HIGH TECH
Heavy-Duty



CATALOGO TECNICO
TECHNICAL CATALOGUE

CT26 FEP 2.1 | **FRA - SPA - POR**



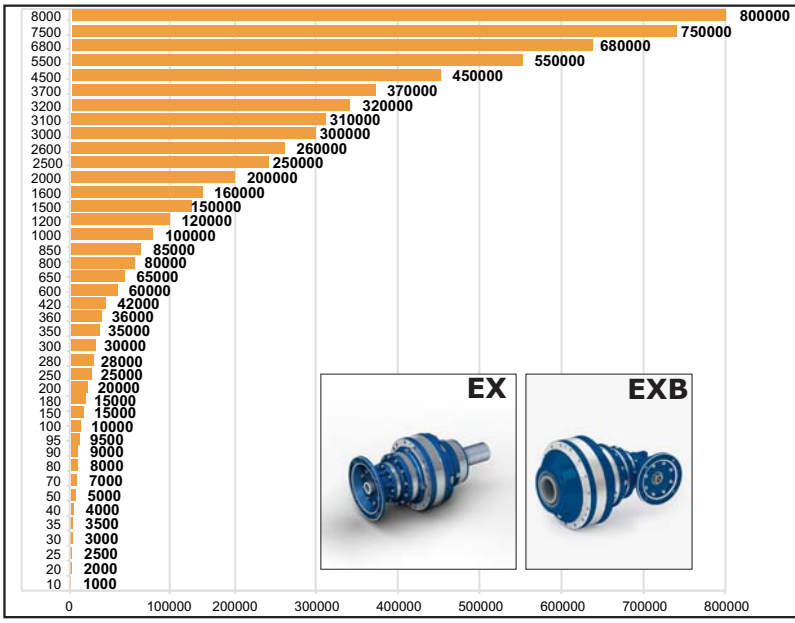
EX Series



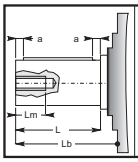
EXB Series

Introduction
Introducción
Introdução

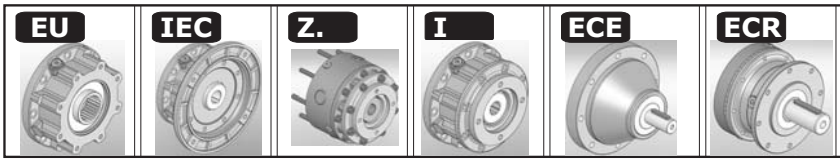
1.1	Caractéristiques de construction	*Características de fabricación*	Características construtivas	**A6**
1.2	Niveaux de pression sonore SPL [dB(A)]	*Niveles de presión acústica SPL [dB(A)]*	Niveles de presión acústica SPL [dB(A)]	**A6**
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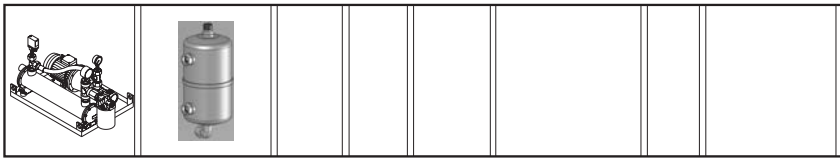
Nomenclature - Fiches Techniques Réducteurs
Designación - Fichas Técnicas Reductores
Denominação - Fichas Técnicas dos Redutores



Dimensions
Dimensiones
Dimensões



Prédisposition Fixation Moteur
Predisposición Conexión Motor
Preparação do Engate do Motor



Accessoires et options
Accesorios y opciones
Acessórios e opções



Positions de montage - Lubrification
Posiciones de montaje - Lubricación
Posições de montagem - Lubrificação

Gestion Révision Catalogues
Gestión Revisión Catálogos
Gestão da Revisão dos Catálogos

SYMBOLE *SÍMBOLO* SÍMBOLO	UNITÉS DE MESURE *UNIDAD DE MEDIDA* UNIDADE DE MEDIDA	Formules utilisées *Fórmulas Usadas* Fórmulas Utilizadas	DÉFINITION	*DEFINICIÓN*	DEFINIÇÃO
1 - PARAMÈTRES TECHNIQUES CALCUL DE BASE / *PARÁMETROS TÉCNICOS CÁLCULO DE BASE* / PARÂMETROS TÉCNICOS DO CÁLCULO BÁSICO (Cinématique-Couple-Durée de vie - *Cinemática-Par-Vida útil* - Cinemática-Binário-Vida)					
n_1	tours/min^{-1}		Vitesse de l'arbre	*Velocidad eje*	Velocidade do eixol
n_2			Vitesse de l'arbre de sortie	*Velocidad eje de salida*	Velocidade do eixo na saída
ir		n_1/n_2	Rapport de réduction	*Relación de transmisión*	Relação de transmissão
T_{2n}	Nm		Couple de Sortie Nominal Application	*Par de Salida NominalAplicación*	Binário de Saída Nominal Aplicação
T_{eq}	Nm	$f_n*T_N>T_{2q}$	Couple de sortie caractéristiques équivalentes	*Par de salida requerido equivalente*	Binário de Saída exigido equivalente
T_N	Nm	$f_n*T_N>Fs*T_{2n}$	Couple de sortie Nominal Réducteur	*Par de Salida Nominal Reductor*	Binário de Saída Nominal Redutor
T_{max}	Nm		Couple de sortie Surcharge Réducteur	*Par de Salida Sobrecarga Reductor*	Binário de Saída Sobrecarga Redutor
M_{2s}	Nm		Couple de glissement du moyeu d'assemblage	*Par de deslizamiento acoplador*	Binário de deslize do anel de contração
T_{1f}	Nm		Couple de freinage moteur Auto-freinant.	*Par de frenado motor Autofrenante.*	Binário de frenagem Motor Autofrenante.
$P_{K\alpha}$	Kg		Poids Moteur Électrique	*Peso Motor Eléctrico*	Peso do Motor Elétrico
RD%			Rendement dynamique	*Rendimiento dinámico*	Rendimento dinâmico
P_1	kW	$(T_{2n}*n_2)/\eta$	Puissance motoréducteur	*Potencia motorreductor*	Potência do motorredutor
h	heures		Durée demandée	*Duración requerida*	Duração exigida
f_{n2h}	(heures*tours) /min^{-1}	n_2*h	Facteur de durée des cycles	*Factor de duración de ciclos*	Fator de duração por ciclos
f_{n1h}		n_1*h	Facteur de durée des cycles	*Factor de duración de ciclos*	Fator de duração por ciclos
2 -PARAMÈTRES TECHNIQUES VÉRIFICATION / *PARÁMETROS TÉCNICOS CONTROL* /PARÂMETROS TÉCNICOS VERIFICAÇÃO (Pics de charge - Tours maximums) / *(Picos de carga - Revoluciones máximas)* / (Picos de carga - Rotações máximas) min^{-1}					
Puissance thermique / *Potencia térmica* / Potência térmica					
Pt_N	kW		Puissance thermique nominale	*Potencia térmica nominal*	Potência térmica nominal
P_{ta}	kW	$P_{ta} \le P_1 - (P_{tN} \cdot fm \cdot fa \cdot fd \cdot fp)$	Puissance thermique additionnelle	*Potencia térmica adicional*	Potência térmica adicional
Charges Externes / *Cargas Externas* / Cargas Externas					
C			Facteur de raccordement	*Factor de conexión*	Fator de ligação
d	mm		Diamètre poulies, roues	*Diámetro poleas, ruedas*	Diâmetro das polias, rodas
Fr_{en1} ; Fr_{en2}	N		Charge Radiale Nominale Application	*Carga Radial Nominal Aplicación*	Carga Radial Nominal Aplicação
x	mm		Distance Charge Radiale Nominale Application	*Distancia Carga Radial Nominal Aplicación*	Distância Carga Radial Nominal Aplicação
$Fr(x)_{n1}$; $Fr(x)_{n2}$	N	fonction de x	Charge Radiale Nominale Réducteur à la distance x.	*Carga Radial Nominal Reductor a la distancia x.*	Carga Radial Nominal Redutor à distância x.
$k\ (f_{nh})$		fonction de f_{nh}	Facteur de correction charge	*Factor Corrección carga*	Fator de Correção da Carga
Fr_{c1} ; Fr_{c2}	N	$Fr_{c1}\ (f_{nh}) = k * Fr(x)_{n1}$ $Fr_{c2}\ (f_{nh}) = k * Fr(x)_{n2}$	Charge Radiale Nominale Réducteur Correcte	*Carga Axial Nominal Reductor Correcto*	Carga Radial Nominal Redutor Correta
Fa_{en1} ; Fa_{en2}	N		Charge Axiale Nominale Application	*Carga Axial Nominal Aplicación*	Carga Axial Nominal Aplicação
Fa_{n1} ; Fa_{n2}	N		Charge Axiale Nominale Réducteur	*Carga Axial Nominal Reductor*	Carga Axial Nominal Redutor
Fa_{c1} ; Fa_{c2}	N	$Fa_{c1}\ (f_{nh})=k * Fa_{n1}$ $Fa_{c2}\ (f_{nh})=k * Fa_{n2}$	Charge Axiale Nominale Réducteur Correcte	*Carga Axial Nominal Reductor Correcto*	Carga Axial Nominal Redutor Correta
Paramètres Transitoires - Charge et tours/ *Parámetros Transitorios - Carga y revoluciones* / Parâmetros Transitórios - Carga e rotações min^{-1}					
n_{1max}	min^{-1}		Vitesse maximum arbre d'entrée	*Velocidad máxima eje entrada*	Velocidade máxima eixo entrada
T_{2max}	Nm		Couple en Sortie Surcharge Application	*Par de Salida Sobrecarga Aplicación*	Binário de Saída Sobrecarga Aplicação
t_a	°C		Température ambiante	*Temperatura ambiente*	Temperatura do ambiente
t_{oil}	°C		Température huile	*Temperatura aceite*	Temperatura do óleo

3 - FACTEURS DE CORRECTION PERFORMANCES / *Factores de corrección de las prestaciones* / Fatores de correção dos desempenhos				
Fs		Facteur de service	*Factor de servicio*	Fator de serviço
fs		Facteur de durée de fonctionnement	*Factor de duración de funcionamiento*	Fator de duração do funcionamento
f_{Ga}	$Fs = fs * f_{Ga} * fv$	Facteur de fiabilité	*Factor de fiabilidad*	Fator de fiabilidade
f_n		Facteur de correction des performances	*Factor de corrección de las prestaciones*	Fator de correção dos desempenhos
fv		Facteur du nombre de démarrages	*Factor del número de encendidos*	Fator do número de arranques
N_i	n2i x ti %	Nombre de cycles sur le niveau de charge N_i	*Número ciclos en el nivel de carga* N_i	Número de ciclos no nível de carga N_i
n_{2eq}	$n2eq = \frac{\sum_i n2ixti\,\%}{100\%}$	vitesse en sortie - caractéristiques équivalentes.	*velocidad de salida requerida equivalente.*	velocidade de saída exigida equivalente.

4 - FACTEURS DE CORRECTION PUISSANCE THERMIQUE / *Factores de corrección potencia térmica* / Fatores de correção da potência térmica				
fm		Facteur correctif pour la position de montage	*Factor correctivo para la posición de montaje*	Fator de correção para a posição de montagem
fa		Facteur correctif de la hauteur	*Factor correctivo de la altitud*	Fator de correção da altitude
fd		Facteur correctif du temps de travail	*Factor correctivo del tiempo de trabajo*	Fator de correção do tempo de trabalho
fp	$P_1 \le P_{tN} \times f_m \times f_a \times f_d \times f_p \times f_f$	Facteur correctif de la température	*Factor correctivo de la temperatura*	Fator de correção da temperatura
ff	$P_1 \le (P_{tN} \cdot fm \cdot fa \cdot fd \cdot fp) + (P_{tamax} \cdot fw \cdot fc)$	Facteur correctif d'aération à l'aide de ventilateur	*Factor correctivo de aireación con ventilador*	Fator de correção da ventilação com microventilador
fc		Coefficient concernant la température de l'air	*Coeficiente relativo a la temperatura del aire*	Coeficiente relativo à temperatura do ar
fw		Coefficient concernant la température de l'eau	*Coeficiente relativo a la temperatura del agua*	Coeficiente relativo à temperatura da água



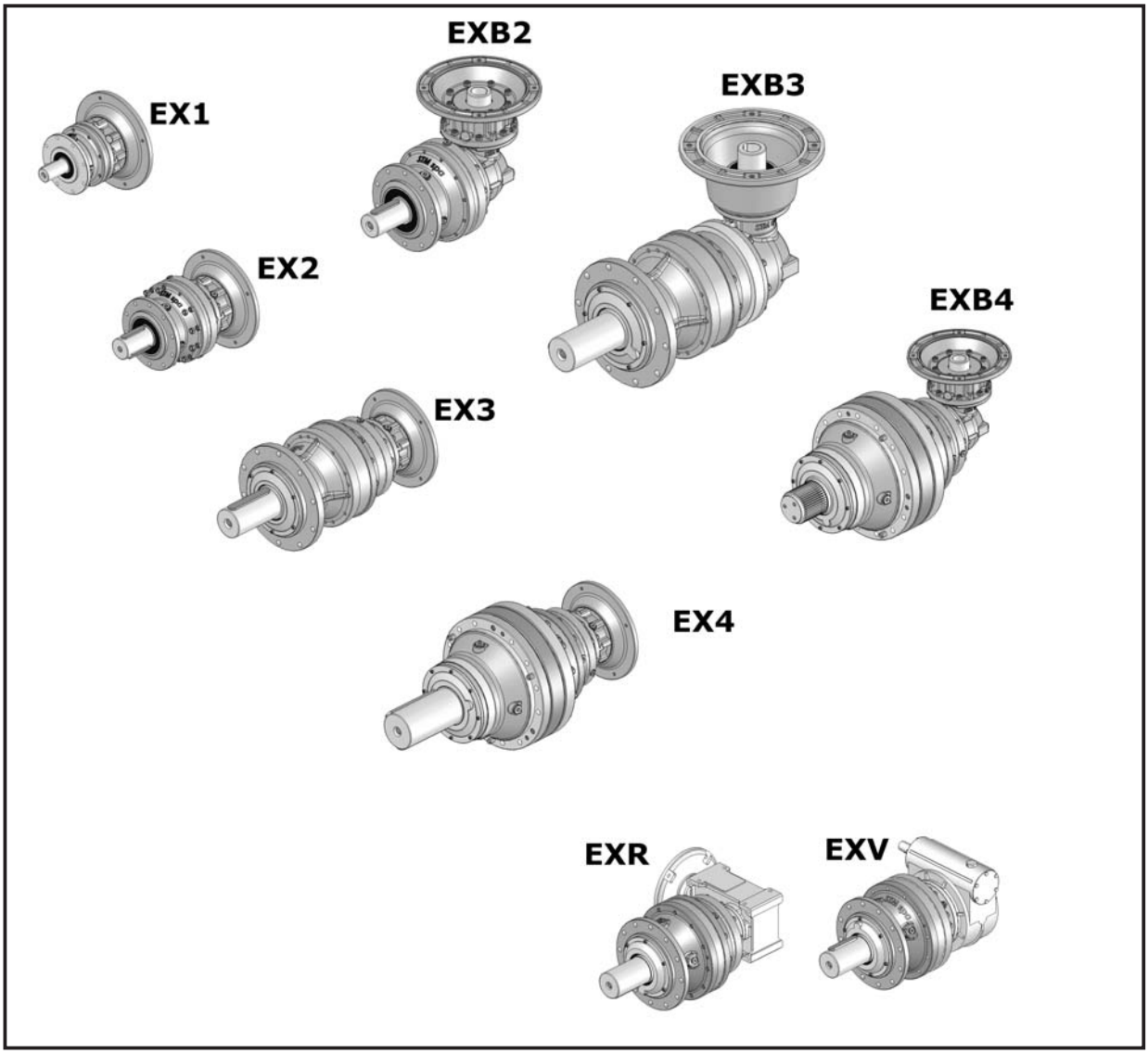
EX Series



EXB Series

EX

A



Épicycloïdaux EX:
Ces réducteurs de la série EX sont extrêmement compacts, cependant ils peuvent transmettre les puissances les plus élevées. L'engrenage de type épicycloïdal est le choix idéal pour toutes les applications où les chocs et les surcharges sont la règle plus que l'exception. Ce produit est le produit le plus polyvalent se trouvant sur le marché. En effet, il offre une vaste gamme de possibilités quant à la fixation, la composition des étages de réduction, l'arbre lent et au type de motorisation.
Nos clients pourront par conséquent être certains de toujours trouver un produit correspondant aux conditions de l'application.

Épicycloïdaux angulaires EXB :
Les réducteurs planétaires angulaires EXB, associent hautes performances et dimensions compactes. Ces réducteurs EXB sont disponibles dans une vaste gamme de rapports afin d'assurer un fonctionnement silencieux dans tous les types d'applications. Un projet moderne et une production technologiquement avancée garantissent les standards de qualité et les performances élevés typiques de notre produit. Renforcez vos projets avec les meilleurs produits.

Epicicloidales EX:
Estos reductores de la serie EX son extremadamente compactos, pero al mismo tiempo capaces de transmitir las potencias más elevadas. El engranaje de tipo epicicloidal es la opción más idónea para todas las aplicaciones donde los golpes y las sobrecargas son la regla más que la excepción. El producto es el más versátil disponible en el mercado, gracias a su amplio abanico de variantes en el tipo de fijación, en la composición de las etapas de reducción, en el eje lento y en el tipo de motorización.
Por lo tanto, nuestros Clientes saben que siempre encontrarán el producto ideal para los requisitos de cada aplicación.

Epicicloidales angulares EXB:
Los reductores planetarios angulares EXB, combinan las altas prestaciones con las dimensiones compactas. Estos reductores EXB están disponibles en una amplia gama de relaciones para garantizar un funcionamiento silencioso en todo tipo de aplicaciones. Un diseño moderno y una producción de tecnología avanzada garantizan los elevados estándares de calidad y rendimiento típicos de nuestro producto. Enriquece tus proyectos con los mejores productos.

Epicicloidais EX:
Estes redutores da série EX são extremamente compactos, apesar disso são capazes de transmitir as potências mais elevadas. A engrenagem de tipo epicicloidal os torna a escolha mais idónea para todas as aplicações onde colisões e sobrecargas são a regra e não a exceção. O produto é o mais versátil disponível no comércio, oferecendo uma escolha muito ampla de versões em relação ao tipo de fixação, à composição dos estágios de redução, ao eixo lento e ao tipo de motorização.
Portanto, encontrar o produto que coincida com os requisitos da aplicação é uma certeza com a qual os nossos Clientes sempre podem contar.

Epicicloidais angulares EXB:
Os redutores planetários angulares EXB, combinam os altos desempenhos com as dimensões compactas. Estes redutores EXB são disponíveis em uma ampla gama de relações, a fim de garantir silenciosidade de funcionamento em todos os tipos de aplicações. Um projeto moderno e uma produção tecnologicamente avançada, garantem os elevados padrões de qualidade e de desempenho típicos do nosso produto. Reforce os teus projetos com os melhores produtos.

1.1 Caractéristiques constructives

Généralités

Les réducteurs de la série EX sont extrêmement compacts, mais capables de transmettre les puissances les plus élevées. L'engrenage de type épicycloïdal en fait le choix le plus adapté à toutes les applications où les chocs et les surcharges sont la règle et non pas l'exception. Ce produit est le produit le plus polyvalent se trouvant sur le marché et offre un très vaste choix de possibilités quant à la fixation, la composition des étages de réduction, l'arbre lent et au type de motorisation. Nos clients pourront par conséquent être certains de toujours trouver un produit correspondant aux conditions de l'application.

Rendements :

Le rendement des réducteurs RD% EX a été calculé aux conditions d'utilisation suivantes :
- service continu;
- réducteur rodé;
- réducteur chargé avec T_N;
- viscosité huile ISO VG 320;
- position de montage M1 ;
- n_1 = 1000 rpm.

Les valeurs ainsi déduites sont les suivantes :

1.1 Características de fabricación

Información general

Los reductores de la serie EX son extremadamente compactos, pero al mismo tiempo capaces de transmitir las potencias más elevadas. El engranaje epicicloidal los convierte en la opción más apropiada para todas las aplicaciones en las que golpes y sobrecargas son la regla más que una excepción. El producto es el más versátil disponible en el mercado, gracias a su amplia gama de variaciones en el tipo de fijación, en la composición de las etapas de reducción, en el eje lento y en el tipo de motorización. Por lo tanto, nuestros Clientes saben que siempre encontrarán el producto ideal para los requisitos de cada aplicación.

Rendimiento :

El rendimiento de los reductores RD% EX ha sido calculado con las siguientes condiciones de uso:
- *servicio continuo;*
- *reductor rodado;*
- *reductor cargado con T_N;*
- *viscosidad aceite ISO VG 320;*
- *posición de montaje M1;*
- *n_1 = 1000 rpm.*

Los valores deducidos de esta manera son los siguientes:

1.1 Características de construção

Generalidades

Os redutores da série EX são extremamente compactos, apesar disso são capazes de transmitir as potências mais elevadas. A engrenagem de tipo epicicloidal os torna a escolha mais idónea para todas as aplicações onde colisões e sobrecargas são a regra e não a exceção. O produto é o mais versátil disponível no comércio, oferecendo uma escolha muito ampla de versões em relação ao tipo de fixação, à composição dos estágios de redução, ao eixo lento e ao tipo de motorização. Portanto, encontrar o produto idóneo aos requisitos da aplicação é uma certeza com a qual os nossos Clientes podem contar.

Rendimento :

O rendimento dos redutores RD% EX foram calculados nas seguintes condições de uso:
- serviço contínuo;
- rodagem redutor;
- redutor carregado com T_N;
- viscosidade do óleo ISO VG 320;
- posição de montagem M1;
- n_1 = 1000 rpm.

Os valores assim deduzidos são os seguintes:

RD (%) - Rendement/*Rendimiento*/Rendimento							
EX 1	**EX 2**	**EX 3**	**EX 4**		**EXB 2**	**EXB 3**	**EXB 4**
97	**94**	**92**	**89**		**92**	**90**	**88**

1.2 Niveaux de pression sonore SPL [dB(A)]

Valeurs normales de production du niveau moyen de pression sonore SPL (dB(A)) à une vitesse côté entrée de 1450 tours/min. (tolérance +3 db(A)). Valeurs mesurées à 1 m de la surface extérieure du réducteur et obtenues sur élaboration de tests expérimentaux. En cas de refroidissement artificiel à l'aide de ventilateur sommer les valeurs de tableau: +2 db(A) pour chaque ventilateur. En cas de côté entrée ayant un nombre de tours différent, sommer les valeurs suivant le tableau. En cas d'exigences particulières il est possible de fournir des réducteurs ayant un niveau moyen de pression sonore réduit.

1.2 Niveles de presión acústica SPL [dB(A)]

Valores normales de producción del nivel promedio de presión acústica SPL (dB(A)) a velocidad en entrada de 1450 rev/min (tolerancia +3 db(A)). Valores medidos a 1 m de la superficie exterior del reductor y obtenidos en elaboración de pruebas experimentales. Para enfriamiento artificial con ventilador, sumar a los valores de tabla: +2 db(A) para cada ventilador. Para entrada a un número de revoluciones distinto, sumar los valores como en la tabla. Para particulares exigencias, se pueden suministrar reductores con nivel promedio de presión acústica reducido.

1.2 Níveis de pressão sonora SPL [dB(A)]

Valores normais de produção do nível médio de pressão sonora SPL [dB(A)] giros/min. (tolerância +3 db(A)). Valores medidos a 1 m da superfície externa do redutor e obtidos mediante a elaboração de testes experimentais. Para o resfriamento artificial com microventilador some aos valores da tabela: +2 db(A) para cada microventilador. Para a entrada de um número de giros diverso some os valores como indicado na tabela. Para exigências particulares é possível o fornecimento de redutores com nível médio de pressão sonora reduzido.

	EX 1	EX 2 - EXB 2	EX 3 - EXB 3	EX 4 - EXB4
10 - 20 - 25	Contacter notre bureau technico-commercial. *Contactar con nuestra oficina técnica comercial.* Contactar o nosso departamento técnico comercial.			
30 - 35 - 40 - 50 - 70				
80 - 90 - 95 - 100				
150 - 180 - 200				
250 - 280 - 300				
350 - 360 - 420				
600 - 650				
800 - 850				
1000 - 1200				
1500 - 1600 - 2000				
2500 - 2600 - 3000 - 3100 - 3200				
3700 - 4500				
5500 - 6800 - 7500 - 8000				

n_1 [min^{-1}]	2750	2400	2000	1750	1000	750	500	350
Δ **SPL** [dB(A)]	8	6	4	2	-2	-3	-4	-6

1.3 Critères de sélection

1.3.1 - Calcul paramètres nominaux application : T_{2n} - Fr_{en1-2} et Fa_{en1-2}

Le couple résistant nominal de l'application T_{2n} est choisi comme base pour le dimensionnement du réducteur. Il s'agit du moment d'exercice dans les conditions de fonctionnement les plus difficiles, régulières.

Exemples :

- Couple maximum continu de laminage (pas celui dû au choc du passage initial);
- Couple pour charge maximum continue de levage durant le fonctionnement des organes de levage d'une grue;
- Couple maximum de coupe avec cisailles;
- Couple dû à la pression de la poussée maximum continue avec des extrudeuses

Tenant compte des mêmes considérations, il est possible de déterminer Fr_{en1-2} et Fa_{en1-2}

Voici les formules approximatives pour certaines des transmissions les plus communes permettant de calculer la charge Fr_{en1-2} agissant sur l'arbre lent.

1.3 Criterios de selección

1.3.1 - Cálculo parámetros nominales aplicación: T_{2n} - Fr_{en1-2} y Fa_{en1-2}

Como base para dimensionar el reductor se elige el par resistente nominal de la aplicación T_{2n}. Se trata del momento de ejercicio para las condiciones de trabajo más exigentes, regulares.

Ejemplos:

-Par máximo continuo de laminado (no de choque de pasada inicial);

-Par para carga máxima continua de elevación en ejercicio de los órganos de elevación de una grúa; -Par máximo de corte con las cizallas;

-Par debido a la presión de empuje máximo continuo con los extrusores. Con las mismas consideraciones es posible determinar Fr_{en1-2} y Fa_{en1-2}

Para calcular la carga Fr_{en1-2} que actúa sobre el eje lento, se suministran fórmulas aproximadas para algunas de las transmisiones más comunes.

1.3 Critérios de seleção

1.3.1 - Cálculo dos parâmetros nominais da aplicação: T_{2n} - Fr_{en1-2} e Fa_{en1-2}

Como base do dimensionamento do redutor, escolhe-se o binário resistente nominal da aplicação T_{2n}. Trata-se do momento de funcionamento para as condições de trabalho mais pesadas, regulares.

Exemplos:

-Binário máximo contínuo de laminação (não por colisão de passada inicial);

-Binário para carga máxima contínua de levantamento em funcionamento dos órgãos de levantamento de uma grua;

-Binário máximo de corte com as cisalhas;

- Drehmoment durch max. Dauerschubdruck mit Extrudern.

Com as mesmas considerações, é possível determinar Fr_{en1-2} e Fa_{en1-2}

Para calcular a carga Fr_{en1-2} que atua no eixo lento damos fórmulas aproximativas para algumas transmissões mais comuns.

$Fr_{en1-2} = (C \times T_{2n}) / d$

C	7000	5000	3000	2120	2000
Transmissions *Transmisiones* Transmissões	Roues d'embrayage (caoutchouc sur métal) *Ruedas de embrague (goma sobre metal)* Rodas de fricção (borracha em metal)	Courroies trapézoïdales *Correas trapezoidales* Correias trapezoidais	Courroies dentées *Correas dentadas* Correias dentadas	Ingranaggi cilindrici *Engranajes cilíndricos* Engrenagens cilíndricas	Chaines *Cadenas* Correntes

C - Facteur de raccordement
d - Diamètre poulies, roues

C - Factor de conexión
d - Diámetro poleas, ruedas

C - Fator de ligação

Forces d'accélération, d'oscillation

Au démarrage, dans certaines circonstances, des forces d'accélération importantes sont observées. D'autres forces secondaires peuvent se produire à cause des oscillations de la ligne d'arbres, en fonction des masses (volant, roues, joints), de leur répartition, des rigidités (arbres, joints) et des conditions d'exercice.

De plus, selon le type de moteur d'entraînement et le processus de travail, les couples du côté de la commande et commandé ne sont souvent pas uniformes. Les forces et les couples agissant effectivement sur le réducteur peuvent être déterminés en prenant des mesures dans tous les modes de fonctionnement, éventuellement avec un nombre important de cycles alternés.

La procédure de sélection du réducteur permettant de calculer la taille et le rapport de réduction sera fournie au paragraphe suivant.

La construction sera d'autant plus économique que la prise en compte des répercussions de ces forces sur les sollicitations sera " précise ".

Fuerzas de aceleración, de oscilación

En el encendido se producen en ciertas circunstancias fuerzas de aceleración relevantes. Otras fuerzas secundarias pueden producirse a causa de las oscilaciones de la línea de mando, en función de las masas (volante, ruedas, acoplamientos), de su distribución, de la rigidez (ejes, acoplamientos) y de las condiciones de ejercicio.

Además, a menudo el par lado mando y el par controlado no son uniformes, según el tipo de motor de mando y del proceso de elaboración. Se pueden determinar las fuerzas y los pares efectivamente aplicados en el reductor mediante mediciones en todos los estados de ejercicio, con un amplio cálculo de los ciclos alternos.

En el párrafo siguiente se describe el procedimiento de selección del reductor para identificar el tamaño y la relación de reducción.

El coste reducido de fabricación depende en gran medida de un cálculo "exacto"de las repercusiones de estas fuerzas en la tensión.

Forças de aceleração, de oscilação

Aquando do arranque ocorrem em determinadas circunstâncias forças relevantes de aceleração.Outras forças secundárias podem ser produzidas por causa das oscilações da linha de comando, em função das massas (volante,rodas,juntas), da sua divisão, da rigidez (eixos,juntas) e das condições de funcionamento.

Além disso, frequentemente o o binário lado de comando e o binário comandado não são uniformes, segundo o tipo de motor de comando e do processo de trabalho.Podem ser determinadas as forças e os binários que realmente atuam no redutor através de medidas em todos os estados de funcionamento eventualmente com um amplo cálculo dos ciclos alternados.

No parágrafo seguinte será fornecido o procedimento de seleção do redutor para identificar o seu tamanho e a relação de redução.

A economia de uma construção depende fundamentalmente do fato que se consiga ou não considerar de "modo preciso" as repercussões destas forças no esforço .

1.3 Critères de sélection

1.3.2 Procédure de sélection

Les données de l'application étant connues, calculer :

$ir = n_1/n_2$;

$f_{n2h} = n_2 * h$;

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%};$$

n_1 - Vitesse arbre d'entrée;
n_2 - Vitesse arbre de sortie;
ir - Rapport de réduction;
h - Durée d'exercice demandée;
f_{n2h} - Facteur de durée des cycles;
RD% - Rendement dynamique;
P1 - Puissance machine motrice;
T_{2n} - Couple en Sortie Nominale Application

Pour choisir le réducteur la relation suivante doit être satisfaite:

1.3 Criterios de selección

1.3.2 *Procedimiento de selección*

Una vez conocidos los datos de la aplicación, calcular:

$ir = n_1/n_2$;

$f_{n2h} = n_2 * h$;

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%};$$

n_1 - Velocidad eje entrada;
n_2 - Velocidad eje salida;
ir - Relación de transmisión;
h - Duración requerida;
f_{n2h} - Factor de duración de ciclos; RD% - Rendimiento dinámico;
P1 - Potencia máquina motriz;
T_{2n} - Par Salida Nominal Aplicación

Para seleccionar el reductor es necesario que se cumpla la siguiente relación:

1.3 Critérios de seleção

1.3.2 Procedimento de seleção

Conhecendo os dados da aplicação, calcule:

$ir = n_1/n_2$;

$f_{n2h} = n_2 * h$;

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%};$$

n_1 - Velocidade do eixo entrada;
n_2 - Velocidade do eixo saída;
ir - Relação de transmissão;
h - Duração exigida;
f_{n2h} - Fator de duração por ciclos;
RD% - Rendimento dinâmico;
P1 -Potência da máquina motriz;
T_{2n} - Binário de Saída Nominal Aplicação

Para selecionar o redutor, é necessário que seja atendida a seguinte relação:

$\mathbf{T_N \times fn \geq T_{2n} \times Fs}$	**(1.3/b)**

1 - $\mathbf{T_N}$: Couple Nominal en sortie du réducteur.
Le couple est calculé en tenant compte de la sollicitation à la flexion, de la sollicitation à la fatigue superficielle et enfin de la durée des roulements à billes des satellites avec **Fs** égale à 1.
Les valeurs de $\mathbf{T_N}$ sont fournies en fonction :

Cas-A - Du facteur f_{nh}:
La valeur de T_N est fournie avec la valeur de fnh variant entre 10000 et 2000000.

Cas-B Des facteurs n_1 et h :
- n_1= 1400 [rpm];
- h = 10000 [heures].

La valeur de T_N est indiquée dans les fiches techniques du produit.

2 - Fs : Facteur de Service:
Pour déterminer la valeur de **Fs** voir le paragraphe suivant.

Il est possible de choisir les étages, le rapport, la taille du réducteur.

En utilisant la désignation, il est possible de sélectionner également l'exécution de sortie et d'entrée, la position de montage et de vérifier les dimensions du réducteur et de tout accessoire ou toute extrémité particulière.

***1** - $\mathbf{T_N}$: Par Nominal de salida del reductor. El par se calcula considerando la tensión de flexión, la tensión de fatiga superficial y, por último, la duración de los cojinetes de rodillos de los planetarios con **Fs** igual a 1. Los valores de T_N se suministran en función:*

Case-A - Factor f_{nh}:
la $\mathbf{T_N}$ se suministra con fnh que varía entre un valor de 10000 y 2000000.

Case-B - Factors n_1 y h :
- n_1= 1400 [rpm];
- h = 10000 [horas].

El valor de $\mathbf{T_N}$ se detalla en las fichas técnicas del producto.

***2 - Fs** : Factor de Servicio:*
*Para determinar el valor **Fs** ver el párrafo siguiente.*

Es posible elegir las etapas, la relación, el tamaño del reductor.

Utilizando la designación, es posible seleccionar, además, la ejecución de salida y entrada, la posición de montaje y controlar las dimensiones del reductor y de eventuales accesorios y extremos particulares.

1 - $\mathbf{T_N}$: Binário nominal de saída do redutor.
O binário é calculado considerando o esforço à flexão, o esforço à fadiga superficial e, por fim, a duração dos rolamentos dos satélites com **Fs** igual ad 1.
Os valores de T_N são fornecidos em função:

Caso-A - Do fator f_{nh}:
a T_N é fornecida com fnh que varia entre um valor de 10000 a 2000000.

Caso-B - Dos fatores n_1 ***e h*** :
- n_1= 1400 [rpm];
- h = 10000 [horas].

O valor de T_N é indicado nas fichas técnicas do produto.

2 - Fs : Fator de Serviço:
Para determinar o valor **Fs**, consultar o parágrafo sucessivo.

É possível escolher os estágios, a relação, o tamanho do redutor.

Utilizando a denominação, é possível selecionar também a execução de saída e entrada, a posição de montagem e verificar as dimensões do redutor e de eventuais acessórios ou extremidades particulares.

1.3 Critères de sélection

1.3.3 Calcul du Facteur de service Fs

Il existe deux possibilités pour calculer Fs:

1- Aucun cycle de charge n'est disponible.

Facteur de service - Fs

Le facteur de service Fs est en fonction :

a) des conditions d'application
b) de la durée de fonctionnement h/d
c) des démarrages /heure
d) du degré de fiabilité ou de la marge de sécurité souhaitée.

Le facteur de service pour des cas spécifiques peut s'obtenir directement ou bien être calculé sur la base de chaque facteur: facteur de durée de fonctionnement f_s, d'après le nombre de démarrages/heure f_v et d'après le facteur de sécurité ou degré de fiabilité f_{Ga}.

1.3 Criterios de selección

1.3.3 Cálculo Factor de servicio Fs

Para obtener Fs existen dos alternativas:

1- No está disponible ningún colectivo de carga.

Factor de servicio - Fs

El factor de Servicio Fs depende:

a) de las condiciones de aplicación
b) de la duración de funcionamiento h/d
c) arranques / hora
d) del grado de confiabilidad o margen de seguridad deseado.

El factor de servicio para casos específicos puede ser aplicado directamente, sino puede ser calculado en base a factores individuales: factor de duración de funcionamiento f_s, número de arranques / hora f_v y factor de seguridad o grado de confiabilidad f_{Ga}.

1.3 Critérios de seleção

1.3.3 Cálculo do Fator de serviço Fs

Para obter Fs estão disponíveis duas alternativas:
1- Não está disponível algum coletivo de carga.

Fator de serviço – Fs

O fator de Serviço Fs depende:

a) das condições de aplicação
b) do funcionamento diário h/d
c) inicialização por hora
d) do grau de confiança desejada ou fator de segurança.

O fator de serviço para casos específicos pode ser usado diretamente, caso contrário pode ser calculado em base aos seguintes fatores: fator funcionamento diário f_s, número de inicializações/hora f_v e fator de segurança ou grau de confiança f_{Ga}.

$$F_s = f_s \times f_v \times f_{Ga} \qquad (1.3/c)$$

fs

CASE A - T_N *values are supplied from* Factors f_{nh}

	Premier moteur / *Máquina motriz* / Máquina motriz	Machine Opératrice / Máquina Utilizadora / Máquina Utilizadora U	M	S
Case A	Moteurs électriques, Turbines, Moteurs hydrauliques *Motores eléctricos, Turbinas, Motores hidráulicos* Motores elétricos, Turbinas, Motores óleo-dinâmicos	1.0	1.25	1.75
	Moteurs alternatifs 4-6 cylindres *Motores alternativos 4-6 cilindros* Motores alternativos 4-6 cilindros	1.25	1.5	2.0
	Moteurs alternatifs 1-3 cylindres *Motores alternativos 1-3 cilindros* Motores alternativos 1-3 cilindros	1.5	1.75	2.25

CASE B - T_N *values are supplied from* Factors n_1 *and h*

	Premier moteur / *Máquina motriz* / Máquina motriz	h/d	Machine Opératrice / Máquina Utilizadora / Máquina Utilizadora U	M	S
Case B	Moteurs électriques, Turbines, Moteurs hydrauliques *Motores eléctricos, Turbinas, Motores hidráulicos* Motores elétricos, Turbinas, Motores óleo-dinâmicos	2	0.8	1.0	1.4
		4	0.9	1.12	1.6
		8	1.0	1.25	1.75
		16	1.25	1.5	2.0
		24	1.5	1.75	2.25
	Moteurs alternatifs 4-6 cylindres *Motores alternativos 4-6 cilindros* Motores alternativos 4-6 cilindros	2	0.9	1.12	1.6
		4	1.0	1.25	1.75
		8	1.25	1.5	2.0
		16	1.5	1.75	2.25
		24	1.75	2.0	2.5
	Moteurs alternatifs 1-3 cylindres *Motores alternativos 1-3 cilindros* Motores alternativos 1-3 cilindros	2	1.0	1.25	1.75
		4	1.25	1.5	2.0
		8	1.5	1.75	2.25
		16	1.75	2.0	2.5
		24	2.25	2.5	3.0

U = machine à charge uniforme
M = machine avec chocs modérés
S = machine avec chocs importants

h/d = heures de fonctionnement journalier

1 - En cas des multiplicateurs de vitesse, multiplier les valeurs de Fs par 1.1
2 - Si le moteur électrique est auto-freinant il est nécessaire de multiplier les valeurs de fs par 1.1

***U** = máquina de carga uniforme*
***M** = máquina con golpes moderados*
***S** = máquina con golpes severos*

***h/d** = horas de funcionamiento diario*

1 - Para los multiplicadores de velocidad, multiplicar los valores de Fs para 1.1

2 -En el caso de que el motor eléctrico sea autofrenante es necesario multiplicar los valores de fs por 1.1.

U = máquina com carga uniforme
M = máquina com choques moderados
S = máquina com choques pesados

h/d = horas de funcionamento diário

1 - Para os multiplicadores de velocidade, multiplique os valores de Fs por 1.1

2 - Caso o motor elétrico seja autofrenante, é necessário multiplicar os valores de fs por 1.1.

1.3 Critères de sélection

1.3 *Criterios de selección*

1.3 Critérios de seleção

Classification de l'application

Clasificación de la aplicación

Classificação da aplicação

	SECTEUR D'APPLICATION	SECTOR DE APLICACIÓN	SETOR DE APLICAÇÃO
	AGITATEURS	***AGITADORES***	**AGITADORES**
U	Avec densité uniforme	*Con densidad uniforme*	Com densidade uniforme
M	Avec densité non uniforme	*Con densidad no uniform*	Com densidade variável
	ALIMENTAIRE	***ALIMENTICIO***	**ALIMENTARE**
U	Trempeurs, bouilleurs, vis transporteuses	*Maceradores, hervidores, cócleas*	Maceradores, caldeiras, cócleas Trituradores,
M	Broyeurs, éplucheurs, machines à emboîter	*Trituradores, peladores, encajonadore*	descascadores, máquinas para encaixotanr
	TREVILS	***MONTACARGOS***	**MANIVELAS**
(1)U,M	Levage	*Elevación*	Levantamento
M	Traînement	*Desplazamiento*	Arrastamento
S	Bobineurs	*Bobinadores*	Bobinadeiran
	PAPETIER	***PAPELERO***	**FÁBRICAS DE PAPEL**
U	Bobineuses, séchoirs, presseurs	*Envolvedores, secadores, prensadores,*	Bobinadeiras, secadoras, prensadores
M	Mélangeurs, extrudeuses, épaississeurs	*Mezcladores, extrusores, espesadores*	Misturadores, extrusoras, adensadores
S	Découpoirs, polisseuses	*Cortadores, lustradores*	Cortadoras, polidoras
	CHIMIQUE	***QUIMICO***	**QUíMICO**
S	Extrudeuses, imprimantes	*Extrusores, impresoras*	Extrusoras, prelos Misturadores
M	Mixeurs	*Importadores*	
	COMPRESSEURS	***COMPRESORES***	**COMPRESSORES**
U	Centrifuges	*Centrífugos*	Centrifugos
M	Rotatifs	*Giratorios*	Rotativos
M	Axiaux	*Axiales*	Axiais
	DRAGUES	***DRAGAS***	**DRAGAS**
M	Convoyeurs	*Transportadoras*	Fördere
S	Extracteurs, têtes fraiseuses	*Extractoras, cabezales fresadoras*	Extratores, cabeças fresadoras
	CONSTRUCTIONS	***EDILICIA***	**CONSTRUCAO**
M	Bétonnières, vis transporteuses	*Hormigoneras, cócleas*	Betoneiras, cócleas
M	Concasseurs, doseurs	*Trituradoras, dosificadoras*	Moinhos trituradores, dosadores
S	Broyeuses	*Trituradoras*	Britadeiras
	ELEFVATEURS	***ELEVADORES***	**ELEVADORES**
U	A bande, escaliers roulants	*De cinta, escaleras móviles*	Esteiras transportadoras, escadas rolantes
M	A godet, monte-charge, benne	*De muelle, montacargas, skip*	Transportadores de balde, monta-cargas, skips
M	Ascenseurs, échafaudages mobiles	*Ascensores, puentes móviles*	Elevadores públicos, andaimes móves
	GRUES	***GRUAS***	**GUINDASTES**
M	Translation	*Desplazamiento*	Translação
M	Rotation	*Rotación*	Rotação
(1)U,M	Levage	*Elevación*	Levantamento
	BOIS	***MADERA***	**MADEIRA**
M	Empileurs	*Estibadoras*	Empilhadeiras
M	Convoyeurs	*Transportadoras*	Transportadoras
M	Scies, raboteuses, fraiseuses	*Sierras, cepilladoras, fresadoras*	Serras, lixadeiras, fresadoras
	MACHINE OUTILS	***MÁCHINA HERRAMENTAS***	**MAQUINAS OPERATRIZES**
M	Aléseuses, brocheuses, cisailles	*Alijadoras, desvastadoras, cizalladoras*	Brocadeiras, furadeiras, tosquiadoras
M	Plieuses, imprimantes	*Plegadoras, impresoras*	Dobradoras, estampadoras
S	Pilons, laminoirs	*Mallas, laminadores*	Malhos, laminadores
	MELANGEURS	***MEZCLADORES***	**MISTURADORES**
U	Avec densité uniforme	*Con densidad uniforme*	Com densidade uniforme
M	Avec densité non uniforme	*Con densidad no uniforme*	Com densidade variável
	DISPOSITIES MOVEMENT TERRE	***MOVIMIENTO TIERRA***	**TERRA PLENAGEM**
S	Excavatrices rotatives à pales	*Excavadoras giratorias de palas*	Escavadoras com pá giratória
M	Convoyeurs	*Transportadoras*	Transportadores
	POMPES	***BOMBAS***	**BOMBAS**
U	Centrifuges	*Centrífugas*	Centrífugas
M,S	Volumétriques à double effet	*Volumétricas de doble efecto*	Volumétricas a duplo efeito
M,S	Volumétriques à simple effet	*Volumétricas de efecto simple*	Volumétricas a simples efeito
	CONVOYEURS	***TRANSPORTADORAS***	**TRANSPORTADORES**
U	Sur rails	*Sobre rieles*	De rolo
M	A bande	*De cinta*	De correia
	TRAITEMENT DES EAUX	***TRATAMIENTO AGUAS***	**TRATAMENTO DE àGUA**
M	Vis transporteuses, broyeurs	*Cócleas, trituradoras*	Cócleas, trituradores
M	Mélangeurs, décanteurs	*Mezcladoras, decantadores*	Misturadores, decantadores
U	Oxygénateurs	*Oxigenadores*	Oxigenadores
	VENTILATEURS	***VENTILADORES***	**VENTILADORES**
U	De petite taille ;	*De pequeñas dimensiones;*	de pequenas dimensões;
M	De grande taille	*De grandes dimensiones*	de grandes dimensões

1) En cas de choix du fs suivant F.E.M. /1.001/1987 consulter le chapitre "levage".

1) Para la selección del fs de acuerdo a F.E.M. /1.001/1987 consultar el capítulo "elevación".

1) Para a escolha do fs conforme F.E.M. /1.001/1987 consulte o capítulo "levantamento".

1.3 Critères de sélection

Facteur du nombre de démarrages - f_V

Facteur correctif du facteur de service fs pour tenir compte des démarrages/heure. Le facteur de service fs doit augmenter en cas de démarrages fréquents avec couple de décollage considérablement supérieur à celui de plein régime, en tenant compte des démarrages par heure suivant le tableau ci-dessous.

fv

Dém/h - *Arranque/h* - Arranque/h	U	M	S
$Z \leq 5$	1	1	1
$5 < Z \leq 30$	1.2	1.12	1.06
$30 < Z \leq 63$	1.33	1.2	1.12
$63 < Z$	1.5	1.33	1.2

fGa

Facteur de fiabilité - f_{Ga}

Une marge de sécurité ou de fiabilité est déjà comprise dans la performance de catalogue du réducteur. Si pour des exigences particulières une fiabilité supérieure s'impose, augmenter le facteur de service et en particulier il est possible de considérer les facteurs qui suivent :
Degré de fiabilité normale $f_{Ga} = 1$;
Degré de fiabilité élevé (difficulté d'entretien, grande importance du réducteur dans le cycle de production, sécurité pour les personnes, etc.): f_{Ga} = 1.25 - 1.4.
Il n'est pas utile d'introduire des coefficients de correction lorsque l'on alterne les cycles de fonctionnement avec des charges appliquées dans les deux sens, car on en a déjà tenu compte dans le calcul des engrenages.

1.3 Criterios de selección

Factor del número de encendidos- f_V

Factor correctivo del factor de servicio fs para tener en cuenta los arranques / hora. El factor de servicio fs debe aumentar en caso de arranques frecuentes con par de arranque notablemente mayor al de régimen, teniendo en cuenta los arranques por hora, de acuerdo a la siguiente tabla.

Factor de fiabilidad- f_{Ga}

Un margen de seguridad o confiabilidad ya ha sido considerado en la prestación del catálogo del reductor. Si para particulares exigencias es necesaria una confiabilidad mayor, se aumenta el factor de servicio y en especial se pueden considerar los siguientes factores:
Criterios de selección normal $f_{Ga} = 1$;
Grado de fiabilidad elevado (dificultad de mantenimiento, gran importancia del reductor durante el ciclo de producción, seguridad para las personas, etc.):f_{Ga} = 1.25 - 1.4.
No es necesario introducir coeficientes de corrección en caso de que se alternen ciclos de funcionamiento con cargas aplicadas en los dos sentidos, porque esto ya se ha calculado en el diseño de los engranajes.

1.3 Critérios de seleção

Fator do número de arranques - f_V

Fator de correção do fator de serviço fs serve para controlar o número de inicializações/hora. O fator de serviço fs deve aumentar em caso de inicializações frequentes com torque de aceleração notavelmente maior daquela em norma controlando as inicializações por hora conforme a seguinte tabela.

Fator de fiabilidade- f_{Ga}

Uma margem de segurança ou de confiança está inserida na avaliação do catálogo do redutor. Se for exigida uma confiança maior, o fator de serviço deve ser aumentado podendo-se obter os seguintes fatores:
Grau de fiabilidade $f_{Ga} = 1$;
Grau de fiabilidade elevado (dificuldades na manutenção, grande importância do redutor no ciclo produtivo, segurança pessoal, ecc....): f_{Ga} = 1.25 - 1.4.

Não é preciso introduzir coeficientes de correção caso se alternem ciclos de funcionamento com cargas aplicadas nos dois sentidos, pois isso já foi considerado no projeto das engrenagens.

1.3 Critères de sélection

2 - Si un cycle de charge est disponible. On mesure les couples résistants sur les arbres du réducteur dans les conditions réelles d'utilisation et on classe les valeurs de mesure par grandeur (T_i,Fr_i) et fréquence (N_i).

Pour calculer **Fs** il faut utiliser la formule en définissant le coefficient fv égal à 1.

$$Ts = \frac{Teq}{T2n} \times f_{Ga}$$

1 - T_{2eq}
Couple en sortie - caractéristiques

$$Teq = \left[\frac{n21xt1\%xT1^{6.6} + n22xt2\%xT2^{6.6} + \ldots n2ixti\%xTi^{6.6}}{n21xt1\% + n22xt2\% + \ldots n2ixti\%} \right]^{\frac{1}{6.6}} \quad \textbf{(1.3/d1)}$$

Où t_1, t_2 … ti représentent les proportions de temps (sur 100% du cycle) durant lesquelles les couples t_1, t_2, ...Ti agissent aux vitesses n_{21},n_{22}…n_{2i}.

2 - n_{2eq}
vitesse en sortie -caractéristiques équivalentes.

$$n2eq = \frac{n21xt1\% + n21xt1\% + \ldots + n2ixti\%}{100\%} \quad \textbf{(1.3/d2)}$$

3 - Fr_{1eq}
Force Radiale axe en entrée - caractéristiques équivalentes.

$$Fr1eq = \left[\frac{n21xt1\%xFr11^{\frac{10}{3}} + n22xt2\%xFr12^{\frac{10}{3}} + \ldots n2ixti\%xFr1i^{\frac{10}{3}}}{n21xt1\% + n22xt2\% + \ldots n2ixti\%} \right]^{\frac{3}{10}} \quad \textbf{(1.3/d3)}$$

4 - Fr_{2eq}
Force Radiale axe en sortie - caractéristiques équivalentes.

$$Fr2eq = \left[\frac{n21xt1\%xFr21^{\frac{10}{3}} + n22xt2\%xFr22^{\frac{10}{3}} + \ldots n2ixti\%xFr2i^{\frac{10}{3}}}{n21xt1\% + n22xt2\% + \ldots n2ixti\%} \right]^{\frac{3}{10}} \quad \textbf{(1.3/d4)}$$

Les formules ont été établies en utilisant la formule de Palmgren/Miner. En cas d'incertitude pour le calcul, utiliser les indications reportées dans le livre de Niemann/Winter - « Eléments de Machines ».

1.3 Criterios de selección

2 - Se encuentra disponible el colectivo de carga. Se miden los pares resistentes de los ejes del reductor en condiciones de ejercicio parecidas a la realidad y se clasifican los valores medidos por tamaño (T_i,Fr_i)y frecuencia (N_i).

*Para calcular **Fs** es necesario utilizar la fórmula colocando el coeficiente fv igual a 1.*

$$Ts = \frac{Fr1eq}{Fren1} \times f_{Ga}$$

1 - T_{eq}
Par de salida requerido equivalente.

2 - n_{2eq}
velocidad de salida requerida equivalente.

3 - Fr_{1eq}
Fuerza Radial eje entrada requerida.

4 - Fr_{2eq}
Fuerza Radial eje salida requerida equivalente.

Las fórmulas se han obtenido usando la fórmula de Palmgren/Miner.En caso de dudas o hipótesis de cálculo, utilizar las indicaciones detalladas en Niemann/Winter - "Elementos de Máquinas".

1.3 Critérios de seleção

2 - Está disponível o coletivo de carga. São medidos os binários resistentes nos eixos do redutor em condições de funcionamento próximas à realidade e são classificados os valores de medida para tamanho (T_i,Fr_i) e frequência (N_i).

Para calcular **Fs**, é necessário utilizar a fórmula colocando o coeficiente fv igual a 1.

$$Ts = \frac{Fr2eq}{Fren2} \times f_{Ga}$$

1 - T_{eq}
Binário de Saída exigido equivalente.

2 - n_{2eq}
velocidade de saída exigida equivalente.

3 - Fr_{1eq}
Força Radial eixo entrada exigida equivalente.

4 - Fr_{2eq}
Força Radial eixo saída exigida equivalente.

As fórmulas foram obtidas utilizando a fórmula de Palmgren/Miner.Para incertezas, hipóteses de cálculo, utilizar as indicações mostradas no Niemann/Winter - "Elementos de Máquinas".

1.4 Contrôles

1) Géométrie - Dimensions Compatibilité dimensionnelle avec les encombrements disponibles (ex.: diamètre du tambour) et des extrémités de l'arbre avec joints, disques ou poulies.

2)Surcharge maximum

En cas de démarrages T_{2max} peut être considéré comme la partie du couple d'accélération (T_{2acc}) passant par l'arbre côté sortie du réducteur :

Démarrage

1.4 Controles

1) Geometría - DimensionesCompatibilidad dimensional con espacios disponibles (ej. diámetro del tambor) y de los extremos del eje con acoplamientos, discos o poleas.

2) Sobrecarga máxima

En caso de arranques T_{2max} se puede considerar como la parte del par de aceleración (T_{2acc}) que pasa a través del eje lento del reductor:

Arranque

1.4 Controles

1) Geometria - DimensõesCompatibilidade dimensional com espaços disponíveis (ex., diâmetro do tambor) e das extremidades do eixo com juntas, discos ou polias.

2)Sobrecarga máxima

No caso de inicializações, T_{2max} pode ser considerada como aquela parte do binário de aceleração (T_{2acc}) que passa através do eixo lento do redutor:

Inicialização

$$T_{2max} = T_{2acc} = \left(\left(0.45 \cdot (T_{1s} + T_{1max}) \cdot ir \cdot \eta\right) - T_{2n}\right) \cdot \left(\frac{J}{J + J_0 \cdot \eta}\right) + T_{2n} \quad \textbf{[Nm]}$$

où :
J : moment d'inertie de la machine et du réducteur réduit sur l'arbre du moteur (kgm^2)
J_0 : moment d'inertie des masses en rotation sur l'arbre du moteur (kgm^2)
T_{1s}: couple moteur de démarrage (Nm)
T_{1max} : couple moteur max (Nm)

donde:
J: momento de inercia de la máquina y del reductor reducido al eje del motor (kgm^2)
J_0: momento de inercia de las masas de rotación del eje del motor (kgm^2)
T_{1s}: par motor de arranque (Nm)
$T_{1máx}$: par motor máx (Nm)

onde:
J: momento de inércia da máquina e do redutor reduzido ao eixo do motor (kgm^2)
J_0: momento de inércia das massas rotativas no eixo do motor (kgm^2)
T_{1s}: binário motriz de partida (Nm)
T_{1max}: binário motriz máx (Nm)

Il faut que la relation suivante soit satisfaite:

Es necesario respetar la siguiente relación:

É necessário que a seguinte relação seja atendida:

$$T_{2max} < T_{max} \qquad \textbf{(2/a)}$$

T_{max}

La valeur est indiquée dans les fiches techniques du produit.

Cette valeur doit être considérée comme la valeur du couple maximum dû aux pics ou pointes lors du démarrage :
- inversions du mouvement par effets d'inertie,
- commutations de basse à haute polarité,
- démarrages et freinages à pleine charge avec degrands moments d'inertie (surtout dans le cas de bas rapports),
- surcharges, heurts ou autres effets dynamiques.

La condition suivante doit être vérifiée :

ATTENTION
Il ne doit jamais être considéré comme le couple d'exercice et doit être opportunément calculé en fonction du nombre élevé de démarrages ou d'inversions.

T_{max}

Se indica el valor en las fichas técnicas del producto.

Dicho valor debe considerarse como un par máximo debido a picos o inicios de encendido:
- *inversiones de movimiento por efectos inerciales,*
- *conmutaciones de baja a alta polaridad,*
- *encendidos y frenados a plena carga con grandes momentos de inercia (sobre todo en caso de bajas relaciones),*
- *sobrecargas, choques u otros efectos dinámicos, se debe controlar la condición:*

ATENCIÓN
No se debe considerar nunca como par de trabajo y debe ser correctamente evaluado en los accionamientos que impliquen un elevando número de encendidos o inversiones.

T_{max}

O valor está indicado nas fichas técnicas do produto.

Tal valor deve ser considerado como um binário máximo devido a picos ou arranques:
- inversões de movimento por efeitos inerciais,- comutações de baixa para alta polaridade,
- arranques e frenagens em plena carga com grandes momentos de inércia (principalmente no caso de baixas relações),
- sobrecargas, colisões ou outros efeitos dinâmicos, a condição deve ser verificada:

ATENÇÃO
Nunca deve ser considerado como binário de trabalho e deve ser devidamente avaliado nos acionamentos onde comportam num elevado número de arranques ou inversões.

1.4 Contrôles

3) Nombre maximum de tours en entrée $n_{1\ max}$

Il représente la valeur maximale acceptable pour toutes les grandeurs de réducteurs, en conditions de fonctionnement intermittent. Pour les applications en service continu ou pour les vitesses supérieures à celles qui sont indiquées, le Service Technico-commercial est à votre disposition pour d'ultérieures informations.

1.4 Controles

3) Número máximo revoluciones de entrada $n_{1\ max}$

Representa el valor máximo aceptable por cada tamaño de reductor, en condiciones de funcionamiento intermitente. Para aplicaciones en servicio continuo o para velocidades superiores a las indicadas, el Servicio Técnico Comercial está a disposición para suministrar más información.

1.4 Controles

3) Número máximo de rotações em entrada $n_{1\ max}$

Representa o valor máximo aceitável para cada tamanho de redutor, em condições de funcionamento intermitente. Para aplicações em serviço contínuo ou para velocidades superiores às indicadas, o Serviço Técnico Comercial está à disposição para maiores esclarecimentos.

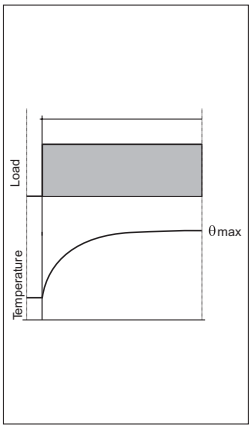
Taille Tamaño Tamanho	EX 1	EX 2	EX 3	EX 4	EXB 2-3-4
10	2800	2800	2800	2800	2800
20	2800	2800	2800	2800	2800
25	2800	2800	2800	2800	2800
30	2800	2800	2800	2800	2800
35	2800	2800	2800	2800	2800
40	—	2800	2800	2800	2800
50	2800	2800	2800	2800	2800
70	2800	2800	2800	2800	2800
80	2000	2800	2800	2800	2800
90	—	2800	2800	2800	2800
95	—	2800	2800	2800	2800
100	2000	2800	2800	2800	2800
150	2000	2800	2800	2800	2800
180	—	2800	2800	2800	2800
200	2000	2800	2800	2800	2800
250	2000	2000	2800	2800	2800
280	—	2000	2800	2800	2800
300	2000	2000	2800	2800	2800
350	1500	2000	2800	2800	2800
360	—	2000	2800	2800	2800
420	1500	2000	2800	2800	2800
600	—	2000	2800	2800	2800
650	1000	2000	2800	2800	2800
800	—	2000	2800	2800	2800
850	1000	2000	2800	2800	2800
1000	500	1500	2000	2800	2800
1200	500	1500	2000	2800	2800
1500	—	1500	2000	2800	2800
1600	500	1500	2000	2800	2800
2000	500	1000	2000	2800	2800
2500	—	—	2000	2800	2800
2600	500	1000	2000	2800	2800
3000	—	—	1500	2000	2800
3100	500	500	1500	2000	2800
3200	—	500	1500	2000	
3700	500	500	1500	2000	
4500	500	500	1500	2000	
5500	500	500	1000	2000	-
6800	500	500	1000	2000	
7500	—	500	500	1500	
8000	500	500	500	1500	

Taille *Tamaño* Tamanho	**Frein** ***Freno*** **Freio**		
	Z0	$n_{1\ max} \leq 2800$	Service - S1 *Servicio - S1* Serviço - S1
	Z1-Z2	$n_{1\ max} \leq 750$	
	Z1-Z2	$n_{1\ max} > 750$	Service - S2 *Servicio - S2* Serviço - S2

S1 - Service continu:
fonctionnement à charge constante pour une période de temps indéfinie, cependant suffisante pour atteindre l'équilibre thermique.

S1 - Servicio continuo:
funcionamiento con carga constante durante un periodo indefinido, siempre suficiente para alcanzar el equilibrio térmico.

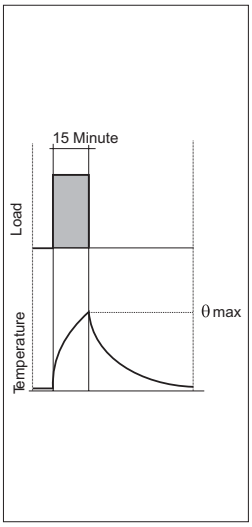
S1 - Serviço contínuo:
funcionamento com carga constante por um período de tempo indefinido, porém suficiente para alcançar o equilíbrio térmico.



S2 - Service de durée limitée:
fonctionnement à charge constante pour une période de temps limitée ne permettant pas d'atteindre l'équilibre thermique, suivie d'une période de repos suffisante pour ramener le frein à température ambiante.

S2 - Servicio de duración limitada:
funcionamiento de carga constante durante un periodo limitado insuficiente para alcanzar el equilibrio térmico, seguido de un periodo de reposo suficiente para restablecerla temperatura ambiente del freno.

S2 - Serviço de duração limitada:
funcionamento com carga constante por um período de tempo limitado insuficiente para alcançar o equilíbrio térmico, seguido por um período de repouso suficiente para colocar o freio na temperatura ambiente.



1.4 Contrôles

Ce paragraphe a le but de déterminer la charge radiale et/ou axiale admissible et/ou la durée des roulements des arbres en entrée et en sortie du réducteur soumis à l'action de charges radiales et axiales provenant de machines motrices et opérationnelles.

4.1 Fr_{en1-2} et Fa_{en1-2}
Pour le calcul des charges radiales et axiales des machines motrices et opérationnelles appliquées au réducteur voir paragraphe 1.3.

4.2 Cas 1
Charges axiale et radiale n'agissent pas simultanément.
A - Vérification charge axiale

Méthode de Calcul Fa_{c1-2}

$$Fa_{c1-2} = K \times Fa_{n1-2} \quad (4/a)$$

La charge axiale nominale réducteur **Fa_{n1}** ; **Fa_{n2}** est indiquée dans les fiches techniques du produit, sa valeur a été calculée en considérant **Fs** = 1 et $f_{nh} = 10^5$.
Si le paramètre calculé fnh de l'application n'est pas égal à 10^5, il est nécessaire de calculer la valeur de **Fa_{c1-2}** en utilisant le facteur de correction de la charge K, dont la valeur est indiquée dans les fiches techniques du produit.

À ce point il est possible de vérifier la condition indiquée dans la formule :

$$Fa_{c1-2} \geq Fa_{en1-2} \times Fs \quad (4/b)$$

B1 - Vérification charge radiale
Méthode de Calcul Fr_{c1-2}

$$Fr_{c1-2} = K \times Fr(x)_{n1-2} \quad (4/c)$$

La charge radiale nominale du réducteur à la distance « x », **Fr**$(x)_{n1}$; **Fr**$(x)_{n2}$ est indiquée dans les fiches techniques du produit, sa valeur a été calculée en considérant **Fs** = 1 and $f_{nh} = 10^5$ et où « x » représente la distance de la charge radiale de l'application de la butée de l'arbre en sortie.

Si le paramètre calculé fnh de l'application est différent de 10^5 , il est nécessaire de calculer la valeur de **Fr_{c1-2}** en utilisant le facteur de correction de la charge K, dont la valeur est indiquée dans les fiches techniques du produit.

À ce point il est possible de vérifier la condition indiquée dans la formule :

$$Fr_{c1-2} \geq Fr_{en1-2} \times Fs \quad (4/d)$$

1.4 Controles

Este párrafo tiene la finalidad de determinar la carga radial y/o axial admisible y/o la duración de los cojinetes de los ejes de entrada y salida del reductor sometido a la acción de cargas radiales y axiales que derivan de máquinas motrices y operadoras.

4.1 Fr_{en1-2} y Fa_{en1-2}
Para el cálculo de las cargas radiales y axiales de las máquinas motrices y operadoras aplicadas al reductor, consultar el párrafo 1.3.

4.2 Caso 1
Carga axial y radial no actúan contemporáneamente.
A - Control carga axial

Método de Cálculo Fa_{c1-2}

*La carga axial nominal reductor **Fa_{n1}** ; **Fa_{n2}** se indica en las fichas técnicas del producto, su valor ha sido calculado considerando **Fs** = 1 e $f_{nh} = 10^5$.*
*En caso de que el parámetro calculado fnh de la aplicación sea distinto de 10^5, es necesario calcular el valor de **Fa_{c1-2}** usando el factor de corrección de la carga K, cuyo valor se indica en las fichas técnicas del producto.*

Ahora es posible verificar la condición indicada en la fórmula:

B1 - Control carga radial
Método de Cálculo Fr_{c1-2}

*La carga radial nominal reductor a la distancia "x" , **Fr**$(x)_{n1}$; **Fr**$(x)_{n2}$ se indica en las fichas técnicas del producto, su valor ha sido calculado considerando **Fs** = 1 and $f_{nh} = 10^5$ donde "x" es la distancia de la carga radial nominal aplicación del tope del eje de salida.*

*En caso de que el parámetro calculado fnh de la aplicación sea distinto de 10^5 , es necesario calcular el valor de **Fr_{c1-2}** usando el factor de corrección de la carga K, cuyo valor se indica en las fichas técnicas del producto.*

Ahora es posible verificar la condición indicada en la fórmula:

1.4 Controles

Este parágrafo tem a finalidade de determinar a carga radial e/ou axial admitida e/ou a duração dos rolamentos dos eixos na entrada e saída do redutor submetido à ação de cargas radial e axiais derivadas de máquinas motrizes e operatriz.

4.1 Fr_{en1-2} e Fa_{en1-2}
Para o cálculo das cargas radial e axiais das máquinas motrizes e operatrizes aplicadas ao redutor, consultar o parágrafo 1.3.

4.2 Caso 1
Carga axial e radial não atuam simultaneamente.
A - Verificação da carga axial

Método de Cálculo Fa_{c1-2}

A carga axial nominal do redutor **Fa_{n1}** ; Fa_{n2} é indicada nas fichas técnicas do produto, cujo valor foi calculado considerando **Fs** = 1 e $f_{nh} = 10^5$.
Caso o parâmetro calculado fnh da aplicação seja diverso de 10^5, é necessário calcular o valor de **Fa_{c1-2}** utilizando o fator de correção da carga K, cujo valor é indicado nas fichas técnicas do produto.

Nesta altura, é possível verificar a condição mostrada na fórmula:

B1 - Verificação da carga radial
Método de Cálculo Fr_{c1-2}

A carga radial nominal do redutor na distância "x" , **Fr**$(x)_{n1}$; **Fr**$(x)_{n2}$ é mostrada nas fichas técnicas do produto, cujo valor foi calculado considerando **Fs** = 1 and $f_{nh} = 10^5$ e onde "x" é a distância da carga radial nominal da aplicação do batente do eixo de saída.

Caso o parâmetro calculado fnh da aplicação seja diverso de 10^5, é necessário calcular o valor de **Fr_{c1-2}** utilizando o fator de correção da carga K, cujo valor é indicado nas fichas técnicas do produto.

Nesta altura, é possível verificar a condição mostrada na fórmula:

1.4 Contrôles

B2 - Calcul de la durée de vie en heures des roulements
Connaissant: Fr_{en1-2} ; Fs ; Fr (x) $_{n1-2}$ à la distance x de la butée.
Le facteur K pourra être calculé à partir de la formule indiquée.

$K = (Fr_{en1-2} \times Fs) / Fr\ (x)_{n1-2}$ **(4/e)**

Il est possible de déterminer la valeur f_{n2h} à partir du graphique du facteur K et connaissant le nombre de tours n2 , on en déduit la durée de vie h.

4.3 Cas 2
Les charges axiale et radiale agissent simultanément. Dans ce cas il est nécessaire d'effectuer un calcul de vérification complet qui nécessite la connaissance des données de base suivantes :

- charge radiale F_{ren2} (sens, intensité, direction);

-charge axiale F_{ren2} (sens, intensité);

1.4 Controles

B2 - Cálculo duración en horas de los cojinetes
Conociendo: Fr_{en1-2} ; Fs ; Fr (x) $_{n1-2}$ a una distancia x del tope.
Con la fórmula indicada se obtiene el factor K.

A partir del gráfico del factor K se obtiene el valor f_{n2h} con el cual, conociendo el número de revoluciones n2, se obtiene la duración h.

4.3 Caso 2
Carga axial y radial actúan contemporáneamente. En este caso es necesario efectuar un cálculo de control completo que requiere el conocimiento de los siguientes datos básicos:

-carga radial F_{ren2} (sentido, intensidad, dirección);

-carga axial F_{ren2} (sentido, intensidad);

-sentido de rotación del eje.

1.4 Controles

B2 - Cálculo da duração em horas dos rolamentos
Conhecendo:Fr_{en1-2} ; Fs ; Fr (x) $_{n1-2}$ à distância x do batente.
Pela fórmula indicada obtém-se o fator K.

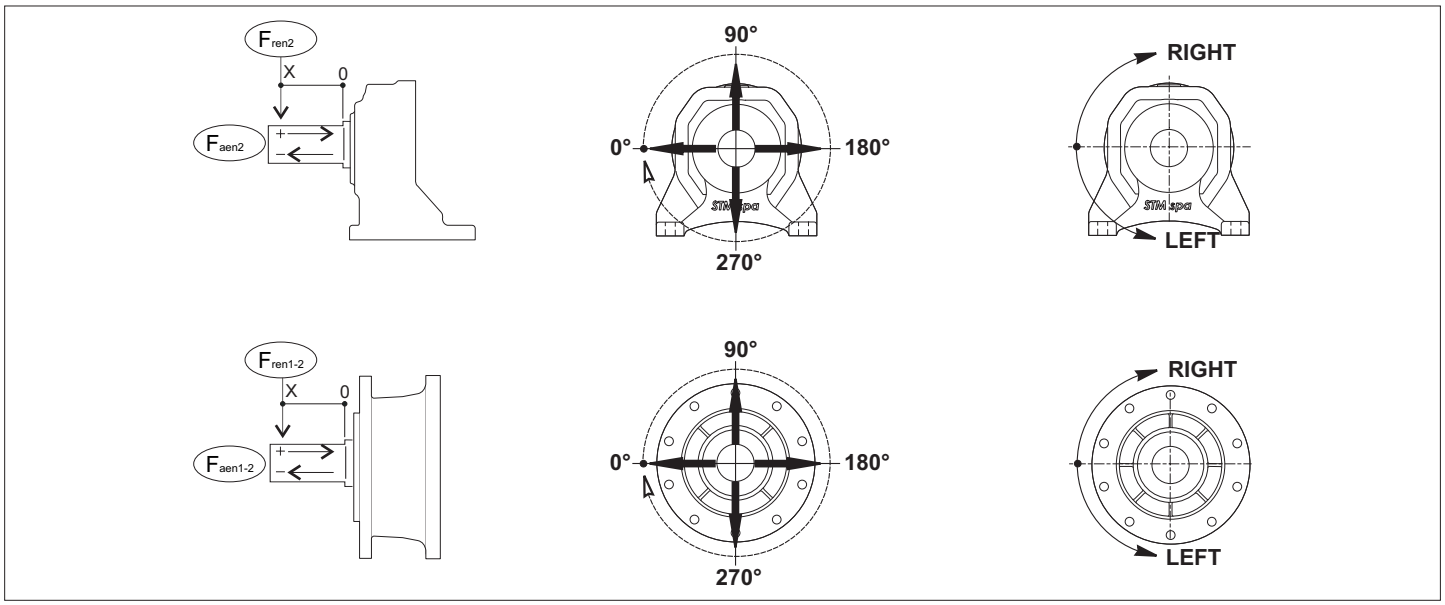
Pelo gráfico do fator K obtém-se o valor f_{n2h} do qual, conhecendo o número de roções n2 , obtém-se a duração h.

4.3 Caso 2
Carga axial e radial atuam simultaneamente.Neste caso, é necessário efetuar um cálculo de verificação completo que requer o conhecimento dos seguintes dados básicos:

-carga radial F_{ren2} (sentido,intensidade,direção);

-carga axial F_{ren2} (sentido, intensidade);

-sentido de rotação do eixo.



5) Vérification Position de montage

6)Lubrification

6.1 - Vérifier que le type et la viscosité de l'huile soient appropriés aux vitesses appliquées, aux charges et au rapport de réduction du réducteur sélectionné;
6.2 - Vérifier que la quantité d'huile soit conforme à la :
-taille;
-version;
- position de montage.
6.3 - Vérifier s'il faut monter un vase d'expansion et un bouchon de purge.

Pour de plus amples informations voir section V.

5) Control Posición de montaje

6) Lubricación

6.1 - Controlar que el tipo y la viscosidad del aceite sean adecuados para las velocidades aplicadas, las cargas y la relación de reducción del reductor seleccionado;
6.2 - Controlar que la cantidad de aceite corresponda a:
- tamaño ;
- versión;
- posición de montaje.
6.3 - Controlar si es necesario montar vaso de expansión y tapón de respiradero.

Para más información ver sección V.

5) Verificação da Posição de montagem

6) Lubrificação

6.1 - Verificar se o tipo e a viscosidade do óleo são idóneos às velocidades aplicadas, às cargas e à relação de redução do redutor selecionado;
6.2 - Verificar se a quantidade de óleo está em conformidade com:
- o tamanho;
- a versão;
- posição de montagem.
6.3 - Verificar se é preciso montar o vaso de expansão e a tampa de respiro.

Para maiores esclarecimentos, consultar a secção V.

1.4 Contrôles

7) Puissance thermique du réducteur :
il est nécessaire de vérifier la formule suivante:

$$P_1 \leq P_{tN} \times f_m \times f_a \times f_d \times f_p \times f_f \quad [kW] \qquad \textbf{(7/a)}$$

Les considérations sur les paramètres avec lesquels la valeur de P_{tN} a été calculée sont reportées dans le tableau avec l'indication du paramètre de correction pour chaque paramètre.

Les valeurs de P_{tN} des réducteurs sont indiquées dans le tableau de la page suivante.

Pour les réducteurs combinés de type EXV - EXA - EXO etc., il est nécessaire de vérifier également la puissance à la limite thermique du réducteur couplé.
La puissance applicable dérive du minimum des deux valeurs calculées.

1.4 Controles

7)Potencia térmica del reductor:
es necesario controlar la siguiente fórmula:

Las consideraciones sobre los parámetros con los cuales ha sido calculada la P_{tN} se encuentran en la tabla con la indicación, por cada parámetro, del relativo parámetro de corrección.

Los valores de las P_{tN}de los reductores se detallan en la tabla de la página siguiente.

En los reductores combinados del tipo EXV - EXA - EXO etc. es necesario también controlar la potencia al límite térmico del reductor acoplado.
La potencia aplicable deriva del mínimo de los dos valores calculados.

1.4 Controles

7) Potência térmica do redutor:
é necessário verificar a seguinte fórmula:

Considerações sobre os parâmetros com os quais foi calculada a P_{tN} são mostradas na tabela com indicado, para cada parâmetro, o relativo parâmetro de correção.

Os valores das P_{tN} dos redutores são mostrados na tabela indicada na página

Nos redutores combinados do tipo EXV - EXA - EXO etc., é necessário verificar a potência ao limite térmico também do redutor acoplado.
A potência aplicável deriva do mínimo dos dois valores calculados.

P_{tN} = puissance thermique nominale/*potencia térmica nominal*/potência térmica nominal		
Description conditions opérationnelles *Descripción condición operativa* Descrição da condição operacional	Valeur de Référence pour le calcul de P_{tN} *Valor Referencia para cálculo P_{tN}* Valor de Referência para o cálculo da PtN	Facteur de correction de référence *Factor de corrección de referencia* Fator de correção de referência
1 - Milieu de travail* *1 - Ambiente Trabajo ** 1- Ambiente de Trabalho *	milieu industriel ouvert avec vitesse de l'air de 1,4 m/s *ambiente industrial abierto con velocidad del aire de 1,4 m/s* ambiente industrial aberto com velocidade do ar de 1,4 m/s	Type de milieu à définir/*Tipo de ambiente por determinar* / A definir o tipo de ambiente Exemple / *Ejemplo* /Exemplo A - Milieu fermé / *Ambiente Cerrado*/Ambiente Fechado B - Carter/ *Cárter*/Cárter
2 - État en surface * 2 - *Estado Superficial ** 2 - Estado Superficial *	Non peint, sans accumulation de poussière et/ou saleté. *Sin pintar, sin ninguna acumulación de polvo y/o suciedad.* Não pintado com nenhum acúmulo de poeira e/ou sujeira.	Type de finition à définir/*Tipo acabado por determinar*/A definir o tipo de acabamento Exemple / *Ejemplo* / Exemplo A - Peint/*Pintado*/Pintado; B - Sale et/ou Poussière/*Suciedad y/o Polvo*/Sujeira e/ou Poeira
3 - Motorisation * 3 - *Motores ** 3 - Motorização *	Version ECE - Sans aucune ventilation *Versión ECE - Sin ninguna ventilación* Versão ECE - Sem alguma ventilação	Type d'unité motrice à définir /*Tipo unidad motriz por determinar* / A definir o tipo de unidade motriz Si l'unité motrice est installée directement sur le réducteur, elle en perturbe l'équilibre thermique. *Si la unidad motriz se ha instalado directamente en el reductor, perjudica su estado de equilibrio térmico*. Se a unidade motriz é instalada diretamente no redutor, perturba o seu estado de equilíbrio térmico.
4 - Méthode de Lubrification 4 - *Método de Lubricación* 4 - Método de Lubrificação	Battement *Barboteo* Chapinhagem	fm.: facteur de correction pour la position de montage, vitesse et rapport. *fm.: factor de corrección para la posición de montaje, velocidad y relación.* fm.: fator de correção para a posição de montagem, velocidade e relação. Lubrification forcée : prévue avec le coefficient fm qui dans ce cas doit être égal à 1. *Lubricación forzada: está previsto un coeficiente fm que en este caso se considera igual a 1*. Lubrificação forçada: é considerado o coeficiente fm a ser colocado, neste caso, igual a 1.
5 - Position de montage 5 - *Posición de montaje* 5 - Posição de montagem	M1	
6 - n_1	1000 [rpm]	
7 - Type de lubrifiant * 7 - *Tipo Lubricante ** 7 - Tipo de Lubrificante *	PAG ISO VG 320 huile synthétique *PAG ISO VG 320 aceite sintético* PAG ISO VG 320 óleo sintético	À définir *Por definir* A definir
8 - t_a	20 [° C]	fp = facteur de correction de la température ambiante *fp = factor de corrección de la temperatura ambiente* fp = fator de correção da temperatura ambiente
9 - t_{oil}	-	-
10 - Type de Service 10 - *Tipo Servicio* 10 - Tipo de Serviço	Continu *Continuo* Contínuo	fd = facteur de correction du temps de travail *fd = factor de corrección del tiempo de trabajo* *fd* = fator de correção do tempo de trabalho
11 - Altitude 11 - *Altitud* 11- Altitude	0 [m]	fa = facteur de correction de l'altitude *fa = factor de corrección de la altitud* *fa* = fator de correção da altitude

1.4 Contrôles — *1.4 Controles* — 1.4 Controles

P_{tN}	
	ALL SIZES
EX 1	Voir les tableaux des performances *Ver tablas de las prestaciones* Consultar as tabelas dos desempenhos
EX 2	
EX 3	
EX 4	

ATTENTION :
Cette valeur ne doit pas être confondue avec la puissance de l'unité motrice installée qui par exemple peut être plus grande que nécessaire pour des exigences de normes.

ATENCIÓN:
Este valor no se debe confundir con la potencia de la unidad motriz instalada que, por ejemplo, por exigencias de normalización a veces se elige más grande de lo necesario.

ATENÇÃO:
Este valor não deve ser confundido com a potência da unidade motriz instalada que, por exemplo, por exigências de normalização, às vezes é escolhido maior que o necessário.

f_m

size		M1-M2-M5-M6	M3-M4	
			n_1	
		>1000 - n_{1max}	> 1000 -1750	1751-n_{1max}
EX...1	**10-20-25**	0.95	0,9	
	30-35-40-50-70	0.95	0.9	0.75
	80-90-95-100	0.90	0.8	0.65
	150-180-200-250-280-300	0.85	0.7	0.60
	350-360-420	0.8	0.68	0.58
	600-650	1.0	1.0	1.0
	800-850	1.0	1.0	1.0
	1000-1200-1500-1600-2000 2500-2600-3000-3100-3200-3700-4500 5500-6800-7500-8000	1.0	1.0	1.0

size		EX: M1-M2-M5-M6 EXB: M...1 - M...2	EX: M3-M4 EXB: M...3 - M...4 - M...5 - M...6	
			n_1	
		> 1000-n_{1max}	> 1000 -1750	1751-n_{1max}
EX...2 EXB...2 EX...3 EXB...3 EX...4 EX...4	**10-20-25**	1.0	1.0	1.0
	30-35-40-50-70	1.0	0.95	0.80
	80-90-95-100	0.95	0.85	0.70
	150-180-200-250-280-300	0.90	0.75	0.65
	350-360-420	0.85	0.7	0.60
	600-650	0.8	0.68	0.58
	800-850	0.8	0.68	0.58
	1000-1200-1500	0.8	0.68	0.58
	1600-2000	0.8	0.68	0.58
	2500-2600-3000-3100	0.8	0.68	0.58
	3200-3700-4500	0.8	0.68	0.58
	5500-6800-7500-8000	0.8	068	0.58

N.B. Les valeurs de n_{1max} sont reportées au point 3 (Vérifications).
(fm =1 dans le cas ou n_1= 0-1000 min^{-1})

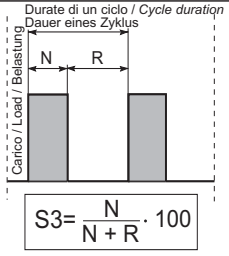
Nota Los valores de $n_{1máx}$ se indican en el punto 3 (Controles).
(fm =1 cuando n_1= 0-1000 rpm)

OBS. Os valores de n_{1max} são mostrados no ponto 3 (Verificações).
(fm =1 no caso em que n_1= 0-1000 min^{-1})

f_a

m	0	750	1500	2250	3000
fa	1	0.95	0.90	0.85	0.81

f_d

S3%		
100	1	
80	1.05	
60	1.15	
40	1.35	
20	1.8	

f_p

Température ambiante *Temperatura ambiente* Temperatura ambiente	50 °C	40 °C	30 °C	20 °C	10 °C	0 °C
	0.63	0.75	0.87	1	1.12	1.25

1.4 Contrôles

Le facteur correctif ff de la puissance thermique tenant compte de l'effet réfrigérant du ventilateur saisit en conformité avec les normes AGMA 6010.E88 les valeurs figurant au tableau. L'emploi est limité aux vitesses supérieures ou de l'ordre de 700 min^{-1}.

1.4 Controles

El factor correctivo ff de la potencia térmica que tiene en cuenta el efecto refrigerante del ventilador asume, de acuerdo a las normas AGMA 6010.E88, los valores que se indican en la tabla. El uso está limitado a las velocidades mayores o iguales a 700 min^{-1}.

1.4 Controles

O fator de correção ff da potência térmica que tem em conta o efeito refrigerante do microventilador, assume conforme as normas AGMA 6010.E88 os valores registrados na tabela. Seu emprego é limitado às velocidades maiores ou iguais a 700 min^{-1}.

f_f

Type / *Tipo* / Tipo	Type ventilateur / *Tipo ventilador* / Tipo microventilador	Note / *Notas* / Notas	f_f
EX **EXB**	VE	Contacter pour la sélection le service Technico-commercial. *Para la selección, contactar con el servicio Técnico Comercial* Contactar, para a seleção, o serviço Técnico Comercial	

Au cas où cette condition (7/a) ne serait pas vérifiée, il faut remplacer le ventilateur par un groupe de refroidissement doté d'un échangeur de chaleur. En cas de sélection du groupe de refroidissement approprié, il faut déterminer la P_{ta} nécessaire :

Cuando dicha condición (7/a) no se compruebe, es necesario sustituir el ventilador por un grupo de enfriamiento con intercambiador de calor. Para seleccionar el grupo de enfriamiento adecuado, es necesario determinar la P_{ta} necesaria:

Caso tal condição (7/a) não seja verificada é necessária a troca do microventilador com uma unidade de resfriamento com cambiador de calor. Para selecionar a unidade de resfriamento adequada é preciso determinar a P_{ta} necessária:

$$P_{ta} = P_1 - (P_{tN} \times f_m \times f_a \times f_d \times f_p) \quad [kW] \qquad \textbf{(7/b)}$$

Où:
P_{ta} = puissance thermique additionnelle

Donde:
P_{ta} = potencia térmica adicional

onde:
P_{ta} = potência térmica adicional

Une fois le groupe de refroidissement sélectionné, contrôler à nouveau, en ajoutant à la précédente la valeur maximale de P_{tamax} de la plage identifiée sur le tableau, ajustée au moyen des coefficients correctifs de température de l'eau et de l'air:

Luego de haber seleccionado el grupo de enfriamiento, repetir el control agregando al precedente, el valor máximo de $P_{tamáx}$ del range identificado expresado en la tabla, adecuado con los coeficientes correctivos de temperatura agua y aire:

Depois de ter selecionado o sistema de resfriamento, repita o controle acrescentando à precedente o valor máximo de P_{tamax} da gama identificada expressa na tabela, adequada aos coeficientes corretores de temperatura, água e ar:

$$P_1 \leq (P_{tN} \times f_m \times f_a \times f_d \times f_p) + (P_{tamax} \times f_w \times f_a) \quad [kW] \qquad \textbf{(7/b)}$$

Où:
P_{tamax} = puissance thermique additionnelle de la plage identifiée figurant au tableau
fw = coefficient concernant la température de l'eau (sauf fc)
fc = coefficient concernant la température de l'air (sauf fw)

donde:
$P_{tamáx}$ = potencia térmica adicional del range identificado expresado en la tabla
fw = coeficiente relativo a la temperatura del agua (excluye fc)
fc = coeficiente relativo a la temperatura del aire (excluye fw)

onde:
P_{tamax} = potência térmica adicional da gama identificada expressa na tabela
fw = coeficiente relativo à temperatura da água (exclui fc)
fc = coeficiente relativo à temperatura do ar (exclui fw)

Pta [kW]

EX

Refroidissement à l'aide d'un échangeur d'eau-huile (Teau=15°C)
Enfriamiento con intercambiador agua-aceite (Tagua=15°C)
Resfriamento com cambiador de água-óleo (T. água=15°C)

RFW...		EX 1	EX 2	EX 3	EX 4
Size	Q_{min}				
1	6	≤ 135	≤ 66	≤ 46	≤ 37
2	6	136 ÷ 219	67 ÷ 108	47 ÷ 74	38 ÷ 59
3	16	220 ÷ 412	109 ÷ 202	75 ÷ 139	60 ÷ 111
4	30	413 ÷ 1104	203 ÷ 542	140 ÷ 373	112 ÷ 298
5	80	1105 ÷ 1972	543 ÷ 968	374 ÷ 666	299 ÷ 533
6	135	1972÷ 3280	968 ÷ 1610	666 ÷ 1107	533 ÷ 886
7	200	3280 ÷ 5910	1610 ÷ 2901	1107 ÷ 1995	886 ÷ 1596
8	200	5910 ÷ 7509	2901 ÷ 3686	1995 ÷ 2536	1596 ÷ 2027

Refroidissement à l'aide d'un échangeur d'air-huile (Tair=20°C)
Enfriamiento con intercambiador aire-aceite (Taire=20°C)
Resfriamento com cambiador de ar- óleo (T. ar=20°C)

RFA...		EX 1	EX 2	EX 3	EX 4
Size	Q_{min}				
1	6	≤ 304	≤ 149	≤ 103	≤ 82
2	13	305 ÷ 407	150 ÷ 200	104 ÷ 138	83 ÷ 110
3	32	408 ÷ 798	201 ÷ 392	139 ÷ 269	111 ÷ 215
4	112	799 ÷ 1336	393 ÷ 656	270 ÷ 451	216 ÷ 361
5	112	1337 ÷ 2003	657 ÷ 984	452 ÷ 676	362 ÷ 541
6	160	2004 ÷ 2516	985 ÷ 1235	677 ÷ 849	452 ÷ 679
7	160	2517 ÷ 3952	1236 ÷ 1940	850 ÷ 1334	680 ÷ 1067

1.4 Contrôles — *1.4 Controles* — 1.4 Controles

EXB

Refroidissement à l'aide d'un échangeur d'eau-huile (Teau=15°C)
Enfriamiento con intercambiador agua-aceite (Tagua=15°C)
Resfriamento com cambiador de água-óleo (T. água=15°C)

RFW...		EXB 2	EXB 3 EXB 4
Size	Q_{min}		
1	6	≤ 46	≤ 37
2	6	47 ÷74	38 ÷59
3	16	75 ÷139	60 ÷111
4	30	140 ÷373	112 ÷298
5	80	374 ÷666	299 ÷533
6	135	666 ÷ 1107	533 ÷ 886
7	200	1107 ÷ 1995	886 ÷ 1596
8	200	1995 ÷ 2534	1596 ÷ 2027

Refroidissement à l'aide d'un échangeur d'air-huile (Tair=20°C)
Enfriamiento con intercambiador aire-aceite (Taire=20°C)
Resfriamento com cambiador de ar- óleo (T. ar=20°C)

RFA...		EXB 2	EXB 3 EXB 4
Size	Q_{min}		
1	6	≤ 103	≤ 82
2	13	104 ÷ 138	83 ÷ 110
3A	32	139 ÷ 269	111 ÷ 215
4	112	270 ÷ 451	216 ÷ 361
5	112	452 ÷ 676	362 ÷ 541
6	160	677 ÷ 849	452 ÷ 679
7	160	850 ÷ 1334	680 ÷ 1067

fw

Coefficient concernant la température de l'eau
Coeficiente relativo a la temperatura del agua
Coeficiente relativo à temperatura da água

Twater	15°C	20° C	25° C	30° C
fw	1	0.85	0.7	0.6

fc

Coefficient concernant la température de l'air
Coeficiente relativo a la temperatura del aire
Coeficiente relativo à temperatura do ar

Tair	15° C	20° C	25° C	30° C	35° C	40° C
fc	1.12	1	0.88	0.75	0.65	0.5

Après avoir sélectionné l'échangeur, il est nécessaire de vérifier si la quantité d'huile dans le réducteur est suffisante pour assurer un bon fonctionnement du groupe.Il faut donc que la relation suivante soit satisfaite :

Una vez seleccionado el intercambiador es necesario verificar si la cantidad de aceite del reductor es suficiente para garantizar un correcto funcionamiento del grupo.
Por lo tanto, se debe verificar la relación:

Assim que o trocador de calor é selecionado, é necessário verificar se a quantidade de óleo do redutor basta para garantir um correto funcionamento do grupo.Portanto, deve ser verificada a relação:

$$Q_{rid} \geq Q_{min} \times 1.2 \qquad \textbf{(7/c)}$$

Q_{rid} - Quantité d'huile de remplissage du réducteur (voir 1.8)
Q_{min} - Quantité d'huile minimale qui le réservoir d'huile doit avoir pour assurer le fonctionnement du groupe.

Q_{rid} - Cantidad de aceite de reposición del reductor (ver 1.8)
Q_{min} - Cantidad aceite mínima que debe tener el depósito de aceite para garantizar el funcionamiento del grupo.

Q_{rid} - Quantidade de óleo de enchimento do redutor (consulte 1.8)
Q_{min} - Quantidade mínima de óleo que o reservatório de óleo de ter para garantir o funcionamento do grupo..

Si la relation n'est pas satisfaite il est nécessaire de prévoir un réservoir supplémentaire.

En el caso de que no se respetase la relación, es necesario prever un depósito adicional.

Caso a relação não for atendida, é necessário prever um reservatório adicional.

8) Conditions d'emploi :
8.1 - ta > 0 °C: voir les points 6 et 7;
8.2 - ta < -10 °C: contacter le service technico-commercial.

8) Condiciones de uso:
8.1 - ta > 0 °C: ver los puntos 6 y 7;
8.2 - ta < -10 °C: contactar con nuestro servicio técnico-comercial.

8) Condições de uso:
8.1 - ta > 0 °C: consultar os pontos 6 e 7;
8.2 - ta < -10 °C: contactar o nosso serviço técnico-comercial.

1.4 Contrôles

9) Couple de glissement du moyeu d'assemblage

La formule suivante doit être satisfaite :

1.4 Controles

9) Par de deslizamiento del acoplador

Es necesario que se cumpla la siguiente relación:

1.4 Controles

9)Binário de deslize do anel de contração

É necessário que seja atendida a seguinte relação:

$M_{2s} > T_{2max}$ **(7/d)**

M_{2S} [Nm] Couple de glissement - *Par Deslizamiento* - Binário de Deslize	
10 - 20 - 25	2000
30 - 35 - 40 - 50 - 70	7500
80	13000
90 - 95 - 100	17600
150 - 180 - 200	35000
250 - 280	41000
300	52000
350 - 360	62000
420	86000
600 - 650	136000
800 - 850	176000
1000 - 1200	342000
1500 - 1600 - 2000	398000
2500 - 2600 - 3000 - 3100 - 3200	603000
3700 - 4500	800000
5500	990000
6800 - 7500	1235000
8000	1235000

Note
Pour les grandeurs ≤ 420 on utilise des moyeux d'assemblage plus larges permettant une distribution de la charge plus uniforme, réduisant ainsi la tension sur l'arbre en sortie.

Nota
En los tamaños ≤ 420 se usan acopladores con mayor ancho, que permiten una distribución de la carga más uniforme, reduciendo de esta forma el estado de tensión del eje de salida.

Nota
Nos tamanhos ≤ 420 são utilizados anéis de contração com largura aumentada que permitem ter uma distribuição da carga mais uniforme, reduzindo assim o estado tensional do eixo de saída.

10) Vérifier le poids du moteur électrique :
EX - Linéaire :

Si le poids du moteur électrique installé est supérieur aux valeurs indiquées dans le tableau et si la position du montage du réducteur implique que le moteur se trouve dans les positions 1-2-3, contacter notre service technique pour vérifier que l'installation est appropriée en tenant compte du poids du moteur installé et du facteur de service de l'application.

P_{KG} - poids moteur électrique

10) Control peso motor eléctrico:
EX - Lineal:

En caso de que el peso del motor eléctrico instalado sea mayor de los valores indicados en la tabla y la posición de montaje del reductor coloque el motor en las posiciones 1-2-3, es necesario contactar con nuestro servicio técnico para comprobar que la instalación sea idónea, considerando el peso del motor instalado y el factor de servicio de la aplicación.

P_{KG} - peso motor eléctrico

10) Verificação do peso do motor elétrico:
EX - Linear:

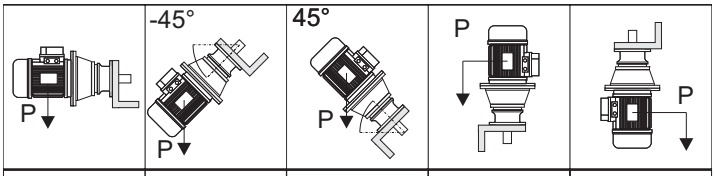
Caso o peso do motor elétrico instalado seja maior que os valores mostrados na tabela e caso a posição de montagem do redutor seja tal a colocar o motor nas posições 1-2-3, é necessário contactar o nosso serviço técnico para verificar se a instalação é idónea, considerando o peso do motor instalado e o fator de serviço da aplicação.

P_{KG} - peso do motor elétrico

1.4 Contrôles

1.4 Controles

1.4 Controles



1	2	3	4	5

Si le poids du moteur électrique installé est supérieur aux valeurs indiquées dans le tableau, contacter notre service technique pour vérifier que l'installation est appropriée en tenant compte du poids du moteur installé et du facteur de service de l'application.

En caso de que el peso del motor eléctrico instalado sea mayor de los valores indicados en la tabla, es necesario contactar con nuestro servicio técnico para comprobar que la instalación sea idónea, considerando el peso del motor instalado y el factor de servicio de la aplicación.

Caso o peso do motor elétrico instalado seja maior que os valores mostrados na tabela, é necessário contactar o nosso serviço técnico para verificar se a instalação é idónea, considerando o peso do motor instalado e o fator de serviço da aplicação.

IEC	50	56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
PKG - max	3,9	5	8	11	15,6	24	33	47	83	150	214	263	344	450	682	1162

11) Couple de freinage-Moteur Autofreinant

En cas de freinages T_{2max} peut être considéré comme la partie du couple de décélération (T_{2dec}) passant par l'arbre côté sortie du réducteur :

11) Par frenado-Motor Autofrenante

En caso de frenados T_{2max}se puede considerar como la parte del par de desaceleración (T_{2dec}) que pasa a través del eje lento del reductor:

11) Torque de frenagem-Motor Autofrenante

No caso de frenagens, T_{2max} pode ser considerada como aquela parte do torque de desaceleração (T_{2dec}) que passa através do eixo lento do redutor:

$$T_{2max} = T_{2dec} = \left(\left(\frac{T_{1f} \cdot ir}{\eta} \right) - T_{2n} \right) \cdot \left(\frac{J}{J + \frac{J_0}{\eta}} \right) + T_{2n} \quad \textbf{[Nm]}$$

où :
J : moment d'inertie de la machine et du réducteur réduit sur l'arbre du moteur (kgm2)
J_0 : moment d'inertie des masses en rotation sur l'arbre du moteur (kgm2)
T_{1f} : couple de freinage dynamique (Nm)

donde:
J: momento de inercia de la máquina y del reductor reducido al eje del motor (kgm2)
J_0: momento de inercia de las masas de rotación en el eje del motor (kgm2)
T_{1f}: par frenante dinámico (Nm)

onde:
J: momento de inércia da máquina e do redutor reduzido ao eixo do motor (kgm2)
J_0: momento de inércia das massas rotativas no eixo do motor (kgm2)
T_{1f} : binário de frenagem dinâmica (Nm)

Avant la mise en service du réducteur, il faut vérifier la relation suivante :

Antes del arranque del reductor, es necesario verificar la siguiente relación:

Antes da colocação em serviço do redutor, é necessário verificar a seguinte relação:

$$T_{2max} < T_{max} \qquad \textbf{(7/e)}$$

Au cas où la condition ne serait pas respectée, il est nécessaire de régler le couple de freinage.

Si no se respeta la condición, se debe efectuar la regulación del par de frenado.

Caso a condição não seja respeitada, é necessário efetuar a regulação do binário de frenagem.

1.5 État lors de la fourniture

1.5.0 MISE EN PEINTURE ET PROTECTION

Les réducteurs sont peints en surface avec un primer antioxydant à l'eau de couleur rouge, sauf accord contractuel différent

La protection est résistante aux conditions environnementales industrielles normales également externes et permet une finition avec des peintures synthétiques.

Pour de plus amples informations concernant l'état du produit à la fourniture, se reporter au tableau suivant

Caractéristiques de la Peinture

Dans le cas de conditions environnementales particulièrement agressives, utiliser des peintures spéciales **(TYP0-TYP1-TYP2 - TYP3 - TYP4).**

ATTENTION
En cas de mise en peinture des produits, éviter de peindre les parties usinées et les bagues d'étanchéité afin que la peinture n'altère pas les caractéristiques chimiques et physiques et ne réduise pas l'efficacité des déflecteurs d'huile. La plaque d'identification doit être également protégée. Le bouchon du niveau de l'huile et l'entrée du bouchon de purge (lorsqu'il existe) doivent également être protégés contre toute obstruction.

1.5 Estado del suministro

1.5.0 PINTURA Y PROTECCIÓN

Los reductores se pintan en la parte externa con base antioxidante al agua de color rojo, excepto en caso de disposiciones contractuales diferentes

La protección es idónea para resistir a ambientes industriales normales, incluso externos, y permitir acabados adicionales con pinturas sintéticas.

Para más información sobre el estado del suministro, ver la tabla siguiente

Características de la Pintura

*En caso de que se prevean condiciones ambientales particularmente agresivas, es necesario adoptar pinturas especiales **(TYP0-TYP1-TYP2 - TYP3 - TYP4).***

ATENCIÓN
En caso de pintura de los productos, se deben proteger de dicho tratamiento los planos elaborados y las estanqueidades, a fin de evitar que la pintura altere sus características químico-físicas y perjudique la eficiencia de la junta de retención de aceite. De la misma manera, es necesario preservar la placa de identificación y proteger contra la obstrucción el tapón de nivel del aceite y el orificio del tapón de respiradero (si están presentes).

1.5 Estado de fornecimento

1.5.0 PINTURA E PROTEÇÃO

Os redutores são pintados externamente com fundo antioxidante à base de água de cor vermelha, salvo disposições contratuais diferentes

A proteção é adequada para resistir a ambientes industriais normais, também externos, e para permitir outros acabamentos com tintas sintéticas.
Para maiores informações sobre o estado de fornecimento, consultar a tabela a seguir

Características da Tinta

Se forem previstas condições ambientais particularmente agressivas, deverão ser adotadas tintas especiais **(TYP0-TYP1-TYP2 - TYP3 - TYP4)**.

ATENÇÃO
Em caso de pintura dos produtos, é preciso preservar deste tratamento as superfícies usinadas e as vedações, para evitar que a tinta altere as suas características físico-químicas e prejudique a eficiência dos retentores de óleo. Analogamente, é preciso preservar a placa de identificação e proteger contra a oclusão a tampa de nível de óleo e o furo da tampa de respiro (quando presentes).

OPT2 Options-Vernissage Opciones-Pintura Opções-Pintura					
Série Serie Série	Vernissage Interne *Pintura Interna* Pintura Interna	Vernissage Externe *Pintura Externa* Pintura Externa		Surfaces usinées *Planos elaborados* Superfícies usinadas	Arbres *Ejes* Eixos
		Type et Caractéristiques du vernis *Tipo y Características pintura* Tipo e Características da tinta	Vernissable *Posibilidad de Pintura* Pode ser pintado		
TypEX					
EX **EXB**	Égal au vernissage externe *Igual a pintura externa* Igual à pintura externa	Fond antioxydant à base d'eau rouge *Base antioxidante al agua de color rojo* Fundo antioxidante à base de água de cor vermelha	Oui *Sì* Sim	Si le matériau est la fonte, elles sont protégées par une pâte antirouille. *Cuando el material y el hierro fundido están protegidos con pasta antioxidante.* Quando o material for o ferro fundido, são protegidos com pasta antiferrugem.	Protégées par une pâte antirouille. *Protegidos con pasta antioxidante* Protegidos com pasta antiferrugem.

1.5 État lors de la fourniture — *1.5 Estado del suministro* — 1.5 Estado de fornecimento

1.5.0 MISE EN PEINTURE ET PROTECTION — *1.5.0 PINTURA Y PROTECCIÓN* — 1.5.0 PINTURA E PROTEÇÃO

Protection de surface - *Protecciòn superficial* - Proteção superficial	**Nombre de couches - *Nùmero de tapas* - Número de camadas**	**Épaisseur - *Espesor* - Espessura**	**Convenable pour - *Adecuado para* - Adequado para**
TYP 1 "STANDARD"	1x Primer 1x Two-component top coat	Circa/Approx. **120 micron** A Secco/*Dry*	1 - FAIBLE impact - (conditions ambiantes normales) Impacto ambiental BAJO - (*condiciones* ambientales normales) Impacto *ambiental* BAIXO - (condições ambientais normais) 2 - Humidité relative inférieure à 90% - *Humedad relativa inferior al 90* % - Humidade relativa inferior a 90% 3 -Température de surface maximale. 120 °C - *Temperatura superficial máxima. 120* °C Temperatura superficial máxima. 120 °C 4 - Catégorie de corrosivité « C3-M » - *Categoría* de *corrosión* "C3-M" Categoria de corrosividade "C3-M" **(DIN EN ISO 12,944-2)**
TYP 2 Standard renforcé *Estàndar reforzado* Padrão reforçado	1x Primer 1x Two-pack Intermediate 1x Two-pack top coat	Approx. **160 micron** A Secco	1 - Impact MOYEN - *Impacto ambiental MEDIO* - Impacto *ambiental MÉDIO* 2 - Humidité relative maximale 95 % - *Humedad* relativa *máxima 95* % - Humidade relativa máxima 95 % 3 - Température de surface maximale 120 °C -*Temperatura superficial* máxima 120 °C - Temperatura superficial máxima 120 °C 4 - Catégorie de corrosivité « C4-M » - *Categoría* de *corrosión* "*C4-M*" - Categoria de corrosividade "C4-M" **(DIN EN ISO 12,944-2)**
TYP 3 Industriel *Industrial* Industrial	1x Primer 2x Two-pack Intermediate 1x Two-pack top coat	Approx. **240 micron** A Secco	1 - Impact ÉLEVÉ - Application - *Impacto ambiental ALTO* - Aplicación - Impacto ambiental ALTO - Aplicação 2 - Humidité relative maximale 100 % - *Humedad relativa máxima 100* % - Humidade relativa máxima 100 % 3 - Température de surface maximale 120 °C - *Temperatura superficial* máxima 120 °C - Temperatura superficial máxima 120 °C 4 - Catégorie de corrosivité « C5I-M » - *Categoría* de *corrosión* "C5I-M" - Categoria de corrosividade "C5I-M" **(DIN EN ISO 12,944-2)**
TYP 4 Marin Marino Marinho	1x Zinc Primer 2x Two-pack Intermediate 2x Two-pack top coat	Approx. **320 micron** A Secco	1 - Impact élevé - Application - *Alto impacto ambiental* - *Aplicación ambiente* - Alto impacto ambiental - Aplicação em ambienten 2 - Humidité relative maximale 100 % - *Humedad relativa máxima 100* % - Humidade relativa máxima 100 % 3 - Température de surface maximale 120 °C - *Temperatura superficial máxima 120* °C - Temperatura superficial máxima 120°C 4 - Catégorie de corrosivité - *Categoría de corrosión* - Categoria de corrosividade "C5M-M" **(DIN EN ISO 12,944-2)**
Sur demande il est possible de fournir le cycle de peinture, les fiches techniques des produits utilisés et les rapports des essais a *A pedido es posible suministrar ciclo de pintura, fichas técnicas de los productos usados e informe de prueba* Sob encomenda, é possível fornecer ciclo de pintura, ficha *técnicas dos produtos utilizados* e relatório de ensaio			

1.5 État lors de la fourniture

1.5 Estado del suministro

1.5 Estado de fornecimento

1.5.1 MATÉRIAUX DE CONSTRUCTION

1.5.1 MATERIALES DE FABRICACIÓN

1.5.1 MATERIAIS CONSTITUINTES

1.5.1.1 Carcasses - Brides - Couvercles

1.5.1.1 Cajas - Bridas - Tapas

1.5.1.1 Caixas - Flanges – Tampas

Série *Serie* Série	**Supports Sortie** ***Soportes Salida*** **Suportes Saída**		**Supports Entrée** ***Soportes Entrada*** **Suportes Entrada**	
	Gicleurs en fonte à graphite sphéroïdal *Chorros de hierro fundido de grafito esferoidal* Fusões de ferro fundido com grafite esferoidal		Gicleurs en fonte à graphite sphéroïdal *Chorros de hierro fundido de grafito esferoidal* Fusões de ferro fundido com grafite esferoidal	Fusions en fonte grise *Fusiones de hierro fundido gris* Fusões de ferro fundido cinzento
EX **EXB**	R-M-MX-T-H-X-S-SB P-PH-PX-PS-PSB F-FB-FP-FS-FSR-FSB FC-FCB FU-HU-SU-TU		EXB - ECR	EU - ECE - IEC - I

1.5.1.2 Matériau des bagues d'étanchéité

1.5.1.2 Material de los anillos de estanqueidad

1.15.1.2 Material dos anéis de vedação

Série *Serie* Série	**OPT** Options - Matériau des bagues d'étanchéité *Opciones - Material de los anillos de estanqueidad* Opções - Material dos anéis de vedação	
	— (Joints standard / *Estanqueidad estàndar* / Vedações padrão)	.... Opzioni - Disponibile *Opciònes - Disponible* Opções – disponível Sur demande *A pedido* Sob encomenda
EX **EXB** **EX.**	— **(VT1 - NBR2)**	**VT2**

NBR1	Bagues en caoutchouc nitrile à l'entrée	*Juntas de retención de aceite de NBR en entrada*	Retentor de óleo em NBR na entrada
NBR2	Bagues en caoutchouc nitrile à la sortie	*Juntas de retención de aceite de NBR en salida*	Retentor de óleo em NBR na saída
NBR	Bagues en caoutchouc nitrile à l'entrée et à la sortie	*Juntas de retención de aceite de NBR en entrada y en salida*	Retentor de óleo em NBR na entrada e na saída
VT1	Bagues raccordement n à l'entrée	*Juntas de retención de aceite perforación n en entrada*	Retentor de óleo em viton na entrada
VT2	Bagues raccordement n à la sortie	*Juntas de retención de aceite perforación n en salida*	Retentor de óleo em viton na saída
VT	Bagues raccordement n à la l'entrée a sortie	*Juntas de retención de aceite perforación en entrada y en salida*	Retentor de óleo em viton na entrada e na saída

1.5 État lors de la fourniture

1.5.2 Lubrification

1.5 Estado del suministro

1.5.2 Lubricación

1.5 Estado de fornecimento

1.5.2 Lubrificação

EX	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	all sizes	**OUTOIL**

EXB	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	all sizes	**OUTOIL**

Z0	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
		OUTOIL

Z1	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
		OUTOIL

Z2	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
		OUTOIL

EXV	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	V	Réducteur/*Redutor*/Redutor **R** Look at CT16

EXC	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	C	Réducteur/*Redutor*/Redutor **C** Look at CT 16

EXS	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	S	Réducteur/*Redutor*/Redutor **S** Look at CT 17

EXR	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	R	Réducteur/*Redutor*/Redutor **RX** Look at GSM_mod CT 03

EXO	OPT1 - Options - État de la fourniture d'huile *Opciones - Estado suministro aceite* Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	O	Réducteur/*Redutor*/Redutor **O** Look at CT 17

EXA	OPT1 - Options - État de la fourniture d'huile Opciones - Estado suministro aceite Opções- Estado de fornecimento do óleo	
		Sigle de la commande *Sigla pedido* Sigla do pedido
	EX	**OUTOIL**
	A	Réducteur/*Redutor*/Redutor **A** Look at CT 17

1.5 État lors de la fourniture

1.5.2 Lubrification

ATTENTION :
L'état de fourniture est indiqué par un autocollant appliqué sur le réducteur.Vérifier la correspondance entre l'état.

1.5 Estado del suministro

1.5.2 Lubricación

ATENCIÓN:
El estado del suministro se evidencia con una placa adhesiva ubicada en el reductor.Verificar la coincidencia entre estado de.

1.5 Estado de fornecimento

1.5.2 Lubrificação

ATENÇÃO:
O estado de fornecimento é indicado por uma etiqueta adesiva aplicada no redutor.Verifique a correspondência entre o estado de.

OPT1 - Options - État de la fourniture d'huile
Opciones - Estado suministro aceite
Opções- Estado de fornecimento do óleo

État du produit à la fourniture *Estado suministro* Estado de fornecimento	Réducteur - Lubrification *Reductor - Lubricación* Redutor - Lubrificacão	Type *Tipo* Tipo	NOTE *NOTAS* NOTAS	Plaquette *Placa* Placa
OUTOIL Réducteur Sans Lubrifiant *Reductor sin Lubricante Estándar STM* Redutor Sem Lubrificante Padrão STM	Utilisation d'huile à base synthétique conseillée. Voir à ce propos les indications reportées en Section V. Tous les réducteurs avec limiteur de couple LC-LP-LF doivent être lubrifiés à l'huile : **la lubrification avec de la graisse n'est pas admise.** *Se recomienda el uso de aceites con base sintética.* *Consultar las indicaciones detalladas en la Sección V.* *Todos los reductores con limitador de par LC-LP-LF se deben lubricar con aceite:* ***la lubricación con grasa no está admitida****.* Recomenda-se o uso de óleos de base sintética.Ver as indicações mostradas na Secção V.Todos os redutores com limitador de binário LC-LP-LF devem ser lubrificados com óleo: **a lubrificação com massa não é admitida.**		STM Raccomanda uso Lubrificanti PETRONAS Les réducteurs demandés avec le plein d'huile seront fournis avec de l'huile standard - **"INOIL_STD"** *Si se piden con lubricante, se suministrarán con aceite estándar -* ***"INOIL_STD"*** Se forem encomendados abastecidos com lubrificante, serão fornecidos com óleo padrão - **"INOIL_STD"**	**GEARBOX**  **BRAKE** 
INOIL_STD Réducteurs Complets avec Lubrifiant Standard STM *Reductor con Lubricante Estándar STM* Reductor Com Lubrificante Padrão STM	EX - EXB **PETRONAS GEAR SYN 220**	OilGear_TYPE CLP HC Synthetic - **GR III**	Label Order **"A-3-HC-220"**	
	EXV - EXC EXS - EXO - EXA EXR	**EX -** Look at EX **V ; C -** Look at CT 16 **S ; O ; A -** Look at CT 17 **R -** Look at GSM_mod CT 03		
	Z0	L'huile utilisée pour la lubrification du frein est la même que celle du réducteur épicycloïdal. - *El aceite usado para la lubricación del freno es el mismo del reductor epicicloidal* - O óleo utilizado para a lubrificação do freio é o mesmo do redutor epicicloidal		
	Z1 - Z2	OilGear_TYPE - Hydraulic - **Mineral** La lubrification du frein est différente de celle du réducteur épicycloïdal. - *El freno tiene lubricación separada de la del reductor epicicloidal* - O freio possui a lubrificação separada daquela do redutor epicicloidal.		
INOIL_Food Réducteur complet avec Lubrifiant « ALIMENTAIRE » *Reductor con Lubricante "ALIMENTARIO"* Redutor Com Lubrificante "ALIMENTAR"	EX-EXB-EXV-EXC-EXS-EXO-EXA-EXR **Klüberoil 4 UH1 N 320**	OilGear_TYPE CLP HCE Synthetic **HCE** **NSF H1**	Z0 - Z1 - Z2 Sur demande A pedido Sob encomenda	
ASOIL Réducteur complet avec Lubrifiant Spécial - sur demande - Sur demande *Reductor con Lubricante Especial - a pedido* Redutor Com Lubrificante Especial - sob encomenda	Sur demande A pedido Sob encomenda	OilGear_TYPE CLP PG Synthetic **PG**	—	
		OilGear_TYPE CLP HC Synthetic **PAO**		
		OilGear_TYPE CLP Mineral		
		OilGear_TYPE CLP HCE Synthetic **HCE** **NSF H1**		
		Grease		

Remarque champ- ASOIL
La plaquette indique les informations suivantes :
- Code_Plate ;
- Sigle du lubrifiant ;
- ISO VG ;
- Type DIN
;- NSF ;
- D'autres prescriptions.

Nota campo- ASOIL
En la placa se indica la siguiente información:
- *Code_Plate;*
- *Sigla lubricante;*
- *ISO VG;*
- *Type DIN;*
- *NSF;*
- *Otras indicaciones.*

Nota de campo- ASOIL
Na placa estão mostradas as seguintes informações:
- Code_Plate;
- Sigla lubrificante;
- ISO VG;
- Type DIN;
- NSF;
- Outras prescrições.

1.5 État lors de la fourniture

1.5.2 Lubrification

Réducteurs fournis avec roulement protégé

Il est recommandé de graisser à nouveau indépendamment des heures de service après au moins 2-3 ans.

On a donc prévu un graisseur pour graisser à nouveau.

Les caractéristiques techniques générales de la graisse utilisée sont :

- elle n'épaissit pas : à base de lithium;
- NGLI: 2;
- Huile : minérale avec additifs EP et viscosité minimum ISO VG 160;
- Additifs : l'huile présente dans la graisse doit avoir les caractéristiques de l'additivation EP;

SPÉCIFICATIONS ET APPROBATIONS

ISO:**L-X-BCHB 2**
DIN 51 825 : **KP2K -20**

1.5 Estado del suministro

1.5.2 Lubricación

Reductores suministrados con el cojinete blindado

Se recomienda el engrase independientemente de las horas de ejercicio efectuadas, después de al menos 2-3 años.

Por lo tanto, se ha predispuesto un engrasador para efectuar el sucesivo engrase.

Las Características técnicas generales de la grasa usada son:

- Espesante: base de Litio;
- NGLI: 2;
- Aceite: mineral con aditivación EP de viscosidad mínima ISO VG 160;
- Aditivos: el aceite presente en la grasa debe tener características de aditivación EP;

ESPECIFICACIONES Y APROBACIONES

*ISO:**L-X-BCHB 2***
*DIN 51 825: **KP2K -20***

1.5 Estado de fornecimento

1.5.2 Lubrificação

Redutores fornecidos com o rolamento blindado

Recomenda-se que seja lubrificado independentemente das horas de funcionamento efetuadas, após ao menos 2-3 anos.

Portanto, foi preparado um lubrificador para realizar a oportuna lubrificação.

As Características técnicas gerais da massa utilizada são:

- Espessante: base de Lítio;
- NGLI: 2;
- Óleo: mineral com aditivação EP de viscosidade mínima ISO VG 160;
- Aditivos: o óleo presente na massa deve ter características de aditivação EP;

ESPECIFICAÇÕES E APROVAÇÕES

ISO:**L-X-BCHB 2**
DIN 51 825: **KP2K -20**

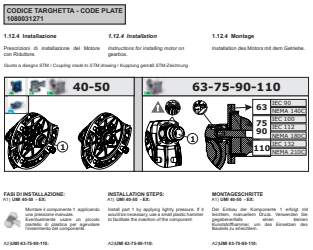
1.5 État lors de la fourniture

1.15.3 Raccordement moteur/réducteur avec joint STM/ROTEX

Si la connexion entre le réducteur et la machine motrice est effectuée avec un joint, il est nécessaire de monter une languette de dimensions établies par STM. La languette et la plaquette sur lesquelles sont reportées les instructions de montage sont jointes à chaque produit.
Si elles ne sont pas fournies, signaler le problème à notre Bureau Commercial et suivre les instructions ci-dessous pour l'installation du moteur sur le réducteur.

Vous trouverez ci-dessous les plaquettes avec les instructions relatives au montage.

Joint dessiné par « STM »
Acoplamiento según diseño "STM"
Junta conforme o desenho da "STM"



Même si cela n'est pas spécifié ici, voir le Manuel d'utilisation et de maintenance sur notre site Web: www.stmspa.com

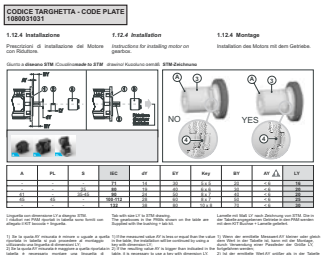
1.5 Estado del suministro

1.15.3 Conexión motor/ reductor con acoplamiento STM/ROTEX

En caso de que la conexión entre reductor y máquina motriz se realice con un acoplamiento, se debe verificar si es necesario montar una lengüeta con dimensiones según el diseño STM.
La lengüeta y la placa donde se indican las instrucciones de montaje se adjuntan a todos los suministros.
En caso de que no se hayan suministrado, comunicar el problema a Nuestra Oficina Comercial y respetar las presentes instrucciones para la instalación del motor en el reductor.

A continuación, se adjuntan las placas con las relativas instrucciones de montaje.

Joint dessiné par « STM »
Acoplamiento según diseño "STM"
Junta conforme o desenho da "STM"



Para la información no suministrada aquí, consultar el manual de uso y mantenimiento disponible en nuestra página Web: www.stmspa.com

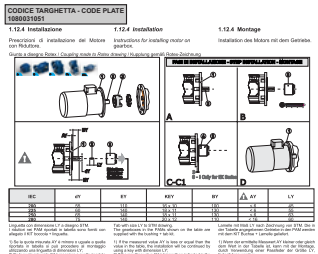
1.5 Estado de fornecimento

1.15.3 Conexão do motor/ redutor com junta STM/ROTEX

Caso a conexão entre o redutor e a máquina motriz seja feita com uma junta, é necessário verificar se é necessário montar uma lingueta de dimensões conforme o desenho STM.
A lingueta e a placa na qual são mostradas as instruções de montagem estão anexadas a cada fornecimento.
Caso não sejam fornecidas, comunicar o problema ao nosso Departamento Comercial e respeitar as presentes instruções para a instalação do motor no redutor.

A seguir são anexadas as placas com as relativas instruções de montagem.

Joint type "ROTEX"
Acoplamiento tipo"ROTEX"
Junta tipo "ROTEX"



Para o quanto não especificado aqui, consultar o manual de uso e manutenção disponível no nosso sítio Web: www.stmspa.com

1.6 Normes appliquées

1.6.1 Spécifications des produits non « ATEX »

Les réducteurs de STM SpA sont des organes mécaniques destinés à un usage industriel et à être intégrés dans des équipements mécaniques plus complexes. Ils ne doivent pas être considérés comme des machines indépendantes pour une application prédéterminée conformément à la directive 2006/42/CE, ou des dispositifs de sécurité.

1.6.2 Spécifications des produits « ATEX »

Champ d'application
La directive ATEX (2014/34/UE) est applicable aux produits électriques et non-électriques destinés à être introduits et utilisés dans une atmosphère potentiellement explosive. Les atmosphères potentiellement explosives sont divisées en groupes et zones en fonction de la probabilité de formation. Les produits GSM sont conformes à la classification suivante :

1.6 Normas aplicadas

1.6.1 Especificaciones productos no "ATEX"

Los reductores STM SpA son piezas mecánicas destinadas al uso industrial y a la incorporación en aparatos mecánicos más complejos. Por consiguiente, no se consideran máquinas independientes para una predeterminada aplicación según 2006/42/CE, ni tampoco dispositivos de seguridad.

1.6.2 Especificaciones productos "ATEX"

Campo de aplicación
La directiva ATEX (2014/34/UE) se aplica a los productos eléctricos y no eléctricos destinados a ser introducidos y a desempeñar su función en atmósferas potencialmente explosivas. Las atmósferas potencialmente explosivas están divididas en grupos y zonas según la probabilidad de formación. Los productos GSM son Conformes a la siguiente clasificación:

1.6 Normativas aplicadas

1.6.1 Especificações dos produtos não "ATEX"

Os redutores da STM SpA são órgãos mecânicos destinados a uso industrial e à incorporação em aparelhagens mecânicas mais complexas. Portanto, não devem ser considerados máquinas independentes para uma aplicação predeterminada nos termos da Diretiva 2006/42/CE, muito menos dispositivos de segurança.

1.6.2 Especificações dos produtos "ATEX"

Campo de aplicação
A diretiva ATEX (2014/34/UE) aplica-se a produtos elétricos e não elétricos destinados a ser introduzidos e exercer a sua função em atmosfera potencialmente explosiva. As atmosferas potencialmente explosivas são divididas em grupos e zonas segundo a probabilidade de formação. Os produtos GSM estão em conformidade com a seguinte classificação:

Type Mark - standard

Designation Type Mark	Material	Symbol Mark	Group	Category	Symbol Protection	Group Dangerous material	Temperature	Protection level EPL	Use limitation
Gb-4 Gb-5	GAS		II	2G	Exh	IIC	T4 T5*	Gb	-
Gc-4 Gc-5			II	3G	Exh	IIC	T4 T5*	Gc	-
Db-4 Db-5	DUST		II	2D	Exh	IIIC	135 °C 100 °C*	Db	-
Dc-4 Dc-5			II	3D	Exh	IIIC	135 °C 100 °C*	Dc	-

(1) Classe de température ATEX disponible sur demande(1)/*Clase de temperatura ATEX que se obtiene a pedido*/(1) Classe de temperatura ATEX que pode ser obtida a pedido

Type Mark - with limitation

Limitation		Material	Designation Type Marrk	Category	Group Dangerous material	Note
Products Versions	Versions with compact motor Versions with brake Z0-Z1-Z2-Z3	—	—	—	—	All versions are excluded from certification
Accessory Option	**Torque limiter type: LP-LC.LF**	GAS DUST	Gc-4-x - Gc-5-x Dc-4-x - Dc-5-x	3G 3D	Standard	with limitation Use x
	Ventilation system And/Or Painting type: TYP3 - TYP4 *	GAS GAS	b_Gb-4 - b_Gb-5 b_Gc-4 - b_Gc-5	Standard	IIB	*For other type painting:Type Mark is Standard On request in available painting type for IIC: TYP3C & TYP4C
	Ventilation system	DUST DUST	b_Db-4-x - b_Db-5-x b_Dc-4-x - b_Dc-5-x		IIIB	with limitation Use x

Dans le cas de classe de températureT5, vérifier la puissance limite thermique déclassée (réf. Norme interne NORM_0198, consultable sur le site web : www.stmspa.com).

Les produits du groupe IID (atmosphère poussiéreuse) sont définis par la température de surface maximale effective.

La température de surface maximale est déterminée dans des conditions ambiantes et d'installation normales (–20°C et +40°C) et sans dépôts de poussière sur les équipements.Toute déviation par rapport à ces conditions de référence peut influencer considérablement la dissipation de la chaleur et donc la température.

En caso de clase de temperatura T5 es necesario controlar la potencia límite térmico rebajada (ref. norma interna NORM_0198, disponible en la página web: www.stmspa.com).

Los productos del grupo IID (atmósfera polvorienta) se definen por la máxima temperatura de superficie efectiva.

La máxima temperatura de superficie está determinada en condiciones normales de instalación y ambiente (–20°C y +40°C) y sin depósitos de polvos en los equipos.Cualquier desviación de estas condiciones de referencia puede influir notablemente en la disipación del calor y por lo tanto de la temperatura.

No caso de classe de temperatura T5, é preciso verificar a potência do limite térmico desclassificada (ref. normativa interna NORM_0198, que pode ser examinada no sítio web: www.stmspa.com).

Os produtos do grupo IID (atmosfera com presença de poeira) são definidos em função da temperatura máxima de superfície efetiva.

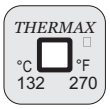
A temperatura máxima de superfície é determinada em condições normais de instalação e ambientais (–20°C e +40°C) e sem o depósito de pó nos aparelhos.Qualquer diferença em relação a estas condições de referência pode afetar significativamente a dissipação do calor e, portanto, a temperatura.

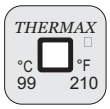
1.6 Normes appliquées

1.6.4. APPLICATION
Lors d'une demande d'offre pour un produit conforme aux normes ATEX 2014/34/UE il est nécessaire de remplir la **fiche d'acquisition des données** (www.stmspa.com).
Effectuer les contrôles comme décrit ci-dessus.
Les réducteurs certifiés seront livrés avec :
-une deuxième plaquette avec les données ATEX ;
-si un bouchon reniflard est prévu, un bouchon reniflard avec un ressort interne ;
-s'il rentre dans les classes de température T4 et T5, un indicateur de température sera inclus (132 °C pour T4 et 99°C respectivement pour T5)
-Indicateur de température : thermomètre à détection unique ; une fois qu'il a atteint la température indiquée il devient noir pour signaler qu'il a atteint cette limite.

1.6 Normas aplicadas

1.6.4. CÓMO SE APLICA
En el momento de pedido de oferta de un producto conforme a la normativa ATEX 2014/34/UE es necesario completar la ***ficha de adquisición de datos*** *(www.stmspa.com).*
Efectuar las verificaciones según las indicaciones previas. Los reductores certificados se entregan con:
-una segunda placa con los datos ATEX;
-si está previsto un tapón de alivio, el mismo es con muelle interior
-si responde a la clase de temperatura T4 y T5 se suministrará un indicador de temperatura (132 °C en el caso de T4 y 99°C para la T5 respectivamente)
-Indicador de temperatura: termómetro de detección única, una vez alcanzada la temperatura indicada se oscurece señalando que ha alcanzado dicho límite.





1.6 Normativas aplicadas

1.6.4. COMO SE APLICA
Aquando de um pedido de oferta para produto em conformidade com a normativa ATEX 2014/34/UE, ocorre preencher a **ficha de aquisição de dados** (www.stmspa.com).
Efetue as verificações conforme o descrito antes. Os redutores certificados serão entregues com:
-uma segunda placa contendo os dados ATEX;
-onde previsto, uma tampa de respiro, tampa de respiro com mola interna;
-se corresponder à classe de temperatura T4 e T5, será anexado um indicador de temperatura (132 °C no caso de T4 e 99°C respetivamente para a T5)
-Indicador de temperatura: termómetro de deteção simples, assim que a temperatura indicada é atingida, torna se preto sinalizando o alcance de tal limite.

1.6.5 Directives UE - marquage CE-ISO9001

Directive Basse Tension 2014/35/UE
Les motoréducteurs, les renvois d'angle motorisés, les motovariateurs et les moteurs électriques STM sont conformes aux dispositions de la directive Basse Tension.

2014/30/UE Compatibilité électromagnétique
Les motoréducteurs, les renvois d'angle motorisés, les motovariateurs et les moteurs électriques STM sont conformes aux dispositions de la directive de Compatibilité Électromagnétique.

Directive Machines 2006/42/CE
Les motoréducteurs, les renvois d'angle motorisés, les motovariateurs et les moteurs électriques STM ne sont pas des machines mais des organes à installer ou à assembler aux machines.

Marquage CE, déclaration du fabricant et déclaration de conformité.
Les motoréducteurs, les motovariateurs et les moteurs électriques ont obtenu le marquage CE.
Ce marquage indique leur conformité à la directive Basse Tension et à la directive Compatibilité Électromagnétique.
Sur demande, STM peut fournir la déclaration de conformité des produits et la déclaration du fabricant conformément à la directive machines.

ISO 9001
Les produits STM sont réalisés selon un système de qualité conforme au standard ISO 9001. À cette fin, sur demande, il est possible de délivrer une copie du certificat.

1.6.5 Directivas UE - marcado CE-ISO9001

Directiva Baja Tensión 2014/35/UE
Los motorreductores, reenvíos angulares, motovariadores y los motores eléctricos STM son conformes a las indicaciones de la directiva Baja Tensión.

2014/30/UE Compatibilidad electromagnética
Los motorreductores, reenvíos angulares, motovariadores y los motores eléctricos STM son conformes a las especificaciones de la directiva de Compatibilidad Electromagnética.

Directiva Máquinas 2006/42/CE
Los motorreductores, reenvíos angulares, motovariadores y los motores eléctricos STM no son máquinas sino piezas que se deben instalar o montar en las máquinas.

Marca CE, declaración del fabricante y declaración de conformidad.
Los motorreductores, motovariadores y los motores eléctricos tienen la marca CE.
Esta marca indica su conformidad con la directiva de Baja Tensión y con la directiva de Compatibilidad Electromagnética.
A pedido, STM puede suministrar la declaración de conformidad de los productos y la declaración del fabricante según la directiva máquinas.

ISO 9001
Los productos STM están realizados dentro de un sistema de calidad conforme a la norma ISO 9001. A tal fin, a pedido, es posible otorgar la copia del certificado.
ISO 9001

1.6.5 Diretivas CE- marcação CE-ISO9001

Diretiva de Baixa Tensão 2014/35/UE
Os motorredutores, transmissões angulares, motovariadores e motores elétricos da STM estão em conformidade com as prescrições da diretiva de Baixa Tensão.

2014/30/UE Compatibilidade eletromagnética
Os motorredutores, transmissões angulares, motovariadores e motores elétricos da STM estão em conformidade com as especificações da diretiva de Compatibilidade Eletromagnética.

Diretiva de Máquinas 2006/42/CE
Os motorredutores, transmissões angulares, motovariadores e motores elétricos da STM não são máquinas, mas sim órgãos a serem instalados ou montados nas máquinas.

Marca CE, declaração do fabricante e declaração de conformidade.
Os motorredutores, motovariadores e motores elétricos estão providos da marca CE.
Esta marca indica a sua conformidade com a diretiva referente à Baixa Tensão e com a diretiva referente à Compatibilidade Eletromagnética.
Sob encomenda, a STM pode fornecer a declaração de conformidade dos produtos e a declaração do fabricante segundo a diretiva de máquinas.

ISO 9001
Os produtos STM são realizados dentro de um sistema de qualidade em conformidade com a norma ISO 9001. Para esta finalidade e sob encomenda, é possível emitir a cópia do certificado.

1.6 Normes appliquées

1.6.6 Normes de référence
Projet et Fabrication

Tous les produits STM sont conçus dans le respect des normes suivantes :

Calcul concernant les engrenages et les roulements

ISO 6336 - ISO10400 - DIN3991
La capacité de charge a été calculée lors d'essais de pression de surface et de rupture conformément à la norme ISO 6336 - ISO10400 - DIN3991 (sur demande il est possible d'exécuter des contrôles conformément aux normes AGMA 2001-C95 et AGMA 2003).

BS 721
Calcul de la capacité de charge des vis et des couronnes hélicoïdales.

ISO 281
Calcul de la longévité des roulements.

Arbres
DIN 743
Calcul de la longévité des arbres

Matériaux

EN 10084
Acier de cémentation pour engrenage, vis sans fin et arbres.

EN 10083
Acier de traitement pour arbres.EN UNI 10025Acier - Caisses

UNI EN 1982 - UNI 5274
Bronze pour couronnes hélicoïdales.

UNI EN 1706
Aluminium et alliages d'Aluminium

UNI EN 1561
Fusions en fonte grise.

UNI EN 1563 2004
Fusions en fonte à graphite sphéroïdal

UNI 3097
Acier à roulement pour pistes de roulement.

1.6 Normas Aplicadas

1.6.6 Normas de referencia
Diseño y Fabricación

Todos los productos STM son diseñados en el respeto de las siguientes normas:

Cálculo de los engranajes y cojinetes

ISO 6336 - ISO10400 - DIN3991 La capacidad de carga ha sido calculada según presión superficial y rotura de acuerdo con la norma ISO 6336 - ISO10400 - DIN3991 (a pedido se pueden efectuar verificaciones según las normas AGMA 2001-C95 y AGMA 2003).

BS 721
Cálculo de la capacidad de carga de los tornillos y de las ruedas helicoidales.

ISO 281
Cálculo de la duración de fatiga de los cojinetes de fricción.

Ejes
DIN 743
Cálculo de la duración de fatiga de los ejes

Materiales

EN 10084
Acero de cementación para engranajes, tornillos sin fin y ejes.

EN 10083
Acero rectificado para ejes.EN UNI 10025Acero - Carcasas

UNI EN 1982 - UNI 5274
Bronce para ruedas helicoidales.

UNI EN 1706
Aluminio y aleaciones de Aluminio

UNI EN 1561
Fusiones de hierro fundido gris.

UNI EN 1563 2004
Boquillas de hierro fundido de grafito esferoidal

UNI 3097
Acero para cojinetes para pistas de rodadura.

1.6 Normativas Aplicadas

1.6.6 Normativas de referência
Projeto e Fabrico

Todos os produtos da GSM são projetados respeitando as seguintes normativas:

Cálculo das engrenagens e dos rolamentos

A capacidade de carga foi calculada com a pressão superficial e a rutura em conformidade com a normativa ISO 6336 - ISO10400 - DIN3991 (sob encomenda, podem ser feitas verificações em conformidade com as normas AGMA 2001-C95 e AGMA 2003).

BS 721
Cálculo da capacidade de carga dos parafusos e das coroas helicoidais.

ISO 281
Cálculo da duração em fadiga dos rolamentos volventes.

Eixos
DIN743
Cálculo da duração em fadiga dos eixos

Materiais

EN 10084
Aço de cementação para engrenagens, parafusos sem fim e eixos.

EN 10083
Aço bonificado para eixos..

EN UNI 10025
Aço - Caixas

UNI EN 1982 - UNI 5274
Bronze para coroas helicoidais

UNI EN 1706
Alumínio e ligas de Alumínio

UNI EN 1561
Fusões em ferro fundido cinzento.

UNI EN 1563 2004
Fusões de ferro fundido com grafite esferoidal

UNI 3097
Aço para rolamentos para pistas de rolamento.

B

Nomenclature
Designación
Denominação

B1

FICHES TECHNIQUES RÉDUCTEURS
FICHAS TÉCNICAS REDUCTORES
FICHAS TÉCNICAS DOS REDUTORES

SIZE	EX Series					EXB Series				Reference Torque Nm	PAGE
	1	2	3	4	range IR	2	3	4	range IR		
10	101	102	103	104	3.48-2687	102	103	104	10.01-2559	**1000**	**B14**
20	201	202	203	204	3.48-2687	202	203	204	10.01-2559	**2000**	**B16**
25	251	252	253	254	3.48-2135	252	253	254	10.01-2051	**2500**	**B18**
30	301	302	303	304	3.60-2799	302	303	304	10.35-2666	**3000**	**B20**
35	351	352	353	354	3.60-2314	352	353	354	10.35-2204	**3500**	**B22**
40	—	402	403	404	12.5-2799	—	403	404	36.0-2666	**4000**	**B24**
50	501	502	503	504	3.60-2799	502	503	504	9.11-2666	**5000**	**B26**
70	704	702	703	704	3.60-1595	702	703	704	9.11-1519	**7000**	**B28**
80	801	802	803	804	3.50-2818	802	803	804	8.85-2685	**8000**	**B30**
90	—	902	903	904	12.6-2818	—	903	904	36.2-2685	**9000**	**B32**
95	—	952	953	954	12.6-2330	—	953	954	36.2-2219	**9500**	**B34**
100	101	1002	1003	1004	3.50-2818	1002	1003	1004	8.85-2685	**10000**	**B36**
150	1501	1502	1503	1504	3.72-2422	1502	1503	1504	9.41-2307	**15000**	**B38**
180	—	1802	1803	1804	15.8-2041	—	1803	1804	40.1-1944	**18000**	**B40**
200	2001	2002	2003	2004	4.40-1163	2002	2003	2004	11.1-1108	**20000**	**B42**
250	2501	2502	2503	2504	3.63-2447	2502	2503	2504	9.17-2330	**25000**	**B44**
280	—	2802	2803	2804	12.7-2447	—	2803	2804	32.1-2341	**28000**	**B46**
300	3001	3002	3003	3004	3.52-2289	3002	3003	3004	8.90-2190	**30000**	**B48**
350	3501	3502	3503	3504	4.04-2883	—	3503	3504	36.8-2758	**35000**	**B50**
360	—	3602	3603	3604	15.0-2478	—	3603	3604	38.0-2371	**36000**	**B52**
420	4201	4202	4203	4204	4.18-2019	—	4203	4204	39.3-1932	**42000**	**B54**
600	—	6002	6003	6004	15.6-2019	—	6003	6004	39.3-1932	**60000**	**B56**
650	6500	6502	6503	6504	4.18-2039	—	6503	6504	38.3-1873	**65000**	**B58**
800	—	8002	8003	8004	15.2-2039	—	8003	8004	38.3-1873	**80000**	**B60**
850	8501	8502	8503	8504	4.18-1907	—	8503	8504	37.2-1752	**85000**	**B62**
1000	10001	10002	10003	10004	4.04-2341	—	10003	10004	36-2150	**100000**	**B64**
1200	12001	12002	12003	12004	4.18-2402	—	—	12004	149.7-2207	**120000**	**B66**
1500	—	15002	15003	15004	16.3-2948	—	—	15004	144.7-2708	**150000**	**B68**
1600	16001	16002	16003	16004	4.04-2065	—	—	16004	159.1-1896	**160000**	**B70**
2000	20001	20002	20003	20004	4.18-1631	—	—	20004	160.3-1550	**200000**	**B72**
2500	—	—	25003	25004	61.3-2002	—	—	25004	155.0-1902	**250000**	**B74**
2600	26001	26002	26003	26004	4.04-1873	—	—	26004	150.5-1779	**260000**	**B76**
3000	—	—	30003	30004	16.9-2002	—	—	30004	155.0-1902	**300000**	**B78**
3100	31001	31002	31003	31004	4.18-1873	—	—	31004	150.5-1779	**310000**	**B80**
3200	—	32002	32003	32004	17.5-1922	—	—	—	—	**320000**	**B82**
3700	37001	37002	37003	37004	4.17-1991	—	—	—	—	**370000**	**B83**
4500	45001	45002	45003	45004	4.17-1615	—	—	—	—	**450000**	**B84**
5500	55001	55002	55003	55004	4.17-1398	—	—	—	—	**550000**	**B85**
6800	68001	68002	68003	68004	4.17-1515	—	—	—	—	**680000**	**B86**
7500	—	75002	75003	75004	15.0-779.5	—	—	—	—	**750000**	**B87**
8000	80001	80002	80003	80004	3.70-956.6	—	—	—	—	**800000**	**B88**

1.1 Nomenclature — *1.1 Designación* — 1.1 Denominação

EX	B	10	1	-	P	D
Maschine	Centerline Orientation	Size	N° of reductions	Combined gearbox	Output Version	Output Shaft
00-M	01-CO	02-SIZE	03-NOR	04-CG	05-OV	06-OS

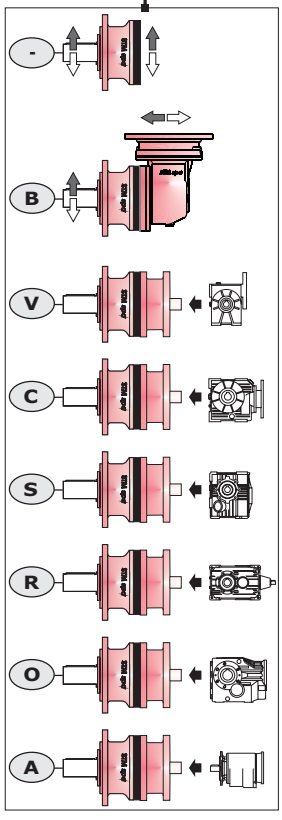
CODE: Example of Order

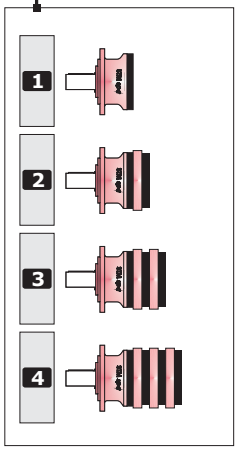
WEB: Reference Designation

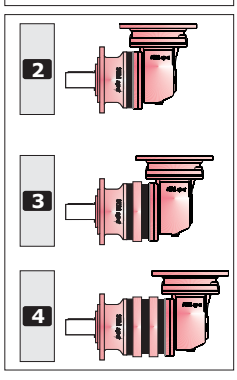


10 20 25 30 35 40 50 70 80 90 95 100 150 180 200 250 280 300 350 360 420 600 650 800 850 1000 1200 1500 1600 2000 2500 2600 3000 3100 3200 3700 4500 5500 6800 7500 8000

63 Example EXV







Standard male output shaft Size 10 ... 150	RN.-LN RD	N. D Q FD
Reinforced male output shaft **M.** - Size 10 ... 80 **L.** - Size 100 **MX.** - Size 30 ... 70	MN.-LN. MXN. MXD MD-LD	
Oversized flange male output shaft Size 30 ... 300	TN. TD	
Male shaft ring gear flange **H.** - Size 150-180-200-250-280-300 **X.** - Size 150-180-200	HN. XN. XD HD	
Male shaft ring gear flange Size 350...8000 NOTE-Size7500-8000 **SN1**-Version FSR+N **SD** - Version FSR+D	SN. SBN. SBD SD	
Male square shaft ring gear flange Size 7500-8000 NOTE **SQ**-Version FSR+Q	SQ	
Drivewheel flange connected ring gear flange Size 1600...8000 NOTE **SFD**-Version FSR+FD	SFD	**N** - Male keyed shaft **D** - Male spined shaft **Q** - Male square shaft **FD**-Drivewheel flange
Cast foot mount Size 10 ... 200	PN. PD	N. D
Bolted on foot Size 150 ... 4500	PHN. PXN. PSN. PSBN. PHD PXD PSD PSBD	**N** - Male keyed shaft **D** - Male spined shaft
Female keyed shaft with shaft front flange Size 10 ... 100	FC	C
Female keyed shaft ring gear flange Size 30 ... 280	FCB	**C** - keyed shaft
Female splined shaft ring gear flange Size 10 ... 100	F	CD
Female splined shaft ring gear flange Size 30-40-50-70	FP	
Female splined shaft ring gear flange Size 10 ... 8000	FS FSB	
Female splined shaft ring gear flange Size 420 ... 8000	FSR	
Female splined shaft ring gear flange Size 80-90-100	FB	**-(CD)** - Spined shaft
Standard shrink disc shaft Size 10 ... 200	FU	U Not supplied
Shrink disc shaft with oversized flange Size 150 ... 300	TU	
Shrink disc shaft ring gear flange Size 150 ... 300	HU	
Shrink disc shaft ring gear flange Size 350 ... 8000	SU	**U** - Shrink disc

1.1 Nomanclature

1.1 Deisgnación

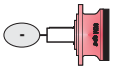
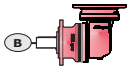
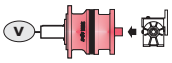
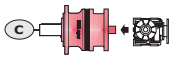
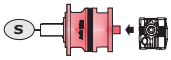
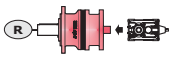
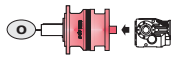
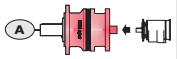
1.1 Denominação

1.1 Nomenclature — *1.1 Designación* — 1.1 Denominação

00 **M - Machines** — ***M - Máquina*** — **M - Máquina**

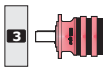
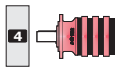
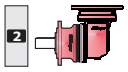
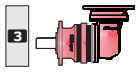
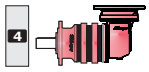
EX

01 **CO - Position des arbres** — ***CO - Posición Ejes*** — **CO - Posição dos Eixos**

							
Lineare *Lineal* Linear	Ortogonale *Ortogonal* Ortogonal	Ortogonale *Ortogonal* Ortogonal	Ortogonale *Ortogonal* Ortogonal	Ortogonale *Ortogonal* Ortogonal	Ortogonale *Ortogonal* Ortogonal	Ortogonale *Ortogonal* Ortogonal	Lineare *Lineal* Linear

02 **SIZE - Taille** — ***SIZE - Tamaño*** — **SIZE - Tamanho**

03 **NOR - Nombre Étages** — ***NOR - N.° Etapas*** — **NOR - N° de Estágios**

								
10	101	102	103	104		102	103	104
20	201	202	203	204		202	203	204
25	251	252	253	254		252	253	254
30	301	302	303	304		302	303	304
35	351	352	353	354		352	353	354
40	—	402	403	404		—	403	404
50	501	502	503	504		502	503	504
70	704	702	703	704		702	703	704
80	801	802	803	804		802	803	804
90	—	902	903	904		—	903	904
95	—	952	953	954		—	953	954
100	101	1002	1003	1004		1002	1003	1004
150	1501	1502	1503	1504		1502	1503	1504
180	—	1802	1803	1804		—	1803	1804
200	2001	2002	2003	2004		2002	2003	2004
250	2501	2502	2503	2504		2502	2503	2504
280	—	2802	2803	2804		—	2803	2804
300	3001	3002	3003	3004		3002	3003	3004
350	3501	3502	3503	3504		—	3503	3504
360	—	3602	3603	3604		—	3603	3604
420	4201	4202	4203	4204		—	4203	4204
600	—	6002	6003	6004		—	6003	6004
650	6500	6502	6503	6504		—	6503	6504
800	—	8002	8003	8004		—	8003	8004
850	8501	8502	8503	8504		—	8503	8504
1000	10001	10002	10003	10004		—	10003	10004
1200	12001	12002	12003	12004		—	—	12004
1500	—	15002	15003	15004		—	—	15004
1600	16001	16002	16003	16004		—	—	16004
2000	20001	20002	20003	20004		—	—	20004
2500	—	—	25003	25004		—	—	25004
2600	26001	26002	26003	26004		—	—	26004
3000	—	—	30003	30004		—	—	30004
3100	31001	31002	31003	31004		—	—	31004
3200	—	32002	32003	32004		—	—	—
3700	37001	37002	37003	37004		—	—	—
4500	45001	45002	45003	45004		—	—	—
5500	55001	55002	55003	55004		—	—	—
6800	68001	68002	68003	68004		—	—	—
7500	—	75002	75003	75004		—	—	—
8000	80001	80002	80003	80004		—	—	—

1.1 Nomenclature

04 CG- Réducteur couplé

1.1 Designación

CG - Reductor Acoplado

1.1 Denominação

CG - Redutor Acoplado

	1										2									3						4			
10	101										102									103						104			
20		201									202									203						204			
25		251									252									253						254			
30			301								302									303						304			
35			351								352									353						354			
40											402									403						404			
50				501								502								503						504			
70					701							702								703						704			
80						801							802							803						804			
90													902							903						904			
95													952							953						954			
100							1001							1002							1003					1004			
150								1501						1502							1503					1504			
180														1802							1803					1804			
200									2001						2002						2003					2004			
250										2501						2502						2503				2504			
280																	2802						2803				2804		
300										3001							3002						3003				3004		
350																	3502						3503				3504		
360																		3602					3603						
420																		4202					4203				4204		
600																		6002					6003						
650																			6502					6503				6504	
800																			8002					8003					
850																			8502						8503				8504
1000																									10003				10004
1200																									12003				12004

EXV 50																													
EXV 63																													
EXV 70																													
EXV 85																													
EXV 110																													
EXV 130																													
EXV 150																													
EXV 180																													
EXC 50																													
EXC 70																													
EXC 85																													
EXC 110																													
EXS 35																													
EXS 45																													
EXR 704																													
EXR 708																													
EXR 712																													
EXR 716																													
EXR 720																													
EXO 132																													
EXO 150																													
EXO 170																													
EXO 190																													
EXA 35																													
EXA 41																													
EXA 45																													
EXA 50																													

1.1 Nomenclature

05 OV - Version Sortie
06 OS - Arbre de Sortie

1.1 Designación

OV - Versión Salida
OS - Eje Salida

1.1 Denominação

OV - Versão Saída
OS - Eixo Saída

Versions / *Versiones* / Versões

FS - FCB

NOTE - Uniquement pour **EXB**

- Non disponibles pour les grandeurs:
502 - 702 - 802 - 1002

*NOTA - Solo para **EXB***

- No disponibles para los tamaños:
502 - 702 - 802 - 1002

NOTA - Apenas para **EXB**

- Não disponíveis para os tamanhos:
502 - 702 - 802 - 1002

Versions / *Versiones* / Versões

PHD - PHN1
PXD - PXN1

NOTE - Uniquement pour **EXB**

- Non disponibles pour les grandeurs:
1502 - 2002 - 2502 - 3002

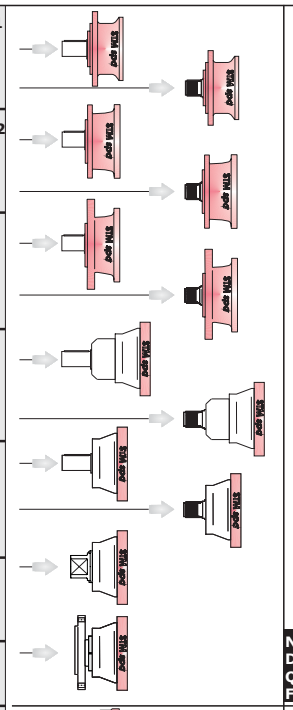
*NOTA - Solo para **EXB***

- No disponibles para los tamaños:
1502 - 2002 - 2502 - 3002

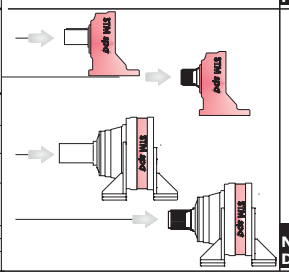
NOTA - Apenas para **EXB**

- Não disponíveis para os tamanhos:
1502 - 2002 - 2502 - 3002

25 20 10	70 50 40 35 30	80	100 95 90	200 180 150	280 250	300	350	360 420	650 600	850 800	1200 1000	2000 1600 1500	3200 3100 3000 2600 2500	4500 3700	5500	8000 7500 6800	
ø38-ø40 ø42 ø50 ø48	ø60 ø65 ø50	ø80	ø90 ø100	ø90 ø100													**RN1-LN1** **RN2** **RN3** **RN4**
B40x36	B58x53	B70x64	B80x74	B80x74													**RD**
ø60 ø65 ø50	ø60 ø65	ø80	ø90														**MN1** **MN2-LN2** **MN3**
	ø60 ø65																**MXN1** **MXN2**
	B58x53																**MXD**
B58x53	B58x53	B70x64	B80x74														**MD-LD**
ø38 ø42 ø50 ø48	ø60 ø65 ø50	ø80	ø90 ø100	ø90 ø100	ø110	ø120											**TN1** **TN2** **TN3** **TN4**
B40x36	B58x53	B70x64	B80x74	B80x74	B100x94	W120x3											**TD**
				ø90 ø100	ø110	ø120											**HN1** **HN2**
				ø100													**XN1** **XN2**
				B100x94													**XD**
				B80x74	B100x94	W120x3											**HD**
							ø120 ø140	ø120 ø140	ø160	ø170	ø180	ø200	ø230	ø290	ø340	ø340	**SN1** **SN2**
							ø120 ø140	**ø120** **ø140**						ø290	ø340	ø340 *Only 6800*	**SBN1** **SBN2**
							W120x3	**W120x3**								W340x8	**SBD**
							W120x3	**W120x3**	W150x5	W170x5	W170x5	W200x5	W220x5	W280x8	W340x8	W340x8	**SD**
																300x250	**SQ** *Only 7500-8000*
												ø585	ø655	ø730	ø730	ø800	**SFD**
ø38 ø42 ø50 ø48	ø60 ø65	ø80	ø90	ø90 ø100													**PN1** **PN2** **PN3** **PN4**
B40x36	B58x53	B70x64	B80x74	B80x74													**PD**
				ø90 ø100	ø110	ø120											**PHN1** **PHN2**
				ø100													**PXN1** **PXN2**
							ø120 ø140	**ø120** **ø140**	ø160	ø170	ø180	ø200	ø230	ø290			**PSN1** **PSN2**
							ø120 ø140	**ø120** **ø140**						ø290			**PSBN1** **PSBN2**
				B80x74	B100x94	W120x3											**PHD**
				B100x94													**PXD**
							W120x3	W120x3	W150x5	W170x5	W170x5	W200x5	W220x5	W280x8			**PSD**
							W120x3	**W120x3**						W280x8			**PSBD**

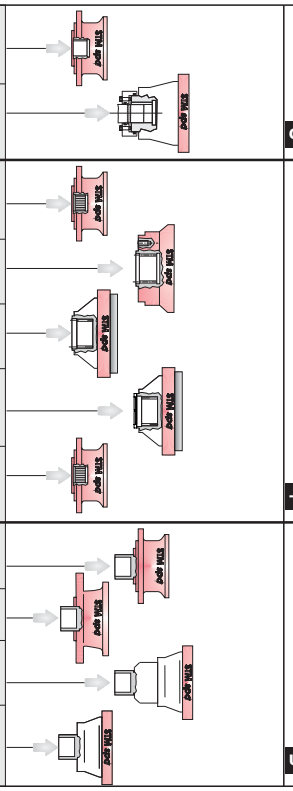


N - Male keyed shaft
D - Male spined shaft
Q - Male square shaft
FD-Drivewheel flange



N - Male keyed shaft
D - Male spined shaft

25 20 10	70 50 40 35 30	80	100 95 90	200 180 150	280 250	300	350	360 420	650 600	850 800	1200 1000	2000 1600 1500	3200 3100 3000 2600 2500	4500 3700	5500	8000 7500 6800	
ø35	ø50	ø65	ø75														**FC**
	ø65	ø80	ø90	ø100	ø110												**FCB**
A40x36	A58x53	**A70x64**	**A80x74**														**F**
	A58x53																**FP**
A40x36	A58x53	A70x64	A80x74	A80x74	A100x94	N120x5	N120x3		N150x5	N170x5	N200x5	N210x5	N240x5	N280x8	N300x8	N340x8	**FS**
								N140x5									**FSB**
							N120x3	N140x5	N150x5	N170x5	N200x5	N210x5	N240x5	N280x8	N300x8	N340x8	**FSR**
		A70x64	A70x74														**FB**
ø50	ø75	ø90	ø100	ø120													**FU**
				ø120	ø130	ø135											**TU**
				ø120	ø130	ø135											**HU**
							ø145	ø145	ø165	ø180	ø220	ø240	ø260	ø290	ø310	ø350	**SU**



C - keyed shaft

-(CD) - Spined shaft

U - Shrink disc

1.1 Nomenclature

09 IV - Version Entrée

10 IS - Arbre d'entrée

1.1 Designación

IV - Versión Entrada

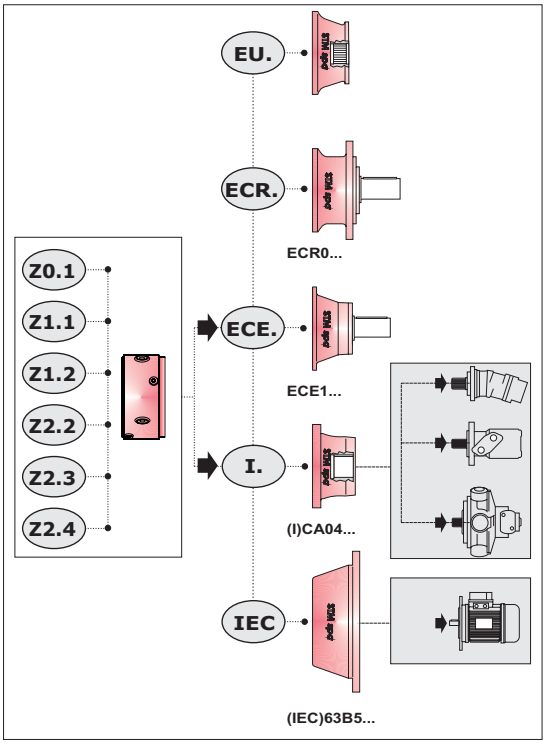
IS - Eje Entrada

1.1 Denominação

IV - Versão Entrada

IS - Eixo Entrada

Description Prédisposition *Descripción Predisposición* Descrição Preparação	09 IV	10 IS
Sans Bride Moteur *Sin Brida Motor* Sem Flange Motor EX. Combinés . *EX. Combinados.* EX Combinados.	PR	-
Universel *Universal* Universal	EU	-
Arbre mâle cylindrique avec languette *Eje macho cilíndrico con lengüeta* Eixo macho cilíndrico com lingueta	ECE	1A 2A 3 ...
Arbre mâle cylindrique avec languette - Renforcée *Eje macho cilíndrico con lengüeta - Reforzada* Eixo macho cilíndrico com lingueta - Reforçada	ECR	1 2 3 ...
Moteur Électrique-IEC *Motor Eléctrico-IEC* Motor Elétrico-IEC	IEC	63 71 80 ...
Moteur Hydraulique *Motor Hidráulico* Motor Hidráulico	I	CA04 CA05 CA06 ...



Description Prédisposition *Descripción Predisposición* Descrição Preparação	08a	08b	08c								08d	09-IV 10-IS
Frein Hydraulique *Freno Hidráulico* Freio Hidráulico	**TBZ** Type *Tipo* Tipo	**SIZEBZ** Grandeur *Tamaño* Tamanho	**STBZ** Couple freinage *Par Frenado* Binário de Frenagem								**ABZ** Accouplement *Acoplamiento* Acoplamento	
			A	**B**	**C**	**D**	**E**	**F**	**G**	**H**		
Z.	**Z**	**0**	60 Nm	100 Nm	160 Nm	200 Nm	280 Nm	330 Nm	430 Nm	520 Nm	**1** (10)	Section *Sección* Secção D
		1	90 Nm	140 Nm	240 Nm	300 Nm	430 Nm	550 Nm	—	—	**1** (10-20-25) **2** (30-50-70)	
		2	400 Nm	650 Nm	800 Nm	1000 Nm	1250 Nm	1500 Nm	1700 Nm	—	**2** (30-50-70) **3** (80-100) **4** (150)	

Pour Dimensions et Prédispositions disponibles voir Section D
Para Dimensiones y Predisposiciones disponibles ver Sección D
Para Dimensões e Preparações disponíveis, ver a Secção D

07 IR- Rapport de réduction

(Voir Performances). Toutes les valeurs des rapports sont approximatives. En cas d'applications où une valeur exacte s'imposerait, n'hésitez pas à consulter notre service technique.

IR - Relación de reducción

(Consultar prestaciones). Todos los valores de las relaciones son estimativos. Para aplicaciones donde se necesita el valor exacto, consultar nuestro servicio técnico.

IR - Relação de redução

(Veja desempenhos). Todos os valores das relações são aproximativos.
Para aplicações que necessitem do valor exato, consulte o nosso serviço técnico.

1.1 Nomenclature — *1.1 Designación* — 1.1 Denominação

11 IECT - Type IEC et Arbre Entrée — *IECT - Tipo IEC y Eje Entrada* — IECT - Tipo IEC e Eixo Entrada

11 IECT	Description *Descripción* Descrição	EX EXB	EX. Combiné / *Combinado* / Combinado					
			EXV	EXC	EXS	EXR	EXA	EXO
-	Avec cloche sans joint *Con campana sin acoplamiento* Com caixa sem junta					RXP - RXO 704 - 708 712 - 716		-
G	Avec joint *Con acoplamiento* Com junta		50 - 63		35 - 45	RXP - RXO 704 - 708 712 - 716	2C - 41 2C - 45	*
D	Accouplement direct *Acoplamiento directo* Acoplamento direto		50 - 63 70 - 85 110 - 130 150 - 180	50 - 70 85 - 110		RXO 704 - 708 712 - 716	35 3C - 41 3C - 45 50	*

* Contacter notre bureau technico-commercial
** Contactar con nuestra oficina técnica comercial*
* Contactar o nosso departamento técnico comercial

13 OPT - Options - Matériaux des bagues d'étanchéité — *OPT - Opciones - Material de las juntas de estanqueidad* — OPT - Opções - Material dos anéis de vedação

— (VT1 - NBR2)	Étanchéités STANDARD	*Estanqueidades ESTÁNDAR*	Vedações PADRÃO
VT2	Déflecteurs en viton en sortie	*Juntas de retención de aceite de Viton en salida*	Retentor de óleo em viton na saída

NBR2	Déflecteurs en viton en entrée	*Juntas de retención de aceite de NBR en salida*	Retentor de óleo em NBR na saída
VT1	Déflecteurs en viton en entrée	*Juntas de retención de aceite de Viton en entrada*	Retentor de óleo em viton na entrada
VT2	Déflecteurs en viton en sortie	*Juntas de retención de aceite de Viton de salida*	Retentor de óleo em viton na saída

14 MV - Version de Montage — *MV - Versión de Montaje* — MV - Versão de Montagem

APPLICABLE : seulement aux produits combinés exemples EXB-EXV - EXC - EXS - EXR - EXO - EXA.
La version choisie pour le montage définit les positions réciproques du réducteur EX et du réducteur combiné.
La schéma graphique est reporté en Section V.

APLICACIÓN: solo para productos combinados, por ejemplo EXB - EXV - EXC - EXS - EXR - EXO - EXA.
La versión de montaje define la posición recíproca del reductor EX con el reductor combinado.
Se indica el esquema gráfico en la Sección V.

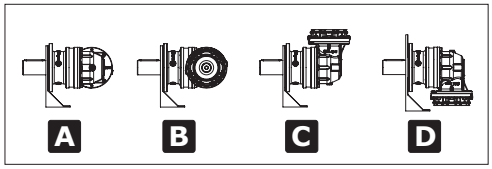
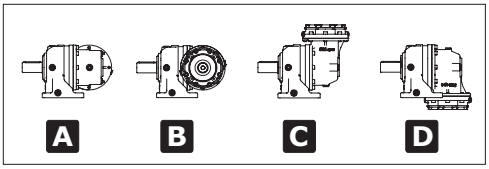
APLICABILIDADE: apenas para produtos combinados, exemplo EXB-EXV - EXC - EXS - EXR - EXO - EXA.
A versão de montagem define a posição recíproca do redutor EX com o redutor combinado.
O esquema gráfico é mostrado na Secção V.

Côté bride en sortie réducteur combiné *Lado brida salida reductor combinado* Lato da flange de saída do redutor combinado	Description *Descripción* Descrição	EX. Combiné / *Combinado* / Combinado						
		EXB	EXV	EXC	EXS	EXR	EXO	EXA
		Nomenclature/*Designación*/Denominação						
DX	Bride droite *Brida derecha* Flange direita	A - B - C - D	A - B - C - D					-
SX	Bride gauche *Brida izquierda* Flange esquerda	-	L - M - N - O					



EXB

Type Support en Sortie / *Tipo Soporte Salida* / Tipo Suporte Saída

Avec Bride-*Con Brida*-Com Flange (Example output version **R.**)	Avec pattes - *Con pie* - Com pé (Example output version **P.**)
A - B - C - D	**A - B - C - D**
	

1.1 Nomenclature

15 MP - Positions de montage.

Après avoir défini le type de montage, il est nécessaire d'indiquer la position dans laquelle le réducteur sera monté.
Le premier numéro indique la position du réducteur EX tandis que le deuxième numéro indique la position dans laquelle se trouve le réducteur combiné.
Tenir compte de ces indications pour le remplissage des réducteurs respectifs.
Le schéma graphique est reporté en Section V.

1.1 Designación

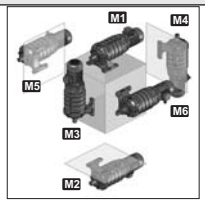
MP - Posiciones de montaje.

Una vez definida la versión de montaje es necesario que se indique la posición donde se montará el reductor.
El primer número indica la posición de montaje donde se encuentra el reductor EX, mientras que el segundo número indica la posición donde se encuentra el reductor combinado.
Respetar estas indicaciones para el llenado de los respectivos reductores.
Se indica el esquema gráfico en la Sección V.

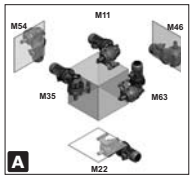
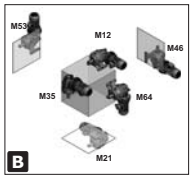
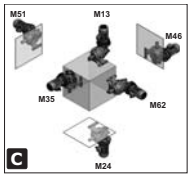
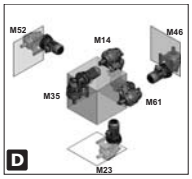
1.1 Denominação

MP - Posições de montagem.

Após definir a versão de montagem, é necessário que seja indicada a posição onde o redutor será montado.
O primeiro número indica a posição de montagem onde se encontra o redutor EX e o segundo número indica a posição na qual se encontra o redutor combinado.
Respeitar estas indicações para o abastecimento dos respetivos redutores.
O esquema gráfico é mostrado na Secção V.

EX	
Type Support en Sortie / *Tipo Soporte Salida* /Tipo Suporte Saída	
Avec Bride-*Con Brida*-Com Flange (Example output version **R.**)	Avec pattes - *Con pie* - Com pé (Example output version **P.**)
M1-M2-M3	**M1-M2-M3-M4-M5-M6**
	

EXB			
Type Support en Sortie / *Tipo Soporte Salida* /Tipo Suporte Saída			
Avec Bride-*Con Brida*-Com Flange (Example output version **R.**)			
M11-M35 -M46 (MV=A)	**M12-M35 -M46 (MV=B)**	**M13-M35 -M46 (MV=C)**	**M11-M35 -M46 (MV=D)**

EXB			
Type Support en Sortie / *Tipo Soporte Salida* /Tipo Suporte Saída			
Avec pattes - *Con pie* - Com pé (Example output version **P.**)			
M11-M22 -M35-M46-M54-M63(MV=A)	**M12-M21 -M35-M46-M53-M64(MV=B)**	**M13-M24 -M35-M46-M51-M62(MV=C)**	**M14-M23 -M35-M46-M52-M61(MV=D)**
			

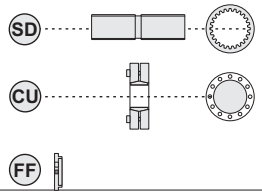
EX. (Combiné / *Combinado* / Combinado		
Type Support en Sortie/*Tipo Soporte Salida*/Tipo Suporte Saída	**P.**	**R - M - H - FB - FS - FP**
Nomenclature / *Designación* / Denominação	M11 - M21 - M35 - M51 - M61 M12 - M22 - M46 - M52 - M62 M13 - M23 - M36 - M53 - M63 M14 - M24 - M45 - M54 - M64	M11 - M12 - M13 - M14 M35 - M46 - M36 - M45
Le schéma graphique est reporté en section V / *Se indica el esquema gráfico en la Sección V* / O esquema gráfico é mostrado na Secção V		

16 ACC. - Accessoires — *ACC. - Accesorios* — ACC. - Acessórios

ACC1

Accessoires-Extrémité de sortie / *Accesorios -Extremo salida* / Acessórios -Extremidade saída

16a



Code	Description	*Descripción*	Descrição
SD	Arbre cannelé - SD	*Barra acanalada - SD*	Barra estriada - SD
CU	Bague de serrage	*Unidad de bloqueo*	Unidade de bloqueio
FF	Kit - Couvercle - FF	*KIT - Fondo - FF*	KIT - Capa- FF

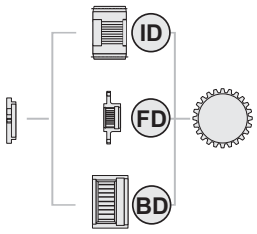
Voir Section C / *Ver Sección C* / Ver a Secção C

Pour toutes autres informations voir **1.14 et Section T** / *Para más información ver **1.14 y Sección T*** / Para maiores informações, **ver 1.14 e Secção T**

ACC2

16b

Accessoires - Extrémité Dentée D / *Accesorios - Extremos Dentados D* / Acessórios - Extremidades Dentadas D



Code	Description	*Descripción*	Descrição
ID.	Pignon denté	*Piñon dentado*	Pinhõ dentado
FD	Extrémité d'arbre lent cannelée et bride brochée	*Extremo acanalado eje lento brida estriada*	Extremidade estriada eixo lento flange trabalhada com broca
BD	Poulie dentée	*Casquillo dentado*	Rolamento dentado

Voir Section C / *Ver Sección C* / Ver a Secção C

Pour toutes autres informations voir **1.14 et Section T** / *Para más información ver **1.14 y Sección T*** / Para maiores informações, **ver 1.14 e Secção T**

B

ID. OP - Pignons dentés — *OP - Piñones dentados* — OP - Pinhões dentados

Module Standard *Módulo Normal* Módulo Normal	
Module *Módulo* Módulo	Nomenclature *Designación* Denominação
4.5	**A**
5	**B**
6	**C**
8	**D**
10	**E**
12	**F**
14	**G**
16	**H**
18	**I**
20	**L**

Nombre Dents *Número Dientes* Número de Dentes	
N° Dents *N° Dientes* N° de Dentes	Nomenclature *Designación* Denominação
10	**10**
11	**11**
12	**12**
13	**13**
14	**14**
15	**15**
16	**16**
17	**17**
18	**18**
19	**19**
20	**20**
21	**21**

Largeur *Ancho cara* Largura da face		
Largeur *Ancho cara* Largura de face	Nomenclature *Designación* Denominação	
40-49	**A**	**1...9**
50-59	**B**	
60-69	**C**	
70-79	**D**	
80-89	**E**	
90-99	**F**	
100-109	**G**	
110-119	**H**	
120-129	**I**	
130-139	**L**	
140-149	**M**	
150-159	**N**	
160-169	**O**	
170-179	**P**	
180-189	**Q**	
190-199	**R**	
200-209	**S**	
210-219	**T**	
220-229	**U**	
230-239	**V**	
240-249	**W**	
250-259	**X**	
260-269	**Y**	
270-279	**Z**	

Coefficient de Déplacement *Coeficiente de Desplazamiento* Coeficiente de Deslocação
Nomenclature *Designación* Denominação
X=(+ or - real value)

Exemple :
Pour un pignon denté pour rotation avec un module standard 16, nombre de dents 21, largeur 146 et coefficient de déplacement de profil de + 0,5, on devra reporter en nomenclature :
ID H21M6 X+0.5

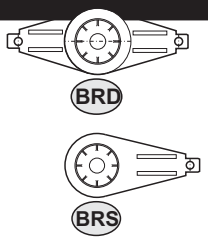
Ejemplo:
Si se desea un piñón dentado para rotación con módulo normal 16, número de dientes 21, ancho cara 146 y coeficiente de desplazamiento de perfil de + 0.5 en la designación se deberá indicar:
ID H21M6 X+0.5

Exemplo:
Se quiser um pinhão dentado por rotação com módulo normal 16, número de dentes 21, largura da face 146 e coeficiente de deslocação de perfil de + 0.5 em denominação terá que indicar:
ID H21M6 X+0.5

16 ACC. - Accessoires — *ACC. - Accesorios* — ACC. - Acessórios

16c ACC3

Accessoires - Versions pendulaires AC / *Accesorios - Versiones pendulares AC* / Acessórios - Versões pendulares AC



Code	Description	*Descripción*	Descrição
BRD	Bras Réaction Double	*Brazo Reacción Doble*	Braço de Reação Duplo
BRS	Bras Réaction Simple	*Brazo Reacción Simple*	Braço de Reação Simples

Voir Section C / *Ver Sección C* / Ver a Secção C

16d ACC4

Accessoires - Vase d'expansion / *Accesorios - Vaso Expansión* / Acessórios - Vaso de Expansão



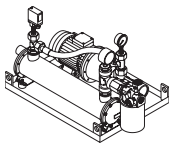
Code	Description	*Descripción*	Descrição
OT.	Vase d'expansion - .... litres	*Vaso expansión - ...litros*	Vaso de expansão - ...litros

Voir Section E / *Ver Sección E* / Ver a Secção E

Pour toutes autres informations voir **1.14 et Section T** / *Para más información ver **1.14 y Sección T*** / Para maiores informações, **ver 1.14 e Secção T**

16e ACC5

Accessoires - système avec échangeur / *Accesorios - sistema con intercambiador* / Acessórios - sistema com trocador de calor

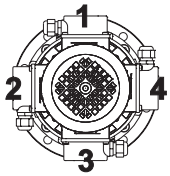


Code	Description	*Descripción*	Descrição
RFA.	RFA. - système avec échangeur air-huile	*RFA. - sistema con intercambiador aire-aceite*	RFA. - sistema com trocador de calor ar-óleo
RFW.	RFW. - système avec échangeur eau-huile	*RFW. - sistema con intercambiador agua-aceite*	RFW. - sistema com trocador de calor água-óleo

Voir Section E / *Ver Sección E* / Ver a Secção E

Pour toutes autres informations voir **1.14 et Section T** / *Para más información ver **1.14 y Sección T*** / Para maiores informações, **ver 1.14 e Secção T**

17 PMT - Position de la boîte à bornes — *PMT - Posiciones del Bloque de conexión* — PMT - Posições do Bloco de Terminais

Type Support en Sortie / *Tipo Soporte Salida* /Tipo Suporte Saída	
Avec Bride-*Con Brida*-Com Flange (Example output version **R.**)	Avec pattes - *Con pie* - Com pé (Example output version **P.**)
	

[2, 3, 4] Position de la boîte à bornes du moteur si elle est différente de la boîte standard (1).

[2, 3, 4] *Posición del bloque de conexión del motor si es diferente de la estándar (1).*

[2, 3, 4] Posição do bloco de terminais do motor, se diversa daquela padrão (1)..

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

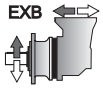
EX

Étage / *Etapa* / Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
1	**3.48**	1021	962	962	962	924	750	609	1400	402.30	494	21.45	1800
	4.26	1326	1250	1250	1250	907	737	598		328.64	516	18.31	2000
	5.77	1074	997	898	830	691	638	581		242.63	548	14.35	1500
	7.20	682	630	568	525	437	408	400		194.44	400	8.40	1100
2	**12.11**	975	920	920	919	918	750	609	1400	115.61	718	9.25	1800
	14.84	1272	1199	1199	1199	907	737	598		94.34	750	7.88	2000
	18.17	1266	1194	1194	1193	907	737	598		77.05	797	6.84	2000
	20.08	963	908	908	908	907	750	609		69.72	836	6.49	1800
	24.60	1258	1186	1186	1186	907	737	598		56.91	872	5.53	2000
	30.69	1253	1181	1181	1181	907	737	598		45.62	932	4.74	2000
	33.28	1029	955	861	795	662	612	581		42.07	675	3.16	1500
	41.54	1026	952	858	793	660	610	581		33.70	690	2.59	1500
	51.84	655	605	545	504	419	392	384		27.01	450	1.35	1100
3	**42.14**	951	896	896	896	895	750	609	1400	33.22	895	3.38	1800
	51.63	1243	1172	1171	1171	907	737	598		27.12	1079	3.33	2000
	63.25	1239	1168	1168	1168	907	737	598		22.13	1102	2.78	2000
	69.87	944	890	890	890	889	750	609		20.04	890	2.03	1800
	77.48	1236	1166	1166	1165	907	737	598		18.07	1125	2.31	2000
	85.59	1235	1164	1164	1164	907	737	598		16.36	1136	2.12	2000
	104.85	1232	1162	1162	1162	907	737	598		13.35	1161	1.76	2000
	115.83	939	885	885	885	884	750	609		12.09	885	1.22	1800
	130.86	1230	1160	1160	1159	907	737	598		10.70	1159	1.41	2000
	141.90	1229	1159	1159	1159	907	737	598		9.87	1159	1.30	2000
	177.09	1227	1157	1157	1156	907	737	598		7.91	1157	1.04	2000
	221.00	1225	1155	1155	1155	907	737	598		6.33	1155	0.83	2000
	239.64	1009	936	844	780	649	600	581		5.84	829	0.55	1500
	299.08	1007	935	843	779	648	599	581		4.68	849	0.45	1500
	373.25	645	596	537	496	413	385	378		3.75	555	0.24	1100
4	**269.63**	1223	1153	1153	1153	907	737	598	1400	5.19	1153	0.70	2000
	297.86	1223	1153	1153	1153	907	737	598		4.70	1153	0.64	2000
	330.31	1222	1152	1152	1152	907	737	598		4.24	1152	0.57	2000
	364.89	1221	1151	1151	1151	907	737	598		3.84	1151	0.52	2000
	403.08	931	878	878	878	877	750	609		3.47	878	0.36	1800
	447.00	1220	1150	1150	1150	907	737	598		3.13	1150	0.42	2000
	493.79	1220	1150	1150	1150	907	737	598		2.84	1150	0.38	2000
	557.86	1219	1149	1149	1149	907	737	598		2.51	1149	0.34	2000
	616.26	1218	1149	1149	1148	907	737	598		2.27	1149	0.31	2000
	754.94	1217	1148	1148	1148	907	737	598		1.85	1148	0.25	2000
	818.63	1217	1147	1147	1147	907	737	598		1.71	1147	0.23	2000
	942.17	1217	1147	1147	1147	907	737	598		1.49	1147	0.20	2000
	1021.64	1216	1147	1147	1146	907	737	598		1.37	1147	0.18	2000
	1275.01	1215	1146	1146	1146	907	737	598		1.10	1196	0.15	2000
	1591.22	1215	1145	1145	1145	907	737	598		0.88	1242	0.13	2000
	1725.44	1001	929	837	774	644	595	577		0.81	1033	0.10	1500
	2153.35	1001	929	837	773	644	595	577		0.65	1068	0.08	1500
	2687.39	641	592	533	493	410	383	376		0.52	697	0.04	1100

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
101	18.6	12.6	14.1	11.7
102	12.2	8.7	9.6	8.2
103	8.0	6.0	6.5	5.7
104	6.7	5.2	5.5	4.9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / *Etapa* / Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**10.01**	981	925	925	924	923	750	609	1400	139.86	679	10.81	1800
	12.26	1279	1205	1205	1205	907	737	598		114.19	708	9.20	2000
	14.50	971	915	915	915	914	750	609		96.55	758	8.33	1800
	16.59	1043	968	872	806	671	620	581		84.39	632	6.07	1500
	17.76	1267	1194	1194	1194	907	737	598		78.83	791	7.10	2000
	20.70	664	614	553	511	425	397	389		67.63	411	3.16	1100
	24.04	1035	961	865	800	666	615	581		58.24	654	4.34	1500
	29.23	1254	1182	1133	1047	871	737	598		47.90	876	4.78	2000
	39.56	1026	953	858	793	660	610	581		35.39	687	2.77	1500
	49.37	655	606	546	504	420	392	384		28.36	448	1.45	1100
3	**34.82**	953	899	899	899	898	750	609	1400	40.21	898	4.20	1800
	42.65	1246	1175	1175	1175	907	737	598		32.83	1029	3.93	2000
	52.25	1242	1171	1171	1171	907	737	598		26.79	1080	3.37	2000
	61.82	1240	1169	1169	1169	907	737	598		22.65	1099	2.90	2000
	70.71	1238	1167	1167	1167	907	737	598		19.80	1114	2.57	2000
	75.73	1237	1166	1166	1166	907	737	598		18.49	1122	2.41	2000
	88.25	1235	1164	1164	1164	907	737	598		15.86	1140	2.10	2000
	102.48	1233	1162	1162	1162	907	737	598		13.66	1158	1.84	2000
	127.89	1230	1160	1160	1160	907	737	598		10.95	1160	1.48	2000
	168.65	1227	1157	1157	1157	907	737	598		8.30	1157	1.12	2000
	210.48	1225	1155	1155	1155	907	737	598		6.65	1155	0.89	2000
	228.23	1009	937	844	780	649	600	581		6.13	824	0.59	1500
	284.84	1008	936	843	779	648	599	581		4.92	844	0.48	1500
	355.47	645	596	537	496	413	386	378		3.94	552	0.25	1100
4	**148.43**	1229	1158	1158	1158	907	737	598	1400	9.43	1158	1.30	2000
	181.84	1227	1157	1156	1156	907	737	598		7.70	1156	1.06	2000
	222.76	1225	1155	1155	1155	907	737	598		6.28	1155	0.86	2000
	246.07	1224	1154	1154	1154	907	737	598		5.69	1154	0.78	2000
	263.53	1224	1154	1154	1153	907	737	598		5.31	1154	0.73	2000
	301.45	1223	1153	1153	1152	907	737	598		4.64	1153	0.64	2000
	322.84	1222	1152	1152	1152	907	737	598		4.34	1152	0.59	2000
	356.63	1222	1152	1152	1151	907	737	598		3.93	1152	0.54	2000
	376.21	1221	1151	1151	1151	907	737	598		3.72	1151	0.51	2000
	407.95	1221	1151	1151	1151	907	737	598		3.43	1151	0.47	2000
	445.07	1220	1150	1150	1150	907	737	598		3.15	1150	0.43	2000
	509.12	1219	1150	1150	1149	907	737	598		2.75	1150	0.38	2000
	545.24	1219	1149	1149	1149	907	737	598		2.57	1149	0.35	2000
	591.23	1219	1149	1149	1149	907	737	598		2.37	1149	0.32	2000
	635.38	1218	1149	1148	1148	907	737	598		2.20	1149	0.30	2000
	737.85	1218	1148	1148	1148	907	737	598		1.90	1148	0.26	2000
	800.10	1003	931	839	775	645	596	579		1.75	946	0.20	1500
	897.30	1217	1147	1147	1147	907	737	598		1.56	1147	0.21	2000
	972.99	1216	1147	1147	1147	907	737	598		1.44	1147	0.20	2000
	1214.30	1216	1146	1146	1146	907	737	598		1.15	1146	0.16	2000
	1515.44	1215	1145	1145	1145	907	737	598		0.92	1232	0.13	2000
	2050.81	1001	929	837	773	644	595	577		0.68	1060	0.09	1500
	2559.41	641	592	534	493	410	383	376		0.55	692	0.05	1100

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
102	11,6	9,4	9,9	9,0
103	8,6	7,1	7,5	6,9
104	6,8	5,7	5,9	5,5

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

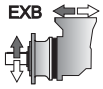
EX		n_2 X h						
		T_N [Nm]						
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000
1	**3.48**	1955	1836	1836	1835	1692	1374	1116
	4.26	2415	2228	2228	2228	1661	1349	1096
	5.77	1961	1820	1640	1515	1261	1165	1064
	7.20	1278	1181	1064	983	818	764	749
2	**12.11**	1902	1793	1793	1793	1692	1374	1116
	14.84	2415	2228	2228	2144	1661	1349	1096
	18.17	2415	2228	2228	2134	1661	1349	1096
	20.08	1879	1771	1771	1771	1692	1374	1116
	24.60	2415	2228	2228	2121	1661	1349	1096
	30.69	2409	2228	2021	1868	1661	1349	1096
	33.28	1879	1744	1571	1452	1209	1117	1064
	41.54	1873	1739	1566	1447	1205	1113	1064
	51.84	1227	1134	1022	944	786	734	719
3	**42.14**	1853	1747	1747	1747	1692	1374	1116
	51.63	2390	2228	2228	2096	1661	1349	1096
	63.25	2383	2228	2228	2091	1661	1349	1096
	69.87	1841	1736	1735	1735	1692	1374	1116
	77.48	2378	2228	2228	2086	1661	1349	1096
	85.59	2375	2228	2228	2084	1661	1349	1096
	104.85	2370	2228	2228	2080	1661	1349	1096
	115.83	1831	1726	1726	1726	1692	1374	1116
	130.86	2365	2228	2228	2076	1661	1349	1096
	141.90	2364	2228	2228	2074	1661	1349	1096
	177.09	2360	2225	2224	2071	1661	1349	1096
	221.00	2331	2154	1941	1793	1608	1349	1096
	239.64	1842	1710	1540	1423	1185	1095	1062
	299.08	1840	1708	1538	1422	1183	1094	1061
	373.25	1208	1116	1006	929	773	722	708
4	**220.10**	2356	2221	2221	2068	1661	1349	1096
	243.14	1821	1716	1716	1716	1692	1374	1116
	269.63	2353	2218	2218	2065	1661	1349	1096
	297.86	2351	2217	2217	2064	1661	1349	1096
	330.31	2350	2216	2215	2063	1661	1349	1096
	364.89	2349	2214	2214	2062	1661	1349	1096
	403.08	1815	1712	1711	1711	1692	1374	1116
	447.00	2346	2212	2212	2060	1661	1349	1096
	493.79	2345	2211	2211	2059	1661	1349	1096
	557.86	2344	2210	2210	2058	1661	1349	1096
	616.26	2343	2209	2209	2057	1661	1349	1096
	754.94	2341	2207	2207	2055	1661	1349	1096
	818.63	2341	2207	2207	2055	1661	1349	1096
	942.17	2340	2206	2205	2054	1661	1349	1096
	1021.64	2339	2205	2205	2053	1661	1349	1096
	1275.01	2337	2204	2203	2052	1661	1349	1096
	1591.22	2295	2121	1910	1765	1582	1349	1096
	1725.44	1828	1697	1529	1413	1176	1087	1054
	2153.35	1827	1696	1528	1412	1175	1086	1054
	2687.39	1201	1110	1000	924	769	718	704

10000 Hours Life				T_{max} [Nm]	T_{max} [Nm] Only Output Version **FC**
n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]		
1400	402.30	905	39.30	3300	2300
	328.64	944	33.49	3700	2300
	242.63	1004	26.30	2800	2300
	194.44	750	15.74	2000	2000
1400	115.61	1316	16.95	3300	2300
	94.34	1373	14.43	3700	2300
	77.05	1459	12.52	3700	2300
	69.72	1531	11.89	3300	2300
	56.91	1597	10.12	3700	2300
	45.62	1681	8.54	3700	2300
	42.07	1233	5.78	2800	2300
	33.70	1260	4.73	2800	2300
	27.01	843	2.54	2000	2000
1400	33.22	1746	6.60	3300	2300
	27.12	1871	5.78	3700	2300
	22.13	1910	4.81	3700	2300
	20.04	1735	3.96	3300	2300
	18.07	1950	4.01	3700	2300
	16.36	1970	3.67	3700	2300
	13.35	2012	3.06	3700	2300
	12.09	1726	2.38	3300	2300
	10.70	2060	2.51	3700	2300
	9.87	2078	2.33	3700	2300
	7.91	2127	1.91	3700	2300
	6.33	1889	1.36	3700	2300
	5.84	1513	1.01	2800	2300
	4.68	1550	0.83	2800	2300
	3.75	1039	0.44	2000	2000
1400	6.36	2177	1.63	3700	2300
	5.76	1716	1.16	3300	2300
	5.19	2218	1.35	3700	2300
	4.70	2217	1.23	3700	2300
	4.24	2215	1.10	3700	2300
	3.84	2214	1.00	3700	2300
	3.47	1711	0.70	3300	2300
	3.13	2212	0.81	3700	2300
	2.84	2211	0.74	3700	2300
	2.51	2210	0.65	3700	2300
	2.27	2209	0.59	3700	2300
	1.85	2207	0.48	3700	2300
	1.71	2207	0.44	3700	2300
	1.49	2206	0.39	3700	2300
	1.37	2205	0.36	3700	2300
	1.10	2299	0.30	3700	2300
	0.88	2329	0.24	3700	2300
	0.81	1887	0.18	2800	2300
	0.65	1950	0.15	2800	2300
	0.52	1306	0.08	2000	2000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
201	19.3	13.3	14.8	12.4
202	12.6	9.2	10.0	8.6
203	8.2	6.2	6.7	5.9
204	6.8	5.3	5.7	5.1

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage *Etapa* Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
2	**10.01**	1800	1798	1798	1797	1692	1374	1116	1400	139.86	1242	19.77	3300	2300
	12.26	2205	2202	2202	2154	1661	1349	1096		114.19	1296	16.84	3700	2300
	14.50	1604	1604	1604	1603	1462	1351	1116		96.55	1357	14.91	3300	2300
	16.59	1904	1767	1592	1471	1225	1132	1064		84.39	1154	11.08	2800	2300
	17.76	1965	1965	1964	1963	1661	1349	1096		78.83	1449	13.00	3700	2300
	20.70	1245	1150	1036	958	797	744	730		67.63	770	5.93	2000	2300
	24.04	1889	1754	1580	1460	1215	1123	1064		58.24	1195	7.92	2800	2300
	29.23	1361	1257	1133	1047	871	847	820		47.90	876	4.78	3700	2300
	39.56	1779	1644	1481	1368	1158	1114	1064		35.39	1185	4.77	2800	2300
	49.37	1228	1135	1022	945	786	734	720		28.36	839	2.71	2000	2000
3	**34.82**	1859	1753	1753	1752	1692	1374	1116	1400	40.21	1751	8.19	3300	2300
	42.65	2396	2228	2228	2102	1661	1349	1096		32.83	1836	7.01	3700	2300
	52.25	2389	2228	2228	2096	1661	1349	1096		26.79	1873	5.84	3700	2300
	61.82	2384	2228	2228	2092	1661	1349	1096		22.65	1906	5.02	3700	2300
	70.71	2380	2228	2228	2088	1661	1349	1096		19.80	1932	4.45	3700	2300
	75.73	2378	2228	2228	2087	1661	1349	1096		18.49	1946	4.19	3700	2300
	88.25	2365	2185	1969	1819	1631	1349	1096		15.86	1726	3.18	3700	2300
	102.48	2371	2228	2228	2080	1661	1349	1096		13.66	2008	3.19	3700	2300
	124.63	2366	2228	2228	2077	1661	1349	1096		11.23	2049	2.68	3700	2300
	168.65	2360	2225	2225	2072	1661	1349	1096		8.30	2116	2.04	3700	2300
	210.48	2333	2156	1942	1794	1609	1349	1096		6.65	1880	1.45	3700	2300
	228.23	1842	1710	1541	1424	1185	1095	1063		6.13	1505	1.07	2800	2300
	284.84	1840	1708	1539	1422	1184	1094	1061		4.92	1542	0.88	2800	2300
	355.47	1208	1116	1006	929	774	722	708		3.94	1033	0.47	2000	2000
4	**148.43**	2363	2228	2227	2074	1661	1349	1096	1400	9.43	2087	2.34	3700	2300
	181.84	2359	2224	2224	2070	1661	1349	1096		7.70	2133	1.95	3700	2300
	222.76	2356	2221	2221	2068	1661	1349	1096		6.28	2180	1.63	3700	2300
	246.07	2354	2219	2219	2066	1661	1349	1096		5.69	2203	1.49	3700	2300
	263.53	2353	2219	2218	2065	1661	1349	1096		5.31	2218	1.40	3700	2300
	301.45	2351	2217	2217	2064	1661	1349	1096		4.64	2217	1.22	3700	2300
	322.84	2350	2216	2216	2063	1661	1349	1096		4.34	2216	1.14	3700	2300
	356.63	2349	2215	2215	2062	1661	1349	1096		3.93	2215	1.04	3700	2300
	376.21	2348	2214	2214	2061	1661	1349	1096		3.72	2214	0.98	3700	2300
	407.95	2347	2213	2213	2061	1661	1349	1096		3.43	2213	0.90	3700	2300
	445.07	2346	2212	2212	2060	1661	1349	1096		3.15	2212	0.83	3700	2300
	509.12	2345	2211	2211	2059	1661	1349	1096		2.75	2211	0.72	3700	2300
	545.24	2344	2210	2210	2058	1661	1349	1096		2.57	2210	0.68	3700	2300
	591.23	2344	2209	2209	2057	1661	1349	1096		2.37	2209	0.62	3700	2300
	635.38	2307	2132	1921	1775	1591	1349	1096		2.20	2109	0.55	3700	2300
	737.85	2342	2208	2207	2056	1661	1349	1096		1.90	2208	0.50	3700	2300
	800.10	1832	1701	1532	1416	1178	1089	1057		1.75	1727	0.36	2800	2300
	897.30	2340	2206	2206	2054	1661	1349	1096		1.56	2206	0.41	3700	2300
	972.99	2339	2205	2205	2054	1661	1349	1096		1.44	2205	0.38	3700	2300
	1214.30	2338	2204	2204	2052	1661	1349	1096		1.15	2204	0.30	3700	2300
	1515.44	2295	2121	1911	1766	1583	1349	1096		0.92	2316	0.25	3700	2300
	2050.81	1827	1696	1528	1412	1176	1086	1054		0.68	1936	0.16	2800	2300
	2559.41	1201	1110	1000	924	769	718	704		0.55	1297	0.08	2000	2000

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
202	11,8	9,6	10,2	9,3
203	8,8	7,3	7,7	7,1
204	6,9	5,8	6,1	5,6

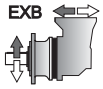
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]	T_{max} [Nm]
		T_N [Nm]												Only Output Version FC
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]		
1	3.48	2271	2206	2206	2206	2204	1832	1488	1400	402.30	1207	52.42	4000	
	4.26	2926	2699	2699	2604	2168	1799	1461		328.64	1259	44.67	4500	
	5.77	2301	2126	1915	1770	1473	1379	1351		242.63	1339	35.07	3300	
2	12.11	2171	2171	2171	2170	2167	1769	1437	1400	115.61	1694	21.82	4000	
	14.84	2810	2699	2699	2503	2084	1799	1461		94.34	1830	19.23	4500	
	18.17	2796	2699	2697	2492	2074	1799	1461		77.05	1945	16.69	4500	
	20.08	2144	2144	2144	2144	2077	1687	1370		69.72	1880	14.60	4000	
	24.60	2779	2699	2680	2477	2062	1799	1461		56.91	2031	12.88	4500	
	30.69	2428	2244	2021	1868	1674	1603	1461		45.62	1681	8.54	4500	
	33.28	2205	2038	1836	1696	1412	1322	1295		42.07	1440	6.75	3300	
	41.54	2198	2031	1829	1691	1407	1317	1290		33.70	1472	5.53	3300	
3	42.14	2116	2115	2115	2115	2111	1769	1437	1400	33.22	2113	7.99	4000	
	51.63	2745	2699	2649	2448	2038	1799	1461		27.12	2185	6.74	4500	
	63.25	2737	2699	2642	2441	2032	1799	1461		22.13	2230	5.62	4500	
	69.87	2101	2101	2101	2100	2097	1769	1437		20.04	2100	4.79	4000	
	77.48	2731	2699	2636	2436	2028	1799	1461		18.07	2277	4.68	4500	
	85.59	2728	2699	2633	2433	2025	1799	1461		16.36	2300	4.28	4500	
	104.85	2722	2699	2628	2428	2021	1799	1461		13.35	2350	3.57	4500	
	115.83	2090	2090	2090	2089	2043	1687	1370		12.09	2089	2.87	4000	
	130.86	2717	2699	2623	2424	2017	1799	1461		10.70	2405	2.93	4500	
	141.90	2715	2699	2621	2422	2016	1799	1461		9.87	2426	2.73	4500	
	177.09	2710	2699	2617	2418	2013	1799	1461		7.91	2483	2.24	4500	
	221.00	2331	2154	1941	1793	1608	1539	1407		6.33	1889	1.36	4500	2300
	239.64	2161	1997	1799	1663	1384	1295	1269		5.84	1768	1.18	3300	
	299.08	2159	1995	1797	1660	1382	1294	1268		4.68	1811	0.96	3300	
4	220.10	2706	2699	2613	2414	2010	1799	1461	1400	6.36	2542	1.90	4500	
	243.14	2078	2078	2078	2077	2074	1769	1437		5.76	2078	1.41	4000	
	269.63	2702	2699	2609	2411	2007	1799	1461		5.19	2598	1.59	4500	
	297.86	2701	2699	2608	2410	2006	1799	1461		4.70	2626	1.45	4500	
	330.31	2699	2699	2606	2408	2005	1799	1461		4.24	2656	1.32	4500	
	364.89	2698	2698	2605	2407	2004	1799	1461		3.84	2685	1.21	4500	
	403.08	2072	2072	2072	2071	2068	1769	1437		3.47	2072	0.85	4000	
	447.00	2695	2695	2602	2405	2002	1799	1461		3.13	2695	0.99	4500	
	493.79	2694	2694	2601	2404	2001	1799	1461		2.84	2694	0.90	4500	
	557.86	2692	2692	2600	2403	2000	1799	1461		2.51	2692	0.79	4500	
	616.26	2691	2691	2599	2402	1999	1799	1461		2.27	2691	0.72	4500	
	754.94	2689	2689	2597	2400	1998	1799	1461		1.85	2689	0.59	4500	
	818.63	2688	2688	2596	2399	1997	1799	1461		1.71	2688	0.54	4500	
	942.17	2687	2687	2595	2398	1996	1799	1461		1.49	2687	0.47	4500	
	1021.64	2686	2686	2594	2397	1996	1799	1461		1.37	2686	0.43	4500	
	1275.01	2685	2684	2593	2396	1994	1799	1461		1.10	2685	0.35	4500	
	1591.22	2295	2121	1910	1765	1582	1515	1385		0.88	2329	0.24	4500	
	1725.44	2145	1982	1786	1650	1374	1286	1260		0.81	2180	0.21	3300	
	2153.35	2144	1981	1785	1649	1373	1285	1259		0.65	2254	0.17	3300	

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
251	19.3	13.3	14.8	12.4
252	12.6	9.2	10.0	8.6
253	8.2	6.2	6.7	5.9
254	6.8	5.3	5.7	5.1

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage *Etapa* Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
2	**10.01**	1800	1798	1798	1797	1796	1791	1488	1400	139.86	1657	26.38	4000	2300
	12.26	2205	2202	2202	2202	2094	1799	1461		114.19	1728	22.46	4500	
	14.50	1604	1604	1604	1603	1462	1351	1313		96.55	1357	14.91	4000	
	16.59	2234	2064	1860	1718	1430	1339	1312		84.39	1348	12.95	3300	
	17.76	1965	1965	1964	1963	1751	1627	1461		78.83	1662	14.91	4500	
	24.04	2217	2049	1846	1706	1420	1329	1302		58.24	1395	9.25	3300	
	29.23	1361	1257	1133	1047	871	847	820		47.90	876	4.78	4500	
	39.56	1779	1644	1481	1368	1158	1133	1085		35.39	1185	4.77	3300	
3	**34.82**	2122	2122	2122	2121	2118	1769	1437	1400	40.21	2119	9.91	4000	
	42.65	2752	2699	2656	2454	2043	1799	1461		32.83	2143	8.19	4500	
	52.25	2744	2699	2648	2447	2037	1799	1461		26.79	2187	6.82	4500	
	61.82	2738	2699	2643	2442	2033	1799	1461		22.65	2225	5.86	4500	
	70.71	2734	2699	2639	2438	2030	1799	1461		19.80	2256	5.20	4500	
	75.73	2732	2699	2637	2436	2028	1799	1461		18.49	2272	4.89	4500	
	88.25	2365	2185	1969	1819	1631	1562	1428		15.86	1726	3.18	4500	
	102.48	2723	2699	2628	2429	2022	1799	1461		13.66	2344	3.73	4500	
	124.63	2718	2699	2624	2425	2018	1799	1461		11.23	2393	3.13	4500	
	168.65	2711	2699	2617	2419	2013	1799	1461		8.30	2471	2.39	4500	
	210.48	2333	2156	1942	1794	1609	1540	1408		6.65	1880	1.45	4500	
	228.23	2162	1998	1800	1663	1384	1296	1270		6.13	1758	1.25	3300	
	284.84	2159	1995	1797	1661	1383	1294	1268		4.92	1801	1.03	3300	
4	**148.43**	2714	2699	2620	2421	2015	1799	1461	1400	9.43	2437	2.73	4500	
	181.84	2710	2699	2616	2417	2012	1799	1461		7.70	2490	2.28	4500	
	222.76	2706	2699	2612	2414	2010	1799	1461		6.28	2545	1.90	4500	
	246.07	2704	2699	2611	2413	2008	1799	1461		5.69	2573	1.74	4500	
	263.53	2703	2699	2610	2412	2007	1799	1461		5.31	2592	1.64	4500	
	301.45	2701	2699	2608	2410	2006	1799	1461		4.64	2630	1.45	4500	
	322.84	2699	2699	2607	2409	2005	1799	1461		4.34	2649	1.37	4500	
	356.63	2698	2698	2605	2407	2004	1799	1461		3.93	2678	1.25	4500	
	376.21	2697	2697	2605	2407	2004	1799	1461		3.72	2694	1.19	4500	
	407.95	2696	2696	2604	2406	2003	1799	1461		3.43	2696	1.10	4500	
	445.07	2695	2695	2603	2405	2002	1799	1461		3.15	2695	1.01	4500	
	509.12	2693	2693	2601	2403	2001	1799	1461		2.75	2693	0.88	4500	
	545.24	2693	2692	2600	2403	2000	1799	1461		2.57	2692	0.82	4500	
	591.23	2692	2692	2599	2402	2000	1799	1461		2.37	2691	0.76	4500	
	635.38	2307	2132	1921	1775	1591	1524	1393		2.20	2109	0.55	4500	
	737.85	2689	2689	2597	2400	1998	1799	1461		1.90	2689	0.61	4500	
	800.10	2150	1986	1789	1654	1377	1288	1262		1.75	2017	0.42	3300	
	897.30	2687	2687	2595	2398	1997	1799	1461		1.56	2687	0.50	4500	
	972.99	2687	2687	2595	2398	1996	1799	1461		1.44	2687	0.46	4500	
	1214.30	2685	2685	2593	2396	1995	1799	1461		1.15	2685	0.37	4500	
	1515.44	2295	2121	1911	1766	1583	1516	1386		0.92	2316	0.25	4500	
	2050.81	2144	1981	1785	1649	1373	1285	1259		0.68	2237	0.18	3300	

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP
252	11,8	9,6	10,2	9,3
253	8,8	7,3	7,7	7,1
254	6,9	5,8	6,1	5,6

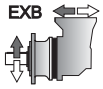
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h										
		T_N [Nm]							10000 Hours Life			T_{max} [Nm]
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**3.60**	3636	3392	3392	3392	2852	2317	1882	1400	388.89	1541	64.69	5900
	4.25	3394	3123	3123	3123	2811	2283	1855		329.41	1597	56.79	6000
	5.33	2936	2680	2680	2680	2566	2215	1799		262.66	1658	47.01	5000
	6.20	2678	2426	2426	2351	1957	1808	1767		225.81	1716	41.83	4100
	7.50	2214	2046	1843	1703	1418	1330	1302		186.67	1306	26.32	3100
2	**12.53**	3412	3392	3392	3392	2231	1812	1472	1400	111.73	1753	21.82	5900
	14.79	3394	3123	3123	3123	2505	2035	1653		94.66	2069	21.82	6000
	15.35	3599	3392	3392	3392	2190	1779	1445		91.21	1829	18.58	5900
	18.12	3394	3123	3123	3123	2460	1998	1623		77.26	2159	18.58	6000
	20.77	3306	3055	2752	2543	2127	1728	1403		67.40	1945	14.60	5900
	22.74	2936	2680	2680	2680	2453	2215	1799		61.57	2395	16.43	5000
	24.52	3394	3123	3123	2946	2389	1941	1576		57.10	2296	14.60	6000
	30.77	2936	2680	2680	2680	2438	2215	1799		45.50	2464	12.49	5000
	35.77	2678	2426	2426	2242	1866	1724	1685		39.14	1919	8.37	4100
	38.40	2936	2680	2465	2278	2072	1962	1799		36.46	2102	8.54	5000
	44.64	2678	2426	2417	2233	1859	1718	1679		31.36	1961	6.85	4100
	54.00	2114	1953	1760	1626	1354	1269	1243		25.93	1459	4.21	3100
3	**43.60**	3261	3260	3259	3258	2231	1812	1472	1400	32.11	2548	9.31	5900
	51.47	3394	3123	3123	3123	2505	2035	1653		27.20	3008	9.31	6000
	63.05	3394	3123	3123	3123	2505	2035	1653		22.20	3122	7.89	6000
	72.28	3221	3221	3220	3218	2231	1812	1472		19.37	2965	6.54	5900
	77.24	3394	3123	3123	3123	2460	1998	1623		18.13	3122	6.44	6000
	85.33	3394	3123	3123	3123	2505	2035	1653		16.41	3123	5.83	6000
	104.53	3394	3123	3123	3123	2460	1998	1623		13.39	3123	4.76	6000
	110.50	3469	3271	3270	3270	2190	1779	1445		12.67	3270	4.72	5900
	130.45	3394	3123	3123	3123	2460	1998	1623		10.73	3123	3.81	6000
	141.46	3394	3123	3055	2823	2389	1941	1576		9.90	2827	3.19	6000
	163.71	2936	2680	2680	2680	2384	2203	1799		8.55	2680	2.61	5000
	176.54	3394	3123	3045	2814	2389	1941	1576		7.93	2889	2.61	6000
	190.31	2678	2426	2377	2197	1829	1690	1651		7.36	2275	1.91	4100
	221.54	2936	2680	2680	2680	2378	2198	1799		6.32	2680	1.93	5000
	257.54	2678	2426	2372	2192	1825	1686	1647		5.44	2349	1.45	4100
	276.48	2843	2627	2367	2187	1990	1884	1745		5.06	2363	1.36	5000
	321.41	2678	2426	2369	2189	1822	1684	1645		4.36	2406	1.19	4100
	388.80	2076	1918	1728	1597	1329	1247	1221		3.60	1794	0.74	3100
4	**151.72**	3178	3177	3176	3175	2231	1812	1472	1400	9.23	3175	3.45	5900
	185.86	3451	3254	3254	3253	2190	1779	1445		7.53	3253	2.88	5900
	219.42	3394	3123	3123	3123	2505	2035	1653		6.38	3123	2.34	6000
	227.69	3446	3249	3248	3248	2190	1779	1445		6.15	3248	2.35	5900
	268.80	3394	3123	3123	3123	2505	2035	1653		5.21	3123	1.91	6000
	296.94	3394	3123	3123	3123	2505	2035	1653		4.71	3123	1.73	6000
	329.29	3394	3123	3123	3123	2460	1998	1623		4.25	3123	1.56	6000
	363.76	3394	3123	3123	3123	2505	2035	1653		3.85	3123	1.41	6000
	416.98	3139	3139	3138	3136	2231	1812	1472		3.36	3139	1.24	5900
	453.98	3394	3123	3123	3123	2505	2035	1653		3.08	3123	1.13	6000
	492.27	3394	3123	3123	3123	2505	2035	1653		2.84	3123	1.04	6000
	556.14	3394	3123	3123	3123	2460	1998	1623		2.52	3123	0.93	6000
	614.35	3394	3123	3123	3123	2505	2035	1653		2.28	3123	0.84	6000
	766.71	3394	3123	3123	3123	2505	2035	1653		1.83	3123	0.67	6000
	795.61	3421	3225	3225	3224	2190	1779	1445		1.76	3225	0.67	5900
	939.26	3394	3123	3123	3123	2460	1998	1623		1.49	3242	0.57	6000
	1018.49	3394	3123	2995	2767	2389	1941	1576		1.37	3272	0.53	6000
	1178.68	2936	2680	2680	2680	2358	2179	1799		1.19	2879	0.40	5000
	1271.08	3394	3123	2991	2764	2389	1941	1576		1.10	3356	0.43	6000
	1595.08	2936	2680	2680	2680	2356	2177	1799		0.88	2980	0.31	5000
	1990.66	2799	2586	2330	2153	1958	1854	1717		0.70	2913	0.24	5000
	2314.14	2678	2426	2350	2172	1808	1671	1633		0.60	2837	0.20	4100
	2799.36	2062	1905	1716	1586	1320	1238	1212		0.50	2253	0.13	3100

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
301	30.0	19.6	23.2	14.4	28.6
302	20.4	14.5	16.5	11.5	19.6
303	12.8	9.3	10.5	7.6	12.3
304	10.3	7.7	8.6	6.4	9.9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / *Etapa* / Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**10.35**	1862	1860	1860	1859	1857	1853	1843	1400	135.27	1849	28.47	5900
	12.22	2198	2195	2195	2195	2192	2185	1855		114.57	2183	28.47	6000
	15.33	2755	2680	2680	2680	2477	2215	1799		91.32	2276	23.66	5000
	17.83	2678	2426	2426	2275	1894	1750	1710		78.52	1799	16.08	4100
	22.22	2458	2458	2457	2456	2135	2026	1799		63.01	2079	14.91	5000
	25.83	2678	2426	2426	2256	1878	1735	1696		54.20	1861	11.48	4100
	31.25	2133	1971	1775	1641	1366	1281	1254		44.80	1383	7.05	3100
	36.57	1659	1533	1381	1276	1072	1051	1010		38.28	1095	4.77	5000
	42.51	1896	1752	1578	1459	1242	1214	1159		32.93	1273	4.77	4100
	51.43	2115	1955	1761	1627	1355	1270	1244		27.22	1452	4.50	3100
3	**36.02**	3279	3278	3277	3276	2231	1812	1472	1400	38.87	2406	10.88	5900
	42.52	3394	3123	3123	3123	2505	2035	1653		32.93	2840	10.88	6000
	52.09	3394	3123	3123	3123	2460	1998	1623		26.88	2963	9.27	6000
	61.63	3394	3123	3123	3123	2505	2035	1653		22.72	3122	8.25	6000
	75.49	3394	3123	3123	3123	2460	1998	1623		18.55	3122	6.74	6000
	85.91	3209	3209	2900	2679	2231	1812	1472		16.30	2534	4.81	5900
	94.74	2936	2680	2680	2680	2397	2215	1799		14.78	2680	4.61	5000
	105.24	3471	3273	3272	3207	2190	1779	1445		13.30	3105	4.80	5900
	124.24	3394	3123	3123	3123	2460	1998	1623		11.27	3123	4.09	6000
	142.42	3160	2920	2630	2431	2106	1728	1403		9.83	2435	2.78	5900
	168.13	3394	3123	3047	2816	2389	1941	1576		8.33	2875	2.79	6000
	186.00	2678	2426	2378	2197	1829	1690	1651		7.53	2269	1.99	4100
	210.99	2936	2680	2680	2680	2379	2198	1799		6.64	2680	2.07	5000
	263.31	2845	2629	2368	2188	1991	1885	1746		5.32	2352	1.46	5000
	306.10	2678	2426	2369	2189	1823	1684	1646		4.57	2393	1.27	4100
	370.29	2076	1919	1728	1597	1330	1247	1221		3.78	1784	0.78	3100
4	**147.97**	3394	3123	3123	3123	2505	2035	1653	1400	9.46	3123	3.52	6000
	153.55	3457	3260	3259	3259	2190	1779	1445		9.12	3259	3.54	5900
	181.27	3394	3123	3123	3123	2505	2035	1653		7.72	3123	2.87	6000
	222.07	3394	3123	3123	3123	2460	1998	1623		6.30	3123	2.34	6000
	254.56	3443	3246	3246	3245	2190	1779	1445		5.50	3245	2.12	5900
	272.62	3441	3244	3244	3243	2190	1779	1445		5.14	3244	1.98	5900
	300.52	3394	3123	3123	3123	2460	1998	1623		4.66	3123	1.73	6000
	321.84	3394	3123	3123	3123	2460	1998	1623		4.35	3123	1.62	6000
	355.53	3394	3123	3123	3123	2505	2035	1653		3.94	3123	1.46	6000
	375.05	3394	3123	3123	3123	2460	1998	1623		3.73	3123	1.39	6000
	406.69	3394	3123	3016	2787	2389	1941	1576		3.44	3123	1.28	6000
	432.36	3394	3123	3123	3123	2505	2035	1653		3.24	3123	1.20	6000
	507.55	3394	3123	3010	2781	2389	1941	1576		2.76	3123	1.03	6000
	543.55	3394	3123	3123	3123	2460	1998	1623		2.58	3123	0.96	6000
	585.10	3394	3123	3123	3123	2505	2035	1653		2.39	3123	0.89	6000
	607.15	3425	3229	3229	3228	2190	1779	1445		2.31	3229	0.89	5900
	716.77	3394	3123	3123	3123	2460	1998	1623		1.95	3123	0.72	6000
	821.64	3106	2871	2586	2390	2070	1728	1403		1.70	2923	0.59	5900
	894.53	3394	3123	3123	3123	2460	1998	1623		1.57	3224	0.60	6000
	969.99	3394	3123	2996	2768	2389	1941	1576		1.44	3254	0.56	6000
	1045.64	2678	2426	2356	2177	1812	1674	1636		1.34	2590	0.41	4100
	1122.55	2936	2680	2680	2680	2359	2179	1799		1.25	2863	0.43	5000
	1210.55	3394	3123	2992	2765	2389	1941	1576		1.16	3338	0.46	6000
	1339.20	2678	2426	2354	2175	1811	1673	1635		1.05	2664	0.33	4100
	1519.12	2936	2680	2680	2680	2356	2177	1799		0.92	2964	0.32	5000
	1895.86	2799	2587	2330	2153	1959	1855	1718		0.74	2898	0.26	5000
	2203.94	2678	2426	2351	2172	1808	1671	1633		0.64	2821	0.21	4100
	2666.06	2062	1905	1716	1586	1320	1238	1213		0.53	2236	0.14	3100

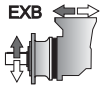
P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
302	16,8	13,0	14,3	11,1	16,3
303	12,2	9,6	10,5	8,3	11,9
304	9,4	7,5	8,1	6,5	9,1

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**3.60**	4356	4112	4112	4112	3803	3089	2509	1400	388.89	2055	86.27	7100
	4.25	4113	3786	3786	3785	3705	3044	2473		329.41	2129	75.71	7200
	5.33	3559	3249	3249	3248	2999	2782	2399		262.66	2211	62.69	6000
	6.20	3239	2935	2934	2739	2280	2151	2104		225.81	2091	50.97	4900
2	**12.53**	3412	3411	3410	3408	2231	1812	1472	1400	111.73	1753	21.82	7100
	14.79	4028	3786	3786	3785	2505	2035	1653		94.66	2069	21.82	7200
	15.35	4114	4112	4112	3549	2190	1779	1445		91.21	1829	18.58	7100
	18.12	4113	3786	3786	3785	2460	1998	1623		77.26	2159	18.58	7200
	20.77	3306	3055	2752	2543	2127	1728	1403		67.40	1945	14.60	7100
	22.74	3559	3249	3249	3248	2867	2342	1902		61.57	2709	18.58	6000
	24.52	3829	3539	3188	2946	2389	1941	1576		57.10	2296	14.60	7200
	30.77	3559	3249	3249	3248	2801	2275	1848		45.50	2880	14.60	6000
	35.77	3239	2935	2827	2612	2175	2052	2006		39.14	2236	9.75	4900
	38.40	2961	2736	2465	2278	2072	1962	1817		36.46	2102	8.54	6000
	44.64	3239	2935	2816	2603	2166	2044	1999		31.36	2285	7.98	4900
3	**43.60**	3261	3260	3259	3258	2231	1812	1472	1400	32.11	2548	9.31	7100
	51.47	3849	3786	3786	3785	2505	2035	1653		27.20	3008	9.31	7200
	63.05	3829	3786	3786	3785	2505	2035	1653		22.20	3196	8.08	7200
	72.28	3221	3221	3220	3218	2231	1812	1472		19.37	2965	6.54	7100
	77.24	4113	3786	3786	3785	2460	1998	1623		18.13	3335	6.88	7200
	85.33	3802	3786	3786	3785	2505	2035	1653		16.41	3500	6.54	7200
	96.87	3559	3249	3249	3248	2801	2342	1902		14.45	3227	5.31	6000
	104.53	4113	3786	3786	3785	2460	1998	1623		13.39	3652	5.57	7200
	130.45	4113	3786	3786	3785	2460	1998	1623		10.73	3785	4.62	7200
	141.46	3670	3391	3055	2823	2389	1941	1576		9.90	2827	3.19	7200
	163.60	3559	3249	3249	3248	2787	2342	1902		8.56	3248	3.16	6000
	177.40	3559	3249	3249	3248	2785	2275	1848		7.89	3248	2.92	6000
	190.31	3239	2935	2770	2560	2131	2010	1966		7.36	2651	2.22	4900
	221.40	3559	3249	3249	3248	2780	2275	1848		6.32	3249	2.34	6000
	257.54	3239	2935	2764	2554	2126	2006	1962		5.44	2738	1.70	4900
	276.31	2843	2627	2367	2187	1990	1884	1745		5.07	2363	1.36	6000
	321.41	3239	2935	2704	2499	2123	2003	1959		4.36	2747	1.36	4900
4	**151.72**	3178	3177	3176	3175	2231	1812	1472	1400	9.23	3175	3.45	7100
	185.86	3945	3945	3944	3549	2190	1779	1445		7.53	3827	3.39	7100
	219.42	4113	3786	3786	3785	2460	1998	1623		6.38	3785	2.84	7200
	227.69	3938	3938	3938	3549	2190	1779	1445		6.15	3906	2.83	7100
	268.80	4113	3786	3786	3785	2460	1998	1623		5.21	3786	2.32	7200
	296.94	3726	3725	3724	3722	2505	2035	1653		4.71	3724	2.06	7200
	329.29	4113	3786	3786	3785	2460	1998	1623		4.25	3786	1.89	7200
	363.76	4113	3786	3786	3785	2460	1998	1623		3.85	3786	1.71	7200
	413.23	3559	3249	3249	3248	2769	2342	1902		3.39	3249	1.30	6000
	453.98	4113	3786	3786	3785	2460	1998	1623		3.08	3786	1.37	7200
	492.27	3706	3706	3704	3702	2505	2035	1653		2.84	3705	1.24	7200
	556.14	4113	3786	3786	3785	2460	1998	1623		2.52	3786	1.12	7200
	603.05	4113	3786	3786	3785	2460	1998	1623		2.32	3786	1.03	7200
	752.61	4113	3786	3786	3785	2460	1998	1623		1.86	3786	0.83	7200
	795.61	3910	3910	3909	3549	2190	1779	1445		1.76	3910	0.81	7100
	939.26	4113	3786	3786	3785	2460	1998	1623		1.49	3930	0.69	7200
	1018.49	3598	3324	2995	2767	2389	1941	1576		1.37	3469	0.56	7200
	1178.68	3559	3249	3249	3248	2757	2342	1902		1.19	3489	0.49	6000
	1271.08	3593	3320	2991	2764	2389	1941	1576		1.10	3554	0.46	7200
	1595.08	3559	3249	3249	3248	2754	2275	1848		0.88	3612	0.37	6000
	1854.28	3239	2935	2740	2532	2108	1989	1945		0.76	3345	0.30	4900
	2314.14	3198	2935	2662	2460	2107	1988	1944		0.60	3386	0.24	4900
5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda												

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
351	30.0	19.6	23.2	14.4	28.6
352	20.4	14.5	16.5	11.5	19.6
353	12.8	9.3	10.5	7.6	12.3
354	10.3	7.7	8.6	6.4	9.9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / *Etapa* / Estágio	ir	n_2 x h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**10.35**	1862	1860	1860	1859	1857	1853	1843	1400	135.27	1849	28.47	7100
	12.22	2198	2195	2195	2195	2192	2185	2172		114.57	2183	28.47	7200
	15.33	2755	2755	2755	2755	2748	2685	2399		91.32	2703	28.09	6000
	17.83	3203	2935	2868	2651	2207	2082	2036		78.52	2096	18.73	4900
	22.22	2458	2458	2457	2456	2135	2026	1978		63.01	2079	14.91	6000
	25.83	2858	2857	2845	2629	2188	2065	2019		54.20	2168	13.37	4900
	29.14	1357	1254	1130	1044	869	844	818		48.04	873	4.77	7200
	36.57	1659	1533	1381	1276	1072	1051	1010		38.28	1095	4.77	6000
	42.51	1896	1752	1578	1459	1242	1214	1159		32.93	1273	4.77	4900
3	**36.02**	3279	3278	3277	3276	2231	1812	1472	1400	38.87	2406	10.88	7100
	42.52	3871	3786	3786	3785	2505	2035	1653		32.93	2840	10.88	7200
	52.09	4113	3786	3786	3785	2460	1998	1623		26.88	2963	9.27	7200
	61.63	3831	3786	3786	3785	2505	2035	1653		22.72	3175	8.39	7200
	75.49	4113	3786	3786	3785	2460	1998	1623		18.55	3312	7.15	7200
	88.46	3559	3249	3249	3248	2801	2275	1848		15.83	3197	5.89	6000
	94.74	3559	3249	3249	3248	2802	2342	1902		14.78	3219	5.54	6000
	105.24	3968	3853	3471	3207	2190	1779	1445		13.30	3105	4.80	7100
	124.24	4113	3786	3786	3716	2460	1998	1623		11.27	3665	4.81	7200
	155.91	3559	3249	3249	3248	2788	2342	1902		8.98	3248	3.39	6000
	168.13	3661	3383	3047	2816	2389	1941	1576		8.33	2875	2.79	7200
	186.00	3239	2935	2726	2519	2131	2011	1966		7.53	2602	2.28	4900
	210.99	3559	3249	3249	3248	2781	2275	1848		6.64	3248	2.51	6000
	245.27	3239	2935	2765	2555	2127	2007	1962		5.71	2723	1.81	4900
	306.10	3239	2935	2706	2501	2124	2004	1959		4.57	2734	1.45	4900
4	**153.55**	3952	3952	3951	3549	2190	1779	1445	1400	9.12	3649	3.96	7100
	181.27	4113	3786	3786	3785	2460	1998	1623		7.72	3785	3.48	7200
	222.07	4113	3786	3786	3785	2460	1998	1623		6.30	3785	2.84	7200
	254.56	3935	3935	3934	3549	2190	1779	1445		5.50	3934	2.57	7100
	272.62	3933	3933	3933	3549	2190	1779	1445		5.14	3933	2.41	7100
	300.52	4113	3786	3786	3785	2460	1998	1623		4.66	3786	2.10	7200
	321.84	4113	3786	3786	3785	2460	1998	1623		4.35	3786	1.96	7200
	355.53	3718	3718	3716	3714	2505	2035	1653		3.94	3717	1.74	7200
	375.05	4113	3786	3786	3785	2460	1998	1623		3.73	3786	1.68	7200
	406.69	3623	3348	3016	2787	2389	1941	1576		3.44	3147	1.29	7200
	432.36	4113	3786	3786	3785	2460	1998	1623		3.24	3786	1.46	7200
	507.55	3616	3341	3010	2781	2389	1941	1576		2.76	3221	1.06	7200
	543.55	4113	3786	3786	3785	2460	1998	1623		2.58	3786	1.16	7200
	585.10	3700	3700	3699	3696	2505	2035	1653		2.39	3700	1.05	7200
	607.15	3915	3914	3914	3549	2190	1779	1445		2.31	3914	1.08	7100
	716.77	4113	3786	3786	3785	2460	1998	1623		1.95	3786	0.88	7200
	821.64	3106	2871	2586	2390	2070	1728	1403		1.70	2923	0.59	7100
	894.53	4113	3786	3786	3785	2460	1998	1623		1.57	3908	0.73	7200
	969.99	3599	3325	2996	2768	2389	1941	1576		1.44	3451	0.59	7200
	1045.64	3239	2935	2745	2537	2112	1992	1948		1.34	3133	0.50	4900
	1122.55	3559	3249	3249	3248	2757	2342	1902		1.25	3470	0.52	6000
	1210.55	3594	3321	2992	2765	2389	1941	1576		1.16	3535	0.49	7200
	1339.20	3207	2935	2670	2467	2110	1991	1947		1.05	3191	0.40	4900
	1519.12	3559	3249	3249	3248	2755	2275	1848		0.92	3592	0.39	6000
	1895.86	2799	2587	2330	2153	1959	1855	1718		0.74	2898	0.26	6000
	2203.94	3199	2935	2663	2461	2107	1988	1944		0.64	3368	0.26	4900

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
352	16,8	13,0	14,3	11,1	16,3
353	12,2	9,6	10,5	8,3	11,9
354	9,4	7,5	8,1	6,5	9,1



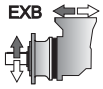
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
		T_N [Nm]												
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]		
2	**12.53**	3412	3411	3410	3408	2231	1812	1472	1400	111.73	1753	21.82	10000	9000
	14.79	4028	4027	4026	4023	2505	2035	1653		94.66	2069	21.82	11000	9000
	15.35	4433	4433	4266	3549	2190	1779	1445		91.21	1829	18.58	10000	9000
	18.12	5233	5233	4908	3986	2460	1998	1623		77.26	2159	18.58	11000	9000
	21.58	5104	4623	4623	4328	3264	2651	2153		64.87	3018	21.81	8050	8050
	22.74	5687	5192	5192	4673	2883	2342	1902		61.57	2709	18.58	9500	9000
	26.43	5104	4623	4623	4310	3204	2602	2114		52.97	3149	18.58	8050	8050
	30.77	4683	4327	3898	3602	2801	2275	1848		45.50	2881	14.60	9500	9000
	35.77	5104	4623	4455	4116	3112	2528	2053		39.14	3349	14.60	8050	8050
	38.40	2961	2736	2465	2278	2072	1962	1817		36.46	2102	8.54	9500	9000
	43.27	3889	3594	3237	2992	2490	2336	2287		32.35	2617	9.43	6000	6000
	54.00	3876	3582	3227	2982	2482	2328	2280		25.93	2675	7.73	6000	6000
3	**43.60**	3261	3260	3259	3258	2231	1812	1472	1400	32.11	2548	9.31	10000	9000
	51.47	3849	3849	3848	3845	2505	2035	1653		27.20	3008	9.31	11000	9000
	64.59	4831	4830	4828	4760	2937	2386	1938		21.68	3774	9.31	9500	9000
	75.08	5104	4623	4586	4238	3264	2651	2153		18.65	3947	8.38	8050	8050
	79.12	5687	5192	5192	4673	2883	2342	1902		17.69	3938	7.93	9500	9000
	85.33	3802	3802	3800	3798	2505	2035	1653		16.41	3500	6.54	11000	9000
	96.93	5687	5192	5192	4673	2883	2342	1902		14.44	4185	6.88	9500	9000
	104.53	4965	4964	4700	3986	2460	1998	1623		13.39	3652	5.57	11000	9000
	107.08	4771	4771	4768	4760	2937	2386	1938		13.07	4392	6.53	9500	9000
	131.17	5687	5192	5192	4673	2883	2342	1902		10.67	4583	5.57	9500	9000
	163.71	5687	5192	5192	4673	2883	2342	1902		8.55	4898	4.77	9500	9000
	177.51	4488	4147	3736	3452	2801	2275	1848		7.89	3547	3.19	9500	9000
	190.31	5104	4623	4544	4199	3204	2602	2114		7.36	4348	3.64	8050	8050
	221.54	4473	4134	3724	3441	2801	2275	1848		6.32	3626	2.61	9500	9000
	257.54	5104	4623	4255	3932	3112	2528	2053		5.44	4215	2.61	8050	8050
	276.48	2843	2627	2367	2187	1990	1884	1745		5.06	2363	1.36	9500	9000
	311.54	3811	3522	3173	2932	2440	2289	2241		4.49	3211	1.64	6000	6000
	388.80	3806	3517	3169	2928	2437	2286	2239		3.60	3289	1.35	6000	6000
4	**219.42**	4904	4904	4645	3986	2460	1998	1623	1400	6.38	4518	3.39	11000	9000
	224.77	4707	4707	4704	4701	2937	2386	1938		6.23	4704	3.45	9500	9000
	275.35	5687	5192	5192	4673	2883	2342	1902		5.08	5192	3.10	9500	9000
	308.13	4129	4128	3986	3549	2190	1779	1445		4.54	4030	2.15	10000	9000
	337.32	5687	5192	5192	4673	2883	2342	1902		4.15	5192	2.54	9500	9000
	363.76	4874	4874	4618	3986	2460	1998	1623		3.85	4757	2.15	11000	9000
	413.23	5687	5192	5192	4673	2883	2342	1902		3.39	5192	2.07	9500	9000
	456.49	5687	5192	5192	4673	2883	2342	1902		3.07	5192	1.88	9500	9000
	510.82	4109	4108	3968	3549	2190	1779	1445		2.74	4108	1.32	10000	9000
	569.69	5687	5192	5192	4673	2883	2342	1902		2.46	5192	1.50	9500	9000
	603.05	4851	4850	4596	3986	2460	1998	1623		2.32	4850	1.32	11000	9000
	756.77	5687	5192	5192	4673	2883	2342	1902		1.85	5301	1.15	9500	9000
	811.31	5104	4623	4507	4165	3204	2602	2114		1.73	4795	0.98	8050	8050
	944.45	5687	5192	5192	4673	2883	2342	1902		1.48	5437	0.95	9500	9000
	1024.12	4405	4071	3667	3389	2801	2275	1848		1.37	4251	0.69	9500	9000
	1178.68	5687	5192	5192	4673	2883	2342	1902		1.19	5577	0.78	9500	9000
	1278.11	4399	4065	3662	3384	2801	2275	1848		1.10	4354	0.56	9500	9000
	1595.08	4394	4060	3658	3380	2801	2275	1848		0.88	4460	0.46	9500	9000
	1854.28	5021	4623	4180	3862	3112	2528	2053		0.76	5184	0.46	8050	8050
	2243.08	3782	3495	3148	2909	2422	2271	2224		0.62	3997	0.29	6000	6000
	2799.36	3780	3493	3147	2908	2421	2270	2223		0.50	4096	0.24	6000	6000

5-6	5,6 stadi/stages/stufen A richiesta / On request / Auf Anfrage

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
402	21.2	15.2	17.3	12.2	20.3
403	13.3	9.8	11.0	8.0	12.8
404	10.6	8.0	8.9	6.7	10.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / *Etapa* / Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life — n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
3	**36.02**	3279	3278	3277	3276	2231	1812	1472	1400	38.87	2406	10.88	10000	9000
	42.52	3871	3870	3869	3866	2505	2035	1653		32.93	2840	10.88	11000	9000
	52.09	5046	5045	4773	3986	2460	1998	1623		26.88	2963	9.27	11000	9000
	65.37	5687	5192	5192	4673	2883	2342	1902		21.42	3719	9.27	9500	9000
	75.49	4999	4999	4731	3986	2460	1998	1623		18.55	3312	7.15	11000	9000
	88.46	4547	4201	3785	3498	2801	2275	1848		15.83	3319	6.11	9500	9000
	94.74	5687	5192	5192	4673	2883	2342	1902		14.78	4156	7.15	9500	9000
	110.13	5104	4623	4566	4219	3204	2602	2114		12.71	4106	6.07	8050	8050
	124.24	4830	4464	4021	3716	2460	1998	1623		11.27	3665	4.81	11000	9000
	155.91	5687	5192	4917	4544	2883	2342	1902		8.98	4600	4.81	9500	9000
	181.25	5104	4623	4545	4200	3204	2602	2114		7.72	4326	3.89	8050	8050
	210.99	4476	4136	3726	3443	2801	2275	1848		6.64	3608	2.79	9500	9000
	245.27	5104	4623	4258	3935	3112	2528	2053		5.71	4194	2.79	8050	8050
	296.70	3812	3523	3174	2933	2441	2290	2242		4.72	3195	1.75	6000	6000
	370.29	3807	3518	3169	2929	2438	2287	2239		3.78	3272	1.44	6000	6000
4	**181.27**	4918	4917	4657	3986	2460	1998	1623	1400	7.72	4308	3.96	11000	9000
	227.48	5687	5192	5192	4673	2883	2342	1902		6.15	5191	3.80	9500	9000
	262.72	4893	4892	4634	3986	2460	1998	1623		5.33	4601	2.92	11000	9000
	278.68	5687	5192	5192	4673	2883	2342	1902		5.02	5192	3.10	9500	9000
	300.52	4885	4884	4627	3986	2460	1998	1623		4.66	4665	2.59	11000	9000
	321.84	4881	4880	4624	3986	2460	1998	1623		4.35	4698	2.43	11000	9000
	357.87	5104	4623	4524	4181	3264	2651	2153		3.91	4623	2.15	8050	8050
	375.05	4873	4872	4616	3986	2460	1998	1623		3.73	4772	2.12	11000	9000
	403.88	5687	5192	5192	4673	2883	2342	1902		3.47	5192	2.14	9500	9000
	435.54	4865	4864	4609	3986	2460	1998	1623		3.21	4847	1.85	11000	9000
	470.65	5687	5192	5192	4673	2883	2342	1902		2.97	5192	1.83	9500	9000
	529.66	4856	4856	4601	3986	2460	1998	1623		2.64	4855	1.53	11000	9000
	542.57	5687	5192	5192	4673	2883	2342	1902		2.58	5192	1.59	9500	9000
	593.29	5062	4623	4214	3894	3112	2528	2053		2.36	4591	1.29	8050	8050
	664.67	5687	5192	5192	4673	2883	2342	1902		2.11	5192	1.30	9500	8050
	716.77	4844	4843	4590	3986	2460	1998	1623		1.95	4843	1.12	11000	9000
	859.84	5046	4623	4201	3882	3112	2528	2053		1.63	4773	0.93	8050	8050
	899.48	5687	5192	5192	4673	2883	2342	1902		1.56	5407	1.00	9500	9000
	923.08	4409	4074	3670	3391	2801	2275	1848		1.52	4204	0.76	9500	9000
	1045.64	5104	4623	4503	4161	3204	2602	2114		1.34	4936	0.79	8050	8050
	1122.55	5687	5192	5192	4673	2883	2342	1902		1.25	5545	0.82	9500	9000
	1217.24	4401	4066	3663	3385	2801	2275	1848		1.15	4331	0.59	9500	9000
	1304.96	5104	4623	4500	4158	3204	2602	2114		1.07	5063	0.64	8050	8050
	1519.12	4395	4061	3659	3381	2801	2275	1848		0.92	4436	0.49	9500	9000
	1765.98	5022	4623	4181	3863	3112	2528	2053		0.79	5157	0.48	8050	8050
	2136.26	3783	3495	3149	2910	2422	2272	2225		0.66	3968	0.31	6000	6000
	2666.06	3781	3494	3147	2908	2421	2271	2224		0.53	4075	0.26	6000	6000

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
403	12,6	10,0	10,9	8,7	12,2
404	9,6	7,7	8,4	6,8	9,4

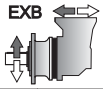
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h												
		T_N [Nm]							10000 Hours Life				T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]		
1	**3.60**	7103	6626	6626	6625	5007	4067	3303	1400	388.89	2706	113.60	10000	9000
	4.25	6730	6194	6194	6193	4935	4008	3256		329.41	2803	99.67	11000	9000
	5.33	5687	5192	5192	5191	4788	3889	3159		262.66	2911	82.54	9500	9000
	6.20	5104	4623	4623	4493	3740	3456	3125		225.81	3013	73.45	8050	8050
	7.50	4060	3751	3380	3123	2600	2438	2388		186.67	2394	48.24	6000	6000
2	**12.53**	6509	6509	6507	6505	4085	3318	2695	1400	111.73	3209	39.94	10000	9000
	14.79	6730	6194	6194	6193	4588	3727	3027		94.66	3788	39.94	11000	9000
	15.35	7081	6626	6626	6499	4010	3257	2646		91.21	3348	34.02	10000	9000
	18.12	6730	6194	6194	6193	4504	3658	2972		77.26	3953	34.02	11000	9000
	20.77	6036	5577	5024	4643	3895	3164	2570		67.40	3561	26.74	10000	9000
	22.74	5687	5192	5192	5191	4755	3889	3159		61.57	4498	30.85	9500	9000
	24.52	6730	6194	5820	5378	4375	3554	2886		57.10	4204	26.74	11000	9000
	30.77	5687	5192	5192	5191	4725	3889	3159		45.50	4776	24.21	9500	9000
	35.77	5104	4623	4623	4285	3567	3296	3125		39.14	3668	15.99	8050	8050
	38.40	5548	5127	4618	4268	3882	3676	3159		36.46	3939	16.00	9500	9000
	44.64	5104	4623	4620	4269	3554	3284	3125		31.36	3748	13.09	8050	8050
	54.00	3876	3582	3227	2982	2482	2328	2280		25.93	2675	7.73	6000	6000
3	**43.60**	6358	6357	6355	6352	4085	3318	2695	1400	32.11	4665	17.05	10000	9000
	51.47	6730	6194	6194	6193	4588	3727	3027		27.20	5507	17.05	11000	9000
	63.05	6730	6194	6194	6193	4588	3727	3027		22.20	5853	14.79	11000	9000
	72.28	6280	6280	6278	6274	4085	3318	2695		19.37	5429	11.97	10000	9000
	77.24	6730	6194	6194	6193	4504	3658	2972		18.13	6107	12.60	11000	9000
	85.33	6730	6194	6194	6193	4588	3727	3027		16.41	6193	11.57	11000	9000
	96.93	5687	5192	5192	5191	4645	3889	3159		14.44	5191	8.53	9500	9000
	104.53	6730	6194	6194	6193	4504	3658	2972		13.39	6193	9.44	11000	9000
	110.50	6825	6435	6194	6008	4010	3257	2646		12.67	5959	8.59	10000	9000
	130.45	6730	6194	6194	6193	4504	3658	2972		10.73	6193	7.56	11000	9000
	141.46	6701	6192	5578	5155	4375	3554	2886		9.90	5161	5.82	11000	9000
	163.71	5687	5192	5192	5191	4621	3889	3159		8.55	5191	5.05	9500	9000
	176.54	6679	6172	5560	5138	4375	3554	2886		7.93	5275	4.76	11000	9000
	190.31	5104	4623	4544	4199	3495	3230	3125		7.36	4348	3.64	8050	8050
	221.54	5687	5192	5192	5191	4610	3889	3159		6.32	5191	3.73	9500	9000
	257.54	5104	4623	4534	4189	3487	3223	3125		5.44	4491	2.78	8050	8050
	276.48	5327	4922	4434	4098	3728	3530	3159		5.06	4428	2.55	9500	9000
	321.41	5104	4623	4527	4183	3483	3218	3125		4.36	4599	2.28	8050	8050
	388.80	3806	3517	3169	2928	2437	2286	2239		3.60	3289	1.35	6000	6000
4	**151.72**	6196	6195	6193	6190	4085	3318	2695	1400	9.23	6191	6.72	10000	9000
	185.86	6790	6402	6401	6400	4010	3257	2646		7.53	6401	5.67	10000	9000
	219.42	6730	6194	6194	6193	4588	3727	3027		6.38	6194	4.65	11000	9000
	227.69	6779	6391	6390	6390	4010	3257	2646		6.15	6390	4.62	10000	9000
	268.80	6730	6194	6194	6193	4588	3727	3027		5.21	6194	3.80	11000	9000
	296.94	6730	6194	6194	6193	4588	3727	3027		4.71	6194	3.43	11000	9000
	329.29	6730	6194	6194	6193	4504	3658	2972		4.25	6194	3.10	11000	9000
	363.76	6730	6194	6194	6193	4588	3727	3027		3.85	6194	2.81	11000	9000
	416.98	6121	6121	6119	6115	4085	3318	2695		3.36	6120	2.42	10000	9000
	453.98	6730	6194	6194	6193	4588	3727	3027		3.08	6194	2.24	11000	9000
	492.27	6730	6194	6194	6193	4588	3727	3027		2.84	6194	2.07	11000	9000
	556.14	6730	6194	6194	6193	4504	3658	2972		2.52	6194	1.84	11000	9000
	614.35	6730	6194	6194	6193	4588	3727	3027		2.28	6194	1.66	11000	9000
	766.71	6730	6194	5755	5566	4588	3727	3027		1.83	6194	1.33	11000	9000
	795.61	6730	6345	5947	5769	4010	3257	2646		1.76	6345	1.31	10000	9000
	939.26	6730	6194	6194	6193	4504	3658	2972		1.49	6430	1.13	11000	9000
	1018.49	6569	6070	5468	5053	4375	3554	2886		1.37	6335	1.02	11000	9000
	1178.68	5687	5192	5192	5191	4571	3889	3159		1.19	5577	0.78	9500	9000
	1271.08	6560	6062	5461	5046	4375	3554	2886		1.10	6489	0.84	11000	9000
	1595.08	5687	5192	5192	5191	4567	3889	3159		0.88	5773	0.60	9500	9000
	1990.66	5244	4845	4365	4034	3669	3474	3159		0.70	5458	0.45	9500	9000
	2314.14	5104	4623	4493	4152	3456	3194	3121		0.60	5406	0.38	8050	8050
	2799.36	3780	3493	3147	2908	2421	2270	2223		0.50	4131	0.24	6000	6000

5-6	5,6 stadi/stages/stufen A richiesta / On request / Auf Anfrage

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
501	31.4	21.0	24.6	15.8	29.9
502	21.6	15.7	17.7	12.7	20.8
503	13.5	10.0	11.2	8.3	13.0
504	10.8	8.2	9.1	6.9	10.4

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage *Etapa* Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
2	**9.11**	4708	4708	4707	4706	4698	4067	3303	1400	153.68	3575	62.53	10000	9000
	10.75	5558	5558	5557	5555	4935	4008	3256		130.23	3703	54.89	11000	9000
	13.49	5687	5192	5192	5191	4788	3889	3159		103.78	3846	45.43	9500	9000
	15.68	5104	4623	4623	4362	3631	3355	3125		89.29	3399	34.54	8050	8050
	17.71	4864	4824	4824	4824	4320	4008	3256		79.05	4100	36.89	11000	9000
	22.22	5687	5192	5192	5191	4757	3889	3159		63.01	4467	32.04	9500	9000
	25.83	5104	4623	4623	4312	3589	3317	3125		54.20	3556	21.94	8050	8050
	29.28	4328	3999	3602	3329	2771	2694	2610		47.81	2785	15.15	11000	9000
	36.74	5292	4890	4405	4071	3420	3353	3159		38.11	3495	15.16	9500	9000
	42.71	5104	4623	4623	4272	3556	3286	3125		32.78	3732	13.92	8050	8050
	51.67	3878	3584	3229	2983	2484	2329	2281		27.10	2663	8.21	6000	6000
3	**36.02**	6375	6374	6373	6371	4085	3318	2695	1400	38.87	4405	19.92	10000	9000
	42.52	6730	6194	6194	6193	4588	3727	3027		32.93	5201	19.93	11000	9000
	52.09	6730	6194	6194	6193	4504	3658	2972		26.88	5426	16.97	11000	9000
	61.63	6713	6194	6194	6193	4588	3727	3027		22.72	5680	15.01	11000	9000
	75.49	6730	6194	6194	6193	4504	3658	2972		18.55	6065	13.09	11000	9000
	86.54	5817	5375	4842	4475	3876	3164	2570		16.18	4236	7.97	10000	9000
	94.74	5687	5192	5192	5191	4646	3889	3159		14.78	5191	8.93	9500	9000
	102.16	6730	6194	5609	5183	4375	3554	2886		13.70	5001	7.97	11000	9000
	110.40	5404	4994	4499	4157	3782	3581	3159		12.68	4046	5.97	9500	9000
	128.21	5687	5192	5192	5191	4632	3889	3159		10.92	5191	6.60	9500	9000
	168.13	6315	5836	5257	4862	4375	3554	2886		8.33	4960	4.81	11000	9000
	186.00	5104	4623	4545	4199	3496	3230	3125		7.53	4338	3.80	8050	8050
	210.99	5687	5192	5192	5191	4612	3889	3159		6.64	5191	4.01	9500	9000
	263.31	5330	4925	4437	4100	3730	3532	3159		5.32	4406	2.73	9500	9000
	306.10	5104	4623	4529	4185	3484	3219	3125		4.57	4575	2.43	8050	8050
	370.29	3807	3518	3169	2929	2438	2287	2239		3.78	3272	1.44	6000	6000
4	**125.34**	6215	6214	6212	6209	4085	3318	2695	1400	11.17	6208	8.25	10000	9000
	153.55	6195	6194	6192	6189	4085	3318	2695		9.12	6189	6.72	10000	9000
	181.27	6730	6194	6194	6193	4588	3727	3027		7.72	6194	5.69	11000	9000
	222.07	6730	6194	6194	6193	4504	3658	2972		6.30	6194	4.64	11000	9000
	245.31	6730	6194	6194	6193	4588	3727	3027		5.71	6194	4.21	11000	9000
	272.62	6770	6382	6382	6381	4010	3257	2646		5.14	6382	3.90	10000	9000
	306.15	6730	6194	5839	5646	4588	3727	3027		4.57	5898	3.21	11000	9000
	321.84	6730	6194	6194	6193	4504	3658	2972		4.35	6194	3.21	11000	9000
	355.53	6730	6194	6194	6193	4588	3727	3027		3.94	6194	2.90	11000	9000
	375.05	6730	6194	6194	6193	4504	3658	2972		3.73	6194	2.75	11000	9000
	406.69	6615	6112	5506	5088	4375	3554	2886		3.44	5746	2.35	11000	9000
	432.36	6730	6194	6194	6193	4588	3727	3027		3.24	6194	2.39	11000	9000
	507.55	6601	6100	5495	5078	4375	3554	2886		2.76	5881	1.93	11000	9000
	543.55	6730	6194	6194	6193	4504	3658	2972		2.58	6194	1.90	11000	9000
	585.10	6730	6194	6194	6193	4588	3727	3027		2.39	6194	1.76	11000	9000
	607.15	6738	6352	6352	6348	4010	3257	2646		2.31	6352	1.75	10000	9000
	716.77	6730	6194	6194	6193	4504	3658	2972		1.95	6194	1.44	11000	9000
	821.64	5672	5241	4722	4363	3780	3164	2570		1.70	5338	1.08	10000	9000
	894.53	6730	6194	6194	6193	4504	3658	2972		1.57	6394	1.19	11000	9000
	969.99	6571	6072	5470	5054	4375	3554	2886		1.44	6302	1.08	11000	9000
	1122.55	5687	5192	5192	5191	4572	3889	3159		1.25	5545	0.82	9500	9000
	1210.55	6562	6064	5463	5048	4375	3554	2886		1.16	6454	0.89	11000	9000
	1339.20	5104	4623	4499	4158	3461	3198	3125		1.05	5078	0.63	8050	8050
	1519.12	5687	5192	5192	5191	4568	3889	3159		0.92	5741	0.63	9500	9000
	1895.86	5245	4847	4366	4035	3670	3475	3159		0.74	5429	0.48	9500	9000
	2203.94	5104	4623	4493	4152	3456	3194	3121		0.64	5376	0.41	8050	8050
	2666.06	3781	3494	3147	2908	2421	2271	2224		0.53	4101	0.26	6000	6000

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
502	17,6	13,8	15,1	11,9	17,0
503	12,7	10,1	11,0	8,8	12,4
504	9,8	7,9	8,5	6,9	9,5

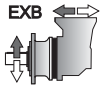
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]	T_{max} [Nm] Only Output Version **FC**
		T_N [Nm]												
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]		
1	**3.60**	8568	8032	8031	8031	6676	5423	4405	1400	388.89	3608	151.47	12000	
	4.55	7691	7049	7049	7048	6246	5294	4300		307.69	3779	125.52	13000	
	5.33	6636	6057	6057	6057	5559	5156	4212		262.66	3881	110.04	11500	
2	**12.53**	7822	7822	7820	7818	5446	4424	3593	1400	111.73	4279	53.26	12000	
	15.82	7691	7049	7049	7048	5979	5208	4230		88.50	5403	53.27	13000	
	19.38	7691	7049	7049	7048	5948	5113	4153		72.24	5637	45.36	13000	
	22.74	6636	6057	6057	6057	5315	4929	4212		61.57	5190	35.60	11500	
	26.22	7691	7049	7049	6668	5908	4966	4034		53.39	5864	34.88	13000	
	30.77	6636	6057	6057	6057	5281	4899	4212		45.50	5338	27.06	11500	
3	**43.60**	7697	7696	7693	7688	5260	4272	3470	1400	32.11	6007	21.95	12000	
	53.41	7876	7876	7875	7671	5347	4343	3528		26.21	6490	19.36	12000	
	65.43	7852	7852	7851	7636	5347	4343	3528		21.40	6897	16.80	12000	
	72.28	7603	7602	7599	7593	5016	4074	3309		19.37	6666	14.70	12000	
	82.61	7691	7049	7049	6965	5798	5113	4153		16.95	6558	12.65	13000	
	88.54	7820	7820	7819	7589	5347	4343	3528		15.81	7203	12.96	12000	
	91.26	7691	7049	7049	6956	5791	4796	3896		15.34	6625	11.57	13000	
	111.80	7691	7049	7049	6941	5778	5113	4153		12.52	6765	9.64	13000	
	139.52	7691	7049	7049	6925	5765	5113	4153		10.03	6922	7.90	13000	
	151.29	7691	7049	6916	6391	5761	4966	4034		9.25	6448	6.79	13000	
	188.81	7691	7049	6893	6370	5745	4966	4034		7.41	6590	5.56	13000	
	221.54	6636	6057	6057	6057	5153	4779	4212		6.32	6057	4.36	11500	9000
4	**151.72**	7501	7500	7497	7491	5260	4272	3470	1400	9.23	7492	8.14	12000	
	185.86	7760	7760	7759	7501	5347	4343	3528		7.53	7747	6.86	12000	
	227.69	7747	7747	7746	7481	5347	4343	3528		6.15	7745	5.60	12000	
	278.93	7735	7735	7734	7464	5347	4343	3528		5.02	7734	4.57	12000	
	308.13	7730	7730	7729	7456	5347	4343	3528		4.54	7729	4.13	12000	
	352.19	7691	7049	7049	6876	5724	5113	4153		3.98	7049	3.30	13000	
	384.54	7719	7719	7718	7440	5347	4343	3528		3.64	7718	3.31	12000	
	416.98	7411	7410	7406	7298	5016	4074	3309		3.36	7408	2.93	12000	
	471.08	7710	7710	7709	7427	5347	4343	3528		2.97	7709	2.69	12000	
	510.82	7707	7706	7705	7422	5347	4343	3528		2.74	7706	2.48	12000	
	559.22	6636	6057	6057	6057	5125	4753	4212		2.50	6057	1.78	11500	
	637.51	7698	7698	7697	7409	5347	4343	3528		2.20	7698	1.99	12000	
	756.77	6636	6057	6057	6057	5118	4747	4212		1.85	6185	1.35	11500	
	804.93	7691	7049	7049	6848	5701	5113	4153		1.74	7219	1.48	13000	
	872.83	7691	7049	6789	6273	5658	4966	4034		1.60	7286	1.37	13000	
	1004.56	7320	6764	6094	5926	5200	4731	3843		1.39	7049	1.15	13000	
	1178.68	6636	6057	6057	6057	5110	4739	4212		1.19	6506	0.91	11500	
	1278.11	6636	6057	6057	6057	5108	4738	4212		1.10	6567	0.85	11500	
	1359.44	7691	7049	6771	6256	5643	4966	4034		1.03	7666	0.93	13000	
	1595.08	7691	7049	6765	6251	5639	4966	4034		0.88	7807	0.81	13000	

5-6	5,6 stadi/stages/stufen A richiesta / On request / Auf Anfrage

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
701	31.4	21.0	24.6	15.8	29.9
702	21.6	15.7	17.7	12.7	20.8
703	13.5	10.0	11.2	8.3	13.0
704	10.8	8.2	9.1	6.9	10.4

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage *Etapa* Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]	T_{max} [Nm] Only Output Version FC
2	**9.11**	4708	4708	4707	4706	4698	4687	4405	1400	153.68	4676	81.79	12000	9000
	11.50	5944	5944	5943	5941	5928	5294	4300		121.74	4991	69.16	13000	
	13.49	6636	6057	6057	6057	5385	4994	4212		103.78	4991	58.95	11500	
	18.94	5202	5160	5159	5159	4585	4289	4202		73.92	4386	36.90	13000	
	22.22	6054	6054	6054	6053	5283	4932	4212		63.01	5146	36.91	11500	
	31.31	4593	4244	3824	3533	2941	2875	2779		44.71	2979	15.16	13000	
	36.74	5292	4890	4405	4071	3420	3353	3222		38.11	3495	15.16	11500	
3	**36.02**	6375	6374	6373	6371	5446	4424	3593	1400	38.87	5874	26.56	12000	
	44.12	7809	7808	7807	7708	5347	4343	3528		31.73	6128	22.62	12000	
	55.71	7691	7049	7049	7002	5829	5113	4153		25.13	6304	18.43	13000	
	65.91	7180	7049	7049	6619	5815	5208	4230		21.24	6075	15.01	13000	
	75.39	7691	7049	7006	6474	5804	4966	4034		18.57	6033	13.03	13000	
	80.74	7691	7049	7049	6967	5799	5113	4153		17.34	6543	13.20	13000	
	88.46	6636	6057	6057	6057	5197	4821	4212		15.83	5925	10.91	11500	
	94.74	6636	6057	6057	6057	5193	4817	4212		14.78	5967	10.26	11500	
	109.27	7691	7049	6954	6426	5779	4966	4034		12.81	6247	9.31	13000	
	128.21	6636	6057	6057	6057	5177	4802	4212		10.92	6057	7.70	11500	
	155.91	5907	5458	4917	4544	4219	3864	3817		8.98	4600	4.81	11500	
	179.82	6703	6194	5580	5194	4802	4402	4034		7.79	5305	4.81	13000	
	210.99	6636	6057	6057	6057	5155	4781	4212		6.64	6057	4.68	11500	
4	**125.34**	7524	7523	7520	7514	5260	4272	3470	1400	11.17	7513	9.99	12000	
	153.55	7773	7773	7772	7520	5347	4343	3528		9.12	7600	8.25	12000	
	188.11	7759	7759	7758	7499	5347	4343	3528		7.44	7756	6.87	12000	
	222.54	7748	7748	7747	7484	5347	4343	3528		6.29	7747	5.80	12000	
	254.56	7740	7740	7739	7472	5347	4343	3528		5.50	7739	5.06	12000	
	272.62	7736	7736	7735	7466	5347	4343	3528		5.14	7735	4.73	12000	
	321.41	7691	7049	7049	6880	5727	5113	4153		4.36	7049	3.66	13000	
	366.23	7721	7721	7720	7444	5347	4343	3528		3.82	7720	3.51	12000	
	401.12	7691	7049	7049	6871	5720	5113	4153		3.49	7049	2.93	13000	
	448.65	7712	7712	7711	7430	5347	4343	3528		3.12	7711	2.86	12000	
	495.61	7399	7398	7395	7279	5016	4074	3309		2.82	7397	2.48	12000	
	542.83	7691	7049	6813	6296	5679	4966	4034		2.58	7049	2.16	13000	
	607.15	7700	7700	7699	7412	5347	4343	3528		2.31	7699	2.12	12000	
	682.11	6636	6057	6057	6057	5120	4749	4212		2.05	6057	1.48	11500	
	757.72	7149	6606	5951	5773	5086	4343	3528		1.85	6666	1.47	12000	
	821.64	6625	6122	5515	5096	4520	4218	3426		1.70	6235	1.26	12000	
	899.48	6636	6057	6057	6057	5114	4744	4212		1.56	6308	1.17	11500	
	956.72	7691	7049	7049	6844	5697	5113	4153		1.46	7363	1.28	13000	
	1037.42	7691	7049	6781	6266	5652	4966	4034		1.35	7432	1.19	13000	
	1122.55	6636	6057	6057	6057	5110	4740	4212		1.25	6470	0.96	11500	
	1294.71	7691	7049	6772	6258	5645	4966	4034		1.08	7623	0.98	13000	
	1519.12	6636	6057	6057	6057	5106	4736	4212		0.92	6698	0.73	11500	

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
702	17,6	13,8	15,1	11,9	17,0
703	12,7	10,1	11,0	8,8	12,4
704	9,8	7,9	8,5	6,9	9,5

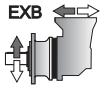
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage *Etapa* Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**3.50**	9011	8496	8495	8494	6093	4949	4020	1400	400.00	3265	140.98	16500
	4.13	9693	8919	8919	8918	6043	4909	3987		338.98	3403	124.53	16000
	5.17	8484	7741	7741	7740	5874	4771	3876		270.79	3539	103.45	14500
	6.00	7934	7210	7210	6839	5693	4666	3790		233.33	3619	91.16	11500
	7.25	6309	5830	5252	4853	4040	3775	3700		193.10	3705	77.23	9000
2	**12.60**	8522	8035	8034	8033	6093	4949	4020	1400	111.11	4795	59.35	16500
	14.85	9693	8919	8919	8918	6043	4909	3987		94.28	4996	52.47	16000
	17.53	9693	8919	8919	8918	6043	4909	3987		79.86	5251	46.71	16000
	18.67	8421	7939	7938	7937	6093	4949	4020		74.99	5395	45.07	16500
	22.00	9693	8919	8919	8918	6043	4909	3987		63.64	5621	39.85	16000
	25.58	9693	8919	8794	8127	6043	4909	3987		54.73	5882	35.86	16000
	27.56	8484	7741	7741	7740	5874	4771	3876		50.80	5846	33.08	14500
	32.03	8484	7741	7741	7740	5874	4771	3876		43.71	6116	29.78	14500
	37.20	7934	7210	7022	6489	5402	4666	3790		37.63	5579	23.39	11500
	38.75	8484	7741	7741	7188	5874	4771	3876		36.13	6476	26.06	14500
	45.00	7934	7210	6998	6467	5383	4666	3790		31.11	5682	19.69	11500
	54.38	5996	5541	4992	4613	3840	3588	3516		25.74	4141	11.87	9000
3	**43.85**	8257	7784	7784	7782	5281	4289	3484	1400	31.93	6042	21.96	16500
	51.68	9693	8919	8919	8918	5925	4812	3909		27.09	7120	21.95	16000
	63.31	9693	8919	8919	8918	5816	4724	3837		22.11	7429	18.70	16000
	76.56	9693	8919	8919	8918	6043	4909	3987		18.29	8172	17.01	16000
	85.67	9693	8919	8919	8918	5650	4589	3727		16.34	7902	14.70	16000
	93.79	9693	8919	8919	8918	6043	4909	3987		14.93	8685	14.76	16000
	101.14	9693	8919	8919	8918	6043	4909	3987		13.84	8884	13.99	16000
	109.03	9693	8919	8436	7795	6043	4909	3987		12.84	7576	11.07	16000
	126.92	9693	8919	8919	8918	6043	4909	3987		11.03	8918	11.20	16000
	147.55	9693	8919	8387	7751	6043	4909	3987		9.49	7797	8.42	16000
	158.40	9693	8919	8688	8499	6043	4909	3987		8.84	8542	8.59	16000
	184.14	9693	8919	8356	7722	6043	4909	3987		7.60	7967	6.89	16000
	230.64	8484	7741	7741	7740	5874	4771	3876		6.07	7741	5.35	14500
	267.84	7934	7210	6857	6336	5275	4666	3790		5.23	6822	4.06	11500
	279.00	8484	7741	7427	6863	5874	4771	3876		5.02	7424	4.24	14500
	324.00	7934	7210	6848	6328	5268	4666	3790		4.32	6963	3.42	11500
	391.50	5881	5434	4895	4524	3766	3519	3449		3.58	5086	2.07	9000
4	**212.31**	9693	8919	8919	8918	6043	4909	3987	1400	6.59	8919	6.92	16000
	260.09	9693	8919	8919	8918	6043	4909	3987		5.38	8919	5.65	16000
	298.14	9693	8919	8919	8918	5925	4812	3909		4.70	8919	4.93	16000
	318.62	9693	8919	8919	8918	6043	4909	3987		4.39	8919	4.61	16000
	351.97	9693	8919	8919	8918	6043	4909	3987		3.98	8919	4.18	16000
	399.84	9693	8919	8919	8918	6043	4909	3987		3.50	8919	3.67	16000
	455.82	9693	8919	8919	8918	5816	4724	3837		3.07	8919	3.22	16000
	494.27	9693	8919	8919	8620	5650	4589	3727		2.83	8919	2.97	16000
	538.12	9693	8919	8919	8918	6043	4909	3987		2.60	8919	2.73	16000
	551.23	9693	8919	8433	8249	6043	4909	3987		2.54	8919	2.67	16000
	629.02	9693	8919	8234	7608	6043	4909	3987		2.23	8919	2.34	16000
	728.22	9693	8919	8919	8918	6043	4909	3987		1.92	8919	2.01	16000
	785.02	9693	8919	8219	7594	6043	4909	3987		1.78	8919	1.87	16000
	851.24	9693	8919	8213	7590	6043	4909	3987		1.64	9157	1.77	16000
	913.85	9693	8919	8919	8918	6043	4909	3987		1.53	9231	1.66	16000
	1062.35	9693	8919	8200	7578	6043	4909	3987		1.32	9392	1.46	16000
	1140.48	9693	8919	8342	8160	6043	4909	3987		1.23	9468	1.37	16000
	1325.81	9693	8919	8189	7567	6043	4909	3987		1.06	9633	1.20	16000
	1428.48	8484	7741	7741	7740	5874	4771	3876		0.98	8504	0.98	14500
	1660.61	8484	7741	7741	7740	5874	4771	3876		0.84	8652	0.86	14500
	1869.23	7934	7210	6796	6280	5228	4666	3790		0.75	8201	0.72	11500
	2008.80	8484	7741	7293	6739	5874	4771	3876		0.70	8842	0.73	14500
	2332.80	7934	7210	6792	6276	5225	4666	3790		0.60	8411	0.59	11500
	2818.80	5838	5394	4860	4491	3738	3493	3423		0.50	6395	0.38	9000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
801	42.2	27.7	29.4	20.1	40.5
802	28.7	20.4	21.4	16.0	27.7
803	17.6	12.8	13.4	10.2	17.1
804	13.9	10.3	10.7	8.4	13.5

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / *Etapa* / Estágio	ir	n_2 x h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
										10000 Hours Life			
2	**8.85**	6247	6247	6246	6245	6093	4949	4020	1400	158.19	4313	77.65	16500
	10.43	7363	7362	7361	7359	6043	4909	3987		134.23	4494	68.66	16000
	13.07	8484	7741	7741	7740	5874	4771	3876		107.12	4674	56.99	14500
	15.18	7934	7210	7169	6625	5515	4666	3790		92.23	4781	50.19	11500
	17.19	6509	6457	6456	6456	5890	4909	3987		81.44	5220	48.39	16000
	21.53	8087	7741	7741	7740	5874	4771	3876		65.03	5429	40.18	14500
	25.00	7934	7210	7080	6542	5446	4666	3790		56.00	5376	34.27	11500
	30.21	6059	5599	5044	4661	3880	3626	3553		46.34	3914	20.64	9000
	35.59	6063	5602	5047	4664	3907	3833	3687		39.34	3990	17.87	14500
	41.33	6922	6396	5762	5325	4523	4424	3790		33.87	4633	17.86	11500
	49.94	6004	5548	4998	4619	3845	3593	3521		28.03	4107	13.10	9000
3	**36.23**	6411	6411	6410	6408	6093	4949	4020	1400	38.64	6375	28.66	16500
	42.77	7569	7568	7567	7562	6093	4949	4020		32.73	6918	26.34	16500
	50.40	8920	8919	8917	8910	6043	4909	3987		27.78	7209	23.30	16000
	63.25	9693	8919	8919	8918	6043	4909	3987		22.13	7717	19.87	16000
	73.53	9693	8919	8511	7864	6043	4909	3987		19.04	7308	16.19	16000
	79.22	8484	7741	7741	7740	5874	4771	3876		17.67	7566	15.55	14500
	91.67	9693	8919	8919	8866	6043	4909	3987		15.27	8448	15.01	16000
	106.56	9693	8919	8440	7799	6043	4909	3987		13.14	7560	11.56	16000
	114.81	8484	7741	7741	7740	5874	4771	3876		12.19	7740	10.98	14500
	133.47	8484	7741	7741	7740	5874	4771	3876		10.49	7740	9.45	14500
	161.46	8484	7741	7494	6925	5874	4771	3876		8.67	7038	7.10	14500
	187.50	7934	7210	6876	6354	5289	4666	3790		7.47	6569	5.71	11500
	219.66	8003	7395	6662	6317	5737	4771	3876		6.37	6480	4.80	14500
	265.71	8484	7741	7432	6868	5874	4771	3876		5.27	7388	4.53	14500
	308.57	7934	7210	6850	6330	5269	4666	3790		4.54	6927	3.66	11500
	372.86	5882	5436	4897	4525	3767	3520	3450		3.75	5059	2.21	9000
4	**148.57**	9693	8919	8919	8918	5925	4812	3909	1400	9.42	8918	10.00	16000
	182.01	9693	8919	8919	8918	5816	4724	3837		7.69	8919	8.16	16000
	214.87	9693	8919	8919	8918	6043	4909	3987		6.52	8919	6.92	16000
	263.78	9693	8919	8919	8918	5816	4724	3837		5.31	8919	5.64	16000
	290.78	9693	8919	8919	8918	6043	4909	3987		4.81	8919	5.10	16000
	319.00	9693	8919	8919	8918	6043	4909	3987		4.39	8919	4.66	16000
	364.90	9693	8919	8919	8918	6043	4909	3987		3.84	8919	4.08	16000
	390.79	9693	8919	8919	8918	6043	4909	3987		3.58	8919	3.80	16000
	421.42	9693	8919	8919	8918	6043	4909	3987		3.32	8919	3.52	16000
	455.40	9693	8919	8463	8278	6043	4909	3987		3.07	8774	3.21	16000
	512.49	9693	8919	8919	8918	6043	4909	3987		2.73	8919	2.90	16000
	587.47	9693	8919	8919	8597	5650	4589	3727		2.38	8919	2.53	16000
	660.00	9693	8919	8407	8224	6043	4909	3987		2.12	8919	2.25	16000
	693.54	9693	8919	8919	8918	6043	4909	3987		2.02	8919	2.14	16000
	767.25	9693	8919	8220	7596	6043	4909	3987		1.82	8919	1.93	16000
	870.33	9693	8919	8919	8918	6043	4909	3987		1.61	9180	1.76	16000
	1011.76	9693	8919	8203	7580	6043	4909	3987		1.38	9339	1.53	16000
	1086.17	9693	8919	8347	8165	6043	4909	3987		1.29	9416	1.45	16000
	1262.67	9693	8919	8191	7569	6043	4909	3987		1.11	9579	1.27	16000
	1360.46	8484	7741	7741	7740	5874	4771	3876		1.03	8456	1.04	14500
	1532.97	8484	7741	7305	6750	5874	4771	3876		0.91	8573	0.93	14500
	1836.62	7934	7210	6796	6280	5228	4666	3790		0.76	8184	0.74	11500
	1913.14	8484	7741	7295	6741	5874	4771	3876		0.73	8793	0.76	14500
	2221.71	7934	7210	6793	6277	5225	4666	3790		0.63	8365	0.63	11500
	2684.57	5838	5395	4860	4491	3739	3494	3424		0.52	6349	0.39	9000

P_{tN}	P	R-L-F-FC-FU FB-FCB	M MX	FS FP	T
802	23,6	18,3	18,9	15,5	23,0
803	16,9	13,3	13,7	11,4	16,5
804	12,8	10,1	10,4	8,7	12,5

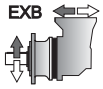
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**12.60**	11694	11572	11571	10943	6752	5485	4455	1400	111.11	5314	65.77	24000
	14.85	13782	12807	12806	12277	7575	6153	4998		94.28	6263	65.78	23000
	17.53	12690	12689	12687	12100	7466	6064	4926		79.86	6487	57.71	23000
	18.60	11348	10354	10353	10353	8052	6540	5313		75.27	7122	59.72	18000
	21.96	11348	10354	10353	10353	8052	6540	5313		63.75	7486	53.16	18000
	25.58	9857	9762	8794	8127	7166	5821	4728		54.73	6975	42.52	23000
	27.56	11348	10354	10353	10353	8052	6540	5313		50.80	8014	45.35	18000
	32.03	11348	10354	10353	9921	8052	6540	5313		43.71	8384	40.82	18000
	37.20	10772	9790	9486	8766	7297	6396	5196		37.63	7537	31.59	15000
	45.00	10668	9790	8881	8206	7272	6396	5196		31.11	7676	26.60	15000
	54.38	8495	7850	7072	6535	5440	5084	4982		25.74	5868	16.83	11000
3	**43.85**	11694	11211	10537	8559	5281	4289	3484	1400	31.93	6042	21.96	24000
	51.68	13782	12807	11821	9602	5925	4812	3909		27.09	7120	21.95	23000
	63.31	13782	12807	11605	9426	5816	4724	3837		22.11	7429	18.70	23000
	76.42	11348	10354	10353	10353	7791	6328	5140		18.32	9997	20.85	18000
	85.67	11429	10561	9514	8994	5650	4589	3727		16.34	7902	14.70	23000
	93.61	11348	10354	10353	10353	7648	6212	5046		14.96	10205	17.38	18000
	101.14	12690	12234	11021	10284	6346	5154	4187		13.84	9329	14.70	23000
	111.48	11348	10354	10343	9558	8052	6540	5313		12.56	9313	13.31	18000
	126.92	10890	10889	10887	10123	7243	5883	4779		11.03	10011	12.57	23000
	147.55	9857	9310	8387	7751	6839	5821	4728		9.49	7797	8.42	23000
	158.97	11348	10354	10353	10353	8052	6540	5313		8.81	10353	10.38	18000
	184.81	11348	10354	10239	9462	8052	6540	5313		7.58	9766	8.43	18000
	230.64	11348	10354	10201	9427	8052	6540	5313		6.07	9978	6.89	18000
	267.84	10772	9790	9263	8560	7126	6396	5196		5.23	9217	5.49	15000
	279.00	8922	8244	7427	6863	6249	5911	5313		5.02	7424	4.24	18000
	324.00	10185	9412	8479	7835	7116	6396	5196		4.32	8621	4.24	15000
	391.50	8332	7699	6936	6409	5335	4986	4886		3.58	7206	2.94	11000
4	**179.84**	13245	12807	11821	9602	5925	4812	3909	1400	7.78	10351	9.47	23000
	212.31	12690	12689	12687	10785	6655	5405	4390		6.59	12220	9.47	23000
	260.09	12690	12689	12687	10785	6655	5405	4390		5.38	12686	8.03	23000
	298.14	13082	12807	11821	9602	5925	4812	3909		4.70	12046	6.66	23000
	318.62	12690	12689	12687	10588	6533	5307	4310		4.39	12687	6.55	23000
	351.97	12690	12689	12687	10785	6655	5405	4390		3.98	12687	5.94	23000
	386.75	11275	10932	10344	8402	5185	4211	3421		3.62	10931	4.66	24000
	455.82	13289	12807	11605	9426	5816	4724	3837		3.07	12807	4.63	23000
	500.81	11348	10354	10353	10353	8052	6540	5313		2.80	10354	3.41	18000
	538.12	12690	12689	12687	10588	6533	5307	4310		2.60	12688	3.88	23000
	583.51	12689	11725	10563	10134	6346	5154	4187		2.40	11485	3.24	23000
	619.08	11348	10354	10353	10353	6614	5372	4364		2.26	10354	2.75	18000
	728.22	12647	11687	10528	10101	6346	5154	4187		1.92	11739	2.65	23000
	802.63	11348	10354	10050	9287	8052	6540	5313		1.74	10648	2.18	18000
	845.81	11348	10354	10353	10353	8052	6540	5313		1.66	10712	2.09	18000
	917.16	11348	10354	10353	10353	8052	6540	5313		1.53	10811	1.95	18000
	1066.20	11348	10354	10027	9266	8052	6540	5313		1.31	10999	1.70	18000
	1144.62	11348	10354	10353	10353	8052	6540	5313		1.22	11089	1.59	18000
	1330.62	11348	10354	10011	9251	8052	6540	5313		1.05	11282	1.39	18000
	1428.48	11348	10354	10353	10107	8052	6540	5313		0.98	11374	1.31	18000
	1660.61	11348	10354	9997	9238	8052	6540	5313		0.84	11571	1.14	18000
	1928.45	10772	9790	9180	8483	7062	6396	5196		0.73	11175	0.96	15000
	2008.80	8761	8096	7293	6739	6137	5805	5313		0.70	9129	0.75	18000
	2332.80	10002	9243	8326	7694	7058	6396	5196		0.60	10601	0.75	15000
	2818.80	8271	7643	6885	6362	5296	4949	4850		0.50	9060	0.53	11000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
902	30.4	25.6	16.9	28.6
903	18.6	15.8	10.8	17.6
904	14.6	12.6	8.7	13.9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 x h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**36.23**	6411	6411	6410	6408	6362	5485	4455	1400	38.64	6375	28.66	24000
	42.77	7569	7568	7567	7562	6655	5405	4390		32.73	7526	28.66	24000
	53.48	9464	9463	9460	9451	8052	6540	5313		26.18	9411	28.67	18000
	63.13	11173	10354	10353	10353	8052	6540	5313		22.18	9809	25.31	18000
	73.31	10772	9790	9384	8672	7219	6396	5196		19.10	8055	17.90	15000
	79.22	11348	10354	10353	10353	8052	6540	5313		17.67	10034	20.63	18000
	92.10	11348	10354	10353	9601	8052	6540	5313		15.20	9153	16.19	18000
	106.95	10772	9790	9341	8631	7185	6396	5196		13.09	8370	12.75	15000
	114.81	11348	10354	10353	10353	8052	6540	5313		12.19	10352	14.68	18000
	133.47	11348	10354	10303	9521	8052	6540	5313		10.49	9469	11.56	18000
	155.00	10772	9790	9305	8598	7158	6396	5196		9.03	8699	9.14	15000
	187.50	10277	9497	8555	7906	7146	6396	5196		7.47	8173	7.10	15000
	219.66	8003	7395	6662	6317	5737	5377	5313		6.37	6480	4.80	18000
	255.09	9137	8443	7606	7308	6530	6244	5196		5.49	7526	4.81	15000
	308.57	10193	9419	8485	7841	7119	6396	5196		4.54	8579	4.53	15000
	372.86	8334	7701	6938	6411	5337	4987	4888		3.75	7168	3.13	11000
4	**148.57**	13317	12807	11821	9602	5925	4812	3909	1400	9.42	9774	10.96	23000
	182.01	13462	12807	11605	9426	5816	4724	3837		7.69	10199	9.33	23000
	214.87	12690	12689	12687	10588	6533	5307	4310		6.52	12040	9.34	23000
	263.78	13382	12807	11605	9426	5816	4724	3837		5.31	11399	7.20	23000
	290.78	12690	11879	10701	10267	6346	5154	4187		4.81	10747	6.15	23000
	319.00	10890	10889	10799	9979	7243	5883	4779		4.39	10888	5.69	23000
	364.90	10890	10889	10781	9962	7243	5883	4779		3.84	10888	4.98	23000
	390.79	10890	10889	10773	9955	7243	5883	4779		3.58	10888	4.64	23000
	421.42	12690	11790	10622	10191	6346	5154	4187		3.32	11128	4.40	23000
	455.40	9972	9214	8463	8278	7192	5883	4779		3.07	8774	3.21	23000
	512.49	12690	12689	12687	10588	6533	5307	4310		2.73	12688	4.12	23000
	587.47	10925	10095	9094	8597	5650	4589	3727		2.38	9896	2.80	23000
	643.13	10890	10889	10719	9905	7243	5883	4779		2.18	10889	2.82	23000
	693.54	12656	11695	10535	10108	6346	5154	4187		2.02	11682	2.81	23000
	764.41	11348	10354	10054	9291	8052	6540	5313		1.83	10588	2.31	18000
	870.33	10890	10889	10693	9881	7243	5883	4779		1.61	10889	2.09	23000
	961.00	11348	10354	10035	9273	8052	6540	5313		1.46	10869	1.89	18000
	1090.11	11348	10354	10353	10353	8052	6540	5313		1.28	11027	1.68	18000
	1267.25	11348	10354	10014	9254	8052	6540	5313		1.10	11219	1.47	18000
	1360.46	11348	10354	10353	10113	8052	6540	5313		1.03	11310	1.39	18000
	1581.53	11348	10354	10000	9240	8052	6540	5313		0.89	11507	1.22	18000
	1836.62	10772	9790	9181	8484	7063	6396	5196		0.76	11112	1.00	15000
	2221.71	10005	9245	8329	7696	7059	6396	5196		0.63	10545	0.79	15000
	2684.57	8272	7644	6886	6363	5297	4950	4851		0.52	8995	0.56	11000

B

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
903	17,6	15,6	11,7	16,9
904	13,3	11,8	9,0	12,8

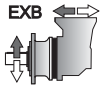
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**12.60**	12274	11572	11571	11569	8352	6784	5510	1400	111.11	6573	81.36	24000
	14.85	13918	12807	12806	12806	8284	6729	5465		94.28	6849	71.93	23000
	17.53	13918	12807	12806	12806	8284	6729	5465		79.86	7198	64.03	23000
	18.67	11200	11199	11198	10768	8352	6784	5510		74.99	7396	61.78	24000
	22.00	13199	12807	12806	12456	8284	6729	5465		63.64	7706	54.63	23000
	25.58	11923	11375	10248	9470	8284	6729	5465		54.73	8062	49.15	23000
	27.56	11348	10354	10353	10353	8052	6540	5313		50.80	8014	45.35	18000
	32.03	11348	10354	10353	10353	8052	6540	5313		43.71	8384	40.82	18000
	37.20	10772	9790	9486	8766	7297	6396	5196		37.63	7537	31.59	15000
	44.95	8521	7874	7094	6555	5457	5099	4997		31.15	5759	19.98	11000
3	**43.85**	11759	11211	10537	8559	5281	4289	3484	1400	31.93	6042	21.96	24000
	51.68	13857	12807	11821	9602	5925	4812	3909		27.09	7120	21.95	23000
	61.01	13918	12807	12806	10785	6655	5405	4390		22.95	8406	21.96	23000
	76.56	13199	12807	12806	11965	7801	6336	5147		18.29	10549	21.96	23000
	89.00	11860	10959	9873	9123	8223	6729	5465		15.73	8664	15.51	23000
	93.79	13199	12807	12806	11908	7659	6221	5053		14.93	11006	18.70	23000
	101.14	13239	12234	11021	10284	6346	5154	4187		13.84	9329	14.70	23000
	111.48	11348	10354	10353	10353	8052	6540	5313		12.56	10352	14.80	18000
	126.92	13199	12807	12806	11834	7439	6042	4908		11.03	11702	14.69	23000
	147.55	11741	10849	9774	9031	8140	6714	5453		9.49	9086	9.81	23000
	158.97	11348	10354	10353	10353	8052	6540	5313		8.81	10353	10.38	18000
	184.81	11348	10354	10353	10353	8052	6540	5313		7.58	10353	8.93	18000
	230.64	11348	10354	10353	10353	8052	6540	5313		6.07	10353	7.15	18000
	267.84	10772	9790	9263	8560	7126	6396	5196		5.23	9217	5.49	15000
	323.64	8341	7708	6944	6417	5341	4991	4892		4.33	7059	3.48	11000
4	**179.84**	13245	12807	11821	9602	5925	4812	3909	1400	7.78	10351	9.47	23000
	212.31	13918	12807	12806	10785	6655	5405	4390		6.59	12220	9.47	23000
	260.09	13918	12807	12806	10785	6655	5405	4390		5.38	12806	8.11	23000
	298.14	13082	12807	11821	9602	5925	4812	3909		4.70	12046	6.66	23000
	318.62	13918	12807	12806	10588	6533	5307	4310		4.39	12807	6.61	23000
	351.97	13918	12807	12806	10785	6655	5405	4390		3.98	12807	6.00	23000
	399.84	13199	12807	12590	11633	7659	6221	5053		3.50	12807	5.27	23000
	455.82	13918	12807	11605	9426	5816	4724	3837		3.07	12807	4.63	23000
	500.81	11348	10354	10353	10353	8052	6540	5313		2.80	10354	3.41	18000
	538.12	13918	12807	12806	10588	6533	5307	4310		2.60	12807	3.92	23000
	551.23	13199	12807	12548	11595	7801	6336	5147		2.54	12807	3.83	23000
	629.02	11526	10650	9594	8866	7991	6729	5465		2.23	10521	2.76	23000
	728.22	12647	11687	10528	10101	6346	5154	4187		1.92	11739	2.65	23000
	785.02	11316	10457	9577	8850	7976	6623	5380		1.78	10594	2.22	23000
	851.24	11497	10624	9571	8844	7971	6714	5453		1.64	10863	2.10	23000
	913.85	13199	12807	12495	11546	7439	6042	4908		1.53	13199	2.38	23000
	1062.35	11479	10607	9556	8830	7959	6714	5453		1.32	11124	1.73	23000
	1144.62	11348	10354	10353	10353	8052	6540	5313		1.22	11089	1.59	18000
	1330.62	11348	10354	10353	10353	8052	6540	5313		1.05	11282	1.39	18000
	1428.48	11348	10354	10353	10107	8052	6540	5313		0.98	11374	1.31	18000
	1660.61	11348	10354	10353	10353	8052	6540	5313		0.84	11571	1.14	18000
	1928.45	10772	9790	9180	8483	7062	6396	5196		0.73	11175	0.96	15000
	2004.48	8278	7649	6891	6367	5301	4953	4854		0.70	8612	0.71	11000
	2330.21	8274	7646	6888	6365	5299	4951	4853		0.60	8807	0.62	11000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
952	30.4	25.6	16.9	28.6
953	18.6	15.8	10.8	17.6
954	14.6	12.6	8.7	13.9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**36.23**	6411	6411	6410	6408	6362	6305	5510	1400	38.64	6375	28.66	24000
	42.77	7569	7568	7567	7562	7499	6784	5510		32.73	7526	28.66	24000
	53.48	9464	9463	9460	9451	8052	6540	5313		26.18	9411	28.67	18000
	63.25	11194	11192	11189	11174	8284	6729	5465		22.13	10578	27.24	23000
	73.53	11913	11009	9917	9164	8260	6729	5465		19.04	8516	18.86	23000
	79.22	11348	10354	10353	10353	8052	6540	5313		17.67	10034	20.63	18000
	92.10	11348	10354	10353	10353	8052	6540	5313		15.20	10188	18.02	18000
	106.56	11606	10917	9835	9088	8191	6729	5465		13.14	8810	13.47	23000
	114.81	11348	10354	10353	10353	8052	6540	5313		12.19	10352	14.68	18000
	133.47	11348	10354	10353	10353	8052	6540	5313		10.49	10352	12.63	18000
	155.00	10772	9790	9305	8598	7158	6396	5196		9.03	8699	9.14	15000
	187.29	8375	7739	6972	6442	5363	5012	4912		7.48	6660	5.80	11000
	219.66	8003	7395	6662	6317	5737	5377	5313		6.37	6480	4.80	18000
	255.09	9137	8443	7606	7308	6530	6244	5196		5.49	7526	4.81	15000
	308.23	8344	7710	6946	6419	5343	4993	4893		4.54	7023	3.71	11000
4	**148.57**	13317	12807	11821	9602	5925	4812	3909	1400	9.42	9774	10.96	23000
	175.40	13918	12807	12806	10785	6655	5405	4390		7.98	11539	10.96	23000
	214.87	13918	12807	12806	10588	6533	5307	4310		6.52	12040	9.34	23000
	263.78	13918	12807	11605	9426	5816	4724	3837		5.31	11399	7.20	23000
	290.78	12855	11879	10701	10267	6346	5154	4187		4.81	10747	6.15	23000
	319.00	13199	12807	12623	11664	7801	6336	5147		4.39	12807	6.69	23000
	364.90	13199	12807	12603	11646	7439	6042	4908		3.84	12807	5.85	23000
	390.79	13199	12807	12593	11636	7659	6221	5053		3.58	12807	5.46	23000
	418.35	13918	12807	11864	10785	6655	5405	4390		3.35	12157	4.85	23000
	457.05	11348	10354	10353	10353	8052	6540	5313		3.06	10353	3.77	18000
	512.49	13918	12807	12806	10588	6533	5307	4310		2.73	12807	4.16	23000
	570.40	11348	10354	10353	10253	8052	6540	5313		2.45	10354	3.02	18000
	643.13	13199	12807	12530	11579	7659	6221	5053		2.18	12807	3.32	23000
	693.54	12656	11695	10535	10108	6346	5154	4187		2.02	11682	2.81	23000
	764.41	11348	10354	10353	10353	8052	6540	5313		1.83	10588	2.31	18000
	870.33	13199	12807	12499	11550	7439	6042	4908		1.61	13181	2.53	23000
	961.00	11348	10354	10353	10353	8052	6540	5313		1.46	10869	1.89	18000
	1090.11	11348	10354	10353	10353	8052	6540	5313		1.28	11027	1.68	18000
	1267.25	11348	10354	10353	10353	8052	6540	5313		1.10	11219	1.47	18000
	1360.46	11348	10354	10353	10113	8052	6540	5313		1.03	11310	1.39	18000
	1581.53	11348	10354	10353	10353	8052	6540	5313		0.89	11507	1.22	18000
	1836.62	10772	9790	9181	8484	7063	6396	5196		0.76	11112	1.00	15000
	2219.25	8275	7647	6889	6366	5299	4952	4853		0.63	8743	0.66	11000

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
953	17,6	15,6	11,7	16,9
954	13,3	11,8	9,0	12,8

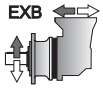
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h										
		T_N [Nm]							10000 Hours Life			T_{max} [Nm]
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	3.50	12978	12235	12234	12232	8352	6784	5510	1400	400.00	4476	193.27	24000
	4.13	13918	12807	12806	12806	8284	6729	5465		338.98	4665	170.71	23000
	5.17	11348	10354	10353	10353	8052	6540	5313		270.79	4851	141.80	18000
	6.00	10772	9790	9789	9239	7691	6396	5196		233.33	4961	124.96	15000
	7.25	8939	8260	7441	6876	5724	5349	5147		193.10	5201	108.42	11000
2	12.60	12274	11572	11571	11569	8352	6784	5510	1400	111.11	6573	81.36	24000
	14.85	13918	12807	12806	12806	8284	6729	5465		94.28	6849	71.93	23000
	17.53	13918	12807	12806	12806	8284	6729	5465		79.86	7198	64.03	23000
	18.67	12127	11434	11433	11431	8352	6784	5510		74.99	7396	61.78	24000
	22.00	13918	12807	12806	12806	8284	6729	5465		63.64	7706	54.63	23000
	25.58	13918	12807	12806	12806	8284	6729	5465		54.73	8062	49.15	23000
	27.56	11348	10354	10353	10353	8052	6540	5313		50.80	8014	45.35	18000
	30.94	13918	12807	11684	10797	8284	6729	5465		45.25	8536	43.03	23000
	37.20	10772	9790	9486	8766	7297	6396	5196		37.63	7537	31.59	15000
	38.75	11348	10354	10353	10353	8052	6540	5313		36.13	8877	35.73	18000
	45.00	10772	9790	9454	8736	7272	6396	5196		31.11	7676	26.60	15000
	54.38	8495	7850	7072	6535	5440	5084	4982		25.74	5868	16.83	11000
3	43.85	11891	11211	11210	11208	8352	6784	5510	1400	31.93	9555	34.72	24000
	51.68	13918	12807	12806	12806	8284	6729	5465		27.09	9956	30.70	23000
	63.31	13918	12807	12806	12806	8284	6729	5465		22.11	10581	26.63	23000
	76.56	13918	12807	12806	12806	8284	6729	5465		18.29	11202	23.32	23000
	85.67	13918	12807	12806	12806	8284	6729	5465		16.34	11586	21.55	23000
	93.79	13918	12807	12806	12806	8284	6729	5465		14.93	11905	20.23	23000
	101.14	13918	12807	12806	12806	8284	6729	5465		13.84	12178	19.18	23000
	109.03	13918	12807	12806	12806	8284	6729	5465		12.84	12455	18.20	23000
	126.92	13918	12807	12806	12806	8284	6729	5465		11.03	12775	16.04	23000
	147.55	13918	12807	12806	12806	8284	6729	5465		9.49	12806	13.83	23000
	158.40	13918	12807	12806	12806	8284	6729	5465		8.84	12806	12.88	23000
	184.14	13918	12807	12806	12806	8284	6729	5465		7.60	12806	11.08	23000
	222.75	13401	12383	11155	10308	8284	6729	5465		6.29	10868	7.78	23000
	267.84	10772	9790	9263	8560	7126	6396	5196		5.23	9217	5.49	15000
	279.00	11348	10354	10353	10353	8052	6540	5313		5.02	10353	5.92	18000
	324.00	10772	9790	9251	8549	7116	6396	5196		4.32	9406	4.62	15000
	391.50	8332	7699	6936	6409	5335	4986	4886		3.58	7206	2.94	11000
4	212.31	13918	12807	12806	12806	8284	6729	5465	1400	6.59	12806	9.93	23000
	260.09	13918	12807	12806	12806	8284	6729	5465		5.38	12806	8.11	23000
	298.14	13918	12807	12806	12806	8284	6729	5465		4.70	12807	7.08	23000
	318.62	13918	12807	12806	12806	8284	6729	5465		4.39	12807	6.61	23000
	351.97	13918	12807	12806	12806	8284	6729	5465		3.98	12807	6.00	23000
	399.84	13918	12807	12806	12796	8284	6729	5465		3.50	12807	5.27	23000
	455.82	13918	12807	12806	12786	8284	6729	5465		3.07	12807	4.63	23000
	494.27	13918	12807	12806	12781	8284	6729	5465		2.83	12807	4.26	23000
	538.12	13918	12807	12806	12775	8284	6729	5465		2.60	12807	3.92	23000
	583.51	13918	12807	12806	12769	8284	6729	5465		2.40	12807	3.62	23000
	629.02	13918	12807	12806	12764	8284	6729	5465		2.23	12807	3.36	23000
	728.22	13918	12807	12806	12756	8284	6729	5465		1.92	12807	2.89	23000
	785.02	13918	12807	12806	12751	8284	6729	5465		1.78	12807	2.68	23000
	851.24	13918	12807	12806	12747	8284	6729	5465		1.64	13148	2.54	23000
	913.85	13918	12807	12806	12743	8284	6729	5465		1.53	13255	2.39	23000
	1062.35	13918	12807	12806	12736	8284	6729	5465		1.32	13485	2.09	23000
	1140.48	13918	12807	12806	12732	8284	6729	5465		1.23	13595	1.97	23000
	1325.81	13918	12807	12806	12725	8284	6729	5465		1.06	13831	1.72	23000
	1428.48	11348	10354	10353	10353	8052	6540	5313		0.98	11374	1.31	18000
	1603.80	13159	12160	10955	10123	8284	6729	5465		0.87	13365	1.37	23000
	1869.23	10772	9790	9181	8484	7062	6396	5196		0.75	11135	0.98	15000
	2008.80	11348	10354	10353	10353	8052	6540	5313		0.70	11826	0.97	18000
	2332.80	10772	9790	9176	8479	7058	6396	5196		0.60	11421	0.81	15000
	2818.80	8271	7643	6885	6362	5296	4949	4850		0.50	9060	0.53	11000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
1001	45.2	36.9	21.6	42.1
1002	31.1	26.4	17.7	29.4
1003	20.3	17.5	12.5	19.3
1004	15.9	13.8	10.0	15.1

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage / Etapa / Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**8.85**	6247	6247	6246	6245	6234	6220	5510	1400	158.19	5912	106.44	24000
	10.43	7363	7362	7361	7359	7344	6729	5465		134.23	6160	94.11	23000
	13.07	9222	9221	9219	9216	8052	6540	5313		107.12	6407	78.11	18000
	15.18	10709	9790	9685	8949	7450	6396	5196		92.23	6554	68.80	15000
	18.34	8682	8023	7228	6679	5560	5195	5092		76.34	5298	46.03	11000
	21.53	8087	8087	8087	8086	7190	6540	5313		65.03	6978	51.65	18000
	25.00	9392	9391	9391	8838	7357	6396	5196		56.00	7263	46.29	15000
	30.21	8584	7932	7146	6603	5497	5137	5034		46.34	5545	29.25	11000
	35.59	6063	5602	5047	4664	3907	3833	3687		39.34	3990	17.87	18000
	41.33	6922	6396	5762	5325	523	4424	4228		33.87	4633	17.86	15000
	49.94	8185	7564	6814	6297	5440	5090	4989		28.03	5599	17.86	11000
3	**31.87**	11968	11283	11282	11281	8352	6784	5510	1400	43.93	8682	44.37	24000
	37.56	13918	12807	12806	12806	8284	6729	5465		37.27	9047	39.23	23000
	44.34	13918	12807	12806	12806	8284	6729	5465		31.57	9509	34.93	23000
	55.65	13918	12807	12806	12806	8284	6729	5465		25.16	10179	29.80	23000
	64.69	13918	12807	12806	12806	8284	6729	5465		21.64	10650	26.81	23000
	73.05	13918	12807	12806	12806	8284	6729	5465		19.16	11045	24.62	23000
	78.25	13663	12626	11374	10510	8284	6729	5465		17.89	9836	20.47	23000
	91.67	13918	12807	12806	12806	8284	6729	5465		15.27	11824	21.01	23000
	106.56	13918	12807	12806	12806	8284	6729	5465		13.14	12370	18.91	23000
	120.77	13918	12807	12455	11509	8284	6729	5465		11.59	11317	15.26	23000
	133.47	11348	10354	10353	10353	8052	6540	5313		10.49	10352	12.63	18000
	151.56	13918	12807	12806	12806	8284	6729	5465		9.24	12806	13.77	23000
	176.18	13918	12807	12806	12806	8284	6729	5465		7.95	12806	11.84	23000
	213.13	13409	12391	11163	10315	8284	6729	5465		6.57	10821	8.27	23000
	266.94	11348	10354	10353	10353	8052	6540	5313		5.24	10353	6.31	18000
	310.00	10772	9790	9254	8551	7118	6396	5196		4.52	9362	4.92	15000
	374.58	8334	7701	6938	6411	5337	4987	4887		3.74	7172	3.12	11000
4	**148.57**	13918	12807	12806	12806	8284	6729	5465	1400	9.42	12806	14.35	23000
	182.01	13918	12807	12806	12806	8284	6729	5465		7.69	12806	11.72	23000
	214.87	13918	12807	12806	12806	8284	6729	5465		6.52	12806	9.94	23000
	263.78	13918	12807	12806	12806	8284	6729	5465		5.31	12806	8.09	23000
	290.78	13918	12807	12806	12806	8284	6729	5465		4.81	12806	7.33	23000
	319.00	13918	12807	12806	12806	8284	6729	5465		4.39	12807	6.69	23000
	364.90	13918	12807	12806	12804	8284	6729	5465		3.84	12807	5.85	23000
	390.79	13918	12807	12806	12798	8284	6729	5465		3.58	12807	5.46	23000
	421.42	13918	12807	12806	12792	8284	6729	5465		3.32	12807	5.06	23000
	455.40	13918	12807	12806	12786	8284	6729	5465		3.07	12807	4.68	23000
	512.49	13918	12807	12806	12778	8284	6729	5465		2.73	12807	4.16	23000
	587.47	13918	12807	12806	12769	8284	6729	5465		2.38	12807	3.63	23000
	660.00	13918	12807	12806	12761	8284	6729	5465		2.12	12807	3.23	23000
	767.25	13918	12807	12806	12753	8284	6729	5465		1.82	12807	2.77	23000
	870.33	13918	12807	12806	12746	8284	6729	5465		1.61	13181	2.53	23000
	1011.76	13918	12807	12806	12738	8284	6729	5465		1.38	13410	2.20	23000
	1086.17	13918	12807	12806	12734	8284	6729	5465		1.29	13519	2.08	23000
	1262.67	13918	12807	12806	12728	8284	6729	5465		1.11	13754	1.82	23000
	1360.46	11348	10354	10353	10353	8052	6540	5313		1.03	11310	1.39	18000
	1527.43	13163	12163	10958	10125	8284	6729	5465		0.92	13294	1.46	23000
	1780.22	10772	9790	9182	8485	7063	6396	5196		0.79	11073	1.04	15000
	1913.14	11348	10354	10353	10353	8052	6540	5313		0.73	11760	1.02	18000
	2221.71	10772	9790	9177	8480	7059	6396	5196		0.63	11357	0.85	15000
	2684.57	8272	7644	6886	6363	5297	4950	4851		0.52	8995	0.56	11000

P_{tN}	P	R-L-F-FC-FU FB-FCB	FS FP	T
1002	25,2	22,1	16,6	24,1
1003	18,9	16,8	13,0	18,1
1004	14,2	12,7	10,0	13,7

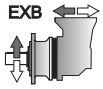
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**3.72**	22750	21448	21447	21443	13822	11227	9119	1400	376.34	7544	306.48	41000
	4.09	25200	23254	23253	22311	13766	11182	9082		342.30	7730	285.63	40000
	5.25	20487	18642	18641	18182	13436	10913	8864		266.67	8131	234.07	31000
	6.23	17390	16199	14593	13485	11226	10373	8651		224.72	8354	202.66	24000
2	**13.39**	21457	20229	20228	20049	12371	10048	8162	1400	104.56	9915	115.49	41000
	14.73	25200	23254	23253	21428	13222	10740	8723		95.04	10905	115.45	40000
	17.39	24958	23254	23253	21118	13031	10584	8597		80.51	11296	101.31	40000
	18.90	20487	18642	18641	17343	13436	10913	8864		74.07	11941	98.53	31000
	22.31	20487	18642	18641	17265	13436	10913	8864		62.75	12551	87.73	31000
	25.36	18630	18523	16687	15420	12508	10160	8252		55.21	12142	74.68	40000
	28.00	20487	18642	18579	17168	13436	10913	8864		50.00	13436	74.84	31000
	32.55	20487	18642	18515	17109	13436	10913	8864		43.01	14057	67.35	31000
	39.38	17379	16060	14467	13369	12185	10913	8864		35.55	12382	49.03	31000
	46.73	16385	15263	13750	12705	10577	9773	8651		29.96	11212	37.42	24000
3	**46.60**	20748	19561	19559	16355	10092	8197	6658	1400	30.04	11758	40.20	41000
	51.25	25200	23254	21521	17481	10786	8761	7116		27.32	12931	40.21	40000
	60.50	24958	23254	23253	19634	12115	9840	7993		23.14	15265	40.20	40000
	74.12	24958	23254	23253	19276	11894	9661	7847		18.89	15928	34.25	40000
	80.57	20487	18642	18217	16834	12610	10242	8319		17.38	15807	31.27	31000
	93.01	20920	20919	20915	19603	12642	10269	8341		15.05	18123	31.04	40000
	100.31	23996	22174	19976	18723	11553	9384	7622		13.96	16941	26.92	40000
	109.04	20487	18642	18144	16766	12248	9948	8081		12.84	16295	23.81	31000
	125.87	20920	20919	20915	19481	12642	10269	8341		11.12	19246	24.36	40000
	138.77	20487	18642	18093	16719	13436	10913	8864		10.09	16702	19.18	31000
	161.54	20487	18642	18063	16692	13436	10913	8864		8.67	16966	16.74	31000
	187.79	20487	18642	18037	16667	13436	10913	8864		7.46	17234	14.63	31000
	201.60	20487	18642	18025	16656	13436	10913	8864		6.94	17363	13.71	31000
	234.36	20487	18642	18001	16634	13436	10913	8864		5.97	17639	11.99	31000
	283.50	16593	15333	13813	12764	11633	10913	8864		4.94	13833	7.78	31000
	336.46	16008	14912	13433	12413	10333	9549	8651		4.16	13717	6.49	24000
4	**178.35**	25200	23254	21521	17481	10786	8761	7116	1400	7.85	18797	17.36	40000
	210.56	24958	23254	23253	19634	12115	9840	7993		6.65	22192	17.36	40000
	257.94	24958	23254	23253	19634	12115	9840	7993		5.43	23253	14.86	40000
	295.68	25200	23254	21521	17481	10786	8761	7116		4.73	21876	12.17	40000
	315.99	24958	23254	23253	19276	11894	9661	7847		4.43	23253	12.12	40000
	349.06	24958	23254	23253	19634	12115	9840	7993		4.01	23253	10.97	40000
	396.53	20920	20919	20725	19151	12642	10269	8341		3.53	20917	8.69	40000
	452.05	25200	23254	21128	17161	10589	8601	6986		3.10	23254	8.48	40000
	485.28	20177	19023	19021	18035	11128	9039	7342		2.88	19022	6.45	41000
	533.67	24958	23254	23253	19276	11894	9661	7847		2.62	23254	7.17	40000
	578.69	22998	21252	19145	18355	11553	9384	7622		2.42	20796	5.92	40000
	629.07	20487	18642	17881	16523	12248	9948	8081		2.23	18642	4.89	31000
	722.20	22923	21182	19082	18295	11553	9384	7622		1.94	21257	4.85	40000
	800.57	20487	18642	17860	16504	13436	10913	8864		1.75	19218	3.96	31000
	859.45	20487	18642	17854	16498	13436	10913	8864		1.63	19374	3.72	31000
	906.29	20920	20919	20569	19007	12642	10269	8341		1.54	20919	3.79	40000
	999.11	20487	18642	17843	16488	13436	10913	8864		1.40	19711	3.25	31000
	1083.39	20487	18642	17837	16482	13436	10913	8864		1.29	19895	3.02	31000
	1163.08	20487	18642	17832	16478	13436	10913	8864		1.20	20057	2.83	31000
	1352.08	20487	18642	17822	16469	13436	10913	8864		1.04	20405	2.50	31000
	1451.52	20487	18642	17817	16464	13436	10913	8864		0.96	20572	2.32	31000
	1687.39	20487	18642	17809	16456	13436	10913	8864		0.83	20929	2.04	31000
	2041.20	16294	15057	13564	12534	11424	10797	8864		0.69	17010	1.38	31000
	2422.52	15868	14781	13315	12304	10243	9465	8651		0.58	17240	1.18	24000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
1501	64.9	54.7	63.5	39.6	26.7	32.7	41.5	58.1
1502	44.4	38.6	43.6	29.9	22.6	26.0	31.0	40.5
1503	28.0	22.5	27.6	19.6	15.3	17.3	20.2	25.8
1504	21.7	19.2	21.4	15.4	12.1	13.6	15.8	20.0

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**9.41**	10738	10738	10736	10734	10714	10689	9119	1400	148.78	9966	168.76	41000
	10.35	11809	11808	11806	11803	11779	11182	9082		135.27	10213	157.24	40000
	13.28	15154	15153	15150	15145	13436	10913	8864		105.42	10742	128.89	31000
	15.76	16813	15661	14109	13037	10853	10029	8651		88.83	10165	102.77	24000
	21.88	13994	13992	13988	13980	11939	10913	8864		63.99	11608	84.54	31000
	25.96	16589	15452	13921	12863	10708	9895	8651		53.93	10616	65.16	24000
	36.17	9500	8779	7908	7308	6131	6013	5781		38.71	6263	27.59	31000
	42.92	11057	10217	9204	8505	7250	7084	6759		32.62	7433	27.60	24000
3	**33.87**	17249	17246	17238	17223	12371	10048	8162	1400	41.33	13098	62.98	41000
	37.25	18969	18965	18955	18938	13222	10740	8723		37.58	14404	62.98	40000
	43.98	22393	22388	22374	21118	13031	10584	8597		31.83	14921	55.26	40000
	55.19	20920	20919	20915	19862	12642	10269	8341		25.37	15497	45.74	40000
	64.16	18630	17983	16200	14970	12508	10160	8252		21.82	13697	34.77	40000
	72.44	19439	19437	19275	17811	13031	10584	8597		19.33	16523	37.16	40000
	82.33	20487	18642	18211	16828	13436	10913	8864		17.00	15841	31.33	31000
	90.91	20920	20919	20915	19613	12642	10269	8341		15.40	18000	32.25	40000
	105.68	18630	17776	16014	14798	12508	10160	8252		13.25	14331	22.09	40000
	116.67	20487	18642	18129	16752	13436	10913	8864		12.00	16408	22.91	31000
	135.63	20487	18642	18097	16723	13436	10913	8864		10.32	16663	20.01	31000
	153.71	18526	17119	15422	14251	13227	10913	8864		9.11	14403	15.27	31000
	174.73	18630	17613	15867	14662	12508	10160	8252		8.01	15037	14.01	40000
	192.89	20487	18642	18032	16663	13436	10913	8864		7.26	17282	14.60	31000
	224.23	20487	18642	18008	16640	13436	10913	8864		6.24	17558	12.75	31000
	271.25	16604	15343	13822	12772	11641	10913	8864		5.16	13772	8.27	31000
	321.92	16013	14916	13438	12417	10337	9552	8651		4.35	13653	6.91	24000
4	**147.35**	25200	23254	21521	17481	10786	8761	7116	1400	9.50	17751	20.07	40000
	173.95	24958	23254	23253	19634	12115	9840	7993		8.05	20956	20.07	40000
	213.10	24958	23254	23253	19276	11894	9661	7847		6.57	21865	17.09	40000
	252.10	24958	23254	23162	19634	12115	9840	7993		5.55	22886	15.11	40000
	288.38	23299	21530	19395	18595	11553	9384	7622		4.85	19461	11.23	40000
	308.84	24958	23254	23253	19276	11894	9661	7847		4.53	23253	12.53	40000
	361.89	20920	20919	20746	19171	12642	10269	8341		3.87	20917	9.63	40000
	387.56	20920	20919	20730	19156	12642	10269	8341		3.61	20917	8.99	40000
	417.94	23126	21370	19252	18457	11553	9384	7622		3.35	20150	8.03	40000
	464.42	20487	18642	17912	16552	13436	10913	8864		3.01	18641	6.68	31000
	524.48	20920	20919	20665	19095	12642	10269	8341		2.67	20918	6.65	40000
	579.60	20487	18642	17889	16531	13436	10913	8864		2.42	18641	5.37	31000
	637.81	20272	18732	17876	17268	12642	10269	8341		2.20	18535	4.85	40000
	687.81	21674	20028	19095	18307	11553	9384	7622		2.04	19988	4.85	40000
	782.45	20487	18642	17862	16506	13436	10913	8864		1.79	19167	4.08	31000
	863.14	20920	20919	20576	19014	12642	10269	8341		1.62	20919	4.03	40000
	976.50	20487	18642	17844	16489	13436	10913	8864		1.43	19659	3.35	31000
	1107.69	20487	18642	17835	16481	13436	10913	8864		1.26	19945	2.99	31000
	1287.69	20487	18642	17825	16471	13436	10913	8864		1.09	20292	2.63	31000
	1382.40	20487	18642	17820	16467	13436	10913	8864		1.01	20457	2.46	31000
	1607.04	20487	18642	17811	16459	13436	10913	8864		0.87	20813	2.15	31000
	1907.26	15878	14791	13324	12312	10250	9471	8651		0.73	16638	1.45	24000
	2307.16	15870	14783	13317	12306	10244	9466	8651		0.61	17115	1.24	24000

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
1502	41.2	37.5	40.7	32.0	27.3	29.5	32.7	38.8
1503	26.8	22.7	26.5	20.5	17.2	18.7	20.9	25.1
1504	20.0	18.1	19.7	15.4	13.0	14.1	15.7	18.7

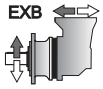
1.2 Performances — *1.2* Prestaciones — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	15.84	27664	25403	25340	22549	13914	11301	9180	1400	88.38	11728	115.46	41000
	18.90	23930	21774	21012	19416	15745	12789	10388		74.07	13993	115.46	39000
	22.31	23930	21774	20918	19329	15517	12604	10237		62.75	14495	101.32	39000
	28.00	23930	21774	20800	19221	15054	12228	9932		50.00	15054	83.85	39000
	32.55	23908	21774	20729	19155	14895	12098	9827		43.01	15583	74.66	39000
	39.38	17379	16060	14467	13369	12185	11516	9710		35.55	12382	49.03	39000
3	55.12	27664	25403	22647	18395	11350	9219	7488	1400	25.40	13908	40.21	41000
	65.08	26844	25403	24532	20661	12749	10355	8411		21.51	16419	40.20	41000
	79.72	26844	25403	24455	20284	12516	10166	8257		17.56	17131	34.24	41000
	100.04	22500	22499	22495	20910	13304	10806	8777		13.99	19493	31.04	41000
	107.88	25596	23652	21308	19703	12157	9875	8021		12.98	18221	26.92	41000
	119.37	23930	21774	20291	18750	15054	12228	9932		11.73	18412	24.58	39000
	135.38	22500	22499	22487	20779	13304	10806	8777		10.34	20700	24.36	41000
	161.54	23930	21774	20223	18687	15054	12228	9932		8.67	18995	18.74	39000
	187.79	23847	21774	19851	18344	14895	12098	9827		7.46	18968	16.11	39000
	201.60	23750	21774	20180	18647	15054	12228	9932		6.94	19438	15.35	39000
	234.36	23758	21774	19777	18275	14895	12098	9827		5.97	19380	13.17	39000
	283.50	16593	15333	13813	12764	11633	10995	9710		4.94	13833	7.78	39000
4	191.83	21051	20763	20284	16476	10166	8258	6707	1400	7.30	20218	17.36	41000
	226.46	21504	21208	18059	14669	9051	7352	5972		6.18	23584	17.15	41000
	277.43	22948	21636	21220	18644	11504	9344	7590		5.05	24095	14.32	41000
	318.02	22948	21636	20063	16296	10055	8167	6634		4.40	23529	12.18	41000
	339.86	20333	17239	16020	13988	8631	7011	5694		4.12	24621	11.93	41000
	389.59	22948	21636	21220	18304	11294	9174	7451		3.59	24549	10.37	41000
	459.93	22948	21636	20063	16296	10055	8167	6634		3.04	25403	9.09	41000
	486.20	22869	21636	21220	19636	12116	9841	7994		2.88	25403	8.61	41000
	548.78	22948	21636	21220	17779	10970	8911	7238		2.55	21630	6.49	39000
	573.99	22948	21636	20063	16296	10055	8167	6634		2.44	25403	7.29	41000
	622.41	22869	21636	21220	19636	12116	9841	7994		2.25	22367	5.92	41000
	720.30	22869	21636	21220	19636	12116	9841	7994		1.94	22499	5.14	41000
	800.57	22948	21636	20063	16296	10055	8167	6634		1.75	21965	4.52	39000
	859.45	21437	20280	18847	15829	9767	7933	6444		1.63	22630	4.34	39000
	926.83	22869	21636	21220	19636	12116	9841	7994		1.51	22826	4.06	39000
	999.11	22948	21636	21220	17779	10970	8911	7238		1.40	22485	3.70	39000
	1083.39	19475	19195	16711	15947	11988	9737	7909		1.29	22680	3.44	39000
	1163.08	22869	21636	21220	19636	12116	9841	7994		1.20	23427	3.31	39000
	1352.08	22948	21636	21220	17779	10970	8911	7238		1.04	23222	2.84	39000
	1451.52	19475	19195	16711	15947	11988	9737	7909		0.96	22899	2.59	39000
	1687.39	22869	21636	21220	19636	12116	9841	7994		0.83	23782	2.32	39000
	2041.20	19475	19195	16711	15947	11988	9737	7909		0.69	17010	1.38	39000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
1802	44.4	38.6	43.6	29.9	22.6	26.0	31.0	40.5
1803	28.0	22.5	27.6	19.6	15.3	17.3	20.2	25.8
1804	21.7	19.2	21.4	15.4	12.1	13.6	15.8	20.0

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**40.07**	20402	20398	20386	20366	13914	11301	9180	1400	34.94	15493	62.98	41000
	47.30	24084	24079	24062	22223	13712	11138	9047		29.60	16048	55.27	41000
	56.44	23930	21774	20509	18951	15517	12604	10237		24.81	17088	49.33	39000
	59.36	22500	22499	22495	21186	13304	10806	8777		23.58	16668	45.73	41000
	70.82	23930	21774	20434	18882	15054	12228	9932		19.77	17472	40.19	39000
	77.92	20908	20906	20560	18998	13712	11138	9047		17.97	17771	37.15	41000
	82.33	23908	21774	20208	18673	14895	12098	9827		17.00	17577	34.77	39000
	92.97	23930	21774	20355	18809	15517	12604	10237		15.06	17952	31.46	39000
	97.78	22500	22499	22495	20921	13304	10806	8777		14.32	19360	32.26	41000
	116.67	23930	21774	20296	18755	15054	12228	9932		12.00	18369	25.65	39000
	135.63	23908	21774	19975	18458	14895	12098	9827		10.32	18392	22.08	39000
	161.66	19373	17902	16127	14902	13304	10806	8777		8.66	15148	15.26	41000
	192.89	22655	20934	18859	17670	15054	12228	9932		7.26	18075	15.27	39000
	224.23	23775	21774	19791	18289	14895	12098	9827		6.24	19297	14.01	39000
	271.25	16604	15343	13822	12772	11641	11002	9710		5.16	13772	8.27	39000
4	**158.48**	27622	25403	22647	18395	11350	9219	7488	1400	8.83	19092	20.06	41000
	187.09	26844	25403	24205	20661	12749	10355	8411		7.48	22539	20.06	41000
	229.20	26844	25403	24159	20284	12516	10166	8257		6.11	23517	17.10	41000
	271.15	26844	25403	24125	20661	12749	10355	8411		5.16	24037	14.76	41000
	332.17	26844	25403	24087	20284	12516	10166	8257		4.21	24561	12.30	41000
	370.09	23930	21774	20083	18558	13757	11174	9076		3.78	20731	9.32	39000
	398.95	23581	21774	19630	18139	14895	12098	9827		3.51	20438	8.54	39000
	416.84	22500	22499	22112	20433	13304	10806	8777		3.36	22497	8.99	41000
	449.52	24668	22795	20535	19703	12157	9875	8021		3.11	21673	8.02	41000
	497.37	23930	21774	20045	18523	15054	12228	9932		2.81	21401	7.16	39000
	536.36	23930	21774	20037	18515	13757	11174	9076		2.61	21577	6.70	39000
	564.10	22500	22499	22042	20368	13304	10806	8777		2.48	22498	6.64	41000
	673.08	23930	21774	20012	18493	15054	12228	9932		2.08	21774	5.39	39000
	782.45	23414	21636	19491	18011	14895	12098	9827		1.79	21912	4.67	39000
	882.69	23930	21774	19987	18469	13757	11174	9076		1.59	22699	4.29	39000
	928.35	22500	22499	21948	20281	13304	10806	8777		1.51	22500	4.04	41000
	976.50	23371	21596	19455	17978	14895	12098	9827		1.43	22431	3.82	39000
	1107.69	23930	21774	19968	18451	15054	12228	9932		1.26	23297	3.49	39000
	1287.69	23323	21552	19415	17941	14895	12098	9827		1.09	23101	3.00	39000
	1382.40	22819	21086	19787	18436	15054	12228	9932		1.01	22786	2.74	39000
	1607.04	23289	21520	19387	17915	14895	12098	9827		0.87	23658	2.45	39000
	1944.00	16299	15061	13568	12538	11427	10800	9710		0.72	16920	1.45	39000

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
1803	26,8	22,7	26,5	20,5	17,2	18,7	20,9	25,1
1804	20,0	18,1	19,7	15,4	13,0	14,1	15,7	18,7

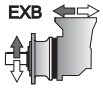
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h											
		T_N [Nm]							10000 Hours Life				T_{max} [Nm]
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.40	27664	25403	25402	24650	18203	14786	12010	1400	318.18	10448	358.86	41000
	5.25	23930	21774	21774	20356	16946	14551	11819		266.67	10842	312.11	39000
2	15.84	27664	25403	25340	23416	18203	14786	12010	1400	88.38	15344	151.06	41000
	18.90	23930	21774	21012	19416	16163	14551	11819		74.07	15455	127.52	39000
	20.00	27664	25403	25167	23256	18111	14711	11949		70.00	16372	127.66	41000
	23.47	26252	25403	25058	23155	17738	14408	11703		59.65	16824	111.79	41000
	28.00	23930	21774	20800	19221	16000	14551	11819		50.00	16000	89.12	39000
3	55.12	27664	25403	24601	22733	15134	12292	9985	1400	25.40	18543	53.61	41000
	69.60	27664	25403	24506	22645	17817	14472	11755		20.11	20911	47.86	41000
	81.66	26252	25403	24446	22590	17738	14408	11703		17.14	21244	41.44	41000
	85.26	27664	25403	24431	22576	17492	14208	11540		16.42	21336	39.87	41000
	91.38	25809	23849	21485	20940	14431	11722	9521		15.32	20579	35.88	41000
	100.04	26252	25403	24378	22526	17738	14408	11703		13.99	21680	34.52	41000
	115.38	27664	25403	24333	22486	16990	13800	11209		12.13	21995	30.37	41000
	135.38	26252	25403	24287	22443	17738	14408	11703		10.34	22357	26.31	41000
	161.54	23930	21774	20223	18687	15556	14402	11819		8.67	18995	18.74	39000
4	191.83	27664	25403	24199	22361	14616	11872	9643	1400	7.30	23178	19.91	41000
	242.21	27664	25403	24148	22314	17207	13977	11353		5.78	23752	16.15	41000
	287.88	27664	25403	24113	22282	14857	12068	9802		4.86	24190	13.83	41000
	318.02	27664	25403	24095	22265	13938	11321	9195		4.40	24447	12.66	41000
	348.15	26252	25403	24079	22250	17738	14408	11703		4.02	24684	11.67	41000
	389.59	27664	25403	24060	22233	14857	12068	9802		3.59	24983	10.55	41000
	426.50	26252	25403	24045	22220	17738	14408	11703		3.28	25227	9.74	41000
	486.20	27238	25403	24026	22201	14857	12068	9802		2.88	25403	8.61	41000
	501.12	27664	25403	24021	22197	16187	13148	10679		2.79	25403	8.34	41000
	577.17	26252	25403	24002	22179	17738	14408	11703		2.43	25403	7.26	41000
	613.89	27664	25403	23994	22172	17492	14208	11540		2.28	25403	6.81	41000
	720.30	26252	25403	23974	22153	17738	14408	11703		1.94	25403	5.80	41000
	830.77	27664	25403	23957	22138	16990	13800	11209		1.69	26060	5.18	41000
	974.77	26252	25403	23940	22122	17738	14408	11703		1.44	26251	4.45	41000
	1163.08	23930	21774	19964	18448	15357	14218	11819		1.20	23427	3.31	39000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
2001	64.9	54.7	63.5	39.6	26.7	32.7	41.5	58.1
2002	44.4	38.6	43.6	29.9	22.6	26.0	31.0	40.5
2003	28.0	22.5	27.6	19.6	15.3	17.3	20.2	25.8
2004	21.7	19.2	21.4	15.4	12.1	13.6	15.8	20.0

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**11.13**	12701	12700	12698	12695	12667	12632	12010	1400	125.79	12615	180.61	41000
	13.28	15154	15153	15150	15145	15106	14551	11819		105.42	14322	171.84	39000
	18.33	11728	11727	11724	11719	10210	9520	9335		76.38	9728	84.57	41000
	21.88	13994	13992	13988	13980	11939	11316	11053		63.99	11608	84.54	39000
	30.31	8124	7507	6763	6249	5202	5071	4907		46.19	5249	27.60	41000
	36.17	9500	8779	7908	7308	6131	6013	5781		38.71	6263	27.59	39000
3	**40.07**	20402	20398	20386	20366	18203	14786	12010	1400	34.94	19832	80.62	41000
	50.59	25758	25403	24639	22768	18111	14711	11949		27.67	20275	65.27	41000
	59.36	26252	25403	24569	22704	17738	14408	11703		23.58	20589	56.49	41000
	70.82	23930	21774	20434	18882	15719	14551	11819		19.77	17472	40.19	39000
	78.75	21131	21129	20402	18853	15694	14530	11819		17.78	17656	36.52	39000
	83.33	22361	22359	21821	20164	18111	14711	11949		16.80	19007	37.15	41000
	97.78	26237	25403	24385	22533	17738	14408	11703		14.32	21630	36.04	41000
	116.67	23930	21774	20296	18755	15613	14454	11819		12.00	18369	25.65	39000
	137.78	16814	15537	13997	12934	11961	11073	10713		10.16	12911	15.26	41000
	161.66	19373	17902	16127	14902	13850	12640	11703		8.66	15148	15.26	41000
	192.89	22655	20934	18859	17670	15529	14377	11819		7.26	18075	15.27	39000
4	**158.48**	27622	25403	24245	22404	15134	12292	9985	1400	8.83	22723	23.87	41000
	200.10	27664	25403	24189	22352	17817	14472	11755		7.00	23281	19.39	41000
	245.13	27664	25403	24145	22311	17492	14208	11540		5.71	23782	16.16	41000
	281.37	27664	25403	24118	22286	14857	12068	9802		4.98	24131	14.30	41000
	331.73	27664	25403	24087	22258	16990	13800	11209		4.22	24557	12.33	41000
	389.23	26252	25403	24060	22233	17738	14408	11703		3.60	24980	10.70	41000
	416.84	26252	25403	24049	22223	17738	14408	11703		3.36	25165	10.06	41000
	464.42	23930	21774	20054	18531	15426	14282	11819		3.01	21244	7.61	39000
	480.77	27664	25403	24027	22203	16990	13800	11209		2.91	25403	8.80	41000
	564.10	26252	25403	24005	22182	17738	14408	11703		2.48	25403	7.50	41000
	673.08	23930	21774	20012	18493	15394	14252	11819		2.08	21774	5.39	39000
	791.21	24537	22674	21993	21062	16990	13800	11209		1.77	22993	4.84	41000
	928.35	26252	25403	23945	22127	17738	14408	11703		1.51	26251	4.72	41000
	1107.69	23930	21774	19968	18451	15360	14220	11819		1.26	23297	3.49	39000

B

P_{tN}	P	PH	PX	R-L-F-FC-FU FB-FCB	FS FP	H HU	X	T
2002	41.2	37.5	40.7	32.0	27.3	29.5	32.7	38.8
2003	26.8	22.7	26.5	20.5	17.2	18.7	20.9	25.1
2004	20.0	18.1	19.7	15.4	13.0	14.1	15.7	18.7

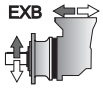
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**3.63**	31472	29425	29424	29421	20752	16856	13691	1400	385.67	11243	468.08	63000
	4.00	37274	35141	35138	33133	20444	16606	13488		350.00	11404	430.87	64000
	5.20	33401	30405	30404	30045	20143	16362	13290		269.23	12156	353.30	57000
	6.25	29044	26316	24822	22937	19094	16050	13036		224.00	12601	304.70	39000
2	**12.69**	30333	29425	29424	23958	14783	12008	9753	1400	110.32	11659	143.28	63000
	14.00	33471	33125	31600	25667	15838	12864	10449		100.00	12864	143.30	64000
	16.50	34931	32933	31344	25459	15709	12760	10364		84.85	13404	126.69	64000
	18.20	33401	30405	30404	28599	19030	15458	12555		76.92	16723	143.29	57000
	21.45	33401	30405	30404	28462	18876	15332	12453		65.27	17426	126.70	57000
	26.87	33401	30405	30404	28289	18348	14903	12105		52.10	18123	105.18	57000
	31.20	33401	30405	30404	28184	17944	14575	11839		44.87	18536	92.65	57000
	37.70	26780	24747	22293	20600	17776	14439	11728		37.14	18977	78.51	57000
	45.31	27784	25884	23318	21547	17937	16050	13036		30.90	18948	65.22	39000
3	**50.40**	31655	31652	31600	25667	15838	12864	10449	1400	27.78	18892	59.73	64000
	59.40	33787	31854	31344	25459	15709	12760	10364		23.57	19685	52.81	64000
	65.52	33401	30405	30044	27762	19030	15458	12555		21.37	24559	59.73	57000
	70.13	33684	31757	31344	25459	15709	12760	10364		19.96	20691	47.01	64000
	77.35	33401	30405	29962	27687	19030	15458	12555		18.10	25813	53.18	57000
	91.16	33401	30405	29888	27618	18876	15332	12453		15.36	26301	45.98	57000
	102.30	33480	31565	29587	25459	15709	12760	10364		13.69	23172	36.11	64000
	114.18	33401	30405	29796	27533	18348	14903	12105		12.26	26901	37.54	57000
	132.60	33401	30405	29740	27481	17944	14575	11839		10.56	27312	32.83	57000
	143.29	33401	30405	29712	27456	18348	14903	12105		9.77	27529	30.61	57000
	166.57	33401	30405	29662	27410	18348	14903	12105		8.40	27958	26.73	57000
	201.50	33401	30405	29604	27356	18348	14903	12105		6.95	28515	22.56	57000
	234.00	33401	30405	29562	27317	17944	14575	11839		5.98	28963	19.71	57000
	281.25	27120	25266	22761	21033	17509	16050	13036		4.98	22773	12.91	39000
	339.84	27080	25229	22727	21002	17483	16050	13036		4.12	23235	10.90	39000
4	**175.39**	30668	30665	27390	22248	13727	11150	9057	1400	7.98	23804	22.35	64000
	206.71	33190	31291	30728	24959	15401	12509	10161		6.77	28054	22.35	64000
	244.04	33135	31239	31236	25459	15709	12760	10364		5.74	30077	20.31	64000
	298.95	33073	31181	31178	25459	15709	12760	10364		4.68	31178	17.17	64000
	317.25	33401	30405	29485	27246	18876	15332	12453		4.41	29908	15.52	57000
	342.69	33035	31145	29302	23801	14686	11929	9689		4.09	31133	14.98	64000
	404.57	32993	31105	31102	25459	15709	12760	10364		3.46	31104	12.66	64000
	445.50	33401	30405	29412	27179	17647	14334	11642		3.14	30405	11.23	57000
	507.69	32940	31055	31052	25459	15709	12760	10364		2.76	31054	10.08	64000
	558.00	33401	30405	29371	27140	18348	14903	12105		2.51	30405	8.98	57000
	633.60	32894	31012	31009	25459	15709	12760	10364		2.21	31011	8.06	64000
	698.88	33401	30405	29333	27106	19030	15458	12555		2.00	30405	7.15	57000
	736.56	32865	30985	28113	25459	15709	12760	10364		1.90	30985	6.93	64000
	823.68	33401	30405	29309	27083	18876	15332	12453		1.70	31434	6.29	57000
	961.00	33401	30405	29287	27063	18348	14903	12105		1.46	31994	5.50	57000
	1031.68	33401	30405	29278	27054	18348	14903	12105		1.36	32255	5.16	57000
	1162.50	33401	30405	29263	27041	18348	14903	12105		1.20	32698	4.62	57000
	1350.00	33401	30405	29113	26902	17944	14575	11839		1.04	33263	4.07	57000
	1450.80	33401	30405	29237	27017	18348	14903	12105		0.96	33538	3.79	57000
	1684.80	33401	30405	29069	26861	17944	14575	11839		0.83	34117	3.33	57000
	2025.00	26841	25006	22527	20816	17328	16012	13036		0.69	28382	2.30	39000
	2446.88	26826	24992	22514	20804	17319	16004	13036		0.57	29190	1.96	39000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PH	FCB	FS FP	H HU	T
2501	61.8	41.8	33.4	36.6	57.1
2502	45.4	34.0	29.2	31.0	42.7
2503	26.5	22.5	19.7	20.8	27.6
2504	22.5	17.5	15.4	16.2	21.4

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**9.17**	15625	15625	15622	15619	15591	15556	13691	1400	152.67	14846	257.97	63000
	10.12	17242	17241	17238	17234	17200	16606	13488		138.34	15065	237.21	64000
	13.15	22414	22412	22408	22401	20143	16362	13290		106.46	16057	194.56	57000
	15.81	26939	26316	23952	22133	18425	16050	13036		88.55	16646	167.77	39000
	21.67	19764	19763	19762	19759	17788	16362	13290		64.61	17276	127.04	57000
	26.04	23754	23754	23612	21819	18163	16050	13036		53.76	18014	110.22	39000
	35.82	14485	13385	12058	11143	9340	9162	8811		39.08	9540	42.43	57000
	43.06	17049	15755	14193	13115	11182	10926	10422		32.51	11466	42.43	39000
3	**32.09**	22303	22300	22289	22272	14783	12008	9753	1400	43.63	15400	78.17	63000
	35.41	24610	24606	24593	24572	15838	12864	10449		39.54	16993	78.17	64000
	46.04	31992	30405	30240	27944	19030	15458	12555		30.41	22092	78.16	57000
	54.26	33401	30405	30145	27855	18876	15332	12453		25.80	23020	69.10	57000
	67.96	33401	30405	30025	27745	18348	14903	12105		20.60	23940	57.38	57000
	78.92	33401	30405	29953	27678	17944	14575	11839		17.74	24487	50.54	57000
	89.38	33069	30405	29897	27626	18876	15332	12453		15.66	26249	47.83	57000
	95.36	33401	30405	29869	27601	17944	14575	11839		14.68	25917	44.27	57000
	111.94	33401	30405	29803	27540	18348	14903	12105		12.51	26847	39.08	57000
	130.00	33401	30405	29747	27488	17944	14575	11839		10.77	27257	34.15	57000
	157.08	33401	30405	29681	27427	17944	14575	11839		8.91	27789	28.81	57000
	185.08	25736	23781	21424	19995	18348	14903	12105		7.56	20437	17.98	57000
	214.93	29382	27151	24459	23146	17944	14575	11839		6.51	23733	17.98	57000
	259.71	29210	26992	24316	23011	17944	14575	11839		5.39	24109	15.12	57000
	312.15	27097	25245	22742	21015	17494	16050	13036		4.49	23026	12.03	39000
4	**144.90**	25256	25249	25202	25113	15838	12864	10449	1400	9.66	25119	28.87	64000
	170.78	29764	29756	29684	25459	15709	12760	10364		8.20	27023	26.37	64000
	201.61	33198	31299	31296	25459	15709	12760	10364		6.94	28402	23.45	64000
	222.38	33401	30405	29576	27330	19030	15458	12555		6.30	28809	21.60	57000
	253.00	33123	31228	31225	25459	15709	12760	10364		5.53	30404	20.01	64000
	294.11	33078	31185	28633	25459	15709	12760	10364		4.76	28794	16.31	64000
	328.28	33401	30405	29477	27239	18348	14903	12105		4.26	30016	15.22	57000
	366.67	33018	31128	31126	25459	15709	12760	10364		3.82	31127	14.15	64000
	381.23	33401	30405	29444	27208	17944	14575	11839		3.67	30405	13.28	57000
	411.96	33401	30405	29428	27193	18348	14903	12105		3.40	30405	12.30	57000
	459.26	30499	30497	29263	24747	15270	12403	10074		3.05	30496	11.07	64000
	478.90	33401	30405	29399	27166	18348	14903	12105		2.92	30405	10.56	57000
	552.50	33401	30405	29352	27123	17944	14575	11839		2.53	30405	9.15	57000
	645.83	30285	27985	25666	24747	15270	12403	10074		2.17	27730	7.16	64000
	694.06	33401	30405	29334	27107	18348	14903	12105		2.02	30405	7.31	57000
	750.00	27790	25679	23134	21377	14934	12130	9852		1.87	25882	5.76	64000
	839.58	33401	30405	29306	27080	18348	14903	12105		1.67	31503	6.26	57000
	975.00	33401	30405	29188	26971	17944	14575	11839		1.44	32047	5.49	57000
	1142.22	33401	30405	29265	27043	18348	14903	12105		1.23	32632	4.78	57000
	1381.71	33401	30405	29243	27022	18348	14903	12105		1.01	33351	4.01	57000
	1604.57	33401	30405	29078	26870	17944	14575	11839		0.87	33927	3.51	57000
	1928.57	26845	25009	22530	20819	17331	16015	13036		0.73	28177	2.45	39000
	2330.36	26829	24995	22517	20807	17321	16006	13036		0.60	28979	2.07	39000

P_{tN}	PH	FCB	FS FP	H HU	T
2502	41.9	34.6	31.5	32.7	40.2
2503	25.6	22.6	20.5	21.3	26.5
2504	20.6	16.9	15.4	16.0	19.7

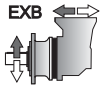
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**12.69**	31472	29425	29424	29421	20264	16460	13369	1400	110.32	15981	196.39	63000
	14.00	35135	33125	33122	33117	20444	16606	13488		100.00	16606	184.98	64000
	16.50	34931	32933	32930	32925	20444	16606	13488		84.85	17445	164.89	64000
	18.20	33401	30405	30404	28599	20143	16362	13290		76.92	17701	151.67	57000
	20.67	34676	32692	32689	32684	20444	16606	13488		67.73	18665	140.82	64000
	26.87	33401	30405	30404	28289	20143	16362	13290		52.10	19896	115.47	57000
	31.20	33401	30405	30404	28184	20143	16362	13290		44.87	20808	104.01	57000
	37.70	33401	30405	30368	28062	20143	16362	13290		37.14	22024	91.12	57000
	45.31	27784	25884	23318	21547	17937	16050	13036		30.90	18948	65.22	39000
3	**45.68**	31472	29425	29424	29421	20264	16460	13369	1400	30.65	23469	81.87	63000
	50.40	33897	31957	31955	31950	20444	16606	13488		27.78	24387	77.11	64000
	59.40	33787	31854	31851	31846	20444	16606	13488		23.57	25619	68.73	64000
	70.13	33684	31757	31754	31750	20444	16606	13488		19.96	26928	61.17	64000
	77.35	33401	30405	29962	27687	20143	16362	13290		18.10	25877	53.31	57000
	87.83	33558	31638	31635	31631	20444	16606	13488		15.94	28808	52.26	64000
	102.30	33480	31565	31562	31557	20444	16606	13488		13.69	30157	46.99	64000
	114.18	33401	30405	29796	27533	20143	16362	13290		12.26	26901	37.54	57000
	128.13	33376	31466	31464	31459	20444	16606	13488		10.93	31458	39.13	64000
	148.80	33313	31407	31404	29491	20444	16606	13488		9.41	29697	31.81	64000
	166.57	33401	30405	29662	27410	20143	16362	13290		8.40	27958	26.73	57000
	201.50	33401	30405	29604	27356	20143	16362	13290		6.95	28515	22.56	57000
	234.00	33401	30405	29562	27317	20143	16362	13290		5.98	28963	19.71	57000
	282.75	33401	30405	29513	27272	20143	16362	13290		4.95	29546	16.65	57000
	339.84	27080	25229	22727	21002	17483	16050	13036		4.12	23235	10.90	39000
4	**175.39**	33249	31346	31343	31339	20444	16606	13488	1400	7.98	31341	29.43	64000
	206.71	33190	31291	31288	31283	20444	16606	13488		6.77	31286	24.92	64000
	244.04	33135	31239	31236	31231	20444	16606	13488		5.74	31235	21.09	64000
	298.95	33073	31181	31178	31174	20444	16606	13488		4.68	31178	17.17	64000
	317.18	33057	31165	31162	31158	20444	16606	13488		4.41	31163	16.17	64000
	342.69	33035	31145	31142	31138	20444	16606	13488		4.09	31143	14.99	64000
	404.57	32993	31105	31102	31098	20444	16606	13488		3.46	31104	12.66	64000
	445.90	32969	31083	31080	31076	20444	16606	13488		3.14	31082	11.48	64000
	507.69	32940	31055	31052	31048	20444	16606	13488		2.76	31054	10.08	64000
	558.00	33401	30405	29371	27140	20143	16362	13290		2.51	30405	8.98	57000
	633.60	32894	31012	31009	31004	20444	16606	13488		2.21	31011	8.06	64000
	698.88	33401	30405	29333	27106	20143	16362	13290		2.00	30405	7.15	57000
	736.56	32865	30985	30982	30977	20444	16606	13488		1.90	30985	6.93	64000
	823.68	33401	30405	29309	27083	20143	16362	13290		1.70	31434	6.29	57000
	961.00	33401	30405	29287	27063	20143	16362	13290		1.46	31994	5.50	57000
	1031.68	33401	30405	29278	27054	20143	16362	13290		1.36	32255	5.16	57000
	1162.50	33401	30405	29263	27041	20143	16362	13290		1.20	32698	4.62	57000
	1350.00	33401	30405	29245	27025	20143	16362	13290		1.04	33263	4.07	57000
	1450.80	33401	30405	29237	27017	20143	16362	13290		0.96	33538	3.79	57000
	1684.80	33401	30405	29222	27003	20143	16362	13290		0.83	34117	3.33	57000
	2035.80	33401	30405	29204	26986	20143	16362	13290		0.69	34864	2.83	57000
	2446.88	26826	24992	22514	20804	17319	16004	13036		0.57	29190	1.96	39000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PH	FCB	FS FP	H HU	T
2802	46.3	34.9	30.1	31.9	43.6
2803	27.0	23.5	20.7	21.7	28.6
2804	23.3	18.3	16.2	17.0	22.1

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**32.09**	22303	22300	22289	22272	20264	16460	13369	1400	43.63	21110	107.16	63000
	35.41	24610	24606	24593	24572	20444	16606	13488		39.54	21936	100.91	64000
	46.04	31992	30405	30240	27944	20143	16362	13290		30.41	23384	82.74	57000
	52.27	33872	31934	31931	31926	20444	16606	13488		26.78	24655	76.82	64000
	60.71	33773	31840	31838	30109	20444	16606	13488		23.06	25787	69.19	64000
	67.96	33401	30405	30025	27745	20143	16362	13290		20.60	25552	61.24	57000
	73.35	33658	31732	31729	29956	20444	16606	13488		19.09	27293	60.62	64000
	86.11	31862	31648	31448	29059	20444	16606	13488		16.26	27494	52.01	64000
	100.00	33492	31575	31573	29733	20444	16606	13488		14.00	28614	46.61	64000
	111.94	33401	30405	29803	27540	20143	16362	13290		12.51	26847	39.08	57000
	120.83	33402	31491	31488	29612	20444	16606	13488		11.59	29119	39.27	64000
	130.00	33401	30405	29747	27488	20143	16362	13290		10.77	27257	34.15	57000
	157.08	33401	30405	29681	27427	20143	16362	13290		8.91	27789	28.81	57000
	185.08	25736	23781	21424	19995	18444	16362	13290		7.56	20437	17.98	57000
	214.93	29382	27151	24459	23146	20143	16362	13290		6.51	23733	17.98	57000
	259.71	29210	26992	24316	23011	20143	16362	13290		5.39	24109	15.12	57000
	312.15	27097	25245	22742	21015	17494	16050	13036		4.49	23026	12.03	39000
4	**127.48**	33378	31468	31466	31461	20444	16606	13488	1400	10.98	31460	41.10	64000
	150.25	33309	31403	31400	31396	20444	16606	13488		9.32	31396	34.82	64000
	177.38	33244	31342	31340	31335	20444	16606	13488		7.89	31337	29.42	64000
	222.17	33165	31267	31265	31260	20444	16606	13488		6.30	31264	23.44	64000
	258.76	33116	31221	31219	31214	20444	16606	13488		5.41	31218	20.10	64000
	292.19	33080	31187	31184	31180	20444	16606	13488		4.79	31185	17.77	64000
	324.10	33051	31160	31157	31152	20444	16606	13488		4.32	31157	16.02	64000
	361.67	33021	31132	31129	31124	20444	16606	13488		3.87	31130	14.34	64000
	392.06	33001	31112	31110	31105	20444	16606	13488		3.57	31111	13.22	64000
	425.00	32981	31094	31091	29040	20444	16606	13488		3.29	31093	12.17	64000
	489.29	33401	30405	29394	27162	20143	16362	13290		2.86	30405	10.35	57000
	552.50	33401	30405	29372	27142	20143	16362	13290		2.53	30405	9.15	57000
	620.00	32898	31016	31013	28928	20444	16606	13488		2.26	31015	8.34	64000
	694.06	33401	30405	29334	27107	20143	16362	13290		2.02	30405	7.31	57000
	786.60	33401	30405	29315	27089	20143	16362	13290		1.78	31269	6.62	57000
	839.58	33401	30405	29306	27080	20143	16362	13290		1.67	31503	6.26	57000
	987.10	33401	30405	29284	27060	20143	16362	13290		1.42	32092	5.42	57000
	1178.13	33401	30405	29261	27039	20143	16362	13290		1.19	32748	4.64	57000
	1388.11	33401	30405	29242	27022	20143	16362	13290		1.01	33369	4.01	57000
	1612.00	33401	30405	29226	27007	20143	16362	13290		0.87	33945	3.51	57000
	1947.83	33401	30405	29208	26990	20143	16362	13290		0.72	34688	2.97	57000
	2341.15	26829	24995	22517	20807	17321	16006	13036		0.60	28999	2.07	39000

B

P_{tN}	PH	FCB	FS FP	H HU	T
2803	26,0	23,4	21,3	22,1	27,2
2804	21,1	17,5	16,0	16,5	20,3

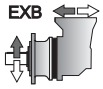
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h											
		T_N [Nm]							10000 Hours Life				T_{max} [Nm]
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	3.52	40671	38026	38024	38021	27669	22474	18255	1400	397.73	14853	637.72	71000
	4.00	42571	42569	42564	42556	27259	22141	17984		350.00	15205	574.49	72000
	4.71	41489	41487	38764	35820	26526	21545	17500		297.24	15539	498.60	64000
	5.85	37783	34394	31682	29276	24371	21379	17365		239.32	16455	425.11	51000
2	12.32	40671	38026	38024	32172	19851	16124	13097	1400	113.64	15518	196.44	71000
	14.00	40128	40127	40122	35184	21710	17634	14323		100.00	17634	196.44	72000
	16.47	39244	39242	36816	34020	24325	19758	16049		85.00	20745	196.43	64000
	19.41	39032	39030	36629	33847	24128	19598	15918		72.13	21616	173.68	64000
	24.31	38766	38764	36394	33630	23453	19050	15473		57.59	22480	144.22	64000
	28.24	38604	38603	36251	33498	22937	18631	15133		49.58	22996	127.01	64000
	35.08	35826	33106	29824	27559	22942	21379	17365		39.91	23538	104.65	51000
	42.38	35681	32971	29703	27447	22848	21379	17365		33.03	23953	88.13	51000
3	44.35	40119	38026	38024	32172	19851	16124	13097	1400	31.57	22788	81.88	71000
	50.40	38714	38712	38708	35184	21710	17634	14323		27.78	25896	81.88	72000
	59.29	37957	37956	35676	32967	24325	19758	16049		23.61	29893	80.33	64000
	70.00	37842	37841	35574	32872	24325	19758	16049		20.00	30376	69.15	64000
	82.50	37737	37736	35480	32786	24128	19598	15918		16.97	30869	59.62	64000
	87.53	37701	37700	35448	32756	23453	19050	15473		15.99	31050	56.51	64000
	102.30	38238	38237	38232	34898	21533	17491	14207		13.69	31763	49.49	72000
	110.22	38197	38196	38191	33922	20931	17001	13809		12.70	31574	45.64	72000
	123.75	38137	38135	38131	34898	21533	17491	14207		11.31	33630	43.29	72000
	155.00	38028	38027	38022	33922	20931	17001	13809		9.03	34974	35.95	72000
	175.06	37352	37351	35137	32469	22937	18631	15133		8.00	33306	30.33	64000
	211.76	37276	37274	35069	32406	22937	18631	15133		6.61	33970	25.56	64000
	226.54	34842	32196	29004	26802	22311	20914	17365		6.18	28312	19.91	51000
	263.08	34796	32153	28966	26766	22282	20886	17365		5.32	28761	17.42	51000
	317.88	34742	32104	28921	26725	22247	20854	17365		4.40	29342	14.69	51000
4	175.39	37974	37972	37968	35184	21710	17634	14323	1400	7.98	37645	35.34	72000
	206.71	37906	37905	37900	34898	21533	17491	14207		6.77	37898	30.19	72000
	244.04	37843	37842	37837	34898	21533	17491	14207		5.74	37836	25.55	72000
	301.57	39685	38026	38024	31911	19690	15993	12991		4.64	38025	20.76	71000
	317.18	37754	37753	37748	33922	20931	17001	13809		4.41	37749	19.59	72000
	342.69	37730	37729	37724	34898	21533	17491	14207		4.09	37726	18.15	72000
	404.57	37681	37680	37675	34898	21533	17491	14207		3.46	37678	15.34	72000
	445.90	37655	37653	37649	33922	20931	17001	13809		3.14	37651	13.91	72000
	507.69	37621	37619	37615	34898	21533	17491	14207		2.76	37618	12.22	72000
	557.57	39504	38026	38024	31911	19690	15993	12991		2.51	38026	11.23	71000
	633.60	37568	37567	37562	34898	21533	17491	14207		2.21	37567	9.77	72000
	736.56	37536	37534	37530	34898	21533	17491	14207		1.90	37534	8.39	72000
	793.60	37520	37519	37515	33922	20931	17001	13809		1.76	37519	7.77	72000
	922.56	37491	37490	37485	33922	20931	17001	13809		1.52	37491	6.70	72000
	1009.95	36861	36859	34698	32063	22937	18631	15133		1.39	36860	6.03	64000
	1116.00	37458	37456	37452	33922	20931	17001	13809		1.25	37457	5.51	72000
	1260.42	36824	36823	34665	32033	22937	18631	15133		1.11	36824	4.81	64000
	1312.94	36818	36816	34660	32028	23453	19050	15473		1.07	36818	4.64	64000
	1524.71	36796	36794	34640	32009	22937	18631	15133		0.92	36796	3.98	64000
	1894.15	34423	31809	28655	26479	22043	20662	17365		0.74	35465	3.09	51000
	2288.77	34403	31790	28639	26464	22030	20650	17365		0.61	36473	2.62	51000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PH	FS FP	H HU	T
3001	64.3	32.7	36.6	73.7
3002	47.7	29.6	31.9	53.1
3003	27.8	20.4	21.7	34.1
3004	23.9	16.0	17.0	26.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
2	**8.90**	15173	15172	15170	15167	15140	15107	15041	1400	157.30	15069	269.79	71000
	11.90	20284	20283	20279	20273	20226	20167	17500		117.65	20146	269.77	64000
	14.79	25199	25197	25191	25182	23492	21379	17365		94.66	21734	234.16	51000
	16.67	15234	15203	15202	15200	14098	13027	12796		83.98	13289	127.02	72000
	19.61	17922	17885	17884	17882	16281	15278	14959		71.39	15634	127.03	64000
	24.36	22219	22219	22217	22214	19733	18884	17365		57.47	19422	127.04	51000
	27.56	11481	10609	9557	8831	7352	7111	6902		50.80	7338	42.43	72000
	32.42	13259	12252	11037	10199	8490	8322	8034		43.18	8633	42.43	64000
	40.27	16070	14849	13377	12361	10475	10251	9809		34.77	10725	42.44	51000
3	**31.16**	21657	21654	21644	21628	19851	16124	13097	1400	44.93	20499	107.16	71000
	35.41	24610	24606	24593	24572	21710	17634	14323		39.54	23294	107.16	72000
	41.66	28952	28946	28929	28899	24325	19758	16049		33.61	27405	107.16	64000
	49.10	34121	34113	34088	33085	24128	19598	15918		28.51	28556	94.72	64000
	52.27	36326	36317	36289	33922	20931	17001	13809		26.78	25242	78.65	72000
	61.50	37931	37930	35653	32946	23453	19050	15473		22.76	29697	78.64	64000
	71.42	37829	37827	35562	32861	22937	18631	15133		19.60	30376	69.27	64000
	88.72	35225	32550	29323	27096	22556	21144	17365		15.78	25724	47.23	51000
	101.31	37484	37479	35373	32687	23453	19050	15473		13.82	31504	50.66	64000
	117.65	37537	37536	35302	32621	22937	18631	15133		11.90	31981	44.28	64000
	146.15	34999	32341	29135	26923	22412	21008	17365		9.58	27055	30.16	51000
	176.60	34927	32275	29075	26867	22366	20965	17365		7.93	27588	25.45	51000
	208.08	28550	26382	23767	22425	20471	19064	17365		6.73	22976	17.99	51000
	241.64	32595	30120	27134	25948	22298	20902	17365		5.79	26682	17.97	51000
	291.98	34766	32125	28941	26743	22262	20868	17365		4.79	29079	16.21	51000
4	**112.18**	39120	38026	38024	32172	19851	16124	13097	1400	12.48	30104	44.70	71000
	127.48	38122	38120	38116	35184	21710	17634	14323		10.98	34209	44.69	72000
	150.50	38042	38040	38036	35184	21710	17634	14323		9.30	35956	39.79	72000
	177.38	37969	37967	37963	34898	21533	17491	14207		7.89	37466	35.17	72000
	222.17	37878	37877	37872	33922	20931	17001	13809		6.30	37870	28.39	72000
	258.76	37822	37821	37816	34898	21533	17491	14207		5.41	37816	24.34	72000
	292.19	37781	37779	37775	34898	21533	17491	14207		4.79	37775	21.53	72000
	324.10	37747	37746	37741	33922	20931	17001	13809		4.32	37742	19.40	72000
	366.67	37710	37708	37704	34898	21533	17491	14207		3.82	37706	17.14	72000
	392.06	37690	37689	37684	33922	20931	17001	13809		3.57	37686	16.01	72000
	426.25	37667	37665	37661	34898	21533	17491	14207		3.28	37663	14.70	72000
	459.26	37647	37645	37641	33922	20931	17001	13809		3.05	37644	13.66	72000
	483.08	37634	37632	37628	34898	21533	17491	14207		2.90	37631	12.99	72000
	533.89	37608	37607	37603	33922	20931	17001	13809		2.62	37606	11.72	72000
	606.22	37578	37577	37572	34898	21533	17491	14207		2.31	37576	10.33	72000
	645.83	37564	37563	37558	33922	20931	17001	13809		2.17	37562	9.70	72000
	759.31	37529	37528	37524	33922	20931	17001	13809		1.84	37528	8.22	72000
	826.67	36898	36896	34731	32094	22937	18631	15133		1.69	36897	7.42	64000
	882.70	37500	37498	37494	33922	20931	17001	13809		1.59	37499	7.09	72000
	1067.78	37465	37464	37459	33922	20931	17001	13809		1.31	37465	5.84	72000
	1205.96	36831	36830	34671	32039	22937	18631	15133		1.16	36831	5.08	64000
	1458.82	36802	36801	34645	32015	22937	18631	15133		0.96	36802	4.20	64000
	1812.31	34428	31813	28659	26483	22046	20665	17365		0.77	35233	3.23	51000
	2189.87	34407	31794	28642	26467	22033	20653	17365		0.64	36235	2.76	51000

P_{tN}	PH	FS FP	H HU	T
3002	43.3	31.8	33.3	46.8
3003	26.6	21.1	22.1	31.3
3004	21.6	15.8	16.5	23.3

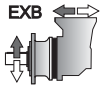
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 x h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**4.04**	52449	49448	49444	45594	28133	22851	18561	1400	346.53	15739	588.77	90000
	5.12	45607	41637	41635	41632	27582	22404	18197		273.44	16568	489.05	75000
	6.00	42395	38538	38536	36988	27034	21958	17836		233.33	17030	428.95	64000
	7.36	34208	31611	28477	26314	21906	20504	17658		190.22	17926	368.10	43000
2	**14.15**	48728	46516	43645	35451	21875	17768	14432	1400	98.94	17825	196.46	90000
	16.68	49040	46234	43291	35163	21697	17623	14315		83.93	18574	173.66	90000
	17.91	45607	41637	41635	41632	25796	20953	17019		78.17	22560	196.45	75000
	21.11	45607	41637	41635	41468	25587	20783	16881		66.32	23508	173.67	75000
	26.44	45607	41637	41635	40308	24872	20202	16409		52.95	24447	144.20	75000
	30.71	45607	41637	41635	38668	24324	19757	16048		45.59	25008	127.00	75000
	36.00	42395	38538	37612	34755	27034	21958	17836		38.89	29151	126.29	64000
	43.50	42395	38538	35855	33132	26934	21877	17770		32.18	30294	108.60	64000
	53.39	32206	29760	26810	24774	20623	19304	17658		26.22	22197	64.83	43000
3	**50.95**	46085	44806	43645	35451	21875	17768	14432	1400	27.48	26178	81.88	90000
	60.15	45840	44653	43645	35451	21875	17768	14432		23.28	27515	72.91	90000
	64.48	45607	41637	41635	40561	25796	20953	17019		21.71	33131	81.87	75000
	76.13	45607	41637	41635	40444	25796	20953	17019		18.39	34824	72.89	75000
	89.72	45607	41637	41635	40338	25587	20783	16881		15.60	36286	64.43	75000
	95.53	45607	41637	41635	40300	25796	20953	17019		14.66	37278	62.20	75000
	103.41	46915	44231	43291	35163	21697	17623	14315		13.54	32108	49.48	90000
	112.59	45607	41637	41635	40205	25587	20783	16881		12.43	38844	54.95	75000
	130.88	45607	41637	41635	40124	25587	20783	16881		10.70	39817	48.49	75000
	158.33	45607	41637	41635	40030	25587	20783	16881		8.84	40596	40.85	75000
	198.31	45607	41637	41635	39931	24872	20202	16409		7.06	41547	33.39	75000
	230.29	45607	41637	39567	36563	24324	19757	16048		6.08	38696	26.78	75000
	270.00	42395	38538	36491	33720	27034	21958	17836		5.19	36340	21.47	64000
	326.25	40937	37828	34078	31490	26934	21877	17770		4.29	34677	16.93	64000
	400.40	31423	29037	26158	24172	20122	18835	17658		3.50	27246	10.85	43000
4	**177.30**	44648	43910	43645	35451	21875	17768	14432	1400	7.90	38054	35.37	90000
	209.31	44515	43827	43645	35451	21875	17768	14432		6.69	39997	31.48	90000
	246.69	46407	43752	43291	35163	21697	17623	14315		5.68	41677	27.85	90000
	262.66	44349	43725	43645	35451	21875	17768	14432		5.33	42816	26.85	90000
	309.57	46307	43658	43291	35163	21697	17623	14315		4.52	43655	23.22	90000
	346.42	46262	43615	43291	35163	21697	17623	14315		4.04	43612	20.73	90000
	379.24	46227	43582	43291	35163	21697	17623	14315		3.69	43580	18.92	90000
	408.96	46199	43556	43291	35163	21697	17623	14315		3.42	43554	17.53	90000
	440.86	46173	43531	43291	35163	21697	17623	14315		3.18	43529	16.29	90000
	513.21	46122	43483	43291	35163	21697	17623	14315		2.73	43482	13.97	90000
	543.44	43930	43466	43462	35451	21875	17768	14432		2.58	43465	13.19	90000
	640.49	46054	43419	43291	35163	21697	17623	14315		2.19	43419	11.19	90000
	698.88	45607	41637	41635	39539	24872	20202	16409		2.00	41637	9.80	75000
	744.57	46012	43379	43291	35163	21697	17623	14315		1.88	43380	9.60	90000
	810.64	45607	41637	41635	39507	25587	20783	16881		1.73	42842	8.72	75000
	913.43	45607	41637	41635	39483	25587	20783	16881		1.53	43432	7.82	75000
	1015.34	45607	41637	41635	39463	24872	20202	16409		1.38	43961	7.14	75000
	1098.33	45607	41637	38834	35885	24324	19757	16048		1.27	44358	6.63	75000
	1180.33	45607	41637	41635	39436	24872	20202	16409		1.19	44725	6.26	75000
	1328.62	45607	41637	38777	35833	24324	19757	16048		1.05	45335	5.60	75000
	1427.82	45607	41637	41635	39405	24872	20202	16409		0.98	45710	5.27	75000
	1658.12	45607	41637	38718	35778	24324	19757	16048		0.84	46499	4.60	75000
	1944.00	42395	38538	36085	33345	27034	21958	17836		0.72	44018	3.73	64000
	2349.00	40148	37099	33421	30883	26934	21877	17770		0.60	42586	3.01	64000
	2882.86	31141	28776	25923	23955	19941	18666	17658		0.49	34207	1.97	43000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
3501	91.3	47.9
3502	54.1	35.5
3503	34.7	23.8
3504	27.6	19.5

1.2 Performances — *1.2 Prestaciones* — 1.2 Desemepnhos



Étage Etapa Estágio	ir	n_2 x h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**35.80**	24878	24873	24860	24838	21875	17768	14432	1400	39.11	23548	107.15	90000
	45.31	31485	31478	31457	31422	25796	20953	17019		30.90	29804	107.15	75000
	53.40	37106	37096	37067	37019	25587	20783	16881		26.22	31055	94.74	75000
	66.88	45607	41637	41635	40308	24872	20202	16409		20.93	32296	78.65	75000
	77.67	45607	41637	40534	37456	24324	19757	16048		18.02	33034	69.26	75000
	91.06	42395	38538	36958	34151	27034	21958	17836		15.37	32518	58.15	64000
	103.13	38156	38152	36891	34089	27034	21958	17836		13.58	32923	52.02	64000
	110.17	40763	40758	39121	36150	24872	20202	16409		12.71	35176	52.02	75000
	127.94	45607	41637	40027	36987	24324	19757	16048		10.94	36610	46.60	75000
	150.00	42395	38538	36712	33924	27034	21958	17836		9.33	34192	37.12	64000
	181.25	41365	38223	34434	31819	26934	21877	17770		7.72	32769	29.43	64000
	211.53	28969	26769	24115	22788	20771	19381	16048		6.62	23357	17.99	75000
	255.60	34258	31656	28518	27387	24096	19572	15898		5.48	28223	17.99	75000
	299.67	39443	36447	32834	31532	26934	21877	17770		4.67	33089	17.98	64000
	367.77	31443	29055	26175	24187	20135	18847	17658		3.81	27001	11.97	43000
4	**163.10**	45607	41637	41635	40017	25796	20953	17019	1400	8.58	40719	41.57	75000
	192.55	45607	41637	41635	39943	25796	20953	17019		7.27	41420	35.83	75000
	226.94	45607	41637	41635	39876	25587	20783	16881		6.17	41634	30.57	75000
	261.57	46380	43727	43291	35163	21697	17623	14315		5.35	42416	27.00	90000
	295.36	46327	43676	43291	35163	21697	17623	14315		4.74	43673	24.63	90000
	331.06	45607	41637	41635	39741	25587	20783	16881		4.23	41635	20.96	75000
	370.65	46236	43590	43291	35163	21697	17623	14315		3.78	43588	19.61	90000
	396.62	45607	41637	41635	39685	24872	20202	16409		3.53	41636	17.49	75000
	430.88	46181	43538	43291	35163	21697	17623	14315		3.25	43537	16.84	90000
	469.12	45607	41637	41635	39637	25587	20783	16881		2.98	41636	14.76	75000
	501.60	45607	41637	41635	39619	24872	20202	16409		2.79	41636	13.82	75000
	545.35	45607	41637	41635	39598	25587	20783	16881		2.57	41636	12.73	75000
	587.58	45607	41637	41635	39579	24872	20202	16409		2.38	41636	11.79	75000
	659.70	45607	41637	41635	39552	25587	20783	16881		2.12	41637	10.50	75000
	712.39	46024	43391	43291	35163	21697	17623	14315		1.97	43391	10.17	90000
	826.29	45607	41637	41635	39503	24872	20202	16409		1.69	42936	8.63	75000
	901.64	45607	41637	41635	39486	25587	20783	16881		1.55	43367	8.00	75000
	971.47	45607	41637	41635	39471	24872	20202	16409		1.44	43739	7.49	75000
	1090.70	45607	41637	41635	39450	25587	20783	16881		1.28	44322	6.75	75000
	1366.13	45607	41637	41635	39412	24872	20202	16409		1.02	45479	5.52	75000
	1586.47	45607	41637	38729	35788	24324	19757	16048		0.88	46264	4.84	75000
	1860.00	42395	38538	36091	33350	27034	21958	17836		0.75	43796	3.91	64000
	2247.50	40158	37109	33430	30891	26934	21877	17770		0.62	42384	3.13	64000
	2758.30	31144	28779	25926	23957	19943	18668	17658		0.51	33983	2.06	43000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
3503	28,3	21,0
3504	24,3	18,4

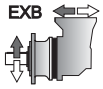
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h											
		T_N [Nm]							10000 Hours Life				T_{max} [Nm]
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**15.04**	49225	46409	46405	45594	28133	22851	18561	1400	93.09	23348	242.11	90000
	16.54	49055	46248	46244	45594	28133	22851	18561		84.64	24023	226.50	90000
	21.23	48641	45858	45854	45594	28133	22851	18561		65.94	25891	190.18	90000
	25.19	48385	45616	45612	45594	28133	22851	18561		55.58	27254	168.74	90000
	31.89	45607	41637	41635	41175	27582	22404	18197		43.90	28680	140.25	75000
	37.38	42395	38538	37579	34725	27034	21958	17836		37.45	29482	122.99	64000
	45.88	32302	29849	26890	24848	20685	19362	17658		30.51	21882	74.37	43000
3	**54.15**	47464	44748	44744	44738	28133	22851	18561	1400	25.85	34288	100.88	90000
	63.93	47306	44599	44595	44589	28133	22851	18561		21.90	36039	89.83	90000
	70.30	47221	44519	44515	44509	28133	22851	18561		19.91	37081	84.03	90000
	80.22	47110	44414	44410	44404	28133	22851	18561		17.45	38579	76.62	90000
	90.70	47012	44323	44319	43852	28133	22851	18561		15.44	40027	70.34	90000
	102.56	46921	44236	44232	44226	28133	22851	18561		13.65	41530	64.52	90000
	113.22	46851	44170	44167	44160	28133	22851	18561		12.37	42780	60.23	90000
	131.62	46751	44076	44072	44066	28133	22851	18561		10.64	44065	53.36	90000
	156.20	46647	43978	43974	43314	28133	22851	18561		8.96	43858	44.73	90000
	170.06	45607	41637	41635	39997	27582	22404	18197		8.23	40894	38.31	75000
	188.95	46540	43877	43874	43157	28133	22851	18561		7.41	43870	37.00	90000
	239.15	45607	41637	41635	39856	27582	22404	18197		5.85	41635	27.72	75000
	280.38	42395	38538	36479	33709	27034	21958	17836		4.99	36485	20.72	64000
	344.11	31459	29070	26188	24199	20145	18856	17658		4.07	26810	12.42	43000
4	**222.47**	46457	43799	43795	43788	28133	22851	18561	1400	6.29	43793	32.41	90000
	244.65	46411	43756	43752	43745	28133	22851	18561		5.72	43751	29.44	90000
	265.95	46373	43720	43716	43709	28133	22851	18561		5.26	43715	27.05	90000
	307.01	46311	43661	43657	43651	28133	22851	18561		4.56	43658	23.42	90000
	343.55	46265	43618	43614	43608	26940	21882	17774		4.08	43615	20.94	90000
	376.10	46230	43585	43581	43575	28133	22851	18561		3.72	43583	19.08	90000
	405.58	46202	43559	43555	43549	28133	22851	18561		3.45	43557	17.68	90000
	437.22	46176	43534	43530	43523	28133	22851	18561		3.20	43532	16.39	90000
	508.97	46124	43485	43481	43475	28133	22851	18561		2.75	43484	14.07	90000
	550.24	46100	43462	43458	43452	28133	22851	18561		2.54	43461	12.99	90000
	635.19	46056	43421	43417	43411	28133	22851	18561		2.20	43421	11.24	90000
	738.41	46014	43382	43378	43371	28133	22851	18561		1.90	43382	9.70	90000
	803.94	45607	41637	41635	39509	27582	22404	18197		1.74	42802	8.76	75000
	918.53	45959	43329	43325	43319	28133	22851	18561		1.52	43330	7.75	90000
	1031.72	45607	41637	41635	39460	27582	22404	18197		1.36	44041	7.05	75000
	1162.54	45607	41637	41635	39439	27582	22404	18197		1.20	44647	6.30	75000
	1360.47	45873	43248	43244	42164	28133	22851	18561		1.03	45643	5.53	90000
	1450.85	45607	41637	41635	39403	27582	22404	18197		0.96	45793	5.17	75000
	1721.89	45607	41637	41635	39377	27582	22404	18197		0.81	46700	4.45	75000
	2018.77	42395	38538	36081	33341	27034	21958	17836		0.69	44209	3.59	64000
	2477.58	42395	38538	36058	33320	27034	21958	17836		0.57	45257	3.04	64000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
3602	56.1	37.5
3603	37.0	26.1
3604	29.3	21.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**38.05**	42762	42754	42730	42690	28133	22851	18561	1400	36.79	30844	132.02	90000
	41.84	47025	45006	45002	44995	28133	22851	18561		33.46	31735	123.54	90000
	53.70	47472	44756	44752	44746	28133	22851	18561		26.07	34203	103.74	90000
	63.73	47309	44602	44598	44283	28133	22851	18561		21.97	36006	92.04	90000
	79.32	45607	41637	41635	40417	27582	22404	18197		17.65	37696	77.41	75000
	88.45	47032	44341	44337	44330	28133	22851	18561		15.83	39726	73.17	90000
	104.97	46904	44220	44217	43693	28133	22851	18561		13.34	41820	64.91	90000
	132.86	45607	41637	41635	40116	27582	22404	18197		10.54	39878	48.90	75000
	155.77	42395	38538	36696	33909	27034	21958	17836		8.99	34324	35.90	64000
	185.09	39759	36740	33098	30891	27582	22404	18197		7.56	31573	27.77	75000
	219.67	45607	41637	38522	36526	27582	22404	18197		6.37	37471	27.77	75000
	257.54	42395	38538	36507	33734	27034	21958	17836		5.44	36160	22.89	64000
	316.07	31480	29089	26205	24215	20158	18869	17658		4.43	26570	13.69	43000
4	**136.97**	46726	44053	44049	44042	28133	22851	18561	1400	10.22	44042	53.56	90000
	150.62	46668	43998	43994	43988	28133	22851	18561		9.29	43989	48.63	90000
	177.82	46573	43908	43904	43898	28133	22851	18561		7.87	43901	41.11	90000
	193.30	46528	43866	43862	43856	28133	22851	18561		7.24	43859	37.78	90000
	223.15	46455	43797	43793	43787	28133	22851	18561		6.27	43792	32.67	90000
	248.12	46405	43750	43746	43739	28133	22851	18561		5.64	43745	29.36	90000
	292.92	46331	43680	43676	43670	28133	22851	18561		4.78	43676	24.84	90000
	318.42	46296	43647	43643	43637	28133	22851	18561		4.40	43644	22.85	90000
	367.59	46239	43593	43589	43583	28133	22851	18561		3.81	43591	19.76	90000
	395.10	46212	43568	43564	42669	28133	22851	18561		3.54	43566	18.35	90000
	427.32	46184	43541	43537	43531	28133	22851	18561		3.28	43539	16.99	90000
	471.74	46149	43509	43505	43499	28133	22851	18561		2.97	43508	15.38	90000
	526.46	46113	43475	43471	43465	28133	22851	18561		2.66	43474	13.76	90000
	607.75	46069	43433	43430	43423	28133	22851	18561		2.30	43433	11.89	90000
	706.51	46026	43393	43389	43383	28133	22851	18561		1.98	43393	10.22	90000
	787.31	45997	43366	43362	42350	28133	22851	18561		1.78	43366	9.19	90000
	839.61	45607	41637	41635	39500	27582	22404	18197		1.67	43015	8.55	75000
	906.68	45962	43332	43328	43322	28133	22851	18561		1.54	43333	7.94	90000
	996.46	45607	41637	41635	39467	27582	22404	18197		1.40	43866	7.31	75000
	1076.06	45922	43295	43291	42237	28133	22851	18561		1.30	43295	6.70	90000
	1171.55	45607	41637	41635	39437	27582	22404	18197		1.19	44686	6.33	75000
	1388.16	45607	41637	41635	39409	27582	22404	18197		1.01	45563	5.48	75000
	1647.49	45607	41637	41635	39384	27582	22404	18197		0.85	46464	4.70	75000
	1931.54	42395	38538	36086	33346	27034	21958	17836		0.72	43986	3.77	64000
	2370.52	31158	28792	25938	23968	19952	18676	17658		0.59	33228	2.33	43000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
3603	32.6	25.4
3604	25.5	19.6

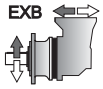
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.18	59828	55392	55389	55385	37510	30468	24748	1400	334.93	21201	766.54	95000
	4.89	54742	50201	50199	50196	36775	29871	24263		286.30	21787	673.35	85000
	6.00	49674	45155	45153	41802	34798	29278	23781		233.33	22706	571.92	70000
2	15.56	57024	55392	55389	55385	37066	30107	24454	1400	89.97	31076	311.45	95000
	17.11	56829	55392	55389	55385	36916	29985	24356		81.82	31845	290.25	95000
	20.00	54742	50201	50199	50196	36775	29871	24263		70.00	33245	259.23	85000
	21.95	56358	55392	55389	55385	36029	29265	23770		63.78	33491	237.95	95000
	25.67	54742	50201	50199	50196	36775	29871	24263		54.54	35829	217.68	85000
	30.46	54742	50201	50199	50196	36775	29871	24263		45.96	37716	193.10	85000
	37.38	49674	45155	42469	39244	32669	29278	23781		37.45	33762	140.85	70000
3	56.00	55015	55012	55006	53763	33174	26945	21886	1400	25.00	40842	116.21	95000
	61.59	54909	54907	54901	54890	35456	28799	23392		22.73	44915	116.20	95000
	72.71	54737	54735	54729	54718	34943	28383	23054		19.25	46526	101.94	95000
	79.04	54656	54654	54647	54637	36029	29265	23770		17.71	49188	99.15	95000
	85.00	54742	50201	50199	49500	36775	29871	24263		16.47	46764	87.66	85000
	93.31	54504	54502	54495	54485	36029	29265	23770		15.00	51699	88.26	95000
	106.07	54395	54393	54386	54360	33542	27245	22129		13.20	50017	75.15	95000
	117.09	54315	54313	54307	54296	36029	29265	23770		11.96	54292	73.91	95000
	136.12	54201	54199	54193	54182	36029	29265	23770		10.29	54182	63.46	95000
	164.66	54069	54067	51830	50649	36029	29265	23770		8.50	51001	49.34	95000
	192.50	54742	50201	50199	48971	36775	29871	24263		7.27	50198	41.54	85000
	228.46	54742	50201	50199	48885	36775	29871	24263		6.13	50198	35.02	85000
	280.38	49524	45155	41226	38095	31713	29278	23781		4.99	41232	23.42	70000
4	214.32	53906	53904	53897	46876	28924	23493	19083	1400	6.53	53263	40.92	95000
	253.02	53814	53811	53805	52651	32488	26388	21434		5.53	53804	35.01	95000
	275.05	53770	53768	53762	53751	34442	27976	22724		5.09	53761	32.20	95000
	309.96	53711	53708	53702	51690	31894	25906	21042		4.52	53703	28.56	95000
	355.31	53647	53645	53639	44700	27582	22403	18197		3.94	53641	24.87	95000
	388.97	53607	53605	53599	53588	33902	27537	22367		3.60	53602	22.70	95000
	419.46	53575	53573	53567	50208	30980	25164	20439		3.34	53570	21.05	95000
	452.18	53545	53543	53536	53526	33542	27245	22129		3.10	53540	19.53	95000
	499.18	53506	53504	53498	53487	36029	29265	23770		2.80	53502	17.63	95000
	556.44	53466	53464	51194	48976	31383	25491	20705		2.52	53463	15.85	95000
	611.92	53433	53431	53424	53414	33542	27245	22129		2.29	53430	14.40	95000
	701.97	53387	53385	49909	48772	36029	29265	23770		1.99	53385	12.50	95000
	797.31	53348	52423	47226	43640	35164	28562	23199		1.76	53206	11.02	95000
	932.00	53303	52350	47160	43579	35164	28562	23199		1.50	53302	9.41	95000
	1000.55	53283	52319	47132	43553	35164	28562	23199		1.40	53283	8.78	95000
	1110.58	54742	50201	50199	48359	36775	29871	24263		1.26	53310	7.90	85000
	1386.00	54742	50201	50199	48314	36775	29871	24263		1.01	54679	6.50	85000
	1644.92	54742	50201	50199	48282	36775	29871	24263		0.85	55761	5.58	85000
	2018.77	48983	45155	40776	37680	31367	29278	23781		0.69	50895	4.13	70000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSB-FSR
4201	91.3	47.9
4202	56.1	37.5
4203	37.0	26.1
4204	29.3	21.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desmpenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**39.35**	44225	44216	44191	44148	37066	30107	24454	1400	35.58	41050	169.93	95000
	43.27	48633	48623	48592	48541	36916	29985	24356		32.35	42065	158.32	95000
	55.53	55024	55022	55015	55005	36029	29265	23770		25.21	44245	129.78	95000
	65.91	54837	54806	49372	45623	35164	28562	23199		21.24	41870	103.47	95000
	77.05	54742	50201	50199	49579	36775	29871	24263		18.17	46318	97.92	85000
	83.33	52494	50201	50007	46210	36775	29871	24263		16.80	43557	85.14	85000
	91.48	54521	54519	54314	50189	36029	29265	23770		15.30	47814	85.11	95000
	108.57	54376	54075	48714	45015	35164	28562	23199		12.89	43730	65.58	95000
	126.92	54742	50201	50199	49214	36775	29871	24263		11.03	48667	62.45	85000
	155.77	49674	45155	41471	38322	31901	29278	23781		8.99	38791	40.57	70000
	176.81	38180	35281	31783	29536	27346	25027	24263		7.92	30161	27.79	85000
	209.85	44437	41063	36992	34930	31862	29702	24263		6.67	35796	27.78	85000
	257.54	49561	45155	41257	38124	31737	29278	23781		5.44	40866	25.87	70000
4	**141.65**	54173	54171	54164	53763	33174	26945	21886	1400	9.88	53952	63.43	95000
	155.78	54107	54104	54098	54087	35456	28799	23392		8.99	54090	57.86	95000
	183.90	53998	53996	53990	53979	34943	28383	23054		7.61	53984	48.88	95000
	199.92	53947	53945	53939	53928	36029	29265	23770		7.00	53934	44.92	95000
	230.78	53864	53862	53855	53845	33902	27537	22367		6.07	53853	38.90	95000
	256.61	53806	53804	53798	53787	35456	28799	23392		5.46	53797	34.95	95000
	275.48	53769	53767	53761	52986	32694	26556	21570		5.08	53761	32.50	95000
	302.94	53722	53720	53713	53703	34943	28383	23054		4.62	53714	29.53	95000
	345.70	53659	53657	53651	51406	31719	25764	20927		4.05	53653	25.86	95000
	380.17	53617	53615	53609	53598	33902	27537	22367		3.68	53611	23.48	95000
	401.87	53593	53591	51514	49282	31383	25491	20705		3.48	53588	22.19	95000
	441.94	53554	53552	53546	53535	33542	27245	22129		3.17	53549	20.20	95000
	487.88	53515	53513	53507	53496	36029	29265	23770		2.87	53511	18.27	95000
	516.67	54742	50201	50199	48563	36775	29871	24263		2.71	50201	16.19	85000
	567.16	53459	53457	53451	53440	36029	29265	23770		2.47	53456	15.71	95000
	628.54	53424	53422	53415	53405	33902	27537	22367		2.23	53421	14.18	95000
	730.68	53375	53373	53366	53356	33542	27245	22129		1.92	53373	12.19	95000
	806.63	53344	53342	53336	53326	36029	29265	23770		1.74	53343	11.04	95000
	891.85	54742	50201	50199	48410	36775	29871	24263		1.57	51988	9.71	85000
	957.31	53295	52338	47149	43569	35164	28562	23199		1.46	53294	9.26	95000
	1119.18	54742	50201	50199	48358	36775	29871	24263		1.25	53357	7.94	85000
	1301.05	54742	50201	50199	48326	36775	29871	24263		1.08	54284	6.98	85000
	1573.85	54742	50201	50199	48290	36775	29871	24263		0.89	55480	5.88	85000
	1931.54	48990	45155	40782	37685	31371	29278	23781		0.72	50564	4.33	70000

B

P_{tN}	PS PSB	S-SB-SU FS-FSB-FSR
4203	32.6	25.4
4204	25.5	19.6

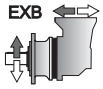
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**15.56**	78975	78972	73956	60071	37066	30107	24454	1400	89.97	31076	311.45	145000
	17.11	78695	78692	73657	59828	36916	29985	24356		81.82	31845	290.25	145000
	20.00	78676	72150	72147	66742	41182	33450	27170		70.00	37228	290.29	120000
	25.67	78676	72150	72147	65138	40192	32646	26517		54.54	39158	237.91	120000
	30.46	70454	65104	58649	54196	39227	31862	25880		45.96	40231	205.97	120000
	37.38	68715	62463	60865	56243	45273	36773	29869		37.45	48387	201.86	94000
3	**56.00**	76073	76070	66190	53763	33174	26945	21886	1400	25.00	40842	116.21	145000
	61.59	75921	75918	70744	57462	35456	28799	23392		22.73	44915	116.20	145000
	72.71	75672	75669	69721	56631	34943	28383	23054		19.25	46526	101.94	145000
	79.04	75555	72906	65679	58390	36029	29265	23770		17.71	49188	99.15	145000
	85.00	78676	72150	72147	63175	38981	31663	25718		16.47	54392	101.96	120000
	93.31	75335	72579	65384	58390	36029	29265	23770		15.00	51699	88.26	145000
	109.08	78676	72150	72147	65138	40192	32646	26517		12.83	60439	88.26	120000
	117.09	75062	72171	65016	58390	36029	29265	23770		11.96	55343	75.34	145000
	136.89	78676	72150	72147	65138	40192	32646	26517		10.23	64700	75.33	120000
	159.13	78676	72150	72147	65138	40192	32646	26517		8.80	67689	67.80	120000
	192.50	69848	64544	60359	58749	40192	32646	26517		7.27	59625	49.34	120000
	236.25	68715	62463	59099	54611	45461	37678	30604		5.93	57966	39.12	94000
	280.38	68715	62463	59002	54522	45273	36773	29869		4.99	59012	33.52	94000
4	**194.89**	74551	71080	53996	43858	27062	21981	17854	1400	7.18	48434	40.91	145000
	214.32	74469	74466	57711	46876	28924	23493	19083		6.53	53263	40.92	145000
	253.02	74336	74333	64821	52651	32488	26388	21434		5.53	62880	40.91	145000
	275.05	74272	70982	63945	55819	34442	27976	22724		5.09	63815	38.22	145000
	309.96	74186	74184	63638	51690	31894	25906	21042		4.52	65608	34.89	145000
	336.94	74129	70765	63750	54800	33814	27465	22309		4.16	65109	31.87	145000
	362.37	78676	72150	70991	57663	35580	28900	23474		3.86	72148	32.77	120000
	388.97	74037	74034	67643	54943	33902	27537	22367		3.60	74029	31.36	145000
	419.46	73991	73988	61813	50208	30980	25164	20439		3.34	69782	27.42	145000
	454.74	78676	72150	72147	61292	37819	30719	24951		3.08	72149	26.14	120000
	478.66	73914	73911	63289	51406	31719	25764	20927		2.92	72088	24.77	145000
	526.38	73862	73859	67643	54943	33902	27537	22367		2.66	73857	23.11	145000
	559.59	78676	72150	70602	57347	35385	28741	23345		2.50	72150	21.22	120000
	583.58	78676	72150	72147	65138	40192	32646	26517		2.40	72150	20.37	120000
	615.38	78676	72150	72147	61292	37819	30719	24951		2.28	72150	19.35	120000
	675.52	73737	70169	63213	58390	36029	29265	23770		2.07	69885	17.02	145000
	789.74	78676	72150	72147	65138	40192	32646	26517		1.77	73686	15.34	120000
	843.05	73638	70019	63077	58287	36029	29265	23770		1.66	71518	13.97	145000
	918.08	78676	72150	72147	65138	40192	32646	26517		1.52	74967	13.41	120000
	985.60	78676	72150	72147	65138	40192	32646	26517		1.42	75578	12.63	120000
	1145.76	78676	72150	72147	65138	40192	32646	26517		1.22	76892	11.04	120000
	1362.98	68715	62463	58415	53979	44935	37678	30604		1.03	68504	8.30	94000
	1668.85	68715	62463	58368	53935	44899	36773	29869		0.84	70110	6.93	94000
	2018.77	68715	62463	58328	53898	44868	36773	29869		0.69	71654	5.82	94000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
6002	68.3	46.1
6003	44.1	31.2
6004	34.7	25.0

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**39.35**	44225	44216	44191	44148	37066	30107	24454	1400	35.58	41050	169.93	145000
	43.27	48633	48623	48592	48541	36916	29985	24356		32.35	42065	158.32	145000
	55.53	62409	62392	62341	58390	36029	29265	23770		25.21	44245	129.78	145000
	64.92	72958	72150	72147	65138	40192	32646	26517		21.57	51726	129.81	120000
	77.05	68115	62942	56702	52396	39227	31862	25880		18.17	48950	103.48	120000
	94.56	68715	62463	59779	55239	45273	36773	29869		14.81	52824	91.02	94000
	106.94	67359	67324	62377	57641	40192	32646	26517		13.09	55898	85.13	120000
	126.92	67207	62103	55946	51698	39227	31862	25880		11.03	51123	65.61	120000
	155.77	68715	62463	59370	54862	45273	36773	29869		8.99	55533	58.09	94000
	176.81	38180	35281	31783	29536	27346	25027	25027		7.92	30161	27.79	120000
	209.85	44437	41063	36992	34930	31862	29702	25880		6.67	35796	27.78	120000
	257.54	53279	49233	44352	42651	38066	36452	29869		5.44	43932	27.81	94000
4	**141.65**	71014	70964	66190	53763	33174	26945	21886	1400	9.88	53952	63.43	145000
	155.78	74760	74757	70744	57462	35456	28799	23392		8.99	59333	63.47	145000
	183.90	74603	74600	69721	56631	34943	28383	23054		7.61	61460	55.65	145000
	199.92	74529	71369	64294	58390	36029	29265	23770		7.00	61873	51.54	145000
	230.78	74408	74405	67643	54943	33902	27537	22367		6.07	63831	46.10	145000
	245.34	78676	72150	70602	57347	35385	28741	23345		5.71	67858	46.11	120000
	275.92	78676	72150	72147	65138	40192	32646	26517		5.07	72147	43.53	120000
	302.94	74203	74200	67452	56631	34943	28383	23054		4.62	68059	37.41	145000
	345.70	74112	74109	63289	51406	31719	25764	20927		4.05	67420	32.49	145000
	380.17	74051	74048	67643	54943	33902	27537	22367		3.68	74043	32.42	145000
	404.15	78676	72150	70602	57347	35385	28741	23345		3.46	72149	29.70	120000
	444.44	78676	72150	72147	61292	37819	30719	24951		3.15	72149	27.04	120000
	487.88	73903	70423	63441	58390	36029	29265	23770		2.87	67585	23.08	145000
	516.67	77314	71442	64360	60642	37418	30393	24687		2.71	69013	22.25	120000
	570.37	78676	72150	72147	65138	40192	32646	26517		2.45	72150	21.03	120000
	663.06	78676	72150	72147	65138	40192	32646	26517		2.11	72150	18.11	120000
	734.81	72993	67450	65072	61292	37819	30719	24951		1.91	67824	15.41	120000
	806.63	73656	70047	63103	58311	36029	29265	23770		1.74	71188	14.74	145000
	854.22	76602	70785	63768	60642	37418	30393	24687		1.64	72409	14.13	120000
	943.01	78676	72150	72147	65138	40192	32646	26517		1.48	75197	13.24	120000
	1096.25	78676	72150	72147	65138	40192	32646	26517		1.28	76504	11.65	120000
	1168.27	68715	62463	58454	54015	44965	36773	29869		1.20	67307	9.61	94000
	1301.05	64968	60034	54083	49976	39227	31862	25880		1.08	64427	8.28	120000
	1573.85	64875	59948	54005	49904	39227	31862	25880		0.89	65746	6.96	120000
	1931.54	68715	62463	58337	53907	44875	36773	29869		0.72	71293	6.11	94000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
6003	37.3	28.7
6004	29.4	22.4

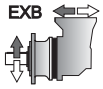
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**4.18**	84262	79227	79224	77596	47879	38890	31589	1000	239.23	29936	773.10	145000
	4.89	78676	72150	72147	72142	47278	38402	31192		204.50	30984	684.00	120000
	6.00	68715	62463	62460	60051	46408	37695	30618		166.67	32339	581.85	94000
2	**15.16**	79054	79051	79042	77596	47879	38890	31589	1400	92.35	39830	409.75	145000
	16.73	78760	78757	78748	77596	47879	38890	31589		83.68	41025	382.42	145000
	19.56	78676	72150	72147	72142	47278	38402	31192		71.57	42454	338.47	120000
	21.75	78039	78036	78027	77596	47879	38890	31589		64.37	44385	318.26	145000
	26.14	77584	77581	77572	77556	47879	38890	31589		53.56	46902	279.83	145000
	30.56	78676	72150	72147	72142	47278	38402	31192		45.81	48535	247.68	120000
	37.50	68715	62463	60861	56239	46408	37695	30618		37.33	48401	201.27	94000
3	**53.06**	76163	76160	76151	64246	39642	32199	26154	1400	26.39	48022	144.24	145000
	58.55	76001	75998	75989	68829	42470	34496	28020		23.91	52990	144.21	145000
	69.00	75749	75746	75737	68270	42125	34216	27792		20.29	55214	127.51	145000
	76.11	75607	75604	75595	75581	47879	38890	31589		18.39	64630	135.28	145000
	80.67	78676	72150	72147	72142	46993	38170	31004		17.35	64550	127.47	120000
	89.70	75385	75382	75374	75359	47879	38890	31589		15.61	67895	120.63	145000
	101.04	78676	72150	72147	72142	45679	37103	30137		13.86	67130	105.90	120000
	107.81	75157	75155	75146	75131	47879	38890	31589		12.99	71746	106.08	145000
	112.35	75109	75106	75097	75083	47879	38890	31589		12.46	72639	103.01	145000
	130.47	74942	74939	74930	74916	47879	38890	31589		10.73	74914	91.49	145000
	156.82	74753	74750	74741	74727	47879	38890	31589		8.93	74730	75.95	145000
	189.49	74576	74573	74564	74550	47879	38890	31589		7.39	74557	62.71	145000
	221.53	78676	72150	72147	71635	47278	38402	31192		6.32	72146	51.90	120000
	271.88	68715	62463	59019	54537	45400	37695	30618		5.15	58822	34.48	94000
4	**210.76**	74483	74480	74472	68829	42470	34496	28020	1400	6.64	74467	58.18	145000
	248.40	74350	74347	74338	68270	42125	34216	27792		5.64	74336	49.33	145000
	273.99	74275	74272	74264	74249	47879	38890	31589		5.11	74263	44.65	145000
	293.25	74226	74223	74214	68270	42125	34216	27792		4.77	74215	41.65	145000
	323.46	74157	74154	74145	74131	47879	38890	31589		4.33	74147	37.77	145000
	368.00	74072	74069	74060	68270	42125	34216	27792		3.80	74064	33.11	145000
	381.23	74049	74046	74038	74023	47879	38890	31589		3.67	74042	31.97	145000
	405.92	74010	74008	73999	73984	47879	38890	31589		3.45	74003	30.04	145000
	427.80	73979	73976	73967	68270	42125	34216	27792		3.27	73972	28.46	145000
	460.93	73935	73933	73924	66361	40947	33259	27015		3.04	73930	26.44	145000
	517.50	73871	73868	73860	68270	42125	34216	27792		2.71	73866	23.55	145000
	556.14	73833	73830	73821	73807	47879	38890	31589		2.52	73829	21.89	145000
	622.25	73776	73773	73765	64900	40046	32527	26420		2.25	73772	19.53	145000
	695.85	73723	73720	73711	73697	47879	38890	31589		2.01	73720	17.43	145000
	752.73	73687	73684	73675	64900	40046	32527	26420		1.86	73684	16.12	145000
	814.36	78676	72150	72147	70918	47278	38402	31192		1.72	73946	14.96	120000
	880.00	78676	72150	72147	70888	44673	36286	29473		1.59	74605	13.96	120000
	945.71	78676	72150	72147	70861	47278	38402	31192		1.48	75222	13.10	120000
	985.11	78676	72150	72147	70847	47278	38402	31192		1.42	75574	12.63	120000
	1144.00	78676	72150	72147	70795	47278	38402	31192		1.22	76879	11.04	120000
	1382.33	78676	72150	72147	70736	47278	38402	31192		1.01	78562	9.34	120000
	1661.46	78676	72150	72147	70683	47278	38402	31192		0.84	80233	7.93	120000
	2039.06	68715	62463	58326	53897	44866	37695	30618		0.69	71737	5.82	94000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
6501	117.0	65.2
6502	73.5	51.3
6503	48.8	35.8
6504	38.6	28.8

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**38.34**	64353	64341	64304	64244	47879	38890	31589	1400	36.52	52613	223.55	145000
	42.31	71009	70994	70950	70876	47879	38890	31589		33.09	54192	208.63	145000
	49.46	78676	72150	72147	72142	47278	38402	31192		28.31	56077	184.71	120000
	55.00	76103	76100	76091	76076	47879	38890	31589		25.45	58628	173.60	145000
	66.11	75813	75810	75801	75786	47879	38890	31589		21.18	61955	152.67	145000
	77.29	78676	72150	72147	72142	47278	38402	31192		18.11	64113	135.09	120000
	90.61	75372	75369	75360	74776	47879	38890	31589		15.45	68101	122.42	145000
	105.93	78676	72150	72147	72142	47278	38402	31192		13.22	70043	107.73	120000
	127.31	78676	72150	72147	72114	47278	38402	31192		11.00	71337	91.30	120000
	156.25	68715	62463	59368	54860	45668	37695	30618		8.96	55550	57.91	94000
	210.49	68521	63318	57041	53877	47278	38402	31192		6.65	55216	42.72	120000
	258.33	68715	62463	59047	54563	45421	37695	30618		5.42	58508	36.90	94000
4	**134.20**	74912	74909	74900	64246	39642	32199	26154	1400	10.43	63435	78.73	145000
	148.09	74810	74807	74798	68829	42470	34496	28020		9.45	69999	78.71	145000
	174.53	74651	74648	74639	68270	42125	34216	27792		8.02	72938	69.61	145000
	192.51	74562	74559	74550	74536	47879	38890	31589		7.27	74543	64.48	145000
	226.89	74422	74419	74410	74396	47879	38890	31589		6.17	74407	54.63	145000
	253.86	74333	74330	74321	64900	40046	32527	26420		5.51	74320	48.73	145000
	287.50	74240	74237	74228	68270	42125	34216	27792		4.87	74229	43.01	145000
	326.34	74151	74148	74139	61942	38221	31045	25216		4.29	74141	37.85	145000
	360.10	74086	74083	74074	66361	40947	33259	27015		3.89	74077	34.29	145000
	396.66	74025	74022	74013	73999	47879	38890	31589		3.53	74017	31.09	145000
	418.18	73992	73990	73981	64900	40046	32527	26420		3.35	73986	29.49	145000
	468.13	73927	73924	73915	73901	47879	38890	31589		2.99	73921	26.30	145000
	543.64	73845	73842	73833	73819	47879	38890	31589		2.58	73840	22.67	145000
	656.89	73750	73747	73738	73724	47668	38719	31449		2.13	73747	18.69	145000
	691.39	73726	73723	72316	64900	40046	32527	26420		2.02	73723	17.72	145000
	789.54	73666	73663	73654	73640	47879	38890	31589		1.77	73663	15.51	145000
	898.81	73611	73608	73599	73585	47879	38890	31589		1.56	73609	13.66	145000
	923.03	78676	72150	72147	70870	47278	38402	31192		1.52	75013	13.57	120000
	976.69	78676	72150	68198	66868	44255	35946	29197		1.43	75500	12.85	120000
	1087.55	78676	72150	72147	70812	47278	38402	31192		1.29	76435	11.73	120000
	1269.70	78676	72150	72147	70762	47278	38402	31192		1.10	77801	10.18	120000
	1526.08	78676	72150	72147	70707	47278	38402	31192		0.92	79456	8.70	120000
	1872.92	68715	62463	58343	53913	44880	37695	30618		0.75	71042	6.34	94000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
6503	40.4	31.8
6504	32.2	25.2

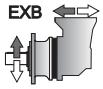
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**15.16**	100594	93134	93130	90186	55648	45200	36714	1400	92.35	46293	476.23	190000
	16.73	100594	93134	93130	88850	54823	44530	36170		83.68	46975	437.88	190000
	19.56	92029	84396	84392	84386	56404	45814	37213		71.57	50649	403.80	163000
	21.75	100594	93134	93130	87542	54016	43875	35637		64.37	50074	359.06	190000
	26.14	100594	93134	86863	80267	52987	43039	34958		53.56	51905	309.68	190000
	30.56	92029	84396	84392	84079	56404	45814	37213		45.81	57904	295.49	163000
	37.50	84769	77056	76004	70233	55535	45108	36639		37.33	60444	251.35	124000
3	**53.06**	100594	93134	93130	88066	54340	44138	35851	1400	26.39	65826	197.72	190000
	62.03	92029	84396	84392	82676	56404	45814	37213		22.57	71605	183.94	163000
	68.44	92029	84396	84392	82516	56404	45814	37213		20.46	73749	171.74	163000
	76.11	100594	93134	93130	87542	54016	43875	35637		18.39	72914	152.62	190000
	80.67	92029	84396	84392	82266	56404	45814	37213		17.35	77258	152.56	163000
	89.70	100594	93134	93130	87542	54016	43875	35637		15.61	76597	136.09	190000
	100.36	100594	93134	93130	88850	54823	44530	36170		13.95	80405	127.66	190000
	112.35	100594	93134	93130	87542	54016	43875	35637		12.46	81950	116.22	190000
	121.27	100594	93134	87605	85639	54379	44170	35877		11.54	84414	110.87	190000
	130.47	100594	93134	93130	87542	54016	43875	35637		10.73	85710	104.67	190000
	157.65	100594	93134	93130	87542	54016	43875	35637		8.88	90716	91.69	190000
	184.31	92029	84396	84392	81274	56404	45814	37213		7.60	83861	72.54	163000
	221.53	92029	84396	84392	81103	56404	45814	37213		6.32	84391	60.70	163000
	271.88	84769	77056	73609	68019	55535	45108	36639		5.15	73363	43.00	124000
4	**191.00**	100594	93134	93130	88066	54340	44138	35851	1400	7.33	93127	80.31	190000
	225.49	100594	93134	93130	88066	54340	44138	35851		6.21	93128	68.04	190000
	248.40	100594	93134	93130	88850	54823	44530	36170		5.64	93129	61.80	190000
	265.76	100594	93134	93130	87351	53899	43779	35560		5.27	93130	57.74	190000
	293.25	100594	93134	93130	88850	54823	44530	36170		4.77	93130	52.27	190000
	322.92	100594	93134	93130	87542	54016	43875	35637		4.34	93131	47.55	190000
	368.00	100594	93134	93130	88850	54823	44530	36170		3.80	93132	41.64	190000
	397.93	100594	93134	93130	88066	54340	44138	35851		3.52	93132	38.57	190000
	427.80	100594	93134	93130	88850	54823	44530	36170		3.27	93132	35.83	190000
	460.93	100594	93134	93130	88850	54823	44530	36170		3.04	93133	33.31	190000
	485.60	100594	93134	93130	84909	52392	42555	34566		2.88	93133	31.56	190000
	535.27	100594	93134	93130	88850	54823	44530	36170		2.62	93133	28.71	190000
	622.25	100594	93134	93130	88850	54823	44530	36170		2.25	93134	24.65	190000
	696.58	100594	93134	93130	87542	54016	43875	35637		2.01	93134	22.02	190000
	808.93	100594	93134	93130	87542	54016	43875	35637		1.73	93135	18.96	190000
	909.55	100020	92425	83262	81394	54379	44170	35877		1.54	95224	17.25	190000
	978.55	100594	93134	93130	87542	54016	43875	35637		1.43	96554	16.24	190000
	1176.14	95684	88418	79652	73604	52987	43039	34958		1.19	93803	13.13	190000
	1421.16	95542	88287	79534	73494	52987	43039	34958		0.99	95705	11.15	190000
	1661.46	92029	84396	84392	79978	56404	45814	37213		0.84	93850	9.28	163000
	2039.06	84769	77056	72707	67185	55535	45108	36639		0.69	88496	7.18	124000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
8002	91.9	57.7
8003	60.0	40.0
8004	47.3	32.4

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**38.34**	64353	64341	64304	64244	55648	45200	36714	1400	36.52	61150	259.83	190000
	42.31	71009	70994	70950	70876	54823	44530	36170		33.09	62051	238.89	190000
	49.46	83012	82992	82932	82831	56404	45814	37213		28.31	66902	220.36	163000
	55.00	92305	92281	92206	87542	54016	43875	35637		25.45	66143	195.85	190000
	66.11	100594	93043	83819	77454	52987	43039	34958		21.18	68564	168.96	190000
	77.29	92029	84396	84392	82329	56404	45814	37213		18.11	76489	161.17	163000
	90.61	81402	81393	80921	74776	54016	43875	35637		15.45	71159	127.91	190000
	105.93	92029	84396	84392	81893	56404	45814	37213		13.22	79332	122.02	163000
	127.31	92029	84396	84392	81669	56404	45814	37213		11.00	80789	103.39	163000
	156.25	84769	77056	74063	68439	55535	45108	36639		8.96	69301	72.24	124000
	210.49	68521	63318	57041	53877	49130	45814	37213		6.65	55216	42.72	163000
	258.33	82155	75916	68390	65784	55535	45108	36639		5.42	67765	42.73	124000
4	**134.20**	91824	91763	91582	88066	54340	44138	35851	1400	10.43	86955	107.92	190000
	148.09	100594	93134	93130	88850	54823	44530	36170		9.45	90360	101.61	190000
	174.53	100594	93134	93130	88850	54823	44530	36170		8.02	93126	88.87	190000
	192.51	100594	93134	93130	87542	54016	43875	35637		7.27	93127	80.56	190000
	226.89	100594	93134	93130	87542	54016	43875	35637		6.17	93128	68.37	190000
	253.86	100594	93134	93130	88850	54823	44530	36170		5.51	93129	61.06	190000
	287.50	100594	93134	90146	87499	54823	44530	36170		4.87	90418	52.40	190000
	326.34	100594	93134	93130	84909	52392	42555	34566		4.29	93131	47.54	190000
	360.10	100594	93134	93130	88850	54823	44530	36170		3.89	93132	43.11	190000
	398.77	100594	93134	93130	87542	54016	43875	35637		3.51	93132	38.90	190000
	418.18	100594	93134	93130	88850	54823	44530	36170		3.35	93132	37.12	190000
	468.13	100594	93134	93130	87542	54016	43875	35637		2.99	93133	33.14	190000
	543.64	100594	93134	93130	87542	54016	43875	35637		2.58	93133	28.59	190000
	656.89	100594	93134	93130	87542	54016	43875	35637		2.13	93134	23.60	190000
	691.39	81493	75304	72316	69646	54823	44530	36170		2.02	75198	18.07	190000
	789.54	96031	88738	79941	73870	52987	43039	34958		1.77	89964	18.95	190000
	898.81	100594	93134	92963	87542	54016	43875	35637		1.56	95619	17.75	190000
	930.26	95880	88599	79815	73754	52987	43039	34958		1.50	91516	16.33	190000
	976.69	92029	84396	84392	80175	56404	45814	37213		1.43	88314	15.03	163000
	1086.06	100594	93134	93130	87542	54016	43875	35637		1.29	97713	15.00	190000
	1305.37	95604	88344	79586	73542	52987	43039	34958		1.07	94845	12.08	190000
	1526.08	92029	84396	84392	80006	56404	45814	37213		0.92	92942	10.17	163000
	1872.92	84769	77056	72729	67206	55535	45108	36639		0.75	87640	7.82	124000

P_{tN}	PS PSB	S-SB-SU FS-FSR
8003	47.9	34.6
8004	38.6	27.7

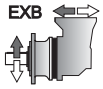
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.18	100594	93134	93130	93123	57729	46890	38087	1000	239.23	36094	932.13	190000
	4.89	92029	84396	84392	84386	56404	45814	37213		204.50	36965	816.04	163000
	6.00	84769	77056	77053	75158	55535	45108	36639		166.67	38699	696.28	124000
2	14.72	100594	93134	93130	93123	57729	46890	38087	1400	95.11	47601	504.33	190000
	16.73	100594	93134	93130	93123	57729	46890	38087		83.68	49464	461.08	190000
	19.68	100594	93134	93130	93123	57729	46890	38087		71.14	51934	411.56	190000
	24.45	100594	93134	93130	93123	57729	46890	38087		57.26	55428	353.55	190000
	28.58	92029	84396	84392	84238	56404	45814	37213		48.99	56752	309.71	163000
	35.08	84769	77056	76132	70351	55535	45108	36639		39.91	59420	264.17	124000
3	51.52	100594	93134	93130	86273	53233	43239	35121	1400	27.17	63919	197.66	190000
	58.55	100594	93134	93130	93123	57729	46890	38087		23.91	72028	196.02	190000
	68.88	100594	93134	93130	93123	57729	46890	38087		20.33	75626	174.99	190000
	76.05	100594	93134	93130	83179	51325	41688	33862		18.41	69264	145.13	190000
	81.18	100594	93134	93130	93123	57729	46890	38087		17.25	79447	155.98	190000
	86.42	100594	93134	93130	90966	56129	45591	37031		16.20	78709	145.13	190000
	101.68	100594	93134	93130	93123	57729	46890	38087		13.77	84999	133.22	190000
	118.07	100594	93134	93130	93123	57729	46890	38087		11.86	88897	120.00	190000
	126.31	100594	93134	93130	93123	57729	46890	38087		11.08	90714	114.40	190000
	146.69	100594	93134	93130	93123	57729	46890	38087		9.54	93124	101.12	190000
	166.80	92029	84396	84392	81373	56404	45814	37213		8.39	83014	79.27	163000
	177.24	100594	93134	93130	93123	57729	46890	38087		7.90	93126	83.73	190000
	207.21	92029	84396	84392	81164	56404	45814	37213		6.76	84390	64.93	163000
	254.31	84769	77056	73658	68064	55535	45108	36639		5.51	72854	45.69	124000
4	185.47	100594	93134	93130	86273	53233	43239	35121	1400	7.55	93127	82.72	190000
	210.76	100594	93134	93130	93123	57729	46890	38087		6.64	93128	72.75	190000
	247.96	100594	93134	93130	93123	57729	46890	38087		5.65	93129	61.91	190000
	274.77	100594	93134	93130	86273	53233	43239	35121		5.10	93130	55.88	190000
	292.24	100594	93134	93130	93123	57729	46890	38087		4.79	93130	52.48	190000
	323.84	100594	93134	93130	85572	52801	42888	34836		4.32	93131	47.34	190000
	367.34	100594	93134	93130	93123	57729	46890	38087		3.81	93132	41.75	190000
	405.62	100594	93134	93130	83179	51325	41688	33862		3.45	93132	37.80	190000
	432.94	100594	93134	93130	93123	57729	46890	38087		3.23	93133	35.39	190000
	460.93	100594	93134	93130	90966	56129	45591	37031		3.04	93133	33.31	190000
	503.29	100594	93134	93130	93123	57729	46890	38087		2.78	93133	30.46	190000
	542.27	100594	93134	93130	93123	57729	46890	38087		2.58	93133	28.27	190000
	630.39	100594	93134	93130	93123	57729	46890	38087		2.22	93134	24.33	190000
	732.06	100594	93134	93130	93123	57729	46890	38087		1.91	93134	20.93	190000
	762.57	100594	93134	93130	93123	57729	46890	38087		1.84	93134	20.16	190000
	885.56	100594	93134	93130	93123	57729	46890	38087		1.58	95457	17.74	190000
	947.34	100594	93134	93130	93123	57729	46890	38087		1.48	96196	16.75	190000
	1100.14	100594	93134	93130	93123	57729	46890	38087		1.27	97857	14.62	190000
	1329.34	100594	93134	93130	93123	57729	46890	38087		1.05	99999	12.35	190000
	1554.10	92029	84396	84392	80000	56404	45814	37213		0.90	93136	9.86	163000
	1907.31	84769	77056	72724	67202	55535	45108	36639		0.73	87822	7.54	124000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
8501	159.9	80.1
8502	91.9	57.7
8503	60.0	40.0
8504	47.3	32.4

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**37.23**	62489	62478	62444	62387	57729	46890	38087	1400	37.60	62072	271.54	190000
	42.31	71009	70994	70950	70876	57729	46890	38087		33.09	65340	251.55	190000
	49.78	83536	83516	83455	83353	57729	46890	38087		28.12	68606	224.46	190000
	61.84	100594	93134	93130	93123	57729	46890	38087		22.64	73219	192.87	190000
	72.29	92029	84396	84392	82431	56404	45814	37213		19.37	74970	168.96	163000
	82.00	73668	73660	73639	68445	57729	46890	38087		17.07	64398	127.90	190000
	95.86	86122	84396	84392	78606	56404	45814	37213		14.60	75286	127.89	163000
	101.86	91516	91505	89770	82953	57729	46890	38087		13.74	80001	127.89	190000
	119.09	92029	84396	84392	81748	56404	45814	37213		11.76	80255	109.81	163000
	146.15	84769	77056	74127	68498	55535	45108	36639		9.58	68834	76.72	124000
	168.42	56235	51965	46813	43301	40242	36657	36657		8.31	44179	42.71	190000
	196.89	64584	59679	53763	50469	46307	42855	37213		7.11	51648	42.72	163000
	241.64	77433	71553	64460	61643	55420	45108	36639		5.79	63387	42.70	124000
4	**130.32**	89166	89109	88938	86273	53233	43239	35121	1400	10.74	84438	107.91	190000
	148.09	100594	93134	93130	93123	57729	46890	38087		9.45	93124	104.71	190000
	174.53	100594	93134	93130	93123	57729	46890	38087		8.02	93126	88.87	190000
	205.33	100594	93134	93130	93123	57729	46890	38087		6.82	93128	75.58	190000
	218.60	100594	93134	93130	90966	56129	45591	37031		6.40	93128	70.92	190000
	253.86	100594	93134	93130	88963	54893	44587	36216		5.51	93129	61.06	190000
	298.66	100594	93134	93130	93123	57729	46890	38087		4.69	93131	51.97	190000
	338.24	100594	93134	93130	93123	57729	46890	38087		4.14	93131	45.88	190000
	360.10	100594	93134	93130	90966	56129	45591	37031		3.89	93132	43.11	190000
	418.18	100594	93134	93130	88963	54893	44587	36216		3.35	93132	37.12	190000
	491.98	100594	93134	93130	93123	57729	46890	38087		2.85	93133	31.58	190000
	526.30	100594	93134	93130	93123	57729	46890	38087		2.66	93133	29.48	190000
	594.47	100594	93134	93130	93123	57729	46890	38087		2.36	93134	26.15	190000
	611.19	100594	93134	93130	93123	57729	46890	38087		2.29	93134	25.38	190000
	694.99	92029	84396	84392	80332	56404	45814	37213		2.01	84396	20.19	163000
	738.52	100594	93134	93130	93123	57729	46890	38087		1.90	93134	21.06	190000
	870.15	99910	92706	90139	85939	57729	46890	38087		1.61	94641	18.13	190000
	982.86	100594	93134	93130	93123	57729	46890	38087		1.42	96602	16.32	190000
	1010.50	100594	93134	93130	93123	57729	46890	38087		1.39	96909	16.03	190000
	1149.05	92029	84396	84392	80109	56404	45814	37213		1.22	89972	13.06	163000
	1221.02	100594	93134	93130	93123	57729	46890	38087		1.15	99031	13.55	190000
	1427.47	92029	84396	84392	80029	56404	45814	37213		0.98	92234	10.76	163000
	1751.90	84769	77056	72748	67223	55535	45108	36639		0.80	86972	8.28	124000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
8503	47.9	34.6
8504	38.6	27.7

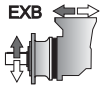
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempnhos

EX		n_2 x h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**4.04**	136727	126588	126583	116355	71795	58315	47367	500	123.76	54702	730.82	235000
	5.12	117651	107409	107405	107398	69871	56753	46098		97.66	57158	602.59	195000
	6.00	104866	95324	95321	95315	68869	55939	45437		83.33	59084	531.49	170000
	7.36	91673	84711	76313	70518	58703	54948	44642		67.93	54324	398.36	135000
2	**14.23**	136727	126588	126583	116355	71795	58315	47367	1400	98.38	58601	642.22	235000
	16.17	136727	126588	126583	115709	71396	57992	47104		86.58	60554	584.02	235000
	19.03	136727	126588	126583	112595	69475	56431	45837		73.57	61875	507.09	235000
	20.47	117651	107409	107405	104210	69871	56753	46098		68.39	63604	484.56	195000
	23.64	129278	119461	107618	99446	68938	55995	45482		59.22	65525	432.26	235000
	29.92	117651	107409	107405	102939	69871	56753	46098		46.79	71276	371.51	195000
	35.08	104866	95324	95321	92667	68869	55939	45437		39.91	73688	327.60	170000
	43.05	85990	79460	71583	66147	55064	51542	44642		32.52	57830	209.49	135000
3	**49.82**	136727	126588	103742	84265	51994	42232	34303	1400	28.10	61806	197.67	235000
	56.61	136727	126588	113453	92153	56861	46186	37515		24.73	70232	197.68	235000
	66.60	136727	126588	125052	103256	63712	51751	42035		21.02	82626	197.68	235000
	71.65	117651	107409	107405	100742	67056	54466	44240		19.54	88891	197.69	195000
	73.54	136727	126588	100023	81244	50130	40718	33074		19.04	66974	145.14	235000
	78.49	136727	126588	124416	102418	63195	51330	41693		17.84	86095	174.82	235000
	84.29	117651	107409	107405	100426	69871	56753	46098		16.61	94785	179.19	195000
	98.31	136727	126588	122565	99554	61428	49895	40527		14.24	89536	145.12	235000
	99.34	117651	107409	107405	100131	69871	56753	46098		14.09	96292	154.42	195000
	105.76	117651	107409	107405	100024	64652	52514	42654		13.24	96323	145.15	195000
	114.17	136727	126588	119867	97362	60076	48797	39635		12.26	91583	127.80	235000
	122.13	122117	112843	101656	93937	68938	55995	45482		11.46	92486	120.63	235000
	124.43	117651	107409	107405	99763	69871	56753	46098		11.25	98432	126.04	195000
	141.83	121692	112451	101303	93610	68938	55995	45482		9.87	93749	105.32	235000
	154.58	117651	107409	107405	99445	69871	56753	46098		9.06	100574	103.71	195000
	179.51	117651	107409	107402	99246	69871	56753	46098		7.80	102097	90.64	195000
	216.91	117651	107409	107150	99013	69871	56753	46098		6.45	104078	76.41	195000
	254.31	104866	95324	95321	89433	68869	55939	45437		5.51	95320	59.78	170000
	312.10	83306	76979	69348	64082	53345	49933	44642		4.49	70211	35.88	135000
4	**179.34**	136727	126588	103742	84265	51994	42232	34303	1400	7.81	90763	83.40	235000
	203.79	136727	126588	113453	92153	56861	46186	37515		6.87	103139	83.37	235000
	239.75	136727	126588	121182	103256	63712	51751	42035		5.84	119058	81.80	235000
	283.04	136727	126588	120834	103256	63712	51751	42035		4.95	120982	70.46	235000
	333.59	136727	126588	120516	102418	63195	51330	41693		4.20	122945	60.75	235000
	355.19	136727	126588	120401	103256	63712	51751	42035		3.94	123709	57.35	235000
	413.65	136727	126588	112532	91405	56400	45811	37210		3.38	126508	50.31	235000
	445.68	136727	126588	109386	88849	54823	44530	36169		3.14	125753	46.46	235000
	486.64	136727	126588	119876	102418	63195	51330	41693		2.88	126587	42.89	235000
	524.33	136727	126588	119763	99554	61428	49895	40527		2.67	126587	39.77	235000
	609.53	136727	126588	119548	99554	61428	49895	40527		2.30	126588	34.26	235000
	707.85	136727	126588	119350	97362	60076	48797	39635		1.98	126588	29.49	235000
	856.27	136727	126588	119118	97362	60076	48797	39635		1.63	129247	24.79	235000
	916.00	118348	109361	98519	91037	68938	55995	45482		1.53	112763	20.30	235000
	1063.75	118191	109216	98388	90917	68938	55995	45482		1.32	114549	17.79	235000
	1159.34	117651	107409	105710	97683	69871	56753	46098		1.21	115138	16.39	195000
	1285.36	118008	109047	98236	90776	68938	55995	45482		1.09	116865	14.99	235000
	1346.33	117651	107409	105631	97610	69871	56753	46098		1.04	117125	14.33	195000
	1626.82	117651	107409	105540	97525	69871	56753	46098		0.86	119690	12.11	195000
	1907.31	104866	95324	95321	88211	68869	55939	45437		0.73	108643	9.33	170000
	2340.79	82294	76045	68506	63304	52697	49327	44642		0.60	87594	6.18	135000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
10001	169.7	99.7
10002	96.1	66.1
10003	62.4	44.9
10004	49.2	36.0

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
3	**36.00**	60422	60412	60380	60326	59900	58315	47367	1400	38.89	60019	271.57	235000
	40.91	68660	68646	68605	68536	67986	57992	47104		34.22	68203	271.54	235000
	48.13	80774	80755	80697	80602	69475	56431	45837		29.09	80239	271.57	235000
	51.78	86895	86873	86807	86697	69871	56753	46098		27.04	84023	264.34	195000
	60.92	102225	102195	102103	101084	69871	56753	46098		22.98	88223	235.88	195000
	75.68	117651	107409	107405	100633	69871	56753	46098		18.50	93821	201.94	195000
	88.72	104866	95324	95321	90765	68869	55939	45437		15.78	86168	158.20	170000
	100.35	90151	90141	88583	81856	69871	56753	46098		13.95	78809	127.91	195000
	117.65	104866	95324	95321	90337	68869	55939	45437		11.90	88565	122.62	170000
	124.66	111992	107409	107360	99208	69871	56753	46098		11.23	97904	127.92	195000
	146.15	104866	95324	95321	90047	68869	55939	45437		9.58	90489	100.86	170000
	179.37	83814	77449	69771	64473	53671	50238	44642		7.81	66319	60.26	135000
	194.51	63890	59039	53186	49871	45807	42337	42337		7.20	51023	42.74	170000
	241.64	77433	71553	64460	61643	55420	52595	45437		5.79	63387	42.70	170000
	296.56	83347	77018	69382	64113	53371	49958	44642		4.72	69838	38.35	135000
4	**126.00**	86218	86164	86005	84265	51994	42232	34303	1400	11.11	81643	107.93	235000
	143.19	97966	97898	97691	92153	56861	46186	37515		9.78	92778	107.97	235000
	168.76	115446	115350	112532	91405	56400	45811	37210		8.30	96674	95.48	235000
	198.54	135799	126588	121614	102418	63195	51330	41693		7.05	113734	95.41	235000
	211.37	136727	126588	109386	88849	54823	44530	36169		6.62	100537	79.20	235000
	248.67	136727	126588	121103	99554	61428	49895	40527		5.63	118279	79.24	235000
	288.78	136727	126588	119867	97362	60076	48797	39635		4.85	120982	69.82	235000
	327.05	119161	112171	101051	99112	63195	51330	41693		4.28	102855	52.38	235000
	348.19	126861	118573	107265	88849	54823	44530	36169		4.02	109504	52.38	235000
	409.63	136727	126588	120153	99554	61428	49895	40527		3.42	125476	51.06	235000
	475.70	136727	126588	119867	97362	60076	48797	39635		2.94	126587	44.28	235000
	518.45	117651	107409	106254	98185	69871	56753	46098		2.70	107408	34.51	195000
	574.81	113292	104689	94924	93123	59513	48340	39264		2.44	102364	29.72	235000
	602.08	117651	107409	106136	98076	69871	56753	46098		2.33	107408	29.78	195000
	644.08	117651	107409	106085	98029	69871	56753	46098		2.17	107409	27.73	195000
	714.09	118636	109627	98759	91260	68938	55995	45482		1.96	109877	25.63	235000
	852.94	104866	95324	95321	88559	68869	55939	45437		1.64	99084	19.34	170000
	903.79	117651	107409	105856	97817	69871	56753	46098		1.55	111903	20.64	195000
	1064.88	117651	107409	105758	97727	69871	56753	46098		1.31	114024	17.77	195000
	1180.63	118088	109121	98303	90838	68938	55995	45482		1.19	115817	16.40	235000
	1236.63	117651	107409	105676	97651	69871	56753	46098		1.13	115992	15.60	195000
	1449.85	104866	95324	95321	88314	68869	55939	45437		0.97	105286	12.15	170000
	1751.90	104866	95324	95321	88241	68869	55939	45437		0.80	107591	10.24	170000
	2150.06	82319	76068	68527	63323	52713	49342	44642		0.65	86501	6.69	135000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
10003	49.6	37.9
10004	40.0	30.4

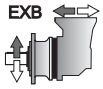
1.2 Performances — *1.2 Prestaciones* — 1.2 Desmpenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.18	157301	145637	145630	145619	94974	77143	62660	500	119.62	73107	944.03	295000
	4.89	141623	129876	129870	129862	93288	75773	61547		102.25	75269	830.82	250000
	6.00	127109	115544	115539	115532	91825	74585	60582		83.33	78779	708.66	184000
2	16.91	157301	145637	145630	122263	75441	61277	49772	1400	82.79	64849	598.07	295000
	19.77	141623	129876	129870	129862	84158	68358	55524		70.81	75814	598.02	250000
	21.40	157301	145637	145630	119870	73964	60077	48798		65.42	68233	497.25	295000
	25.09	157301	145637	140077	117487	72494	58883	47828		55.80	70146	436.02	295000
	29.33	141623	129876	129870	129862	80871	65688	53355		47.73	82005	436.01	250000
	36.00	137481	127041	114446	105755	80066	65033	52824		38.89	86335	374.02	250000
	44.18	127109	115544	115539	107855	89784	74585	60582		31.69	94573	333.86	184000
3	59.18	155135	145637	117039	95065	58658	47646	38700	1400	23.66	73424	197.72	295000
	69.75	154560	145637	116089	94293	58182	47259	38386		20.07	76508	174.77	295000
	74.90	154325	145637	138023	112110	69175	56188	45639		18.69	92928	197.68	295000
	87.82	153828	145637	133502	117487	72494	58883	47828		15.94	102148	185.32	295000
	103.50	153355	145637	132877	117487	72494	58883	47828		13.53	107309	165.25	295000
	110.57	153176	145637	133074	108090	66695	54173	44002		12.66	100702	145.10	295000
	128.41	152790	145637	130145	105710	65227	52981	43034		10.90	103005	127.79	295000
	150.55	152410	145637	131621	117487	72494	58883	47828		9.30	120076	127.10	295000
	181.91	150728	139282	129544	117055	72227	58666	47652		7.70	124782	109.36	295000
	212.67	141623	129876	129870	129528	80573	65446	53158		6.58	129868	97.26	250000
	261.00	127109	115544	113291	104688	87148	74585	60582		5.36	112388	68.56	184000
	320.32	127109	115544	113057	104472	86968	74585	60582		4.37	114803	57.10	184000
4	213.05	151679	145637	117039	95065	58658	47646	38700	1400	6.57	107827	83.35	295000
	251.10	151374	145637	116089	94293	58182	47259	38386		5.58	112356	73.76	295000
	269.65	151250	145637	138023	112110	69175	56188	45639		5.19	136472	83.33	295000
	296.44	151091	145637	116089	94293	58182	47259	38386		4.72	118093	65.58	295000
	318.34	150977	145637	138023	112110	69175	56188	45639		4.40	143440	74.26	295000
	375.19	150728	145637	136902	111199	68614	55732	45268		3.73	145633	63.91	295000
	398.06	150643	145637	133074	108090	66695	54173	44002		3.52	145633	60.31	295000
	439.88	150506	143265	129062	117487	72494	58883	47828		3.18	135879	50.84	295000
	464.40	150434	145637	138023	112110	69175	56188	45639		3.01	145634	51.57	295000
	547.33	150228	145637	136902	111199	68614	55732	45268		2.56	145635	43.86	295000
	641.70	150044	142573	128439	117487	72494	58883	47828		2.18	141167	36.21	295000
	685.55	149972	145637	133074	108090	66695	54173	44002		2.04	145637	34.95	295000
	796.12	149817	145637	130145	105710	65227	52981	43034		1.76	145637	30.16	295000
	829.29	149777	145637	133074	108090	66695	54173	44002		1.69	145637	28.96	295000
	933.38	149665	142003	127926	117487	72494	58883	47828		1.50	146736	25.90	295000
	972.27	149628	141948	127875	117487	72494	58883	47828		1.44	147362	24.97	295000
	1129.09	149498	141752	127700	117487	72494	58883	47828		1.24	149497	21.81	295000
	1364.32	143257	132378	123123	117055	72227	58666	47652		1.03	142836	17.31	295000
	1595.00	141623	129876	129870	127552	80573	65446	53158		0.88	143752	14.88	250000
	1988.18	127109	115544	111756	103269	85967	74585	60582		0.70	132315	10.90	184000
	2402.39	127109	115544	111677	103197	85906	74585	60582		0.58	135212	9.23	184000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR
12001	169.7	99,7
12002	103.1	73,1
12003	68.9	51,4
12004	54.0	40,9

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**149.70**	102416	102341	102116	95065	58658	47646	38700	1400	9.35	96995	107.91	295000
	176.43	120689	120585	116089	94293	58182	47259	38386		7.94	101068	95.49	295000
	189.46	129598	129478	129117	112110	69175	56188	45639		7.39	122761	107.95	295000
	223.29	151589	145637	136902	111199	68614	55732	45268		6.27	127916	95.43	295000
	261.79	151301	144455	130134	117487	72494	58883	47828		5.35	129141	82.21	295000
	279.68	151188	145637	133074	108090	66695	54173	44002		5.01	133029	79.30	295000
	324.79	150945	145637	130145	105710	65227	52981	43034		4.31	136069	69.78	295000
	380.79	150707	143566	129333	117487	72494	58883	47828		3.68	133944	58.65	295000
	431.25	150533	143305	129099	117487	72494	58883	47828		3.25	135610	52.44	295000
	460.72	150445	145637	133074	108090	66695	54173	44002		3.04	144894	52.41	295000
	535.03	150256	145637	130145	105710	65227	52981	43034		2.62	145635	45.40	295000
	627.27	150070	142611	128473	117487	72494	58883	47828		2.23	140840	37.37	295000
	757.95	144755	133762	124410	117055	72227	58666	47652		1.85	134980	29.71	295000
	886.11	141623	129876	129870	127940	80573	65446	53158		1.58	134400	25.27	250000
	951.14	127109	115544	112145	103628	86266	74585	60582		1.47	121608	21.27	184000
	1068.86	119884	113394	105547	103250	64616	52485	42631		1.31	116253	18.12	295000
	1253.15	138029	132421	123287	117055	72227	58666	47652		1.12	136297	18.16	295000
	1465.04	141623	129876	129870	127601	80573	65446	53158		0.96	142361	16.26	250000
	1488.00	126556	116946	105352	97352	80066	65033	52824		0.94	127438	14.25	250000
	1826.18	127109	115544	111794	103304	85996	74585	60582		0.77	131034	12.01	184000
	2206.64	127109	115544	111712	103228	85933	74585	60582		0.63	133903	10.04	184000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR
12004	43.5	33,9

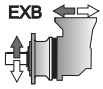
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**16.35**	193471	179124	147021	119418	73685	59851	48614	1400	85.63	62703	598.11	360000
	20.69	167759	153155	153149	140828	86896	70581	57330		67.67	79356	598.20	280000
	26.19	167759	153155	153149	138071	85195	69200	56208		53.46	83504	497.28	280000
	30.71	167759	153155	153149	135327	83501	67824	55090		45.59	85848	435.98	280000
	36.00	146105	132811	132806	128799	93336	75813	61579		38.89	100645	436.01	230000
	44.18	146105	132811	132806	126797	92407	75058	60966		31.69	105956	374.04	230000
	54.22	119076	110033	99125	91597	76250	71374	69924		25.82	82214	236.47	155000
3	**57.22**	185252	150482	114315	92853	57293	46537	37799	1400	24.47	70994	197.73	360000
	67.44	183761	149261	113387	92099	56828	46159	37493		20.76	73976	174.79	360000
	72.43	165827	165818	134811	109500	67565	54880	44577		19.33	89857	197.69	360000
	85.36	165827	165818	133716	108611	67017	54435	44215		16.40	93630	174.77	360000
	91.67	167759	153155	153149	129133	79679	64720	52569		15.27	113728	197.66	280000
	107.47	167759	153155	153149	135327	83501	67824	55090		13.03	125007	185.39	280000
	126.66	167759	153155	153149	135327	83501	67824	55090		11.05	131322	165.16	280000
	158.65	167759	153155	153149	135327	83501	67824	55090		8.82	140501	141.04	280000
	184.24	167759	153155	153149	135327	83501	67824	55090		7.60	146947	127.11	280000
	222.62	167759	153155	153149	134829	83194	67574	54887		6.29	151046	108.14	280000
	261.00	146105	132811	132806	124076	92992	75533	61352		5.36	132805	81.02	230000
	320.32	146105	132811	129187	119377	92407	75058	60966		4.37	131183	65.25	230000
	393.12	115523	106751	96168	88865	73976	69244	67838		3.56	99959	40.50	155000
4	**206.01**	178445	150482	114315	92853	57293	46537	37799	1400	6.80	104261	83.41	360000
	243.20	177833	150482	114315	92853	57293	46537	37799		5.76	109584	74.26	360000
	260.73	165827	165504	134811	109500	67565	54880	44577		5.37	131958	83.37	360000
	307.81	165827	165028	134811	109500	67565	54880	44577		4.55	138695	74.25	360000
	330.00	167759	153155	153149	129133	79679	64720	52569		4.24	153151	76.40	280000
	362.78	165827	164594	133716	108611	67017	54435	44215		3.86	144521	65.63	360000
	386.27	165827	164437	134811	109500	67565	54880	44577		3.62	148472	63.24	360000
	449.04	165827	164080	134811	109500	67565	54880	44577		3.12	155333	57.02	360000
	487.14	167759	153155	153149	124503	76822	62399	50684		2.87	153153	51.71	280000
	543.19	165827	163666	134811	109500	67565	54880	44577		2.58	159004	48.27	360000
	570.21	165827	163566	129977	105574	65143	52913	42978		2.46	159789	46.25	360000
	640.19	165827	163338	133716	108611	67017	54435	44215		2.19	161685	41.66	360000
	721.69	167759	153155	153149	124503	76822	62399	50684		1.94	153155	34.96	280000
	801.86	165827	162931	129977	105574	65143	52913	42978		1.75	165473	34.07	360000
	983.61	167759	153155	153016	135327	83501	67824	55090		1.42	161117	26.92	280000
	1189.85	167759	153155	152849	135327	83501	67824	55090		1.18	164665	22.86	280000
	1381.76	167759	153155	152722	135327	83501	67824	55090		1.01	167507	19.90	280000
	1669.63	167759	153155	149827	134829	83194	67574	54887		0.84	171175	16.92	280000
	1988.18	146105	132811	126227	116642	92407	75058	60966		0.70	152089	12.53	230000
	2402.39	146105	132811	126048	116476	92407	75058	60966		0.58	155419	10.61	230000
	2948.38	114186	105515	95055	87836	73119	68443	67053		0.47	125856	6.96	155000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
15002	125.2	91.0
15003	81.8	61.8
15004	63.7	48.7

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**144.74**	99031	98960	98750	92853	57293	46537	37799	1400	9.67	93785	107.91	360000
	170.59	116700	116602	113387	92099	56828	46159	37493		8.21	97724	95.47	360000
	215.91	147669	147512	133716	108611	67017	54435	44215		6.48	123685	95.37	360000
	231.86	158567	153155	153149	129133	79679	64720	52569		6.04	150233	107.97	280000
	253.13	151735	140213	126312	114753	70807	57513	46715		5.53	124869	82.17	360000
	273.27	167759	153155	153149	128084	79032	64194	52142		5.12	153149	93.30	280000
	320.38	167759	153155	153149	135327	83501	67824	55090		4.37	153150	79.64	280000
	342.27	167759	153155	153149	124503	76822	62399	50684		4.09	153151	74.53	280000
	397.48	167759	153155	149906	121762	75131	61025	49568		3.52	153152	64.15	280000
	445.48	159626	147504	129977	105574	65143	52913	42978		3.14	140101	52.35	360000
	466.01	167759	153155	153149	135327	83501	67824	55090		3.00	153153	54.67	280000
	527.76	167759	153155	153149	135327	83501	67824	55090		2.65	153154	48.29	280000
	563.82	167759	153155	153149	124503	76822	62399	50684		2.48	153154	45.20	280000
	625.10	122033	112766	103058	100931	63112	51263	41639		2.24	111321	29.67	360000
	654.76	167759	153155	149906	121762	75131	61025	49568		2.14	153155	39.00	280000
	767.65	167759	153155	153149	135327	83501	67824	55090		1.82	156610	33.92	280000
	927.57	167759	153155	151394	134829	83194	67574	54887		1.51	160039	28.76	280000
	1087.50	146105	132811	132718	122640	92992	75533	61352		1.29	141941	21.79	230000
	1269.18	139592	134068	128647	119860	83501	67824	55090		1.10	138040	18.07	280000
	1533.59	165075	153155	150027	134829	83194	67574	54887		0.91	166798	18.06	280000
	1826.18	146105	132811	126314	116722	92407	75058	60966		0.77	150617	13.80	230000
	2206.64	146105	132811	126126	116549	92407	75058	60966		0.63	153914	11.54	230000
	2708.14	114219	105546	95082	87862	73141	68463	67072		0.52	124285	7.69	155000

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
15004	50.5	39.6

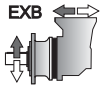
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h											
		T_N [Nm]							10000 Hours Life				T_{max} [Nm]
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.04	193471	179124	179116	179103	114665	93137	75651	500	123.76	87367	1167.22	360000
	5.12	167759	153155	153149	153139	111601	90648	73629		97.66	91295	962.47	280000
	6.00	146105	132811	132806	132798	110072	89406	72620		83.33	94433	849.47	230000
	7.36	128092	118365	106631	98533	82024	76778	71535		67.93	75753	555.50	155000
2	16.91	193471	179124	179116	159224	98247	79801	64819	1400	82.79	84453	778.86	360000
	19.77	193471	179124	179116	156104	96321	78237	63548		70.81	86772	684.45	360000
	21.40	167759	153155	153149	151072	111601	90648	73629		65.42	102954	750.28	280000
	24.26	179838	170566	153657	141988	94409	76684	62287		57.71	90434	581.37	360000
	30.71	167759	153155	153149	149245	111335	90432	73454		45.59	114464	581.31	280000
	36.00	146105	132811	132806	128799	107219	89406	72620		38.89	110334	477.99	230000
	44.18	119678	110590	99627	92061	76636	71735	70278		31.69	80724	284.97	155000
3	62.90	193471	179124	179116	157336	97082	78855	64050	1400	22.26	123761	313.56	360000
	69.17	193471	179124	179116	156701	96690	78536	63791		20.24	126826	292.16	360000
	73.54	193471	179124	179116	156104	96321	78237	63548		19.04	128686	278.87	360000
	80.87	193471	179124	179116	156104	96321	78237	63548		17.31	132407	260.87	360000
	88.77	193471	179124	179116	152935	94366	76649	62258		15.77	133398	239.44	360000
	103.78	193471	179124	179116	156104	96321	78237	63548		13.49	142695	219.09	360000
	123.17	193471	179124	179116	156104	96321	78237	63548		11.37	150220	194.40	360000
	155.89	167759	153155	153149	143967	111601	90648	73629		8.98	145741	148.96	280000
	191.32	167759	153155	153149	143552	111335	90432	73454		7.32	148752	123.93	280000
	224.31	146105	132811	132806	124298	103472	89406	72620		6.24	131156	93.15	230000
	275.29	115934	107130	96510	89181	74239	69491	68079		5.09	96323	55.80	155000
4	226.45	193471	179124	173364	140815	86888	70575	57325	1400	6.18	162668	118.28	360000
	249.02	193471	179124	179116	150502	92865	75430	61268		5.62	178886	118.28	360000
	264.73	193471	179124	179116	156104	96321	78237	63548		5.29	179115	111.48	360000
	293.99	193471	179124	179116	148327	91523	74339	60382		4.76	179117	100.31	360000
	319.58	193471	179124	179116	152935	94366	76649	62258		4.38	179118	92.30	360000
	377.28	193471	179124	179116	152935	94366	76649	62258		3.71	179120	78.19	360000
	392.20	193471	179124	179116	150201	92679	75279	61146		3.57	179120	75.23	360000
	428.88	193471	179124	175289	142379	87853	71358	57961		3.26	179121	68.70	360000
	473.45	193471	179124	179116	152935	94366	76649	62258		2.96	179122	62.38	360000
	501.39	193471	179124	179116	156104	96321	78237	63548		2.79	179122	58.80	360000
	550.39	193471	179124	179116	152935	94366	76649	62258		2.54	179123	53.53	360000
	653.21	193471	179124	164032	149262	92100	74808	60763		2.14	179124	45.10	360000
	763.66	193471	179124	179116	156104	96321	78237	63548		1.83	179125	38.57	360000
	790.17	193471	179124	163437	149262	92100	74808	60763		1.77	179125	37.30	360000
	923.78	193471	179124	179116	156104	96321	78237	63548		1.52	184481	32.99	360000
	1020.38	167759	153155	152983	141366	111335	90432	73454		1.37	161795	26.08	280000
	1186.19	167759	153155	152852	141245	111335	90432	73454		1.18	164607	22.85	280000
	1434.91	167759	153155	152700	141104	111335	90432	73454		0.98	168233	19.40	280000
	1682.31	146105	132811	132426	122370	101867	89406	72620		0.83	149209	14.57	230000
	2064.65	114336	105653	95179	87951	73215	68533	67141		0.68	119410	9.55	155000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
16001	203.0	123.2
16002	125.2	91.0
16003	82.9	63.0
16004	64.5	49.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**159.10**	176036	175899	175487	157336	97082	78855	64050	1400	8.80	163490	171.19	360000
	174.97	193471	179124	179116	156701	96690	78536	63791		8.00	167541	159.49	360000
	204.55	193471	179124	179116	156104	96321	78237	63548		6.84	174910	142.36	360000
	224.54	193471	179124	179116	152935	94366	76649	62258		6.23	176221	130.64	360000
	262.51	193471	179124	179116	156104	96321	78237	63548		5.33	179115	113.60	360000
	311.55	193471	179124	179116	156104	96321	78237	63548		4.49	179118	95.70	360000
	336.96	193471	179124	170036	156104	96321	78237	63548		4.15	173481	85.67	360000
	369.89	193471	179124	179116	152935	94366	76649	62258		3.78	179119	80.57	360000
	432.43	193471	179124	179116	156104	96321	78237	63548		3.24	179121	69.06	360000
	468.15	167759	153155	153149	142161	111285	90392	73421		2.99	153153	54.49	280000
	513.21	193471	179124	179116	156104	96321	78237	63548		2.73	179122	58.19	360000
	555.60	167759	153155	153149	141959	108612	88220	71657		2.52	153154	45.92	280000
	629.85	169218	156367	140866	130168	94409	76684	62287		2.22	154497	40.81	360000
	649.55	167759	153155	153149	141788	111601	90648	73629		2.16	153155	39.36	280000
	797.17	167759	153155	153149	141585	111335	90432	73454		1.76	157288	32.94	280000
	918.60	161938	151035	146619	139403	108612	88220	71657		1.52	154347	27.92	280000
	1041.35	168344	155560	140139	129497	94409	76684	62287		1.34	162762	25.95	360000
	1110.53	167759	153155	152908	141296	111335	90432	73454		1.26	163370	24.49	280000
	1317.99	167759	153155	152766	141165	111335	90432	73454		1.06	166604	21.01	280000
	1545.23	146105	132811	132478	122418	101907	89406	72620		0.91	147764	16.00	230000
	1896.42	114376	105690	95212	87982	73241	68557	67164		0.74	117926	10.38	155000

B

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
16004	53.4	42.6

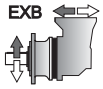
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**4.18**	218187	202007	201998	201983	151593	123132	100014	500	119.62	116690	1506.82	410000
	4.89	195560	179339	179332	179319	148967	120999	98282		102.25	120194	1326.69	360000
	6.00*	177096	160983	160977	160967	135218	119208	96827		83.33	121569	1093.58	280000
2	**17.49**	218187	202007	201998	201983	128392	104287	84707	1000	57.18	123329	785.56	410000
	20.44	218187	202007	201998	201983	126780	102978	83644		48.92	127611	695.41	410000
	23.90	195560	179339	179332	179319	141430	114877	93309		41.84	149195	695.37	360000
	25.09	218187	202007	201998	201684	124446	101081	82104		39.86	133205	591.46	410000
	29.33	195560	179339	179332	179319	138826	112762	91591		34.09	155724	591.36	360000
	36.00*	177096	160983	160977	150850	125575	118053	96827		27.78	133073	411.80	280000
3	**63.39**	218187	202007	201998	201983	128392	104287	84707	1400	22.09	164058	412.48	410000
	69.95	218187	202007	201998	201983	128392	104287	84707		20.01	168977	384.84	410000
	74.11	218187	202007	201998	201983	126780	102978	83644		18.89	169772	365.01	410000
	81.78	218187	202007	201998	201983	126780	102978	83644		17.12	174863	340.73	410000
	90.94	218187	202007	201998	201983	128392	104287	84707		15.39	182818	320.23	410000
	109.30	217537	202007	201998	201983	128392	104287	84707		12.81	193187	281.67	410000
	127.78	216925	202007	201998	201983	126780	102978	83644		10.96	199914	249.38	410000
	156.82	216191	202007	201998	196807	124446	101081	82104		8.93	199368	202.64	410000
	183.33	195560	179339	179332	176290	138826	112762	91591		7.64	179325	155.93	360000
	225.00*	177096	160983	157535	145572	121182	113923	96827		6.22	153658	108.78	280000
4	**221.87**	215106	202007	201998	172281	106303	86345	70134	1400	6.31	197801	146.85	410000
	244.83	214831	202007	201998	184571	113886	92505	75137		5.72	201996	135.94	410000
	259.39	214676	202007	201998	192189	118587	96323	78238		5.40	201997	128.34	410000
	288.55	214401	202007	201998	183072	112962	91753	74527		4.85	201998	115.26	410000
	327.53	214093	202007	201998	166104	102492	83249	67619		4.27	202000	101.48	410000
	361.41	213867	202007	201998	177953	109803	89188	72443		3.87	202001	91.98	410000
	380.36	213754	202007	199995	162447	100235	81416	66131		3.68	202002	87.46	410000
	422.52	213530	202007	201998	198517	122492	99494	80814		3.31	202003	78.67	410000
	469.83	213316	202007	201998	201983	128392	104287	84707		2.98	202004	70.82	410000
	490.67	213231	202007	201998	194146	119795	97304	79035		2.85	202004	67.73	410000
	564.70	212970	202007	201998	201983	128392	104287	84707		2.48	202006	58.94	410000
	655.79	212712	202007	201998	201983	128392	104287	84707		2.13	202007	50.62	410000
	766.67	212462	202007	201998	201983	126780	102978	83644		1.83	202008	43.49	410000
	810.23	212378	202007	201998	191504	124446	101081	82104		1.73	202008	41.12	410000
	940.91	212163	202007	201998	191203	124446	101081	82104		1.49	208486	36.55	410000
	1136.93	211912	202007	201998	190852	124446	101081	82104		1.23	211910	30.67	410000
	1329.17	195560	179339	179332	173234	138826	112762	91591		1.05	194401	24.02	360000
	1631.25*	177096	160983	155119	143340	119324	112176	96827		0.86	180222	18.24	280000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
20001	203.0	123.2
20002	130.3	96.1
20003	89.6	69.6
20004	71.6	56.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**160.35**	216115	202007	201998	201983	128392	104287	84707	1400	8.73	201987	209.82	410000
	176.93	215792	202007	201998	201983	128392	104287	84707		7.91	201989	190.12	410000
	206.85	215310	202007	201998	201983	126780	102978	83644		6.77	201993	162.72	410000
	230.01	215004	202007	201998	201983	128392	104287	84707		6.09	201995	146.38	410000
	268.90	214582	202007	201998	201983	126780	102978	83644		5.21	201997	125.23	410000
	308.80	214234	202007	201998	201983	126780	102978	83644		4.53	201999	108.88	410000
	340.74	214001	202007	201998	201983	126780	102978	83644		4.11	202001	98.79	410000
	378.90	213762	202007	201998	201983	128392	104287	84707		3.69	202002	88.69	410000
	418.18	213552	202007	201998	193144	124446	101081	82104		3.35	202003	80.52	410000
	455.41	213378	202007	201998	201983	128392	104287	84707		3.07	202004	73.79	410000
	532.41	213078	202007	201998	201983	126780	102978	83644		2.63	202005	63.22	410000
	653.41	212718	202007	201998	191980	124446	101081	82104		2.14	202007	51.44	410000
	752.94	208792	192937	186470	178965	128392	104287	84707		1.86	194546	43.06	410000
	880.25	212257	202007	201998	201983	126780	102978	83644		1.59	206902	39.14	410000
	1080.30	211978	202007	201998	190944	124446	101081	82104		1.30	211808	32.76	410000
	1262.96	195560	179339	179332	173281	138826	112762	91591		1.11	193268	25.53	360000
	1550.00*	177096	160983	155156	143374	119352	112203	96827		0.90	179171	19.19	280000

B

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- No disponibles para las versiones

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
20004	58.6	47.7

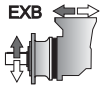
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
3	**61.30**	313325	290090	290077	236214	145752	118387	96160	1400	22.84	184376	479.30	580000
	67.64	313325	290090	286503	232713	143592	116633	94735		20.70	187087	440.78	580000
	71.66	313325	290090	290077	239424	147733	119996	97467		19.54	195845	435.56	580000
	79.07	313325	290090	290077	239424	147733	119996	97467		17.71	201712	406.59	580000
	87.93	313325	290090	282286	229287	141478	114916	93341		15.92	199426	361.35	580000
	97.04	306892	290090	261347	235732	145455	118146	95964		14.43	211186	346.85	580000
	111.29	276461	252394	252384	242976	166844	135519	110076		12.58	236705	338.92	435000
	123.55	313325	290090	290077	239424	147733	119996	97467		11.33	230612	297.39	580000
	133.76	276461	252394	252384	242190	163664	132936	107978		10.47	240935	287.11	435000
	151.63	306892	286575	258165	235732	145455	118146	95964		9.23	240739	252.90	580000
	191.91	276461	252394	252384	240840	171533	139328	113170		7.30	249652	207.43	435000
	225.00	248095	225521	225513	215164	179113	149272	121247		6.22	225509	159.65	352000
	276.14*	203223	187790	169173	156326	130134	121811	119337		5.07	168906	97.47	230000
4	**214.53**	313325	290090	283977	230661	142326	115604	93900	1400	6.53	262169	201.42	580000
	250.81	313325	290090	290077	239424	147733	119996	97467		5.58	285189	187.23	580000
	276.75	313325	290090	290077	239424	147733	119996	97467		5.06	290077	172.69	580000
	295.60	313325	290090	290077	239424	147733	119996	97467		4.74	290078	161.77	580000
	326.17	313325	290090	290077	239424	147733	119996	97467		4.29	290080	146.41	580000
	362.70	313325	290090	282286	229287	141478	114916	93341		3.86	290082	131.74	580000
	408.54	313325	290090	290077	239424	147733	119996	97467		3.43	290084	117.06	580000
	435.94	313325	290090	276905	224917	138781	112726	91562		3.21	290085	109.56	580000
	474.43	313325	290090	290077	239424	147733	119996	97467		2.95	290086	100.68	580000
	509.65	313325	290090	290077	239424	147733	119996	97467		2.75	290087	93.86	580000
	531.10	313325	290090	290077	239424	147733	119996	97467		2.64	290087	90.10	580000
	616.77	313325	290090	290077	239424	147733	119996	97467		2.27	290089	77.48	580000
	741.30	313325	290090	290077	239424	147733	119996	97467		1.89	290090	64.51	580000
	824.96	276461	252394	252384	237300	171533	139328	113170		1.70	260223	52.05	435000
	895.74	313325	290090	290077	239424	147733	119996	97467		1.56	297713	54.64	580000
	991.54	276461	252394	252384	237010	171533	139328	113170		1.41	265759	44.09	435000
	1099.32	300352	277544	250029	231042	145455	118146	95964		1.27	292191	43.66	580000
	1391.36	276461	252394	252384	236542	171533	139328	113170		1.01	276265	32.83	435000
	1631.25	248095	225521	225513	211669	176204	149272	121247		0.86	252473	25.55	352000
	2001.99*	200288	185079	166731	154069	128255	120052	117614		0.70	208204	17.15	230000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
25003	111.4	84.1
25004	90.1	69.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**155.04**	256160	255965	255381	236214	145752	118387	96160	1400	9.03	243556	261.70	580000
	171.08	282637	282400	281688	232713	143592	116633	94735		8.18	247139	240.55	580000
	200.01	313325	290090	290077	239424	147733	119996	97467		7.00	266467	221.95	580000
	222.40	313325	290090	282286	229287	141478	114916	93341		6.29	263440	197.17	580000
	260.01	313325	290090	290077	239424	147733	119996	97467		5.38	288287	184.55	580000
	312.51	313325	290090	290077	239424	147733	119996	97467		4.48	290079	154.64	580000
	329.47	291477	277724	250192	239424	147733	119996	97467		4.25	254873	128.89	580000
	366.36	313325	290090	277350	229287	141478	114916	93341		3.82	283414	128.82	580000
	428.31	313325	290090	290077	239424	147733	119996	97467		3.27	290085	112.87	580000
	463.69	276461	252394	252384	238401	166844	135519	110076		3.02	252391	90.70	435000
	514.79	313325	290090	290077	239424	147733	119996	97467		2.72	290087	93.89	580000
	557.32	276461	252394	252384	238015	163664	132936	107978		2.51	252393	75.38	435000
	631.79	302204	279255	251571	232467	145455	118146	95964		2.22	276012	72.91	580000
	665.29	276461	252394	252384	237675	171533	139328	113170		2.10	252394	63.07	435000
	799.63	276461	252394	252384	237352	171533	139328	113170		1.75	259296	53.99	435000
	851.13	232747	215509	209671	200119	147733	119996	97467		1.64	219916	42.92	580000
	921.43	249705	232961	226127	214965	163664	132936	107978		1.52	238082	43.06	435000
	1077.23	276461	252394	252384	236888	174219	141510	114942		1.30	268292	41.50	435000
	1322.06	276461	252394	252384	236607	171533	139328	113170		1.06	274655	34.64	435000
	1550.00	248095	225521	225513	211722	176249	149272	121247		0.90	251002	26.88	352000
	1902.27*	200333	185120	166768	154104	128284	120079	117640		0.74	206647	18.20	230000

B

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- No disponibles para las versiones

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
25004	72.0	57.1

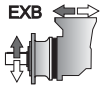
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 x h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	**4.04**	313325	290090	290077	290055	191525	155567	126360	500	123.76	145929	1949.61	580000
	5.12	276461	252394	252384	252368	186376	151384	122962		97.66	152465	1607.35	435000
	6.00	248095	225521	225513	225499	183776	149272	121247		83.33	157664	1418.27	352000
	7.36*	225614	208482	187813	173551	144473	135233	119418		67.93	133191	976.70	230000
2	**16.91**	313325	290090	290077	245046	151201	122814	99756	1000	59.14	143777	947.20	580000
	19.77	313325	290090	290077	239424	147733	119996	97467		50.58	147221	829.50	580000
	21.40	276461	252394	252384	252368	178310	144833	117641		46.73	181967	947.23	435000
	25.02	276461	252394	252384	252368	174219	141510	114942		39.97	186326	829.61	435000
	30.71	276461	252394	252384	250941	171533	139328	113170		32.56	195085	707.58	435000
	36.00	248095	225521	225513	223408	183776	149272	121247		27.78	196987	609.59	352000
	44.18*	210172	194212	174958	161672	134584	125977	119418		22.63	146057	368.19	230000
3	**59.52**	313325	290090	290077	245046	151201	122814	99756	1400	23.52	189586	507.52	580000
	67.64	313325	290090	290077	245046	151201	122814	99756		20.70	197001	464.14	580000
	75.33	276461	252394	252384	244898	178310	144833	117641		18.58	228200	482.58	435000
	79.57	313325	290090	290077	245046	151201	122814	99756		17.59	206839	414.10	580000
	93.03	313325	290090	290077	239424	147733	119996	97467		15.05	211795	362.79	580000
	98.85	313325	290090	290077	245046	151201	122814	99756		14.16	220750	355.77	580000
	115.57	313325	290090	290077	239424	147733	119996	97467		12.11	226038	311.55	580000
	125.11	276461	252394	252384	242468	178310	144833	117641		11.19	239381	304.88	435000
	141.83	306892	287058	258600	235732	145455	118146	95964		9.87	236652	265.85	580000
	179.51	276461	252394	252384	241072	171533	139328	113170		7.80	247998	220.17	435000
	210.46	248095	225521	225513	215352	179271	149272	121247		6.65	225508	170.68	352000
	258.29*	203381	187937	169305	156448	130236	121906	119418		5.42	167755	103.49	230000
4	**208.32**	313325	290090	278194	225963	139427	113250	91988	1400	6.72	254577	201.28	580000
	236.73	313325	290090	290077	245046	151201	122814	99756		5.91	286869	199.47	580000
	279.00	313325	290090	290077	245046	151201	122814	99756		5.02	290077	171.33	580000
	328.24	313325	290090	290077	245046	151201	122814	99756		4.27	290080	145.73	580000
	359.52	313325	290090	290077	239424	147733	119996	97467		3.89	290082	132.76	580000
	411.12	313325	290090	290077	245046	151201	122814	99756		3.41	290084	116.38	580000
	431.52	313325	290090	259858	211070	130238	105786	85925		3.24	290085	110.58	580000
	477.43	313325	290090	290077	245046	151201	122814	99756		2.93	290086	100.00	580000
	510.74	313325	290090	290077	245046	151201	122814	99756		2.74	290087	93.52	580000
	558.16	313325	290090	290077	239424	147733	119996	97467		2.51	290088	85.67	580000
	597.10	313325	290090	290077	239424	147733	119996	97467		2.34	290089	79.86	580000
	674.44	313325	290090	290077	239424	147733	119996	97467		2.08	290090	70.99	580000
	716.69	313325	290090	290077	245046	151201	122814	99756		1.95	290090	66.55	580000
	837.86	313325	290090	290077	239424	147733	119996	97467		1.67	290091	57.00	580000
	907.08	276461	252394	252384	237147	178310	144833	117641		1.54	263065	47.66	435000
	1028.29	300550	277726	250193	231194	145455	118146	95964		1.36	290166	46.43	580000
	1301.46	276461	252394	252384	236628	171533	139328	113170		1.08	274161	34.84	435000
	1525.85	248095	225521	225513	211739	176263	149272	121247		0.92	250551	27.12	352000
	1872.63*	200347	185133	166779	154114	128293	120088	117649		0.75	206172	18.19	230000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
26001	264.6	155.4
26002	167.6	120.8
26003	111.4	84.1
26004	90.1	69.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**150.55**	248745	248562	248011	245046	151201	122814	99756	1400	9.30	247222	273.58	580000
	171.08	282637	282400	281688	245046	151201	122814	99756		8.18	260236	253.30	580000
	201.27	313325	290090	290077	245046	151201	122814	99756		6.96	273239	226.29	580000
	235.30	313325	290090	290077	239424	147733	119996	97467		5.95	279779	198.08	580000
	250.04	313325	290090	290077	245046	151201	122814	99756		5.60	290074	193.29	580000
	292.32	313325	290090	290077	239424	147733	119996	97467		4.79	290078	165.33	580000
	331.55	293319	279279	251592	245046	151201	122814	99756		4.22	256483	128.79	580000
	387.61	313325	290090	290077	239424	147733	119996	97467		3.61	290083	124.61	580000
	411.89	313325	290090	290077	245046	151201	122814	99756		3.40	290084	117.36	580000
	481.53	313325	290090	290077	239424	147733	119996	97467		2.91	290086	100.45	580000
	521.31	276461	252394	252384	238151	178310	144833	117641		2.69	252392	80.79	435000
	590.97	302464	279495	251787	232667	145455	118146	95964		2.37	274155	77.31	580000
	714.53	248095	225521	225513	212724	177082	149272	121247		1.96	225522	52.60	352000
	747.96	276461	252394	252384	237466	171533	139328	113170		1.87	252395	56.16	435000
	876.92	248095	225521	225513	212420	176829	149272	121247		1.60	235161	44.77	352000
	1007.63	270294	252394	246125	232823	174219	141510	114942		1.39	260353	43.06	435000
	1181.36	248095	225521	225513	212030	176505	149272	121247		1.19	243320	34.45	352000
	1236.63	276461	252394	252384	236696	171533	139328	113170		1.13	272563	36.65	435000
	1449.85	248095	225521	225513	211794	176309	149272	121247		0.97	249090	28.75	352000
	1779.36*	200393	185176	166818	154150	128323	120115	117676		0.79	204632	19.24	230000

B

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- No disponibles para las versiones

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
26004	72.0	57.1

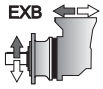
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
3	**61.30**	344758	333705	290813	236214	145752	118387	96160	1400	22.84	184376	479.30	650000
	67.64	343898	333705	286503	232713	143592	116633	94735		20.70	187087	440.78	650000
	77.58	342767	333705	333690	278564	171884	139613	113401		18.05	233352	479.40	650000
	85.60	342001	333705	333690	274436	169336	137544	111720		16.36	236780	440.90	650000
	90.70	331405	303916	303903	303883	191746	155746	126505		15.44	272810	479.42	540000
	106.33	331405	303916	303903	303883	206019	167339	135922		13.17	299143	448.41	540000
	117.33	331405	303916	303903	303883	206019	167339	135922		11.93	301968	410.02	540000
	130.47	339110	333705	333690	299300	184678	150005	121842		10.73	293036	357.87	650000
	156.82	338025	333705	333690	296483	182940	148593	120695		8.93	306748	311.78	650000
	183.33	331405	303916	303903	303883	204080	165764	134642		7.64	303892	264.25	540000
	225.00	331405	303916	287225	265414	202414	164412	133544		6.22	280157	198.34	540000
	276.14*	300721	273359	272083	251421	209296	189754	154128		5.07	271653	156.76	410000
4	**214.53**	336391	333705	283977	230661	142326	115604	93900	1400	6.53	262169	201.42	650000
	250.81	331405	303916	303903	257315	158772	128963	104751		5.58	303901	199.51	540000
	271.53	335320	333705	333690	272016	167843	136331	110735		5.16	331819	201.45	650000
	299.61	334909	333705	333690	274436	169336	137544	111720		4.67	333692	183.35	650000
	320.01	334644	333705	332172	269807	166480	135224	109836		4.37	333693	171.57	650000
	353.12	334265	333705	333690	274436	169336	137544	111720		3.96	333695	155.47	650000
	400.82	333804	333705	322884	262263	161825	131443	106765		3.49	333698	137.02	650000
	442.29	333466	333453	333414	274436	169336	137544	111720		3.17	333438	124.36	650000
	465.47	333297	333284	315775	256489	158262	128549	104414		3.01	333270	118.02	650000
	527.56	332900	332887	282286	229287	141478	114916	93341		2.65	332878	103.79	650000
	562.45	332706	332693	312819	254088	156781	127346	103437		2.49	332687	97.46	650000
	620.63	332421	332408	332369	272214	167965	136430	110816		2.26	332404	88.39	650000
	674.11	332191	332178	332139	299300	184678	150005	121842		2.08	332177	81.29	650000
	727.64	331988	331975	331936	299300	184678	150005	121842		1.92	331976	74.99	650000
	810.23	331714	331701	331662	296483	182940	148593	120695		1.73	331705	67.52	650000
	940.91	331358	331345	331306	296483	182940	148593	120695		1.49	331351	58.09	650000
	1136.93	330943	330930	330891	296483	182940	148593	120695		1.23	330940	47.89	650000
	1350.00	331405	303916	279046	257856	202414	164412	133544		1.04	330028	40.38	540000
	1631.25	331405	303916	278534	257383	202414	164412	133544		0.86	337254	34.12	540000
	2001.99*	300721	273359	268084	247726	206220	189754	154128		0.70	313286	25.80	410000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
30003	115.3	88.0
30004	93.1	72.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**155.04**	256160	255965	255381	236214	145752	118387	96160	1400	9.03	243556	261.70	650000
	171.08	282637	282400	281688	232713	143592	116633	94735		8.18	247139	240.55	650000
	196.23	324144	323832	322897	278564	171884	139613	113401		7.13	308260	261.53	650000
	216.53	336346	333705	333690	274436	169336	137544	111720		6.47	312794	240.81	650000
	230.06	336060	333705	333690	299300	184678	150005	121842		6.09	333685	241.81	650000
	253.86	335613	333705	333690	299300	184678	150005	121842		5.51	333688	218.78	650000
	281.49	335167	333705	332897	270396	166844	135519	110076		4.97	333427	197.18	650000
	338.33	334428	333705	326552	265242	163664	132936	107978		4.14	333695	164.39	650000
	396.66	333841	333705	333690	296483	182940	148593	120695		3.53	333698	140.17	650000
	418.18	333657	333644	315702	299300	184678	150005	121842		3.35	323500	128.95	650000
	463.69	333309	333296	332897	270396	166844	135519	110076		3.02	333283	119.77	650000
	543.64	332808	332795	332756	299300	184678	150005	121842		2.58	332788	102.16	650000
	653.41	332277	332264	332225	296483	182940	148593	120695		2.14	332262	84.61	650000
	763.89	331405	303916	303903	301325	204080	165764	134642		1.83	303917	66.18	540000
	801.91	293064	270809	243962	225436	181447	147381	119710		1.75	275036	57.27	650000
	937.50	331405	303916	280180	258903	202414	164412	133544		1.49	316539	56.12	540000
	1077.23	286775	271444	262132	246973	182576	148298	120455		1.30	278338	43.06	540000
	1289.60	331405	303916	279177	257977	202414	164412	133544		1.09	328304	42.58	540000
	1550.00	331405	303916	278668	257506	202414	164412	133544		0.90	335288	35.91	540000
	1902.27*	300721	273359	268145	247782	206267	189754	154128		0.74	311459	27.42	410000

B

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- *No disponibles para las versiones*

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
30004	74.2	59.3

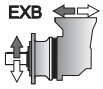
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]							n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000					
1	**4.18**	360433	333705	333690	333665	253207	205668	167054	500	119.62	194908	2516.86	650000
	4.89	331405	303916	303903	303883	248793	202083	164142		102.25	200739	2215.75	540000
	6.00*	300721	273359	273349	273332	235288	199030	161662		83.33	210219	1891.03	410000
2	**16.91**	360433	333705	333690	312015	192524	156378	127018	500	29.57	225386	742.42	650000
	19.77	331405	303916	303903	303883	214771	174448	141696		25.29	263498	742.33	540000
	21.40	356967	333705	333690	303656	187366	152189	123616		23.36	235405	612.57	650000
	25.09	354718	333705	333690	299300	184678	150005	121842		19.93	243369	540.31	650000
	29.33	331405	303916	303903	303883	206019	167339	135922		17.05	284512	540.37	540000
	36.00	331405	303916	303903	283405	202414	164412	133544		13.89	261611	404.79	540000
	44.18*	300721	273359	273349	260168	216578	189754	154128		11.32	250761	316.21	410000
3	**59.52**	345023	333705	333690	312015	192524	156378	127018	1400	23.52	241399	646.22	650000
	67.64	343898	333705	333690	310284	191456	155510	126314		20.70	249449	587.71	650000
	75.33	343004	333705	333690	303656	187366	152189	123616		18.58	252136	533.20	650000
	85.60	342001	333705	333690	303656	187366	152189	123616		16.36	261991	487.84	650000
	100.71	340814	333705	333690	303656	187366	152189	123616		13.90	275084	435.20	650000
	118.07	339742	333705	333690	299300	184678	150005	121842		11.86	284387	383.89	650000
	146.27	331405	303916	303903	303883	209018	169775	137900		9.57	303884	331.00	540000
	171.49	331405	303916	303903	303883	206019	167339	135922		8.16	303890	282.24	540000
	210.46	331405	303916	287691	265844	202414	164412	133544		6.65	278483	210.78	540000
	258.29*	300721	273359	272299	251621	209462	189754	154128		5.42	269806	166.44	410000
4	**208.32**	336533	333705	278194	225963	139427	113250	91988	1400	6.72	254577	201.28	650000
	236.73	335928	333705	304235	247116	152479	123851	100598		5.91	289293	201.16	650000
	278.50	335212	333705	333690	276890	170850	138774	112719		5.03	333690	197.48	650000
	328.24	334545	333705	333690	274642	169463	137647	111804		4.27	333694	167.64	650000
	353.12	334265	333705	333690	289055	178357	144871	117671		3.96	333695	155.47	650000
	411.12	333716	333703	328669	266962	164725	133798	108678		3.41	333684	133.87	650000
	442.29	333466	333453	333414	280972	173370	140820	114381		3.17	333438	124.36	650000
	477.43	333214	333201	321433	261085	161098	130852	106285		2.93	333189	114.86	650000
	520.34	332942	332929	332890	303656	187366	152189	123616		2.69	332920	105.37	650000
	576.90	332631	332618	318424	258640	159590	129627	105290		2.43	332613	95.09	650000
	604.27	332497	332484	332445	303656	187366	152189	123616		2.32	332480	90.75	650000
	730.15	331979	331966	331927	303656	187366	152189	123616		1.92	331967	74.99	650000
	856.04	331580	331567	331528	299300	184678	150005	121842		1.64	331572	63.98	650000
	1063.47	331085	331072	331033	299300	184678	150005	121842		1.32	331081	51.42	650000
	1243.28	331405	303916	303903	300380	206019	167339	135922		1.13	326932	43.47	540000
	1525.85	331405	303916	278709	257544	202414	164412	133544		0.92	334686	36.23	540000
	1872.63*	300721	273359	268164	247800	206282	189754	154128		0.75	310900	27.43	410000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
31001	264.6	155.4
31002	174.4	127.6
31003	115.3	88.0
31004	93.1	72.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
4	**150.55**	248745	248562	248011	247093	192524	156378	127018	1400	9.30	247222	273.58	650000
	171.08	282637	282400	281688	280503	191456	155510	126314		8.18	280934	273.45	650000
	201.27	332464	332136	331152	301935	186304	151326	122915		6.96	330510	273.72	650000
	216.53	336346	333705	333690	303656	187366	152189	123616		6.47	333683	256.89	650000
	254.74	335598	333705	333690	303656	187366	152189	123616		5.50	333688	218.38	650000
	298.66	334922	333705	333690	299300	184678	150005	121842		4.69	333692	186.22	650000
	316.46	334689	333705	333690	303656	187366	152189	123616		4.42	333693	175.50	650000
	349.16	331405	303916	303903	303422	206019	167339	135922		4.01	303907	145.01	540000
	371.03	334082	333705	333690	299300	184678	150005	121842		3.77	333696	149.69	650000
	419.63	333645	333632	316770	303656	187366	152189	123616		3.34	324620	129.01	650000
	491.98	333118	333105	333066	299300	184678	150005	121842		2.85	333094	112.96	650000
	521.31	332937	332923	332884	303656	187366	152189	123616		2.69	332915	106.56	650000
	575.16	331405	303916	303903	301993	206019	167339	135922		2.43	303914	87.88	540000
	611.19	332464	332451	332412	299300	184678	150005	121842		2.29	332447	90.59	650000
	705.88	331405	303916	281216	259861	202414	164412	133544		1.98	303916	71.60	540000
	876.92	331405	303916	280411	259117	202414	164412	133544		1.60	314128	59.81	540000
	1010.50	270977	254992	246787	233412	184678	150005	121842		1.39	261095	43.18	650000
	1181.36	311205	297017	285840	267688	206019	167339	135922		1.19	305242	43.22	540000
	1449.85	331405	303916	278847	257672	202414	164412	133544		0.97	332734	38.40	540000
	1779.36*	300721	273359	268227	247858	206330	189754	154128		0.79	309088	29.06	410000

B

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- *No disponibles para las versiones*

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
31004	74.2	59.3

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**17.49**	360055	333705	333690	333665	253207	205668	167054	500	28.59	299442	953.66	650000
	20.44	357646	333705	333690	333665	250160	203193	165044		24.46	310000	844.67	650000
	23.90	331405	303916	303903	303883	248793	202083	164142		20.92	286554	667.79	540000
	25.09	354718	333705	333690	333665	246238	200007	162456		19.93	324493	720.41	650000
	29.33	331405	303916	303903	303883	248793	202083	164142		17.05	291977	554.55	540000
	36.00*	300721	273359	273349	261713	217864	199030	161662		13.89	245886	380.46	410000
3	**70.71**	343524	333705	333690	327860	202301	164319	133469	1400	19.80	267113	601.96	650000
	82.67	342268	333705	333690	333665	225678	183307	148892		16.93	312281	601.74	650000
	89.50	341667	333705	333690	321441	198340	161102	130856		15.64	281067	500.33	650000
	104.63	340549	333705	333690	333665	221260	179719	145977		13.38	328588	500.40	650000
	122.67	339496	333705	333690	333665	216862	176147	143076		11.41	333658	433.31	650000
	150.55	338257	333705	333690	333665	246238	200007	162456		9.30	333669	353.19	650000
	184.76	337138	333705	333690	333665	246238	200007	162456		7.58	333677	287.88	650000
	216.00	331405	303916	303903	303883	248793	202083	164142		6.48	303897	224.14	540000
	265.09*	300721	273359	272214	251542	209397	196855	161662		5.28	270522	162.57	410000
4	**247.49**	335726	333705	313850	254926	157298	127766	103778	1400	5.66	302442	201.40	650000
	289.33	335052	333705	333690	284384	175475	142530	115770		4.84	333691	190.02	650000
	313.23	334729	333705	333690	300631	185500	150673	122384		4.47	333693	175.49	650000
	341.00	334398	333705	333690	282075	174050	141372	114830		4.11	333695	161.36	650000
	369.17	334100	333705	333690	298190	183994	149449	121391		3.79	333696	148.80	650000
	424.26	333607	333594	295936	240374	148319	120473	97854		3.30	333577	129.51	650000
	462.39	333318	333305	333266	289853	178849	145270	117996		3.03	333292	118.82	650000
	506.00	333029	333016	332977	332912	216862	176147	143076		2.77	333006	108.53	650000
	540.58	332825	332812	332773	323347	199516	162057	131632		2.59	332805	101.41	650000
	599.33	332520	332507	327042	265641	163909	133136	108140		2.34	332503	91.54	650000
	648.84	332296	332283	332244	280817	173274	140742	114318		2.16	332281	84.44	650000
	758.55	331880	331867	331828	313267	193297	157006	127528		1.85	331869	72.23	650000
	889.33	331489	331476	331437	331372	216063	175498	142549		1.57	331482	61.23	650000
	954.60	331325	331312	331273	331208	246238	200007	162456		1.47	331318	57.30	650000
	1091.45	331029	331016	330977	330912	246238	200007	162456		1.28	331025	49.85	650000
	1339.51	330614	330601	330562	330497	246238	200007	162456		1.05	330613	40.84	650000
	1566.00	331405	303916	303903	300006	248793	202083	164142		0.89	335682	35.15	540000
	1921.91*	300721	273359	268133	247771	206257	193903	161662		0.73	311826	26.78	410000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- No disponibles para las versiones

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
32002	174.4	127.6
32003	119.5	92.2
32004	96.2	75.7

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX

Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	10000 Hours Life n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
1	**4.17**	429121	397272	397254	397225	263076	213684	173565	500	119.90	202358	2619.17	780000
	4.65	404919	371449	371434	371408	260895	211913	172127		107.53	207349	2406.89	700000
	5.29	384299	351014	351000	350977	255307	207374	168440		94.52	210911	2152.03	590000
	6.21	343510	311204	311192	311173	254626	206821	167990		80.52	220714	1918.49	480000
2	**17.45**	428132	397272	397254	397225	254345	206592	167805	500	28.65	300581	959.30	780000
	20.41	425082	397272	397254	397225	249828	202924	164825		24.50	309453	844.56	780000
	22.73	404919	371449	371434	371408	260895	211913	172127		22.00	333769	817.97	700000
	25.04	421399	397272	397253	397195	245912	199742	162241		19.97	323869	720.47	780000
	27.90	404919	371449	371434	371408	260895	211913	172127		17.92	354934	708.52	700000
	31.76	384299	351014	351000	340450	255307	207374	168440		15.74	314208	550.92	590000
	37.29	343510	311204	311192	306482	254626	206821	167990		13.41	288756	431.35	480000
3	**70.58**	407216	383917	383883	327426	202033	164102	133292	1400	19.84	266612	602.05	780000
	82.51	405623	382415	382381	365262	225379	183065	148695		16.97	311687	602.02	780000
	91.92	404919	371449	371434	371408	243081	197443	160373		15.23	347237	601.91	700000
	101.26	403709	380611	380577	380521	245912	199742	162241		13.83	361629	569.24	780000
	112.81	404919	371449	371434	371408	260895	211913	172127		12.41	371396	524.59	700000
	128.16	401734	378748	378714	378659	245912	199742	162241		10.92	376688	468.18	780000
	150.26	400524	377607	377574	377518	245912	199742	162241		9.32	377526	400.47	780000
	184.41	399100	376265	376232	376177	245912	199742	162241		7.59	376203	324.99	780000
	205.45	404919	371449	371434	371408	260895	211913	172127		6.81	371425	287.89	700000
	233.90	384299	351014	351000	325324	255307	207374	168440		5.99	344916	235.15	590000
	274.56	343510	311204	311192	293993	244736	206821	167990		5.10	311192	180.64	480000
4	**247.02**	397304	374572	313435	254588	157090	127596	103641	1400	5.67	301870	201.38	780000
	288.79	396446	373763	349654	284008	175242	142341	115617		4.85	352912	201.38	780000
	312.64	396036	373376	369631	300234	185254	150473	122222		4.48	373349	196.79	780000
	340.36	395614	372978	346815	281702	173819	141185	114678		4.11	367733	177.82	780000
	368.47	395235	372621	366630	297796	183750	149251	121230		3.80	372602	166.58	780000
	426.30	394578	372002	337118	273825	168959	137238	111472		3.28	371988	143.55	780000
	461.52	394240	371683	356378	289469	178612	145078	117840		3.03	371672	132.50	780000
	495.06	393952	371412	329696	267796	165239	134216	109017		2.83	371403	123.66	780000
	541.09	393602	371081	371048	314636	194141	157691	128085		2.59	371075	113.08	780000
	598.20	393224	370725	326609	265289	163692	132960	107997		2.34	370722	102.06	780000
	647.61	392939	370457	345269	280446	173044	140556	114167		2.16	370455	94.14	780000
	760.70	392394	369943	369910	367269	245912	199742	162241		1.84	369945	80.09	780000
	864.90	404919	371449	371434	371408	260895	211913	172127		1.62	383204	73.04	700000
	901.57	391865	369444	369411	347499	214418	174162	141463		1.55	369449	67.37	780000
	988.90	404919	371449	371434	371408	232725	189031	153541		1.42	389125	65.01	700000
	1061.47	404919	371449	371434	371408	260895	211913	172127		1.32	392292	60.92	700000
	1106.47	391284	368896	368864	365680	245912	199742	162241		1.27	368904	55.12	780000
	1232.67	404919	371449	371434	371408	260895	211913	172127		1.14	399063	53.52	700000
	1336.98	390798	368438	368405	364983	245912	199742	162241		1.05	387658	47.89	780000
	1489.48	404919	371449	371434	371408	260895	211913	172127		0.94	407800	45.10	700000
	1695.80	384299	351014	345951	319680	255307	207374	168440		0.83	392822	38.36	590000
	1990.55	343510	311204	311192	289353	240873	206821	167990		0.70	357629	29.45	480000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
37001	320.6	180.6
37002	208.0	148.0
37003	139.1	104.1
37004	110.9	84.6

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	4.17	498641	461633	461612	461578	350767	284912	231420	500	119.90	269811	3492.24	910000
	4.84	474962	435703	435685	435655	344594	279897	227347		103.31	277180	3091.21	760000
	5.87	430532	391610	391595	391570	339589	275832	224045		85.18	289431	2661.38	610000
2	16.88	489791	461633	461612	461578	307078	249424	202596	500	29.62	359302	1185.53	910000
	19.58	474962	435703	435685	435655	340715	276747	224788		25.54	407135	1158.32	760000
	21.36	484570	461633	461612	461578	298871	242759	197181		23.41	375288	978.67	910000
	25.04	481332	461633	461612	461578	294777	239433	194480		19.97	388225	863.64	910000
	29.05	474962	435703	435685	435655	327067	265661	215784		17.21	421655	808.36	760000
	35.66	474962	435703	424900	392634	322179	261691	212559		14.02	361319	564.30	760000
	43.20	430532	391610	391595	387311	322418	275832	224045		11.57	371654	479.01	610000
3	70.58	465132	461633	461612	426408	263108	213710	173586	1400	19.84	347209	784.05	910000
	81.88	474962	435703	435685	435655	291929	237120	192601		17.10	402794	783.95	760000
	89.33	462438	461633	461612	461578	298871	242759	197181		15.67	423288	754.94	910000
	104.43	460816	460798	460743	460653	298871	242759	197181		13.41	443592	677.05	910000
	122.43	459287	459269	459215	452750	294777	239433	194480		11.44	445884	580.57	910000
	128.16	458869	458851	458797	458707	298160	242181	196712		10.92	458691	570.10	910000
	150.26	457487	457469	457415	449974	294777	239433	194480		9.32	453615	481.19	910000
	174.32	474962	435703	435685	435655	327067	265661	215784		8.03	435667	398.18	760000
	213.93	474962	435703	397002	366854	322179	261691	212559		6.54	385012	286.59	760000
	259.20	430532	391610	391595	373409	310845	275832	224045		5.40	391593	240.68	610000
4	262.55	453418	453400	453347	421351	259988	211176	171528	1400	5.33	453341	284.29	910000
	288.72	452831	452814	452760	419650	258938	210323	170836		4.85	452763	258.36	910000
	337.54	451925	451907	451854	418052	257953	209523	170185		4.15	451869	220.63	910000
	370.53	451417	451399	451346	409566	252716	205269	166730		3.78	451368	200.74	910000
	439.75	450543	450525	450472	399729	246646	200339	162726		3.18	450504	168.55	910000
	468.96	450234	450216	450163	450075	298025	242072	196623		2.99	450199	158.37	910000
	514.10	449809	449791	449738	418052	257953	209523	170185		2.72	449779	143.94	910000
	556.57	449457	449440	449387	449299	290867	236258	191901		2.52	449431	133.25	910000
	614.70	449037	449019	448966	436730	294777	239433	194480		2.28	449014	120.45	910000
	672.86	448671	448654	448601	448513	298160	242181	196712		2.08	448652	109.79	910000
	762.86	448191	448174	448121	435392	294777	239433	194480		1.84	448176	97.02	910000
	884.99	474962	435703	435685	434105	327067	265661	215784		1.58	450674	83.78	760000
	926.40	474962	435703	435685	433963	330821	268710	218261		1.51	453039	80.49	760000
	1086.12	474962	435703	435685	433491	327067	265661	215784		1.29	461361	70.02	760000
	1332.97	461987	426904	384582	355377	321889	261691	212559		1.05	459411	56.75	760000
	1615.02	430532	391610	391595	367597	306007	275832	224045		0.87	437630	44.80	610000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	PS PSB	S-SB-SU FS-FSR-SFD
45001	320.6	180.6
45002	212.4	152.4
45003	146.2	111.2
45004	117.1	90.8

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX



Étage Etapa Estágio	ir	n_2 X h — T_N [Nm] 10000	20000	50000	100000	500000	1000000	2000000	10000 Hours Life n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	T_{max} [Nm]
1	4.17	603872	559054	559029	558987	432833	351570	285563	500	119.90	332936	4309.28	1150000
	4.65	588039	539433	539411	539374	428906	348380	282973		107.53	340877	3956.87	990000
	5.29	549663	502056	502036	502003	421026	341980	277774		94.52	347813	3548.91	860000
	6.21	521843	472764	472747	469914	391181	338659	275077		80.52	351509	3055.38	680000
2	17.45	603872	559054	559029	558987	405972	329752	267842	500	28.65	479772	1531.19	1150000
	20.41	603872	559054	559029	558987	398939	324040	263202		24.50	494151	1348.64	1150000
	22.73	588039	539433	539411	539374	428906	348380	282973		22.00	539285	1321.63	990000
	25.04	603872	559054	559029	558987	393036	319244	259307		19.97	499809	1111.86	1150000
	27.9	588039	539433	539411	539374	423905	344318	279673		17.92	539315	1076.59	990000
	31.76	549663	502056	502036	502003	421026	341980	277774		15.74	487651	855.03	860000
	37.29	521843	472764	468531	432951	360411	333042	275077		13.41	407449	608.65	680000
3	72.99	603872	559054	559029	557245	343839	279284	226849	1000	13.70	507021	790.60	1150000
	85.33	603872	559054	559029	558987	383572	311557	253063		11.72	558973	745.64	1150000
	99.76	603872	559054	559029	558987	378756	307646	249886		10.02	558987	637.50	1150000
	111.14	588039	539433	539411	539374	408504	331808	269512		9.00	539381	552.52	990000
	122.43	603872	559054	559029	558987	371782	301981	245285		8.17	559002	519.81	1150000
	150.26	603872	559054	559029	527010	393036	319244	259307		6.66	547104	414.72	1150000
	167.4	588039	539433	539411	539374	423905	344318	279673		5.97	539404	366.52	990000
	190.59	549663	502056	502036	502003	421026	341980	277774		5.25	502034	299.99	860000
	223.71	521843	472764	449880	415717	346065	319785	275077		4.47	453611	230.78	680000
4	264.6	603872	559054	559029	557245	343839	279284	226849	1400	5.29	559026	347.93	1150000
	291.97	603872	559054	559029	557245	343839	279284	226849		4.80	559030	315.71	1150000
	309.33	603872	559054	559029	550249	339522	275778	224001		4.53	559033	297.95	1150000
	341.33	603872	559054	559029	550249	339522	275778	224001		4.10	559036	269.67	1150000
	379.56	603872	559054	559029	557245	343839	279284	226849		3.69	559040	242.70	1150000
	418.91	603872	559054	559029	540117	333271	270700	219877		3.34	559042	219.68	1150000
	443.73	603872	559054	559029	550249	339522	275778	224001		3.16	559044	207.85	1150000
	518.76	603872	559054	559029	558987	378756	307646	249886		2.70	559048	177.59	1150000
	533.33	603872	559054	559029	550249	339522	275778	224001		2.63	559048	172.99	1150000
	601.04	603872	559054	553721	511672	393036	319244	259307		2.33	559051	153.25	1150000
	654.55	603872	559054	559029	540117	333271	270700	219877		2.14	559052	140.76	1150000
	765.22	603872	559054	559029	558987	371782	301981	245285		1.83	559055	120.37	1150000
	852.5	588039	539433	539411	539374	400982	325699	264550		1.64	555585	107.20	990000
	939.13	603872	559054	550367	508573	393036	319244	259307		1.49	570303	99.98	1150000
	1046.25	588039	539433	539411	539374	423905	344318	279673		1.34	568761	89.67	990000
	1191.18	549663	502056	502036	496390	413221	341980	277774		1.18	539595	74.91	860000
	1398.21	521843	472764	442038	408470	340032	314210	275077		1.00	521767	61.39	680000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

P_{tN}	S-SB-SU FS-FSR-SFD
55001	232.4
55002	183.0
55003	132.0
55004	109.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 x h						
		T_N [Nm]						
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000
1	**4.17**	719388	665997	665967	665917	577111	468760	380751
	4.84	685413	628758	628732	628689	567004	460551	374083
	5.87*	642181	584126	584103	584066	490718	451414	366662
2	**16.88**	719388	665997	665967	665917	512912	416614	338396
	19.58	685413	628758	628732	628689	567004	460551	374083
	21.36	719388	665997	665967	665917	499121	405412	329297
	25.04	715342	665997	665967	665917	492159	399757	324704
	29.05	685413	628758	628732	628689	546070	443547	360272
	35.66	685413	628758	628732	628689	537835	436858	354839
	43.2*	642181	584126	582936	538669	448416	420501	366662
3	**70.58**	690275	665997	665967	656241	404923	328900	267150
	82.51	687453	665997	665967	641185	395633	321354	261021
	89.33	686098	665997	665967	665917	477522	387868	315047
	104.43	683582	665997	665967	665917	466566	378970	307819
	122.43	681211	665997	665967	665917	492159	399757	324704
	128.16	680562	665997	665967	665917	459373	373127	303073
	150.26	678418	665997	665967	665917	492159	399757	324704
	174.32	685413	628758	628732	628689	546070	443547	360272
	213.93	685413	628758	628732	628689	537835	436858	354839
	259.2*	642181	584126	561094	518485	431614	404745	366662
4	**248.43**	672652	665997	665967	656241	404923	328900	267150
	282.31	671403	665997	665967	656241	404923	328900	267150
	332.13	669925	665997	665967	656241	404923	328900	267150
	388.28	668613	665997	665967	641185	395633	321354	261021
	451.14	667446	665997	665967	665917	459373	373127	303073
	482.37	666953	665997	665967	641185	395633	321354	261021
	522.21	666389	665997	665967	665917	477522	387868	315047
	592	665543	665517	665439	631300	389533	316399	256996
	610.51	665343	665317	665239	665109	466566	378970	307819
	715.77	664359	664333	664255	664125	492159	399757	324704
	749.26	664091	664065	663986	663856	459373	373127	303073
	878.45	663203	663177	663099	662969	492159	399757	324704
	1019.08	685413	628758	628732	628689	544677	443547	360272
	1078.1	662159	656578	591487	546570	484736	393728	319807
	1250.69	685413	628758	628732	623431	537835	436858	354839
	1515.32*	642181	584126	552144	510215	424729	398288	366662

10000 Hours Life				T_{max} [Nm]
n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
500	119.90	443915	5745.71	1350000
	103.31	456079	5086.36	1050000
	85.18	437751	4025.22	820000
500	29.62	600143	1980.20	1350000
	25.54	615495	1751.11	1050000
	23.41	626738	1634.39	1350000
	19.97	648180	1441.92	1350000
	17.21	628627	1205.15	1050000
	14.02	628654	981.81	1050000
	11.57	516335	665.48	820000
1000	14.17	591109	953.34	1350000
	12.12	605251	834.92	1350000
	11.19	665906	848.11	1350000
	9.58	665922	726.10	1350000
	8.17	665936	619.25	1350000
	7.80	665939	591.20	1350000
	6.66	665951	504.81	1350000
	5.74	628726	410.75	1050000
	4.67	628735	334.19	1050000
	3.86	575484	252.83	820000
1400	5.64	665961	441.91	1350000
	4.96	665967	388.63	1350000
	4.22	665975	330.66	1350000
	3.61	665981	282.86	1350000
	3.10	665986	242.90	1350000
	2.90	665988	227.23	1350000
	2.68	665990	210.00	1350000
	2.36	665507	184.79	1350000
	2.29	665310	179.25	1350000
	1.96	664334	153.20	1350000
	1.87	664068	146.10	1350000
	1.59	663187	124.06	1350000
	1.37	660949	106.54	1050000
	1.30	662151	101.28	1350000
	1.12	676624	89.16	1050000
	0.92	648025	70.14	820000

5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda

(*) NOTE
- Pas disponibles pour les versions

PS-PN1
SD-SN1

(*) NOTA
- No disponibles para las versiones

PS-PN1
SD-SN1

(*) NOTA
- Não disponíveis para as versões

PS-PN1
SD-SN1

P_{tN}	**S-SB-SU** **FS-FSR-SFD**
68001	232.4
68002	192.6
68003	144.0
68004	118.2

1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
2	**14.98**	914850	851086	851046	764538	471746	383177	311236	500	33.38	532551	1980.23	1500000
	18.95	914850	851086	851046	743981	459061	372874	302867		26.39	556101	1634.79	1500000
	22.22	822718	822679	820535	733603	452658	367672	298643		22.50	575166	1441.60	1500000
3	**62.63**	914850	851086	743083	603571	372424	302502	245708	500	7.98	645761	586.52	1500000
	73.22	914850	851086	726035	589724	363880	295562	240071		6.83	661221	514.02	1500000
	79.26	914850	851086	851046	711785	439196	356738	289761		6.31	815411	585.62	1500000
	92.67	914850	851086	851046	695455	429120	348553	283113		5.40	827001	508.29	1500000
	108.64	822718	822679	764695	706625	452658	367672	298643		4.60	751130	393.26	1500000
	113.73	914850	851086	843005	684733	422503	343179	278748		4.40	842758	422.05	1500000
	133.33	822718	822679	759768	702072	452658	367672	298643		3.75	765736	326.83	1500000
4	**220.44**	914850	851086	743083	603571	372424	302502	245708	1400	6.35	691635	516.72	1500000
	250.51	914850	851086	743083	603571	372424	302502	245708		5.59	718683	472.67	1500000
	279.01	914850	851086	832848	711785	439196	356738	289761		5.02	832512	491.70	1500000
	294.71	914850	851086	743083	603571	372424	302502	245708		4.75	754585	421.70	1500000
	317.05	914850	851086	830570	711785	439196	356738	289761		4.42	842414	438.08	1500000
	344.54	914850	851086	726035	589724	363880	295562	240071		4.06	772649	369.08	1500000
	373	914850	851086	827871	711785	439196	356738	289761		3.75	851063	375.49	1500000
	436.07	914850	851086	825470	695455	429120	348553	283113		3.21	851070	321.42	1500000
	541.74	914850	851086	822427	695455	429120	348553	283113		2.58	851078	258.34	1500000
	635.14	822718	815303	734476	678701	452658	367672	298643		2.20	806320	208.71	1500000
	664.86	914850	851086	819839	684733	422503	343179	278748		2.11	851085	211.28	1500000
	779.49	822718	812965	732370	676755	452658	367672	298643		1.80	822687	174.23	1500000
5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda												

P_{tN}	S-SB-SU FS-FSR-SFD
75002	192.6
75003	144.0
75004	118.2

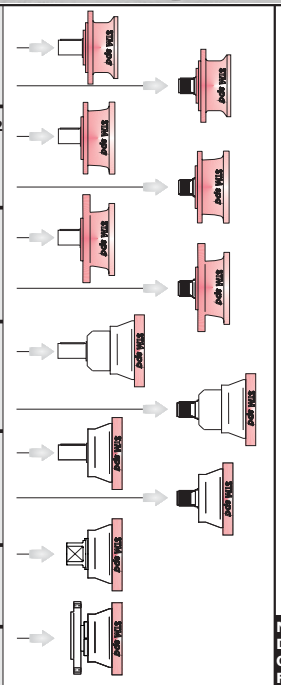
1.2 Performances — *1.2 Prestaciones* — 1.2 Desempenhos

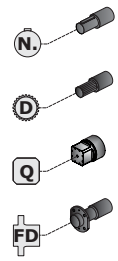
EX		n_2 X h							10000 Hours Life				T_{max} [Nm]
		T_N [Nm]											
Étage Etapa Estágio	ir	10000	20000	50000	100000	500000	1000000	2000000	n_1 [rpm]	n_2 [rpm]	T_N [Nm]	P_1 [kW]	
1	3.7	914850	851086	851046	850980	591161	480172	390021	500	135.14	438699	6399.93	1500000
2	15.49	914850	851086	851046	850980	591161	480172	390021	500	32.28	674095	2423.95	1500000
	18.11	914850	851086	851046	850980	591161	480172	390021		27.61	706450	2172.78	1500000
	22.22	914850	851086	851046	850980	591161	480172	390021		22.50	751154	1882.70	1500000
3	62.63	914850	851086	851046	768523	474204	385174	312858	500	7.98	822243	746.81	1500000
	73.22	914850	851086	851046	850980	529002	429683	349011		6.83	851022	661.56	1500000
	79.26	914850	851086	851046	747935	461501	374856	304477		6.31	851029	611.20	1500000
	92.67	914850	851086	851046	834364	514831	418172	339662		5.40	851041	523.06	1500000
	108.64	914850	851086	851046	822394	507445	412173	334789		4.60	851052	445.58	1500000
	113.73	914850	851086	851046	826546	591161	480172	390021		4.40	851054	426.21	1500000
	133.33	914850	851086	851046	808005	498567	404962	328931		3.75	851063	363.25	1500000
	163.64	914850	851086	851046	817591	575416	467383	379633		3.06	851072	296.41	1500000
4	220.44	914850	851086	851046	768523	474204	385174	312858	1400	6.35	851028	635.81	1500000
	250.51	914850	851086	851046	764259	471574	383037	311123		5.59	851039	559.72	1500000
	279.01	914850	851086	851046	747935	461501	374856	304477		5.02	851046	502.65	1500000
	294.71	914850	851086	851046	743694	458885	372730	302751		4.75	851050	475.61	1500000
	317.05	914850	851086	851046	747935	461501	374856	304477		4.42	851054	442.57	1500000
	344.54	914850	851086	851046	829633	511912	415801	337736		4.06	851059	406.53	1500000
	373	914850	851086	851046	747935	461501	374856	304477		3.75	851063	375.49	1500000
	436.07	914850	851086	851046	834364	514831	418172	339662		3.21	851070	321.42	1500000
	463.38	914850	851086	851046	747935	461501	374856	304477		3.02	851073	302.40	1500000
	541.74	914850	851086	851046	834364	514831	418172	339662		2.58	851078	258.34	1500000
	635.14	914850	851086	851046	822394	507445	412173	334789		2.20	851083	220.29	1500000
	779.49	914850	851086	851046	808005	498567	404962	328931		1.80	851089	180.24	1500000
	956.64	914850	851086	851046	790731	575416	467383	379633		1.46	875836	150.45	1500000
5-6	5,6 Étages/ *Etapas* /Estágios Sur demande / *A pedido* / Sob encomenda												

P_{tN}	S-SB-SU FS-FSR-SFD
80001	232.4
80002	192.6
80003	147.9
80004	121.1

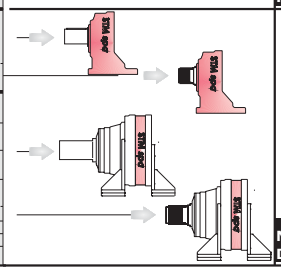
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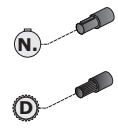
25 20 10	70 50 40 35 30	80	100 95 90	200 180 150	280 250	300	350	360 420	650 600	850 800	1200 1000	2000 1600 1500	3200 3100 3000 2600 2500	4500 3700	5500	8000 7500 6800	
ø38-ø40 ø42 ø50 ø48	ø60 ø65 ø50	ø80	ø90 ø100	ø90 ø100													**RN1-LN1** **RN2** **RN3** **RN4**
B40x36	B58x53	B70x64	B80x74	B80x74													**RD**
ø60 ø65 ø50	ø60 ø65	ø80	ø90														**MN1** **MN2-LN2** **MN3**
	ø60 ø65																**MXN1** **MXN2**
	B58x53																**MXD**
B58x53	B58x53	B70x64	B80x74														**MD-LD**
ø38 ø42 ø50 ø48	ø60 ø65 ø50	ø80	ø90 ø100	ø90 ø100	ø110	ø120											**TN1** **TN2** **TN3** **TN4**
B40x36	B58x53	B70x64	B80x74	B80x74	B100x94	W120x3											**TD**
				ø90 ø100	ø110	ø120											**HN1** **HN2**
				ø100													**XN1** **XN2**
				B100x94													**XD**
				B80x74	B100x94	W120x3											**HD**
							ø120 ø140	ø120 ø140	ø160	ø170	ø180	ø200	ø230	ø290	ø340	ø340	**SN1** **SN2**
							ø120 ø140	**ø120** **ø140**						ø290	ø340	ø340	**SBN1** **SBN2**
																Only 6800	
							W120x3	**W120x3**								W340x8	**SBD**
							W120x3	**W120x3**	W150x5	W170x5	W170x5	W200x5	W220x5	W280x8	W340x8	W340x8	**SD**
																300x250	**SQ** *Only 7500-8000*
												ø585	ø655	ø730	ø730	ø800	**SFD**
ø38 ø42 ø50 ø48	ø60 ø65	ø80	ø90	ø90 ø100													**PN1** **PN2** **PN3** **PN4**
B40x36	B58x53	B70x64	B80x74	B80x74													**PD**
				ø90 ø100	ø110	ø120											**PHN1** **PHN2**
				ø100													**PXN1** **PXN2**
							ø120 ø140	**ø120** **ø140**	ø160	ø170	ø180	ø200	ø230	ø290			**PSN1** **PSN2**
							ø120 ø140	**ø120** **ø140**						ø290			**PSBN1** **PSBN2**
				B80x74 B100x94	B100x94	W120x3											**PHD** **PXD**
							W120x3	W120x3	W150x5	W170x5	W170x5	W200x5	W220x5	W280x8			**PSD**
							W120x3	**W120x3**						W280x8			**PSBD**





N - Male keyed shaft
D - Male spined shaft
Q - Male square shaft
FD-Drivewheel flange

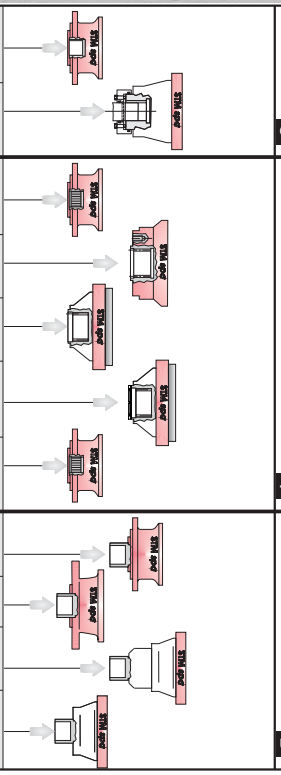


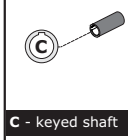


N - Male keyed shaft
D - Male spined shaft

C

25 20 10	70 50 40 35 30	80	100 95 90	200 180 150	280 250	300	350	360 420	650 600	850 800	1200 1000	2000 1600 1500	3200 3100 3000 2600 2500	4500 3700	5500	8000 7500 6800	
ø35	ø50	ø65	ø75														**FC**
	ø65	ø80	ø90	ø100	ø110												**FCB**
A40x36	A58x53	**A70x64**	**A80x74**														**F**
	A58x53																**FP**
A40x36	A58x53	A70x64	A80x74	A80x74	A100x94	N120x5	N120x3		N150x5	N170x5	N200x5	N210x5	N240x5	N280x8	N300x8	N340x8	**FS**
								N140x5									**FSB**
							N120x3	N140x5	N150x5	N170x5	N200x5	N210x5	N240x5	N280x8	N300x8	N340x8	**FSR**
		A70x64	A70x74														**FB**
ø50	ø75	ø90	ø100	ø120													**FU**
				ø120	ø130	ø135											**TU**
				ø120	ø130	ø135											**HU**
							ø145	ø145	ø165	ø180	ø220	ø240	ø260	ø290	ø310	ø350	**SU**





C - keyed shaft

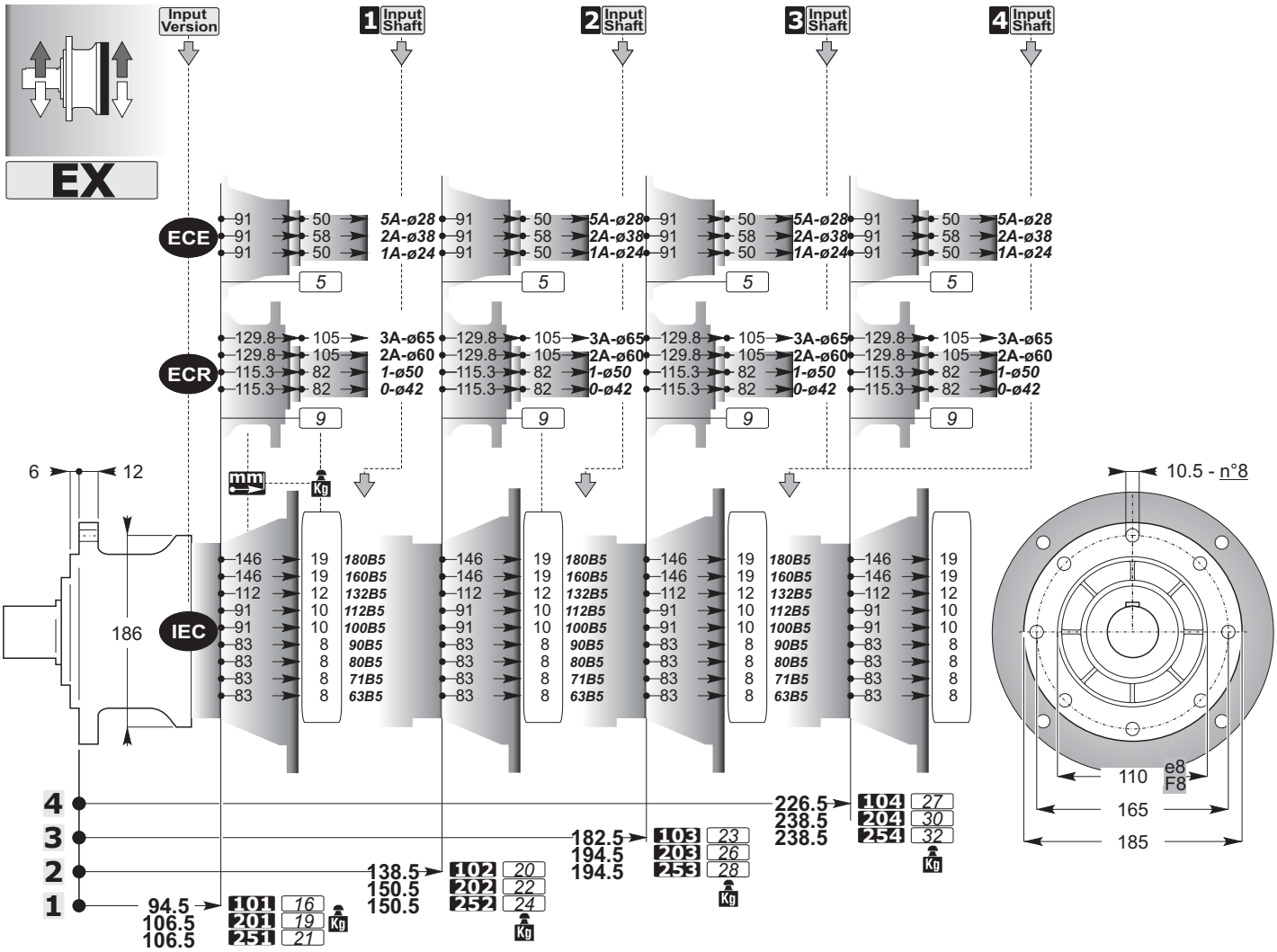


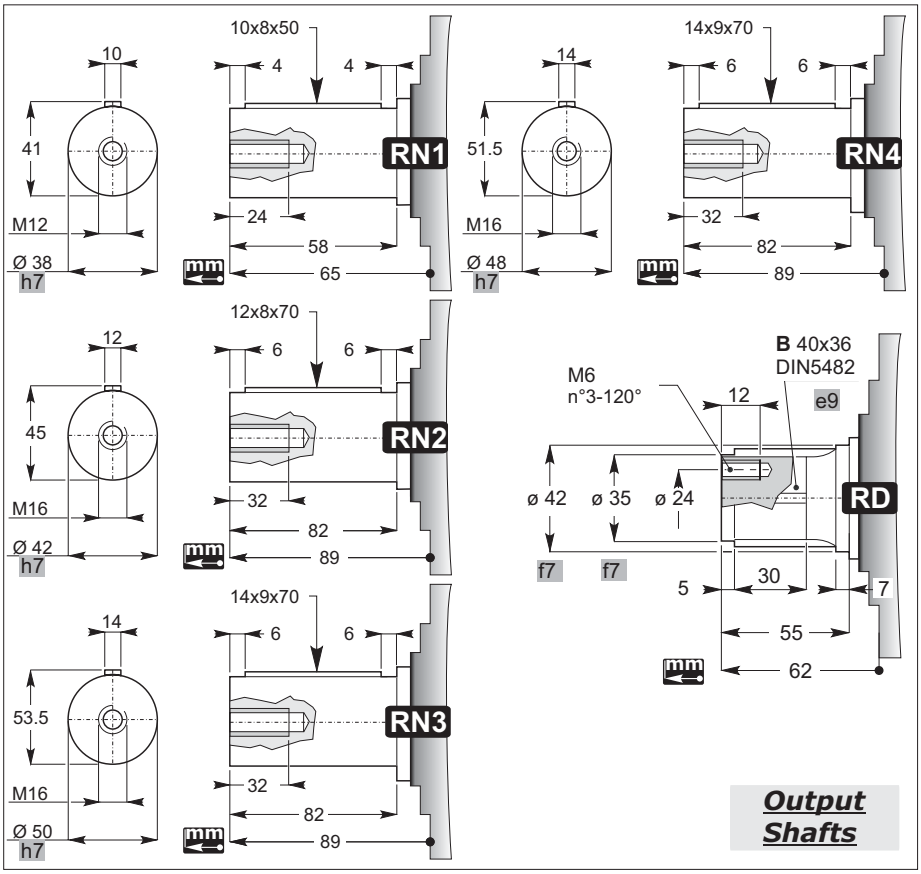
-(CD) - Spined shaft

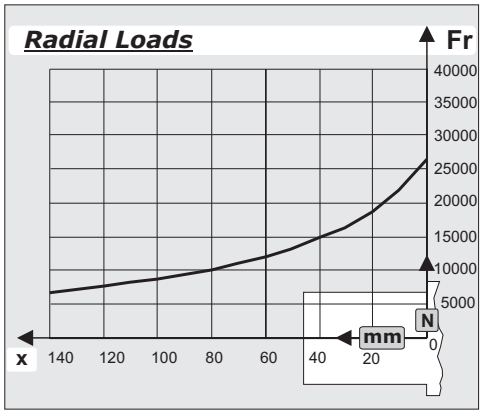


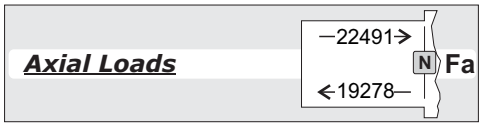
U - Shrink disc

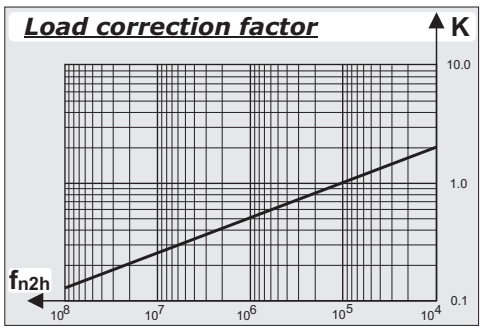
mm
C

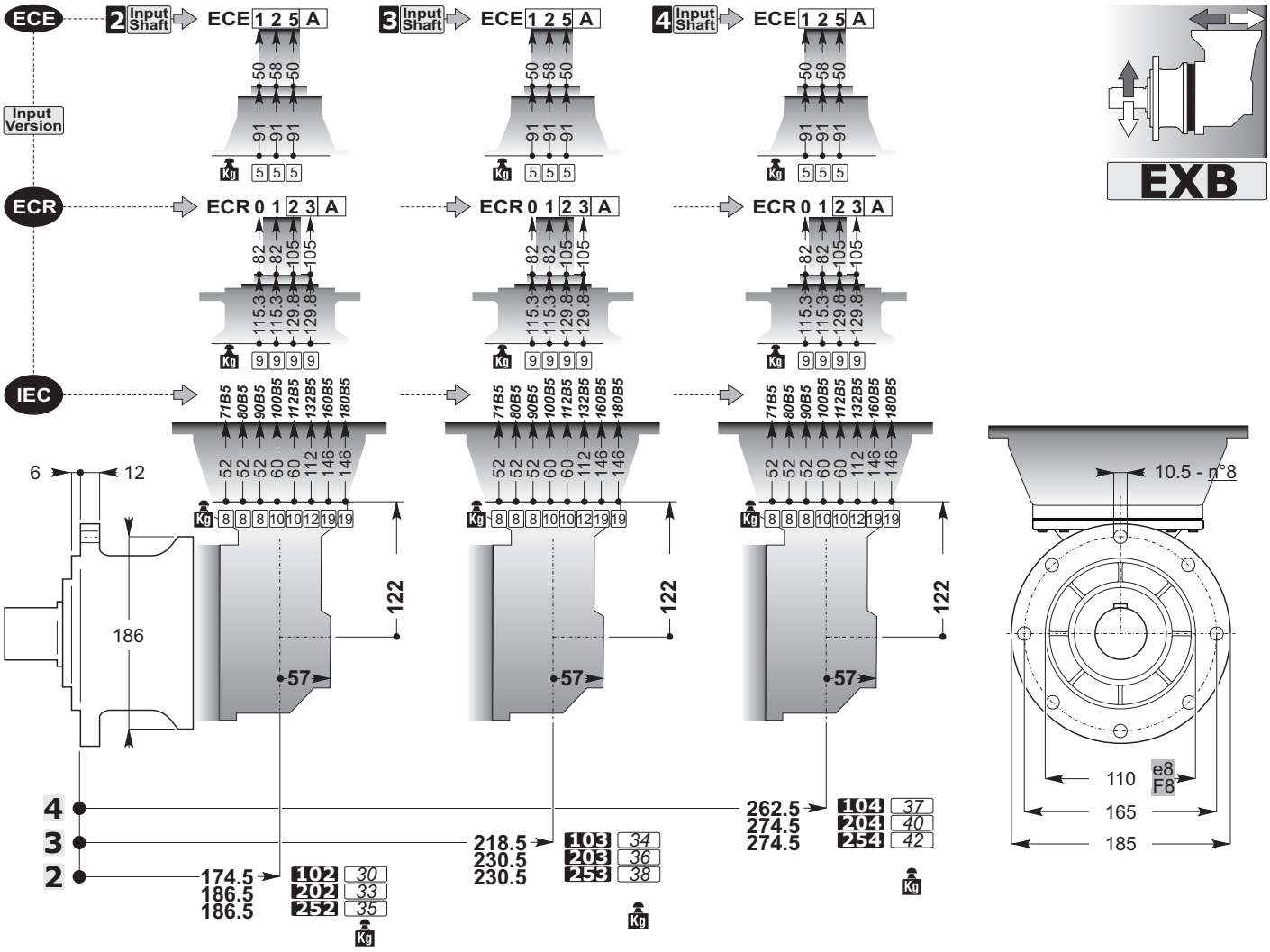

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
5A-ø28
2A-ø38
1A-ø24
3A-ø65
2A-ø60
1-ø50
0-ø42
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
mm
Kg
186
10.5 - n°8
e8
F8
110
165
185
94.5
106.5
106.5
138.5
150.5
150.5
182.5
194.5
194.5
226.5
238.5
238.5

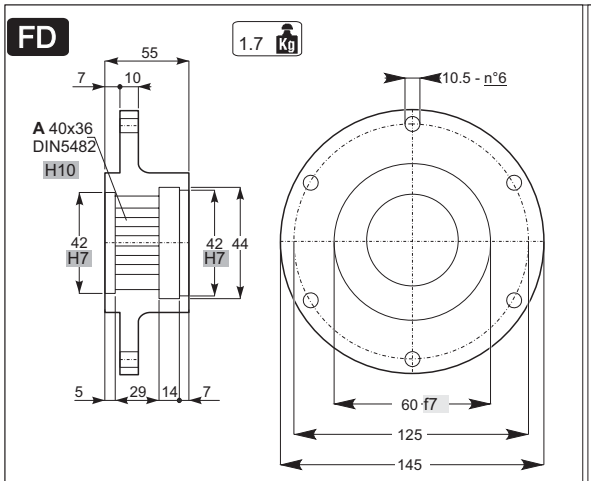

RN1
RN2
RN3
RN4
RD
10x8x50
12x8x70
14x9x70
14x9x70
M6
n°3-120°
B 40x36
DIN5482
e9
Output Shafts

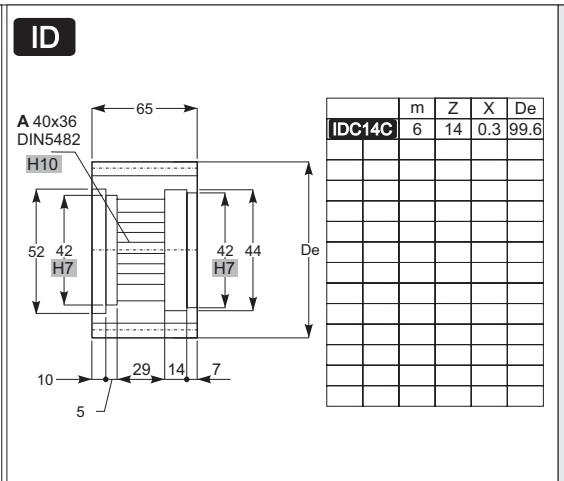

Radial Loads
Fr
N
mm
x

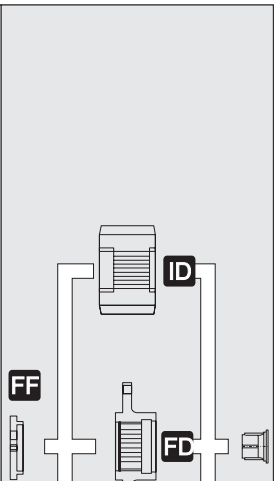

Axial Loads
22491
19278
N
Fa

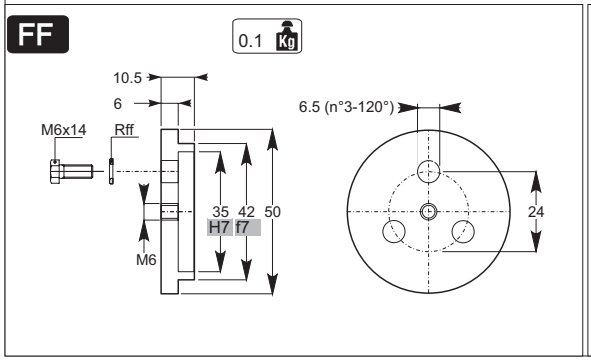

Load correction factor
K
fn2h

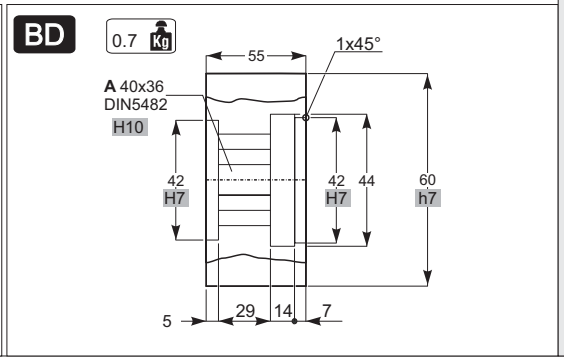




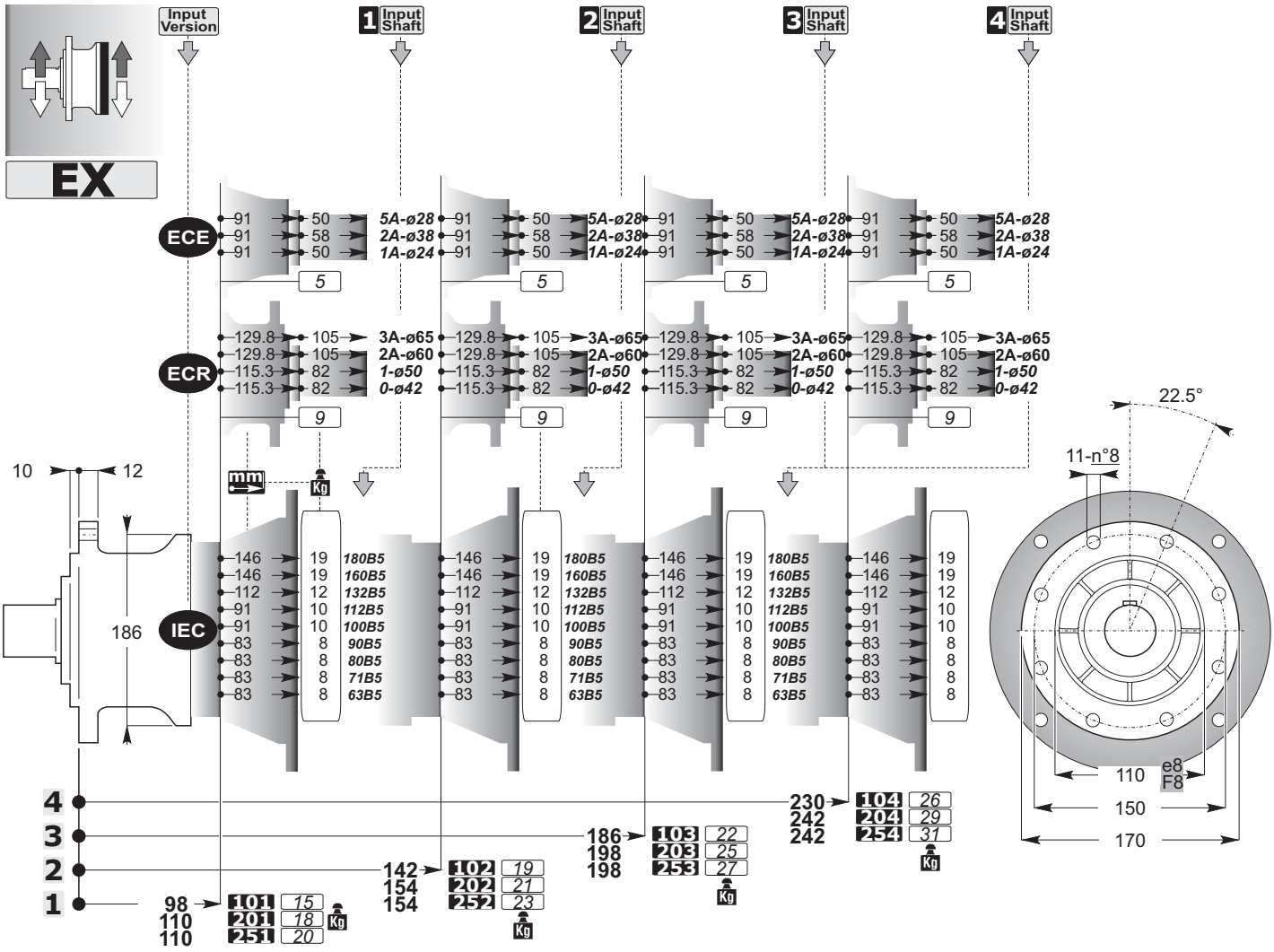


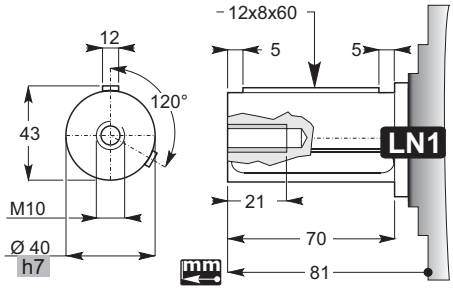




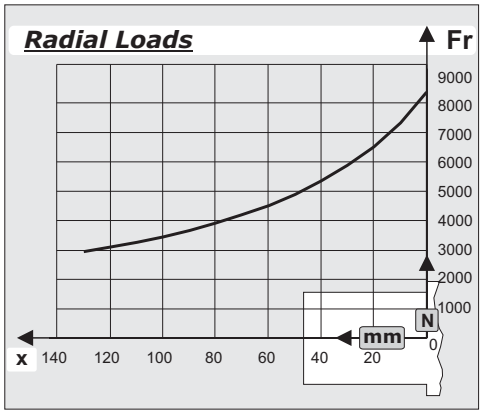


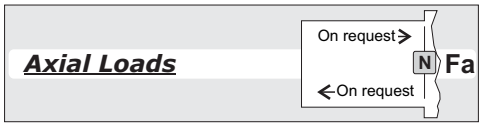
Accessories

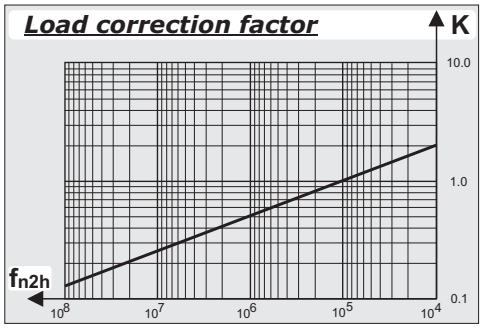


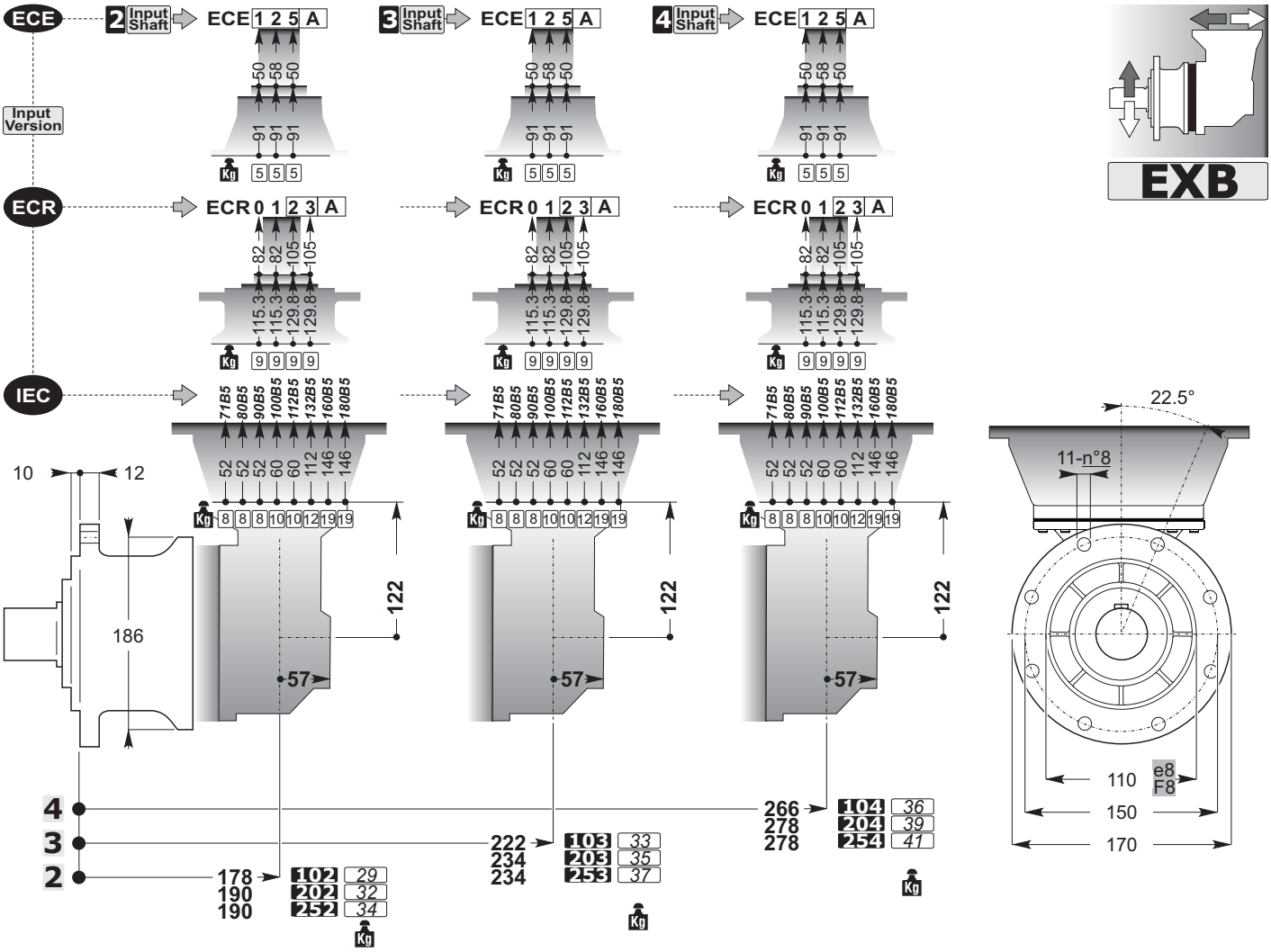


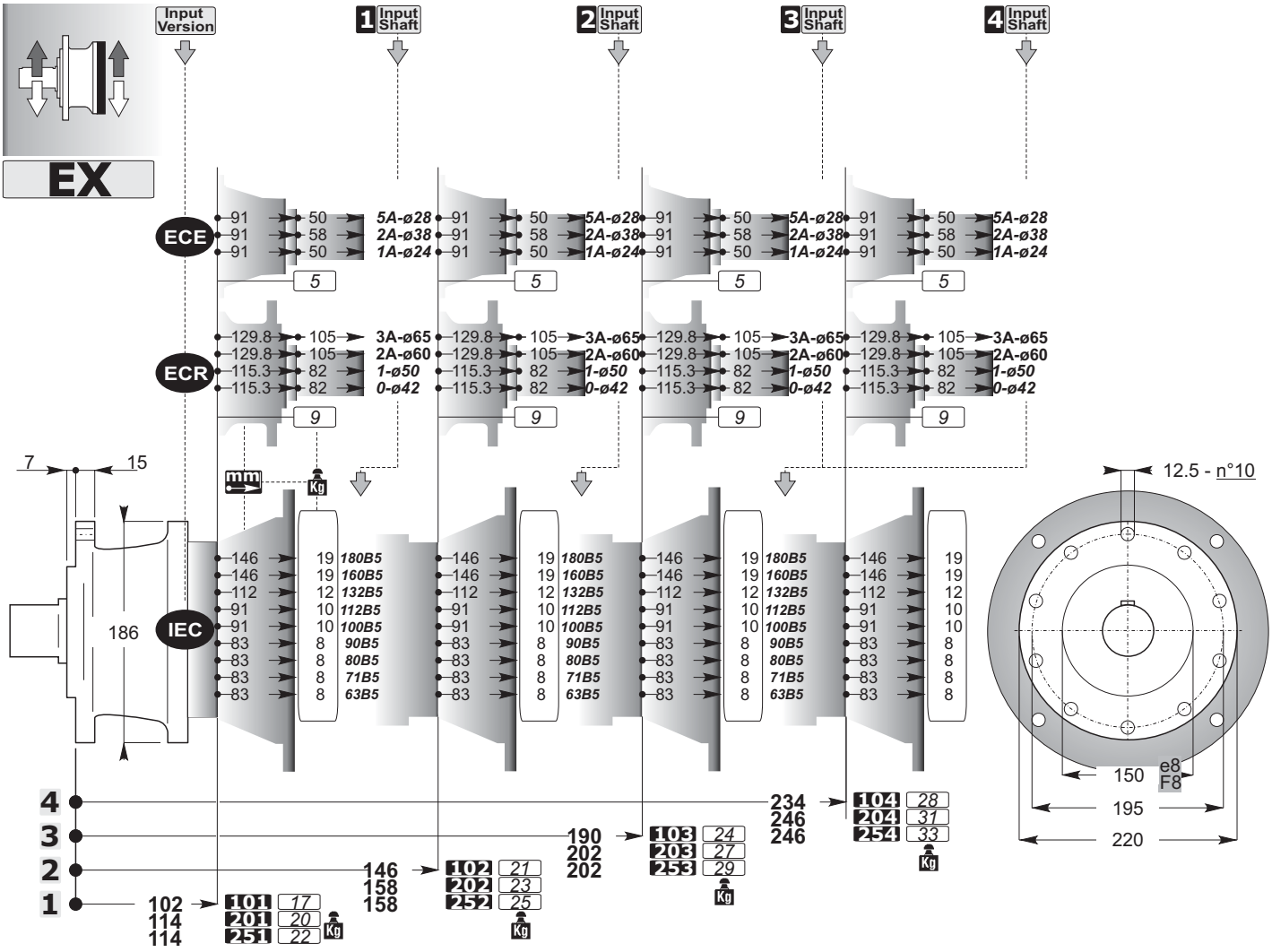
Output Shafts

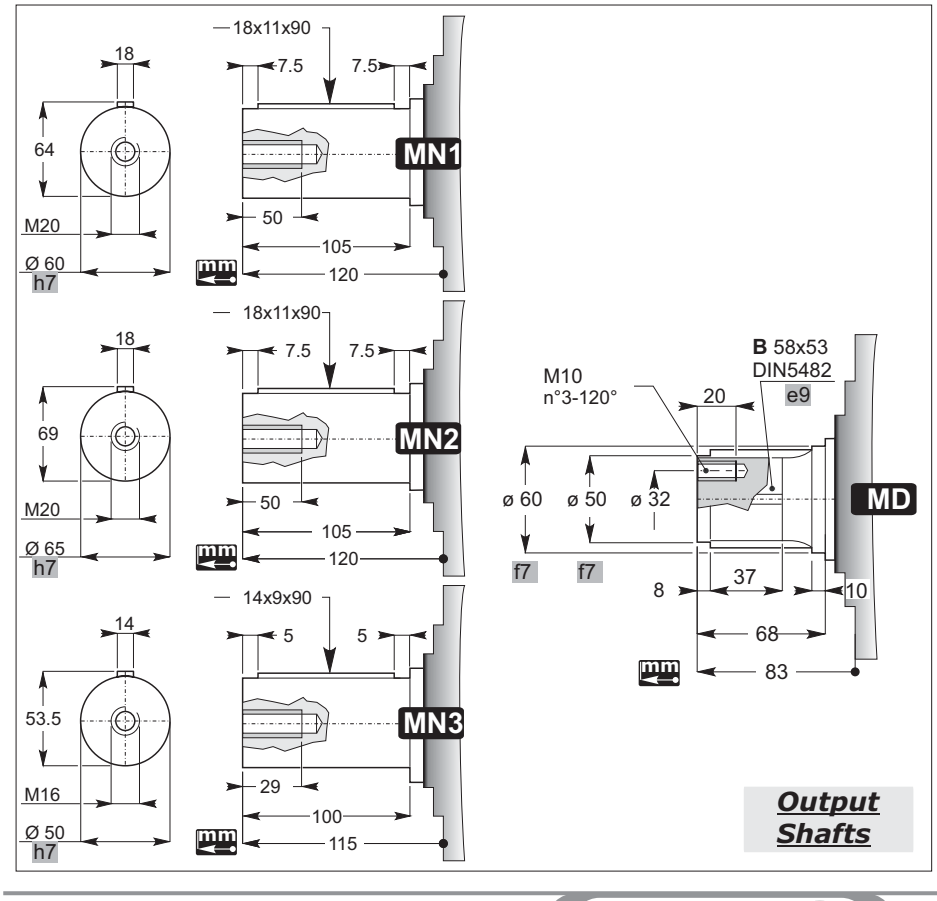


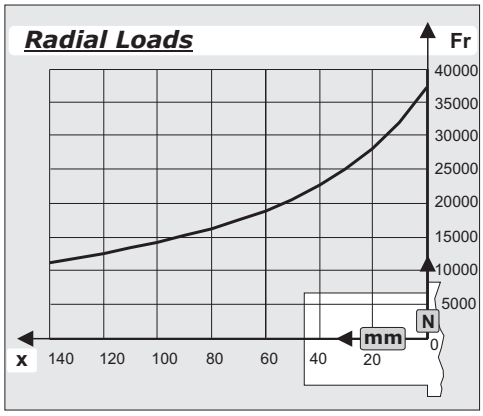


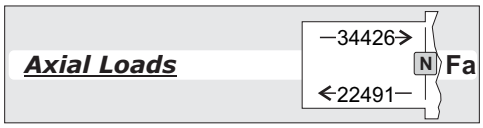


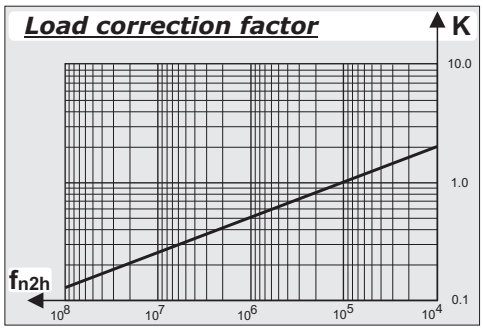

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
50 58 50
91 91 91
Kg 5 5 5
EXB
ECR
ECR 0 1 2 3 A
82 82 105 105
115.3 115.3 129.8 129.8
Kg 9 9 9 9
IEC
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
52 52 52 60 60 112 146 146
Kg 8 8 8 10 10 12 19 19
10
12
186
122
57
22.5°
11-n°8
110
e8
F8
150
170
4
3
2
178
190
190
102 29
202 32
252 34
222
234
234
103 33
203 35
253 37
266
278
278
104 36
204 39
254 41

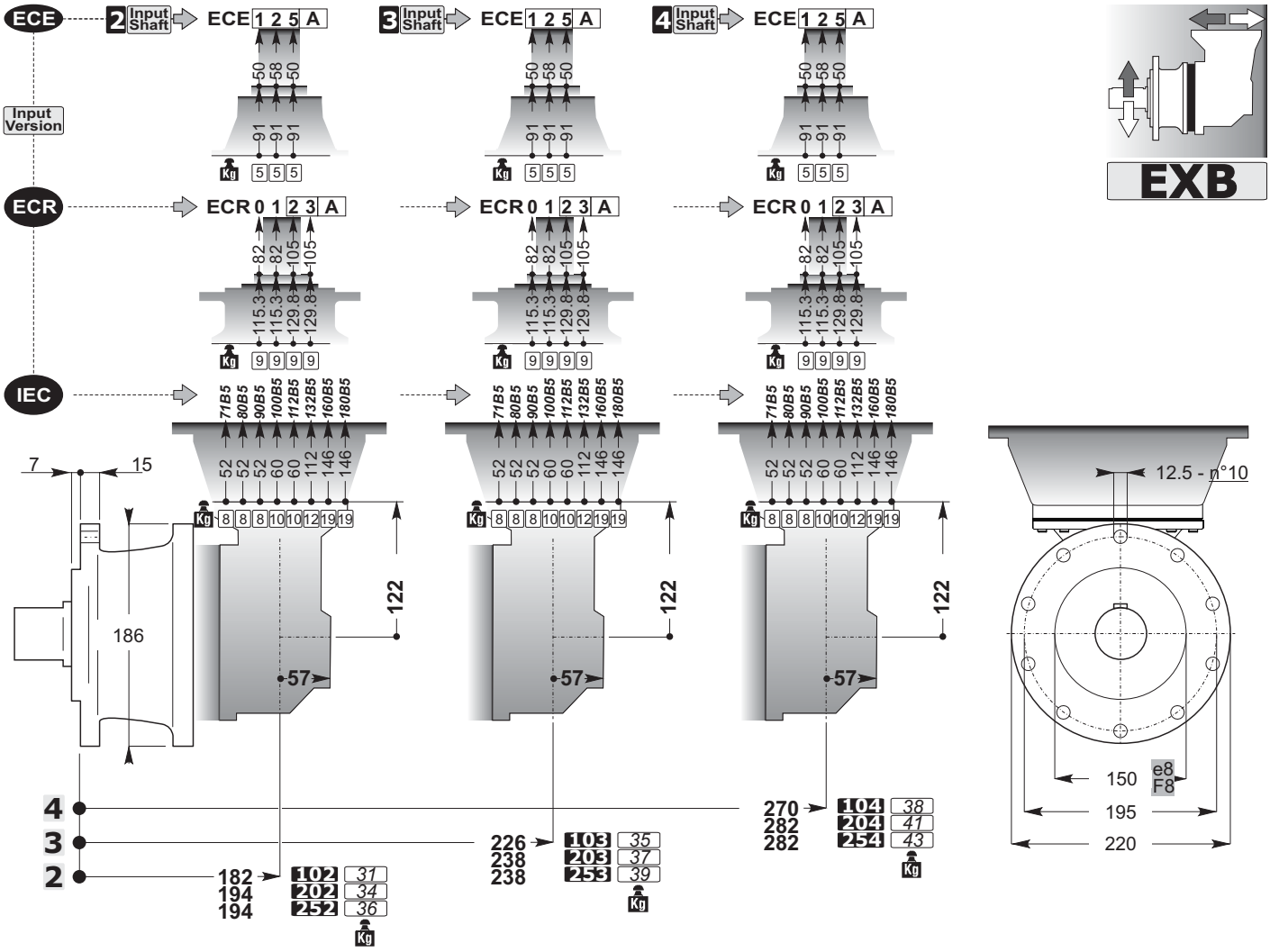

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
5A-ø28
2A-ø38
1A-ø24
3A-ø65
2A-ø60
1-ø50
0-ø42
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
12.5 - n°10
150 e8 F8
195
220

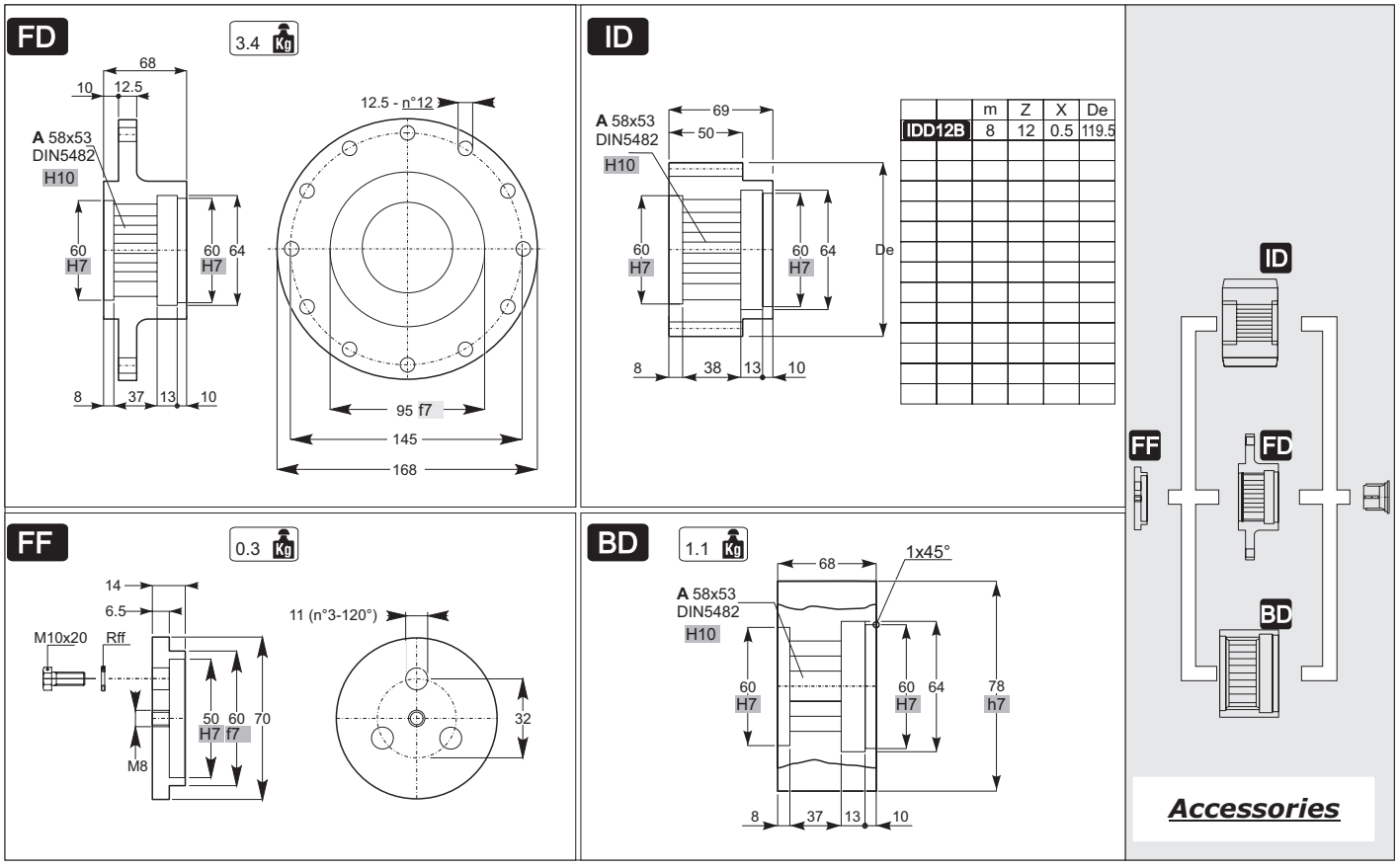

18x11x90
MN1
MN2
MN3
M20
M16
Ø 60 h7
Ø 65 h7
Ø 50 h7
M10 n°3-120°
B 58x53 DIN5482 e9
MD
Output Shafts


Radial Loads
Fr
mm
N
x

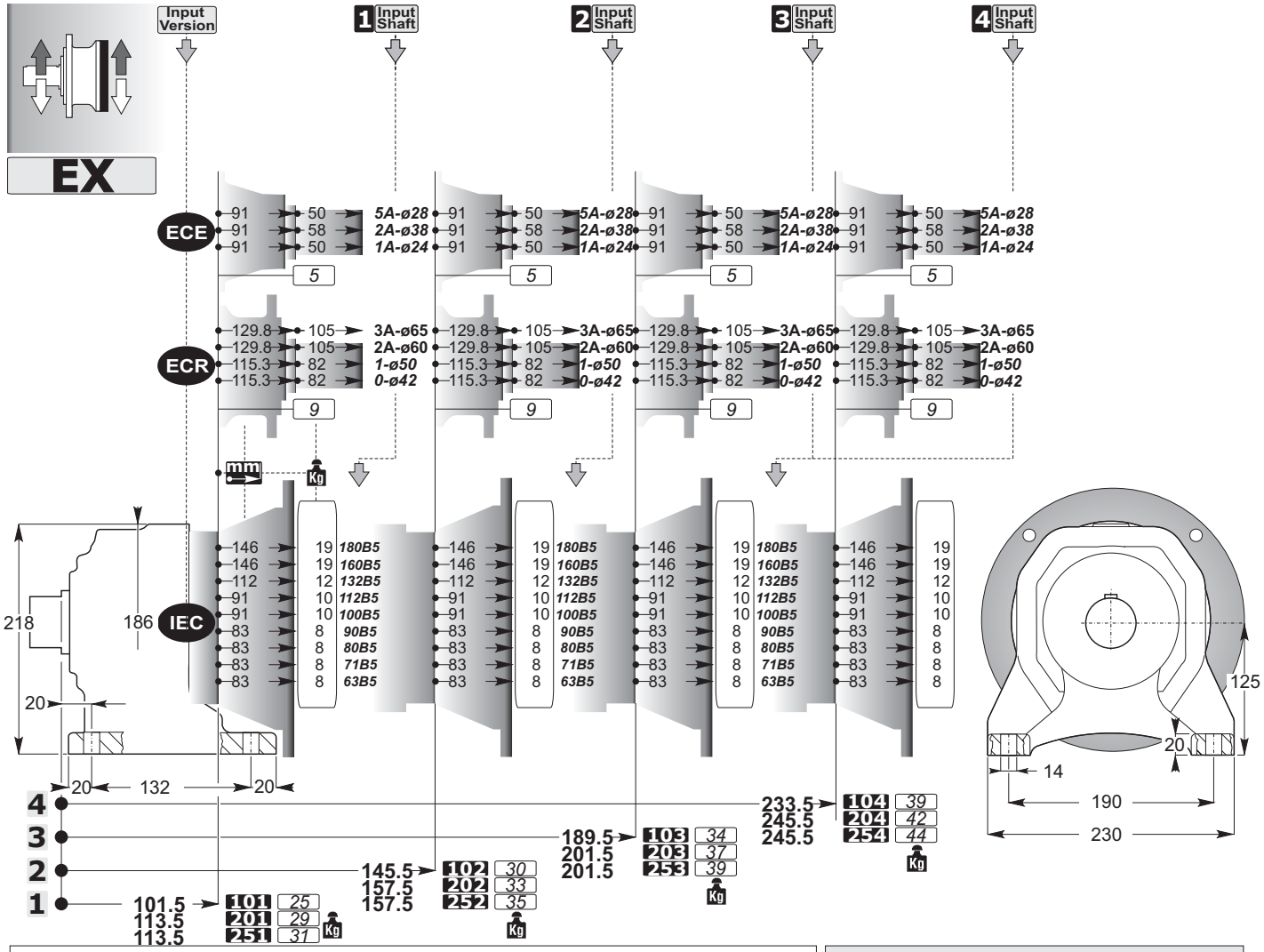

Axial Loads
34426
22491
N
Fa

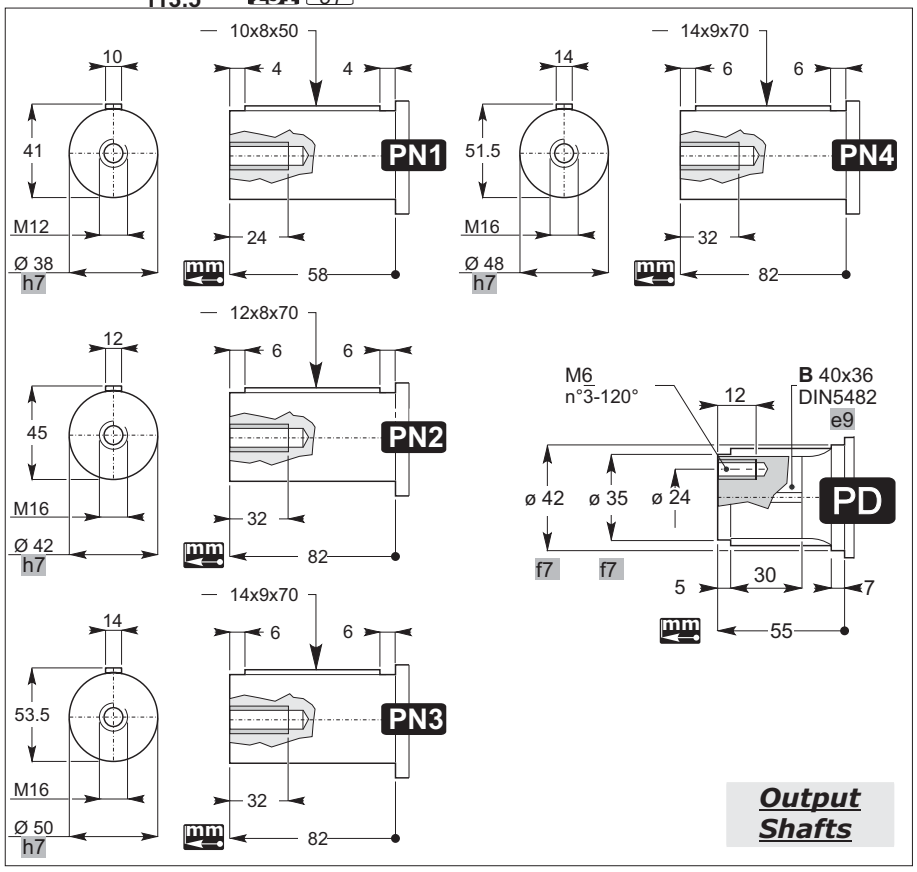

Load correction factor
K
fn2h


ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
50 58 50
91 91 91
5 5 5
ECR
ECR 0 1 2 3 A
82 82 105 105
115.3 115.3 129.8 129.8
9 9 9 9
IEC
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
52 52 52 60 60 112 146 146
8 8 8 10 10 12 19 19
7
15
186
122
57
4
3
2
182
194
194
102 31
202 34
252 36
226
238
238
103 35
203 37
253 39
270
282
282
104 38
204 41
254 43
12.5 - n°10
150 e8 F8
195
220
EXB

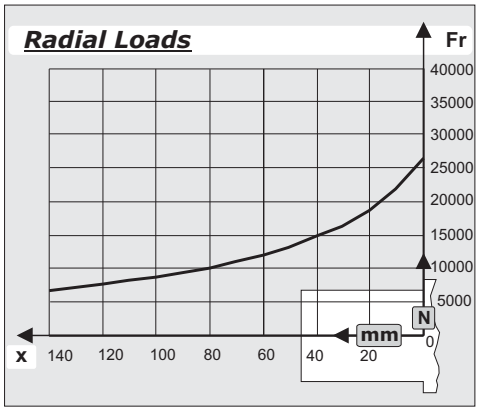

FD
3.4 Kg
68
10
12.5
A 58x53
DIN5482
H10
60 H7
60 H7
64
8
37
13
10
12.5 - n°12
95 f7
145
168
ID
A 58x53
DIN5482
H10
69
50
60 H7
60 H7
64
De
8
38
13
10
m Z X De
IDD12B 8 12 0.5 119.5
FF
0.3 Kg
14
6.5
M10x20
Rff
50 60 70
H7 f7
M8
11 (n°3-120°)
32
BD
1.1 Kg
68
1x45°
A 58x53
DIN5482
H10
60 H7
60 H7
64
78
h7
8
37
13
10
ID
FF
FD
BD
Accessories

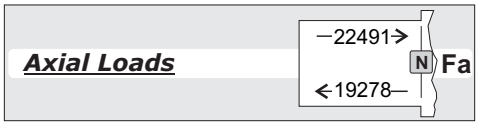
EX

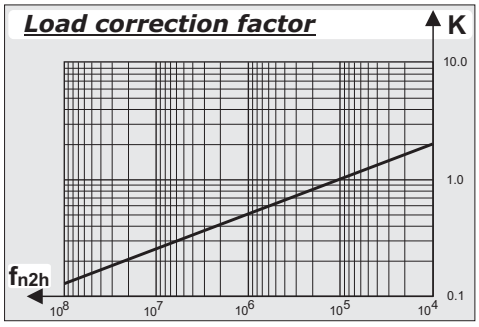


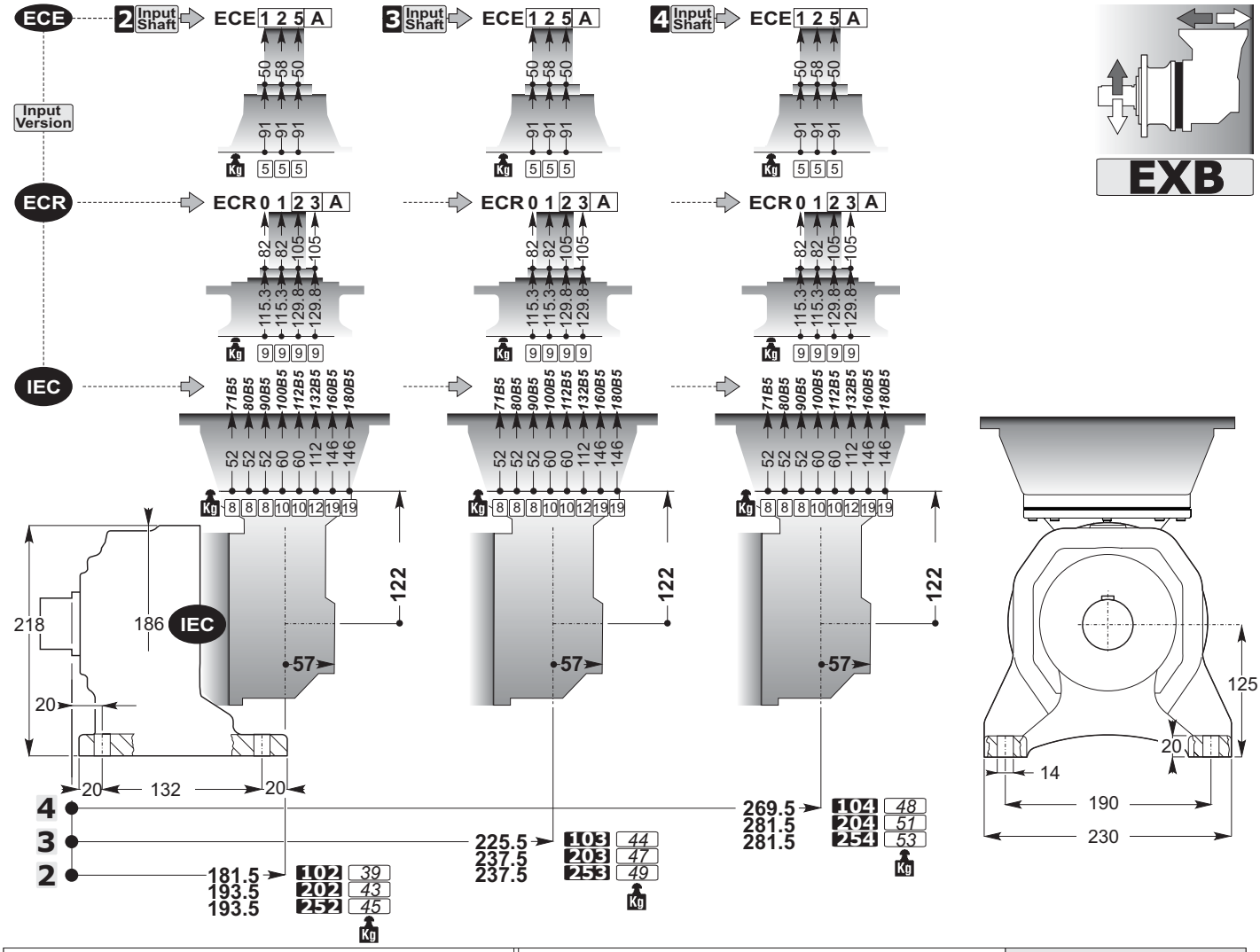


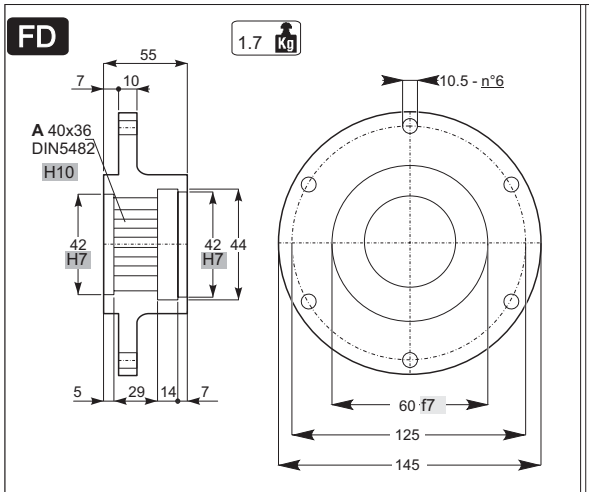
Output Shafts

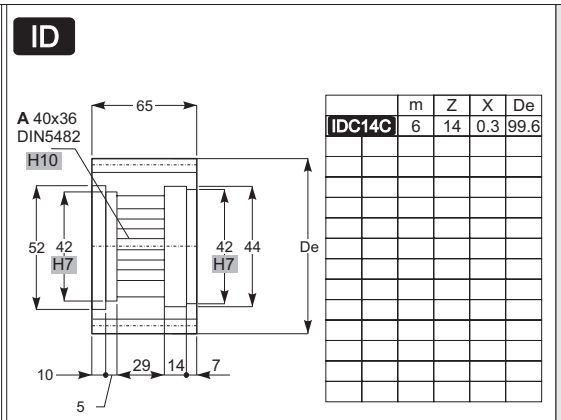


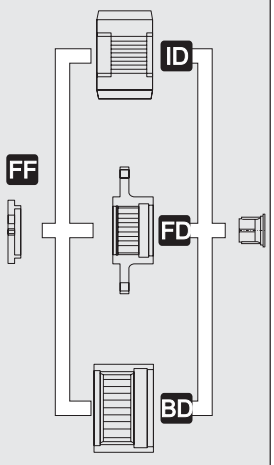




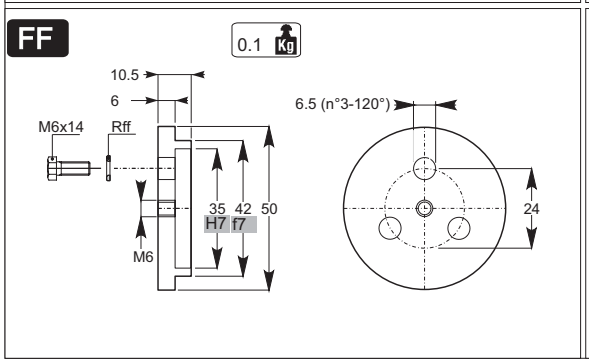


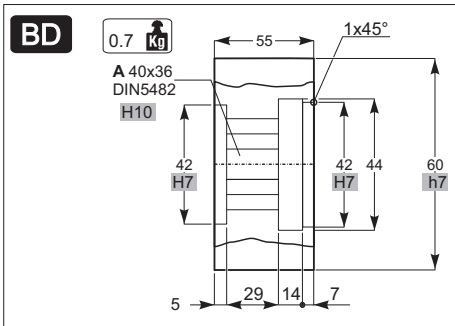






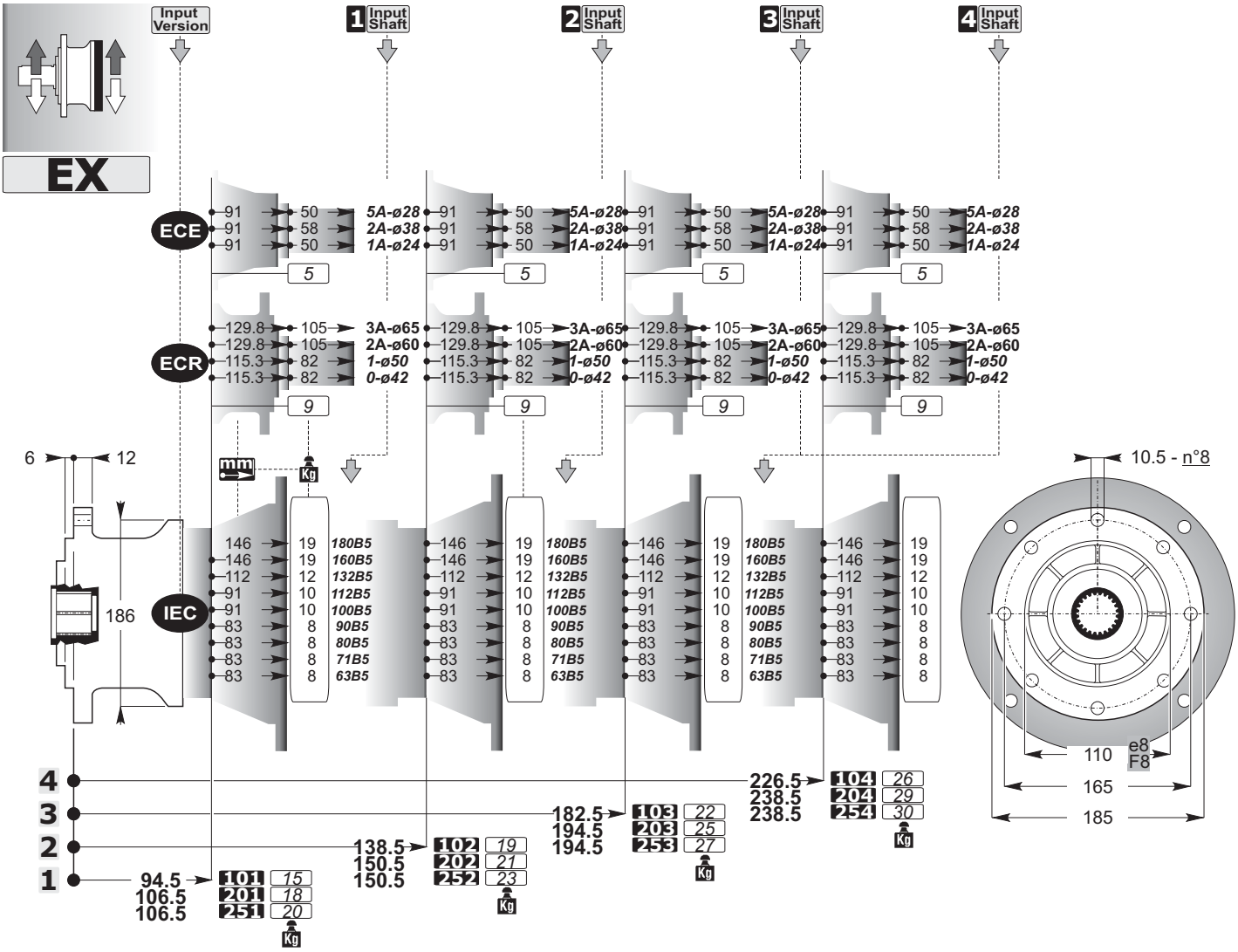
Accessories

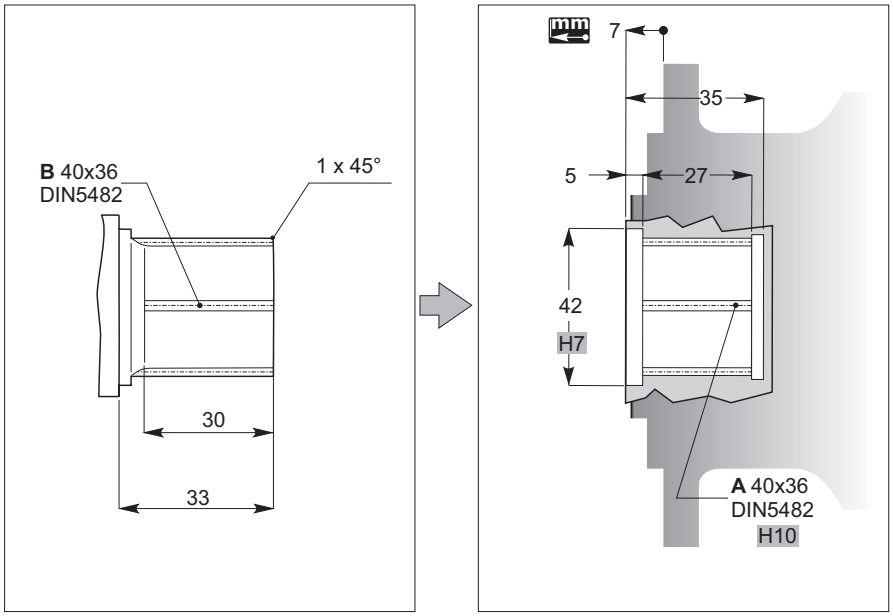




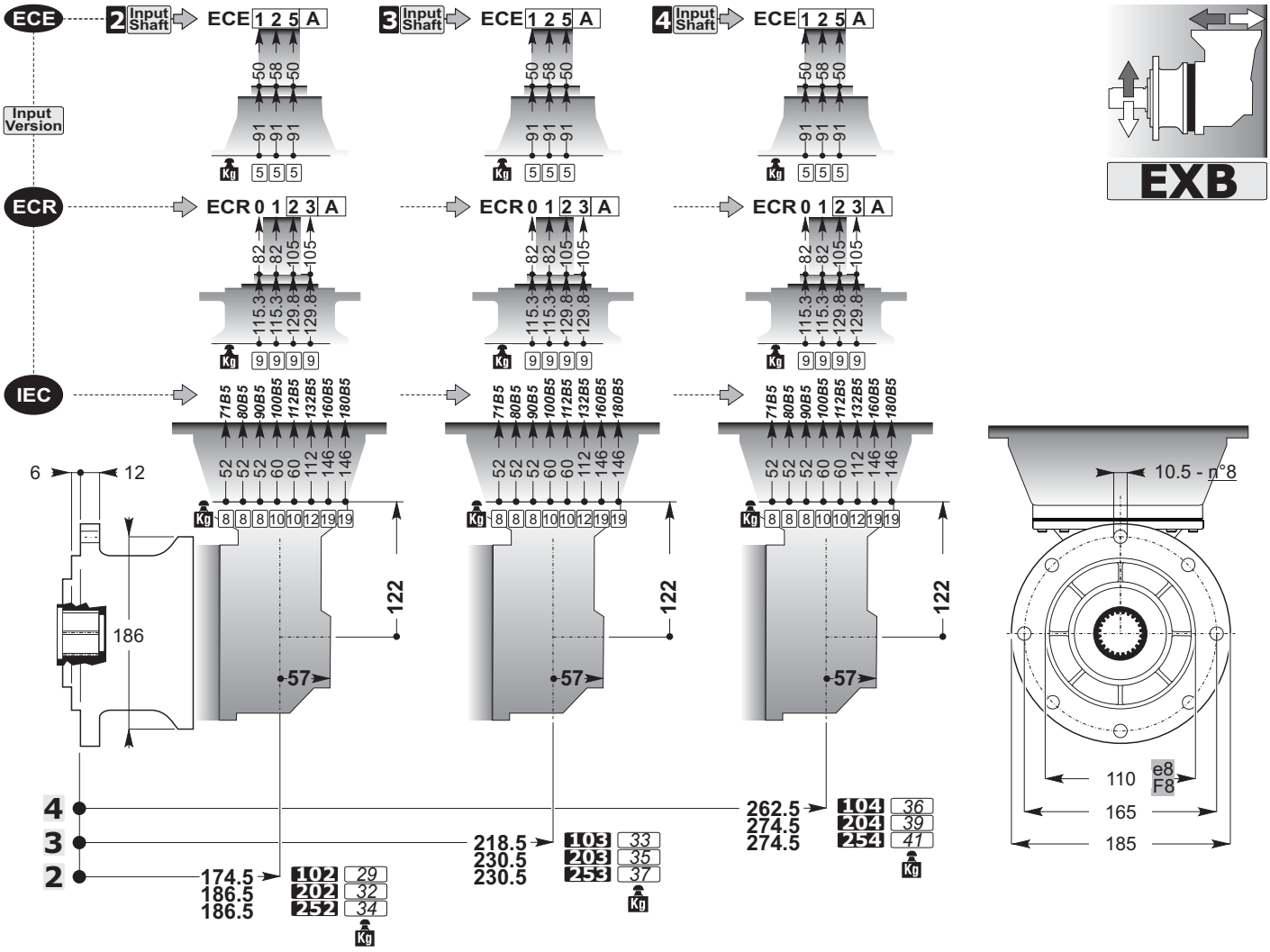
mm

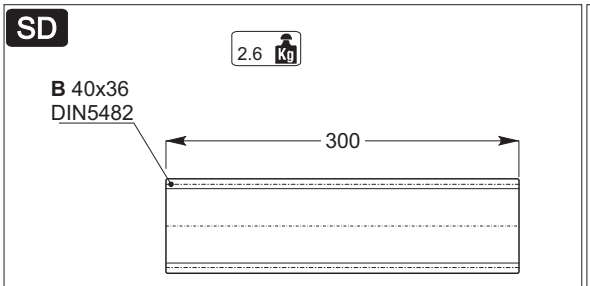
C

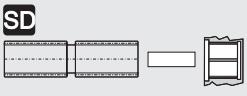




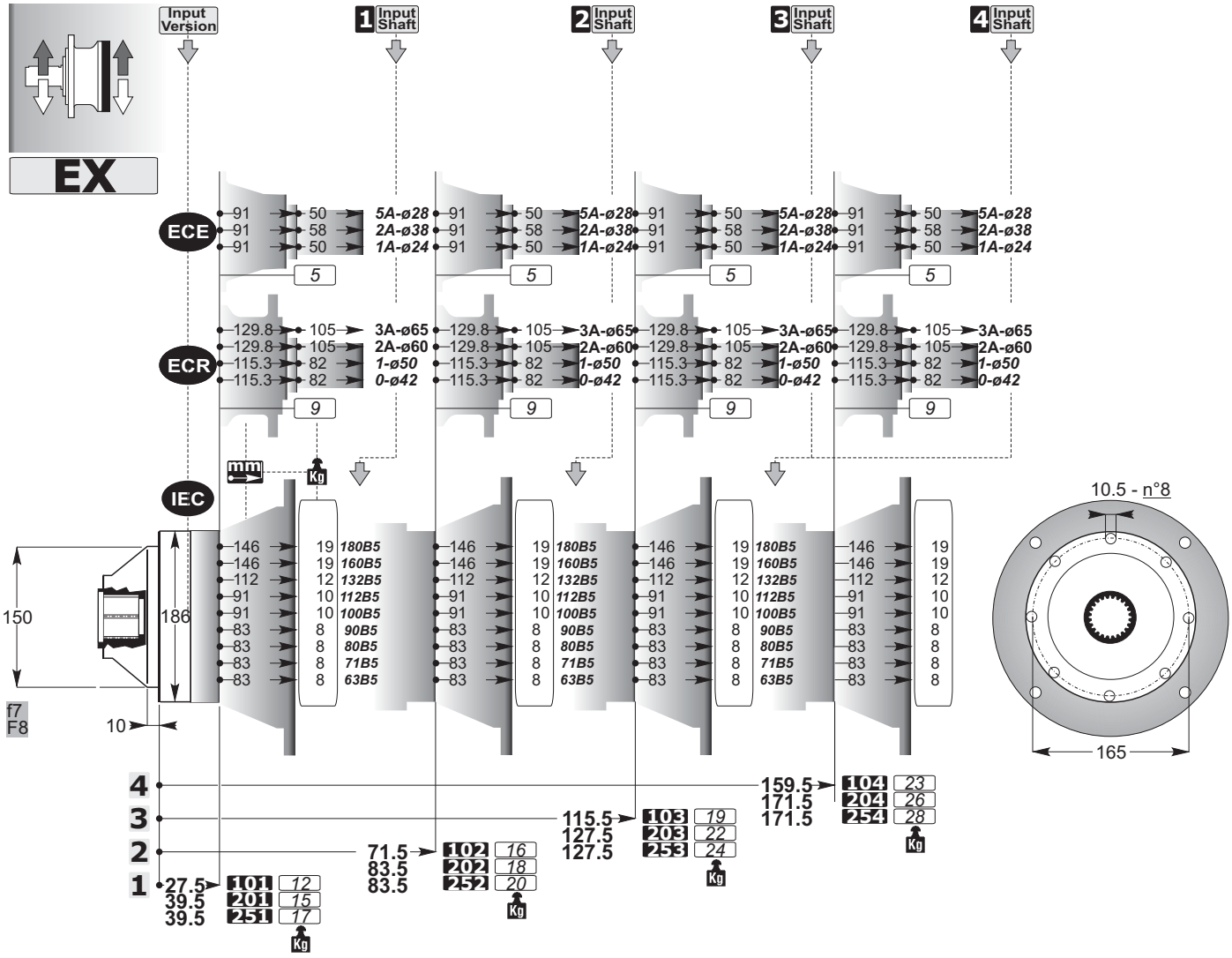
Output Shafts

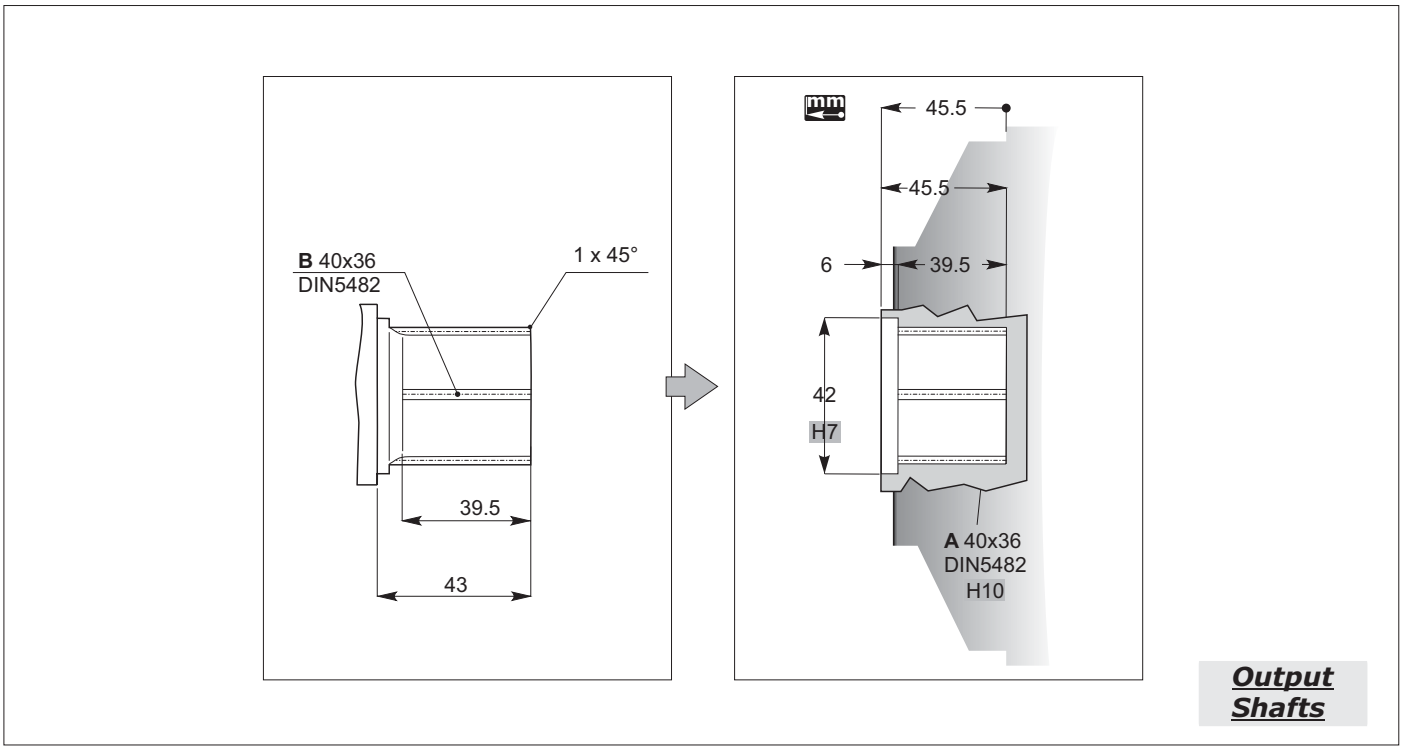




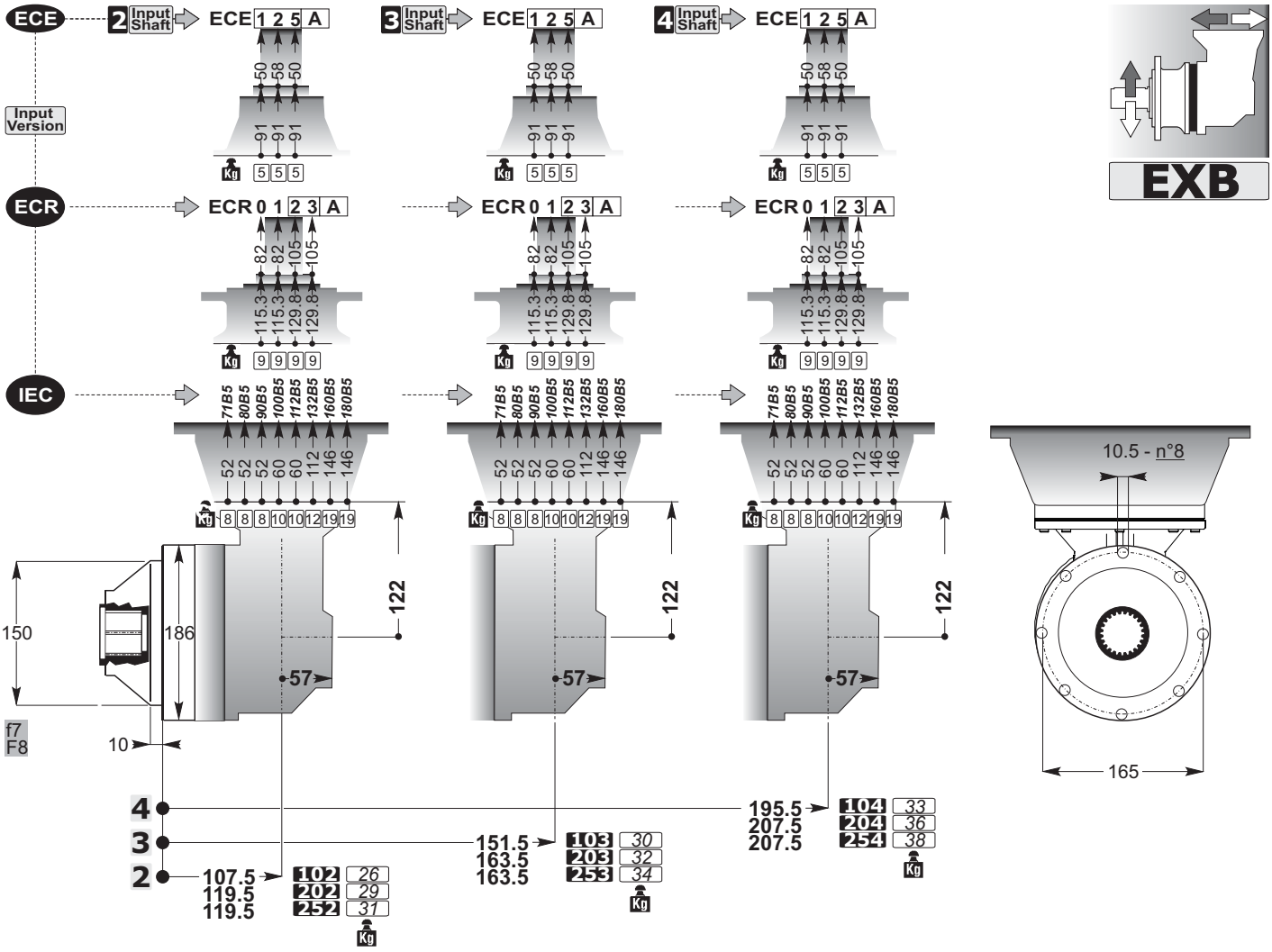


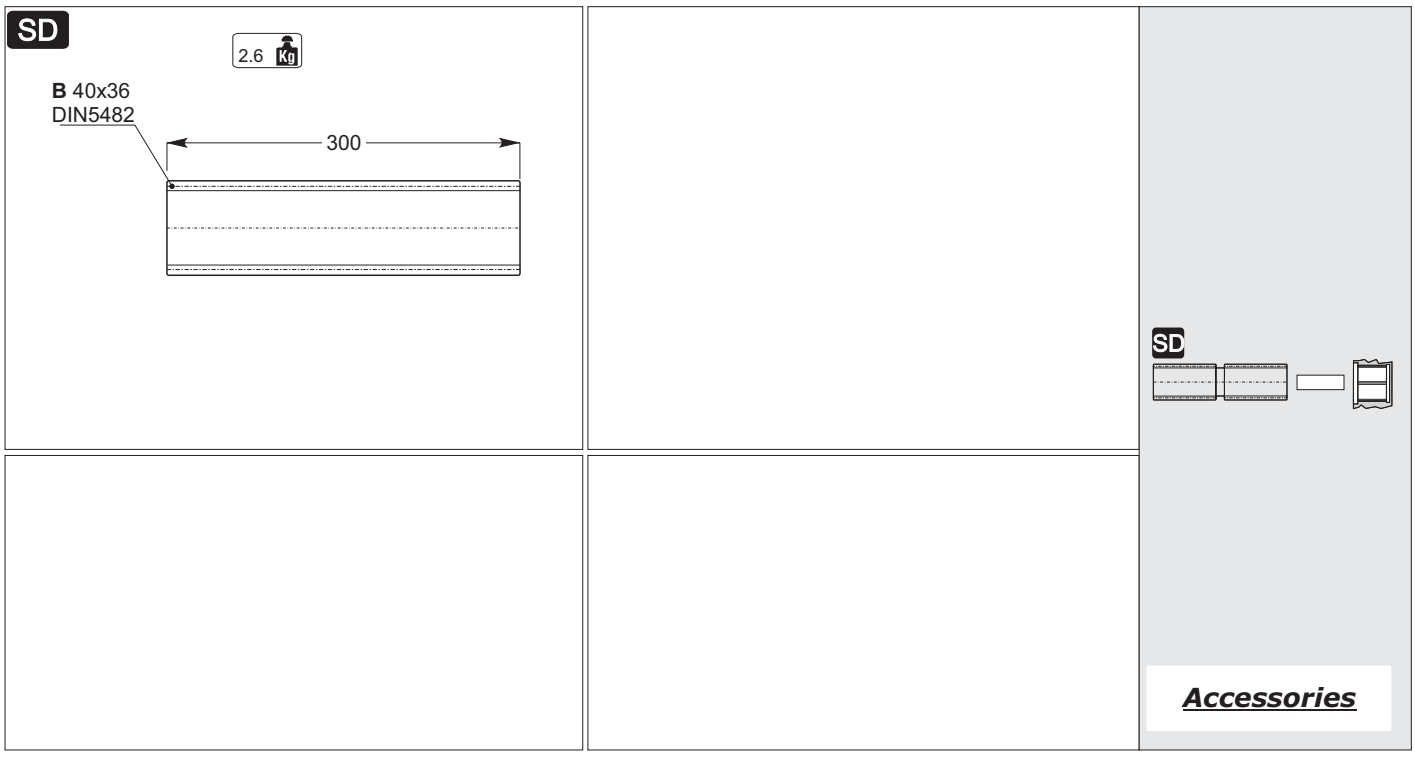
Accessories

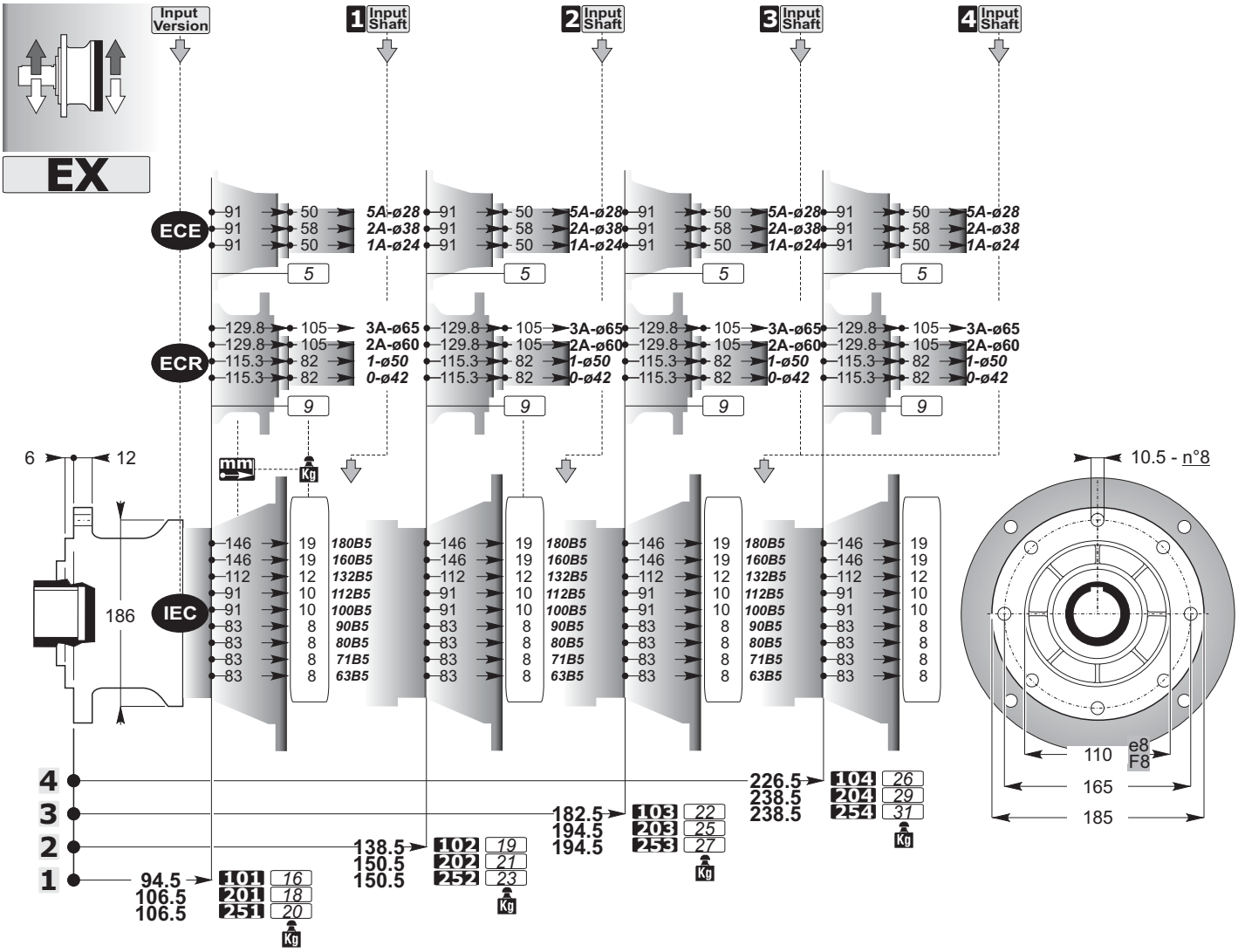


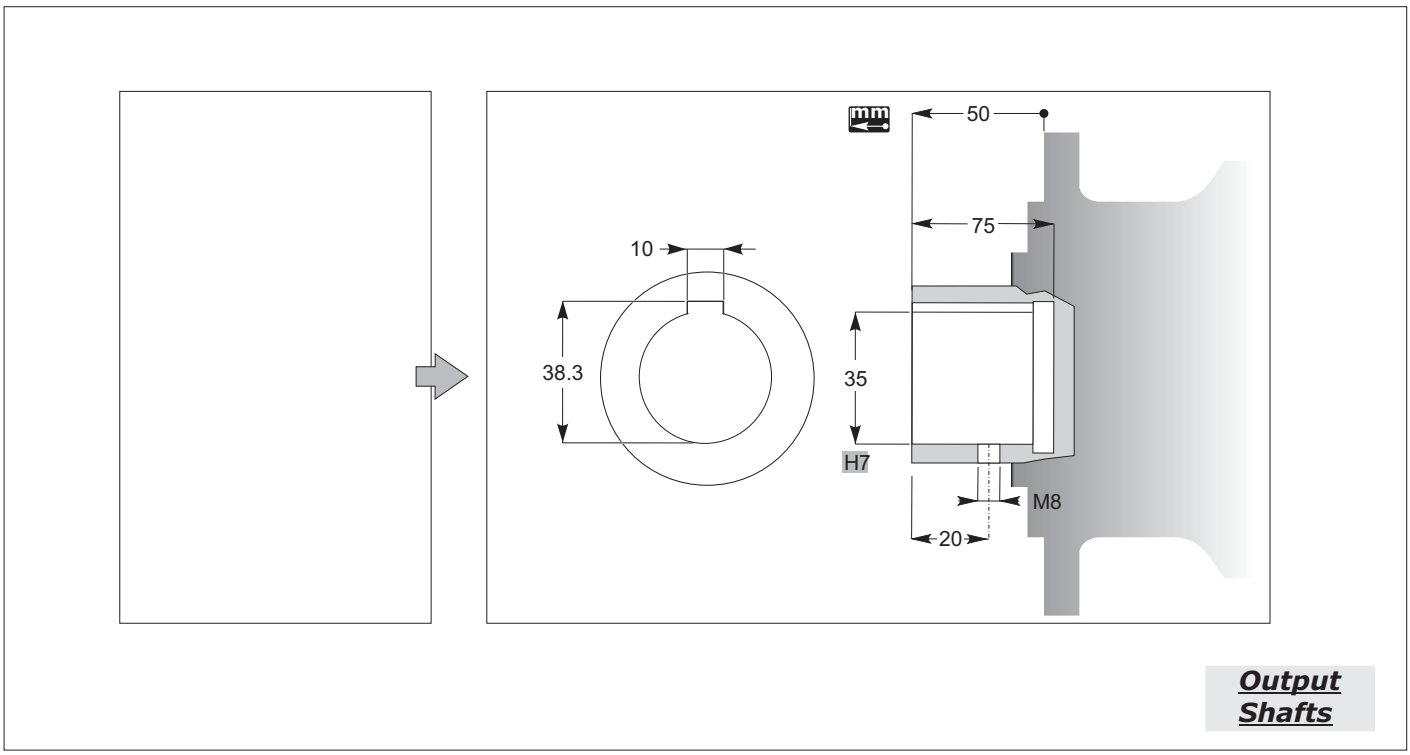


Output Shafts

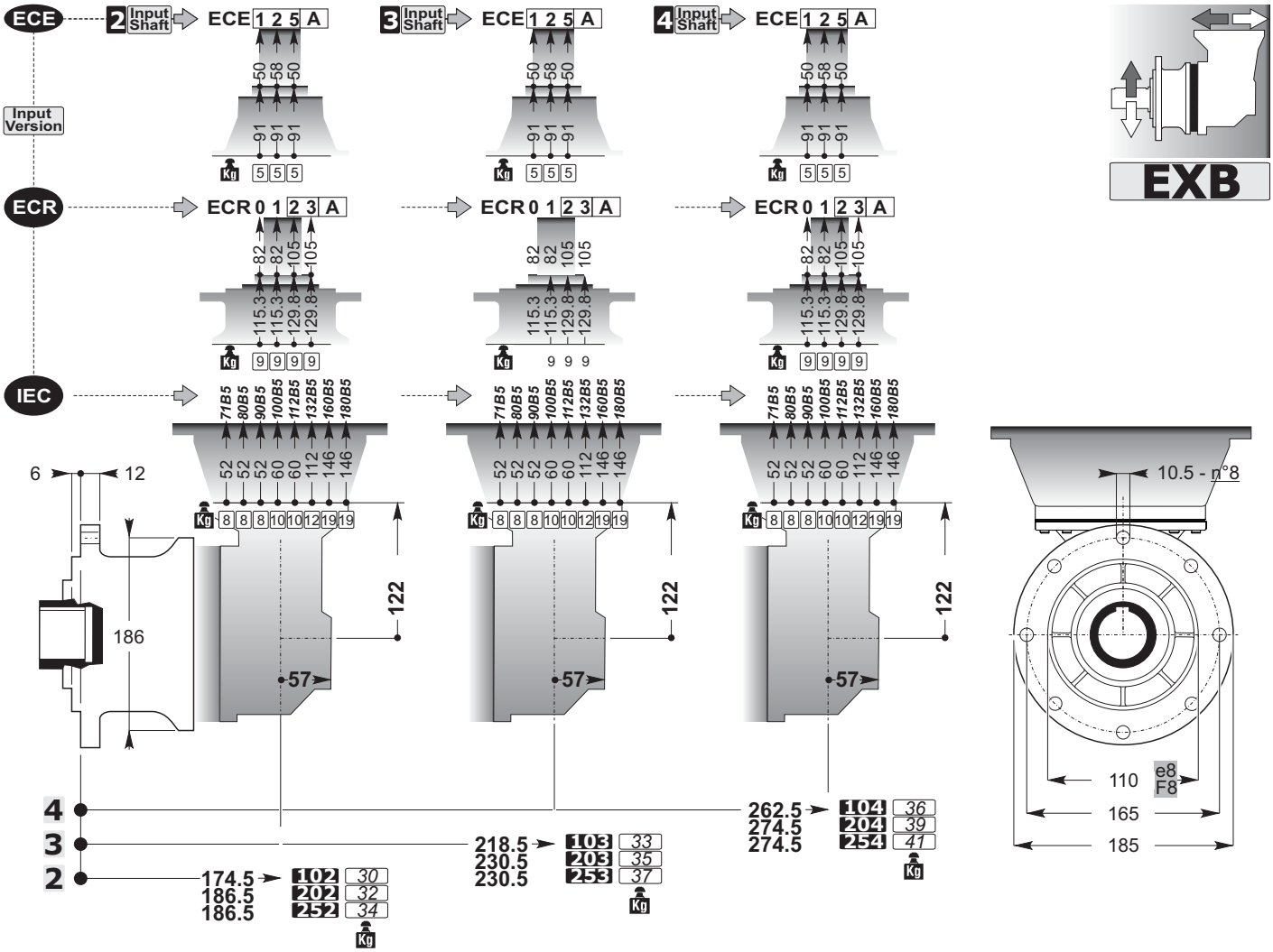

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
150
186
122
57
f7
F8
10
4
3
2
107.5
119.5
119.5
102 26
202 29
252 31
151.5
163.5
163.5
103 30
203 32
253 34
195.5
207.5
207.5
104 33
204 36
254 38
10.5 - n°8
165
EXB

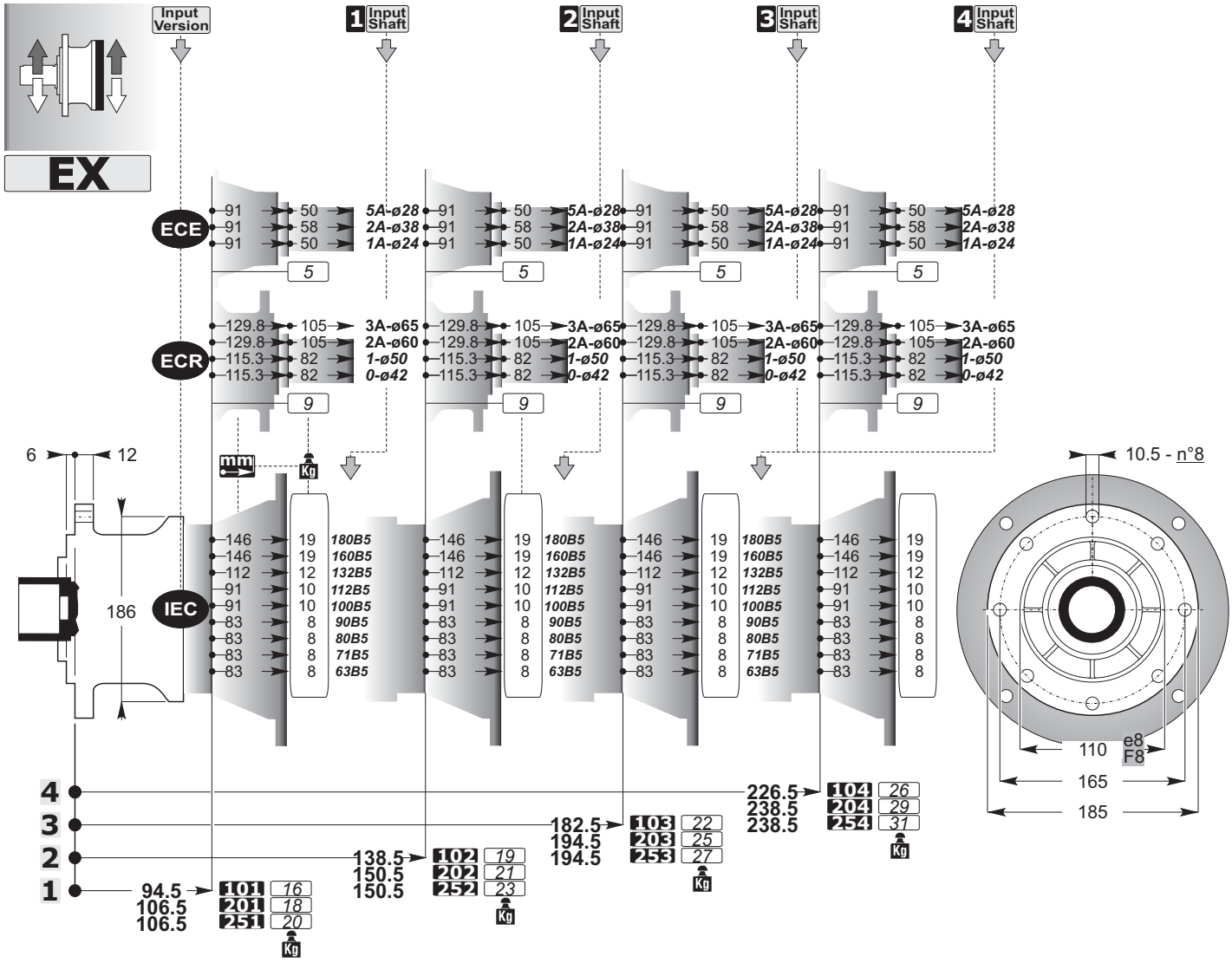

SD
2.6 Kg
B 40x36
DIN5482
300
SD
Accessories

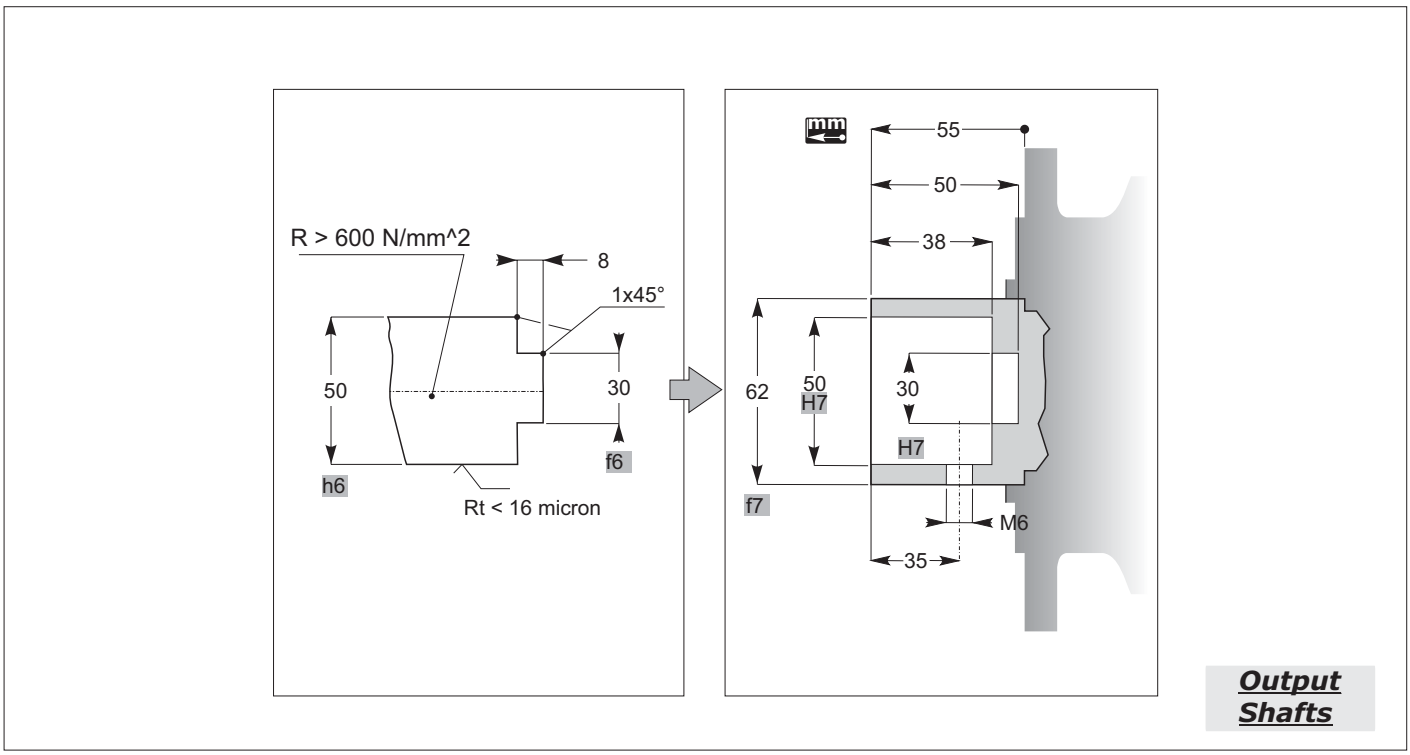


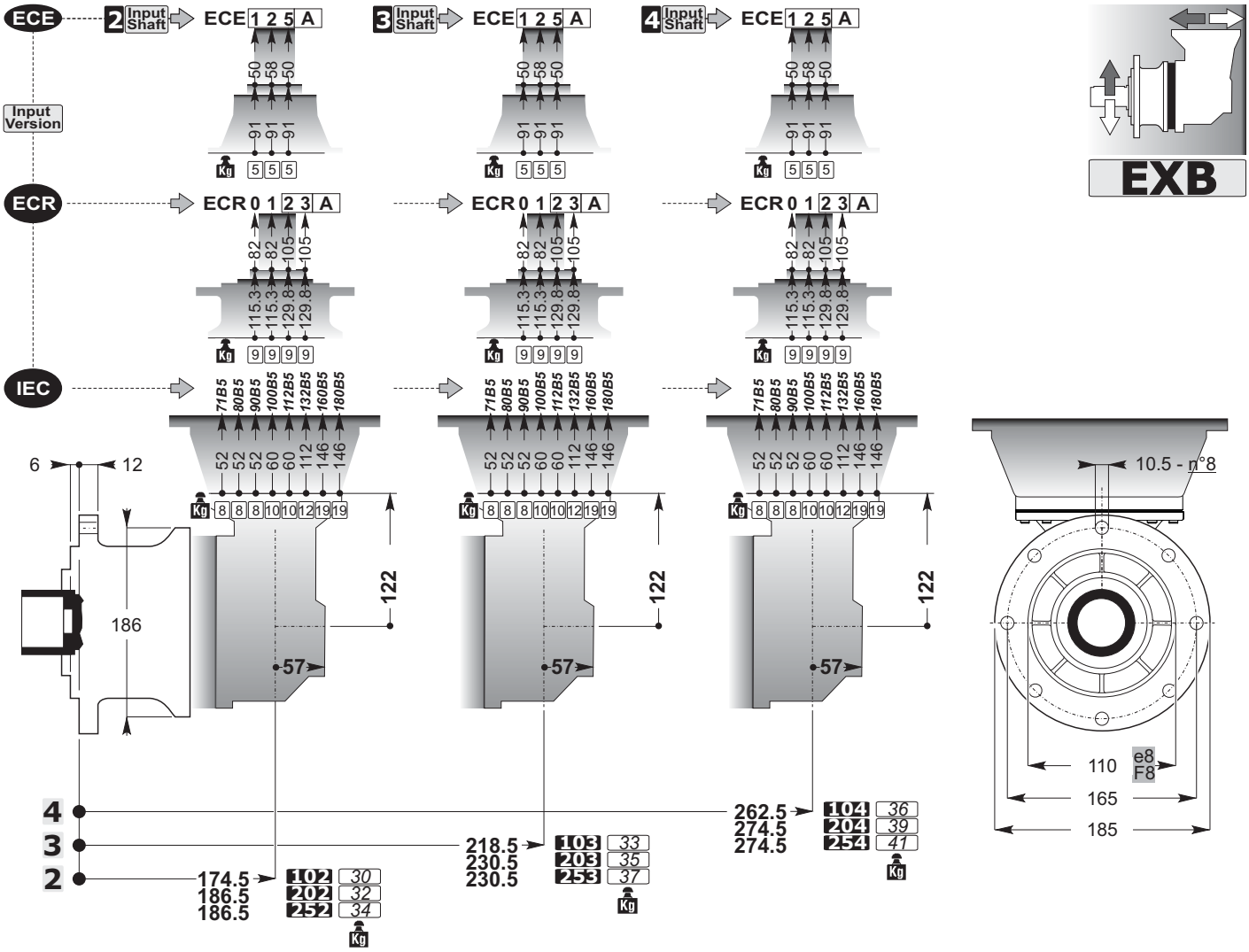


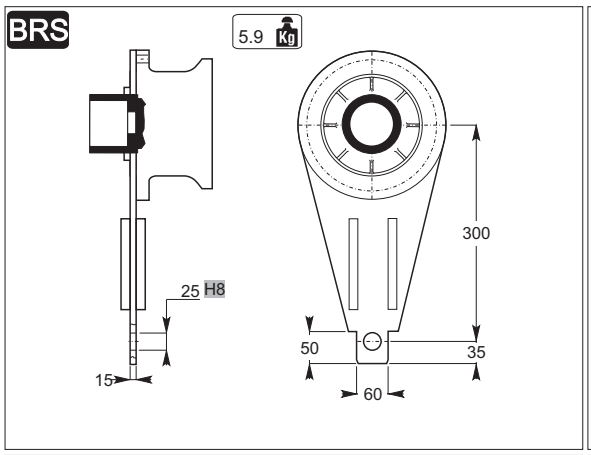
Output Shafts

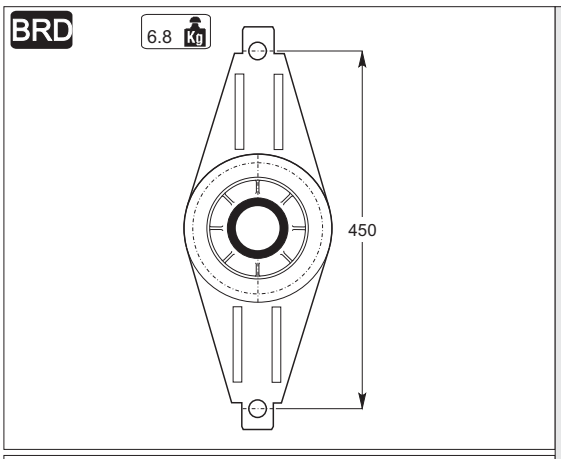

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
6
12
186
122
57
4
3
2
174.5 186.5 186.5
102 202 252
30 32 34
218.5 230.5 230.5
103 203 253
33 35 37
262.5 274.5 274.5
104 204 254
36 39 41
10.5 - n°8
110
e8 F8
165
185
EXB

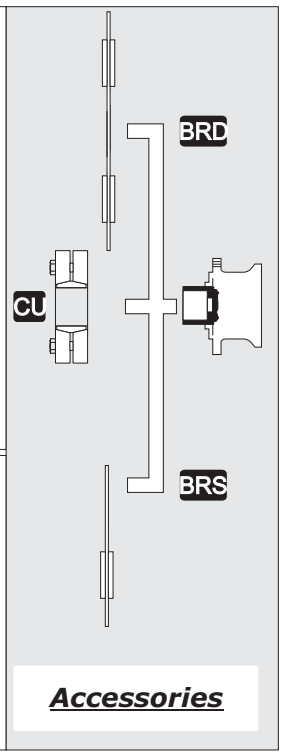

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
5A-ø28
2A-ø38
1A-ø24
3A-ø65
2A-ø60
1-ø50
0-ø42
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
186
6
12
10.5 - n°8
110
e8
F8
165
185
94.5
106.5
106.5
138.5
150.5
150.5
182.5
194.5
194.5
226.5
238.5
238.5
Kg

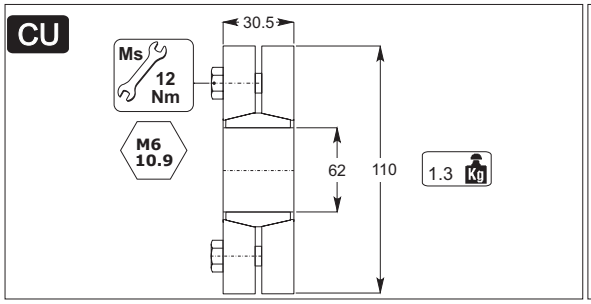

R > 600 N/mm^2
8
1x45°
50
30
h6
f6
Rt < 16 micron
55
50
38
62
50
H7
30
H7
f7
M6
35
Output Shafts


ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
6
12
186
122
57
10.5 - n°8
110 e8 F8
165
185
4
3
2
262.5 274.5 274.5
218.5 230.5 230.5
174.5 186.5 186.5
104 36
204 39
254 41
103 33
203 35
253 37
102 30
202 32
252 34
Kg

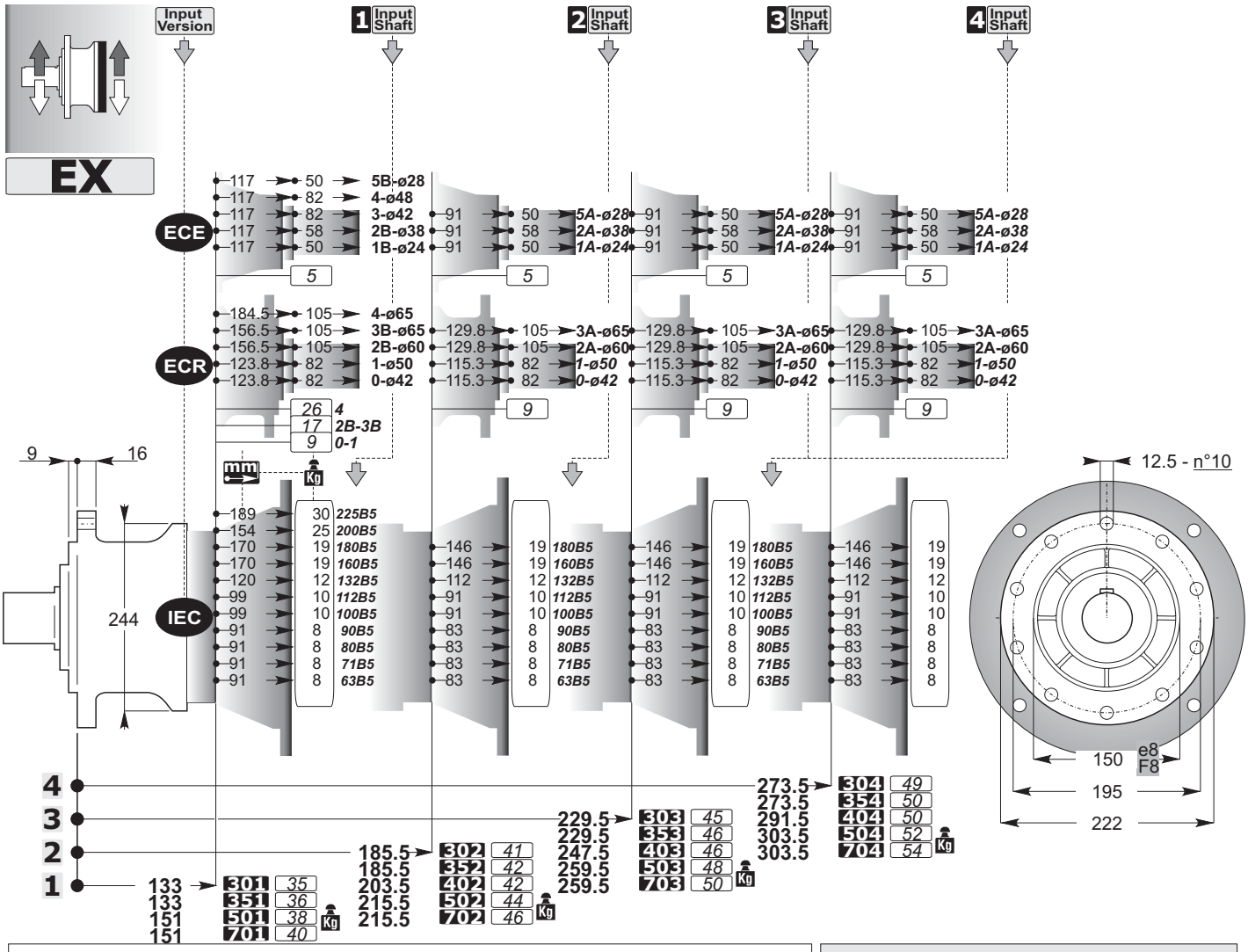

BRS
5.9 Kg
25 H8
15
300
50
35
60

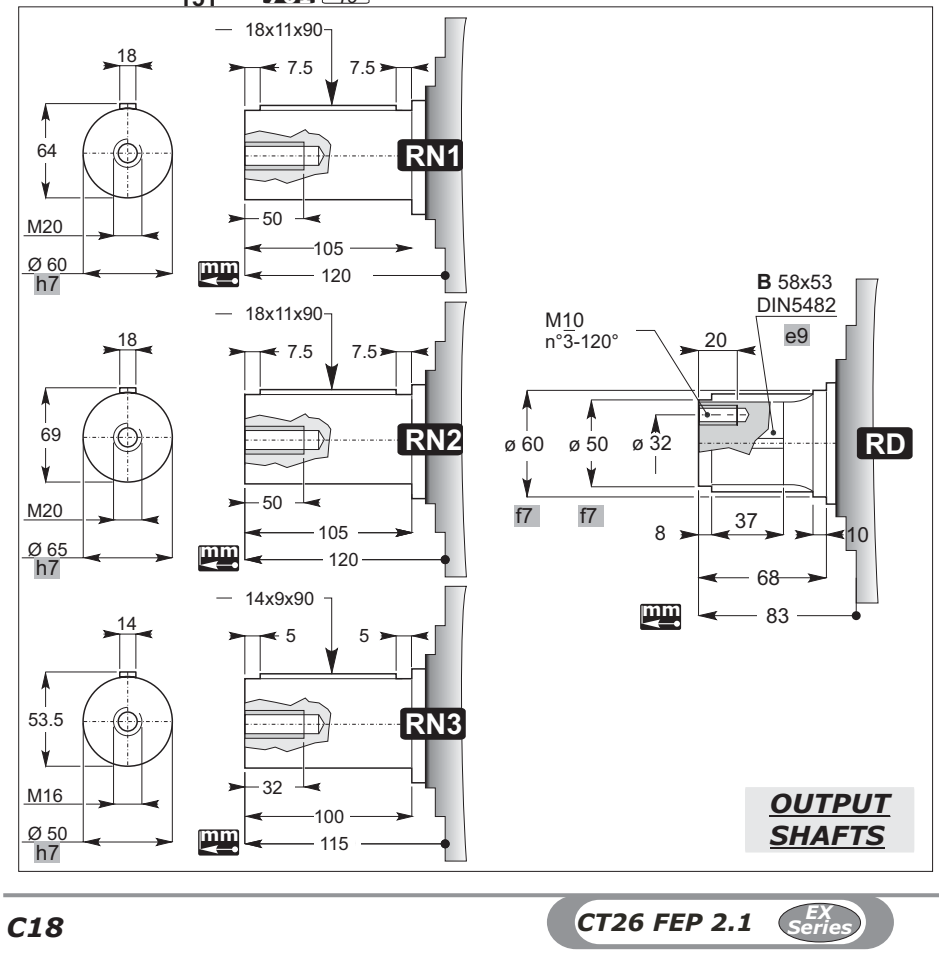

BRD
6.8 Kg
450


BRD
CU
BRS
Accessories

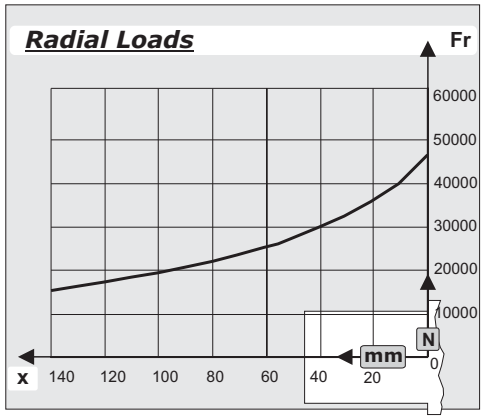

CU
Ms 12 Nm
M6 10.9
30.5
62
110
1.3 Kg

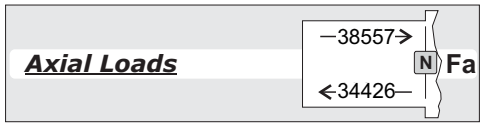
mm
C

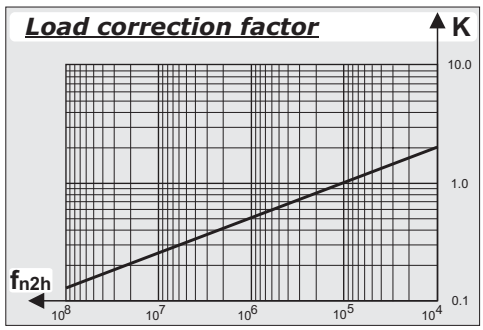


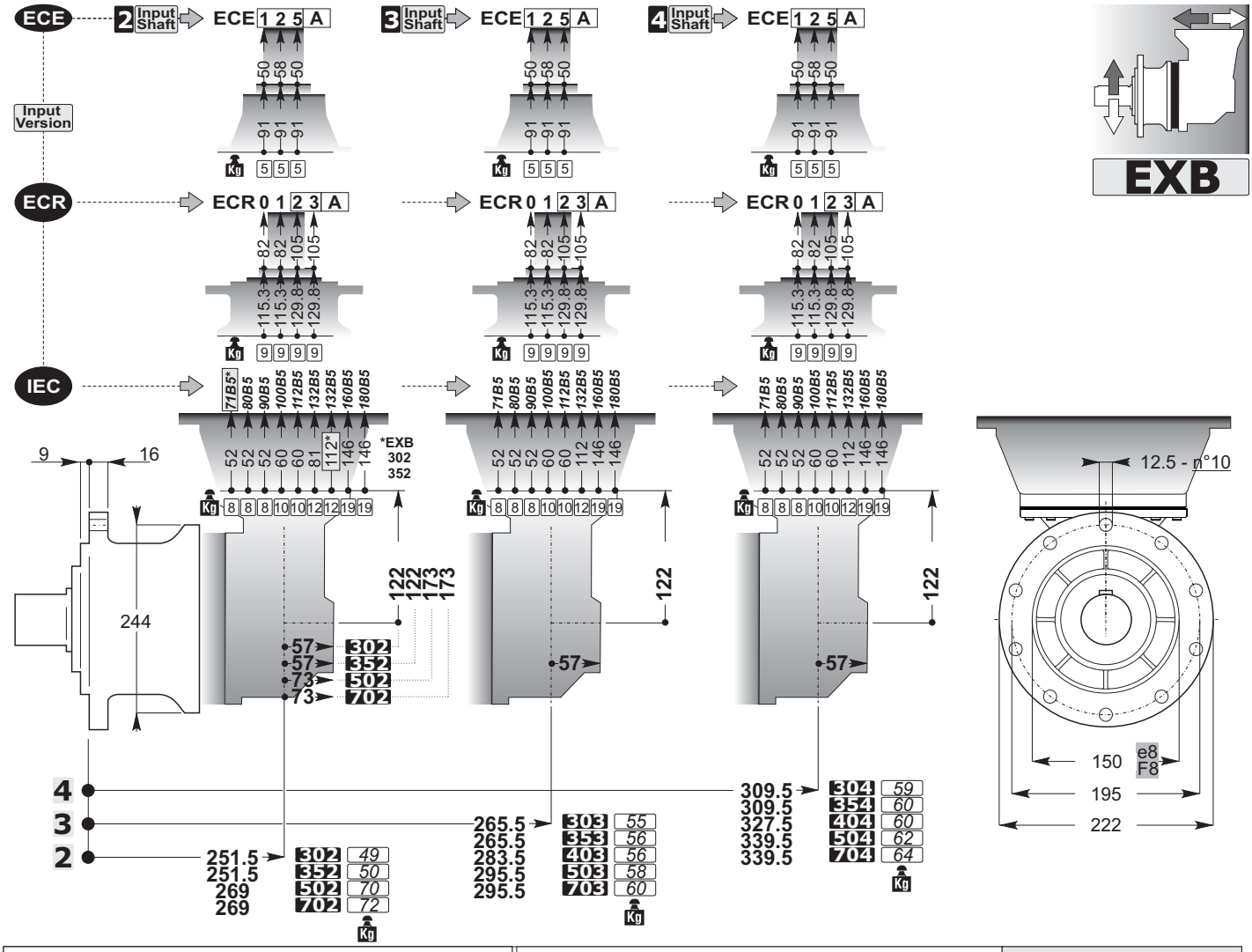


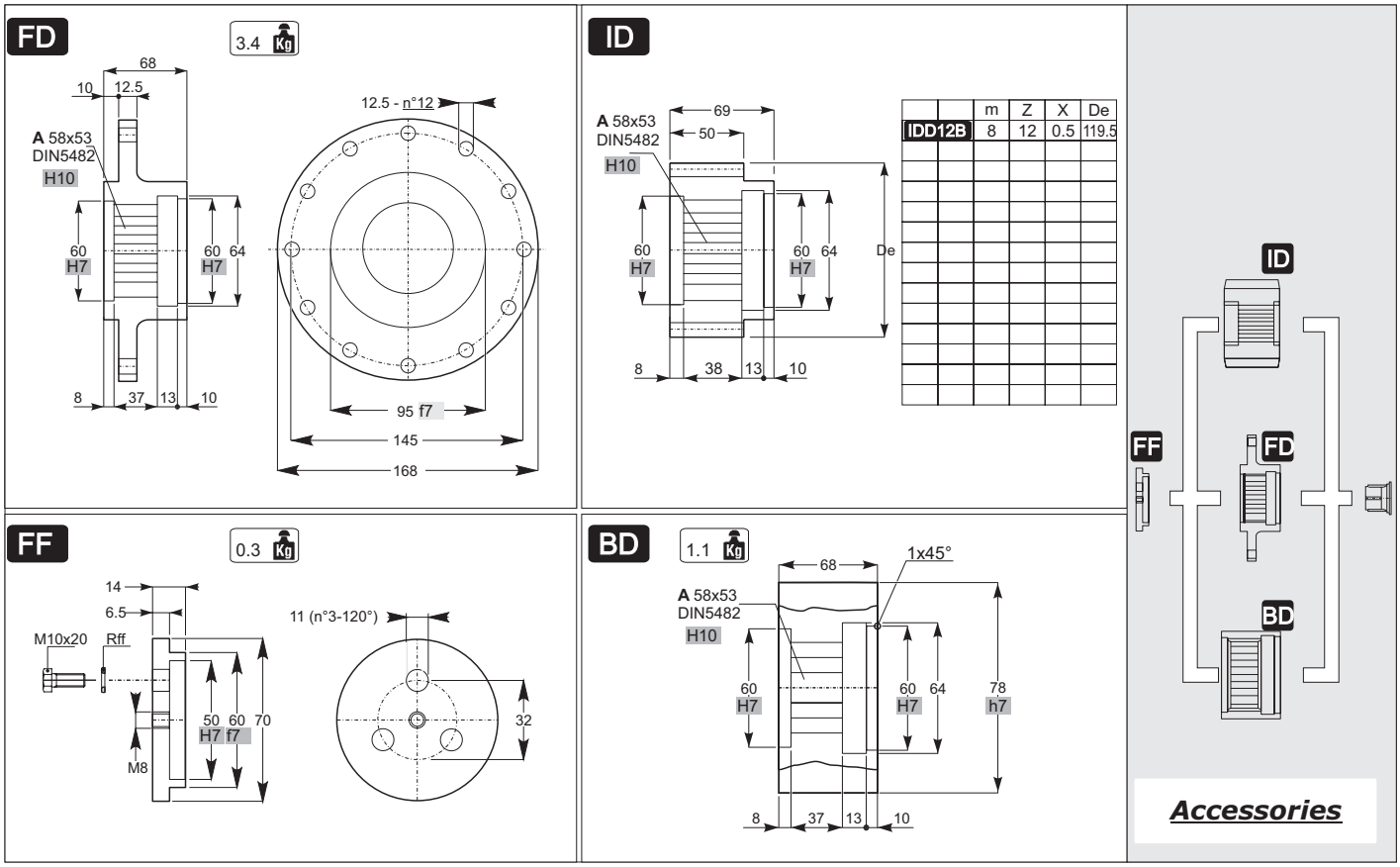
OUTPUT SHAFTS

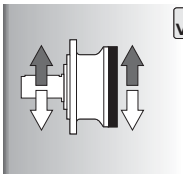







ECE
Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
ECE 1 2 5 A
ECR
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
244
9
16
122
173
57
73
302
352
502
702
303 55
353 56
403 56
503 58
703 60
304 59
354 60
404 60
504 62
704 64
251.5
269
265.5
283.5
295.5
309.5
327.5
339.5
12.5 - n°10
150 e8 F8
195
222
EXB


FD
3.4 Kg
A 58x53 DIN5482 H10
12.5 - n°12
95 f7
145
168
ID
IDD12B m 8 Z 12 X 0.5 De 119.5
FF
0.3 Kg
M10x20
Rff
11 (n°3-120°)
M8
BD
1.1 Kg
1x45°
Accessories



EX

Input Version

1 Input Shaft

2 Input Shaft

3 Input Shaft

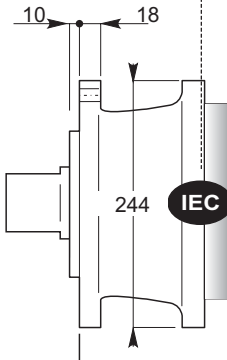
4 Input Shaft

ECE

117	50	5B-ø28	91	50	5A-ø28	91	50	5A-ø28	91	50	5A-ø28				
117	82	4-ø48	91	58	2A-ø38	91	58	2A-ø38	91	58	2A-ø38				
117	82	3-ø42	91	50	1A-ø24	91	50	1A-ø24	91	50	1A-ø24				
117	58	2B-ø38													
117	50	1B-ø24													
	5			5			5			5					

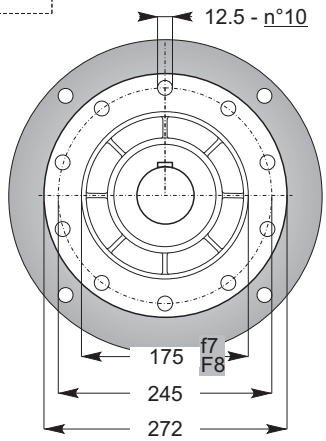
ECR

184.5	105	4-ø65	129.8	105	3A-ø65	129.8	105	3A-ø65	129.8	105	3A-ø65				
156.5	105	3B-ø65	129.8	105	2A-ø60	129.8	105	2A-ø60	129.8	105	2A-ø60				
156.5	105	2B-ø60	115.3	82	1-ø50	115.3	82	1-ø50	115.3	82	1-ø50				
123.8	82	1-ø50	115.3	82	0-ø42	115.3	82	0-ø42	115.3	82	0-ø42				
123.8	82	0-ø42													
26	4														
17	2B-3B														
9	0-1			9			9			9					



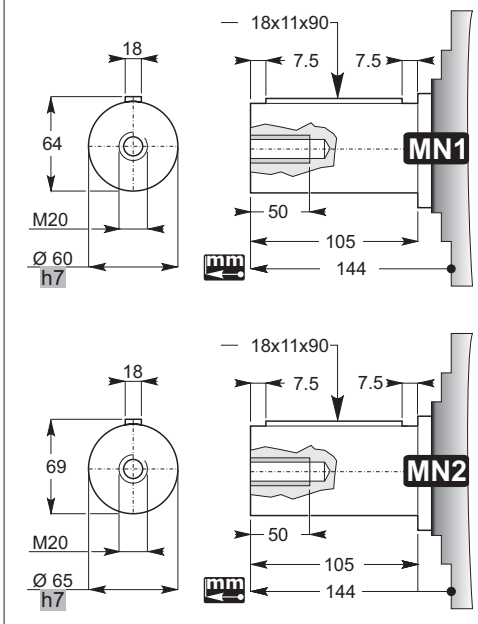
mm Kg

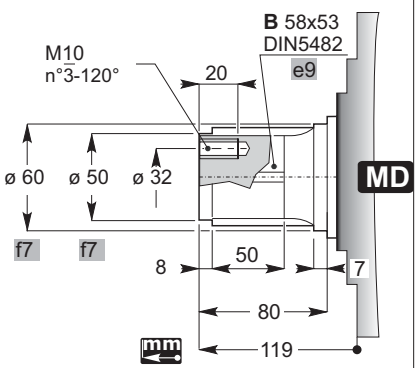
189	30	225B5	146	19	180B5	146	19	180B5	146	19	180B5	146	19		
154	25	200B5	146	19	160B5	146	19	160B5	146	19	160B5	146	19		
170	19	180B5	112	12	132B5	112	12	132B5	112	12	132B5	112	12		
170	19	160B5	91	10	112B5	91	10	112B5	91	10	112B5	91	10		
120	12	132B5	91	10	100B5	91	10	100B5	91	10	100B5	91	10		
99	10	112B5	83	8	90B5	83	8	90B5	83	8	90B5	83	8		
99	10	100B5	83	8	80B5	83	8	80B5	83	8	80B5	83	8		
91	8	90B5	83	8	71B5	83	8	71B5	83	8	71B5	83	8		
91	8	80B5	83	8	63B5	83	8	63B5	83	8	63B5	83	8		
91	8	71B5													
91	8	63B5													



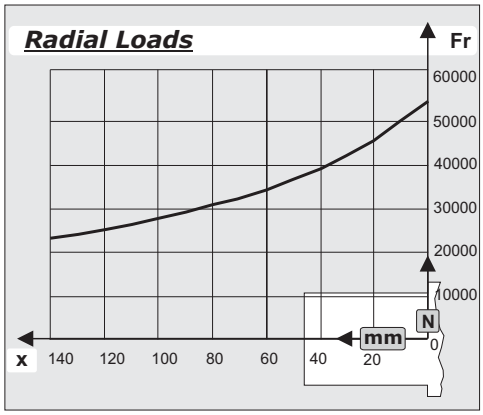
4									277.5	304	52				
3									277.5	354	53				
									295.5	404	53				
									307.5	504	55				
									307.5	704	57				
2									233.5	303	48				
									233.5	353	49				
									251.5	403	49				
									263.5	503	51				
									263.5	703	53				
			189.5	302	44										
			189.5	352	45										
			207.5	402	45										
			219.5	502	47										
			219.5	702	49										
1															
137	301	38													
137	351	39													
155	501	41													
155	701	43													

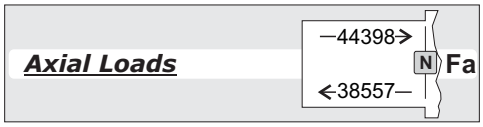
Kg

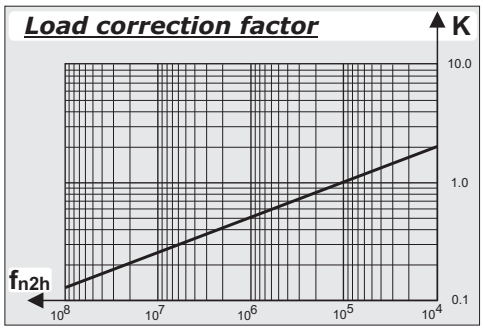


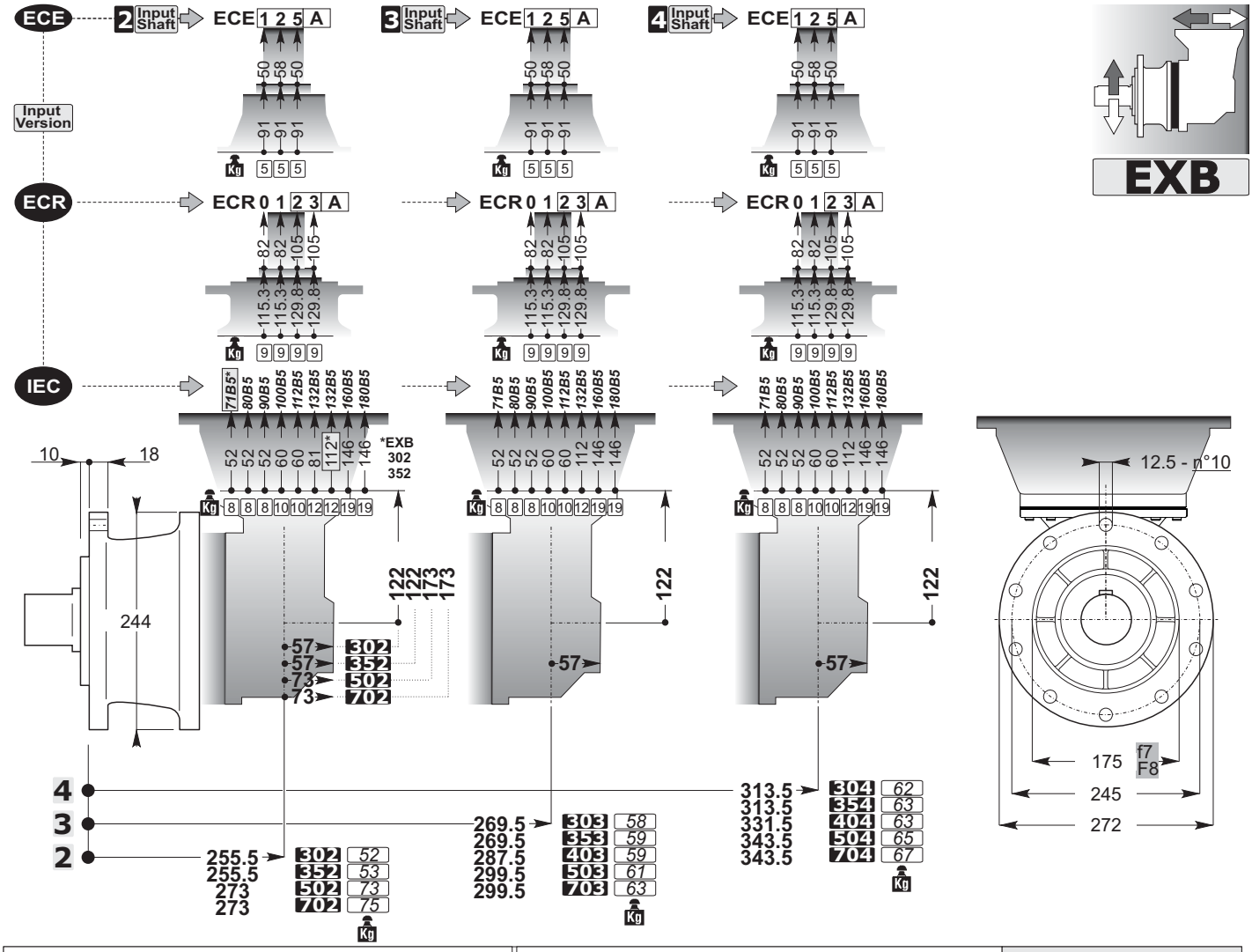


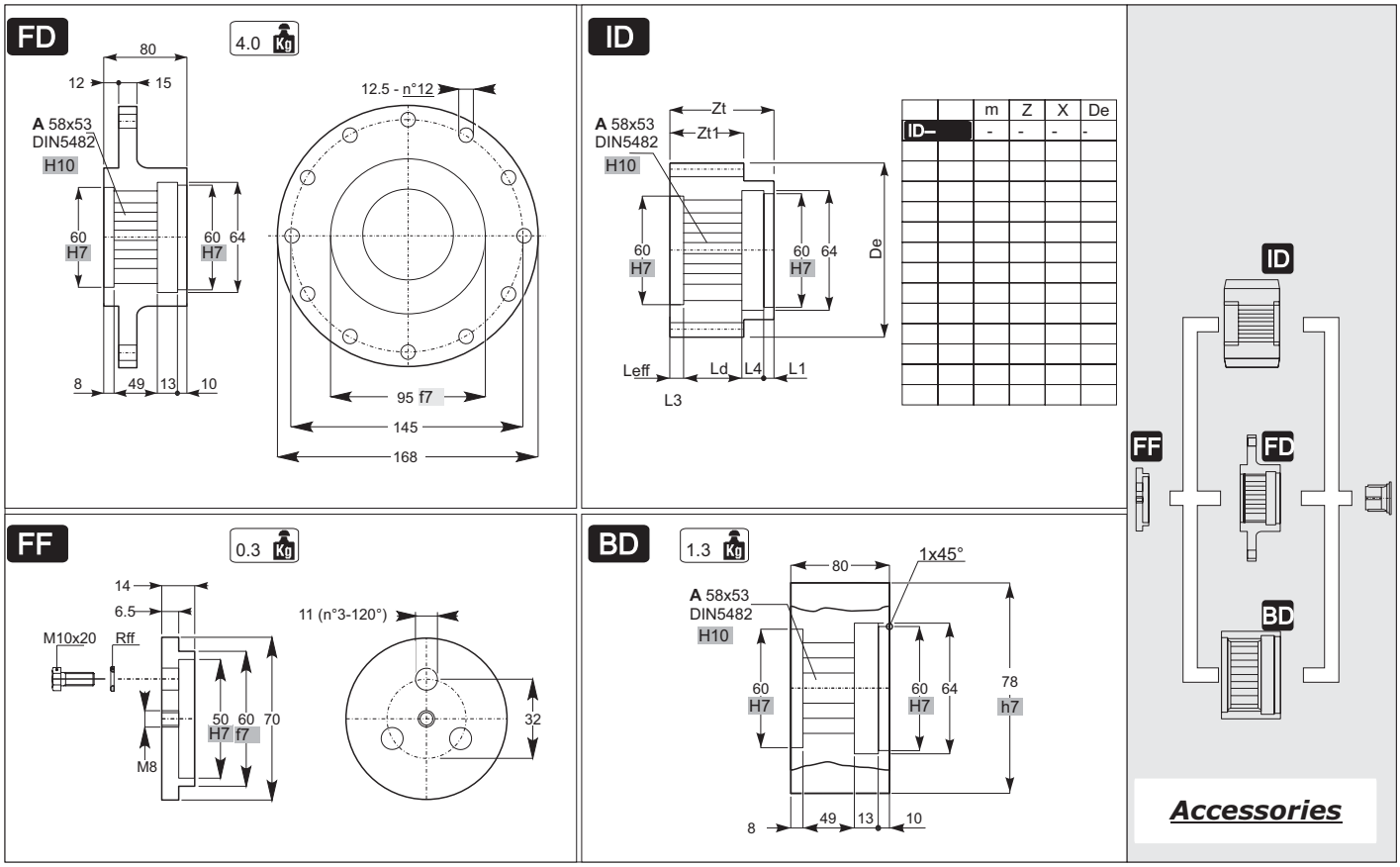
Output Shafts



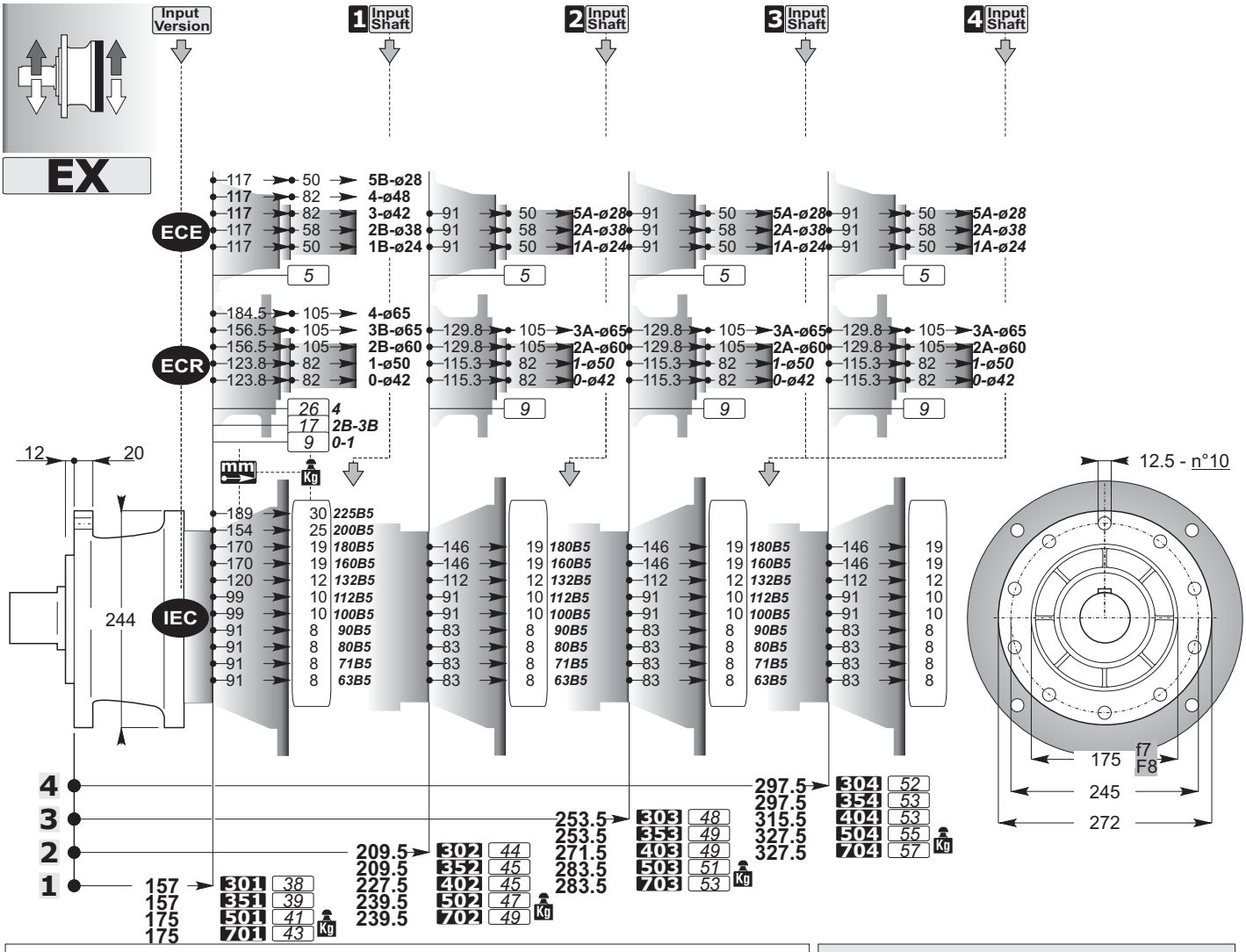


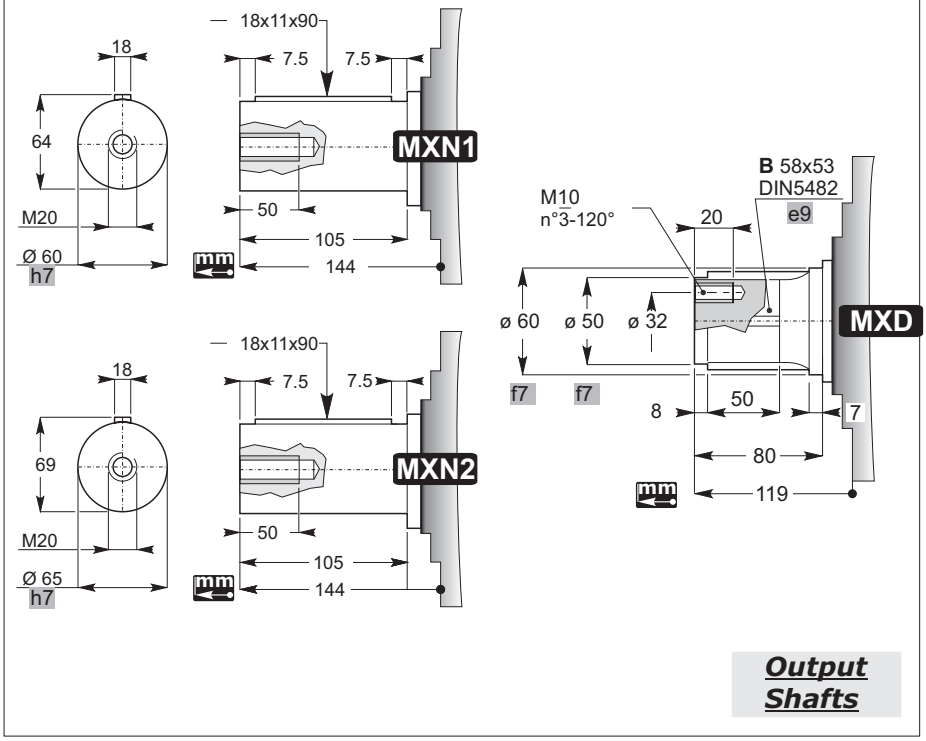



ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
244
10
18
12.5 - n°10
175 f7 F8
245
272
EXB

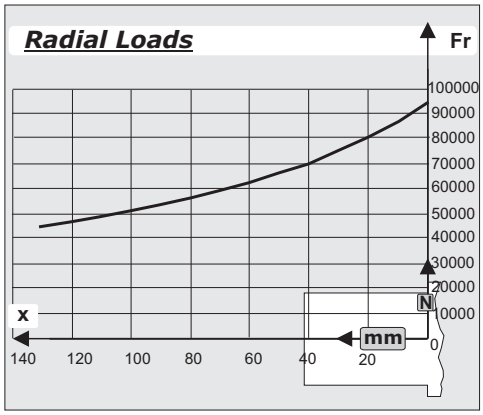

FD
4.0 Kg
80
12
15
A 58x53 DIN5482
H10
60 H7
60 H7
64
8
49
13
10
12.5 - n°12
95 f7
145
168
ID
A 58x53 DIN5482
H10
Zt
Zt1
60 H7
60 H7
64
De
Leff
Ld
L4
L1
L3
ID–
m
Z
X
De
FF
0.3 Kg
14
6.5
M10x20
Rff
M8
50 H7
60 f7
70
11 (n°3-120°)
32
BD
1.3 Kg
80
1x45°
A 58x53 DIN5482
H10
60 H7
60 H7
64
78
h7
8
49
13
10
ID
FF
FD
BD
Accessories

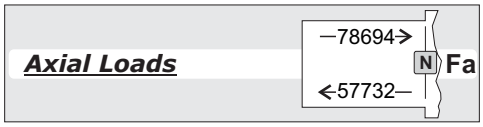
EX

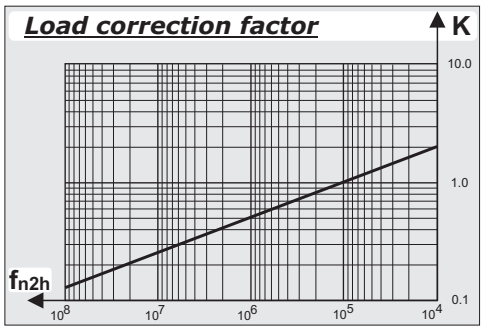


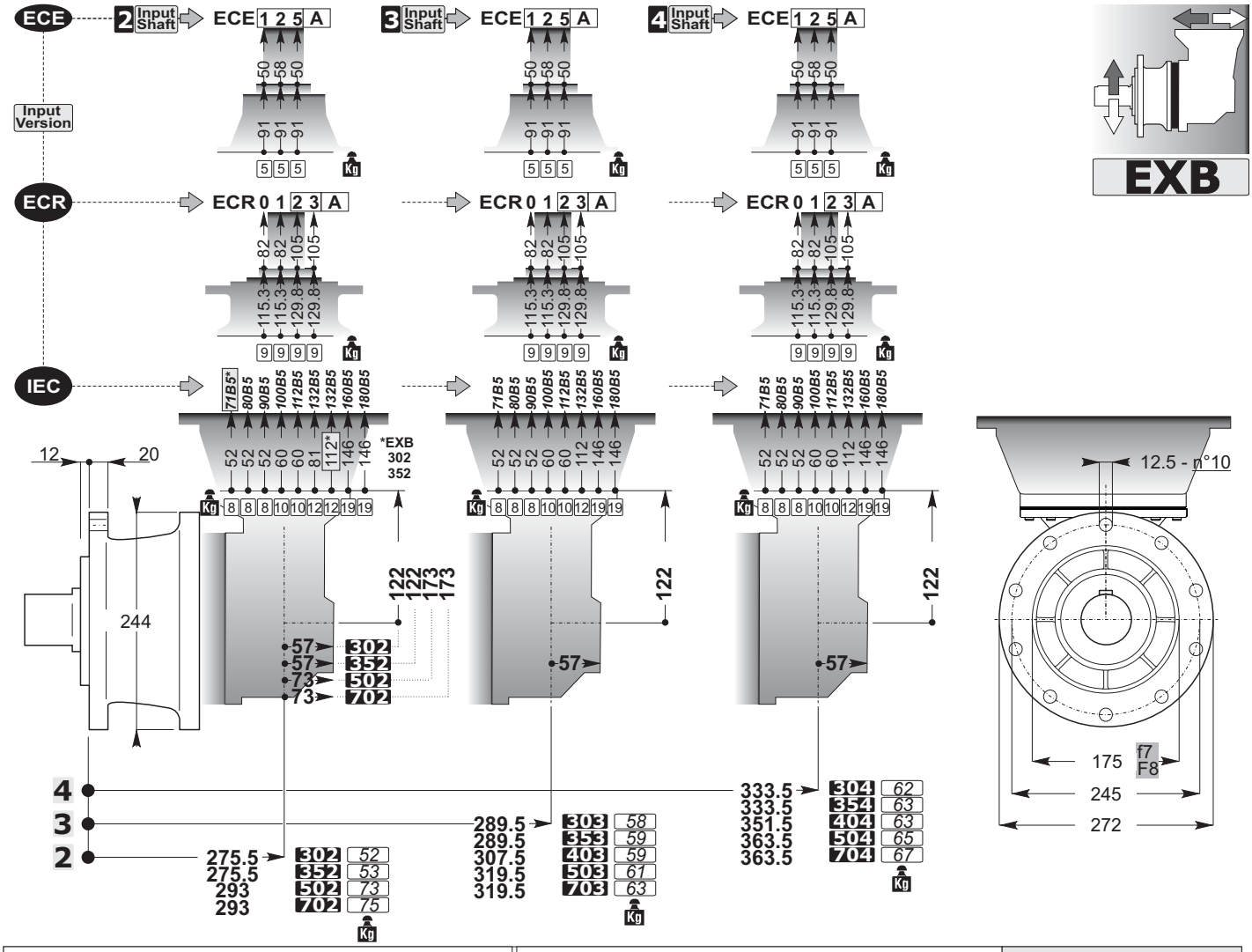


Output Shafts

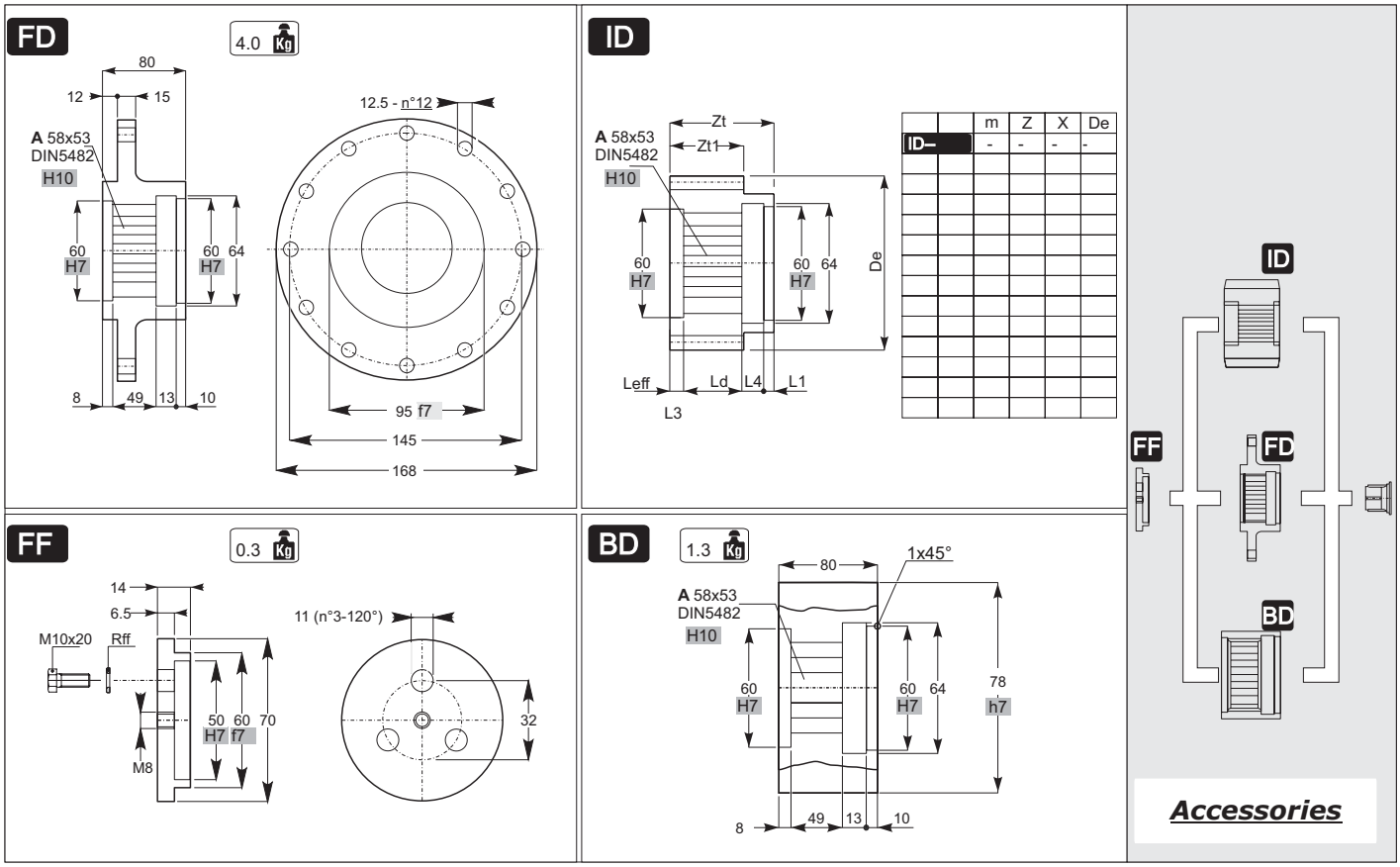


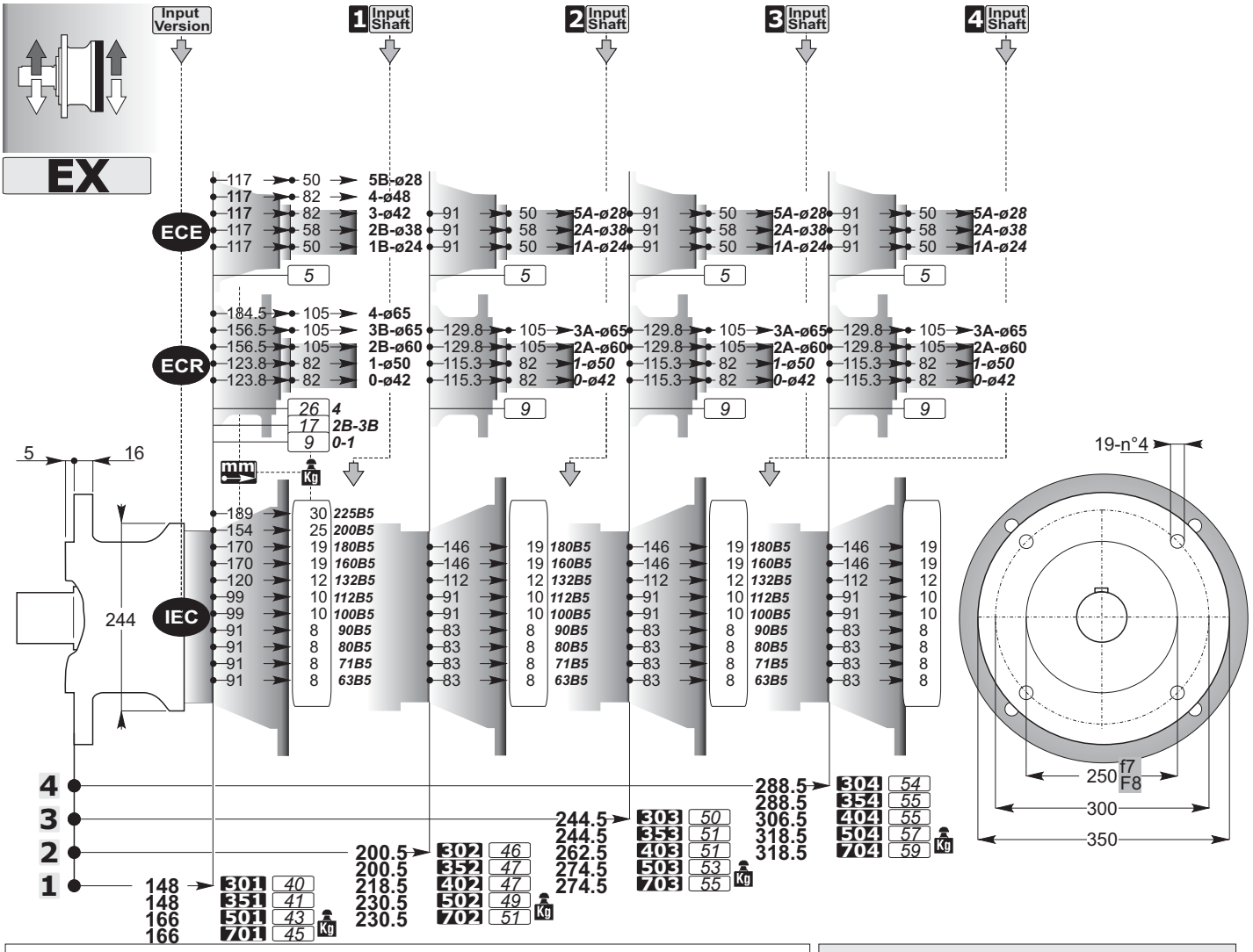


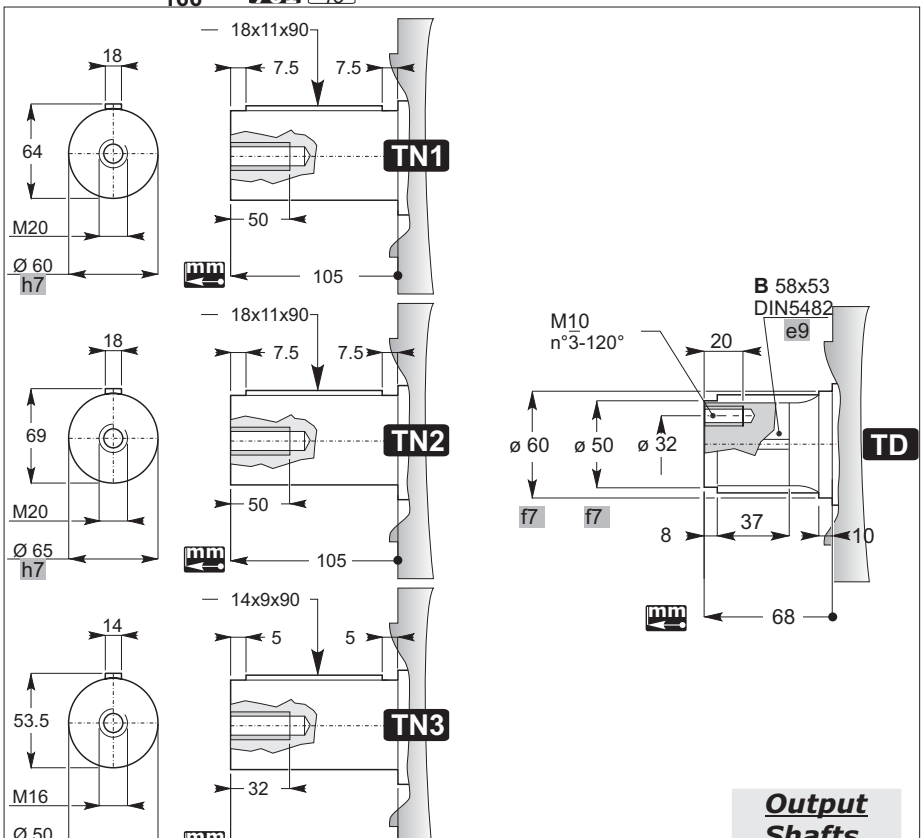


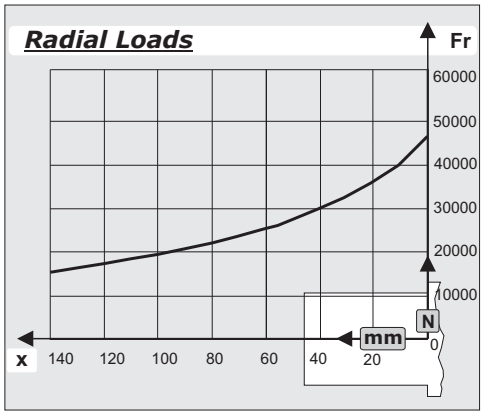

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
12
20
244
122
122
173
173
57
57
73
73
302
352
502
702
4
3
2
275.5
275.5
293
293
289.5
289.5
307.5
319.5
319.5
303 58
353 59
403 59
503 61
703 63
333.5
333.5
351.5
363.5
363.5
304 62
354 63
404 63
504 65
704 67
12.5 - n°10
175 f7 F8
245
272

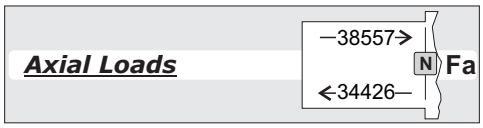
EXB

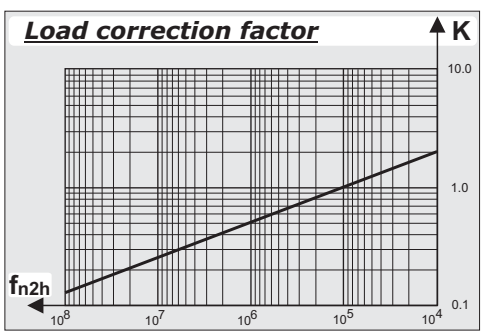

FD
4.0 Kg
80
12
15
A 58x53
DIN5482
H10
60 H7
60 H7
64
8
49
13
10
12.5 - n°12
95 f7
145
168
ID
A 58x53
DIN5482
H10
Zt
Zt1
60 H7
60 H7
64
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID–
FF
0.3 Kg
14
6.5
M10x20
Rff
50 H7
60 f7
70
M8
11 (n°3-120°)
32
BD
1.3 Kg
80
1x45°
A 58x53
DIN5482
H10
60 H7
60 H7
64
78 h7
8
49
13
10
ID
FF
FD
BD
Accessories

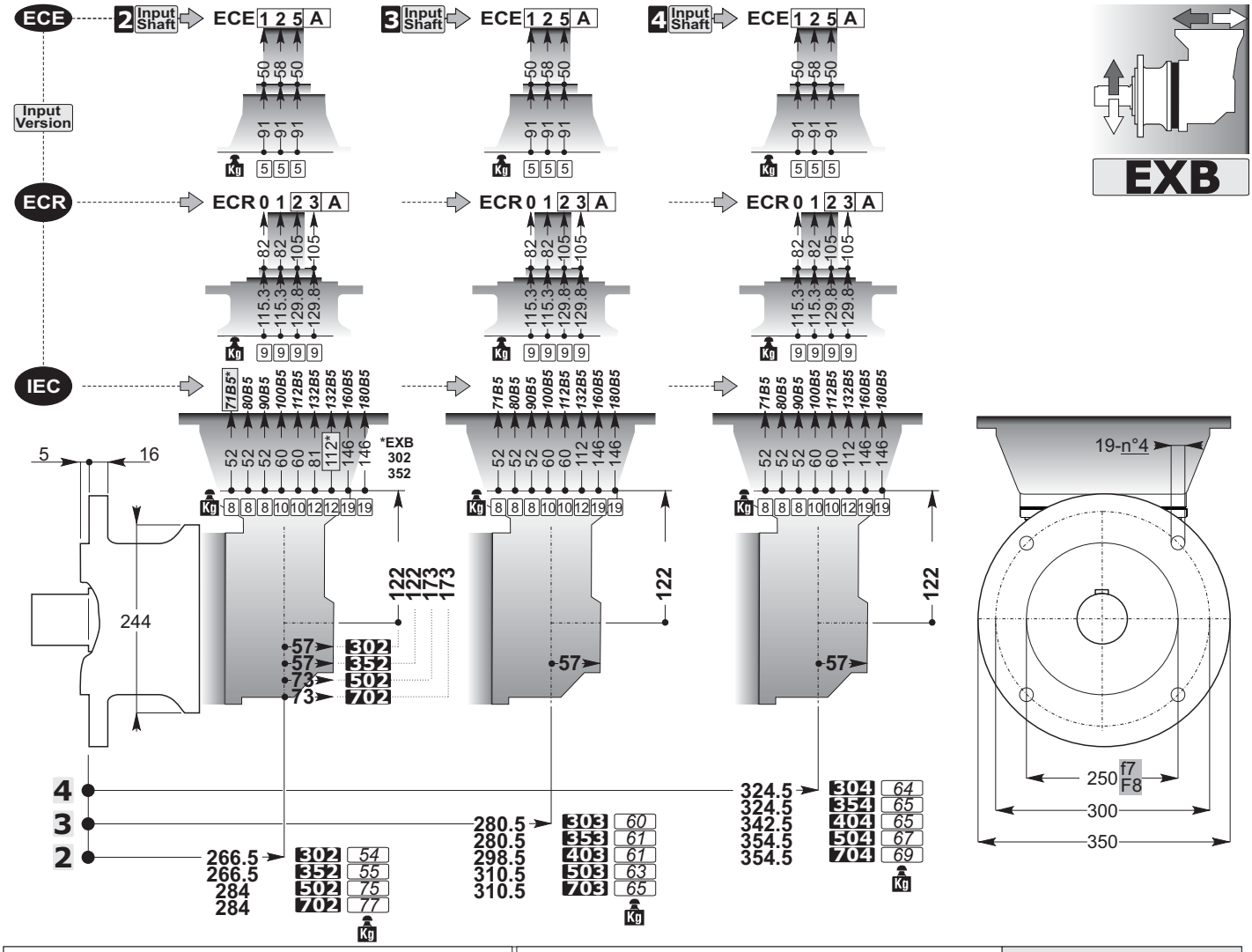

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
5A-ø28
2A-ø38
1A-ø24
4-ø65
3B-ø65
2B-ø60
1-ø50
0-ø42
3A-ø65
2A-ø60
1-ø50
0-ø42
4
2B-3B
0-1
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
19-n°4
250 f7 F8
300
350
244
5
16

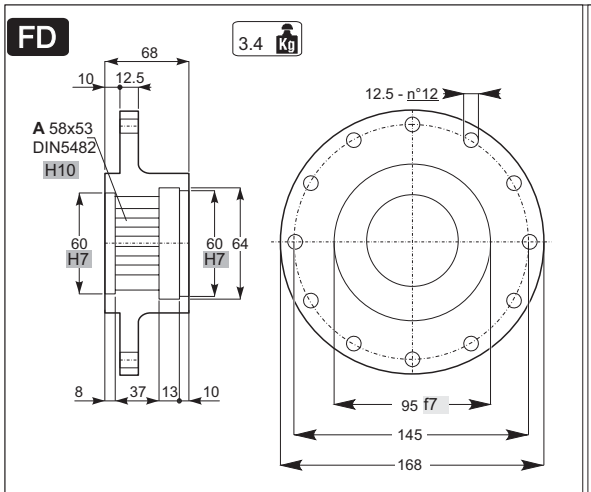

TN1
TN2
TN3
18x11x90
14x9x90
M20
M16
Ø 60 h7
Ø 65 h7
Ø 50 h7
64
69
53.5
105
100
M10 n°3-120°
B 58x53 DIN5482 e9
TD
ø 60
ø 50
ø 32
f7
68
Output Shafts

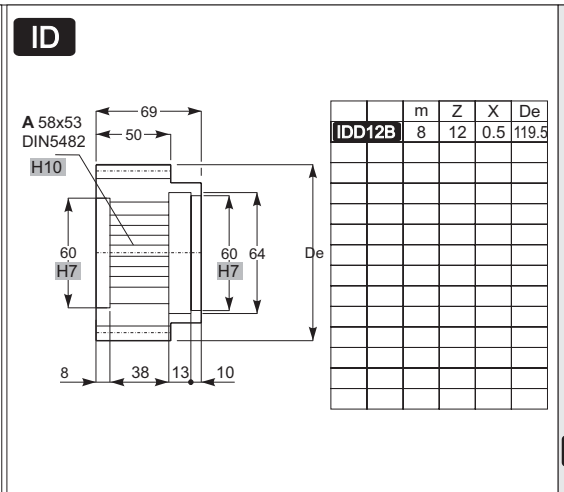

Radial Loads
Fr
60000
50000
40000
30000
20000
10000
mm
x
140
120
100
80
60
40
20
0

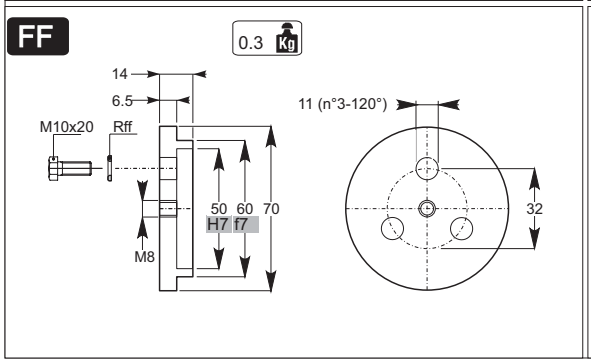

Axial Loads
38557
34426
Fa

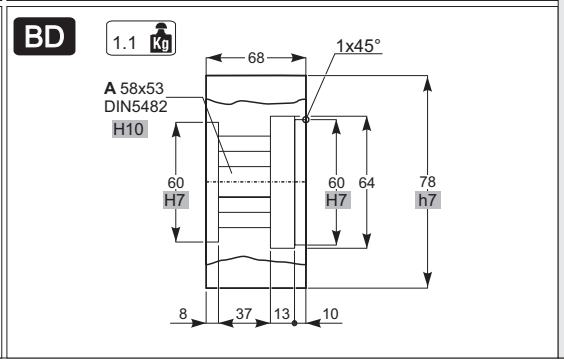

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

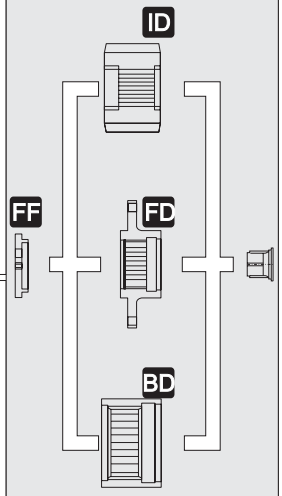






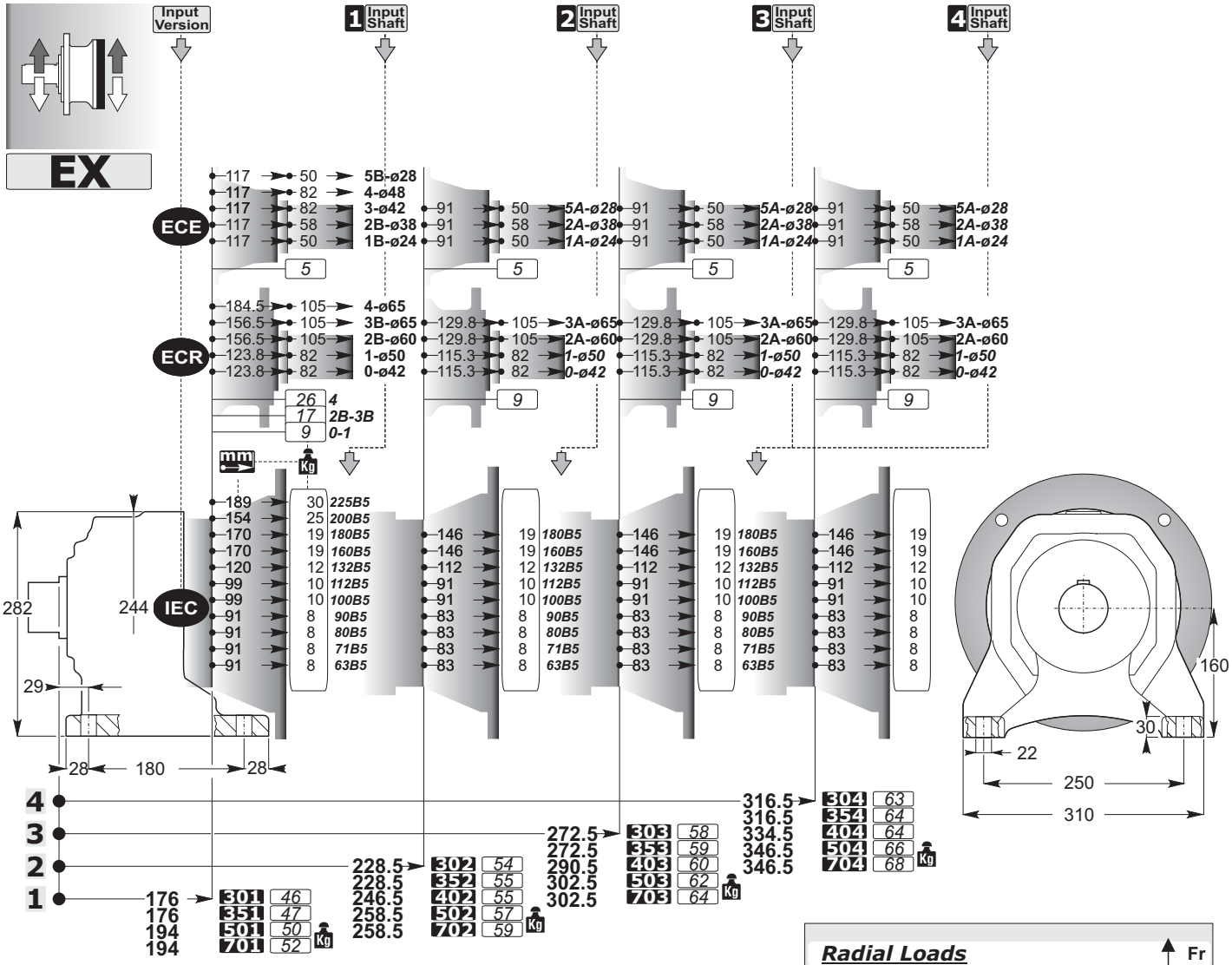


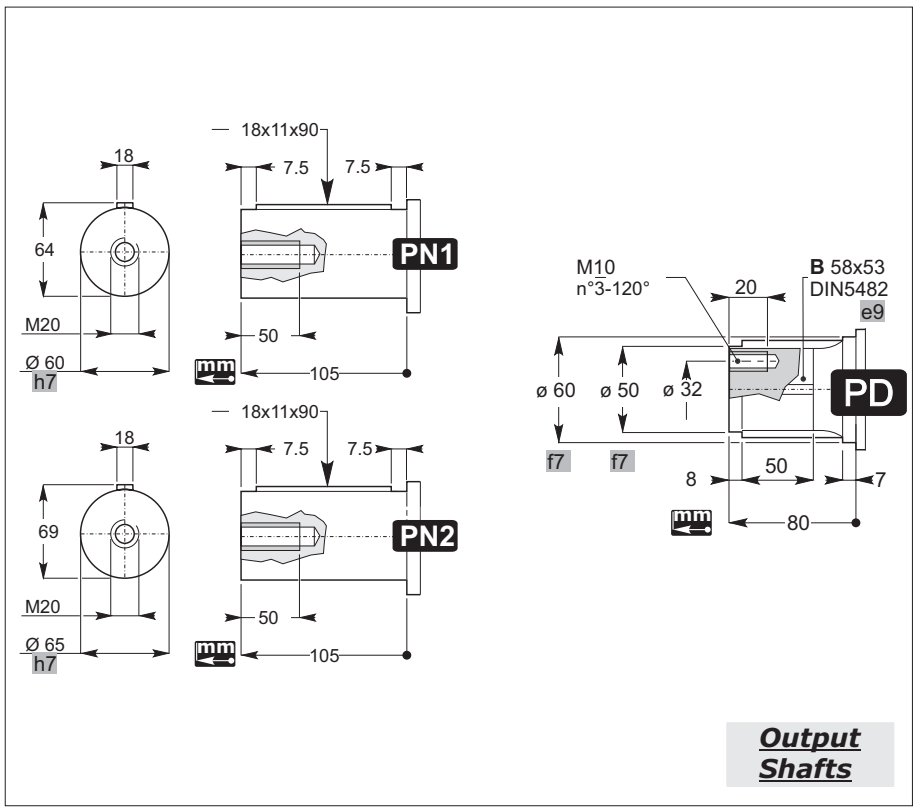


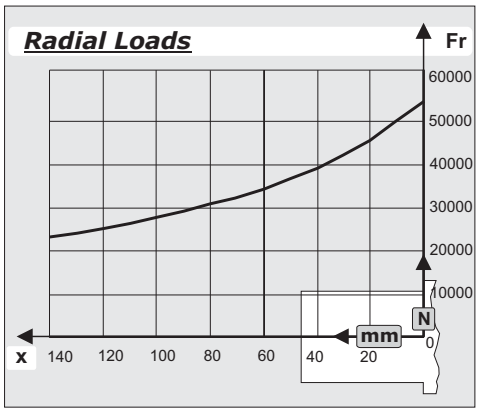


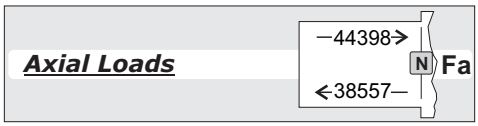
Accessories

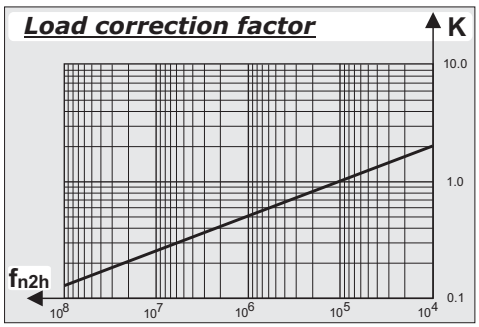
mm
C



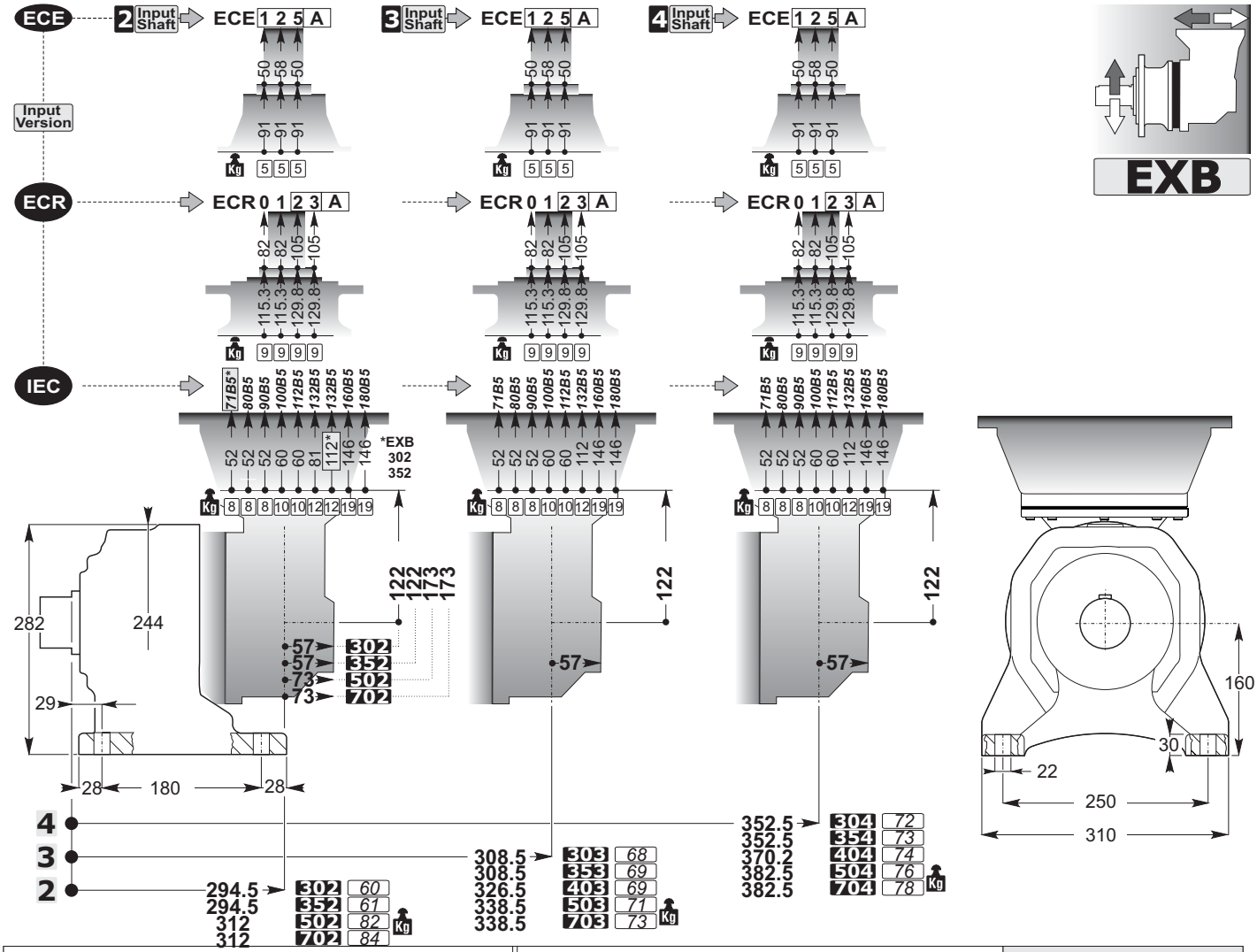


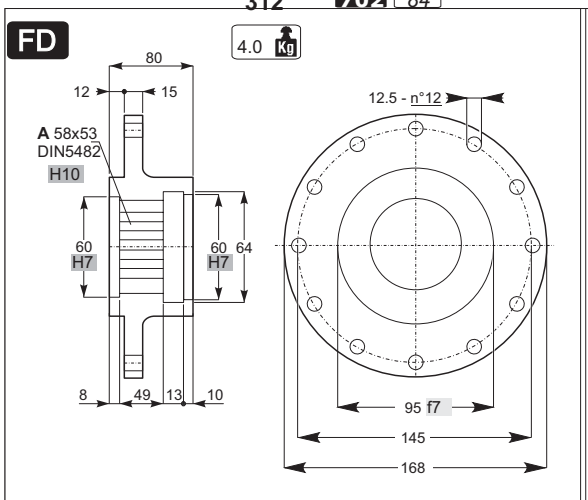


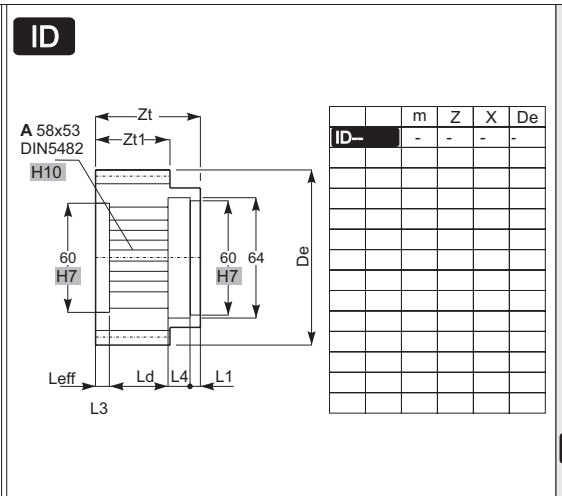


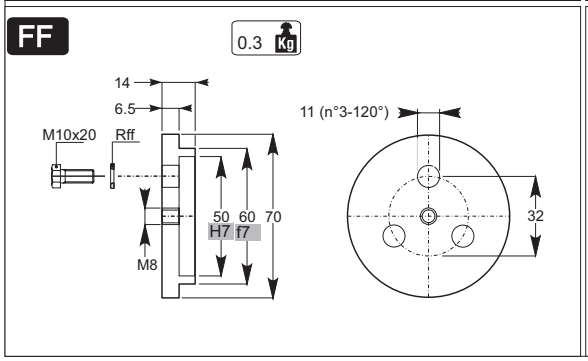


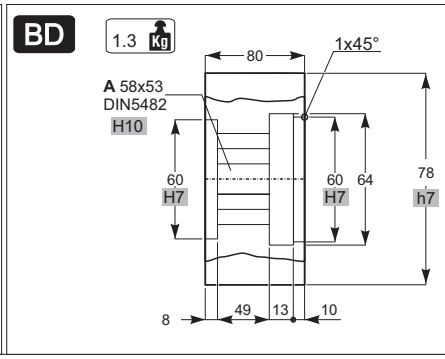
Output Shafts

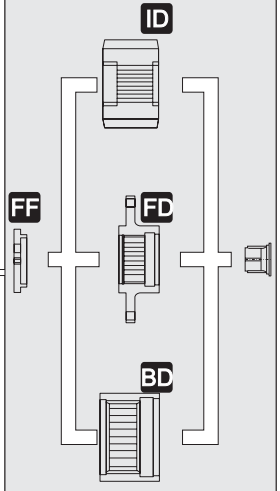








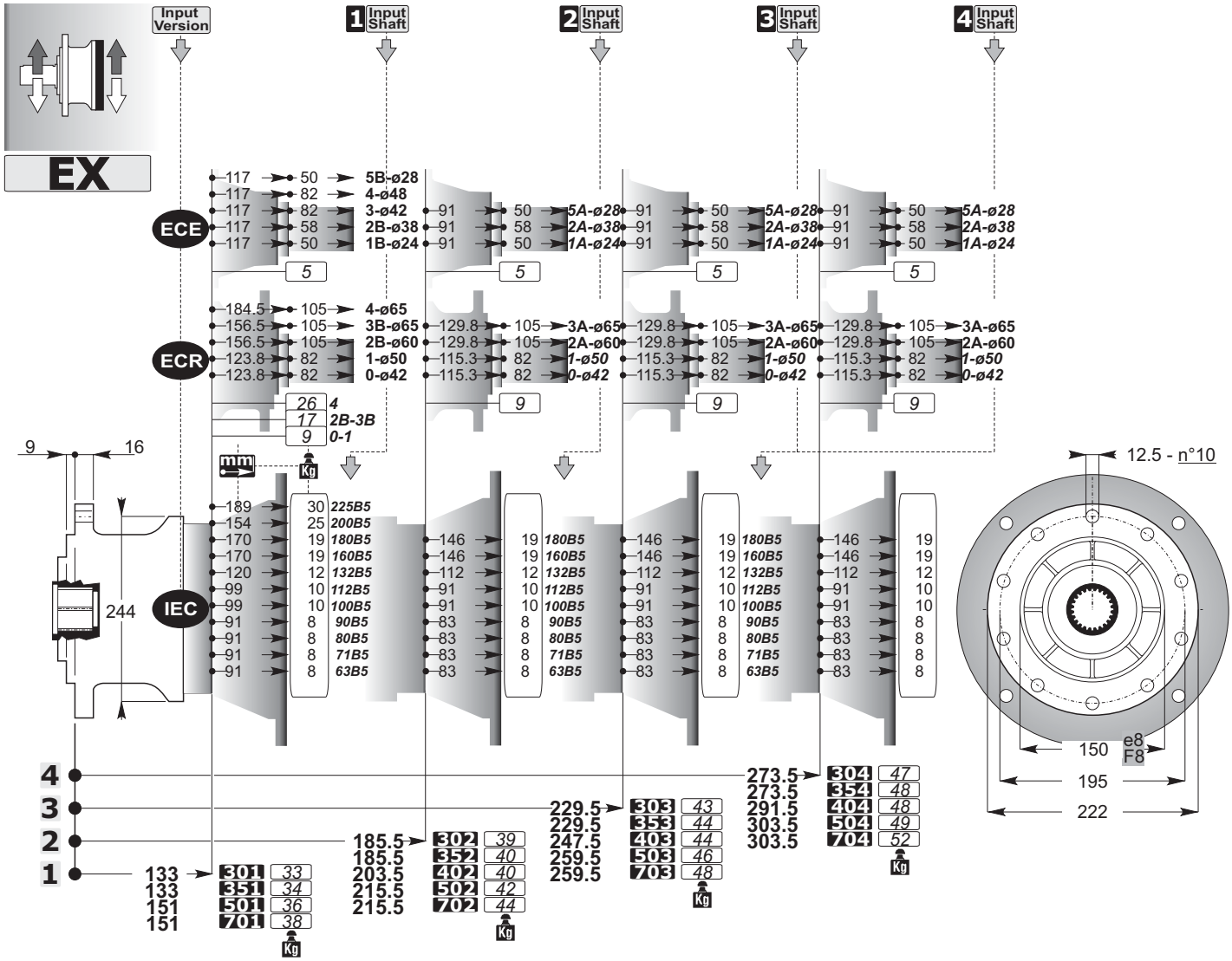


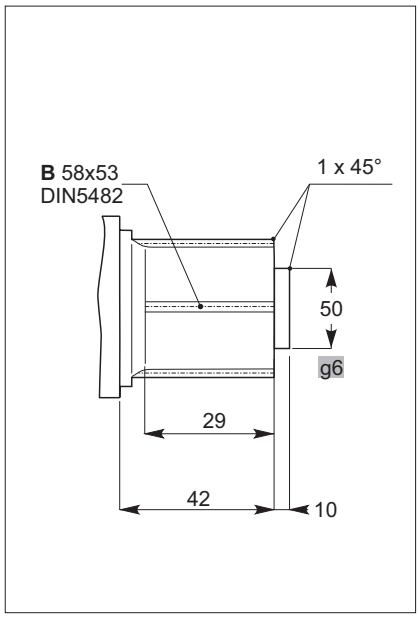


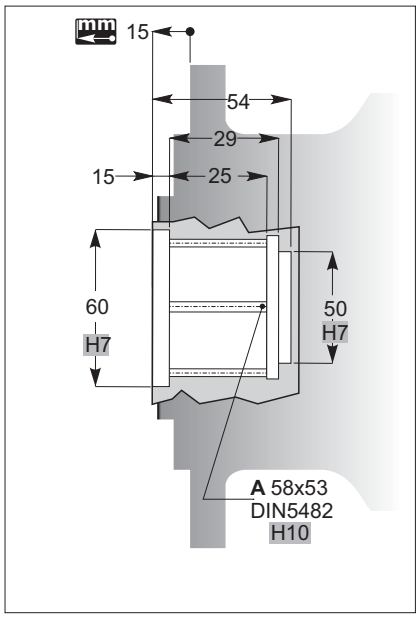
Accessories

mm

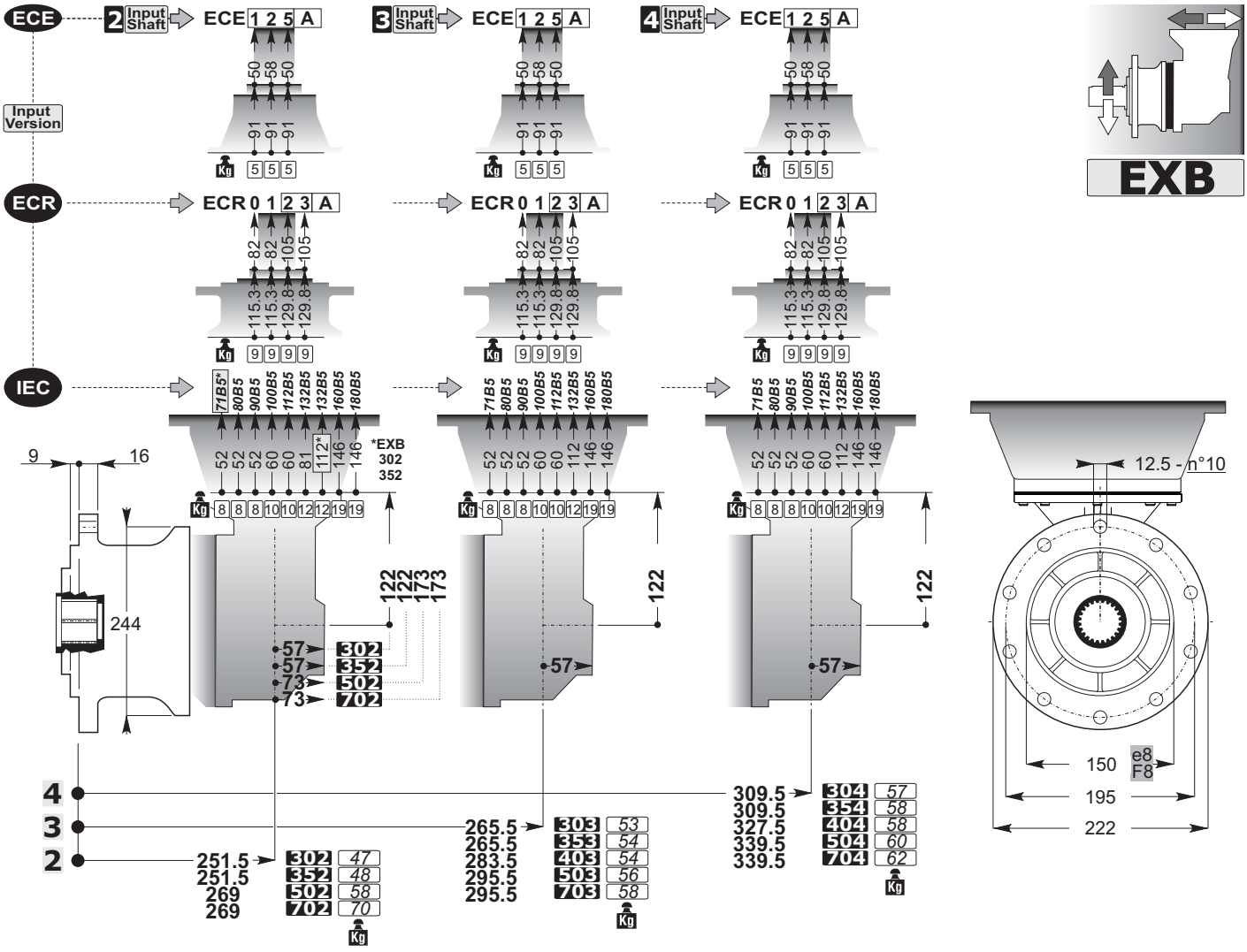
C

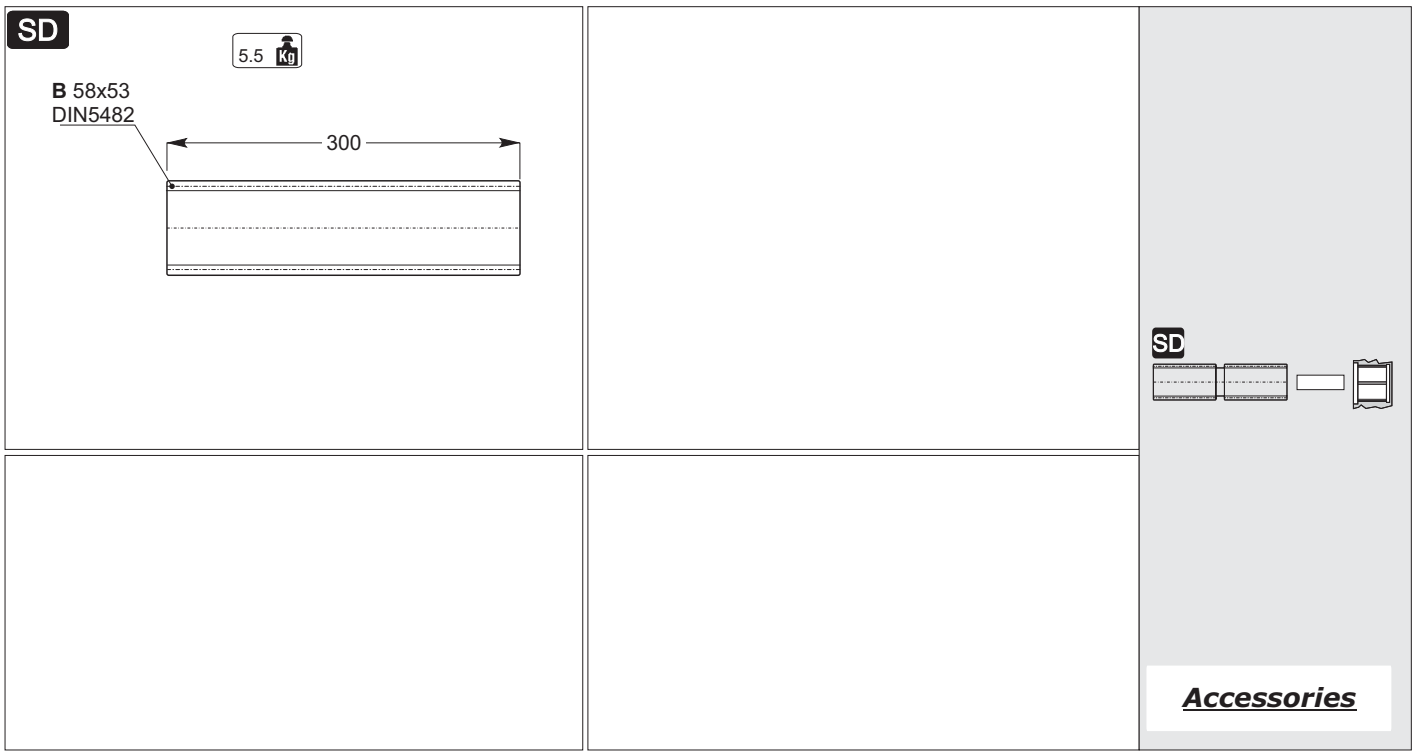


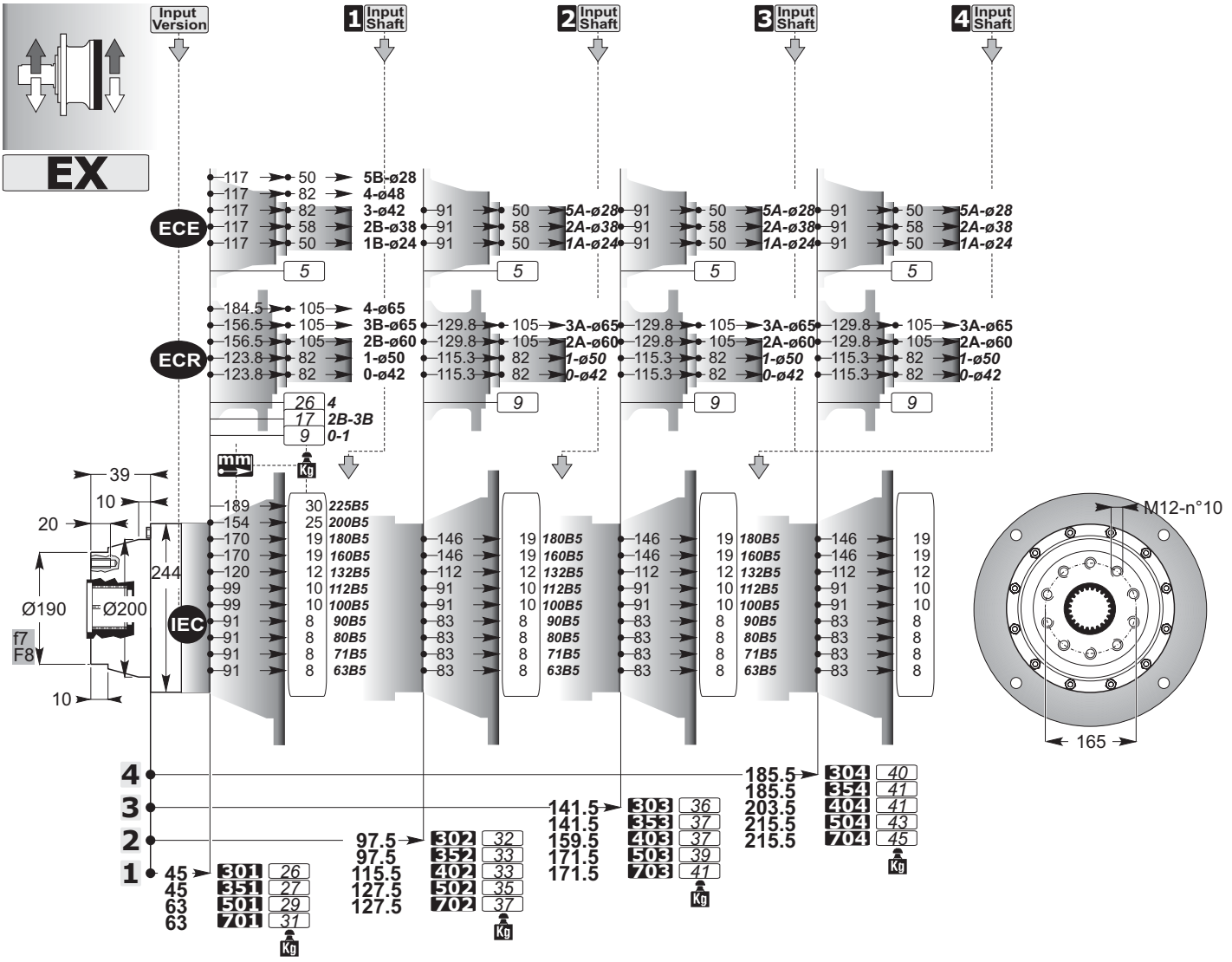


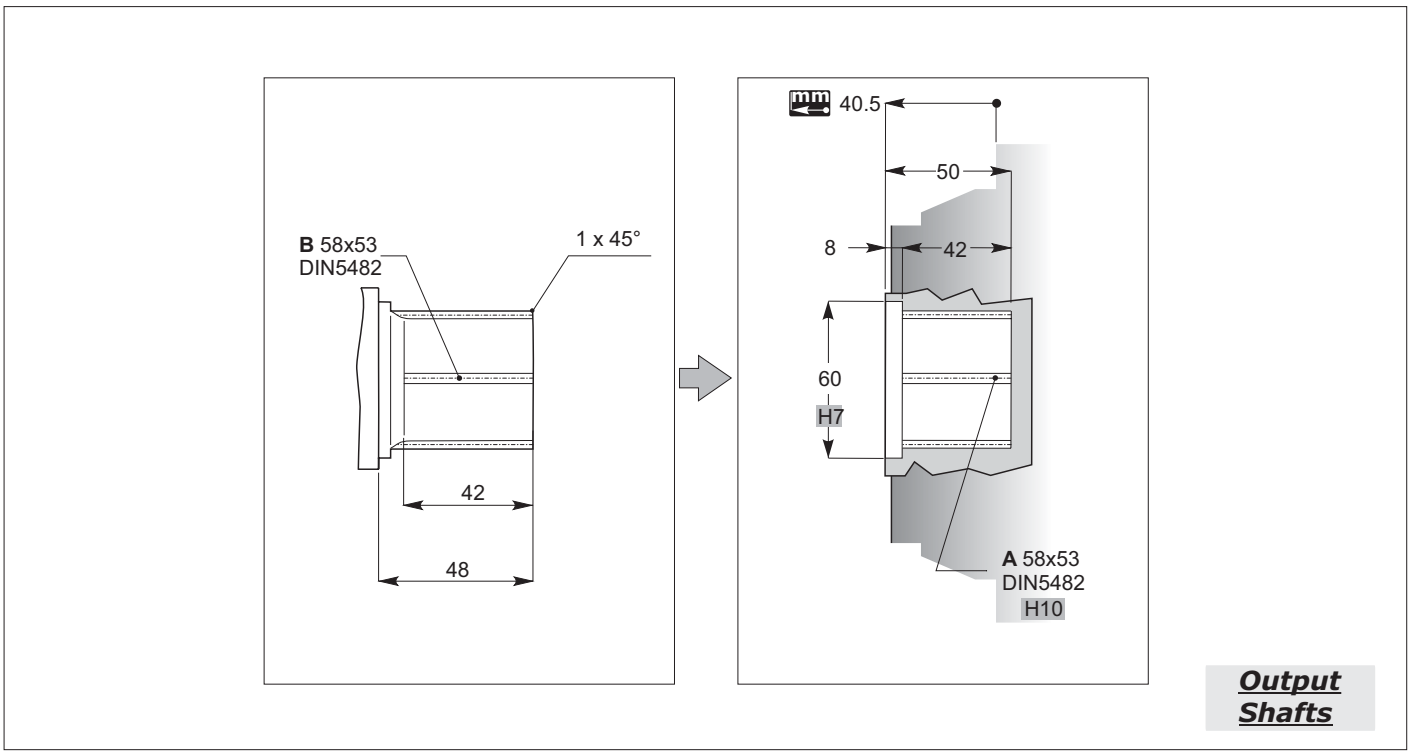


Output Shafts

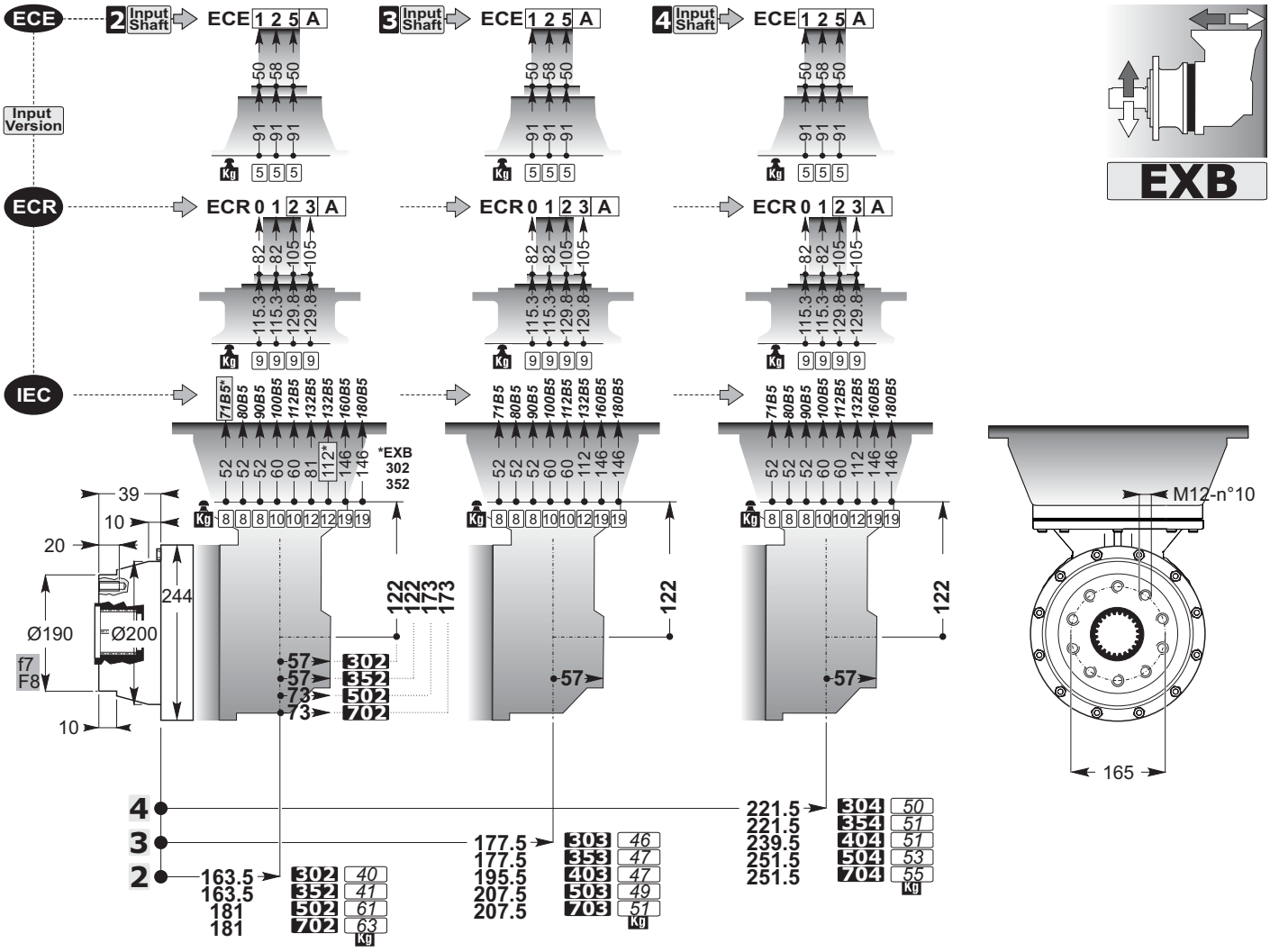

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
9
16
244
122
122
173
173
57
57
73
73
302
352
502
702
4
3
2
251.5
251.5
269
269
265.5
265.5
283.5
295.5
295.5
309.5
309.5
327.5
339.5
339.5
303 53
353 54
403 54
503 56
703 58
304 57
354 58
404 58
504 60
704 62
12.5 - n°10
150 e8 F8
195
222
EXB


SD
5.5
B 58x53
DIN5482
300
SD
Accessories





Output Shafts



SD

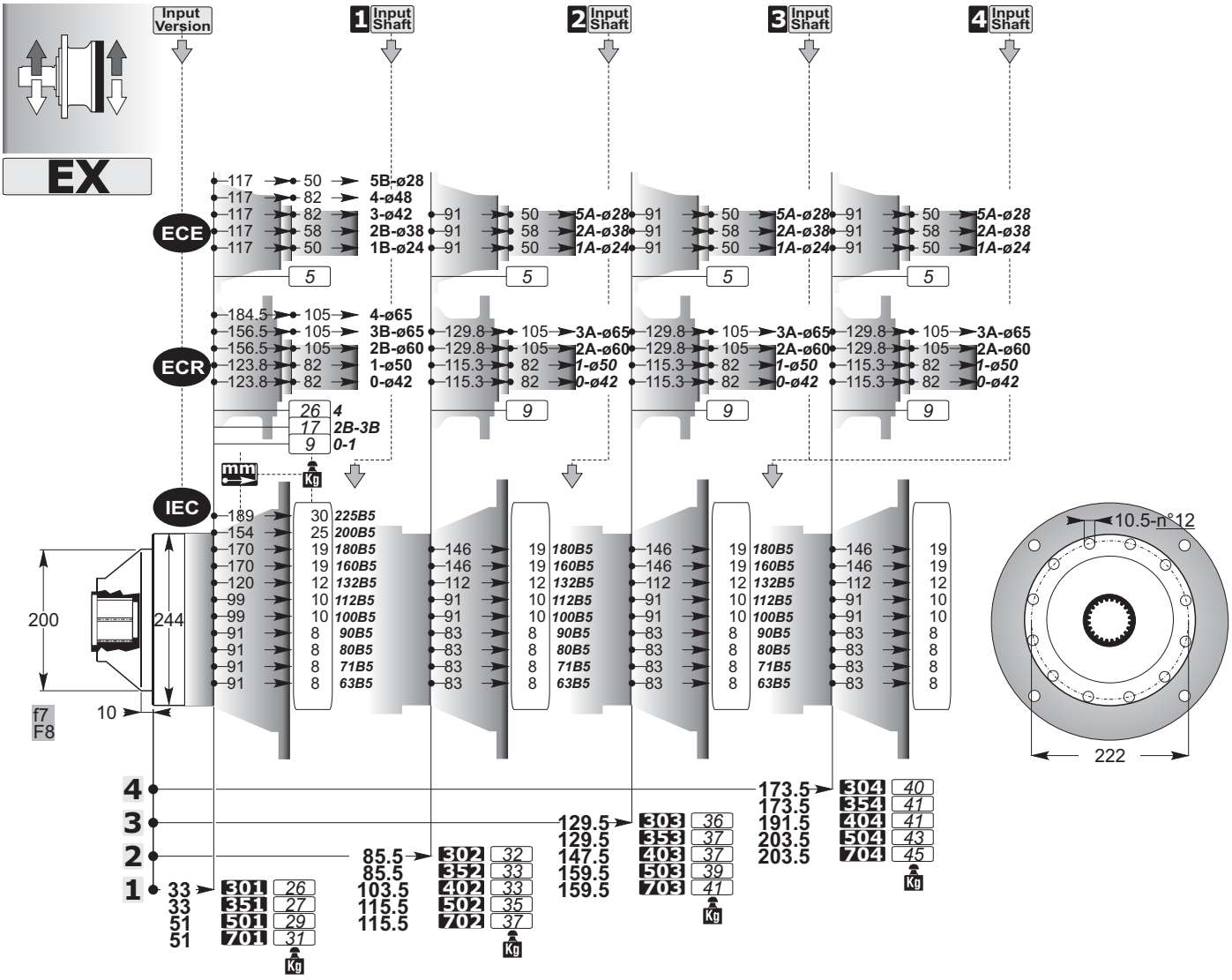
5.5 Kg

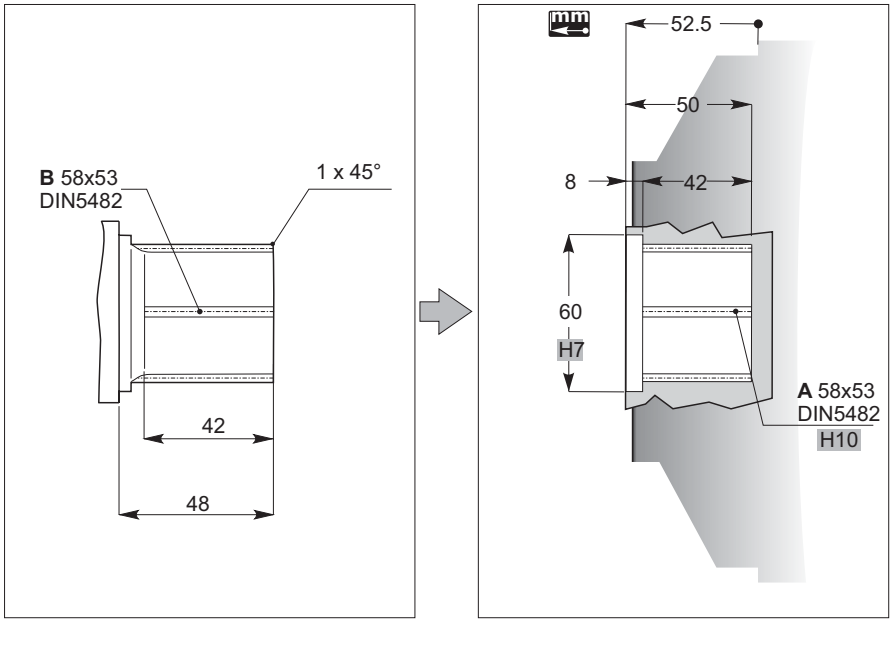
B 58x53
DIN5482

300

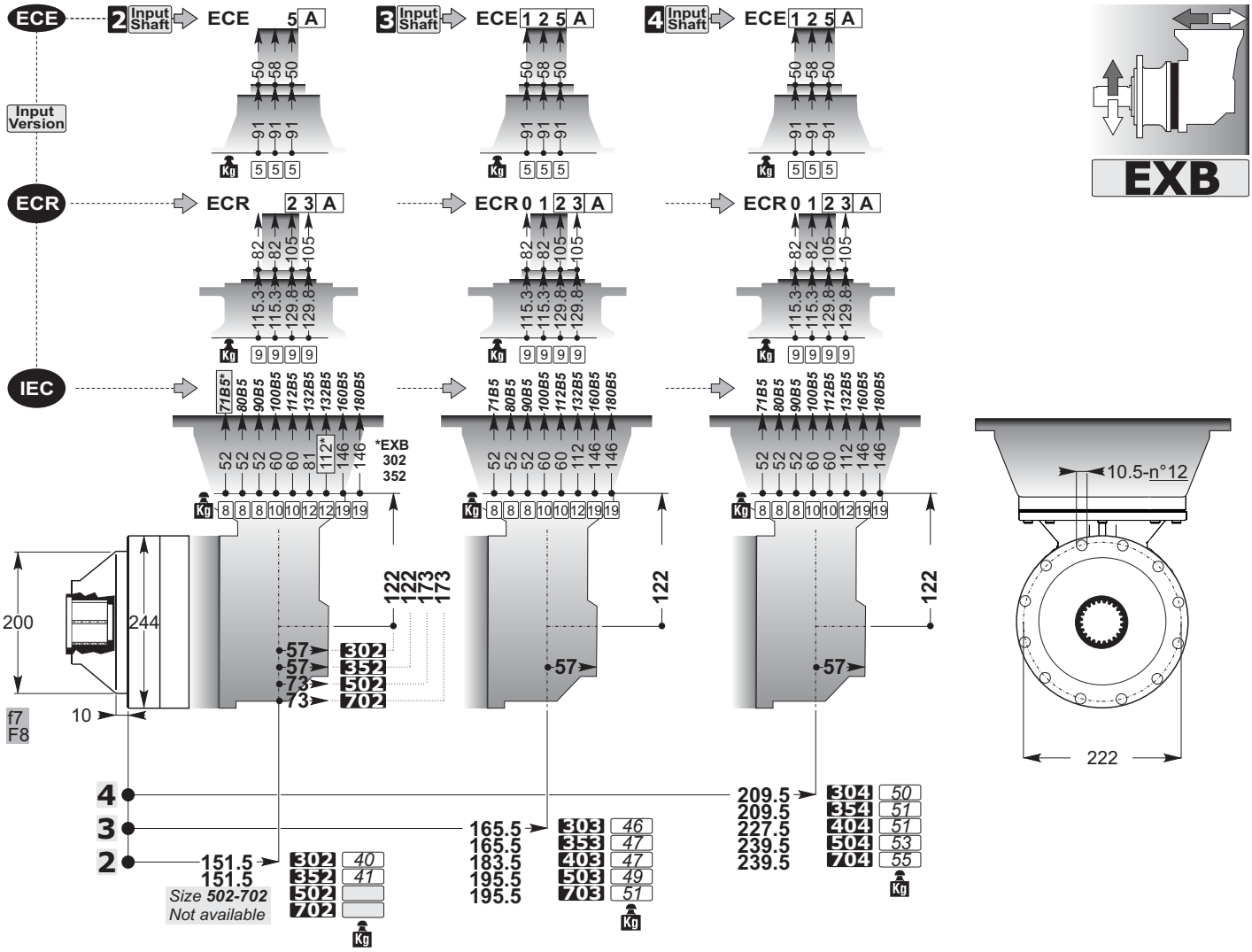
SD

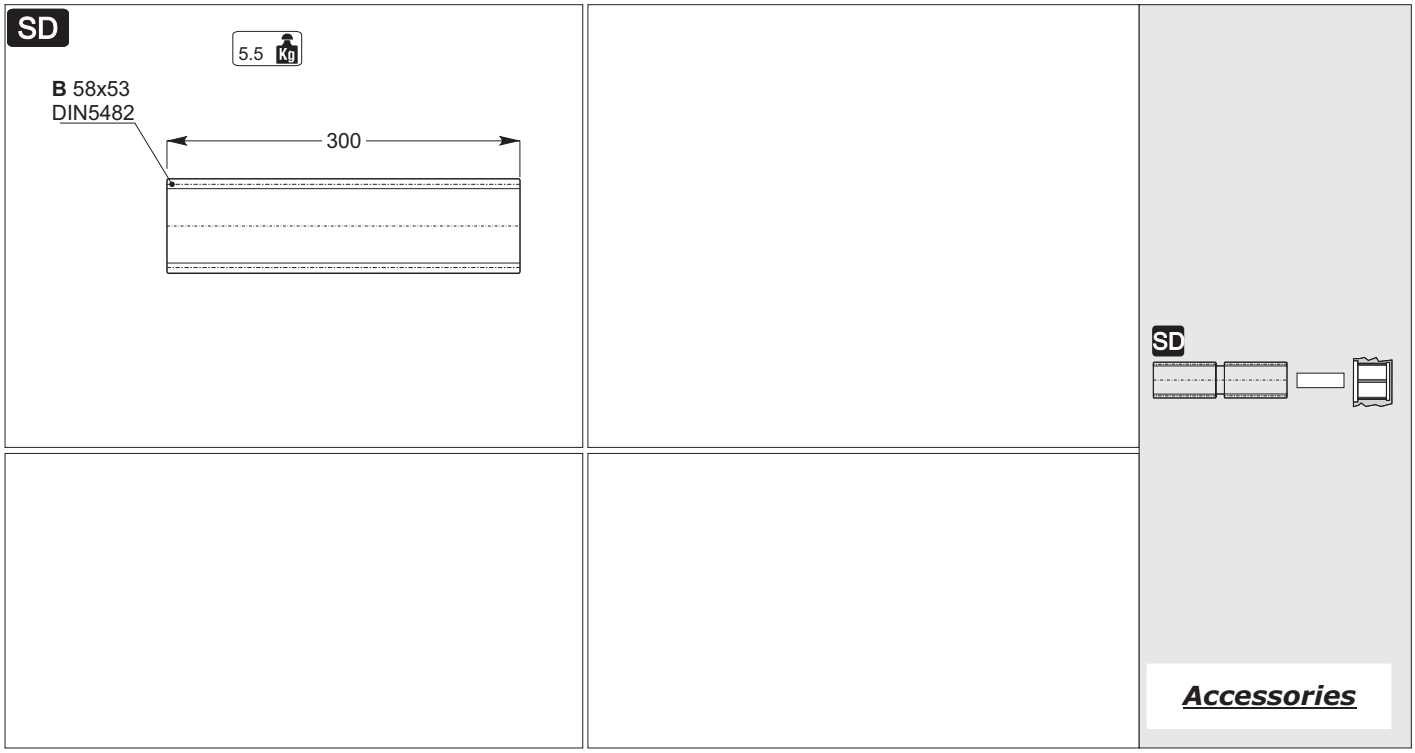
Accessories

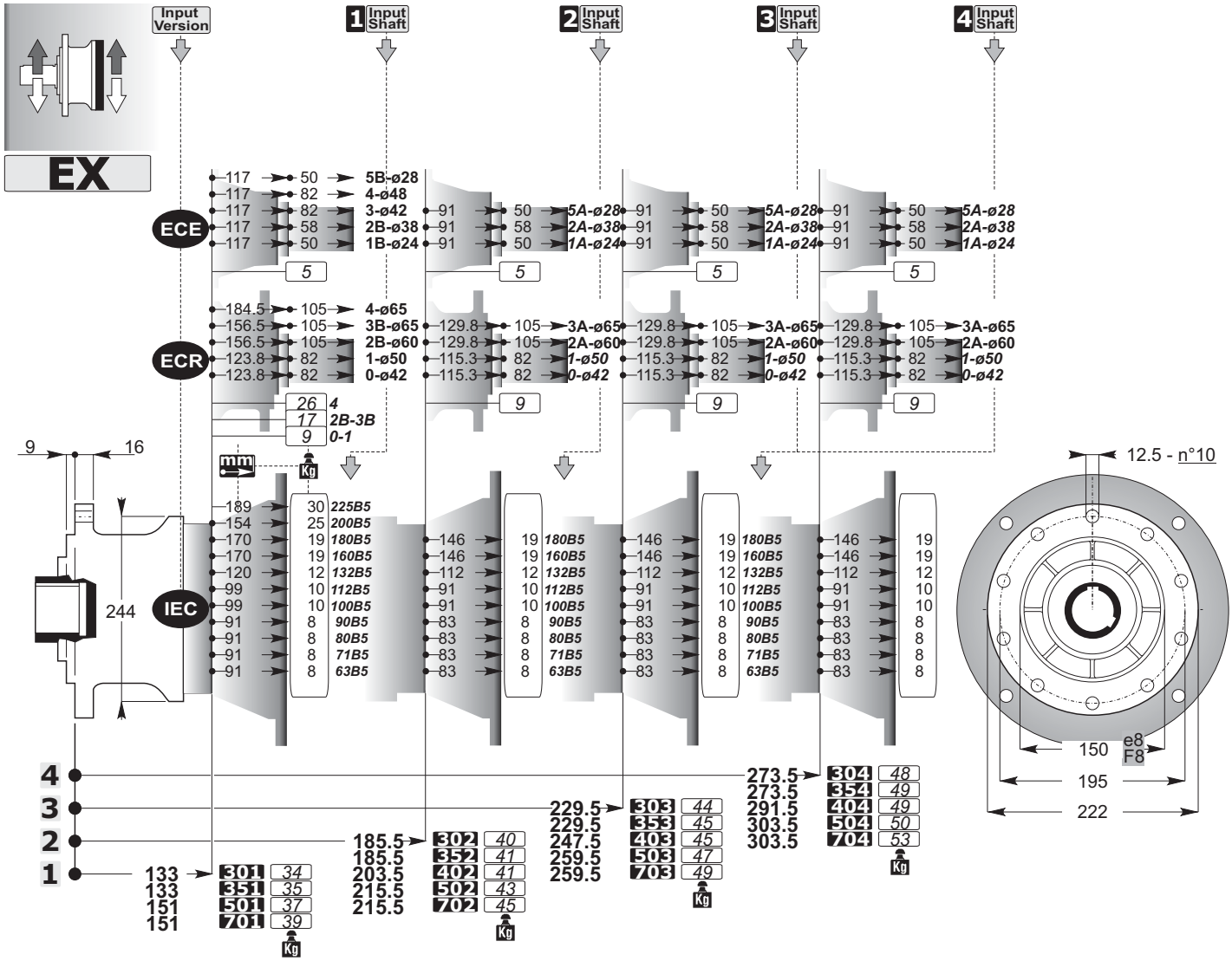


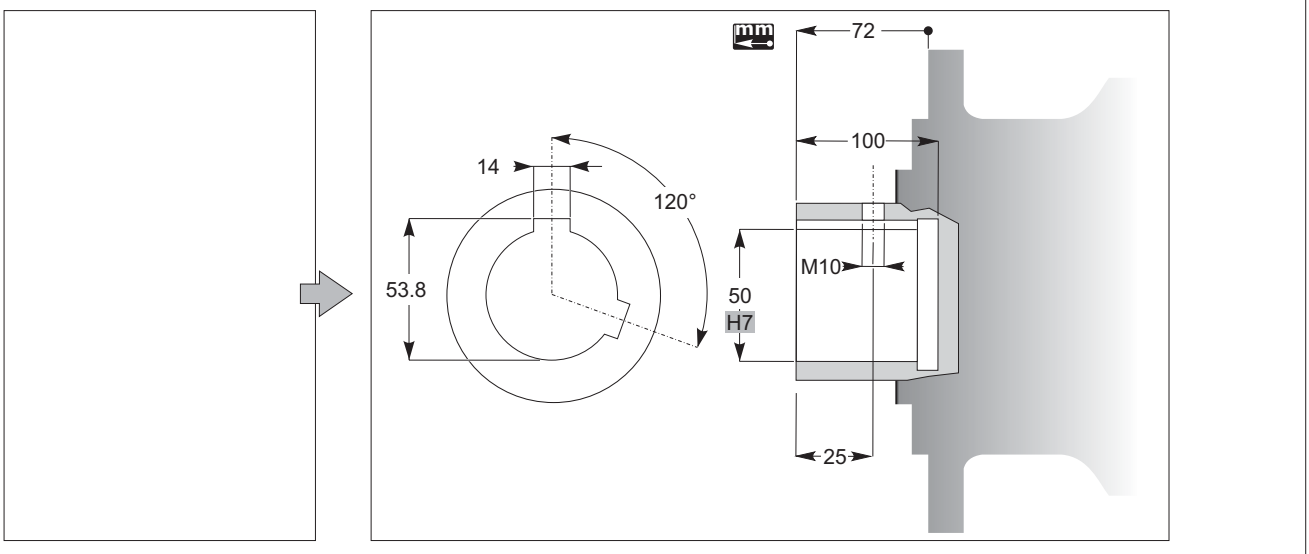


Output Shafts

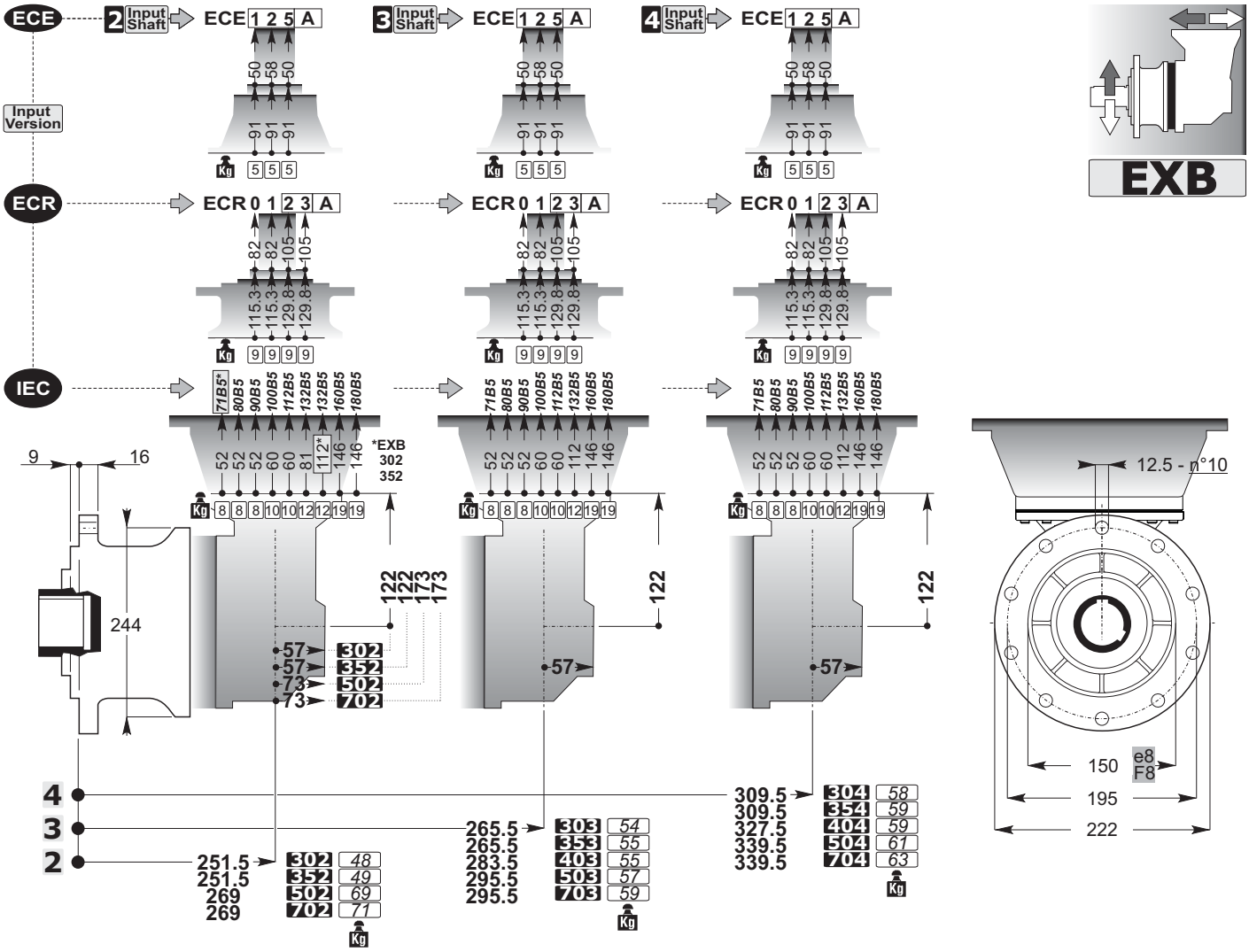

ECE
2 Input Shaft
ECE 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
302
352
10.5-n°12
222
200
244
f7
F8
10
Size 502-702
Not available

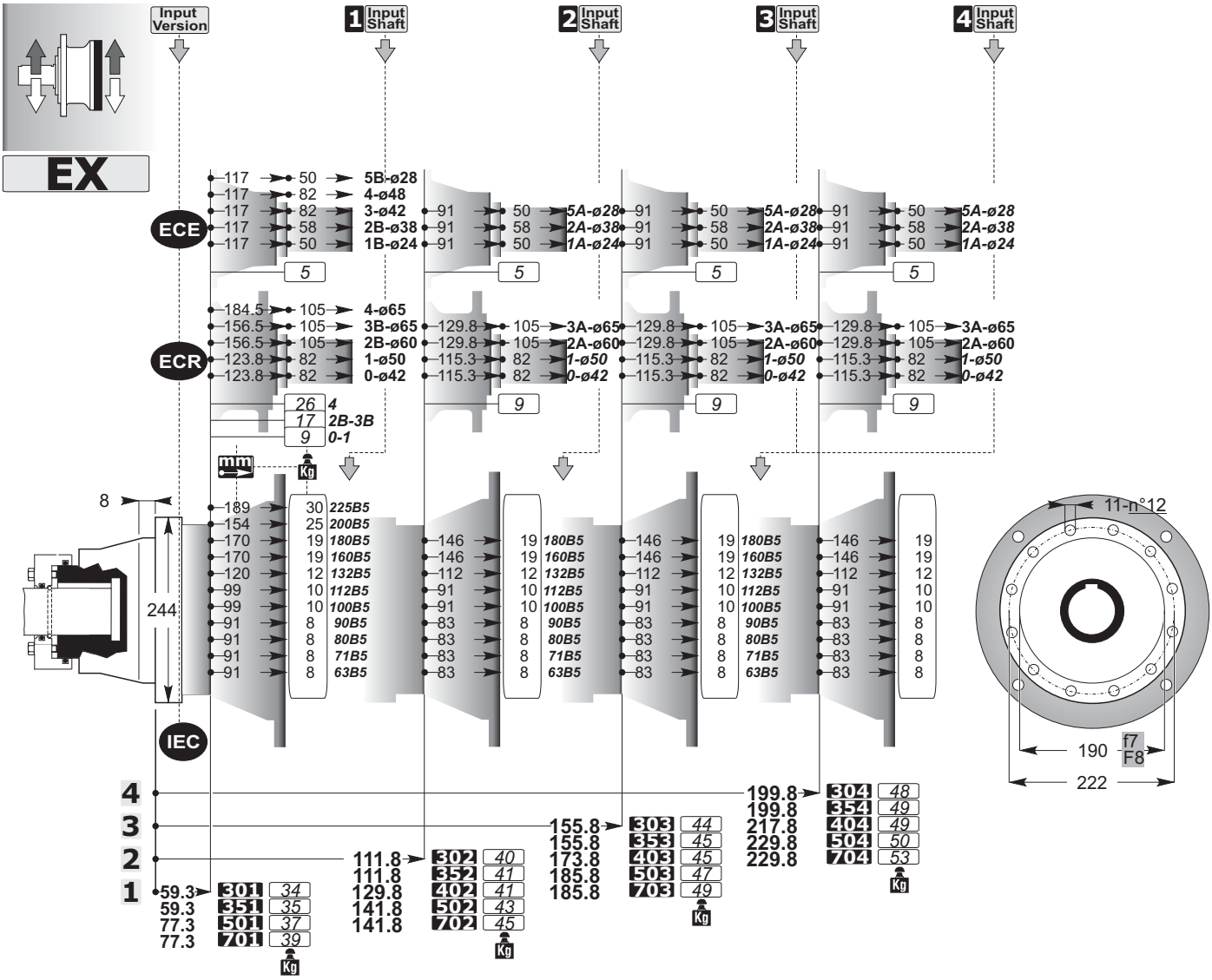

SD
5.5 Kg
B 58x53
DIN5482
300
SD
Accessories

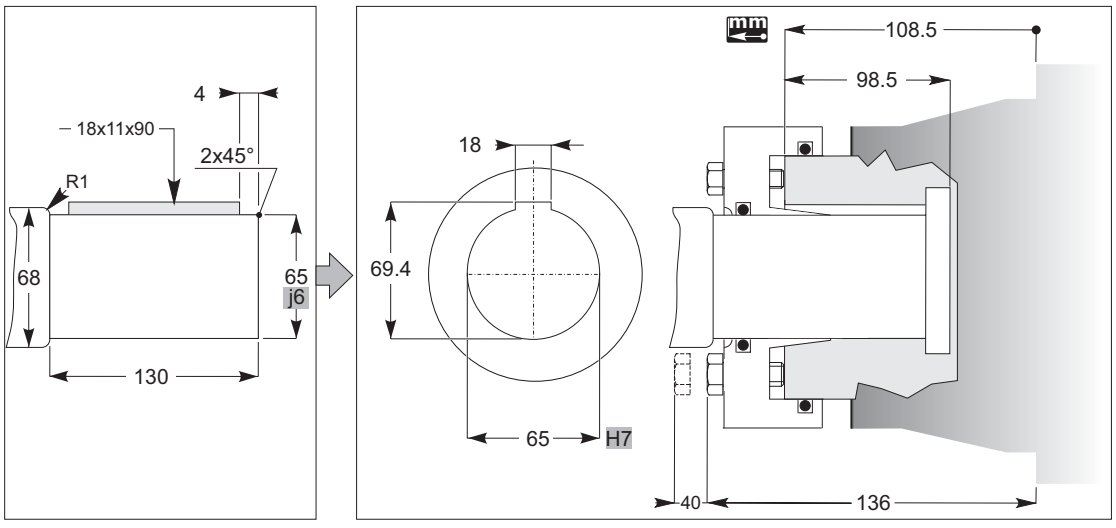




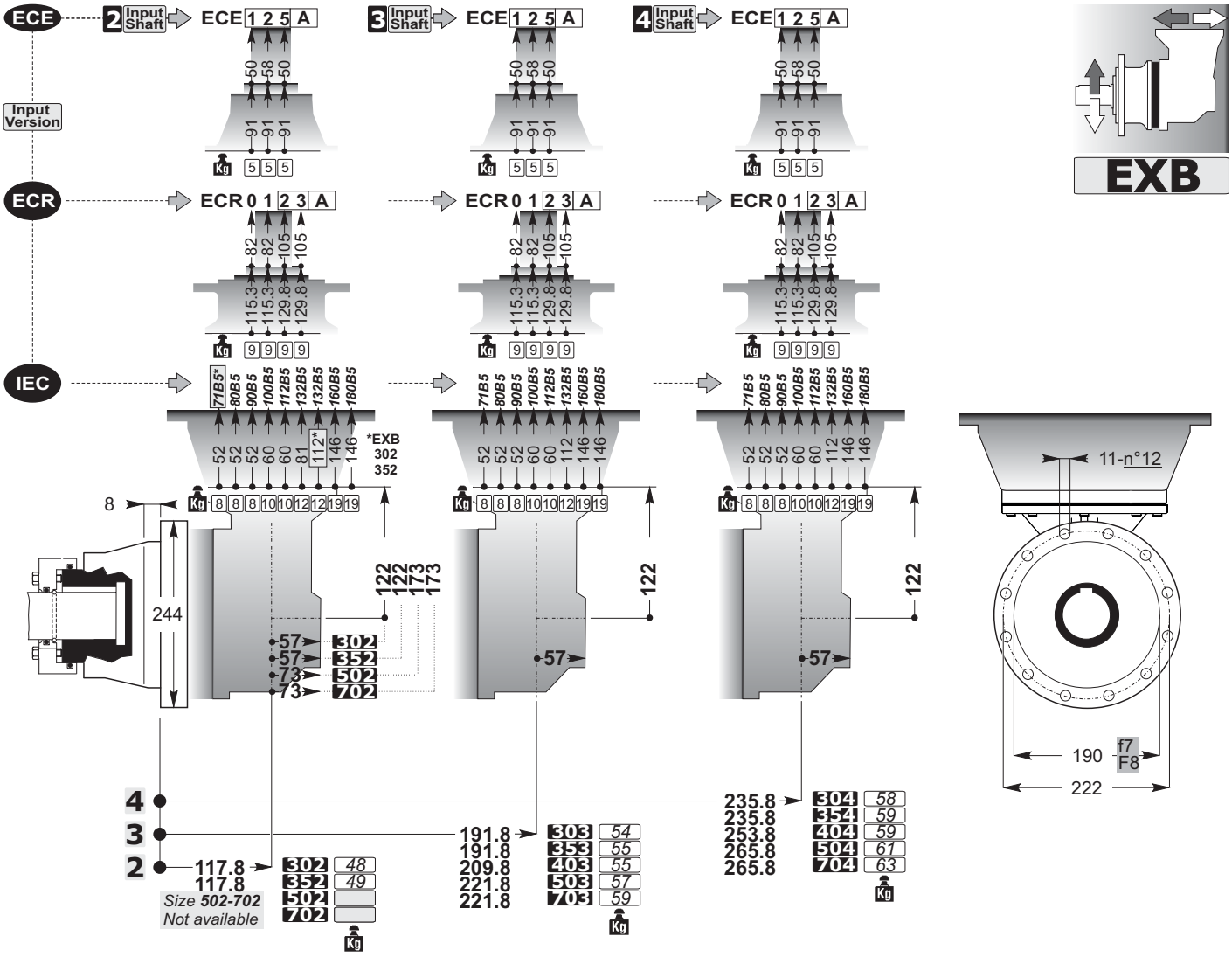
Output Shafts

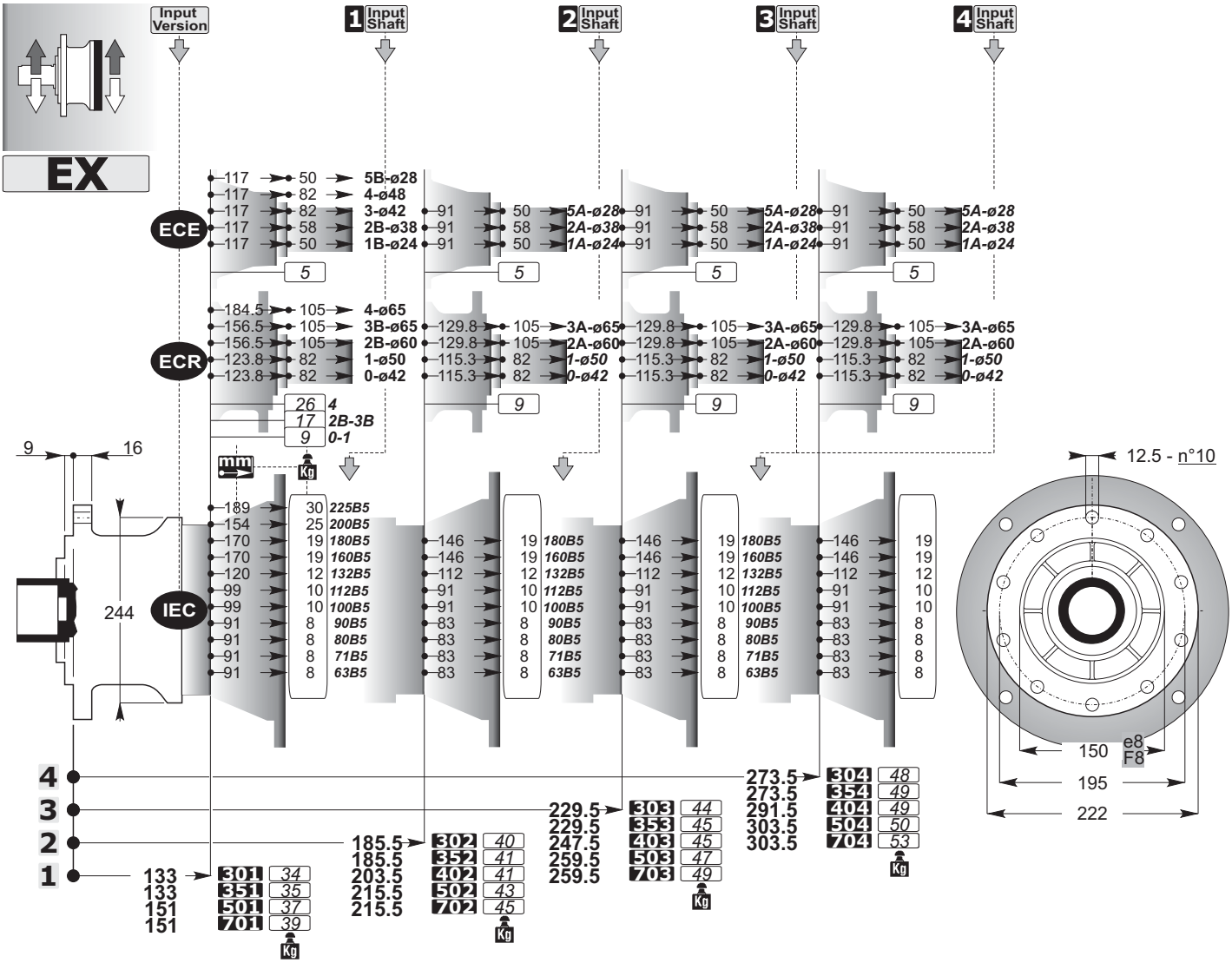

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
50 58 50
91 91 91
Kg 5 5 5
EXB
ECR
ECR 0 1 2 3 A
82 82 105 105
115.3 115.3 129.8 129.8
Kg 9 9 9 9
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
52 52 52 60 60 81 112* 146 146
52 52 52 60 60 112 146 146
52 52 52 60 60 112 146 146
*EXB
302
352
Kg 8 8 8 10 10 12 12 19 19
9
16
244
122
122
173
173
57
57
73
73
302
352
502
702
4
3
2
251.5
251.5
269
269
302 48
352 49
502 69
702 71
Kg
265.5
265.5
283.5
295.5
295.5
303 54
353 55
403 55
503 57
703 59
Kg
309.5
309.5
327.5
339.5
339.5
304 58
354 59
404 59
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704 63
Kg
12.5 - n°10
150
e8
F8
195
222

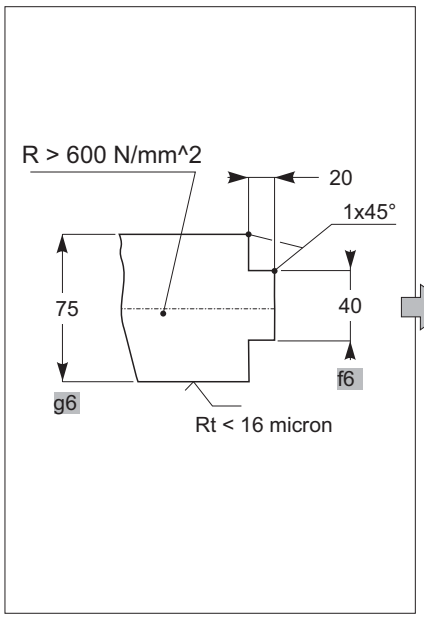


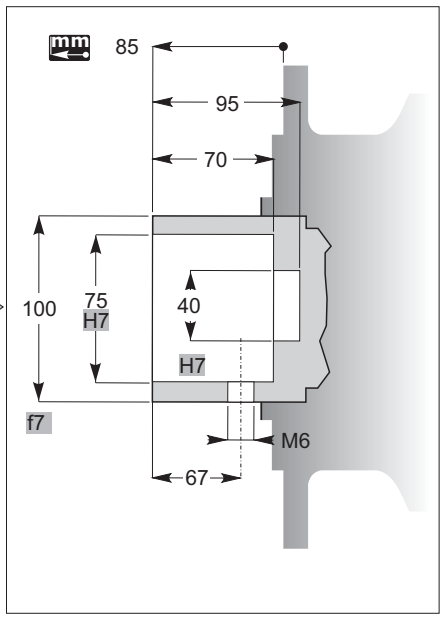


Output Shafts

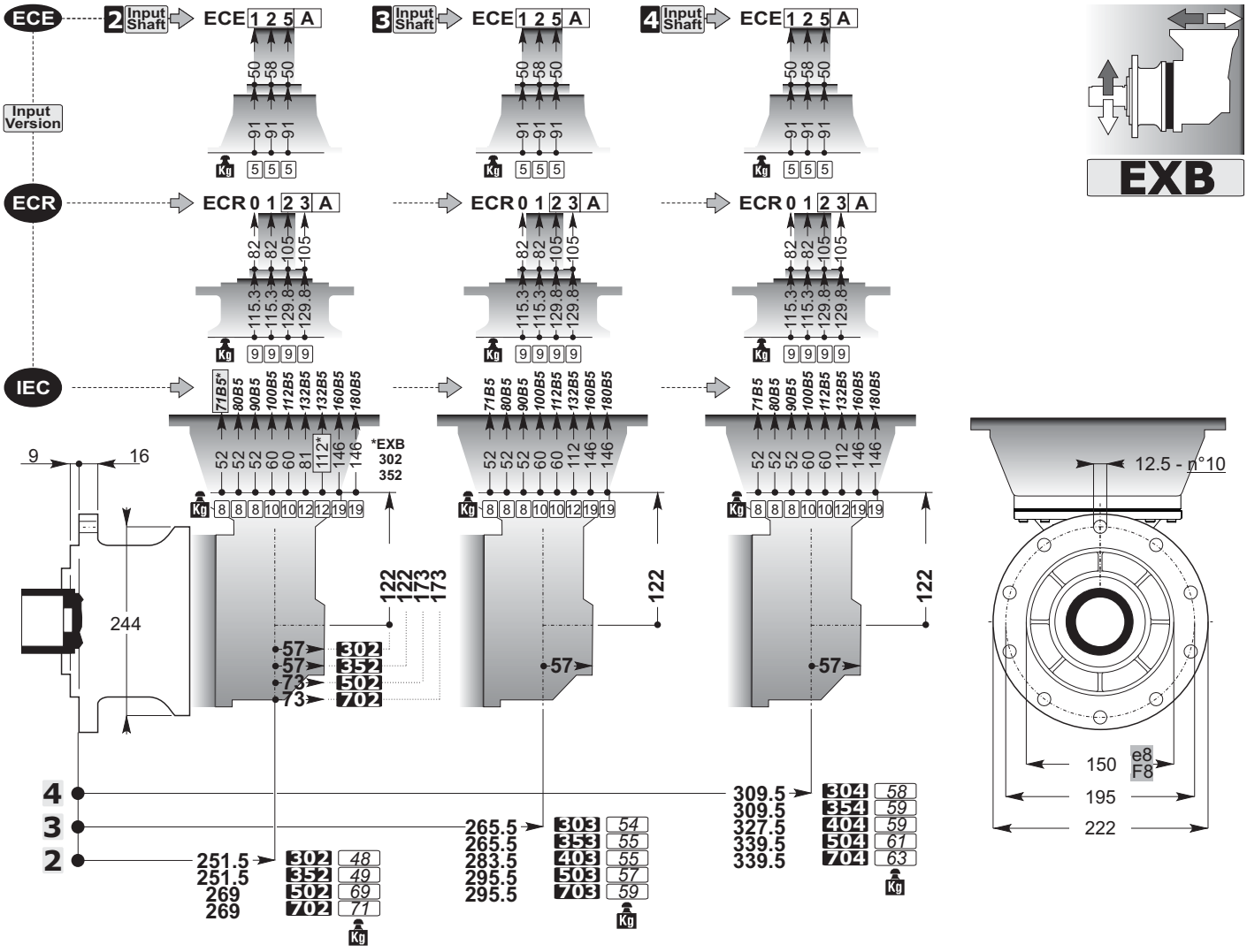

ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
8
244
122
122
173
173
57
57
73
73
302
352
502
702
57
57
122
122
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
57
57
122
122
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
4
3
2
117.8
117.8
Size 502-702
Not available
302 48
352 49
502
702
191.8
191.8
209.8
221.8
221.8
303 54
353 55
403 55
503 57
703 59
235.8
235.8
253.8
265.8
265.8
304 58
354 59
404 59
504 61
704 63
11-n°12
190 f7 F8
222
EXB

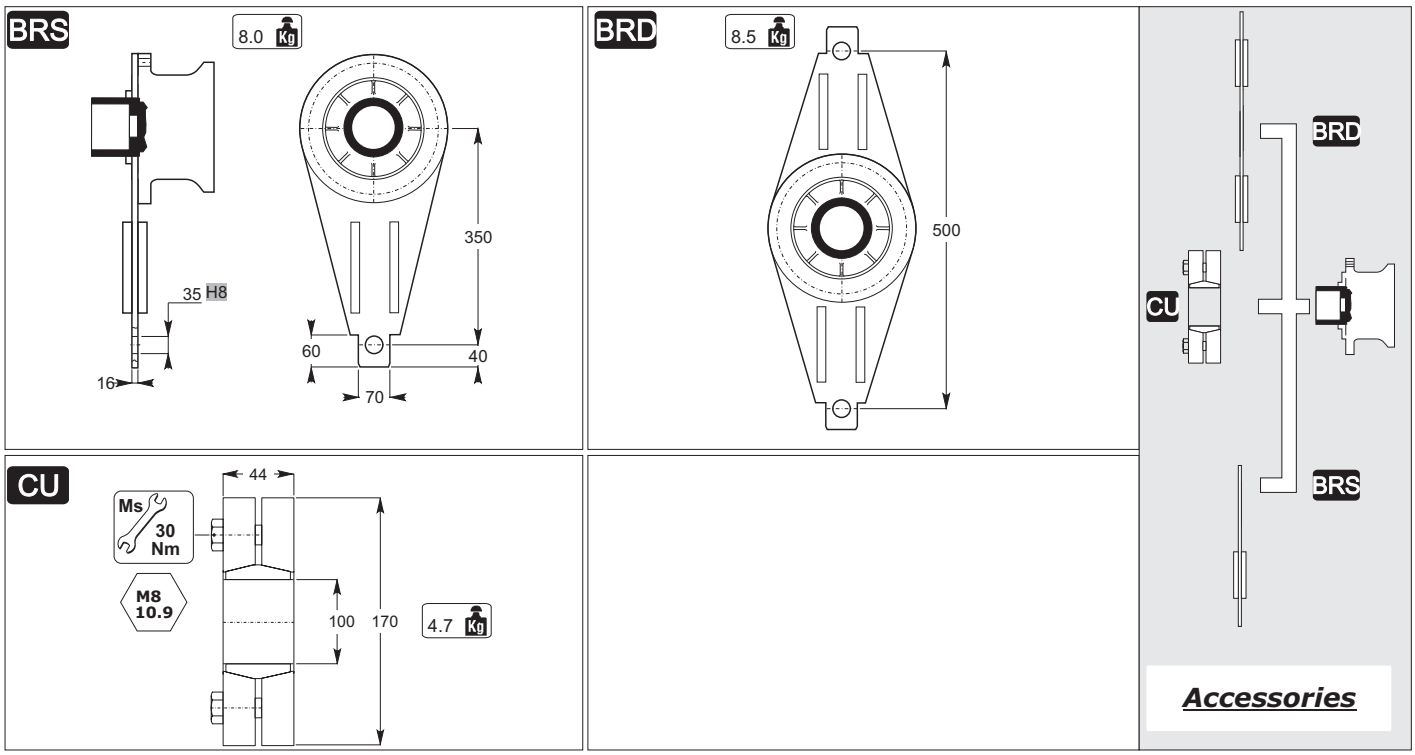


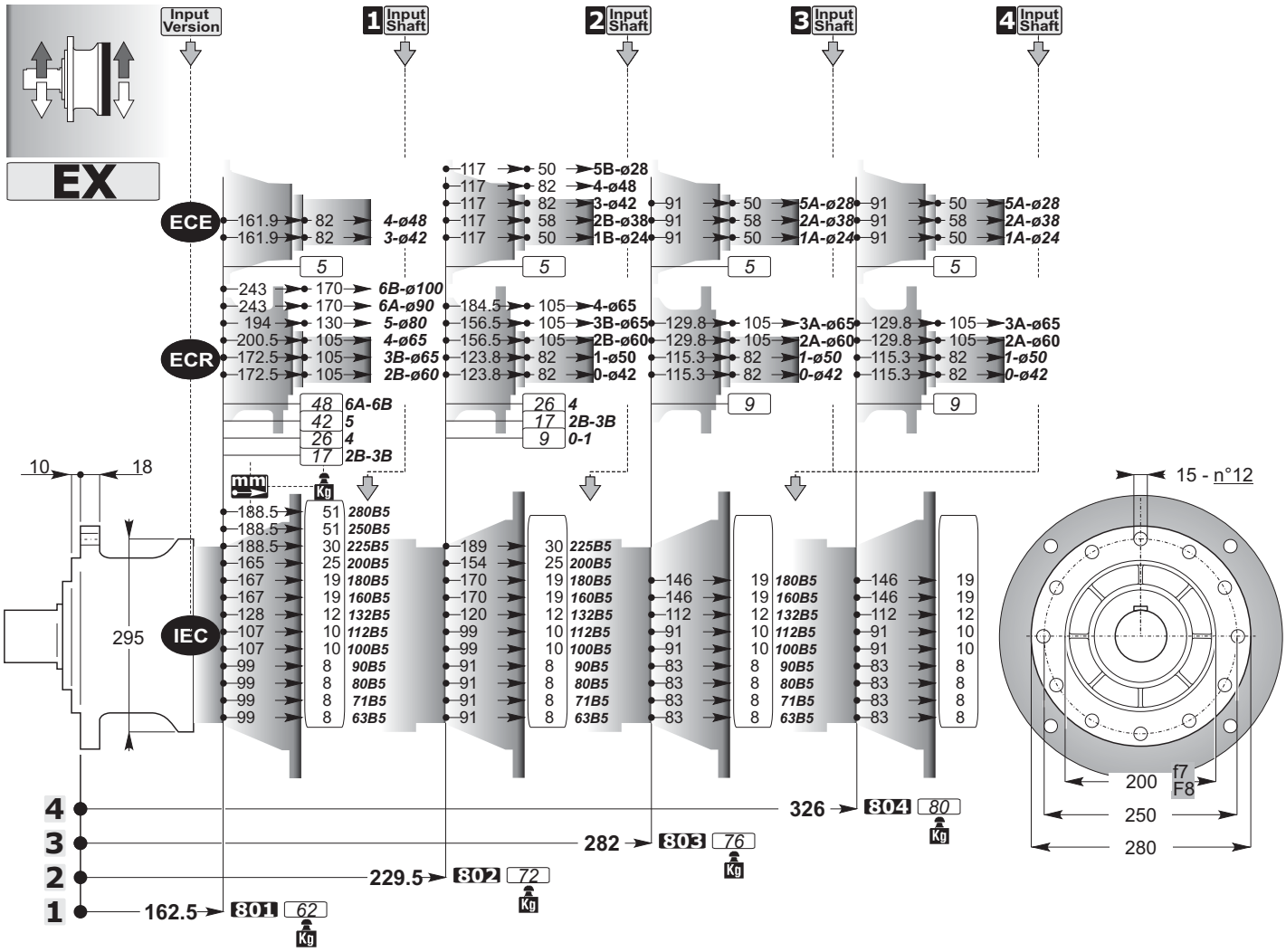


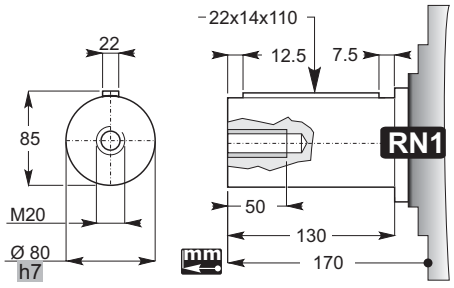


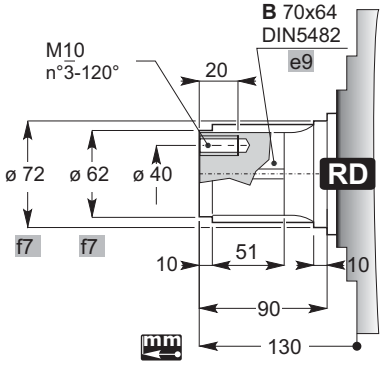
Output Shafts


ECE
2 Input Shaft
ECE 1 2 5 A
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
302
352
9
16
244
122
122
173
173
57
57
73
73
302
352
502
702
4
3
2
251.5
251.5
269
269
265.5
265.5
283.5
295.5
295.5
309.5
309.5
327.5
339.5
339.5
303 54
353 55
403 55
503 57
703 59
304 58
354 59
404 59
504 61
704 63
12.5 - n°10
150 e8 F8
195
222
EXB

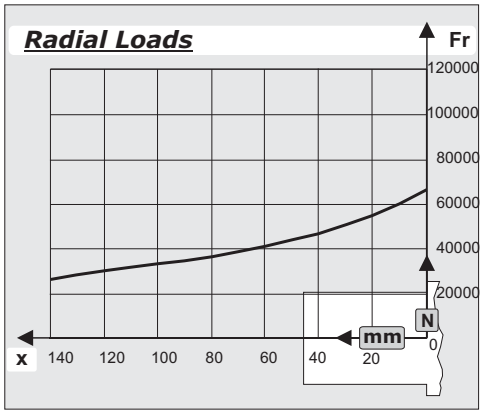

BRS
8.0 Kg
35 H8
16
350
60
40
70
BRD
8.5 Kg
500
CU
Ms
30
Nm
M8
10.9
44
100
170
4.7 Kg
BRD
CU
BRS
Accessories

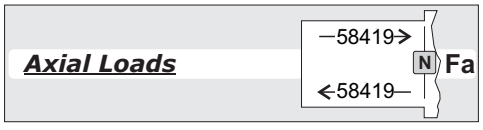


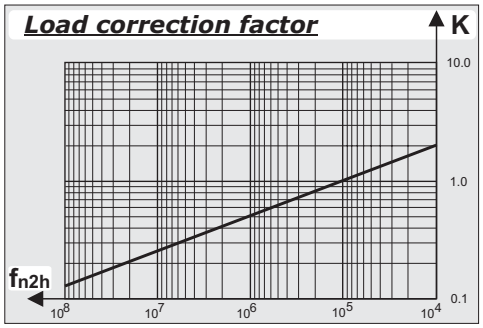


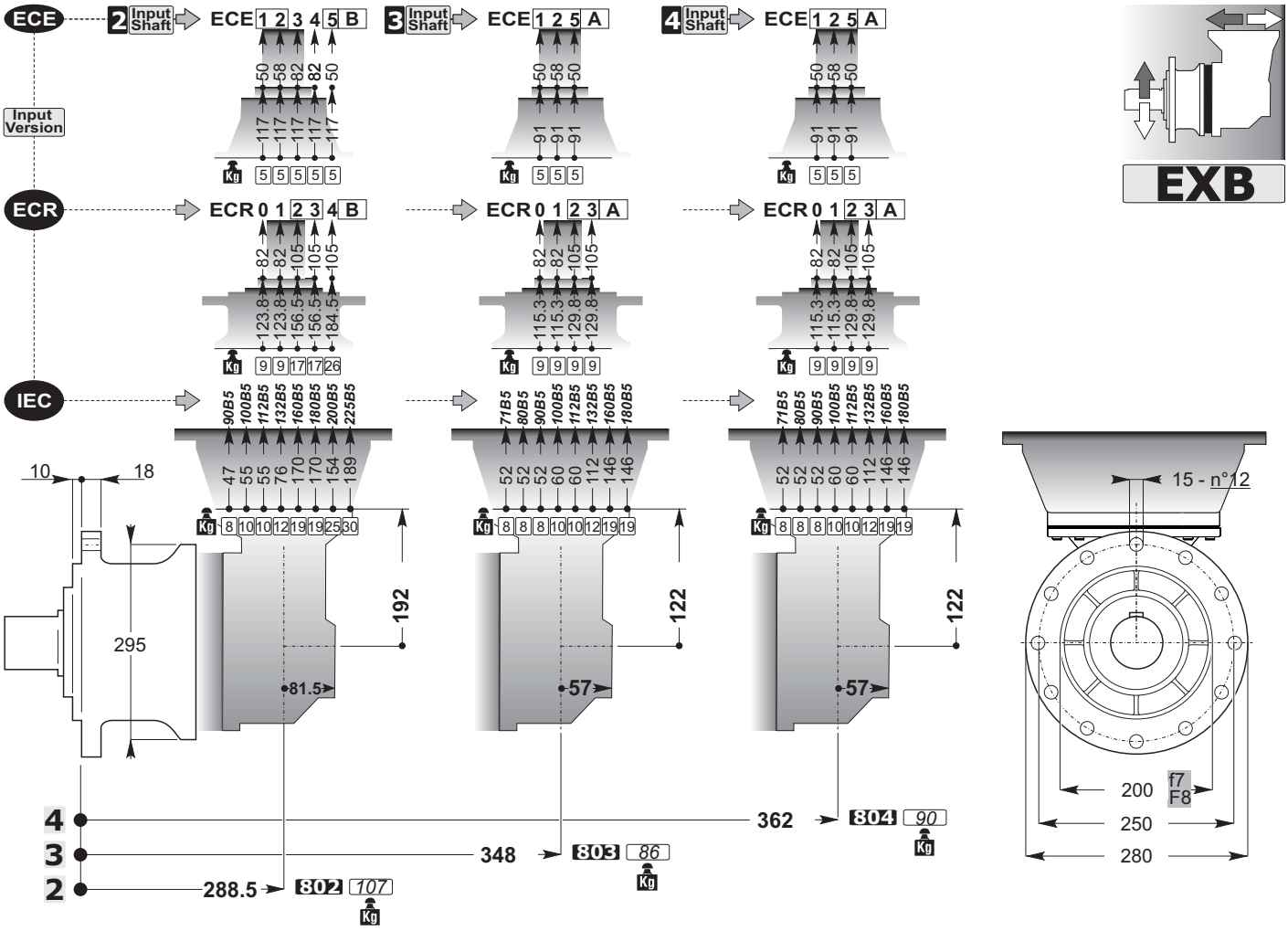


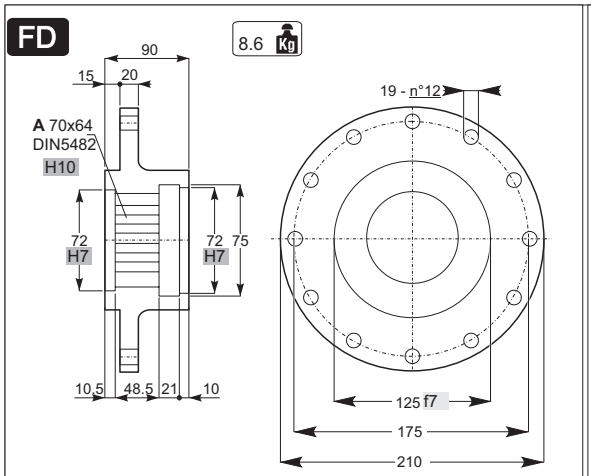
Output Shafts

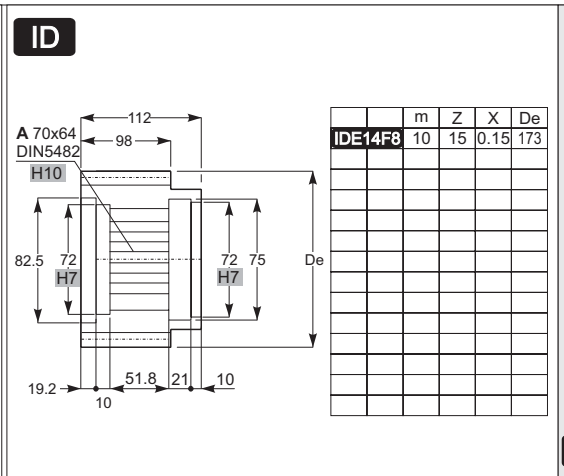




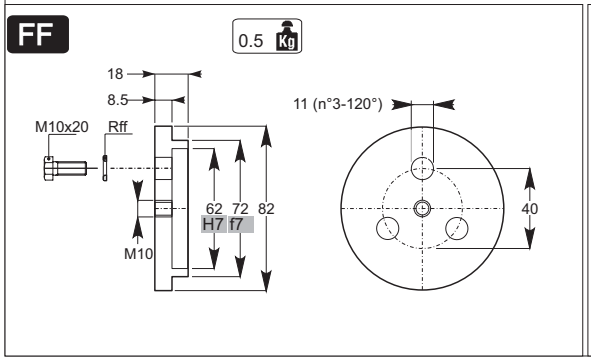


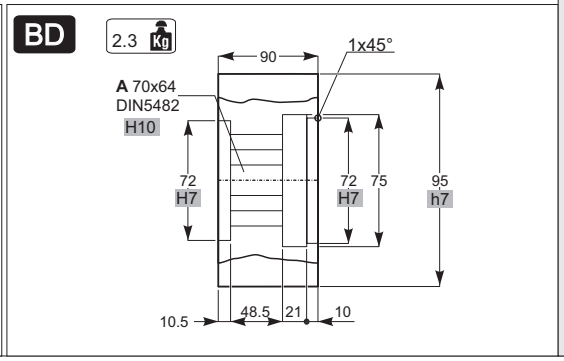


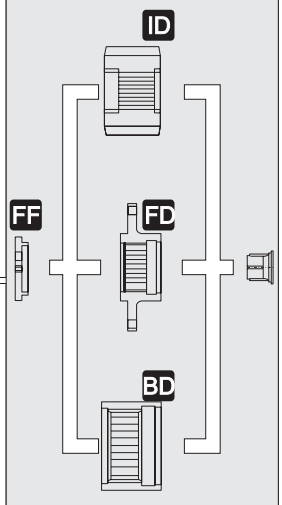




		m	Z	X	De
IDE	14F8	10	15	0.15	173

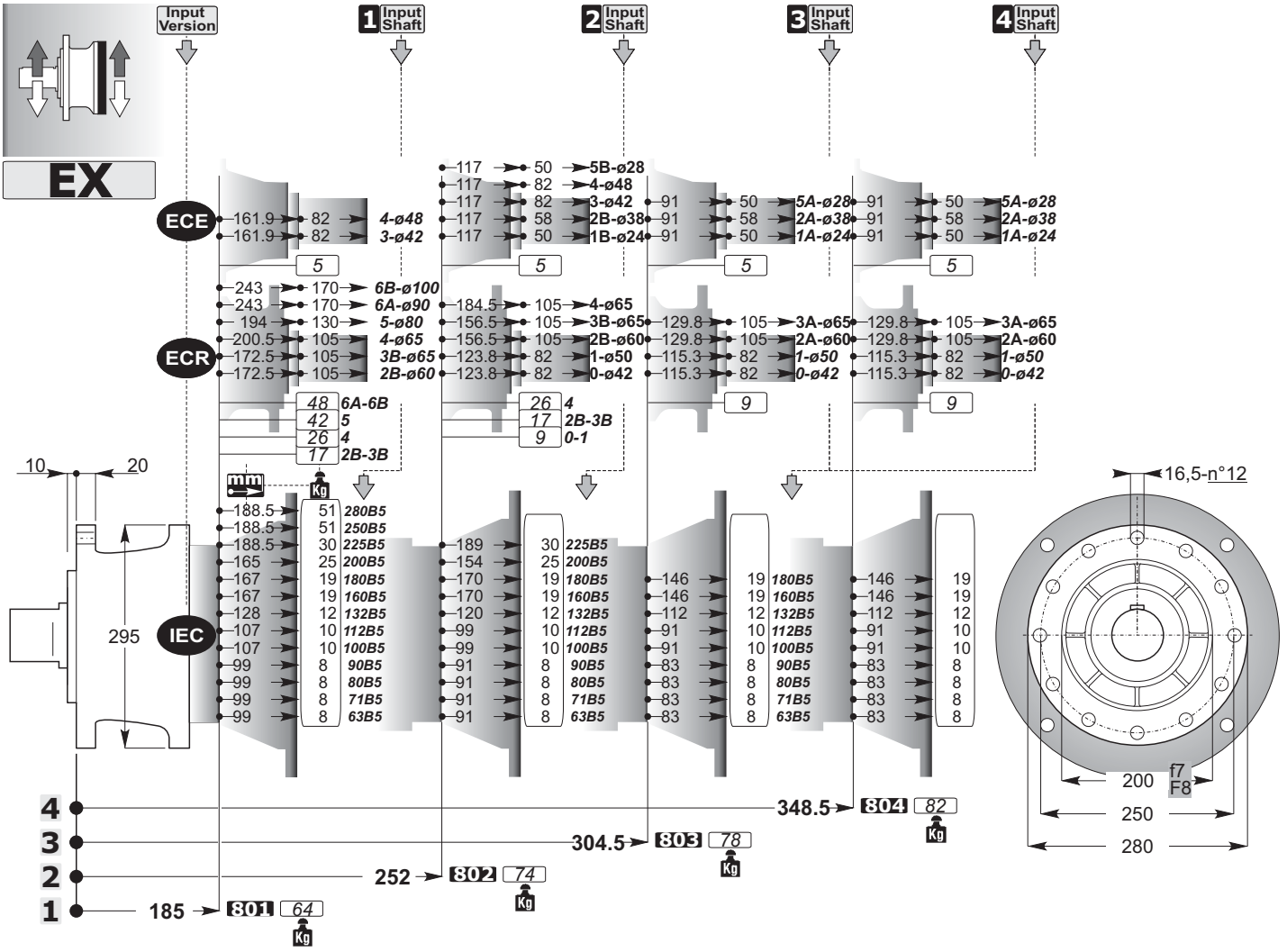


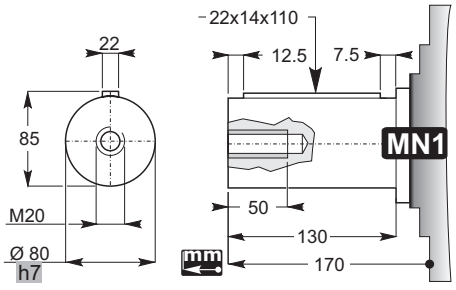


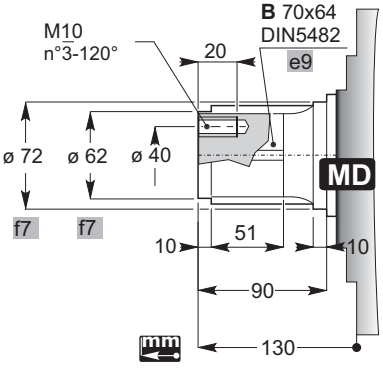


Accessories

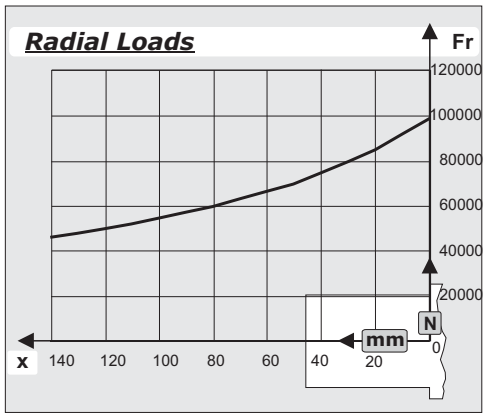
mm
C

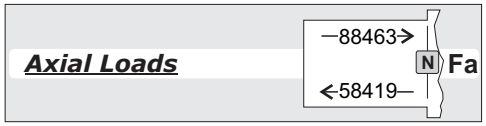


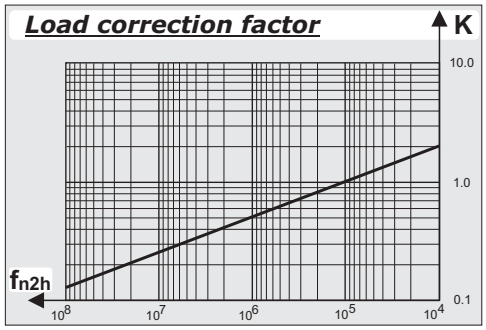


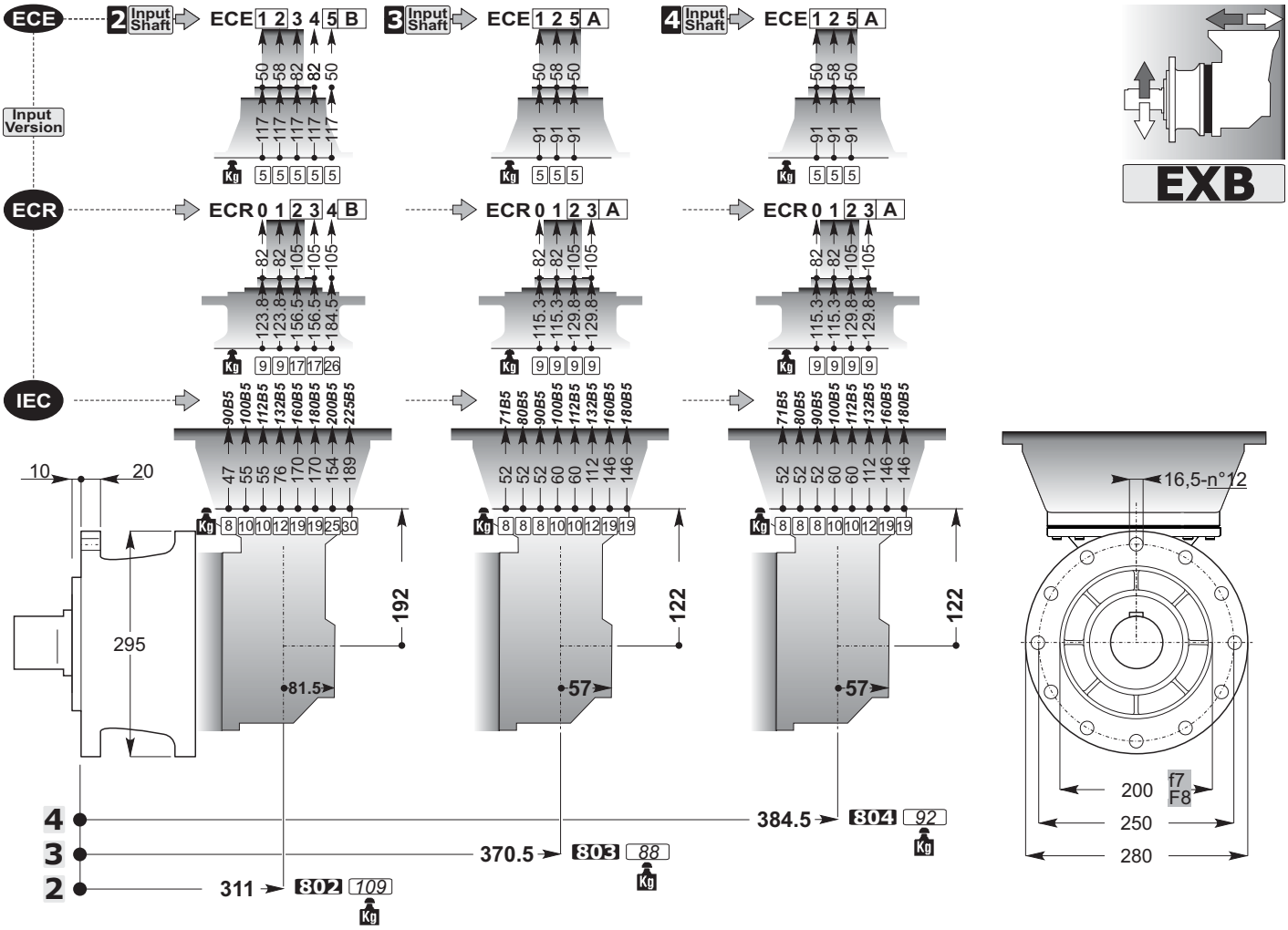


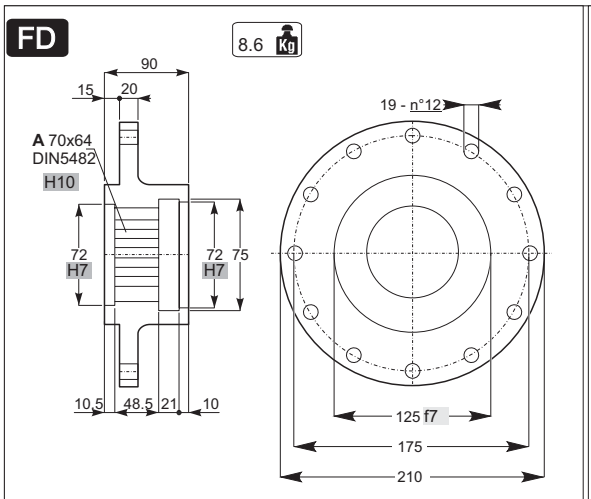
Output Shafts

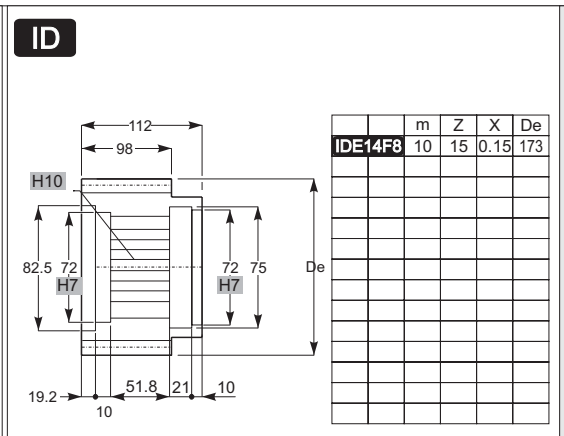




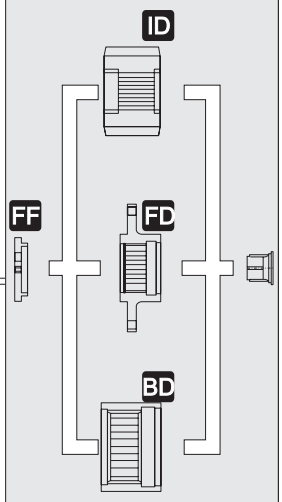


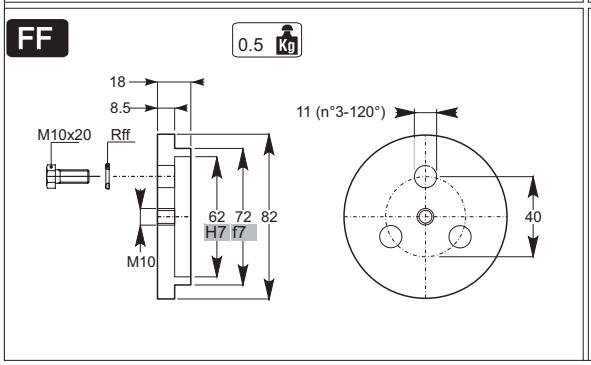


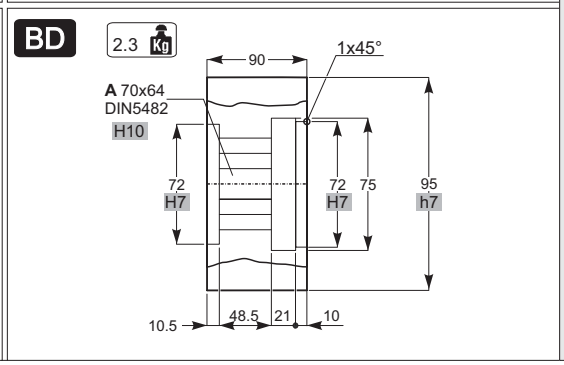




	m	Z	X	De
IDE14F8	10	15	0.15	173

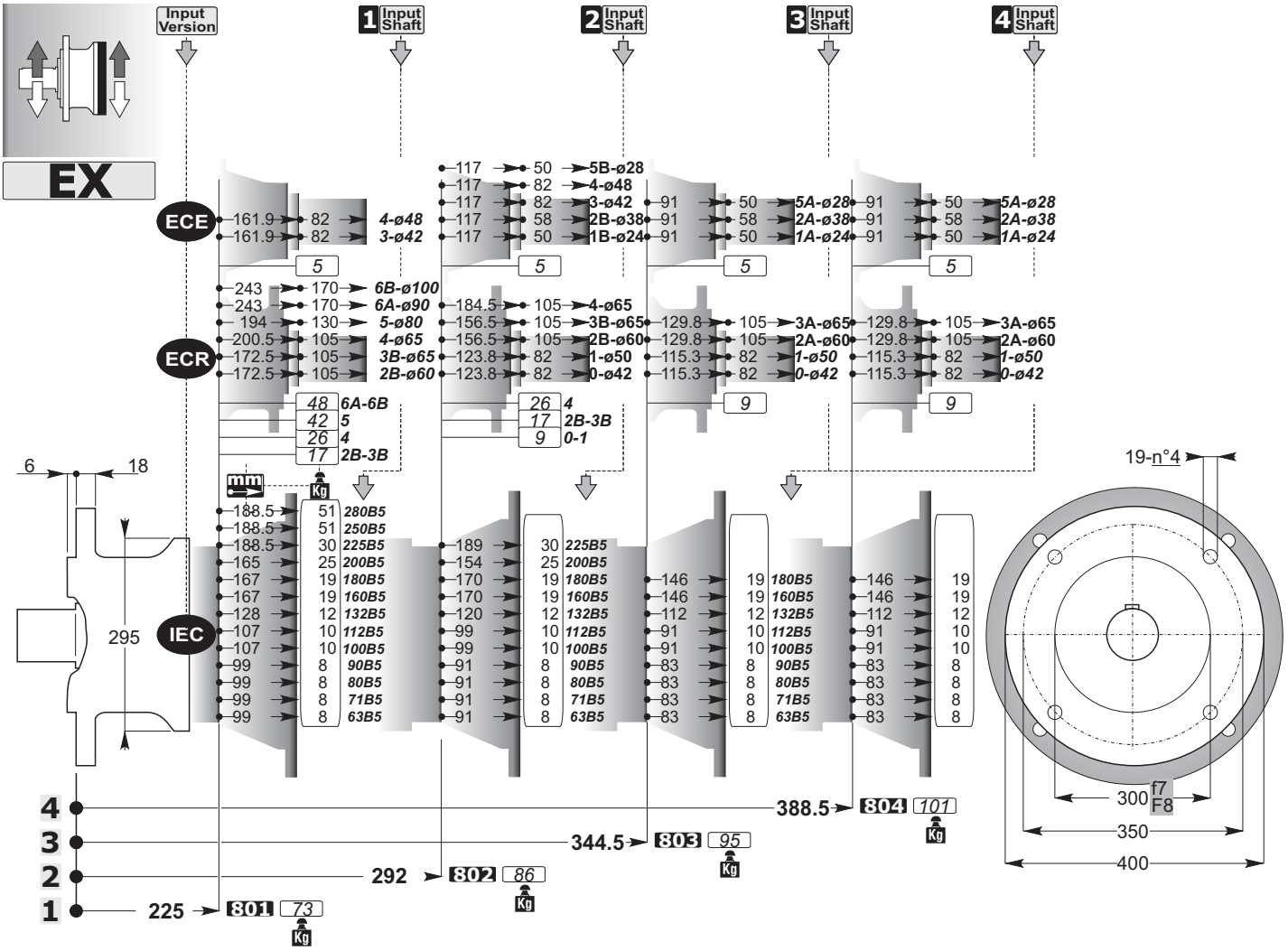


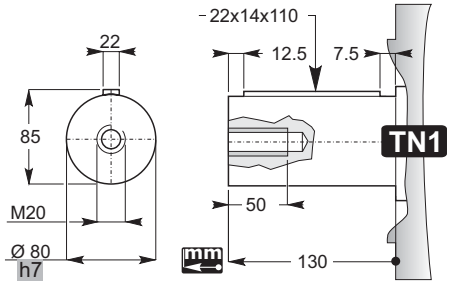


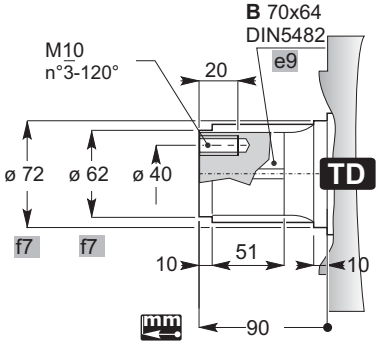


Accessories

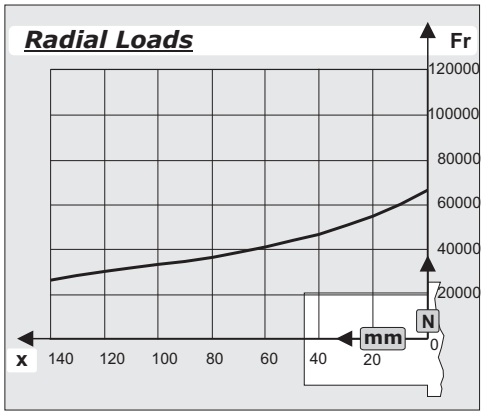
mm
C

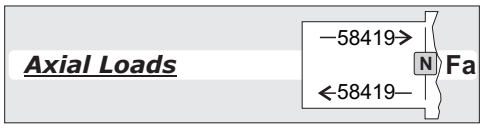


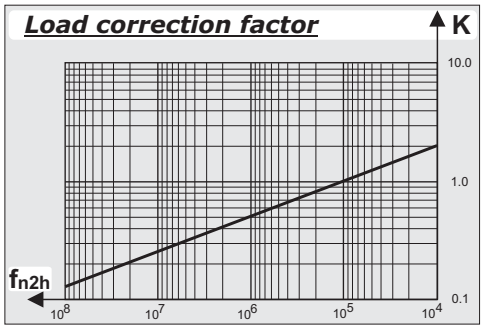


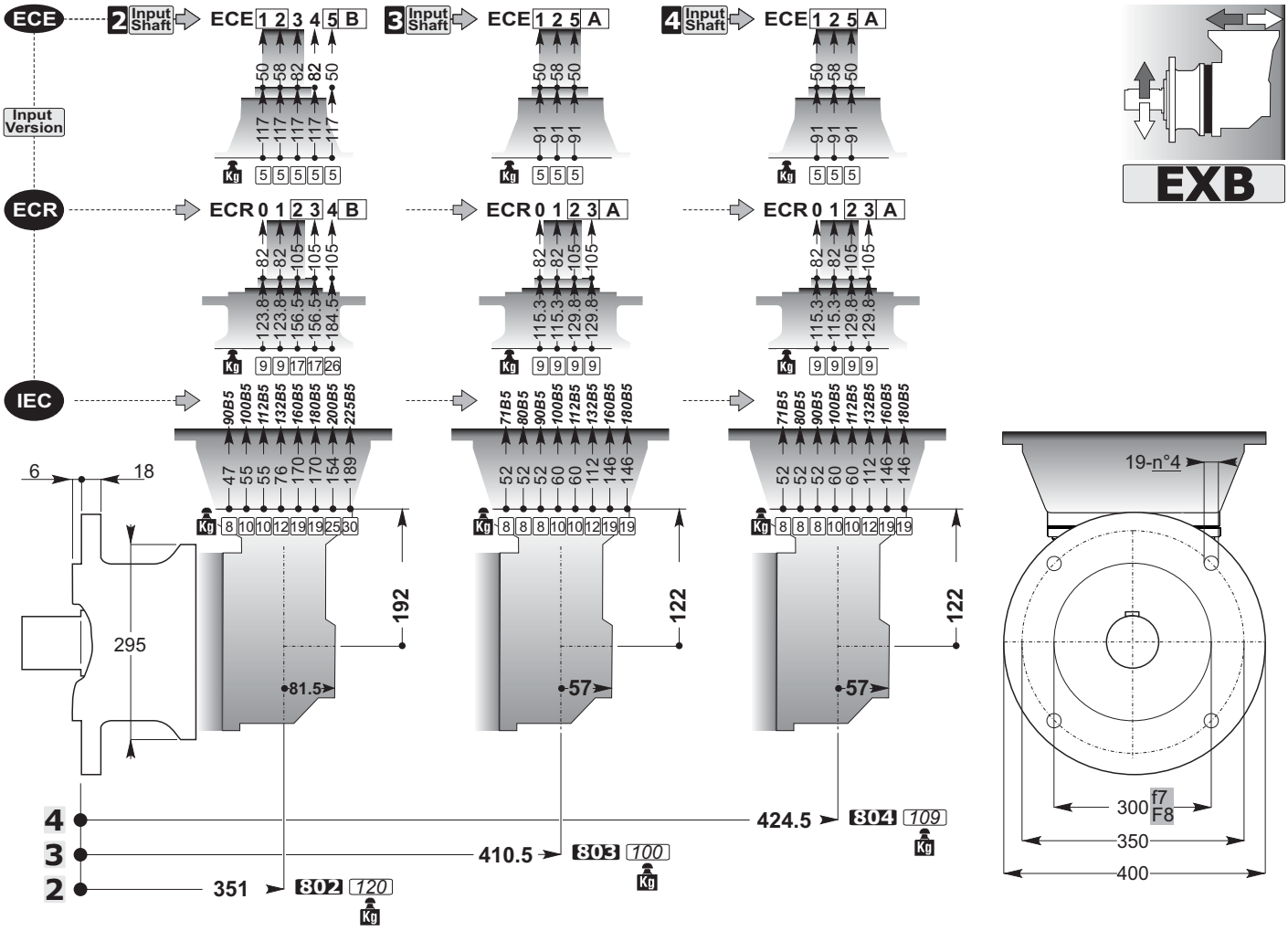


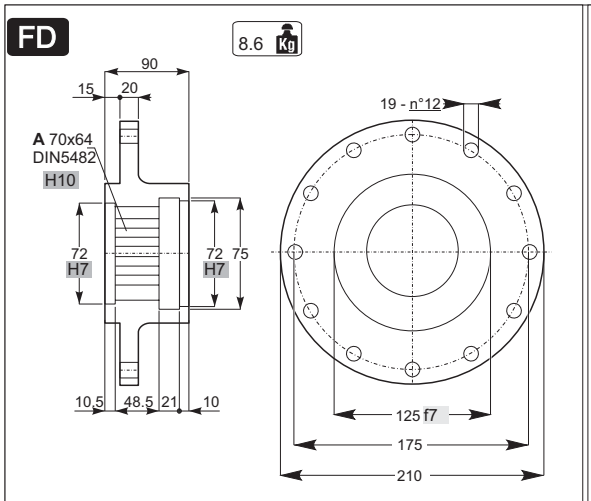
Output Shafts

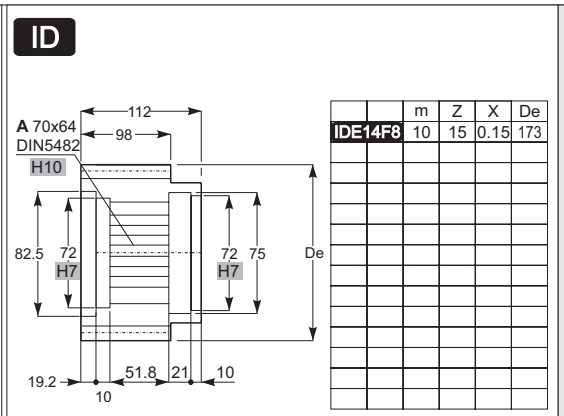




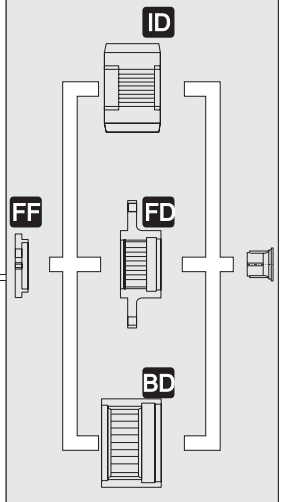




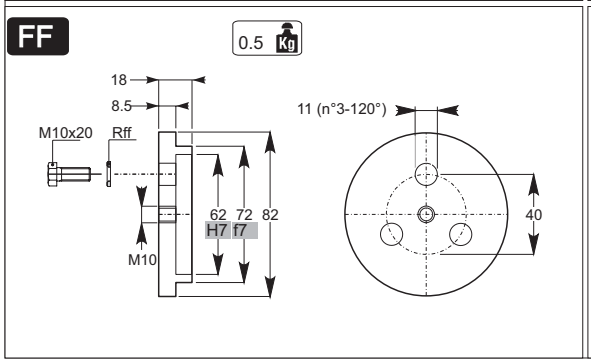


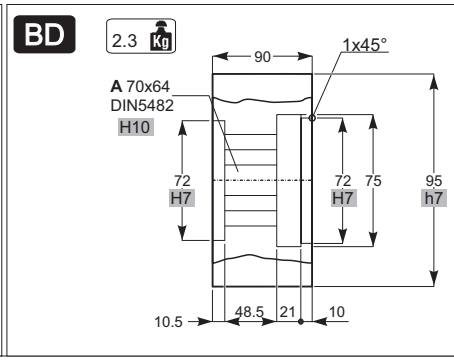


	m	Z	X	De
IDE14F8	10	15	0.15	173

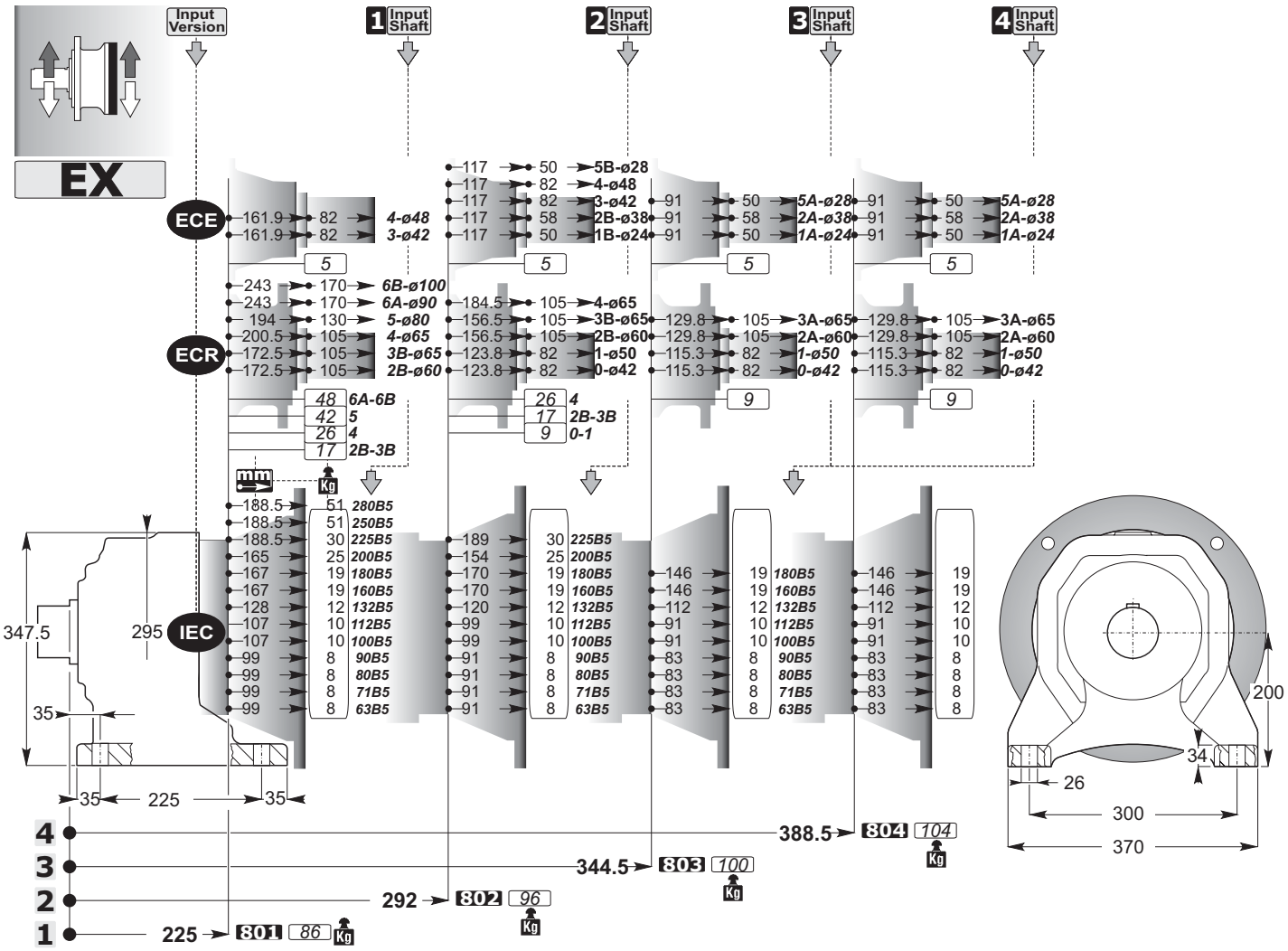


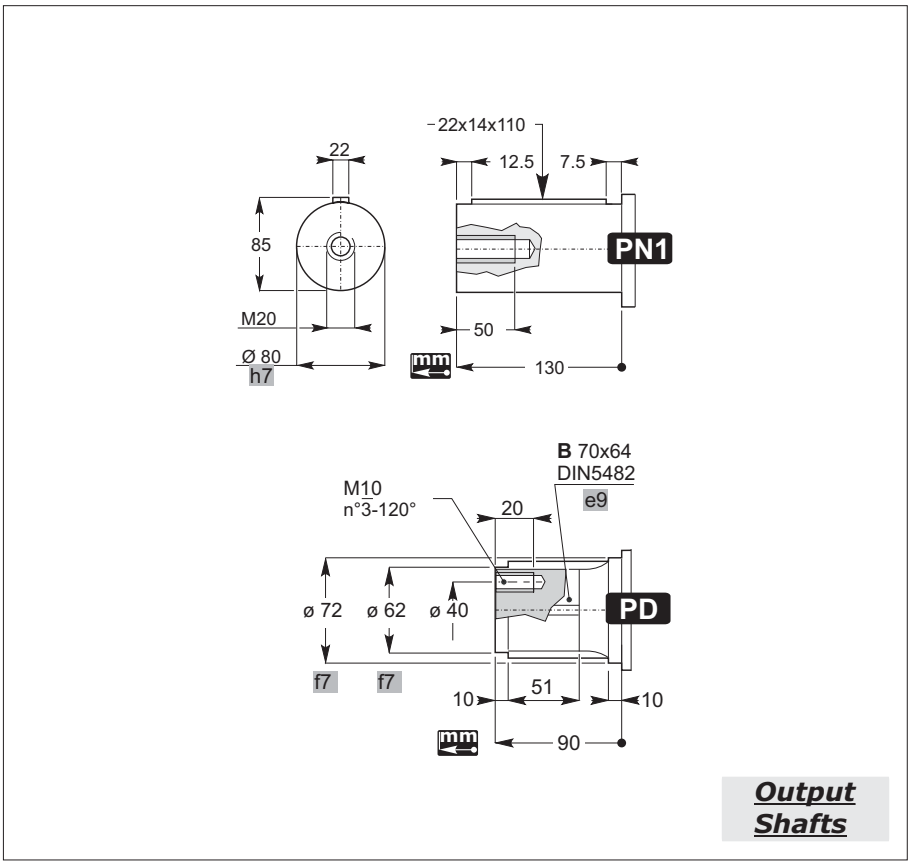
Accessories

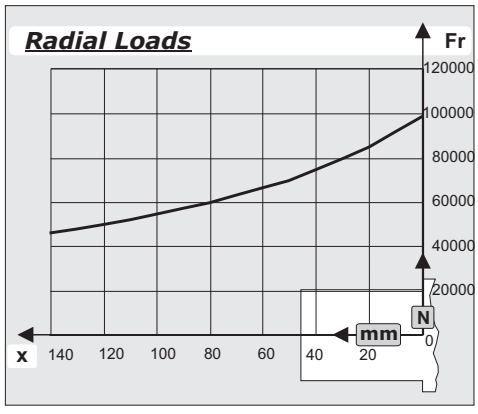


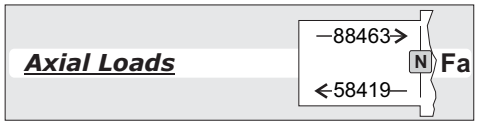


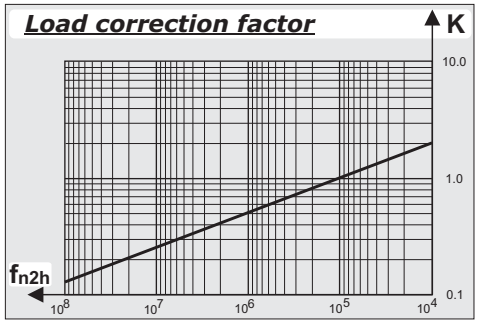
mm
C

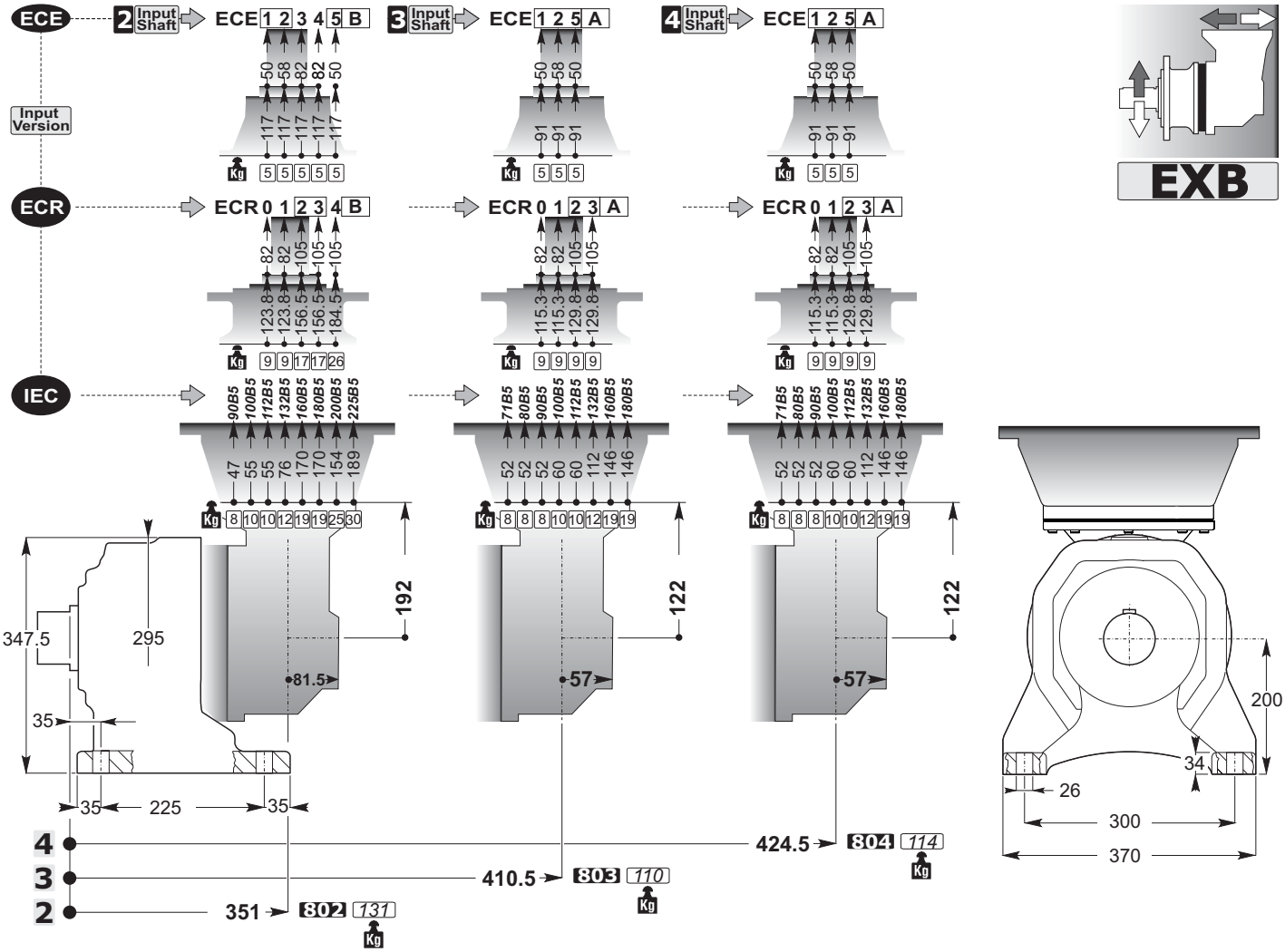

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
4-ø48
3-ø42
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
5A-ø28
2A-ø38
1A-ø24
6B-ø100
6A-ø90
5-ø80
4-ø65
3B-ø65
2B-ø60
4-ø65
3B-ø65
2B-ø60
1-ø50
0-ø42
3A-ø65
2A-ø60
1-ø50
0-ø42
6A-6B
5
4
2B-3B
4
2B-3B
0-1
280B5
250B5
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
347.5
295
35
35
225
35
200
34
26
300
370
388.5
804
104
344.5
803
100
292
802
96
225
801
86
Kg
mm

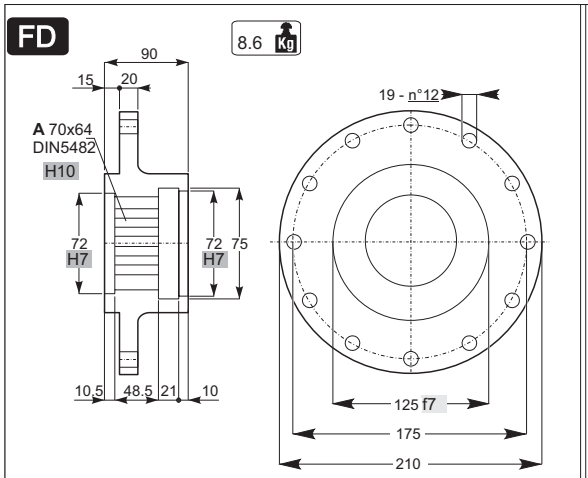

22
85
M20
Ø 80
h7
22x14x110
12.5
7.5
PN1
50
130
mm
B 70x64
DIN5482
e9
M10
n°3-120°
20
ø 72
ø 62
ø 40
PD
f7
f7
10
51
10
90
Output Shafts

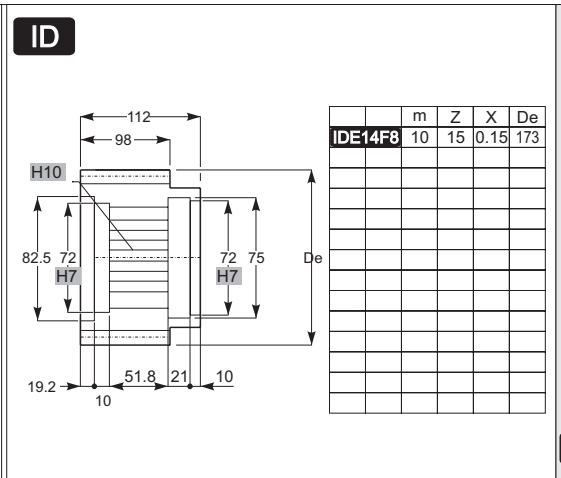

Radial Loads
Fr
120000
100000
80000
60000
40000
20000
N
mm
x
140
120
100
80
60
40
20
0


Axial Loads
88463
N
Fa
58419

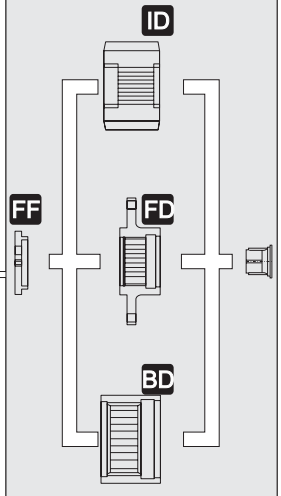

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4



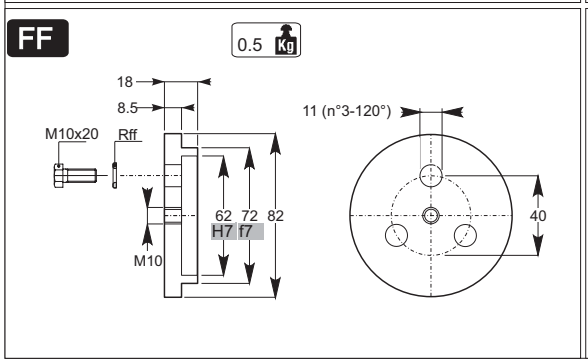


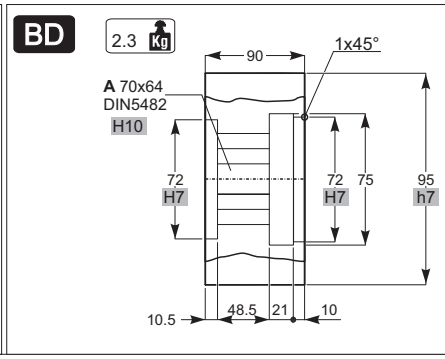


	m	Z	X	De
IDE14F8	10	15	0.15	173

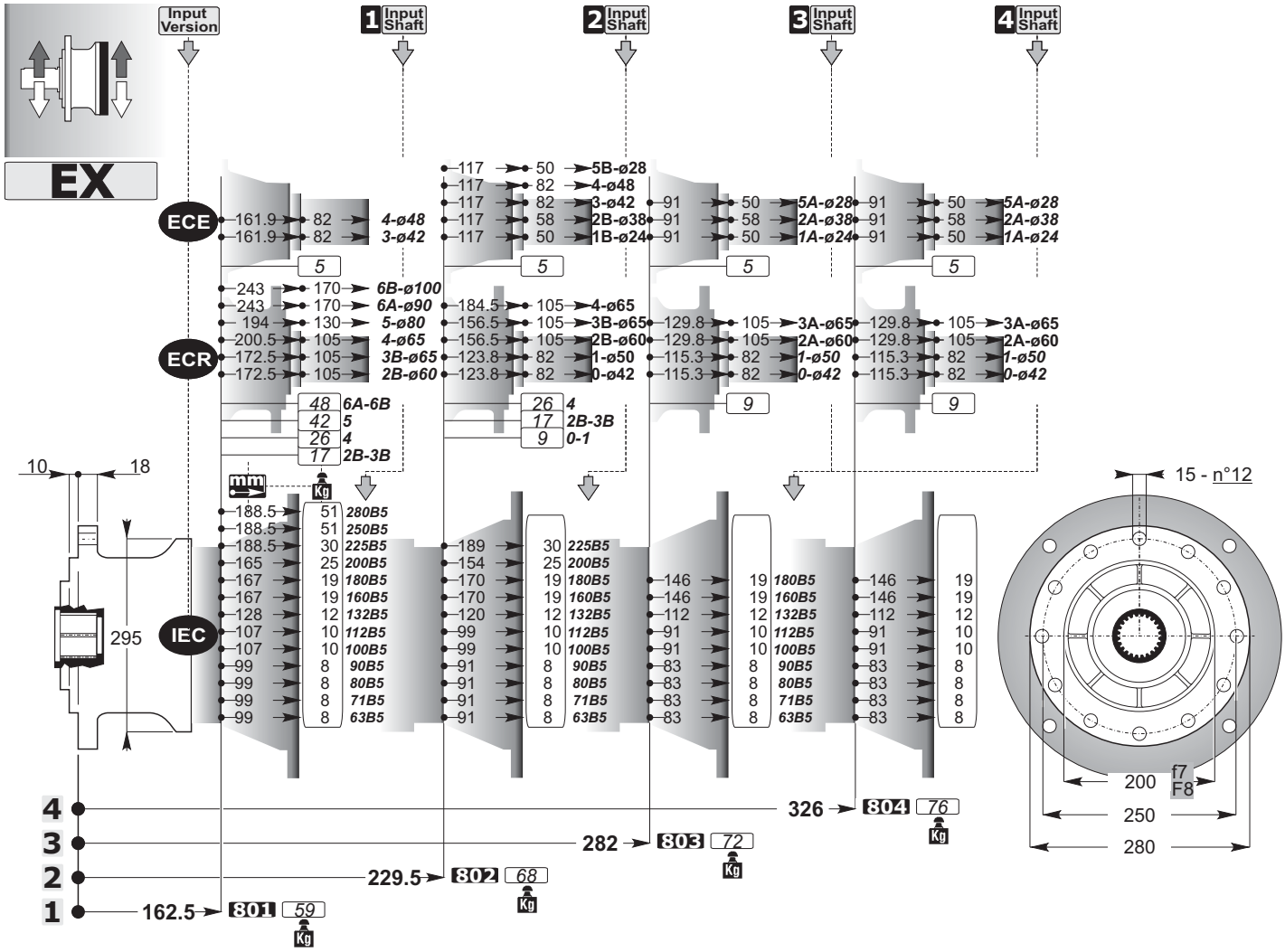


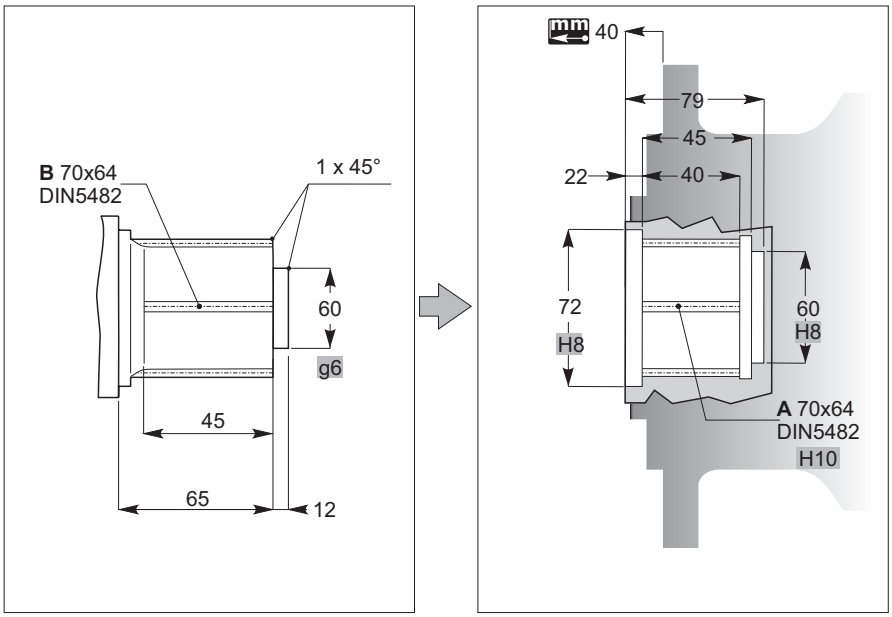
Accessories



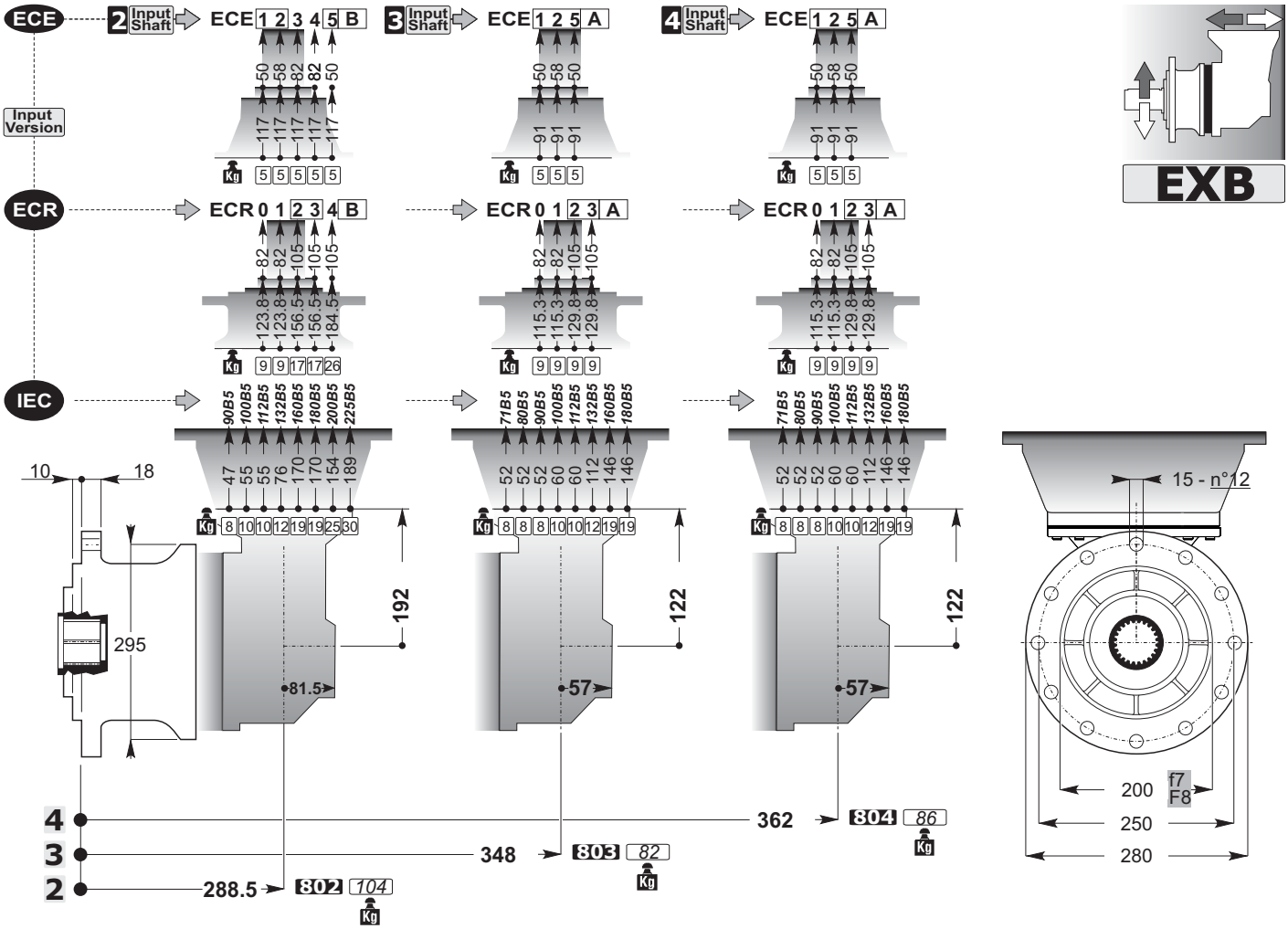


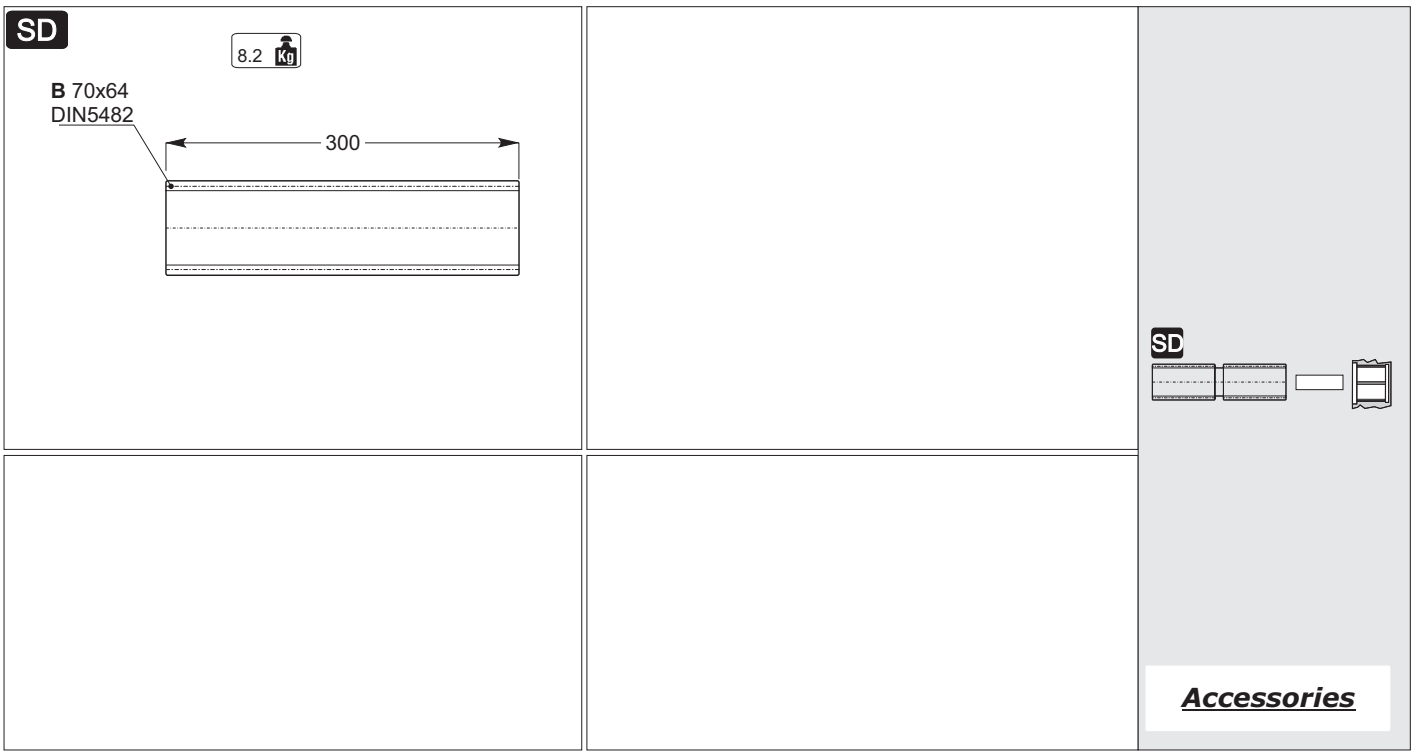
mm
C

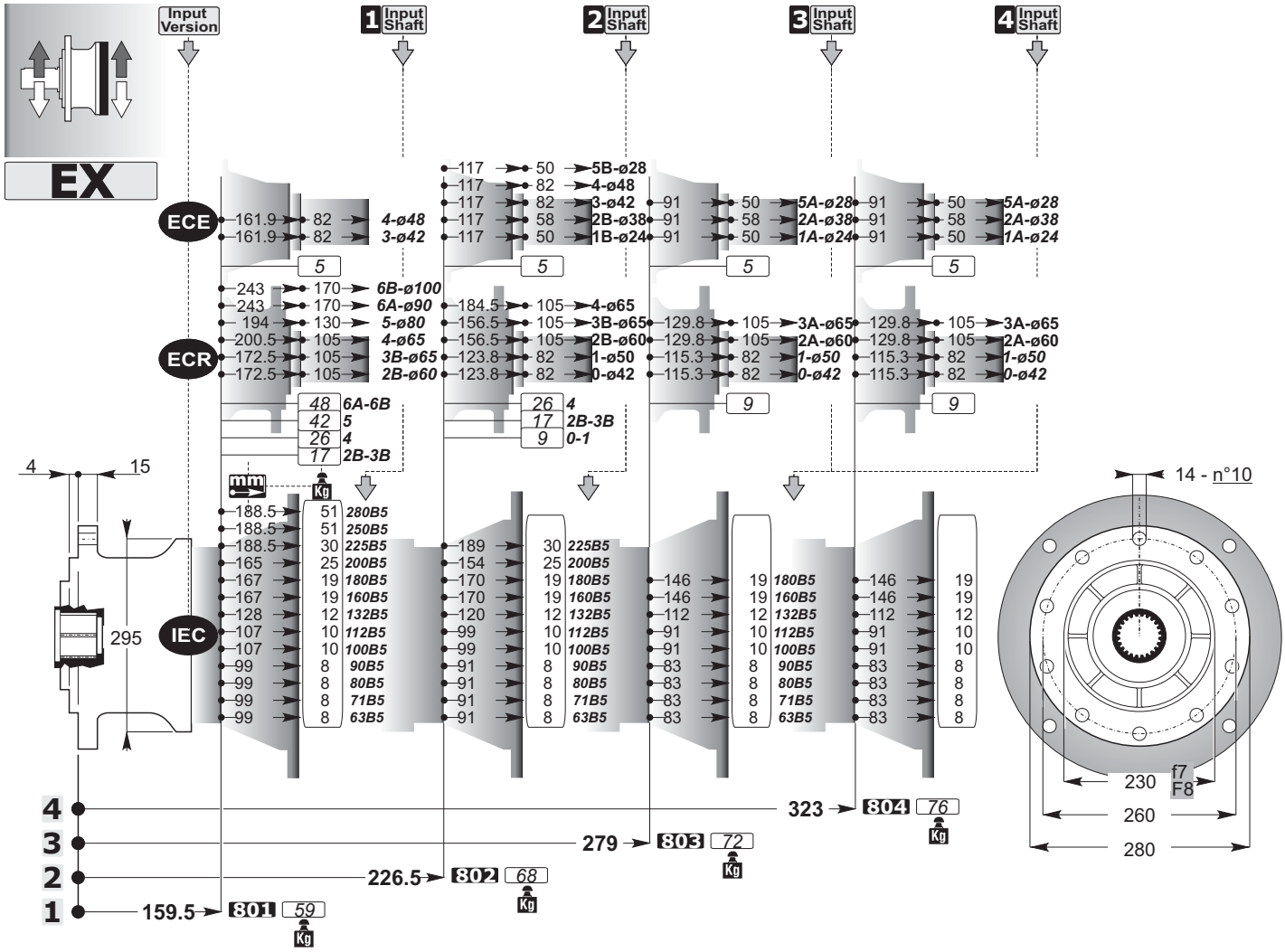


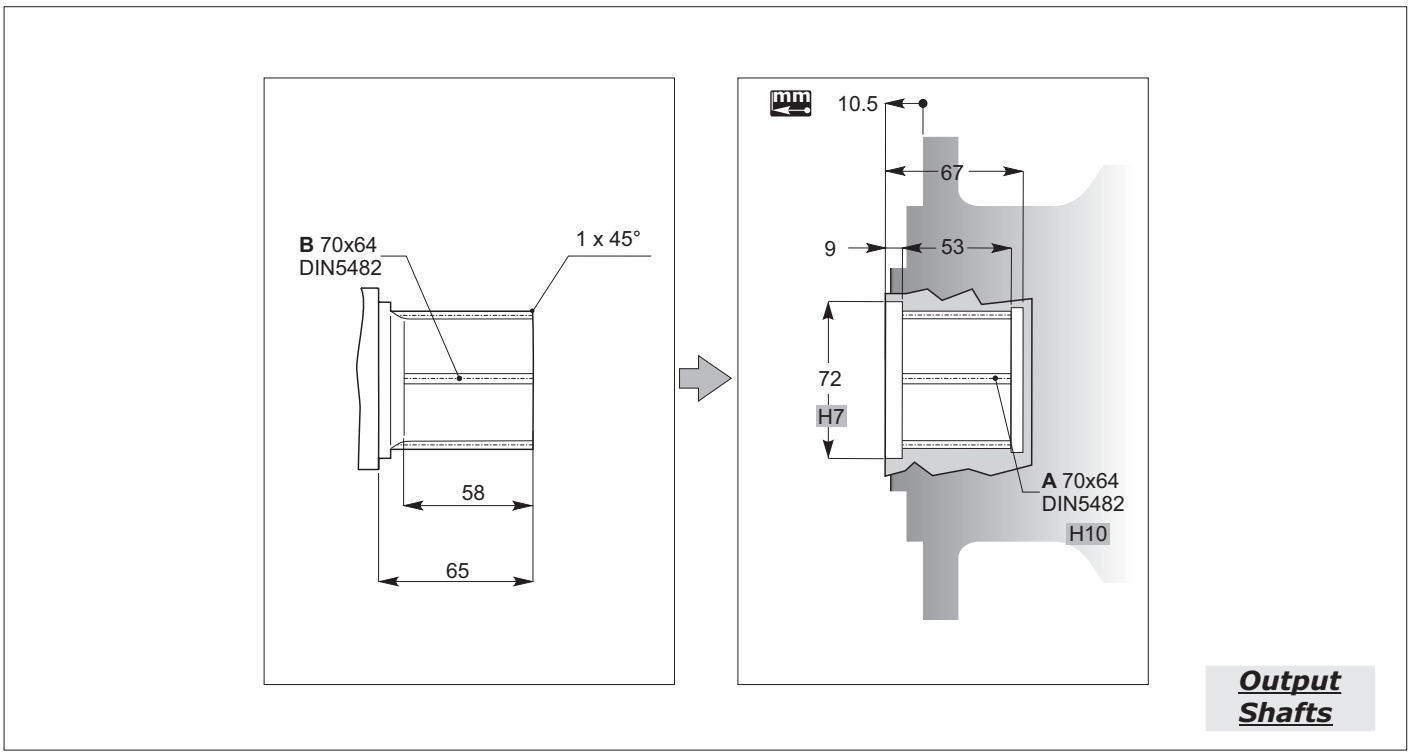


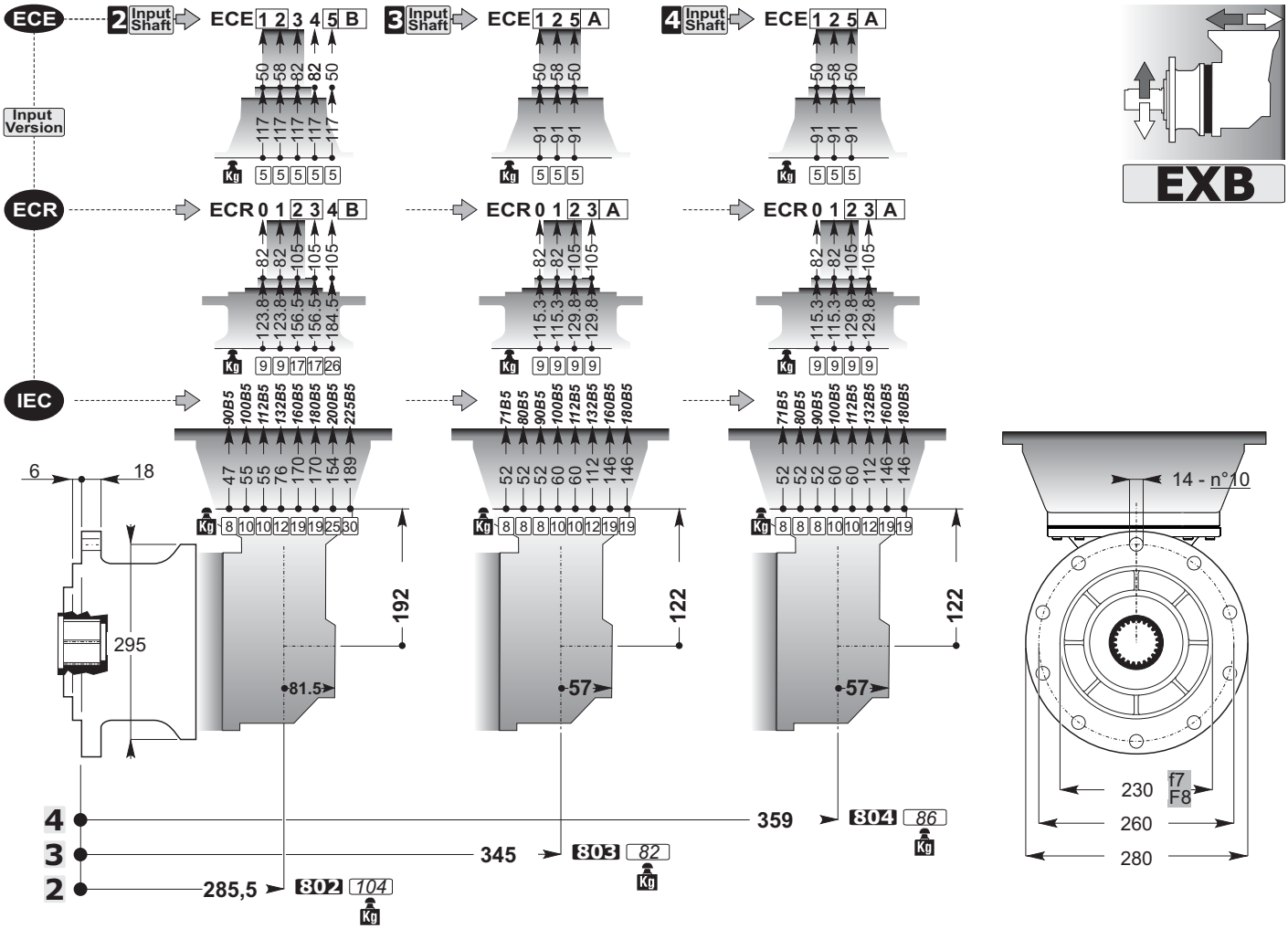
Output Shafts

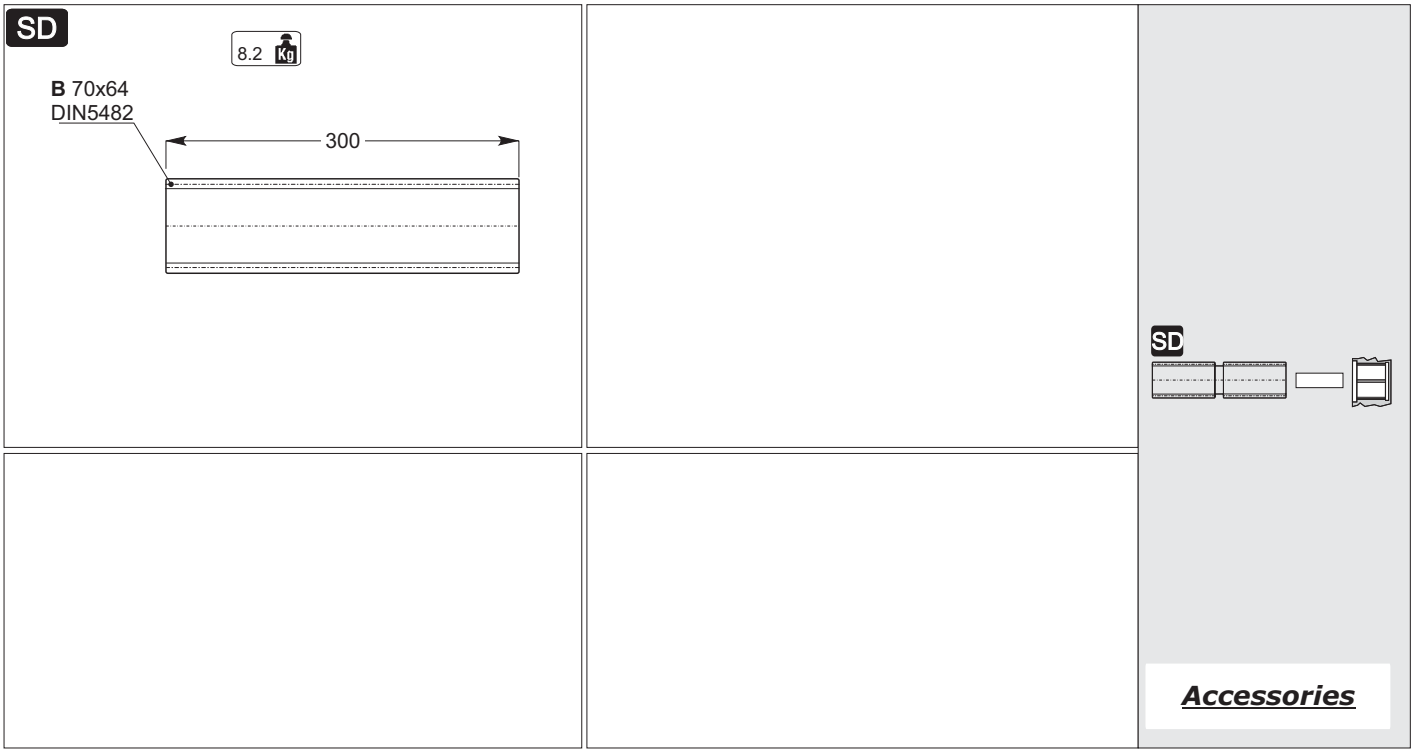

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
10
18
295
192
122
122
81.5
57
57
15 - n°12
200 f7 F8
250
280
4
3
2
362
348
288.5
304 86
303 82
302 104

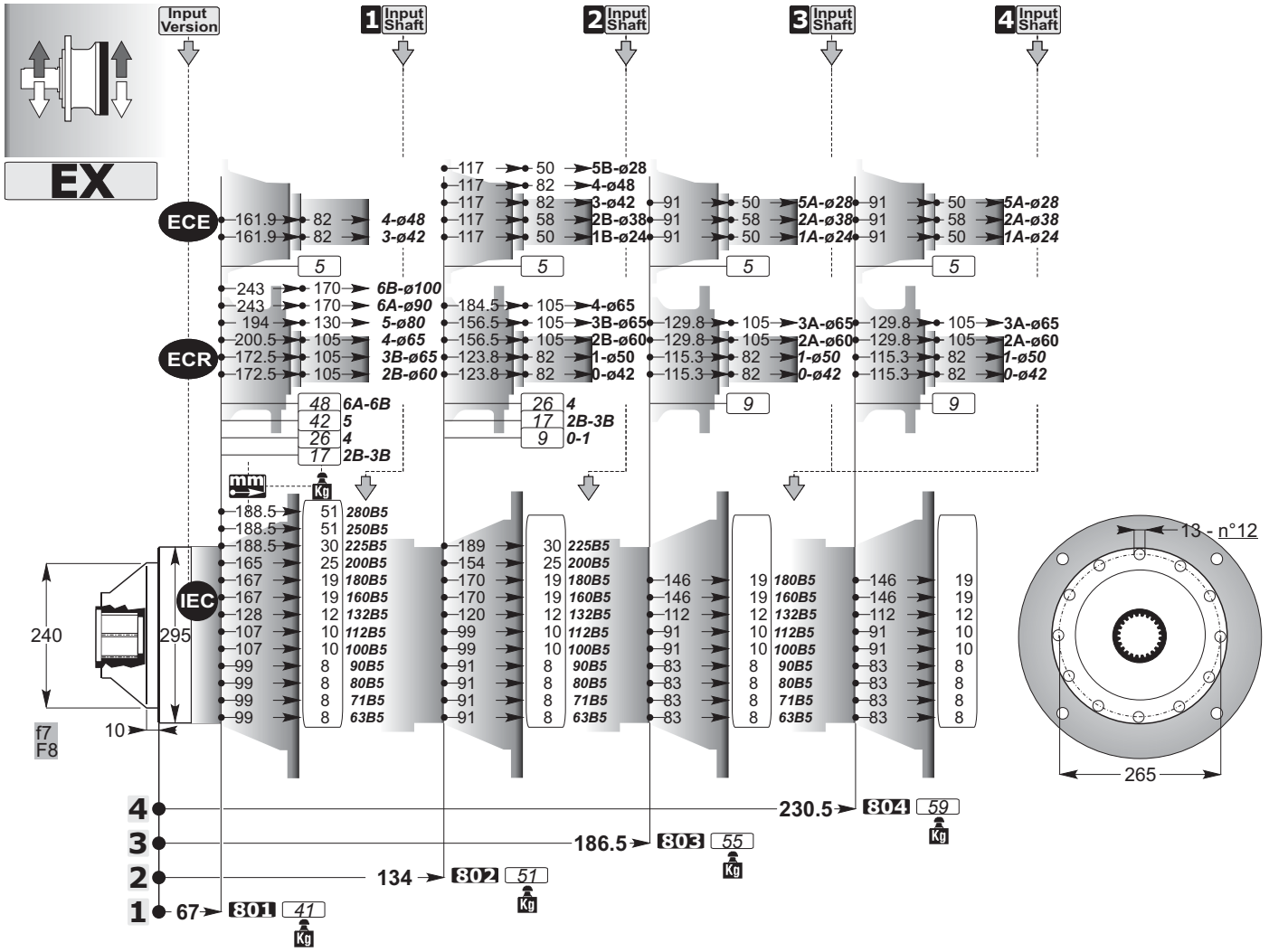

SD
8.2
B 70x64
DIN5482
300
SD
Accessories

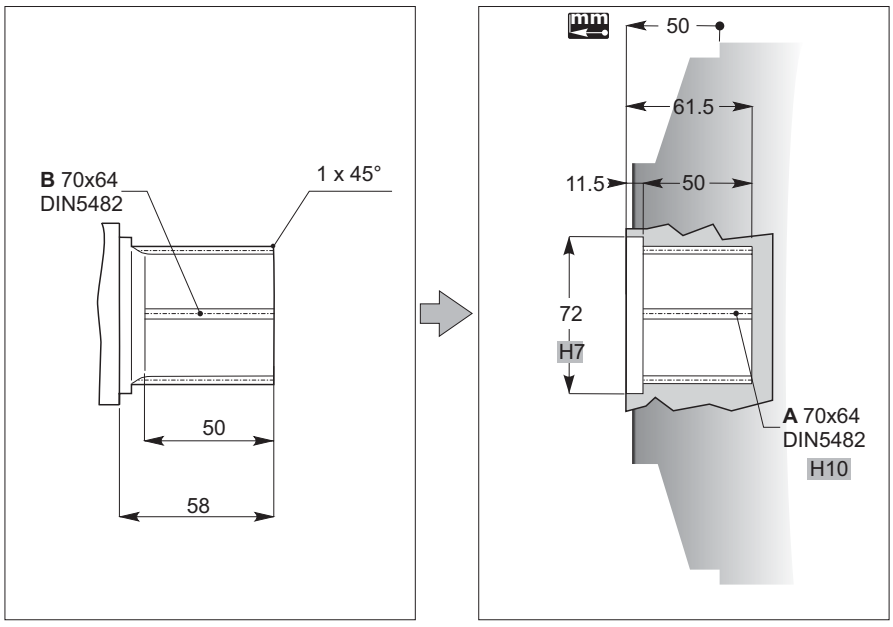

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
4-ø48
3-ø42
6B-ø100
6A-ø90
5-ø80
4-ø65
3B-ø65
2B-ø60
6A-6B
5
4
2B-3B
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
0-ø42
0-1
5A-ø28
2A-ø38
1A-ø24
3A-ø65
2A-ø60
1-ø50
280B5
250B5
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
4
15
295
14 - n°10
230
f7
F8
260
280
323
304
76
279
303
72
226.5
302
68
159.5
301
59
Kg


B 70x64
DIN5482
1 x 45°
58
65
10.5
67
9
53
72
H7
A 70x64
DIN5482
H10
Output Shafts

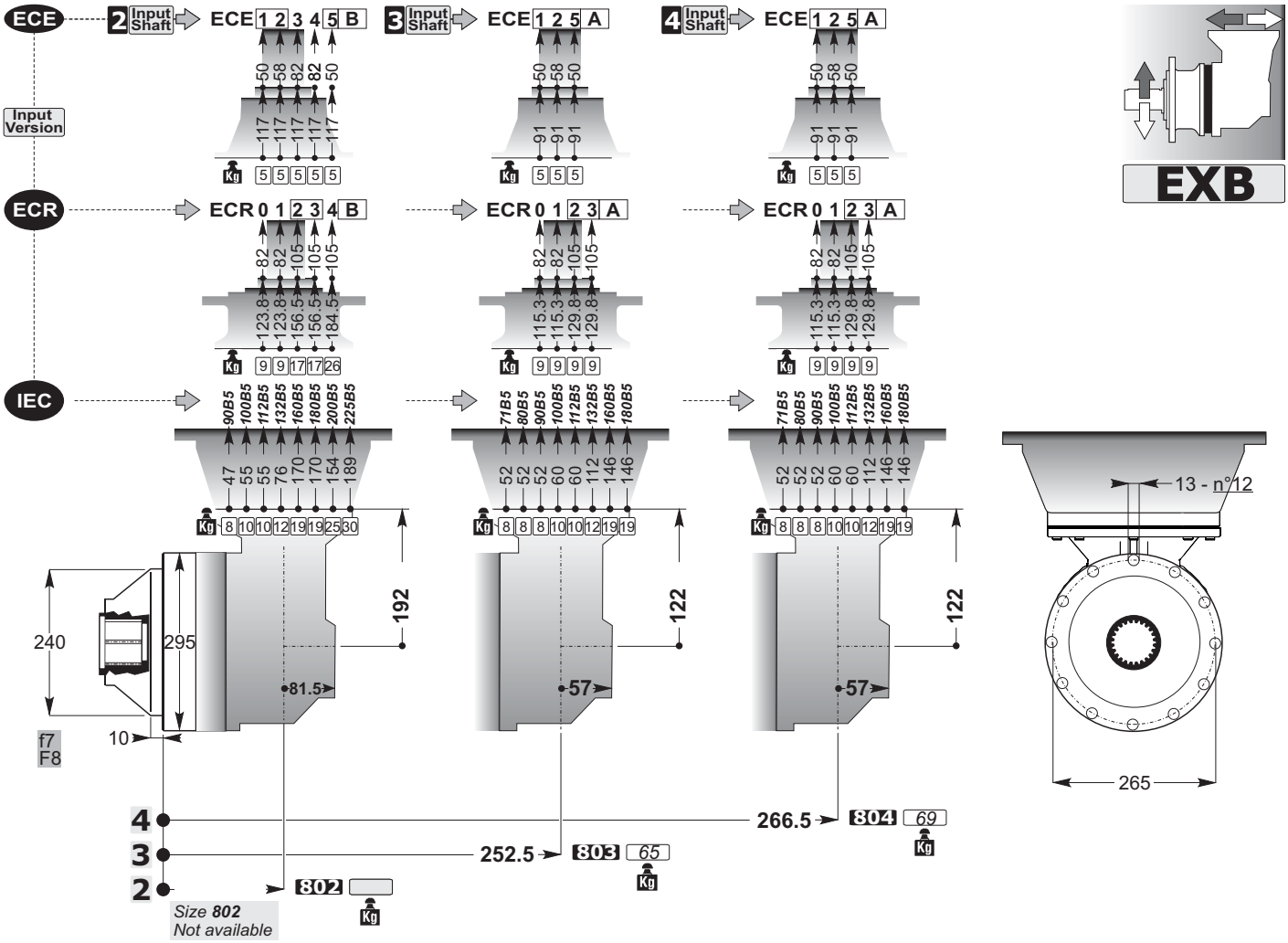

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
6
18
295
192
122
122
81.5
57
57
14 - n°10
230 f7 F8
260
280
4
3
2
359
345
285,5
304 86
303 82
302 104

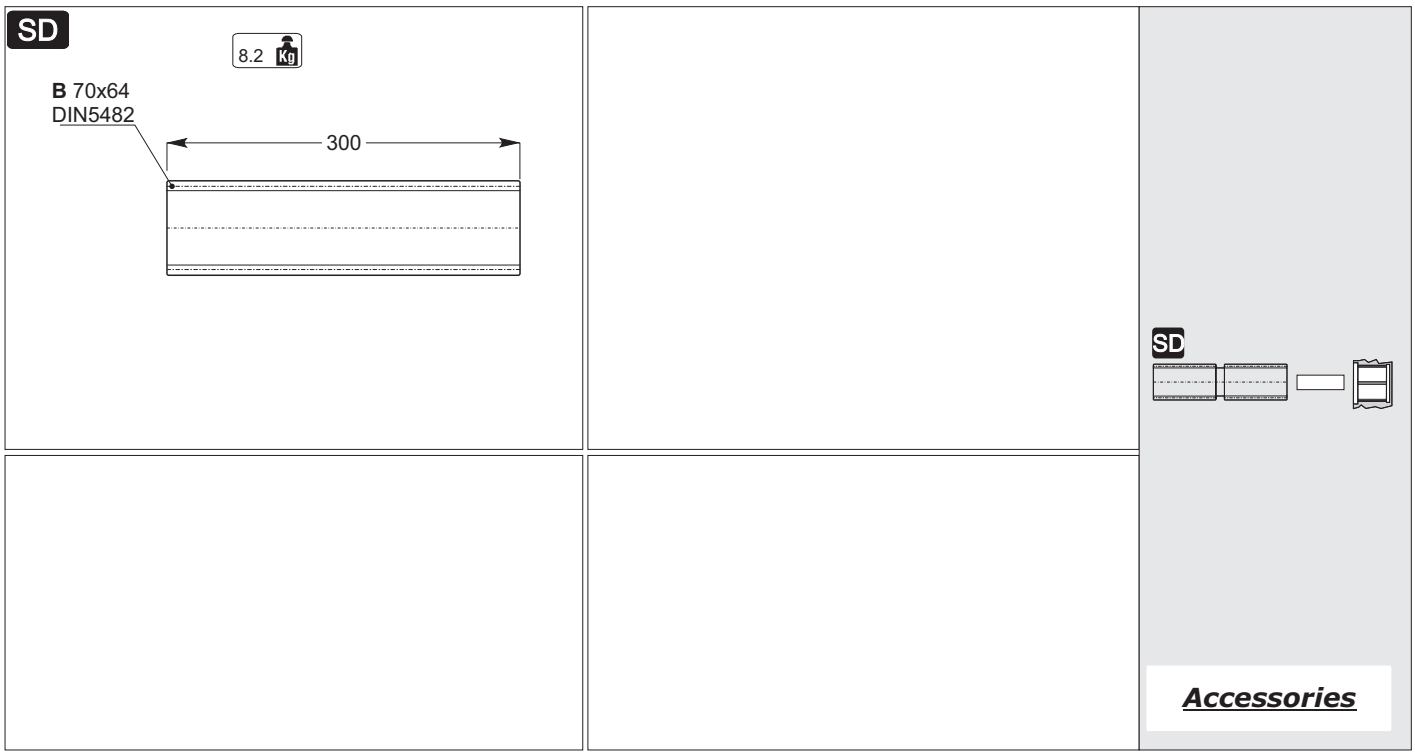

SD
8.2
B 70x64
DIN5482
300
SD
Accessories

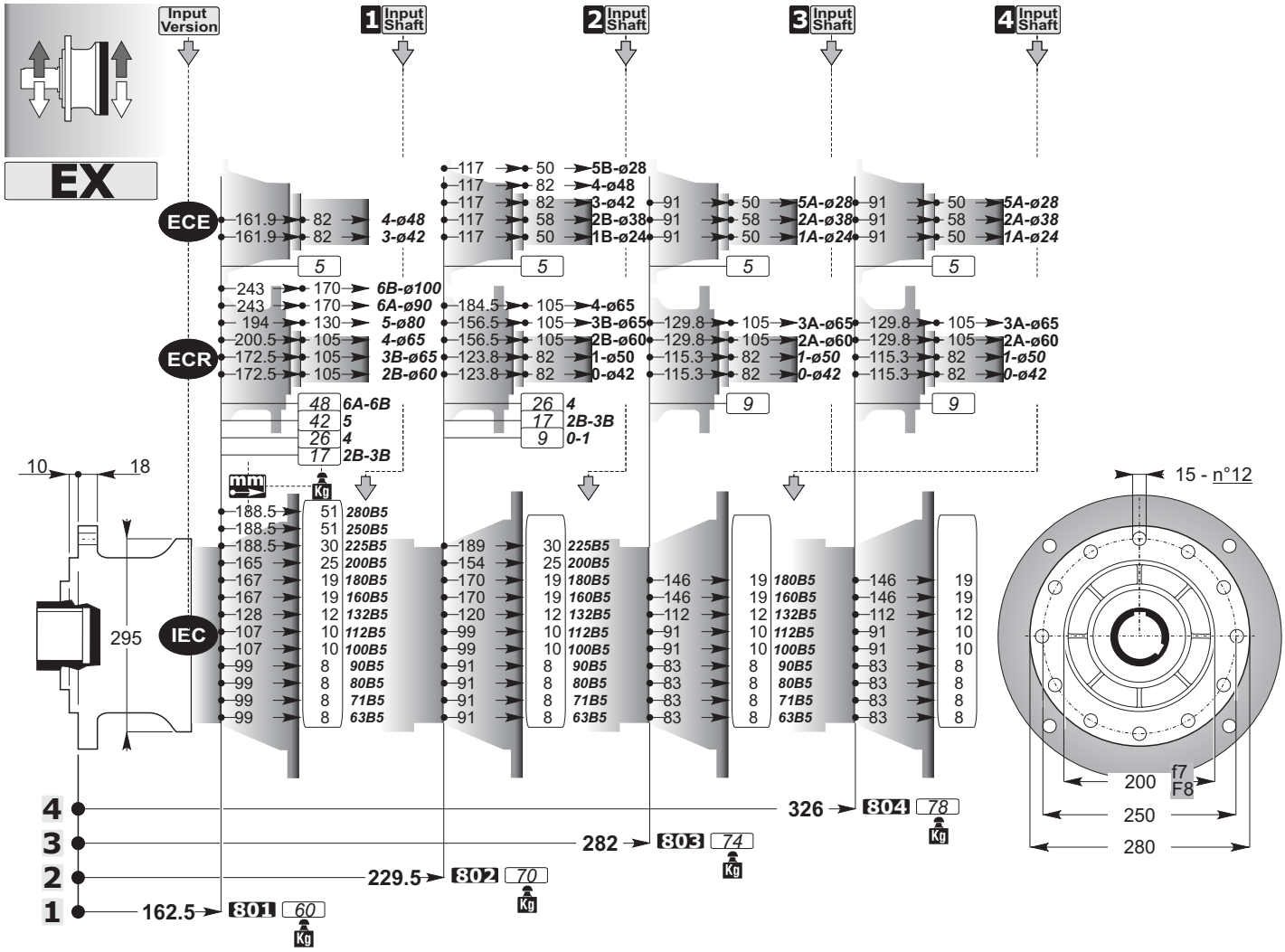


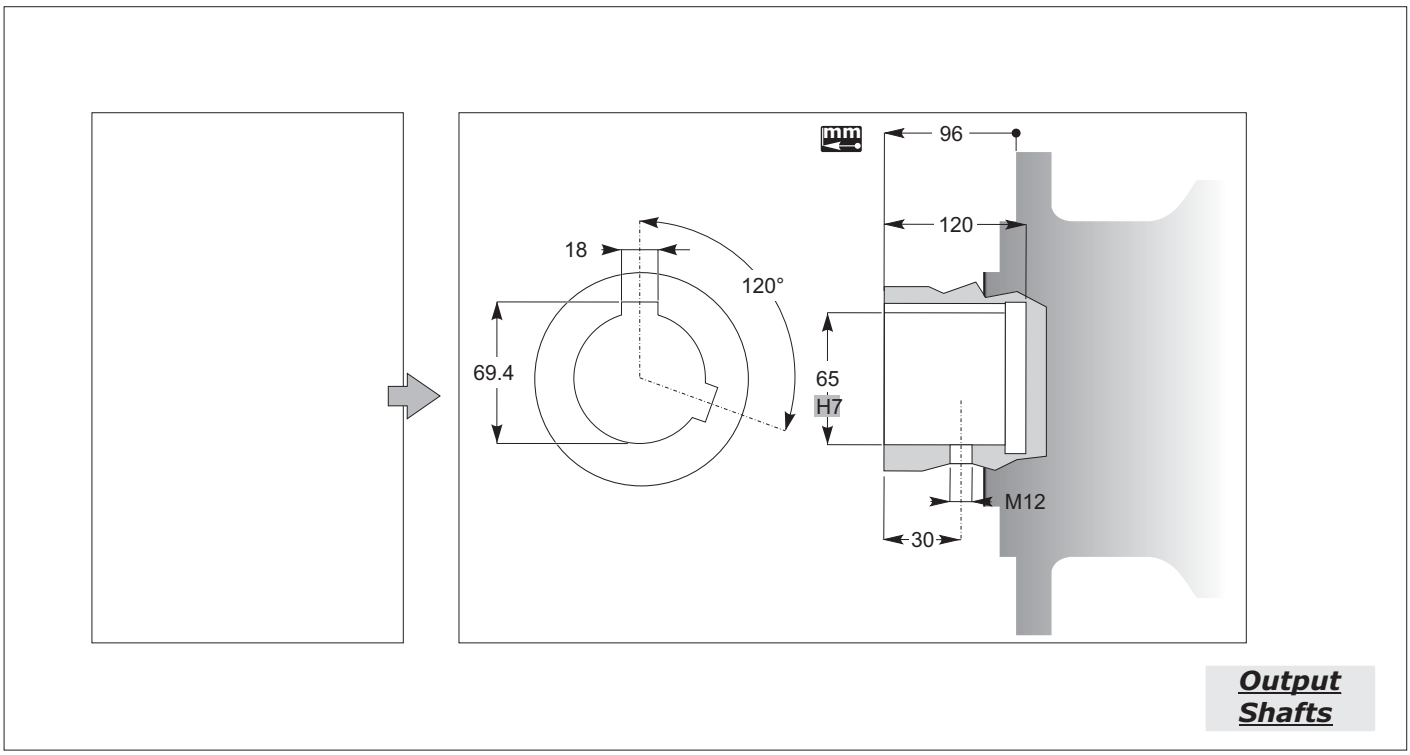


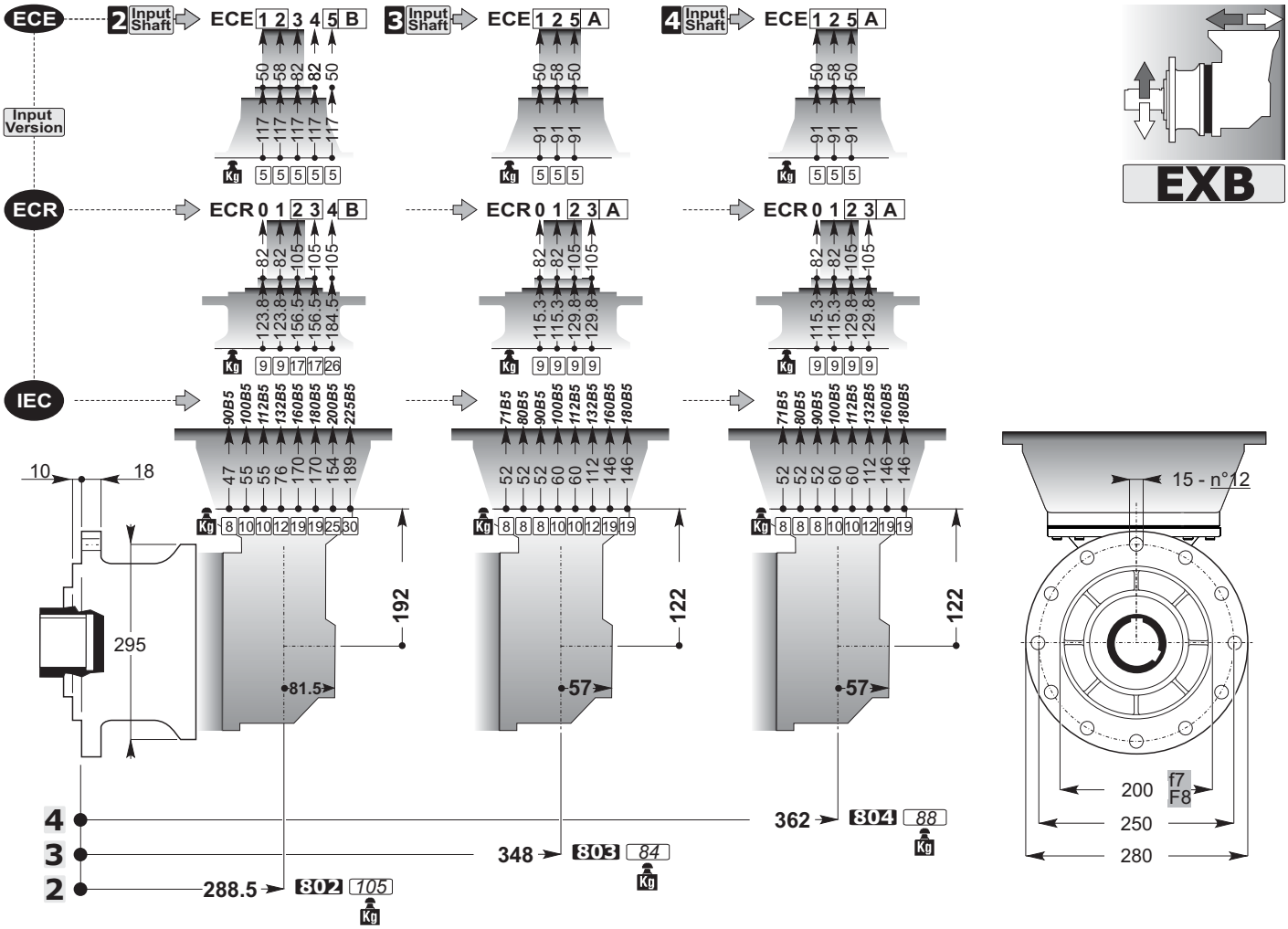
Output Shafts

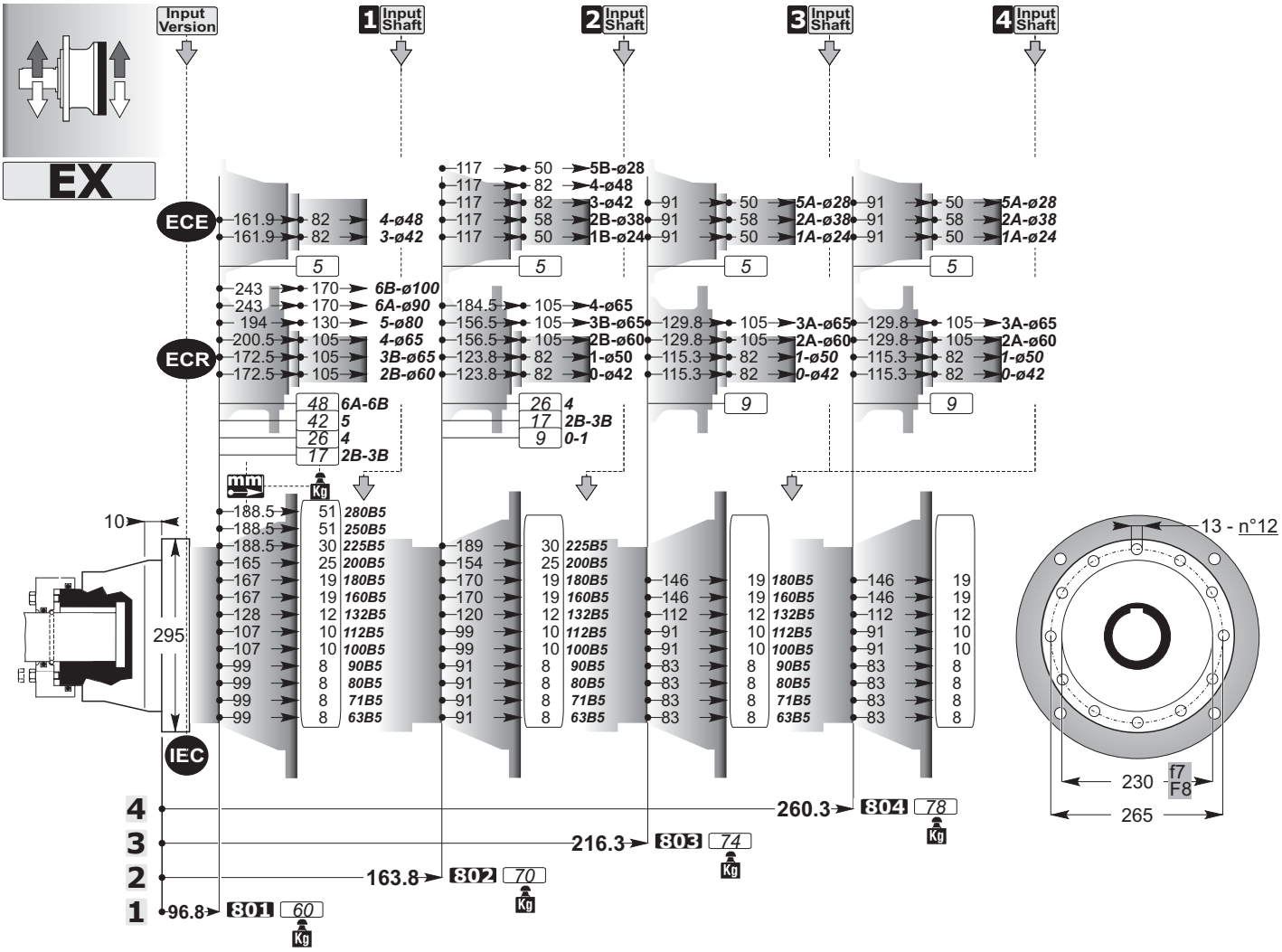

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
13 - n°12
265
240
295
192
122
122
81.5
57
57
f7
F8
10
4
3
2
266.5
304 69
252.5
303 65
802
Size 802
Not available

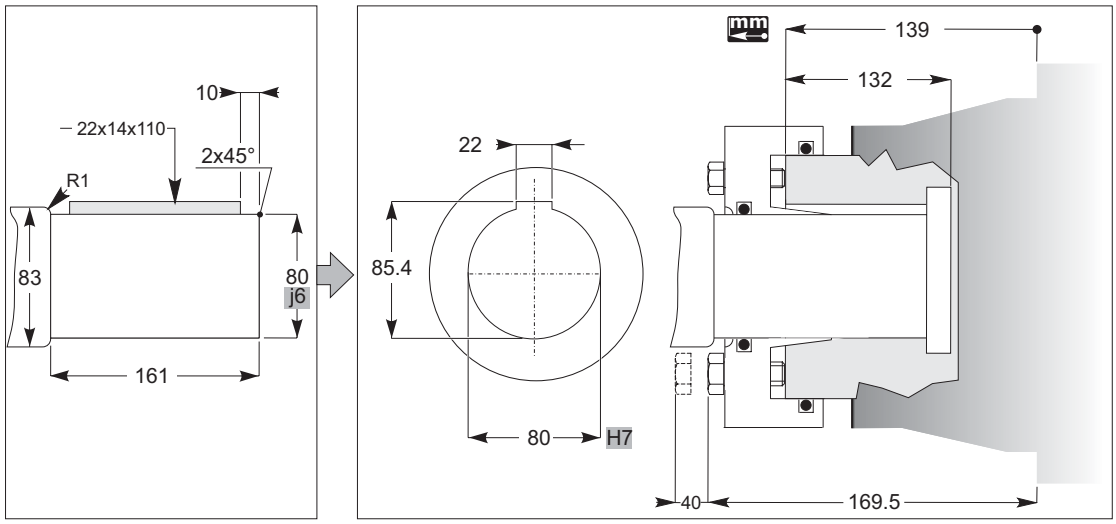

SD
8.2
B 70x64
DIN5482
300
SD
Accessories


Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
4-ø48
3-ø42
5-ø80
4-ø65
3B-ø65
2B-ø60
6B-ø100
6A-ø90
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
5A-ø28
2A-ø38
1A-ø24
3A-ø65
2A-ø60
1-ø50
0-ø42
6A-6B
5
4
2B-3B
0-1
280B5
250B5
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
295
10
18
15 - n°12
200 f7 F8
250
280
326 804 78
282 803 74
229.5 802 70
162.5 801 60
Kg

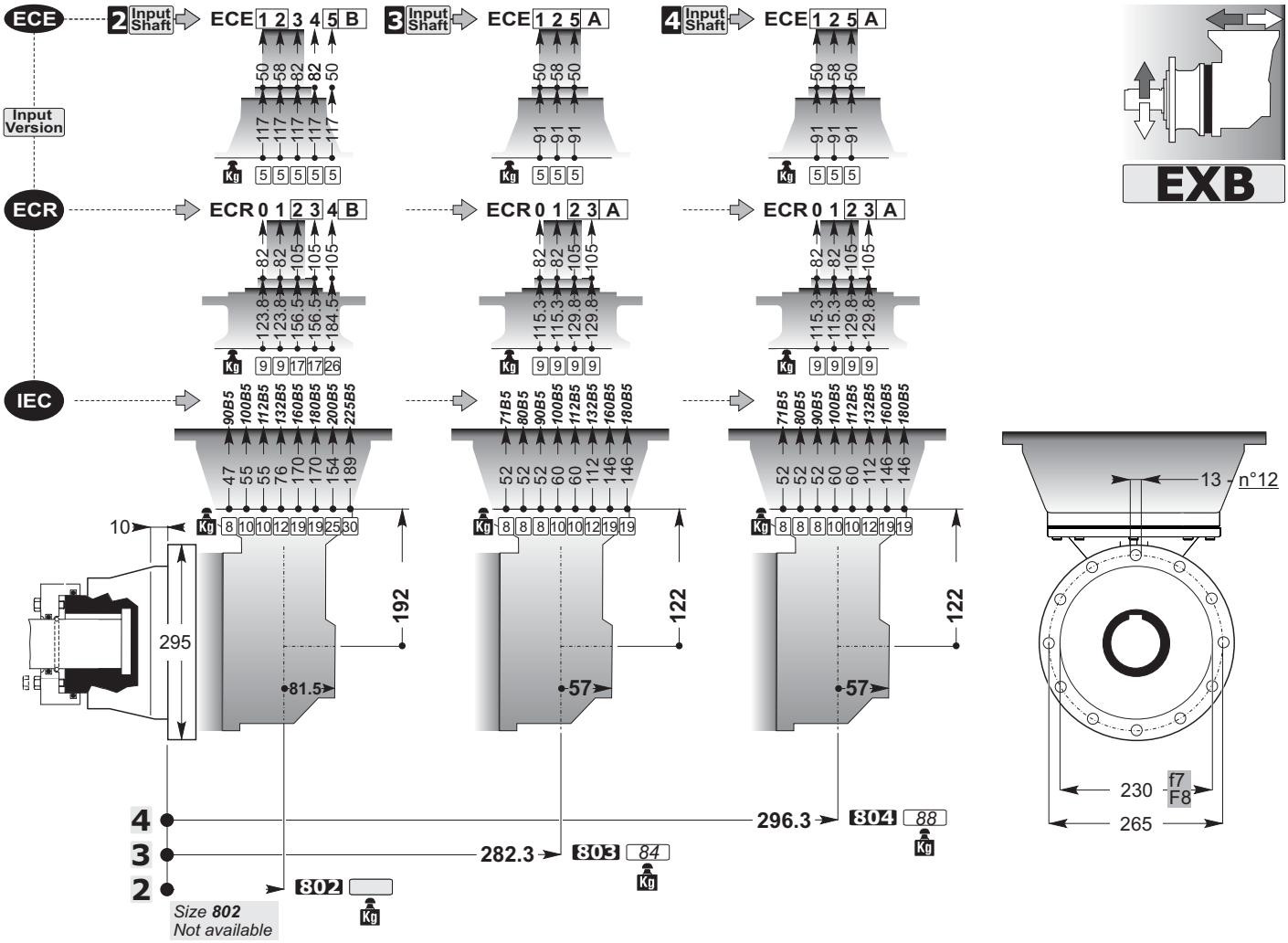

96
120
18
120°
69.4
65 H7
M12
30
Output Shafts

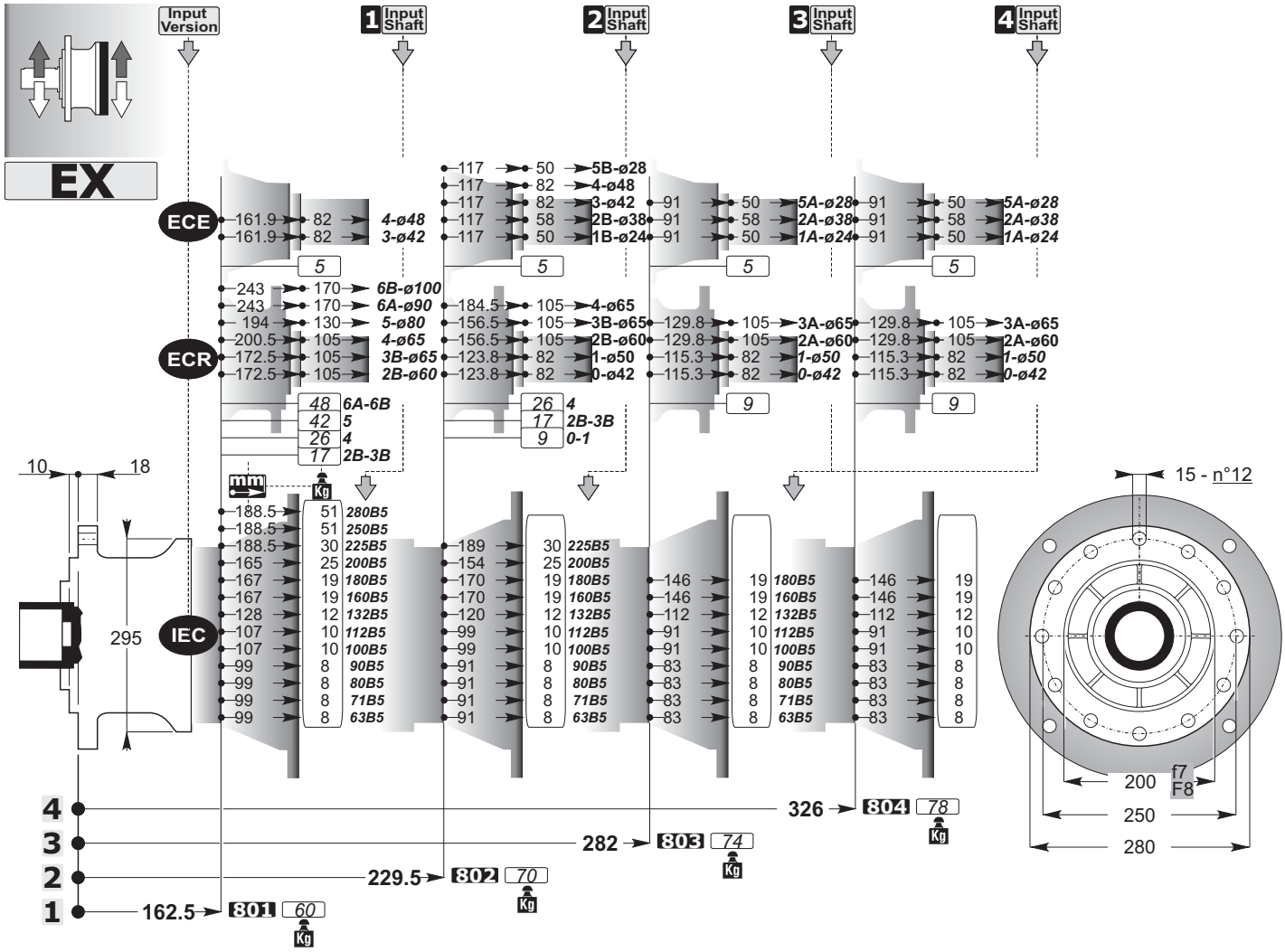

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
Kg
10
18
295
192
122
122
81.5
57
57
15 - n°12
200 f7 F8
250
280
4
3
2
362
304 88
348
303 84
288.5
302 105

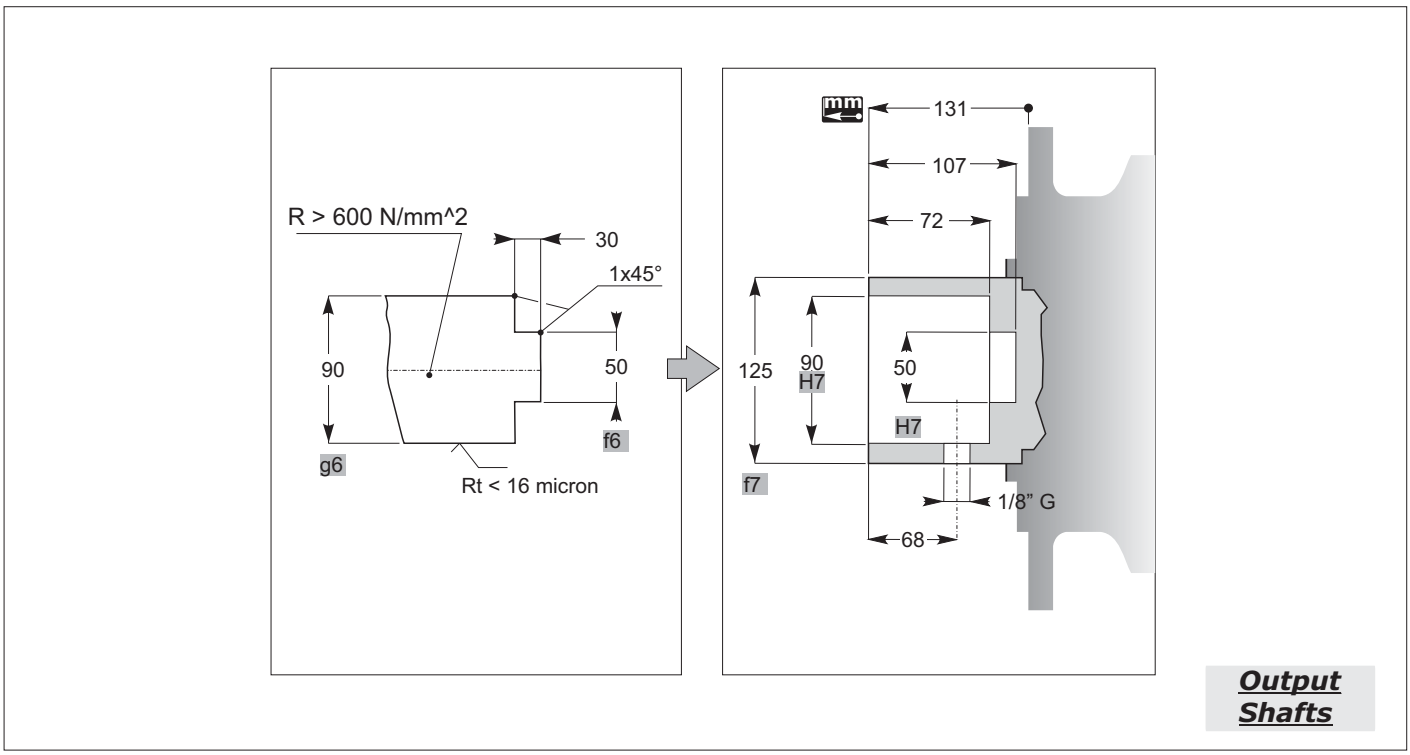




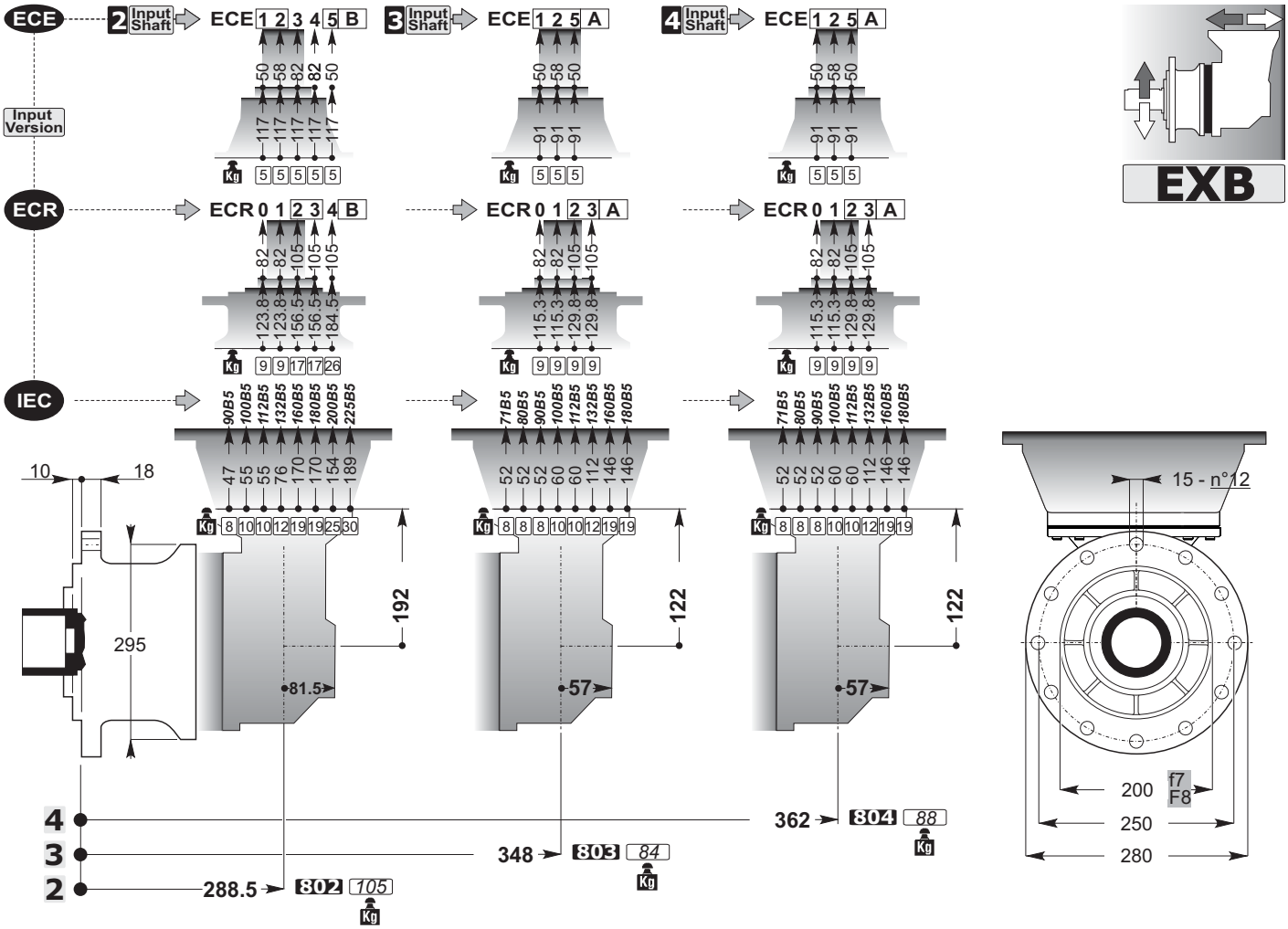
Output Shafts

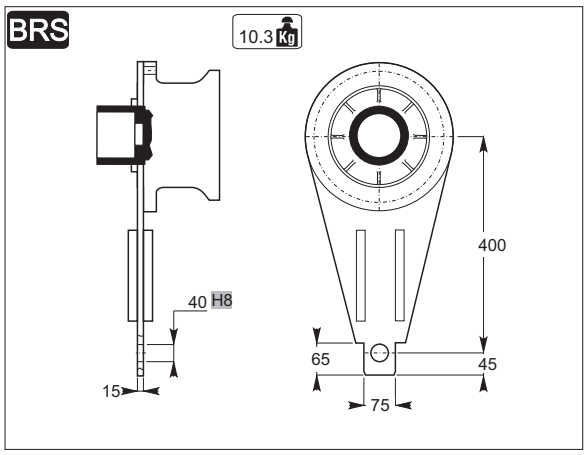

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
10
295
192
122
122
81.5
57
57
13
n°12
230
f7
F8
265
4
3
2
296.3
304
88
282.3
303
84
802
Size 802
Not available

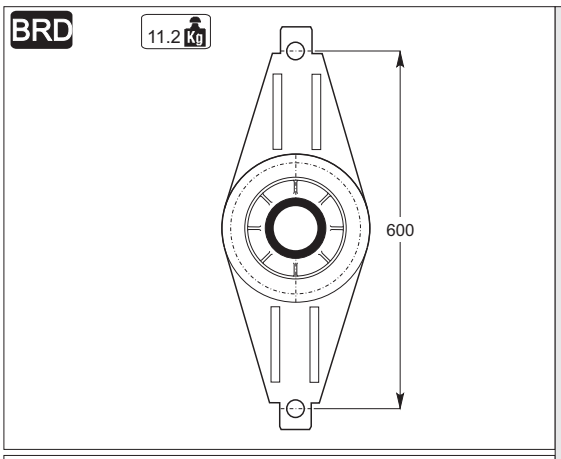


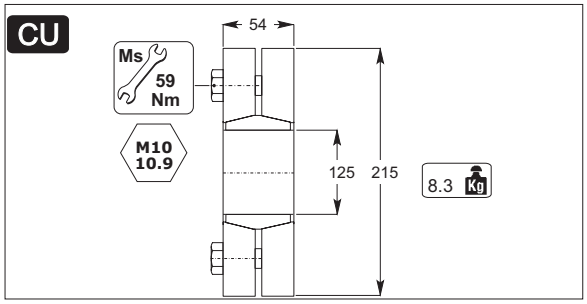


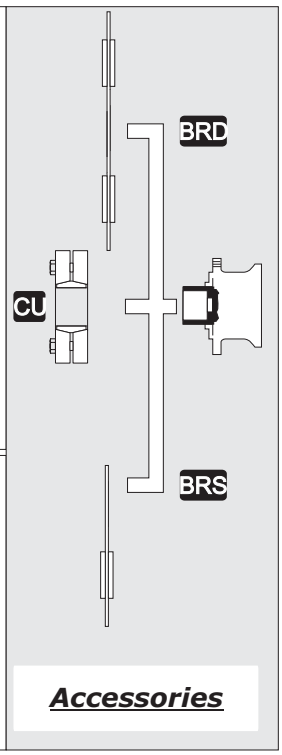
Output Shafts


ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
10
18
295
192
122
122
81.5
57
57
15 - n°12
200 f7 F8
250
280
4
3
2
362 304 88
348 303 84
288.5 302 105

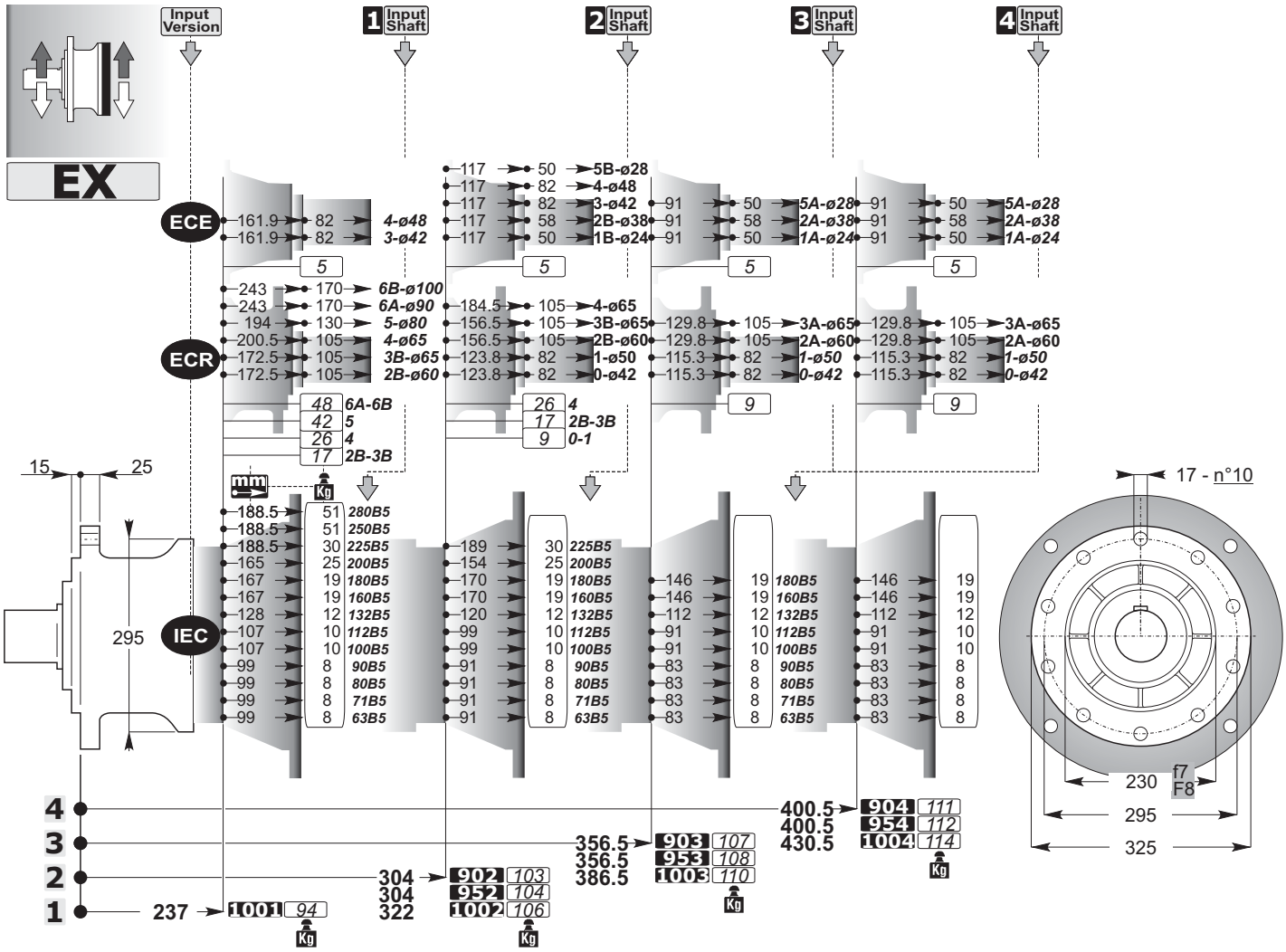

BRS
10.3 Kg
40 H8
15
400
65
45
75

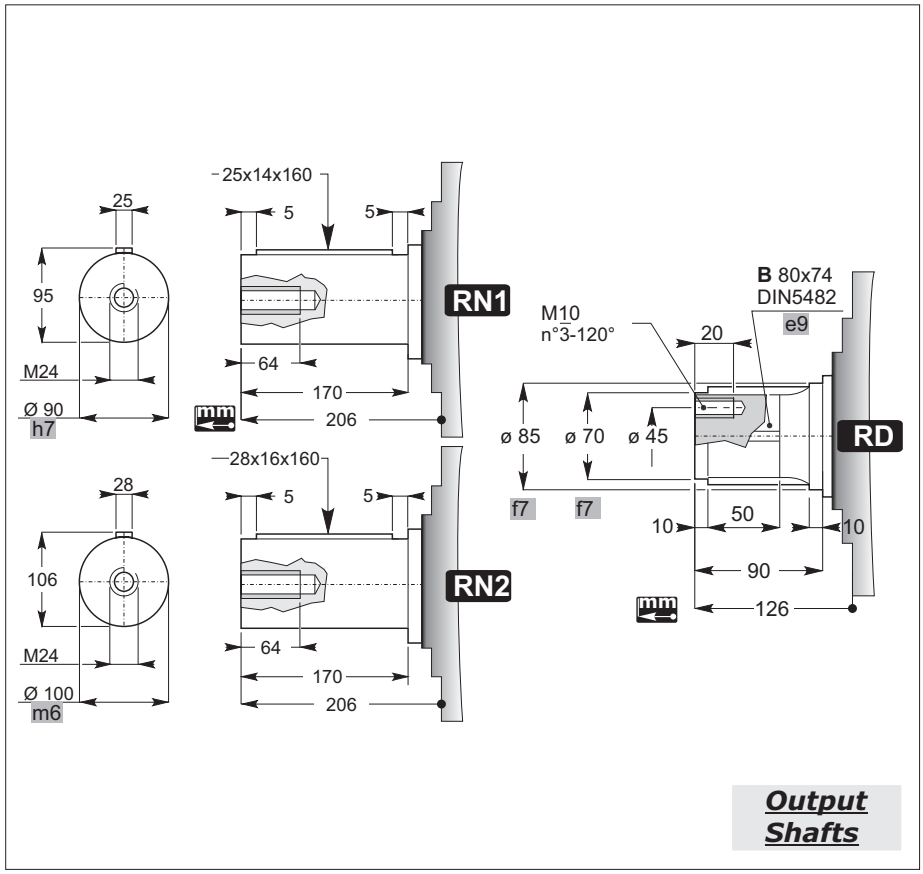

BRD
11.2 Kg
600

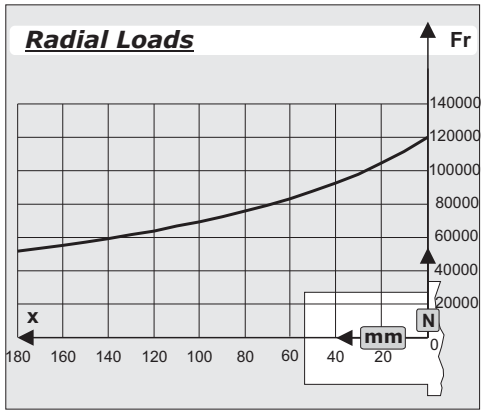

CU
Ms
59 Nm
M10 10.9
54
125
215
8.3 Kg

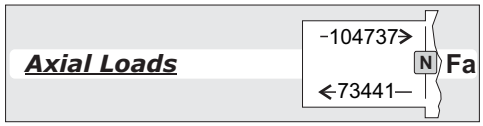

BRD
CU
BRS
Accessories

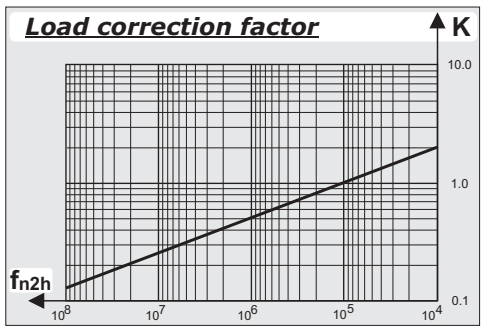
mm
C

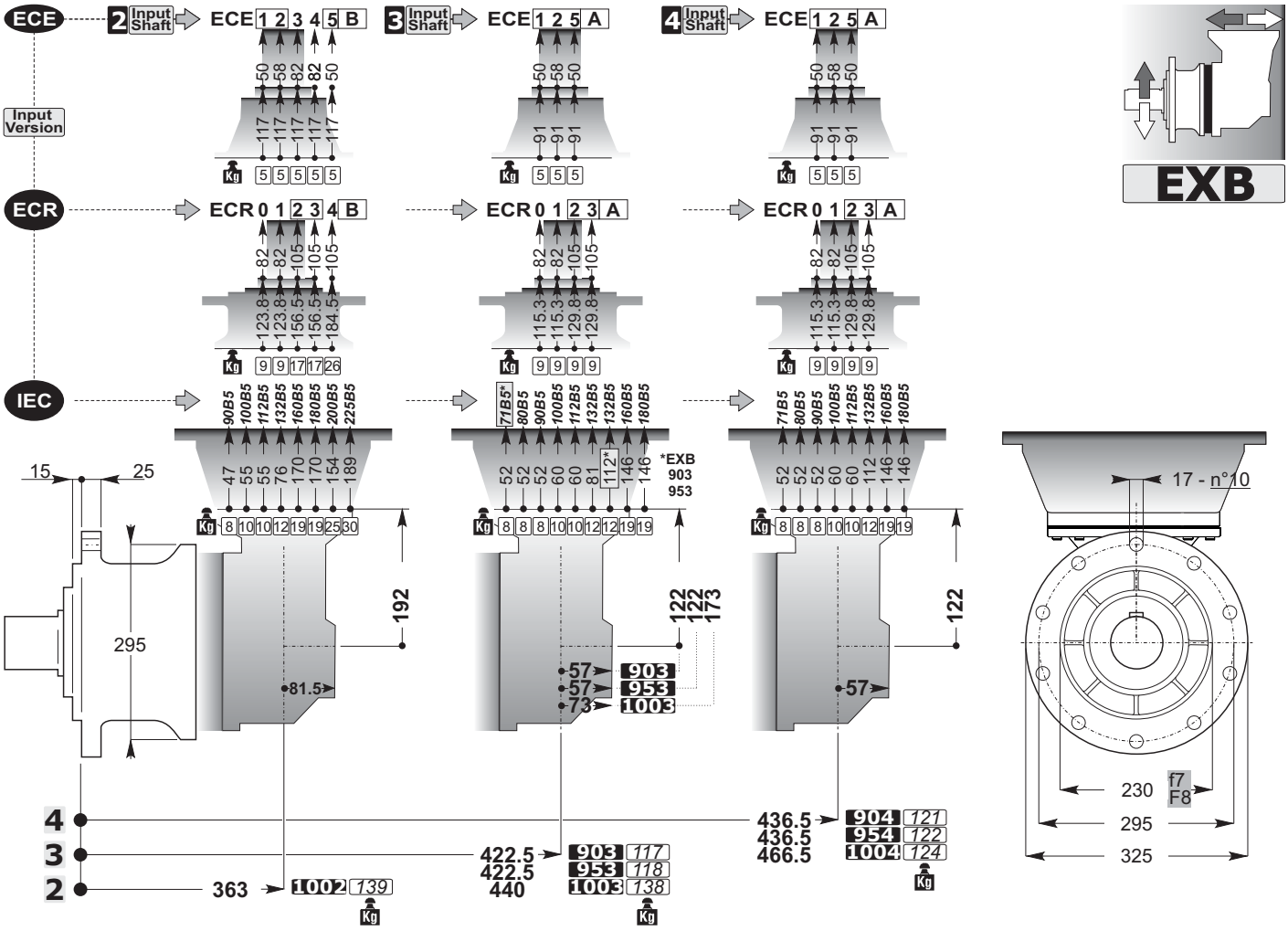

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
4-ø48
3-ø42
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
5A-ø28
2A-ø38
1A-ø24
6B-ø100
6A-ø90
5-ø80
4-ø65
3B-ø65
2B-ø60
4-ø65
3B-ø65
2B-ø60
1-ø50
0-ø42
3A-ø65
2A-ø60
1-ø50
0-ø42
6A-6B
5
4
2B-3B
4
2B-3B
0-1
280B5
250B5
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
17 - n°10
230
295
325
f7
F8
400.5
400.5
430.5
356.5
356.5
386.5
304
304
322
237
904 111
954 112
1004 114
903 107
953 108
1003 110
902 103
952 104
1002 106
1001 94
Kg
mm

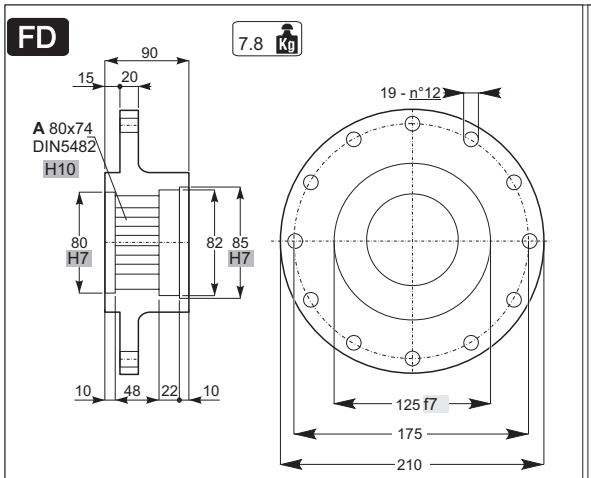

25x14x160
28x16x160
RN1
RN2
RD
B 80x74
DIN5482
e9
M10
n°3-120°
M24
Ø 90
h7
Ø 100
m6
ø 85
ø 70
ø 45
f7
f7
mm
Output Shafts

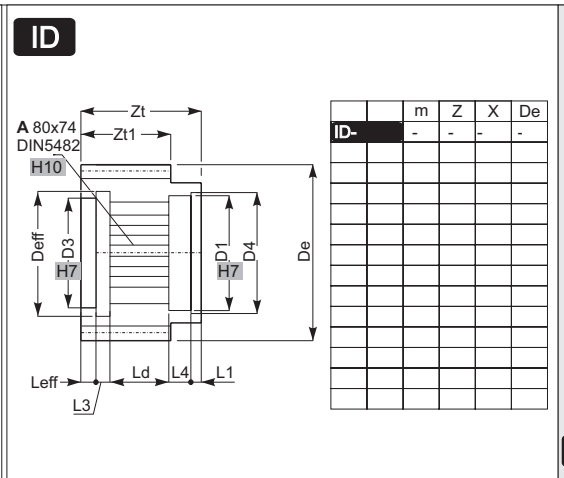

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
0
x
N
mm
180
160
140
120
100
80
60
40
20

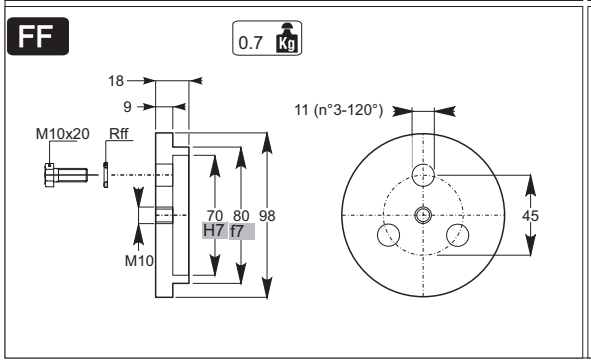

Axial Loads
-104737>
N
Fa
<73441-

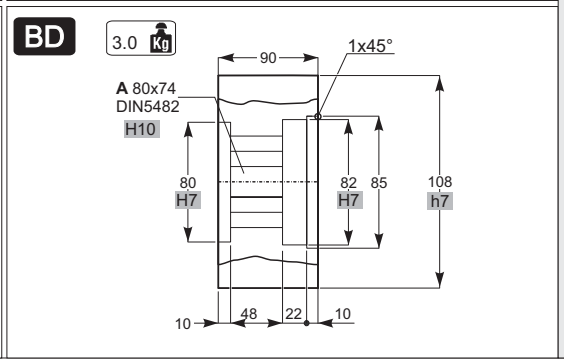

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

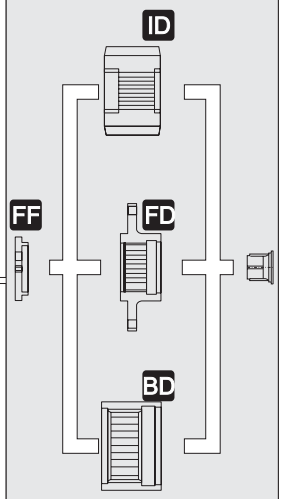






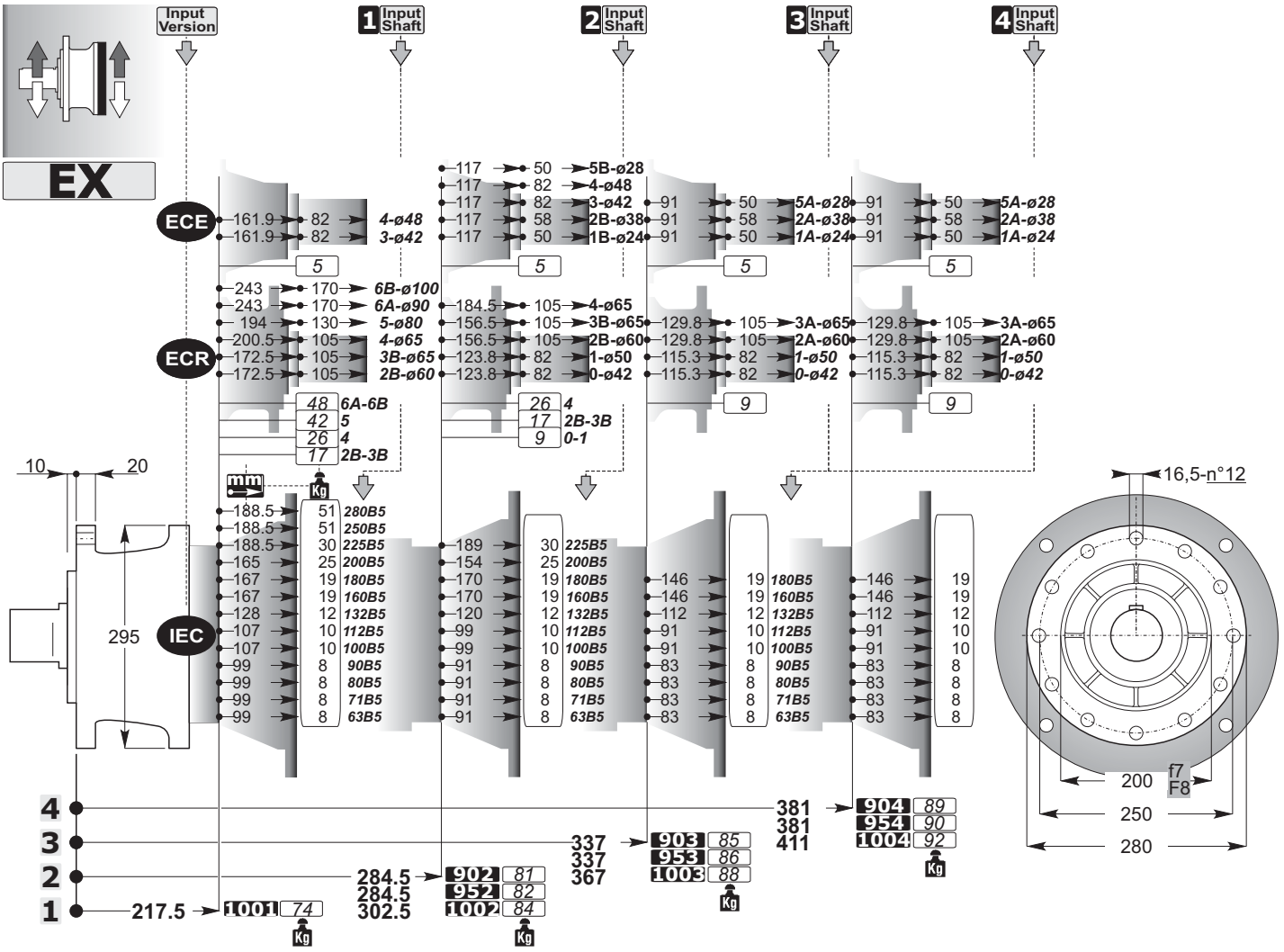


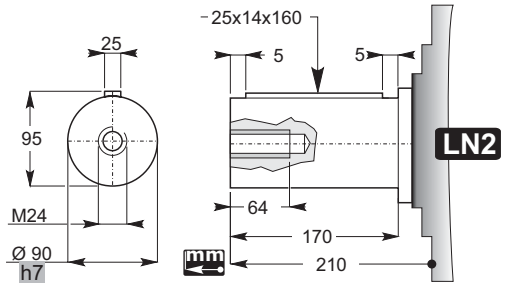


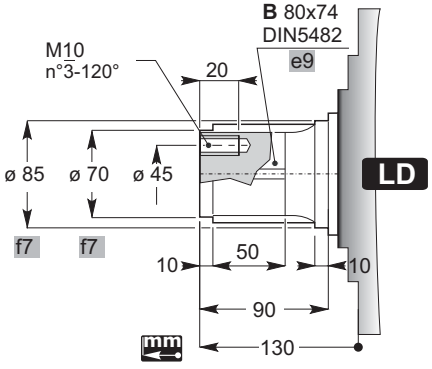


Accessories

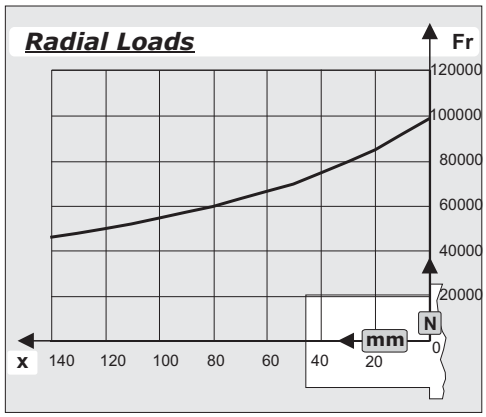
mm
C

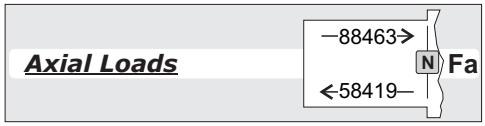


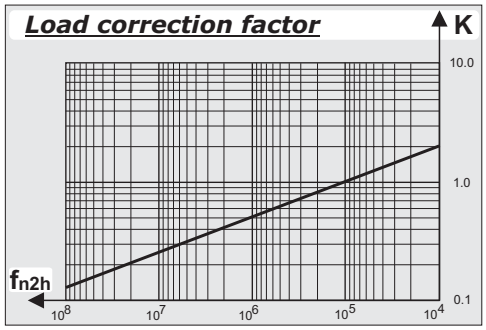


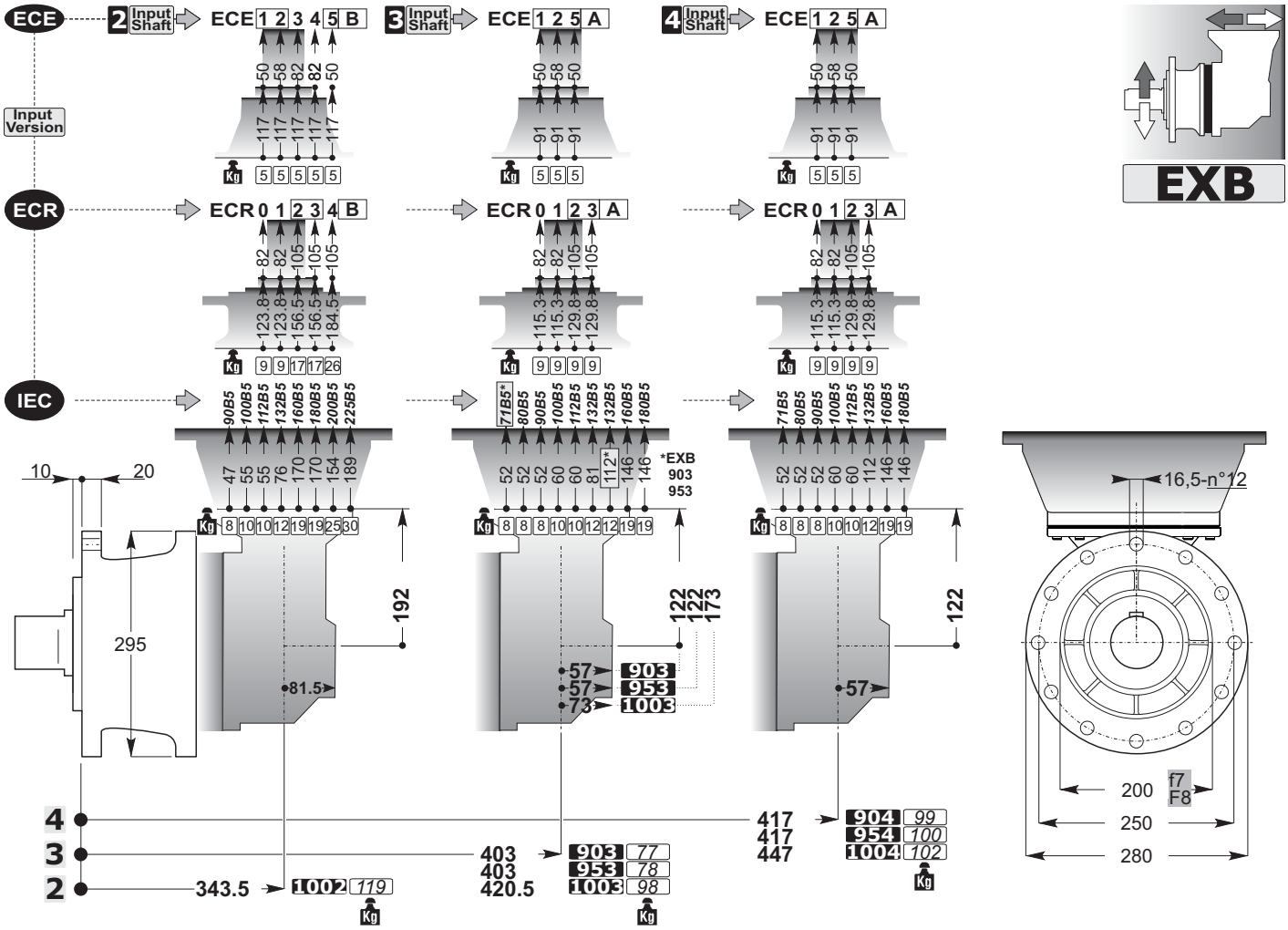


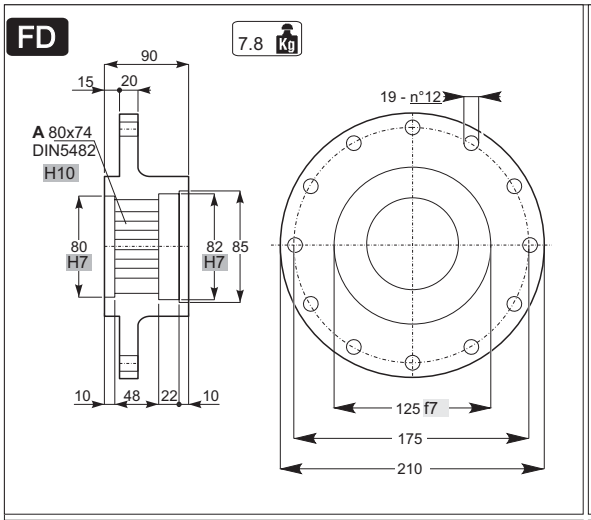
Output Shafts

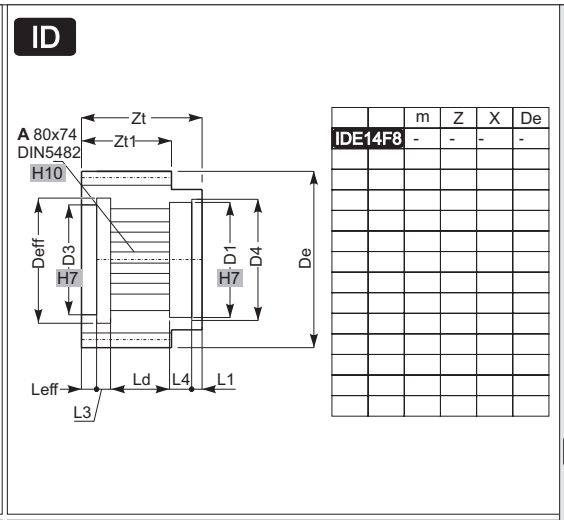


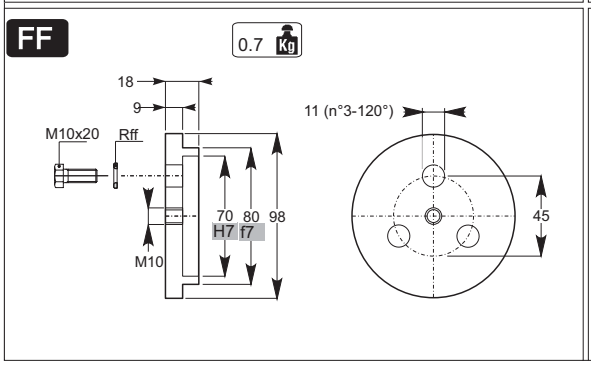


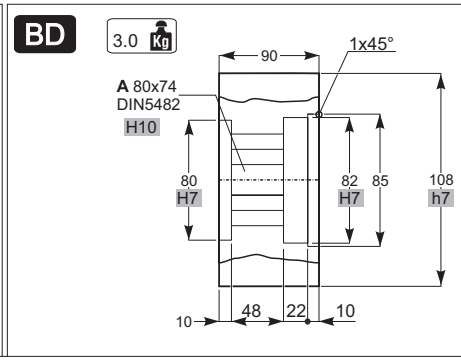


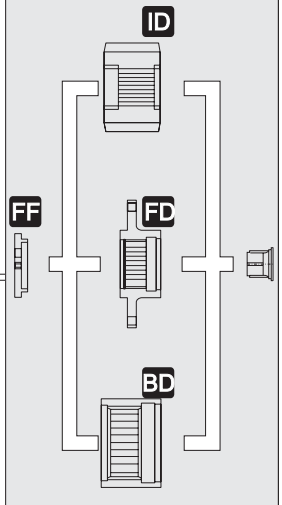






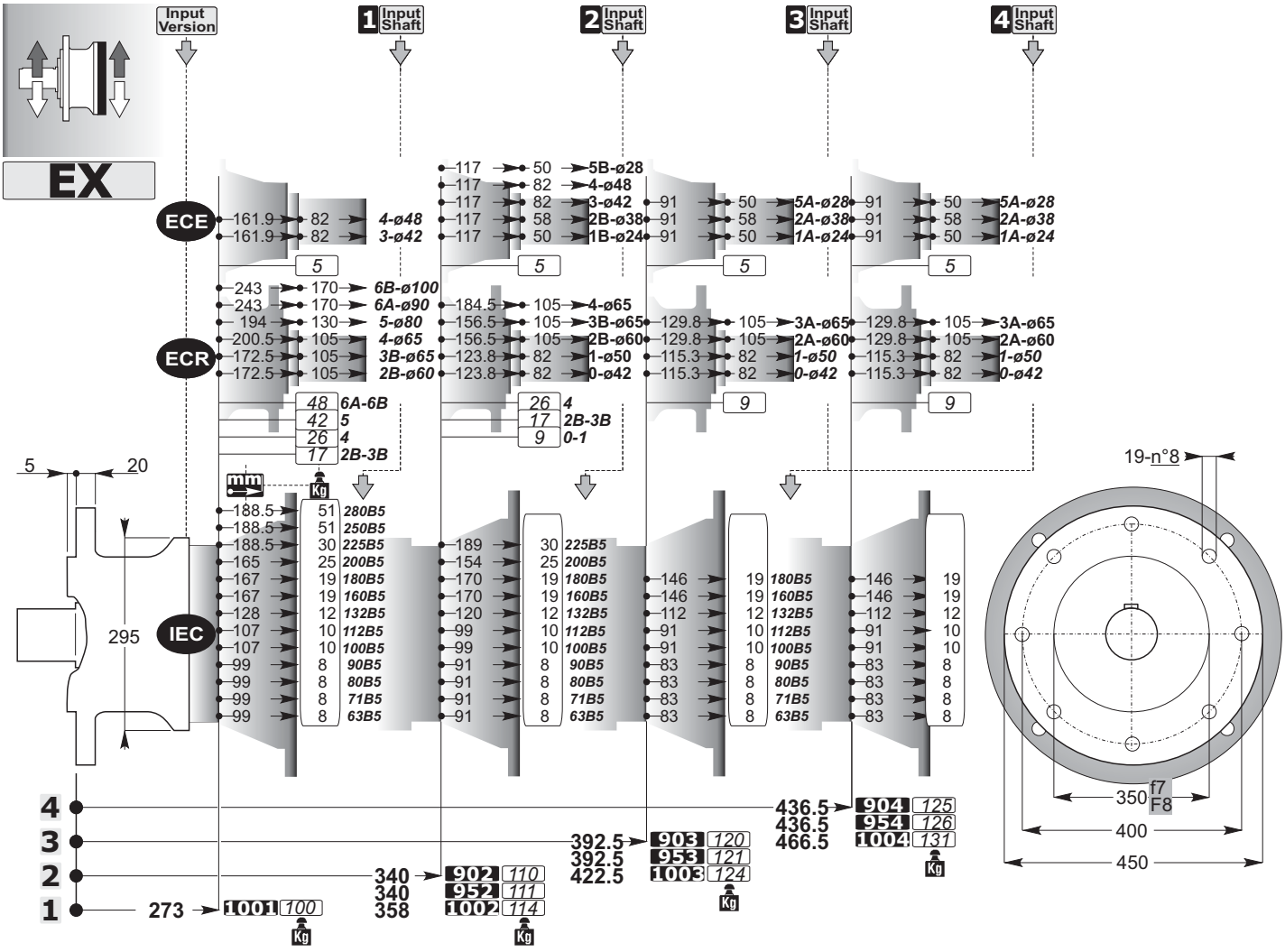


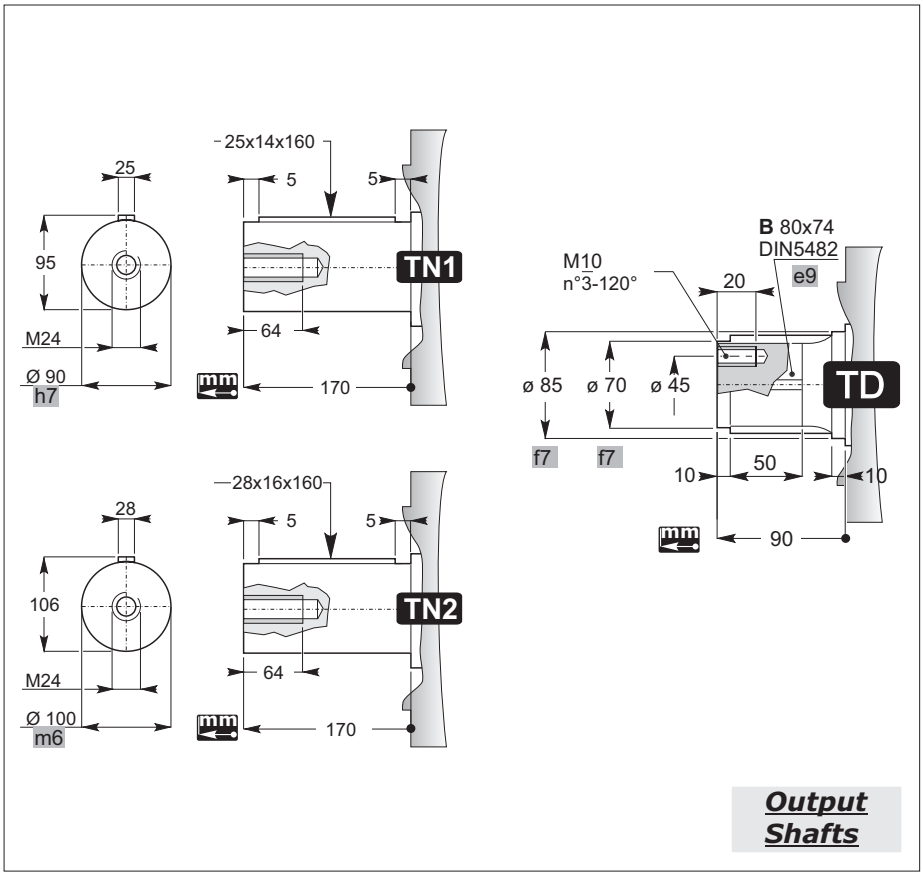


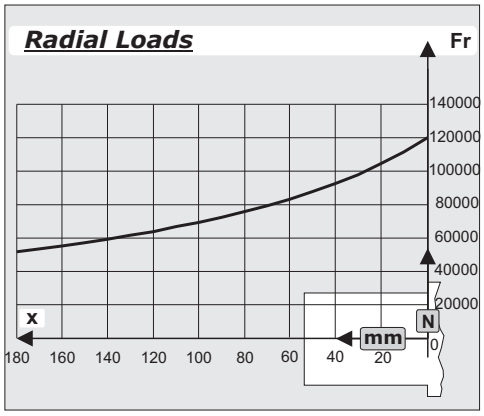


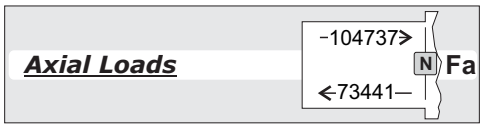
Accessories

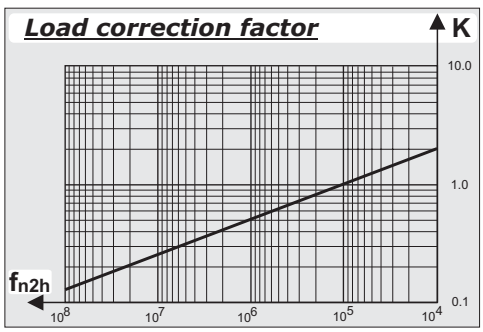
mm
C

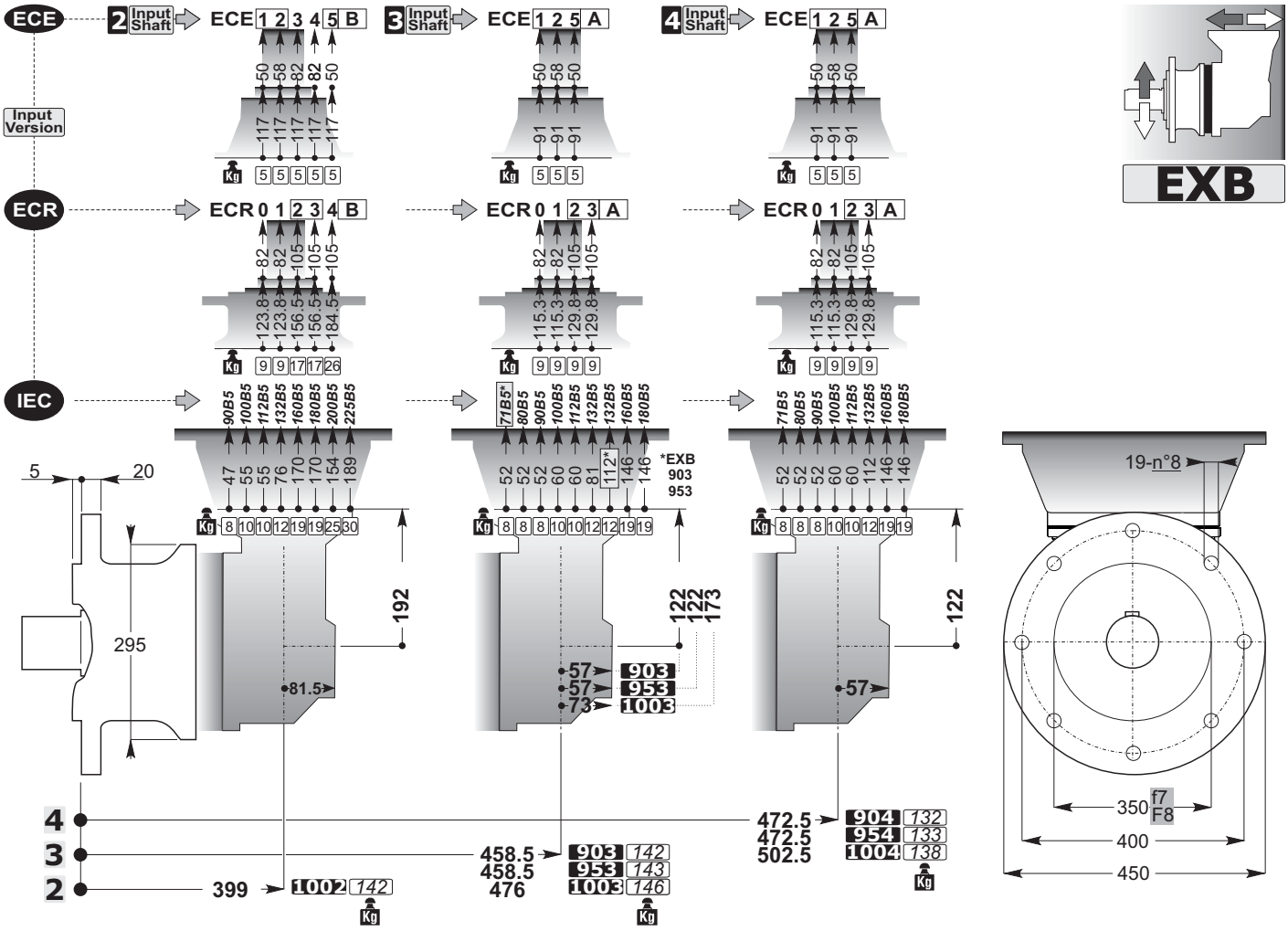

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
4-ø48
3-ø42
5B-ø28
4-ø48
3-ø42
2B-ø38
1B-ø24
5A-ø28
2A-ø38
1A-ø24
6B-ø100
6A-ø90
5-ø80
4-ø65
3B-ø65
2B-ø60
4-ø65
3B-ø65
2B-ø60
1-ø50
0-ø42
3A-ø65
2A-ø60
1-ø50
0-ø42
6A-6B
5
4
2B-3B
4
2B-3B
0-1
280B5
250B5
225B5
200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
295
19-n°8
350 f7 F8
400
450
436.5
436.5
466.5
392.5
392.5
422.5
340
340
358
273
904 125
954 126
1004 131
903 120
953 121
1003 124
902 110
952 111
1002 114
1001 100
Kg

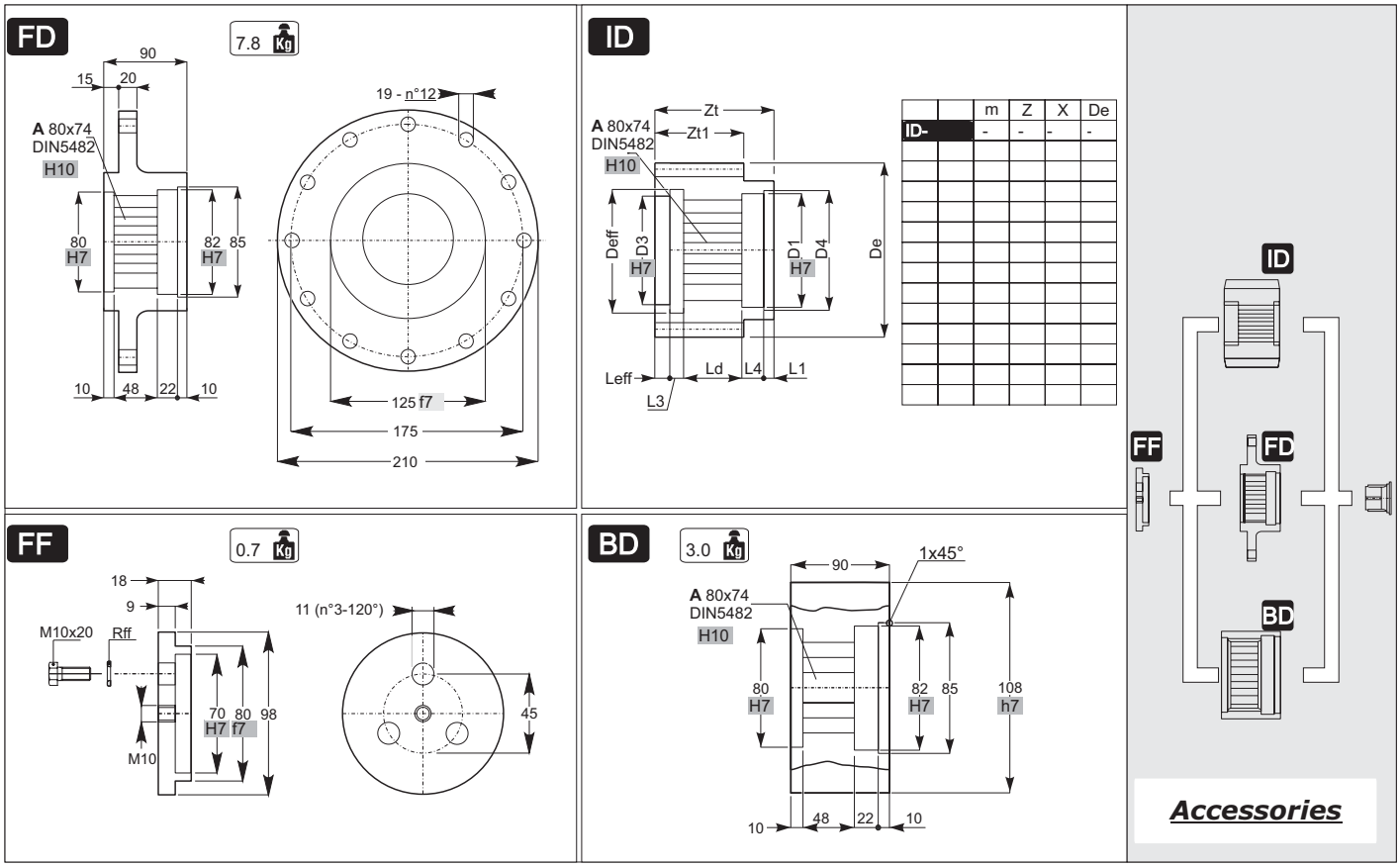

25x14x160
TN1
28x16x160
TN2
M10
n°3-120°
B 80x74
DIN5482
e9
TD
Output Shafts

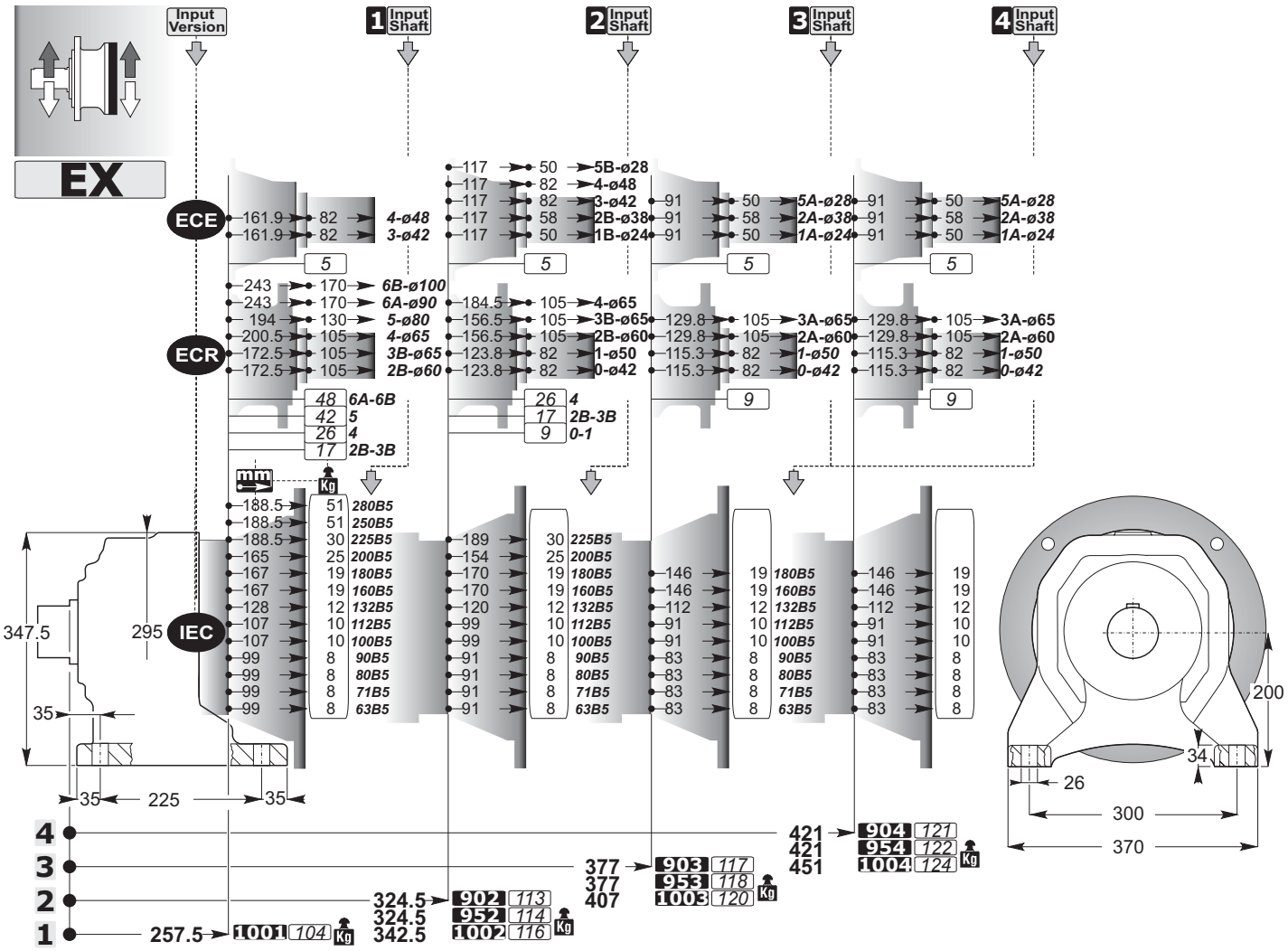

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
0
x
mm
N

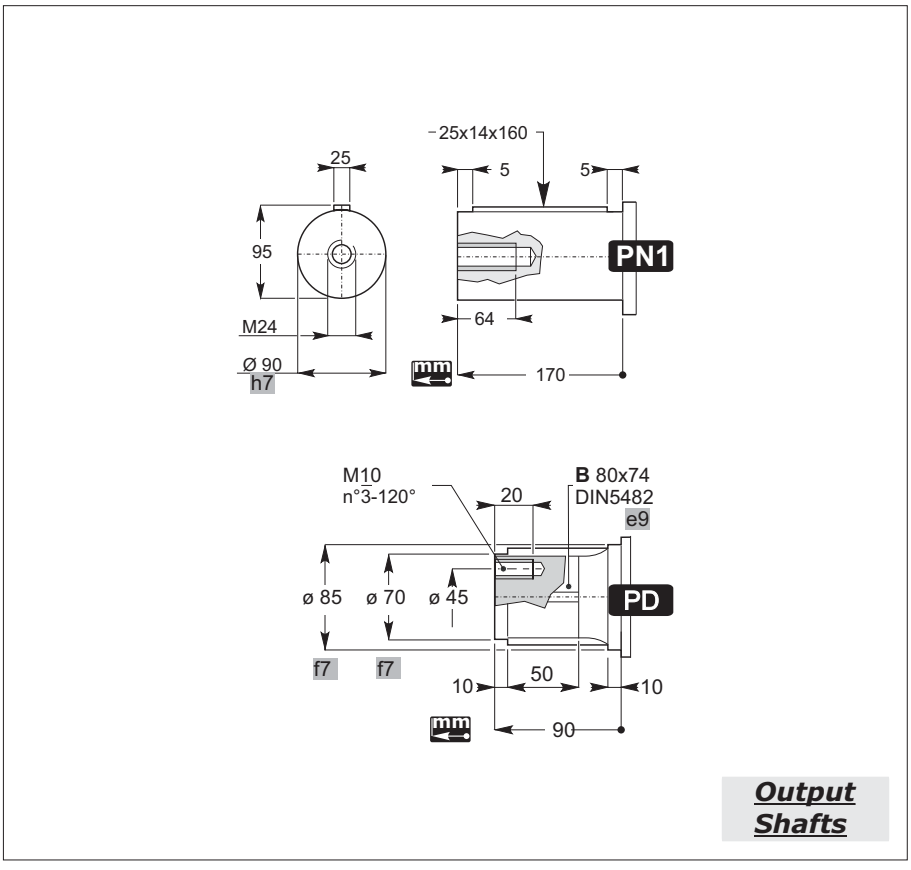

Axial Loads
104737
73441
N
Fa

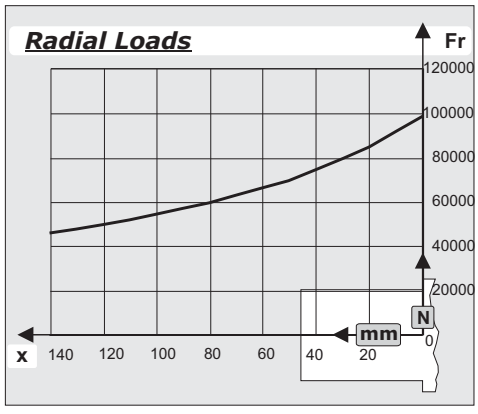

Load correction factor
K
10.0
1.0
0.1
fn2h

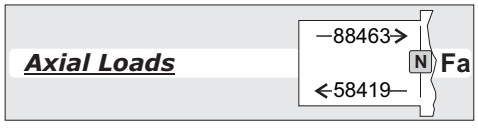

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
5
20
295
192
81.5
122
122
173
57
903
57
953
73
1003
122
57
19-n°8
350 f7
F8
400
450
4
3
2
472.5
472.5
502.5
904 132
954 133
1004 138
458.5
458.5
476
903 142
953 143
1003 146
399
1002 142

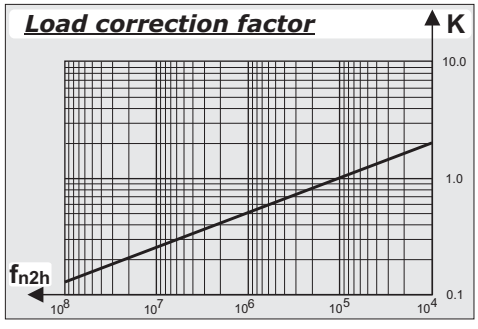

FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210
ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID-
FF
0.7 Kg
18
9
M10x20
Rff
70
H7
80
f7
98
M10
11 (n°3-120°)
45
BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10
ID
FF
FD
BD
Accessories

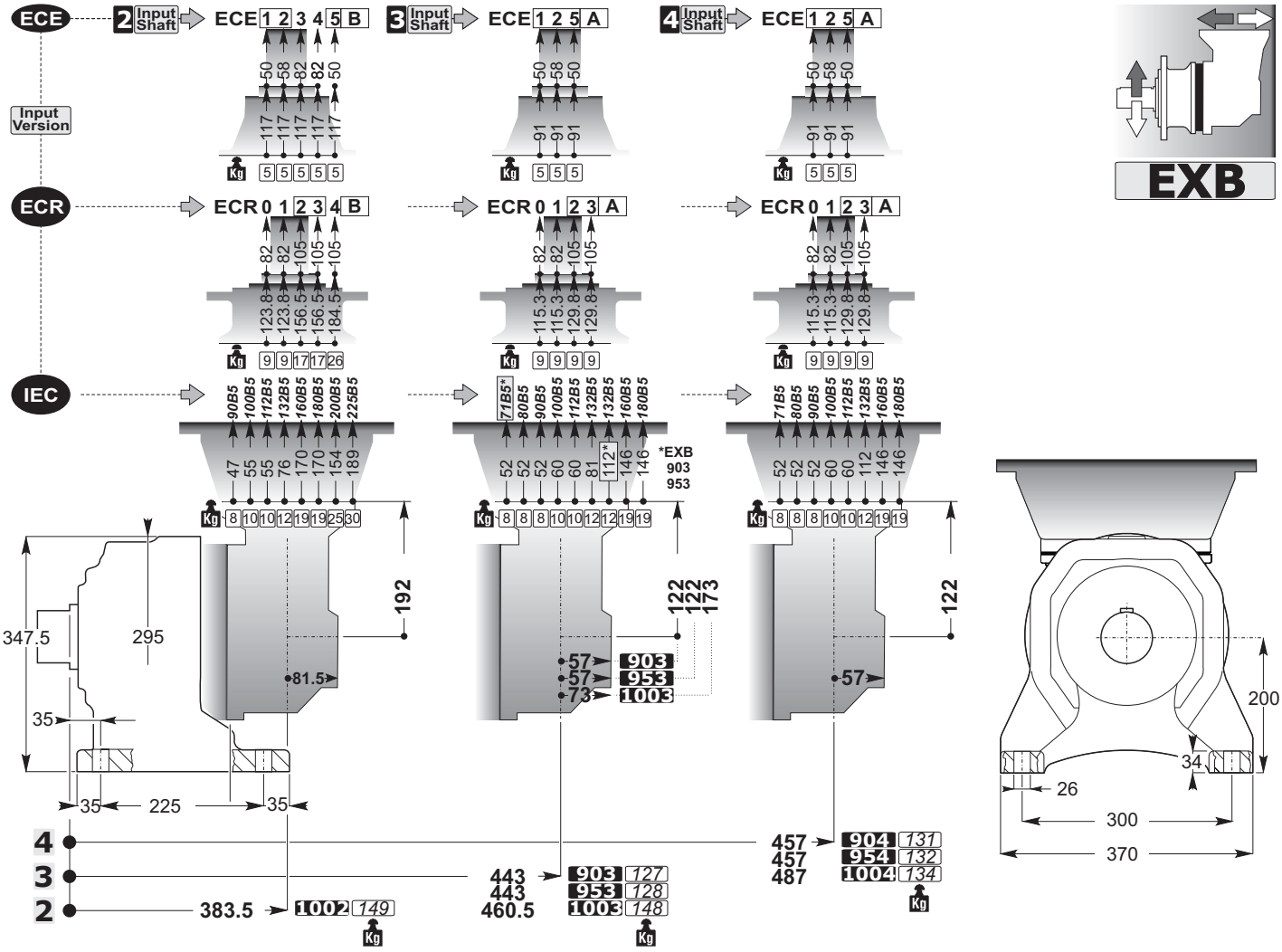

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
347.5
295
35
225
35
200
34
26
300
370
4
3
2
1
257.5
324.5
342.5
377
407
421
451
1001 104
1002 116
1003 120
1004 124
902 113
952 114
903 117
953 118
904 121
954 122

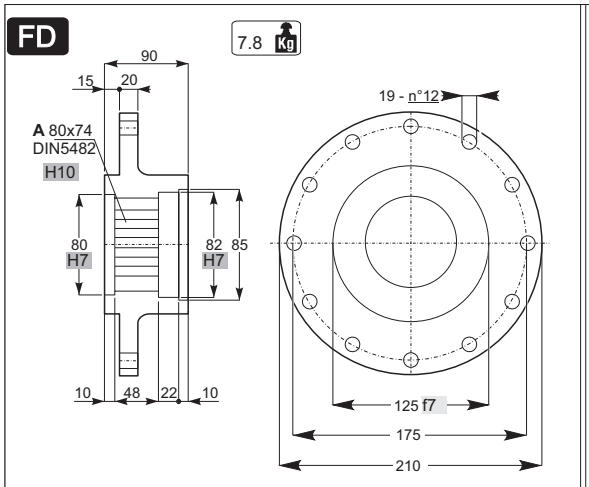

25x14x160
PN1
M24
Ø 90 h7
64
170
M10 n°3-120°
B 80x74 DIN5482
e9
PD
ø 85
ø 70
ø 45
f7
50
90
Output Shafts

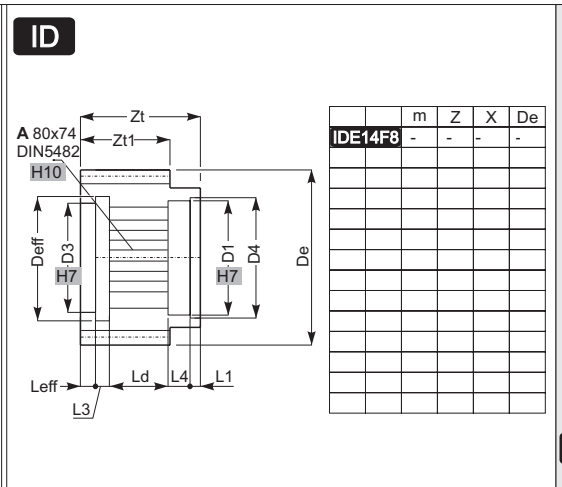

Radial Loads
Fr
120000
100000
80000
60000
40000
20000
N
mm
x
140
120
100
80
60
40
20
0

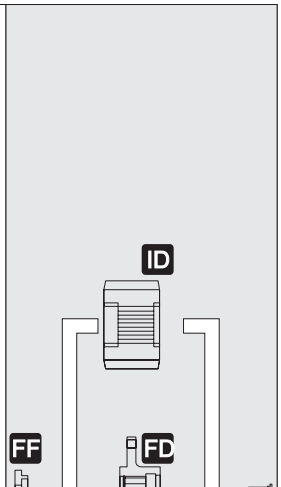

Axial Loads
88463
N
Fa
58419

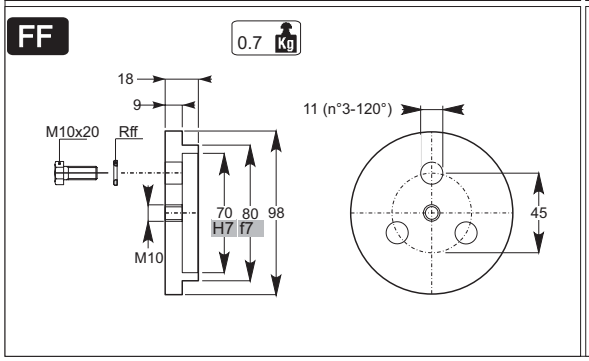

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

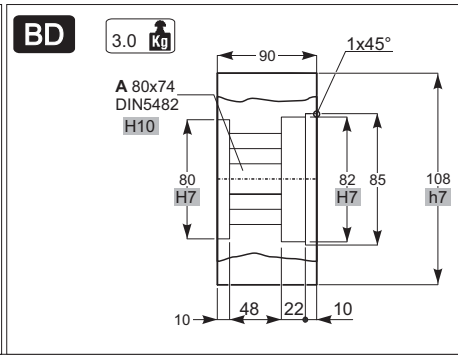






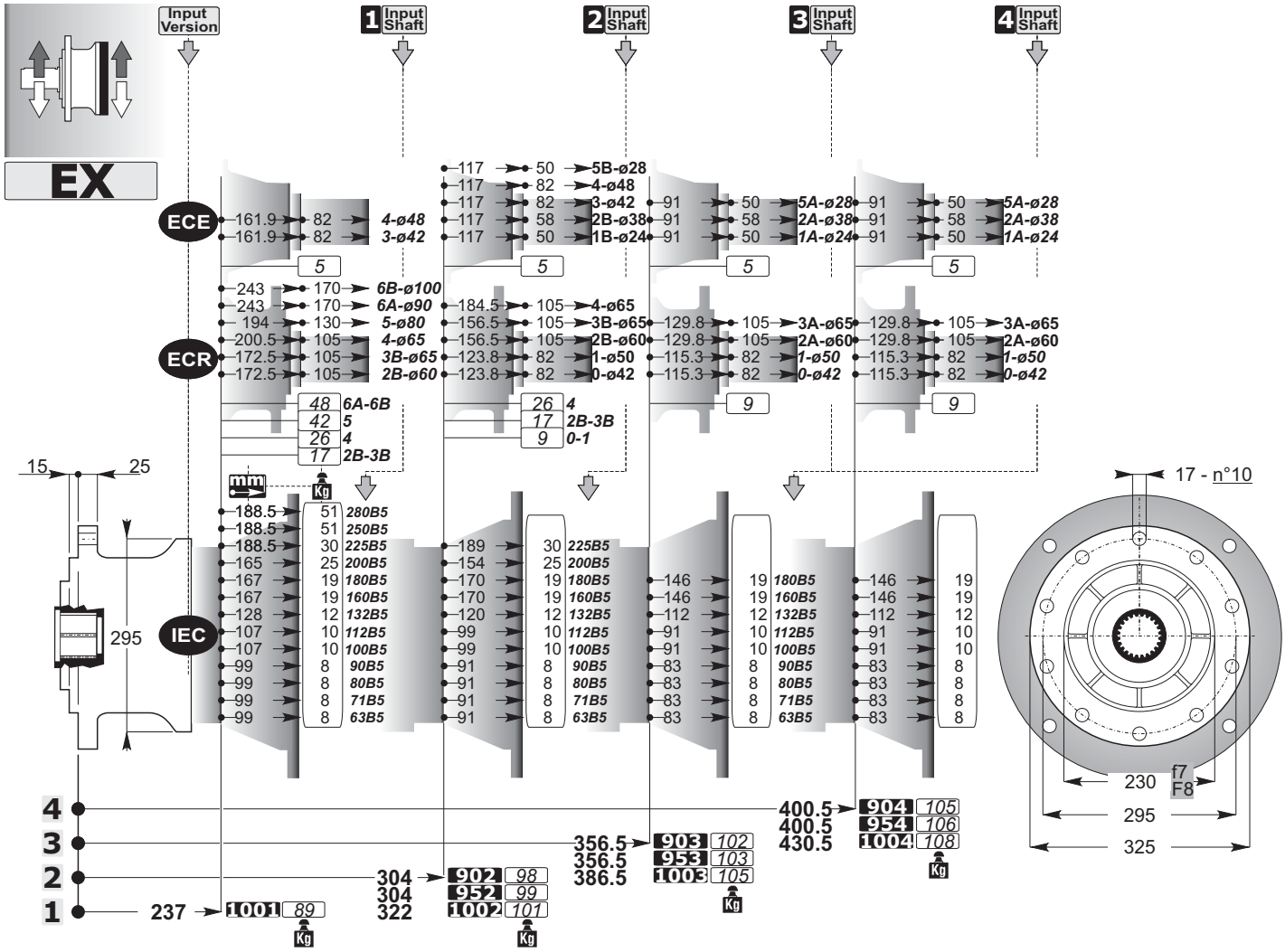


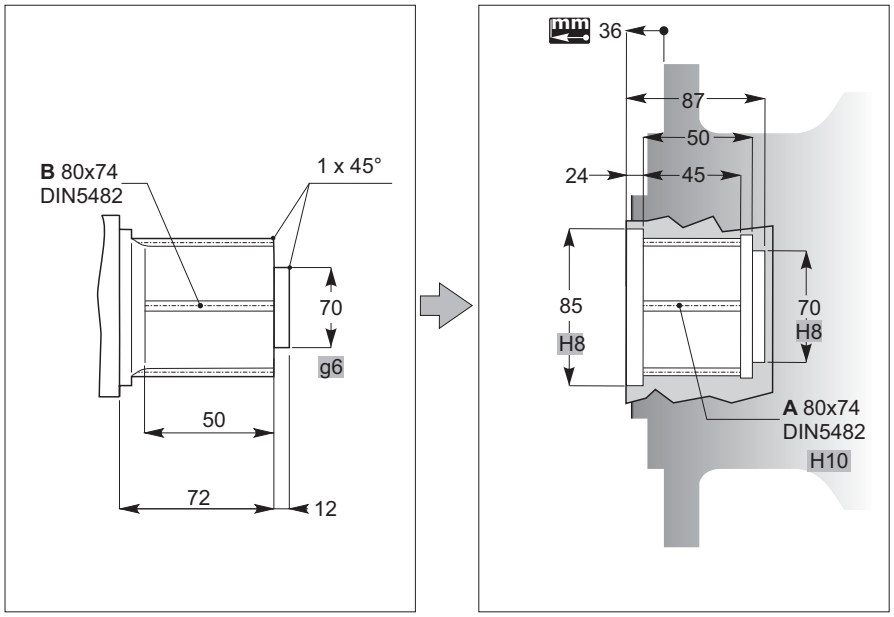




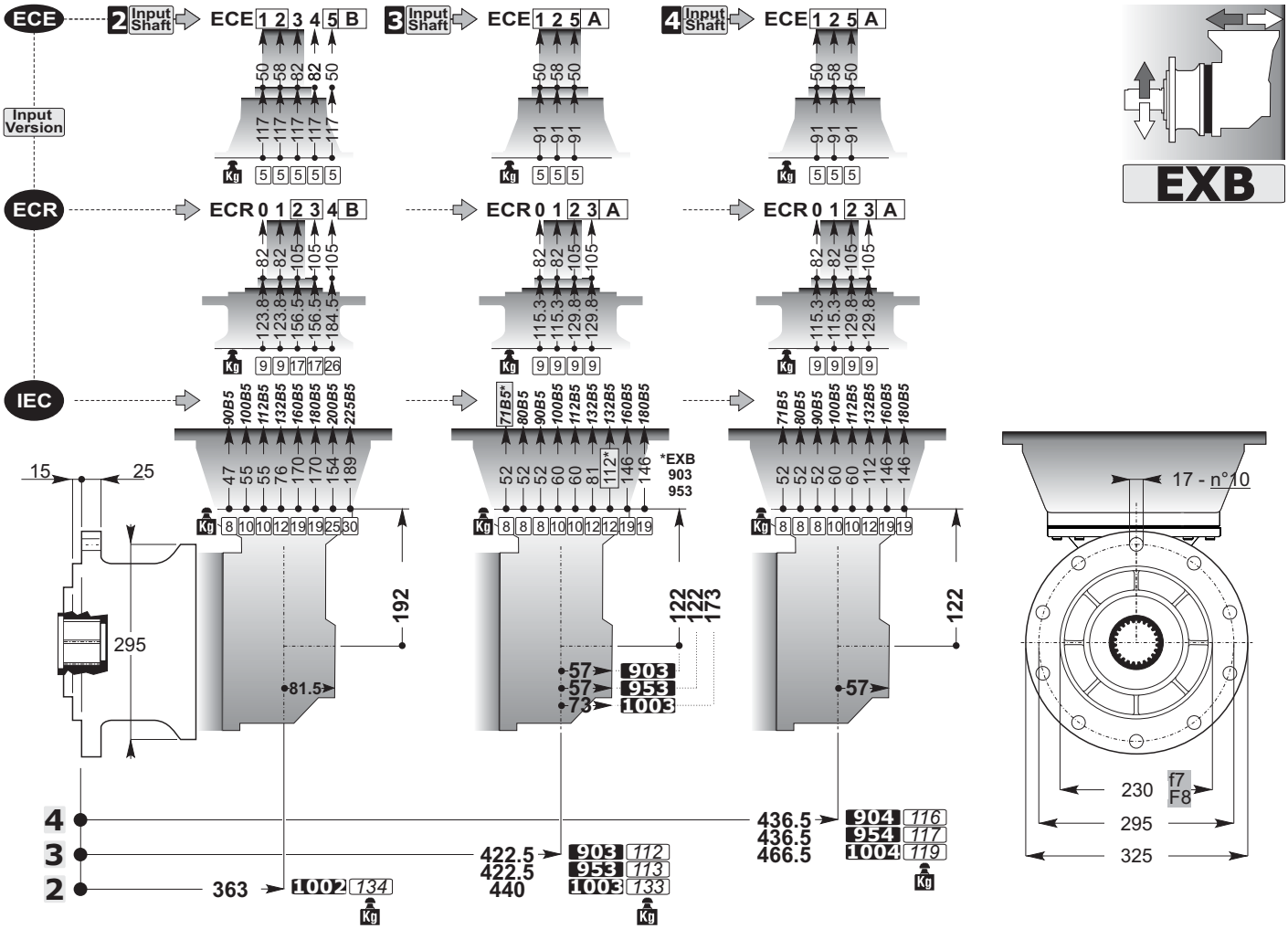
Accessories

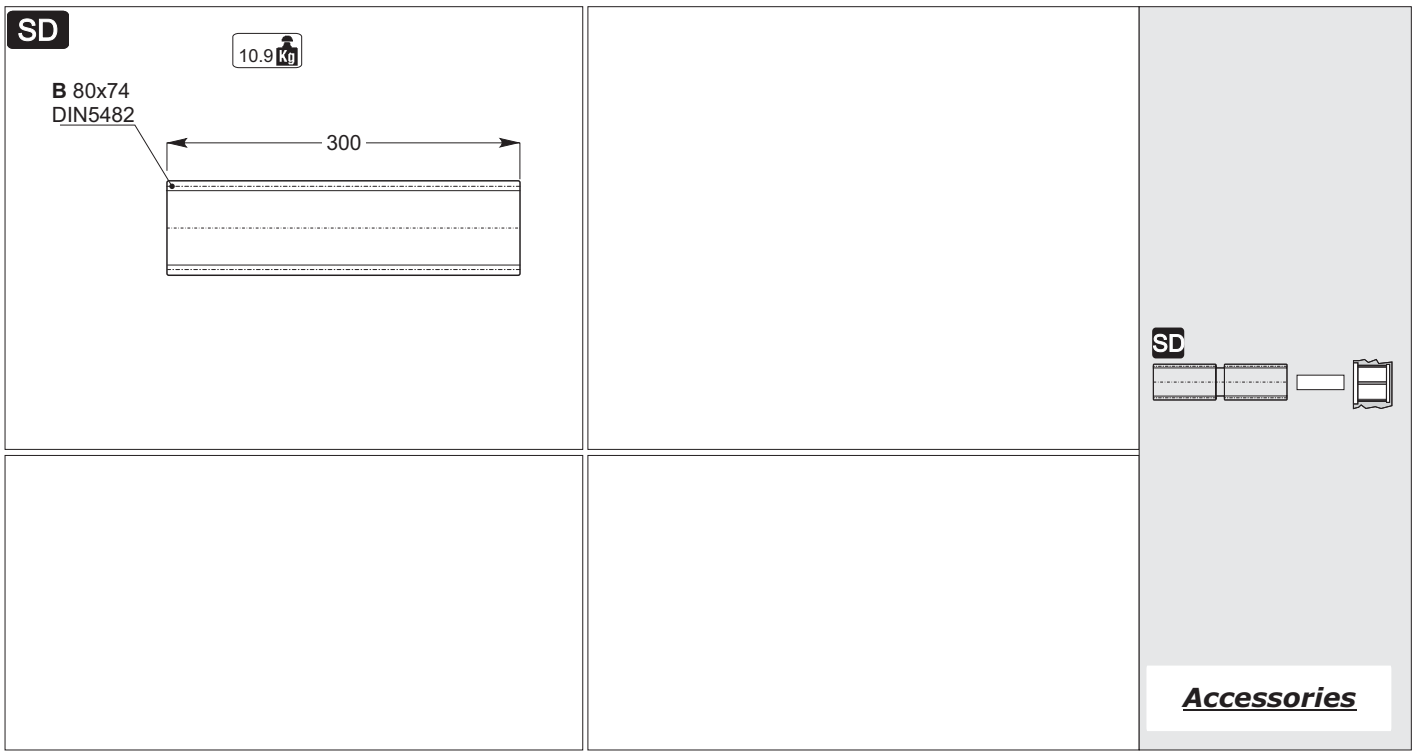
mm
C

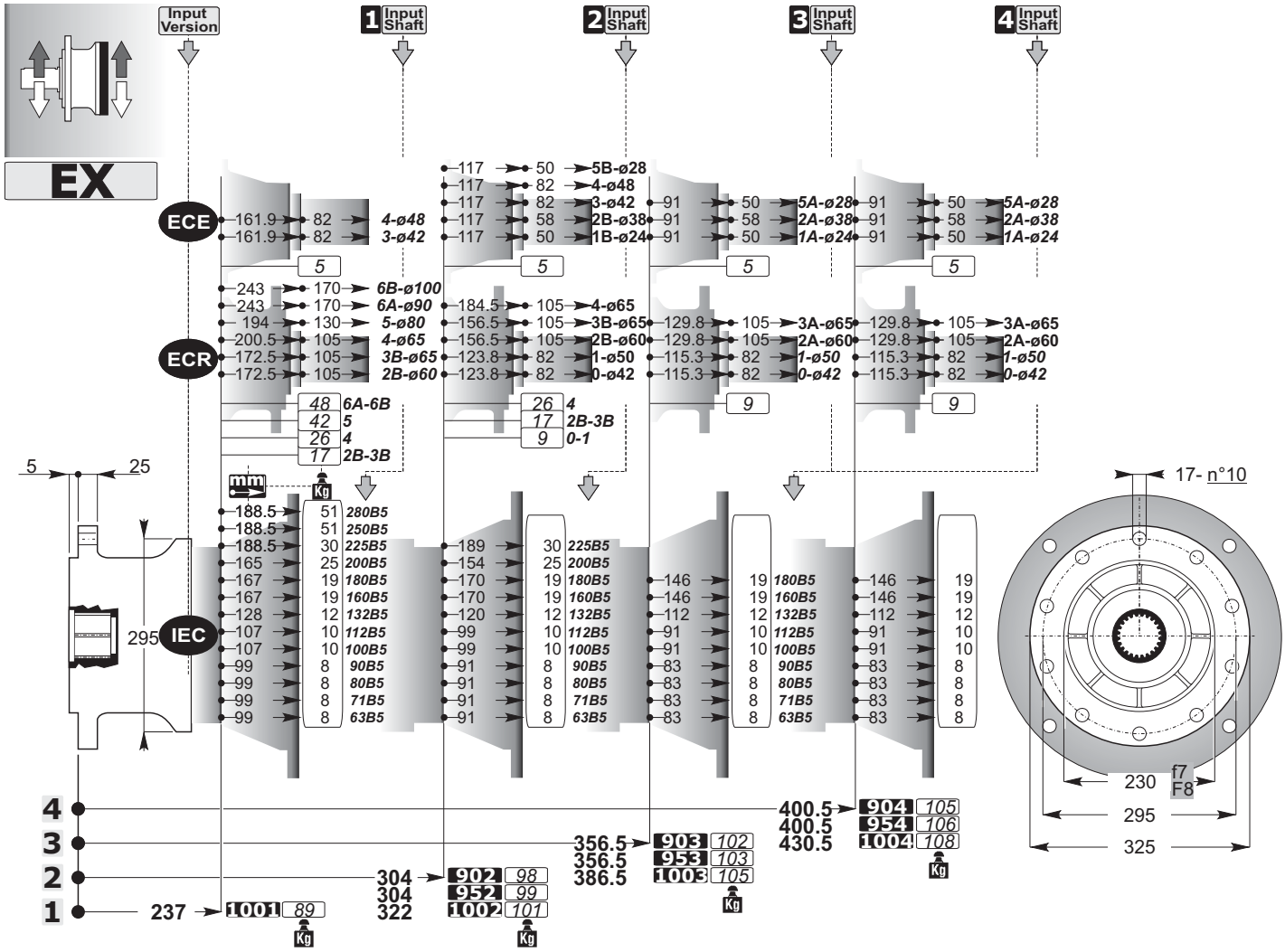


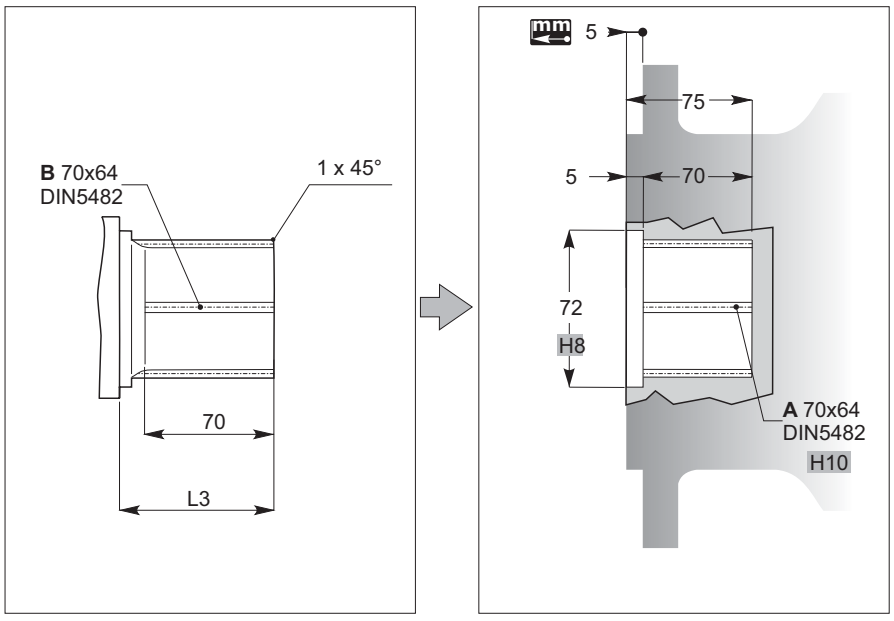


Output Shafts

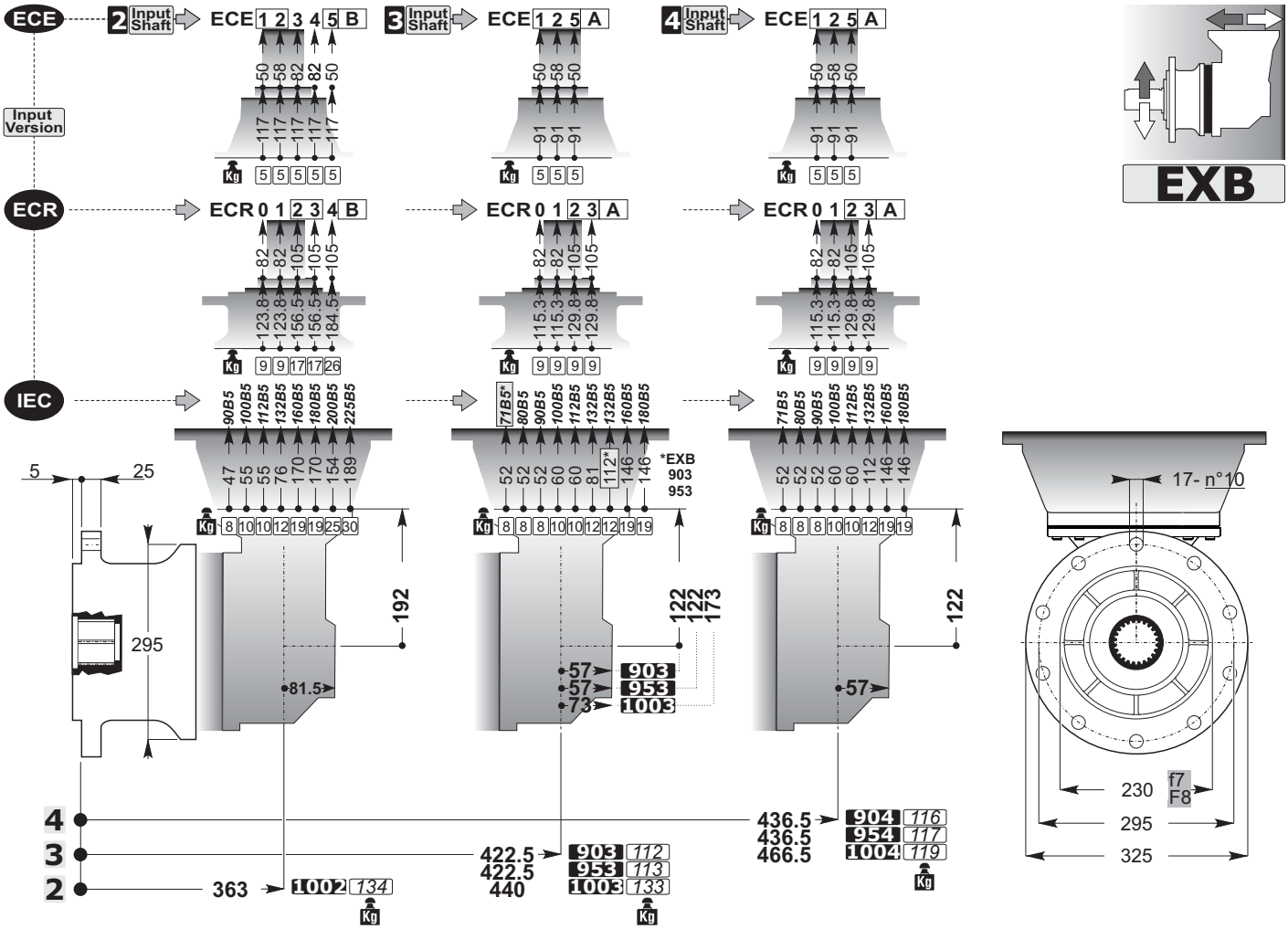

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
15
25
295
192
81.5
122
122
173
57
903
57
953
73
1003
122
57
17 - n°10
230
f7
F8
295
325
4
3
2
436.5
436.5
466.5
904 116
954 117
1004 119
422.5
422.5
440
903 112
953 113
1003 133
363
1002 134

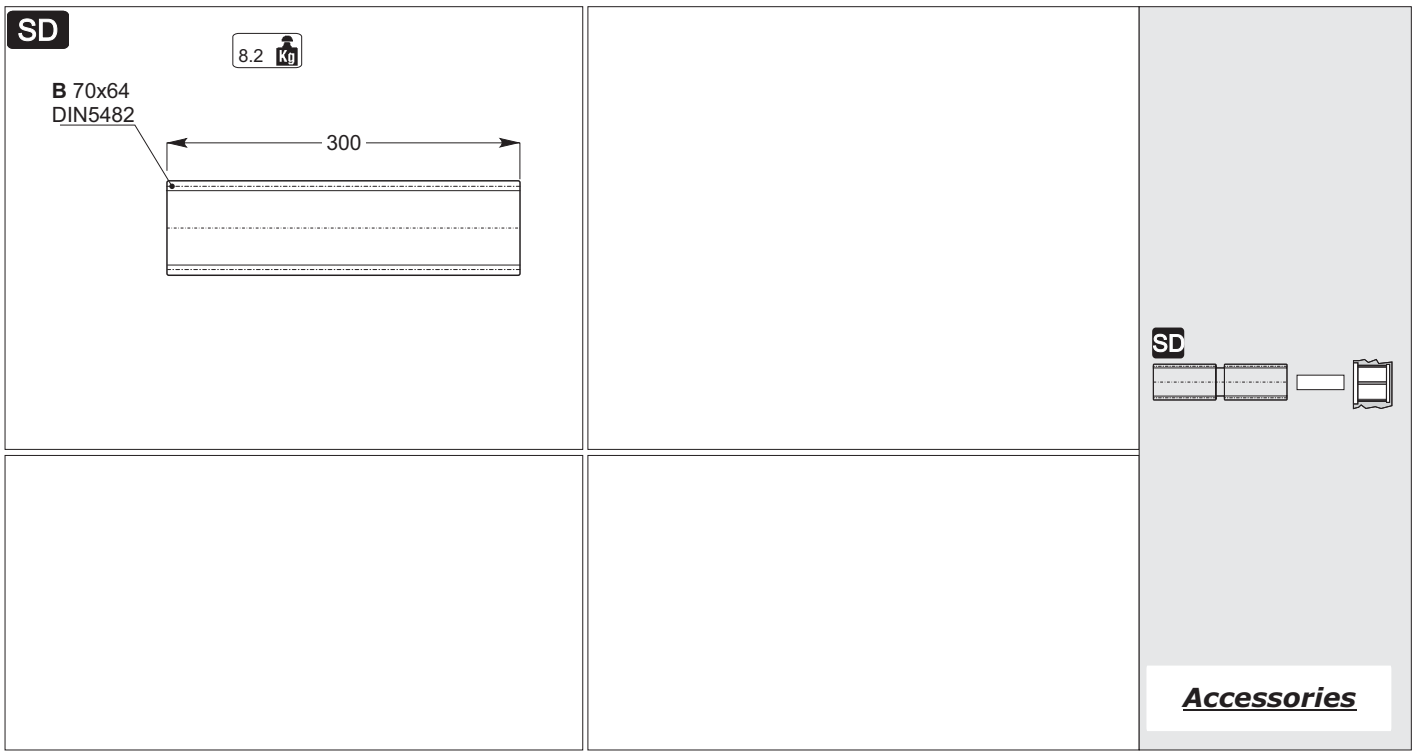

SD
10.9
B 80x74
DIN5482
300
SD
Accessories

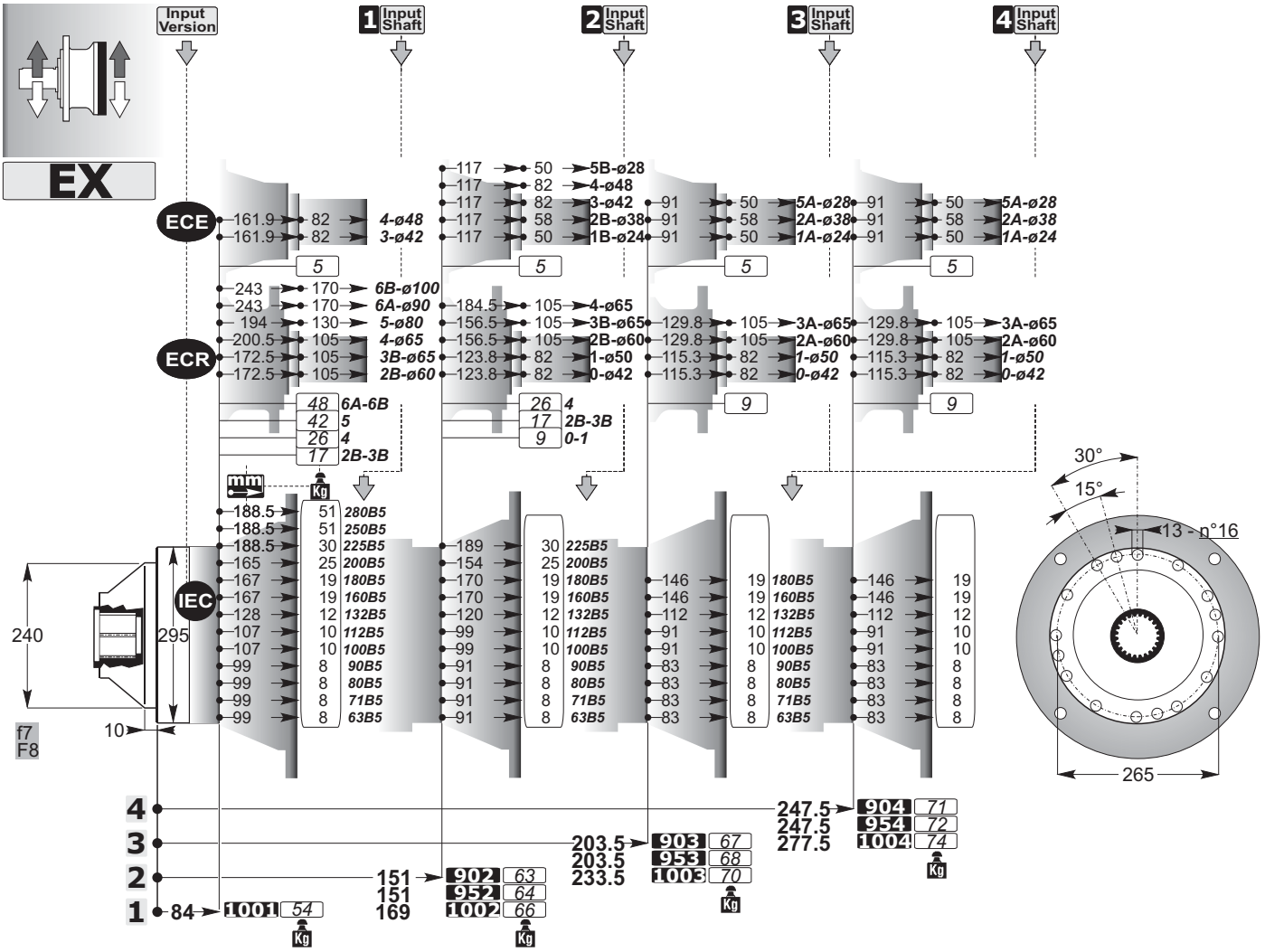


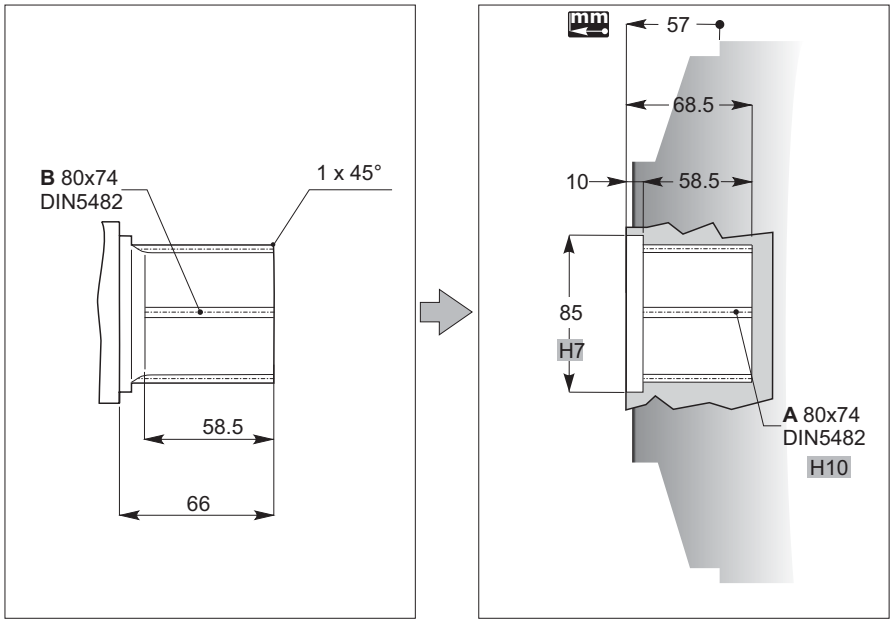


Output Shafts

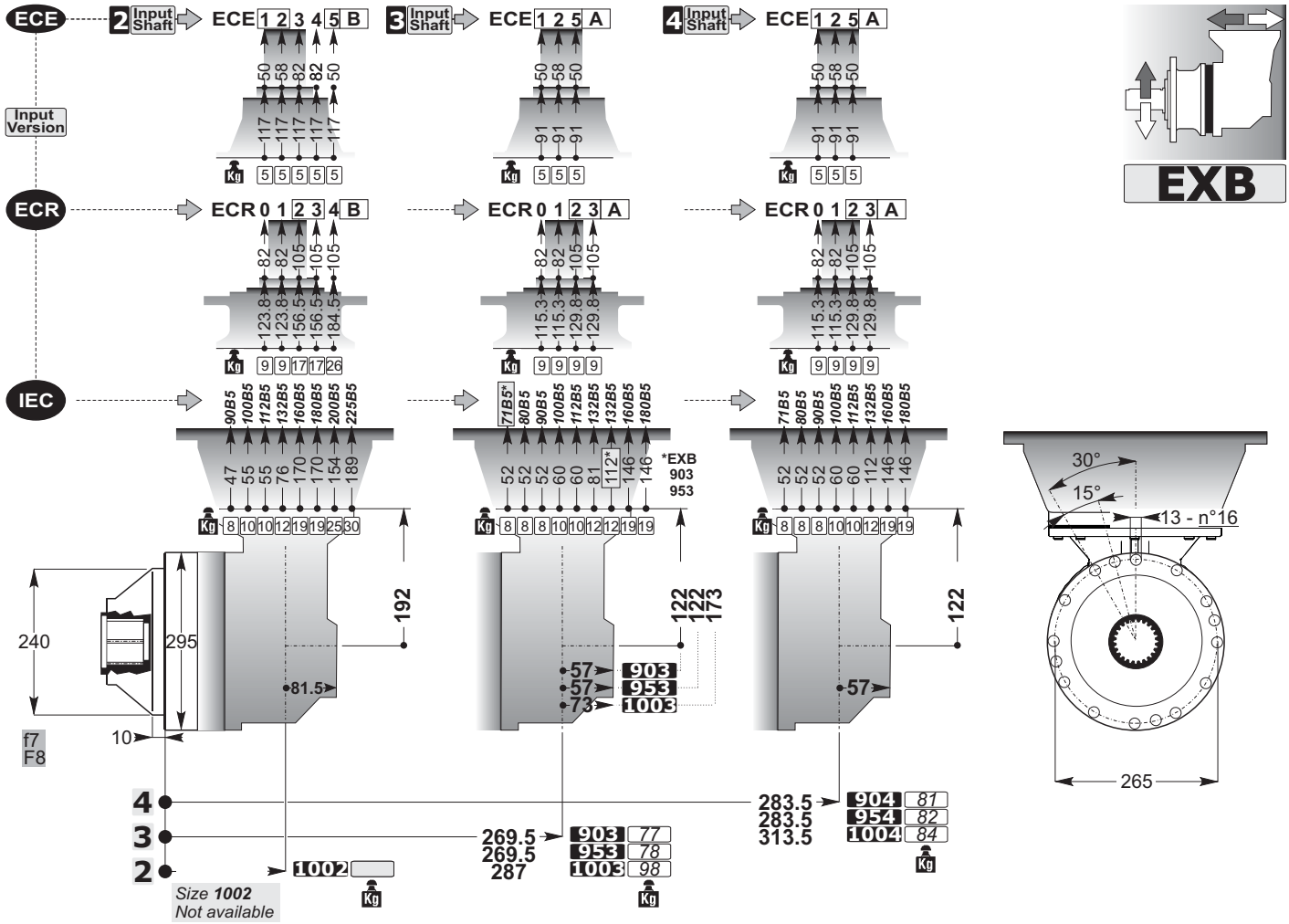

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
17- n°10
230 f7 F8
295
325
192
122
122
122
173
295
81.5
57
57
73
903
953
1003
57
4
3
2
436.5
436.5
466.5
904 116
954 117
1004 119
422.5
422.5
440
903 112
953 113
1003 133
363
1002 134

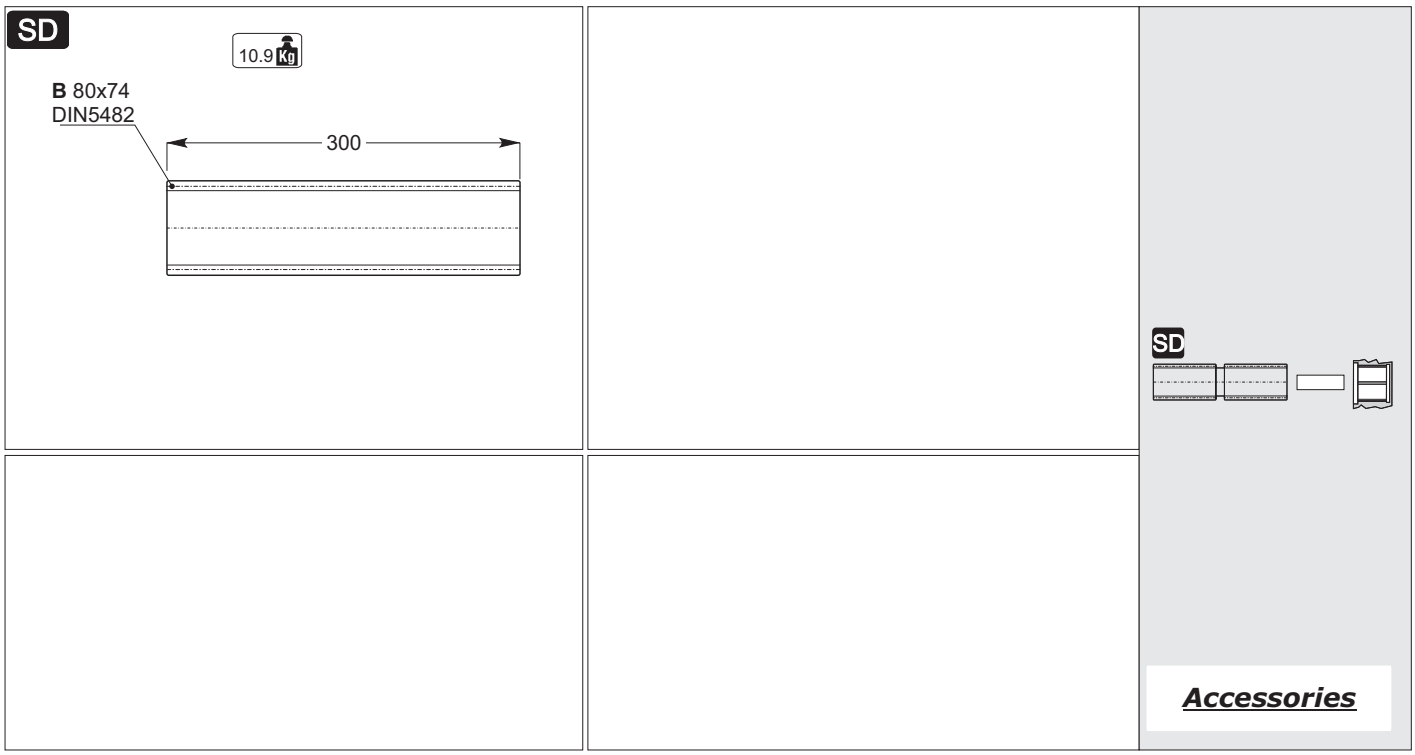

SD
8.2
B 70x64
DIN5482
300
SD
Accessories

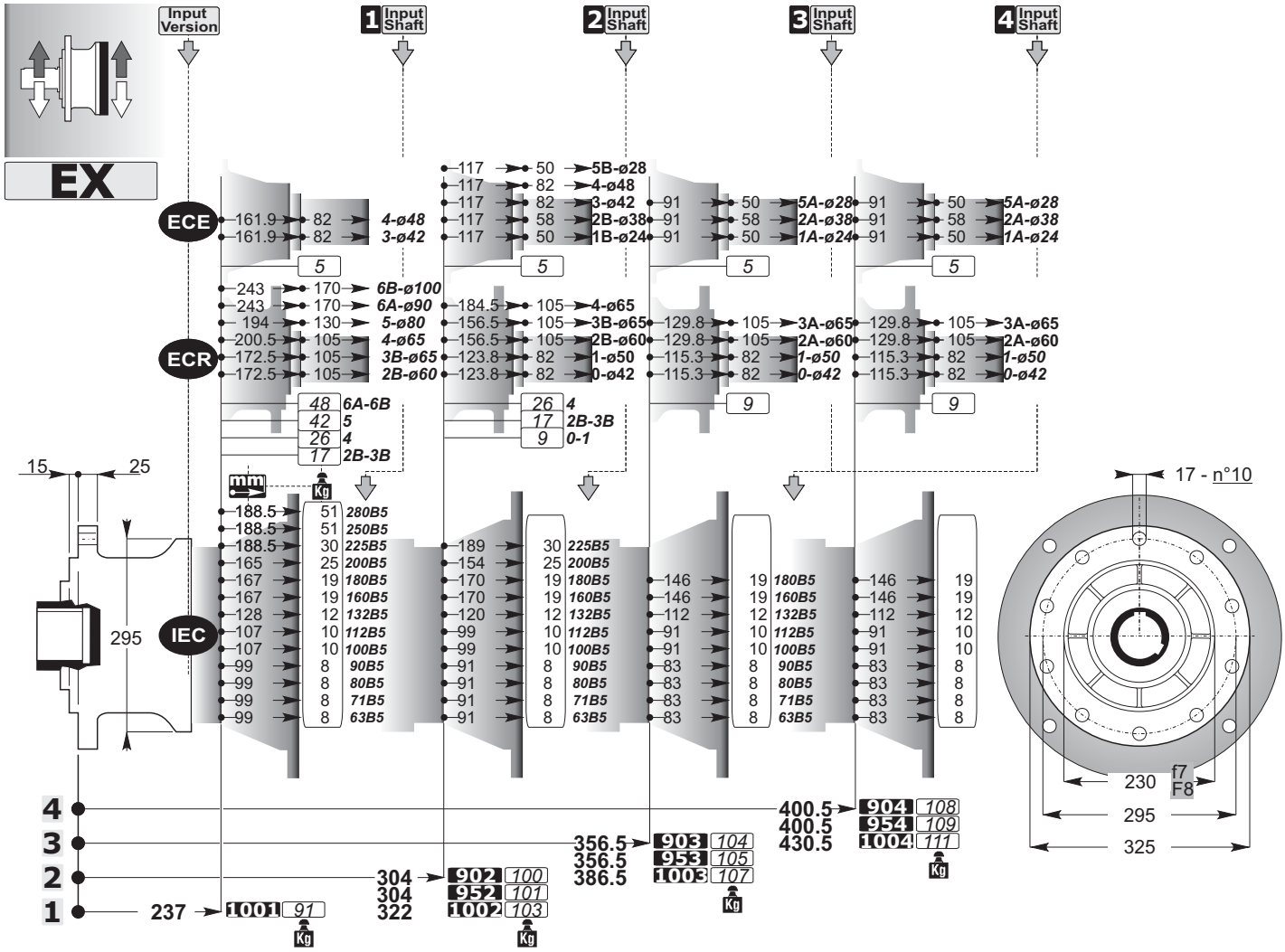


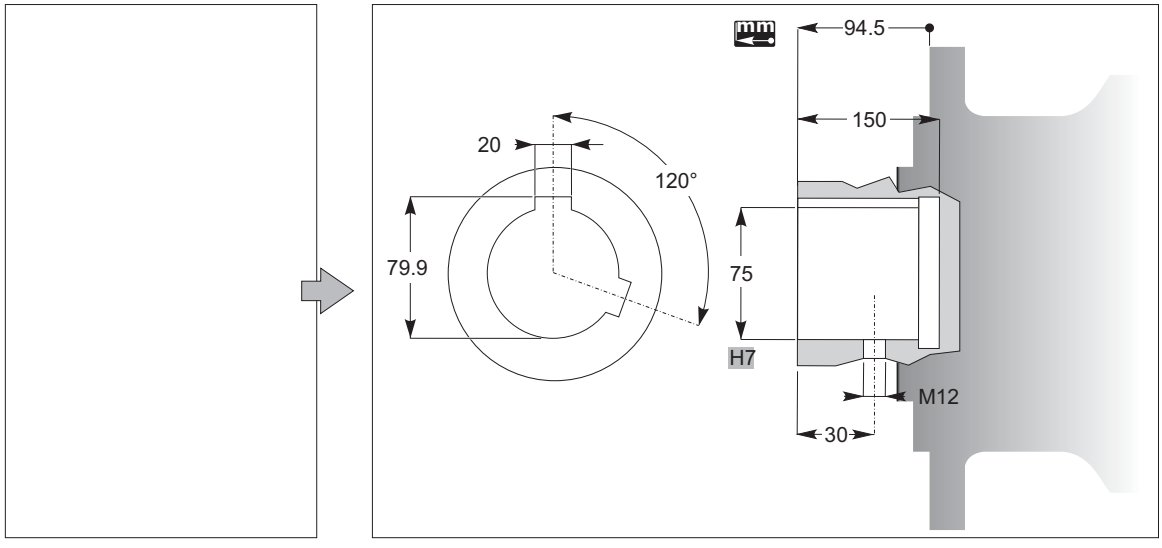


Output Shafts

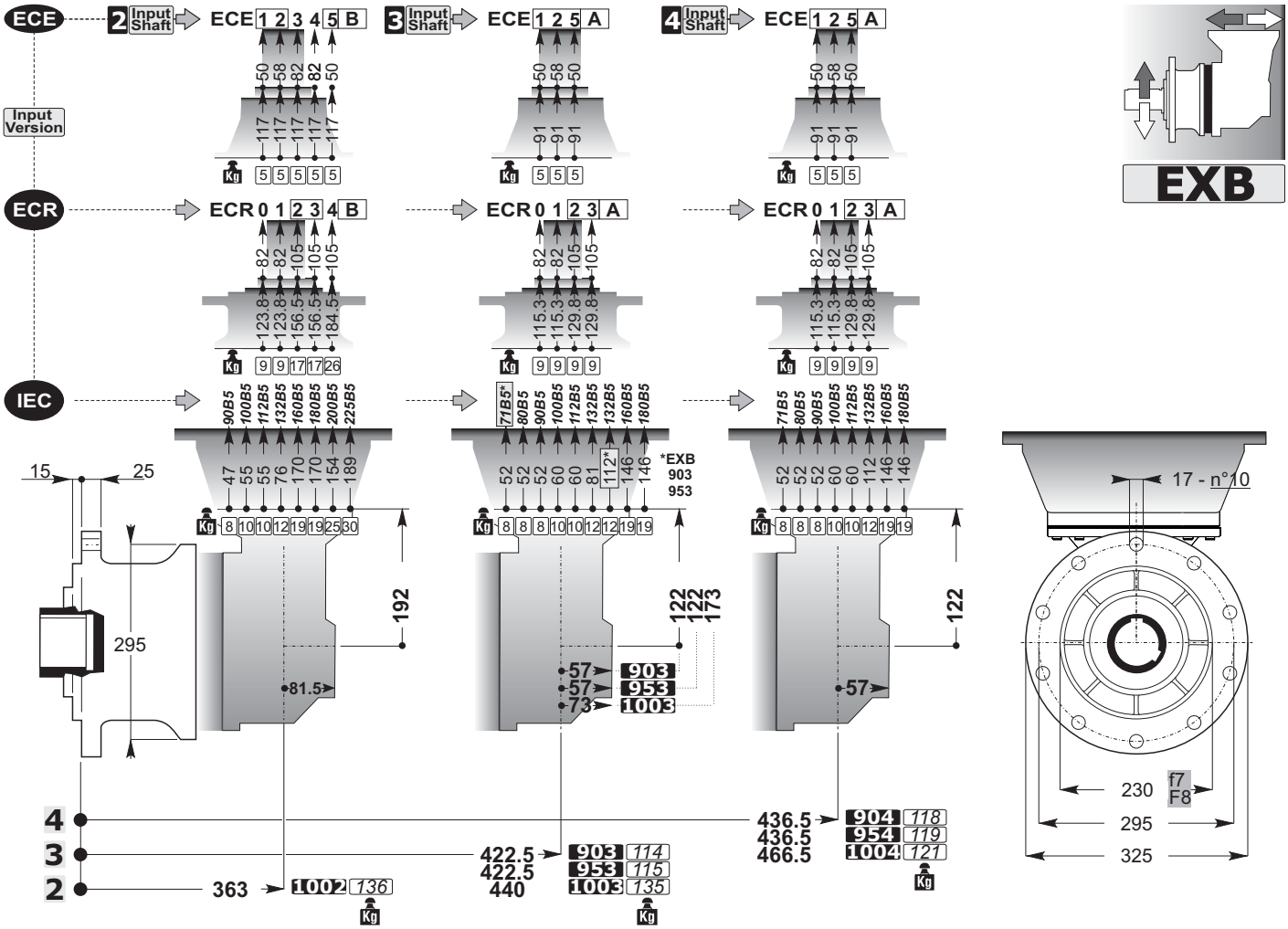

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
30°
15°
13 - n°16
265
240
295
192
122
122
173
122
81.5
57
903
57
953
73
1003
57
f7
F8
10
4
3
2
283.5
283.5
313.5
904 81
954 82
1004 84
269.5
269.5
287
903 77
953 78
1003 98
1002
Size 1002
Not available

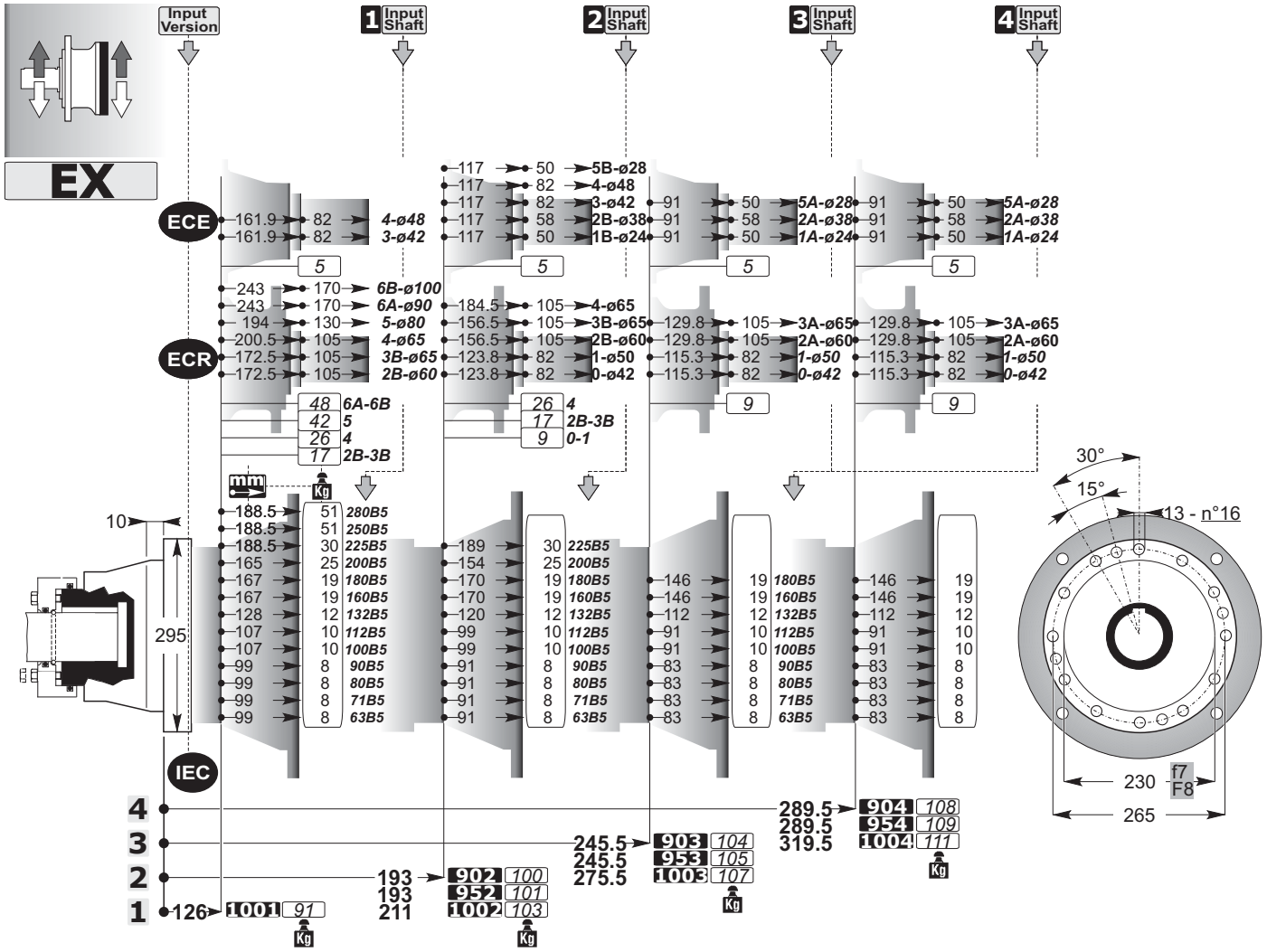

SD
10.9
B 80x74
DIN5482
300
SD
Accessories

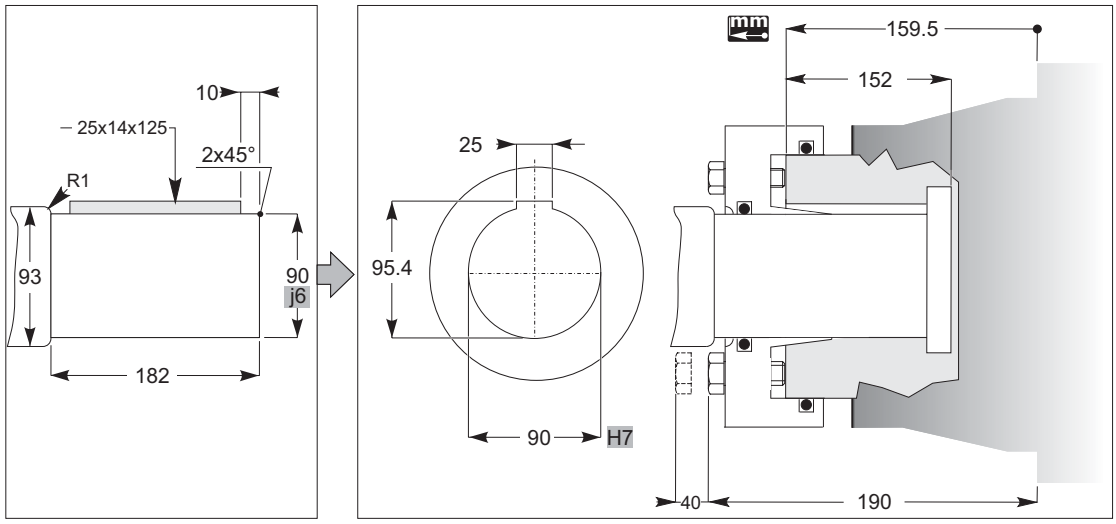




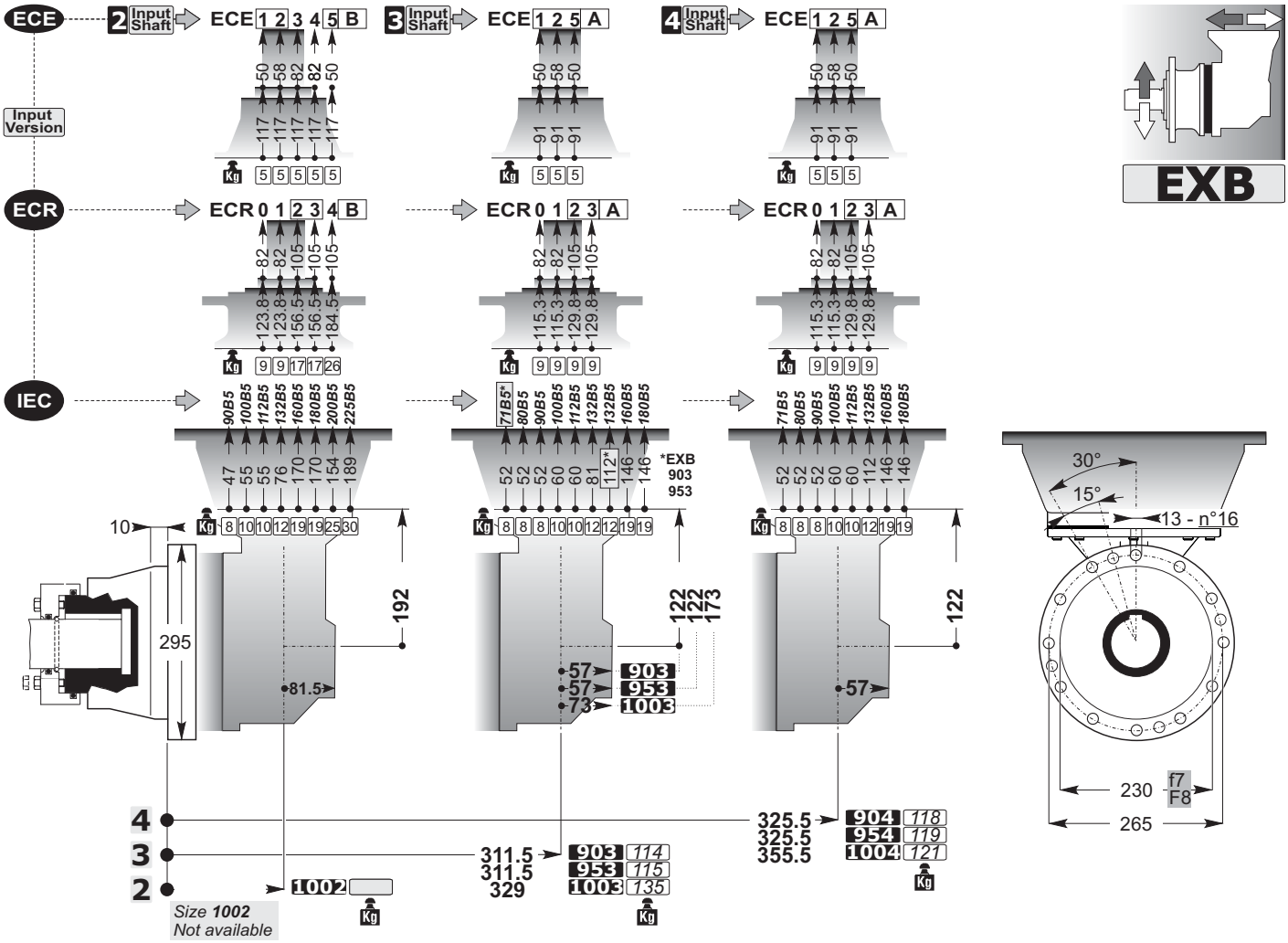
Output Shafts

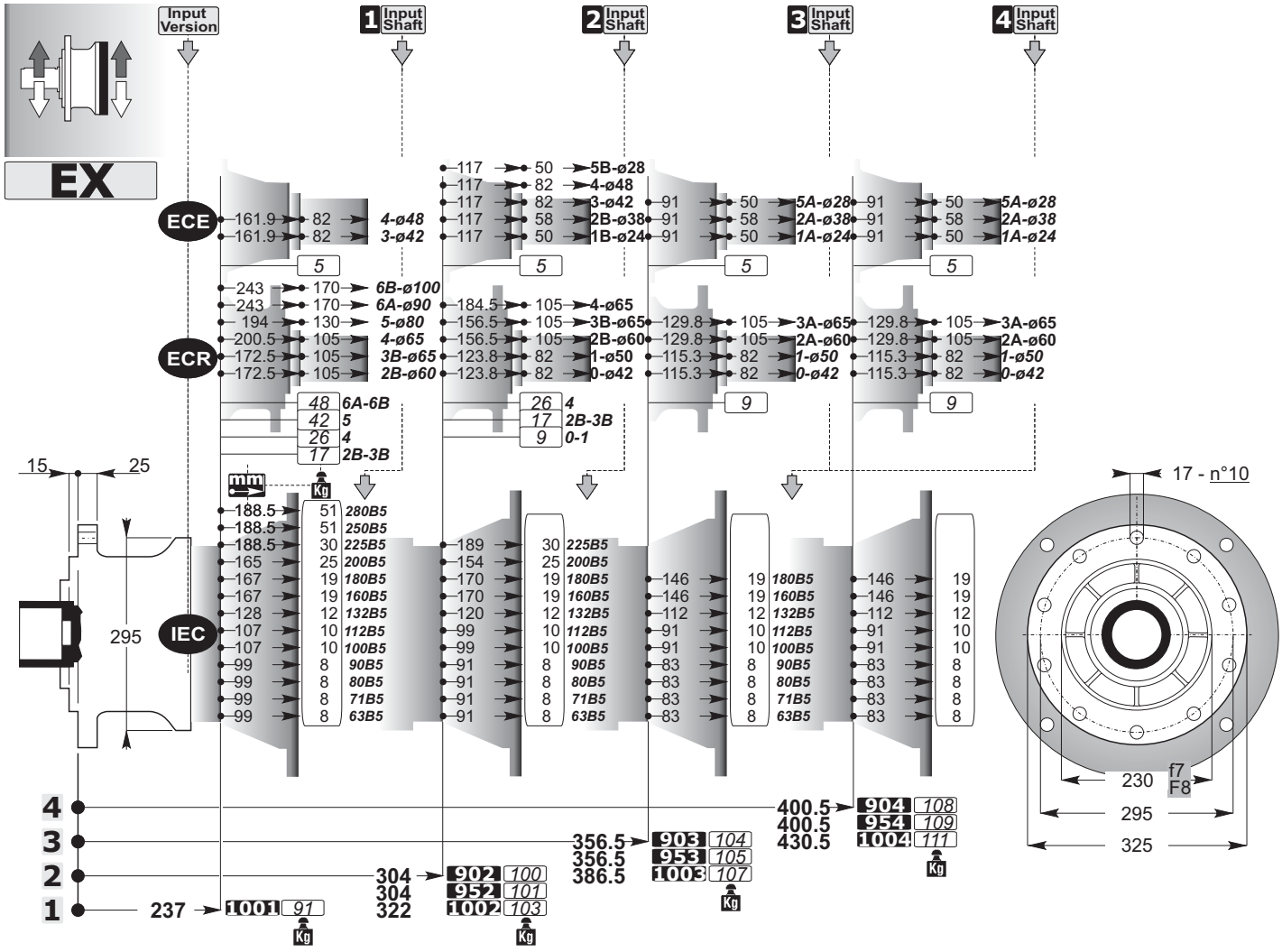

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
15
25
295
192
81.5
122
122
173
57
903
57
953
73
1003
122
57
17 - n°10
230 f7 F8
295
325
4
3
2
436.5 904 118
436.5 954 119
466.5 1004 121
422.5 903 114
422.5 953 115
440 1003 135
363 1002 136
Kg

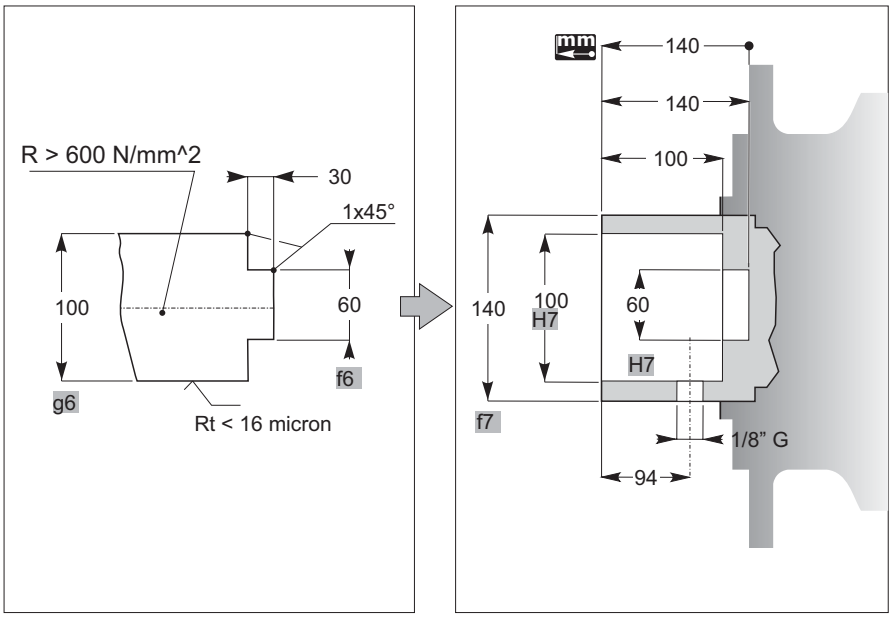




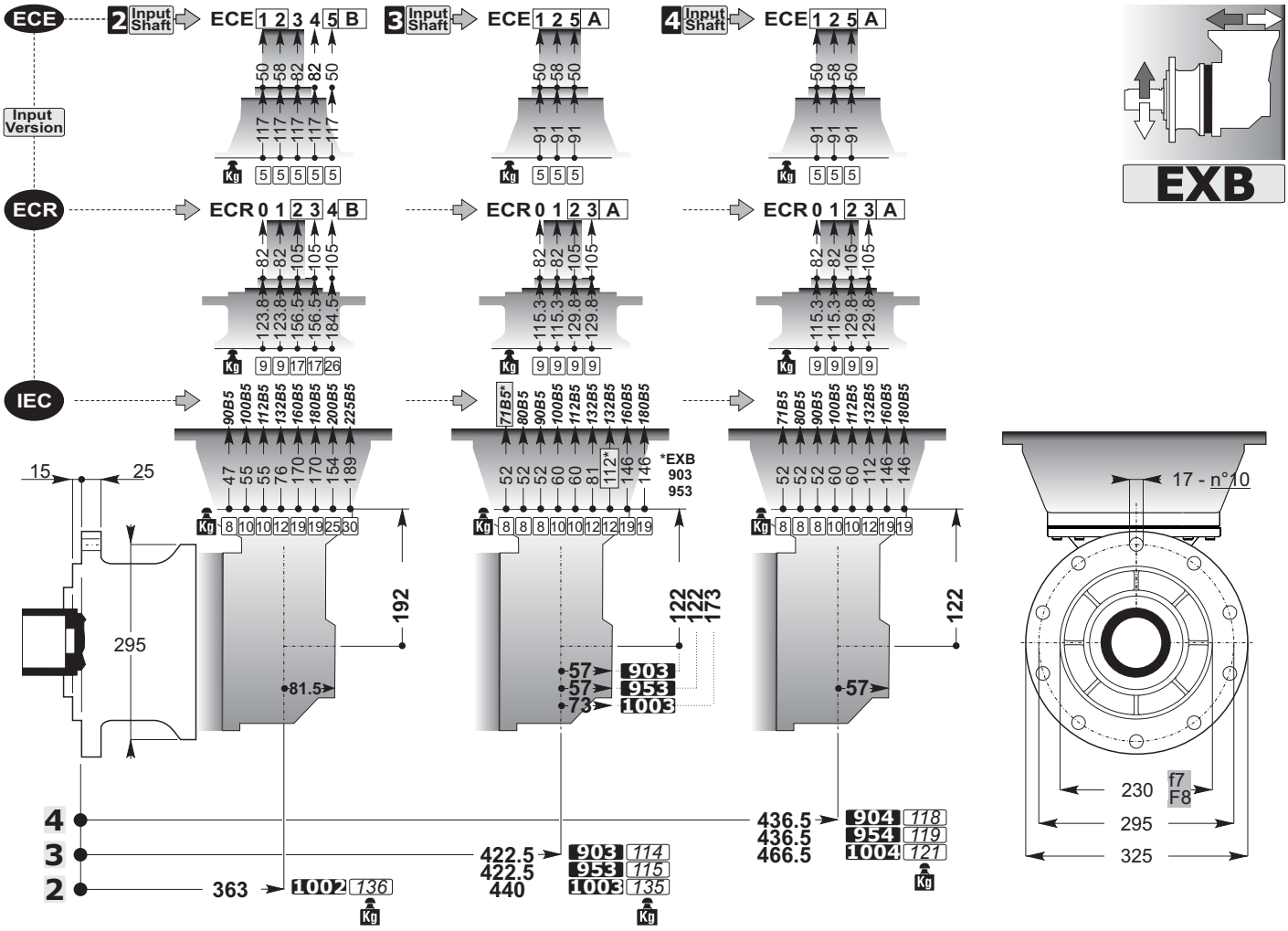
Output Shafts

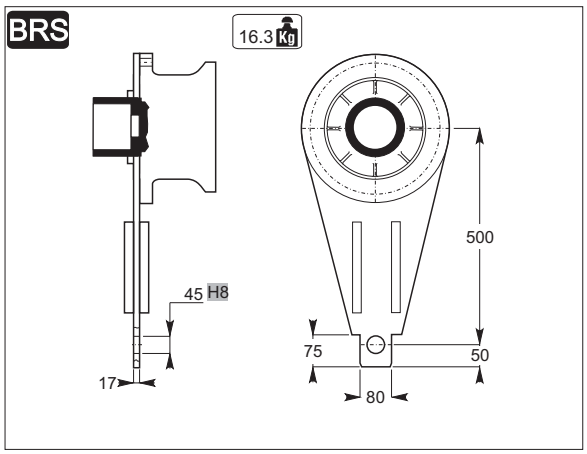

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
EXB
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB
903
953
10
295
192
81.5
122
122
173
57
57
73
903
953
1003
122
57
30°
15°
13 - n°16
230 f7 F8
265
4
3
2
325.5
325.5
355.5
904 118
954 119
1004 121
311.5
311.5
329
903 114
953 115
1003 135
1002
Size 1002
Not available

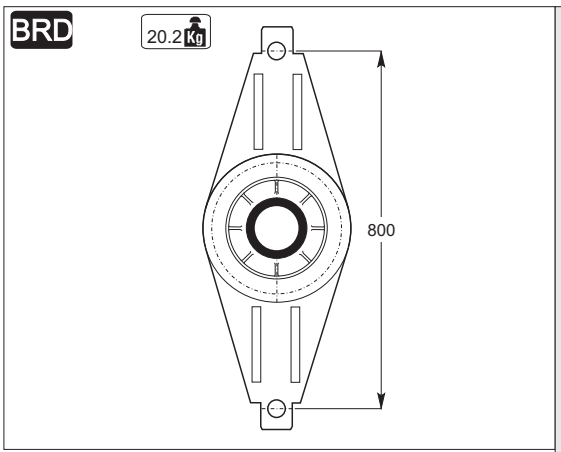


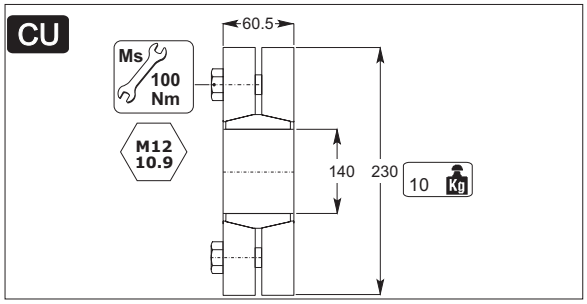


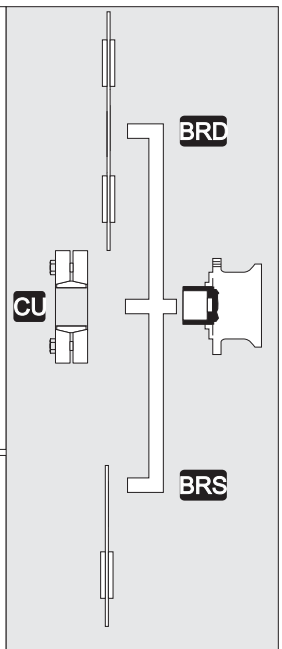
Output Shafts


ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
*EXB
903
953
15
25
295
192
81.5
122
122
173
57
903
57
953
73
1003
122
57
17 - n°10
230
f7
F8
295
325
4
3
2
363
1002 136
422.5
422.5
440
903 114
953 115
1003 135
436.5
436.5
466.5
904 118
954 119
1004 121

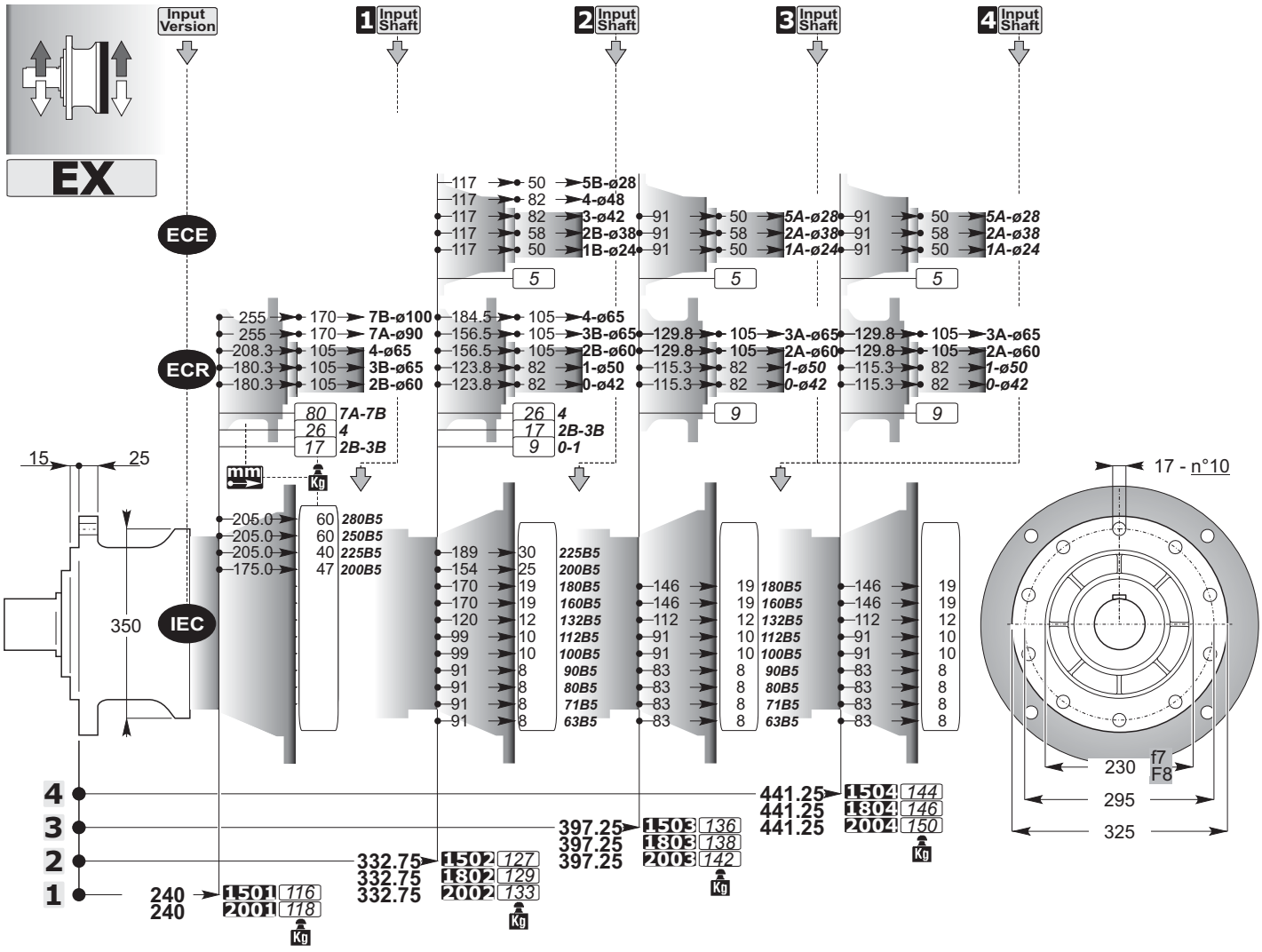

BRS
16.3 Kg
45 H8
17
500
75
50
80

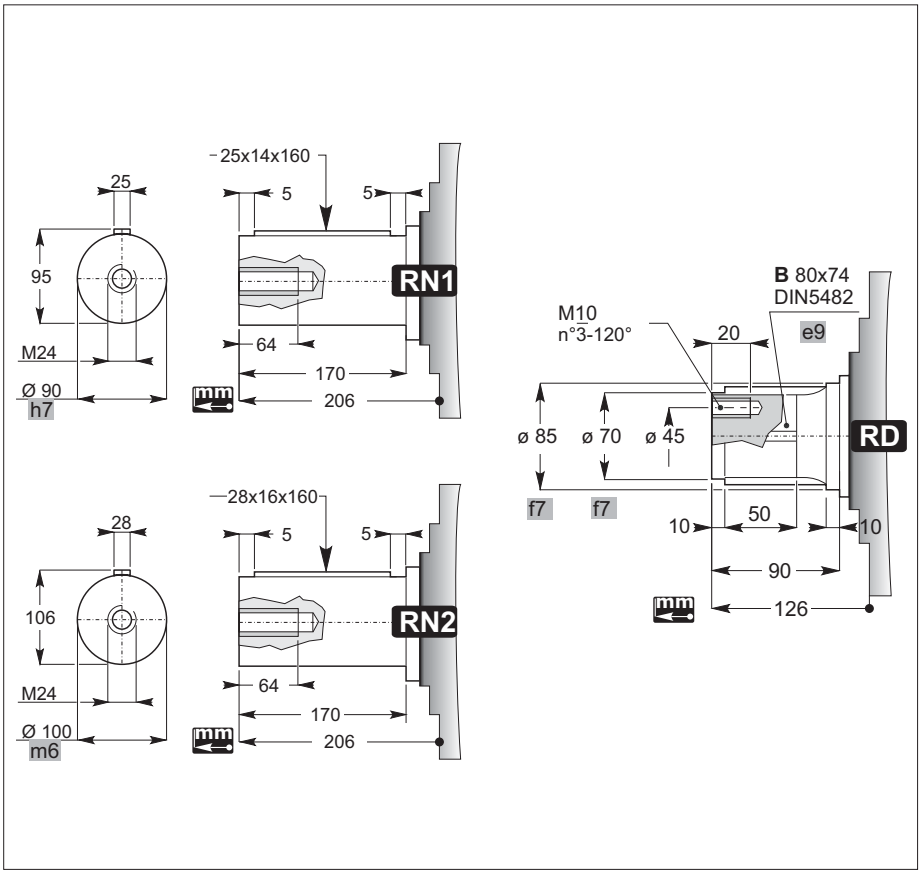

BRD
20.2 Kg
800

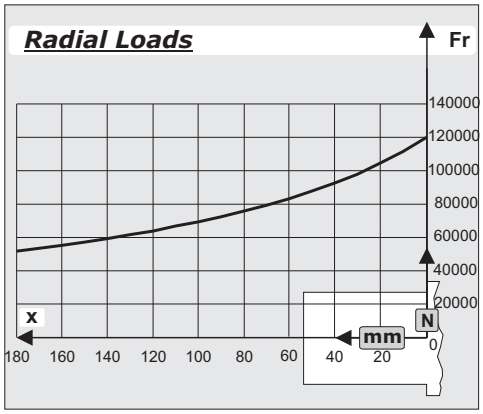

CU
Ms
100
Nm
M12
10.9
60.5
140
230
10 Kg

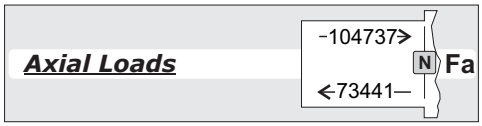

BRD
CU
BRS
Accessories

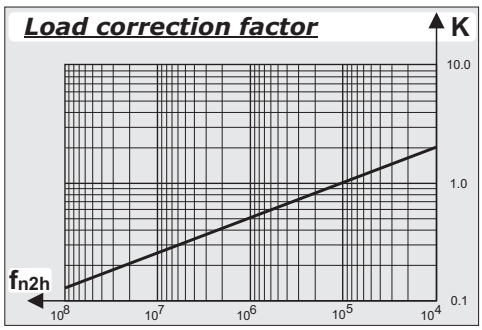
mm
C

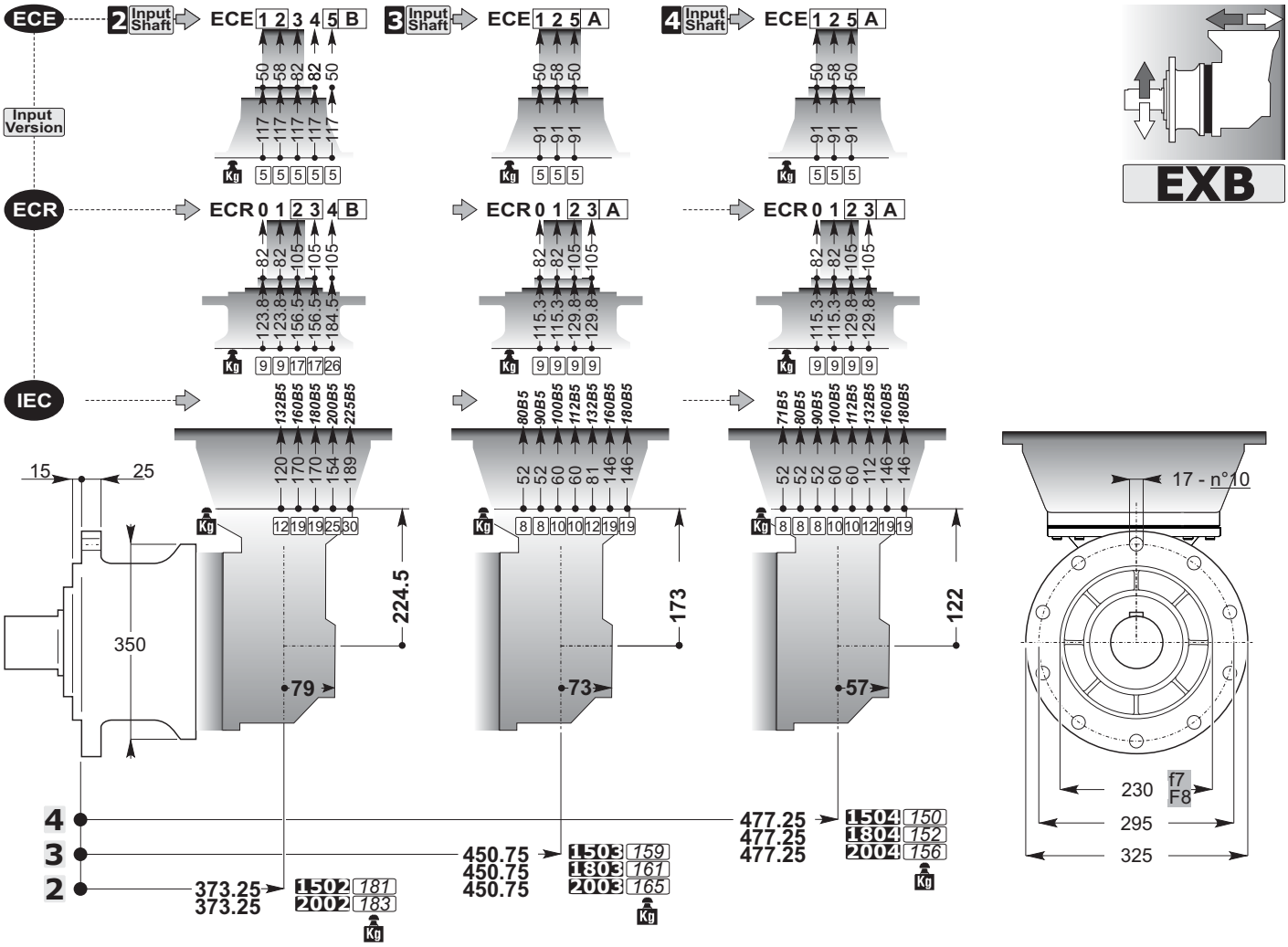

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19 180B5
146 19 160B5
112 12 132B5
91 10 112B5
91 10 100B5
83 8 90B5
83 8 80B5
83 8 71B5
83 8 63B5
146 19
146 19
112 12
91 10
91 10
83 8
83 8
83 8
83 8
15
25
350
mm
Kg
17 - n°10
230 f7 F8
295
325
4
3
2
1
441.25 1504 144
441.25 1804 146
441.25 2004 150
397.25 1503 136
397.25 1803 138
397.25 2003 142
332.75 1502 127
332.75 1802 129
332.75 2002 133
240 1501 116
240 2001 118

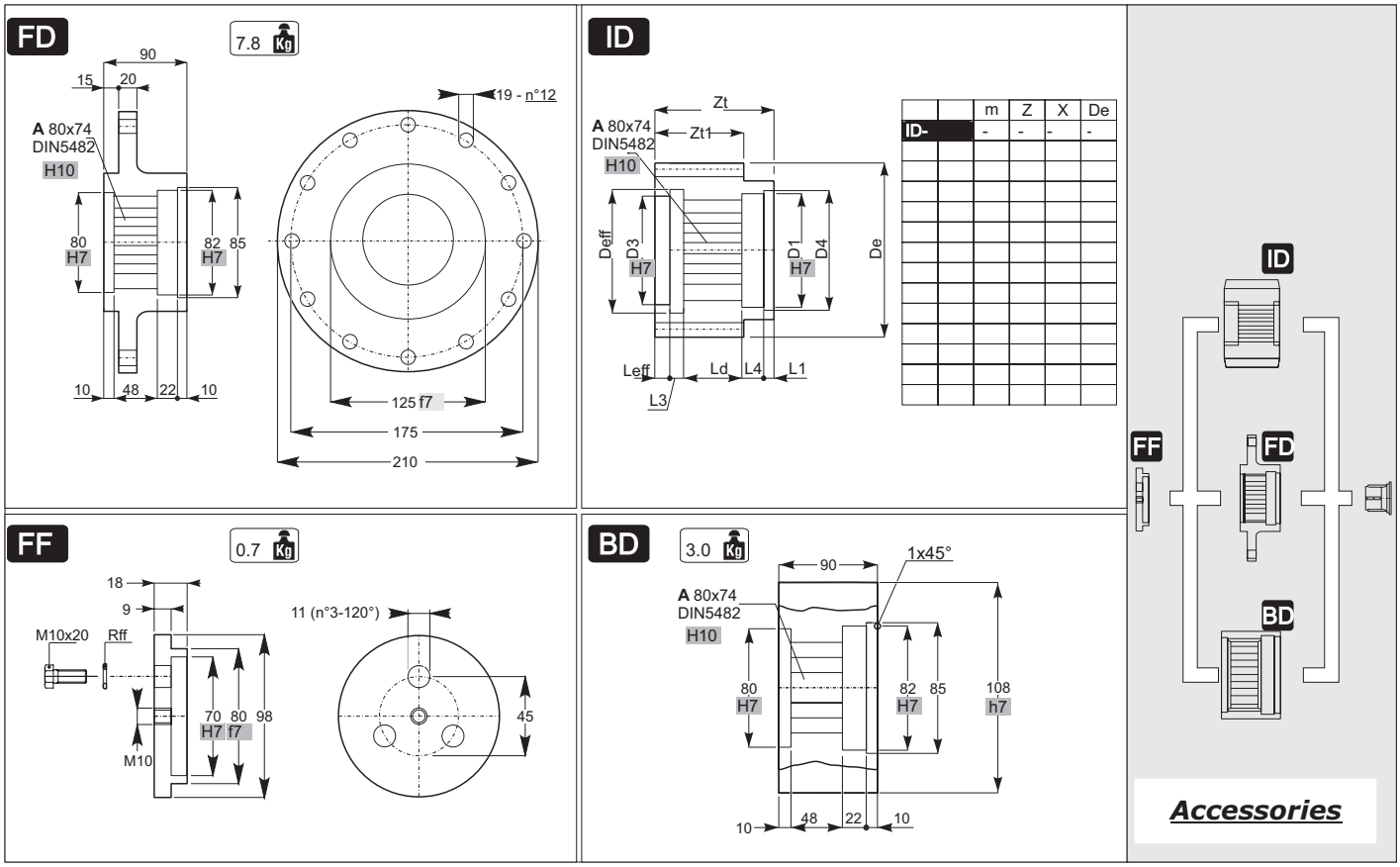

25
95
M24
Ø 90
h7
25x14x160
5
5
RN1
64
170
206
mm
28
106
M24
Ø 100
m6
28x16x160
5
5
RN2
64
170
206
mm
M10
n°3-120°
B 80x74
DIN5482
20
e9
ø 85
ø 70
ø 45
f7
f7
RD
10
50
10
90
126
mm

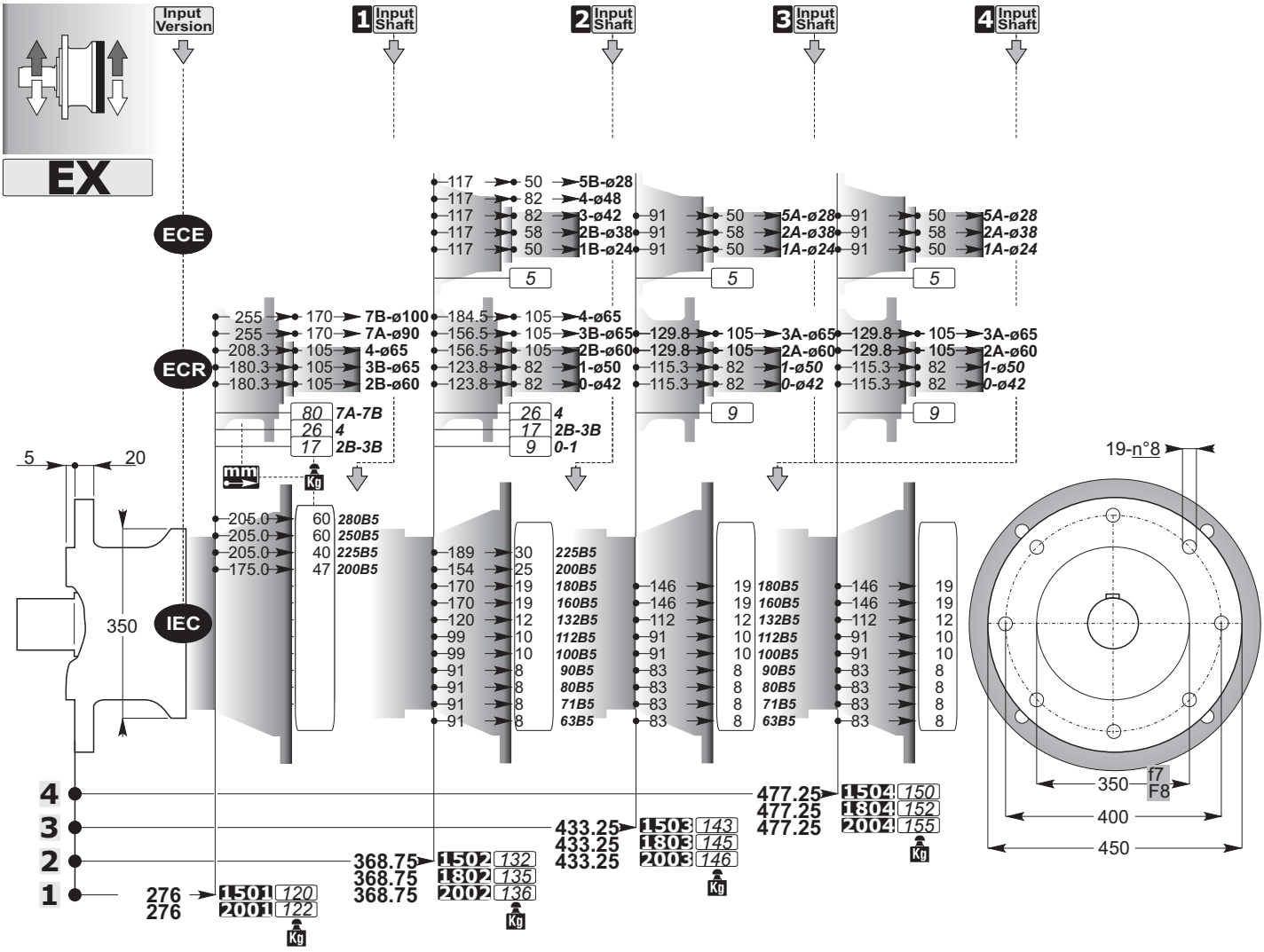

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
x
N
mm
180 160 140 120 100 80 60 40 20 0

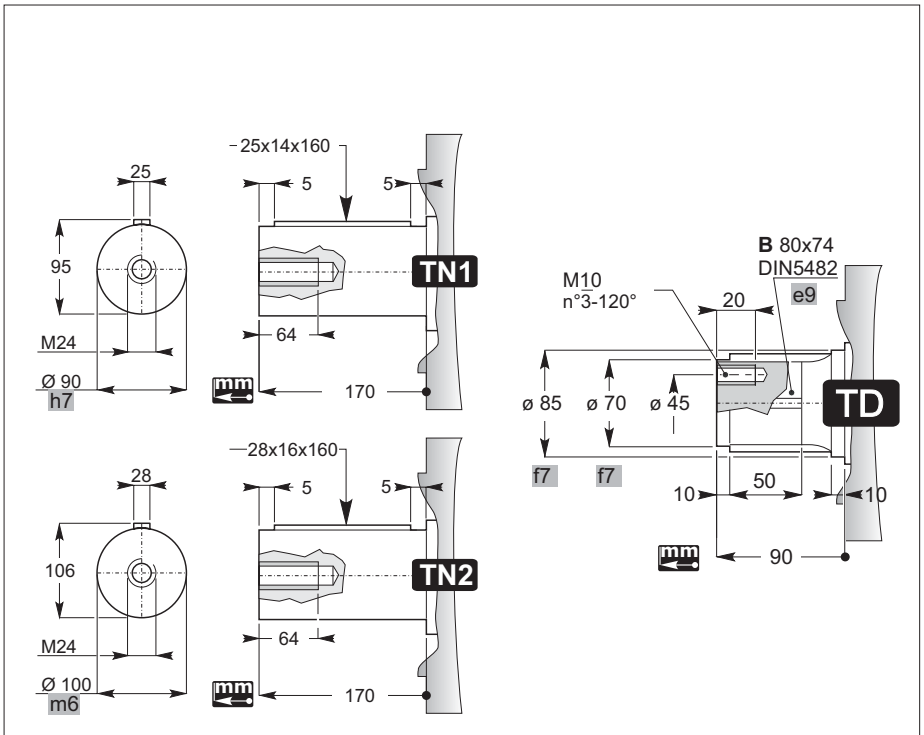

Axial Loads
-104737>
N
Fa
<73441-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

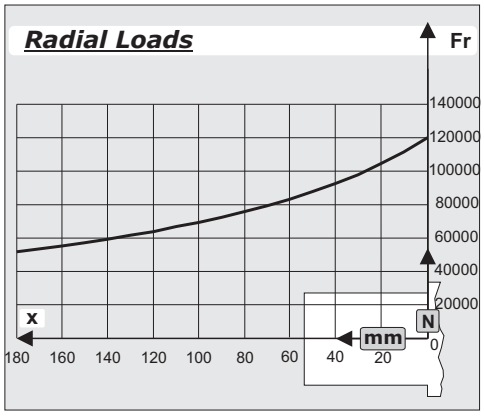

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
EXB
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
15
25
350
224.5
173
122
79
73
57
17 - n°10
230 f7 F8
295
325
4
3
2
477.25
477.25
477.25
1504 150
1804 152
2004 156
450.75
450.75
450.75
1503 159
1803 161
2003 165
373.25
373.25
1502 187
2002 183

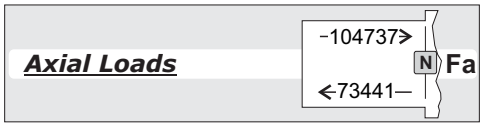

FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210
ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID-
m
Z
X
De
FF
0.7 Kg
18
9
M10x20
Rff
11 (n°3-120°)
70
H7
80
f7
98
M10
45
BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10
ID
FF
FD
BD
Accessories

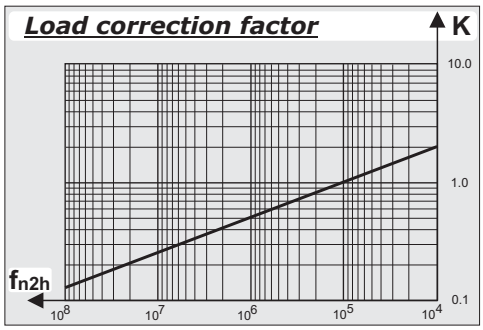


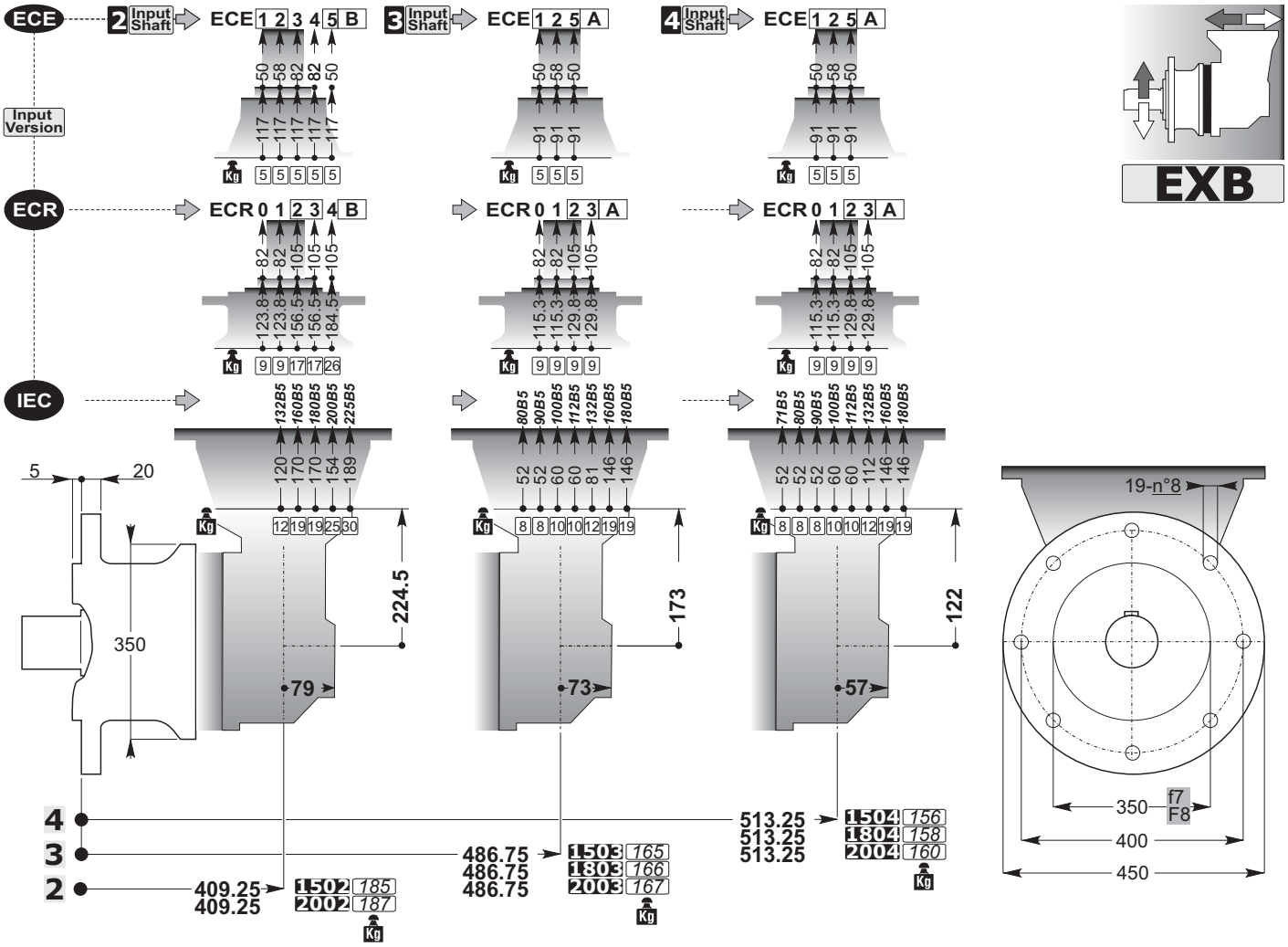


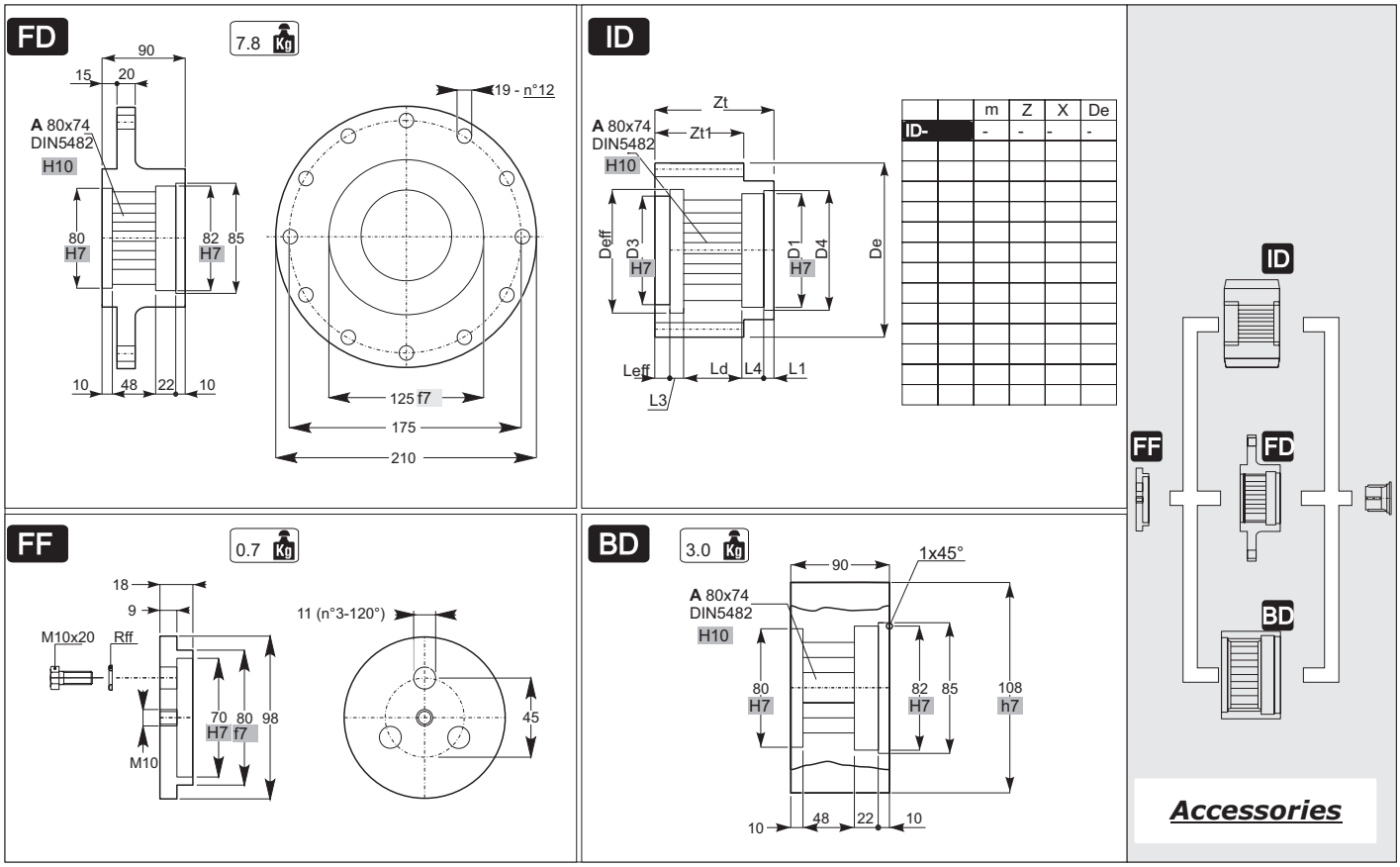
Output Shafts

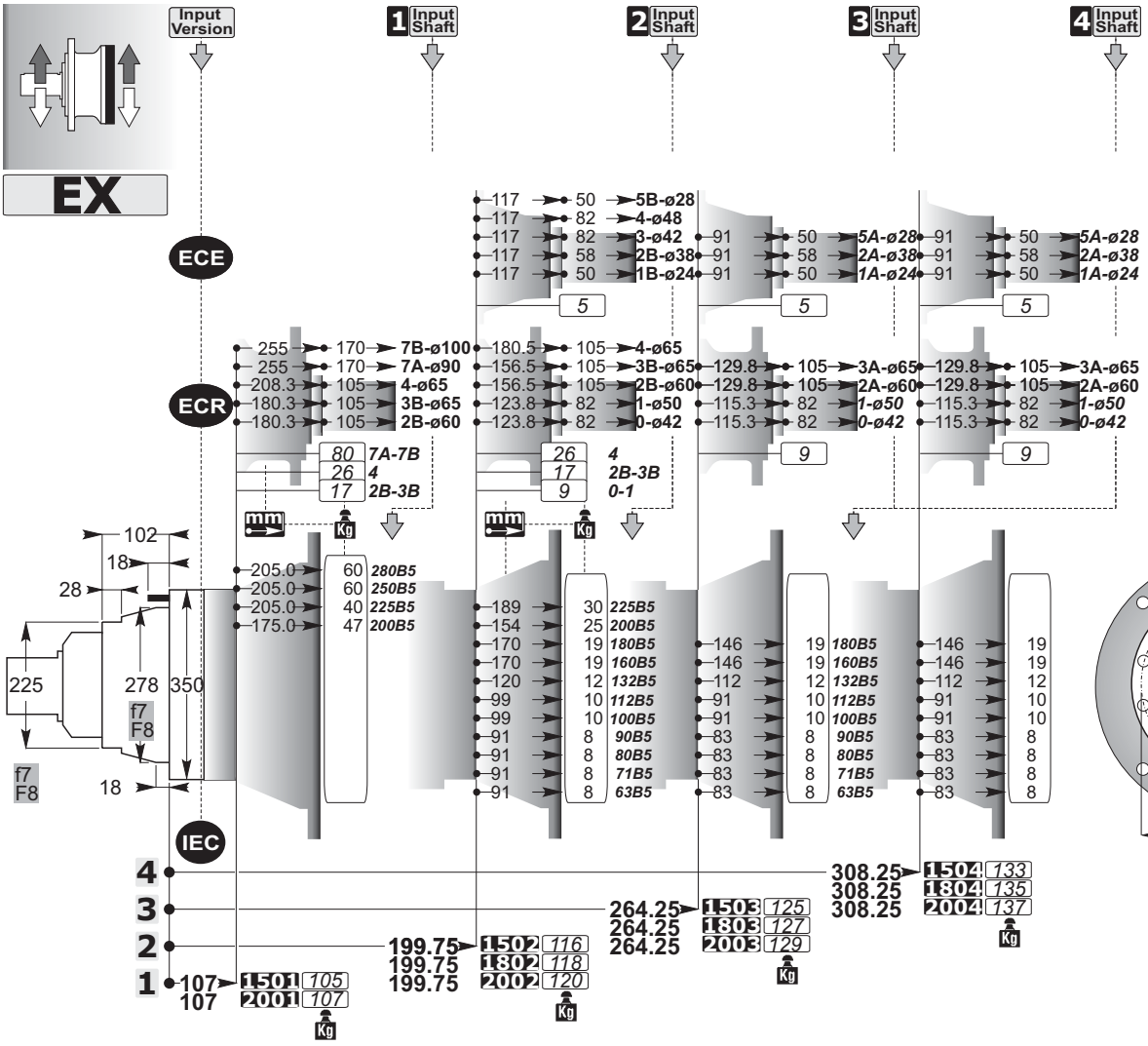


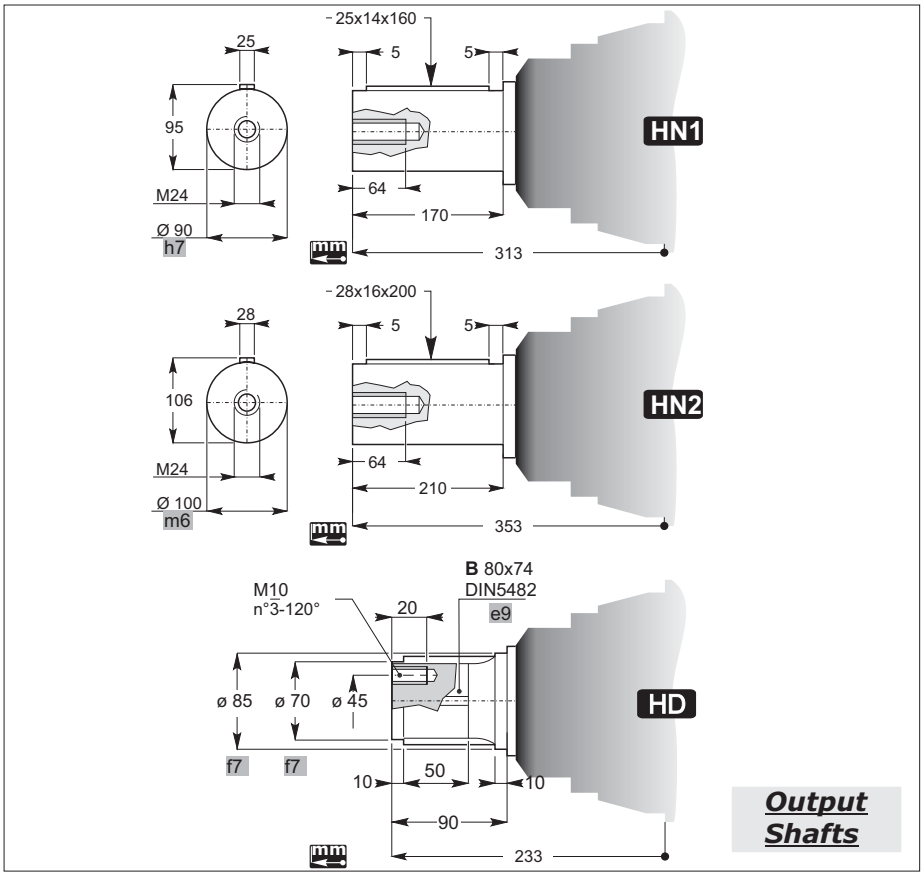


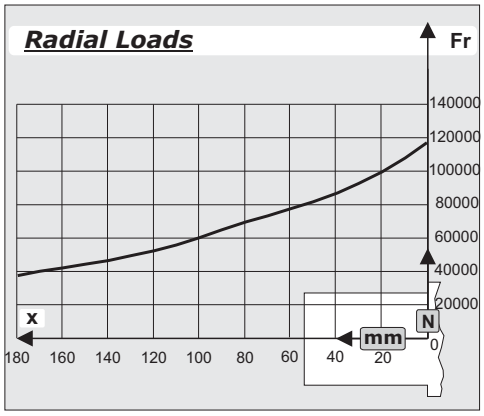


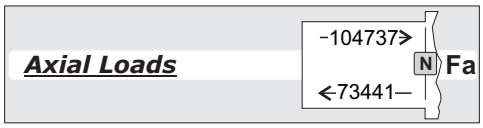

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
5
20
350
224.5
173
122
79
73
57
19-n°8
350 f7 F8
400
450
4
3
2
513.25
513.25
513.25
1504 156
1804 158
2004 160
486.75
486.75
486.75
1503 165
1803 166
2003 167
409.25
409.25
1502 185
2002 187

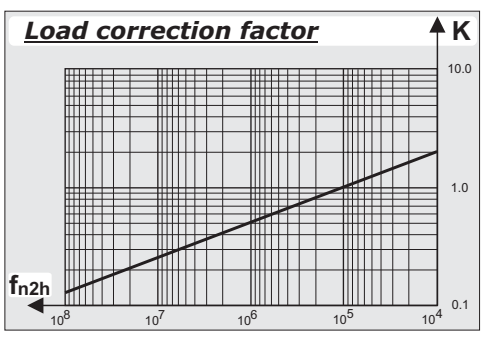

FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210
ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID-
m
Z
X
De
FF
0.7 Kg
18
9
M10x20
Rff
M10
70
H7
80
f7
98
11 (n°3-120°)
45
BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10
ID
FF
FD
BD
Accessories

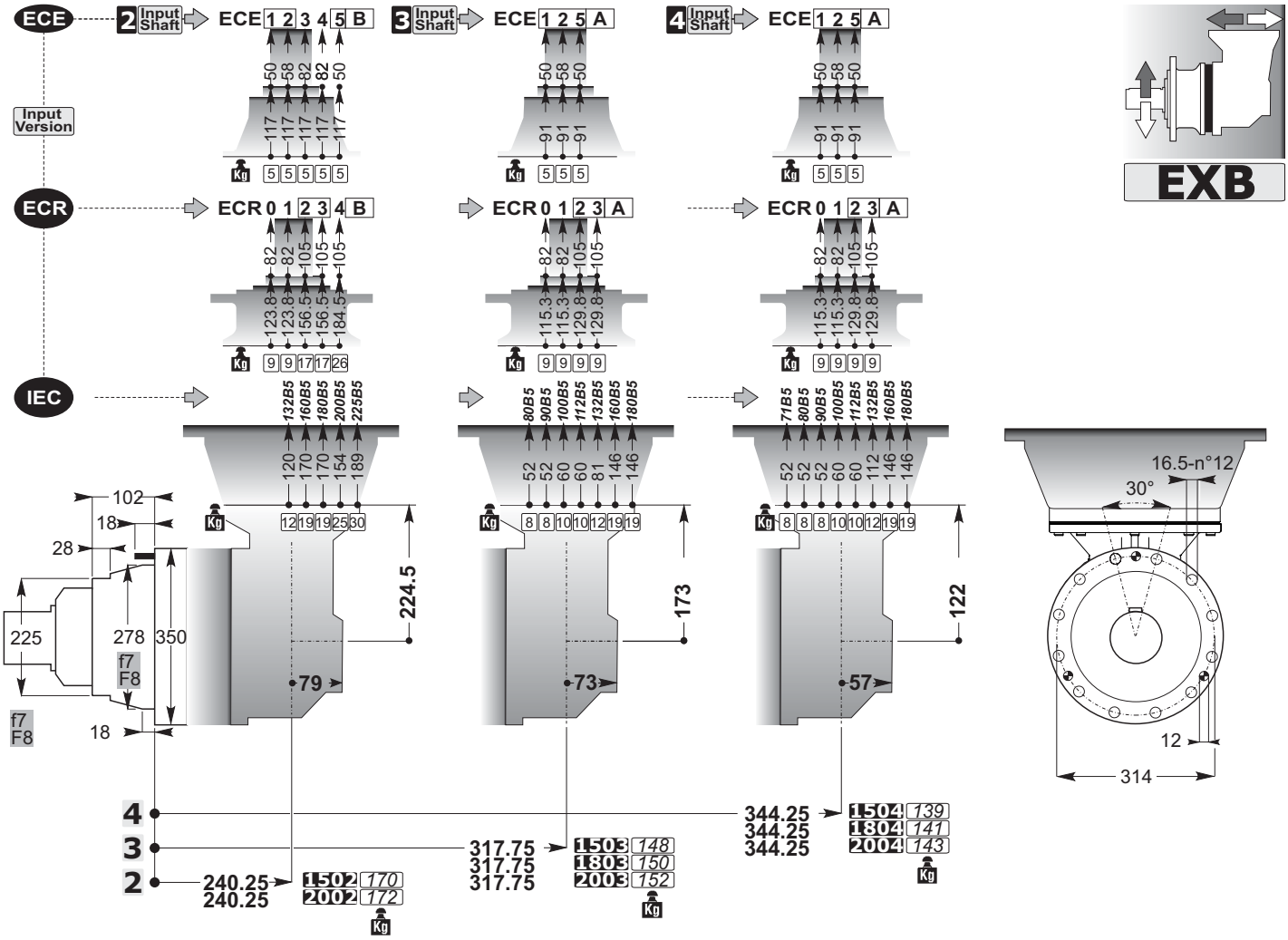

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
16.5-n°12
30°
12
314
102
18
28
225
278
350
f7
F8
18
mm
Kg

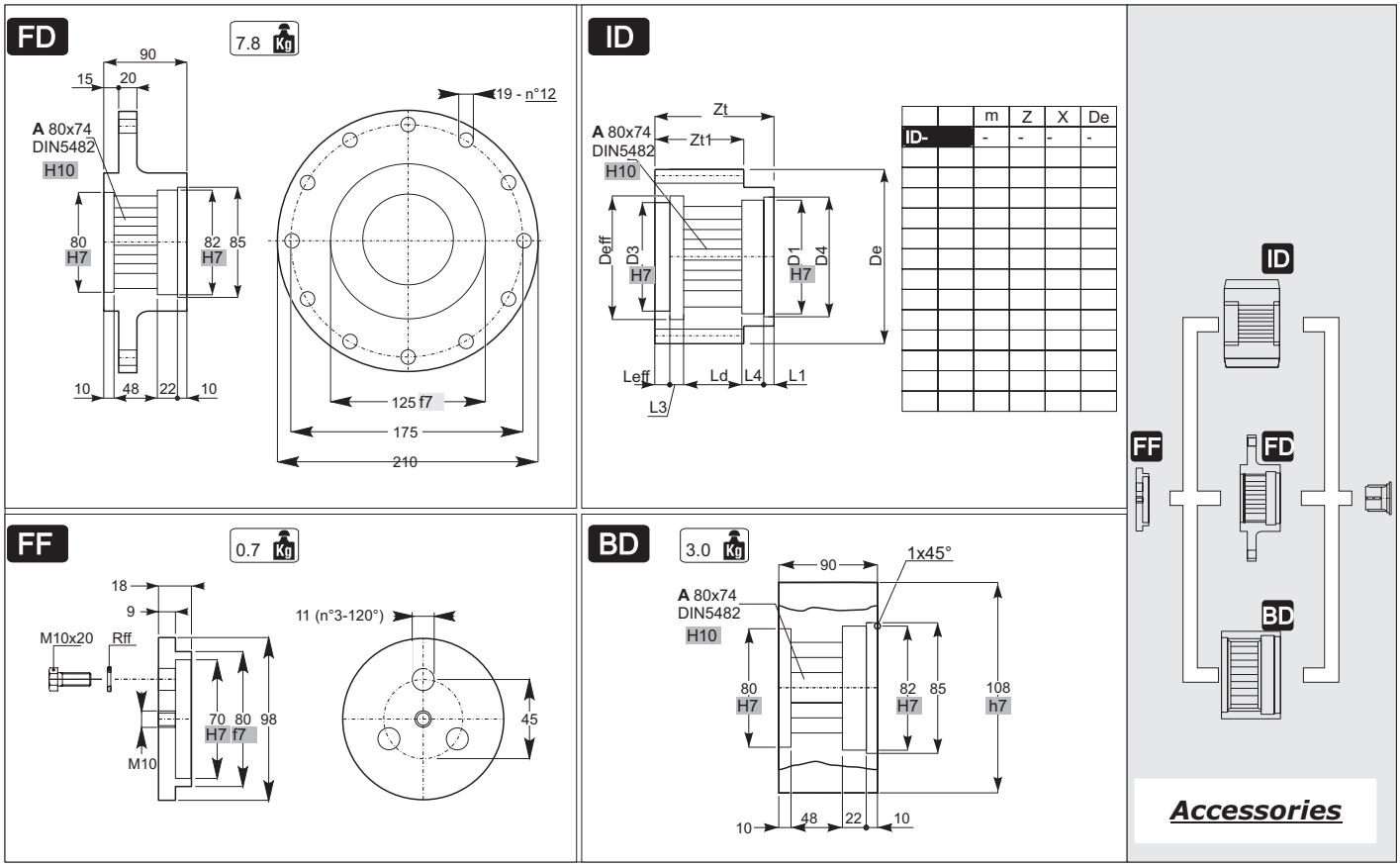

25x14x160
HN1
M24
Ø 90
h7
95
313
28x16x200
HN2
M24
Ø 100
m6
106
353
M10
n°3-120°
B 80x74
DIN5482
e9
HD
ø 85
ø 70
ø 45
f7
f7
233
Output Shafts

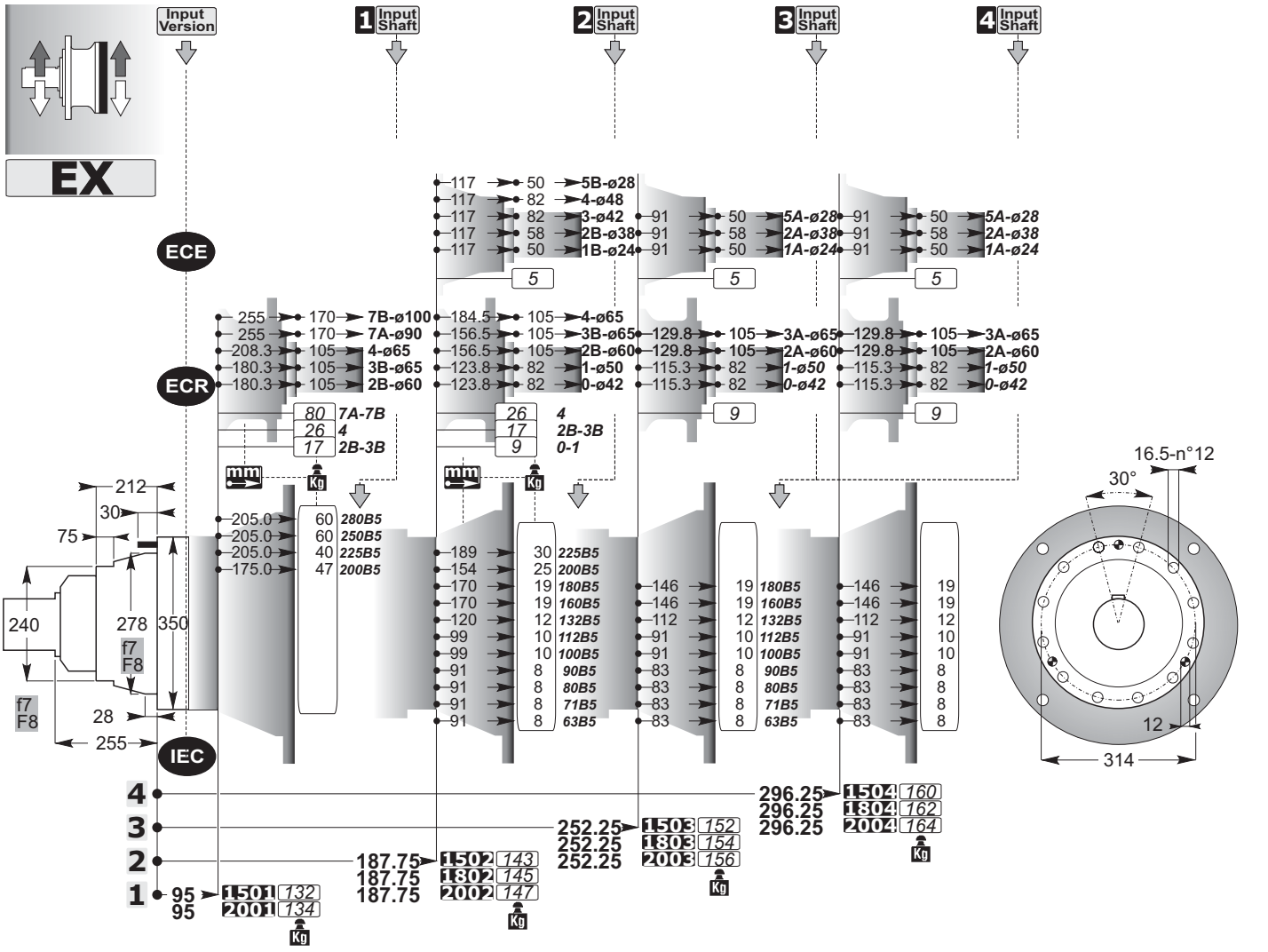

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
0
x
N
mm
180
160
140
120
100
80
60
40
20

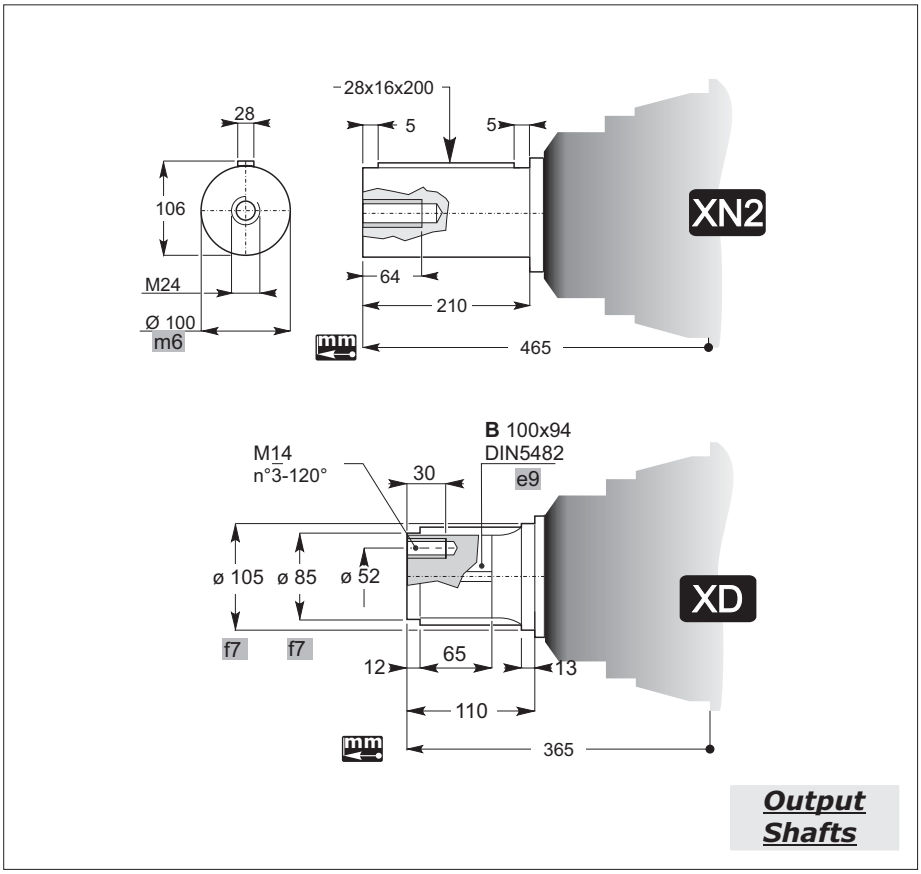

Axial Loads
104737
N
Fa
73441

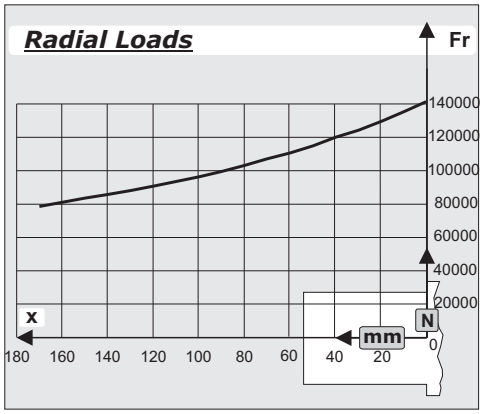

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

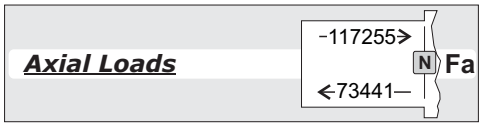

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
EXB
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
102
18
28
225
278
350
f7
F8
224.5
173
122
79
73
57
16.5-n°12
30°
12
314
4
3
2
344.25
344.25
344.25
1504 139
1804 141
2004 143
317.75
317.75
317.75
1503 148
1803 150
2003 152
240.25
240.25
1502 170
2002 172

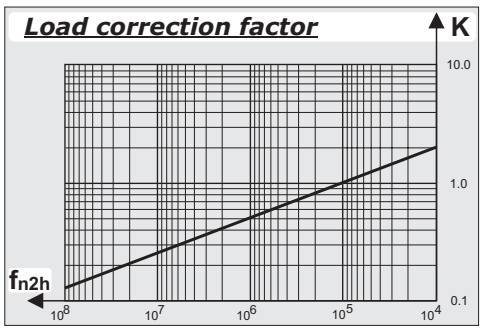

FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210
ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID-
m
Z
X
De
FF
0.7 Kg
18
9
M10x20
Rff
M10
70
H7
80
f7
98
11 (n°3-120°)
45
BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10
ID
FF
FD
BD
Accessories

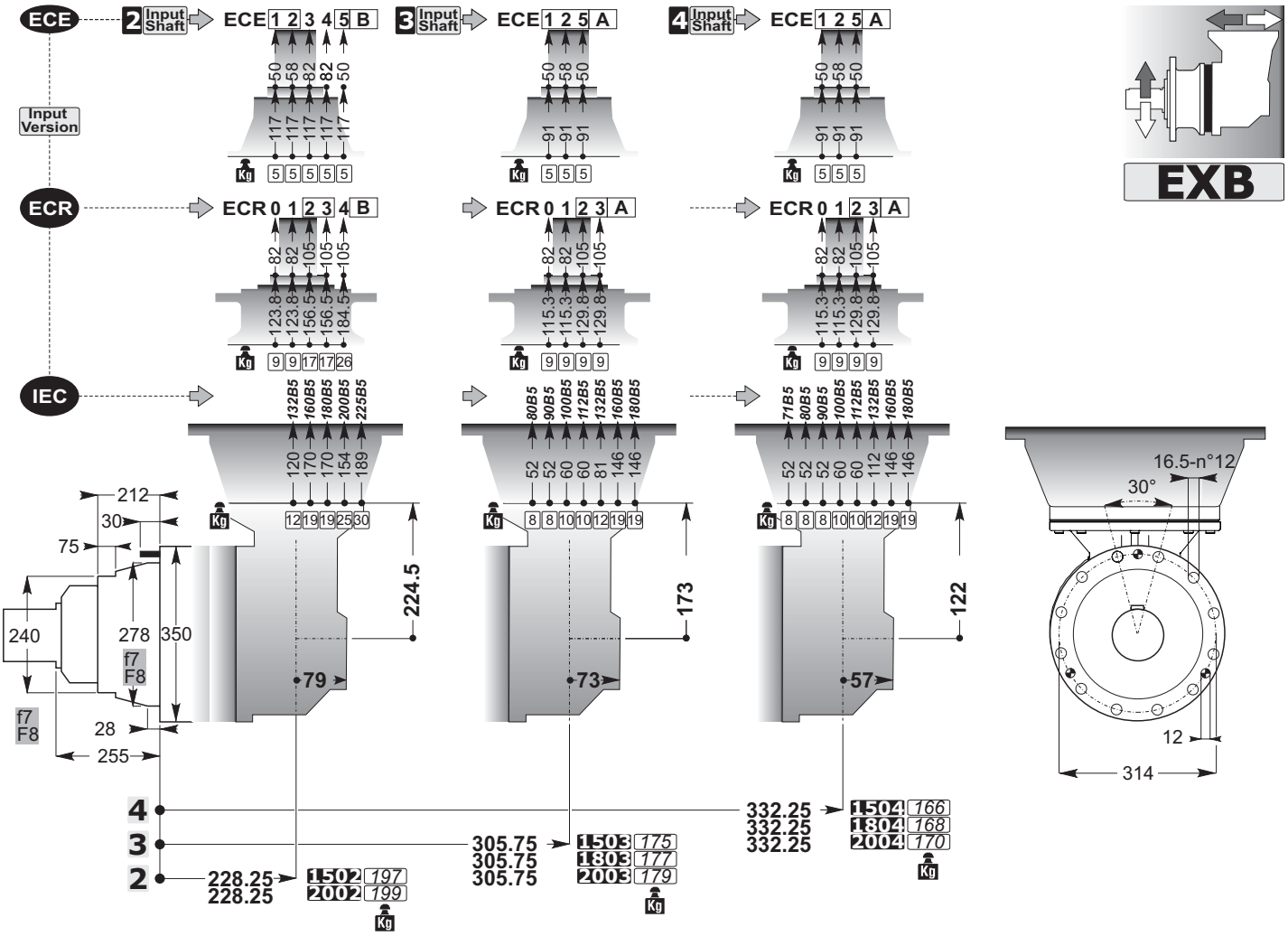

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19 180B5
146 19 160B5
112 12 132B5
91 10 112B5
91 10 100B5
83 8 90B5
83 8 80B5
83 8 71B5
83 8 63B5
212
30
75
240
278
350
f7
F8
28
255
16.5-n°12
30°
12
314
4
3
2
1
95 1501 132
95 2001 134
187.75 1502 143
187.75 1802 145
187.75 2002 147
252.25 1503 152
252.25 1803 154
252.25 2003 156
296.25 1504 160
296.25 1804 162
296.25 2004 164
Kg
mm

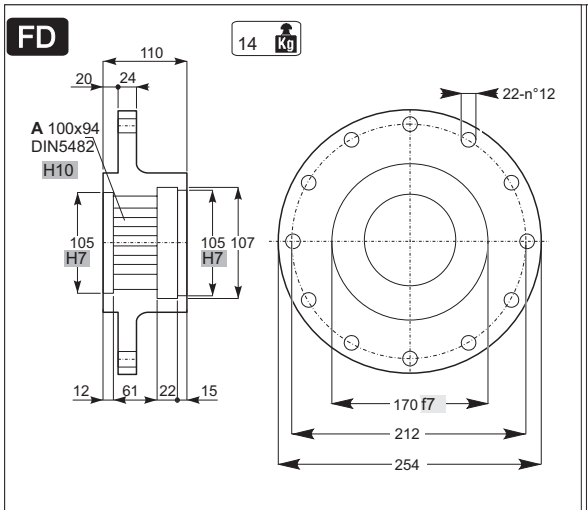

28x16x200
5
5
28
106
M24
Ø 100
m6
64
210
465
XN2
B 100x94
DIN5482
M14
n°3-120°
30
e9
ø 105
ø 85
ø 52
f7
f7
12
65
13
110
365
XD
mm
Output Shafts

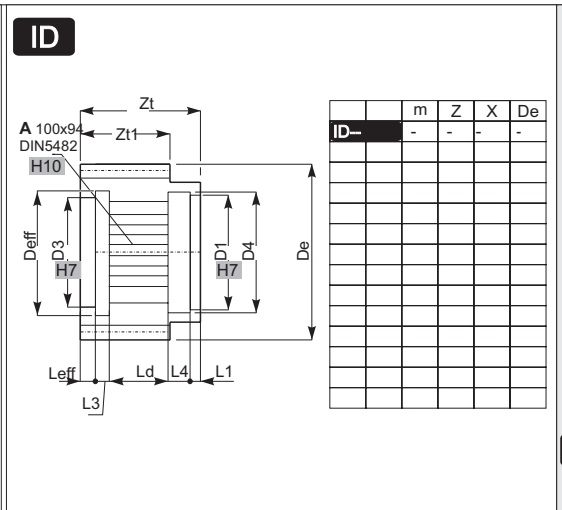

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
0
x
N
mm
180 160 140 120 100 80 60 40 20

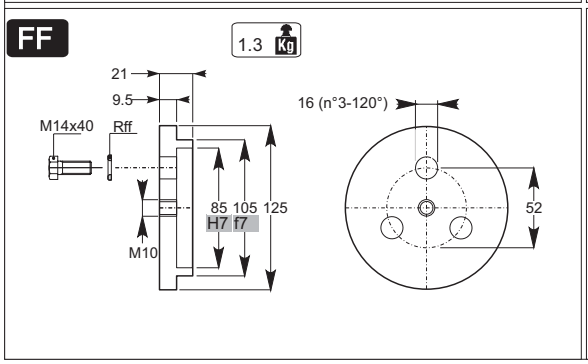

Axial Loads
-117255>
N
Fa
<-73441—

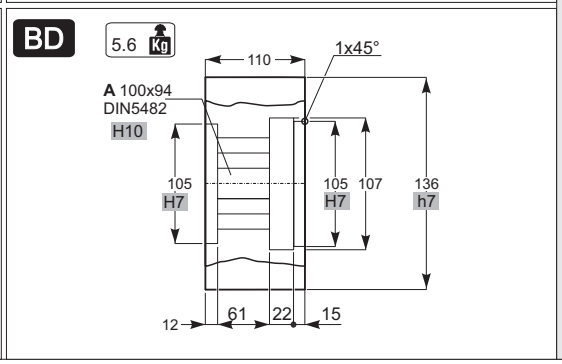

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

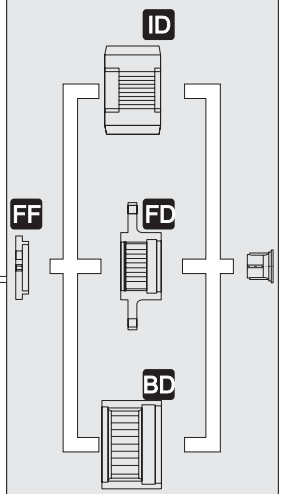








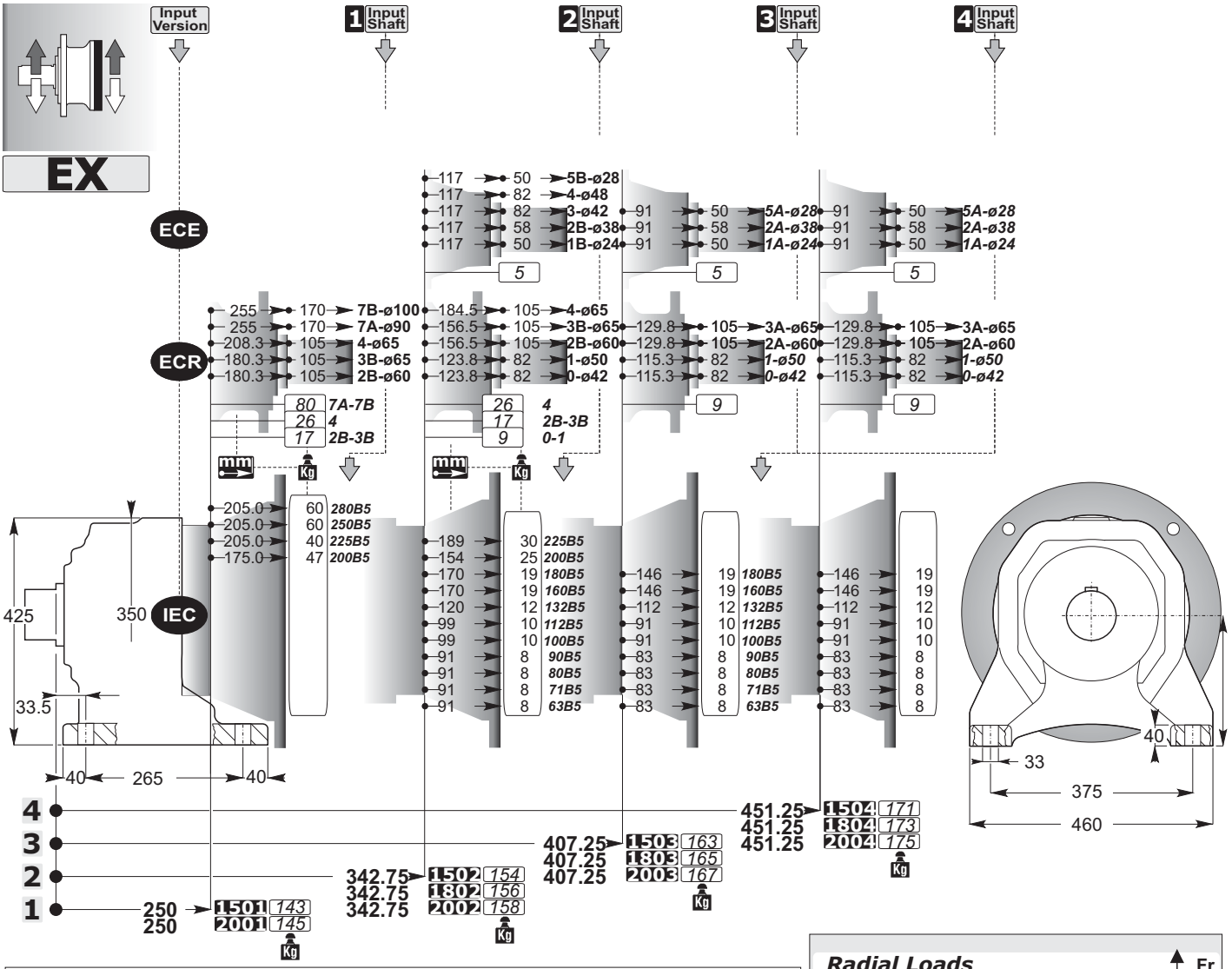


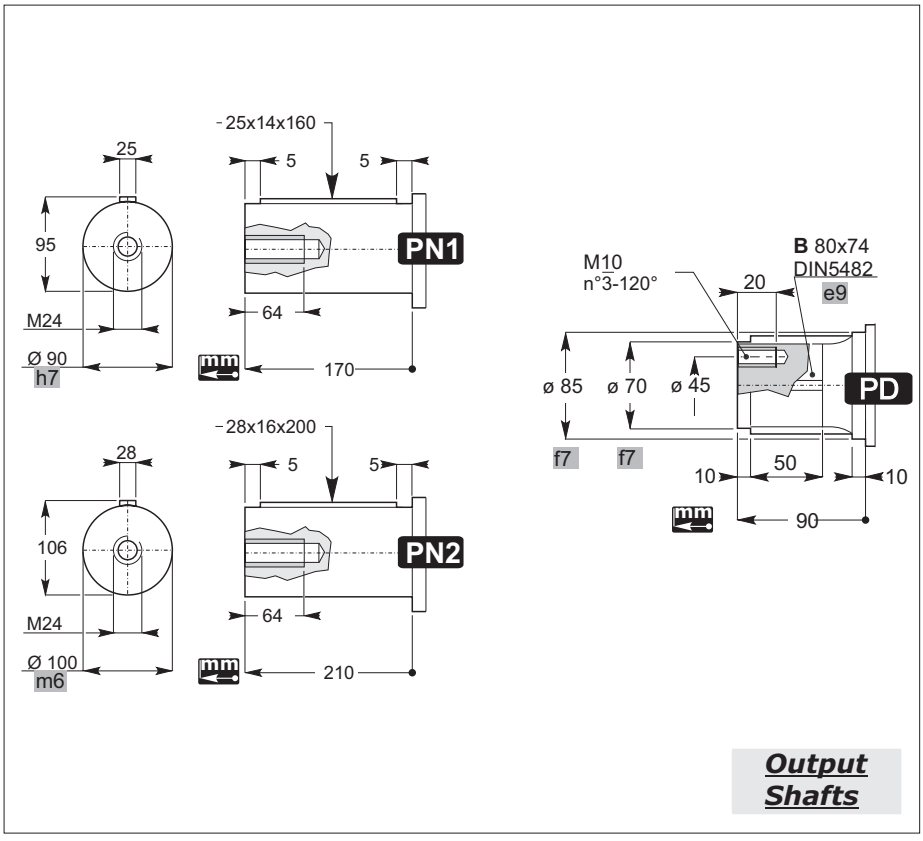


Accessories

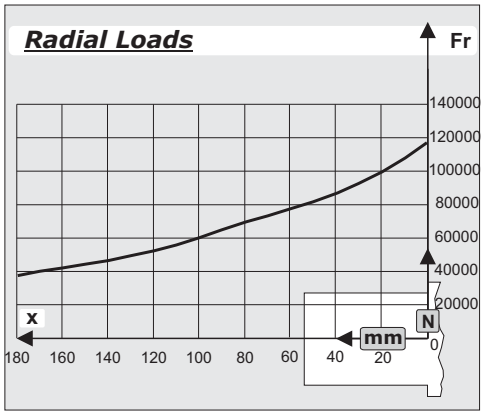
mm
C

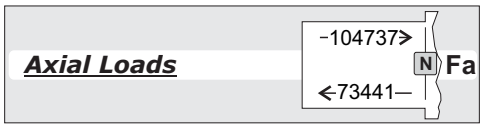
EX

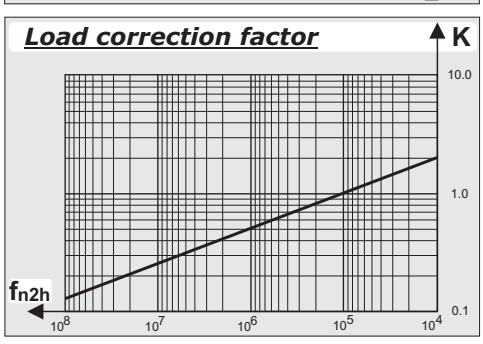


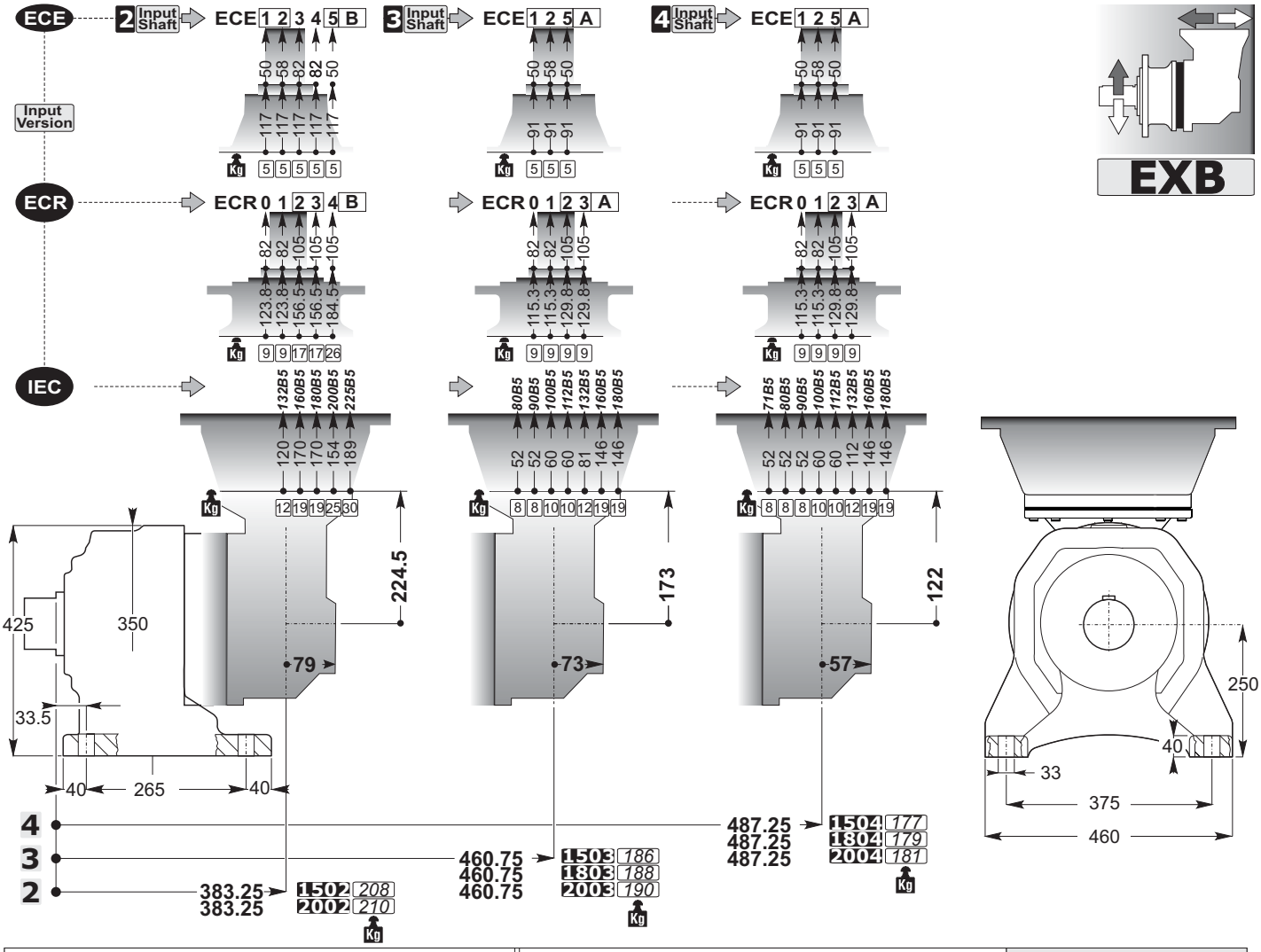


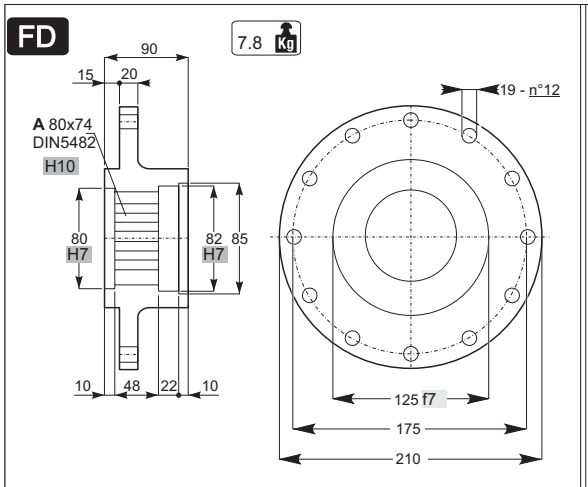
Output Shafts

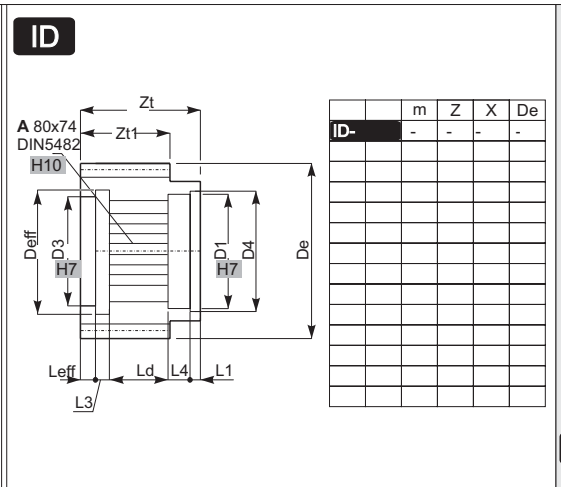


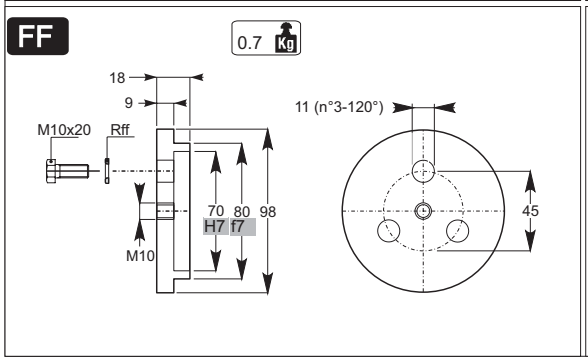


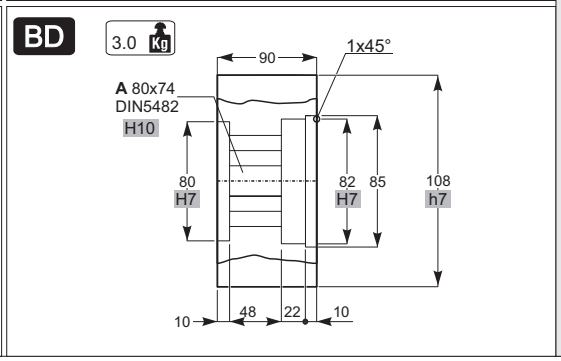


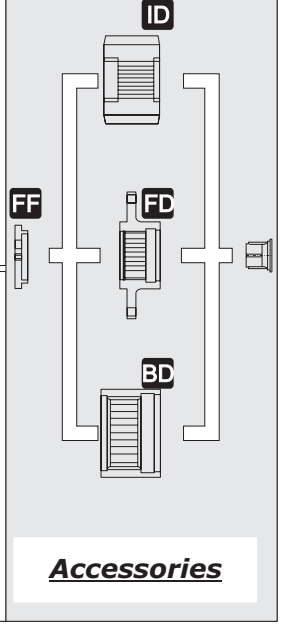

ECE
2 Input Shaft ECE 1 2 3 4 5 B
3 Input Shaft ECE 1 2 5 A
4 Input Shaft ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
425
350
33.5
40
265
40
224.5
173
122
79
73
57
4
3
2
487.25 1504 177
487.25 1804 179
487.25 2004 181
460.75 1503 186
460.75 1803 188
460.75 2003 190
383.25 1502 208
383.25 2002 210
250
40
33
375
460


FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210

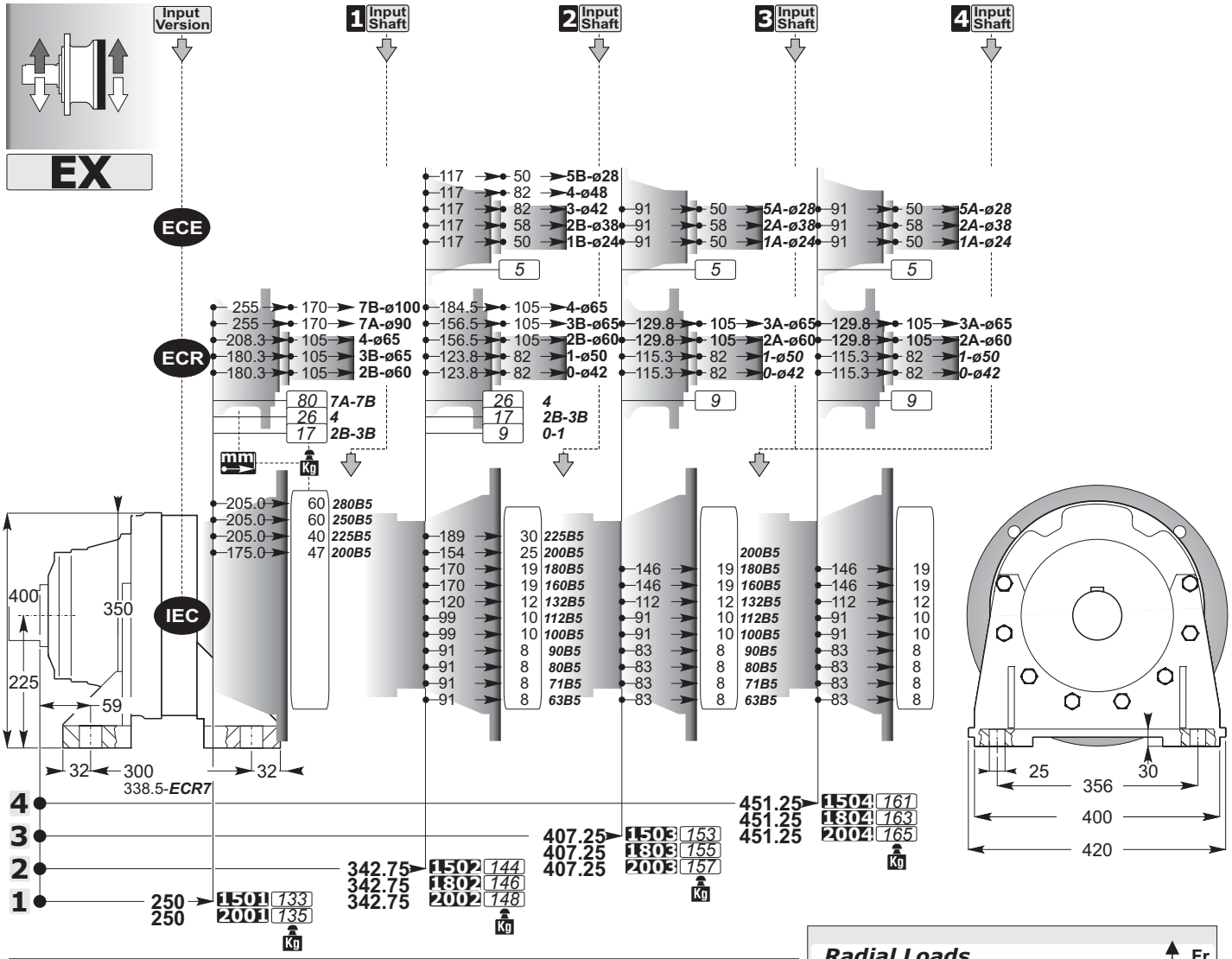

ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID-
m
Z
X
De

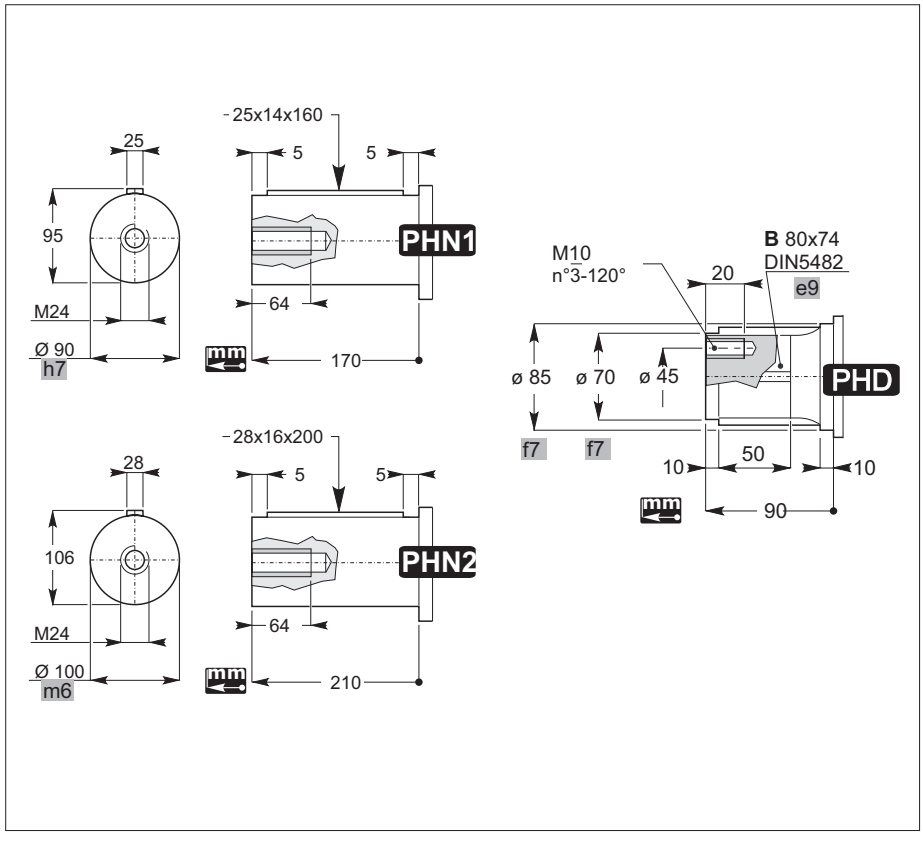

FF
0.7 Kg
18
9
M10x20
Rff
70
H7
80
f7
98
M10
11 (n°3-120°)
45

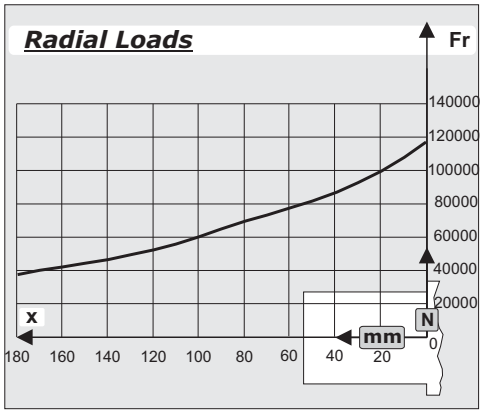

BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10


ID
FF
FD
BD
Accessories

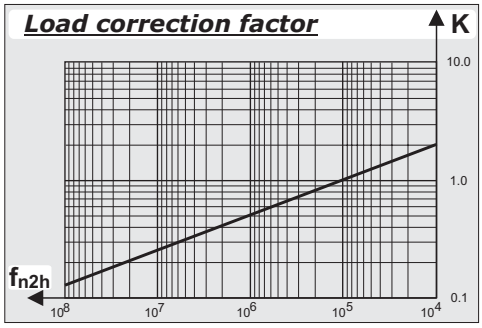
mm
C

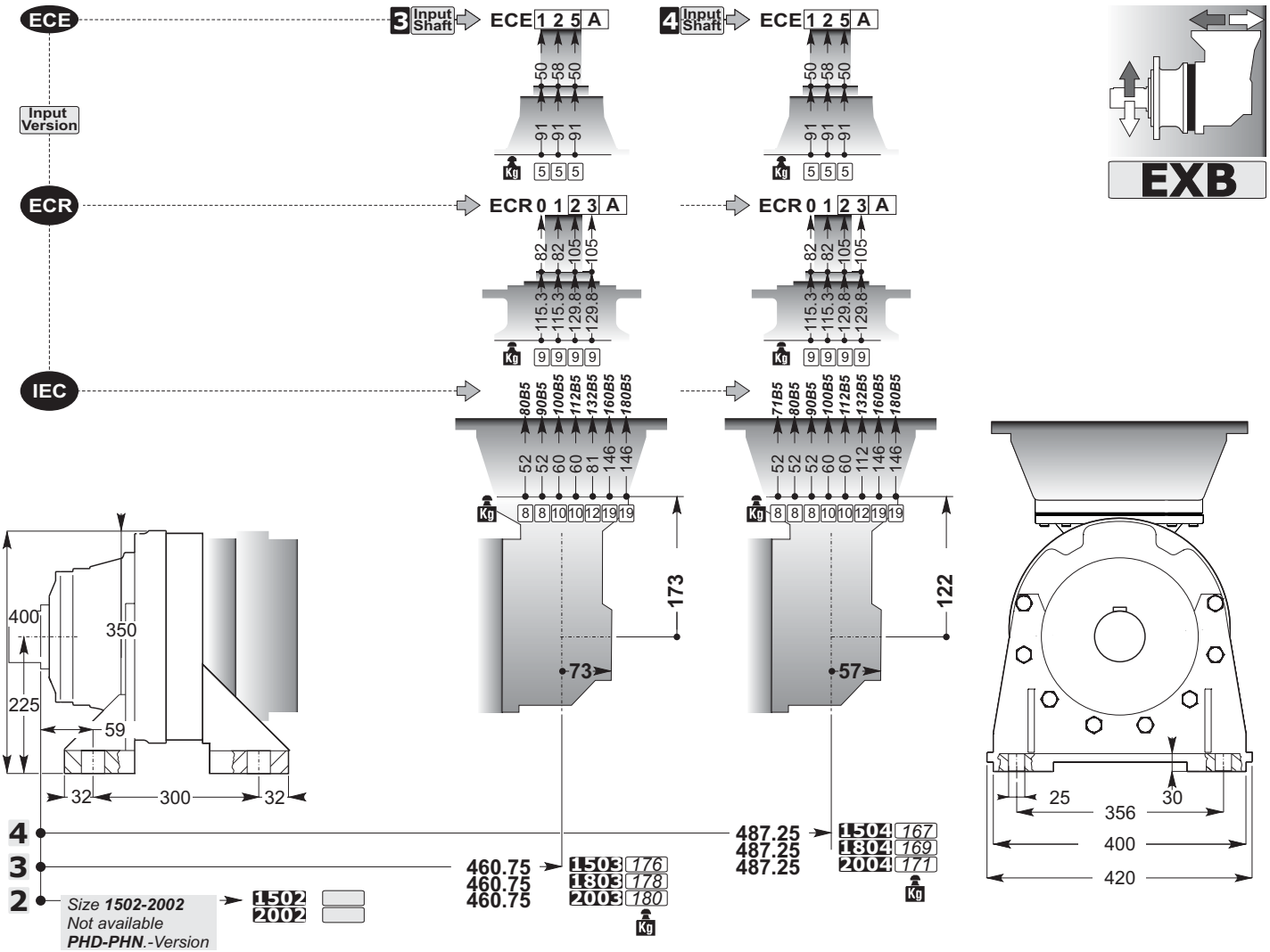

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
5
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
9
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19 200B5
146 19 180B5
146 19 160B5
112 12 132B5
91 10 112B5
91 10 100B5
83 8 90B5
83 8 80B5
83 8 71B5
83 8 63B5
400
350
225
59
32 300 32
338.5-ECR7
4
3
2
1
250 1501 133
250 2001 135
342.75 1502 144
342.75 1802 146
342.75 2002 148
407.25 1503 153
407.25 1803 155
407.25 2003 157
451.25 1504 161
451.25 1804 163
451.25 2004 165
25
356
30
400
420

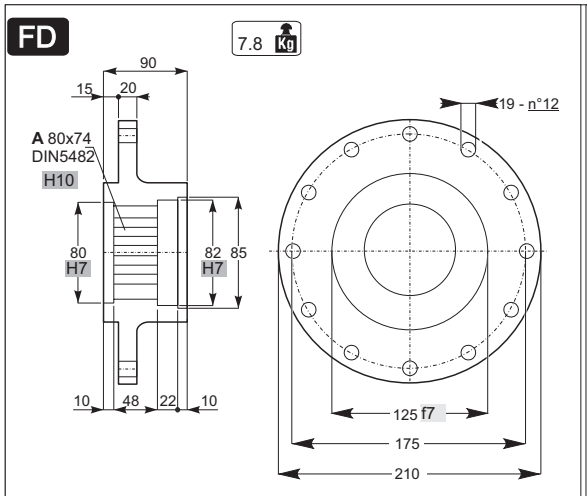

25x14x160
25
5
5
95
M24
Ø 90
h7
64
170
PHN1
28x16x200
28
106
M24
Ø 100
m6
64
210
PHN2
M10
n°3-120°
20
B 80x74
DIN5482
e9
ø 85
ø 70
ø 45
f7
f7
10
50
10
90
PHD

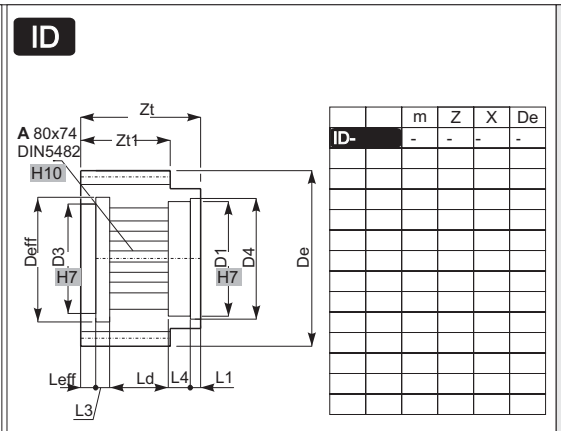

Radial Loads
Fr
140000
120000
100000
80000
60000
40000
20000
0
x
N
mm
180 160 140 120 100 80 60 40 20

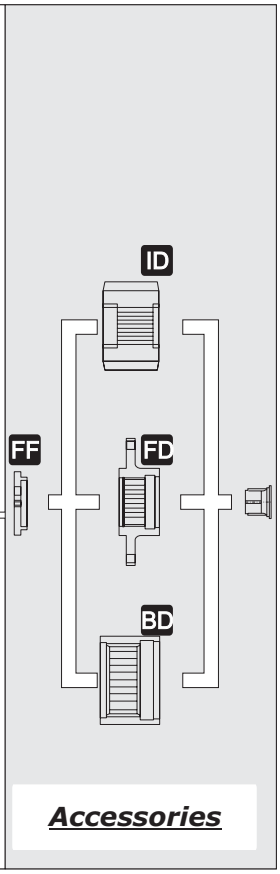

Axial Loads
-104737>
N
Fa
<73441-

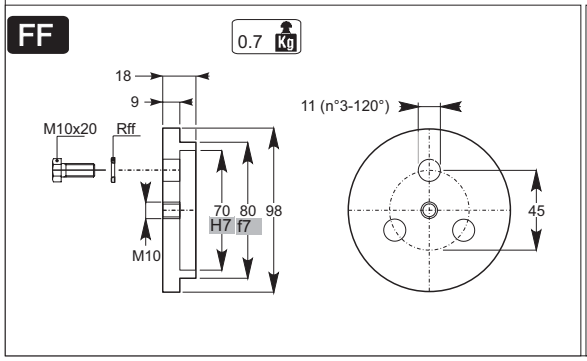

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

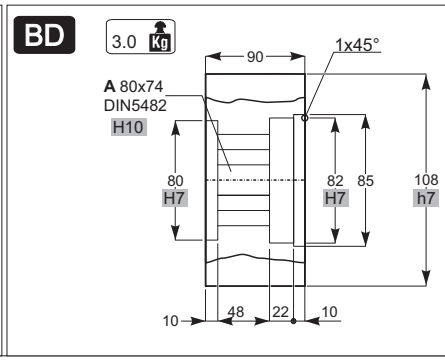

ECE
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
400
350
225
59
32
300
32
173
73
122
57
25
30
356
400
420
4
3
2
487.25
487.25
487.25
1504 167
1804 169
2004 171
460.75
460.75
460.75
1503 176
1803 178
2003 180
Size 1502-2002
Not available
PHD-PHN.-Version
1502
2002

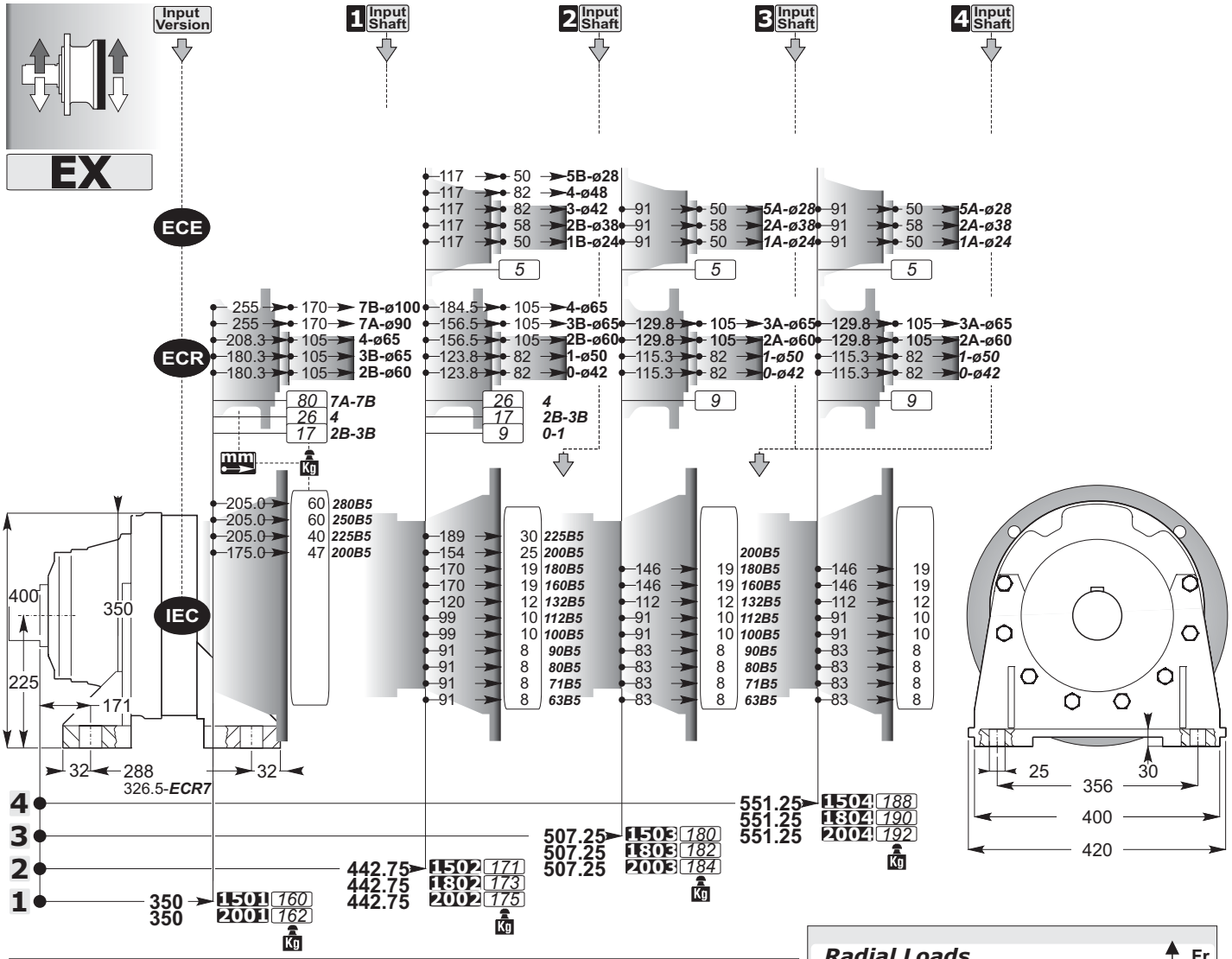

FD
7.8 Kg
90
15
20
A 80x74
DIN5482
H10
80
H7
82
H7
85
10
48
22
10
19 - n°12
125 f7
175
210

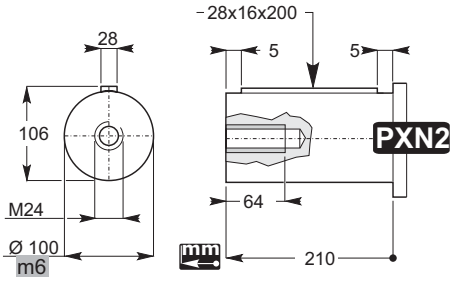

ID
Zt
Zt1
A 80x74
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID-
m
Z
X
De

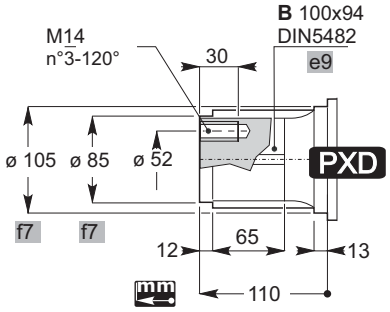

ID
FF
FD
BD
Accessories


FF
0.7 Kg
18
9
M10x20
Rff
M10
70
H7
80
f7
98
11 (n°3-120°)
45

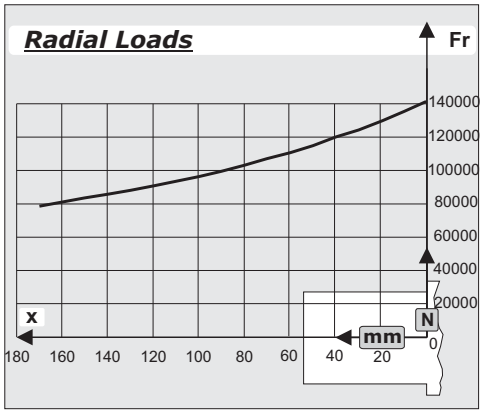

BD
3.0 Kg
90
1x45°
A 80x74
DIN5482
H10
80
H7
82
H7
85
108
h7
10
48
22
10

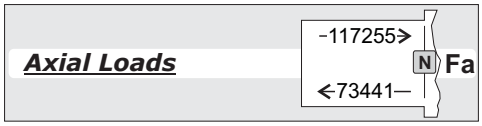


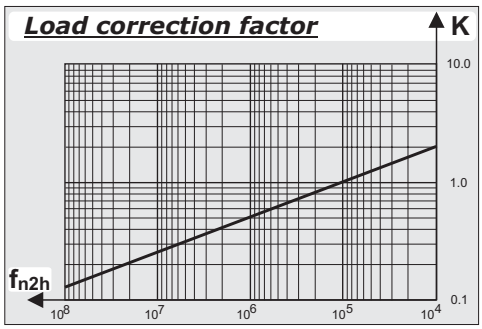


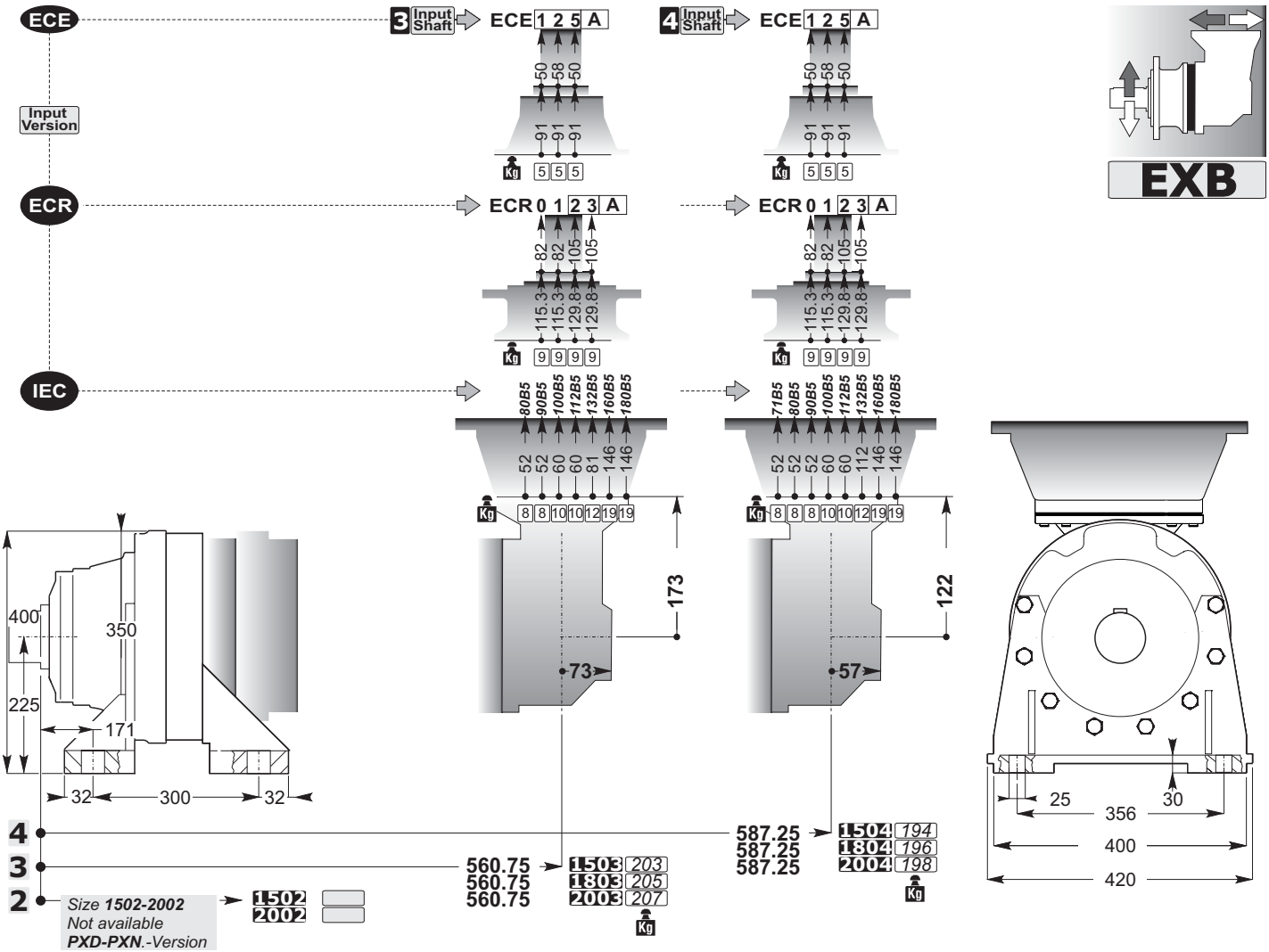


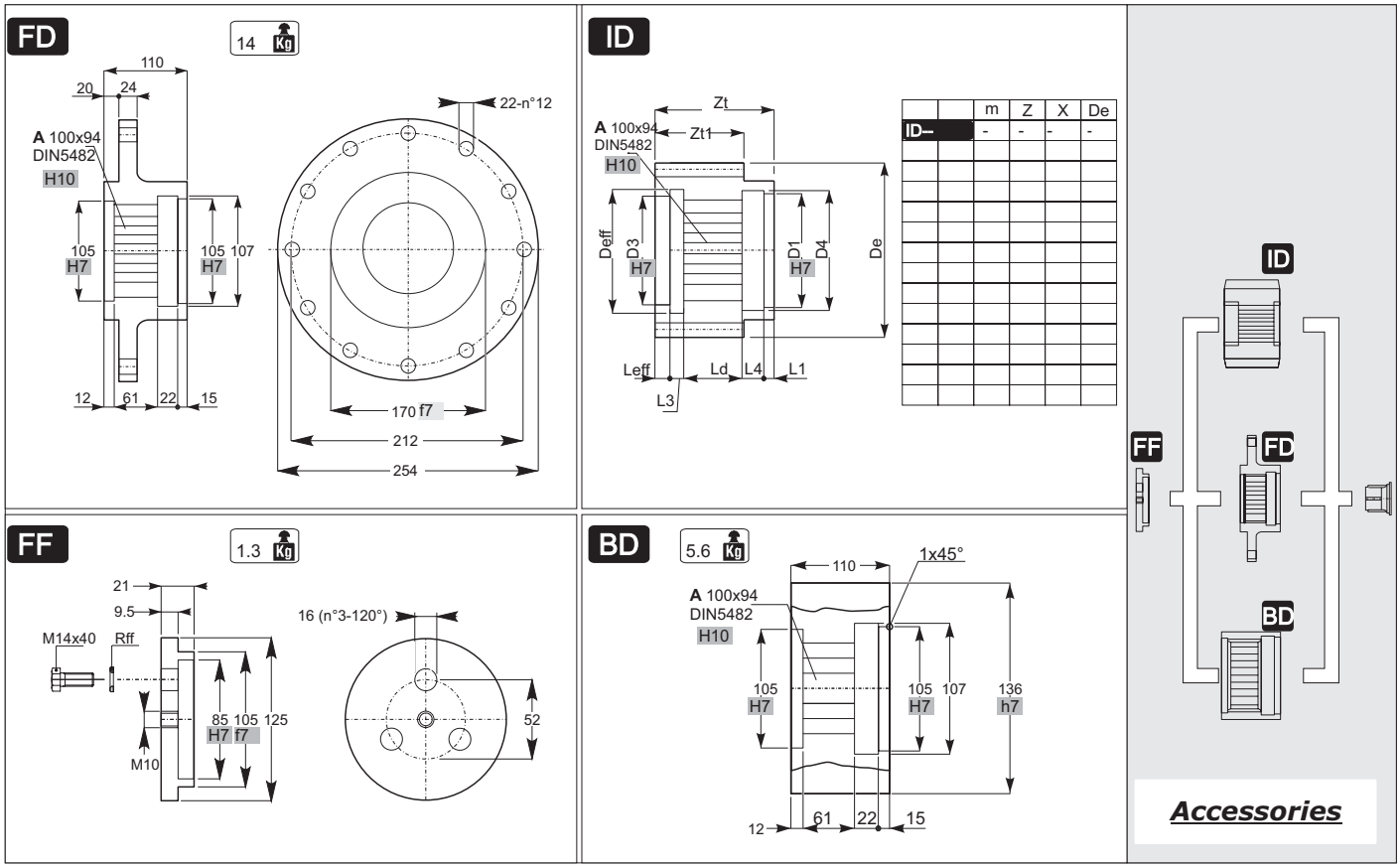
Output Shafts



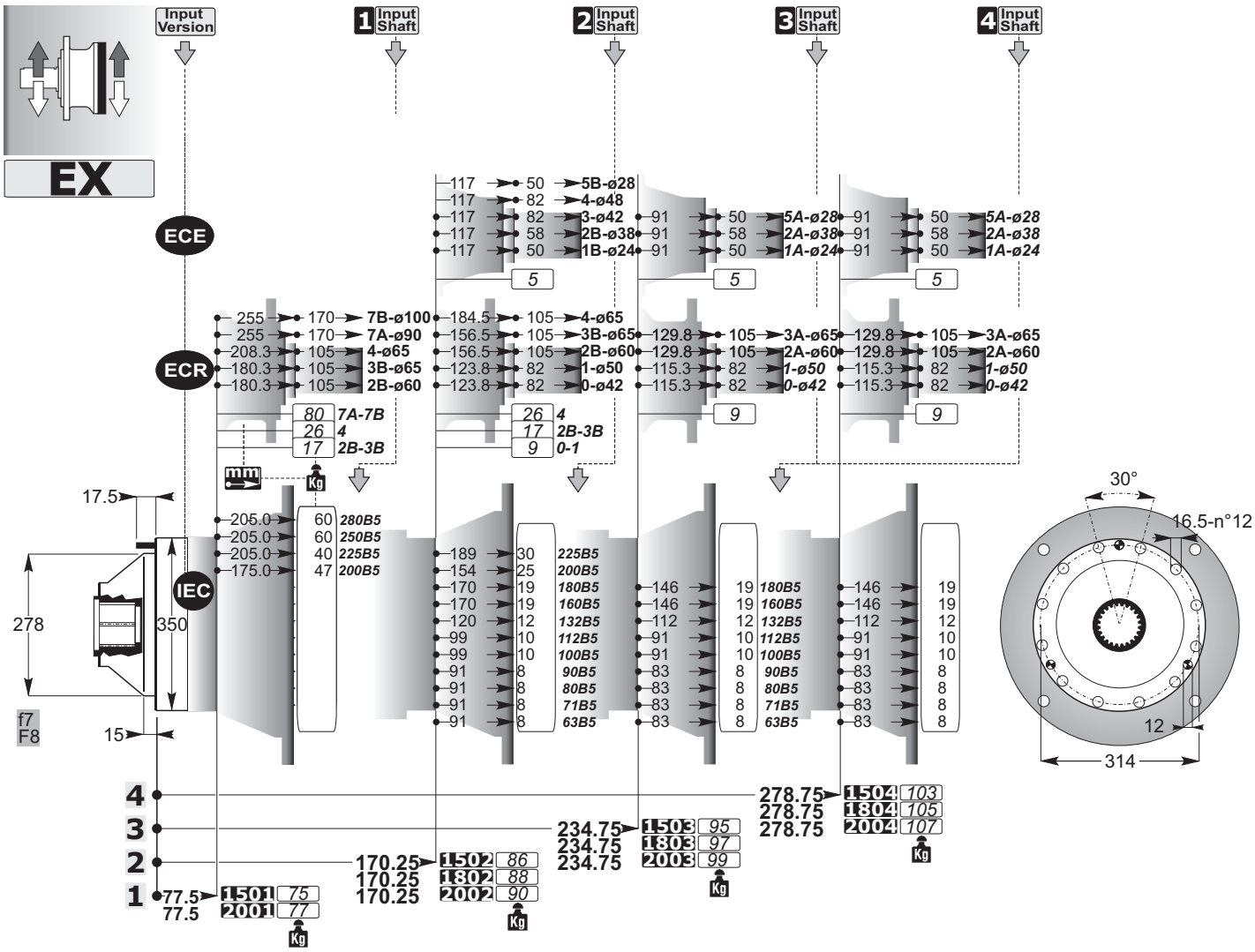


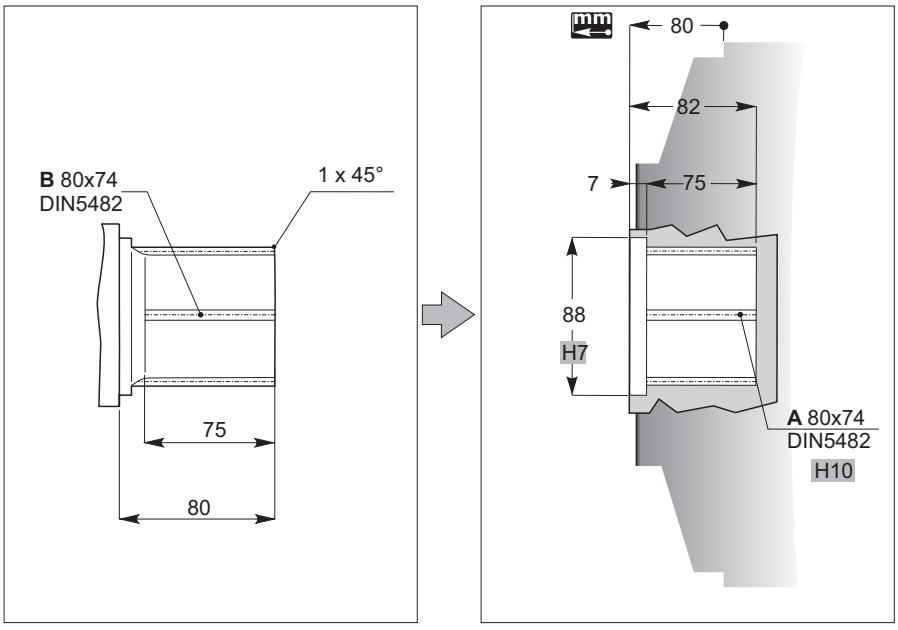



ECE
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
EXB
ECR
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
Kg
173
122
73
57
400
350
225
171
32
300
32
25
30
356
400
420
4
3
2
587.25
587.25
587.25
1504 194
1804 196
2004 198
560.75
560.75
560.75
1503 203
1803 205
2003 207
Size 1502-2002
Not available
PXD-PXN.-Version
1502
2002

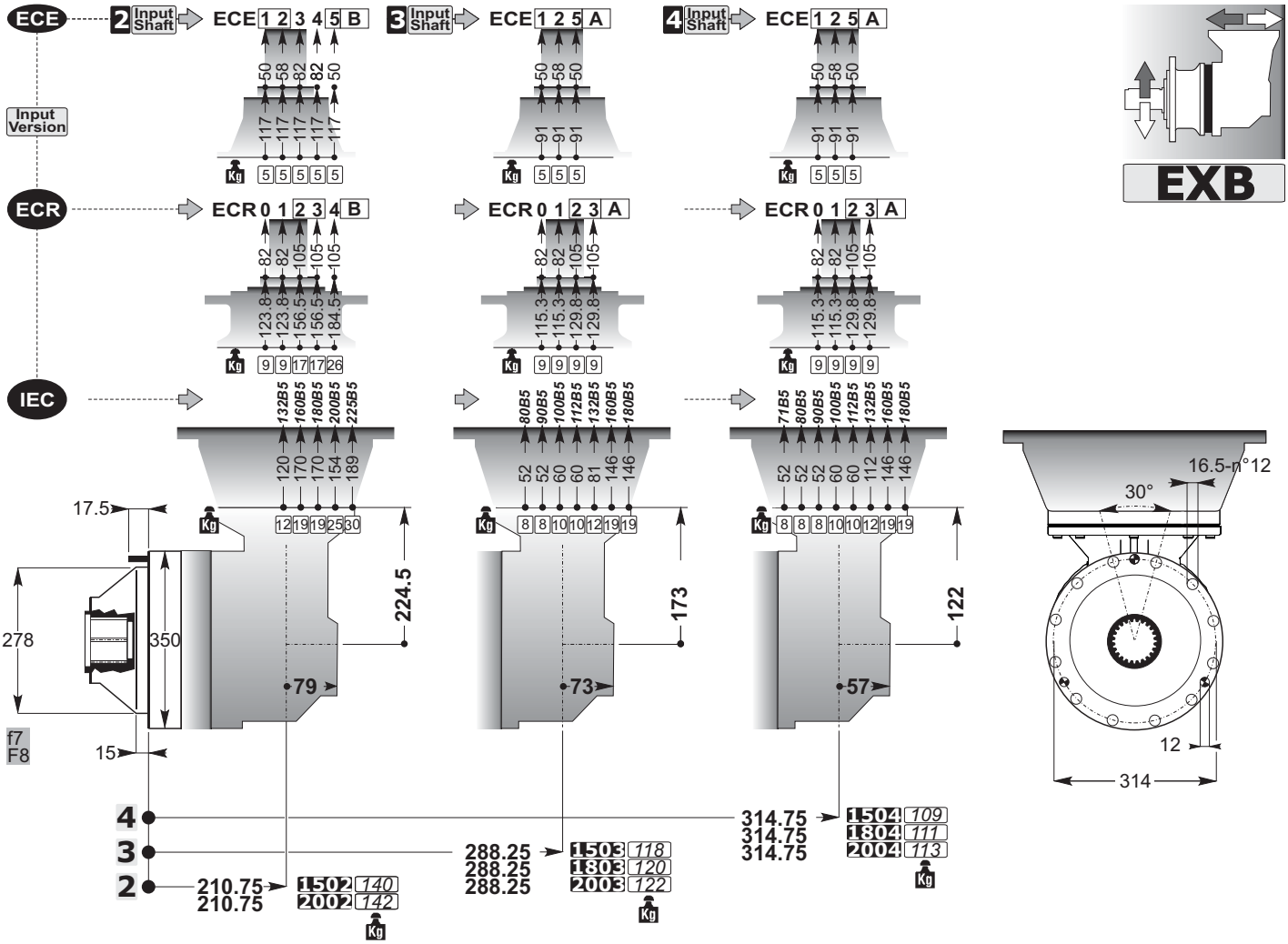

FD
14 Kg
110
20
24
A 100x94
DIN5482
H10
105
H7
105
H7
107
12
61
22
15
22-n°12
170 f7
212
254
ID
Zt
Zt1
A 100x94
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID--
FF
1.3 Kg
21
9.5
M14x40
Rff
16 (n°3-120°)
85
H7
105
f7
125
M10
52
BD
5.6 Kg
110
1x45°
A 100x94
DIN5482
H10
105
H7
105
H7
107
136
h7
12
61
22
15
ID
FF
FD
BD
Accessories

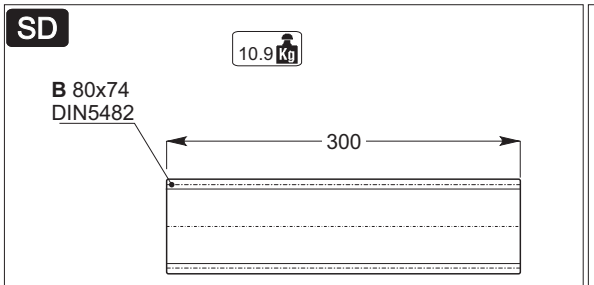
mm
C





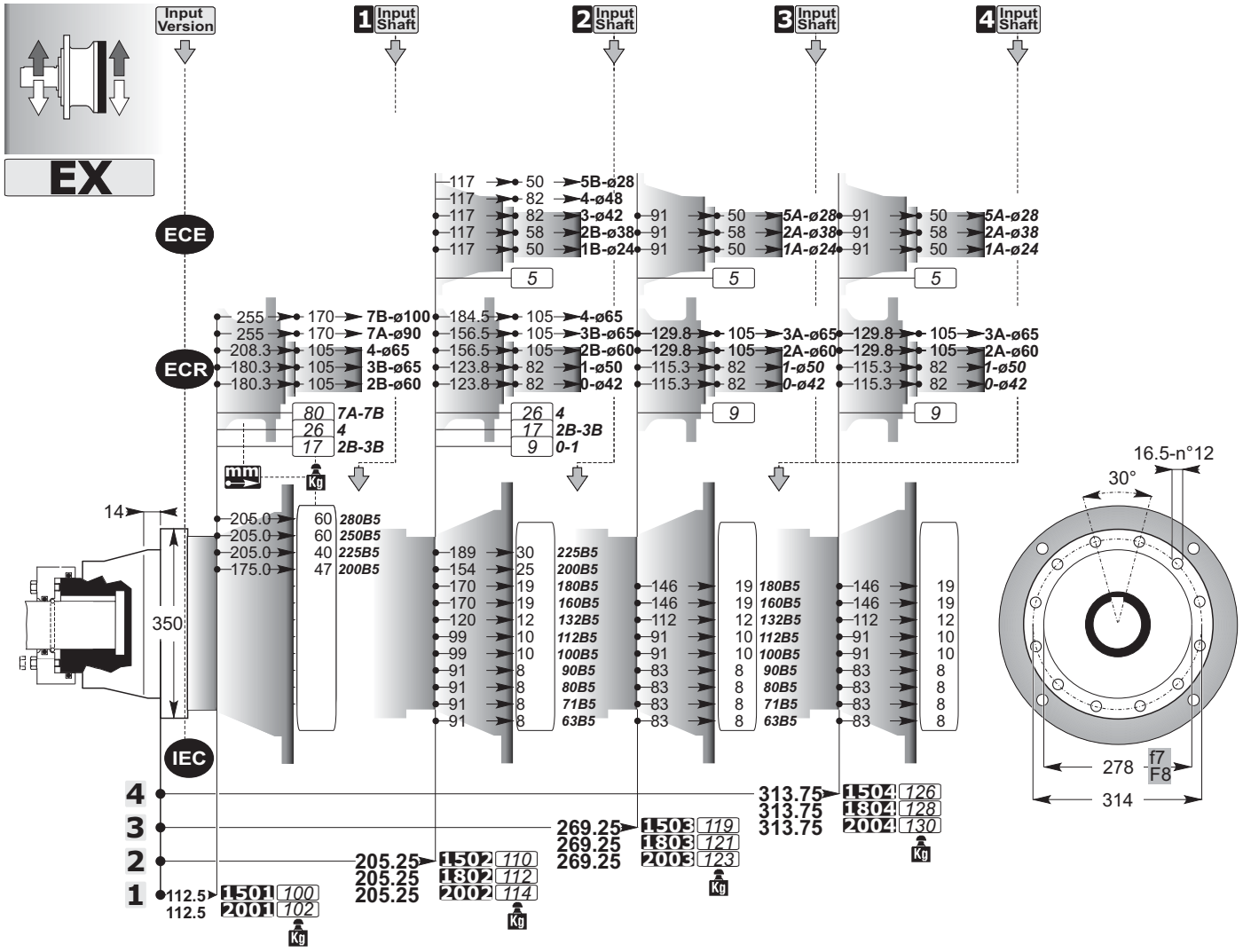
Output Shafts

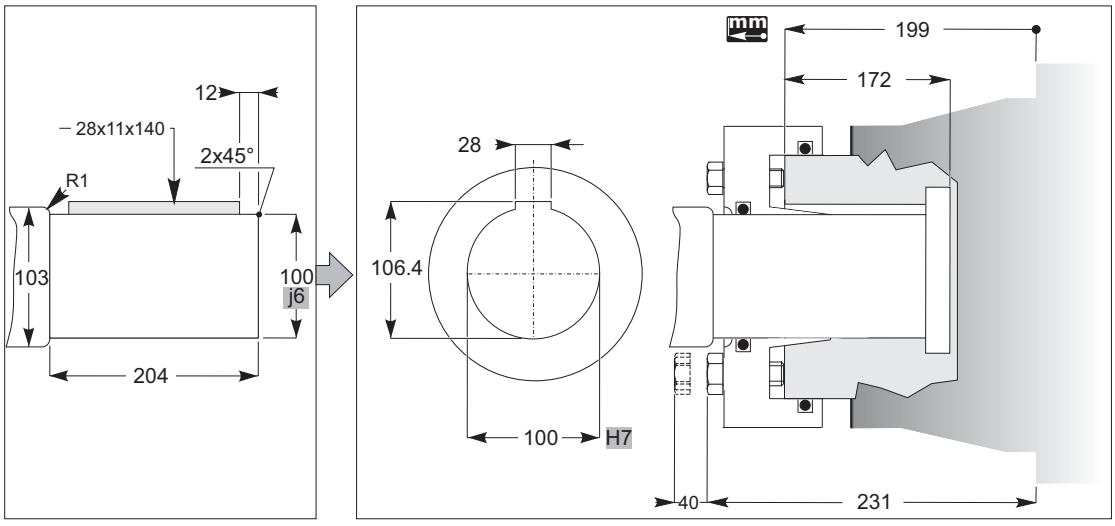




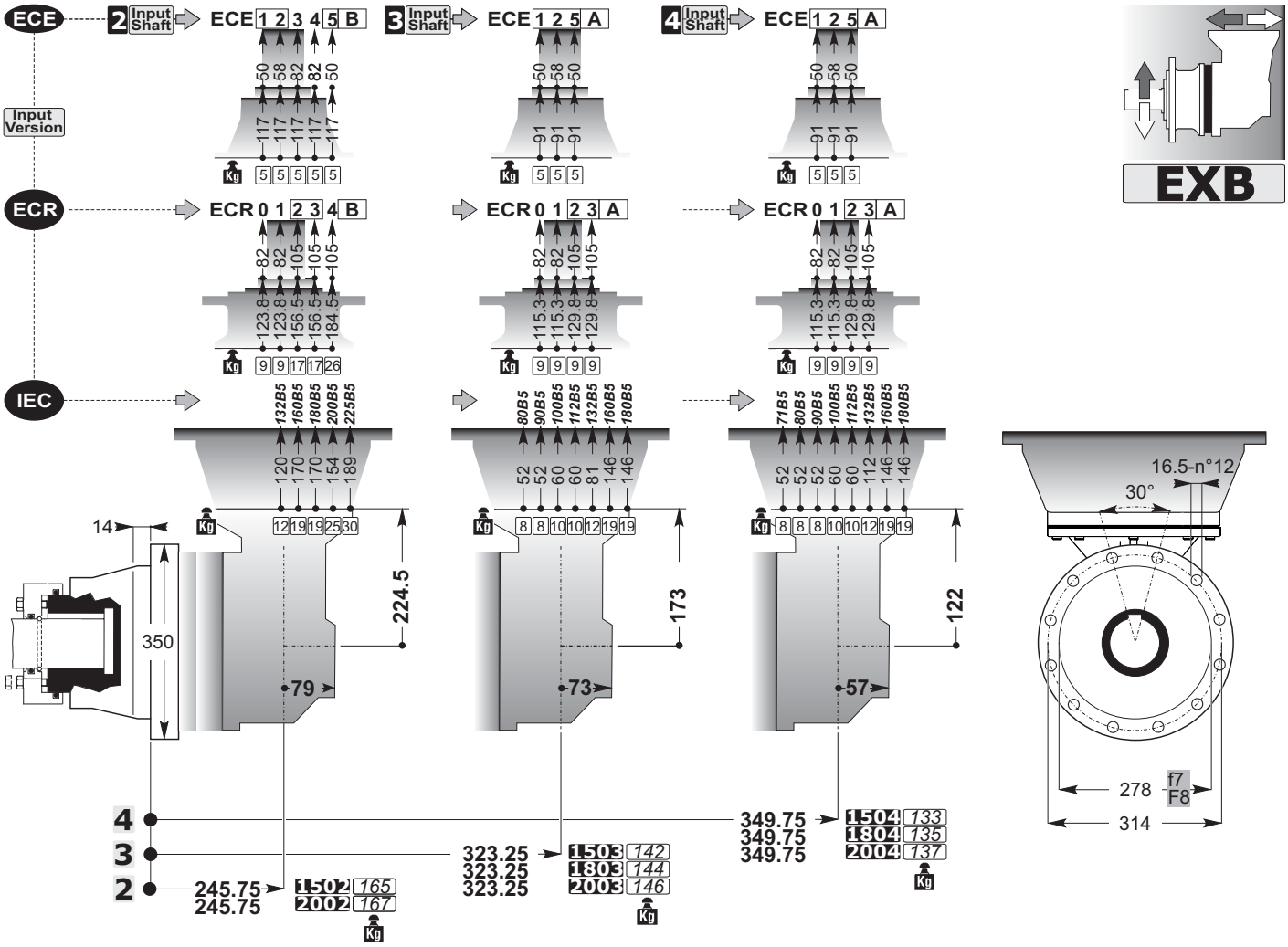


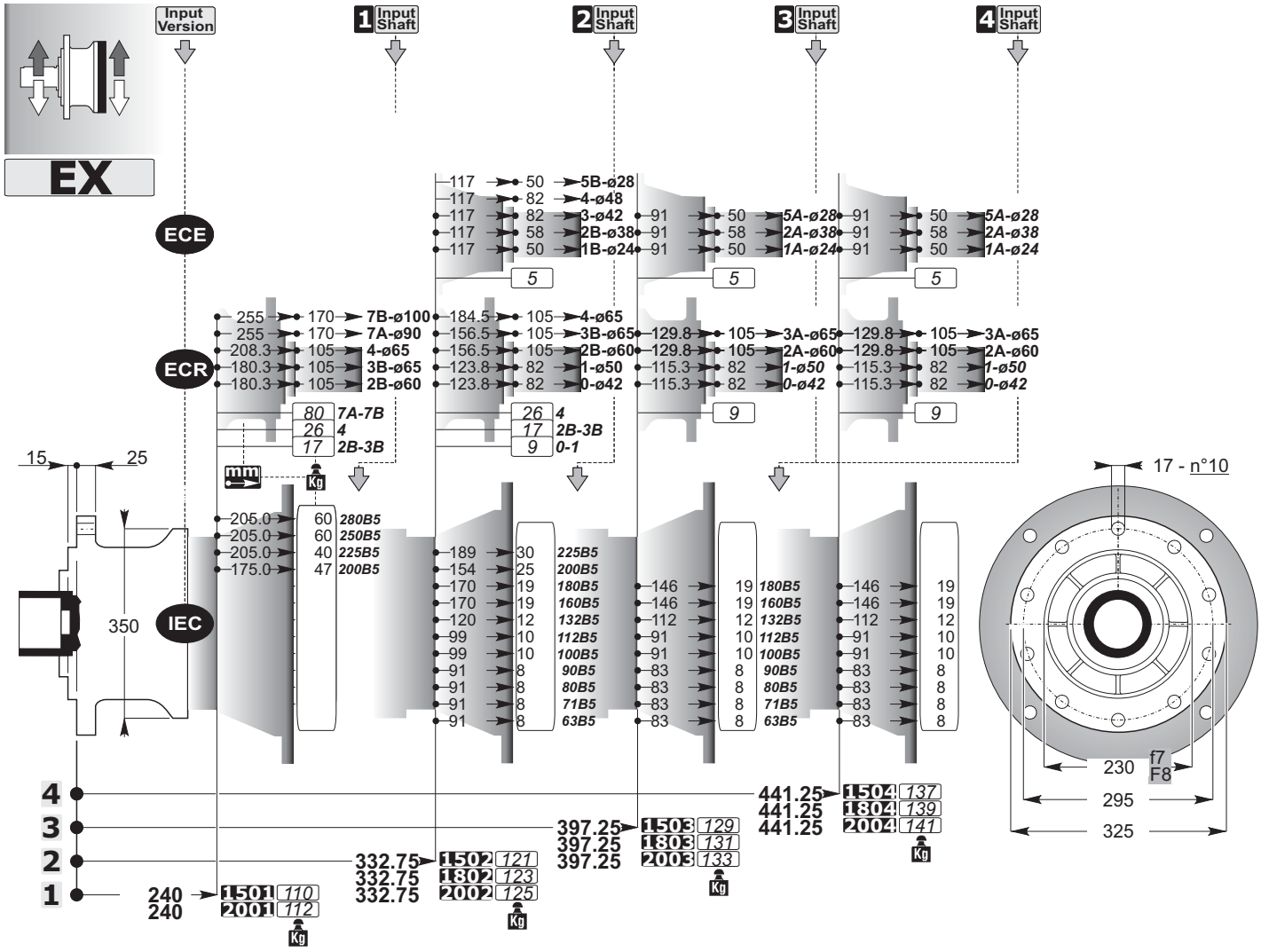
Accessories



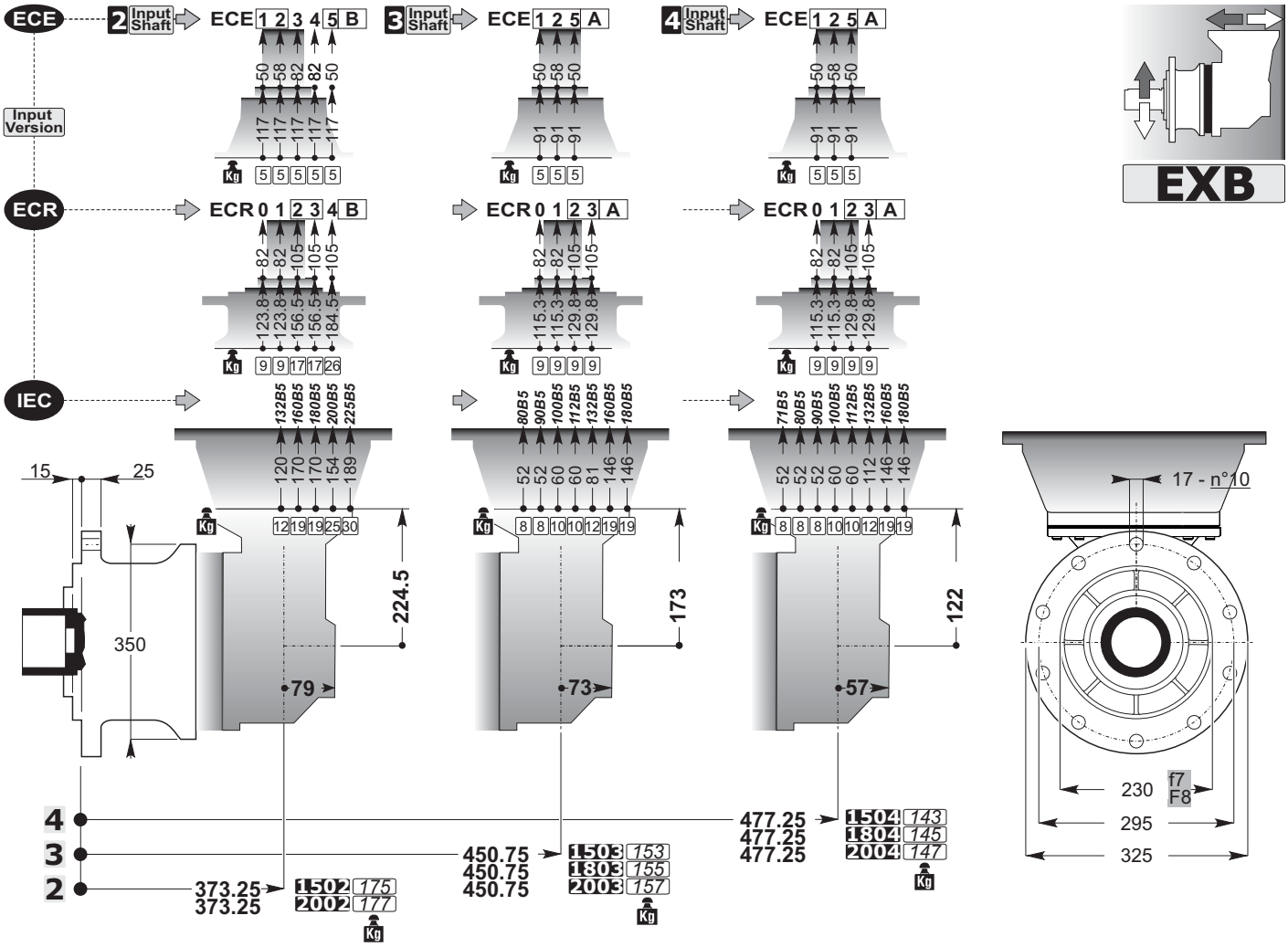


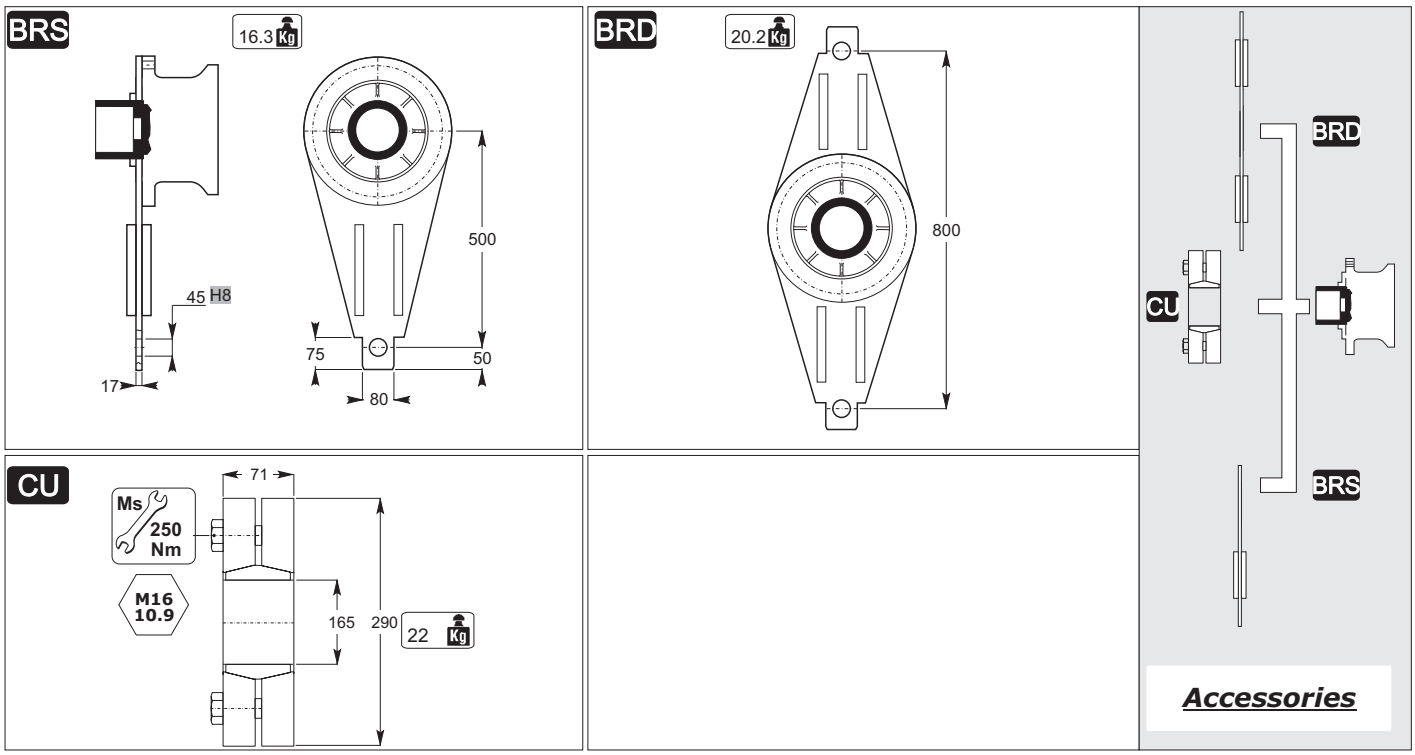
Output Shafts

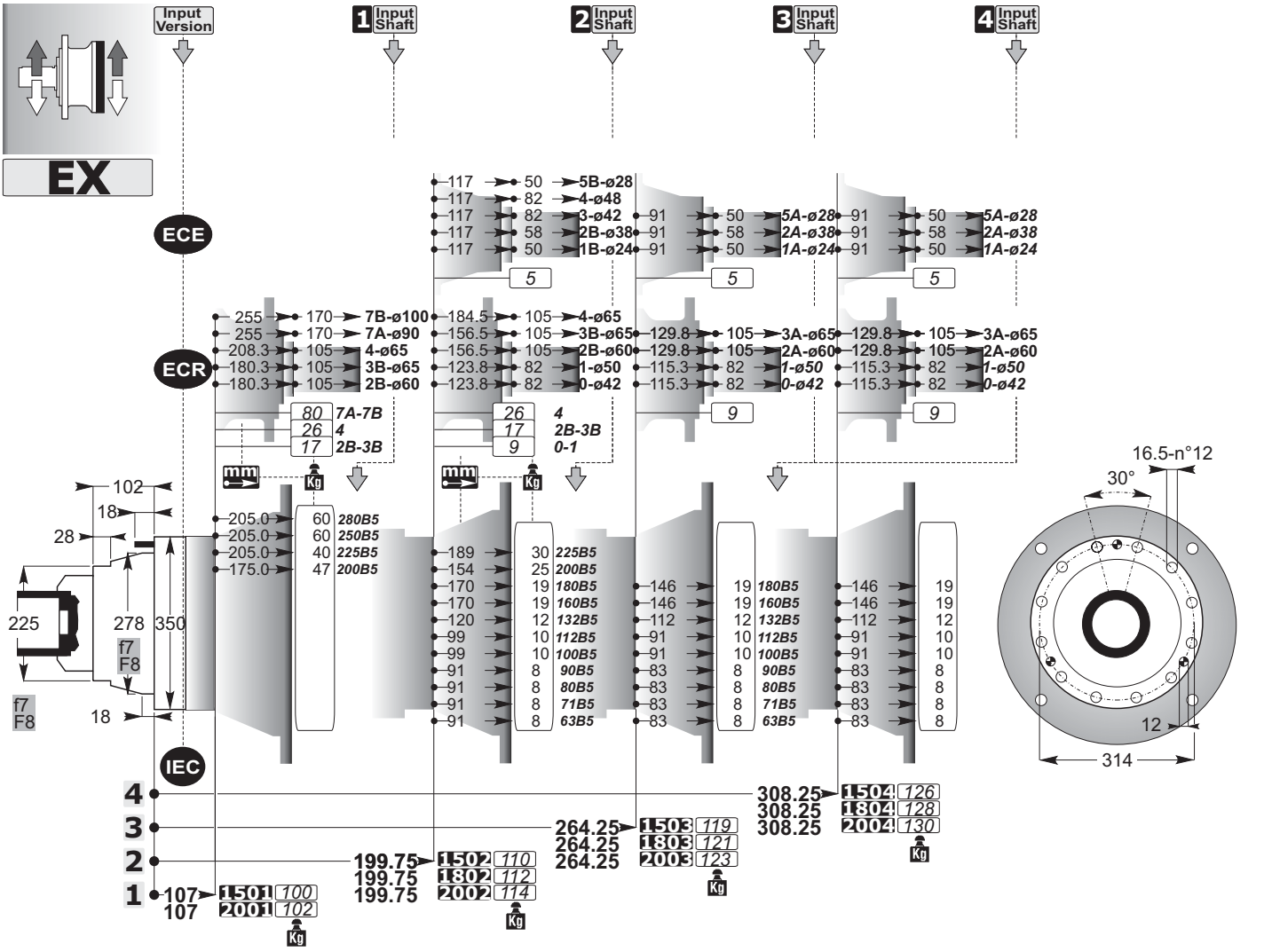

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
14
350
224.5
173
122
79
73
57
16.5-n°12
30°
278 f7 F8
314
4
3
2
245.75
245.75
1502 165
2002 167
323.25
323.25
323.25
1503 142
1803 144
2003 146
349.75
349.75
349.75
1504 133
1804 135
2004 137

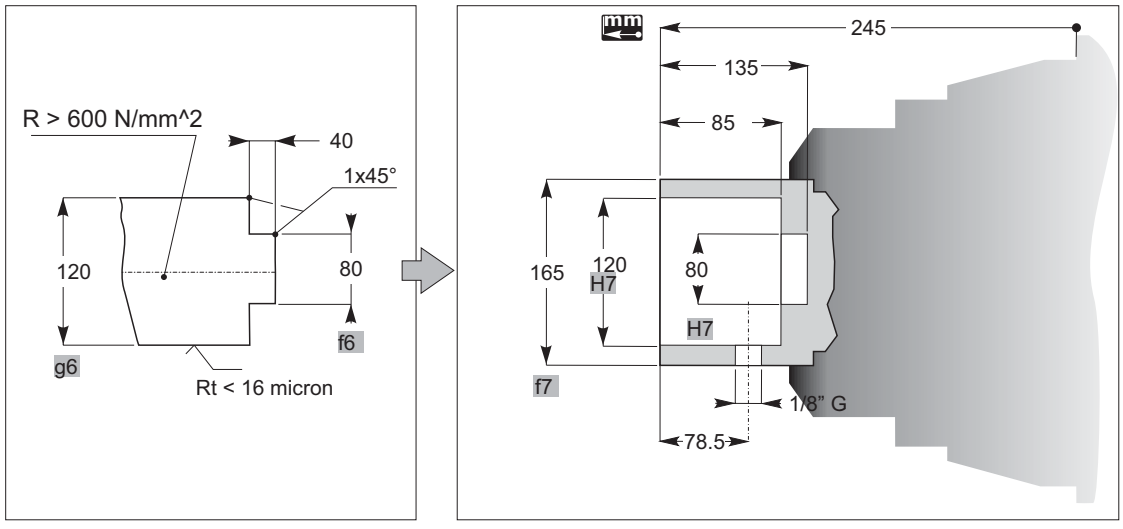


Output Shafts

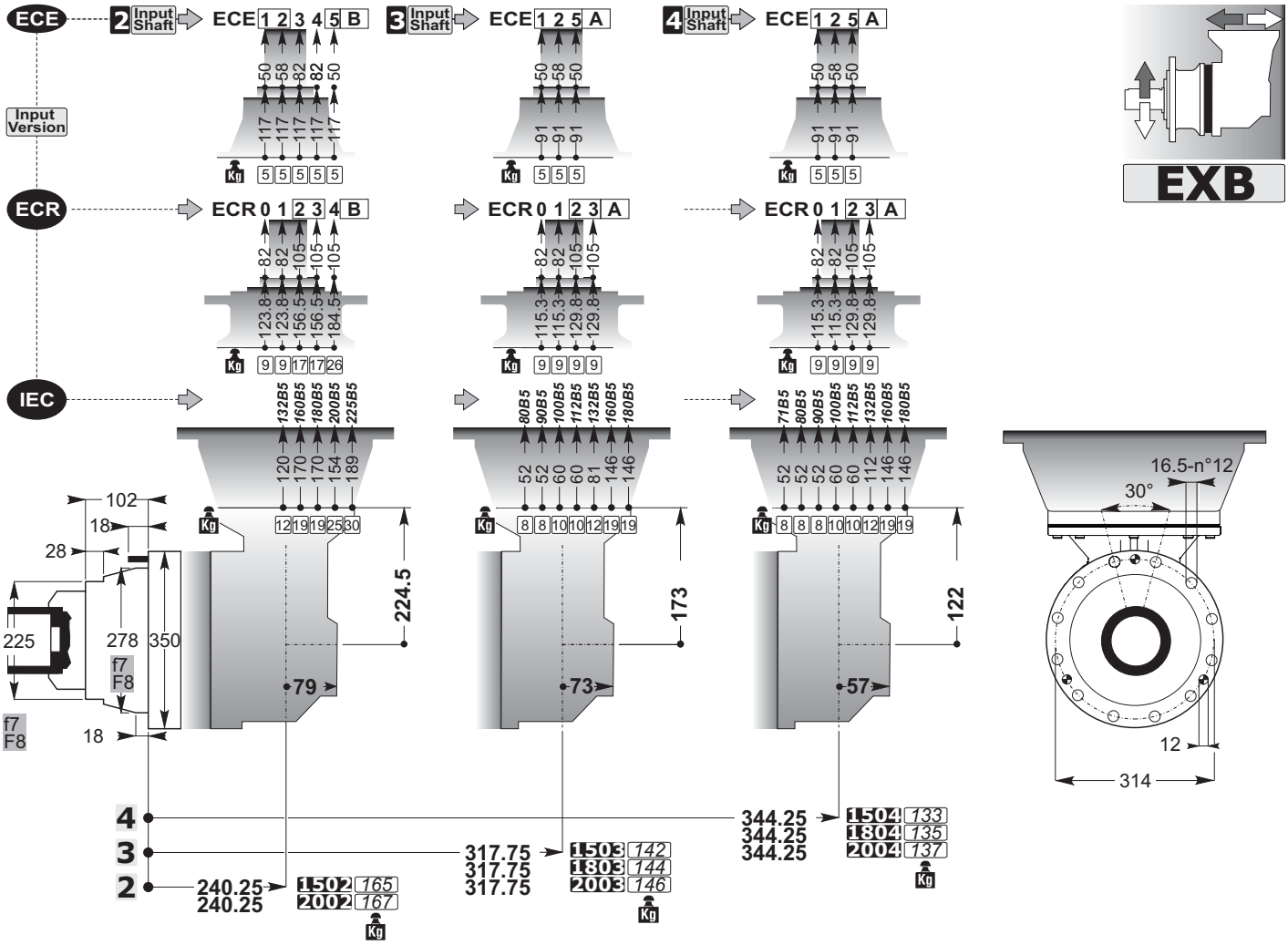

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5
15
25
350
224.5
173
122
79
73
57
17 - n°10
230 f7 F8
295
325
4
3
2
477.25
477.25
477.25
450.75
450.75
450.75
373.25
373.25
1504 143
1804 145
2004 147
1503 153
1803 155
2003 157
1502 175
2002 177

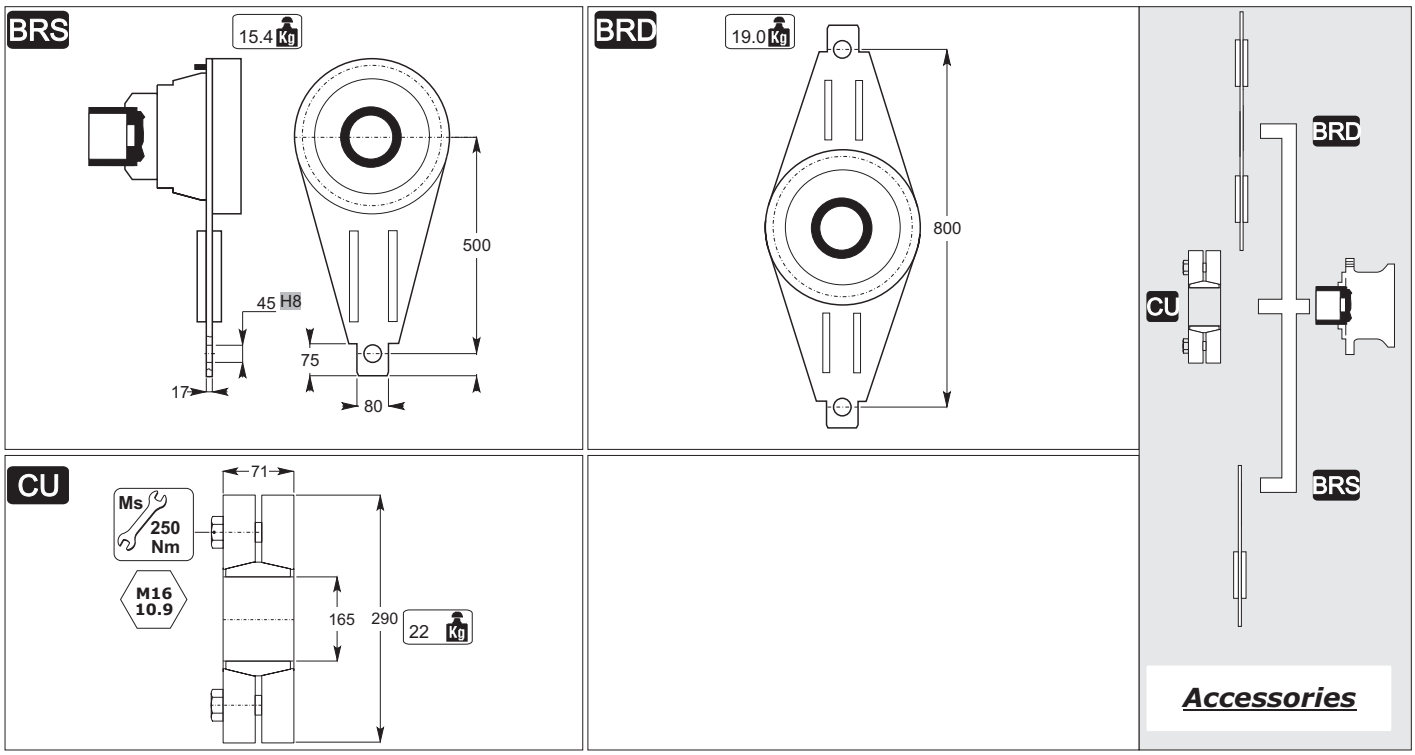

BRS
16.3 Kg
45 H8
17
500
75
50
80
BRD
20.2 Kg
800
CU
Ms
250
Nm
M16
10.9
71
165
290
22 Kg
BRD
CU
BRS
Accessories

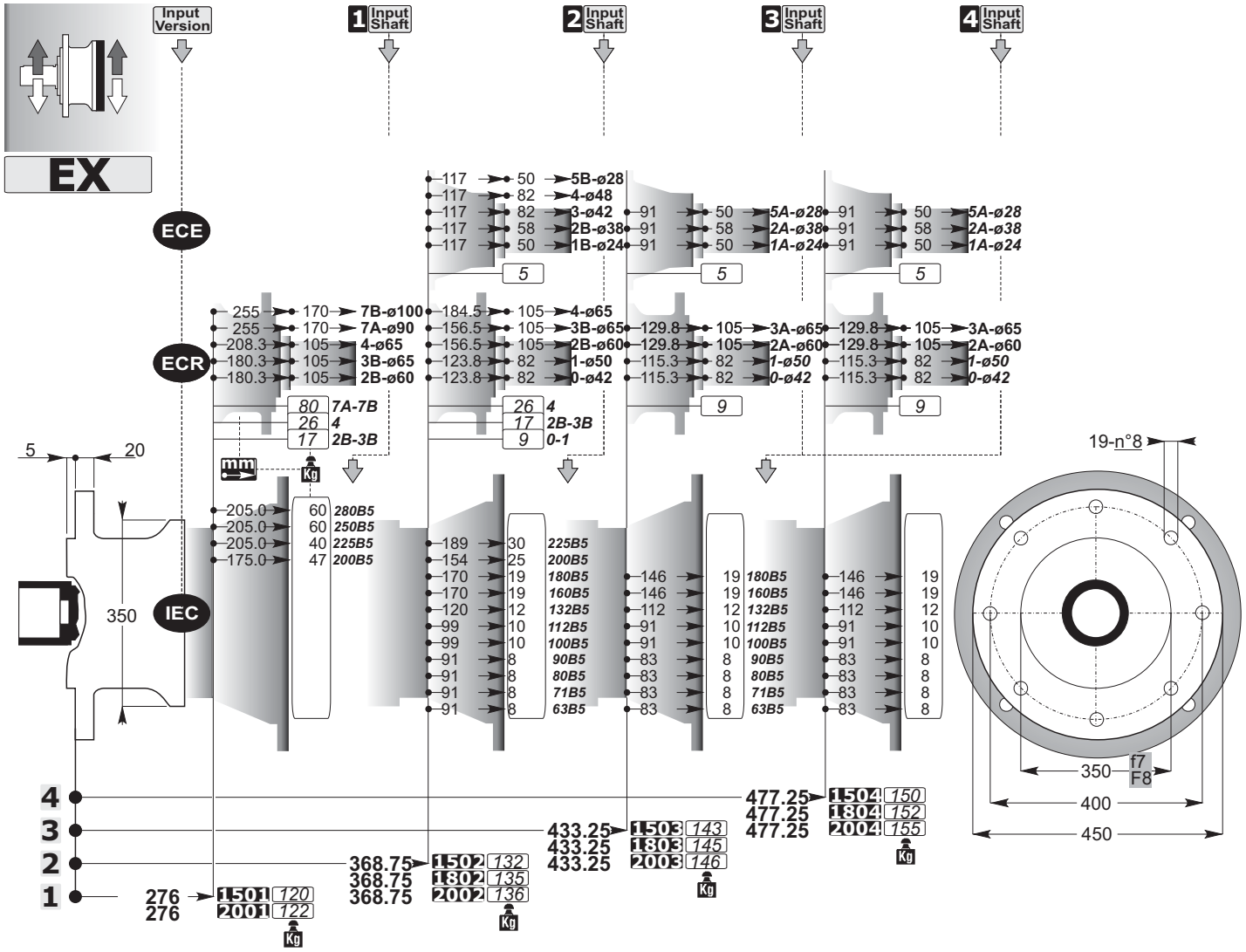




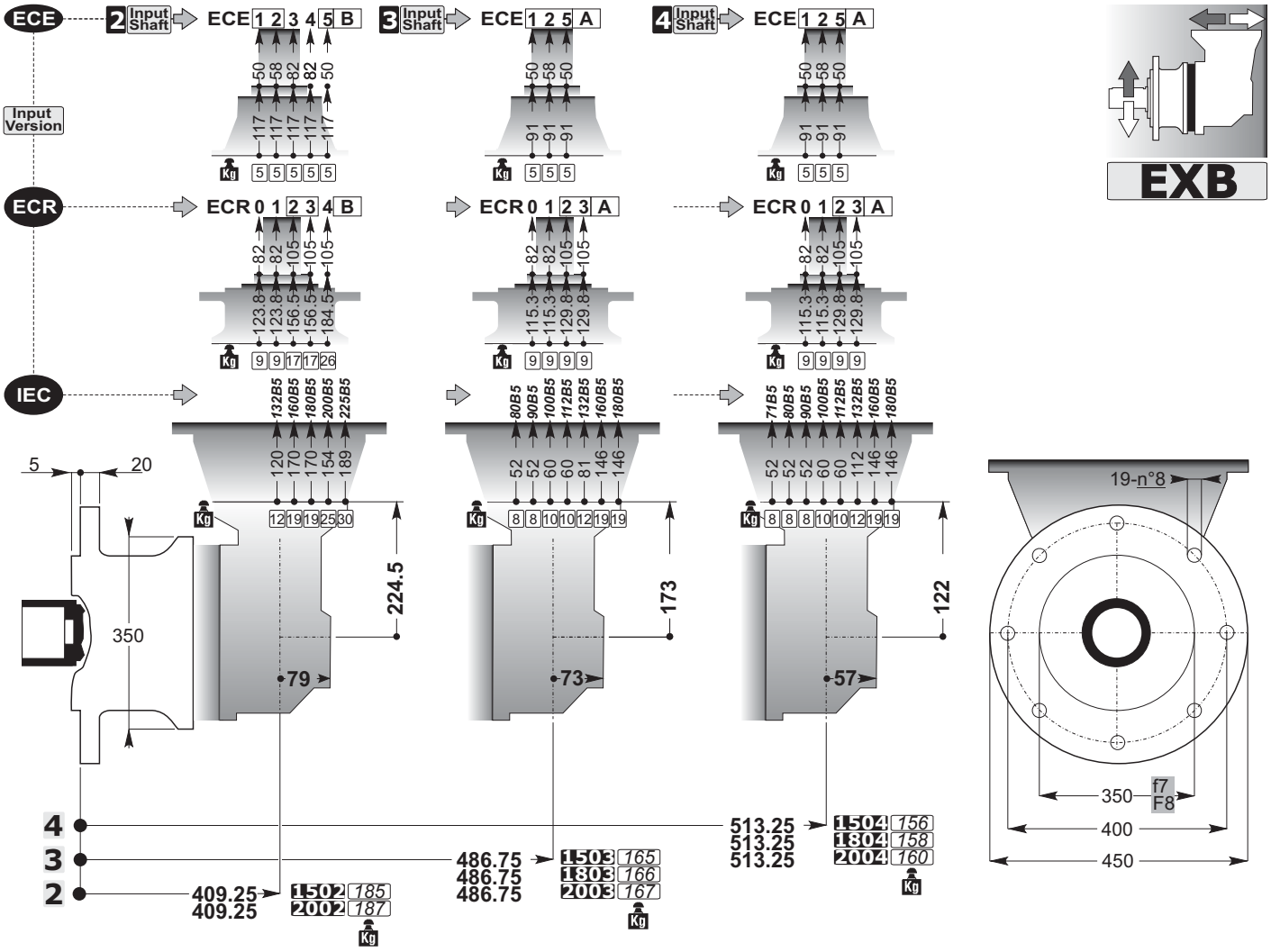
Output Shafts

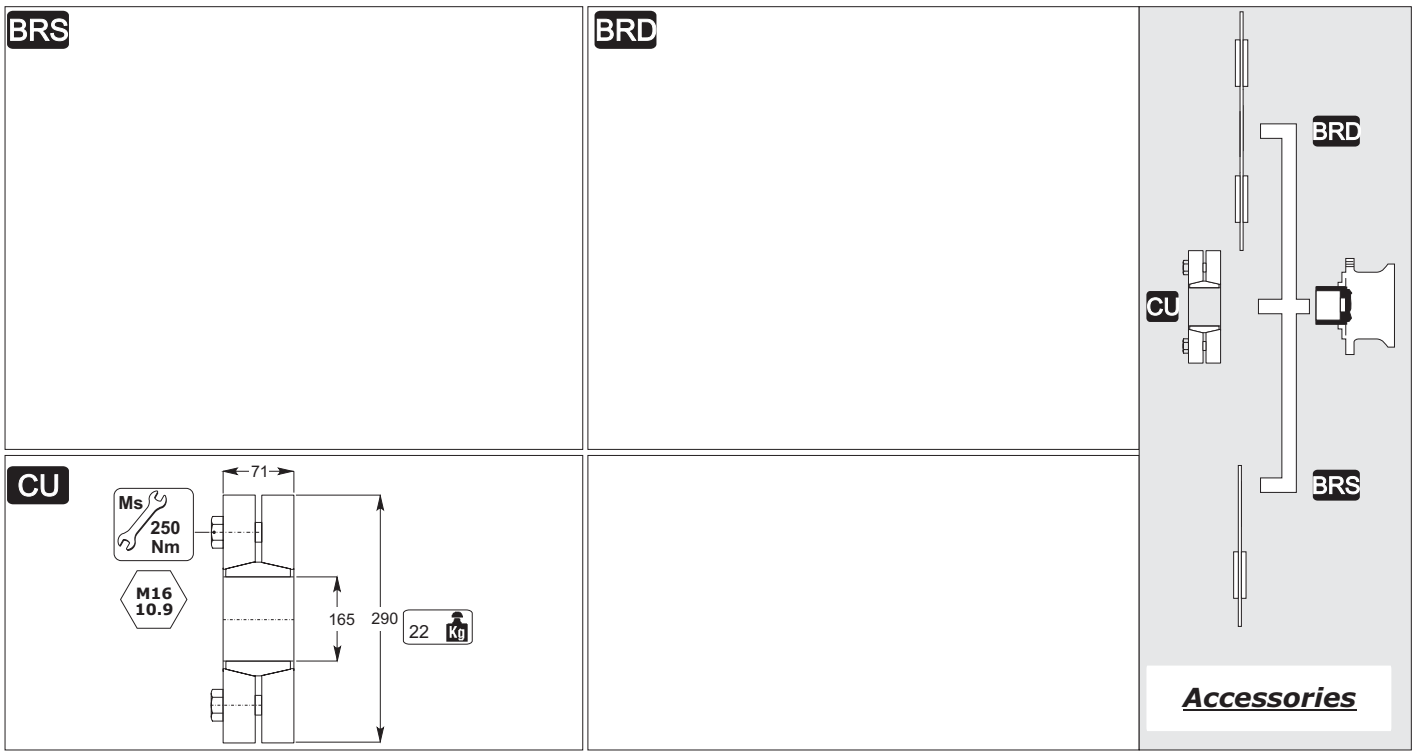

ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
16.5-n°12
30°
102
18
28
225
278
350
f7
F8
224.5
173
122
79
73
57
12
314
4
3
2
344.25
344.25
344.25
1504 133
1804 135
2004 137
317.75
317.75
317.75
1503 142
1803 144
2003 146
240.25
240.25
1502 165
2002 167

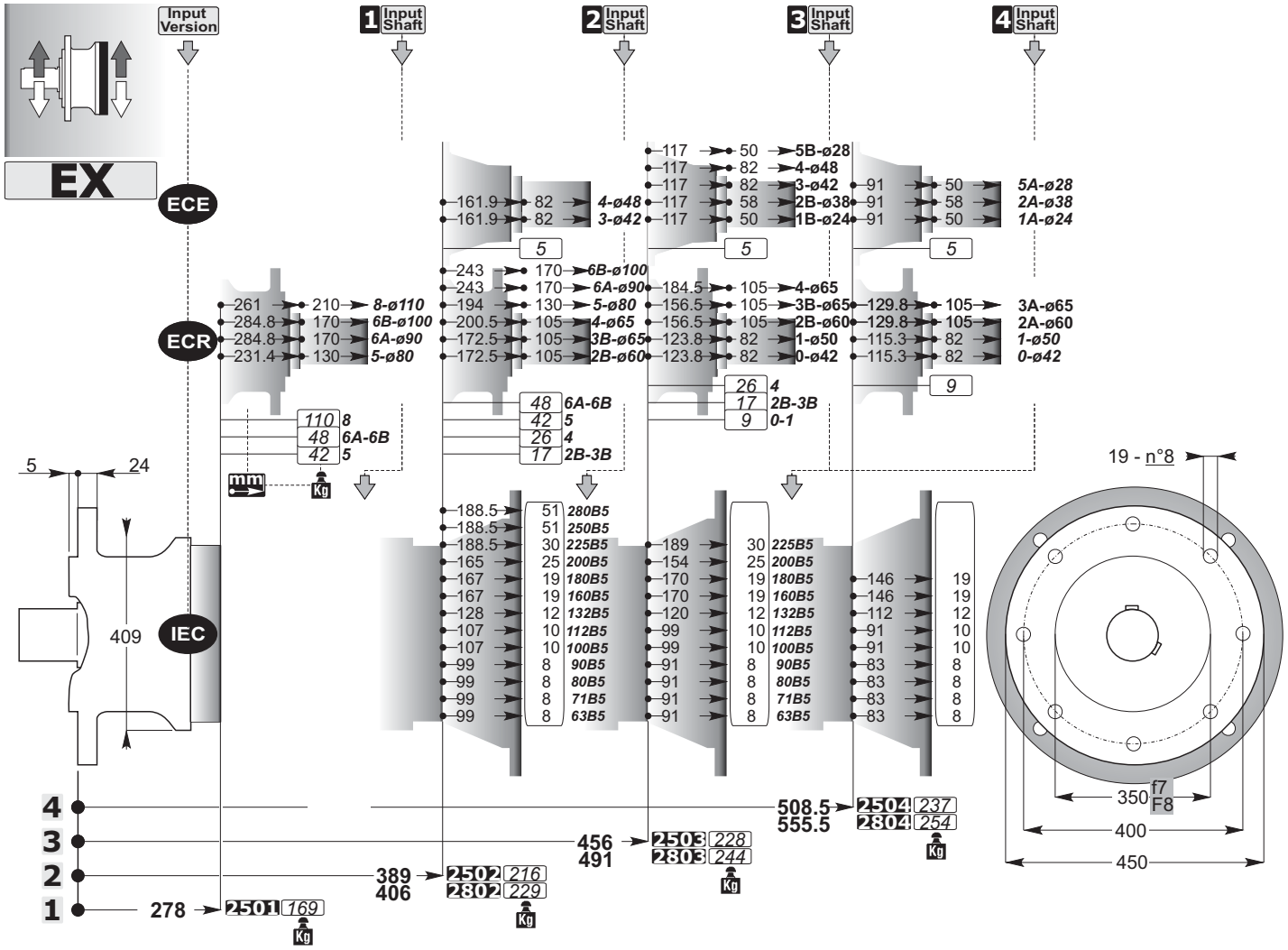

BRS
15.4 Kg
500
45 H8
75
17
80
BRD
19.0 Kg
800
CU
Ms
250
Nm
M16
10.9
71
165
290
22 Kg
BRD
CU
BRS
Accessories

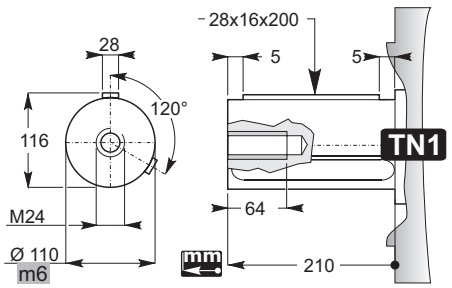


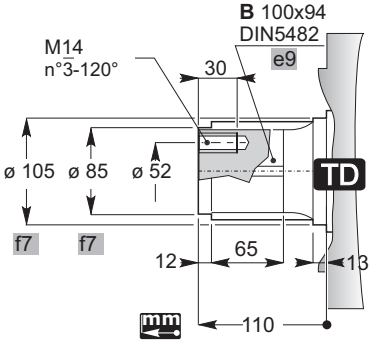
Output Shafts


ECE
2 Input Shaft
ECE 1 2 3 4 5 B
3 Input Shaft
ECE 1 2 5 A
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
ECR 0 1 2 3 A
IEC
EXB
5
20
350
224.5
173
122
79
73
57
4
3
2
513.25
513.25
513.25
486.75
486.75
486.75
409.25
409.25
1504 156
1804 158
2004 160
1503 165
1803 166
2003 167
1502 185
2002 187
19-n°8
350 f7 F8
400
450

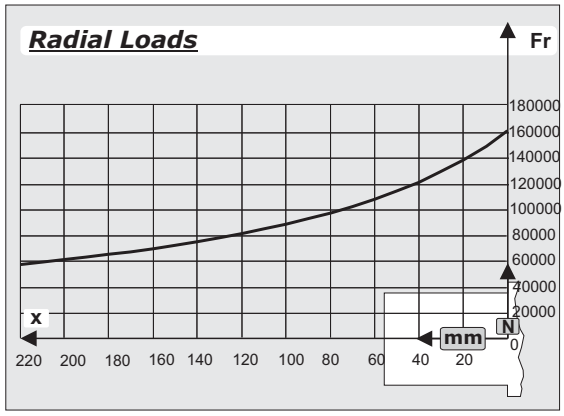

BRS
BRD
CU
Ms 250 Nm
M16 10.9
71
165
290
22
BRD
CU
BRS
Accessories

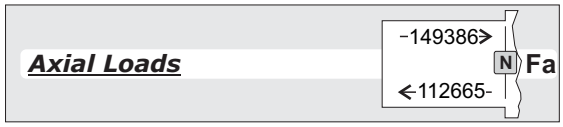


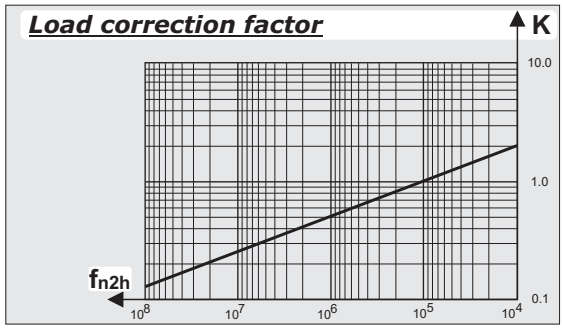


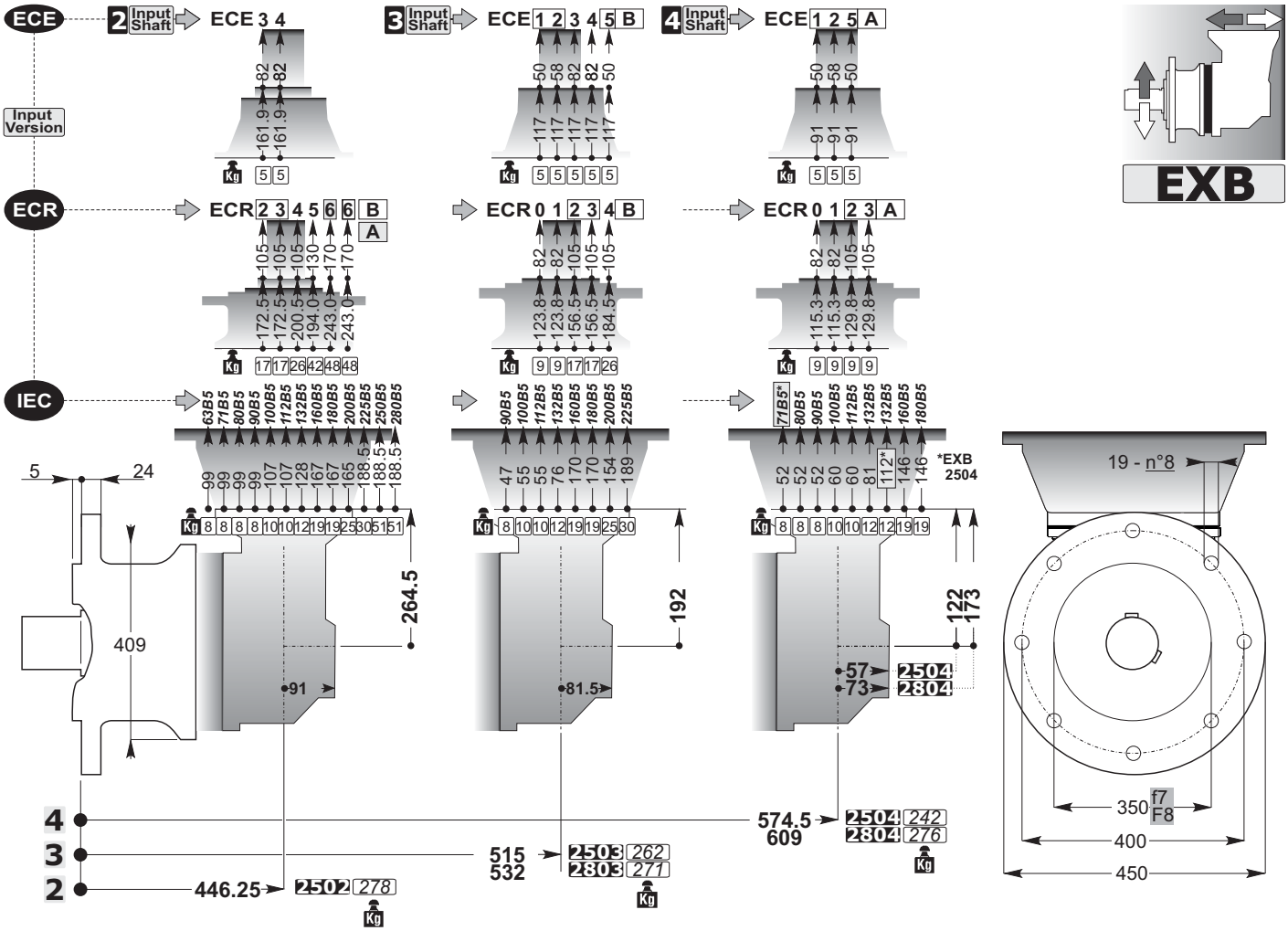


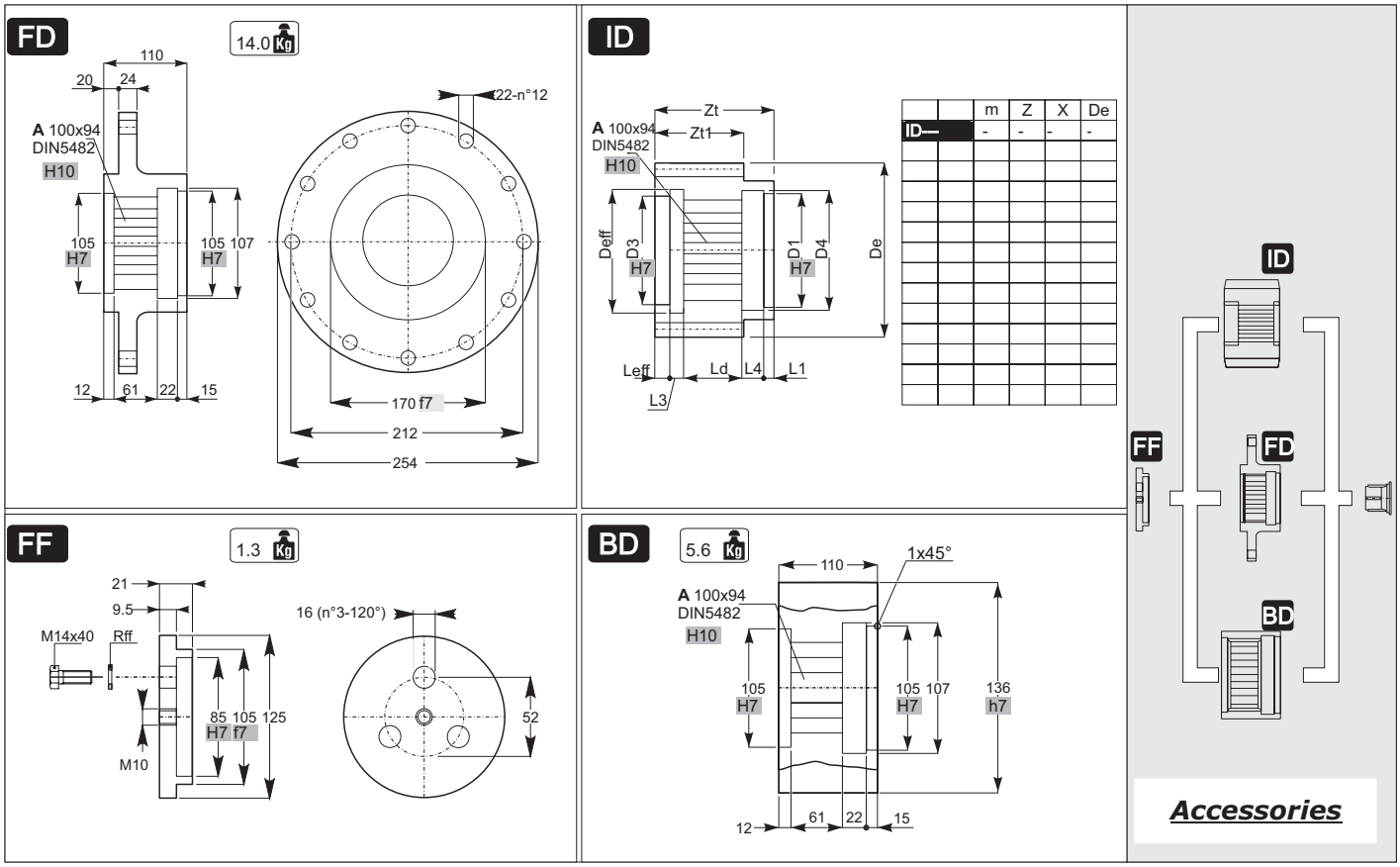
Output Shafts

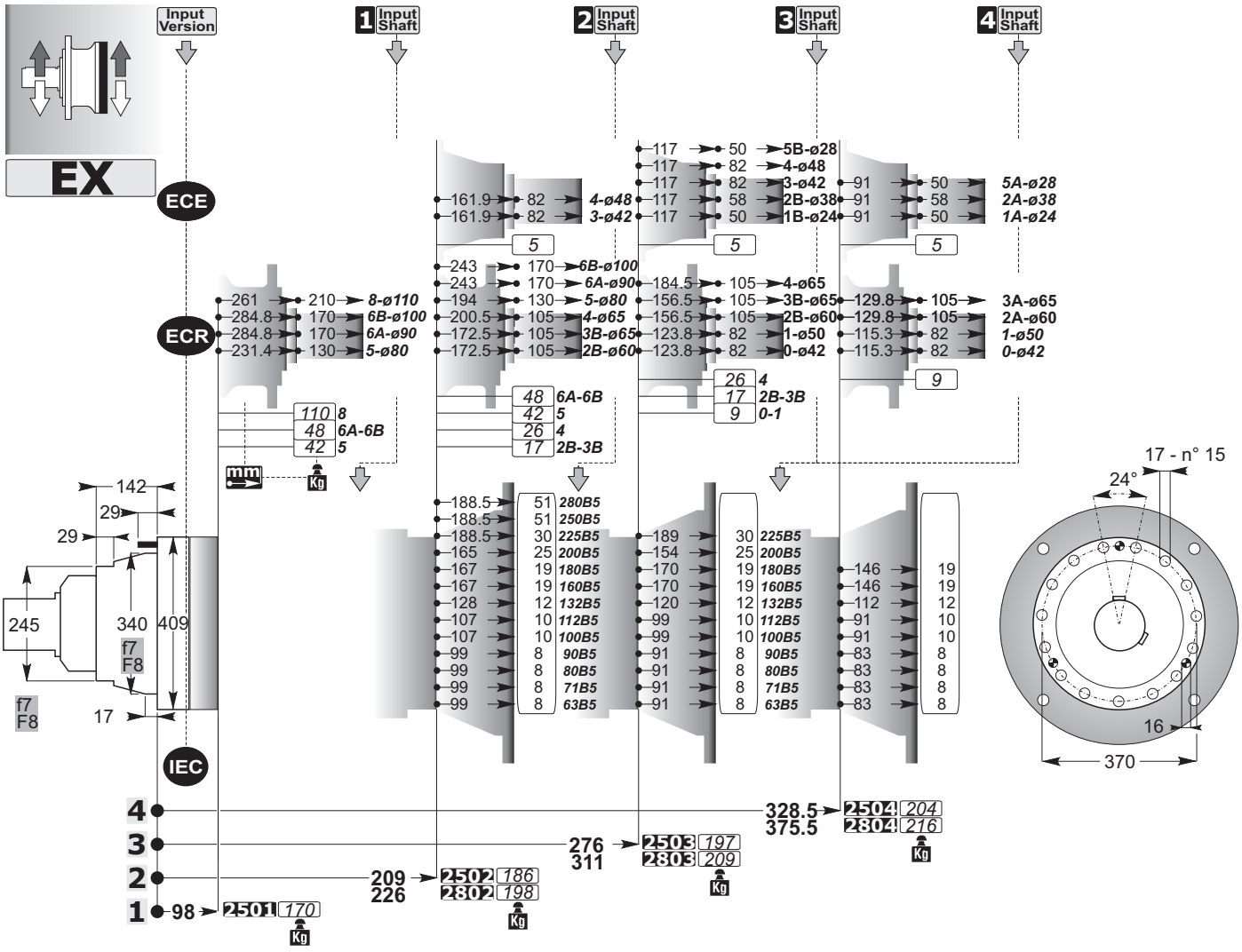


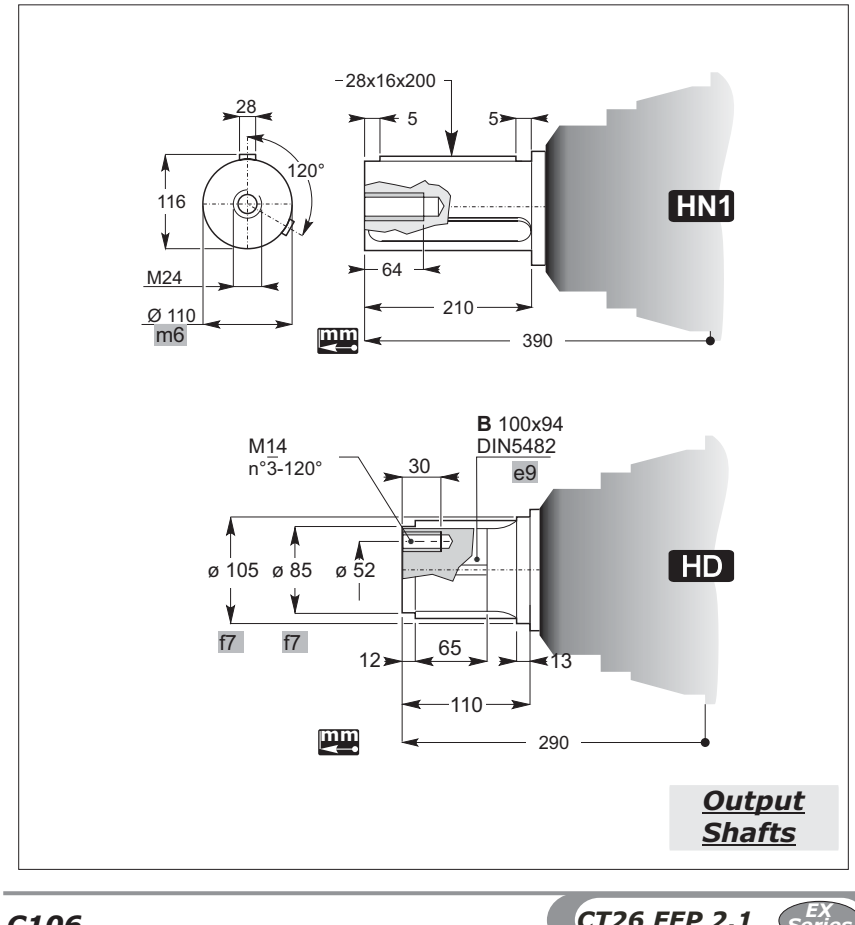




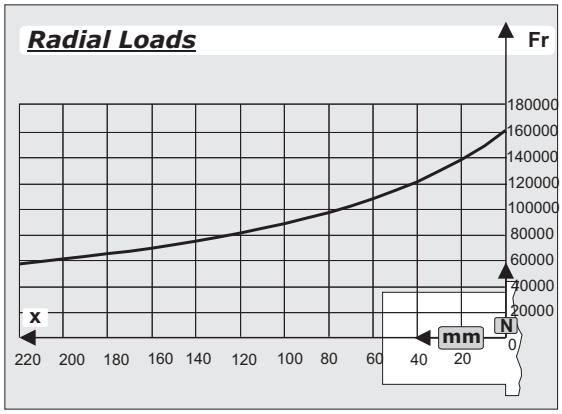

ECE
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
*EXB 2504
19 - n°8
5
24
409
264.5
192
122
173
91
81.5
57
73
2504
2804
4
3
2
446.25
2502 278
515
532
2503 262
2803 271
574.5
609
2504 242
2804 276
350 f7
F8
400
450

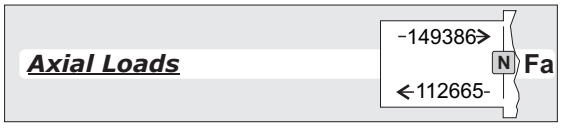

FD
14.0 Kg
110
20
24
A 100x94
DIN5482
H10
105
H7
105 107
H7
12
61
22
15
22-n°12
170 f7
212
254
ID
A 100x94
DIN5482
H10
Zt
Zt1
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID
m
Z
X
De
FF
1.3 Kg
21
9.5
M14x40
Rff
16 (n°3-120°)
85 105 125
H7 f7
M10
52
BD
5.6 Kg
110
1x45°
A 100x94
DIN5482
H10
105
H7
105 107
H7
136
h7
12
61
22
15
FF
FD
ID
BD
Accessories

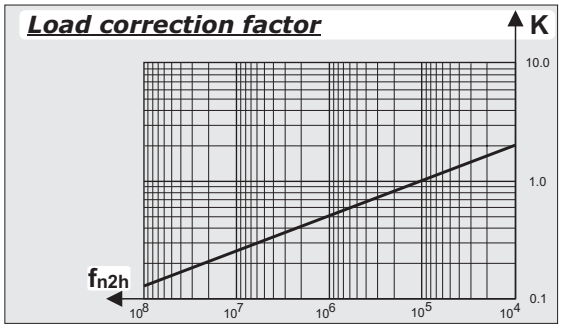


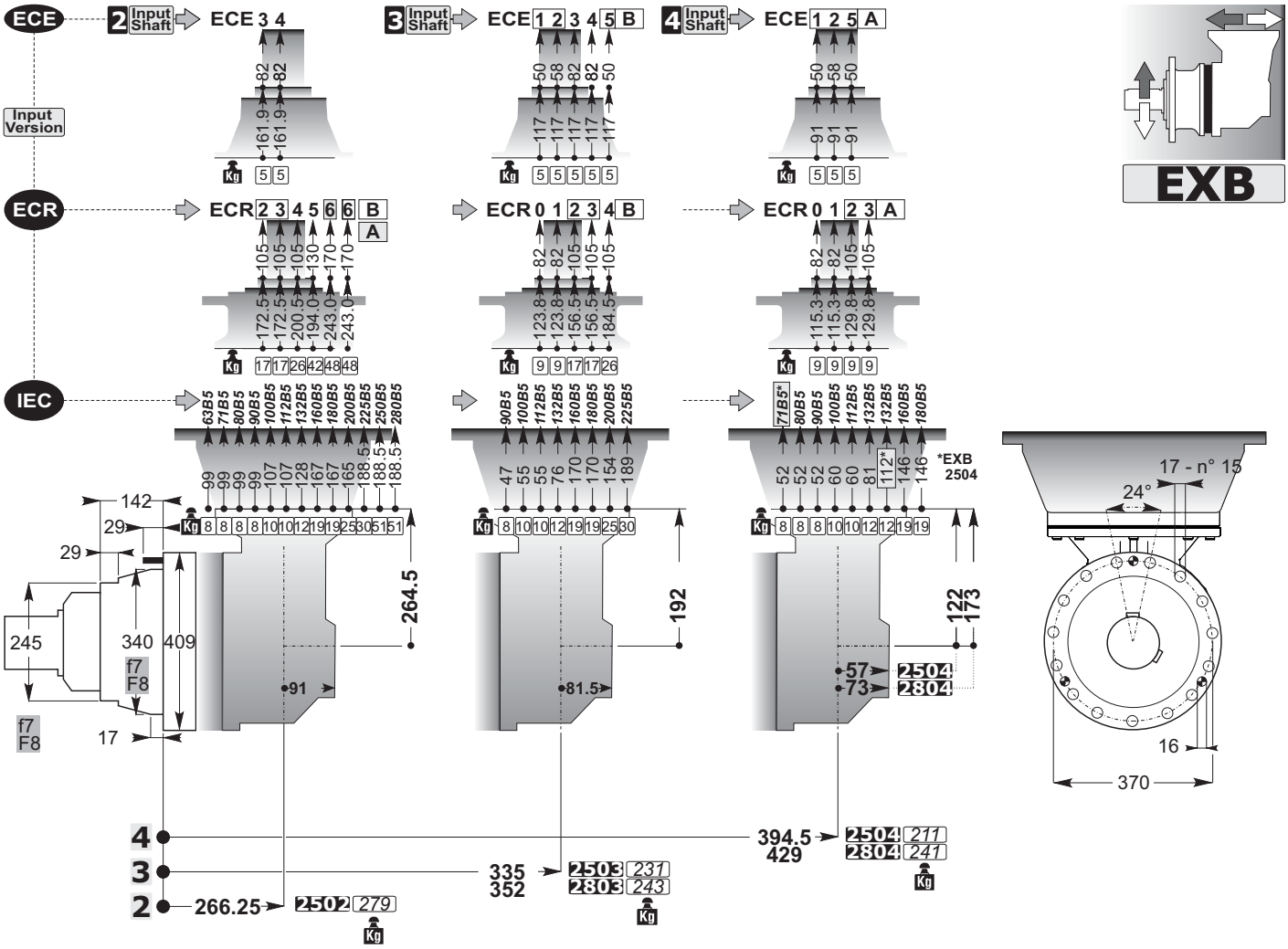


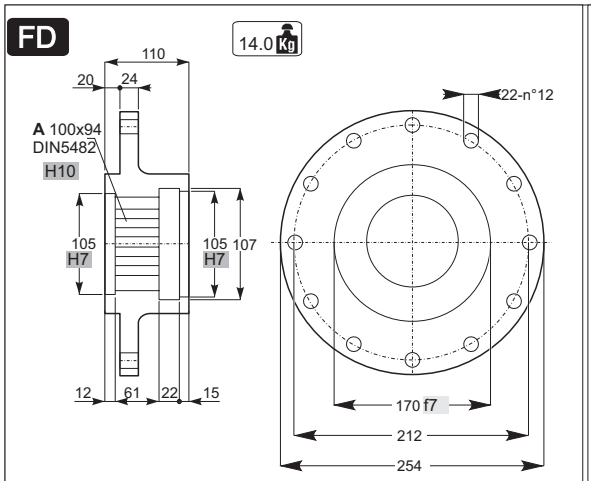
Output Shafts

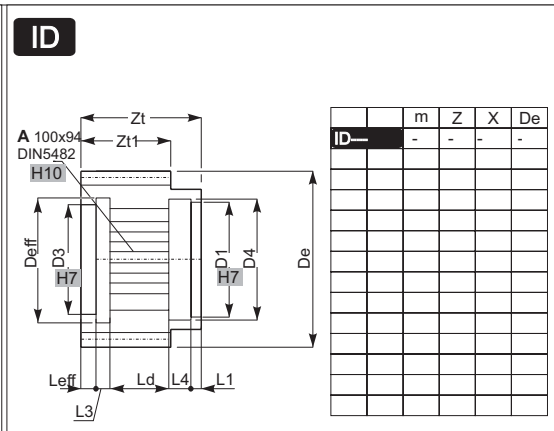


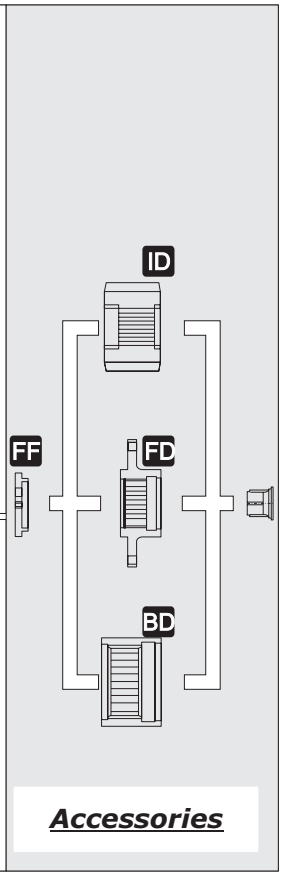


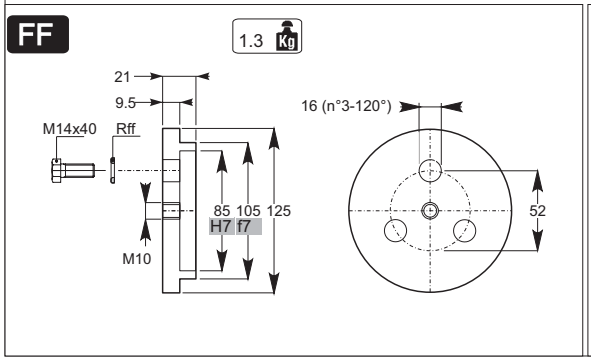


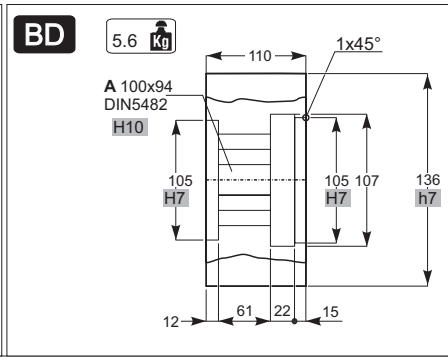

ECE
Input Version
2 Input Shaft ECE 3 4
3 Input Shaft ECE 1 2 3 4 5 B
4 Input Shaft ECE 1 2 5 A
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
*EXB 2504
17 - n° 15
24°
16
370
142
29
245
340
409
f7
F8
17
264.5
192
122
173
91
81.5
57
73
2504
2804
4
3
2
394.5
429
335
352
266.25
2504 211
2804 241
2503 231
2803 243
2502 279


FD
14.0 Kg
110
20
24
A 100x94
DIN5482
H10
105
H7
105
H7
107
12
61
22
15
22-n°12
170 f7
212
254

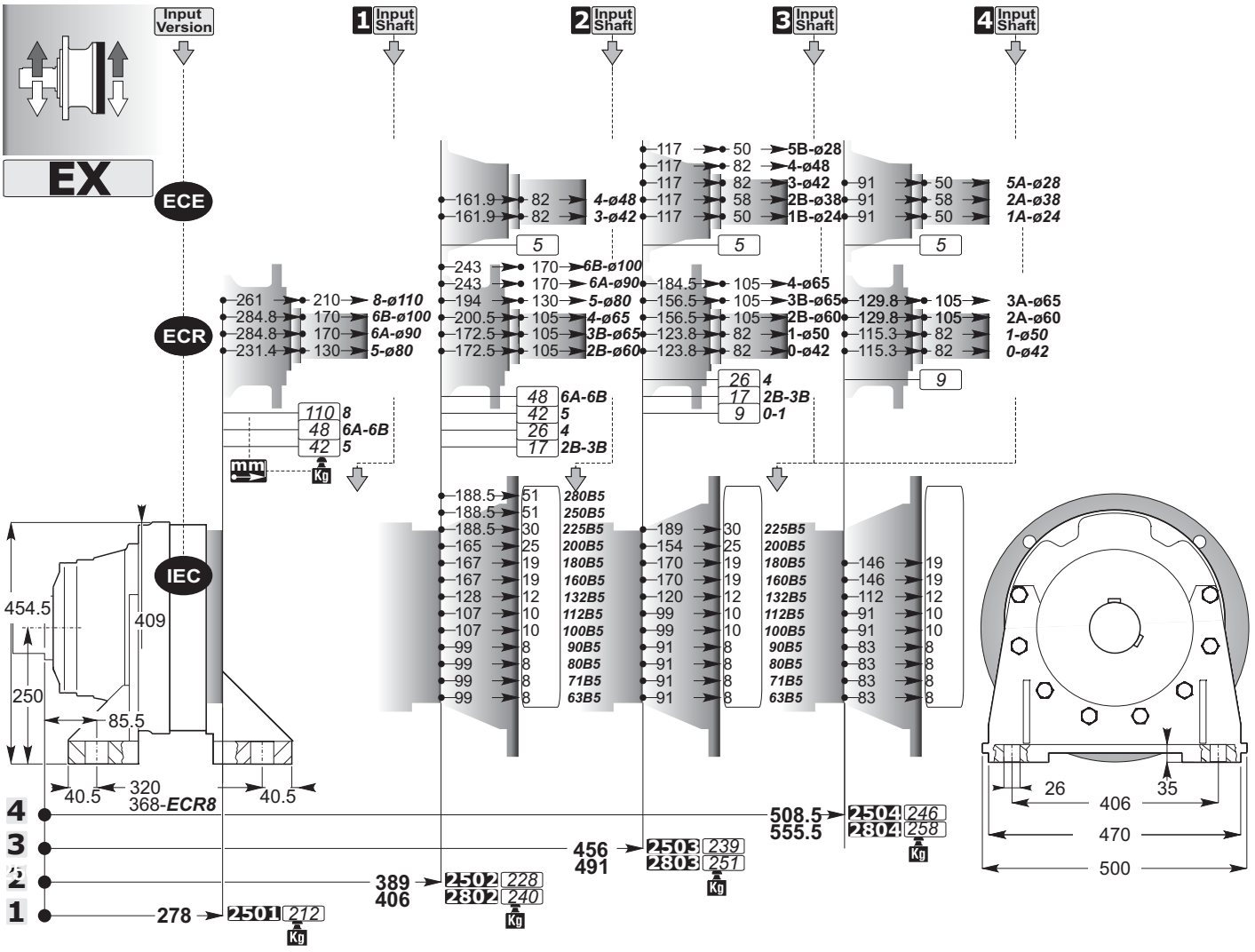

ID
Zt
Zt1
A 100x94
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
ID—
m
Z
X
De

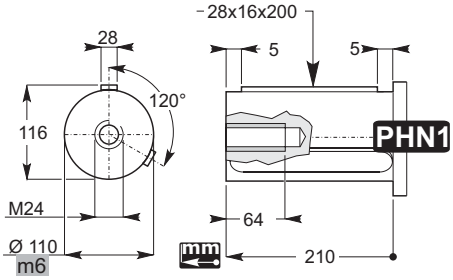

ID
FF
FD
BD
Accessories

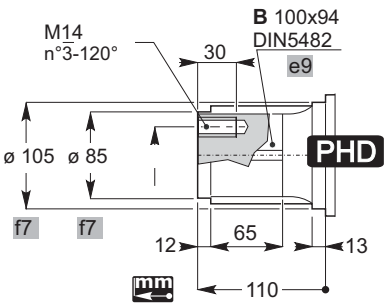

FF
1.3 Kg
21
9.5
M14x40
Rff
M10
85
H7
105
f7
125
16 (n°3-120°)
52


BD
5.6 Kg
110
1x45°
A 100x94
DIN5482
H10
105
H7
105
H7
107
136
h7
12
61
22
15

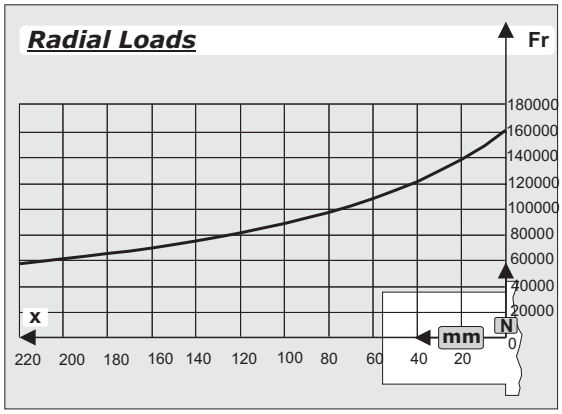
mm
C

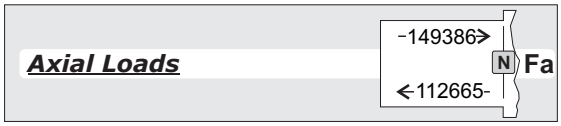


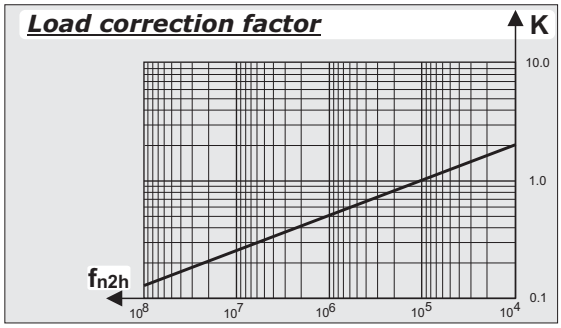


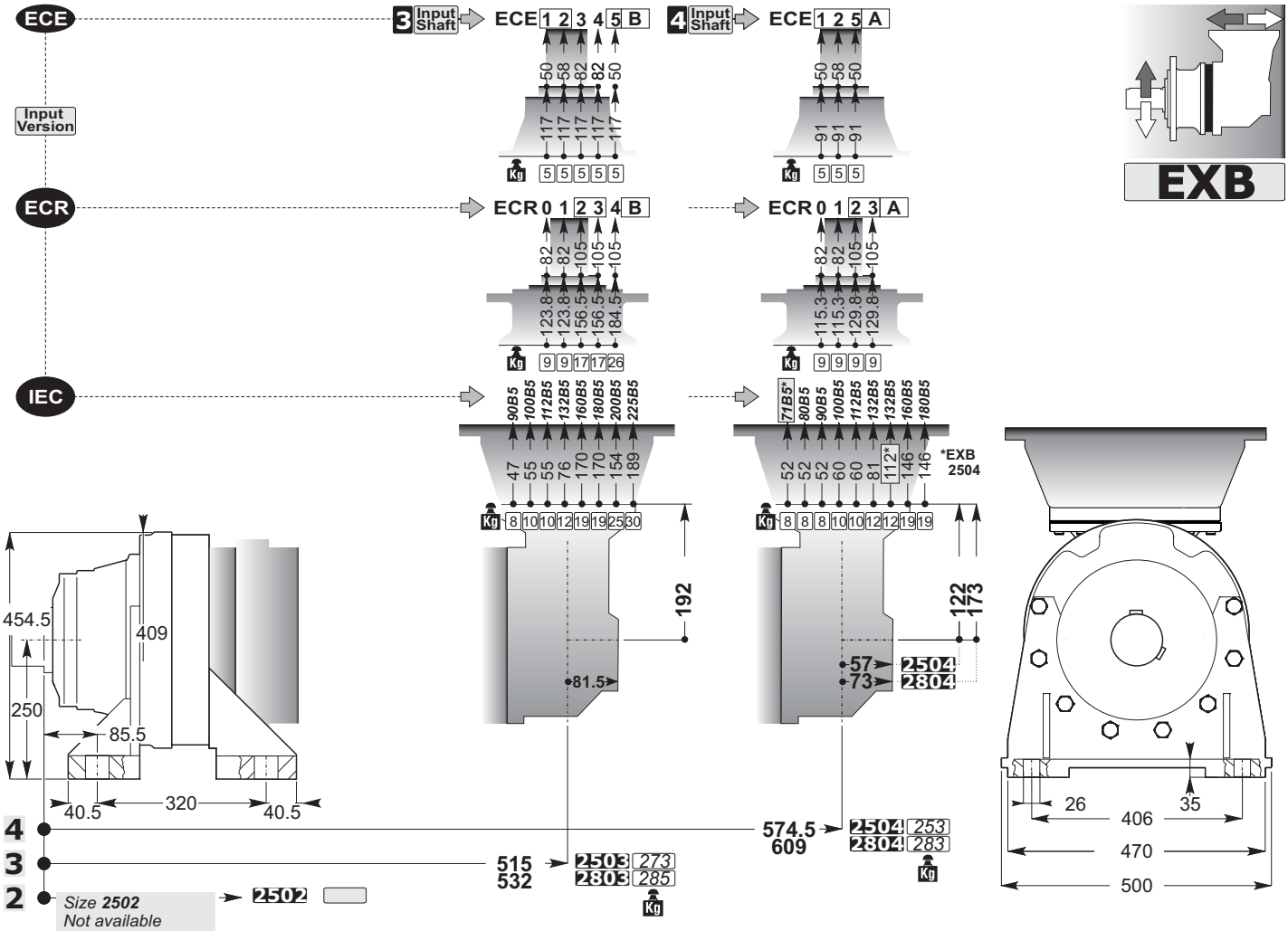


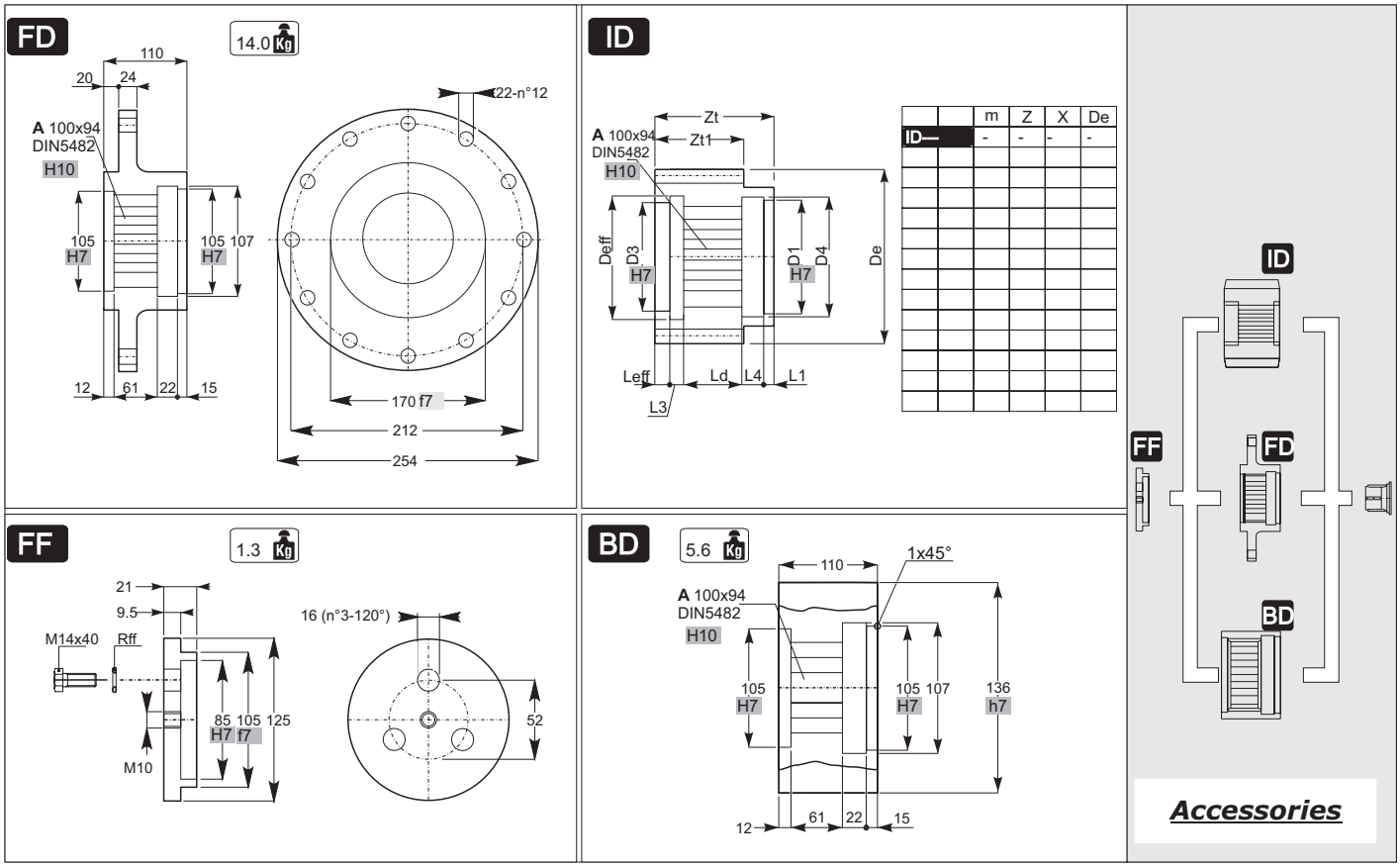
Output Shafts

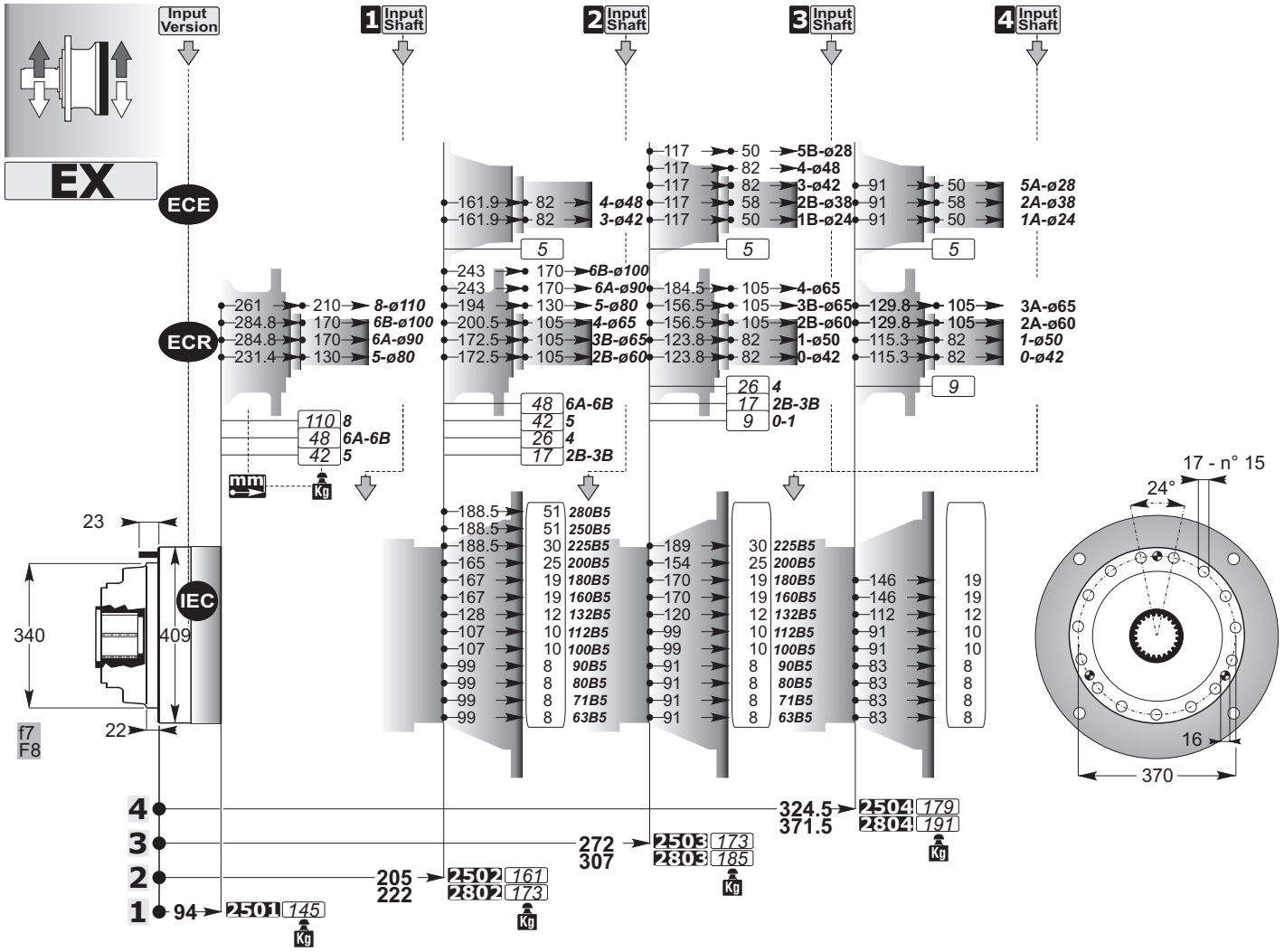


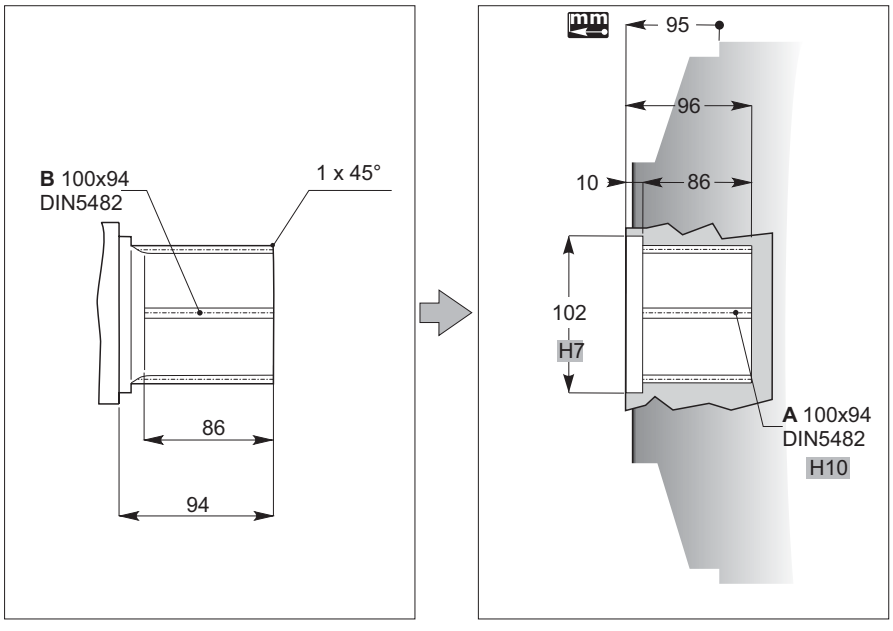




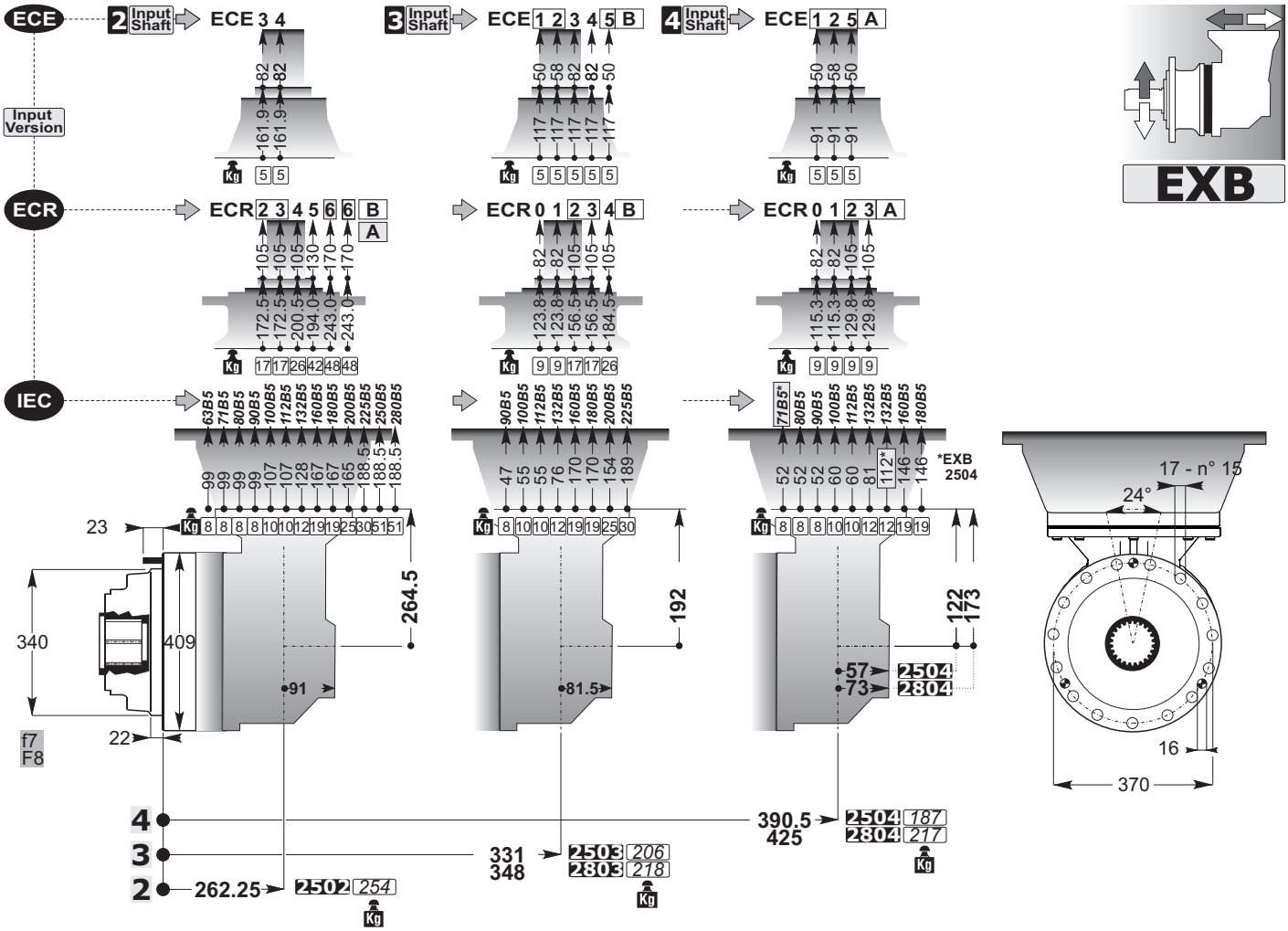

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
EXB
*EXB 2504
454.5
409
250
85.5
40.5
320
40.5
192
81.5
122
173
57
73
2504
2804
574.5
609
515
532
2503 273
2803 285
2504 253
2804 283
26
406
35
470
500
Size 2502
Not available
PHD-PHN.-Version
2502

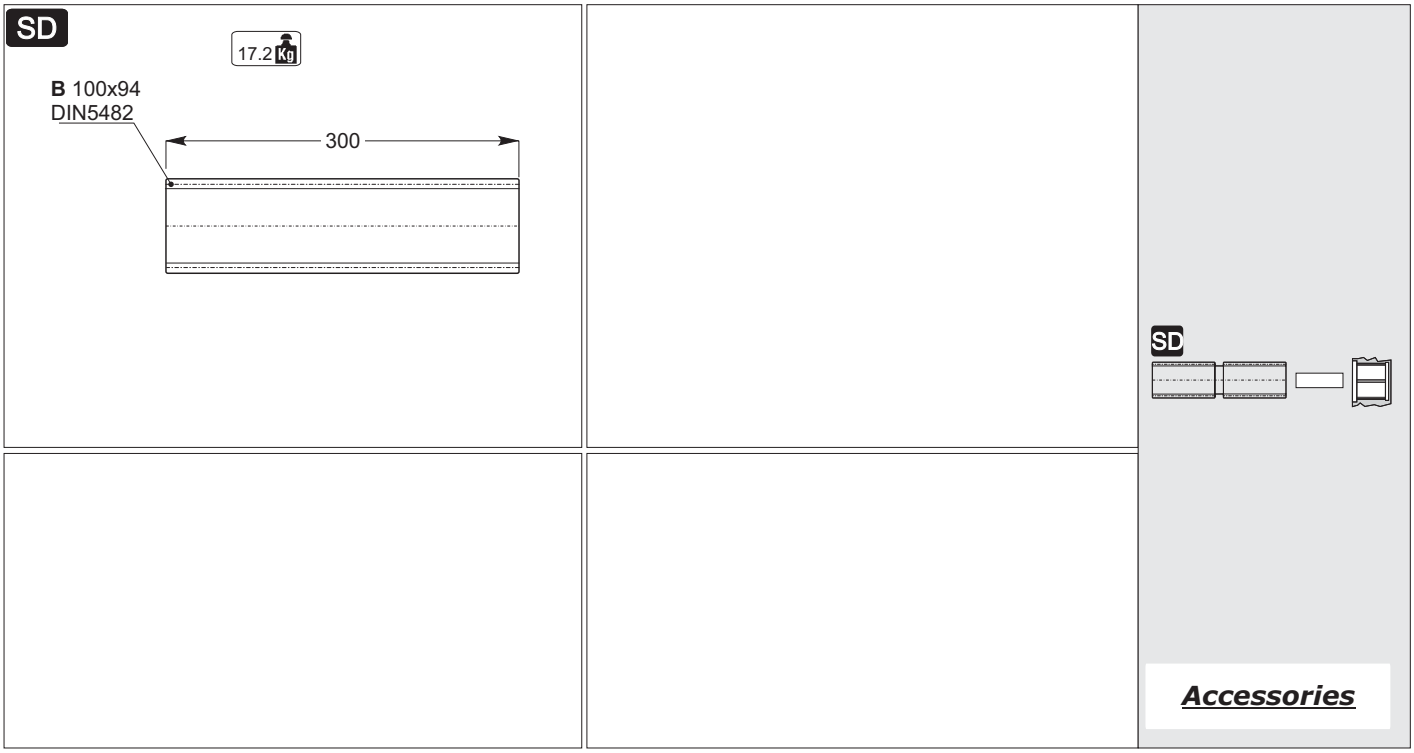

FD
14.0 Kg
110
20
24
A 100x94
DIN5482
H10
105
H7
105 107
H7
12
61
22
15
22-n°12
170 f7
212
254
ID
Zt
Zt1
A 100x94
DIN5482
H10
Deff
D3
H7
D1
H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
1.3 Kg
21
9.5
M14x40
Rff
16 (n°3-120°)
85 105 125
H7 f7
M10
52
BD
5.6 Kg
110
1x45°
A 100x94
DIN5482
H10
105
H7
105 107
H7
136
h7
12
61
22
15
ID
FF
FD
BD
Accessories

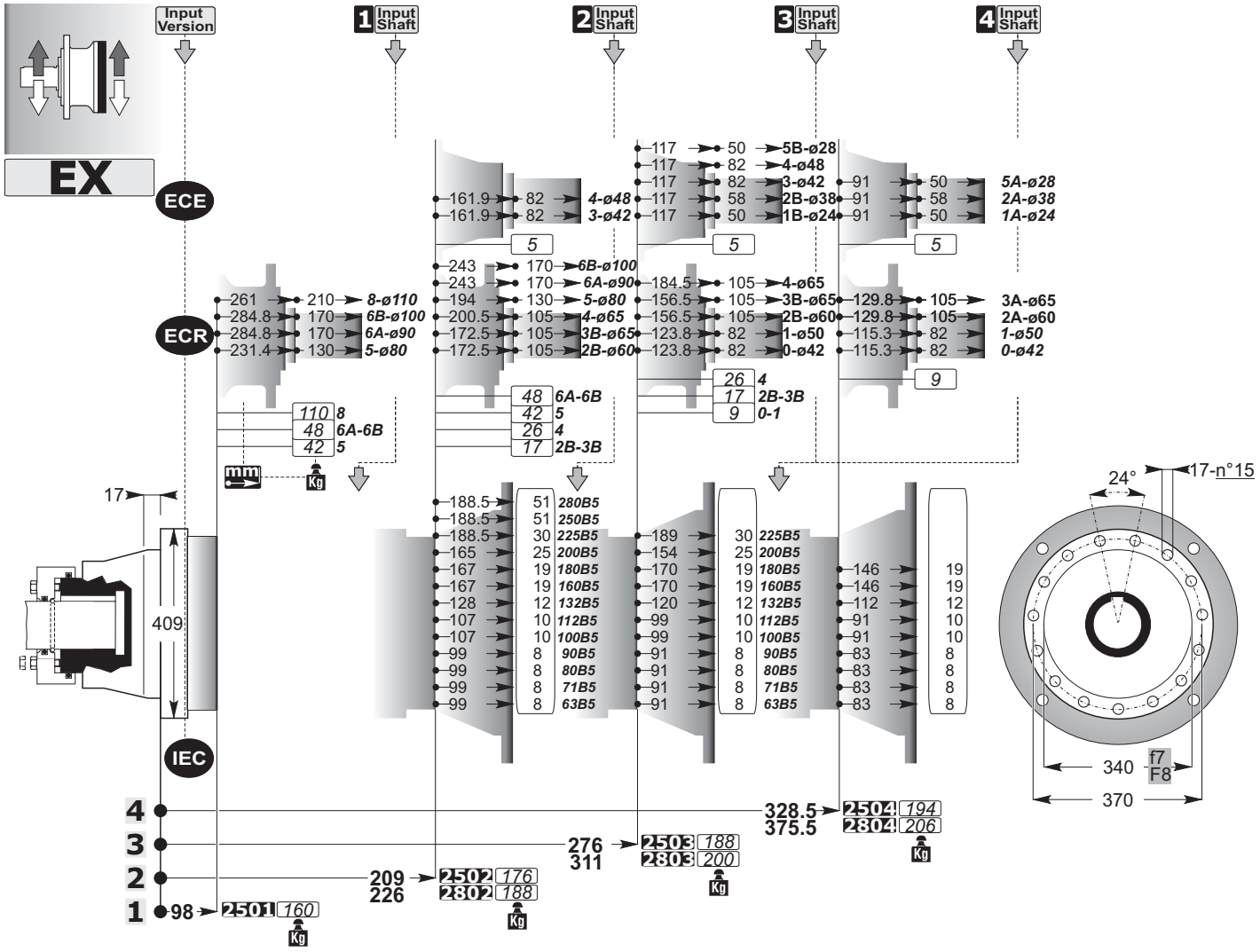


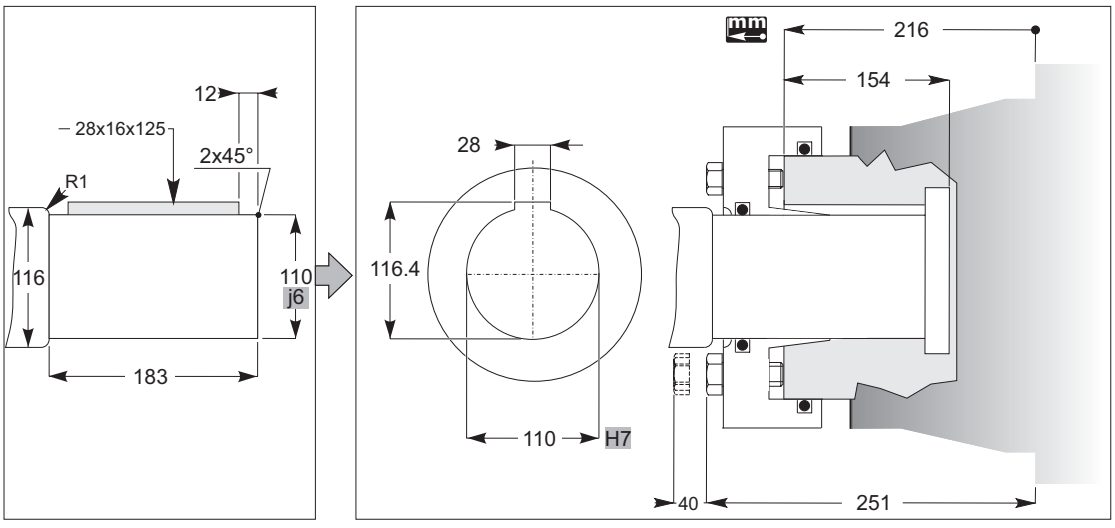


Output Shafts

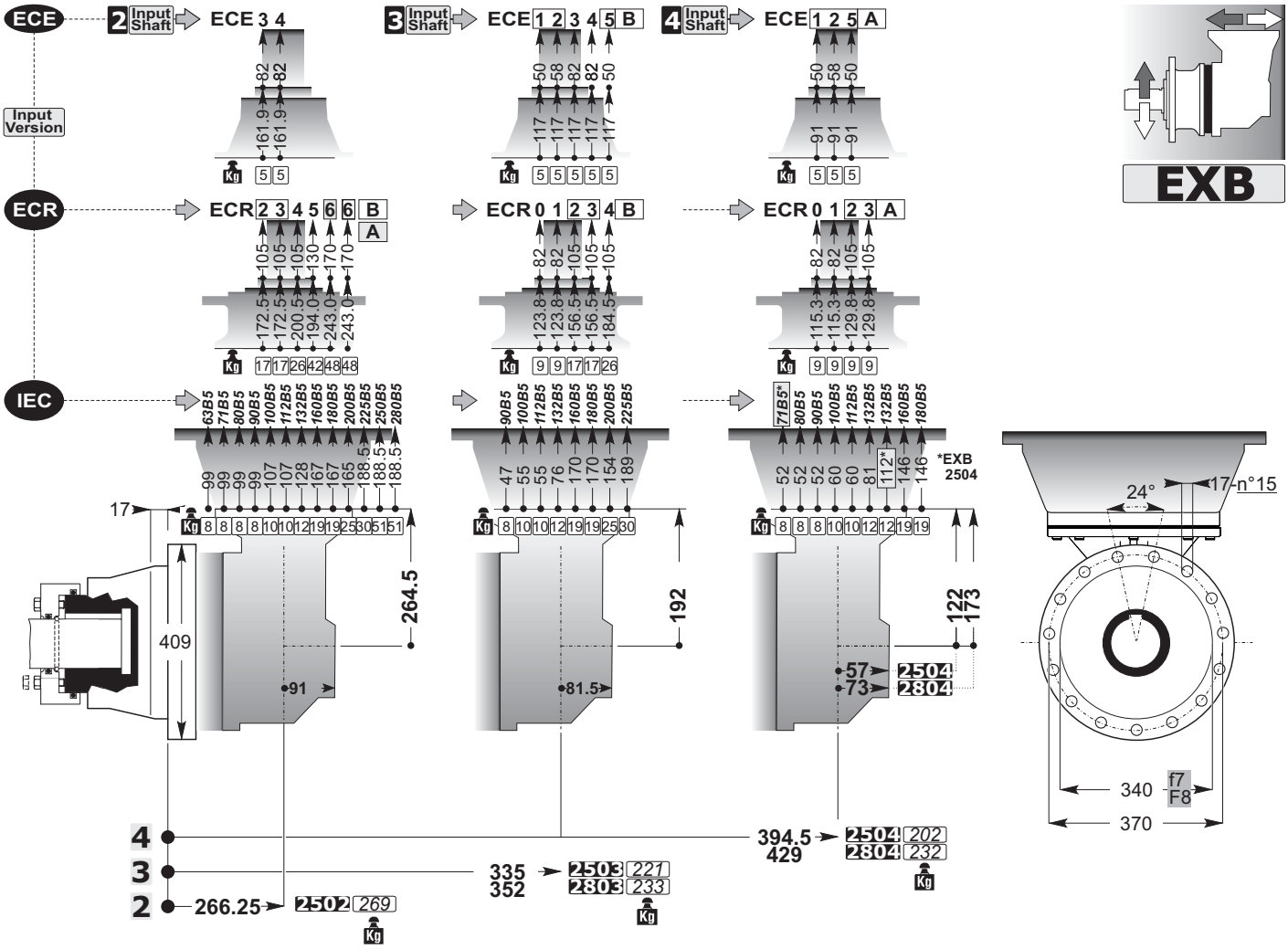

ECE
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
*EXB 2504
17 - n° 15
24°
16
370
23
340
409
264.5
192
122
173
91
81.5
57
73
2504
2804
22
f7
F8
4
3
2
390.5
425
2504 187
2804 217
331
348
2503 206
2803 218
262.25
2502 254

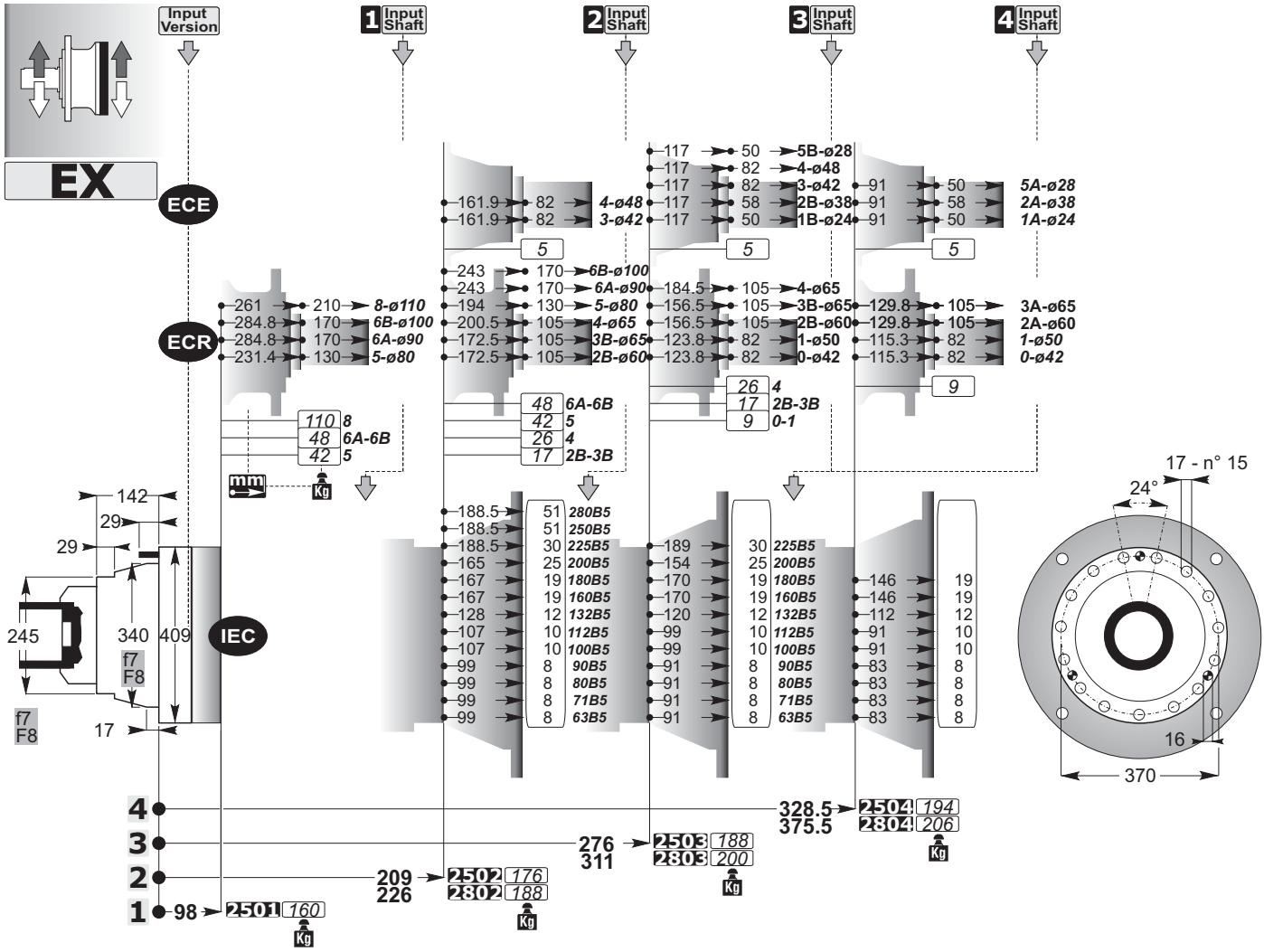

SD
17.2 Kg
B 100x94
DIN5482
300
SD
Accessories

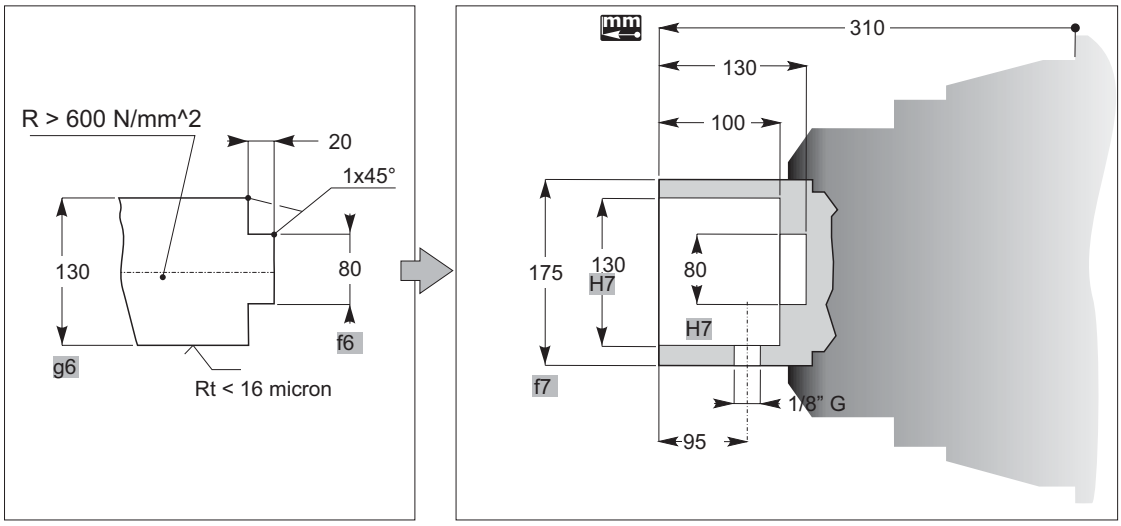




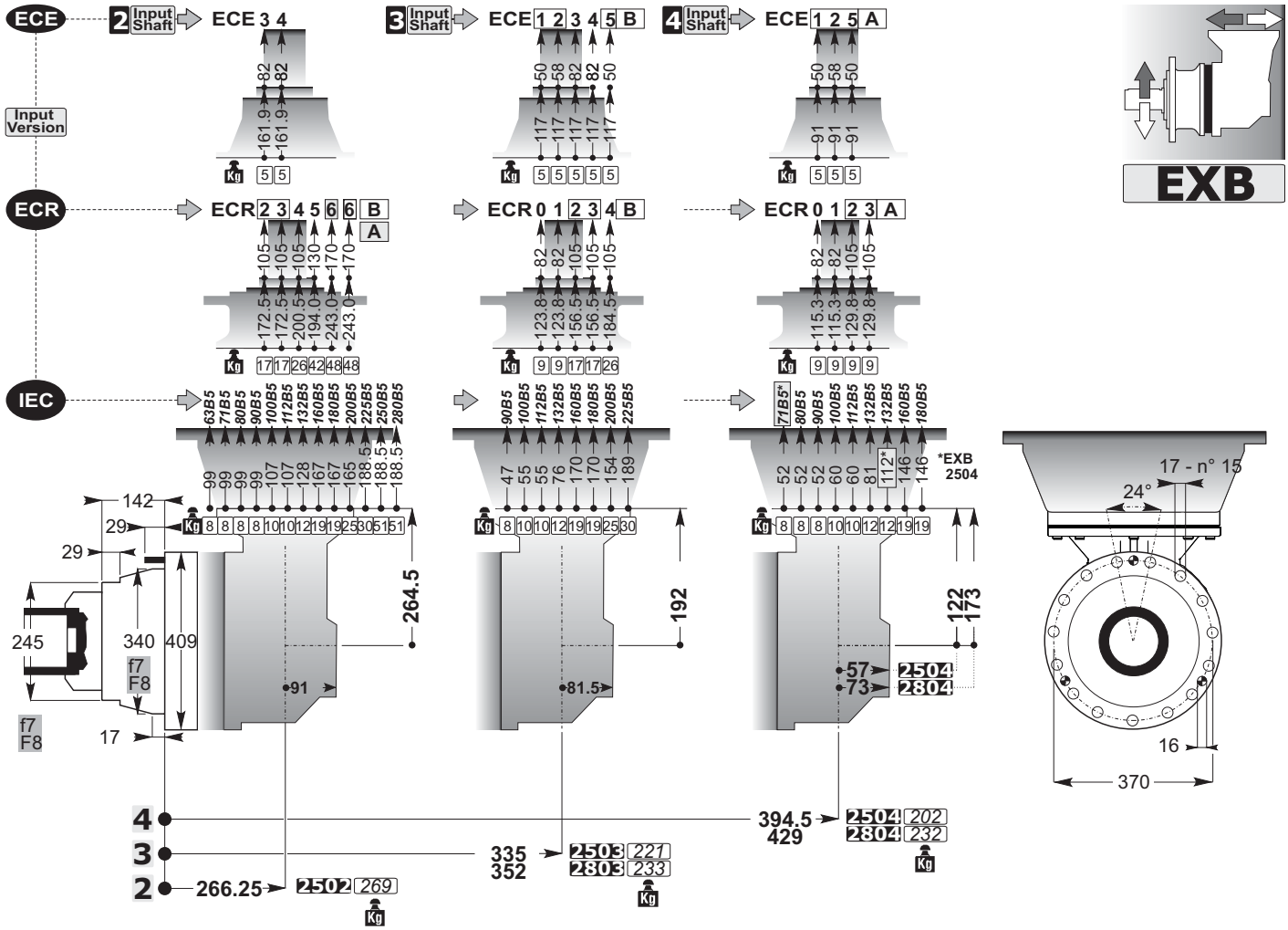
Output Shafts

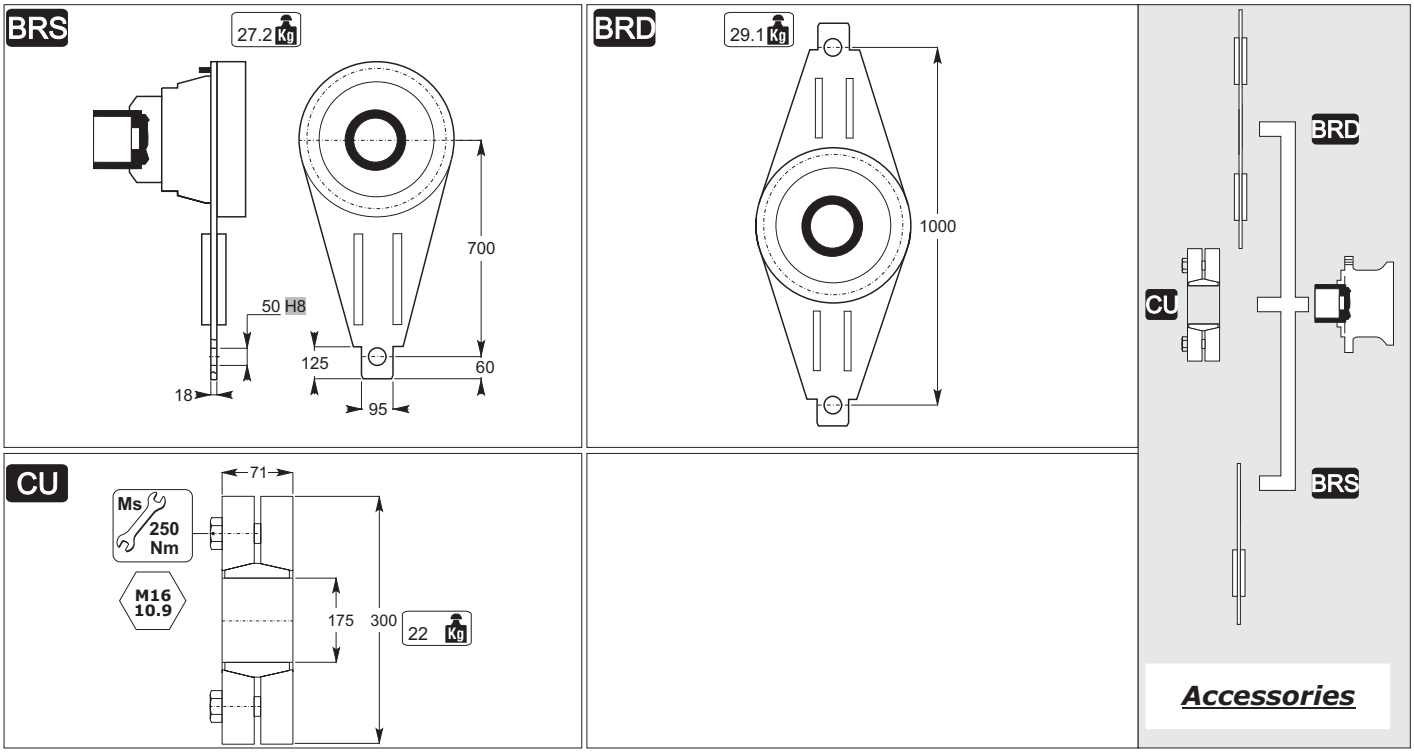

ECE
Input Version
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
EXB
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
71B5* 80B5 90B5 100B5 112B5 132B5 160B5 180B5
*EXB 2504
17
409
264.5
192
122
173
91
81.5
57
73
2504
2804
24°
17-n°15
340 f7 F8
370
4
3
2
394.5
429
2504 202
2804 232
335
352
2503 221
2803 233
266.25
2502 269
Kg

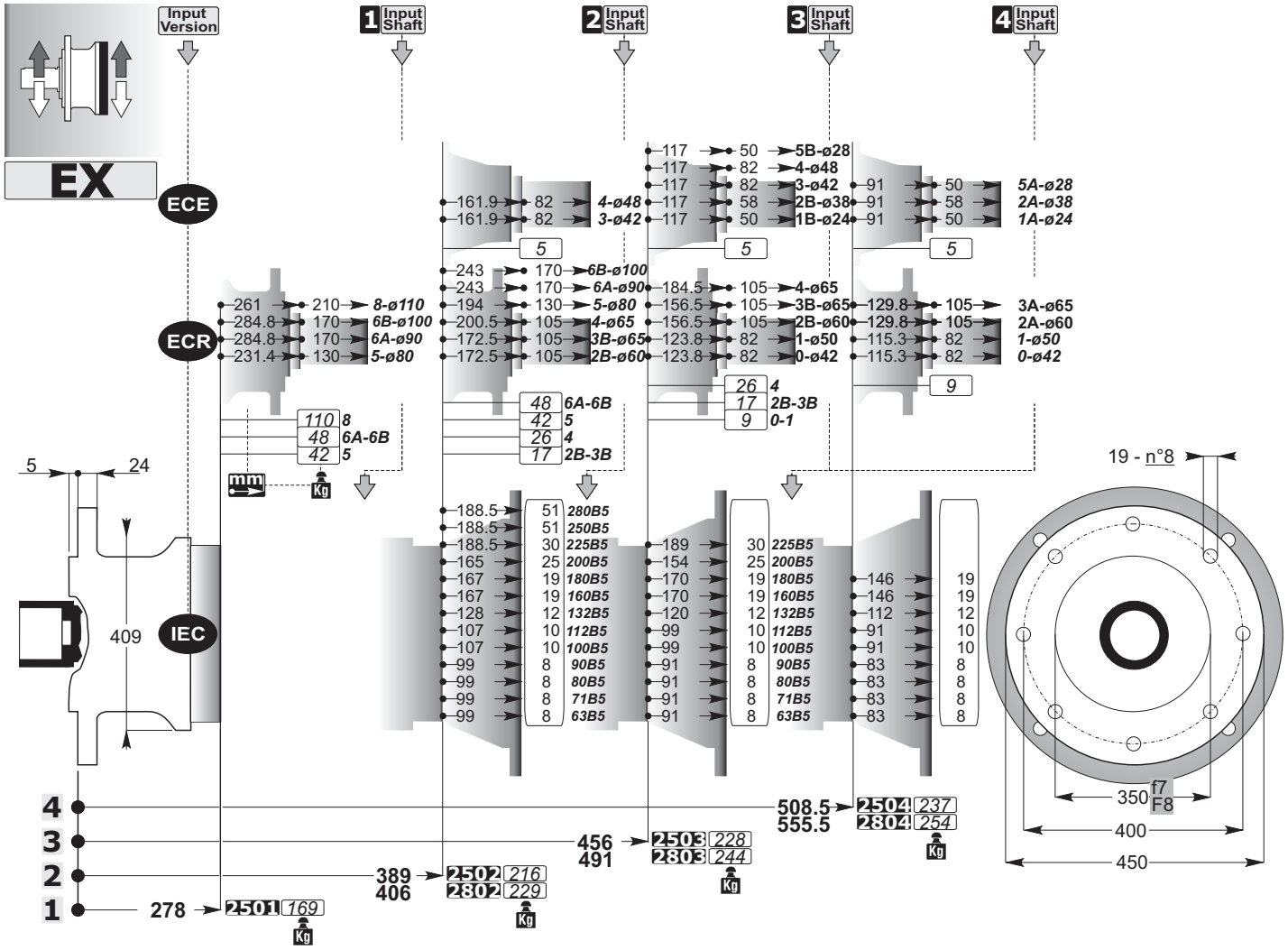


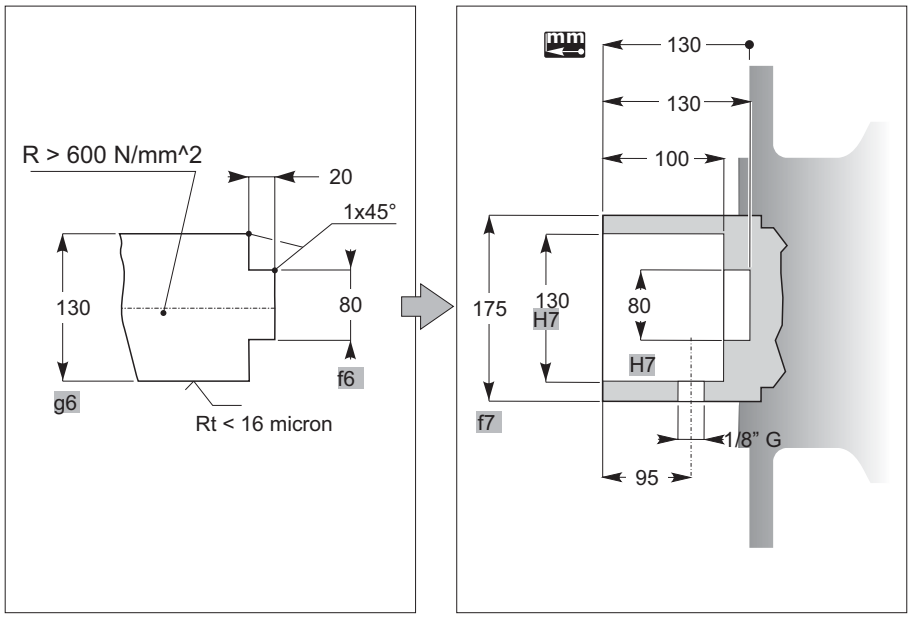


Output Shafts

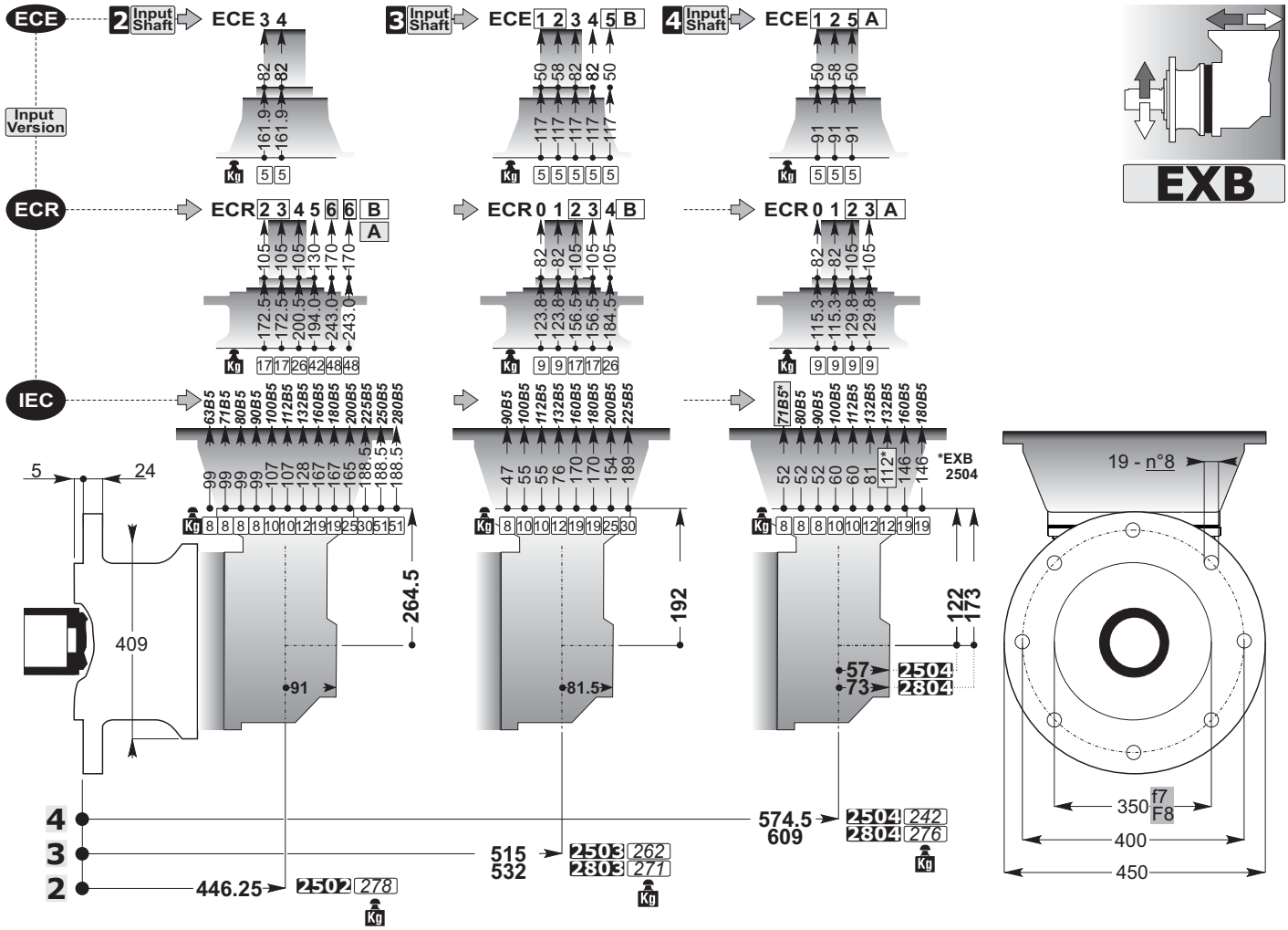

ECE
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
*EXB 2504
17 - n° 15
24°
16
370
142
29
245
340
409
f7 F8
17
264.5
192
122
173
91
81.5
57
73
2504
2804
4
3
2
394.5
429
2504 202
2804 232
335
352
2503 221
2803 233
266.25
2502 269


BRS
27.2 Kg
700
50 H8
125
60
18
95
BRD
29.1 Kg
1000
CU
Ms
250 Nm
M16 10.9
71
175
300
22 Kg
BRD
CU
BRS
Accessories



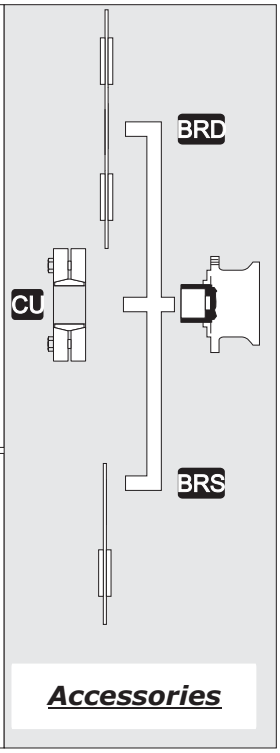


Output Shafts

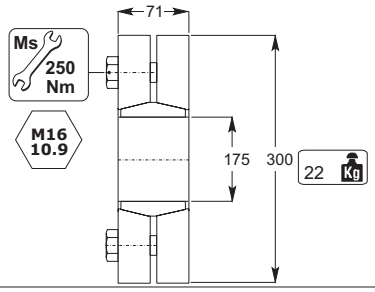


BRS

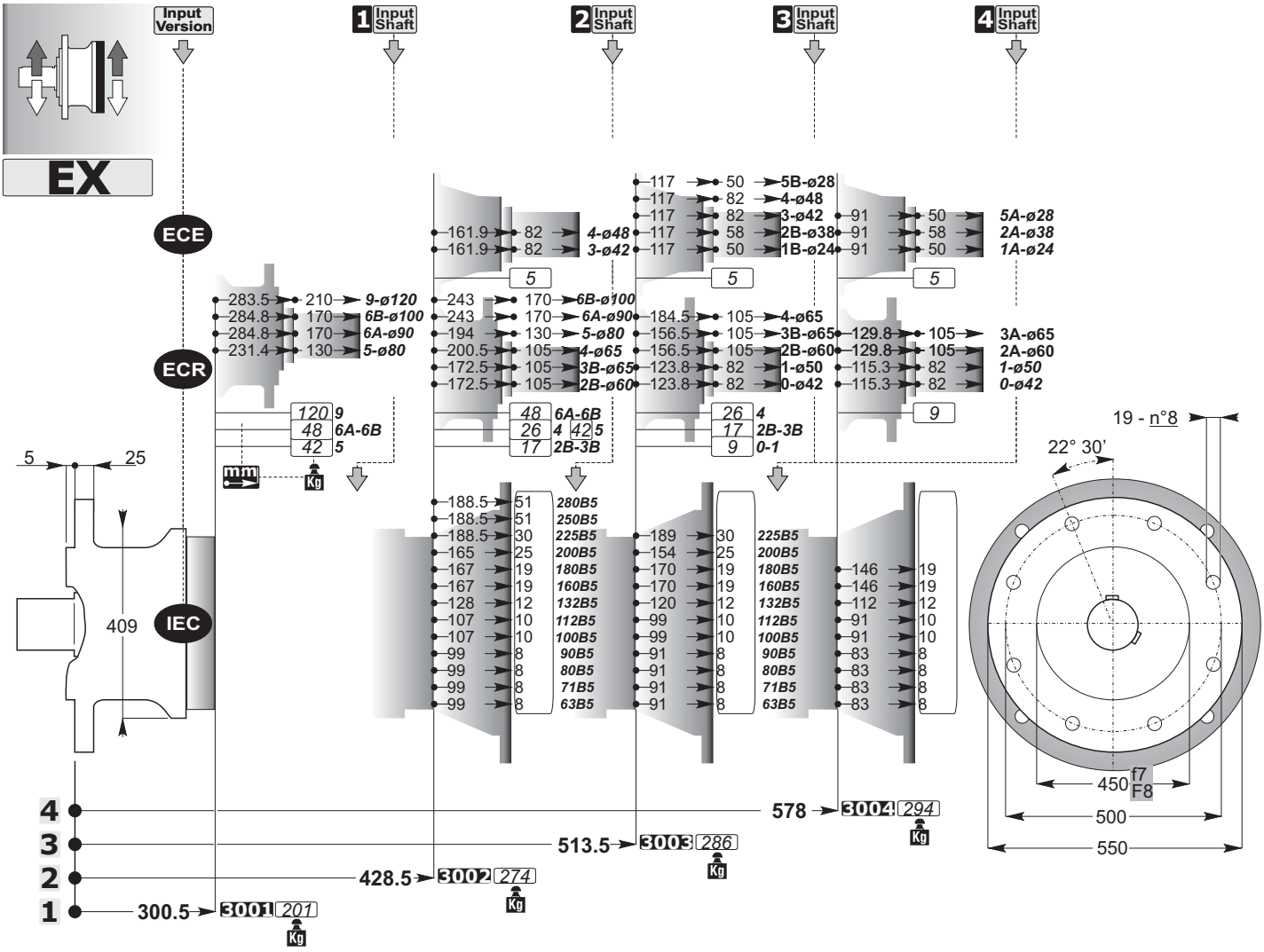
BRD

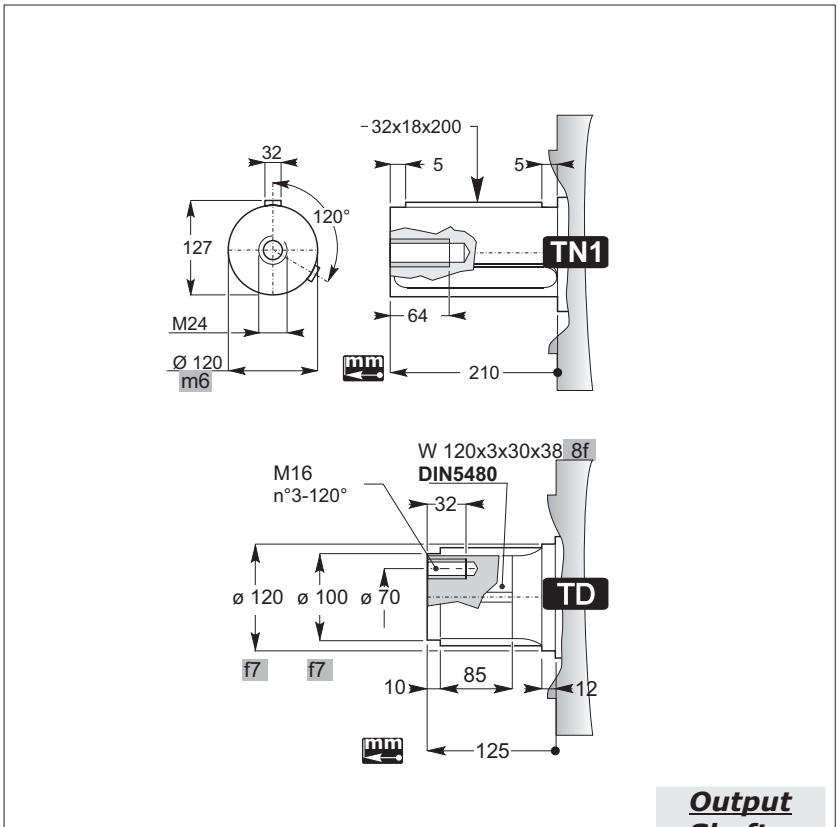


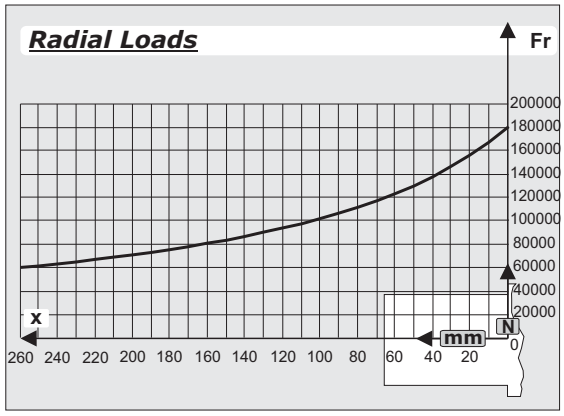
CU

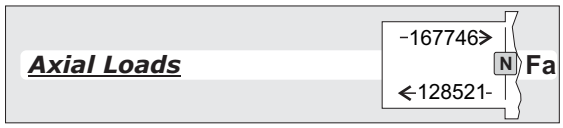


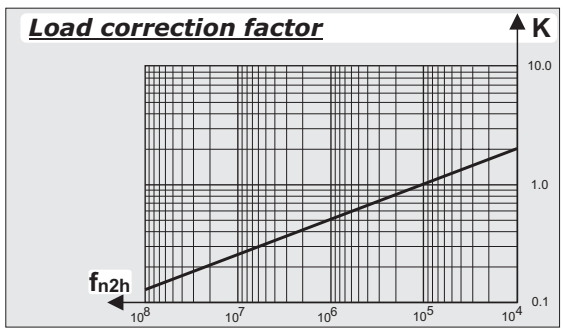
Accessories

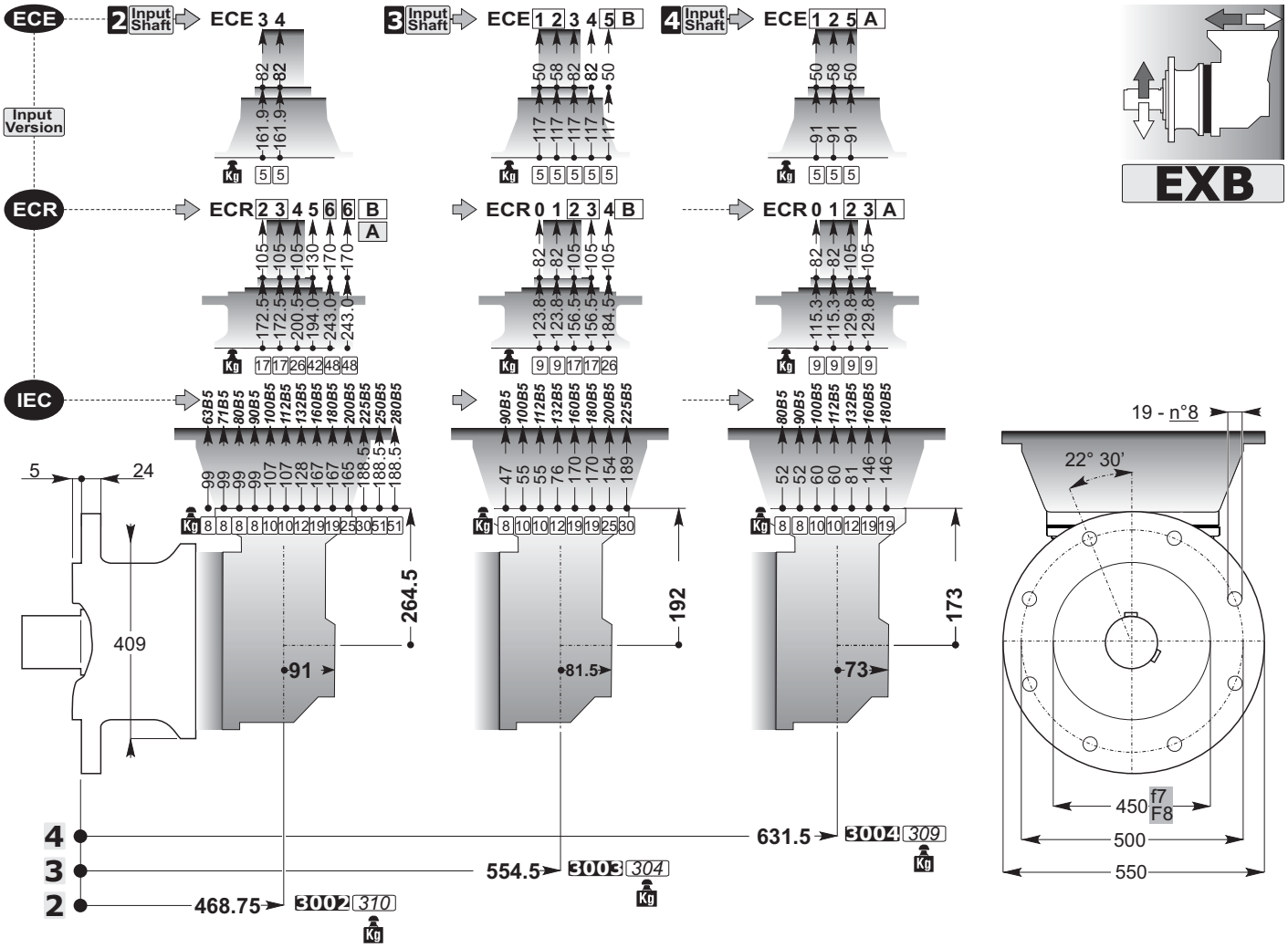

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
409
5
25
19 - n°8
22° 30'
450 f7 F8
500
550
4
3
2
1
578 3004 294 Kg
513.5 3003 286 Kg
428.5 3002 274 Kg
300.5 3001 201 Kg

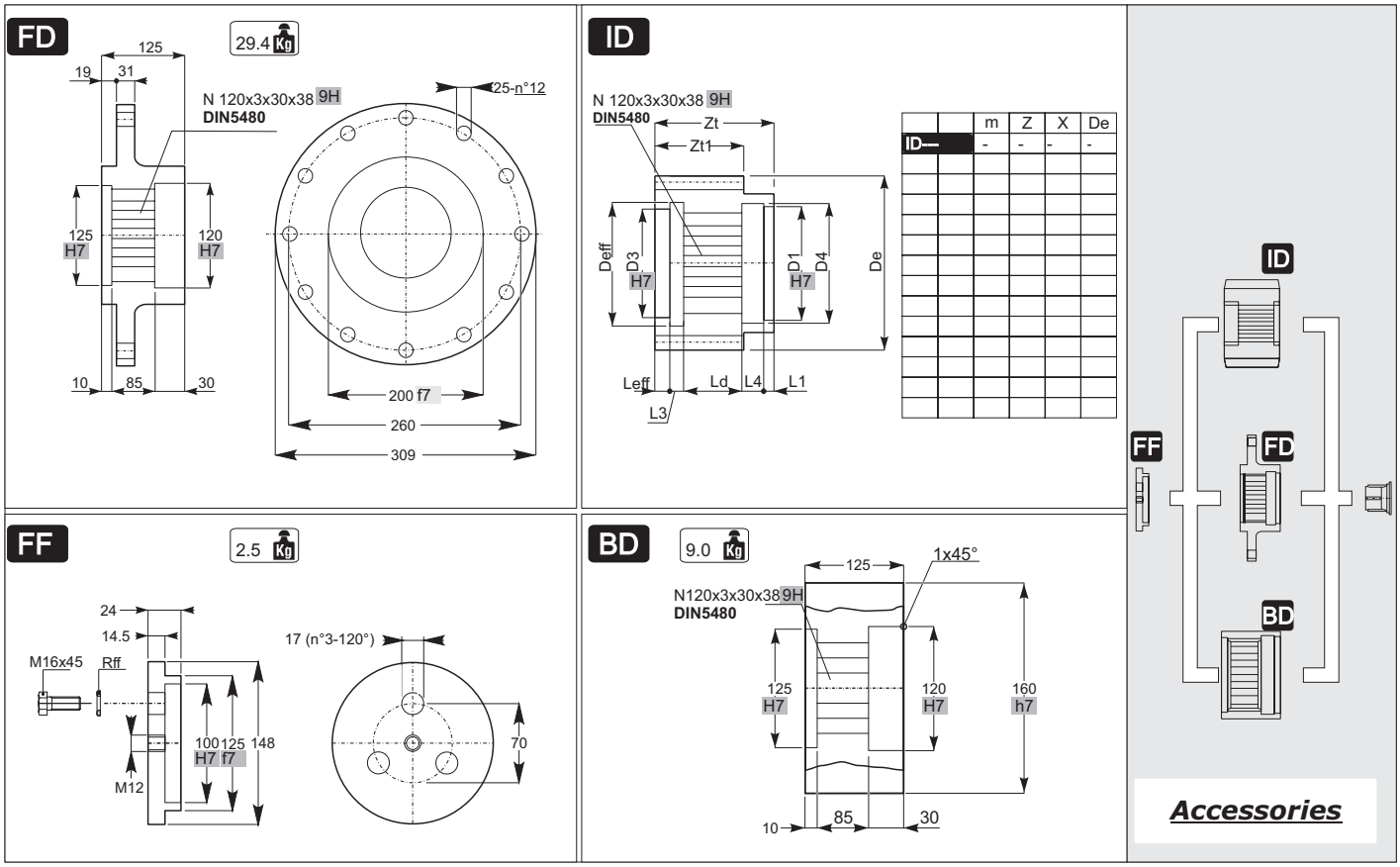

32
120°
127
M24
Ø 120
m6
32x18x200
5
5
TN1
64
210
mm
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 120 ø 100 ø 70
f7 f7
TD
10
85
12
125
Output Shafts


Radial Loads
Fr
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
N
x
260 240 220 200 180 160 140 120 100 80 60 40 20
mm

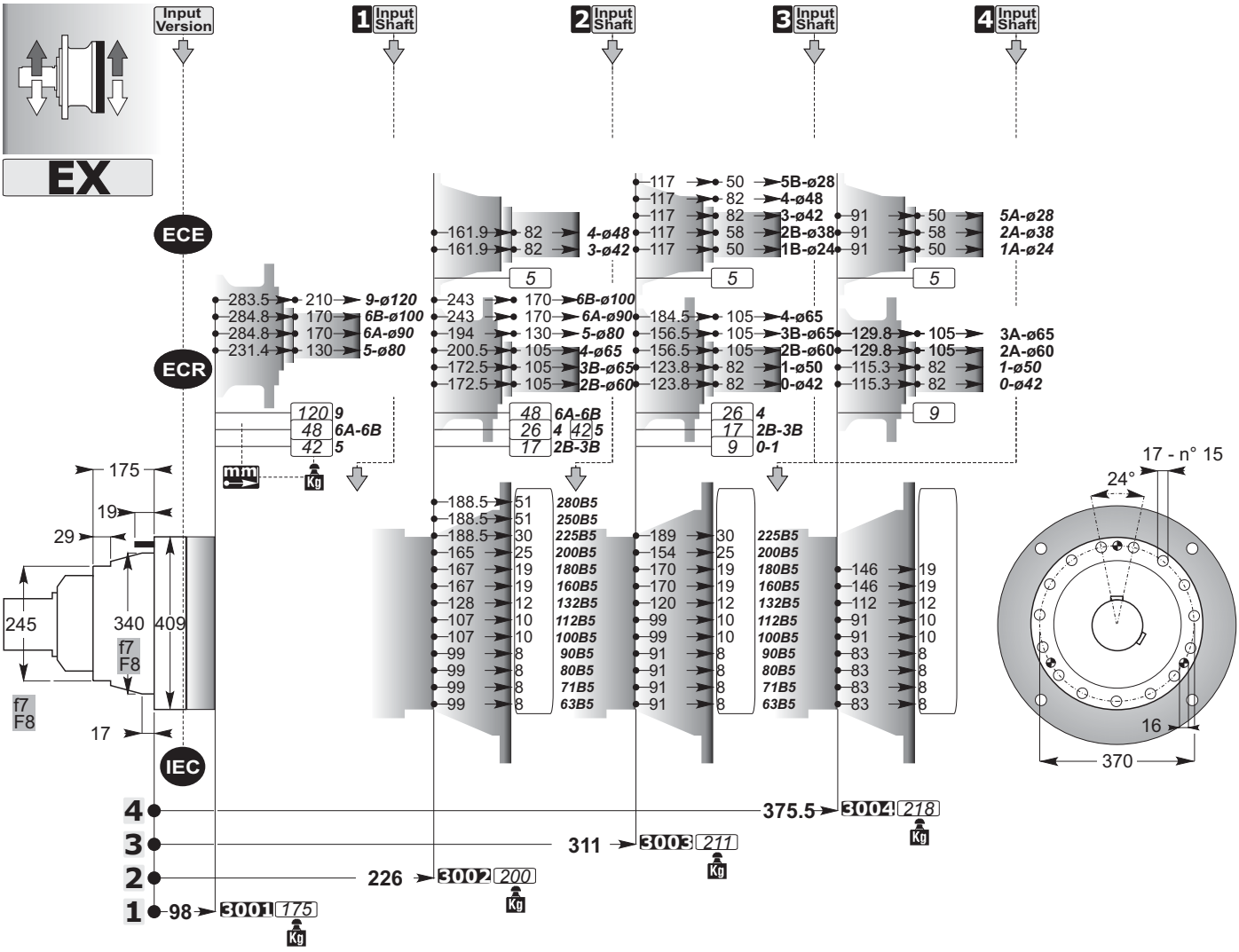

Axial Loads
167746
N
Fa
128521

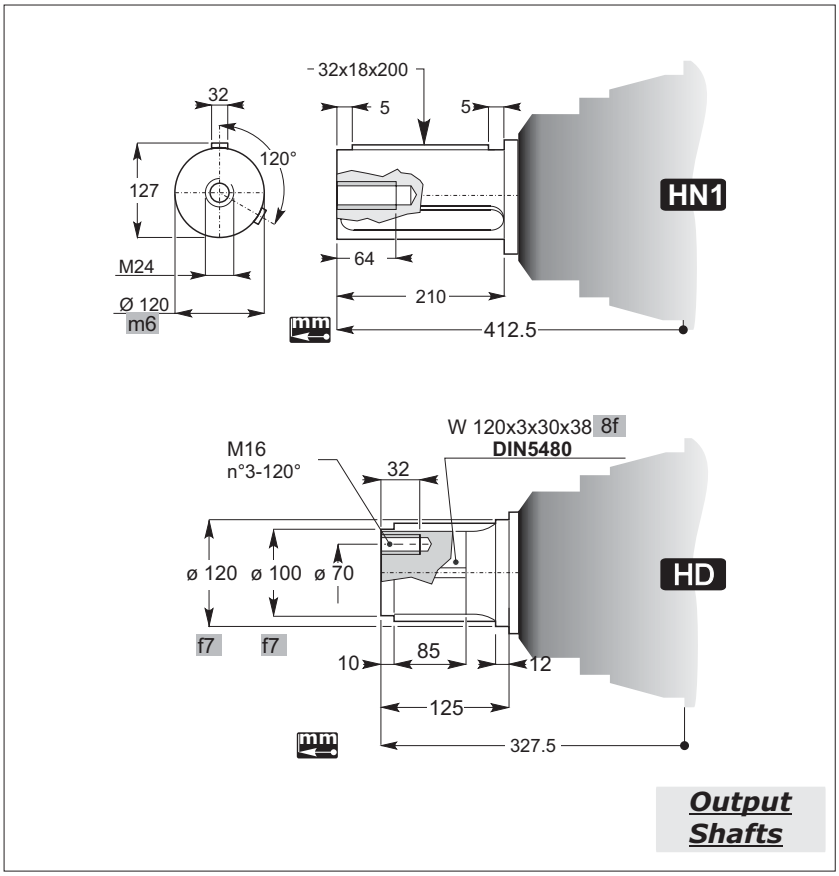

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4

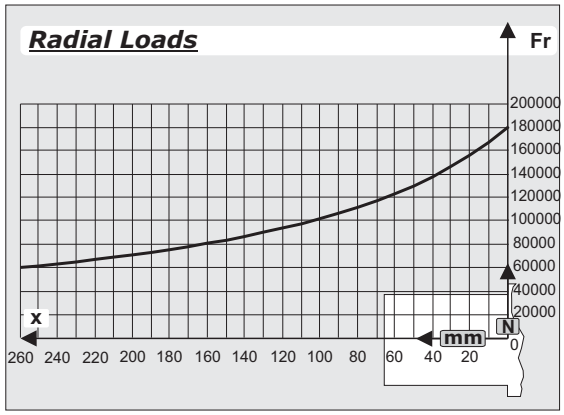

ECE
Input Version
2 Input Shaft ECE 3 4
3 Input Shaft ECE 1 2 3 4 5 B
4 Input Shaft ECE 1 2 5 A
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
19 - n°8
22° 30'
450 f7 F8
500
550
409
264.5
192
173
91
81.5
73
631.5
554.5
468.75
3004 309
3003 304
3002 310

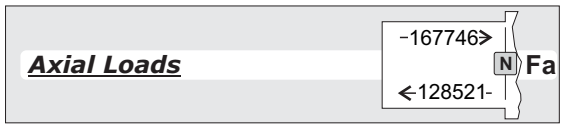

FD
29.4 Kg
N 120x3x30x38 9H
DIN5480
25-n°12
200 f7
260
309
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
FF
2.5 Kg
M16x45
Rff
M12
17 (n°3-120°)
70
BD
9.0 Kg
1x45°
N120x3x30x38 9H
DIN5480
160 h7
Accessories

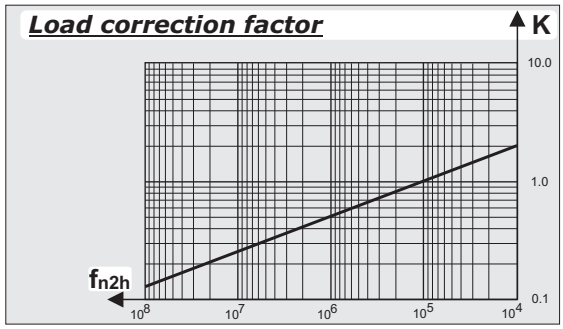
	m	Z	X	De
ID—	-	-	-	-

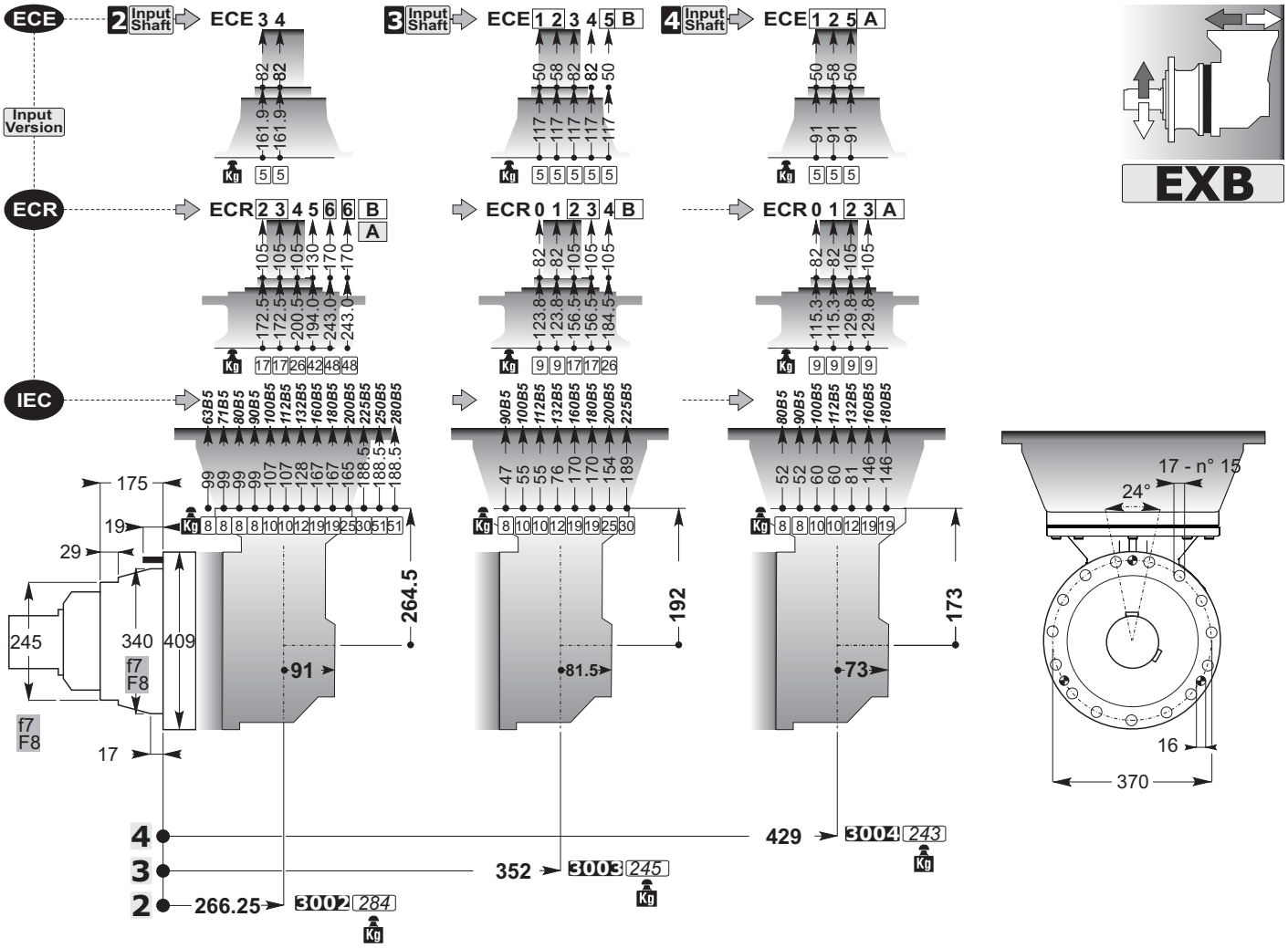

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
175
19
29
245
340
409
f7
F8
17
mm
Kg
4
3
2
1
98 3001 175
226 3002 200
311 3003 211
375.5 3004 218
17 - n° 15
24°
16
370

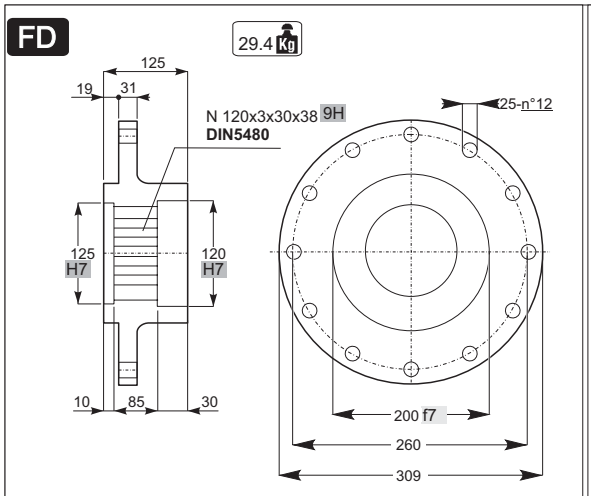

32x18x200
32
5
5
120°
127
M24
Ø 120
m6
64
210
412.5
HN1
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 120
ø 100
ø 70
f7
f7
10
85
12
125
327.5
HD
Output Shafts

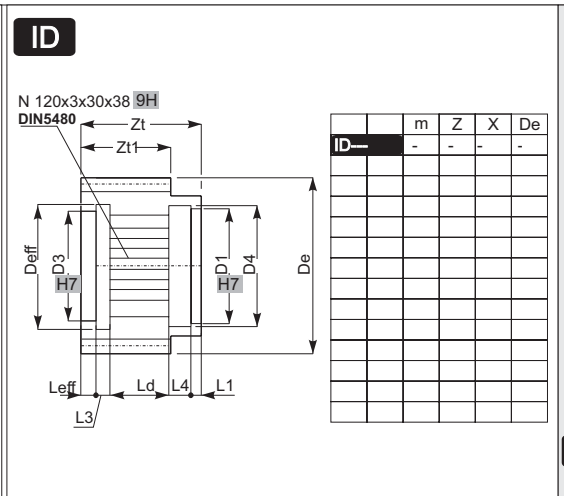

Radial Loads
Fr
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
x
260 240 220 200 180 160 140 120 100 80 60 40 20
mm
N

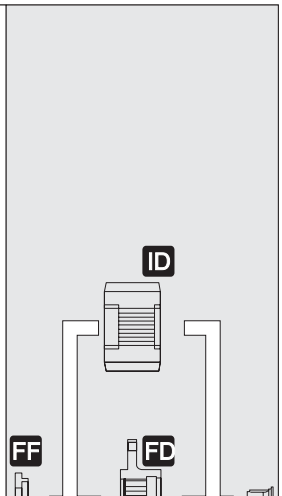

Axial Loads
-167746>
N
Fa
<-128521-

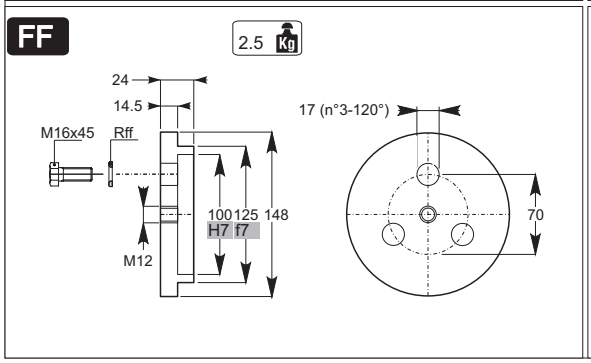

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

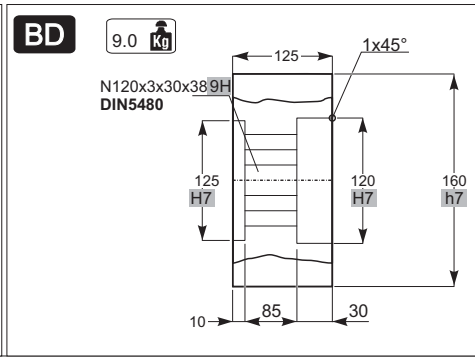

ECE
Input Version
2 Input Shaft ECE 3 4
3 Input Shaft ECE 1 2 3 4 5 B
4 Input Shaft ECE 1 2 5 A
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
175
19
29
245
340
409
f7
F8
17
264.5
192
173
91
81.5
73
17 - n° 15
24°
16
370
4
3
2
429
3004 243
352
3003 245
266.25
3002 284

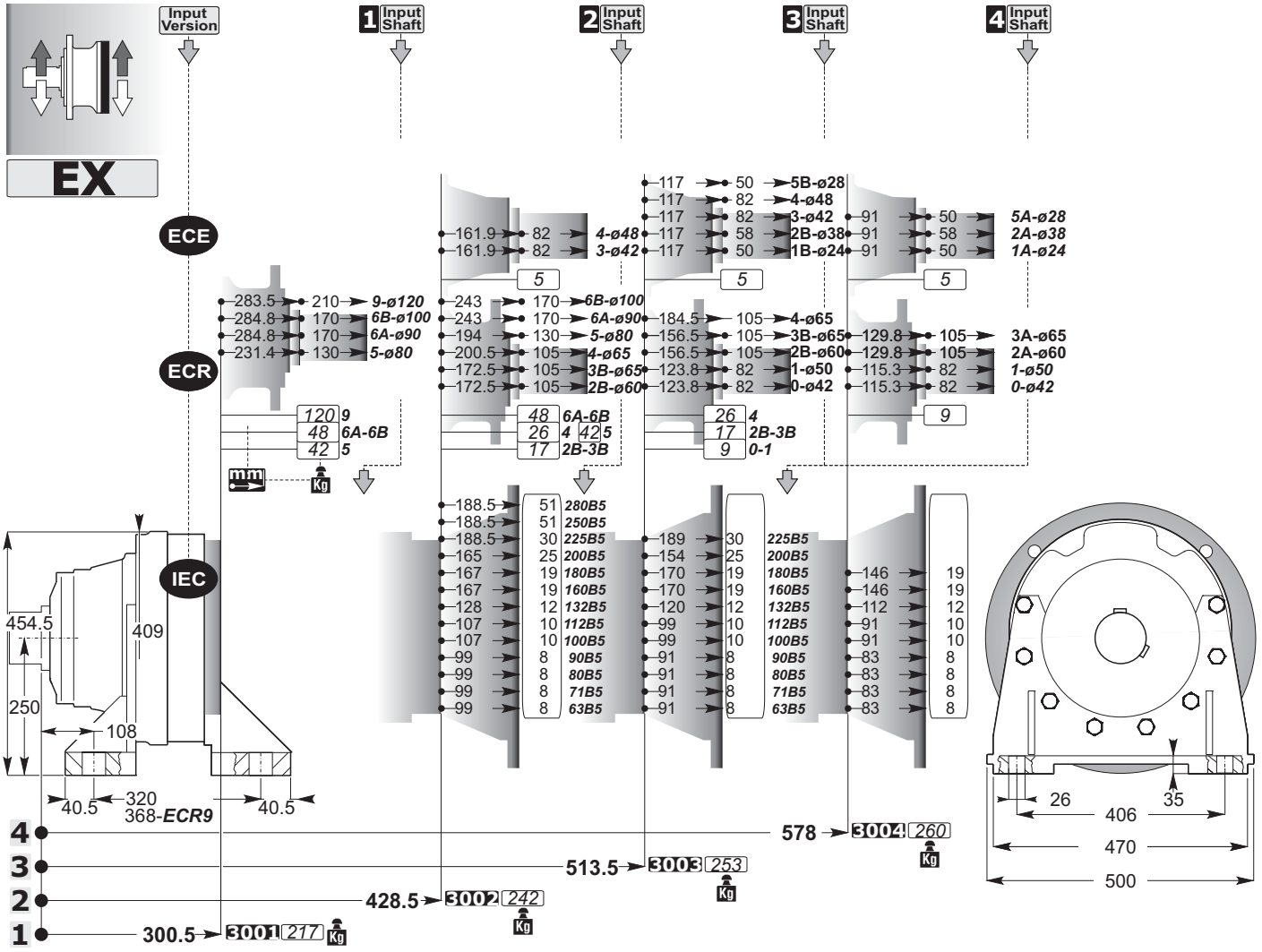

FD
29.4 Kg
125
19
31
N 120x3x30x38 9H
DIN5480
25-n°12
125 H7
120 H7
10
85
30
200 f7
260
309

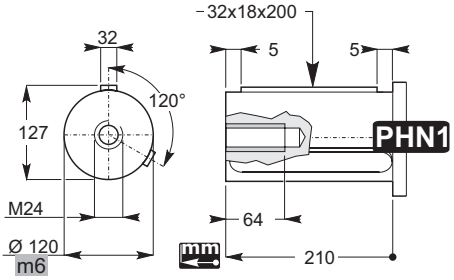

ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—

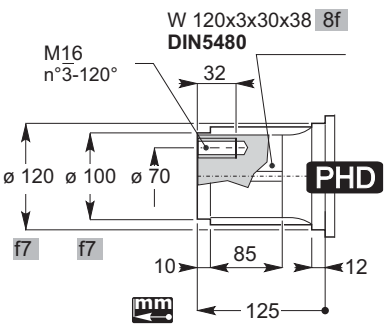

ID
FF
FD
BD
Accessories


FF
2.5 Kg
24
14.5
M16x45
Rff
100 H7
125 f7
148
M12
17 (n°3-120°)
70

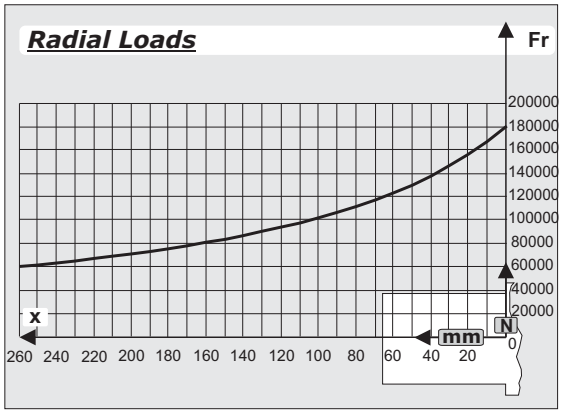

BD
9.0 Kg
125
1x45°
N120x3x30x38 9H
DIN5480
125 H7
120 H7
160 h7
10
85
30

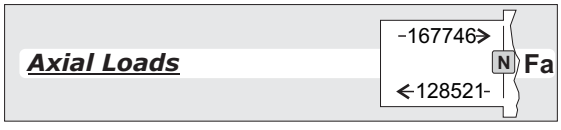


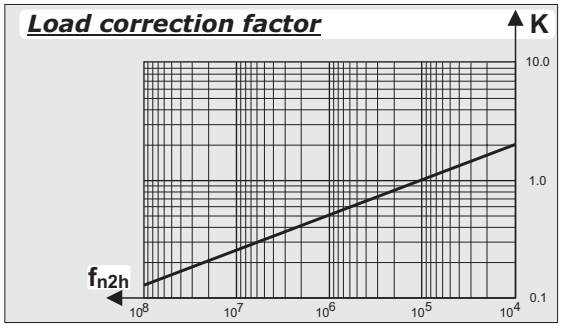


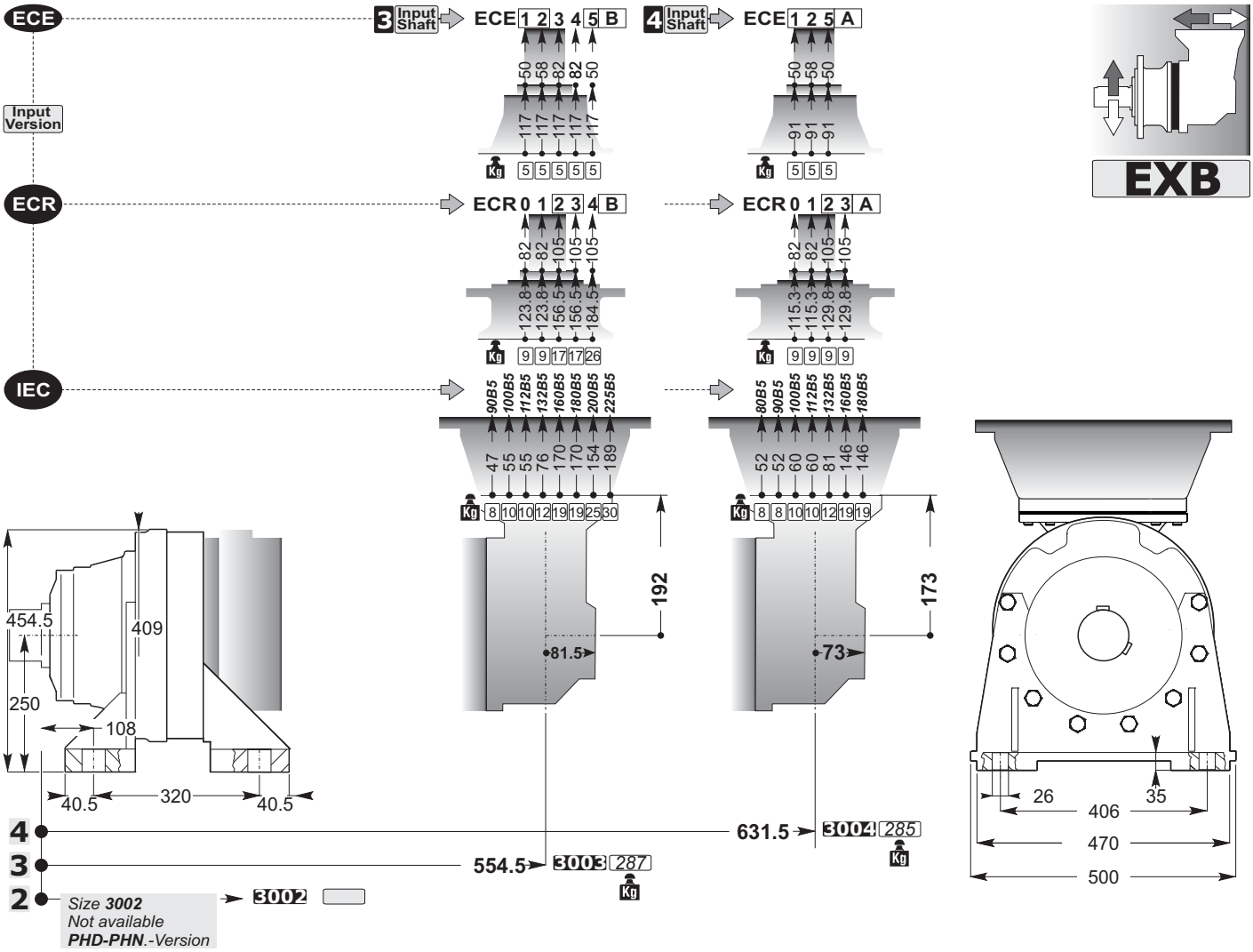


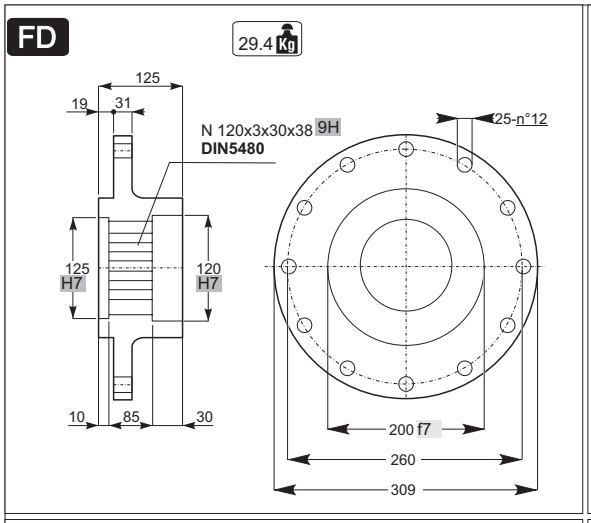
Output Shafts

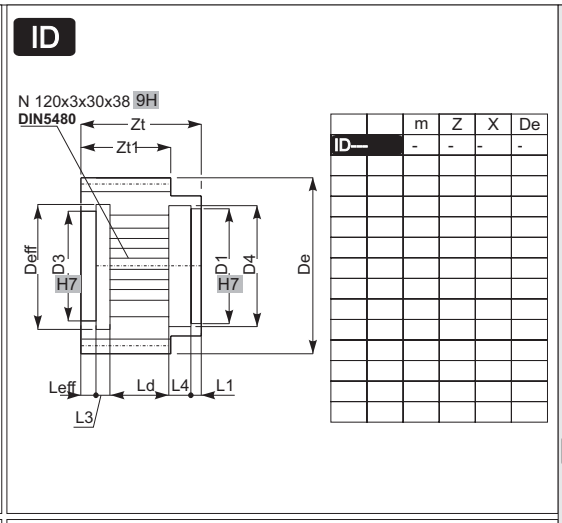


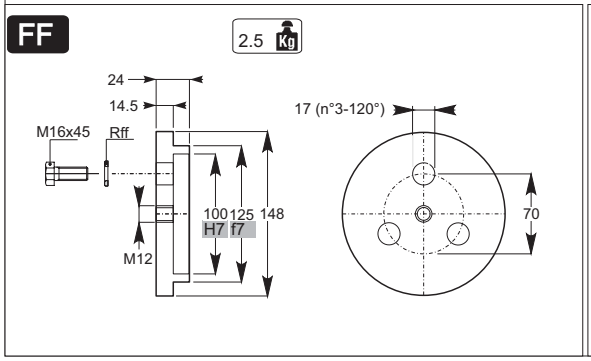


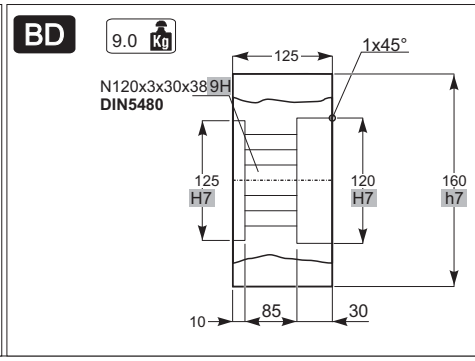


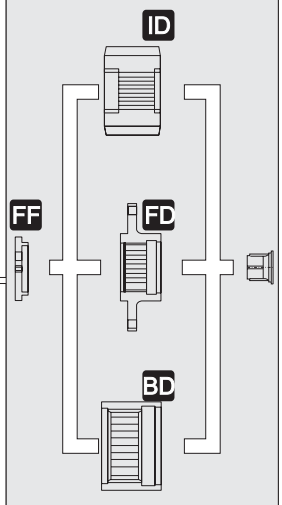






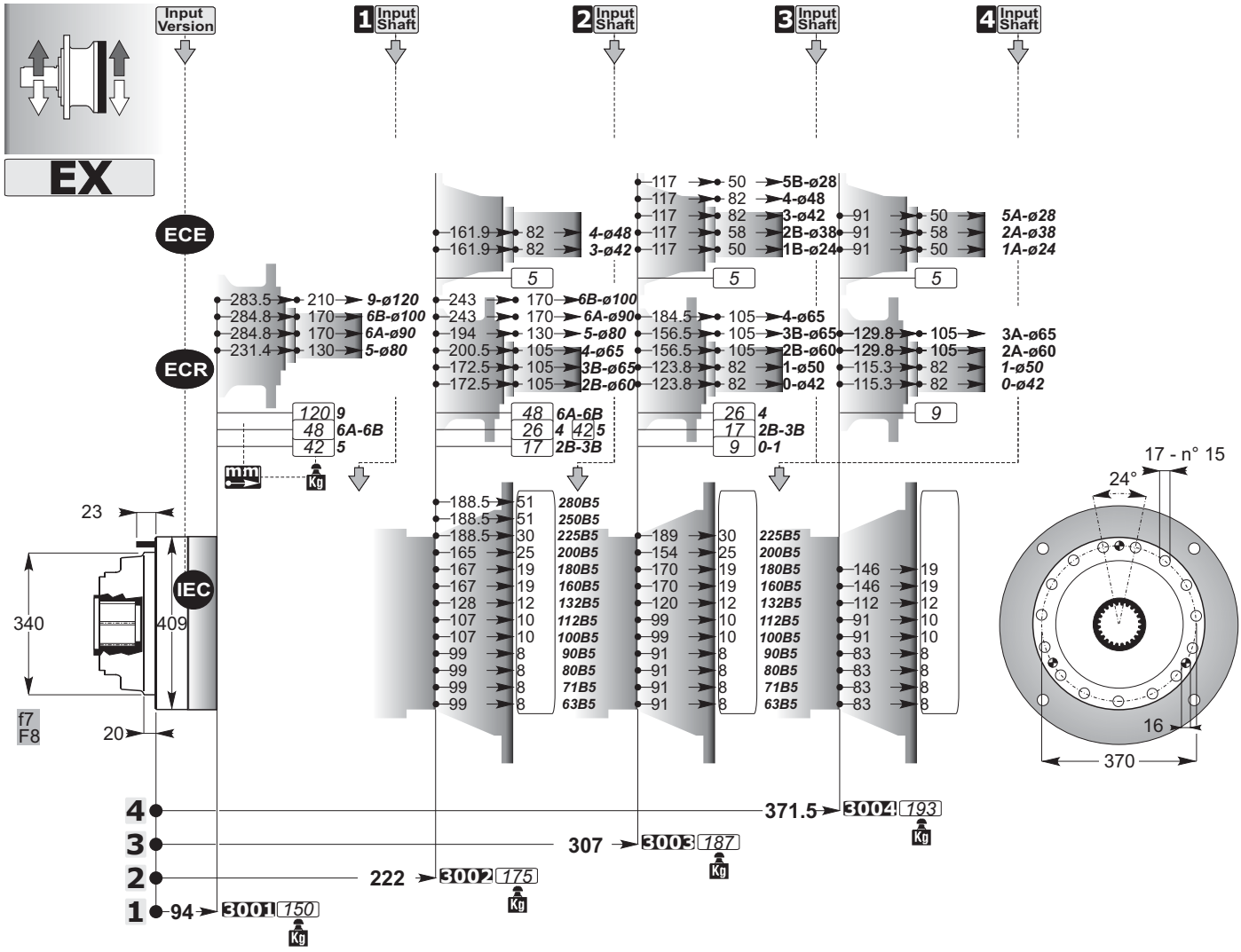


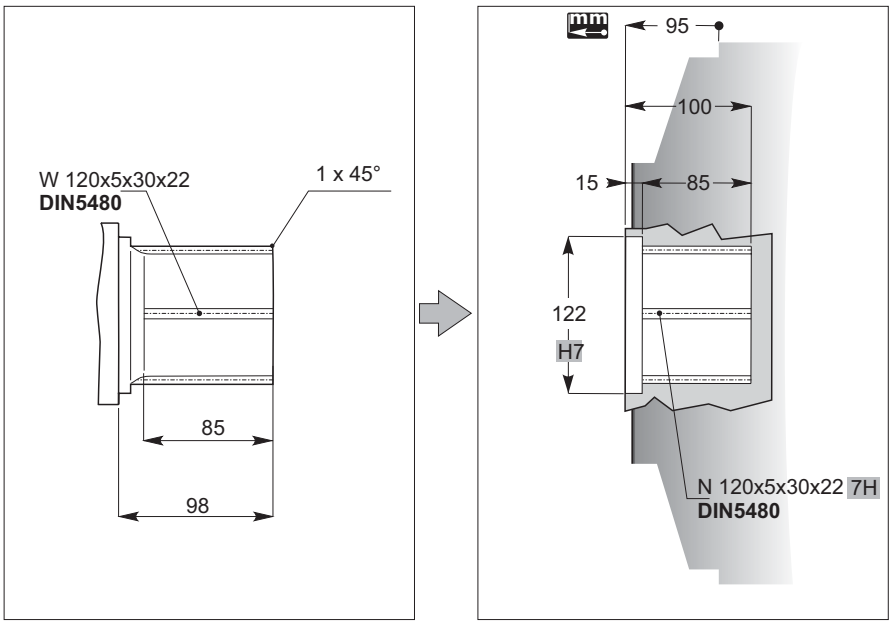




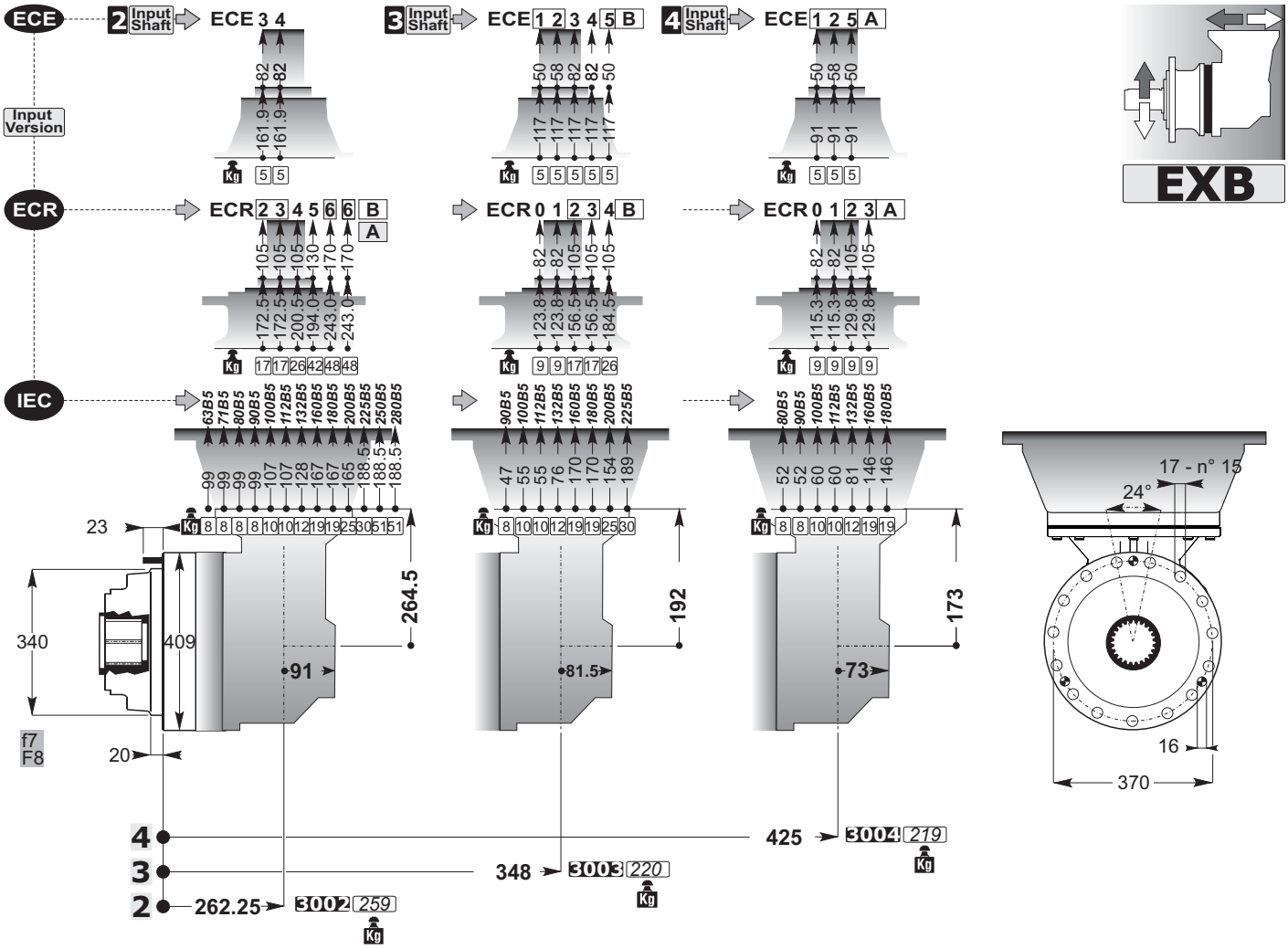
Accessories

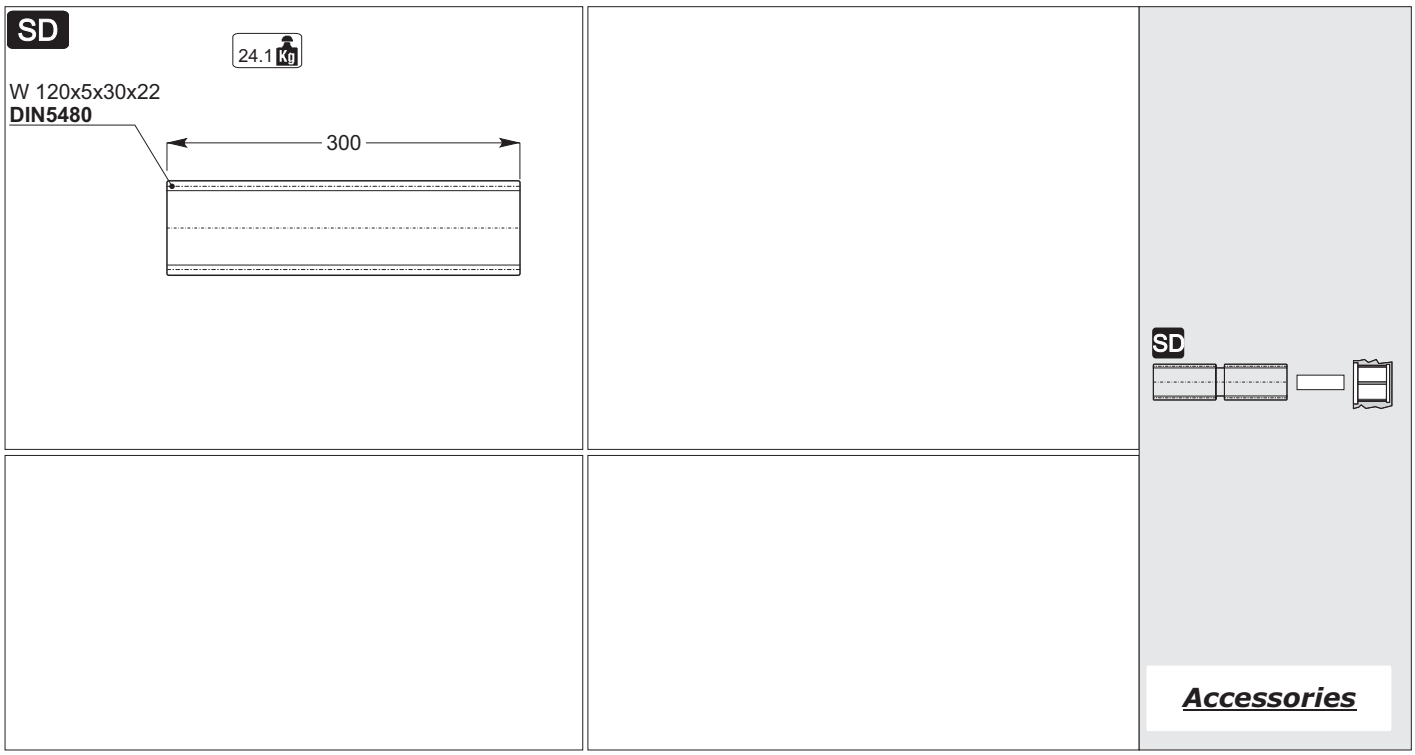
mm
C

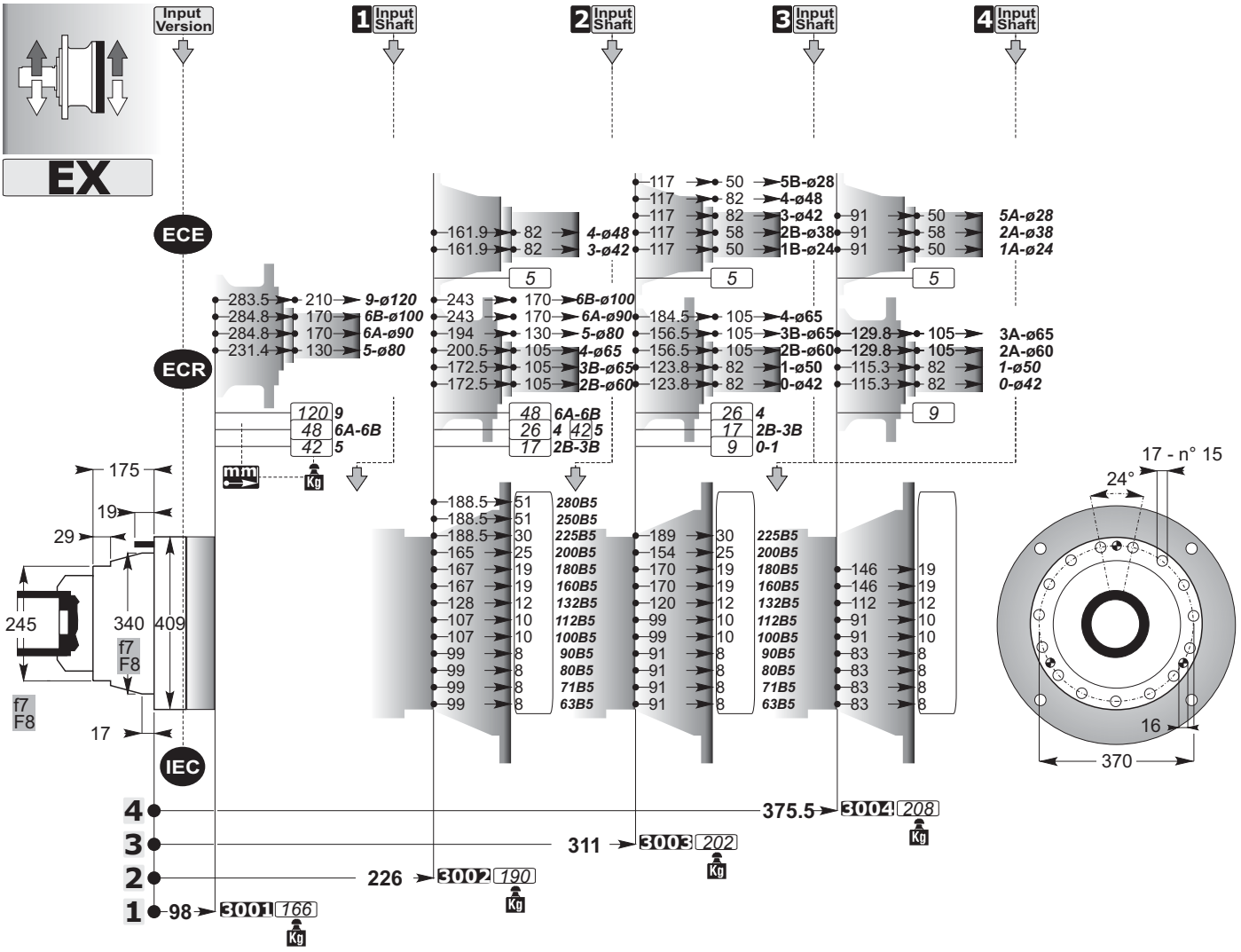


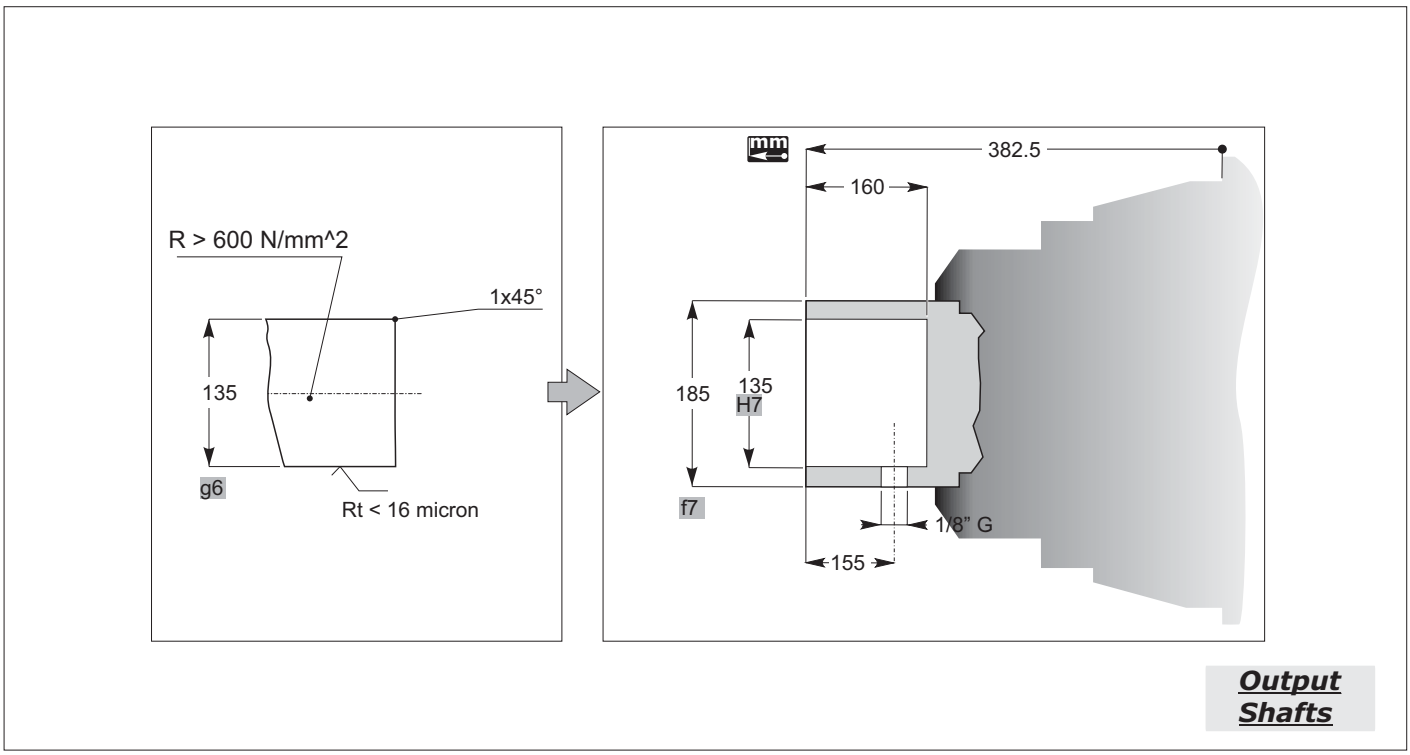


Output Shafts

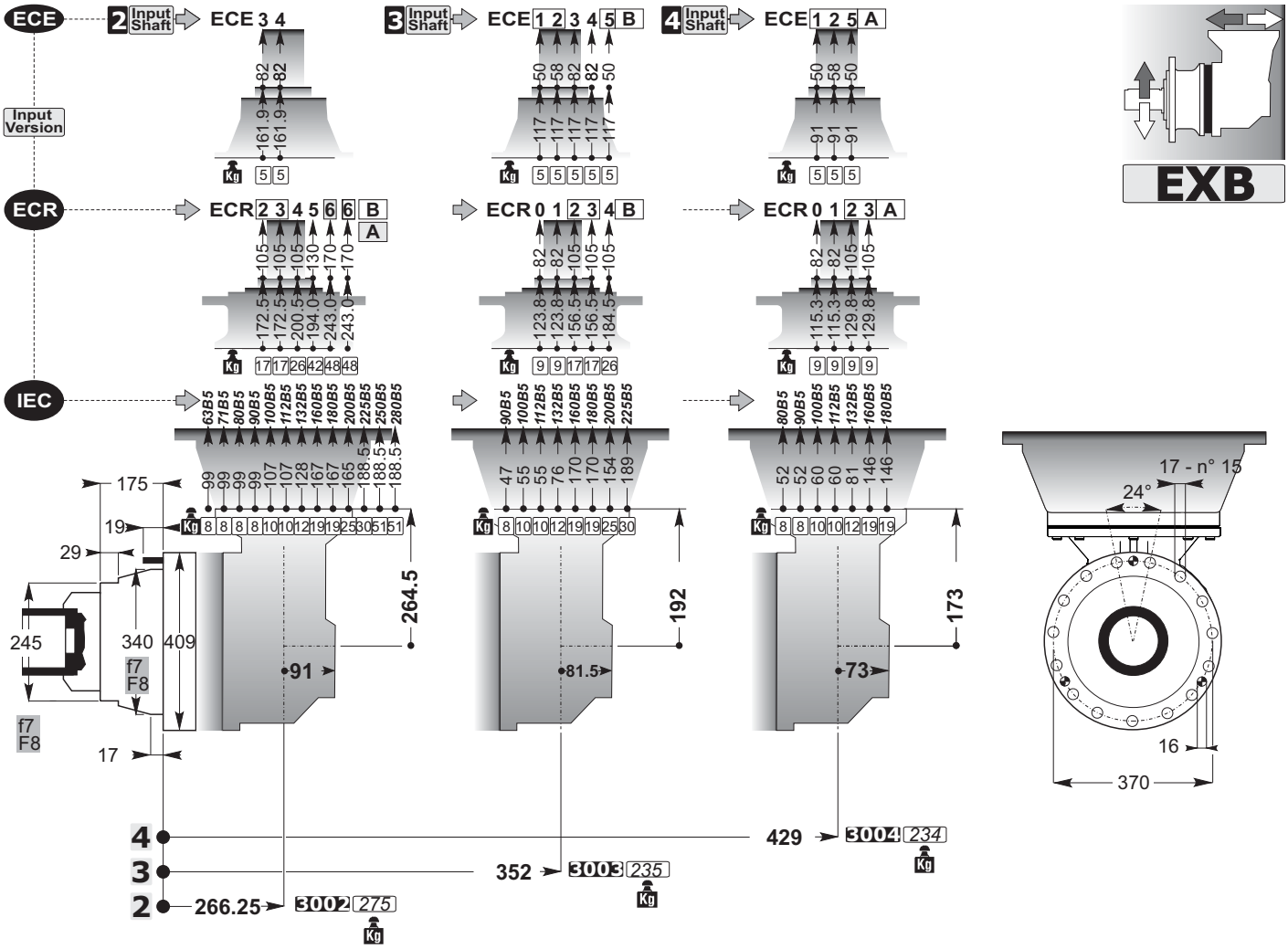

ECE
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
17 - n° 15
24°
16
370
23
340
409
264.5
192
173
91
81.5
73
20
f7
F8
4
3
2
425
348
262.25
3004 219
3003 220
3002 259

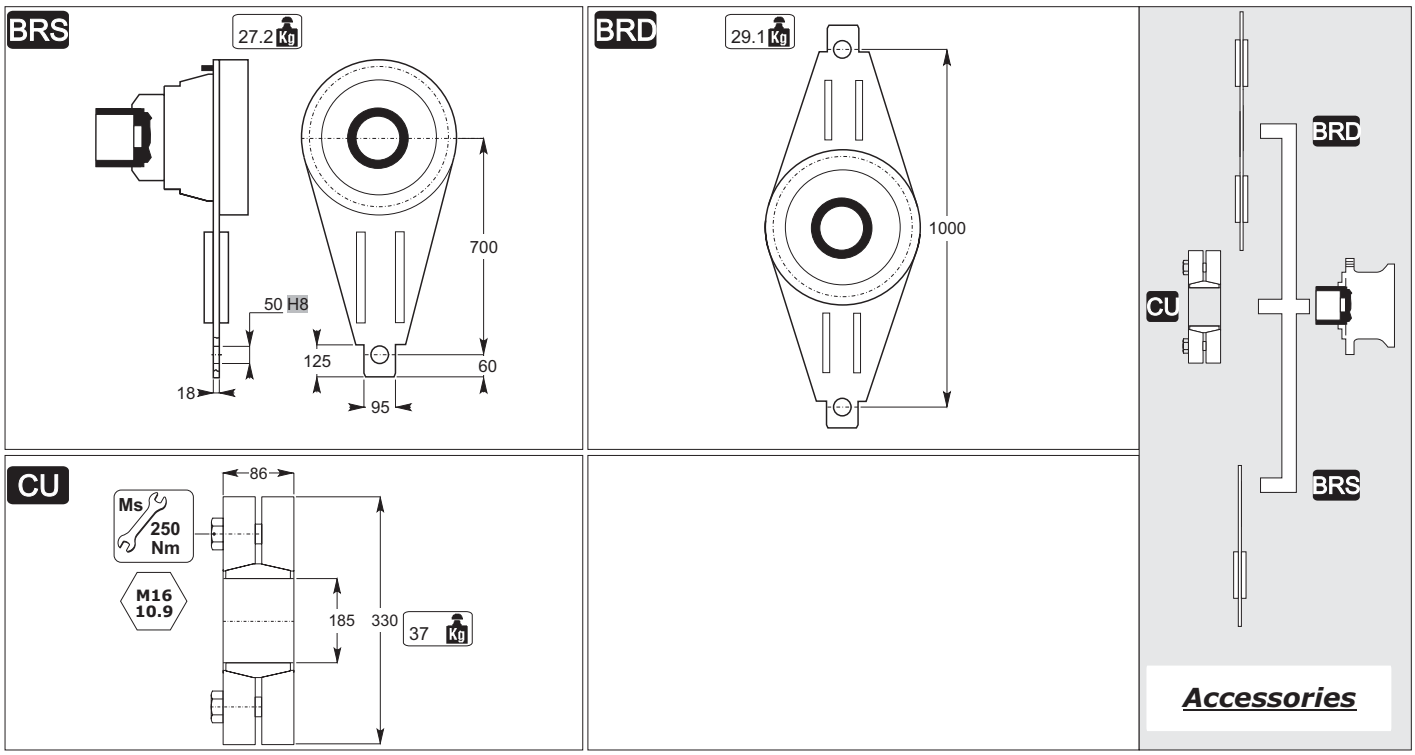

SD
24.1
W 120x5x30x22
DIN5480
300
SD
Accessories

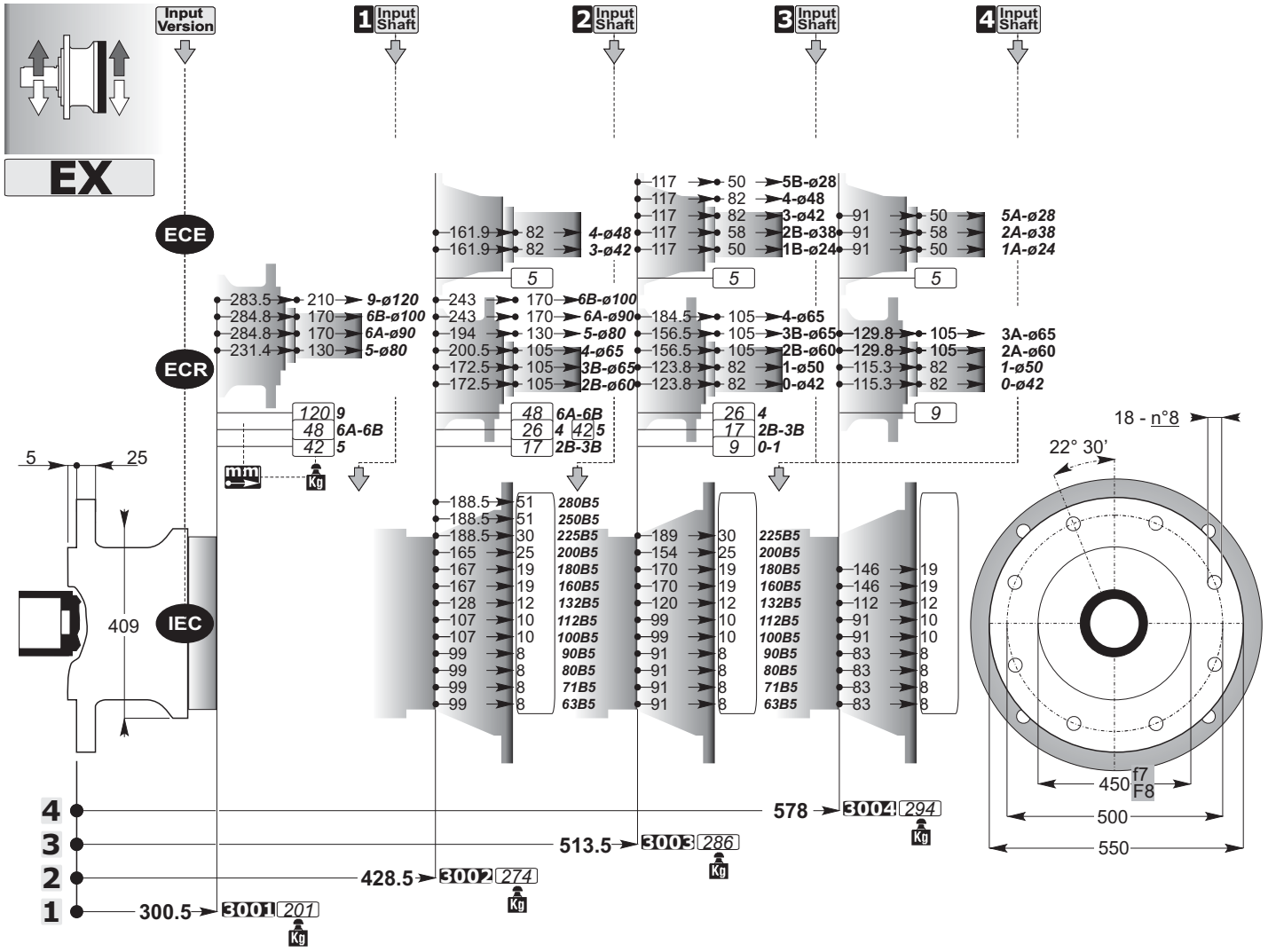


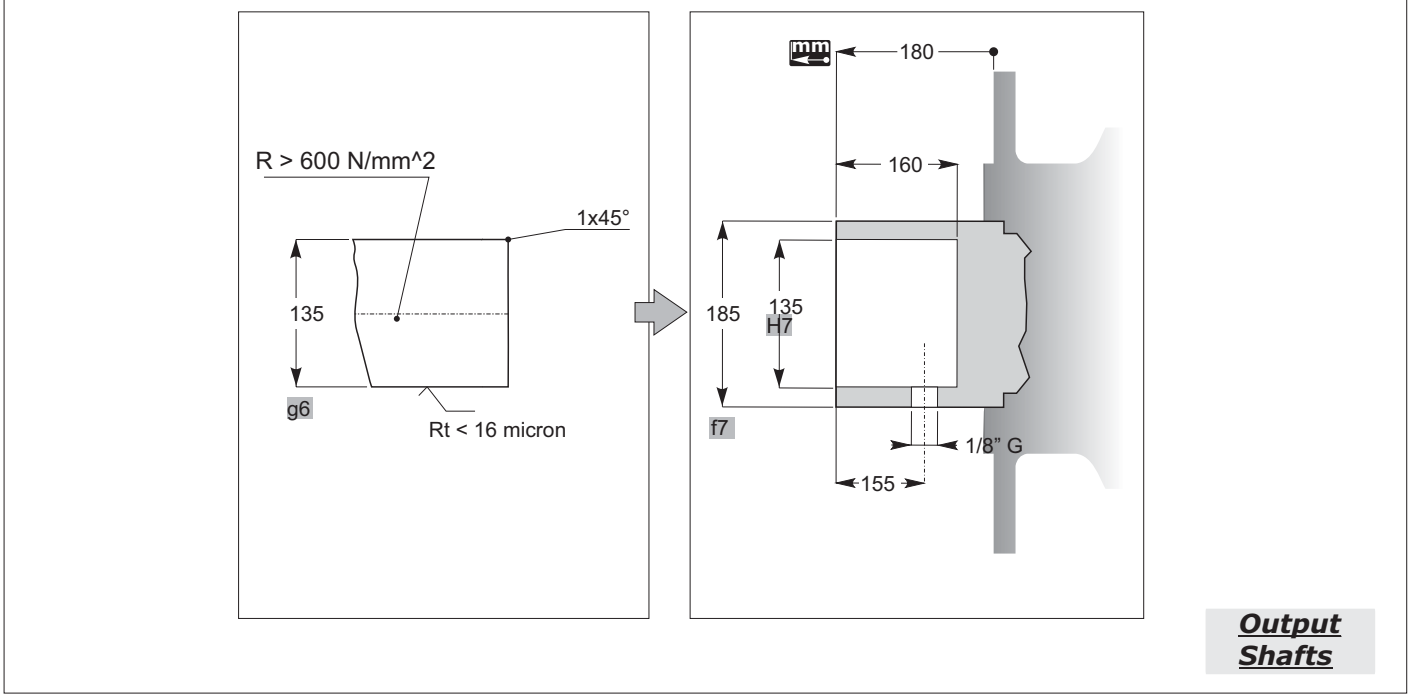


Output Shafts

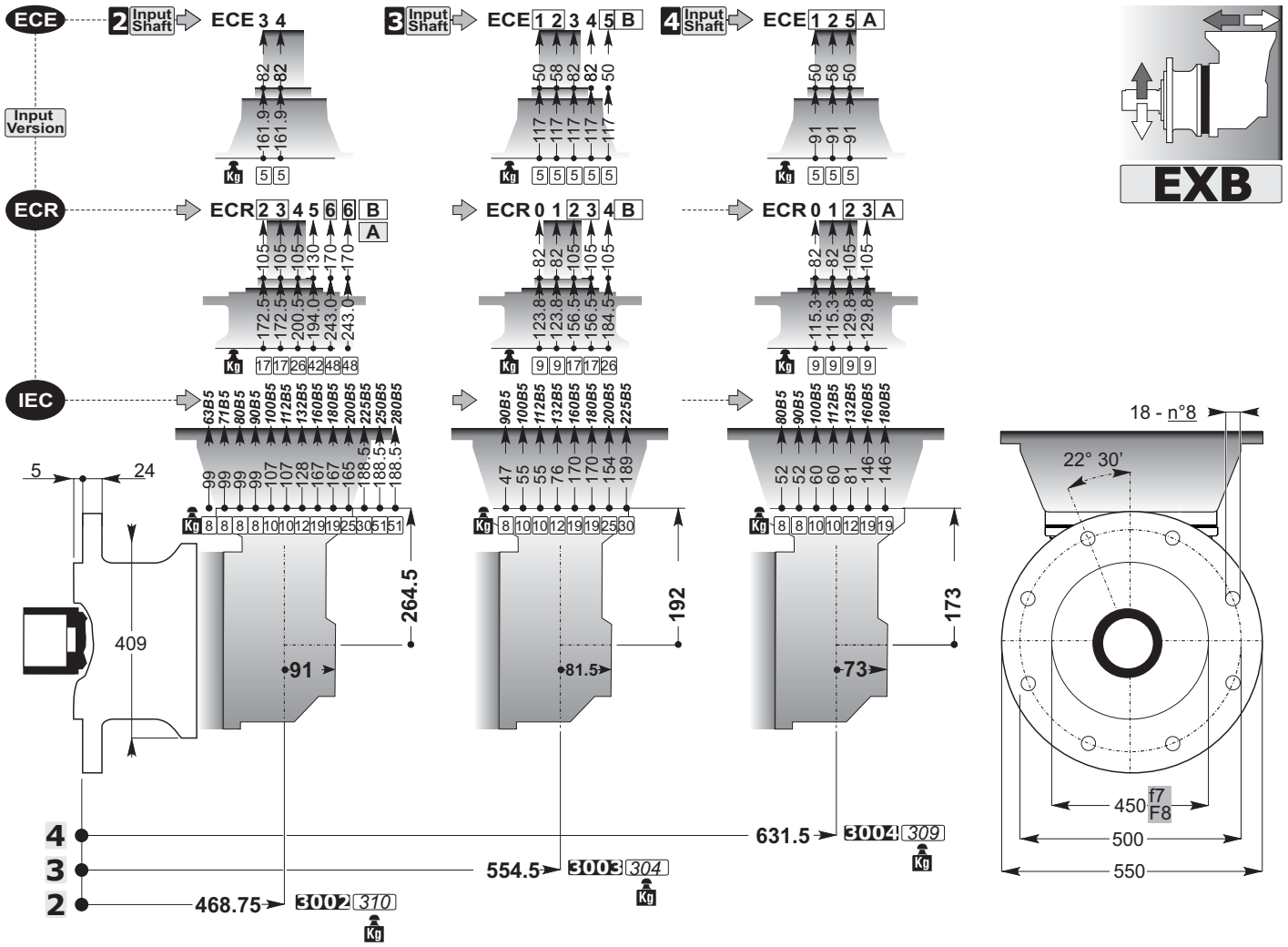

ECE
2 Input Shaft
ECE 3 4
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
Input Version
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
IEC
EXB
175
19
29
245
340
409
f7
F8
17
264.5
192
173
91
81.5
73
4
3
2
429
3004 234
352
3003 235
266.25
3002 275
17 - n° 15
24°
16
370


BRS
27.2
700
50 H8
125
60
18
95
BRD
29.1
1000
CU
Ms
250
Nm
M16
10.9
86
185
330
37
BRD
CU
BRS
Accessories



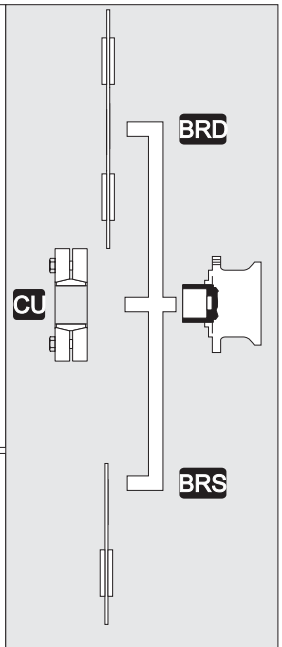


Output Shafts

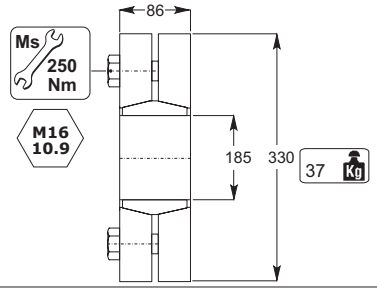


BRS

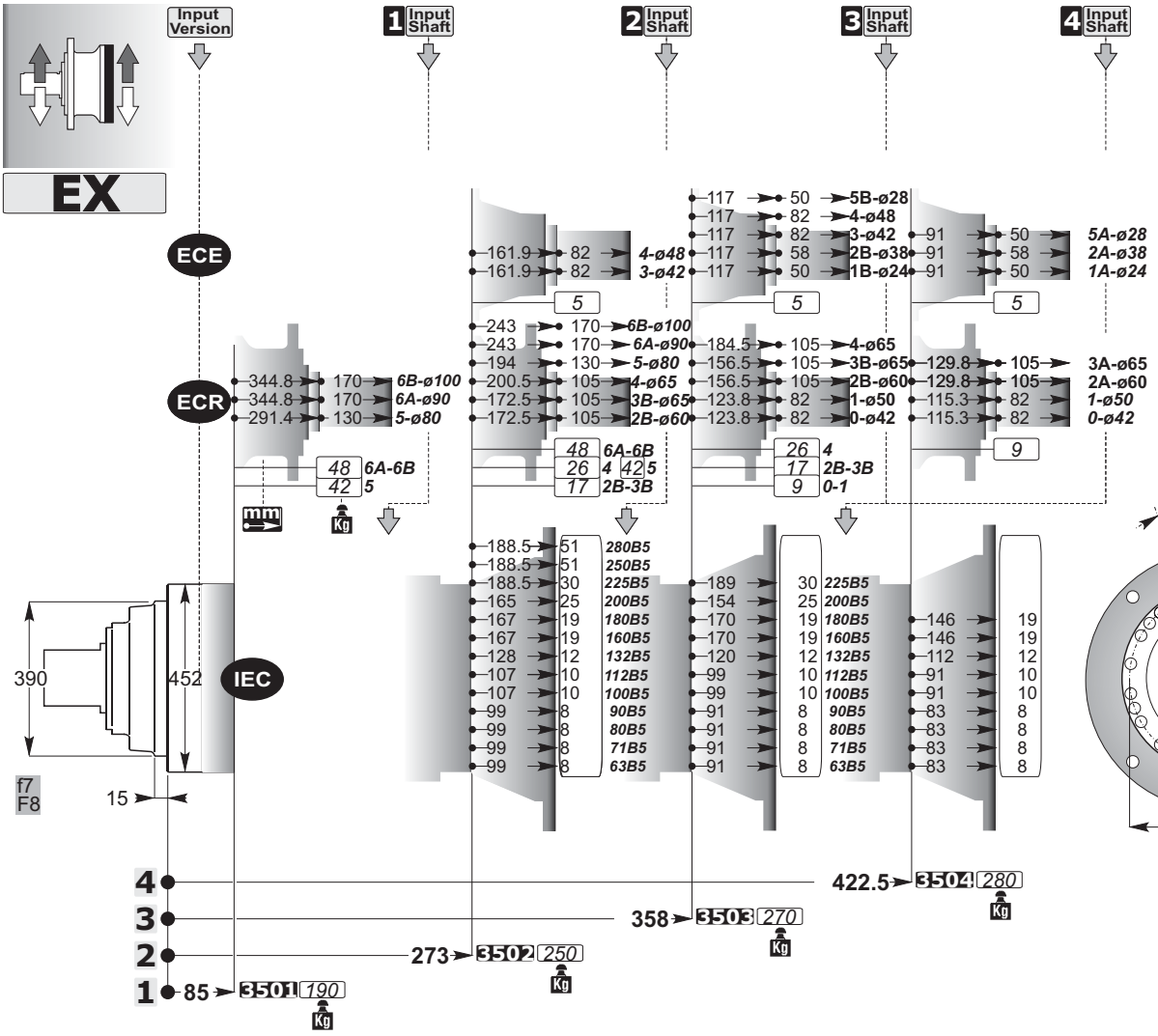
BRD

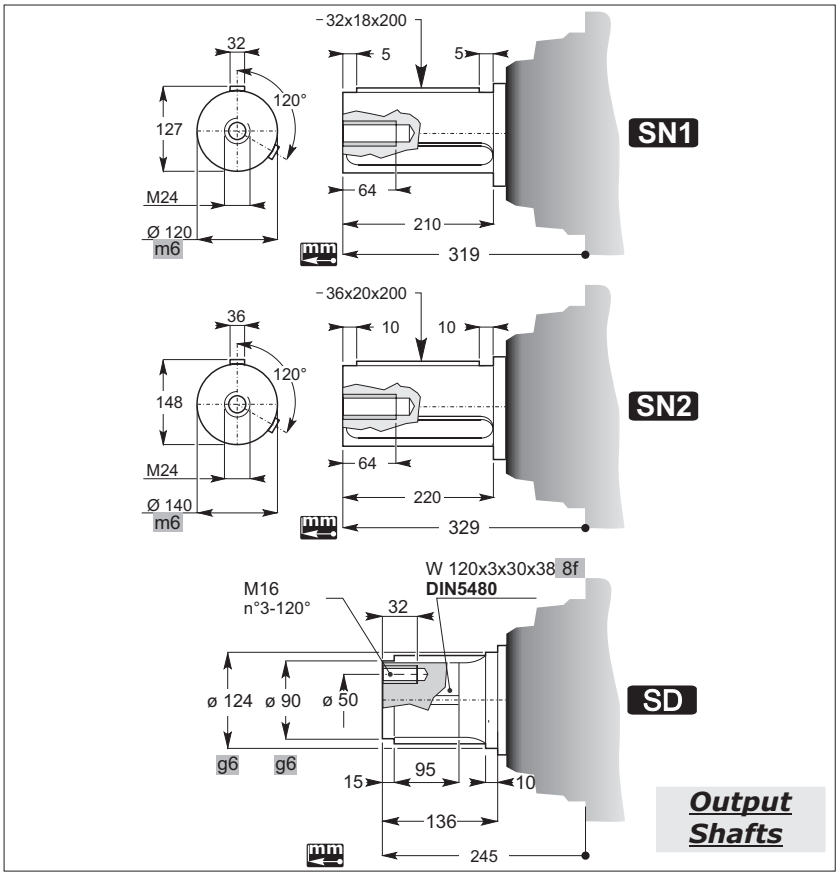


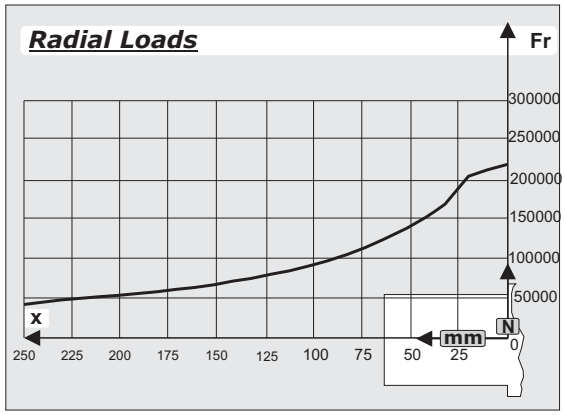
CU

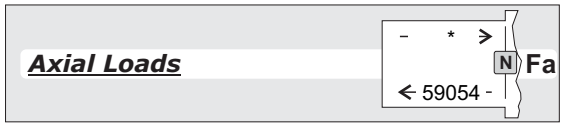


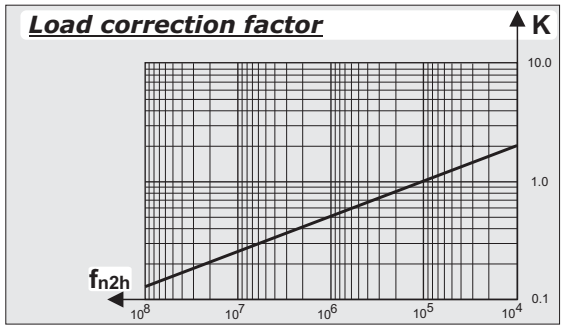
Accessories

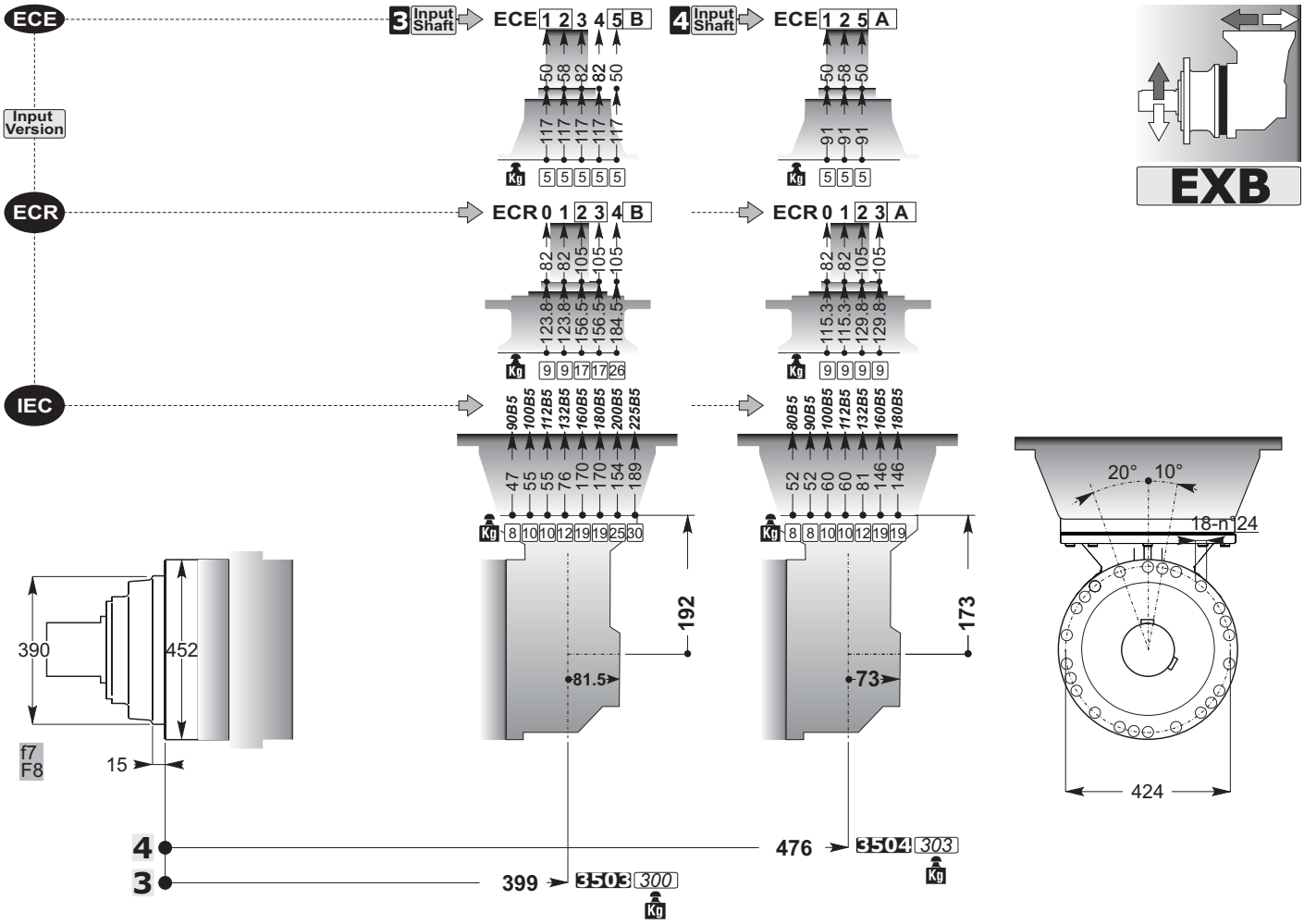

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
161.9 82 4-ø48
161.9 82 3-ø42
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
243 170 6B-ø100
243 170 6A-ø90
194 130 5-ø80
200.5 105 4-ø65
172.5 105 3B-ø65
172.5 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
344.8 170 6B-ø100
344.8 170 6A-ø90
291.4 130 5-ø80
48 6A-6B
42 5
48 6A-6B
26 4 42 5
17 2B-3B
26 4
17 2B-3B
9 0-1
188.5 51 280B5
188.5 51 250B5
188.5 30 225B5
165 25 200B5
167 19 180B5
167 19 160B5
128 12 132B5
107 10 112B5
107 10 100B5
99 8 90B5
99 8 80B5
99 8 71B5
99 8 63B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19
146 19
112 12
91 10
91 10
83 8
83 8
83 8
83 8
20° 10°
18-n°24
424
390
452
f7
F8
15
4
3
2
1
422.5 3504 280
358 3503 270
273 3502 250
85 3501 190
Kg
mm

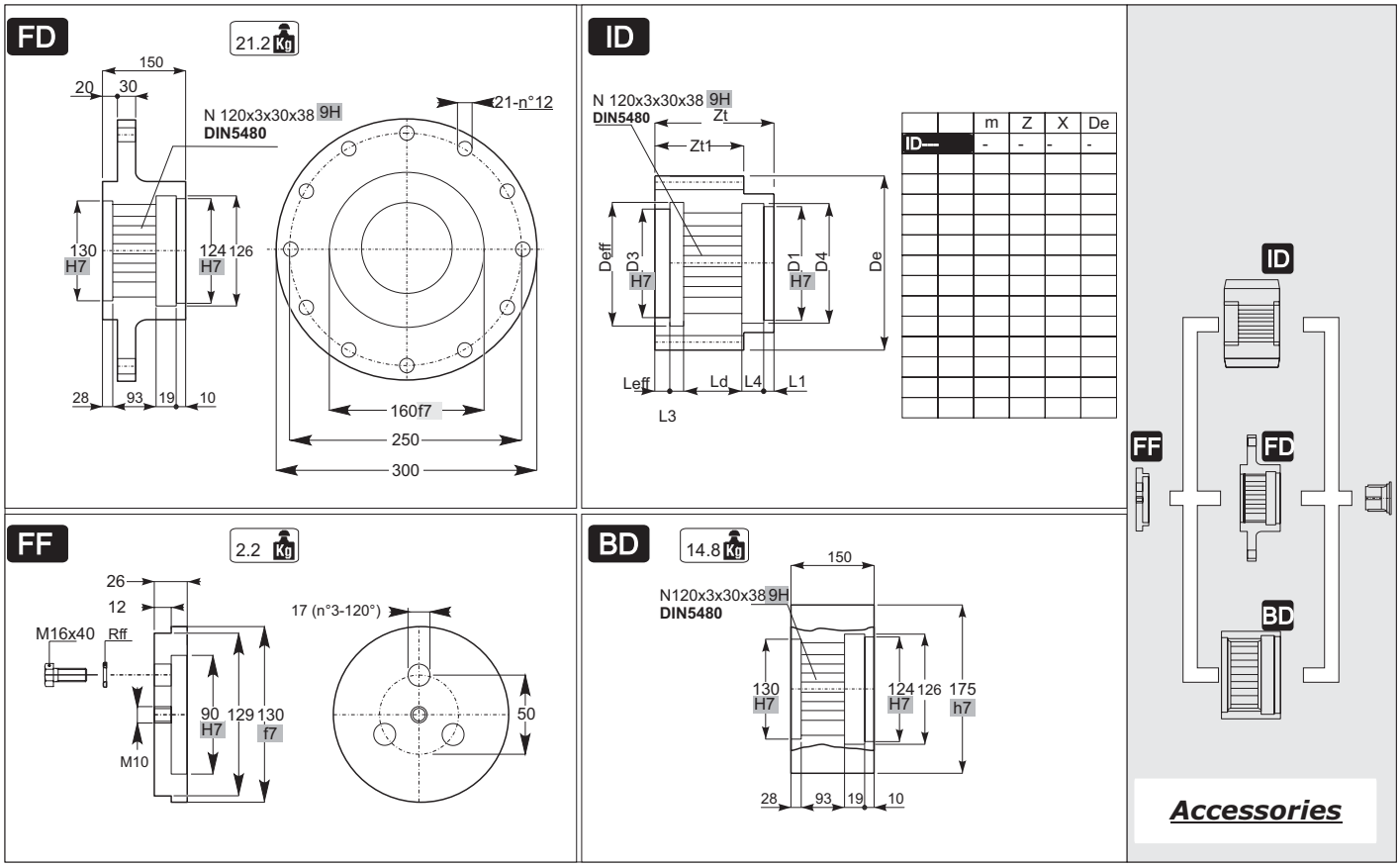

32x18x200
5
5
32
120°
127
M24
Ø 120
m6
64
210
319
SN1
36x20x200
10
10
36
120°
148
M24
Ø 140
m6
64
220
329
SN2
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 124
ø 90
ø 50
g6
g6
15
95
10
136
245
SD
mm
Output Shafts

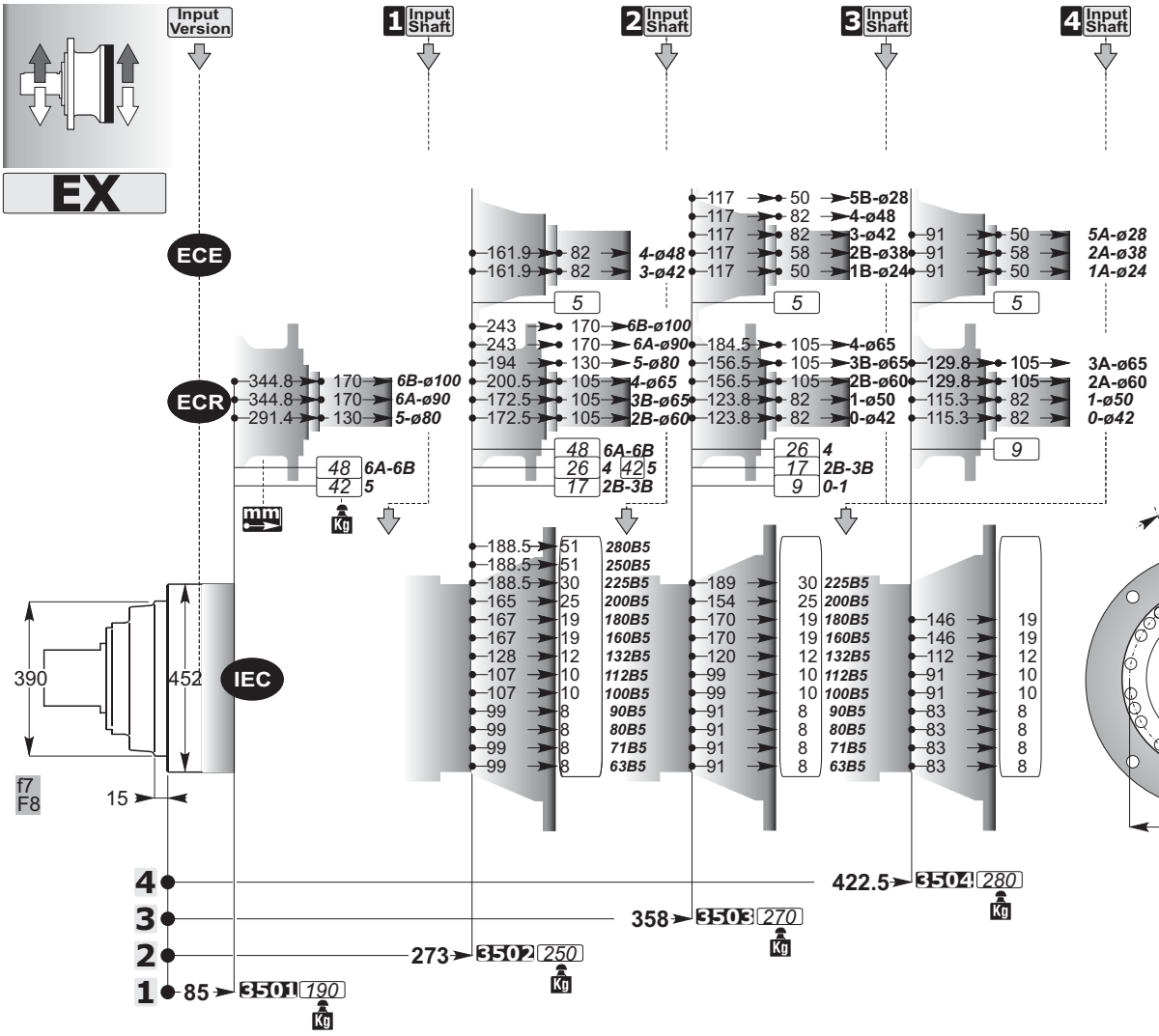

Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
mm
N

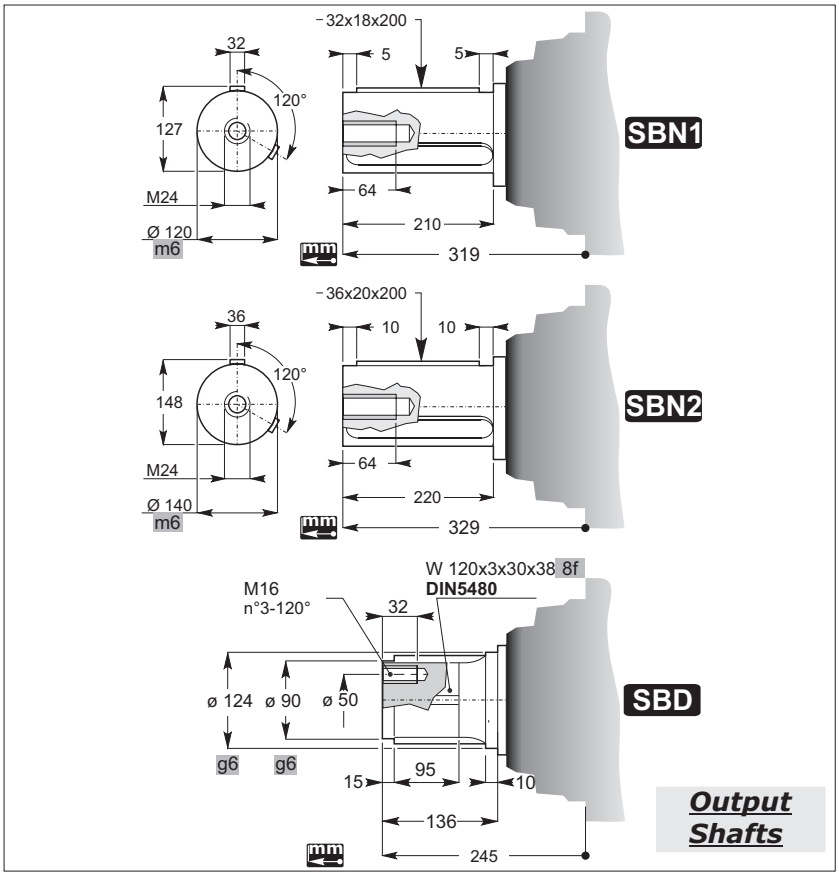

Axial Loads
N
Fa
59054

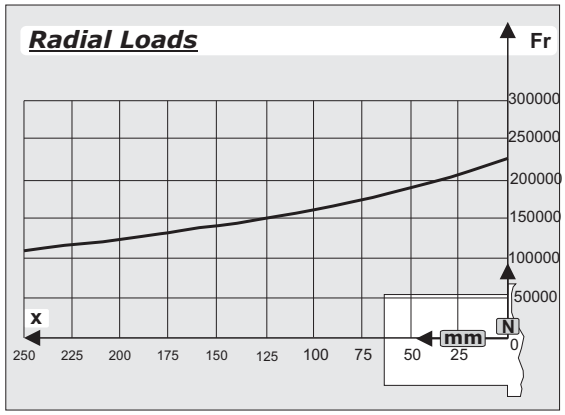

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

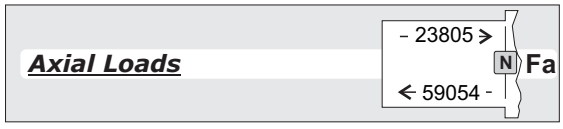

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
EXB
192
173
81.5
73
390
452
f7
F8
15
20° 10°
18-n124
424
4
3
476
3504 303
399
3503 300

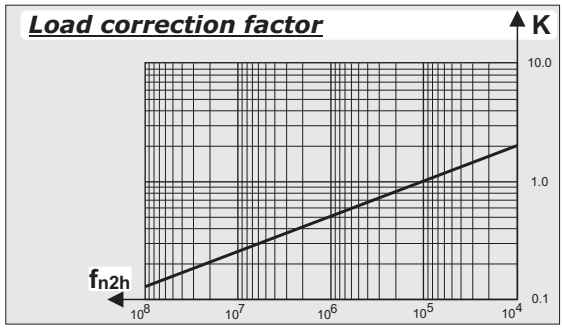

FD
21.2 Kg
N 120x3x30x38 9H
DIN5480
21-n°12
160f7
250
300
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3
D1
D4
De
Leff
Ld
L4
L1
L3
FF
2.2 Kg
M16x40
Rff
M10
17 (n°3-120°)
BD
14.8 Kg
N120x3x30x38 9H
DIN5480
Accessories

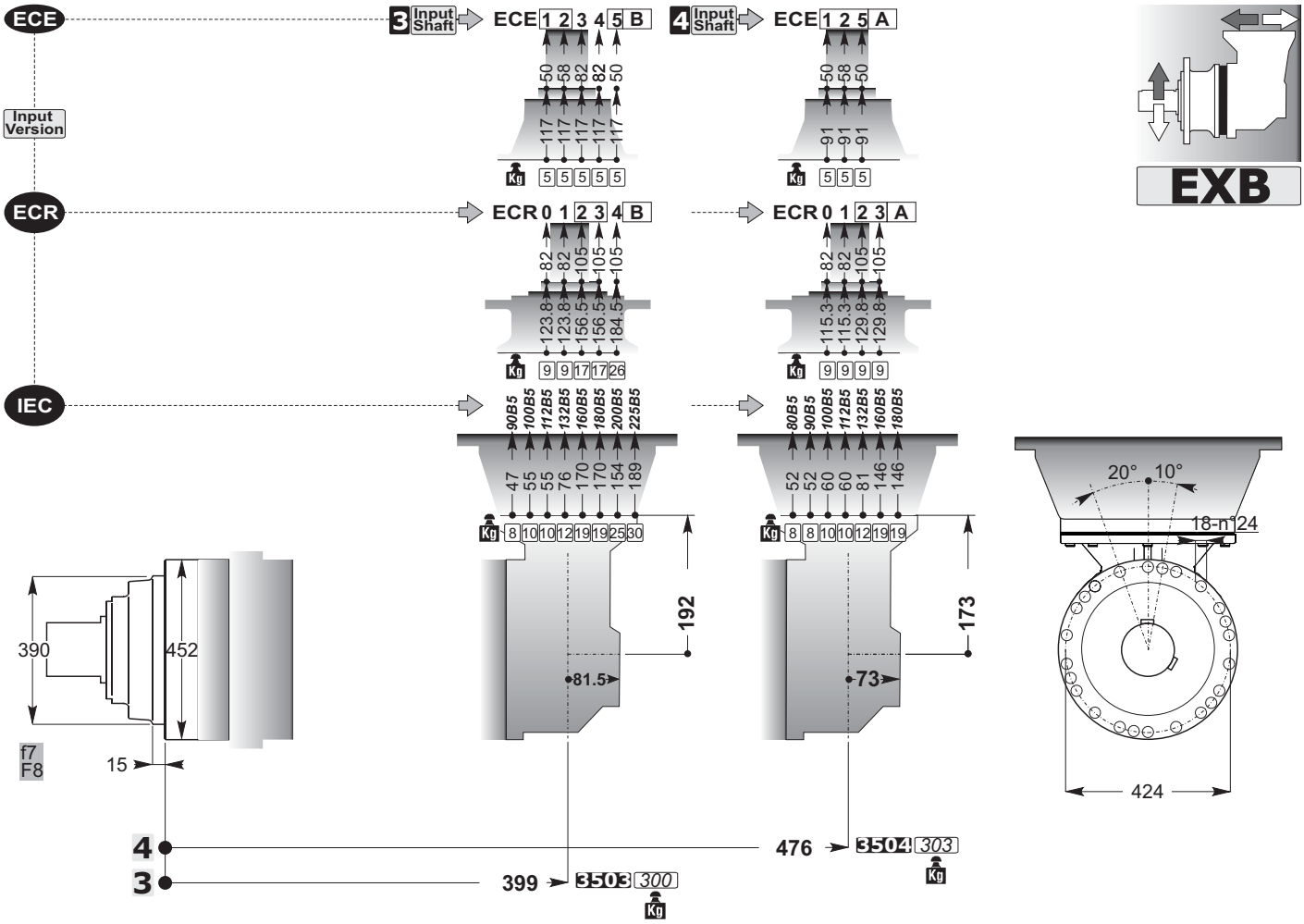

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
344.8 170 6B-ø100
344.8 170 6A-ø90
291.4 130 5-ø80
48 6A-6B
42 5
161.9 82 4-ø48
161.9 82 3-ø42
243 170 6B-ø100
243 170 6A-ø90
194 130 5-ø80
200.5 105 4-ø65
172.5 105 3B-ø65
172.5 105 2B-ø60
48 6A-6B
26 4
42 5
17 2B-3B
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
26 4
17 2B-3B
9 0-1
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
5
9
188.5 51 280B5
188.5 51 250B5
188.5 30 225B5
165 25 200B5
167 19 180B5
167 19 160B5
128 12 132B5
107 10 112B5
107 10 100B5
99 8 90B5
99 8 80B5
99 8 71B5
99 8 63B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19
146 19
112 12
91 10
91 10
83 8
83 8
83 8
83 8
20° 10°
18-n°24
424
390
452
f7
F8
15
4
3
2
1
85 3501 190
273 3502 250
358 3503 270
422.5 3504 280
Kg
mm

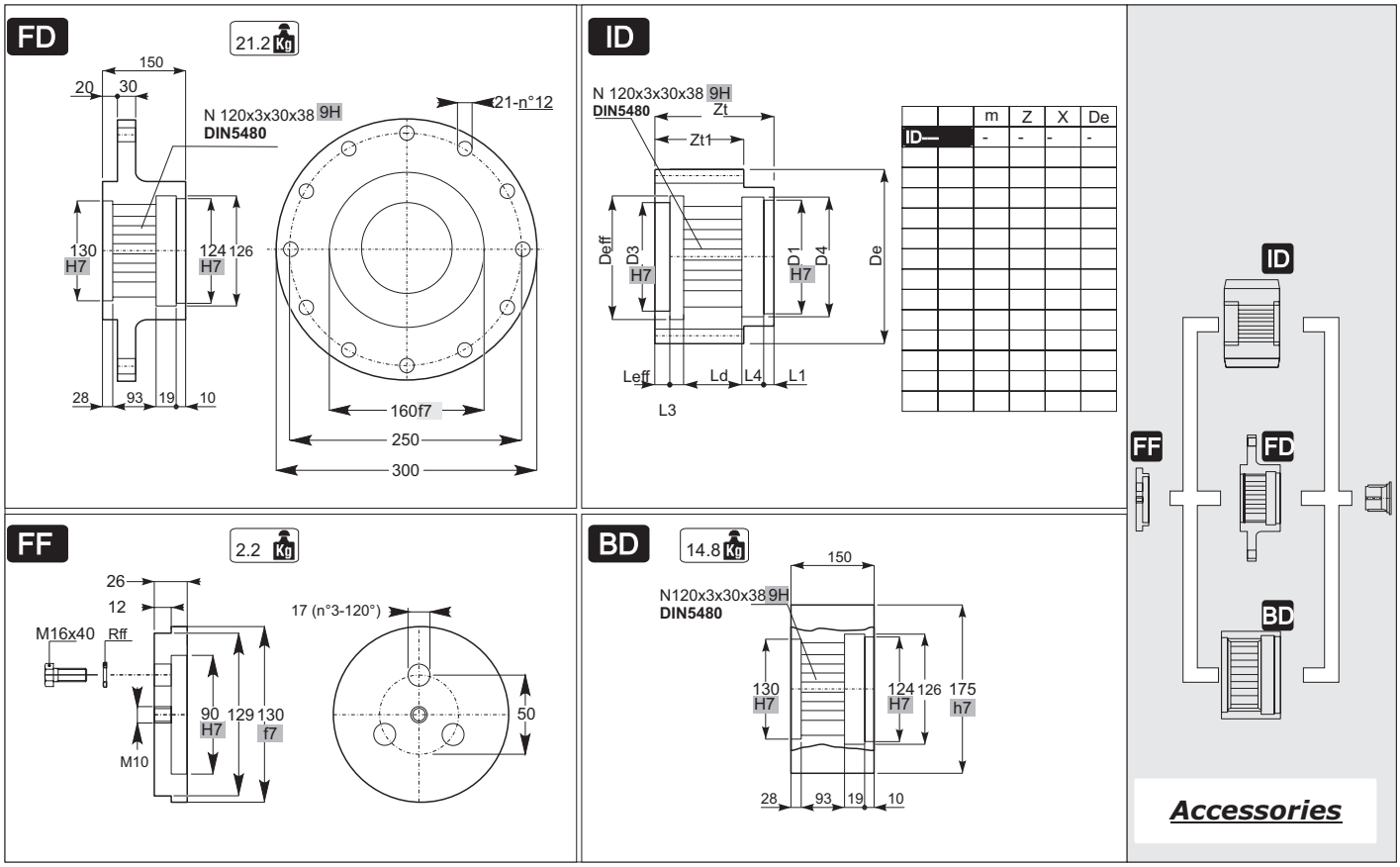

32x18x200
5
5
32
120°
127
M24
Ø 120
m6
64
210
319
SBN1
36x20x200
10
10
36
120°
148
M24
Ø 140
m6
64
220
329
SBN2
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 124
ø 90
ø 50
g6
g6
15
95
10
136
245
SBD
Output Shafts
mm

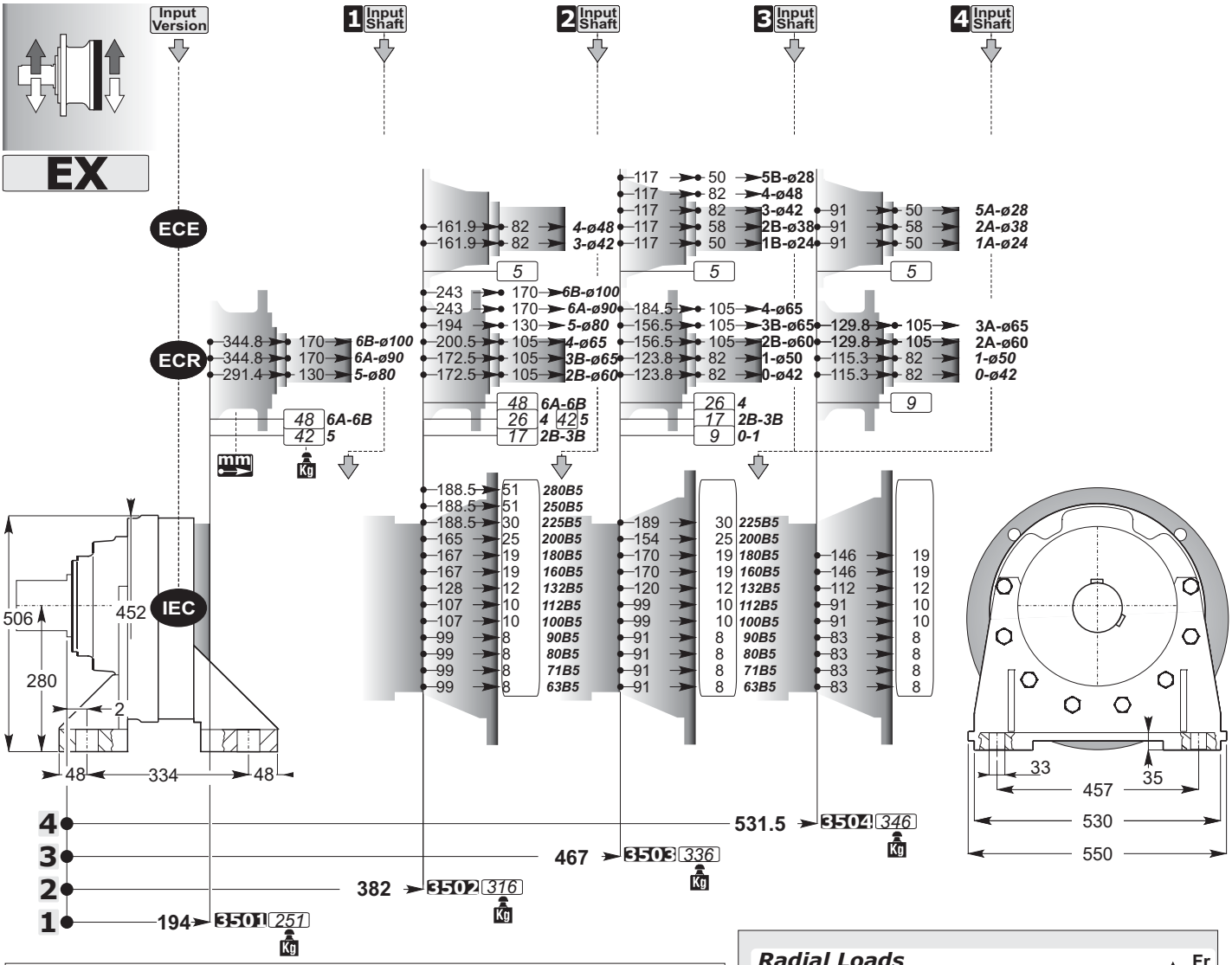

Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
mm
N

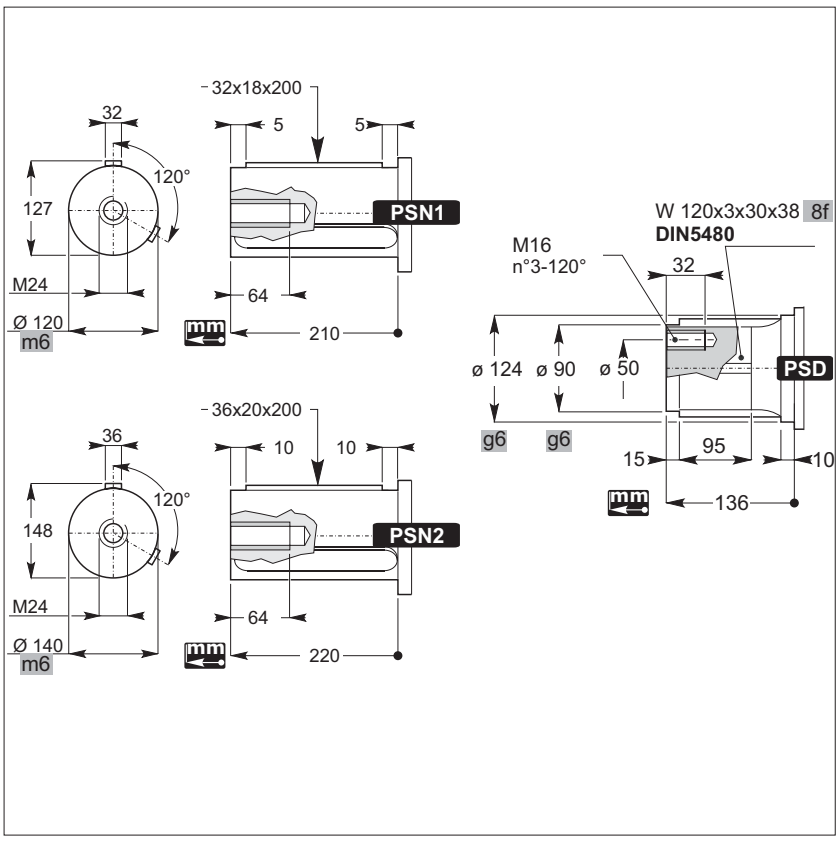

Axial Loads
23805
N
Fa
59054

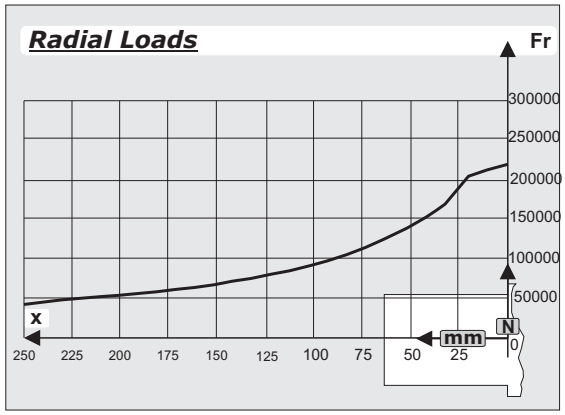

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

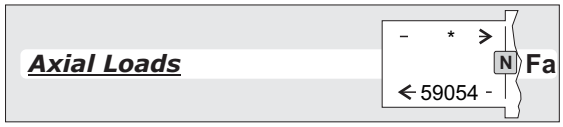

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
20° 10°
18-n124
424
390
452
f7
F8
15
192
173
81.5
73
4
3
476
399
3504 303
3503 300

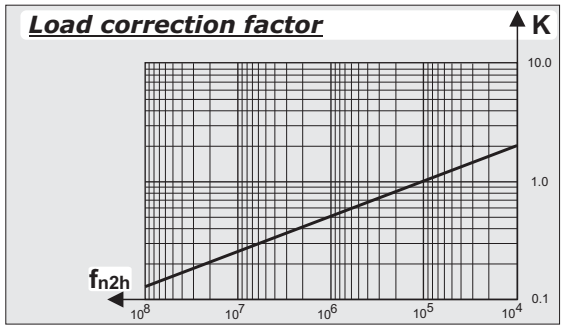

FD
21.2 Kg
150
20
30
N 120x3x30x38 9H
DIN5480
21-n°12
130 H7
124 126 H7
28
93
19
10
160f7
250
300
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID
FF
2.2 Kg
26
12
M16x40
Rff
17 (n°3-120°)
90 H7
129
130 f7
M10
50
BD
14.8 Kg
150
N120x3x30x38 9H
DIN5480
130 H7
124 126 H7
175 h7
28
93
19
10
ID
FF
FD
BD
Accessories

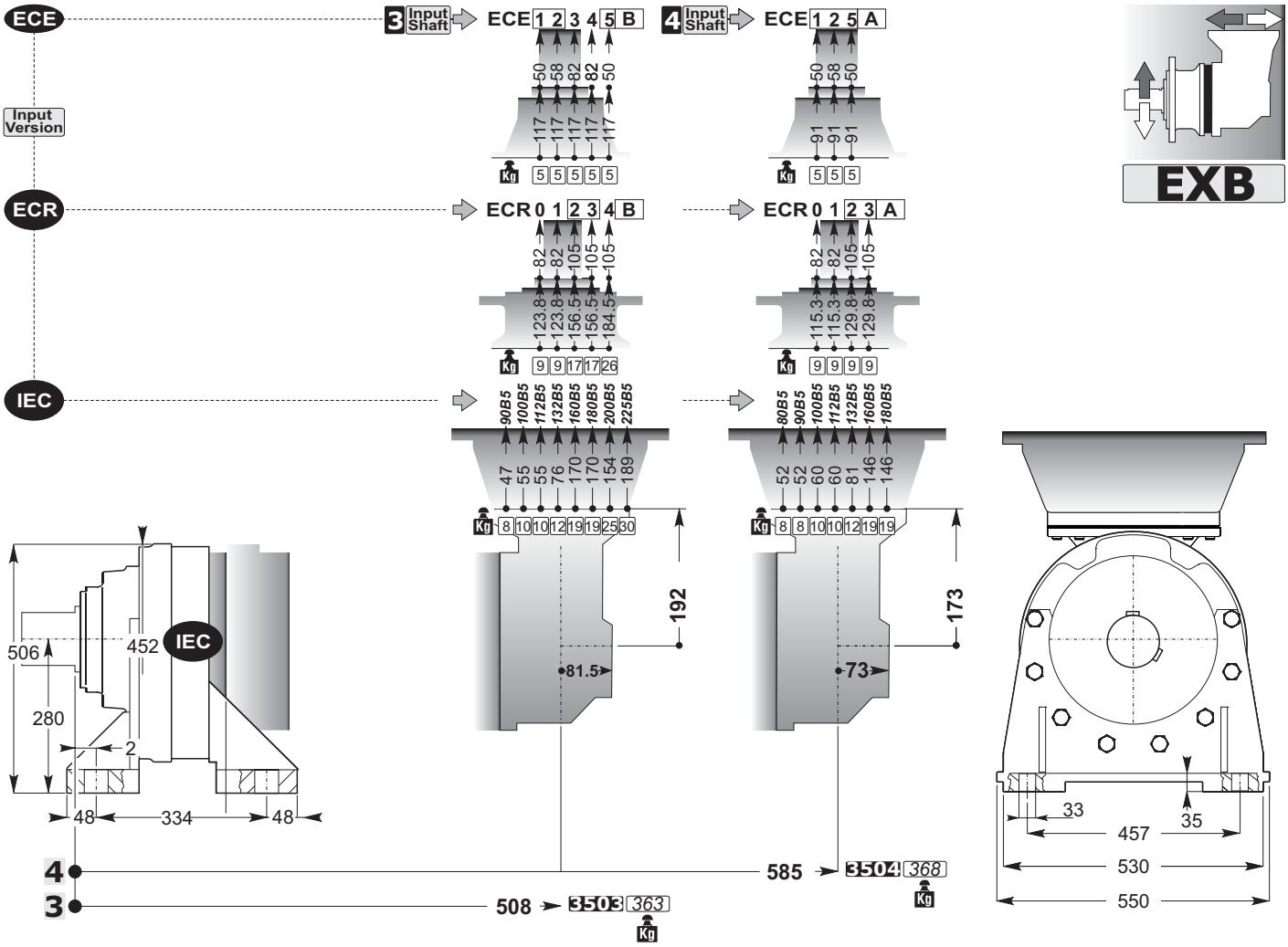

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
506
452
280
2
48
334
48
mm
Kg
4
3
2
1
531.5
3504 346
467
3503 336
382
3502 316
194
3501 251

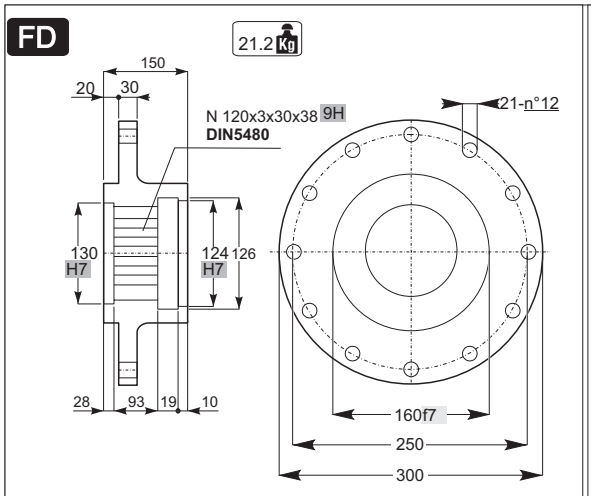

32x18x200
32
5
5
120°
127
M24
Ø 120
m6
64
210
PSN1
36x20x200
36
10
10
120°
148
M24
Ø 140
m6
64
220
PSN2
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 124
ø 90
ø 50
g6
g6
15
95
10
136
PSD

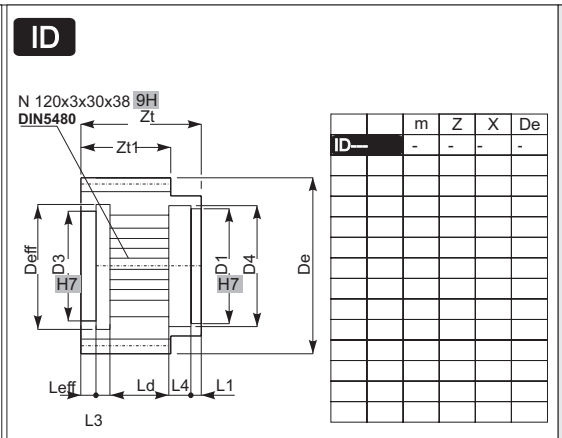

Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
mm
N

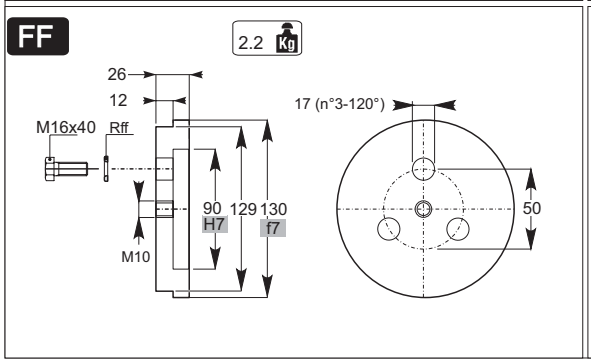

Axial Loads
N
Fa
59054

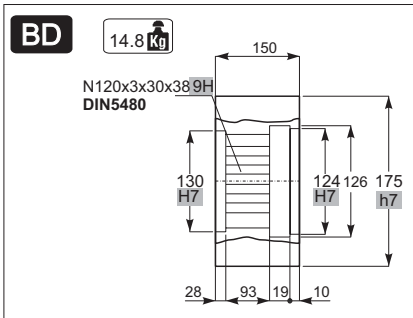

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

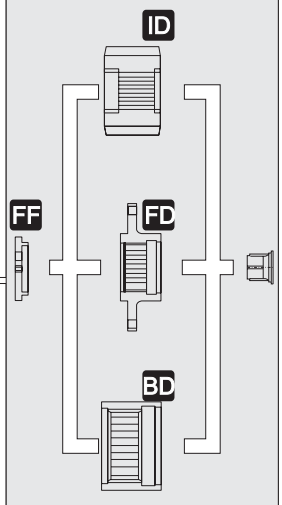












Accessories

mm
C

EX

Input Version

1 Input Shaft

2 Input Shaft

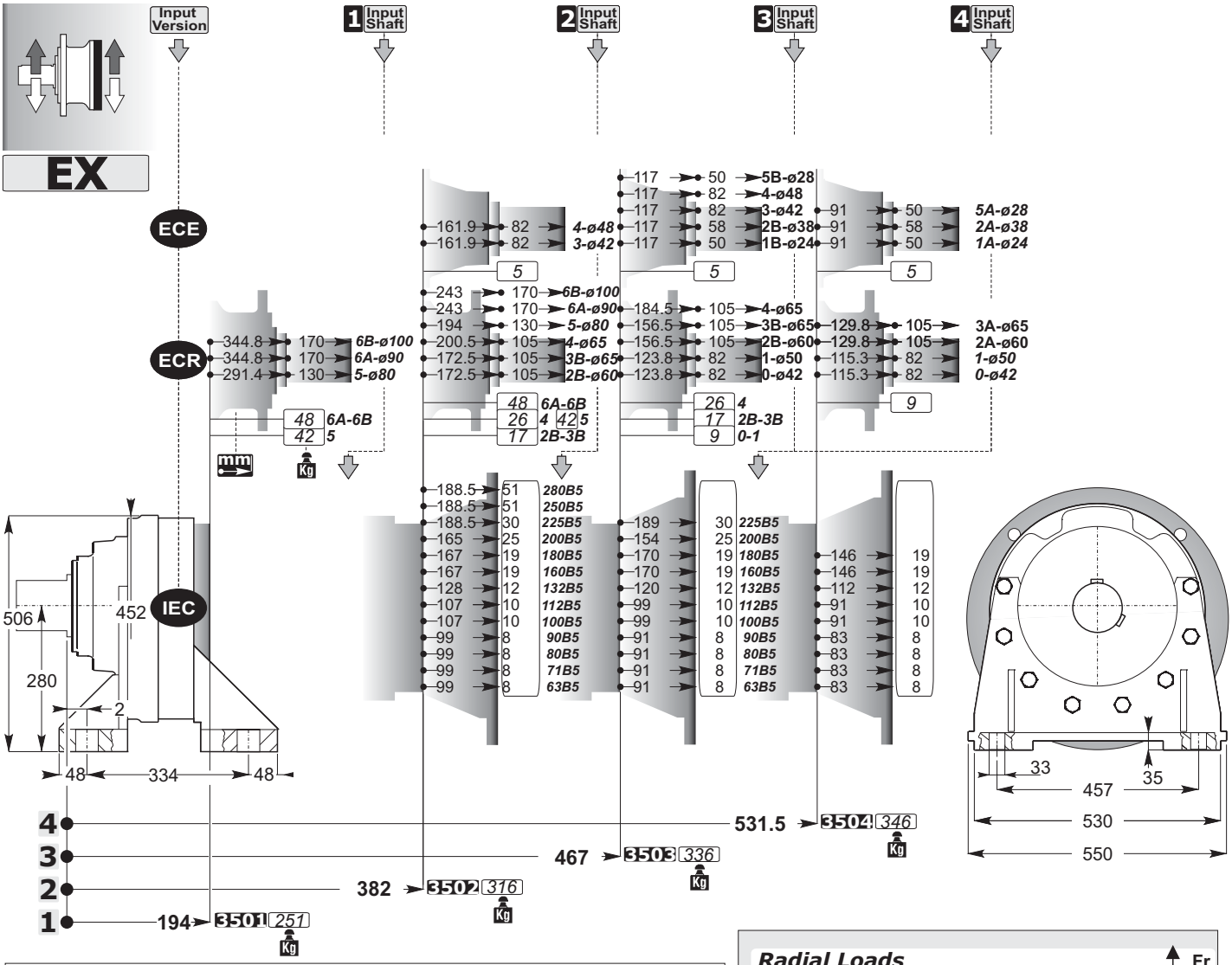
3 Input Shaft

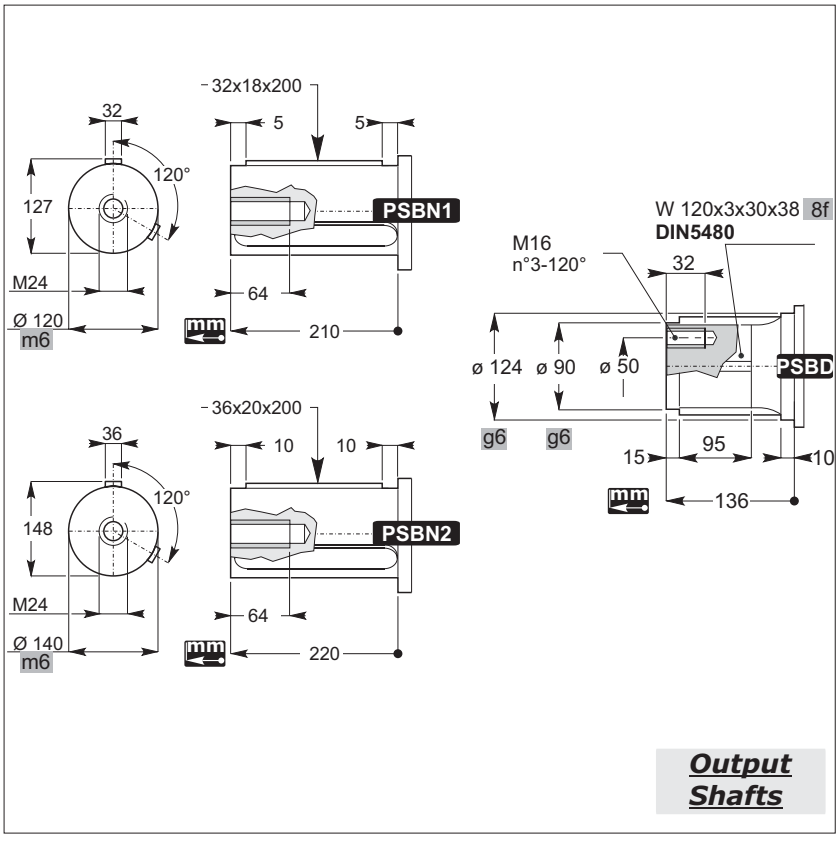
4 Input Shaft

ECE

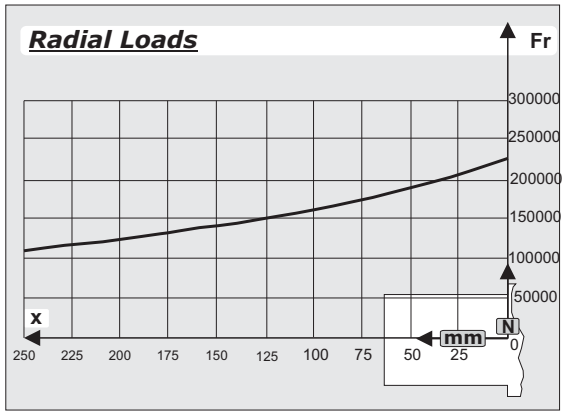
ECR

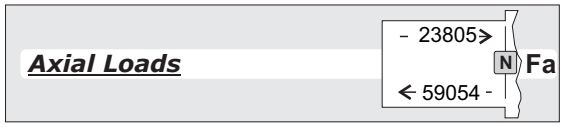
IEC

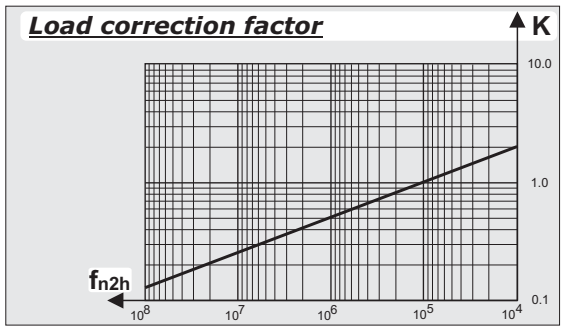


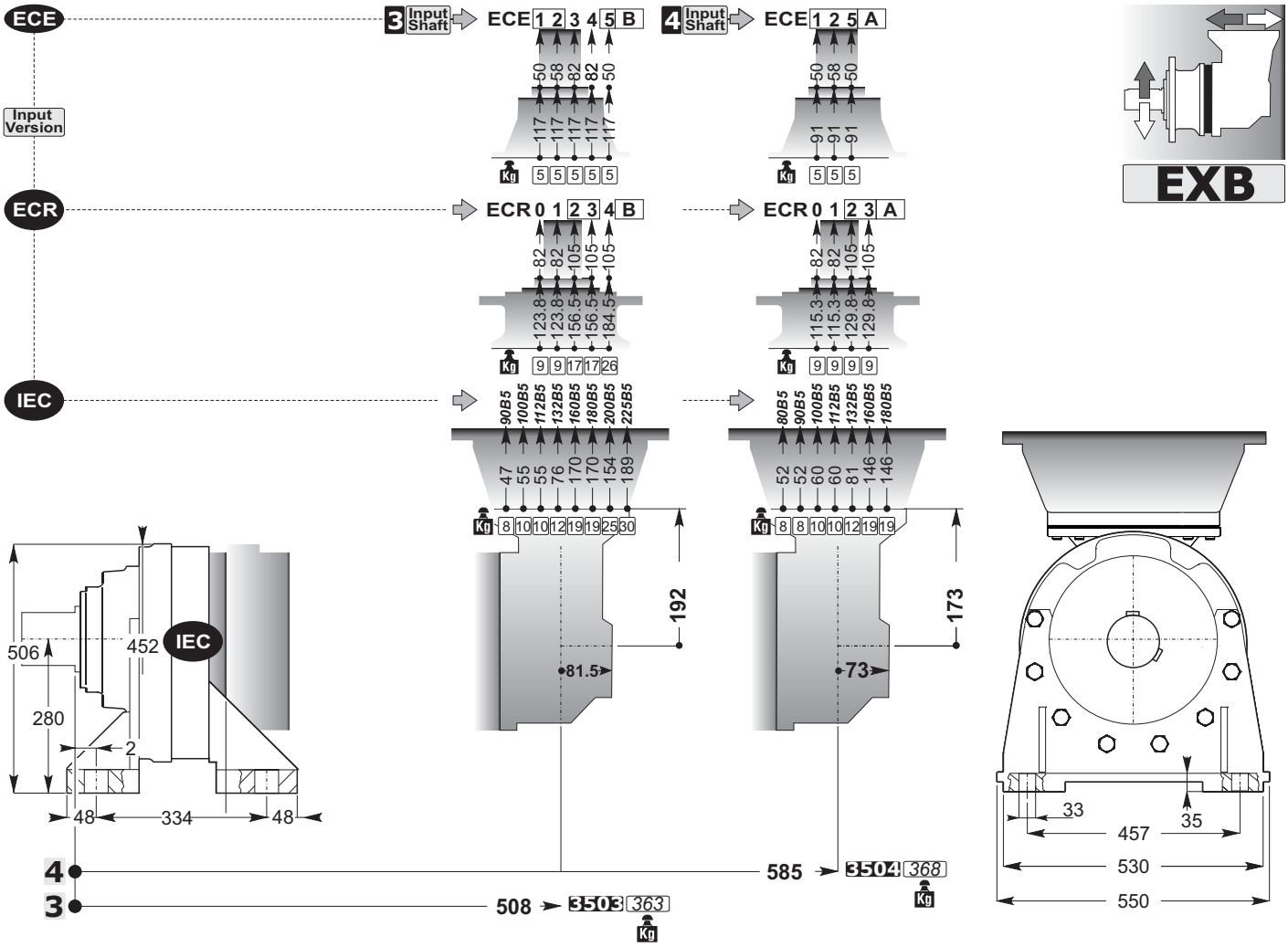


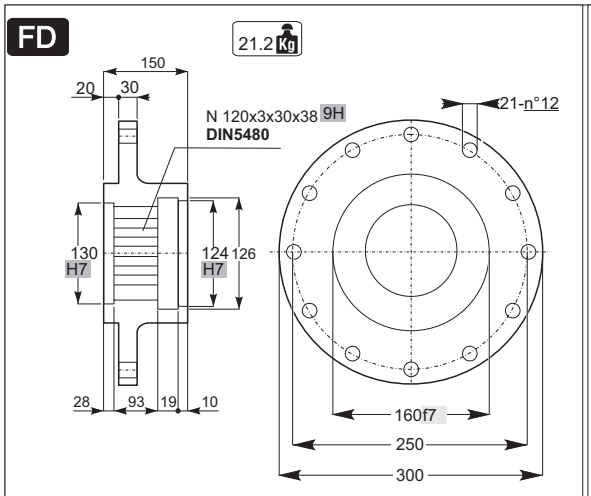
Output Shafts

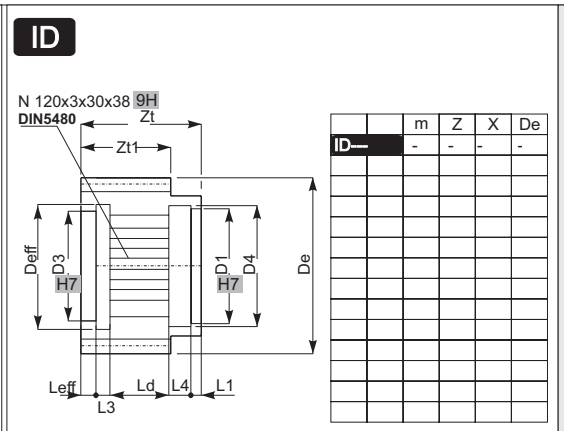


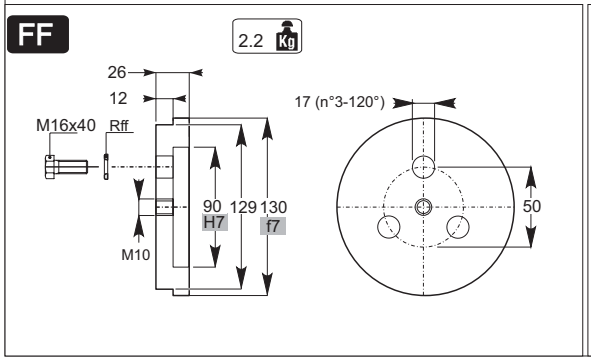


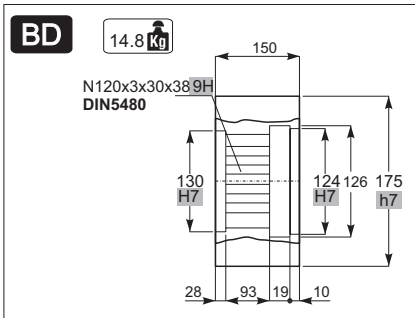


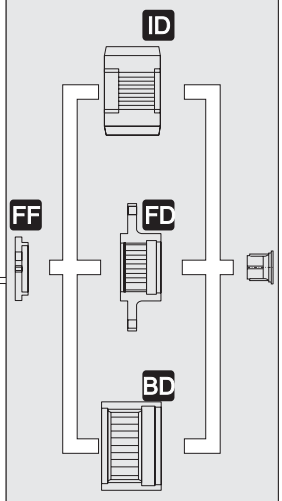






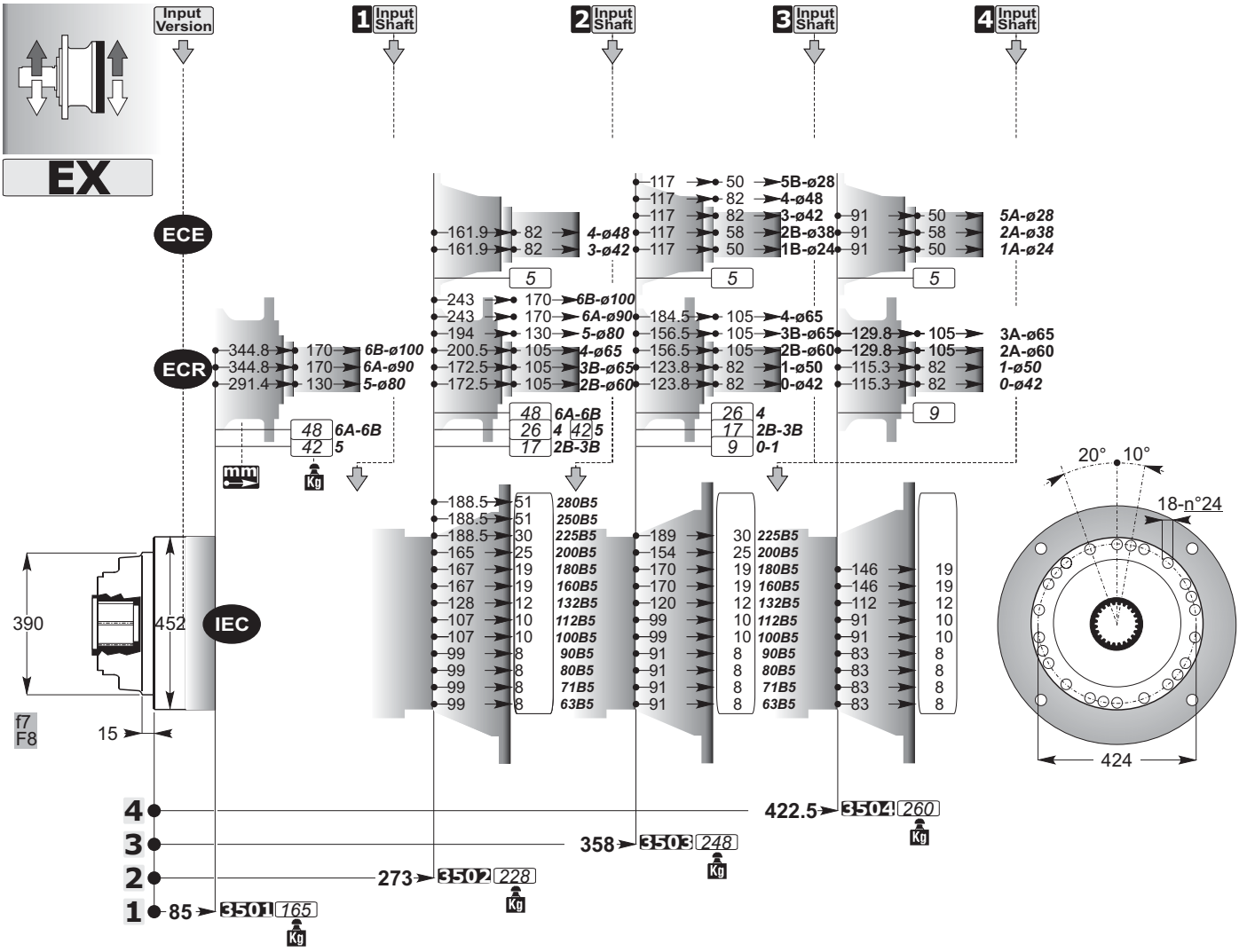


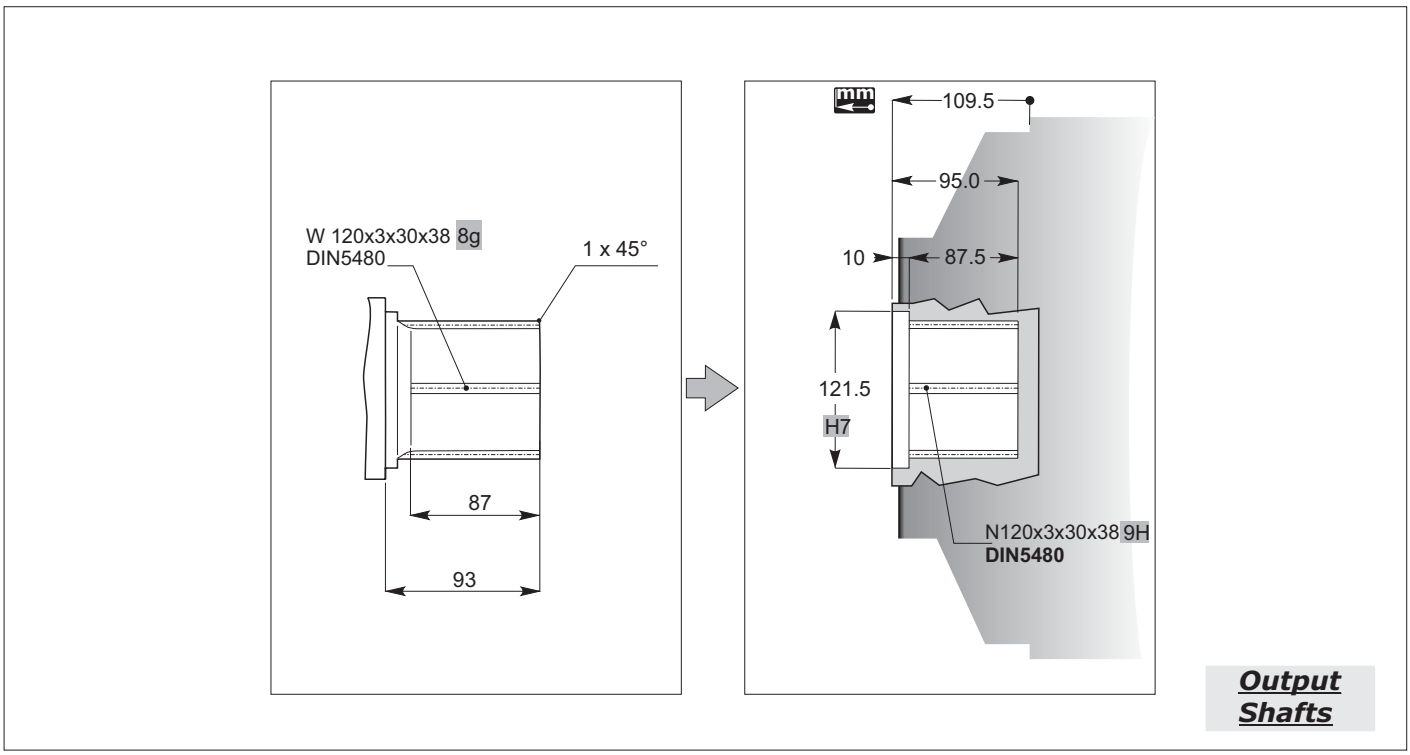




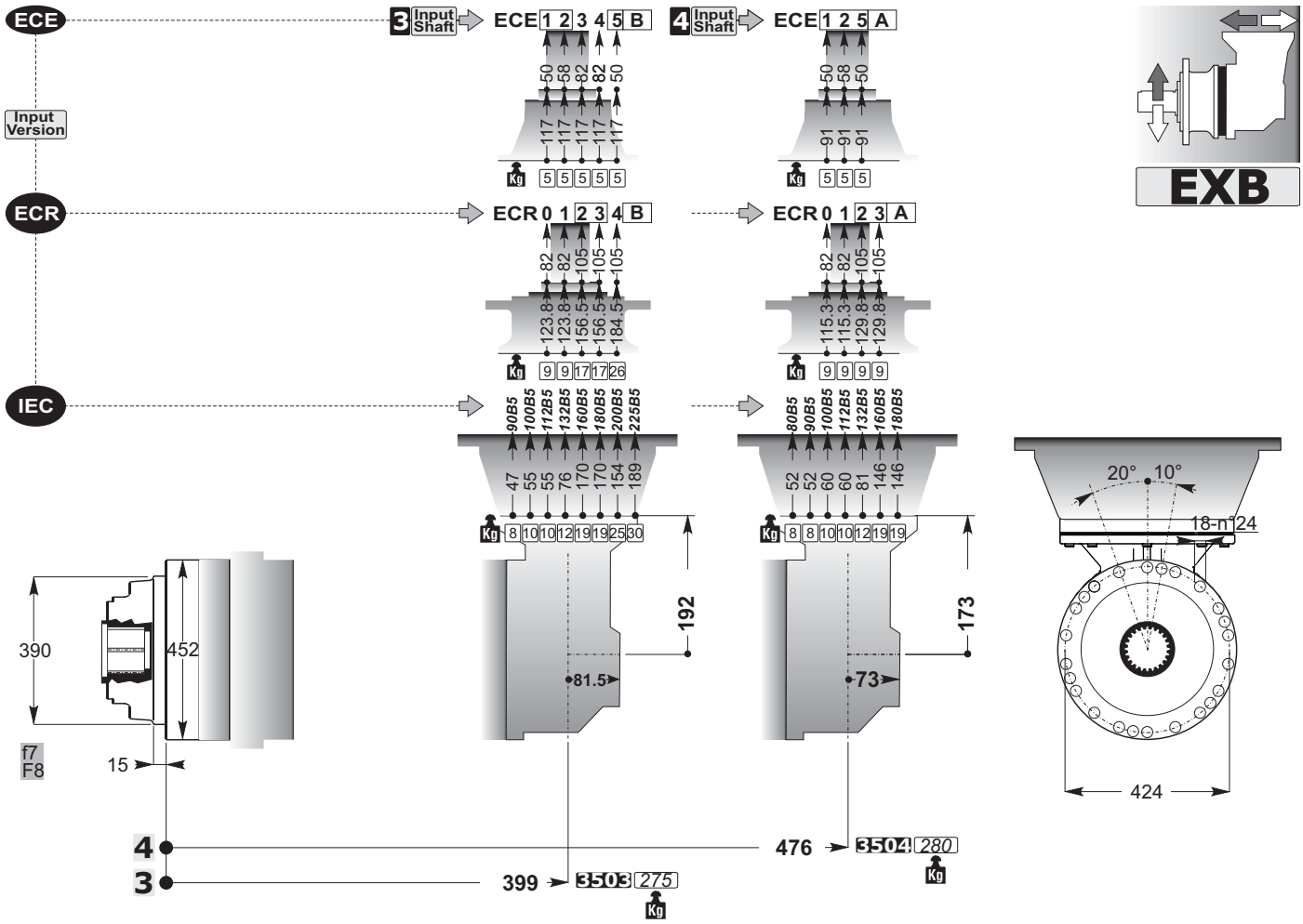
Accessories

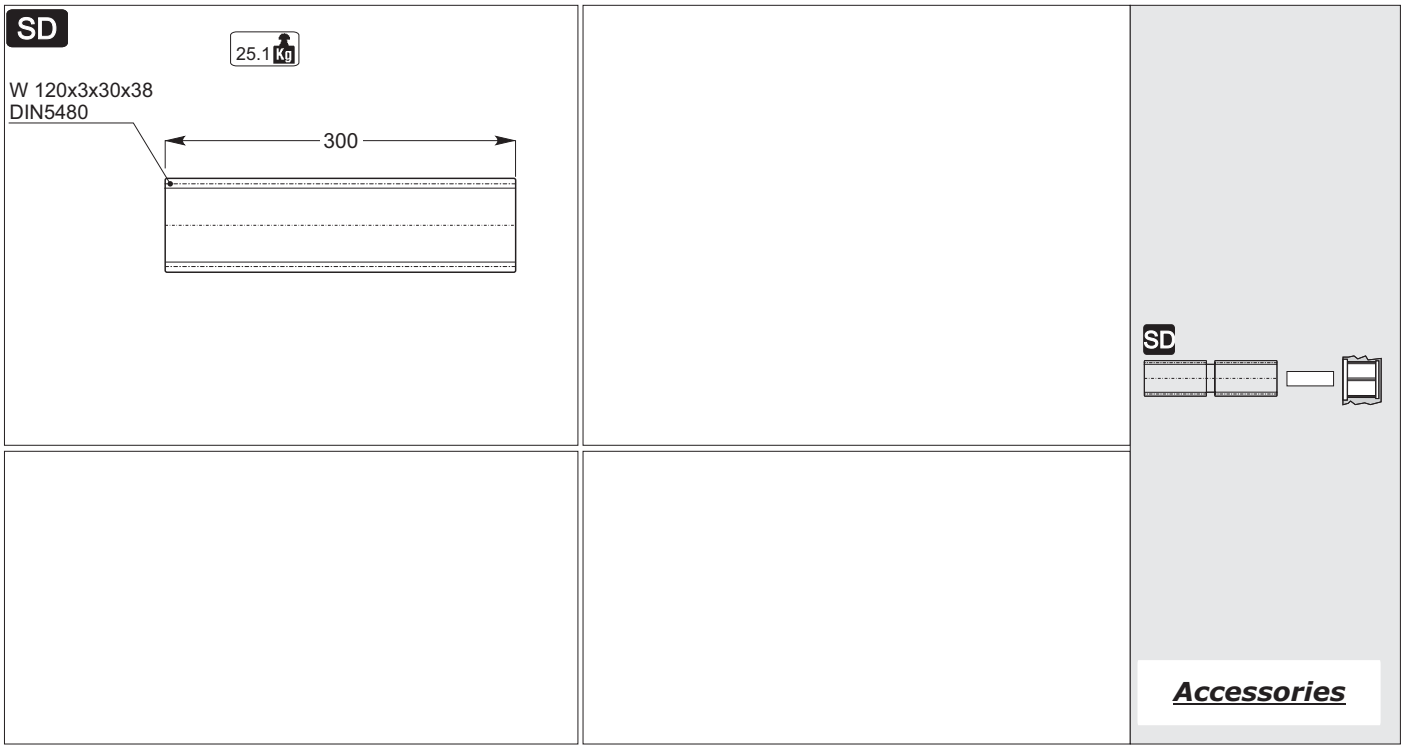
mm
C

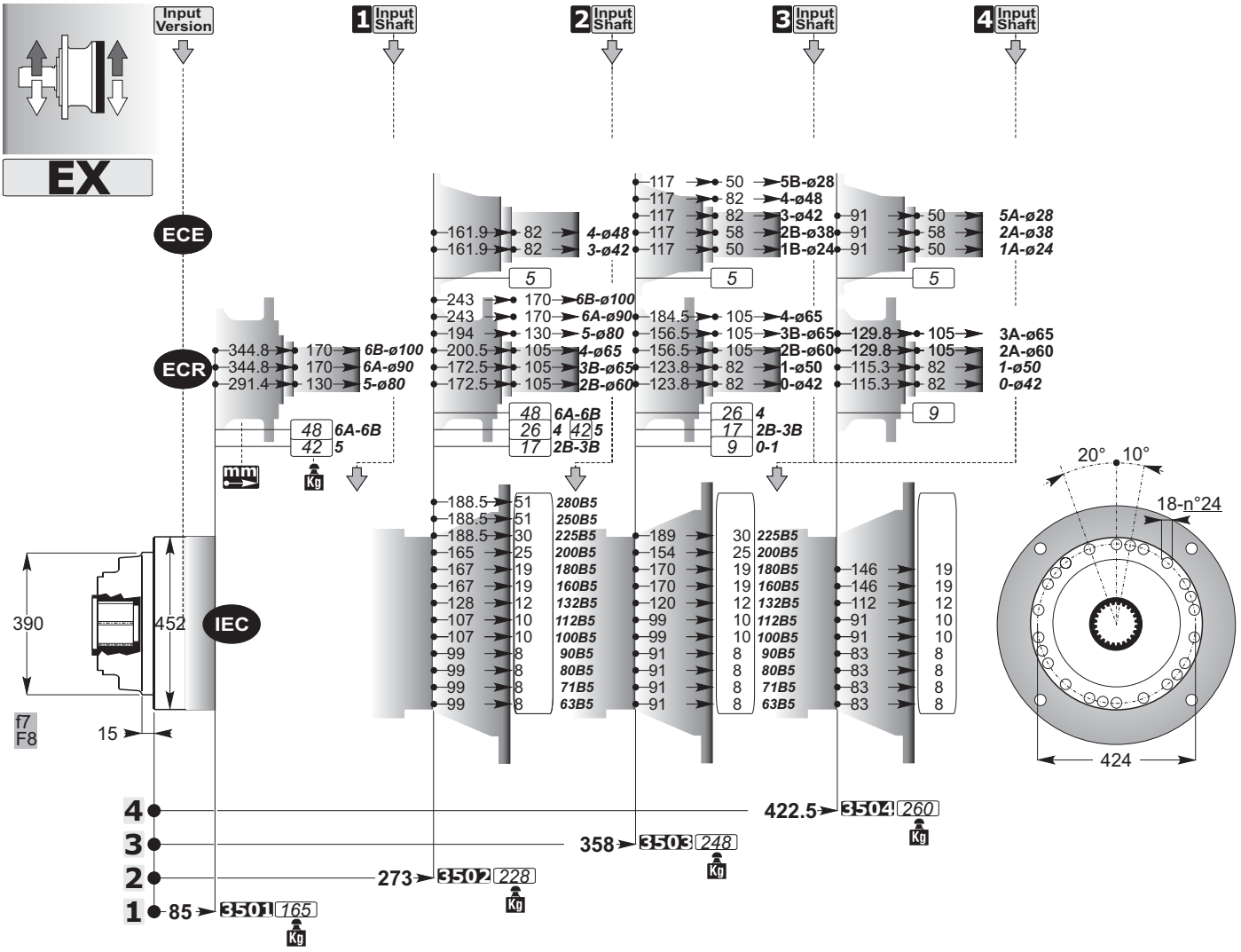


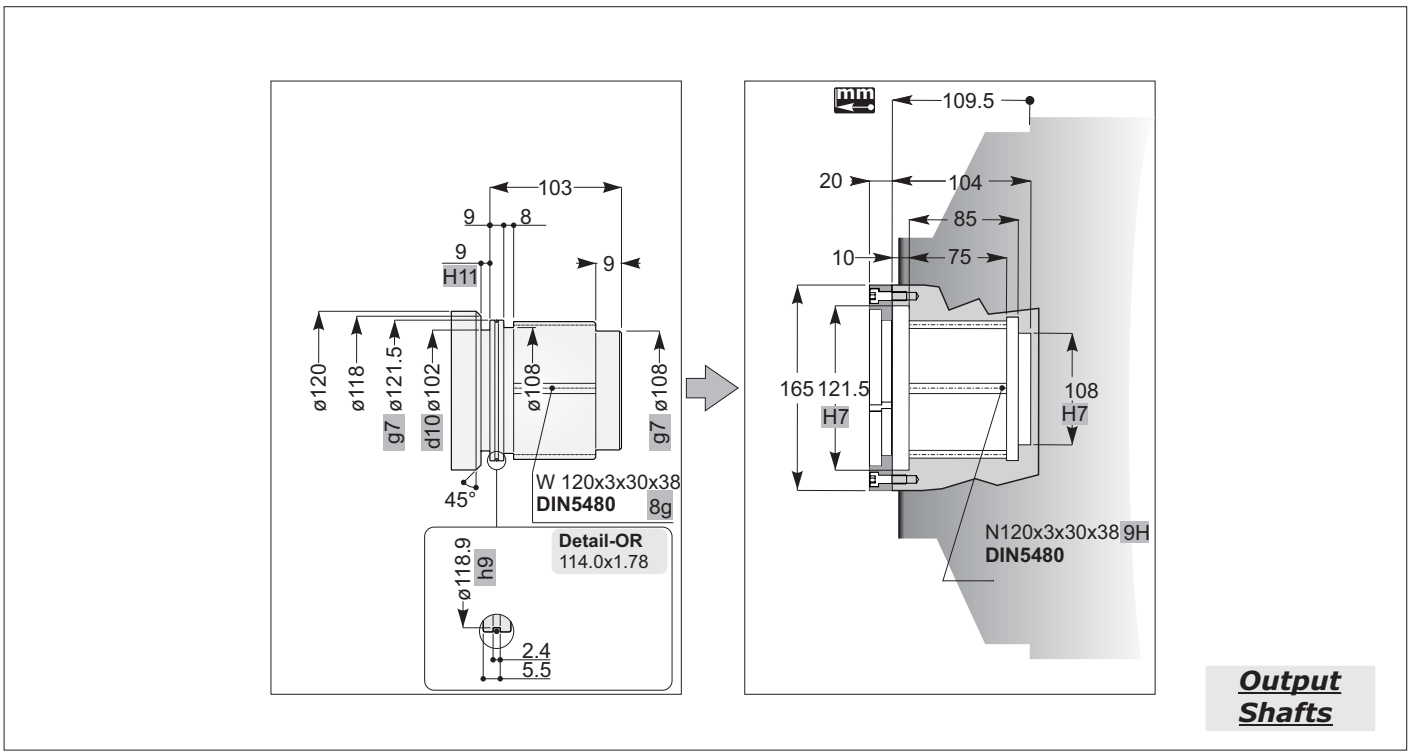


Output Shafts

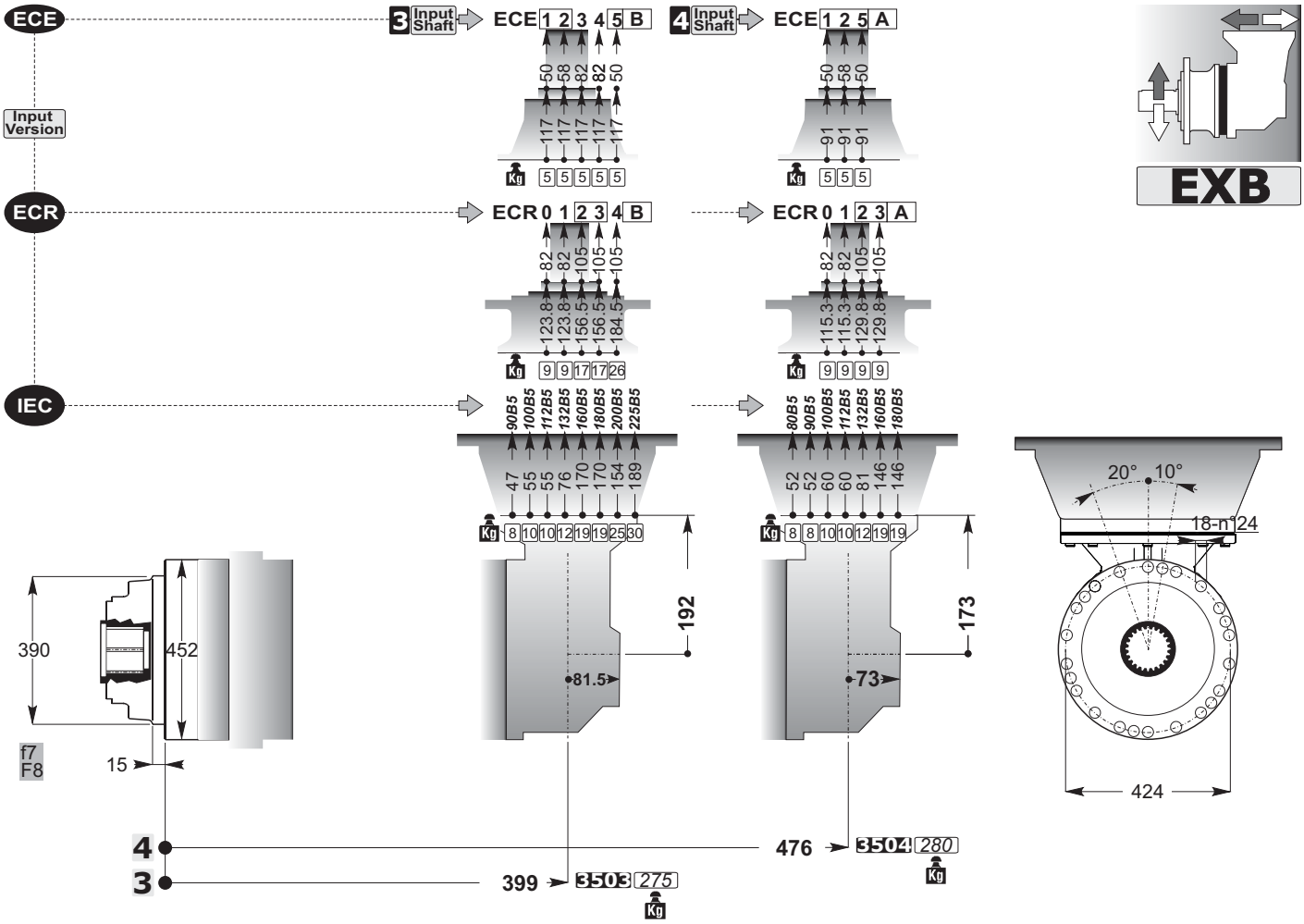

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
EXB
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
192
173
81.5
73
390
452
f7
F8
15
20°
10°
18-n°24
424
4
3
476
3504 280
399
3503 275

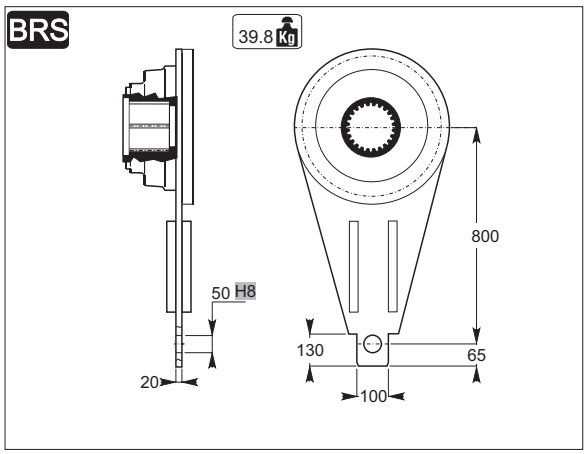

SD
25.1 Kg
W 120x3x30x38
DIN5480
300
SD
Accessories

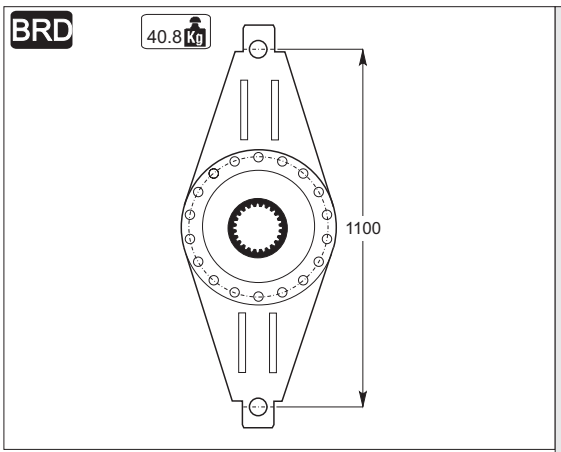


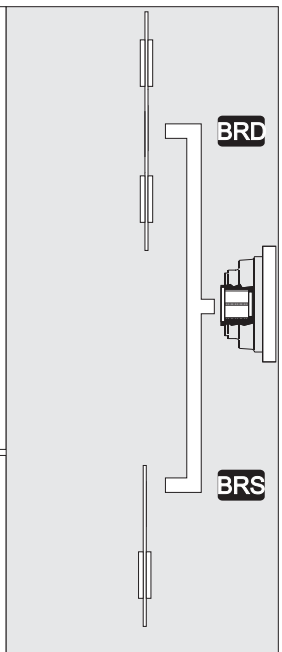


Output Shafts

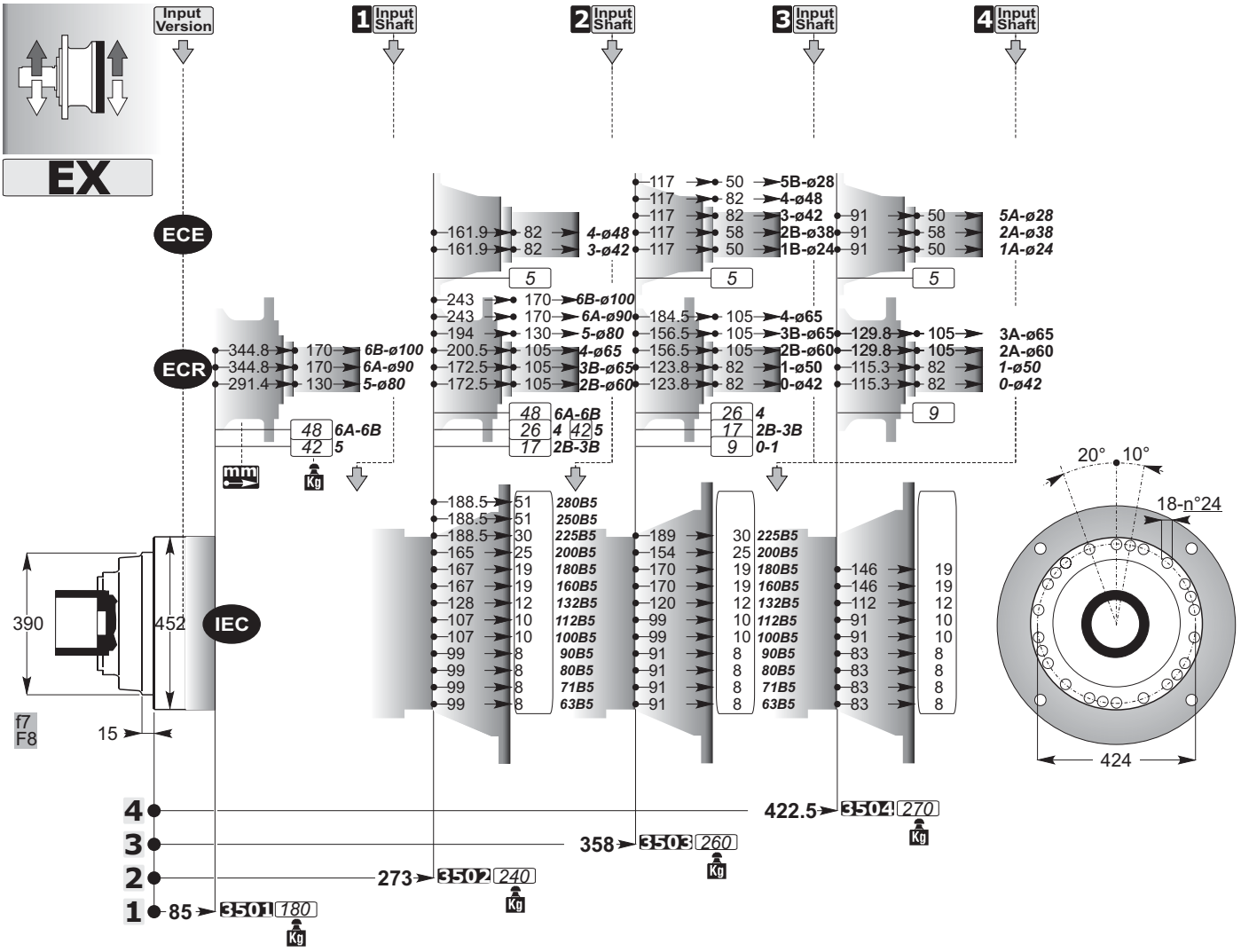


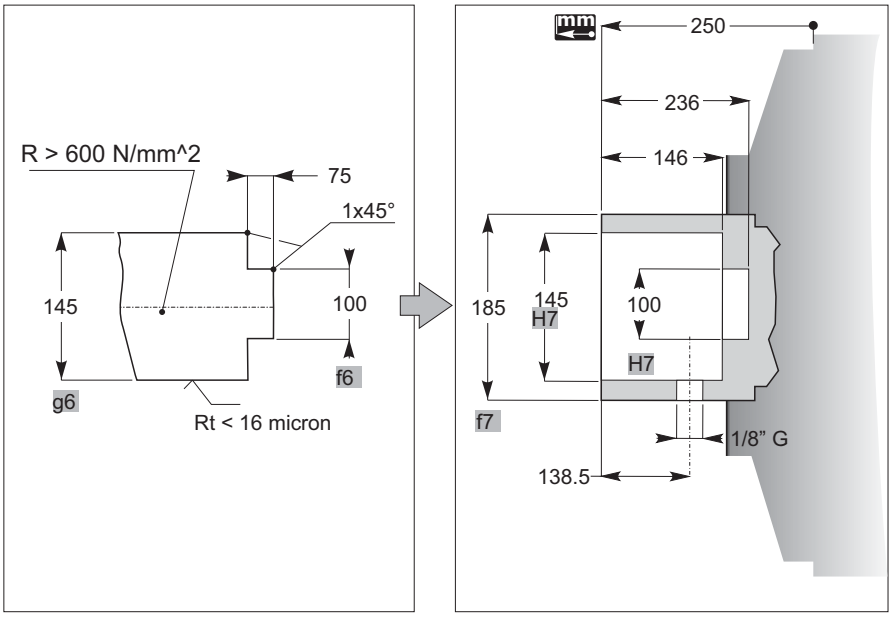




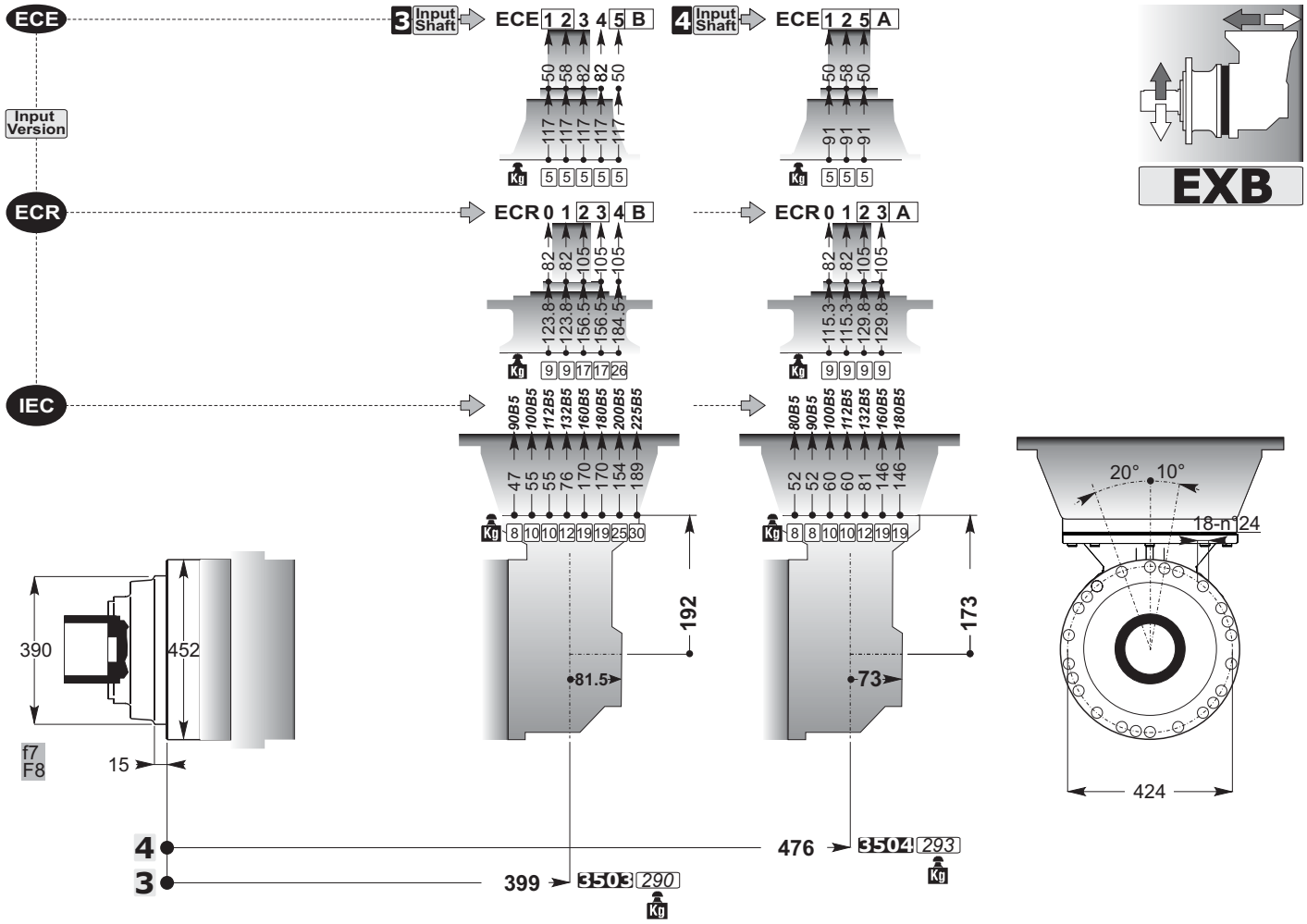


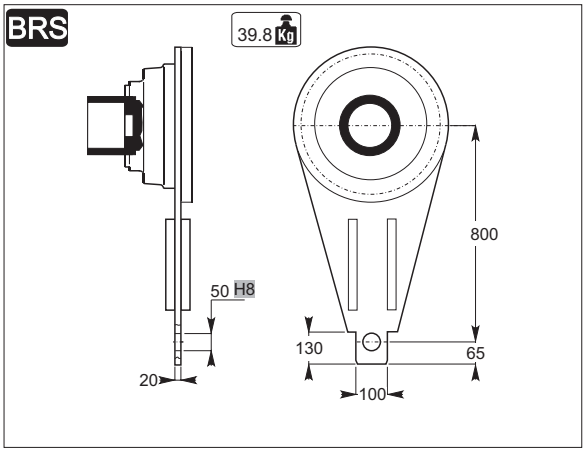
Accessories

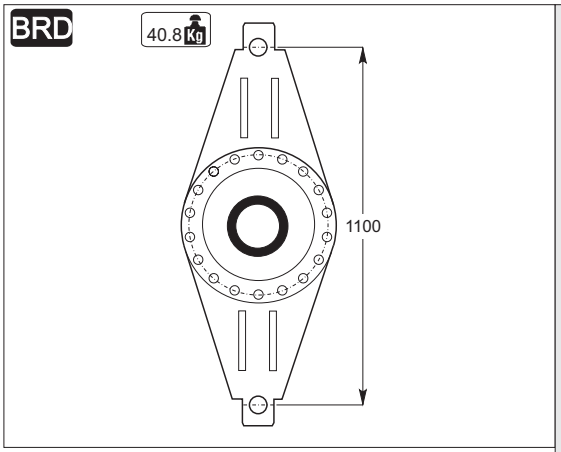


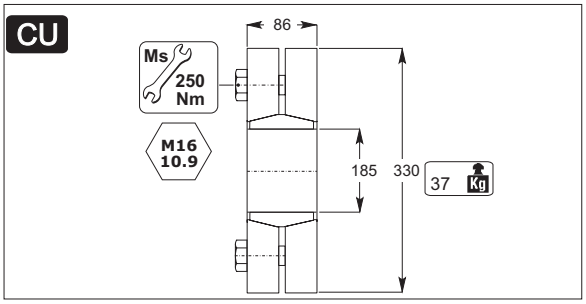


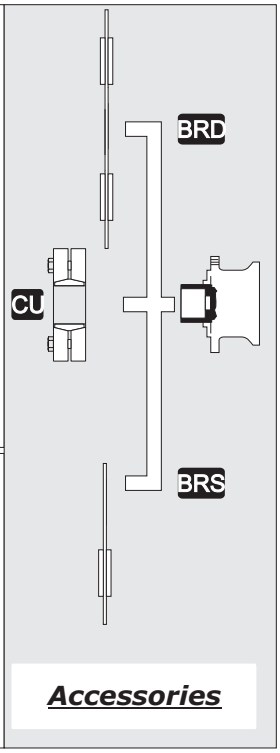
Output Shafts


ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
EXB
390
452
f7
F8
15
192
81.5
173
73
20°
10°
18-n124
424
4
3
476
3504 293
399
3503 290

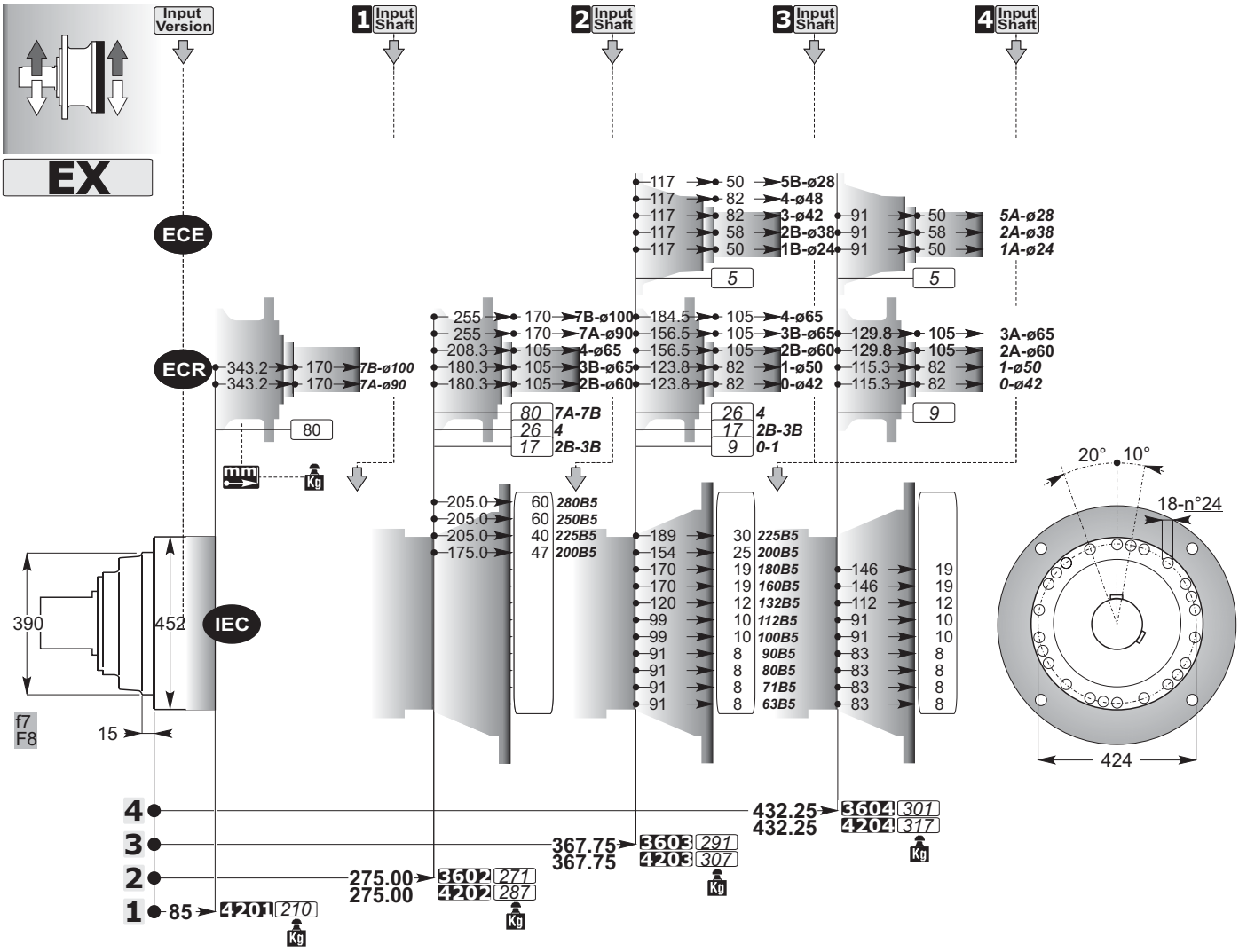

BRS
39.8 Kg
50 H8
20
800
130
65
100

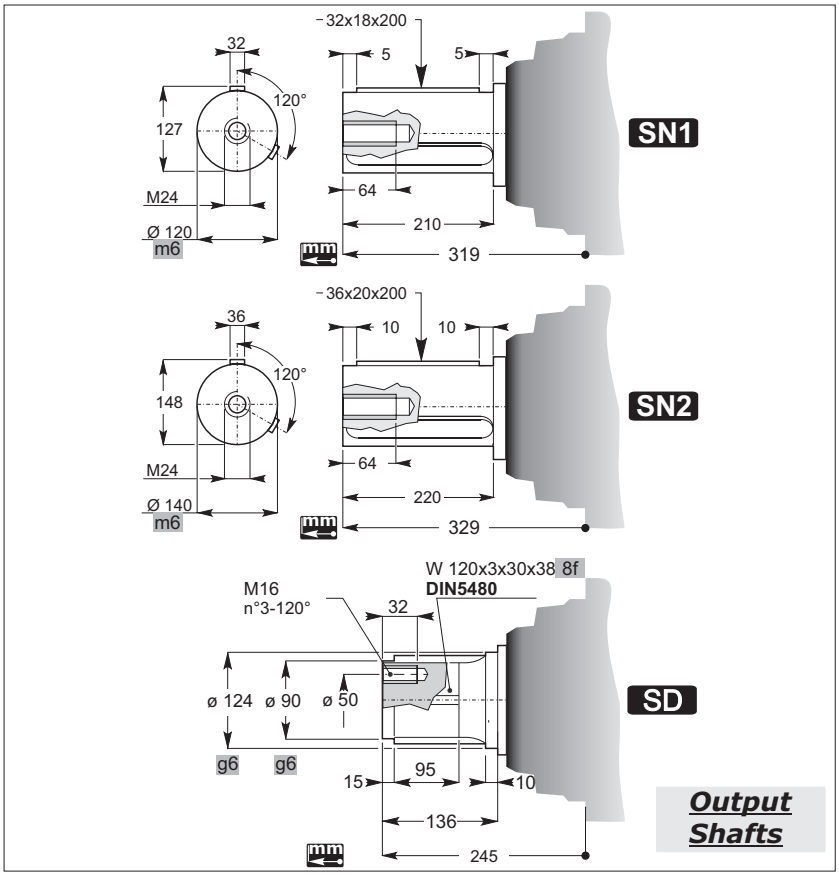

BRD
40.8 Kg
1100

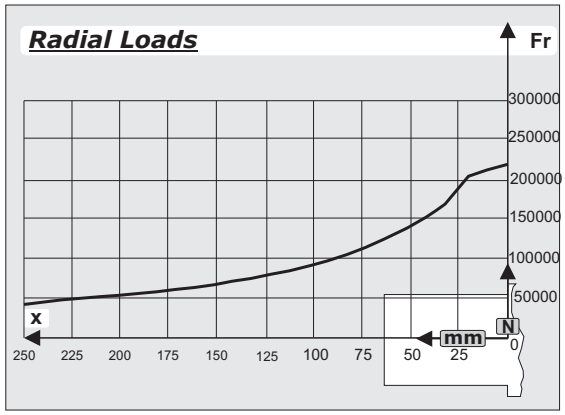

CU
Ms
250
Nm
M16
10.9
86
185
330
37 Kg

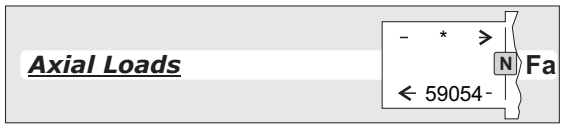

BRD
CU
BRS
Accessories

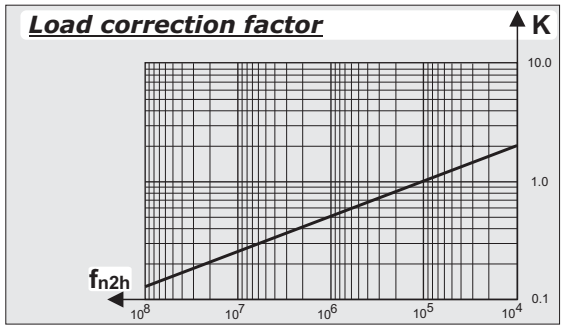
mm
C

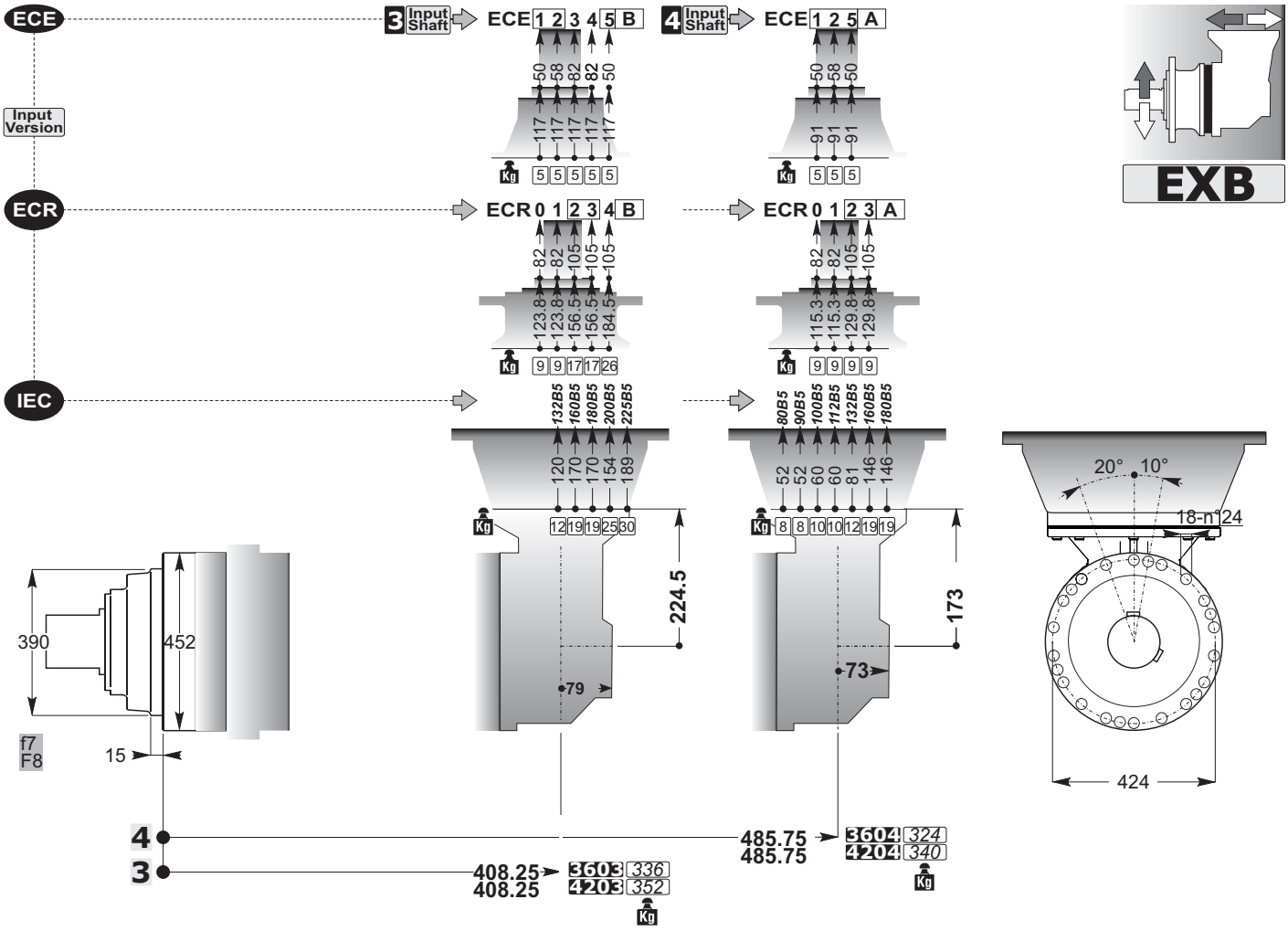

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
5
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
9
343.2 170 7B-ø100
343.2 170 7A-ø90
80
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19
146 19
112 12
91 10
91 10
83 8
83 8
83 8
83 8
20° 10°
18-n°24
424
390
452
f7
F8
15
4
3
2
1
85 4201 210
275.00 3602 271
275.00 4202 287
367.75 3603 291
367.75 4203 307
432.25 3604 301
432.25 4204 317

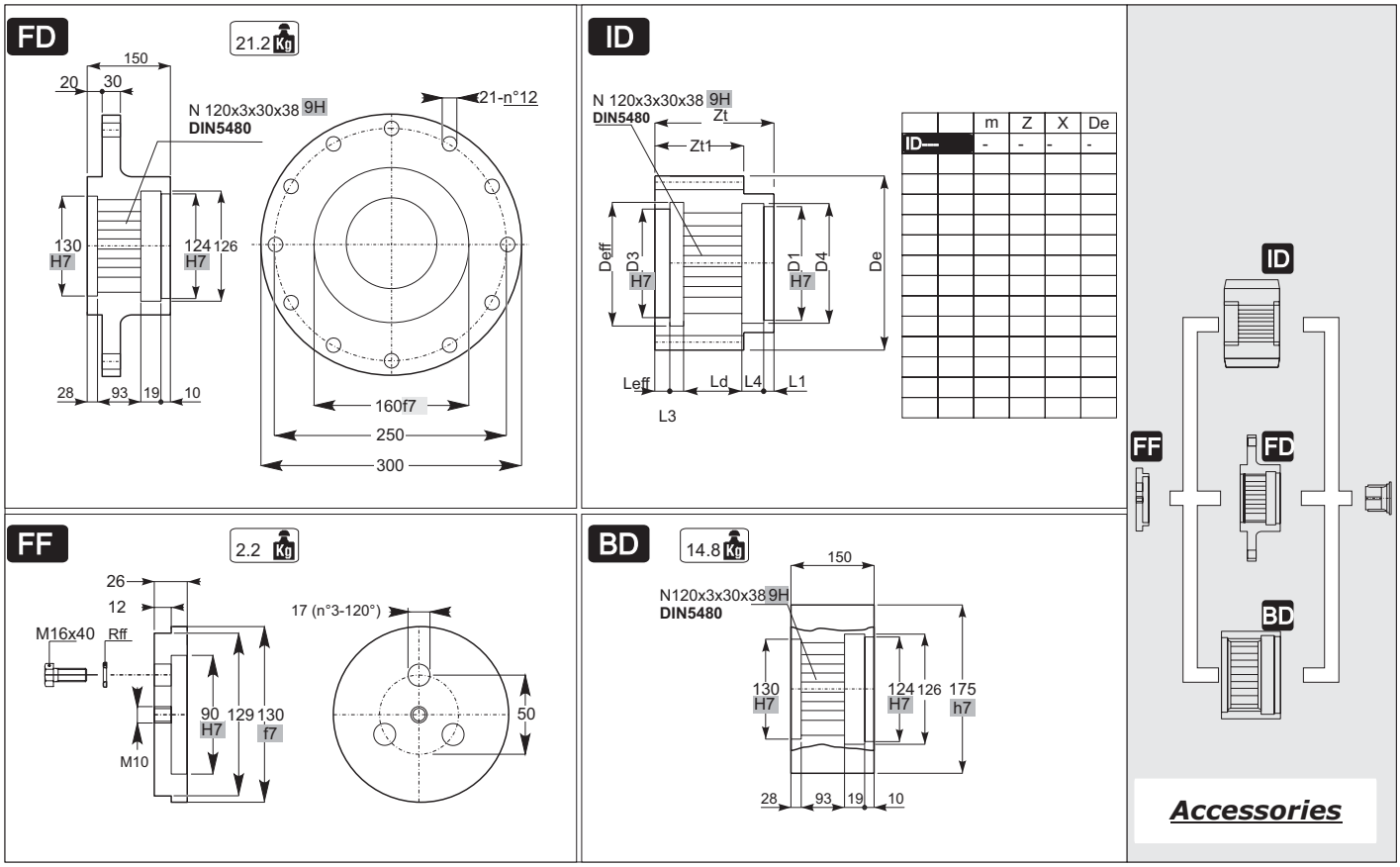

32x18x200
32
5
5
120°
127
M24
Ø 120
m6
64
210
319
SN1
36x20x200
36
10
10
120°
148
M24
Ø 140
m6
64
220
329
SN2
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 124
ø 90
ø 50
g6
g6
15
95
10
136
245
SD
Output Shafts

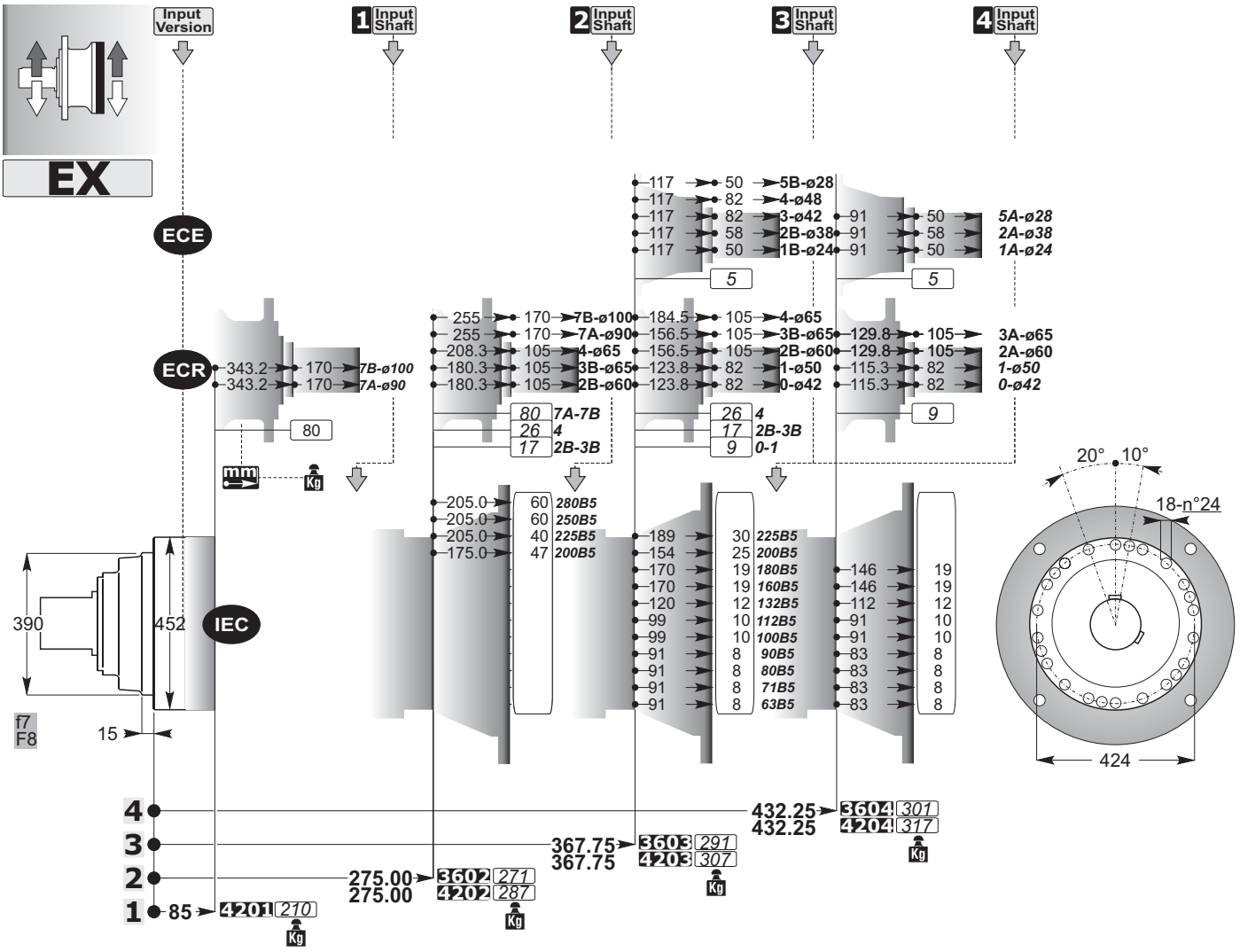

Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250 225 200 175 150 125 100 75 50 25
mm
N

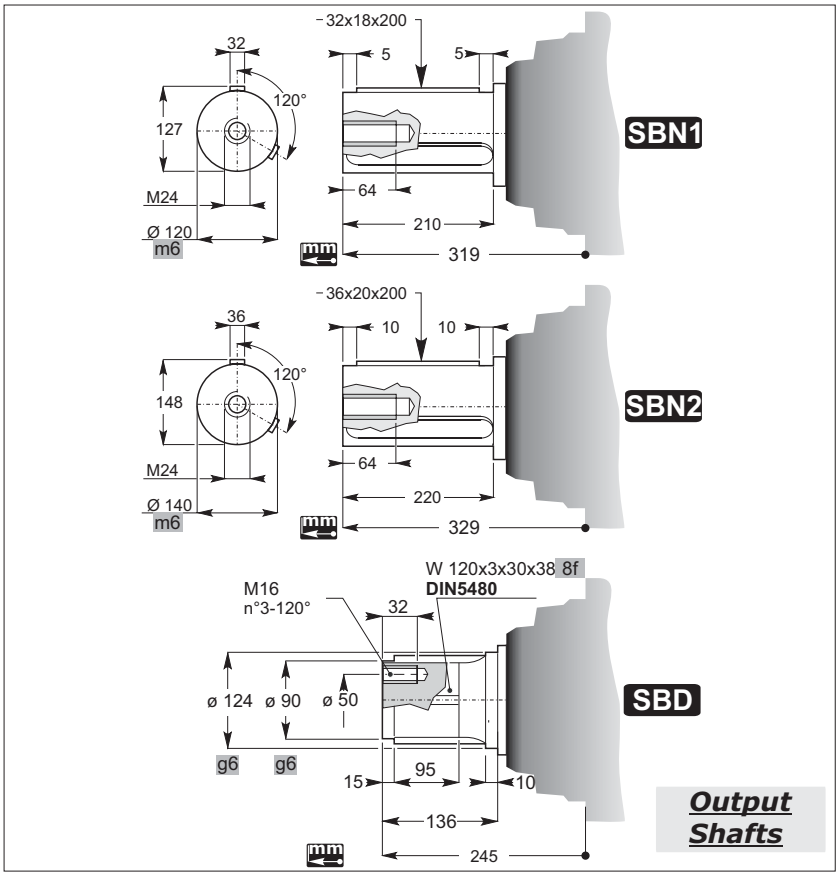

Axial Loads
N
Fa
59054

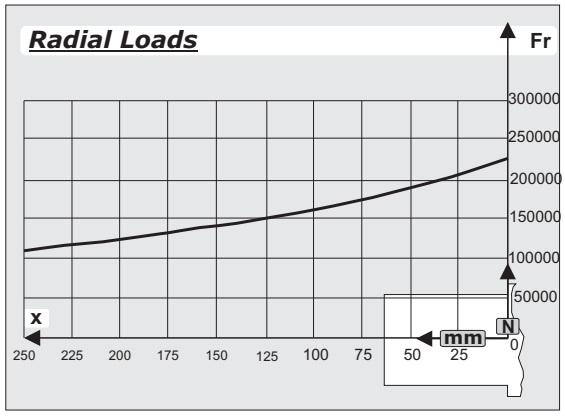

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4

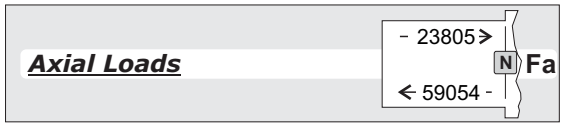

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
390
452
f7
F8
15
224.5
173
79
73
20°
10°
18-n124
424
4
3
485.75
485.75
3604 324
4204 340
408.25
408.25
3603 336
4203 352

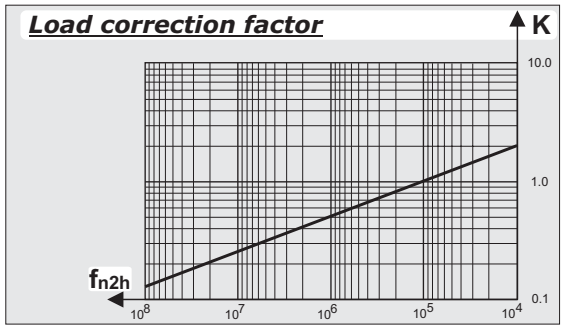

FD
21.2 Kg
150
20
30
N 120x3x30x38 9H
DIN5480
21-n°12
130 H7
124 126 H7
28
93
19
10
160f7
250
300
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
2.2 Kg
26
12
M16x40
Rff
17 (n°3-120°)
90 H7
129
130 f7
M10
50
BD
14.8 Kg
150
N120x3x30x38 9H
DIN5480
130 H7
124 126 H7
175 h7
28
93
19
10
ID
FF
FD
BD
Accessories

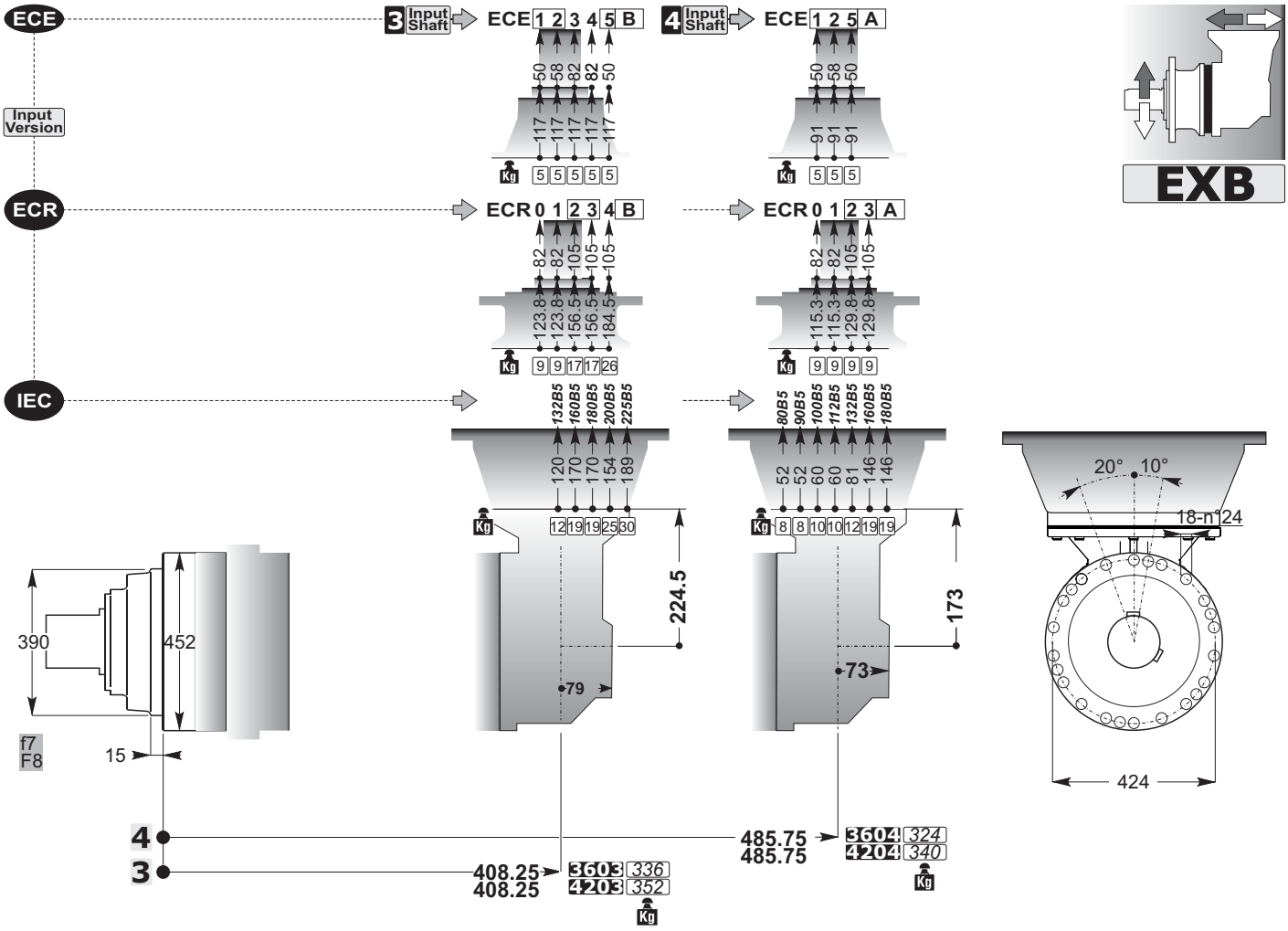

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 → 50 → 5B-ø28
117 → 82 → 4-ø48
117 → 82 → 3-ø42
117 → 58 → 2B-ø38
117 → 50 → 1B-ø24
91 → 50 → 5A-ø28
91 → 58 → 2A-ø38
91 → 50 → 1A-ø24
5
255 → 170 → 7B-ø100
255 → 170 → 7A-ø90
208.3 → 105 → 4-ø65
180.3 → 105 → 3B-ø65
180.3 → 105 → 2B-ø60
184.5 → 105 → 4-ø65
156.5 → 105 → 3B-ø65
156.5 → 105 → 2B-ø60
123.8 → 82 → 1-ø50
123.8 → 82 → 0-ø42
129.8 → 105 → 3A-ø65
129.8 → 105 → 2A-ø60
115.3 → 82 → 1-ø50
115.3 → 82 → 0-ø42
343.2 → 170 → 7B-ø100
343.2 → 170 → 7A-ø90
80
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
9
20°
10°
18-n°24
424
390
452
f7
F8
15
205.0 → 60 280B5
205.0 → 60 250B5
205.0 → 40 225B5
175.0 → 47 200B5
189 → 30 225B5
154 → 25 200B5
170 → 19 180B5
170 → 19 160B5
120 → 12 132B5
99 → 10 112B5
99 → 10 100B5
91 → 8 90B5
91 → 8 80B5
91 → 8 71B5
91 → 8 63B5
146 → 19
146 → 19
112 → 12
91 → 10
91 → 10
83 → 8
83 → 8
83 → 8
83 → 8
4
3
2
1
432.25 → 3604 301
432.25 → 4204 317
367.75 → 3603 291
367.75 → 4203 307
275.00 → 3602 271
275.00 → 4202 287
85 → 4201 210
Kg
mm

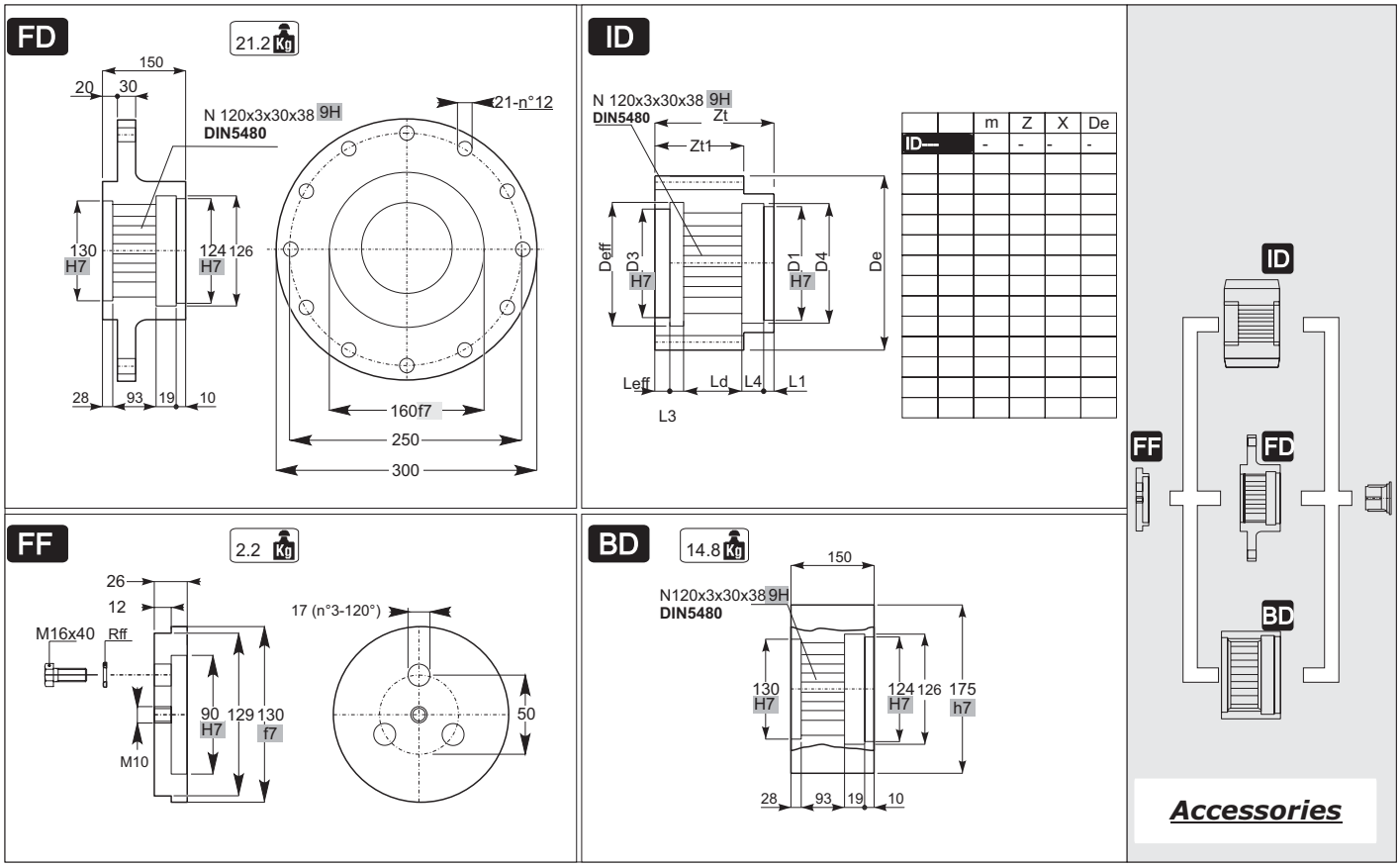

32x18x200
32
120°
127
M24
Ø 120
m6
5
5
64
210
319
SBN1
36x20x200
36
120°
148
M24
Ø 140
m6
10
10
64
220
329
SBN2
W 120x3x30x38 8f
DIN5480
M16
n°3-120°
32
ø 124
ø 90
ø 50
g6
g6
15
95
10
136
245
SBD
Output Shafts
mm


Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
mm
N

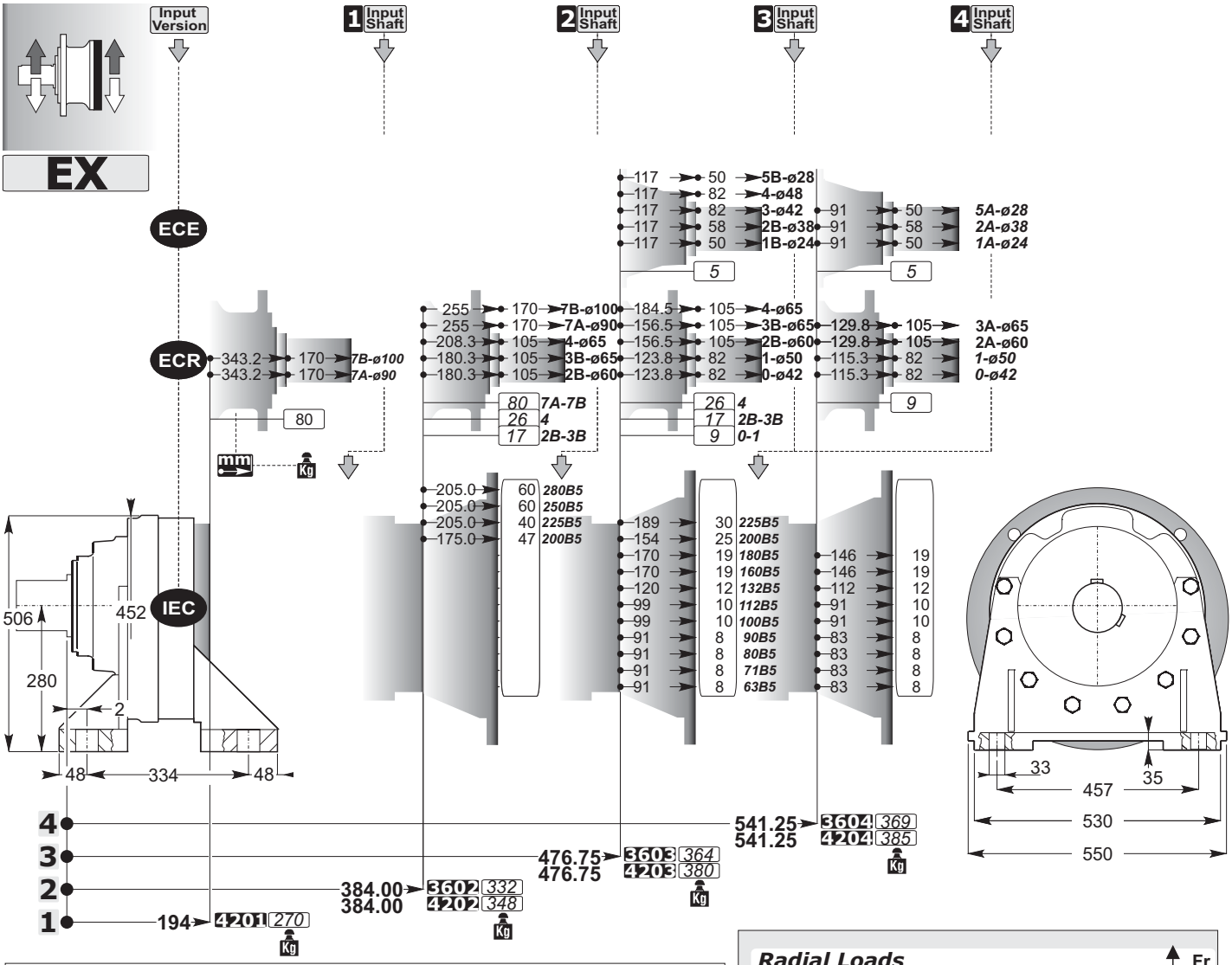

Axial Loads
23805
N
Fa
59054

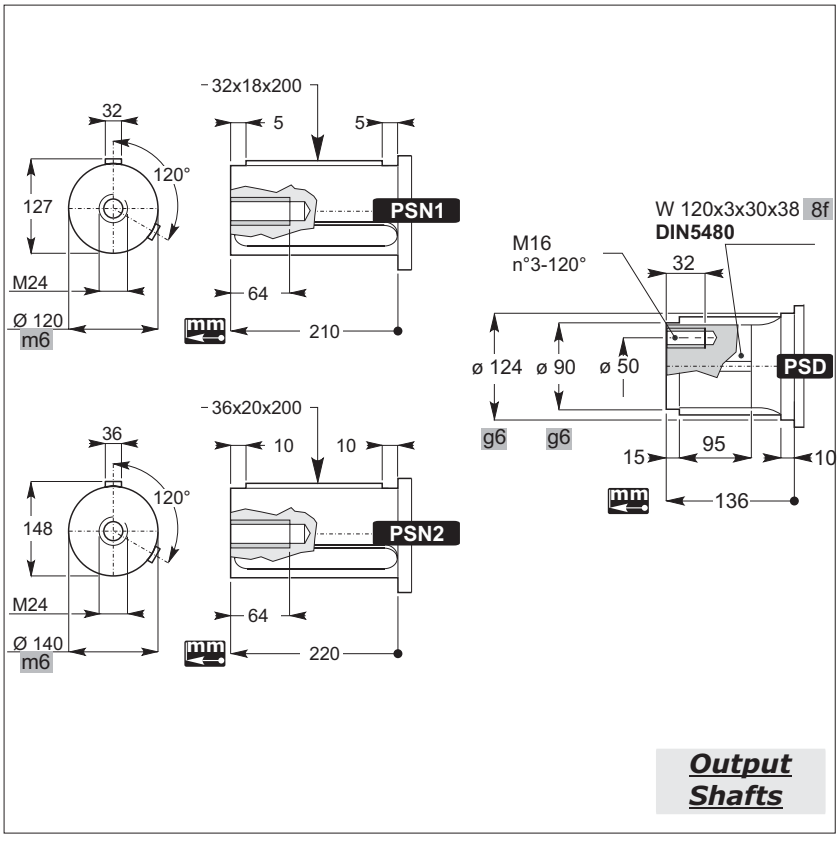

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4


ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
390
452
f7
F8
15
224.5
173
79
73
20°
10°
18-n124
424
4
3
485.75
485.75
3604 324
4204 340
408.25
408.25
3603 336
4203 352

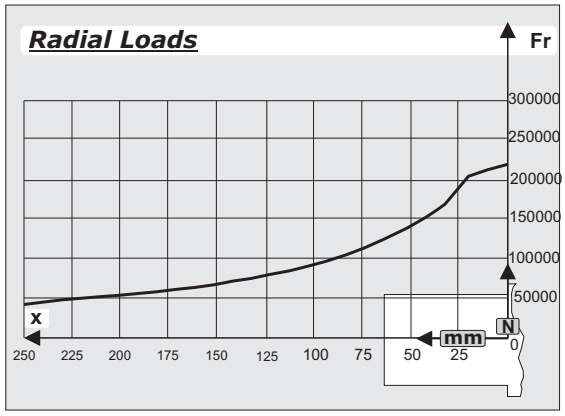

FD
21.2 Kg
150
20
30
N 120x3x30x38 9H
DIN5480
21-n°12
130 H7
124 H7
126
28
93
19
10
160f7
250
300
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
2.2 Kg
26
12
M16x40
Rff
17 (n°3-120°)
90 H7
129
130 f7
M10
50
BD
14.8 Kg
150
N120x3x30x38 9H
DIN5480
130 H7
124 H7
126
175 h7
28
93
19
10
ID
FF
FD
BD
Accessories

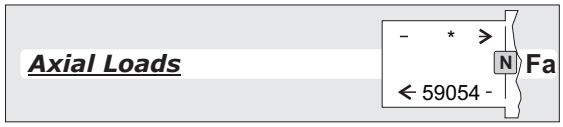
mm
C

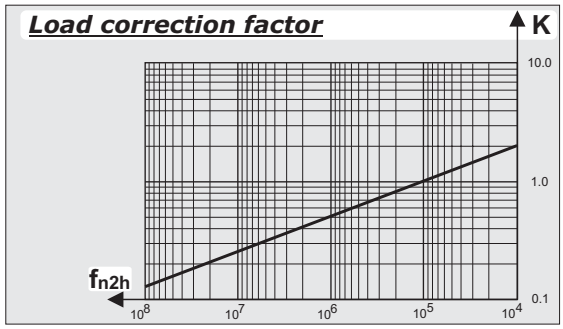


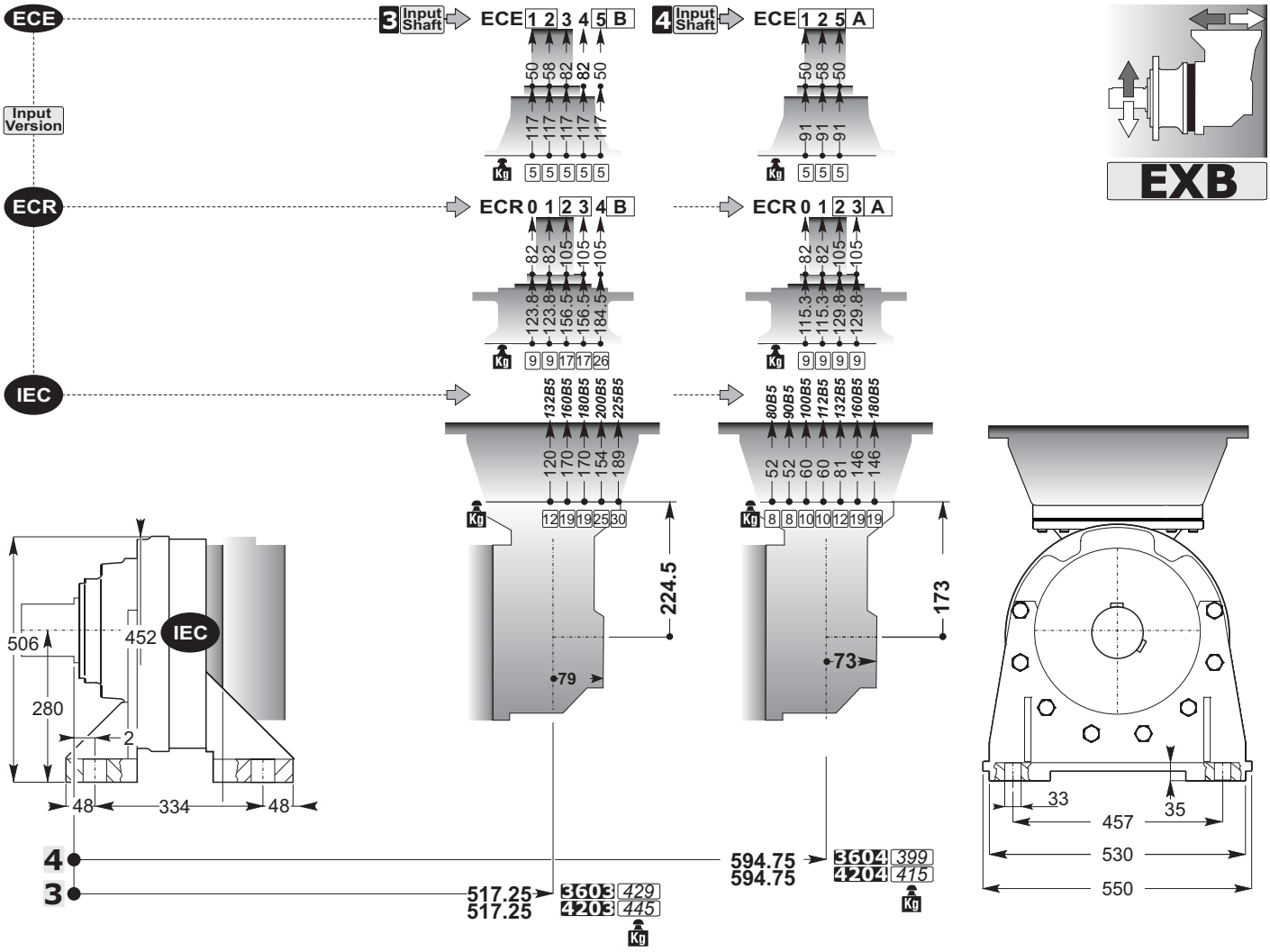


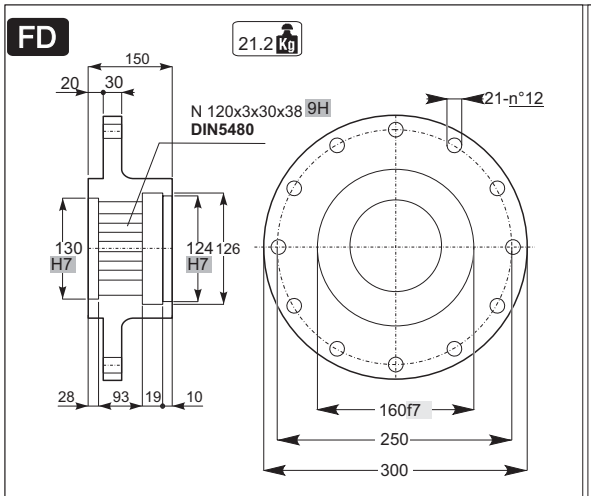
Output Shafts

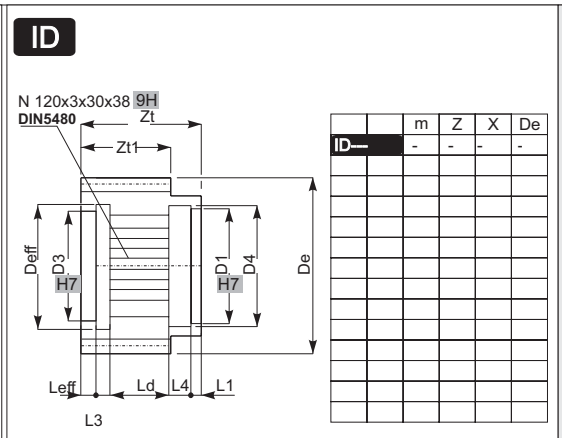


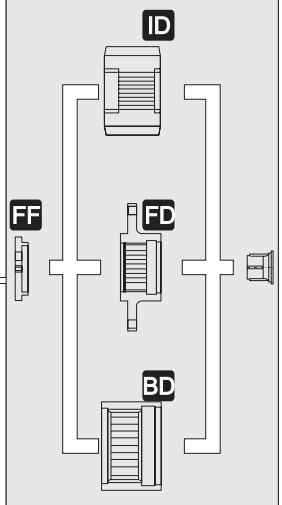




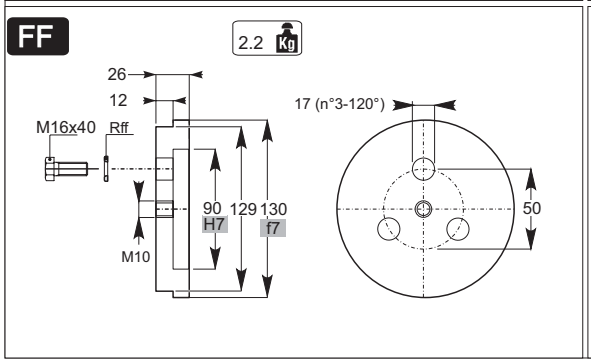


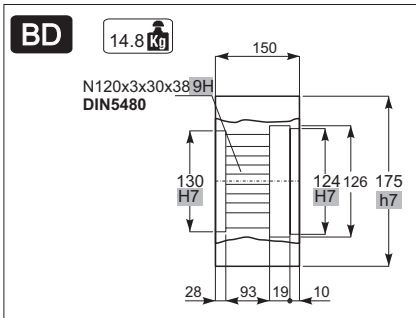


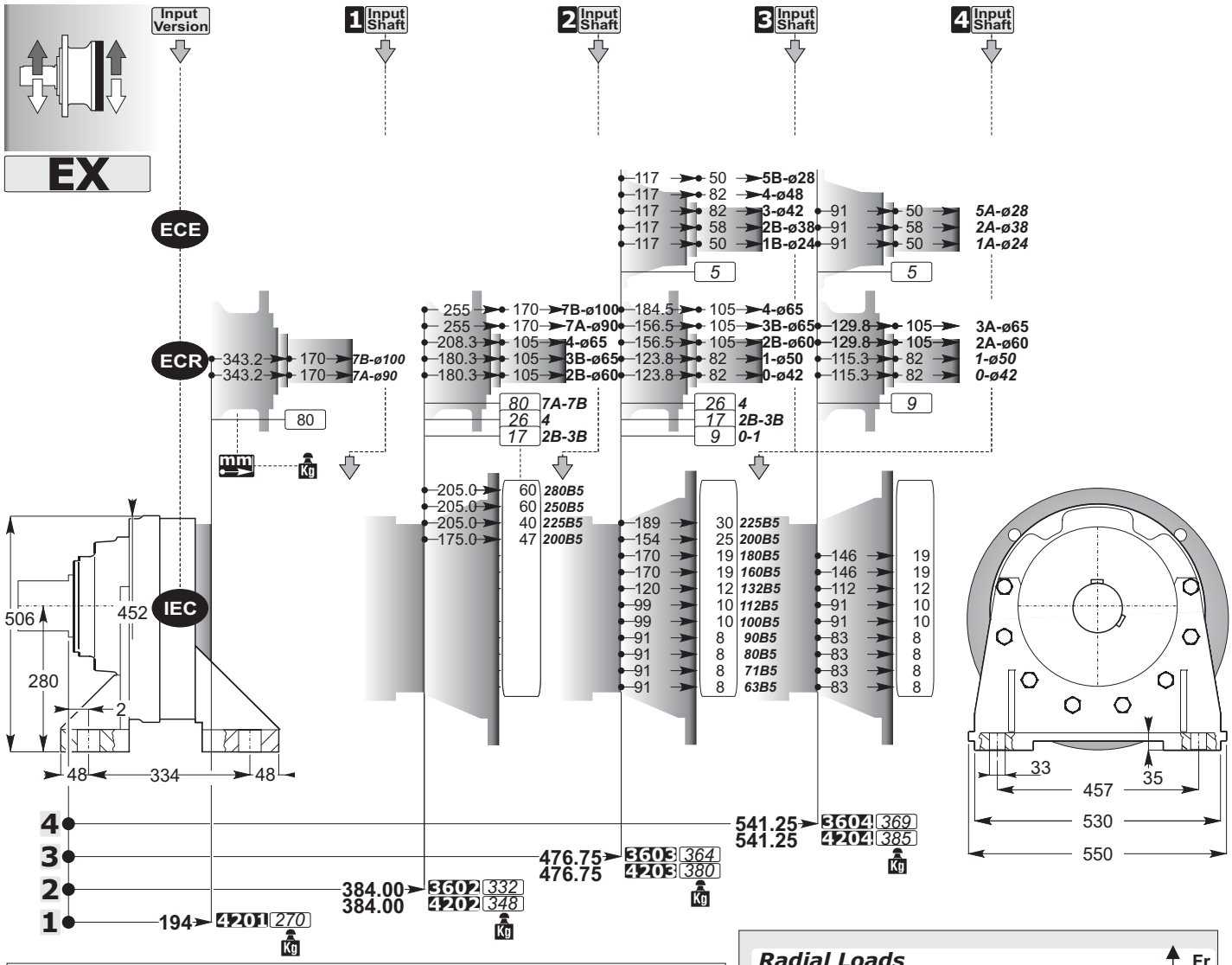


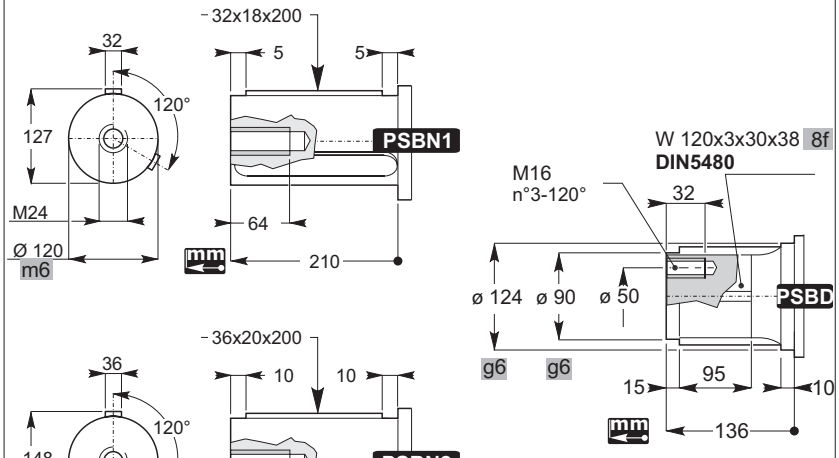


Accessories

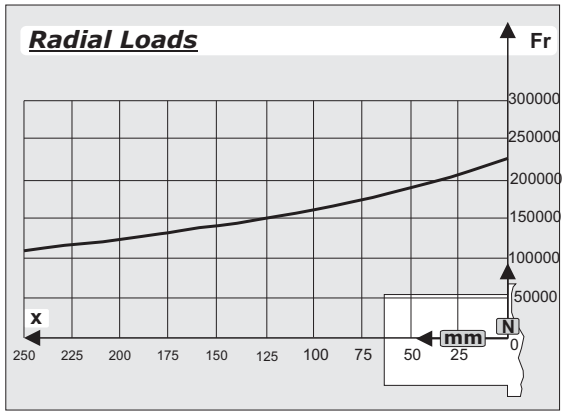


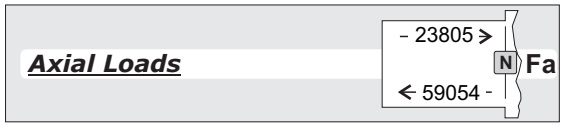


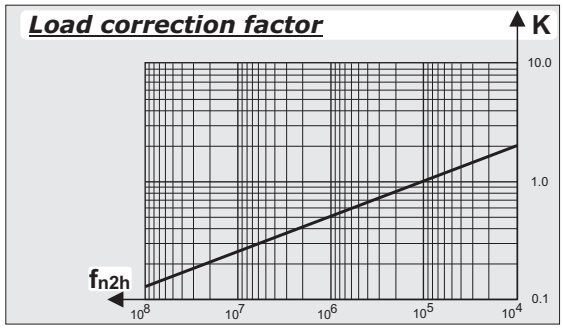


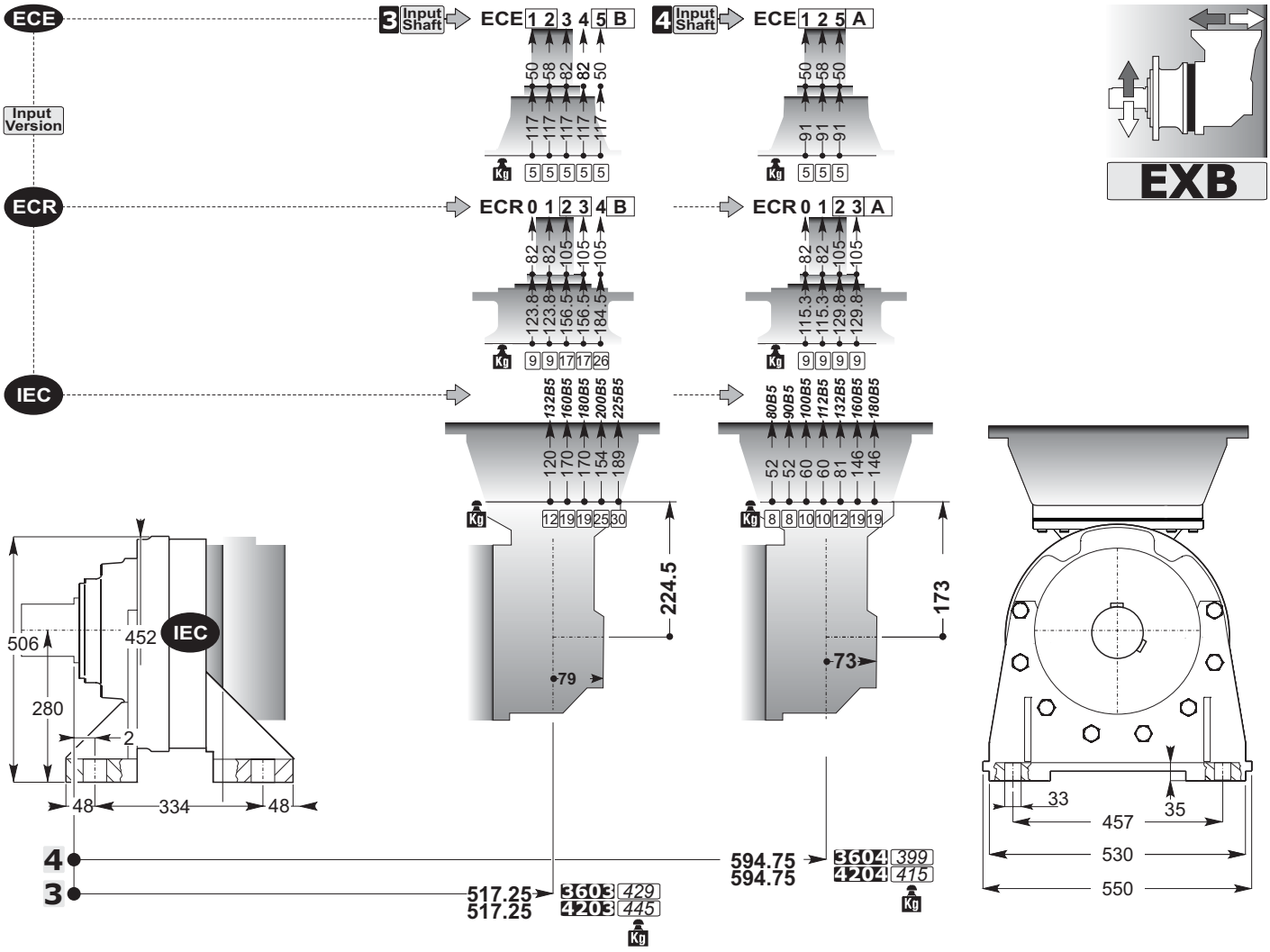


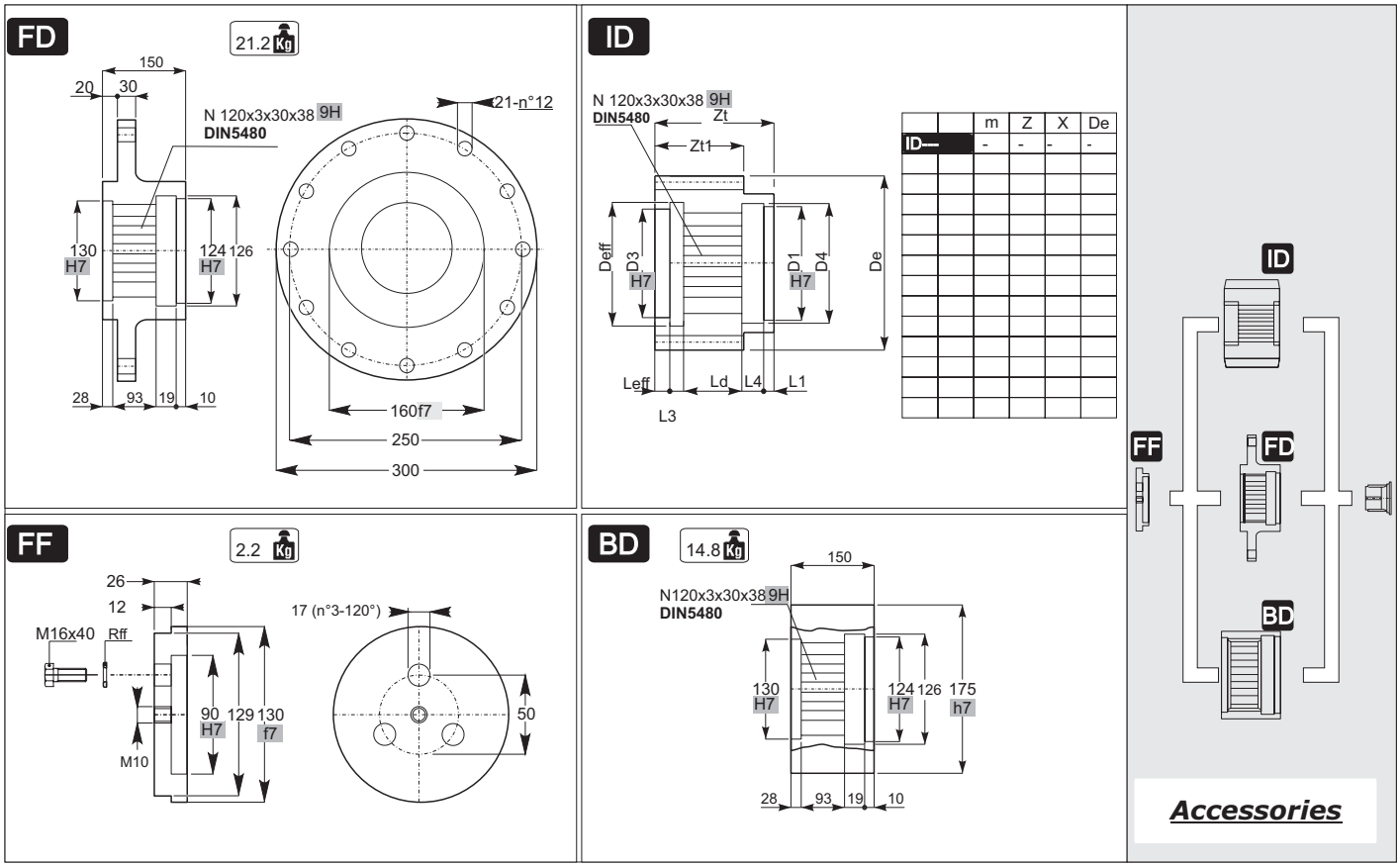
Output Shafts

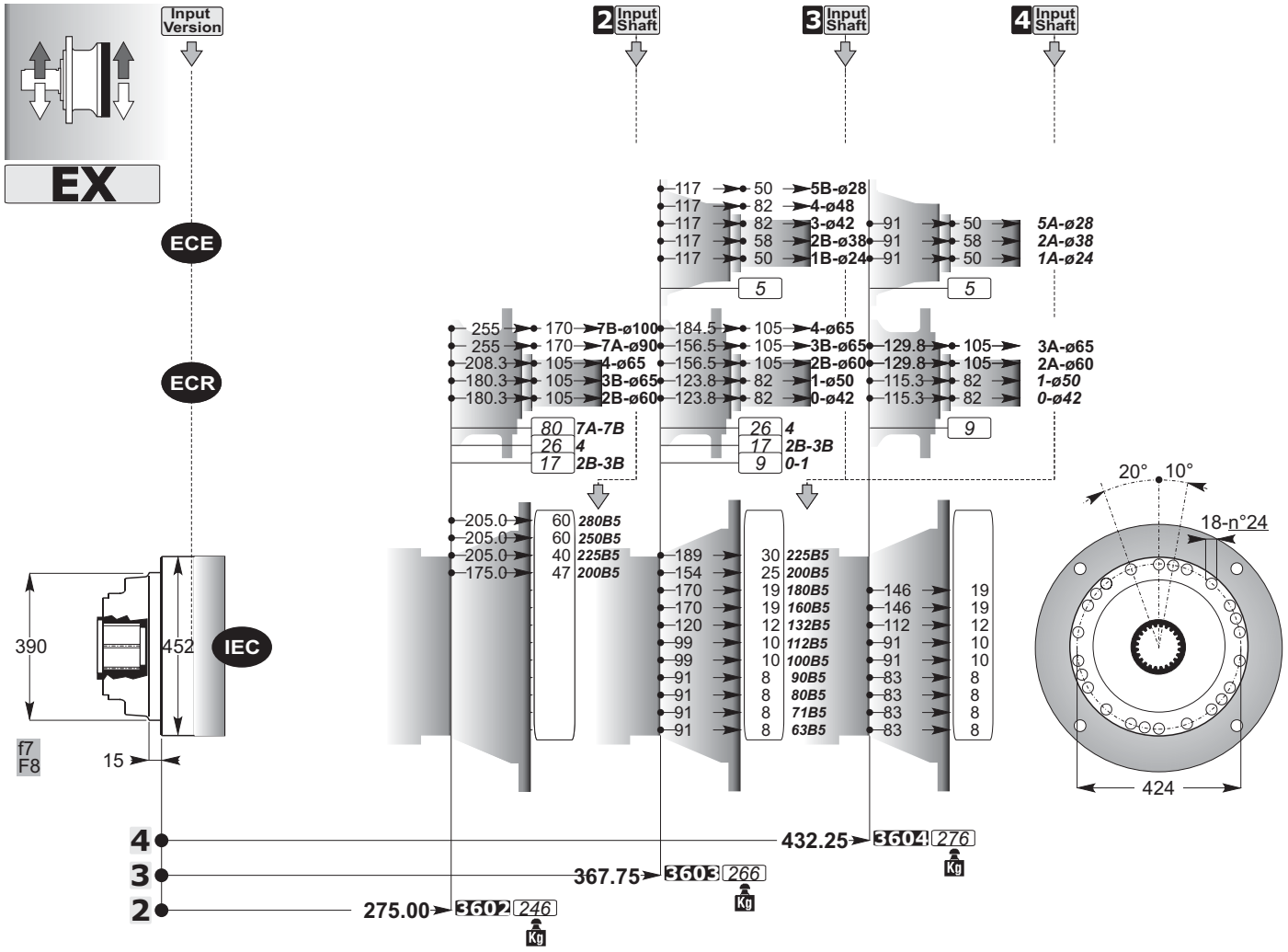


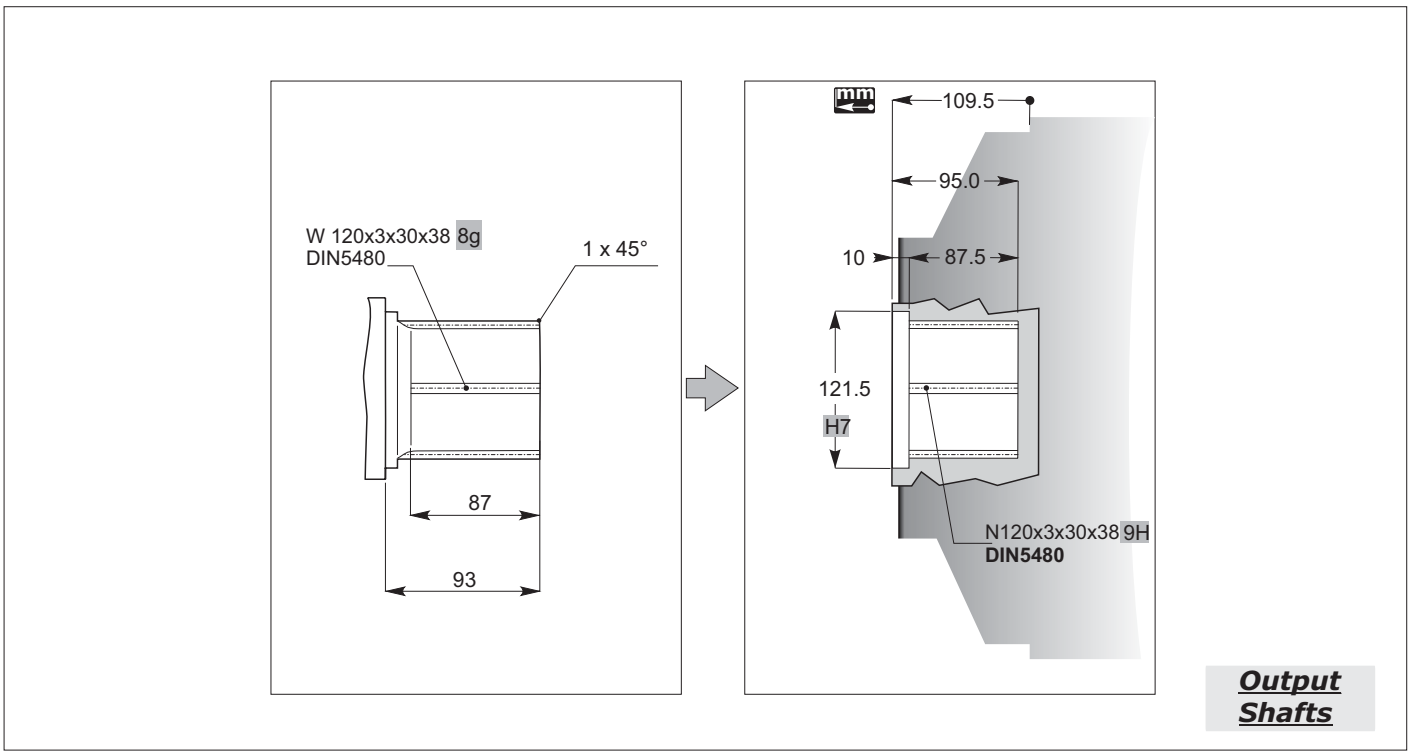


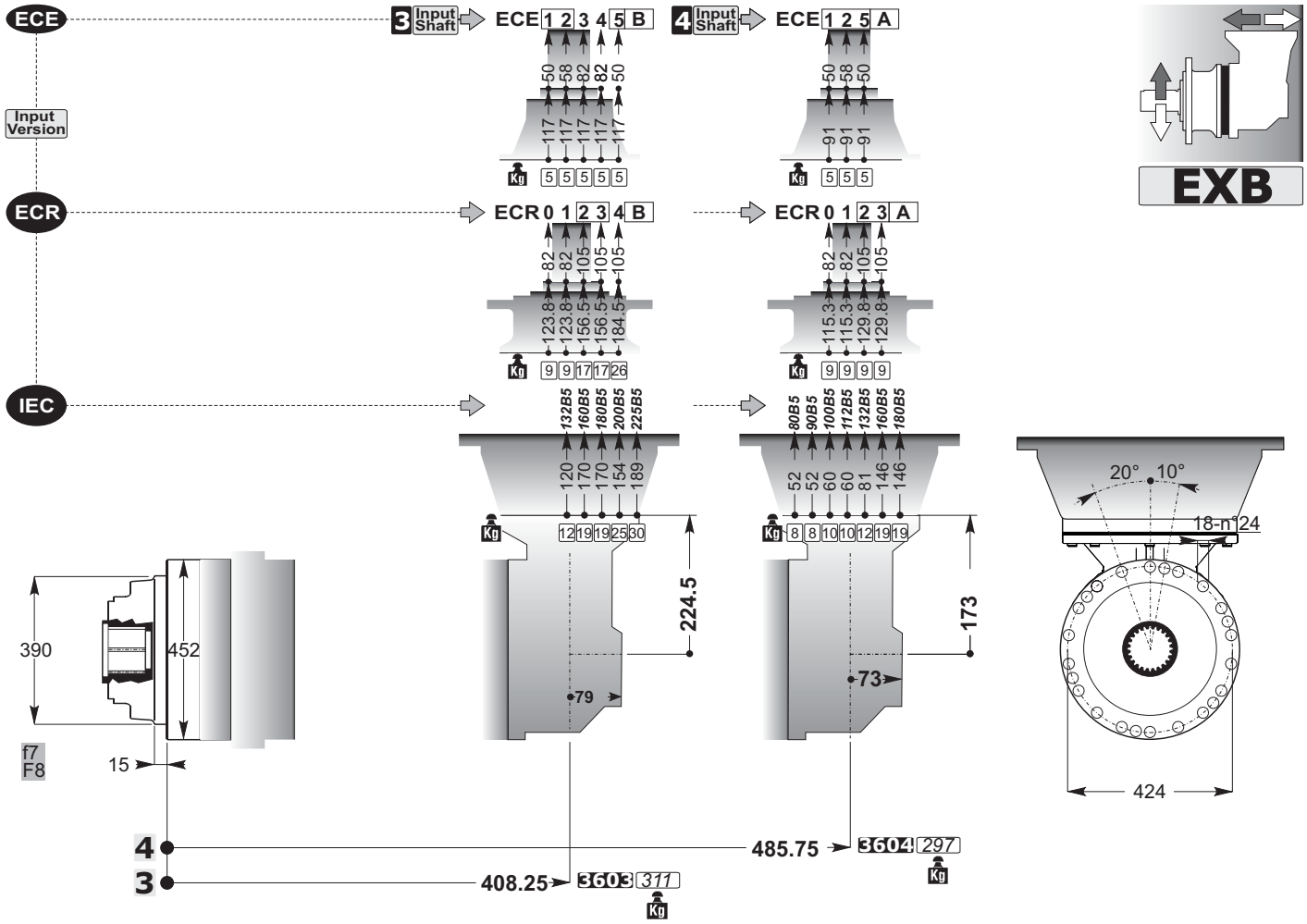


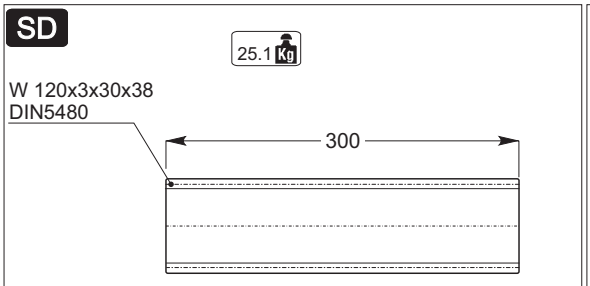

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
EXB
IEC
506
452
280
2
48
334
48
224.5
173
79
73
33
35
457
530
550
4
3
594.75
594.75
3604 399
4204 415
517.25
517.25
3603 429
4203 445

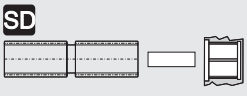

FD
21.2 Kg
150
20
30
N 120x3x30x38 9H
DIN5480
21-n°12
130 H7
124 H7
126
28
93
19
10
160f7
250
300
ID
N 120x3x30x38 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
2.2 Kg
26
12
M16x40
Rff
17 (n°3-120°)
90 H7
129
130 f7
M10
50
BD
14.8 Kg
150
N120x3x30x38 9H
DIN5480
130 H7
124 H7
126
175 h7
28
93
19
10
ID
FF
FD
BD
Accessories


Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
390
452
f7
F8
15
20°
10°
18-n°24
424
4
3
2
432.25
3604
276
367.75
3603
266
275.00
3602
246
Kg

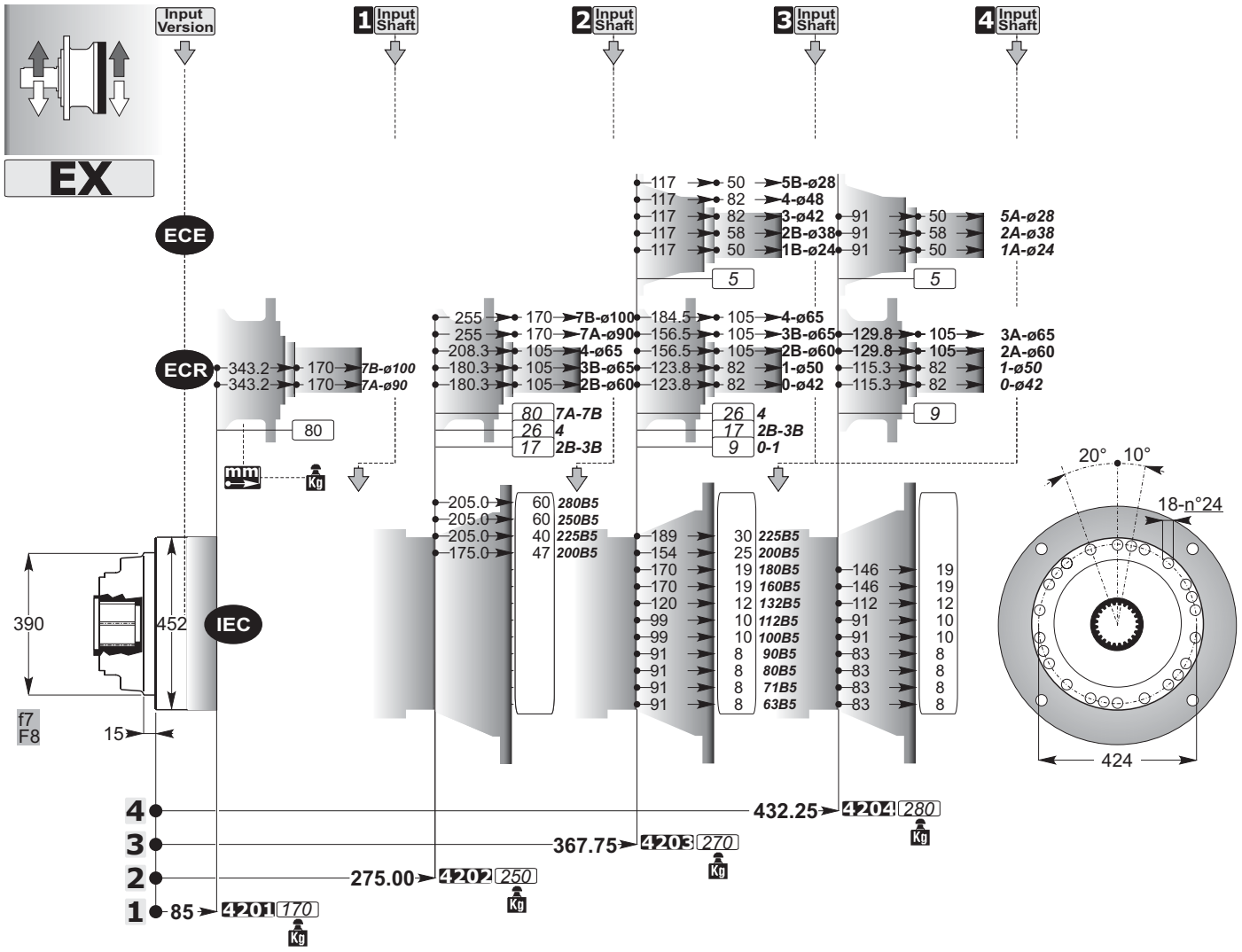

W 120x3x30x38 8g
DIN5480
1 x 45°
87
93
mm
109.5
95.0
10
87.5
121.5
H7
N120x3x30x38 9H
DIN5480
Output Shafts

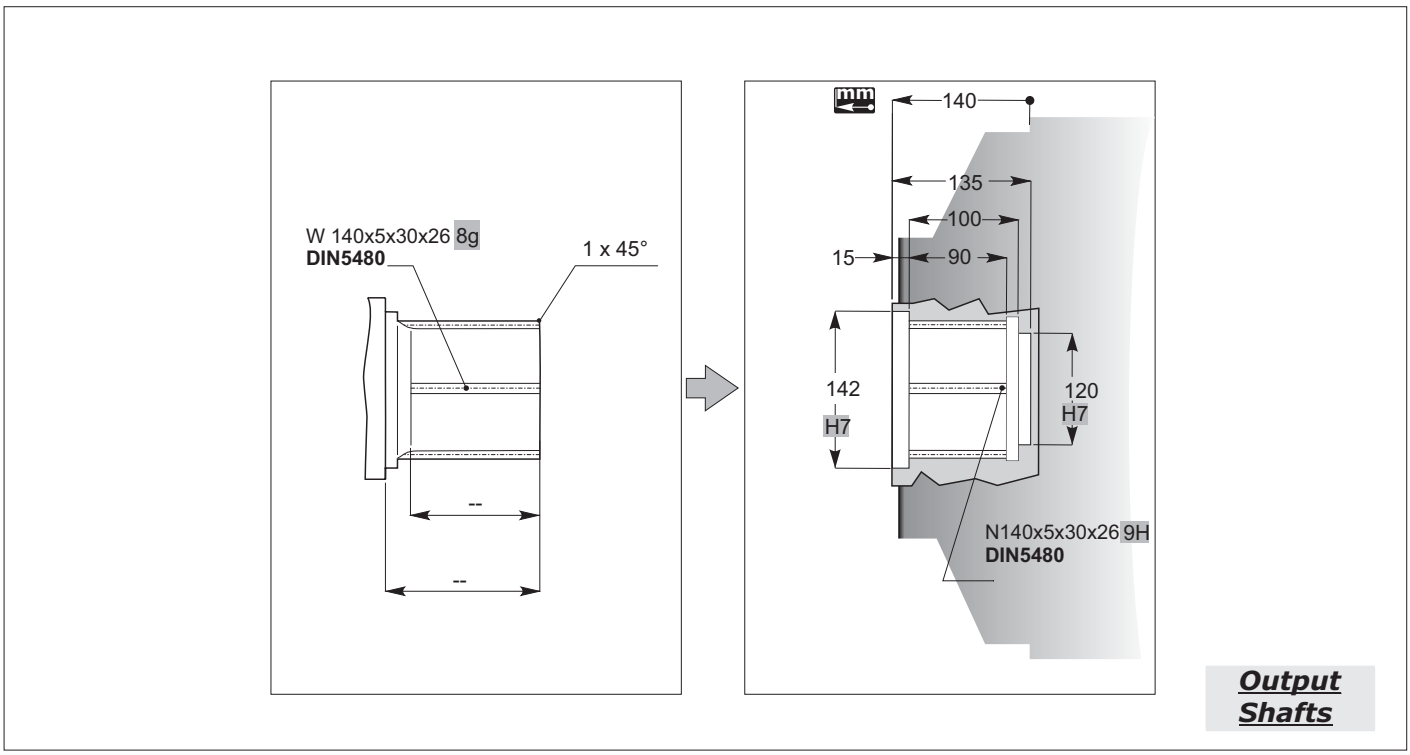


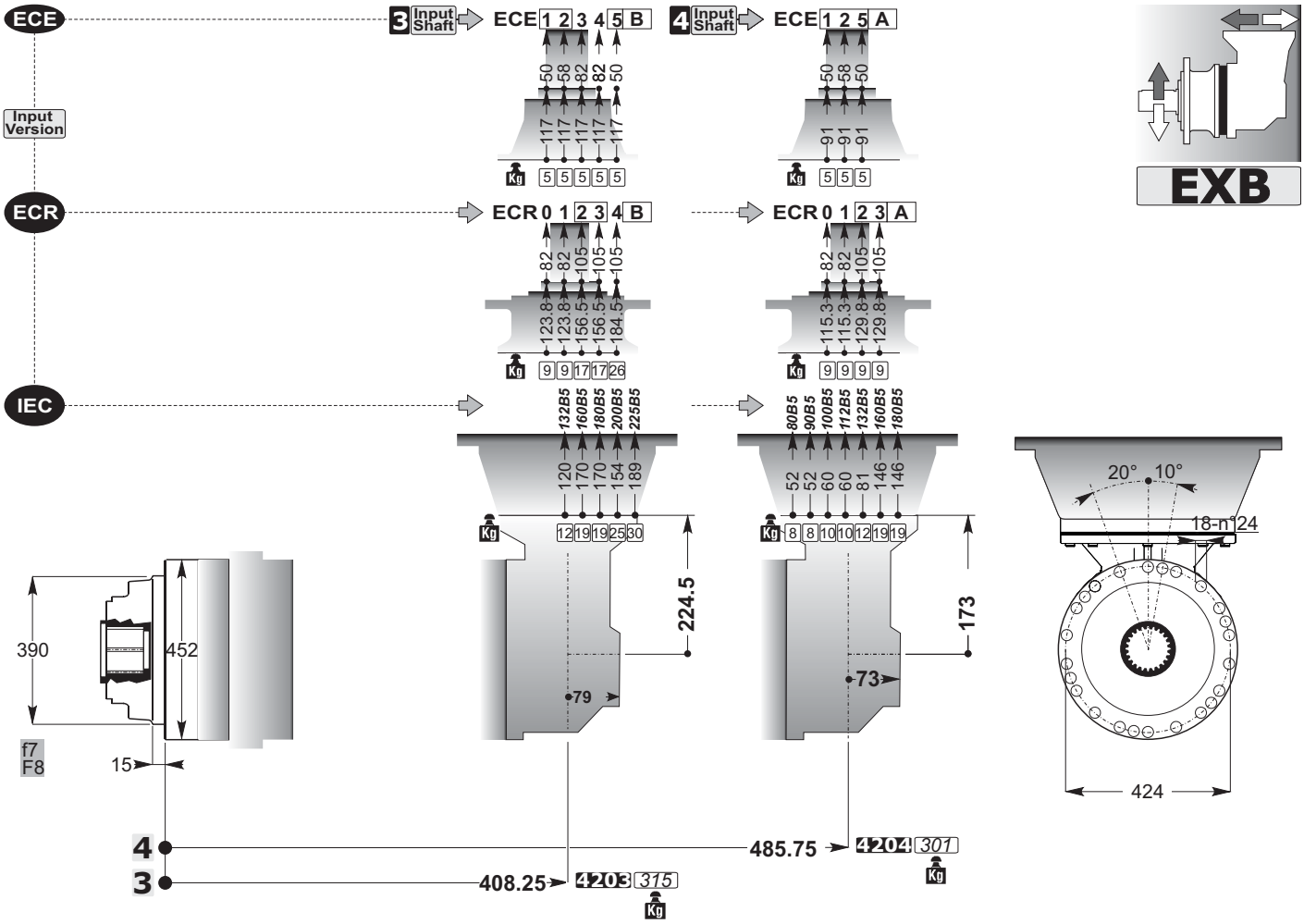


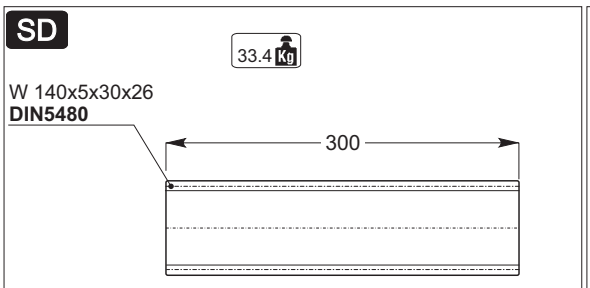


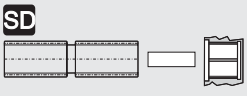
Accessories


Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
91 50 5A-ø28
91 58 2A-ø38
91 50 1A-ø24
5
5
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
129.8 105 3A-ø65
129.8 105 2A-ø60
115.3 82 1-ø50
115.3 82 0-ø42
80 7A-7B
26 4
17 2B-3B
26 4
17 2B-3B
9 0-1
9
343.2 170 7B-ø100
343.2 170 7A-ø90
80
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
189 30 225B5
154 25 200B5
170 19 180B5
170 19 160B5
120 12 132B5
99 10 112B5
99 10 100B5
91 8 90B5
91 8 80B5
91 8 71B5
91 8 63B5
146 19
146 19
112 12
91 10
91 10
83 8
83 8
83 8
83 8
20° 10°
18-n°24
424
390
452
f7
F8
15
4
3
2
1
85 4201 170
275.00 4202 250
367.75 4203 270
432.25 4204 280
Kg
mm

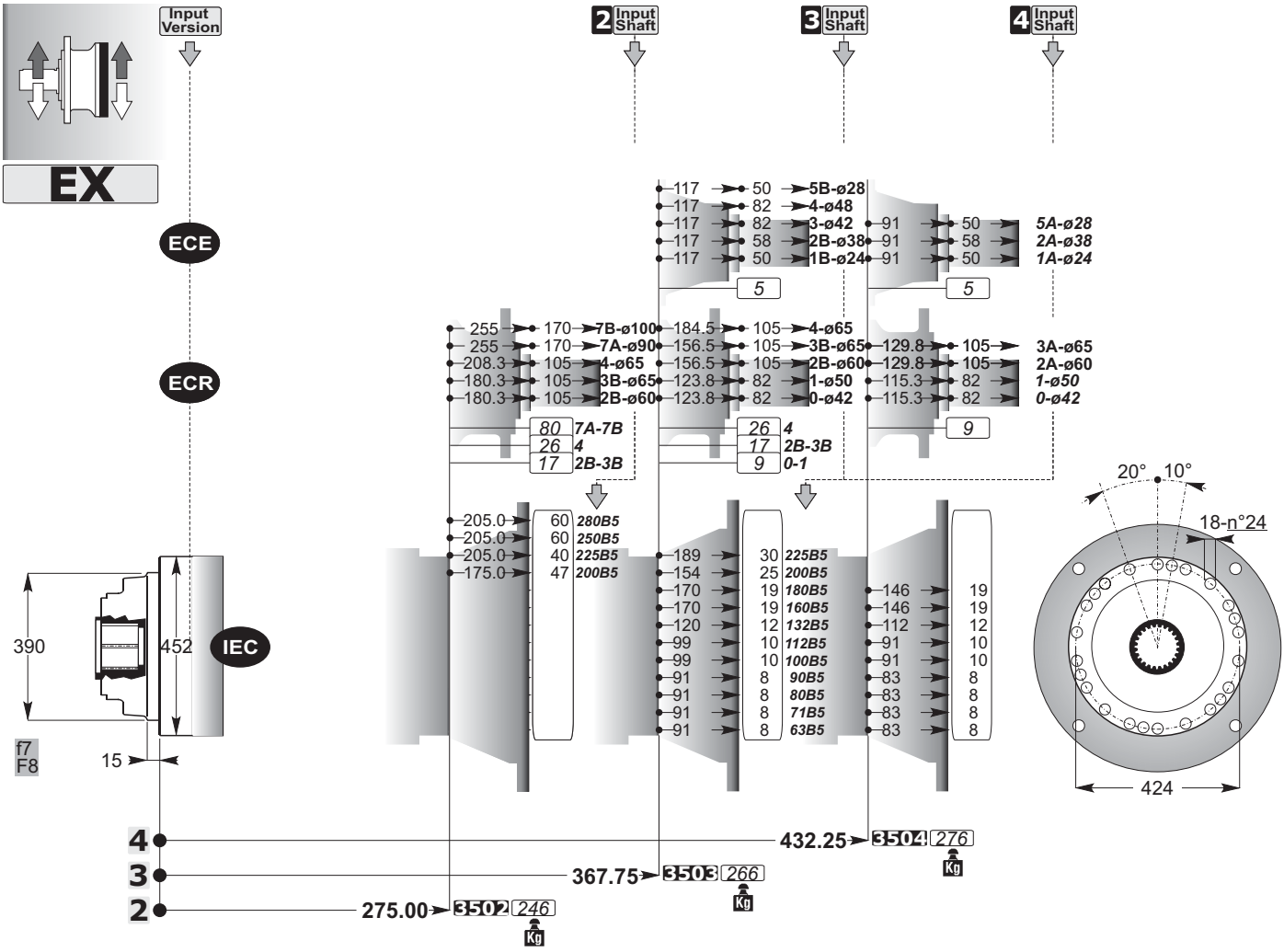

W 140x5x30x26 8g
DIN5480
1 x 45°
mm
140
135
100
15
90
142
H7
120
H7
N140x5x30x26 9H
DIN5480
Output Shafts

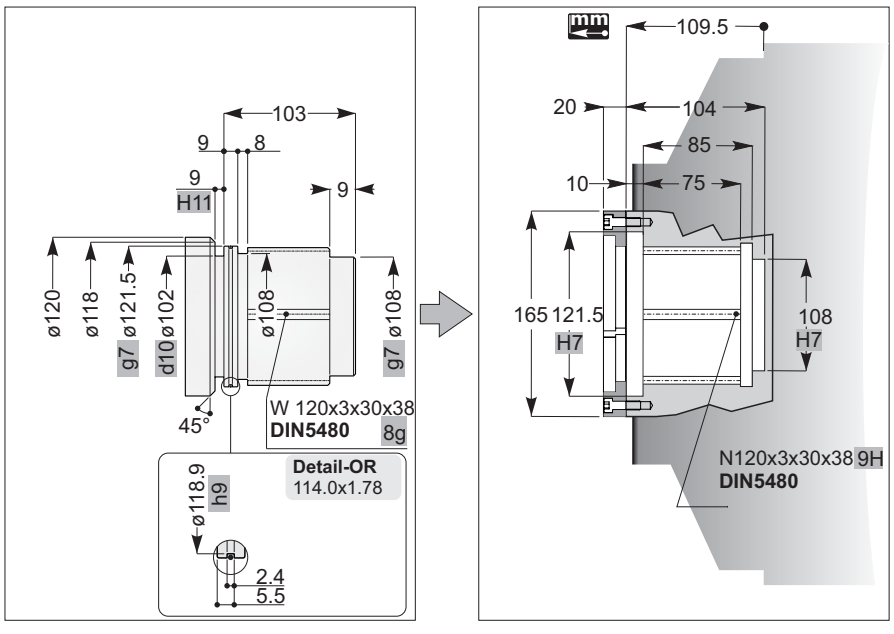




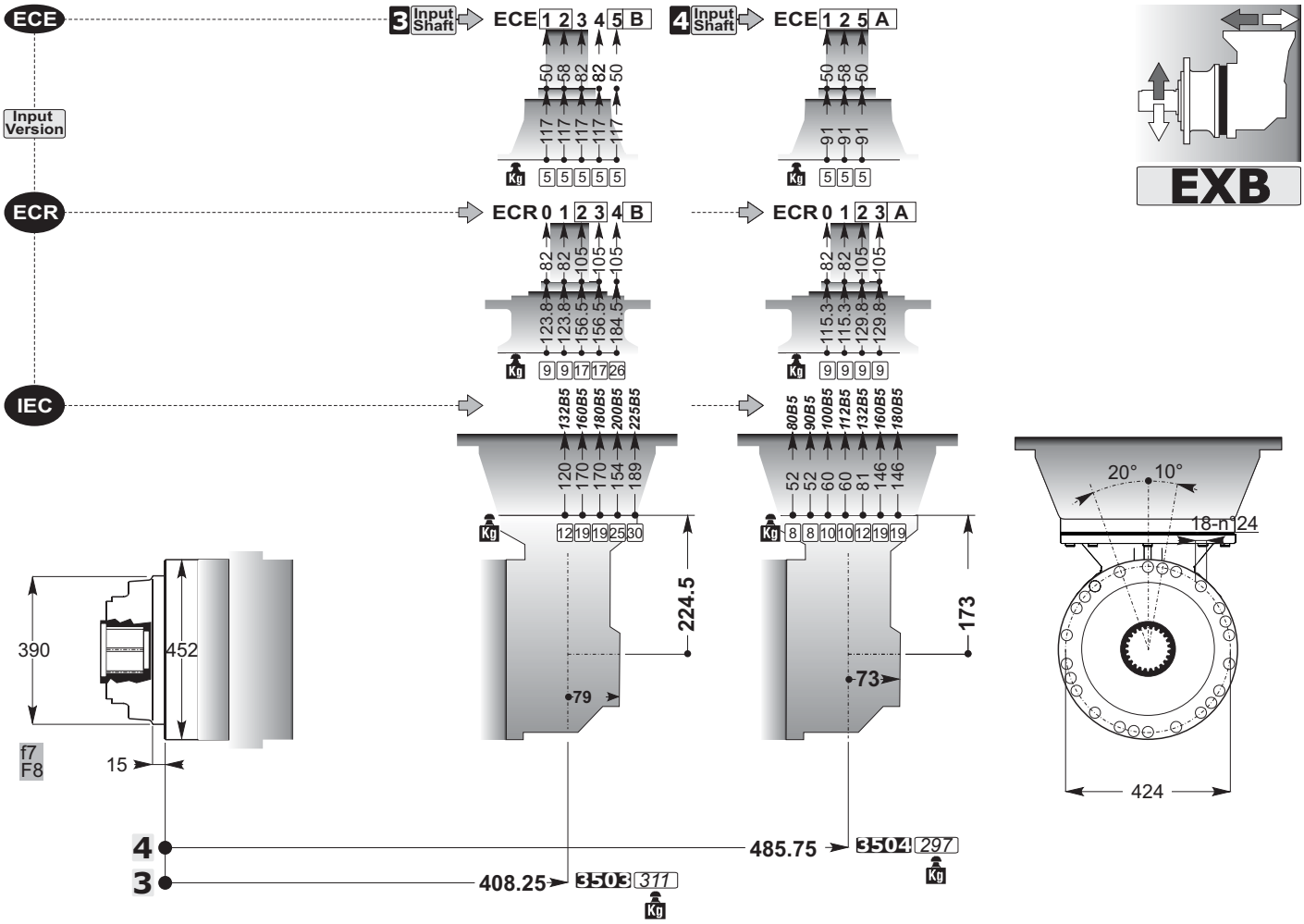


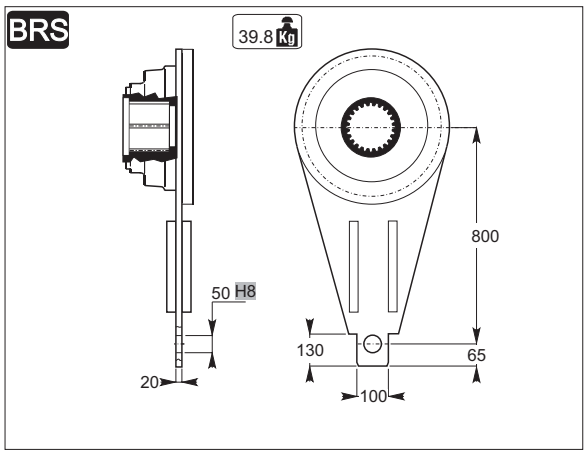
Accessories

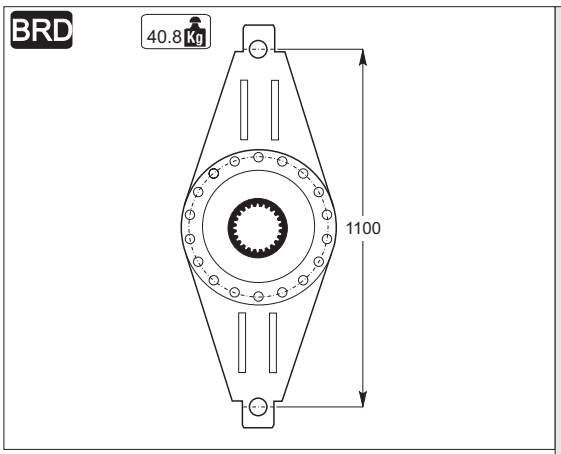


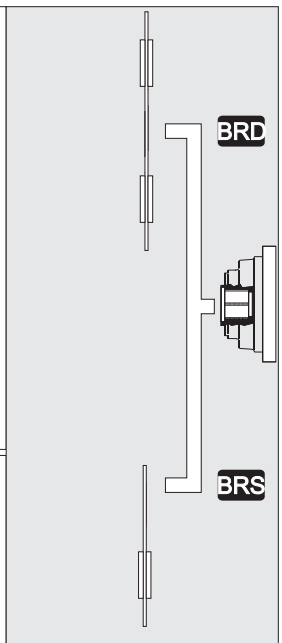


Output Shafts

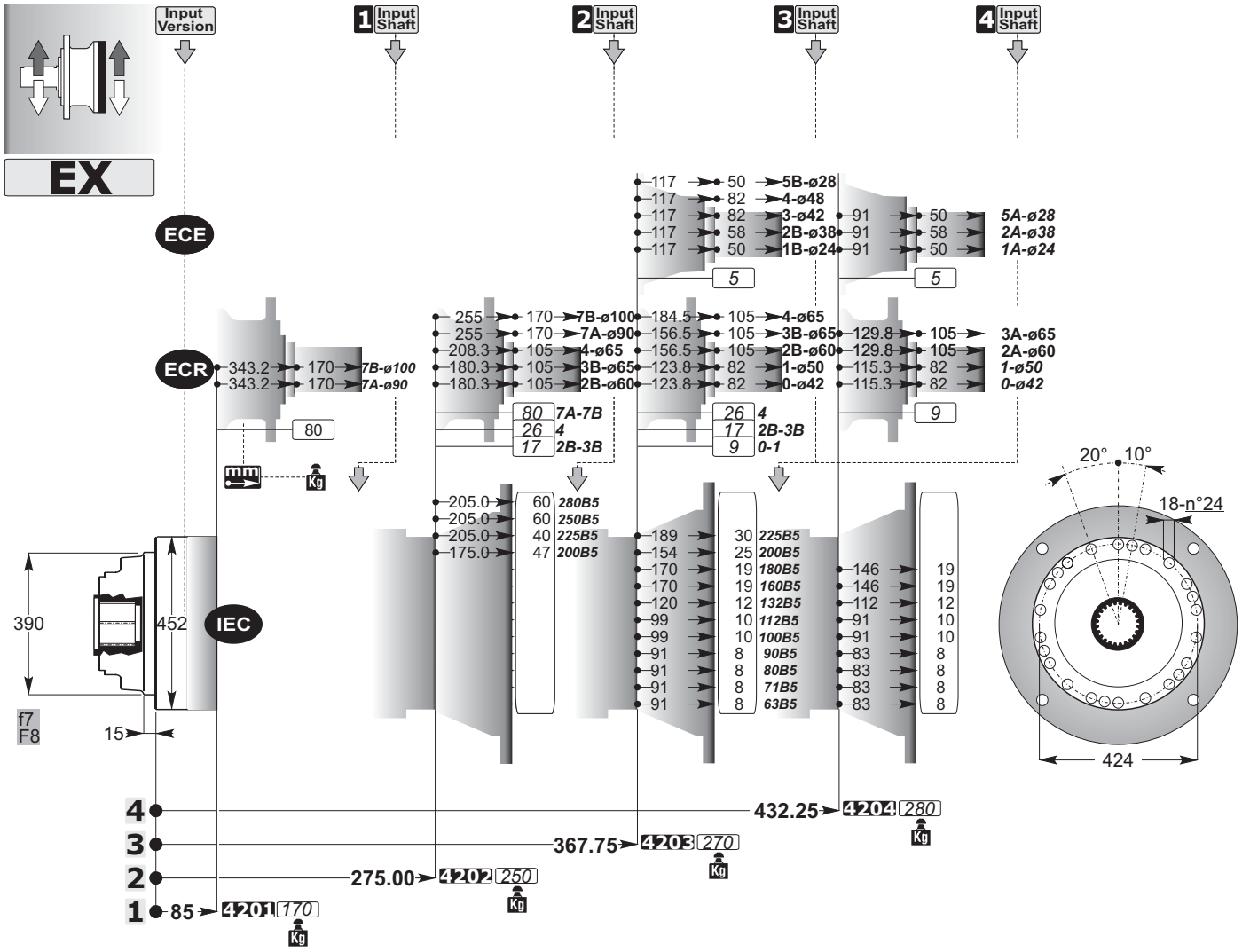


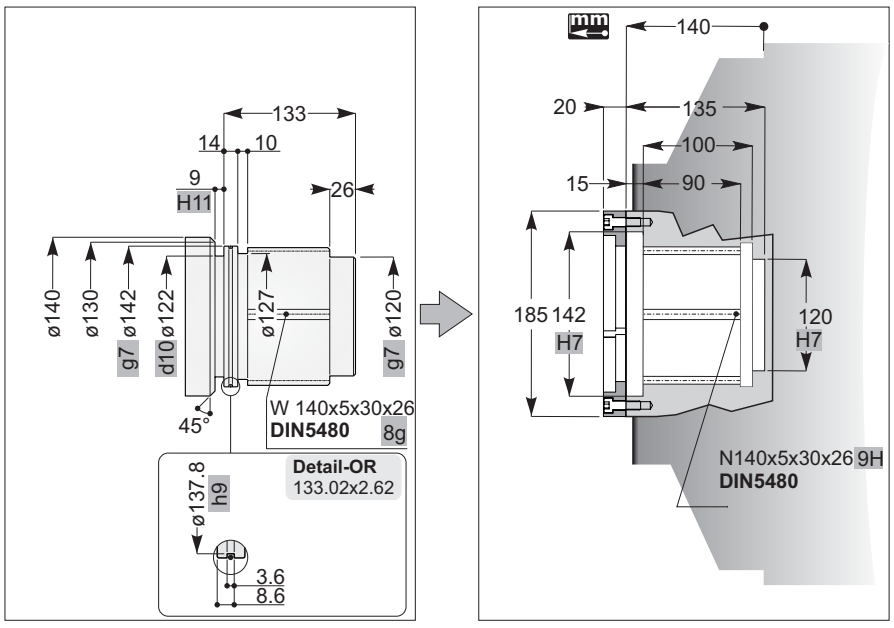




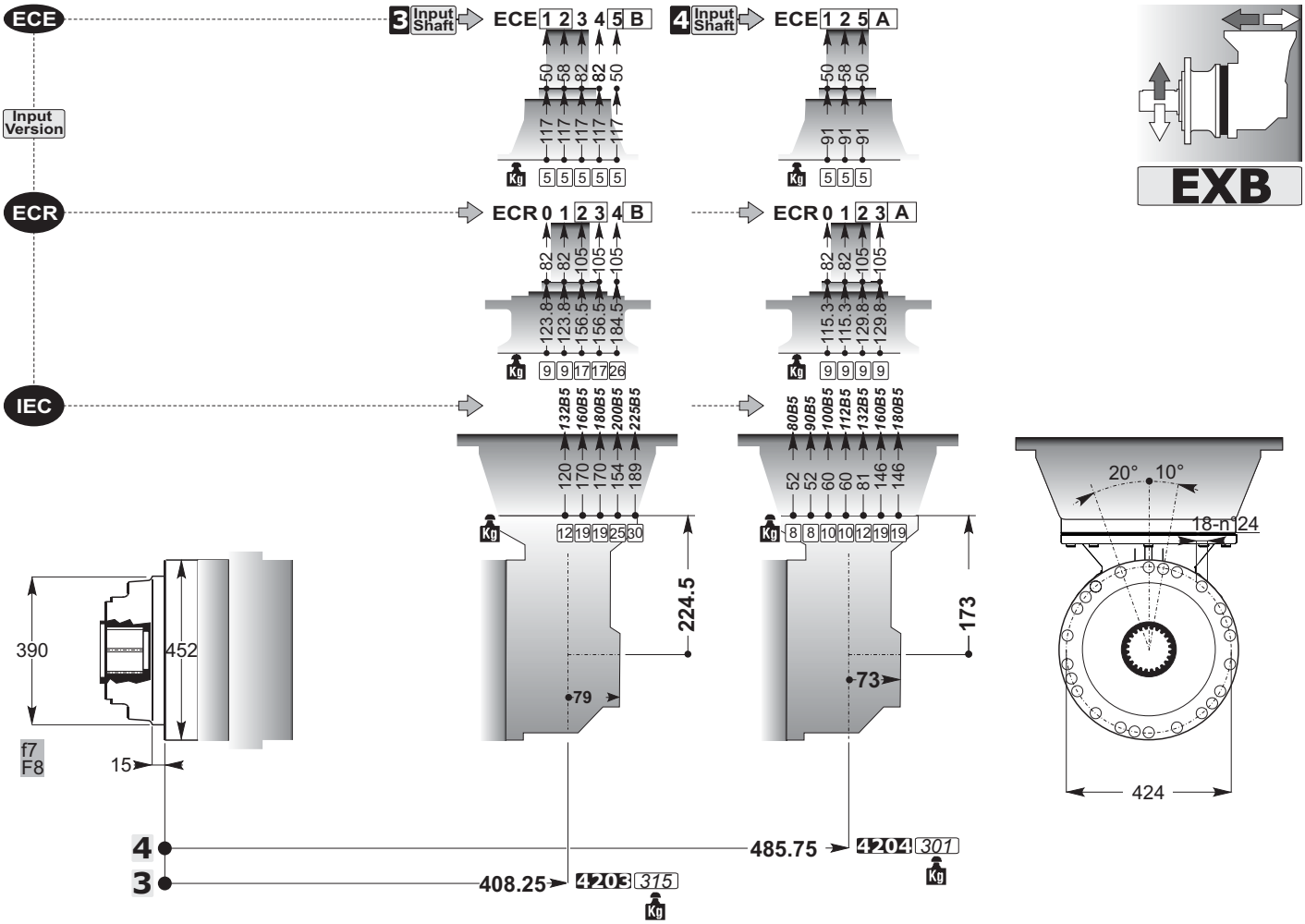


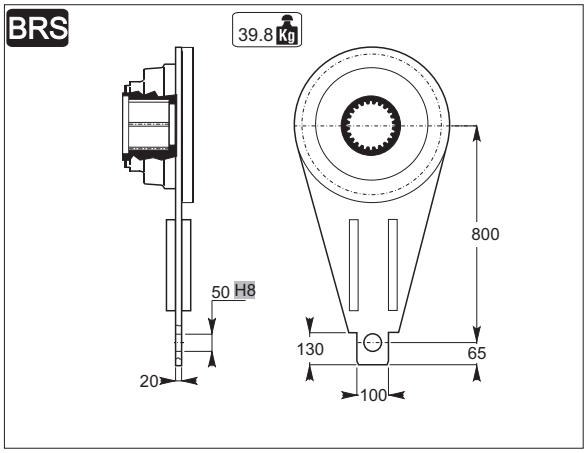
Accessories

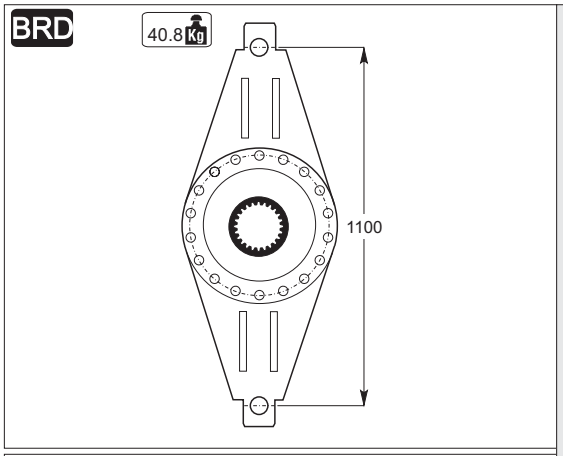


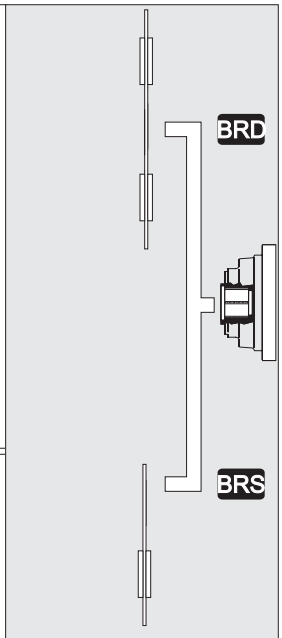


Output Shafts



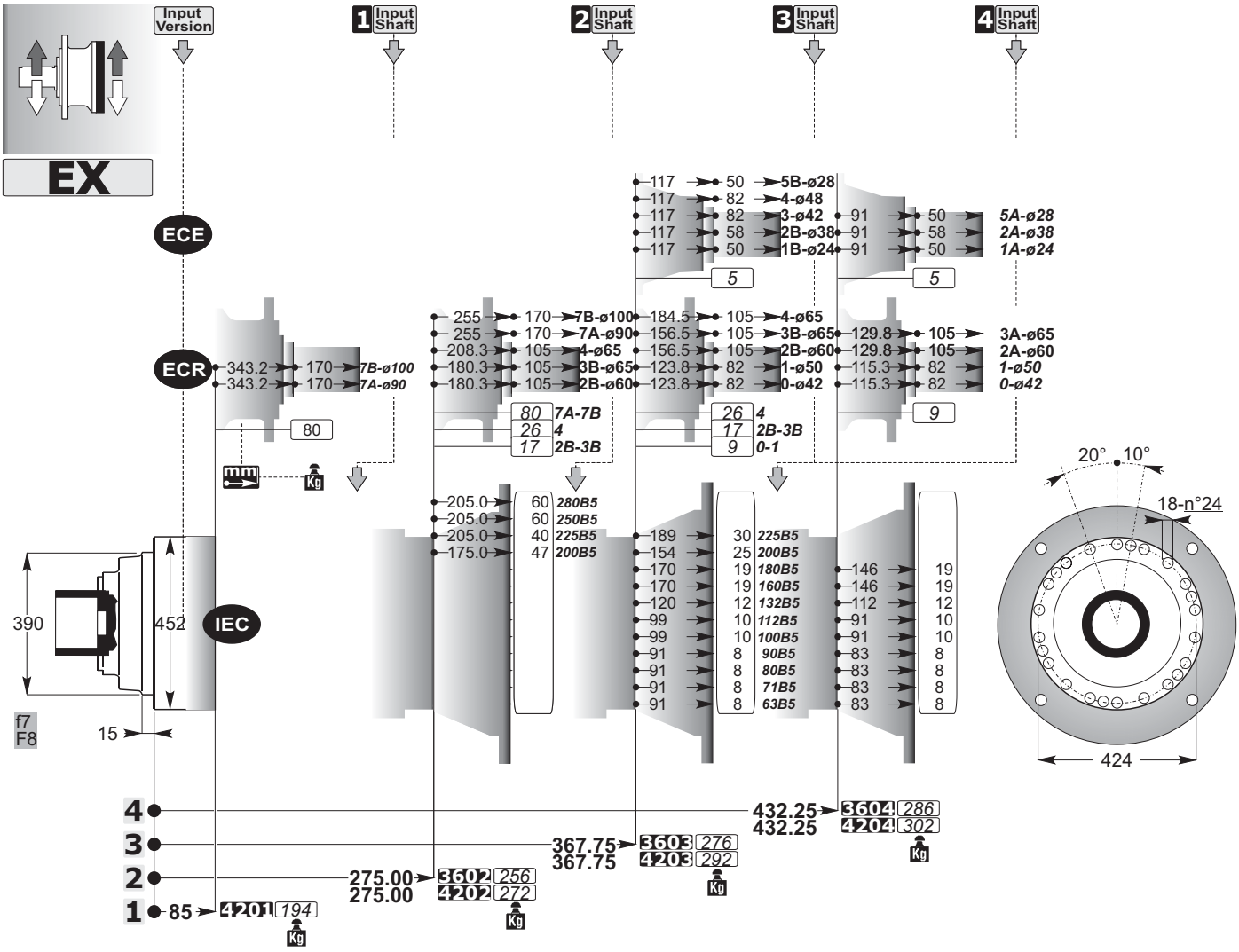


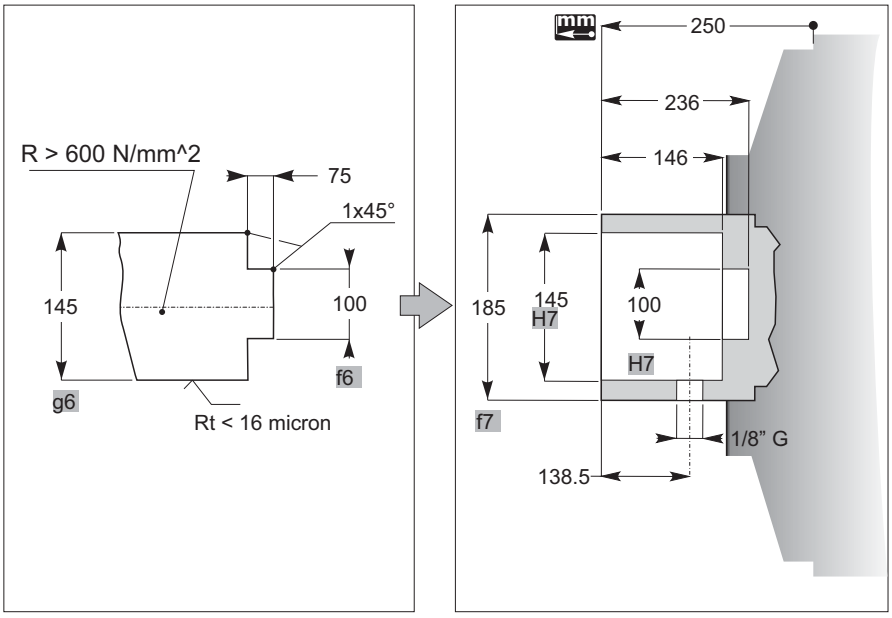




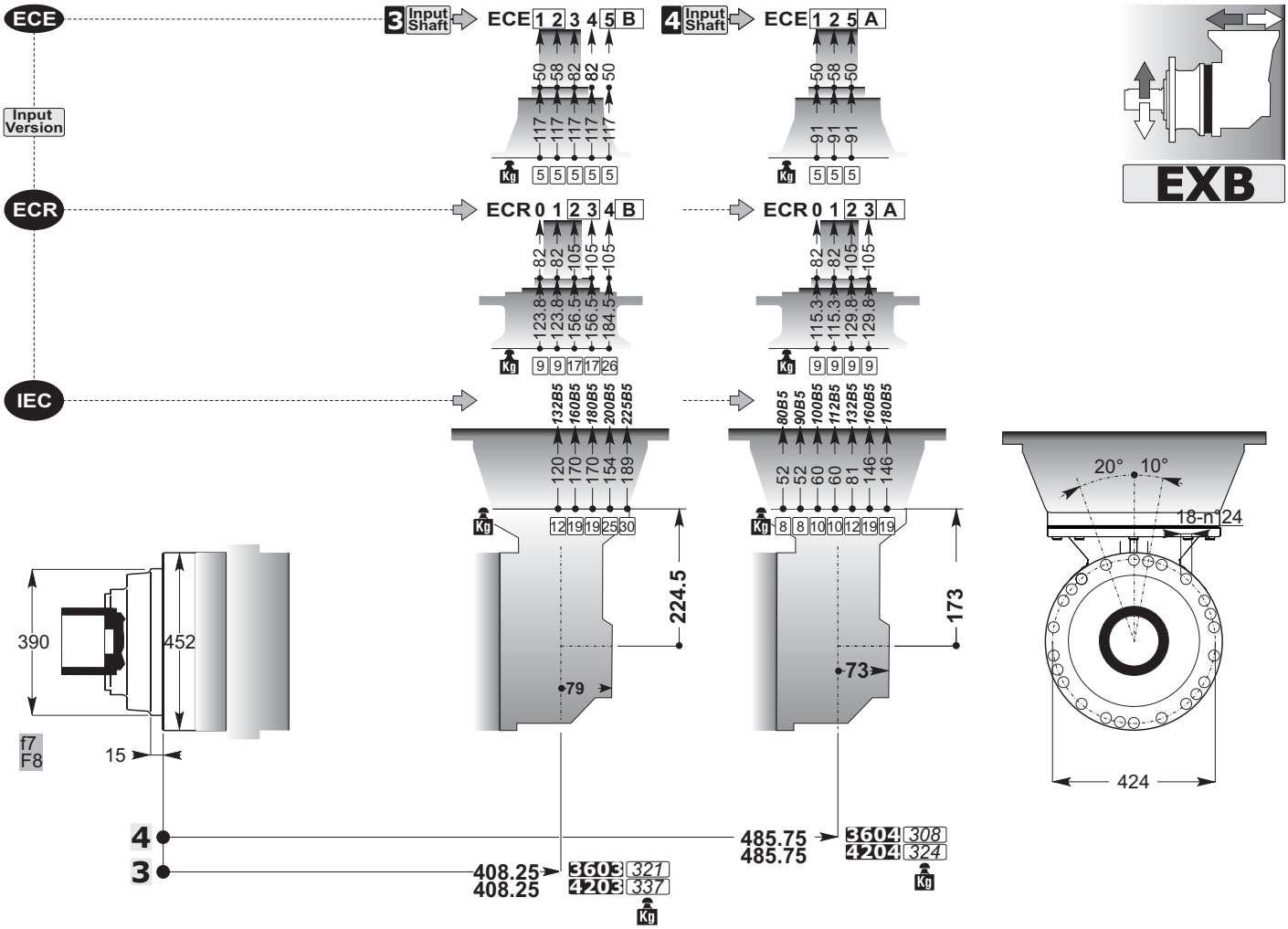
Accessories

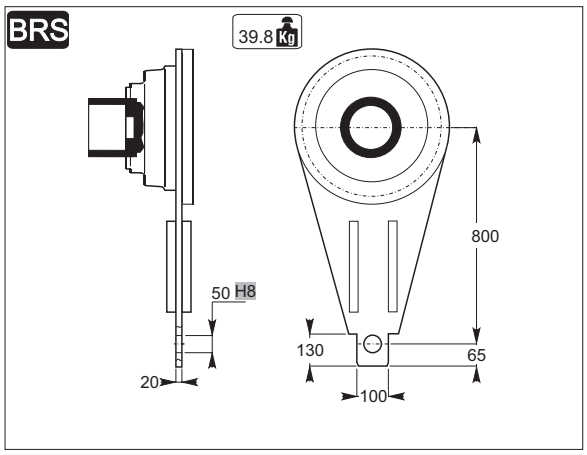
mm
C

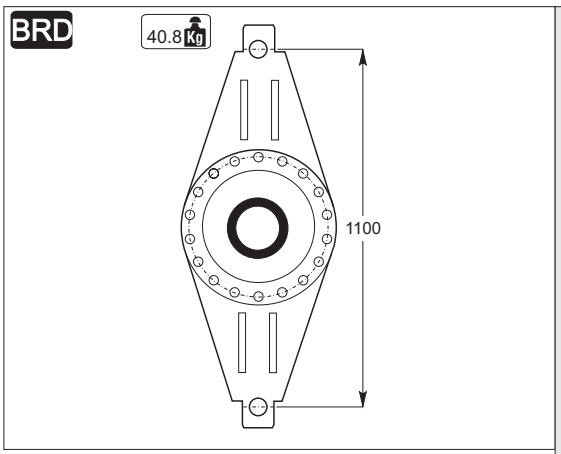


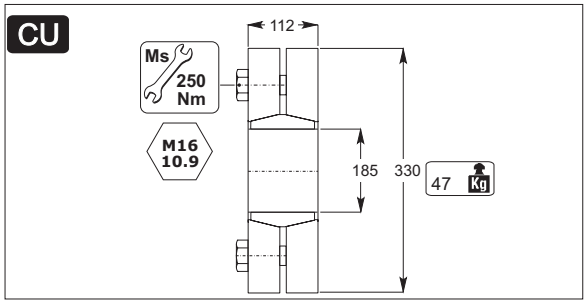


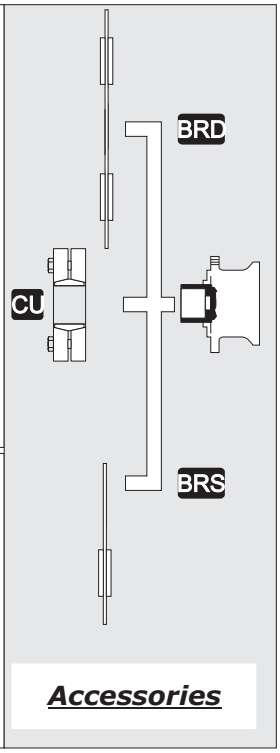
Output Shafts


ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 1 2 3 4 5 B
4 Input Shaft
ECE 1 2 5 A
ECR 0 1 2 3 4 B
ECR 0 1 2 3 A
EXB
132B5 160B5 180B5 200B5 225B5
80B5 90B5 100B5 112B5 132B5 160B5 180B5
224.5
173
79
73
390
452
f7
F8
15
20°
10°
18-n124
424
4
3
485.75
485.75
3604 308
4204 324
408.25
408.25
3603 321
4203 337

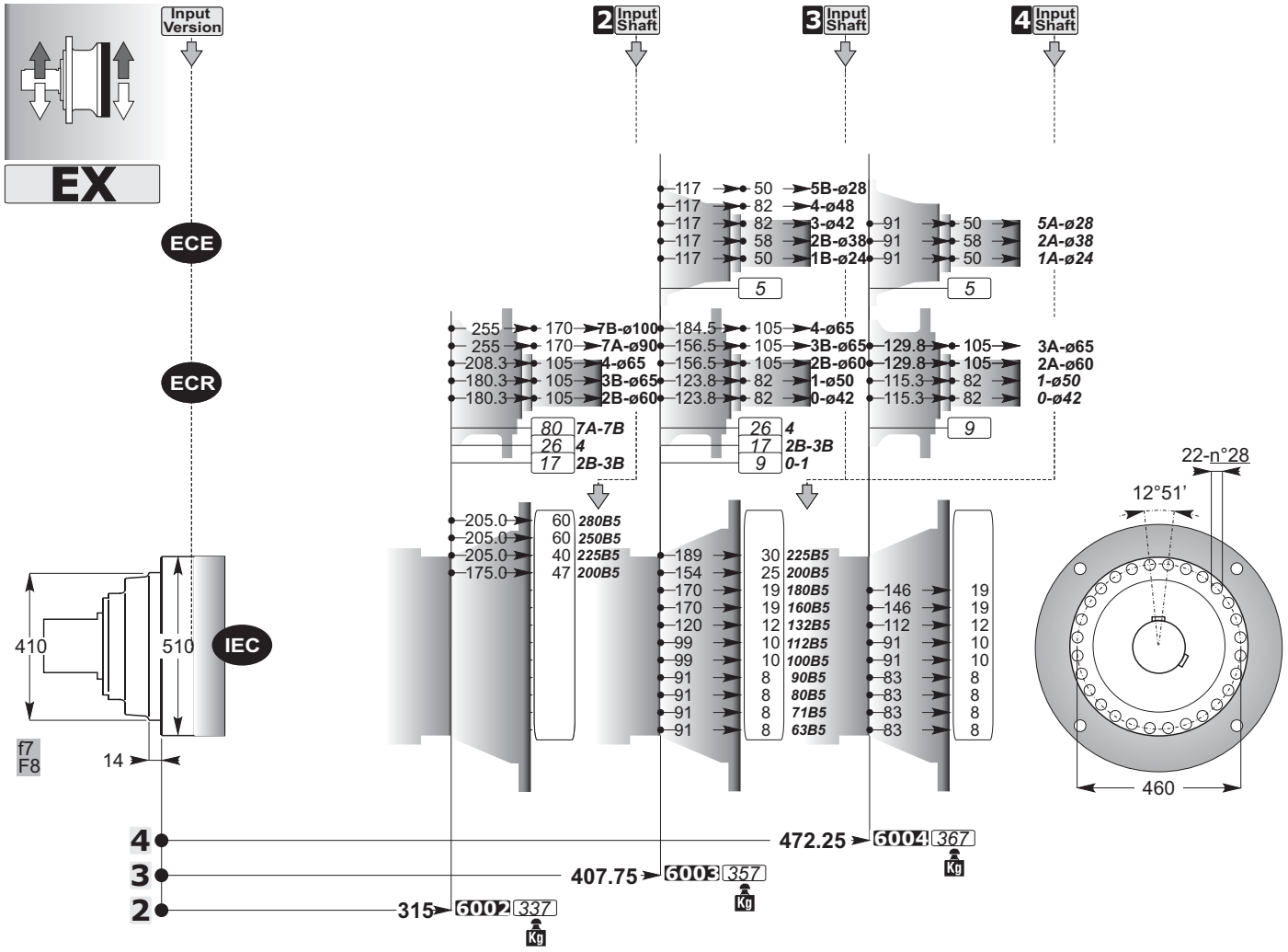

BRS
39.8 Kg
50 H8
20
800
130
65
100

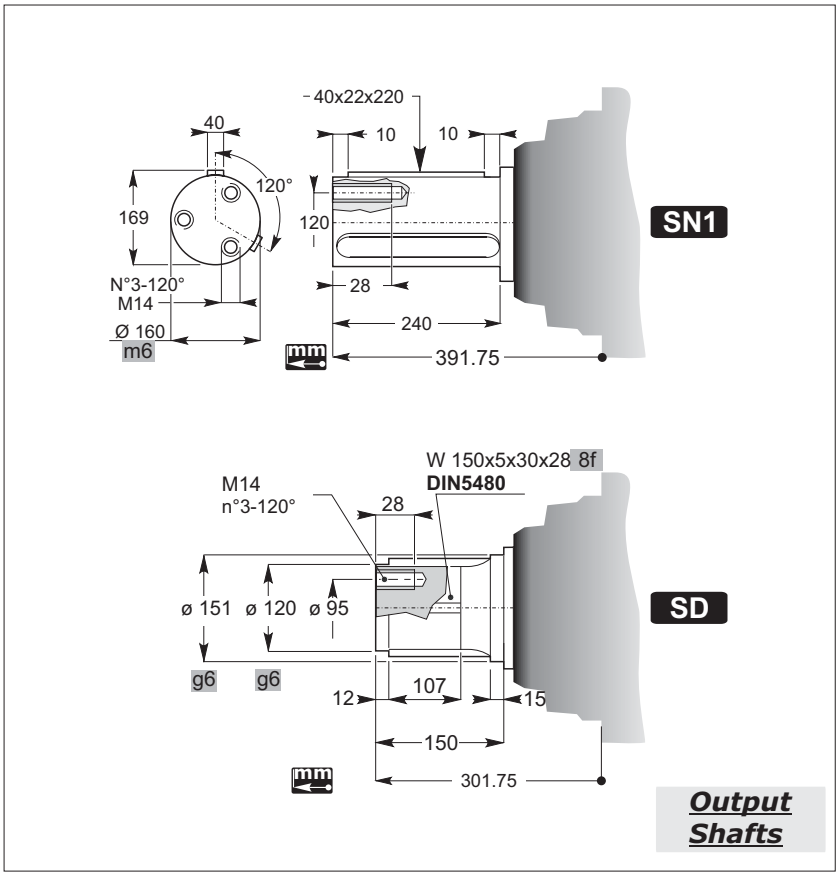

BRD
40.8 Kg
1100

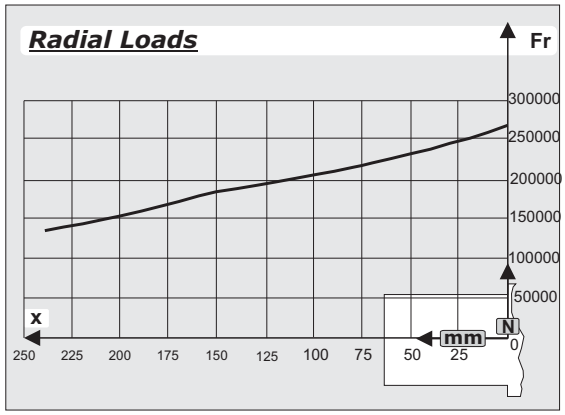

CU
Ms
250
Nm
M16
10.9
112
185
330
47 Kg

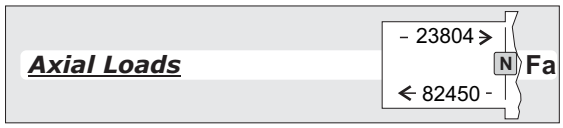

BRD
CU
BRS
Accessories

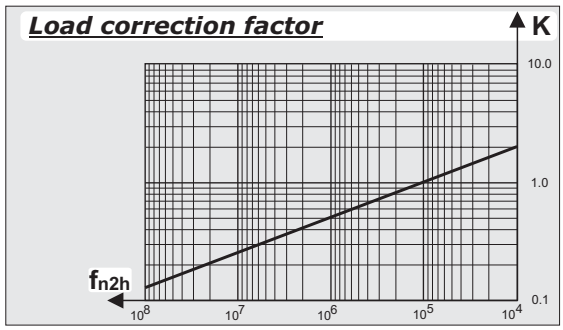
mm
C

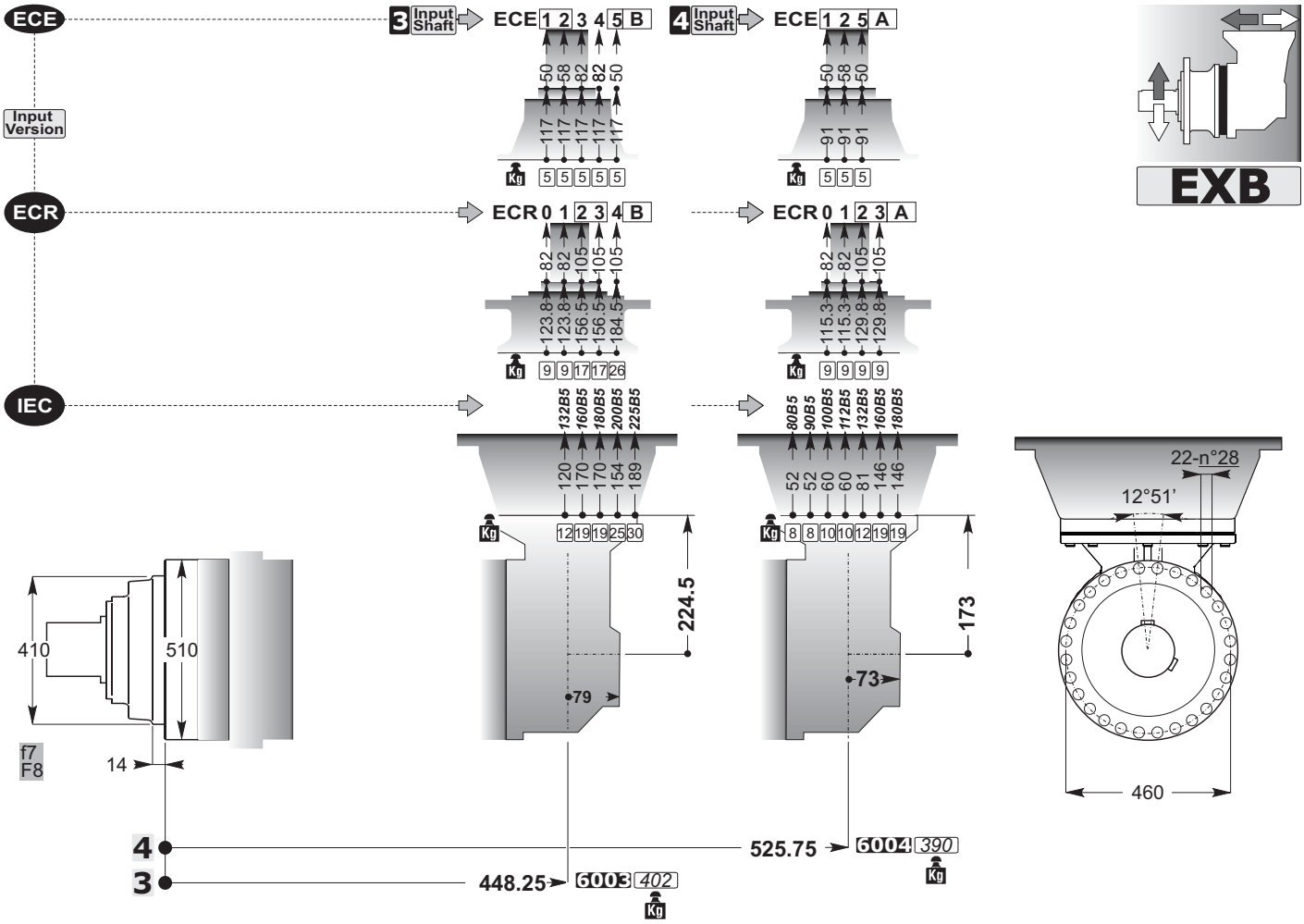

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
410
510
f7
F8
14
22-n°28
12°51'
460
4
3
2
472.25 6004 367 Kg
407.75 6003 357 Kg
315 6002 337 Kg

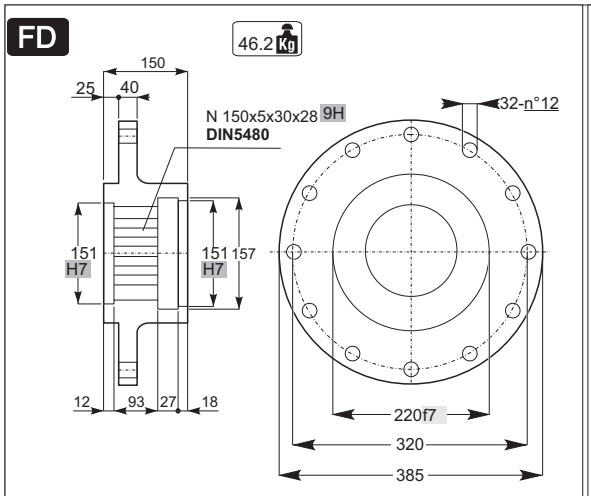

40x22x220
40
10
10
120°
169
120
N°3-120°
M14
Ø 160
m6
28
240
391.75
mm
SN1
W 150x5x30x28 8f
DIN5480
M14
n°3-120°
28
ø 151
ø 120
ø 95
g6
g6
12
107
15
150
301.75
mm
SD
Output Shafts

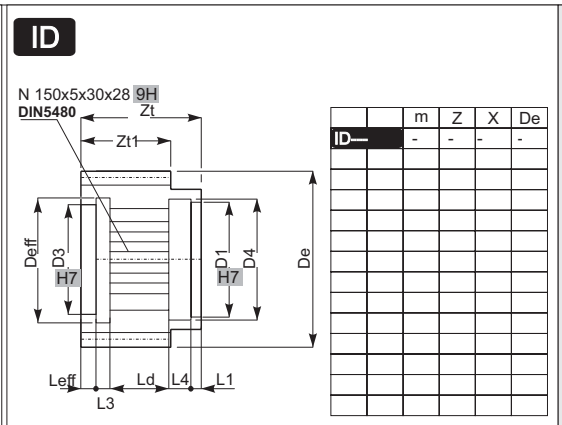

Radial Loads
Fr
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
mm
N

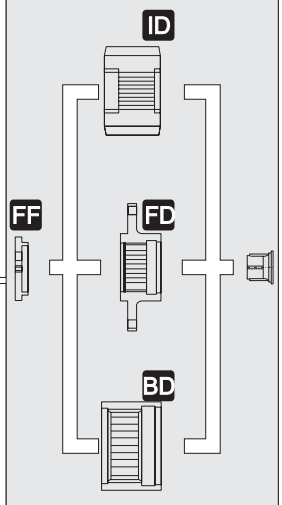

Axial Loads
23804
N
Fa
82450

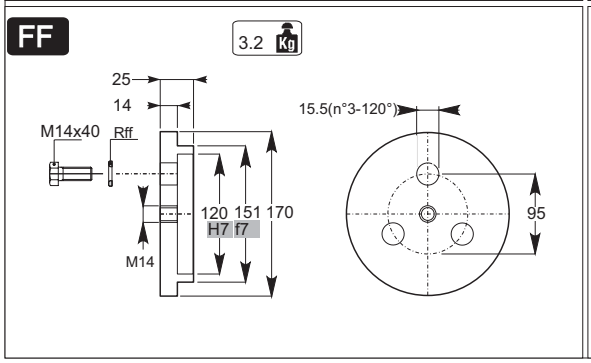

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

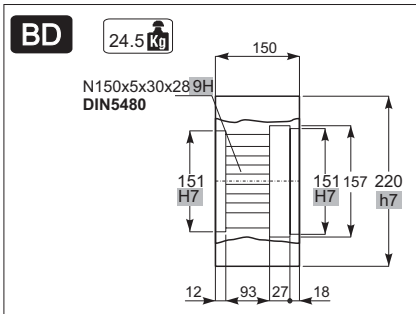






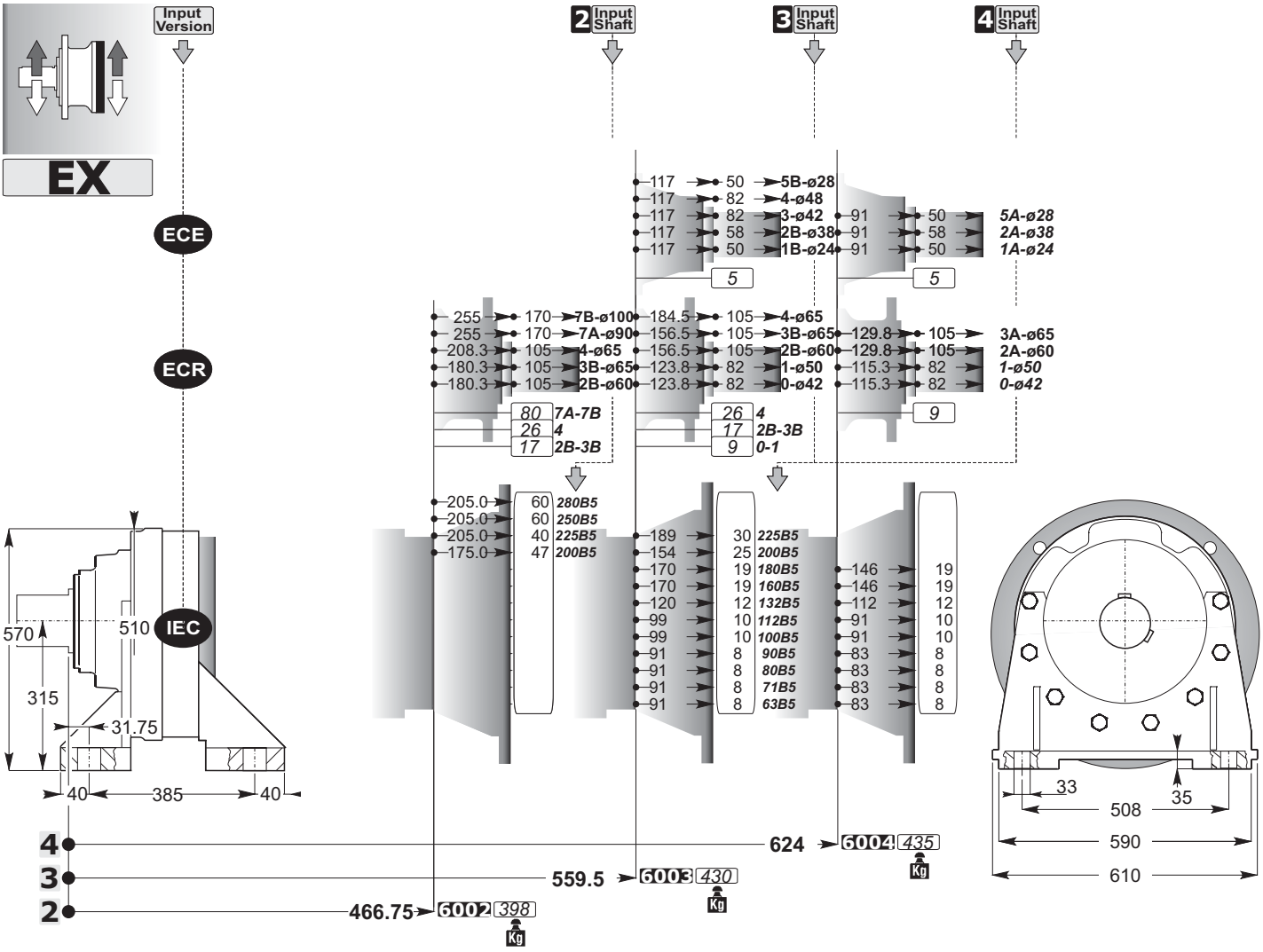


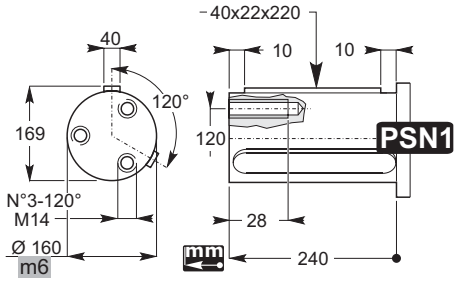


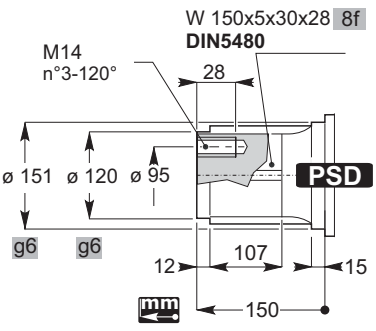


Accessories

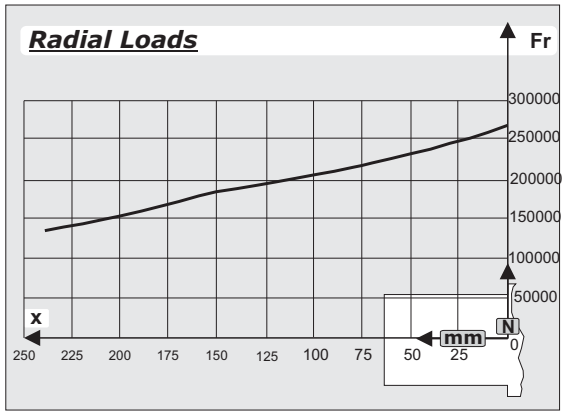
mm
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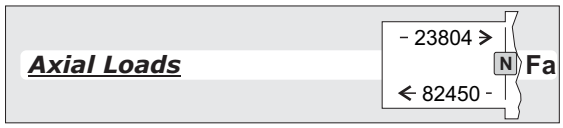


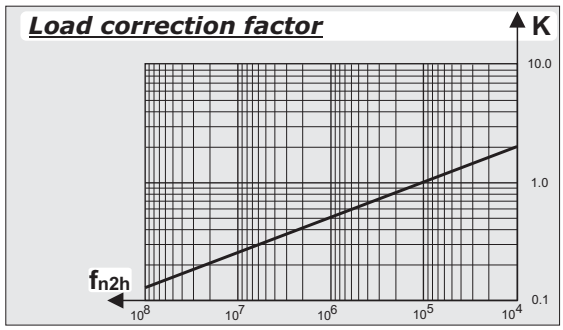


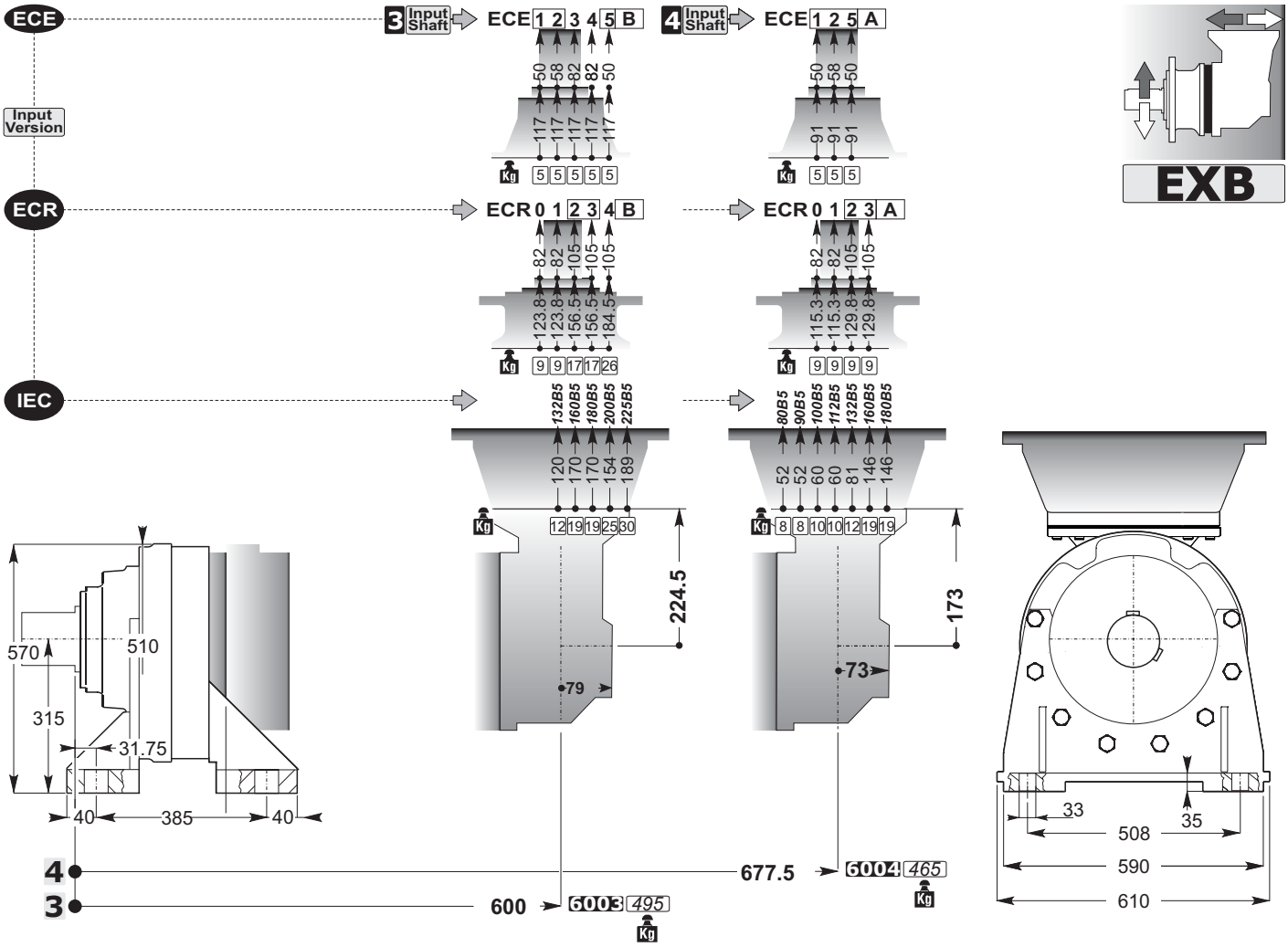


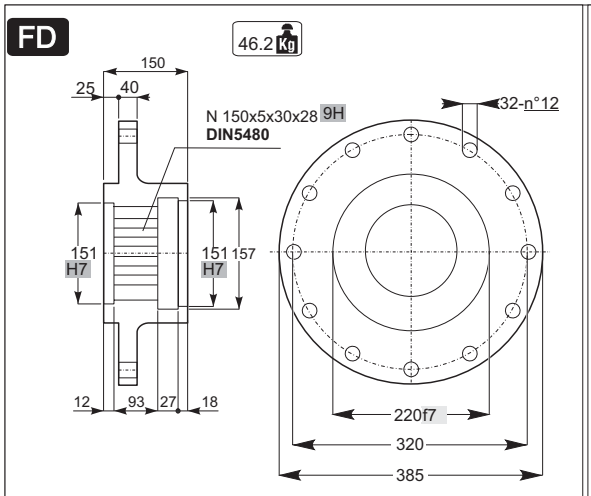
Output Shafts

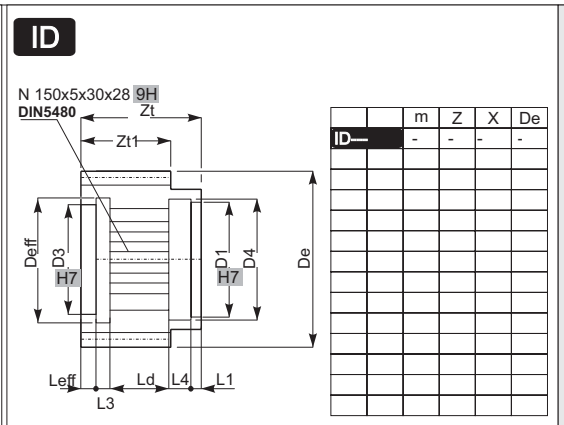


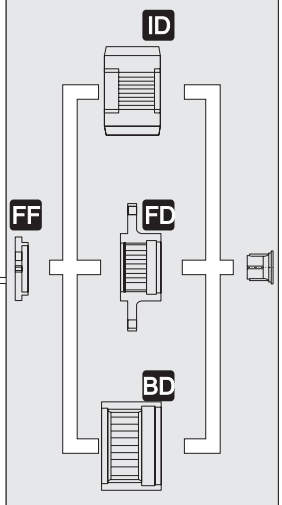


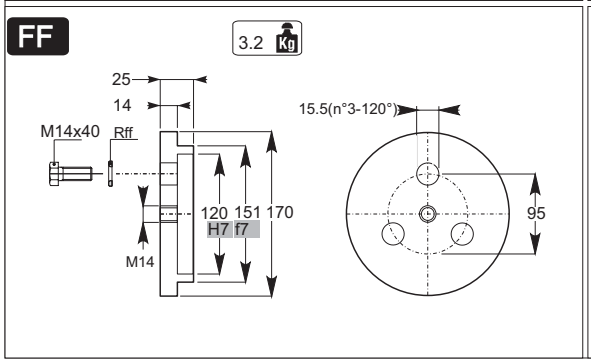


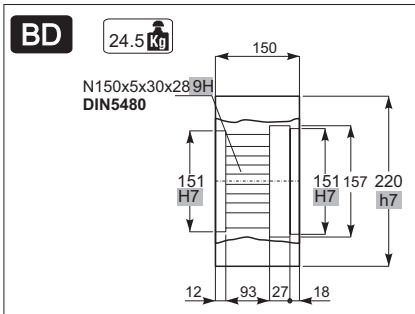






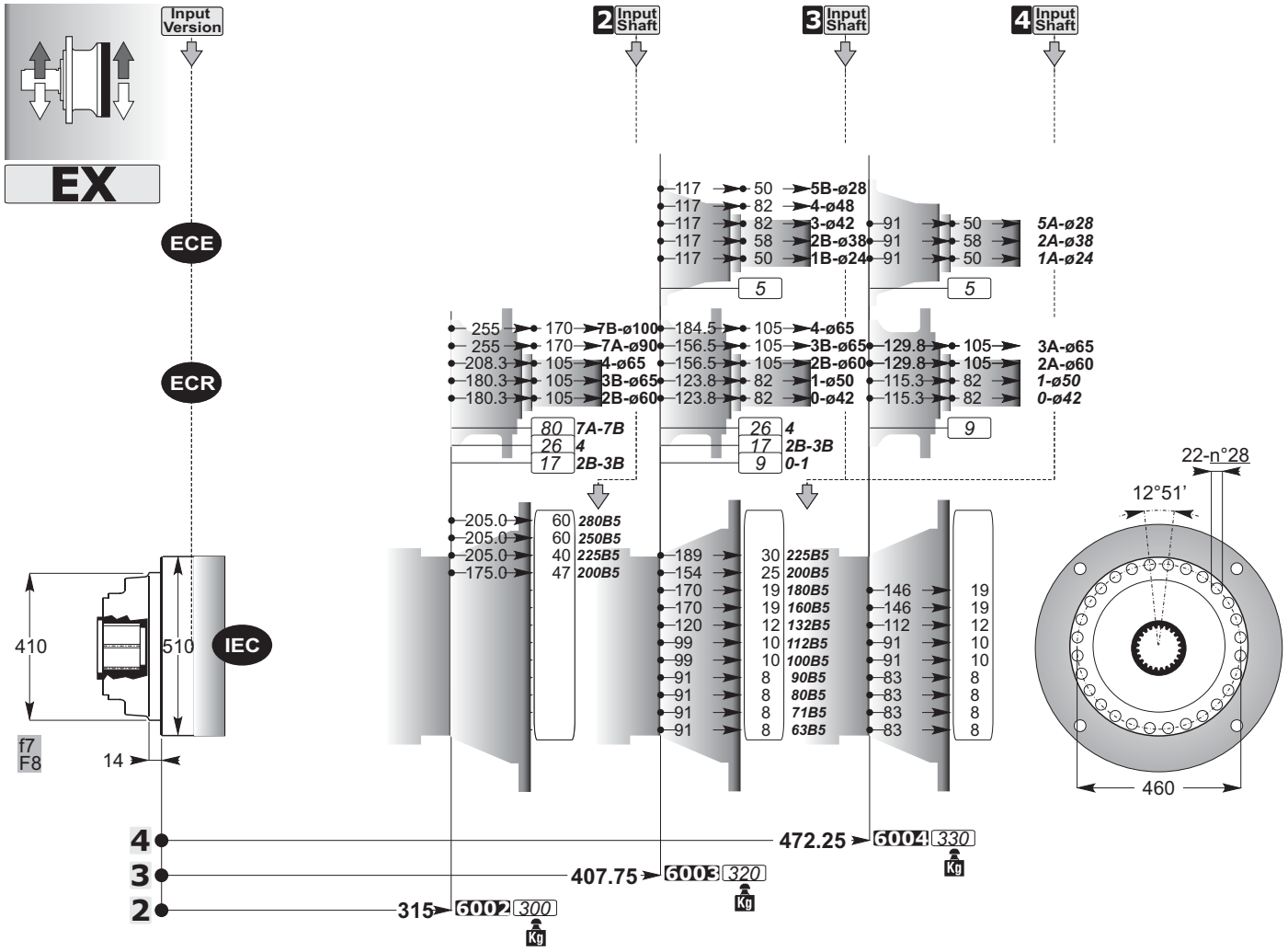


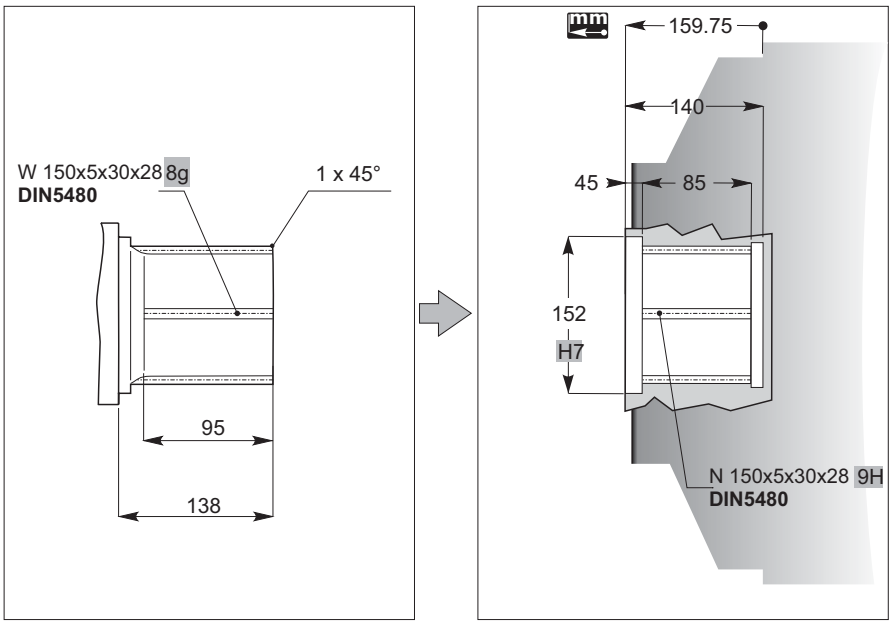




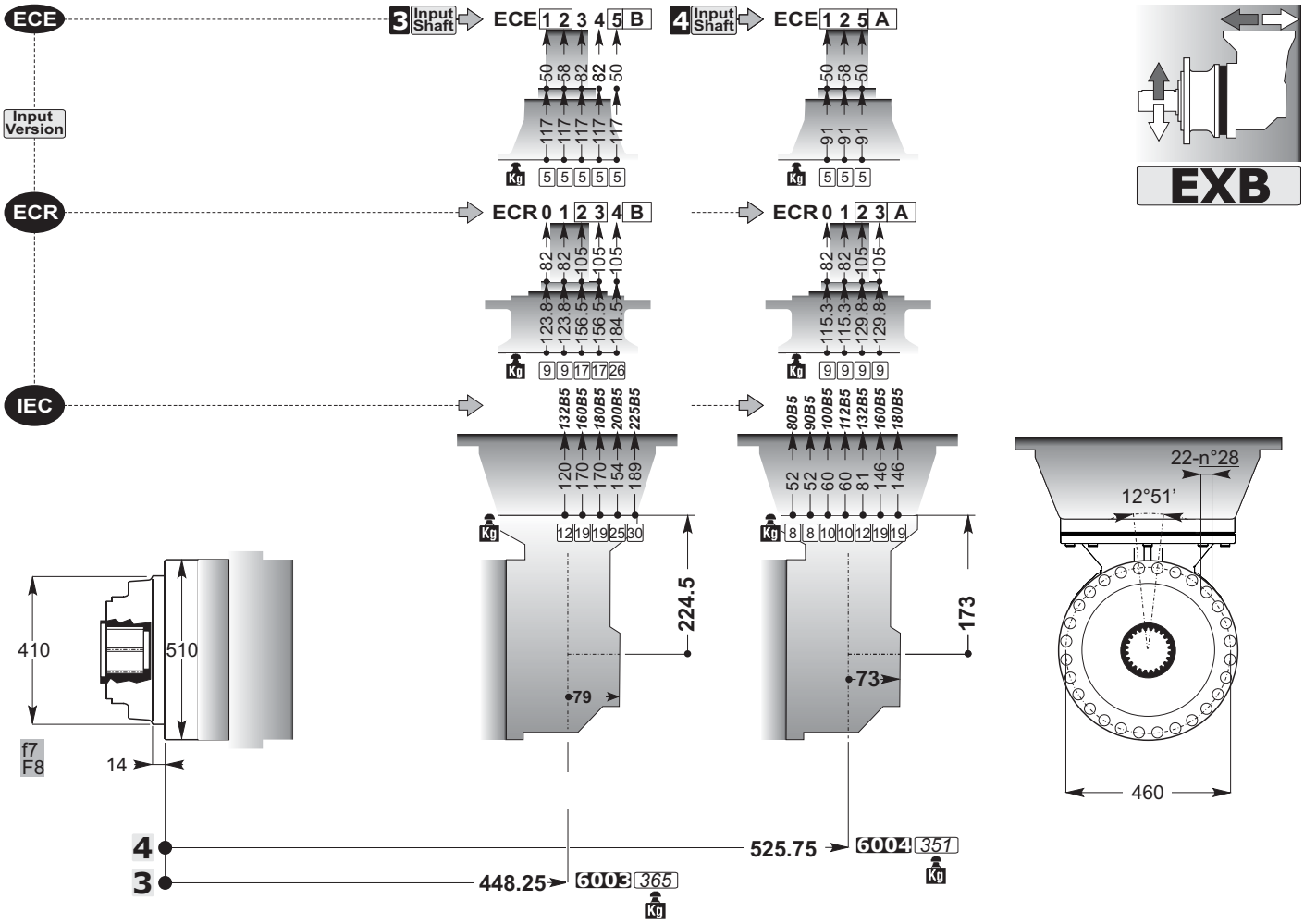
Accessories

mm
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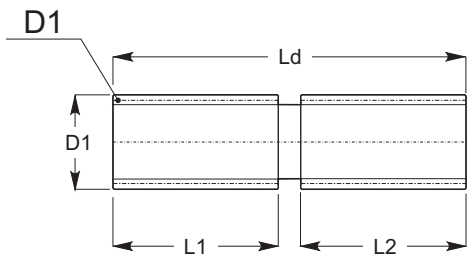




Output Shafts



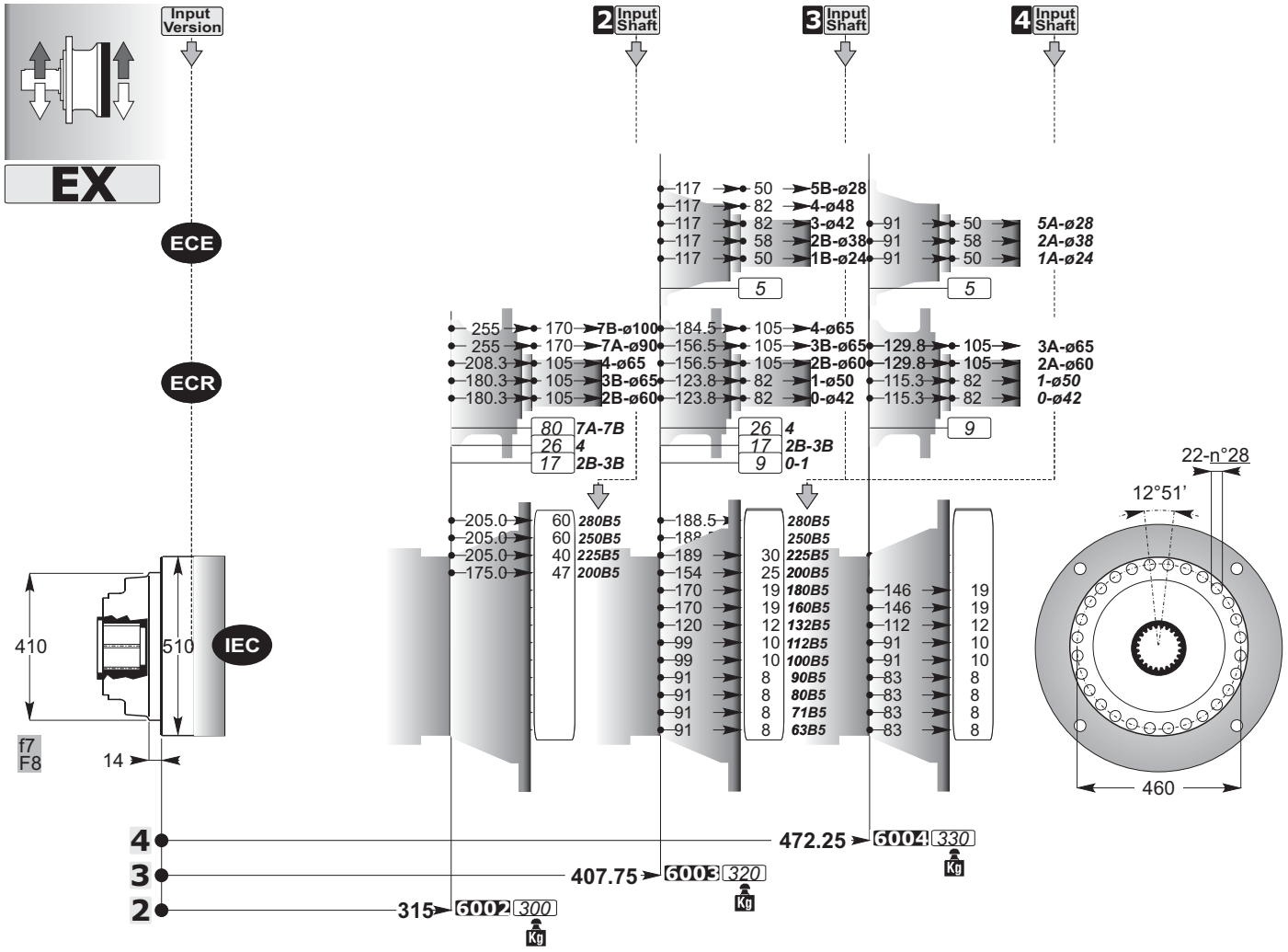
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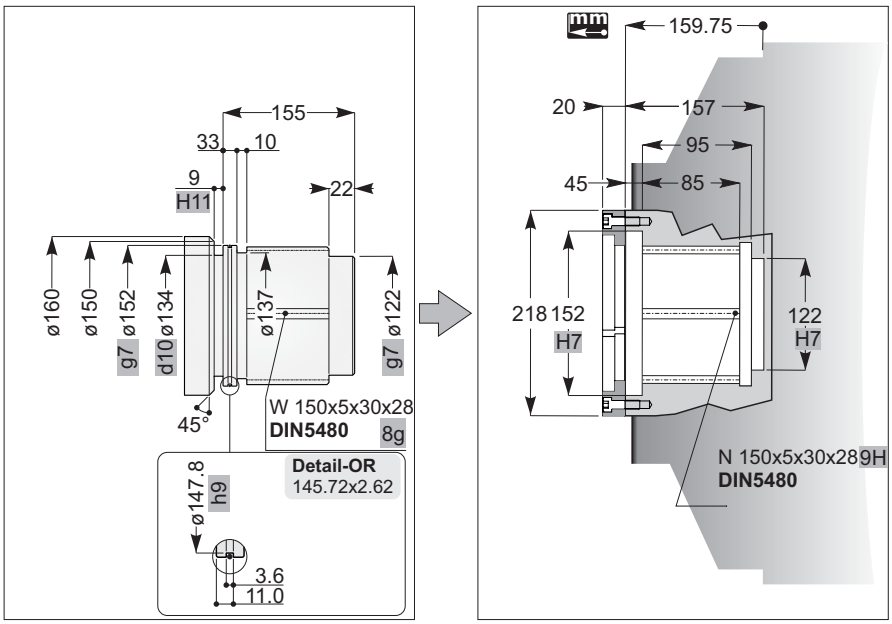


SD

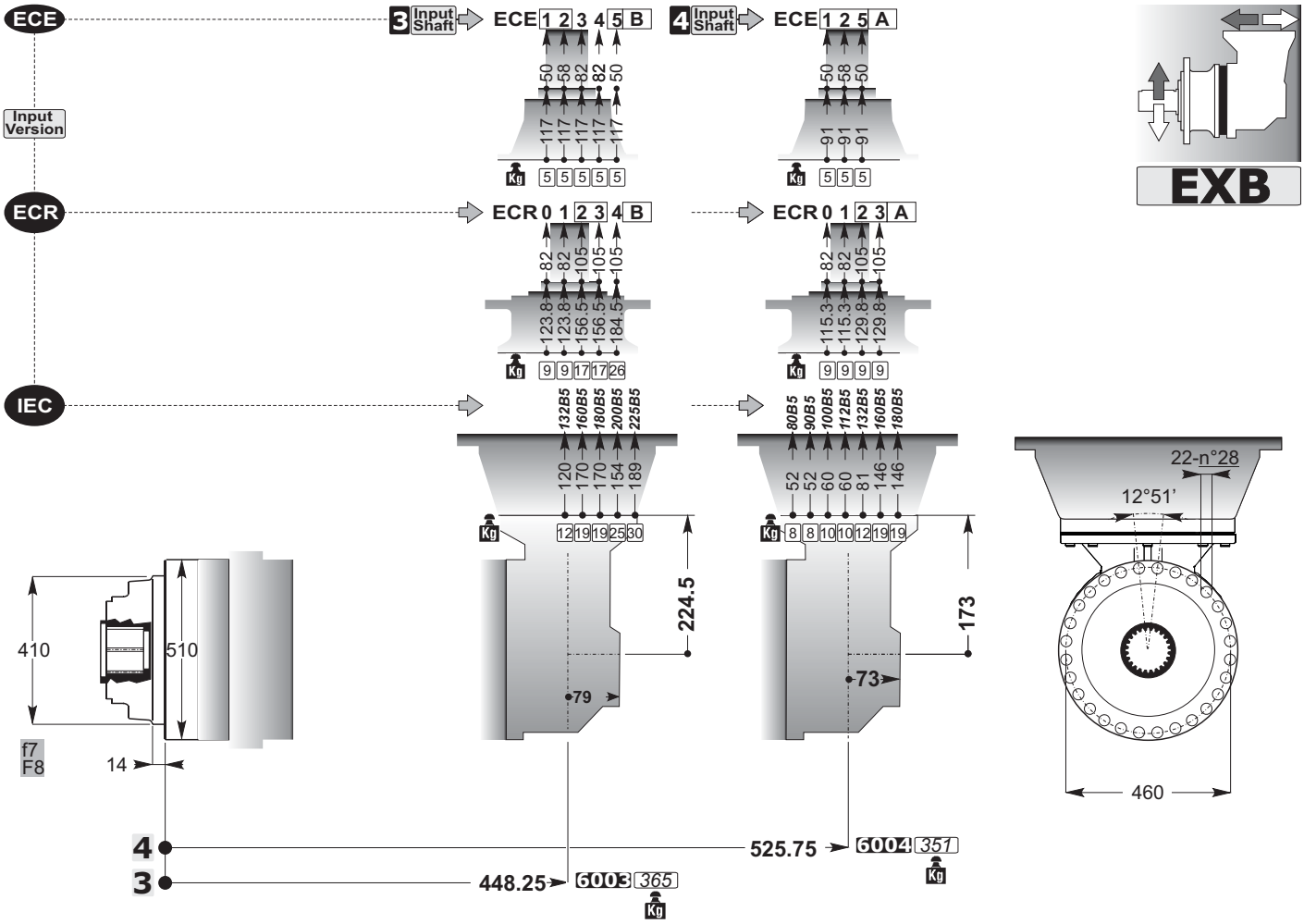


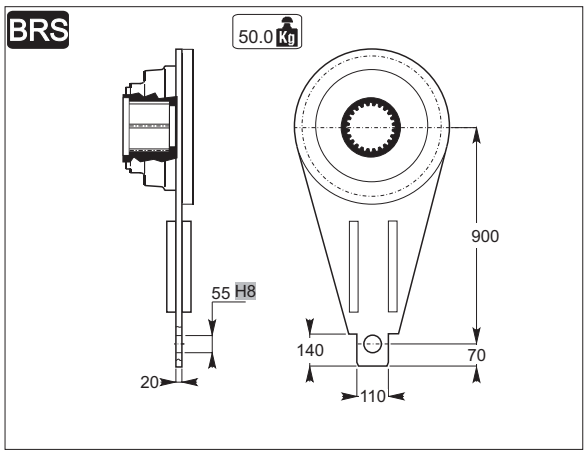
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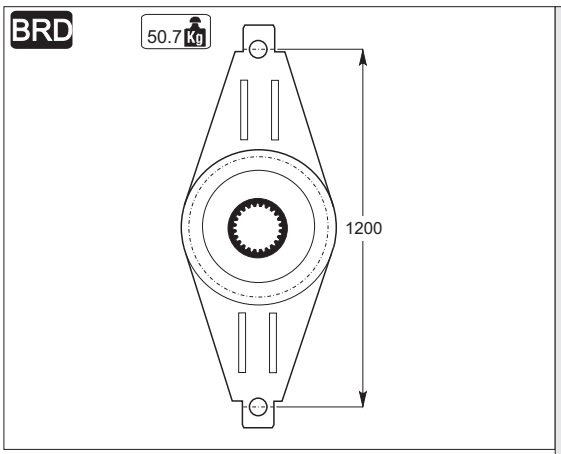


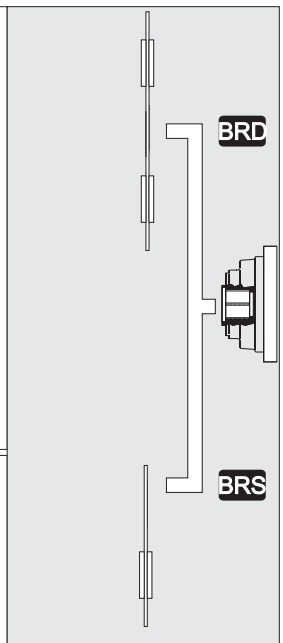


Output Shafts

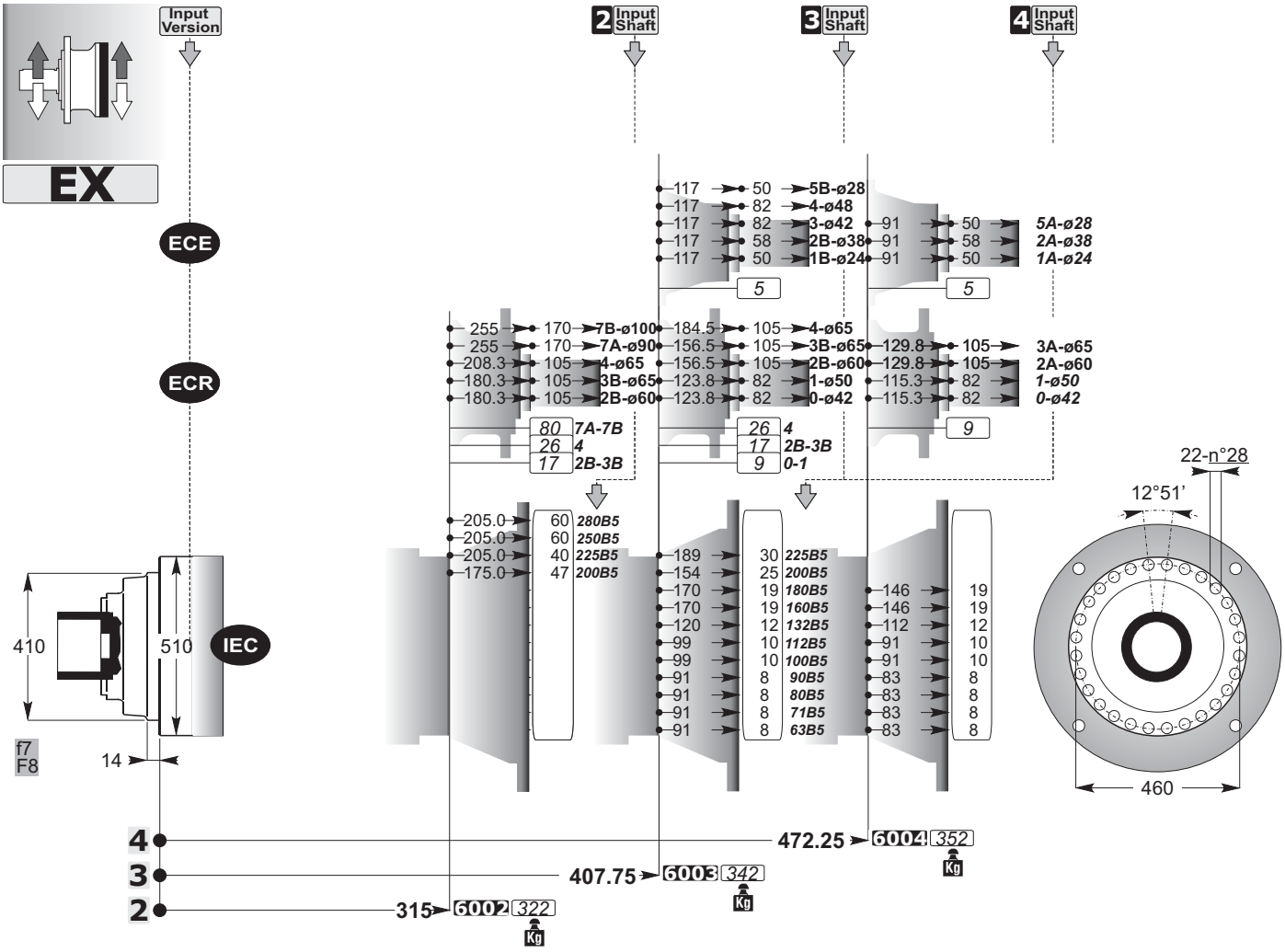


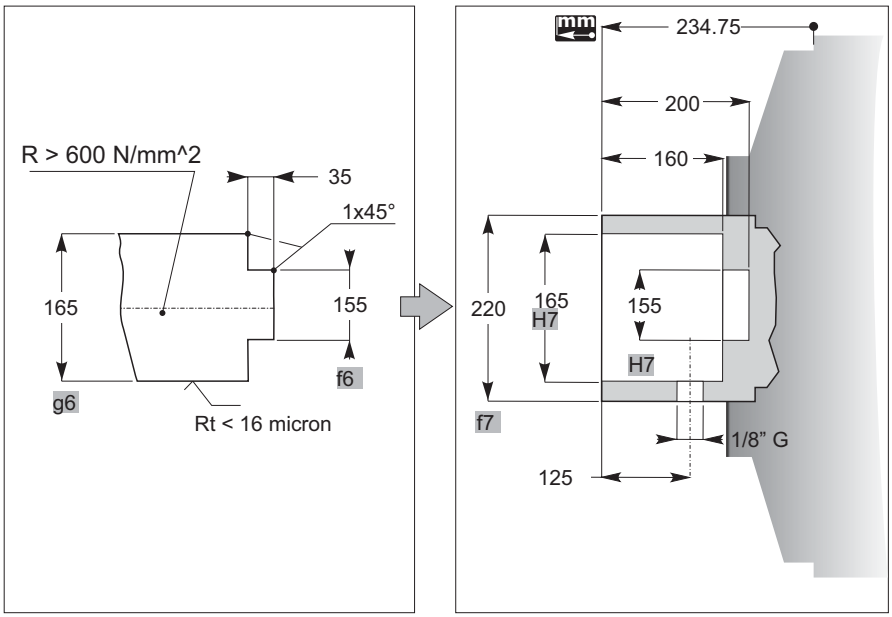




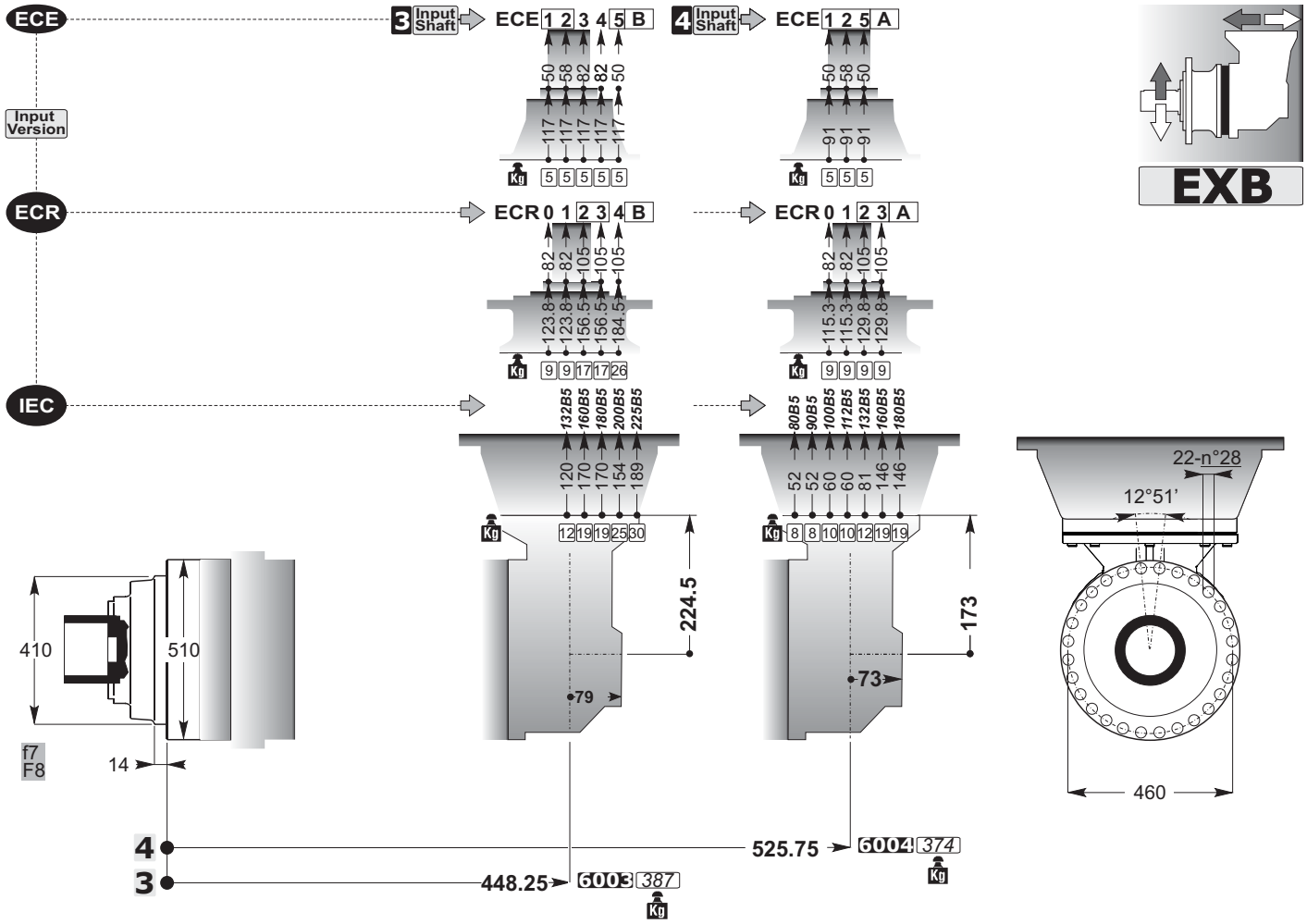


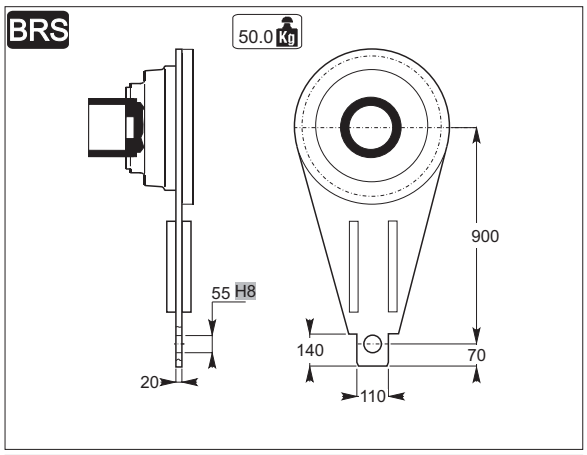
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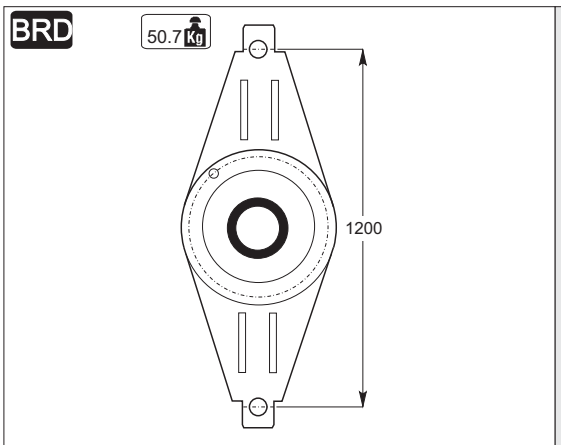


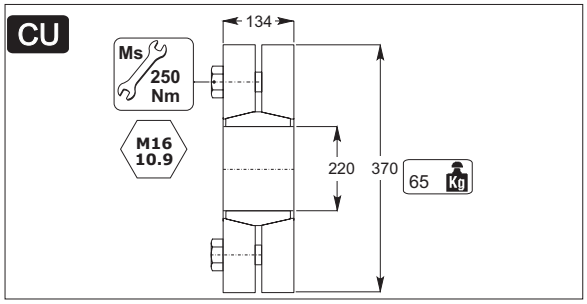


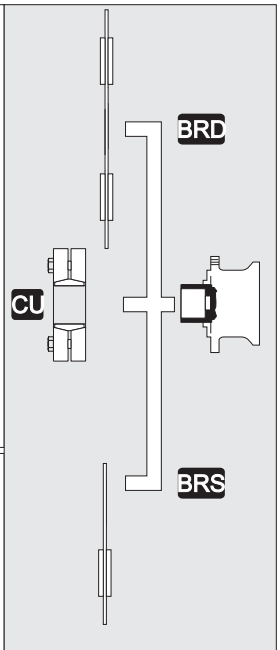
Output Shafts





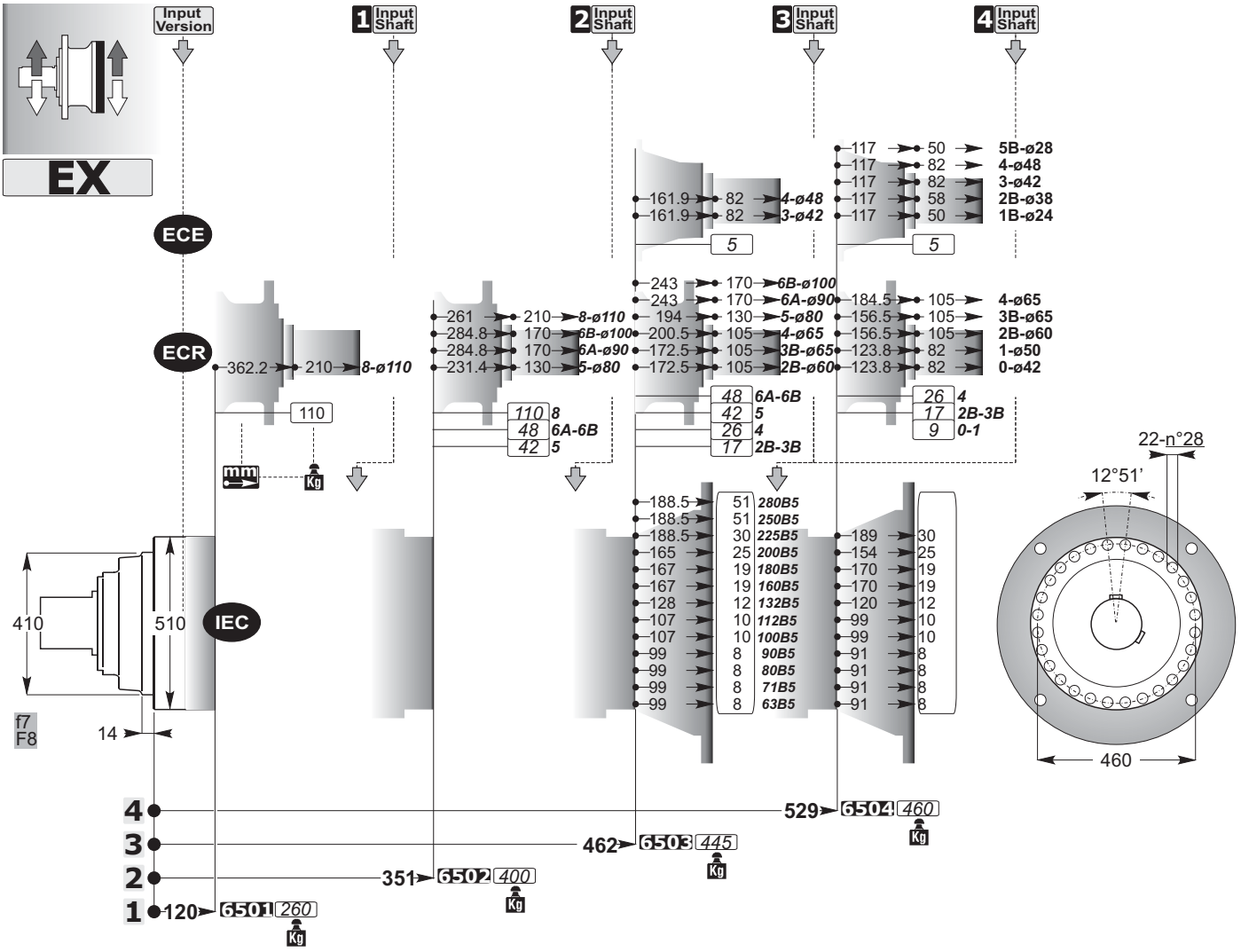


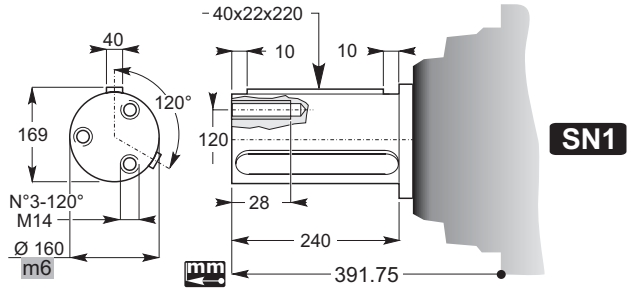


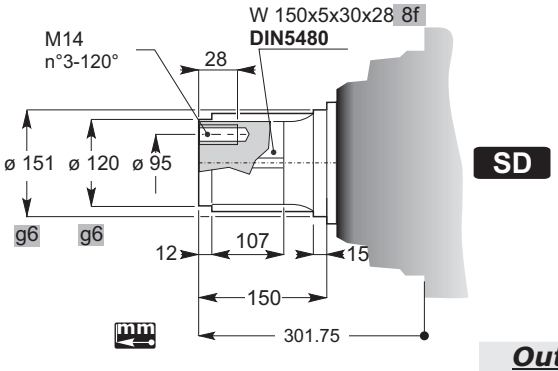


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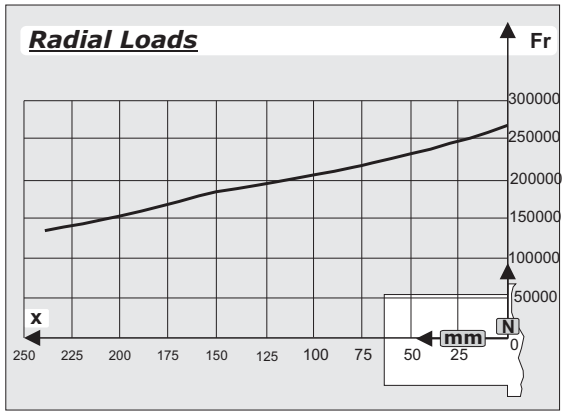
mm
C

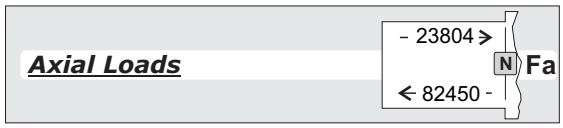


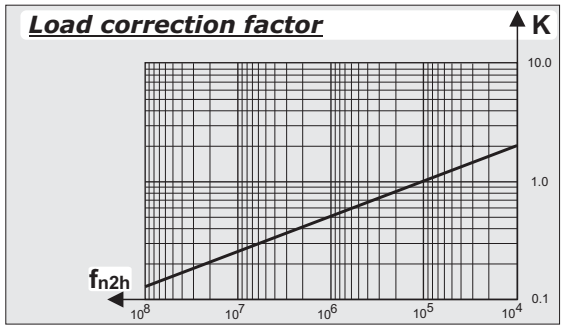


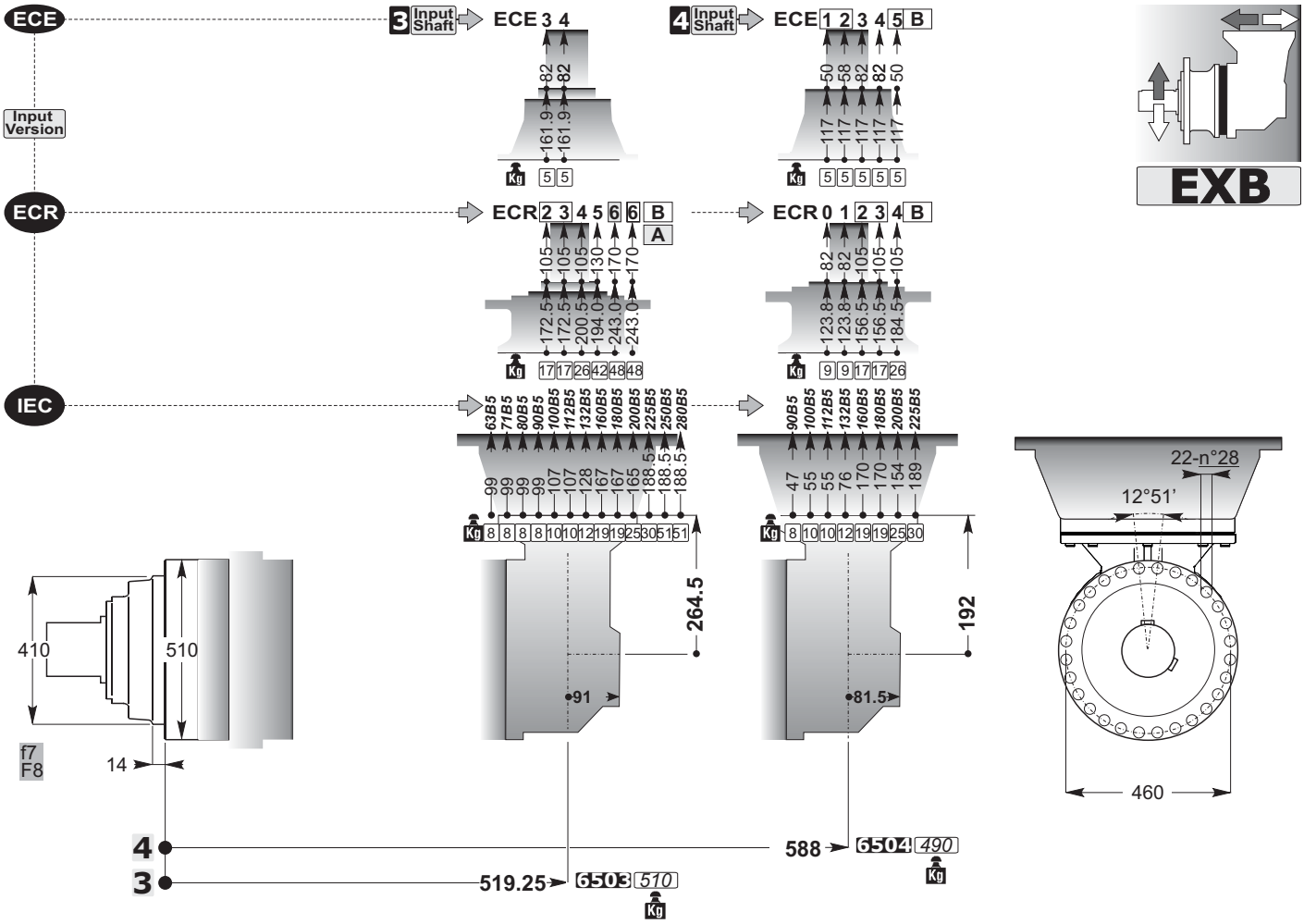


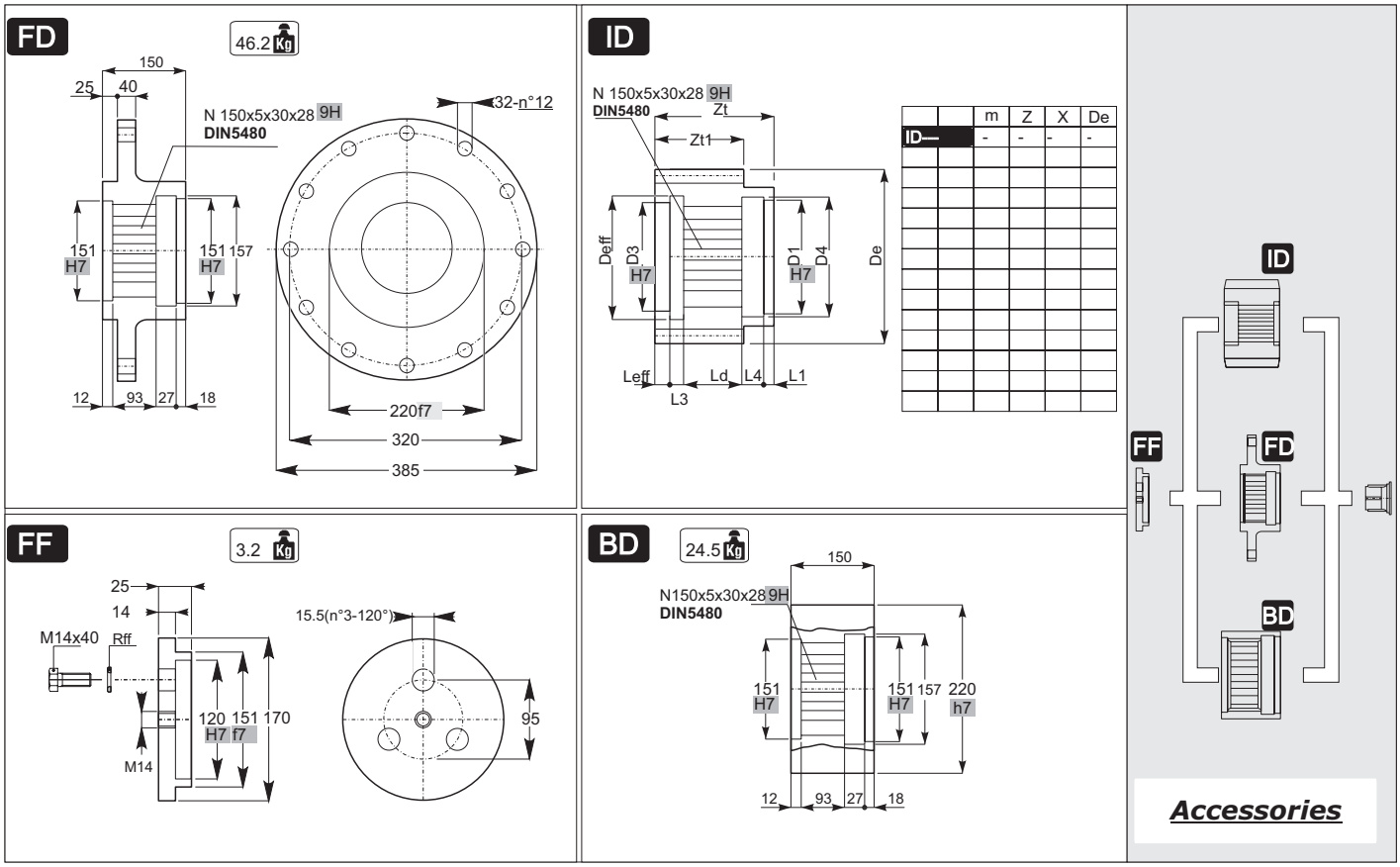
Output Shafts

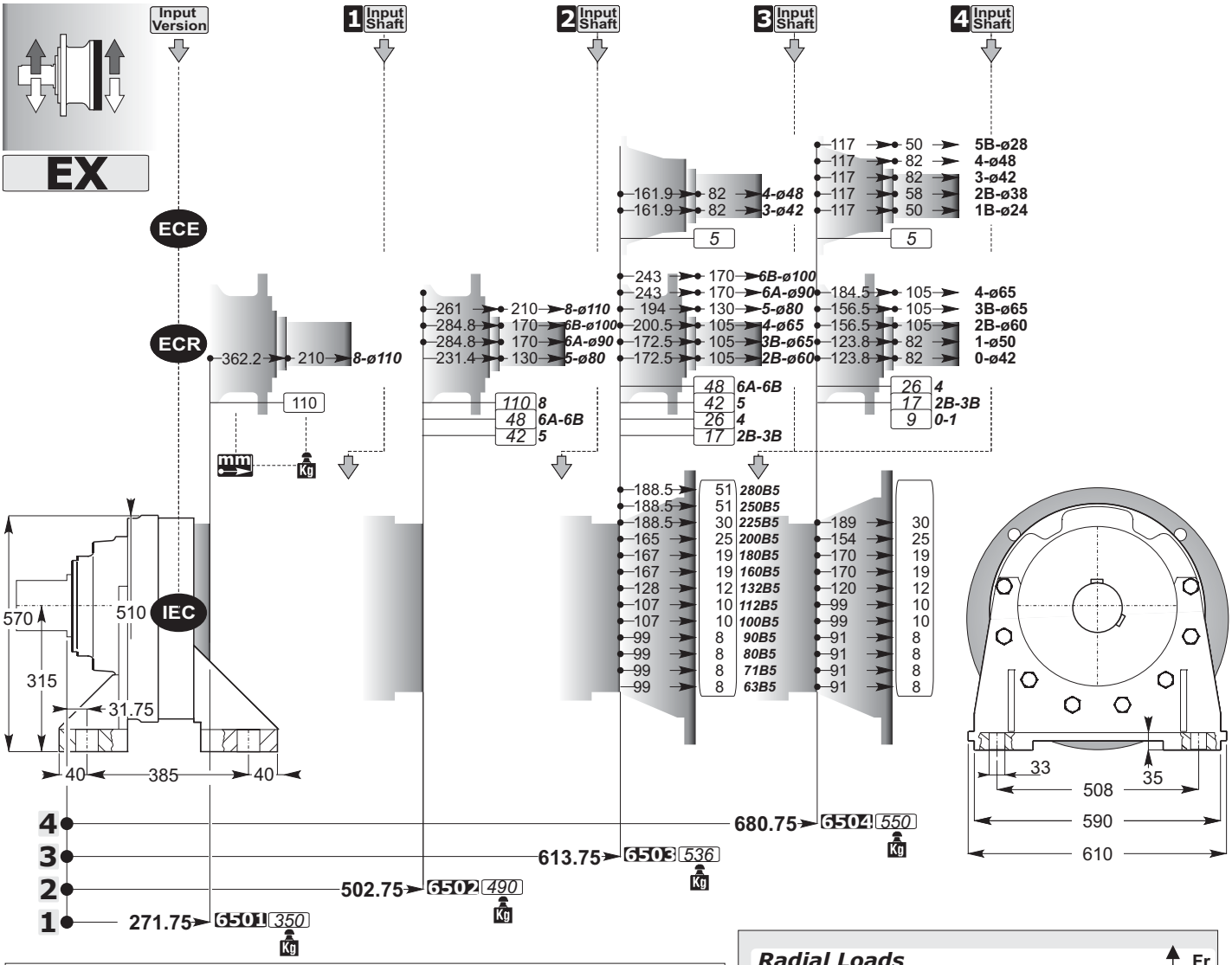


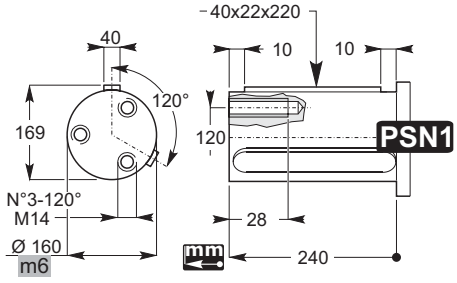


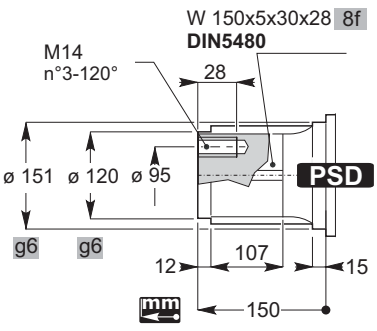



ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
22-n°28
12°51'
460
264.5
192
91
81.5
410
510
f7
F8
14
4
3
588
6504 490
519.25
6503 510

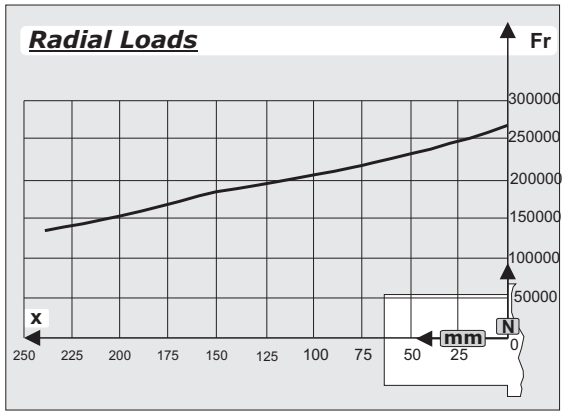

FD
46.2 Kg
150
25
40
N 150x5x30x28 9H
DIN5480
32-n°12
151 H7
151 H7
157
12
93
27
18
220f7
320
385
ID
N 150x5x30x28 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
3.2 Kg
25
14
M14x40
Rff
15.5(n°3-120°)
120 H7
151 f7
170
M14
95
BD
24.5 Kg
150
N150x5x30x28 9H
DIN5480
151 H7
151 H7
157
220 h7
12
93
27
18
ID
FF
FD
BD
Accessories

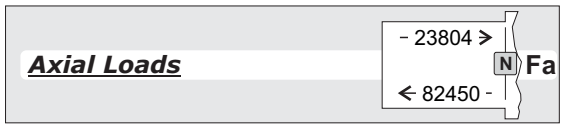


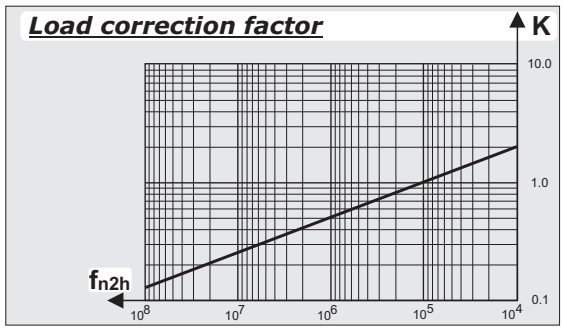


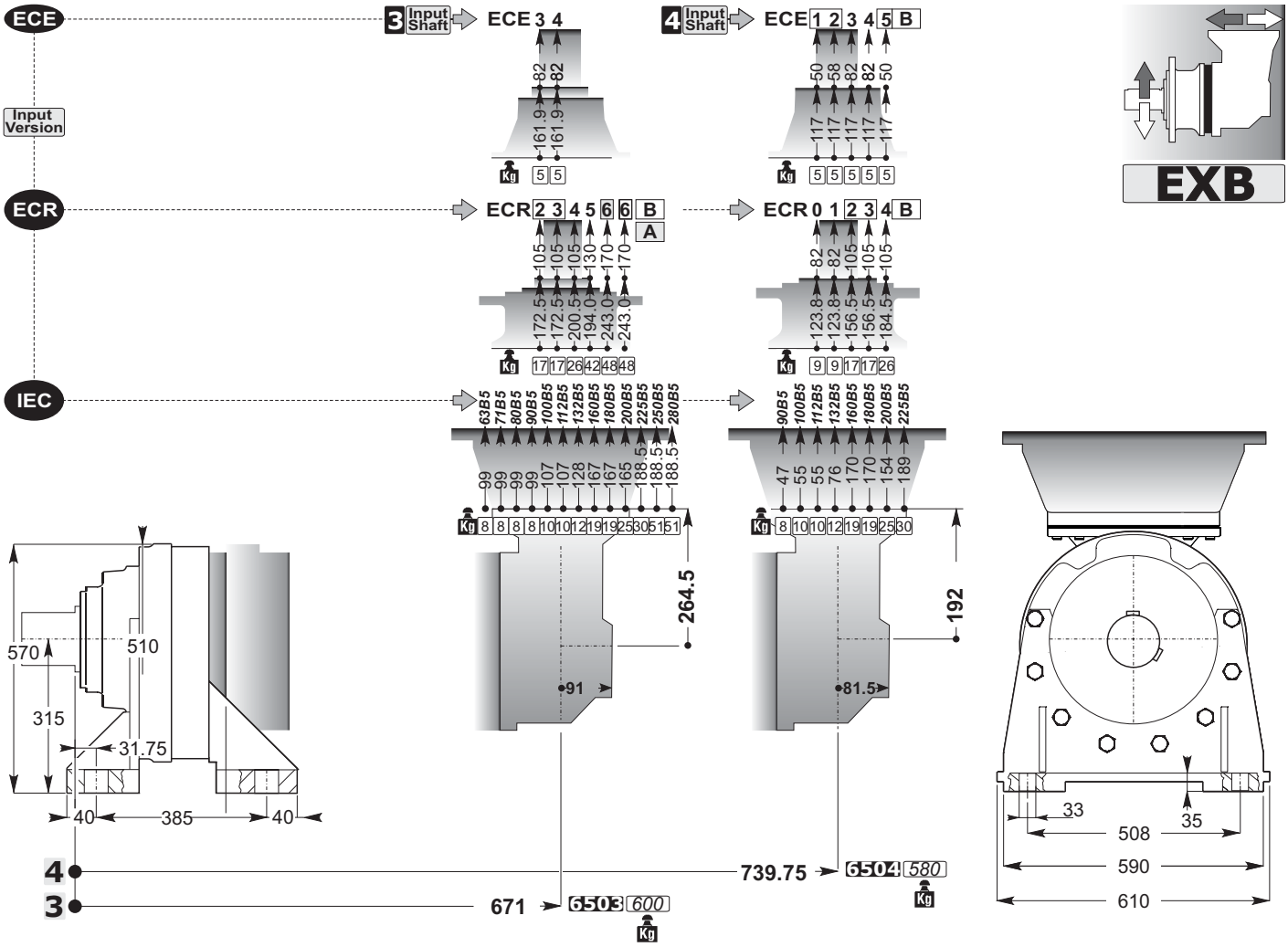


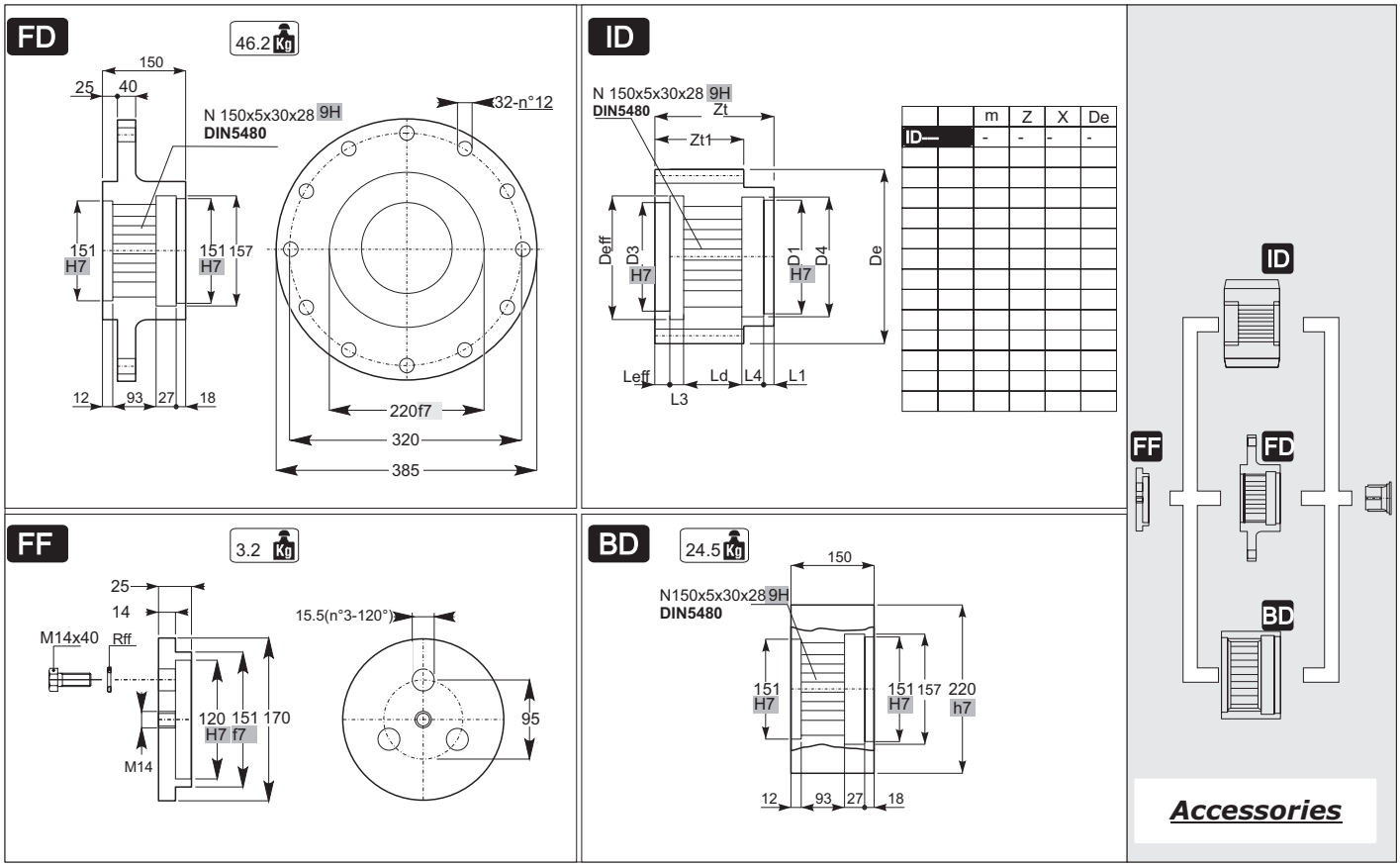
Output Shafts

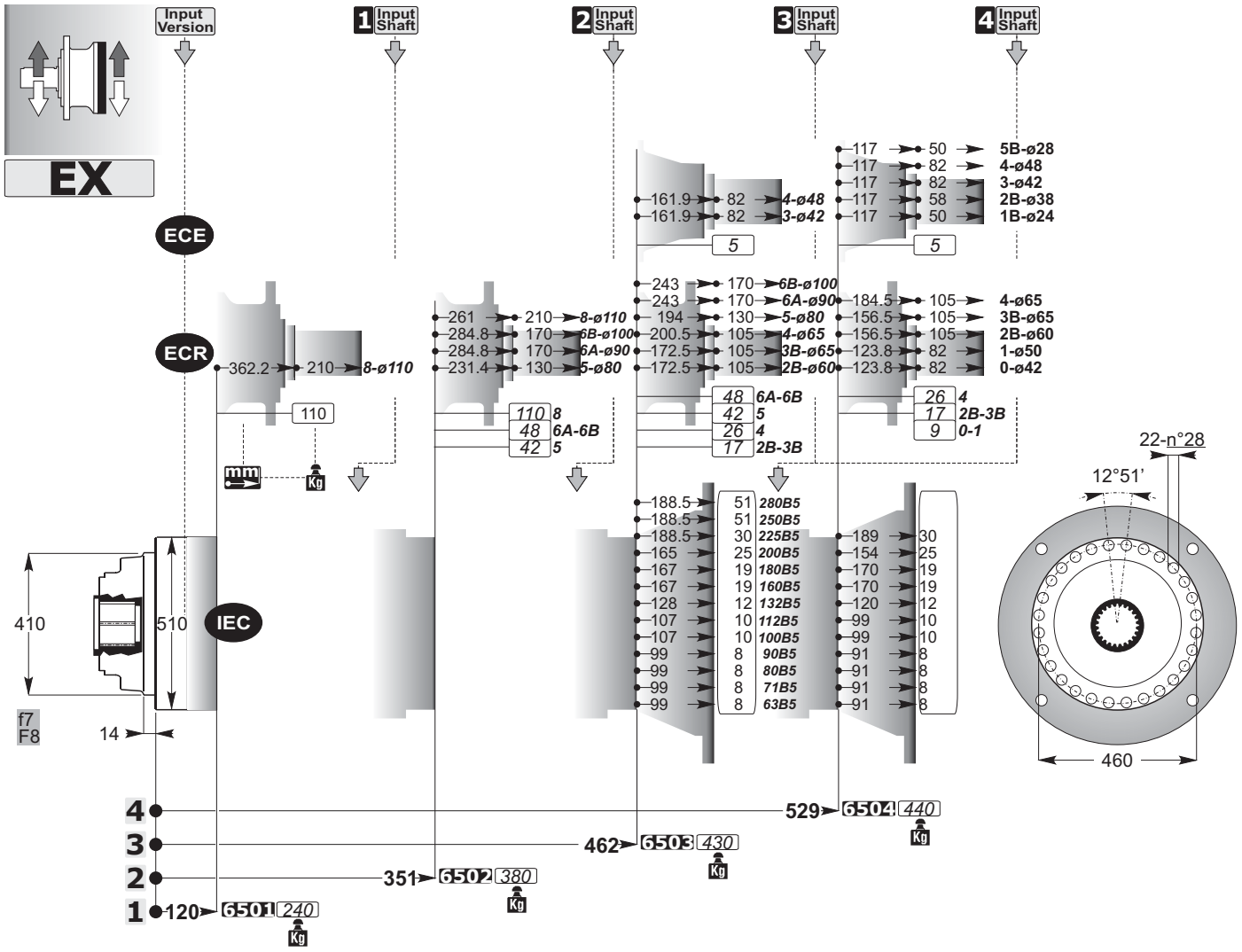


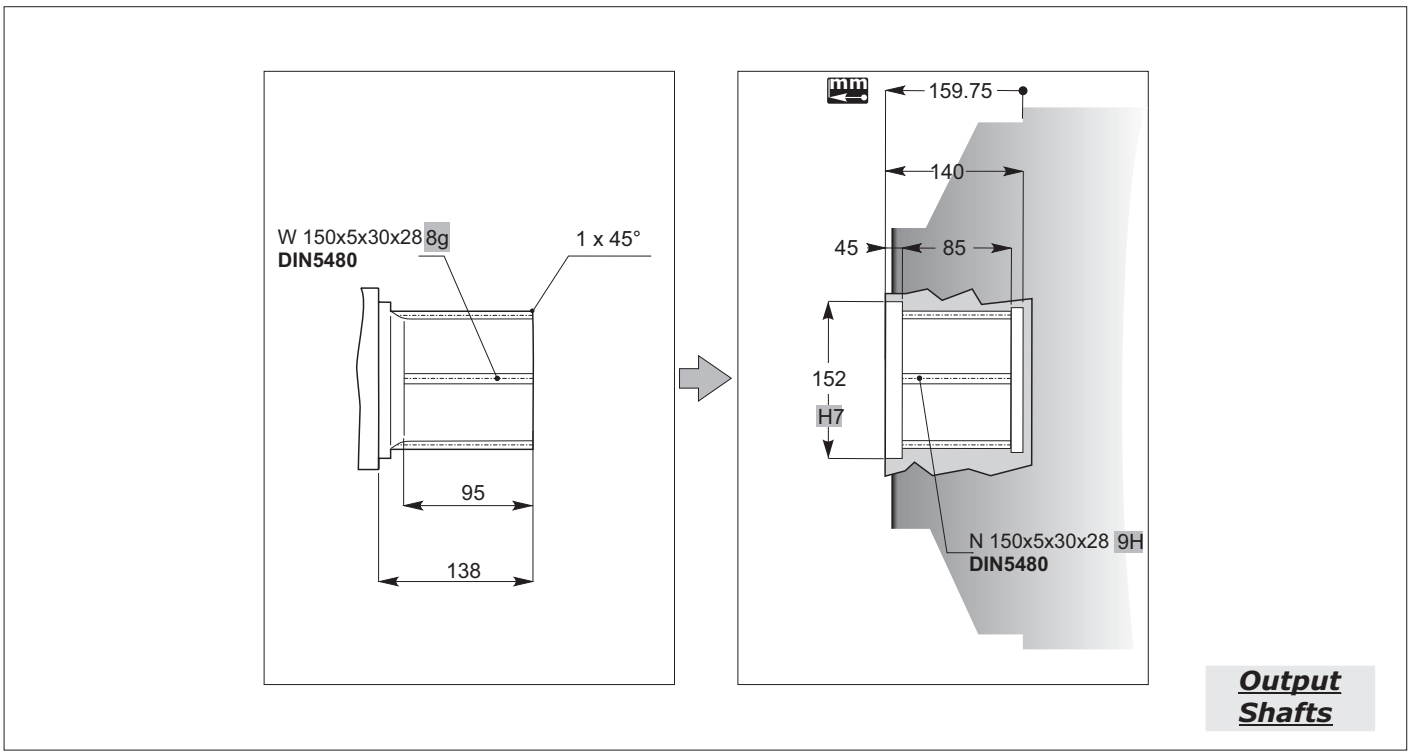


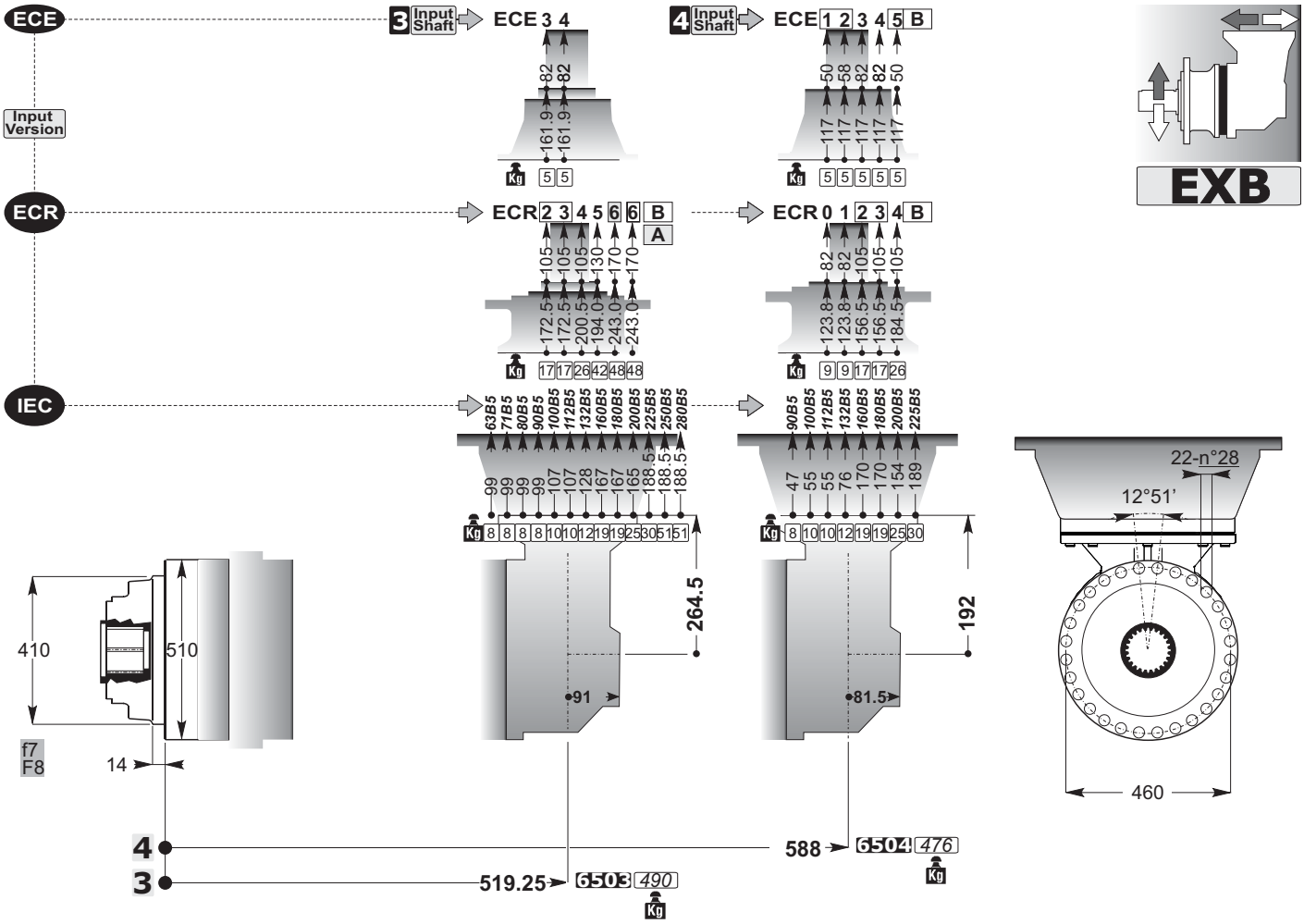


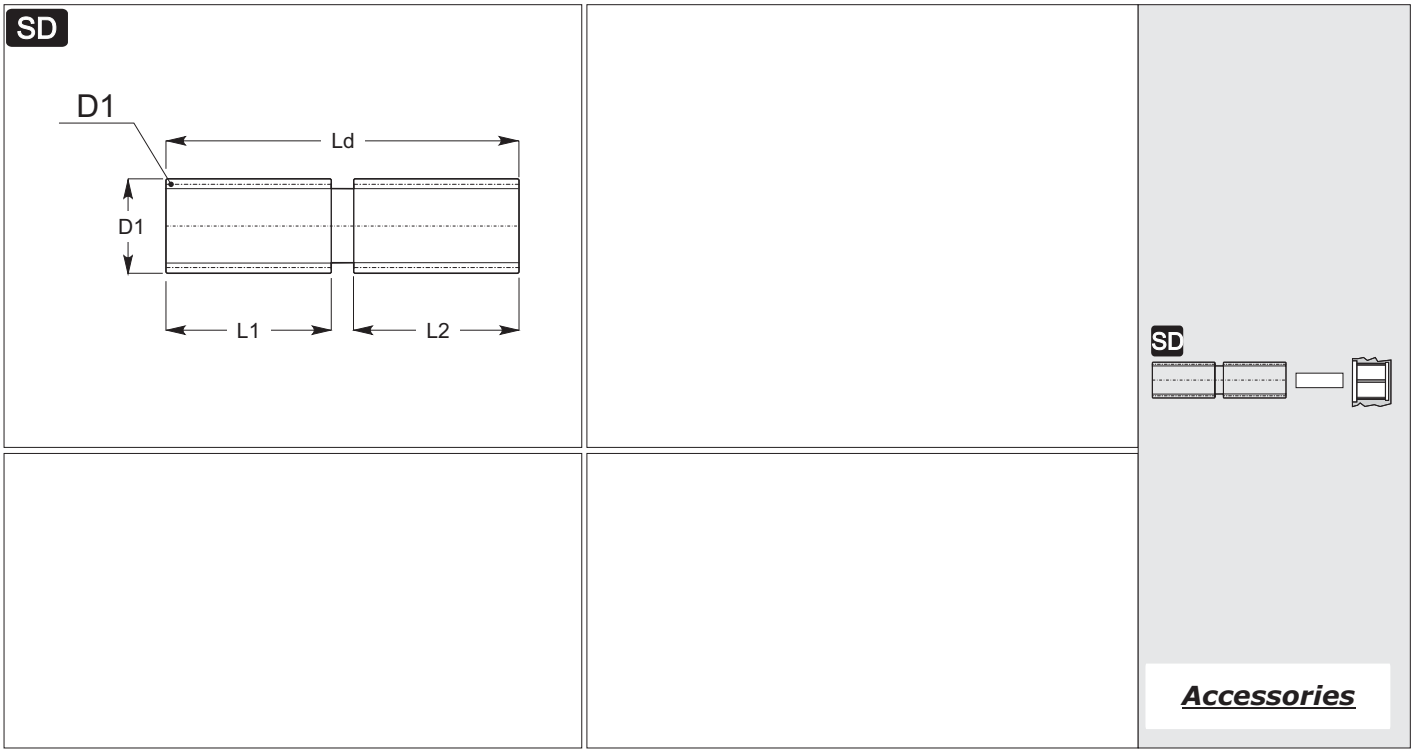

ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
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ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
264.5
192
91
81.5
570
510
315
31.75
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33
35
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590
610
4
3
739.75
671
6504 580
6503 600

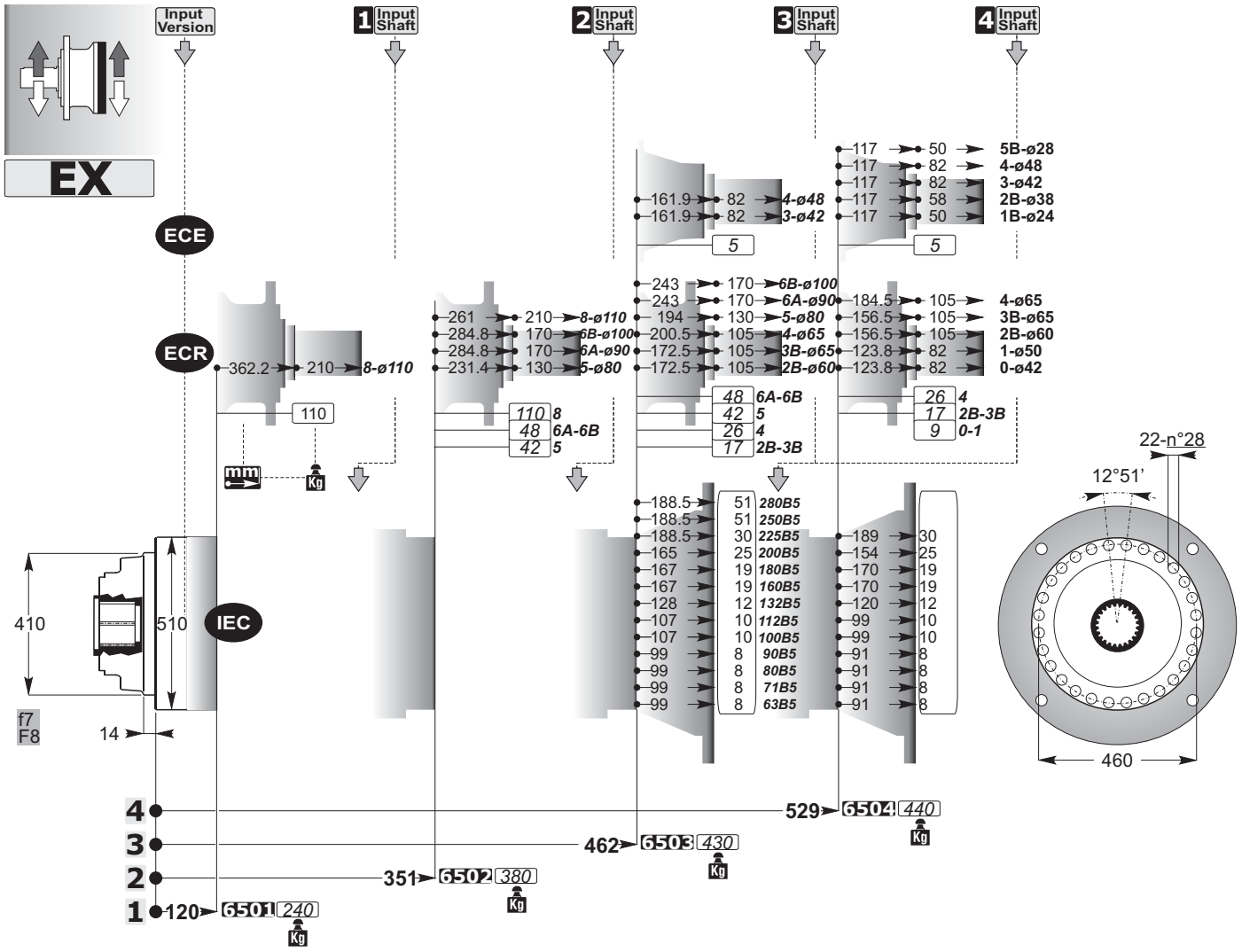

FD
46.2 Kg
150
25
40
N 150x5x30x28 9H
DIN5480
32-n°12
151 H7
151 H7
157
12
93
27
18
220f7
320
385
ID
N 150x5x30x28 9H
DIN5480
Zt
Zt1
Deff
D3 H7
D1 H7
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—
FF
3.2 Kg
25
14
M14x40
Rff
15.5(n°3-120°)
120 H7
151 f7
170
M14
95
BD
24.5 Kg
150
N150x5x30x28 9H
DIN5480
151 H7
151 H7
157
220 h7
12
93
27
18
ID
FF
FD
BD
Accessories

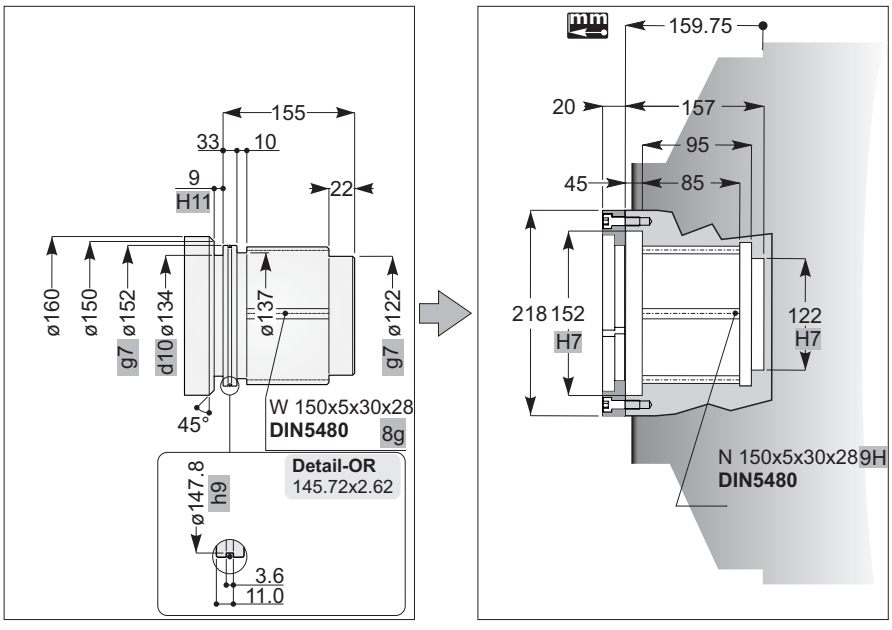

Input Version
1 Input Shaft
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
362.2 → 210 → 8-ø110
110
mm
Kg
261 → 210 → 8-ø110
284.8 → 170 → 6B-ø100
284.8 → 170 → 6A-ø90
231.4 → 130 → 5-ø80
110 8
48 6A-6B
42 5
161.9 → 82 → 4-ø48
161.9 → 82 → 3-ø42
5
243 → 170 → 6B-ø100
243 → 170 → 6A-ø90
194 → 130 → 5-ø80
200.5 → 105 → 4-ø65
172.5 → 105 → 3B-ø65
172.5 → 105 → 2B-ø60
48 6A-6B
42 5
26 4
17 2B-3B
117 → 50 → 5B-ø28
117 → 82 → 4-ø48
117 → 82 → 3-ø42
117 → 58 → 2B-ø38
117 → 50 → 1B-ø24
5
184.5 → 105 → 4-ø65
156.5 → 105 → 3B-ø65
156.5 → 105 → 2B-ø60
123.8 → 82 → 1-ø50
123.8 → 82 → 0-ø42
26 4
17 2B-3B
9 0-1
22-n°28
12°51'
460
410
510
f7
F8
14
188.5 → 51 280B5
188.5 → 51 250B5
188.5 → 30 225B5
165 → 25 200B5
167 → 19 180B5
167 → 19 160B5
128 → 12 132B5
107 → 10 112B5
107 → 10 100B5
99 → 8 90B5
99 → 8 80B5
99 → 8 71B5
99 → 8 63B5
189 → 30
154 → 25
170 → 19
170 → 19
120 → 12
99 → 10
99 → 10
91 → 8
91 → 8
91 → 8
91 → 8
4
3
2
1
529 6504 440
462 6503 430
351 6502 380
120 6501 240


W 150x5x30x28 8g
DIN5480
1 x 45°
95
138
mm
159.75
140
45
85
152
H7
N 150x5x30x28 9H
DIN5480
Output Shafts

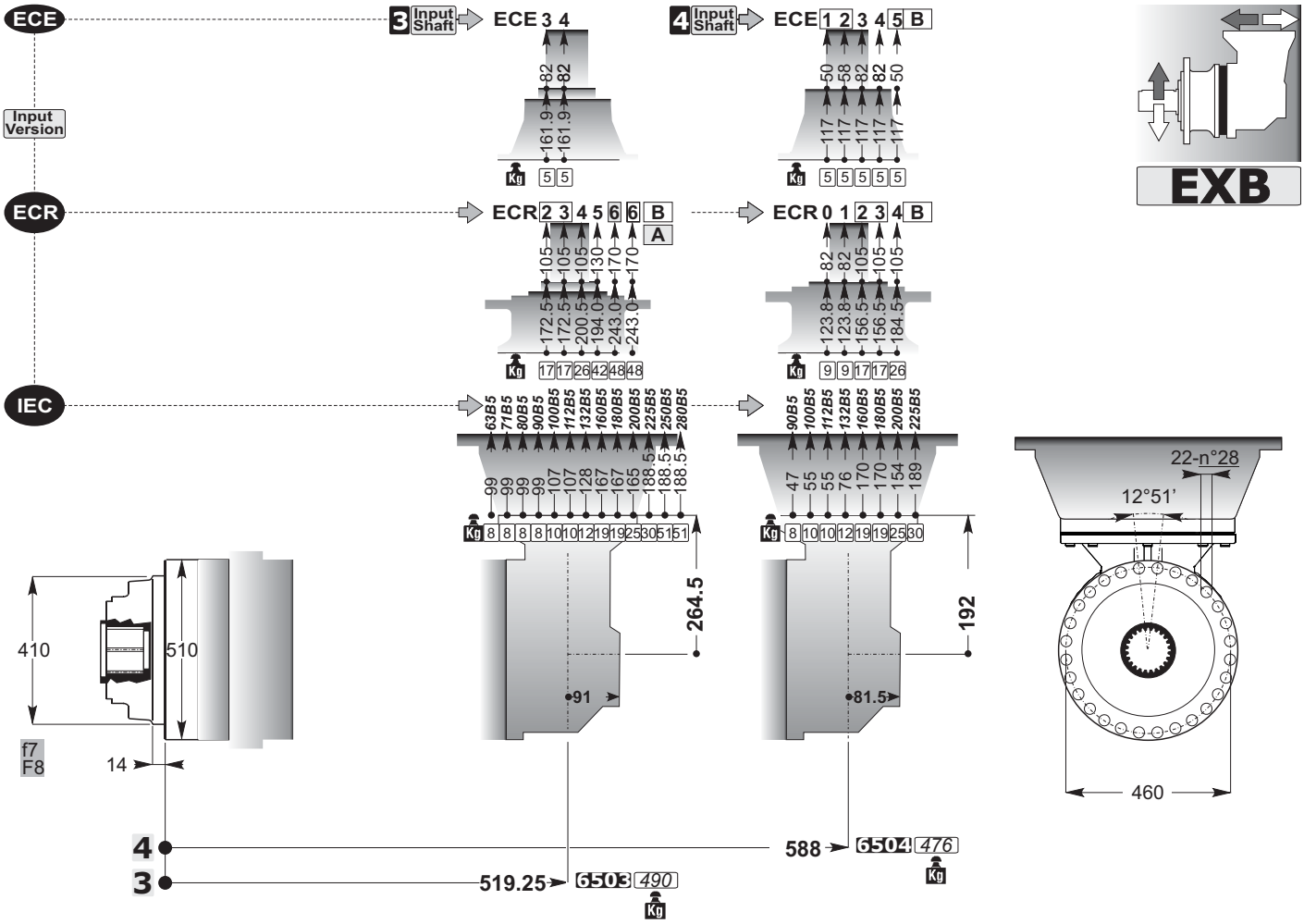

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 3 4
4 Input Shaft
ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
EXB
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
264.5
192
91
81.5
410
510
f7
F8
14
22-n°28
12°51'
460
4
3
588
6504 476
519.25
6503 490
Kg

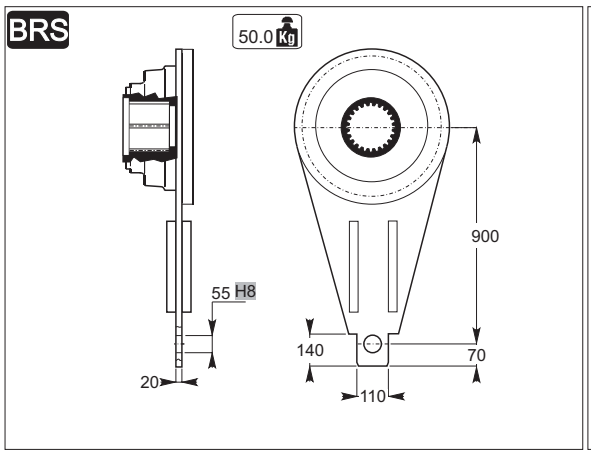

SD
D1
Ld
D1
L1
L2
SD
Accessories

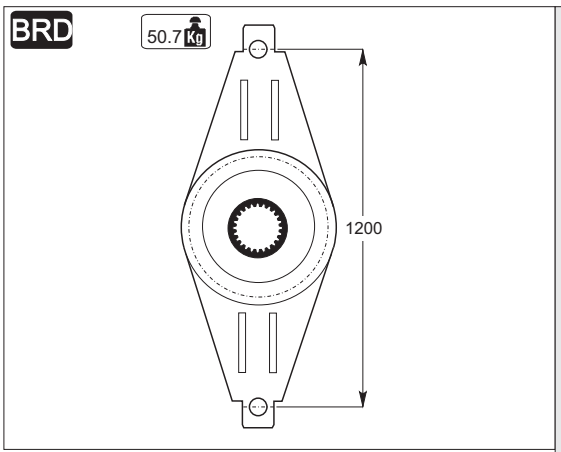


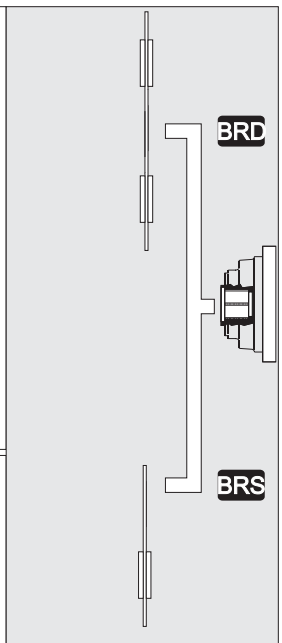


Output Shafts



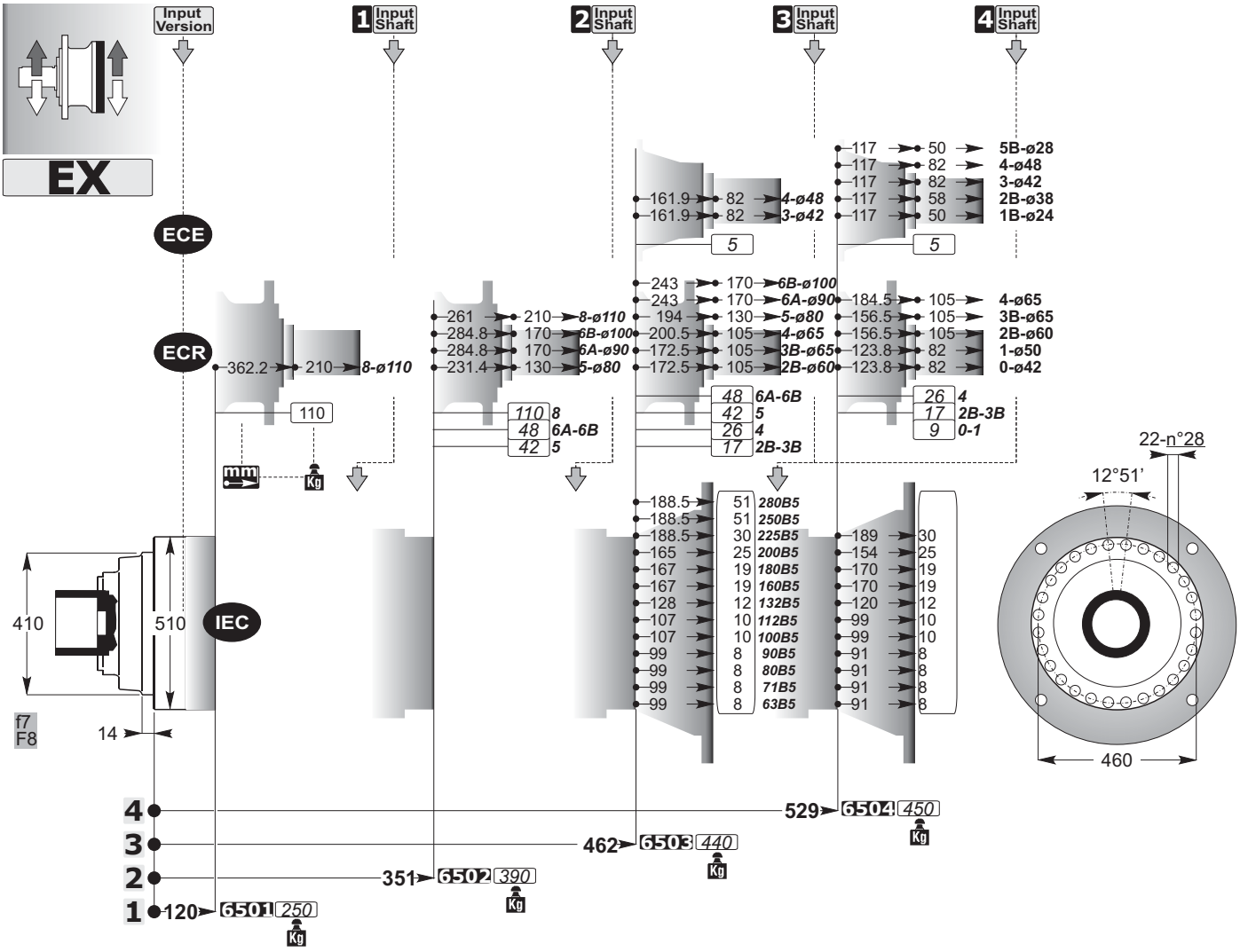


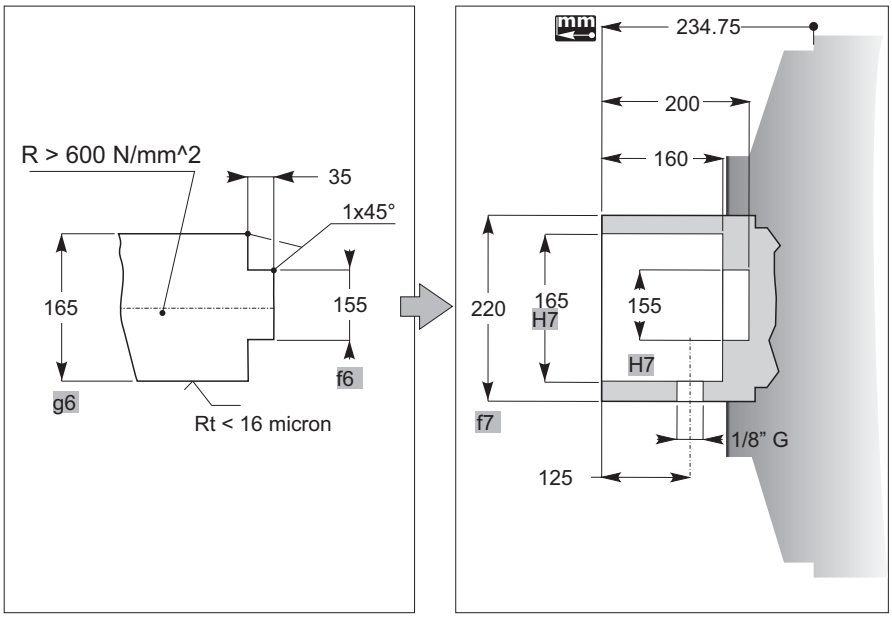




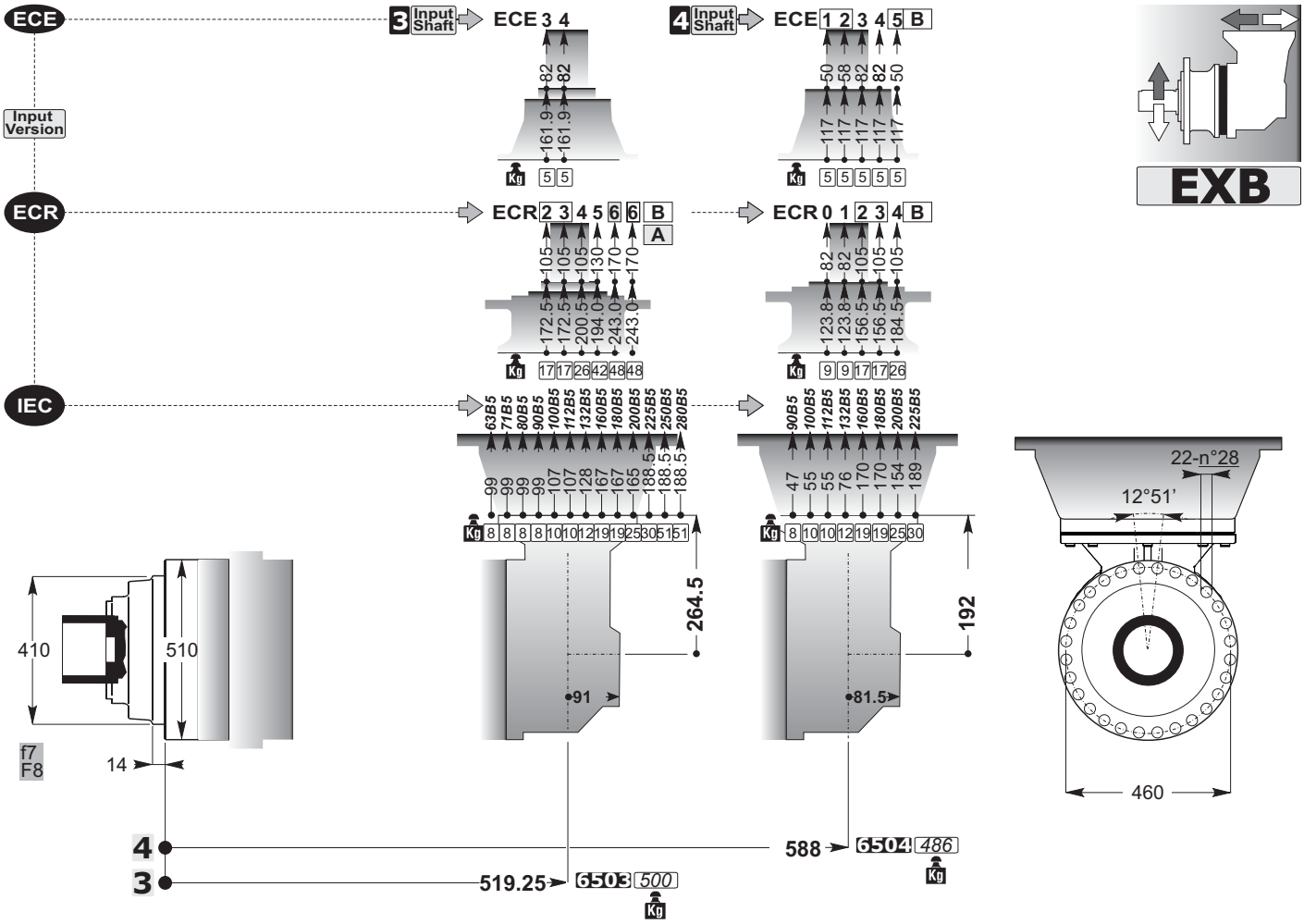
Accessories

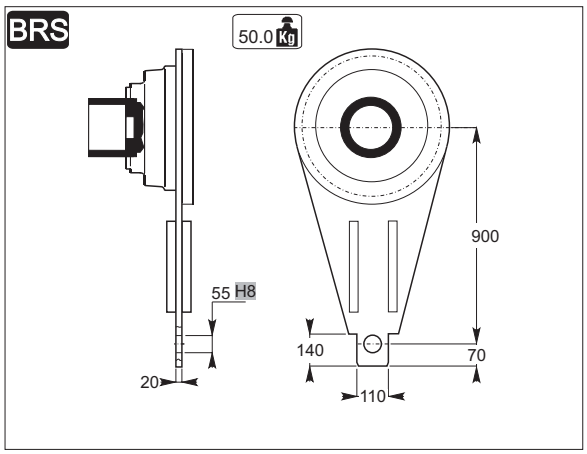
mm
C

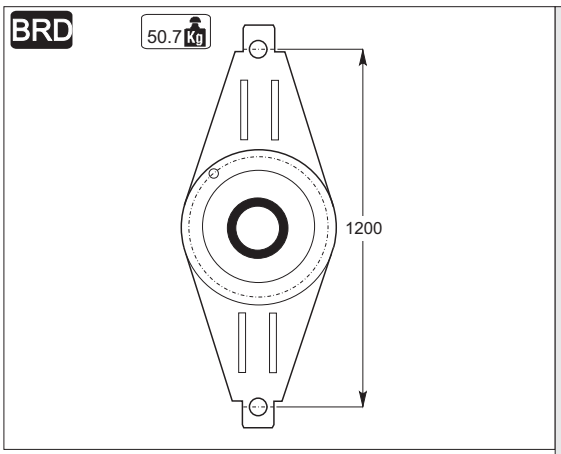


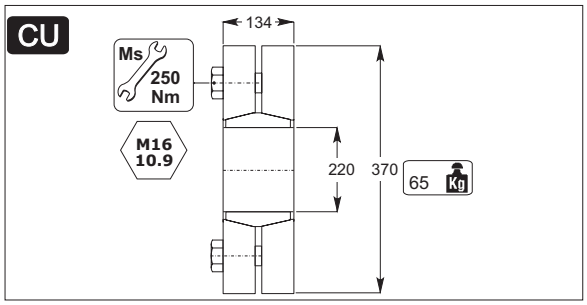


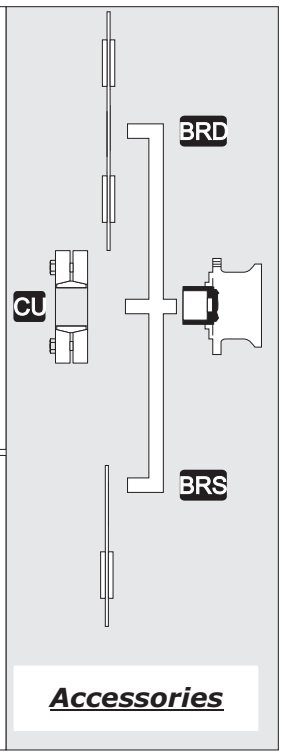
Output Shafts


ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
410
510
f7
F8
14
264.5
192
91
81.5
22-n°28
12°51'
460
4
3
588
6504 486
519.25
6503 500

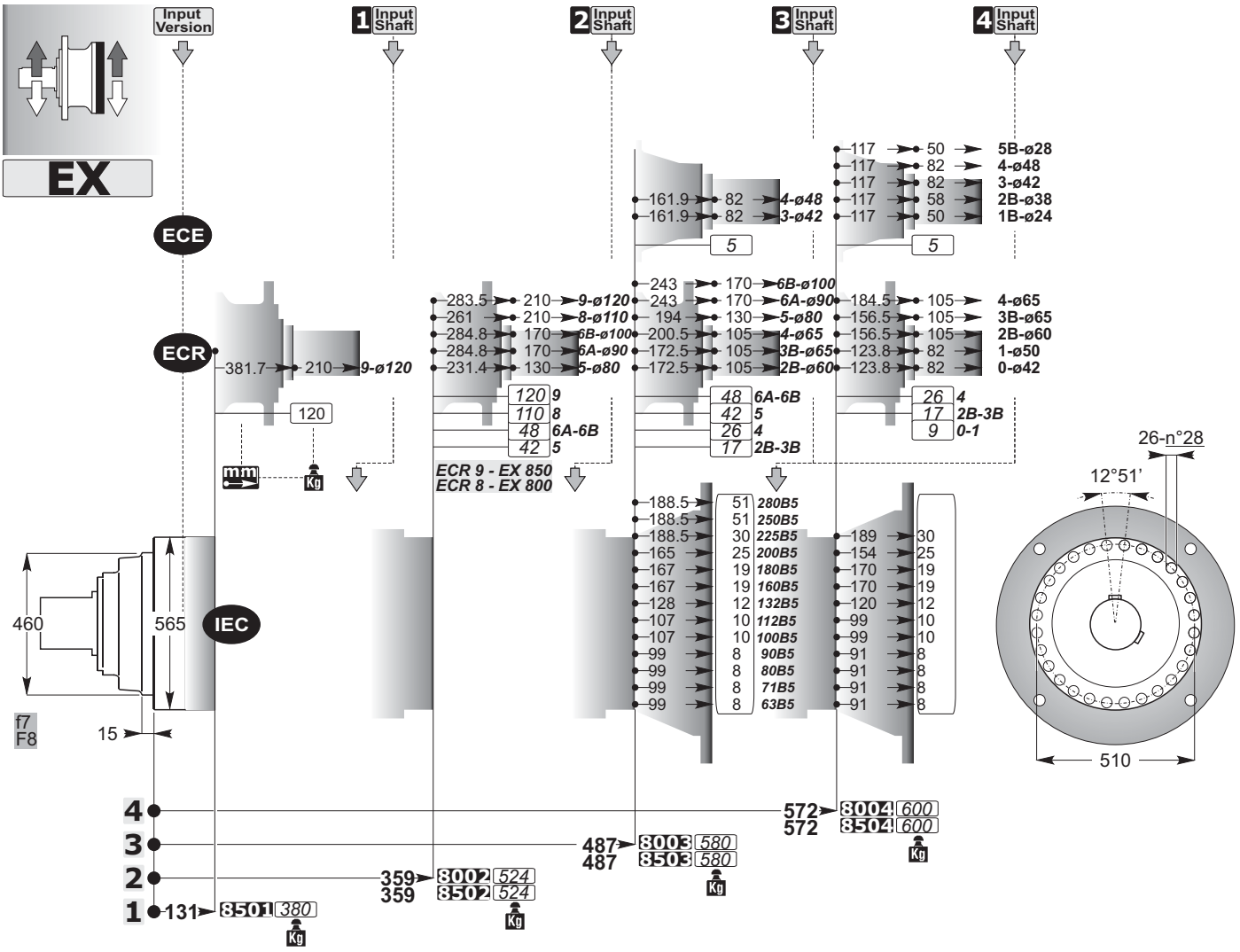

BRS
50.0 Kg
55 H8
20
900
140
70
110

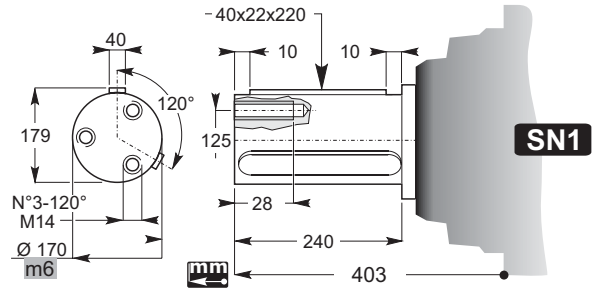

BRD
50.7 Kg
1200

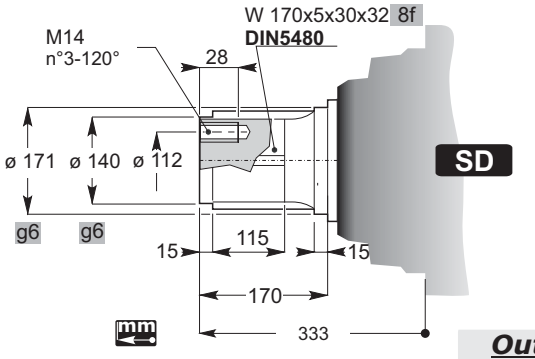

CU
Ms
250
Nm
M16
10.9
134
220
370
65 Kg


BRD
CU
BRS
Accessories

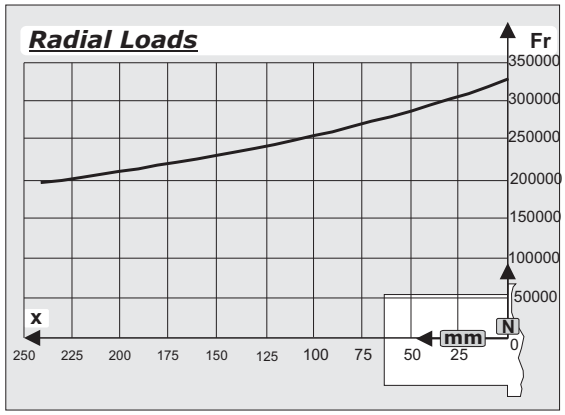
mm
C

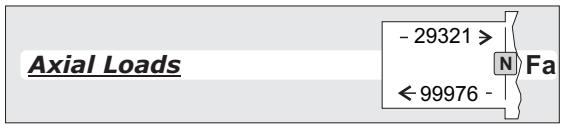


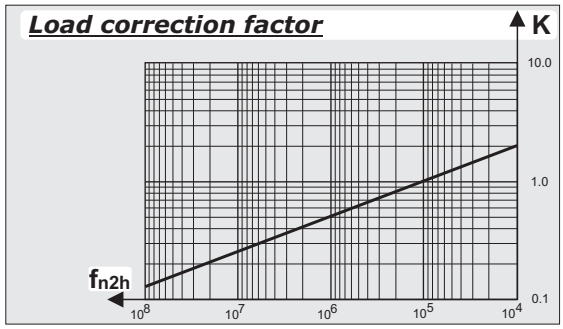


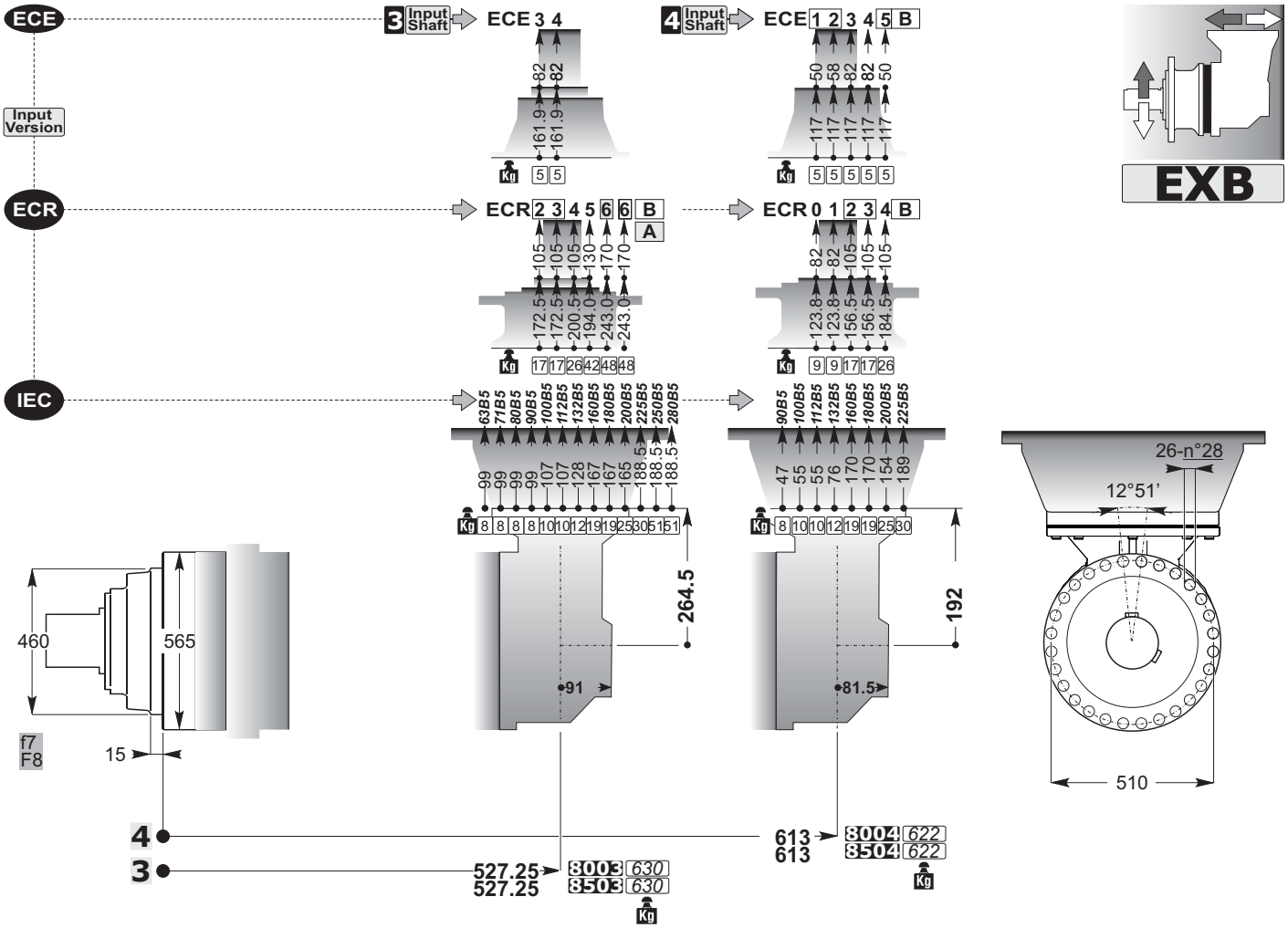


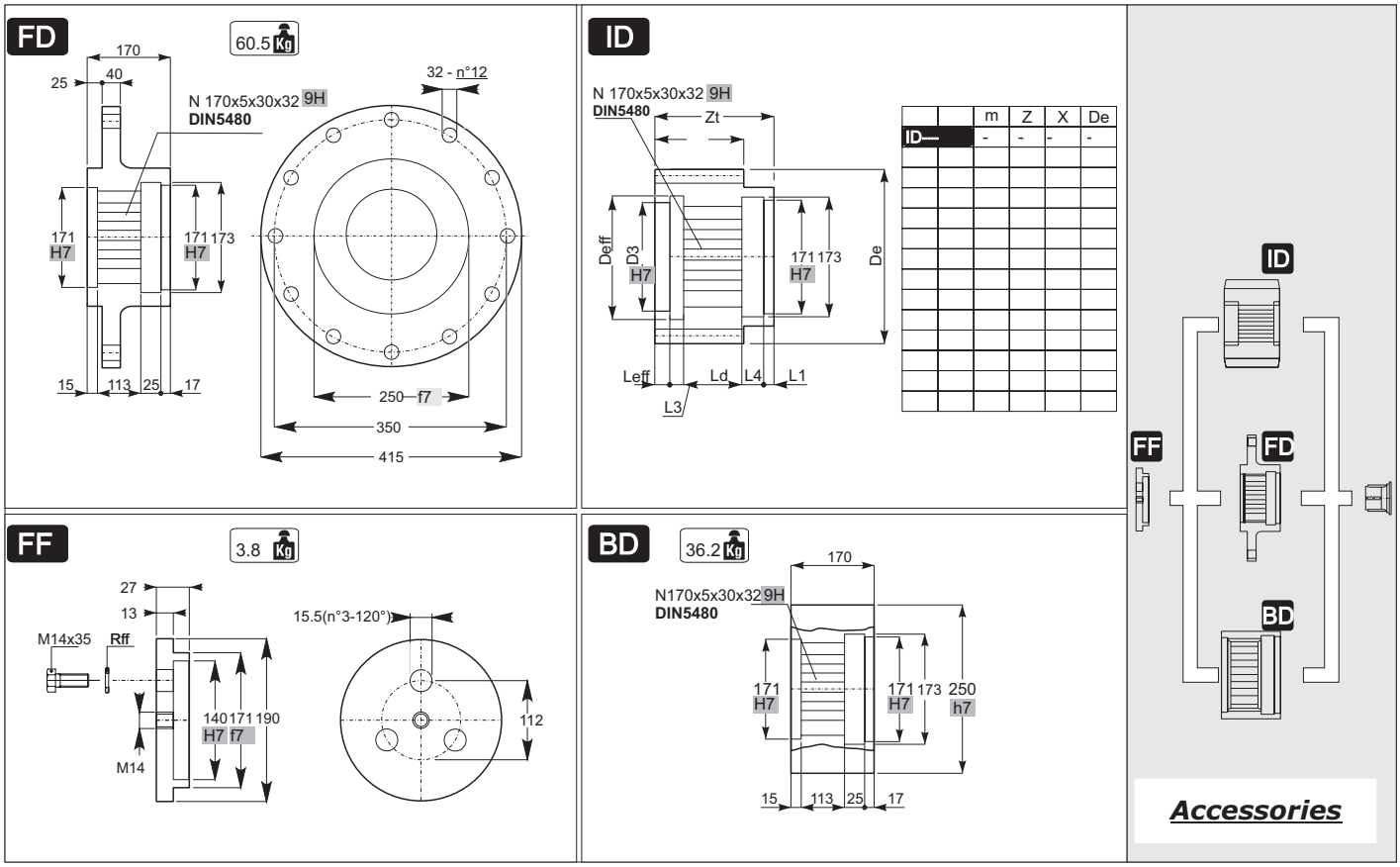
Output Shafts

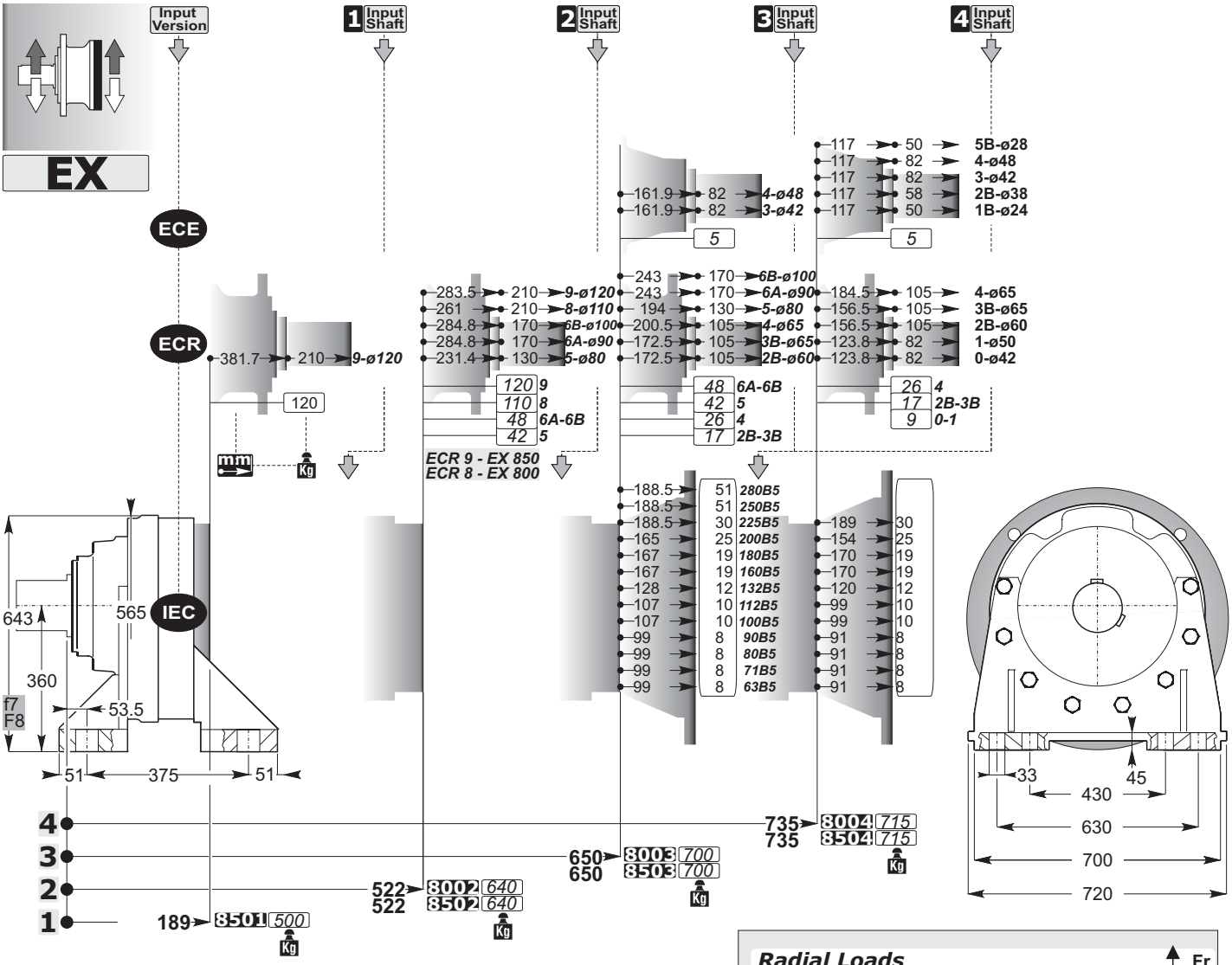


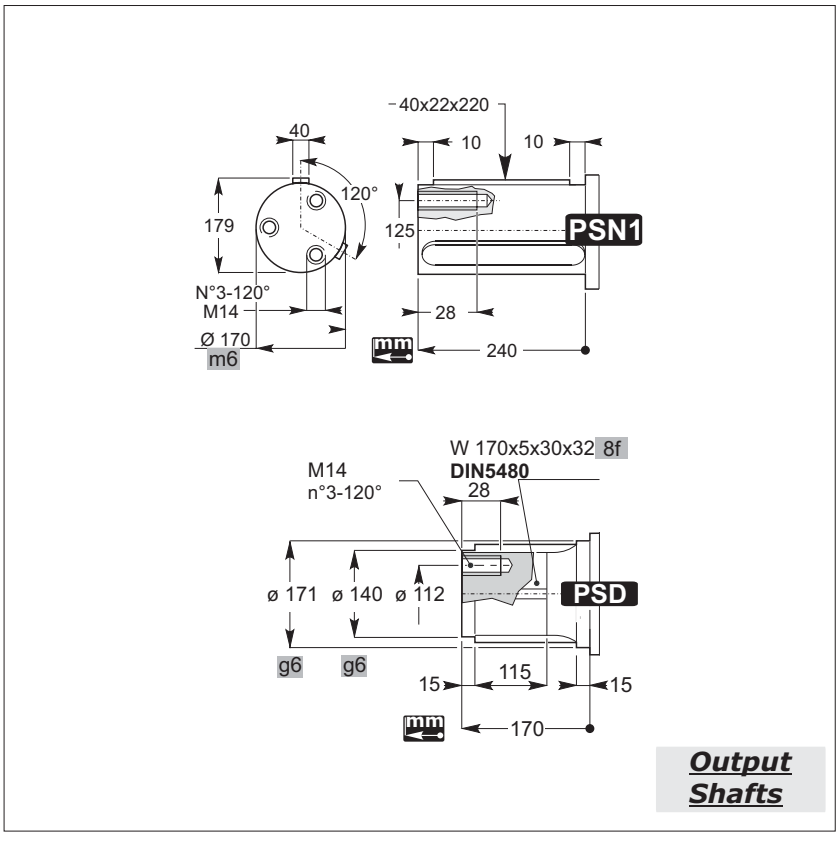




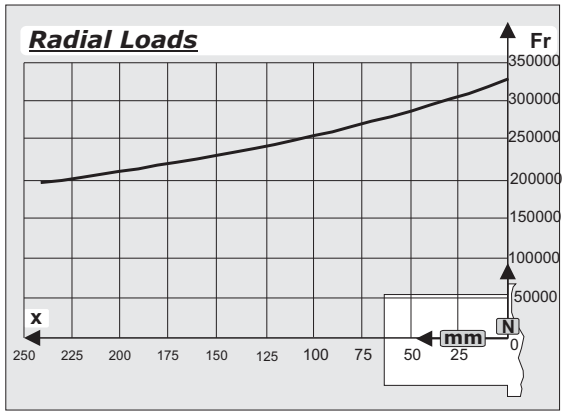

ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
26-n°28
12°51'
510
460
565
f7
F8
15
264.5
192
91
81.5
4
3
613
613
8004 622
8504 622
527.25
527.25
8003 630
8503 630

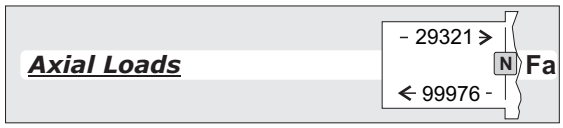

FD
60.5 Kg
170
25
40
N 170x5x30x32 9H
DIN5480
32 - n°12
171 H7
171 173 H7
15
113
25
17
250 f7
350
415
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
171 173 H7
De
Leff
Ld
L4
L1
L3
m Z X De
ID
FF
3.8 Kg
27
13
M14x35
Rff
15.5(n°3-120°)
140 171 190
H7 f7
M14
112
BD
36.2 Kg
170
N170x5x30x32 9H
DIN5480
171 H7
171 173 H7
250 h7
15
113
25
17
ID
FF
FD
BD
Accessories

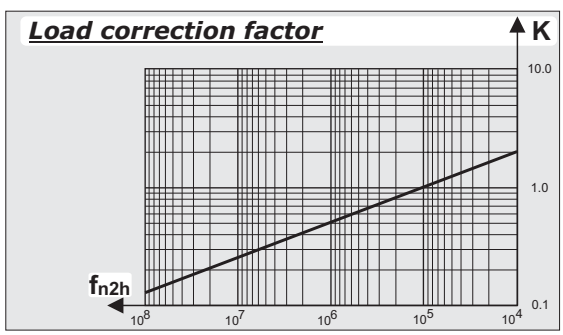


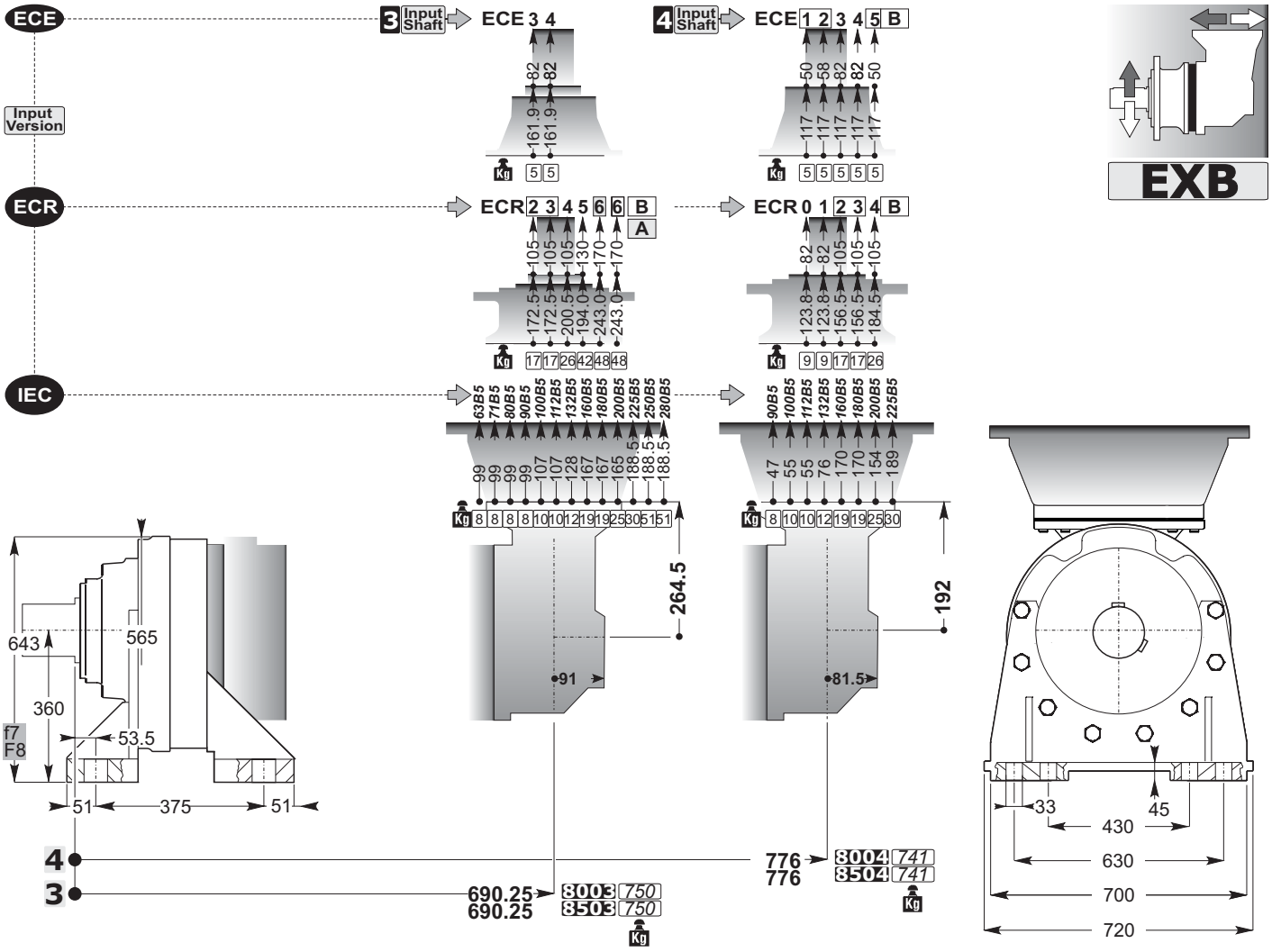


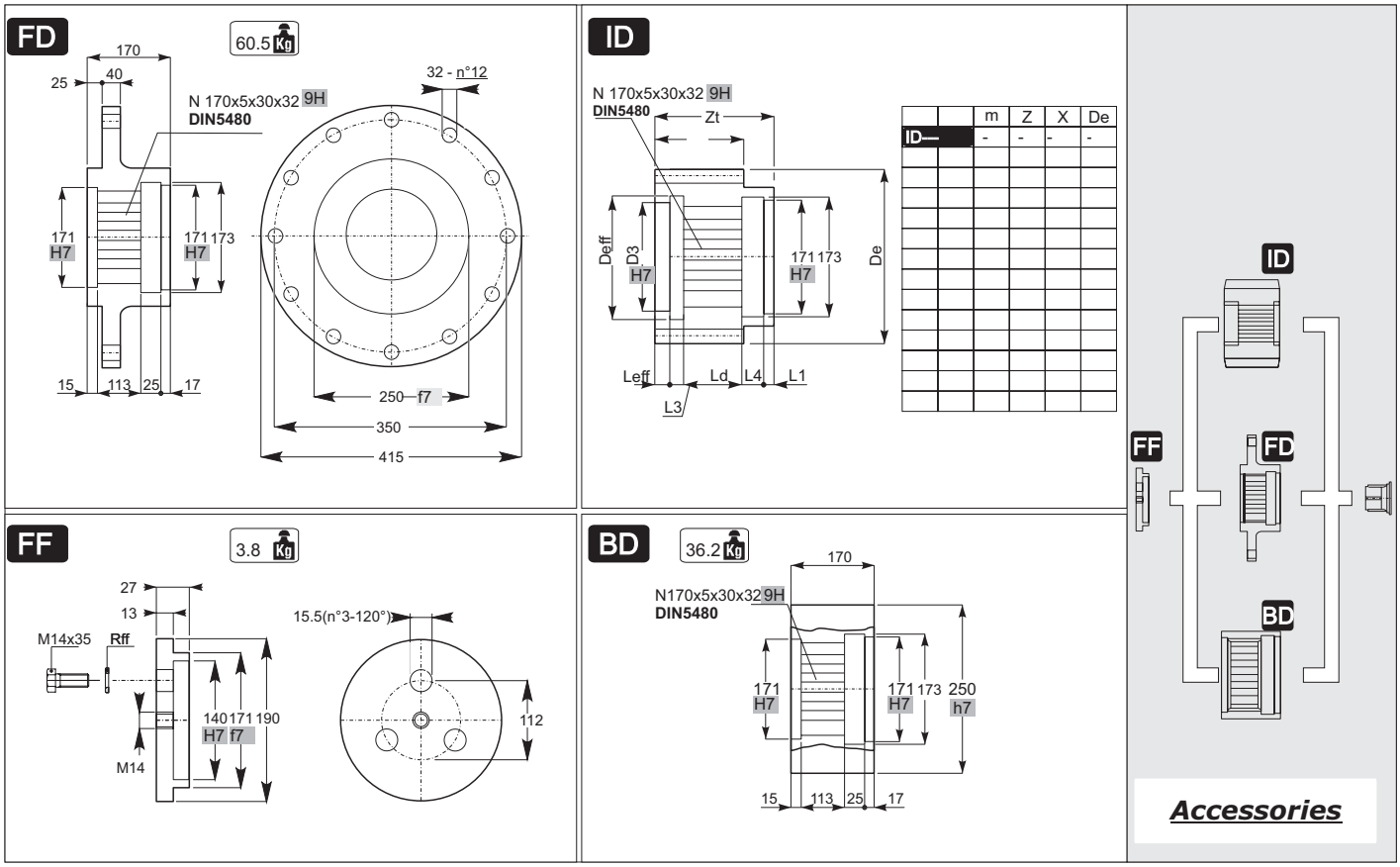
Output Shafts

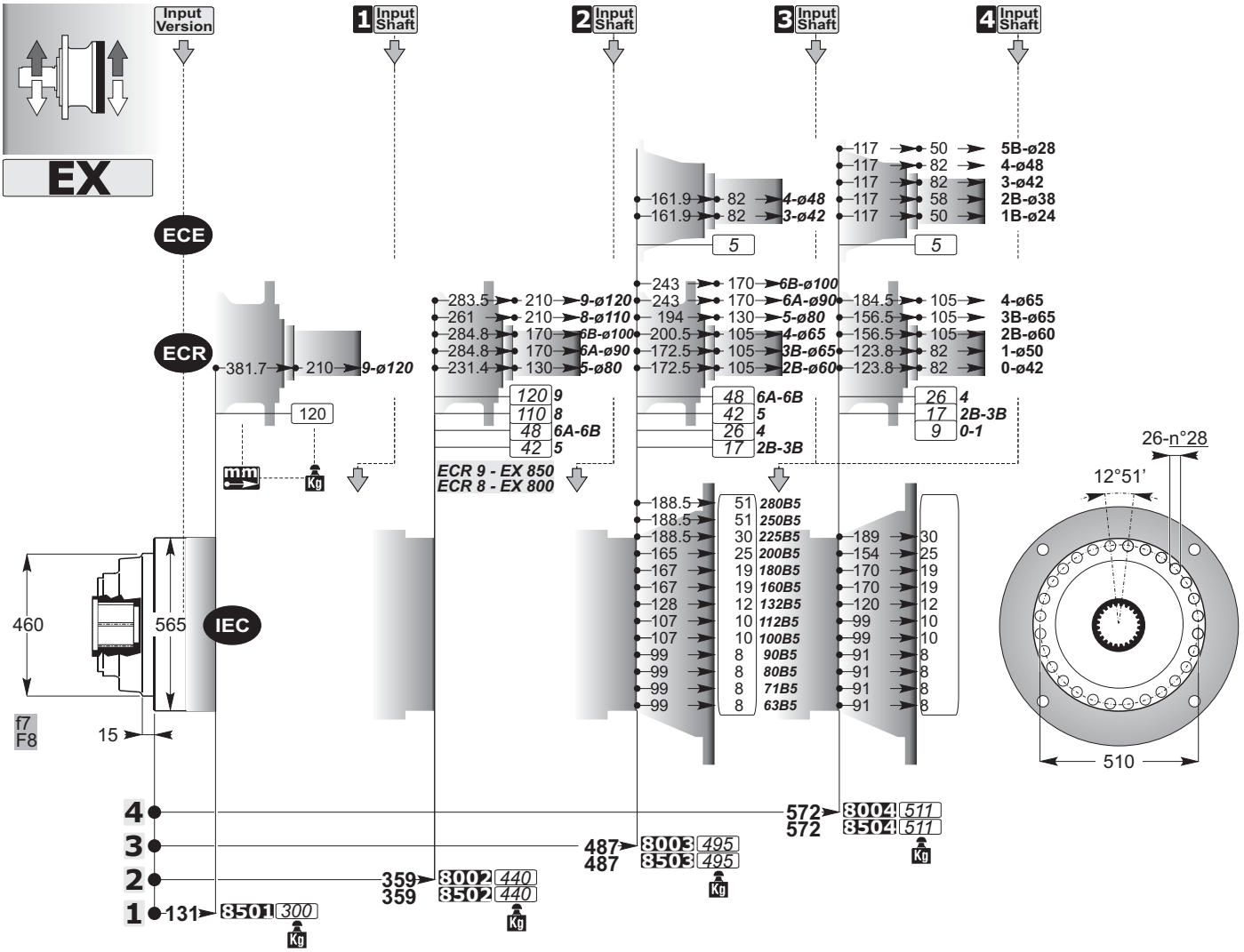


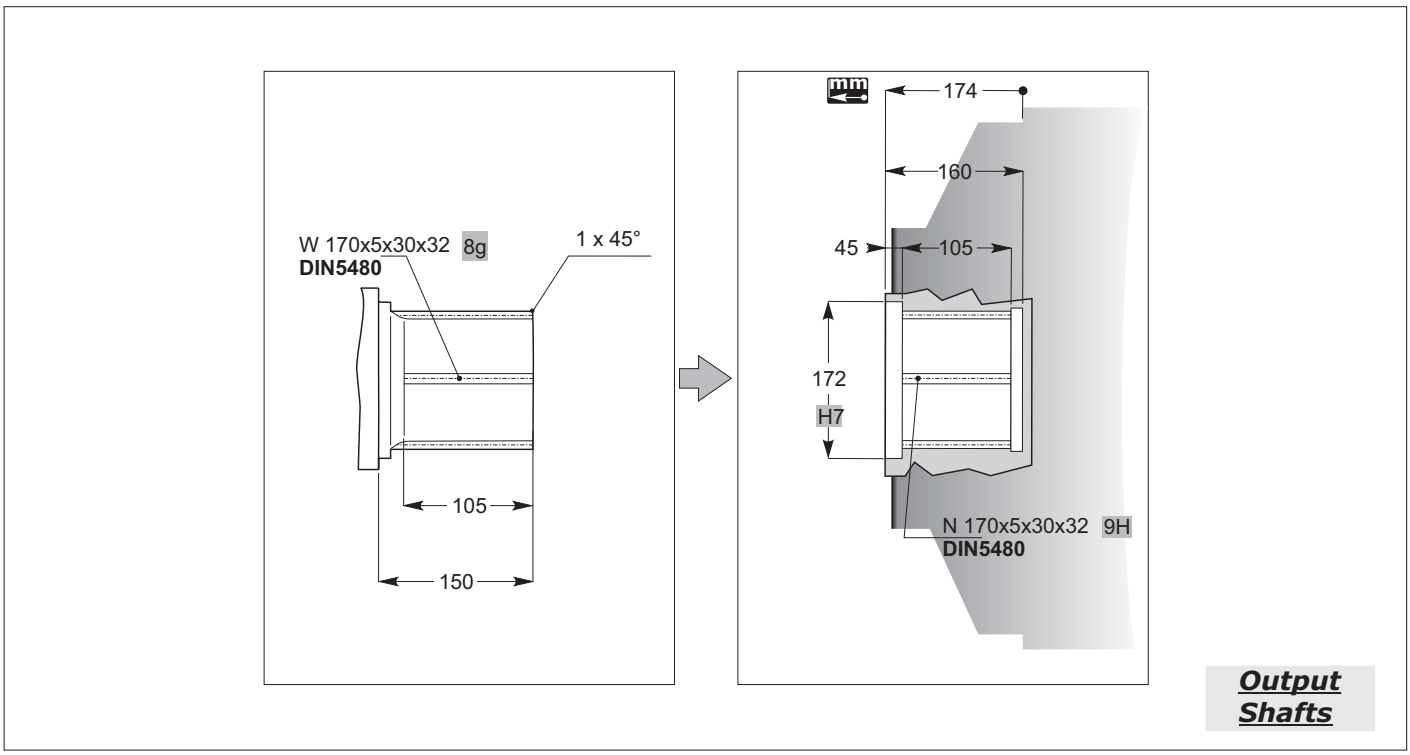




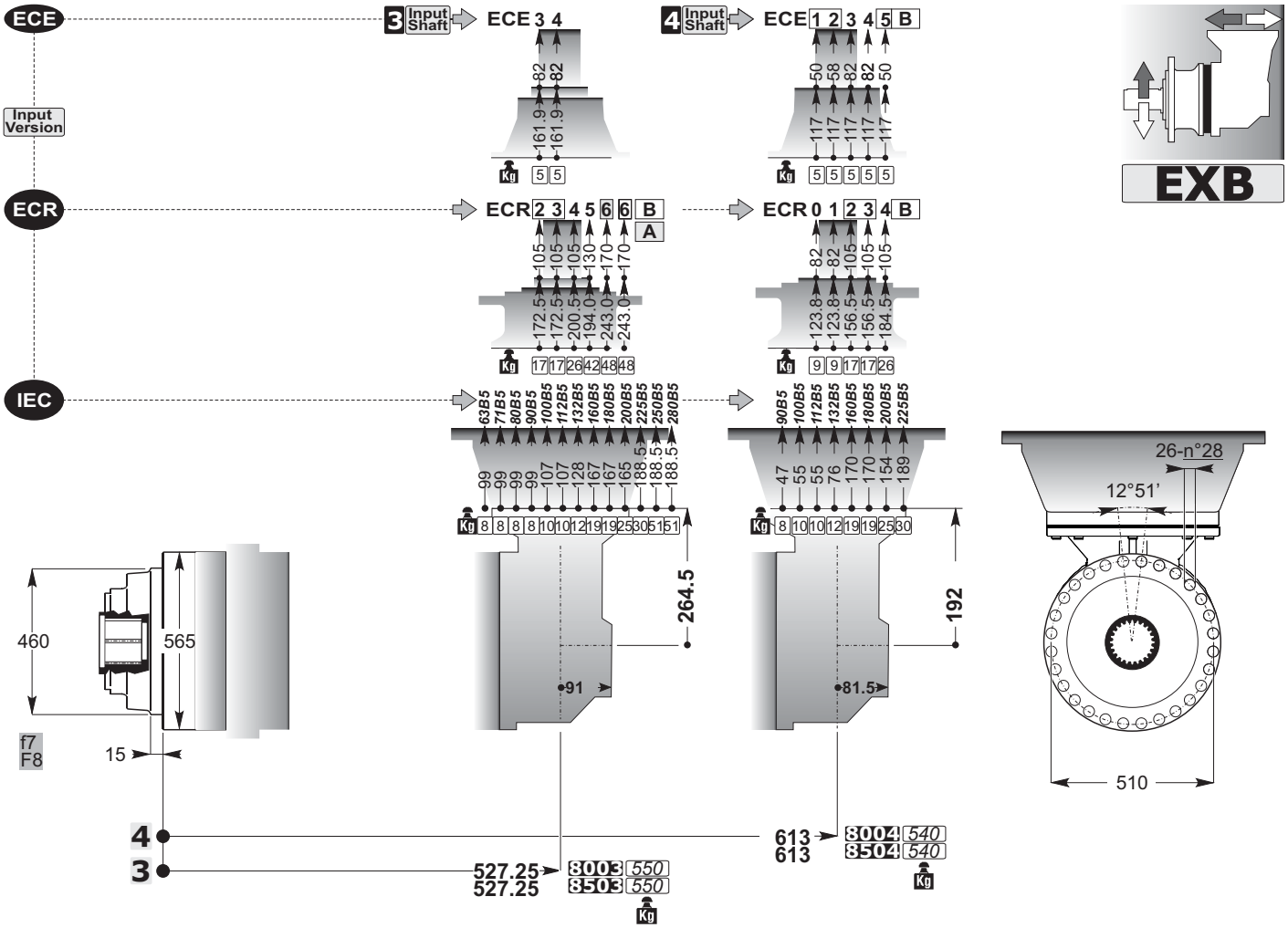

ECE
Input Version
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
IEC
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
264.5
192
91
81.5
643
565
360
f7
F8
53.5
51
375
51
33
45
430
630
700
720
776 8004 741
776 8504 741
690.25 8003 750
690.25 8503 750


FD
60.5 Kg
170
25
40
N 170x5x30x32 9H
DIN5480
32 - n°12
171 H7
171 173 H7
15
113
25
17
250 f7
350
415
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
171 173 H7
De
Leff
Ld
L4
L1
L3
m Z X De
ID— - - - -
FF
3.8 Kg
27
13
M14x35
Rff
15.5(n°3-120°)
140 171 190
H7 f7
M14
112
BD
36.2 Kg
170
N170x5x30x32 9H
DIN5480
171 H7
171 173 H7
250 h7
15
113
25
17
ID
FF
FD
BD
Accessories

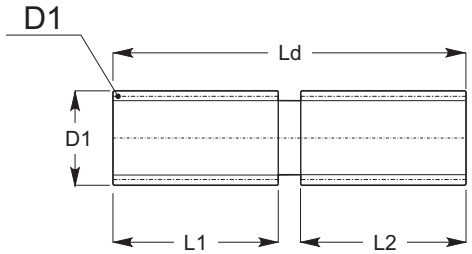




Output Shafts



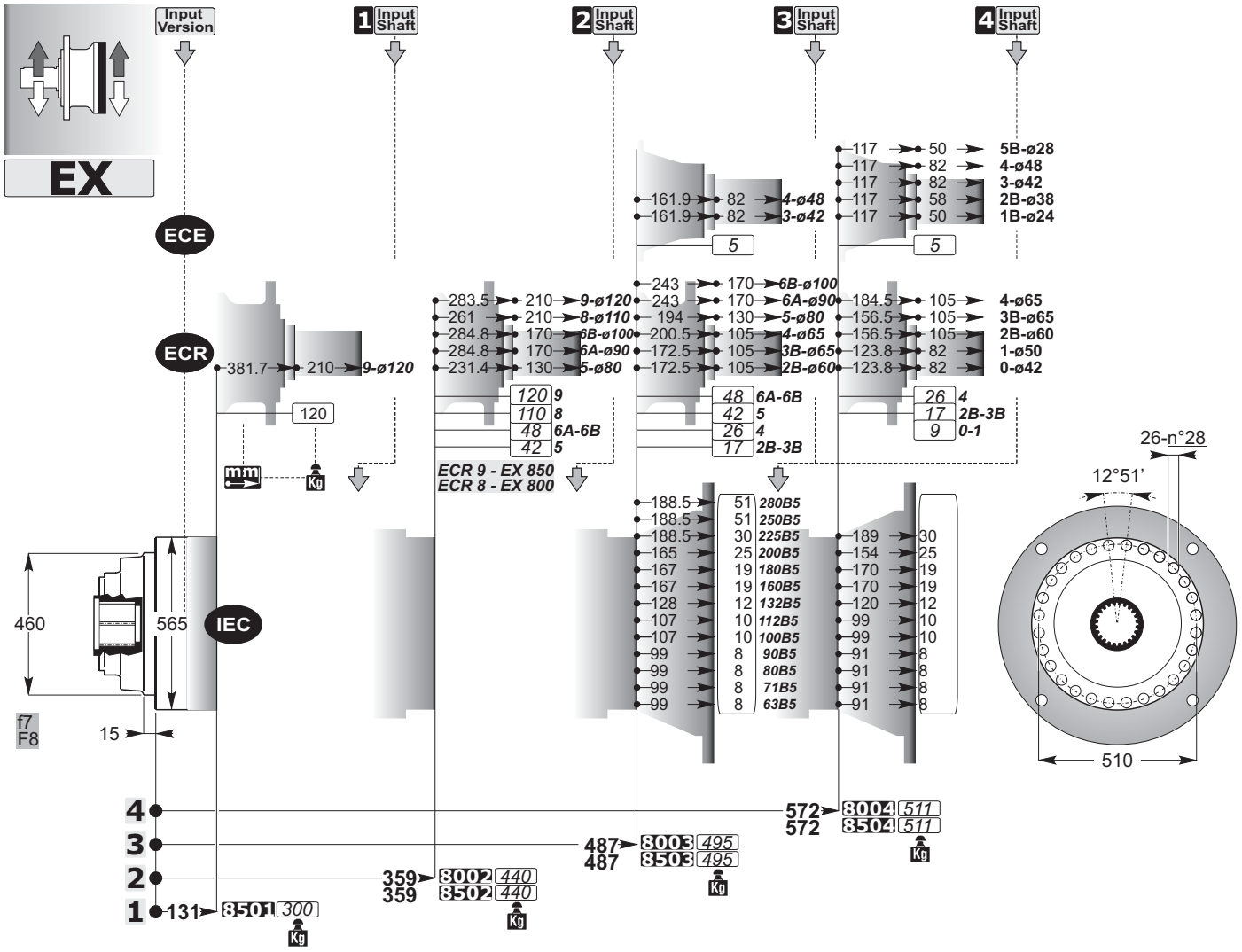
SD

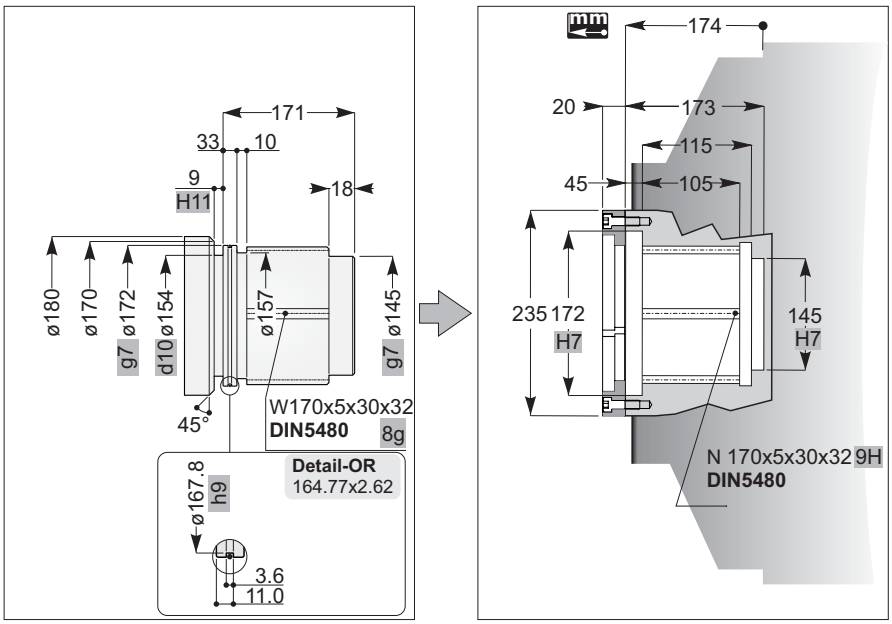


SD

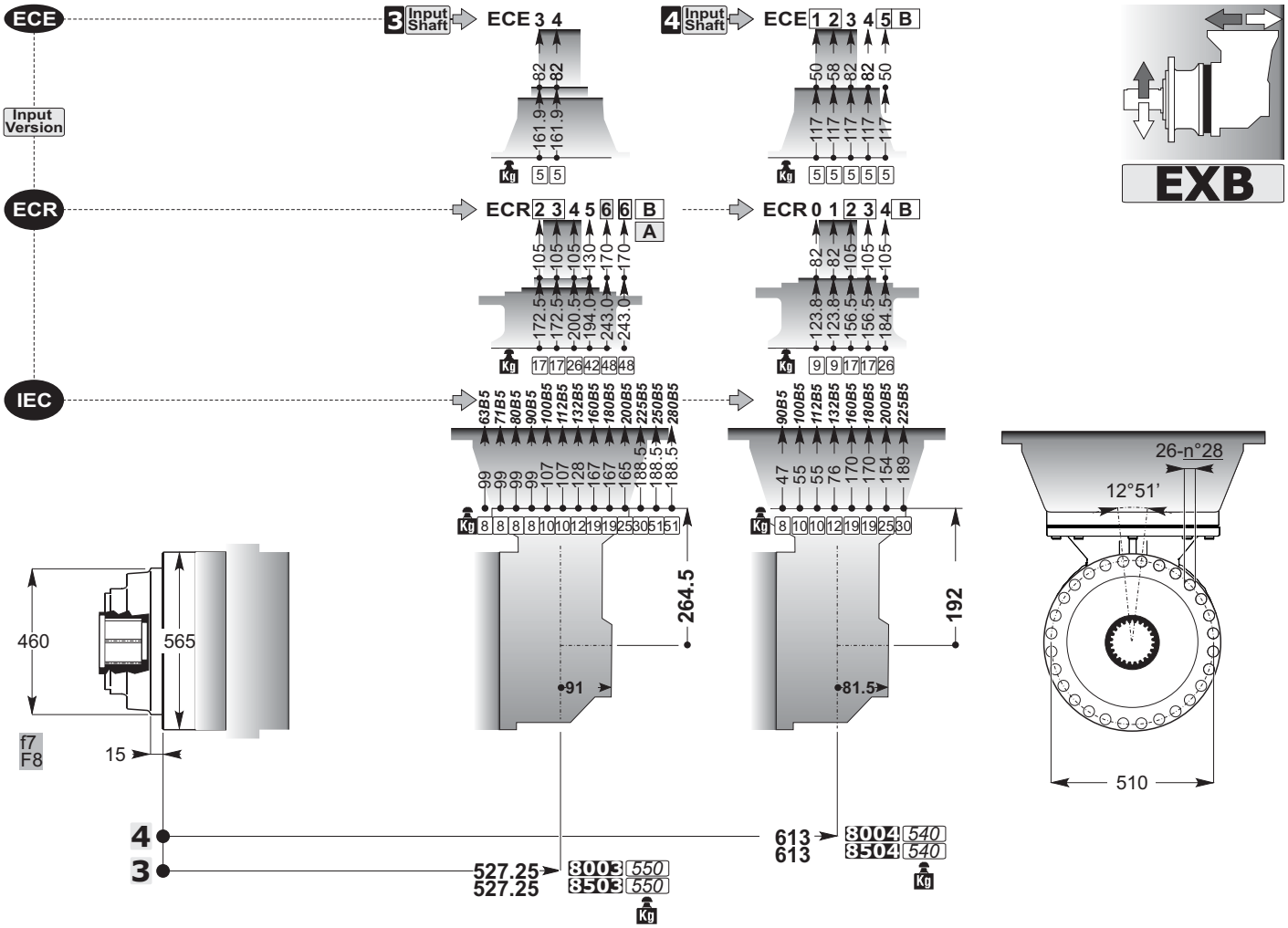


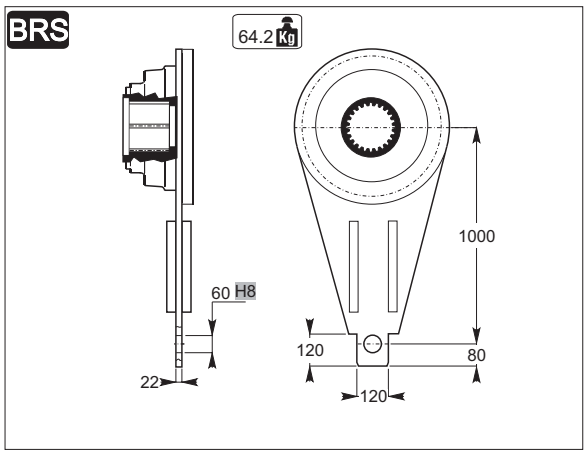
Accessories

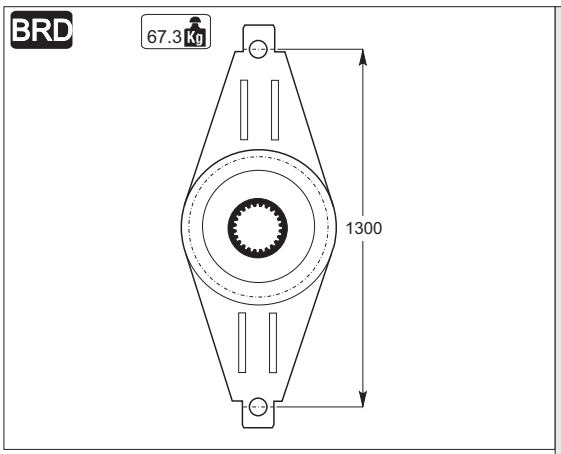


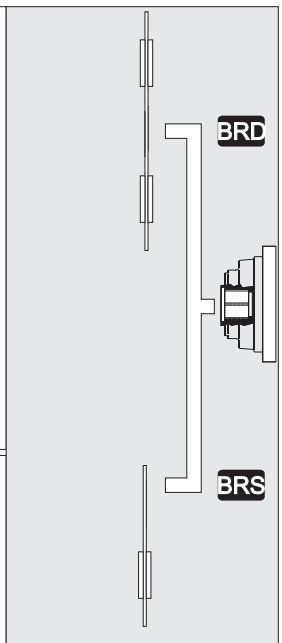


Output Shafts



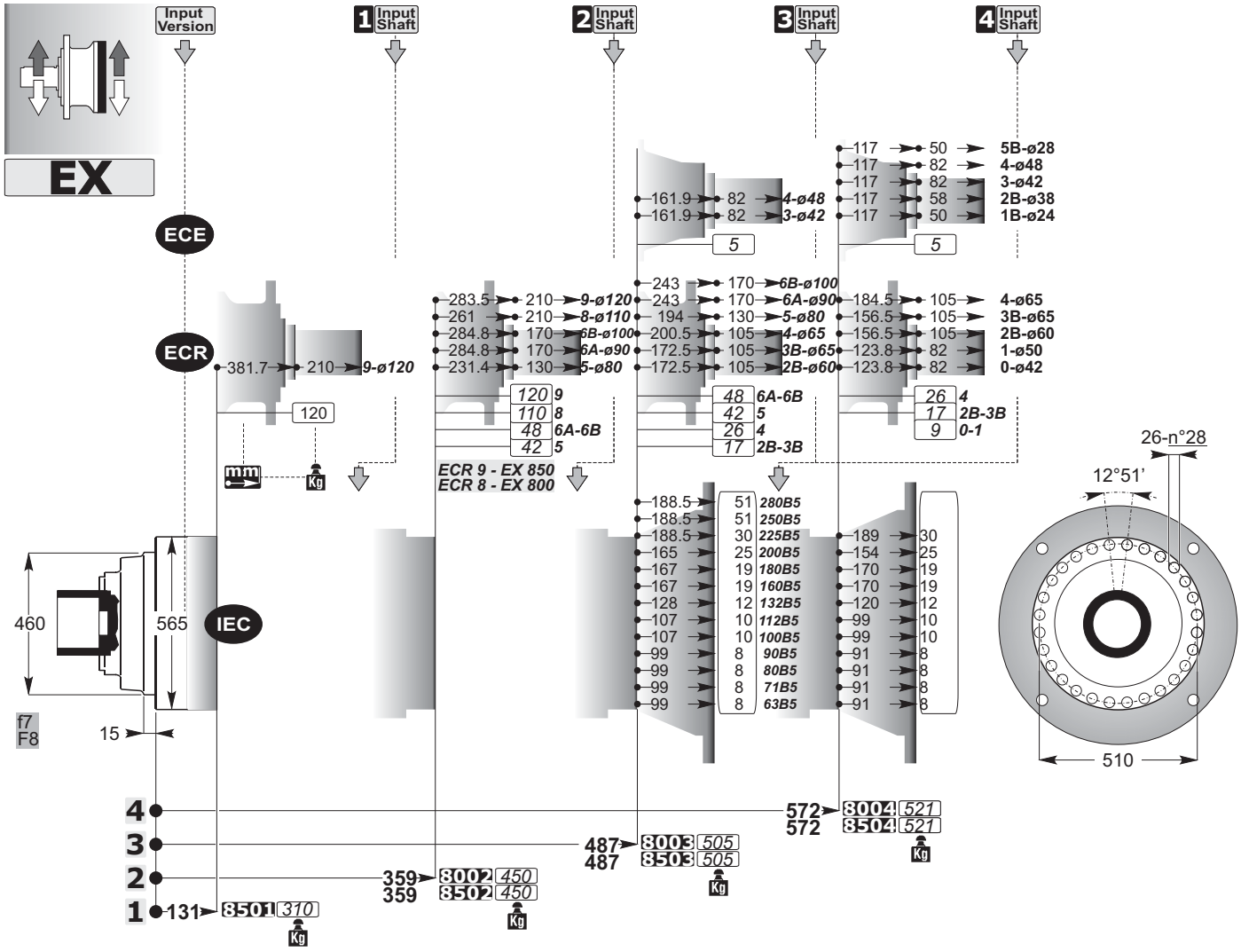


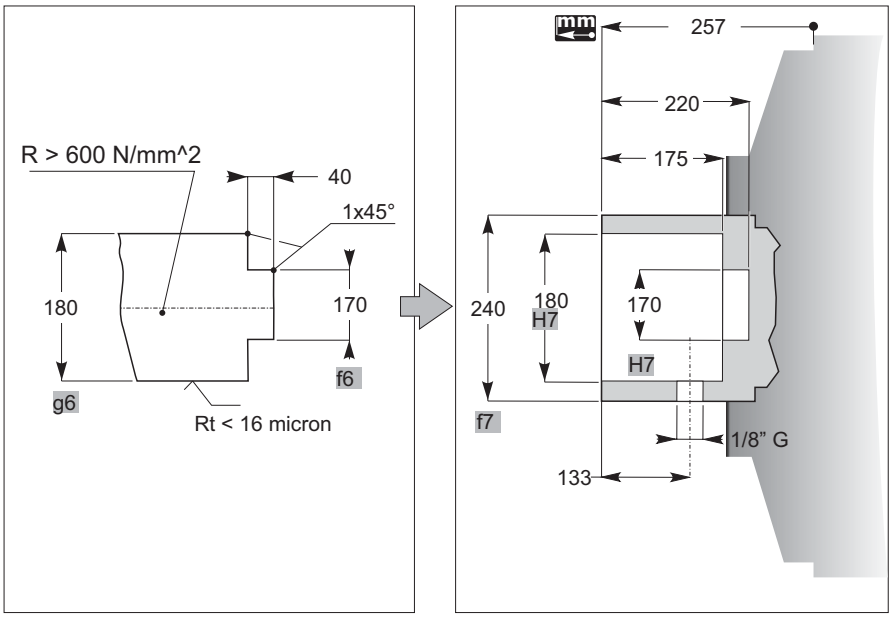




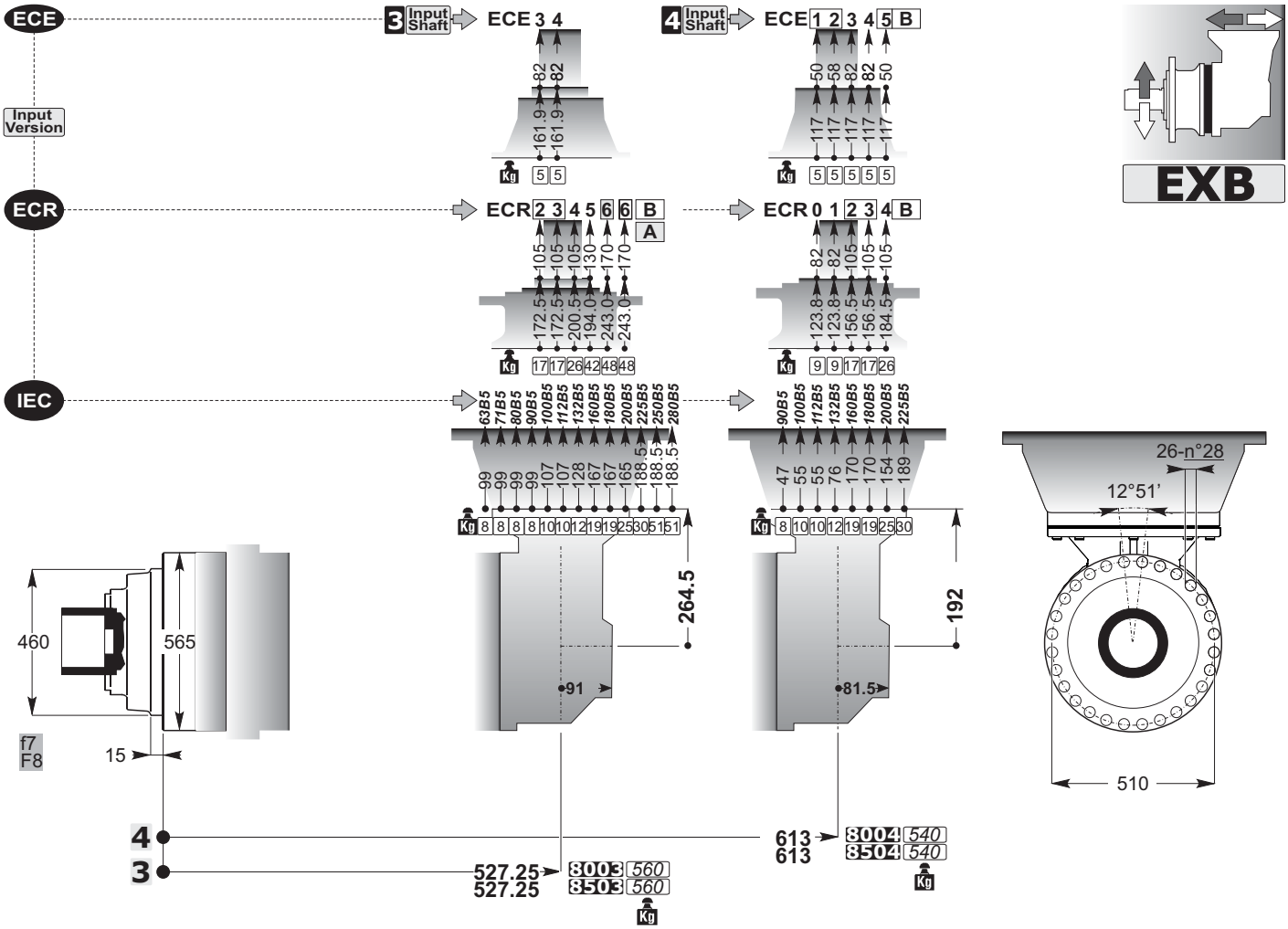
Accessories

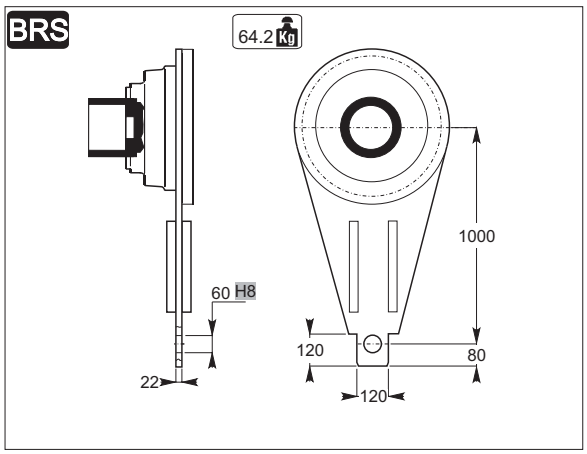
mm
C

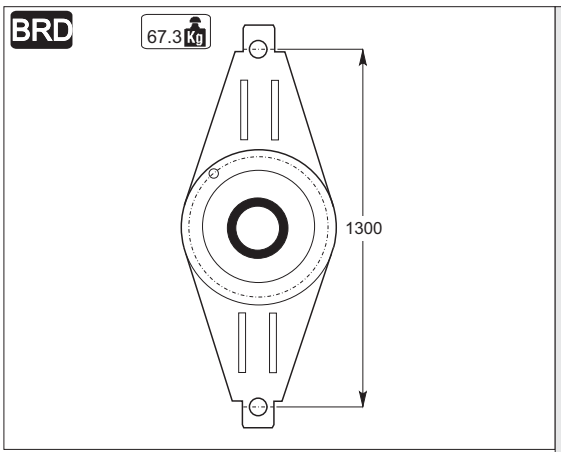


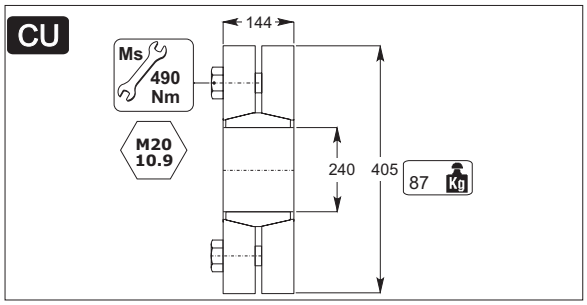


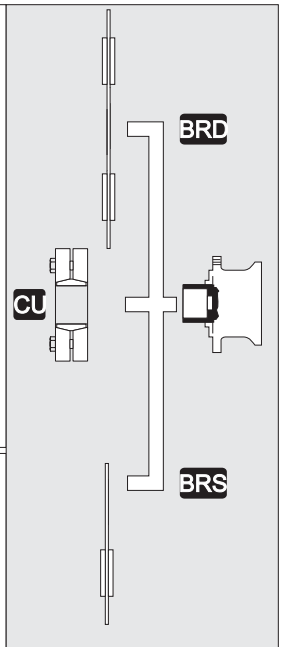
Output Shafts


ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
EXB
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
264.5
192
91
81.5
460
565
f7
F8
15
26-n°28
12°51'
510
4
3
613
613
8004 540
8504 540
527.25
527.25
8003 560
8503 560

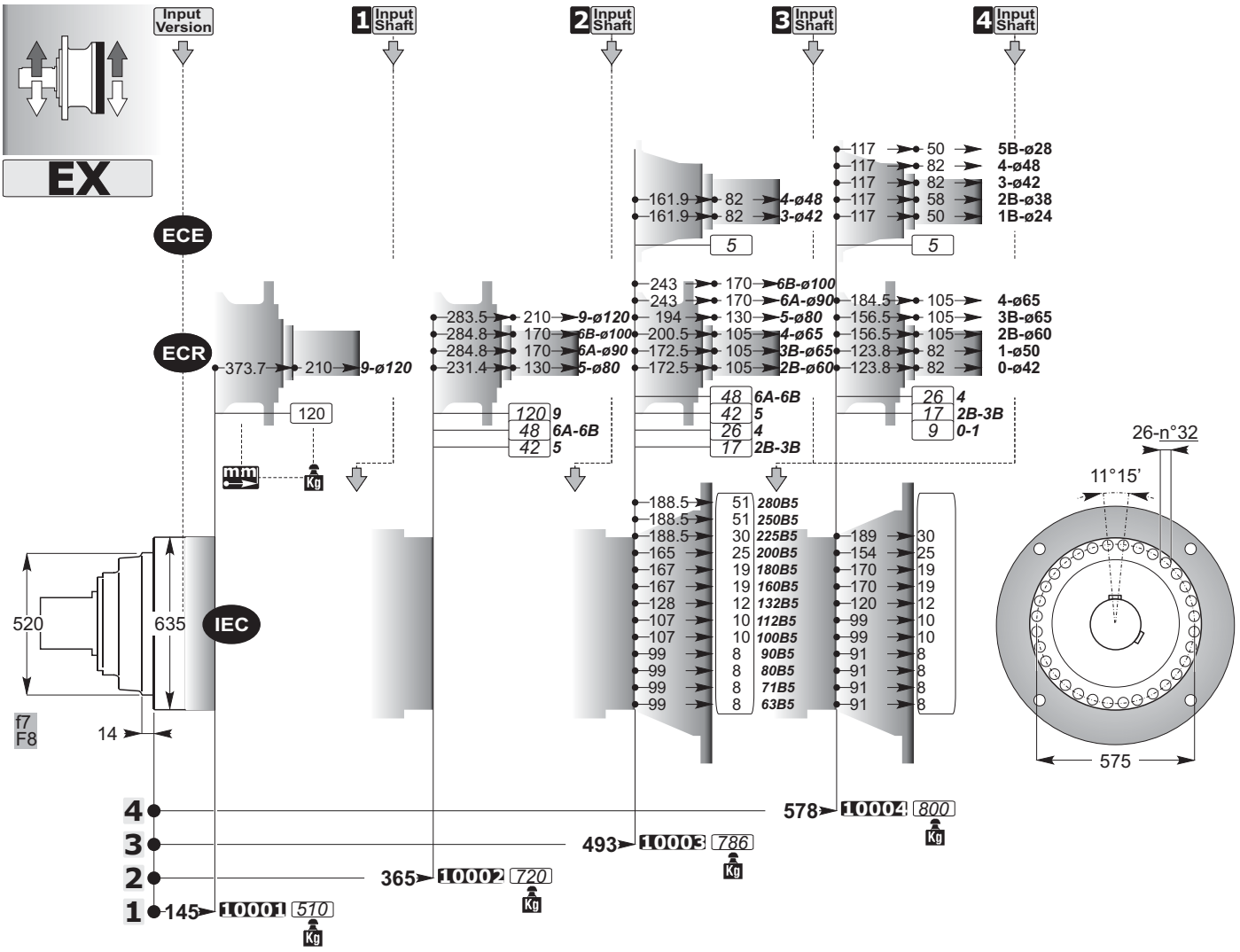

BRS
64.2 Kg
60 H8
22
1000
120
80
120

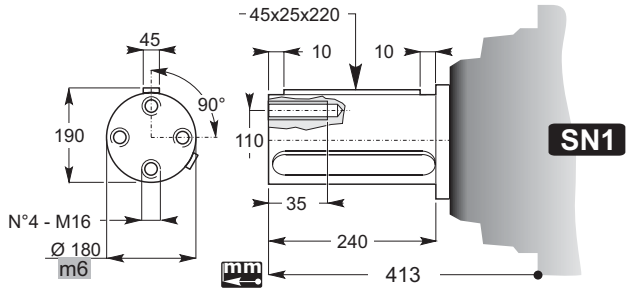

BRD
67.3 Kg
1300

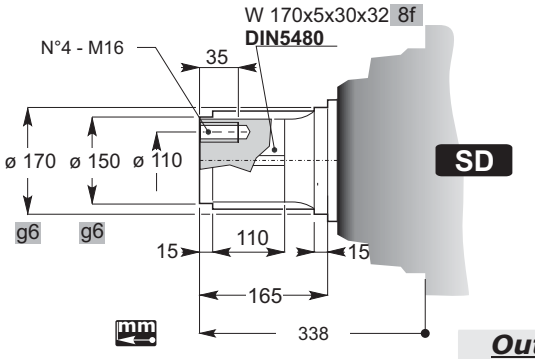

CU
Ms
490
Nm
M20
10.9
144
240
405
87 Kg


BRD
CU
BRS
Accessories

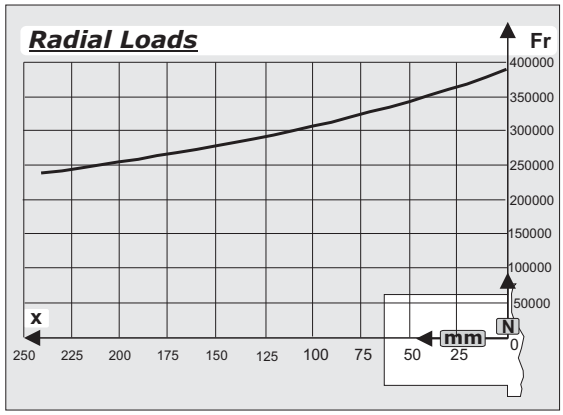
mm
C

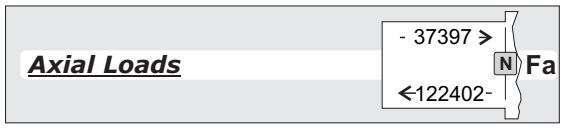


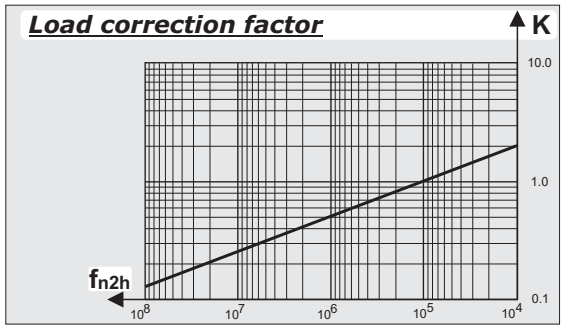


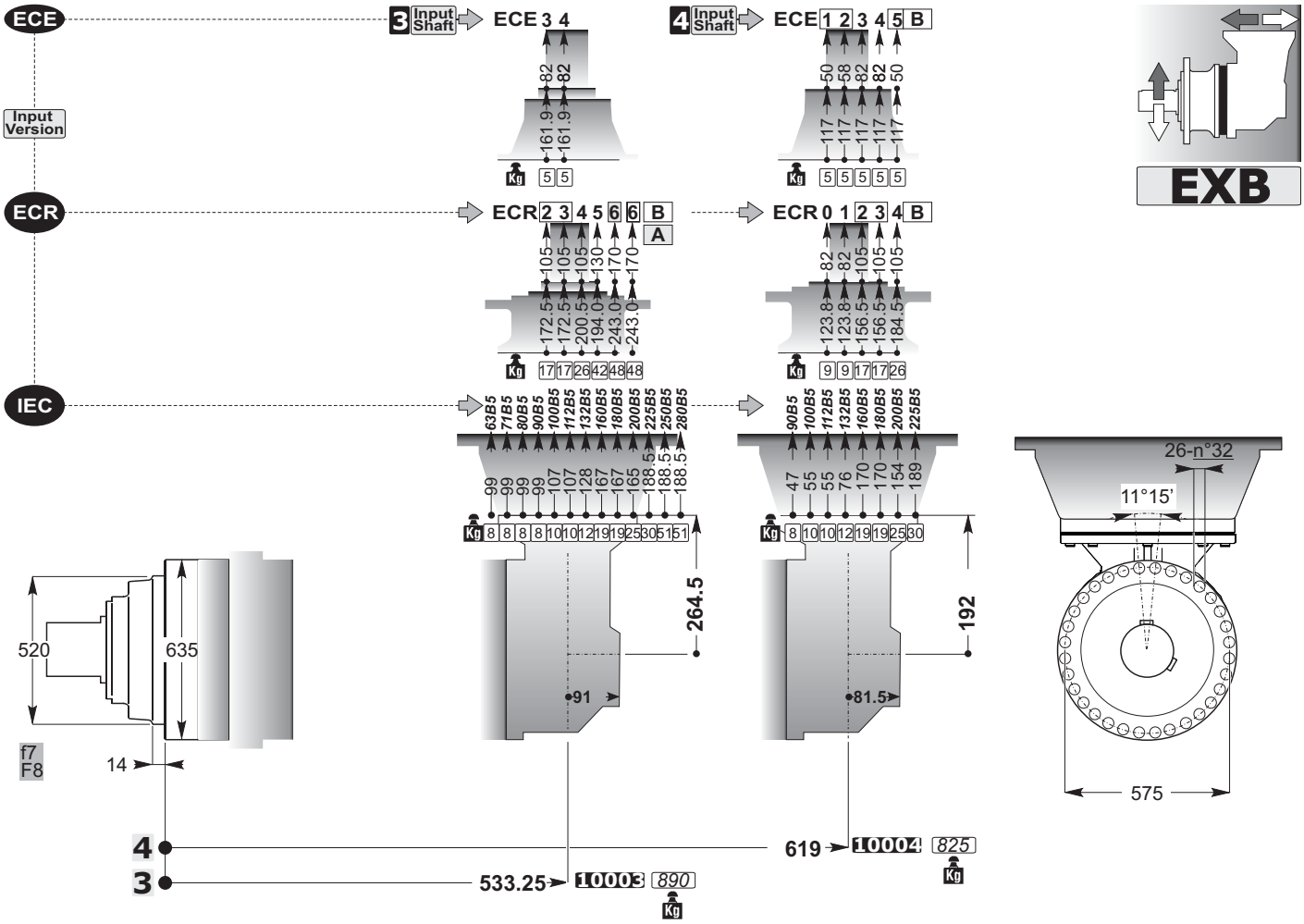


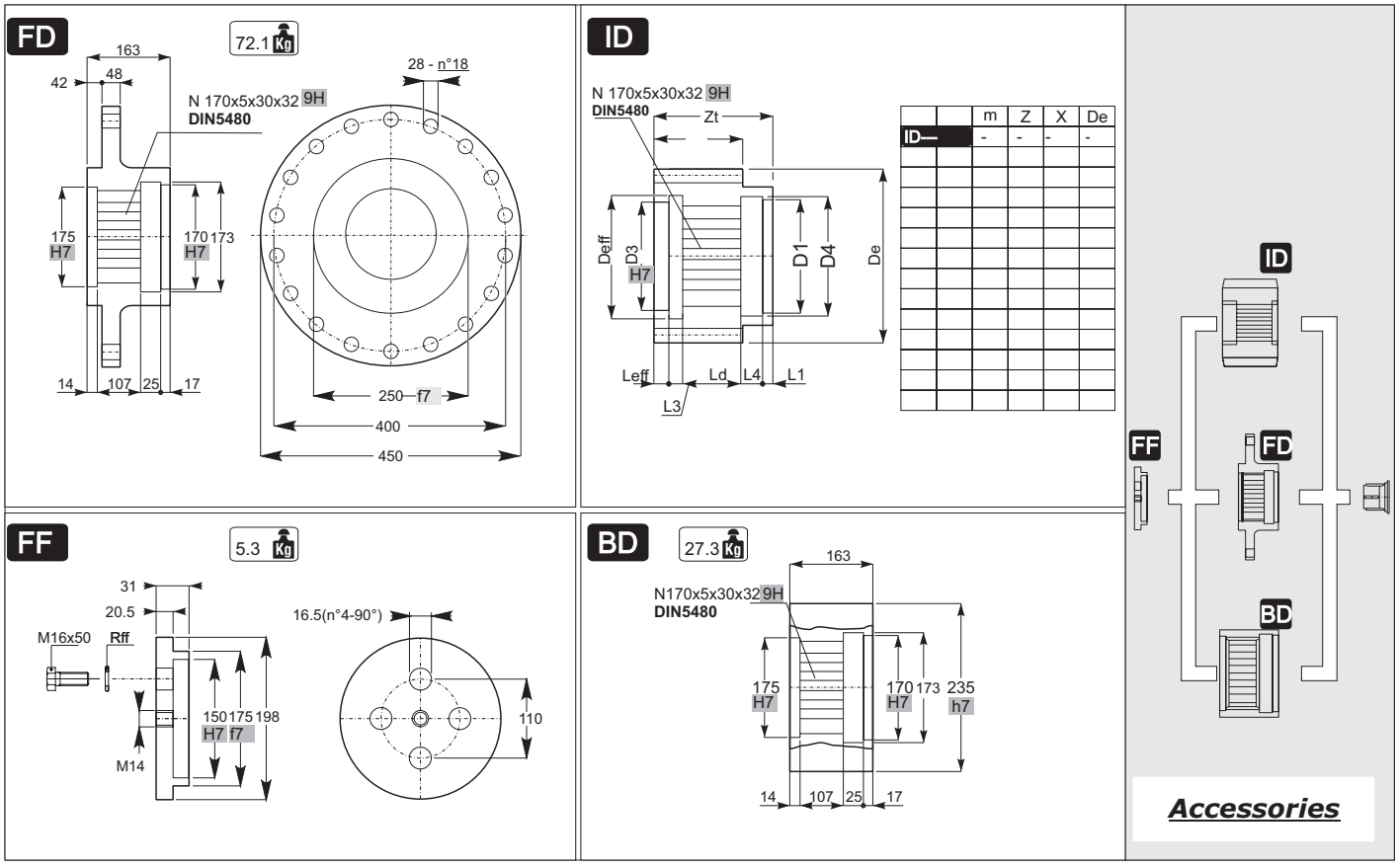
Output Shafts

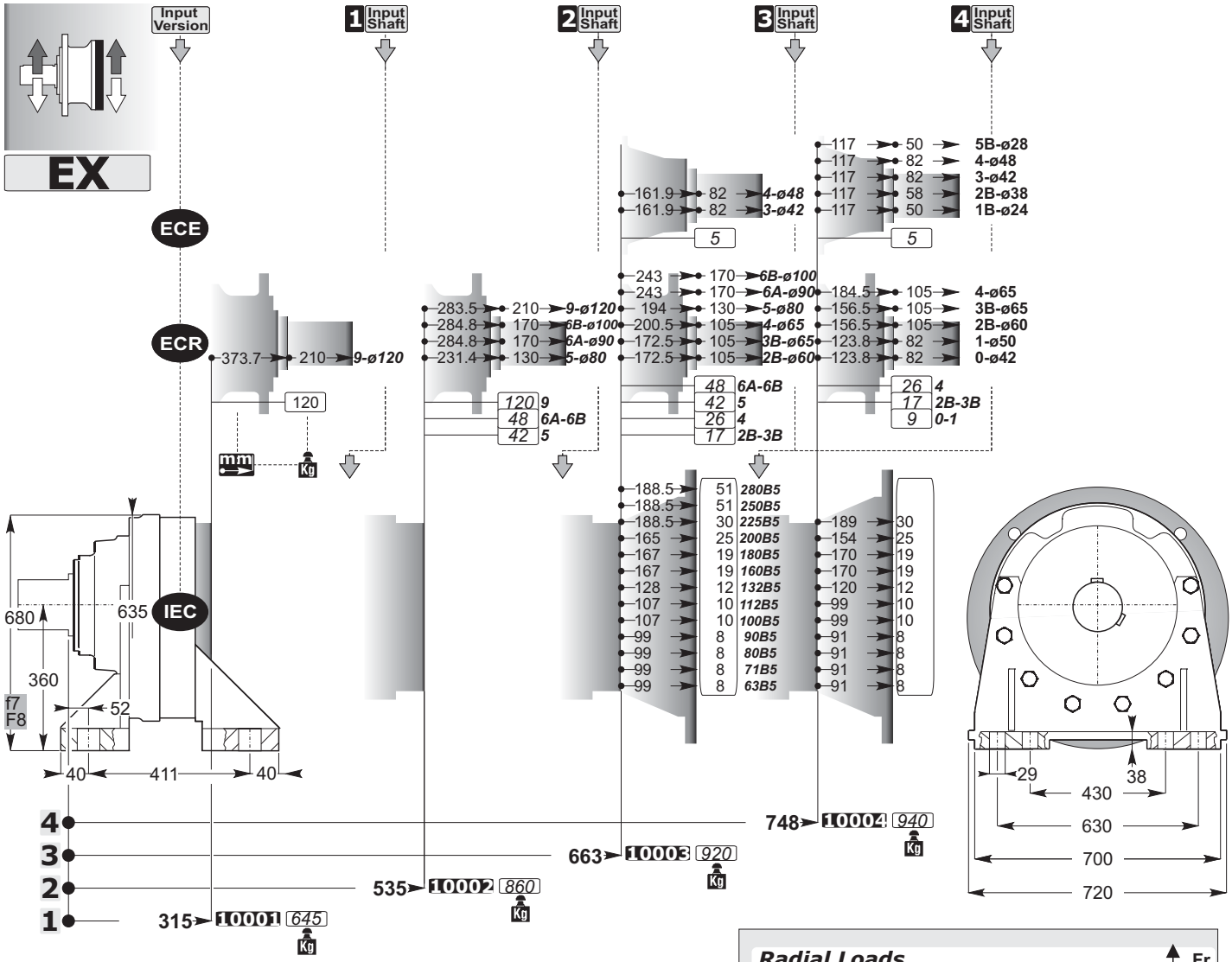


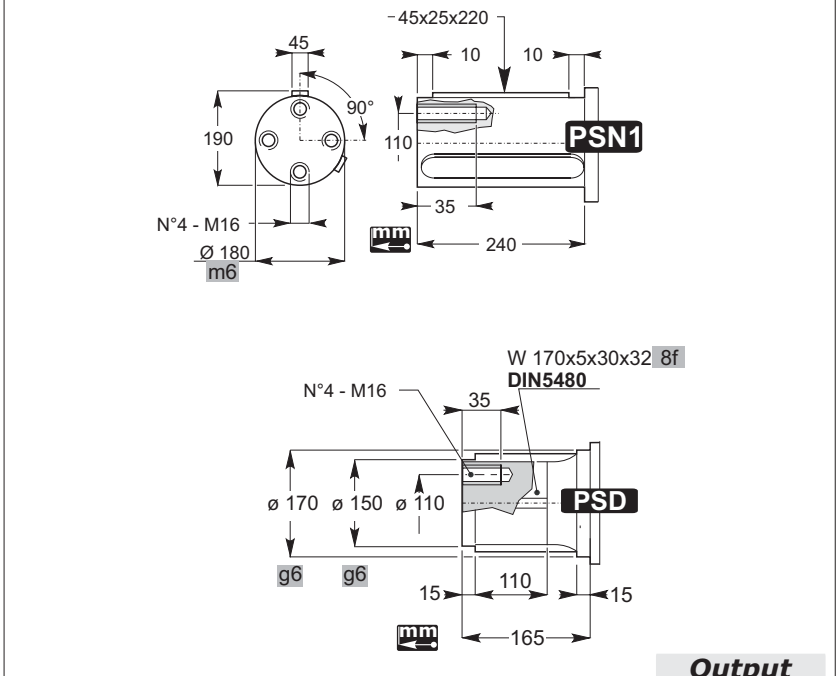




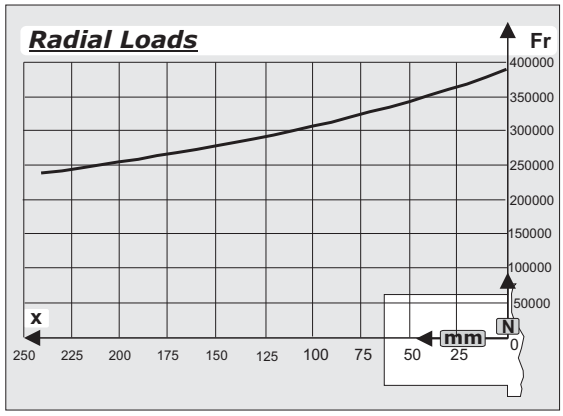

ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
520
635
f7
F8
14
264.5
192
91
81.5
26-n°32
11°15'
575
4
3
619
10004
825
533.25
10003
890

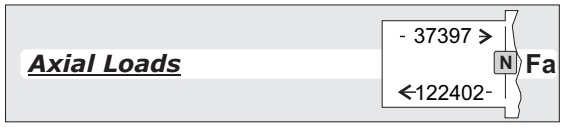

FD
72.1 Kg
163
42
48
N 170x5x30x32 9H
DIN5480
28 - n°18
175 H7
170 H7
173
14
107
25
17
250 f7
400
450
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
D1
D4
De
Leff
Ld
L4
L1
L3
ID
m
Z
X
De
FF
FD
BD
FF
5.3 Kg
31
20.5
M16x50
Rff
16.5(n°4-90°)
150 H7
175 f7
198
M14
110
BD
27.3 Kg
163
N170x5x30x32 9H
DIN5480
175 H7
170 H7
173
235 h7
14
107
25
17
Accessories

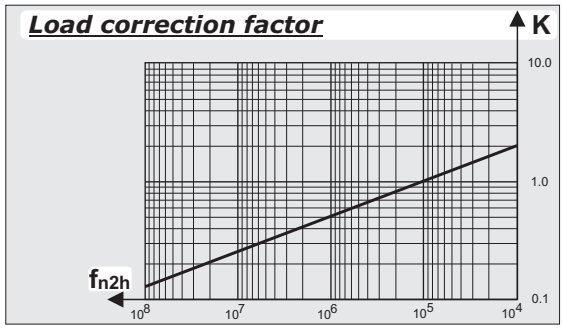


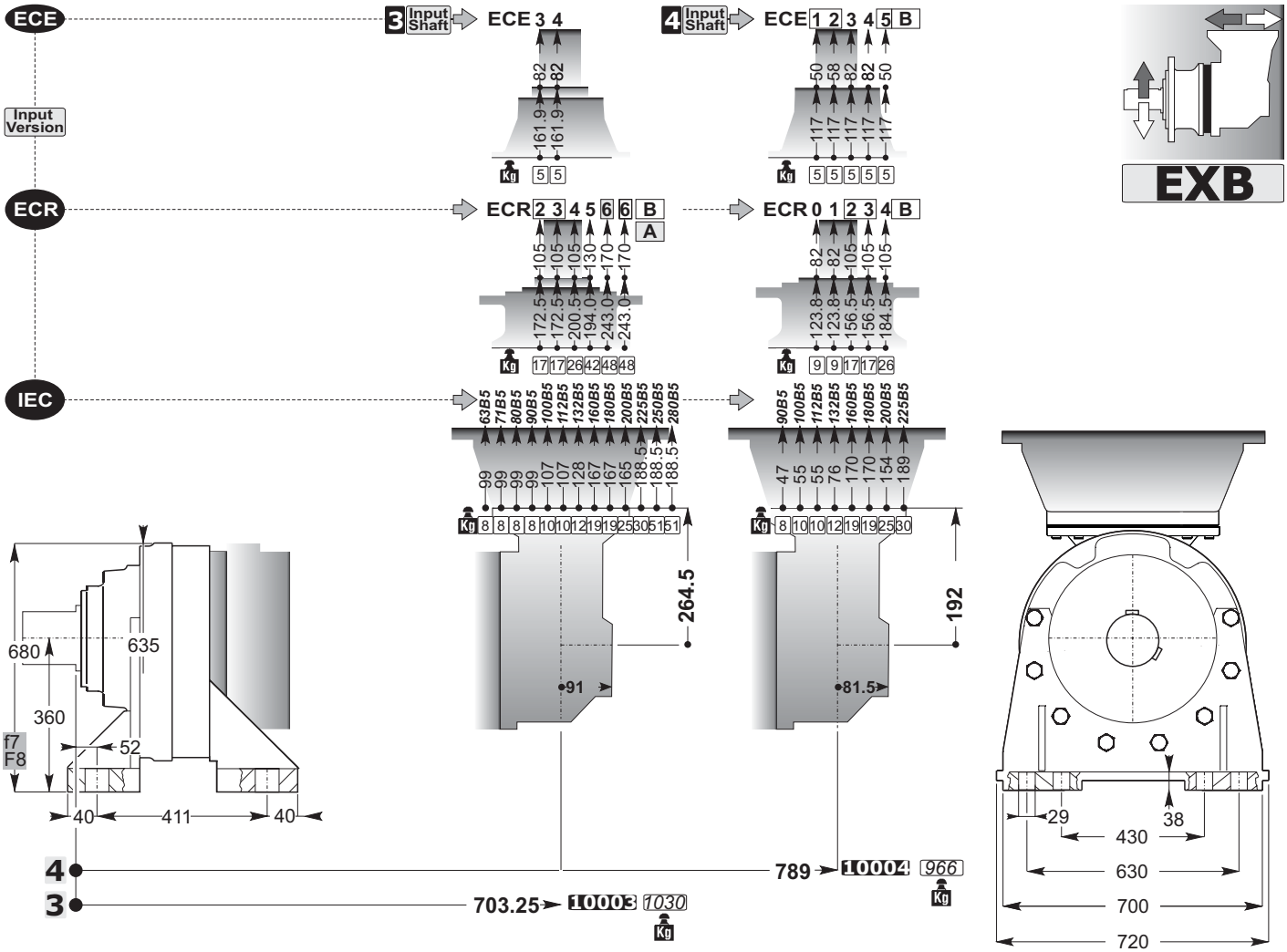


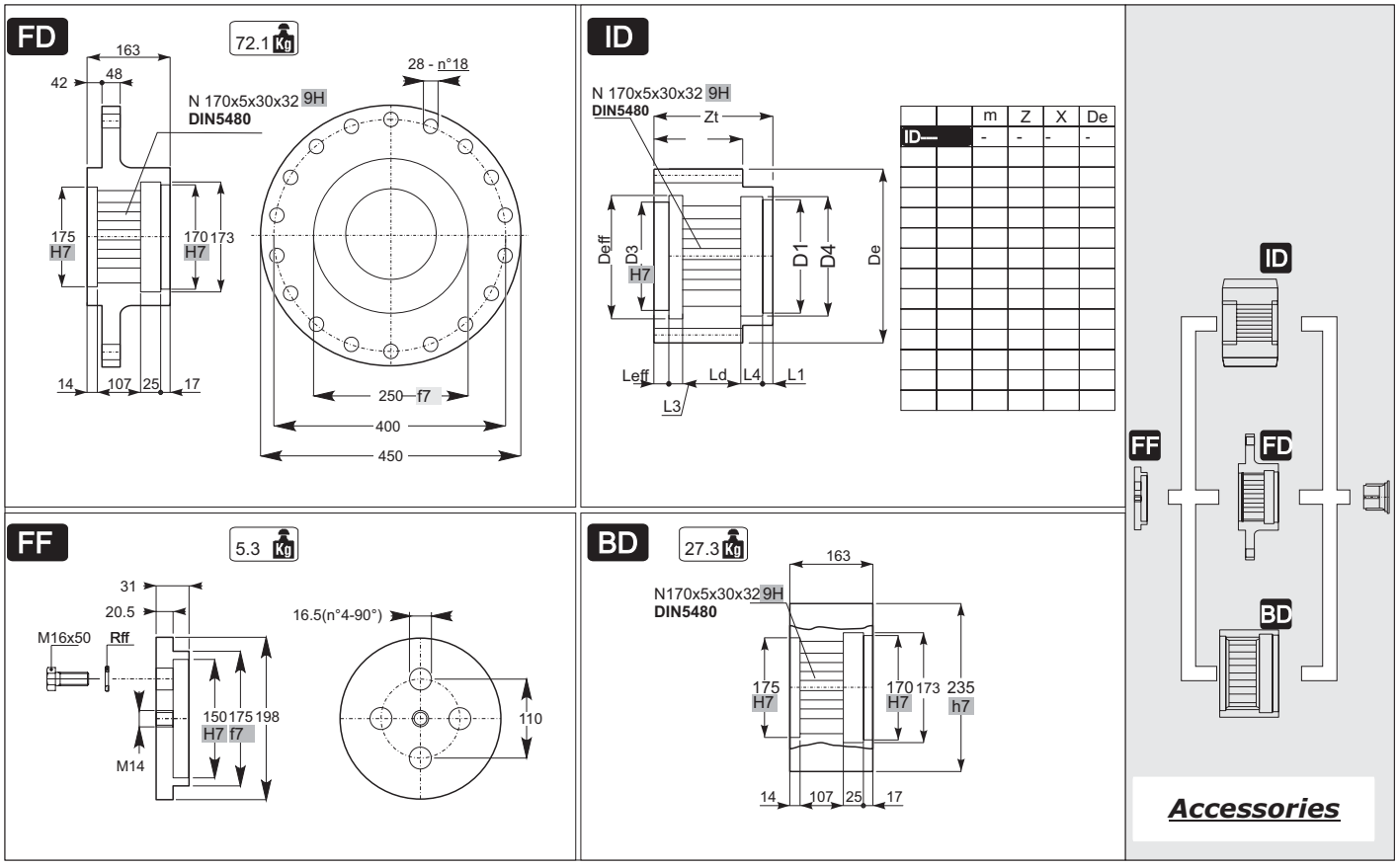
Output Shafts

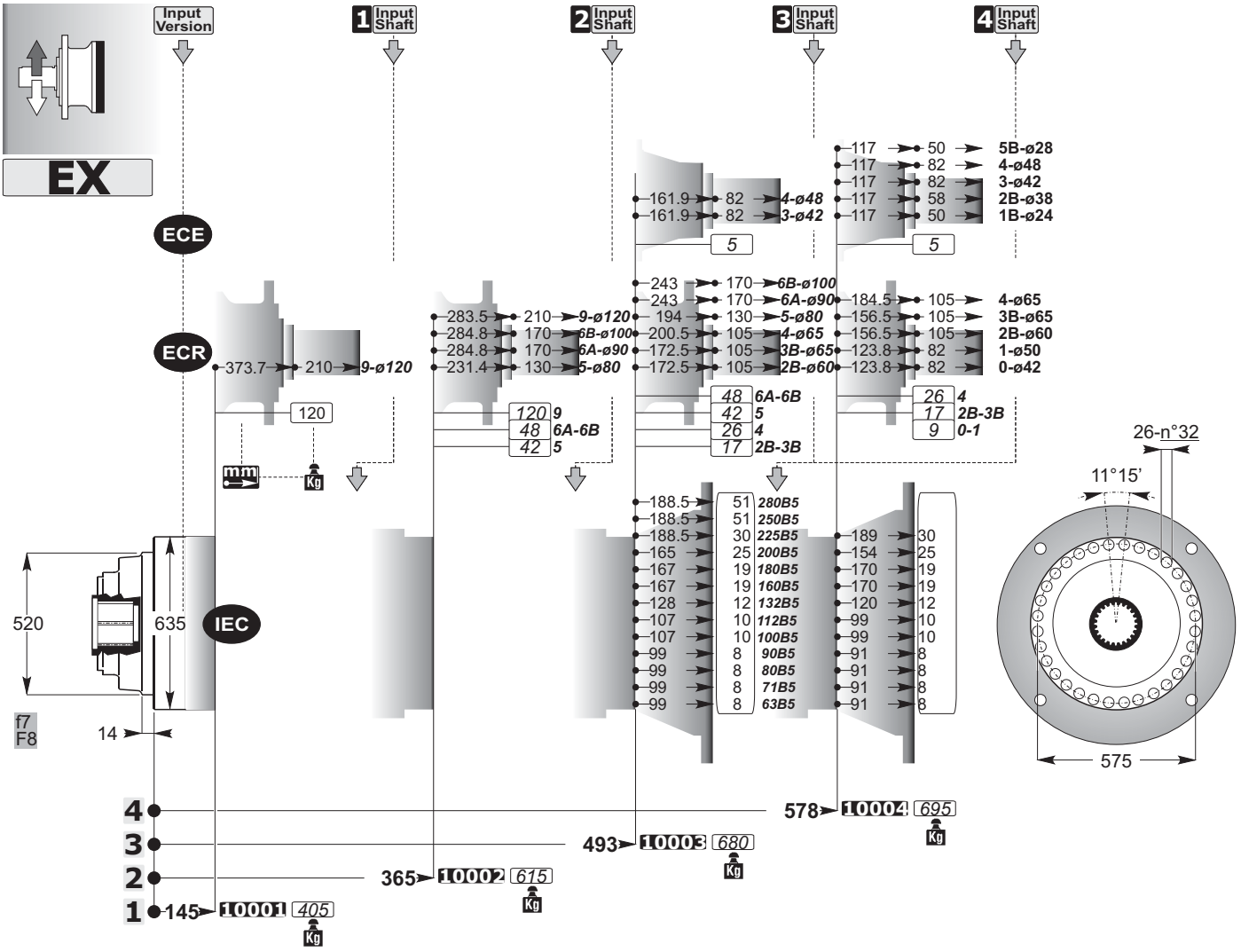


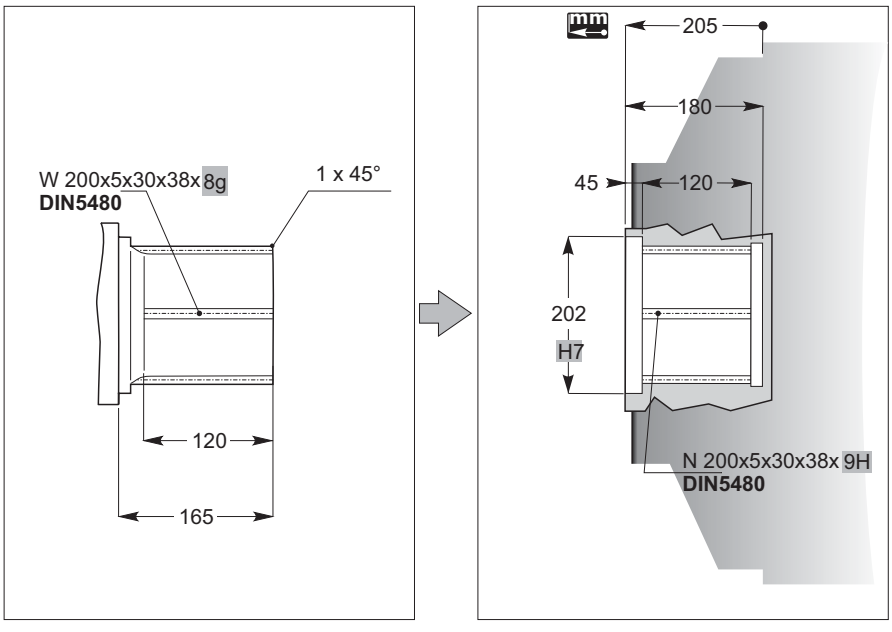




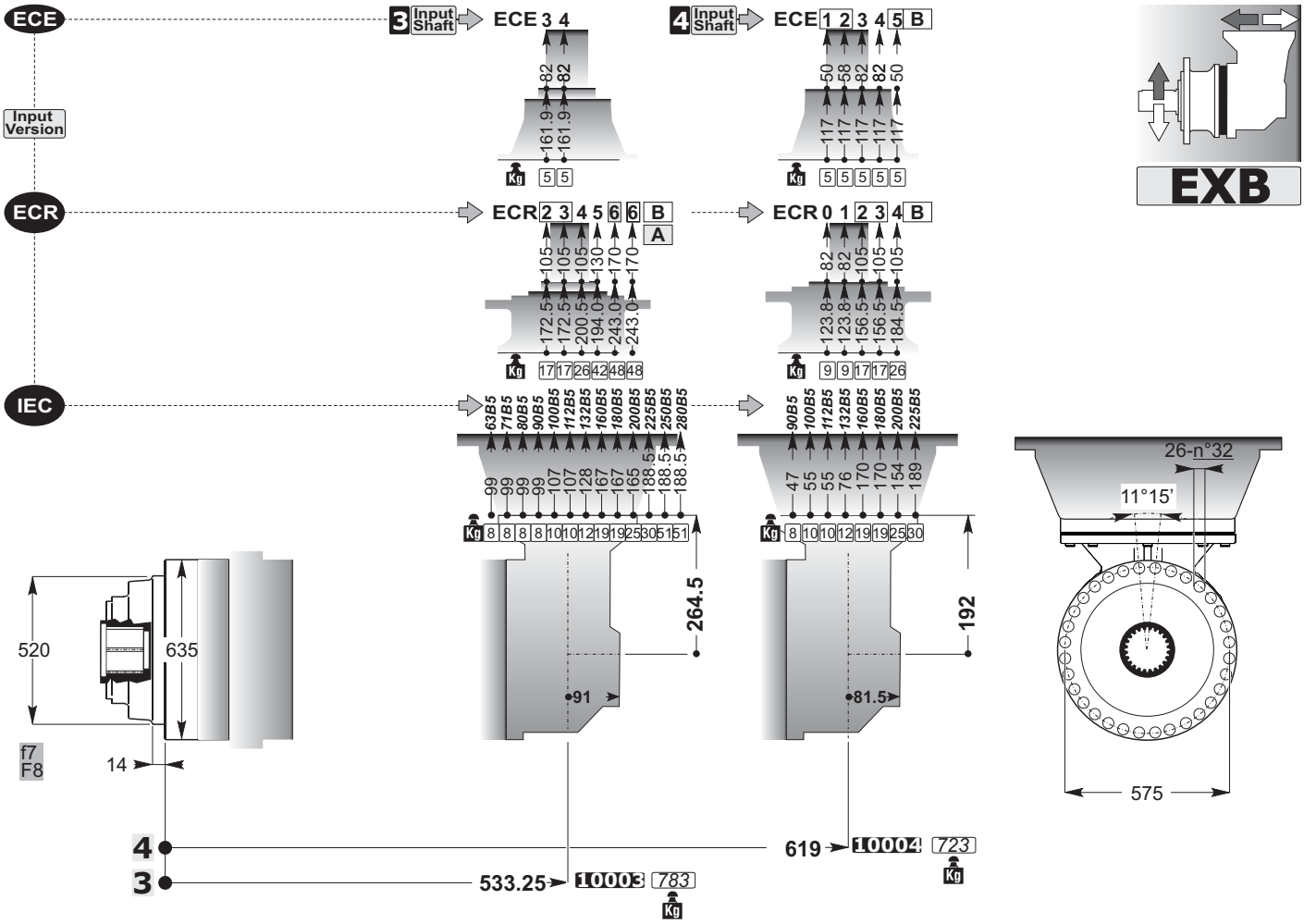

ECE
Input Version
ECR
IEC
3 Input Shaft ECE 3 4
4 Input Shaft ECE 1 2 3 4 5 B
ECR 2 3 4 5 6 6 B A
ECR 0 1 2 3 4 B
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
EXB
264.5
192
91
81.5
680
635
360
f7
F8
52
40
411
40
29
38
430
630
700
720
4
3
789
10004
966
703.25
10003
1030


FD
72.1 Kg
163
42
48
N 170x5x30x32 9H
DIN5480
28 - n°18
175 H7
170 H7
173
14
107
25
17
250 f7
400
450
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
D1
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID
FF
5.3 Kg
31
20.5
M16x50
Rff
16.5(n°4-90°)
150 H7
175 f7
198
M14
110
BD
27.3 Kg
163
N170x5x30x32 9H
DIN5480
175 H7
170 H7
173
235 h7
14
107
25
17
Accessories

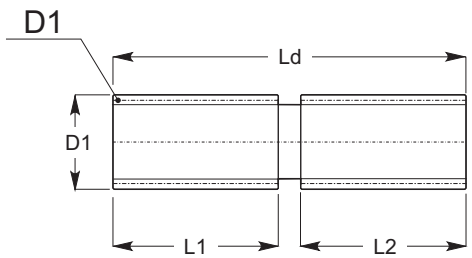




Output Shafts



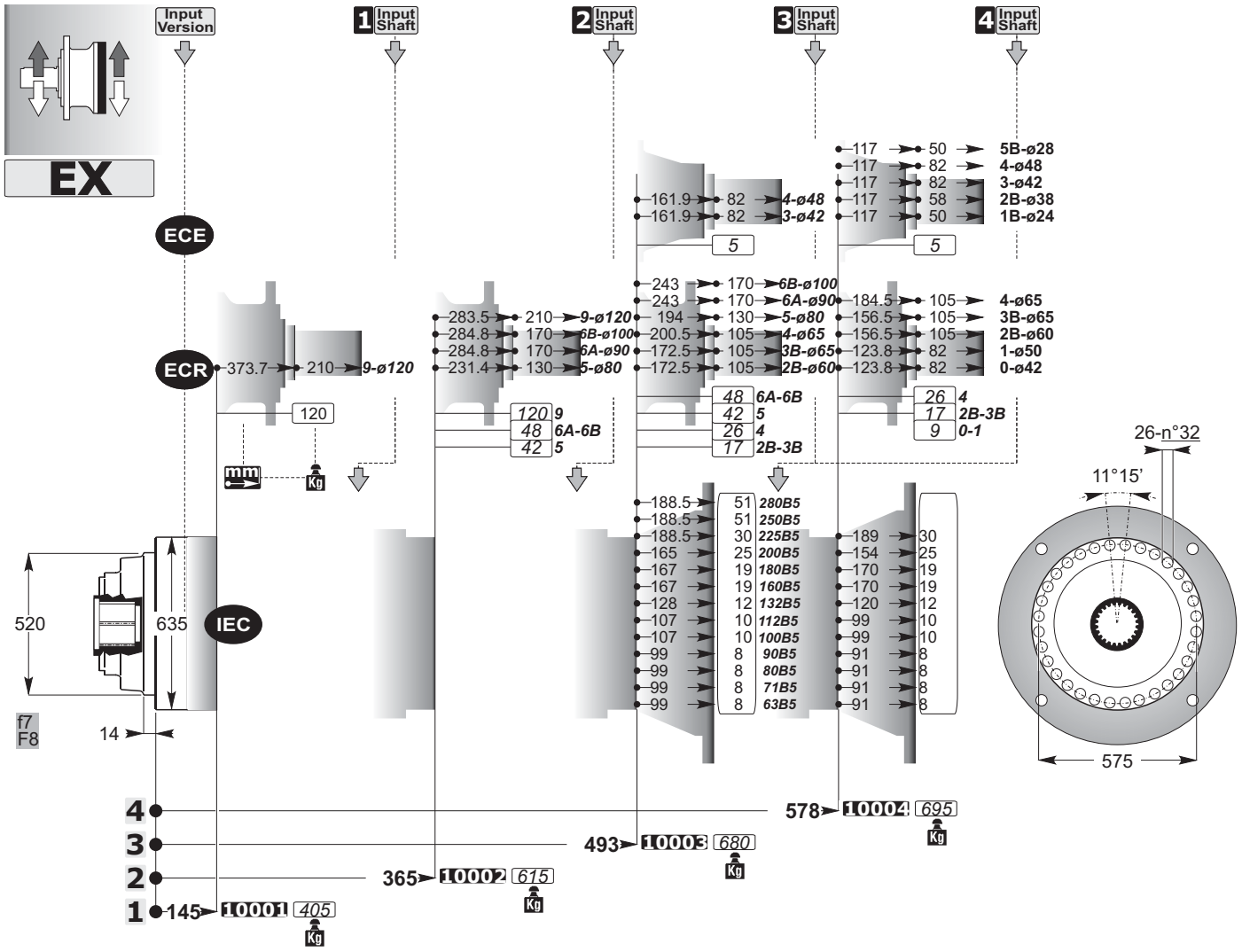
SD

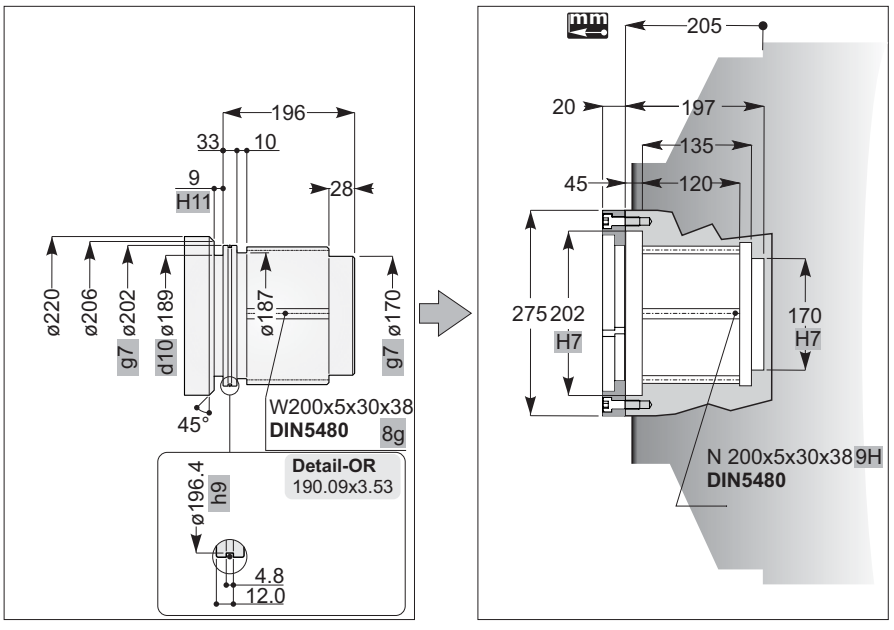


SD

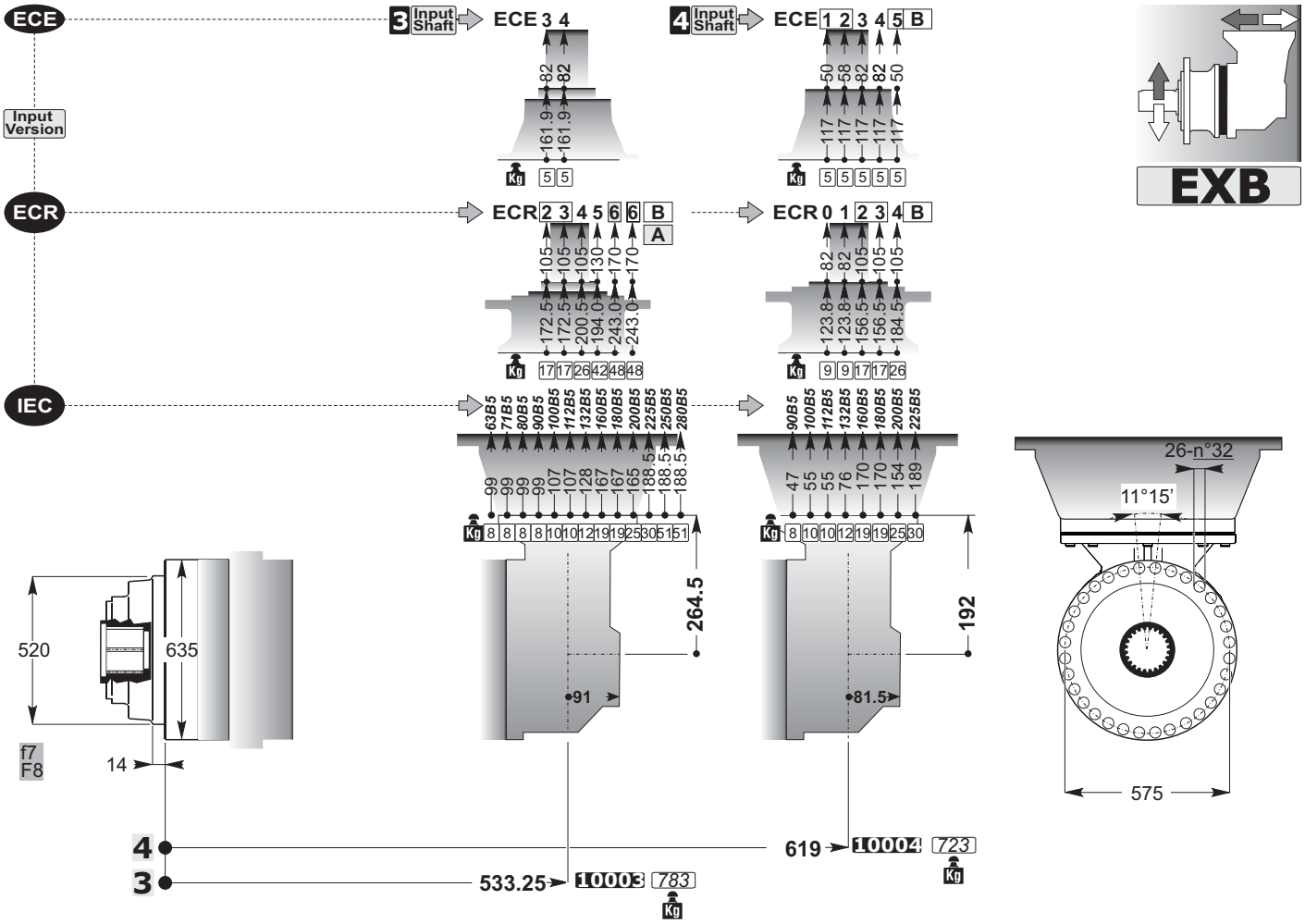


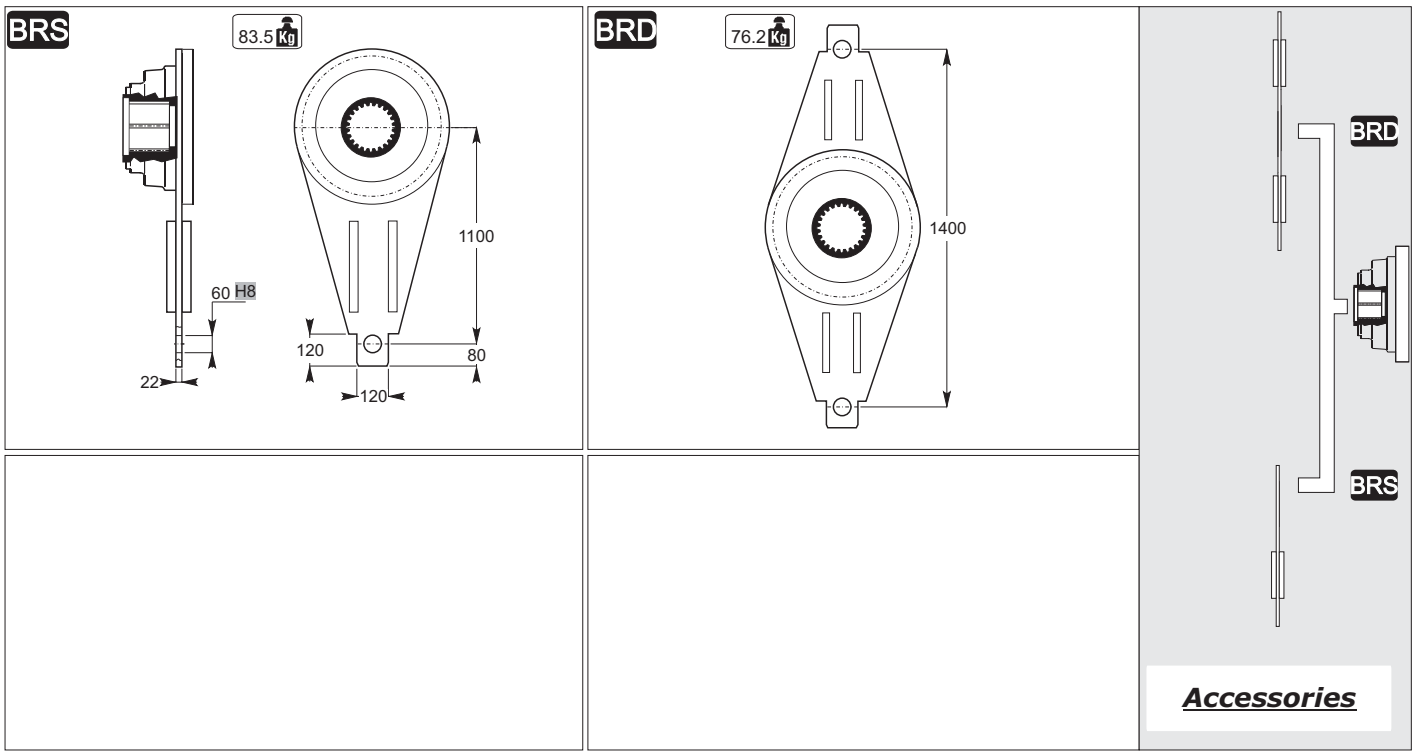
Accessories

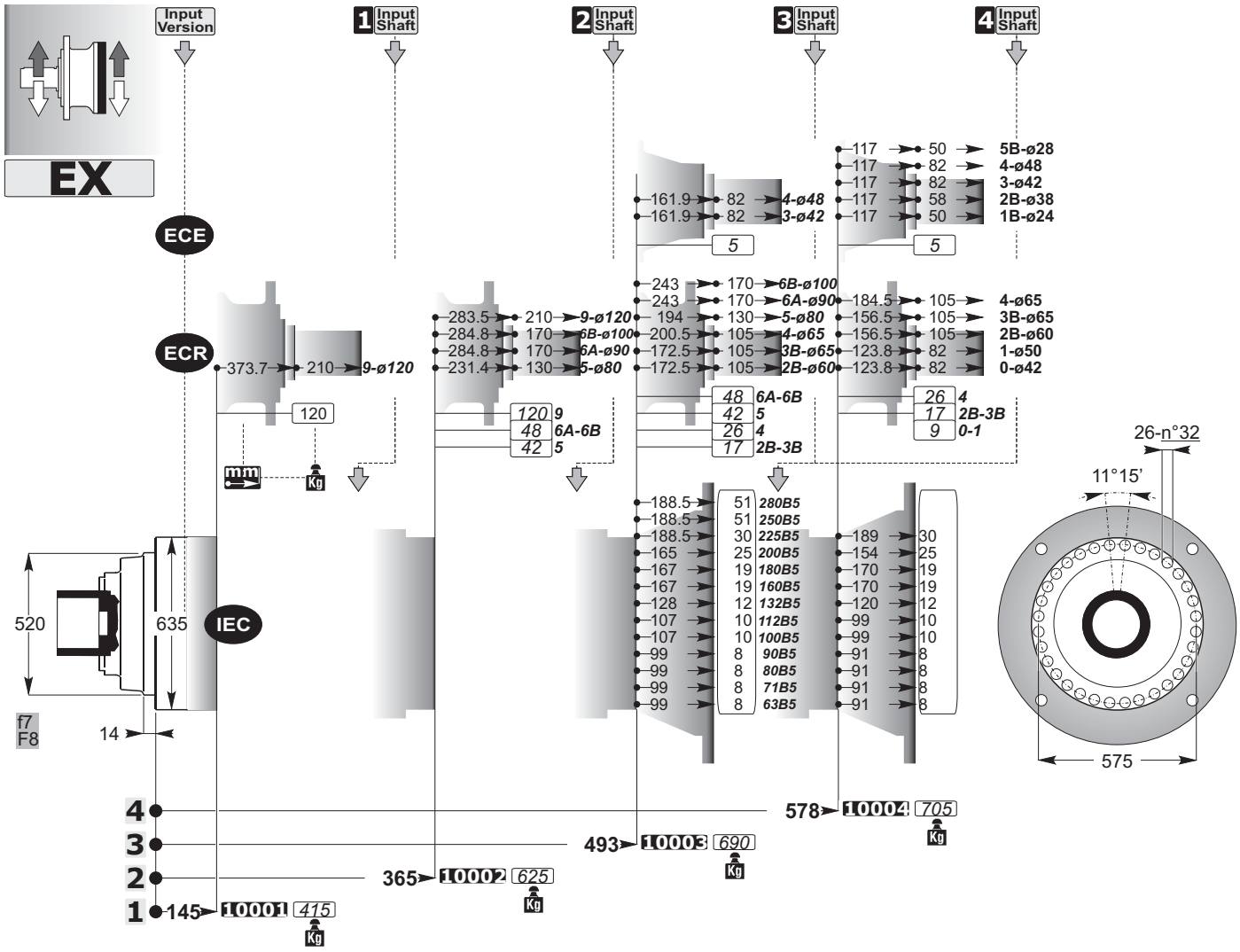


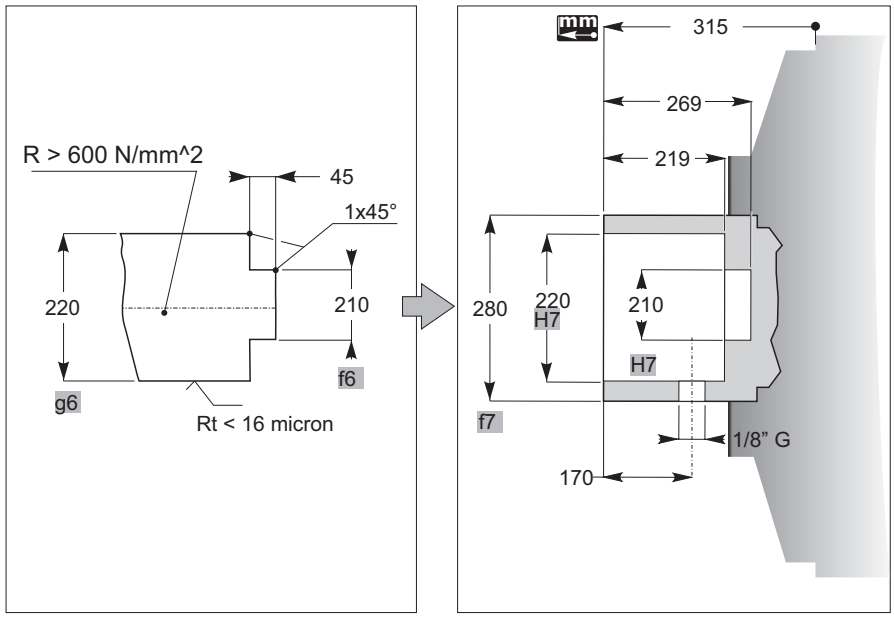


Output Shafts

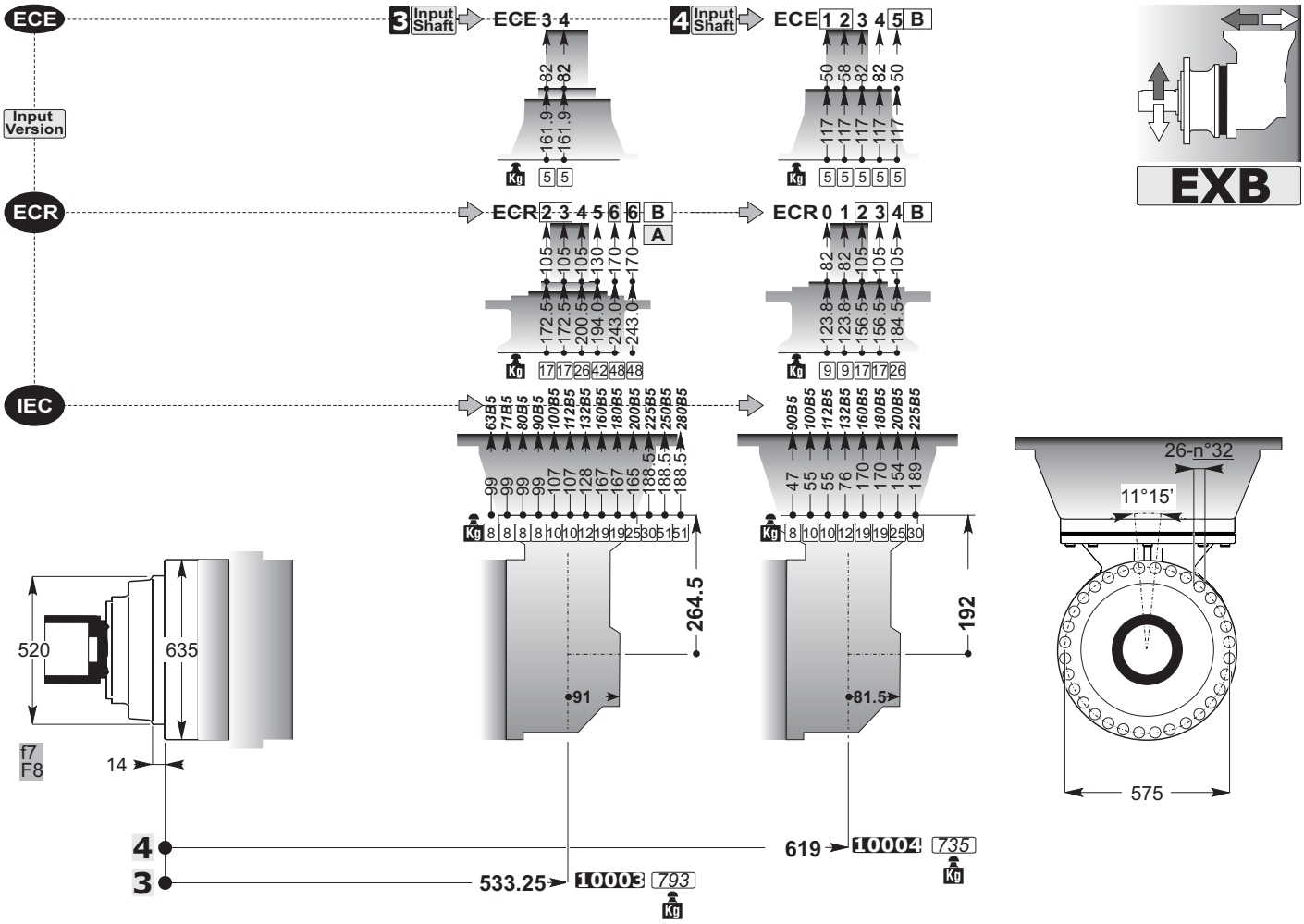

ECE
Input Version
ECR
IEC
3 Input Shaft
ECE 3 4
161.9 82
5 5
4 Input Shaft
ECE 1 2 3 4 5 B
50 58 82 82 50
117 117 117 117 117
5 5 5 5 5
EXB
ECR 2 3 4 5 6 6 B
A
105 105 105 130 170 170
172.5 172.5 200.5 194.0 243.0 243.0
17 17 26 42 48 48
ECR 0 1 2 3 4 B
82 82 105 105
123.8 123.8 156.5 156.5 184.5
9 9 17 17 26
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
99 99 99 99 107 107 128 167 167 165 188.5 188.5 188.5
8 8 8 8 10 10 12 19 19 25 30 51 51
264.5
91
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
47 55 55 76 170 170 154 189
8 10 10 12 19 19 25 30
192
81.5
26-n°32
11°15'
575
520
635
f7
F8
14
4
3
619
10004
723
533.25
10003
783

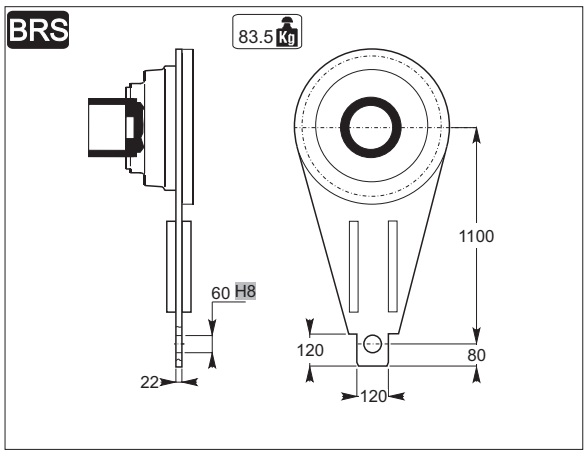

BRS
83.5
60 H8
22
1100
120
80
120
BRD
76.2
1400
BRD
BRS
Accessories

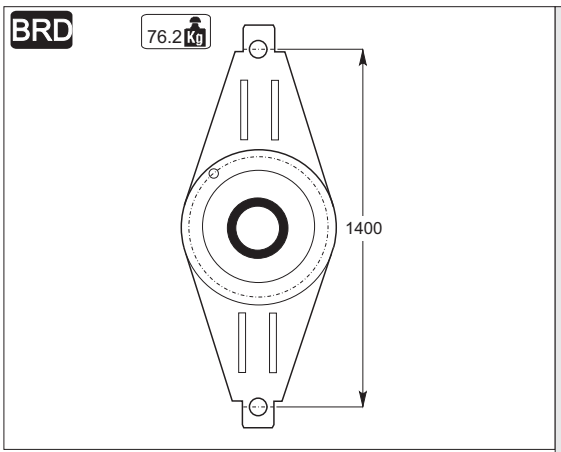


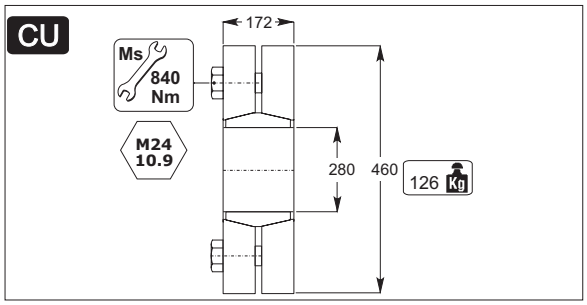


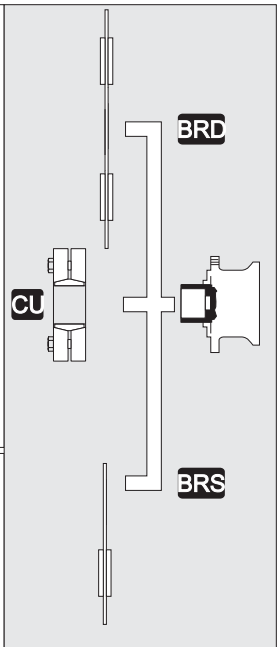
Output Shafts





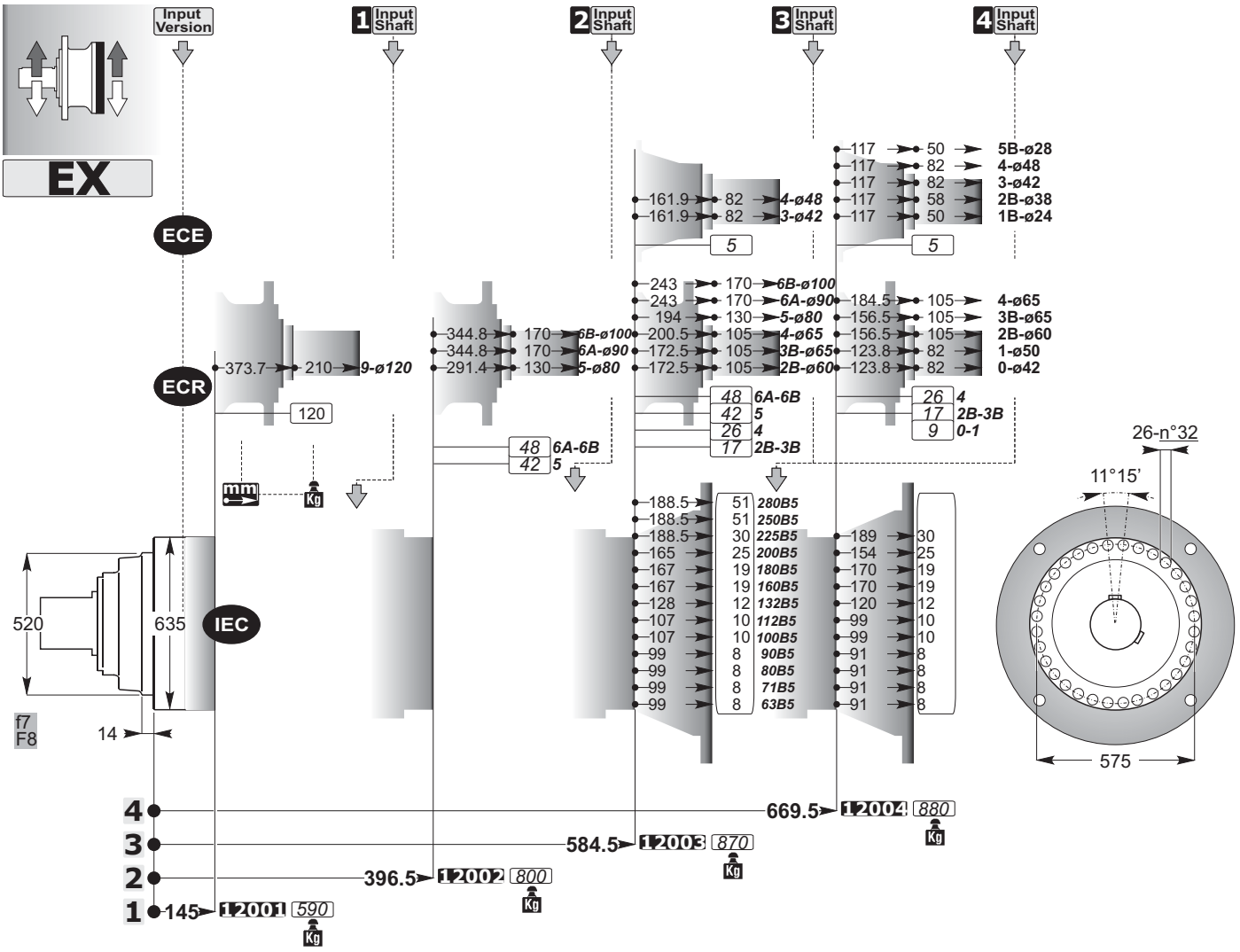


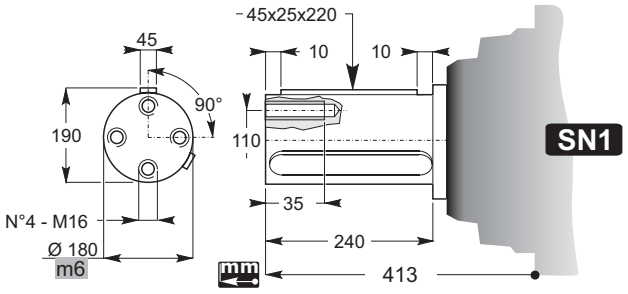


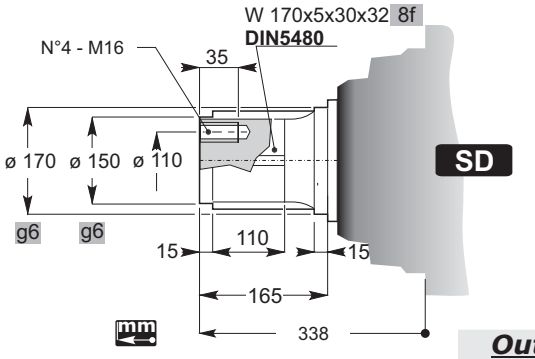


Accessories

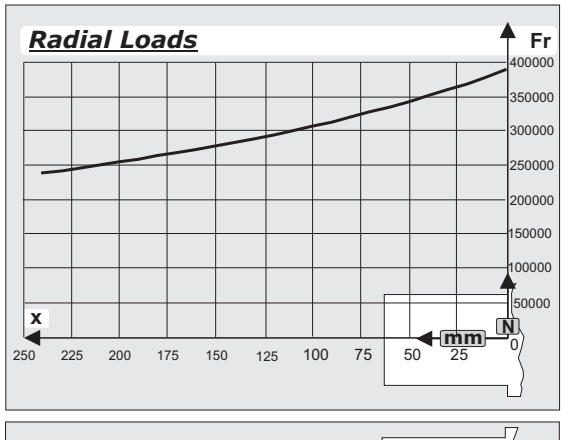
mm
C

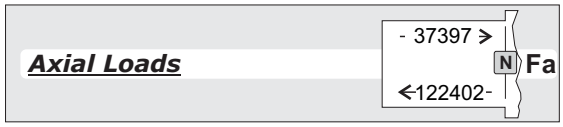


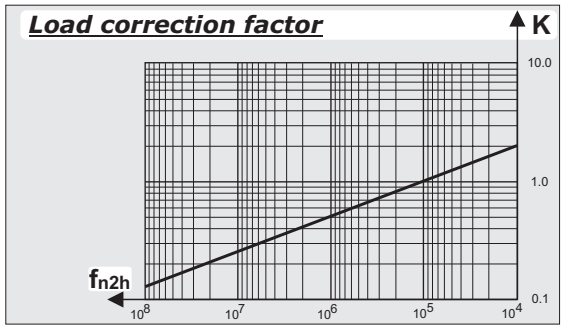


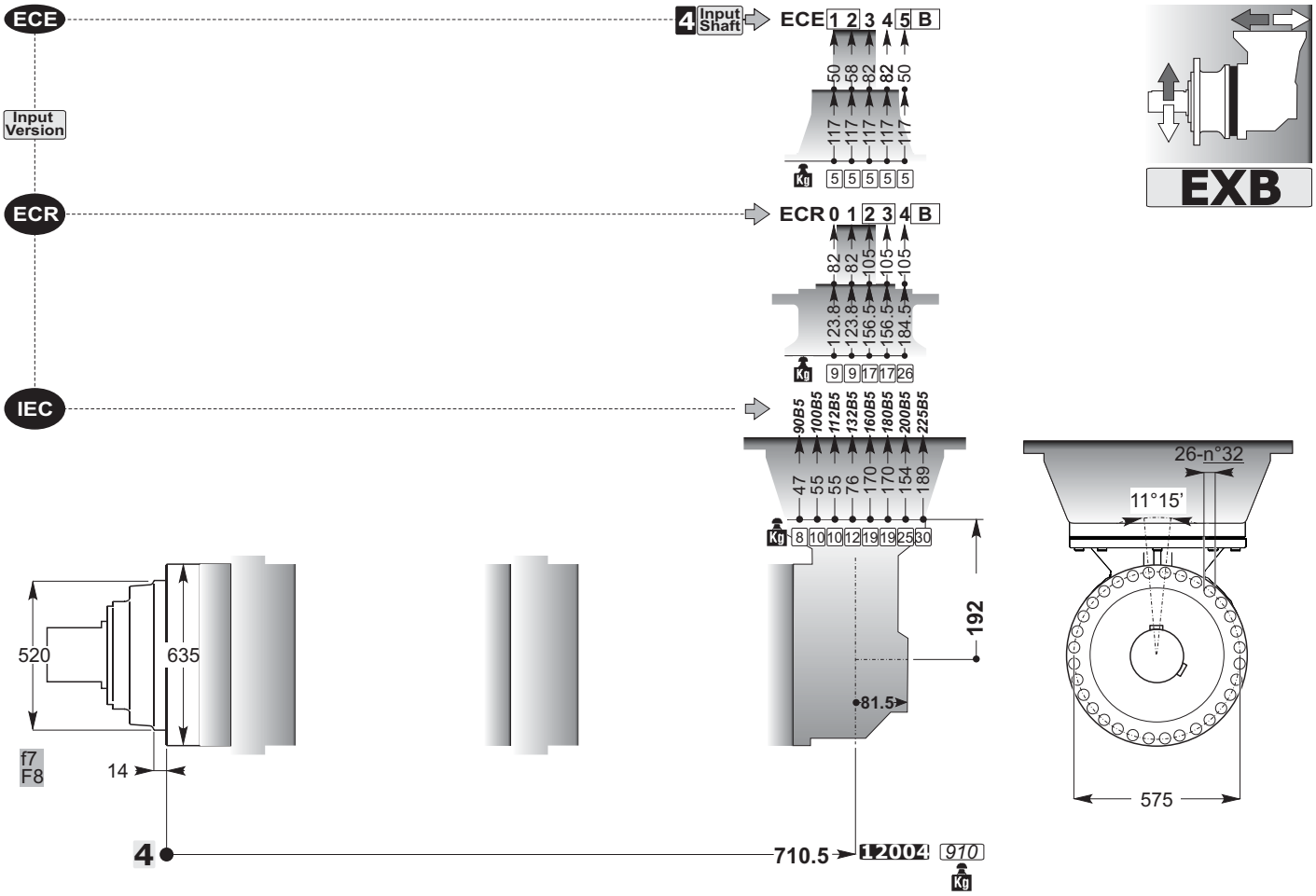


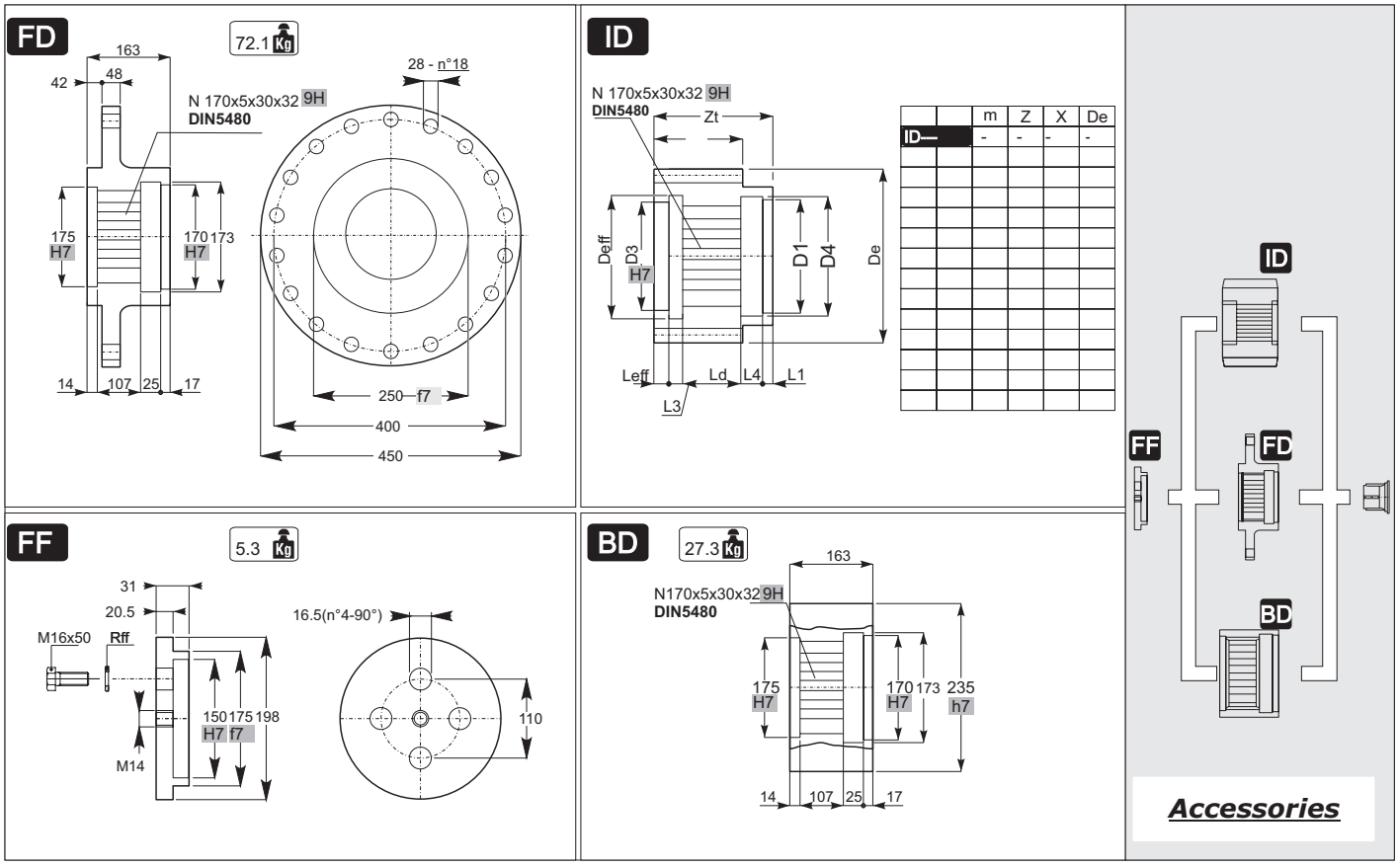
Output Shafts

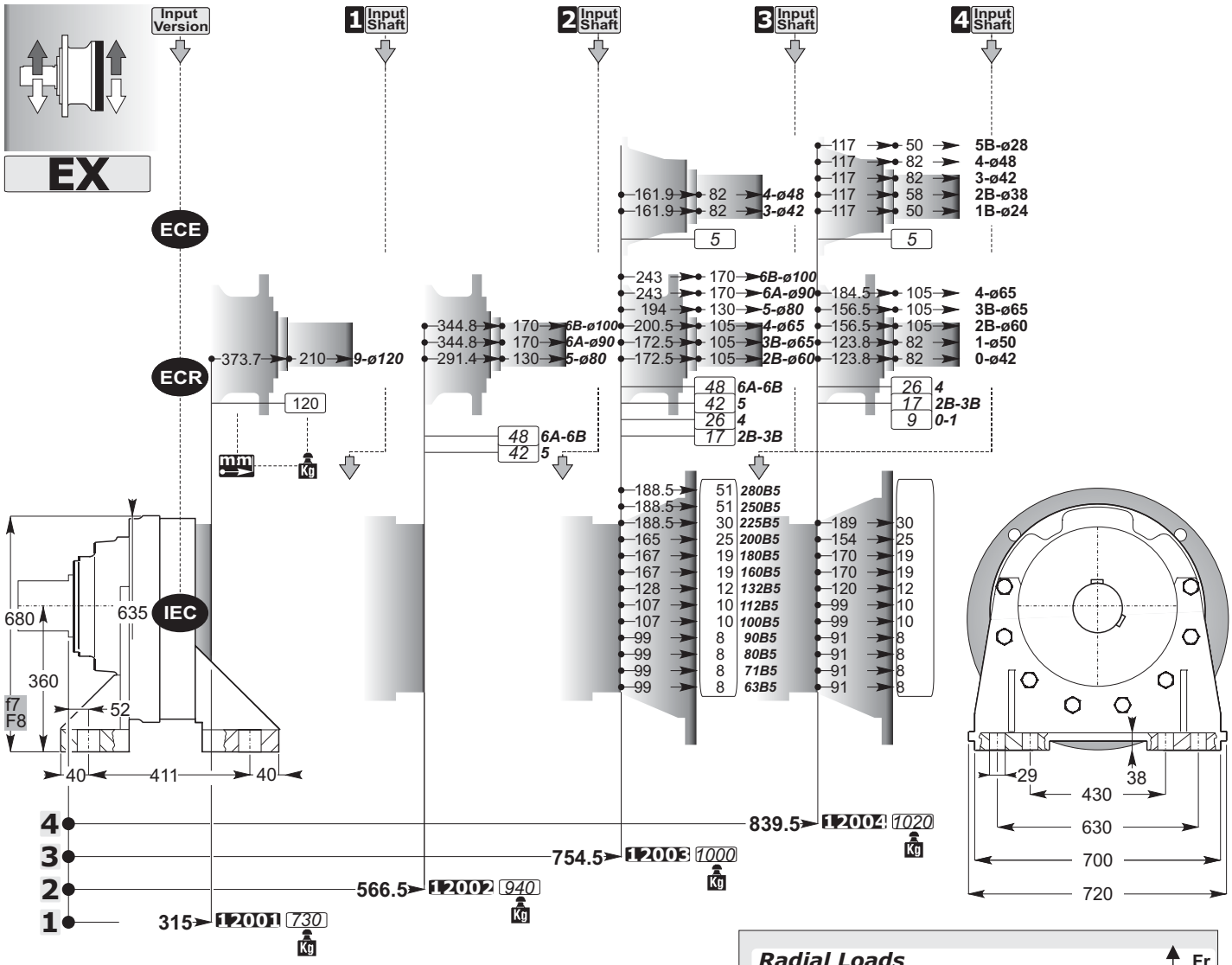


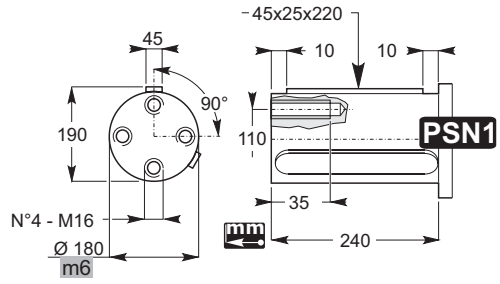


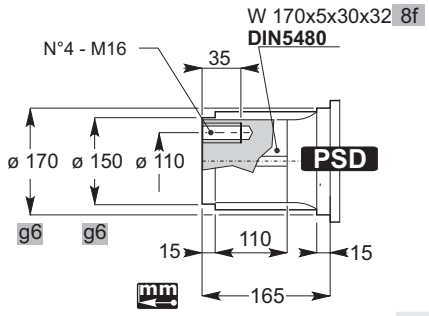



ECE
Input Version
ECR
IEC
4 Input Shaft
ECE 1 2 3 4 5 B
50 58 82 82 50
117 117 117 117 117
5 5 5 5 5
ECR 0 1 2 3 4 B
82 82 105 105 105
123.8 123.8 156.5 156.5 184.5
9 9 17 17 26
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
47 55 55 76 170 170 154 189
8 10 10 12 19 19 25 30
192
81.5
520
635
f7
F8
14
4
710.5
12004
910
EXB
26-n°32
11°15'
575

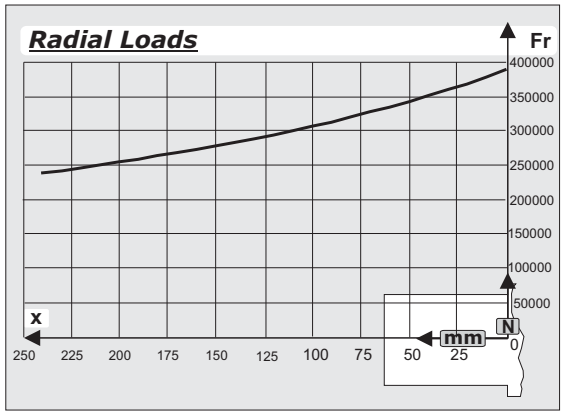

FD
72.1 Kg
163
42
48
N 170x5x30x32 9H
DIN5480
28 - n°18
175 H7
170 H7
173
14
107
25
17
250 f7
400
450
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
D1
D4
De
Leff
Ld
L4
L1
L3
ID
m
Z
X
De
FF
5.3 Kg
31
20.5
M16x50
Rff
16.5(n°4-90°)
150 H7
175 f7
198
M14
110
BD
27.3 Kg
163
N170x5x30x32 9H
DIN5480
175 H7
170 H7
173
235 h7
14
107
25
17
Accessories

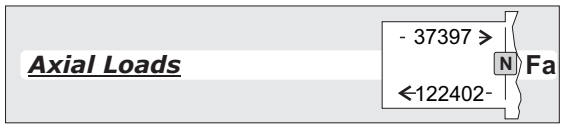


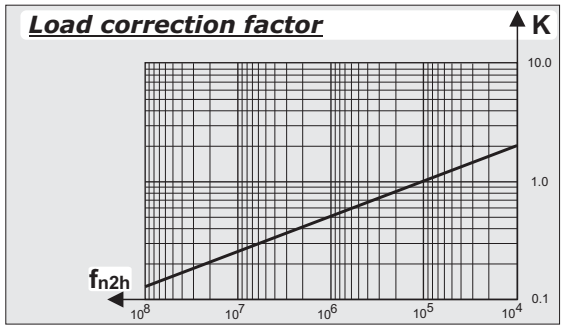


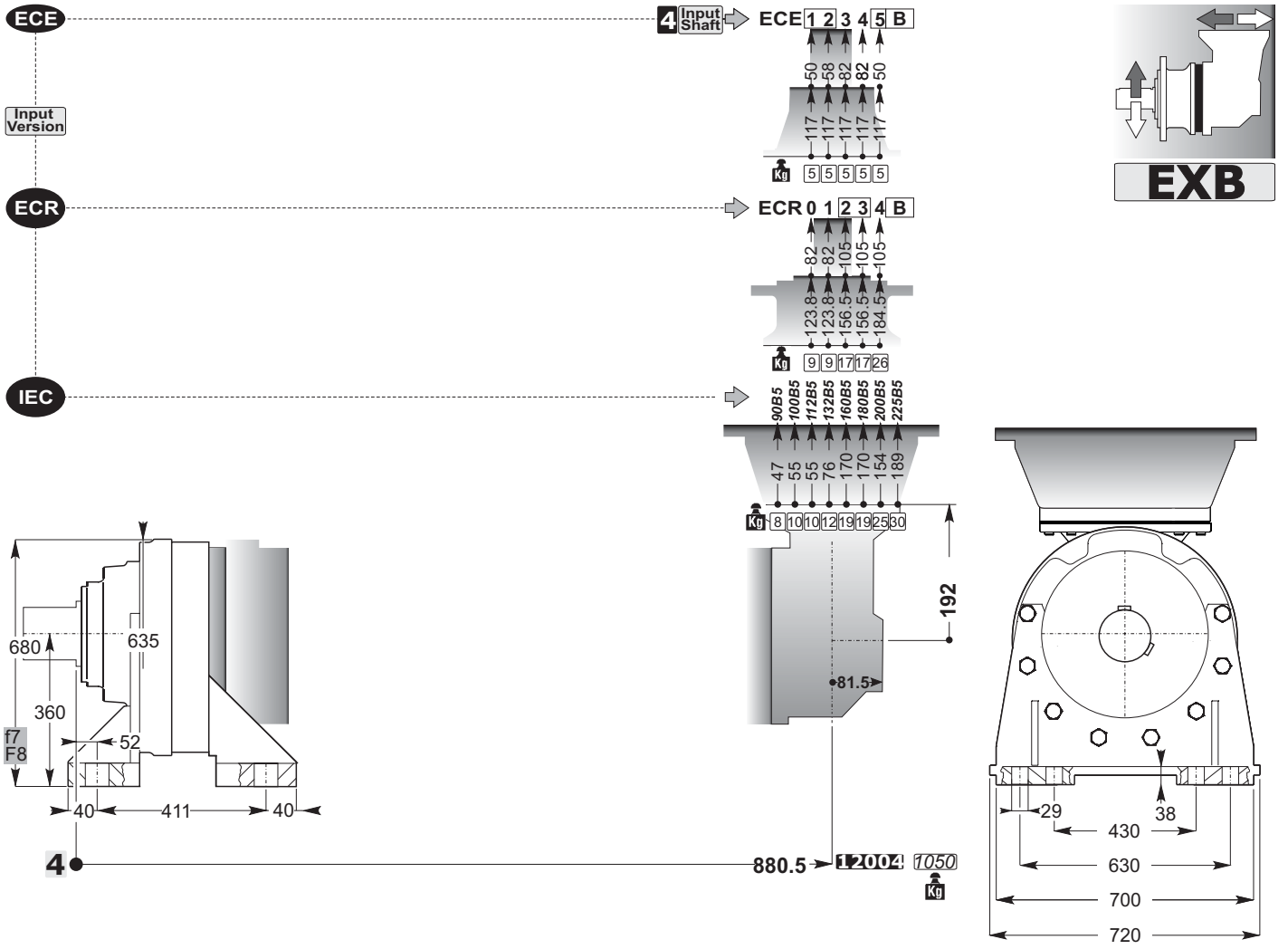


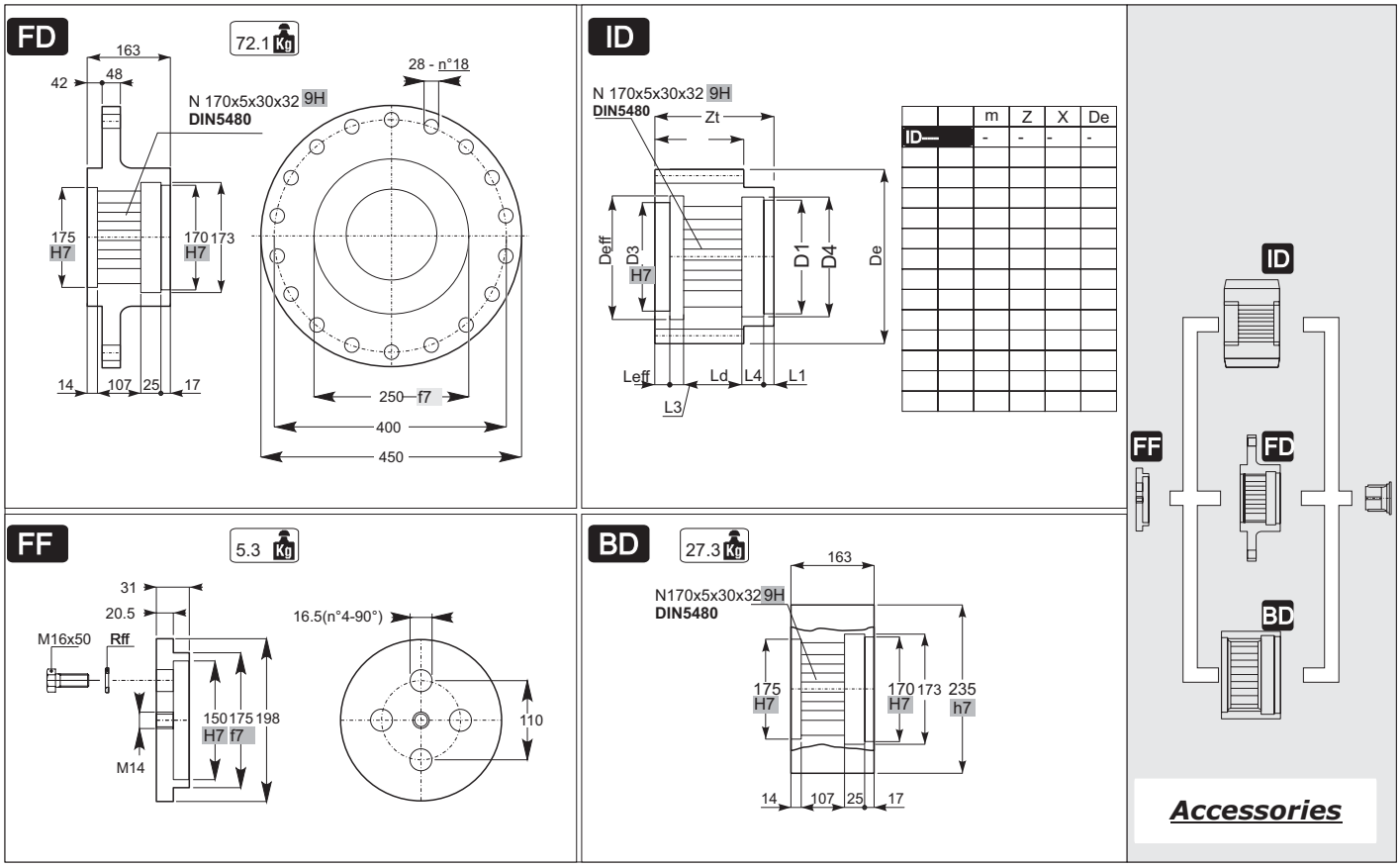
Output Shafts

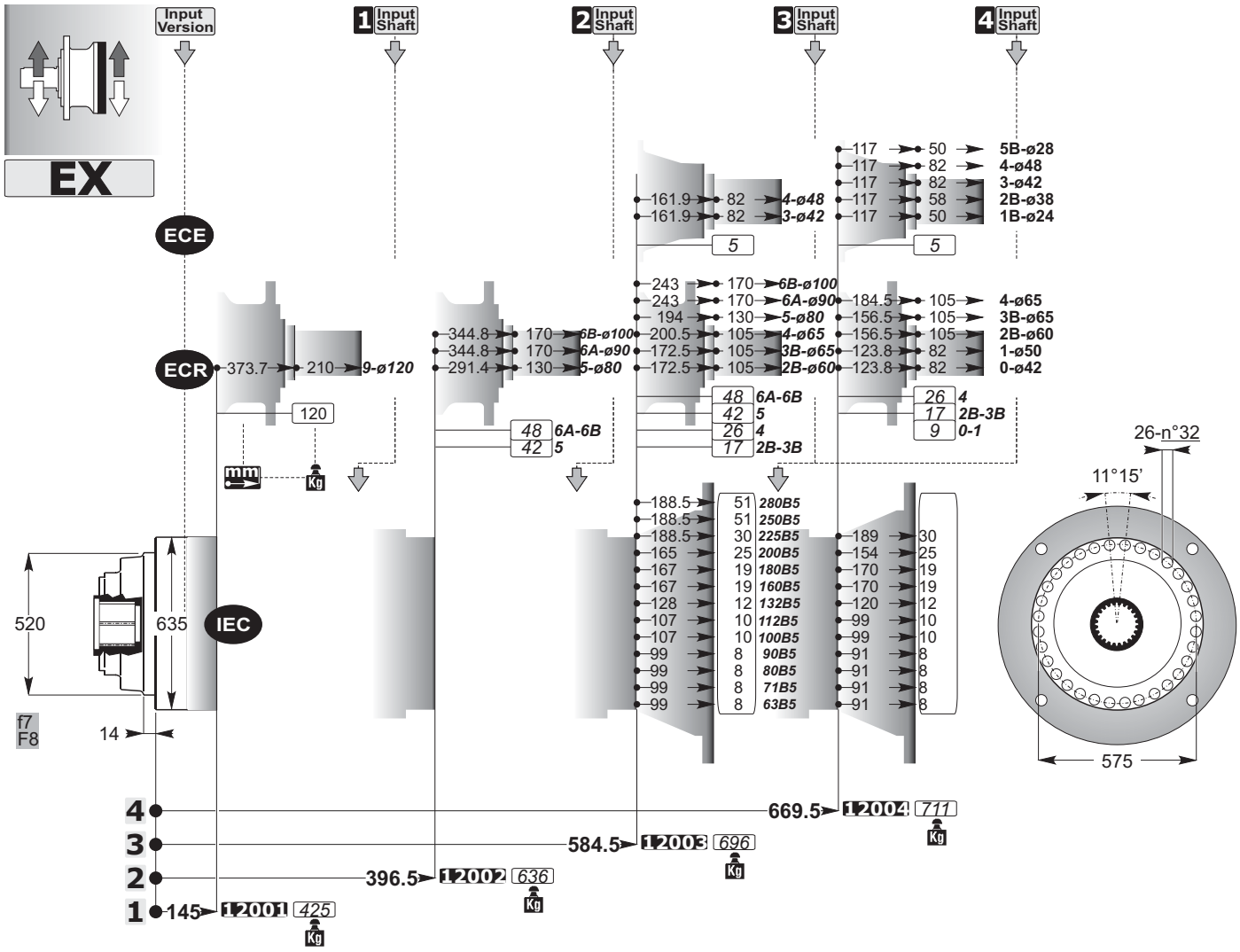


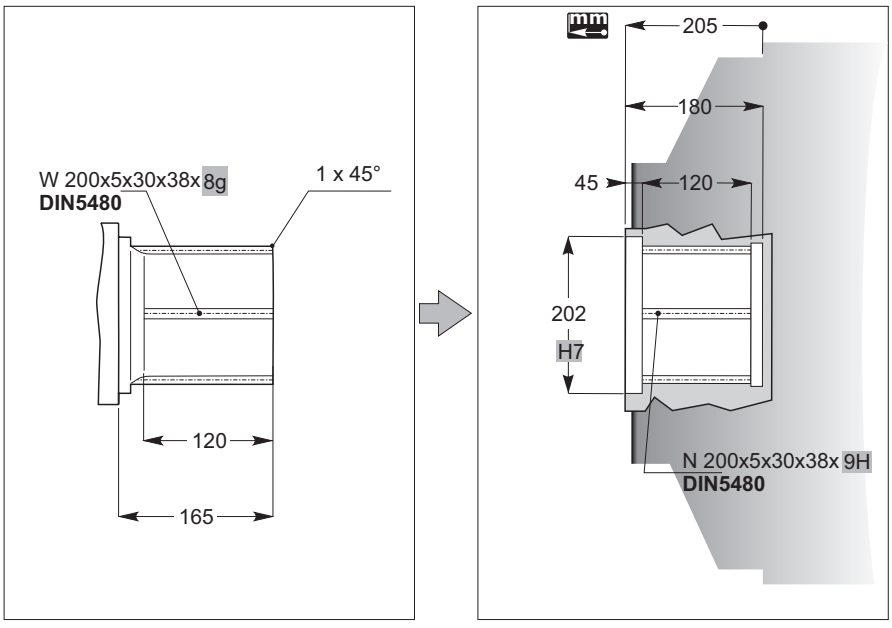




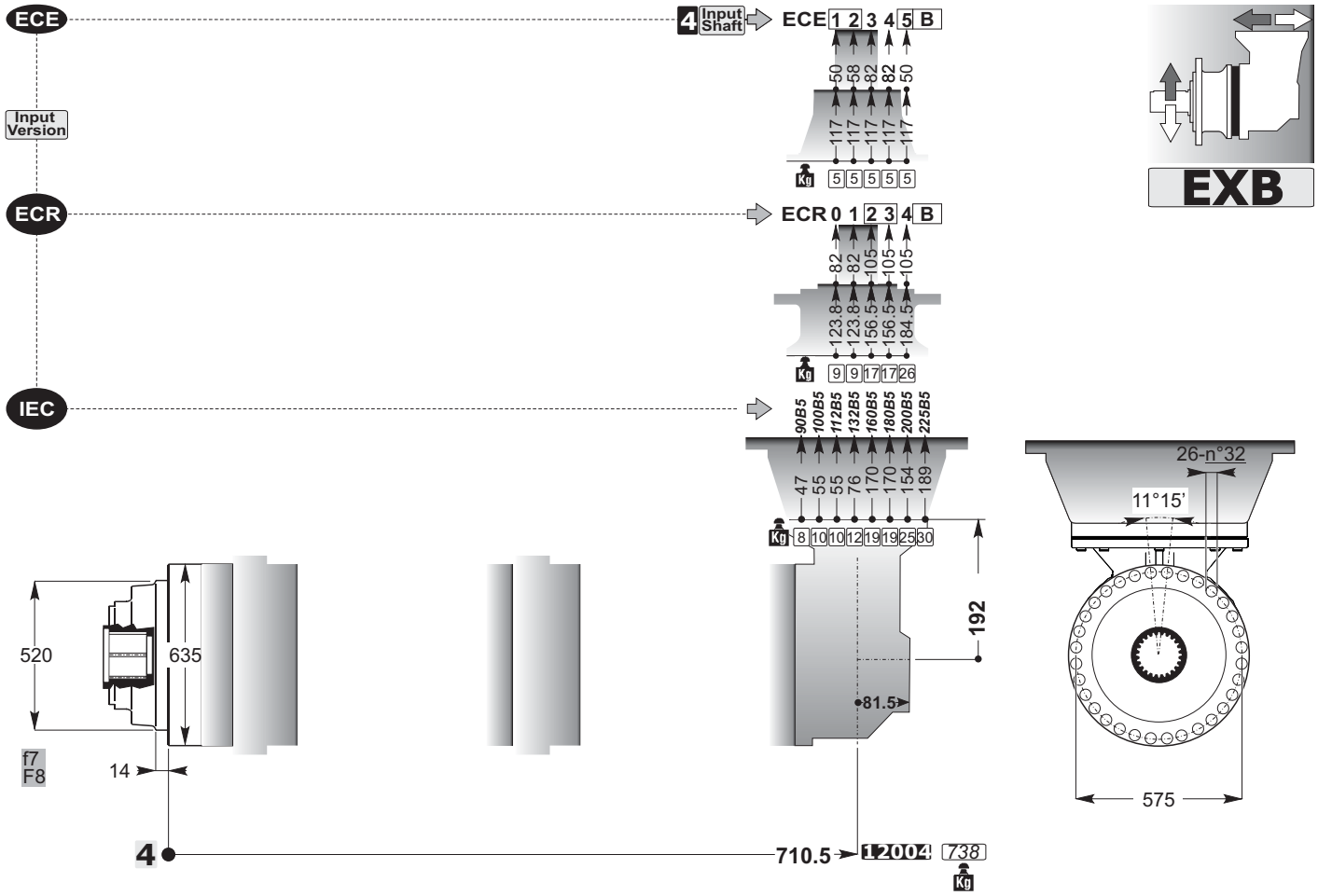

ECE
Input Version
ECR
IEC
4 Input Shaft
ECE 1 2 3 4 5 B
50 58 82 82 50
117 117 117 117 117
5 5 5 5 5
ECR 0 1 2 3 4 B
82 82 105 105 105
123.8 123.8 156.5 156.5 184.5
9 9 17 17 26
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
47 55 55 76 170 170 154 189
8 10 10 12 19 19 25 30
192
81.5
680
635
360
f7
F8
52
40
411
40
4
880.5
120004
1050
EXB
29
38
430
630
700
720


FD
72.1 Kg
163
42
48
N 170x5x30x32 9H
DIN5480
28 - n°18
175 H7
170 H7
173
14
107
25
17
250 f7
400
450
ID
N 170x5x30x32 9H
DIN5480
Zt
Deff
D3 H7
D1
D4
De
Leff
Ld
L4
L1
L3
ID—
m
Z
X
De
FF
5.3 Kg
31
20.5
M16x50
Rff
16.5(n°4-90°)
150 H7
175 f7
198
M14
110
BD
27.3 Kg
163
N170x5x30x32 9H
DIN5480
175 H7
170 H7
173
235 h7
14
107
25
17
ID
FF
FD
BD
Accessories

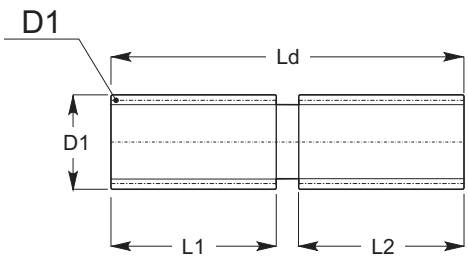




Output Shafts



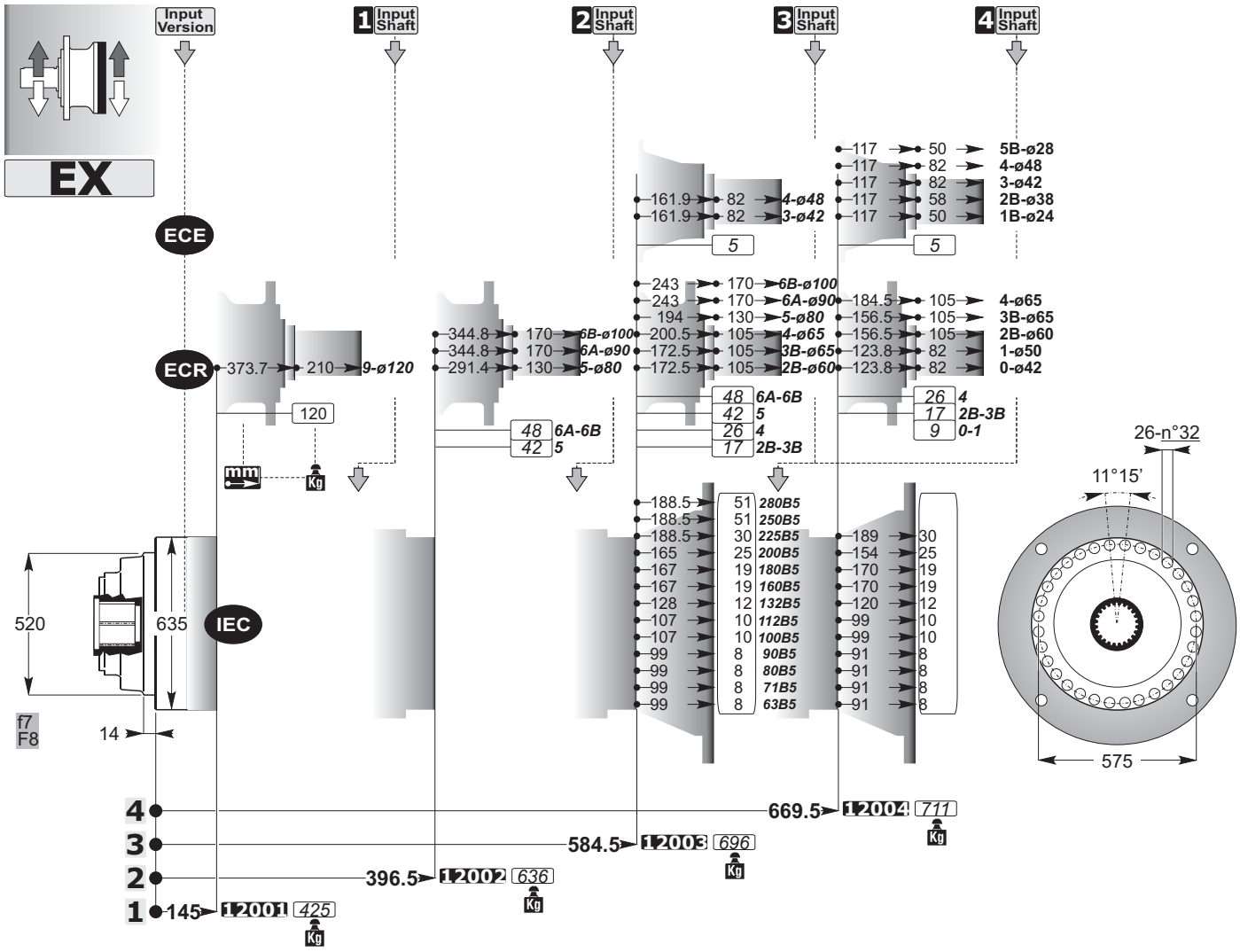
SD

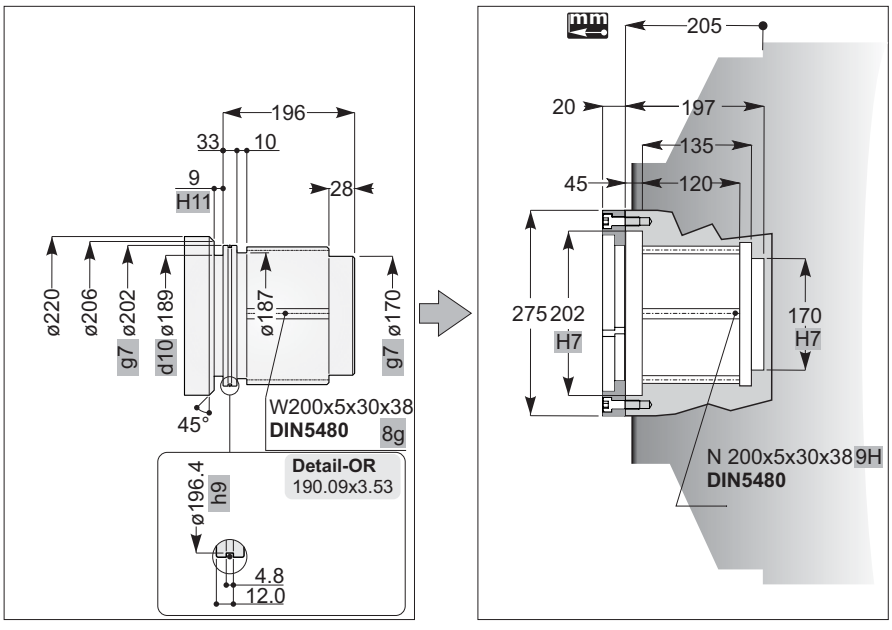


SD

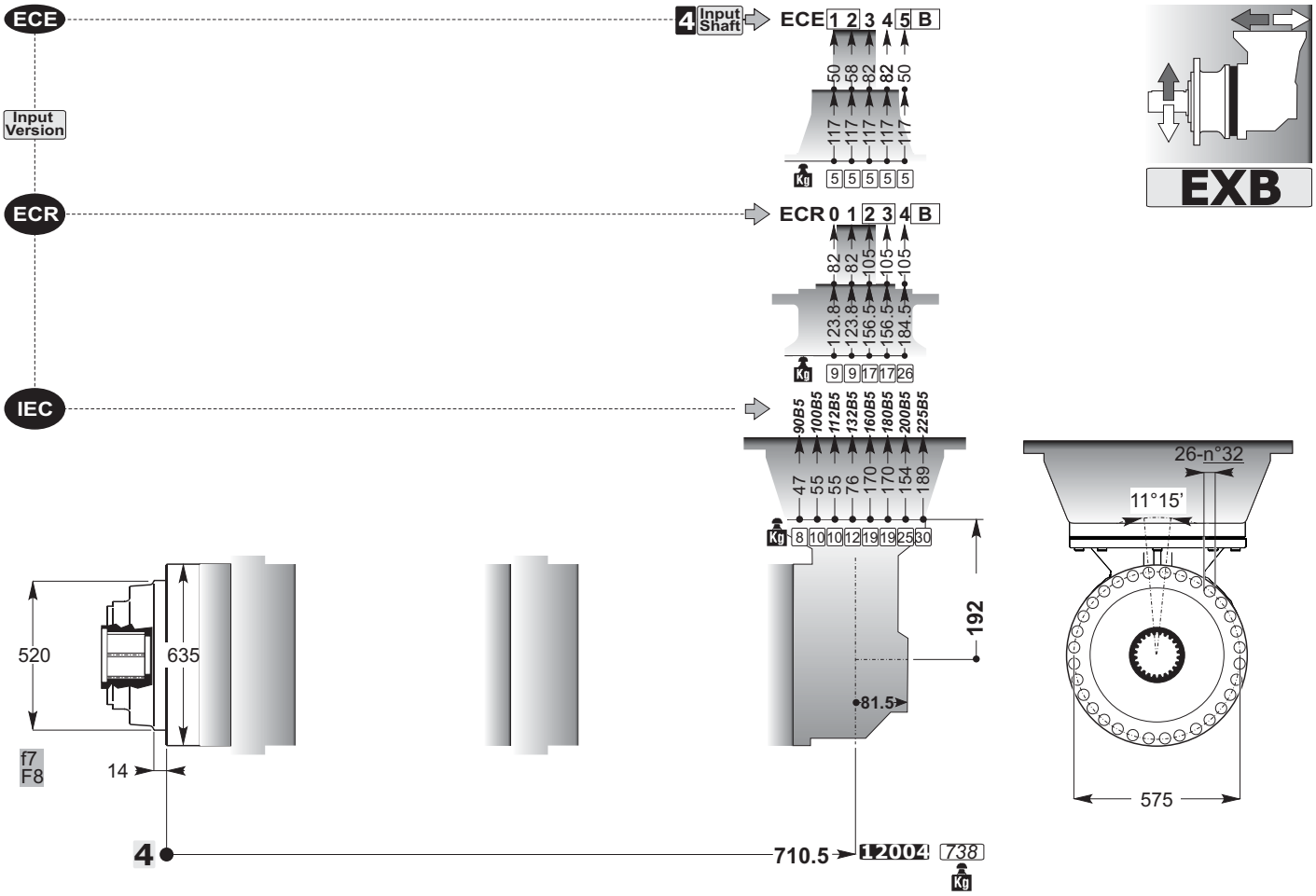


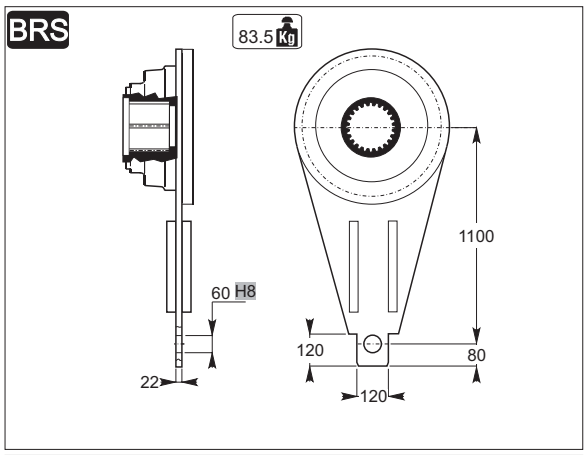
Accessories

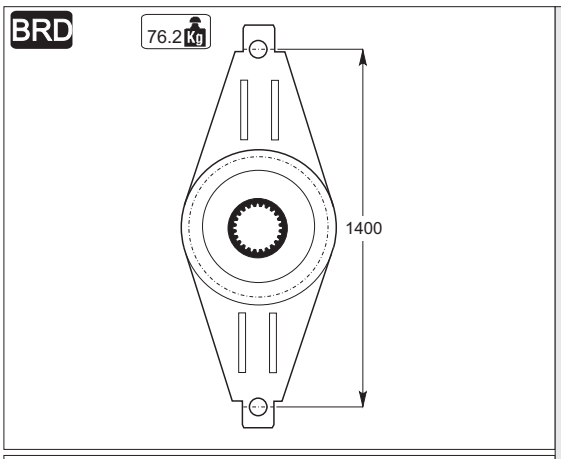


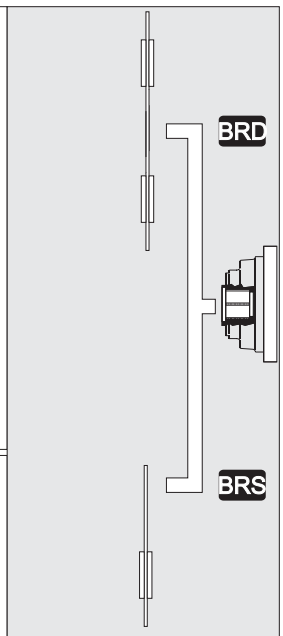


Output Shafts



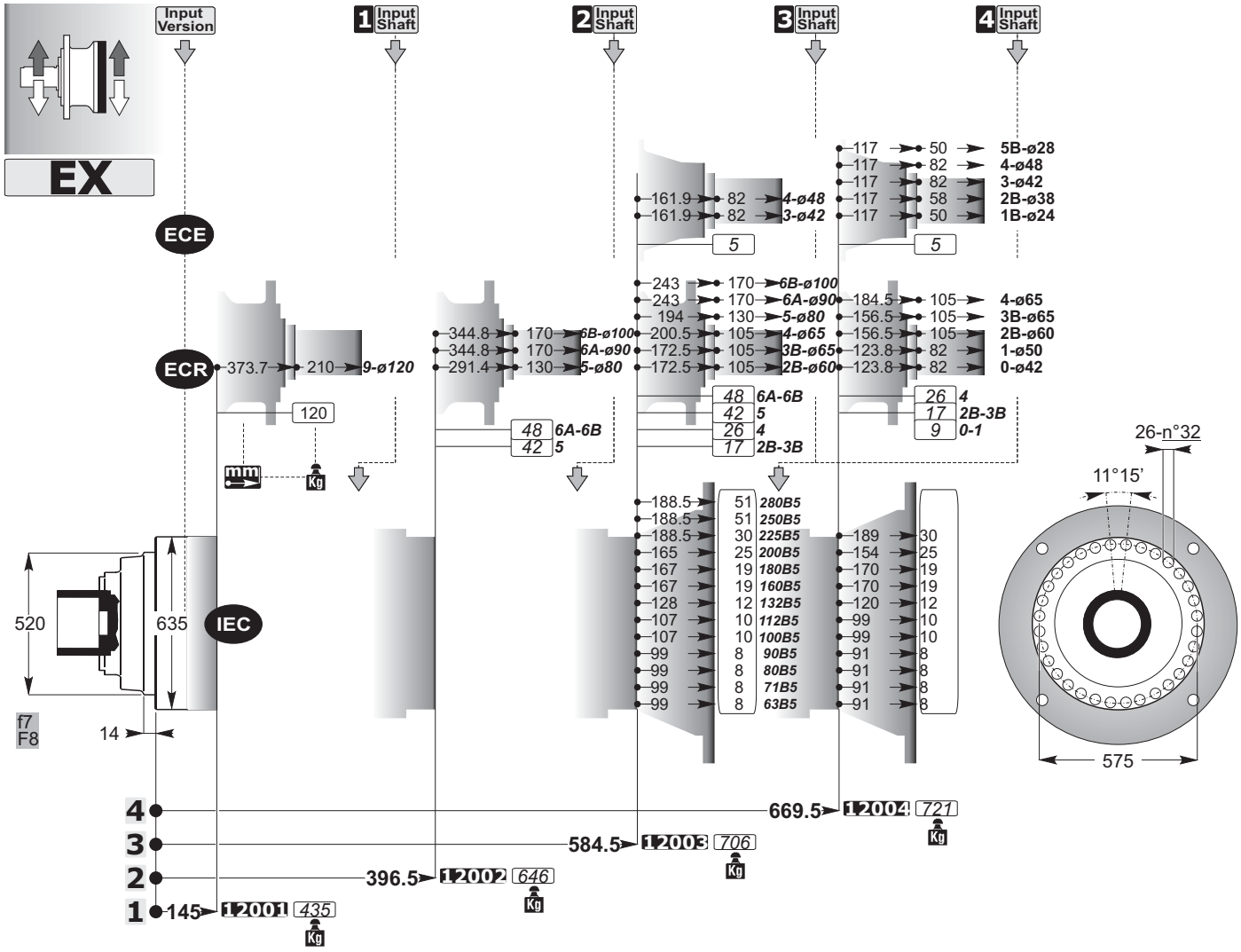


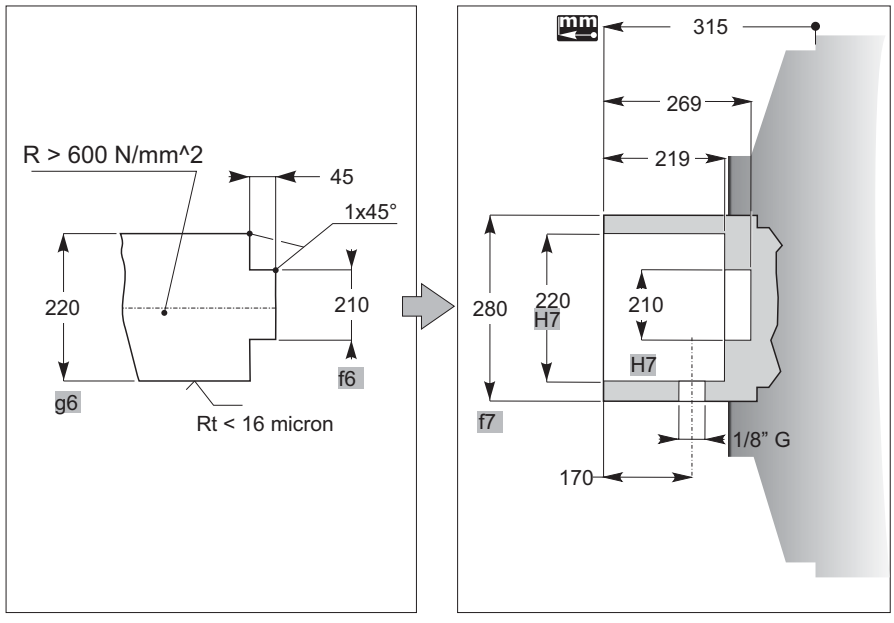




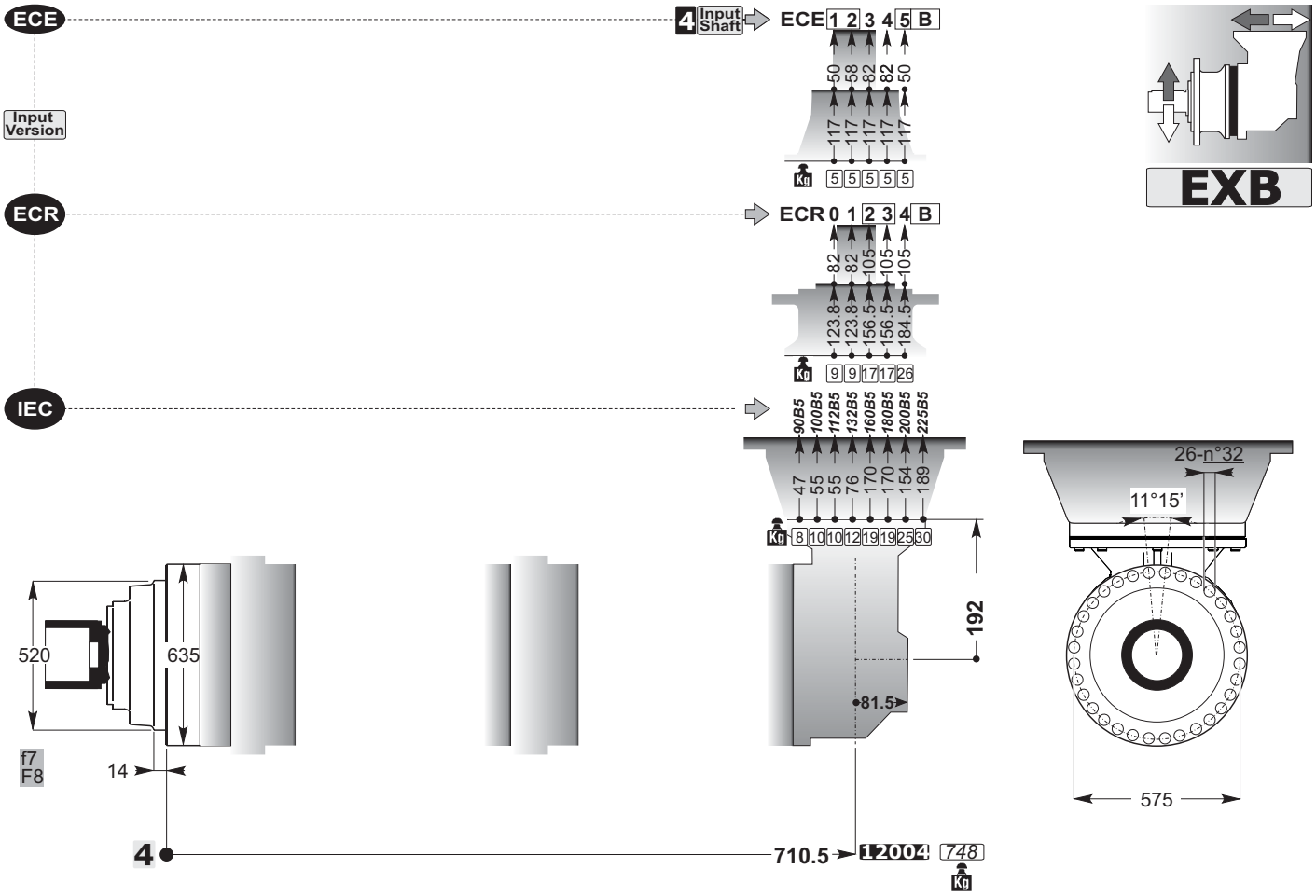
Accessories

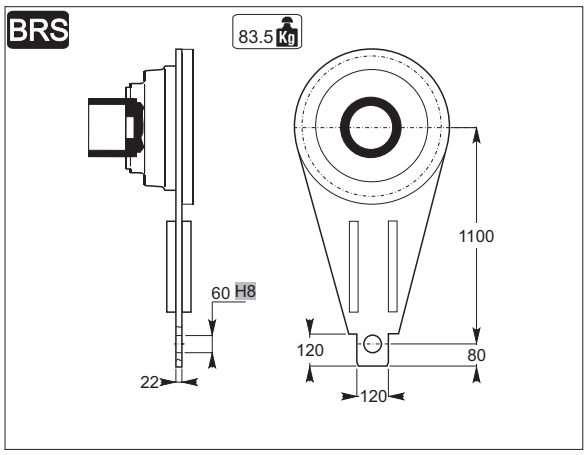
mm
C

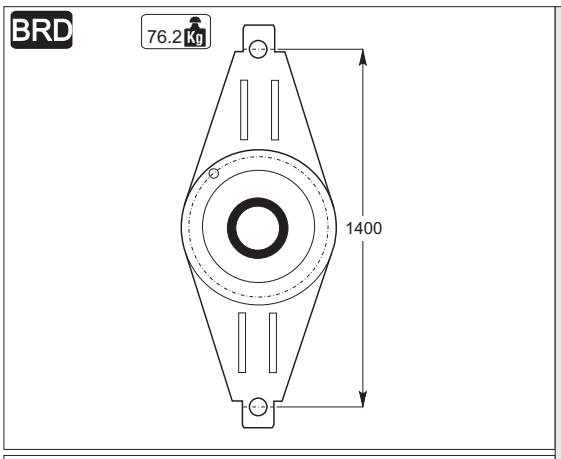


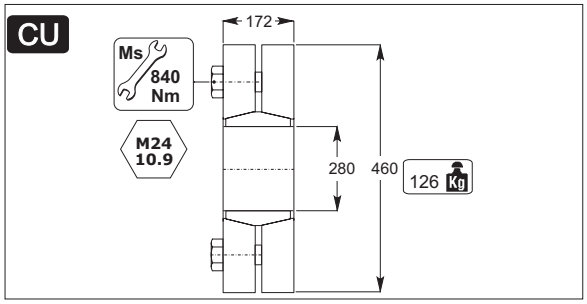


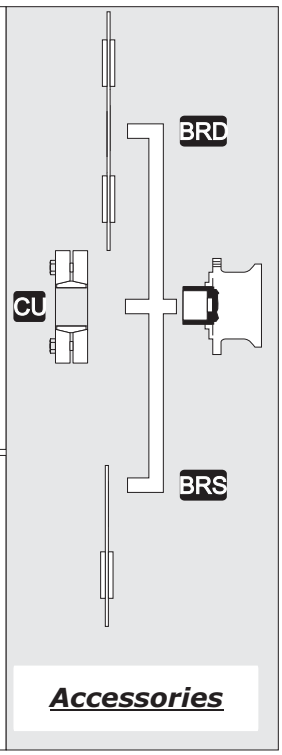
Output Shafts

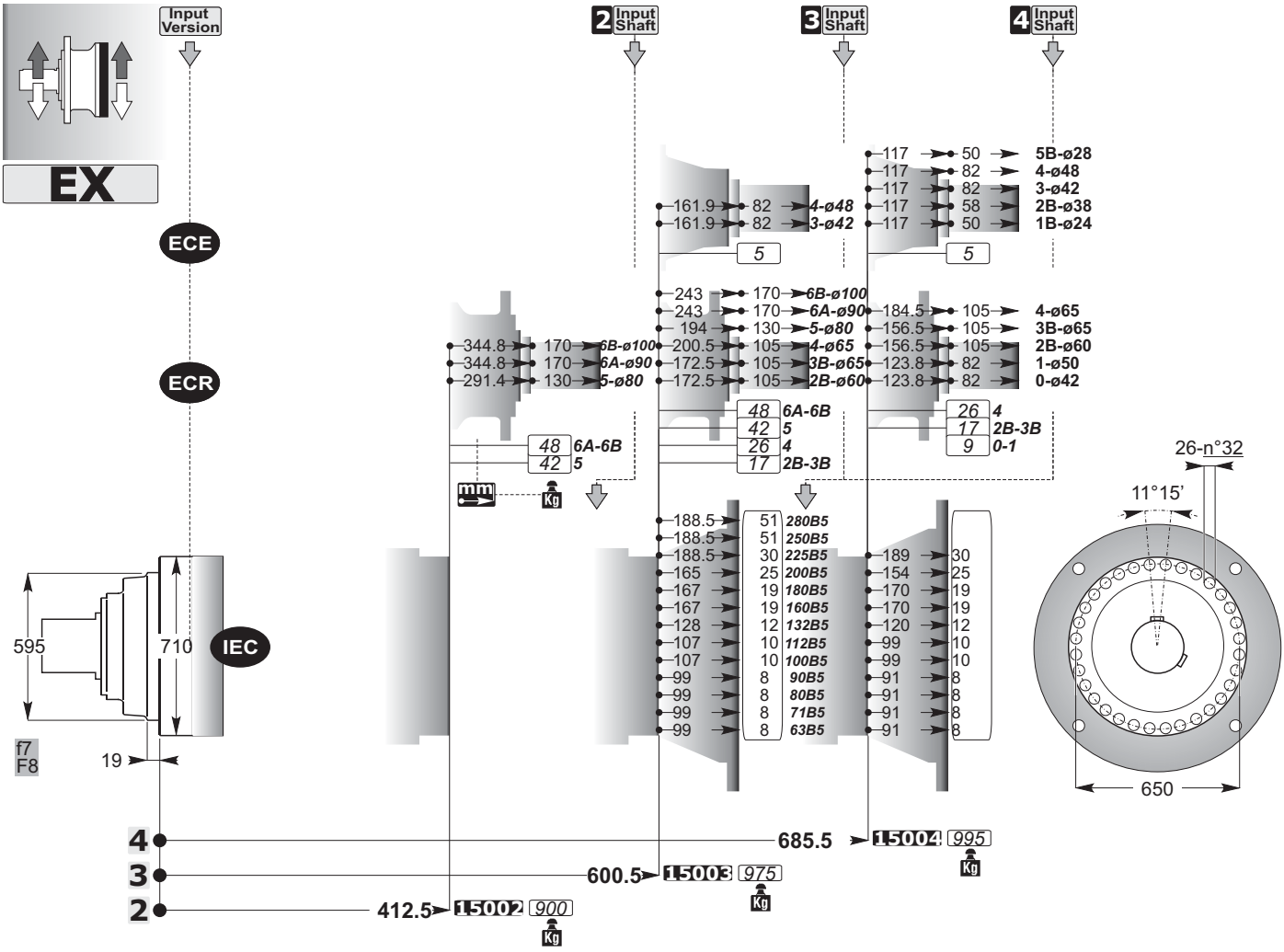

ECE
Input Version
ECR
IEC
4 Input Shaft
ECE 1 2 3 4 5 B
50 58 82 82 50
117 117 117 117 117
5 5 5 5 5
ECR 0 1 2 3 4 B
82 82 105 105 105
123.8 123.8 156.5 156.5 184.5
9 9 17 17 26
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5
47 55 55 76 170 170 154 189
8 10 10 12 19 19 25 30
EXB
26-n°32
11°15'
575
520
635
f7
F8
14
192
81.5
4
710.5
12004
748

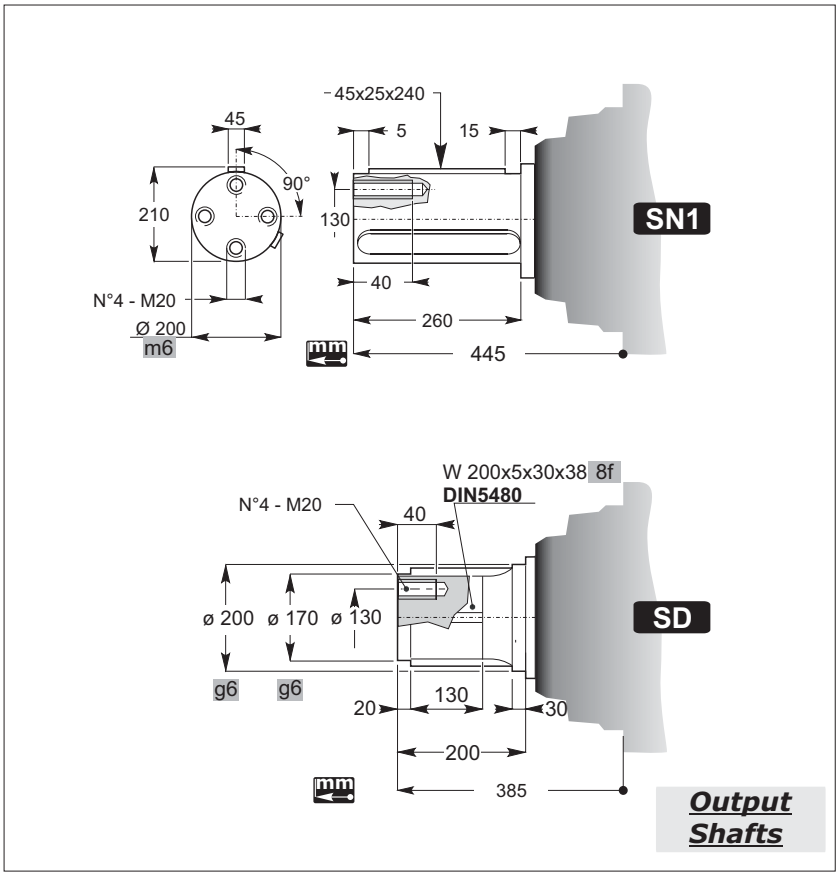

BRS
83.5
60 H8
22
1100
120
80
120

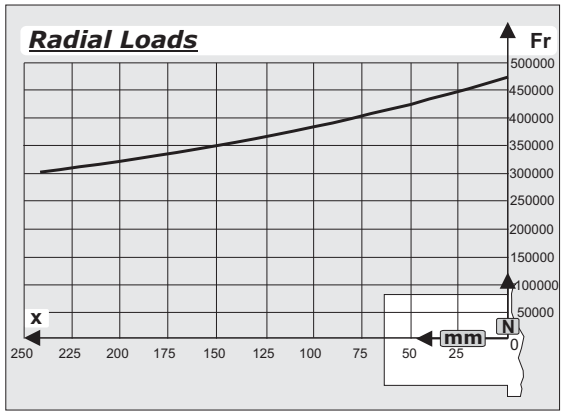

BRD
76.2
1400

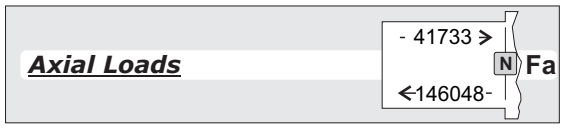

CU
Ms
840
Nm
M24
10.9
172
280
460
126

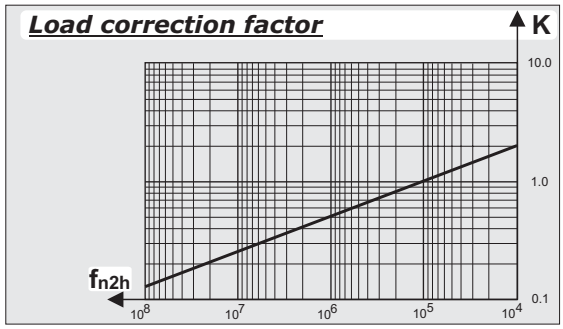

BRD
CU
BRS
Accessories

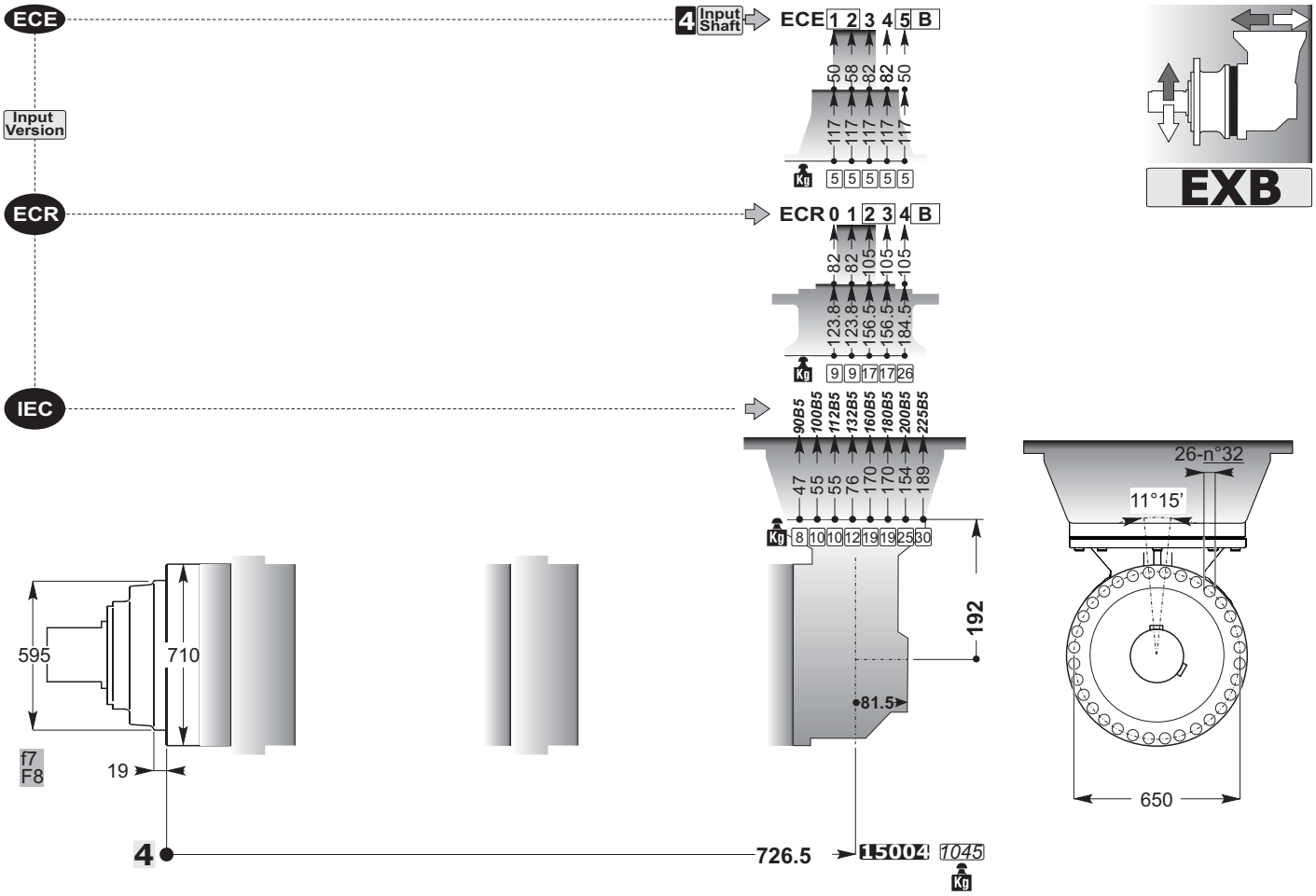

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
595
710
f7
F8
19
161.9 82 4-ø48
161.9 82 3-ø42
5
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
5
243 170 6B-ø100
243 170 6A-ø90
194 130 5-ø80
200.5 105 4-ø65
172.5 105 3B-ø65
172.5 105 2B-ø60
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
344.8 170 6B-ø100
344.8 170 6A-ø90
291.4 130 5-ø80
48 6A-6B
42 5
48 6A-6B
42 5
26 4
17 2B-3B
9 0-1
mm
Kg
188.5 51 280B5
188.5 51 250B5
188.5 30 225B5
165 25 200B5
167 19 180B5
167 19 160B5
128 12 132B5
107 10 112B5
107 10 100B5
99 8 90B5
99 8 80B5
99 8 71B5
99 8 63B5
189 30
154 25
170 19
170 19
120 12
99 10
99 10
91 8
91 8
91 8
91 8
26-n°32
11°15'
650
4
3
2
685.5 15004 995
600.5 15003 975
412.5 15002 900
Kg


45
45x25x240
5
15
90°
210
130
SN1
N°4 - M20
Ø 200
m6
40
260
445
mm
W 200x5x30x38 8f
DIN5480
N°4 - M20
40
ø 200
ø 170
ø 130
SD
g6
g6
20
130
30
200
385
mm
Output Shafts

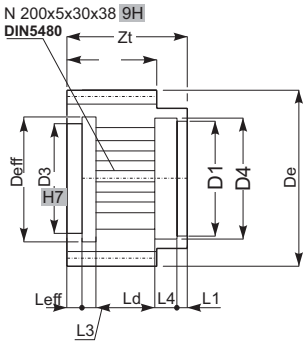

Radial Loads
Fr
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
250 225 200 175 150 125 100 75 50 25
mm
N


Axial Loads
- 41733 >
N
Fa
<146048-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4



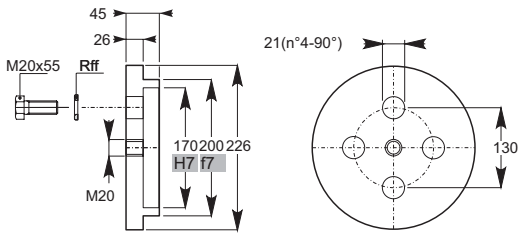
ID



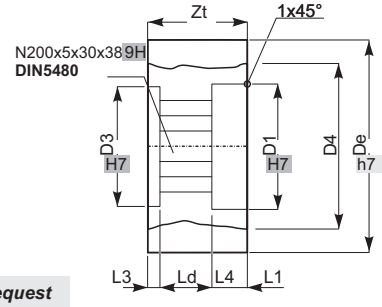
ID—		m	Z	X	De
		-	-	-	-

On request

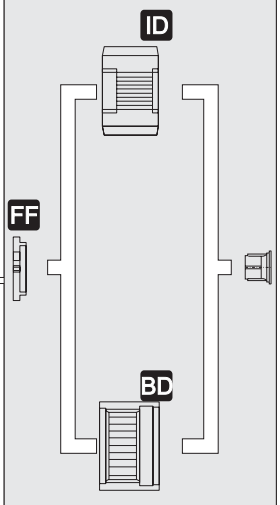
FF



BD

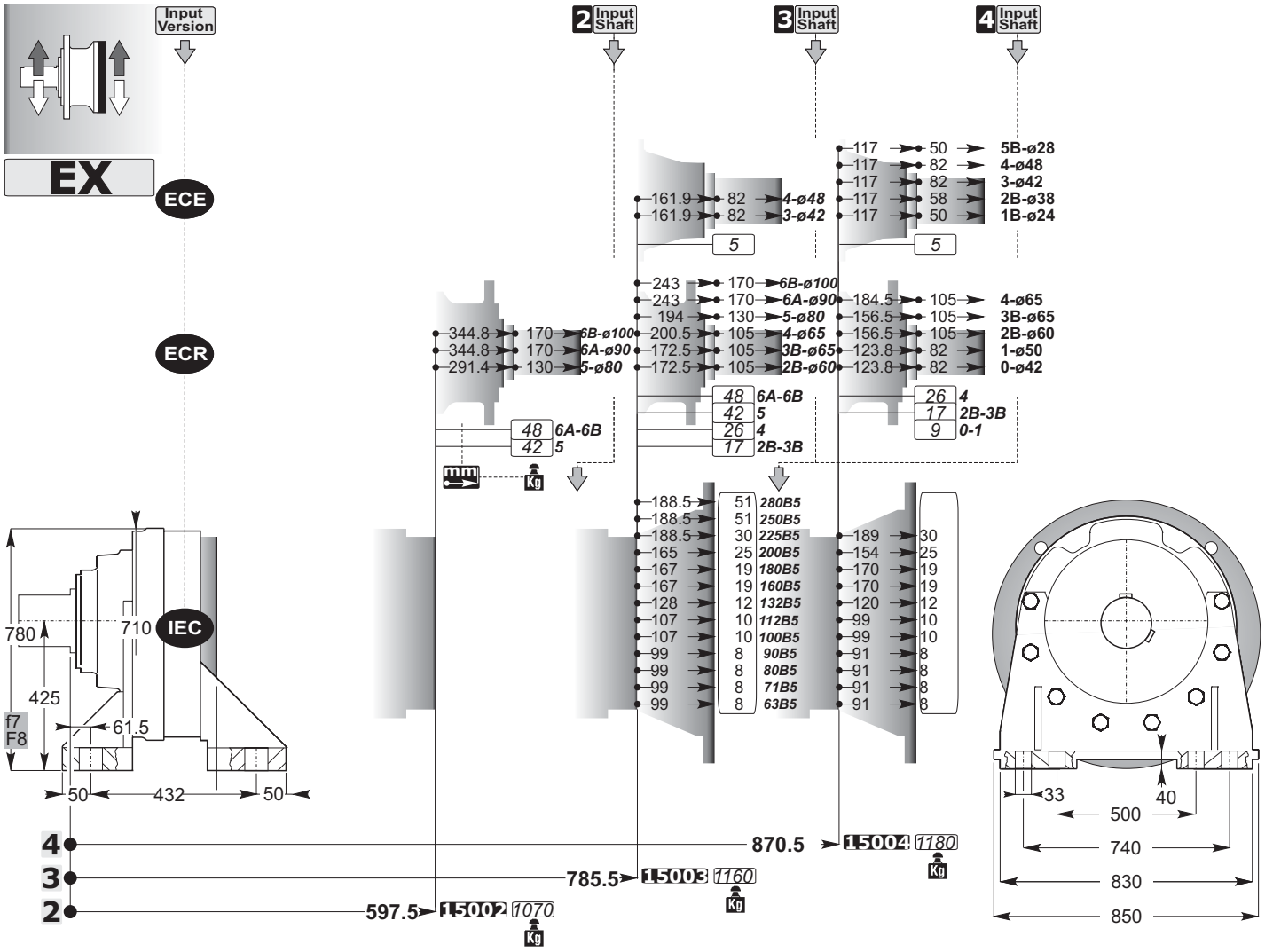


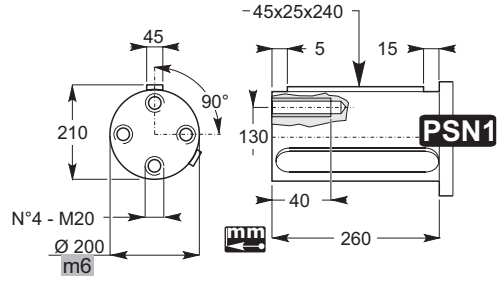
On request

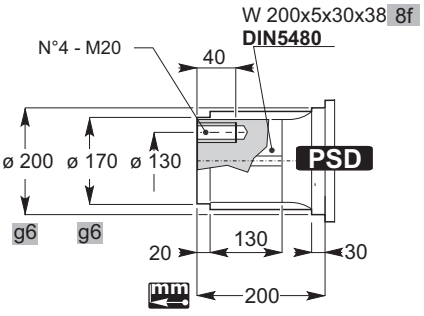


Accessories

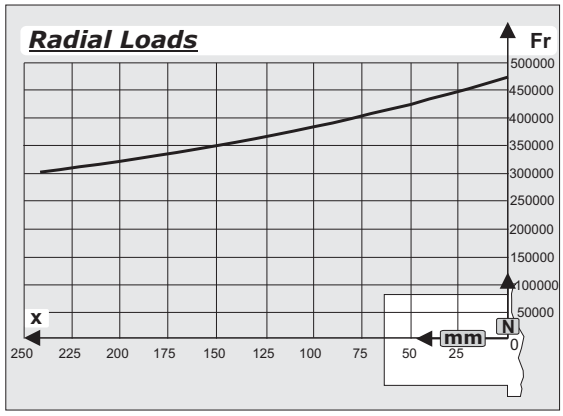
mm
C

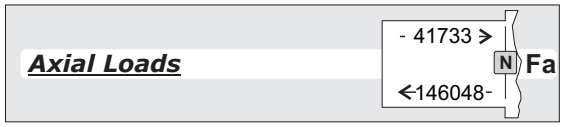


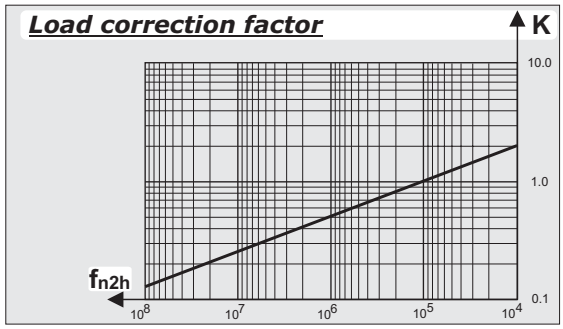


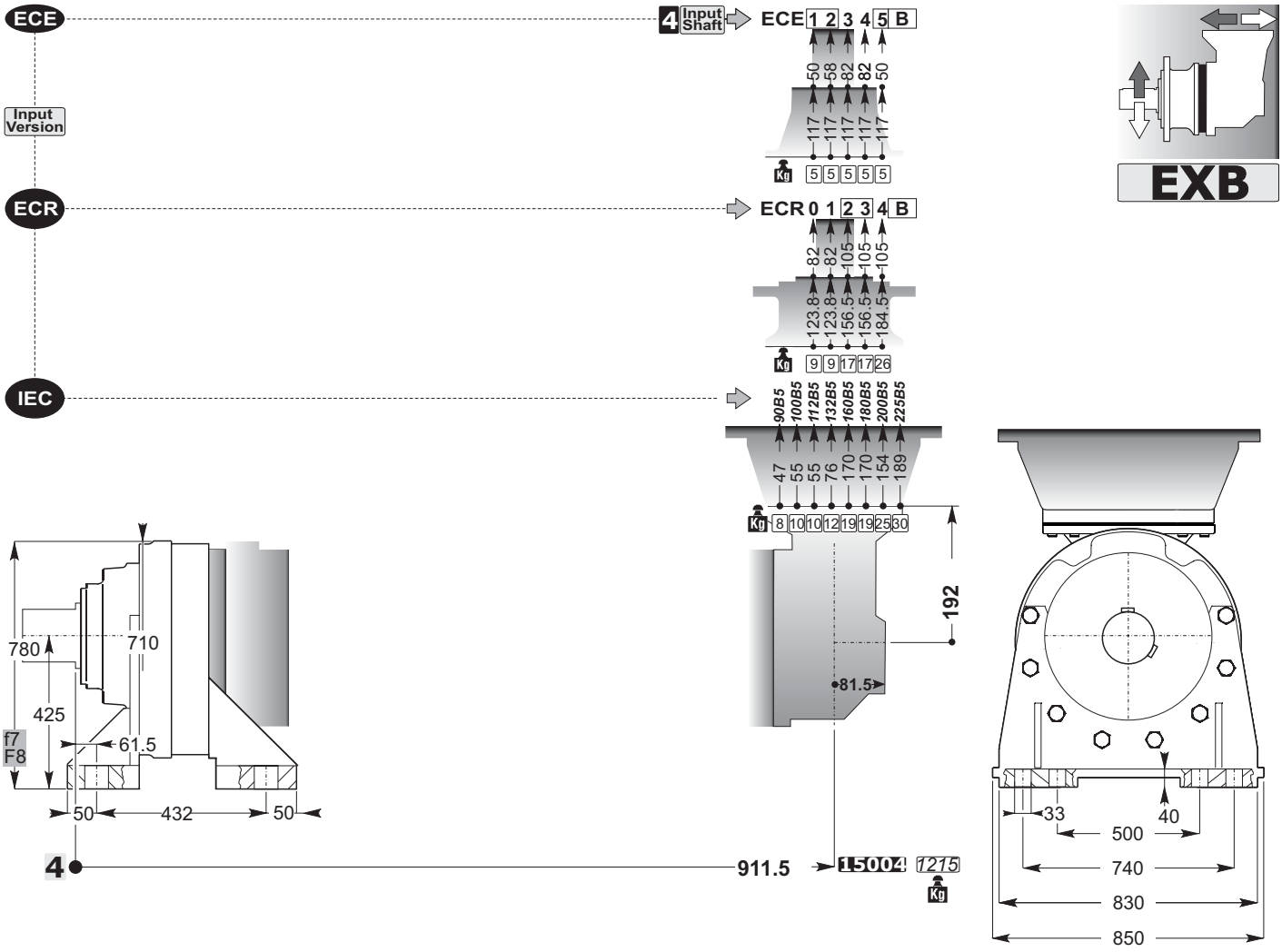


Output Shafts

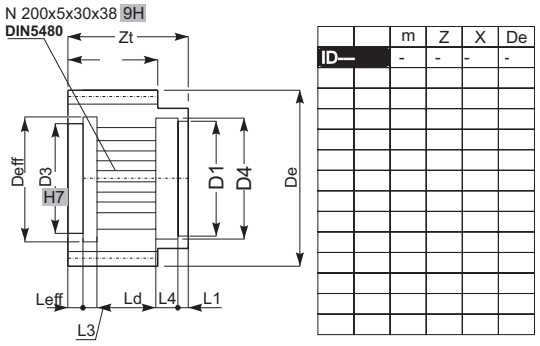








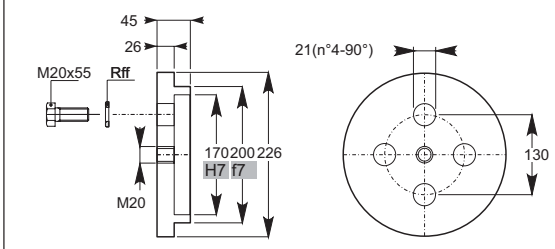
ID



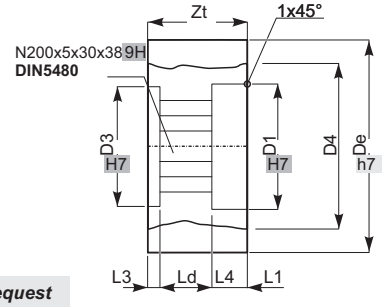
		m	Z	X	De
ID—		-	-	-	-

On request

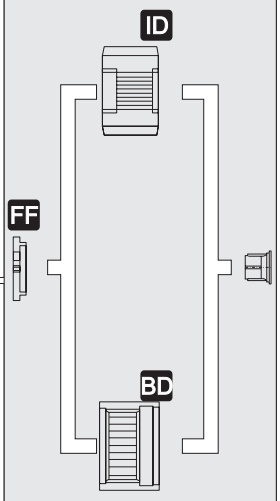
FF



BD

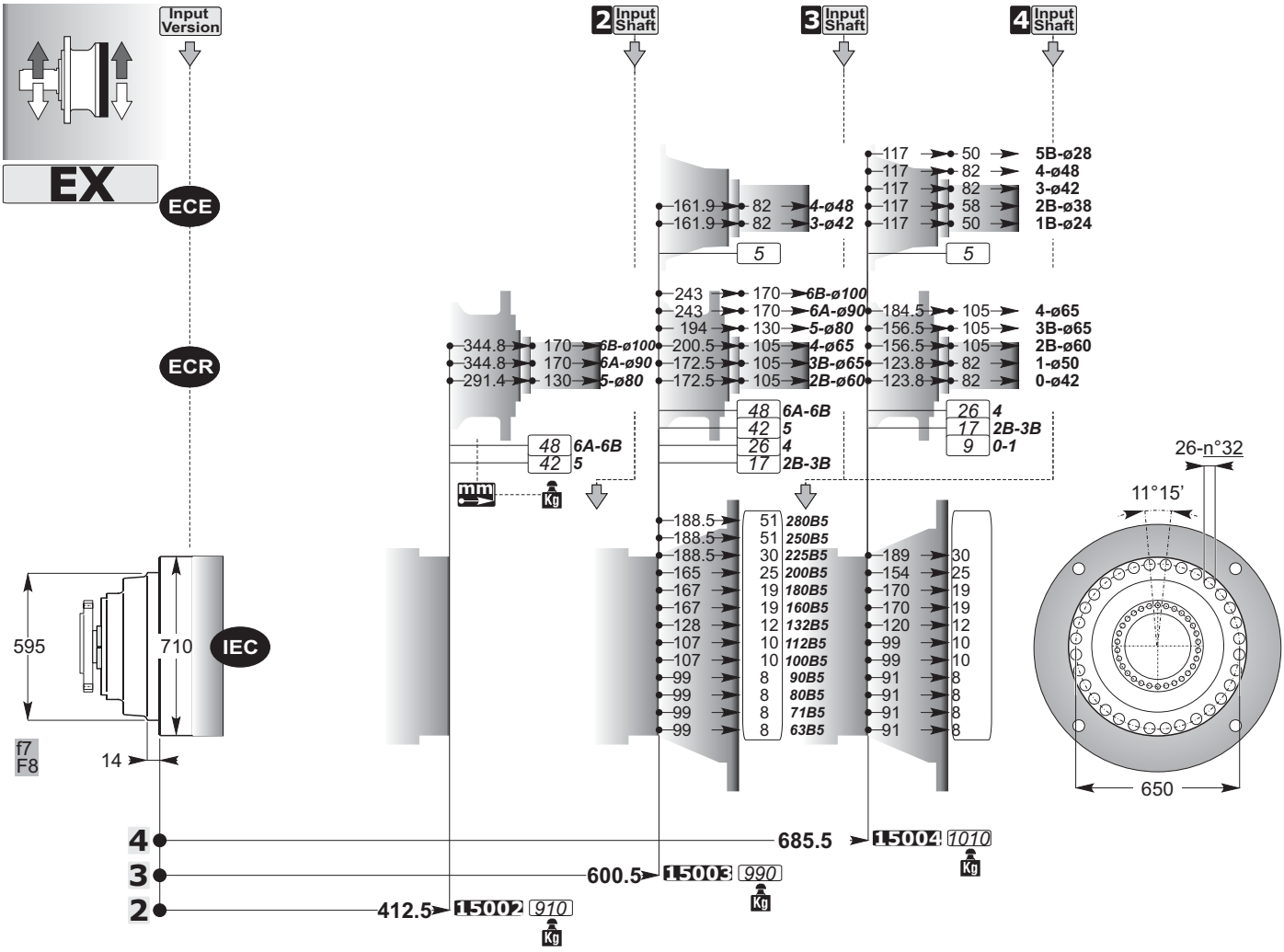


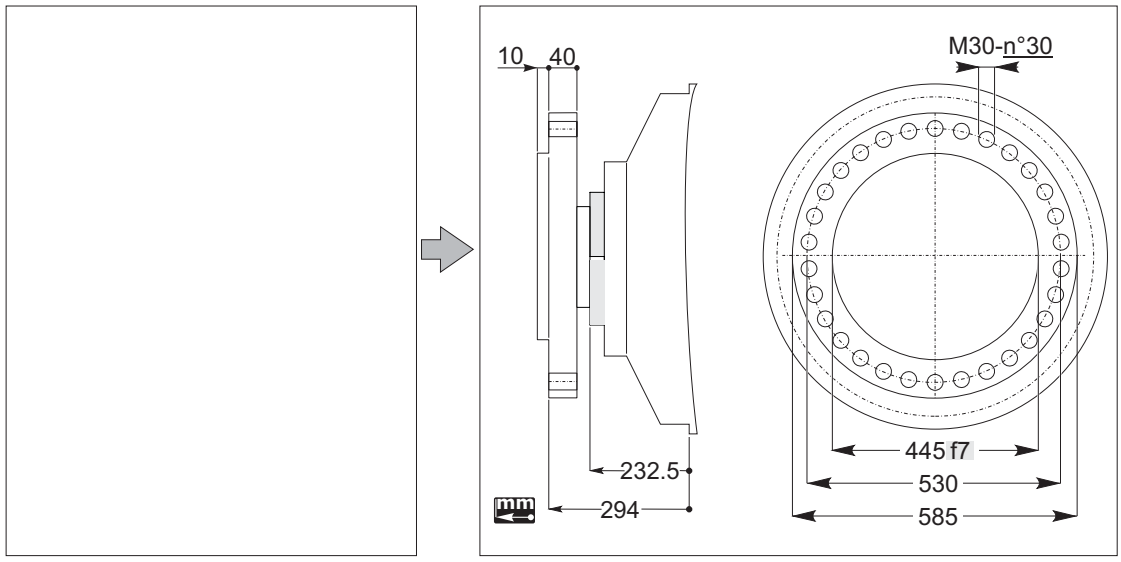
On request



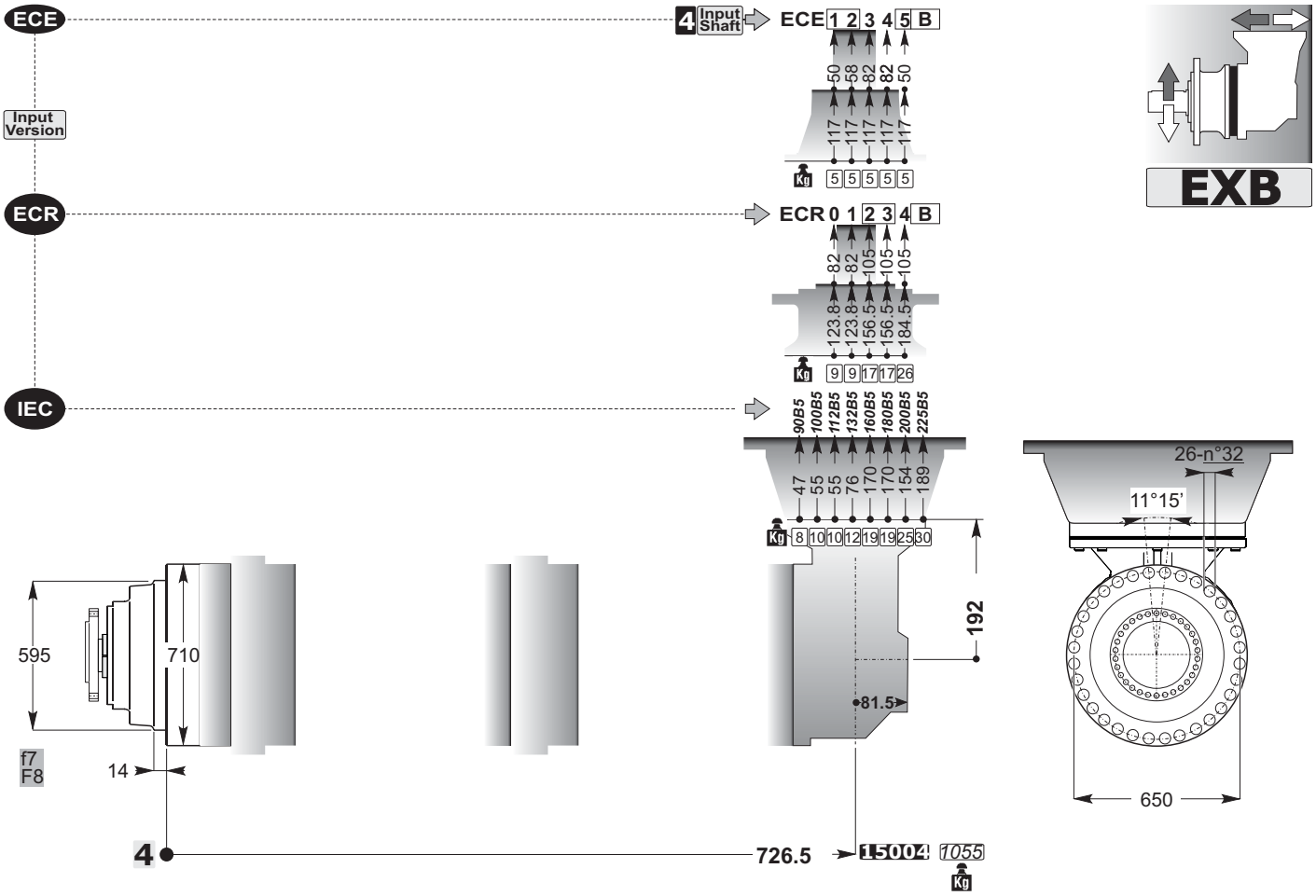
Accessories

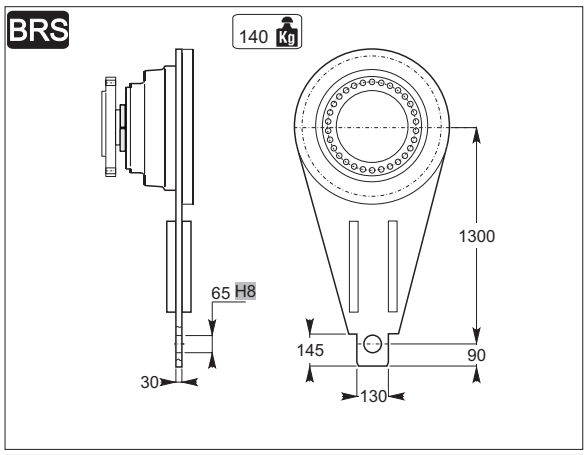
mm
C

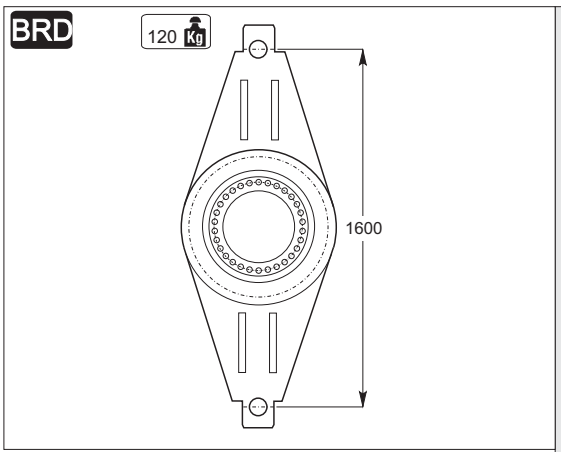


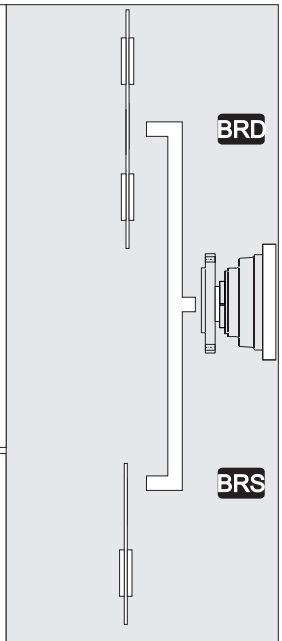


Output Shafts



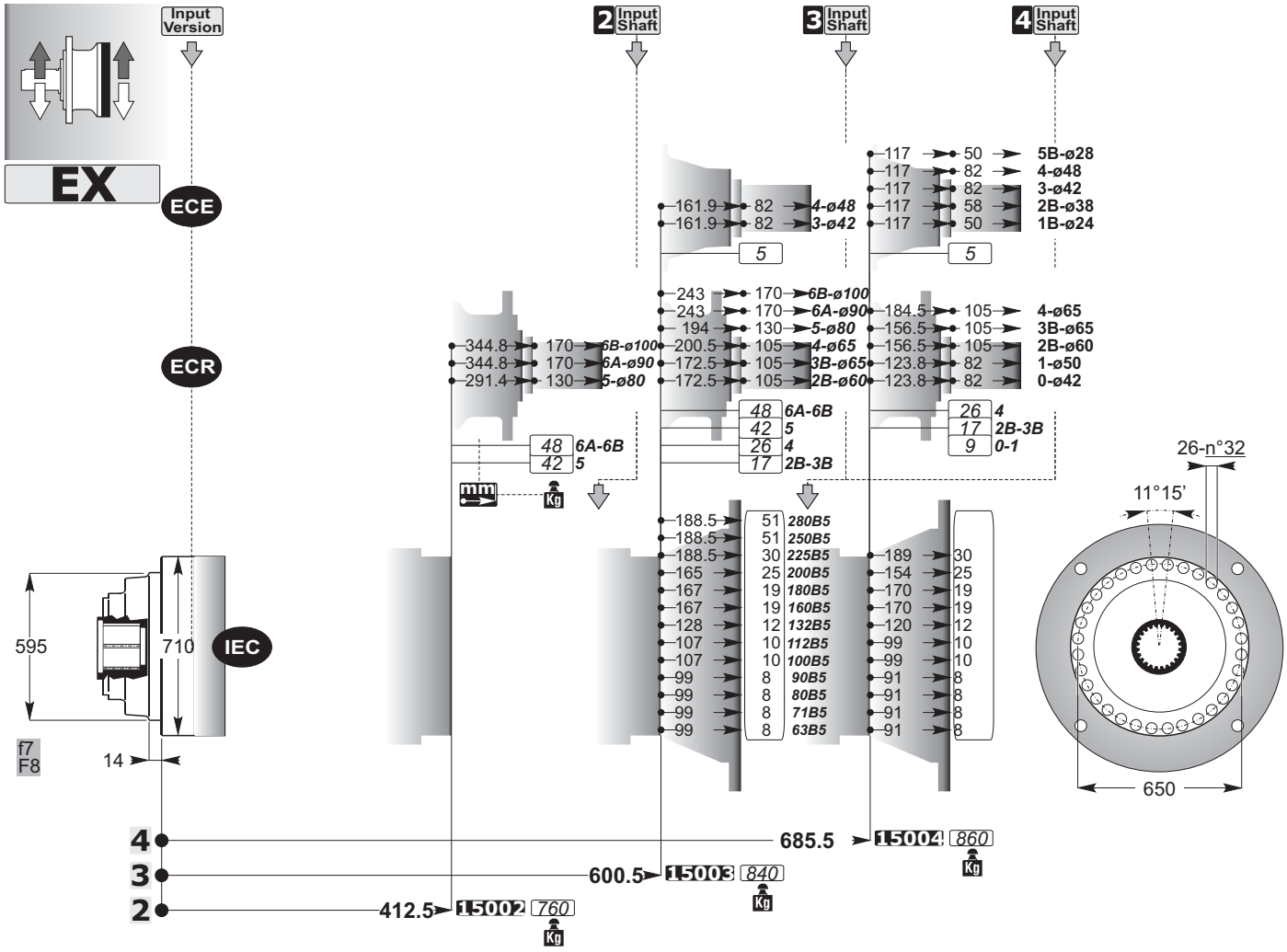


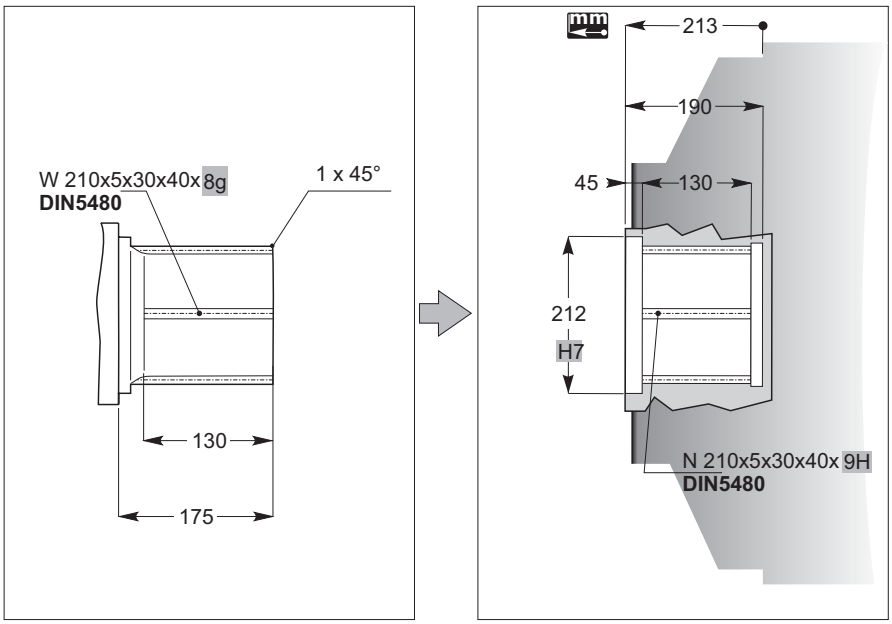




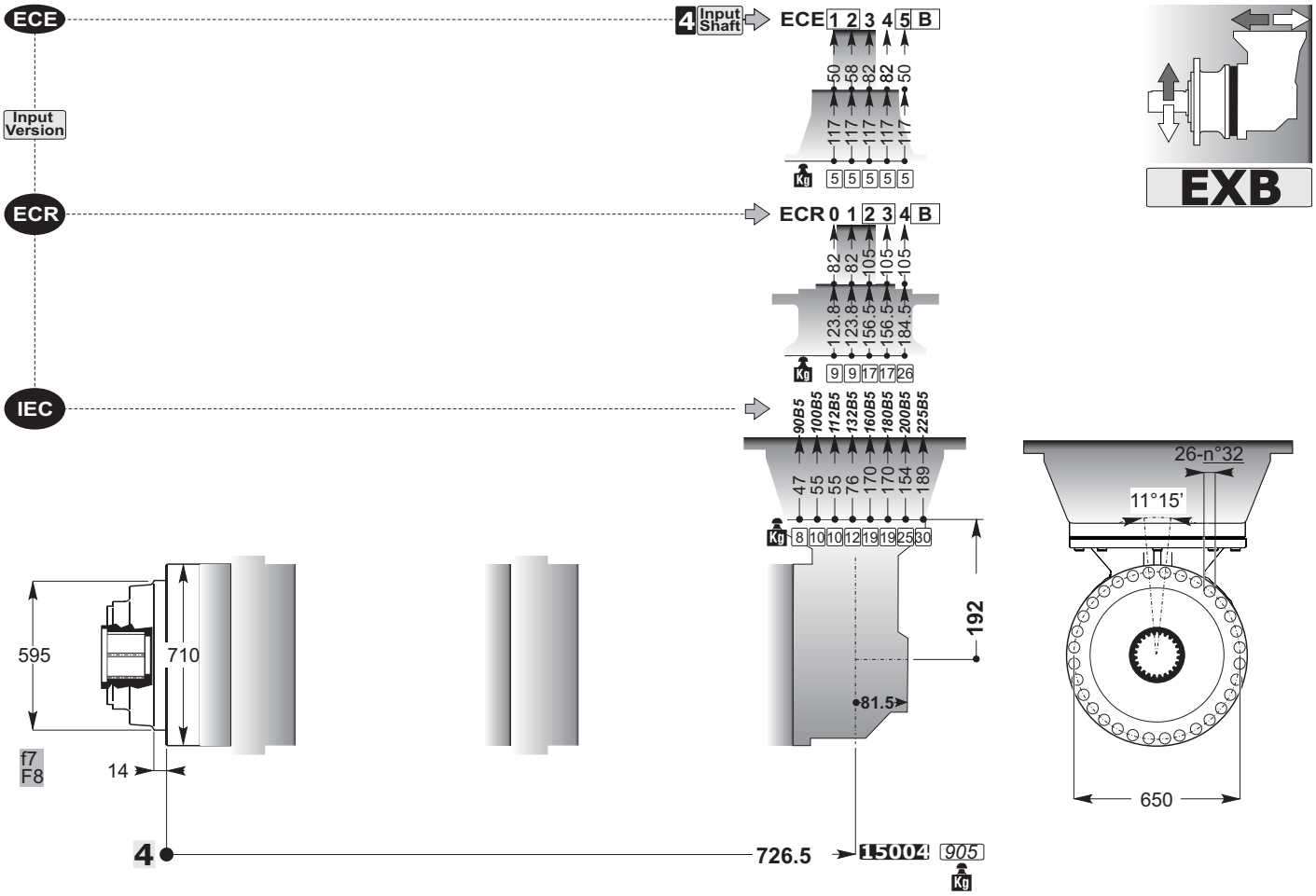
Accessories

mm
C

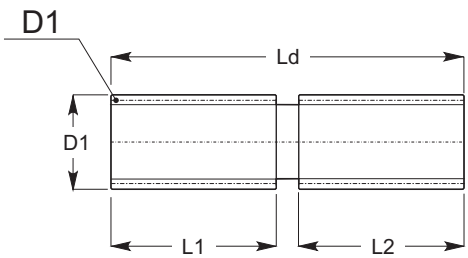




Output Shafts



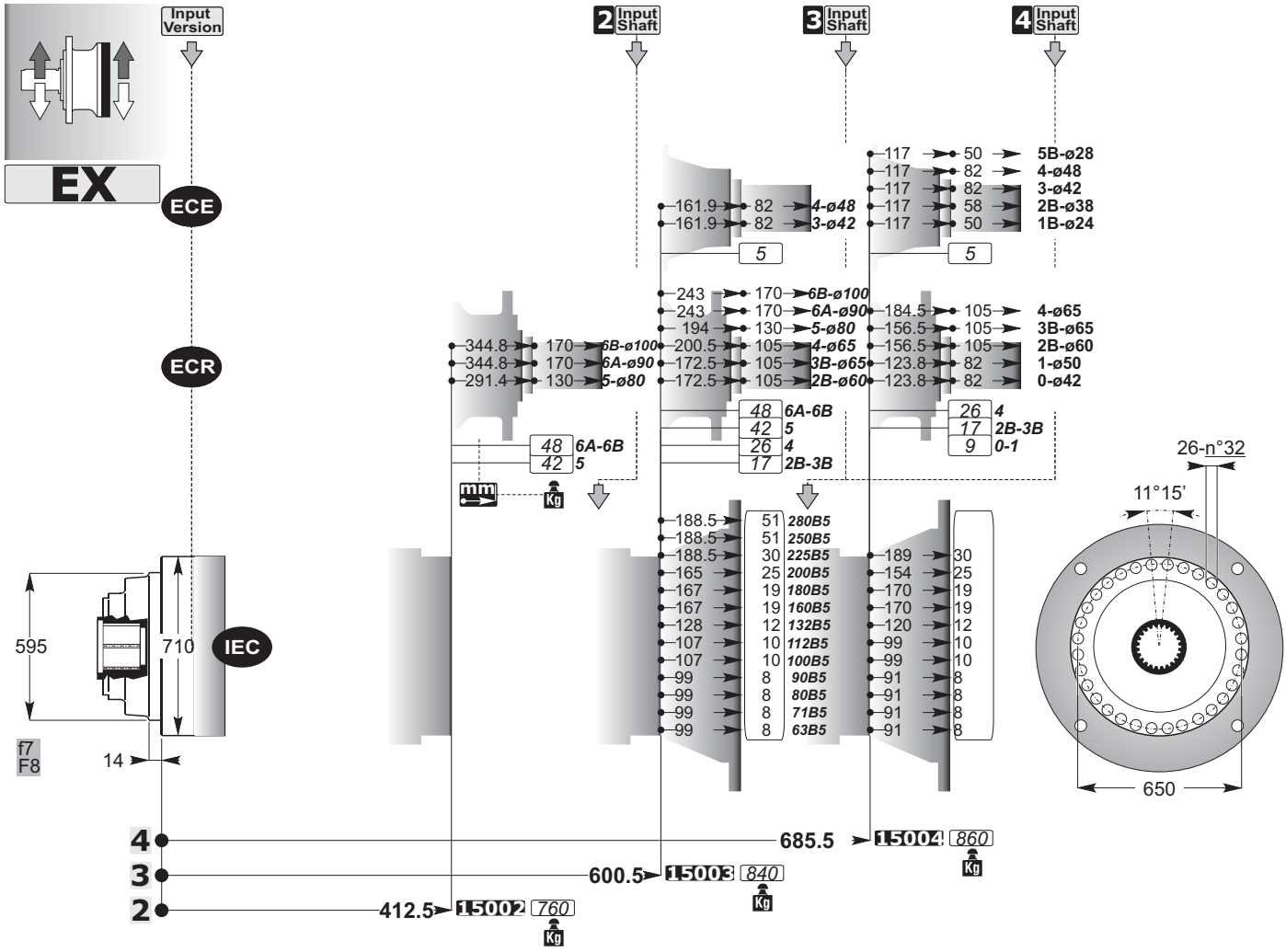
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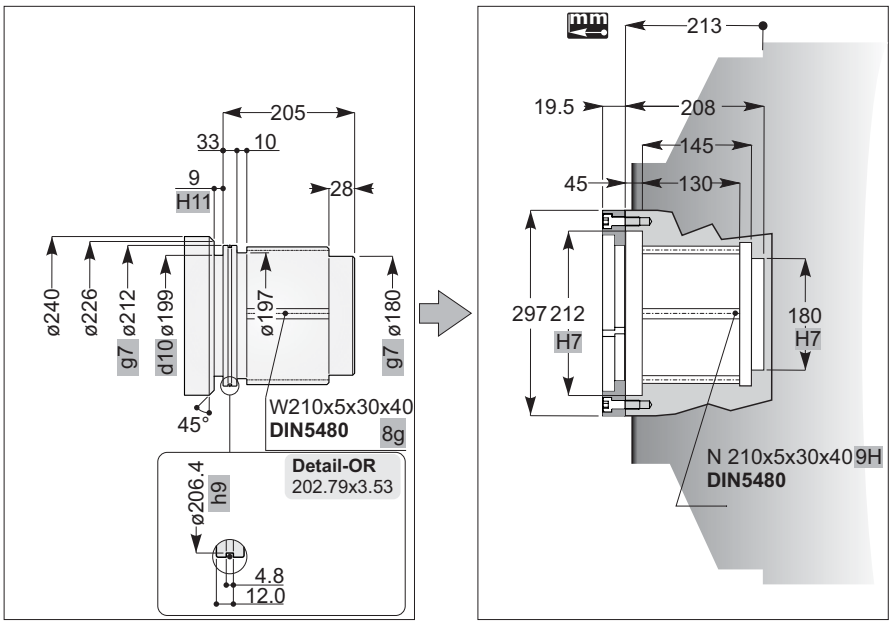


On request

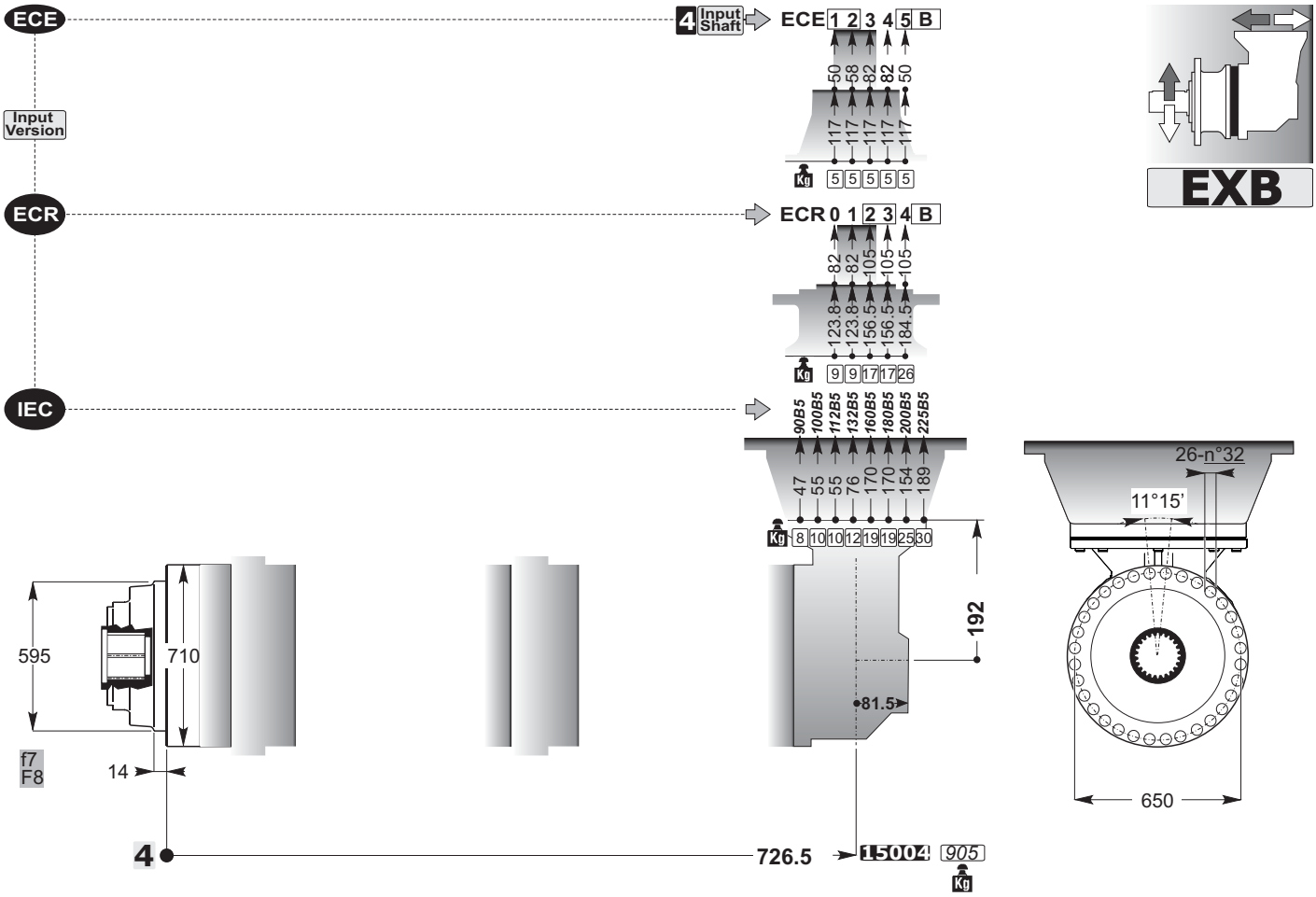


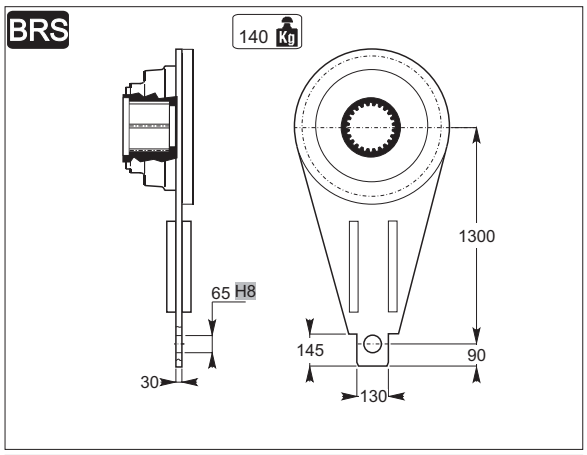
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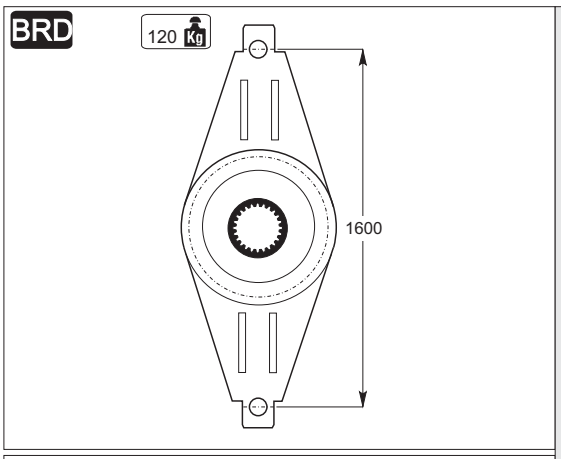


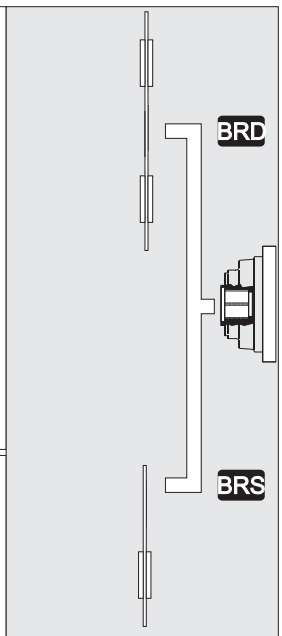


Output Shafts



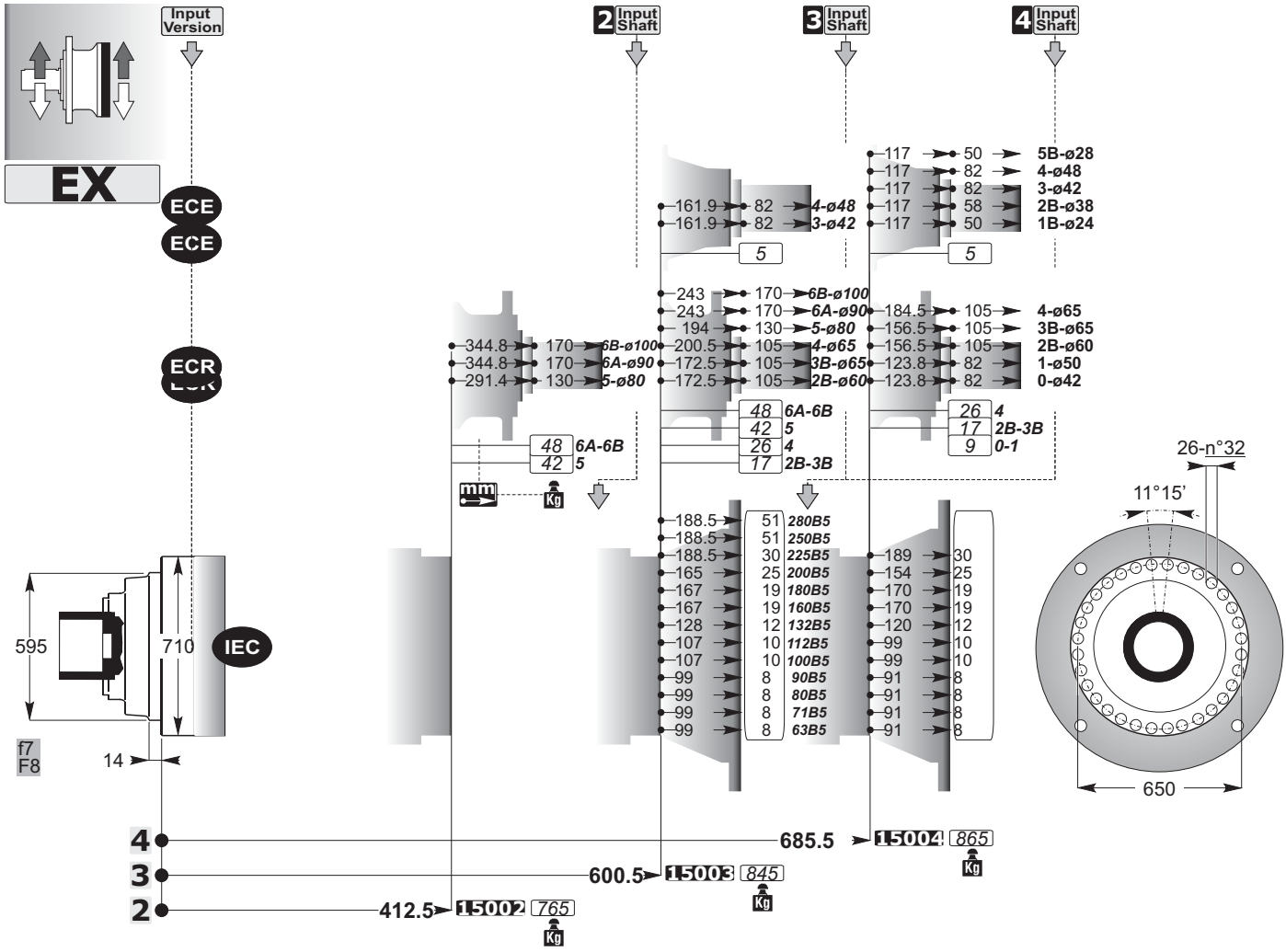


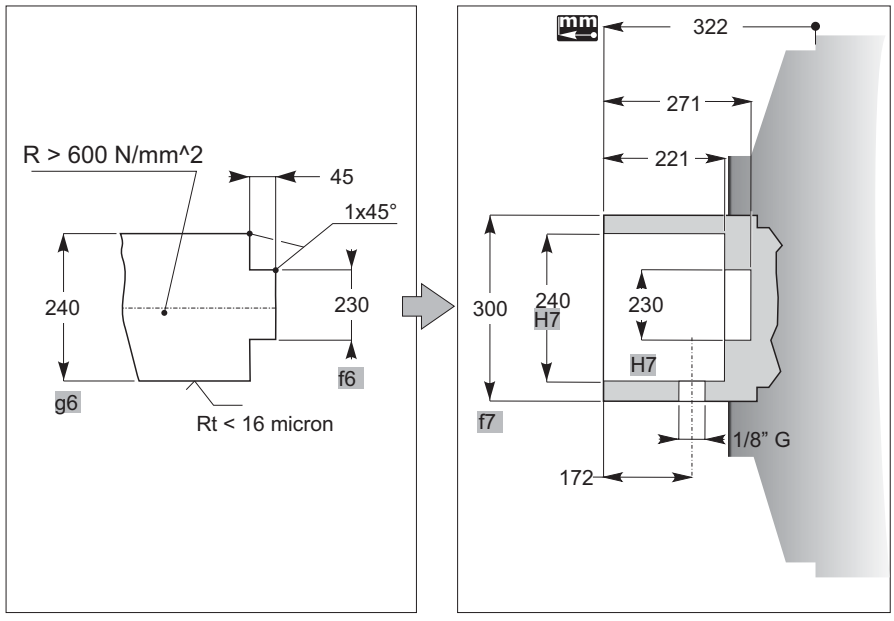




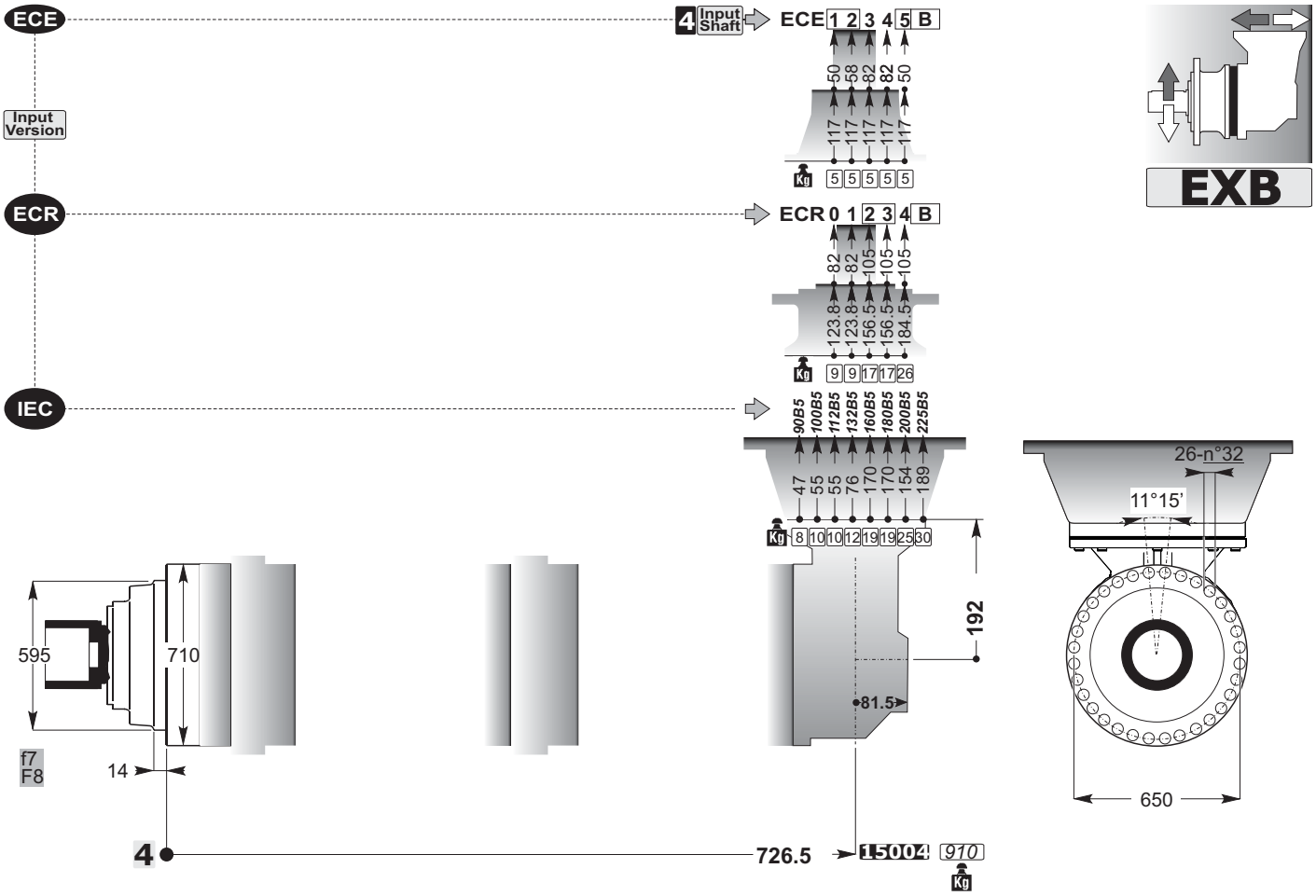
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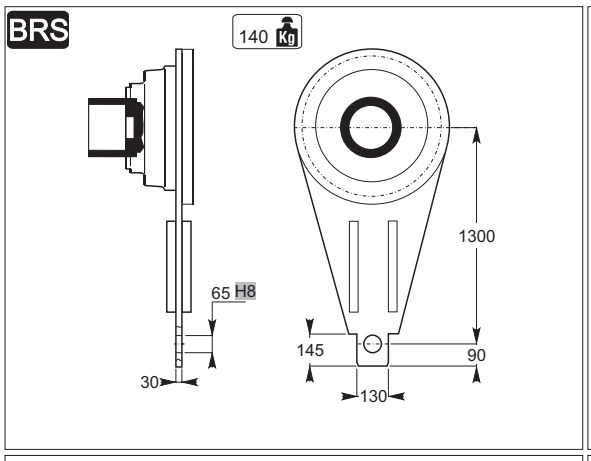
mm
C

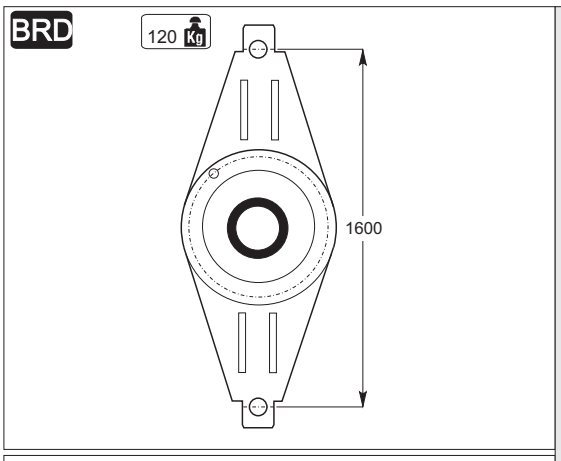


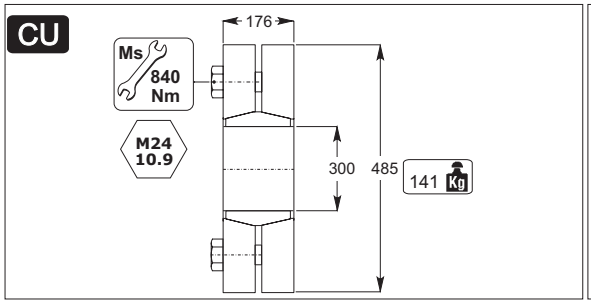


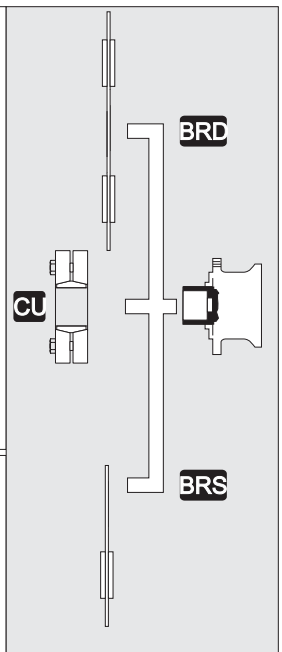
Output Shafts



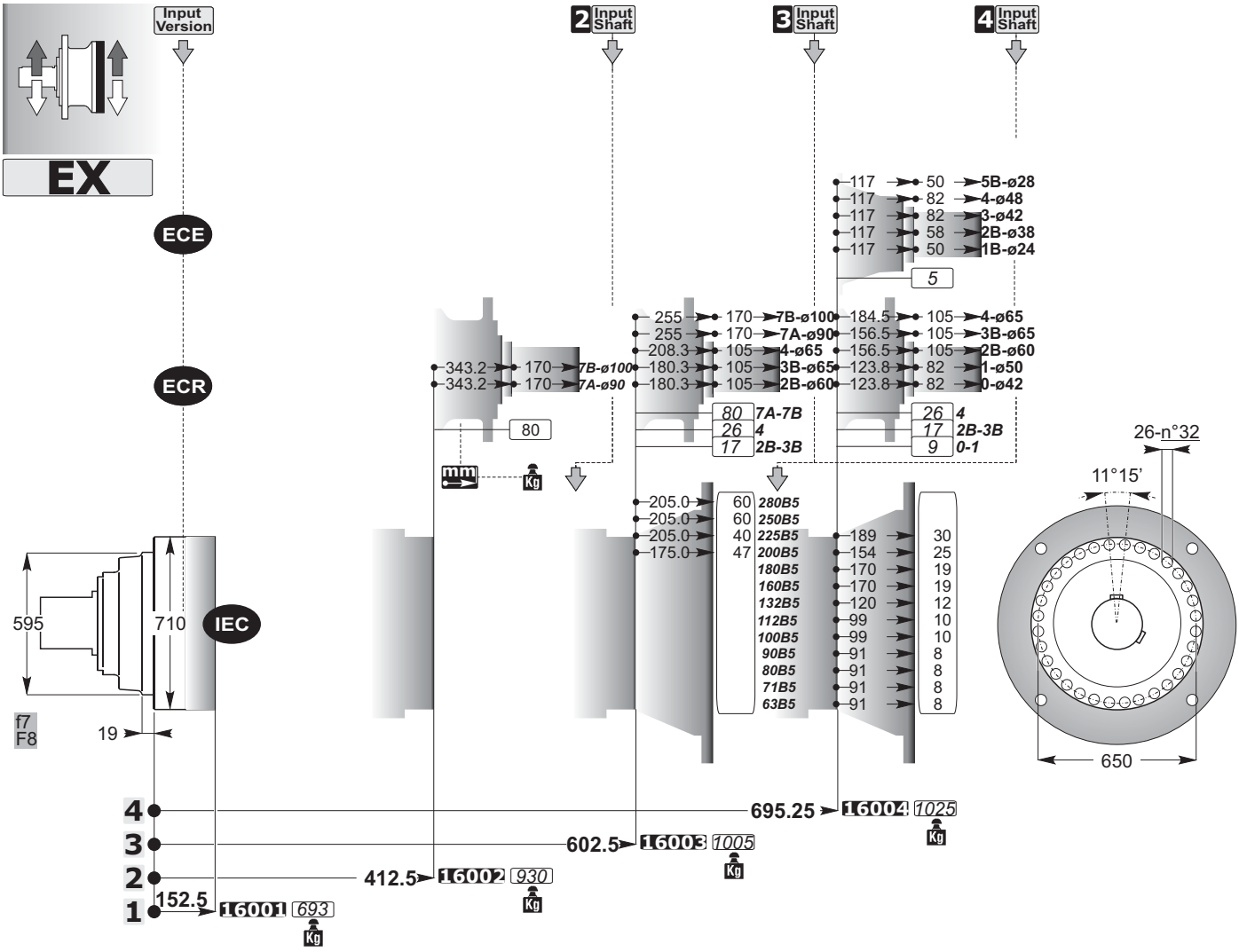


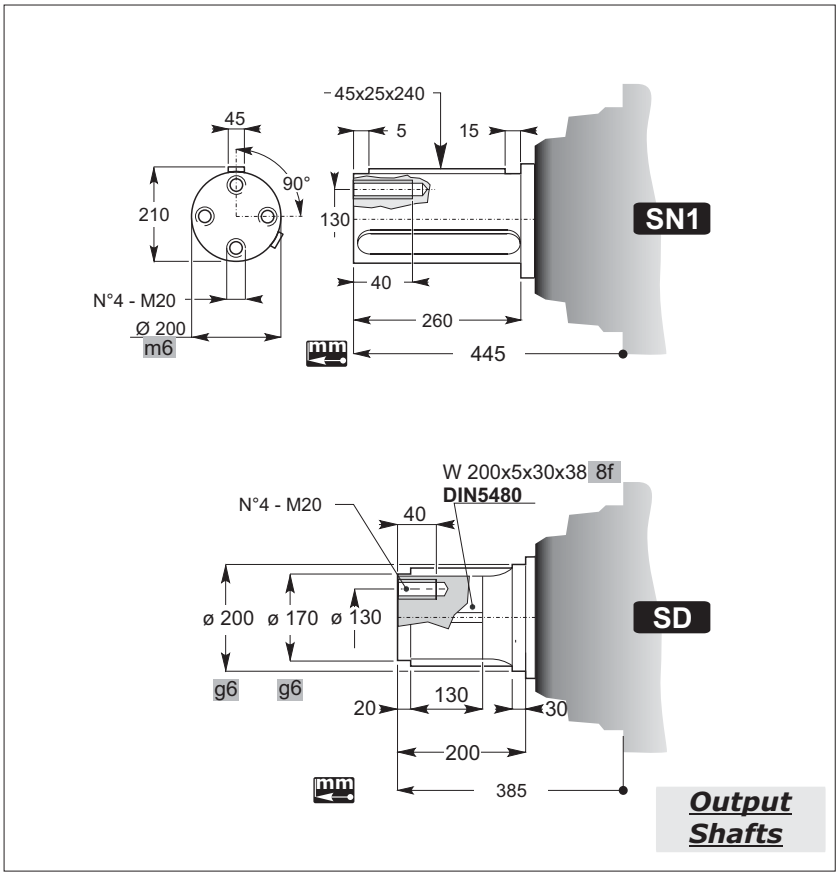


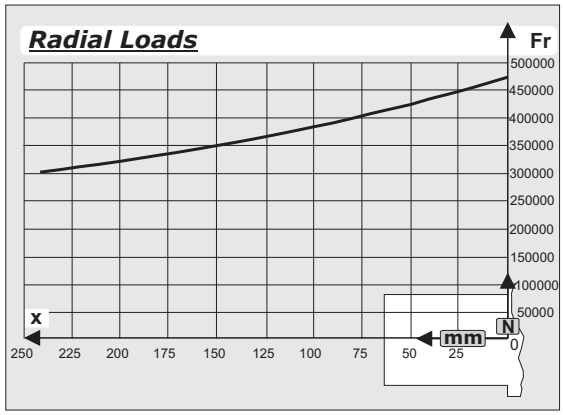


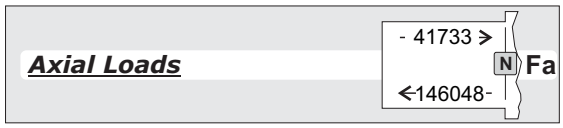


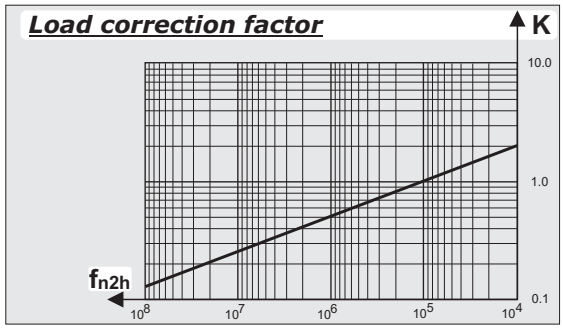
Accessories

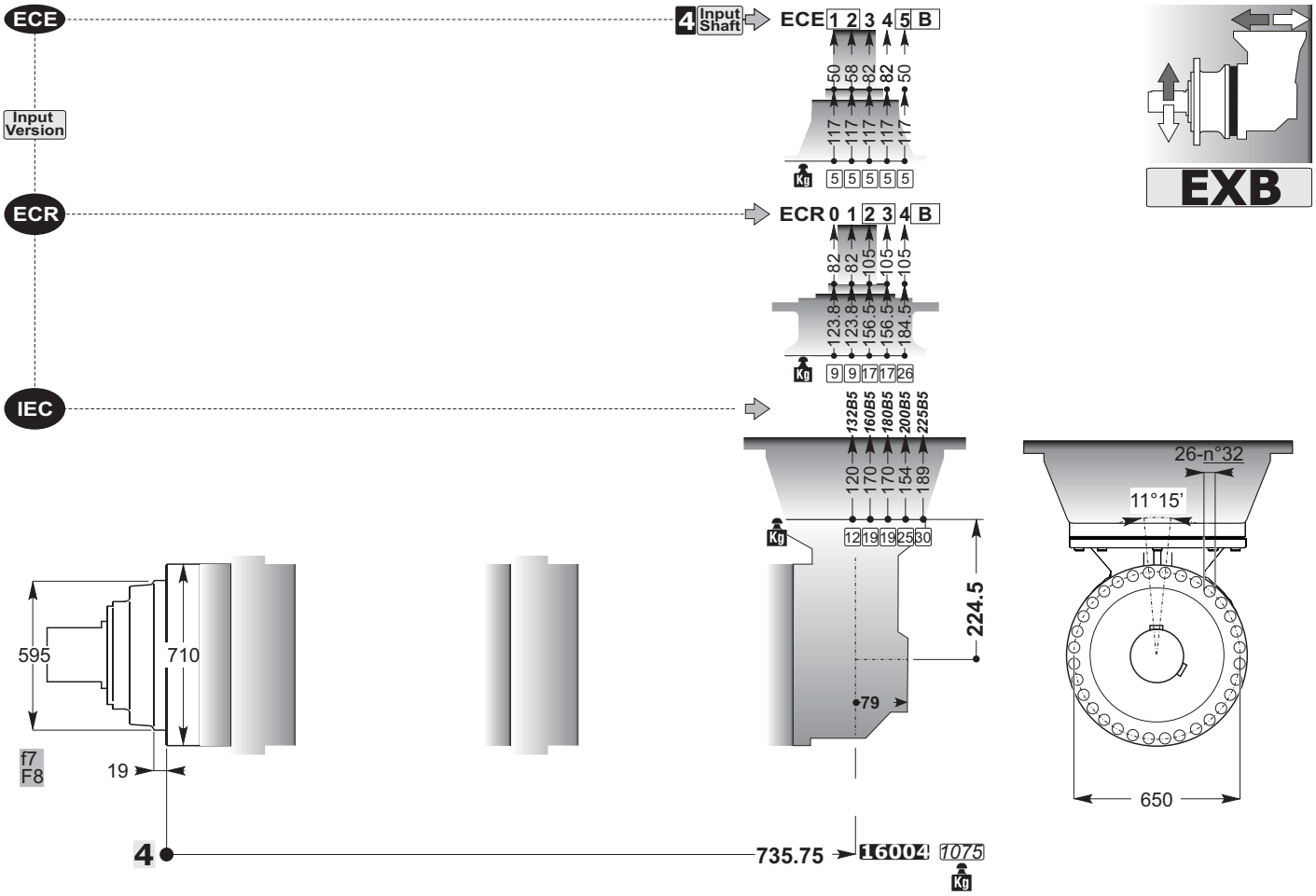

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
595
710
f7
F8
19
80
mm
Kg
343.2 170 7B-ø100
343.2 170 7A-ø90
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
80 7A-7B
26 4
17 2B-3B
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
5
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
26 4
17 2B-3B
9 0-1
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
189 30
154 25
170 19
170 19
120 12
99 10
99 10
91 8
91 8
91 8
91 8
26-n°32
11°15'
650
4
3
2
1
152.5
L6001 693
412.5
L6002 930
602.5
L6003 1005
695.25
L6004 1025


45
45x25x240
5
15
90°
210
130
SN1
N°4 - M20
Ø 200
m6
40
260
mm
445
W 200x5x30x38 8f
DIN5480
N°4 - M20
40
ø 200
ø 170
ø 130
SD
g6
g6
20
130
30
200
385
mm
Output Shafts

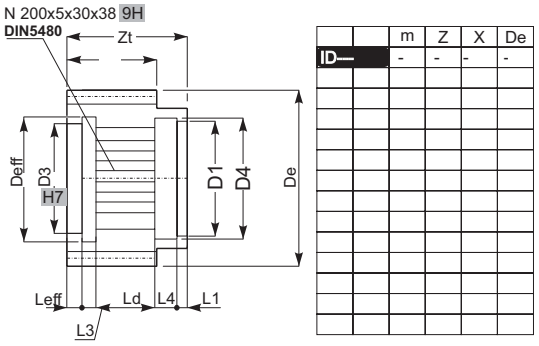

Radial Loads
Fr
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
250 225 200 175 150 125 100 75 50 25
mm
N


Axial Loads
- 41733 >
N
Fa
<146048-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4



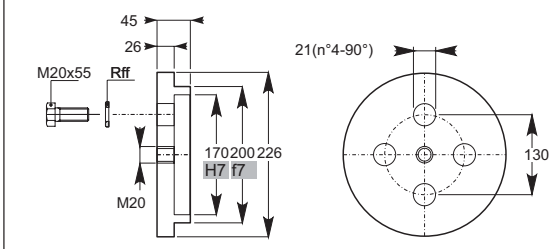
ID



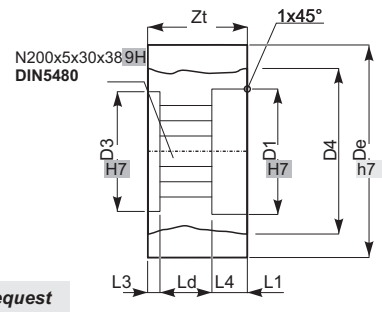
ID—		m	Z	X	De
		-	-	-	-

On request

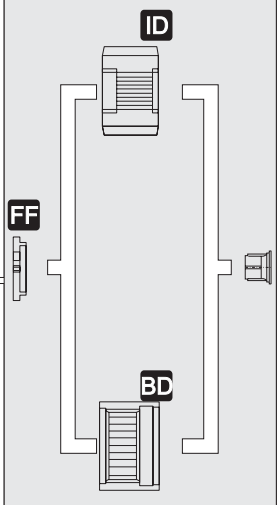
FF



BD

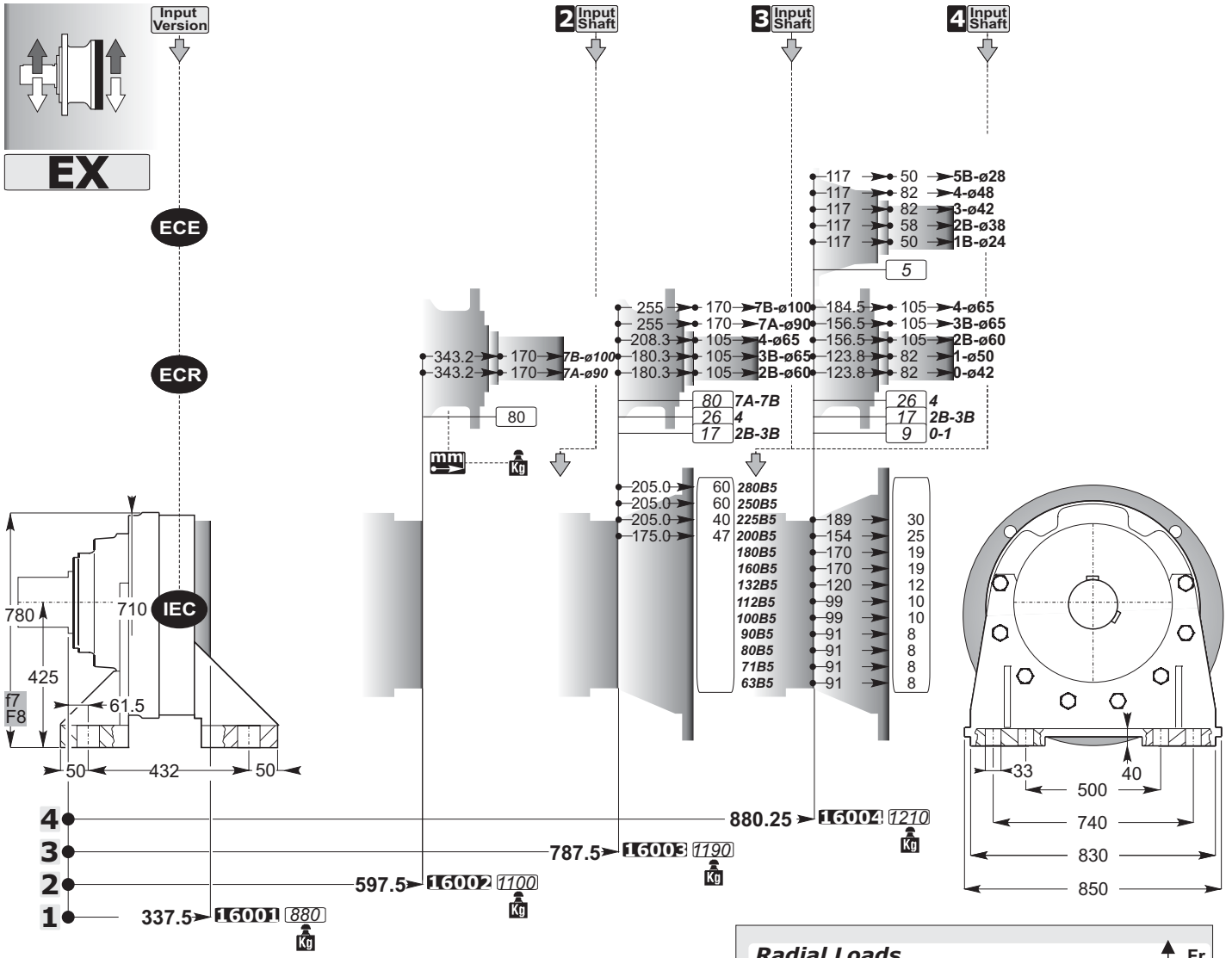


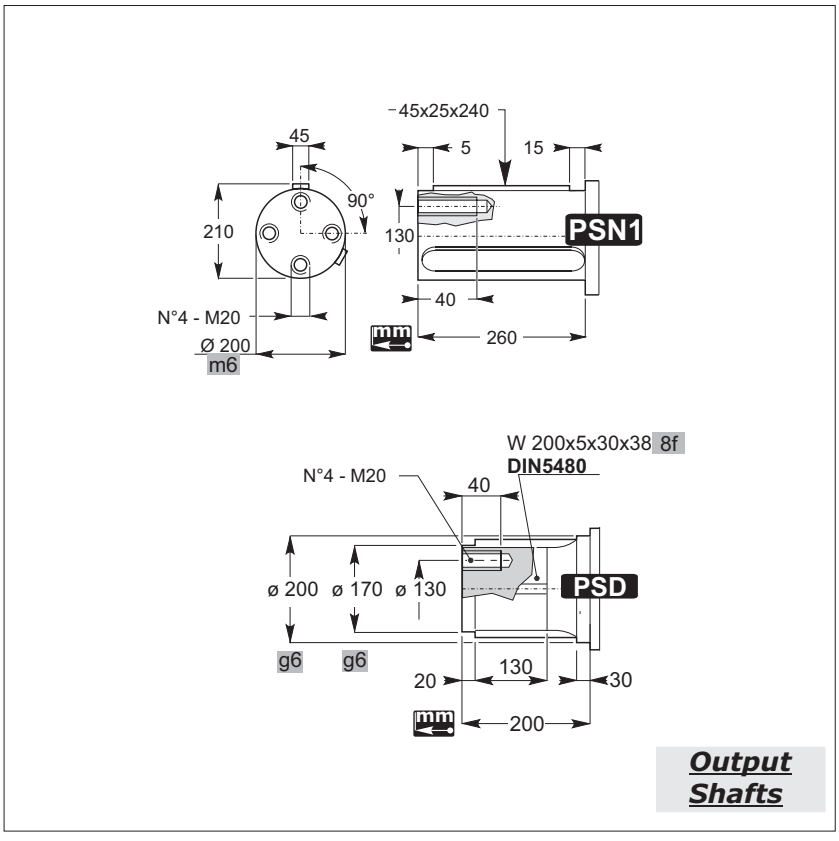
On request

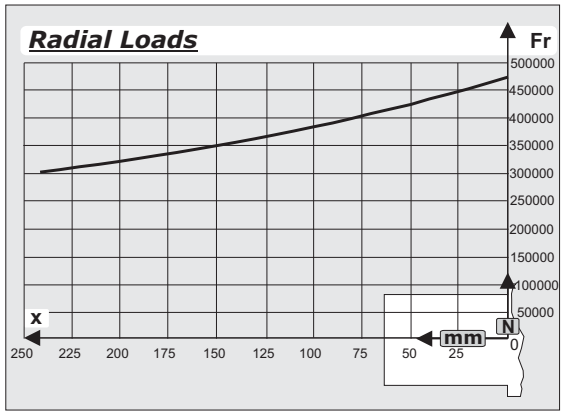


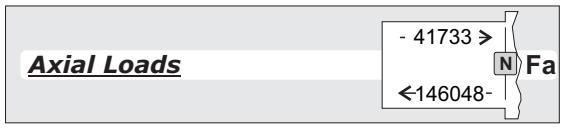
Accessories

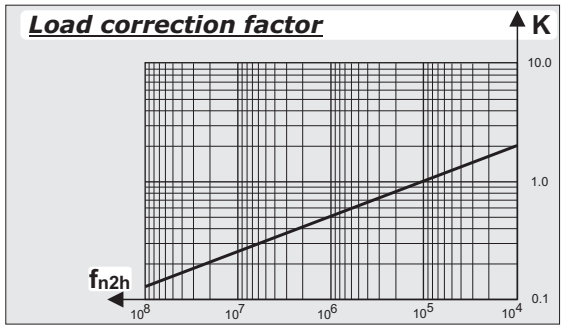
mm
C

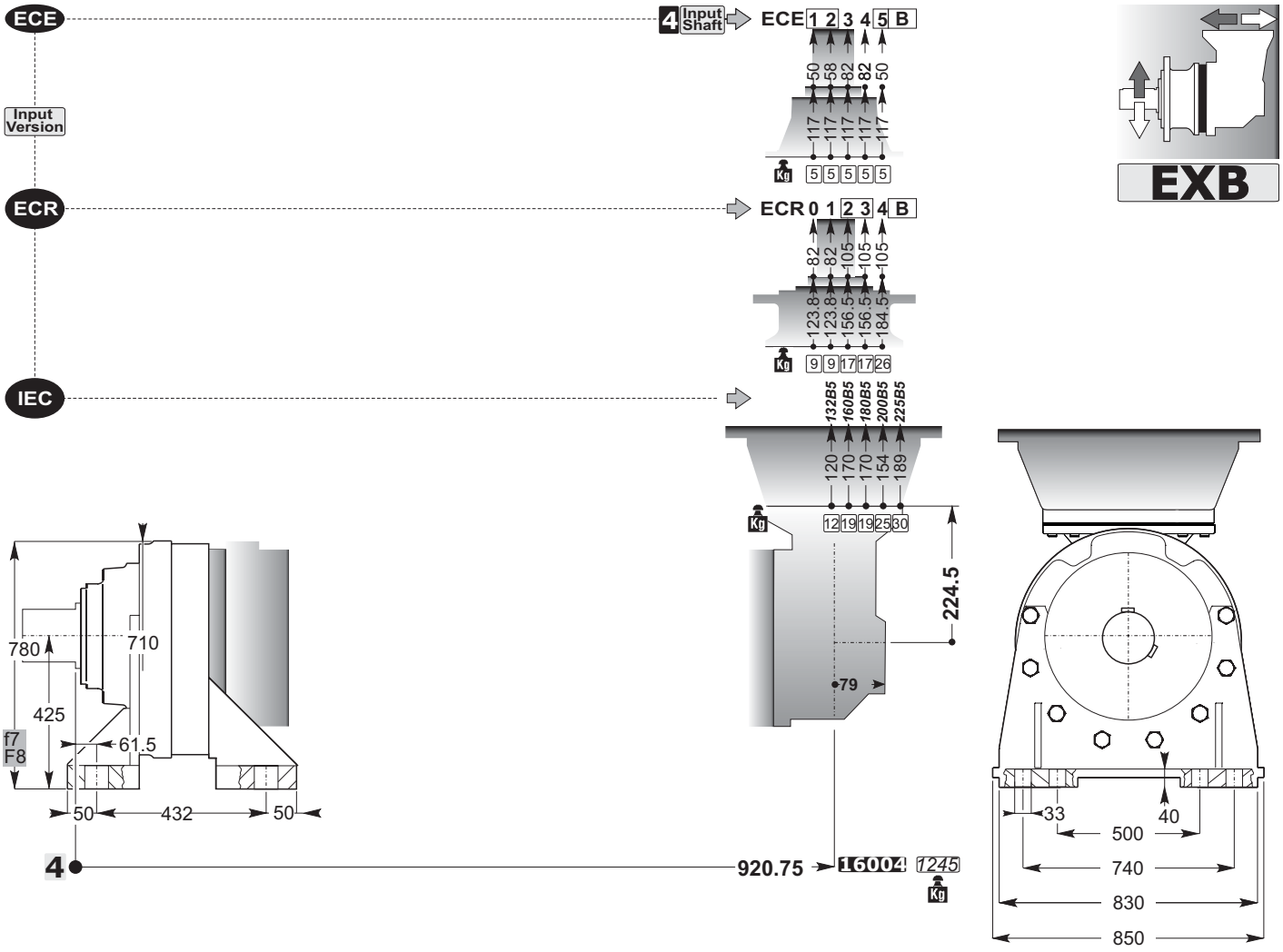

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
780
710
425
f7
F8
61.5
50
432
50
4
3
2
1
880.25 L6004 1210 Kg
787.5 L6003 1190 Kg
597.5 L6002 1100 Kg
337.5 L6001 880 Kg
343.2 170 7B-ø100
343.2 170 7A-ø90
80
mm
Kg
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
80 7A-7B
26 4
17 2B-3B
117 50 5B-ø28
117 82 4-ø48
117 82 3-ø42
117 58 2B-ø38
117 50 1B-ø24
5
184.5 105 4-ø65
156.5 105 3B-ø65
156.5 105 2B-ø60
123.8 82 1-ø50
123.8 82 0-ø42
26 4
17 2B-3B
9 0-1
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
180B5
160B5
132B5
112B5
100B5
90B5
80B5
71B5
63B5
189 30
154 25
170 19
170 19
120 12
99 10
99 10
91 8
91 8
91 8
91 8
33
40
500
740
830
850


45x25x240
45
5
15
90°
210
130
PSN1
40
260
N°4 - M20
Ø 200
m6
mm
W 200x5x30x38 8f
DIN5480
N°4 - M20
40
ø 200
ø 170
ø 130
PSD
g6
g6
20
130
30
200
Output Shafts

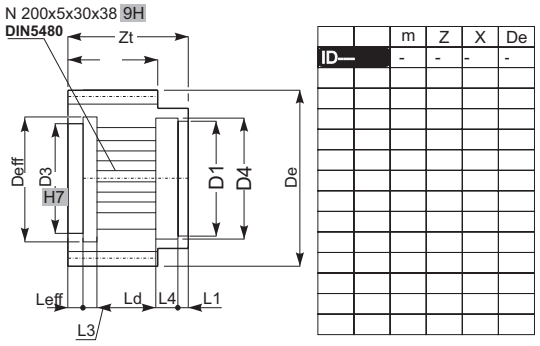

Radial Loads
Fr
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
250
225
200
175
150
125
100
75
50
25
N
mm


Axial Loads
- 41733 >
N
Fa
<146048-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4



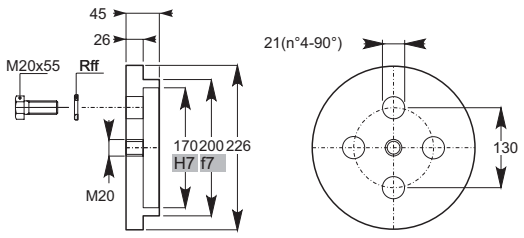
ID



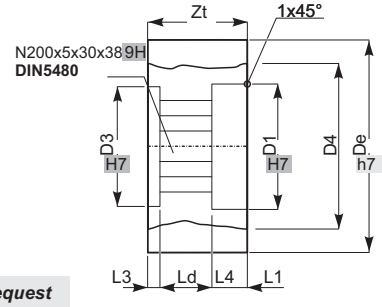
		m	Z	X	De
ID—		-	-	-	-

On request

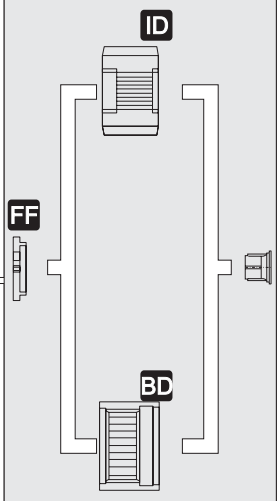
FF



BD

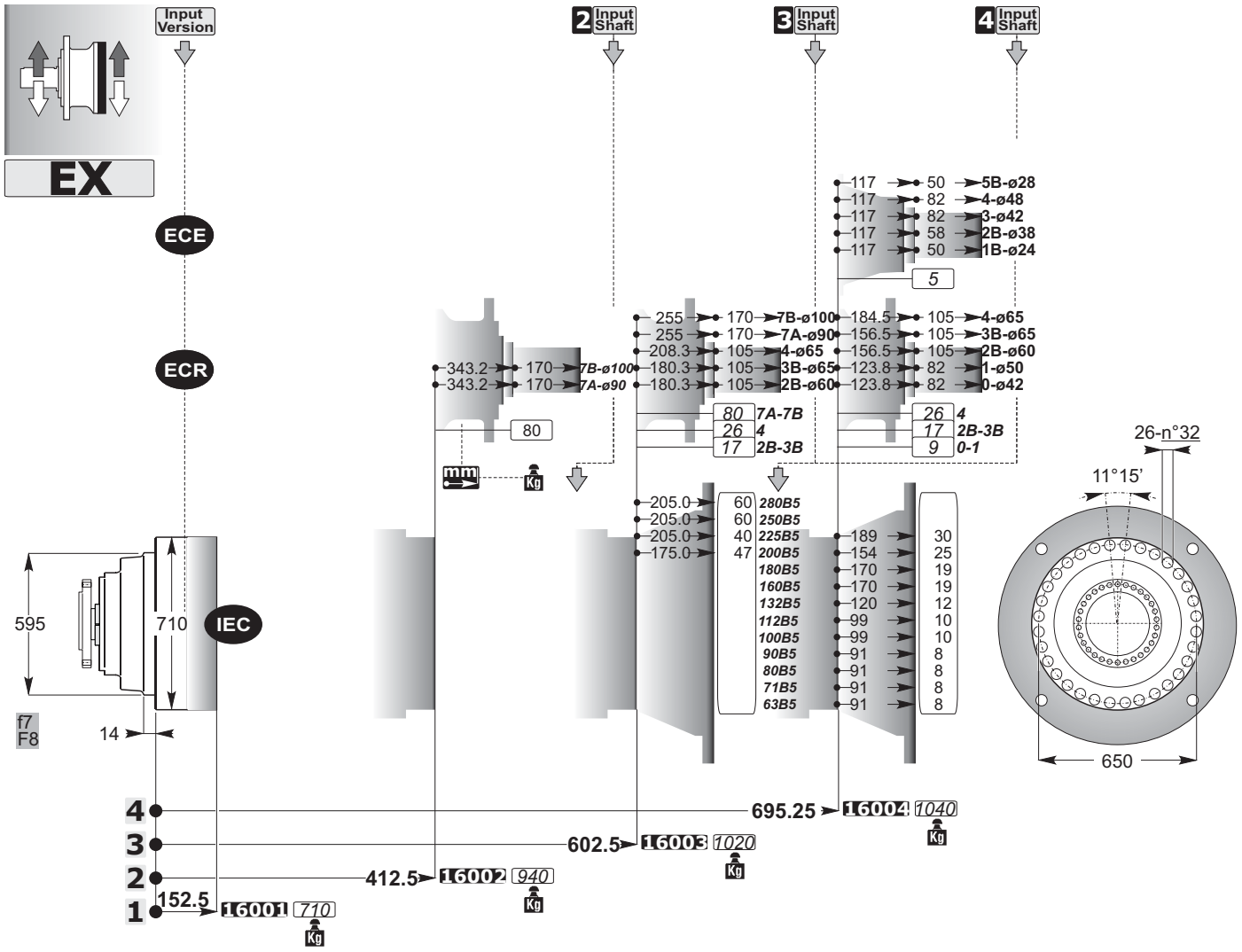


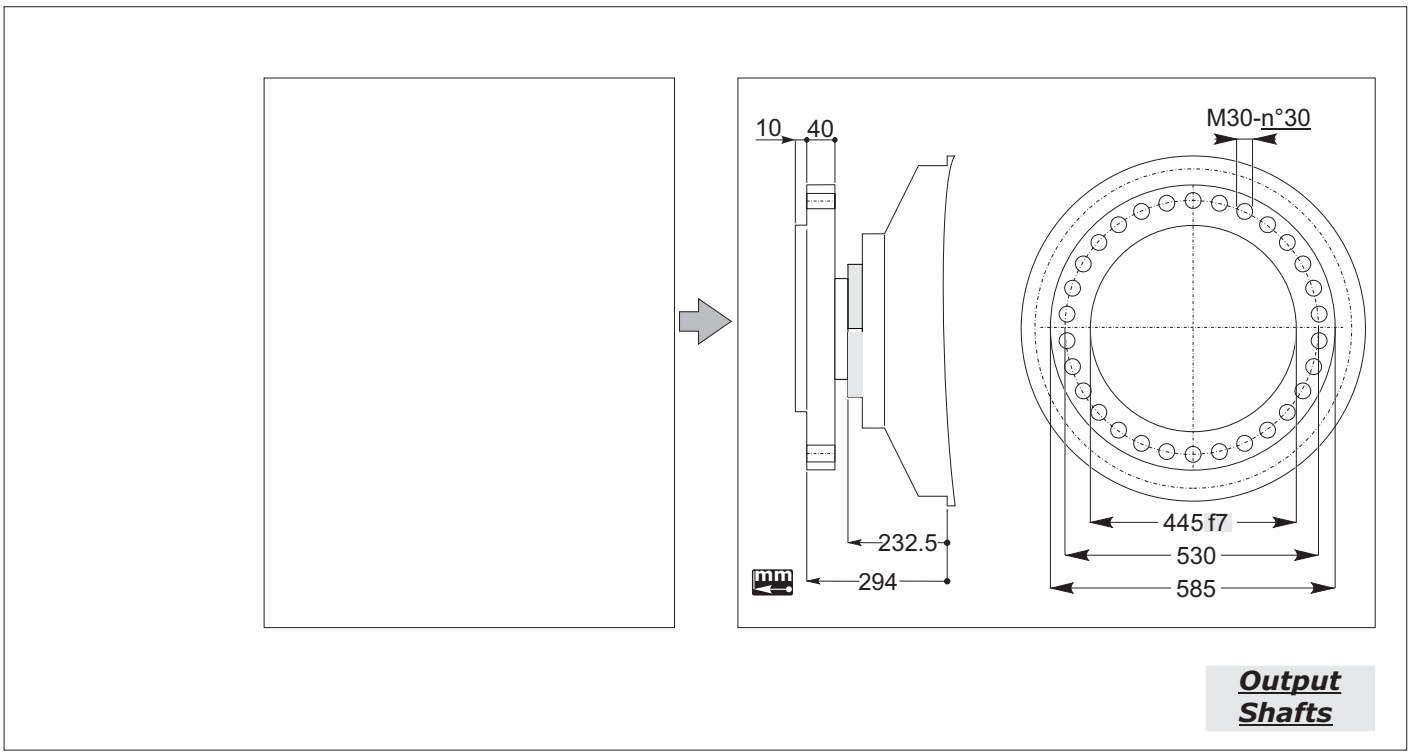
On request



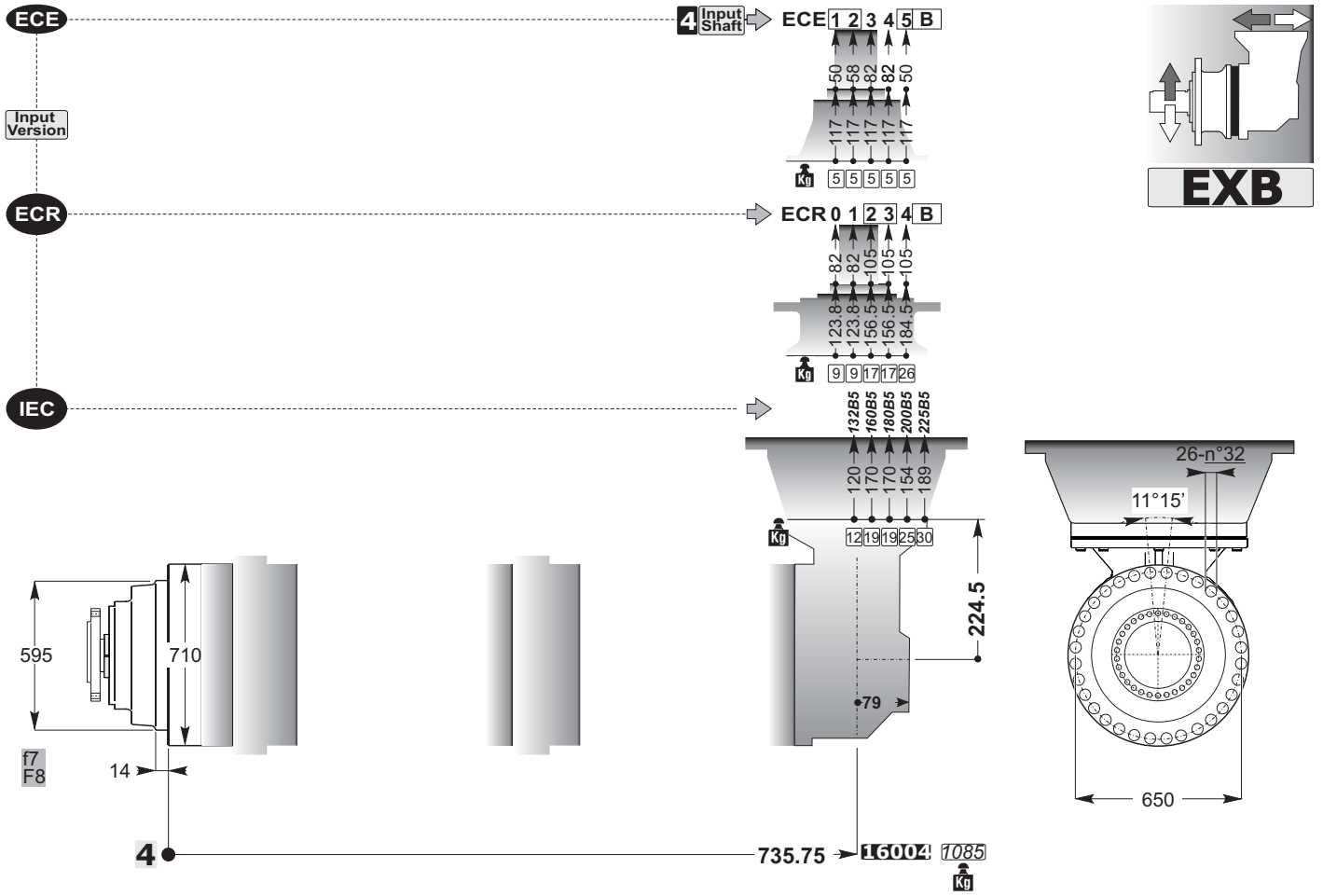
Accessories

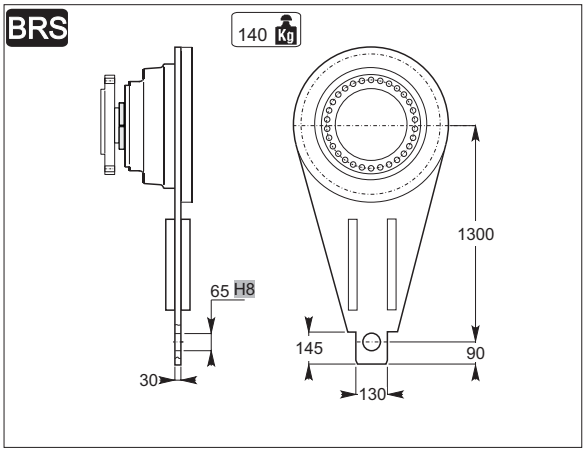
mm
C

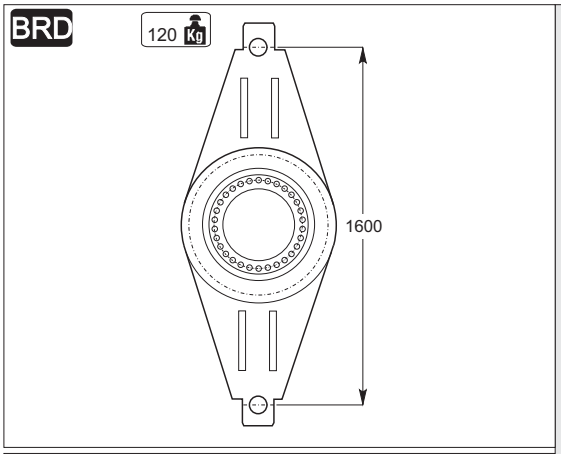


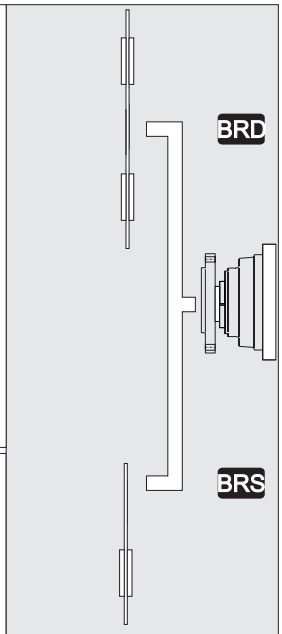


Output Shafts



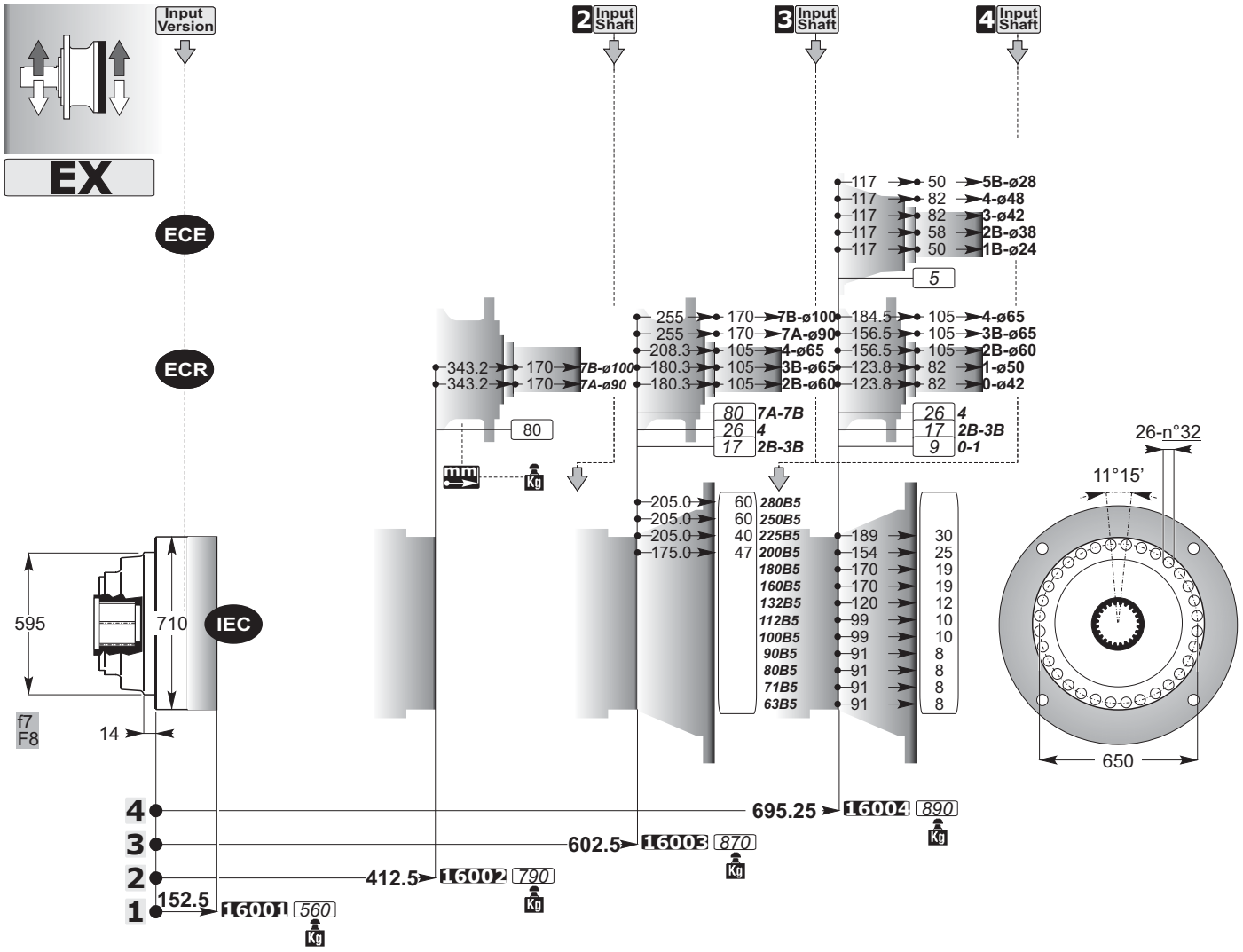


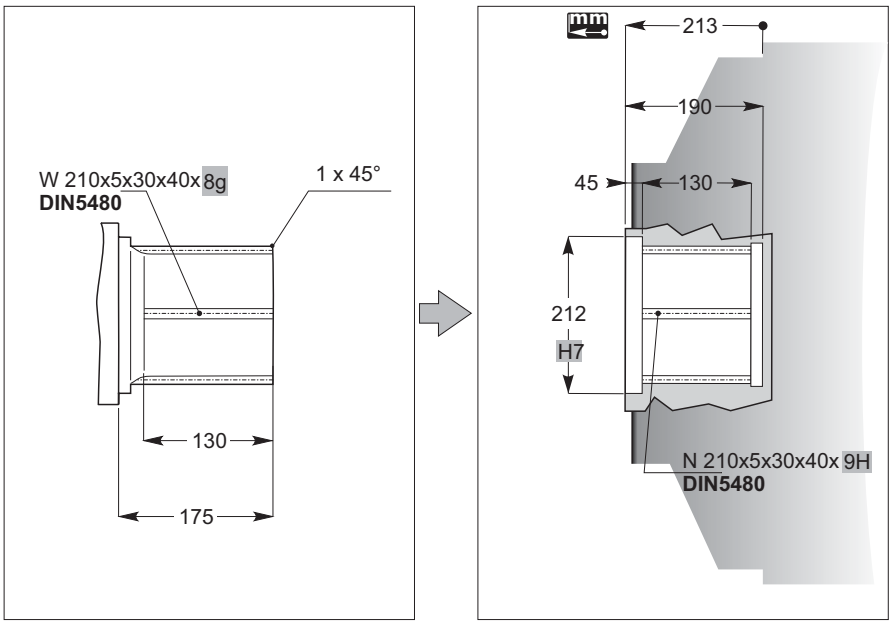




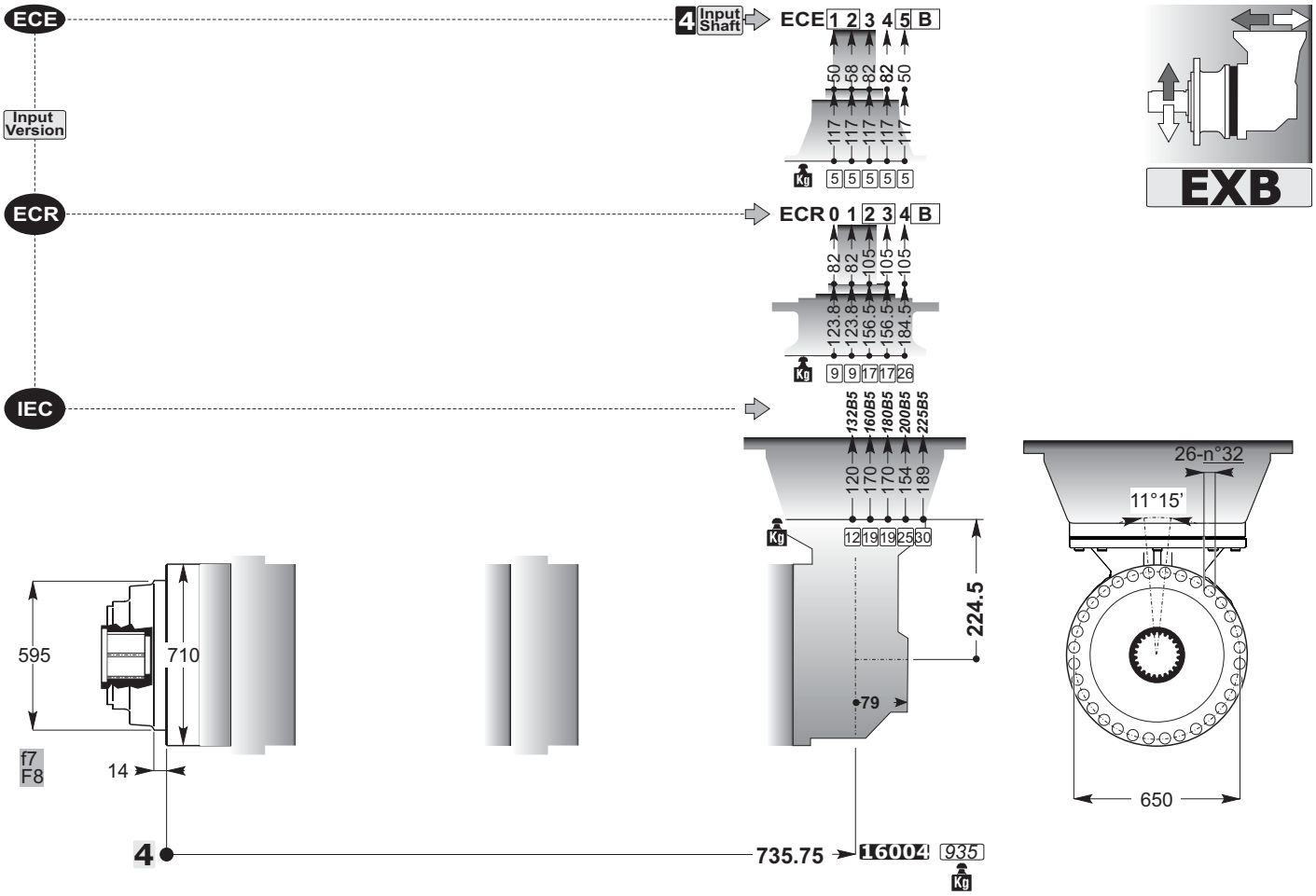
Accessories

mm
C

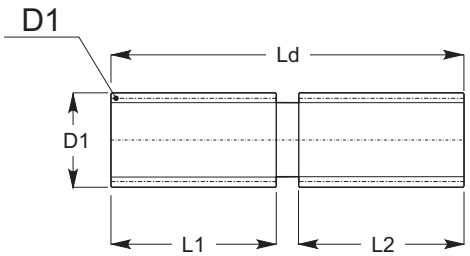




Output Shafts



SD

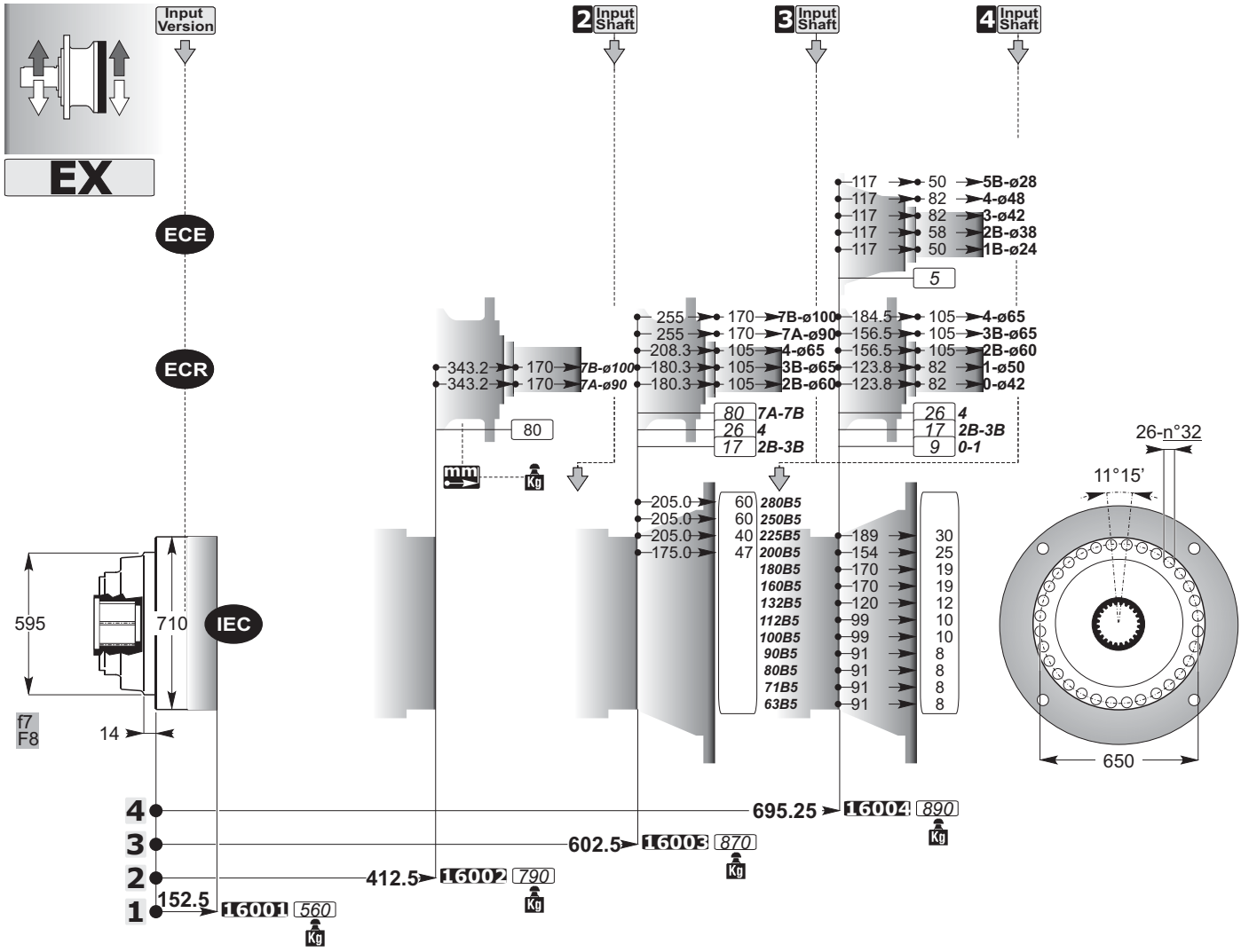


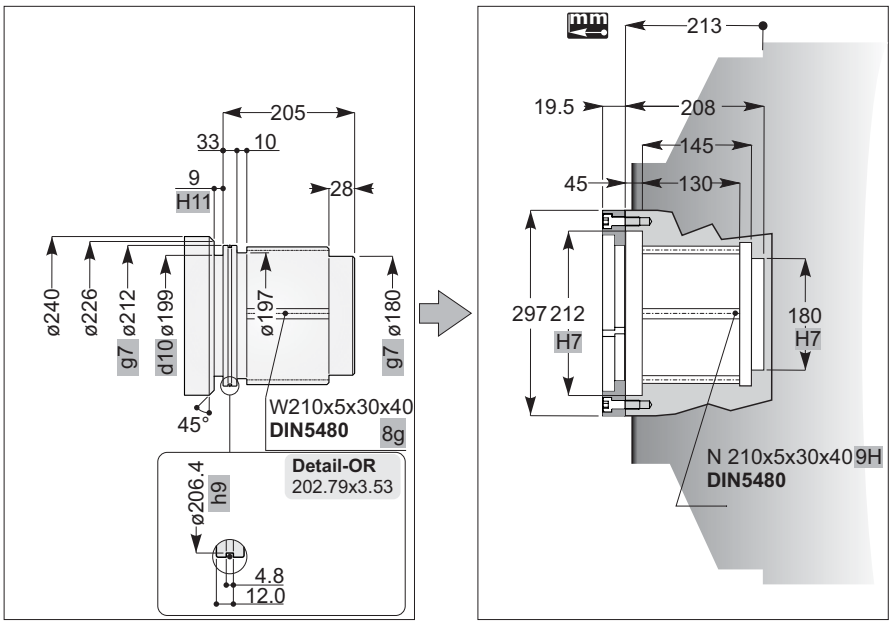
On request

SD

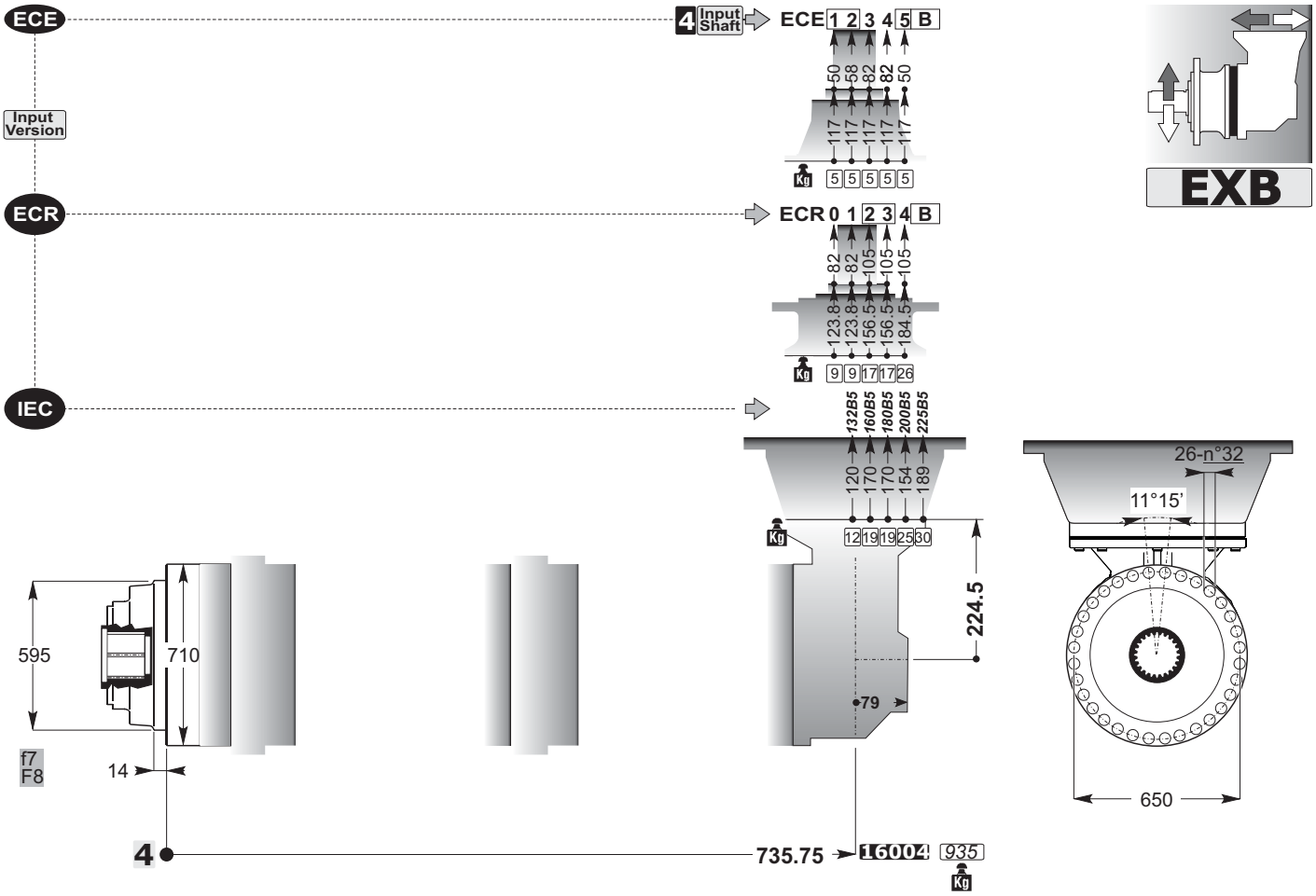


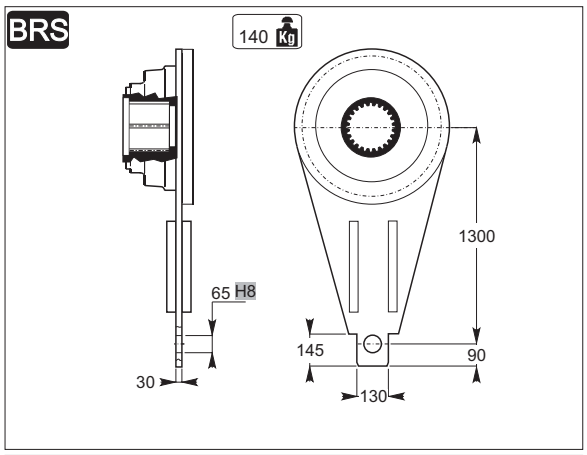
Accessories

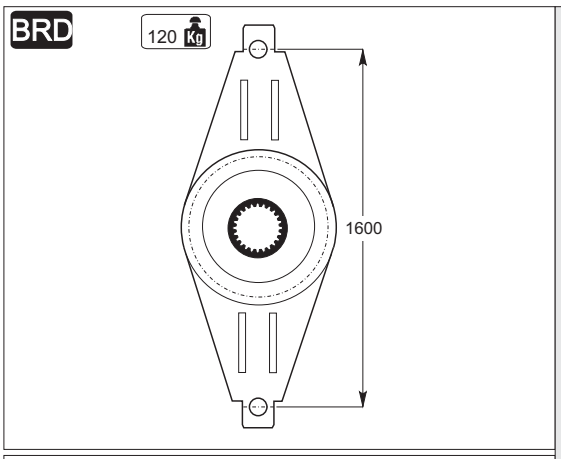


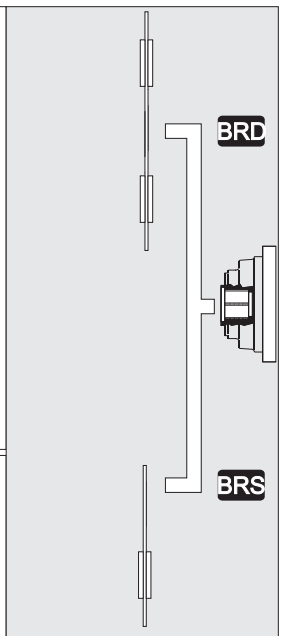


Output Shafts



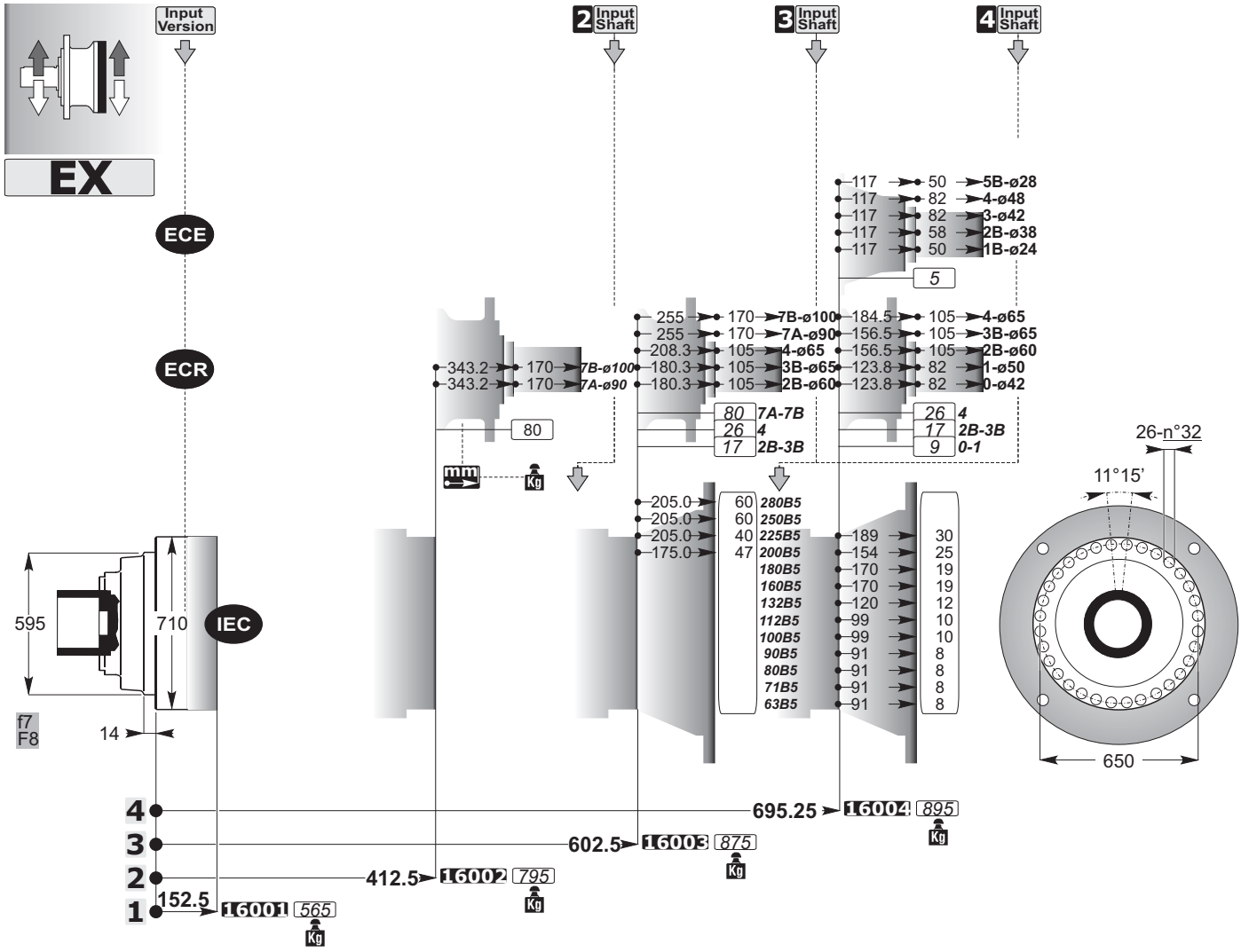


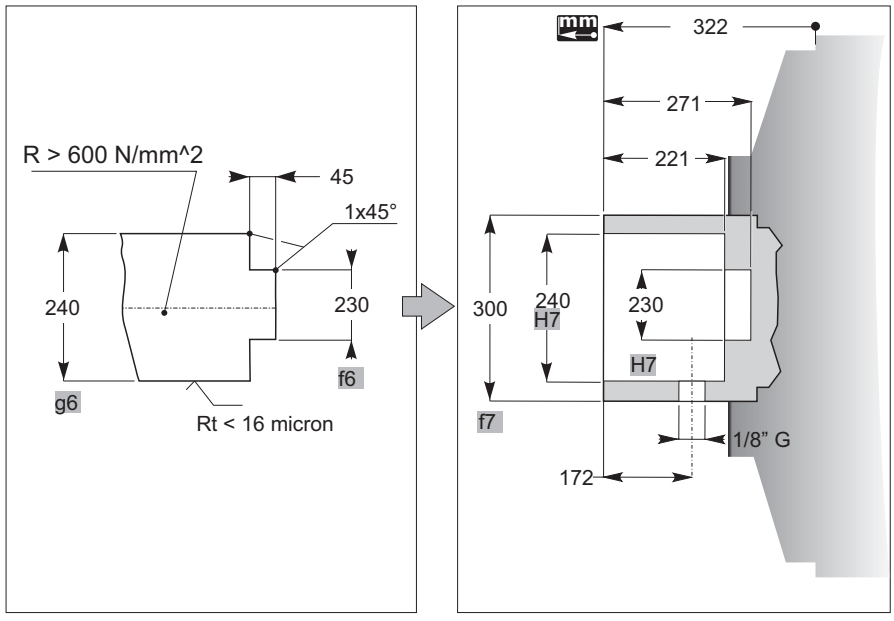




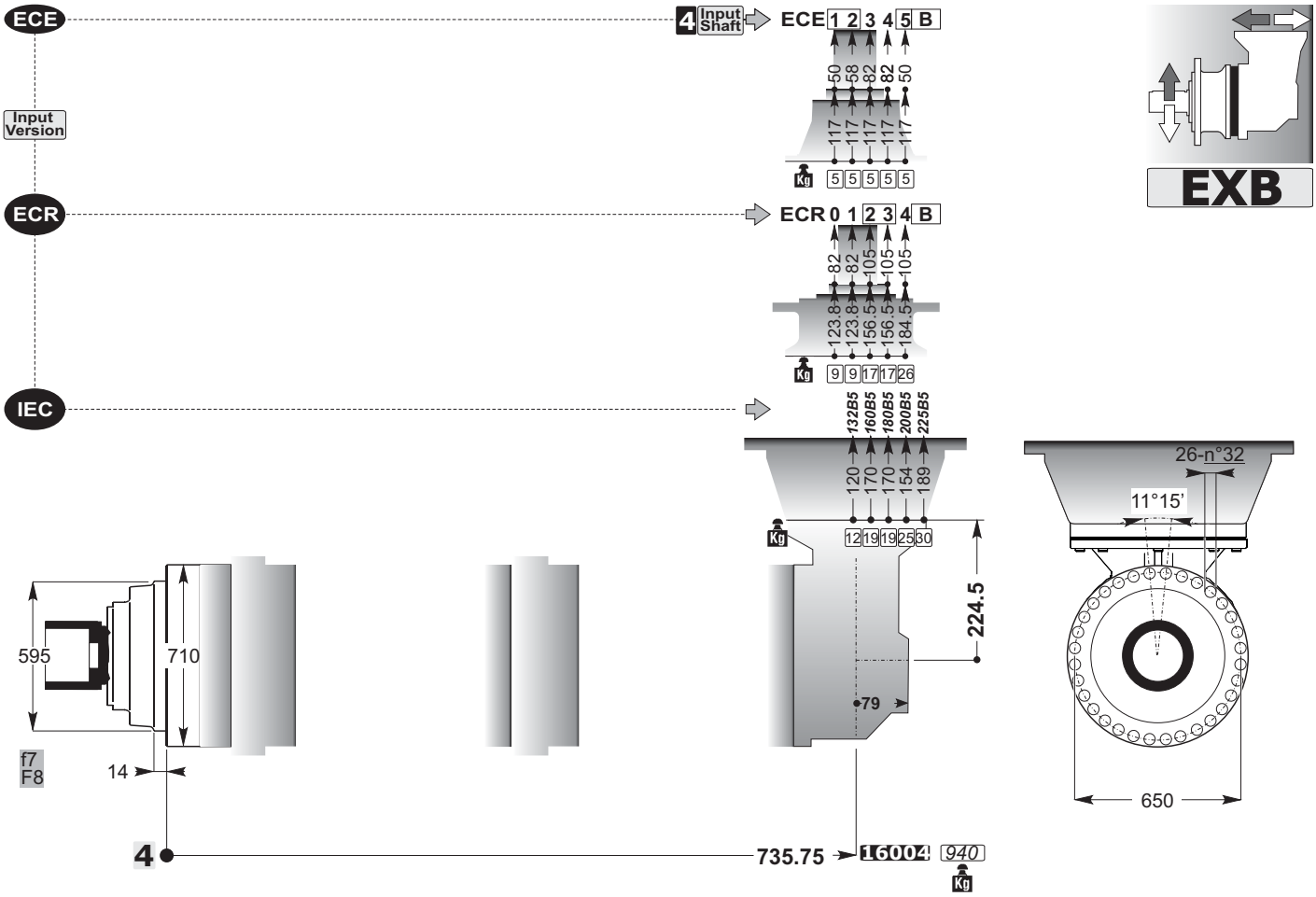
Accessories

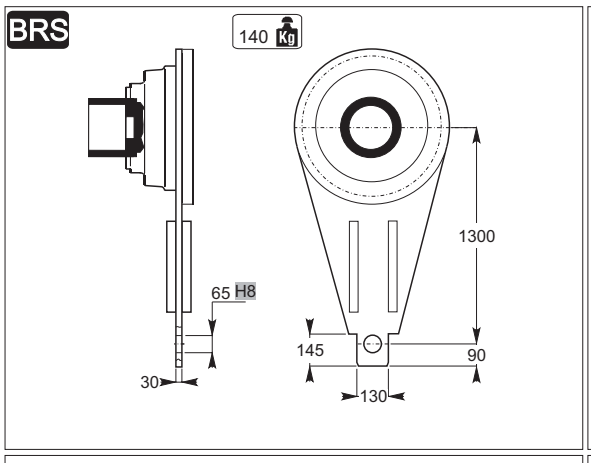
mm
C

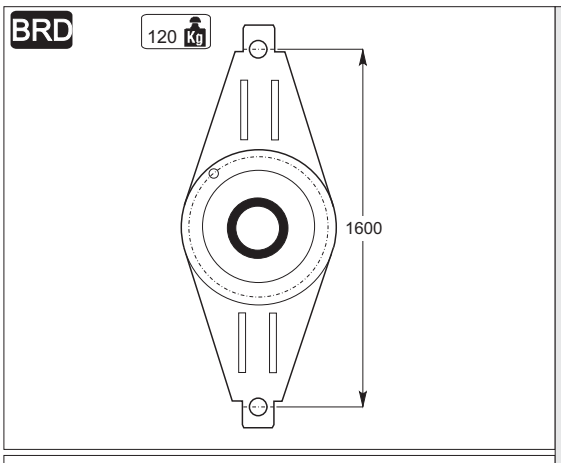


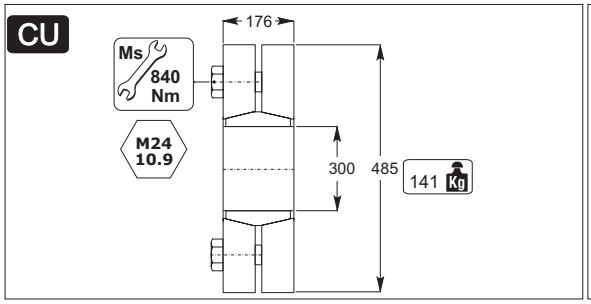


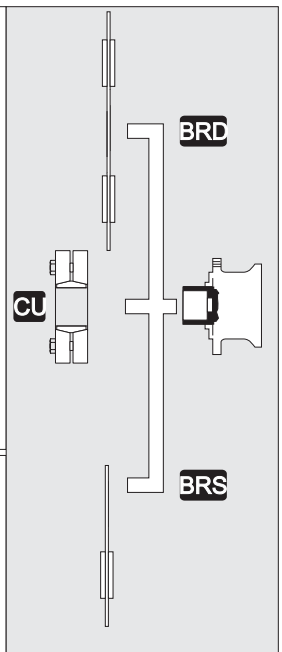
Output Shafts





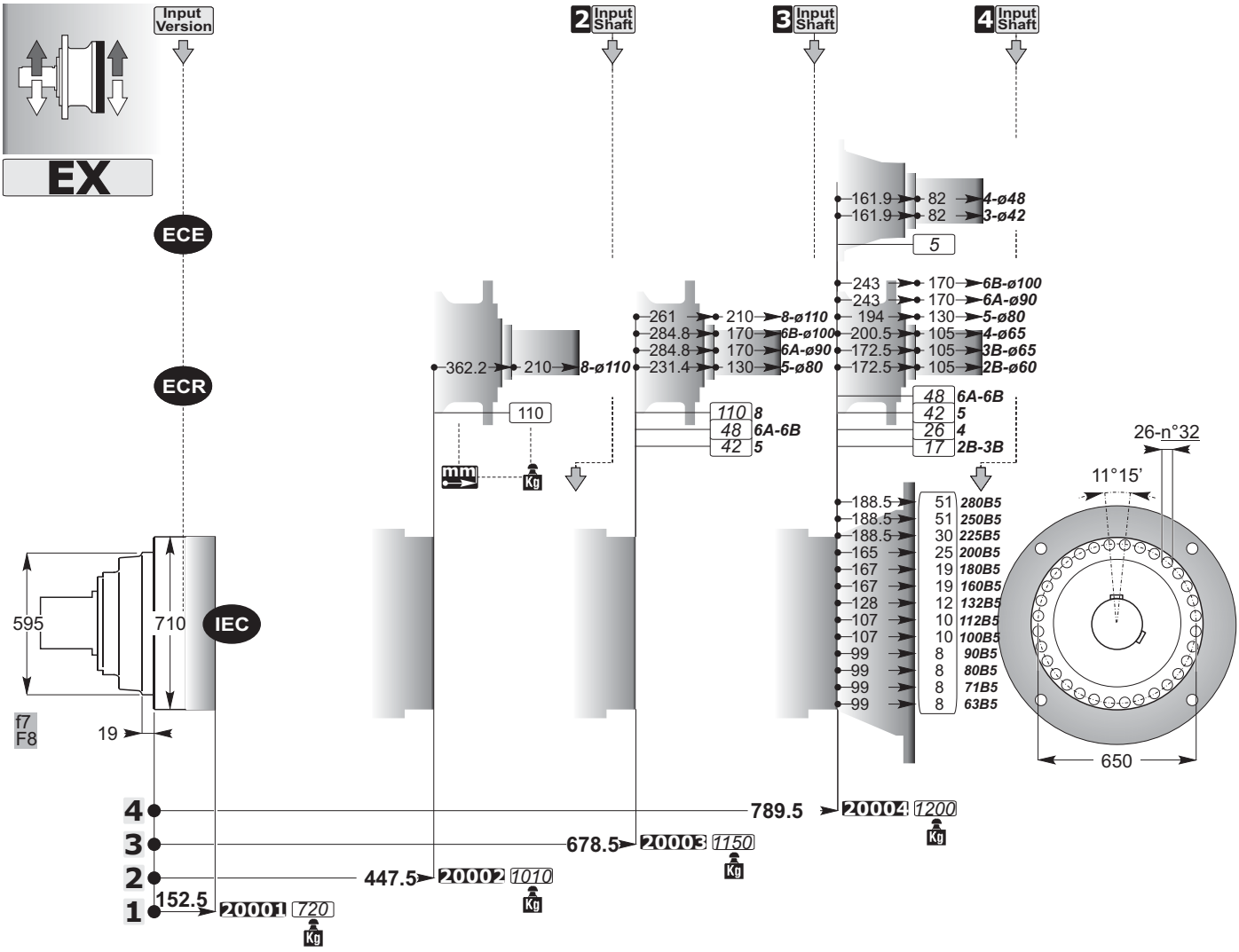


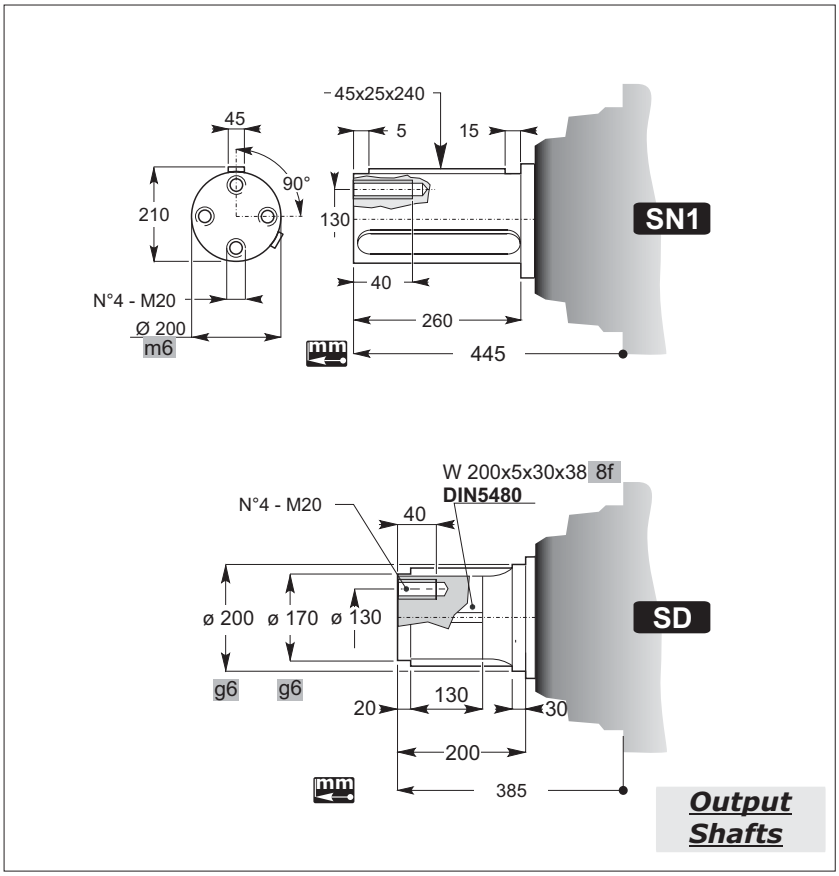


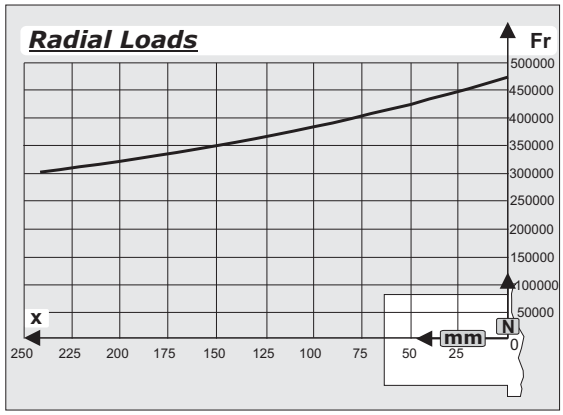


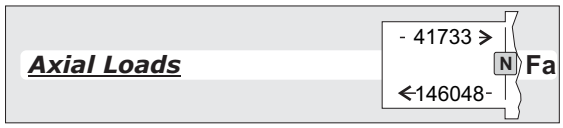
Accessories

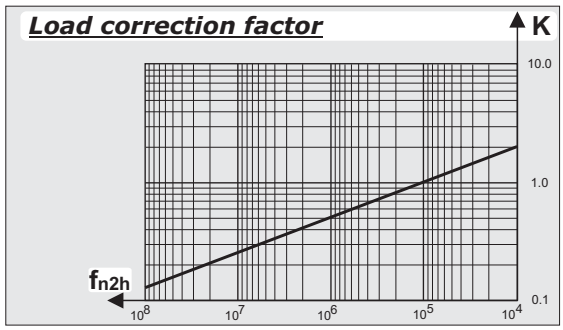
mm
C

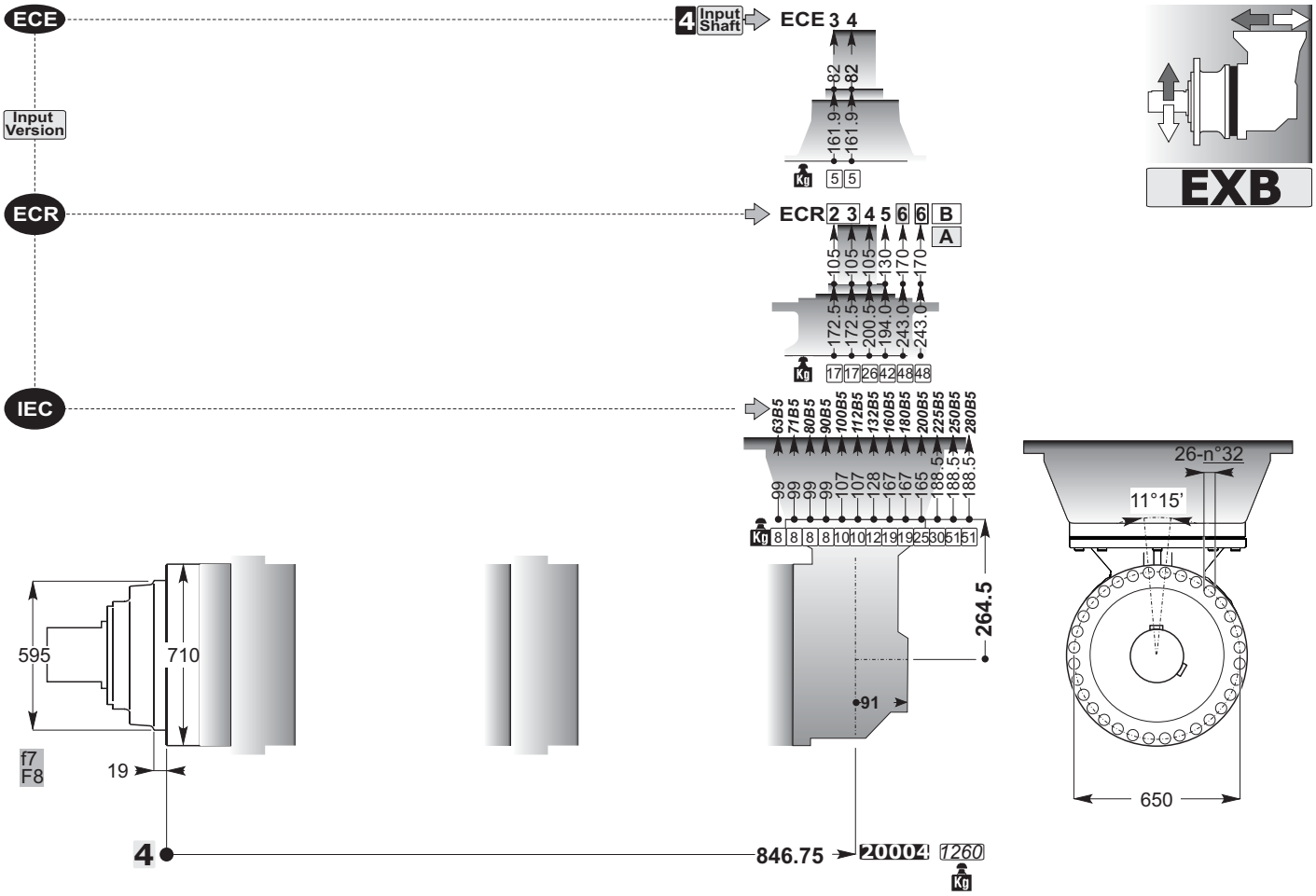

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
595
710
f7
F8
19
110
mm
Kg
362.2 210 8-ø110
261 210 8-ø110
284.8 170 6B-ø100
284.8 170 6A-ø90
231.4 130 5-ø80
110 8
48 6A-6B
42 5
161.9 82 4-ø48
161.9 82 3-ø42
5
243 170 6B-ø100
243 170 6A-ø90
194 130 5-ø80
200.5 105 4-ø65
172.5 105 3B-ø65
172.5 105 2B-ø60
48 6A-6B
42 5
26 4
17 2B-3B
188.5 51 280B5
188.5 51 250B5
188.5 30 225B5
165 25 200B5
167 19 180B5
167 19 160B5
128 12 132B5
107 10 112B5
107 10 100B5
99 8 90B5
99 8 80B5
99 8 71B5
99 8 63B5
26-n°32
11°15'
650
4 789.5 20004 1200
3 678.5 20003 1150
2 447.5 20002 1010
1 152.5 20001 720

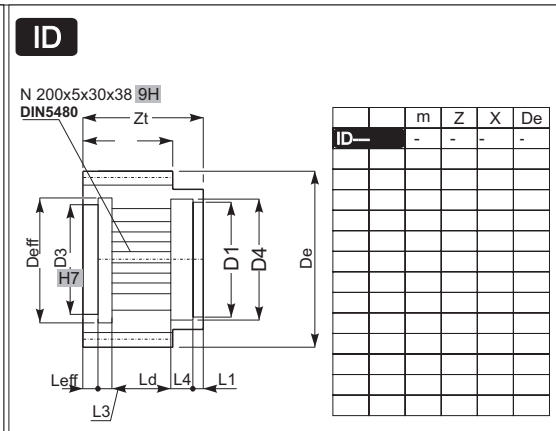

45
45x25x240
5
15
90°
210
130
SN1
N°4 - M20
Ø 200
m6
40
260
mm
445
W 200x5x30x38 8f
DIN5480
N°4 - M20
40
ø 200
ø 170
ø 130
SD
g6
g6
20
130
30
200
385
mm
Output Shafts

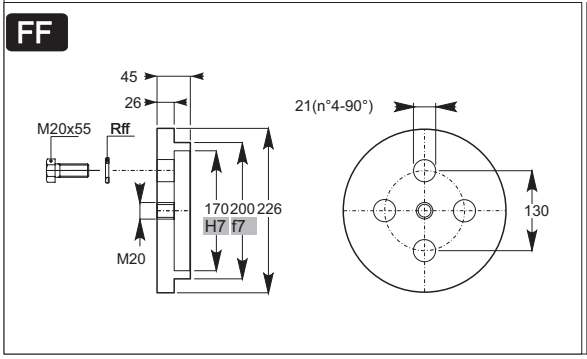

Radial Loads
Fr
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
250 225 200 175 150 125 100 75 50 25
mm
N

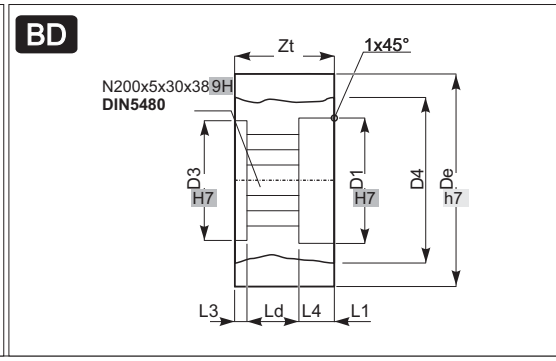

Axial Loads
- 41733 >
N
Fa
<146048-

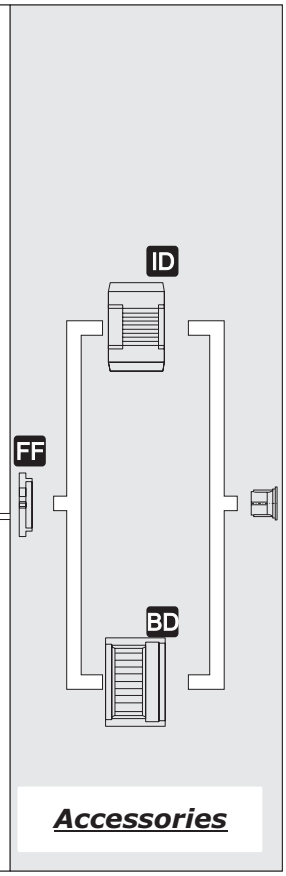

Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4

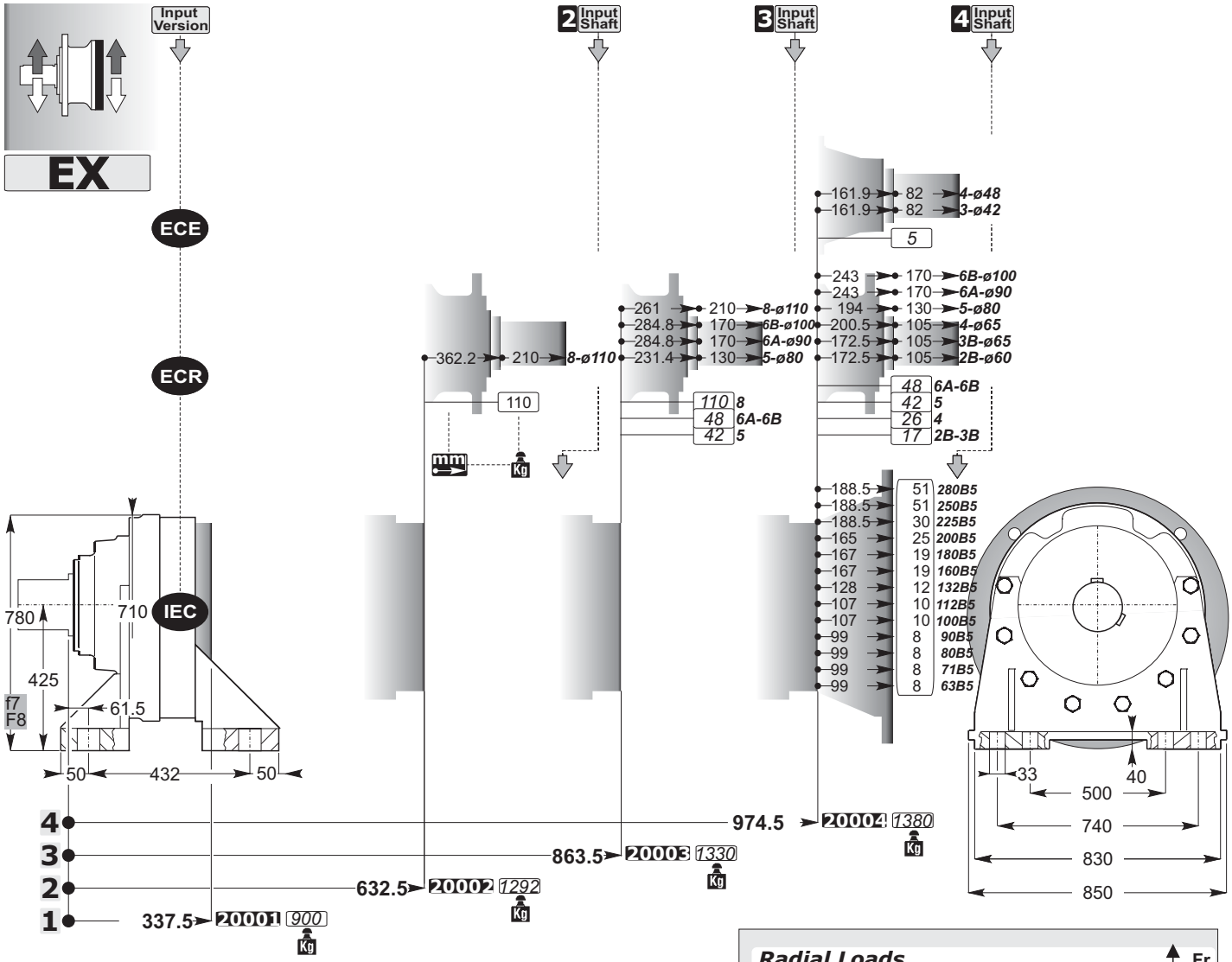

ECE
Input Version
ECR
IEC
4 Input Shaft
ECE 3 4
161.9 82
161.9 82
5 5
EXB
ECR 2 3 4 5 6 6 B A
105 105 105 130 170 170
172.5 172.5 200.5 194.0 243.0 243.0
17 17 26 42 48 48
63B5 71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5 250B5 280B5
99 99 99 99 107 107 128 167 167 165 188.5 188.5 188.5
8 8 8 8 10 10 12 19 19 25 30 51 51
264.5
91
595
710
f7
F8
19
4
846.75
20004
1260
26-n°32
11°15'
650

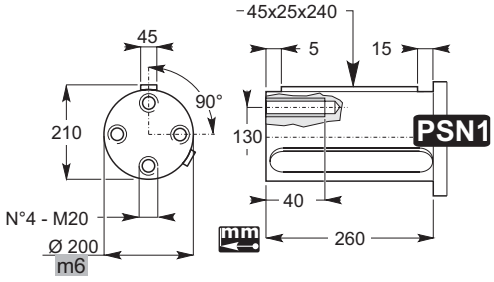

ID
N 200x5x30x38 9H
DIN5480
Zt
Deff
D3
H7
D1
D4
De
Leff
Ld
L4
L1
L3
m
Z
X
De
ID—

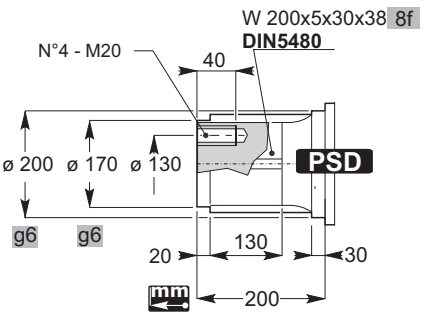

FF
45
26
M20x55
Rff
170 200 226
H7 f7
M20
21(n°4-90°)
130


BD
Zt
1x45°
N200x5x30x38 9H
DIN5480
D3
H7
D1
H7
D4
De
h7
L3
Ld
L4
L1

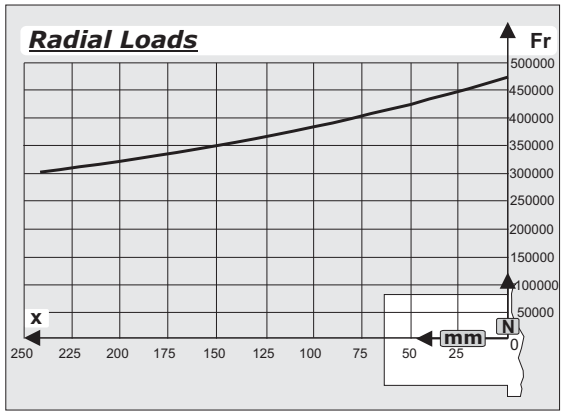

ID
FF
BD
Accessories

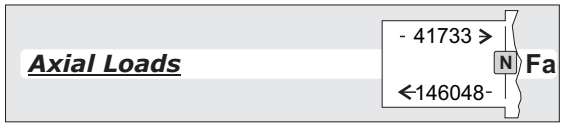


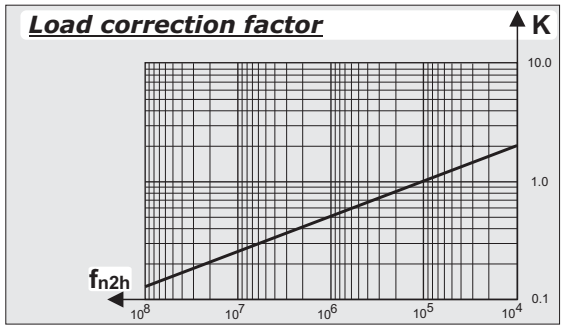


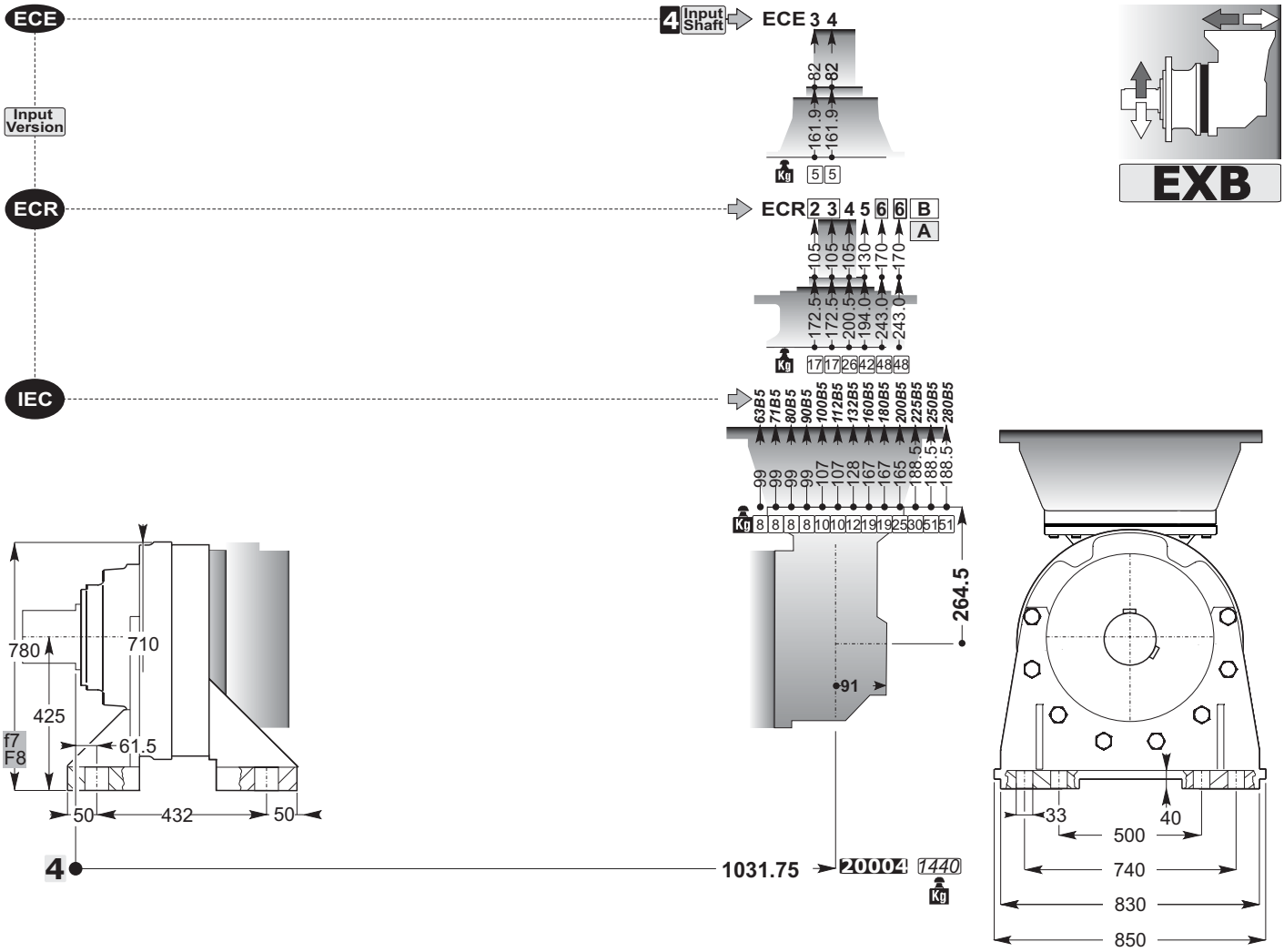


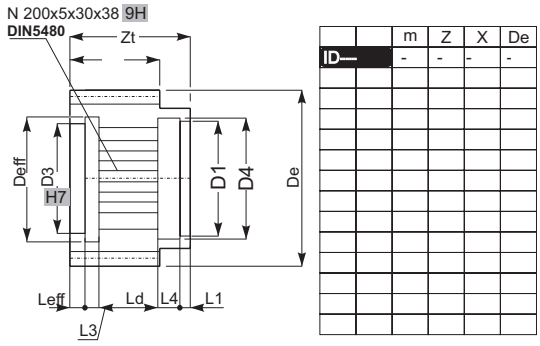
Output Shafts

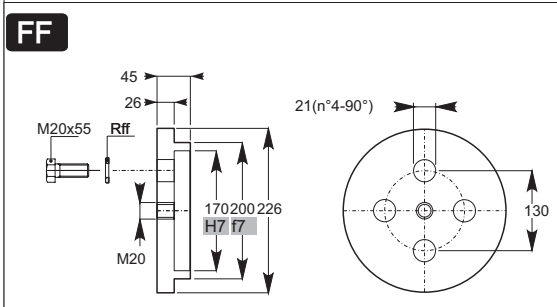


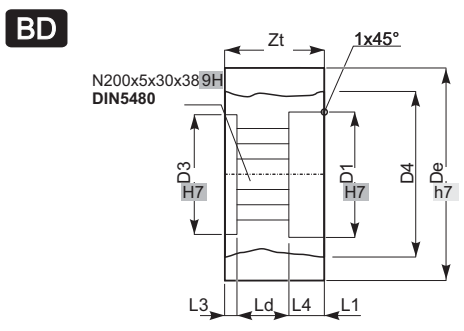


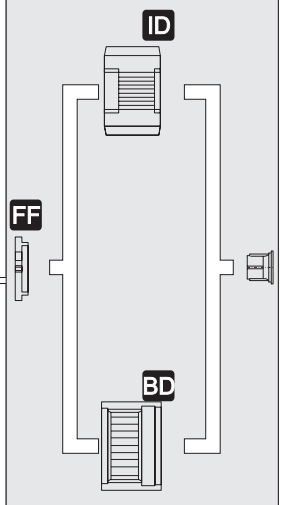






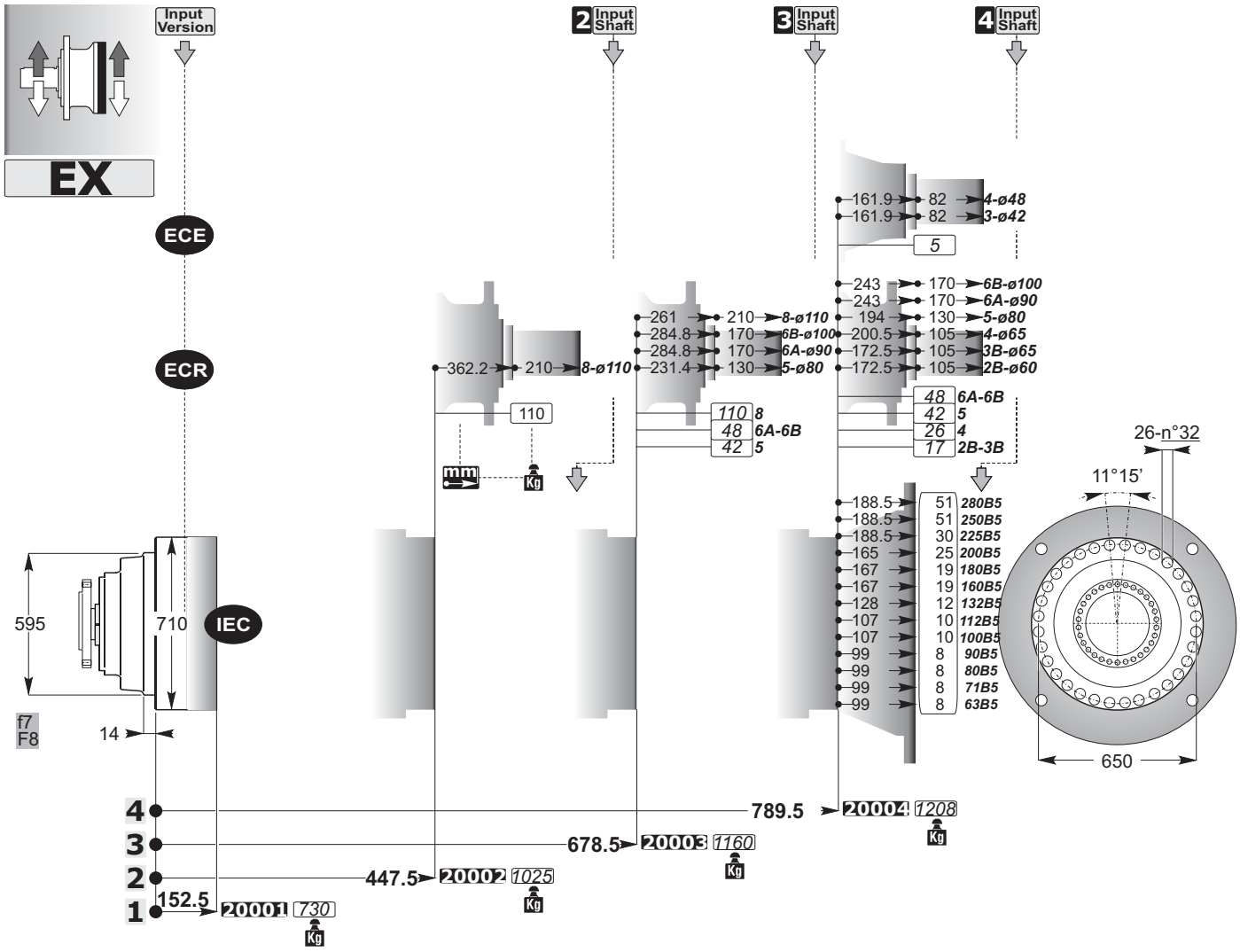


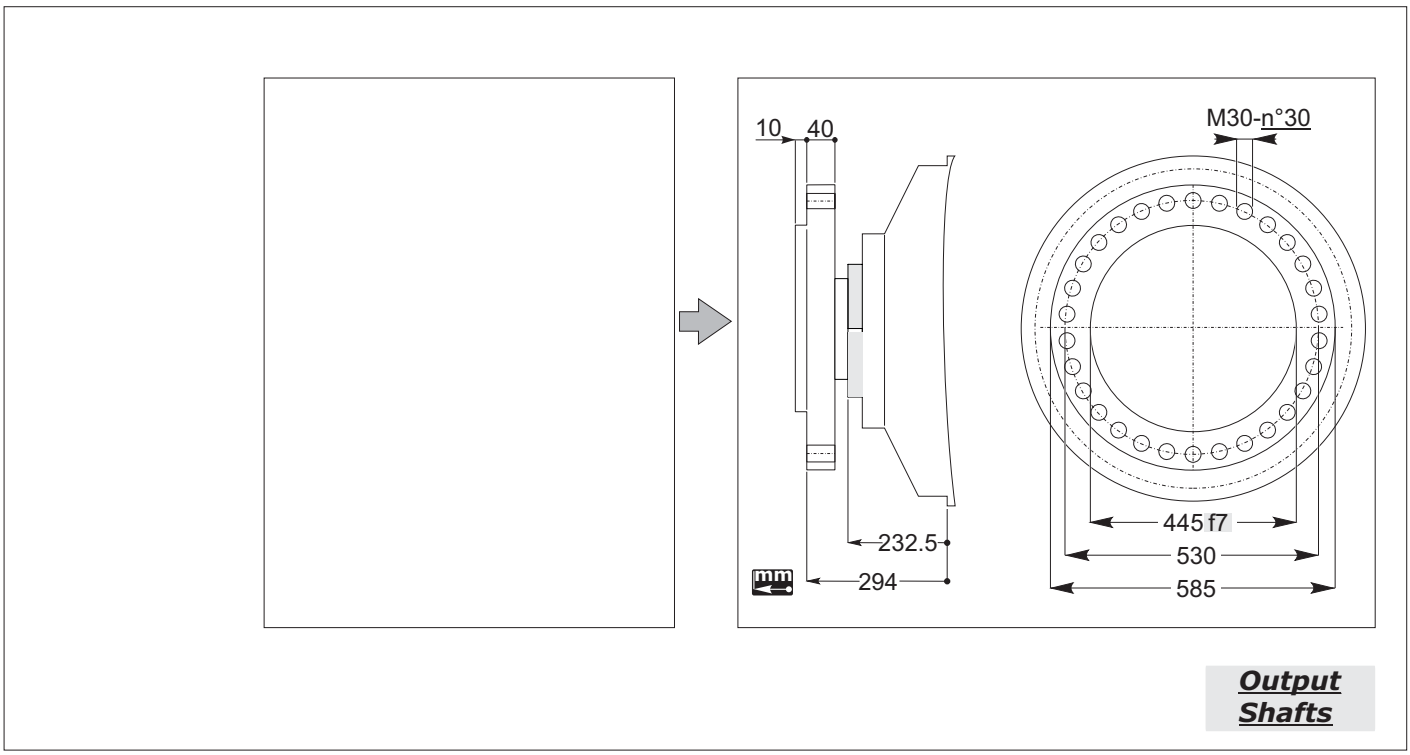


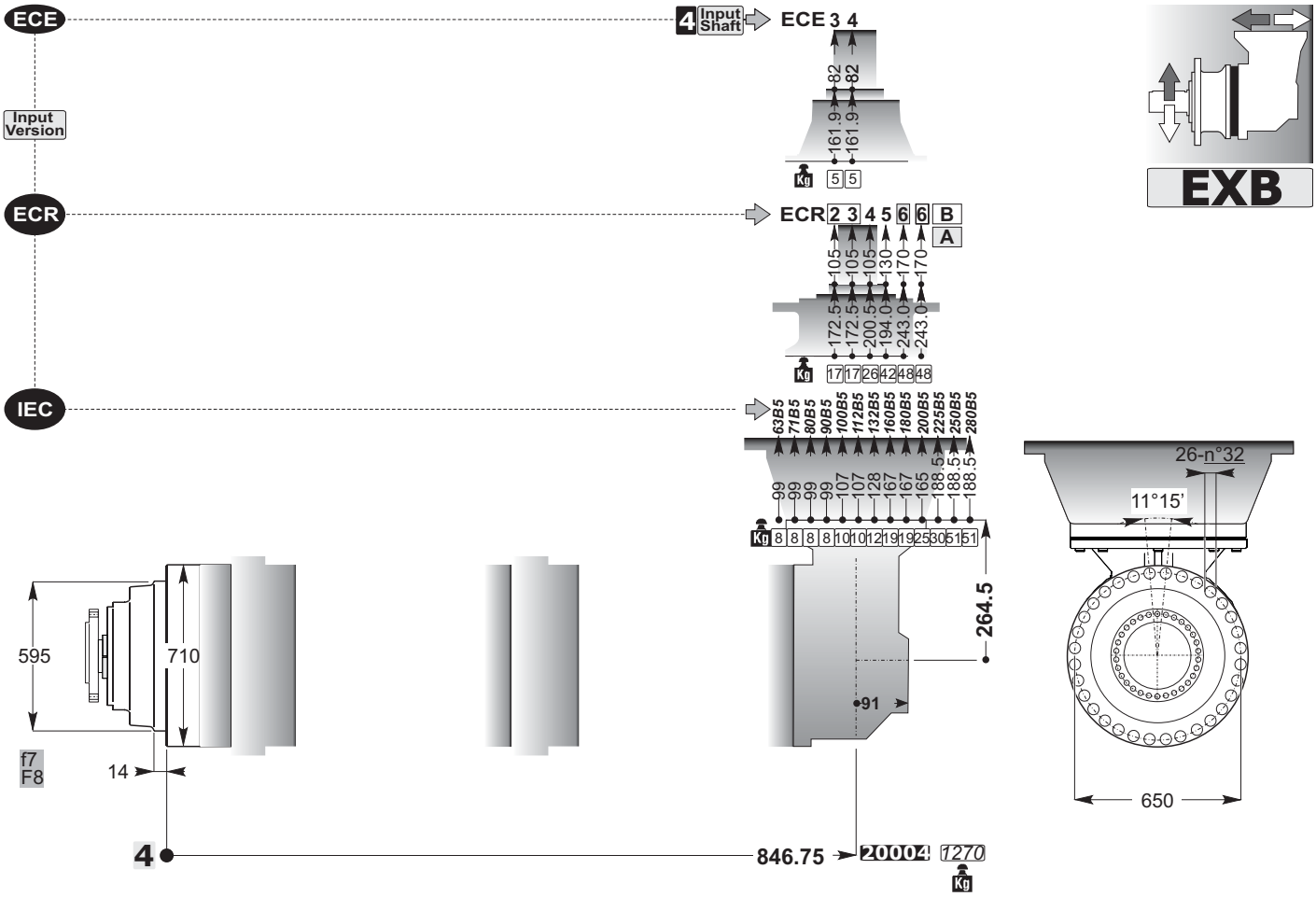


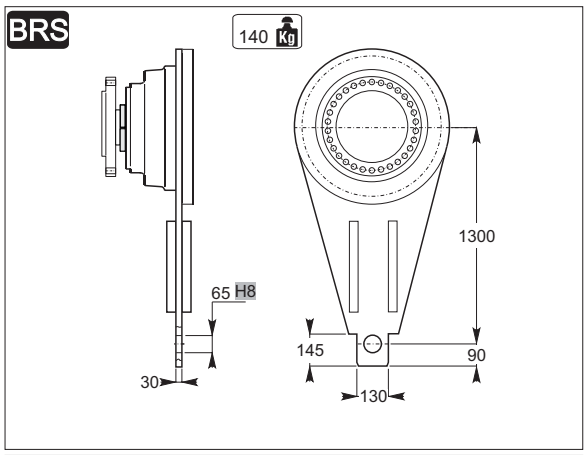
Accessories

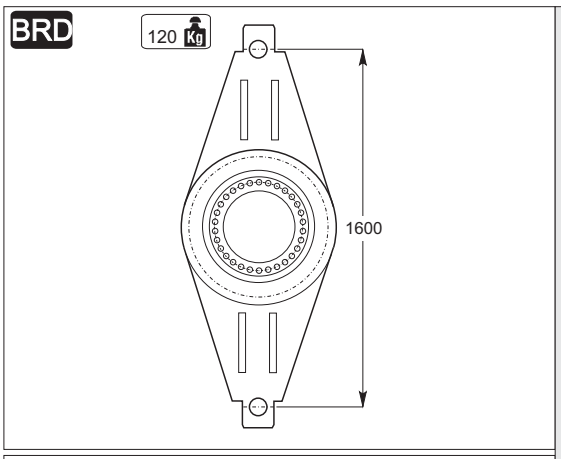
mm
C

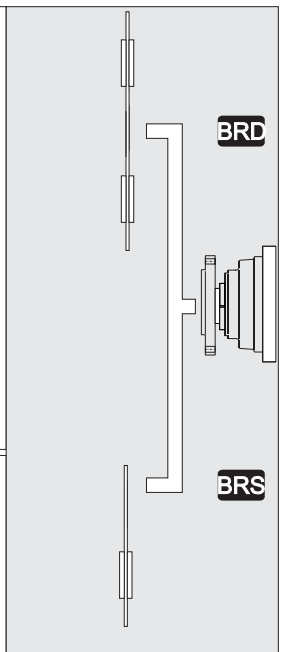

Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
595
710
f7
F8
14
362.2
210
8-ø110
110
261
284.8
284.8
231.4
210
170
170
130
8-ø110
6B-ø100
6A-ø90
5-ø80
110 8
48 6A-6B
42 5
161.9
161.9
82
82
4-ø48
3-ø42
5
243
243
194
200.5
172.5
172.5
170
170
130
105
105
105
6B-ø100
6A-ø90
5-ø80
4-ø65
3B-ø65
2B-ø60
48 6A-6B
42 5
26 4
17 2B-3B
188.5
188.5
188.5
165
167
167
128
107
107
99
99
99
99
51 280B5
51 250B5
30 225B5
25 200B5
19 180B5
19 160B5
12 132B5
10 112B5
10 100B5
8 90B5
8 80B5
8 71B5
8 63B5
26-n°32
11°15'
650
4
3
2
1
789.5
20004
1208
678.5
20003
1160
447.5
20002
1025
152.5
20001
730


10
40
M30-n°30
232.5
294
445 f7
530
585
Output Shafts

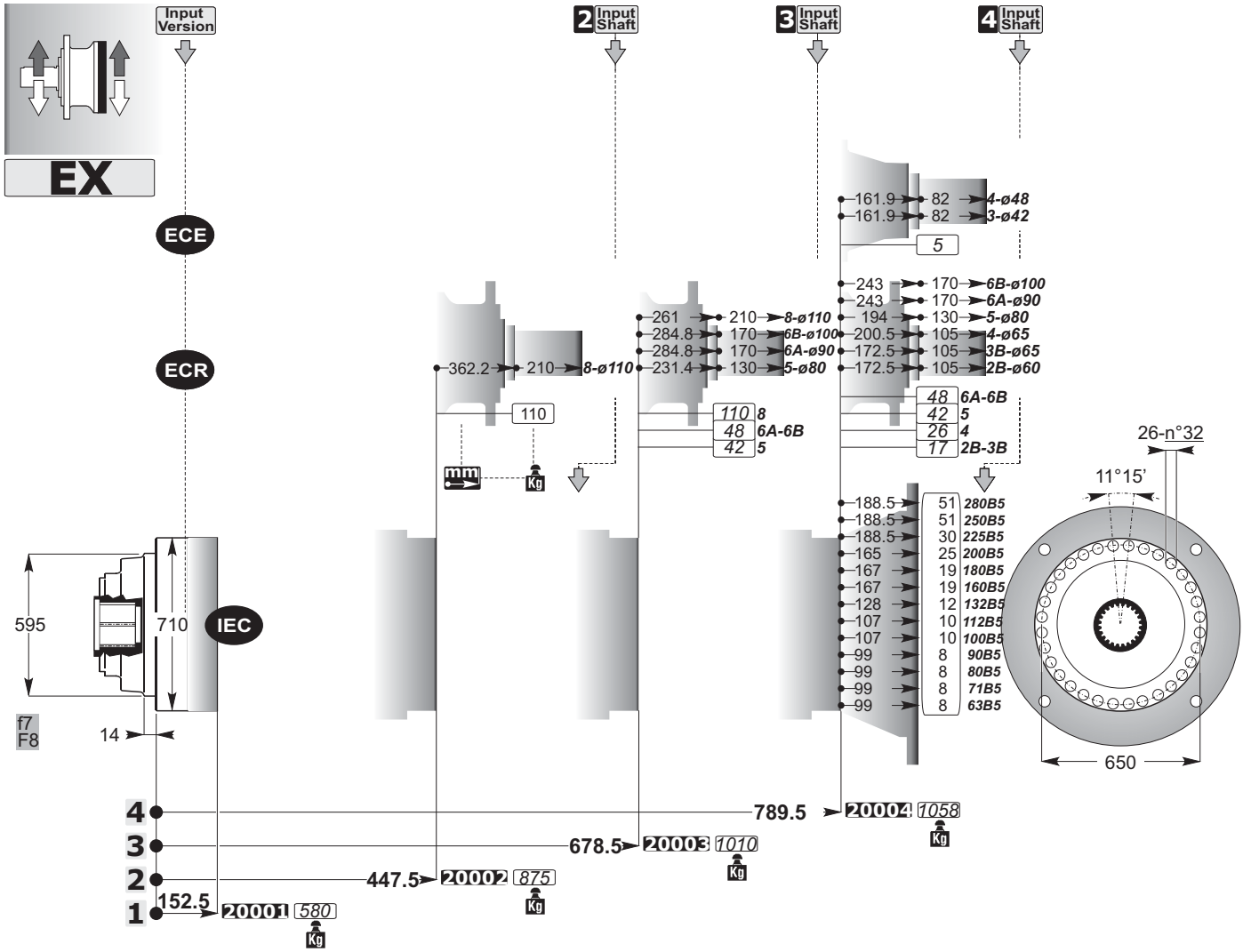


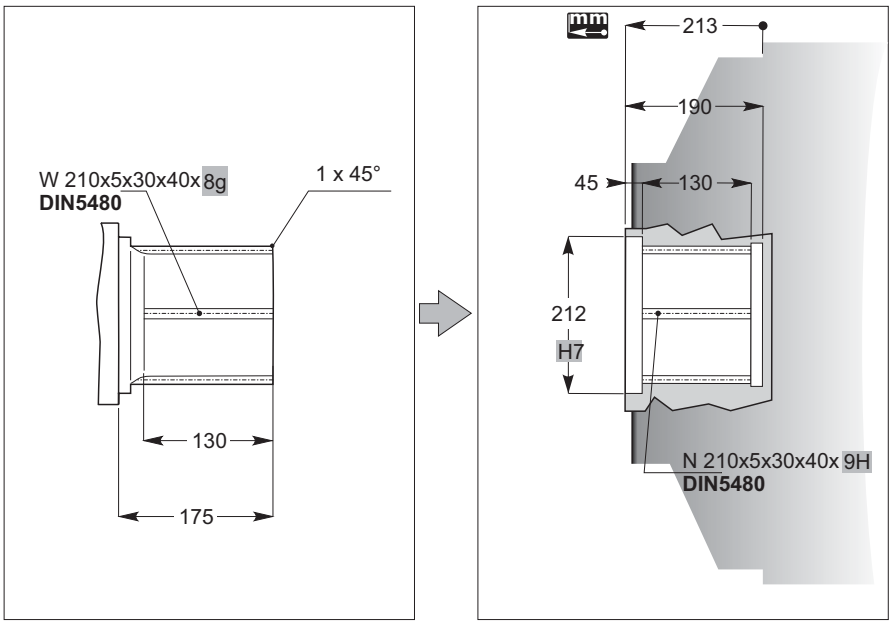




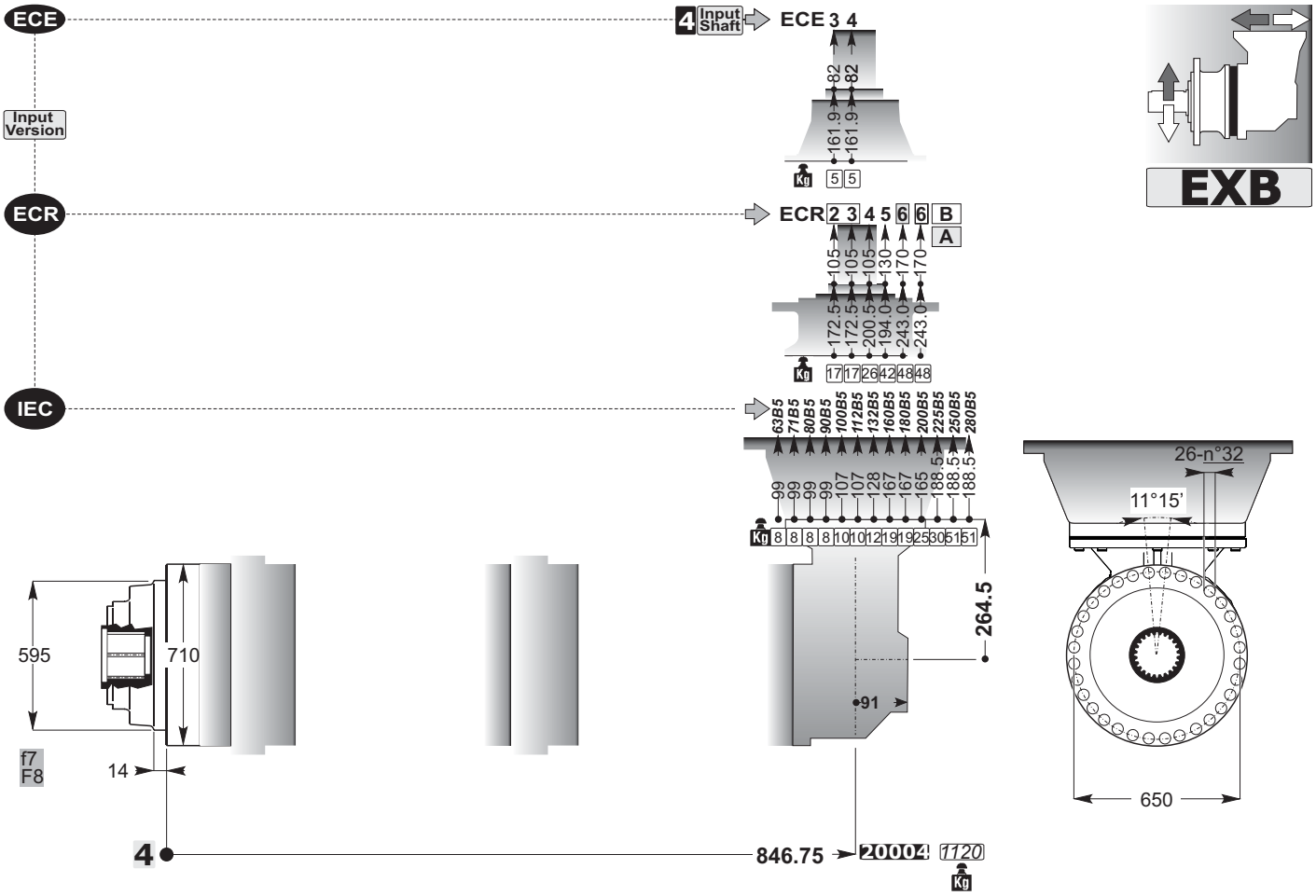


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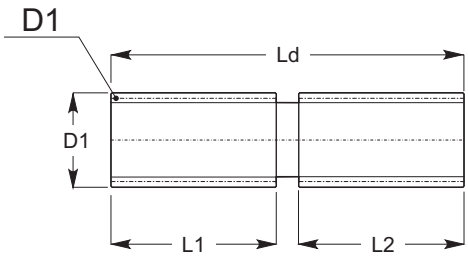




Output Shafts



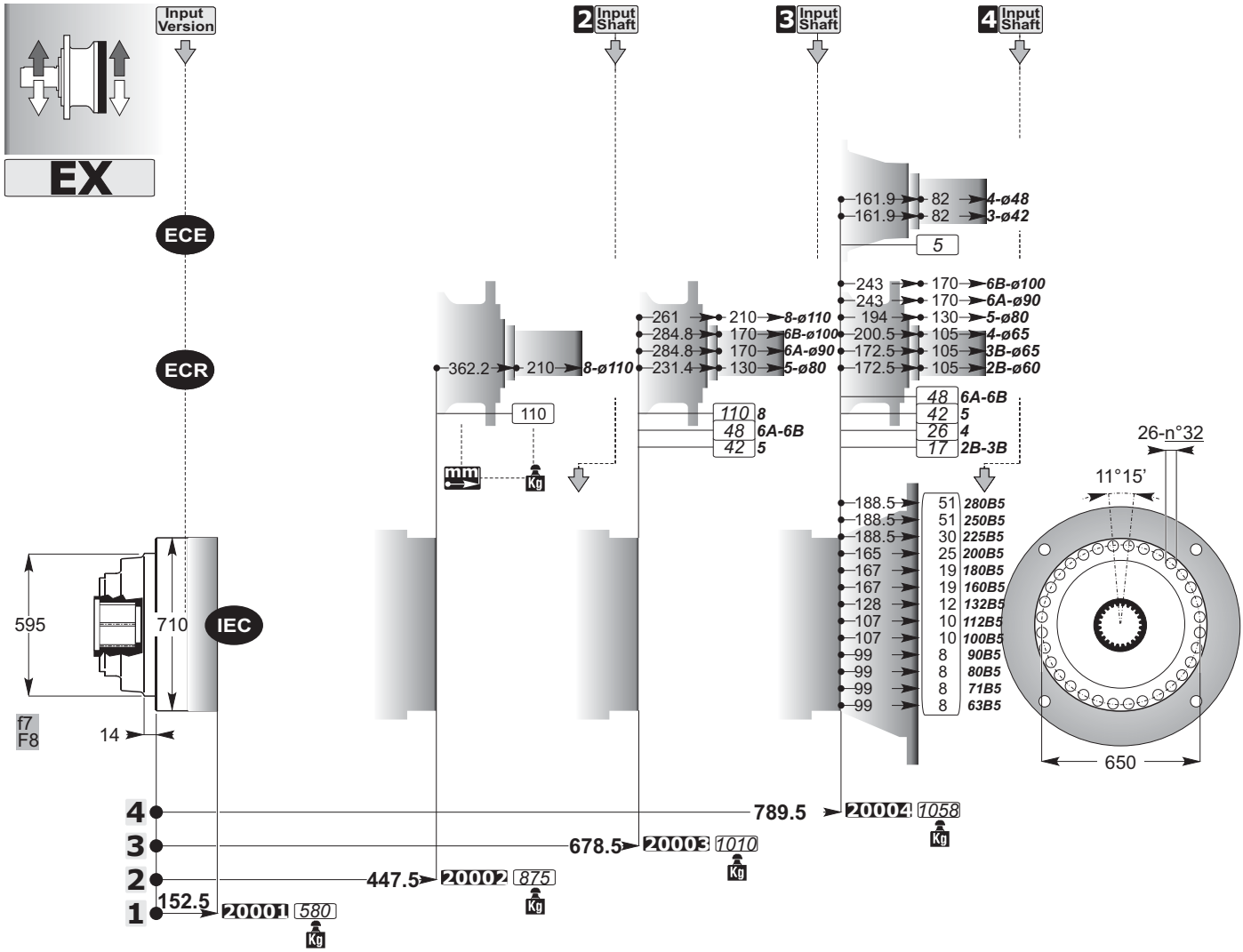
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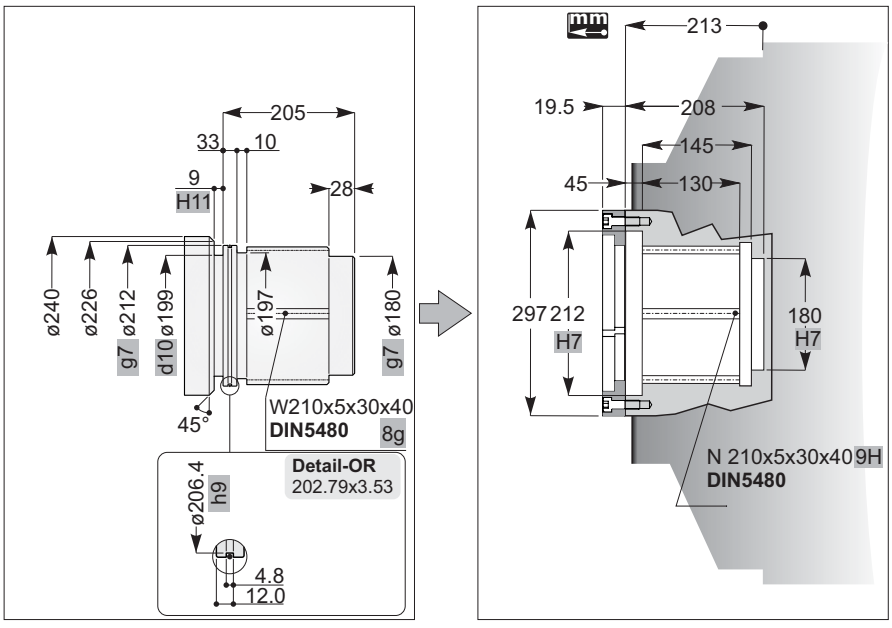


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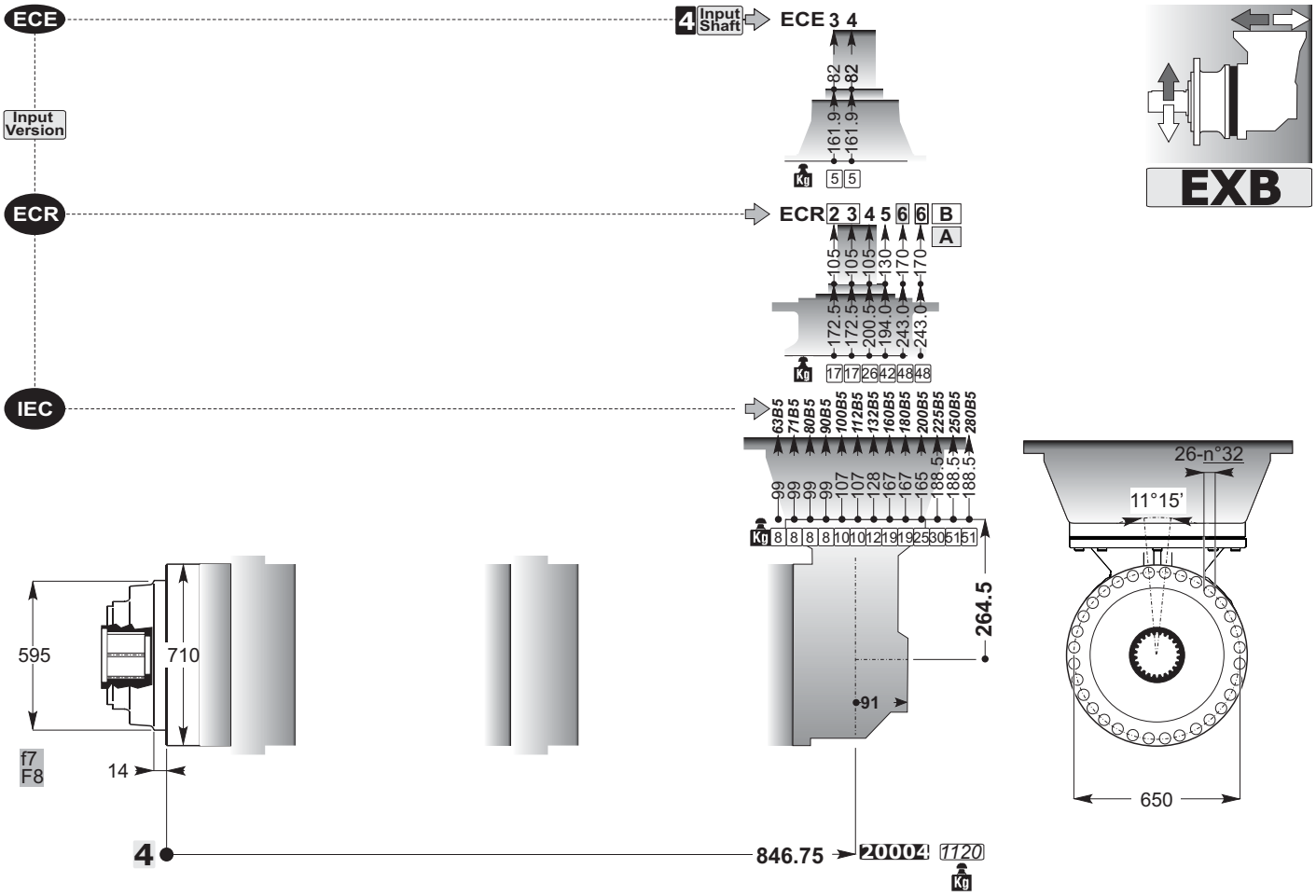


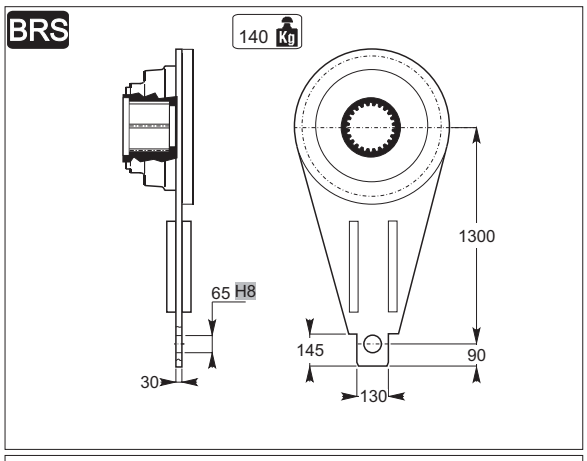
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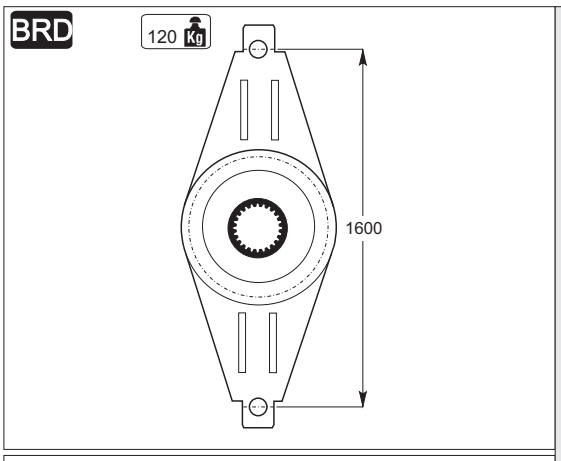


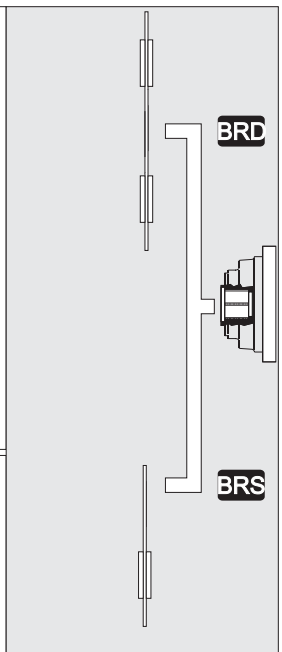


Output Shafts



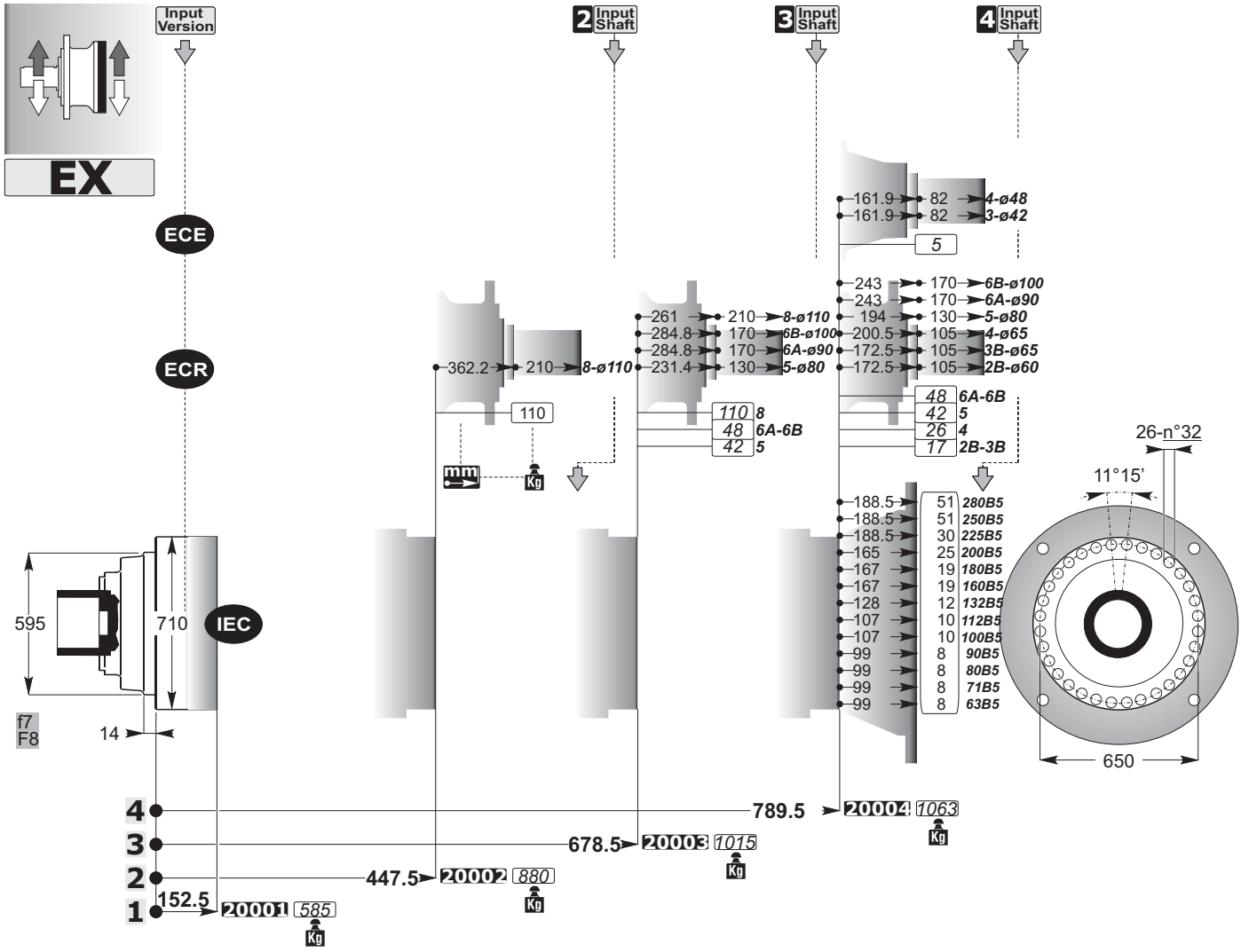


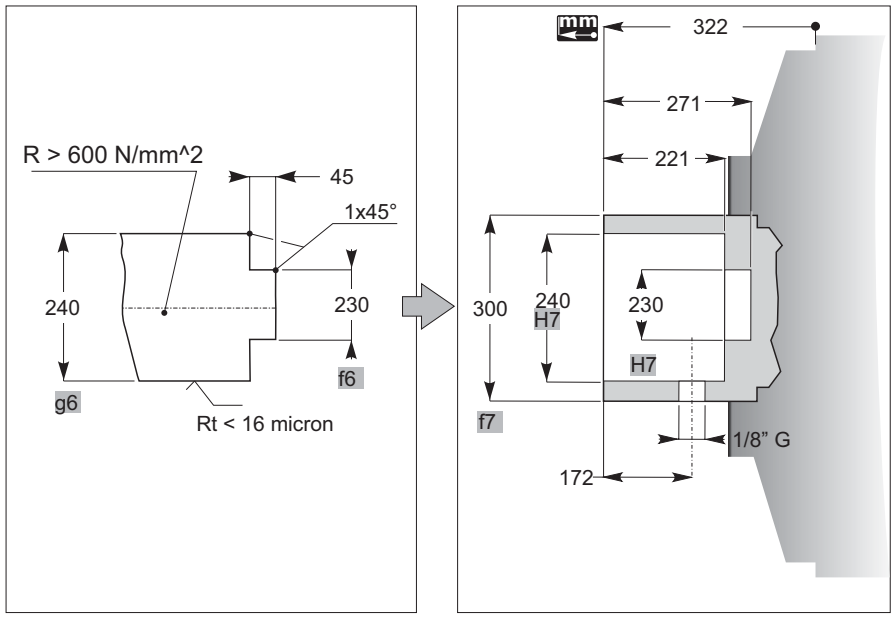




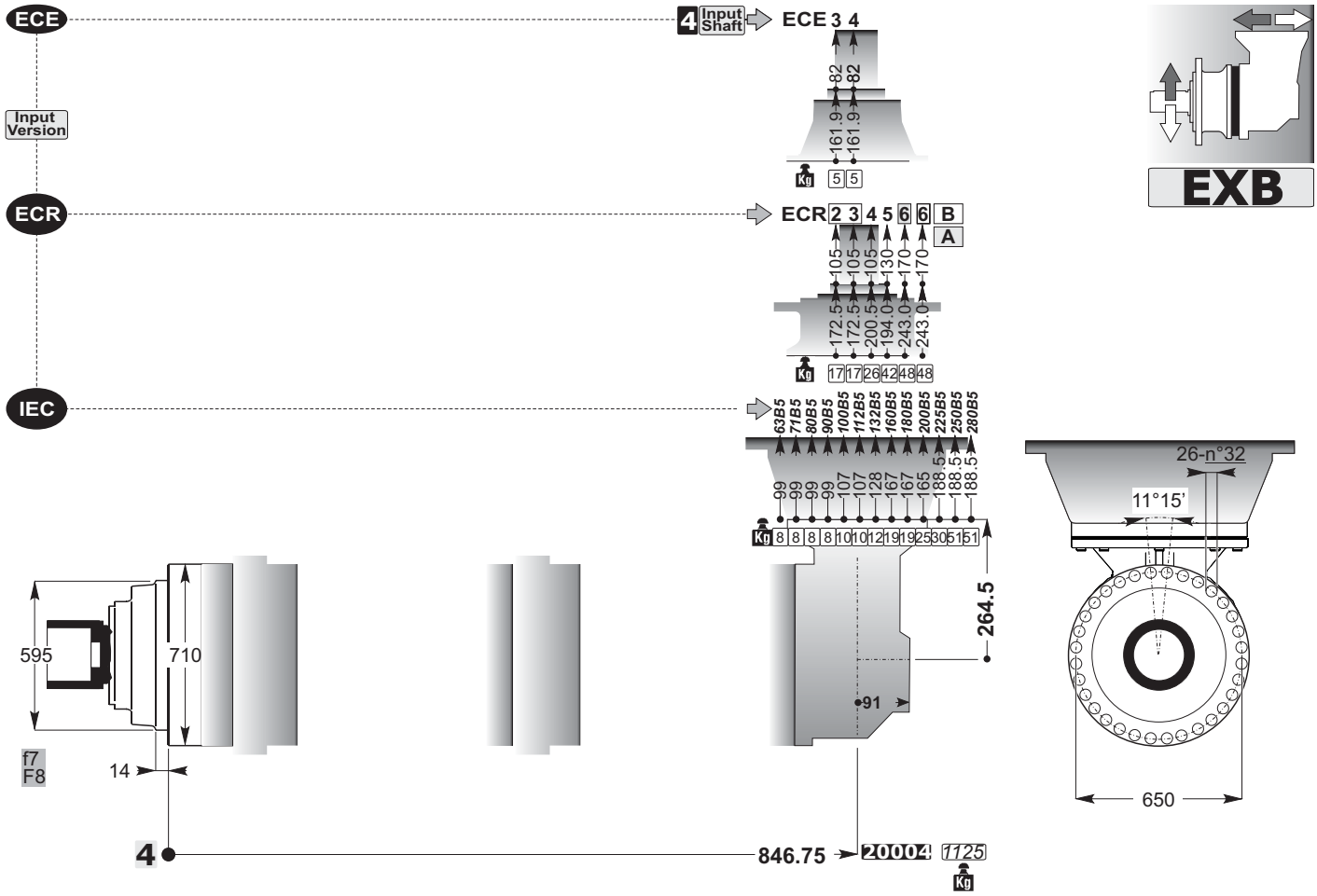
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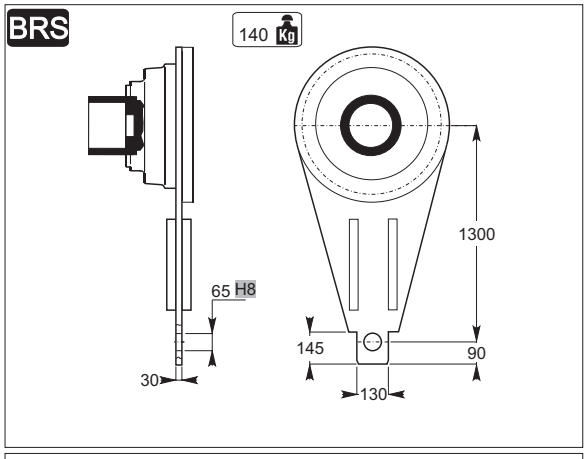
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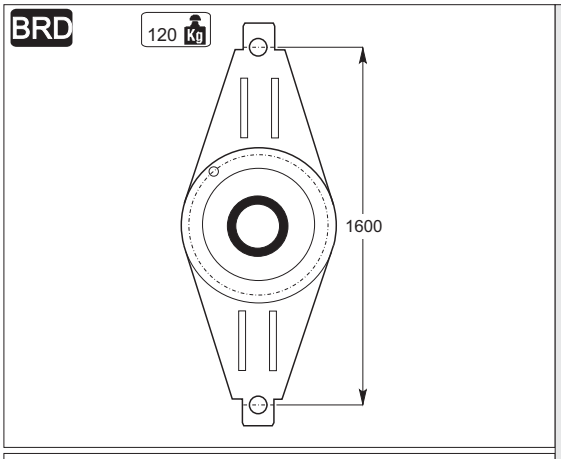


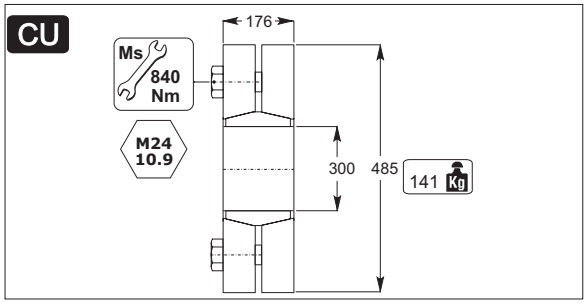


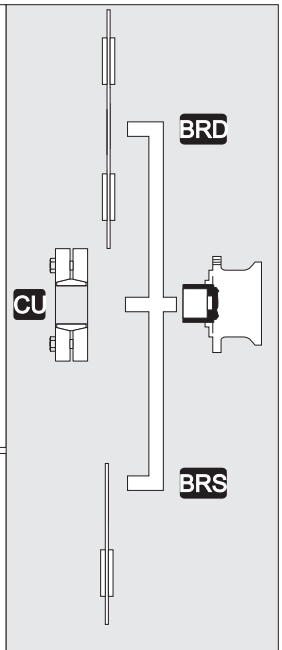
Output Shafts





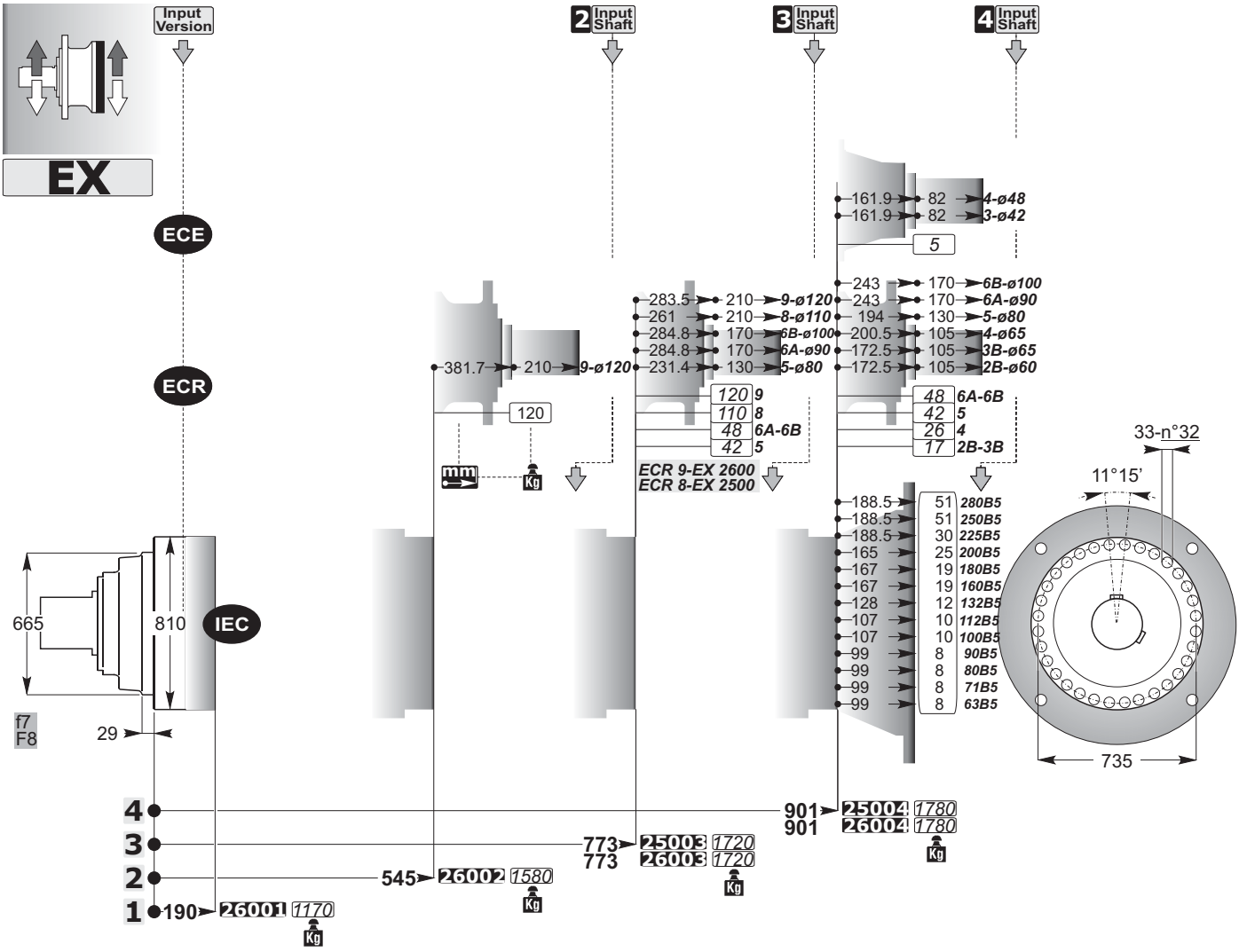


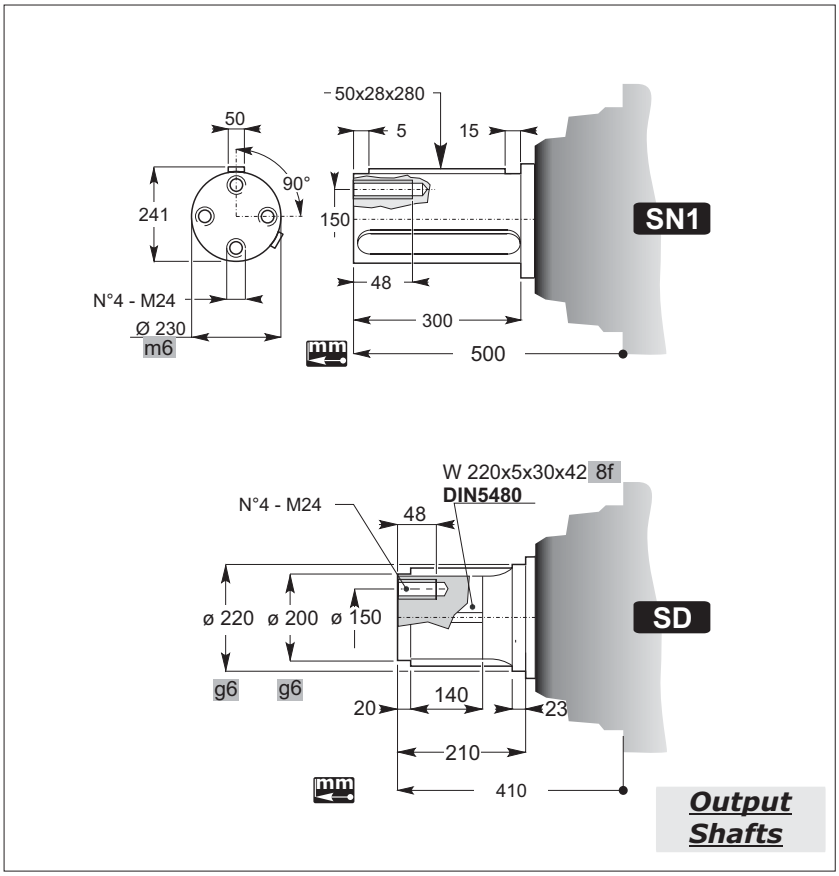


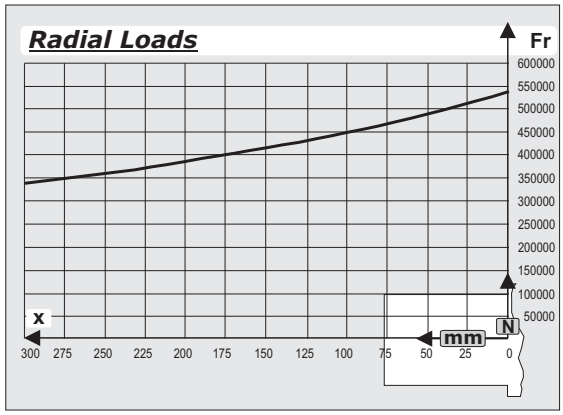


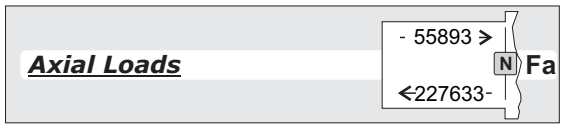
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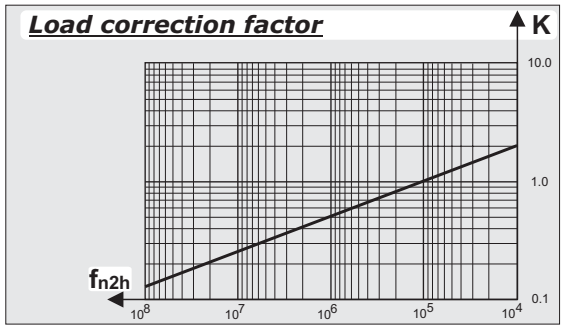
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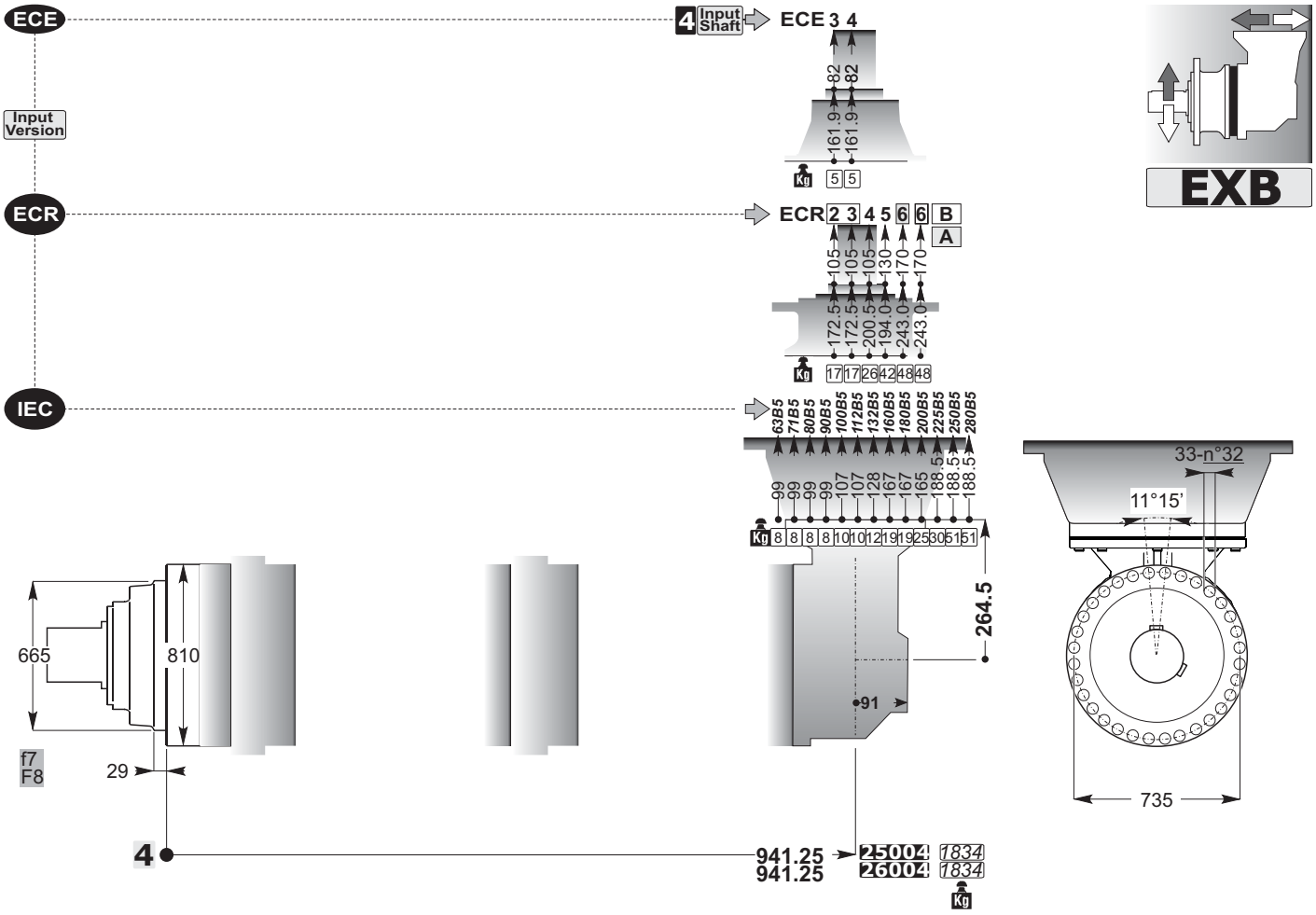

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2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
665
810
f7
F8
29
381.7 210 9-ø120
120
283.5 210 9-ø120
261 210 8-ø110
284.8 170 6B-ø100
284.8 170 6A-ø90
231.4 130 5-ø80
120 9
110 8
48 6A-6B
42 5
ECR 9-EX 2600
ECR 8-EX 2500
161.9 82 4-ø48
161.9 82 3-ø42
5
243 170 6B-ø100
243 170 6A-ø90
194 130 5-ø80
200.5 105 4-ø65
172.5 105 3B-ø65
172.5 105 2B-ø60
48 6A-6B
42 5
26 4
17 2B-3B
188.5 51 280B5
188.5 51 250B5
188.5 30 225B5
165 25 200B5
167 19 180B5
167 19 160B5
128 12 132B5
107 10 112B5
107 10 100B5
99 8 90B5
99 8 80B5
99 8 71B5
99 8 63B5
33-n°32
11°15'
735
4
3
2
1
901 25004 1780
901 26004 1780
773 25003 1720
773 26003 1720
545 26002 1580
190 26001 1170
mm
Kg


50x28x280
50
5
15
90°
241
150
SN1
N°4 - M24
Ø 230
m6
48
300
500
mm
W 220x5x30x42 8f
DIN5480
N°4 - M24
48
ø 220
ø 200
ø 150
SD
g6
g6
140
20
23
210
410
mm
Output Shafts

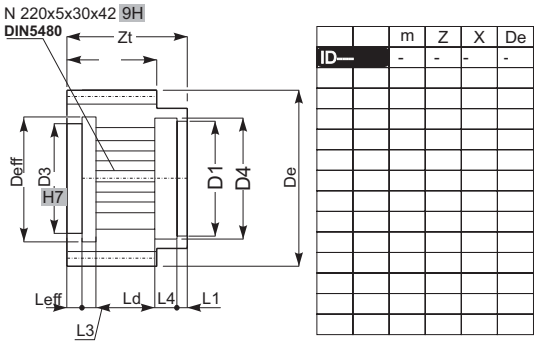

Radial Loads
Fr
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
x
300 275 250 225 200 175 150 125 100 75 50 25 0
mm
N


Axial Loads
- 55893 >
N
Fa
<227633-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8 10^7 10^6 10^5 10^4



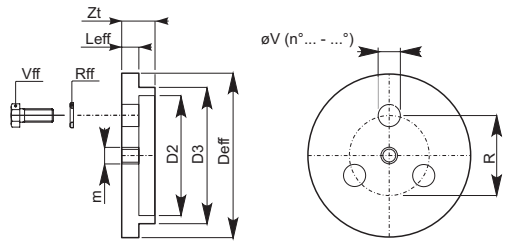
ID



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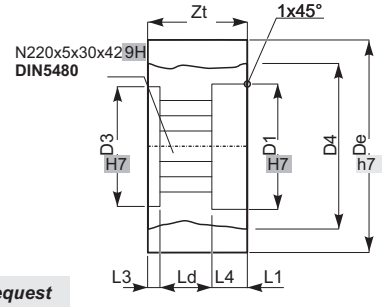
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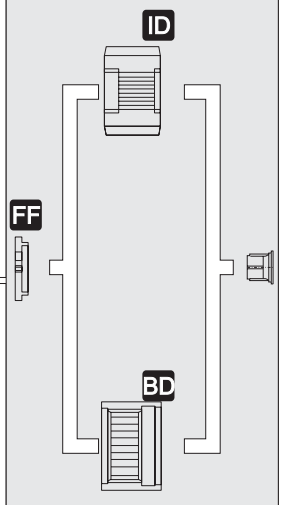


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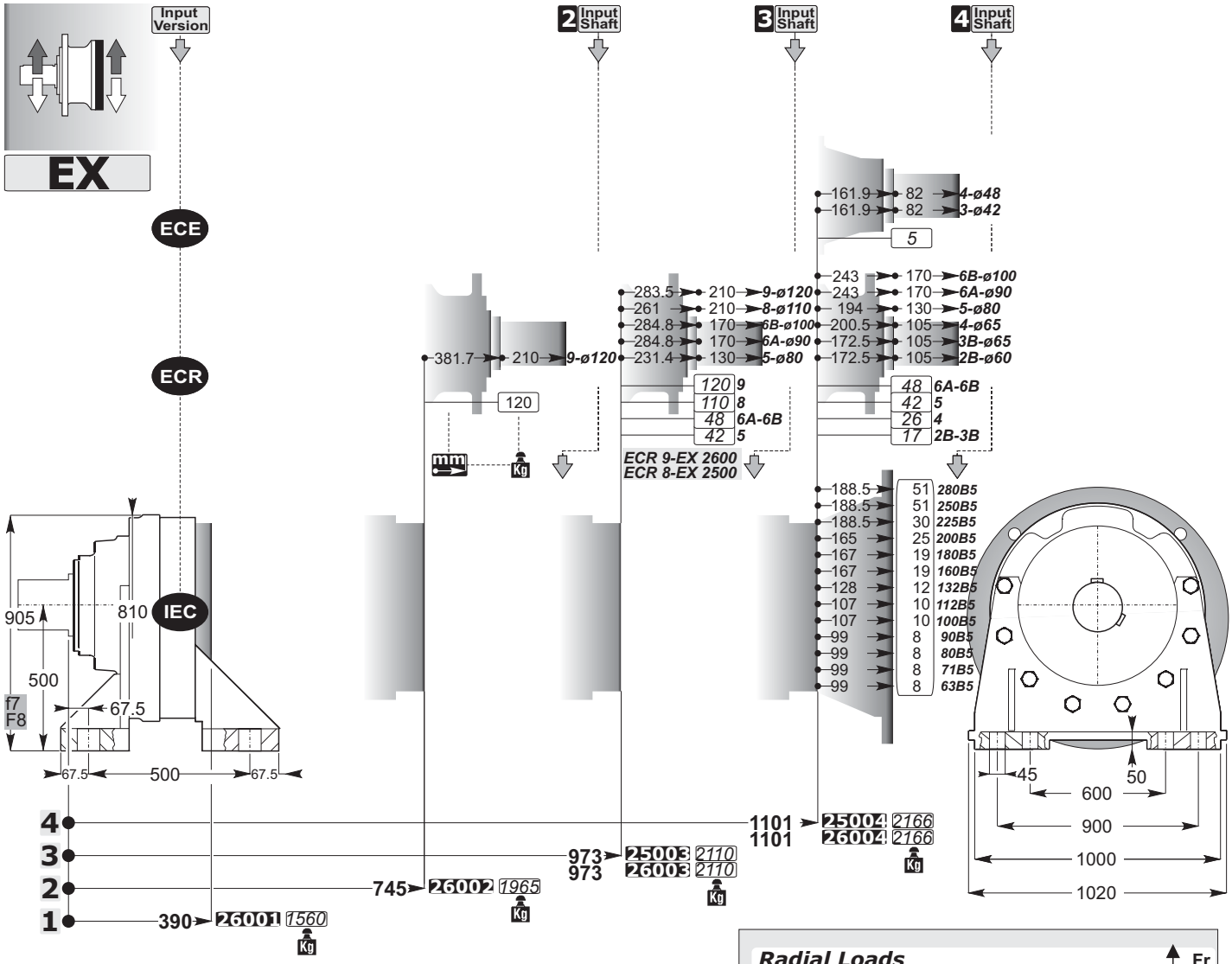


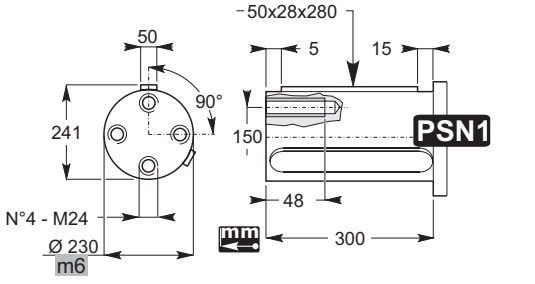
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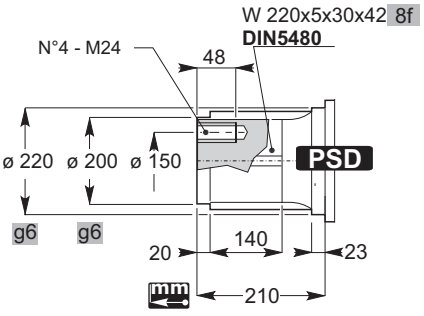


Accessories

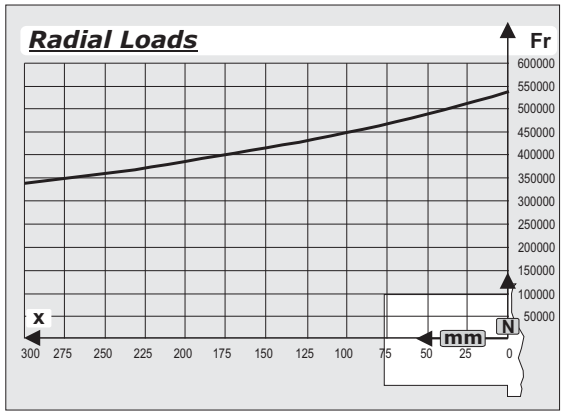
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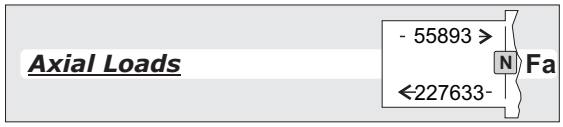


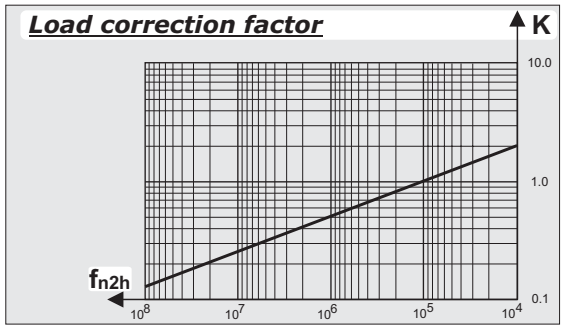


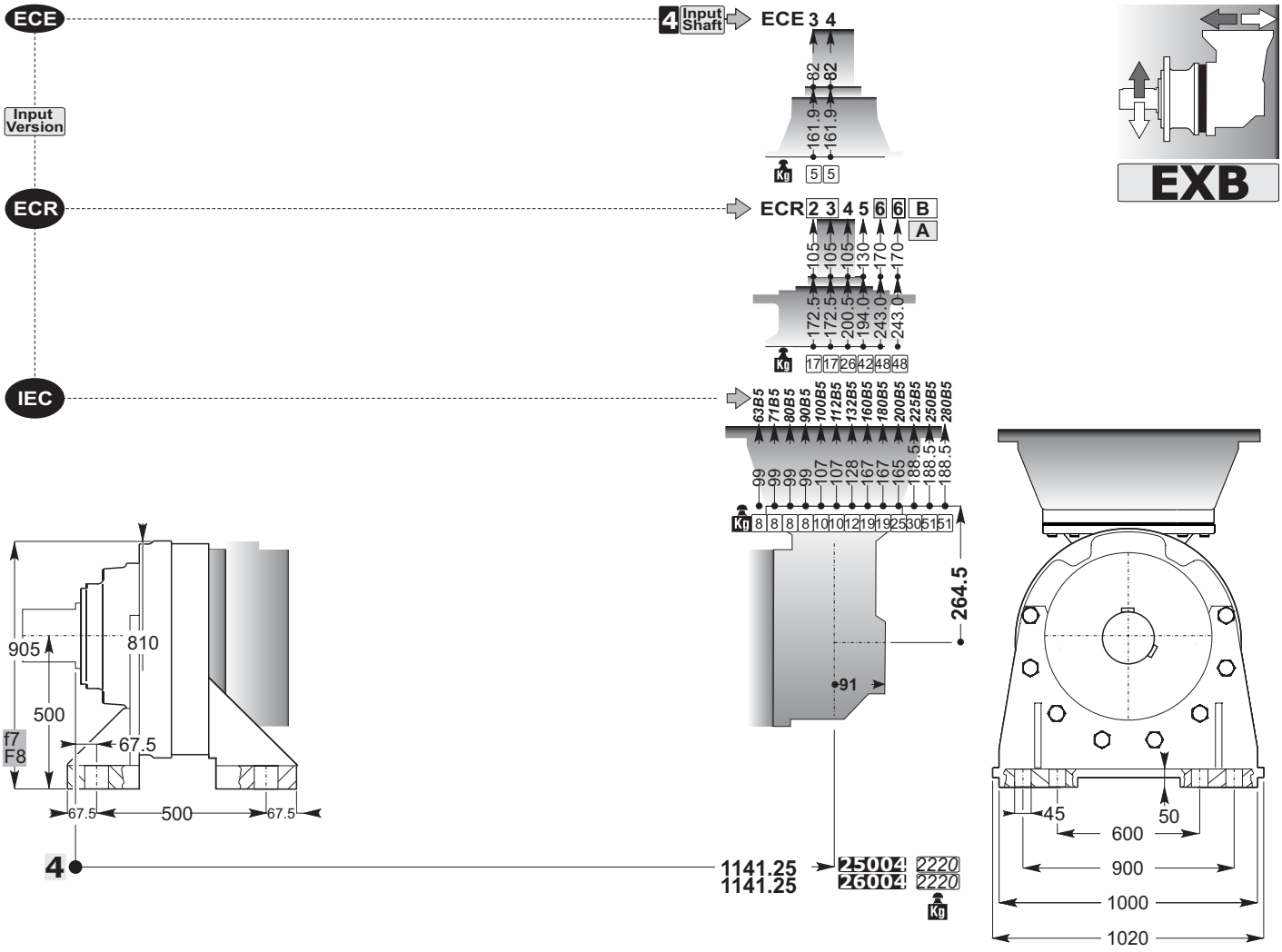


Output Shafts

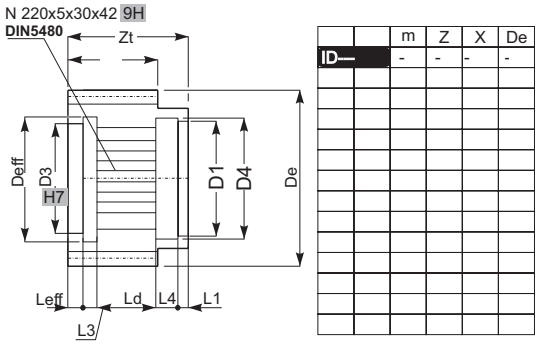








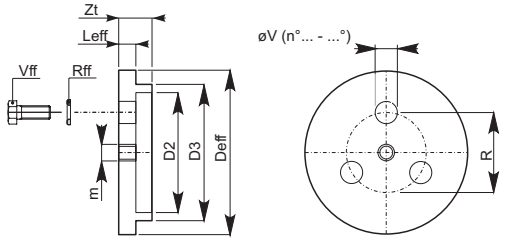
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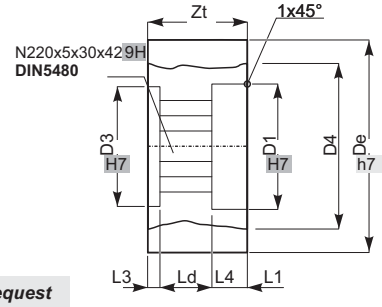
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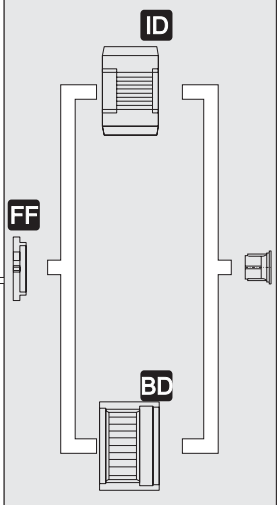


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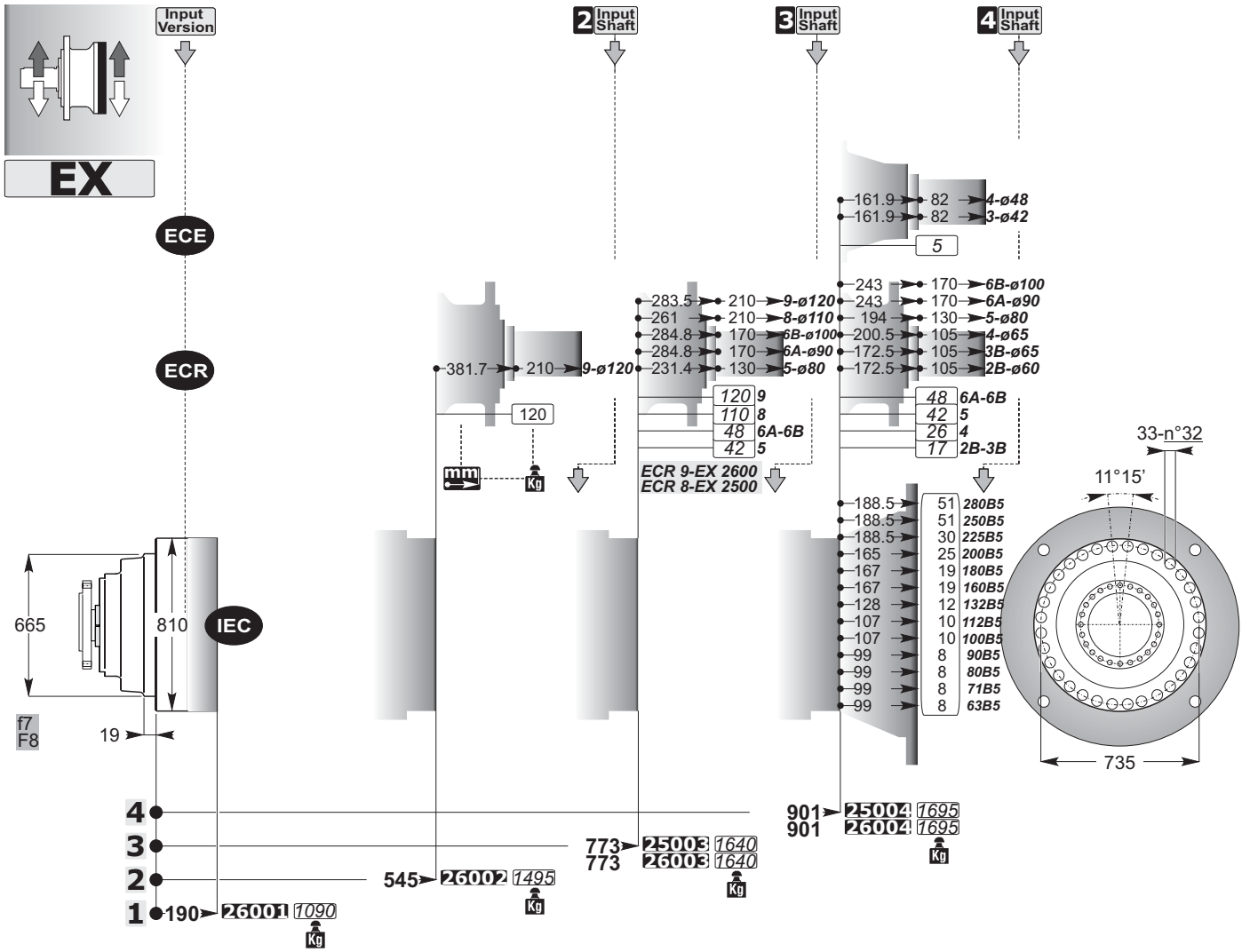


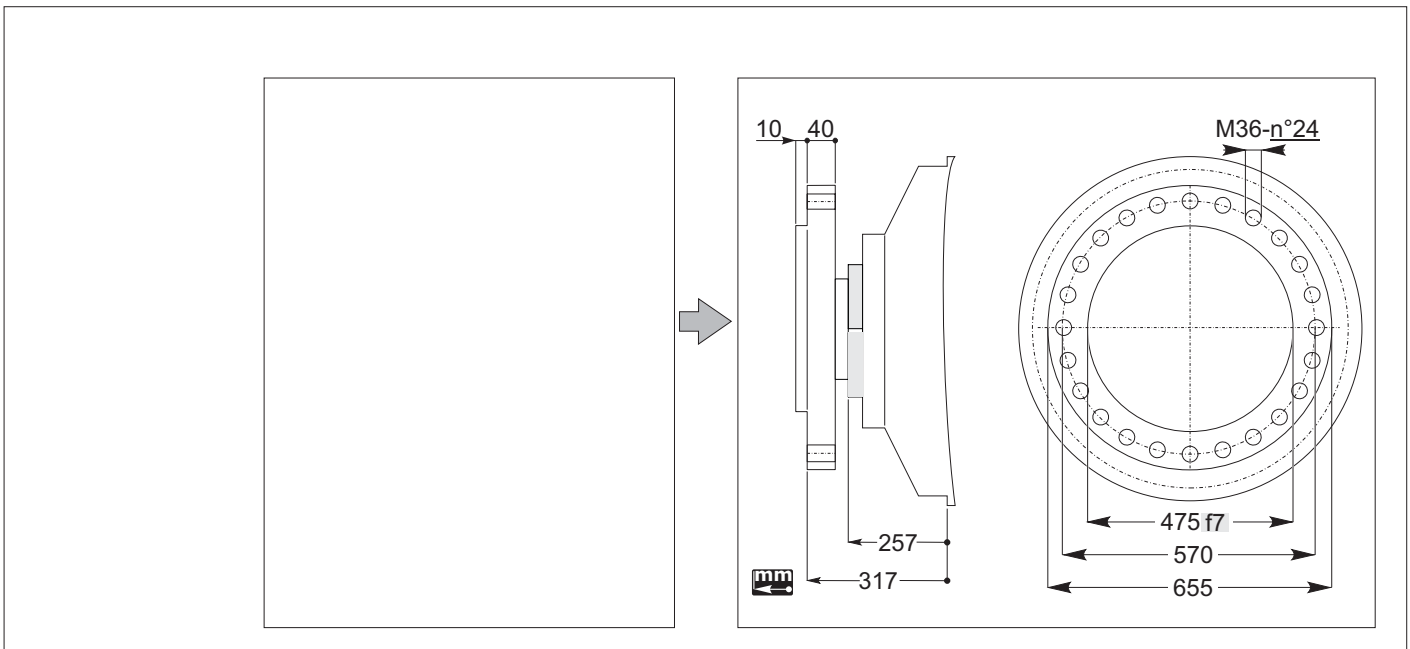
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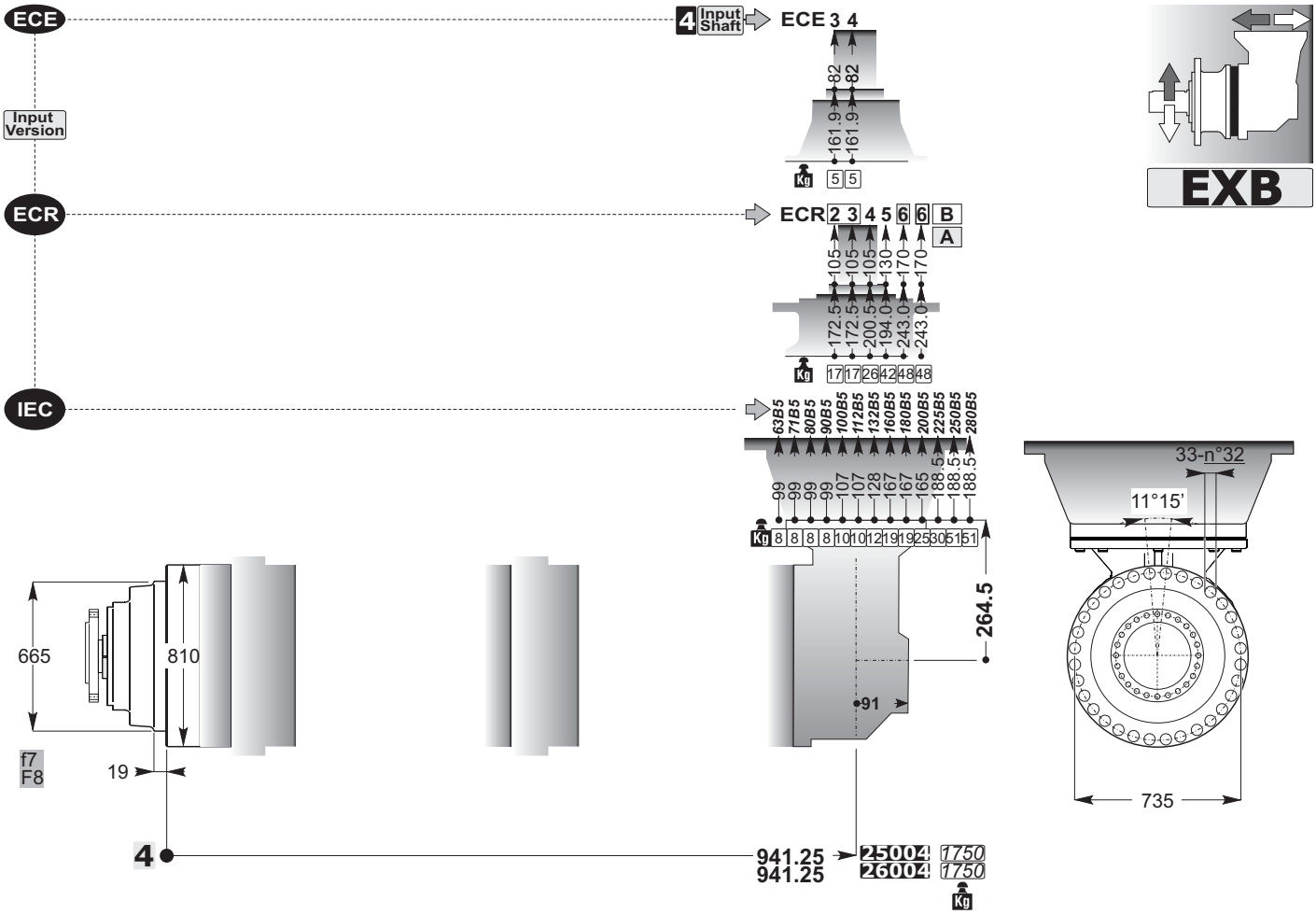
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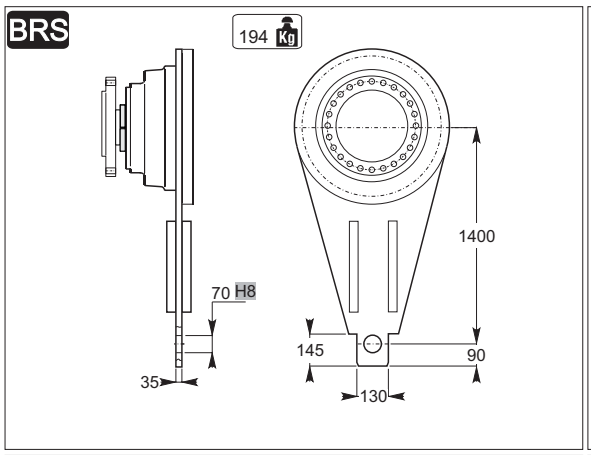
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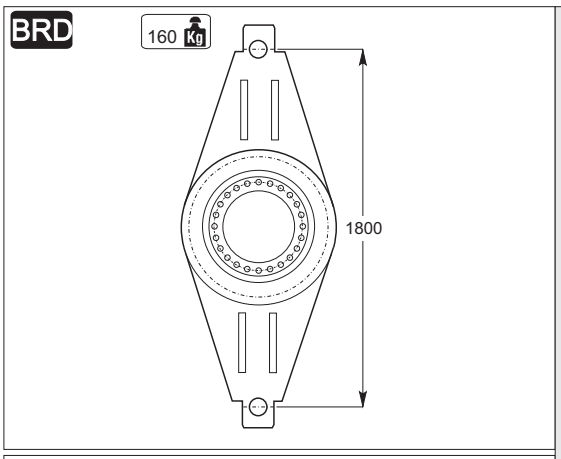


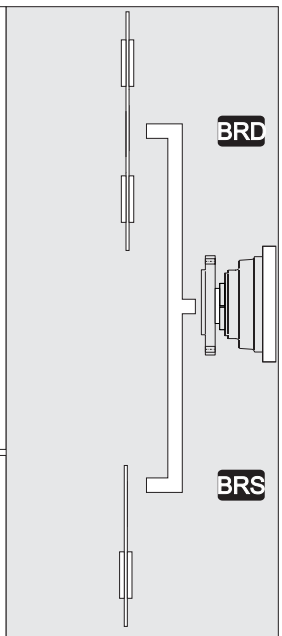


Output Shafts



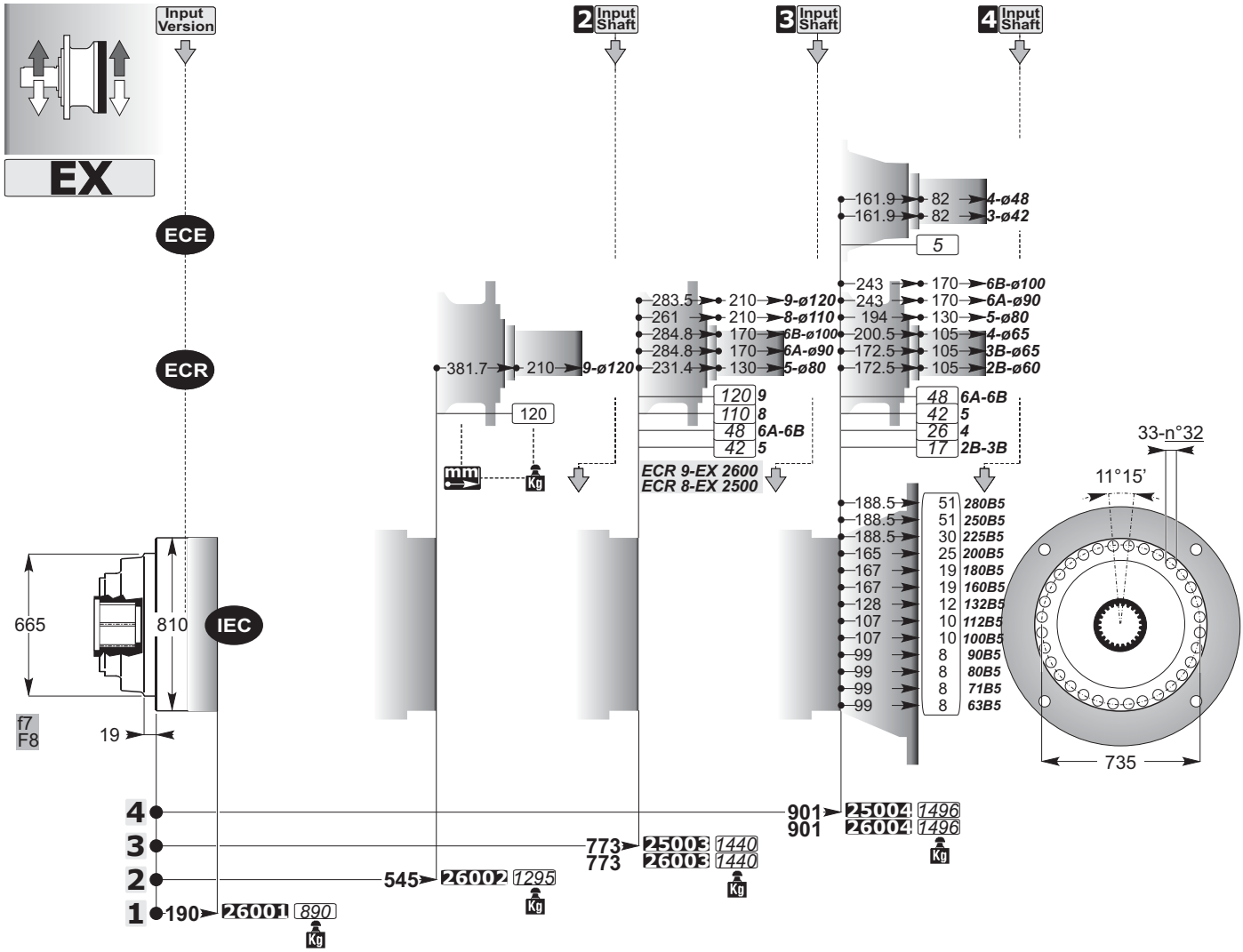


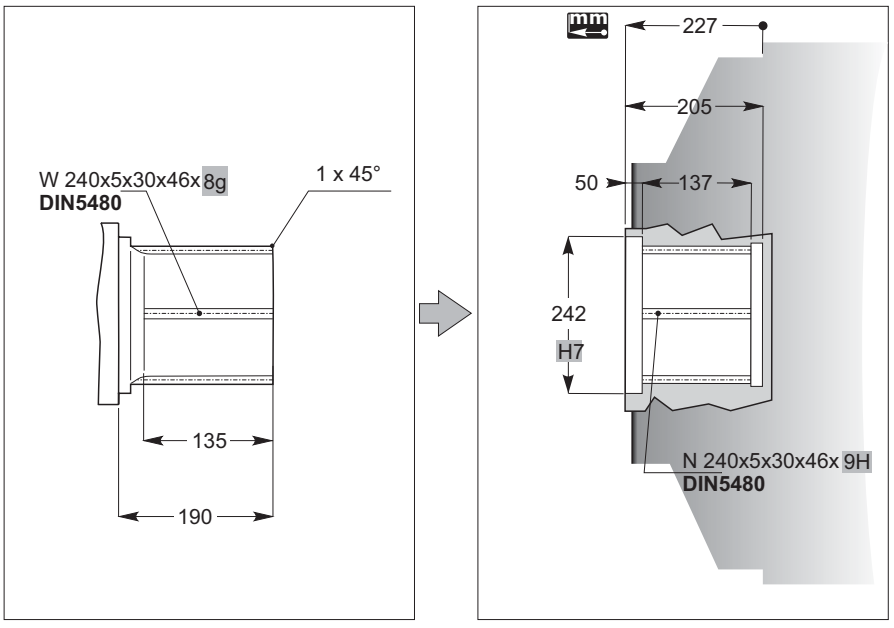




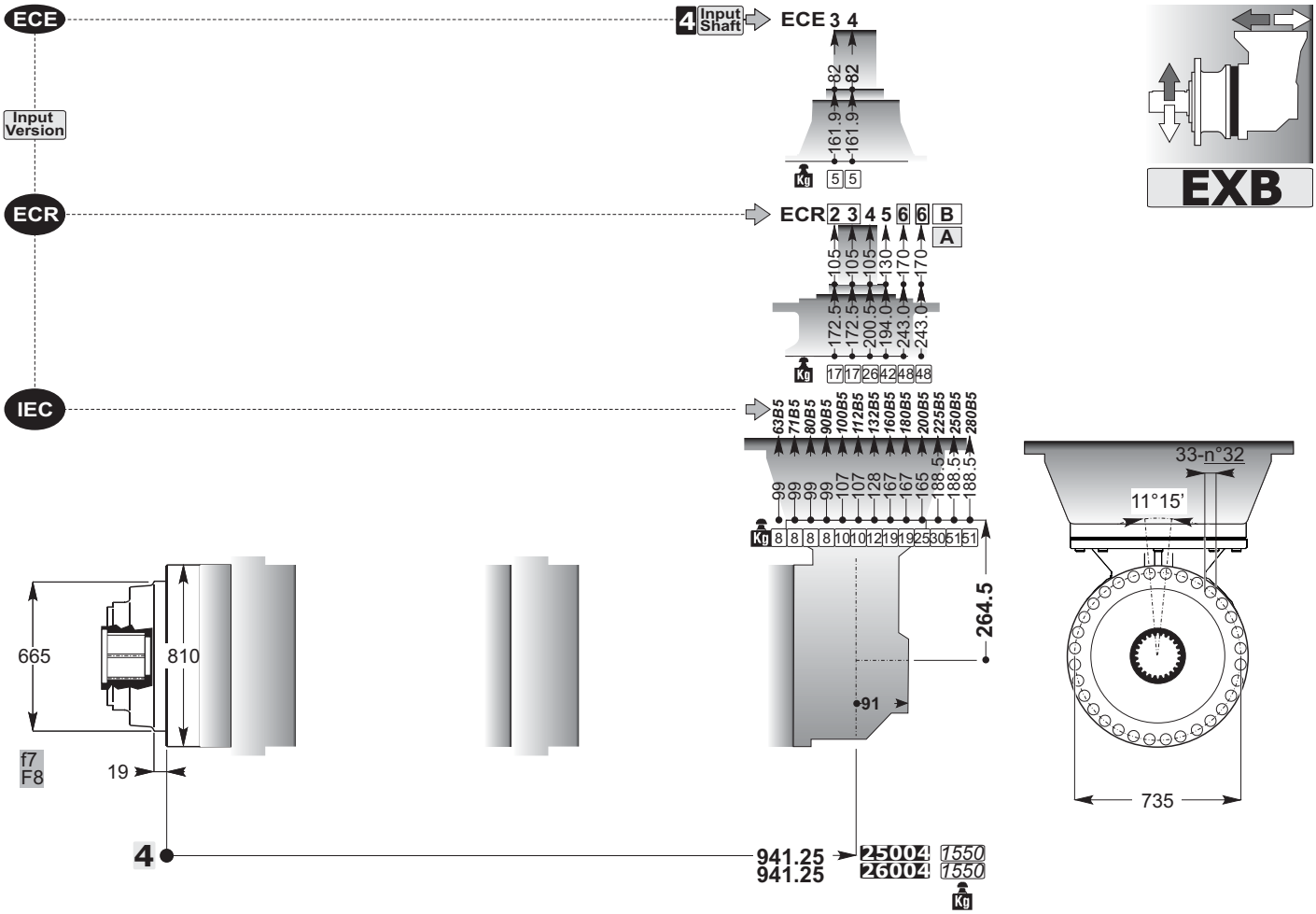
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mm
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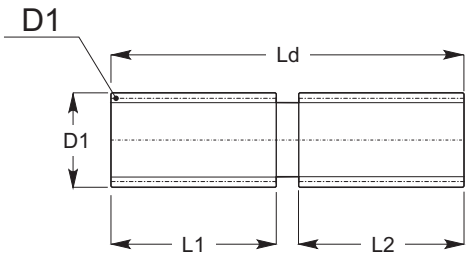




Output Shafts



SD

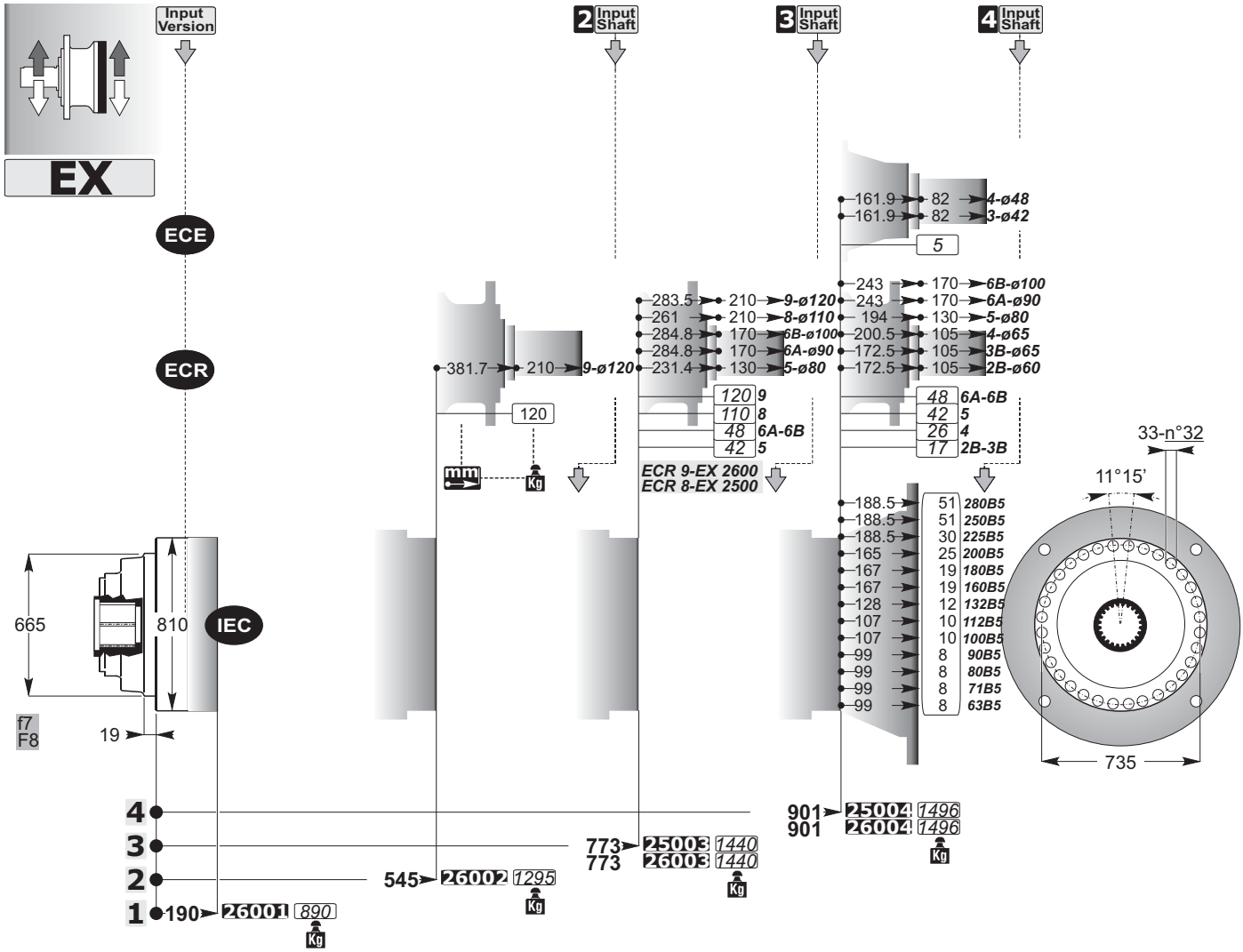


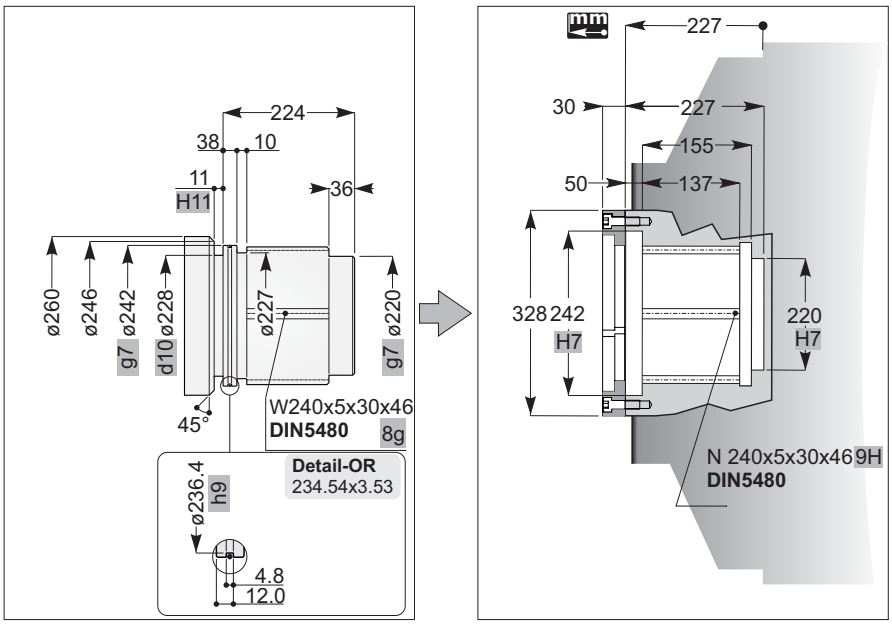
On request

SD

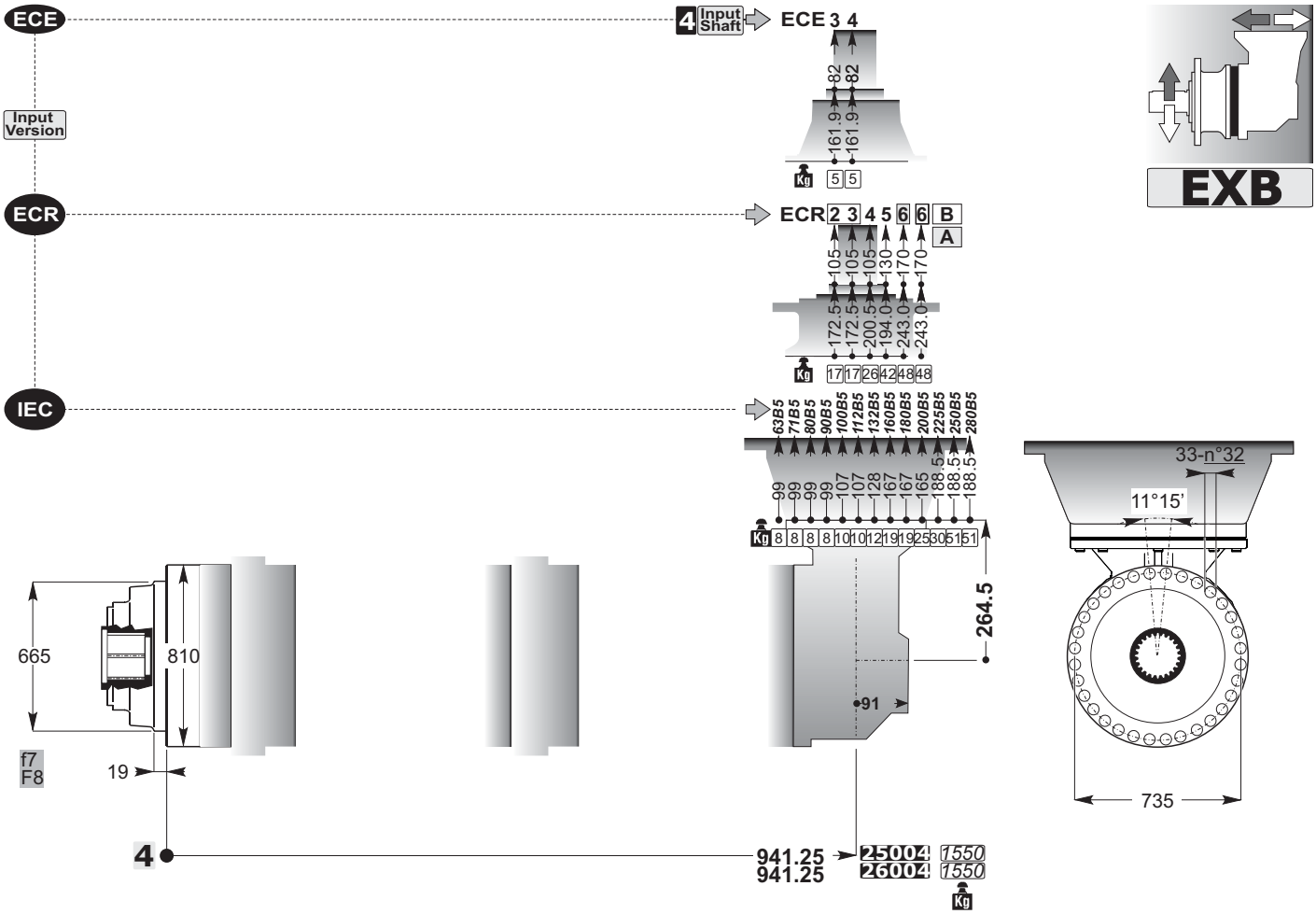


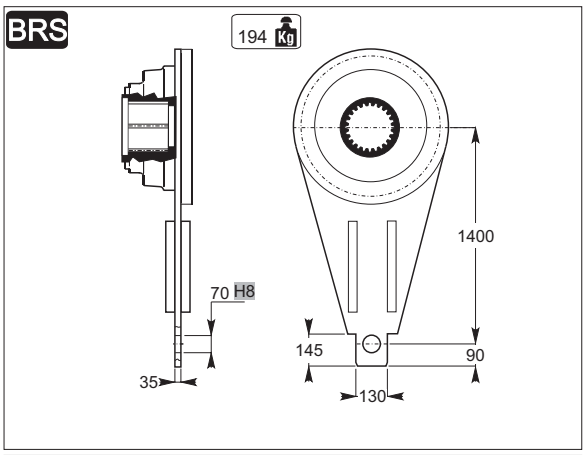
Accessories

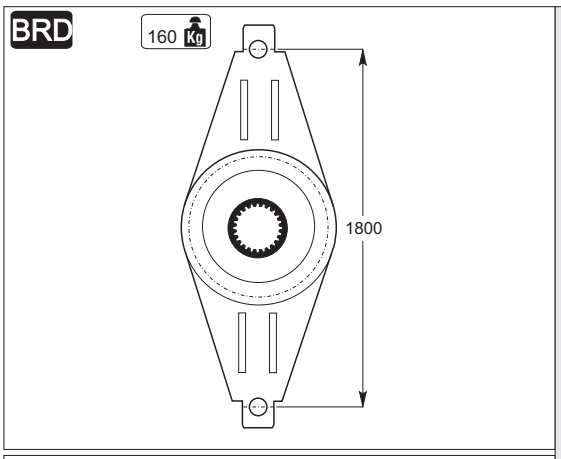


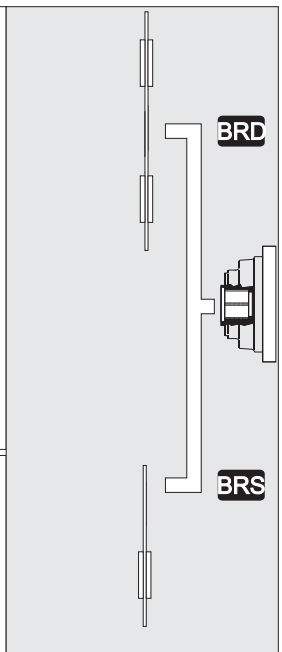


Output Shafts

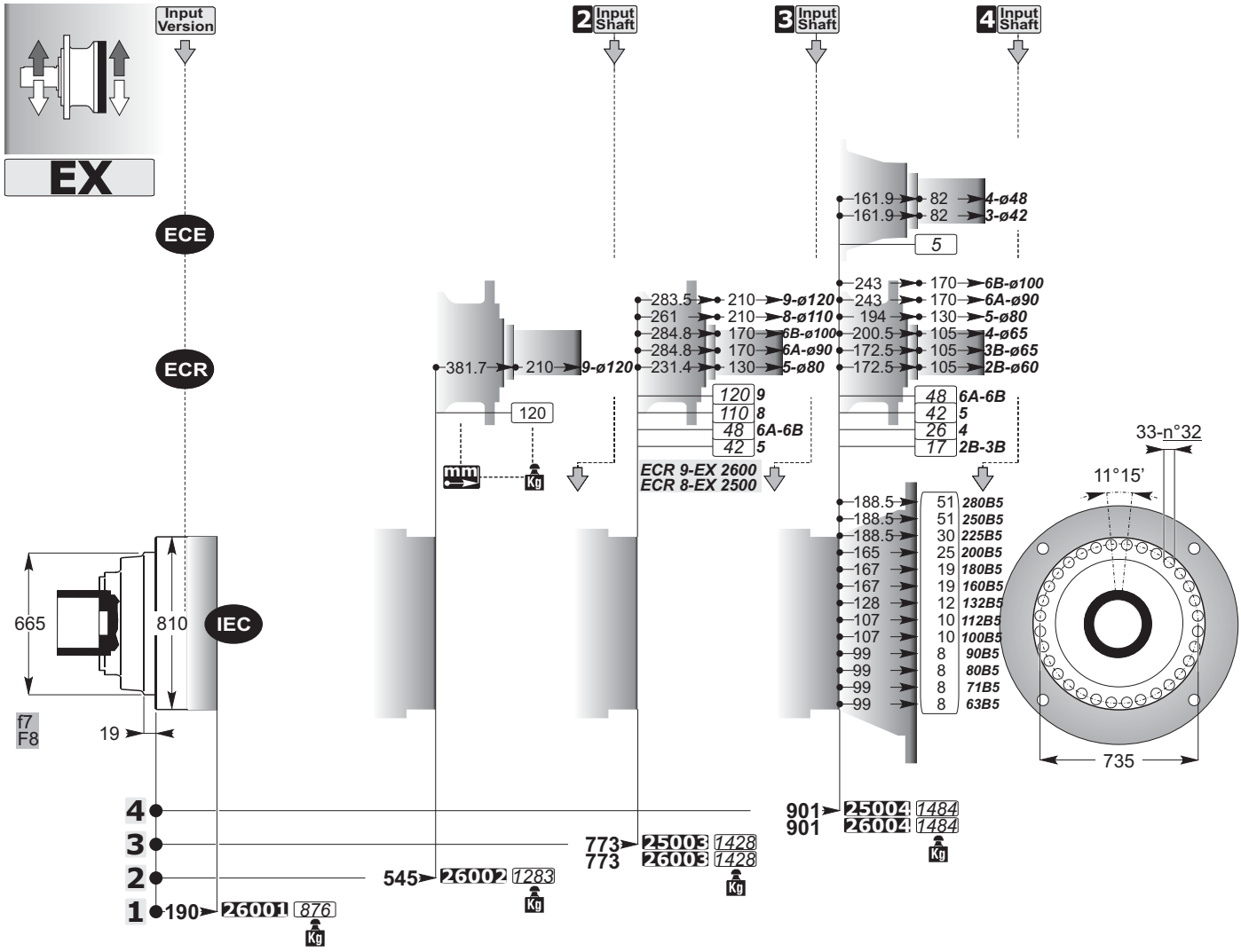


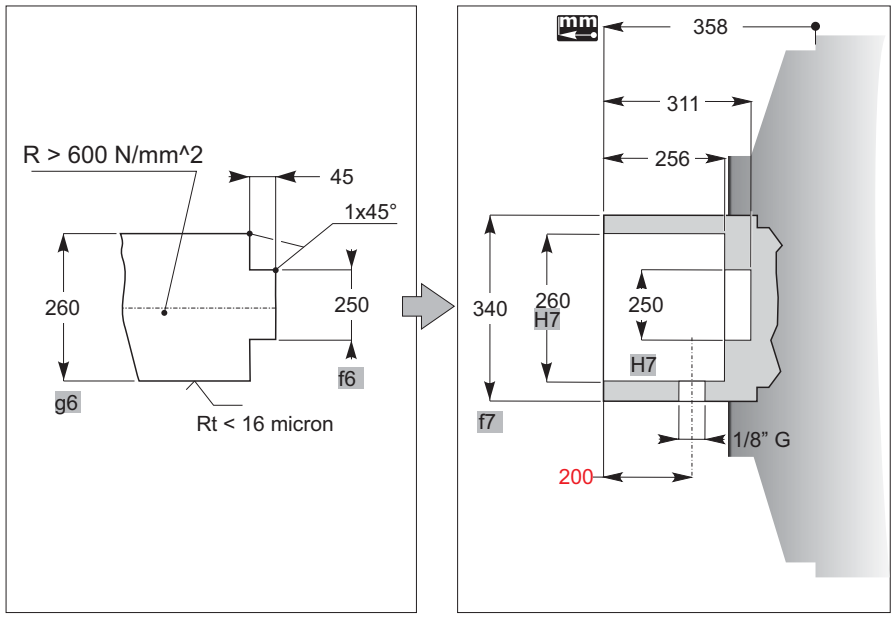




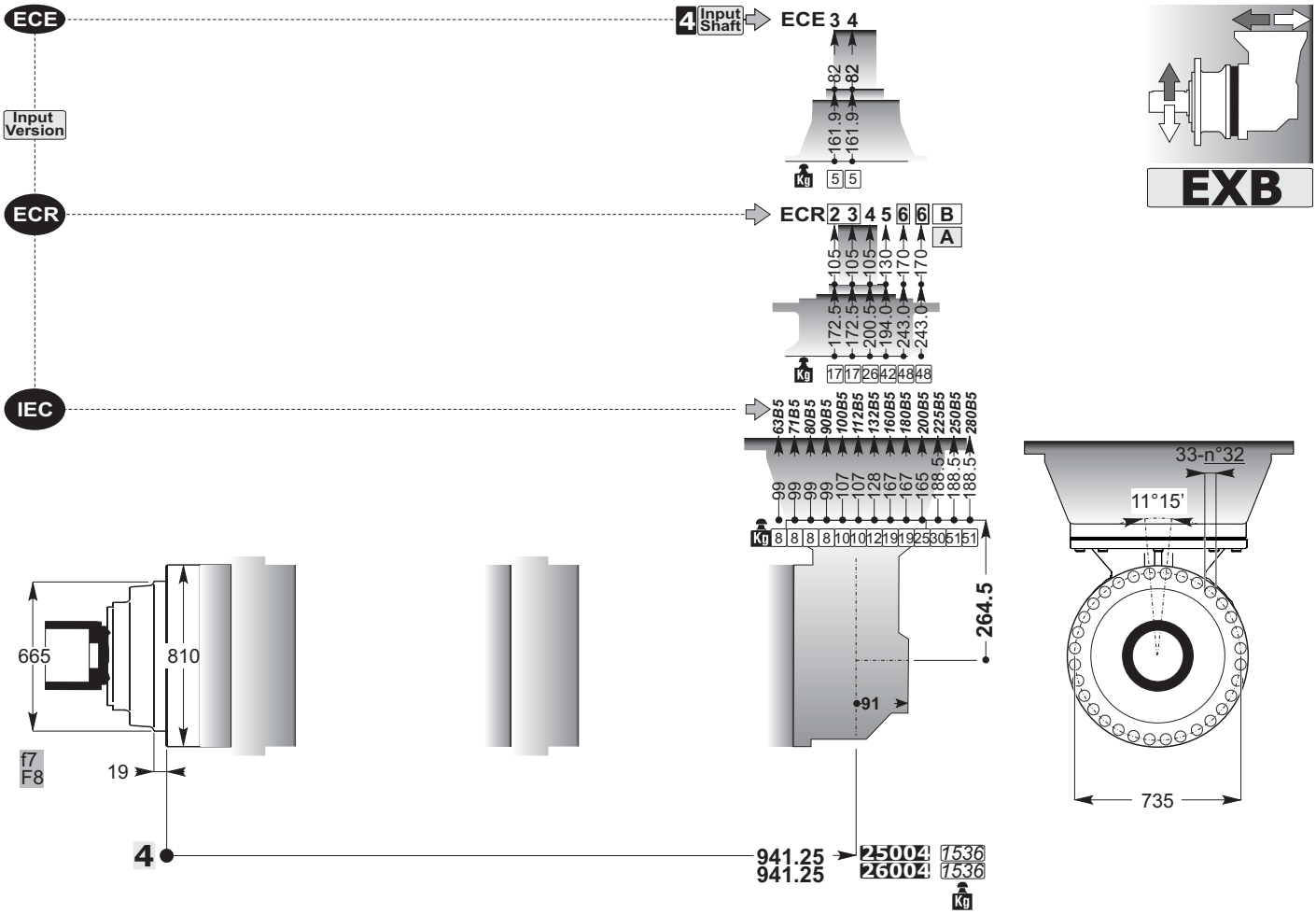


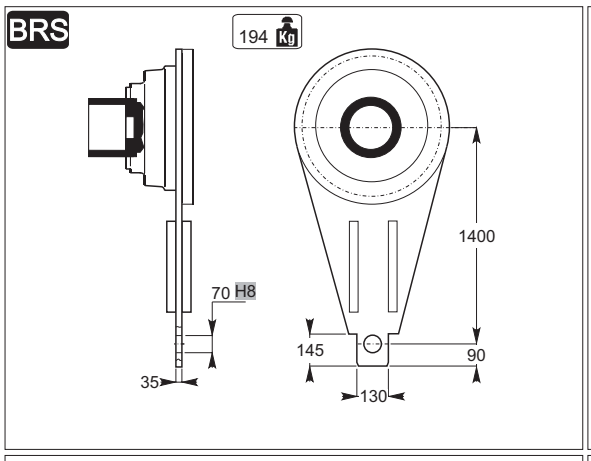
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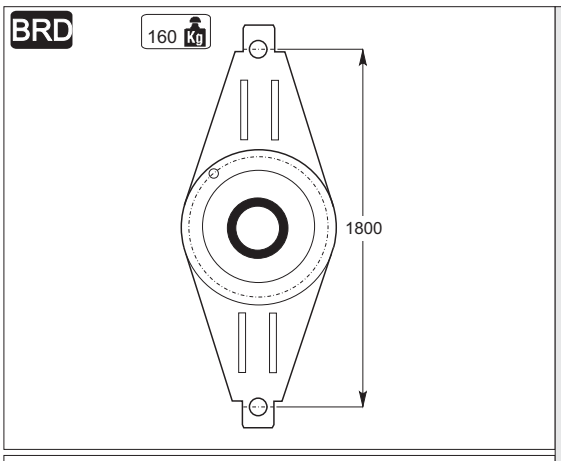


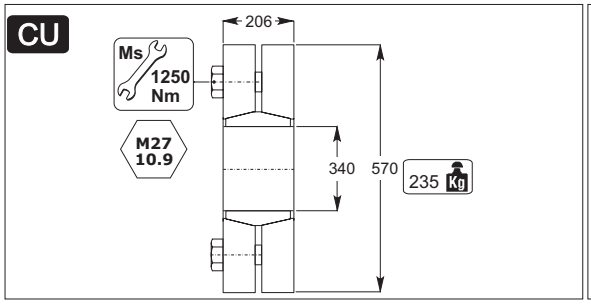


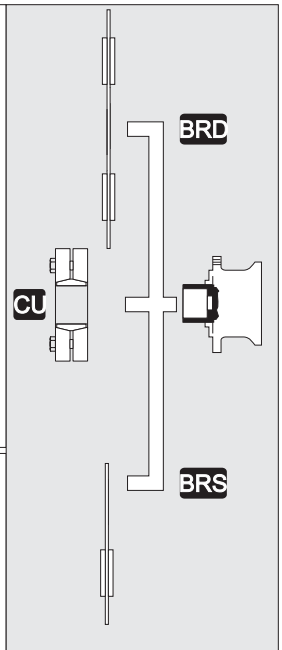
Output Shafts





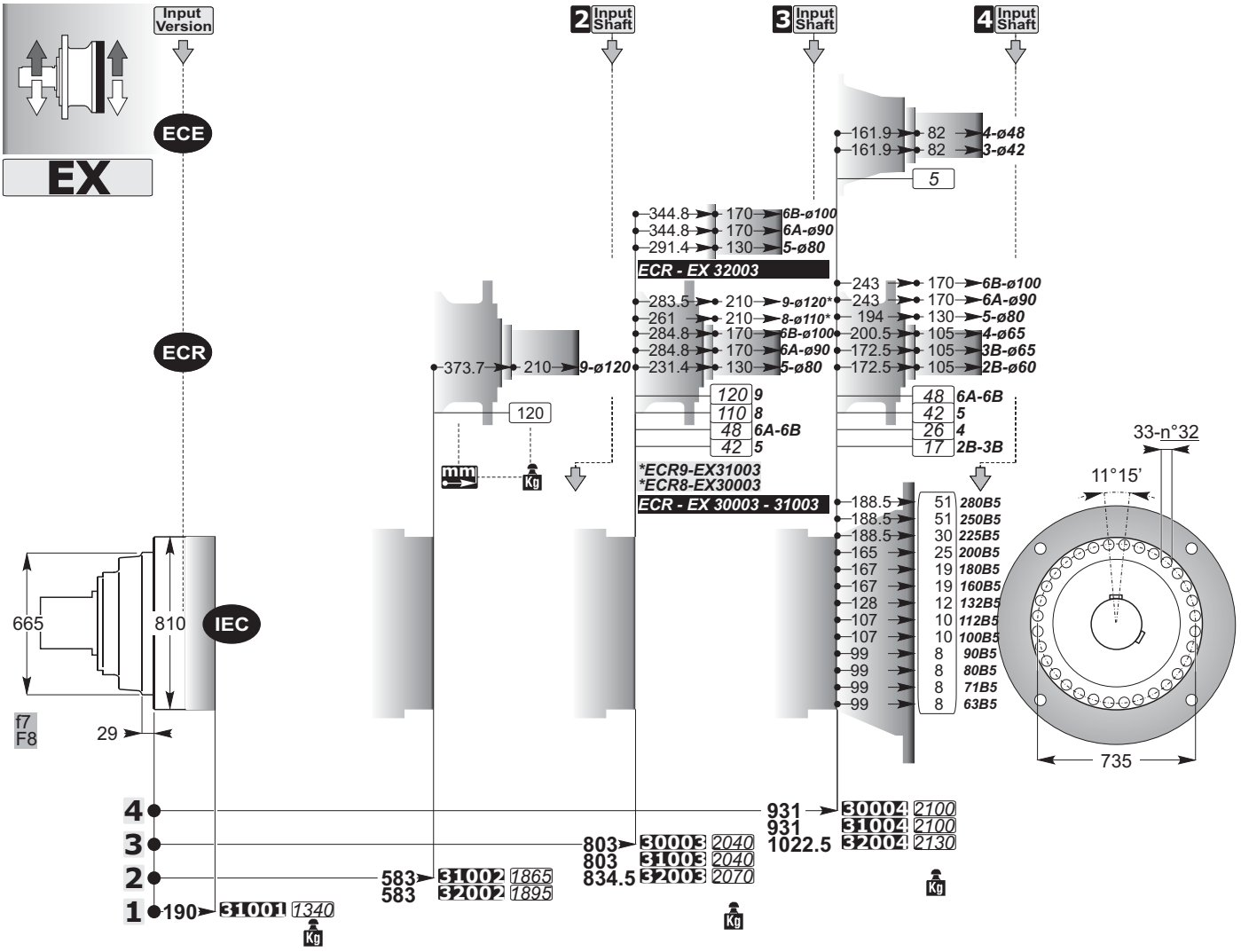


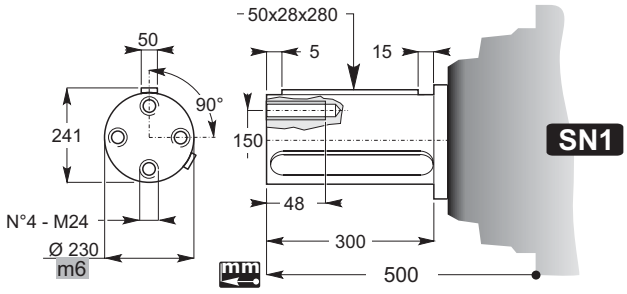


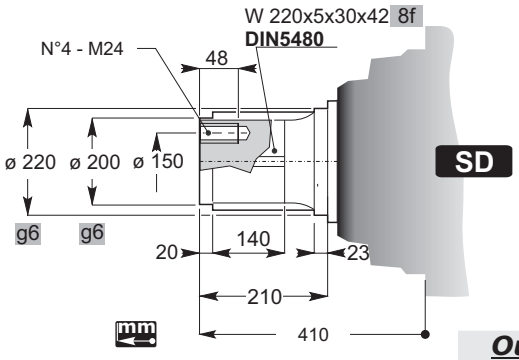


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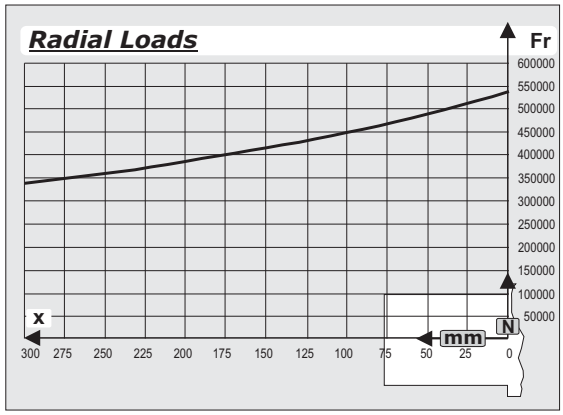
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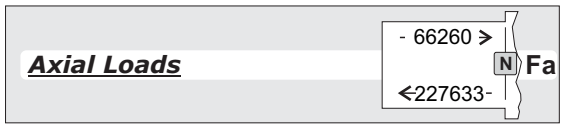


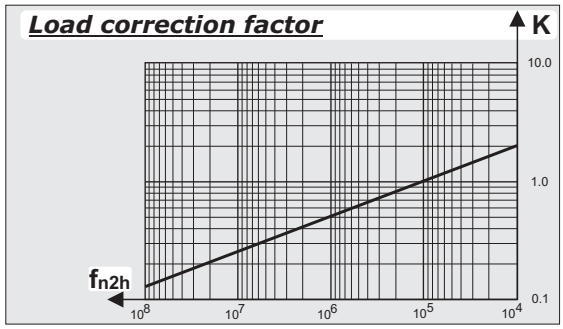


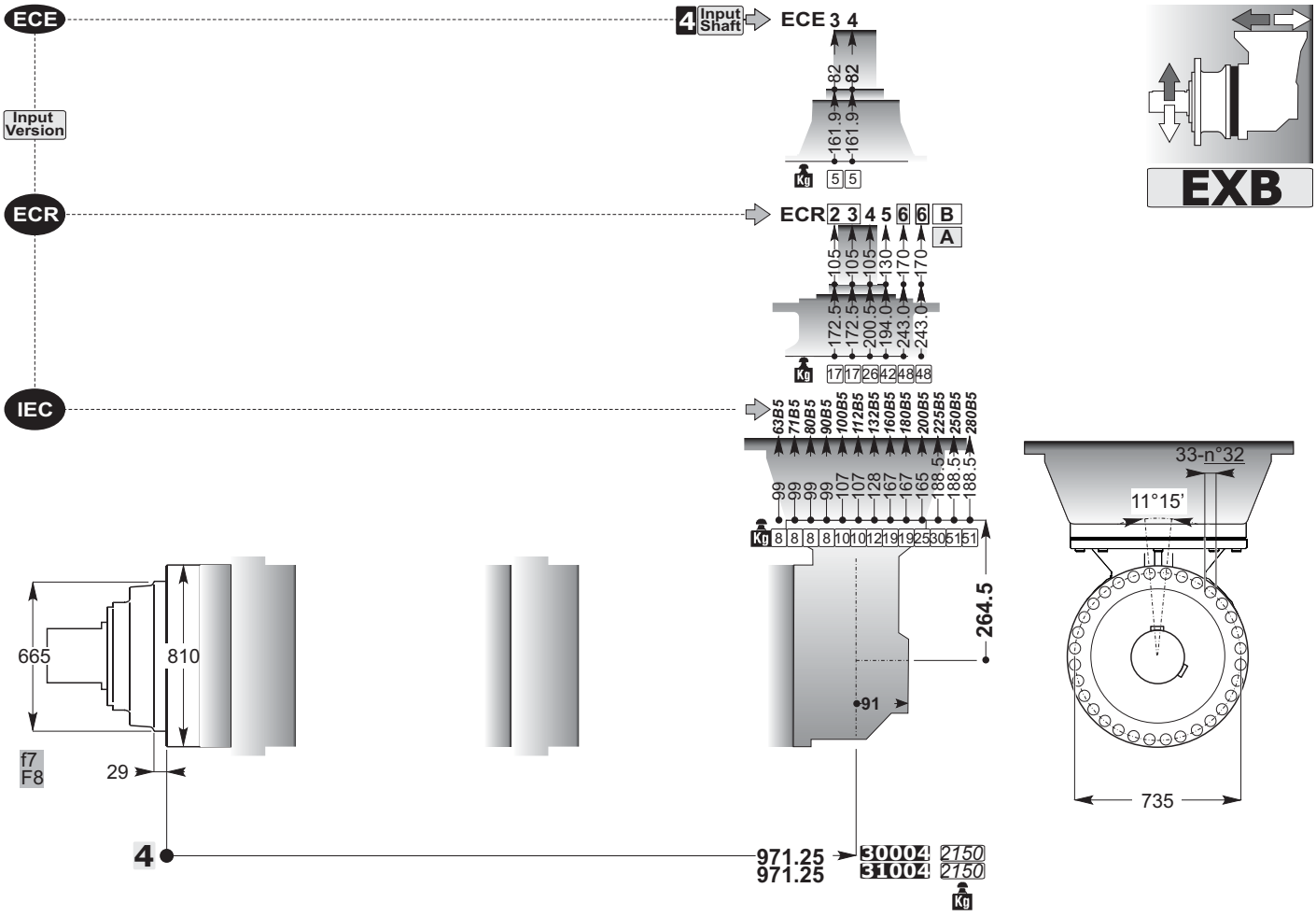


Output Shafts

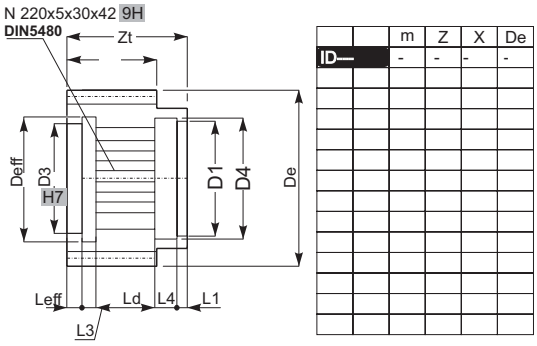








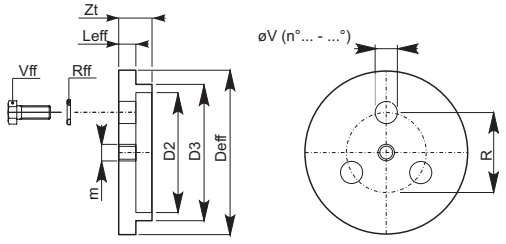
ID



	m	Z	X	De
ID—	-	-	-	-

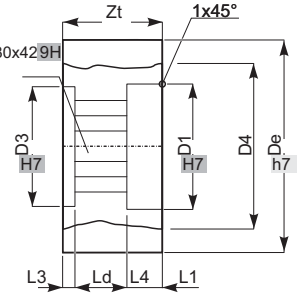
On request

FF

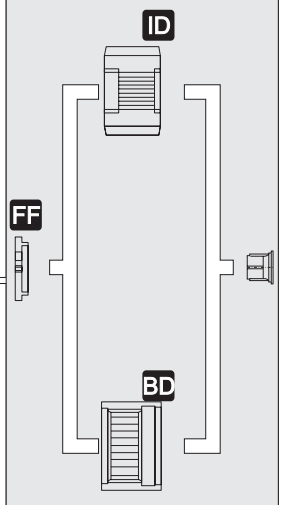


On request

BD

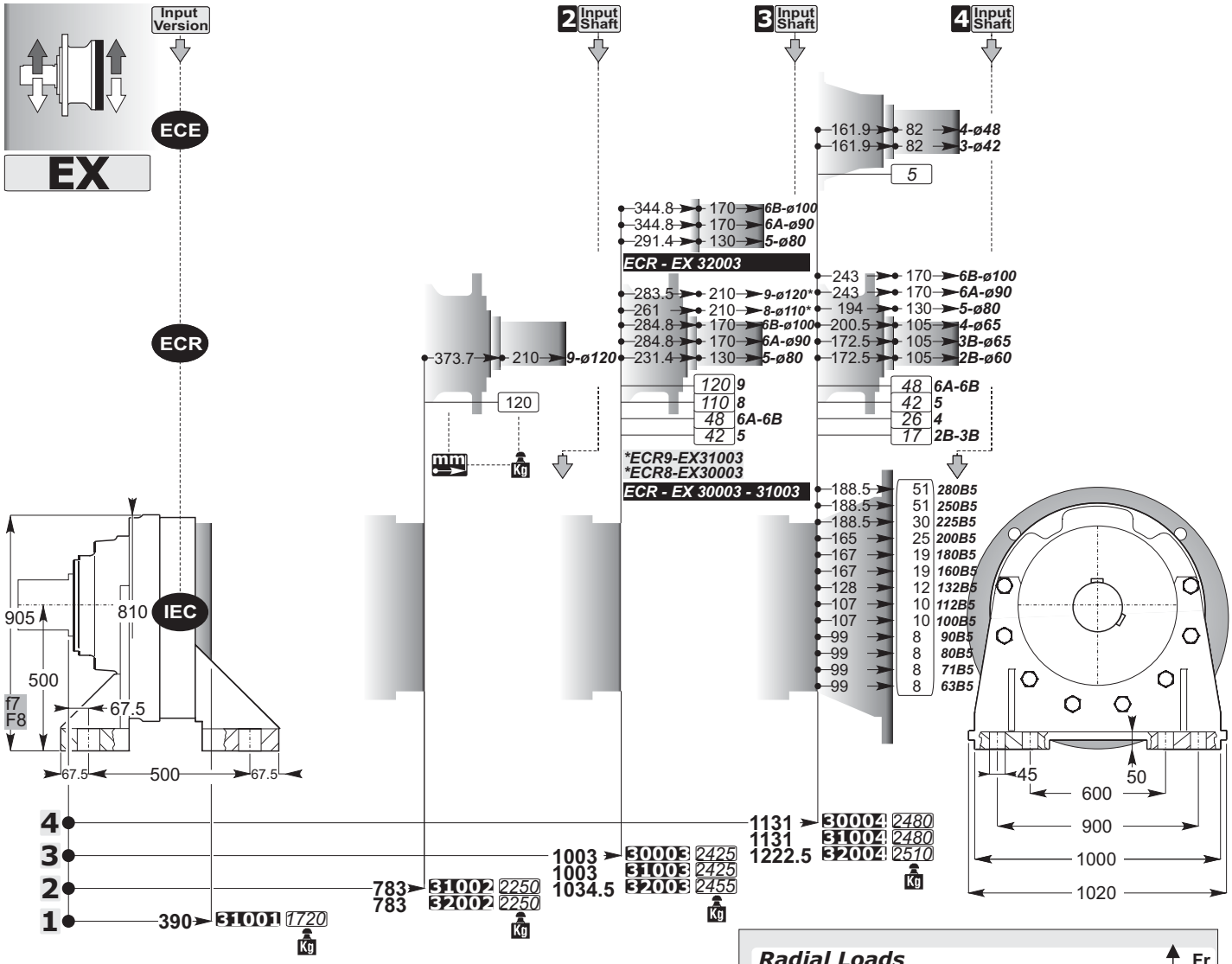


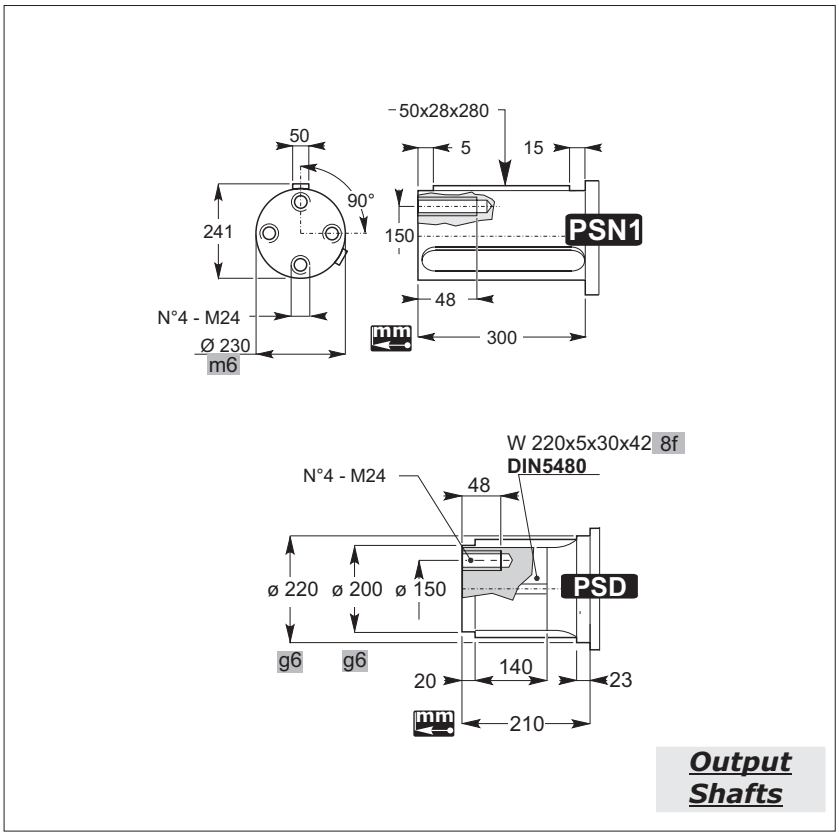
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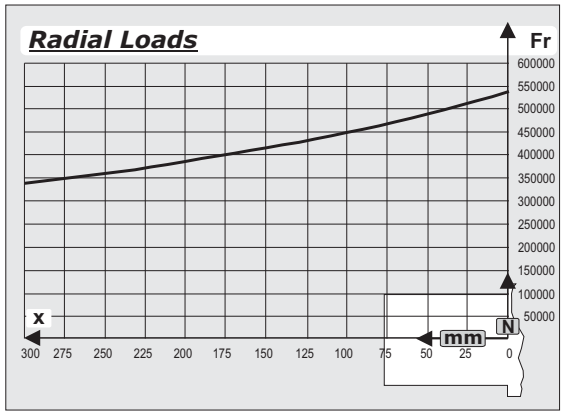


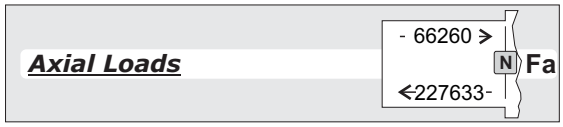
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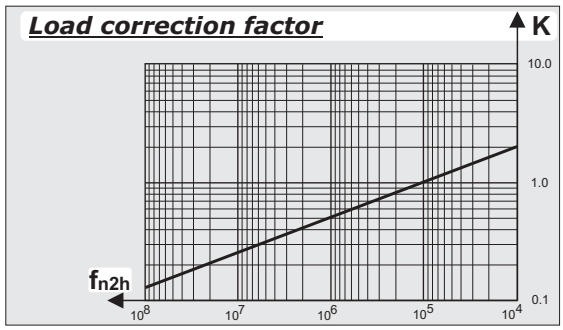
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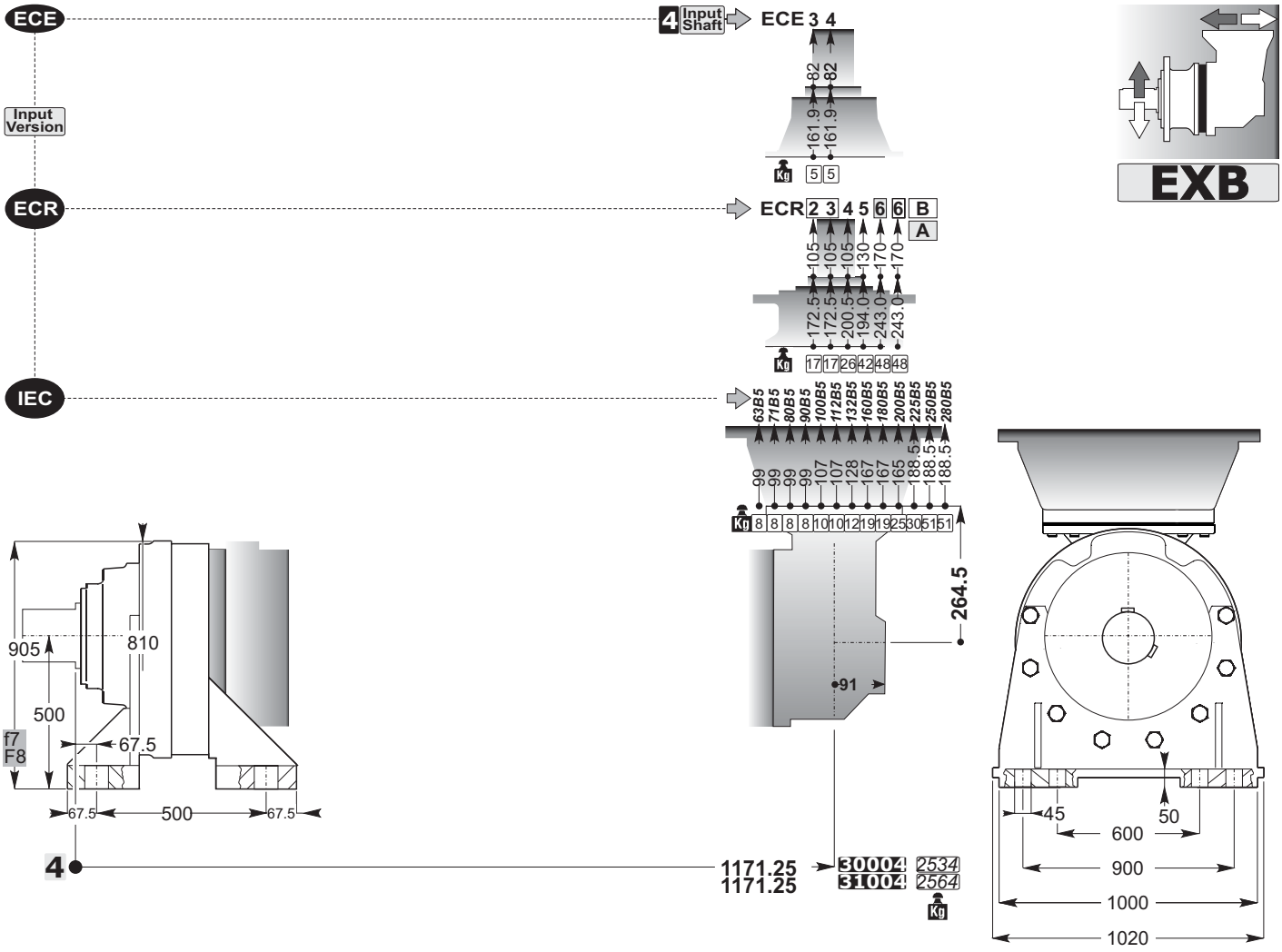

Input Version
ECE
EX
ECR
IEC
2 Input Shaft
3 Input Shaft
4 Input Shaft
ECR - EX 32003
ECR - EX 30003 - 31003
*ECR9-EX31003
*ECR8-EX30003
905
810
500
f7
F8
67.5
500
67.5
67.5
45
50
600
900
1000
1020
4
3
2
1
390 31001 1720
783 31002 2250
783 32002 2250
1003 30003 2425
1003 31003 2425
1034.5 32003 2455
1131 30004 2480
1131 31004 2480
1222.5 32004 2510


50x28x280
50
5
15
90°
241
150
PSN1
48
N°4 - M24
Ø 230
m6
300
W 220x5x30x42 8f
DIN5480
N°4 - M24
48
ø 220
ø 200
ø 150
PSD
g6
g6
20
140
23
210
Output Shafts

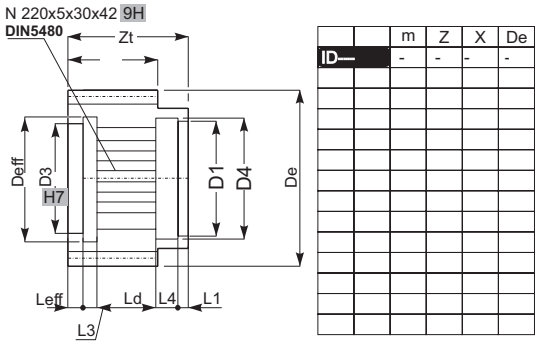

Radial Loads
Fr
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
x
300 275 250 225 200 175 150 125 100 75 50 25 0
mm
N


Axial Loads
- 66260 >
N
Fa
<227633-


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4



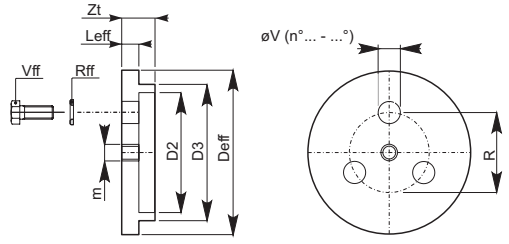
ID



	m	Z	X	De
ID—	-	-	-	-

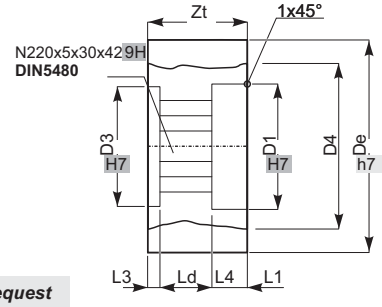
On request

FF

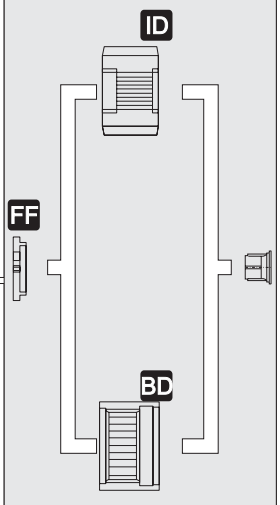


On request

BD

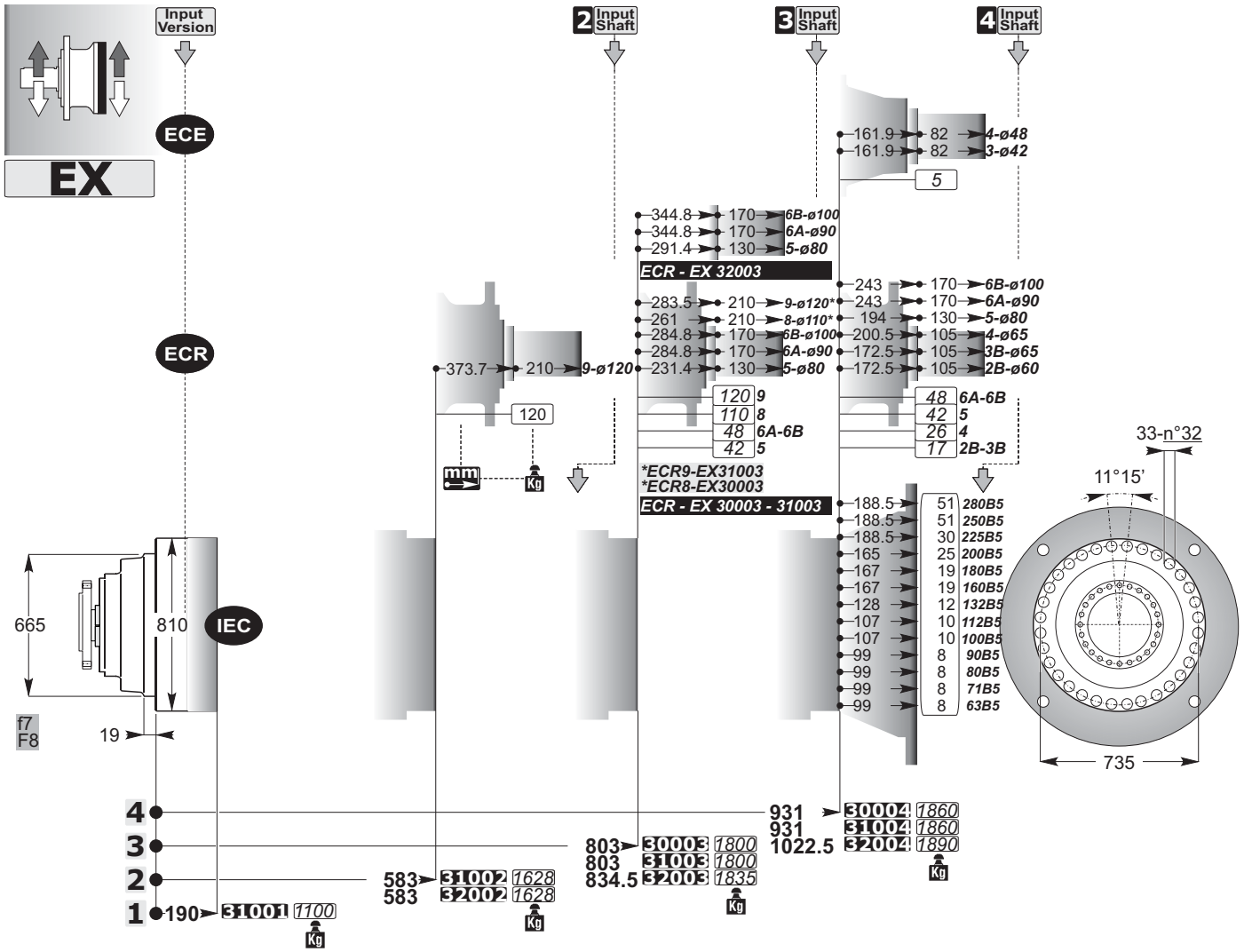


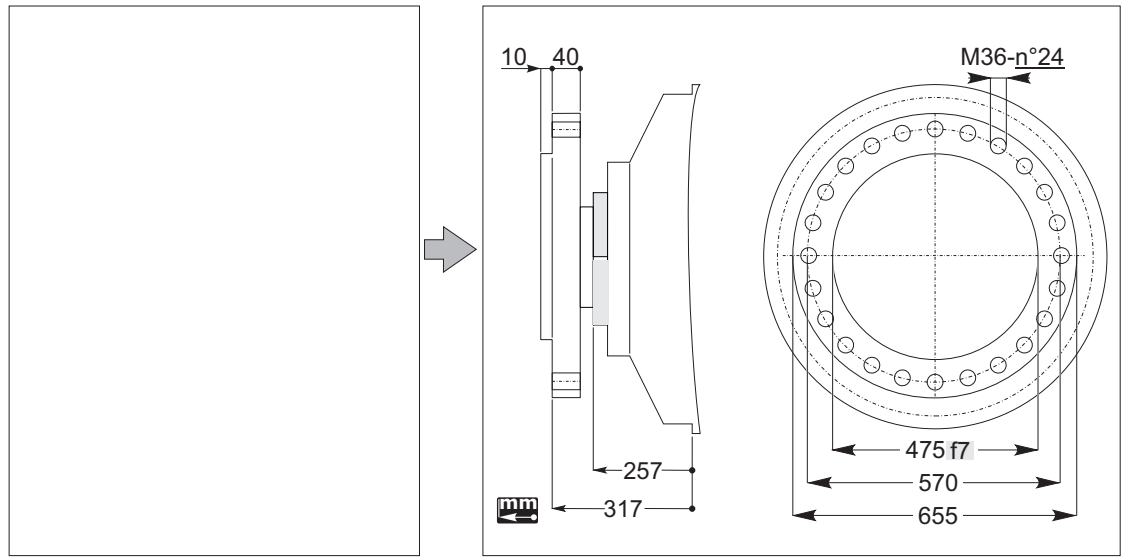
On request



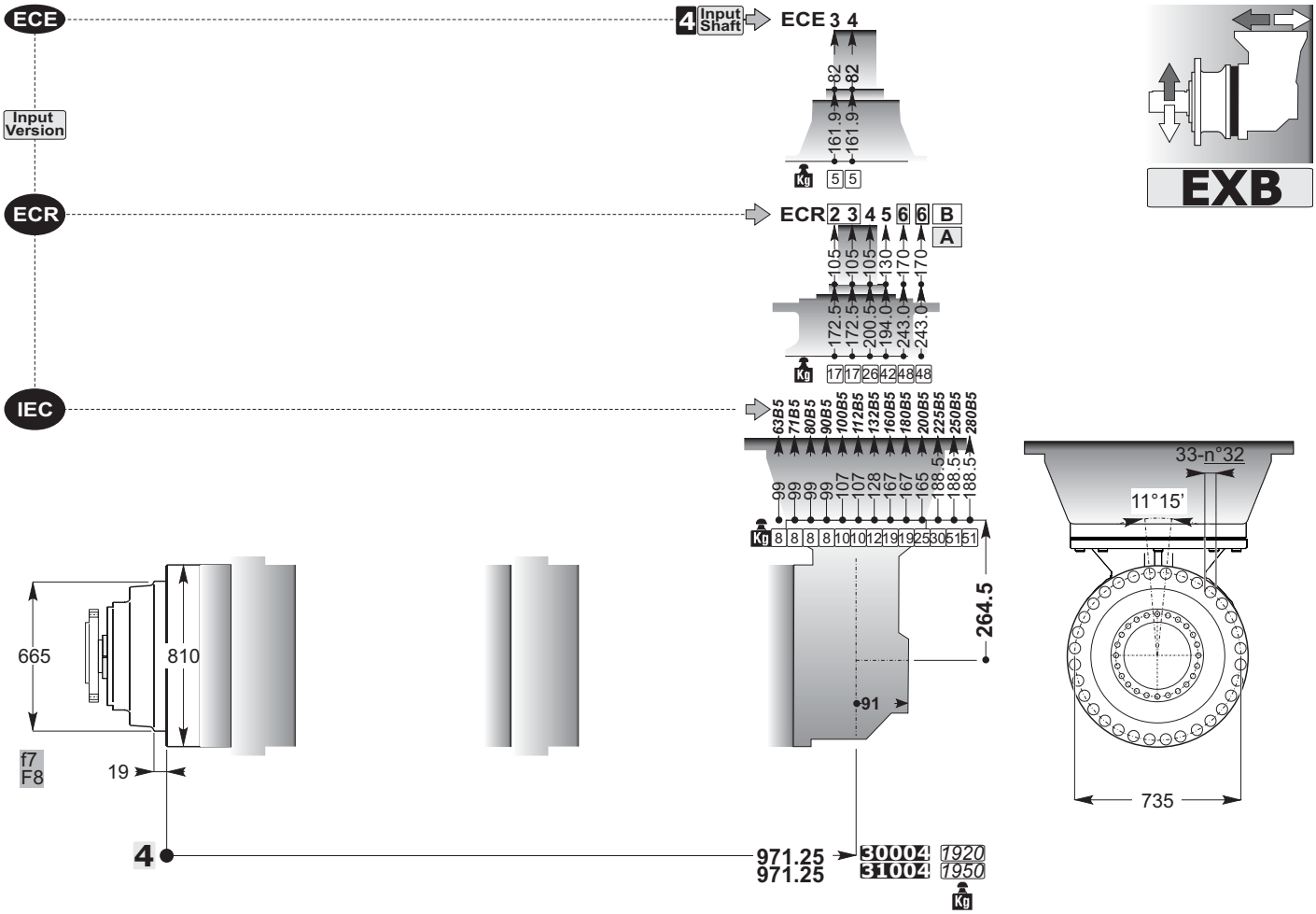
Accessories

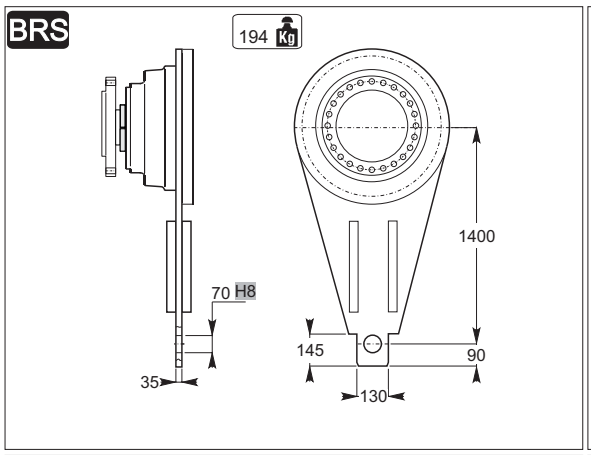
mm
C

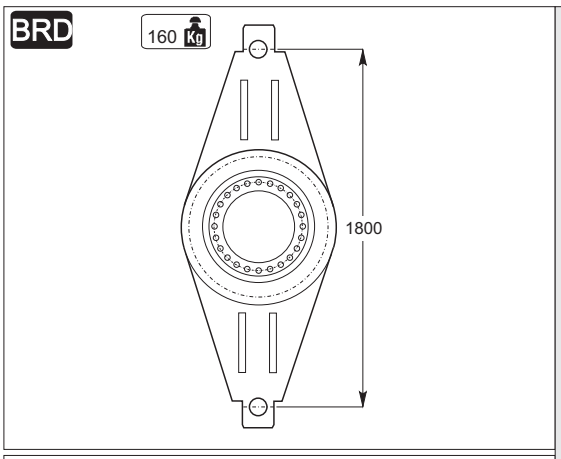


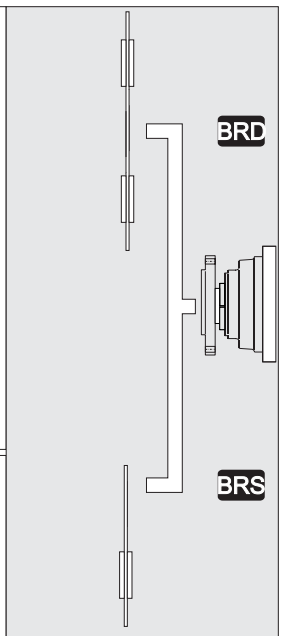


Output Shafts

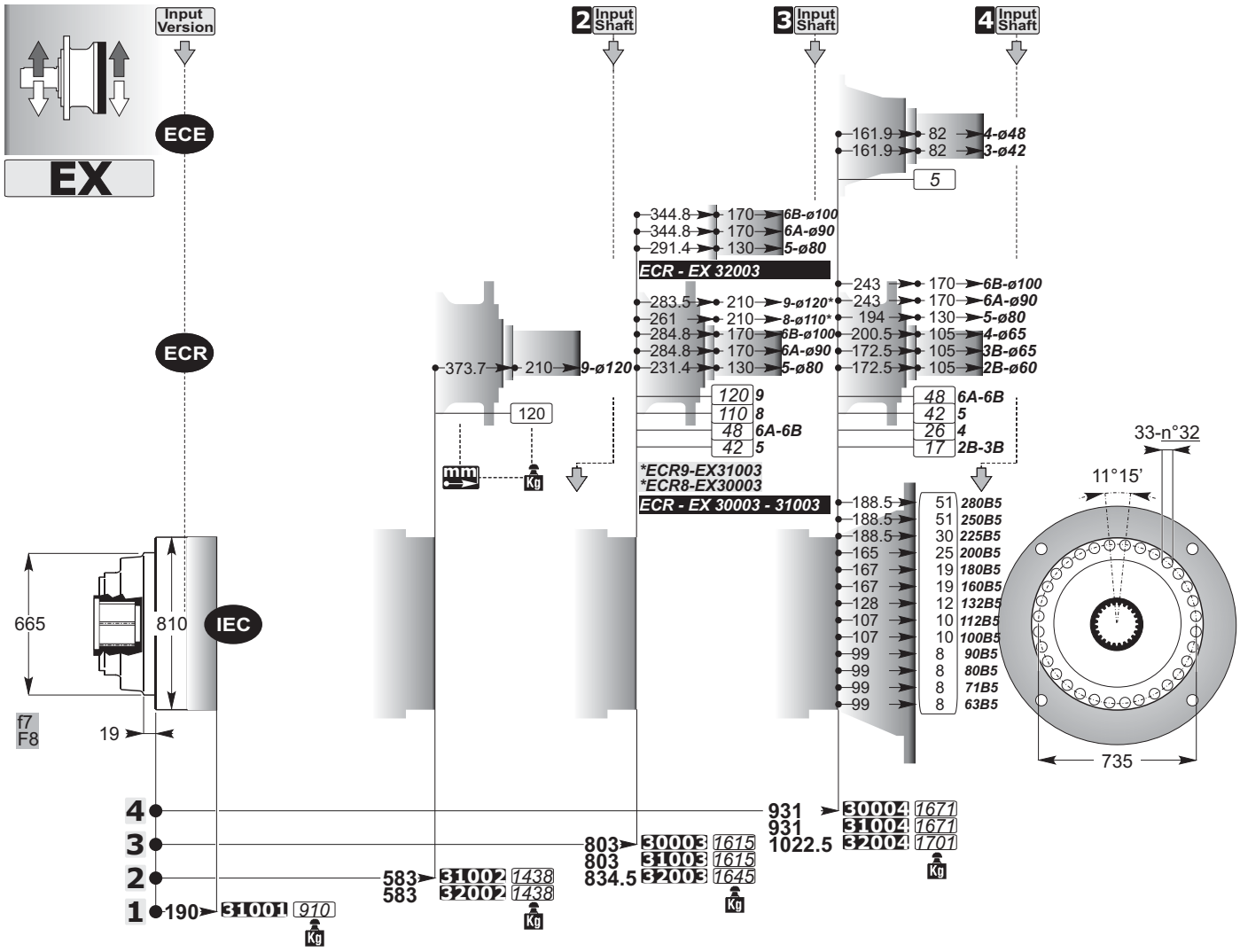


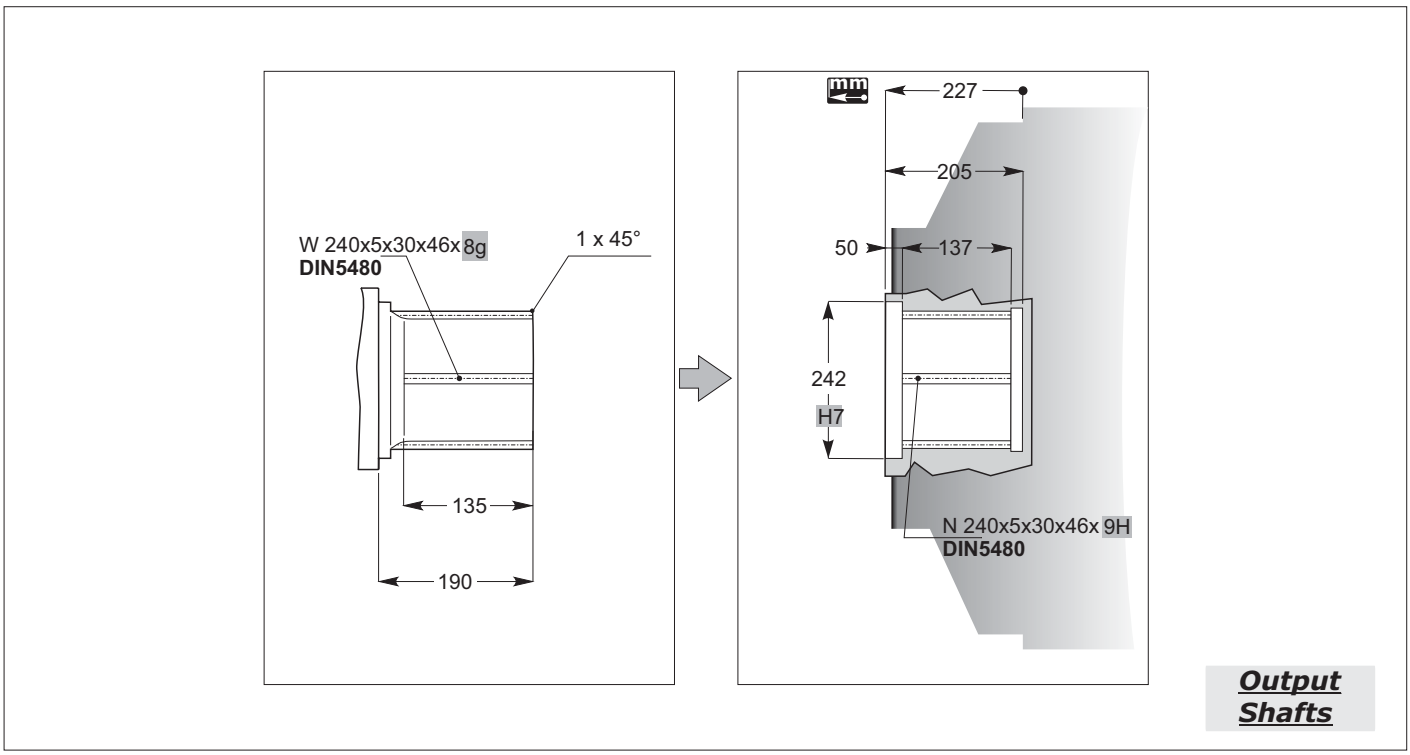


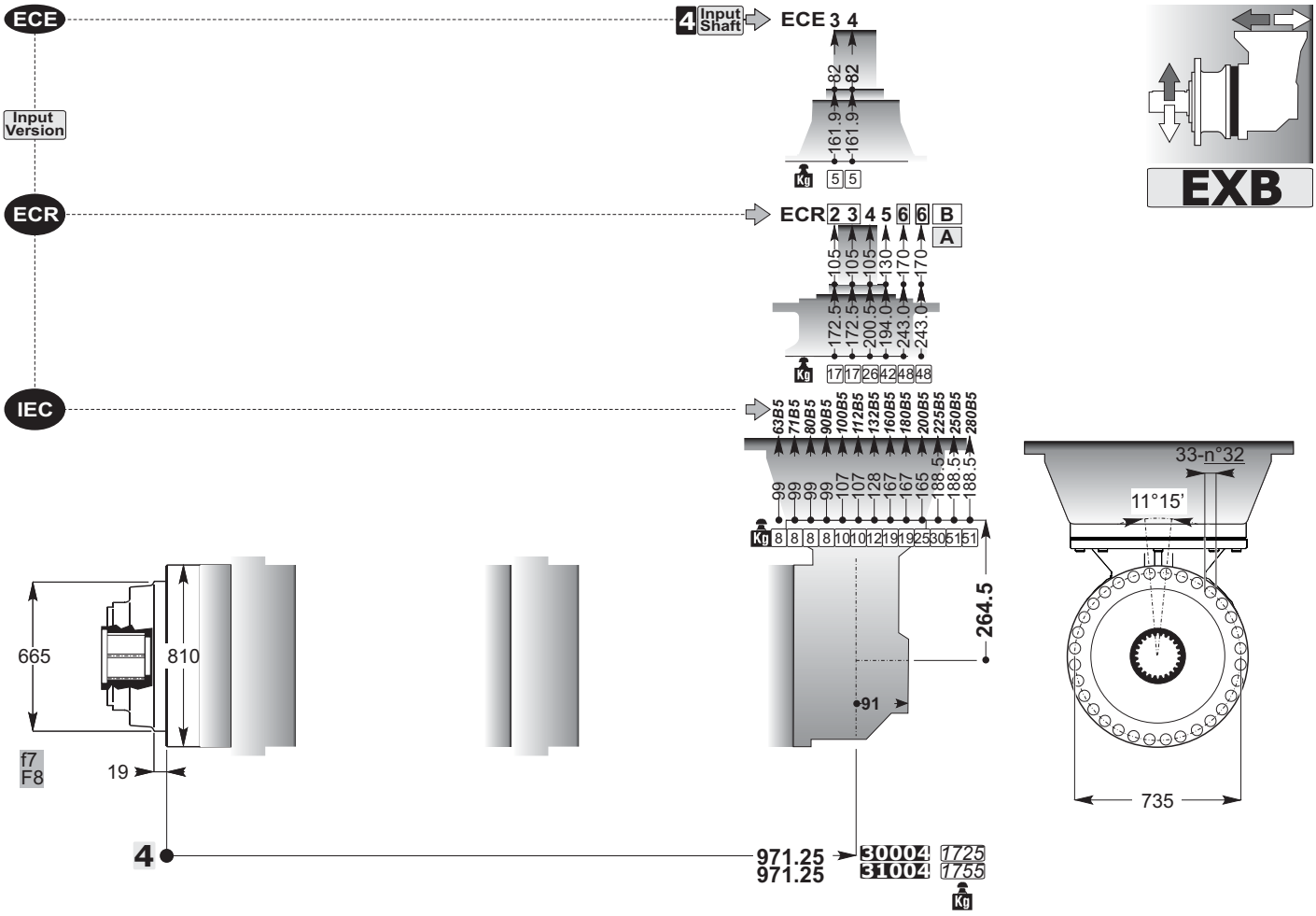




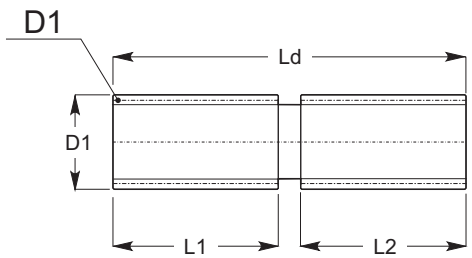
Accessories


Input Version
ECE
EX
ECR
IEC
2 Input Shaft
3 Input Shaft
4 Input Shaft
ECR - EX 32003
*ECR9-EX31003
*ECR8-EX30003
ECR - EX 30003 - 31003
665
810
19
f7
F8
120
mm
Kg
33-n°32
11°15'
735
4
3
2
1
190 31001 910
583 31002 1438
583 32002 1438
803 30003 1615
803 31003 1615
834.5 32003 1645
931 30004 1671
931 31004 1671
1022.5 32004 1701


W 240x5x30x46x 8g
DIN5480
1 x 45°
135
190
mm
227
205
50
137
242
H7
N 240x5x30x46x 9H
DIN5480
Output Shafts



SD

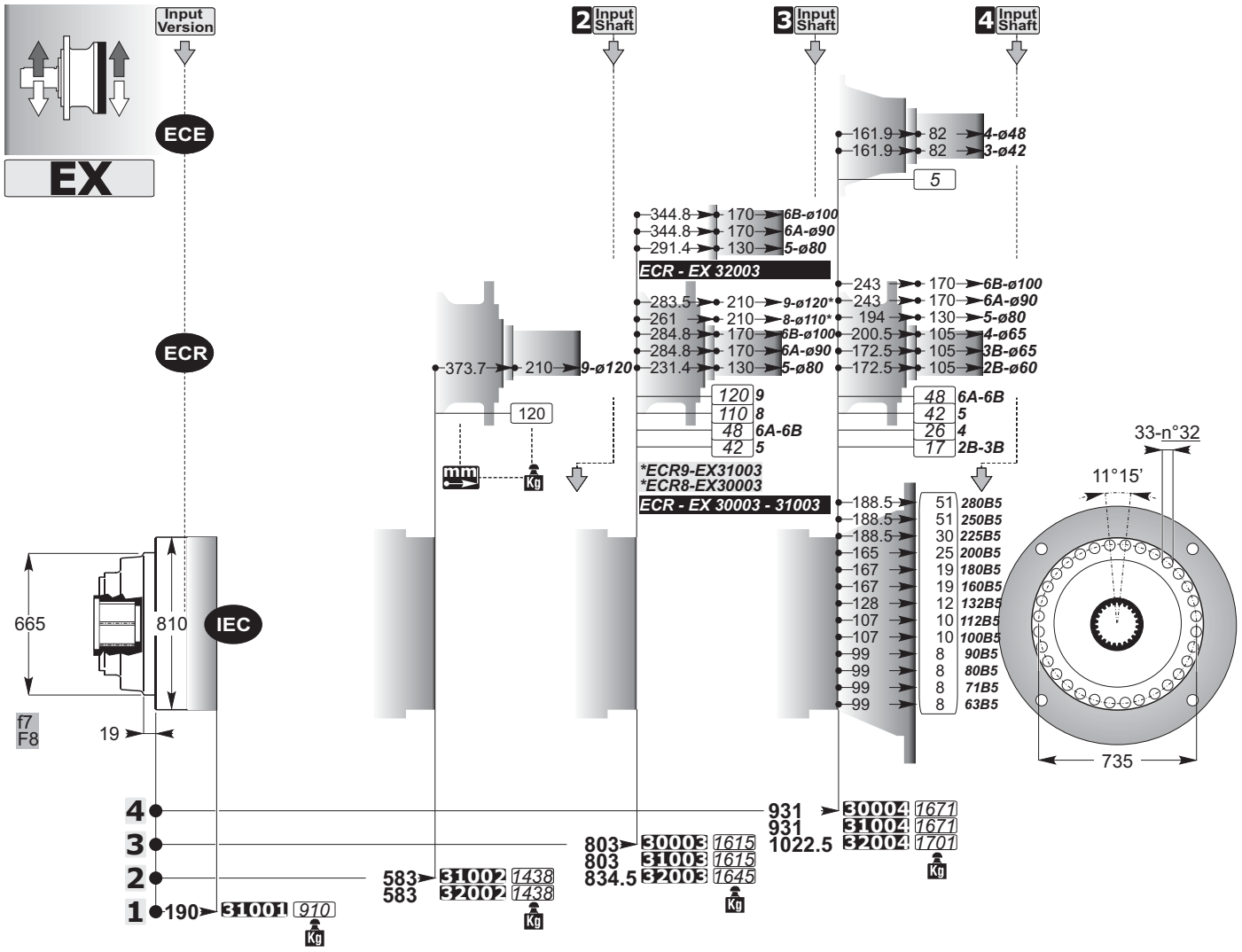


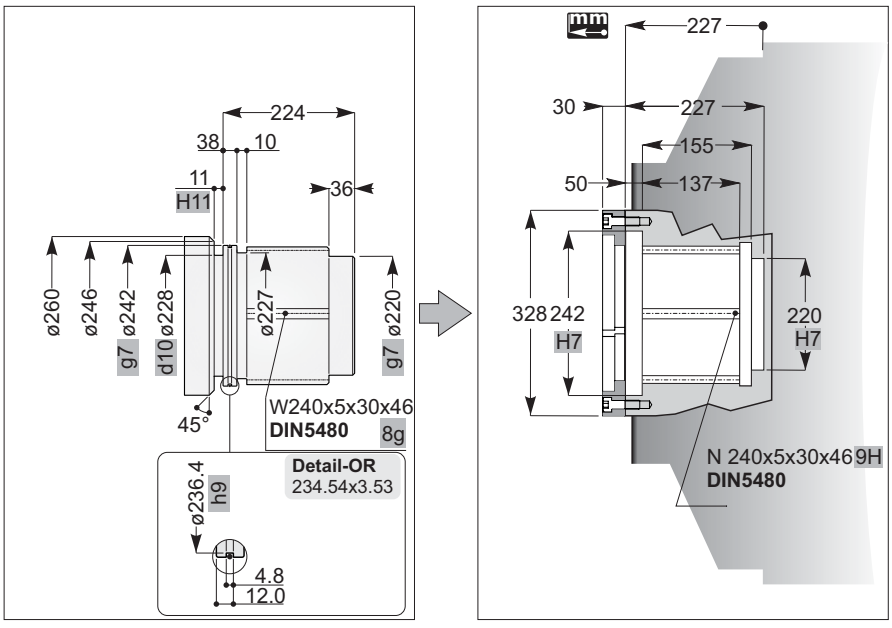
On request

SD

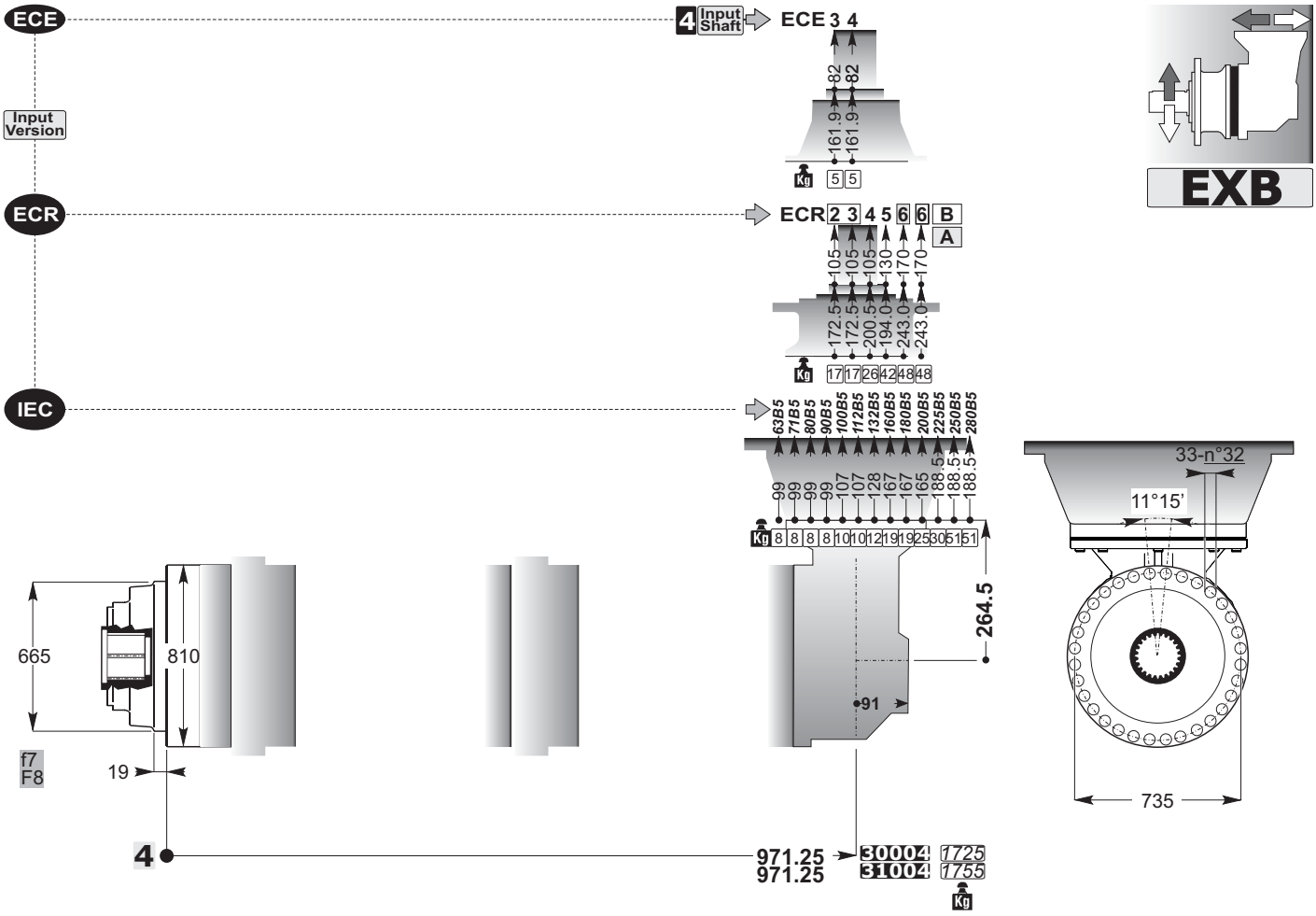


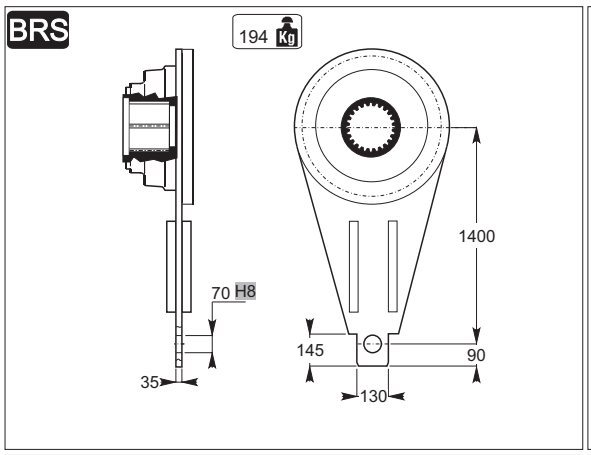
Accessories

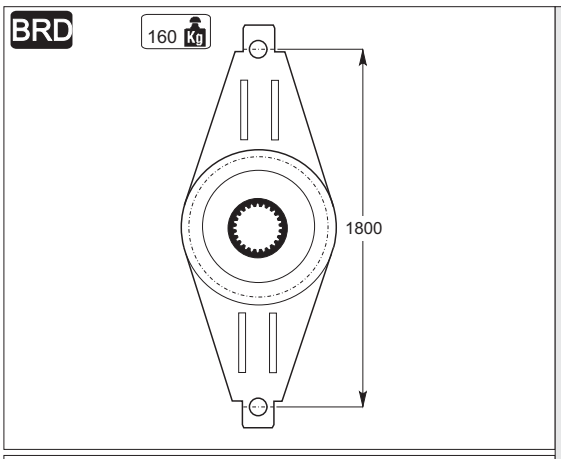


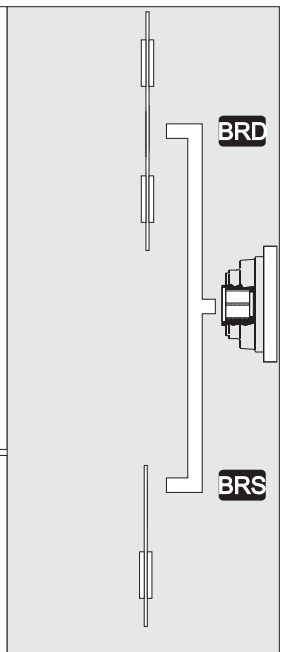


Output Shafts



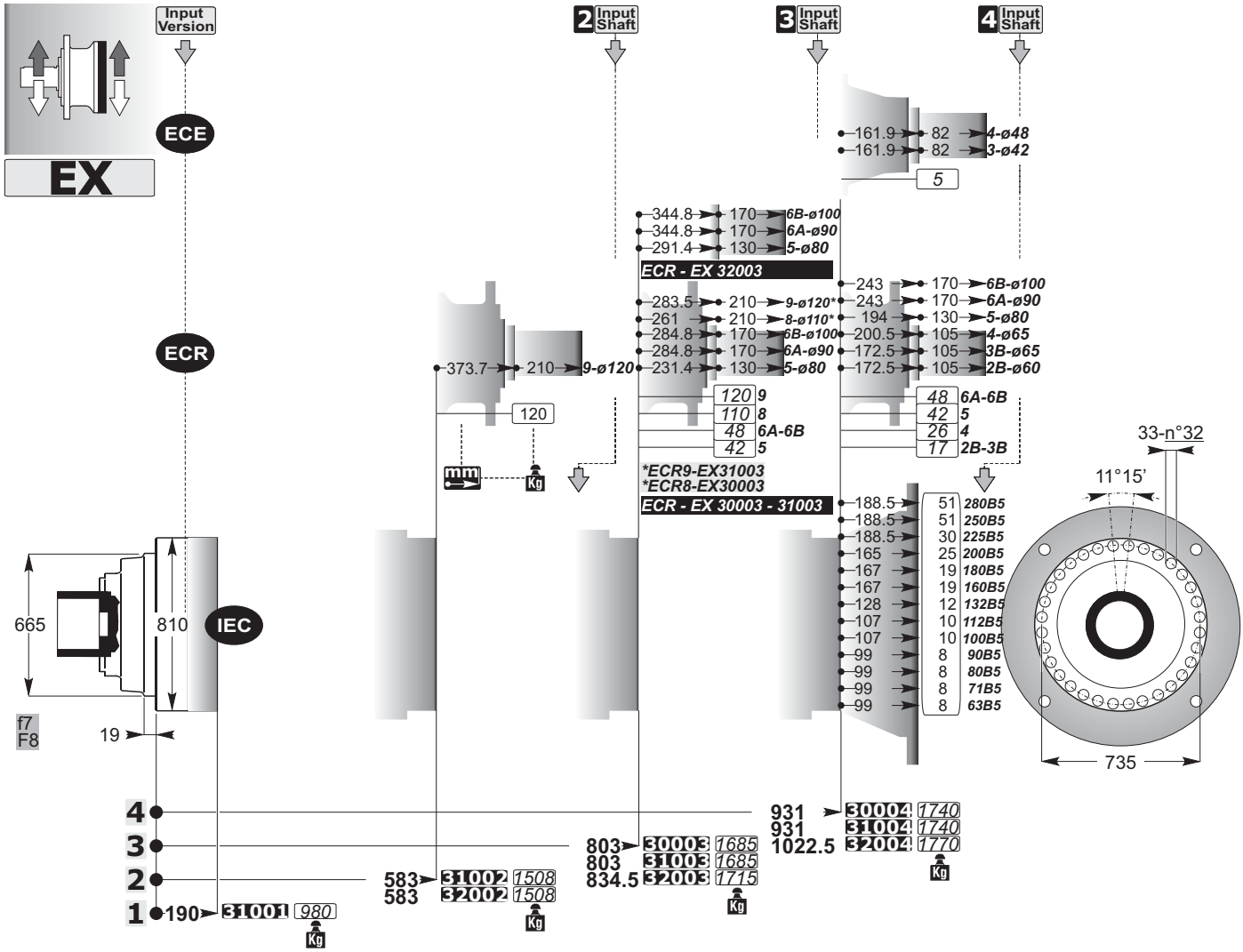


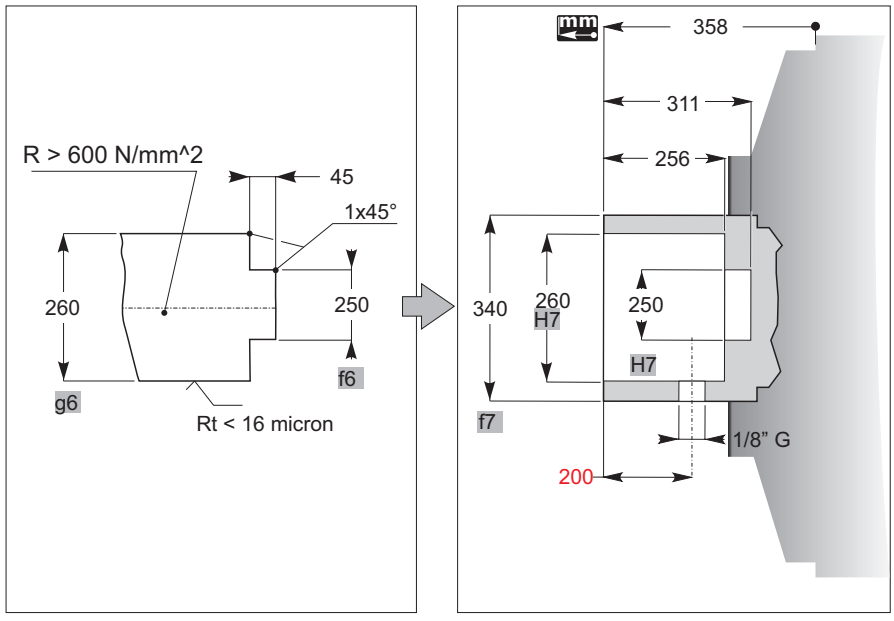




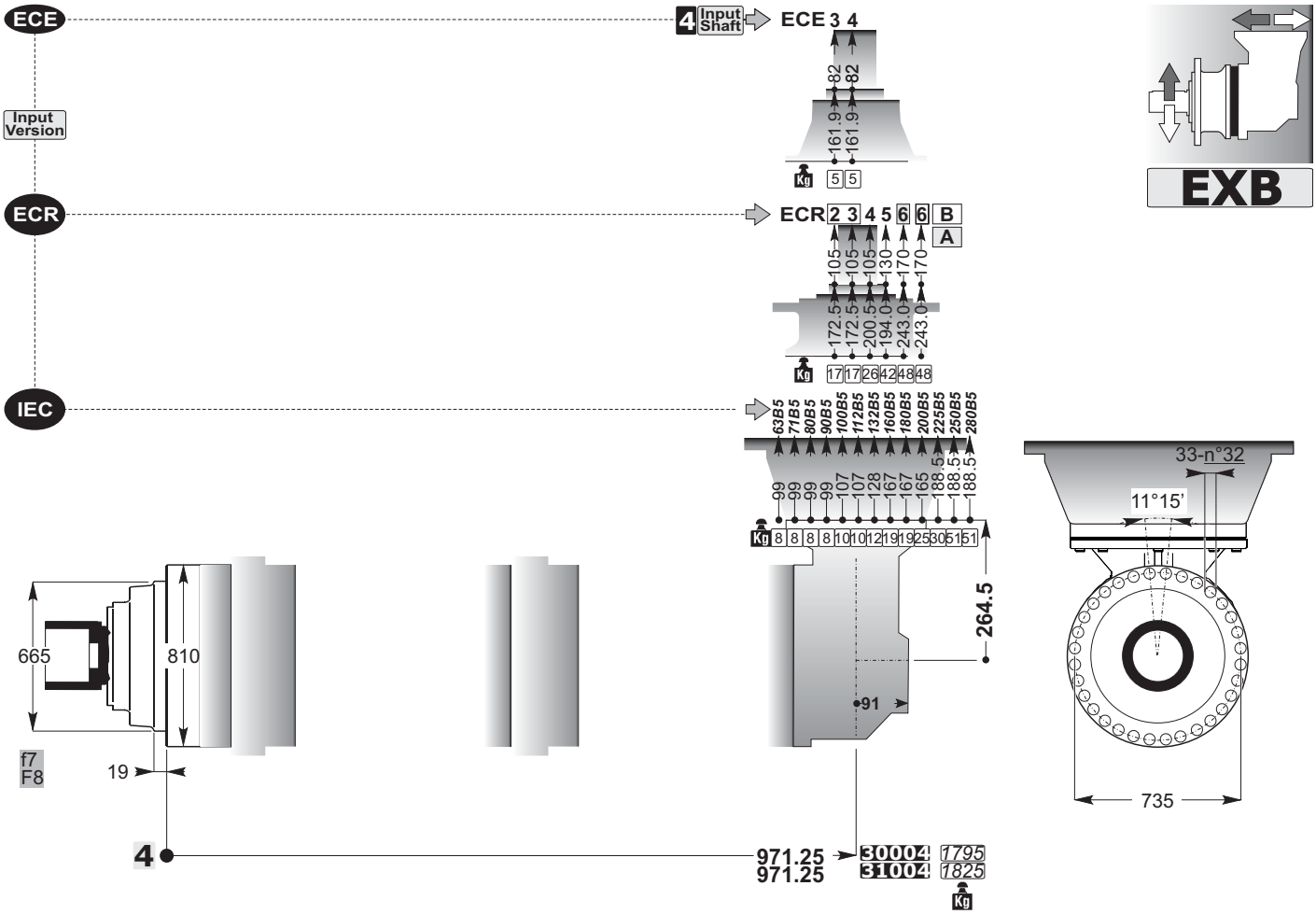
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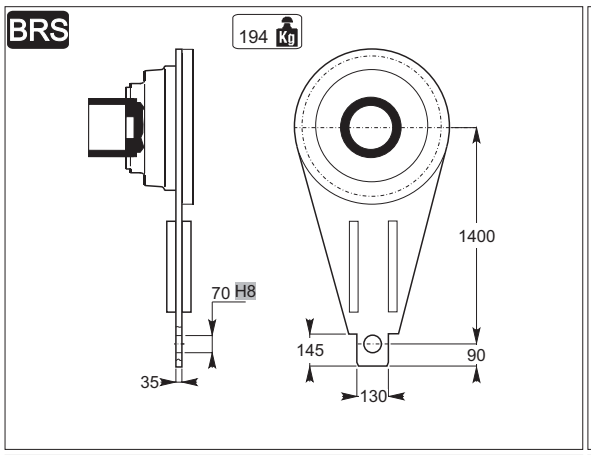
mm
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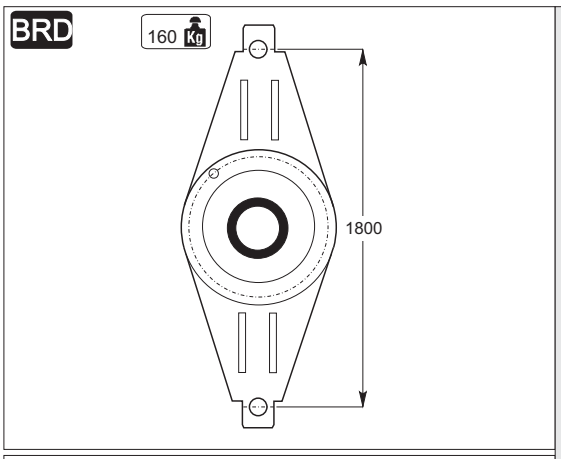


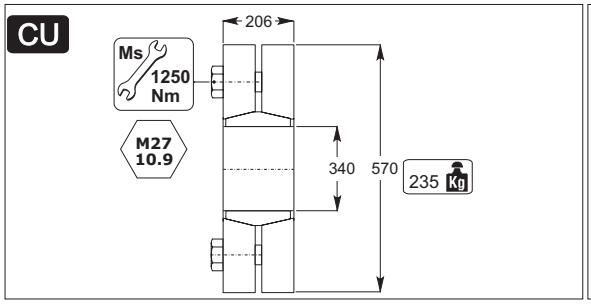


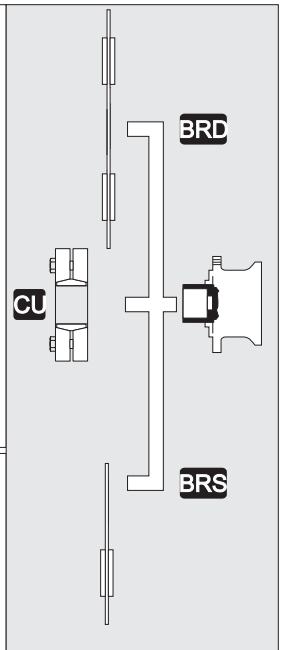
Output Shafts





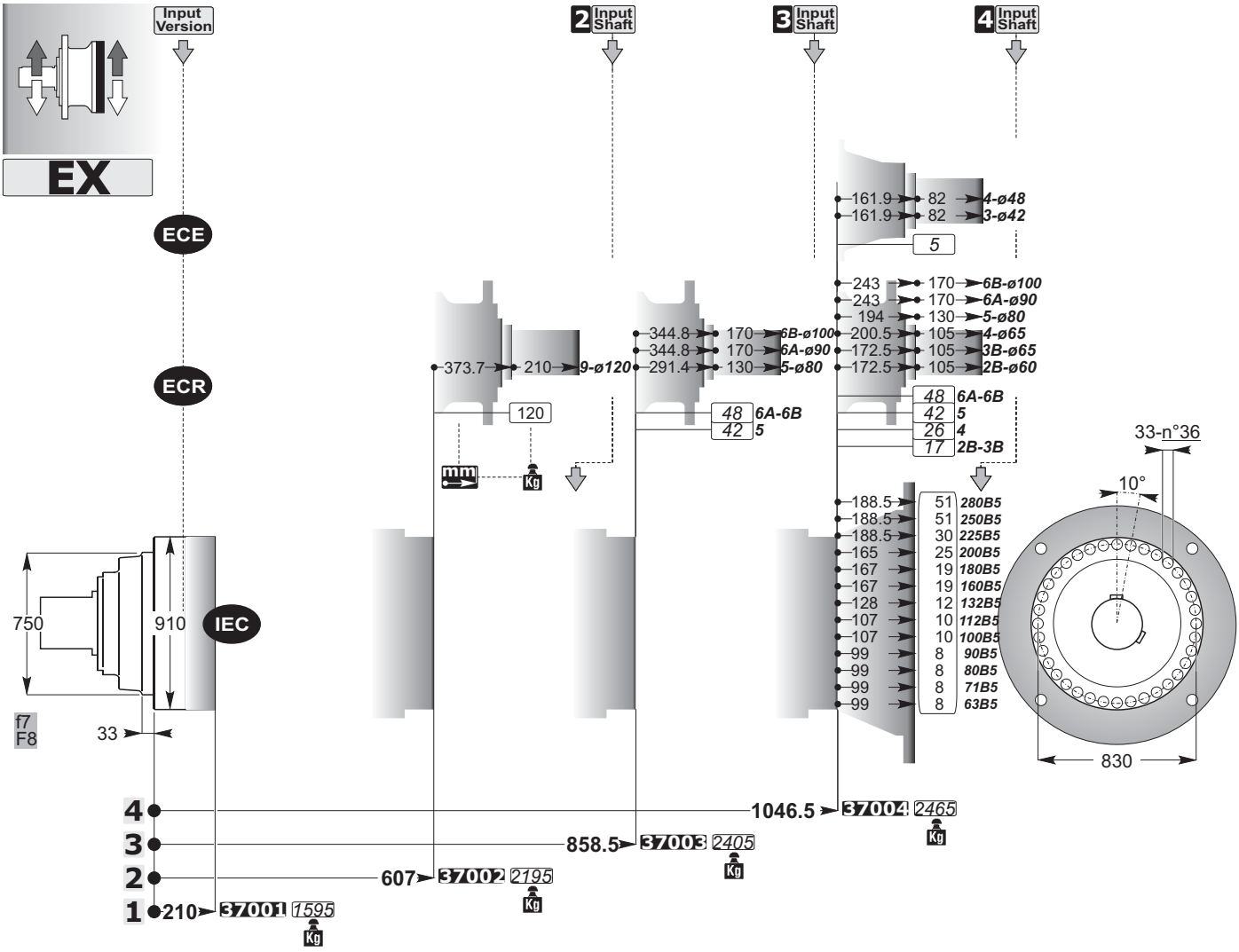


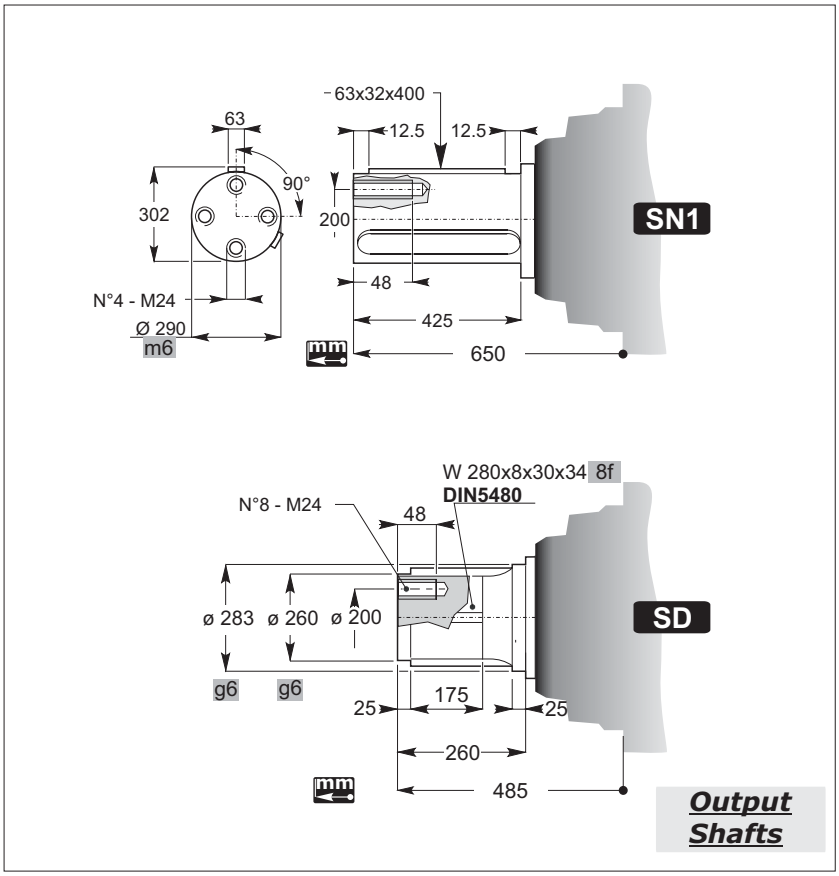


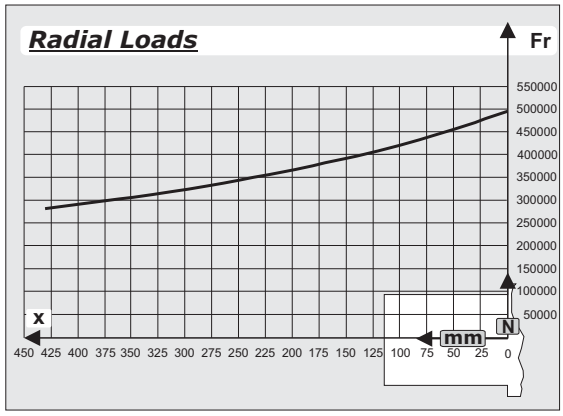


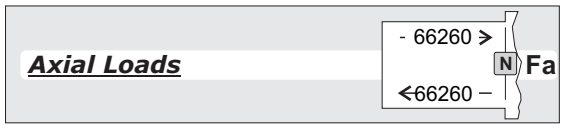
Accessories

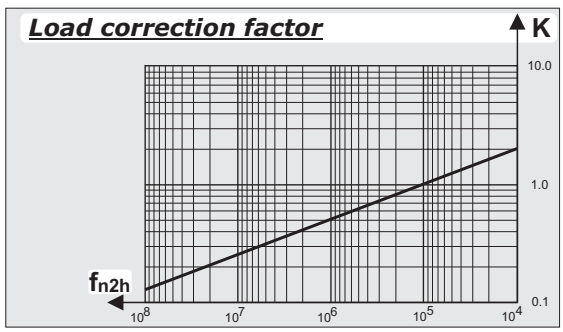
mm
C


Input Version
2 Input Shaft
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
750
910
f7
F8
33
373.7
210
9-ø120
120
344.8
170
6B-ø100
344.8
170
6A-ø90
291.4
130
5-ø80
48
6A-6B
42
5
161.9
82
4-ø48
161.9
82
3-ø42
5
243
170
6B-ø100
243
170
6A-ø90
194
130
5-ø80
200.5
105
4-ø65
172.5
105
3B-ø65
172.5
105
2B-ø60
48
6A-6B
42
5
26
4
17
2B-3B
188.5
51
280B5
188.5
51
250B5
188.5
30
225B5
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200B5
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180B5
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160B5
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112B5
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100B5
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71B5
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63B5
33-n°36
10°
830
4
3
2
1
1046.5
37004
2465
858.5
37003
2405
607
37002
2195
210
37001
1595
Kg
mm


63x32x400
63
12.5
12.5
90°
302
200
SN1
N°4 - M24
Ø 290
m6
48
425
650
mm
W 280x8x30x34 8f
DIN5480
N°8 - M24
48
ø 283
ø 260
ø 200
SD
g6
g6
25
175
25
260
485
mm
Output Shafts


Radial Loads
Fr
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
x
450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0
mm
N

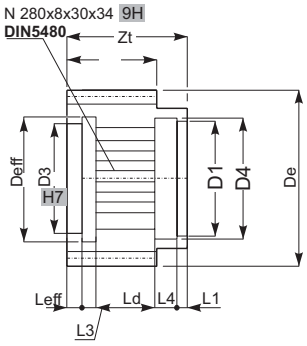

Axial Loads
- 66260 >
N
Fa
<66260 –


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

EXB

non disponibile
not available
nicht verfügbar

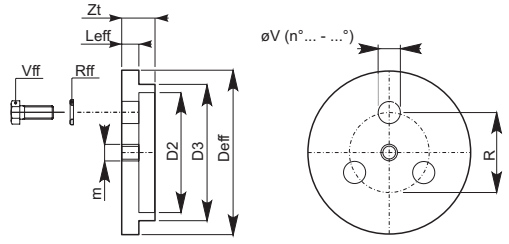
ID



	m	Z	X	De
ID—	-	-	-	-

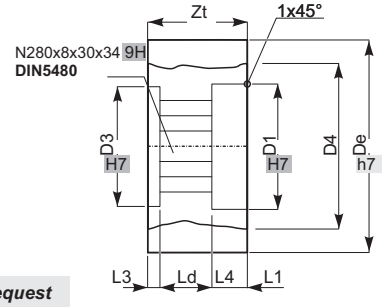
On request

FF

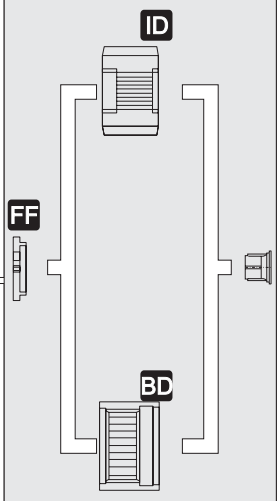


On request

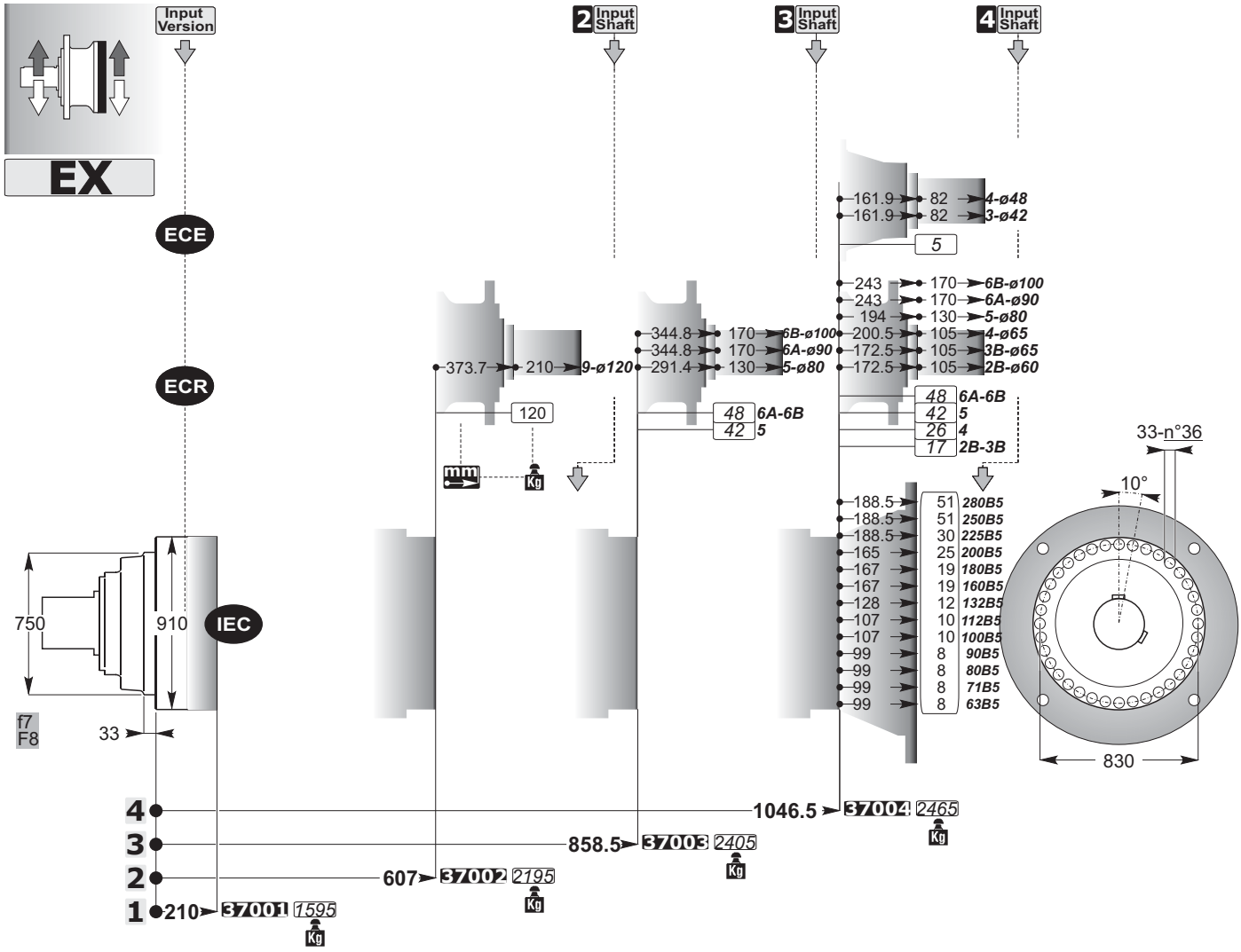
BD

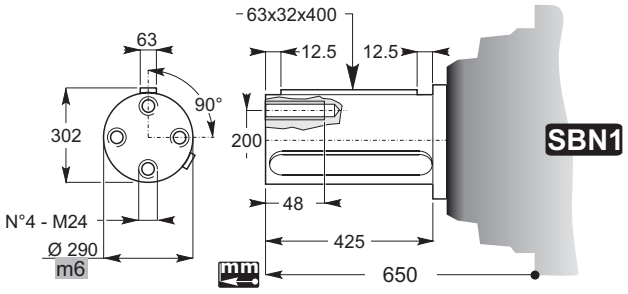


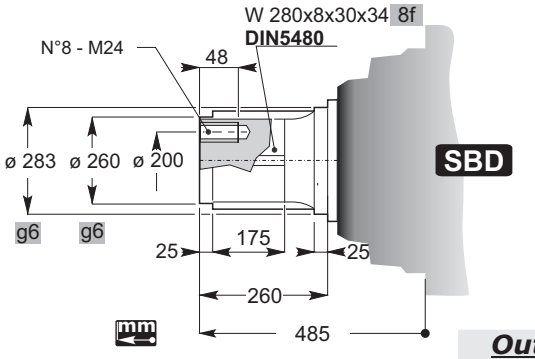
On request



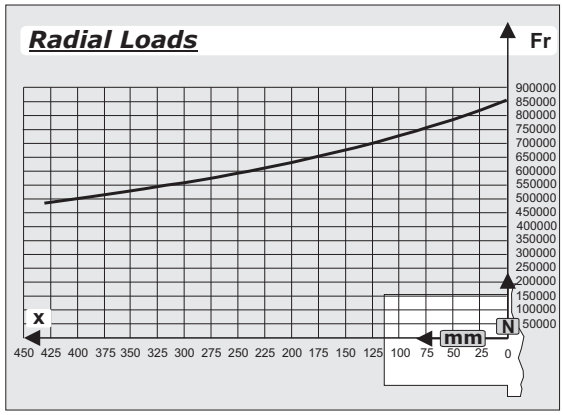
Accessories

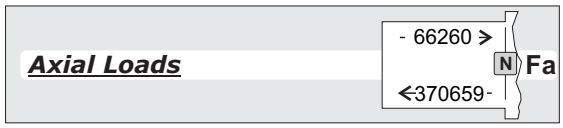


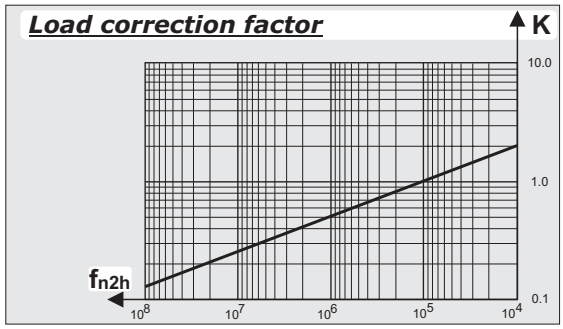




Output Shafts



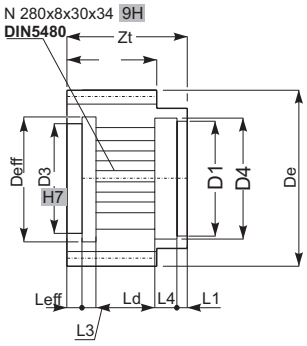




EXB

non disponibile
not available
nicht verfügbar

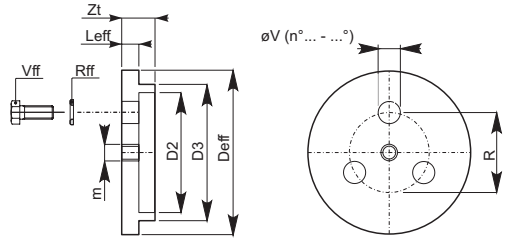
ID



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ID—	-	-	-	-

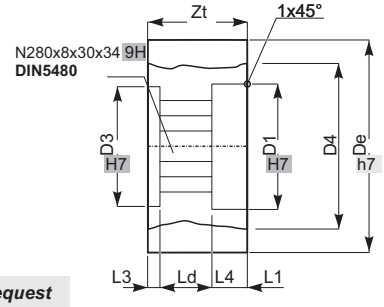
On request

FF

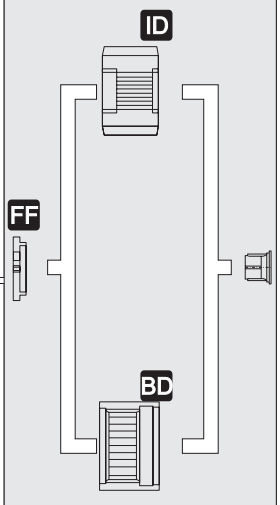


On request

BD

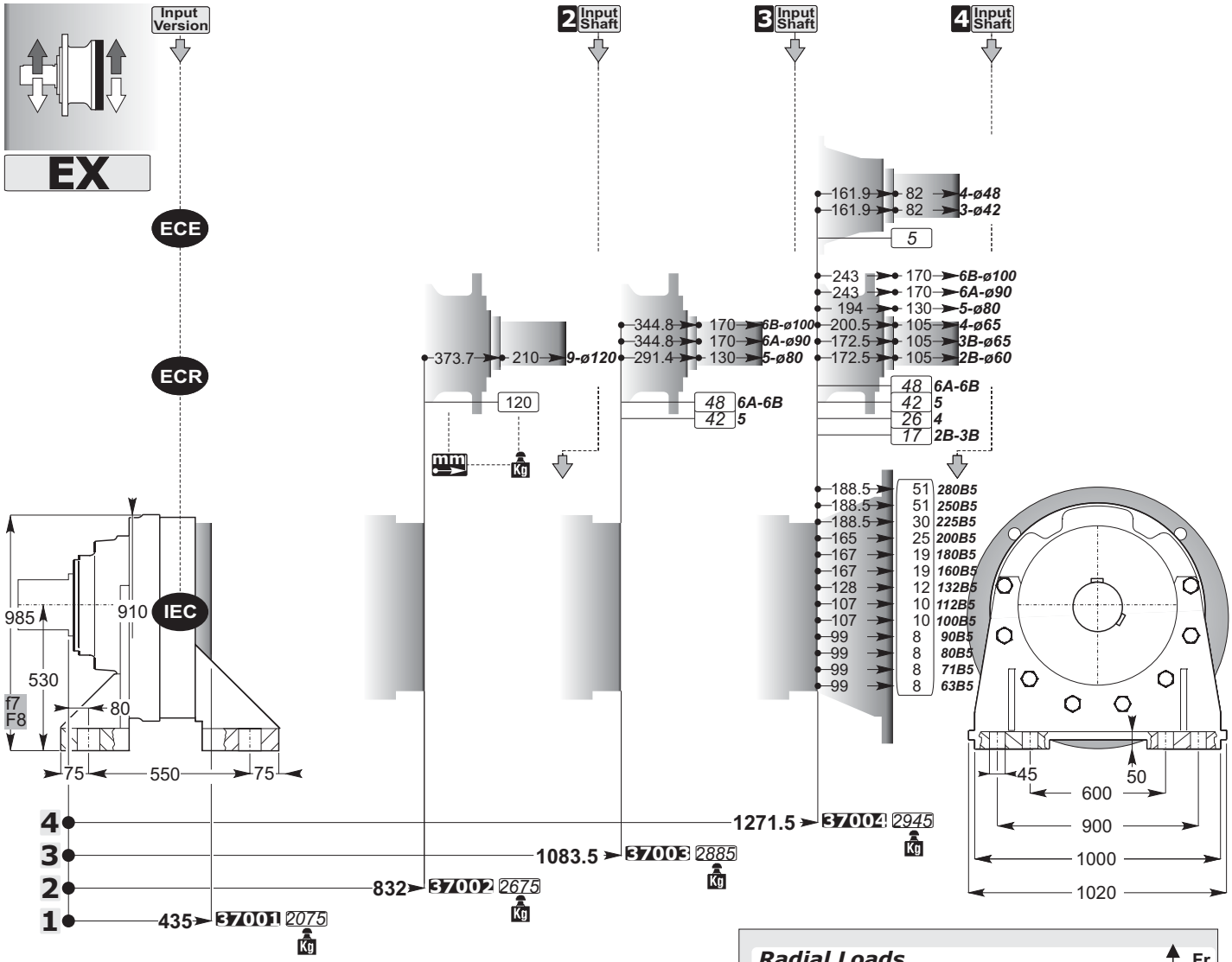


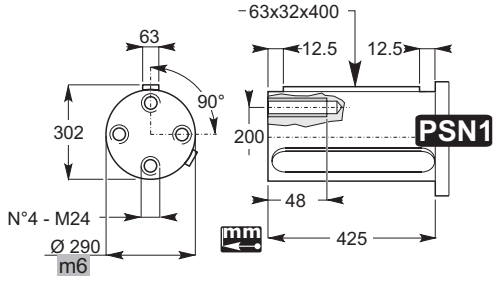
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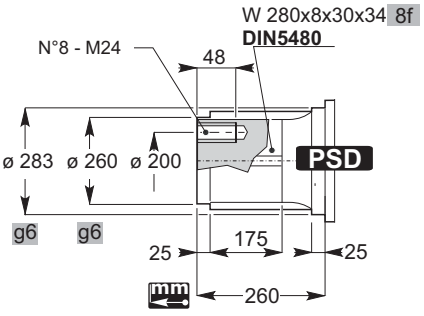


Accessories

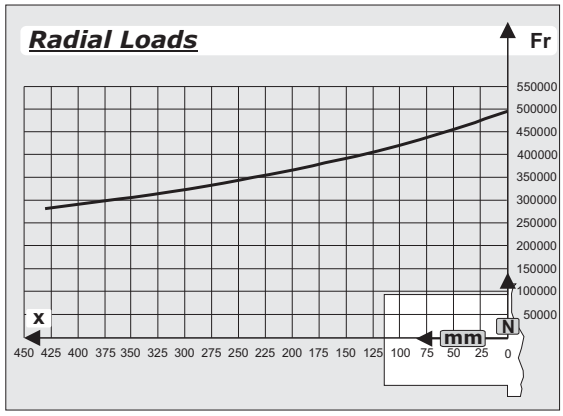
mm
C

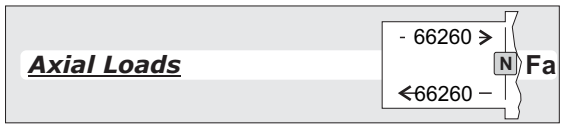


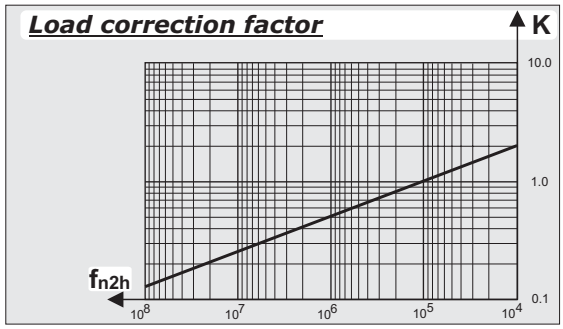




Output Shafts



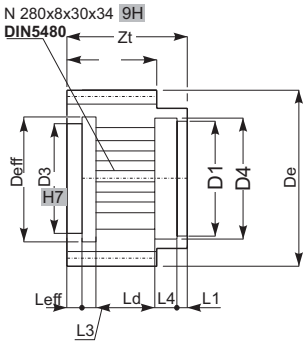




EXB

non disponibile
not available
nicht verfügbar

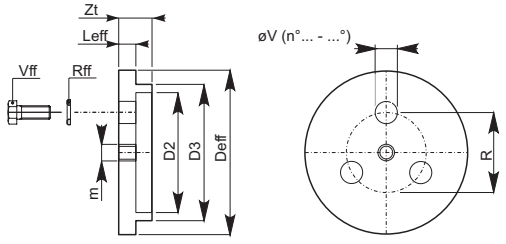
ID



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ID—	-	-	-	-

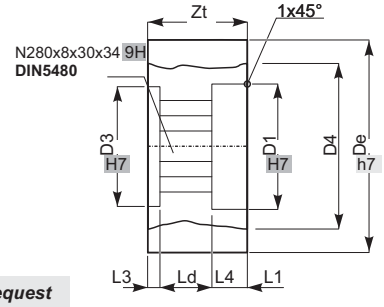
On request

FF

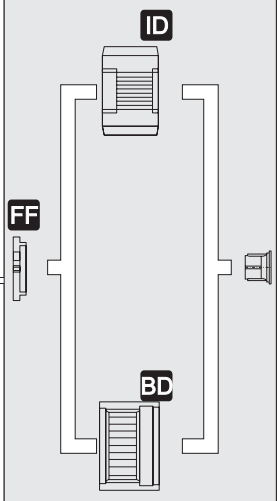


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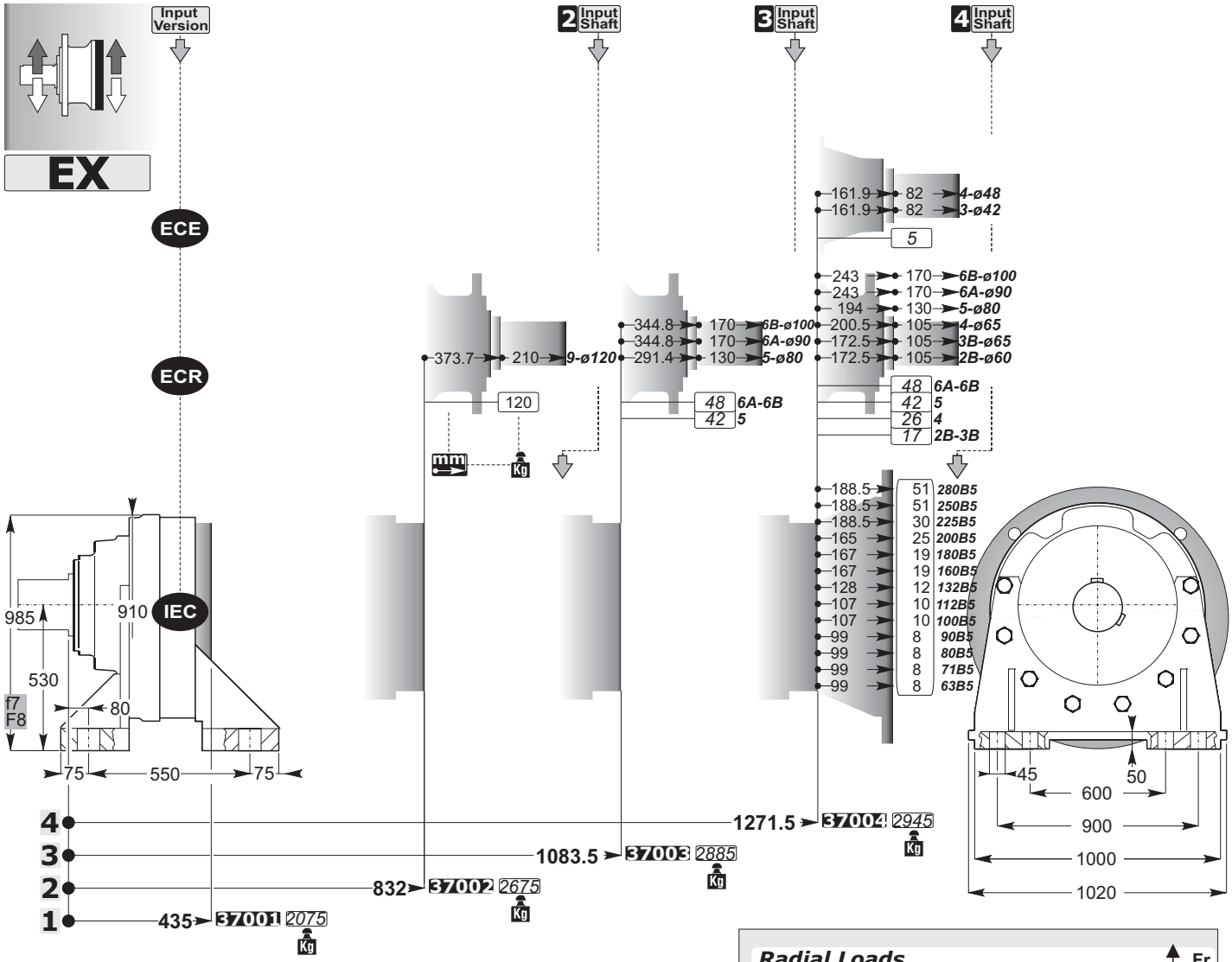
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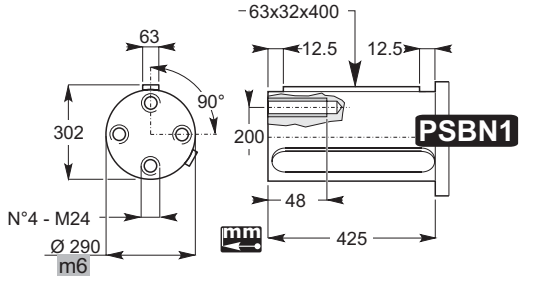


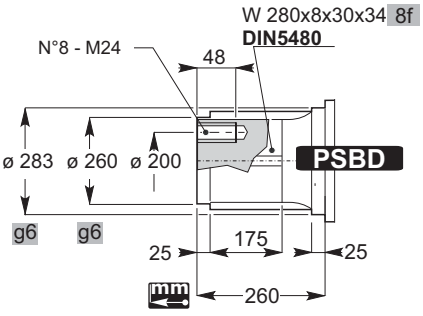
On request



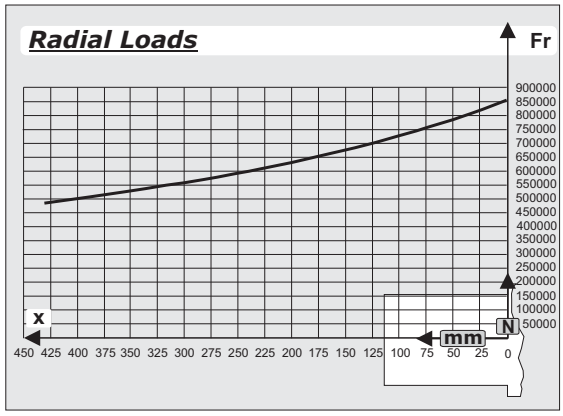
Accessories

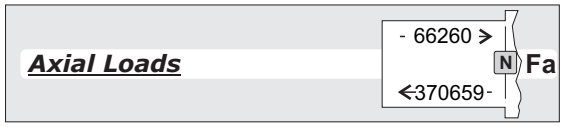


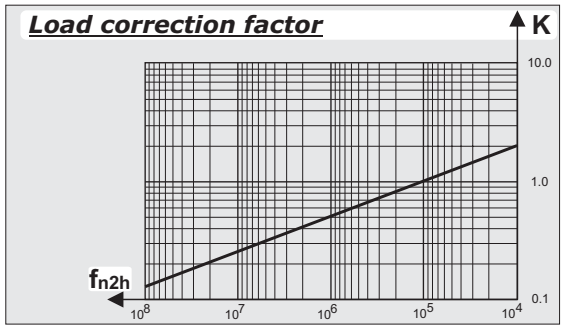




Output Shafts



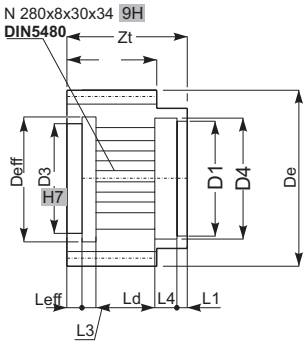




EXB

non disponibile
not available
nicht verfügbar

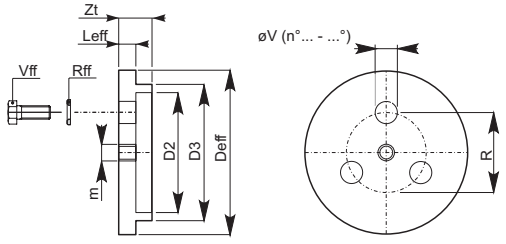
ID



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ID—	-	-	-	-

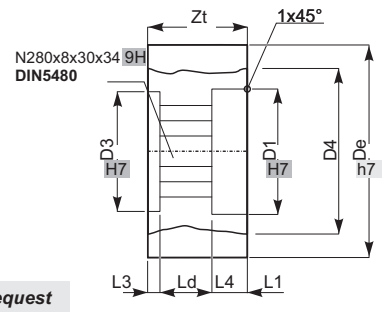
On request

FF

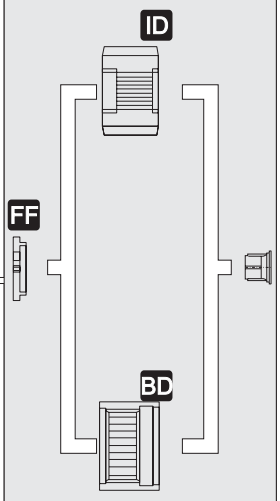


On request

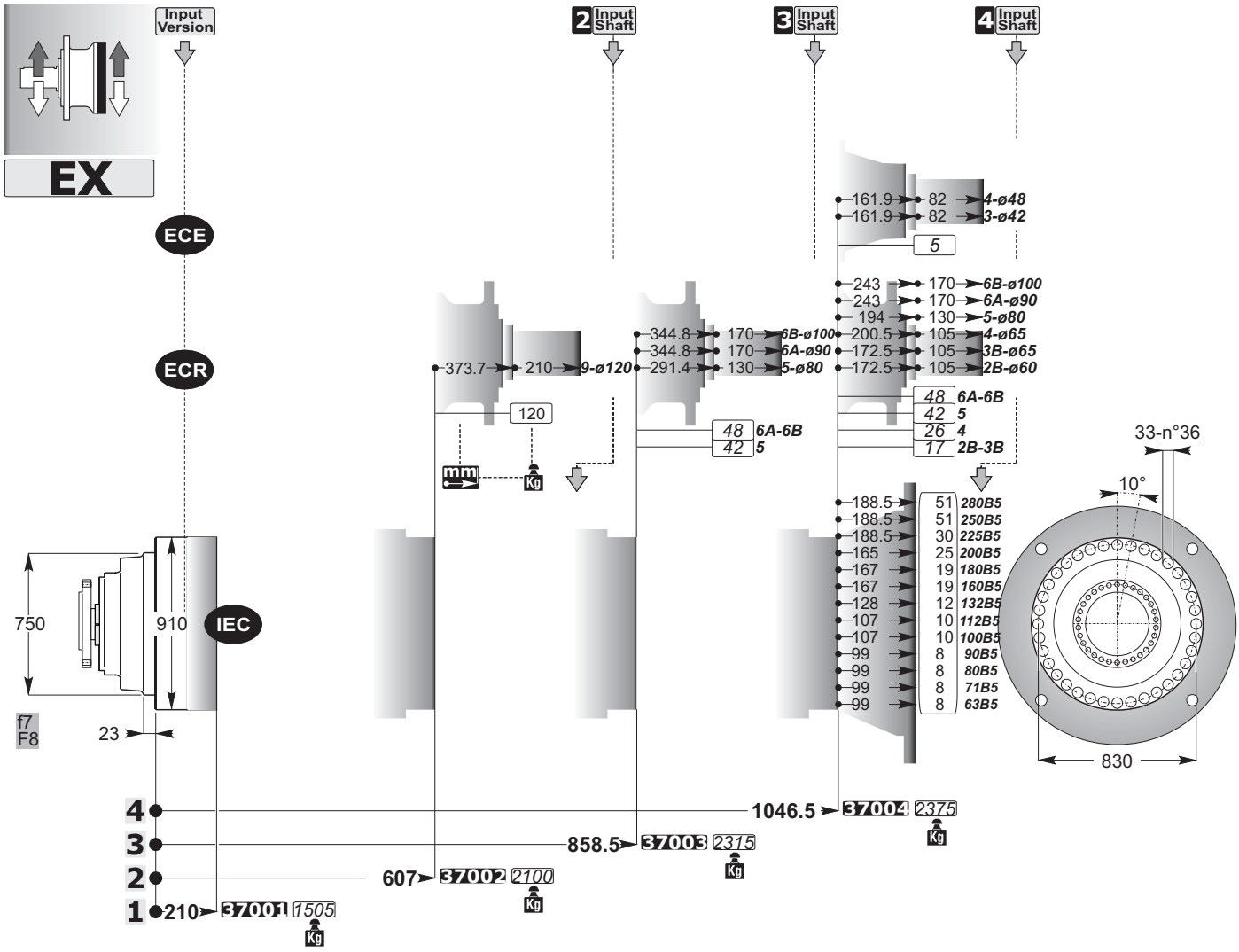
BD

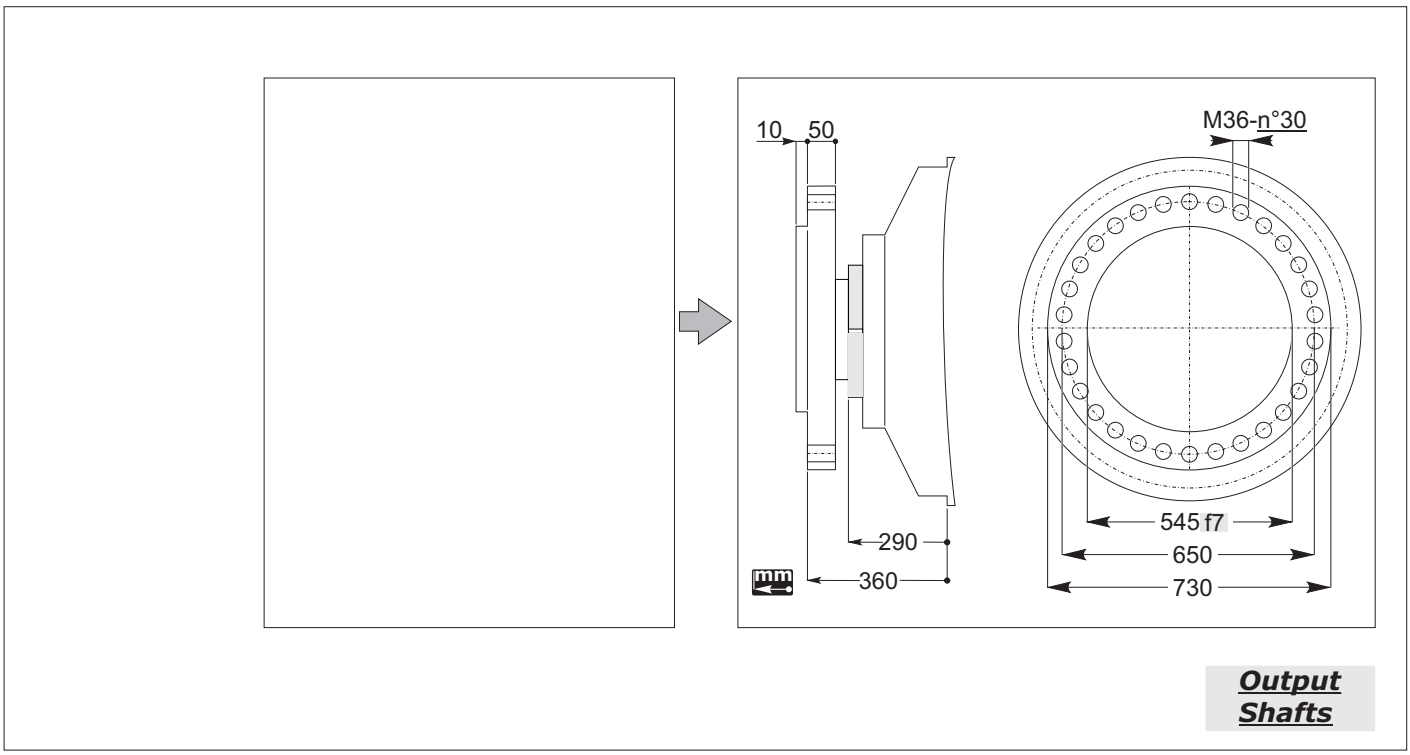


On request



Accessories



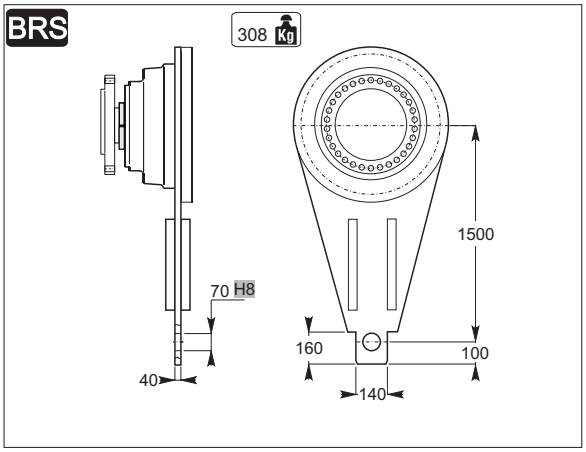


Output Shafts

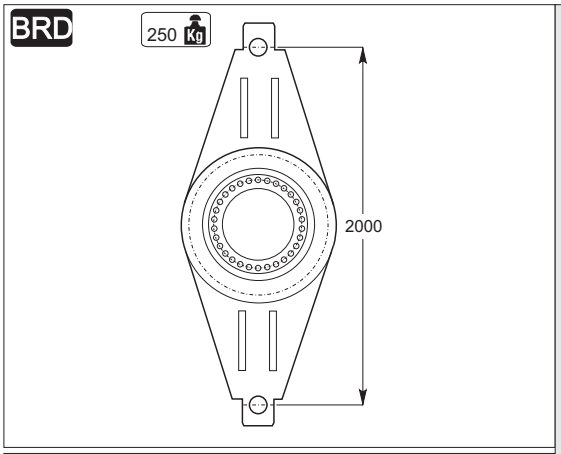
EXB

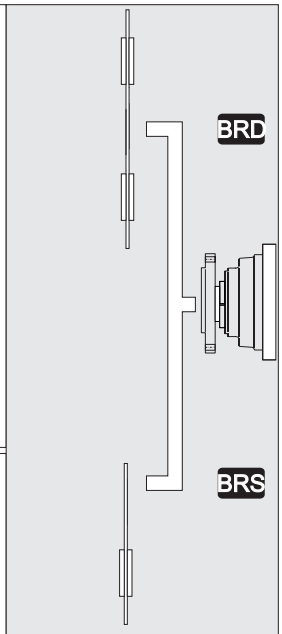
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not available
nicht verfügbar

BRS

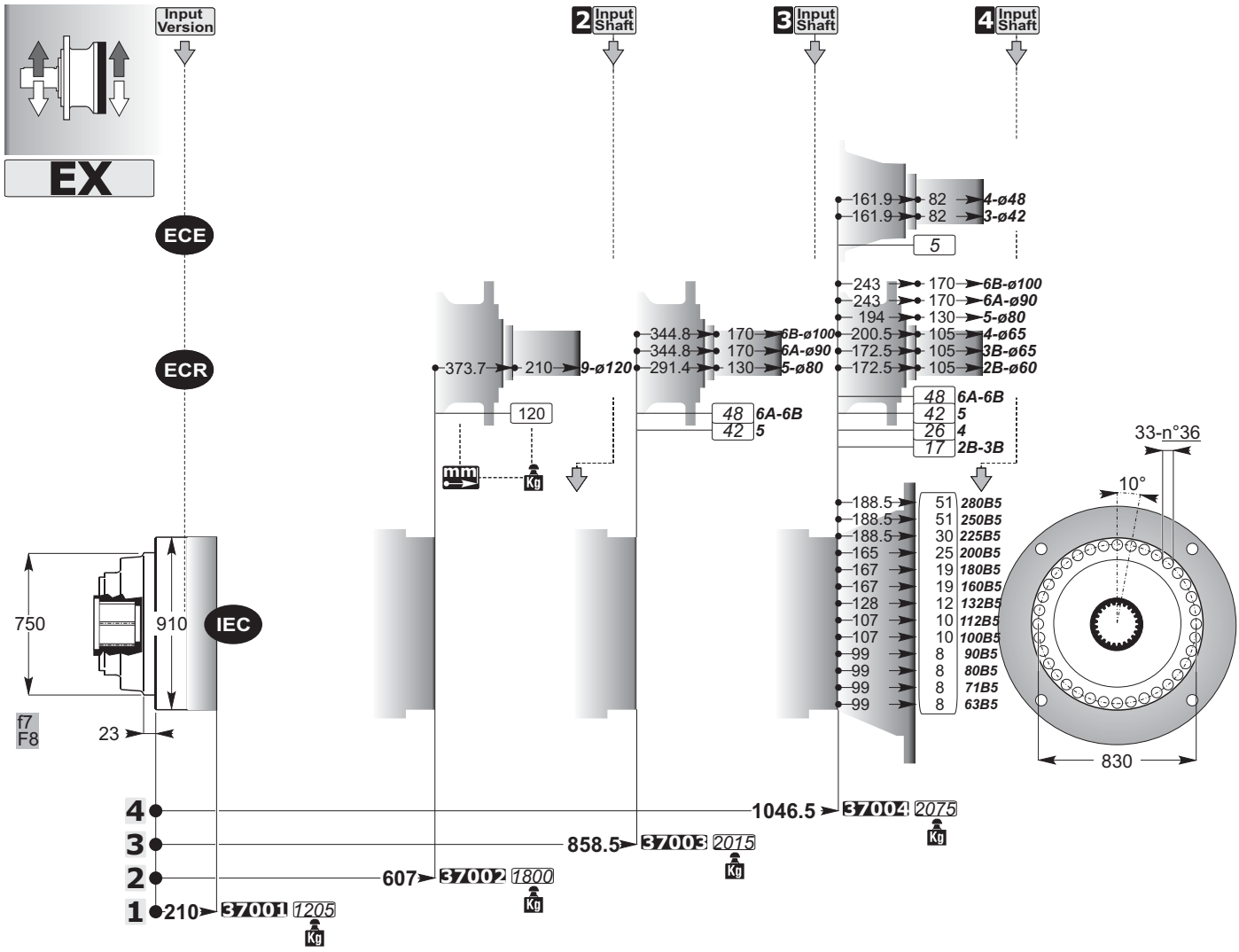


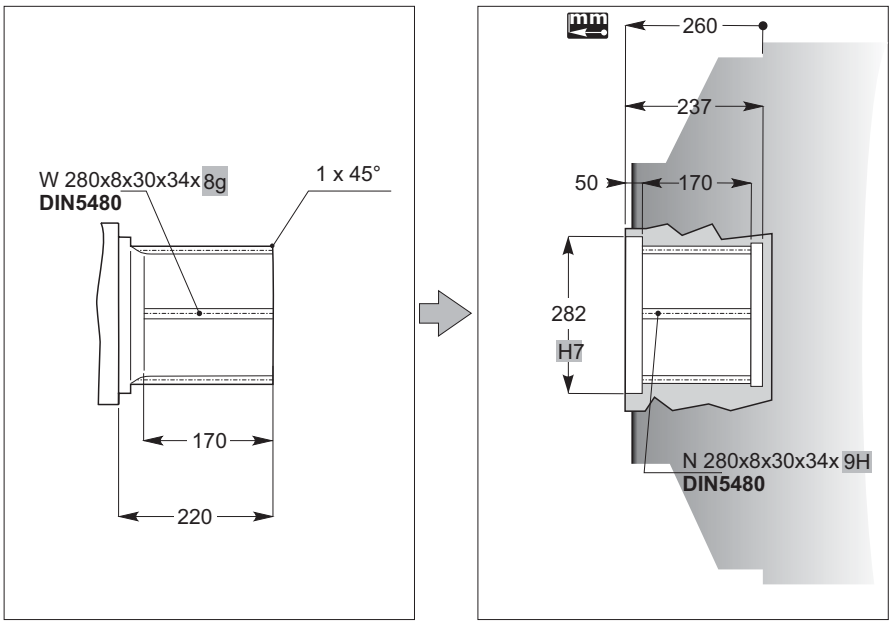
BRD





Accessories



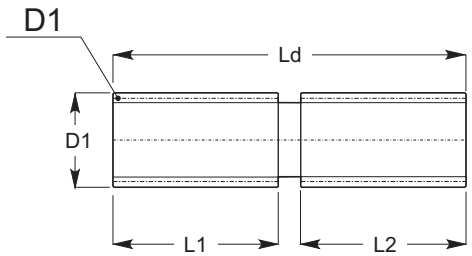


Output Shafts

EXB

non disponibile
not available
nicht verfügbar

SD

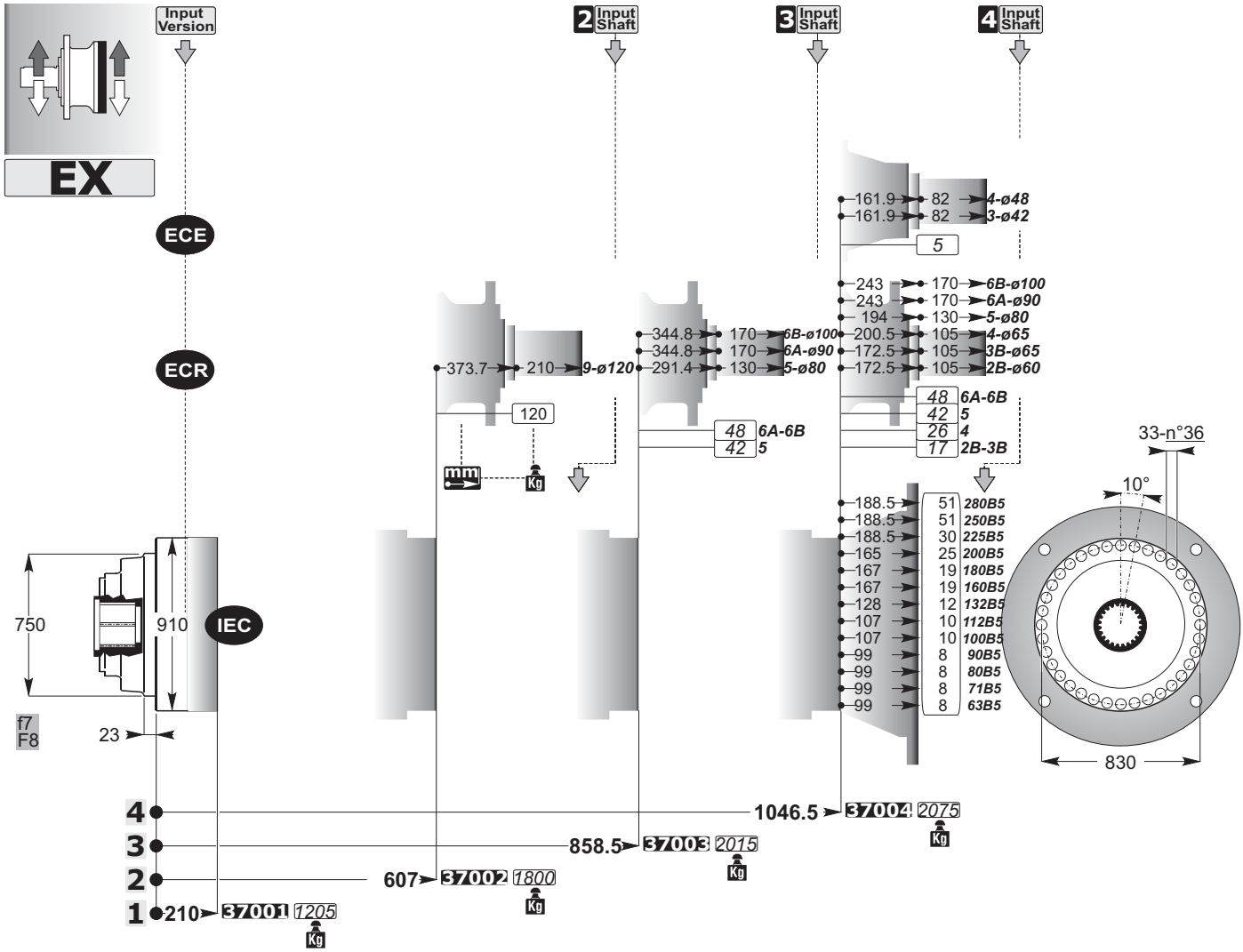


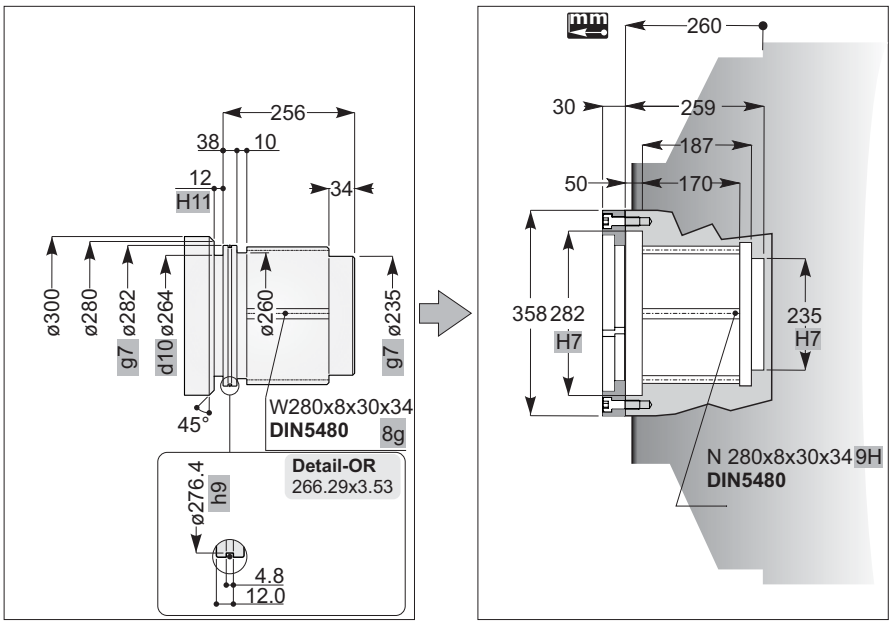
On request

SD



Accessories



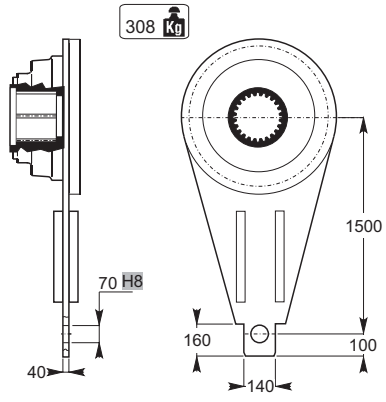


Output Shafts

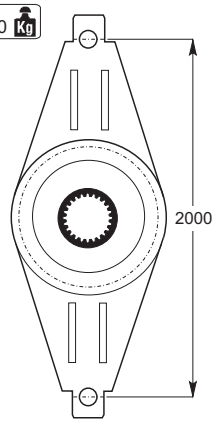
EXB

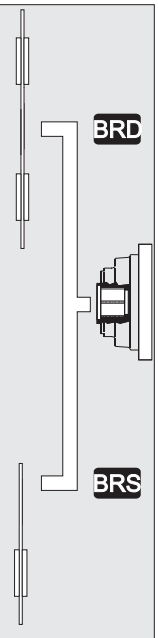
non disponibile
not available
nicht verfügbar

BRS

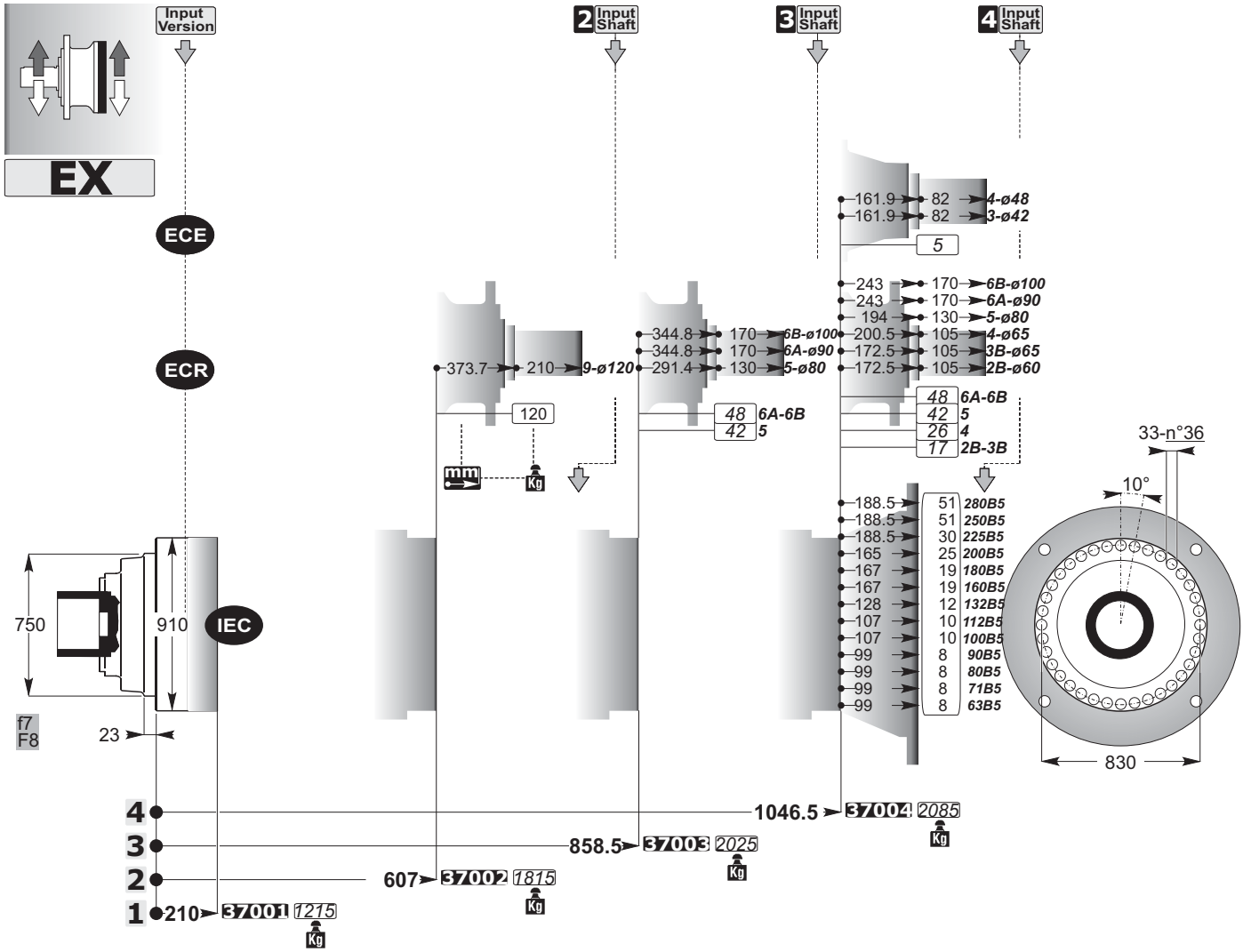


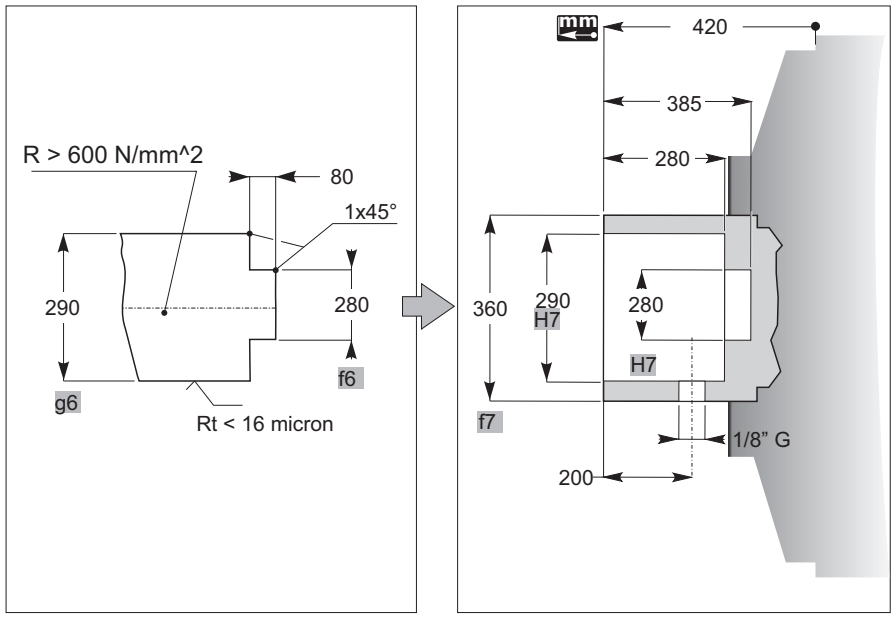
BRD





Accessories

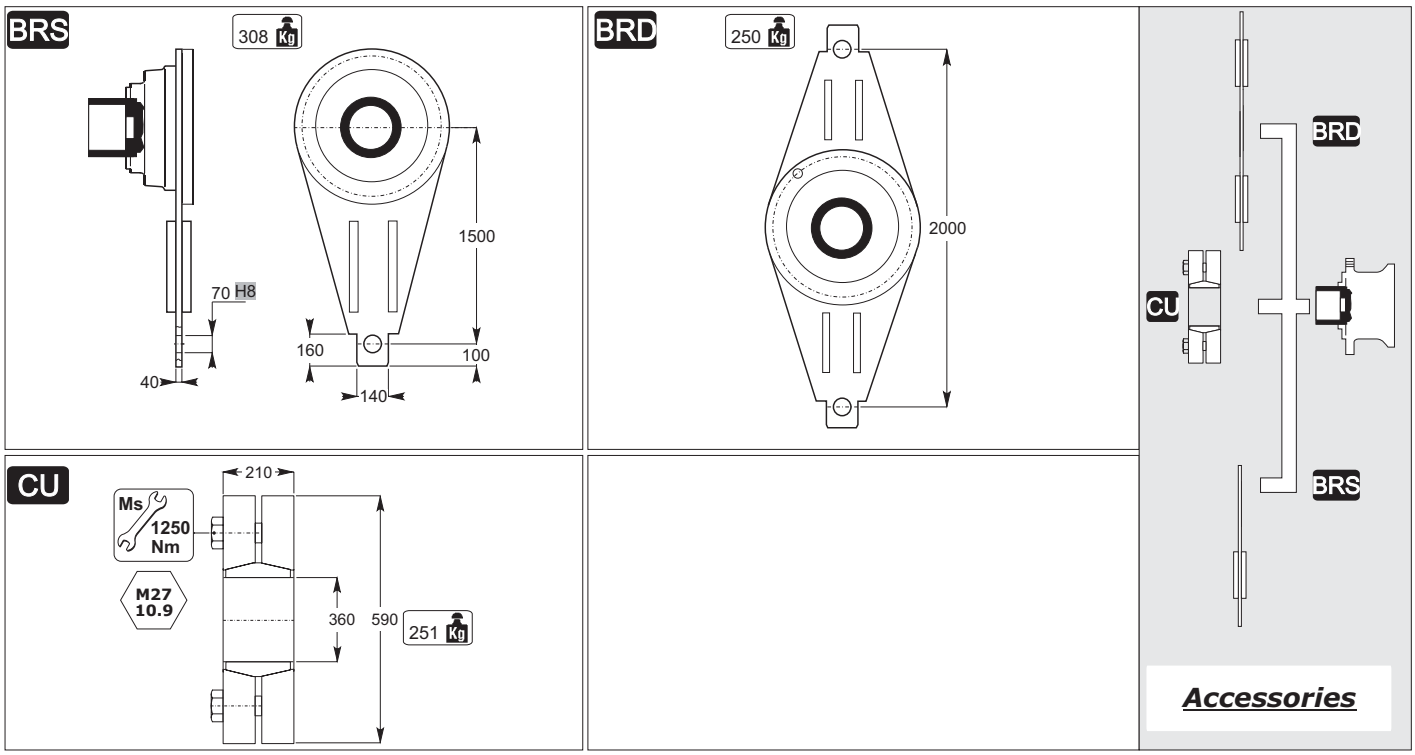




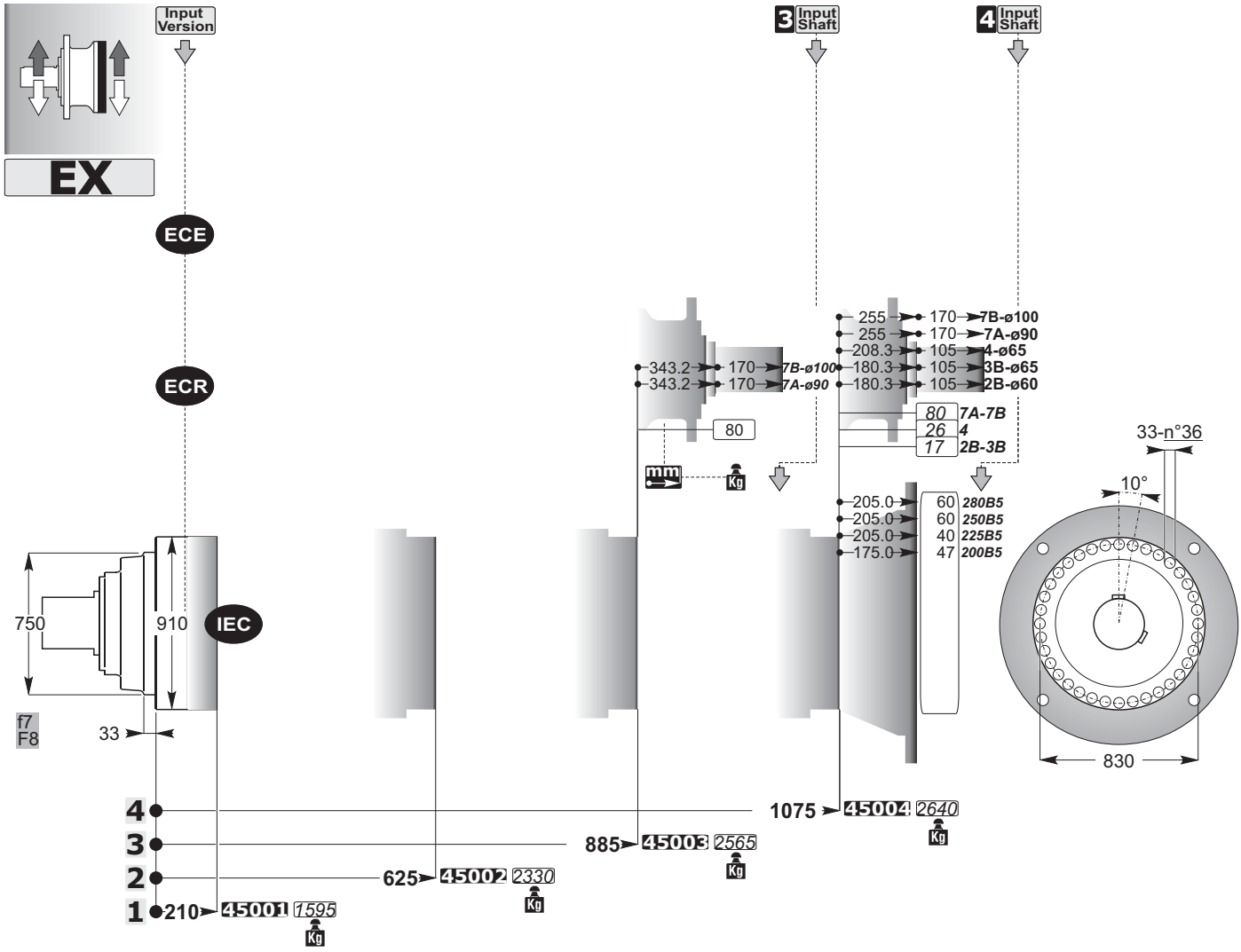
Output Shafts

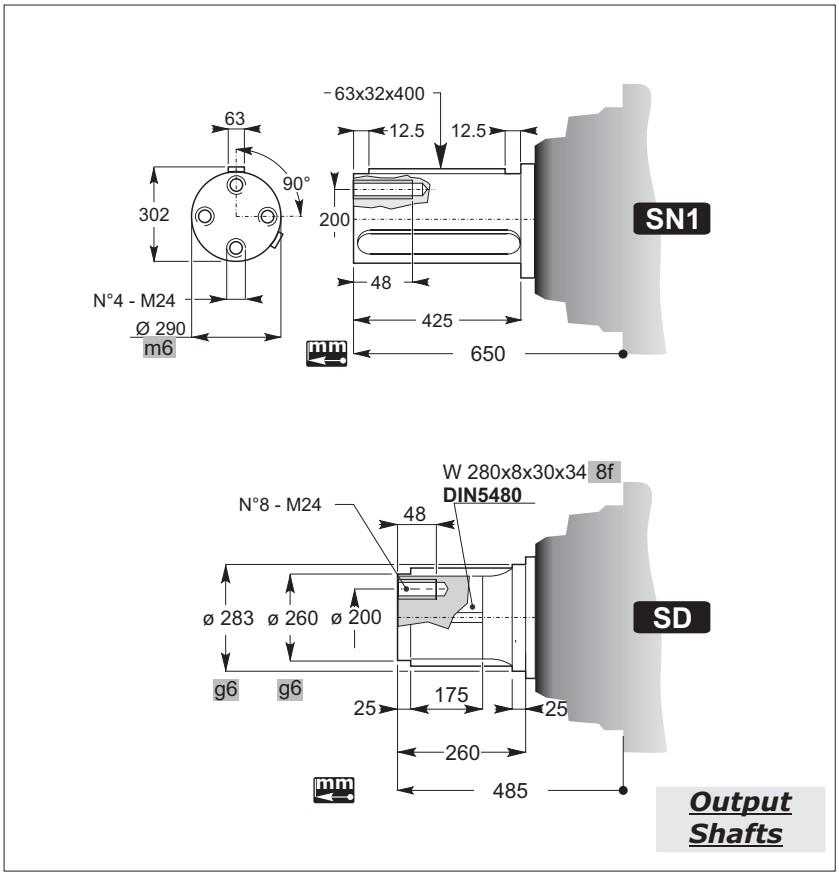
EXB

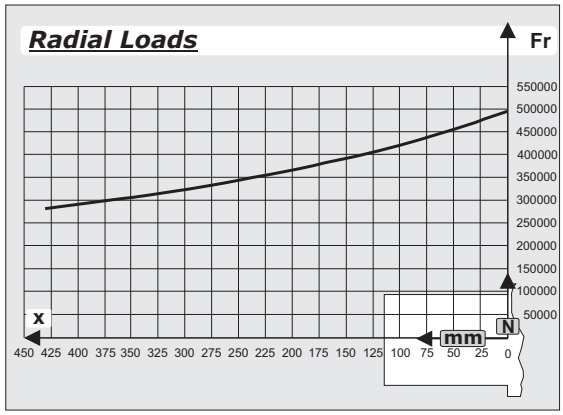
non disponibile
not available
nicht verfügbar

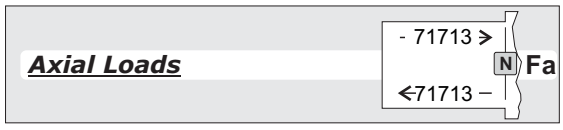


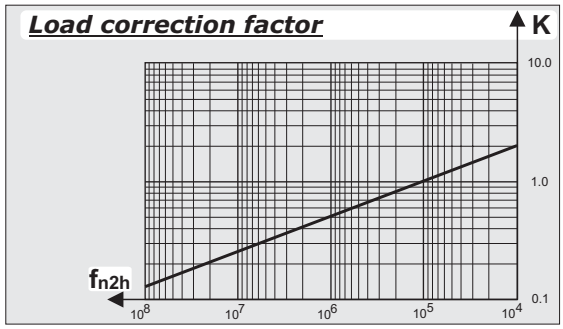
mm
C


Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
750
910
f7
F8
33
343.2 170 7B-ø100
343.2 170 7A-ø90
80
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
80 7A-7B
26 4
17 2B-3B
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
33-n°36
10°
830
4
3
2
1
210 45001 1595
625 45002 2330
885 45003 2565
1075 45004 2640


63x32x400
63
12.5
12.5
90°
302
200
SN1
N°4 - M24
Ø 290
m6
48
425
650
W 280x8x30x34 8f
DIN5480
N°8 - M24
48
ø 283
ø 260
ø 200
SD
g6
g6
25
175
25
260
485
Output Shafts


Radial Loads
Fr
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
x
mm
N
450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0

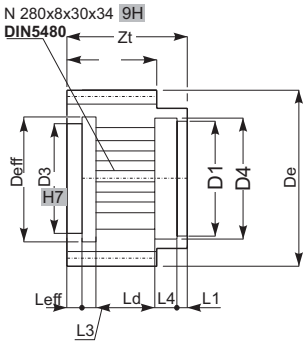

Axial Loads
- 71713 >
N
Fa
<71713 –


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

EXB

non disponibile
not available
nicht verfügbar

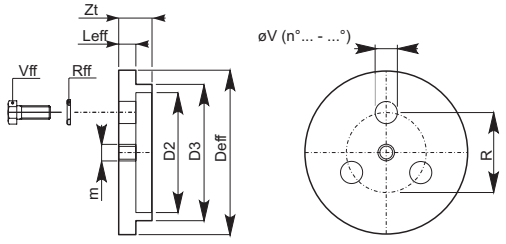
ID



	m	Z	X	De
ID—	-	-	-	-

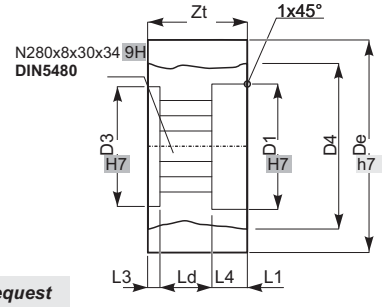
On request

FF

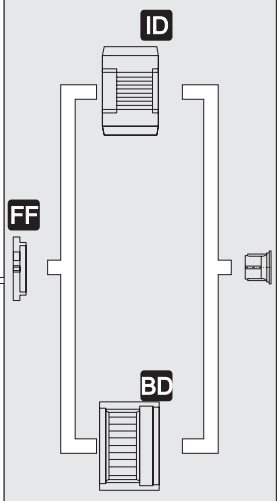


On request

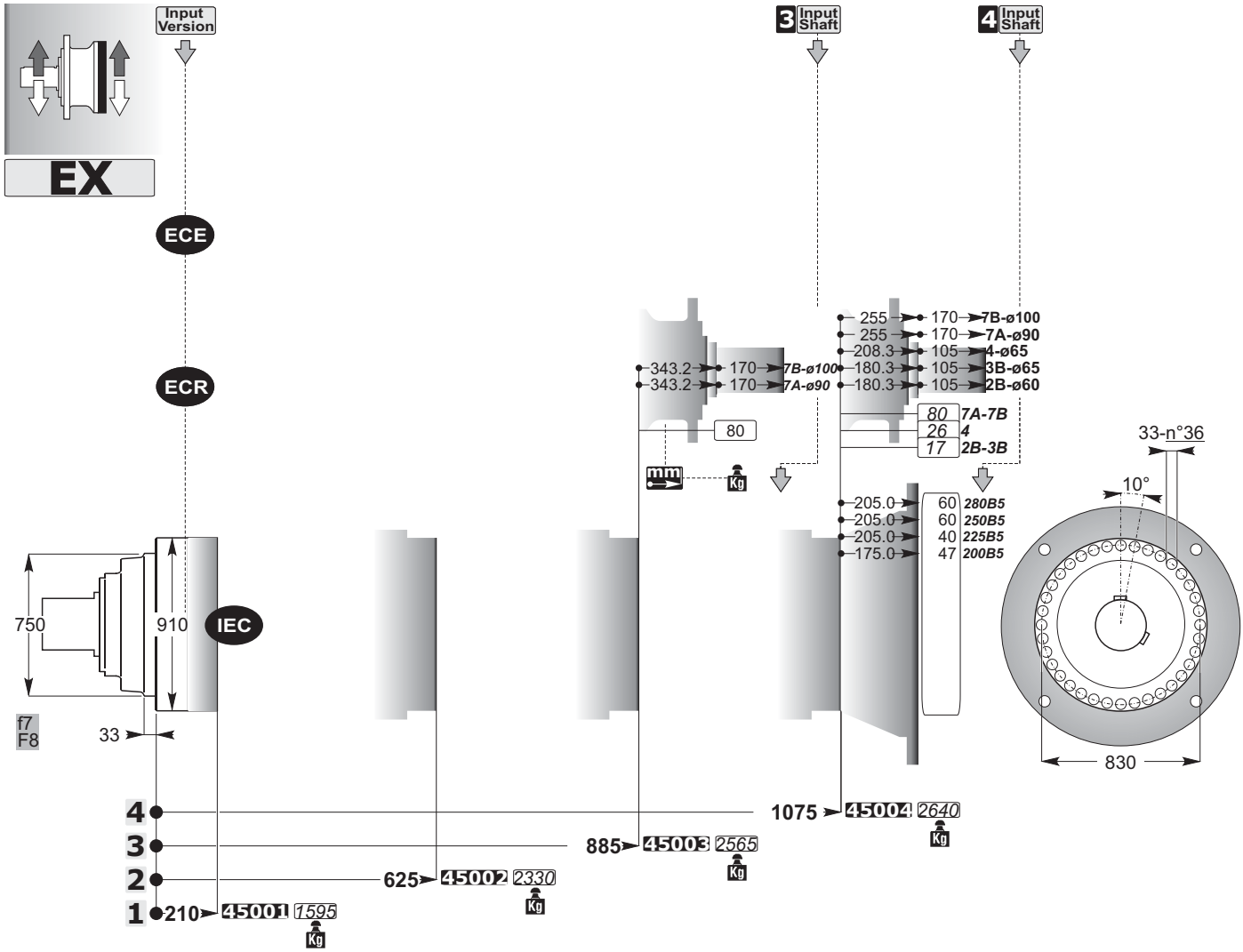
BD

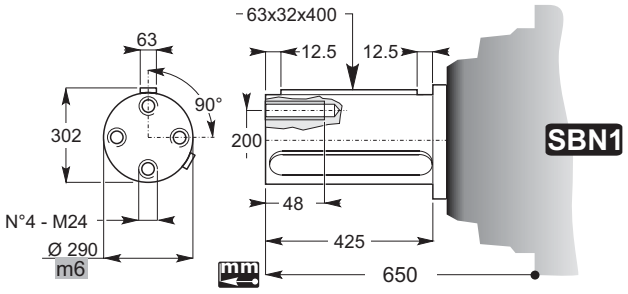


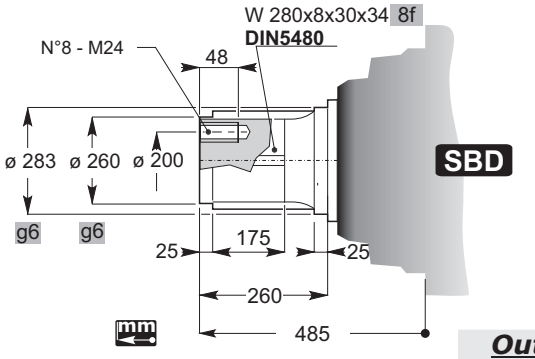
On request



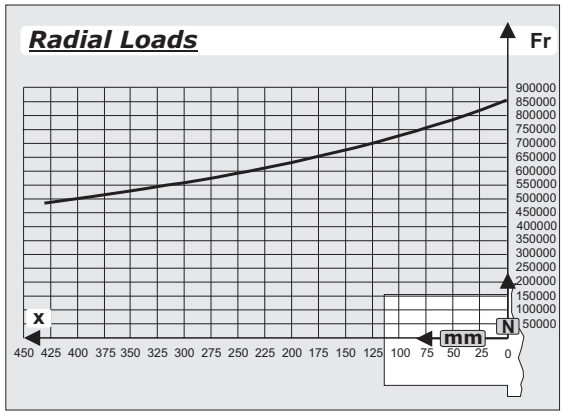
Accessories

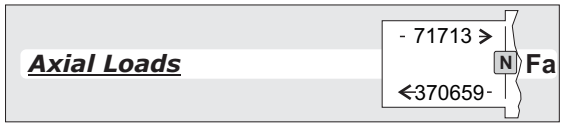


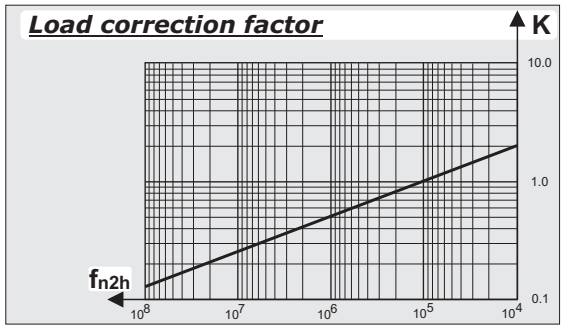




Output Shafts



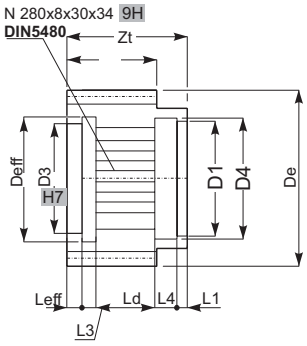




EXB

non disponibile
not available
nicht verfügbar

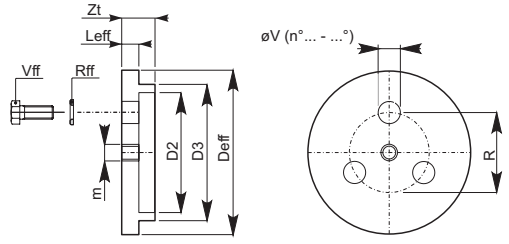
ID



	m	Z	X	De
ID—	-	-	-	-

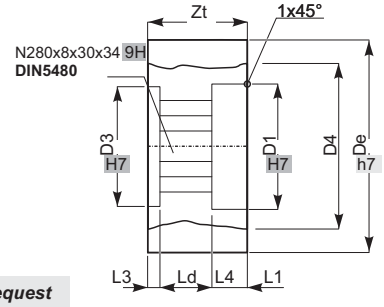
On request

FF

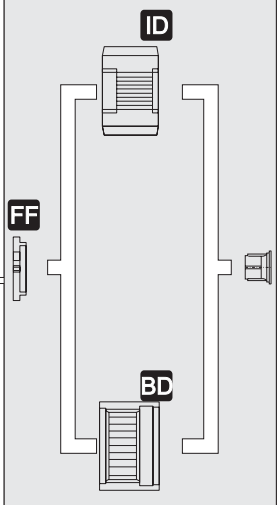


On request

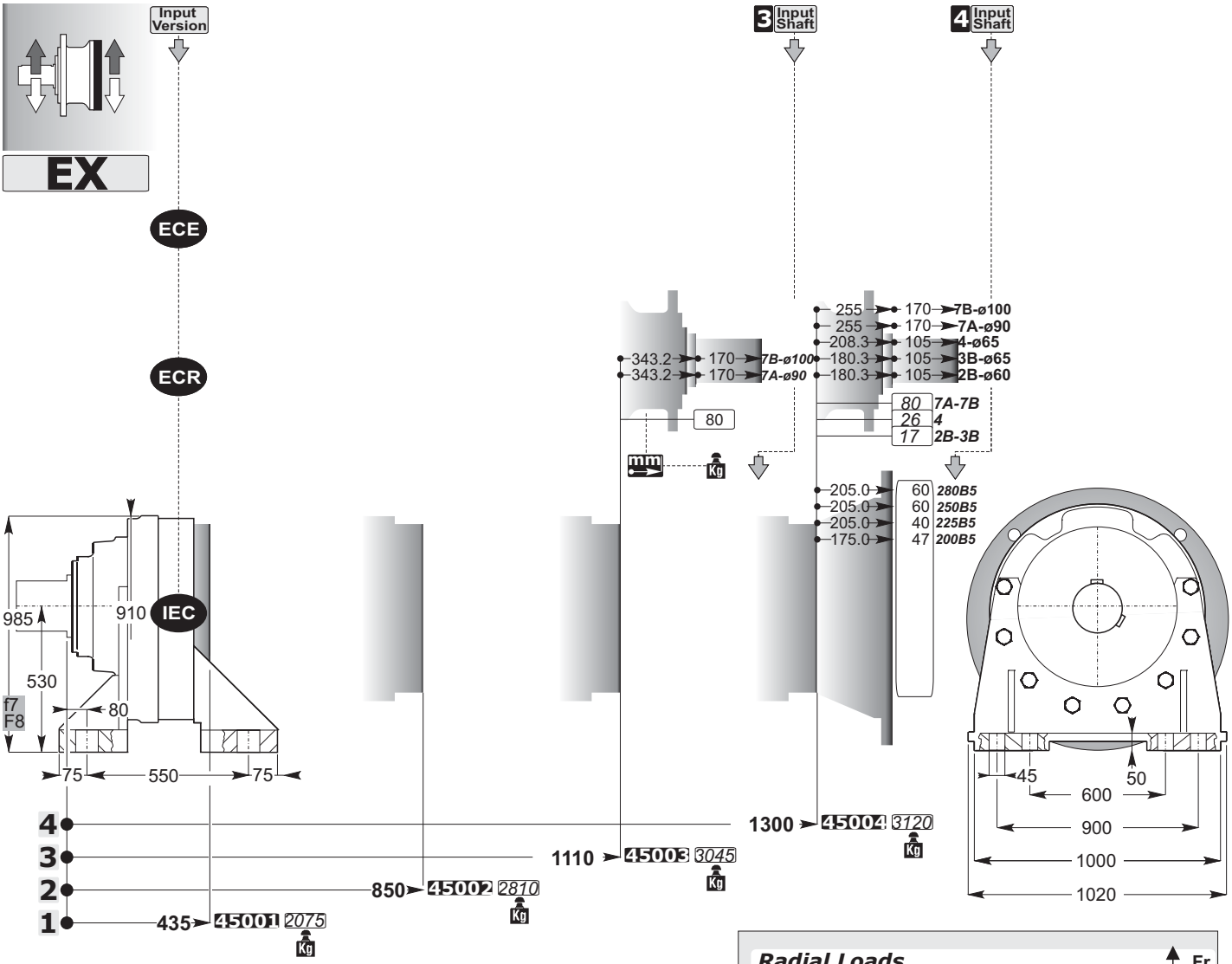
BD

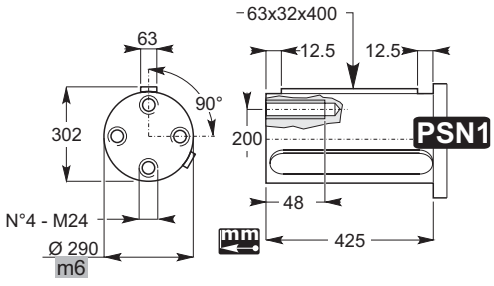


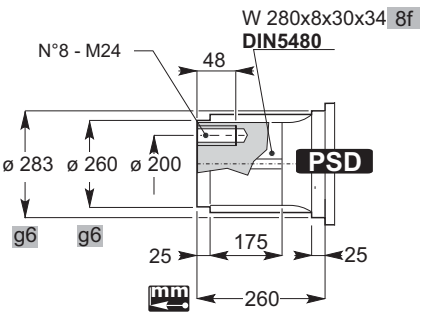
On request



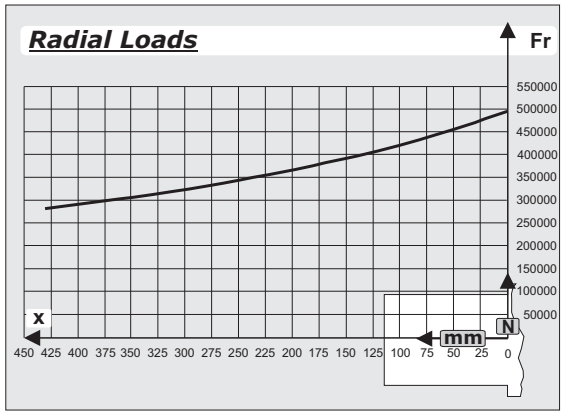
Accessories

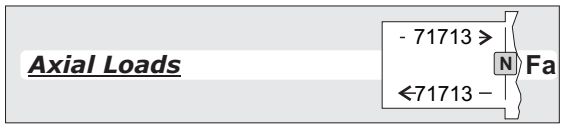


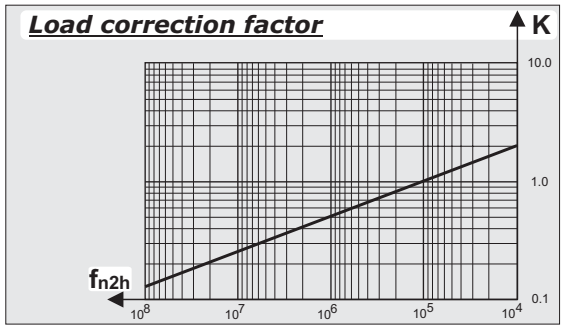




Output Shafts



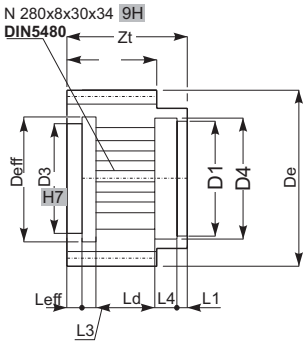




EXB

non disponibile
not available
nicht verfügbar

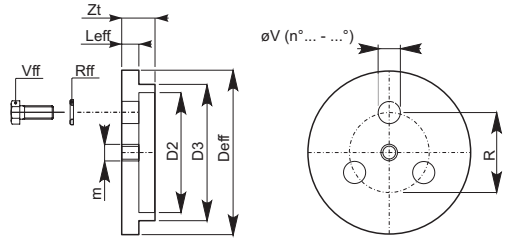
ID



	m	Z	X	De
ID—	-	-	-	-

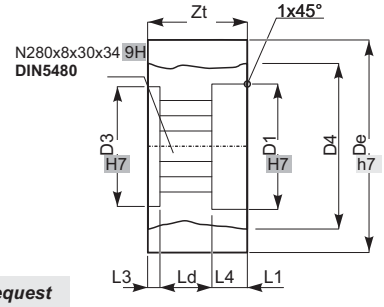
On request

FF

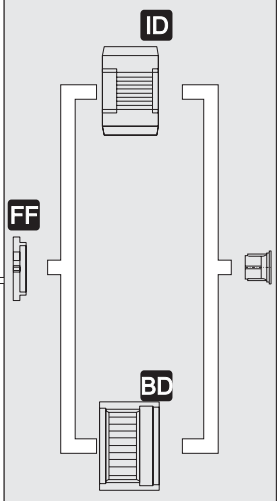


On request

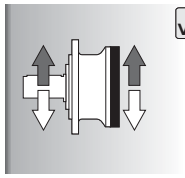
BD



On request



Accessories



EX

Input Version

3 Input Shaft

4 Input Shaft

ECE

ECR

IEC

343.2 → 170 → 7B-ø100
343.2 → 170 → 7A-ø90
80

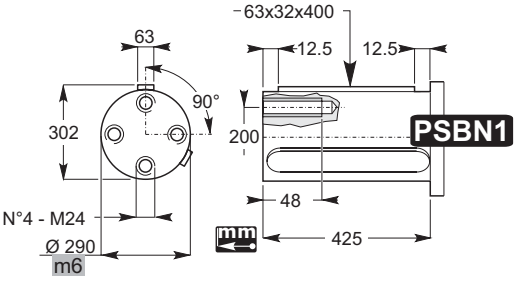
255 → 170 → 7B-ø100
255 → 170 → 7A-ø90
208.3 → 105 → 4-ø65
180.3 → 105 → 3B-ø65
180.3 → 105 → 2B-ø60
80 7A-7B
26 4
17 2B-3B

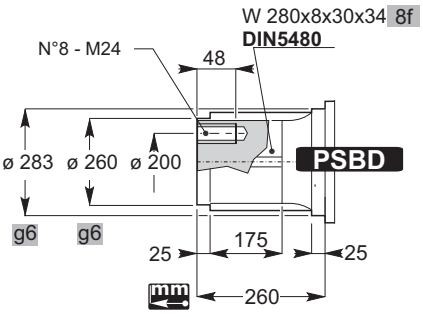
205.0 → 60 280B5
205.0 → 60 250B5
205.0 → 40 225B5
175.0 → 47 200B5

985 910 530 80 f7 F8
75 550 75

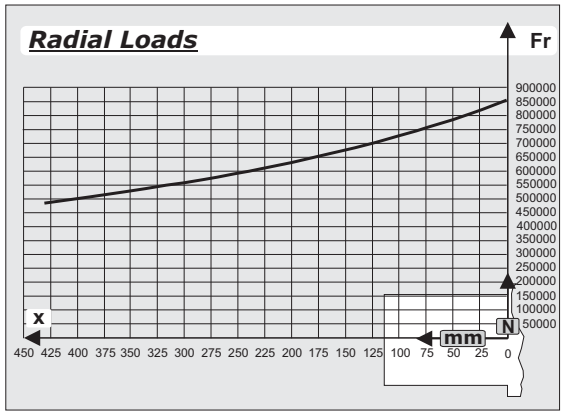
4 1300 → 45004 3120 Kg
3 1110 → 45003 3045 Kg
2 850 → 45002 2810 Kg
1 435 → 45001 2075 Kg

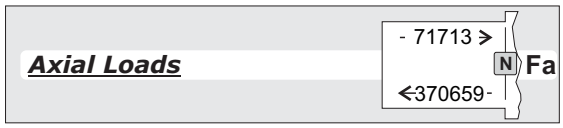
45 50
600
900
1000
1020

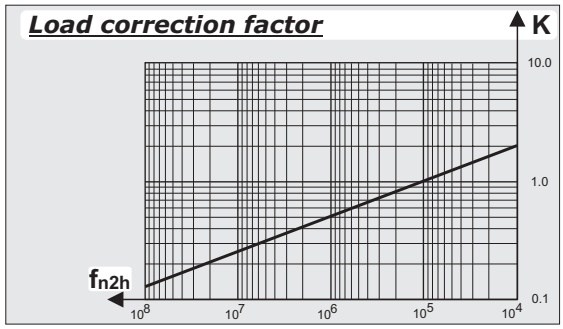




Output Shafts



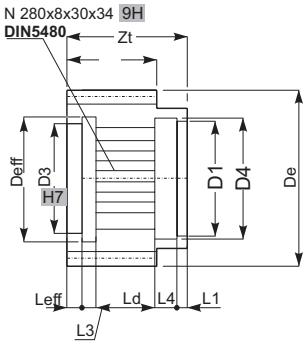




EXB

non disponibile
not available
nicht verfügbar

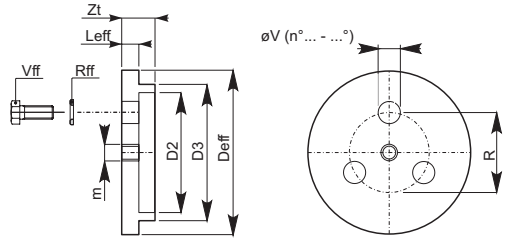
ID



		m	Z	X	De
ID—		-	-	-	-

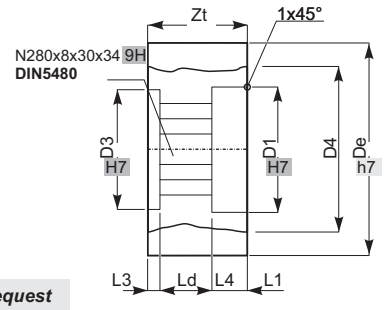
On request

FF

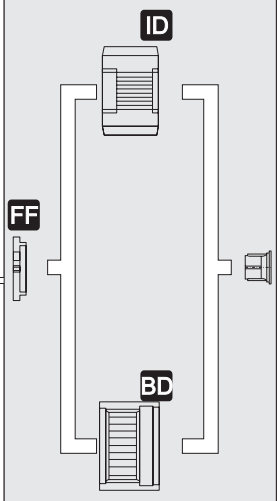


On request

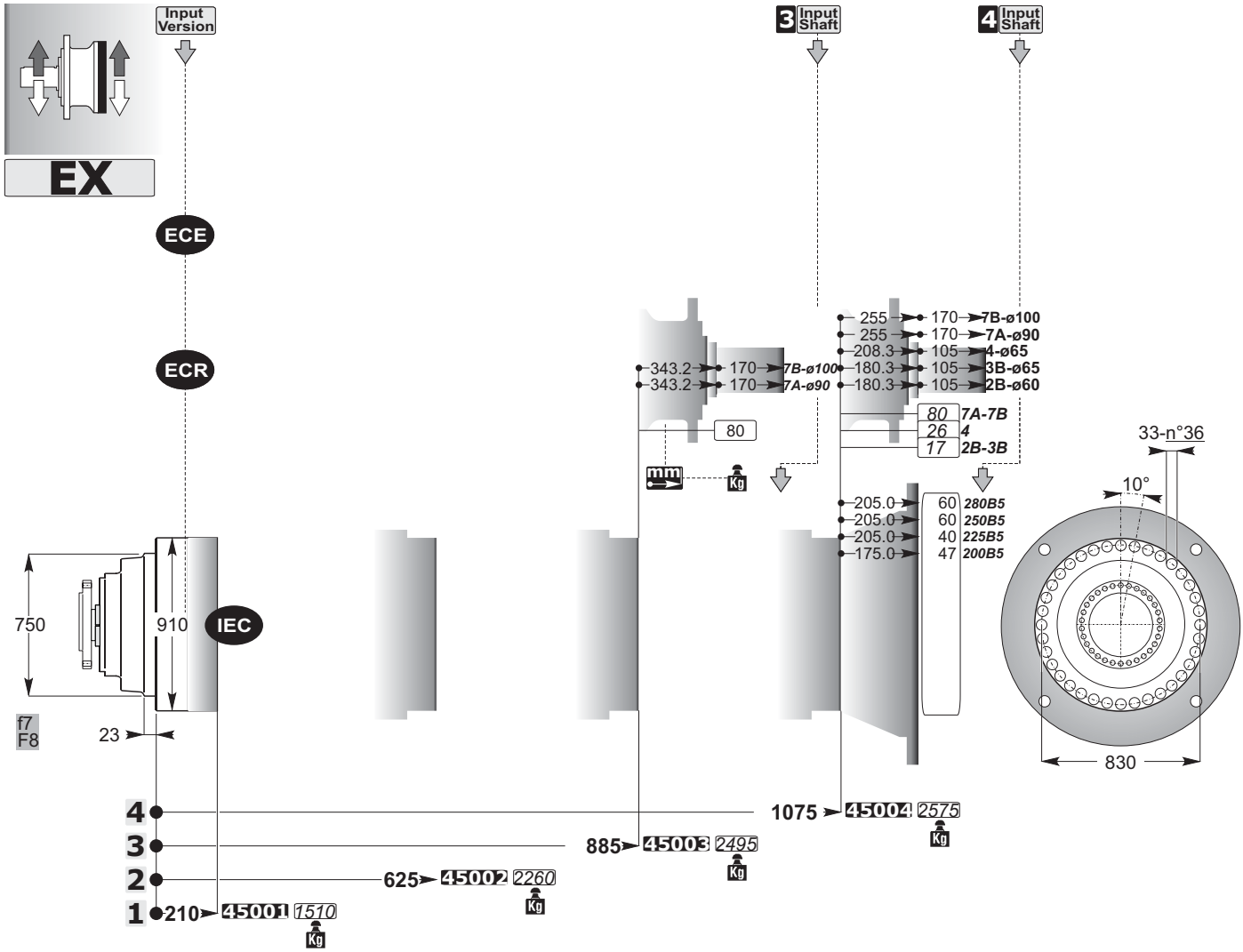
BD

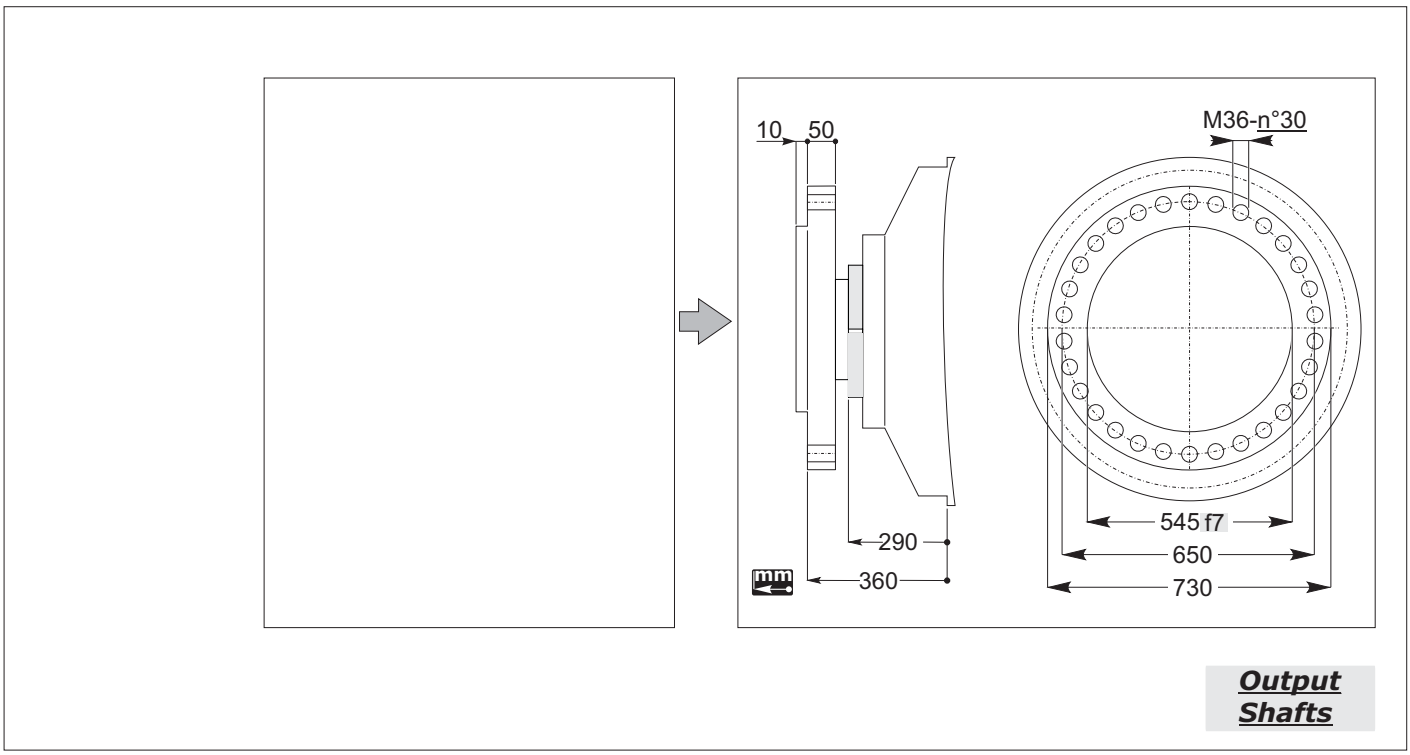


On request



Accessories

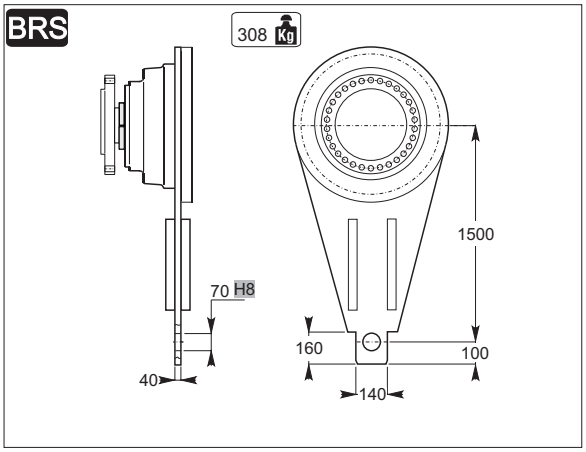

Input Version
EX
ECE
ECR
IEC
750
910
f7
F8
23
3 Input Shaft
4 Input Shaft
343.2 170 7B-ø100
343.2 170 7A-ø90
80
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
80 7A-7B
26 4
17 2B-3B
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
33-n°36
10°
830
4
3
2
1
1075 45004 2575
885 45003 2495
625 45002 2260
210 45001 1510


10 50
M36-n°30
290
360
545 f7
650
730
Output Shafts

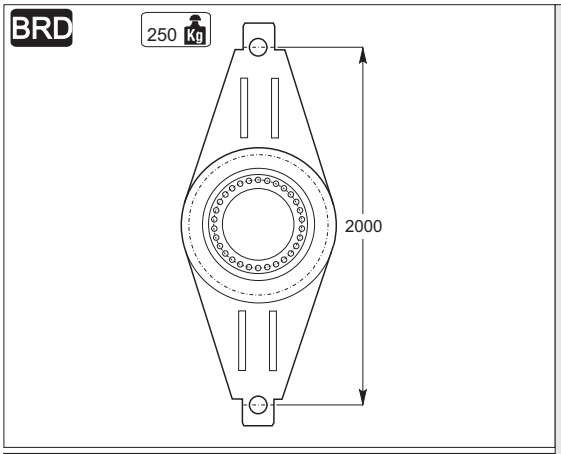
EXB

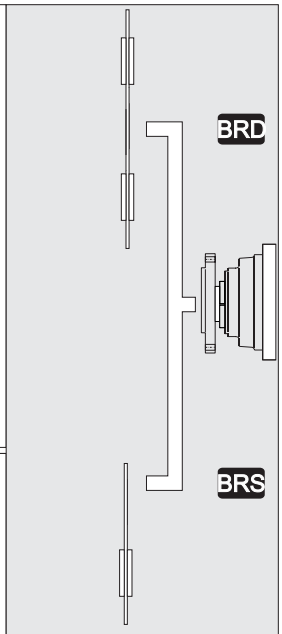
non disponibile
not available
nicht verfügbar

BRS

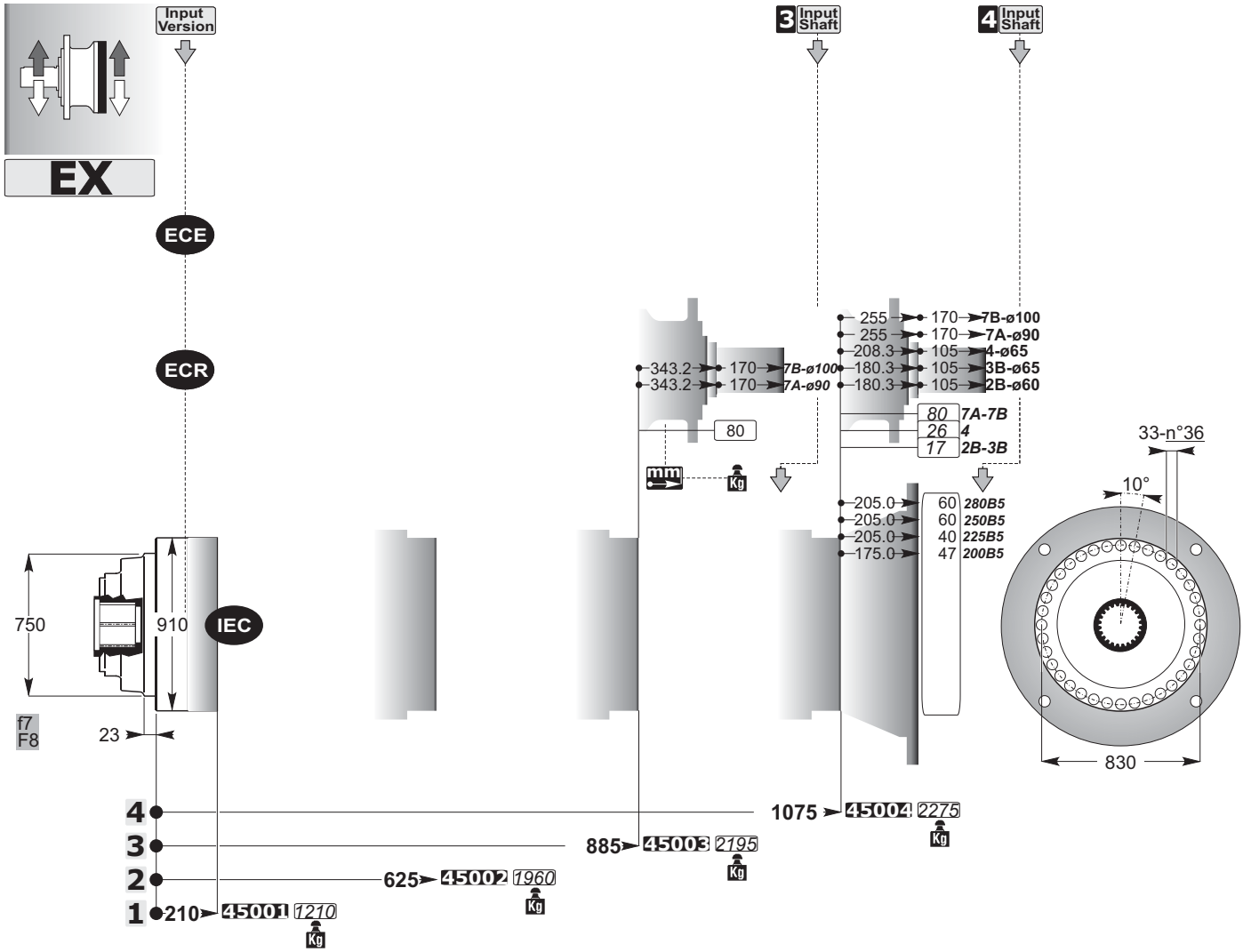


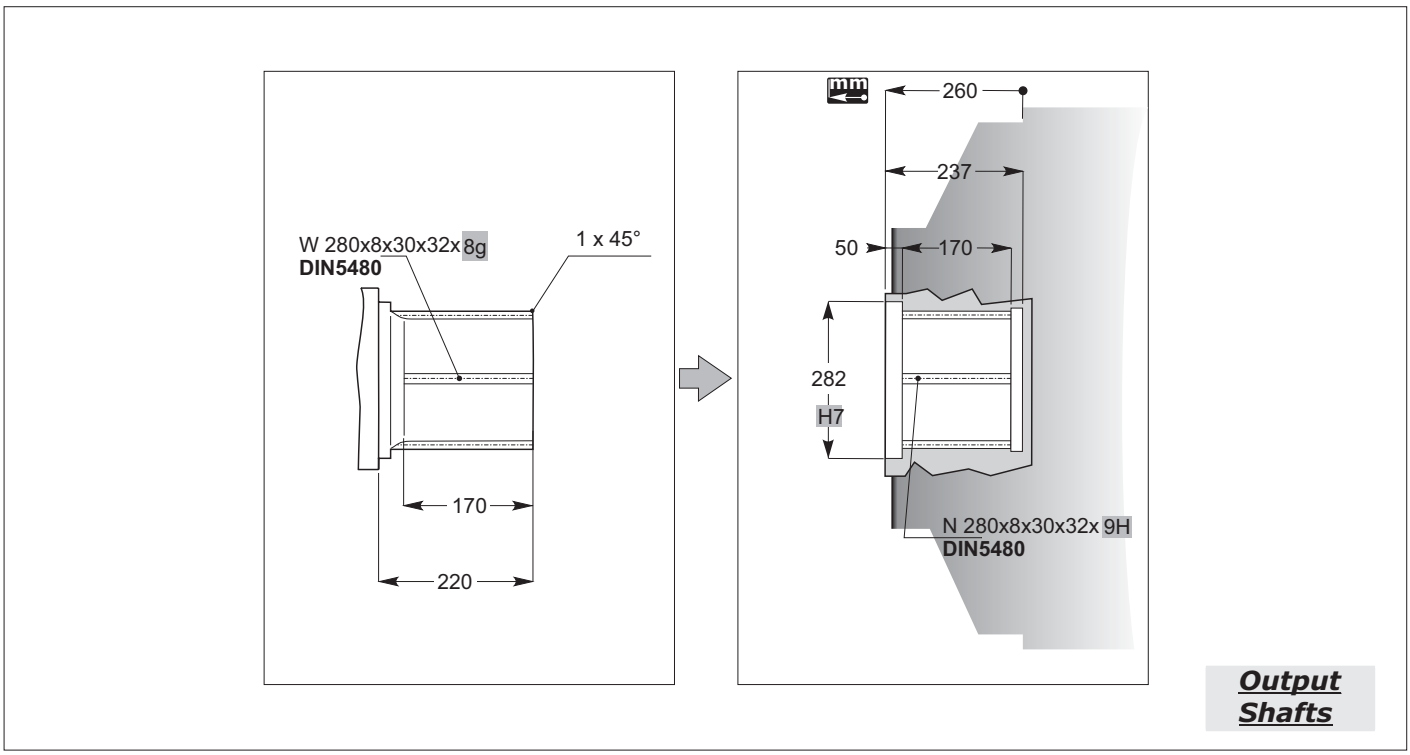
BRD





Accessories

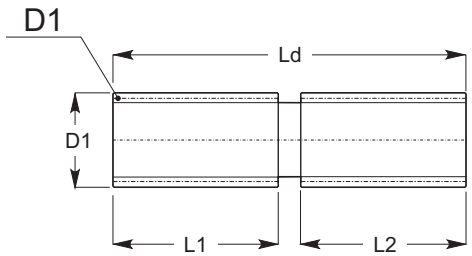

Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
750
910
23
f7
F8
343.2 170 7B-ø100
343.2 170 7A-ø90
80
255 170 7B-ø100
255 170 7A-ø90
208.3 105 4-ø65
180.3 105 3B-ø65
180.3 105 2B-ø60
80 7A-7B
26 4
17 2B-3B
205.0 60 280B5
205.0 60 250B5
205.0 40 225B5
175.0 47 200B5
33-n°36
10°
830
4 1075 45004 2275
3 885 45003 2195
2 625 45002 1960
1 210 45001 1210


W 280x8x30x32x 8g
DIN5480
1 x 45°
170
220
260
237
50
170
282
H7
N 280x8x30x32x 9H
DIN5480
Output Shafts

EXB

non disponibile
not available
nicht verfügbar

SD

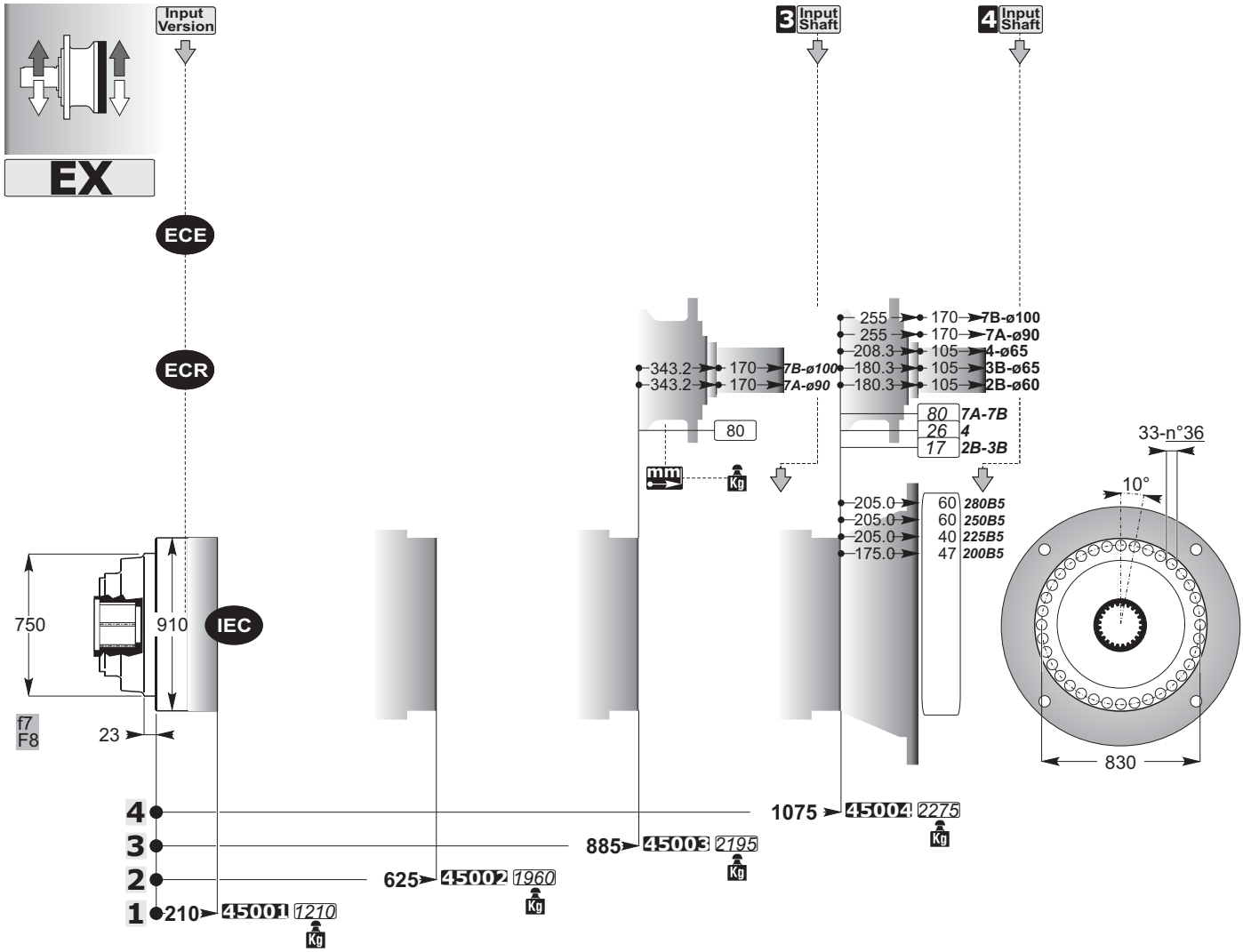


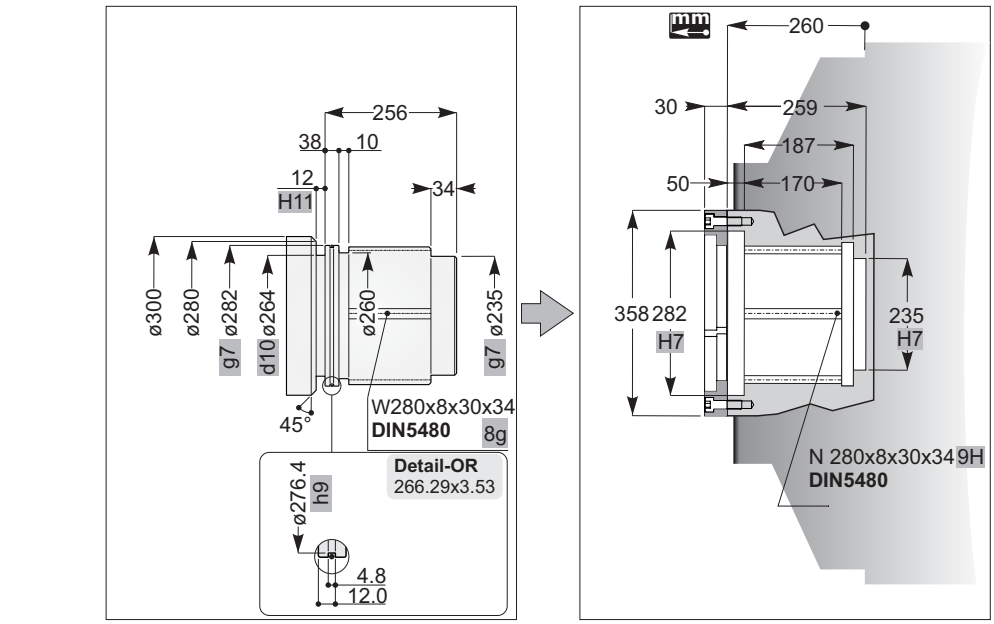
On request

SD



Accessories



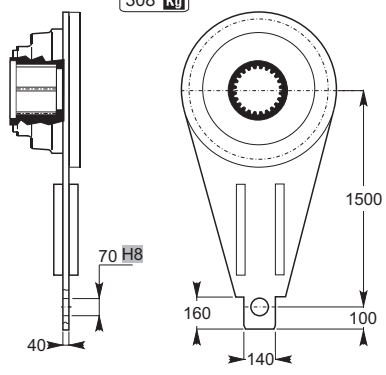


Output Shafts

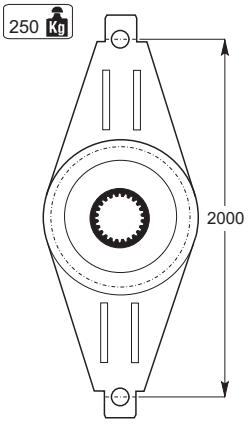
EXB

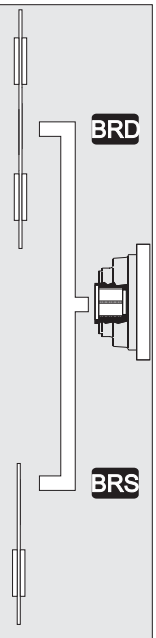
non disponibile
not available
nicht verfügbar

BRS

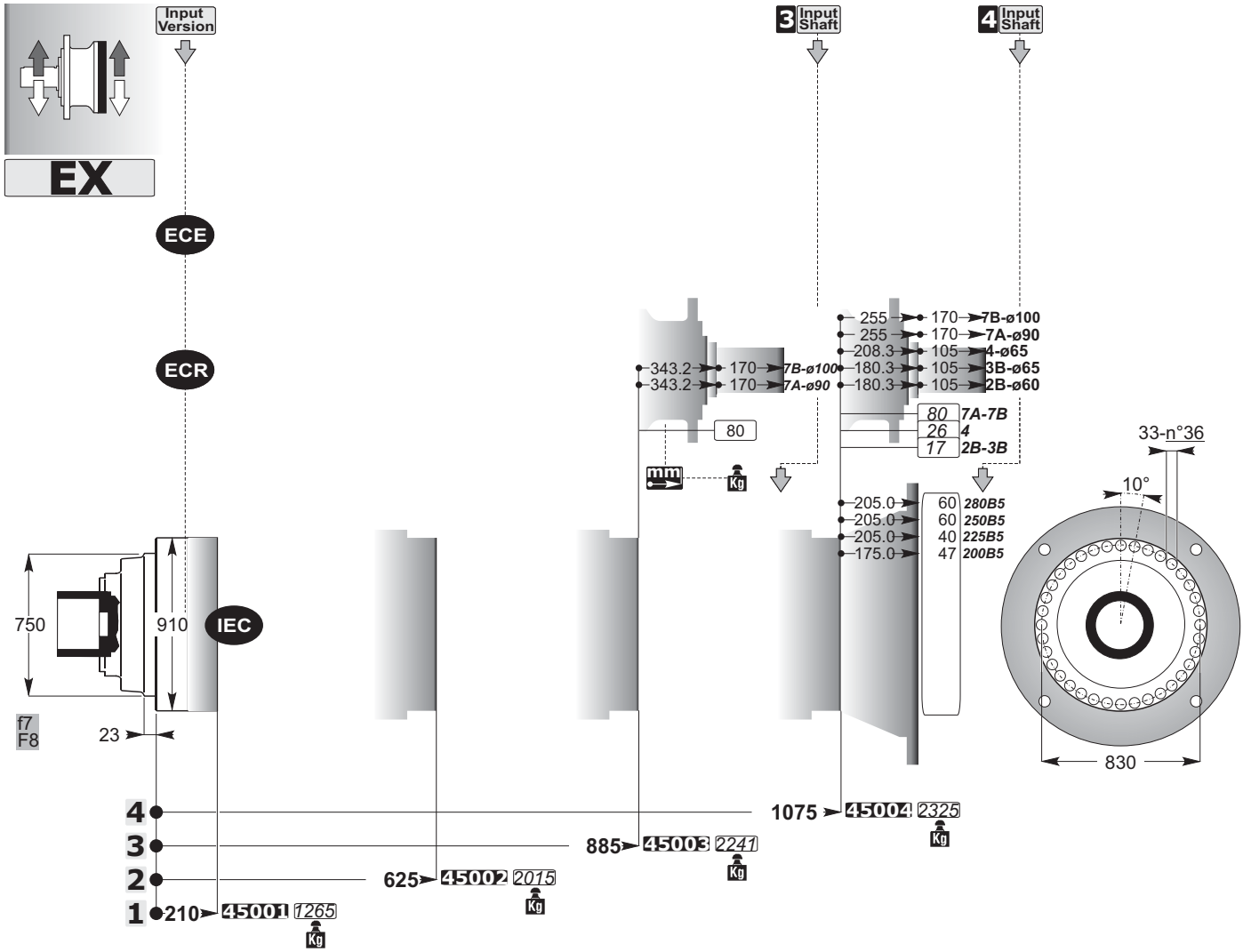


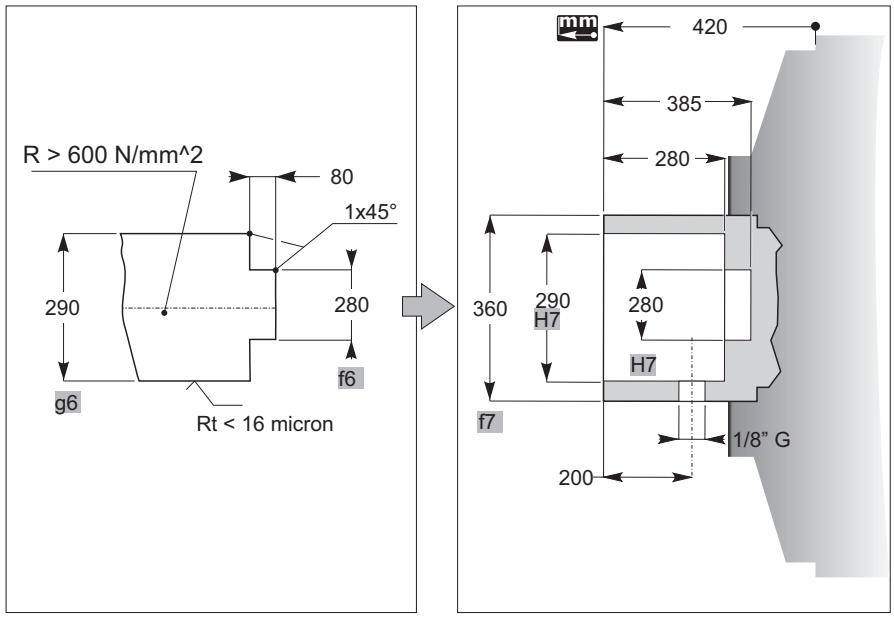
BRD





Accessories

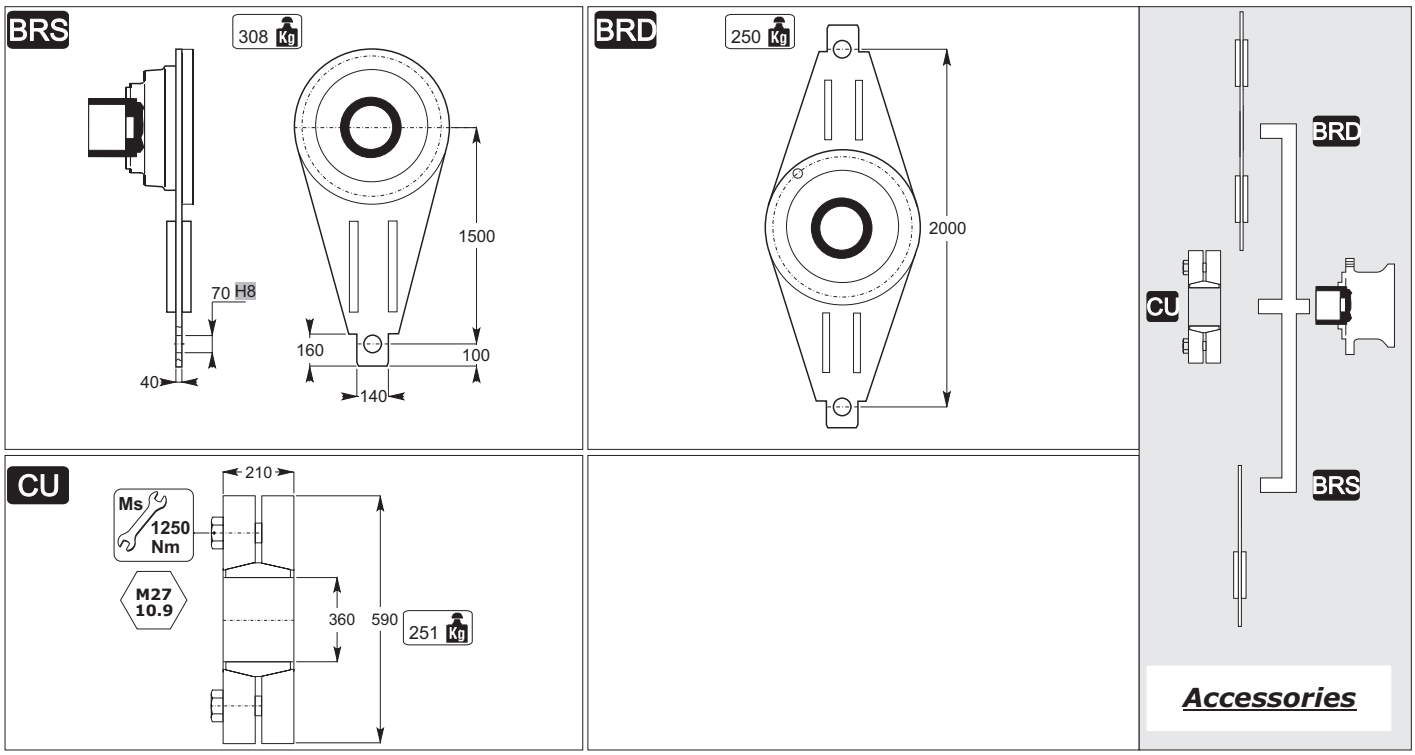




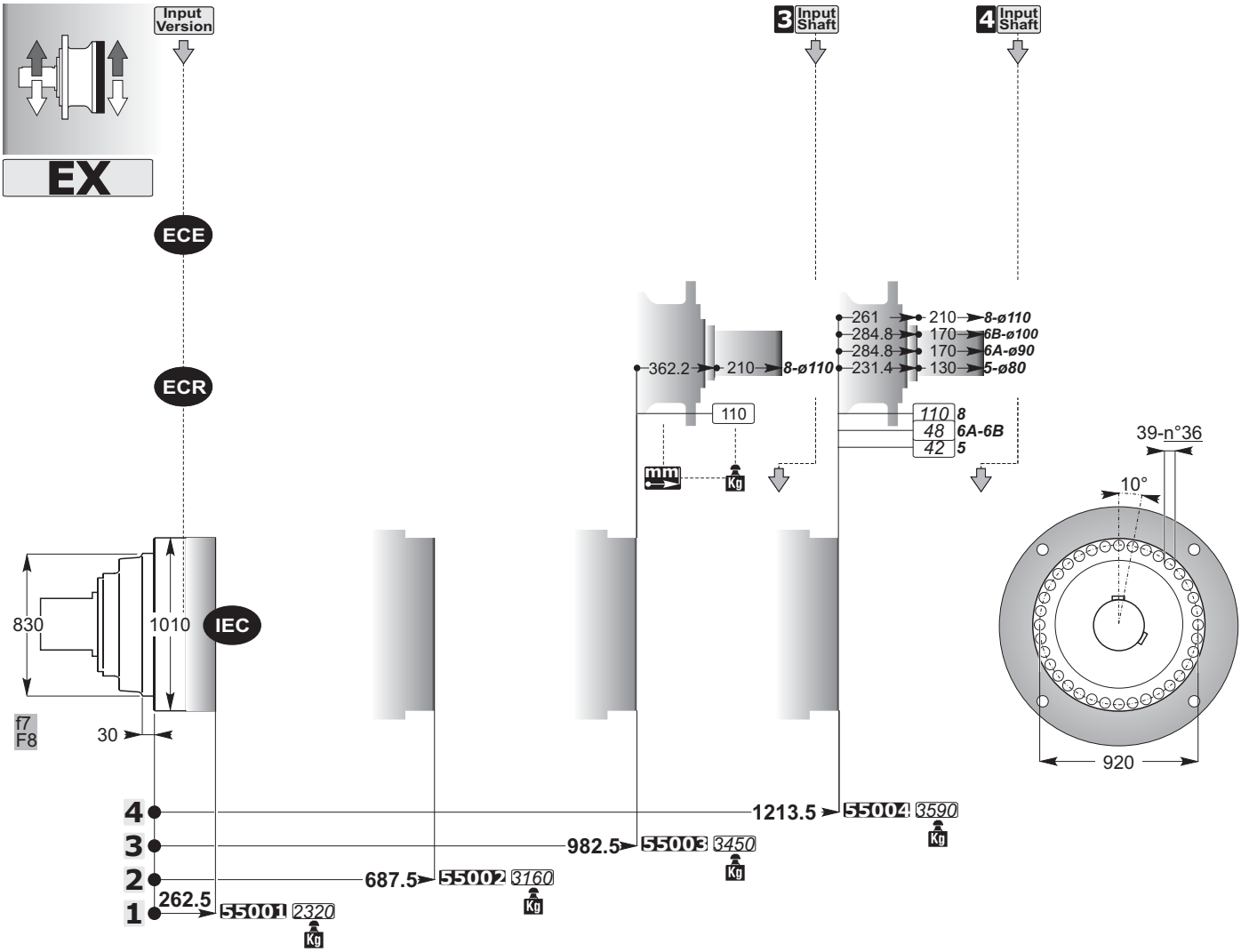
Output Shafts

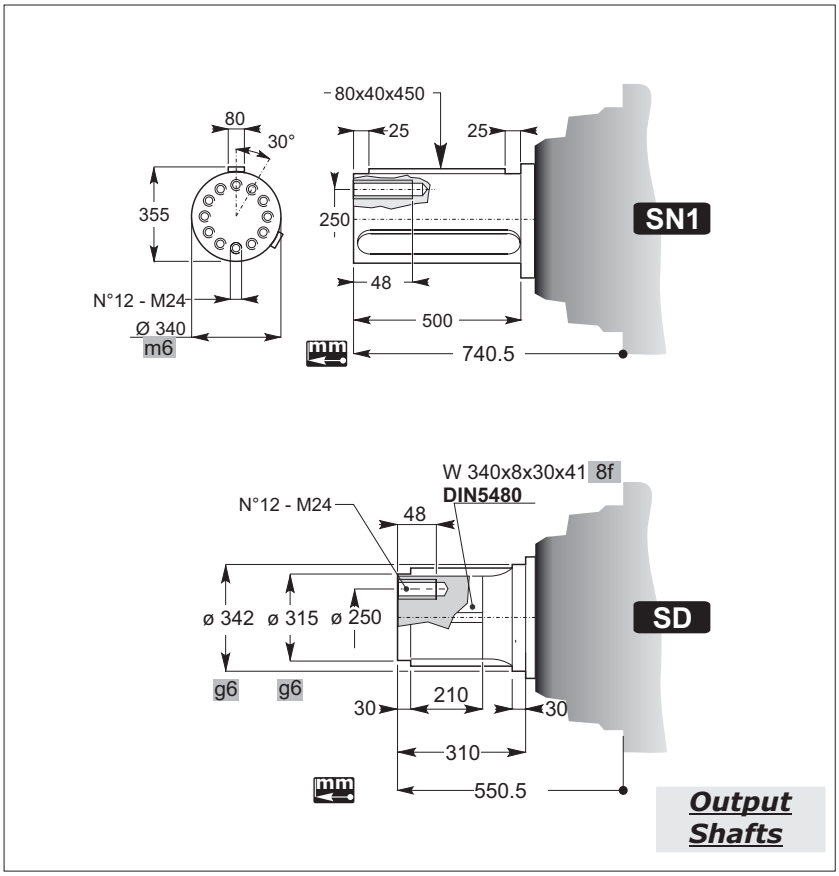
EXB

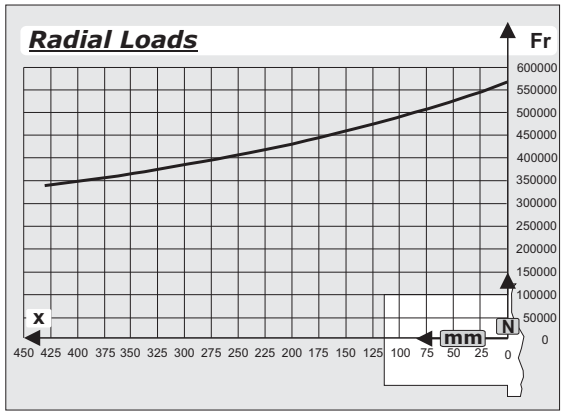
non disponibile
not available
nicht verfügbar

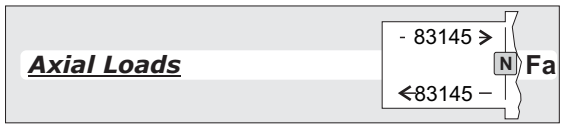


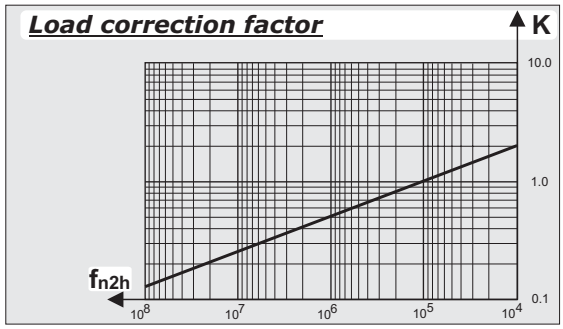
mm
C


Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
830
1010
f7
F8
30
362.2
210
8-ø110
110
261
284.8
284.8
231.4
210
170
170
130
8-ø110
6B-ø100
6A-ø90
5-ø80
110 8
48 6A-6B
42 5
39-n°36
10°
920
4
3
2
1
1213.5
55004
3590
982.5
55003
3450
687.5
55002
3160
262.5
55001
2320
mm
Kg


80
30°
355
N°12 - M24
Ø 340
m6
80x40x450
25
25
250
48
500
740.5
SN1
W 340x8x30x41 8f
DIN5480
N°12 - M24
48
ø 342
ø 315
ø 250
g6
g6
30
210
30
310
550.5
SD
mm
Output Shafts


Radial Loads
Fr
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0
mm
N

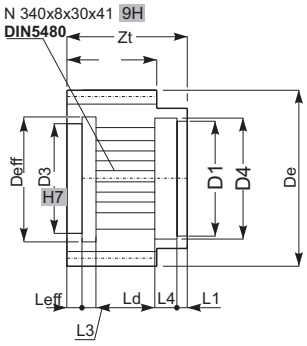

Axial Loads
- 83145 >
N
Fa
<83145 –


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

EXB

non disponibile
not available
nicht verfügbar

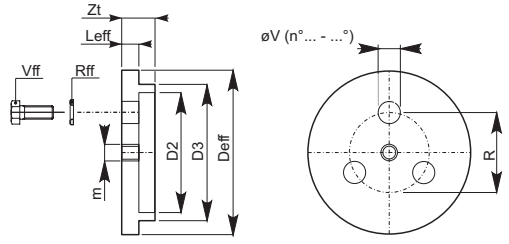
ID



		m	Z	X	De
ID—		-	-	-	-

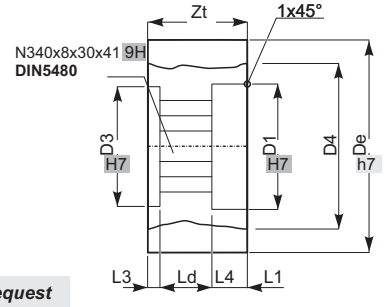
On request

FF

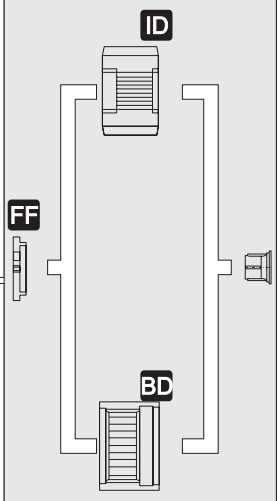


On request

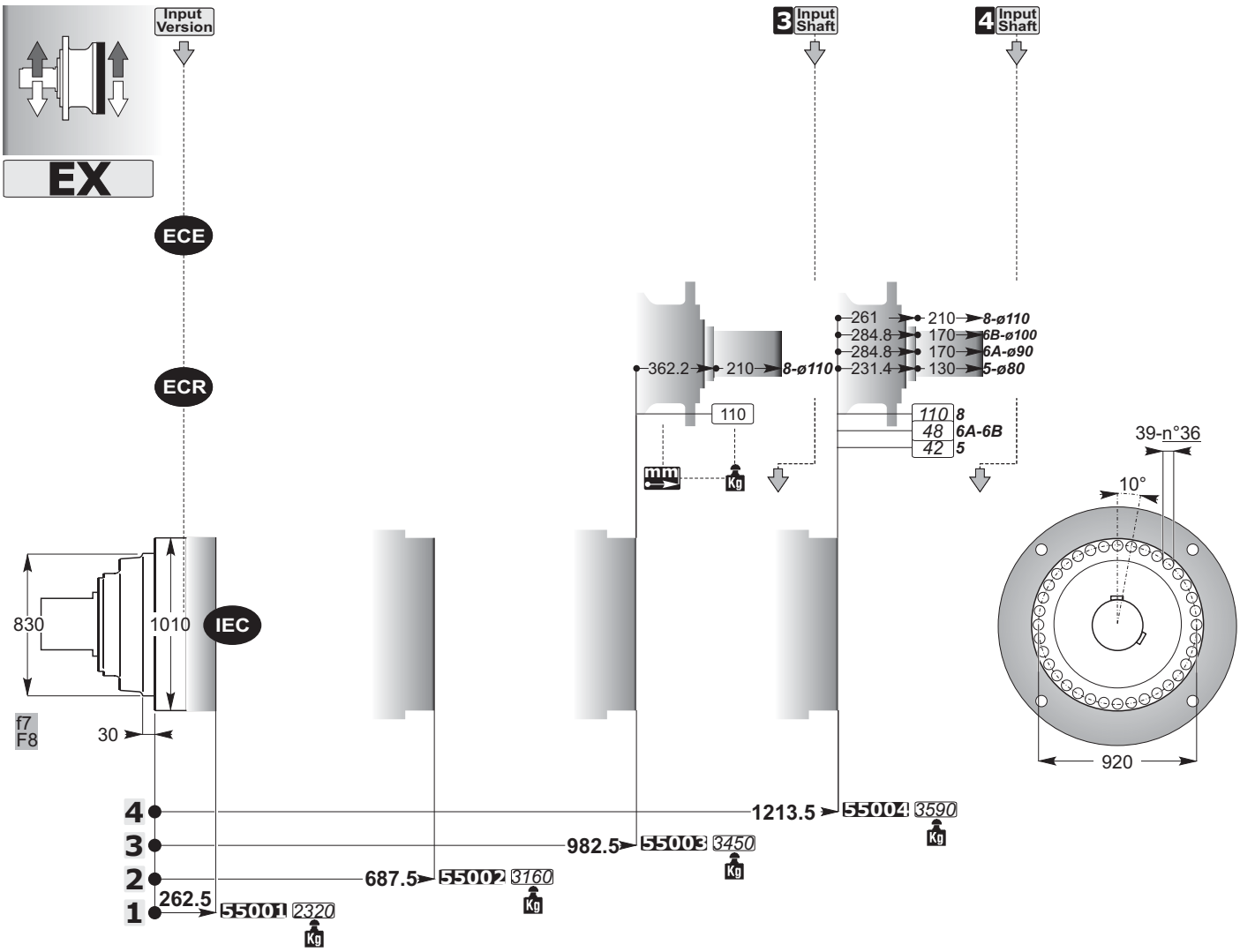
BD

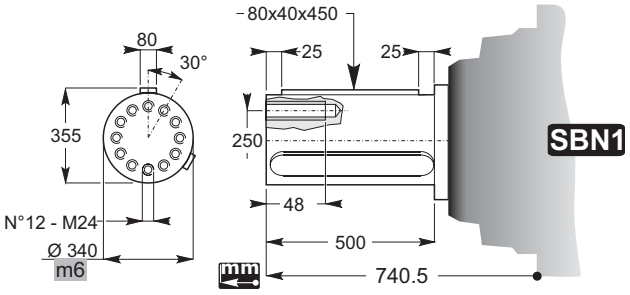


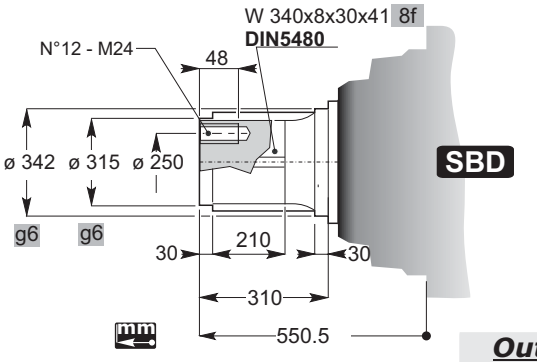
On request



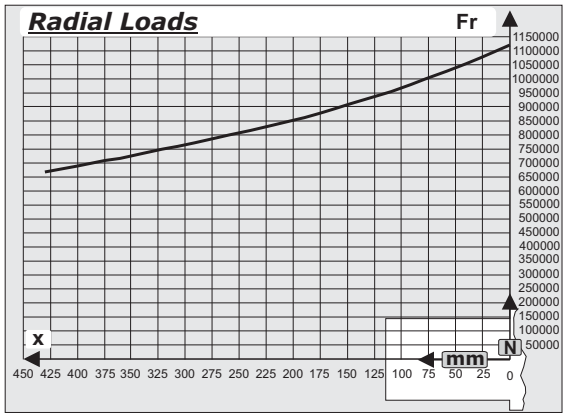
Accessories

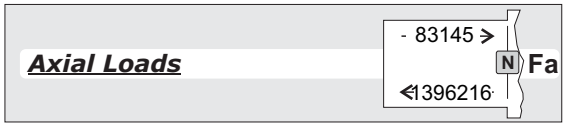


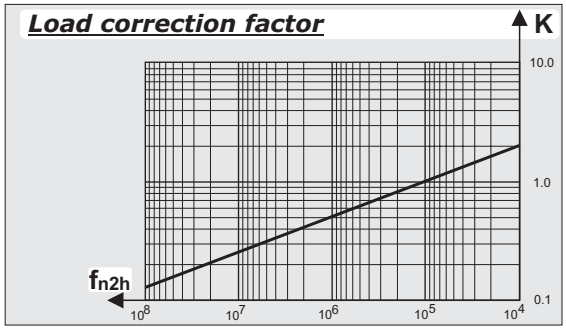




Output Shafts



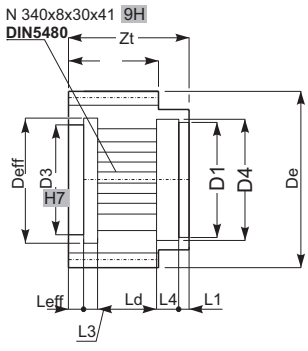




EXB

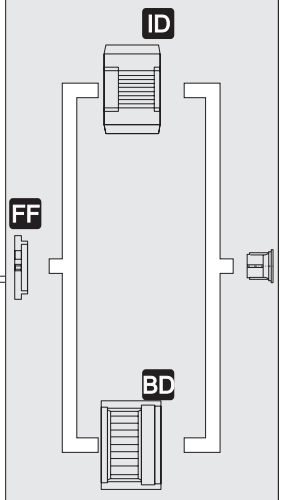
non disponibile
not available
nicht verfügbar

ID



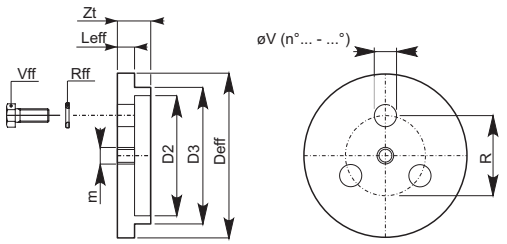
	m	Z	X	De
ID	-	-	-	-

On request



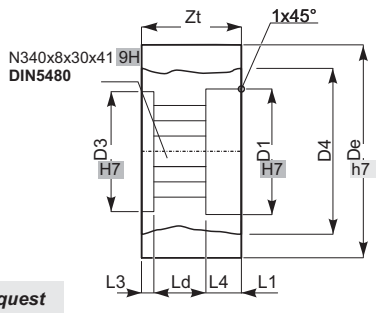
Accessories

FF

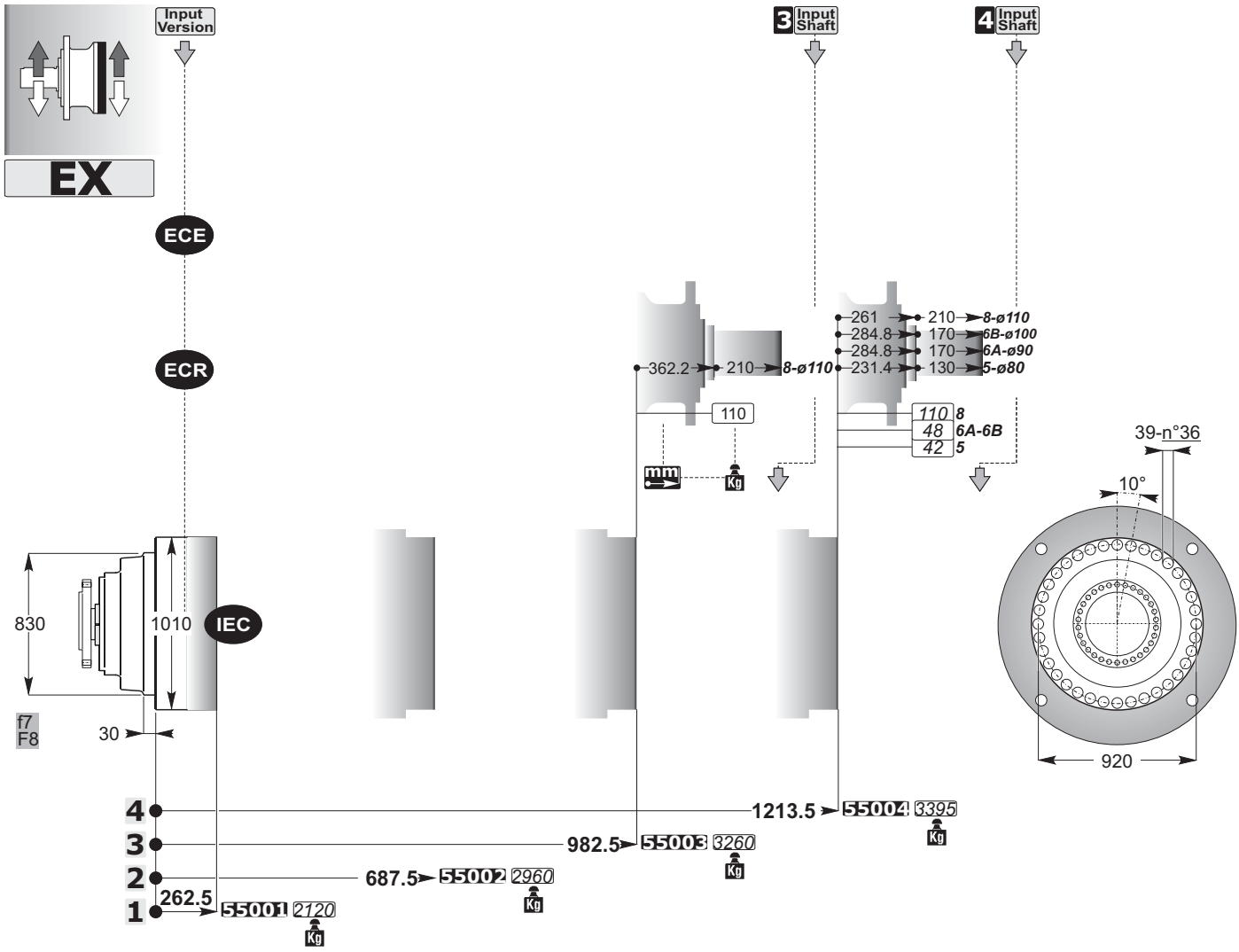


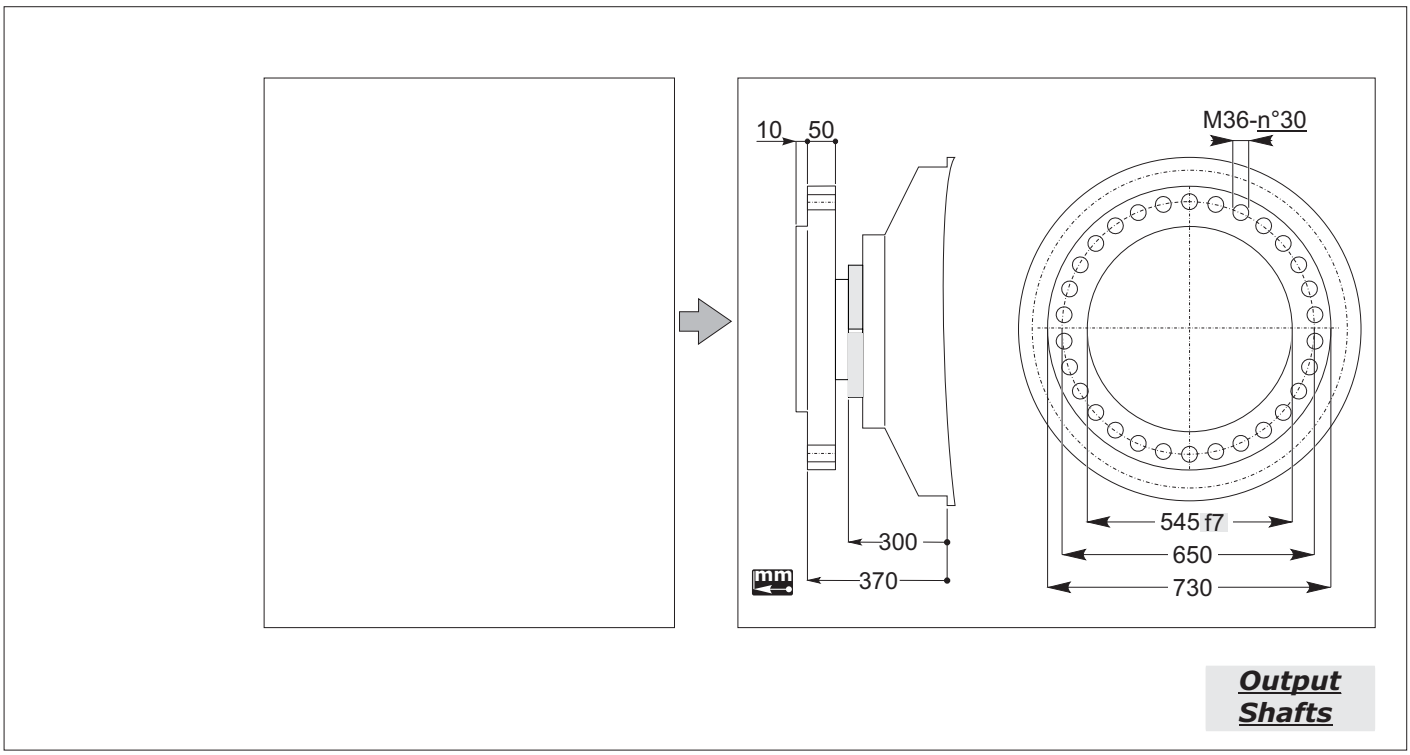
On request

BD



On request





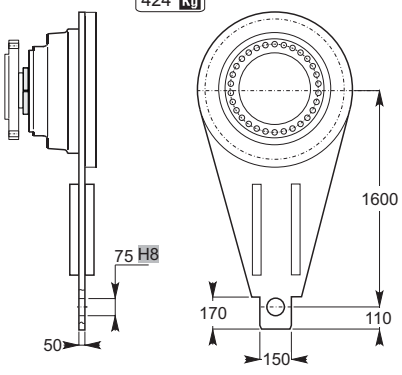
Output Shafts

EXB

non disponibile
not available
nicht verfügbar

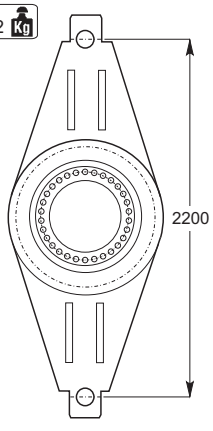
BRS

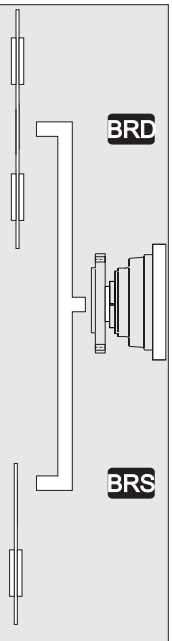
424 Kg



BRD

392 Kg

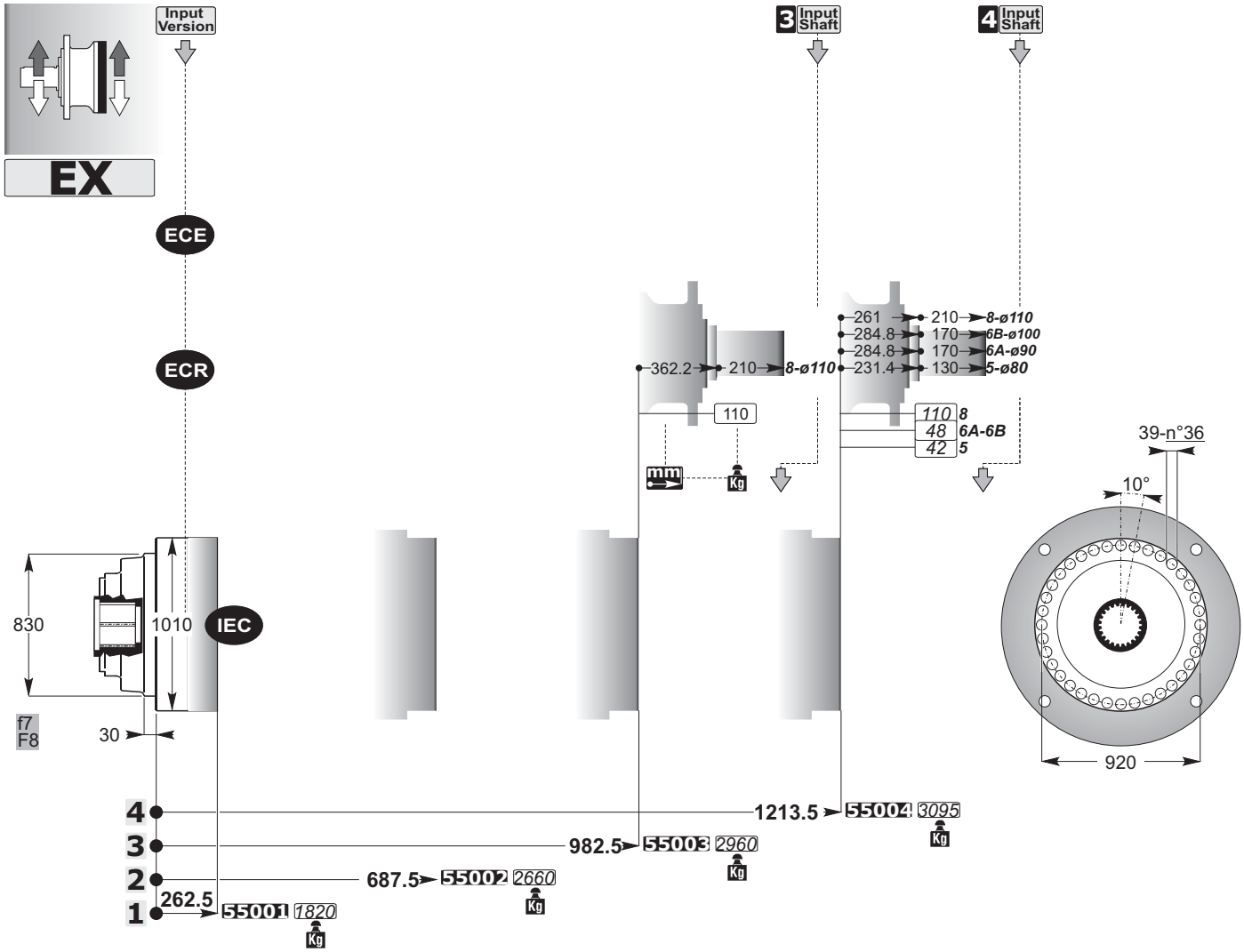


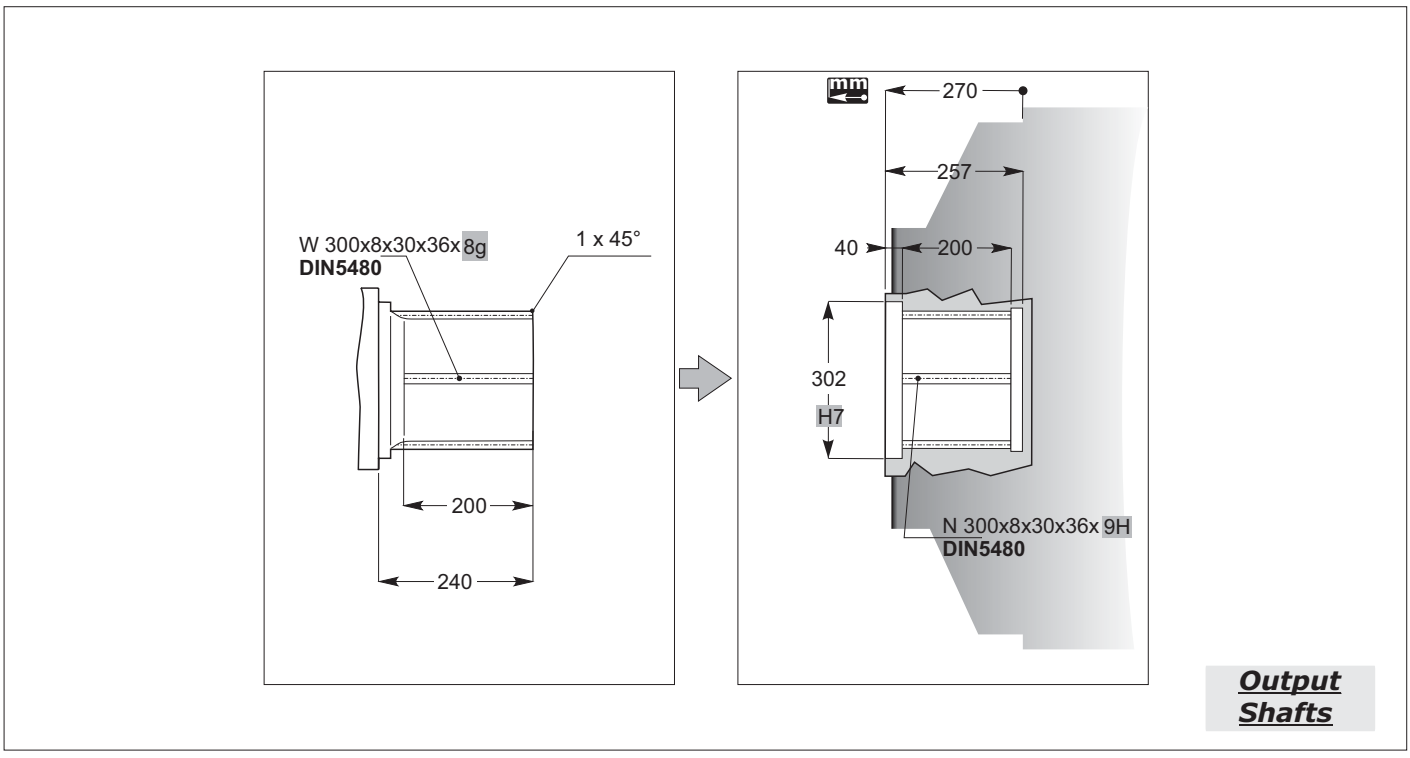


Accessories

mm

C

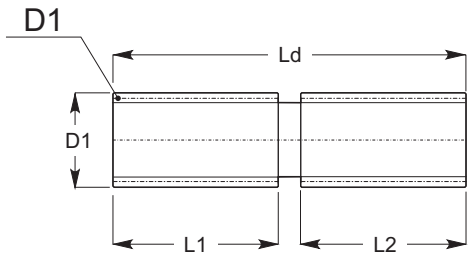

Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
362.2
210
8-ø110
261
284.8
284.8
231.4
210
170
170
130
8-ø110
6B-ø100
6A-ø90
5-ø80
110
110 8
48 6A-6B
42 5
39-n°36
10°
830
1010
f7
F8
30
920
4
3
2
1
1213.5
55004
3095
982.5
55003
2960
687.5
55002
2660
262.5
55001
1820
Kg
mm


W 300x8x30x36x 8g
DIN5480
1 x 45°
200
240
mm
270
257
40
200
302
H7
N 300x8x30x36x 9H
DIN5480
Output Shafts

EXB

non disponibile
not available
nicht verfügbar

SD

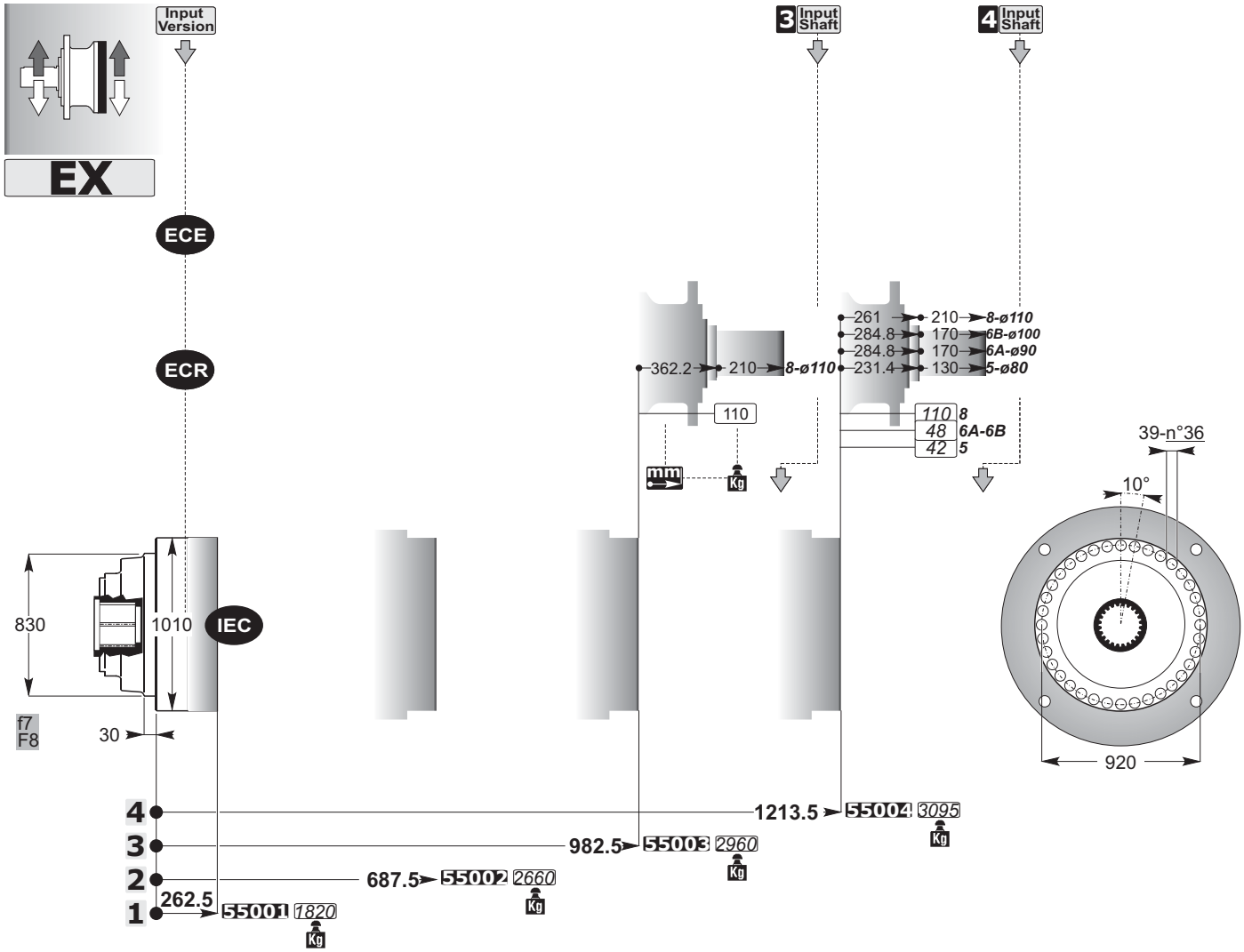


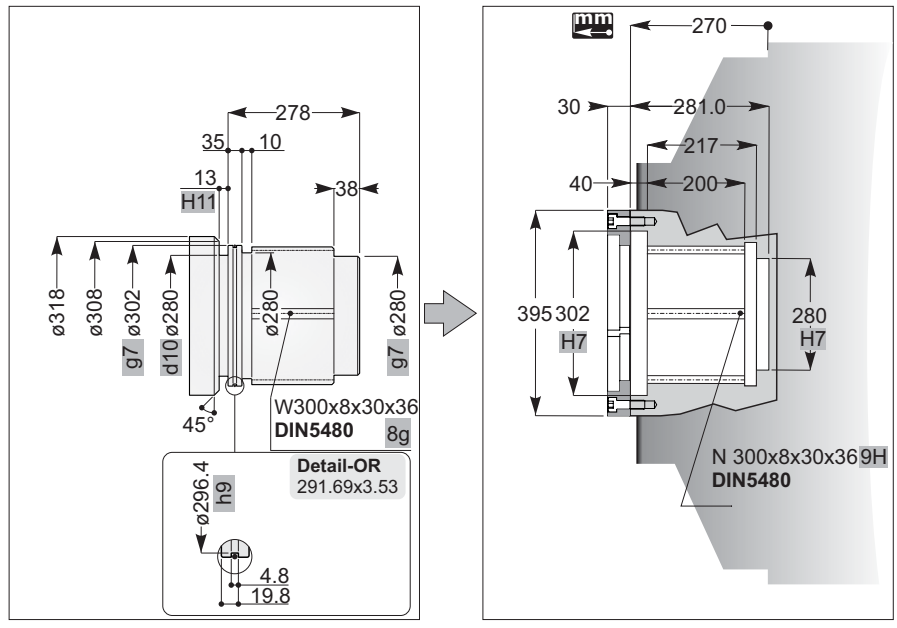
On request

SD



Accessories



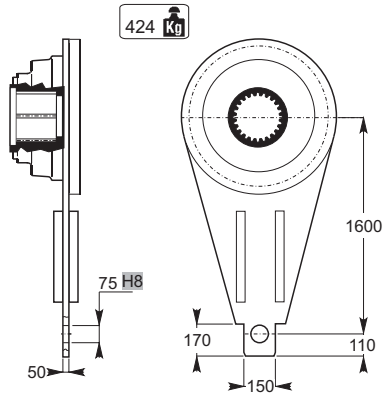


Output Shafts

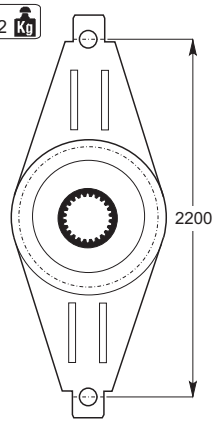
EXB

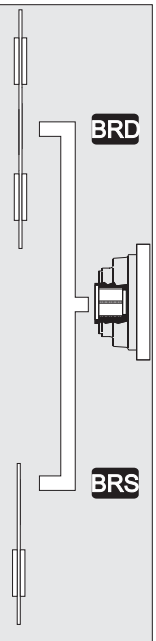
non disponibile
not available
nicht verfügbar

BRS

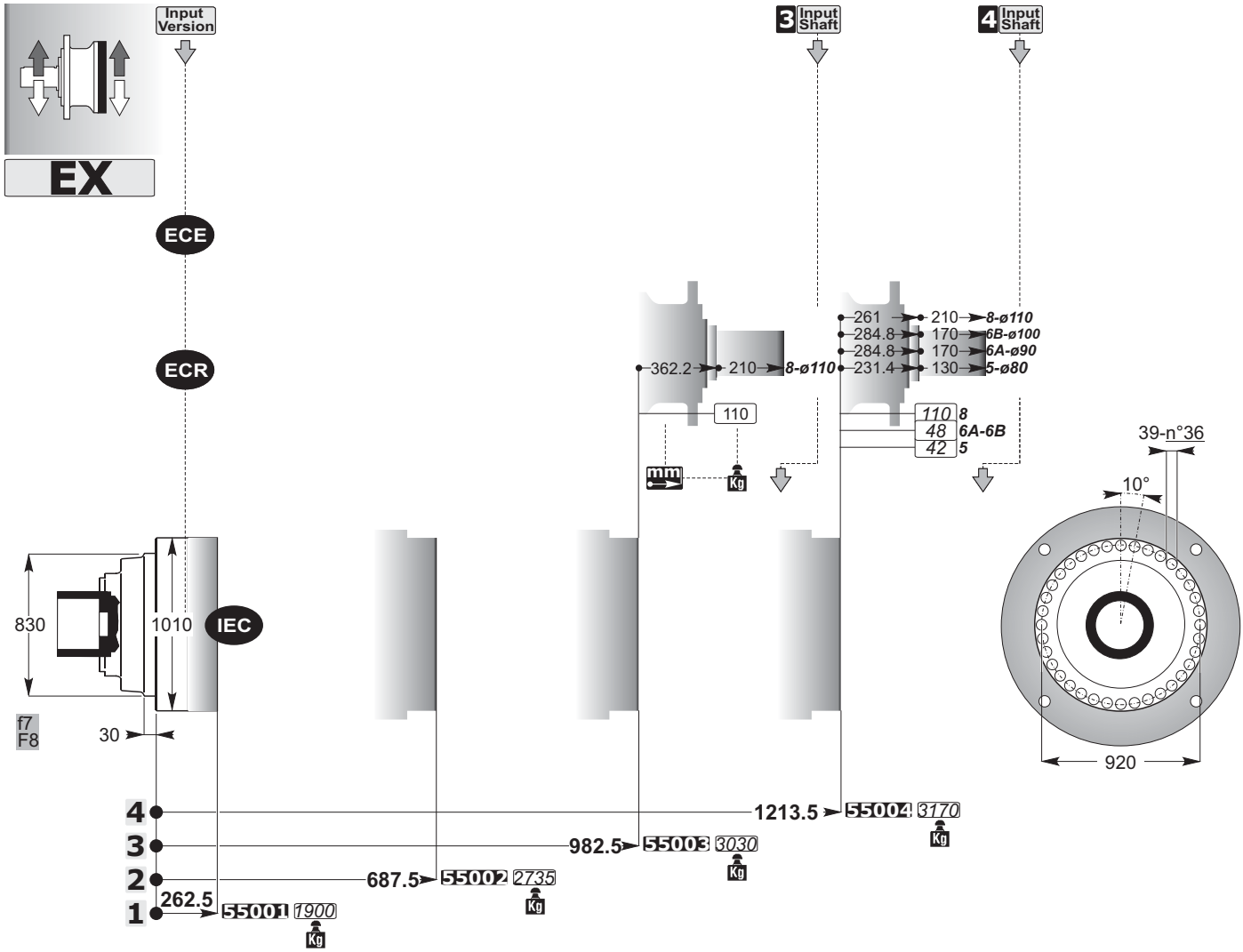


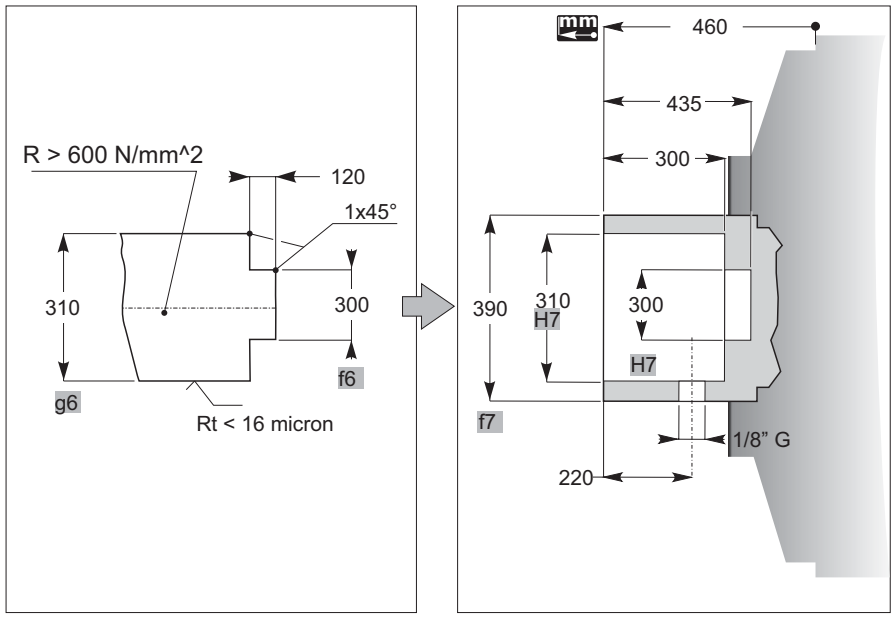
BRD





Accessories

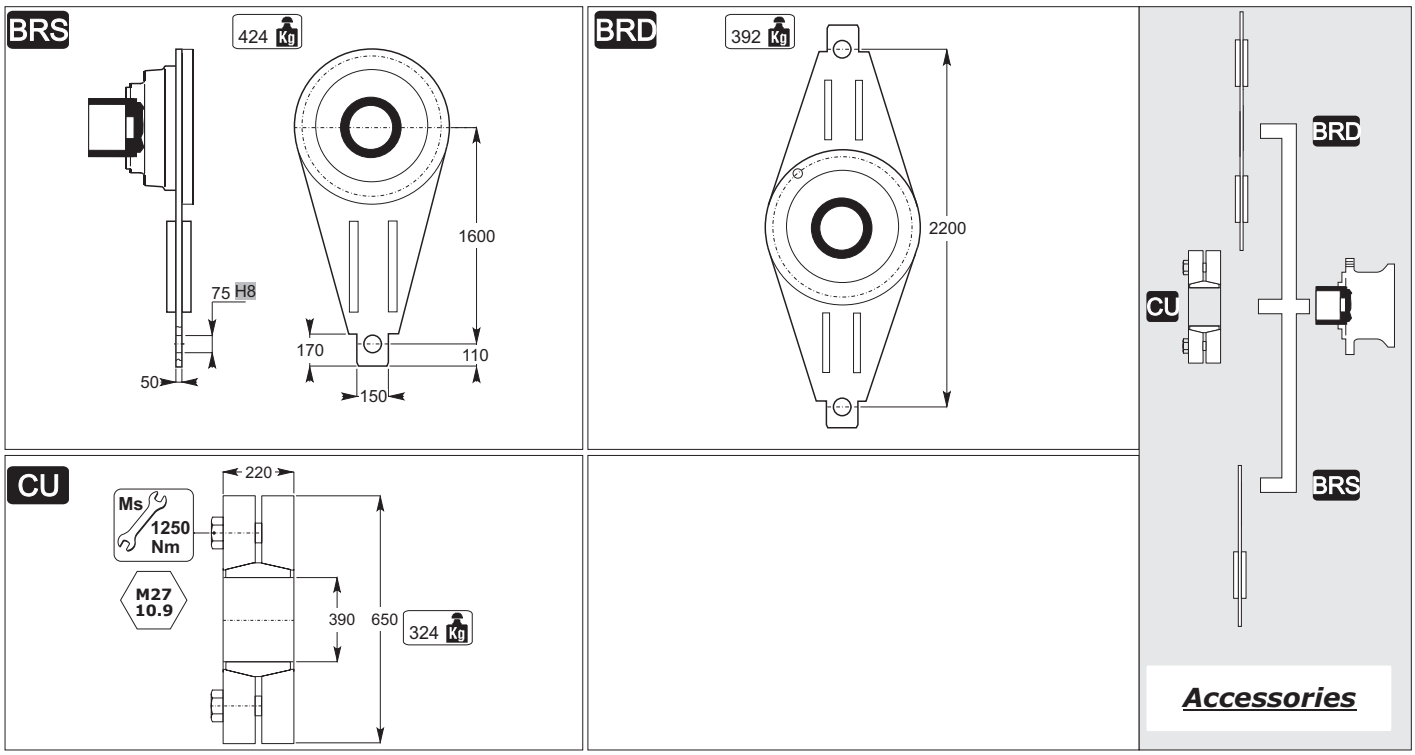


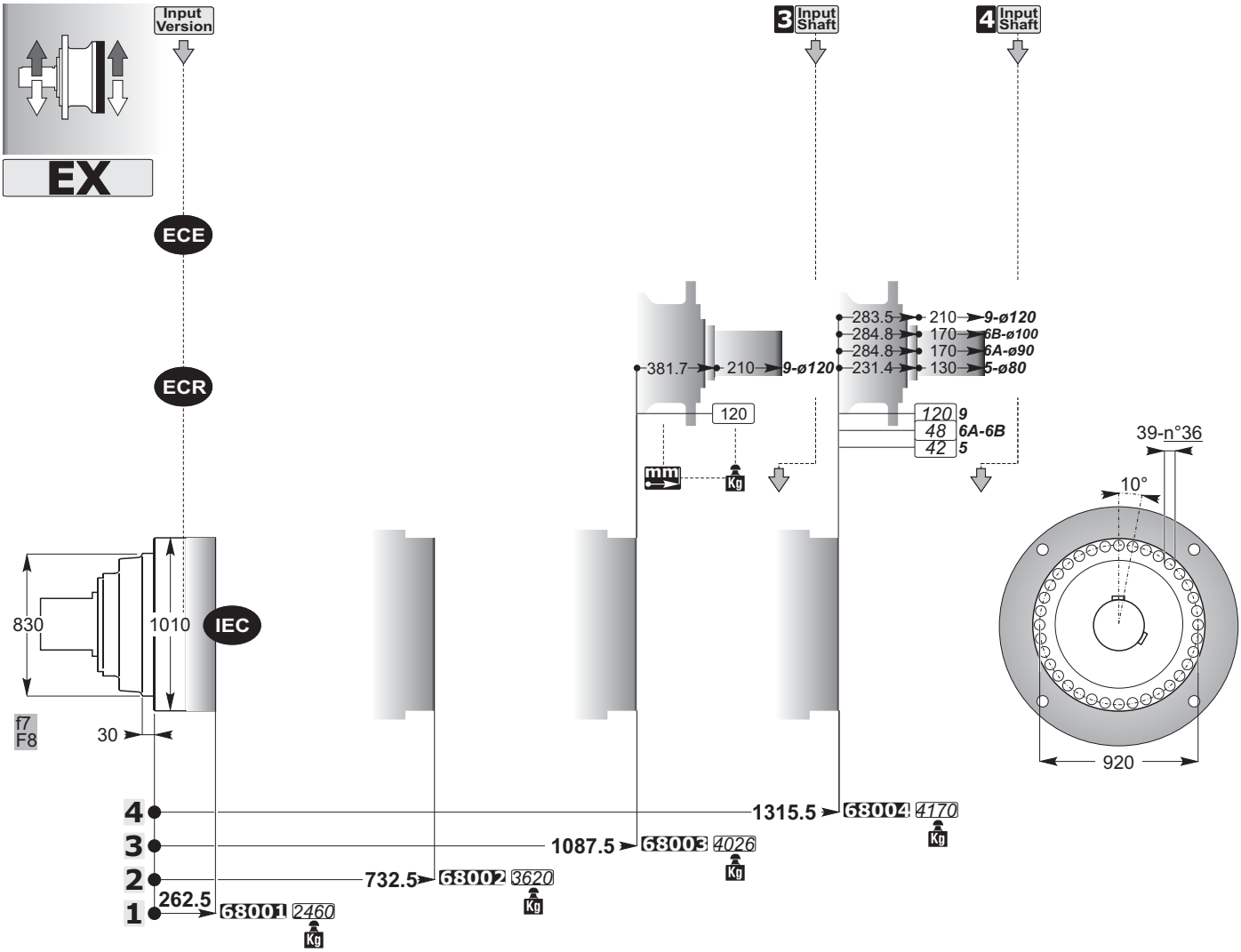


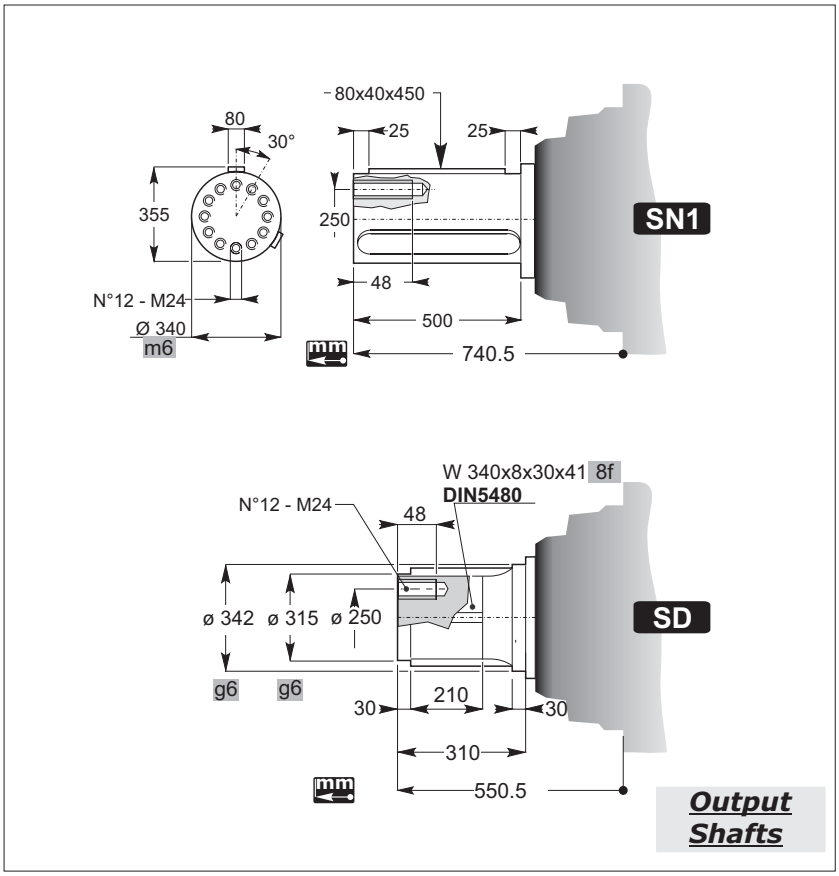
Output Shafts

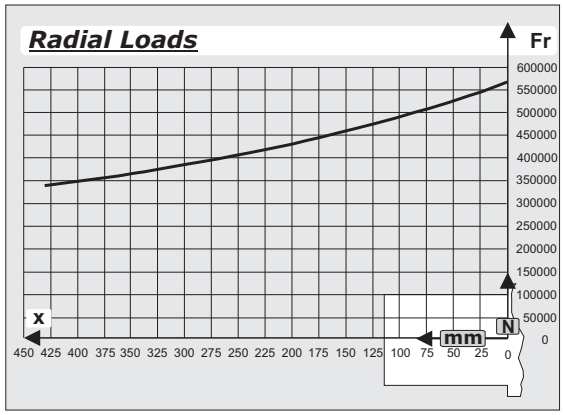
EXB

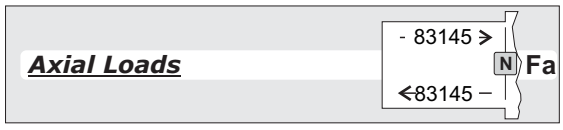
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not available
nicht verfügbar

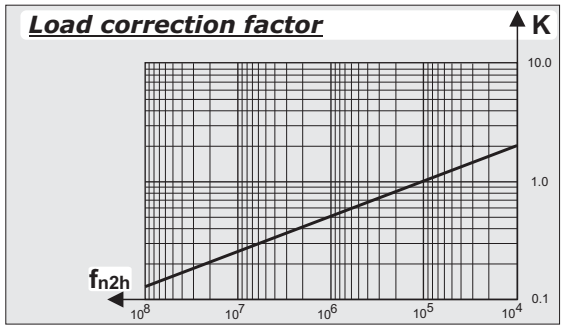



Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
283.5 210 9-ø120
284.8 170 6B-ø100
284.8 170 6A-ø90
231.4 130 5-ø80
381.7 210 9-ø120
120
120 9
48 6A-6B
42 5
39-n°36
10°
920
830
1010
f7
F8
30
4 1315.5 68004 4170
3 1087.5 68003 4026
2 732.5 68002 3620
1 262.5 68001 2460


80
30°
355
N°12 - M24
Ø 340
m6
80x40x450
25
25
250
48
500
740.5
SN1
W 340x8x30x41 8f
DIN5480
N°12 - M24
48
ø 342
ø 315
ø 250
g6
g6
30
210
30
310
550.5
SD
Output Shafts


Radial Loads
Fr
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
x
450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0
mm
N

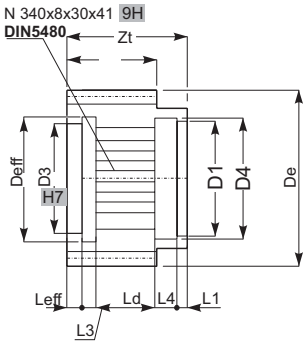

Axial Loads
- 83145 >
N
Fa
<83145 –


Load correction factor
K
10.0
1.0
0.1
fn2h
10^8
10^7
10^6
10^5
10^4

EXB

non disponibile
not available
nicht verfügbar

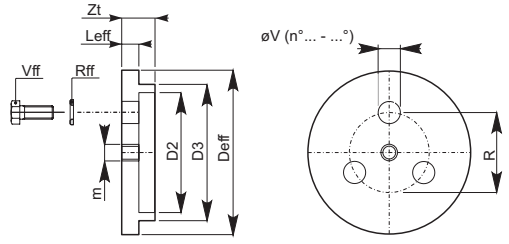
ID



	m	Z	X	De
ID—	-	-	-	-

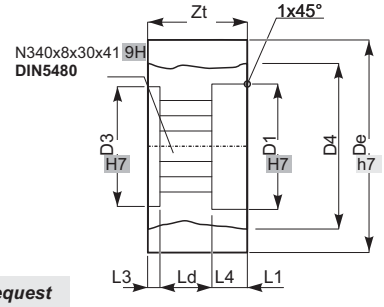
On request

FF

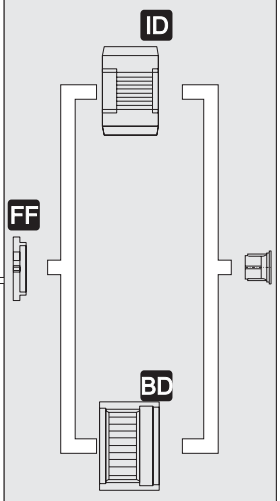


On request

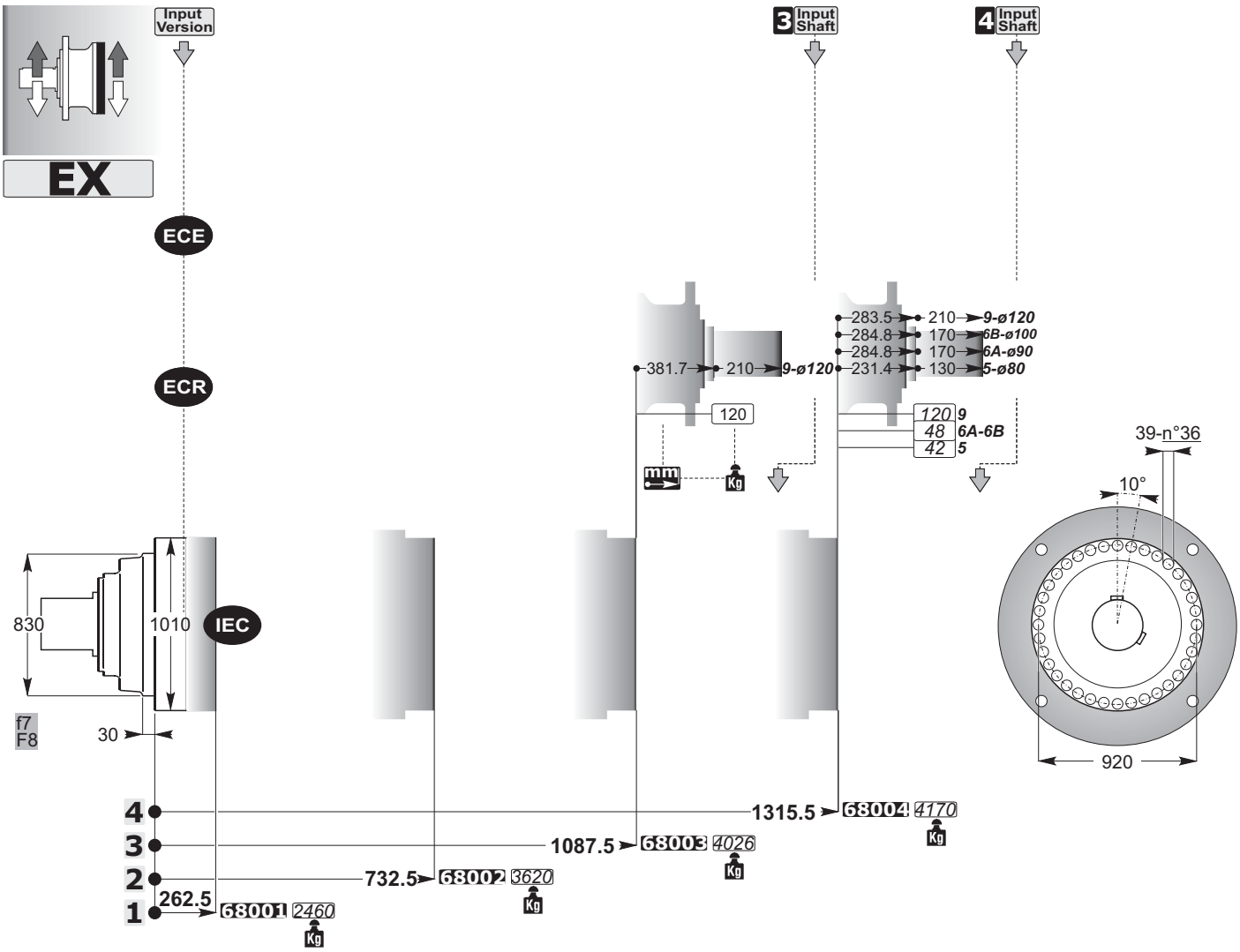
BD

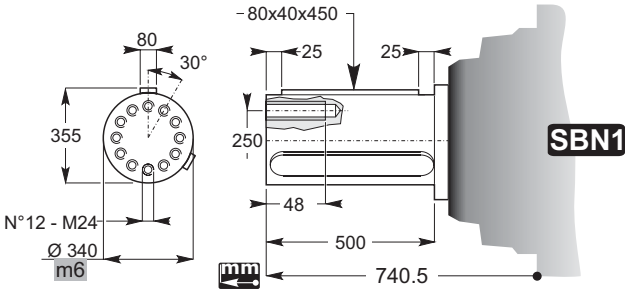


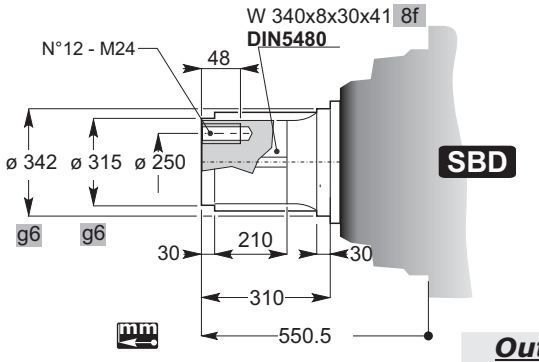
On request



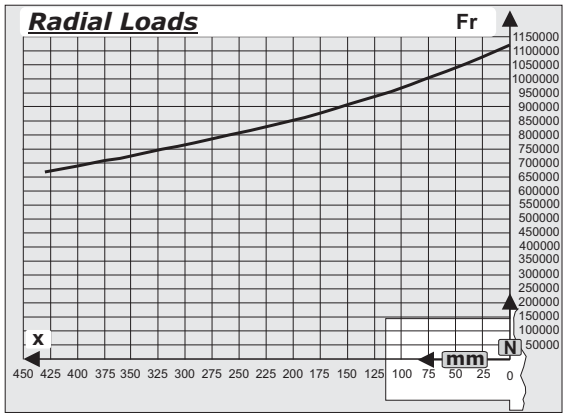
Accessories

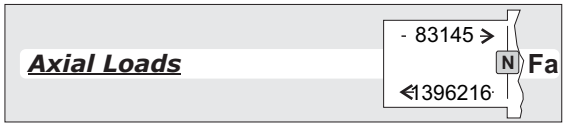


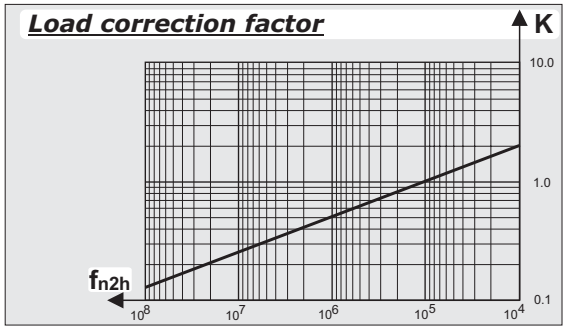




Output Shafts



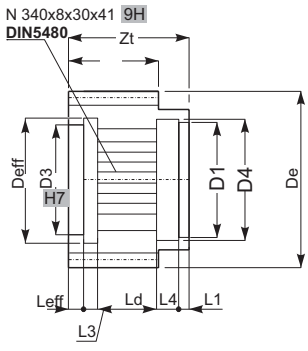




EXB

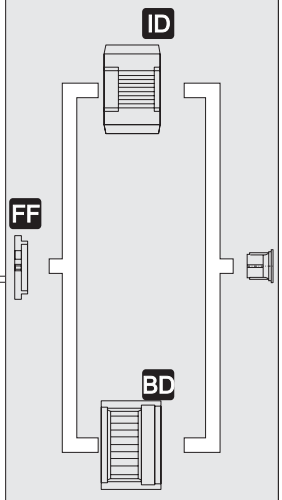
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not available
nicht verfügbar

ID



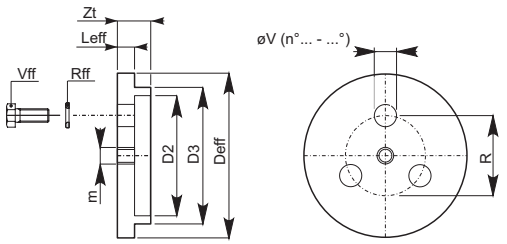
	m	Z	X	De
ID	-	-	-	-

On request



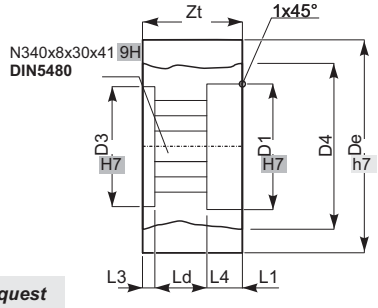
Accessories

FF

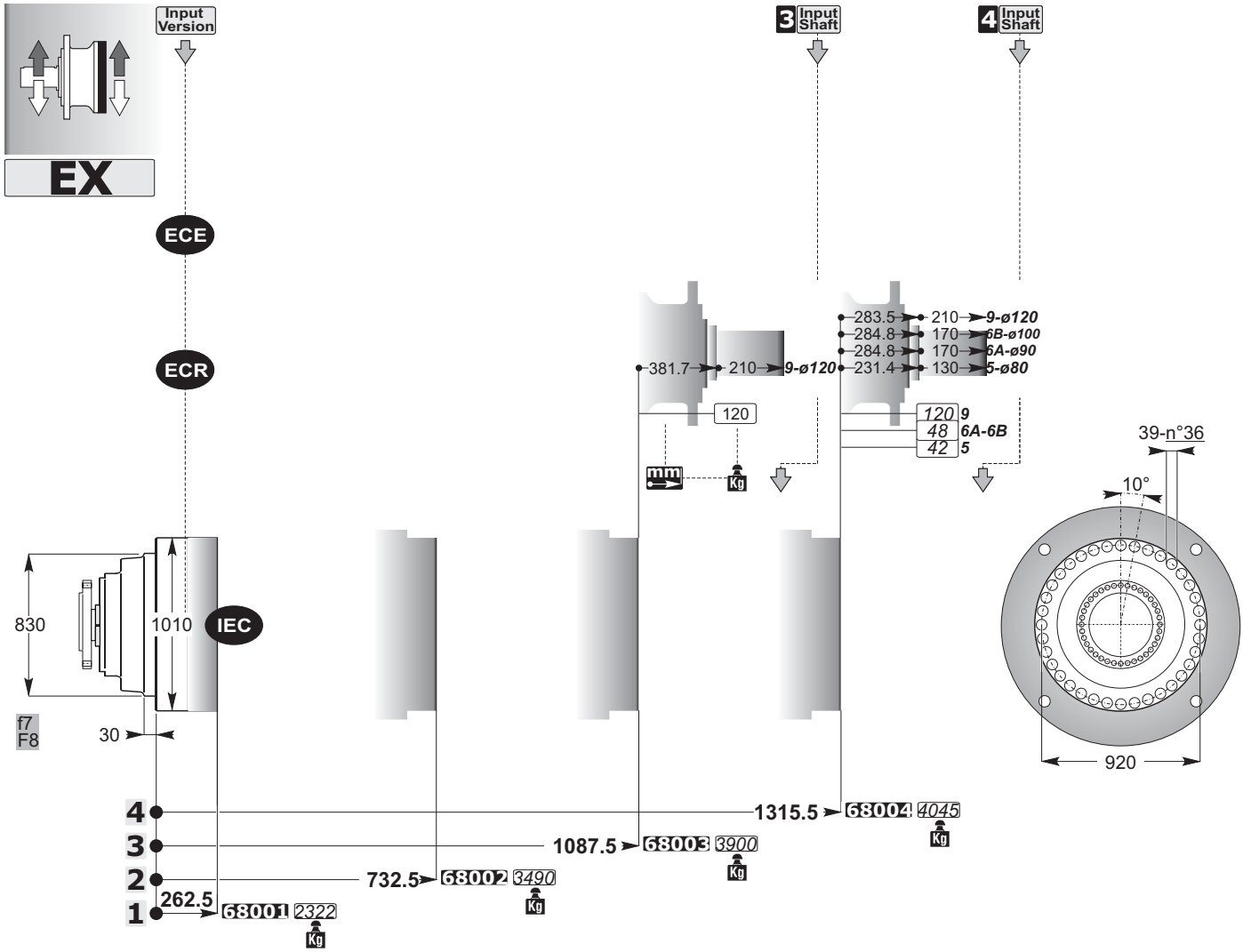


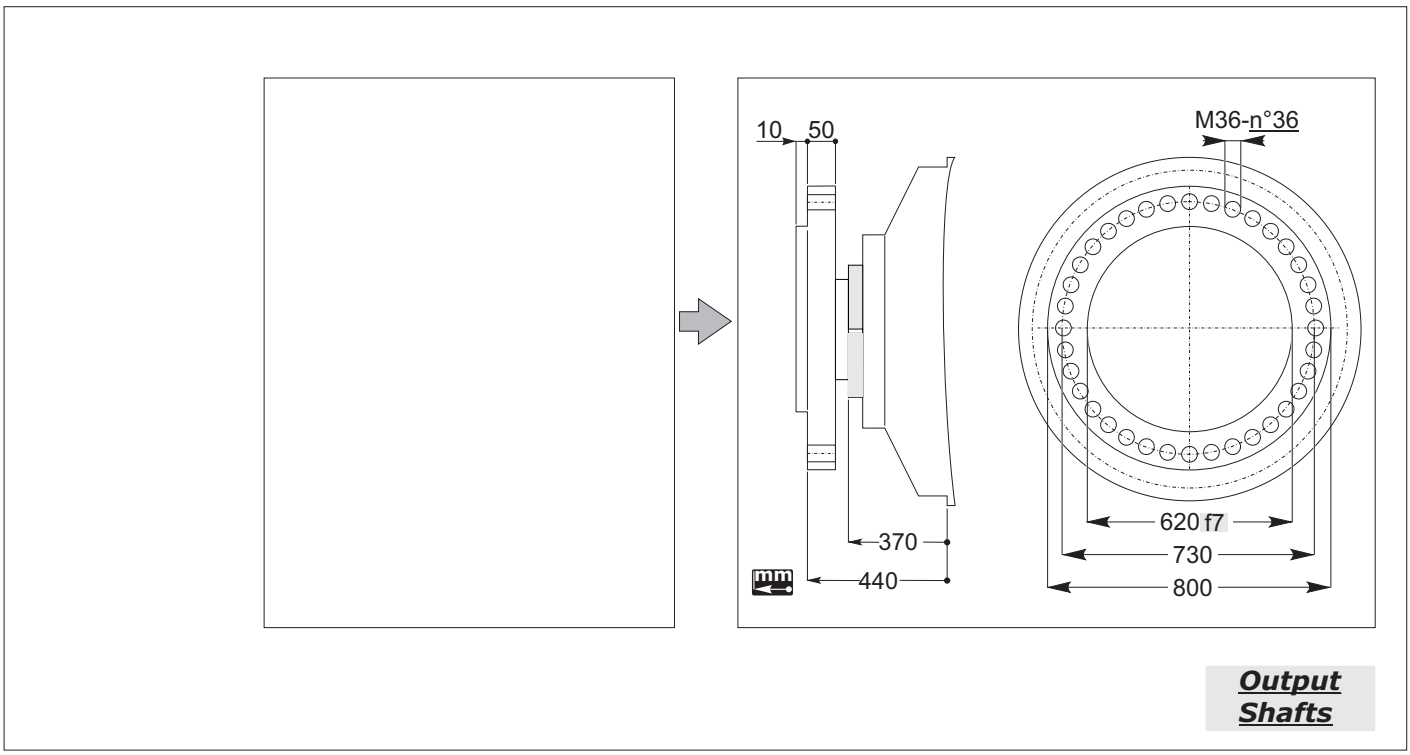
On request

BD



On request



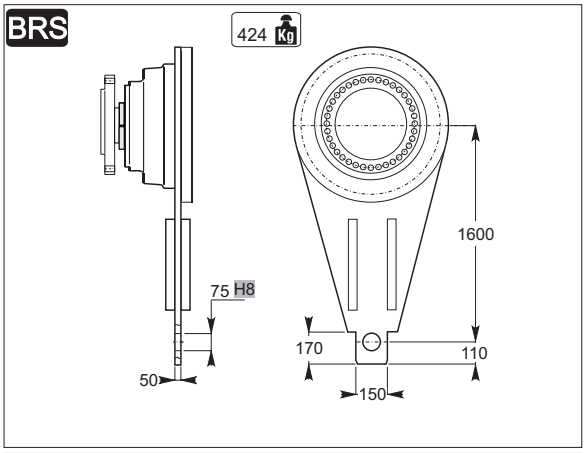


Output Shafts

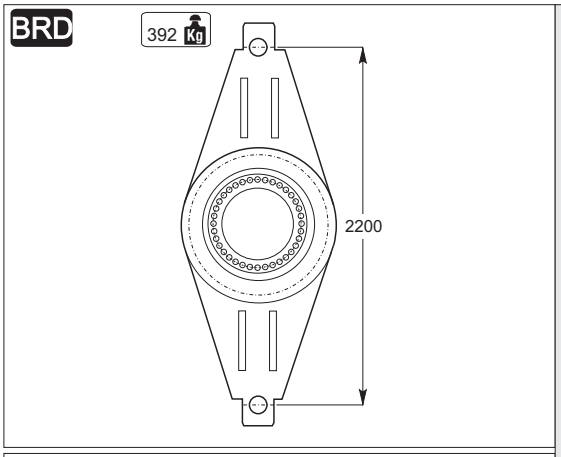
EXB

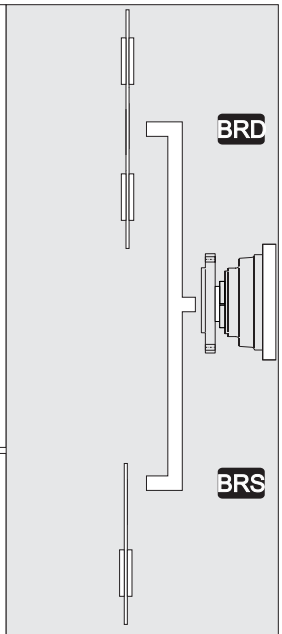
non disponibile
not available
nicht verfügbar

BRS



BRD

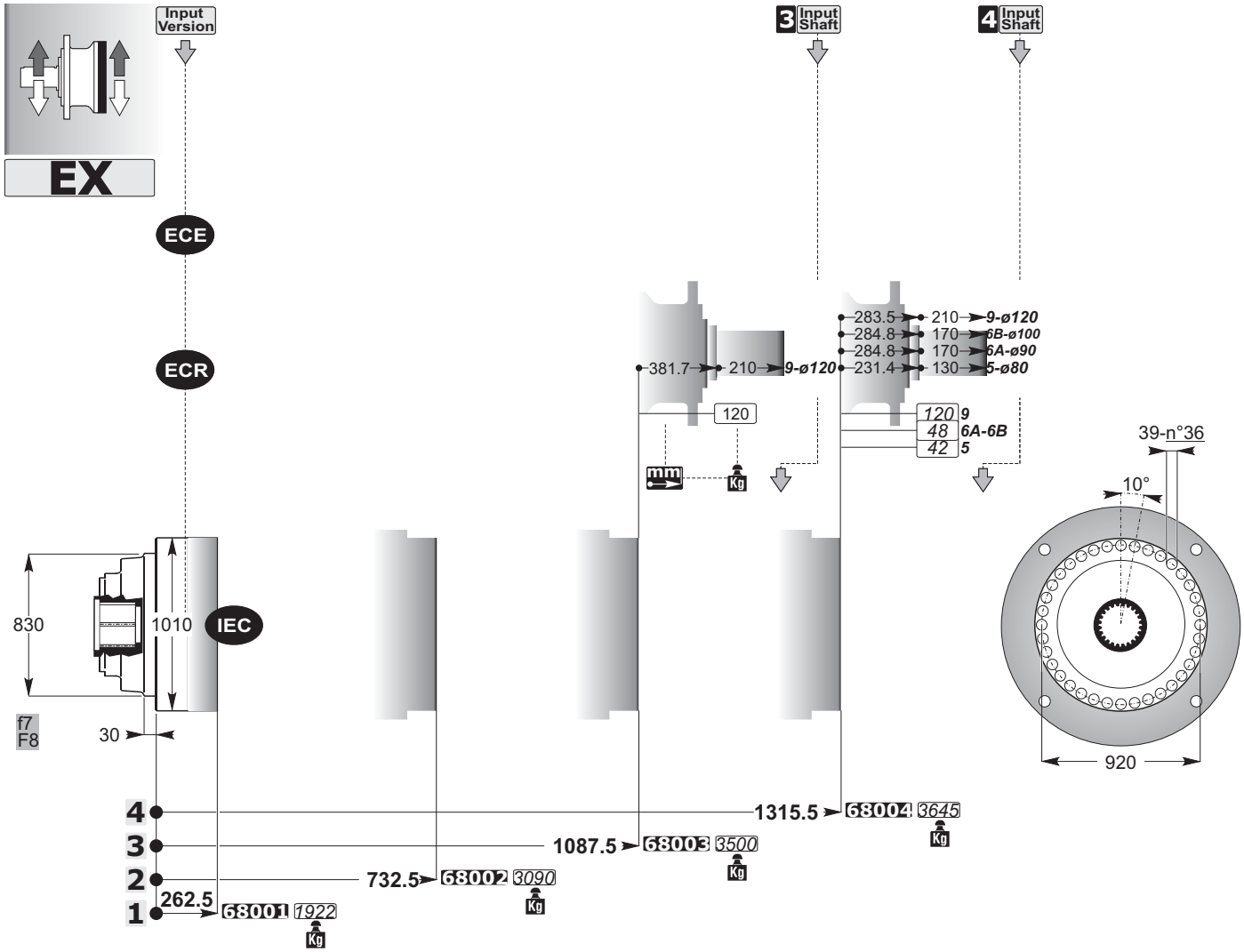


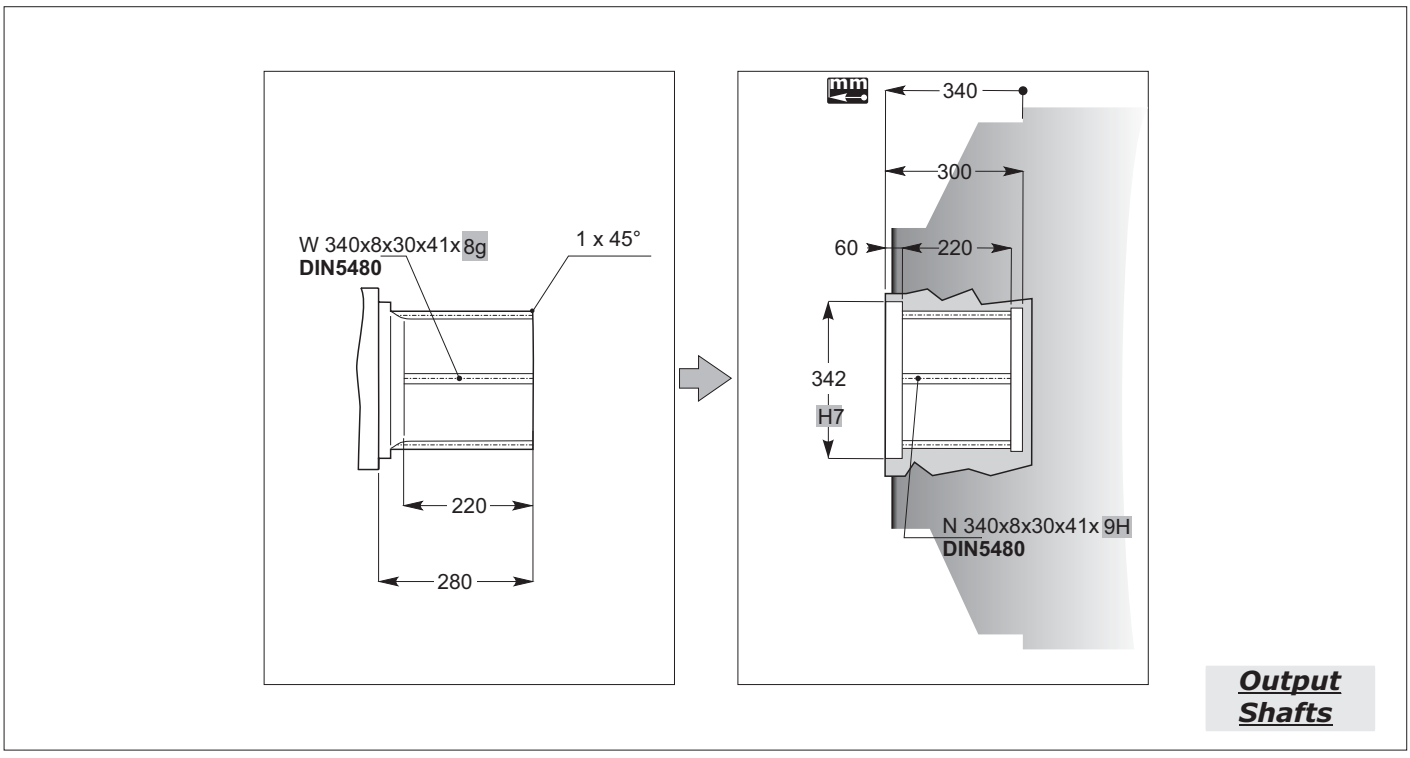


Accessories

mm

C

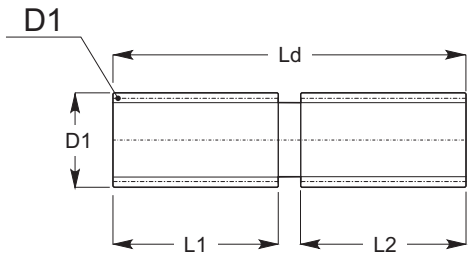

Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
IEC
830
1010
f7
F8
30
381.7
210
9-ø120
120
283.5
284.8
284.8
231.4
210
170
170
130
9-ø120
6B-ø100
6A-ø90
5-ø80
120 9
48 6A-6B
42 5
39-n°36
10°
920
4
3
2
1
1315.5
68004
3645
1087.5
68003
3500
732.5
68002
3090
262.5
68001
1922
Kg
mm


W 340x8x30x41x 8g
DIN5480
1 x 45°
220
280
mm
340
300
60
220
342
H7
N 340x8x30x41x 9H
DIN5480
Output Shafts

EXB

non disponibile
not available
nicht verfügbar

SD

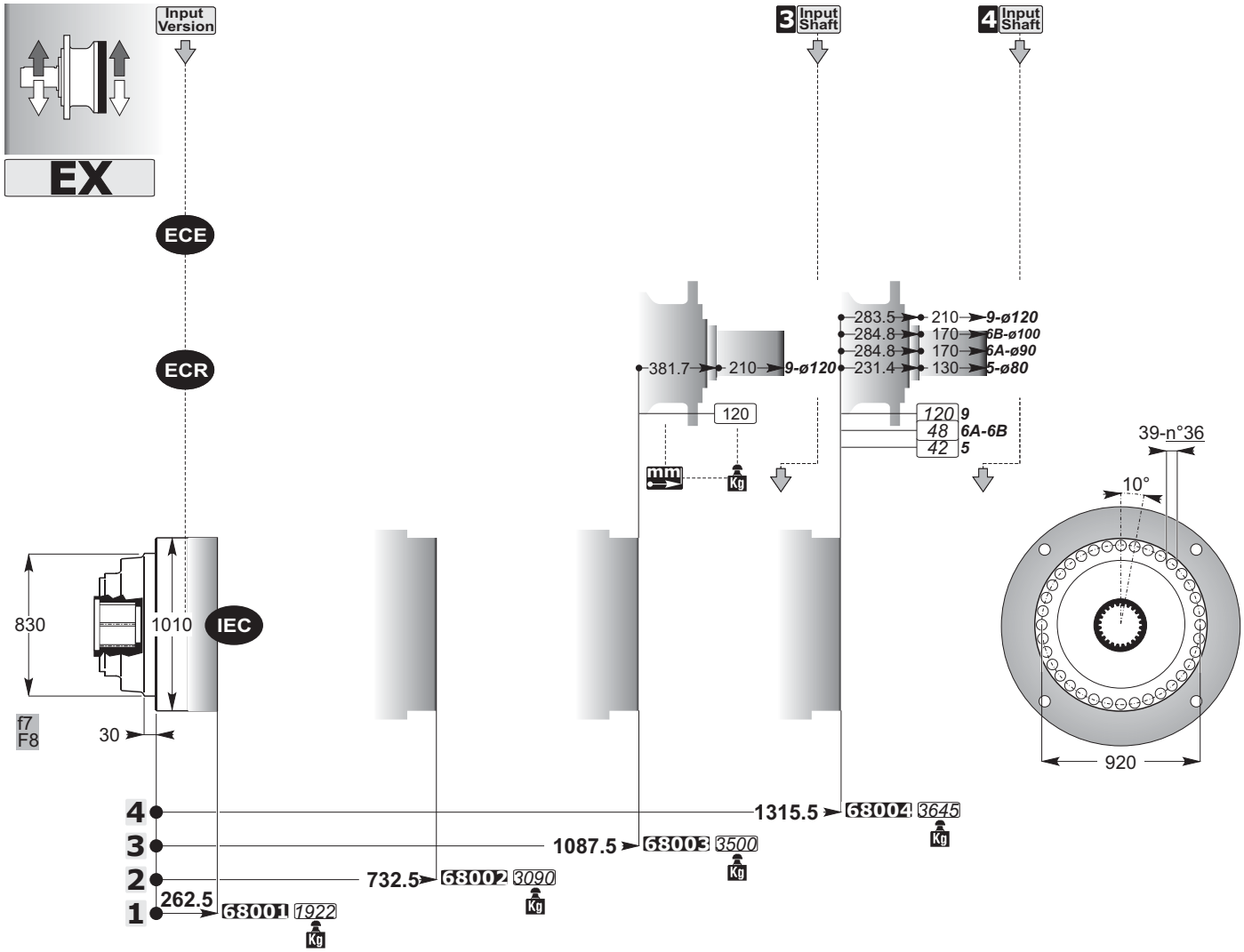


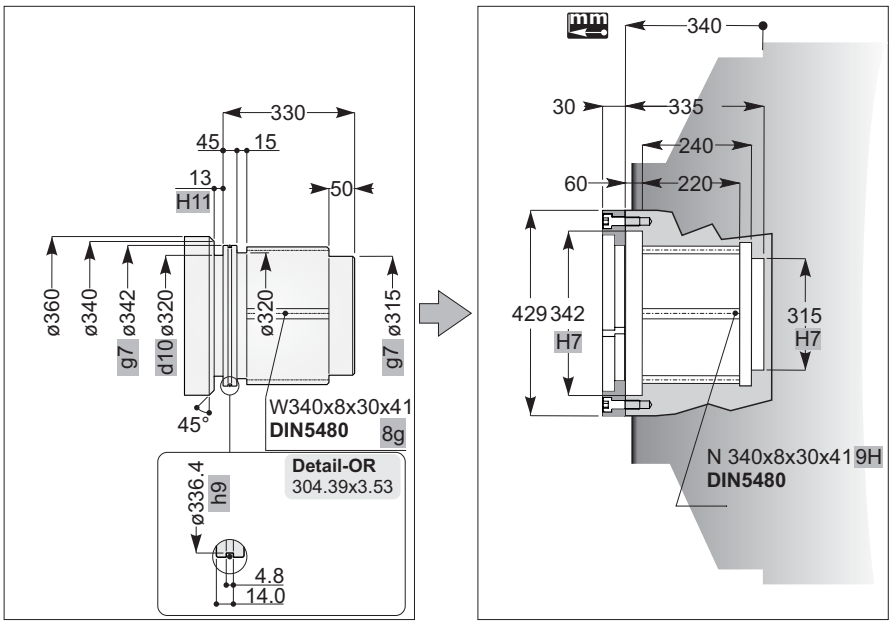
On request

SD



Accessories



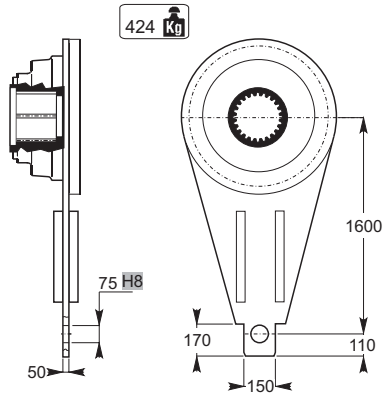


Output Shafts

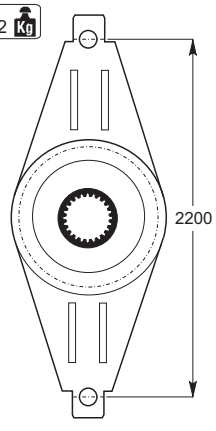
EXB

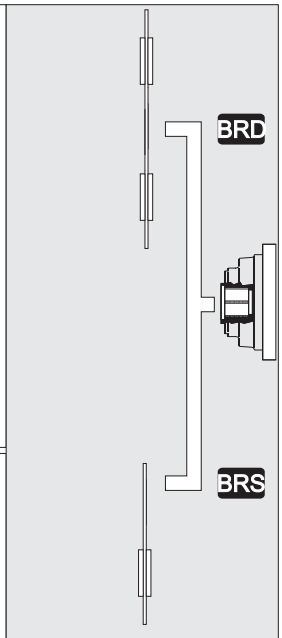
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not available
nicht verfügbar

BRS



BRD

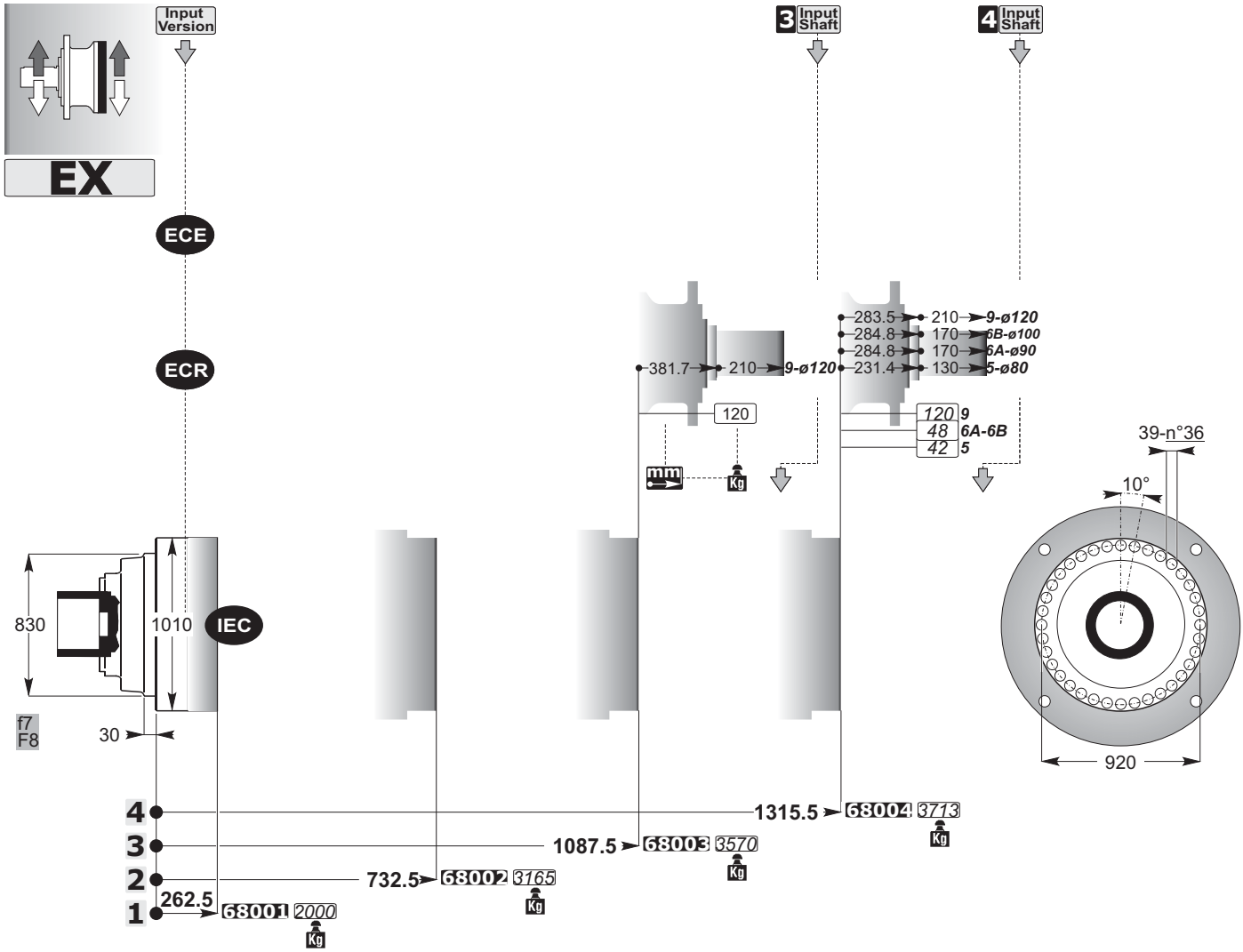


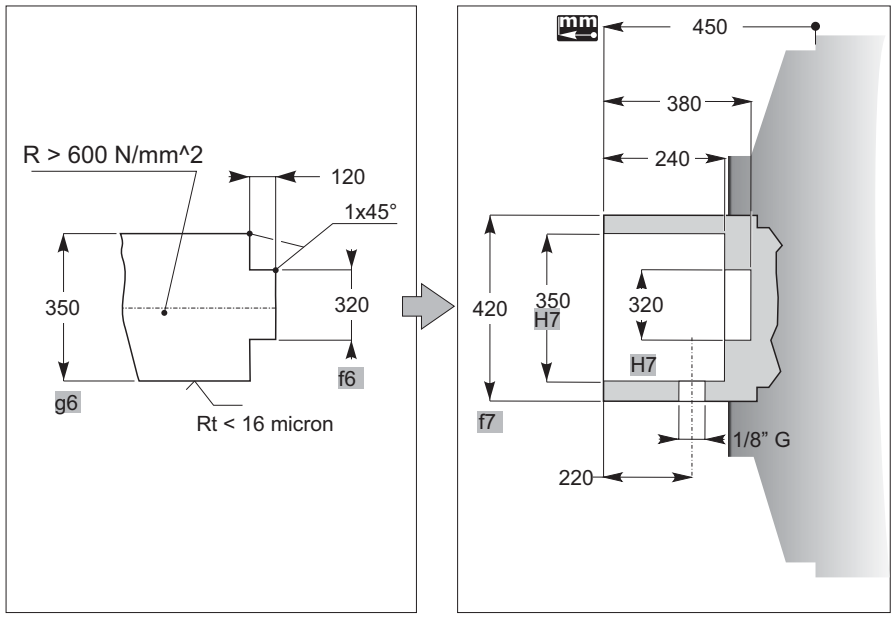


Accessories

mm

C

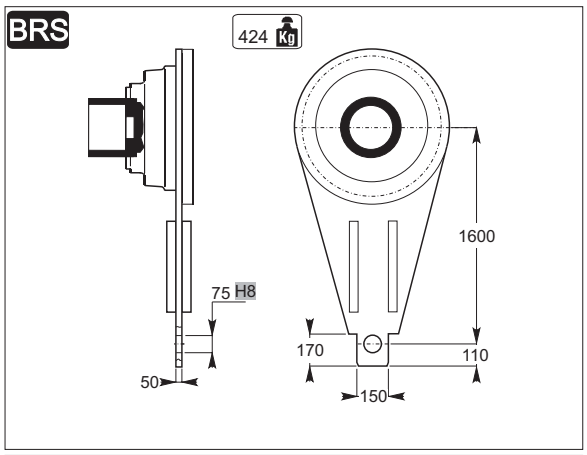


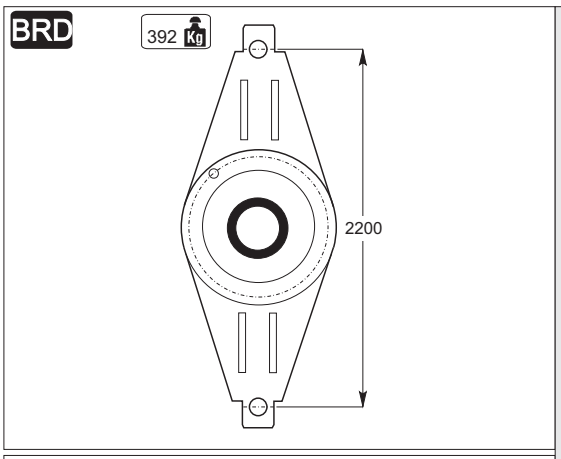


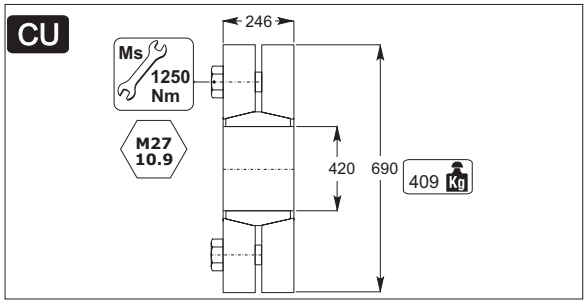
Output Shafts

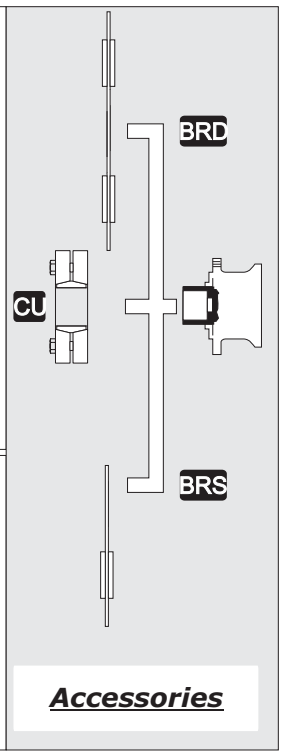
EXB

non disponibile
not available
nicht verfügbar

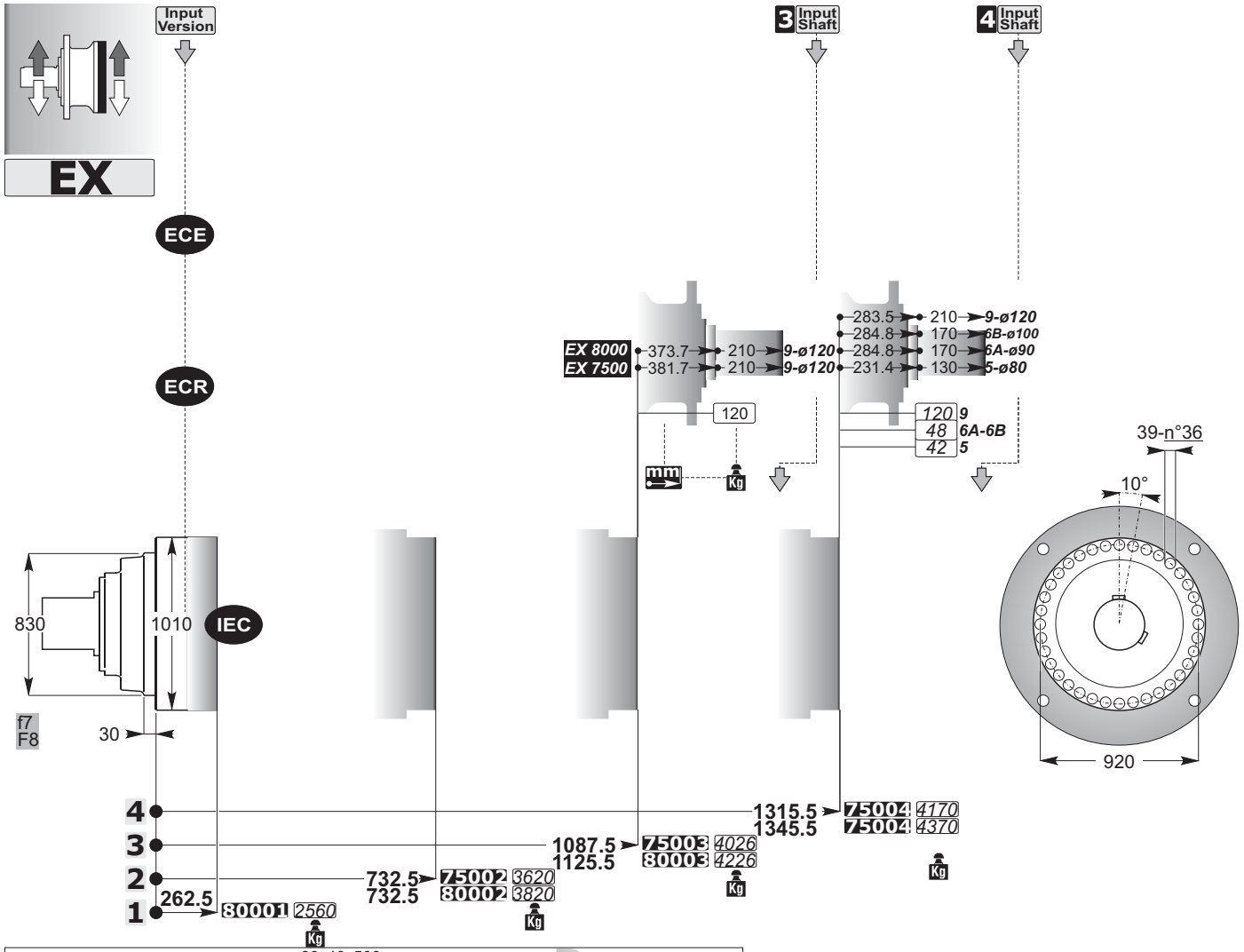


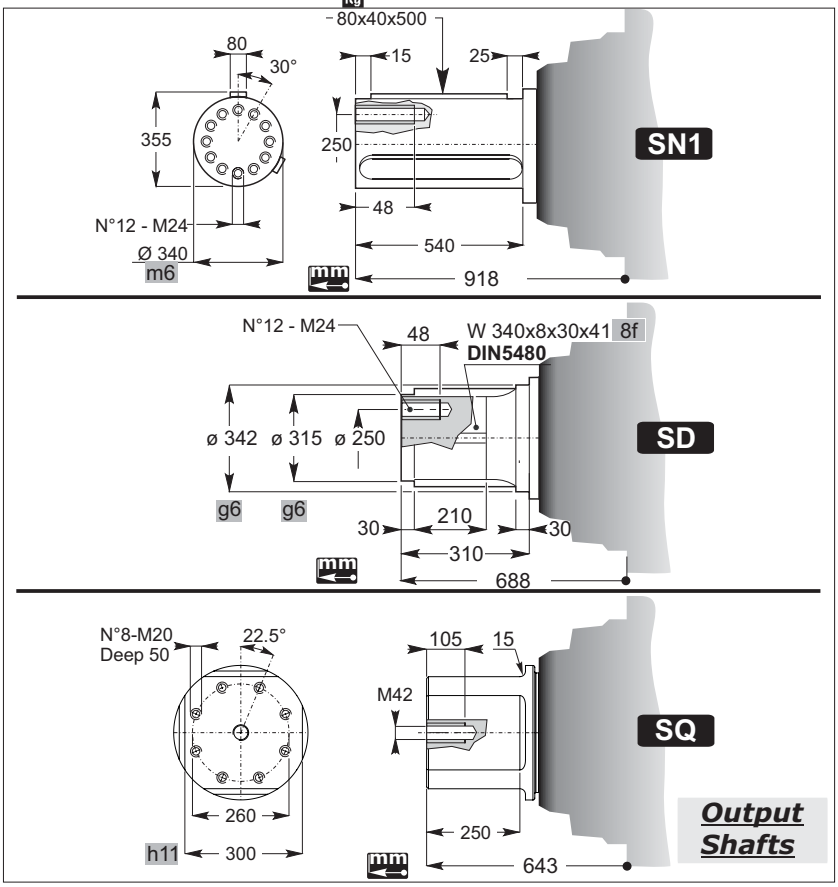




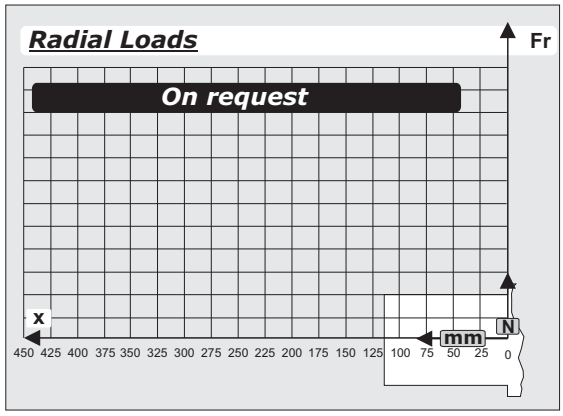


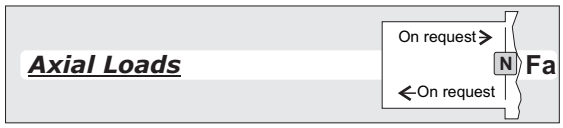
mm
C

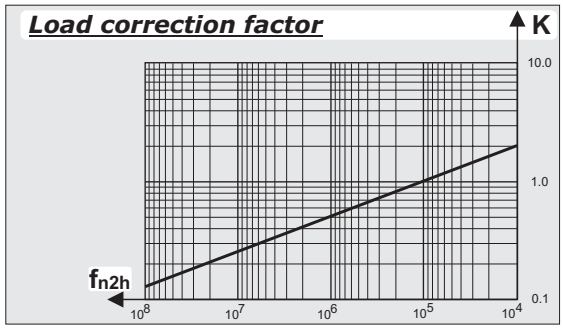




Output Shafts



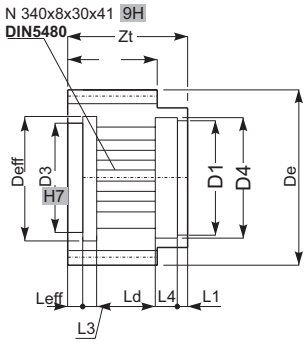




EXB

non disponibile
not available
nicht verfügbar

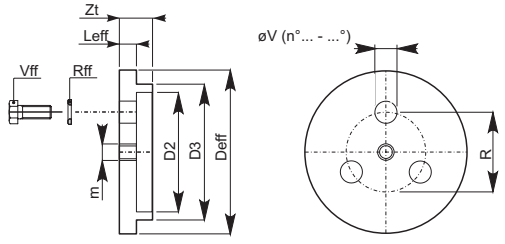
ID



	m	Z	X	De
ID—	-	-	-	-

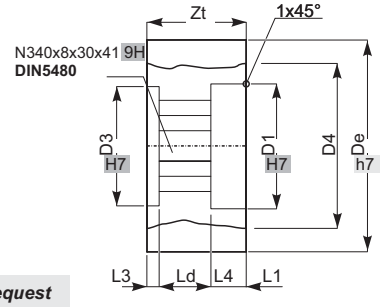
On request

FF

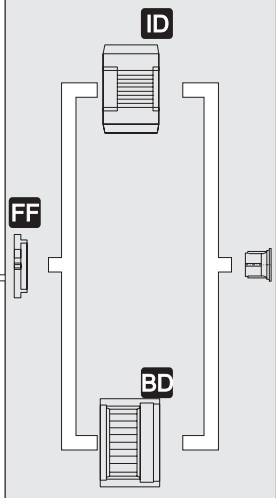


On request

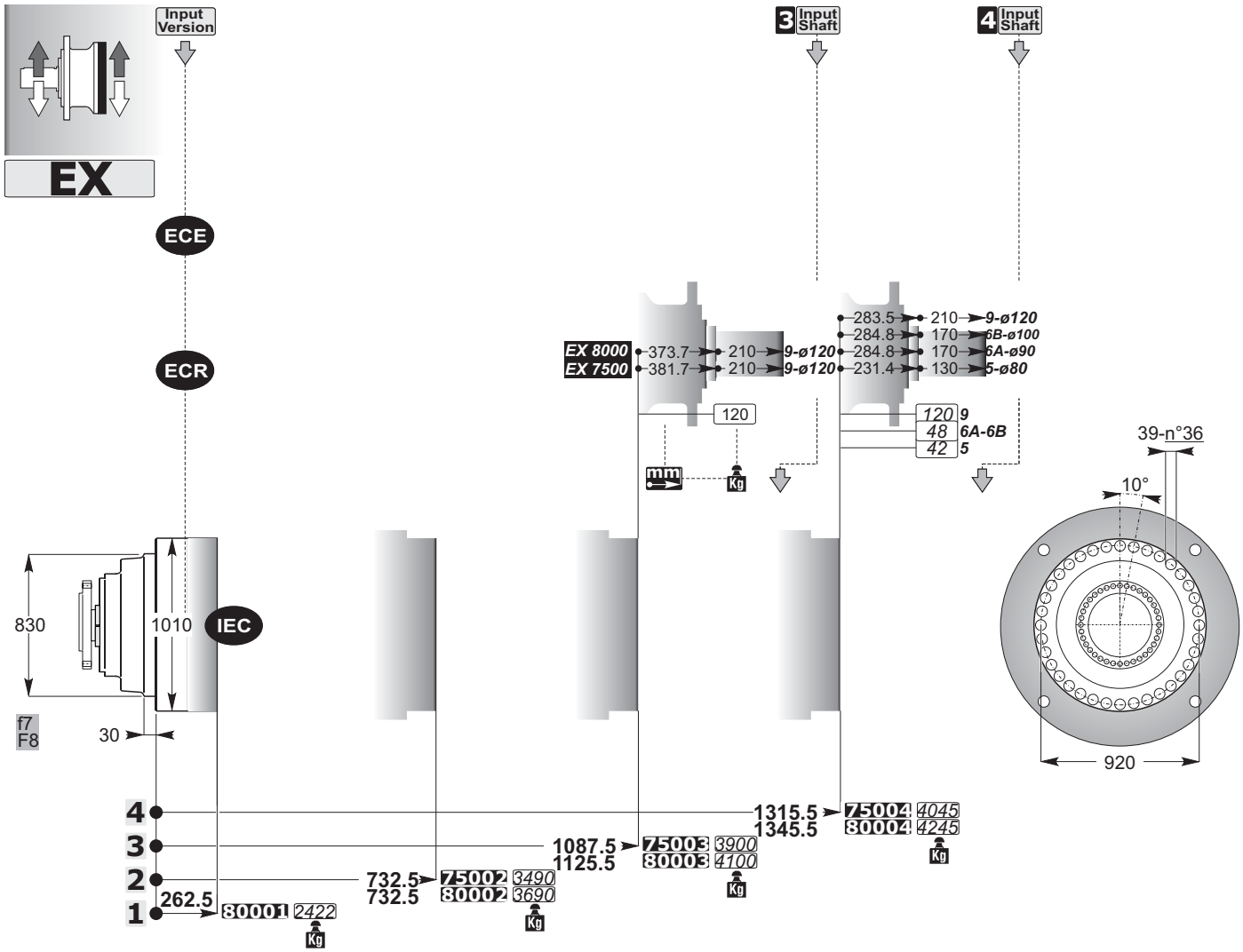
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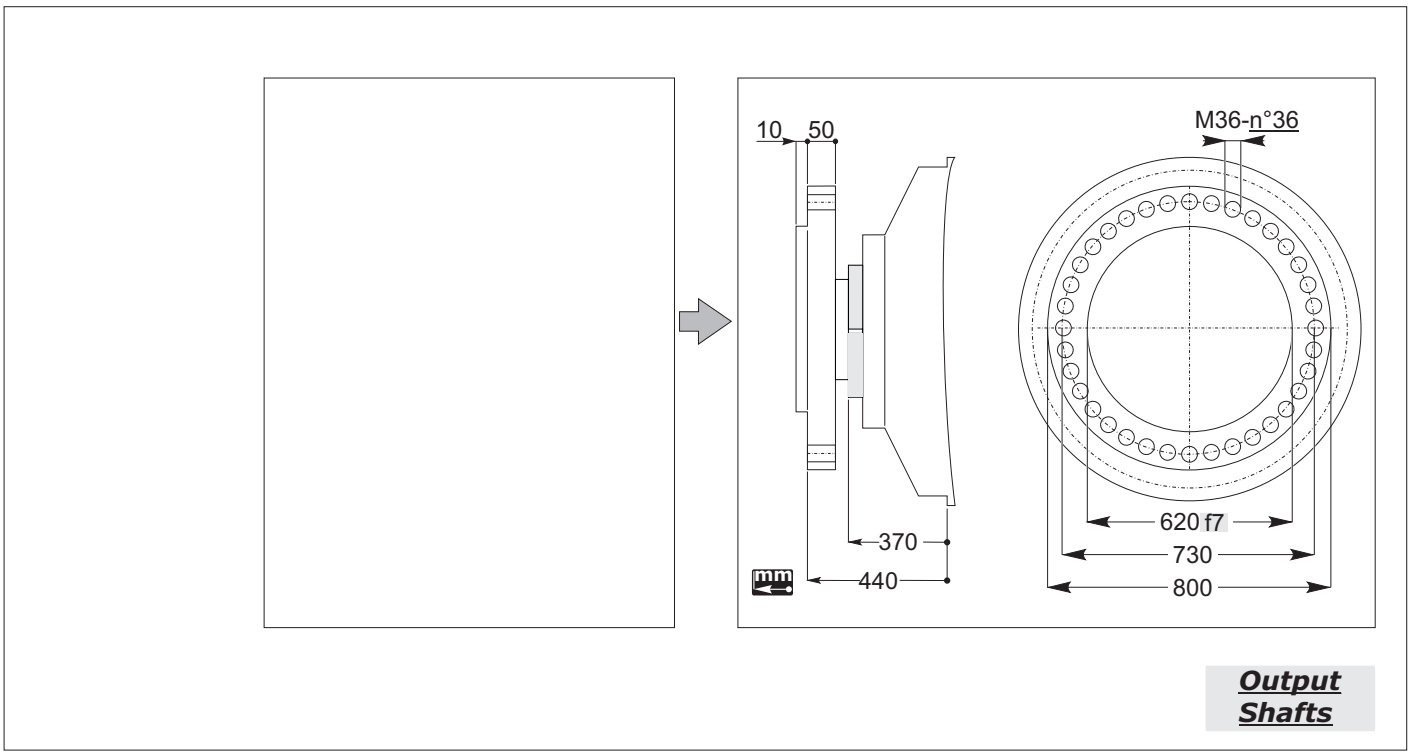


On request



Accessories



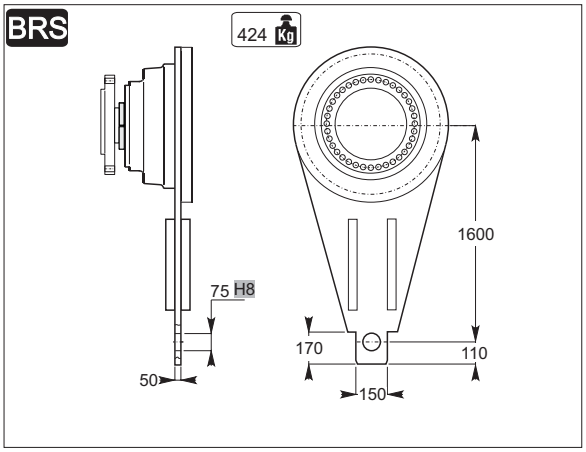


Output Shafts

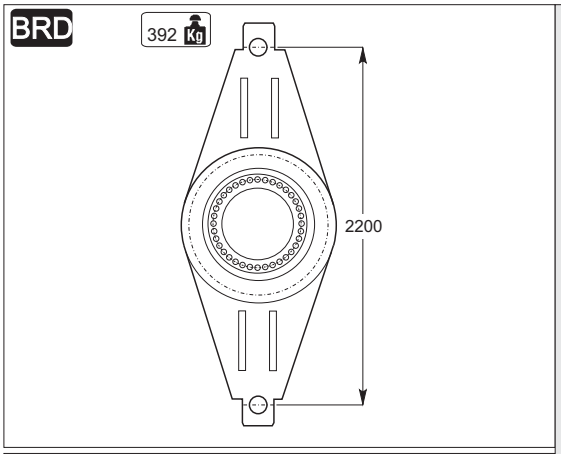
EXB

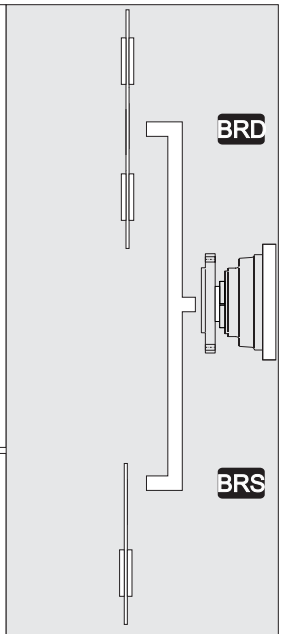
non disponibile
not available
nicht verfügbar

BRS



BRD

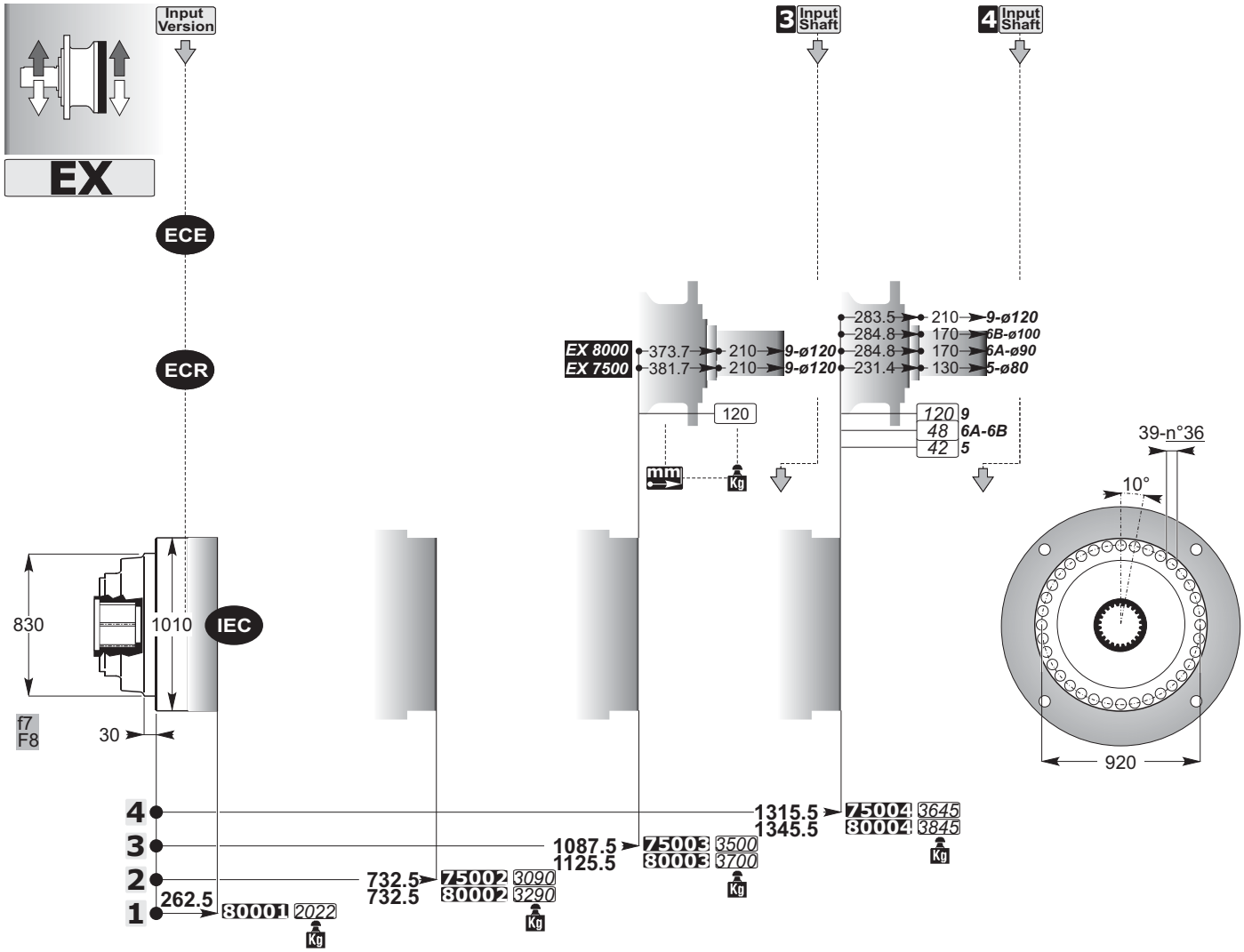


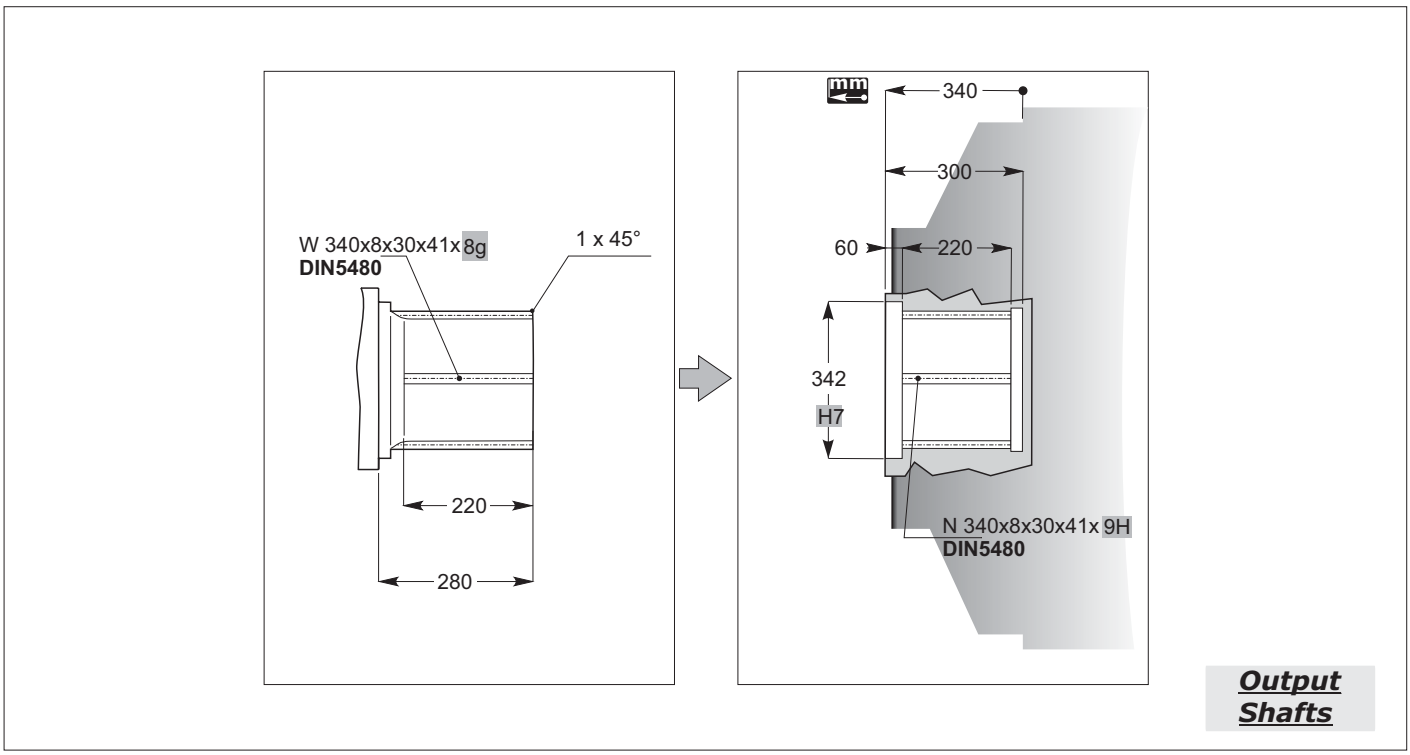


Accessories

mm

C

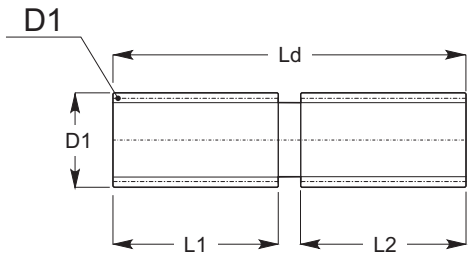

Input Version
3 Input Shaft
4 Input Shaft
EX
ECE
ECR
EX 8000
EX 7500
373.7
381.7
210
9-ø120
283.5
284.8
231.4
170
130
6B-ø100
6A-ø90
5-ø80
120
9
48
6A-6B
42
5
39-n°36
10°
920
830
1010
IEC
f7
F8
30
4
3
2
1
262.5
80001 2022
732.5
75002 3090
80002 3290
1087.5
1125.5
75003 3500
80003 3700
1315.5
1345.5
75004 3645
80004 3845
Kg
mm


W 340x8x30x41x 8g
DIN5480
1 x 45°
220
280
340
300
60
220
342
H7
N 340x8x30x41x 9H
DIN5480
mm
Output Shafts

EXB

non disponibile
not available
nicht verfügbar

SD

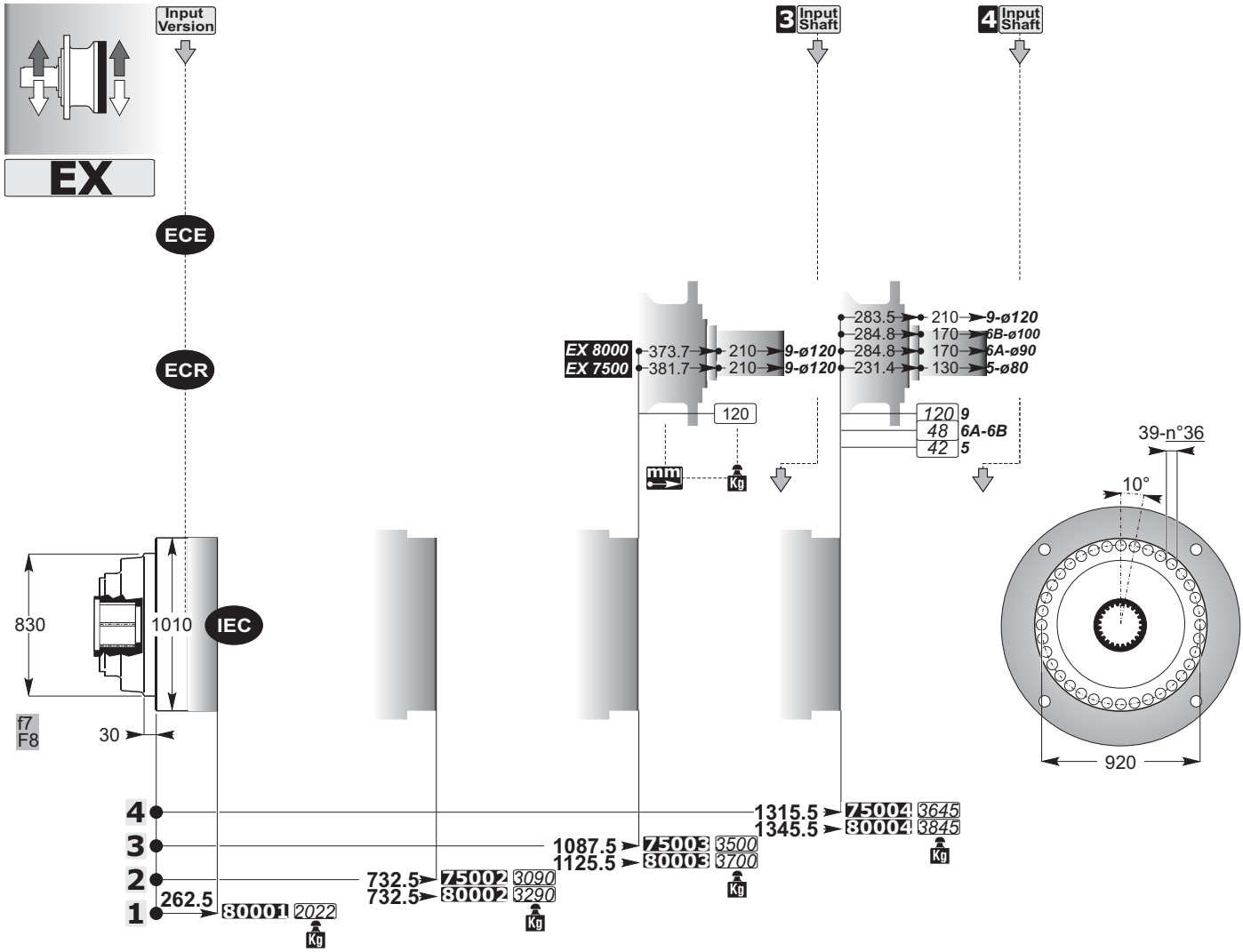


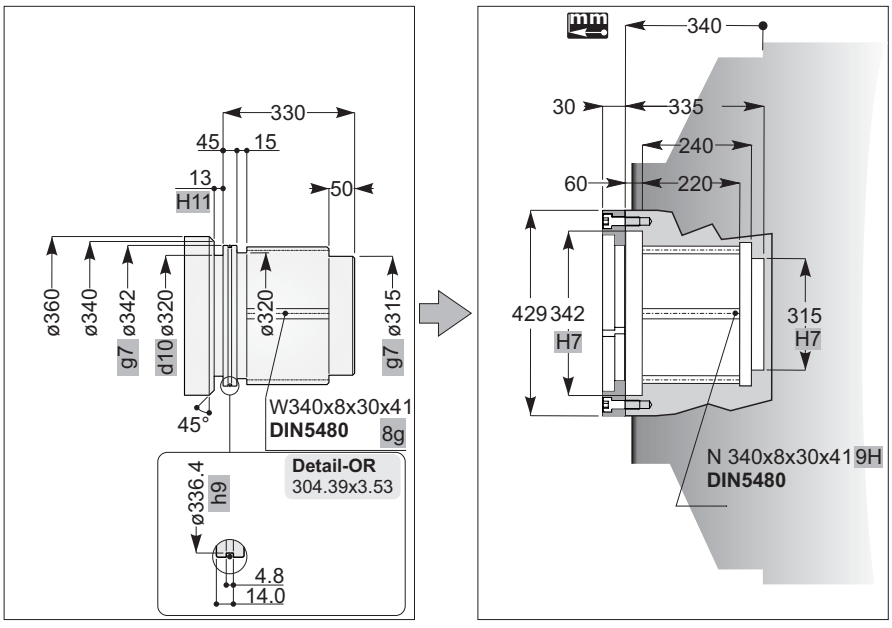
On request

SD



Accessories



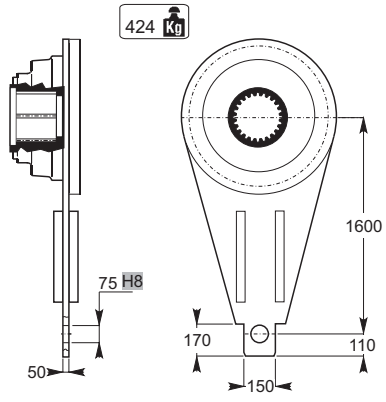


Output Shafts

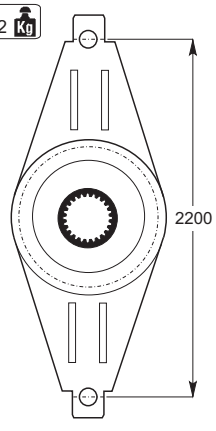
EXB

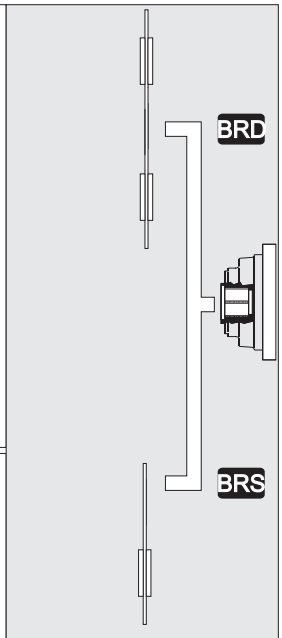
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not available
nicht verfügbar

BRS

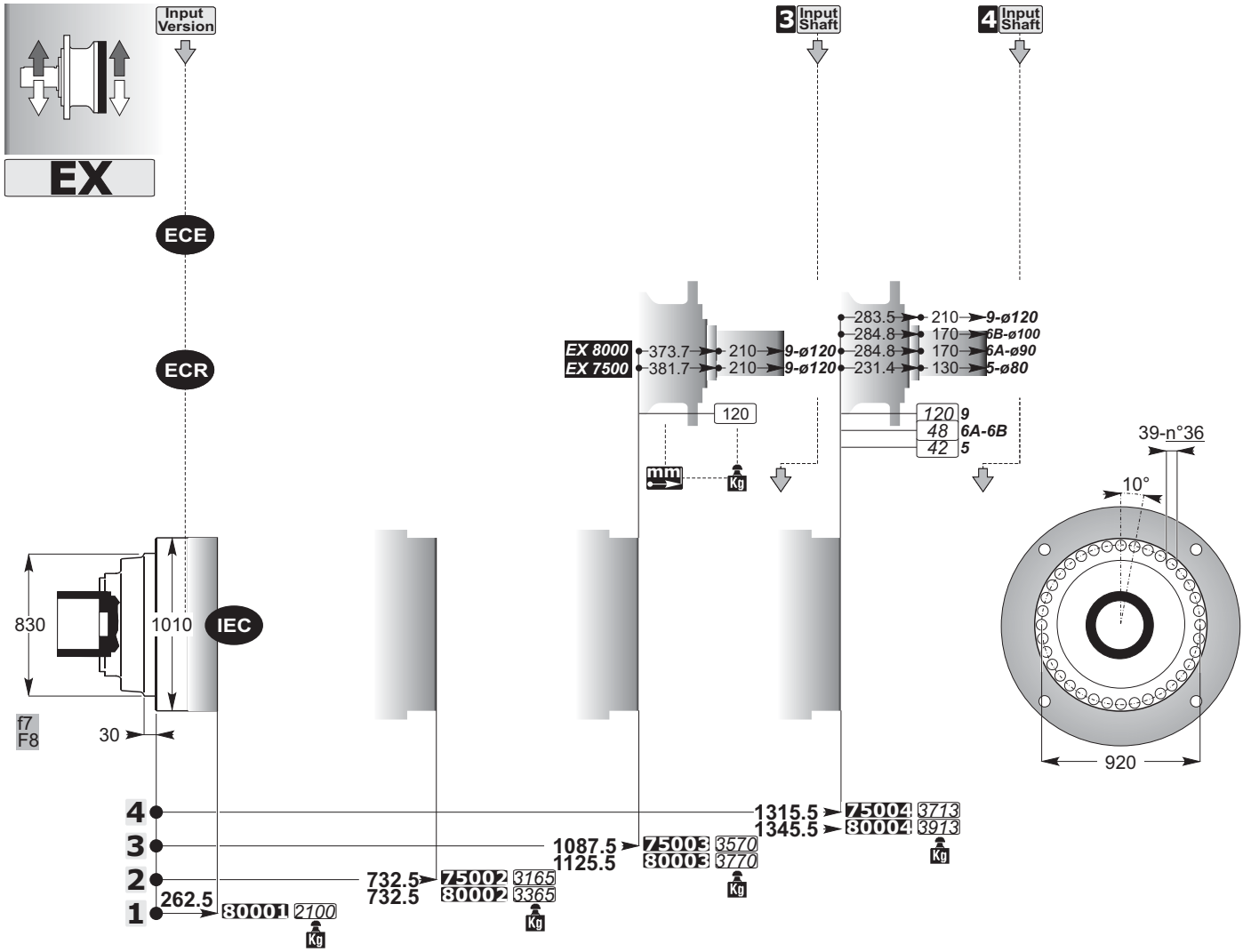


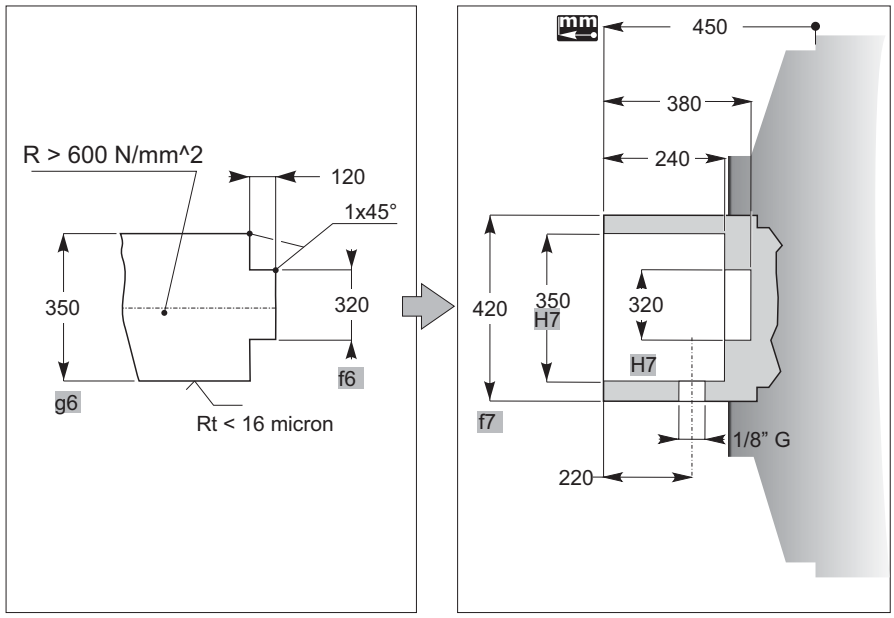
BRD





Accessories

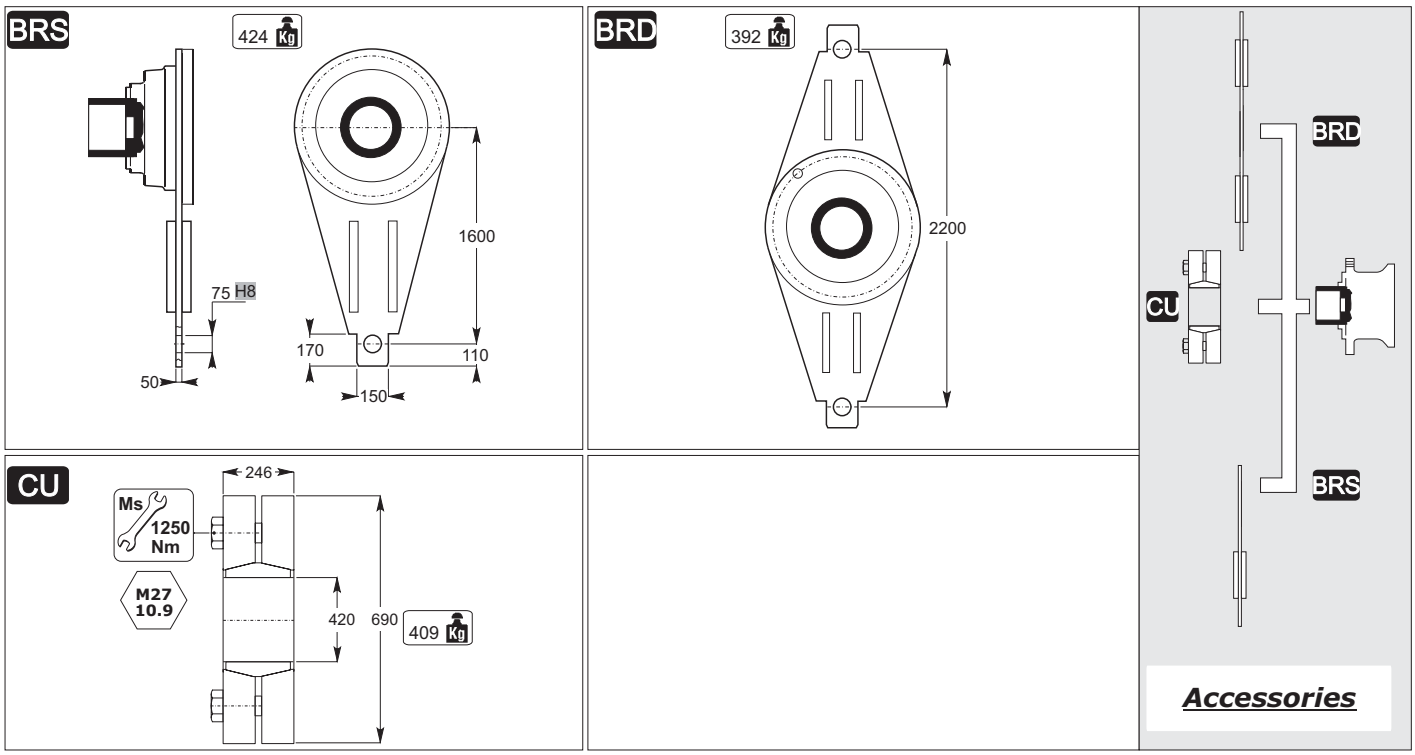




Output Shafts

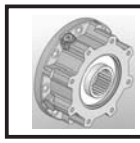
EXB

non disponibile
not available
nicht verfügbar

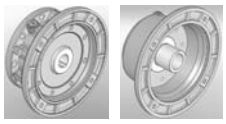


PRÉDISPOSITION FIXATION MOTEUR
PREDISPOSICIONES CONEXIÓN MOTOR
PREPARAÇÕES ENGATE MOTOR

D



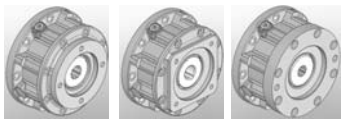
EU D2



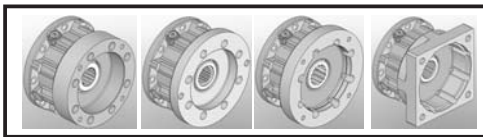
IEC D3



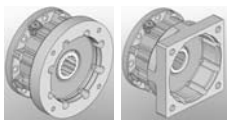
Z. Z0. Z1. Z2. D6



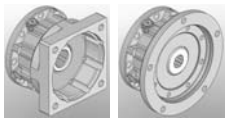
I CB DB BA CA DA EA D8



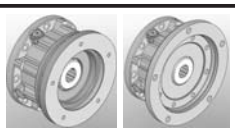
I GD FB GC HB FA GAB HA D12



I LB JA KB LA D16



I MA NA D20



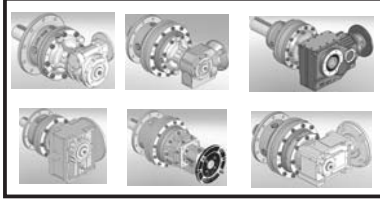
I OA PA QA D22



ECE D28



ECR D30

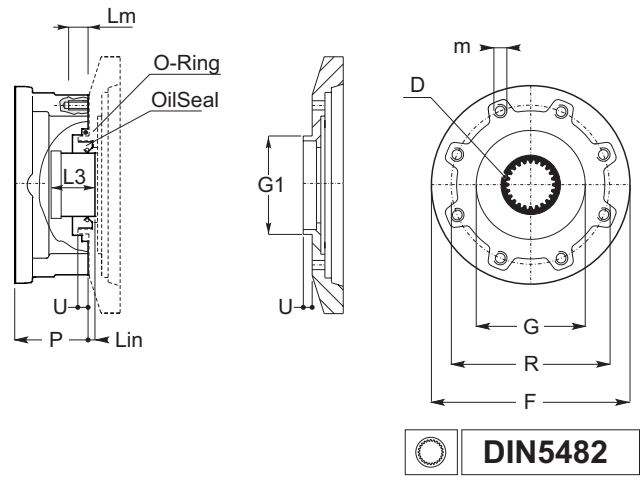


EX. D42

Input Shaft - PAM

EU - universal

EU



DIN5482

	Kg
EU	5.8

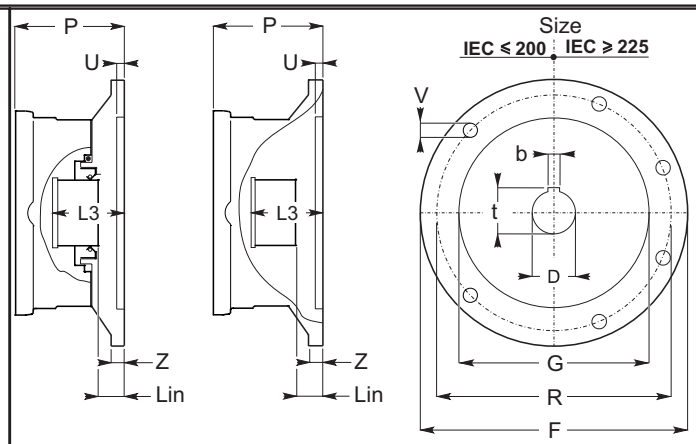
	D	F	R	G	U_{max}	L_{IN}	L3	m	L_m	O_{Ring}	Oil_{Seal}
	DIN 5482	186-244	+/- 0,1	H7 - g6							
	50 x 45	295-350	150	95	6	4	38	M10	20	94.92 x 2.62	60x80x7.5

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒1001				EX 102⇒6002 / EXB 102⇒ 3002				EX 103⇒16003 / EX 103⇒ 10003				EX 104⇒ 45004 / EXB 104⇒ 31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
280							2802			2803			2804			
300							3002			3003			3004			
350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
EU	67	75	83	90.5	67	75	83	90.5	67	75	83	90.5	67	75	83	90.5

Input Shaft - PAM

IEC - electric motor

IEC



Kg	
71-80-90	8
100-112	10
132	12
160-180	19
200	25
225	30
250-280	51

UNI 6604

	D	F	R	G	U	V	Z	L_{IN}	L3	b	t
	F7		+/-0,1	F8 G6						H7	+0,1 +0,2
63	11	140	115	95	10	M8	16	5,5	25	4	12,8
71	14	160	130	110	10	M8	16	5,5	32	5	16,3
80	19	200	165	130	5	M10	14	5,5	52	6	21,8
90	24	200	165	130	5	M10	14	5,5	52	8	27,3
100	28	250	215	180	5	M12	14	10,5	61	8	31,3
112	28	250	215	180	5	M12	14	10,5	61	8	31,3
132	38	300	265	230	5	M12	14	10,5	82	10	41,3
160	42	350	300	250	6	M16	18	8,5 - 24.5	111	12	45,3
180	48	350	300	250	6	M16	18	8,5 - 24.5	111	14	51,8
160	42	350	300	250	6	M16	18	24,5	111	12	45,3
180	48	350	300	250	6	M16	18	24,5	111	14	51,8
200	55	400	350	300	6	M16	22	8,5	111	16	59,3
225	60	450	400	350	6	M16	20	8,5	143	18	64,4
250	65	550	500	450	6	M16	21	8,5	145	18	69,4
280	75	550	500	450	6	M16	21	8,5	145	20	79,9

	EX1				EX2				EX3				EX4			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
280							2802			2803			2804			
300							3002			3003			3004			
350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

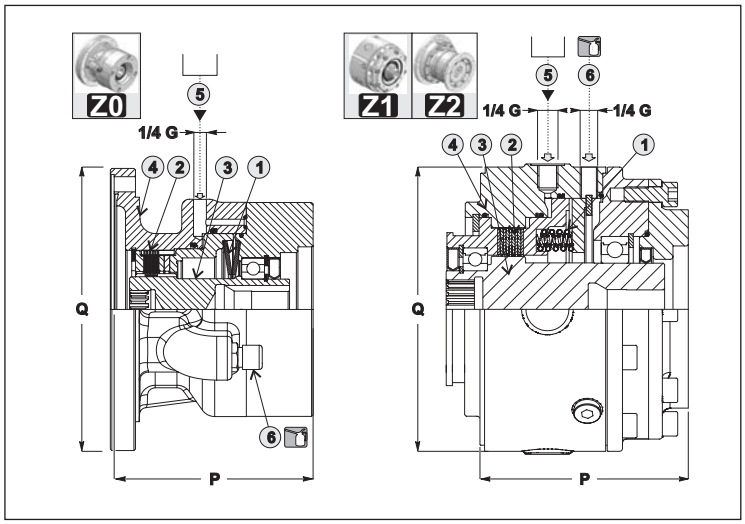
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71	83	91	99		83	91	99		83	91	99		83	91	99	
80	83	91	99		83	91	99		83	91	99		83	91	99	
90	83	91	99		83	91	99		83	91	99		83	91	99	
100	91	99	107		91	99	107		91	99	107		91	99	107	
112	91	99	107		91	99	107		91	99	107		91	99	107	
132	112	120	128		112	120	128		112	120	128		112	120	128	
160	146	170	167		146	170	167		146	170	167		146	170	167	
180	146	170	167		146	170	167		146	170	167		146	170	167	
200		154	165	175		154	165	175		154	165	175		154	165	175
225		189	188.5	205		189	188.5	205		189	188.5	205		189	188.5	205
250			188.5	205			188.5	205			188.5	205			188.5	205
280			188.5	205			188.5	205			188.5	205			188.5	205

P - [mm]

					EXB2				EXB3				EXB4				
10	102					103					104				
20	202					203					204				
25	252					253					254				
30	302					303					304				
35	352					353					354				
40						403					404				
50		502				503					504				
70		702				703					704				
80			802			803					804				
90						903					904				
95						953					954				
100			1002				1003				1004				
150				1502			1503				1504				
180				-			1803				1804				
200				2002			2003				2004				
250					2502			2503			2504				
280								2803				2804			
300					3002			3003				3004			
350								3503				3504			
360									3603			3604			
420									4203			4204			
600									6003			6004			
650										6503			6504		
800										8003			8004		
850										8503			8504		
1000										10003			10004		
1200													12004		
1500													15004		
1600														16004	
2000															20004
2500															25004
2600															26004
3000															30004
3100															31004
3200															32004
3700															
4500															
5500															
6800															
7500															
8000															

63					99					99					99
71	52				99	52				99	52				99
80	52	52			99	52	52			99	52	52			99
90	52	52	47		99	52	52	47		99	52	52	47		99
100	60	60	55		107	60	60	55		107	60	60	55		107
112	60	60	55		107	60	60	55		107	60	60	55		107
132	112	81	76	120	128	112	81	76	120	128	112	81	76	120	128
160	146	146	170	170	167	146	146	170	170	167	146	146	170	170	167
180	146	146	170	170	167	146	146	170	170	167	146	146	170	170	167
200			154	154	165			154	154	165			154	154	165
225			189	189	188.5			189	189	188.5			189	189	188.5
250					188.5					188.5					188.5
280					188.5					188.5					188.5

P - [mm]



		A	B	C	D	E	F	G	H	Q	kg
Z0	T_{RF}	60	100	160	200	280	330	430	520	186	12
	P_{Af}	10	16	16	20	20	24	24	29		
Z1.	T_{RF}	90	140	240	300	430	550	—	—	186	26
	P_{Af}	8.5	13	11	15	20	25	—	—		
Z2.	T_{RF}	400	650	800	1000	1250	1500	1700	—	244	30
	P_{Af}	25	41	25	32	30	36	41	—		
P_{max} = 310											

P_{INf} [bar] = Pression entrée-installation hydraulique/*Presión entrada-sistema hidráulico*/Pressão de entrada-sistema hidráulico
P_{Af} [bar] = Pression ouverture frein/*Presión apertura freno*/Pressão de abertura do freio
P_c [bar] = Contrepression dans l'installation hydraulique/*Contrapresión en el sistema hidráulico*/Contrapressão no sistema hidráulico
P_{max} [bar] =Pression max./*Presión max.*/Pressão máx.
T_{RF} [Nm] = Couple moyen Statique/*Par promedio Estático*/Binário médio Estático

1 - Ressorts / *Muelles* / Molas
2 - Disques à Lamelles / *Discos de Láminas* / Discos de Lâminas
3 - Arbre d'entrée / *Eje entrada* / Eixo entrada
4 - Carcasse Frein / *Carcasa Freno* / Carcaça Freio
5 - Attache Commande Frein / *Conexión Mando Freno* / Engate Comando Freio
6 - Bouchon de remplissage et de purge huile / *Tapón Carga y Respiradero Aceite* / Tampa de Carga e Respiro do Óleo

1.0 - Secteur d'application
Le frein est à employer uniquement comme frein de stationnement et non pour les freinages dynamiques.

2.0 - Principe de fonctionnement du frein
Le fonctionnement du frein est du type négatif et suit les modalités suivantes :
2.1 - Condition 1- Pression $P_{INf} = 0$
Les ressorts (composant 1) exercent une poussée sur le couple de disques à lamelles (composant 2).
Certains disques sont solidaires avec un élément mobile (composant 3) et d'autres avec un élément fixe (composant 4).Dans cette condition opérationnelle un couple T_{RF} avec un niveau de précision de la valeur de ±10% (Z1-Z2) et ±18% Z0 se crée sur la douille du réducteur (composant 3).
2.2 - Condition 2 - Pression $P_{INf} = P_{Af}$
Si une pression PINf égale à la pression d'ouverture PAf est exercée à travers l'attache commande du frein (composant 5), la valeur du couple résistant TRF est égale à zéro permettant la rotation libre de la douille du réducteur.
2.3 - Condition 3 - Contre-pression présente dans l'installation hydraulique rotation libre $P_c \neq 0$.
Ces performances (T_{RF}) sont toujours calculées avec la contre-pression égale à zéro. Dans le cas contraire le couple freinant est réduit en pourcentage du point de vue du rapport contre-pression/pression ouverture frein.
Rappelons que les grandes vitesses de rotation ou les fonctionnements prolongés avec l'axe vertical peuvent générer des augmentations de température importantes : dans ces cas voir Section A.

1.0 - Campo aplicación
Se debe emplear el freno solo como freno de estacionamiento y no para efectuar frenados dinámicos.

2.0 - Principio de funcionamiento freno
El funcionamiento del freno es de tipo negativo con las siguientes modalidades operativas:
2.1 - Condición 1 - Presión$P_{INf} = 0$
Los muelles (detalle 1) ejercen un empuje en los pares de discos de láminas (componente 2). Algunos discos son solidarios al elemento móvil (componente 3) y otros al elemento fijo (componente 4). En esta condición operativa se genera, en el manguito reductor (componente 3), un par T_{RF} con nivel de precisión del valor de ±10 % (Z1-Z2) y ±18 % Z0.

2.2 - Condición 2 - Presión $P_{INf} = P_{Af}$
Si mediante la conexión mando freno (componente 5), se introduce una presión PINf igual a la presión de apertura PAf, el valor del par resistente TRF es igual a cero y permite la libre rotación del manguito del reductor.

2.3 - Contrapresión presente en el sistema hidráulico $P_c \neq 0$
Dichas prestaciones (T_{RF}) se calculan siempre con contrapresión igual a cero. De lo contrario, el par frenante se reduce en porcentaje en relación contrapresión/Presión apertura freno.

Recordamos que altas velocidades de rotación o funcionamientos prolongados con eje vertical pueden causar aumentos elevados de temperatura: en estos casos consultar la Sección A.

1.0 - Campo de aplicação
O freio só deve ser usado como freio de estacionamento e não para efetuar frenagens dinâmicas.

2.0 - Princípio de funcionamento do freio
O funcionamento do freio é do tipo negativo com as seguintes modalidades operacionais:

2.1 - Condição 1 - Pressão $P_{INf} = 0$
As molas (detalhe 1) exercem um impulso nos pares de discos de lâminas (componente 2). Alguns discos são fixos com elemento móvel (componente 3) e discos fixos com elemento fixo (componente 4). Nesta condição operacional gera-se na manga do redutor (componente 3) um binário T_{RF} com nível de precisão do valor de±10% (Z1-Z2) e ±18% Z0.

2.2 - Condição 2 - Pressão $P_{INf} = P_{Af}$
Caso através do engate do comando do freio (componente 5), seja inserida uma pressão PINf igual à pressão de abertura PAf, o valor do binário resistente TRF é igual a zero consentindo a livre rotação da manga do redutor.

2.3 - Condição 3 - Contrapressão presente no sistema hidráulico $P_c \neq 0$.
Tais desempenhos (T_{RF}) são sempre calculados com contrapressão igual a zero.Em caso contrário, o binário de frenagem á percentualmente reduzido na relação contrapressão/Pressão de abertura do freio.

Lembramos que altas velocidades de rotação, ou prolongados funcionamentos com eixo vertical, podem gerar elevados aumentos de temperatura: nestes casos, consultar a Secção A.

	F	R	G	U	V	Z	L_{TN}	L3	b	t
Z0 Z1 Z2	LOOK AT D8-D10-D12-D14-D16-D18-D19-D20-D21-D22-D23-D24-D25-D28-D29									

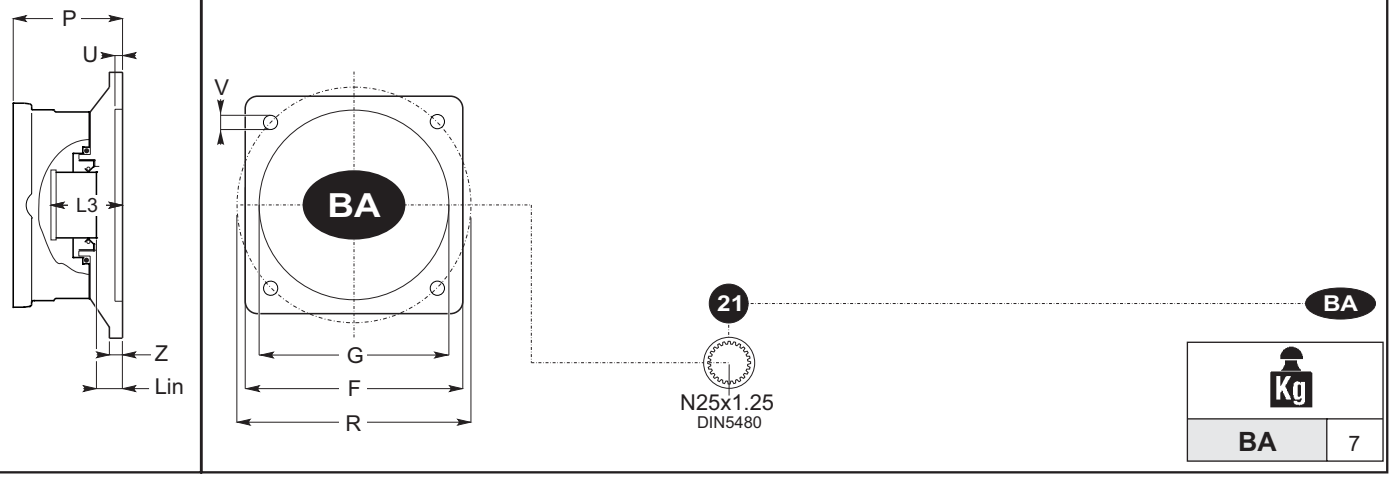
Z.	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒ 4202				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB 103⇒ 10003				EXB 104⇒ 31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
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420								4202		4203			4204			
600								6002		6003			6004			
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800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
Z0	**Z0.1**				**Z0.1**				**Z0.1**				**Z0.1**			
CA 04	131				131				131				131			
CA 05	131				131				131				131			
CA 09	131				131				131				131			
Z1	**Z1.1**	**Z1.2**			**Z1.1**	**Z1.2**			**Z1.1**	**Z1.2**			**Z1.1**	**Z1.2**		
CA 04	166	174.5			166	174.5			166	174.5			166	174.5		
CA 09	166	174.5			166	174.5			166	174.5			166	174.5		
CB 07	178	186.5			178	186.5			178	186.5			178	186.5		
DA 11	160	168.5			160	168.5			160	168.5			160	168.5		
DB 22	180	188.5			180	188.5			180	188.5			180	188.5		
FA 13	186	194.5			186	194.5			186	194.5			186	194.5		
FA 22	186	194.5			186	194.5			186	194.5			186	194.5		
FA 23	186	194.5			186	194.5			186	194.5			186	194.5		
FA 24	186	194.5			186	194.5			186	194.5			186	194.5		
FA 28	186	194.5			186	194.5			186	194.5			186	194.5		
FB 08	226	234.5			226	234.5			226	234.5			226	234.5		
PA 29	168	176.5			168	176.5			168	176.5			168	176.5		
ECE 6	165	173.5			165	173.5			165	176.5			165	176.5		
Z2		**Z2.2**	**Z2.3**	**Z2.4**		**Z2.2**	**Z2.3**	**Z2.4**		**Z2.2**	**Z2.3**	**Z2.4**		**Z2.2**	**Z2.3**	**Z2.4**
FA13		248	237	245		248	237	245		248	237	245		248	237	245
FA24		248	237	245		248	237	245		248	237	245		248	237	245
HB24		257	246	254		257	246	254		257	246	254		257	246	254
KB24		265	254	262		265	254	262		265	254	262		265	254	262
LA25		264	253	261		264	253	261		264	253	261		264	253	261
OA31		244	233	241		244	233	241		244	233	241		244	233	241
ECE 7		*	*	*		*	*	*		*	*	*		*	*	*

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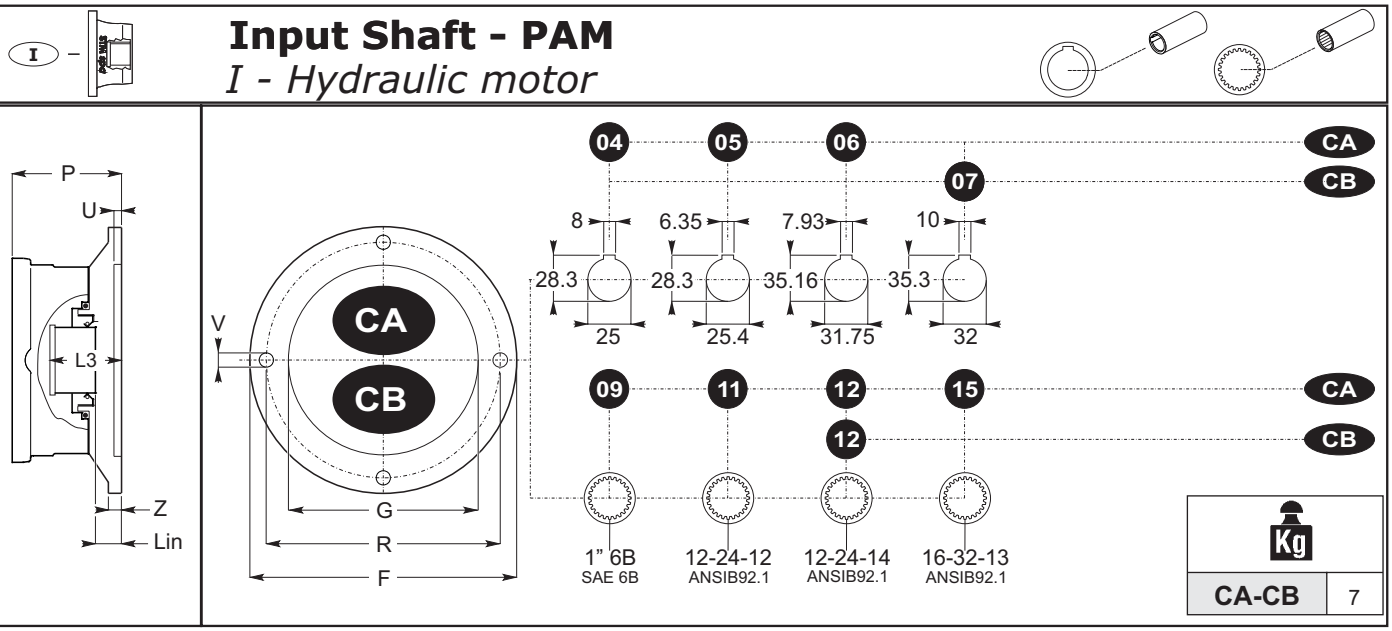
Input Shaft - PAM

I - Hydraulic motor



Input Shaft - PAM

I - Hydraulic motor



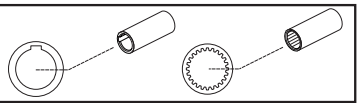
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		+/- 0,1	F8				+/- 0,5					
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CA 04	130	106,4	82,6	10	M12	17			15.5	58		
CA 05	130	106,4	82,6	10	M12	17			15.5	58		
CA 06	130	106,4	82,6	10	M12	17			13	58		
CA 09	130	106,4	82,6	10	M12	17			20.5	58		
CA 11	130	106,4	82,6	10	M12	17			13	56		
CA 12	130	106,4	82,6	10	M12	17			13	56		
CA 15	130	106,4	82,6	10	M12	17			13	58		
CB 07	130	106,4	82,6	22	M12	29			17.5	74		
CB 12	130	106,4	82,6	22	M12	29			25	71.5		

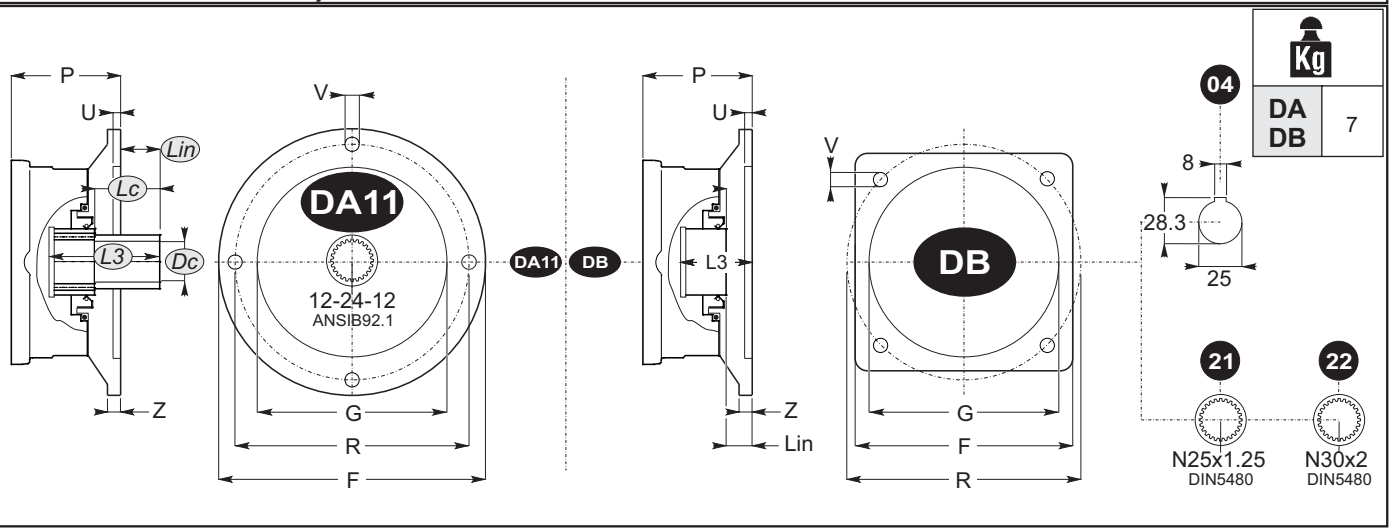
	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
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BA 21	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 04	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 05	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 06	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 09	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 11	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 12	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CA 15	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5	93	101	109	116,5
CB 07	105	113	121	128,5	105	113	121	128,5	105	113	121	128,5	105	113	121	128,5
CB 12	105	113	121	128,5	105	113	121	128,5	105	113	121	128,5	105	113	121	128,5

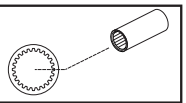
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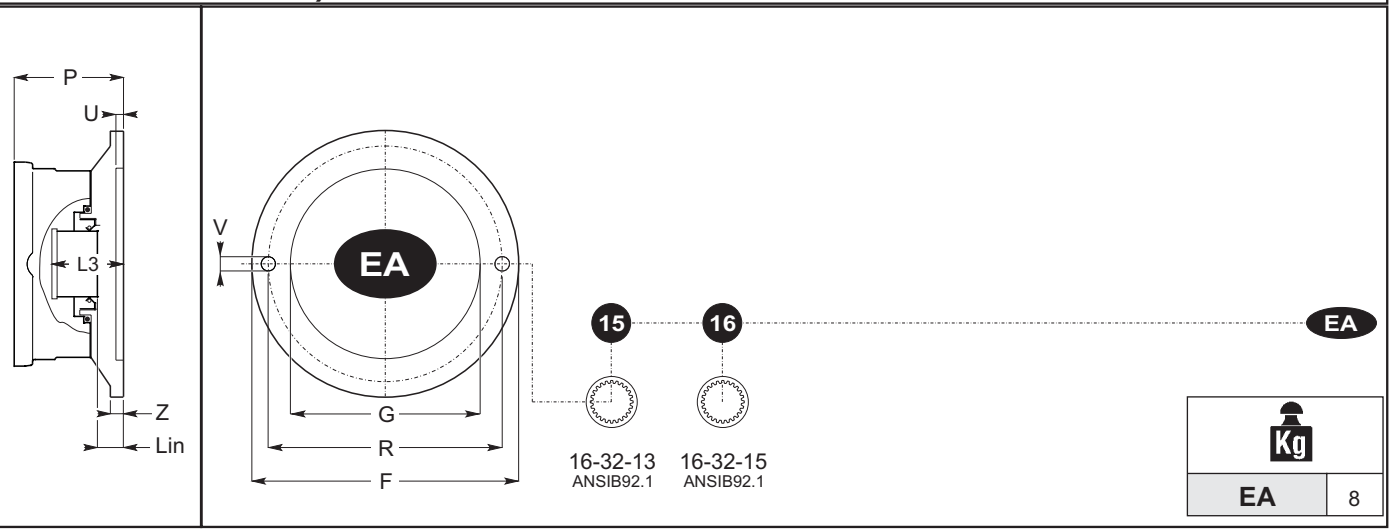
Input Shaft - PAM
I - Hydraulic motor





Input Shaft - PAM
I - Hydraulic motor





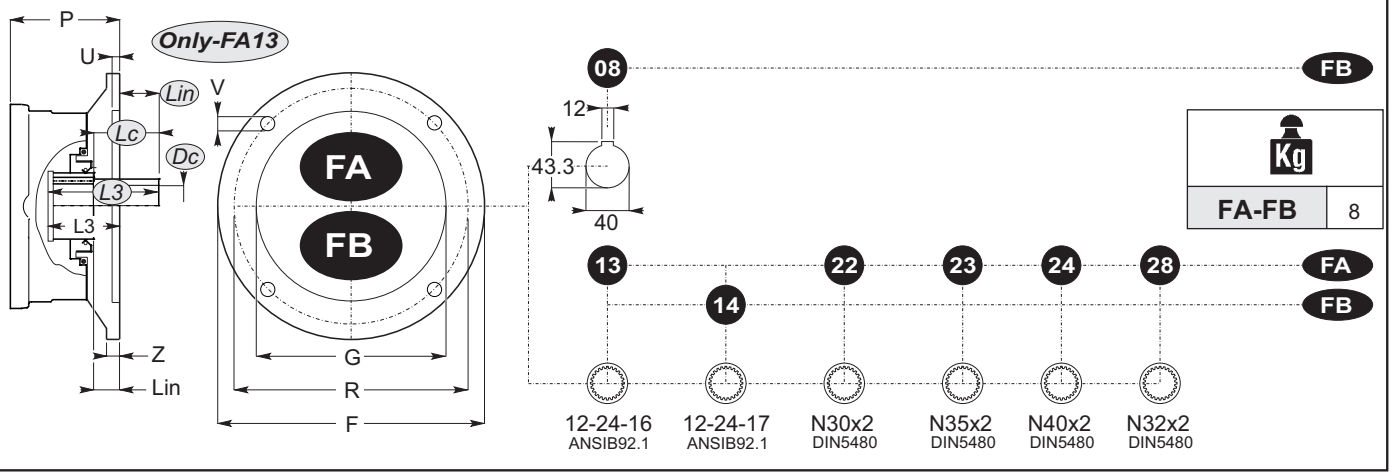
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		+/- 0.1	F8				+/- 0.5					
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DB 04	118	125	100	10	M10	30	-		29	73		
DB 21	118	125	100	10	M10	30	-		36	73		
DB 22	118	125	100	10	M10	30			27	68		
EA 15	170	146	101,6	10	M14	23	-		10	56		
EA 16	170	146	101,6	10	M14	23			14	56.5		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
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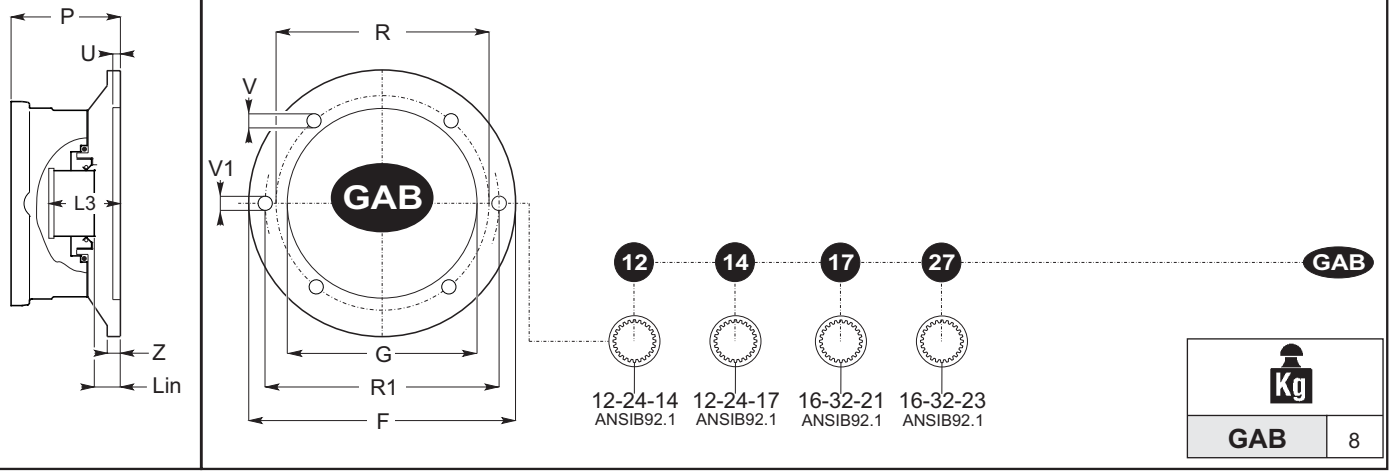
DA 11	87	95	103	110,5	87	95	103	110,5	87	95	103	110,5	87	95	103	110,5
DB 04	107	115	123	130,5	107	115	123	130,5	117	115	123	130,5	107	115	123	130,5
DB 21	107	115	123	130,5	107	115	123	130,5	117	115	123	130,5	107	115	123	130,5
DB 22	107	115	123	130,5	107	115	123	130,5	117	115	123	130,5	107	115	123	130,5
EA 15	90	98	106	113,5	90	98	106	113,5	90	98	106	113,5	90	98	106	113,5
EA 16	90	98	106	113,5	90	98	106	113,5	90	98	106	113,5	90	98	106	113,5

P - [mm]

Input Shaft - PAM
I - Hydraulic motor



Input Shaft - PAM
I - Hydraulic motor



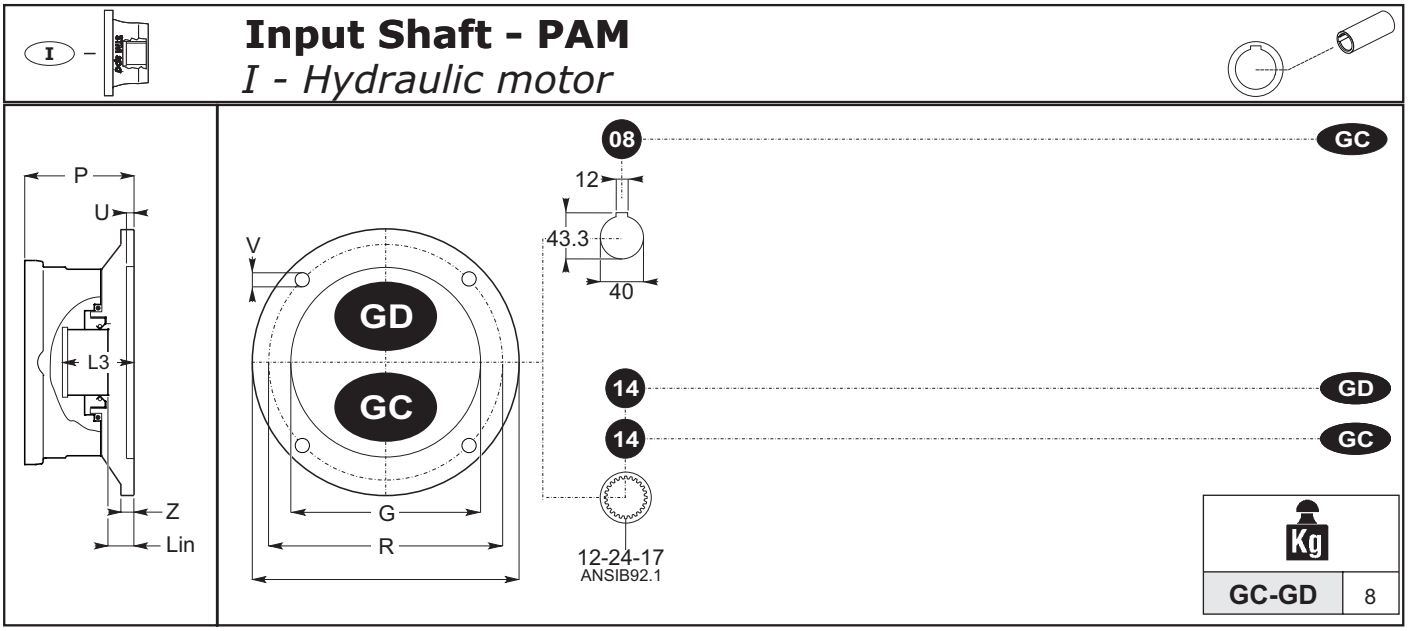
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		+/- 0,1		F8										
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FA 22	182	160	-	125	35	M12	-	46			34	79		
FA 23	182	160	-	125	35	M12	-	46			33	74		
FA 24	182	160	-	125	35	M12	-	46			33	74		
FA 28	182	160	-	125	35	M12	-	46	-		33	74		
FB 08	182	160	-	125	10	M12	-	86			35	118		
FB 14	182	160	-	125	10	M12	-	86			60	118		
GAB 12	200	162	181	127	20	M14	M16	30			21	67.5		
GAB 14	200	162	181	127	20	M14	M16	30			8.5	66.5		
GAB 17	200	162	181	127	20	M14	M16	30	-		21	62		
GAB 27	200	162	181	127	20	M14	M16	30			21	64		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
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80			801			802			803				804			
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95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
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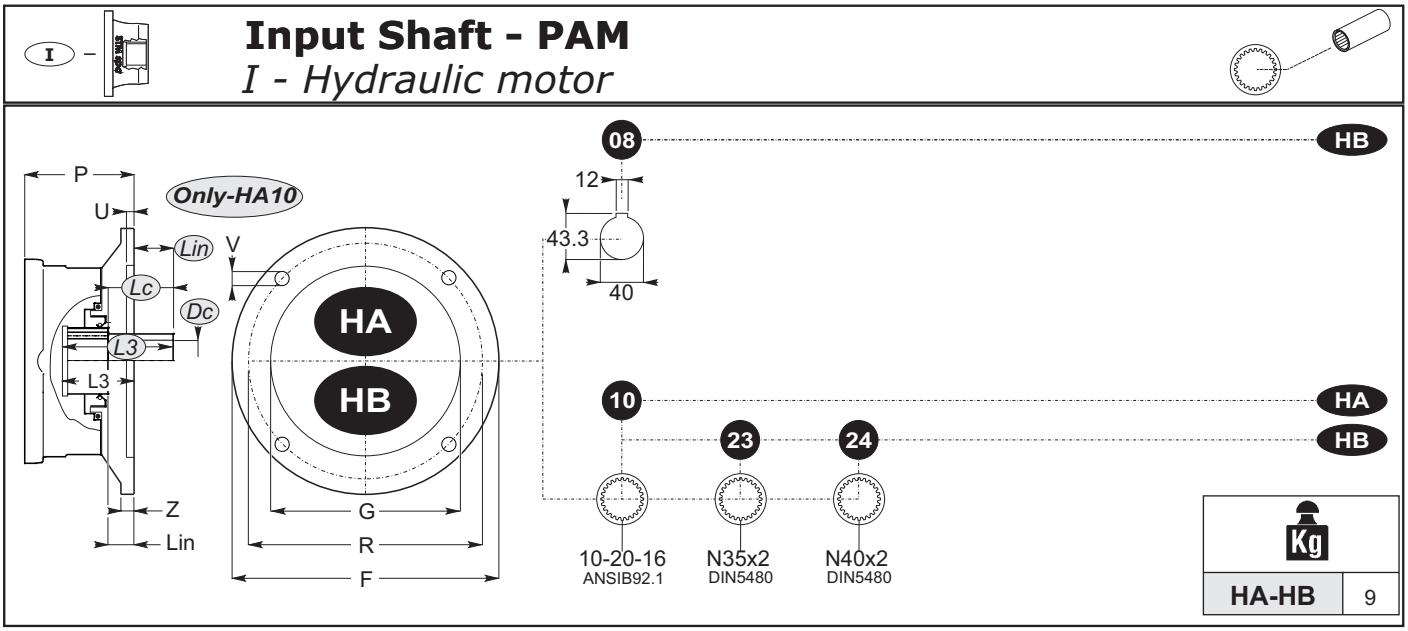
FA 13	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5
FA 22	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5
FA 23	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5
FA 24	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5
FA 28	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5	113	121	129	136,5
FB 08	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5
FB 14	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5
GAB 12	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5
GAB 14	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5
GAB 17	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5
GAB 27	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5

P - [mm]

Input Shaft - PAM
I - Hydraulic motor



Input Shaft - PAM
I - Hydraulic motor



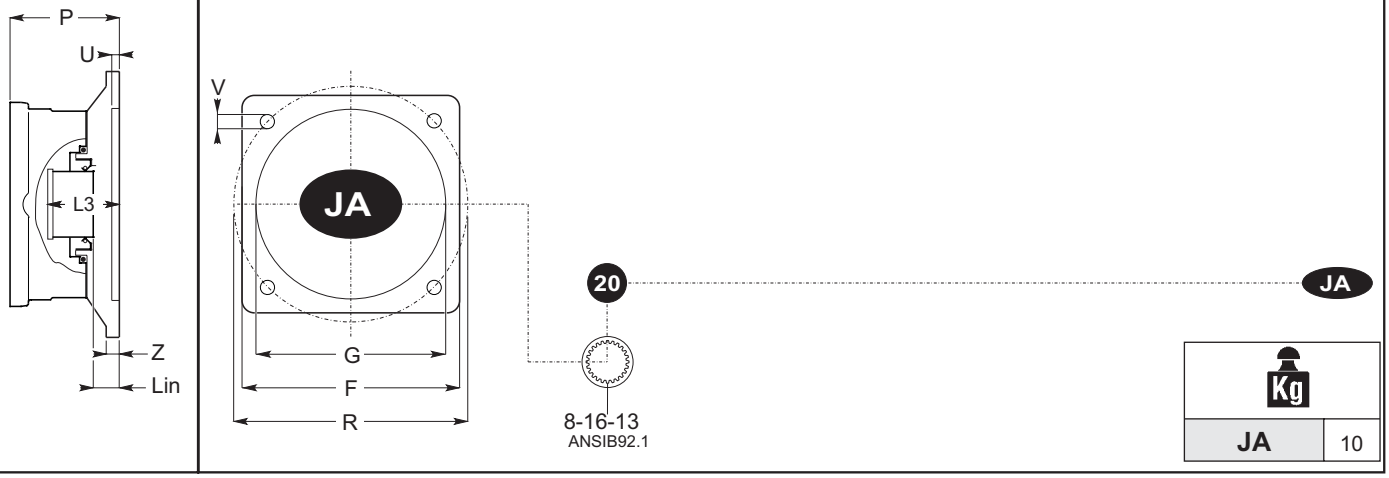
	F	R	R1	G	U	V	V1	Z	D_C	L_C	L_{IN}	L3		
		+/- 0.1		F8										
GC 08	200	162	-	127	73	M12	-	86			35	118		
GC 14	200	162	-	127	73	M12	-	86			60.5	118.5		
GD 14	200	162	-	127	18	M12	-	57			31.5	89.5		
HA 10	207	180	-	140	10	M12	-	29	46	44	23	76		
HB 08	207	180	-	140	12	M12	-	50	-		4.5	87.5		
HB 23	207	180	-	140	12	M12	-	50	-		42	82		
HB 24	207	180	-	140	12	M12	-	50			42	82		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
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350							3502			3503			3504			
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600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
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3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

GC 08	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5
GC 14	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5	153	161	169	176,5
GD 14	124	132	140	147,5	124	132	140	147,5	124	132	140	147,5	124	132	140	147,5
HA 10	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5	101	109	117	124,5
HB 08	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5
HB 23	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5
HB 24	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5	122	130	138	145,5
P - [mm]																

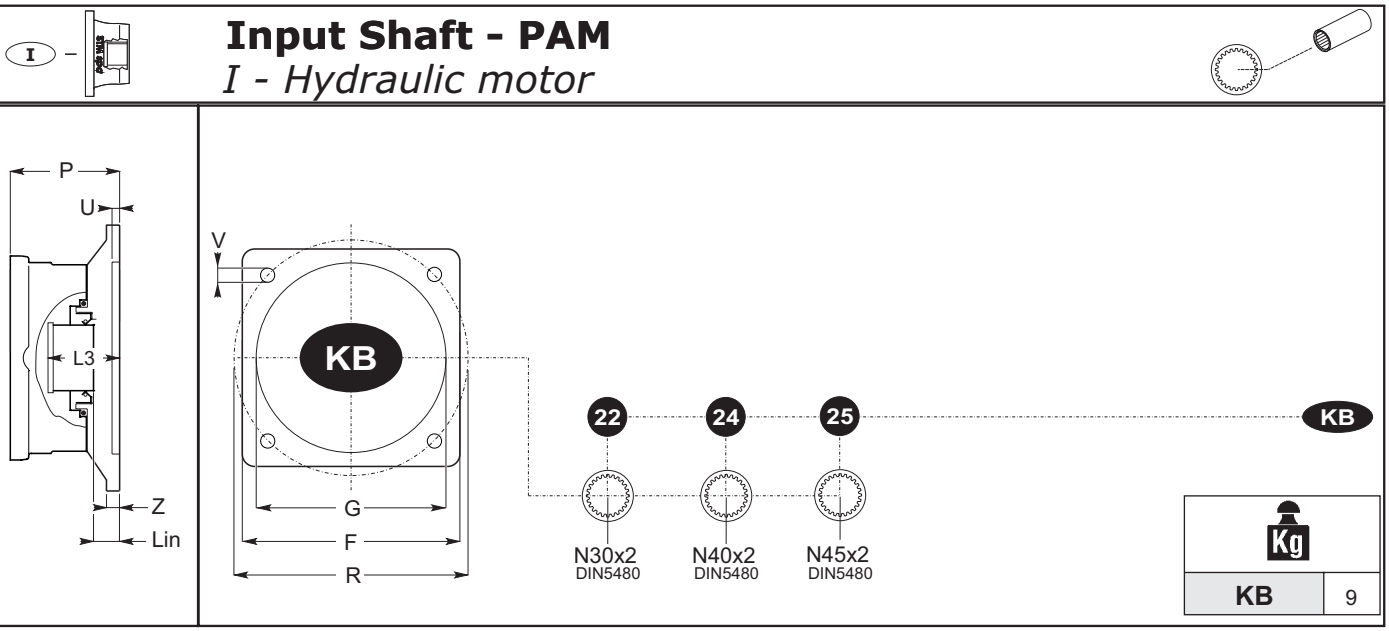
Input Shaft - PAM

I - Hydraulic motor



Input Shaft - PAM

I - Hydraulic motor



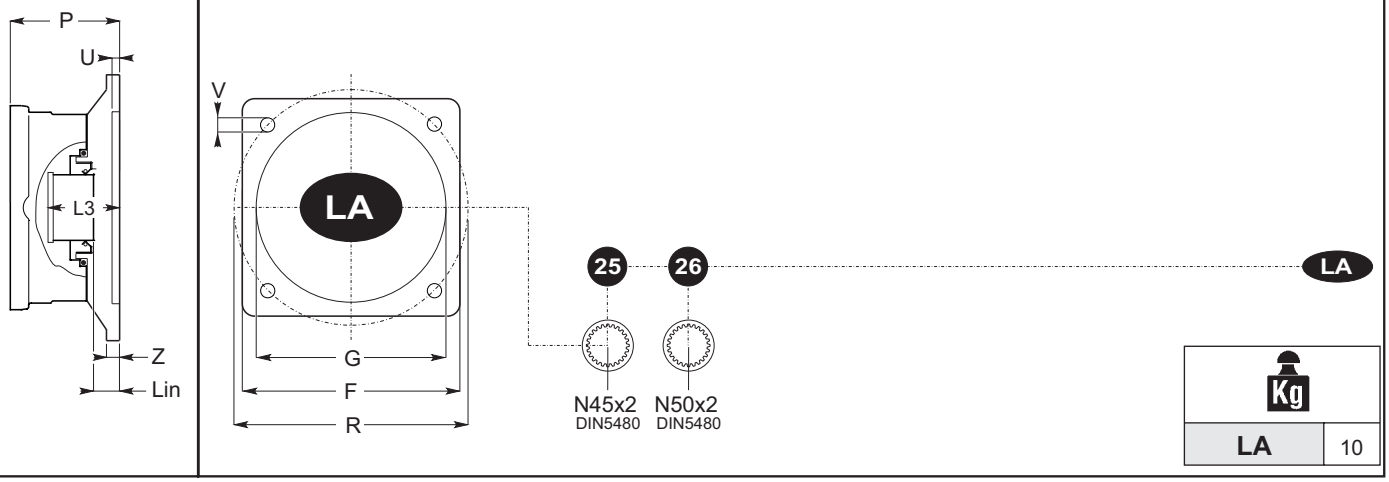
	F	R	G	U	V	Z	L_{IN}	L3		
		+/-0,1	F8							
JA 20	197	228.6	152.4	15	ø 21	30	30.5	80		
KB 22	180	200	160	10	M16	30	50	93		
KB 24	180	200	160	10	M16	30	50	93		
KB 25	180	200	160	10	M16	30	46	98		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
280							2802			2803			2804			
300							3002			3003			3004			
350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

JA 20	117	125	133	140,5	117	125	133	140,5	117	125	133	140,5	117	125	133	140,5
KB 22	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5
KB 24	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5
KB 25	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5	130	138	146	153,5
	P - [mm]															

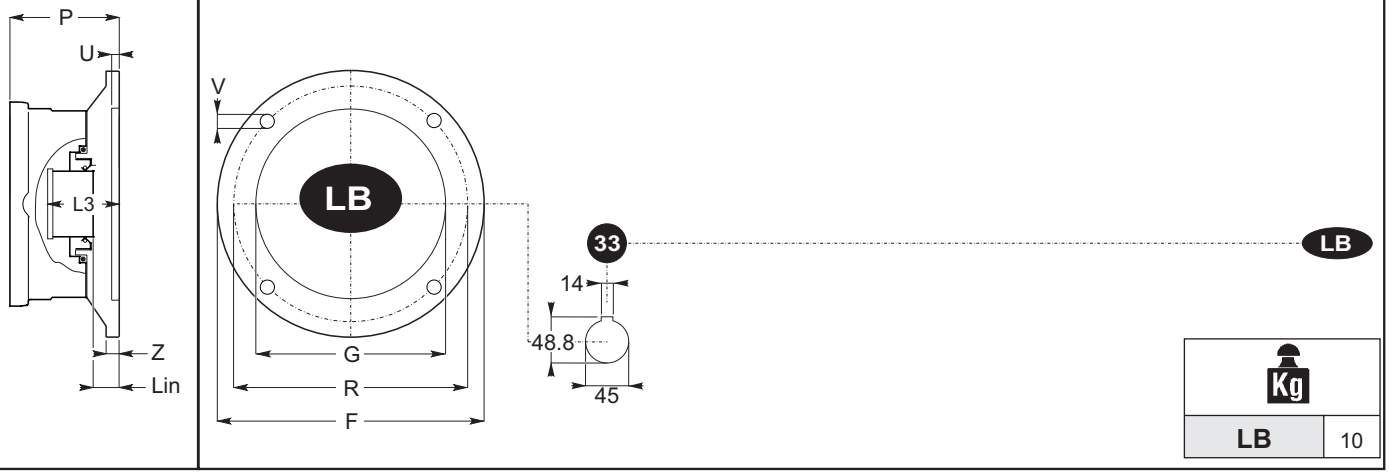
Input Shaft - PAM

I - Hydraulic motor



Input Shaft - PAM

I - Hydraulic motor



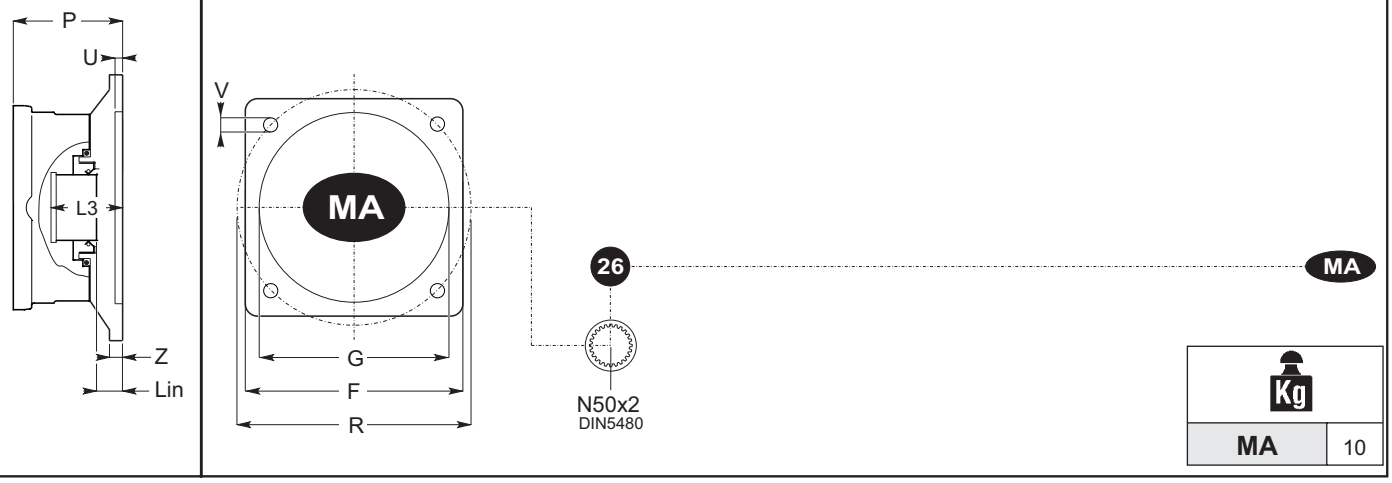
	F	R	G	U	V	Z	L_{IN}	L3		
		+/-0,1	F8							
LA 25	210	224	180	12	M16	18	45	97		
LA 26	210	224	180	12	M16	18	46.5	96.5		
LB 33	265	224	180	20	M16	10	43.5	135.5		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
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150				1501		1502			1503				1504			
180						1802			1803				1804			
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350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
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1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
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2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

LA 25	129	137	145	152,5	129	137	145	152,5	129	137	145	152,5	129	137	145	152,5
LA 26	129	137	145	152,5	129	137	145	152,5	129	137	145	152,5	129	137	145	152,5
LB 33	172.5	180.5	188.5	196,0	172.5	180.5	188.5	196,0	172.5	180.5	188.5	196,0	172.5	180.5	188.5	196,0
P - [mm]																

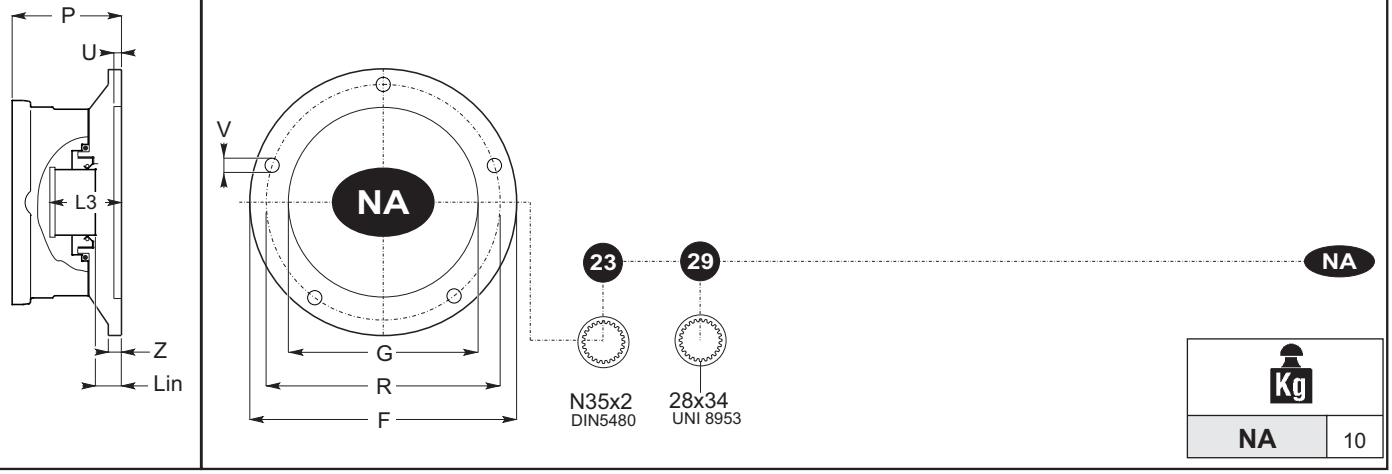
Input Shaft - PAM

I - Hydraulic motor



Input Shaft - PAM

I - Hydraulic motor



	F	R	G	U	V	Z	L_{IN}	L3		
		+/-0,1	F8							
MA 26	236	250	200	11	M20	20	50.5	100.5		
NA 23	195	160	125	12	M10	43	36	77.5		
NA 29	195	160	125	12	M10	43	40	79		

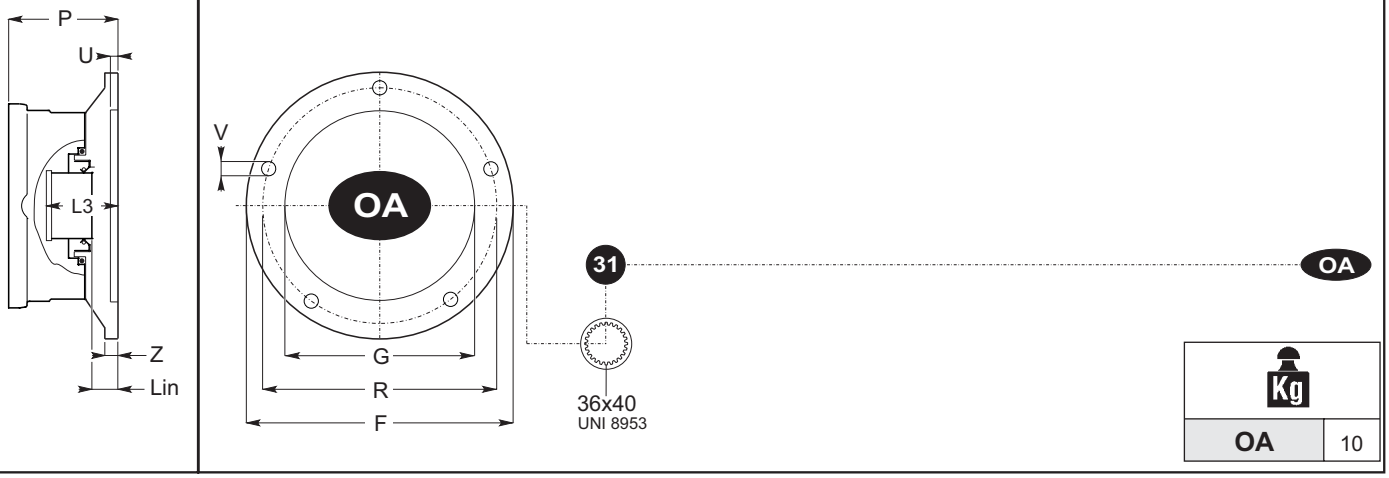
	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
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40					402				403				404			
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95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
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280							2802			2803			2804			
300							3002			3003			3004			
350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

MA 26	133	141	149	156,5	133	141	149	156,5	133	141	149	156,5	133	141	149	156,5
NA 23	116	124	132	139,5	116	124	132	139,5	116	124	132	139,5	116	124	132	139,5
NA 29	116	124	132	139,5	116	124	132	139,5	116	124	132	139,5	116	124	132	139,5

P - [mm]

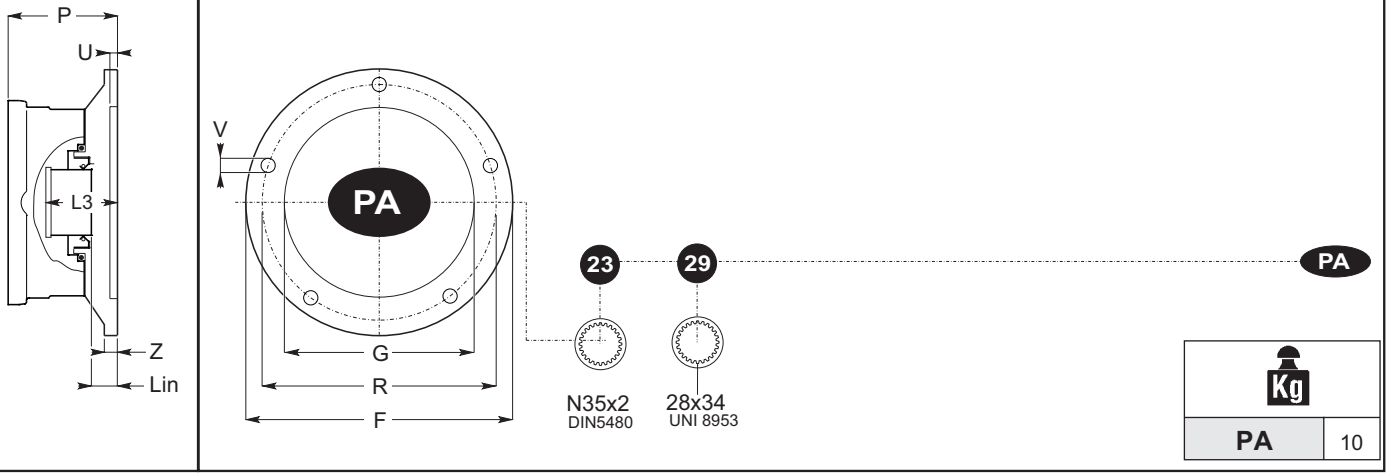
Input Shaft - PAM

I - Hydraulic motor



Input Shaft - PAM

I - Hydraulic motor



	F	R	G	U	V	Z	L_{IN}	L3		
		+/-0,1	F8							
OA 31	288	250	150	7	ø 14	15	27	77		
PA 23	233	210	175	6	ø 14	16	15	56.5		
PA 29	233	210	175	6	ø 14	16	22	62		

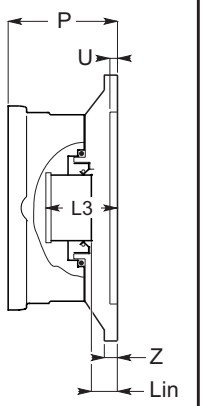
	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
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35		351			352				353				354			
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200				2001		2002			2003				2004			
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350							3502			3503			3504			
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420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
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3100															31004	
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3700															37004	
4500																45004
5500																
6800																
7500																
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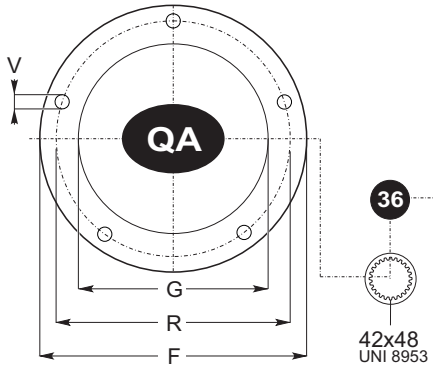
OA 31	109	117	125	132,5	109	117	125	132,5	109	117	125	132,5	109	117	125	132,5
PA 23	95	103	111	118,5	95	103	111	118,5	95	103	111	118,5	95	103	111	118,5
PA 29	95	103	111	118,5	95	103	111	118,5	95	103	111	118,5	95	103	111	118,5

P - [mm]

Input Shaft - PAM

I - Hydraulic motor





QA

Kg	
QA	10

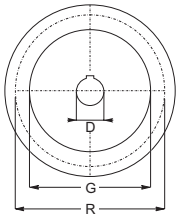
	F	R	G	U	V	Z	L_{IN}	L3		
		+/-0,1	F8							
QA 36	256	232	175	18	M10	15	37	86		

	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒ 2001				EX 102⇒6002				EX 103⇒ 16003				EX 104⇒ 45004			
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
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70		701			702				703				704			
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95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
280							2802			2803			2804			
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350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15004		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004
5500																
6800																
7500																
8000																

QA 36	119	127	135	142.5	119	127	135	142.5	119	127	135	142.5	119	127	135	142.5
P - [mm]																

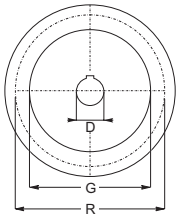
4.0 Type de Moteur / Code STM — *4.0 Tipo Motor / Código STM* — 4.0 Tipo Motor / Código STM

Hydraulic Motor		Input Gearbox			
Company	**Motor Type**	**D**	**G**	**R**	**Code STM**
AXIAL PUMP	M2 24-50	16/32-15	101,6	146	EA16
AXIAL PUMP	M3 40-65	16/32-15	101,6	146	EA16
AXIAL PUMP	M2 24-50	16/32-13	101,6	146	EA15
AXIAL PUMP	M3 40-65	16/32-13	101,6	146	EA15
CALZONI	TYPE MR 250	8x42x48	175	232	QA36
DANFOSS	OMH 200-500	12/24-14	82,55	106,4	CB12
DANFOSS	OMS 80-400	12/24-14	82,55	106,4	CB12
DANFOSS	OMP 25-400	25	82,55	106,4	CA4
DANFOSS	OMR 50-375	25	82,55	106,4	CA4
DANFOSS	OMP 25-400	25,4	82,55	106,4	CA5
DANFOSS	OMR 50-375	25,4	82,55	106,4	CA5
DANFOSS	OMP 25-400	32	82,55	106,4	CB7
DANFOSS	OMR 50-375	32	82,55	106,4	CB7
DANFOSS	OMH 200-500	32	82,55	106,4	CB7
DANFOSS	OMS 80-400	32	82,55	106,4	CB7
DANFOSS	OMT 160-500	40	125	160	FB8
DANFOSS	OMP 25-400	1"6B	82,55	106,4	CA9
DANFOSS	OMR 50-375	1"6B	82,55	106,4	CA9
DANFOSS	OMSS 80-400	12/24-12	100	125	DA11
DANFOSS	OMTS 160-500	12/24-16	125	160	FA13
DANFOSS	OMT 160-500	12/24-17	125	160	FB14
DANFOSS	OMVS 315-800	10/20-16	140	180	HA10
DINAMIC OIL	MGL 50-400	25	82,55	106,4	CA4
DINAMIC OIL	MGLR 50-375	25	82,55	106,4	CA4
DINAMIC OIL	MGT 50-400	25	82,55	106,4	CA4
DINAMIC OIL	MGL 50-401	25,4	82,55	106,4	CA5
DINAMIC OIL	MGLR 50-375	25,4	82,55	106,4	CA5
DINAMIC OIL	MGT 50-400	25,4	82,55	106,4	CA5
DINAMIC OIL	MGL 50-402	1"6B	82,55	106,4	CA9
DINAMIC OIL	MGLR 50-375	1"6B	82,55	106,4	CA9
DINAMIC OIL	MGT 50-400	1"6B	82,55	106,4	CA9
EATON(CHAR-LYNN)	SERIE 4000	12/24-17	127	162	GA14
EATON(CHAR-LYNN)	SERIE 2000	25	82,55	106,4	CA4
EATON(CHAR-LYNN)	SERIE 2000	25,4	82,55	106,4	CA5
EATON(CHAR-LYNN)	SERIE 2000	31,75	82,55	106,4	CA6
EATON(CHAR-LYNN)	SERIE 2000	32	82,55	106,4	CB7
EATON(CHAR-LYNN)	SERIE 2000	1"6B	82,55	106,4	CA9
GEOLINK	GLS 80-315	12/24-14	82,55	106,4	CB12
GEOLINK	GHL 50-400	25	82,55	106,4	CA4
GEOLINK	GFS 50-400	25	82,55	106,4	CA4
GEOLINK	GKS 50-400	25	82,55	106,4	CA4
GEOLINK	GLS 80-315	32	82,55	106,4	CB7
GEOLINK	GHL 50-400	1"6B	82,55	106,4	CA9
GEOLINK	GFS 50-400	1"6B	82,55	106,4	CA9
GEOLINK	GKS 50-400	1"6B	82,55	106,4	CA9
HP HYDRAULIC	M4MF 21-28	25,4	82,55	106,4	CA5
HP HYDRAULIC	M4MF 21-28	16/32-13	82,55	106,4	CA15
HP HYDRAULIC	M4PV 21-28	16/32-15	101,6	146	EA16
HP HYDRAULIC	M4PV 34-65	16/32-15	101,6	146	EA16
HP HYDRAULIC	M4PV 21-28	16/32-13	101,6	146	EA15
HP HYDRAULIC	M4PV 34-65	16/32-13	101,6	146	EA15
HP HYDRAULIC	M4MF 34-65	16/32-13	101,6	146	EA15
HP HYDRAULIC	M4MV 34-65	16/32-13	101,6	146	EA15
HP HYDRAULIC	M4MF 34-65	16/32-15	101,6	146	EA16
HP HYDRAULIC	M4MV 34-65	16/32-15	101,6	146	EA16
LINDE	HMV 35	16/32-15	101,6	146	EA16
LINDE	HMF 105	16/32-23	127	181	GB27
LINDE	HMF 50-75	16/32-21	127	181	GB17
M + S	EPM 40-630	12/24-14	82,55	106,4	CB12
M + S	EPRM 50-400	12/24-14	82,55	106,4	CB12
M + S	EPM 40-630	25	82,55	106,4	CA4
M + S	EPRM 50-400	25	82,55	106,4	CA4
M + S	EPM 40-630	25,4	82,55	106,4	CA5
M + S	EPRM 50-400	25,4	82,55	106,4	CA5
M + S	EPM 40-630	32	82,55	106,4	CB7
M + S	EPRM 50-400	32	82,55	106,4	CB7
M + S	EPRM 80-400	32	82,55	106,4	CB7
M + S	EPM 40-630	1"6B	82,55	106,4	CA9
M + S	EPRM 50-400	1"6B	82,55	106,4	CA9
M + S	EPMT 160-500	12/24-17	125	160	FB14
REXROTH	A2FM 23-32	25	100	125	DB4
REXROTH	A4FM 22-28	16/32-13	101,6	146	EA15
REXROTH	A10FM 23-28	16/32-13	101,6	146	EA15
REXROTH	A4FM 22-28	16/32-15	101,6	146	EA16
REXROTH	A2FM 10-16	N25x1,25	80	100	BA21
REXROTH	A2FM 23-32	N25x1,25	100	125	DB21
REXROTH	A6VM 28	N25x1,25	100	125	DB21
REXROTH	A2FM 23-32	N30x2	100	125	DB22
REXROTH	A6VM 28	N30x2	100	125	DB22
REXROTH	A2FM 45-63	N30x2	125	160	FA22
REXROTH	A6VM 55	N30x2	125	160	FA22
REXROTH	A2FM 45-63	N35x2	125	160	FA23
REXROTH	A6VM 55	N35x2	125	160	FA23
REXROTH	A2FM 80-90	N35x2	140	180	HB23
REXROTH	A6VM 80	N35x2	140	180	HB23
REXROTH	A2FM 80-90	N40x2	140	180	HB24



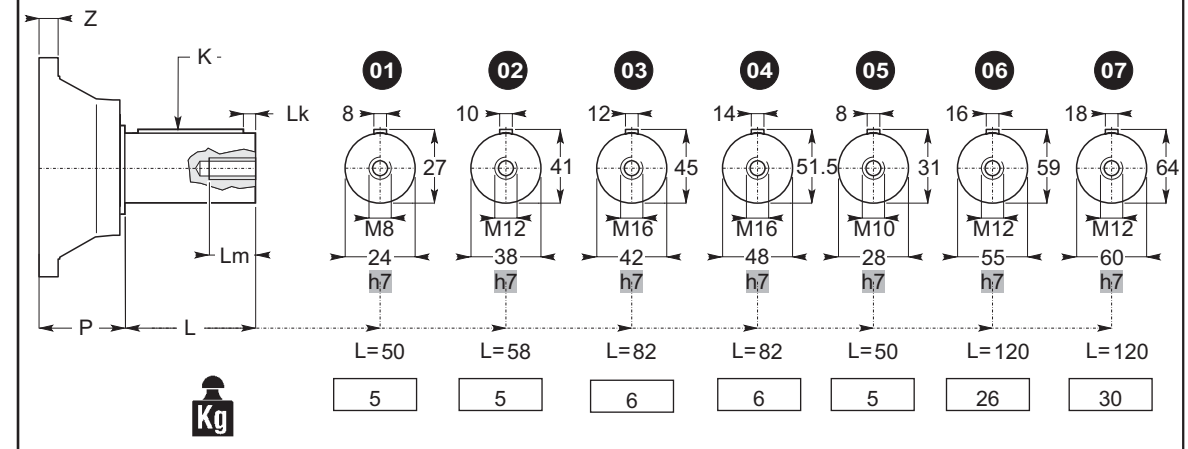
4.0 Type de Moteur / Code STM — *4.0 Tipo Motor / Código STM* — 4.0 Tipo Motor / Código STM

Hydraulic Motor		Input Gearbox			
Company	**Motor Type**	**D**	**G**	**R**	**Code STM**
REXROTH	A6VM 80	N40x2	140	180	HB24
REXROTH	A6VM 160	N45x2	180	224	LA25
REXROTH	A10FM 37-45	16/32-15	101,6	146	EA16
REXROTH	A2FM 160	N50x2	180	224	LA26
REXROTH	A6VM 160	N50x2	180	224	LA26
REXROTH	A2FM 200	N50x2	200	250	MA26
REXROTH	A6VM 107	N45x2	160	200	KB25
REXROTH	A6VM 250	N50x2	200	250	MA26
SAE STANDARD	SAE A	25	82,55	106,4	CA4
SAE STANDARD	SAE A	25,4	82,55	106,4	CA5
SAE STANDARD	SAE A	31,75	82,55	106,4	CA6
SAE STANDARD	SAE A	1"6B	82,55	106,4	CA9
SAE STANDARD	SAE C	12/24-14	127	162	GA12
SAE STANDARD	SAE C	12/24-17	127	162	GA14
SAI	GM05-40-200	28x34	125	160	NA29
SAI	GM05-40-200	N35x2	125	160	NA23
SAI	GM2-200-630	36x40	150	250	OA31
SAI	GM1-100-320	28x34	175	210	PA29
SAI	GM1-100-320	N35x2	175	210	PA23
SAMHYDRAULIK	BG 40-400	25	82,55	106,4	CA4
SAMHYDRAULIK	AGC 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	AGF 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	AR 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	ARC 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	ARF 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	BR 50-400	25	82,55	106,4	CA4
SAMHYDRAULIK	BG 40-401	25,4	82,55	106,4	CA5
SAMHYDRAULIK	AGC 50-401	25,4	82,55	106,4	CA5
SAMHYDRAULIK	AR 50-401	25,4	82,55	106,4	CA5
SAMHYDRAULIK	ARC 50-401	25,4	82,55	106,4	CA5
SAMHYDRAULIK	BR 50-401	25,4	82,55	106,4	CA5
SAMHYDRAULIK	BR 50-402	31,75	82,55	106,4	CA6
SAMHYDRAULIK	AGC 50-402	32	82,55	106,4	CB7
SAMHYDRAULIK	AGS 50-402	32	82,55	106,4	CB7
SAMHYDRAULIK	ARC 50-402	32	82,55	106,4	CB7
SAMHYDRAULIK	BR 50-403	32	82,55	106,4	CB7
SAMHYDRAULIK	HPR 80-401	32	82,55	106,4	CB7
SAMHYDRAULIK	AGS 50-404	12/24-14	82,55	106,4	CB12
SAMHYDRAULIK	HPR 80-402	12/24-14	82,55	106,4	CB12
SAMHYDRAULIK	H1C 55	12/24-17	127	162	GA14
SAMHYDRAULIK	H1C 226 M	N50x2	200	250	MA26
SAMHYDRAULIK	BG 40-402	1"6B	82,55	106,4	CA9
SAMHYDRAULIK	AR 50-402	1"6B	82,55	106,4	CA9
SAMHYDRAULIK	BR 50-404	1"6B	82,55	106,4	CA9
SAMHYDRAULIK	H1C 75	N35x2	140	180	HB23
SAMHYDRAULIK	H1C 90	N40x2	160	200	KB24
SAMHYDRAULIK	H1C 160 M	N45x2	180	224	LA25
SAMHYDRAULIK	H2V 160 M	N45x2	180	224	LA25
SAMHYDRAULIK	H1C 160 M	45	180	224	LB33
SAUER	51V 080	12/24-14	127	162	GA12
SAUER	90M 031	16/32-15	101,6	146	EA16
SAUER	90M 043	16/32-15	101,6	146	EA16
SAUER	SMF2 033-070	16/32-21	127	162	GA17
SAUER	90M 055	16/32-21	127	162	GA17
SAUER	90M 075	16/32-21	127	162	GA17
SAUER	SMF2 089	16/32-23	127	162	GA27
SAUER	51V 081	16/32-23	127	162	GA27
SAUER	90M 100	16/32-23	127	162	GA27
SAUER	M25MF	16/32-13	101,6	146	EA15
SAUER	M35MF	16/32-13	101,6	146	EA15
SAUER	M44MF	16/32-13	101,6	146	EA15
SAUER	M46MF	16/32-13	101,6	146	EA15
SAUER	90M 030	16/32-13	101,6	146	EA15
SAUER	90M 042	16/32-13	101,6	146	EA15
SAUER	51V 160/A	8/16-13	152,4	228,5	JA20
SAUER	OMT 160-500	40	127	162	GC8
VOAC	0	12/24-14	127	162	GA12
VOAC	0	12/24-14	127	162	GA12
VOAC	V12-60 SAE	12/24-14	127	162	GA12
VOAC	V12-80 SAE	12/24-14	127	162	GA12
VOAC	F12-80 SAE	12/24-17	127	162	GA14
VOAC	0	16/32-13	101,6	146	EA15
VOAC	F12-30 ISO	N30x2	100	125	DB22
VOAC	F12-60 ISO	N35x2	125	160	FA23
VOAC	F12-80 ISO	N40x2	140	180	HB24
VOAC	V14-160	N45x2	180	224	LA25
VOAC	F 12/40 ISO	N32x2	125	160	FA28
VOAC	F12/110 ISO	N45x2	160	200	KB25
WHITE	RS-03-24	25	82,55	106,4	CA4
WHITE	HB-03-24	25	82,55	106,4	CA4
WHITE	RS-03-24	25,4	82,55	106,4	CA5
WHITE	HB-03-24	25,4	82,55	106,4	CA5
WHITE	HB-03-24	31,75	82,55	106,4	CA6
WHITE	HB-03-24	32	82,55	106,4	CB7
WHITE	RS-03-24	1"6B	82,55	106,4	CA9
WHITE	HB-03-24	1"6B	82,55	106,4	CA9
WHITE	HB-03-24	16/32-13	82,55	106,4	CA15

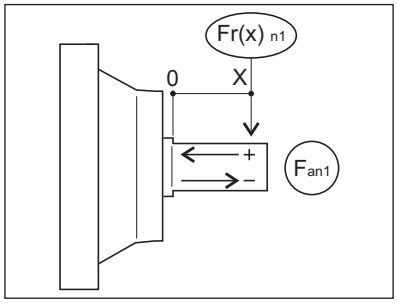


Input Shaft - ECE

ECE - with solid input shaft

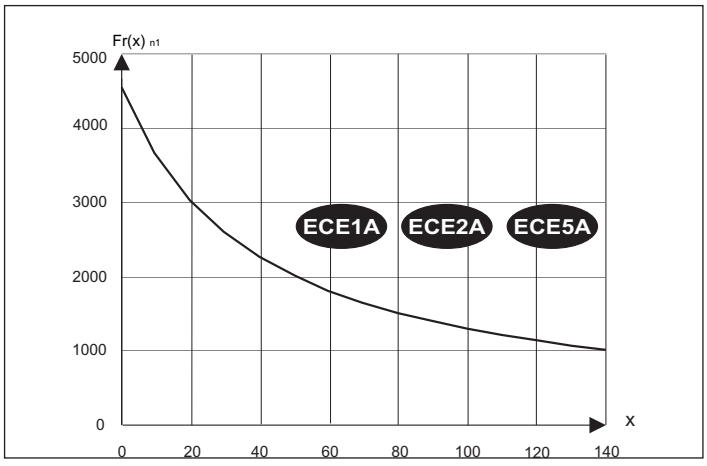


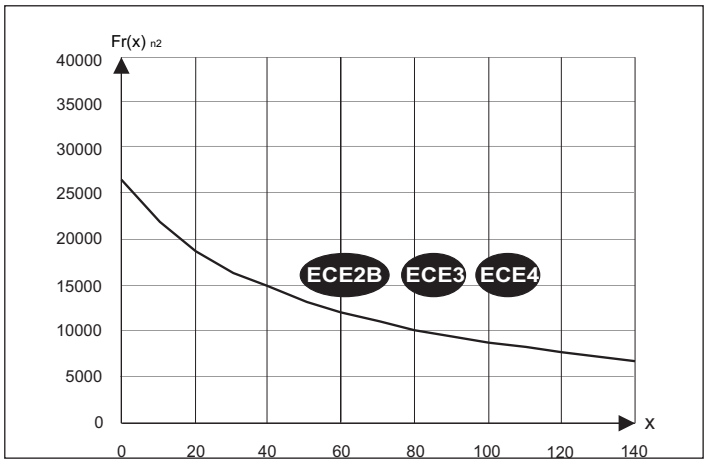
ECE

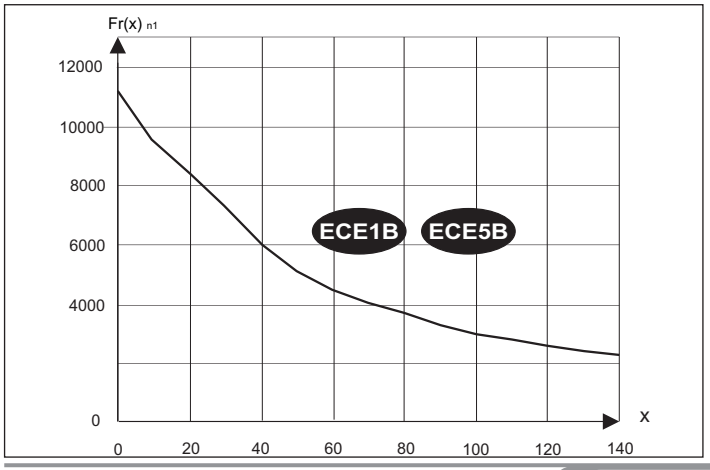


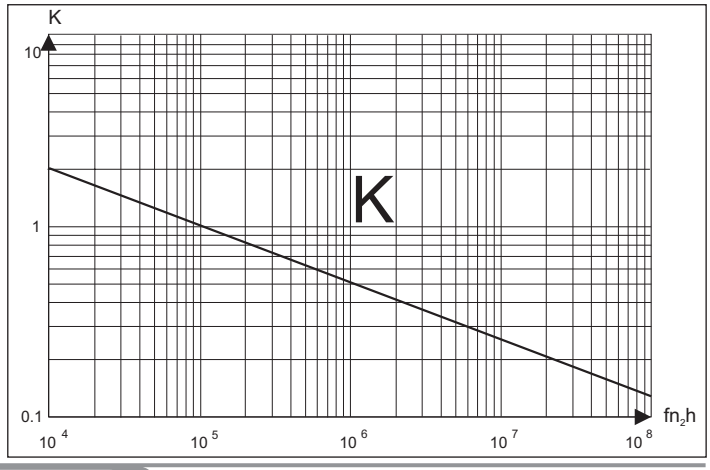
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					UNI6604	(+)	(-)
ECE 1A	50	23	20	5	8x7x40	*	*
ECE 1B	50	23	20	5	8x7x40	*	*
ECE 2A	58	23	24	4	10x8x50	*	*
ECE 2B	58	23	24	4	10x8x50	*	*
ECE 3	82	23	32	6	12x8x70	*	*
ECE 4	82	23	32	6	14x9x70	*	*
ECE 5A	50	23	22	5	8x7x40	*	*
ECE 5B	50	23	22	5	8x7x40	*	*
ECE 6	120	-	30	10	16x10x100	*	*
ECE 7	120	-	30	10	18x11x100	*	*

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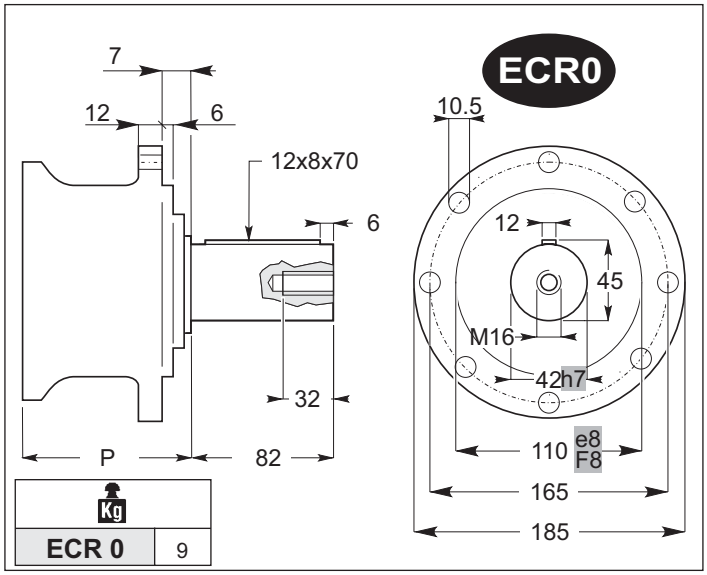


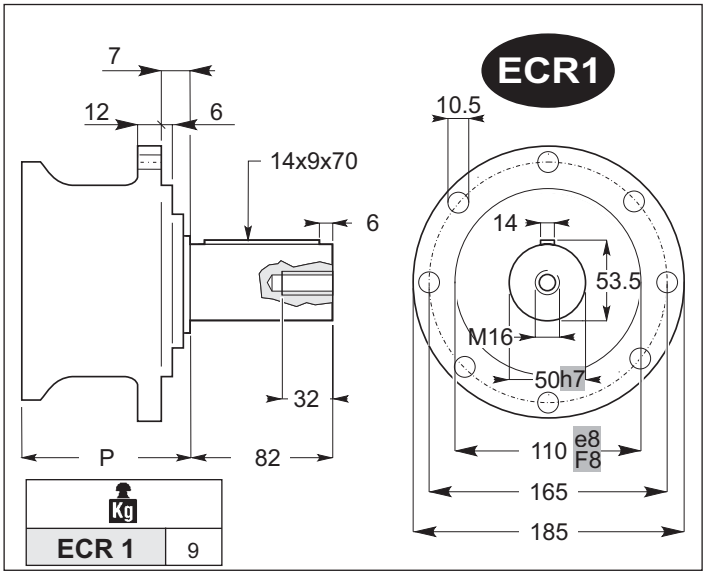


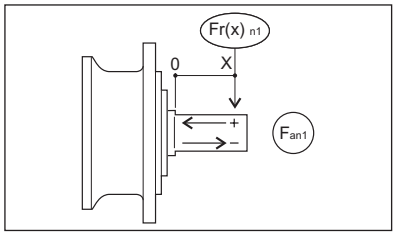
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	EX 101⇒ 1001				EX 102⇒3502				EX 103⇒ 15003				EX 104⇒ 37004		
					EXB 102⇒ 3002				EXB103⇒ 10003				EXB 104⇒31004		
10	101				102				103				104		
20	201				202				203				204		
25	251				252				253				254		
30		301			302				303				304		
35		351			352				353				354		
40					402				403				404		
50		501			502				503				504		
70		701			702				703				704		
80			801			802			803				804		
90						902			903				904		
95						952			953				954		
100			1001			1002			1003				1004		
150						1502			1503				1504		
180						1802			1803				1804		
200						2002			2003				2004		
250							2502			2503			2504		
280							2802			2803			2804		
300							3002			3003			3004		
350							3502			3503			3504		
360										3603			3604		
420										4203			4204		
600										6003			6004		
650											6503			6504	
800											8003			8004	
850											8503			8504	
1000											10003			10004	
1200											12003			12004	
1500											15003			15004	
1600														16004	
2000															20004
2500															25004
2600															26004
3000															30004
3100															31004
3200															32004
3700															37004
4500															
5500															
6800															
7500															
8000															

ECE 1A	91				91				91				91		
ECE 1B		117				117				117				117	
ECE 2A	91				91				91				91		
ECE 2B		117				117				117				117	
ECE 3		117	161,9			117	161,9			117	161,9			117	161,9
ECE 4		117	161,9			117	161,9			117	161,9			117	161,9
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ECE 5B		117				117				117				117	
ECE 6	LOOK AT D7														
ECE 7															

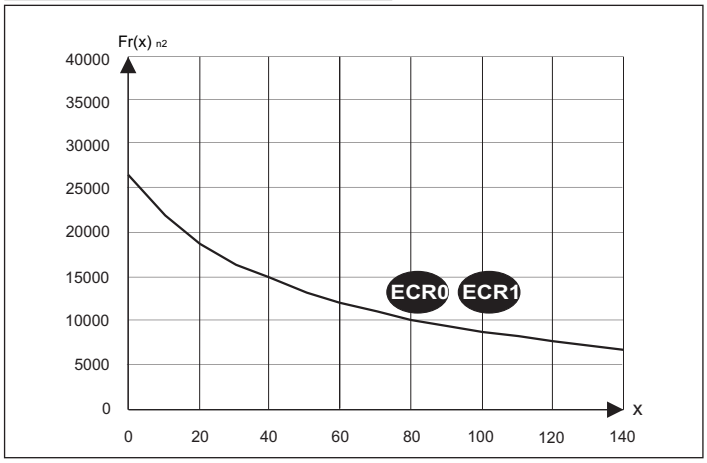
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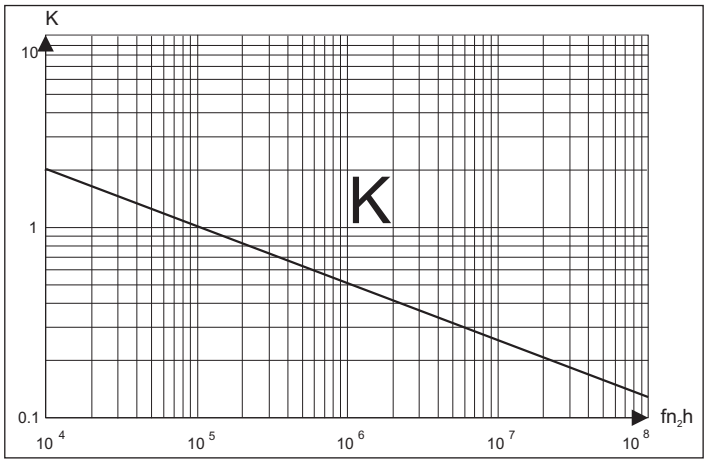






	Diretion/*Dirección*/Direção	ECR 0	ECR 1
Fa n1	(+)	22491	22491
	(-)	19278	19278



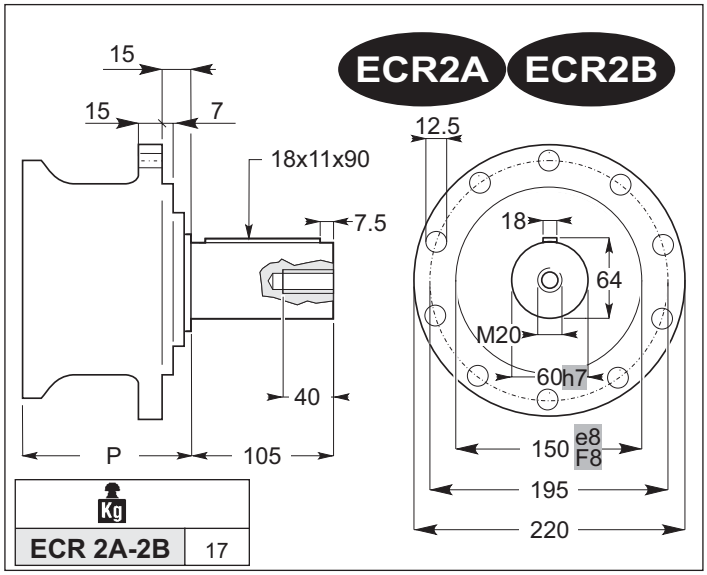


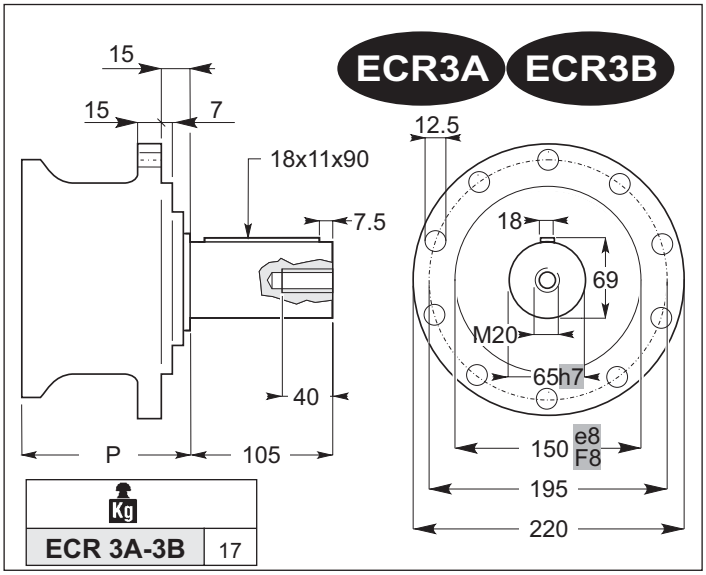
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					EX 102⇒2002				EX 103⇒6003				EX-EXB 104⇒16004			
	EX 101⇒701				EXB 102⇒2002				EXB 103⇒6003							
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
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35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80						802			803				804			
90						902			903				904			
95						952			953				954			
100						1002			1003				1004			
150						1502			1503				1504			
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200						2002			2003				2004			
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280										2803			2804			
300										3003			3004			
350										3503			3504			
360										3603			3604			
420										4203			4204			
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650														6504		
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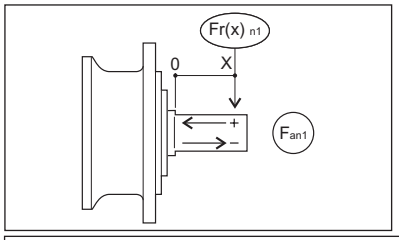
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ECR0	115,3	123,8			115,3	123,8			115,3	123,8			115,3	123,8		
ECR1	115,3	123,8			115,3	123,8			115,3	123,8			115,3	123,8		

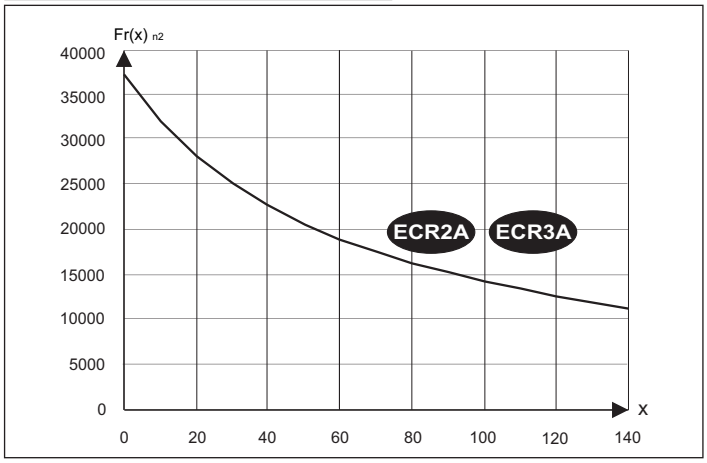
P - [mm]

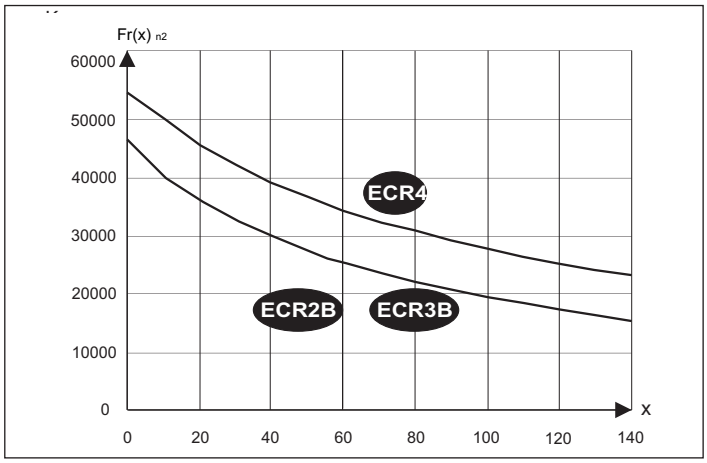


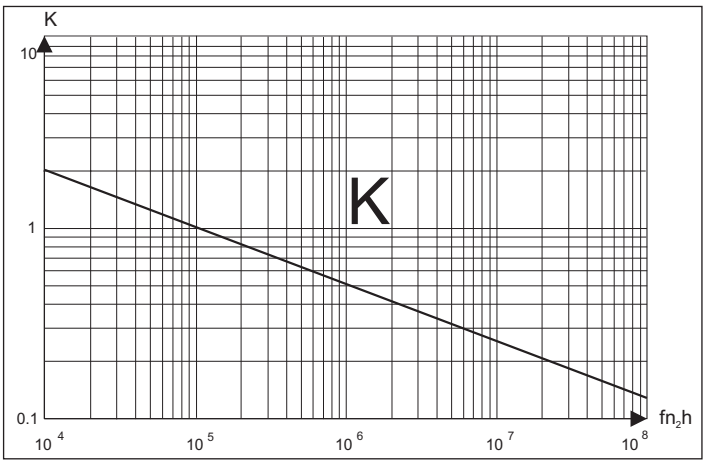


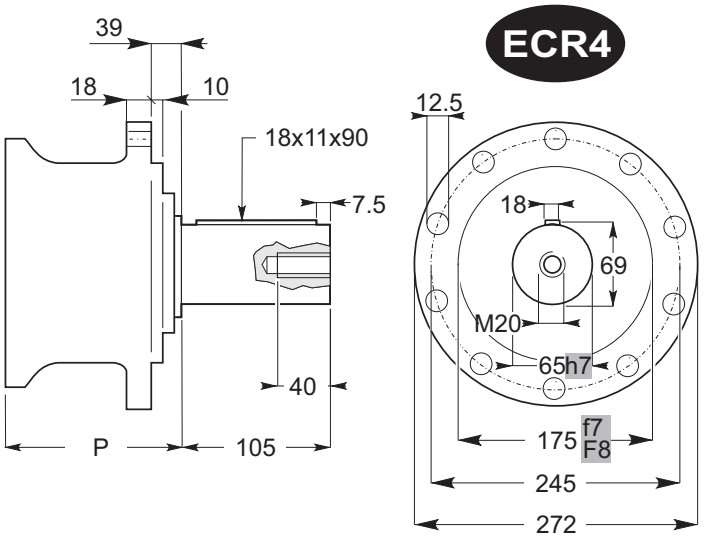


Fa n1	Diretion/*Dirección*/Direção	ECR 2A	ECR 3A	ECR 2B	ECR 3B	ECR 4
	(+)	34426		38557		44398
	(-)	22491		34426		38557







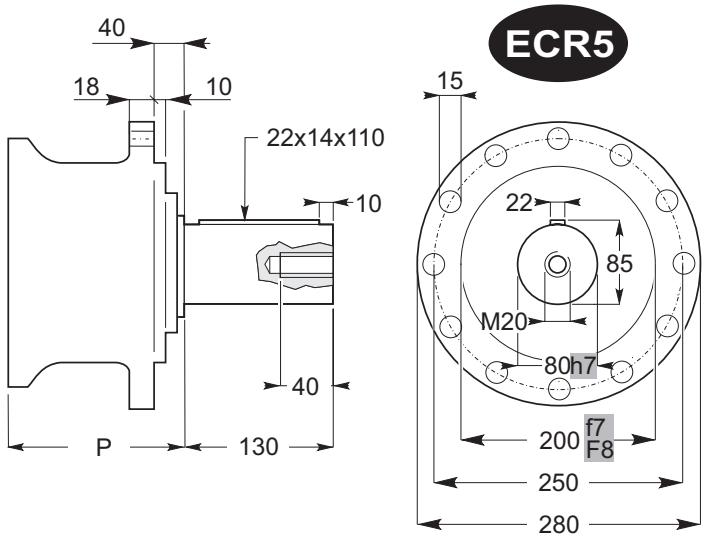


Kg	
ECR 4	26

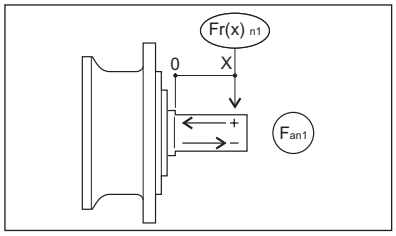
	EX1				EX2 EXB2				EX3 EXB3				EX4 EXB4			
	EX 101⇒2001				EX 102⇒ 6002 EXB 102⇒3002				EX 103⇒ 16003 EXB 103⇒ 10003				EX 104⇒ 45004 EXB 104⇒ 31004			
10	101				102				103				104			
20	201				202				203				204			
25	251				252				253				254			
30		301			302				303				304			
35		351			352				353				354			
40					402				403				404			
50		501			502				503				504			
70		701			702				703				704			
80			801			802			803				804			
90						902			903				904			
95						952			953				954			
100			1001			1002			1003				1004			
150				1501		1502			1503				1504			
180						1802			1803				1804			
200				2001		2002			2003				2004			
250							2502			2503			2504			
280							2802			2803			2804			
300							3002			3003			3004			
350							3502			3503			3504			
360								3602		3603			3604			
420								4202		4203			4204			
600								6002		6003			6004			
650											6503			6504		
800											8003			8004		
850											8503			8504		
1000											10003			10004		
1200											12003			12004		
1500											15003			15003		
1600												16003		16004		
2000															20004	
2500															25004	
2600															26004	
3000															30004	
3100															31004	
3200															32004	
3700															37004	
4500																45004

ECR2A	129,8				129,8				129,8				129,8			
ECR2B		156,5	172,5	180,25		156,5	172,5	180,25		156,5	172,5	180,25		156,5	172,5	180,25
ECR3A	129,8				129,8				129,8				129,8			
ECR3B		156,5	172,5	180,25		156,5	172,5	180,25		156,5	172,5	180,25		156,5	172,5	180,25
ECR4		184,5	200,5	208,25		184,5	200,5	208,25		184,5	200,5	208,25		184,5	200,5	208,25

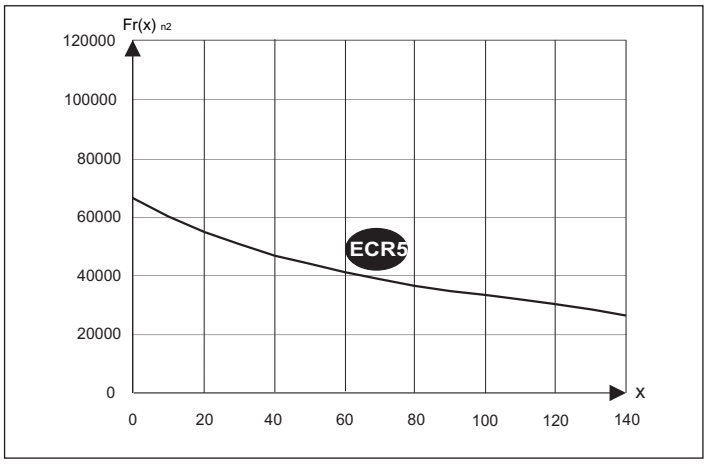
P - [mm]

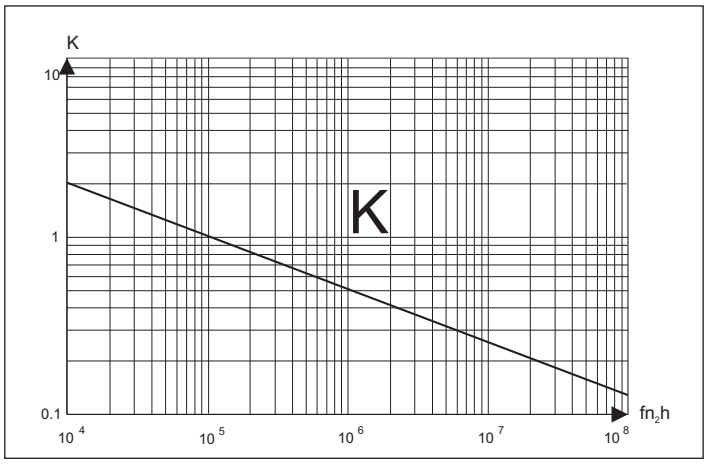


Kg	
ECR 5	42



Fa n1	Diretion/*Dirección*/Direção	ECR 5
	(+)	58419
	(-)	58419

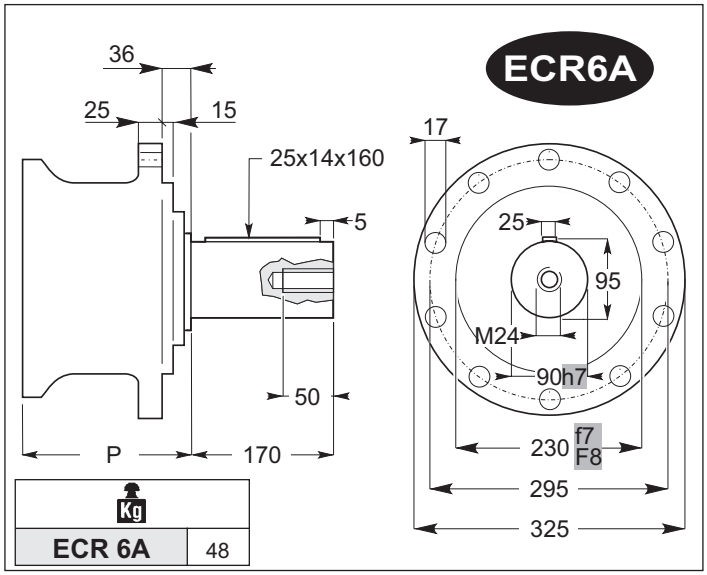




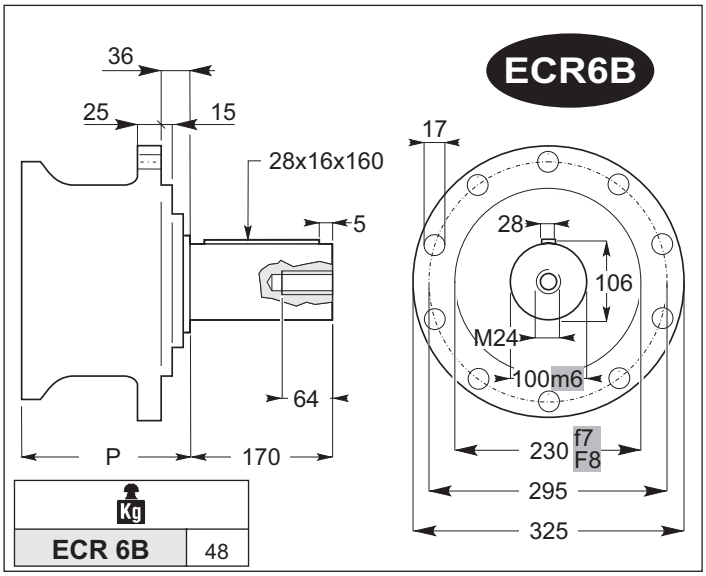
	EX1					EX2 EXB2					EX3 EXB3					EX4 EXB4			
	EX 101⇒3501					EX 102⇒ 15002					EX 103⇒ 37003					EX 104⇒ 80004			
						EXB102 ⇒3002					EXB103 ⇒ 10003					EXB104 ⇒ 31004			
80	801																		
90																			
95																			
100	1001																		
150																			
180																			
200																			
250			2501			2502													
280						2802													
300				3001		3002													
350					3501	3502													
360																			
420																			
600																			
650								6502			6503								
800								8002			8003								
850									8502		8503								
1000									10002		10003								
1200										12002	12003								
1500										15002	15003								
1600																			
2000													20003			20004			
2500													25003			25004			
2600														26003		26004			
3000													30003			30004			
3100														31003		31004			
3200															32003	32004			
3700															37003	37004			
4500																			
5500																		55004	
6800																			68004
7500																			75004
8000																			80004

ECR5	194,0		231,4	231,4	291,4	194,0		231,4	231,4	291,4	194,0		231,4	231,4	291,4	194,0		231,4	231,4
	P - [mm]																		

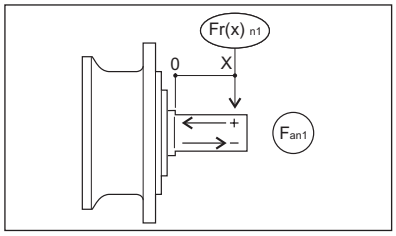
D



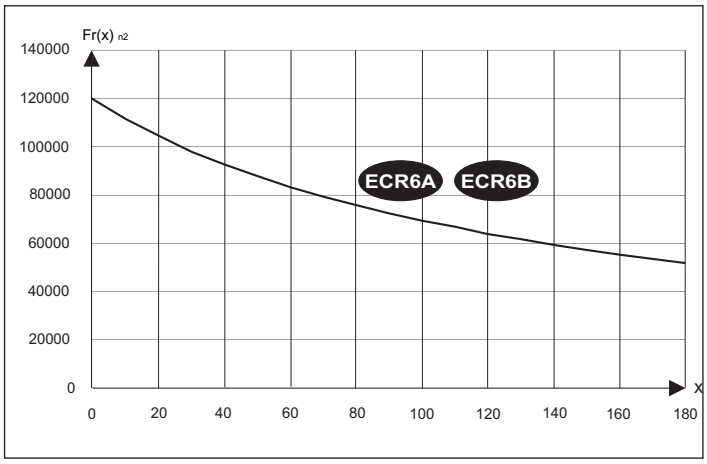
Kg	
ECR 6A	48

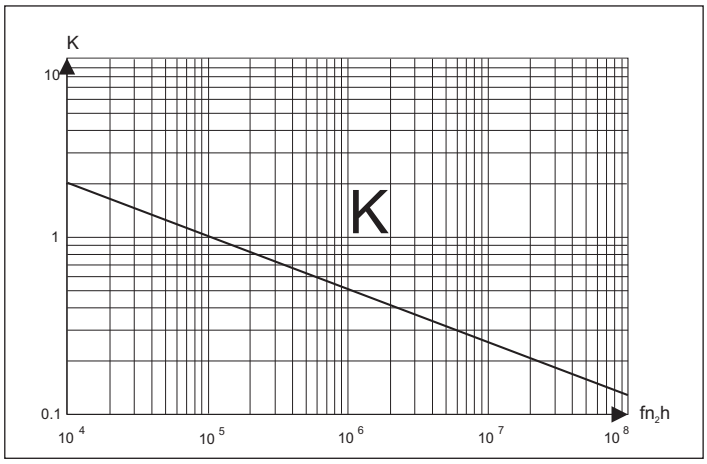


Kg	
ECR 6B	48



Fa n1	Diretion/*Dirección*/Direção	ECR 6A - ECR 6B
	(+)	104737
	(-)	73441



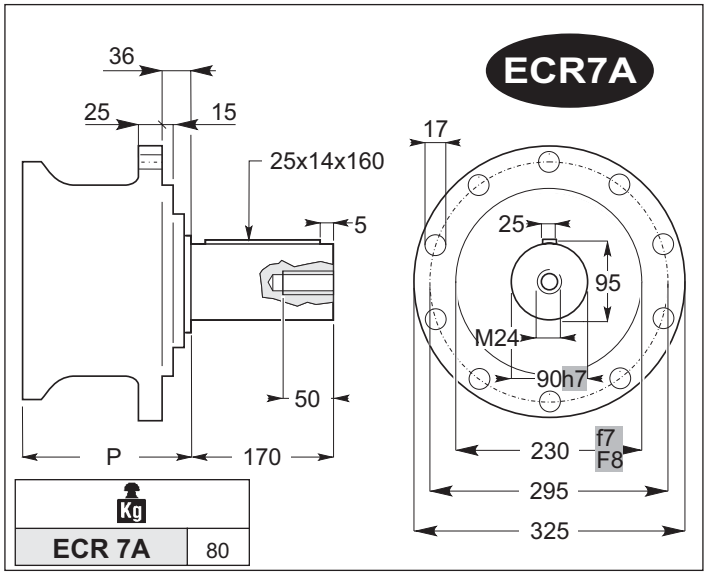


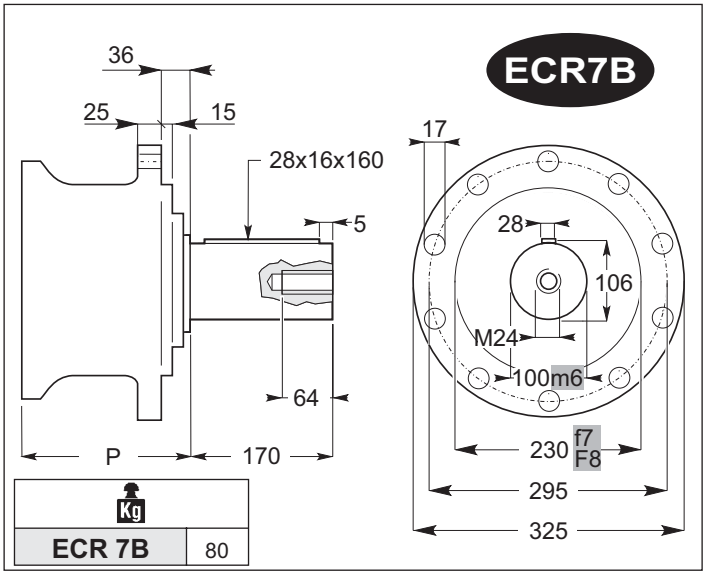
	EX1					EX2 EXB2					EX3 EXB3					EX4 EXB4			
	EX 101⇒3501					EX 102⇒ 15002					EX 103⇒ 37003					EX 104⇒ 80004			
						EXB102 ⇒3002					EXB103 ⇒ 10003					EXB104 ⇒ 31004			
80	801																		
90																			
95																			
100	1001																		
150																			
180																			
200																			
250			2501			2502													
280						2802													
300				3001		3002													
350					3501	3502													
360																			
420																			
600																			
650								6502			6503								
800								8002			8003								
850									8502		8503								
1000									10002		10003								
1200										12002	12003								
1500										15002	15003								
1600																			
2000													20003			20004			
2500													25003			25004			
2600														26003		26004			
3000													30003			30004			
3100														31003		31004			
3200															32003	32004			
3700															37003	37004			
4500																			
5500																		55004	
6800																			68004
7500																			75004
8000																			80004

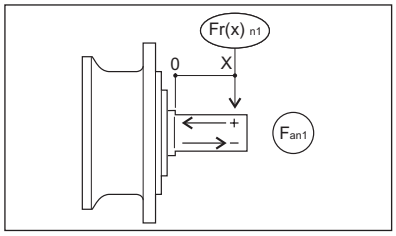
ECR6A	247,4		289,2	289,2	349,2	247,4		289,2	289,2	349,2	247,4		289,2	289,2	349,2	247,4		289,2	289,2
ECR6B	247,4		289,2	289,2	349,2	247,4		289,2	289,2	349,2	247,4		289,2	289,2	349,2	247,4		289,2	289,2

P - [mm]

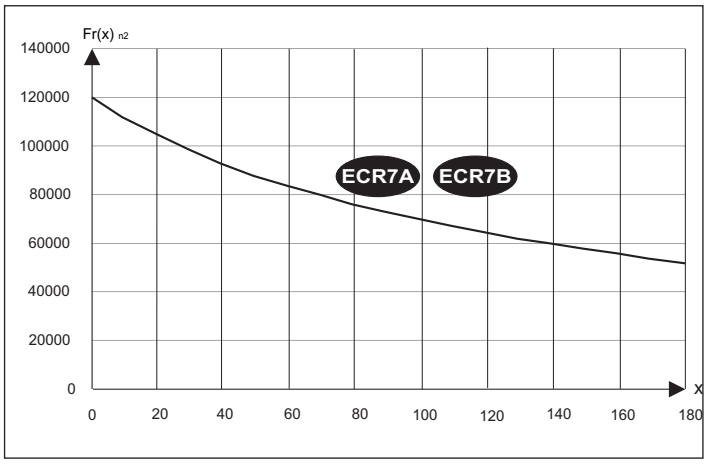
D

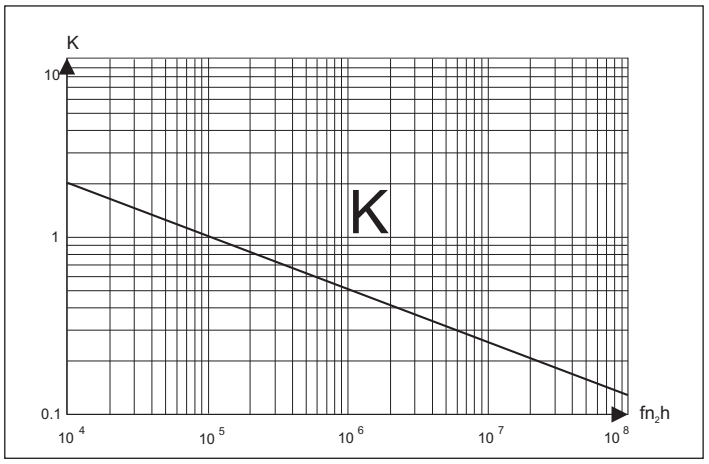






	Diretion/*Dirección*/Direção	**ECR 7A - ECR 7B**
Fa n1	(+)	104737
	(-)	73441



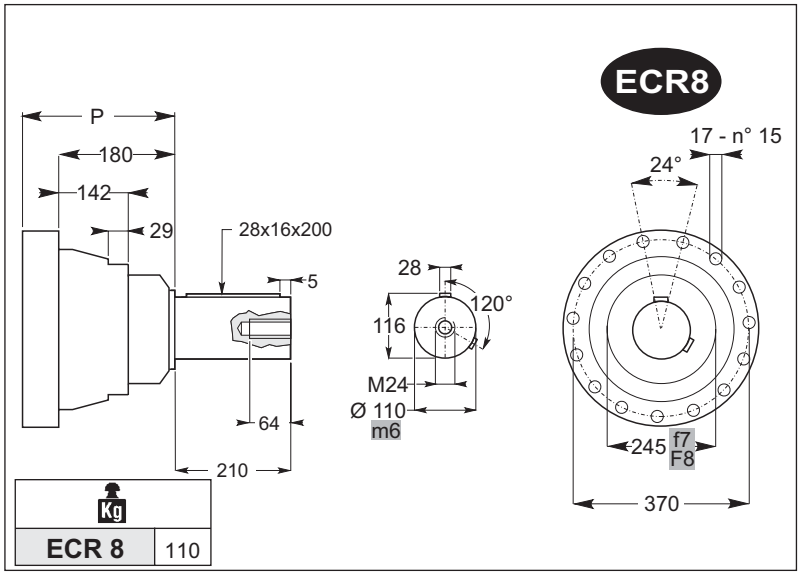


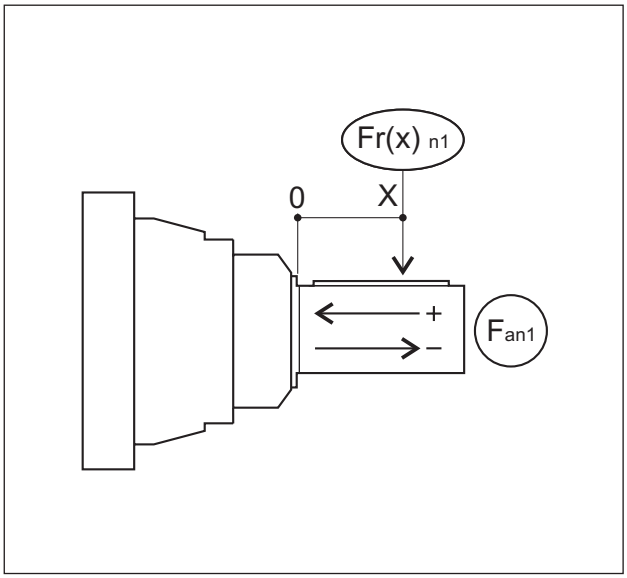
	EX1				EX2				EX3				EX4		
150			1501												
180															
200			2001												
250															
280															
300															
350															
360							3602								
420				4201			4202								
600							6002								
650															
800															
850															
1000															
1200											16003				
1500															
1600								16002							
2000															
2500															
2600															
3000															
3100															
3200															
3700															
4500												45003			45004

ECR7A			255	343,2			255	343,2			255	343,2			255
ECR7B			255	343,2			255	343,2			255	343,2			255

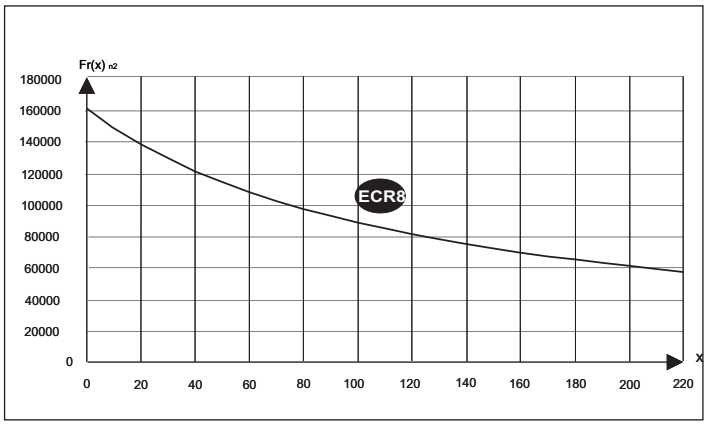
P - [mm]

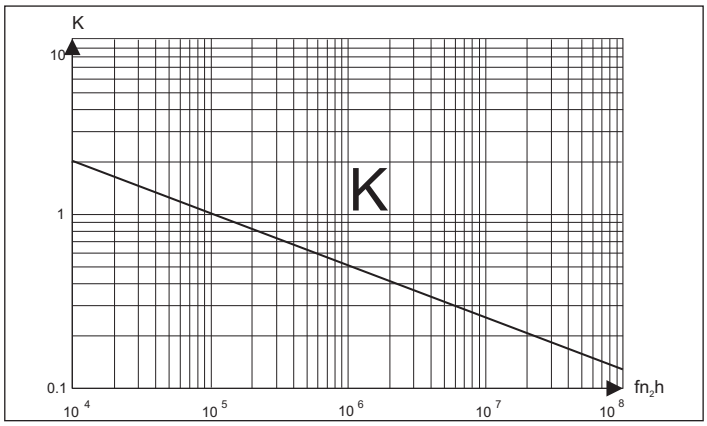
D





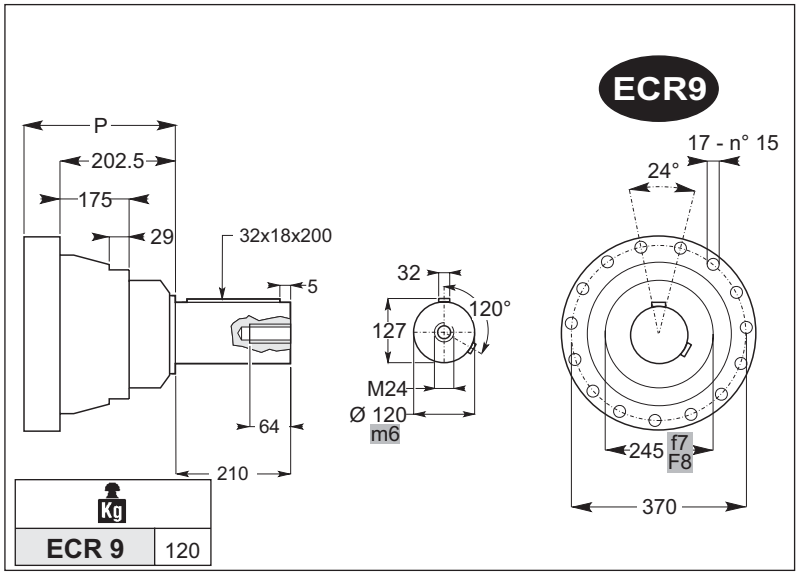
	Diretion/*Dirección*/Direção	**ECR 8**
Fa n1	(+)	149386
	(-)	112665

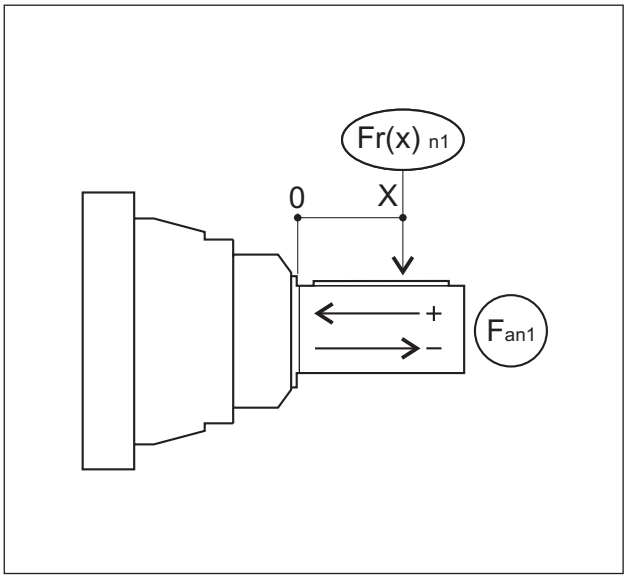




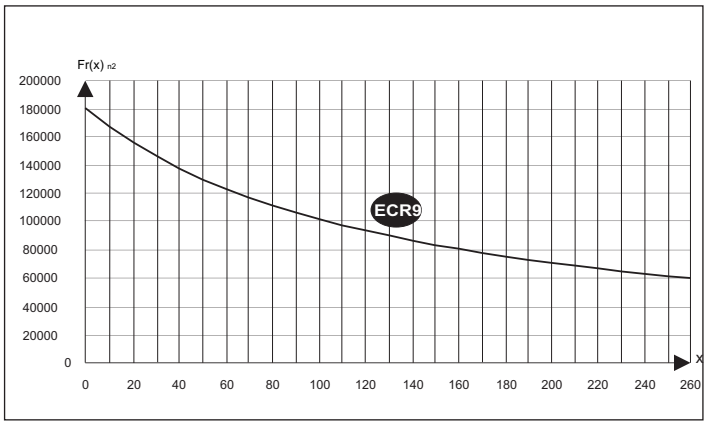
	EX1				EX2				EX3				EX4		
250		**2501**													
280															
300															
350															
360															
420															
600															
650			**6501**			**6502**									
800						**8002**									
850															
1000															
1200															
1500															
1600															
2000							**20002**			**20003**					
2500										**25003**					
2600															
3000										**30003**					
3100															
3200															
3700															
4500															
5500												**55003**			**55004**

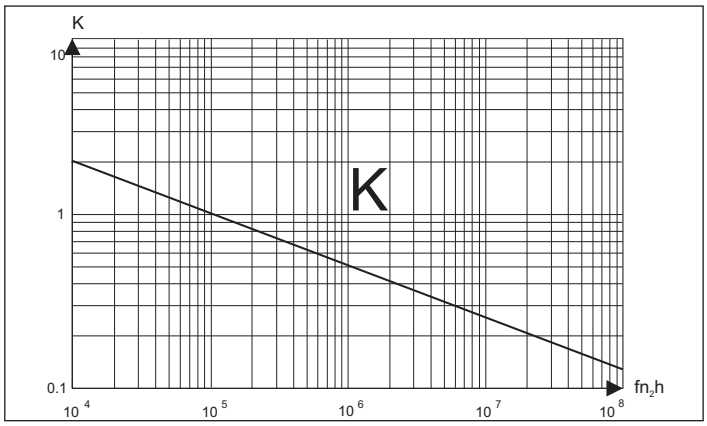
ECR8		**261**	**362,2**			**261**	**362,2**			**261**	**362,2**			**261**	
P - [mm]															





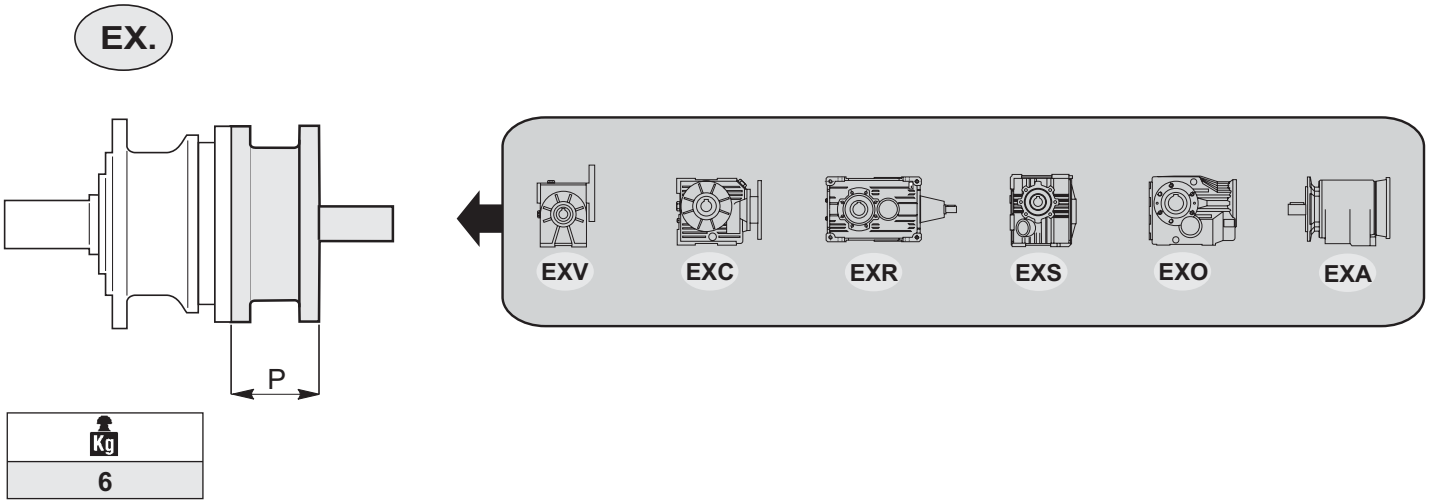
Fa n1	*Diretion/Dirección/Direção*	**ECR 9**
	(+)	167746
	(-)	128521





	EX1					EX2					EX3				EX4		
300	**3001**																
350																	
360																	
420																	
600																	
650																	
800																	
850		**8501**				**8502**											
1000			**10001**			**10002**											
1200				**12001**													
1500																	
1600																	
2000																	
2500																	
2600							**26002**					**26003**					
3000																	
3100								**31002**				**31003**					
3200									**32002**								
3700									**37002**								
4500																	
5500																	
6800													**68003**				**68004**
7500													**75003**				**75004**
8000														**80003**			**80004**
ECR9	**283,5**	**381,7**	**373,7**	**373,7**		**283,5**	**381,7**	**373,7**	**373,7**			**283,5**	**381,7**	**373,7**			**283,5**
P - [mm]																	

6.0 EXV-EXC-EXS-EXR-EXO-EXA ***6.0 EXV-EXC-EXS-EXR-EXO-EXA*** **6.0 EXV-EXC-EXS-EXR-EXO-EXA**



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6.0 EXV-EXC-EXS-EXR-EXO-EXA *6.0 EXV-EXC-EXS-EXR-EXO-EXA* 6.0 EXV-EXC-EXS-EXR-EXO-EXA

	1										2									3						4			
10	101										102									103						104			
20		201									202									203						204			
25		251									252									253						254			
30			301								302									303						304			
40											402									403						404			
50				501								502								503						504			
70					701							702								703						704			
80						801							802							803						804			
90													902							903						904			
100							1001							1002							1003					1004			
150								1501						1502							1503					1504			
180														1802							1803					1804			
200									2001						2002						2003					2004			
250										2501						2502						2503				2504			
280																	2802						2803				2804		
300										3001							3002						3003				3004		
350																	3502						3503				3504		
420																		4202					4203				4204		
650																			6502					6503				6504	
850																			8502						8503				8504
1200																									12003				12004

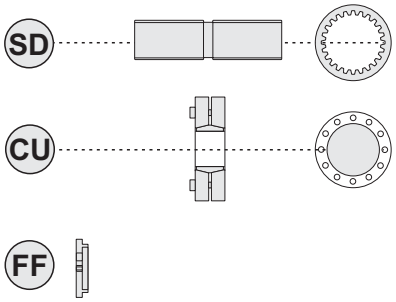
	P																												
EXV 50	*										*									*						*			
EXV 63	*										*									*						*			
EXV 70	*	*									*	*								*	*					*	*		
EXV 85		*	*	*	*							*	*	*	*						*	*	*				*	*	*
EXV 110			*	*	*	*	*						*	*	*	*	*					*	*	*	*			*	*
EXV 130				*		*								*		*							*	*					*
EXV 150						*	*									*	*								*	*				
EXV 180								*										*												
EXC 50	*										*									*						*			
EXC 70	*	*									*	*								*	*					*	*		
EXC 85		*	*	*	*							*	*	*	*						*	*	*				*	*	*
EXC 110			*	*	*	*	*						*	*	*	*	*					*	*	*	*			*	*
EXS 35	*										*									*						*			
EXS 45	*	*									*	*								*	*					*	*		
EXR 704	*	*									*	*								*	*					*	*		
EXR 708		*	*	*	*							*	*	*	*						*	*	*				*	*	*
EXR 712			*	*	*	*	*						*	*	*	*	*					*	*	*	*			*	*
EXR 716						*	*	*								*	*	*						*	*				
EXR 720								*		*								*	*										
EXO 132								*		*								*	*										
EXO 150								*		*								*	*										
EXO 170										*								*	*										
EXO 190																														
EXA 35	*	*									*	*								*	*					*	*		
EXA 41	*	*									*	*								*	*					*	*		
EXA 45	*	*									*	*								*	*					*	*		
EXA 50	*	*									*	*								*	*					*	*		

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ACCESSOIRES ET OPTIONS
ACCESORIOS Y OPCIONES
ACESSÓRIOS E OPÇÕES

E

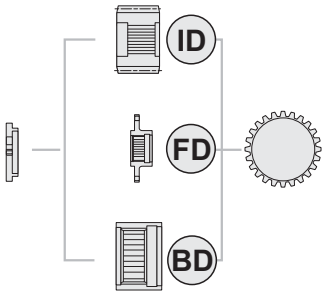
ACC1



SECTION

C

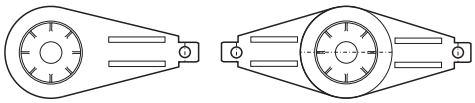
ACC2



SECTION

C

ACC3



SECTION

C

ACC4

OT

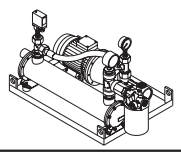


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E2

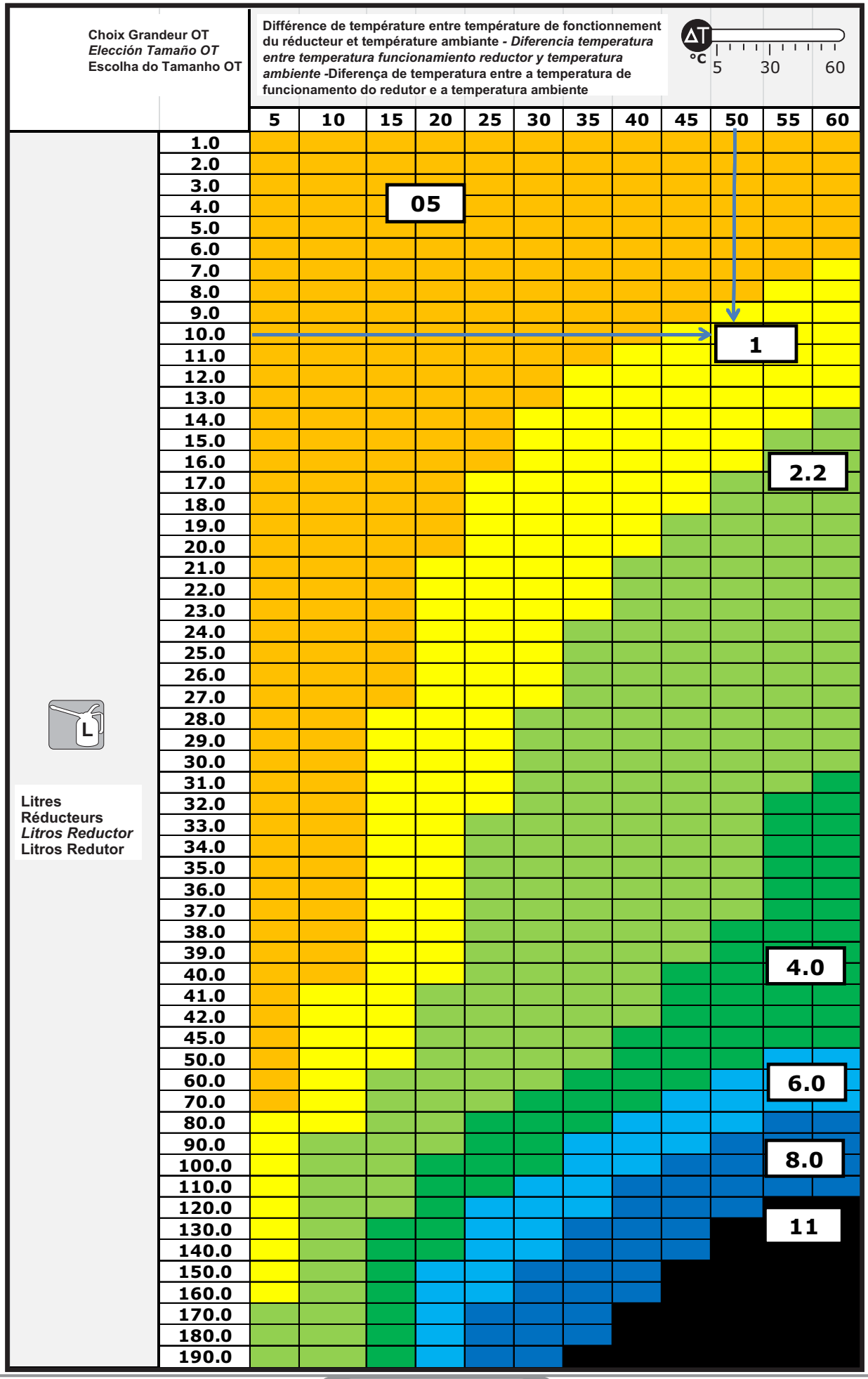
ACC5

RFA RFW

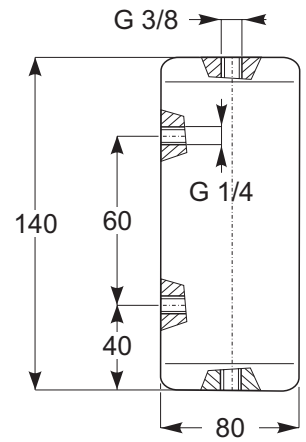


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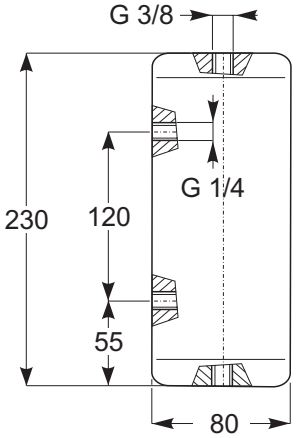
E4


Choix Grandeur OT
Elección Tamaño OT
Escolha do Tamanho OT
Différence de température entre température de fonctionnement du réducteur et température ambiante - Diferencia temperatura entre temperatura funcionamiento reductor y temperatura ambiente -Diferença de temperatura entre a temperatura de funcionamento do redutor e a temperatura ambiente
ΔT °C
5 30 60
5 10 15 20 25 30 35 40 45 50 55 60
1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 45.0 50.0 60.0 70.0 80.0 90.0 100.0 110.0 120.0 130.0 140.0 150.0 160.0 170.0 180.0 190.0
05
1
2.2
4.0
6.0
8.0
11
L
Litres
Réducteurs
Litros Reductor
Litros Redutor

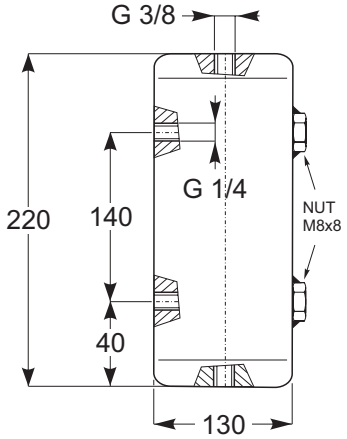
OT 05



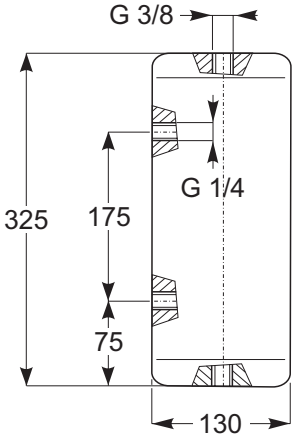
OT 1



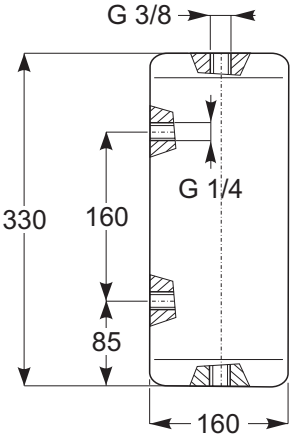
OT 2.2



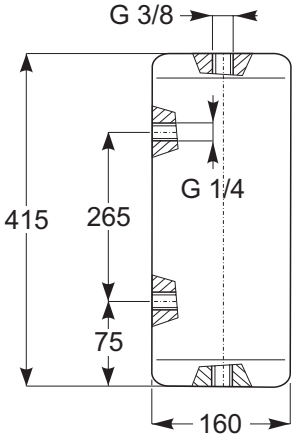
OT 4.0



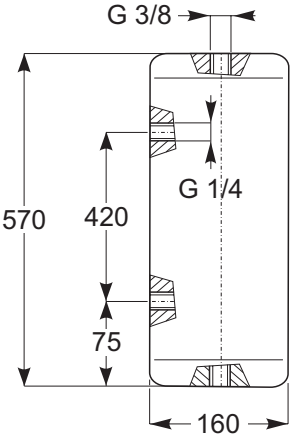
OT 6.0



OT 8.0



OT 11



1.0 - Groupe de refroidissement

Le refroidissement à l'aide d'un échangeur de chaleur peut être subdivisé en deux typologies principales : à l'aide d'un échangeur eau-huile et d'un échangeur air-huile ; chaque catégorie est divisée en plusieurs tailles, avec des puissances d'échange diversifiées.
Chaque groupe de refroidissement est livré séparément du réducteur ; les tuyaux de raccordement entre le réducteur et l'équipement ne sont pas aux soins de GSM.

1.0 - Grupo de enfriamiento

Se puede dividir el enfriamiento con intercambiador de calor en dos tipos principales: con intercambiador agua-aceite y con intercambiador aire- aceite, cada categoría está dividida en diferentes tamaños, con potencias de intercambio diversas.
Se suministra cada grupo de enfriamiento separado del reductor; los tubos de conexión entre reductor y sistema no están a cargo de GSM.

1.0 - Grupo de resfriamento

O resfriamento com trocador de calor pode ser dividido em dois tipos principais: com trocador de calor de água-óleo e com trocador de calor de ar-óleo, cada categoria é dividida em mais tamanhos, com potências de transferência diversificadas.
Cada grupo de resfriamento é fornecido separadamente do redutor; os tubos de ligação entre o redutor e o sistema não são responsabilidade da GSM.

RFW

1.1 - RFW - système avec échangeur eau-huile

1.1.1 Généralités

De plus en plus, il est essentiel de refroidir l'huile avec de l'eau en cas de disponibilité suffisante d'eau propre.Dans certains cas, il n'est pas possible de relier l'échangeur huile-eau directement au tuyau d'évacuation à cause des coups de bélier dans le circuit et on est obligé de réaliser un circuit séparé avec une pompe indépendante de circulation, des tuyaux, un pressostat et un circuit électrique.Pour ces cas, maintenant de plus en plus fréquents, GSM S.p.A. a introduit dans sa gamme de production les groupes autonomes de refroidissement RFW, qui refroidissent l'huile au mieux, indépendamment du circuit hydraulique primaire.L'appareil est conçu pour refroidir l'huile et se compose d'un échangeur à faisceau tubulaire qui dissipe la chaleur par contact de l'huile, qui est mise en circulation par la motopompe, avec le serpentin de l'eau.
Toutes les pièces métalliques sont protégées par un revêtement en poudre résistant aux intempéries pour assurer une longue durée.
En cas d'exécution standard l'unité est livrée avec toutes les pièces assemblées sur un cadre

1.1.2 État de fourniture et caractéristiques techniques

Les unités de refroidissement série RFW standard se composent de :
1 - Un échangeur de chaleur eau-huile ;
2 - Une motopompe constituée d'un moteur 4 pôles forme B3/B5, alimentation standard triphasée 230-400V 50 hz et d'une pompe à engrenages ou à vis ;
3 - Manomètre 0-16 bars monté entre la pompe et l'échangeur de chaleur ;
4 - Thermomètre analogique 0-120 °C, monté à la sortie de l'échangeur ;
5 - Pressostat de pression minimale avec contacts de commutation, monté entre la pompe et l'échangeur de chaleur ;
6 - Filtre à l'entrée du réservoir, pour nettoyer l'huile vidangée ;
7 - Indicateur électrique de colmatage

A – Aspiration de la pompe ;
M – Refoulement de la pompe.

1.1 - RFW - sistema con intercambiador agua-aceite

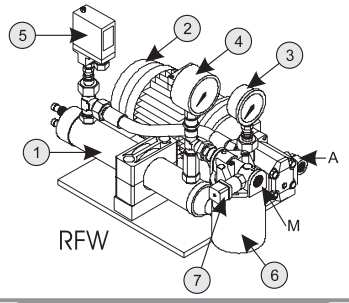
1.1.1 Generalidades

Cada vez con mayor frecuencia es indispensable enfriar el aceite con agua si se tiene suficiente disponibilidad de agua limpia.En algunos casos, además, no es posible conectar el intercambiador aceite-agua directamente a la descarga por la presencia de golpe de ariete en el circuito, y es necesario realizar un circuito separado con una bomba autónoma de circulación, tuberías, presostato y sistemas eléctricos.Para estos casos, cada vez más frecuentes, GSM S.p.A. ha introducido en su producción los grupos autónomos de enfriamiento serie RFW, que resuelven de la mejor manera el enfriamiento del aceite, independientemente del sistema hidráulico primario.La unidad ha sido estudiada para enfriar el aceite y consiste en un intercambiador de carcasa y tubos que, al poner en contacto el aceite puesto en circulación por la motobomba con la serpentina del agua, elimina el calor producido.
Todas las partes metálicas están protegidas por pintura en polvo para garantizar una larga duración ante los agentes atmosféricos.
En la ejecución estándar, la unidad se suministra con todas las partes montadas en un bastidor que se transporta en pallet

1.1.2 Estado de suministro y características técnicas

Las unidades de enfriamiento serie RFA estándar están compuestas por:
1 - Un intercambiador de calor agua-aceite;
2 - Una motobomba compuesta por un motor de 4 polos en forma B3/B5, alimentación estándar trifásica 230-400V 50 hz y por una bomba de engranajes o de tornillos;
3 - Manómetro 0-16 bar montado entre la bomba y el intercambiador de calor;
4 - Termómetro analógico 0-120 °C, montado en la salida del intercambiador;
5 - Presostato de mínima con contactos en intercambio, montado entre la bomba y el intercambiador de calor;
6 - Filtro, en suministro al depósito, para la limpieza del aceite descargado;
7 - Indicador eléctrico de obstrucción

A – Aspiración de la bomba;
M – Suministro de la bomba.



1.1 - RFW - sistema com trocador de calor de água-óleo

1.1.1 Generalidades

Cada vez com mais frequência é indispensável resfriar o óleo com água, se tivermos à disposição bastante água limpa.Depois, em alguns casos, não é possível ligar o trocador de calor de óleo-água diretamente à descarga, devido à presença de golpes de aríete no circuito, obrigando-nos a realizar um circuito separado com uma bomba autónoma de circulação, tubagens, pressóstato e sistema elétrico.Para estes casos, agora cada vez mais frequentes, a GSM S.p.A. inseriu na própria produção os grupos autónomos de resfriamento série RFW, que resolvem da melhor maneira a tarefa de resfriar o óleo, independentemente do sistema hidráulico primário.A unidade foi estudada para resfriar o óleo e consiste em um trocador de calor de feixe tubular que, colocando em contacto o óleo posto em circulação pela motobomba com a serpentina da água, retira o calor cedido.
Todas as partes metálicas são protegidas por pintura a pó para garantir uma longa duração contra os agentes atmosféricos.
Na execução padrão, a unidade é fornecida com todas as peças montadas em um chassi.

1.1.2 Estado de fornecimento e características técnicas

As unidades de resfriamento série RFW padrão são compostas por:
1 - Um trocador de calor de água-óleo;
2 - Uma motobomba composta por um motor de 4 polos na forma B3/B5, alimentação padrão trifásica de 230-400V 50 hz e por uma bomba de engrenagens ou de parafuso;
3 - Manómetro de 0-16 bar montado entre a bomba e o trocador de calor;
4 - Termómetro analógico 0-120 °C, montado na saída do trocador de calor;
5 - Pressostato de pressão mínima com contactos em troca, montado entre a bomba e o trocador de calor;
6 - Filtro, no envio para o reservatório, para a limpeza do óleo descarregado;
7 - Indicador elétrico de entupimento

A – Aspiração da bomba;
M – Envio da bomba.

1.0 - Groupe de refroidissement

1.1.3 Dimensions et Caractéristiques Fonctionnelles
Pour choisir le groupe de refroidissement consulter la Section A-B-C-D-E-F-G.

CARACTÉRISTIQUES TECHNIQUES
Voir les caractéristiques techniques dans le tableau ci-dessous

1.0 - Grupo de enfriamiento

1.1.3 Dimensiones y Características Funcionales
Para la elección del grupo de enfriamiento consultar la Sección A-B-C-D-E-F-G.

CARACTERÍSTICAS TÉCNICAS
En la Tabla a continuación se indican las características técnicas

1.0 - Grupo de resfriamento

1.1.3 Dimensão e Características Funcionais
Para a escolha do grupo de resfriamento, consulte a Secção A-B-C-D-E-F-G.

CARACTERÍSTICAS TÉCNICAS
Na Tabela abaixo mostramos as características técnicas

Taille *Tamaño* Tamanho	Poids *Peso* Peso[[Kg]	Volume *Volumen* Volume [dm^3]	Motopompa *Motor Pump* Motorpumpe				Échangeur *Intercambiador* Trocador de Calor			
			[*1]	[*2]	[*3]	[*4]	Raccordement Huile *Conexión Aceite* Ligação do Óleo [*5]	[*6]	[*7]	[*8]
1	13	0,4	Engrenages *Engranajes* Engrenagens	0.37	6	230/400 50	G 1/2"	G 3/4"	G 1/2"	8-30
2	15	0,6		0.37	6					10-30
3	18	1,2		0.55	16					16-30
4	44	3,0	Vis *Tornillo* Parafuso	1.5	30		G 3/4"	G 1" 1/4	G 1"	40-110
5	70	4,5		2.2	80		G 1" 1/4	G 1" 1/2	G 1"	80-110
6	On request			7.50	135.0		G 2"	On request	G 1"	90-110
7	On request			7.50	200.0		G 2"	On request	G 1"	180-220
8	On request			7.50	200.0		G 2"	On request	G 1"	270-330

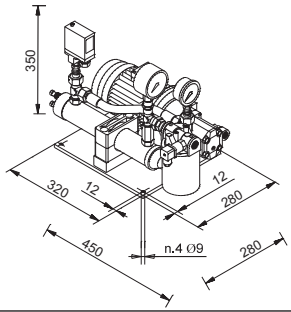
Légende/*Leyenda*/Legenda
[*1] Type de pompe/*Tipo bomba*/Tipo de bomba
[*2] Puissance/*Potencia*/Potência [kW]
[*3] Débit/*Caudal*/Vazão [dm^3 / min]
[*4] Alimentation/*Alimentación*/Alimentação [V / Hz]
[*5] Aspiration/*Aspiración*/Aspiração
[*6] Refoulement/*Suministro*/Envio
[*7] Raccordement eau/*Conexión agua*/Ligação da água
[*8] Débit d'eau/*Caudal agua*/Vazão de água [l / min]

1.1.4 Dimensions

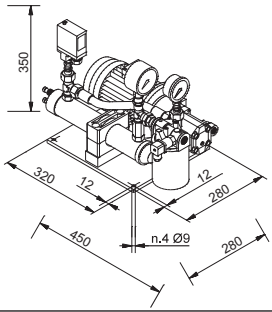
1.1.4 Dimensiones

1.1.4 Dimensões

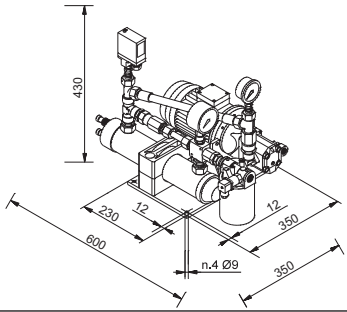
RFW 1



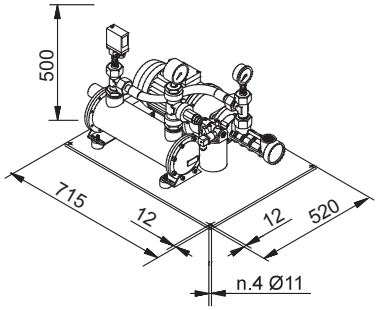
RFW 2



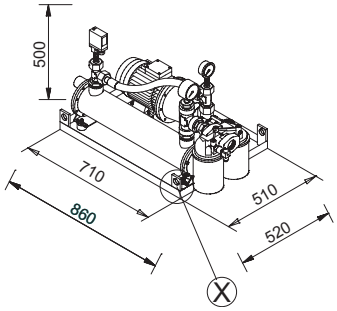
RFW 3

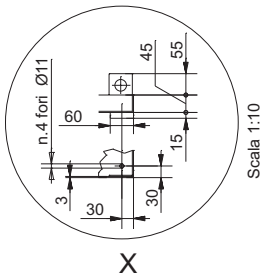


RFW 4



RFW 5





RFW 6

On request

RFW 7

On request

RFW 8

On request

1.0 - Groupe de refroidissement

RFA

1.2 - RFA - système avec échangeur air-huile

1.2.1 Généralités

De plus en plus, il est essentiel de refroidir l'huile avec de l'air à cause d'une disponibilité insuffisante d'eau.

Dans certains cas, il n'est pas possible de relier l'échangeur air-eau directement au tuyau d'évacuation à cause des coups de bélier dans le circuit et on est obligé de réaliser un circuit séparé avec une pompe indépendante de circulation, des tuyaux, un thermostat et un circuit électrique.

GSM S.p.A. a introduit dans sa gamme de production les groupes autonomes de refroidissement RFA, qui refroidissent l'huile au mieux, indépendamment du circuit hydraulique primaire.Un problème qui aujourd'hui est plus que jamais urgent est la réduction de la consommation d'énergie.

En utilisant pour le refroidissement de l'eau qui est ensuite éliminée on perd la chaleur que l'huile a cédée à l'eau.

En utilisant par contre l'air émis par les groupes RFA il est possible de récupérer la chaleur cédée par l'huile en chauffant l'espace dans lequel ils sont installés.Aujourd'hui, la consommation d'eau pour les usages industriels a des coûts toujours très élevés et dans de nombreux cas, les entreprises doivent se munir d'équipements de refroidissement de l'eau en circuit fermé et dans la plupart des cas, il s'agit de machines frigorifiques. La consommation d'énergie de ces équipements est très importante, environ le 30% de la puissance à dissiper.Avec les groupes autonomes série RFA cette consommation chute à 6%, avec une économie considérable d'énergie électrique et donc des coûts d'exploitation, sans compter le coût initial qui est considérablement inférieur.L'unité est conçue pour refroidir l'huile et se compose d'un radiateur traversé par le flux d'air généré par un ventilateur, qui arrive aux ailettes en aluminium du corps du radiateur et dissipe la chaleur cédée par l'huile circulant dans le radiateur de bas en haut, grâce à la pompe à vis de recirculation.Le contrôle du bon fonctionnement de l'appareil est assuré par des thermostats qui permettent d'en optimiser le fonctionnement en cas de variations éventuelles de température.Toutes les pièces métalliques sont protégées par un revêtement en poudre résistant aux intempéries pour assurer une longue durée.

En cas d'exécution standard l'unité est livrée avec toutes les pièces assemblées sur un cadre palettisable

1.2.2 État de fourniture et caractéristiques techniques

Les unités de refroidissement série RFA standard se composent de :

1. Un échangeur de chaleur air-huile ;
2. Une motopompe constituée d'un moteur 4 pôles pour les tailles RFA1, RFA2, RFA3 et 2 pôles pour les tailles RFA4, RFA5 de forme B3/B5, alimentation standard triphasée 230-400V 50 hz.Pour les groupes du schéma A (RFA1 – RFA2 – RFA3) le moteur de la motopompe est le même que celui du motoventilateur.
3. SCHÉMA A : Manomètre 0-12 bars avec fonction supplémentaire d'indicateur visuel de colmatage ;SCHÉMA B : Manomètre 0-16 bars monté entre la pompe et l'échangeur de chaleur ;
4. Thermomètre analogique 0-120 °C, monté à la sortie de l'échangeur.
5. Pressostat de pression minimale avec contacts de commutation, monté entre la pompe et l'échangeur de chaleur.
6. Filtre à l'entrée du réservoir, pour nettoyer l'huile vidangée.

1.0 - Grupo de enfriamiento

1.2 - RFA - sistema con intercambiador aire-aceite

1.2.1 Generalidades

Cada vez con mayor frecuencia es indispensable enfriar el aceite con agua si se tiene suficiente disponibilidad de agua limpia.

En algunos casos, además, no es posible conectar el intercambiador aceite-agua directamente a la descarga por la presencia de golpe de ariete en el circuito, y es necesario realizar un circuito separado con una bomba autónoma de circulación, tuberías, presostato y sistemas eléctricos.

Para estos casos, GSM S.p.A. ha introducido en su producción los grupos autónomos de enfriamiento serie RFW, que resuelven de la mejor manera el enfriamiento del aceite, independientemente del sistema hidráulico primario.Un problema que actualmente exige solución es el ahorro en el consumo de energía.

Usando agua de manera indiscriminada para el enfriamiento se desperdicia el calor que el aceite ha suministrado al agua.

En cambio, usando el aire emitido por los grupos RFA se puede recuperar el calor cedido por el aceite, calentando el ambiente en el que están instalados.Actualmente, el consumo de agua para usos industriales tiene costes muy elevados y en muchos casos las empresas deben equiparse con sistemas de enfriamiento y en la mayor parte de los casos estas son máquinas frigoríficas.El consumo de energía de estos sistemas es muy elevado y equivale a aprox. el 30 % de la potencia que se dispersa.Con los grupos autónomos serie RFA este consumo se reduce el 6 %, con un considerable ahorro de energía eléctrica y por lo tanto, el coste de ejercicio, sin considerar el coste inicial notablemente inferior.La unidad ha sido estudiada para enfriar el aceite y consiste en un radiador que, a través del flujo de aire generado por un ventilador que, al rozar el sistema de aletas de aluminio de la masa radiante elimina el calor cedido al aceite que circula en el radiador de abajo hacia arriba gracias a la bomba de tornillos de recirculación

.El control del correcto funcionamiento de la máquina está regulado por los termostatos que mejoran el funcionamiento en el caso de eventuales variaciones de temperatura.Todas las partes metálicas están protegidas por pintura en polvo para garantizar una larga duración ante los agentes atmosféricos.

En la ejecución estándar, la unidad se suministra con todas las partes montadas en un bastidor que se transporta en pallet

1.2.2 Estado de suministro y características técnicas

Las unidades de enfriamiento serie RFA estándar están compuestas por:

1. Un intercambiador de calor aire-aceite;
2. Una motobomba compuesta por un motor de 4 polos para los tamaños RFA1, RFA2, RFA3 y 2 polos para los tamaños RFA4, RFA5 en forma B3/B5, alimentación estándar trifásica 230-400V 50 hz.Para los grupos que forman parte del esquema A (RFA1 – RFA2 – RFA3) el motor de la motobomba es el mismo que el motoventilador.
3. ESQUEMA A: Manómetro 0-12 bar con función adicional de indicador visual de obstrucción;
ESQUEMA B: Manómetro 0-16 bar montado entre la bomba y el intercambiador de calor;
4. Termómetro analógico 0-120 °C, montado en la salida del intercambiador.
5. Presostato de mínima con contactos con el intercambio, montado entre la bomba y el intercambiador de calor.
6. Filtro, en suministro al depósito, para la limpieza del aceite descargado.

1.0 - Grupo de resfriamento

1.1 - RFA - sistema com trocador de calor de ar-óleo

1.2.1 Generalidades

Cada vez com mais frequência é indispensável resfriar o óleo com o ar, se tivermos à disposição bastante água.

Em alguns casos, não é possível ligar o trocador de calor de ar-óleo diretamente à descarga, devido à presença de golpes de aríete no circuito, obrigando-nos a realizar um circuito separado com uma bomba autónoma de circulação, tubagens, termóstato e sistema elétrico.

A GSM S.p.A. inseriu na própria produção os grupos autónomos de resfriamento série RFA, que resolvem da melhor maneira a tarefa de resfriar o óleo, independentemente do sistema hidráulico primário.Um problema que atualmente torna-se cada vez mais urgente é a economia em relação aos consumos de energia elétrica.Utilizando água com perda total para o resfriamento desperdiça-se calor que o óleo cedeu à água.

Ao contrário, utilizando o ar emitido pelos grupos RFA é possível recuperar o calor cedido pelo óleo, aquecendo o ambiente no qual os mesmos estão instalados.Atualmente, o consumo da água para usos industriais possui custos sempre muito elevados e, em muitos casos, as empresas devem equipar-se com sistemas de refrigeração de circuito fechado da água de resfriamento e geralmente os mesmos são máquinas frigoríficas.O consumo de energia destes sistemas é considerável e é igual a cerca de 30% da potência a dispersar.Com os grupos autónomos série RFA este consumo baixa de 6%, com uma considerável economia de energia elétrica e de custos de funcionamento, sem contar os custos iniciais consideravelmente inferiores.A unidade foi estudada para resfriar o óleo e consiste em um radiador que é atravessado pelo fluxo de ar gerado por um ventilador, que tocando nas aletas de alumínio da massa radiante retira o calor cedido pelo óleo, que circula no radiador de baixo para cima graças à pompa de parafuso de recirculação.O controlo do funcionamento correto da máquina é regulado pelos termóstatos que otimizam o seu funcionamento no caso de eventuais alterações de temperatura.Todas as partes metálicas são protegidas por pintura a pó para garantir uma longa duração contra os agentes atmosféricos.

Na execução padrão, a unidade é fornecida com todas as peças montadas em um chassi paletizável

1.2.2 Estado de fornecimento e características técnicas

As unidades de resfriamento série RFA padrão são compostas por:

1. Um trocador de calor de ar-óleo;
2. Uma motobomba composta por um motor de 4 polos para os tamanhos RFA1, RFA2, RFA3 e 2 polos para os tamanhos RFA4, RFA5 na forma B3/B5, alimentação padrão trifásica de 230-400V 50 hz.Para os grupos que fazem parte do esquema A (RFA1 – RFA2 – RFA3), o motor da motobomba é o mesmo do motoventilador.
3. ESQUEMA A: Manómetro de 0-12 bar com função adicional de indicador visual de entupimento;ESQUEMA B: Manómetro de 0-16 bar montado entre a bomba e o trocador de calor;
4. Termómetro analógico 0-120 °C, montado na saída do trocador de calor.
5. Pressostato de pressão mínima com contactos em troca, montado entre a bomba e o trocador de calor.
6. Filtro, no envio para o reservatório, para a limpeza do óleo descarregado.

1.0 - Groupe de refroidissement

7. Indicateur électrique de colmatage du filtre à huile.
8. Scatola Morsettiera;
9. Thermostat de régulation :

A – Aspiration de la pompe ;
M – Refoulement de la pompe.

NOTES SPÉCIFIQUES - SCHÉMA A :
Le groupe RFA3 est livré avec sonde de température et thermostat.

ATTENTION :
Le groupe RFA3 est livré selon le schéma A quand l'application nécessite uniquement le refroidissement, en cas contraire le groupe RFA3 est livré selon le schéma B. RFA3 est livré selon le schéma B.

1.0 - Grupo de enfriamiento

7. Indicador eléctrico de obstrucción del filtro de aceite.
8. Caja de bornes;
9. Termostato de regulación:

A – Aspiración de la bomba;
M – Suministro de la bomba.

NOTAS ESPECÍFICAS - ESQUEMA A :
El grupo RFA3 se suministra con sonda de temperatura y termostato.

ATENCIÓN
El grupo RFA3 se suministra según el esquema A cuando la aplicación requiere solo enfriamiento, de lo contrario se suministra RFA3 según el esquema B.

1.0 - Grupo de resfriamento

7. Indicador elétrico de entupimento do filtro de óleo.
8. Scatola Morsettiera;
9. Termóstato de regulação:

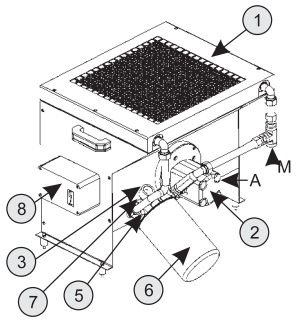
A – Aspiração da bomba;
M – Envio da bomba.

NOTAS ESPECÍFICAS - ESQUEMA A:
O grupo RFA3 é fornecido com sonda de temperatura e termóstato.

ATENÇÃO:
O grupo RFA3 é fornecido conforme o esquema A quando a aplicação precisar apenas de resfriamento, caso contrário o mesmo grupo é fornecido conforme o esquema B.

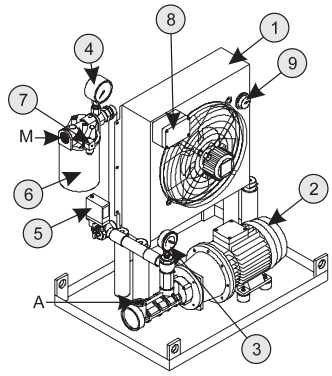
RFA

SCHÉMA A
ESQUEMA A
ESQUEMA A



RFA1 - RFA2 - RFA3

SCHÉMA B
ESQUEMA B
ESQUEMA B



RFA3 - RFA4 - RFA5

1.2.3 Dimensions et Caractéristiques Fonctionnelles

Pour choisir le groupe de refroidissement consulter la Section A-B-C-D-E-F-G.

CARACTÉRISTIQUES TECHNIQUES
Voir les caractéristiques techniques dans le tableau ci-dessous

1.2.3 Tamaño y Características Funcionales

Para la elección del grupo de enfriamiento consultar la Sección A-B-C-D-E-F-G.

CARACTERÍSTICAS TÉCNICAS
En la Tabla a continuación se indican las características técnicas

1.2.3 Dimensão e Características Funcionais

Para a escolha do grupo de resfriamento, consulte a Secção A-B-C-D-E-F-G.

CARACTERÍSTICAS TÉCNICAS
Na Tabela abaixo mostramos as características técnicas

Schéma *Esquema* Esquema	Taille *Tamaño* Tamanho	Poids *Peso* Peso [Kg]	Volume *Volumen* Volume [dm^3]	Motopompe *Motobomba* Motobomba				Échangeur *Intercambiador* Trocador de Calor					Champ Application *Campo Aplicación* Campo de Aplicação	
				[*1]	[*2]	[*3]	[*4]	Raccordement Huile *Conexión Aceite* Ligação do Óleo [*5]	[*6]	[*7]	[*8]	[*9]	Refroidissement *Enfriamiento* Resfriamento	Lubrification forcée *Lubricación forzada* Lubrificação forçada
A	1	20	3.0	Engrenages *Engranajes* Engrenagens	0.55	6	400 / 50 Triphasé *Trifásico* Trifásico	G 1/2"	G 1/2"	0.55	600	64	SI *YES* JA	OUI *SI* SIM
A	2	27	3,6		0.55	13				0.75	850	68		
A	3-A	61	5,5		1.1	34		G 3/4"		1.1	2000	75		NON *NO* NAO
B	3-B	75	5,5	Vite *Screw-type* Schnecke	1.5	30		G 1"	G 1" 1/4	0.23	2700	72		OUI *SI* SIM
B	4	96	15		3.0	112		G 1" 1/4	G 1" 1/2	0.23	3500	72		
B	5	118	15		3.0	112				0.56	6300	75		
B	6	127	16		3.0	160					7450	79		
B	7	140	20		3.0	160				0.9	9500	79		

Légende/*Leyenda*/Legenda
[*1] Type de pompe/*Tipo bomba*/Tipo de bomba
[*2] Puissance/*Potencia*/Potência [kW]
[*3] Débit/*Caudal*/Vazão [dm^3 / min]
[*4] Alimentation/*Alimentación*/Alimentação [V / Hz]
[*5] Aspiration/*Aspiración*/Aspiração
[*6] Refoulement/*Suministro*/Envio
[*7] Puissance/*Potencia*/Potência [kW]
[*8] Débit d'air. /*Caudal Aire*/Vazão de Ar.[[m^3 / h]
[*9] Niveau de bruit. /*Ruido.*/Ruído.[dB]

1.0 - Groupe de refroidissement

1.2.4 Dimensions
Les tableaux ci-dessous montrent les dimensions des groupes :

- SCHÉMA A : RFA 1, RFA 2, RFA3 ;
- SCHÉMA B : RFA 3, RFA 4, RFA5, RFA6, RFA7 ;

SCHÉMA A

RFA 1

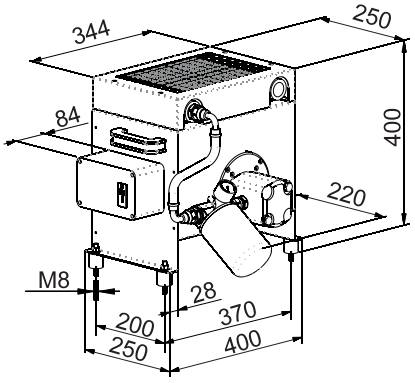
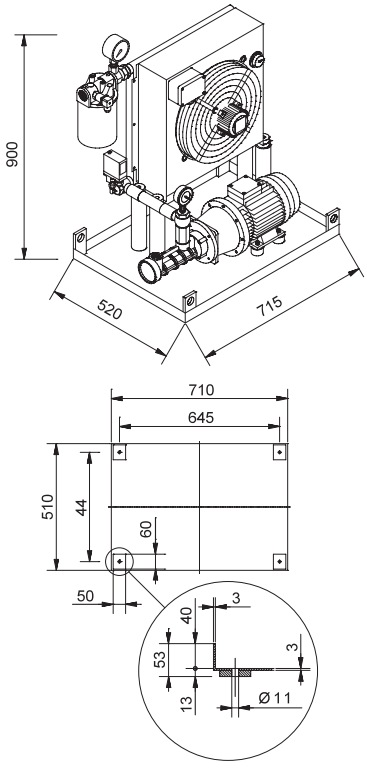


SCHÉMA B

RFA 3-B



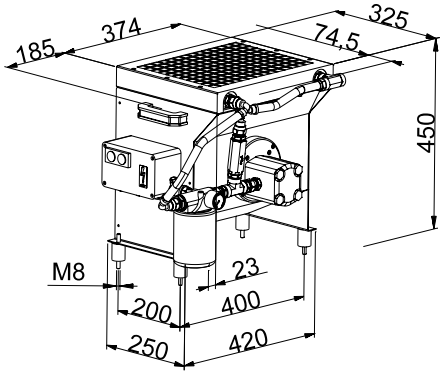
1.0 - Grupo de enfriamiento

1.2.4 Dimensiones
En las tablas a continuación se indican las dimensiones de los grupos:

- *ESQUEMA A: RFA 1, RFA 2, RFA3;*
- *ESQUEMA B: RFA 3, RFA 4, RFA5, RFA6, RFA7;*

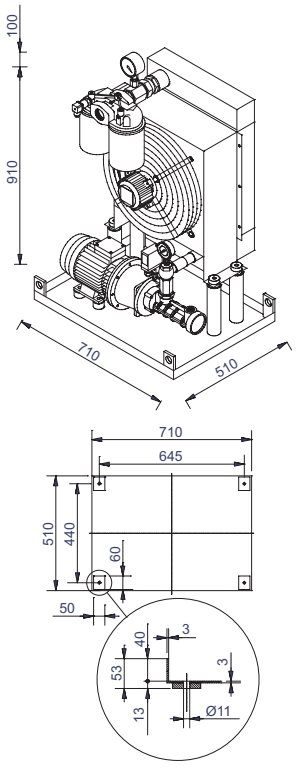
ESQUEMA A

RFA 2



ESQUEMA B

RFA 4



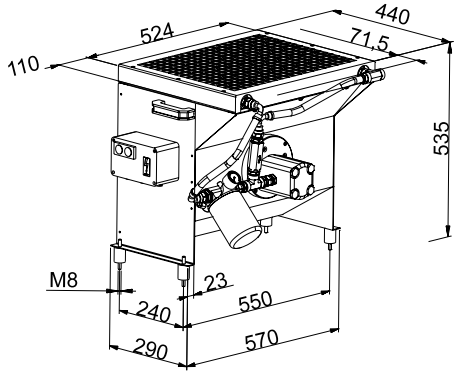
1.0 - Grupo de resfriamento

1.2.4 Dimensões
Nas tabelas abaixo são mostradas as dimensões dos grupos:

- ESQUEMA A: RFA 1, RFA 2, RFA3;
- ESQUEMA B: RFA 3, RFA 4, RFA5, RFA6, RFA7;

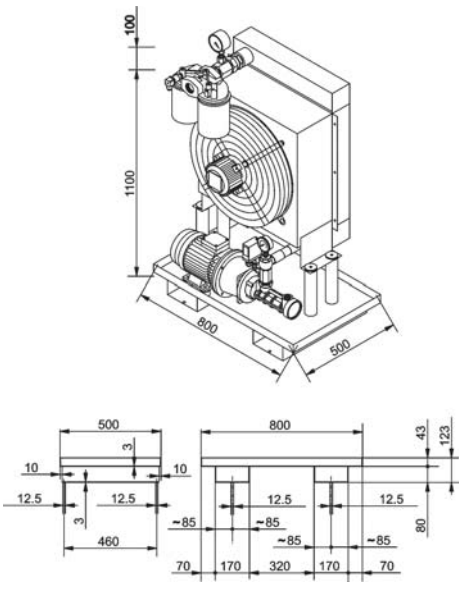
ESQUEMA A

RFA 3-A



ESQUEMA B

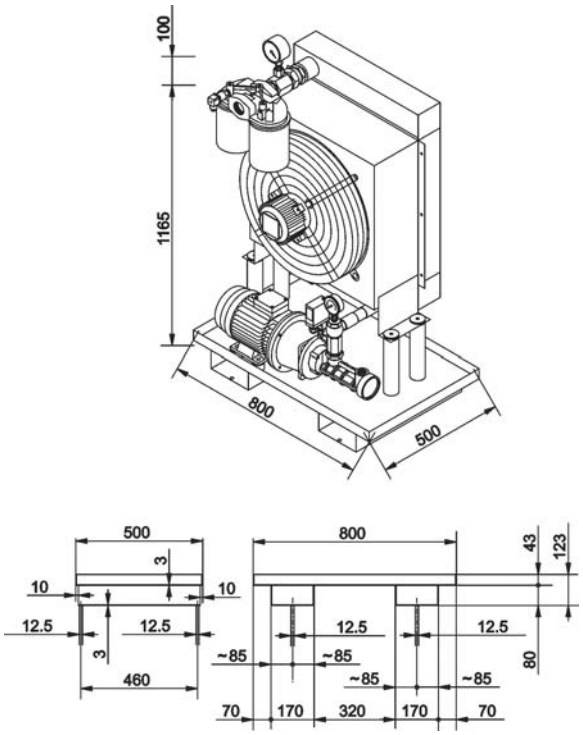
RFA 5



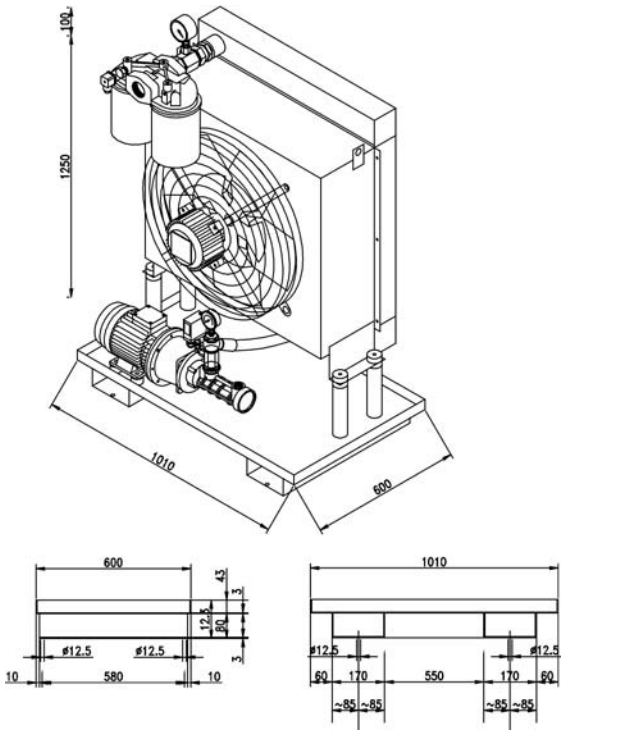
1.0 - Groupe de refroidissement | ***1.0 - Grupo de enfriamiento*** | **1.0 - Grupo de resfriamento**

SCHÉMA B | ***ESQUEMA B*** | **ESQUEMA B**

RFA 6



RFA 7



Positions de montage - Lubrification
Posiciones de montaje - Lubricación
Posições de montagem - Lubrificação

V

i			V2
EX		A-B C-D	V6
EXB		A-B C-D	V21
		A-B C-D	
EXV		A-B C-D	V29
		L-M N-O	
		A-B C-D	
		L-M N-O	
EXA	 		V36
EXO		A-B C-D	V38
		L-M N-O	
		A-B C-D	
		L-M N-O	

1.5 Lubrification

ATTENTION :
L'état de fourniture est mis en évidence par une plaquette autocollante placée sur le réducteur.
Vérifier la correspondance entre l'état de fourniture et la plaquette autocollante.

ions et mesures de sécurité pour les produits "ATEX"
s reniflard (si prévus) avec vanne
on

Réducteurs

Si les réducteurs sont fournis sans huile, avant la mise en service, l'utilisateur doit les remplir avec la quantité d'huile appropriée (1.5.1) correspondant à la position de montage, en se servant des bouchons de remplissage, de niveau et de purge.

Tous les réducteurs avec limiteur de couple doivent être lubrifiés avec de l'huile : **la lubrification avec de la graisse n'est pas admise.**

Freins- Z0. - Z1. - Z2.

Z0 -L'huile utilisée pour la lubrification du frein est la même que celle du réducteur épicycloïdal.

Z1-Z2 - La lubrification du frein est différente de celle du réducteur épicycloïdal et ils sont fournis sans huile.

Dans ce cas le remplissage du frein sera effectué avec de l'huile hydraulique à viscosité ISO VG32, en utilisant le bouchon de remplissage approprié.

S'ils sont commandés complets de lubrifiant, ils seront fournis avec de l'huile Shell Hydraulic S1 M ISO VG 32.

1.5 Lubrificación

ATENCIÓN:
El estado de suministro se evidencia con una tarjeta adhesiva colocada en el reductor.
Controlar que el estado de suministro corresponda con los datos de la placa adhesiva.

Especificaciones de seguridad adoptadas para productos "ATEX"
1- tapones de alivio (si está previsto) con válvula anti-intrusión

Reductores

En cambio, los reductores se suministran en seco y, por lo tanto, es responsabilidad del usuario llenarlos con aceite adecuado (1.5.1), antes de la puesta en marcha, empleando los tapones de carga, descarga, nivel y respiradero, y la cantidad correspondiente a la posición específica de montaje.

Todos los reductores con limitador de par deben ser lubricados con aceite: ***la lubricación con grasa no está admitida.***

Frenos - Z0. - Z1. - Z2.

Z0 - *El aceite usado para la lubricación del freno es el mismo del reductor epicicloidal.*

Z1-Z2 *- El freno tiene lubricación separada de la del reductor epicicloidal, y se suministra en seco.*

Por lo tanto, se deberá llenar el freno con aceite hidráulico con viscosidad ISO VG32, usando el tapón específico de llenado.

Si se pide con lubricante, se suministrará con aceite Shell Hydraulic S1 M ISO VG 32.

1.5 Lubrificação

ATENÇÃO:
O estado de fornecimento é indicado por uma etiqueta adesiva aplicada no redutor.
Verifique a correspondência entre o estado de fornecimento e a etiqueta adesiva.

Especificações de segurança adotadas para os produtos "ATEX"1-Tampade respiro (quando previstas) com válvula anti-intrusão

Redutores

Os redutores são, ao invés, fornecidos vazios e, portanto, é tarefa do utilizador abastecê-los com óleo adequado (1.5.1), antes da colocação em funcionamento, usando as tampas de carga, descarga, nível e respiro, na quantidade correspondente à específica posição de montagem.

Todos os redutores com limitador de binário devem ser lubrificados com óleo: a lubrificação com massa não é admitida.

Freios - Z0. - Z1. - Z2.

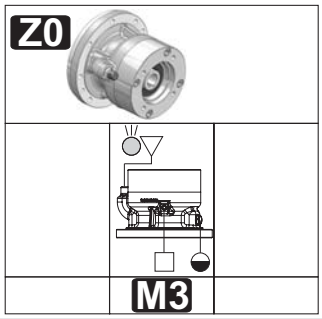
Z0 - O óleo utilizado para a lubrificação do freio é o mesmo daquele do redutor epicicloidal.

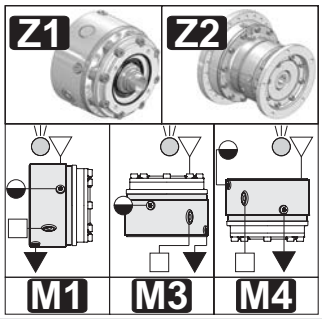
Z1-Z2 - O freio tem a lubrificação separada daquela do redutor epicicloidal e são fornecidos vazios.Portanto, terá que ser feito o abastecimento do freio com óleo hidráulico de viscosidade ISO VG32, utilizando a específica tampa de abastecimento.

Se forem encomendados com lubrificante, serão fornecidos com óleo Shell Hydraulic S1 M ISO VG 32.

	M1	M2	M3
Z0	Look level gearbox EX-EXB		
Z1.1- Z1.2	0.15	0.3	0.3

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro
Attache Commande / *Conexión Mando Freno* /Engate do Comando do Freio





CAUTION:

Pour les positions de montage M3 le vase d'expansion OT doit nécessairement être installé.



Attention
Choix de la grandeur **OT** : Section E;
Installation **OT** : Point 8.3 manuel utilisation et de maintenance

Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau.

Pour les moteurs hydrauliques **DA11 ; FA13 ; HA10** :le montage des moteurs en objet prévoit un drainage de l'huile du moteur approprié aux éléments d'étanchéité.
* Pression de drainage maximale 0,5 bar

Para las posiciones de montaje M3 es necesario instalar el vaso de expansión OT.

Atención
Elección tamaño ***OT****: Sección E;*
Instalación ***OT*** *: Punto 8.3 manual de uso y mantenimiento.*

Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel.

Para los motores hidráulicos **DA11;FA13;HA10**:El montaje de los motores en cuestión incluye un drenaje del aceite del motor adecuado a la estanqueidad.
* Máxima presión de drenaje 0.5 bar

Para as posições de montagem M3, é necessário instalar o vaso de expansão OT.

Atenção
Escolha do tamanho **OT**: Secção E;
Instalação **OT** : Ponto 8.3 manual de uso e manutenção.

As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível.

Para os motores hidráulicos **DA11;FA13;HA10**:A montagem dos motores em questão prevê a drenagem do óleo do motor adequada às vedações:
* Pressão máxima de drenagem 0.5 bar

1.5 Lubrification

1.5.1 - Réducteurs livrés vides Recommandation de STM

1.5.1.1 - Recommandations de STM pour la sélection
Si les réducteurs sont livrés vides, STM fournit lors de chaque livraison une plaque signalétique indiquant le lubrifiant recommandé pour le remplissage et une liste de lubrifiants alternatifs recommandés.

Réducteurs



Freins- Z1. - Z2.

1.5.1.2 - Restrictions d'utilisation
Ces recommandations peuvent être utilisées à des températures ambiantes comprises entre -20 °C et +50 °C et en l'absence de pompe de lubrification, sinon suivre les instructions de la section 1.5.2.

1.5 Lubricación

1.5.1 - Reductores suministrados vacíos Recomendación STM

1.5.1.1 - Indicaciones STM para la selección
Si los reductores se suministran vacíos, con cada entrega STM suministra una placa con la indicación del lubricante recomendado para el llenado y la lista de lubricantes alternativos recomendados.

Reductores



Frenos - Z1. - Z2.

1.5.1.2 - Restricciones de uso
Estas recomendaciones pueden utilizarse con una temperatura ambiente comprendida entre -20 °C y +50 °C y en ausencia de bomba de lubricación; de lo contrario, seguir las indicaciones del apartado 1.5.2.

1.5 Lubrificação

1.5.1 - Redutores fornecidos vazios Recomendação STM

1.5.1.1 - Indicações STM para a seleção
Se os redutores forem fornecidos vazios, a STM fornece uma placa de identificação com o lubrificante recomendado para enchimento e uma lista de lubrificantes alternativos recomendados com cada entrega.

Redutores

Freios - Z1. - Z2.

1.5.1.2 - Restrições de utilização
Estas recomendações podem ser utilizadas em temperaturas ambiente entre -20°C e +50°C e na ausência de uma bomba de lubrificação, caso contrário, siga as instruções da secção 1.5.2.

1.5 Lubrification

1.5.2 - Réducteurs livrés vides Critères de sélection des huiles et Restrictions d'utilisation Série standard EX - EXB



1.5.2.1 - Critères de sélection génériques

STM fournit également un critère de sélection d'un type d'huile et d'une viscosité autres que ceux recommandés à la section 1.5.1.

Réducteurs

Les huiles disponibles appartiennent en général à trois grandes familles:
1) Huiles minérales
2) Huiles synthétiques Poly-Alpha-Oléfine 3) Huiles synthétiques Poly-Glycol

Le choix le plus approprié est en général lié aux conditions d'application. Les réducteurs non particulièrement chargés et avec un cycle d'emploi discontinu, sans amplitudes importantes, peuvent être graissés avec de l'huile minérale.
Dans les cas de lourdes conditions où les réducteurs seraient très chargés de façon prévisible et en continu, avec une hausse conséquente prévisible de la température, il vaut mieux utiliser des lubrifiants synthétiques de type poly-alpha-oléfine (PAO).

Les huiles de type poly-glycol (PG) doivent être étroitement utilisées dans le cas d'applications ayant d'importants frottements entre les contacts tels que dans les vis sans fin. Il faut les utiliser avec une attention toute particulière, du fait qu'elles ne sont pas compatibles avec les autres huiles et sont au contraire tout à fait miscibles dans l'eau. Ce phénomène est particulièrement dangereux du fait qu'on ne le remarque pas et qu'il abat rapidement les caractéristiques lubrifiantes de l'huile.

En plus des huiles exposées ci-dessus il existe aussi les huiles pour l'industrie alimentaire, qui sont spécifiquement utilisées dans l'industrie alimentaire, du fait qu'il s'agit de produits spéciaux non nuisibles pour la santé. Plusieurs producteurs fournissent des huiles appartenant à toutes les familles avec des caractéristiques très similaires. Plus loin est exposé un tableau comparatif.

1.5 Lubricación

1.5.2 - Reductores suministrados vacíos Criterios de selección de aceite y restricciones de uso Serie Estándar EX - EXB

1.5.2.1 - Criterios genéricos de selección

STM también proporciona un criterio para seleccionar un tipo de aceite y una viscosidad distintos de los recomendados en el punto 1.5.1.

Reductores

Los aceites disponibles pertenecen generalmente a tres grandes familias:
1) Aceites minerales
2) Aceites sintéticos Poli-Alfa-Olefine
3) Aceites sintéticos Poli-Glicol

La elección más apropiada está generalmente relacionada con las condiciones de uso. Reductores no particularmente cargados y con un ciclo de uso discontinuo sin variaciones térmicas importantes, pueden ser lubricados con aceite mineral.
En casos de uso exhaustivo, cuando los reductores estarán previsiblemente muy cargados y de manera continua, con consiguiente elevación de la temperatura, se recomienda utilizar lubricantes sintéticos tipo polialfaolefine (PAO).

Los aceites de tipo poliglicol (PG) se deben utilizar exclusivamente en el caso de aplicaciones con gran roce entre los contactos, por ejemplo en los tornillos sin fin. Se deben usar con mucha atención porque no son compatibles con otros aceites, en cambio, se pueden usar mezclados con agua. Este fenómeno es particularmente peligroso porque no se nota, pero disminuye rápidamente las características lubricantes del aceite.

Además de los aceites ya mencionados, recordamos que existen otros aceites para la industria alimenticia. Estos aceites se usan específicamente en la industria alimenticia porque son productos especiales que no dañan la salud. Varios productores suministran aceites que pertenecen a todas las familias con características muy similares. Más adelante se encuentra una tabla comparativa.

1.5 Lubrificação

1.5.2 - Redutores fornecidos vazios Critérios de seleção do óleo e restrições de utilização Série padrão EX - EXB

1.5.2.1 - Critérios genéricos de seleção

A STM também fornece um critério para selecionar um tipo de óleo e viscosidade diferentes dos recomendados no ponto 1.5.1.

Redutores

Os óleos disponíveis pertecem geralmente a três grandes famílias:
1) Óleos minerais
2) Óleos sintéticos Poli-Alfa-Olefine
3) Óleos sintéticos Poliglicol

A escolha mais apropriada está geralmente ligada às condições de uso. Redutores com carga moderada e com um ciclo de uso descontínuo, sem variações térmicas importantes, podem certamente ser lubrificados com óleo mineral.
Em casos de uso crítico, quando os redutores operam com muita carga e em modo contínuo, com consequente aumento da temperatura, é preferível o uso de lubrificantes sintéticos do tipo polialfaolefine (PAO).

Os óleos do tipo poliglicol (PG) são usados rigorosamente no caso de aplicações com fortes fricções entre os contatos, por ex. nos parafusos sem fim. Devem ser utilizados com grande atenção já que não são compatíveis com os outros óleos, sendo completamente miscíveis em água. Este fenômeno é particularmente perigoso pois não é distinguível, degradando rapidamente as características lubrificantes do óleo.

Além dos óleos mencionados, recordamos que existem os óleos para a indústria alimentar, onde encontram um uso específico pois são produtos especiais não nocivos à saúde. Vários fabricantes fornecem óleos pertencentes à todas as famílias com características muito semelhantes. Mais adiante propomos uma tabela comparativa.

Input speed n_1 (min $^{-1}$)	Absorbed power (kW)	Lubrication system	Viscosity ISO VG at 40° (cSt)	
			i ≤ 10	i > 10
2000 < n_1 ≤ 5000	P < 7.5	Forced or Oil splash	68	68
	7.5 ≤ P ≤ 22		68	150
	P > 22		150	220
1000 < n_1 ≤ 2000	P < 7.5	Forced or Oil splash	68	150
	7.5 ≤ P ≤ 37		150	220
	P > 37		220	320
300 < n_1 ≤ 1000	P < 15	Forced Oil splash	68	150
			150	220
	15 ≤ P ≤ 55	Forced Oil splash	150	220
			220	320
	P > 55	Forced Oil splash	220	320
			320	460
50 < n_1 ≤ 300	P < 22	Forced Oil splash	150	220
			220	320
	22 ≤ P ≤ 75	Forced Oil splash	220	320
			320	460
	P > 75	Forced Oil splash	320	460
			460	680

The table is valid for normal peripheral speeds; in case of speed > 13 m/s, contact us.

If the environment temperature T < 0°C decrease viscosity class by one, vice versa increase by one if T > 40°C.

*Permissible temperatures for **mineral oil** are: (-10 =T = 90)°C, up to 100°C for a short time.*

*Permissible temperatures for **synthetic oil** are: (-20 = T = 110)°C, up to 120°C for a short time.*

If the oil temperature is not permissible for mineral oil and for decreasing frequency of oil change, use synthetic oil with polyalphaolefins (PAOs).

1.5 Lubrification

Freins- Z1. - Z2.

STM recommande l'utilisation d'huiles minérales hautement résistantes à la chaleur et au vieillissement, avec viscosité ISO VG 32 et indice de viscosité de 95 ou plus.

1.5.2.2 - Restrictions d'utilisation
Si les conditions ambiantes sont en dehors de la plage de température spécifiée ou en cas de lubrification forcée par pompe (lorsque ISO VG > 220 et/ou des températures < 10 °C sont requises), veuillez contacter notre service technique/vente pour sélectionner le lubrifiant approprié.

1.5 Lubricación

Frenos - Z1. - Z2.

STM recomienda el uso de aceites minerales altamente resistentes al calor y al envejecimiento de viscosidad ISO VG 32, índice de viscosidad de 95 o superior.

1.5.2.2 - Restricciones de uso
Si las condiciones ambientales están fuera del rango de temperatura especificado o en el caso de lubricación forzada con bomba (cuando se requiere ISO VG > 220 y/o temperaturas < 10 °C), contactar con nuestro Servicio Técnico/Comercial para seleccionar el lubricante adecuado

1.5 Lubrificação

Freios - Z1. - Z2.

A STM recomenda a utilização de óleos minerais altamente resistentes ao calor e ao envelhecimento, com viscosidade ISO VG 32, índice de viscosidade de 95 ou superior.

1.5.2.2 -Restrições de utilização
Se as condições ambientais estiverem fora do intervalo de temperatura especificado ou no caso de lubrificação forçada com bomba (quando é necessário ISO VG > 220 e/ou temperaturas < 10°C), contacte o nosso Serviço Técnico/Departamento Comercial para selecionar o lubrificante adequado.

1.5.4–STM recommande l'utilisation des lubrifiants PETRONAS

1.5.4 – STM recomienda el uso de lubricantes PETRONAS

1.5.4 – A STM recomenda a utilização de lubrificantes PETRONAS

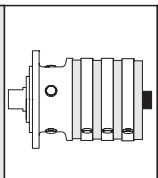
Manufacturer	Mineral oils(MINERAL)			Synthetic oils (GR III)	*Poly-Alpha-Olefin synthetic oils (PAO)*		
	ISO VG 150	ISO VG 220	ISO VG 320	ISO VG 150-220-320	ISO VG 150	ISO VG 220	ISO VG 320
AGIP	Blasia 150	Blasia 220	Blasia 320	—	-	Blasia SX 220	Blasia SX 320
ARAL	Degol BG 150 Plus	Degol BG 220 Plus	Degol BG 320 Plus	—	Degol PAS 150	Degol PAS 220	Degol PAS 320
BP	Energol GR-XP 150	Energol GR-XP 220	Energol GR-XP 320	—	Enersyn EPX 150	Enersyn EPX 220	Enersyn EPX 320
CASTROL	Alpha SP 150	Alpha SP 220	AlphaSP 320	—	Alphasyn EP 150	Alphasyn EP 220	Alphasyn EP 320
CHEVRON	Ultra Gear150	Ultra Gear 220	Ultra Gear 320	—	Tegra Synthetic Gear 150	Tegra Synthetic Gear 220	Tegra Synthetic Gear 320
ESSO	Spartan EP 150	Spartan EP 220	Spartan EP 320	—	Spartan S EP 150	Spartan S EP 220	Spartan S EP 320
KLÜBER	Klüberoil GEM 1-150	Klüberoil GEM 1-220	Klüberoil GEM 1-320	—	Klübersynth EG 4-150	Klübersynth EG 4-220	Klübersynth EG 4-320
MOBIL	Mobilgear XMP 150	Mobilgear XMP 220	Mobilgear XMP 320	—	Mobilgear SHC XMP 150	Mobilgear SHC XMP 220	Mobilgear SHC XMP 320
MOLIKOTE	L-0115	L-0122	L-0132	—	L-1115	L-1122	L-1132
OPTIMOL	Optigear BM 150	Optigear BM 220	Optigear BM 320	—	Optigear Synthetic A 150	Optigear Synthetic A 220	Optigear Synthetic A 320
PETRONAS	PETRONAS GEAR MEP 150	PETRONAS GEAR MEP 220	PETRONAS GEAR MEP 320	PETRONAS GEAR SYN 150-220-320	PETRONAS GEAR SYN PAO 150	PETRONAS GEAR SYN PAO 220	PETRONAS GEAR SYN PAO 320
Q8	Goya 150	Goya 220	Goya 320	—	El Greco 150	El Greco 220	El Greco 320
SHELL	OMALA S2 GX 150	OMALA S2 GX 220	OMALA S2 GX 320	—	Omala S4 GXV 150	Omala S4 GXV 220	Omala S4 GXV 320
TEXACO	Meropa 150	Meropa 220	Meropa 320	—	Pinnacle EP 150	Pinnacle EP 220	Pinnacle EP 320
TOTAL	Carter EP 150	Carter EP 220	Carter EP 320	—	Carter SH 150	Carter SH 220	Carter SH 320
TRIBOL	1100/150	1100/220	1100/320	—	1510/150	1510/220	1510/320
Food-grade synthetic lubricants							
AGIP	—	—	—	—	Rocol Foodlube Hi-Torque 150	—	Rocol Foodlube Hi-Torque 320
ESSO	—	—	—	—	—	Gear Oil FM 220	—
FUCHS	—	—	—	—	Cassida Fluid GL150	Cassida Fluid GL 220	Cassida Fluid GL 320
KLÜBER	—	—	—	—	Klüberoil 4 UH1 N 150	Klüberoil 4 UH1 N 220	Klüberoil 4 UH1 N 320
MOBIL	—	—	—	—	Mobil SHC Cibus Series 150	Mobil SHC Cibus Series 220	Mobil SHC Cibus Series 320

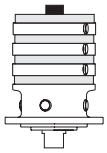
EX

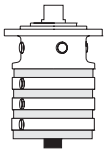


R

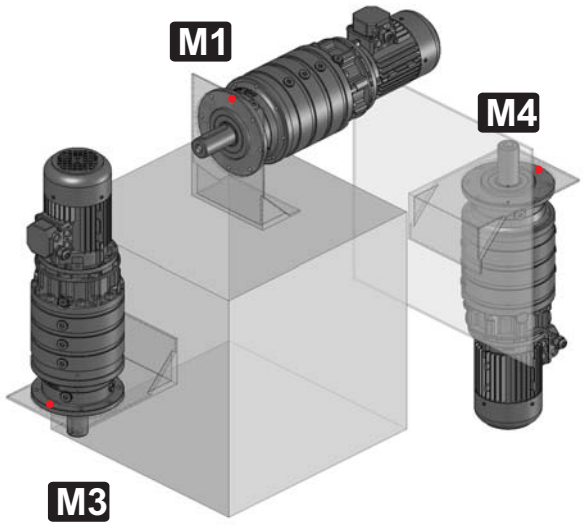


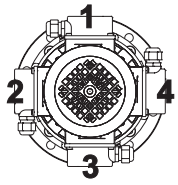






	M1				M3				M4			
10	0,6	0,8	1,0	1,2	1,0	1,3	1,7	2,1	0,9	1,3	1,6	2,0
20	0,7	0,9	1,1	1,3	1,1	1,5	1,9	2,3	1,1	1,4	1,8	2,2
25	0,6	0,8	1,0	1,3	1,0	1,4	1,8	2,2	1,0	1,4	1,7	2,1
30-35	0,9	1,3	1,5	1,8	1,6	2,3	2,7	3,0	1,5	2,2	2,5	2,9
40		1,4	1,7	1,9		2,5	2,9	3,2		2,3	2,7	3,1
50	1,0	1,5	1,8	2,0	1,8	2,7	3,0	3,4	1,7	2,5	2,9	3,2
70	1,0	1,4	1,7	1,9	1,7	2,5	2,9	3,2	1,6	2,3	2,7	3,1
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90-95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
150	2,1	3,0	3,5	3,7	3,7	5,2	6,1	6,5	3,5	5,0	5,8	6,1
180		3,0	3,5	3,7		5,2	6,1	6,5		5,0	5,8	6,1
200	2,1	3,0	3,4	3,6	3,7	5,1	5,9	6,3	3,5	4,9	5,6	5,9
EX	1	2	3	4	1	2	3	4	1	2	3	4



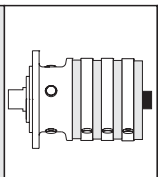


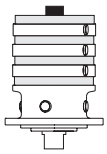
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

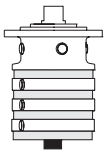
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C

M

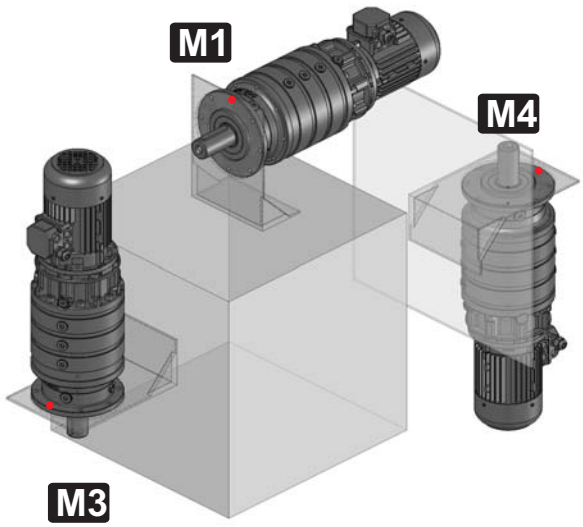


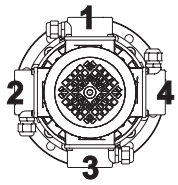






	M1				M3				M4			
10	0,7	0,9	1,1	1,3	1,1	1,5	1,9	2,3	1,1	1,4	1,8	2,2
20	0,8	1,0	1,2	1,4	1,3	1,7	2,1	2,5	1,3	1,6	2,0	2,3
25	0,7	0,9	1,2	1,4	1,2	1,6	2,0	2,4	1,2	1,5	1,9	2,3
30-35	1,0	1,4	1,7	1,9	1,8	2,5	2,9	3,2	1,7	2,3	2,7	3,1
40		1,5	1,8	2,0		2,7	3,0	3,4		2,5	2,9	3,2
50	1,2	1,7	1,9	2,1	2,0	2,9	3,2	3,6	1,9	2,7	3,1	3,4
70	1,1	1,5	1,8	2,0	1,9	2,7	3,0	3,4	1,8	2,5	2,9	3,2
80	1,7	2,7	2,9	3,1	2,9	4,7	5,0	5,4	2,7	4,4	4,8	5,1
EX	1	2	3	4	1	2	3	4	1	2	3	4





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C

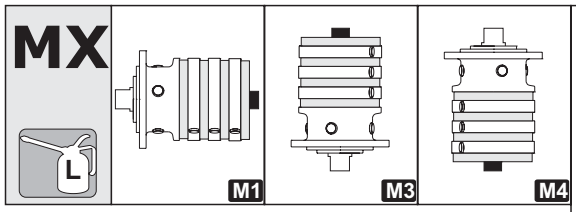


A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

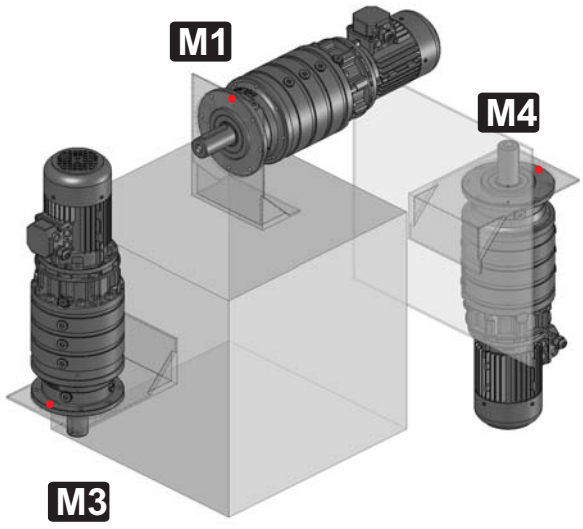
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

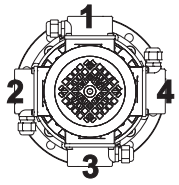
A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

MX



	M1				M3				M4			
30-35	1,0	1,4	1,7	1,9	1,8	2,5	2,9	3,2	1,7	2,3	2,7	3,1
40		1,5	1,8	2,0		2,7	3,0	3,4		2,5	2,9	3,2
50	1,2	1,7	1,9	2,1	2,0	2,9	3,2	3,6	1,9	2,7	3,1	3,4
70	1,1	1,5	1,8	2,0	1,9	2,7	3,0	3,4	1,8	2,5	2,9	3,2
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

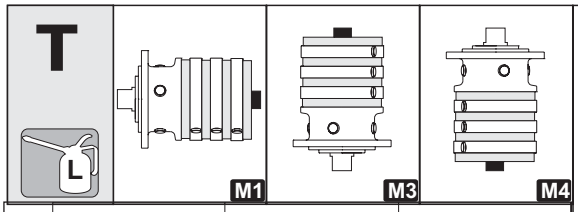




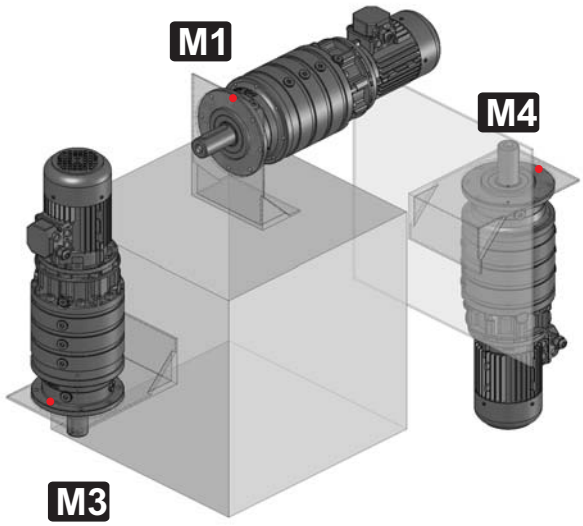
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

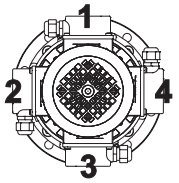
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

T



	M1				M3				M4			
30 35	1,5	1,9	2,1	2,4	2,7	3,3	3,7	4,1	2,5	3,2	3,5	3,9
40		2,0	2,3	2,5		3,5	3,9	4,3		3,3	3,7	4,1
50	1,7	2,1	2,4	2,6	2,9	3,7	4,1	4,5	2,7	3,5	3,9	4,2
70	1,6	2,0	2,3	2,5	2,8	3,5	3,9	4,3	2,6	3,3	3,7	4,1
80	2,5	3,5	3,7	4,0	4,3	6,1	6,5	6,8	4,1	5,8	6,1	6,5
90 95		3,7	3,9	4,1		6,4	6,7	7,1		6,0	6,4	6,8
100	2,6	3,8	4,3	4,5	4,6	6,6	7,4	7,8	4,3	6,2	7,0	7,4
150	3,1	4,0	4,5	4,7	5,4	6,9	7,8	8,2	5,1	6,6	7,4	7,7
180		4,0	4,5	4,7		6,9	7,8	8,2		6,6	7,4	7,7
200	3,1	4,0	4,4	4,6	5,4	6,8	7,6	8,0	5,1	6,5	7,2	7,6
250	4,2	5,7	6,7	6,9	7,3	9,8	11,6	12,0	6,9	9,3	11,0	11,3
280		5,8	7,0	7,2		10,1	12,1	12,4		9,5	11,4	11,8
300	5,0	6,5	7,7	7,9	8,6	11,3	13,3	13,7	8,1	10,7	12,6	13,0
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

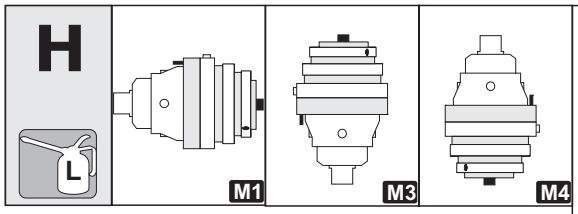
* Contacter notre bureau technico-commercial / * *Contactar con nuestra oficina técnica comercial* / * Contactar o nosso departamento técnico comercial

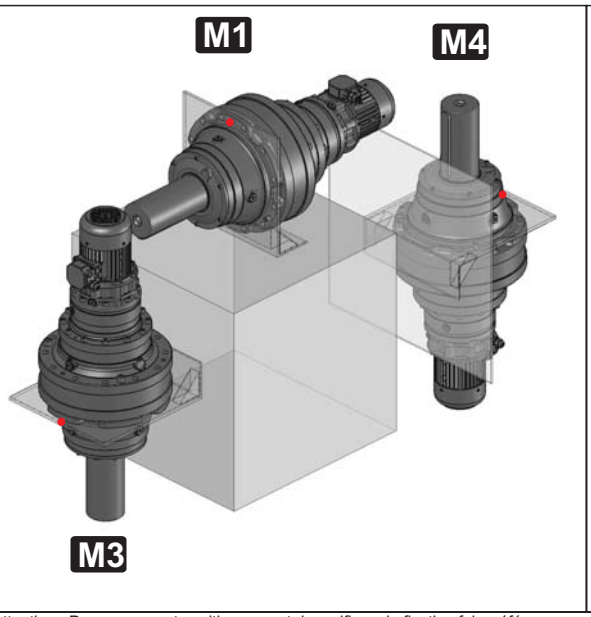


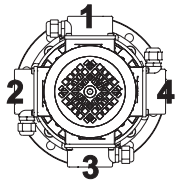
A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.



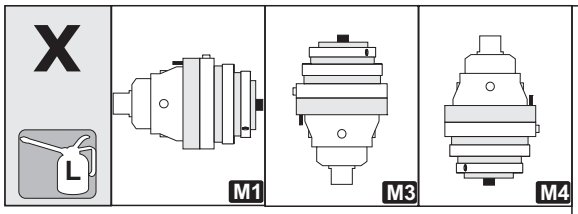


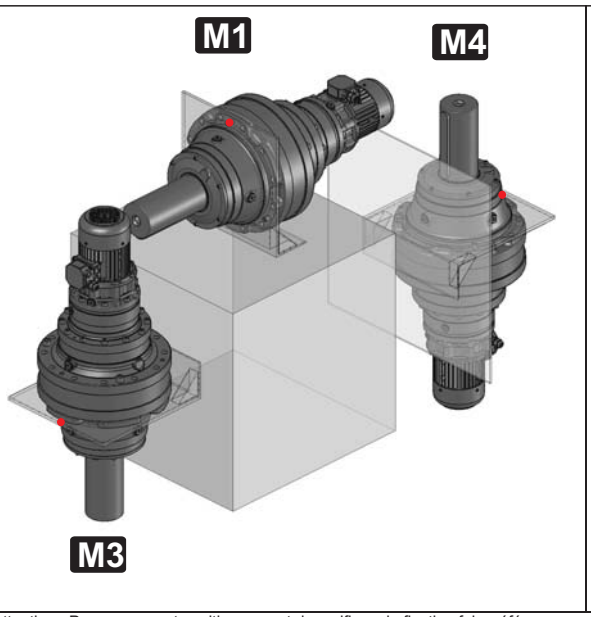


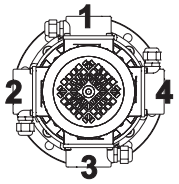
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

	M1				M3				M4			
150	2,4	3,2	3,7	4,0	4,1	5,6	6,5	6,8	3,9	5,3	6,1	6,5
180		3,2	3,7	4,0		5,6	6,5	6,8		5,3	6,1	6,5
200	2,4	3,2	3,6	3,9	4,1	5,5	6,3	6,7	3,9	5,2	5,9	6,3
250	3,4	4,8	5,9	6,1	5,9	8,4	10,2	10,5	5,6	7,9	9,6	10,0
280		5,0	6,2	6,4		8,6	10,6	11,0		8,2	10,1	10,4
300	3,6	5,2	6,3	6,5	6,2	8,9	10,9	11,3	5,9	8,5	10,4	10,7
EX	1	2	3	4	1	2	3	4	1	2	3	4

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.







	M1				M3				M4			
150	3,1	4,0	4,5	4,7	5,4	6,9	7,8	8,2	5,1	6,6	7,4	7,7
180		4,0	4,5	4,7		6,9	7,8	8,2		6,6	7,4	7,7
200	3,1	4,0	4,4	4,6	5,4	6,8	7,6	8,0	5,1	6,5	7,2	7,6
EX	1	2	3	4	1	2	3	4	1	2	3	4

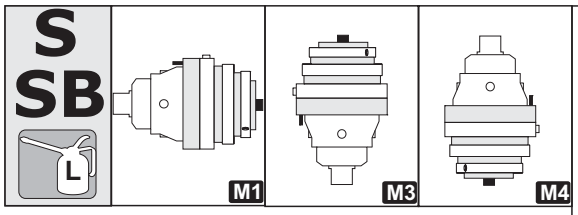
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

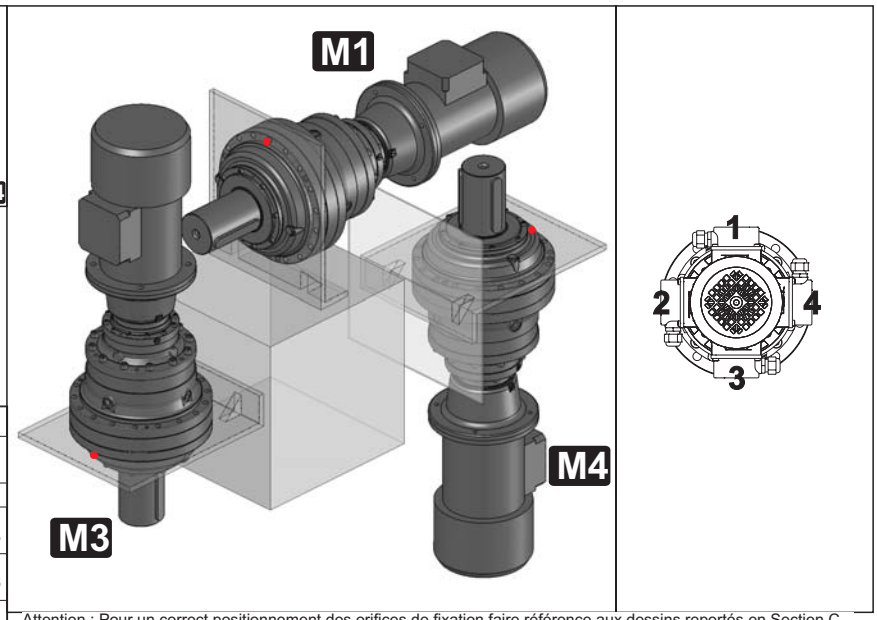


A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor..





	M1				M3				M4			
350 360	2,5	4,5	5,6	5,8	4,4	7,7	9,7	10,1	4,1	7,3	9,2	9,5
420	2,5	4,6	5,5	6,0	4,4	8,0	9,5	10,4	4,1	7,6	9,0	9,8
600 650	4,3	8,1	9,5	10,6	7,4	14,0	16,4	18,2	7,0	13,2	15,6	17,3
800 850	4,3	8,0	9,6	10,8	7,5	13,9	16,6	18,6	7,1	13,1	15,8	17,6
>850	*											
EX	1	2	3	4	1	2	3	4	1	2	3	4

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

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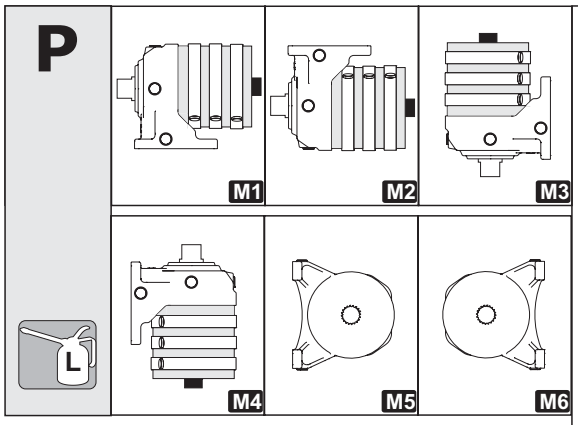
A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

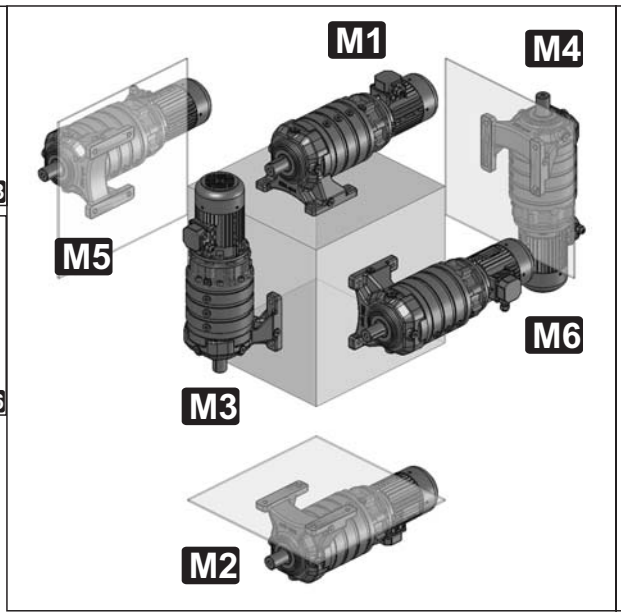
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

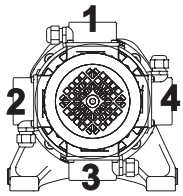
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
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D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.







	M1				M2				M3				M4				M5				M6			
10	0,8	1,0	1,2	1,4	0,8	1,0	1,2	1,4	1,3	1,7	2,1	2,5	1,3	1,6	2,0	2,3	0,8	1,0	1,2	1,4	0,8	1,0	1,2	1,4
20	0,9	1,1	1,3	1,5	0,9	1,1	1,3	1,5	1,5	1,9	2,3	2,7	1,4	1,8	2,2	2,5	0,9	1,1	1,3	1,5	0,9	1,1	1,3	1,5
25	0,8	1,0	1,3	1,5	0,8	1,0	1,3	1,5	1,4	1,8	2,2	2,6	1,4	1,7	2,1	2,4	0,8	1,0	1,3	1,5	0,8	1,0	1,3	1,5
30-35	1,6	2,0	2,2	2,4	1,6	2,0	2,2	2,4	2,8	3,4	3,8	4,2	2,6	3,2	3,6	4,0	1,6	2,0	2,2	2,4	1,6	2,0	2,2	2,4
40		2,1	2,3	2,5		2,1	2,3	2,5		3,6	4,0	4,4		3,4	3,8	4,1		2,1	2,3	2,5		2,1	2,3	2,5
50	1,7	2,2	2,4	2,6	1,7	2,2	2,4	2,6	2,9	3,8	4,2	4,6	2,8	3,6	4,0	4,3	1,7	2,2	2,4	2,6	1,7	2,2	2,4	2,6
70	1,7	2,1	2,3	2,5	1,7	2,1	2,3	2,5	2,9	3,6	4,0	4,4	2,7	3,4	3,8	4,1	1,7	2,1	2,3	2,5	1,7	2,1	2,3	2,5
80	2,3	3,3	3,5	3,7	2,3	3,3	3,5	3,7	3,9	5,7	6,1	6,5	3,7	5,4	5,8	6,1	2,3	3,3	3,5	3,7	2,3	3,3	3,5	3,7
90-95		3,6	3,8	4,0		3,6	3,8	4,0		6,2	6,6	6,9		5,9	6,2	6,6		3,6	3,8	4,0		3,6	3,8	4,0
100	2,5	3,7	4,2	4,4	2,5	3,7	4,2	4,4	4,4	6,4	7,2	7,6	4,1	6,0	6,8	7,2	2,5	3,7	4,2	4,4	2,5	3,7	4,2	4,4
150	3,2	4,1	4,6	4,8	3,2	4,1	4,6	4,8	5,6	7,1	8,0	8,4	5,3	6,8	7,6	7,9	3,2	4,1	4,6	4,8	3,2	4,1	4,6	4,8
180		4,1	4,6	4,8		4,1	4,6	4,8		7,1	8,0	8,4		6,8	7,6	7,9		4,1	4,6	4,8		4,1	4,6	4,8
200	3,2	4,1	4,5	4,7	3,2	4,1	4,5	4,7	5,6	7,0	7,8	8,2	5,3	6,7	7,4	7,7	3,2	4,1	4,5	4,7	3,2	4,1	4,5	4,7
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4



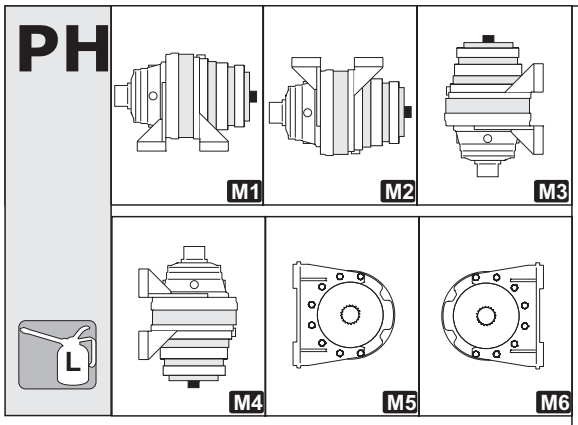
A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

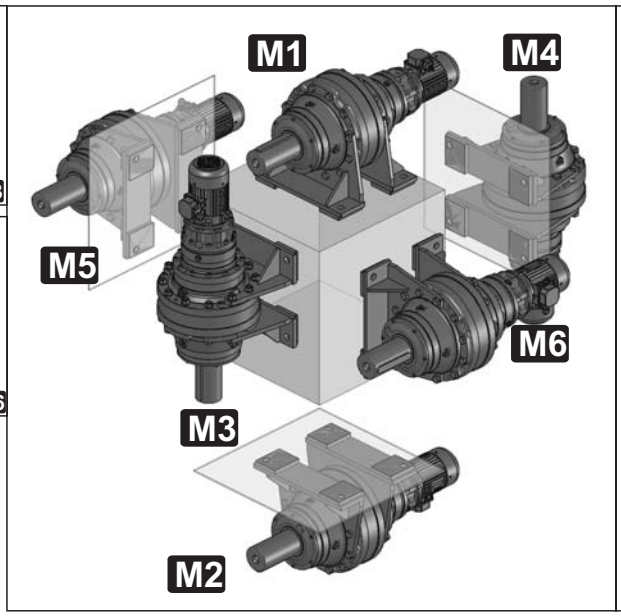
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

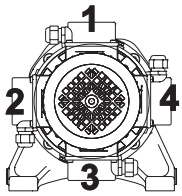
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.







	M1				M2				M3				M4				M5				M6			
150	2,4	3,2	3,7	4,0	2,4	3,2	3,7	4,0	4,1	5,6	6,5	6,8	3,9	5,3	6,1	6,5	2,4	3,2	3,7	4,0	2,4	3,2	3,7	4,0
180		3,2	3,7	4,0		3,2	3,7	4,0		5,6	6,5	6,8		5,3	6,1	6,5		3,2	3,7	4,0		3,2	3,7	4,0
200	2,4	3,2	3,6	3,9	2,4	3,2	3,6	3,9	4,1	5,5	6,3	6,7	3,9	5,2	5,9	6,3	2,4	3,2	3,6	3,9	2,4	3,2	3,6	3,9
250	3,4	4,8	5,9	6,1	3,4	4,8	5,9	6,1	5,9	8,4	10,2	10,5	5,6	7,9	9,6	10,0	3,4	4,8	5,9	6,1	3,4	4,8	5,9	6,1
280		5,0	6,2	6,4		5,0	6,2	6,4		8,6	10,6	11,0		8,2	10,1	10,4		5,0	6,2	6,4		5,0	6,2	6,4
300	3,6	5,2	6,3	6,5	3,6	5,2	6,3	6,5	6,2	8,9	10,9	11,3	5,9	8,5	10,4	10,7	3,6	5,2	6,3	6,5	3,6	5,2	6,3	6,5
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4



A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

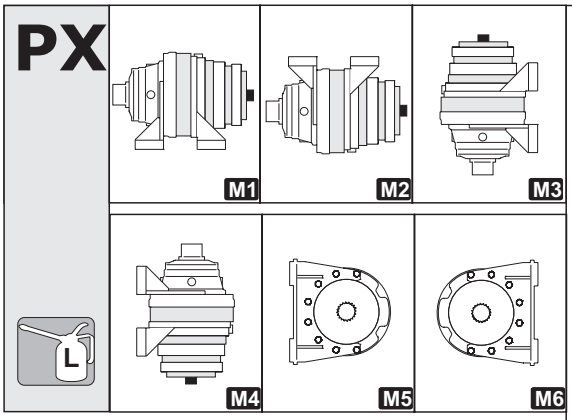
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

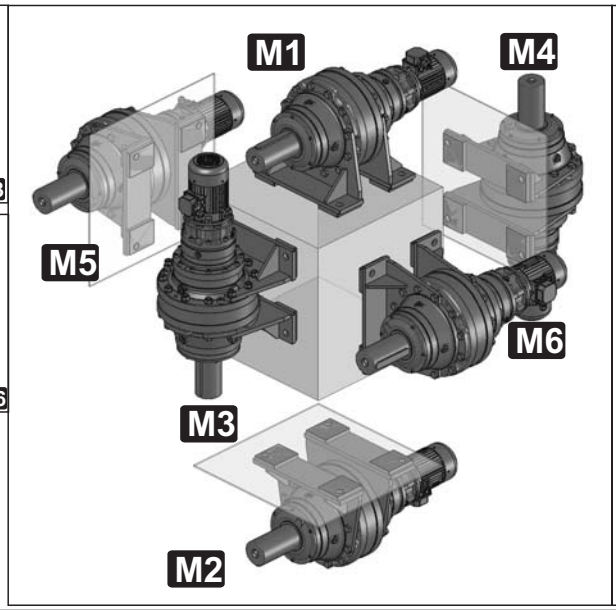
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

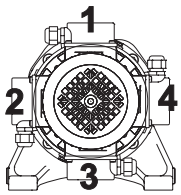
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

PX

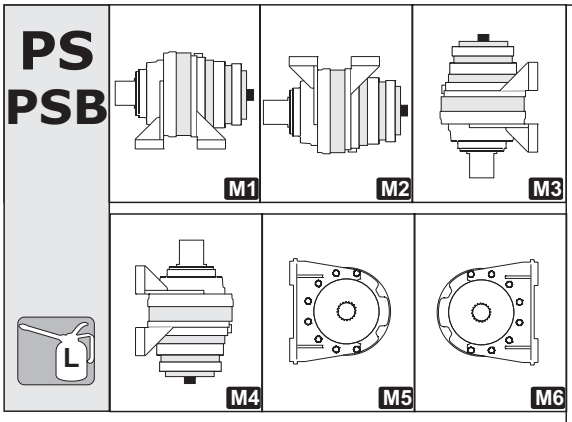


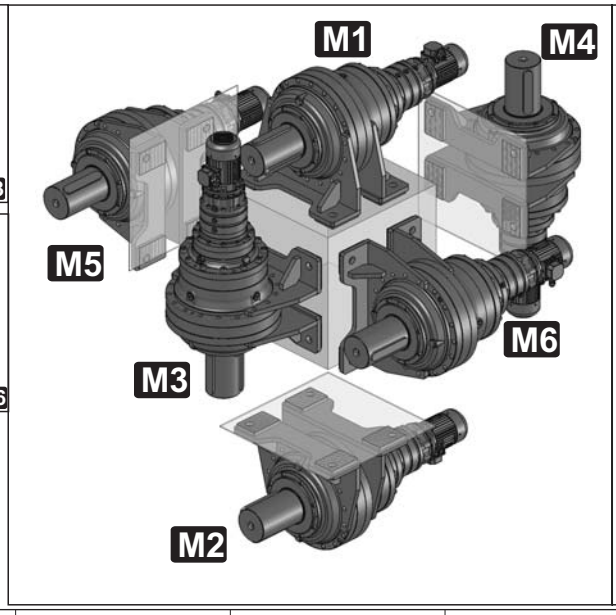


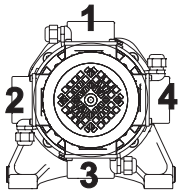


	M1				M2				M3				M4				M5				M6			
150	3,1	4,0	4,5	4,7	3,1	4,0	4,5	4,7	5,4	6,9	7,8	8,2	5,1	6,6	7,4	7,7	3,1	4,0	4,5	4,7	3,1	4,0	4,5	4,7
180		4,0	4,5	4,7		4,0	4,5	4,7		6,9	7,8	8,2		6,6	7,4	7,7		4,0	4,5	4,7		4,0	4,5	4,7
200	3,1	4,0	4,4	4,6	3,1	4,0	4,4	4,6	5,4	6,8	7,6	8,0	5,1	6,5	7,2	7,6	3,1	4,0	4,4	4,6	3,1	4,0	4,4	4,6
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

PS
PSB







	M1				M2				M3				M4				M5				M6			
350-360	2,5	4,5	5,6	5,8	2,5	4,5	5,6	5,8	4,4	7,7	9,7	10,1	4,1	7,3	9,2	9,5	2,5	4,5	5,6	5,8	2,5	4,5	5,6	5,8
420	2,5	4,6	5,5	6,0	2,5	4,6	5,5	6,0	4,4	8,0	9,5	10,4	4,1	7,6	9,0	9,8	2,5	4,6	5,5	6,0	2,5	4,6	5,5	6,0
600-650	4,3	8,1	9,5	10,6	4,3	8,1	9,5	10,6	7,4	14,0	16,4	18,2	7,0	13,2	15,6	17,3	4,3	8,1	9,5	10,6	4,3	8,1	9,5	10,6
800-850	4,3	8,0	9,6	10,8	4,3	8,0	9,6	10,8	7,5	13,9	16,6	18,6	7,1	13,1	15,8	17,6	4,3	8,0	9,6	10,8	4,3	8,0	9,6	10,8
>850	* Contacter notre bureau technico-commercial / * Contactar con nuestra oficina técnica comercial / * Contactar o nosso departamento técnico comercial																							
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;

B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;

C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

Attention

Choix de la grandeur OT : Section E;

Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);

B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);

C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.

Atención

Elección tamaño OT: Sección E;

Instalación OT : Punto 8.3 manual de uso y mantenimiento.

D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);

B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);

C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.

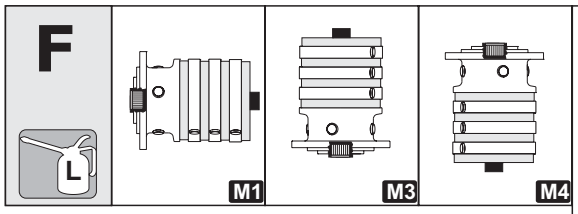
Atenção

Escolha do tamanho OT: Secção E;

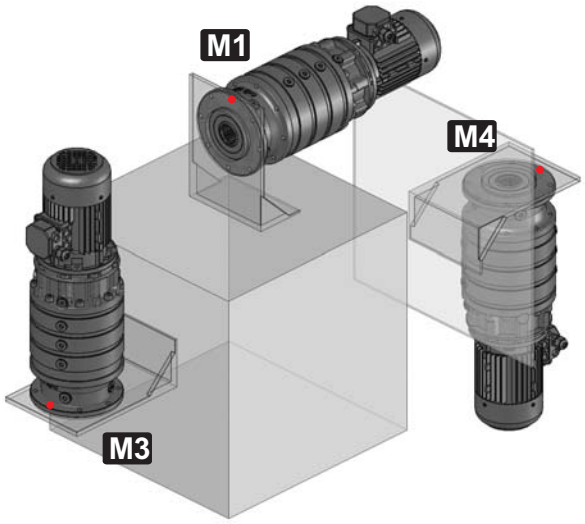
Instalação OT : Ponto 8.3 manual de uso e manutenção.

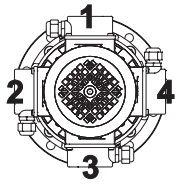
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

F



	M1				M3				M4			
10	0,6	0,8	1,0	1,2	1,0	1,3	1,7	2,1	0,9	1,3	1,6	2,0
20	0,7	0,9	1,1	1,3	1,1	1,5	1,9	2,3	1,1	1,4	1,8	2,2
25	0,6	0,8	1,0	1,3	1,0	1,4	1,8	2,2	1,0	1,4	1,7	2,1
30-35	0,9	1,3	1,5	1,8	1,6	2,3	2,7	3,0	1,5	2,2	2,5	2,9
40		1,4	1,7	1,9		2,5	2,9	3,2		2,3	2,7	3,1
50	1,0	1,5	1,8	2,0	1,8	2,7	3,0	3,4	1,7	2,5	2,9	3,2
70	1,0	1,4	1,7	1,9	1,7	2,5	2,9	3,2	1,6	2,3	2,7	3,1
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90-95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

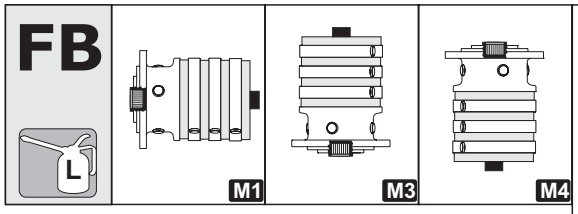




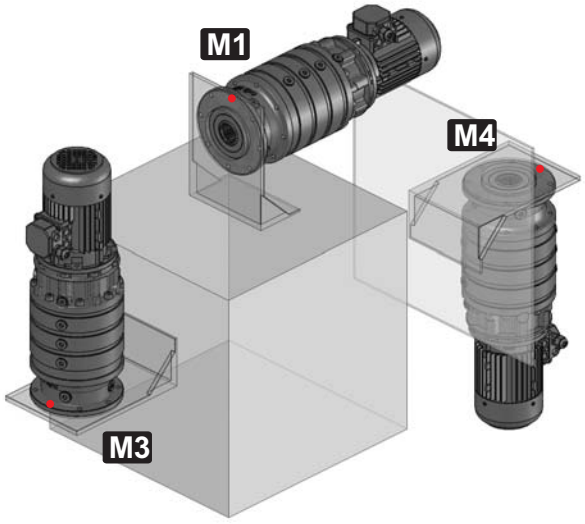
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

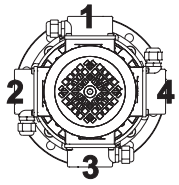
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

FB



	M1				M3				M4			
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90-95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



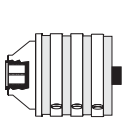
A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

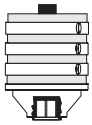
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

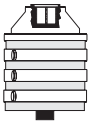
A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

FS

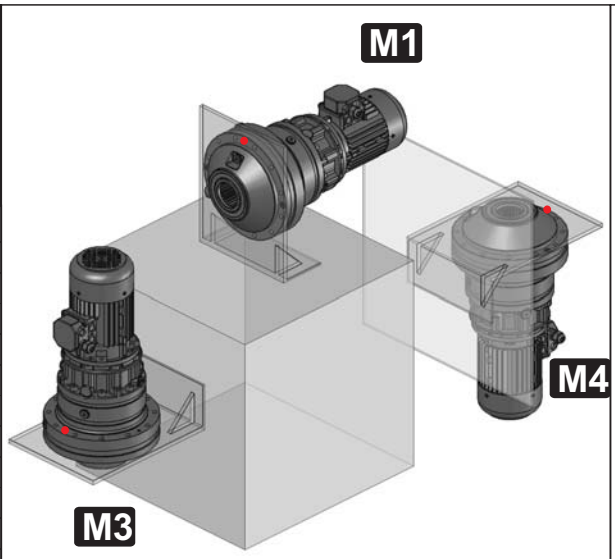


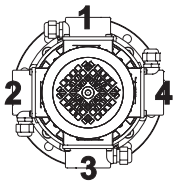






	M1				M3				M4			
10	0,4	0,6	0,8	1,0	0,7	1,0	1,4	1,8	0,6	1,0	1,4	1,7
20	0,5	0,7	0,9	1,2	0,9	1,2	1,6	2,0	0,8	1,2	1,5	1,9
25	0,4	0,7	0,9	1,1	0,8	1,1	1,5	1,9	0,7	1,1	1,4	1,8
30-35	0,7	1,1	1,3	1,5	1,2	1,9	2,3	2,7	1,2	1,8	2,2	2,5
40		1,2	1,4	1,7		2,1	2,5	2,9		2,0	2,3	2,7
50	0,8	1,3	1,5	1,8	1,4	2,3	2,7	3,0	1,4	2,2	2,5	2,9
70	0,8	1,2	1,4	1,7	1,3	2,1	2,5	2,9	1,3	2,0	2,3	2,7
80	1,0	2,1	2,3	2,5	1,8	3,6	4,0	4,4	1,7	3,4	3,8	4,1
90-95		2,3	2,5	2,7		3,9	4,3	4,7		3,7	4,1	4,4
100	1,2	2,4	2,9	3,1	2,1	4,1	4,9	5,3	2,0	3,9	4,7	5,0
150	1,5	2,4	2,9	3,1	2,6	4,1	4,9	5,3	2,4	3,9	4,7	5,0
180		2,4	2,9	3,1		4,1	4,9	5,3		3,9	4,7	5,0
200	1,5	2,3	2,8	3,0	2,6	4,0	4,8	5,1	2,4	3,8	4,5	4,9
EX	1	2	3	4	1	2	3	4	1	2	3	4



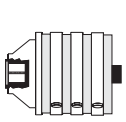


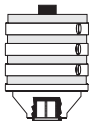
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

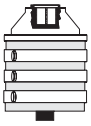
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

FS

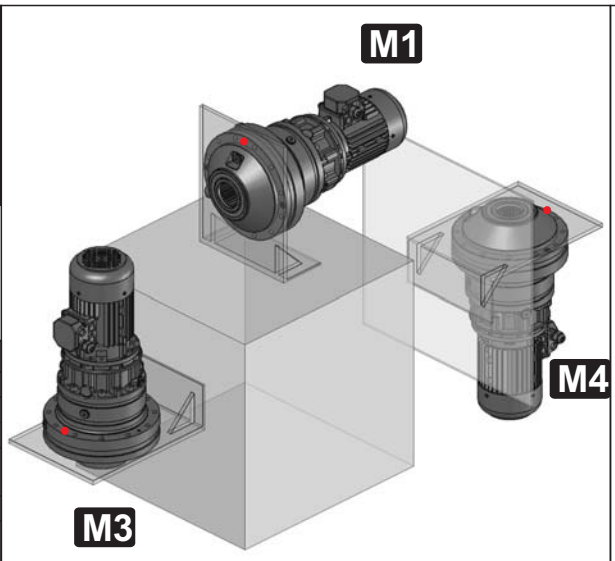


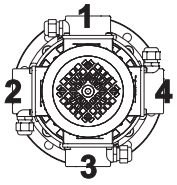






	M1				M3				M4			
250	2,6	4,0	5,1	5,3	4,5	6,9	8,7	9,1	4,2	6,6	8,3	8,6
280	2,6	4,2	5,3	5,6	4,5	7,2	9,2	9,6	4,2	6,8	8,7	9,1
300	2,5	4,1	5,3	5,5	4,4	7,1	9,1	9,5	4,1	6,8	8,6	9,0
350 360	2,5	4,5	5,6	5,8	4,4	7,7	9,7	10,1	4,1	7,3	9,2	9,5
420	2,5	4,6	5,5	6,0	4,4	8,0	9,5	10,4	4,1	7,6	9,0	9,8
600 650	4,3	8,1	9,5	10,6	7,4	14,0	16,4	18,2	7,0	13,2	15,6	17,3
800 850	4,3	8,0	9,6	10,8	7,5	13,9	16,6	18,6	7,1	13,1	15,8	17,6
>850	*											
EX	1	2	3	4	1	2	3	4	1	2	3	4





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

* Contacter notre bureau technico-commercial / * *Contactar con nuestra oficina técnica comercial* / * Contactar o nosso departamento técnico comercial



A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

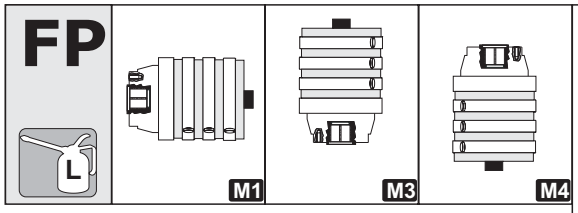
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

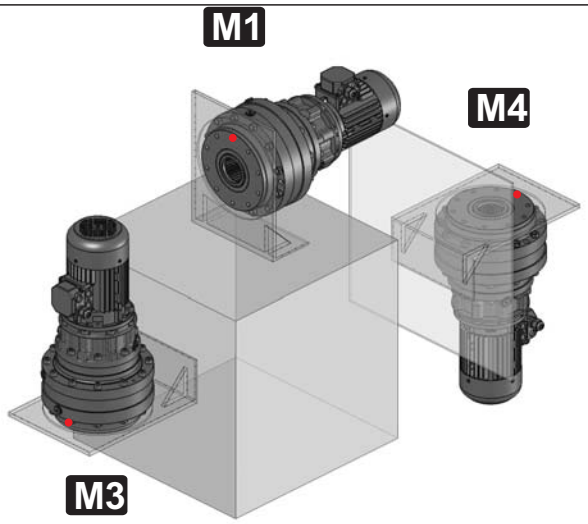
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

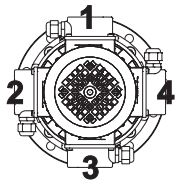
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

FP





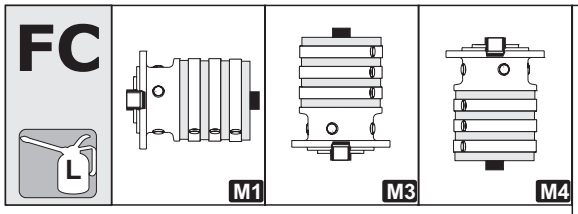


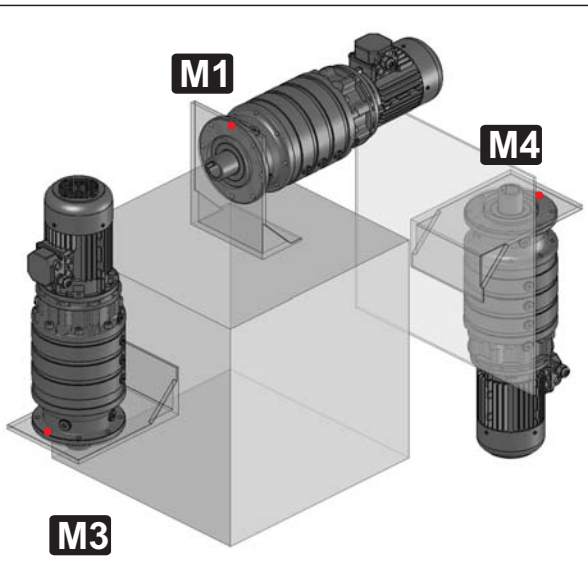
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

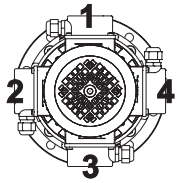
	M1				M3				M4			
30-35	0,7	1,1	1,3	1,5	1,2	1,9	2,3	2,7	1,2	1,8	2,2	2,5
40		1,2	1,4	1,7		2,1	2,5	2,9		2,0	2,3	2,7
50	0,8	1,3	1,5	1,8	1,4	2,3	2,7	3,0	1,4	2,2	2,5	2,9
70	0,8	1,2	1,4	1,7	1,3	2,1	2,5	2,9	1,3	2,0	2,3	2,7
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

FC







1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

	M1				M3				M4			
10	0,6	0,8	1,0	1,2	1,0	1,3	1,7	2,1	0,9	1,3	1,6	2,0
20	0,7	0,9	1,1	1,3	1,1	1,5	1,9	2,3	1,1	1,4	1,8	2,2
25	0,6	0,8	1,0	1,3	1,0	1,4	1,8	2,2	1,0	1,4	1,7	2,1
30-35	0,9	1,3	1,5	1,8	1,6	2,3	2,7	3,0	1,5	2,2	2,5	2,9
40		1,4	1,7	1,9		2,5	2,9	3,2		2,3	2,7	3,1
50	1,0	1,5	1,8	2,0	1,8	2,7	3,0	3,4	1,7	2,5	2,9	3,2
70	1,0	1,4	1,7	1,9	1,7	2,5	2,9	3,2	1,6	2,3	2,7	3,1
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90-95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

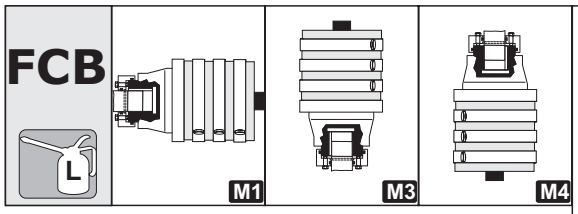


A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

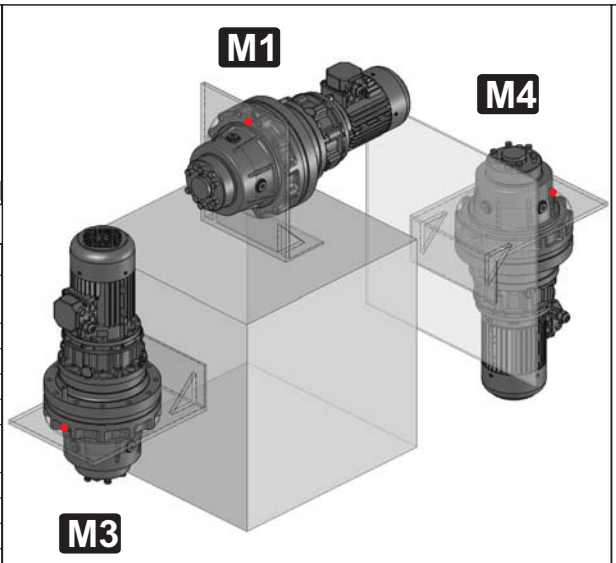
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

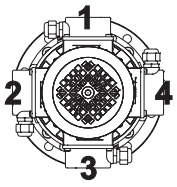
A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

FCB



	M1				M3				M4			
30 35	0,9	1,3	1,5	1,8	1,6	2,3	2,7	3,0	1,5	2,2	2,5	2,9
40		1,4	1,7	1,9		2,5	2,9	3,2		2,3	2,7	3,1
50	1,0	1,5	1,8	2,0	1,8	2,7	3,0	3,4	1,7	2,5	2,9	3,2
70	1,0	1,4	1,7	1,9	1,7	2,5	2,9	3,2	1,6	2,3	2,7	3,1
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90 95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
150	2,4	3,2	3,7	4,0	4,1	5,6	6,5	6,8	3,9	5,3	6,1	6,5
180		3,2	3,7	4,0		5,6	6,5	6,8		5,3	6,1	6,5
200	2,4	3,2	3,6	3,9	4,1	5,5	6,3	6,7	3,9	5,2	5,9	6,3
250	3,4	4,8	5,9	6,1	5,9	8,4	10,2	10,5	5,6	7,9	9,6	10,0
280		5,0	6,2	6,4		8,6	10,6	11,0		8,2	10,1	10,4
EX	1	2	3	4	1	2	3	4	1	2	3	4

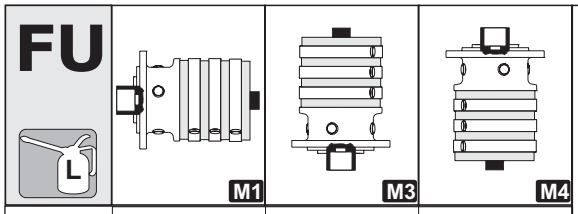




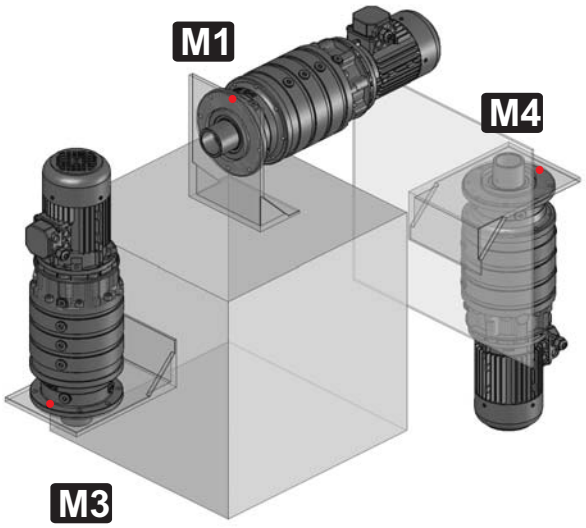
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

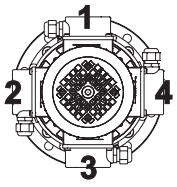
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

FU



	M1				M3				M4			
10	0,6	0,8	1,0	1,2	1,0	1,3	1,7	2,1	0,9	1,3	1,6	2,0
20	0,7	0,9	1,1	1,3	1,1	1,5	1,9	2,3	1,1	1,4	1,8	2,2
25	0,6	0,8	1,0	1,3	1,0	1,4	1,8	2,2	1,0	1,4	1,7	2,1
30-35	0,9	1,3	1,5	1,8	1,6	2,3	2,7	3,0	1,5	2,2	2,5	2,9
40		1,4	1,7	1,9		2,5	2,9	3,2		2,3	2,7	3,1
50	1,0	1,5	1,8	2,0	1,8	2,7	3,0	3,4	1,7	2,5	2,9	3,2
70	1,0	1,4	1,7	1,9	1,7	2,5	2,9	3,2	1,6	2,3	2,7	3,1
80	1,6	2,6	2,9	3,1	2,8	4,6	4,9	5,3	2,6	4,3	4,7	5,0
90-95		2,9	3,1	3,4		5,0	5,4	5,8		4,8	5,1	5,5
100	1,9	3,0	3,5	3,7	3,2	5,2	6,1	6,5	3,1	5,0	5,8	6,1
150	2,1	3,0	3,5	3,7	3,7	5,2	6,1	6,5	3,5	5,0	5,8	6,1
180		3,0	3,5	3,7		5,2	6,1	6,5		5,0	5,8	6,1
200	2,1	3,0	3,4	3,6	3,7	5,1	5,9	6,3	3,5	4,9	5,6	5,9
EX	1	2	3	4	1	2	3	4	1	2	3	4





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

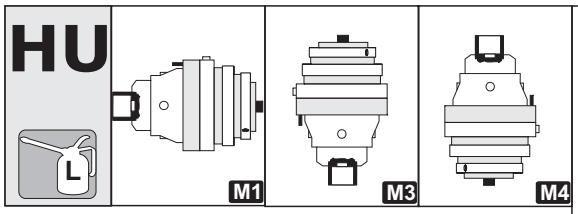
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

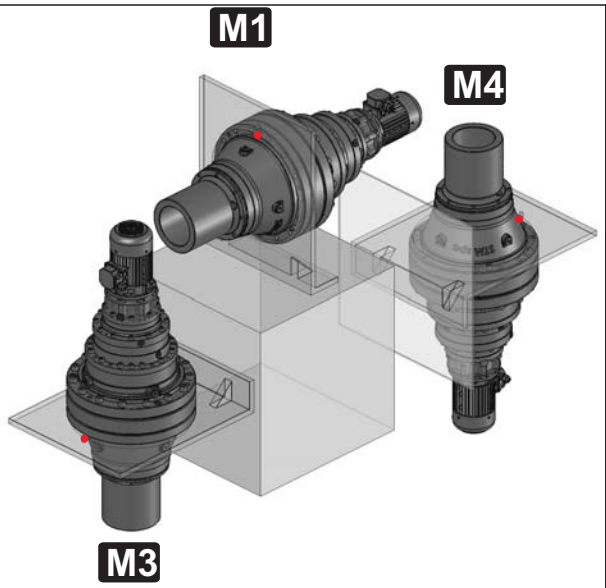
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

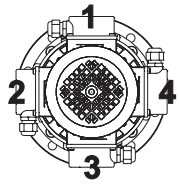
A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

HU



	M1				M3				M4			
150	2,4	3,2	3,7	4,0	4,1	5,6	6,5	6,8	3,9	5,3	6,1	6,5
180		3,2	3,7	4,0		5,6	6,5	6,8		5,3	6,1	6,5
200	2,4	3,2	3,6	3,9	4,1	5,5	6,3	6,7	3,9	5,2	5,9	6,3
250	3,4	4,8	5,9	6,1	5,9	8,4	10,2	10,5	5,6	7,9	9,6	10,0
280		5,0	6,2	6,4		8,6	10,6	11,0		8,2	10,1	10,4
300	3,6	5,2	6,3	6,5	6,2	8,9	10,9	11,3	5,9	8,5	10,4	10,7
EX	1	2	3	4	1	2	3	4	1	2	3	4

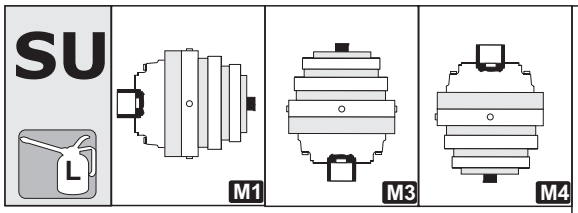




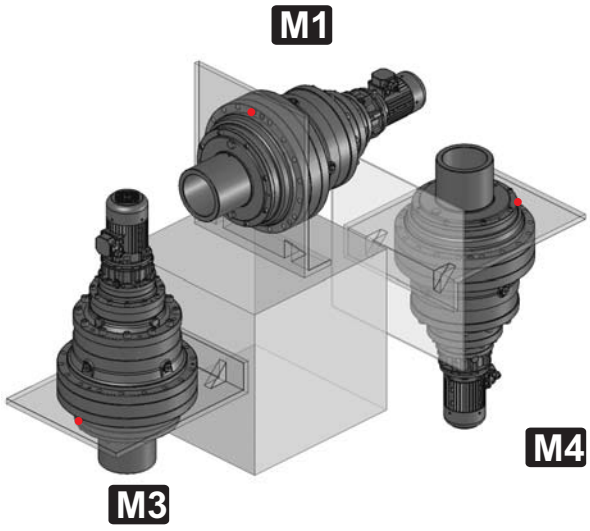
1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

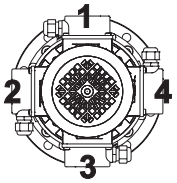
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

SU



	M1				M3				M4			
350 360	2,5	4,5	5,6	5,8	4,4	7,7	9,7	10,1	4,1	7,3	9,2	9,5
420	2,5	4,6	5,5	6,0	4,4	8,0	9,5	10,4	4,1	7,6	9,0	9,8
600 650	4,3	8,1	9,5	10,6	7,4	14,0	16,4	18,2	7,0	13,2	15,6	17,3
800 850	4,3	8,0	9,6	10,8	7,5	13,9	16,6	18,6	7,1	13,1	15,8	17,6
>850	*											





1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



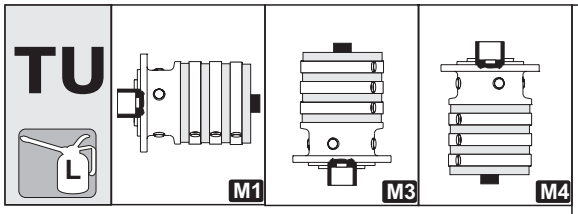
A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

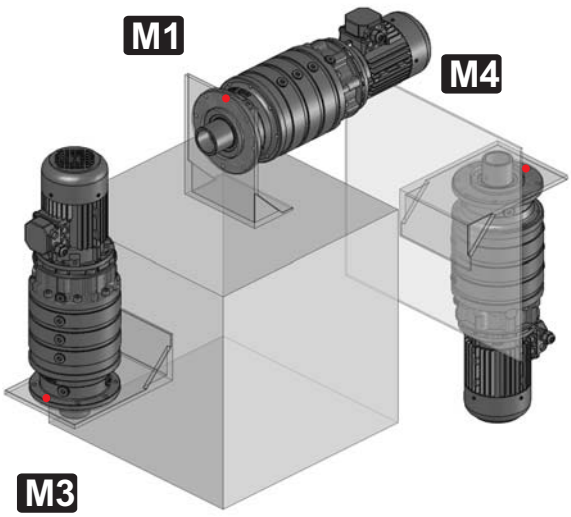
Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

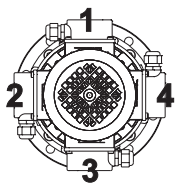
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.







1 - Standard
Position boîte à bornes
Posición bloque de conexión
Posição do bloco de terminais

	M1				M3				M4			
150	3,1	4,0	4,5	4,7	5,4	6,9	7,8	8,2	5,1	6,6	7,4	7,7
180		4,0	4,5	4,7		6,9	7,8	8,2		6,6	7,4	7,7
200	3,1	4,0	4,4	4,6	5,4	6,8	7,6	8,0	5,1	6,5	7,2	7,6
250	4,2	5,7	6,7	6,9	7,3	9,8	11,6	12,0	6,9	9,3	11,0	11,3
280		5,8	7,0	7,2		10,1	12,1	12,4		9,5	11,4	11,8
300	5,0	6,5	7,7	7,9	8,6	11,3	13,3	13,7	8,1	10,7	12,6	13,0
EX	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;
B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;
C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

Attention
Choix de la grandeur OT : Section E;
Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

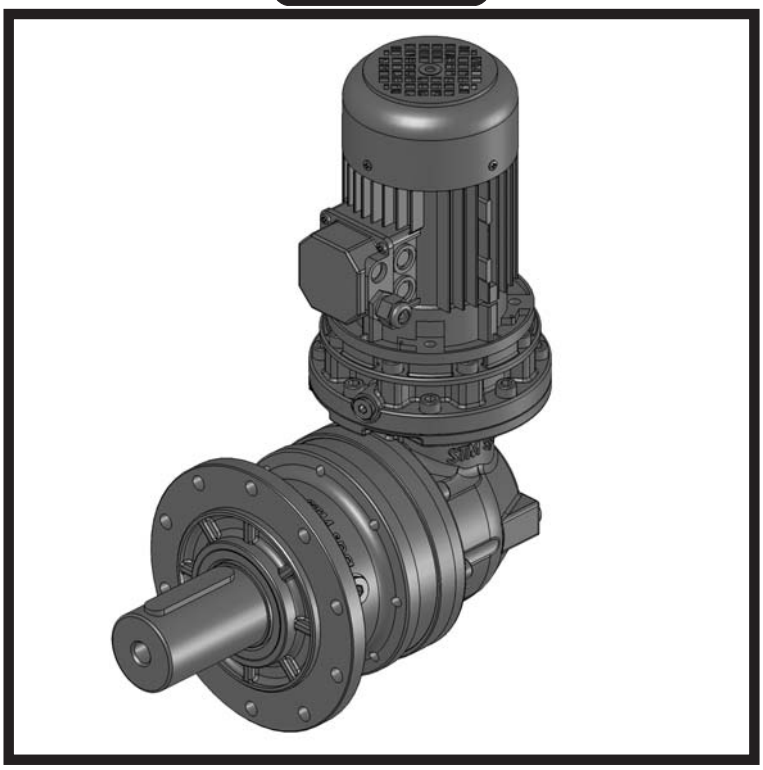
D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

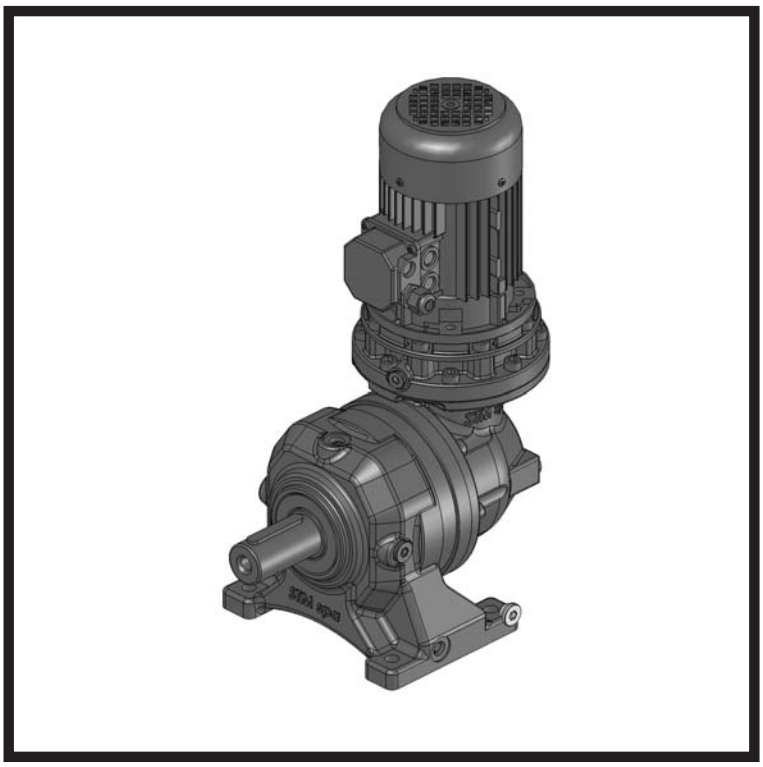
A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);
B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);
C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.
Atención
Elección tamaño OT: Sección E;
Instalación OT : Punto 8.3 manual de uso y mantenimiento.
D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);
B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);
C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.
Atenção
Escolha do tamanho OT: Secção E;
Instalação OT : Ponto 8.3 manual de uso e manutenção.
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

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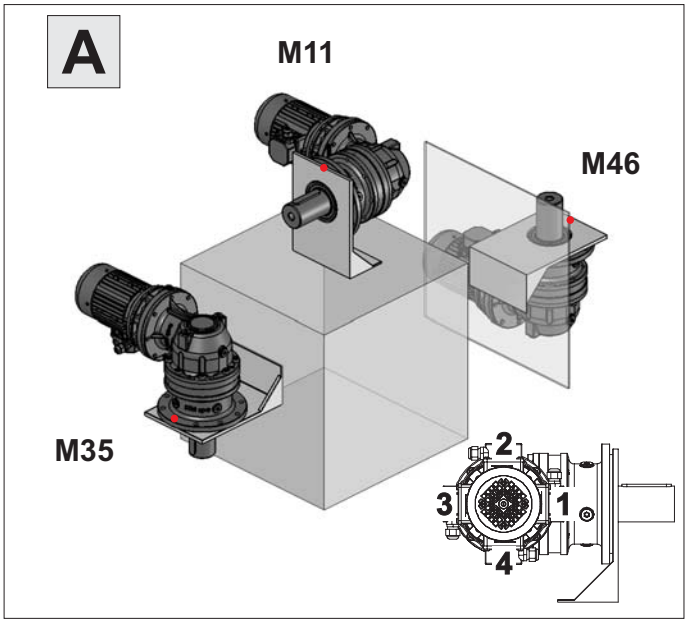
EXB



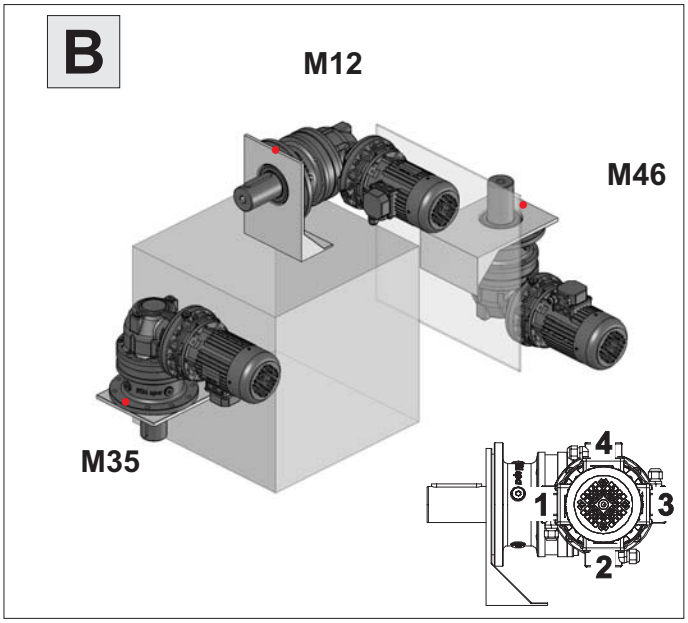


R-M.-T-H.-X-S.-F.

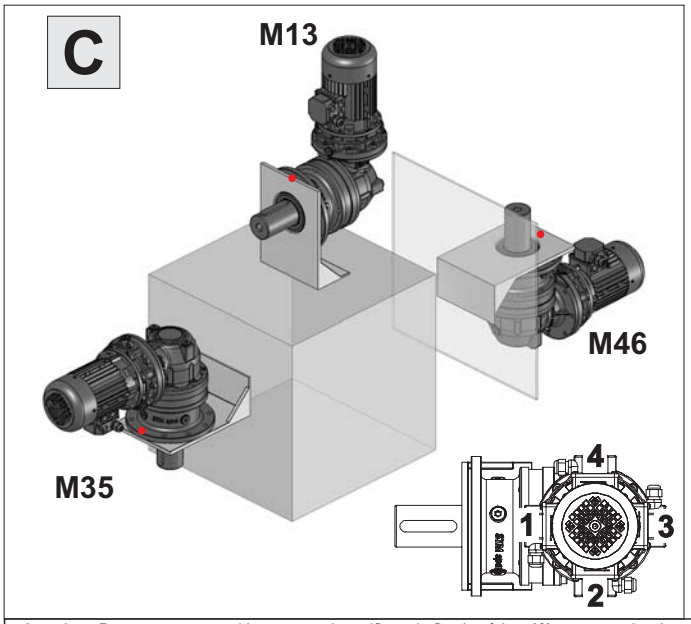
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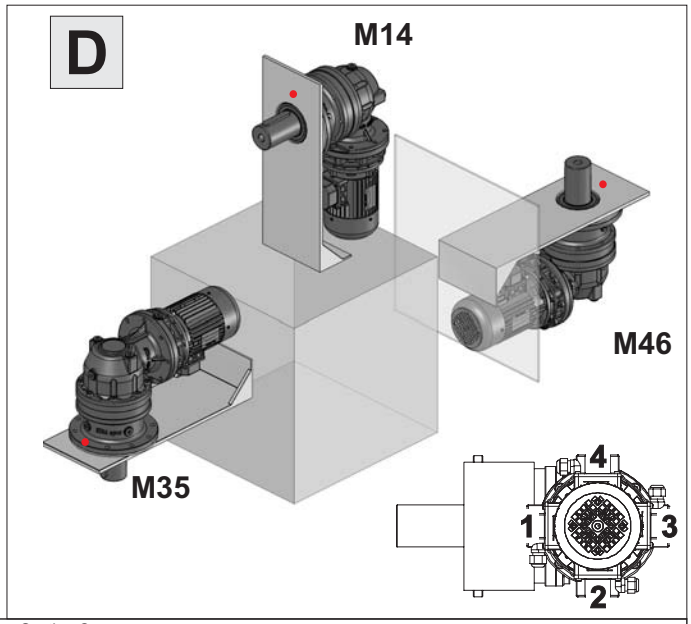
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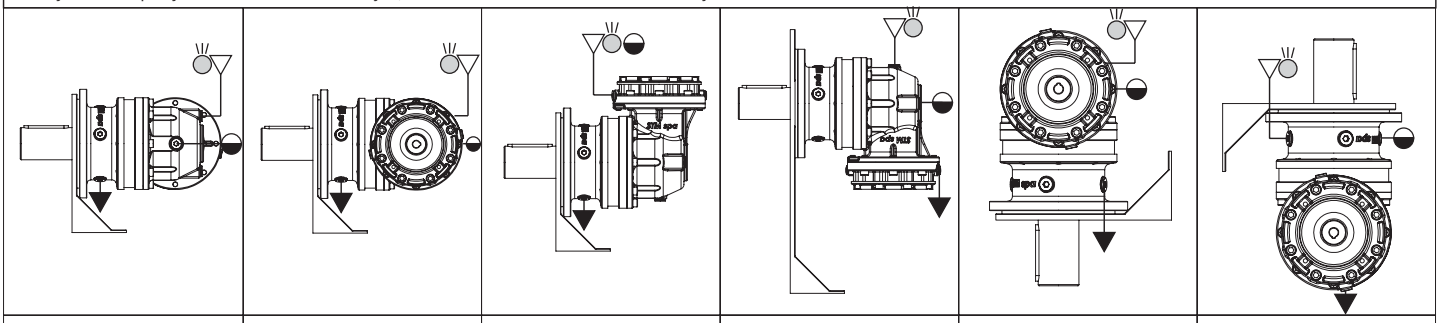
C



D



- Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
  Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
  Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



M11	M12	M13	M14	M35	M46

N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

R-F-FU-FC-FB

	M11			M12			M13			M14			M35			M46		
10	1,0	1,3	1,5	1,0	1,3	1,5	1,9	2,3	2,7	1,1	1,3	1,5	1,5	1,9	2,2	1,9	2,2	2,6
20	1,1	1,4	1,6	1,1	1,4	1,6	2,1	2,5	2,9	1,2	1,4	1,6	1,7	2,1	2,4	2,1	2,4	2,8
25	1,1	1,3	1,5	1,1	1,3	1,5	2,0	2,4	2,8	1,1	1,4	1,6	1,6	2,0	2,3	2,0	2,3	2,7
30-35	1,4	1,8	2,0	1,4	1,8	2,0	2,6	3,3	3,6	1,5	1,9	2,1	2,1	2,8	3,2	2,5	3,1	3,5
40		1,9	2,1		1,9	2,1		3,4	3,8		2,0	2,2		3,0	3,4		3,3	3,7
50	2,6	2,0	2,2	2,6	2,0	2,2	4,9	3,6	4,0	2,8	2,1	2,3	3,6	3,2	3,6	4,8	3,5	3,9
70	2,6	1,9	2,1	2,6	1,9	2,1	4,8	3,4	3,8	2,8	2,0	2,2	3,5	3,0	3,4	4,7	3,3	3,7
80	3,3	3,1	3,3	3,3	3,1	3,3	6,3	5,5	5,9	3,5	3,2	3,4	4,7	5,1	5,5	6,1	5,3	5,7
90-95		3,4	3,6		3,4	3,6		6,0	6,4		3,5	3,7		5,6	5,9		5,7	6,1
100	3,6	4,6	4,0	3,6	4,6	4,0	6,7	8,3	7,1	3,8	4,8	4,1	5,2	7,0	6,6	6,6	8,1	6,7
150		4,6	4,0	0,0	4,6	4,0		8,3	7,1		4,8	4,1		7,0	6,6		8,1	6,7
180		4,6	4,0	0,0	4,6	4,0		8,3	7,1		4,8	4,1		7,0	6,6		8,1	6,7
200		4,6	3,9	0,0	4,6	3,9		8,2	6,9		4,8	4,0		6,9	6,4		8,0	6,6
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

M-MX

	M11			M12			M13			M14			M35			M46		
10	1,1	1,4	1,6	1,1	1,4	1,6	2,1	2,5	2,9	1,2	1,4	1,6	1,7	2,1	2,4	2,1	2,4	2,8
20	1,3	1,5	1,7	1,3	1,5	1,7	2,3	2,7	3,1	1,3	1,5	1,8	1,9	2,2	2,6	2,2	2,6	3,0
25	1,2	1,4	1,6	1,2	1,4	1,6	2,2	2,6	3,0	1,3	1,5	1,7	1,8	2,1	2,5	2,1	2,5	2,9
30-35	1,5	1,9	2,1	1,5	1,9	2,1	2,8	3,4	3,8	1,6	2,0	2,2	2,3	3,0	3,4	2,7	3,3	3,7
40		2,0	2,2		2,0	2,2		3,6	4,0		2,1	2,3		3,2	3,6		3,5	3,9
50	2,8	2,1	2,4	2,8	2,1	2,4	5,1	3,8	4,2	3,0	2,2	2,4	3,7	3,4	3,8	5,0	3,7	4,0
70	2,7	2,0	2,2	2,7	2,0	2,2	5,0	3,6	4,0	2,9	2,1	2,3	3,7	3,2	3,6	4,9	3,5	3,9
80	3,4	3,2	3,4	3,4	3,2	3,4	6,4	5,6	6,0	3,6	3,2	3,5	4,8	5,2	5,6	6,2	5,4	5,7
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

S-SU-SB - FS-FSB - FP

	M11			M12			M13			M14			M35			M46		
10	0,9	1,1	1,3	0,9	1,1	1,3	1,6	2,0	2,4	0,9	1,1	1,4	1,2	1,6	2,0	1,6	2,0	2,3
20	1,0	1,2	1,4	1,0	1,2	1,4	1,8	2,2	2,6	1,0	1,3	1,5	1,4	1,8	2,1	1,8	2,1	2,5
25	0,9	1,1	1,4	0,9	1,1	1,4	1,7	2,1	2,5	1,0	1,2	1,4	1,3	1,7	2,1	1,7	2,1	2,4
30-35	1,2	1,6	1,8	1,2	1,6	1,8	2,2	2,9	3,3	1,3	1,6	1,9	1,8	2,4	2,8	2,1	2,8	3,1
40		1,7	1,9		1,7	1,9		3,1	3,4		1,8	2,0		2,6	3,0		3,0	3,3
50	2,4	1,8	2,0	2,4	1,8	2,0	4,5	3,3	3,6	2,6	1,9	2,1	3,2	2,8	3,2	4,5	3,1	3,5
70	2,4	1,7	1,9	2,4	1,7	1,9	4,4	3,1	3,4	2,6	1,8	2,0	3,1	2,6	3,0	4,4	3,0	3,3
80	2,8	2,6	2,8	2,8	2,6	2,8	5,3	4,6	5,0	2,9	2,6	2,9	3,7	4,1	4,5	5,2	4,4	4,8
90-95		2,7	3,0		2,7	3,0		4,9	5,2		2,8	3,0		4,4	4,8		4,7	5,0
100	3,0	4,0	3,3	3,0	4,0	3,3	5,6	7,2	5,9	3,1	4,2	3,4	4,0	5,8	5,5	5,5	7,0	5,7
150		4,0	3,3		4,0	3,3		7,2	5,9		4,2	3,4		5,8	5,5		7,0	5,7
180		4,0	3,3		4,0	3,3		7,2	5,9		4,2	3,4		5,8	5,5		7,0	5,7
200		3,9	3,2		3,9	3,2		7,1	5,7		4,1	3,3		5,7	5,3		6,9	5,5
250		5,8	5,5		5,8	5,5		10,4	9,7		5,9	5,6		8,9	9,3		10,1	9,3
280		5,9	6,9		5,9	6,9		10,7	12,3		6,1	7,1		9,2	11,0		10,3	11,8
300		5,9	6,9		5,9	6,9		10,6	12,2		6,0	7,1		9,1	10,9		10,3	11,7
350-360		6,2	7,2		6,2	7,2		11,2	12,8		6,4	7,4		9,6	11,4		10,8	12,3
420			7,1			7,1			12,6			7,3			11,3			12,1
600-650			11,3			11,3			19,9			11,4			18,4			19,1
800-850			11,4			11,4			20,1			11,5			18,6			19,3
>850	*																	
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

* Contacter notre bureau technico-commercial / * *Contactar con nuestra oficina técnica comercial* / * Contactar o nosso departamento técnico comercial

A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;



B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;

C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

Attention

Choix de la grandeur OT : Section E;

Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);

B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);

C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.

Atención

Elección tamaño OT: Sección E;

Instalación OT : Punto 8.3 manual de uso y mantenimiento.

D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);

B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);

C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.

Atenção

Escolha do tamanho OT: Secção E;

Instalação OT : Ponto 8.3 manual de uso e manutenção.

D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

H

	M11			M12			M13			M14			M35			M46		
150		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
180		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
200		4,8	4,1		4,8	4,1		8,6	7,2		5,0	4,2		7,3	6,8		8,3	6,9
250		6,6	6,4		6,6	6,4		11,9	11,1		6,7	6,4		10,3	10,7		11,4	10,6
280		6,8	7,8		6,8	7,8		12,1	13,7		6,9	8,0		10,6	12,4		11,7	13,2
300		6,9	7,9		6,9	7,9		12,4	14,0		7,1	8,1		10,9	12,7		12,0	13,5
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

X-T

	M11			M12			M13			M14			M35			M46		
30-35		2,4	2,6		2,4	2,6		4,3	4,7		2,5	2,7		3,9	4,2		4,1	4,5
40		2,5	2,7		2,5	2,7		4,5	4,9		2,6	2,8		4,0	4,4		4,3	4,7
50		2,6	2,8		2,6	2,8		4,7	5,1		2,7	2,9		4,2	4,6		4,5	4,8
70		2,5	2,7		2,5	2,7		4,5	4,9		2,6	2,8		4,0	4,4		4,3	4,7
80		4,0	4,2		4,0	4,2		7,1	7,4		4,1	4,3		6,6	7,0		6,7	7,1
90-95		4,2	4,4		4,2	4,4		7,3	7,7		4,2	4,4		6,9	7,3		7,0	7,4
100		5,4	4,8		5,4	4,8		9,7	8,4		5,6	4,8		8,3	7,9		9,3	8,0
150		5,6	5,0		5,6	5,0		10,0	8,8		5,8	5,1		8,7	8,3		9,7	8,4
180		5,6	5,0		5,6	5,0		10,0	8,8		5,8	5,1		8,7	8,3		9,7	8,4
200		5,6	4,9		5,6	4,9		9,9	8,6		5,8	4,9		8,6	8,1		9,6	8,2
250		7,4	7,2		7,4	7,2		13,3	12,6		7,6	7,3		11,7	12,1		12,8	12,0
280		7,6	8,6		7,6	8,6		13,6	15,2		7,7	8,8		12,0	13,8		13,0	14,5
300		8,3	9,3		8,3	9,3		14,8	16,4		8,4	9,5		13,2	15,1		14,2	15,7
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

FCB

	M11			M12			M13			M14			M35			M46		
10	1,0	1,3	1,5	1,0	1,3	1,5	1,9	2,3	2,7	1,1	1,3	1,5	1,5	1,9	2,2	1,9	2,2	2,6
20	1,1	1,4	1,6	1,1	1,4	1,6	2,1	2,5	2,9	1,2	1,4	1,6	1,7	2,1	2,4	2,1	2,4	2,8
25	1,1	1,3	1,5	1,1	1,3	1,5	2,0	2,4	2,8	1,1	1,4	1,6	1,6	2,0	2,3	2,0	2,3	2,7
30-35	1,4	1,8	2,0	1,4	1,8	2,0	2,6	3,3	3,6	1,5	1,9	2,1	2,1	2,8	3,2	2,5	3,1	3,5
40		1,9	2,1		1,9	2,1		3,4	3,8		2,0	2,2		3,0	3,4		3,3	3,7
50	2,6	2,0	2,2	2,6	2,0	2,2	4,9	3,6	4,0	2,8	2,1	2,3	3,6	3,2	3,6	4,8	3,5	3,9
70	2,6	1,9	2,1	2,6	1,9	2,1	4,8	3,4	3,8	2,8	2,0	2,2	3,5	3,0	3,4	4,7	3,3	3,7
80	3,3	3,1	3,3	3,3	3,1	3,3	6,3	5,5	5,9	3,5	3,2	3,4	4,7	5,1	5,5	6,1	5,3	5,7
90-95		3,4	3,6		3,4	3,6		6,0	6,4		3,5	3,7		5,6	5,9		5,7	6,1
100	3,6	4,6	4,0	3,6	4,6	4,0	6,7	8,3	7,1	3,8	4,8	4,1	5,2	7,0	6,6	6,6	8,1	6,7
150		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
180		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
200		4,8	4,1		4,8	4,1		8,6	7,2		5,0	4,2		7,3	6,8		8,3	6,9
250		6,6	6,4		6,6	6,4		11,9	11,1		6,7	6,4		10,3	10,7		11,4	10,6
280		6,8	7,8		6,8	7,8		12,1	13,7		6,9	8,0		10,6	12,4		11,7	13,2
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;



B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;

C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

Attention

Choix de la grandeur OT : Section E;

Installation OT : Point 8.3 manuel d'utilisation et de maintenance.

D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);

B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);

C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.

Atención

Elección tamaño OT: Sección E;

Instalación OT : Punto 8.3 manual de uso y mantenimiento.

D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);

B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);

C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.

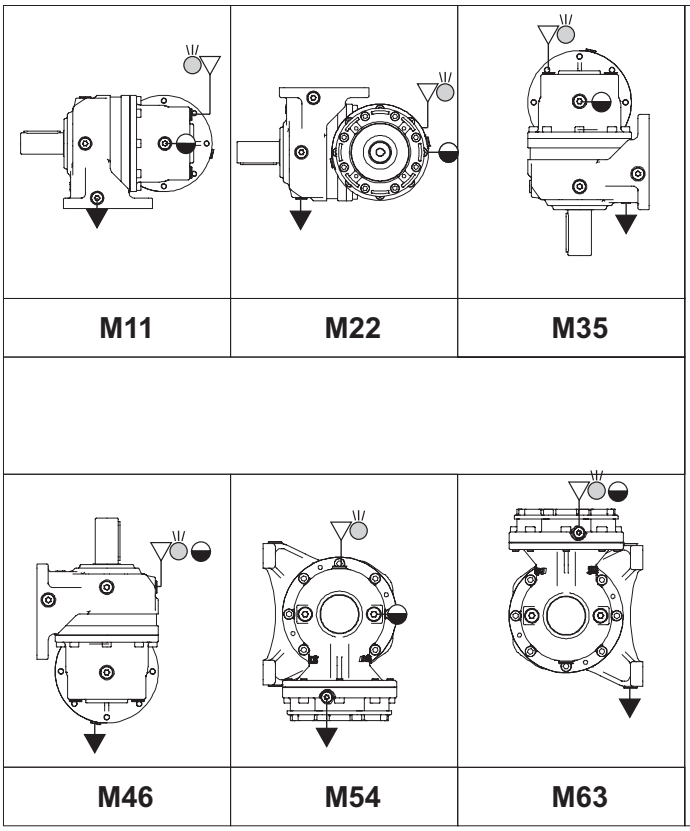
Atenção

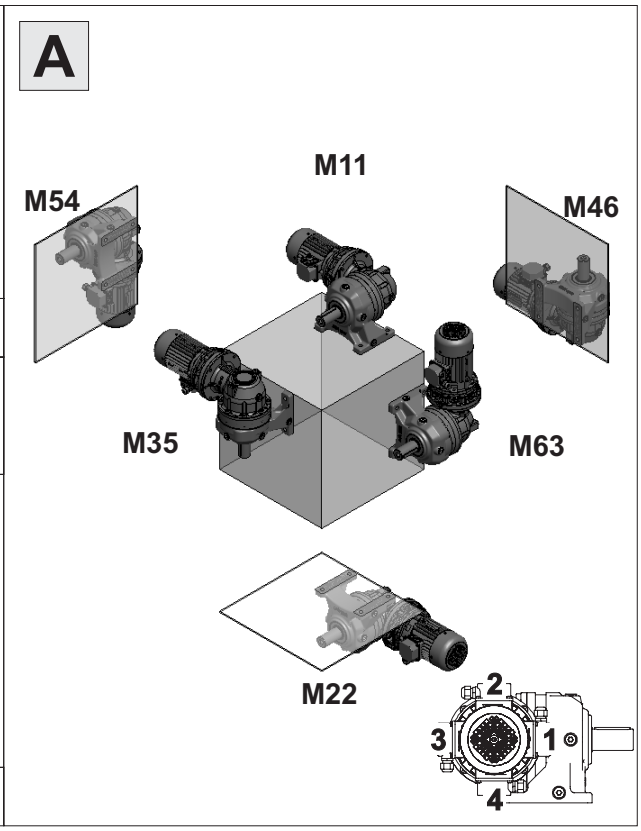
Escolha do tamanho OT: Secção E;

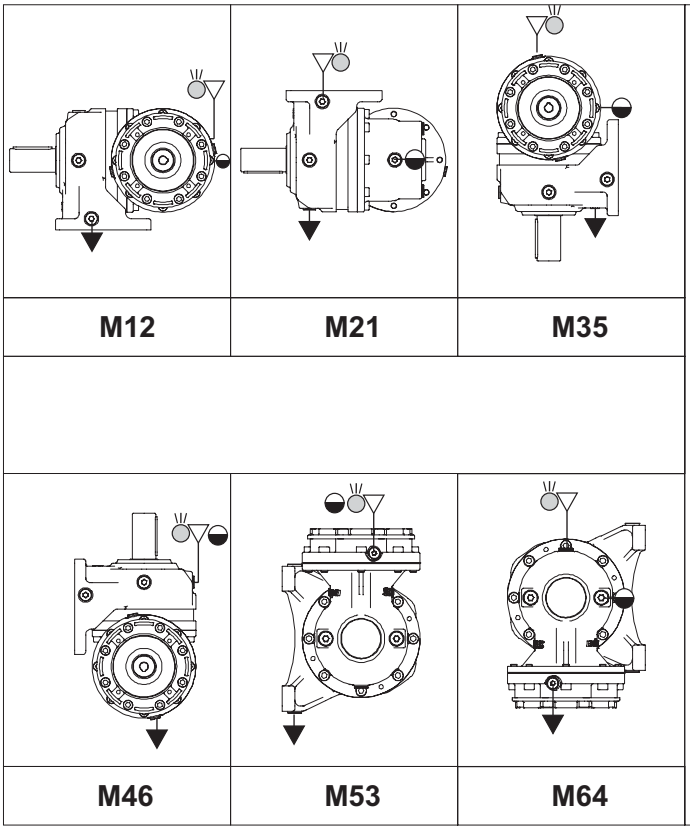
Instalação OT : Ponto 8.3 manual de uso e manutenção.

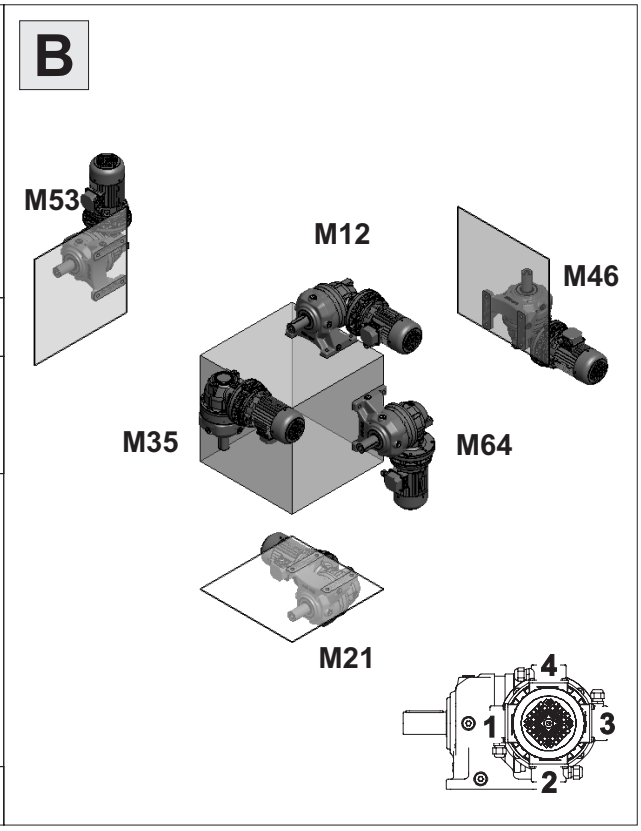
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

P-PH-PX-PS-PSB





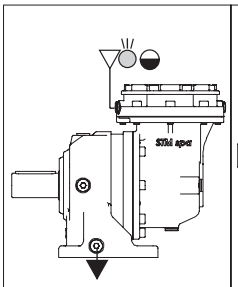




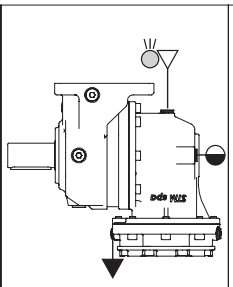
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◌ Purge / *Respiradero* / Respiro

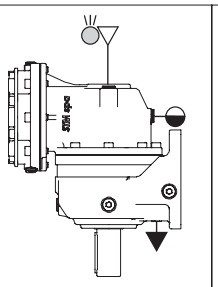
P-PH-PX-PS-PSB



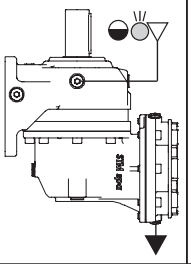
M13



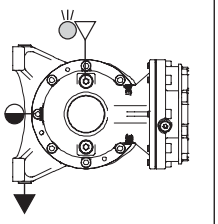
M24



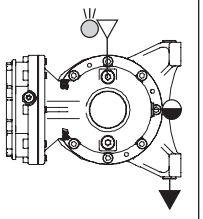
M35



M46

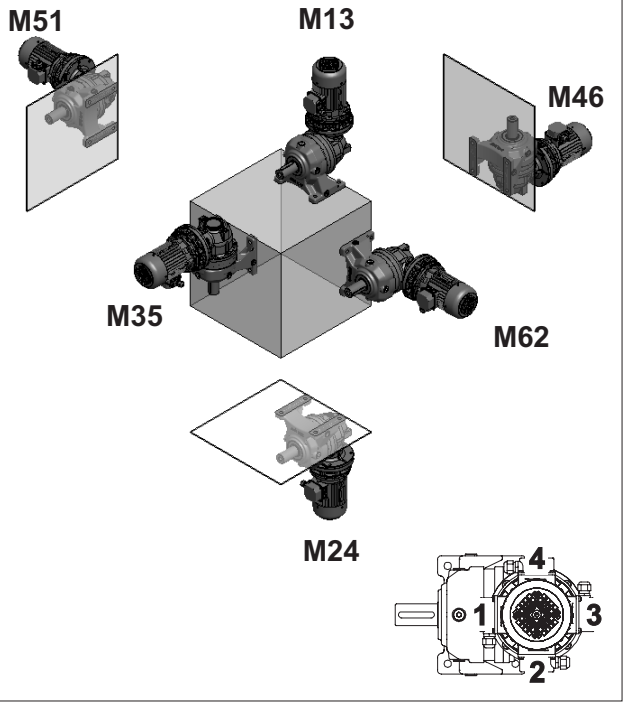


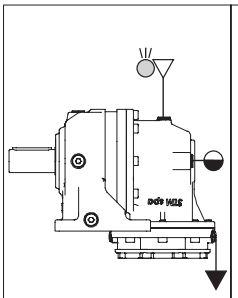
M51



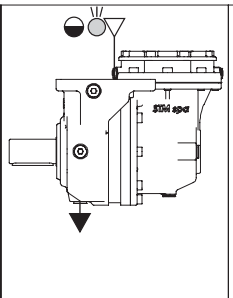
M62

C

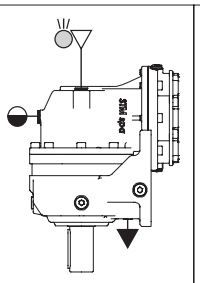




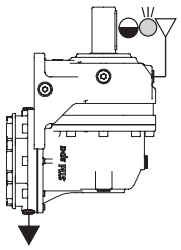
M14



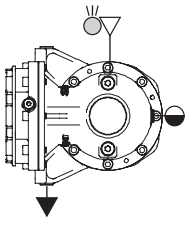
M23



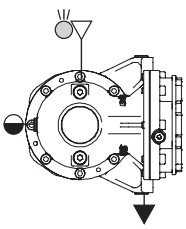
M35



M46

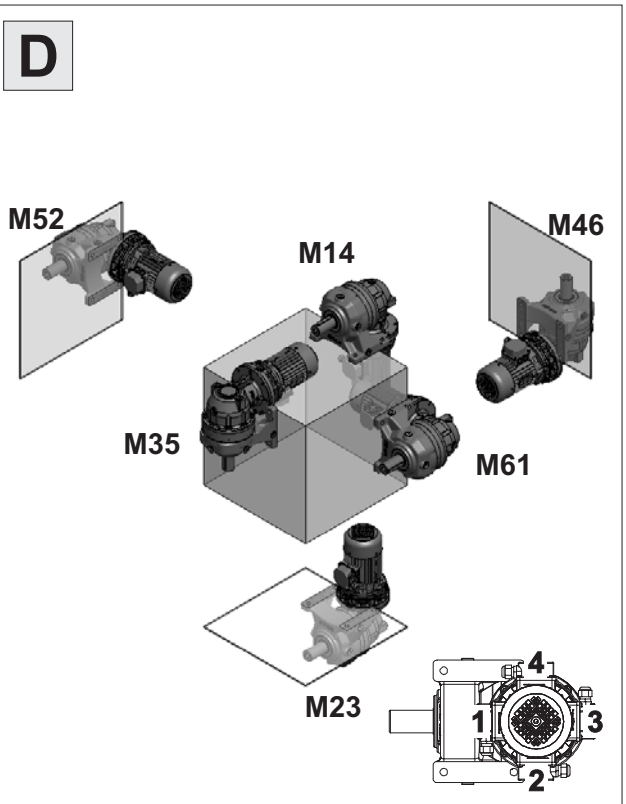


M52



M61

D



N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◌ Purge / *Respiradero* / Respiro

P

	M11-M21 M51-M61			M12-M22 M52-M62			M13-M23 M53-M63			M14-M24 M54-M64			M35			M46		
10	1,3	1,5	1,7	1,3	1,5	1,7	2,3	2,7	3,1	1,3	1,5	1,8	1,9	2,2	2,6	2,2	2,6	3,0
20	1,4	1,6	1,8	1,4	1,6	1,8	2,5	2,9	3,3	1,4	1,6	1,9	2,1	2,4	2,8	2,4	2,8	3,1
25	1,3	1,5	1,7	1,3	1,5	1,7	2,4	2,8	3,2	1,4	1,6	1,8	2,0	2,3	2,7	2,3	2,7	3,0
30-35	2,1	2,5	2,7	2,1	2,5	2,7	3,7	4,4	4,8	2,1	2,5	2,7	3,3	4,0	4,3	3,6	4,2	4,6
40		2,6	2,8	D	2,6	2,8	D	4,6	5,0		2,6	2,9		4,1	4,5		4,4	4,8
50	3,3	2,7	2,9	3,3	2,7	2,9	6,0	4,8	5,2	3,5	2,7	3,0	4,7	4,3	4,7	5,9	4,6	4,9
70	3,3	2,6	2,8	3,3	2,6	2,8	6,0	4,6	5,0	3,5	2,6	2,9	4,6	4,1	4,5	5,8	4,4	4,8
80	4,0	3,8	4,0	4,0	3,8	4,0	7,4	6,7	7,1	4,2	3,8	4,1	5,8	6,2	6,6	7,2	6,4	6,7
90-95		4,1	4,3		4,1	4,3		7,1	7,5		4,1	4,3		6,7	7,1		6,8	7,2
100	4,3	5,3	4,7	4,3	5,3	4,7	7,9	9,5	8,2	4,4	5,5	4,7	6,3	8,1	7,8	7,6	9,1	7,8
150		5,7	5,1		5,7	5,1		10,2	9,0		5,9	5,2		8,9	8,5		9,9	8,5
180		5,7	5,1		5,7	5,1		10,2	9,0		5,9	5,2		8,9	8,5		9,9	8,5
200		5,7	5,0		5,7	5,0		10,1	8,8		5,9	5,1		8,8	8,3		9,8	8,4
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

PH

	M11-M21 M51-M61			M12-M22 M52-M62			M13-M23 M53-M63			M14-M24 M54-M64			M35			M46		
150		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
180		4,8	4,2		4,8	4,2		8,7	7,4		5,0	4,3		7,4	7,0		8,4	7,1
200		4,8	4,1		4,8	4,1		8,6	7,2		5,0	4,2		7,3	6,8		8,3	6,9
250		6,6	6,4		6,6	6,4		11,9	11,1		6,7	6,4		10,3	10,7		11,4	10,6
280		6,8	7,8		6,8	7,8		12,1	13,7		6,9	8,0		10,6	12,4		11,7	13,2
300		6,9	7,9		6,9	7,9		12,4	14,0		7,1	8,1		10,9	12,7		12,0	13,5
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

PX

	M11-M21 M51-M61			M12-M22 M52-M62			M13-M23 M53-M63			M14-M24 M54-M64			M35			M46		
150		5,6	5,0		5,6	5,0		10,0	8,8		5,8	5,1		8,7	8,3		9,7	8,4
180		5,6	5,0		5,6	5,0		10,0	8,8		5,8	5,1		8,7	8,3		9,7	8,4
200		5,6	4,9		5,6	4,9		9,9	8,6		5,8	4,9		8,6	8,1		9,6	8,2
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

PS-PSB

	M11-M21 M51-M61			M12-M22 M52-M62			M13-M23 M53-M63			M14-M24 M54-M64			M35			M46		
350-360		6,2	7,2		6,2	7,2		11,2	12,8		6,4	7,4		9,6	11,4		10,8	12,3
420			7,1			7,1			12,6			7,3			11,3			12,1
600-650			11,3			11,3			19,9			11,4			18,4			19,1
800-850			11,4			11,4			20,1			11,5			18,6			19,3
>850	*																	
	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

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A. n2 < 5 rpm - Si la vitesse en sortie du réducteur est inférieure à 5 rpm, faire référence aux quantités de la position M4 (voir point C) pour le remplissage;

B. n2 < 1 rpm - Si la vitesse en sortie du réducteur est, par contre, inférieure à 1 rpm, faire référence aux quantités de la position M3 (voir point C) ;

C. C Pour les positions de montage M3 et M4 le vase d'expansion OT doit nécessairement être installé.

Attention

Choix de la grandeur OT : Section E;

Installation OT : Point 8.3 manuel d'utilisation et de maintenance.



D. Les quantités d'huile sont approximatives ; pour une lubrification correcte faire référence au niveau signalé sur le réducteur.

A. n2 < 5 rpm - En caso de que la velocidad de salida del reductor sea inferior a 5 rpm, para el llenado consultar las cantidades de la posición M4 (ver punto C);

B. n2 < 1 rpm - En caso de que la velocidad de salida del reductor sea inferior a 1 rpm, para el llenado consultar las cantidades de la posición M3 (ver punto C);

C. Para las posiciones de montaje M3 y M4 es necesario instalar el vaso de expansión OT.

Atención

Elección tamaño OT: Sección E;

Instalación OT : Punto 8.3 manual de uso y mantenimiento.

D. Las cantidades de aceite son aproximadas; para una correcta lubricación, consultar el nivel marcado en el reductor.

A. n2 < 5 rpm –Caso a velocidade de saída do redutor seja inferior a 5 rpm, para o abastecimento consultar as quantidades da posição M4 (ver o ponto C);

B. n2 < 1 rpm - Caso a velocidade de saída do redutor seja inferior a 1 rpm, para o abastecimento consultar as quantidades da posição M3 (ver o ponto C);

C. Para as posições de montagem M3 e M4, é necessário instalar o vaso de expansão OT.

Atenção

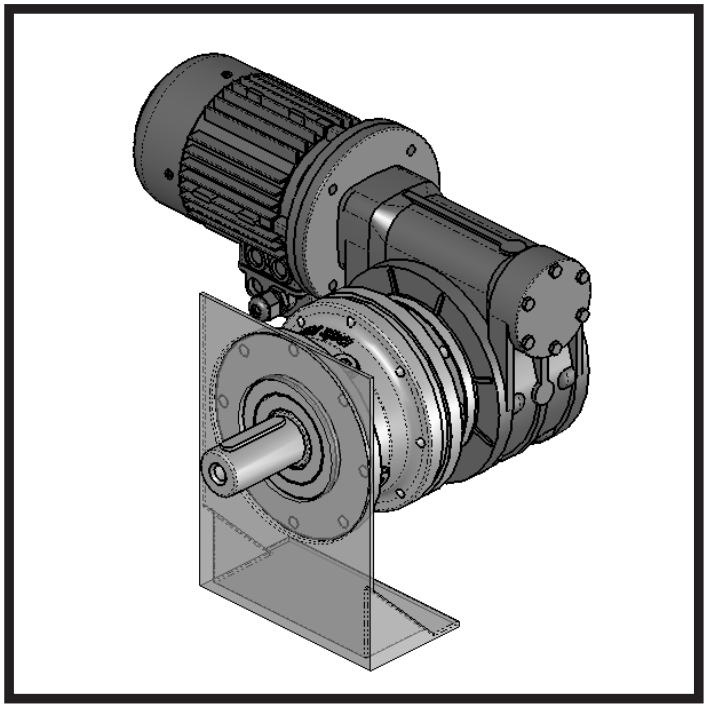
Escolha do tamanho OT: Secção E;

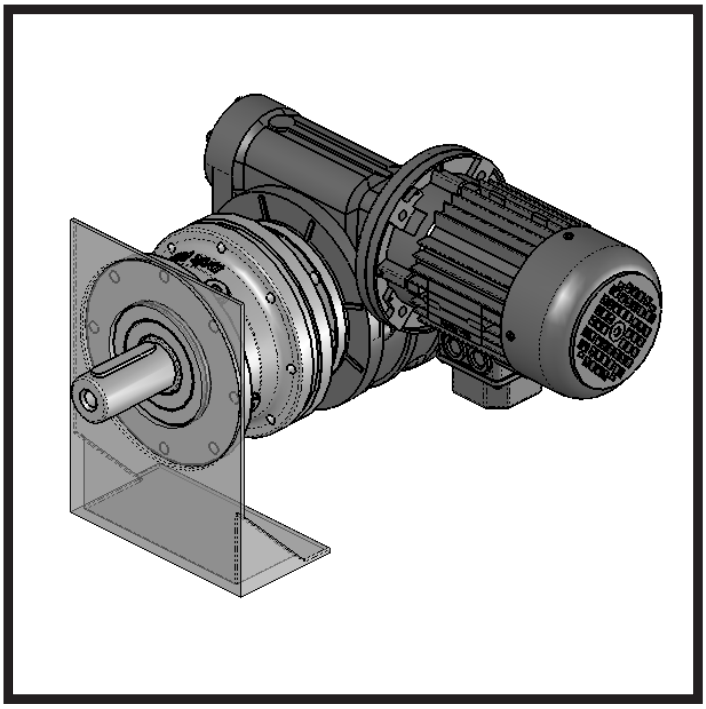
Instalação OT : Ponto 8.3 manual de uso e manutenção.

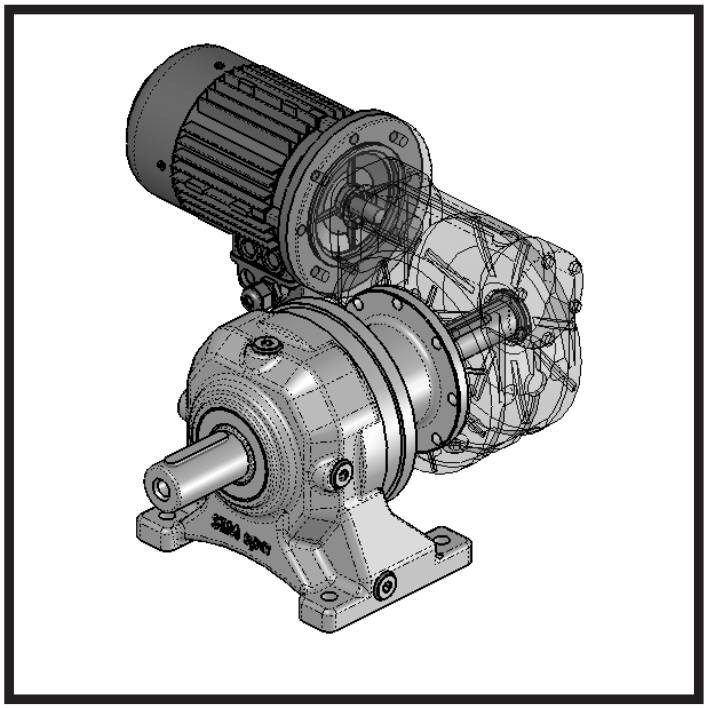
D. As quantidades de óleo aproximadas; para uma correta lubrificação, é preciso consultar o nível marcado no redutor.

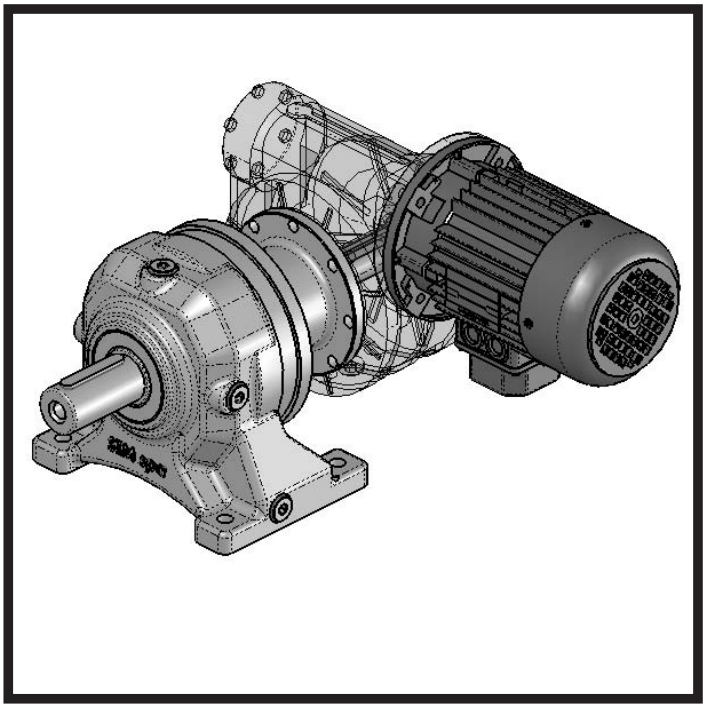
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EXV





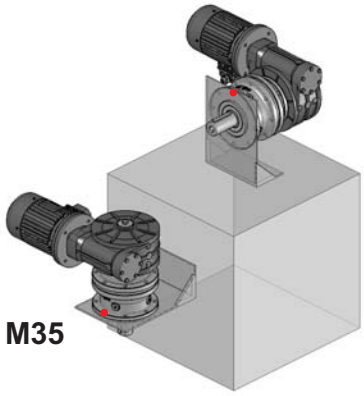




R-M-T-H-X-S-F

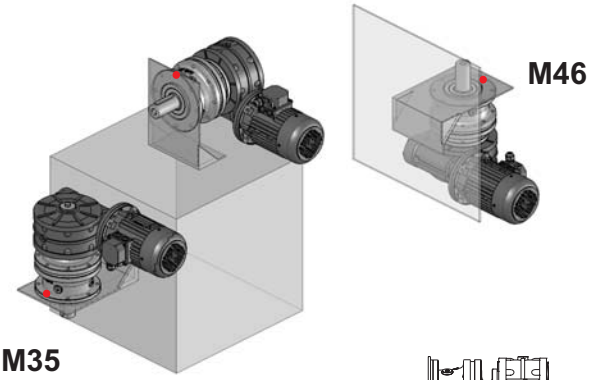
A

M11



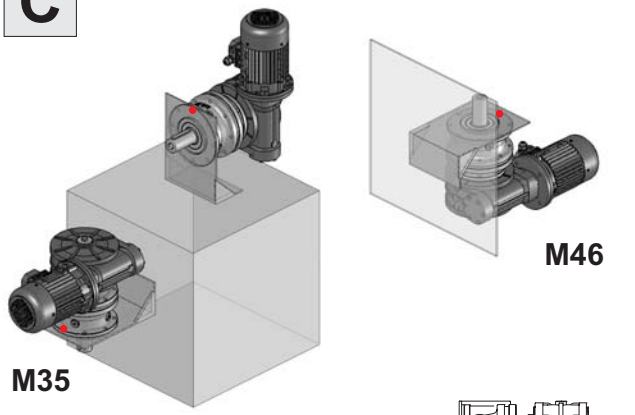
B

M12



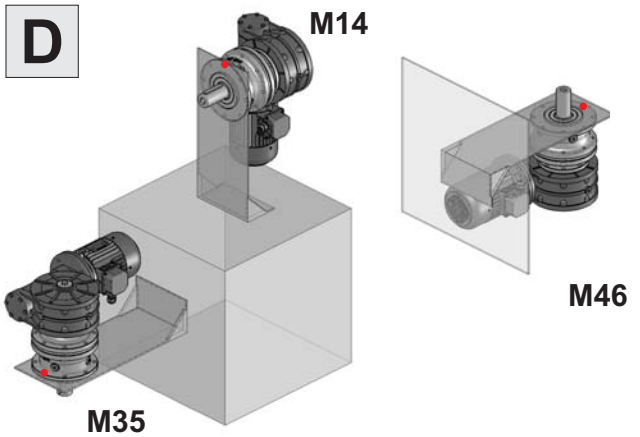
C

M13

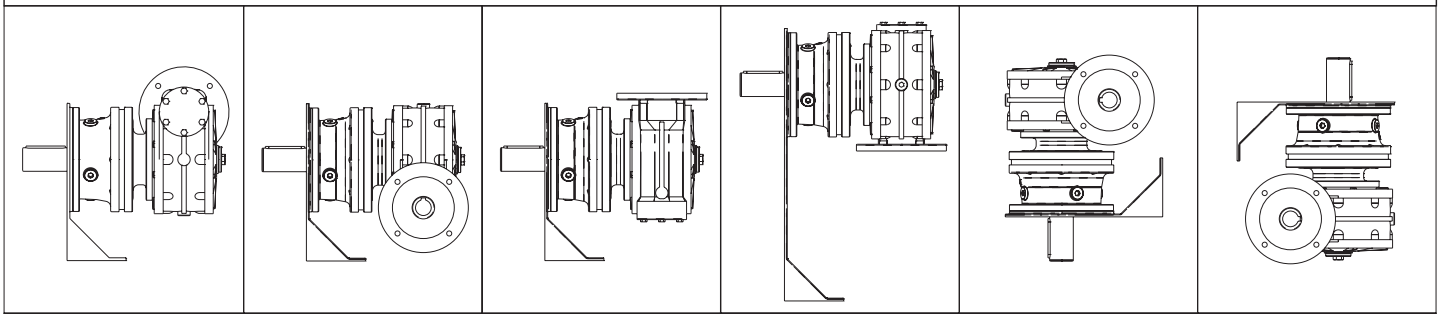


D

M14



- Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
  Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
  Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.



M11	M12	M13	M14	M35	M46

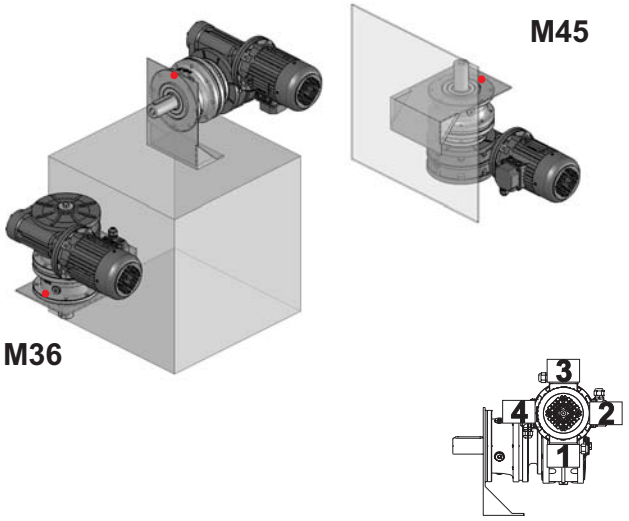
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

R-M-T-H-X-S-F

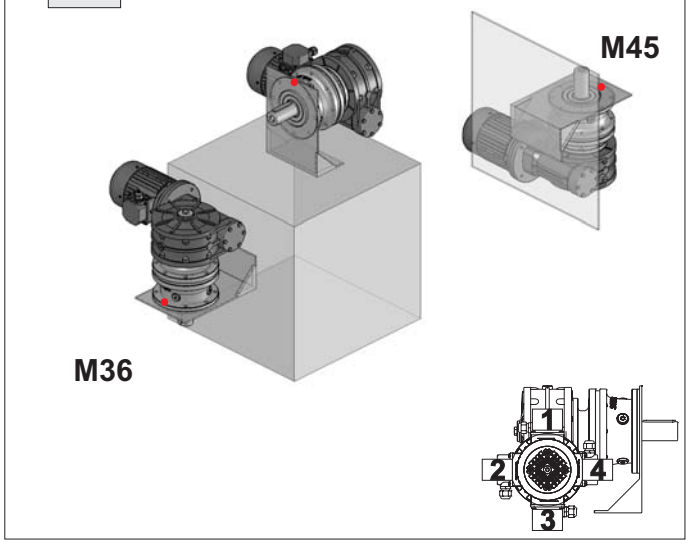
L

M11



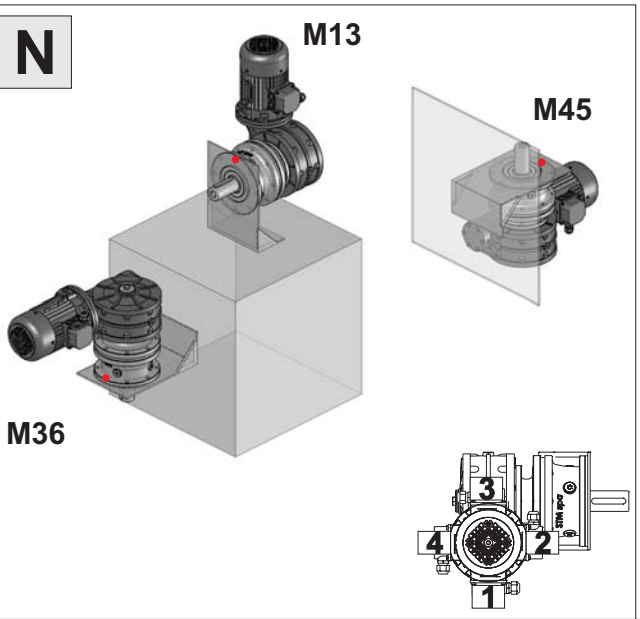
M

M12



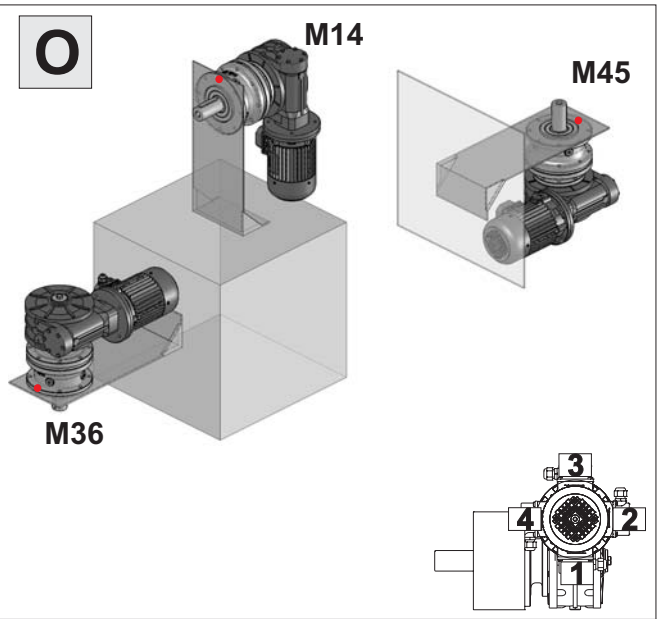
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M13

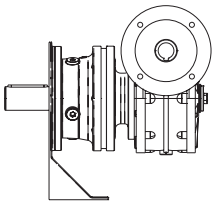
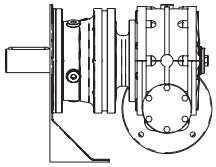
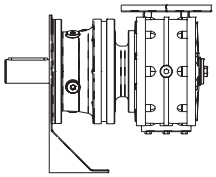
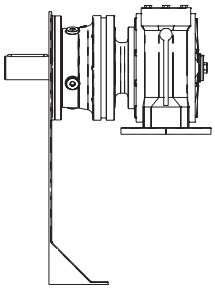
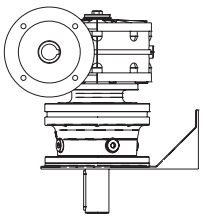
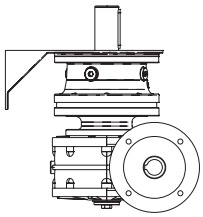


O

M14



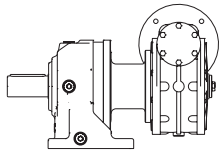
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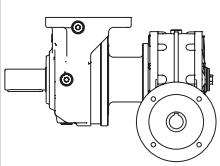
M11	M12	M13	M14	M36	M45
					

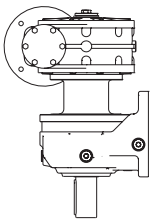
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

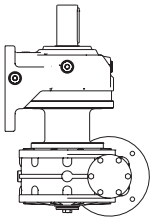
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
♕ Purge / *Respiradero* / Respiro

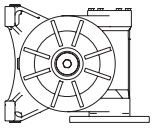
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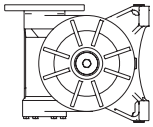

M11


M22

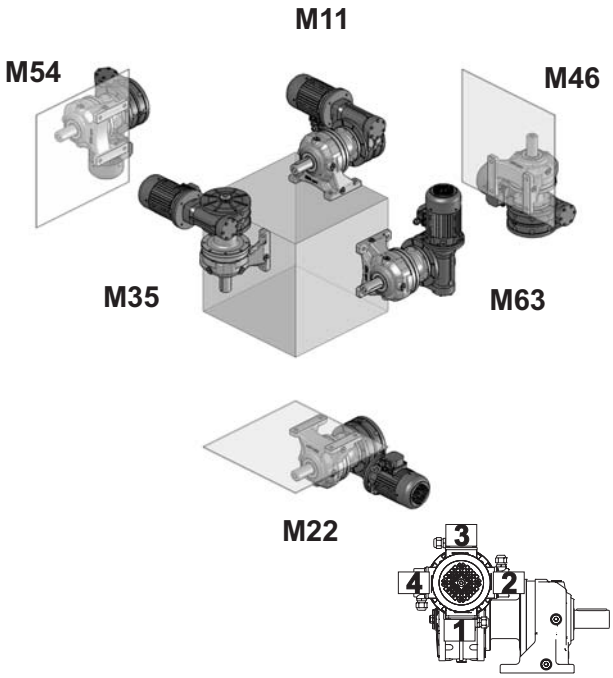

M35

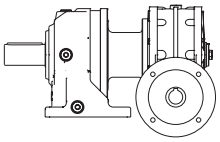

M46

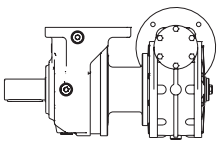

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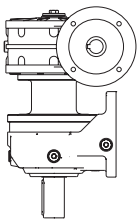

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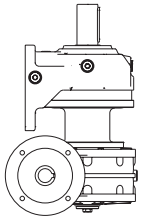
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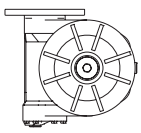


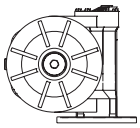

M12


M21

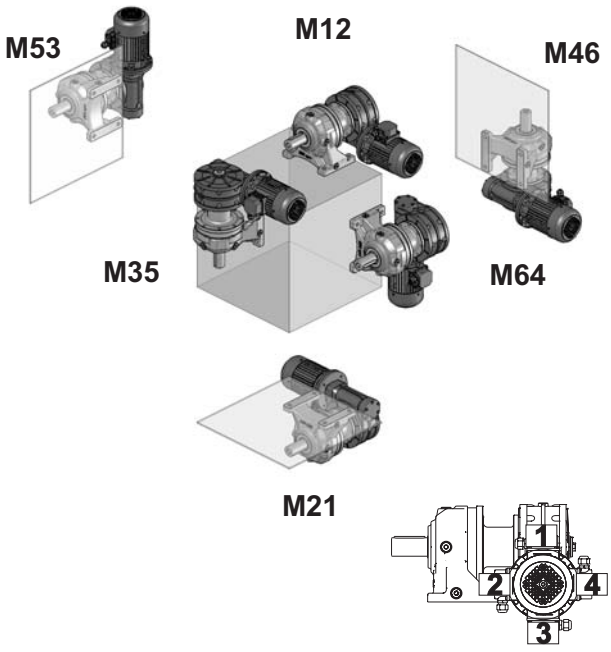

M35


M46


M53


M64

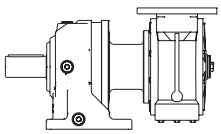
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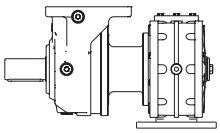
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

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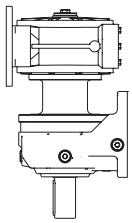
P-PH-PX-PS-PSB



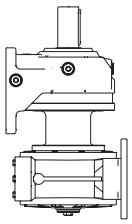
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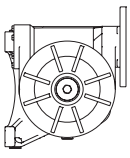
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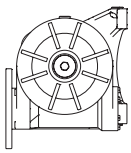
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M46



M51



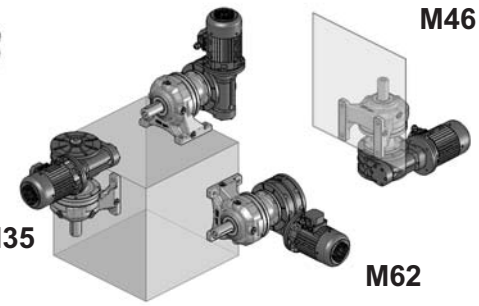
M62

C

M51



M13



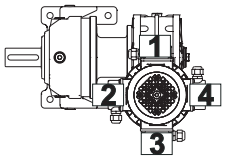
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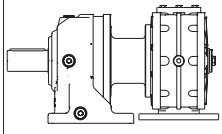
M35

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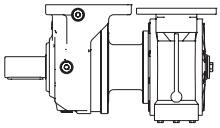


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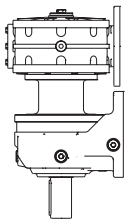




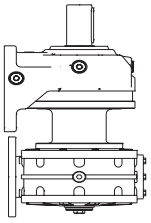
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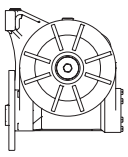
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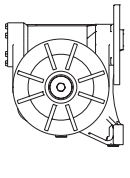
M35



M46



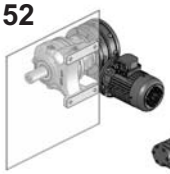
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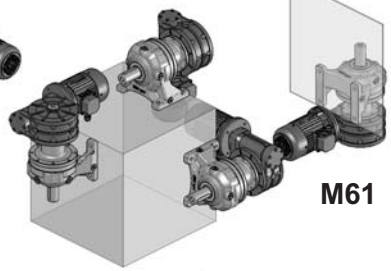
M61

D

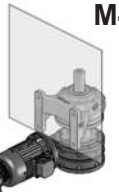
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M14

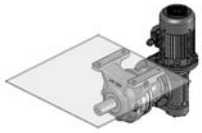


M46

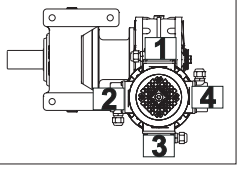


M35

M61



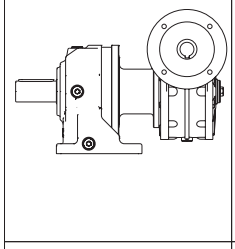
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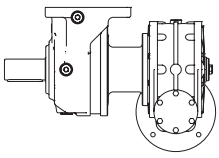


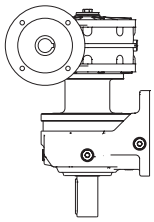
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

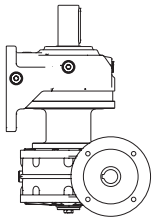
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◌ Purge / *Respiradero* / Respiro

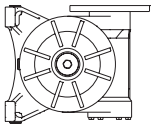
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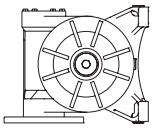

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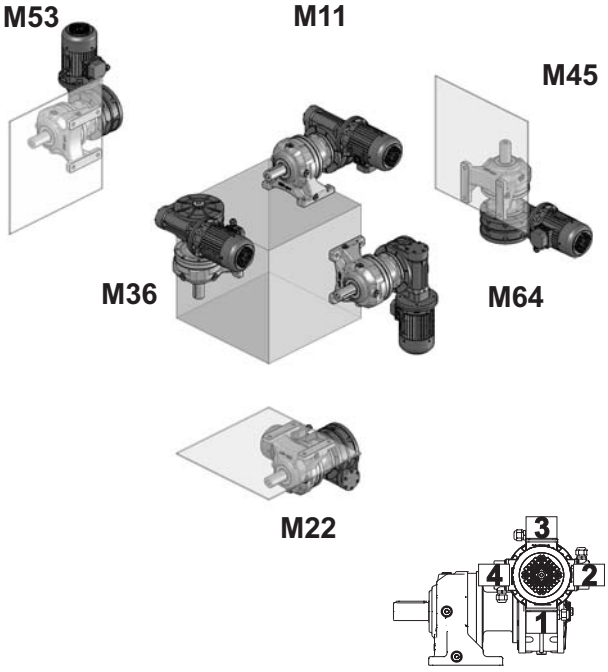

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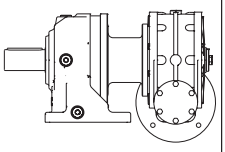

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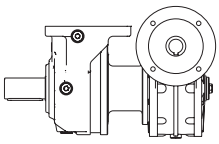

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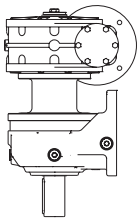

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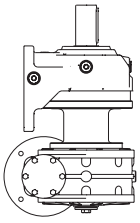
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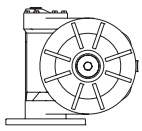


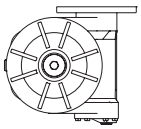

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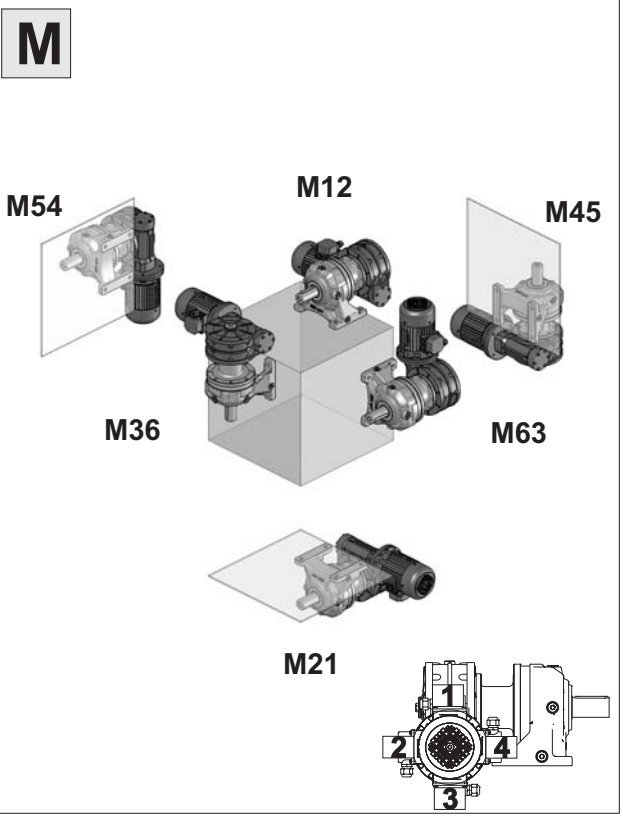

M36


M45


M54


M63

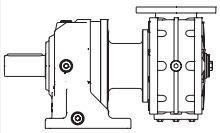
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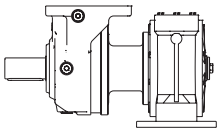


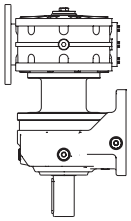
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

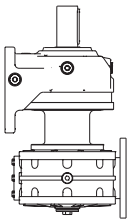
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

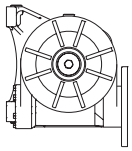
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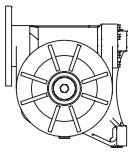

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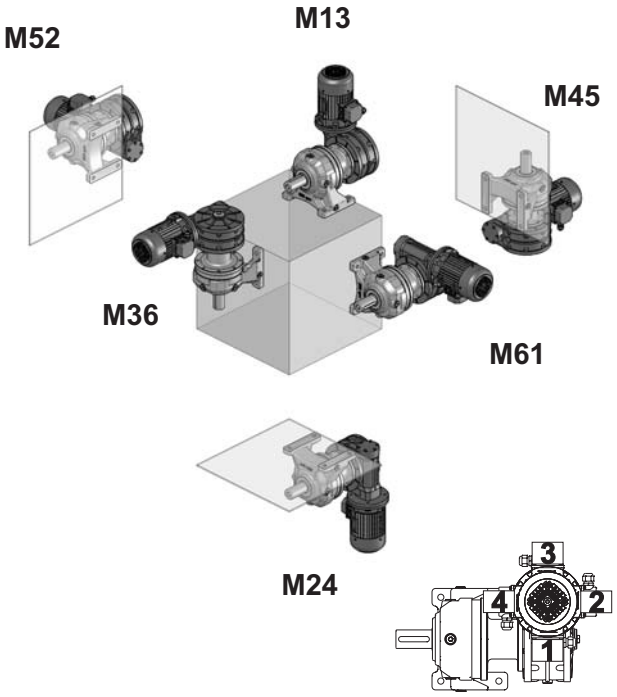

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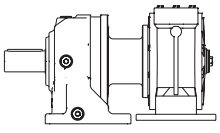

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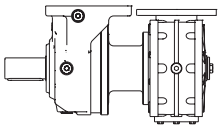

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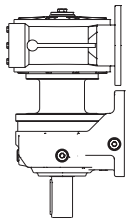

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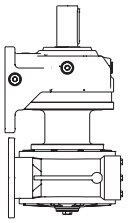
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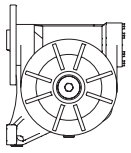


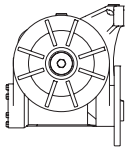

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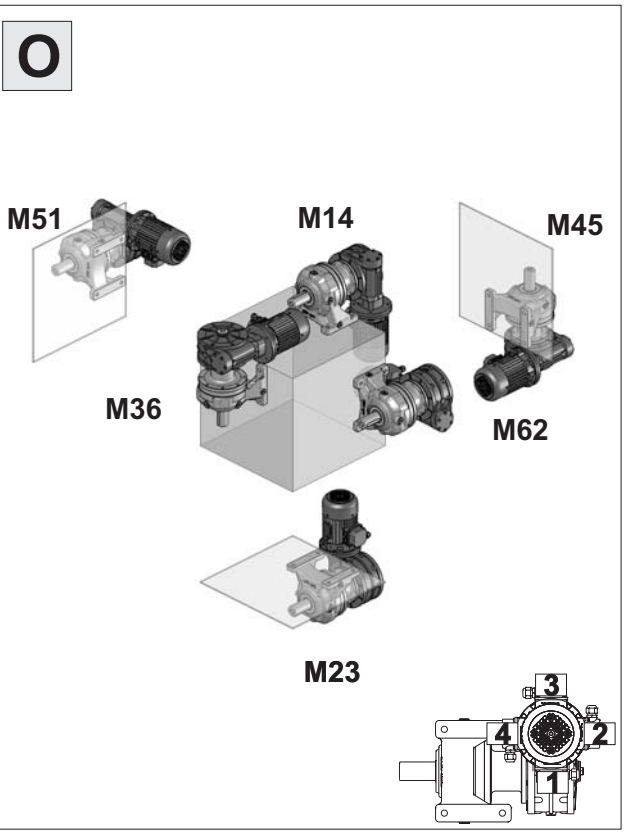

M36


M45


M51


M62

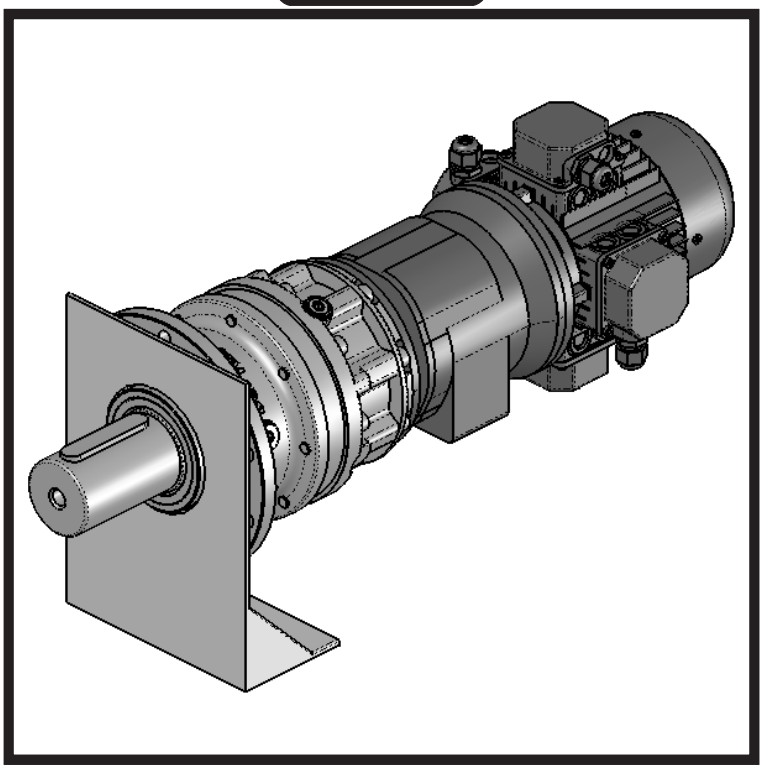
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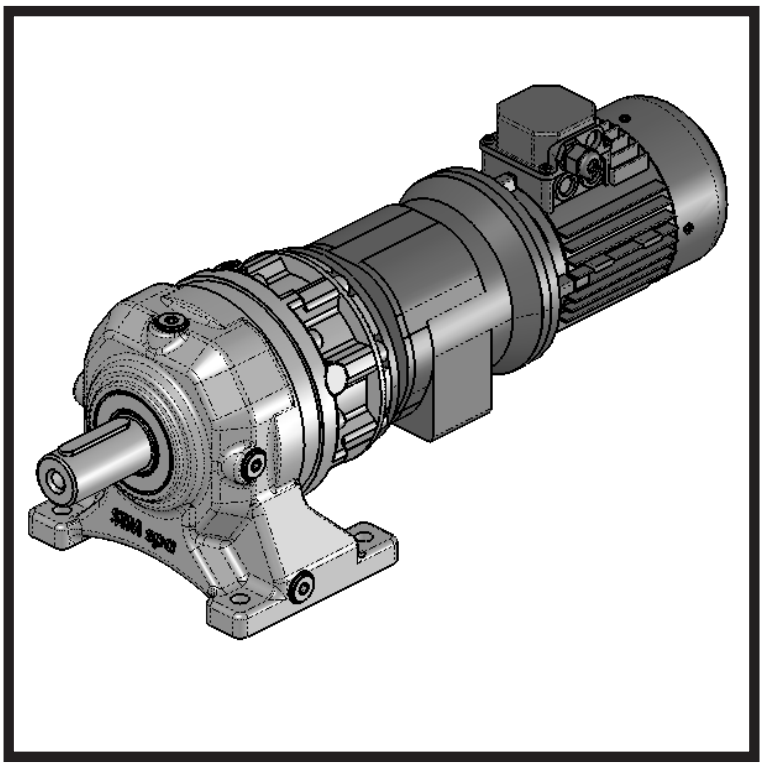


N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

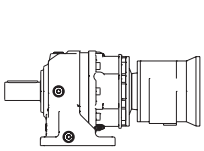
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

EXA

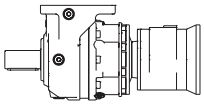




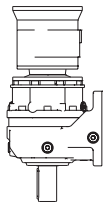
R-M-T-H-X-S-F - P-PH-PX-PS-PSB



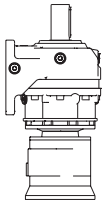
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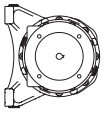
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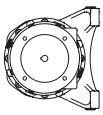
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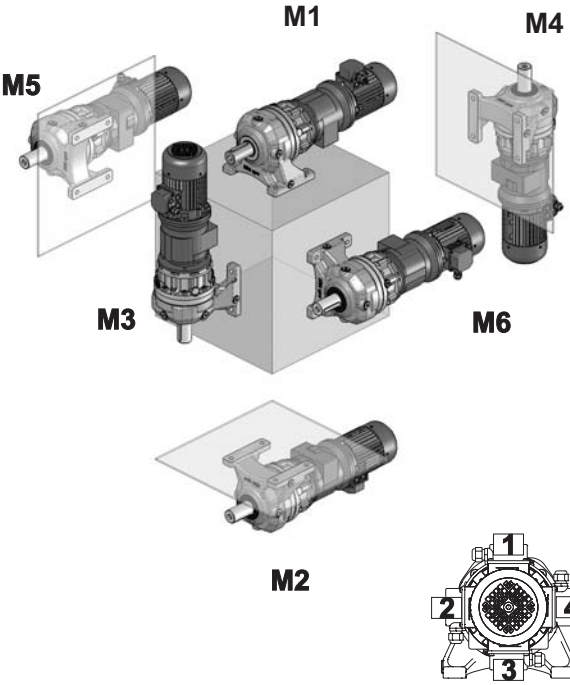
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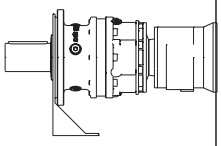


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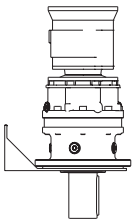


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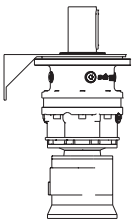




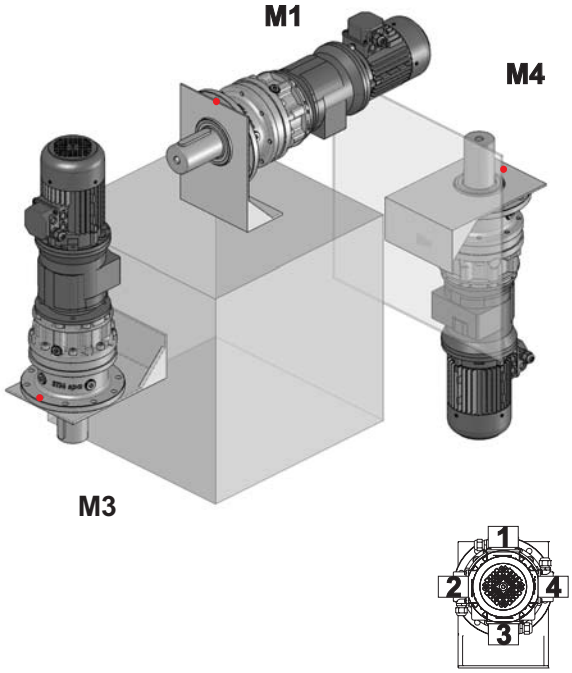
M1



M3



M4

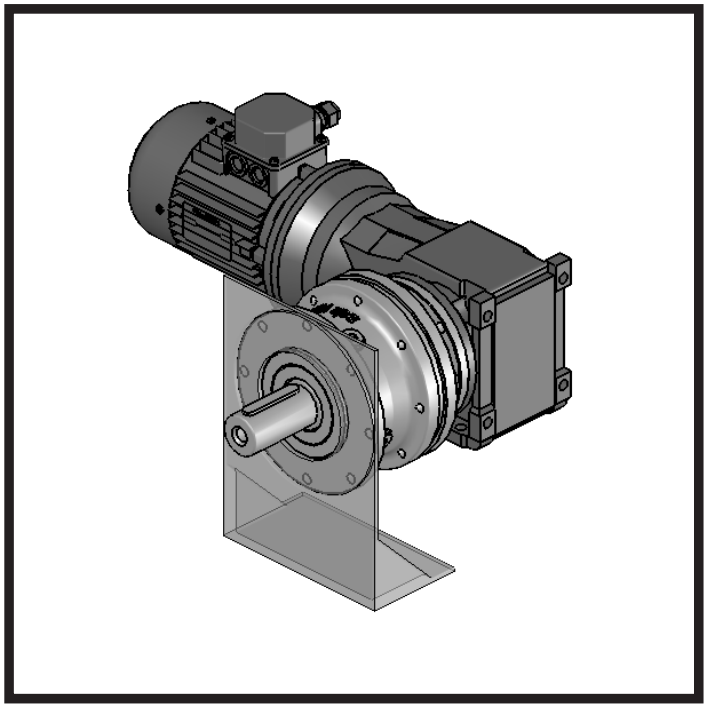


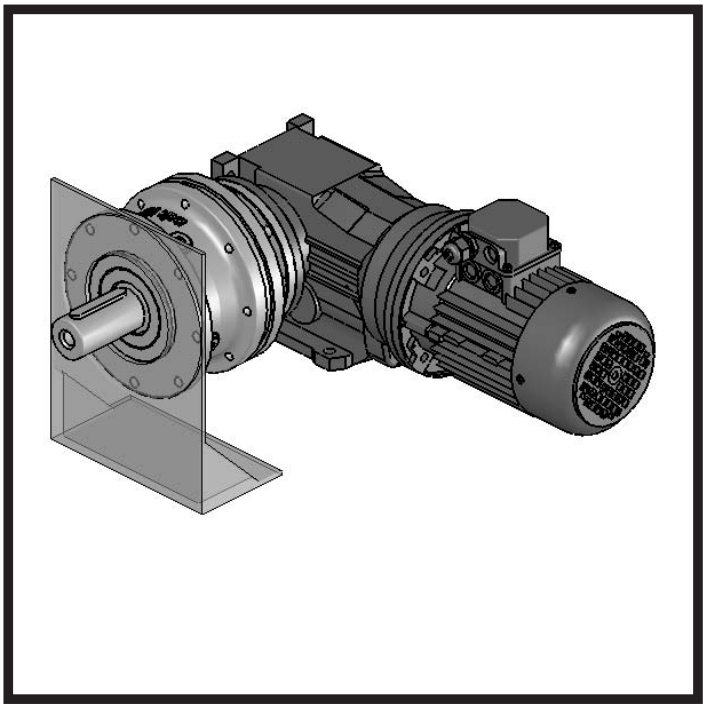
- Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
  Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
  Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

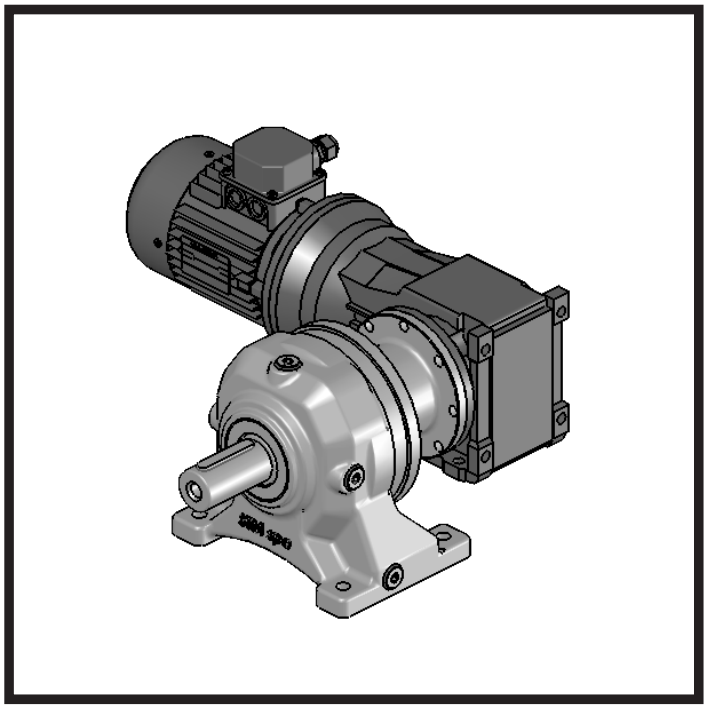
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

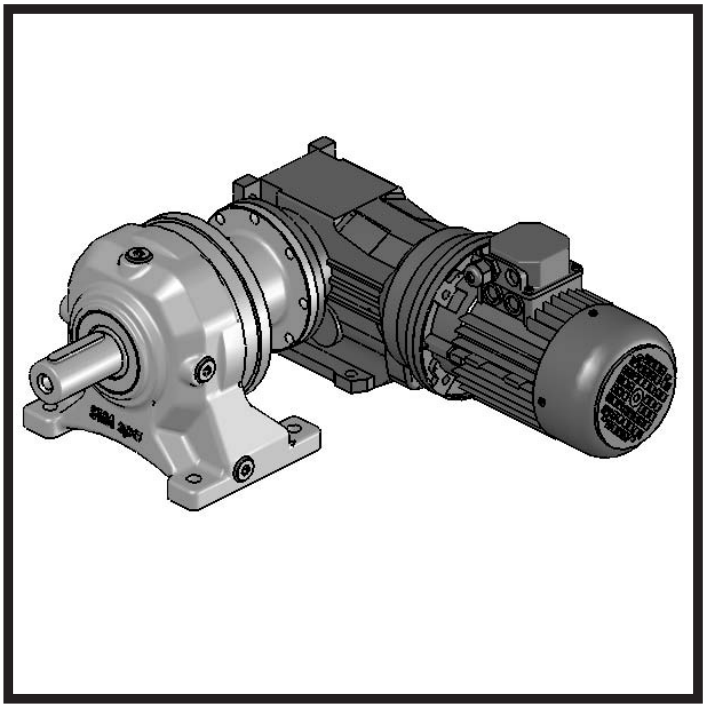
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◎ Purge / *Respiradero* / Respiro

EXO





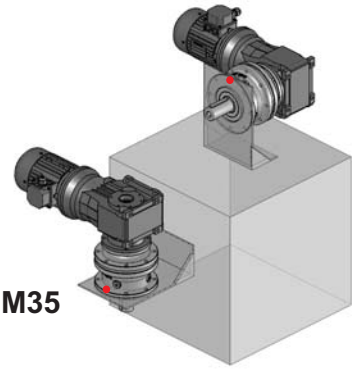




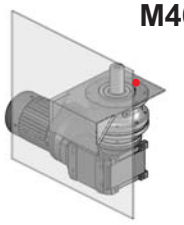
R-M.-T-H.-X-S.-F.

A

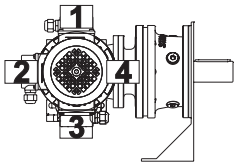
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M46

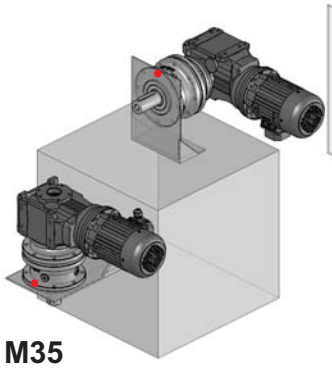


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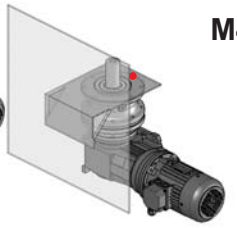


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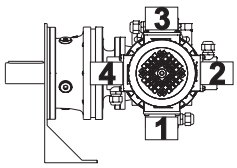
M12



M46

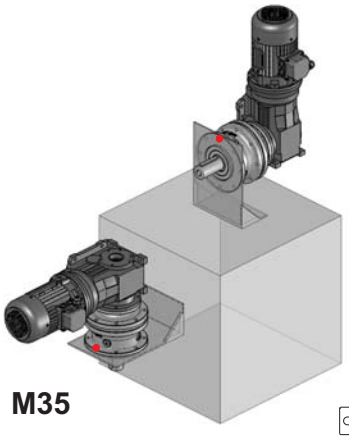


M35

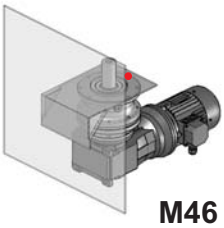


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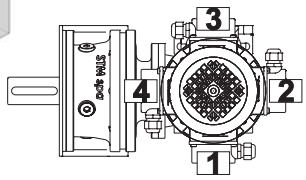
M13



M46

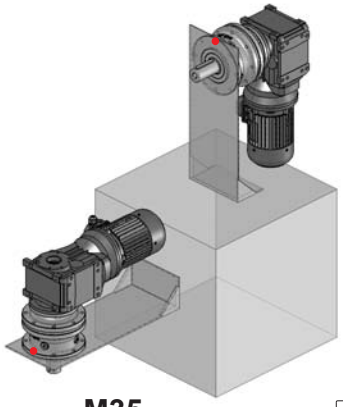


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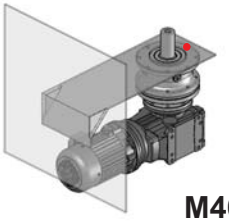


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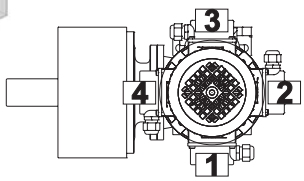
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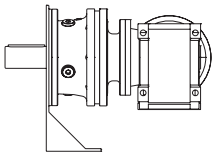
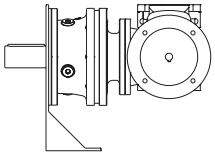
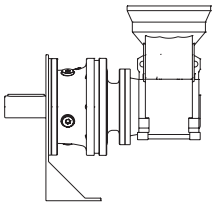
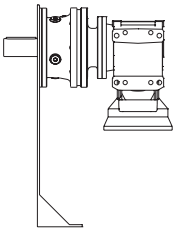
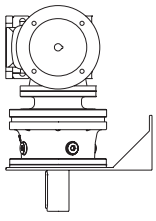
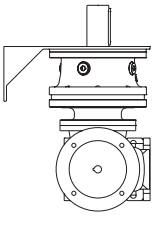
M46



M35



Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

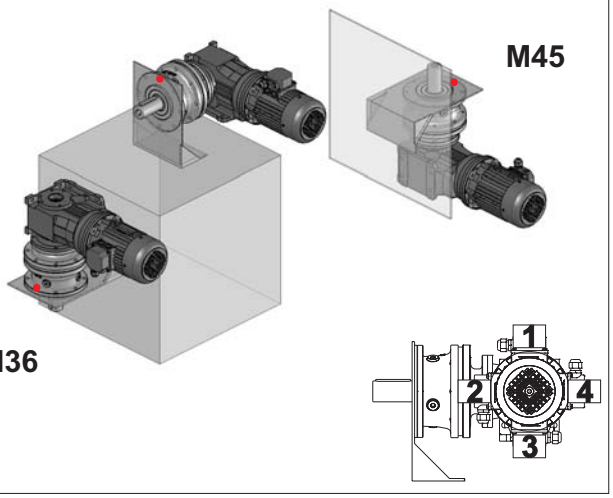
M11	M12	M13	M14	M35	M46
					

N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

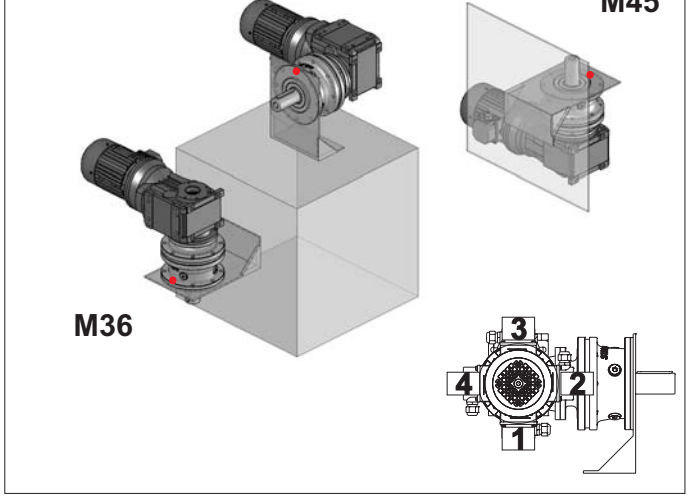
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◎ Purge / *Respiradero* / Respiro

R-M.-T-H.-X-S.-F.

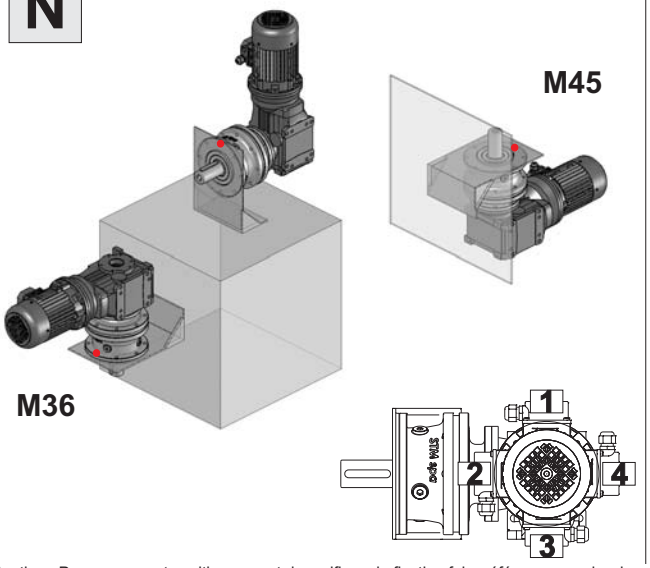
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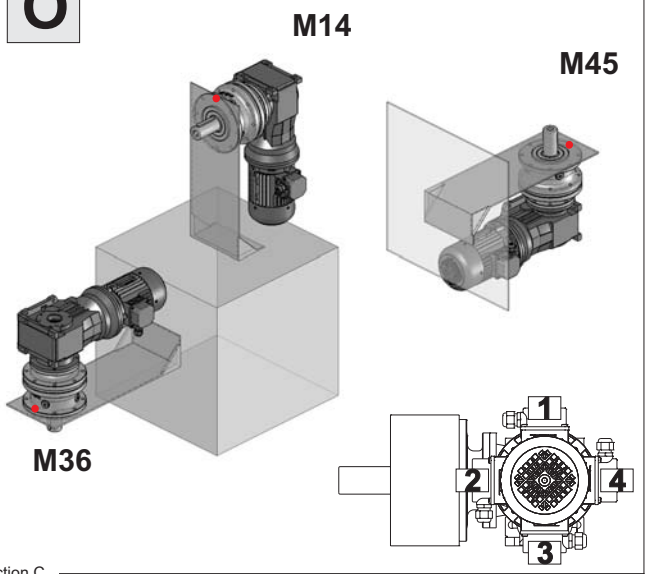
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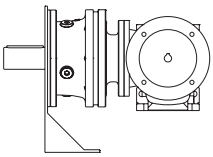
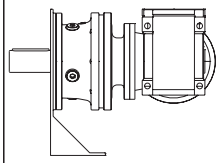
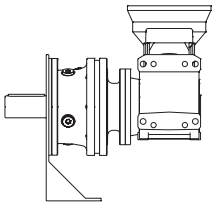
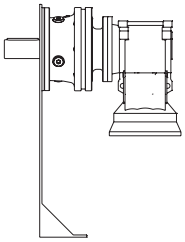
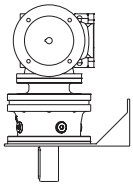
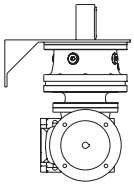
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O



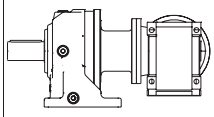
Attention : Pour un correct positionnement des orifices de fixation faire référence aux dessins reportés en Section C
Atención: Para la posición correcta de los orificios de fijación, consultar los diseños indicados en la Sección C
Atenção: Para a posição correta dos furos de fixação, consultar os desenhos mostrados na Secção C.

M11	M12	M13	M14	M36	M45
					

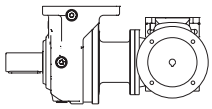
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

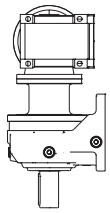
P-PH-PX-PS-PSB



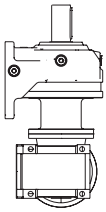
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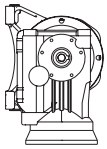
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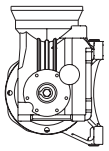
M35



M46

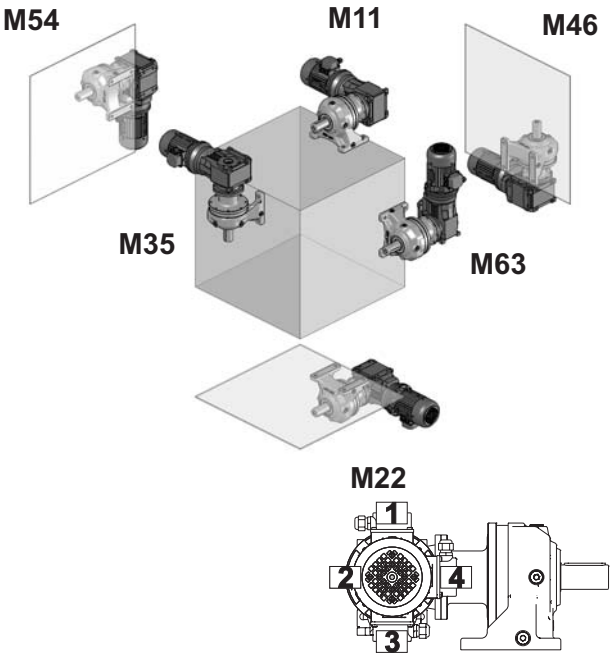


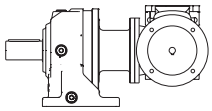
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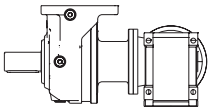
M63

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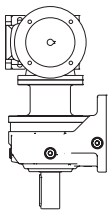




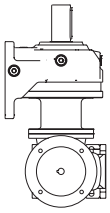
M12



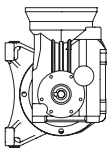
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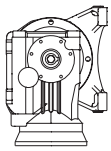
M35



M46

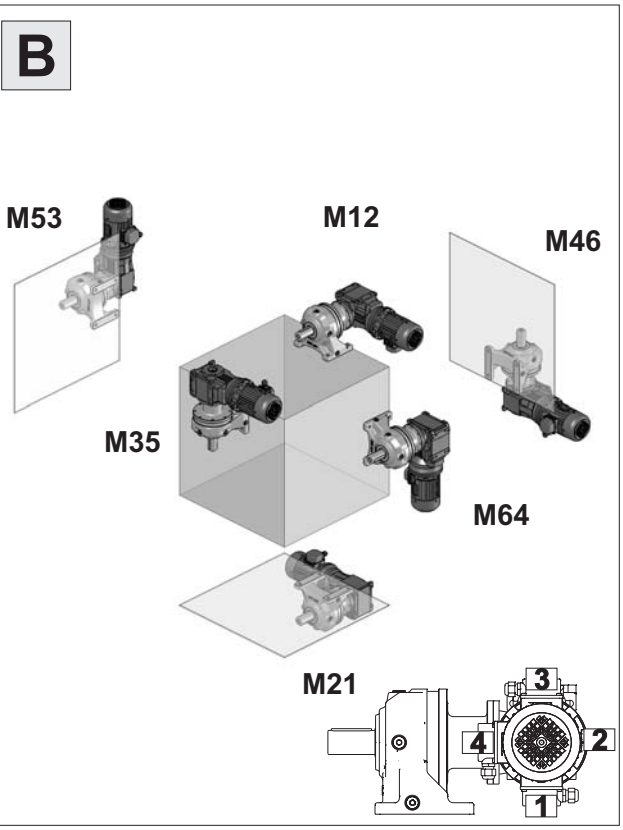


M53



M64

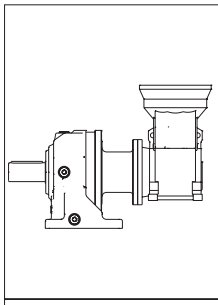
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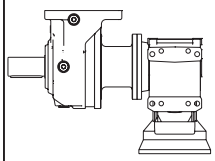


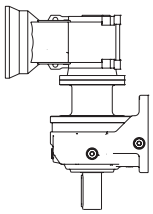
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

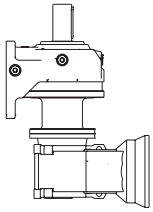
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◎ Purge / *Respiradero* / Respiro

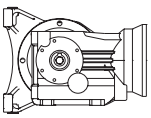
P-PH-PX-PS-PSB

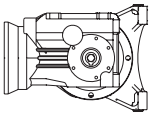

M13


M24

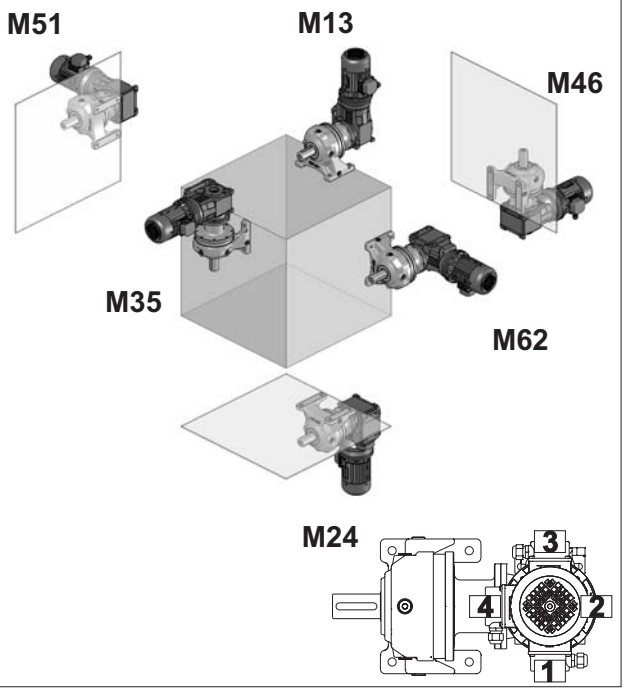

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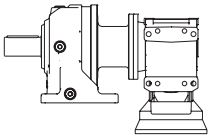

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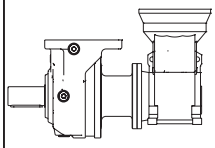

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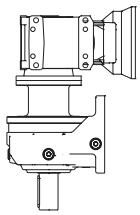

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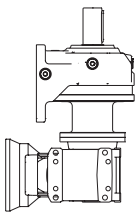
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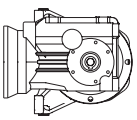


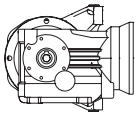

M14


M23

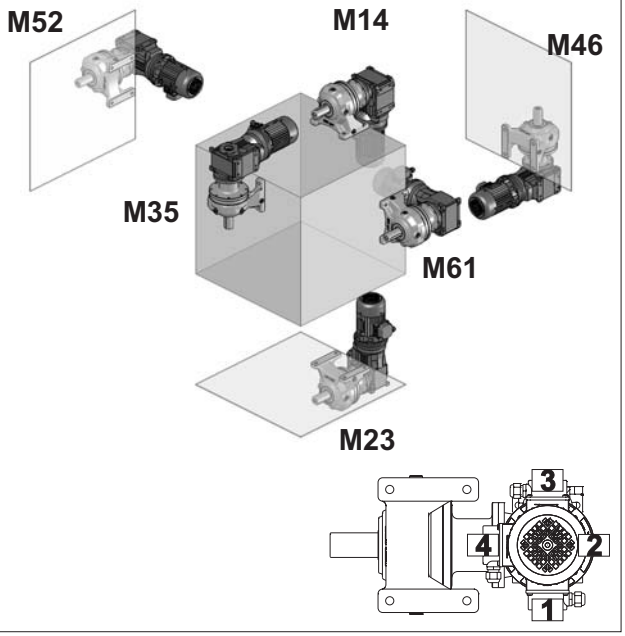

M35


M46


M52


M61

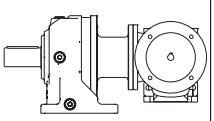
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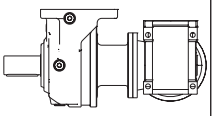
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
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◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

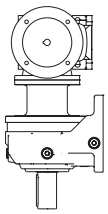
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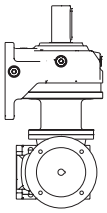
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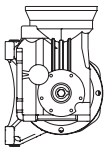
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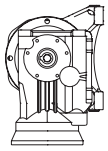
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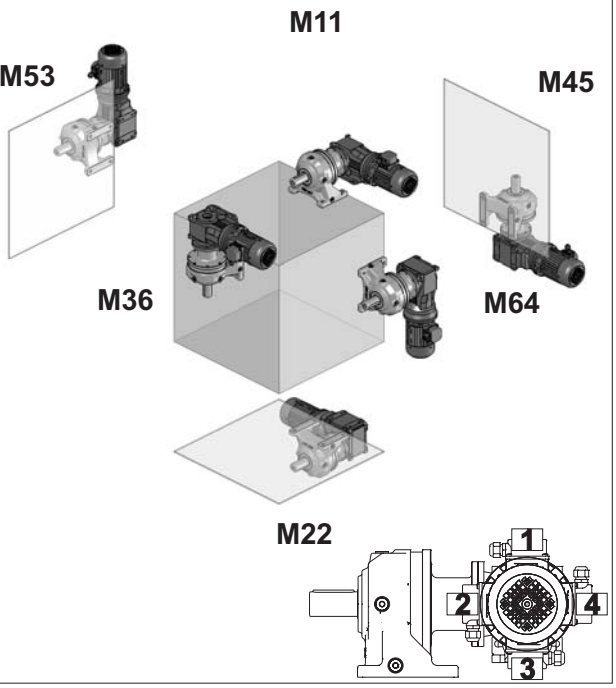


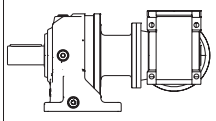
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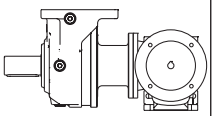
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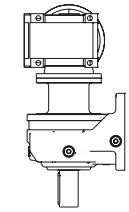




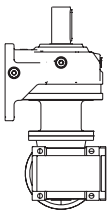
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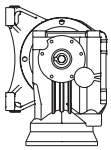
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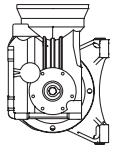
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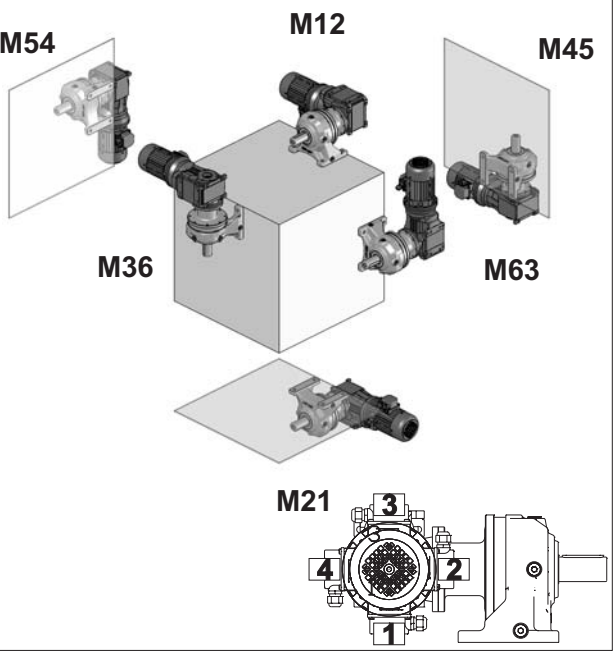


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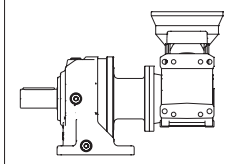
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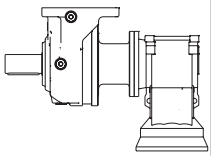


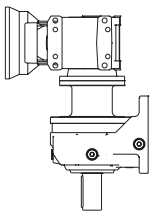
N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

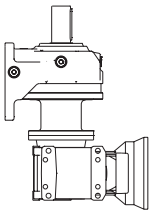
▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
Purge / *Respiradero* / Respiro

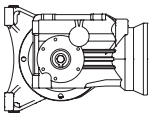
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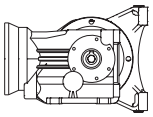

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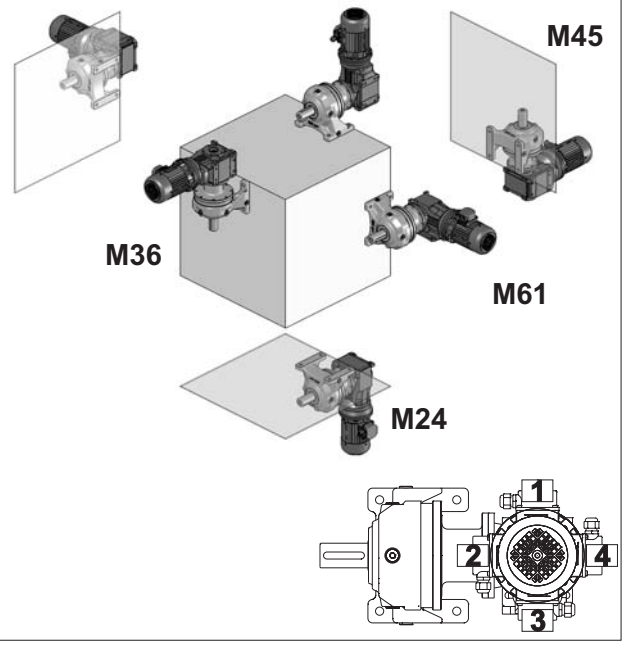

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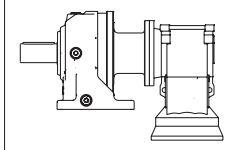

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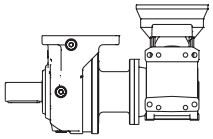

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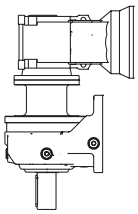

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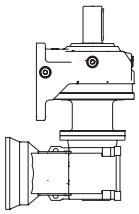
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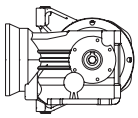


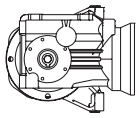

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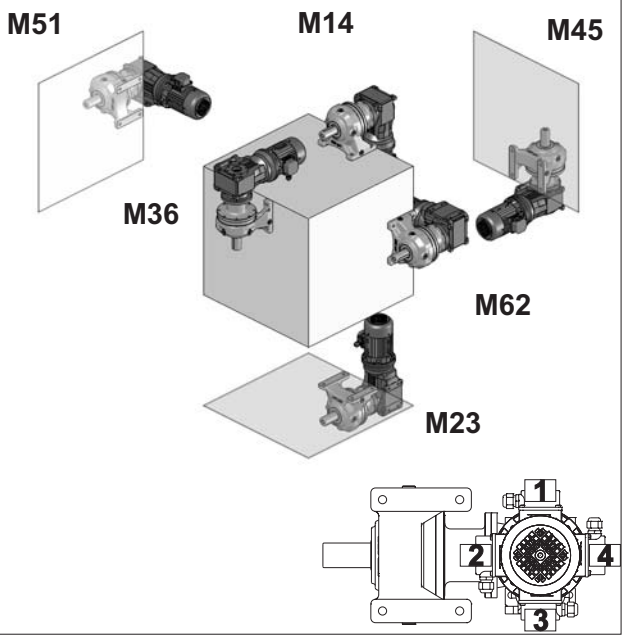

M36


M45


M51


M62

O



N.B. schéma pour la représentation de 2 , 3 et 4 étages / *N.B. esquema representativo también para 2, 3 y 4 etapas* / OBS. esquema representativo também para 2 , 3 e 4 estágios

▽ Remplissage / *Carga* / Carga
▼ Vidange / *Descarga* / Descarga
◒ Niveau / *Nivel* / Nível
◎ Purge / *Respiradero* / Respiro

Z

Gestion Révision Catalogues
Gestión Revisión Catálogos
Gestão da Revisão dos Catálogos

Gestion Révisions Catalogues GSM

Gestión Revisiones Catálogos GSM

Gestão de Revisões dos Catálogos GSM

Code Catalogue

Código Catálogo

Código do Catálogo

	CT26	F	E	P	2.1	
	N° Identification N° de Identificación N° Identificação	Identification Langue / *Identificación Idioma* / Identificação Língua **F** - Français - *Francés* - Francês **E** - Espagnol - *Español* - Espanhol **P** - Portuguais - *Portugués* - Português			Index de révision *Índice de Revisión* Índice de Revisão	

1) Chaque catalogue GSM distribué possède un code d'identification indiqué à la dernière page des catalogues et en bas dans toutes les pages du catalogue en question. Pour vérifier quel est le numéro de révision que vous avez, il faut regarder le dernier chiffre du code du catalogue :

2) Le catalogue contenant les dernières mises à jour est disponible sur le site internet STM. Les modifications indiquées sont visibles en consultant le tableau des mises à jour joint à ce document. Les pages qui font l'objet d'une modification contiennent l'indice de révision modifié.
3) Regarder avec attention le symbole inséré dans la colonne « Classification de la Modification ».Cette colonne présente un symbole indiquant la classification des modifications apportées.
Cette solution permet d'identifier avec une extrême rapidité l'importance de la modification effectuée ;

1) Todos los catálogos GSM en distribución están provistos de un código de identificación que se encuentra en la última página de los catálogos y a pie de página de todas las páginas de dicho catálogo. Para verificar la revisión que actualmente está en su posición, es necesario mirar la última cifra que compone el código del catálogo:
2) El catálogo que contiene las últimas actualizaciones está disponible en el sitio Internet STM. Las modificaciones efectuadas se pueden ver en la tabla de actualizaciones que se adjunta a este documento. En las páginas sujetas a modificación se presenta el índice de revisiones cambiado.
3) Observar con atención el símbolo introducido en la columna "Clasificación Modificación".En esta columna se introducirá un símbolo que determina una clasificación de las modificaciones efectuadas.
Esto permite identificar muy rápidamente la importancia de la modificación efectuada;

1) Cada catálogo GSM em distribuição é identificado por um código impresso na última página e no final de cada página do catálogo. Para examinar a revisão em sua posse, é necessário ver o último algarismo que compõe o código do catálogo:

2) O catálogo com as últimas atualizações está disponível no sítio internet da STM. As modificações feitas são visíveis consultando a tabela das atualizações anexada ao documento. Nas páginas modificadas está registado o índice de revisão mudado.

3) Preste atenção ao símbolo inserido na coluna "Classificação de Mudança".Nessa coluna será inserido um símbolo que determina uma classificação das mudanças feitas.
Esse símbolo permite identificar com extrema rapidez a importância da mudança feita;

Classification ***Clasificación*** **Classificação**	**Définition précisant les éléments de modification** ***Definición que especifica los elementos de modificación*** **Identificador dos elementos de mudança**	**Symbole d'identification** ***Símbolo de Identificación*** **Símbolo Identificador**
Légende *Clave* Chave	Sortie et introduction d'un produit *Salida y entrada de un producto* Saída e introdução de um produto	⇄
IImportant *Importante* Importante	Modification concernant les dimensions/l'état de fourniture/l'installation du produit *Modificación que afecta las dimensiones/estado suministro/instalación del producto* Mudança que afeta os espaços/estado de fornecimento/instalação do produto	▼
Secondaire *Secundaria* Secundária	Modification concernant les traductions/les mises en page/l'introduction de descriptions *Modificación relativa a traducciones/disposición de las páginas/introducción descripciones* Mudança que compete à traduções/paginações/inserimento de descrições	—

4) Au cas où l'on constaterait une diversité de cotes entre le plan **2D – 3D** téléchargé du site internet et le tableau du catalogue, il est conseillé de consulter notre service technique.

Attention
Vérifiez quel est le numéro de révision que vous avez et le tableau des modifications apportées à la nouvelle révision.

*4) En el caso de que resultase una diferencia de cota entre el dibujo **2D – 3D** descargado del sitio Internet y la tabla del catálogo, es necesario consultar con nuestro servicio técnico.*

Atención
Verificar la revisión que se encuentra en su posesión y la tabla de actualizaciones efectuadas en la nueva versión.

4) Caso resulte uma diversidade de quotas entre o desenho **2D – 3D** baixado do sítio internet e a tabela do catálogo, é necessário consultar o nosso serviço técnico.

Atenção
Verifique a revisão em sua posse e a tabela das atualizações feitas na nova revisão.

Puissance demandée / *Potencia solicitada* / Potência requerida

$$P = \frac{m \cdot g \cdot v}{6 \cdot 10^4}$$ Levage / *Elevación* / Levantamento

$$P = \frac{M \cdot n}{9550}$$ Rotation / *Rotación* / Rotação

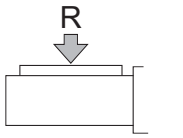
$$P = \frac{F \cdot v}{6 \cdot 10^4}$$ Translation / *Desplazamiento* / Translação

$$M = \frac{9550 \cdot P}{n}$$ Couple / *Par* / Binário

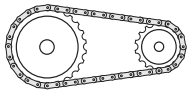
$$F = 1000 \cdot \frac{M}{r}$$ Force / *Fuerza* / Força

$$v = \frac{2r \cdot \pi \cdot n}{1000}$$ Vitesse linéaire / *Velocidad lineal* / Velocidade linear

Charges radiales / *Cargas radiales* / Cargas radiais

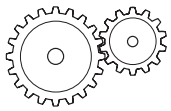


$$R = \frac{2000 \cdot T \cdot Kr}{d}$$



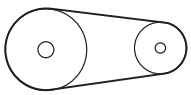
Kr = 1

Roue pour chaîne / *Rueda para cadena* / Roda para corrente



Kr = 1.06

Engrenage / *Engranaje* / Engrenagem



Kr = 1.5-2.5-3.5

1.5 - Courroies dentées/*Correas dentadas*/Correias dentadas

2.5 - Courroies trapézoïdales/*Correas trapezoid.*/Correias trapezoidais

3.5 - Roues de friction (caoutchouc sur métal) / *Ruedas de fricción (gomas sobre metal)* / Rodas de fricção (borracha em metal)

R (N)
Charge radiale
Carga Radial
Carga radial

T (Nm)
Couple sur l'arbre
Par en el eje
Binário no eixo

d (mm)
Diamètre de la roue
Diámetro de la rueda
Diâmetro da roda

Moment d'inertie — ***Momento de inercia*** — **Momento de inércia**

$J = 98.p.l.D^4$ Cylindre plein / *Cilindro lleno* / Cilindro cheio
$J = 98.p.l.(D^4-d^4)$ Cylindre creux / *Cilindro hueco* / Cilindro oco

Conversion d'une masse en mouvement linéaire en un moment d'inertie se rapportant à l'arbre du moteur

Conversión de una masa en movimiento lineal en un momento de inercia correspondiente al eje del motor

$$J = 91.2 \cdot m \cdot \frac{v^2}{n^2}$$

Conversão de uma massa em movimento linear em um momento de inércia referido ao eixo do motor

Conversion de différents moments d'inertie de masse à des vitesses différentes en un moment d'inertie se rapportant à l'arbre du moteur.

Conversión de diferentes momentos de inercia de masa a velocidades diferentes en un momento de inercia correspondiente al eje del motor.

$$J_a = \frac{J_2 \cdot n_2^{\,2} + J_3 \cdot n_3^{\,2} \ldots}{n_1^{\,2}}$$

Conversão de diversos momentos de inércia de massa com velocidades diversas em um momento de inércia referido ao eixo do motor.

P	= Puissance moteur	*Potencia motor*	Potência do motor	[kW]
m	= Masse	*Masa*	Massa	[kg]
v	= Vitesse linéaire	*Velocidad lineal*	Velocidade linear	[m/min]
F	= Force	*Fuerza*	Força	[N]
n	= Vitesse de rotation	*Velocidad de rotac.*	Velocidade de rotação	[min-1]
g	= 9.81	*9.81*	9.81	[m/sec]
M	= Couple du moteur	*Par del motor*	Torque de motor	[Nm]
r	= Rayon	*Radio*	Raio	[mm]
J	= IInertie	*Inercia*	Inércia	[kgm2]
l	= Longueur	*Longitud*	Comprimento	[mm]
d	= Diamètre interne	*Diámetro interno*	Diâmetro interno	[mm]
D	= Diamètre externe	*Diámetro externo*	Diâmetro externo	[mm]
p	= Poids spécifique	*Peso específico*	Peso específico	[kg/dm3]



STM PIEMONTE

Strada del Cascinotto, 139/43B
10156 TORINO
T: +39/011/22.38.463
F: +39/011/22.38.463
E-MAIL: info@labet.it

STM LOMBARDIA

Via Velleia, 1
20052 Monza (Mi)
T: +39/039/83.79.41
F: +39/039/83.79.490
E-MAIL: sef@sefmotoriduttori.com

STM SUD

Via Ottaviano, 298/300
80040 San Gennaro Vesuviano (Na)
T: +39/081/52.86.802
F: +39/081/52.86.803
E-MAIL: info@stmsud.it

STM VENETO

Via Manfredini, 54
45100 Loc. Granzette ROVIGO
T: +39/0425/48.61.58
F: +39/0425/93.20.68
E-MAIL: stmveneto@stmspa.com

STM SERVICE

Via Enrico Fermi, 35
00044 Frascati (RM)
T: +39/06/97.60.85.44
F: +39/06/97.60.85.45
E-MAIL: info@tecnodrivesrl.it



STM UKRAINE

Belaia Tzerkov Yaroslava Mudrogo, ST66/13
09107 Region of Kiev
T: +38/04463519369
F: +38/0446391037
E-MAIL: stm@stm.com.ua

STM RUS

Bolshaya Pochtovaya st. 30
105082 Mosca
T: +74/957836809
F: +74/952672073
E-MAIL: ars@ttaars.ru

STM AANDRIJFTECHNIEK NL

Jan Vrijmanstraat, 12
1087MC, Amsterdam - The Netherlands
T: + 31/20 3586361
F: +31/20 3586361
E-MAIL: stmaandrijftechniek@stmspa.com

STM SWEDEN

Stathogavagen, 48
60223 Norrkoping
T: +46/11158340
F: +46/11158349
E-MAIL: info@stmsweden.se

STM FINLAND

Luoteisrinne, 5
02270 Espoo
T: +35/8440674519
F: +35/8104256805
E-MAIL: info@stmfinland.fi

STM DEUTSCHLAND

Gewerbepark Markfeld 7a
83043 BAD AIBLING
T: +49/8061/937680
F: +49/8061/9376829
E-MAIL: stmdeutschland@stmspa.com

STM POWER TRANSMISSION UK

UNIT 1 OASIS BUSINESS PARK ROAD ONE,
WINSFORD Industrial Est - CW7 3RY - WINSFORD
T: +44/1606/557200
F: +44/1606/557396
E-MAIL: info@stmuk.co.uk

STM IBERIA

Contrada Nacional 121, km 39,400
31390 Olite Navarra
T: +34/948712017
F: +34/948712153
E-MAIL: martinena@martinenasl.es

STM SCHWEIZ

Bösch 27
6331 Hünenberg
SVIZZERA
T: 0041 41 7832970
F: 0041 41 7832971
E-MAIL: info@eurodrives.ch

STM TURKIYE

10026 - IZMIR
Str. No: 54 AOSB CIGLI
T: 0090.232.328 36 39
F: 0090.232.328 36 40
E-MAIL: info@novaguc.com

STM team

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DO BRASIL

Rua Padre Raposo,
1293 Mooca (SP)
T: +55/11/2605.1144
F: +55/11/2601.1559
E-MAIL: stmdobrasil@stmdobrasil.com

ARGENTINA

Langeri, 3525 (Santos Lugares)
1676 Buenos Aires
T: +54/11/41.15.63.85
F: +54/11/47.57.05.12
E-MAIL: comercial@stmteam.com.ar

INDIA

STM INDIA
T: +91 99 42 559285
E-MAIL: k.saravanan@stmspa.com

AUSTRALIA

13/97 Bayfield Road East
Bayswater - VIC 3153
T: +61/397617355
F: +61/397617222
E-MAIL: pbeveridge@hmagroup.com.au

ASIA PACIFIC

STM-AP (ASIA PACIFIC) PTE LTD
6 Penjuru Place #01-32 Penjuru Tech Hub,
Singapore 608781
T: 65-6266 2022 F:65-6266 5955
E-MAIL: stm@stmap.com

KOREA

STM Korea
#104-216, 41, Yutongdanji 1-ro,
Gangseo-gu, Busan, 618-899 Rep. of KOREA
T: +82-01-8536-6469 - +82-70-8730-1238
F: +82-51-955-2250
E-MAIL: stmapkorea@gmail.com

BEIJING

Rm306, Blk A, Jingjiang Building,
#35, Bagou Nan Rd, Haidian Dist.
Beijing 100089, China
T: 0086 10 8256 5319
F: 0086 10 8255 1142
E-MAIL: stm@stmchina.cn

SOUTH AFRICA

22 Lorna Rd, Anderbolt, Boksburg North
PO Box 6300, Dunswart, 1508
Tel: +27 10 010 6879
F: +27 86 461 5898
E-MAIL: anthony@stmsa.co.za

High Tech line
CT 26 FEP 2.1
03/17

DE MEXICO

STM RIDUTTORI MEXICO S.A. DE C.V
T: +52 33 36150087
E-MAIL: info@stmmexico.com.mx

YOUNG POWERTECH INC

3060 PLAZA DR. #107
19061 - GARNET VALLEY - PA
T: 0016105580760
F: 0016505580762
E-MAIL: Info@youngpowertech.com

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HOT MINDS 3/2016

STM S.p.A.
Headquarter
Via del Maccabreccia, 39
40012 Lippo di Calderara di Reno (BO)
Tel. +39 051 37 65 711
Fax +39 051 64 66 178
www.stmspa.com - info@stmspa.com

GSM S.p.A.
Via Malavolti, 48
41122 Modena - Italy
Tel. +39 051 37 65 711
Fax +39 051 64 66 178
www.stmspa.com - info@stmspa.com