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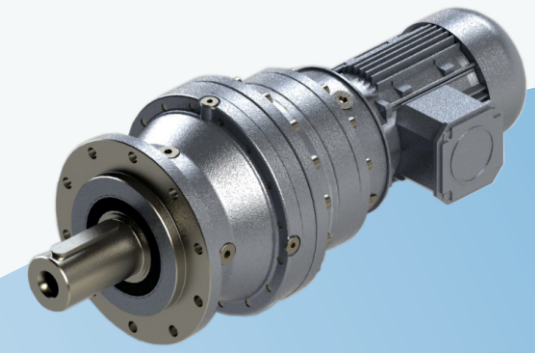
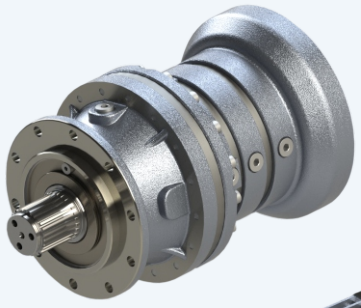
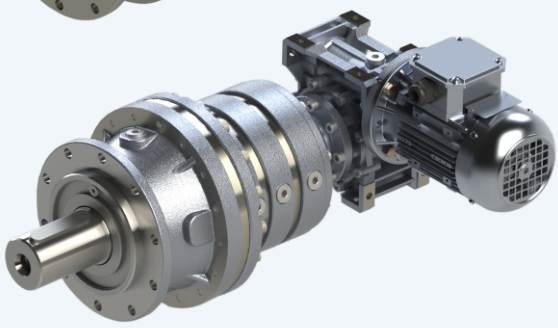
DRIVE TECHNOLOGIES

PL/PLB SERIE




Planetengetriebe
Planetary Gear Units
Planet Dişli Üniteleri
Riduttori Epicicloidali
Réducteur Planétaire
Reductores Epicicloidales

DE EN TR IT FR ES

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DE DAS PRODUKT

Im Vergleich zum Stirnradgetriebe, bei dem nur ein Zahn die Kräfte überträgt, wird das Moment am Zentralrad des Planetengetriebes auf drei Zahneingriffe aufgeteilt. Diese Konstruktion fuehrt zu kleinen Getriebeabmessungen, kompakter Bauweise und einem geringen Eingengewicht.

Die Planetengetriebe PL/PLB bestehen zu 62% aus Stahl, zu ca. 33% aus Gusseisen und aus geringeren Mengen Aluminium, Kupfer, Gummi und Messing. Diese prozentuellen Anteile variieren je nach Konfiguration des Produkts.

Die Planetengetriebe der Serie PL werden in 21 Grundgrößen mit Abtriebsdrehmomenten von 500 Nm bis zu 660000 Nm hergestellt.

Die modulare Konstruktion der Planetary Drives Produkte erlaubt die Kombination mit Kegelradgetrieben, Schneckengetrieben, hydraulischen Bremsen, unterschiedlichen Ausführungen von Antriebswellen und Motorflanschen für hydraulische und elektrische Motore.

Der Antrieb ist mit allen gaengigen Hydraulikmotoren, aber auch mit freiem Wellenende oder Flansch für den Antrieb durch Elektomotore zurealisieren. Im Hydraulikbetrieb wird eine wartungsfreie und geräuscharme Federdruck-Lamellenbremse als Haltebremse eingesetzt.

Die verfuegbaren Formen hinsichtlich der Wellen und Flansche des Abtriebs erlauben den Einbau der Getriebe in diversen mobilen und stationaeren Applikationen.

Die Standardausführung des Produkts wird ohne Schlussanstrich geliefert. NRW empfiehlt den Gebrauch von umweltfreundlichen Lacken.

EN THE PRODUCT

The use of planetary gear units in the field of power transmission is the modern answer to the demand for compactness, constructive simplicity and product reliability.

PL/PLB planetary gear units are made of 62% steel, about 33% cast iron and a lower percentage of aluminium, copper, rubber and brass. These percentages vary depending on the product configurations.

PL planetary gear units are divided into 21 basic groups depending on the different torques that are to be transmitted to the output shaft, which can vary from 500 Nm to 660000 Nm.

In fact, the Planetary gear units product modular construction permits the coupling of bevel gears, worm gears, hydraulic brakes and a variety of input shafts to the planetary units, as well as providing for a wide choice of coupling flanges for hydraulic or electric motors.

Another advantage of the planetary gear units modular construction is that various stages, in different sizes, can be mounted in series to offer a wide range of reduction ratios. Planetary gear units reduction ratios range from 3:1 to 7:1 on single-stage drives up to 10,000:1 and more on 5 stage drives.

The wide selection of output shafts and flanges simplifies the reduction unit mounting operation on industrial machinery or plants.

Standard supply of the product does not include painting upon completion. NRW recommends using eco-friendly paints.

TR ÜRÜN

Güç aktarımı alanında planet dişli ünitelerinin kullanılması kompaktlık, yapısal basitlik ve ürün güvenilirliği konusundaki taleplere modern bir yanıttır.

PL/PLB Planet dişli üniteleri %62 çelik, yaklaşık %33 dökme demir ve daha düşük oranlarda alüminyum, bakır, kauçuk ve pirinçten yapılmıştır. Bu oranlar ürünün konfigürasyonuna bağlı olarak değişiklik göstermektedir.

PL planet dişli üniteleri çıkış şaftından iletilmek üzere 500 Nm ile 660000 Nm arasında değişiklik gösteren farklı çıkış momenti değerlerine bağlı olarak 21 ana gruba ayrılmıştır.

Esas olarak, Planet dişli üniteleri ürününün modüler yapısı konik dişlilerin, sonsuz dişlilerin, hidrolik frenlerin ve çeşitli giriş şaftlarının planet ünitelere bağlanmasına olanak tanımakla birlikte hidrolik veya elektrik motorlu bağlantı için geniş yelpazedeki kaplin flanşlarının kullanılabilmesine de imkan tanımaktadır.

Planet dişli üniteleri modüler yapısının bir başka avantajı da çok çeşitli tahvil oranlarına olanak tanıyabilmek için farklı boylardaki çeşitli kademelerin seri olarak monte edilebilmesidir. Planet dişli ünitesinin tahvil oranları tek kademeli dişli ünitelerinde 3:1 ile 7:1, ve 5 kademede ise 10,000:1 oranına kadar değişiklik gösterebilmektedir.

Çıkış şaftları ve flanşlardaki geniş seçenek imkanı, sanayi makinelerinde veya sanayi tesislerinde redüktör ünitesinin montaj işlemini basitleştirmektedir.

Ürünün standart teslimi tamamlandığında boyanmasını içermemektedir. NRW çevre dostu boyaların kullanılmasını tavsiye etmektedir.

Die Einsatzbereiche

Immer öfter werden die Planetengetriebe auch in industriellen Anwendungen, wei Förder-und Hubsystemen, Krananlagen, im Schiffsbau, in der Offshore Technik, Stahlverarbeitung, Anlagen der Chemie, im Bereich alternativer Energien Umwelttechnik und der Nahrungsmitteltechnologie eingesetzt, um nur einige Schwerpunkte aufzuzeigen.

The Applications

The range of applications has now been extended to a wide variety of mobile machinery, chemical plants, machine tools, marble processing machinery, transportation and hoisting systems, in addition to the food and ecology industries.

Uygulamalar

Planet dişli ünitelerinin uygulama yelpazesi artık çok çeşitli mobil makinelere, kimyasal tesislere, işleme aletlerine, mermer işleme makinelerine, nakliye ve kaldırma sistemlerine ve ek olarak gıda ve ekoloji sanayilerine genişlemiştir.

IT IL PRODOTTO

L' utilizzo del riduttore epicicloidale per la trasmissione di potenza è una risposta moderna alle esigenze di ingombri limitati, di semplicità costruttiva e di affidabilità per l'utilizzatore.

I riduttori epicicloidali PL/PLB sono costitu iti da acciaio per il 62% e ghisa per il 33% circa e in percentuale minore da alluminio rame, gomma e ottone. Tali percentuali variano a seconda delle configurazioni del prodotto.

La famiglia di riduttori epicicloidali PL è offerta al mercato in 21 grandezze di base, selezionate in funzione dei momenti torcenti che possono essere trasmessi all albero di uscita, che vanno da 500 Nm fino a 660000 Nm.

La modularità del prodotto Planetary Drives permette l'accoppiamento ai riduttori epicicloidali di coppie coniche, riduttori vite senza fine, freni idraulici, diversi tipi di alberi di ingresso, nonché di flange per l'accoppiamento diretto a motori idraulici o elettrici.

Un altro grande vantaggio derivante dalla modularità dei montaggio in serie di stadi di differenti grandezze, in modo da ottenere una vastissima gamma di rapporti di riduzione. La gamma di prodotti Planetray Drives offre rapporti di riduzione da 3:1 a 7:1 per i riduttori a singolo stadio fino a 10.000:1 e oltre per i riduttori a 5 stadi di riduzione.

Le diverse opzioni di albero e flangiatura in uscita semplificano l'installazione del riduttore su applicazioni mobili e impianti fissi industriali.

La fornitura standard del prodotto non prevede la verniciatura a finire. NRW raccomanda l'utilizzo di vernici a basso impatto ambientale.

FR LE PRODUIT

L'utilisation du réducteur planétaire pour la transmission de puissance est une solution moderne répondant aux exigences de dimensions réduites, de simplicité dans la construction et de fiabilité pour l'utilisateur.

Les réducteurs épicycloïdaux PL/PLB sont réalisés à 62% en acier et à 33% environ en fonte, avec un pourcentage minime d aluminium, de cuivre, de laiton et de caoutchouc. Ces pourcentages varient selon les différentes configurations du produit.

La famille de réducteurs planétaires PL se présente sur le marché avec 21 types de base, sélectionnés en fonction des couples transmissibles sur l'arbre de sortie qui vont de 500 Nm à 660000 Nm.

La construction modulaire du produit Planetary Drives permet d'accoupler les réducteurs planétaires avec des couples coniques, des vis sans fin, des freins hydrauliques ou bien avec divers types d'arbres d' entrée, ainsi qu'avec des brides pour la fixation directe sur moteurs hydrauliques ou électriques.

La possibilité de monter en série des étages de différents rapports permettant d'obtenir une très vaste gamme de rapports de réduction (de 3:1 à 7:1 pour les réducteurs monoétagés et jusqu'à 10.000:1 et plus pour les réducteurs à 5 étages de réduction) est un autre grand avantage résultant de la conception modulaire des réducteurs Planetray Drives.

La possibilité de disposer de plusieurs options en ce qui concerne l'arbre et le bridage côté sortie du réducteur simplifie le montage de ce dernier sur les machines ou sur les equipements industriels.

La fourniture standard du produit ne prévoit pas la peinture de finition. NRW recommande l'utilisation de peintures à faible impact environnemental.

ES EL PRODUCTO

La utilización del reductor epicicloidal para la trasmisión de potencia es una solución moderna ante las exigencias de espacios limitados, de sencillez constructiva y de confiabilidad para el utilizador.

Los reductores epicicloidales PL/PLB están constituidos por un 62% de acero, aproximadamente, un 33% de fundición y, en menor porcentaje, por aluminio, cobre, caucho y latón. Estos porcentajes varían según las configuraciones del producto.

La familia de reductores epicicloidales PL está compuesta por 21 grupos básicos, seleccionados en función de los momentos de torsión que se puenden transmitir al eje de salida, que van desde 500 Nm hasta 660000Nm.

La construcción modular del producto Planetary Drives permite acoplar a los reductores epicicloidales de pares cónicos, reductores de tornillo sin fin, frenos hidráulicos, distintos tipos de ejes de entrada, así como bridas para el acoplamiento directo a motores hidráulicos o eléctricos.

Otra gran ventaja ofrecida por la construcción modular de los reductores epicicloidales es la posibilidad del montaje en serie de etapas con diferente magnitud, para poder obtener una vasta gama de relaciones de reducción. La gama de productos Planetary Drives ofrece relaciones de reducción de 3:1 a 7:1 para los reductores con una sola etapa hasta 10.000:1 y más para los reductores con 5 etapas de reducción.
Las distintas opciones de eje y de embridado en la salida simplifican la instalación del reductor en aplicaciones móviles y en instalaciones industriales fijas.

El suministro estándar del producto no prevé la pintura de terminación. NRW recomienda usar pinturas de bajo impacto ambiental.

Le Applicazioni

Sempre più frequenti sono le applicazioni in impianti chimici, macchine utensili, macchine lavorazione marmo, sistemi di trasporto e sollevamento, impianti alimentari ed ecologici e macchine mobili in generale.

Les Applications

Les applications sont maintenant de plus en plus fréquentes dans les complexes chimiques, alim entaires et écologiques ainsi que sur les machines outils, les dispositifs de transport et de relevage et toutes les machines mobiles en général.

Las Aplicaciones

Son cada vez más frecuentes las aplicaciones en las instalaciones químicas, máquinas herramientas, máquinas para la elaboración del mármol, sistemas de transporte y elevación, instalaciones alimenticias y ecológicas y máquinas móviles en general.

DE TECHNISCHE EIGENSCHAFTEN

Die Kenntnis der Anforderung, sowie die korrekte Umsetzung der im Katalog gelieferten Daten sind Voraussetzung für die gezielte Auswahl und somit den erfolgreichen Einsatz des entsprechenden Produktes.

Es ist deshalb wichtig, die folgenden Bestimmungsfaktoren festzulegen:

Übersetzung

i_{ges}

Es handelt sich um den Quotienten aus Antriebsdrehzahl n_1 und Abtriebsdrehzahl n_2.

Sie wird für jedes Getriebemodell im jeweiligen technischen Datenblatt angegeben.

Maximal Zulässige Antriebsdrehzahl

n_{1max} [min^{-1}]

Ist die zulässige Höchstgeschwindigkeit für jedes Planetengetriebe im intermittierenden Betrieb. Im Dauerbetrieb mit Antriebsdrehzahlen, die angegebenen Werte überschreiten, halten Sie bitte Rücksprache mit dem technische Abteilung von NRW.
Die werte der zulässigen Eingangsdrehzahl sind für jedes Getriebemodell im technischen Datenblatt angegeben.

Wirkungsrad

Der Wirkungsgrad des Planetengetriebes liegt pro Planetenstufe bei 98%; d.h. bei einem dreistufigem Getriebe n gesamt = 0.98x0.98x0.98 = 94%. Dieser Anhaltswert nimmt beim Betrieb mit hohen Geschwindigkeiten sowie bei Getrieben in der Winkelausführung ab.

Dauerdrehmoment
Mc [kNm]

Dieser allgemein festgelegte Wert entspricht einer theoretisch unbegrenzten Lebensdauer der Zahnräder, wobei sowohl die Biegespannung als auch die zulässige Hertzsche Pressung auf die Zahnflankenoberfläche berücksichtigt werden. Es handelt sich um das Limit der Beanspruchung an die Verzahnung gemaess der Norm ISO 6336.

EN TECHNICAL INFORMATION

To properly select and implement our products, users must have complete knowledge of and correctly interpret the information provided in this catalogue.

Thus, it's important to define some distinctive parameters, such as:

Reduction Ratio

i_{ges}

This is the ratio between input speed n_1 and output speed n_2.

It is provided for each drive shown on the relative technical sheet.

Maximum Input Speed

n_{1max} [min^{-1}]

This is the maximum allowable speed for each size of drive under intermittent work conditions. For more information about continuous duty or higher speeds, please contact the NRW Technical Department.
Maximum speed values for each type of planetary drive are illustrated on the single technical sheets.

Efficiency

Efficiency is usually high in planetary transmissions average values range between 0.97 and 0.98 for each reduction stage. This approximate value decreases under high-speed conditions or in applications with bevel gears.

Continuous Torque
Mc [kNm]

Continuous torque is the maximum value of the stress on the gears according to international standard ISO 6336.

This conventional value corresponds to the unlimited theoretical duration of the gears, taking into account both the bending stress and the surface strength of the tooth (Hertz pressure).

TR TEKNİK BİLGİLER

Ürünlerimizi doğru şekilde seçmek ve işletmeye almak için kullanıcılar bu katalogta yer alan bilgileri eksiksiz olarak bilmeli ve doğru biçimde yorumlayabilmelidir.

Dolayısı ile aşağıdaki bazı belirli parametrelerin tanımlanması önemlidir.

Tahvil Oranı

i_{ges}

Bu oran, giriş devri n_1 ile çıkış devri n_2 arasındaki orandır.

İlgili teknik sayfada gösterilen her planet dişli üniteleri için sunulmuştur.

Maksimum Giriş Devri

n_{1max} [d/d]

Aralıklı çalışma koşullarında, her bir planet dişli ünitesi için izin verilen maksimum devirdir. Sürekli çalışma veya daha yüksek hızlarda çalışma konularında daha ayrıntılı bilgi almak için lütfen NRW Teknik Departmanı ile irtibata geçiniz. Her bir planet dişli ünitesi tipi için maksimum devir değerleri teknik sayfalarda gösterilmiştir.

Verimlilik

Planet aktarımlarda verimlilik oranı genellikle yüksektir. Ortalama değerler her bir tahvil kademesi için 0.97 ile 0.98 arasında değişmektedir. Bu yaklaşık değer yüksek devir koşulları altında veya konik dişli kullanılan uygulamalarda düşer.

Sürekli Moment
Mc [kNm]

Sürekli moment, uluslararası standart ISO 6336;'ya göre, dişliler üzerindeki maksimum stres oranıdır.

Bu konvansiyonel değer, teorik olarak sınırsız kabul edilen dişli kullanım süresine denk gelir ve hem burulma gerilimini hem de dişlerin yüzey mukavemetlerini hesaba katar (Hertz basıncı).

IT CARATTERISTICHE TECNICHE

La conoscenza e l'esatta interpretazione dei dati riportati sul presente catalogo sono condizione indispensabile per la scelta e l'impiego corretto dei prodotti presentati.

È importante quindi definire alcuni parametri caratteristici:

Rapporto Di Trasmissione

i_{ges}

È il valore effettivo del rapporto tra la velocità di entrata n_1 e la velocità di uscita n_2.

Viene indicato per ogni tipo di riduttore nella relativa scheda tecnica.

Velocità Massima In Entrata

n_{1max} [min^{-1}]

Rappresenta il valore massimo accettabile per ogni grandezza di riduttore, in condizioni di funzionamento intermittente. Per applicazioni in servizio continuo o per velocità superiori a quelle indicate, il NRW è a disposizione per ulteriori chiarimenti.

I valori della velocità massima in entrata per ogni tipo di riduttore sono illustrati nelle singole schede tecniche.

Rendimento

Nella trasmissione epicicloidale, il rendimento è generalmente elevato, mediamente 0.97 - 0.98 per ogni stadio di riduzione. Questo dato indicativo si riduce nel caso di funzionamenti a velocità elevate o nel caso di riduttori in versione angolare.

Coppia Continua
Mc [kNm]

È quella coppia per cui il valore delle sollecitazioni sugli ingranaggi è pari al valore limite secondo le norme internazionali ISO 6336.

Questo valore convenzionale corrisponde ad una durata di vita teorica illimitata degli ingranaggi, tenendo conto sia della sollecitazione a flessione che della esistenza superficiale del dente (pressione di Hertz).

FR CARACTERISTIQUES TECHNIQUES

La connaissance et la bonne interprétation des données contenues dans le présent catalogue sont deux conditions indispensables qui permettent de choisir et d'utiliser correctement les produits présentés.

Il est par conséquent important de définir un certains nombre de paramètres spécifiques:

Rapport De Transmission

i_{ges}

Il s'agit de la valeur effective du rapport entre la vitesse d'entrée n_1 et la vitesse de sortie n_2.

Elle est indiquée sur la fiche technique de chaque type de réducteurs.

Vitesse Maximale D'entree

n_{1max} [min^{-1}]

Ce paramètre représente la vitesse maximale admise pour chaque taille de réducteur, en condition de fonctionnement intermittent. Pour des applications en service continu ou bien pour des vitesses supérieures à celles indiquées, le NRW est à votre disposition pour toute information supplémentaire.
Les valeurs de vitesse maximale en entrée sont indiquées sur la fiche technique de chaque type de réducteur.

Rendement

Sur les transmissions épicycloïdales, le rendement est généralement élevé, 0.97-0.98 en moyenne pour chaque étage de réduction. Cette donnée indicative peut être inférieure dans le cas d'un fonctionnement à haute vitesse ou dans le cas de réducteurs en version angulaire.

Couple Continu
Mc [kNm]

Il s'agit du couple auquel la valeur des sollicitations sur les engrenages est égale à la valeur limite selon les normes internationales ISO 6336.

Cette valeur conventionnelle correspond à une durée de vie théorique illimitée des engrenages, en tenant compte aussi bien de la contrainte de flexion que de la résistance de la surface de la dent (pression de Hertz).

ES CARACTERÍSTICAS TÉCNICAS

El conocimiento y la correcta interpretación de los datos indicados en este catálogo son una condición indispensable para efectuar la mejor elección y utilización de los productos presentados.

Por tanto es importante definir algunos parámetros característicos:

Relación De Transmisión

i_{ges}

Es el valor efectivo de la relación entre la velocidad de entrada n_1 y la velocidad de salida n_2.

El valor para cada tipo de reductor se indica en la respectiva ficha técnica.

Velocidad Máxima De Entrada

n_{1max} [min^{-1}]

Representa el valor máximo aceptable para cada dimensión de reductor, con funcionamiento intermitente. Para aplicaciones con servicio continuo o para velocidades superiores a aquellas indicadas, se aconseja ponerse en contacto con el Servicio Técnico NRW.
Los valores de la velocidad máxima de entrada para cada tipo de reductor se indican en las respectivas fichas técnicas.

Rendimiento

En la transmisión epicicloidal, el rendimiento es generalmente elevado, entre 0.97-0.98 para cada etapa de reducción. Este dato indicativo se reduce para el funcionamiento con elevadas velocidades o para aplicaciones con reductores cónicos.

Momento De Torsión Continuo
Mc [kNm]

Es el valor del momento para el cual el valor de las solicitaciones en los engranajes es igual al valor límite según las normas internacionales ISO 6336.

Este valor convencional corresponde a un tiempo de vida teórico ilimitado de los engranajes, teniendo en cuenta la solicitación bajo flexión y la resistencia superficial del diente (presión de Hertz).

DE TECHNISCHE EIGENSCHAFTEN

Um eine korrekte Auswahl des Getriebes zu treffen, muß dieser Wert in Bezug zur LEBENSDAUER-KONSTANTE nxh gesetzt werden (Diagramm 1).
n = Drehzahl an der Ausgangswelle (min^{-1})
h = Betriebsdauer (Stunden)

Zum einfacheren Nachschlagen sind in dem Datenblatt die einem vorgegebenen Wert von $n_2$xh entsprechenden Mc-Werte angegeben.

Maximales Drehmoment

M_{max} [kNm]

Es handelt sich um den maximal zulässigen Wert des Drehmoments, den das Getriebe kurzzeitig übertragen kann, ohne daß Schäden auftreten. Dieser Wert ist als maximales Drehmoment bei kurzzeitigen Spitzenbelastungen zu betrachten und niemals als Drehmoment bei Dauerbetrieb; er muß außerdem jeweils entsprechend dem Lastkollektiv gewertet werden.

Der Wert M_{max} wird in den technischen Datenblaettern des entsprechenden Getriebetyps ausgewiesen.

Betriebs Temperatur

Die Getriebe können bei einer Umgebungstemperatur zwischen -20°C und +90°C betrieben werden. Ein betrieb bei Temperaturen außerhalb dieses Bereiches ist möglich, vorausgesetzt daß besondere Maßnahmen in Bezug auf verwendete Schmierstoffe und Dichtungen beachtet werden. Diese Maßnahmen können im Einzelfall in Abstimmung mit dem technische Abteilung von NRW entschieden werden.

Thermische Leistung

Pt [kW]

Es handelt sich um die maximale Leistung, die das Getriebe bei Dauerbetrieb und normaler Schmierweise übertragen kann, ohne daß die Öltemperatur von 90°C überschritten wird. Die in den jeweiligen techischen Datenblättern aufgeführten Pt- Werten sind maximalwerte unter den folgenden Betriebsbedingungen:

• Dauerbetrieb ohne Unterbrechungen
• Drehzahl n_1 = 1500 min^{-1}

EN TECHNICAL INFORMATION

For the purpose of selecting a drive, this value must be considered in relation to the DURATION CONSTANT nxh, as shown in Curve 1 where:
n = output speed (min^{-1})
h = working time (hours)

To make consultation easier, the Mc values corresponding to a fixed $n_2$xh value are shown on the product technical sheets.

Maximum Torque

M_{max} [kNm]

This is the maximum output torque that the drive can transmit over a brief time interval without damaging its internal components and structure. This value must be considered as the maximum output torque o wing to working or start-up peaks and never as the continuous working torque.
M_{max} must also be carefully evaluated in those applications with a high number or start-ups or reversals.

The M_{max} value is shown on the single product technical cards.

Working Temperature

The working oil temperature of the drives should range between -20°C and +90°C. Temperatures falling outside this range might be tolerated only if special lubricants and gaskets are used. For further information, please contact the NRW Technical Department.

Thermal Power

Pt [kW]

The thermal power is the maximum power the drive can transmit under continuous duty with normal turbulence lubrication and without exceeding an oil temperature of 90°C. The Pt values shown on the single product technical sheet indicate the maximum values under the following duty conditions:
• Continuous duty
• Speed n_1 = 1500 min^{-1}

TR TEKNİK BİLGİLER

Bir planet dişli ünitesi seçerken, bu değer Grafik 1'de gösterilen SÜRE SABİTİ nxh ile ilişkili olarak düşünülmelidir.
Burada;
n = çıkış devri (d/d)
h = çalışma süresi (saat) ifade etmektedir.

Anlamayı kolaylaştırmak için, ürünlerin teknik sayfalarında sabit bir $n_2$xh değerine denk gelen Mc değerleri gösterilmiştir.

Maksimum Moment

M_{max} [kNm]

Bu moment, planet dişli ünitesinin iç bileşenleri ve yapısı hasar görmeden, kısa bir süre içerisinde aktarabileceği maksimum çıkış momentini ifade etmektedir. Bu değer, çalışma sırasında veya başlatma sırasında ulaşılan pik değerler olarak kabul edilmelidir ve asla sürekli çalışma momenti olarak kabul edilmemelidir. Aynı zamanda, M_{max} çok fazla sayıda başlatmaya veya ters çevirmeye sahip uygulamalar için dikkatli bir biçimde değerlendirilmelidir.

Her bir planet dişli ünitesi tipi için M_{max} değerleri ürün teknik sayfalarında gösterilmektedir.

Çalışma Sıcaklığı

Planet dişli ünitelerinin çalışırken yağ sıcaklığı -20°C ile +90°C arasında olmalıdır. Bu aralığın dışında kalan sıcaklıklar ancak özel yağlar ve contalar kullanıldığı takdirde izin verilebilir. Bu konuda daha ayrıntılı bilgi almak için lütfen NRW Teknik Departmanı ile iletişime geçiniz.

Termik Güç

Pt [kW]

Termik güç, kesintisiz çalışma sırasında, normal türbülans yağlaması ile yağ sıcaklığı 90°C 'yi aşmayacak şekilde aktarabileceği maksimum gücü ifade etmektedir.
Ürün teknik sayfasında gösterilen Pt değerleri aşağıdaki çalışma koşullarındaki maksimum değerleri ifade etmektedir:

• Kesintisiz çalışma
• Hız n_1 = 1500 (d/d)

IT CARATTERISTICHE TECNICHE

Ai fini della scelta del riduttore questo valore va posto in riferimento alla COSTANTE DI DURATA nxh espressa nel Diagramma 1 dove:

n = Velocità in uscita (min^{-1})
h = Durata di funzionamento (ore).

Per semplicità di consultazione, nella scheda tecnica di prodotto sono riportati i valori di Mc corrispondenti ad un valore n_2xh prefissato.

Coppia Massima

M_{max} [kNm]

È il valore massimo di coppia che il riduttore può trasmettere per breve tempo senza che si verifichino danneggiamenti ai suoi componenti interni ed alla sua struttura.
Tale valore deve essere considerato come una coppia massima dovuta a picchi o spunti di avviamento e mai come coppia di lavoro; il valore M_{max} deve inoltre essere opportunamente valutato in quegli azionamenti che comportano un elevato numero di avviamenti o inversioni.

Il valore M_{max} è indicato nelle schede tecniche di prodotto.

Temperatura Di Funzionamento

Le temperature dell'olio a cui i riduttori possono funzionare sono quelle comprese tra -20°C e +90°C. Temperature al di fuori di questa fascia possono essere accettate se si prevedono particolari accorgimenti relativi ai tipi di lubrificante e di guarnizioni utilizzati. Tali accorgimenti possono essere decisi caso per caso, d'accordo con il Servizio Tecnico NRW.

Potenza Termica

Pt [kW]

È la potenza massima trasmissibile dal riduttore in funzionamento continuo con lubrificazione normale a sbattimento, senza che l'olio superi la temperatura di 90°C. I valori di Pt riportati nelle singole schede tecniche di prodotto sono valori massimi espressi alle seguenti condizioni di impiego:

• Servizio continuo
• Velocità n_1 =1500 min^{-1}

FR CARACTERISTIQUES TECHNIQUES

Pour le choix du réducteur, cette valeur doit être mise en rapport avec CONSTANTE DE DURÉE nxh indiquée dans le Diagramme 1 où:

n = vitesse de sortie (min^{-1})
h = durée de fonctionnement (heures)

Pour simplifier la consultation, les fiches techniques des produits indiquent les valeurs de Mc correspondant à une valeur n_2xh prédéterminée.

Couple Maximal

M_{max} [kNm]

Il s'agit de la valeur maximum de couple que len réducteur peut transmettre pendant une courte durée, sans que ni ses composants internes ni sa structure ne subissent de dommages. Cette valeur doit être considérée comme un couple maximum lors de pics ou lors de mises en marche et ne doit jamais être envisagée comme couple de fonctionnement. La valeur M_{max} doit en outre être bien évaluée sur les actionnements qui prévoient un grand nombre de mises en marche ou d'inversions.

La valeur M_{max} est indiquée sur chaque fiche technique de produit.

Temperature De Fonctionnement

Les températures de l'huile auxquelles les réducteurs peuvent fonctionner sont celles comprises entre -20°C et +90°C. Des températures hors de cette plage sont acceptables à condition de prendre des précautions spécifiques concernant le type de lubrifiant et les joints utilisés. Ces précautions sont à établir au cas par cas, en accord avec le Service Technico NRW.

Puissance Thermique

Pt [kW]

Il s'agit de la puissance maximale transmissible par le réducteur en fonctionnement continu en conditions de lubrification standard par barbotage, sans que l'huile ne dépasse la température de 90°C.
Les valeurs de Pt indiquées sur chaque fiche technique sont des valeurs maximales établies dans les conditions d'utilisation suivantes:
• Service continu
• Vitesse n_1=1500 min^{-1}

ES CARACTERÍSTICAS TÉCNICAS

Para la elección del reductor, este valor representa la CONSTANTE DEL TIEMPO DE VIDA nxh como se muestra en el Diagrama 1 donde:

n = Velocidad en la salida (min^{-1})
h = Duración de funcionamiento (horas)

Para simplificar la consulta, en la ficha técnica del producto se indican los valores de Mc correspondientes a un valor n_2xh prefijado.

Máximo Momento De Torsión

M_{max} [kNm]

Es el máximo valor del momento de torsión que el reductor puede transmitir durante un tiempo breve sin que se produzcan daños en sus componentes internos y estructura. Dicho valor se tiene que considerar como el máximo momento de torsión debido al trabajo o a picos de arranque y jamás como un momento continuo de trabajo. Además, el valor M_{max} se tendrá que evaluar en aquellos accionamientos que requieran un gran número de arranques o inversiones.

El valor M_{max} se indica en las fichas técnicas del producto.

Temperatura De Funcionamiento

Las temperaturas del aceite para las cuales los reductores pueden funcionar tienen que estar comprendidas entre -20°C y +90°C. Se pueden aceptar temperaturas fuera de esta faja si se prevén particulares precauciones respecto a los tipos de lubricante y de guarniciones utilizadas. Dishas precauciones se pueden establecer según el caso, poniéndose de acuerdo con el Servicio Técnico NRW.

Potencia Térmica

Pt [kW]

Es la potencia máxima que puede transmitir e l reductor durante el funcionamiento continuo con lubricación normal por circulación y salpicadura y sin que el aceite supere los 90°C. Los valores de Pt indicados en cada una de las fichas técnicas del producto son los máximos valores para las siguientes condiciones de utilización:
• Servicio continuo
• Velocidad n_1= 1500 min^{-1}

DE TECHNISCHE EIGENSCHAFTEN

• Öl ISO VG 150
• Waagerechte einbaulage
• Umgebungstemperatur 20°C.

Sollte die geforderte Leistung die im technischen Datenblatt des Getriebes aufgeführten Werte übersteigen, wird ein Schmiermittel-Kühlsystem erforderlich.

Der Pt-Wert der Getriebe in Fussaussfuehrung (von Größe PL1000 bis PL16000) kann um 15% erhöht werden.

Weichen die Einsatzbedingungen von den Normbedingungen ab, können die Pt Werte durch den Korrekturfaktor fk korrigiert werden (vgl. nachstehend aufgeführte Tabelle 1).

EN TECHNICAL INFORMATION

• Oil ISO VG 150
• Horizontal mounting position.
• Room temperature 20°C.

If the required power exceeds the values indicated on the drive technical sheet, a lubricant cooling system must be installed.

For foot-mounted drives (from the PL1000 to the PL16000 series), the Pt value can be increased by 15%.

If the duty characteristics differ, you can apply a corrective factor fk to the Pt values as indicated in Table 1 below:

TR TEKNİK BİLGİLER

• Yağ ISO VG 150
• Yatay montaj pozisyonu
• Oda sıcaklığı 20°C.

Eğer gereken güç, planet dişli ünitesinin teknik sayfasında belirtilen değerlerin üzerine çıkıyorsa ilave yağ soğutma sistemi takılmalıdır.

Ayak montajlı Planet dişli üniteleri için (PL1000 ile PL16000 arasındaki seriler) Pt değeri % 15 daha arttırılabilir.

Eğer çalışma özellikleri değişirse aşağıdaki Tablo 1'de gösterildiği üzere, Pt değerlerini düzeltmek için bir fk düzeltme faktörü kullanabilirsiniz.

$$Pt_1 = Pt \times fk$$

Anpassungsfaktor Wärmekapazität **fk** Thermal power adjustment factor **fk** Termal güç düzeltme faktörü **fk**					
Betriebszeit in % Work time % Çalışma süresi %	Raumtemperatur In / Room temperature / Oda sıcaklığı				
	10°C	20°C	30°C	40°C	50°C
100	1.1	1.0	0.8	0.7	0.6
80	1.2	1.1	1.0	0.8	0.7
60	1.4	1.2	1.1	1.0	0.8
40	1.6	1.4	1.2	1.1	1.0
20	1.8	1.6	1.4	1.2	1.1

Tabelle 1 / Table 1 / Tablo 1

ANMERKUNG: Es wird darauf hingewiesen, daß sich der Pt-Wert auf die tatsächlich vom Getriebe übertragene Leistung bezieht; sie darf nicht mit der Leistung des eingebauten Motors verwechselt werden, die höher sein könnte.
Für weitere Rückfragen wenden Sie sich bitte an den Kundenservice von NRW.

NOTE. Pt refers to the power actually transmitted by the drive. It should not be confused with the power of the motor mounted on the drive which, for various reasons, might be higher.

For further details please contact the NRW Technical Department.

NOT: Pt, planet dişli ünitesi tarafından aktarılan gerçek gücü ifade etmektedir. Planet dişli ünitesinin üzerine monte edilen motorun, çeşitli sebeplerle daha yüksek olabilecek olan güç değeri ile karıştırılmamalıdır.

Daha fazla ayrıntı için lütfen NRW Teknik Departmanı ile iletişime geçiniz.

Betriebsfaktor
fs

Es handelt sich um einen Multiplikationskoeffizienten, der in die Formel eingesetzt wird.

Damit soll den nach Einsatzform unterschiedlichen Belastungen Rechnung getragen werden; er wird in Tabelle 2 aufgeführt.

Service Factor
fs

Service factor fs is a multiplication coefficient introduced into the formula for selecting the drive.

This factor takes into account the application load conditions. It is defined in Table 2.

Servis Faktörü
fs

Servis faktörü fs, planet dişli ünitesinin seçilmesi için formüle girilen katsayıdır.

Bu faktör uygulamanın yük koşullarını da hesaba katar. Tablo 2 'de tanımlanmıştır.

IT CARATTERISTICHE TECNICHE

• Olio ISO VG 150
• Posizione di montaggio orizzontale
• Temperatura ambiente 20°C.

Qualora a potenza richiesta ecceda i valori indicati nella scheda tecnica del riduttore sarà necessario prevedere un sistema di raffeddamento del lubrificante.

Per i riduttori con piedi (dalla grandezza PL1000 alla grandezza PL16000) il valore di Pt può essere incrementato del 15%.

Nel caso le caratteristiche di impiego siano diverse, si può applicare ai valori di Pt un fattore correttivo fk, come indica la Tabella 1, di seguito riportata:

FR CARACTERISTIQUES TECHNIQUES

• Huile ISO VG 150
• Position de montage horizontale
• Température ambiante 20°C

Si la puissance requise dépasse les valeurs indiquées sur la fiche technique du réducteur, il est nécessaire de prévoir l'installation d'un système de refroidissement du lubrifiant.

Pour les réducteurs à pattes, (de la grandeur PL1000 à la grandeur PL16000) la valeur Pt peut être majorée de 15%.

Dans le cas où les caractéristiques d'utilisation seraient différentes, il est possible d'appliquer un facteur correctif fk, comme indique dans le Tableau 1 ci-dessous:

ES CARACTERÍSTICAS TÉCNICAS

• Aceite ISO VG 150
• Posición de montaje horizontal
• Temperatura ambiante 20°C

Si la potencia requerida excede los valores indicados en la ficha técnica del reductor será necesario prever un sistema de enfriamento del lubricante.

Para los reductores con pie (desde la serie PL1000 hasta PL16000) el valor de Pt se puede incrementar el 15%.

Si las características de empleo son distintas, a los valores de Pt se les puede aplicar un factor de corrección fk, com o se indica en la siguiente Tabla 1:

$$Pt_1 = Pt \times fk$$

Fattore di adeguamento della capacità termica **fk** Facteur d'adaptation de la capacite thermique **fk** Factor de adaptación de la capacidad térmica **fk**					
Tempo % di funzionamento Temps % de fonctionnement Tempo % de funcionamento	Temperatura ambiente / Température Ambiante / Temperatura ambiente				
	10°C	20°C	30°C	40°C	50°C
100	1.1	1.0	0.8	0.7	0.6
80	1.2	1.1	1.0	0.8	0.7
60	1.4	1.2	1.1	1.0	0.8
40	1.6	1.4	1.2	1.1	1.0
20	1.8	1.6	1.4	1.2	1.1

Tabella 1 / Tableau 1 / Tabla 1

N.B. Si noti che la Pt è riferita alla potenza effettivamente trasmessa dal riduttore, da non confondere quindi con la potenza del motore su di esso installato, che per vari motivi potrebbe essere superiore.

Per ulteriori dettagli si prega di contattare il Servizio Tecnico NRW.

N.B. Pt se réfère à la puissance effectivement, transmise par le réducteur; il est important de ne pas confondre cette valeur avec la puissance du moteur sur lequel le réducteur est installé, puissance qui, pour différentes raisons, peut être supérieure.

Pour plus de détails, s'adresser au Service Technico NRW.

Nota: Tener en cuenta que la Pt se refiere a la potencia efectivamente transmitida por el reductor, por tanto no hay que confundirse con la potencia del motor instalado sobre el mismo, que por distintos motivos podría ser superior.

Para más detalles se aconseja ponerse en contacto con el Servicio Técnico NRW.

Fattore Di Servizio
fs

È un coefficiente di moltiplicazione che viene inserito nella formula per la scelta del riduttore.

Serve per tener conto delle condizioni di carico dell'applicazione, ed è definito dalla Tabella 2.

Facteur De Service
fs

Il s'agit d'un coefficient de multiplication qui est introduit dans la formule servant à choisir le réducteur.

Il permet de tenir compte des conditions de charge de l'application et est défini dans le Tableau 2.

Factor De Servicio
fs

Es un coeficiente de multiplicación que se introduce en la fórmula para la elección del reductor.

Sirve para tener en cuenta las condiciones de carga de la aplicación y está definido en la Tabla 2.

DE TECHNISCHE EIGENSCHAFTEN

BELASTUNG DER ABTRIEBSWELLE UND ANTRIEBSWELLE

Fr; Fa [N]
Fr = Radiallast
Fa= Axiallast

Die Belastbarkeit der Abtriebswelle ergibt sich aus den jeder Getriebegröße zugeordneten Diagrammen. Dagegen sind die Werte der Antriebswelle auf der S. 72-74 ersichtlich.

Die zulässigen Maximalwerte der Radial und Axialbelastungen dürfen nicht gleichzeitig auftreten. Der Wert der zulässigen Belastung durch Fr und Fa bezieht sich auf eine Betriebsdauer nach ISO 281, das entspricht:

$n \times h = 5x10^6$ fuer antriebswelle
$n \times h = 10^5$ fuer abtriebswelle

Die Getriebe in Ausführung F werden in der Regel für die Übertragung von Drehmomenten ohne Radialbelastung eingesetzt. Deshalb werden Fr und Fa nicht angegeben. Für weitere Rückfragen wenden sie sich bitte an den Kundenservice von NRW.

EN TECHNICAL INFORMATION

OUTPUT AND INPUT SHAFT LOADS

Fr; Fa [N]
Fr = Radial load
Fa= Axial load

The load values that output shafts can bear are indicated on the load curves shown for each drive size; the load values relevant to input shafts are shown on page 72-74.

Maximum radial and axial loads must not occur simultaneously.
The values of the tolerated loads Fr, Fa refer to a bearing duration, according to standard ISO 281, corresponding to:

$n \times h = 5x10^6$ for input shafts
$n \times h = 10^5$ for output shafts

F gear units are usually applied in the transmission of a torque without radial loads. In this case, maximum values Fr and Fa are not shown.
For further information, please contact the NRW Technical Department.

TR TEKNİK BİLGİLER

GİRİŞ VE ÇIKIŞ RADYAL YÜKLERİ

Fr; Fa [N]
Fr = Radyal yük
Fa= Eksenel yük

Çıkış şaftlarının taşıyabileceği yük değerleri, her bir planet dişli ünitesi için verilen yük eğrilerinde gösterilmiştir; giriş şaftları ile ilgili olan yük değerleri ise sayfa 72-74 arasında gösterilmiştir.

Maksimum radyal ve eksenel yükler aynı anda meydana gelmemelidir.
İzin verilen yük değerleri Fr ve Fa, ISO 281 standardına uygun olarak, aşağıdaki rulman dayanma süreleri göz önüne alınmalıdır.

$nxh = 5x10^6$ giriş şaftları için
$nxh = 10^5$ çıkış şaftları için

Flanşlı planet dişli üniteleri (F) genellikle radyal yüke sahip olmayan momentlerin aktarımında uygulanmaktadır. Bu durumda Fr ve Fa maksimum değerleri gösterilmez.
Daha ayrıntılı bilgi almak için lütfen NRW Teknik Departmanı ile iletişime geçiniz.

Im Rahmen der ständigen Weiterentwicklung und Verbesserung der Produkte behält sich NRW das Recht vor, erforderliche technische Änderungen ohne ausdrückliche vorankündigung durchzufuehren.

Because NRW is continuously improving its product, it will make the technical and dimensional changes deemed necessary, without notifying the market in advance.

NRW, ürününü sürekli olarak geliştirdiği için gerekli görülen teknik verilerde ve ölçülerde, önceden piyasaya haber vermeden değişiklik yapabilir.

GETRIEBEAUSWAHL

In einem mechanischen System ist das Getriebe eine Einheit zwischen Motor und anzutreibender Maschine. Die Belastungen die auf dem Getriebe während des Betriebes wirken, sind eine Funktion sowohl der Motor-als auch der Maschinenkennlinie (Leistungsaufnahme und Lastkollektiv).

Die Kenntnis des gesamten Antriebsystems ist Voraussetzung für die korrekte Auswahl des Getriebes. Man sollte folgende Daten beruecksichtigen:

ANZUTREIBENDE MASCHINE
a) Einsatz
b) Drehgeschwindigkeit
c) Leistung und/oder
d) Lastkollektiv

MOTOR
e) Typ und Eigenschaften des Motors
f) Leistung und/oder Drehmoment
g) Drehgeschwindigkeit

DRIVE SELECTION

In a mechanical transmission system, a drive is a device positioned between the prime mover and the driven equipment. The stress it is subjected to during operation is strictly related to the characteristics of the prime mover and the driven equipment (power absorption and work cycle).

Knowledge of the entire transmission system is mandatory to choose the best drive. It is necessary to know the following:

DRIVEN EQUIPMENT
a) Type of operation
b) Rotation speed
c) Power and/or torque absorption
d) Working cycle

PRIME MOVER
e) Type and characteristics of the prime mover
f) Delivered power and/or torque
g) Operating speed

PLANET DİŞLİ ÜNİTESİ SEÇİMİ

Mekanik bir aktarım sisteminde yer alan bir planet dişli ünitesi, ana makine ile tahrik edilecek donanımlar arasında konumlanmış bir ekipmandır. Çalışma sırasında maruz kaldığı gerilimler kesin bir şekilde ana makine ile tahrik edilen ekipmanların özellikleri ile ilgilidir (güç emilimi ve çalışma döngüsü).

En iyi planet dişli ünitesinin seçilebilmesi için bütün aktarım sistemi hakkında bilgi sahibi olunması gerekmektedir. Aşağıdakilerin bilinmesi gereklidir:

TAHRİK EDİLEN EKİPMAN
a) Çalışma Şartları
b) Dönüş hızı
c) Güç ve/veya moment ihtiyacı
d) Çalışma döngüsü

ANA MAKİNE
e) Ana makinenin tipi ve özellikleri
f) İletilen güç ve/veya moment
g) Çalışma devri

IT CARATTERISTICHE TECNICHE

CARICHI SULL'ALBERO DI USCITA E ENTRATA

Fr; Fa [N]
Fr = Carico radiale
Fa= Carico assiale

I valori dei carichi applicabili sugli alberi di uscita si ricavano dai diagrammi riportati in corrispondenza di ogni grandezza di riduttore, mentre quelli relativi agli alberi di entrata si trovano a pag. 72-74.
I carichi radiali ed assiali massimi non possono agire contemporaneamente.
L'entità dei carichi ammessi Fr, Fa è riferita ad una durata dei cuscinetti secondo ISO 281, corrispondente a:

n x h = $5x10^6$ per alberi in entrata
n x h = 10^5 per alberi di uscite

I riduttori in versione F vengono normalmente utilizzati per trasmettere coppia senza carichi radiali, pertanto non vengono indicate le capacità di Fr ed Fa massime.
Per informazioni ulteriori contattare il Servizio Tecnico NRW.

FR CARACTERISTIQUES TECHNIQUES

CHARGES SUR L'ARBRE DE SORTIE ET D'ENTREE

Fr; Fa [N]
Fr = Charge radiale
Fa= Charge axiale

Les valeurs des charges applicables sur l'arbre de sortie peuvent être obtenues à partir des diagrammes correspondants à chaque famille de rèducteur; celles relatives aux arbres d'entrée sont indiquées page 72-74.
Les charges radiales et axiales maximales ne sont pas cumulables.
La valeur des charges admissibles Fr et Fa se réfère à une durée des roulements établie selon la norme ISO 281, à savoir:

n x h = $5x10^6$ pour arbres d'entrée
n x h = 10^5 pour arbres de sortie

Les réducteurs version F sont généralement utilisés pour transmettre un couple sans charges radiales, aussi les charges maximales Fr et Fa ne sont-elles pas indiquées.
Pour de plus amples informations, s'adresser au Service Technico NRW.

ES CARACTERÍSTICAS TÉCNICAS

CARGAS EN EL EJE DE SALIDA Y ENTRADA

Fr; Fa [N]
Fr = Carga radial
Fa= Carga axial

Los valores de las cargas aplicables sobre los ejes de salida se obtienen de los diagramas indicados en correspondencia con cada dimensión del reductor, mientras los valores en los ejes de entrada se encuentran en la Pág. 72-74.
Las cargas radiales y axiales máximas no pueden intervenir simultáneamente.
El valor de las cargas admitidas Fr, Fa está referido a una duración de los rodamientos según la norma ISO 281 y corresponde a:

n x h = $5x10^6$ para ejes de entrada
n x h = 10^5 para ejes de salida

Los reductores de la versión F generalmente se utilizan para transmitir un momento de torsión sin cargas radiales, por tanto no se indican los valores máximos de Fr y Fa.
Para más informaciones, se recomienda ponerse en contacto con el Servicio Técnico NRW.

Nell'ambito del continuo sviluppo e miglioramento del prodotto, la NRW si riserva la facoltà di apportare le modifiche sia tecniche sia dimensionali che saranno ritenute opportune, senza darne espresso preavviso.

NRW se réserve le droit d'apporter, sans préavis, les modifications de type technique et dimensionnel jugées nécessaires au développement et à l'amélioration constant de ses produits.

NRW continua desarrollando y mejorando sus productos, reservándose la facultad de efectuar las oportunas modificaciones técnicas y dimensionales sin previo aviso.

SCELTA DEL RIDUTTORE

In una trasmissione meccanica, il riduttore è un organo inserito tra motore ed utenza. Le sollecitazioni a cui è sottoposto durante il funzionamento sono funzione delle curve caratteristiche del motore come di quelle dell'utenza (assorbimento e ciclo di lavoro).
La conoscenza della trasmissione nella sua interezza è condizione necessaria per la corretta scelta del riduttore.
È necessario conoscere:

UTENZA
a) Tipo di servizio
b) Velocità di rotazione
c) Potenza e/o coppia assortita
d) Ciclo di lavoro

MOTORE
e) Tipo e caratteristiche del motore
f) Potenza e/o coppia erogata
g) Velocità di funzionamento

SELECTION DU REDUCTEUR

Dans un système de transmission mécanique, le réducteur est un organe situé entre le moteur et la machine à actionner. Les sollicitations auxquelles il est soumis pendant le fonctionnement sont fonction des courbes caractéristiques du moteur ainsi que de celles la machine à actionner (absorption de puissance et cycle de travail).
La connaissance du système de transmission dans son intégralité est une condition indispensable au choix du réducteur répondant aux besoins effectifs.
Ainsi est-il nécessaire de connaître:

MACHINE A ACTIONNER
a) Type de service
b) Vitesse de rotation
c) Puissance et/ou couple absorbé et/ou couple
d) Cycle de travail

MOTEUR
e) Type et caractéristiques du moteur
f) Puissance et/ou couple produits
g) Vitesse de fonctionnement

ELECCIÓN DEL REDUCTOR

En una transmisión mecánica el reductor es un órgano situado entre el motor y el equipo conducido. Las solicitaciones a las que se somete durante el funcionamiento son función de las curvas características del motor y del equipo conducido (potencia absorbida y ciclo de trabajo).
El conocimiento del sistema de transmisión es una condición necesaria para la correcta elección del reductor.
Será necesario conocer:

EQUIPO CONDUCIDO
a) Tipo de servicio
b) Velocidad de rotación
c) Potencia y/o momento de torsión absorbido
d) Ciclo de trabajo

MOTOR
e) Tipo y características del motor
f) Potencia y/o momento de torsión erogado
g) Velocidad de funcionamiento

DE TECHNISCHE EIGENSCHAFTEN

Diese Daten ermöglichen eine erste Auswahl des Getriebes und zwar nach der Festlegung von:

- Übersetzung i_{ges}
- Arbeitsdrehmoment M [kNm]
- Belastung an der Abtriebs - und Antriebswelle Fr, Fa [N]

Danach sind folgende Parameter zu überprüfen:

1. Getriebedrehzahl ≤ n_1 max
2. Betriebsdrehmoment ≤ Mc
3. Belastungen auf der Abtriebswelle und Antriebswelle ≤ Fr; Fa
4. Wärmeleistung ≤ Pt (Dauerbetrieb)
5. Umgebungstemperatur

Die Parameter 1 und 5 kann man ohne weiteres prüfen. Was 2, 3 und 4 betrifft, ist wie folgt vorzugehen:

ÜBERPRÜFUNG DES GETRIEBES AUFGRUND DES DREHMOMENTS

Berechnung des äquivalenten Drehmoments

Me [kNm]

Wenn die Belastung während der Einsatzdauer variert (siehe z.B. Diagramm 1), soll man einen Durchschnittswert ermitteln.

Nach dem Lastkollektiv wird das Drehmoment mit der unten angegebenen Formel berechnet.

EN TECHNICAL INFORMATION

With this information an initial drive selection can be made, determining the following:

- Reduction ratio i_{ges}
- Working torque M [kNm]
- Loads Fr and Fa [N] on drive output and input shafts

Subsequently, we must verify some specific drive parameters as follows:

1. Drive input rotation speed ≤n_1 max
2. Working torque ≤ Mc
3. Loads on output and input shafts ≤ Fr; Fa
4. Horsepower to be transmitted ≤ Pt (if under continuous duty)
5. Room temperature

Relations 1 and 5 can be readily verified; as for relations 2, 3 and 4 we must proceed as follows.

VERIFICATION OF THE PLANETARY UNIT ACCORDING TO THE TORQUE

Calculation of the equivalent working torque

Me [kNm]

When loads are intermittent (see Histogram 1), we must determine the equivalent working torque value.

The cumulative load principle, based on the following formula, is used to determine the torque value which produces the same fatigue after the number of cycles (nxh) required by the project:

TR TEKNİK BİLGİLER

Bu bilgiler ile aşağıdaki verileri de kullanarak başlangıçta bir planet dişli ünitesi seçilebilir:

- Tahvil oranı i_{ges}
- Çalışma momenti M [kNm]
- Giriş ve çıkış şaftlarındaki yükler Fr, Fa [N]

Bunu takiben, bazı belirli planet dişli ünitesi parametrelerini aşağıda gösterildiği biçimde doğrulamalıyız:

1. Planet dişli ünitesinin giriş devri ≤ n_1 max
2. Çalışma momenti ≤ Mc
3. Giriş ve çıkış şaftları üzerine etki eden yükler ≤ Fr; Fa
4. İletilecek beygir gücü ≤ Pt (eğer sürekli çalışma yapılıyorsa)
5. Oda sıcaklığı

1 ve 5 ilişkileri kolaylıkla doğrulanabilir; 2, 3 ve 4 ilişkileri için ise aşağıdaki gibi devam etmeliyiz.

PLANET DİŞLİ ÜNİTESİNİN MOMENT AÇISINDAN DOĞRULANMASI

Eşdeğer çalışma momentinin hesaplanması

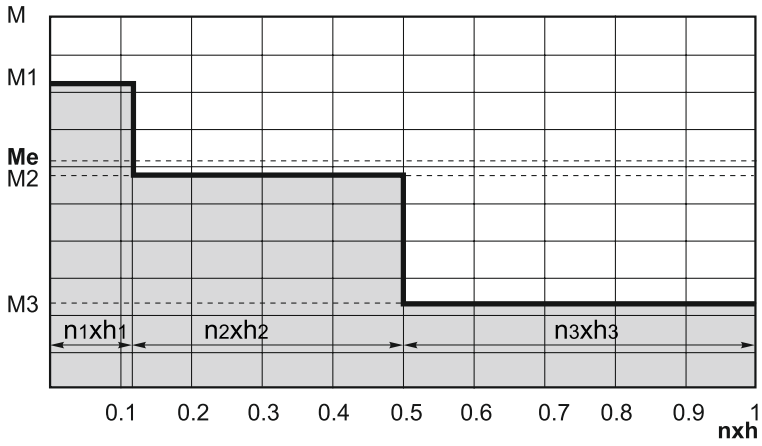
Me [kNm]

Yükler aralıklı olduğunda (Grafik 1'e bakınız), eşdeğer çalışma momenti değerini hesaplamamız gerekmektedir.

Aşağıdaki formüle dayanarak, projenin gerektirdiği tur sayısı (nxh) ardından aynı yorulma seviyesini üreten momentin belirlenebilmesi için kümülatif yük prensibi kullanılmaktadır.

$$Me = \sqrt[6]{M_1^{\,6}\,\frac{(n_1 \times h_1)}{(n \times h)} + M_2^{\,6}\,\frac{(n_2 \times h_2)}{(n \times h)} + M_3^{\,6}\,\frac{(n_3 \times h_3)}{(n \times h)}}$$

Histogramm 1
Histogram 1
Grafik 1



IT CARATTERISTICHE TECNICHE

Queste informazioni permettono una prima scelta dei riduttori dopo aver determinato:

- Rapporto di trasmissione iges
- Coppia di lavoro M [kNm]
- Carichi sull'albero in uscita e in entrata al riduttore Fr; Fa [N]

Successivamente si dovrà procedere alle verifiche dei parametri caratteristici dei riduttori come segue:

1. Velocità in ingresso al riduttore ≤ n_1 max
2. Coppia di lavoro ≤ Mc
3. Carichi applicati all'albero in uscita e in entrata ≤ Fr; Fa
4. Potenza da trasmettere ≤ Pt (se in servizio continuo)
5. Temperatura ambiente

Le relazioni 1 e 5 sono di immediata verifica mentre per la 2, la 3 e la 4 si procede come segue:

VERIFICA DEL RIDUTTORE IN FUNZIONE DELLA COPPIA

Calcolo della coppia equivalente

Me [kNm]

Quando il carico è variabile nel tempo (Istogramma 1), si deve determinare il valore della coppia equivalente.

Con il criterio del cumulativo di carico si c alcola, con la formula sotto indicata, la coppia in grado di provocare lo stesso livello di usura dopo il numero di cicli (nxh) richiesto dal progetto.

FR CARACTERISTIQUES TECHNIQUES

Ces informations permettent une première sélection après avoir établi:

- Rapport de transmission iges
- Couple de travail M [kNm]
- Charges sur l'arbre de sortie et d'entrée sur le réducteur Fr; Fa [N]

Ensuite, il est nécessaire de procéder aux contrôles des paramètres spécifiques des réducteurs, comme suit:

1. Vitesse en entrée sur le réducteu ≤ n_1 max
2. Couple de travail ≤ Mc
3. Charges appliquées sur l'arbre en sortie et en entrée ≤ Fr; Fa
4. Puissance à transmettre ≤ Pt (si le service est de type continu)
5. Température ambiante

Les paramètres 1 et 5 peuvent être calculés directement alors que pour les paramètres 2, 3 et 4, il est nécessaire de procéder comme suit:

CONTRÔLE DU RÉDUCTEUR EN FONCTION DU COUPLE

Calcul du couple equivalent

Me [kNm]

Lorsque la charge varie dans le temps (voir histogramme 1), il est nécessaire d'établir la valeur du couple équivalent.

Par l'intermédiaire du critère du cumul des charges est calculée, au moyen de la formule ci dessous, la valeur de couple qui détermine le même niveau d'usure à l'issue du nombre de cycles (nxh) requis par le projet.

ES CARACTERÍSTICAS TÉCNICAS

Estas informaciones permiten una primer elección de los reductores después de haber determinado:

- Relación de transmisión iges
- Momento de trabajo M [kNm]
- Cargas en el eje de salida y entrada del reductor Fr; Fa [N]

Después se tendrán que efectuar las verificaciones de los parámetros característicos de los reductores como sigue:

1. Velocidad de entrada en el reductor ≤ $n_1$máx.
2. Momento de trabajo ≤ Mc
3. Cargas aplicadas en el eje de salida y entrada ≤ Fr; Fa
4. Potencia a transmitir ≤ Pt (si el servicio es conuo)
5. Temperatura ambientetinuo

Las relaciones 1 y 5 se verifican directamente mientras para las 2, 3 y 4 se procede como sigue:

VERIFICACIÓN DEL REDUCTOR SEGÚN EL MOMENTO DE TORSIÓN

Cálculo del momento equivalente

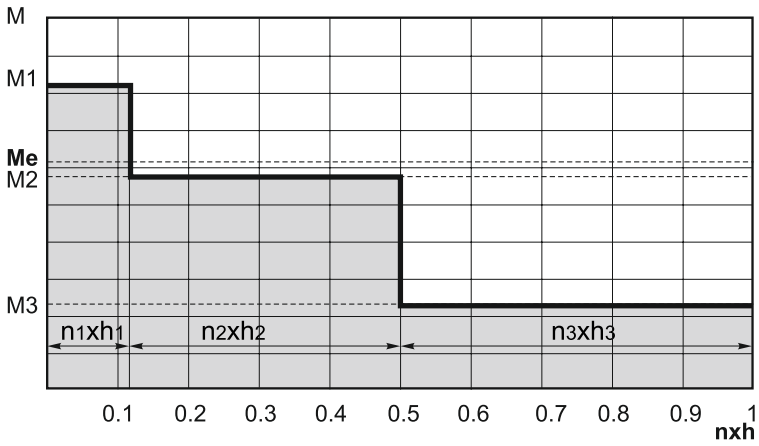
Me [kNm]

Cuando la carga varía durante el tiempo (Histograma 1), se tendrá que determinar el valor del momento equivalente.

Se emplea el criterio de la carga acumulada para calcular, con la fórmula abajo indicada, el momento capaz de producir el mismo nivel de desgaste para el número de ciclos (nxh) requerido por el proyecto.

$$Me = \sqrt[6]{M_1^6 \frac{(n_1 \times h_1)}{(n \times h)} + M_2^6 \frac{(n_2 \times h_2)}{(n \times h)} + M_3^6 \frac{(n_3 \times h_3)}{(n \times h)}}$$

Istogramma 1
Histogramme 1
Histogram 1



DE TECHNISCHE EIGENSCHAFTEN

Lebensdauerfaktor

fh

Sollte die sich nach dem Einsatz ergebende Anzahl von Arbeitszyklen den Wert $2x10^4$ übersteigen, dann ist mit Hilfe des Diagramms1 fh auszuwählen. Auf diese Weise wird der Katalogwert Mc an die tatsaechliche Vorgabe nxh angepasst.

EN TECHNICAL INFORMATION

Duration factor

fh

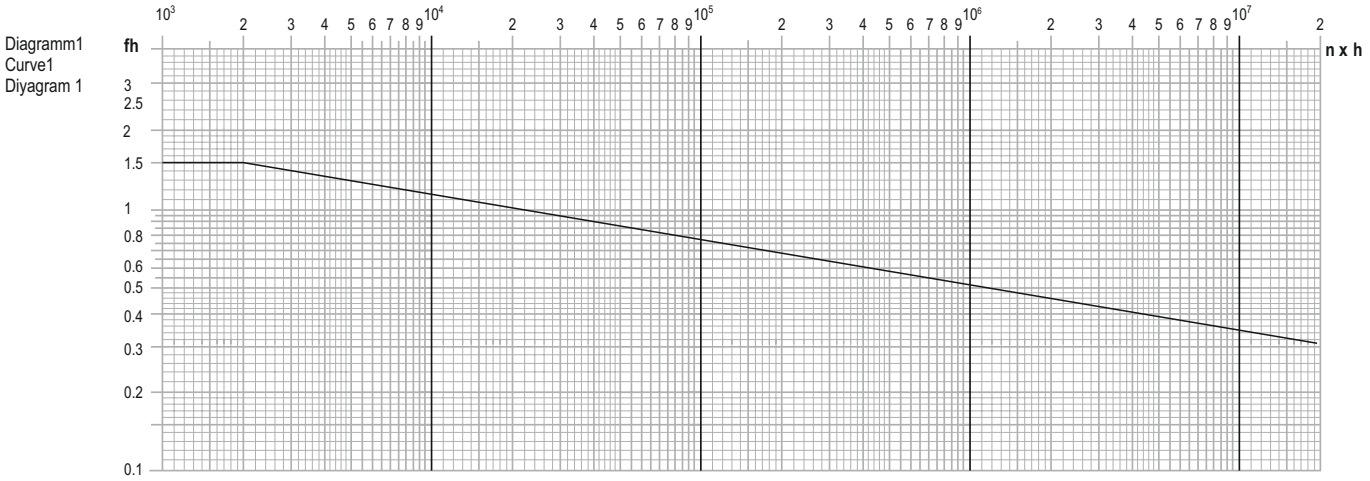
In industrial installations and when ever the number of working cycles nxh exceeds $2x10^4$, we must consider a duration factor fh (see curve 1) in order to adapt the Mc torque shown in the catalogue to a new value which allows the machine to operate at the number of cycles (nxh) required by the project.

TR TEKNİK BİLGİLER

Süre Faktörü

fh

Endüstriyel alanlarda ve çalışma tur sayısı nxh değerinin $2x10^4$'ü aştığı durumlarda, katalogta gösterilen Mc momentinin, makinenin proje tarafından gereksinim duyulan tur sayısında (nxh) çalışabilmesine olanak tanıyan yeni bir değere uyarlanması için bir süre faktörü fh (Diyagram 1'e bakınız) dikkate almalıyız.



Betriebsfaktor fs

Die Stöße die auf Unregelmässigkeit des Betriebes zurückzuführen sind, sowie die Spitzenbelastungen während des Einschal toder Bremsvorgangs werden mittels des Betriebsfaktors berücksichtigt.
Die Tabelle 2 zeigt die Betriebsfaktoren fs eingestuft nach Einsatzbedingungen.

Service factor fs calculation

The effect of shocks generated by intermittent motion and overloads during starts and stops must be calculated, introducing a service factor fs. Table 2 indicates the service factors fs in relation to the type of operation.

Servis faktörü fs değerinin hesaplanması

Aralıklı hareketler ve ilk çalıştırma ve durdurma sırasında ortaya çıkan aşırı yüklerden kaynaklanan şokların etkileri, servis faktörü (fs) değeri kullanılarak hesaplanmalıdır.
Tablo 2, çalışma tipine göre servis faktörü (fs) değerlerini göstermektedir.

	Belastungskennwert / Load classifications / Yük sınıflandırmaları											
	U Gleichmässig / Uniform / Uniform Yük				**M** Mittelschwer / Moderate / Orta Yük				**H** Schwer / Heavy / Ağır Yük			
Stunden pro Tag / Hours-day Saat-gün												
Starts pro Stunde Start-time Başlatma sayısı	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24
< 5	0.8	0.9	1.0	1.5	0.9	1.0	1.3	1.9	1.0	1.5	1.9	2.4
5 - 50	1.0	1.0	1.4	1.7	1.0	1.3	1.6	1.9	1.4	1.8	2.1	2.5
> 50	1.3	1.5	1.7	1.9	1.4	1.7	1.9	2.2	1.7	2.1	2.5	2.9
	fs											

Tabelle 2 / Table 2 / Tablo 2

Die Werte gelten bei Betrieb mit Hydraulikund Elektromotor. Wenn die Einheiten unter abweichenden Bedingungen verwendet bzw. werden abweichende Motortypen (Verbrennungsmotore) verwendet, setzen Sie sich bitte mit unserem Kundenservice (sales) in Verbindung.

Operating values refer to drives with hydraulic and electric motors.
If other types of motors are operated (internal combustion engine), please contact our NRW Technical Department.

İşletim değerleri hidrolik ve elektrik motorlarına sahip planet dişli üniteleri için geçerlidir.
Eğer farklı tiplerde motorlar kullanılıyorsa (içten yanmalı motorlar...v.b.) lütfen Teknik Departmanımız ile iletişime geçiniz.

IT CARATTERISTICHE TECNICHE

Fattore di durata

fh

Nelle applicazioni industriali o di norma quando il numero di cicli di lavoro previsto nxh supera $2x10^4$, si rende necessario introdurre un fattore di durata fh (con l'ausilio del Diagramma 1) per adeguare il valore della coppia di catalogo Mc adun valore che permetta di raggiungere il numero di cicli (nxh) designato a progetto.

FR CARACTERISTIQUES TECHNIQUES

Facteur de duree

fh

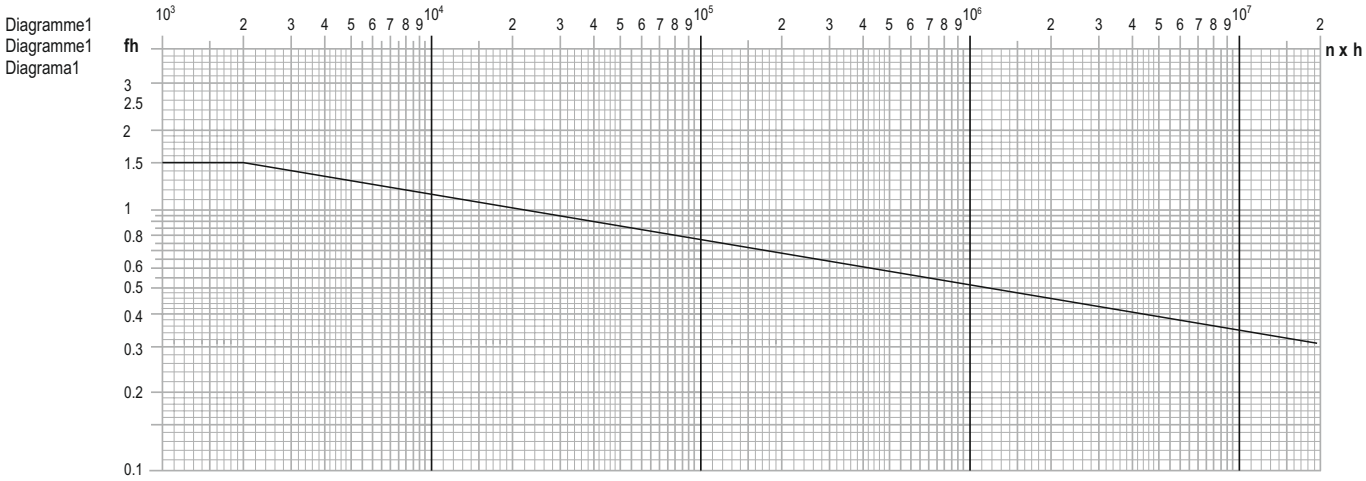
Sur toutes les applications du secteur industriel ou lorsque le nombre de cycles de travail prévu nxh dépasse $2x10^4$, il est nécessaire d'introduire un facteur de durée fh (á l'aide du diagramme 1) dans le but d'adapter la valeur du couple de catalogue Mc à une valeur qui permette d'atteindre le nombre de cycles (nxh) requis par le projet.

ES CARACTERÍSTICAS TÉCNICAS

Factor de desgaste

fh

En las aplicaciones industriales o en general cuando el número de ciclos de trabajo previsto nxh supera $2x10^4$, sera necesario introducir un factor de duración fh (con la ayuda del Diagrama 1) para adecuar el valor del momento indicado en el catálogo Mc a un valor que permita alcanzar el número de ciclos (nxh) requerido en el pro yecto.



Determinazione del fattore dl servizio fs

L'effetto degli urti derivanti da irregolarità del moto, dai sovraccarichi nei transitori di velocità (avviamenti ed arresti), viene conteggiato introducendo un fattore di servizio fs. La Tabella 2 indica i fattori fs in funzione del tipo di applicazione.

Calcul du facteur de service fs

L'effet des chocs résultant des irrégularités de mouvement, des surcharges lors des pics de vitesse (mises en marche et arrêts) est pris en compte en introduisant un facteur de service fs.
Le Tableau 2 indique les facteurs fs selon le type d'application.

Determinación del factor de servicio fs

El efecto de los choques ocasionados por la irregularidad del movimiento y las sobrecargas (durante las puestas en marcha y las detenciones) se deberá calcular-introduciendo un factor de servicio fs.
La Tabla 2 indica los factores fs en función del tipo de aplicación.

	Condizioni di carico / Conditions de charge / Condiciones de carga											
	U Uniforme / Uniforme / Uniforme				**M** Moderato / Moyenne / Moderado				**H** Pesante / Loude / Pesado			
Ore-giorno / Heures-jour / Horas-dia Avviamenti-ora Demarrages par heure Puestas en marcha-horas	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24
< 5	0.8	0.9	1.0	1.5	0.9	1.0	1.3	1.9	1.0	1.5	1.9	2.4
5 - 50	1.0	1.0	1.4	1.7	1.0	1.3	1.6	1.9	1.4	1.8	2.1	2.5
> 50	1.3	1.5	1.7	1.9	1.4	1.7	1.9	2.2	1.7	2.1	2.5	2.9
	fs											

Tabella 2 / Tableau 2 / Tabla 2

I valori riportati sono per azionamento con motori idraulici e elettrici.
Nel caso vengano utilizzati altri tipi di motori (cumbustione interna), contattare il nostro Servizio Tecnico NRW.

Les valeurs sont indiquées pour des actionnements à moteurs hydrauliques et électriques.
Pour l'utilisation d'autres types de moteur (à combustion interne), prendre contact avec le Service Technico NRW.

Los valores indicados son para accionamiento con motores hidráulicos y eléctricos.
Si se utilizaran otros tipos de motores (combustión interna), se aconseja ponerse en contacto con nuestro Servicio Técnico NRW.

DE TECHNISCHE EIGENSCHAFTEN

Die Tabelle 3 am Abschnittsende zeigt einige Beispiele der Einstufung nach Einsatzbedingungen.

Die Relation 2 wird mit folgender Formel überprüft:

Bedingung ist daß

$$Mp \leqslant M_{max}$$

Mp = Spitzenmoment während des Betriebes

ÜBERPRÜFUNG DER GETRIEBEAUSWAHL NACH DER AUF DER ABTRIEBSWELLE WIRKENDEN BELASTUNGEN

Berechnung der equivalentbelastung

Fre; Fae [N]

Wie bereits bei der Berechnung des Drehmoments, soll man die equivalente Wellenbelastung ermitteln.
Unter Berücksichtigung des Lastkollektivs wird mittels der unten angegebenen Damit wird die Haltbarkeit der Lagerung gewaehrleistet. Formel die resultierende Kraft Fe ermittelt:

Betriebsfaktor fs

Den Betriebsfaktor fs ermittelt man mit Hilfe der Tabelle 2 und 3 mit der gleichen Vorgehenswise wie bei der entsprechenden Momentenberechnung.
Die Relation 3 wird mit folgender Formel überprüft:

EN TECHNICAL INFORMATION

Table 3 at the end of this section includes some examples of load classifications.

Relationship 2 can be verified by using the following formula:

$$Mexfs \leqslant Mcxfh$$

It is also required that

$$Mp \leqslant M_{max}$$

Mp = working peak torque

VERIFICATION OF THE DRIVE ACCORDING TO OUTPUT SHAFT LOADS

Equivalent working loads

Fre; Fae [N]

In the same manner that we calculated the equivalent working torque, when loads vary over time, we must determine the value of the average equivalent load.
As before, we use the cumulative load principle, based on the following formula, to determine the load value which produces the same fatigue on the bearings after the number of cycles (nxh) required by the project:

$$Fe = \sqrt[10/3]{F_1^{10/3}\,\frac{(n_1 x\, h_1)}{(n \times h)} + F_2^{10/3}\,\frac{(n_2 x\, h_2)}{(n \times h)} + F_3^{10/3}\,\frac{(n_3 x\, h_3)}{(n \times h)}}$$

Service factor fs

Service factor fs can be calculated using Tables 2 and 3 in the same manner as calculating the torque.

Relationship 3 can be verified by using the following formulas:

$$Fre \times fs \leqslant Fr \times fh$$
$$Fae \times fs \leqslant Fa \times fh$$

TR TEKNİK BİLGİLER

Bu bölümün sonunda yer alan Tablo 3, yük sınıflandırmalarına bazı örnekler vermektedir.

2 ilişkisi aşağıdaki formül kullanılarak doğrulanabilir:

Aynı zamanda

$$Mp \leqslant M_{max}$$

Mp = Çalışma pik momenti.

PLANET DİŞLİ ÜNİTESİNİN ÇIKIŞ ŞAFTI YÜKLERİ AÇISINDAN DOĞRULANMASI

Eşdeğer Çalışma Yükleri

Fre; Fae [N]

Eşdeğer çalışma momentlerini hesapladığımız biçimde, yükler zamanla değişiklik gösteriyorsa, ortalama eşdeğer yük değerini belirlememiz gereklidir.
Daha önce olduğu gibi, aşağıdaki formüle dayanarak, projenin gerektirdiği tur sayısı (nxh) ardından aynı yorulma seviyesini üreten momentin belirlenebilmesi için kümülatif yük prensibi, kullanılmaktadır.

Servis faktörü fs

Servis faktörü (fs) değeri, momentin hesaplandığı gibi Tablo 2 ve 3 kullanılarak hesaplanabilir.

3 ilişkisi aşağıdaki formüller kullanılarak doğrulanabilir.

IT CARATTERISTICHE TECNICHE

La Tabella 3 a fine paragrafo indica alcuni esempi di classificazione delle condizioni di carico.

La relazione 2 è verificata dalla formula:

Si richiede inoltre che

$$Mp \leqslant M_{max}$$

Mp = coppia di picco in funzionamento

VERIFICA DEL RIDUTTORE IN FUNZIONE DEI CARICHI SULL'ALBERO DI USCITA E DI ENTRATA

Calcolo dei carichi equivalenti
Fre; Fae [N]

Analogamente a quanto fatto per il calcolo della coppia equivalente, quando il carico è variabile nel tempo, si deve determinare il valore del carico medio equivalente.
Con il criterio del cumulativo di carico si determina, con la formula sotto indicata, il carico in grado di provocare lo stesso livello di usura sui cuscinetti dopo il numero di cicli (nxh) richiesto dal progetto:

Fattore di servizio fs

Fattore di servizio fs si calcola con l'ausilio delle Tabelle 2 e 3 analogamente a quanto fatto per la coppia.

La relazione 3 è verificata dalle formule:

FR CARACTERISTIQUES TECHNIQUES

La Tableau 3 en fin de chapitre fournit quelques exemples de classification des conditions de charge.

Le rapport 2 peut être vérifié par le biais de cette formule:

$$Me \times fs \leqslant Mc \times fh$$

Il est nécessaire que

$$Mp \leqslant M_{max}$$

Mp = Couple de pic en fonctionnement

CONTRÔLE DU RÉDUCTEUR EN FONCTION DES CHARGES SUR L'ARBRE DE SORTIE ET D'ENTRÉE

Calcul des charges equivalentes
Fre; Fae [N]

De même que pour le calcul du couple équivalent, lorsque la charge varie dans le temps, il est nécessaire d'établir la valeur de la charge moyenne équivalente.
Par l'intermédiaire du critère du cumul des charges est calculée, au moyen de la formule ci-dessous, la charge qui détermine le même niveau d'usure des roulements à l'issue du nombre de cycles (nxh) requis par le projet:

Le facteur de service fs

Le facteur de service fs est calculé à l'aide des Tableaux 2 et 3 selon les mêmes principes que pour le couple.

Le rapport relation 3 peut être vérifié parles formules suivantes:

$$Fre \times fs \leqslant Fr \times fh$$
$$Fae \times fs \leqslant Fa \times fh$$

ES CARACTERÍSTICAS TÉCNICAS

La Tabla 3 que está en el final del párrafo indica algunos ejemplos de clasificación de las condiciones de carga.

La relación 2 se verifica con la fòrmula:

además se requiere que

$$Mp \leqslant M_{max}$$

Mp = momento de pico durante el funcionamiento.

VERIFICACIÓN DEL REDUCTOR SEGÚN LAS CARGAS EN EL EJE DE SALIDA Y DE ENTRADA

Cálculo de las cargas equivalentes
Fre; Fae [N]

En modo análogo a como se calculó el momento equivalente, cuando la carga varía durante el tiempo, se tendrá que determinar el valor de la carga media equivalente.
Como antes, se empleó el criterio de la carga acumulada y su valor se determina con la fórmula abajo indicada, la carga es capaz de ocasionar el mismo nivel de desgaste en los rodamientos después del número de ciclos (nxh) requerido por el proyecto:

$$Fe = \sqrt[10/3]{F_1^{10/3}\,\frac{(n_1 \times h_1)}{(n \times h)} + F_2^{10/3}\,\frac{(n_2 \times h_2)}{(n \times h)} + F_3^{10/3}\,\frac{(n_3 \times h_3)}{(n \times h)}}$$

Factor de servicio fs

El factor de servicio fs se calcula con la ayuda de las Tablas 2 y 3 en modo análogo al cálculo del momento.

La relación 3 se verifica con las fórmulas:

DE TECHNISCHE EIGENSCHAFTEN

RADIALLAST Fr [N]

Dieser Abschnitt soll dem Benutzers des Katalogs in den nachfolgenden Punkten Unterstützung bieten: die Feststellung der max. übertragbaren Radiallast und / oder der Lebensdauer der Lagerungen an Anund Abtriebswelle der gewünschten Getriebeausführung.

Wie wird die Radiallast einer Vollwelle in Anoder Abtrieb festgestellt, wenn die geforderte Lebensdauer der Lager und der Eingriffspunkt der Last bekannt sind.

Bekannte Parameter:
- Ausführung
  Antriebswelle:
  EL, EML, EM, EP, ET
  Abtriebswelle:
  MS, MC, PS, PC
- Abstand E [mm]
  (Abstand des Lasteingriffspunktes vom Wellenansatz)
- Geforderte Lebensdauer der Lager [h]
- Drehgeschwindigkeit [min^{-1}]

Um die Radiallast der An-oder Abtriebswelle auf der Basis der vorgenannten, bekannten Parameter zu bestimmen, ist jetzt gemäss dem folgenden Ablauf vorzugehen:

1. Auswählen der entsprechenden Grafik (Lebensdauer der Lager an An-oder Abtriebswelle) gemäss gewünschter Ausführung. Die entsprechenden Diagramme der uebertragbaren Radiallast im Abtrieb sind in den modellspezifischen Datenblaettern ersichtlich, dagegen sind die Diagramme bezueglich des Antriebs auf den Seiten 72-74 zu finden.

2. Den Radiallast - Wert (Fr) fest - stellen, der mit dem vorgegebenen Abstand E korrespondiert.

EN TECHNICAL INFORMATION

RADIAL LOADS Fr [N]

This section provides the catalogue user with the information needed to determine the maximum allowable radial load and/or the service life of the bearings on input and output shafts of the selected drive.

How to determine the admissible radial load of an input or output shaft knowing the required service life of the bearings and the load position.

Known parameters:
- Input or output version
  Input:
  EL, EML, EM, EP, ET
  Output:
  MS, MC, PS, PC
- Distance E [mm]
  (Distance of the load position from output shaft shoulder)
- Required bearing service life [h]
- Shaft rotation speed [min^{-1}]

To determine the admissible radial load capacity of a selected input or output shaft, based on known parameters, follow the steps described below:

1. Select the bearing service life chart for the selected input or output shaft (radial load curves for output shaft versions are shown on the drive technical sheets, while the curves for input versions can be found on pages 72-74.

2. Use the curve to find the radial load (Fr) value with reference to the distance E.

TR TEKNİK BİLGİLER

RADYAL YÜKLER Fr [N]

Bu bölüm müşteri için seçilen planet dişli ünitesinin giriş ve çıkış şaftlarındaki rulman ömrünü ve/veya izin verilen maksimum radyal yük değerini belirlemek için gerekli olan bilgileri sağlamaktadır.

Giriş veya çıkış şaftının kabul edilebilir radyal yük değerinin, yatakların sahip olması gereken servis ömrü ve yük konumu bilinerek belirlenmesi.

Bilinen parametreler:
- Giriş veya çıkış tipi
  Giriş:
  EL, EML, EM, EP, ET
  Çıkış:
  MS, MC, PS, PC
- Mesafe E [mm]
  (Yük konumunun çıkış şaftı faturasından mesafesi)
- Gerekli rulman servis ömrü [h]
- Şaft devir sayısı [d/d]

Seçilen giriş veya çıkış şaftının kabul edilebilir radyal yük kapasitesini, bilinen parametrelere dayanarak belirlemek için aşağıda anlatılmış olan adımları izleyiniz:

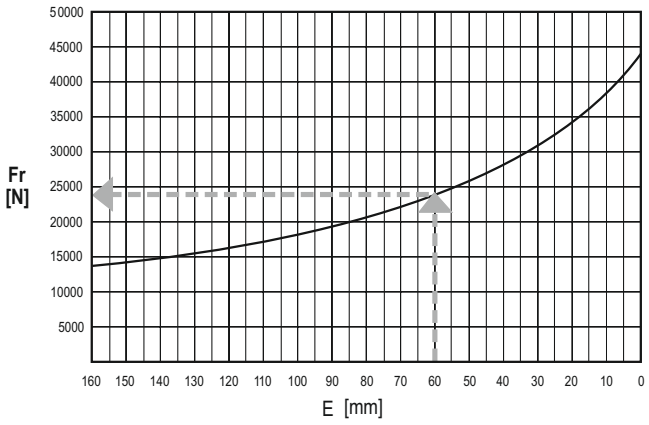
1. Seçilen giriş veya çıkış şaftı için rulman servis ömrü tablosunu seçin (çıkış şaftı tiplerine ait radyal yük grafikleri planet dişli ünitesi teknik sayfalarında gösterilmektedir, giriş tiplerinin grafikleri ise sayfa 72-74'de bulunabilir).

2. Grafiği kullanarak E mesafesine göre radyal yük (Fr) değerini bulunuz.

Grafisches Beispiel einer Kurve der Lagerung im Antrieb/Abtrieb.

Example of bearing service life curve for input and/or output shaft versions.

Giriş ve çıkış şaftı versiyonları için rulman ömrü eğrisi örneği.



IT CARATTERISTICHE TECNICHE

CARICHI RADIALI Fr [N]

Questo capitolo vuole essere di supporto all'utilizzatore del catalogo per determinare il carico radiale massimo accettabile e/o la durata di vita dei cuscinetti degli alberi di entrata e uscita del riduttore selezionato.

Come determinare il carico radiale massimo ammissibile di un albero di entrata o di uscita conoscendo la durata di vita richiesta dei cuscinetti e la posizione del carico.

Parametri conosciuti:
- Versione del supporto
  Entrata:
  EL, EML, EM, EP, ET
  Uscita:
  MS, MC, PS, PC
- Distanza E [mm]
  (Distanza del carico dallo spallamento dell'albero)
- Durata di vita richiesta dei cuscinetti [h]
- Velocità di rotazione dell'albero [min^{-1}]

Per determinare la capacità di carico radiale massimo ammissibile di un albero di entrata o di uscita, in base ai parametri conosciuti, seguire il seguente procedimento:

1. Selezionare il grafico della curva dei cuscinetti per l'albero di uscita o entrata selezionato. (I grafici relativi ai carichi applicabili in uscita sono riportati nelle sezioni dei dati tecnici di ogni riduttore, mentre quelli relativi agli alberi di entrata si trovano a pag. 72-74).

2. Trovare nel grafico il valore del carico radiale (Fr) riferito alla distanza E.

FR CARACTERISTIQUES TECHNIQUES

CHARGES RADIALES Fr [N]

Le présent chapitre a pour but de fournir une aide à l'utilisateur du catalogue pour déterminer la charge radiale maximum admissible et/ou la durée de vie des roulements des arbres d'entrée et sortie du réducteur sélectionné.

Comment déterminer la charge radiale maximum acceptable d'un arbre d'entrée ou de sortie en connaissantla durée de vie requise des roulements et la position de la charge.

Paramètres connus:
- Version du support
  Entrée
  EL, EML, EM, EP, ET
  Sortie
  MS, MC, PS, PC
- Distance E [mm] (Distance entre la charge et la base de l'arbre)
- Durée de vie requise des roulements [h]
- Vitesse de rotation de l'arbre [min^{-1}]

Pour déterminer la capacité de charge radiale maximum admissible d'un arbre d'entrée ou de sortie, en fonction des paramètres connus, procéder comme suit:

1. Sélectionner le graphique de la courbe des roulements pour l'arbre de sortie ou d'entrée sélectionné (les graphiques relatifs aux charges applicables en sortie figurent dans les sections des données techniques de chaque réducteur, alors que ceux relatifs aux arbres d'entrée se trouvent pages 72-74).

2. Trouver sur le graphique, la valeur de la charge radiale (Fr) en fonction de la distance E.

ES CARACTERÍSTICAS TÉCNICAS

CARGAS RADIALES Fr [N]

Este capítulo sirve para ayudar al usuario del catálogo a determinar la carga radial máxima aceptable y/o el tiempo de vida de los rodamientos de los ejes de entrada y salida del reductor seleccionado.

Cómo determinar la carga radial máxima admisible de un eje de entrada o de salida conociendo el tiempo de vida re querido por los rodamientos y la posición de la carga.

Parámetros conocidos:
- Tipo de soporte
  Entrada:
  EL, EML, EM, EP, ET
  Salida:
  MS, MC, PS, PC
- Distancia E [mm] (Distancia entre la carga y la base del eje)
- Tiempo de vida requerido de los roda mientos [h]
- Velocidad de rotación del eje [min^{-1}]

Para determinar la capacidad admisible de carga radial de un eje de entrada o de salida, en base a los parámetros conocidos, seguir el siguiente procedimiento:

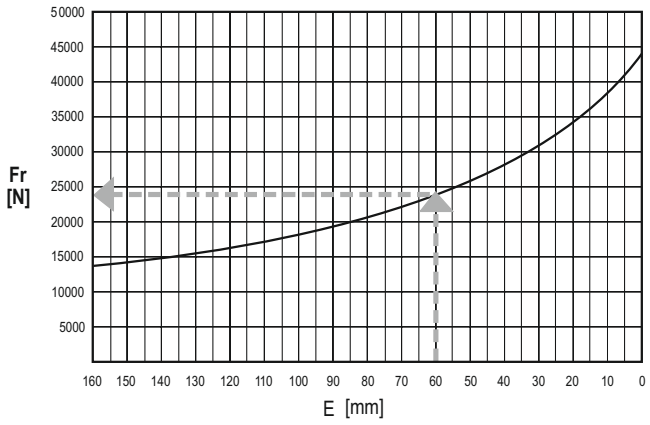
1. Seleccionar el gráfico de la curva de los rodamientos para el eje de salida o entrada seleccionado. (Los gráficos de las cargas aplicables en los ejes de salida se indican en las secciones de los datos técnicos de cada reductor, mientras que los gráficos de los ejes de entrada se encuentran en la Pág. 72-74).

2. Encontrar en el gráfico el valor de la carga radial (Fr) referida a la distancia E.

Esempio di diagramma della curva dei cuscinetti dei supporti di entrata e uscita.

Exemple de diagramme de la courbe des roulements des supports d'entrée et de sortie.

Ejemplo de diagrama de la curva de los rodamientos de los soportes de entrada y salida.



DE TECHNISCHE EIGENSCHAFTEN

3. Der festgestellte Wert (Fr) ist die max. tragbare Radiallast in Verbindung zum Abstand E bei einer Lebensdauer der Lager h von:

Abtriebswelle

Antriebswelle

h = Lebensdauer der Lager [h]
n_1 = Drehgeschwindigkeit der Antriebswelle [min^{-1}]
n_2 = Drehgeschwindigkeit der Abtriebswelle [min^{-1}]

Für den Fall, dass die so kalkulierte Lebensdauer nicht mit der geforderten Lebensdauer übereinstimmt, wird der Korrekturkoeffizient K der Radiallast eingesetzt. Dieses wird mit dem nachfolgenden Ablauf erreicht:

4. Bestimmung von Anzahl der Zyklen über die geforderte Lebensdauer der Lager:

nxh = $n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Feststellen des Korrekturkoeffizients (K) der Radiallast in der entsprechenden Grafik korrespondierend mit dem Punkt 1. Die entsprechenden Diagramme des Korrekturkoeffizienten im Bezug auf die tragbare Radiallast im Abtrieb sind in den modellspezifischen Datenblaettern ersichtlich, dagegen sind die Diagramme bezueglich des Antriebs auf den Seiten 72-74 zu finden.

EN TECHNICAL INFORMATION

3. Fr will be the max. load the shaft can bear at position E for a bearing service life h of:

Output version

$$h = \frac{10^5}{n_2}$$

Input version

$$h = \frac{5 \times 10^6}{n_1}$$

h = Bearings life time [h]
n_1 = Input shaft speed [min^{-1}]
n_2 = Output shaft speed [min^{-1}]

If the bearing service life, as calculated with the previous formulas, does not meet customer requirements, the radial load correction factor that would allow the bearings to meet the service life requirements must be determined according to the following procedure:

4. Determine the no. of cycles that the shaft will complete during the required service life:

nxh = $n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Use the radial load correction factor curve to determine the K value corresponding to the no. of cycles calculated in point 1. (radial load correction factor curves for output shaft versions are shown on the drive technical sheets, while the curves for input versions can be found on pages 72-74).

TR TEKNİK BİLGİLER

3. Fr, h yatak servis ömrüne sahip bir şaftın, E konumunda dayanabileceği maksimum yük değeridir.

Çıkış Tipi

Giriş Tipi

h = Rulman ömrü [saat]
n_1 = Giriş devri [d/d]
n_2 = Çıkış devri [d/d]

Eğer daha önceki formüller kullanılarak hesaplanmış olan yatak rulman servis ömrü müşterinin gereksinimlerini karşılamıyorsa, rulmanların servis ömrü konusundaki gereksinimleri karşılayabilmesini sağlayacak olan radyal yük düzeltme faktörü değerinin, aşağıdaki prosedür izlenerek belirlenmesi gerekmektedir:

4. Şaftın, gereksinim duyulan Servis ömrü süresince tamamlayacağı tur sayısını hesaplayın:

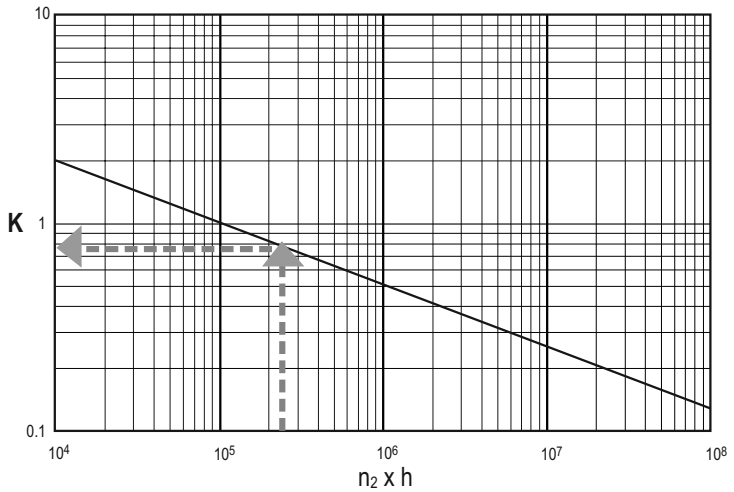
nxh = $n_{1\text{-}2}$ [d/d] x h [h]

5. Radyal yük düzeltme faktörü grafiğini kullanarak, 1 numarada hesaplanan tur sayısına denk gelen K değerini hesaplayın. (Çıkış şaftı tiplerine ait radyal yük düzeltme grafikleri planet dişli ünitesi teknik sayfalarında gösterilmektedir, giriş tiplerinin grafikleri ise sayfa 72-74'de bulunabilir).

Grafisches Beispiel des Korrekturkoeffizienten der Radiallast.

Example of radial load correction factor curve for input and/or output shaft versions.

Giriş ve/veya çıkış tipine göre radyal yük düzeltme faktör grafiği.



IT CARATTERISTICHE TECNICHE

3. Il valore di Fr trovato è il valore di carico radiale massimo accettabile nella posizione E per una durata di vita dei cuscinetti h di:

Albero di uscita

$$h = \frac{10^5}{n_2}$$

Albero di entrata

$$h = \frac{5 \times 10^6}{n_1}$$

h = Durata di vita dei cuscinetti [h]
n = Velocità di rotazione dell'albero entrata [min^{-1}]
n = Velocità di rotazione dell'albero uscita [min^{-1}]

Nel caso la durata di vita dei cuscinetti, calcolata con le suddette formule, non corrisponda a quella richiesta occorrerà determinare il coefficiente di corezione del carico radiale per ottenere la durata richiesta seguendo il seguente procedimento:

4. Determinare il numero di cicli che l'albero compierà durante la durata di vita richiesta:

$nxh = n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Determinare, nel grafico del coefficiente di correzione del carico radiale, il valore K corrispondente al numero di cicli calcolati al punto 1.
(I grafici relativi ai coefficienti di correzione riferiti ai carichi applicabili in uscita sono riportati nelle sezioni dei dati tecnici di ogni riduttore, mentre quelli relativi agli alberi di entrata si trovano a pag. 72-74).

FR CARACTERISTIQUES TECHNIQUES

3. La valeur Fr trouvée est la valeur de charge radiale maximum acceptable dans la position E pour une durée de vie des roulements h de:

Arbre de sortie

$$h = \frac{10^5}{n_2}$$

Arbre d'entrée

$$h = \frac{5 \times 10^6}{n_1}$$

h = durée de vie des roulements (h)
n_1 = vitesse de rotation l'arbre d'entrée [min^{-1}]
n_2 = vitesse de rotation de l'arbre de sortie [min^{-1}]

Si la durée de vie des roulements, calculée par le biais des formules indiquées plus haut, ne correspond pas à celle requise, il est nécessaire de déterminer le coefficient de correction de la charge radiale pour obtenir la durée requise en procédant comme suit:

4. Établir le nombre de cycles accomplis par l'arbre pendant la durée de vie requise:

$nxh = n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Établir, à l'aide du graphique du coefficient de correction de la charge radiale, la valeur K correspondant au nombre de cycles calculé au point 1 (les graphiques relatifs aux coefficients de correction des charges applicables en sortie figurent dans les sections des données techniques de chaque réducteur, tandis que ceux relatifs aux arbres d'entrée se trouvent pages 72-74).

ES CARACTERÍSTICAS TÉCNICAS

3. El valor obtenido de Fr es el valor máximo de carga radial aceptable en la posición E para un tiempo de vida de los rodamientos h de:

Eje de salida

$$h = \frac{10^5}{n_2}$$

Eje de entrada

$$h = \frac{5 \times 10^6}{n_1}$$

h = Tiempo de vida útil de los rodamientos (h)
n_1 = Velocidad de rotación del eje de entrada [min^{-1}]
n_2 = Velocidad de rotación del eje de salida [min^{-1}]

Si el tiempo de vida de los rodamientos, calculado con las respectivas fórmulas, no correspondiera al solicitado será necesario determinar el coeficiente de corrección de la carga radial para obtener la duración de la carga radial para obtener la duración requerida de los rodamientos siguiendo el siguiente procedimiento:

4. Determinar el número de ciclos que efectuará el eje durante el tiempo de vida requerido:

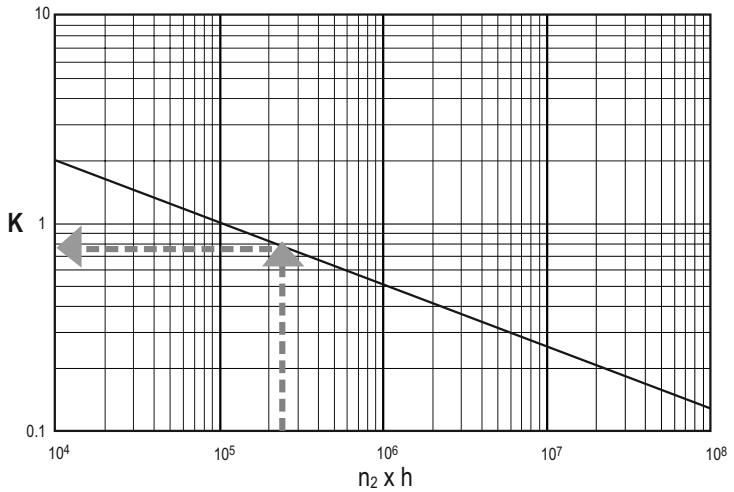
$nxh = n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Determinar, en el gráfico del coeficiente de corrección de la carga radial, el valor K correspondiente al número de ciclos calculado en el punto 1. (Los gráficos de los coeficientes de corrección para las cargas aplicadas en los ejes de salida se indican en las secciones de los datos técnicos de cada reductor, mientras que los datos de los ejes de entrada-se encuentran en la Pág. 72-74).

Esempio di diagramma del coefficiente di correzione del carico radiale.

Exemple de diagramme du coefficient de correction de la charge radiale.

Ejemplo de diagrama del coeficiente de corrección de la carga radial.



DE TECHNISCHE EIGENSCHAFTEN

6. Jetzt kann einwandfrei bestimmt werden, welche Radiallast Fr_{nxh} (auf der Basis des vorgegebenen Abstands E) annehmbar ist, um die geforderte Lebensdauer der Lager garantieren zu konnen:

Wie wird die Lebensdauer der Lager einer Vollwelle in An - oder Abtrieb festgestellt, wenn die Radiallast und der entsprechende Eingriffspunkt vorgegeben sind.

Bekannte Parameter:
- Ausführung
  Antriebswelle:
  EL, EML, EM, EP, ET
  Abtriebswelle:
  MS, MC, PS, PC
- Abstand E [mm] (Abstand des Lasteingriffspunktes vom Wellenansatz)
- Applizierte Radiallast [kN]
- Drehgeschwindigkeit [min^{-1}]

Um die Lebensdauer der Lager der An oder Abtriebswelle auf der Basis der vorgenannten, bekannten Parameter zu bestimmen, ist jetzt gemäss dem folgenden Ablauf vorzugehen:

1. Auswählen der entsprechenden Grafik (Lebensdauer dern Lager an Anoder Abtriebswelle) gemäss gewünschter Ausführung.
2. Den Radiallast - Wert (Fr) feststellen, der mit dem vorgegebenen Abstand E korrespondiert.
3. Den Korrekturkoeffizienten K der Radiallast nach der folgenden Formel bestimmen:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Applizierte Radiallast [kN]

4. Den ermittelten Koeffzienten K der Radiallast in der entsprechenden Darstellung mit dem korrespondierenden Wert nxh in Verbindung setzen.
5. Jetzt kann einwandfrei bestimmt werden, welche Lebensdauer der Lager in Verbindung zur vorgegebenen Radiallast (auf der Basis des vorgegebenen Abstands E) annehmbar ist. Dazu ist die nachfolgende Formel einzusetzen:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

EN TECHNICAL INFORMATION

6. Now you can determine the acceptable radial load Fr_{nxh} at the known position E to meet the bearing service life requirements, applying the following formula:

$$Fr_{nxh} = Fr \times K$$

How to determine the bearing service life of an input or output shaft version knowing the applied radial load and its load position.

Known parameters:
- Input or output version
  Input:
  EL, EML, EM, EP, ET
  Output:
  MS, MC, PS, PC
- Load position E [mm]
  (Distance of the load from the output shaft shoulder)
- Applied radial load [kN]
- Shaft speed [min^{-1}]

To determine the bearing service life to the selected input or output shaft, based on known parameters, follow the steps described below:

1. Select the service life curve of the bearings for the selected input or output shaft.
2. Use the chart to find the radial load (Fr) with reference to the load position E.
3. Determine the radial load correction factor K applying the following formula:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Applied radial load [kN]

4. Once you have determined the K factor, use the radial load correction factor curve to find the corresponding (nxh) value.
5. Finally, to determine the bearing service life based on the applied radial load and its position E, apply the following formula:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

TR TEKNİK BİLGİLER

6. Artık rulman servis ömrü gereksinimlerini karşılayacak olan, bilenen E konumunda kabul edilebilir radyal yük Fr_{nxh} değerini, aşağıdaki formülü kullanarak hesaplayabiliriz.

$$Fr_{nxh} = Fr \times K$$

Giriş veya çıkış şaftının rulman servis ömrünün, uygulanan radyal yük değeri ve yük konumunun bilinerek belirlenmesi.

Bilinen parametreler:
- Giriş veya çıkış tipi
  Giriş:
  EL, EML, EM, EP, ET
  Çıkış:
  MS, MC, PS, PC
- Mesafe E [mm]
  (Yük konumunun çıkış şaftı faturasından mesafesi)
- Uygulanan radyal yük [kN]
- Şaft devir sayısı [d/d]

Giriş veya çıkış şaftının rulman servis ömrünün, bilinen parametrelere dayanarak belirlenmesi:

1. Seçilen giriş veya çıkış şaftı için rulmanların servis ömrü grafiğini seçin.
2. Grafiği kullanarak E yük konumundaki radyal yükü (Fr) bulun.
3. Aşağıdaki formülü kullanarak radyal yük düzeltme faktörü K değerini belirleyin.

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Uygulanan radyal yük [kN]

4. K faktörünü belirledikten sonra radyal yük düzeltme faktörü grafiğini kullanarak buna karşılık gelen (nxh) değerini bulun.
5. Son olarak, E konumunda uygulanan radyal yüke dayanarak rulman servis ömrünü belirlemek için aşağıdaki formülü uygulayın.

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

IT CARATTERISTICHE TECNICHE

6. Ora potrete definire quale sarà il carico massimo accettabile Fr_{nxh} nella posizione E che garantirà la durata di vita dei cuscinetti richiesta applicando la seguente formula:

$$Fr_{nxh} = Fr \times K$$

Come determinare la durata di vita richiesta dei cuscinetti di un albero di entrata o di uscita conoscendo il carico radiale applicato e la posizione del carico.

Parametri conosciuti:
- Versione del supporto
  Entrata:
  EL, EML, EM, EP, ET
  Uscita:
  MS, MC, PS, PC
- Distanza E [mm]
  (Distanza del carico dallo spallamento dell'albero)
- Carico radiale applicato [kN]
- Velocità di rotazione dell'albero [min^{-1}]

Per determinare la durata di vita dell'albero di entrata o di uscita scelto, in base ai parametri conosciuti, seguire il seguente procedimento:

1. Selezionare il grafico della durata di vita dei cuscinetti dell'albero di entrata o uscita selezionato.
2. Individuare nel grafico il carico radiale (Fr) riferito alla posizione del carico E.
3. Determinare il fattore di correzione del carico radiale K applicando la seguente formula:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Carico radiale applicato [kN]

4. Una volta determinato il fattore K individuare sul grafico del fattore di correzione del carico radiale il valore di nxh corrispondente.
5. Infine per determinare la durata di vita dei cuscinetti riferito al carico radiale applicato ed alla sua posizione E applicare la seguente formula:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

FR CARACTERISTIQUES TECHNIQUES

6. Il est à présent possible de définir la charge maximum acceptable Fr_{nxh} dans la position E connue qui garantira la durée de vie requise des roulements, en appliquant la formule suivante:

$$Fr_{nxh} = Fr \times K$$

Comment déterminer la durée de vie re quise des roulements d'une d'arbre d'entrée ou de sortie en connaissant la charge radiale appliquée et sa position.

Paramétres connus:
- Version du suppor:
  Entrèe
  EL, EML, EM, EP, ET
  Sortie:
  MS, MC, PS, PC
- Distance E [mm] (distance entre la charge et la base de l'arbre)
- Charge radiale appliquée [kN]
- Vitesse de rotation l'arbre [min^{-1}]

Pour déterminer la durée de vie de l'arbre d'entrée ou de sortie choisi, en fonction des paramètres connus, procéder comme suit:

1. Sélectionner le graphique de la durée de vie des roulements de l'arbre d'entrée ou de sortie sélectionné.
2. Trouver dans le graphique la charge radiale (Fr) correspondant à la position de la charge E.
3. Déterminer le facteur de correction de la charge radiale K en appliquant la formule suivante:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Charge radiale appliquée [kN]

4. Une fois établi le facteur K; trouver dans le graphique du facteur de correction de la charge radiale, la valeur de nxh correspondante.
5. Établir enfin la durée de vie des roulements en fonction de la charge radiale appliquée et de sa position E, et appliquer la formule suivante:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

ES CARACTERÍSTICAS TÉCNICAS

6. Ahora se podrá definir cuál será la carga máxima aceptable Fr_{nxh} en la posición E que podrá garantizar el tiempo de vida requerido de los rodamientos, aplicando la siguiente fórmula:

$$Fr_{nxh} = Fr \times K$$

Cómo determinar el tiempo de vida útil requerido de los rodamientos de un eje de entrada o de salida conociendo la carga radial aplicada y la posición de la carga.

Parámetros conocidos:
- Versión del soporte
  Entrada:
  EL, EML, EM, EP, ET
  Salida:
  MS, MC, PS, PC
- Distancia E [mm]
  (Distancia entre la carga y la base del eje)
- Carga radial aplicada [kN]
- Velocidad de rotación del eje [min^{-1}]

Para determinar el tiempo de vida útil del eje de entrada o de salida elegido, en base a los parámetros conocidos, seguir el siguiente procedimiento:

1. Seleccionar el gráfico del tiempo de vida útil de los rodamientos del eje de entrada o de salida seleccionado.
2. Localizar en el gráfico la carga radial (Fr) correspondiente a la posición de la carga E.
3. Determinar el factor de corrección de la carga radial K aplicando la siguiente fórmula:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Carga radial aplicada [kN]

4. Después de determinar el factor K localizar en el gráfico del factor de corrección de la carga radial el correspondiente valor de nxh.
5. Por último, determinar el tiempo de vida útil de los rodamientos basándose en la carga radial aplicada y a su posición E utilizando la siguiente fórmula:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

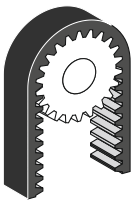
DE TECHNISCHE EIGENSCHAFTEN

Die auf die Getriebewelle e inwirkende Radiallast Fra kann je nach angewandtem Getriebetyp mit folgenden Formeln berechnet werden.

Elastische Kupplung
Elastic coupling
Elastik kaplin

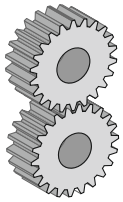
Keine Radiallast
No radial load
Radyal yük yok

Zahnriemen
Trigger belt
Triger kayış



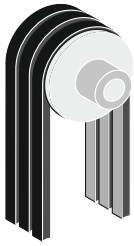
$$Fr_a = \frac{2100\ M_2}{D}$$

Zahnräder mit gerader Verzahnung (Druckwinkel 20°)
Spur gear (pressure angle 20°)
Düz dişli (Kavrama açısı 20°)



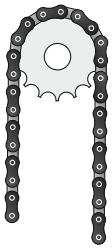
$$Fr_a = \frac{2100\ M_2}{D}$$

Keilriemen
Pulley for V belt
V kayış



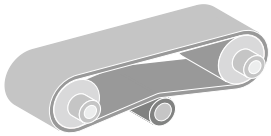
$$Fr_a = \frac{4000\ M_2}{D}$$

Kettengetriebe mit niedriger Geschwindigkeit (z < 17)
Chain drives at low speed (z < 17)
Küçük hızlarda zincir dişli (z < 17)



$$Fr_a = \frac{2100\ M_2}{D}$$

Flachriemen mit spanner
Flat belt with spanning pulley
Gerdirme makaralı kayış



$$Fr_a = \frac{8000\ M_2}{D}$$

Fr_a = Radiallast an der Welle [N]
M_2 = Drehmoment an der Welle [Nm]
D = Teilkreisdurchmesser des Zahnrads oder der Riemenscheibe [mm]

EN TECHNICAL INFORMATION

The Fra radial load on the drive's shaft can be calculated with the following formulas according to the type of transmission used.

Fr_a = Radial load on shaft [N]
M_2 = Torque on shaft [Nm]
D = Gear or pulley pitch diameter [mm]

TR TEKNİK BİLGİLER

Radyal yük Fra, çıkış şaftında kullanılan aktarma tipine göre aşağıdaki formüller kullanılarak hesaplanabilir.

Fr_a = Çıkış şaftındaki radyal yük [N]
M_2 = Şafttaki moment [Nm]
D = Dişli veya kasnak bölüm dairesi çapı[mm]

ÜBERPRÜFUNG DES GETRIEBES AUFGRUND DER THERMISCHEN LEISTUNG
Pt [kW]

Wird das Getriebe im Dauerbetrieb bei Raumtemperatur und mit einer Abtriebsdrehzahl von über 20 min^{-1} ein gesetzt bzw. mit Unterbrechungen zwischen den Einschaltungen, die zu kurz sind, um die normale Wärmeableitung zu gewährleisten, muss kontrolliert werden, dass die tatsächlich übertragene Leistung nicht den Wert überschreitet, der in den jeweiligen Getriebetypen zugeordneten technischen Datenblättern verzeichnet ist.

Bei großen Getrieben können zulässige Höchstwerte für die Eingangsgeschwindigkeit vorgeschrieben sein, die generell im technischen Datenblatt des Produkts aufgeführt sind und eingehalten werden müssen.

VERIFICATION OF THE DRIVE ACCORDING TO THE THERMAL POWER
Pt [kW]

When the drive is used with an output speed greater than 20 min^{-1} under continuous duty or with stops between applications that inhibit normal heat dissipation, make sure that the actual transmitted power does not exceed the power indicated on the data sheet of the individual drive.

For large drives, the maximum input speeds, as always shown on the product's data sheet, must be taken into account.

PLANET DİŞLİ ÜNİTESİNİN TERMİK GÜCE GÖRE DOĞRULANMASI
Pt [kW]

Planet dişli üniteleri sürekli yük altında 20 d/d'nın üzerindeki devir sayılarında kullanıldığında veya uygulamalar arasında normal ısı yayılımını engelleyecek durmalar ile kullanıldığında, asıl aktarılan gücün ilgili Planet dişli ünitesinin veri sayfası üzerinde belirtilmiş olan güç seviyesini aşmadığından emin olun.

Büyük Planet dişli üniteleri için, her zaman veri sayfasında gösterilen maksimum giriş devri göz önüne alınmalıdır.

Die im Katalog enthaltenen technischen Informationen sollen eine Hilfe zur möglichst einfachen Auswahl der Getriebe sein. Diese Informationen sollen auf keinen Fall die Kenntnisse und die Erfahrung der Anlagentechniker ersetzen, die zu bestimmen haben, welcher Getriebetyp installiert werden muss.

Für eine optimale Zusammenarbeit steht der Kundenservice von NRW Ihnen für jegliche Überprüfung und Beantwortung sonstiger technischer Fragen zur Verfügung.

The technical information in this catalog is provided as a brief guide for s electing drives and does not substitute the know ledge and experience of the installers who are responsible for selecting the proper drive.

To collaborate as much as possible with its customers, NRW is pleased to offer the services of its technical assistance department to carry out any necessary verifications.

Bu katalogta yer alan teknik bilgiler Planet dişli ünitelerinin seçilmesi konusunda yardımcı olacak özet bir kılavuz niteliğinde sunulmuştur ve doğru Planet dişli ünitesini seçmekten sorumlu olan kurulumu gerçekleştirecek kişilerin bilgi ve deneyiminin yerini tutmaz.

NRW, müşterileri ile mümkün olabildiğince iş birliği yapabilmek için herhangi bir doğrulamanın yapılabilmesi için kendi teknik destek departmanının hizmetlerini kullanımınıza sunmaktan mutluluk duymaktadır.

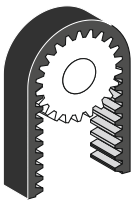
IT CARATTERISTICHE TECNICHE

Il carico radiale Fr_a agente sull'albero del riduttore può essere calcolato con le seguenti formule secondo il tipo di trasmissionne adottato.

Giunto elastico
Joint élastique
Unión elástica

No carico radiale
Aucune charge radiale
No carga radial

Pulegge dentate
Pour courroie dentée
Para correa dentada



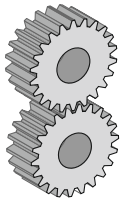
$$Fr_a = \frac{2100\ M_2}{D}$$

Fr_a = Carico radiale risultante sull'albero [N]
M_2 = Momento torcente sull'albero [Nm]
D = Diametro primitivo ingranaggio o puleggia [mm]

FR CARACTERISTIQUES TECHNIQUES

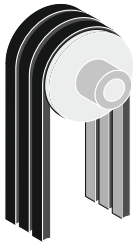
La charge r adiale Fr_a qui agit sur l'arbre du réducteur peut être calculée par le biais des formules ci-dessous selon le type de transmission adopté.

Ingranaggi a denti diritti (angolo pressione 20°)
Engrenages à dents droites (angle pression 20°)
Engranajes de dientes rectos (ângulo presión 20°)



$$Fr_a = \frac{2100\ M_2}{D}$$

Pulegge a gole V
Pour courroie trapézoïdale
Para correa trapezoidal



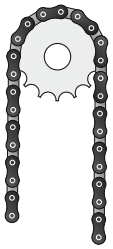
$$Fr_a = \frac{4000\ M_2}{D}$$

Fr_a = Charge radiale exercée sur l'arbre [N]
M_2 = Moment de torsion sur l'arbre [Nm]
D = Diamètre primitif engrenage ou poulie [mm]

ES CARACTERÍSTICAS TÉCNICAS

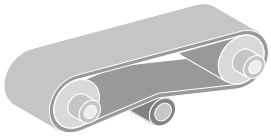
La carga radial Fr_a que actúa sobre el eje del reductor se puede calcular con las siguientes fórmulas según el tipo de transmisión utilizado.

Catene a bassa velocità (z < 17)
Pour réducteur à chaîne à basse vitesse (z < 17)
Para reductor cadena a baja velocidad (z < 17)



$$Fr_a = \frac{2100\ M_2}{D}$$

Cinghia piana con tenditore
Courroie plate avec tendeur
Correa plana con tensor



$$Fr_a = \frac{8000\ M_2}{D}$$

Fr_a = Carga radial resultante sobre el eje [N]
M_2 = Momento de torsión sobre el eje [Nm]
D = Diámetro primitivo engranaje o polea [mm]

VERIFICA DEL RIDUTTORE IN FUNZIONE DELLA POTENZA TERMICA

Pt [kW]

Nel caso in cui il riduttore sia utilizzato a velocità di uscita superiore a 20 min^{-1} ed in servizio continuo, o comunque abbia soste tra una inserzione e l'altra tali da non consentire il normale smaltimento del calore, è necessario verificare che la potenza effettivamente trasmessa non superi quella indicata nella scheda tecnica relativa al singolo tipo di riduttore.

Per i riduttori di grosse dimensioni vi possono essere limitazioni alla velocità max in entrata, di cuisi deve tenere conto e che sono indicate sempre nella scheda tecnica del prodotto.

CONTRÔLE DU RÉDUCTEUR EN FONCTION DE LA PUISSANCE THERMIQUE

Pt [kW]

Dans le cas où le réducteur serait utilisé à une vitesse de sortie supérieure à 20 min^{-1} et en service continu, ou bien que les arrêts de fonctionnement entre un enclenchement et l'autre ne seraient pas suffisamment longs pour permettre la dissipation normale de la chaleur, il est nécessaire de s'assurer que la puissance effectivement transmise ne dépasse pas celle indiquée sur la fiche technique du réducteur.

En ce qui concerne les réducteurs de grandes dimensions, peuvent exister des limitations à la vitesse maximum en entrée, limitations dont il est nécessaire de tenir compte et qui sont indiquées sur la fiche technique du produit

VERIFICACIÓN DEL REDUCTOR SEGÚN LA POTENCIA TÉRMICA

Pt [kW]

Cuando se utilice el reductor con una velocidad de salida superior a 20 min^{-1} y con servicio continuo o de todas maneras con paradas entre una activación y otra tales que no permitan una disipación normal del calor, será necesario comprobar que la potencia efectivamente transmitida no supere aquella indicada en la respectiva ficha técnica del reductor.

Para los reductores de grandes dimensiones puede haber unas limitaciones de la velocidad máx. de entrada, habrá que tener en cuenta dichas limitaciones que siempre vienen indicadas en la ficha técnica del producto.

Le informazioni tecniche contenute nel presente catalogo intendono essere una rapida guida alla scelta dei riduttori e non vogliono in nessun caso sostituirsi alle conoscenze ed all'esperienza dei tecnici impiantisti cui spetta il compito di determinare i riduttori da installare.

Nello spirito della migliore collaborazione con i clienti, la NRW è lieta di mettere a disposizione il proprio servizio tecnico per le verifiche che si rendano necessarie.

Les informations techniques figurant dans le présent catalogue constituent une aide dans le choix des réducteurs et ne sauraient se substituer aux connaissances ni à l'expérience des techniciens d'installation auxquels ils incombe d'établir le type de réducteur à installer.

Dans une optique de collaboration efficace avec les clients, NRW met à la disposition de ceux-ci ses propres services techniques pour tout contrôle éventuellement nécessaire.

Las informaciones técnicas contenidas en este catálogo sirven como guia rápida para la elección de los reductores y en ningún caso se proponen sustituir los conocimientos y la experiencia de los técnicos en instalaciones que tienen la tarea de seleccionar los reductores a instalar.

Queriendo siempre colaborar con los clientes, NRW pone con mucho gusto a disposición su propio Servicio Técnico para efectuar las comprobaciones que fueran necesarias.

DE TECHNISCHE EIGENSCHAFTEN

BELASTUNGSKENNWERT

Die Änderung des erforderlichen Belastungkennwertes kann ggf. nach Angabe der genauen Betriebsbedingungen erfolgen.

Legende:
U = gleichmässige Belastung
M = mittlere Belastung
H = schwere Belastung

EN TECHNICAL INFORMATION

LOAD CLASSIFICATION

Listed load conditions may change depending on drive actual operating conditions.

Legend:
U = Uniform load
M = Moderate load
H = Heavy load

TR TEKNİK BİLGİLER

YÜK SINIFLANDIRMASI

Listelenmiş yük koşulları, planet dişli ünitesinin gerçek çalışma şartlarına bağlı olarak değişebilir.

Yük Tipleri:
U = Düzgün çalışma
M = Orta şiddetli çalışma
H = Ağır yük

Tabelle 3 / Table 3 / Tablo 3

Gebläse, Förderer	**Blowers, ventilators**	**Havalandırma Sistemleri, Vantilatörler**			
Gebläse	Blowers (axial and radial)	Havalandırmalar (radyal ve eksenel)	**U**		
Kühlturmlüfter	Cooling tower fans	Soğutma kulesi fanları		**M**	
Saugzuggebläse	Induced draught fans	Cebri çekişli fanlar		**M**	
Drehkolbengebläse	Rotary piston blowers	Döner pistonlu fanlar		**M**	
Turbogebläse	Turbo blowers	Turbo fanlar	**U**		
Chemische industrie	**Chemical industry**	**Kimya Endüstrisi**			
Rührwerke (leichte Flüssigkeit)	Agitators (liquid material)	Karıştırıcılar (Sıvı materyal)	**U**		
Rührwerke	Agitators (semi-liquid material)	Karıştırıcılar (Yarı sıvı materyal)		**M**	
Zentrifugen (schwer)	Centrifuges (heavy)	Santrifüj (Ağır)		**M**	
Zentrifugen (leicht)	Centrifuges (light)	Santrifüj (Hafif)	**U**		
Kühltrommel	Cooling drums	Soğutucu tamburlar		**M**	
Trockentrommel	Drying drums	Kurutma tamburları		**M**	
Mischer	Mixers	Mikserler		**M**	
Verdichter, Kompressoren	**Compressors**	**Kompresörler**			
Kolbenkompressoren	Piston compressors	Pistonlu kompresörler			**H**
Turbokompressoren	Turbo compressors	Turbo kompresörler		**M**	
Förderanlagen	**Conveyors**	**Konveyörler**			
Plattenbänder	Apron conveyors	Levhalı konveyörler		**M**	
Hebewerk	Ballast elevators	Dengeleyici elevatörler		**M**	
Gurttaschenbecherwerke	Band pocket conveyors	Bantlı cepli konveyörler		**M**	
Fördermaschinen (Schüttgut)	Belt conveyors (bulk material)	Bantlı konveyörler (dökme malzeme)		**M**	
Fördermaschinen (Stückgut)	Belt conveyors (piece goods)	Bantlı konveyörler (parçalı yük)			**H**
Mehlbecherwerke	Bucket conveyors for flour	Kovalı konveyör (un için)	**U**		
Kettenfoerderanlagen	Chain conveyors	Zincirli konveyörler		**M**	
Kreisförderer	Circular conveyors	Dairesel konveyörler		**M**	
Lastaufzüge	Hoists	Vinçler			**H**
Schrägaufzüge	Inclined hoists	Eğimli vinçler			**H**
Stahlbandförderer	Steel belt conveyors	Çelik bantlı konveyörler		**M**	
Personenautzüge	Passenger lifts	İnsan asansörleri		**M**	
Schneckenförderer	Screw conveyors	Helezon taşıyıcılar		**M**	
Trogkettenförderer	Trough chain conveyors	Oluklu-zincirli konveyörler		**M**	
Förderwinden	Winches hauling	Taşıma vinçleri		**M**	
Bagger, Kräne	**Cranes**	**Vinçler**			
Bohrvorrichtung	Derricking jib gear	Dikme pergel vinç		**M**	
Hebewerke	Hoist gear	Dişli kaldırma	**U**		
Schwenkwerke	Slewing gear	Döner dişli		**M**	
Fahrwerke	Travelling gear	Gezici dişli			**H**
Begger	**Dredgers**	**Tarama Makinaları**			
Eimerkettenbagger	Bucket conveyors	Kovalı konveyörler			**H**
Schaufelräder	Bucket wheels	Tekerlekli kepçe			**H**
Schneidköpfe	Cutter heads	Kesme kafası			**H**
Manövrierwinden	Manoeuvring winches	Manevra vinçleri		**M**	
Saugpumpen	Pumps	Pompalar		**M**	
Schwenkwerke	Slewing gear	Döner dişli		**M**	
Fahrwerke (Raupe)	Travelling gear (caterpillar)	Gezici dişli (Tırtıl)			**H**
Fahrwerke (Schiene)	Travelling gear (rails)	Gezici dişli (Raylı)		**M**	

IT CARATTERISTICHE TECNICHE

CONDIZIONI DI CARICO

Le condizioni di carico qui elencate possono subire variazioni in funzione delle reali condizioni di funzionamento dei riduttori.

Legenda:
U = Carico uniforme
M = Carico moderato
H = Carico pesante

FR CARACTERISTIQUES TECHNIQUES

CONDITIONS DE CHARGE

Les conditions de charge indiquées peuvent varier en fonction des conditions de fonctionnement réelles des réducteurs.

Légendes:
U = Charge uniforme
M = Charge modérée
H = Charge lourde

ES CARACTERÍSTICAS TÉCNICAS

CONDICIONES DE LA CARGA

Las condiciones de la carga ilustradas pueden variar según las reales condiciones de funcionamiento de los reductores.

Leyenda:
U = Carga uniforme
M = Carga moderada
H = Carga pesada

Tabella 3 / Tableau 3 / Tabla 3

Compressori, ventilatori	**Compresseurs, ventilateurs**	**Compresores, ventiladores**			
Compressori (assiali e radiali)	Compresseurs (axiaux et radiaux)	Compresores (axiales y radiales)	**U**		
Ventilatori a torre di raffredamento	Ventilateurs à tour de réfrigération	Ventiladores de torre de enfriamiento		**M**	
Ventilatori a tiraggio indotto	Ventilateurs à tirage induit	Ventiladores de tiro inducido		**M**	
Compressori a pistoni rotanti	Compresseurs à pistons rotatifs	Compresores con pistones giratorios		**M**	
Compressoriturbo	Turbocompresseurs	Turbocompresores	**U**		
Industria chimica	**Industrie chimique**	**Industria química**			
Agitatori (materiali liquidi)	Agitateurs (pour produits liquides)	Agitadores (materiales líquidos)	**U**		
Agitatori (materiali semi-liquidi)	Agitateurs (pour produits semi-liquides)	Agitadores (materiales semi-líquidos)		**M**	
Centrifughe (pesanti)	Centrifugeuses (lourdes)	Centrifugadoras (pesadas)		**M**	
Centrifughe (leggere)	Centrifugeuses (légères)	Centrifugadoras (livianas)	**U**		
Tamburi di raffreddamento	Tambours refroidisseurs	Tambores de enfriamiento		**M**	
Tamburi di essicazione	Tambours de séchage	Tambores de secado		**M**	
Miscelatori	Mélangeurs	Mezcladores		**M**	
Compressori	**Compresseurs**	**Compresores**			
Compressori a pistone	Compresseurs à piston	Compresores de pistón			**H**
Compressori turbo	Turbocompresseurs	Turbocompresores		**M**	
Convogliatori	**Convoyeurs**	**Transportadores**			
Nastro trasportatore a piastre	Tapis transporteurs à plaques	Cintas transportadoras de placas		**M**	
Sollevatori zavorra	Elévateurs de leste	Elevadores de lastre		**M**	
Convogliatori nastro a sacca	Convoyeurs tapis à poches	Transportadores de cinta con funda		**M**	
Convogliatori a nastro (materie voluminose)	Transporteurs à bandes (matériel volumineux)	Transportadores de cinta (material suelto)		**M**	
Convogliatori (merce a pezzi)	Transporteurs à bandes (pièces détachées)	Transportadores (mercadería en piezas)			**H**
Convogliatori a tazza per farinacei	Convoyeurs à godets pour farine	Transportadores de cangilones para harinas	**U**		
Convogliatori a catena	Convoyeurs à chaînes	Transportadores de cadena		**M**	
Convogliatori circolari	Convoyeurs circulaires	Transportadores circulares		**M**	
Montacarichi	Monte-charge	Montacargas			**H**
Montacarichi inclinati	Monte-charge inclinés	Montacargas inclinados			**H**
Convogliatore a nastro d'acciaio	Convoyeurs à tapis en acier	Transportadores de cinta de acero		**M**	
Sollevatori per persone	Ascenseurs	Ascensores para personas		**M**	
Trasportatori a coclea	Transporteurs à vis sans fin	Trasportadores de tornillo		**M**	
Trasportatore a nastro concavo	Transporteur à tapis concave	Trasportadores de cinta cóncava		**M**	
Trasportatore a verricello	Transporteurs à treuil	Trasportador con guinche		**M**	
Gru	**Grues**	**Grúas**			
Meccanismo del braccio di trivellazione	Mécanisme du bras de forage	Mecanismo del brazo de perforación		**M**	
Meccanismo di montacarico	Mécanisme de montecharges	Mecanismo del montacargas	**U**		
Meccanismo girevole	Mécanisme de rotation	Mecanismo giratorio		**M**	
Meccanismo di traslazione	Mécanisme de translation	Mecanismo de traslado			**H**
Draghe	**Dragues**	**Dragas**			
Convogliatori a tazza	Convoyeurs à godets	Transportadores de cangilones			**H**
Ruote a tazza	Roues à godets	Ruedas de cangilones			**H**
Teste portautensili	Têtes porte-outils	Cabezales portaherramientas			**H**
Verricelli per manovre	Treuils de manoeuvre	Guinches para maniobras		**M**	
Pompe	Pompes	Bombas		**M**	
Meccanismo girevole	Mécanismes de rotation	Mecanismo giratorio		**M**	
Meccanismo di traslazione (mezzo cingolato)	Mécanismes de translation (véhicule chenillé)	Mecanismo de traslación (vehículo de orugas)			**H**
Meccanismo di traslazione (rotaie)	Mécanismes de translation (rails)	Mecanismo de traslación (vehículo sobre rieles)		**M**	

DE TECHNISCHE EIGENSCHAFTEN

BELASTUNGSKENNWERT

Die Änderungdes erforderlichen Belastungkennwertes kann ggf. nach Angabe der genauen Betriebsbedingungen erfolgen.

Legende:
U = gleichmässige Belastung
M = mittlere Belastung
H = schwere Belastung

EN TECHNICAL INFORMATION

LOAD CLASSIFICATION

Listed load conditions may change depending on drive actual operating conditions.

Legend:
U = Uniform load
M = Moderate load
H = Heavy load

TR TEKNİK BİLGİLER

YÜK SINIFLANDIRMASI

Listelenmiş yük koşulları, planet dişli ünitesinin gerçek çalışma şartlarına bağlı olarak değişebilir.

Yük Tipleri:
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Tabelle 3 / Table 3 / Tablo 3

Nahrungsmittelmaschinen	**Food industry machinery**	**Gıda Endüstri Makinaları**			
Abfüllmaschinen	Bottling and container filling machines	Şişeleme ve konteyner dolum makinaları	**U**		
Zuckerrohrbecher	Cane crushers	Şeker kamışı kesici		**M**	
Zuckerrohrschneider	Cane knives	Şeker kamışı bıçakları			**H**
Zuckerrohrmühlen	Cane mills	Şeker kamışı değirmenleri		**M**	
Knetmaschinen	Kneading machines	Yoğurma makinaları		**M**	
Maischen	Mash tubs (crystallizers)	Püre küvetleri (kristalizatör)			**H**
Verpackungsmaschinen	Packaging machines	Paketleme makinaları	**U**		
Zuckerrübenschneider	Sugar beet cutters	Şeker pancarı kesicileri		**M**	
Zuckerrübenwäscher	Sugar beet washing machines	Şeker pancarı yıkama makinaları		**M**	
Baumaschinen	**Building machinery**	**İnşaat Makinaları**			
Betonmischmaschinen	Concrete mixers	Beton mikserleri		**M**	
Bauaufzüge	Hoists	Vinçler		**M**	
Strassenbaumaschinen	Road construction machinery	Yol yapım makinaları		**M**	
Generatoren, Umformer	**Generators, transformers**	**Jeneratörler, Trafolar**			
Frequenzumformer	Frequency transformers	Frekans trafoları			**H**
Generatoren	Generators	Jeneratörler			**H**
Schweissgeneratoren	Welding generators	Kaynak jeneratörleri			**H**
Wäschereimaschinen	**Laundries**	**Çamaşırhaneler**			
Trommeltrockner	Tumblers	Tamburlar		**M**	
Waschmaschinen	Washing machines	Çamaşır makinaları		**M**	
Bügelmaschinen	Pressing machines	Ütü makinaları		**M**	
Walzwerke	**Metal rolling mills**	**Haddehaneler**			
Blechsheren	Billet shears	Kütük makasları			**H**
Kettenschlepper	Chain transfres	Zincirli transfer		**M**	
Kaltwalzwerke	Cold rolling mills	Soğuk hadde			**H**
Stranggussanlagen	Continuous casting plant	Sürekli döküm tesisi			**H**
Kühlbetten	Cooling beds	Soğutma ızgarası		**M**	
Schopfscheren	Cropping shears	Kırpma makası			**H**
Plattenwalz-werk	Heavy and medium plate mills	Ağır ve orta levha haddesi			**H**
Blocktransportanlagen	Descaling machines	Tufal giderme makinaları			**H**
Verschiebevomchtungen	Manipulators	Manüplatörler			**H**
Blechpressen	Ingot pushers	Tomruk itici			**H**
Rollenrichtmaschinen	Plate tilters	Plaka devirici		**M**	
Rollgänge (schwer)	Roller tables (heavy)	Merdaneli masa (ağır)			**H**
Rollgänge (leicht)	Roller tables (light)	Meradaneli masa (hafif)			**H**
Rohrschweissmaschinen	Tube welding machines	Boru kaynak makinaları		**M**	
Wickler	Winding machines (strip and wire)	Sarma makinaları (şerit ve tel)		**M**	
Drahtzüge	Wire drawing banches	Tel çekme tezgahları		**M**	
Metallbearbeitungsmaschinen	**Metal working machines**	**Metal İşleme Makinaları**			
Vorgelege	Contershafts, line shafts	Grup mili, transmisyon mili	**U**		
Schmiedepressen	Forging presses	Dövme tezgahları			**H**
Hämmer	Hammers	Çekiçler			**H**
Werkzeugmaschinen Hilfsantriebe	Auxiliary drives, machine tools	Yardımcı sürücü tezgahları	**U**		
Werkzeugmaschinen Hauptantriebe	Main drives, machine tools	Ana tahrik tezgahları		**M**	
Hobelmaschinen	Metal planing machines	Metal planya makinaları			**H**
Blechrichtmaschinen	Plate straightening machines	Plaka doğrultma makinaları			**H**
Pressen	Presses	Presler			**H**
Stanzen	Punch presses	Punç presler			**H**
Scheren	Shears	Makaslar		**M**	
Blechbiegemaschinen	Sheet metal bending machines	Saç bükme makinaları		**M**	

IT CARATTERISTICHE TECNICHE

CONDIZIONI DI CARICO

Le condizioni di carico qui elencate possono subire variazioni in funzione delle reali condizioni di funzionamento dei riduttori.

Legenda:
U = Carico uniforme
M = Carico moderato
H = Carico pesante

FR CARACTERISTIQUES TECHNIQUES

CONDITIONS DE CHARGE

Les conditions de charge indiquées peuvent varier en fonction des conditions de fonctionnement réelles des réducteurs.

Légendes:
U = Charge uniforme
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ES CARACTERÍSTICAS TÉCNICAS

CONDICIONES DE LA CARGA

Las condiciones de la carga ilustradas pueden variar según las reales condiciones de funcionamiento de los reductores.

Leyenda:
U = Carga uniforme
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Tabella 3 / Tableau 3 / Tabla 3

Macchinari per industria alimentare	**Machines pour l'industrie alimentaire**	**Máquinas para la industria alimenticia**			
Macchine per il riempimento di bottiglie e contenitori	Machines pour le remplissage bouteilles et conteneurs	Máquinas para llenar botellas y recipientes	**U**		
Frantumatori di canna	Broyeurs de joncs	Trituradores de caña		**M**	
Coltelli per canna	Lames pour joncs	Cuchillos para caña			**H**
Macina per canna	Moulins de joncs	Muelas para caña		**M**	
Impastatrice	Pétrisseuse	Empastadoras		**M**	
Vasche per macerazione (cristallizzanti)	Cuves de macération (cristallisantes)	Depósitos para maceración (cristalizadores)			**H**
Macchinari per imballaggio	Machines d'emballage	Máquinas para embalaje	**U**		
Taglierine per barbabietole da zucchero	Coupeuses pour betteraves à sucre	Cuchillas para remolacha azucarera		**M**	
Macchine per il lavaggio di barbabietole da zucchero	Machines pour le lavage de betteraves à sucre	Máquinas para lavar la remolacha azucarera		**M**	
Macchinari per costruzione	**Machines de construction**	**Máquinas para la construcción**			
Betoniere	Bétonnières	Hormigoneras		**M**	
Montacarichi	Monte-charge	Montacargas		**M**	
Macchinari per costruzione strade	Machines pour la construction de routes	Máquinas para la construcción vial		**M**	
Generatori e trasformatori	**Générateurs et transformateurs**	**Generadores y transformadores**			
Trasformatori di frequenza	Transformateurs de fréquence	Transformadores de frecuencia			**H**
Generatori	Générateurs	Generadores			**H**
Generatori per saldatrici	Générateurs pour machines à souder	Generadores para soldadoras			**H**
Lavanderie	**Laveries**	**Lavanderías**			
Invertitori	Inverseurs	Invertidores		**M**	
Lavatrici	Machines à laver	Lavadoras		**M**	
Stiratrici	Machines à repasser	Planchadoras		**M**	
Laminatori per metalli	**Laminoirs a métaux**	**Laminadores para metales**			
Cesoie per laminatoi	Cisailles pour laminoirs	Cizallas para laminadores			**H**
Trasmissioni a catena	Transmissions à chaîne	Transmisiones de cadena		**M**	
Laminatoi a freddo	Laminoirs à froid	Laminadores en frío			**H**
Impianti per fusione continua	Installations de fusion continue	Instalaciones para fundición continua			**H**
Basamenti refrigeranti	Bases de réfrigération	Bases de refrigeración		**M**	
Cesoie per spuntatura	Cisailles à ébouter	Cizallas para despunte			**H**
Laminatoi per piatti medi e pesanti	Laminoirs pour plats moyens et lourds	Laminadores para platos medios y pesados			**H**
Treni sbozzatori e lingotti	Trains ébaucheurs et lingots	Trenes desbastadores y lingotes			**H**
Manipolatori	Manipulateurs	Manipuladores			**H**
Trancia lamiere	Coupe-tôles	Cizallas de planchas			**H**
Raddrizzatore rulli	Machnies à dresser les rouleaux	Máquinas enderezadoras de rodillos		**M**	
Tavole a rulli (pesante)	Tables à rouleaux (lourdes)	Mesas de rodillos (pesadas)			**H**
Tavole a rulli (leggere)	Tables à rouleaux (légères)	Mesas de rodillos (livianas)			**H**
Macchine saldatrici a tubo	Machines à souder les tubes	Maquinas para soldar		**M**	
Macchine avvolgitrici (guarnizioni e fili)	Enrouleuses (garnitures et fils)	Máquinas bobinadoras (flejes e hilos)		**M**	
Banchi da disegno a filo	Bancs traceurs à fil	Bancos de diseño a hilo		**M**	
Macchine per la lavorazione del metallo	**Machnies d'usinage des métaux**	**Máquinas para la elaboración del metal**			
Contralberi, alberi in linea	Contre-arbres, arbres en ligne	Contraejes, ejes en linea	**U**		
Pressa per stampaggio a caldo	Presses à mouler à chaud	Prensa para estampado en caliente			**H**
Martelli	Marteaux	Martillos			**H**
Guide ausiliarie, macchine utensili	Glissières auxiliaires, machines outils	Guías auxiliares, máquinas herramientas	**U**		
Guide principali, macchine utensili	Glissières principales, machines outils	Guías principales, máquinas herramientas		**M**	
Macchine per la piallatura di metalli	Raboteuses à métaux	Máquinas para el cepillado de metales			**H**
Raddrizzatrice per la lamiera	Machines à dresser les tôles	Máquinas enderezadoras de chapa			**H**
Presse	Presses	Prensas			**H**
Presse per stampi	Presses à estamper	Prensas para punzunado			**H**
Cesoie	Cisailles	Cizallas		**M**	
Macchine per piegatrici di metallo	Plieuses à métaux	Máquinas para plegado de metal		**M**	

DE TECHNISCHE EIGENSCHAFTEN

BELASTUNGSKENNWERT

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EN TECHNICAL INFORMATION

LOAD CLASSIFICATION

Listed load conditions may change depending on drive actual operating conditions.

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TR TEKNİK BİLGİLER

YÜK SINIFLANDIRMASI

Listelenmiş yük koşulları, planet dişli ünitesinin gerçek çalışma şartlarına bağlı olarak değişebilir.

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Tabelle 3 / Table 3 / Tablo 3

Ölindustrie	**Oil industry**	**Petrol Endüstrisi**			
Pompes pour pipeline	Pipeline pumps	Boru hattı pompaları		**M**	
Bohrvorrichtungen	Rotary drilling equipment	Döner sondaj ekipmanları			**H**
Papiermaschinen	**Paper machines**	**Kağıt Makinaları**			
Kalander	Calenders	Kalenderleme			**H**
Gautschen	Couches	Gauç valisleri			**H**
Trockenzylinder	Drying cylinders	Kurutucu silindirler			**H**
Glättzylinder	Glazing cylinders	Parlatma silindirleri			**H**
Holländer	Pulpers	Hamurlaştırıcılar			**H**
Holzschleifer	Pulp grinders	Kağıt hamur değirmeni			**H**
Saugwalzen	Suction rolls	Emici valsler			**H**
Saugpressen	Suction presses	Emici presler			**H**
Nasspressen	Wet presses	Islak presler			**H**
Reisswolf	Willows	Açma makinaları			**H**
Kunstoffmaschinen	**Plastic industry machinery**	**Plastik Endüstri Makinaları**			
Kalander	Calenders	Perdah makinaları		**M**	
Zerkleinerungsmaschinen	Crushers	Kırıcılar		**M**	
Extruder	Extruders	Ekstruder		**M**	
Mischer	Mixers	Karıştırıcılar		**M**	
Kreiselpumpen (zähe					
Pumpen	**Pumps**	**Pompalar**			
Kreiselpumpen (zähe Flüssigkeit)	Centrifugal pumps (light liquids)	Santrifüj pompalar (hafif sıvılar)	**U**		
Kreiselpumpen (leichte Flüssigkeit)	Centrifugal pumps (viscous liquids)	Santrifüj pompalar (akışmaz sıvı)			**H**
Kolbenpumpen	Piston pumps	Pistonlu pompalar			**H**
Plungerpumpen	Plunger pumps	Dalgıç pompalar			**H**
Presspumpen	Pressure pumps	Basınç pompaları			**H**
Gummimaschinen	**Rubber machinery**	**Kauçuk Makinaları**			
Kalander	Calenders	Perdah makinaları		**M**	
Extruder	Extruders	Ekstruderler			**H**
Mischer	Mixers	Karıştırıcılar		**M**	
Knetwerke	Pug mills	Yoğurma değirmeni			**H**
Walzwerke	Rolling mills	Haddehaneler			**H**
Steine, Erden	**Stone and clay working machines**	**Taş ve Kil İşleme Makinaları**			
Hammermühlen	Hammer mills	Çekiçli değirmenler			**H**
Walzwerk	Beater mills	Dövücü değirmenler			**H**
Brecher	Breakers	Kesiciler			**H**
Ziegelpressen	Brick presses	Tuğla presleri			**H**
Drehöfen	Rotary ovens	Döner fırınlar			**H**
Rohrmühlen	Tube mills	Boru profil makinası			**H**
Textilmaschinen	**Textile machines**	**Tekstil Makinaları**			
Dosierer	Batchers	Harman ölçer		**M**	
Webstühle	Looms	Dokuma tezgahları		**M**	
Druckerei-Färbereimaschinen	Printing and dyeing machines	Yazma ve boyama makinaları		**M**	
Gerbwanne	Tanning vats	Tabaklama fıçıları		**M**	
Reisswolf	Willows	Açma makinaları		**M**	
Wasseraufbereitung	**Water treatment**	**Su Arıtma**			
Kreiselbelüfter	Aerators	Havalandırıcılar		**M**	
Wasserschnecken	Screw pumps	Vidalı pompa		**M**	
Holzbearbeitungsmaschinen	**Wood working machines**	**Ağaç İşleme Makinaları**			
Sägegatter	Barkers	Kabuk soyucular			**H**
Hobelmaschinen	Planing machines	Planya tezgahı		**M**	
Entrindungstrommel	Saw frames	Kollu testere			**H**
Holzbearbeitungsmaschinen	Wood working machines	Ağaç işleme makinaları	**U**		

IT CARATTERISTICHE TECNICHE

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FR CARACTERISTIQUES TECHNIQUES

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ES CARACTERÍSTICAS TÉCNICAS

CONDICIONES DE LA CARGA

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Tabella 3 / Tableau 3 / Tabla 3

Industria petrolifera	**Industrie pétrolifère**	**Industria del petróleo**			
Pompe conduttrici	Pompes pour pipeline	Bombas conductoras		**M**	
Attrezzatura trapanatrice rotante	Équipement de forage rotatif	Equipos perforado rotativo			**H**
Macchine per la carta	**Industrie papetière**	**Máquinas para el papel**			
Calandre	Calandres	Calandras			**H**
Manicotto	Fourreaux	Manguitos			**H**
Tamburo essicatore	Tambours de séchoir	Tambores de secado			**H**
Cilindro essicatore	Cylindres de séchoir	Cilindros de secado			**H**
Raffinatrice	Raffineurs	Refinadoras			**H**
Sfibratore per pasta	Défibreurs de pâte	Desfibrador de pasta			**H**
Rulli aspiranti	Rouleaux aspirants	Rodillos aspiradores			**H**
Presse aspiranti	Presses aspirantes	Prensas aspiradoras			**H**
Presse a umido	Presses humides	Prensas en húmedo			**H**
Battitoi	Battoirs	Batidores			**H**
Macchinari per la plastica	**Machines pour matières plastiques**	**Máquinas para el plástico**			
Calandre	Calandres	Calandras		**M**	
Frantoi	Broyeurs	Trituradores		**M**	
Estrusori	Extrudeuses	Extrusores		**M**	
Miscelatori	Mélangeurs	Mezcladores		**M**	
Pompe	**Pompes**	**Bombas**			
Pompa centrifuga (liquidi leggeri)	Pompes centrifuges (liquides légers)	Bombas centrifugadoras (líguidos livianos)	**U**		
Pompa centrifuga (liquidi viscosi)	Pompe centrifuges (liquides visqueux)	Bombas centrifugadoras (líguidos viscosos)			**H**
Pompe a pistoni	Pompes à pistons	Bombas de pistón			**H**
Pompe a pulsante	Pompes à poussoir	Bombas de émbolo			**H**
Pompe a pressione	Pompes à pression	Bombas de presión			**H**
Macchinari per la gomma	**Machines pour le caoutchouc**	**Máquinas para la goma**			
Calandre	Calandres	Calandras		**M**	
Estrusori	Extrudeuses	Extrusores			**H**
Miscelatori	Mélangeurs	Mezcladores		**M**	
Impastatrice	Malaxeur	Empastadoras			**H**
Laminatoi	Laminoirs	Laminadores			**H**
Macchine per la lavorazione della pietra e dell'argilla	**Machines pour le travail de la pierre et de l'argile**	**Máquinas para la elaboración de la piedra y de la arcilla**			
Mulino a martelli	Moulins à marteux	Molinos de martillo			**H**
Laminatoi per raffinare	Laminoirs à raffiner	Laminadores para refinar			**H**
Interruttore	Interrupteurs	Interruptores			**H**
Presse per mattoni	Presses à briques	Prensas para ladrillos			**H**
Forno rotante	Fours rotatifs	Hornos rotativos			**H**
Laminatoi a tubo	Laminoirs à tubes	Laminadores de tubo			**H**
Macchine tessili	**Machines pour l'industrie textile**	**Máquinas textiles**			
Dosatori	Doseurs	Dosificadores		**M**	
Telai per tessitura	Métiers à tisser	Máquinas para tejido		**M**	
Macchine per la stampa e la tintura	Machines pour l'impression et la teinture	Máquinas para imprimir y teñir		**M**	
Vasca per la concia	Cuves de tannage	Depósitos para curtiembre		**M**	
Battitoi	Battoirs	Batidores		**M**	
Trattamenti ad acqua	**Traitement des eaux**	**Tratamientos con agua**			
Aeratori	Aérateurs	Aireadores		**M**	
Pompa a vite	Pompes à vis	Bombas de tornillo		**M**	
Macchine per la lavorazione del legno	**Machines a travailler le bois**	**Máquinas para la elaboración de la madera**			
Scortecciatrici	Machines à décortiquer	Descortezadoras			**H**
Macchine per la piallatura	Raboteuses	Máquinas para el cepillado		**M**	
Telaio per seghe	Métiers à scies	Marcos para sierras			**H**
Macchine per la lavorazione del legno	Machines à bois	Máquinas para la elaboración de la madera	**U**		

DE ALLGEMEINE VORSCHRIFTEN FÜR EINBAU UND WARTUNG

Der korrekte Einbau des Getriebes in die entsprechende Vorrichtung der Applikation ist Voraussetzung, um einen einwandfreien und dauerhaften Betrieb zu gewährleisten. Vorallem die Oberflaechen der Zentrierungen / Aufnahme sind in einer Toleranz H8 zu fertigen, damit die einwandfreie Uebereinstimmung mit der Getriebeachse garantiert wird.

Für die Befestigung sind die Schrauben zu verwenden, die in der Zeichnung / Teileliste des Modells vorgesehen sind. Dazu sind alle vorgesehenen Befestigungsbohrungen zu verwenden.

Für im Freien betriebene Maschinen wird empfohlen, das Getriebe soweit wie möglich vor Witterungseinflüssen zu schützen sowie mit Rostschutzmittel zu behandeln Die Dichtringe sind mit wasserabweisen dem Fett zu versehen.

Bei Betriebsbedingungen, unter denen Dauerstörungen aufgrund unvorhergesehener Überlastungen aufreten könnten oder gar die Getriebewelle blockiert werden könnte, empfiehlt sich der Einbau eines hydraulischen oder mechanischen Sicherheitsystems zum Schutz des Getriebes.

Der Anbau des Getriebes an Elektro-oder Hydraulikmotoren erfolgt normalerweise direkt über Flansche, wenn keine außergewöhnliche Situation vorliegt, die nach erfolgtem Einbau Schäden verursachen könnte.

Ist es jedoch erforderlich, sehr schwere Motoren anzubauen, deren Gewicht 100 kg überschreitet, wird empfohlen, sich an unseren Kundenservice (sales) zu wenden, um die beste Einbauposition zu ermitteln.

Alternativ dazu kann ein separater Einbau der beiden Teile erfolgen, die dann über Kupplungen oder Riemenscheiben verbunden werden.

ENTSORGUNG DER MASCHINE

Die Entsorgung des bei der Verschrottung der Maschine anfallenden Abfalls muss unter Beachtung der Umweltschutzgesetze erfolgen. Bode, Luft und Wasser dürfen nicht verschmutzt werden. Der anfallende Abfall ist als Sondermüll zu betrachten. Auf jeden Fall müssen die örtlichen Gesetze und Vorschriften zum Schutz der Umwelt des Landes, in dem die Maschine verwendet wird, befolgt werden.

Eisenhaltige Materialien: Da es sich um recyclingfähiges Material handelt (sekundäre Rohstoffe), sind diese einer zugelassenen Rohstoffsammelung zu übergeben.

Kunststoffmaterialien: Recycling zulässig wo möglich, Entrsorgung auf der Müllhalde von unter Hausmüll fallendem Abfall, Verbrennung zugelassen in Anlagen mit Nachverbrennung und Entstaubungsanlage vor dem Ablassen in die Atmosphäre.

EN GENERAL MOUNTING AND MAINTEANCE INSTRUCTIONS

For the longest and most efficient service life, drives must be correctly mounted on the application structure. Therefore, all structure faces must be machined with H8 spigots so that they are flat and perpendicular to the drive axis.

To secure the drive, use the nuts and bolts shown under each technical drawing on the product technical sheets. Make sure to use all the fixing holes on the flanges.

For outdoor installations, drives must be protected against bad weather, treated with anticorrosive agents and oil seals protected with water-repellent grease.

In operations in which transmission malfunctions might occur due to accidental overloads, a mechanical or hydraulic safety device must be used to protect the drive.

Drives are usually connected directly to what are mainly electric or hydraulic motors by means of flanges when there are particularly critical conditions that might cause damage after installation.

With this in mind, and when heavy motors must be installed (weighing more than 100 kg), please contact our Technical Service Department, to evaluate the proper mounting position.

As an alternative, we suggest to separately mount the two units and to connect them with either a coupling or pulleys.

MACHINE DISPOSAL

Disposing of waste deriving from demolition of the machine must be done with the environment in mind, avoiding pollution of the soil, air and water. Waste from demolition of the machine is classified as special waste. Local laws and environmental protection regulations must in any case be observed, in compliance with the environmental laws in force in the country where the machine is used.

Ferrous materials: these are recyclable (secondary raw materials) to be delivered to a special authorised collection centre.

Plastic materials: recycling permitted where done, disposal in landfill for waste similar to urban waste, incineration allowed in plant equipped with post-combustion and dust damping system before being released into the air.

TR GENEL MONTAJ VE BAKIM TALİMATI

Uzun ve verimli bir servis ömrü elde etmek için Planet dişli üniteleri uygulama yerine doğru şekilde monte edilmelidir. Dolayısı ile yapının bütün yüzeyleri düz ve Planet dişli ünitesinin eksenine dik olabilmeleri için H8 kılavuzlar ile işlenmelidir.

Planet dişli ünitesini sabitlemek için ürün teknik sayfalarında yer alan her bir teknik çizimin altında gösterilen somun ve civataları kullanınız. Flanşların üzerinde yer alan bütün bağlantı deliklerini kullandığınızdan emin olunuz.

Açık hava kurulumları için Planet dişli üniteleri kötü hava koşullarına karşı korunmalıdır, paslanmaya karşı etkili maddeler ve su geçirmeyen gres ile korunmuş yağ keçeleri kullanılmalıdır.

Kazara gerçekleşen aşırı yüklemeler sonucunda aktarımda arızalanmaların meydana gelebileceği uygulamalarda, Planet dişli ünitesini korumak için mekanik veya hidrolik bir güvenlik tertibatı kullanılması gerekmektedir.

Planet dişli üniteleri kurulumdan sonra hasara sebep olabilecek özel durumlar olması halinde çoğunlukla elektrik veya hidrolik motorlara, flanşlar aracılığı ile direkt olarak bağlanmaktadır.

Bu düşünce ile ağır motorların kurulumu söz konusu olduğunda (100 kg'dan daha ağır motorlar), doğru montaj pozisyonunun değerlendirilebilmesi için lütfen Teknik Departmanımız ile iletişime geçiniz.

Alternatif olarak, iki üniteyi ayrı ayrı monte etmenizi ve bir kaplin veya kasnaklar aracılığı ile birbirlerine bağlamanızı tavsiye ederiz.

MAKİNENİN BERTARAFI

Makinenin imha edilmesinden kaynaklı olarak açığa çıkacak olan atıkların elden çıkartılması çevreyi düşünerek gerçekleştirilmelidir. Toprağın, havanın veya suyun kirletilmesinden kaçınılmalıdır. Makinenin imha edilmesinden kaynaklı olarak ortaya çıkan atıklar özel atık olarak sınıflandırılmaktadır. Her durumda, yerel kanunlar ve çevre koruma düzenlemeleri, makinenin kullanıldığı ülkede geçerli olan çevre kanunlarına uyulmalıdır.

Demir içeren malzemeler: Bunlar özel yetkili toplama merkezine iletilmesi gereken geri dönüştürülebilir malzemelerdir (ikincil hammaddeler).

Plastik malzemeler: Geri dönüşümü yapılan tesislerde geri dönüştürülmesine izin verilmektedir. Elden çıkartılması, kentsel atıklara benzer biçimde gömülerek gerçekleştirilir. Havaya salınmadan önce yakım sonrası toz boşaltma sistemi ile donatılmış tesislerde yakılmasına izin verilmektedir.

IT NORME GENERALI PER L'INSTALLAZIONE E LA MANUTENZIONE

Per garantire un buon funzionamento dei riduttori ed una miglior durata nel tempo è necessario un corretto accoppiamento alla struttura cui viene fissato il gruppo. Pertanto le superfici di tale struttura dovranno essere lavorate con centraggi in H8 ed in modo da garantire un'ottima planarità e perpendicolarità con l'asse del riduttore.

Per il fissaggio del riduttore usare la-bulloneria indicata sotto ogni disegno nelle schede tecniche di prodotto. Usare inoltre tutti i fori di fissaggio previsti sulle flange dei riduttori.

Per gruppi installati all'aperto si consiglia, dove possibile, di proteggere i riduttori dalle intemperie, di trattarli con sistemi anticorrosivi e di proteggere i paraoli con grasso idrorepellente.

Nelle applicazioni in cui possono verificarsi sovraccarichi accidentali tali da compromettere l'integrità della trasmissione, occorre prevedere un sistema di sicurezza (idraulico, meccanico) per salvaguardare il riduttore.

L'abbinamento fra riduttori e motori, principalmente elettrici o idraulici, viene normalmente fatto mediante flangiatura diretta quando non si presentano particolari condizioni di criticità, che possono provocare danni dopo l'installazione.

A tale proposito, ove è richiesto di installare motori molto pesanti, oltre i 100 kg, consigliamo di contattare il nostro Servizio Tecnico per meglio valutare l'applicazione in funzione della posizione di montaggio.

In alternativa, si consiglia un montaggio se parato dei due particolari collegati mediante guinto o pulegge.

SMALTIMENTO DELLA MACCHINA

Lo smaltimento dei rifiuti derivati dalla demolizione della macchina dovrà essere eseguito nel rispetto ambientale, evitando di inquinare suolo, aria e acqua. I rifiuti derivanti dalla demolizione della macchina sono classificabili come rifiuti speciali. In ogni caso dovranno essere rispettate le locali legislazioni e lenormative di tutela ambientali nel rispetto delle leggi vigenti in materia nel paese di utilizzo della macchina.

Materiali ferrosi: trattasi di materiale riciclabile (materie prime secondarie) da conferire ad apposito centro di raccolta autorizzato.

Materiali plastici: riciclo consentito ove effettuato, smaltimento in discarica per rifiuti assimilabili agli urbani, incenerimento consentito in impianto dotato di postcombustione e sistema di abbattimento polveri prima dell'immissione in atmosfera.

FR REGLES GENERALES D'INSTALLATION ET D'ENTRETIEN

Pour garantir le bon fonctionnement des réducteurs et leur durée de vie maximum, il est indispensable d'assurer un bon accouplement à la structure sur laquelle le groupe doit être fixé. Aussi, les surfaces de cette structure doivent être usinées par des centrages en H8 et de façon à garantir une planéité optimale et une perpendicularité par rapport à l'axe du réducteur.

Pour effectuer la fixation du réducteur, utiliser les boulons indiqués sous chaque dessins des fiches techniques du produit. En outre, utiliser tous les trous de fixation prévus sur les brides des réducteurs.

Pour les groupes installés à ciel ouvert, il est conseillé, dans la mesure du possible, de mettre les réducteurs à l'abri des intempéries, de les traiter avec des produits anti-corrosion et de protéger les joints d'étanchéité à l'aide de la graisse hydrofuge.

Dans le cas des applications exposées à des risques de surcharges accidentelles susceptibles de compromettre la transmission, il est nécessaire de prévoir un dispositif de sécurité (hydraulique ou mécanique) de protection du réducteur.

L'assemblage des réducteurs aux moteurs, principalement électriques ou hydrauliques, est généralement assuré par bridage direct en l'absence de conditions critiques particulières susceptibles d'endommager l'installation).

A cet égard, lorsque s'avère nécessaire l'installation de moteurs très lourds, de plus de 100 kg, il est recommandé de prendre contact avec notre Service Technico qui vous aidera à mieux étudier l'application en fonction de la position de montage.

Différemment, il est recommandé d'effectuer un montage séparé des deux éléments et de les relier l'un à l'autre par l'intermédiaire d'un joint ou de poulies.

DÉMOLITION DE LA MACHINE

L'élimination des déchets provenant de la démolition de la machine doit s'effectuer dans le respect de l'environnement pour prévenir la pollution des sols, de l'air et des eaux. Les déchets provenant de la démolition de la machine rentrent d ans la catégorie des déchets spéciaux. Dans tous les cas, il est nécessaire de veiller au respect des dispositions locales et des autres normes de protection de l'environnement, en conformité aux lois en vigueur dans le pays où la machine est utilisée.

Matériaux ferreux: matériaux recyclables (matières premières secondaires) à remettre à un centre de collecte agréé.

Matières plastiques: recyclage autorisé, élimination en décharge pour déchets assimilables aux déchets urbains, incinération autorisée dans des installations à post-combustion et à système de filtrage des poussières avant rejet dans l'atmosphère.

ES NORMAS GENERALES PARA LA INSTALACIÓN Y EL MANTENIMIENTO

Para garantizar un buen funcionamiento de los reductores y una mayor duración se deberá realizar un correcto acoplamiento a la estructura en la que se fija el grupo. Por tanto las superficies de dicha estructura tendrán que estar bien planas y los ejes de los agujeros respetar una tolerancia H8, de este modo se podrá garantizar una óptima planaridad y perpendicularidad con el eje del reductor.

Pour effectuer la fixation du réducteur, utiliser les boulons indiqués sous chaque dessins des fiches techniques du produit. En outre, utiliser tous les trous de fixation prévus sur les brides des réducteurs.

Para los grupos instalados al aire libre se aconseja, donde sea posible, proteger los reductores contra la intemperie, tratarlos con sistemas contra la corrosión y proteger los sellos de lubricación con grasa hidrófuga.

En las aplicaciones donde se pueden producir sobrecargas accidentales, capaces de comprometer la integridad de la transmisión, se deberá utilizar un sistema de seguridad (hidráulico o mecánico) para salvaguardar el reductor.

El montaje entre los reductores y los motores, principalmente eléctricos o hidráulicos, generalmente se realiza con embridado directo siempre que no se presenten particulares condiciones críticas que podrían ocasionar daños después de la instalación.

Para tal fin, donde se requiera la instalación de motores muy pesados (más de 100 kg), se aconseja ponerse en contacto con nuestro Servicio Técnico para poder evaluar mejor la aplicación en función de la posición de montaje.

Como alternativa, se aconseja un montaje separado de las dos unidades y acoplarlas por medio de juntas o poleas.

DEMOLICIÓN DE LA MÁQUINA

Los residuos derivados de la demolición de la máquina deberán eliminarse respetando el medio ambiente, evitando contaminar suelo, aire y agua. Los residuos derivados de la demolición de la máquina se clasifican como residuos especiales. De todos modos, se deberán respetar las legislaciones y normativas locales de protección del medio ambiente observando las leyes vigentes en la materia del país donde se utiliza la máquina.

Materiales ferrosos: se trata de materiales reciclables (materias primas secundarias) que deben enviarse a los correspondientes centros de recolección autorizados.

Materiales plásticos: reciclado permitido si fuere necesario efectuarlo, eliminación en vertederos para residuos asimilables a los urbanos, incineración permitida en instalaciones con postcombustión y sistema de abatimiento de polvo antes de ingresar a la atmósfera.

DE ALLGEMEINE VORSCHRIFTEN FÜR EINBAU UND WARTUNG

EINHEITEN MIT BEFESTIGUNG DURCH VORGESCHOBENEN FLANSCH BZW. OHNE FLANSCH

Getriebe mit Abtriebswelle (M-P)

Werden bei Einheiten dieser Art Leistungen angelegt, die die Werte der den jeweiligen Produkten zugeordneten technischen Datenblätter um 50% überschreiten, wird empfohlen, beide Zentrierungen, die am Gehäuse abtriebsseitig vorhanden sind, zu verwenden.
Dagegen gilt grundsätzlich in allen Fällen: vorhandene Zentrierungen an den Nutwellen verwenden, vor allem, wenn Ritzel montiert werden.

Bei Betriebsbedingungen, unter denen starke äußere Belastungen gleichzeitig am Abtrieb und Antrieb wirken, wird empfohlen, sich an unseren Kundenservice zu wenden.

Getriebe mit innenverzahnter Hohlwelle (F)

Diese Getriebeausführung kann weder Radial noch Axialkräfte übertragen.
Es muß deshalb besonders sorgfältig darauf geachtet werden, daß der Anbau an die Hohlwelle koaxial und rechtwinklig erfolgt.

Getriebe mit Befestigungsfüssen (CPC)

Auch bei diesen Einheiten gelten die zu Beginn des Kapitels erwähnten Vorschriften in Bezug auf einen koaxialen und rechtwinkligen Anbau.

Außerdem muß die Ausrichtung der Einheit mit der zu bewegenden Maschine entsprechend kontrolliert werden. Sollte dieses nicht einwandfrei garantiert werden koennen, ist zwischen Getriebe und Maschine eine flexible Verbindung einzubauen, z.B. eine elastische Kupplung.

Beim Einbau ist zu beachten, daß das auf diese Weise angebaute Getriebe keinen Vibrationen ausgesetzt werden darf.

EN GENERAL MOUNTING AND MAINTEANCE INSTRUCTIONS

UNITS WITH FLANGE CLAMPING OR WITHOUT FLANGE MOUNTING

Drive with male output shaft (M-P)

For these units, when the loads are 50% greater than those indicated on the single product technical sheets, use both spigots on the output housing.
In all other cases, especially when toothed pinions are mounted, the spigots on the splined output shafts must be used.

In applications where heavy external load conditions act simultaneously on both the output and the input sides, please contact our Technical-Service Department.

Drives with female output shaft (F)

Thanks to their construction design, these drives are particularly suitable for transmitting pure torque.
Therefore always check that the shaft is concentric and in-line with the axis of the driven shaft.

Foot mounted drives (CPC)

The fastening conditions with respect to the concentricity and alignment as discussed in the beginning of this section, also apply to these units.

Ensure that the unit is properly aligned with the machine to be operated. Should you have any doubts about the outcome of this operation, connect a flexible coupling between the drive and the machine.

Ensure that the mounted drive is not subjected to vibrations.

TR GENEL MONTAJ VE BAKIM TALİMATI

FLANŞ MONTAJLI VEYA FLANŞ MONTAJLI OLMAYAN ÜNİTELER

Çıkış milli planet dişli üniteleri (M-P)

Bu üniteler için yükler ürün teknik sayfalarında gösterilenlerden %50'den daha yüksek olduğunda, çıkış tarafındaki her iki kılavuzu da kullanın.
Diğer tüm durumlarda, özellikle dişli pinyonlar monte edildiğinde, spline çıkış millerinin kılavuzları kullanılmalıdır.

Ağır, dış yük koşullarının hem giriş hem de çıkış taraflarına aynı anda uygulandığı durumlarda, lütfen Teknik Departmanımız ile iletişime geçiniz.

Delik milli-spline planet dişli üniteleri (F)

Yapısal tasarımları sayesinde bu planet dişli üniteleri özellikle salt moment aktarımı için uygundur.
Dolayısı ile her zaman şaftın, planet dişli ünitesinin ekseni ile eş merkezli ve aynı doğrultuda olduğunu kontrol ediniz.

Ayak montajlı planet dişli üniteleri (CPC)

Bu bölümün başında anlatılmış olan, eş merkezlilik ve hizalama ile ilgili bağlama koşulları bu üniteler için de geçerlidir.

Planet dişli ünitesinin bağlanacak olan makine ile doğru şekilde hizalanmış olduğundan emin olunuz. Eğer bu işlemin sonuçları hakkında şüpheleriniz varsa, planet dişli ünitesi ile makine arasına esnek bir kaplin bağlayınız.

Montajlı planet dişli ünitesinin titreşime maruz kalmadığından emin olunuz.

IT NORME GENERALI PER L'INSTALLAZIONE E LA MANUTENZIONE

GRUPPI CON FISSAGGIO A FLANGIA AVANZATA O SENZA FLANGIA

Riduttori con albero lento maschio (M-P)

Per tali gruppi, quando i carichi sono superiori del 50% rispetto a quelli indicati nei grafici riportati nelle singole schede di prodotto, si consiglia di utilizzare entrambi i centraggi previsti sulla scatola lato uscita.
In tutti i casi, invece, devono essere utilizzati i centraggi previsti sugli alberi scanalati, soprattutto quando vengono montati dei pignoni dentati.

Nelle applicazioni dove si verificano condizioni di forti carichi esterni agenti contemporeneamente sia sull'uscita che sull'entrata, si consiglia di contattare il nostro Servizio Tecnico.

Riduttori con albero lento femmina (F)

Per la tipologia di costruzione questi riduttori sono idonei alla trasmissione della pura coppia.
Occorre quindi curare particolarmente la coassialità e l'ortogonalità nel collegamento con l'albero condotto.

Riduttori a basamento con piedi (CPC)

Anche per questi gruppi occorre che siano verificate le condizioni di fissaggio relative a coassialità ed ortogonalità già elencate all'inizio di questo capitolo.

Occorre inoltre controllare adeguatamente l'allineamento del gruppo con la macchina da movimentare. Se si hanno dei dubbi sulla perfetta riuscitadi tale operazione, utilizzare un collegamento non rigido fra riduttore e macchina, ad esempio un giunto elastico.

Durante l'installazione considerare che il riduttore così montato non deve essere soggetto a fenomeni di vibrazione.

FR REGLES GENERALES D'INSTALLATION ET D'ENTRETIEN

GROUPES AVEC FIXATION A BRIDE AVANCEE OU SANS BRIDE

Réducteurs à arbre lent mâle (M-P)

Pour de tels groupes, lorsque les charges sont supérieures de 50% à celles indiquées dans les graphiques des fiches des produits, il est recommandé d'utiliser les deux centrages prévus sur la carcasse, côté sortie.
Dans tous les cas, il est nécessaire d'utiliser les centrages prévus sur les arbres cannelés, en particulier quand sont montés des pignons dentés.

Dans le cas des applications présentant de fortes charges extérieures agissant simultanément sur la sortie et sur l'entrée, il est recommandé de prendre contact avec notre Service Technico.

Réducteurs à arbre lent femelle (F)

Le type de construction de ces réducteurs permet de transmettre le couple pur.
Il est par conséquent nécessaire de bien veiller à la co-axialité et à l'orthogonalité de l'accouplement avec l'arbre mené.

Reducteurs a carcasse avec pieds (CPC)

Pour ces groupes également, il est nécessaire de vérifier les conditions de fixation quant à la co-axialité et l'orthogonalité (voir début du chapitre).

De plus, il est nécessaire contrôler soigneusement l'alignement du groupe avec la machine à actionner.
Au moindre doute quant à la réussite de cette opération, utiliser un accouplement non rigide entre réducteur et machine, par exemple un joint élastique.

Lors de l'installation, ne pas oublier que le réducteur ainsi monté ne doit subir aucun phénomène de vibration.

ES NORMAS GENERALES PARA LA INSTALACIÓN Y EL MANTENIMIENTO

GRUPOS DE FIJACIÓN CON BRIDA AVANZADA O SIN BRIDA

Reductores con eje lento macho (M-P)

Para dichos grupos, cuando las cargas superen en un 50% a los valores indicados en los gráficos de cada una de las fichas del producto, se aconseja la utilización de ambos centrajes previstos en la carcasa, lado salida.
En todos los otros casos, sobretodo cuando se montan los piñones dentados, se tendrán que utilizar los centrajes previstos en los ejes ranurados.

En las aplicaciones con cargas m externas pesadas que intervienen simultáneamente en la salida y entrada, se aconseja ponerse en contacto con nuestro Servicio Técnico.

Reductores con eje lento hembra (F)

Debido al tipo de construcción estos reductores son idóneos para transmitir pares puros. Por tanto siempre hay que controlar la coaxialidad y la ortogonalidad del acoplamiento con el eje conducido.

Reductores con carcasa con pie (CPC)

También para estos grupos se tendrán que verificar las condiciones de fijación respecto a la coaxialidad y ortogonalidad que ya fueron enunciadas al comienzo de este capítulo.

Además hay que controlar la alineación del grupo con la máquina a accionar.
Si se tienen dudas sobre el buen resultado de dicha operación, entre el reductor y la máquina hay que utilizar un acoplamiento que no sea rígido, por ejemplo: una junta elástica.

Durante la instalación hay que tener en cuenta que el reductor no esté solicitado con vibraciones.

DE ALLGEMEINE VORSCHRIFTEN FÜR EINBAU UND WARTUNG

Getriebe mit Hohlwelle für Anbau einer Schrumpfscheibe (FS)

Für den Einbau dieser Getriebe sollte die Achsstrebe die Mindestlänge aufweisen die in der Zeichnung der jeweiligen Einheit angegeben ist.

Außerdem wird empfohlen, die Achsverbindung mit Gummi- und/oder stoßdämpfenden Elementen abzufedern. Bei besonderen Montagebedingungen, bei denen der Anbau von sehr schweren Motoren vorgesehen ist oder Zugkräfte von außen am Eingang wirken, sollten.
Sie sich an Technische Abteilung wenden, um den Anbau zu überprüfen.

Summieren sich Sonderbelastungen dieser Art und Radialkräfte, kann die Lebensdauer der Lager erheblich eingeschränkt werden sowie die Wirksamkeit der Kupplungsspannung reduziert und die Lebensdauer der Welle beeinflußt werden.

Vor dem Anziehen der Reibschlußverbindung wird empfohlen, die Innenfläche der Getriebewelle und die entsprechende Zapfwelle von Fett zu befreien.

Danach die Schrauben langsam und gleichmäßig, ohne Unterbrechung, anziehen.

Zum Lösen der Verbindung sind die Schrauben auf dieselbe Weise, gleichmäßig und ohne Unterbrechung zu loesen.

Es wird empfohlen, jede Schraube um eine Drittel-Drehung im ersten Lockerungsvorgang zu lösen, damit eine eventuelle Verschiebung verhindert wird.

Danach die Schrauben vollständig lösen, jedoch immer gleichmäßig und ohne sie aus den Gewinden zu nehmen.

Die an die Planetary Drives anzuschließende Welle sollte eine Toleranz von h6 uafweisen.

Ansonsten sind die Daten in den technischen Zeichnungen zu beachten.

EN GENERAL MOUNTING AND MAINTEANCE INSTRUCTIONS

Shaft mounted drives (FS)

Before installing these drives, apply a torque arm that respects the minimum lengths shown on the drawing for each single unit.

It is also recommended to cushion the reaction constraint using rubber pieces and/or shock absorbers.
When installing very heavy motors or for a belt mounting on the input side, please contact our Technical Department.

These external and transmission load conditions might significantly shorten bearing service life, loosening shrink disc tightness or affecting shaft resistance.

To ensure that the drive-driven equipment coupling is as efficient as possible, thoroughly degrease the internal surface of the drive shaft and its male coupling shaft.

Tighten the screws on the shrink disc in a gradual and uniform manner in a continuous sequence.

To remove the unit, gradually loosen the screws in the same order that they were tightened; i.e. in a gradual and continuous sequence.

Each screw should be backed off one third turn during the first loosening sequence to avoid any misalignment.

Then proceed to completely unfasten the unit, always in a gradual manner without completely removing the screw from the threads.

It is recommended to use tolerance h6 for the male shafts to be connected to the Planetary Drives.

In addition, follow the instructions provide next to each drawing.

TR GENEL MONTAJ VE BAKIM TALİMATI

Şaft montajlı planet dişli üniteleri (FS)

Bu planet dişli ünitelerinin kurulumunu gerçekleştirmeden önce, her bir ünitenin çizimlerinde gösterilen minimum uzunluklara uygun bir tork kolu uygulayınız.

Ayrıca tepkileri kısıtlamak için kauçuk parçalar ve/veya darbe emiciler kullanarak yumuşatılması da tavsiye edilir.
Çok ağır motorların kurulumunu yaparken veya giriş tarafına bir kayış takılacağı zaman lütfen Teknik Departmanımız ile iletişime geçiniz.

Bu harici ve iletim yük koşulları, konik sıktırma sıkılığının gevşemesine sebep olarak veya şaft dayanımını etkileyerek rulman servis ömrünü belirgin miktarda kısaltabilmektedir.

Planet dişli ünitesi ile tahrik edilen ekipmanlar arasındaki bağlantının mümkün olabildiğince verimli olmasını sağlamak için, Planet dişli ünitesi şaftının iç yüzeyini ve erkek kaplin şaftını iyice temizleyin.

Konik sıktırma üzerindeki vidaları, kesintisiz bir sıra ile kademeli ve düzgün bir biçimde sıkın.

Üniteyi yerinden çıkartmak için vidaları sıkıştırıldıkları sıra ile kademeli olarak gevşetin.

Her bir vida ilk gevşetilmesi sırasında herhangi bir hiza kaymasının önüne geçilebilmesi için yalnızca 1/3 tur gevşetilmelidir.

Ardından üniteyi tamamen sökmeye devam edin. Bu işlemi her zaman kademeli bir biçimde, vidaları yivlerinden tamamen ayırmadan gerçekleştirin.

Planet dişli ünitelerine bağlı olan miller için h6 toleransının kullanılması tavsiye edilir.

İlave olarak her bir çizimin yanında sunulmuş olan talimatları takip ediniz.

IT NORME GENERALI PER L'INSTALLAZIONE E LA MANUTENZIONE

Riduttori per montaggio pendolare (FS)

Per l'installazione di questi riduttori si prescrive l'applicazione di un braccio di reazione che rispetti le lunghezze minime riportate a disegno per ogni singolo gruppo.

Inoltre, si consiglia di ammortizzare il vincolo di reazione con elementi in gomma e/o ammortizzatori.
In caso di applicazione di motori molto persanti o di montaggio con cinghia sul lato entrata, contattare il nostro Servizio Tecnico per verificare l'installazione.

In guesti casi si producono, infatti, carichi esterni che, aggiungendosi a quelli della transmissione, possono ridurre sensibilmente la vita dei cuscinetti,compromettere l'efficacia del serraggio dell'anello calettatore o influire sulla resistenza dell'albero.

Per garantire un efficiente accoppiamento riduttore-utente, occorre sgrassare opportunamente la superficie interna dell'albero del riduttore e il relativo albero maschio di accoppiamento.

Per un corretto serraggio dell'anello calettatore si raccomanda di serrare le viti in modo graduale ed uniforme, con sequenza continua.

Per la rimozione, occorre svitare gradualmente le viti nello stesso modo in cui sono state avvitate, cioè con sequenza continua e graduale.

Si consiglia di far compiere 1/3 di giro ad ogni vite nella prima equenza di allentamento, in modo da evitare eventuali intraversamenti.

Procedere poi allo sbloccaggio totale, ma sempre gradualmente e senza arrivare all'estrazione totale delle viti dai filetti.

É consigliabile realizzare l'albero maschio da accoppiare ai gruppi Planetary Drives in tolleranza h6.

Seguire, inoltre, le indicazioni riportate a lato di ogni disegno.

FR REGLES GENERALES D'INSTALLATION ET D'ENTRETIEN

Réducteur pour montage pendulaire (FS)

Pour l'installation de ces réducteurs, il est nécessaire d'appliquer un bras de réaction respectant les longueurs minimales indiquées sur le plan de chaque groupe.

En outre, il est conseillé d'amortir le lien de réaction au moyen d'éléments en caoutchouc et/ou d'amortisseurs.
En cas d'application de moteurs très lourds ou de montage avec courroie sur le côté entrée, prendre contact avec notre Service Technico pour contrôler l'application.

Dans de tels cas en effet, sont induites des charges externes qui, ajoutées aux charges de transmission, peuvent réduire sensiblement le durée de vie des roulements, compromettre l'efficacité du serrage de la frette ou avoir une influence sur la résistance de l'arbre.

Pour garantir l'efficacité de l'accouplement réducteur-machine, il est nécessaire de dégraisser la surface interne de l'arbre du réducteur ainsi que l'arbre mâle de couplage correspondant.

Pour le bon serrage de la frette, il est recommandé serrer les vis de manière graduelle a uniforme en séquence continue.

Pour le retrait du réducteur, il est nécessaire de dévisser graduellement les vis comme lors du serrage, c'est-à-dire en séquence continue et graduelle.

Il est conseillé de dévisser de 1/3 de tour chaque vis lors de la première séquence de desserrage, de façon à éviter les éventuelles mises de travers.

Débloquer ensuite les vis totalement, mais toujours graduellement et sans retirer les vis des filetages.

Il est conseillé de réaliser l'arbre mâle à accoupler aux groupes Planetary Drives avec une tolérance h6.

Par ailleurs, il est conseillé de suivre les indications figurant en marge de chaque dessin.

ES NORMAS GENERALES PARA LA INSTALACIÓN Y EL MANTENIMIENTO

Reductores para montaje pendular (FS)

Para la instalación de estos reductores es necesario aplicar un brazo de reacción que respete las longitudes mínimas indicadas en el plano para cada grupo.

Además, se aconseja amortiguar el vínculo de reacción con elementos de goma y/o amortiguadores.
En el caso de aplicaciones de motores muy pesados o de montaje con correa en la entrada, se aconseja ponerse en contacto con nuestro Servicio Técnico para verificar la instalación.

En efecto, en estos casos se producen cargas externas que, agregándose a aquellas de la transmisión, pueden reducir sensiblemente la vida útil de los rodamientos y perjudiar la eficacia del ajuste del disco de contracción o influir sobre la resistancia del eje.

Para garantizar un acoplamiento eficiente entre reductor-máquina, hay que desengrasar bien la superficie interna del eje reductor y el respectivo eje macho de acoplamiento.

Para un correcto cierre del disco de contracción se recomienda ajustar los tornillos en modo gradual, uniforme y en secuencia continua.

Para la remoción, se deberán aflojar los tornillos del mismo modo que para el ajuste o sea, en secuencia continua y gradual.

Mientras se aflojen los tornillos, se aconseja hacerles dar 1/3 de vuelta a cada uno, de este modo se evitarán eventuales desalineamientos.

Después efectuar el desbloqueo total, pero siempre gradual y sin extraer totalmente los tornillos de los filetes.

Se aconseja realizar el eje macho, a acoplar con los grupos Planetary Drives, con una tolerancia h6.

Además, se recomienda seguir las instrucciones indicadas al lado de cada plano.

DE SCHMIERUNG

Nur eine korrekte Schmierung gewährleistet den problemlosen Betrieb des Getriebes.

Es wird deshalb empfohlen, bei der Installation folgende Bedingungen zu überprüfen:

- Kontrollieren, ob je nach bestellter Montageposition die Einfüllstutzen korrekt montiert sind, vgl. dazu die Angaben im Abschnitt EINBAULAGE (Seite 54-57).
- Ist das Getriebe waagerecht montiert, muß es bis zur Mitte aufgefüllt werden: Sichtkontrolle des Ölstandes vornehmen, indem der Öeleinfüllstopfen abgeschraubt wird.
- Bei Winkelgetrieben ist der rechtwinklige Teil so angebaut, daß das Öel ungehindert zirkulieren kann; es empfiehlt sich jedoch, das Öl am Boden einzufüllen, wobei es auf beiden Seiten geoeffnet, aber nicht gleichzeitig eingefüllt wird; der Vorgang wird dadurch beschleunigt und man kann gleichzeitig sicher sein, die erforderliche Ölmenge einzufüllen, da das Öl Zeit braucht, um von einer Kammer in die andere zu fließen.
- Besondere Sorgfalt ist bei Getrieben erforderlich, die senkrecht montiert werden; sie müssen mit Hilfe der beigelegten Kniestücke und Verlängerungen vollständig aufgefüllt werden. Für diese Einbauposition wird die Verwendung eines Ausgleichsbehälter empfohlen, der auf Anfrage separat geliefert wird. Das Gefäß muß oberhalb des höchsten Getriebepunktes positioniert werden und soll überschüssige Ölmengen aufnehmen bzw. bei Getrieben in unzugänglichen Positionen ein sicheres Einfüllen gewährleisten.
- Die montierten Bremsen und Motoranschlüsse bilden eine vom restlichen Getriebe ausfuehrung getrennte Kammer; diese muß deshalb getrennt vom Getriebe aufgefüllt werden, siehe Abschnitt BREMSENMODULE (Seite 77-78).
- Außerdem kommt es bei Getrieben, die im Dauerbetrieb arbeiten, aufgrund der darin enthaltenen großen Ölmengen leicht zu Überhitzung; in diesem Fall wird die Verwendung von Öltypen mit niedrigerem Viskositätsgrad empfohlen.

EN LUBRICATION

Correct lubrication is required to run drives efficiently.

Therefore, check the following conditions during installation:

- Make sure that all plugs are correctly mounted with respect to the installation position specified in the order and according to the instructions in the MOUNTING POSITIONS section (page 54-57).
- Fill horizontally-mounted units up to the central line regardless of a linear-or angular configuration. To visually check the oil level, unscrew the plug located just above the center line.
- For right angle units, the bevel gear is connected so that the oil is free to circulate. In any case, carry out the filling operation on both ends, but not simultaneously, and while the unit is on the ground, based on the correct mounting position. This will speed up the operation and ensure that the correct quantity oil is introduced, regardless of how long it would take for the oil to go from one chamber to the other.
- Particular attention should be paid to verticallymounted units which must be completely filled by means of elbows and extensions supplied with the unit. For these positions it is recommended to use an expansion tank, which can be supplied separately on request. This tank must be positioned above the highest point of the drive and is designed to collect any oil expansions or to ensure that the units mounted in hard-to reach places can be topped up.
- Brakes and assembled motor connections form a separate chamber from the drive and thus must be filled separately see the MODULAR BRAKES section (page 77-78).
- Units running under continuous duty conditions may overheat due to the large quantity of oil they contain. In these cases, use oil with a, lower viscosity.

TR YAĞLAMA

Planet dişli ünitesinin verimli çalıştırılabilmesi için doğru şekilde yağlanması gereklidir.

Dolayısı ile kurulum sırasında aşağıdaki koşulları da kontrol ediniz.

- Bütün tapaların MONTAJ POZİSYONLARI bölümünde (sayfa 54-57) yer alan montaj pozisyonunda belirtilmiş olan sıraya göre ve talimatlar uyarınca doğru biçimde takıldığından emin olunuz.
- Yatay yerleştirilmiş olan üniteleri, doğrusal veya açısal bir konfigürasyondan bağımsız olarak merkez hatta kadar doldurun. Yağ seviyesini görsel olarak kontrol etmek için, merkez hattın hemen üzerinde yer alan tapayı sökün.
- Dik açılı ünitelerde konik dişli yağın serbest biçimde dolaşmasına izin verecek biçimde bağlanır. Her durumda doldurma işlemini her iki uçta da, (ancak aynı anda değil), ünite yerde, doğru montaj pozisyonu temel alınarak durağan haldeyken gerçekleştiriniz. Bu, işlemi hızlandıracaktır ve yağın bir bölmeden bir diğerine gitmesinin ne kadar zaman alacağından bağımsız şekilde doğru miktarda yağ konulmasını sağlayacaktır.
- Dikey olarak montaj edilmiş olan ve ünite ile birlikte tedarik edilen dirsekler ve uzatmalar kullanılarak tamamen doldurulması gereken ünitelerde özellikle dikkat edilmelidir. Bu pozisyonlar için istek üzerine tedarik edilebilen bir genleşme tankı kullanılması tavsiye edilmektedir. Bu tank Planet dişli ünitesinin en üst noktasına konumlanmalı ve herhangi bir yağ genleşmesini toplamak üzere veya ulaşılması zor yerlerdeki ünitelerin doldurulmasını sağlamak için kullanılmalıdır.
- Frenler ve montajlı motor bağlantıları planet dişli ünitesinden ayrı bir bölme oluşturur ve dolayısı ile ayrıca doldurulmalıdır. MODÜLER FRENLER bölümüne bakın. (sayfa 77-78).
- Sürekli çalışma koşullarında çalışan üniteler barındırdıkları fazla miktarda yağdan dolayı aşırı ısınabilirler. Bu gibi durumlarda daha düşük viskozite değerine sahip bir yağ kullanılmalıdır.

IT LUBRIFICAZIONE

Per il buon funzionamento dei riduttori è indispensabile una corretta lubrificazione.

Si consiglia pertanto di verificare le seguenti condizioni in fase di installazione:

- Controllare che, in relazione alla posizione di montaggio specificata in fase d'ordine, il gruppo abbia i tappi di servizio montati correttamente, secondo le indicazioni del capitolo POSIZIONI DI MONTAGGIO (pag. 59-62).
- Quando il gruppo è montato in posizione orizzontale bisogna riempirlo fino alla mezzeria, indipendentemente dalla configurazione lineare o angolare. Controllare visivamente il livello dell'olio svitando il tappo posto sulla stessa zona o in zona limitrofa, vale a dire appena sopra.
- Nel caso di gruppi angolari, la coppia conica è collegata in modo che l'olio possa circolare liberamente; conviene comunque effettuare il riempimento a terra, secondo la corretta posizione di montaggio, introducendo olio da entrambe le parti non contemporaneamente, in modo da snellire l'operazione di riempimento e, nello stesso tempo, avere la certezza di introdurre la quantità di olio necessaria, qualora l'olio impieghi tempo per passare da una camera all'altra.
- Rivolgere particolare attenzione ai gruppi montati in posizione verticale che devono essere completamente riempiti mediante gomiti e prolunghe, di cui è dotato il gruppo. Per queste posizioni è consigliabile l'uso di un vaso di espansione fornito su richiesta, separatamente dal gruppo. Il vaso deve essere posizionato oltre il punto più alto del riduttore ed ha il compito di alloggiare eventuali espansioni di olio o di garantire un rabbocco sicuro per gruppi montati in posizioni inaccessibili.
- I freni e gli attacchi motore assemblati formano una camera separata dal resto del riduttore; bisogna pertanto provvedere al loro riempimento separatamente dal riduttore, vedere capitolo FRENI MODULARI (pag.77-78).
- I gruppi con servizio continuativo sono soggetti a surriscaldamento per la notevole quantità di olio in essi contenuta: in questi casi consigliamo l'uso di oli con una viscosità più bassa.

FR LUBRIFICATION

Une bonne lubrification est indispensable au bon fonctionnement des réducteurs.

Il est par conséquent recommandé de s'assurer des conditions suivantes en cours d'installation:

- En fonction de la position de montage spécifiée lors de la commande, s'assurer que les bouchons de service du groupe sont montés correctement, conformément aux indications du chapitre POSITIONS DE MONTAGE (Page 59-62).
- Lorsque le groupe est monté en position horizontale, il est nécessaire de le remplir de lubrifiant à mi-hauteur, que la configuration soit linéaire ou angulaire Contrôler le niveau de lubrifiant visuellement en dévissant le bouchon se trouvant à mi-hauteur ou à proximité, c'est-à-dire juste au-dessus.
- Dans le cas de groupes angulaires, la couple conique est relié de façon à ceque le lubrifiant puisse circuler librement; il convient cependant d'effectuer le remplissage au sol, selon la position exacte de montage, en introduisant le lubrifiant des deux côtés, non simultanément, de façon à faciliter le remplissage et, dans le même temps, d'être certain que la quantité d'huile nécessaire a bien été introduite dans le cas où le lubtifiant mettrait un certain temps pour passer d'une chambre à l'autre.
- Faire particulièrement attention aux groupes montés en position verticale, lesquels doivent être entièrement remplis au moyen de coudes et rallonges dont le groupe est équipé. En ce qui concerne ces positions, il est conseillé d'utiliser un réservoir d'expansion fourni sur demande. Le réservoir doit être placé au-dessus du point le plus haut du réducteur, sa fonction est de permettre aux éventuelles expansions du lubrifiant d'y pénétrer ou bien de garantir une remise à niveau dans le cas de groupes montés dans des postions inaccessibles.
- Les freins et les accouplements au moteur forment une chambre séparée du reste du réducteur; il est par conséquent nécessaire de les remplir séparément du réducteur (voir chapitre FREINS MODULARIES, page 77-78).
- Les groupes à fonctionnement en service continu sont sujets des surchauffes en raison de la très grande quantité d'huile qu'ils contiennent: dans ce cas, il est conseillé d'employer des lubrifiants à degré de viscosité inférieur.

ES LUBRICACIÓN

Para un buen funcionamiento de los reductores es indispensable una correcta lubricación.

Por tanto, se aconseja verificar las siguientes condiciones durante la instalación:

- Controlar que, según la posición de montaje especificada en la orden, el grupo tenga todos los tapones de servicio correctamente montados, según las indicaciones del capítulo POSICIONES DE MONTAJE (pág.59-62).
- Cuando el grupo esté montado en posición horizontal habrá que llenarlo hasta la línea central, independientemente de la configuración lineal o angular. Controlar visualmente el nivel de aceite aflojando el tapón que está situado en la misma zona o en una zona limítrofe o sea, apenas por encima.
- En el caso de grupos angulares, los en granajes cónicos están conectados de modo tal que el aceite pueda circular libremente: se aconseja introducir el aceite en ambos lados pero no simultáneamente y mientras la unidad esté en el piso, según la correcta posición de montaje. De este modo se hará más rápido el llenado y, al mismo tiempo, se podrá estar seguro que se introdujo la cantidad necesaria de aceite, ya que el aceite emplea un cierto tiempo para pasar de una cámara a otra.
- Prestar una particular atención a los grupos montados en posición vertical pues se tienen que llenar totalmente con tubos acodados y extensiones suministradas junto con el grupo. Para estas posiciones se aconseja utilizar un recipiente de expansión suministrado a pedido, separado del grupo. Dicho recipiente tiene que ubicarse por encima del punto más alto del reductor y cumple la función de absorber las eventuales dilataciones del aceite o de garantizar un llenado seguro en los grupos que se montaron en posiciones inaccesibles.
- Los frenos y las conexiones al motor for man una cámara separada del resto del reductor: por tanto hay que prever su llenado separadamente del reductor, ver el capítulo FRENOS MODULARES (pág.77-78).
- Los grupos con servicio continuo pueden recalentarse debido a la gran cantidad de aceite que contienen: en estos casos se aconseja utilizar aceites con una viscosidad más baja.

DE SCHMIERUNG

Die in den Tabellen den einzelnen Größen zugeordneten Ölmengen sind Richtwerte, die je nach Getriebeausführung und damit je nach Übersetzung, Bremse, Motoranschluß und Ausgangswelle variieren.

Beim Betrieb sollte die Gehäusetemperatur von außen 80°C nicht überschreiten.

Sollten höhere Temperaturen auftreten, wenden Sie sich bitte an den Technische Abteilung von NRW.

ÖLWECHSEL

- Der erste Ölwechsel sollte nach 100 Betriebstunden vorgenommen werden.
- Weitere Ölwechsel sollten nach 2000 Betriebsstunden bzw. mindestens einmal jährlich erfolgen.
- Das Öl bitte bei noch warmen Getriebe ablassen. Auf diese Weise werden Ablagerungen vermieden.
- Ölstopfen reinigen.
- Vor dem Auffüllen mit neuem Öl, das Getriebe innen mit einem vom Schmierstoffhersteller empfohlenen Reinigungsmittel auswaschen.
- Getriebe regelmäßig auf Dichtigkeit prüfen sowie sicherstellen, daß bei Stillstand das Öl bis zum vorgesehenen Ölstand reicht. Sofern erforderlich, ist Öl nachzufüllen; der Öltyp muß mit dem im Getriebe bereits enthaltenen Oel unbedingt übereinstimmen.

- **Achtung:**
  Eine Nachfüllmenge, die 10% der Gesamtmenge übersteigt, könnte auf eine Undichtigkeit des Getriebes hinweisen.

ALTÖLENTSORGUNG

Bei den Vorgängen zur Altölentsorgung ist es vorgeschrieben, alle notwendigen Sicherheitsmaßnahmen zu treffen und die Arbeit kunstgerecht durchzuführen, damit Boden, Luft und Wasser nicht verschmutzt und die Umwelt und die Gesundheit des Menschen geschützt werden.

Nicht mit anderen Stoffen verunreinigtes Altöl muss unter Berücksichtigung der örtlichen Umweltschutzgesetze und-vorschriften gesammelt und der speziellen zugelassenen Entsorgungsstelle übergeben werden.

EN LUBRICATION

Please note that the oil quantities shown in the catalogue are approximate and may vary depending on the drive configuration: ratio, brake, motor connections and output adapters.

During normal operation, the temperature of the outer casing should not exceed 80°C.

If the temperature exceeds 80°C, contact the NRW Technical Department.

OIL CHANGES

- The first oil change should be done after 100 hours of duty.
- Subsequent oil changes should take place after 2000 hours or at least once a year.
- To avoid sludge deposits, change the oil while the drive is still hot.
- Clean all plugs.
- Before adding the new oil, the unit should be flushed with a liquid detergent recommended by the lubricant supplier.
- Periodically check for oil leaks and the oil level while the unit is idling.
  If needed, top up using the same type of oil.

- **Attention:**
  If the quantity of oil used to top up is greater than 10% of the oil capacity, then check again for leaks.

DISPOSING OF EXHAUSTED OIL

When disposing of exhausted oils, it is mandatory to adopt all precautions and professional expertise necessary for carrying out the job in a workmanlike manner so as not to pollute the soil, air and water and treating the environment and human health with care.

Exhausted oil not contaminated by other substances must be collected and delivered to a special authorised centre, in full compliance with local environmental protection laws and regulations and laws in force.

TR YAĞLAMA

Lütfen katalogta gösterilmiş olan yağ miktarlarının yaklaşık değerler olduğunu ve Planet dişli ünitesinin konfigürasyonuna (tahviller, fren ve motor bağlantıları ve çıkış adaptörlerine) bağlı olarak değişiklik gösterebileceğini unutmayınız.

Normal çalışma sırasında dış gövdenin sıcaklığı 80°C'nin üzerine çıkmamalıdır.

Eğer sıcaklık 80°C'nin üzerine çıkarsa, NRW Teknik Departmanı ile iletişime geçiniz.

YAĞ DEĞİŞİMİ

- İlk yağ değişimi 100 saatlik çalışmadan sonra gerçekleştirilmelidir.
- Daha sonraki yağ değişimleri 2000 saatlik çalışmadan sonra veya senede bir kez yapılmalıdır.
- Atık birikmesini önlemek için yağı Planet dişli ünitesi hala sıcak iken değiştiriniz.
- Bütün tapaları temizleyiniz.
- Yeni yağ eklemeden önce ünite yağ tedarikçisi tarafından tavsiye edilen sıvı bir deterjan ile yıkanmalıdır.
- Periyodik olarak ünite rölantide çalışırken yağ sızıntıları ve yağ seviyesini kontrol ediniz.
  Eğer gerekli görülürse aynı tipte yağ kullanarak tamamen doldurunuz.

- **Dikkat:**
  Kullanılan yağ miktarı yağ kapasitesinin %10'un dan fazla ise sızıntı olup olmadığını tekrar kontrol ediniz.

KULLANILMIŞ YAĞIN BERTARAFI

Kullanılmış olan yağları elden çıkartırken, toprağın, havanın ve suyun kirletilmemesi, çevreye ve insan sağlığına özenli davranılabilmesi için işi doğru şekilde gerçekleştirilmesi, gerekli önlemlere ve profesyonel uzmanlığa uygun davranılması zorunludur.

Başka maddeler ile kirlenmemiş olan kullanılmış yağlar, yürürlükte olan yerel çevre koruma kanunlarına, yasa ve düzenlemelere tam olarak uyularak toplanmalı ve özel yetkili bir merkeze teslim edilmelidir.

IT LUBRIFICAZIONE

I quantitativi di olio indicati nelle tabelle di catalogo, riportate per ogni grandezza, sono puramente indicativi e sono soggetti a variazioni in funzione della configurazione del riduttore: tipo di rapporto, freno, attacco motore e supporto in uscita.

Durante il funzionamento la temperatura delle superfici esterne non deve superare gli 80°C.

Se si verificano temperature superiori contattare il Servizio Tecnico NRW.

CAMBIO OLIO

- Effettuare il primo cambio olio dopo 100 ore di funzionamento.
- I cambi successivi devono avvenire dopo 2000 ore o almeno una volta all'anno.
- Lo svuotamento del riduttore va effettua to con l'olio ancora caldo, per evitare il deposito di morchie.
- Pulire i tappi
- Prima del riempimento con nuovo olio effettuare un lavaggio interno del gruppo con liquido detergente consigliato dal fornitore di lubrificante.
- Controllare periodicamente che non visiano perdite d'olio e che, a gruppo fermo, l'olio raggiunga il livello previsto. Se necessario, effettuare un rabbocco con lo stesso tipo di olio presente nel riduttore.

• Attenzione:
Un rabbocco superiore al 10% del quantitativo totale può essere indice di perdita nel riduttore.

SMALTIMENTO OLIO ESAUSTO

Durante le fasi di smaltimento degli oli esausti è obbligatorio utilizzare tutte le cautele e le professionalità necessaire per eseguire il lavoro a regola d'arte, evitando di inquinare suolo, aria, acqua e rispettando l'ambiente e la salute umana.

L'olio esausto, non inquinato da altre sostanze, deve essere raccolto e conferito in apposito centro autorizzato, nel pieno rispetto delle locali legislazioni e normative di tutela ambientale e delle leggi vigenti.

FR LUBRIFICATION

Les quantités d'huile indiquées dans les tableaux du catalogue pour chaque dimensionnement sont purement indicatives et peuvent varier en fonction de la configuration du réducteur: type de rapport, frein, accouplement au moteur et support en sortie.

Pendant le fonctionnement du réducteur, la température de ses surfaces extérieures ne doit pas dépasser 80°C.

En présence de températures supérieures, prendre contact avec le Service Technico NRW.

VIDANGE D'HUILE

- Faire la première vidange après 100 heures de functionnement.
- Exécuter les vidanges suivantes toutes les 2000 heures ou bien au moins une fois pas an.
- La vidange du réducteur doit se faire lorsque l'huile est encore chaude de façon à éviter les dépôts de cambouis.
- Nettoyer les bouchons.
- Laver l'intérieur du réducteur avec un détergent conseillé par le fournisseur du lubrifiant avant d'effectuer le remplissage.
- Contrôler périodiquement qu'il n'y ait pas de pertes d'huile et que, lorsque le groupe est arrêté, l'huile atteigne bien le niveau prévu. Si nécessaire, rétablir ce niveau avec de l'huile du même type que celle se trouvant dans le rêducteur.

• Attention:
Une remise à niveau avec plus de 10% de la quantité totale de l'huile contenue dans le réducteur peut être un signe de fuite dans ce dernier.

ÉLIMINATION DES HUILES USÉES

Durant les phases d'élimination des huiles usées, il est impératif de prendre toutes les précautions et les mesures techniques pour opérer dans les règles de l'art et prévenir ainsi la pollution des sols, de l'air et des eaux, pour respecter l'environnement et la santé des personnes.

Les huiles usées, non polluées par d'autres substances, doivent être récupérées et remises à un centre de collecte agréé, dans le respect des dispositions locales et des autres normes de protection de l'environnement, en conformité aux lois en vigueur.

ES LUBRICACIÓN

Las cantidades de aceite indicadas en las tablas del catálogo para cada dimensión, son sólo indicativas y pueden variar en función de la configuración del reductor: tipo de relación, freno, conexion al motor y soporte de salida.

Durante el funcionamiento la temperatura de las superficies externas no tiene que superar los 80°C.

Si las temperaturas fueran superiores será necesario ponerse en contacto con el Servicio Técnico NRW.

CAMBIO DE ACEITE

- Efectuar el primer cambio de aceite después de las 100 horas de funcionamiento.
- Los cambios sucesivos se deberán realizar después de las 2000 horas o por lo menos una vez al año.
- El vaciado del reductor se tiene que realizar estando todavía el acetie caliente, para evitar el depósito de sedimentos.
- Limpiar los tapones.
- Antes de efectuar el llenado con el aceite nuevo hay que lavar el interior del grupo con el detergente que aconseja el provedor del lubricante.
- Controlar periódicamente que no haya pérdidas de aceite y que, estando el grupo parado, el aceite alcance el nivel previsto. Si fuese necesario, efectuar un llenado con el mismo tipo de aceite del reductor.

• Atención:
Si el llenado supera el 10% de la cantidad total puede ser que haya una pérdida en el reductor.

ELIMINACIÓN DE ACEITE USADO

Durante las fases de eliminación de los aceites usados se requiere ser extremadamente cauteloso y profesional para efectuar correctamente el trabajo, evitando contaminar suelo, aire, agua y respetando el medio ambiente y la salud humana.

El aceite usado, no contaminado con otras sustancias, debe recolectarse y enviarse al centro autorizado correspondiente, respetando las legislaciones y normativas locales de protección del ambiente y leyes vigentes.

DE SCHMIERUNG

NRW empfiehlt Getriebeöltypen mit EP- Zusatz und Anti-Schaum - Eingenschaft. Ist das Getriebe starken Temperaturschwankungen ausgesetzt, wird die Verwendung von synthetischen Öltypen mit EP - Zusatz empfohlen. (Mobilgear SHC XMP 220 SYNTHETIKOEL PAO, EP, ISO VG 220 kompatibel mit Mineraloelen).

Dazu sind in Tabelle 4 einige im Handel erhältliche Öltypen aufgeführt, deren Ei genschaften unterschiedlichen Raumtemperaturen angepaßt sind.

EN LUBRICATION

NRW recommends using EP additive oil with anti foaming properties. If the drive is subjected to high temperatures, use EP additive synthetic oil (such as Mobilgear SHC XMP 220 PAO Synthetic Oil, EP, ISO VG 220 compatible with mineral oils).

With this in mind, Table 4 shows some types of commercially available oils that meet the lubrication requirements in relation to different ambient temperatures.

TR YAĞLAMA

NRW, köpüklenmeyen özelliklere sahip EP katkılı yağ kullanılmasını tavsiye etmektedir. Eğer Planet dişli ünitesi yüksek sıcaklıklara maruz kalıyorsa, EP katkılı sentetik yağlar kullanın (Mobil gear SHC XMP 220 PAO Sentetik Yağ, EP, ISO VG 220 mineral yağlar ile uyumlu).

Bu düşünce ile Tablo 4 farklı ortam sıcaklıklarına dair yağlama gereksinimlerini karşılayan ticari olarak satışı olan bazı yağ tiplerini göstermektedir.

HINWEIS: Saemtliche Getriebe Planetary Drives werden ohne Oelfullung ausgeliefert.	Generally, Planetary Drives are supplied without lubricant.	Genel olarak, Planet dişli üniteleri yağsız olarak tedarik edilmektedir.

Auswahl des Schmiermittels in Bezug auf die Umgebungstemperatur.

Lubricants are selected in relation to ambient temperature.

Kullanılacak yağlar ortam sıcaklığına göre seçilmektedir.

Tabelle 4 / Table 4 / Tablo 4

	SCHMIERMITTE / LUBRICANT / YAĞLAMA			
	Umgebungstemperatur / Ambient temperature / Ortam sıcaklığı			
	-20° C / +5° C - IV 95	+5°C / +40° C - IV 95	+40° C / +55° C - IV 95	-30° C / +65° C - IV 165
ISO 3448	VG 100	VG 150	VG 320	VG 150-200
MOBIL	Mineraloel Mineral oil Mineral yağ	**Mobilgear XMP 150**	**MobilgearXMP320**	
	Synthetikoel Synthetic oil (PAO, EP, ISO VG 220) Sentetik yağ	**Mobilgear SHC XMP 220**		
AGIP	Blasia 100	Blasia 150	Blasia 320	Blasia S 220
ARAL	Degol BG 100	Degol BG 150	Degol BG 320	Degol GS 220
BP MACH	GR XP 100	GR XP 150	GR XP 320	Enersyn HTX 220
CASTROL	Alpha SP 100	Alpha SP 150	Alpha 320	Alpha SN 150
CHEVRON	non leaded gear compound 100	non leaded gear compound 150	non leaded gear compound 320	
ESSO	Spartan EP 100	Spartan EP 150	Spartan EP 320	
Q8	Goya 100	Goya 150	Goya 320	El Greco 228
IP	Mellana 100	Mellana 150	Mellana 320	Telesia Oil 150
SHELL	Omala oil 100	Omala oil 150	Omala oil 320	Tivela Oil SA
TOTAL	Carter EP 100 N	Carter EP 150	Carter EP 320 N	
KLUEBER	Gem 1-100	Gem 1-150	Gem 1-320	Synteso D 220 EP
ELF	Reductelf SP 100	Reductelf SP 150	Reductelf SP 320	Elf ORITIS 125 MS Elf Syntherma P 30
FINA	Giran 100	Giran 150	Giran 320	Giran 220

IT LUBRIFICAZIONE

NRW consiglia l'uso di olii per ingranaggi con additivi EP e caratteristiche antischiuma. Quando il riduttore è sottoposto ad elevate temperature, si consiglia l'uso di olii a base sintetica con additivi EP (tipo Mobilgear SHC XMP 220 Olio sintetico PAO, EP, ISO VG 220 compatibile con olio minerali).

A tale riguardo la Tabella 4 riporta alcuni tipi di olii commerciali che rispondono alle caratteristiche richieste in funzione della temperatura ambiente.

FR LUBRIFICATION

NRW conseille l'utilisation des huiles pour engrenages avec additifs EP et anti-mousse. Lorsque le réducteur est soumis à de hautes températures, il est conseillé d'utiliser des huiles de synthèse avec additifs EP (type Mobilgear SHC XMP 220 Huile de synthèse PAO, EP, ISO VG 220 compatible avec les huiles minérales).

Le tableau 4 indique certains types d'huiles vendues dans le commerce quicorrespondent aux caractéristiques requises, en fonction de la température ambiante.

ES LUBRICACIÓN

NRW aconseja el uso de aceites para engranajes con aditivos EP con características antiespuma. Cuando el reductor está sometido a elevadas temperaturas, se aconseja el uso de aceites de base sintética con aditivos EP (tipo Mobilgear SHC XMP 220 Aceite sintético PAO, EP, ISO VG 220 compatible con aceites minerales).

Para tal fin en la Tabla 4 se indican algunos tipos de aceites comerciales que cumplen con las características solicitadas en función de la temperatura ambiente.

In generale, i riduttori Planetary Drives vengono forniti privi di lubrificante.	Les réducteurs Planetary Drives sont généralement vendus sans lubrifiant.	En general, los reductores Planetary Drives se suministran sin el lubricante.

Scelta del lubrificante in funzione della temperatura ambiente.

Choix du lubrifiant en fonction de la température ambiante.

Elección del lubricante en función de la temperatura ambiente.

Tabella 4 / Tableau 4 / Tabla 4

	LUBRIFICANTE / LUBRIFIANT / LUBRICANTE			
	Temperatura ambiente / Température ambiante / Temperatura ambiente			
	-20° C / +5° C - IV 95	+5° C / +40° C - IV 95	+40° C / +55° C - IV 95	-30° C / +65° C - IV 165
ISO 3448	VG 100	VG 150	VG 320	VG 150-200
MOBIL	Olio Minerale Huile Minerale Aceite Mineral	**Mobilgear XMP 150**	**Mobilgear XMP 320**	
	Olio Sintetico (PAO, EP, ISO VG 220) Huile Synthétique Aceite Sintético	**Mobilgear SHC XMP 220**		
AGIP	Blasia 100	Blasia 150	Blasia 320	Blasia S 220
ARAL	Degol BG 100	Degol BG 150	Degol BG 320	Degol GS 220
BP MACH	GR XP 100	GR XP 150	GR XP 320	Enersyn HTX 220
CASTROL	Alpha SP 100	Alpha SP 150	Alpha 320	Alpha SN 150
CHEVRON	non leaded gear compound 100	non leaded gear compound 150	non leaded gear compound 320	
ESSO	Spartan EP 100	Spartan EP 150	Spartan EP 320	
Q8	Goya 100	Goya 150	Goya 320	El Greco 228
IP	Mellana 100	Mellana 150	Mellana 320	Telesia Oil 150
SHELL	Omala oil 100	Omala oil 150	Omala oil 320	Tivela Oil SA
TOTAL	Carter EP 100 N	Carter EP 150	Carter EP 320 N	
KLUEBER	Gem 1-100	Gem 1-150	Gem 1-320	Synteso D 220 EP
ELF	Reductelf SP 100	Reductelf SP 150	Reductelf SP 320	Elf ORITIS 125 MS Elf Syntherma P 30
FINA	Giran 100	Giran 150	Giran 320	Giran 220

DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

M	B5	V1 V3
PL 1001	0.50	0.90
PL 1002	0.70	1.20
PL 1003	1.00	1.70
PL 1004	1.30	2.20
PL 1601	0.50	1.00
PL 1602	0.70	1.30
PL 1603	1.00	1.80
PL 1604	1.30	2.20
PL 2501	1.10	1.90
PL 2502	1.20	2.30
PL 2503	1.60	2.80
PL 2504	1.80	3.20
PL 5001	1.10	1.90
PL 5002	1.40	2.30
PL 5003	1.60	2.70
PL 5004	1.80	3.10
PL 7001	-	-
PL 7002	-	-
PL 7003	-	-
PL 7004	-	-
PL 10001	2.90	5.30
PL 10002	3.20	5.90
PL 10003	3.50	6.50
PL 10004	3.70	6.90
PL 16001	3.10	5.80
PL 16002	3.40	6.30
PL 16003	3.80	6.80
PL 16004	4.00	7.30
PL 18002	4.00	7.30
PL 18003	4.40	8.20
PL 18004	4.80	8.60
PL 25001	7.60	14.20
PL 25002	6.50	12.20
PL 25003	7.00	12.20
PL 25004	7.20	13.40
PL 30002	7.50	13.90
PL 30003	7.70	14.40
PL 30004	8.00	14.90
PL 35001	7.50	13.70
PL 35002	7.30	13.30
PL 35003	7.60	14.00
PL 35004	7.90	14.50
PL 50001	10.30	19.10
PL 50002	10.10	18.80
PL 50003	11.50	18.70
PL 50004	10.80	20.10
PL 65001	-	-
PL 65002	14.00	26.10
PL 65003	13.00	23.90
PL 65004	13.30	24.60
PL 90001	8.7	17.4
PL 90002	10.0	20.0
PL 90003	11.2	22.4
PL 90004	11.6	23.2

P	B5	V1 V3
PL 1001	0.60	1.00
PL 1002	0.80	1.50
PL 1003	1.00	1.90
PL 1004	1.20	2.30
PL 1601	0.60	1.10
PL 1602	0.80	1.50
PL 1603	1.10	1.90
PL 1604	1.40	2.40
PL 2501	1.30	2.30
PL 2502	1.40	2.70
PL 2503	1.70	3.10
PL 2504	1.90	3.60
PL 5001	1.20	2.10
PL 5002	1.50	2.60
PL 5003	1.70	3.00
PL 5004	1.90	3.50
PL 7001	2.00	3.50
PL 7002	2.40	4.40
PL 7003	2.70	4.80
PL 7004	2.90	5.20
PL 10001	-	-
PL 10002	-	-
PL 10003	-	-
PL 10004	-	-
PL 16001	3.60	6.70
PL 16002	3.90	7.30
PL 16003	4.20	7.90
PL 16004	4.40	8.30
PL 18002	4.60	8.50
PL 18003	5.00	9.30
PL 18004	5.30	9.70

F	B5	V1 V3
PL 1001	0.50	0.90
PL 1002	0.70	1.20
PL 1003	1.00	1.70
PL 1004	1.30	2.20
PL 1601	0.50	1.00
PL 1602	0.70	1.30
PL 1603	1.00	1.80
PL 1604	1.30	2.20
PL 2501	0.90	1.50
PL 2502	1.00	1.90
PL 2503	1.20	2.30
PL 2504	1.40	2.70
PL 5001	0.80	1.40
PL 5002	1.10	1.90
PL 5003	1.30	2.30
PL 5004	1.60	2.70
PL 7001	1.70	3.00
PL 7002	2.10	3.80
PL 7003	2.40	4.30
PL 7004	2.60	4.70
PL 10001	1.70	3.10
PL 10002	2.10	3.90
PL 10003	2.40	4.40
PL 10004	2.60	4.80
PL 16001	2.10	3.80
PL 16002	2.60	4.40
PL 16003	2.80	5.00
PL 16004	3.00	5.40
PL 18002	3.10	5.60
PL 18003	3.60	6.40
PL 18004	3.90	6.80
PL 25001	5.90	10.70
PL 25002	4.50	8.20
PL 25003	5.40	9.70
PL 25004	5.60	10.10
PL 30002	5.60	10.40
PL 30003	6.00	11.10
PL 30004	6.40	11.60
PL 35001	5.40	9.90
PL 35002	5.20	9.60
PL 35003	5.60	10.30
PL 35004	5.90	10.80
PL 50001	8.30	15.50
PL 50002	8.20	15.40
PL 50003	8.60	16.10
PL 50004	8.90	16.70
PL 65001	-	-
PL 65002	12.40	23.50
PL 65003	11.70	22.00
PL 65004	11.80	22.40
PL 90001	8.7	17.4
PL 90002	10.0	20.0
PL 90003	11.2	22.4
PL 90004	11.6	23.2

FS	B5	V1 V3
PL 1001	0.50	0.90
PL 1002	0.70	1.20
PL 1003	1.00	1.70
PL 1004	1.30	2.20
PL 1601	0.50	1.00
PL 1602	0.70	1.30
PL 1603	1.00	1.80
PL 1604	1.30	2.20
PL 2501	1.10	1.90
PL 2502	1.30	2.30
PL 2503	1.60	2.80
PL 2504	1.80	3.20
PL 5001	1.10	1.90
PL 5002	1.40	2.30
PL 5003	1.60	2.70
PL 5004	1.80	3.10
PL 7001	2.00	3.50
PL 7002	2.40	4.40
PL 7003	2.70	4.80
PL 7004	2.90	5.20
PL 10001	2.90	5.30
PL 10002	3.20	5.90
PL 10003	3.50	6.50
PL 10004	3.70	6.90
PL 16001	3.10	5.80
PL 16002	3.40	6.30
PL 16003	3.80	6.80
PL 16004	4.00	7.20
PL 18002	4.00	7.30
PL 18003	4.40	8.20
PL 18004	4.80	8.60
PL 25001	5.70	10.50
PL 25002	4.60	8.40
PL 25003	5.00	9.20
PL 25004	5.20	9.60
PL 30002	5.20	9.80
PL 30003	5.60	10.60
PL 30004	5.80	11.10
PL 35001	5.10	9.20
PL 35002	5.00	9.00
PL 35003	5.60	10.10
PL 35004	5.70	10.30
PL 50001	8.30	15.50
PL 50002	8.20	15.40
PL 50003	8.60	16.10
PL 50004	8.90	16.70
PL 65001	-	-
PL 65002	12.40	23.50
PL 65003	11.70	22.00
PL 65004	11.80	22.40
PL 90001	8.7	17.4
PL 90002	10.0	20.0
PL 90003	11.2	22.4
PL 90004	11.6	23.2

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

M	B5	V1 V3
PL 140001	15.0	-
PL 140002	16.4	32.8
PL 140003	17.6	35.2
PL 140004	18.1	36.2
PL 140005	18.4	36.8
PL 180001	21.0	-
PL 180002	23.4	46.8
PL 180003	24.8	49.6
PL 180004	25.2	50.4
PL 180005	25.5	51.0
PL 220001	21.0	-
PL 220002	23.4	46.8
PL 220003	24.8	49.6
PL 220004	25.2	50.4
PL 220005	25.5	51.0
PL 340001	42.5	-
PL 340002	46.5	93.0
PL 340003	47.9	95.8
PL 340004	48.7	97.4
PL 340005	49.1	98.2
PL 400001	42.5	-
PL 400002	46.5	93.0
PL 400003	47.9	95.8
PL 400004	48.7	97.4
PL 400005	49.1	98.2
PL 550001	50.0	-
PL 550002	60.0	120.0
PL 550003	62.5	125.0
PL 550004	63.5	127.0
PL 550005	64.0	128.0
PL 660001	50.0	-
PL 660002	60.0	120.0
PL 660003	62.5	125.0
PL 660004	63.5	127.0
PL 660005	64.0	128.0

F	B5	V1 V3
PL 140001	16.4	-
PL 140002	16.4	32.8
PL 140003	17.6	35.2
PL 140004	18.1	36.2
PL 140005	18.4	36.8
PL 180001	21.0	-
PL 180002	23.4	46.8
PL 180003	24.8	49.6
PL 180004	25.2	50.4
PL 180005	25.5	51.0
PL 220001	21.0	-
PL 220002	23.4	46.8
PL 220003	24.8	49.6
PL 220004	25.2	50.4
PL 220005	25.5	51.0
PL 340001	42.5	-
PL 340002	46.5	93.0
PL 340003	47.9	95.8
PL 340004	48.7	97.4
PL 340005	49.1	98.2
PL 400001	42.5	-
PL 400002	46.5	93.0
PL 400003	47.9	95.8
PL 400004	48.7	97.4
PL 400005	49.1	98.2
PL 550001	50.0	-
PL 550002	60.0	120.0
PL 550003	62.5	125.0
PL 550004	63.5	127.0
PL 550005	64.0	128.0
PL 660001	60.0	-
PL 660002	60.0	120.0
PL 660003	62.5	125.0
PL 660004	63.5	127.0
PL 660005	64.0	128.0

FS	B5	V1 V3
PL 140001	16.4	-
PL 140002	16.4	32.8
PL 140003	17.6	35.2
PL 140004	18.1	36.2
PL 140005	18.4	36.8
PL 180001	21.0	-
PL 180002	23.4	46.8
PL 180003	24.8	49.6
PL 180004	25.2	50.4
PL 180005	25.5	51.0
PL 220001	21.0	-
PL 220002	23.4	46.8
PL 220003	24.8	49.6
PL 220004	25.2	50.4
PL 220005	25.5	51.0
PL 340001	42.5	-
PL 340002	46.5	93.0
PL 340003	47.9	95.8
PL 340004	48.7	97.4
PL 340005	49.1	98.2
PL 400001	42.5	-
PL 400002	46.5	93.0
PL 400003	47.9	95.8
PL 400004	48.7	97.4
PL 400005	49.1	98.2
PL 550001	50.0	-
PL 550002	60.0	120.0
PL 550003	62.5	125.0
PL 550004	63.5	127.0
PL 550005	64.0	128.0
PL 660001	50.0	-
PL 660002	60.0	120.0
PL 660003	62.5	125.0
PL 660004	63.5	127.0
PL 660005	64.0	128.0

Eingabetyp / Input Type / Giriş Tipi Tipo di ingresso / Type d'entrée / Tipo de entrada	Horizontale / Horizontal / Yatay Orizzontale / Horizontale / Horizontal (lt)	Vertikale / Vertical / Dikey Verticale / Verticale / Vertical (lt)
ELC 28	0.2	0.3
ELC 42	0.2	0.3
EML 42	0.2	0.4
EML 1" 3/8 Z-6	0.2	0.4
EM 65	0.5	1.0
EM 1" 3/8 Z-6	0.5	1.0
EP 65	0.7	1.4
ET 90	1.9	3.8

⚠

- Wenn die Eingangswelle verwendet wird, muss zusätzliches Öl hinzugefügt werden
- If the input shaft is used, additional oil must be added
- Eğer giriş şaftı kullanılıyorsa ilave yağ eklenmesi gerekmektedir.
- Se si utilizza l'albero di ingresso, olio supplementare deve essere aggiunto
- Si l'arbre d'entrée est utilisé, de l'huile supplémentaire doit être ajoutée
- Si se utiliza el eje de entrada, se debe añadir aceite adicional

DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

CPC	B3	B4	B6 / B7	V2 / V4
PL 1001	1.30	0.70	1.00	1.80
PL 1002	1.50	0.80	1.20	2.10
PL 1003	1.80	1.10	1.50	2.50
PL 1004	2.10	1.30	1.70	3.00
PL 1601	1.40	0.70	1.00	1.80
PL 1602	1.50	0.90	1.20	2.10
PL 1603	1.80	1.20	1.50	2.60
PL 1604	2.10	1.40	1.70	3.10
PL 2501	3.60	1.60	2.60	4.90
PL 2502	3.90	1.90	2.90	5.30
PL 2503	4.10	2.10	3.10	5.80
PL 2504	4.30	2.40	3.40	6.20
PL 5001	3.50	1.50	2.50	4.70
PL 5002	3.80	1.80	2.80	5.20
PL 5003	4.10	2.10	3.10	5.70
PL 5004	4.30	2.30	3.30	6.10
PL 7001	7.40	2.80	5.20	9.70
PL 7002	7.80	3.30	5.70	10.60
PL 7003	8.00	3.40	5.80	10.80
PL 7004	8.30	3.70	6.10	11.40
PL 10001	9.50	3.70	6.70	12.70
PL 10002	9.90	4.10	7.10	13.30
PL 10003	10.20	4.40	7.40	13.90
PL 10004	10.40	4.60	7.60	14.30
PL 16001	9.70	3.90	6.80	12.90
PL 16002	10.00	4.20	7.10	13.60
PL 16003	10.30	4.50	7.40	14.10
PL 16004	10.60	4.80	7.70	14.50
PL 18002	10.80	4.70	7.90	14.70
PL 18003	11.20	5.20	8.40	15.50
PL 18004	11.50	5.50	8.60	16.00
PL 25001	7.60	7.60	7.60	14.20
PL 25002	6.50	6.50	6.50	12.20
PL 25003	7.00	7.00	7.00	13.00
PL 25004	7.20	7.20	7.20	13.40
PL 30002	7.50	7.50	7.50	13.90
PL 30003	7.70	7.70	7.70	14.40
PL 30004	8.00	8.00	8.00	14.90
PL 35001	7.50	7.50	7.50	13.70
PL 35002	7.30	7.30	7.30	13.30
PL 35003	7.60	7.60	7.60	14.00
PL 35004	7.90	7.90	7.90	14.50
PL 50001	10.30	10.30	10.30	19.10
PL 50002	10.10	10.10	10.10	18.80
PL 50003	10.10	10.10	10.10	18.70
PL 50004	10.80	10.80	10.80	20.10
PL 65001	-	-	-	-
PL 65002	14.00	14.00	14.00	26.10
PL 65003	13.00	13.00	13.00	23.90
PL 65004	13.30	13.30	13.30	24.60
PL 90001	-	-	-	-
PL 90002	-	-	-	-
PL 90003	-	-	-	-
PL 90004	-	-	-	-

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

M	B51	B55	B53	B54	V15	V16	V17	V18	V35	V36	V37	V38
PLB 1002	1.90	1.20	1.40	1.20	1.60	1.60	1.60	1.60	1.90	1.90	1.90	1.90
PLB 1003	2.20	1.40	1.60	1.40	1.90	1.90	1.90	1.90	2.20	2.20	2.20	2.20
PLB 1004	2.70	1.70	1.90	1.70	2.40	2.40	2.40	2.40	2.70	2.70	2.70	2.70
PLB 1602	2.00	1.20	1.40	1.20	1.70	1.70	1.70	1.70	2.00	2.00	2.00	2.00
PLB 1603	2.30	1.40	1.60	1.40	2.00	2.00	2.00	2.00	2.30	2.30	2.30	2.30
PLB 1604	2.80	1.70	1.90	1.70	2.50	2.50	2.50	2.50	2.80	2.80	2.80	2.80
PLB 2502	2.90	1.80	2.00	1.80	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 2503	3.30	1.90	2.10	1.90	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 2504	3.80	2.30	2.50	2.30	3.50	3.50	3.50	3.50	3.80	3.80	3.80	3.80
PLB 5002	5.20	2.90	3.30	2.90	3.70	3.70	3.70	3.70	5.20	5.20	5.20	5.20
PLB 5003	3.30	2.10	2.30	2.10	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 5004	3.70	2.30	2.50	2.30	3.40	3.40	3.40	3.40	3.70	3.70	3.70	3.70
PLB 7002	-	-	-	-	-	-	-	-	-	-	-	-
PLB 7003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 7004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 10002	8.60	4.70	5.10	4.70	7.10	7.10	7.10	7.10	8.60	8.60	8.60	8.60
PLB 10003	9.20	5.00	5.40	5.00	7.70	7.70	7.70	7.70	9.20	9.20	9.20	9.20
PLB 10004	7.50	4.20	4.40	4.20	7.20	7.20	7.20	7.20	7.50	7.50	7.50	7.50
PLB 16002	9.10	4.90	5.30	4.90	7.60	7.60	7.60	7.60	9.10	9.10	9.10	9.10
PLB 16003	9.60	5.20	5.60	5.20	8.10	8.10	8.10	8.10	9.60	9.60	9.60	9.60
PLB 16004	7.80	4.50	4.70	4.50	7.50	7.50	7.50	7.50	7.80	7.80	7.80	7.80
PLB 18002	15.60	8.60	9.00	8.60	13.30	13.30	13.30	13.30	15.60	15.60	15.60	15.60
PLB 18003	10.60	5.80	6.20	5.80	9.10	9.10	9.10	9.10	10.60	10.60	10.60	10.60
PLB 18004	11.50	6.20	6.60	6.20	10.00	10.00	10.00	10.00	11.50	11.50	11.50	11.50
PLB 25002	18.50	10.00	10.20	10.00	15.60	15.60	15.60	15.60	18.50	18.50	18.50	18.50
PLB 25003	15.50	8.30	8.70	8.30	14.00	14.00	14.00	14.00	15.50	15.50	15.50	15.50
PLB 25004	15.50	8.80	9.20	8.80	14.00	14.00	14.00	14.00	15.50	15.50	15.50	15.50
PLB 30003	23.70	12.60	12.80	12.60	21.40	21.40	21.40	21.40	23.70	23.70	23.70	23.70
PLB 30004	17.70	9.50	9.90	9.50	16.20	16.20	16.20	16.20	17.70	17.70	17.70	17.70
PLB 35002	17.70	9.70	9.90	9.70	14.80	14.80	14.80	14.80	17.70	17.70	17.70	17.70
PLB 35003	23.40	12.70	13.10	12.70	21.10	21.10	21.10	21.10	23.40	23.40	23.40	23.40
PLB 35004	17.30	9.40	9.80	9.40	15.80	15.80	15.80	15.80	17.30	17.30	17.30	17.30
PLB 50002	28.30	15.40	15.60	15.40	25.90	25.90	25.90	25.90	28.30	28.30	28.30	28.30
PLB 50003	22.10	11.90	12.30	11.90	20.60	20.60	20.60	20.60	22.10	22.10	22.10	22.10
PLB 50004	22.00	13.30	13.70	13.30	20.50	20.50	20.50	20.50	22.00	22.00	22.00	22.00
PLB 65003	30.20	16.10	16.30	16.10	27.30	27.30	27.30	27.30	30.20	30.20	30.20	30.20
PLB 65004	27.20	14.80	15.20	14.80	25.70	25.70	25.70	25.70	27.20	27.20	27.20	27.20
PLB 90003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 90004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 660005	-	-	-	-	-	-	-	-	-	-	-	-

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

P	B51	B55	B53	B54	V15	V16	V17	V18	V35	V36	V37	V38
PLB 1002	2.00	1.30	1.50	1.30	1.70	1.70	1.70	1.70	2.00	2.00	2.00	2.00
PLB 1003	2.50	1.50	1.70	1.50	2.20	2.20	2.20	2.20	2.50	2.50	2.50	2.50
PLB 1004	2.90	1.70	1.90	1.70	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 1602	2.10	1.30	1.50	1.30	1.80	1.80	1.80	1.80	2.10	2.10	2.10	2.10
PLB 1603	2.50	1.50	1.70	1.50	2.20	2.20	2.20	2.20	2.50	2.50	2.50	2.50
PLB 1604	2.90	1.80	2.00	1.80	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 2502	3.30	2.00	2.20	2.00	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 2503	3.70	2.10	2.30	2.10	3.40	3.40	3.40	3.40	3.70	3.70	3.70	3.70
PLB 2504	4.10	2.40	2.60	2.40	3.80	3.80	3.80	3.80	4.10	4.10	4.10	4.10
PLB 5002	5.40	3.00	3.40	3.00	3.90	3.90	3.90	3.90	5.40	5.40	5.40	5.40
PLB 5003	3.60	2.20	2.40	2.20	3.30	3.30	3.30	3.30	3.60	3.60	3.60	3.60
PLB 5004	4.00	2.40	2.60	2.40	3.70	3.70	3.70	3.70	4.00	4.00	4.00	4.00
PLB 7002	6.80	3.80	4.20	3.80	5.30	5.30	5.30	5.30	6.80	6.80	6.80	6.80
PLB 7003	5.40	3.10	3.30	3.10	5.10	5.10	5.10	5.10	5.40	5.40	5.40	5.40
PLB 7004	5.80	3.40	3.60	3.40	5.50	5.50	5.50	5.50	5.80	5.80	5.80	5.80
PLB 10002	-	-	-	-	-	-	-	-	-	-	-	-
PLB 10003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 10004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 16002	10.00	5.40	5.80	5.40	8.50	8.50	8.50	8.50	10.00	10.00	10.00	10.00
PLB 16003	10.60	5.70	6.10	5.70	9.10	9.10	9.10	9.10	10.60	10.60	10.60	10.60
PLB 16004	8.90	4.90	5.10	4.90	8.60	8.60	8.60	8.60	8.90	8.90	8.90	8.90
PLB 18002	16.60	9.20	9.60	9.20	14.30	14.30	14.30	14.30	16.60	16.60	16.60	16.60
PLB 18003	11.80	6.40	6.80	6.40	10.30	10.30	10.30	10.30	11.80	11.80	11.80	11.80
PLB 18004	12.60	6.80	7.20	6.80	11.10	11.10	11.10	11.10	12.60	12.60	12.60	12.60

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

CPC	B56	B60	B58	B62	B57	B61	B59	B63	V53	V52	V54	V55
PLB 1002	2.80	2.00	2.20	2.00	2.80	1.30	1.50	1.30	2.50	2.50	2.50	2.50
PLB 1003	3.10	2.20	2.40	2.20	3.10	1.50	1.70	1.50	2.80	2.80	2.80	2.80
PLB 1004	3.60	2.50	2.70	2.50	3.60	1.70	1.90	1.70	3.30	3.30	3.30	3.30
PLB 1602	2.80	2.00	2.20	2.00	2.80	1.40	1.60	1.40	2.50	2.50	2.50	2.50
PLB 1603	3.20	2.20	2.40	2.20	3.20	1.60	1.80	1.60	2.90	2.90	2.90	2.90
PLB 1604	3.70	2.50	2.70	2.50	3.70	1.80	2.00	1.80	3.40	3.40	3.40	3.40
PLB 2502	5.80	4.60	4.80	4.60	5.80	2.30	2.50	2.30	5.50	5.50	5.50	5.50
PLB 2503	6.50	4.70	4.90	4.70	6.50	2.60	2.80	2.60	6.20	6.20	6.20	6.20
PLB 2504	6.80	4.80	5.00	4.80	6.80	2.80	3.00	2.80	6.50	6.50	6.50	6.50
PLB 5002	7.60	5.10	5.50	5.10	7.60	3.10	3.50	3.10	6.10	6.10	6.10	6.10
PLB 5003	6.10	4.50	4.70	4.50	6.10	2.40	2.60	2.40	5.80	5.80	5.80	5.80
PLB 5004	6.50	4.70	4.90	4.70	6.50	2.70	2.90	2.70	6.20	6.20	6.20	6.20
PLB 7002	12.70	9.00	9.40	9.00	12.70	5.60	4.50	5.60	11.20	11.20	11.20	11.20
PLB 7003	11.30	8.30	8.50	8.30	11.30	3.70	3.90	3.70	11.00	11.00	11.00	11.00
PLB 7004	12.00	8.70	8.90	8.70	12.00	4.10	4.30	4.10	11.70	11.70	11.70	11.70
PLB 10002	15.10	10.80	11.20	10.80	15.10	5.00	5.40	5.00	13.60	13.60	13.60	13.60
PLB 10003	16.20	11.40	11.80	11.40	16.20	5.60	6.00	5.60	14.70	14.70	14.70	14.70
PLB 10004	14.80	10.70	10.90	10.70	14.80	4.90	5.10	4.90	14.50	14.50	14.50	14.50
PLB 16002	15.30	10.90	11.30	10.90	15.30	5.10	5.50	5.10	13.80	13.80	13.80	13.80
PLB 16003	16.50	11.50	11.90	11.50	16.50	5.80	6.20	5.80	15.00	15.00	15.00	15.00
PLB 16004	15.00	10.90	11.10	10.90	15.00	5.10	5.30	5.10	14.70	14.70	14.70	14.70
PLB 18002	22.70	15.30	15.70	15.30	22.70	9.30	9.70	9.30	20.40	20.40	20.40	20.40
PLB 18003	16.90	11.90	12.30	11.90	16.90	5.90	6.30	5.90	15.40	15.40	15.40	15.40
PLB 18004	18.70	12.80	13.20	12.80	18.70	6.80	7.20	6.80	17.20	17.20	17.20	17.20
PLB 25002	18.50	10.00	10.20	10.00	18.50	10.00	10.20	10.00	15.60	15.60	15.60	15.60
PLB 25003	15.50	8.30	8.70	8.30	15.50	8.30	8.70	8.30	14.00	14.00	14.00	14.00
PLB 25004	15.50	8.80	9.20	8.80	15.50	8.80	9.20	8.80	14.00	14.00	14.00	14.00
PLB 30003	23.70	12.60	12.80	12.60	23.70	12.60	12.80	12.60	21.40	21.40	21.40	21.40
PLB 30004	17.70	9.50	9.90	9.50	17.70	9.50	9.90	9.50	16.20	16.20	16.20	16.20
PLB 35002	17.70	9.70	9.90	9.70	17.70	9.70	9.90	9.70	14.80	14.80	14.80	14.80
PLB 35003	23.40	12.70	13.10	12.70	23.40	12.70	13.10	12.70	21.10	21.10	21.10	21.10
PLB 35004	17.30	9.40	9.80	9.40	17.30	9.40	9.80	9.40	15.80	15.80	15.80	15.80
PLB 50002	28.30	15.40	15.60	15.40	28.30	15.40	15.60	15.40	25.90	25.90	25.90	25.90
PLB 50003	22.10	11.90	12.30	11.90	22.10	11.90	12.30	11.90	20.60	20.60	20.60	20.60
PLB 50004	22.00	13.30	13.70	13.30	22.00	13.30	13.70	13.30	20.50	20.50	20.50	20.50
PLB 65003	30.20	16.10	16.30	16.10	30.20	16.10	16.30	16.10	27.30	27.30	27.30	27.30
PLB 65004	27.20	14.80	15.20	14.80	27.20	14.80	15.20	14.80	25.70	25.70	25.70	25.70
PLB 90003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 90004	-	-	-	-	-	-	-	-	-	-	-	-

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

CPC	V49	V48	V50	V51	V42	V40	V41	V43	V46	V44	V45	V47
PLB 1002	2.50	2.50	2.50	2.50	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
PLB 1003	2.80	2.80	2.80	2.80	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
PLB 1004	3.30	3.30	3.30	3.30	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
PLB 1602	2.50	2.50	2.50	2.50	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
PLB 1603	2.90	2.90	2.90	2.90	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
PLB 1604	3.40	3.40	3.40	3.40	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
PLB 2502	5.50	5.50	5.50	5.50	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80
PLB 2503	6.20	6.20	6.20	6.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
PLB 2504	6.50	6.50	6.50	6.50	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80
PLB 5002	6.10	6.10	6.10	6.10	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
PLB 5003	5.80	5.80	5.80	5.80	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10
PLB 5004	6.20	6.20	6.20	6.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
PLB 7002	11.20	11.20	11.20	11.20	12.70	12.70	12.70	12.70	12.70	12.70	12.70	12.70
PLB 7003	11.00	11.00	11.00	11.00	11.30	11.30	11.30	11.30	11.30	11.30	11.30	11.30
PLB 7004	11.70	11.70	11.70	11.70	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
PLB 10002	13.60	13.60	13.60	13.60	15.10	15.10	15.10	15.10	15.10	15.10	15.10	15.10
PLB 10003	14.70	14.70	14.70	14.70	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20
PLB 10004	14.50	14.50	14.50	14.50	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
PLB 16002	13.80	13.80	13.80	13.80	15.30	15.30	15.30	15.30	15.30	15.30	15.30	15.30
PLB 16003	15.00	15.00	15.00	15.00	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50
PLB 16004	14.70	14.70	14.70	14.70	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
PLB 18002	20.40	20.40	20.40	20.40	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70
PLB 18003	15.40	15.40	15.40	15.40	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90
PLB 18004	17.20	17.20	17.20	17.20	18.70	18.70	18.70	18.70	18.70	18.70	18.70	18.70
PLB 25002	15.60	15.60	15.60	15.60	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
PLB 25003	14.00	14.00	14.00	14.00	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50
PLB 25004	14.00	14.00	14.00	14.00	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50
PLB 30003	21.40	21.40	21.40	21.40	23.70	23.70	23.70	23.70	23.70	23.70	23.70	23.70
PLB 30004	16.20	16.20	16.20	16.20	17.70	17.70	17.70	17.70	17.70	17.70	17.70	17.70
PLB 35002	14.80	14.80	14.80	14.80	17.70	17.70	17.70	17.70	17.70	17.70	17.70	17.70
PLB 35003	21.10	21.10	21.10	21.10	23.40	23.40	23.40	23.40	23.40	23.40	23.40	23.40
PLB 35004	15.80	15.80	15.80	15.80	17.30	17.30	17.30	17.30	17.30	17.30	17.30	17.30
PLB 50002	25.90	25.90	25.90	25.90	28.30	28.30	28.30	28.30	28.30	28.30	28.30	28.30
PLB 50003	20.60	20.60	20.60	20.60	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10
PLB 50004	20.50	20.50	20.50	20.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
PLB 65003	27.30	27.30	27.30	27.30	30.20	30.20	30.20	30.20	30.20	30.20	30.20	30.20
PLB 65004	25.70	25.70	25.70	25.70	27.20	27.20	27.20	27.20	27.20	27.20	27.20	27.20
PLB 90003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 90004	-	-	-	-	-	-	-	-	-	-	-	-

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

F	B51	B55	B53	B54	V15	V16	V17	V18	V35	V36	V37	V38
PLB 1002	1.90	1.20	1.40	1.20	1.60	1.60	1.60	1.60	1.90	1.90	1.90	1.90
PLB 1003	2.20	1.40	1.60	1.40	1.90	1.90	1.90	1.90	2.20	2.20	2.20	2.20
PLB 1004	2.70	1.70	1.90	1.70	2.40	2.40	2.40	2.40	2.70	2.70	2.70	2.70
PLB 1602	2.00	1.20	1.40	1.20	1.70	1.70	1.70	1.70	2.00	2.00	2.00	2.00
PLB 1603	2.30	1.40	1.60	1.40	2.00	2.00	2.00	2.00	2.30	2.30	2.30	2.30
PLB 1604	2.80	1.70	1.90	1.70	2.50	2.50	2.50	2.50	2.80	2.80	2.80	2.80
PLB 2502	2.50	1.60	1.80	1.60	2.20	2.20	2.20	2.20	2.50	2.50	2.50	2.50
PLB 2503	2.90	1.90	2.10	1.90	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 2504	3.30	1.90	2.10	1.90	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 5002	4.70	2.60	3.00	2.60	3.20	3.20	3.20	3.20	4.70	4.70	4.70	4.70
PLB 5003	2.90	1.80	2.00	1.80	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 5004	3.30	2.00	2.20	2.00	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 7002	6.30	3.50	3.90	3.50	4.80	4.80	4.80	4.80	6.30	6.30	6.30	6.30
PLB 7003	4.80	2.80	3.00	2.80	4.50	4.50	4.50	4.50	4.80	4.80	4.80	4.80
PLB 7004	5.30	3.10	3.30	3.10	5.00	5.00	5.00	5.00	5.30	5.30	5.30	5.30
PLB 10002	6.40	3.50	3.90	3.50	4.90	4.90	4.90	4.90	6.40	6.40	6.40	6.40
PLB 10003	7.20	3.90	4.30	3.90	5.70	5.70	5.70	5.70	7.20	7.20	7.20	7.20
PLB 10004	5.40	3.10	3.30	3.10	5.10	5.10	5.10	5.10	5.40	5.40	5.40	5.40
PLB 16002	7.10	3.90	4.30	3.90	5.60	5.60	5.60	5.60	7.10	7.10	7.10	7.10
PLB 16003	7.70	4.40	4.80	4.40	6.20	6.20	6.20	6.20	7.70	7.70	7.70	7.70
PLB 16004	6.00	3.50	3.70	3.50	5.70	5.70	5.70	5.70	6.00	6.00	6.00	6.00
PLB 18002	13.70	7.70	8.10	7.70	11.40	11.40	11.40	11.40	13.70	13.70	13.70	13.70
PLB 18003	8.90	4.90	5.30	4.90	7.40	7.40	7.40	7.40	8.90	8.90	8.90	8.90
PLB 18004	9.70	5.40	5.80	5.40	8.20	8.20	8.20	8.20	9.70	9.70	9.70	9.70
PLB 25002	14.90	8.10	8.30	8.10	12.00	12.00	12.00	12.00	14.90	14.90	14.90	14.90
PLB 25003	11.50	6.30	6.70	6.30	10.00	10.00	10.00	10.00	11.50	11.50	11.50	11.50
PLB 25004	13.00	7.20	7.60	7.20	12.50	12.50	12.50	12.50	13.00	13.00	13.00	13.00
PLB 30003	20.40	11.20	11.40	11.20	18.10	18.10	18.10	18.10	20.40	20.40	20.40	20.40
PLB 30004	14.40	7.80	8.20	7.80	12.90	12.90	12.90	12.90	14.40	14.40	14.40	14.40
PLB 35002	14.50	8.00	8.20	8.00	11.60	11.60	11.60	11.60	14.50	14.50	14.50	14.50
PLB 35003	19.50	10.70	11.10	10.70	17.20	17.20	17.20	17.20	19.50	19.50	19.50	19.50
PLB 35004	13.60	7.40	7.80	7.40	12.10	12.10	12.10	12.10	13.60	13.60	13.60	13.60
PLB 50002	24.80	13.40	13.60	13.40	22.40	22.40	22.40	22.40	24.80	24.80	24.80	24.80
PLB 50003	18.70	10.00	10.40	10.00	17.20	17.20	17.20	17.20	18.70	18.70	18.70	18.70
PLB 50004	19.40	10.40	10.70	10.40	17.90	17.90	17.90	17.90	19.40	19.40	19.40	19.40
PLB 65003	27.90	14.90	15.10	14.90	25.00	25.00	25.00	25.00	27.90	27.90	27.90	27.90
PLB 65004	25.30	13.50	13.90	13.50	23.80	23.80	23.80	23.80	25.30	25.30	25.30	25.30
PLB 90003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 90004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 660005	-	-	-	-	-	-	-	-	-	-	-	-

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DE SCHMIERUNG

Fuellmenge Getriebeschmierung [l]

P.S. Die angegebenen Schmiermittelmengen sind indikativ und sind waehrend der Befuellung anhand der Oelstandsstopfen zu ueberpruefen.

EN LUBRICATION

Lubricant quantity inside the drives [l]

NOTE: The lubricant quantities shown in the table are indicative, but should be verified during the filling operation, checking the level through the service plug.

TR YAĞLAMA

Redüktörlerdeki yağlayıcı miktarı [l]

NOT: Tablodaki değerler yaklaşık yağ miktarlarıdır, bundan dolayı yağ doldurulurken seviye tapasından yağ miktarı kontrol edilmelidir.

IT LUBRIFICAZIONE

Quantita'di lubrificante contenuto nei riduttori [l]

NB. Le quantità di lubrificante riportate sono indicative e vanno controllate in fase di riempimento verificando il livello tramite l'apposito tappo di servizio.

FR LUBRIFICATION

Quantité de lubrifiant présente dans les réducteurs [l]

N.B. Les quantités sont indicatives et doivent être contrôlées en phase de remplissage en vérifiant le niveau par le biais du bouchon de service.

ES LUBRICACIÓN

Cantidad de lubricante contenido en los reductores [l]

Nota. Las cantidades de lubricante indicadas son aconsejables y se recomienda controlarlas durante el llenado verificando el nivel mediante los respectivos tapones de servicio.

FS	B51	B55	B53	B54	V15	V16	V17	V18	V35	V36	V37	V38
PLB 1002	1.90	1.20	1.40	1.20	1.60	1.60	1.60	1.60	1.90	1.90	1.90	1.90
PLB 1003	2.20	1.40	1.60	1.40	1.90	1.90	1.90	1.90	2.20	2.20	2.20	2.20
PLB 1004	2.70	1.70	1.90	1.70	2.40	2.40	2.40	2.40	2.70	2.70	2.70	2.70
PLB 1602	2.00	1.20	1.40	1.20	1.70	1.70	1.70	1.70	2.00	2.00	2.00	2.00
PLB 1603	2.30	1.40	1.60	1.40	2.00	2.00	2.00	2.00	2.30	2.30	2.30	2.30
PLB 1604	2.80	1.70	1.90	1.70	2.50	2.50	2.50	2.50	2.80	2.80	2.80	2.80
PLB 2502	2.90	1.80	2.00	1.80	2.60	2.60	2.60	2.60	2.90	2.90	2.90	2.90
PLB 2503	3.30	2.20	2.40	2.20	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 2504	3.80	2.30	2.50	2.30	3.50	3.50	3.50	3.50	3.80	3.80	3.80	3.80
PLB 5002	5.20	2.90	3.30	2.90	3.70	3.70	3.70	3.70	5.20	5.20	5.20	5.20
PLB 5003	3.30	2.10	2.30	2.10	3.00	3.00	3.00	3.00	3.30	3.30	3.30	3.30
PLB 5004	3.70	2.30	2.50	2.30	3.40	3.40	3.40	3.40	3.70	3.70	3.70	3.70
PLB 7002	6.80	3.80	4.20	3.80	5.30	5.30	5.30	5.30	6.80	6.80	6.80	6.80
PLB 7003	5.40	3.10	3.30	3.10	5.10	5.10	5.10	5.10	5.40	5.40	5.40	5.40
PLB 7004	5.80	3.40	3.60	3.40	5.50	5.50	5.50	5.50	5.80	5.80	5.80	5.80
PLB 10002	8.60	4.70	5.10	4.70	7.10	7.10	7.10	7.10	8.60	8.60	8.60	8.60
PLB 10003	9.20	5.00	5.40	5.00	7.70	7.70	7.70	7.70	9.20	9.20	9.20	9.20
PLB 10004	7.50	4.20	4.40	4.20	7.20	7.20	7.20	7.20	7.50	7.50	7.50	7.50
PLB 16002	9.10	4.90	5.30	4.90	7.60	7.60	7.60	7.60	9.10	9.10	9.10	9.10
PLB 16003	9.60	5.20	5.60	5.20	8.10	8.10	8.10	8.10	9.60	9.60	9.60	9.60
PLB 16004	7.80	4.50	4.70	4.50	7.50	7.50	7.50	7.50	7.80	7.80	7.80	7.80
PLB 18002	15.60	8.60	9.00	8.60	13.30	13.30	13.30	13.30	15.60	15.60	15.60	15.60
PLB 18003	10.60	5.80	6.20	5.80	9.10	9.10	9.10	9.10	10.60	10.60	10.60	10.60
PLB 18004	11.50	6.20	6.60	6.20	10.00	10.00	10.00	10.00	11.50	11.50	11.50	11.50
PLB 25002	14.70	8.00	8.20	8.00	11.80	11.80	11.80	11.80	14.70	14.70	14.70	14.70
PLB 25003	11.70	6.40	6.80	6.40	10.20	10.20	10.20	10.20	11.70	11.70	11.70	11.70
PLB 25004	12.50	6.80	7.20	6.80	11.00	11.00	11.00	11.00	12.50	12.50	12.50	12.50
PLB 30003	19.90	11.00	11.20	11.00	17.60	17.60	17.60	17.60	19.90	19.90	19.90	19.90
PLB 30004	13.90	7.40	7.80	7.40	12.40	12.40	12.40	12.40	13.90	13.90	13.90	13.90
PLB 35002	14.00	7.70	7.90	7.70	11.10	11.10	11.10	11.10	14.00	14.00	14.00	14.00
PLB 35003	19.30	10.50	10.90	10.50	17.00	17.00	17.00	17.00	19.30	19.30	19.30	19.30
PLB 35004	13.40	7.40	7.80	7.40	11.90	11.90	11.90	11.90	13.40	13.40	13.40	13.40
PLB 50002	24.80	13.40	13.60	13.40	22.40	22.40	22.40	22.40	24.80	24.80	24.80	24.80
PLB 50003	18.70	10.00	10.40	10.00	17.20	17.20	17.20	17.20	18.70	18.70	18.70	18.70
PLB 50004	19.40	10.40	10.70	10.40	17.90	17.90	17.90	17.90	19.40	19.40	19.40	19.40
PLB 65003	27.90	14.90	15.10	14.90	25.00	25.00	25.00	25.00	27.90	27.90	27.90	27.90
PLB 65004	25.30	13.50	13.90	13.50	23.80	23.80	23.80	23.80	25.30	25.30	25.30	25.30
PLB 90003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 90004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 140005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 180005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220003	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 220005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 340005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 400005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550004	-	-	-	-	-	-	-	-	-	-	-	-
PLB 550005	-	-	-	-	-	-	-	-	-	-	-	-
PLB 660005	-	-	-	-	-	-	-	-	-	-	-	-

*** Siehe seite 45 / See page 45 / Sayfa 45 bakınız / Vedere a pagina 45 / Voir page 45 / Consulte la página 45**

DE SCHMIERUNG

Ausgleichsbehälter

Fuer die vertikalen Einbaupositionen ist die Ausruestung mit einem Oelausgleichsbehaelter zu empfehlen. Dadurch ist gegeben, dass eventuelle Oeluebertritte vermieden und eine einfache Befuellung ermoeglicht wird. Der Behaelter ist auf Nachfrage lieferbar.

EN LUBRICATION

Expansion tank

For vertical applications, it is recommended to use an expansion tank that can absorb any oil expansions and/or ensure topping up in hard-to-rea-ch places. This fitting can be supplied on request.

TR YAĞLAMA

Genleşme tankı

Dikey uygulamalar için herhangi bir yağ genleşmesini absorbe edebilecek ve/veya ulaşılması zor yerlerin doldurulmasını sağlayacak bir genleşme tankının kullanılması tavsiye edilmektedir. Bu parça istek üzerine tedarik edilebilir.

IT LUBRIFICAZIONE

Vaso di espansione

Per applicazioni dove vengono considerate posizioni di montaggio verticali si consiglia l'utilizzo di un vaso di espansione che permette di alloggiare eventuali espansioni di olio o di garantire un rabbocco in posizioni inaccessibili. Tale accessorio può essere fornito su richiesta.

FR LUBRIFICATION

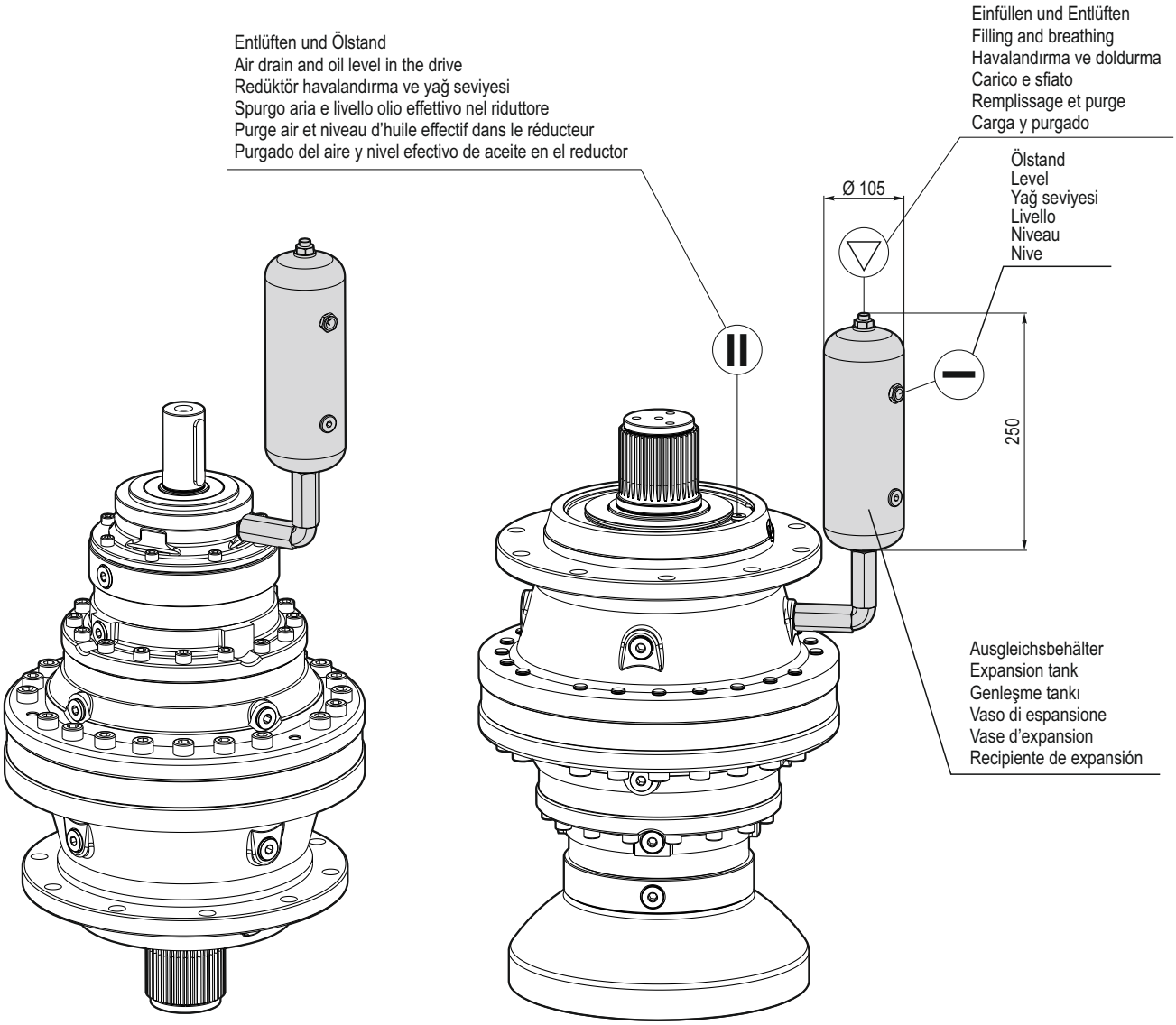
Vase d'expansion

Pour les applications prévoyant des positions de montage verticales, il est recommandé d'utiliser un vase d'expansion qui permet une éventuelle expansion de l'huile ou qui garantit un remplissage dans des positions inaccessibles.
Cet accessoire peut être fourni sur demande.

ES LUBRICACIÓN

Recipiente de expansión

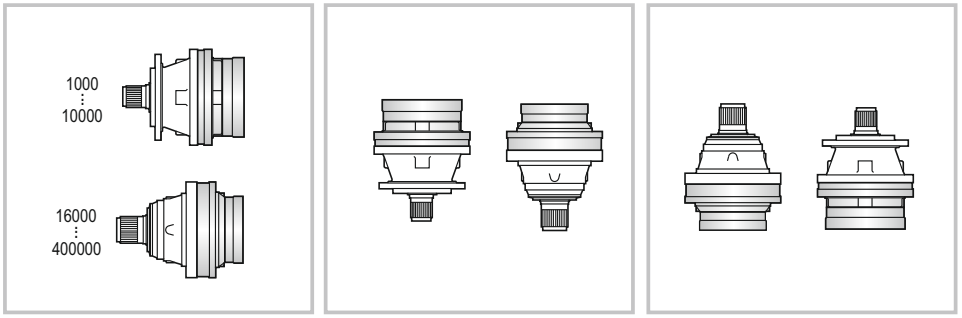
Para las aplicaciones donde se prevén posiciones verticales de montaje, se aconseja la utilización de un recipiente de expansión que permita absorber las eventuales dilataciones del aceite y/o garantizar un llenado en posiciones inaccesibles.
Dicho accesorio se puede suministrar a pedido.



NRW® DRIVE TECHNOLOGIES

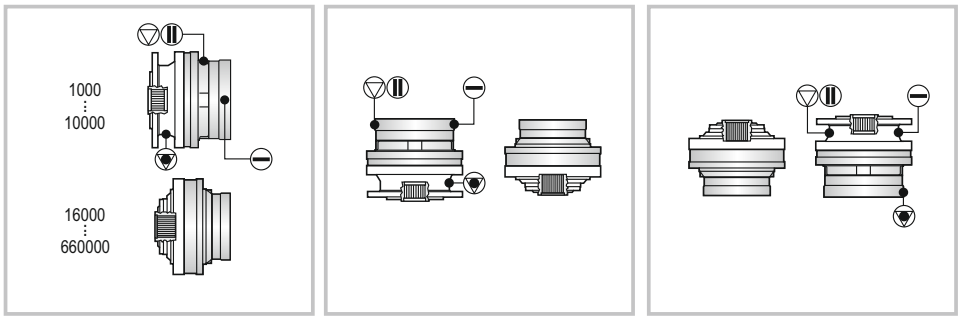
DE	EINBAUPOSITION	EN	MOUNTING POSITIONS	TR	MONTAJ POZİSYONLARI
IT	POSIZIONOI DI MONTAGGIO	FR	POSITIONS DE MONTAGE	ES	POSICIONES DE MONTAJE

M-P



B5 V1 V3

F



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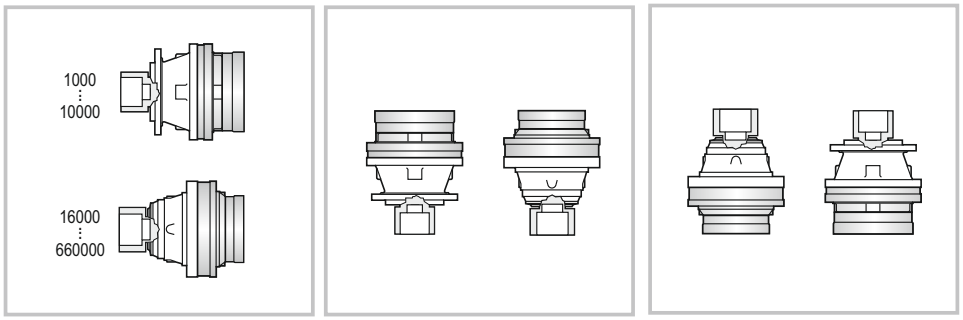

B5 V1 V3

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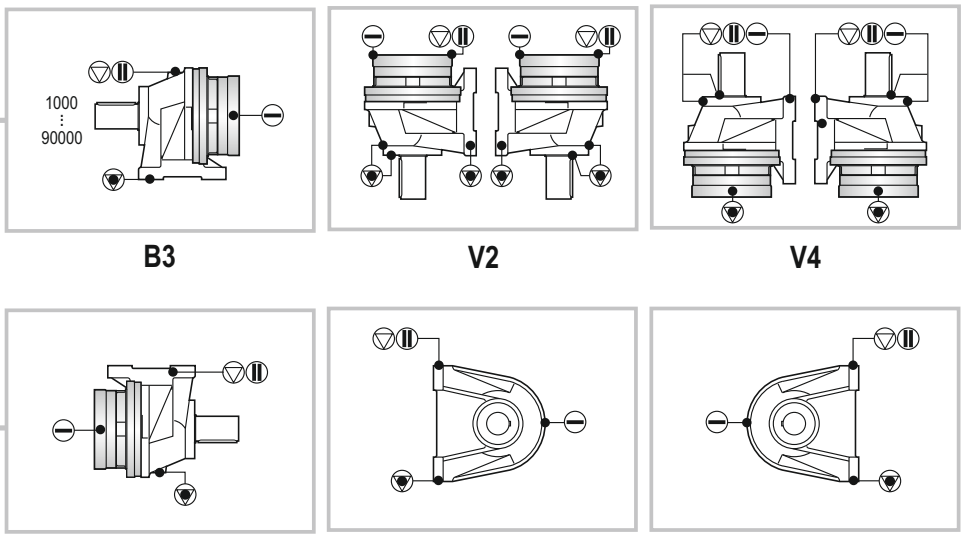


B3 V2 V4

B4 B6 B7

Ölstopfen
Oil plugs
Yağ tapası
Tappi olio
Bouchons huile
Tapón de aceite

Entlüftungstopfen
Vent plug
Havalandırma tapası
Tappo sfiato
Bouchon à évent
Tapón de venteo

Einfüllstopfen
Filling plug
Doldurma tapası
Tappo carico
Bouchon remplissage
Tapón de carga

Ölstandstopfen
Level plug
Seviye tapası
Tappo livello
Bouchon jauge
Tapón de nivel

Ablassstopfen
Drain plug
Boşaltma tapası
Tappo scarico
Bouchon vidange
Tapón de descarga

N.B

Die Ausfuehrung der Befestigungsvorrichtung (Flansch, Bohrung) ist in den Datenblaettern der Getriebe auf den Seiten 96-251 ersichtlich.

The mounting flange orientation is shown in each planetary gears technical sheets (page 96-251).

Montaj flanşı bilgileri planet teknik sayfalarında gösterilmektedir (sayfa 96-251).

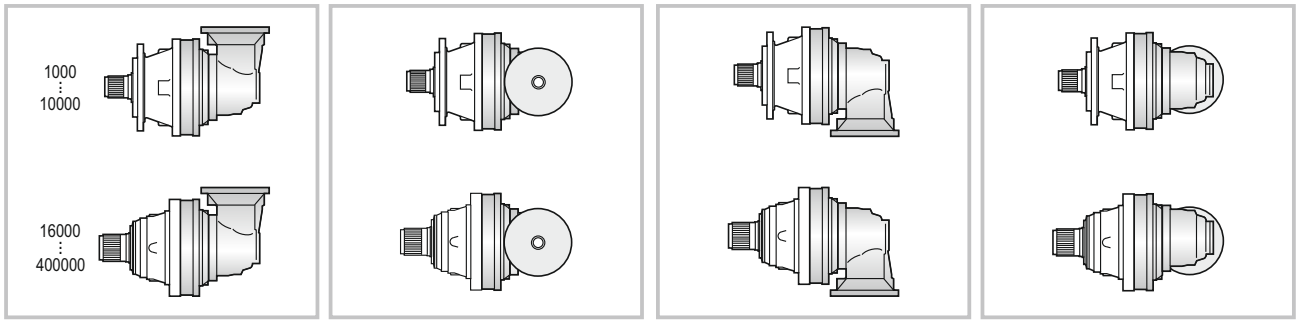
L'orientamento della foratura della flangia di fissaggio è come illustrato nelle schede dei dati dimensionali dei riduttori (pag. 96-251).

L'oriéntation de la flasque de montage est indiquée dans chaque fiche technique réducteur (page 96-251).

La orientación del perforado de la brida de fijación se ilustra en las fichas de los datos dimensionales de los reductores (Pág. 96-251).

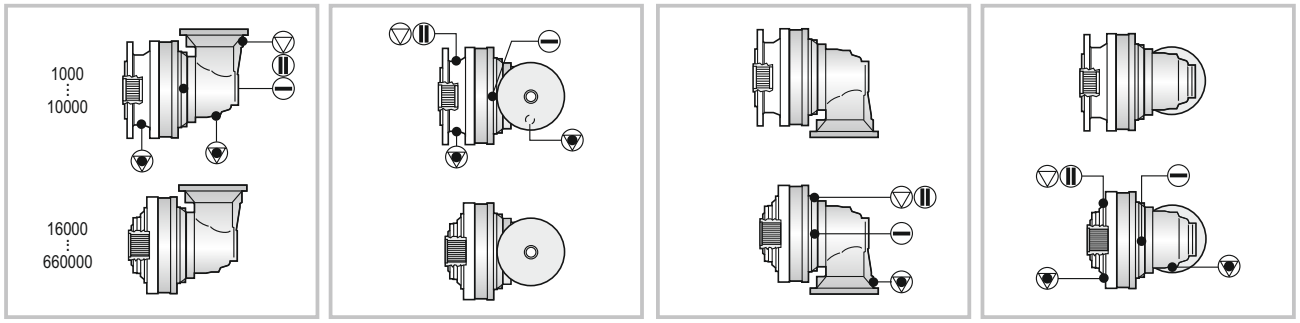
DE EINBAUPOSITION	EN MOUNTING POSITIONS	TR MONTAJ POZİSYONLARI
IT POSIZIONOI DI MONTAGGIO	FR POSITIONS DE MONTAGE	ES POSICIONES DE MONTAJE

M-P



B51 B55 B53 B54

F



B51 B55 B53 B54

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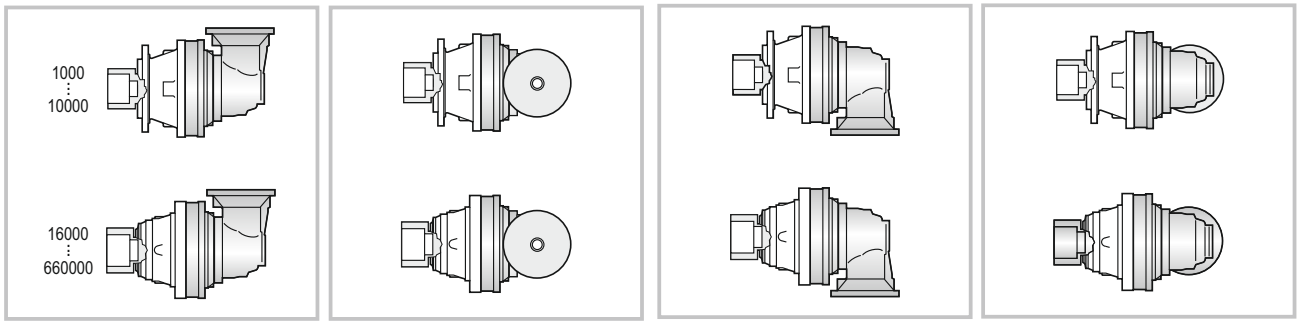

B51 B55 B53 B54

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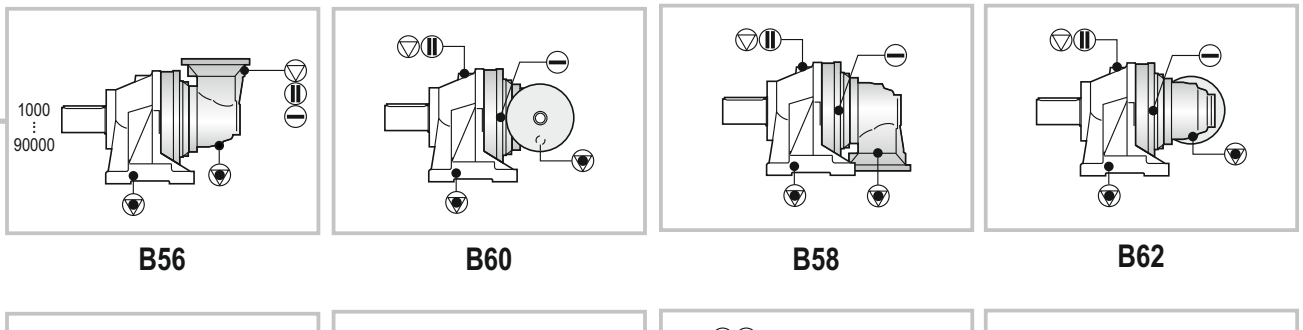
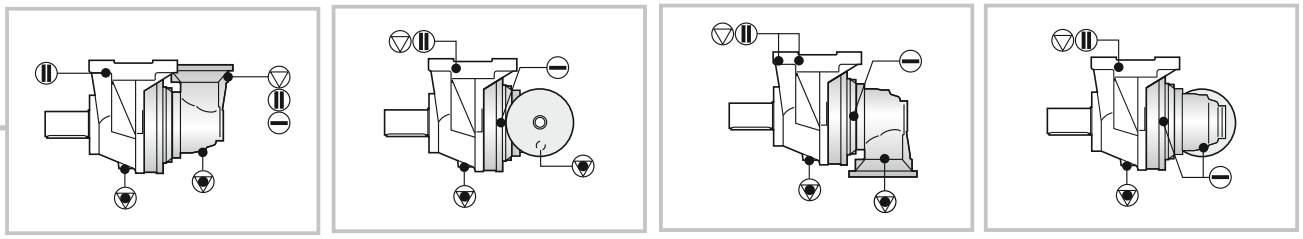


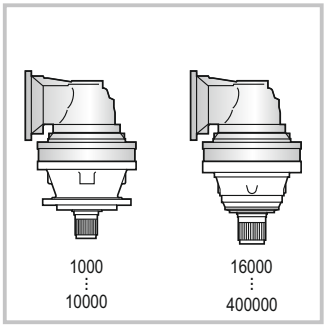
B56 B60 B58 B62



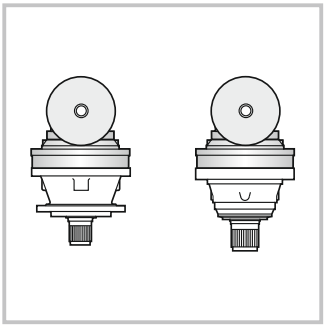
B57 B61 B59 B63

DE	EINBAUPOSITION	EN	MOUNTING POSITIONS	TR	MONTAJ POZİSYONLARI
IT	POSIZIONOI DI MONTAGGIO	FR	POSITIONS DE MONTAGE	ES	POSICIONES DE MONTAJE

M-P



V15



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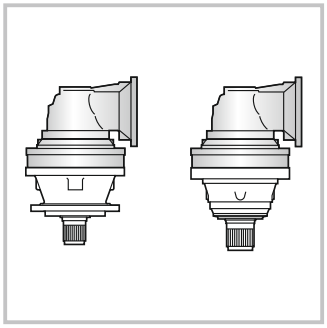

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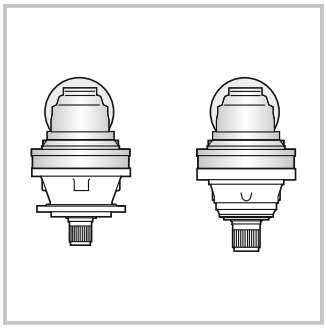
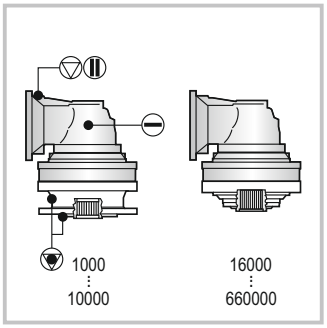


V18

F



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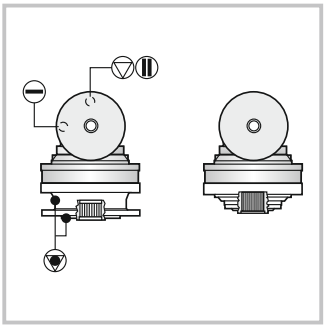

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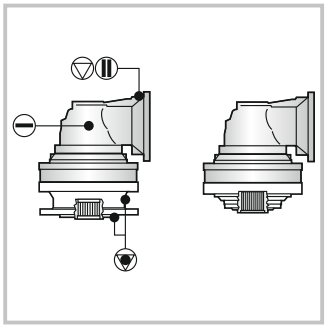

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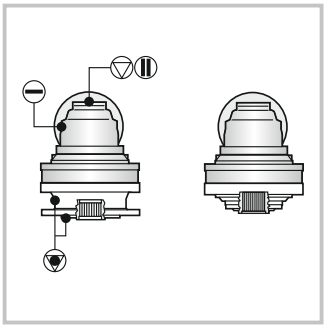

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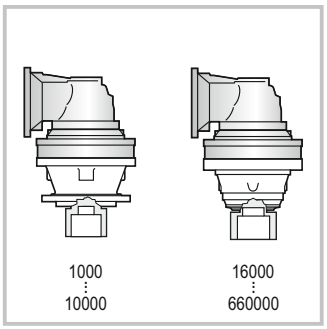

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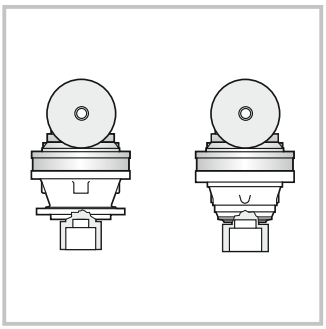

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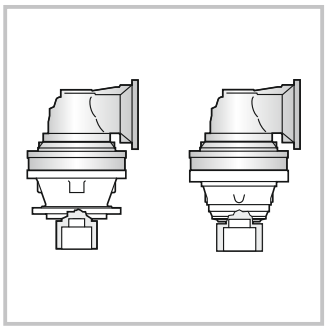

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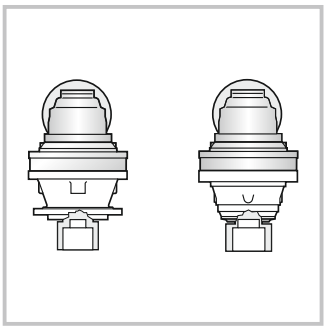
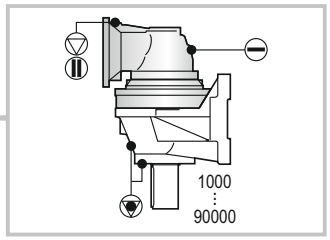


V18

CPC



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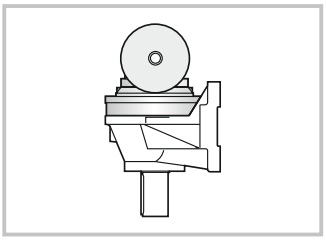

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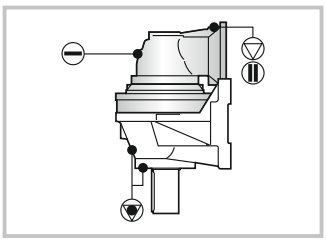

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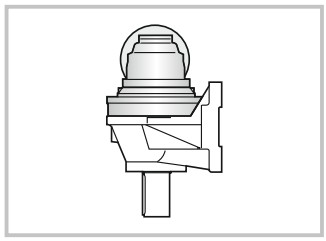

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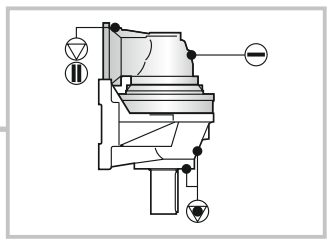

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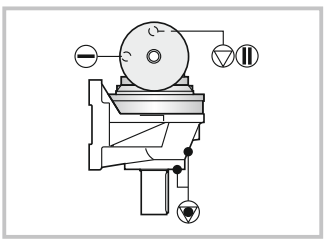

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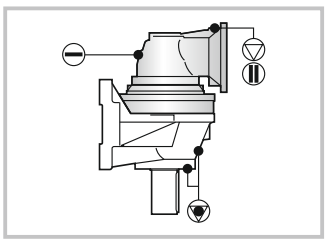

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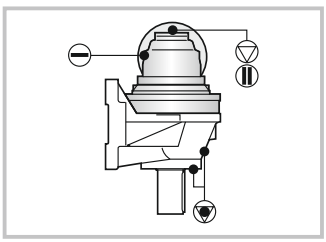


V51

DE EINBAUPOSITION

EN MOUNTING POSITIONS

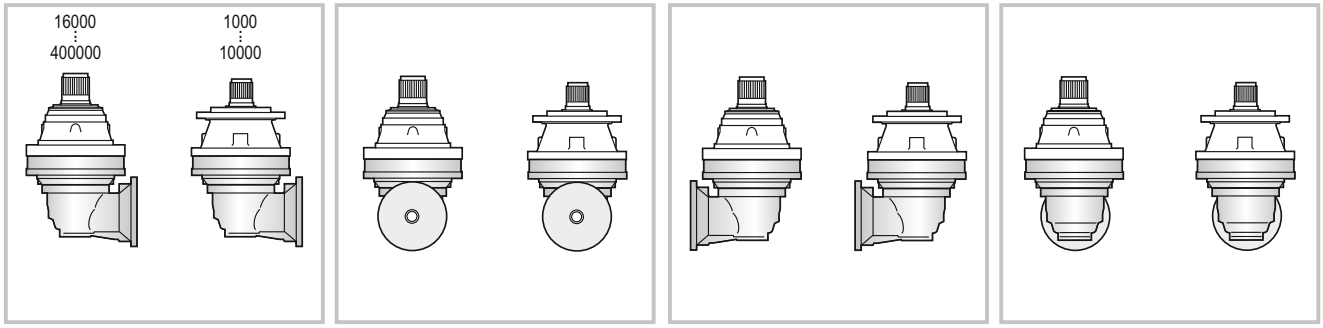
TR MONTAJ POZİSYONLARI

IT POSIZIONOI DI MONTAGGIO

FR POSITIONS DE MONTAGE

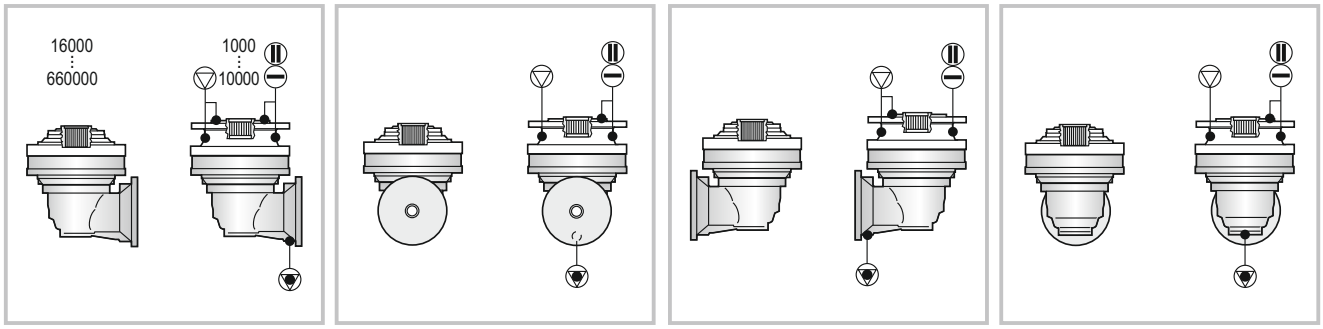
ES POSICIONES DE MONTAJE

M-P



V35 V36 V37 V38

F



V35 V36 V37 V38

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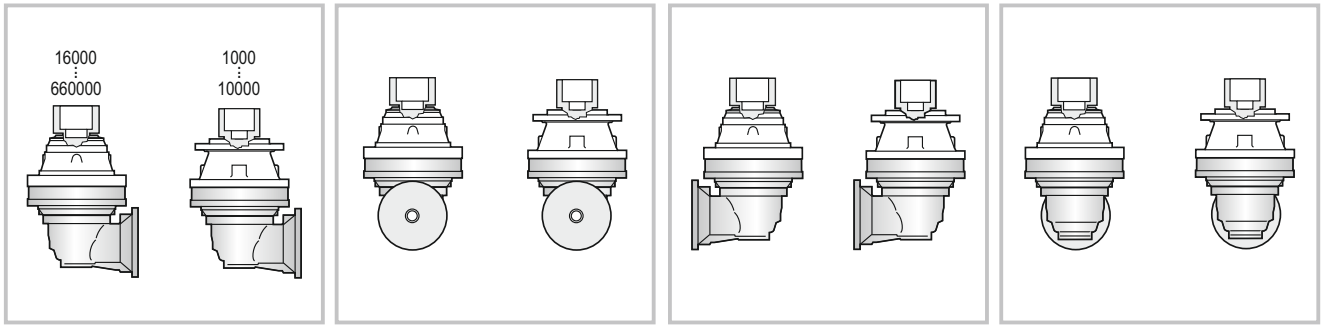

V35 V36 V37 V38

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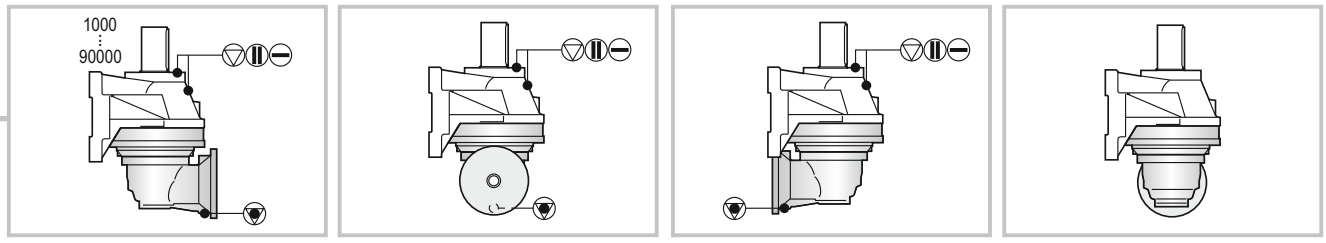
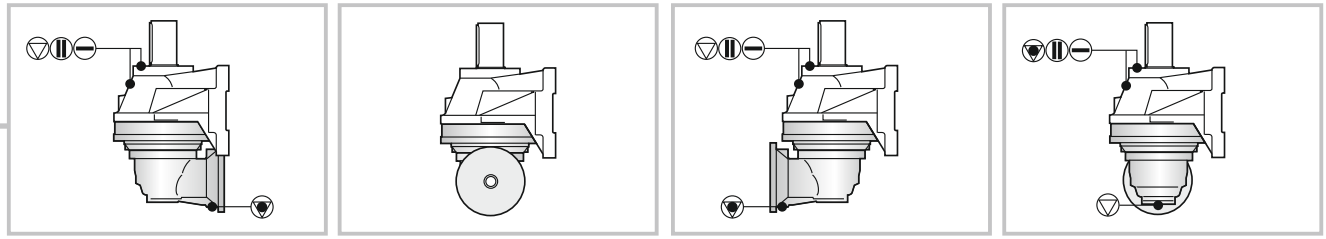


V42 V40 V41 V43



V46 V44 V45 V47

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

ANSCHLUSS FÜR SCHNECKENGETRIEBE

NRW kann kombinierte Getriebe wie folgt liefern:

1) Komplett mit Schneckengetriebe.
2) Vorrichtung für Schnecken - getriebe.

Weiterhin weisen wir darauf hin, das die Schmierung der Planetengetriebe getrennt von der des Schneckengetriebes erfolgt.

EN WORM GEARBOX ADAPTORS

WORM GEARBOX ADAPTORS

NRW can supply the combined reduction units as follows:

1) Complete of worm reduction units.
2) Preset for worm reduction units.

Furthermore, we would like to remind you that the lubrication of the planetary gear units is separated from the lubrication of the worm reduction units.

TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

SONSUZ DİŞLİ KUTUSU ADAPTÖRLERİ

NRW, kombine planet dişli ünitelerini aşağıdaki gibi tedarik edebilir:

1) Hazır montajlı sonsuz dişli üniteleri ile.
2) Ön ayarı yapılmış sonsuz dişli üniteleri ile.

İlave olarak, planet dişli ünitelerinin yağlamasının sonsuz dişli ünitelerinin yağlamasından ayrı olduğunu hatırlatmak isteriz.

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

NRW può fornire i riduttori combinati nelle seguenti configurazioni:

1) Completi di riduttore a vite senza fine.
2) Predisposti per riduttori a vite senza fine.

Inoltre ricordiamo che i riduttori epicicloidali hanno la lubrificazione separate da quella del riduttore a vite senza fine.

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

ADAPTATION POUR REDUCTEURS A VIS SANS FIN

Les réducteurs combinés peuvent être fournis de la manière suivante:

1) Equipés d'un réducteur à vis sans fin.
2) Equipés pour recevoir un réducteur à vis sans fin.

En outre, nous vous rappelons que le réducteurs planétaires ont une lubrification séparée de celle, du réducteur à vis sans fin.

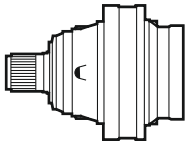
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

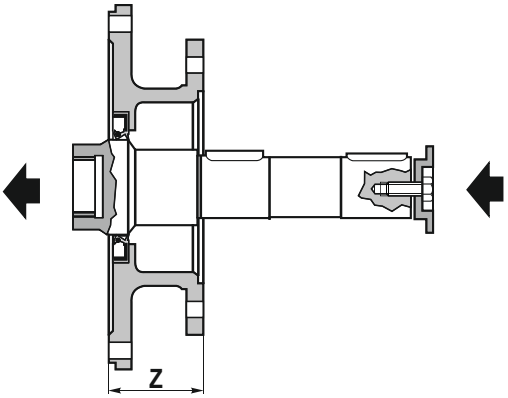
ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

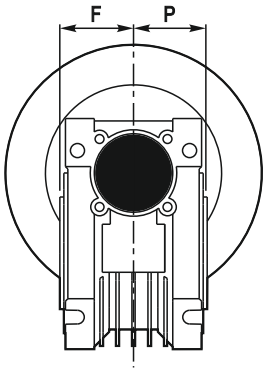
NRW puede suministrar las unidades de reducción combinadas del siguiente modo:

1) Completos con reductor de tornillo sin fin.
2) Predispuestos para reductores de tornillo sin fin.

Además, queremos recordar que los reductores epicicloidales tienen la lubricación separada de aquella del reductor de tornillo sin fin.







ANSCHLUSS FÜR SCHNECKENGETRIEBE
WORM GEARBOX ADAPTORS
SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ
PREDISPOSIZIONI PER RIDUTTORI VITE SENZA FINE
ADAPTATIONS POUR REDUCTEURS A VIS SANS FIN
ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

Type - Type - Tip - Tipo - Typ - Tipos	Z	Bestell Nr. / Code Kod / Codice Code / Código	
PMRV 50 /PRV 50	82	2074.017.004	A
PMRV 63 / PRV 63	82	2074.017.005	
PMRV 75 / PRV 75	57	2074.017.006	
PMRV 90 / PRV 90	57	2074.017.007	
PMRV 110 / PRV 110	64	2074.057.002	B
PMRV 130 / PRV 130	64	2074.057.001	

SCHNECKENGETRIEBE
WORM REDUCTION UNITS
SONSUZ DİŞLİLİ REDÜKTÖRLER
RIDUTTORI VITE SENZA FINE
REDUCTEURS A VIS SANS FIN
REDUCTORES DE TORNILLO SIN FIN

Type - Type - Tip Tipo - Typ - Tipos	F	P
PMRV 50 / PRV 50	46	46
PMRV 63 / PRV 63	56	56
PMRV 75 / PRV 75	60	60
PMRV 90 / PRV 90	70	70
PMRV 110 / PRV 110	77.5	77.5
PMRV 130 / PRV 130	85	85

	A	B	
	Z	Z	Z+13.5
PL 1000	1-2-3-4	—	—
PL 1600	1-2-3-4	—	—
PL 2500	1-2-3-4	—	1
PL 5000	1-2-3-4	—	1
PL 7000	2-3-4	1	2
PL 10000	2-3-4	1	2
PL 16000	2-3-4	1	2
PL 18000	3-4	2	3
PL 25000	3-4	2	3
PL 30000	3-4	2	3
PL 35000	3-4	2	3

	A	B	
	Z	Z	Z+13.5
PL 50000	3-4	2	3
PL 65000	4	3	4
PL 90000	4	3	4
PL 140000	4-5	3	4
PL 180000	4-5	3	4
PL 220000	4-5	3	4
PL 340000	5	4	5
PL 400000	5	4	5
PL 550000	5	4	5
PL 660000	5	4	5

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.
Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.
N.B.: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.
N.B.: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.
Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

EN WORM GEARBOX ADAPTORS

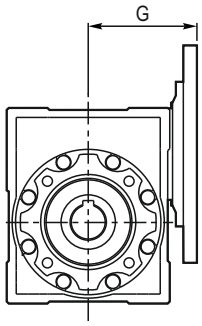
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

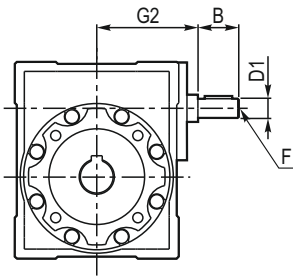
PMRV



SCHNECKENGETRIEBE / WORM REDUCTION UNITS SONSUZ DİŞLİLİ REDÜKTÖRLER / RIDUTTORI VITE SENZA FINE REDUCTEURS A VIS SANS FIN / REDUCTORES DE TORNILLO SIN FIN	
Type - Type - Tip - Tipo - Typ - Tipo	G
PMRV 50 PAM 63 71 80	80
PMRV 63 PAM 71 80 90	95
PMRV 75 PAM 71 80 90 100 112	112.5
PMRV 90 PAM 80 90 100 112	129.5
PMRV 110 PAM 80 90 100 112 132	160
PMRV 130 PAM 90 100 112 132	180

Schneckengetriebe vorgesehen für Elektromotoranbau (PAM/IEC).
Worm gear reduction unit with input adaptor for electric motor (PAM/IEC).
B5/B14 Motor bağlantı flanşlı sonsuz dişlili redüktör (PAM/IEC).
Riduttore vite senza fine con predisposizione per motore elettrico (PAM/IEC).
Réducteur à vis sans fin avec prédisposition pour moteur éléctrique (PAM/IEC).
Reductor de tornillo sin fin con acoplamiento para motor eléctrico (PAM/IEC).

PRV



ANTRIEBSWELLENÄNGE / INPUT SHAFT LENGTH GİRİŞ MİLİ UZUNLUĞU / SPORGENZA ALBERO DI ENTRATA ARBRE D'ENTREE MALE / SALIENTE EJE DE ENTRADA				
Type - Type - Tip - Tipo - Typ - Tipo	G2	B	D1 (J6)	F
PRV 50	72	30	14	M6
PRV 63	90	40	19	M6
PRV 75	105	50	24	M8
PRV 90	125	50	24	M8
PRV 110	142	60	28	M10
PRV 130	162	80	30	M10

Schneckengetriebe mit Zapfwelle am Eingang.
Worm gear reduction unit with male input shaft.
Mil girişli sonsuz dişlili redüktör
Riduttore vite senza fine con albero maschio in ingresso.
Réducteur à vis sans fin avec arbre mâle en entrée.
Reductor de tornillo sin fin con eje macho en entrada.

Für die auswahl des Schneckengetriebes kontaktieren sie bitte dem Technische Abteilung von NRW.

To select the worm reduction unit please contact the NRW Technical Department.

Sonsuz dişli ünitesi seçmek için lütfen NRW Teknik Departmanı ile iletişime geçiniz.

Per la selezione del riduttore vite senza fine contattare il Servizio Tecnico NRW.

Pour choisir le réducteur à vis sans fin, s'addresser an Service Technico NRW.

Para la elección del reductor de tornillo sin fin se aconseja ponerse en contacto con el Servicio Técnico de NRW.

Einbauposition

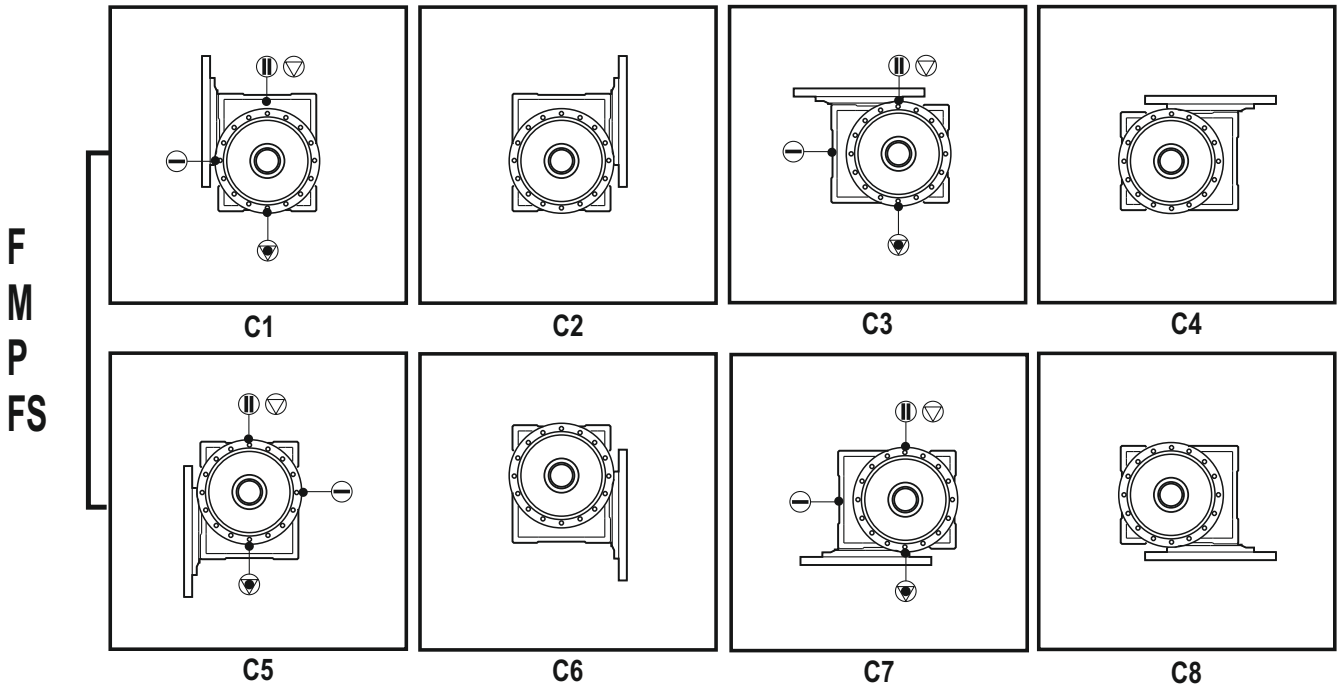
Posizioni di montaggio

Mounting positions

Positions de montage

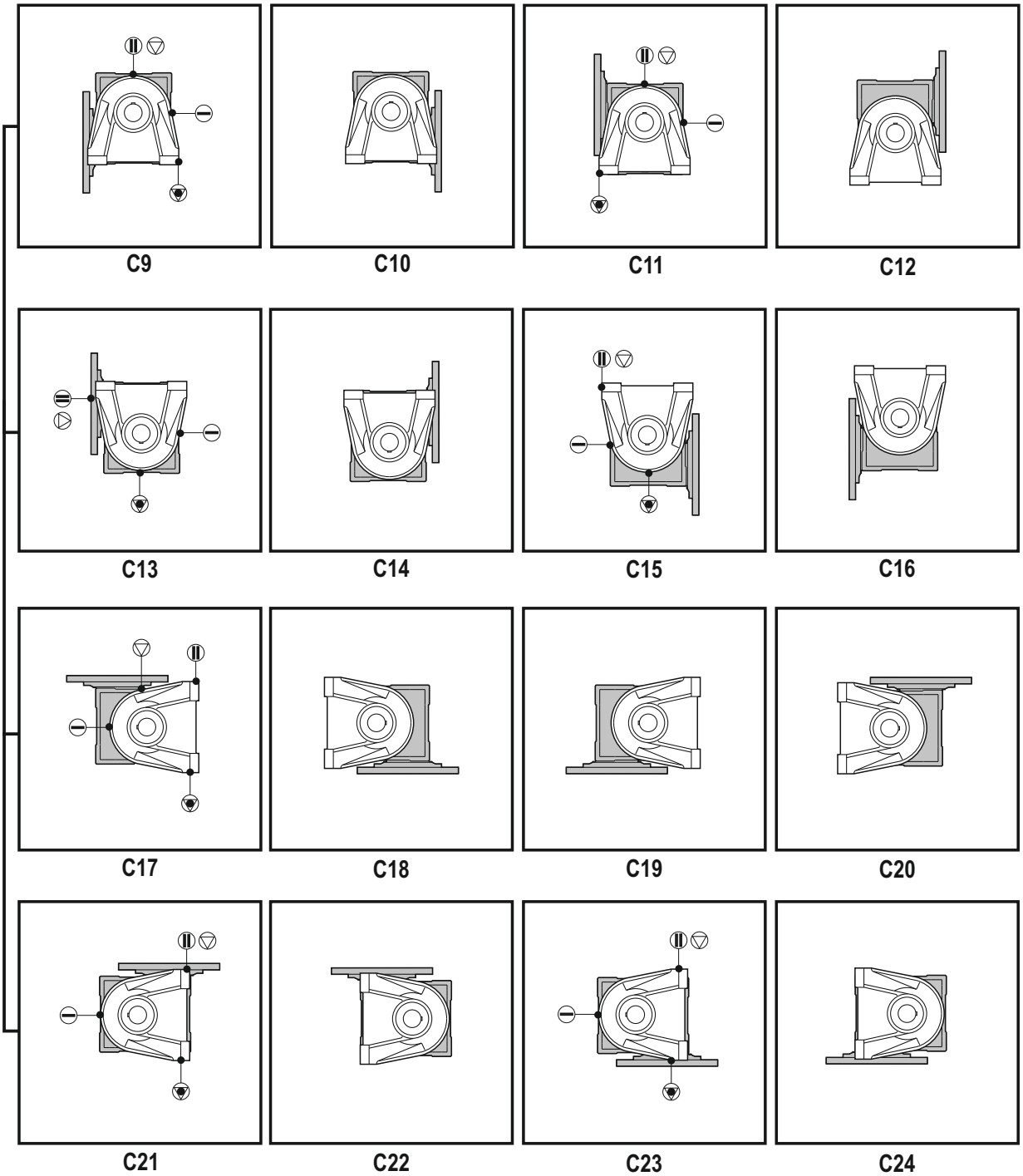
Montaj pozisyonları

Posiciones de montaje



DE ANSCHLUSS FÜR SCHNECKENGETRIEBE
EN WORM GEARBOX ADAPTORS
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ
IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE
FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

CPC



Ölstopfen Oil plugs Yağ tapaları Tappi olio Bouchons huile Tapón de aceite	Entlüftungstopfen Vent plug Havalandırma tapası Tappo sfiato Bouchon à évent Tapón de venteo	Einfüllstopfen Filling plug Doldurma tapası Tappo carico Bouchon remplissage Tapón de carga	Ölstandstopfen Level plug Seviye tapası Tappo livello Bouchon jauge Tapón de nivel	Ablassstopfen Drain plug Boşaltma tapası Tappo scarico Bouchon vidange Tapón de descarga

N.B.
Die Ausfuehrung der Befestigung - vorrichtung (Flansch, Bohrung) ist in den Datenblaettern der Getriebe auf den Seiten 96-251 ersichtlich.

N.B.
L'orientamento della foratura della flangia di fissagio è come illustrato nelle schede dei dati dimensionali dei riduttori (pag. 96-251).

N.B.
The mounting flange orientation is shown in each planetary gears technical sheets. (page 96-251).

N.B.
L'oriéntation de la flasque de montage est indiquée dans chaque fiche technique réducteur (page 96-251).

NOT.
Montaj flanşının özellikleri her bir planet dişli ünitesinin teknik sayfalarında gösterilmiştir (sayfa 96-251).

N.B.
La orientación del perforado de la brida de fijación se ilustra en las fichas de los datos dimensionales de los reductores (Pág. 96-251).

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

EN WORM GEARBOX ADAPTORS

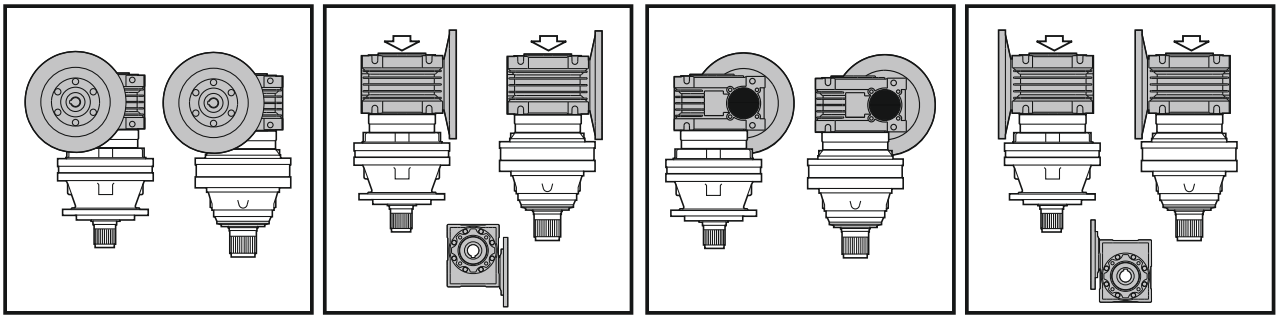
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

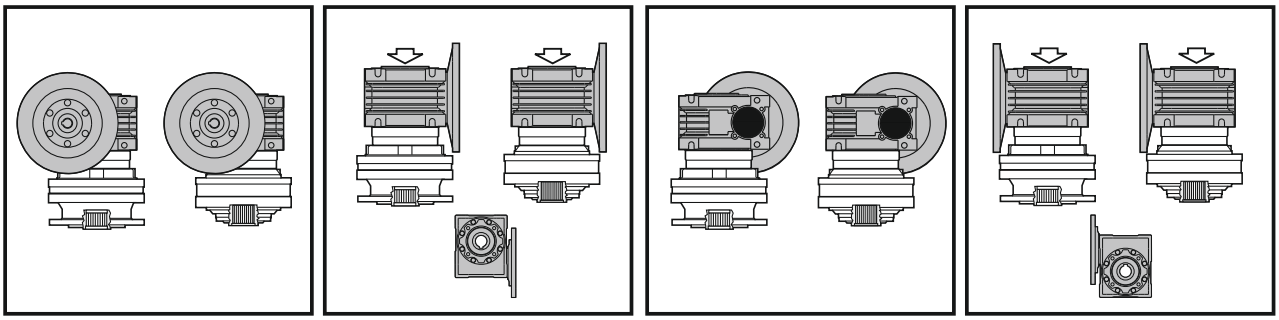
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

M-P



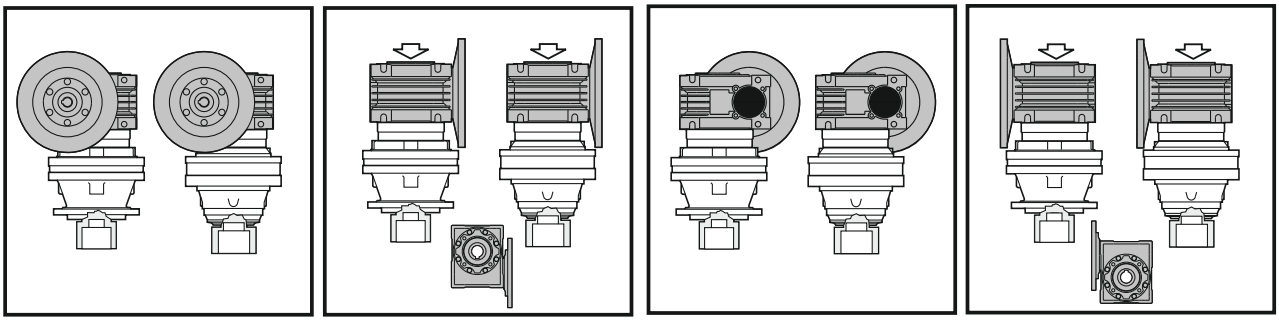
C25 C26 C27 C28

F



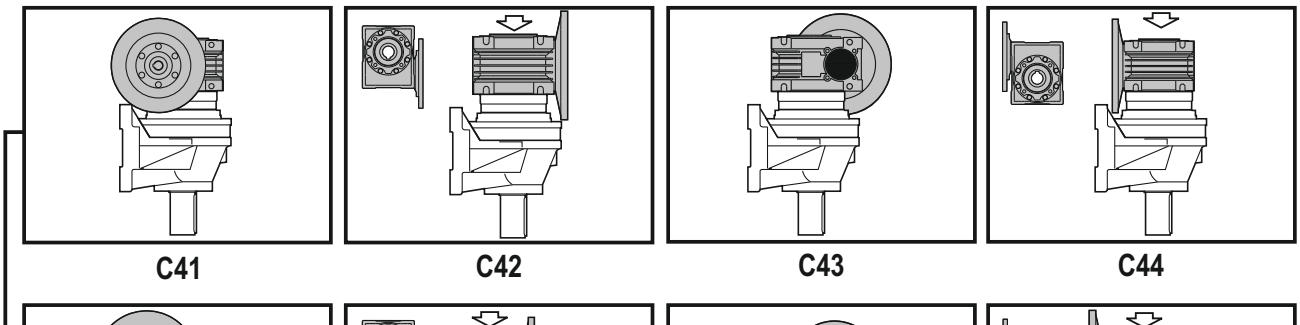
C25 C26 C27 C28

FS

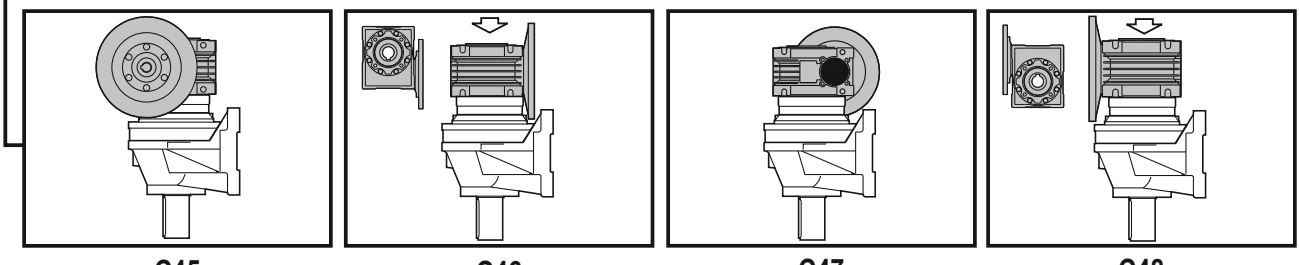


C25 C26 C27 C28

CPC



C41 C42 C43 C44



C45 C46 C47 C48

NRW® DRIVE TECHNOLOGIES

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

EN WORM GEARBOX ADAPTORS

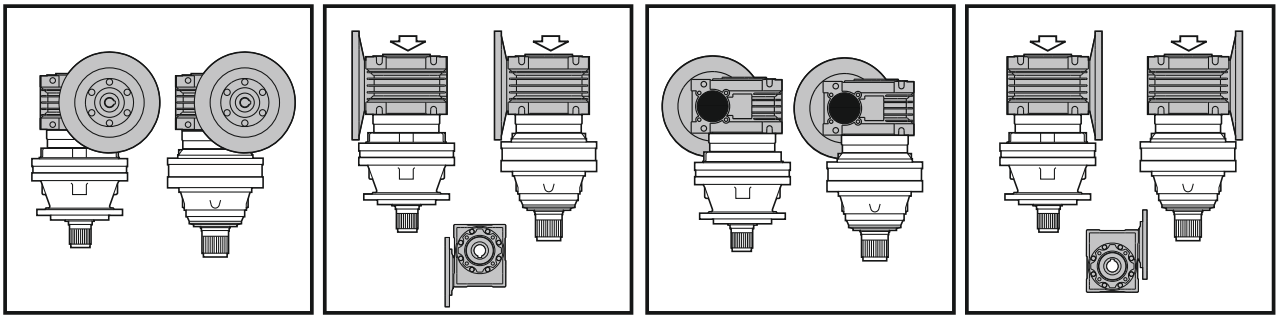
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

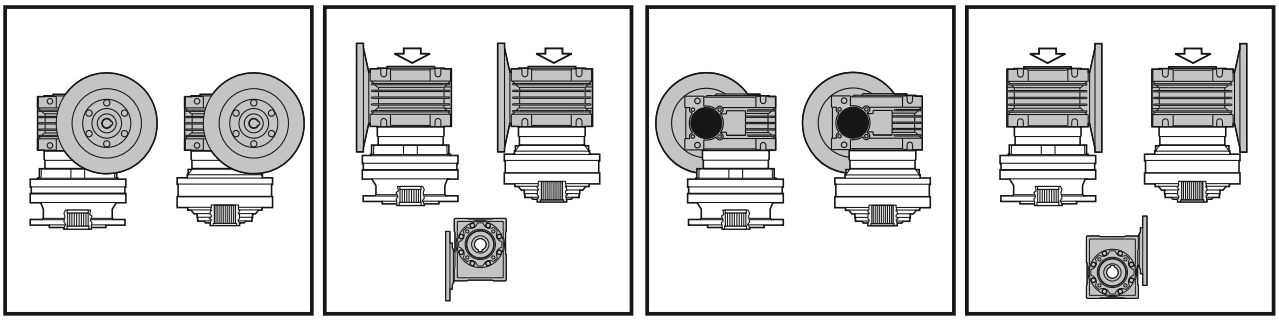
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

M-P



C29 C30 C31 C32

F



C29 C30 C31 C32

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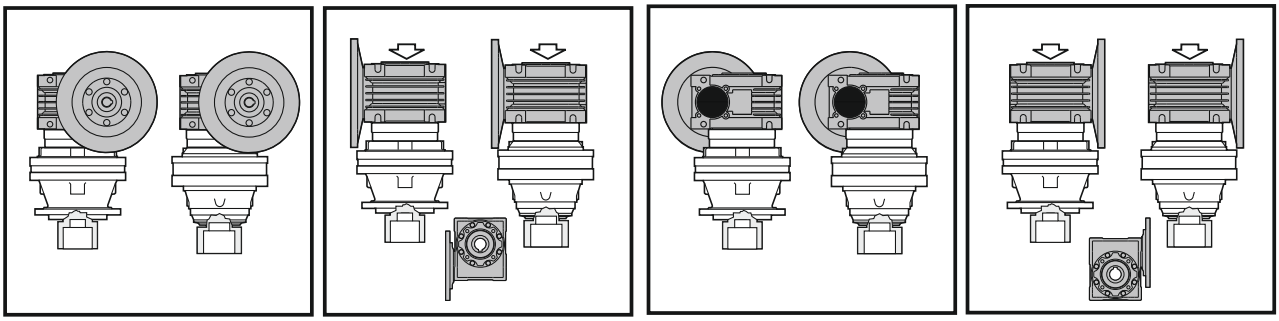

C29 C30 C31 C32

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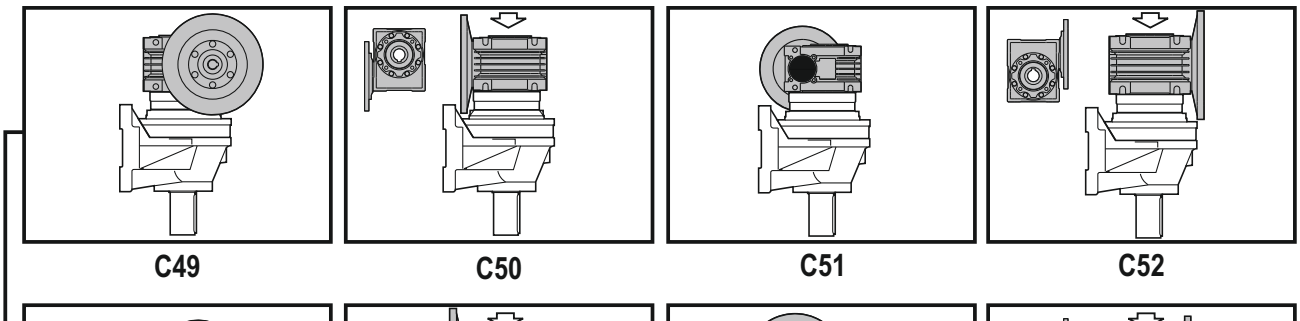
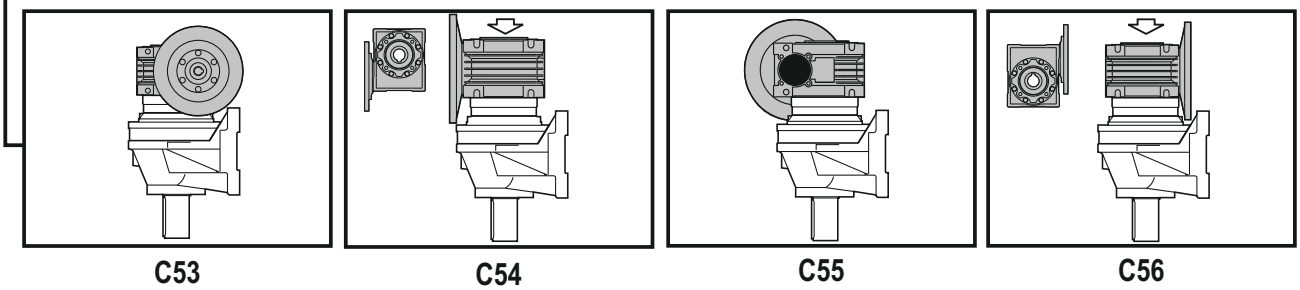


C49 C50 C51 C52



C53 C54 C55 C56

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

EN WORM GEARBOX ADAPTORS

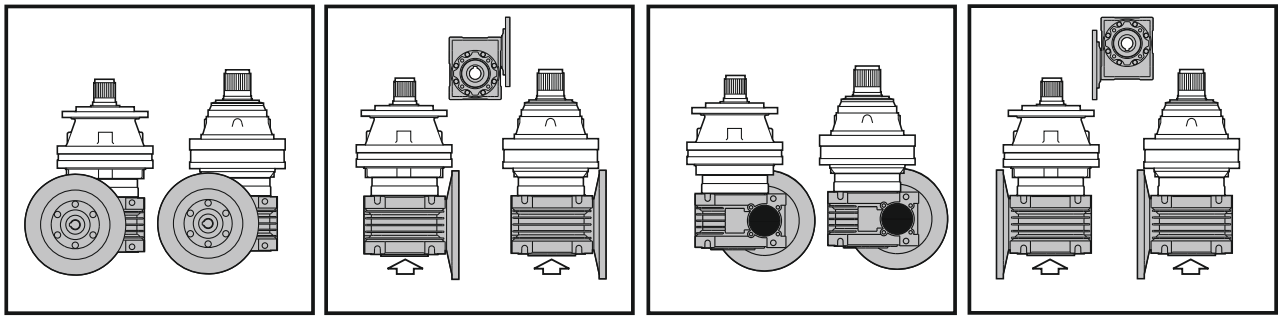
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

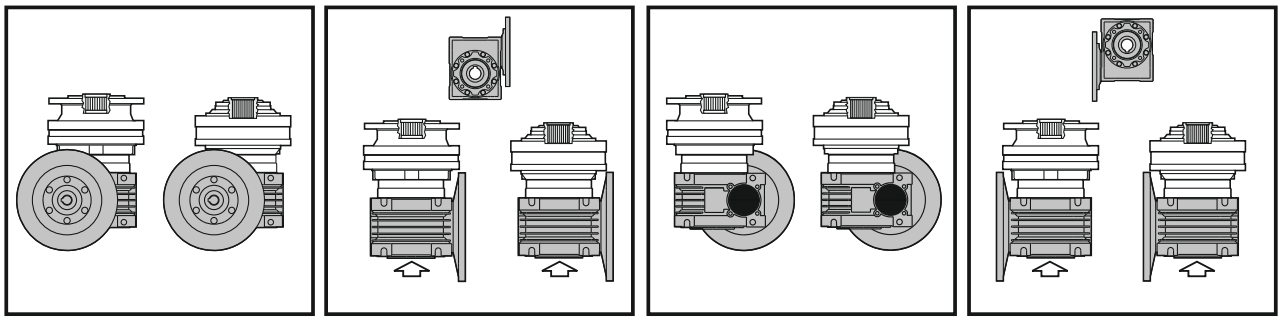
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

M-P



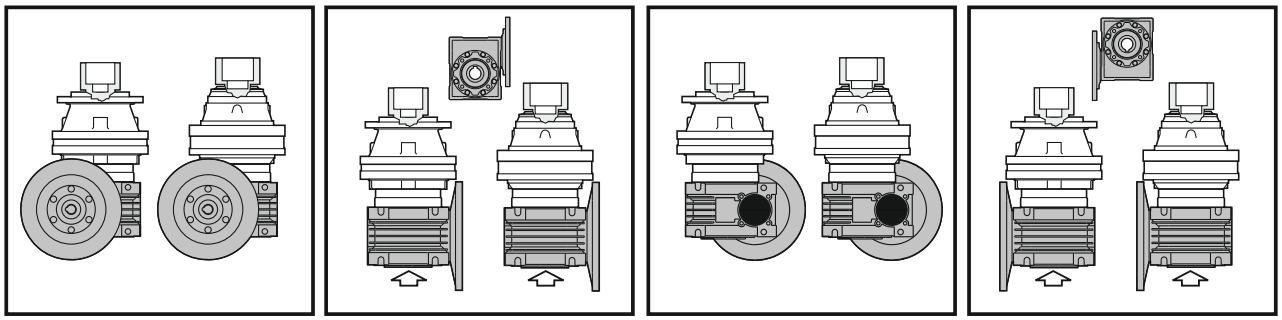
C33 C34 C35 C36

F



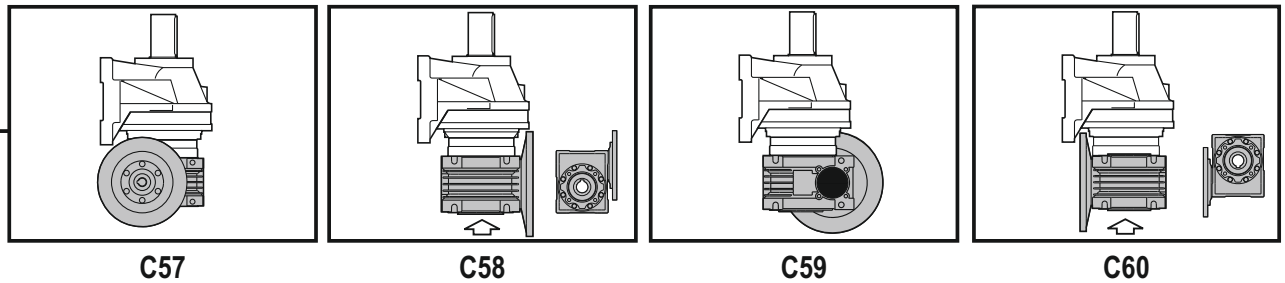
C33 C34 C35 C36

FS

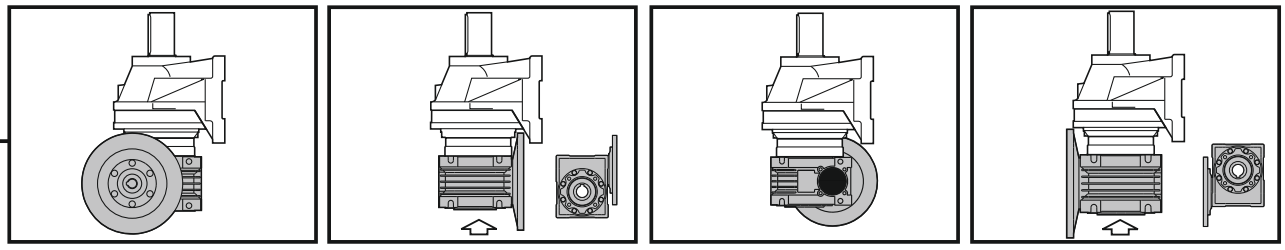


C33 C34 C35 C36

CPC



C57 C58 C59 C60



C61 C62 C63 C64

DE ANSCHLUSS FÜR SCHNECKENGETRIEBE

EN WORM GEARBOX ADAPTORS

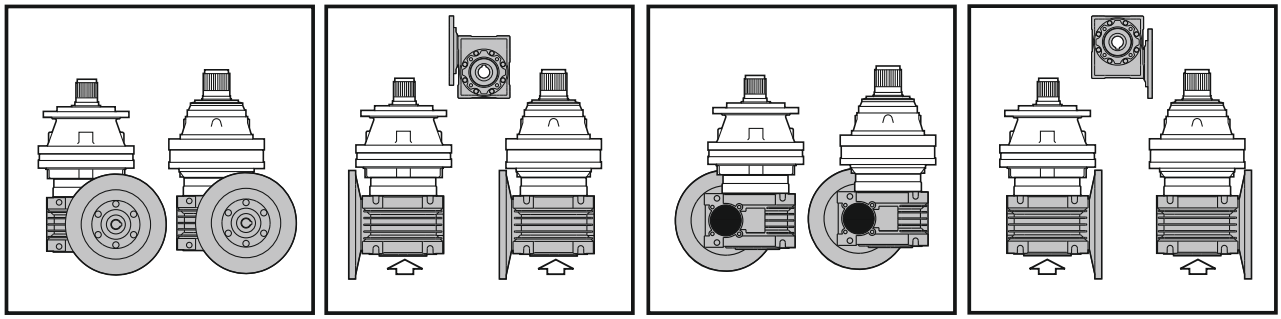
TR SONSUZ DİŞLİLİ REDÜKTÖR ADAPTÖRLERİ

IT PREDISPOSIZIONI PER RIDUTTORI A VITE SENZA FINE

FR ADAPTATION POUR REDUCTEURS A VIS SANS FIN

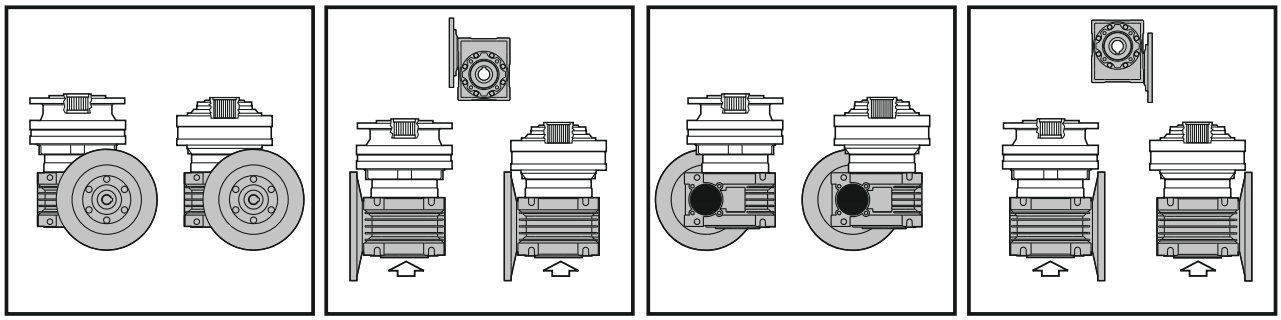
ES ACOPLAMIENTO PARA REDUCTORES DE TORNILLO SIN FIN

M-P



C37 C38 C39 C40

F



C37 C38 C39 C40

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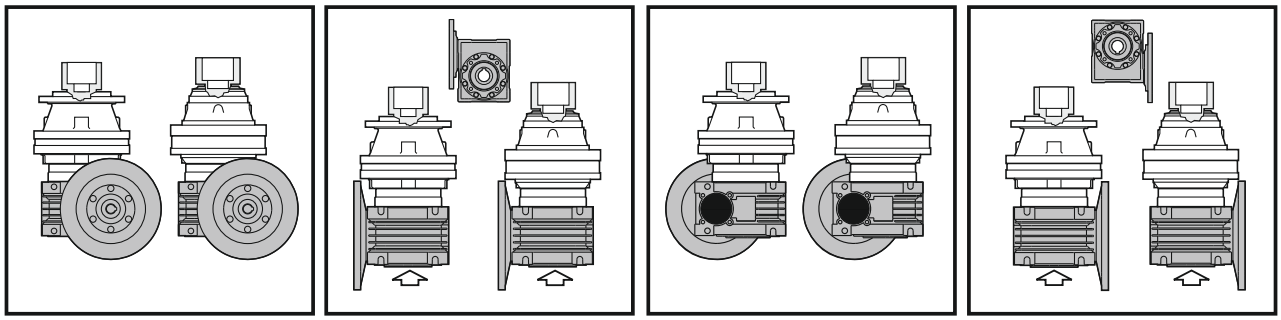
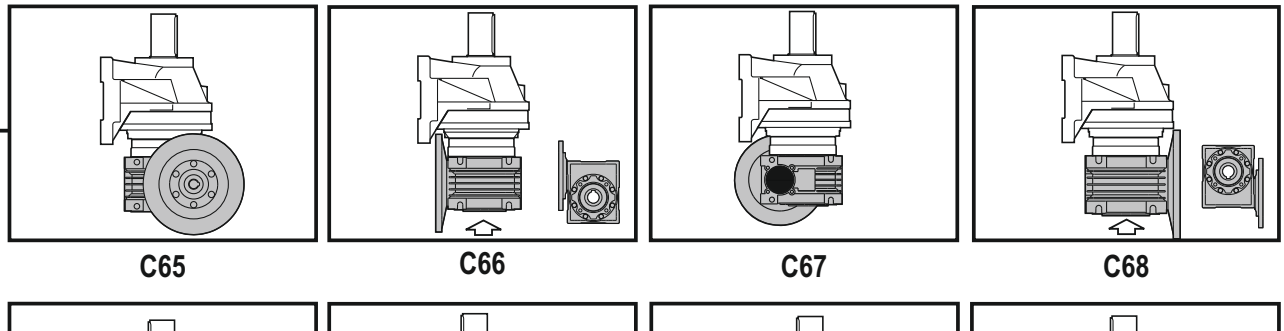
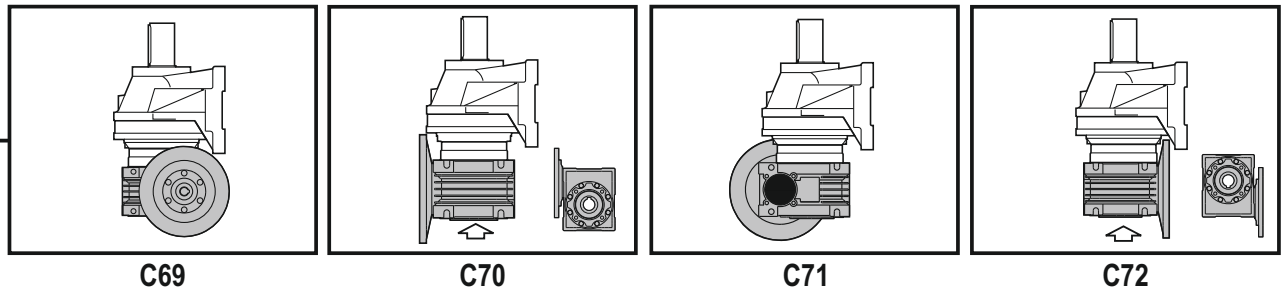


C37 C38 C39 C40

CPC



C65 C66 C67 C68



C69 C70 C71 C72

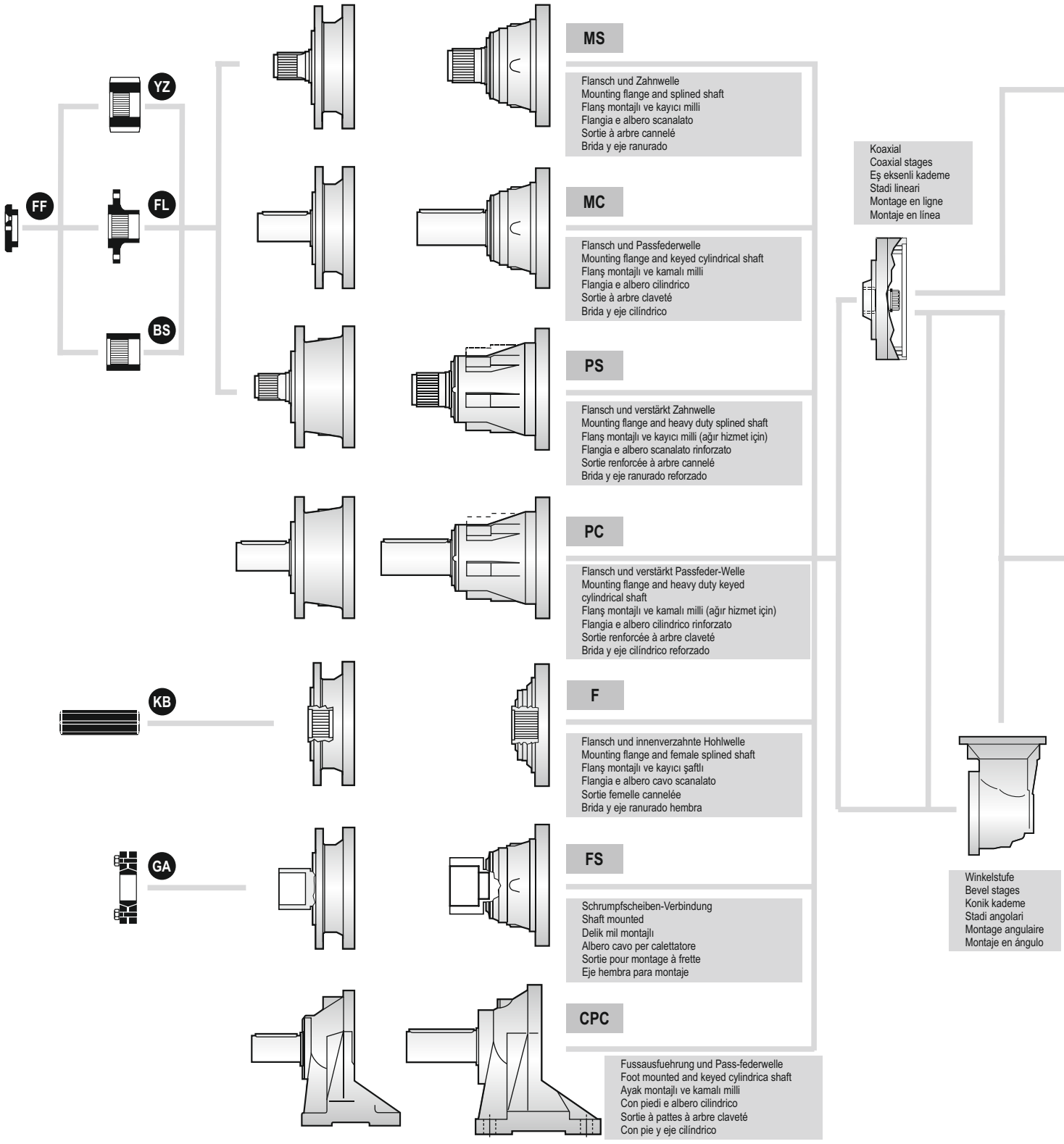
NRW® DRIVE TECHNOLOGIES

DE ABTRIEBSBAUTEILE	EN OUTPUT FITTINGS	TR ÇIKIŞ AKSESUARLARI
IT ACCESSORI USCITA	FR ACCESSOIRES DE SORTIE	ES ACCESORIOS DE SALIDA

ABTRIEBSBAUTEILE
OUTPUT FITTINGS
ÇIKIŞ BAĞLANTI PARÇALARI
ACCESSORI USCITA
ACCESSOIRES DE SORTIE
ACCESORIOS DE SALIDA

ABTRIEBSWELLEN
OUTPUT TYPES
ÇIKIŞ TİPİ
VERSIONI USCITA
TYPES DE SORTIE
VERSIONES DE SALIDA

PLANETENSTUFEN
TYPE OF REDUCTION UNIT
KADEME TİPİ
FORMA COSTRUTTIVA
TYPE DU REDUCTEUR
FORMA CONSTRUCTIVA



DE ANTRIEBSBAUTEILE

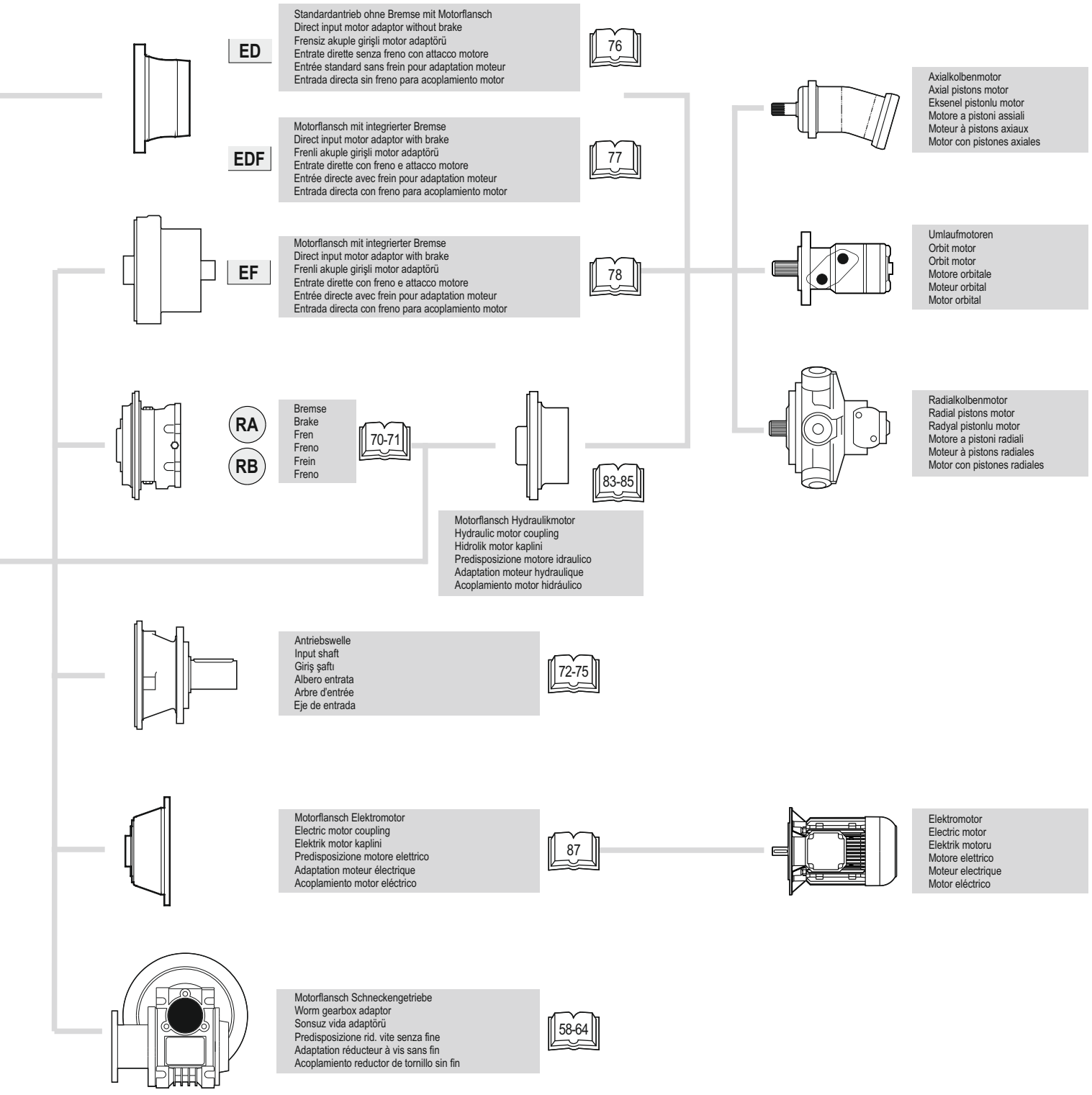
EN INPUT FITTINGS

TR GİRİŞ AKSESUARLARI

IT ACCESSORI ENTRATA

FR ACCESSOIRES D'ENTREE

ES ACCESORIOS DE ENTRADA



NRW® DRIVE TECHNOLOGIES

DE ANTRIEBSBAUTEILE	EN INPUT FITTINGS	TR GİRİŞ AKSESUARLARI
IT ACCESSORI ENTRATA	FR ACCESSOIRES D'ENTREE	ES ACCESORIOS DE ENTRADA

DE BREMSMODULE

Fuer die Planetary Drives - Planetengetriebe stehen hydraulische Federdruck-Lamellen bremsen zur Verfuegung. Diese sind ausschliesslich als statische Haltebremsen ausgelegt. Die Lamellen liegen im Oelb-ad, das vom Oelkreislauf des Getriebes getrennt ist. Deshalb ist beim Befuellen darauf zu achten, dass der Schmierstoff direkt in den Bremskoerper gegeben wird.
In der Regel koennen Hydraulikoele verwendet werden.
Empfohlener Schmierstoff: ISO VG 32.

EN MODULAR BRAKES

Planetary Drives planetary reduction units are equipped with hydraulic brakes with oil-bath disks, expressly designed for static or parking braking. The lubrication for the brakes is separated from the lubrication of the planetary gear units. Thus during the lubricant inlet phase, it is necessary to pour the fluid also into the brake through the proper hole mounted on its casing.
We suggest to use lubricant ISO VG 32 (however, hydraulic lubricants can be used as well).

TR MODÜLER FRENLER

Planet dişli üniteleri, yağ banyolu disklere sahip, özellikle statik veya manuel fren için tasarlanmış olan hidrolik frenler ile donatılmıştır. Frenlerin yağlaması, planet dişli ünitelerinin yağlamasından ayrı tutulmuştur. Böylece, yağ giriş aşamasında sıvının aynı zamanda gövdenin yanında yer alan uygun delik kullanılarak frene de doldurulması gerekmektedir.
ISO VG 32 yağı kullanmanızı tavsiye ederiz. (bununla birlikte, hidrolik yağlar da kullanılabilmektedir).

IT FRENI MODULARI

I freni in dotazione ai riduttori a epicicloidali Planetary Drives sono di tipo idraulico, con dischi a bagnod'olio, adatti esclusivamente alla fre natura statica, ovvero di parcheggio. I freni hanno la lubrificazione separata da quella del riduttore epicicloidale. In fase di immissione del lubrificante bisognerà quindi provvedere anche al riempimento del freno, mediante un apposito foro adduzione olio posto sullo stesso.
Il lubrificante consigliato è un ISO VG 32.
Normalmente possono andar bene gli olii idraulici.

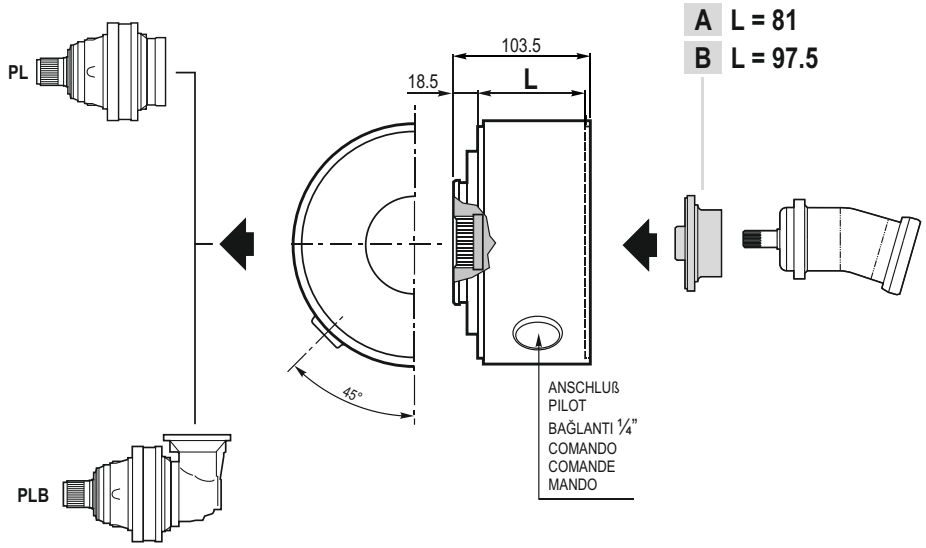
FR FREINS MODULAIRES

Les freins dont sont équipés les réducteurs planétaires Planetary Drives sont du type hydraulique, avec disques en bain d'huile, appropriés exclusivement pour le freinage statique, c'est à dire de stationnement. Les freins ont une lubrification séparée de celle du reducteur planétaire. Lors de l'introduction du lubrifiant, il est donc nécessaire d'introduire de l'huile par le trou pratiqué sur le corps du frein.
Il est conseillé d'utiliser du lubrifiant ISO VG 32 (on peut utiliser normalement des huiles hydrauliques).

ES FRENOS MODULARES

Los reductores epicicloidales Planetary Drives se suministran con frenos de tipo hidráulico, con discos sumergidos en baño de aceite, aptos exclusivamente para el frenado estático o sea, para el estacionamiento.
Los frenos tienen la lubricación separada del reductor epicicloidal. Por tanto, durante la introducción del lubricante también habrá que efectuar el llenado del freno, mediante el respectivo agujero de aducción de aceite que está en su carcasa.
Se aconseja uitizar el lubricante ISO VG 32 (también se pueden utilizar los aceites hidráulicos).

	RA		RA
PL 1000	1-2-3-4	PLB 1000	2-3-4
PL 1600	1-2-3-4	PLB 1600	2-3-4
PL 2500	1-2-3-4	PLB 2500	2-3-4
PL 5000	1-2-3-4	PLB 5000	2-3-4
PL 7000	2-3-4	PLB 7000	2-3-4
PL 10000	2-3-4	PLB 10000	2-3-4
PL 16000	2-3-4	PLB 16000	2-3-4
PL 18000	3-4	PLB 18000	3-4
PL 25000	3-4	PLB 25000	3-4
PL 30000	3-4	PLB 30000	3-4
PL 35000	3-4	PLB 35000	3-4
PL 50000	3-4	PLB 50000	3-4
PL 65000	4	PLB 65000	4
PL 90000	4	PLB 90000	4
PL 140000	4-5	PLB 140000	5
PL 180000	5	PLB 180000	5
PL 220000	5	PLB 220000	5
PL 340000	5	PLB 340000	5
PL 400000	5	PLB 400000	—
PL 550000	—	PLB 550000	—
PL 660000	—	PLB 660000	—



RA							
	Cfs_{min} [Nm]	Pa_{min} [bar]	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
RA 10	90	17	6074.000.500	300	0.4	0.2	14
RA 16	140	23	6074.001.500				
RA 25	220	19	6074.002.500				
RA 35	330	23	6074.003.500				
RA 45	430	33	6074.004.500				
RA 55	550	39	6074.006.500				

N.B. Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

N.B: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.

N.B: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

N.B: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.

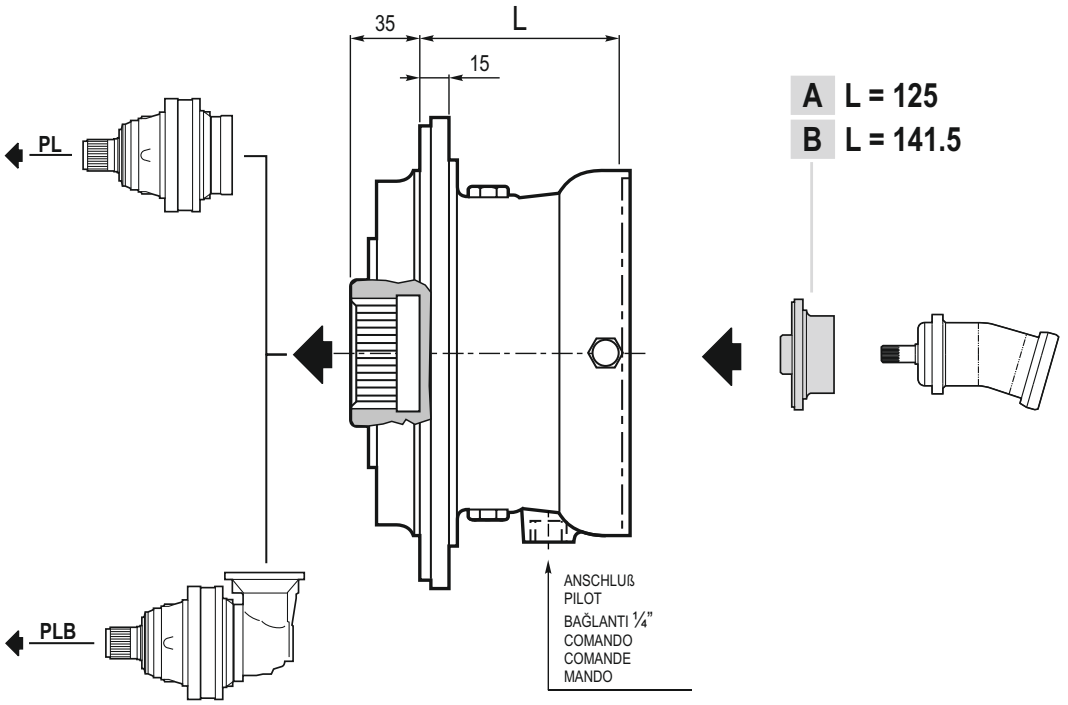
Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.

Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.

DE BREMSMODULE	EN MODULAR BRAKES
TR MODÜLER FRENLER	IT FRENI MODULARI
FR FREINS MODULAIRES	ES FRENOS MODULARES

	RB
PL 1000	—
PL 1600	—
PL 2500	1
PL 5000	1
PL 7000	1-2
PL 10000	1-2
PL 16000	1-2
PL 18000	2-3
PL 25000	2-3
PL 30000	2-3
PL 35000	2-3
PL 50000	2-3
PL 65000	3-4
PL 90000	3-4
PL 140000	3-4
PL 180000	3-4
PL 220000	3-4
PL 340000	4-5
PL 400000	4-5
PL 550000	4-5
PL 660000	4-5

	RB
PLB 1000	—
PLB 1600	—
PLB 2500	—
PLB 5000	—
PLB 7000	—
PLB 10000	—
PLB 16000	—
PLB 18000	2
PLB 25000	2
PLB 30000	—
PLB 35000	2-3
PLB 50000	2
PLB 65000	3
PLB 90000	3
PLB 140000	4
PLB 180000	4
PLB 220000	4
PLB 340000	4
PLB 400000	4-5
PLB 550000	4-5
PLB 660000	5



RB							
	Cfs_{min} [Nm]	Pa_{min} [bar]	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
RB 25	250	22	5074.300.500	300	0.6	0.3	1 2
RB 40	400	35	5074.301.500				
RB 63	650	50	5074.302.500				
RB 80	800	38	5074.303.500				
RB 100	1000	45	5074.304.500				
RB 125	1250	45	5074.305.500				
RB 160	1500	45	5074.306.500				
RB 180	1700	50	5074.307.500				

N.B. Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

N.B: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.

N.B: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

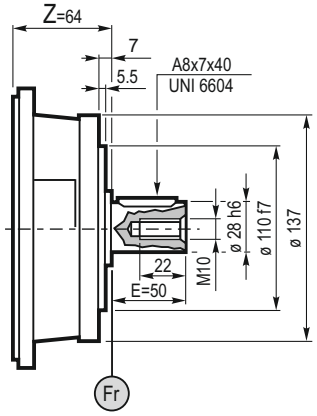
N.B: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.

Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.

Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.

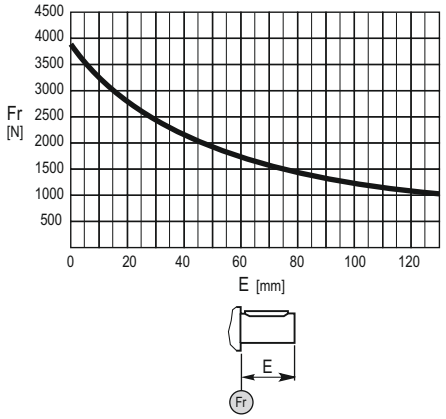
DE	ANTRIEBSWELLEN	EN	INPUT SHAFTS	TR	GİRİŞ ŞAFTLARI
IT	ALBERI ENTRATA	FR	ARBRES D'ENTREE	ES	EJES DE ENTRADA

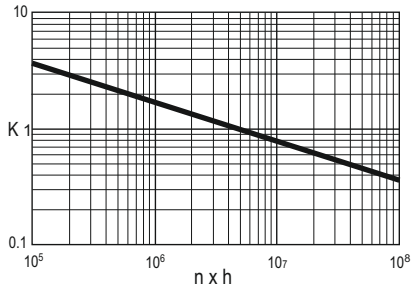
EL C 28



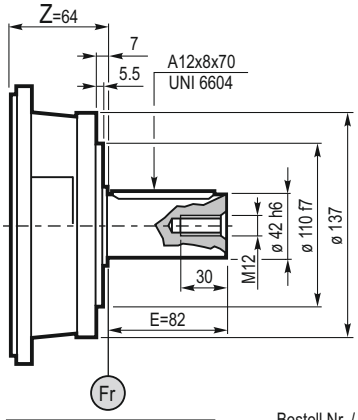
Gewicht / Weight / Ağırlık / Peso / Poids / Peso	5.5 kg

Bestell Nr. / Code / Kod / Codice / Code / Código
8074.517.400



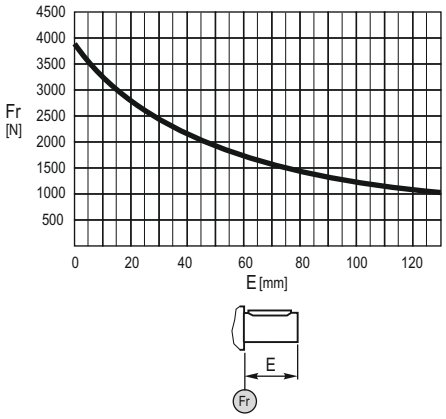


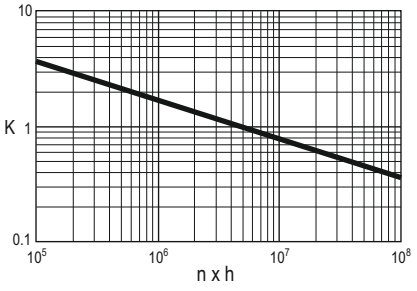
EL C 42



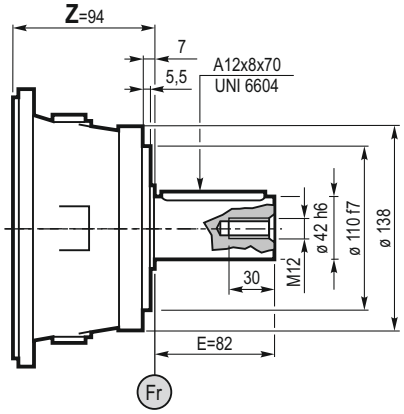
Gewicht / Weight / Ağırlık / Peso / Poids / Peso	6.0 kg

Bestell Nr. / Code / Kod / Codice / Code / Código
8074.507.400



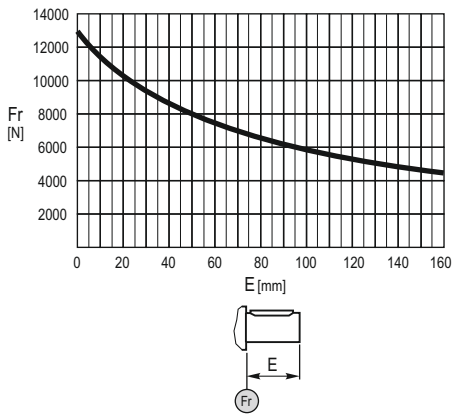


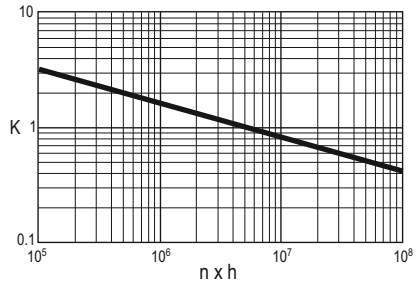
EML42



Gewicht / Weight / Ağırlık / Peso / Poids / Peso	9.0 kg

Bestell Nr. / Code / Kod / Codice / Code / Código
8074.505.400

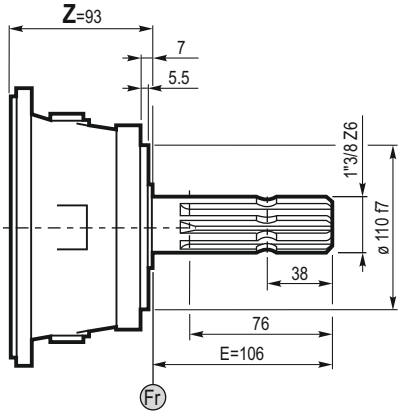


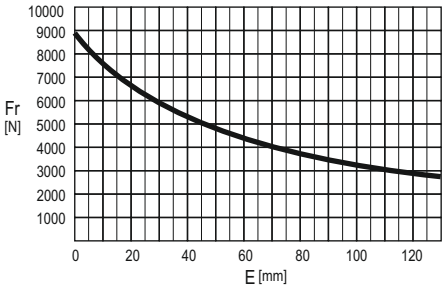


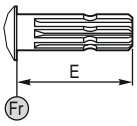
Das Mass Z wird in der entsprechenden Tabelle auf der Seite 75 festgestellt.
Z dimensions have to be verified in the table on page 75.
Z ölçüleri sayfa 75'deki tablodan doğrulanması gerekmektedir.
Le dimensioni Z riportate vanno verificate con la tabella a pag. 75.
Les dimensions de Z sont à verifier dans le tableau à page 75.
Las dimensiones Z indicadas tienen que verificarse con la tabla de la Pág. 75.

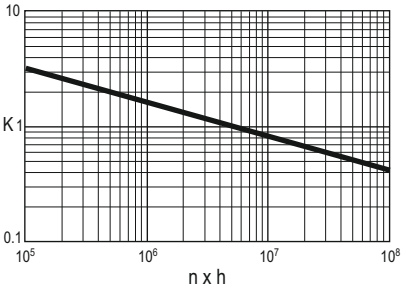
DE ANTRIEBSWELLEN	EN INPUT SHAFTS	TR GİRİŞ ŞAFTLARI
IT ALBERI ENTRATA	FR ARBRES D'ENTREE	ES EJES DE ENTRADA

EML1"3/8 Z=6





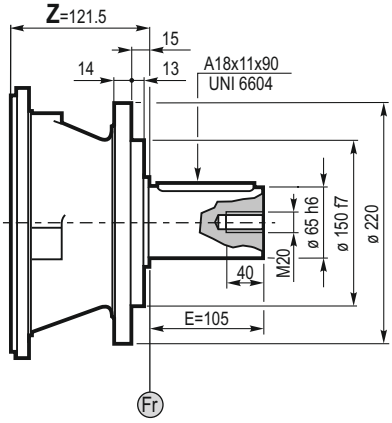


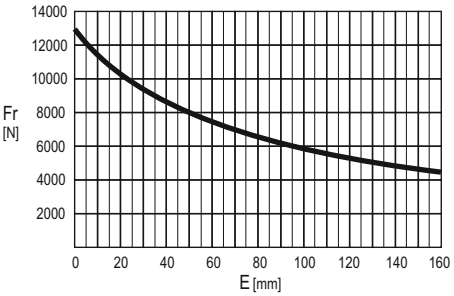


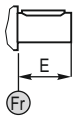
Gewicht / Weight / Ağırlık / Peso / Poids / Peso	9.0 kg

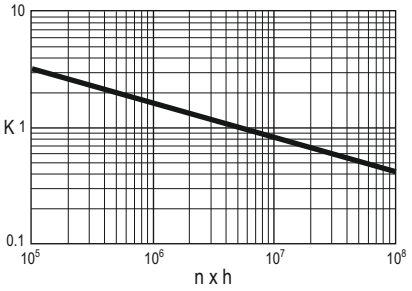
Bestell Nr. / Code / Kod / Codice / Code / Código
8074.508.400

EM65





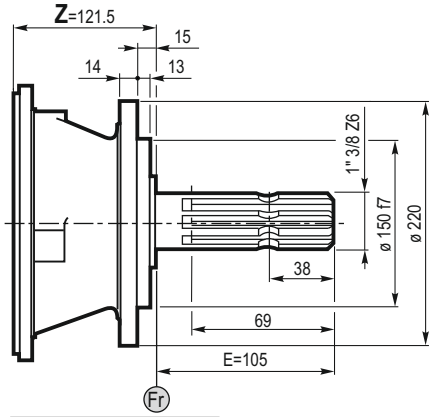


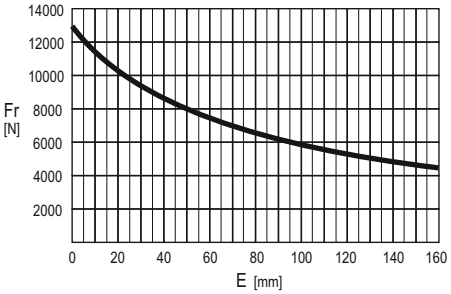


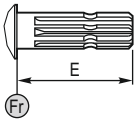
Gewicht / Weight / Ağırlık / Peso / Poids / Peso	**17 kg**

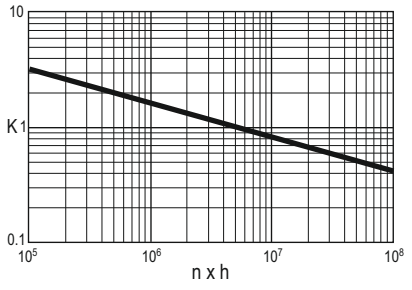
Bestell Nr. / Code / Kod / Codice / Code / Código
2174.501.400 (size < 10000)
4174.501.400 (size > 10000)

EM1"3/8 Z=6









Gewicht / Weight / Ağırlık / Peso / Poids / Peso	**17 kg**

Bestell Nr. / Code / Kod / Codice / Code / Código
2174.505.400 (size < 10000)
4174.504.400 (size > 10000)

Das Mass Z wird in der entsprechenden Tabelle auf der Seite 75 festgestellt.
Z dimensions have to be verified in the table on page 75.
Z ölçüleri sayfa 75'deki tablodan doğrulanması gerekmektedir.
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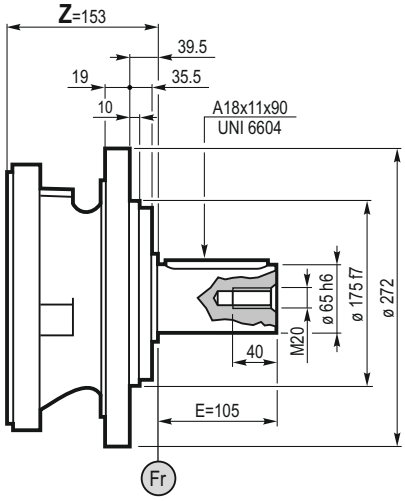
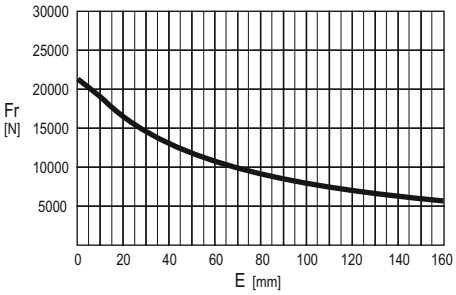
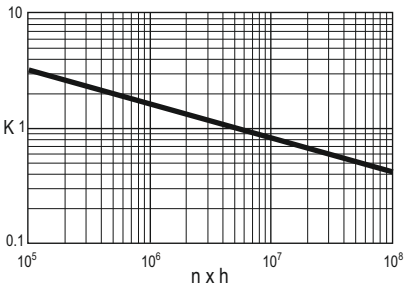
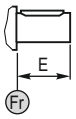
DE ANTRIEBSWELLEN	EN INPUT SHAFTS	TR GİRİŞ ŞAFTLARI
IT ALBERI ENTRATA	FR ARBRES D'ENTREE	ES EJES DE ENTRADA

EP65





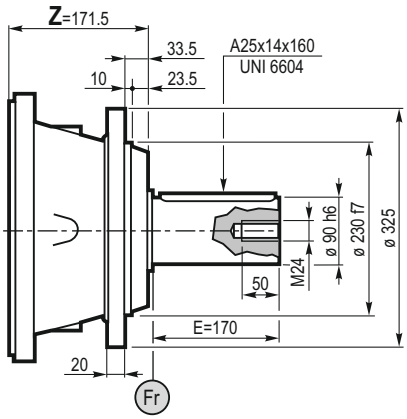


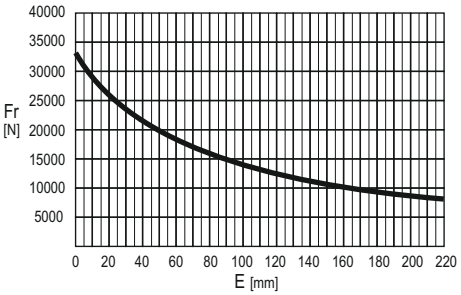


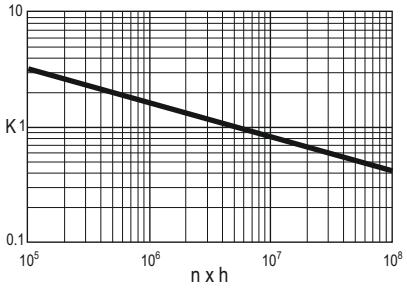
Gewicht / Weight / Ağırlık / Peso / Poids / Peso	26 kg

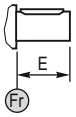
Bestell Nr./ Code
Kod / Codice
Code / Código
Nr. **2174.503.400 (size < 10000)**
Nr. **4174.503.400 (size > 10000)**

ET90









Gewicht / Weight / Ağırlık / Peso / Poids / Peso	48 kg

Bestell Nr. / Code
Kod / Codice
Code / Código
Nr. **6174.500.400 (size < 25000)**
Nr. **7174.500.400 (size > 25000)**

Das Mass Z wird in der entsprechenden Tabelle auf der Seite 75 festgestellt.
Z dimensions have to be verified in the table on page 75.
Z ölçüleri sayfa 75'deki tablodan doğrulanması gerekmektedir.
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Les dimensions de Z sont à verifier dans le tableau à page 75.
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DE ANTRIEBSWELLEN

EN INPUT SHAFTS

TR GİRİŞ ŞAFTLARI

IT ALBERI ENTRATA

FR ARBRES D'ENTREE

ES EJES DE ENTRADA

	EL - EML	EM - EP		ET		
	Z	Z	Z+13.5	Z	Z+15	Z+31
PL 1000	1-2-3-4	—	—	—	—	—
PL 1600	1-2-3-4	—	—	—	—	—
PL 2500	1-2-3-4	—	1	—	—	—
PL 5000	1-2-3-4	—	1	—	—	—
PL 7000	2-3-4	1	2	—	—	—
PL 10000	2-3-4	1	2	—	—	—
PL 16000	2-3-4	1	2	—	—	—
PL 18000	3-4	2	3	—	—	—
PL 25000	3-4	2	3	—	1	—
PL 30000	3-4	2	3	—	—	2
PL 35000	3-4	2	3	—	—	2
PL 50000	3-4	2	3	1	—	2
PL 65000	4	3	4	—	2	—
PL 90000	4	3	4	—	2	—
PL 140000	4-5	3	4	—	2	3
PL 180000	4-5	3	4	—	2	3
PL 220000	4-5	3	4	2	—	3
PL 340000	5	4	5	—	3	—
PL 400000	5	4	5	—	3	—
PL 550000	5	4	5	3	—	4
PL 660000	5	4	5	3	—	4

	EL - EML	EM - EP		ET
	Z	Z	Z+16	—
PLB 1000	2-3-4	—	—	—
PLB 1600	2-3-4	—	—	—
PLB 2500	2-3-4	—	2-3-4	—
PLB 5000	2-3-4	—	2-3-4	—
PLB 7000	2-3-4	—	2-3-4	—
PLB 10000	2-3-4	—	2-3-4	—
PLB 16000	2-3-4	—	2-3-4	—
PLB 18000	3-4	2	3-4	—
PLB 25000	3-4	2	3-4	—
PLB 30000	4	—	3-4	—
PLB 35000	4	2-3	4	—
PLB 50000	4	—	2-3-4	—
PLB 65000	4	2	3-4	—
PLB 90000	4	2	3-4	—
PLB 140000	5	4	5	—
PLB 180000	5	4	5	—
PLB 220000	5	4	5	—
PLB 340000	5	4	5	—
PLB 400000	—	4-5	—	—
PLB 550000	—	4-5	—	—
PLB 660000	—	5	—	—

N.B. Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

N.B: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.

N.B: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

N.B: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.

Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.

Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.

DE STANDARDANTRIEB OHNE BREMSE MIT MOTORFLANSCH

Die nachfolgenden Tabellen zeigen die Anbaumöglichkeiten der ED Antriebe an die Getriebe der Serien PL.

EN DIRECT INPUT MOTOR ADAPTOR WITHOUT BRAKE

The following tables show how to apply direct inputs ED on PL planetary gear units.

TR FRENSİZ MOTOR ADAPTÖRÜ

Aşağıdaki tablolar PL planet dişli ünitelerinde akuple girişli ED uygulamasını göstermektedir.

IT ENTRATE DIRETTE SENZA FRENO CON ATTACCO MOTORE

La tabella seguente indica l'applicabilità delle entrate dirette ED sui riduttori PL.

FR ENTRÉE STANDARD SANS FREIN POUR ADAPTATION MOTEUR

Les tableaux ci-dessous montrent l'applicabilité des entrées standards ED aux réducteurs PL.

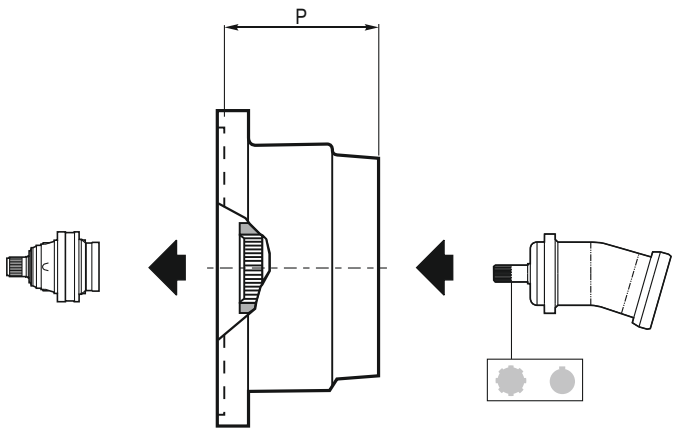
ES ENTRADAS DIRECTAS SIN FRENO PARA ACOPLAMIENTO MOTOR

Las siguientes tablas indican la factibilidad de aplicación de las entradas directas ED en los reductores PL.

	ED
PL 1000	1-2-3-4
PL 1600	1-2-3-4
PL 2500	2-3-4
PL 5000	2-3-4
PL 7000	3-4
PL 10000	3-4
PL 16000	3-4
PL 18000	4
PL 25000	4
PL 30000	4
PL 35000	4

	ED
PL 50000	4
PL 65000	—
PL 90000	—
PL 140000	5
PL 180000	5
PL 220000	5
PL 340000	—
PL 400000	—
PL 550000	—
PL 660000	—

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.
Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.
N.B.: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.
N.B.: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.
Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.



ED		
	P	Bestell Nr. / Code Kod / Codice Code / Código
ED SAE A 2-4 F 16/32 DP 9TH	62	8074.550.700
ED SAE A 2-4 F 16/32 DP 13TH	62	8074.551.700
ED SAE A 2-4 F 12/24 DP 14TH	78	8074.552.700
ED SAE A 2-4 F 12/24 DP 14TH	78	8074.553.700
ED SAE A 2-4 F 1" 6B	62	8074.554.700
ED SAE A 2-4 F 1" 6B	78	8074.555.700
ED SAE A 2-4 F 25x22 DIN 5482	62	8074.556.700

ED		
	P	Bestell Nr. / Code Kod / Codice Code / Código
ED SAE A 2-4 F D. 19.5 CH 4.8	62	8074.530.700
ED SAE A 2-4 F D. 25 CH 8	62	8074.531.700
ED SAE A 2-4 F D. 25.4 CH 6.35	78	8074.532.700
ED SAE A 2-4 F D. 25.4 CH 6.35	62	8074.533.700
ED SAE A 2-4 F D. 31.75 CH 7.96	62	8074.534.700
ED SAE A 2-4 F D. 31.75 CH 7.96	78	8074.535.700
ED SAE A 2-4 F D. 32 CH 10	62	8074.536.700

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

Die nachfolgenden Tabellen zeigen die Anbaumöglichkeiten der EF - und EDF - Antriebe an die Getriebe der Serien PL und PLB.

EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

The following tables show how to apply direct inputs EDF, EF on PL, PLB planetary gear units.

TR FRENLİ MOTOR ADAPTÖRÜ

Aşağıdaki tablolar PL, PLB planet dişli ünitelerinde akuple girişli EDF, EF uygulamalarını göstermektedir.

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

Le tabelle seguenti indicano l'applicabilità delle entrate dirette EDF, EF sui riduttori PL, PLB.

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

Le tabelle seguenti indicano l'applicabilità delle entrate dirette EDF, EF sui riduttori PL, PLB.

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR

Las siguientes tablas indican la factibilidad de aplicación de las entradas directas EDF, EF en los reductores PL, PLB.

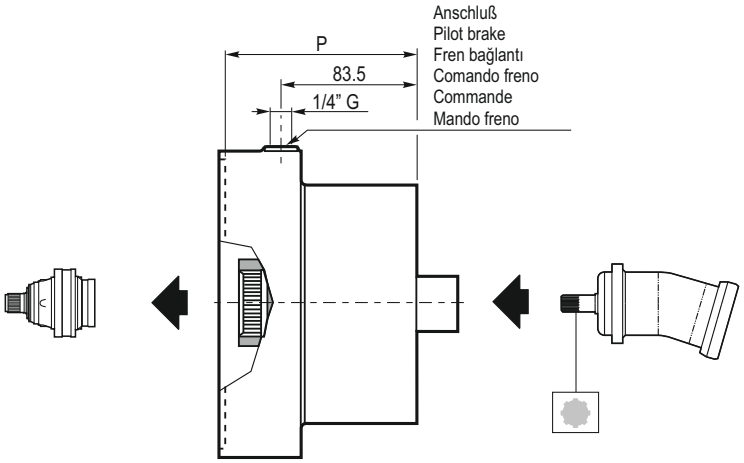
	EDF-EF
PL 1000	1-2-3-4
PL 1600	1-2-3-4
PL 2500	2-3-4
PL 5000	2-3-4
PL 7000	3-4
PL 10000	3-4
PL 16000	3-4
PL 18000	4
PL 25000	4
PL 30000	4
PL 35000	4

	EDF-EF
PL 50000	4
PL 65000	—
PL 90000	—
PL 140000	5
PL 180000	5
PL 220000	5
PL 340000	—
PL 400000	—
PL 550000	—
PL 660000	—

	EF
PLB 1000	2-3-4
PLB 1600	2-3-4
PLB 2500	2-3-4
PLB 5000	2-3-4
PLB 7000	2-3-4
PLB 10000	2-3-4
PLB 16000	2-3-4
PLB 18000	3-4
PLB 25000	3-4
PLB 30000	3-4
PLB 35000	4

	EF
PLB 50000	4
PLB 65000	4
PLB 90000	4
PLB 140000	5
PLB 180000	5
PLB 220000	5
PLB 340000	5
PLB 400000	—
PLB 550000	—
PLB 660000	—

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.
Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.
N.B.: i numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.
N.B.: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.
Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.



EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 per/for GLC-OMSS-HPRC	110	13	118	8074.100.710	300	0.3	0.15	20
EDF 16 per/for GLC-OMSS-HPRC	160	17	118	8074.101.710				
EDF 20 per/for GLC-OMSS-HPRC	220	23	118	8074.102.710				
EDF 25 per/for GLC-OMSS-HPRC	260	17	118	8074.103.710				
EDF 35 per/for GLC-OMSS-HPRC	360	17	118	8074.104.710				
EDF 45 per/for GLC-OMSS-HPRC	470	23	118	8074.105.710				
EDF 55 per/for GLC-OMSS-HPRC	600	27	118	8074.106.710				

EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 per/for EATON 2000 BEARINGLESS	110	13	118	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EDF 16 per/for EATON 2000 BEARINGLESS	160	17	118					
EDF 20 per/for EATON 2000 BEARINGLESS	220	23	118					
EDF 25 per/for EATON 2000 BEARINGLESS	260	17	118					
EDF 35 per/for EATON 2000 BEARINGLESS	360	17	118					
EDF 45 per/for EATON 2000 BEARINGLESS	470	23	118					
EDF 55 per/for EATON 2000 BEARINGLESS	600	27	118					

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

Die nachfolgenden Tabellen zeigen die Anbaumöglichkeiten der EDF und EF Antriebe an die Getriebe der Serien PL und PLB.

EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

The following tables show how to apply direct inputs EDF, EF on PL, PLB planetary gear units.

TR FRENLİ MOTOR ADAPTÖRÜ

Aşağıdaki tablolar PL, PLB planet dişli ünitelerinde akuple girişli EDF, EF uygulamalarını göstermektedir.

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

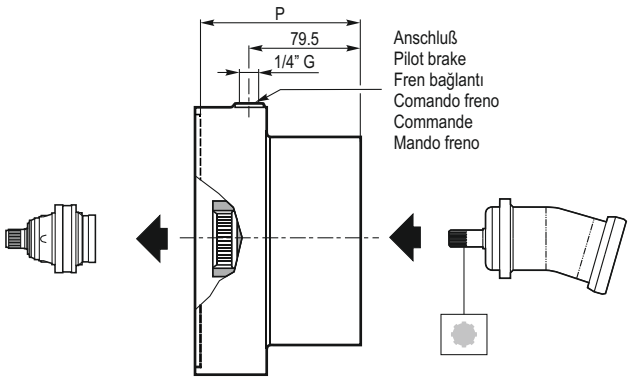
La tabella seguente indica l'applicabilità delle entrate dirette EDF, EF sui riduttori PL, PLB.

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

Le tableaux ci-dessous montrent l'applicabilité des entrées standards EDF, EF aux réducteurs PL, PLB.

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR

Las siguientes tablas indican la factibilidad de aplicación de las entradas directas EDF, EF en los reductores PL, PLB.



EDF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F 16/32 DP 9TH	110	13	114	Auf Anfrage / On request / İstenirse / A richiesta / Sur demande / Bajo demanda	300	0.3	0.15	20
EDF 16 SAE A 2-4 F 16/32 DP 9TH	160	17	114					
EDF 20 SAE A 2-4 F 16/32 DP 9TH	220	23	114					
EDF 25 SAE A 2-4 F 16/32 DP 9TH	260	17	114					
EDF 25 SAE A 2-4 F 16/32 DP 9TH	360	17	114					
EDF 45 SAE A 2-4 F 16/32 DP 9TH	470	23	114					
EDF 55 SAE A 2-4 F 16/32 DP 9TH	600	27	114					

EDF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F 16/32 DP 13TH	110	13	114	Auf Anfrage / On request / İstenirse / A richiesta / Sur demande / Bajo demanda	300	0.3	0.15	20
EDF 16 SAE A 2-4 F 16/32 DP 13TH	160	17	114					
EDF 20 SAE A 2-4 F 16/32 DP 13TH	220	23	114					
EDF 25 SAE A 2-4 F 16/32 DP 13TH	260	17	114					
EDF 35 SAE A 2-4 F 16/32 DP 13TH	360	17	114					
EDF 45 SAE A 2-4 F 16/32 DP 13TH	470	23	114					
EDF 55 SAE A 2-4 F 16/32 DP 13TH	600	27	114					

EDF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F 12/24 DP 14TH	110	13	114	Auf Anfrage / On request / İstenirse / A richiesta / Sur demande / Bajo demanda	300	0.3	0.15	20
EDF 16 SAE A 2-4 F 12/24 DP 14TH	160	17	114					
EDF 20 SAE A 2-4 F 12/24 DP 14TH	220	23	114					
EDF 25 SAE A 2-4 F 12/24 DP 14TH	260	17	114					
EDF 35 SAE A 2-4 F 12/24 DP 14TH	360	17	114					
EDF 45 SAE A 2-4 F 12/24 DP 14TH	470	23	114					
EDF 55 SAE A 2-4 F 12/24 DP 14TH	600	27	114					

EDF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F 1" 6B	110	13	114	8074.080.710	300	0.3	0.15	20
EDF 16 SAE A 2-4 F 1" 6B	160	17	114	8074.081.710				
EDF 20 SAE A 2-4 F 1" 6B	220	23	114	8074.082.710				
EDF 25 SAE A 2-4 F 1" 6B	260	17	114	8074.083.710				
EDF 35 SAE A 2-4 F 1" 6B	360	17	114	8074.084.710				
EDF 45 SAE A 2-4 F 1" 6B	470	23	114	8074.085.710				
EDF 55 SAE A 2-4 F 1" 6B	600	27	114	8074.086.710				

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

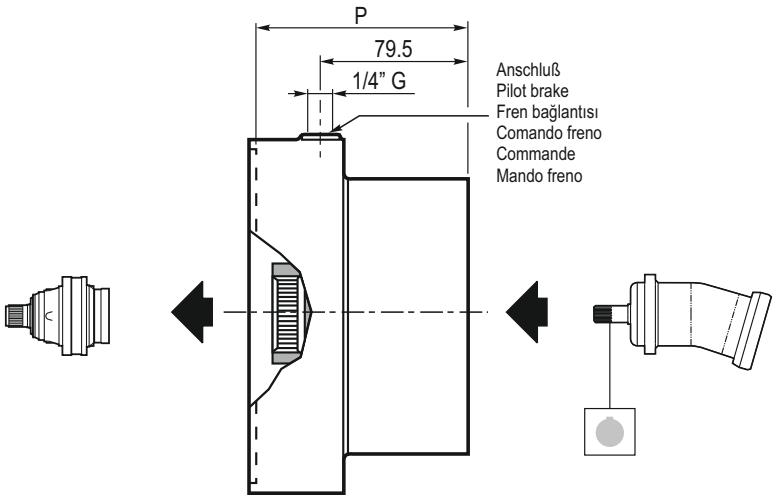
EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

TR FRENLİ MOTOR ADAPTÖRÜ

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR



EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F D. 25 CH 8	110	13	114	8074.010.710	300	0.3	0.15	20
EDF 16 SAE A 2-4 F D. 25 CH 8	160	17	114	8074.011.710				
EDF 20 SAE A 2-4 F D. 25 CH 8	220	23	114	8074.012.710				
EDF 25 SAE A 2-4 F D. 25 CH 8	260	17	114	8074.013.710				
EDF 35 SAE A 2-4 F D. 25 CH 8	360	17	114	8074.014.710				
EDF 45 SAE A 2-4 F D. 25 CH 8	470	23	114	8074.015.710				
EDF 55 SAE A 2-4 F D. 25 CH 8	600	27	114	8074.016.710				

EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F D. 25.4 CH 6.35	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EDF 16 SAE A 2-4 F D. 25.4 CH 6.35	160	17	114					
EDF 20 SAE A 2-4 F D. 25.4 CH 6.35	220	23	114					
EDF 25 SAE A 2-4 F D. 25.4 CH 6.35	260	17	114					
EDF 35 SAE A 2-4 F D. 25.4 CH 6.35	360	17	114					
EDF 45 SAE A 2-4 F D. 25.4 CH 6.35	470	23	114					
EDF 55 SAE A 2-4 F D. 25.4 CH 6.35	600	27	114					

EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F D. 31.75 CH 7.96	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EDF 16 SAE A 2-4 F D. 31.75 CH 7.96	160	17	114					
EDF 20 SAE A 2-4 F D. 31.75 CH 7.96	220	23	114					
EDF 25 SAE A 2-4 F D. 31.75 CH 7.96	260	17	114					
EDF 35 SAE A 2-4 F D. 31.75 CH 7.96	360	17	114					
EDF 45 SAE A 2-4 F D. 31.75 CH 7.96	470	23	114					
EDF 55 SAE A 2-4 F D. 31.75 CH 7.96	600	27	114					

EDF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P$_{max}$ [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EDF 10 SAE A 2-4 F D. 32 CH 10	110	13	114	8074.040.710	300	0.3	0.15	20
EDF 16 SAE A 2-4 F D. 32 CH 10	160	17	114	8074.041.710				
EDF 20 SAE A 2-4 F D. 32 CH 10	220	23	114	8074.042.710				
EDF 25 SAE A 2-4 F D. 32 CH 10	260	17	114	8074.043.710				
EDF 35 SAE A 2-4 F D. 32 CH 10	360	17	114	8074.044.710				
EDF 45 SAE A 2-4 F D. 32 CH 10	470	23	114	8074.045.710				
EDF 55 SAE A 2-4 F D. 32 CH 10	600	27	114	8074.046.710				

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

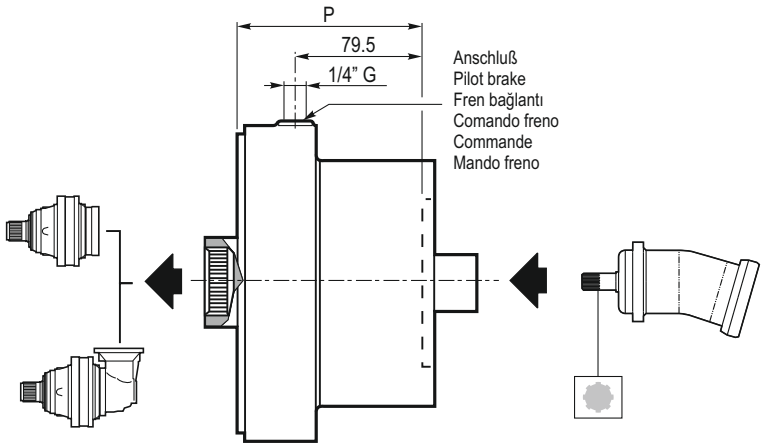
EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

TR FRENLİ MOTOR ADAPTÖRÜ

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR



EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 per/for GLC-OMSS-HPRC	110	13	118	2074.015.060	300	0.3	0.15	20
EF 16 per/for GLC-OMSS-HPRC	160	17	118	2074.015.061				
EF 20 per/for GLC-OMSS-HPRC	220	23	118	2074.015.062				
EF 25 per/for GLC-OMSS-HPRC	260	17	118	2074.015.063				
EF 35 per/for GLC-OMSS-HPRC	360	17	118	2074.015.064				
EF 45 per/for GLC-OMSS-HPRC	470	23	118	2074.015.065				
EF 55 per/for GLC-OMSS-HPRC	600	27	118	2074.015.066				

EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 per/for EATON 2000 BEARINGLESS	110	13	118	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 per/for EATON 2000 BEARINGLESS	160	17	118					
EF 20 per/for EATON 2000 BEARINGLESS	220	23	118					
EF 25 per/for EATON 2000 BEARINGLESS	260	17	118					
EF 35 per/for EATON 2000 BEARINGLESS	360	17	118					
EF 45 per/for EATON 2000 BEARINGLESS	470	23	118					
EF 55 per/for EATON 2000 BEARINGLESS	600	27	118					

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

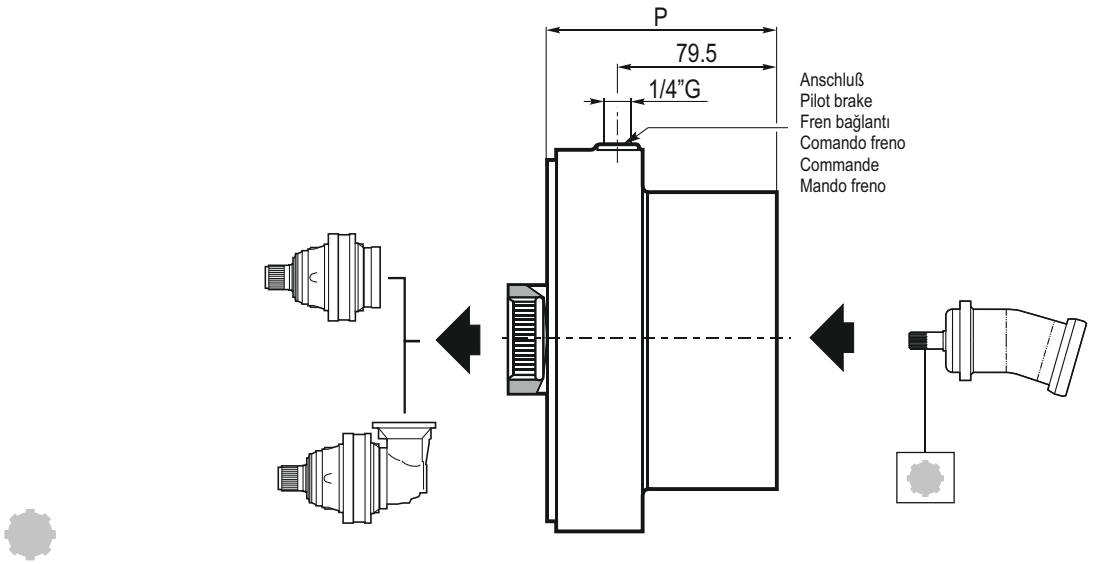
EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

TR FRENLİ MOTOR ADAPTÖRÜ

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR



EF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F 16/32 DP 9TH	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 SAE A 2-4 F 16/32 DP 9TH	160	17	114					
EF 20 SAE A 2-4 F 16/32 DP 9TH	220	23	114					
EF 25 SAE A 2-4 F 16/32 DP 9TH	260	17	114					
EF 35 SAE A 2-4 F 16/32 DP 9TH	360	17	114					
EF 45 SAE A 2-4 F 16/32 DP 9TH	470	23	114					
EF 55 SAE A 2-4 F 16/32 DP 9TH	600	27	114					

EF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F 16/32 DP 13TH	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 SAE A 2-4 F 16/32 DP 13TH	160	17	114					
EF 20 SAE A 2-4 F 16/32 DP 13TH	220	23	114					
EF 25 SAE A 2-4 F 16/32 DP 13TH	260	17	114					
EF 35 SAE A 2-4 F 16/32 DP 13TH	360	17	114					
EF 45 SAE A 2-4 F 16/32 DP 13TH	470	23	114					
EF 55 SAE A 2-4 F 16/32 DP 13TH	600	27	114					

EF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F 12/24 DP 14TH	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 SAE A 2-4 F 12/24 DP 14TH	160	17	114					
EF 20 SAE A 2-4 F 12/24 DP 14TH	220	23	114					
EF 25 SAE A 2-4 F 12/24 DP 14TH	260	17	114					
EF 35 SAE A 2-4 F 12/24 DP 14TH	360	17	114					
EF 45 SAE A 2-4 F 12/24 DP 14TH	470	23	114					
EF 55 SAE A 2-4 F 12/24 DP 14TH	600	27	114					

EF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F 1" 6B	110	13	114	2074.015.040	300	0.3	0.15	20
EF 16 SAE A 2-4 F 1" 6B	160	17	114	2074.015.041				
EF 20 SAE A 2-4 F 1" 6B	220	23	114	2074.015.042				
EF 25 SAE A 2-4 F 1" 6B	260	17	114	2074.015.043				
EF 35 SAE A 2-4 F 1" 6B	360	17	114	2074.015.044				
EF 45 SAE A 2-4 F 1" 6B	470	23	114	2074.015.045				
EF 55 SAE A 2-4 F 1" 6B	600	27	114	2074.015.046				

NRW® DRIVE TECHNOLOGIES

DE MOTORFLANSCH MIT INTEGRIERTER BREMSE

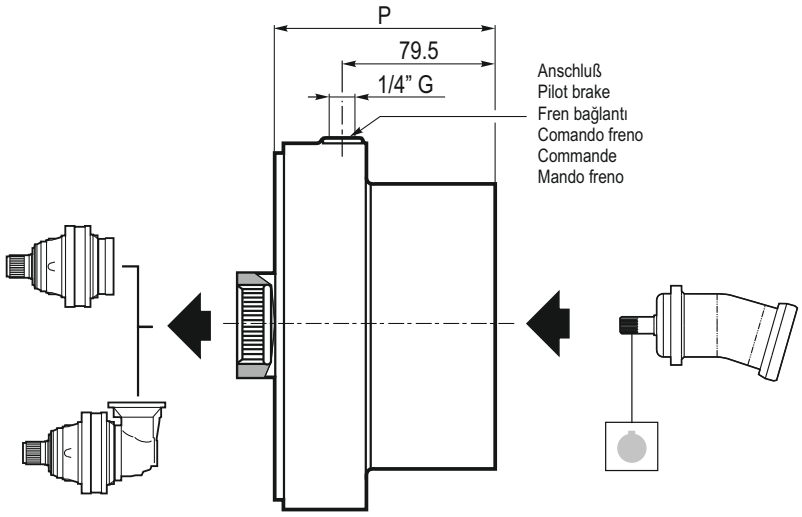
EN DIRECT INPUT MOTOR ADAPTOR WITH BRAKE

TR FRENLİ MOTOR ADAPTÖRÜ

IT ENTRATE DIRETTE CON FRENO E ATTACCO MOTORE

FR ENTRÉE DIRECTE AVEC FREIN POUR ADAPTATION MOTEUR

ES ENTRADAS DIRECTAS CON FRENO PARA ACOPLAMIENTO MOTOR



EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F D. 25 CH 8	110	13	114	2074.014.010	300	0.3	0.15	20
EF 16 SAE A 2-4 F D. 25 CH 8	160	17	114	2074.014.011				
EF 20 SAE A 2-4 F D. 25 CH 8	220	23	114	2074.014.012				
EF 25 SAE A 2-4 F D. 25 CH 8	260	17	114	2074.014.013				
EF 35 SAE A 2-4 F D. 25 CH 8	360	17	114	2074.014.014				
EF 45 SAE A 2-4 F D. 25 CH 8	470	23	114	2074.014.015				
EF 55 SAE A 2-4 F D. 25 CH 8	600	27	114	2074.014.016				

EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F D. 25.4 CH 6.35	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 SAE A 2-4 F D. 25.4 CH 6.35	160	17	114					
EF 20 SAE A 2-4 F D. 25.4 CH 6.35	220	23	114					
EF 25 SAE A 2-4 F D. 25.4 CH 6.35	260	17	114					
EF 35 SAE A 2-4 F D. 25.4 CH 6.35	360	17	114					
EF 45 SAE A 2-4 F D. 25.4 CH 6.35	470	23	114					
EF 55 SAE A 2-4 F D. 25.4 CH 6.35	600	27	114					

EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F D. 31.75 CH 7.96	110	13	114	Auf Anfrage On request İstenirse A richiesta Sur demande Bajo demanda	300	0.3	0.15	20
EF 16 SAE A 2-4 F D. 31.75 CH 7.96	160	17	114					
EF 20 SAE A 2-4 F D. 31.75 CH 7.96	220	23	114					
EF 25 SAE A 2-4 F D. 31.75 CH 7.96	260	17	114					
EF 35 SAE A 2-4 F D. 31.75 CH 7.96	360	17	114					
EF 45 SAE A 2-4 F D. 31.75 CH 7.96	470	23	114					
EF 55 SAE A 2-4 F D. 31.75 CH 7.96	600	27	114					

EF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Bestell Nr. / Code Kod / Codice Code / Código	P_{max} [bar]	OIL [lt] V1	OIL [lt] B5	Kg
EF 10 SAE A 2-4 F D. 32 CH 10	110	13	114	2074.014.040	300	0.3	0.15	20
EF 16 SAE A 2-4 F D. 32 CH 10	160	17	114	2074.014.041				
EF 20 SAE A 2-4 F D. 32 CH 10	220	23	114	2074.014.042				
EF 25 SAE A 2-4 F D. 32 CH 10	260	17	114	2074.014.043				
EF 35 SAE A 2-4 F D. 32 CH 10	360	17	114	2074.014.044				
EF 45 SAE A 2-4 F D. 32 CH 10	470	23	114	2074.014.045				
EF 55 SAE A 2-4 F D. 32 CH 10	600	27	114	2074.014.046				

DE ANBAUVORRICHTUNG FUER HYDRAULIKMOTORE

EN HIDRAULIC MOTOR COUPLINGS

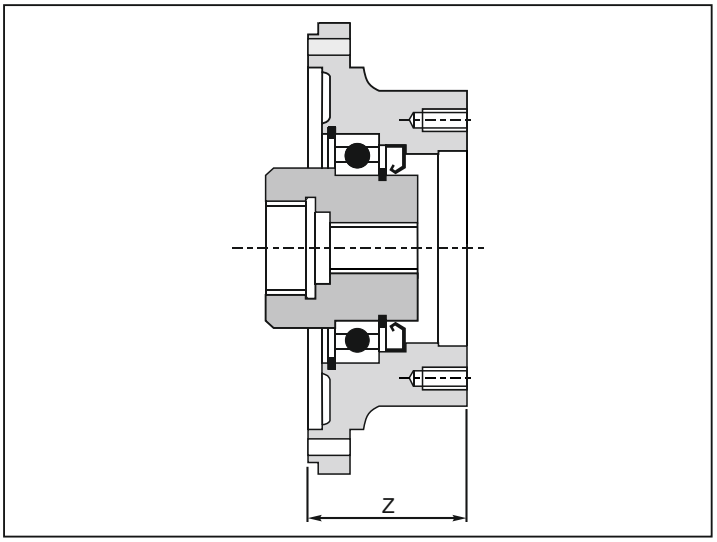
TR HİDROLİK MOTOR KAPLİNLERİ

IT PREDISPOSIZIONI PER MOTORI IDRAULICI

FR ADAPTATIONS POUR MOTEURS HYDRAULIQUE

ES ACOPLAMIENTOS PARA MOTORES HIDRÁULICOS

	A	B		C	D	
	Z	Z	Z+13.5	Z+15	Z	Z+31
PL 1000	1-2-3-4	—	—	—	—	—
PL 1600	1-2-3-4	—	—	—	—	—
PL 2500	1-2-3-4	—	1	—	—	—
PL 5000	1-2-3-4	—	1	—	—	—
PL 7000	2-3-4	1	2	—	—	—
PL 10000	2-3-4	1	2	—	—	—
PL 16000	2-3-4	1	2	—	—	—
PL 18000	3-4	2	3	—	—	—
PL 25000	3-4	2	3	1	—	—
PL 30000	3-4	2	3	—	—	2
PL 35000	3-4	2	3	—	—	2
PL 50000	3-4	2	3	—	1	2
PL 65000	4	3	4	2	—	—
PL 90000	4	3	4	2	—	—
PL 140000	4-5	3	4	2	—	3
PL 180000	4-5	3	4	2	—	3
PL 220000	4-5	3	4	—	2	3
PL 340000	5	4	5	3	—	—
PL 400000	5	4	5	3	—	—
PL 550000	5	4	5	—	3	4
PL 660000	5	4	5	—	3	4



AXIAL PUMP			
Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
M2-AMVCS 34-40-50-55 16/32 DP TH13	52	2074.013.001	A
M2-AMVCS 34-40-50-55 16/32 DP TH15	52	2074.013.003	
AMF 24-34-55 25x22 DIN5482	81	2074.013.070	
AMF 55 30x27 DIN5482	81	2074.013.060	

	A	B		C	D
	Z	Z	Z+16		
PLB 1000	2-3-4	—	—	—	—
PLB 1600	2-3-4	—	—	—	—
PLB 2500	2-3-4	—	2-3-4	—	—
PLB 5000	2-3-4	—	2-3-4	—	—
PLB 7000	2-3-4	—	2-3-4	—	—
PLB 10000	2-3-4	—	2-3-4	—	—
PLB 16000	2-3-4	—	2-3-4	—	—
PLB 18000	3-4	2	3-4	—	—
PLB 25000	3-4	2	3-4	—	—
PLB 30000	3-4	—	3-4	—	—
PLB 35000	4	2-3	4	—	—
PLB 50000	4	—	2-3-4	—	—
PLB 65000	4	—	3-4	—	—
PLB 90000	4	—	3-4	—	—
PLB 140000	5	4	5	—	—
PLB 180000	5	4	5	—	—
PLB 220000	5	4	5	—	—
PLB 340000	5	4	5	—	—
PLB 400000	—	4-5	—	—	—
PLB 550000	—	4-5	—	—	—
PLB 660000	—	5	—	—	—

GEOLINK			
Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
GHL/GFS/GFS Æ 25 CH8	61.5	2074.012.012	A
GHL/GFS/GFS Æ 25.4 CH6.35	61.5	2074.012.014	
GHL/GFS/GFS SAE 1"6B	61.5	2074.013.013	
GHL/GFS/GFS 25x22 DIN 5482 TH14	61.5	2074.013.011	
GLS Ø32 CH10	77.5	2074.012.019	
GLC 12/24 DP TH12	38	2074.013.006	
GWS/GWP/GWR - **ED**	61	8074.502.700	
GWS/GWP/GWR - **EDF**	61	8074.505.700	

SAUER - DANFOSS			
Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
OMM Ø16 CH5	70.5	2074.012.035	A
OMP - OMR Ø 25 CH8	61.5	2074.012.012	
OMP - OMR Ø 25.4 CH6.35	61.5	2074.012.014	
OMP - OMR SAE 1"6B	61.5	2074.013.013	
OMS Ø 32 CH10	77.5	2074.012.019	
OMS 12/24 DP TH14	77.5	2074.013.039	
OMSS 12/24 DP TH12	38	2074.013.006	
OMT Ø40 CH12	134	2074.012.031	
OMTS 12/24 DP TH16	78	2074.013.032	

N.B.: Die ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.
Not: 1-2-3-4-5 rakamları planet dişli ünitesinin kademe sayısını göstermektedir.
N.B.: I numeri 1-2-3-4-5 indicano il numero di stadi dei riduttori.
N.B.: Les numéros 1-2-3-4-5 indiquent le nombre d'étages des réducteurs.
Nota: Los números 1-2-3-4-5 indican el número de etapas de los reductores.

Das Mass Z wird in den entsprechenden Tabellen auf dieser Seite festgestellt.
Z dimensions have to be verified in the tables of this page.
Z ölçüleri bu sayfadaki tablolardan doğrulanmalıdır.
Le dimensioni Z riportate vanno verificate con le tabelle di questa pagina.
Les dimensions de Z sont à verifier dans le tableaux de cette page.
Las dimensiones Z indicadas tienen que verificarse con las tablas de esta página.

DE ANBAUVORRICHTUNG FUER HYDRAULIKMOTORE

EN HIDRAULIC MOTOR COUPLINGS

TR HİDROLİK MOTOR KAPLİNLERİ

IT PREDISPOSIZIONI PER MOTORI IDRAULICI

FR ADAPTATIONS POUR MOTEURS HYDRAULIQUE

ES ACOPLAMIENTOS PARA MOTORES HIDRÁULICOS

DINAMIC OIL

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
AH100/BH150/BH175/BH200 28x34 UNI 8953	55.5	2074.013.024	A
CH250/DH300/DH 350 32x38 UNI 8953	138	2074.053.003	B
PH250/PH300 32x38 UNI 8953	130	2074.053.016	
PH800 46x50 UNI 8953	118	2074.053.020	
PH800/PH1250/MH1000 46x50 UNI 8953	148	2074.073.001	C
PH800/PH1250/MH1000 46x50 UNI 8953	148	2074.083.001	D

EATON (CHAR-LYNN)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
A-H-S Ø 25 CH8	61.5	2074.012.012	A
A-H-S Ø 25.4 CH6.35	61.5	2074.012.014	
A-H-S SAE 1"6B	61.5	2074.013.013	
SERIE 2000			
BEARINGLESS 12/24 DP TH12	52	2074.013.033	
Ø 32 CH10	77	2074.012.019	
Ø 31.75 CH7.96	61.5	2074.012.017	
12/24 DP TH14	77.5	2074.013.038	
SERIE 4000			
BEARINGLESS 10/20 DP TH12	78	2074.013.045	
Ø 40 CH12	78	2074.012.027	
Ø 31.75 CH7.96	78	2074.012.020	
12/24 DP TH17	78	2074.013.016	
SERIE 6000			
Ø 40 CH12	78	2074.012.027	
12/24 DP TH14	77.5	2074.013.038	

EATON

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
MF-MV25 16/32 DP TH13	52	2074.013.001	A
MF-MV25 16/32 DP TH15	52	2074.013.003	
MF-MV (33/39/46) 16/32 DP TH21	78	2074.013.017	
MF-MV54 16/32 DP TH23	78	2074.013.018	
MF-MV (33/39/46/54) 12/24 DP TH14	78	2074.013.015	
MF-MV25 Ø 22.22 CH6.25	52	2074.012.001	

HAGGLUNDS-ABEX DENISON

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
M3D/M1D/M4E/12/24 DP TH14	78	2074.013.015	A
M3B/M3B1/TM3B 16/32 DP TH9	61.5	2074.013.010	
M1C/M4C/M4SC 16/32 DP TH13	52	2074.013.001	
M4C/M4SC Ø 22.22 CH4/75	67	2074.012.003	

REXROTH BOSCH GROUP (HYDROMATIK)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
A2FM (10/12/16) W25x1.25 DIN 5480 TH18	61.5	2074.013.009	A
A2FM (23/28/32) W25x1.25 DIN 5480 TH18	81	2074.013.062	
A2FM (23/28/32) W30x2 DIN 5480 TH14	81	2074.013.063	
A2FM (45/56) W30x2 DIN 5480 TH14	78	2074.013.019	
A2FM 45 W32x2 DIN 5480 TH14	78	2074.013.020	
A2FM (56/83) W35x2 DIN 5480 TH16	78	2074.013.021	
A2FM 80 W35x2 DIN 5480 TH16	81.5	2074.013.071	
A2FM (80/90) W40x2 DIN 5480 TH18	81.5	2074.013.064	
A2FM 107 W40x2 DIN 5480 TH18	88.5	2074.013.065	
A2FM 107 W40x2 DIN 5480 TH18	112	2074.053.007	B
A2FM (107/125) W45x2 DIN 5480 TH21	112	2074.053.006	
A2FM 160 W45x2 DIN 5480 TH21	112	2074.053.009	
A2FM (160/180) W50x2 DIN 5480 TH24	112	2074.053.008	
A2FM (200) W50x2 DIN 5480 TH24	112	2074.053.100	
A6VM55 W35x2 DIN 5480 TH16	78	2074.013.021	A
A6VM55 W30x2 DIN 5480 TH14	78	2074.013.019	
A6VM80 W35x2 DIN 5480 TH16	81.5	2074.013.071	
A6VM80 W40x2 DIN 5480 TH18	81.5	2074.013.064	
A6VM107 W40x2 DIN 5480 TH18	88.5	2074.013.065	
A6VM107 W40x2 DIN 5480 TH18	112	2074.053.007	B
A6VM107 W45x2 DIN 5480 TH21	112	2074.053.006	
A6VM160 W45x2 DIN 5480 TH21	112	2074.053.009	

INTERMOT

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
NHM 100/150 26x32 UNI 8953	72.5	2074.013.052	A
NHM 200/250/300 32x38 UNI 8953	130	2074.053.016	B
NHM 400/450/500/600 36x42 UNI 8953	143	2074.053.017	
NHM 700/800/900/1000/1100 46x50 UNI 8953	118	2074.053.020	
NHM 700/800/900/1000/1100 46x50 UNI 8953	148	2074.073.002	C
NHM 700/800/900/1000/1100 46x50 UNI 8953	148	2074.083.002	D
NHM 1400/1600/1800/2000 62x72 UNI 8953	179	2074.053.021	B
NHM 1400/1600/1800/2000 62x72 UNI 8953	148	2074.073.003	C
NHM 1400/1600/1800/2000 62x72 UNI 8953	148	2074.083.003	D

LINDE

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
MF43M 16/32 DP TH15	52	2074.013.003	A
MF63M 12/24 DP TH14	78	2074.013.015	
BMF35 25x22 DIN 5482 TH14	81	2074.013.070	
BMF50 30x27 DIN 5482 TH16	81	2074.013.060	
BMF75 35x31 DIN 5482 TH18	98	2074.013.061	
BMF 105 40x36 DIN 5482 TH20	90.5	2074.013.068	

Das Mass Z wird in den entsprechenden Tabellen auf der Seite 83 festgestellt.
Z dimensions have to be verified in the tables on page 83.
Z ölçüleri sayfa 83'deki tablolardan doğrulanmalıdır.
Le dimensioni Z riportate vanno verificate con le tabelle a pag. 83.
Les dimensions de Z sont à verifier dans les tableaux à page 83.
Las dimensiones Z indicadas tienen que verificarse con la tabla de la Pág. 83.

DE ANBAUVORRICHTUNG FUER HYDRAULIKMOTORE

EN HIDRAULIC MOTOR COUPLINGS

TR HİDROLİK MOTOR KAPLİNLERİ

IT PREDISPOSIZIONI PER MOTORI IDRAULICI

FR ADAPTATIONS POUR MOTEURS HYDRAULIQUE

ES ACOPLAMIENTOS PARA MOTORES HIDRÁULICOS

SAUER - DANFOSS (SAUER-SUNSTRAND)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
SERIE 90 (FLANGE SAE)			
90M032/042 16/32 DP TH13	52	2074.013.001	A
90M032/042 16/32 DP TH15	52	2074.013.003	
90M055 16/32 DP TH21	78	2074.013.017	
90M075/100 16/32 DP TH23	78	2074.013.018	
90M130 16/32 DP TH27	112	2074.053.012	B
SERIE 40 (FLANGE SAE)			
MMF025 16/32 DP TH13	52	2074.013.001	A
MMF035/MMV035 16/32 DP TH15	52	2074.013.003	
MMF046/MMV046 16/32 DP TH13	52	2074.013.001	
MMF046/MMV046 16/32 DP TH15	52	2074.013.003	
SERIE 51 (FLANGE SAE)			
51V060 (C6) 13/32 DP TH21	78	2074.013.017	A
51V060 (S1) 12/24 DP TH14	78	2074.013.015	
51V080 (C7) 16/32 DP TH23	78	2074.013.018	
51V080 (S1) 12/24 DP TH14	78	2074.013.015	
51V110 (C8) 16/32 DP TH27	112	2074.053.012	B
51V110 (F1) 8/16 DP TH13	112	2074.053.005	
OMF/SMF18 16/32 DP TH13	52	2074.013.001	A
OMV/SMV 16/32 DP TH13	67	2074.013.067	
SMF2 (033/052/070) 16/32 DP TH21	78	2074.013.017	
SMF3 (049/066) 16/32 DP TH21	78	2074.013.017	

SAI

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
SAI M05 28x34 UNI 8953	73.5	2074.013.041	A
SAI M05 35x2 DIN 5480 TH16	73.5	2074.013.044	
SAI M1 28x34 UNI 8953	55.5	2074.013.022	
SAI M1 35x2 DIN 5480 TH16	55.5	2074.013.040	
SAI M2 36x40 UNI 8953	78.5	2074.013.066	
SAI M2/M3 36x40 UNI 8953	137	2074.053.010	B
SAI M4 56x65 UNI 8953	96	2074.053.025	

SAE J744C

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
SAE A 16/32 DP TH9	61.5	2074.013.010	A
SAE B 16/32 DP TH13	52	2074.013.001	
SAE BB 16/32 DP TH15	52	2074.013.003	
SAE C 12/24 DP TH14	78	2074.013.015	
SAE CC 12/24 DP TH17	78	2074.013.016	
SAE D 8/16 DP TH13	112	2074.053.005	B

STAFFA

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
HMC 030	142	2074.052.001	B

SAMHYDRAULIC

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
AG/AR Ø 25 CH8	61.5	2074.012.012	A
AG/AR Ø 25.4 CH6.35	61.5	2074.012.014	
AG/AR 25x22 DIN 5482 TH14	61.5	2074.013.011	
AG/AR SAE 1"6B	61.5	2074.013.013	
AGS/ARS Ø 25 CH8	61.5	2074.012.026	
AGS/ARS Ø 32 CH10	77.5	2074.012.019	
AGS/ARS SAE 1"6B	61.5	2074.013.012	
HPR Ø 32 CH10	77.5	2074.012.019	
HPRC 12/24 DP TH12	38	2074.013.006	

PARKER (TRW TORQMOTOR)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
MF/MAC/MAF/MAB Ø 25 CH8	61.5	2074.012.012	A
MF/MAC/MAF/MAB Ø 25.4 CH6.35	61.5	2074.013.014	
MF/MAC/MAF/MAB SAE 1"6B	61.5	2074.013.013	
MAB/MAE Ø 31.75 CH7.96	77.5	2074.012.016	
ME 12/24 DP TH14	77.5	2074.013.047	

EATON (VICKERS)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
25M 16/32 DP TH13	52	2074.013.001	A
35M-45M 12/24 DP TH14	78	2074.013.015	
MVE-MFE19 16/32 DP TH15	52	2074.013.003	
35M-45M Ø 31.75 CH7.96	78	2074.012.020	

PARKER (VOLVO)

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
F11/10 (M-C-K) Ø 20 CH6	81	2074.012.065	A
F11/10 (C-T) W20x1.25 DIN 5480 TH14	49	2074.013.046	
F11/19 (M-C-D) W25x1.25 DIN 5480 TH18	77	2074.013.068	
F11/39/58 (M-C-D) W30x2 DIN 5480 TH14	81.5	2074.013.030	
F11/78 (M-C-D) W40x2 DIN 5480 TH18	88.5	2074.013.065	
F11/110 (M-C-D) W40x2 DIN 5480 TH18	88.5	2074.013.034	
F11/110 (M-C-D) W40x2 DIN 5480 TH18	112	2074.053.018	B
F12/30 (M-F-Z) W25x1.25 DIN 5480 TH18	81	2074.013.062	A
F12/40 (M-F-D) W32x2 DIN 5480 TH14	78	2074.013.020	
F12/80 (M-I-D) W40x2 DIN 5480 TH18	81.5	2074.013.064	
V11 (60/80) (M-S-S) 12/24 DP TH14	78	2074.013.015	
V12/60 (M-I-C) W30x2 DIN 5480 TH14	78	2074.013.019	
V12/60 (M-I-D) W35x2 DIN 5480 TH16	78	2074.013.021	
V12-110 (U-S) S8/16 DP TH13	112	2074.053.005	B
V12/110 (M-I-D) W45x2 DIN 5480 TH21	112	2074.053.006	

WHITE

Motortyp / Motor type Motor tipi / Motore tipo Moteur type / Tipos de motor	Z	Bestell Nr. / Code Kod / Codice Code / Código	
HS-RS Ø25 CH8	61.5	2074.012.012	A
HS-RS Ø1"6B	61.5	2074.013.013	
RE Ø32 CH10	77.5	2074.012.019	
RE Ø31.75 CH7.96	77.5	2074.012.016	

Das Mass Z wird in den entsprechenden Tabellen auf der Seite 83 festgestellt.
Z dimensions have to be verified in the tables on page 83.
Z ölçüleri sayfa 83'deki tablolardan doğrulanmalıdır.
Le dimensioni Z riportate vanno verificate con le tabelle a pag. 83.
Les dimensions de Z sont à verifier dans les tableaux à page 83.
Las dimensiones Z indicadas tienen que verificarse con la tabla de la Pág. 83.

NRW® DRIVE TECHNOLOGIES

DE FLANSCHE FÜR MOTORE NACH SAEJ 744C-NORM

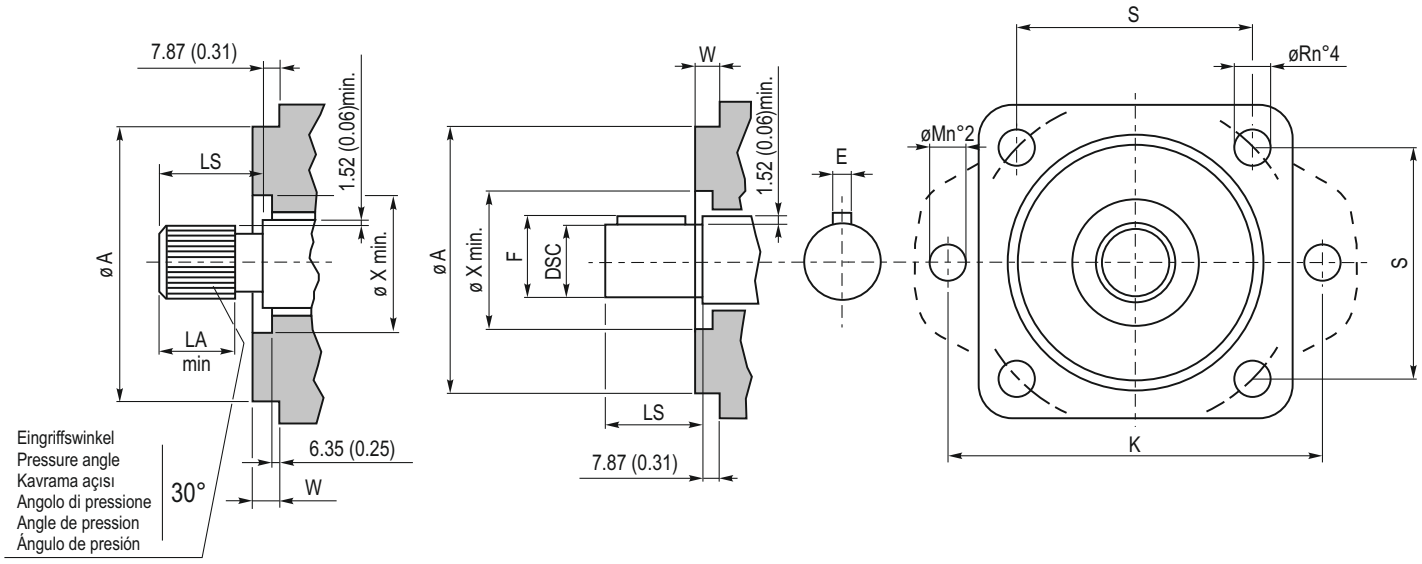
EN FLANGES FOR MOTORS ACCORDING TO THE SAEJ STD

TR SAEJ 744C STANDARTLARINA GÖRE MOTOR BAĞLANTI FLANŞLARI

IT FLANGIATURE PER MOTORI A NORME SAEJ 744C

FR BRIDAGES POUR MOTEURS AUX NORMES SAEJ 744C

ES EMBRIDADOS PARA MOTORES SEGÚN NORMAS SAEJ 744C



	A	W	X_{min}	K	M	S	R	Zahnwelle Splined shaft Kayıcı milli Albero cannelé Arbre cannelé Eje ranurado			Zylinderwelle Parallel shaft Kamalı milli Albero cilindrico Arbre cylindrique Eje cilíndrico			
								DP	LS	LA_{min}	DSC	LS	F	E
SAE A-A	50.80 (2.00)	6.35 (0.25)	— —	350.04 (13.785)	10.31 (0.406)	— —	— —	20/40 9T	19.05 (0.750)	5.08 (0.20)	12.70 (0.50)	19.05 (0.750)	14.07 (0.554)	3.175 (0.125)
SAE A	82.55 (3.250)	6.35 (0.25)	— —	106.37 (4.188)	11.10 (0.438)	— —	— —	16/32 9T	23.83 (0.938)	7.62 (0.30)	15.87 (0.625)	23.83 (0.938)	17.60 (0.693)	3.97 (0.1563)
SAE B	101.60 (4.00)	9.65 (0.38)	50.8 (2.00)	146.05 (5.75)	14.30 (0.562)	89.81 (3.536)	14.27 (0.562)	16/32 13T	33.32 (1.312)	10.16 (0.40)	22.22 (0.875)	33.32 (1.312)	24.94 (0.982)	6.35 (0.250)
SAE B-B	101.60 (4.00)	9.65 (0.38)	50.8 (2.00)	146.05 (5.75)	14.30 (0.562)	89.81 (3.536)	14.27 (0.562)	16/32 15T	38.10 (1.500)	12.70 (0.50)	25.40 (1.000)	38.10 (1.500)	28.10 (1.106)	6.35 (0.250)
SAE C	127 (5.00)	12.70 (0.50)	63.5 (2.50)	180.98 (7.125)	17.50 (0.688)	114.50 (4.508)	14.27 (0.562)	12/24 14T	47.63 (1.875)	15.24 (0.60)	31.75 (1.250)	47.63 (1.875)	35.20 (1.386)	7.94 (0.3125)
SAE C-C	127 (5.00)	12.70 (0.50)	63.5 (2.50)	180.98 (7.125)	17.50 (0.688)	114.50 (4.508)	14.27 (0.562)	12/24 17T	53.98 (2.125)	17.78 (0.70)	38.10 (1.500)	53.98 (2.125)	42.26 (1.664)	9.53 (0.375)
SAE D	152.40 (6.00)	12.70 (0.50)	69.85 (2.75)	228.60 (9.00)	20.60 (0.812)	161.65 (6.364)	20.63 (0.812)	8/16 13T	66.67 (2.625)	20.32 (0.80)	44.45 (1.750)	66.67 (2.625)	49.30 (1.941)	11.11 (0.4375)
SAE E	165.10 (6.50)	15.875 (0.625)	69.85 (2.75)	317.50 (12.5)	26.97 (1.062)	224.51 (8.839)	20.63 (0.812)	8/16 13T	66.67 (2.625)	20.32 (0.80)	44.45 (1.750)	66.67 (2.625)	49.30 (1.941)	11.11 (0.4375)
SAE F	177.80 (7.00)	15.875 (0.625)	69.85 (2.75)	317.50 (12.5)	26.87 (1.062)	247.52 (9.745)	26.98 (1.062)	8/16 15T	79.38 (3.125)	25.40 (1.00)	— —	79.38 (3.129)	— —	— —

DE ANBAUVORRICHTUNG FÜR ELEKTROMOTORE

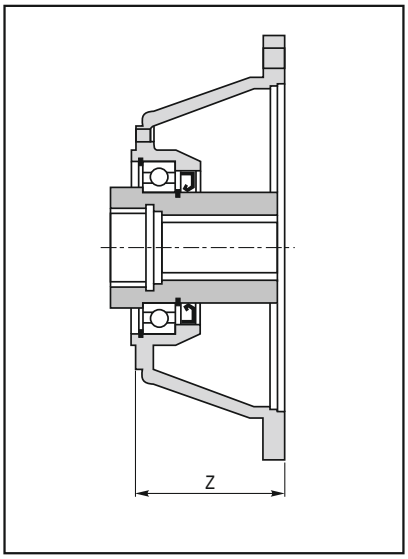
EN ELECTRIC MOTOR COUPLINGS

TR ELEKTRİK MOTOR KAPLİNLERİ

IT PREDISPOSIZIONI PER MOTORI ELETTRICI

FR ADAPTATIONS POUR MOTEURS ELECTRIQUES

ES ACOPLAMIENTOS PARA MOTORES ELÉCTRICOS



UNEL/IEC B5			
	Z	Bestell Nr. / Code Kod / Codice Code / Código	
H63	36	2074.011.005	A
H71	36	2074.011.006	
H80	56	2074.011.001	
H90	56	2074.011.002	
H100/112	66	2074.011.003	
H132	100	2074.011.004	
H160	139	2074.011.047	
H180	139	2074.011.048	
H160	118	2074.051.001	B
H180	118	2074.051.002	
H200	148	2074.051.015	
H225	139	2074.051.016	
H250	148.5	2074.051.024	
H280	148.5	2074.051.025	
H160	150	2074.071.001	C
H180	150	2074.071.002	
H200	150	2074.071.003	
H225	139	2074.071.004	
H250	139	2074.071.005	
H280	139	2074.071.006	
H160	150	2074.081.001	D
H180	150	2074.081.002	
H200	150	2074.081.003	
H225	139	2074.081.004	
H250	139	2074.081.005	
H280	139	2074.081.006	

NEMA C			
	Z	Bestell Nr. / Code Kod / Codice Code / Código	
143TC-145TC 182TC-184TC	80	2074.011.008	A
182TC-184TC 213TC-215TC	88.5	2074.011.009	
213TC-215TC	88.5	2074.011.010	
286TC	139	2074.051.006	B
326TC	149	2074.051.007	
365TS	149	2074.051.010	

Dass Mass Z wird in den entsprechenden Tabellen auf der Seite 83 festgestellt.
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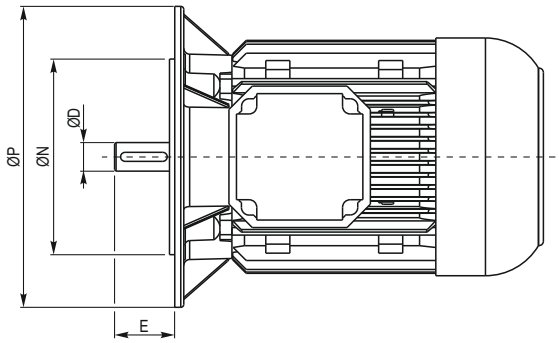
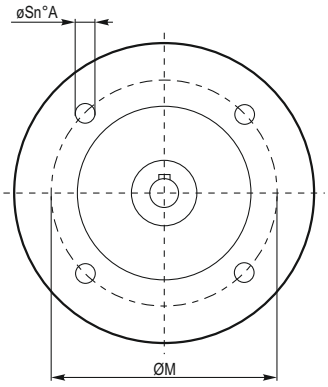
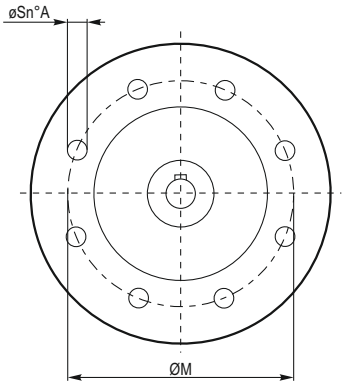




63...200



225...280

	Anzahl Pole - Number of poles - Kutup sayısı N° poli - Numero poles - N° de polos									ØD	E	ØP	ØM	ØN	ØS	A
	2			4			6									
	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]							
63	0.18		0.25	0.12		0.18	0.06		0.09	11	23	140	115	95	9.5	4
71	0.37		0.55	0.25		0.37	0.18		0.25	14	30	160	130	110	9.5	4
80	0.75		1.1	0.55		0.75	0.37		0.55	19	40	200	165	130	11.5	4
90	1.5		2.2	1.1		1.5	0.75		1.1	24	50	200	165	130	11.5	4
100/112	3		4	2.2	3	4	1.5		2.2	28	60	250	215	180	14	4
132	5.5		7.5	5.5		7.5	3	4	5.5	38	80	300	265	230	14	4
160	11	15	18.5	11		15	7.5		11	42	110	350	300	250	18	4
180	22			18.5		22	15			48	110	350	300	250	18	4
200	30		37	30			18.5		22	55	110	400	350	300	18	4
225	45			37		45	30			60 (55-2p)	140	450	400	350	18	8
250	55			55			37			65 (60-2p)	140	550	500	450	18	8
280	75		90	75		90	45		55	75 (65-2p)	140	550	500	450	18	8

NRW® DRIVE TECHNOLOGIES

DE PRODUKTBESCHREIBUNG	EN PRODUCT IDENTIFICATION	TR ÜRÜN TANITIMI
IT DESIGNAZIONE PRODOTTO	FR DESIGNATION PRODUIT	ES DESIGNACIÓN PRODUCTO

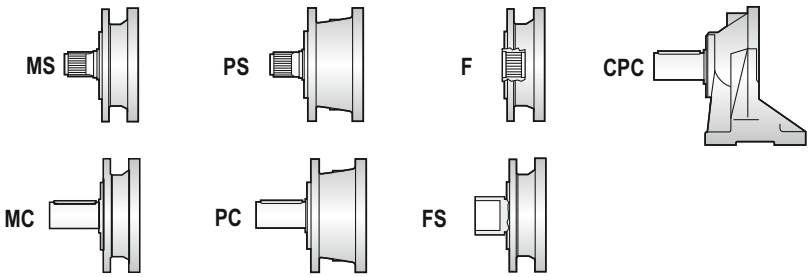
GETRIEBE / GEAR UNIT / REDÜKTÖR / RIDUTTORE / REDUCTEUR / REDUTOR

P	L	1	8	0	0	4	M	C	1	2	1	6	.	4

VERHÄLTNIS / RATIO / TAHVİL / RAPPORTO / RAPPORT / RELACIÓN

i Siehe Datenblätter / See technical sheets / Teknik sayfalara bakınız / Vedi schede tecniche / Voir fiches techniques / Ver fichas técnicas

ABTRIEBSBAUTEILE AND ABTRIEBSWELLE / OUTPUT TYPE AND SHAFT / ÇIKIŞ TİPİ VE ŞAFTI / VERSIONE E ALBERO DI USCITA / VERSION ET ARBRE DE SORTIE / VERSIÓN Y EJE DE SALIDA



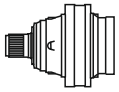
N° STUFEN / N° STAGES / KADEME / N° STADI / N° ETAGES / N° ETAPAS

1, 2, 3, 4, 5

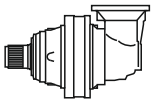
GRANDEZZA / SIZE / GÖVDE BÜYÜKLÜĞÜ / TAILLE / GRÖSSE / TAMAÑO

1000, 1600, 2500, 5000, 7000, 10000, 16000, 18000, 25000, 30000, 35000, 50000, 65000, 90000, 140000, 180000, 220000, 340000, 400000, 550000, 660000

TYPE DU REDUCTEUR / TYPE OF REDUCTION UNIT / REDÜKTÖR TİPİ / FORMA COSTRUTTIVA / BAUFORM GETRIEBESTUFEN / FORMA CONSTRUCTIVA

PL 

Koaxiale Ausfuehrung / Inline stages gear unit / Eşeksenli dişli ünitesi / Riduttore con stadi lineari / Réducteur avec montage en ligne / Reductor con montaje en línea

PLB 

Ausfuehrung mit Winkelstufe / Bevel stages gear unit / Konik dişli ünitesi / Riduttore con stadi angolari / Réducteur avec montage angulaire / Reductor con montaje angular

Beispiel Bestellbeschreibung
Example for ordering
Sipariş örneği
Esempio di ordinazione
Exemple de commande
Ejemplo orden de compra

PL 18004 MC 1216.4

DE PRODUKTBESCHREIBUNG | EN PRODUCT IDENTIFICATION | TR ÜRÜN TANITIMI

IT DESIGNAZIONE PRODOTTO | FR DESIGNATION PRODUIT | ES DESIGNACIÓN PRODUCTO

BAUTEILE / ACCESSORI / AKSESUARLAR / ACCESSORIES / ACCESSOIRES / ACCESORIOS

Y	Z	F	F	R	A	2	5	6	0	7	4	···	S	A	E	A	2	0	7	4	···	V	3

ABTRIEB / OUTPUT
ÇIKIŞ / USCITA
SORTIE / SALIDA

ENTRATA / INPUT
GİRİŞ / ANTRIEB / ENTREE
ENTRADA

EINBAUPOSITION
MOUNTING POSITION
MONTAJ POZİSYONU
POSIZIONE DI MONTAGGIO
POSITION DE MONTAGE
POSICIÓN DE MONTAJE

Siehe Datenblätter / See technical sheets
Teknik sayfalara bakınız / Vedi schede tecniche
Voir fiches techniques / Ver fichas técnicas

Bremse / Brake
Fren / Freni modulari
Frein / Freno

RA
RB

Antriebswelle / Input shaft
Giriş şaftı / Albero entrata
Arbre d'entrée / Eje de entrada

EL28, EL42, ...

Motorflansch Elektromotor / Electric motor coupling
Elektrik motor kaplini
Predisposizione motore elettrico
Adaptation moteur électrique
Acoplamiento motor eléctrico

H71, H80, ...

Motorflansch Hydraulikmotor / Hydraulic motor coupling
Hidrolik motor kaplini
Predisposizione motore idraulico
Adaptation moteur hydraulique
Acoplamiento motor hidráulico

SAE A, SAE B, ...

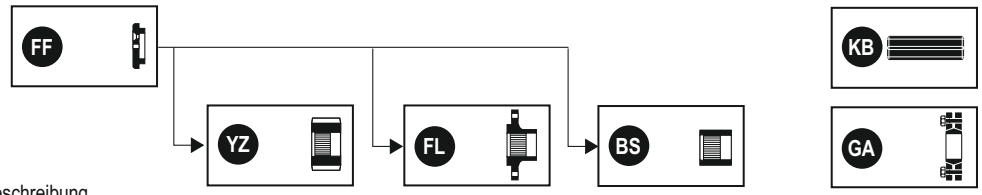
Motorflansch mit integrierter Bremse / Direct input motor adaptor with brake
Frenli akuple girişli motor bağlantı adaptörü / Entrata diretta con freno e attacco motore
Entrée directe avec frein pour adaptation moteur / Entrada directa con freno para acoplamiento motor

EDF
EF

Standardantrieb ohne bremse mit motorflansch / Direct input motor adaptor without brake /
Frensiz akuple girişli motor bağlantı adaptörü / Entrata diretta senza freno e con attacco motore /
Entrée directe sans frein pour adaptation moteur / Entrada directa sin freno para acoplamiento motor

ED

Abtriebsbauteile / Output fittings / Çıkış Aksesuarları / Accessori di uscita / Accessoires de sortie / Accesorios de salida



Beispiel Bestellbeschreibung
Example for ordering
Sipariş örneği
Esempio di ordinazione
Exemple de commande
Ejemplo orden de compra

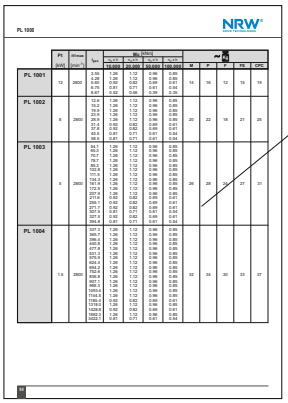
YZ FF RA 25 6074.002.500 SAE A 2074.012.012 V3

DE LEGENDE	EN LEGEND	TR SEMBOLLER
IT SIMBOLOGIA	FR SYMBOLES	ES SİMBOLOS

Cfs	**[Nm]**	Bremsmoment, statisch	Static braking torque	Statik fren momenti	Coppia frenante statica	Couple de freinage statique	Momento de torsión estático de frenado
Fa	**[N]**	Axiallast	Axial load	Eksenel yük	Carico assiale	Charge axiale	Carga axial
fh		Lebensdauerfaktor	Duration factor	Süre faktörü	Fattore di durata	Facteur de durée	Factor de duración
fk		Anpassungsfaktor Waerme - kapazitaet	Thermal power adjustment factor	Termik güç ayarlama faktörü	Fattore di adeguamento della capacità termica	Facteur d'adaptation de la capacité thermique	Factor de adaptación de la capacidad térmica
Fr	**[N]**	Radiallast	Radial load	Radyal yük	Carico radiale	Charge radiale	Carga radial
fs		Betriebsfaktor	Service factor	Servis faktörü	Fattore di servizio	Facteur de service	Factor de servicio
η		Wirkungsgrad	Efficiency	Verim	Rendimento	Rendement	Rendimiento
iges		Übersetzung	Ratio	Tahvil oranı	Rapporto di riduzione	Rapport	Relación de reducción
K		Korrekturkoeffizient der Radiallast	Radial load correction factor	Radyal yük düzeltme faktörü	Coefficiente di correzione del carico radiale	Facteur de correction de charge radiale	Coeficiente de corrección de la carga radial
Kg	**[Kg]**	Gewicht	Weight	Ağırlık	Peso	Poids	Peso
Mc	**[kNm]**	Dauerbetriebsmoment	Continuous torque	Sürekli moment	Coppia continua	Couple continu	Momento de torsión continou
Me	**[kNm]**	Equivalentes Betriebsmoment	Equivalent working torque	Eşdeğer çalışma momenti	Coppia equivalente	Couple equivalent	Momento de torsión equivalente
M_{max}	**[kNm]**	Maximales Betriebsmoment	Maximum torque	Maksimum moment	Coppia massima	Couple maximal	Momento de torsión máximo
Mp	**[kNm]**	Spitzenmoment	Working peak torque	Çalışma pik momenti	Coppia di picco	Couple maximum de travail	Momento de torsión de pico
$n_{1\ max}$	**[min^{-1}]**	Max. zulaessige Antriebsdrehzahl	Maximum input speed	Maksimum giriş devri	Velocità massima in entrata	Vitesse maximale d'entrée	Velocidad máxima de entrada
n_2	**[min^{-1}]**	Abtriebsdrehzahl	Output speed	Çıkış devri	Velocità in uscita	Vitesse de sortie	Velocidad de salida
nxh		Anzahl der Zyklen	Cycles number	Tur sayısı	Numero cicli	N bde cycles	Número de ciclos
Pa_{min}	**[bar]**	Bremsoeffnungsdruck	Opening pressure	Açma basıncı	Pressione di apertuna	Pression d'ouverture	Presión de apertura
P_{max}	**[bar]**	Max. Betriebsdruck Bremse	Max pressure	Maksimum basınç	Pressione massima	Pression maxi	Presión máxima
Pt	**[kW]**	Thermische Leistung	Thermal power	Termik güç	Potenza termica	Puissance thermique	Potencia térmica
i		Information	Information	Bilgi	Informazioni	Information	Informaciones
OIL		Oelmenge	Oil quantity	Yağ miktarı	Quantità lubrificante	Quantité d'huile	Cantidad de lubricante

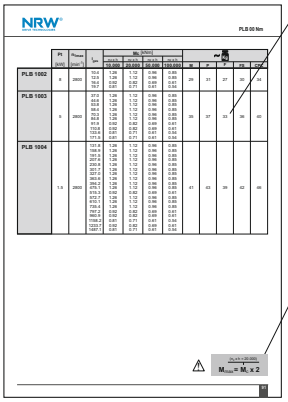
DE LEGENDE | EN LEGEND | TR SEMBOLLER

IT LEGENDA | FR LEGENDE | ES LEYENDA



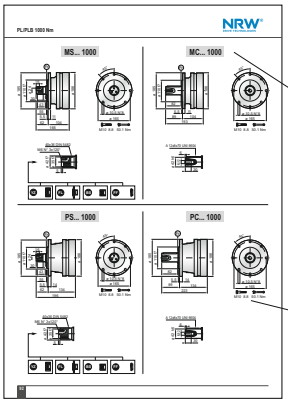
TECHNISCHE DATEN / TECHNICAL DATA / TEKNİK VERİLER / DATI TECNICI
DONNEES TECHNIQUES / DATOS TÉCNICOS

1 Tabelle mit den technischen Daten des entsprechenden PL - Getriebetyps.
Technical data tables of PL series.
PL Serisi için teknik veri tabloları.
Tabelle dei dati tecnici relativi ai riduttori PL.
Tableaux des données techniques sur les séries PL.
Tablas con los datos técnicos de los reductores PL.



2 Tabelle mit den technischen Daten des entsprechenden PLB - Getriebetyps.
Technical data tables of PLB series.
PLB Serisi için teknik veri tabloları.
Tabelle dei dati tecnici relativi ai riduttori PLB.
Tableaux des données techniques sur les séries PLB.
Tablas con los datos técnicos de los reductores PLB.

3 Anweisung zur Berechnung des maximalen Betriebsdrehmoments M_{max}.
Determination of the maximum torque M_{max}.
Maksimum momentin belirlenmesi (M_{max}).
Indicazione per il calcolo della coppia massima M_{max}.
Indications pour calculer le couple maxi M_{max}.
Determinación del momento máximo de torsión M_{max}.



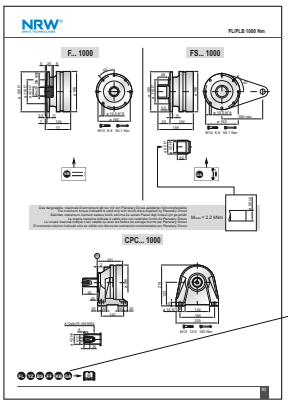
MASSE / DIMENSIONS / ÖLÇÜLER / DIMENSIONI / DIMENSIONS / DIMENSIONES

4 Auf diesen Seiten sind die Masse der diversen Abtriebstypen angegeben.
These pages show the outputs dimensions in their different possible configurations.
Bu sayfalarda çıkış ölçülerinin farklı konfigrasyonları gösterilmektedir.
Queste pagine riportano le dimensioni delle uscite nelle varie configurazioni disponibili.
Ces pages montrent les dimensions des sorties dans leurs différentes configurations possibles.
Estas páginas contienen las dimensiones de las salidas en las distintas configuraciones disponibles.

5 Diese Symbol gibt Hinweise zur Befestigung des Getriebes und die einzusetzenden Schrauben.
This symbol gives information about screws to use to mount the gearbox.
Bu semboller redüktörde kullanılacak montaj civataları hakkında bilgi verir.
Questo simbolo fornisce le indicazioni sulle viti da utilizzare per il fissaggio del riduttore.
Ce symbole donne l'indication des vis à utiliser pour monter le réducteur.
Este símbolo suministra las indicaciones sobre los tornillos a utilizar para fijar el reductor.

M10 8.8 50.1Nm

Durchmesser der Schrauben Screw diameter Civata çapı Diametro della vìte Diamètre de vis Diámetro del tornillo	Schraubenfestigkeitsklasse Screw quality Civata kalitesi Classe di resistenza Classe de résistance Clase de resistencia	Empfohlenes Anzugsdrehmoment Screw tightened torque Civata sıkma momenti Coppia di serraggio consigliata Couple de serrage conseillé Par de apriete aconsejado



6 Diese Symbole zeigen die moeglichen Optionen im Bezug auf die verfuegbaren Abtriebsbauteile.
Symbols refer to suitable fittings on output in their possible configuration.
Semboller, olası konfigrasyonlardaki uygun çıkış parçalarını gösterir.
Simboli riferiti agli accessori applicabili in uscita al riduttore nelle configurazioni disponibili.
Symboles se référant aux accessories applicables en sortie du réducteur et leurs configurations possibles.
Símbolos referidos a los accesorios aplicables en la salida del reductor para las configuraciones disponibles.

DE	LEGENDE	EN	LEGEND	TR	SEMBOLLER
IT	SIMBOLOGIA	FR	SYMBOLES	ES	SİMBOLOS

ANTRIEB / GEARBOX INPUTS / REDÜKTÖR GİRİŞLERİ / ENTRATE / ENTREES / ENTRADAS

Diese Seiten geben die Aussenmasse der diversen Getriebetypen an. Dazu werden die moeglichen Optionen der verfuegbaren Antriebsformen, Bremsen gezeigt und auf die entsprechenden Katalogseiten hingewiesen. Das Gesamtausmass des Getriebes wird ermittelt (wie im nachstehenden Schema gezeigt), indem die Angaben aus dem vorgenannten Abtriebsausmass A und B, das Laengenmass des gewaehlten Antriebs (L, P, Z) und eventuellen Aufmasse (wenn angezeigt) addiert werden.

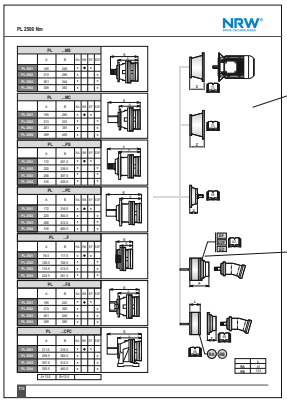
These pages show overall dimensions of the gearboxes in their possible configurations plus the type of gearbox inputs, brakes and motor drives applicable with indication of the pages in which to find further information. Maximum gearbox overall dimension is obtained (see scheme below) adding the input dimensions used (L, P, Z) to A and B dimensions, plus possible oversize if indicated.

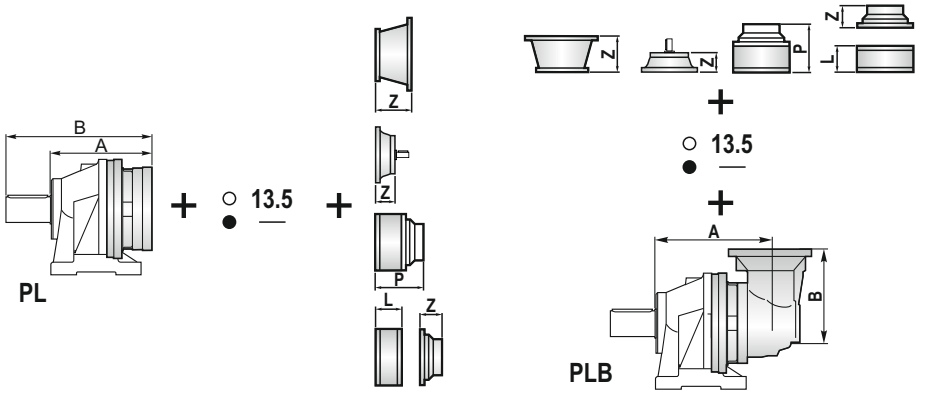
Bu sayfalar planet dişli ünitelerinin olası konfigürasyonlarındaki bütün ölçülerini ve ayrıca, kullanılabilecek planet girişlerinin, frenlerin ve motor tahrik ünitelerinin tiplerini daha ayrıntılı bilgi bulabileceğiniz sayfa numaraları ile birlikte göstermektedir. Maksimum redüktör genel ölçüleri, (aşağıdaki şemaya bakınız) kullanılan giriş boyutları (L, P, Z) ile “A” ve “B” ölçüleri de eklenerek elde edilir.

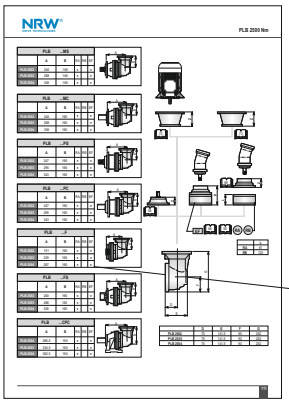
Queste pagine riportano le dimensioni di massimo ingombro del riduttore nelle varie configurazioni disponibili e i tipi di entrate, freni e motorizzazioni applicabili con l’indicazione delle pagine nelle quali reperire ulteriori dati. Il massimo del riduttore è ottenuto (come illustrato nei disegni seguenti) sommando alle quote A e B le dimensioni delle entrate utilizzate (L, P, Z) e le eventuali maggiorazioni dimensionali dove indicate.

Ces pages montrent les dimensions extérieures des réducteurs dans leurs configurations possibles ainsi que les sortes d’entrées, freins et d’adaptations moteurs applicables avec les indications des pages dans lequelles se trouvent de plus amples informations. La dimension extérieure maximum du réducteur est obtenue (voir schéma ci-dessous) en additionnant les dimensions des entrées utilisées (L, P, Z) aux dimensions A et B, plus la cote additionnelle si indiquée.

Estas páginas contienen las dimensiones exteriores máximas del reductor para las configuraciones disponibles y los tipos de entradas, frenos y motores conductores aplicables con la indicación de las páginas en las que se pueden obtener más informaciones. Las dimensiones máximas del reductor se obtienen (como se ilustra en los siguientes esquemas) sumando a las cotas A y B las dimensiones de las entradas utiilizadas (L, P, Z) y los eventuales incrementos dimensionales donde esté indicado.







Das symbol (●) in der Tabelle gibt an, welcher Bremsentyp (RA, RB) und welche Form der Antriebsvorrichtung ED, EDF oder EF verwendet werden kann. Das Symbol (○) hat dieselbe Funktion. Zusaetzlich wird auf ein zu beruecksichtigendes Aufmass hingewiesen (siehe oberes Schema).

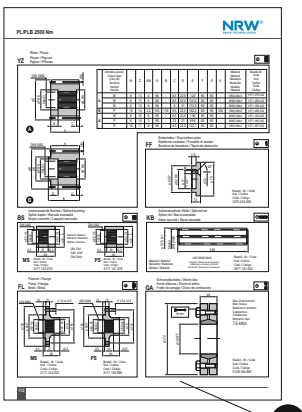
The tables, show the suitability of the brakes (RA nad RB) and of the inputs ED, EDF, EF Symbols marked with (○) in the tables, also show the suitability of the same components increasing the lenght (as show in the scheme above).

Tablolar, fren (RA ve RB) ve girişlerin (ED, EDF, EF) uygunluğunu gösterir. Aynı parçaların uzunluğu arttıkça tablolarda (○) sembolü ile işaretlenerek gösterilmiştir.

I simboli (●) riportati nelle tabelle indicano l’applicabilità dei freni (RA,RB) e delle entrate ED, EDF, EF. I simboli (○) indicano ugualmente l’applicabilità degli stessi componenti prevedendo una maggiorazione di lunghezza (come evidenziato nello schema sopra riportato).

Les symboles marqués d’un (●) dans les tableaux, montrent l’adaptation des freins (RA et RB) et des entrées ED, EDF, EF. Les symboles marqués d’un (○) dans les tableaux, montrent également l’adaptation des mêmes composants en augmentant la longueur (comme montré dans le schéma ci-dessous).

Los símbolos (●) contenidos en las tablas indican la factibilidad de aplicación de los frenos (RA, RB) y de las entradas ED, EDF, EF. Los simbolos (○) también indican la factibilidad de aplicación de los mismos componentes incrementando la longitud (como se evidencia en el esquema arriba indicado).



ABTRIEBSBAUTEILE
OUTPUT ACCESSORIES
ÇIKIŞ AKSESUARLARI
ACCESSORI USCITA
ACCESSOIRES DE SORTIE
ACCESORIOS DE SALIDA

Diese Seite gibt die Dimensionsmass der verfuegbaren Abtribsbauteile an.

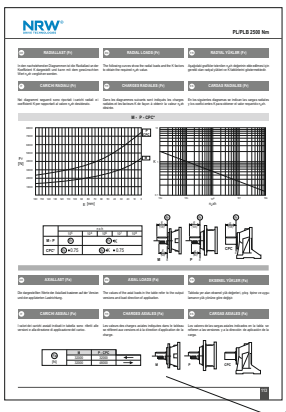
This page shows dimensions of the available accessories.

Bu sayfa mevcut aksesuarların ölçülerini göstermektedir.

Questa pagina riporta le dimensioni degli accessori disponibili.

Cette page montre les dimensions des accessoires disponible.

Esta página contiene las dimensiones de los accesorios disponibles.



RADIALLAST UND AXIALLAST
RADIAL AND AXIAL LOADS
RADYAL VE EKSENEL YÜKLER
CARICHI RADIALI E ASSIALI
CHARGES RADIALES ET AXIALES
CARGAS RADIALES Y AXIALES

Diese Seite zeigt die Diagramme, aus denen die Werte der Radiallast auf An - oder Abtriebswelle ermittelt werden koennen.

This page shows graphs to determine radial loads on output shaft and tables for axial load values.

Bu sayfa çıkış şaftına gelen radyal ve eksenel yük değerlerini belirlemek için kullanılan grafikleri gösterir.

Dazu sind hier die Tabellen mit den Werten der Axiallast ersichtlich.

Questa pagina riporta i diagrammi dai quali si ricavano i carichi radiali sugli alberi in uscita e le tabelle con i valori dei carichi assiali.

Cette page montre les diagrammes des charges radiales sur les arbres de sortie et les tableaux avec les valeurs des charges axiales.

DE TECHNISCHE DATENBLÄTER GETRIEBE

EN PLANETARY GEARS UNIT TECHNICAL SHEETS

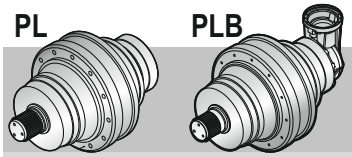
TR PLANET DİŞLİ ÜNİTELERİ TEKNİK SAYFALARI

IT SCHEDE TECHNICHE RODUTTORİ

FR FICHES TECHNIQUES REDUCTEURS

ES FICHAS TECNICAS REDUCTORES

PL PLB



	İges	Nm	
1000	3.56-3422.2	1.000	96-103
1600	3.56-3422.2	1.600	104-111
2500	3.78-2369.2	2.500	112-119
5000	3.78-1845.3	5.000	120-127
7000	3.67-2968.9	7.000	128-135
10000	3.56-2229.7	10.000	136-143
16000	3.56-2229.7	16.000	144-151
18000	13.0-1216.4	18.000	152-159
25000	4.00-1774.0	25.000	160-167
30000	14.2-1425.1	30.000	168-175
35000	4.00-1289.7	35.000	176-183
50000	3.95-1982.0	50.000	184-191
65000	3.84-1008.1	65.000	192-199
90000	4.04-1623.2	90.000	200-207
140000	3.69-7313.2	140.000	208-215
180000	3.91-9793.3	180.000	216-223
220000	3.68-8263.1	220.000	224-231
340000	4.09-8522.1	340.000	232-237
400000	3.83-5155.7	400.000	238-243
550000	3.84-5571.3	550.000	244-247
660000	3.84-5571.3	660.000	248-251

Die folgenden Seiten zeigen die techischen Daten bezueglich Leistung und Dimensionen der Produktserien PL/PLB Um die Suche der gewuenschten Groesse zu erleichtern, liefert die vorstehende Tabelle die Groessen in Verbindung zur entsprechenden Katalogseite.

The following pages show the technical information on performances and dimensions of the PL/PLB planetary the research andthe selection of the required size you can refer to the above table, including some technical data and the corresponding page.

Bundan sonraki sayfalar PL/PLB planetin performansları ve boyutları ile ilgili teknik bilgileri göstermektedir ve gerek duyulan boyutun araştırılması ve seçilmesi için bazı teknik veriler ile ilgili sayfalar için yukarıdaki tabloyu inceleyebilirsiniz.

Le pagine che seguono riportano i dati tecnici prestazionali e dimensionali dei riduttori Serie PL/PLB. Per facilitare la ricerca della grandezza desiderata riportiamo la tabella sopraindicata con i dati indicativi e i riferimenti alle pagine.

Las páginas siguientes contienen los datos técnicos de las prestaciones y dimensiones de la serie de reductores PL/PLB. Para facilitar la búsqueda de la dimensión deseada se puede consultar la siguiente tabla, con los datos indicativos y las páginas correspondientes.

Les page qui suivent se rapportent aux données techniques des prestations et dimensions des réducteurs série PL/PLB Pour facilité la sélection de la taille du réducteur envisagée, se référer au tableau ci dessus pour se reporter à la page correspondante.

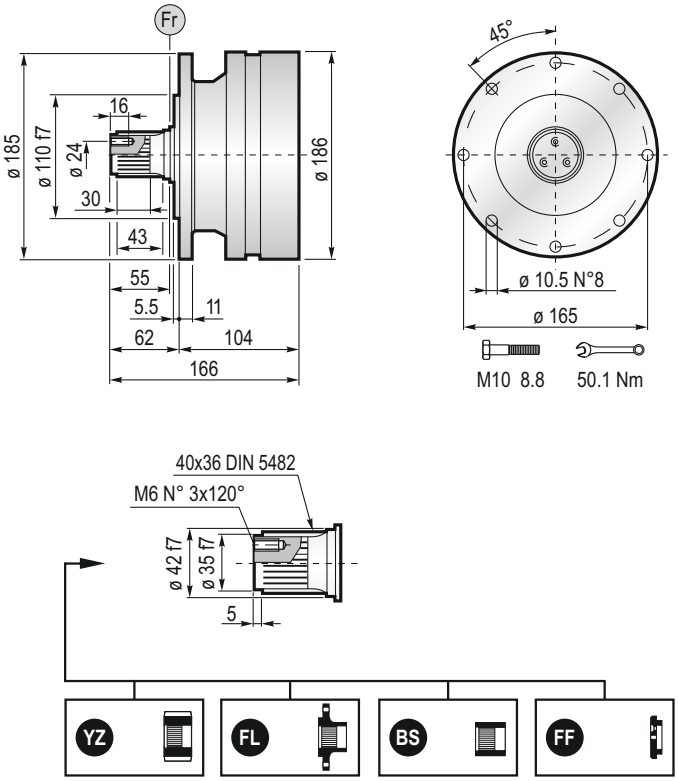
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 1001	12	2800	3.56 4.29 5.60 6.75 8.67	1.26 1.26 0.92 0.81 0.52	1.12 1.12 0.82 0.71 0.46	0.96 0.96 0.69 0.61 0.39	0.85 0.85 0.61 0.54 0.35	14	16	12	15	19
PL 1002	8	2800	12.6 15.2 19.9 24.0 28.9 31.4 37.8 45.6 58.5	1.26 1.26 1.26 1.26 1.26 0.92 0.92 0.81 0.81	1.12 1.12 1.12 1.12 1.12 0.82 0.82 0.71 0.71	0.96 0.96 0.96 0.96 0.96 0.69 0.69 0.61 0.61	0.85 0.85 0.85 0.85 0.85 0.61 0.61 0.54 0.54	20	22	18	21	25
PL 1003	5	2800	54.2 65.3 70.8 78.7 85.3 102.9 111.5 134.4 162.0 172.6 208.0 211.7 255.2 271.8 307.5 327.6 394.9	1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 0.92 0.92 0.92 0.81 0.92 0.81	1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 0.82 0.82 0.82 0.71 0.82 0.71	0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.69 0.69 0.69 0.61 0.69 0.61	0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.61 0.61 0.61 0.54 0.61 0.54	26	28	24	27	31
PL 1004	1.5	2800	337.4 365.7 396.4 440.8 477.9 531.3 576.0 624.4 694.3 752.6 836.9 907.2 966.3 1093.5 1144.5 1185.4 1318.1 1428.8 1692.3 3422.2	1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 0.92 1.26 0.92 1.26 0.81	1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 0.82 1.12 0.82 1.12 0.71	0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.69 0.96 0.69 0.96 0.61	0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.61 0.85 0.61 0.85 0.54	32	34	30	33	37

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 1002	8	2800	10.4	1.26	1.12	0.96	0.85	29	31	27	30	34
			12.6	1.26	1.12	0.96	0.85					
			16.4	0.92	0.82	0.69	0.61					
			19.8	0.81	0.71	0.61	0.54					
PLB 1003	5	2800	37.1	1.26	1.12	0.96	0.85	35	37	33	36	40
			44.7	1.26	1.12	0.96	0.85					
			53.9	1.26	1.12	0.96	0.85					
			58.4	1.26	1.12	0.96	0.85					
			70.4	1.26	1.12	0.96	0.85					
			84.9	1.26	1.12	0.96	0.85					
			92.0	0.92	0.82	0.69	0.61					
			110.9	0.92	0.82	0.69	0.61					
			133.6	0.81	0.71	0.61	0.54					
			171.6	0.81	0.71	0.61	0.54					
PLB 1004	1.5	2800	131.8	1.26	1.12	0.96	0.85	41	43	39	42	46
			158.9	1.26	1.12	0.96	0.85					
			191.6	1.26	1.12	0.96	0.85					
			207.7	1.26	1.12	0.96	0.85					
			230.9	1.26	1.12	0.96	0.85					
			301.7	1.26	1.12	0.96	0.85					
			327.1	1.26	1.12	0.96	0.85					
			363.7	1.26	1.12	0.96	0.85					
			394.2	1.26	1.12	0.96	0.85					
			475.2	1.26	1.12	0.96	0.85					
			515.1	0.92	0.82	0.69	0.61					
			572.8	1.26	1.12	0.96	0.85					
			610.1	1.26	1.12	0.96	0.85					
			735.4	1.26	1.12	0.96	0.85					
			797.2	0.92	0.82	0.69	0.61					
			960.9	0.92	0.82	0.69	0.61					
			1158.3	0.81	0.71	0.61	0.54					
			1233.8	0.92	0.82	0.69	0.61					
			1487.2	0.81	0.71	0.61	0.54					

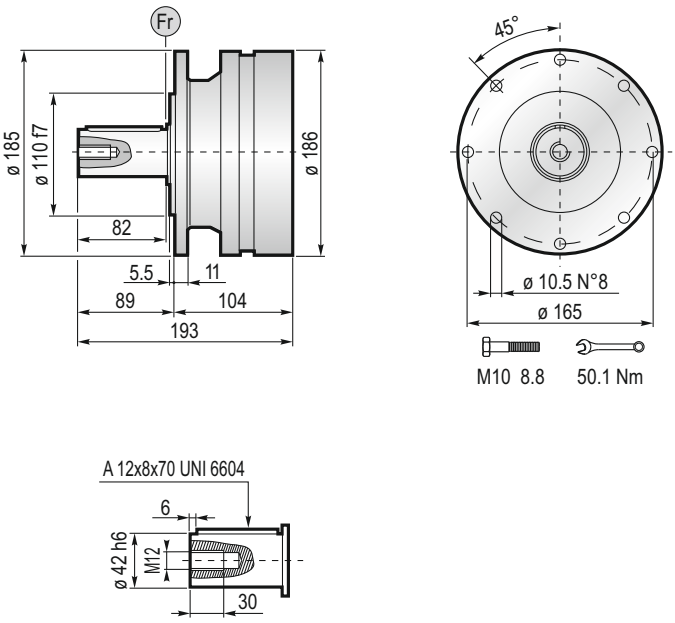
(n_2 x h = 20.000)

$M_{max} = M_c \times 2$

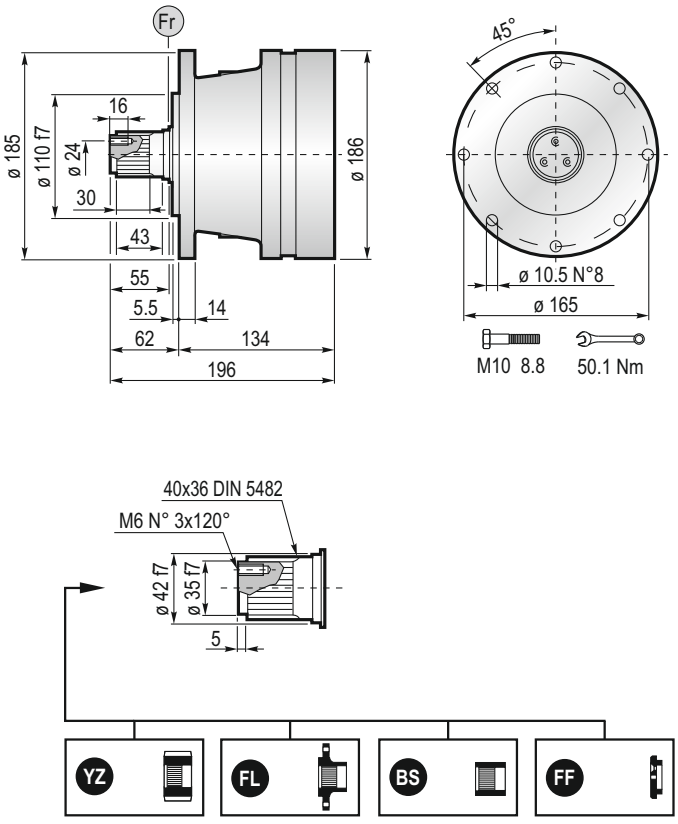
MS... 1000



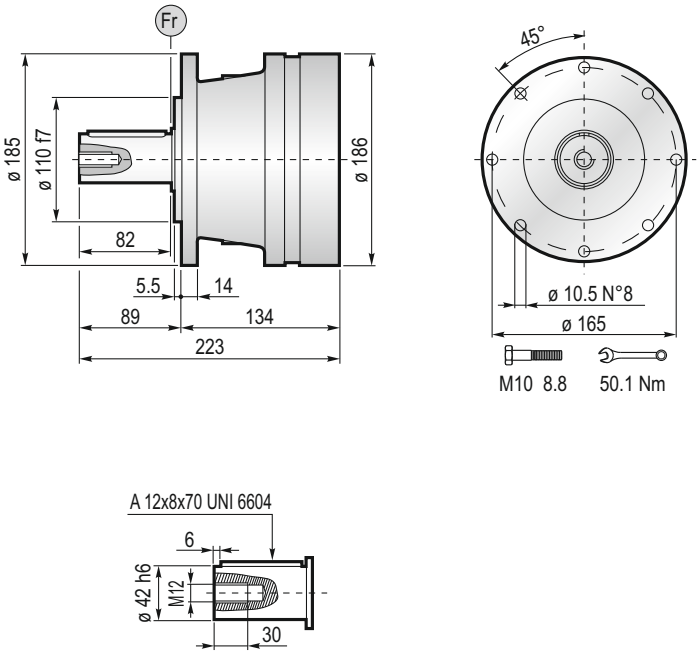
MC... 1000



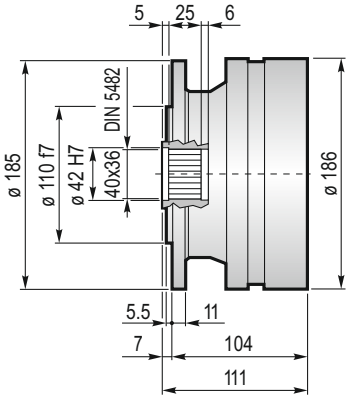
PS... 1000

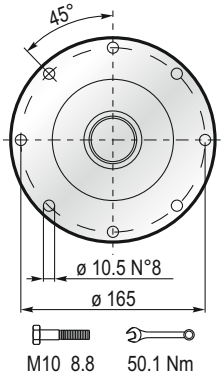


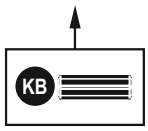
PC... 1000



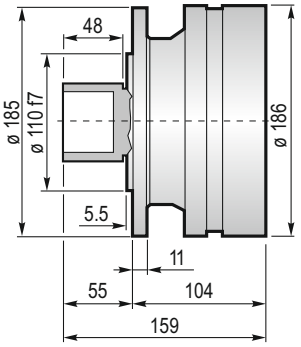
F... 1000

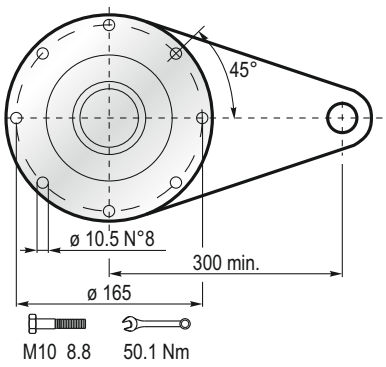


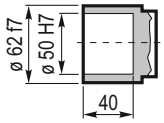


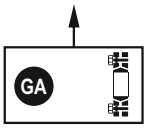


FS... 1000



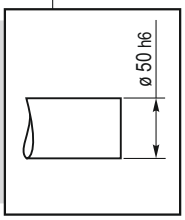




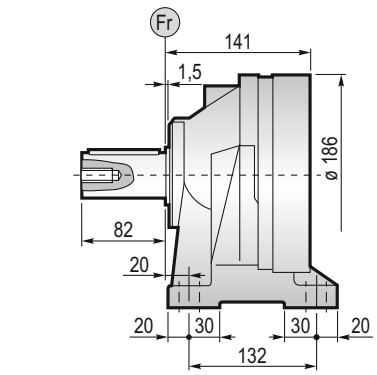


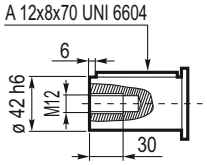
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti da Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

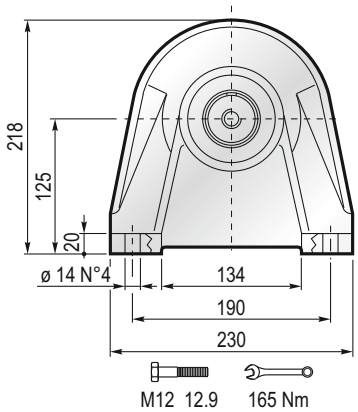
M_{max}= 2.2 kNm



CPC... 1000

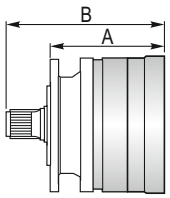




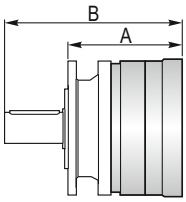


FL YZ BS FF KB GA → 102

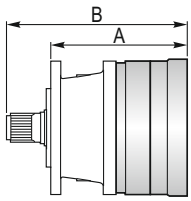
PL ...MS	A	B	RA	RB	EF	EDF
PL 1001	104	166	•			•
PL 1002	152	214	•			•
PL 1003	200	262	•			•
PL 1004	248	310	•			•



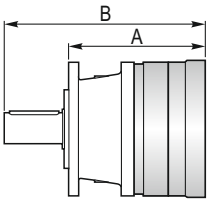
PL ...MC	A	B	RA	RB	EF	EDF
PL 1001	104	193	•			•
PL 1002	152	241	•			•
PL 1003	200	289	•			•
PL 1004	248	337	•			•



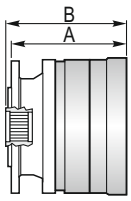
PL ...PS	A	B	RA	RB	EF	EDF
PL 1001	134	196	•			•
PL 1002	182	244	•			•
PL 1003	230	292	•			•
PL 1004	278	340	•			•



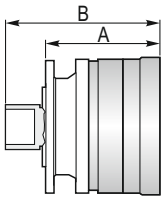
PL ...PC	A	B	RA	RB	EF	EDF
PL 1001	134	223	•			•
PL 1002	182	271	•			•
PL 1003	230	319	•			•
PL 1004	278	367	•			•



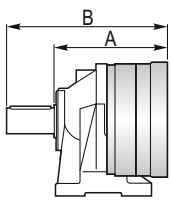
PL ...F	A	B	RA	RB	EF	EDF
PL 1001	104	111	•			•
PL 1002	152	159	•			•
PL 1003	200	207	•			•
PL 1004	248	255	•			•

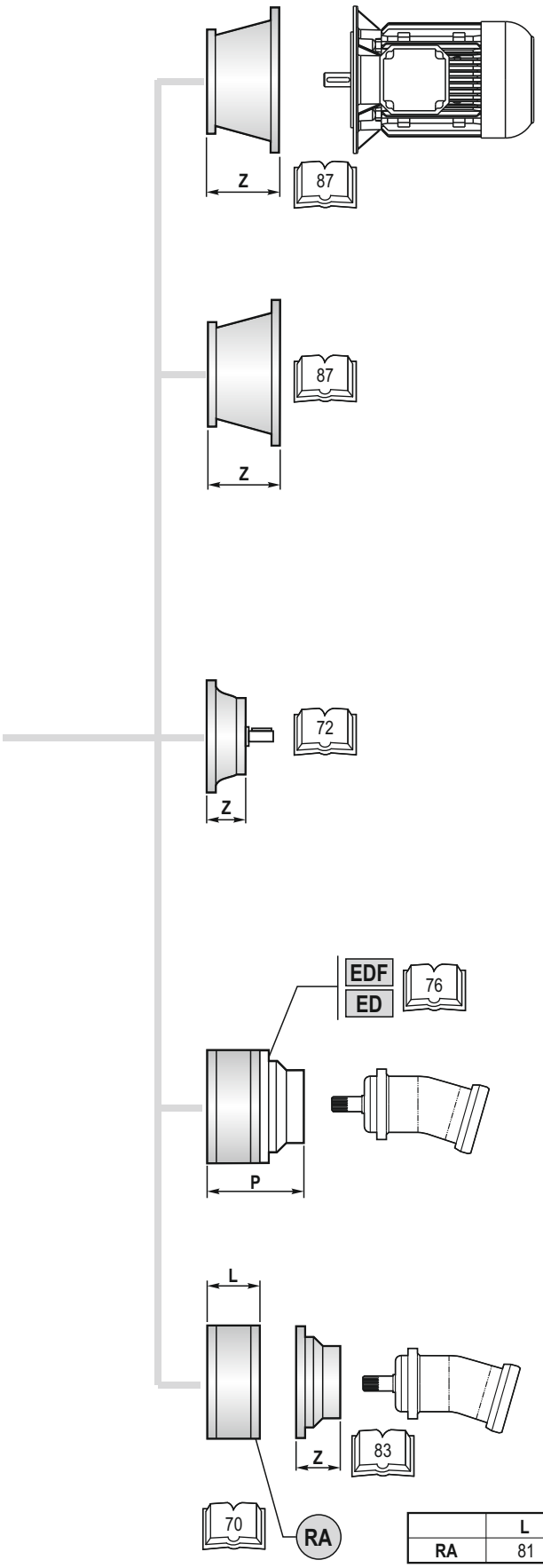


PL ...FS	A	B	RA	RB	EF	EDF
PL 1001	104	159	•			•
PL 1002	152	207	•			•
PL 1003	200	255	•			•
PL 1004	248	303	•			•



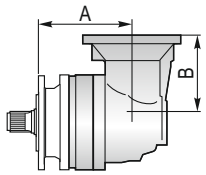
PL ...CPC	A	B	RA	RB	EF	EDF
PL 1001	141	223	•			•
PL 1002	189	271	•			•
PL 1003	237	319	•			•
PL 1004	286	367	•			•



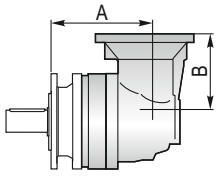


	L
RA	81

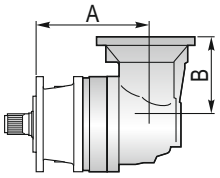
PLB ...MS	A	B	RA	RB	EF
PLB 1002	179	160	•		•
PLB 1003	227	160	•		•
PLB 1004	275	160	•		•



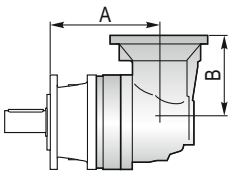
PLB ...MC	A	B	RA	RB	EF
PLB 1002	179	160	•		•
PLB 1003	227	160	•		•
PLB 1004	275	160	•		•



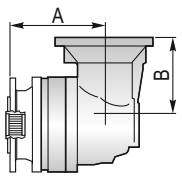
PLB ...PS	A	B	RA	RB	EF
PLB 1002	209	160	•		•
PLB 1003	257	160	•		•
PLB 1004	305	160	•		•



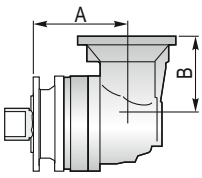
PLB ...PC	A	B	RA	RB	EF
PLB 1002	209	160	•		•
PLB 1003	257	160	•		•
PLB 1004	305	160	•		•



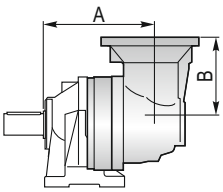
PLB ...F	A	B	RA	RB	EF
PLB 1002	179	160	•		•
PLB 1003	227	160	•		•
PLB 1004	275	160	•		•

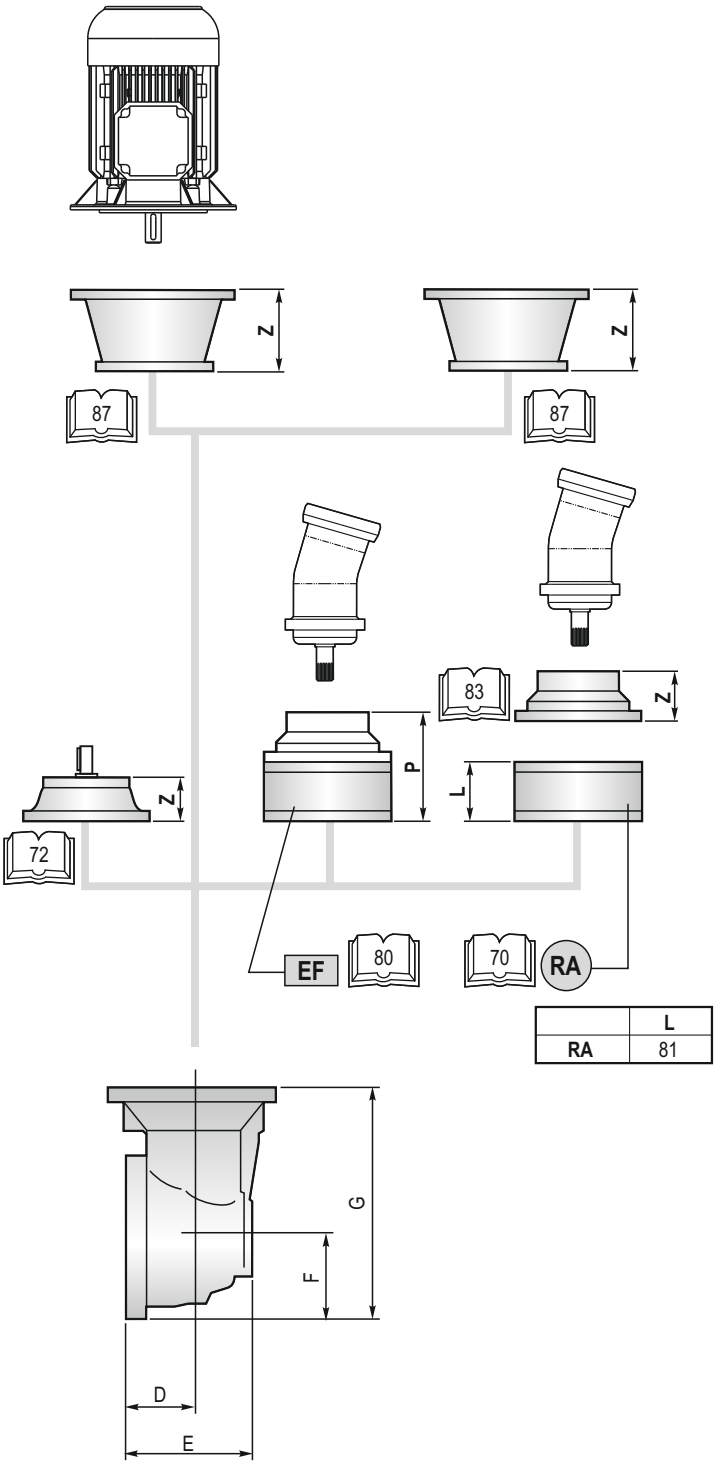


PLB ...FS	A	B	RA	RB	EF
PLB 1002	179	160	•		•
PLB 1003	227	160	•		•
PLB 1004	275	160	•		•



PLB ...CPC	A	B	RA	RB	EF
PLB 1002	216	160	•		•
PLB 1003	264	160	•		•
PLB 1004	312	160	•		•



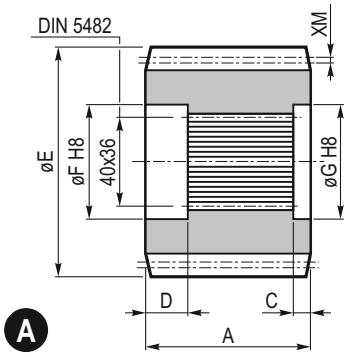


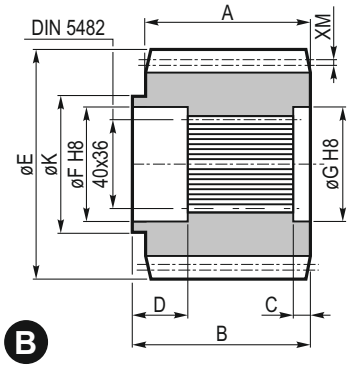
	L
RA	81

	D	E	F	G
PLB 1002	75	141.5	93	252
PLB 1003	75	141.5	93	252
PLB 1004	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

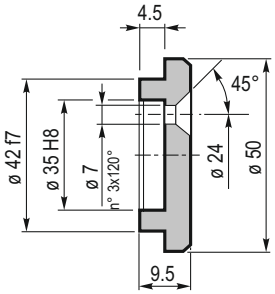




	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	M..-P..	1.9	20	0.049	65	-	6	20.5	84.5	42	42	-	38NiCrMo4	1071.200.042
	M..-P..	5	16	2.5	55	-	6	20.5	95	42	42	-	38NiCrMo4	1071.259.042
B	M..-P..	3.5	23	0	40	60.5	6	20.5	87.5	42	42	60	38NiCrMo4	1071.291.042

FF

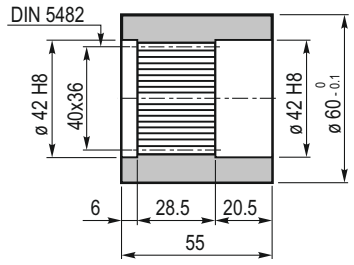
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.034.000

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

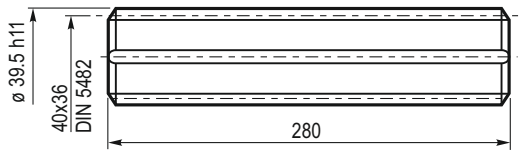


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
0171.100.076

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

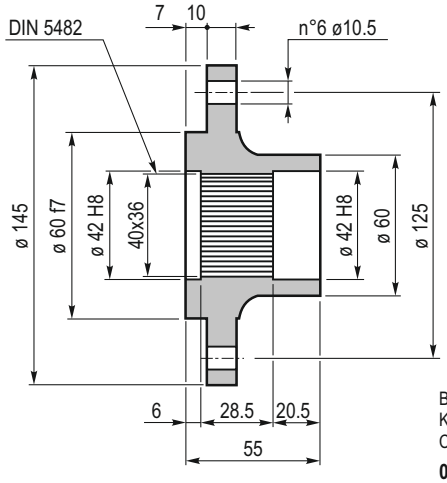


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.179.042

FL

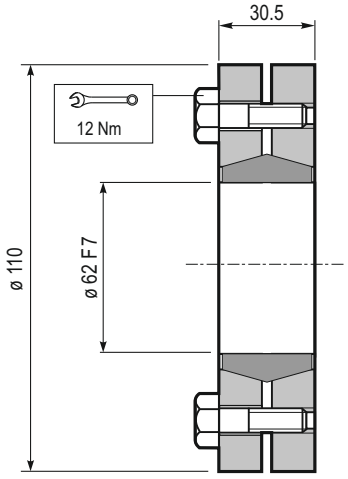
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
0171.102.025

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
2.2 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.062.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

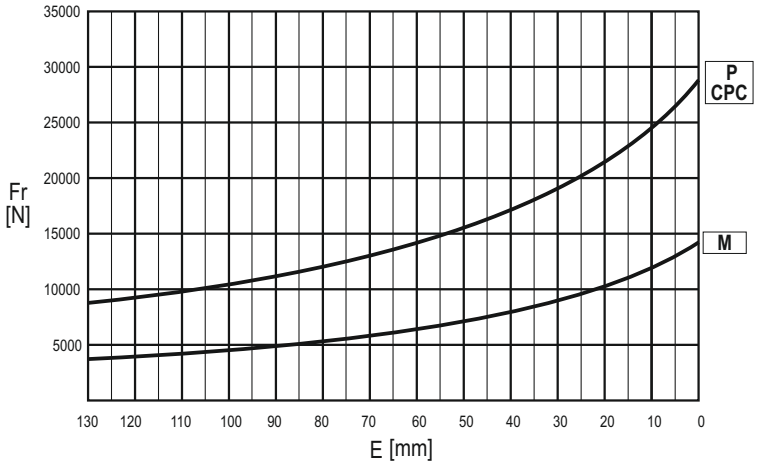
FR CHARGES RADIALES (Fr)

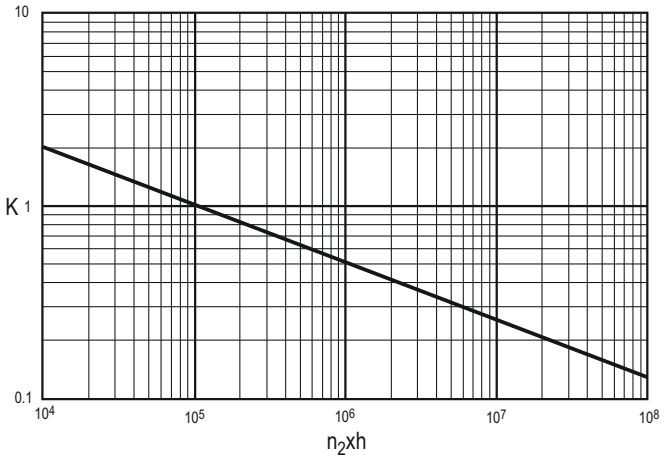
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

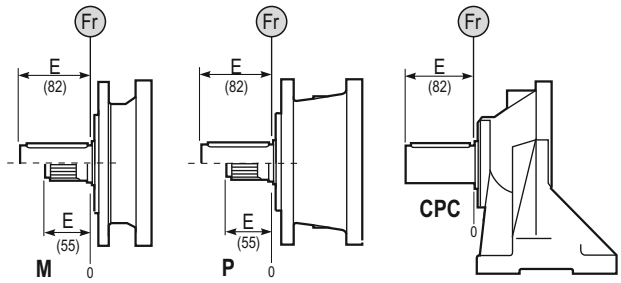
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - P - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

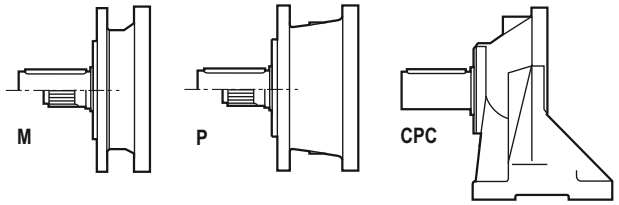
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	P - CPC	
	16000	18000	←
	16000	18000	→



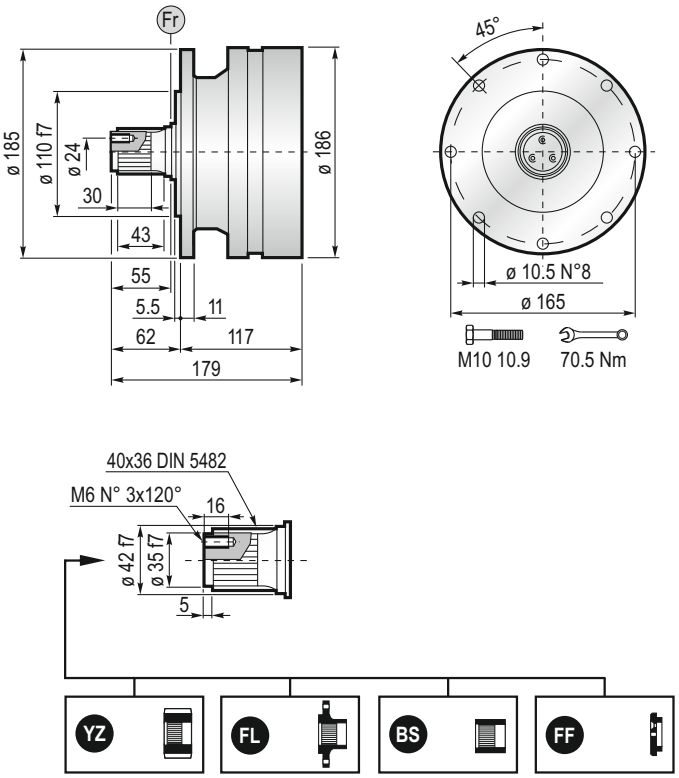
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 1601	12	2800	3.56 4.29 5.60 6.75	1.96 1.96 1.40 1.15	1.73 1.73 1.23 1.02	1.48 1.48 1.05 0.87	1.31 1.31 0.93 0.77	16	18	14	17	21
PL 1602	8	2800	12.6 15.2 19.9 24.0 28.9 31.4 37.8 45.6 58.5	1.96 1.96 1.96 1.96 1.96 1.40 1.40 1.15 1.15	1.73 1.73 1.73 1.73 1.73 1.23 1.23 1.02 1.02	1.48 1.48 1.48 1.48 1.48 1.05 1.05 0.87 0.87	1.31 1.31 1.31 1.31 1.31 0.93 0.93 0.77 0.77	22	24	20	23	27
PL 1603	5	2800	54.2 65.3 70.8 78.7 85.3 102.9 111.5 134.4 162.0 172.6 208.0 211.7 255.2 271.8 307.5 327.6 394.9	1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.40 1.40 1.40 1.15 1.40 1.15	1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.23 1.23 1.23 1.02 1.23 1.02	1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.05 1.05 1.05 0.87 1.05 0.87	1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 0.93 0.93 0.93 0.77 0.93 0.77	28	30	26	29	33
PL 1604	1.5	2800	337.4 365.7 396.4 440.8 477.9 531.3 576.0 624.4 694.3 752.6 836.9 907.2 966.3 1093.5 1144.5 1185.4 1318.1 1428.8 1692.3 3422.2	1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.40 1.96 1.40 1.96 1.15	1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.23 1.73 1.23 1.73 1.02	1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.48 1.05 1.48 1.05 1.48 0.87	1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 1.31 0.93 1.31 0.93 1.31 0.77	34	36	32	35	39

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 1602	8	2800	10.4	1.96	1.73	1.48	1.31	31	33	29	32	36
			12.6	1.96	1.73	1.48	1.31					
			16.4	1.40	1.23	1.05	0.93					
			19.8	1.15	1.02	0.87	0.77					
PLB 1603	5	2800	37.1	1.96	1.73	1.48	1.31	37	39	35	38	42
			44.7	1.96	1.73	1.48	1.31					
			53.9	1.96	1.73	1.48	1.31					
			58.4	1.96	1.73	1.48	1.31					
			70.4	1.96	1.73	1.48	1.31					
			84.9	1.96	1.73	1.48	1.31					
			92.0	1.40	1.23	1.05	0.93					
			110.9	1.40	1.23	1.05	0.93					
			133.6	1.15	1.02	0.87	0.77					
			171.6	1.15	1.02	0.87	0.77					
PLB 1604	1.5	2800	131.8	1.96	1.73	1.48	1.31	43	45	41	44	48
			158.9	1.96	1.73	1.48	1.31					
			191.6	1.96	1.73	1.48	1.31					
			207.7	1.96	1.73	1.48	1.31					
			230.9	1.96	1.73	1.48	1.31					
			301.7	1.96	1.73	1.48	1.31					
			327.1	1.96	1.73	1.48	1.31					
			363.7	1.96	1.73	1.48	1.31					
			394.2	1.96	1.73	1.48	1.31					
			475.2	1.96	1.73	1.48	1.31					
			515.1	1.40	1.23	1.05	0.93					
			572.8	1.96	1.73	1.48	1.31					
			610.1	1.96	1.73	1.48	1.31					
			735.4	1.96	1.73	1.48	1.31					
			797.2	1.40	1.23	1.05	0.93					
			960.9	1.40	1.23	1.05	0.93					
			1158.3	1.15	1.02	0.87	0.77					
			1233.8	1.40	1.23	1.05	0.93					
			1487.2	1.15	1.02	0.87	0.77					

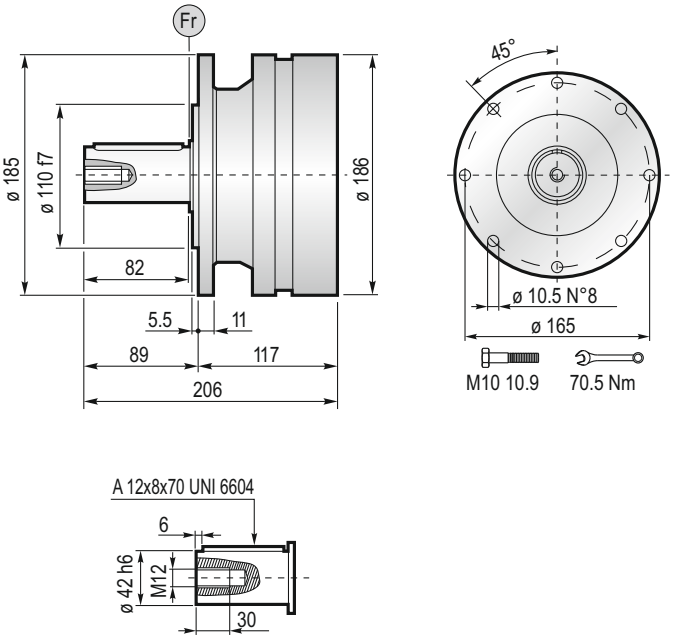
(n_2 x h = 20.000)

$M_{max} = M_c \times 2$

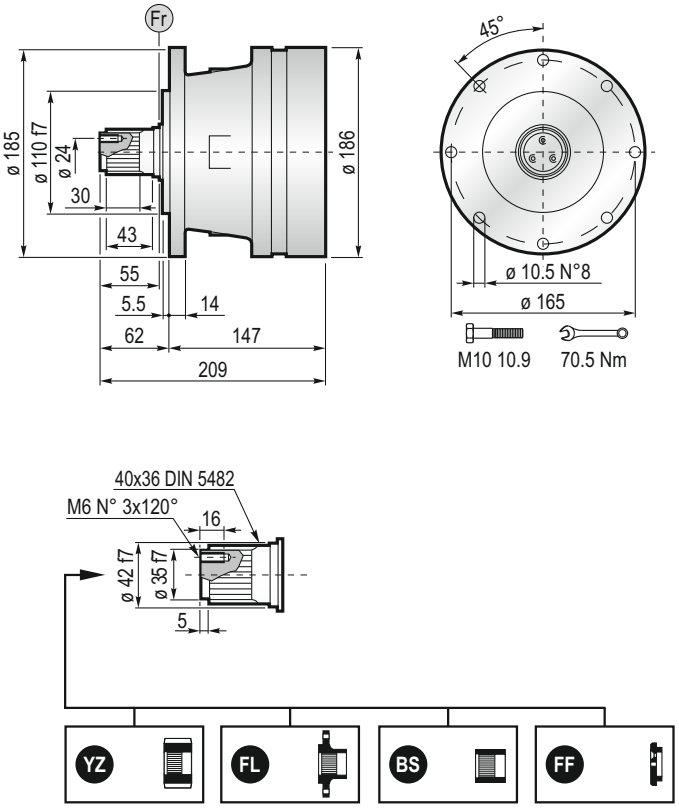
MS... 1600



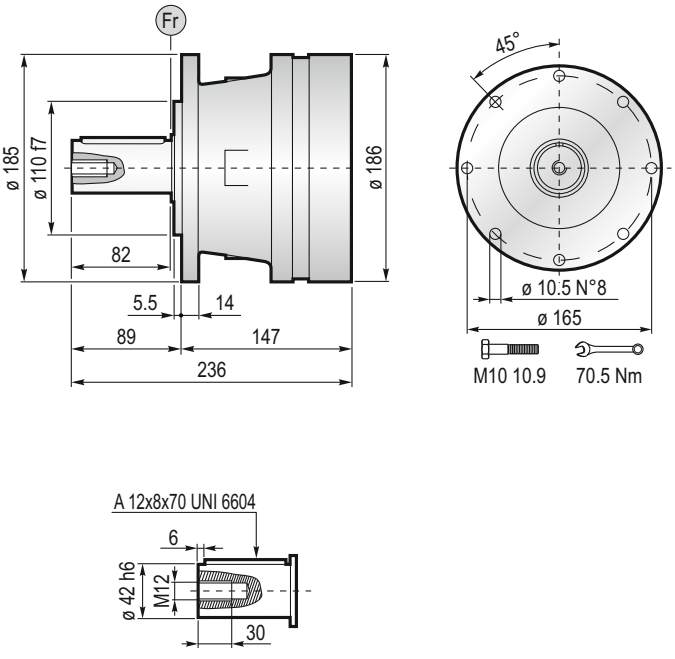
MC... 1600



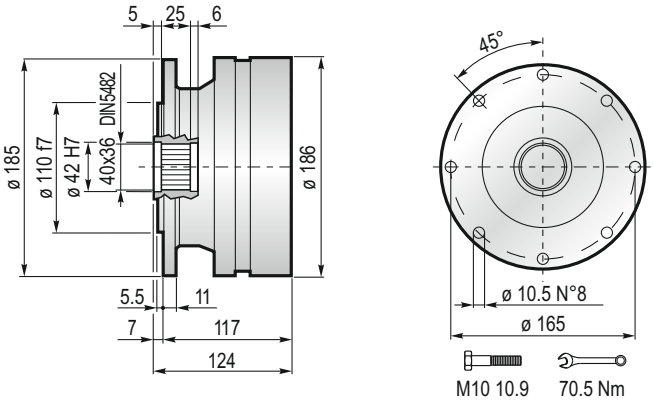
PS... 1600

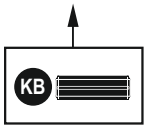


PC... 1600

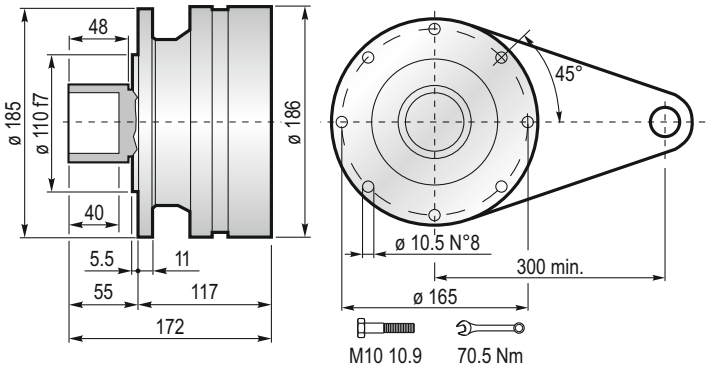


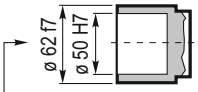
F... 1600

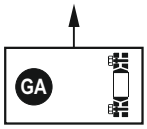




FS... 1600

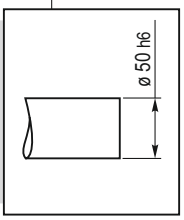




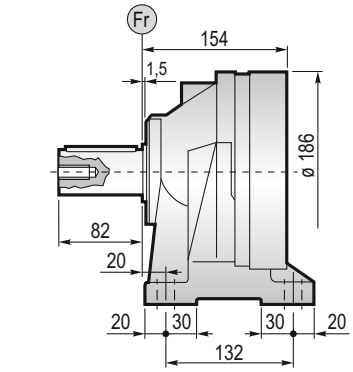


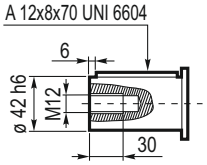
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

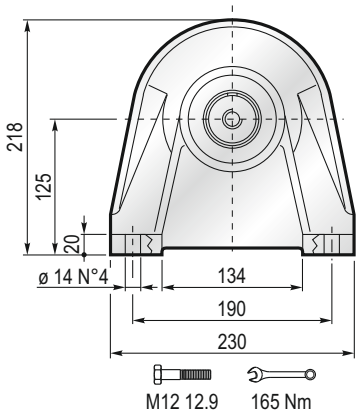
M_{max}= 2.2 kNm



CPC... 1600

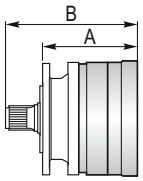




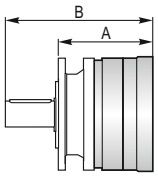


FL YZ BS FF KB GA → 110

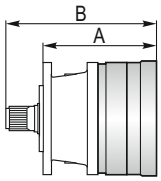
PL ...MS	A	B	RA	RB	EF	EDF
PL 1601	117	179	•			•
PL 1602	165	227	•			•
PL 1603	213	275	•			•
PL 1604	261	323	•			•



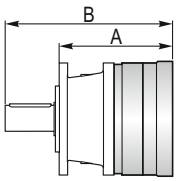
PL ...MC	A	B	RA	RB	EF	EDF
PL 1601	117	206	•			•
PL 1602	165	254	•			•
PL 1603	213	302	•			•
PL 1604	261	350	•			•



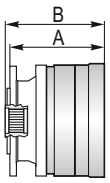
PL ...PS	A	B	RA	RB	EF	EDF
PL 1601	147	209	•			•
PL 1602	195	257	•			•
PL 1603	243	305	•			•
PL 1604	291	353	•			•



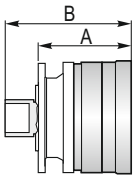
PL ...PC	A	B	RA	RB	EF	EDF
PL 1601	147	236	•			•
PL 1602	195	284	•			•
PL 1603	243	332	•			•
PL 1604	291	380	•			•



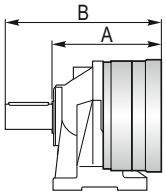
PL ...F	A	B	RA	RB	EF	EDF
PL 1601	117	124	•			•
PL 1602	165	172	•			•
PL 1603	213	220	•			•
PL 1604	261	268	•			•

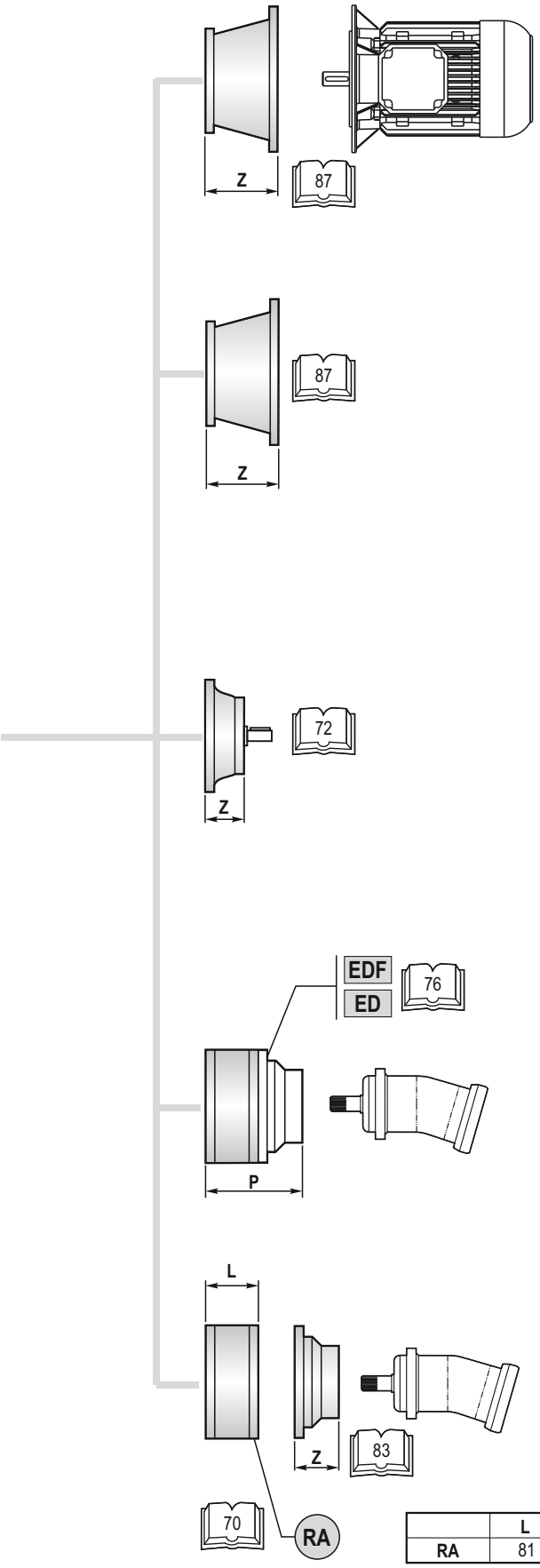


PL ...FS	A	B	RA	RB	EF	EDF
PL 1601	117	172	•			•
PL 1602	165	220	•			•
PL 1603	213	268	•			•
PL 1604	261	316	•			•



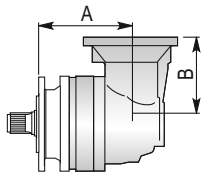
PL ...CPC	A	B	RA	RB	EF	EDF
PL 1601	154	236	•			•
PL 1602	202	284	•			•
PL 1603	250	332	•			•
PL 1604	298	380	•			•



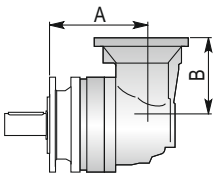


	L
RA	81

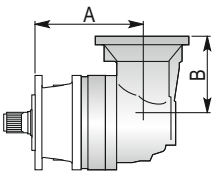
PLB ...MS	A	B	RA	RB	EF
PLB 1602	192	160	•		•
PLB 1603	240	160	•		•
PLB 1604	288	160	•		•



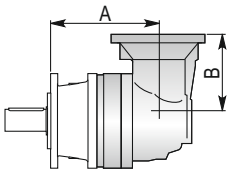
PLB ...MC	A	B	RA	RB	EF
PLB 1602	192	160	•		•
PLB 1603	240	160	•		•
PLB 1604	288	160	•		•



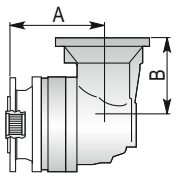
PLB ...PS	A	B	RA	RB	EF
PLB 1602	222	160	•		•
PLB 1603	270	160	•		•
PLB 1604	318	160	•		•



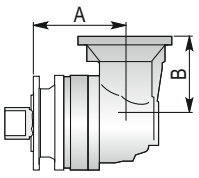
PLB ...PC	A	B	RA	RB	EF
PLB 1602	222	160	•		•
PLB 1603	270	160	•		•
PLB 1604	318	160	•		•



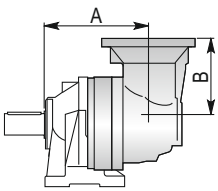
PLB ...F	A	B	RA	RB	EF
PLB 1602	192	160	•		•
PLB 1603	240	160	•		•
PLB 1604	288	160	•		•

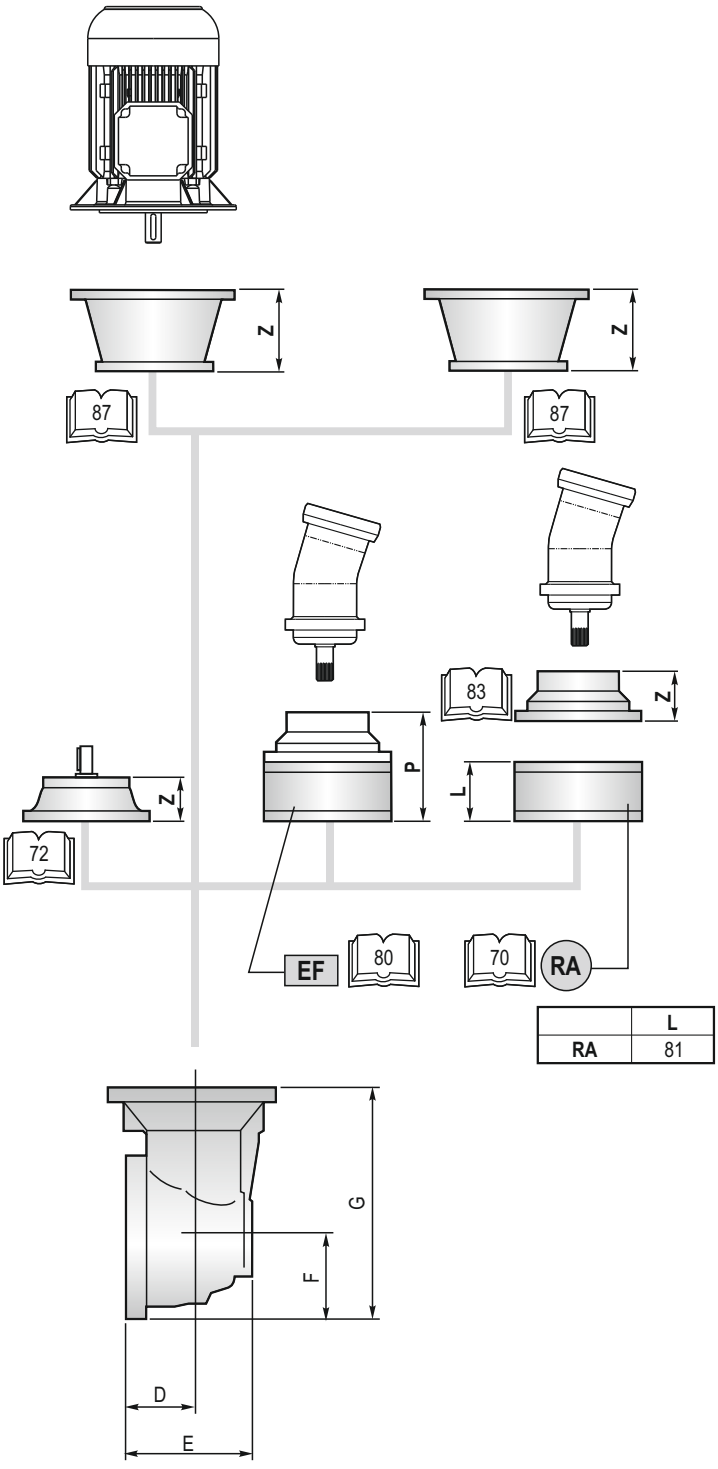


PLB ...FS	A	B	RA	RB	EF
PLB 1602	192	160	•		•
PLB 1603	240	160	•		•
PLB 1604	288	160	•		•



PLB ...CPC	A	B	RA	RB	EF
PLB 1602	229	160	•		•
PLB 1603	277	160	•		•
PLB 1604	325	160	•		•



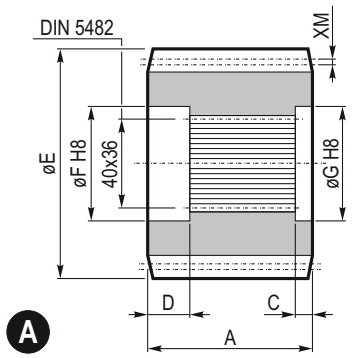


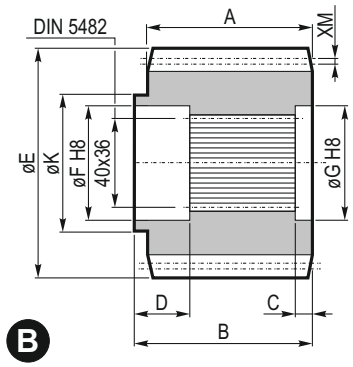
	L
RA	81

	D	E	F	G
PLB 1602	75	141.5	93	252
PLB 1603	75	141.5	93	252
PLB 1604	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

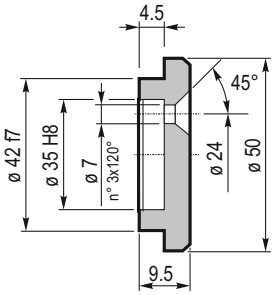




	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	M..-P..	1.9	20	0.049	65	-	6	20.5	84.5	42	42	-	38NiCrMo4	1071.200.042
	M..-P..	5	16	2.5	55	-	6	20.5	95	42	42	-	38NiCrMo4	1071.259.042
B	M..-P..	3.5	23	0	40	60.5	6	20.5	87.5	42	42	60	38NiCrMo4	1071.291.042

FF

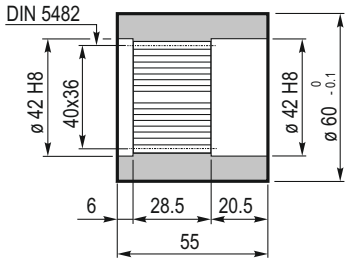
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.034.000

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

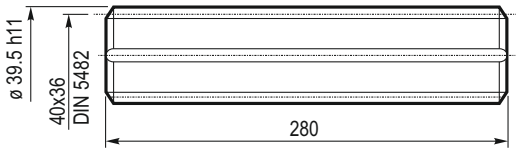


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
0171.100.076

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

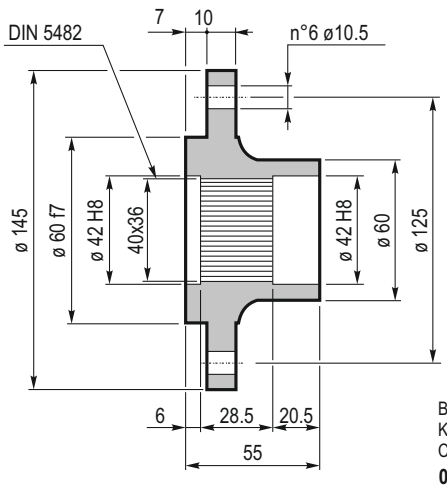


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.179.042

FL

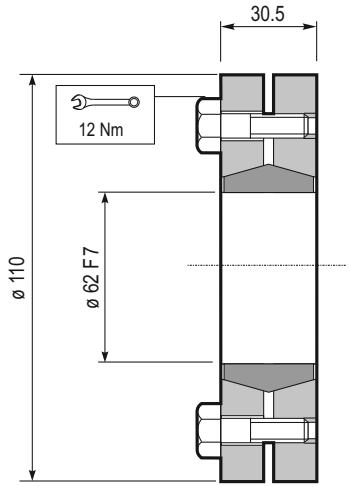
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
0171.102.025

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
2.2 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.062.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

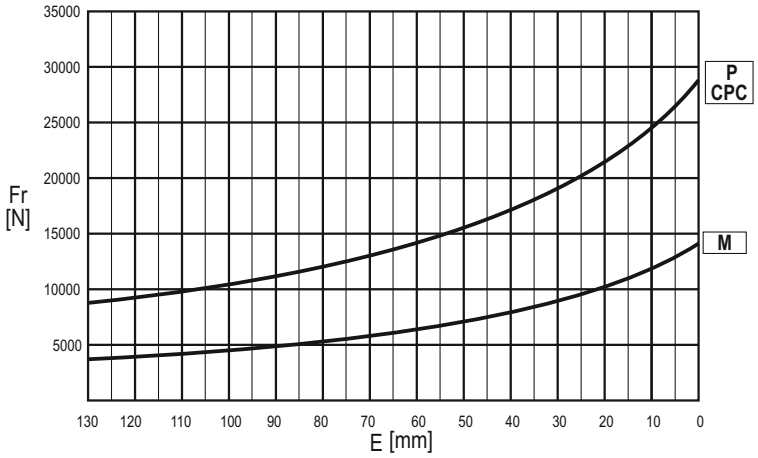
FR CHARGES RADIALES (Fr)

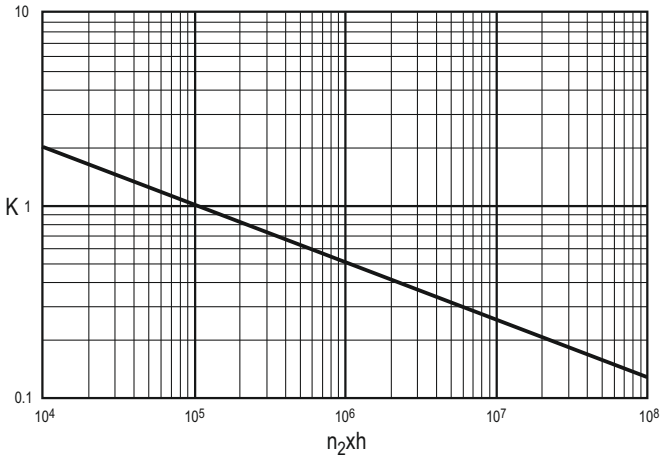
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

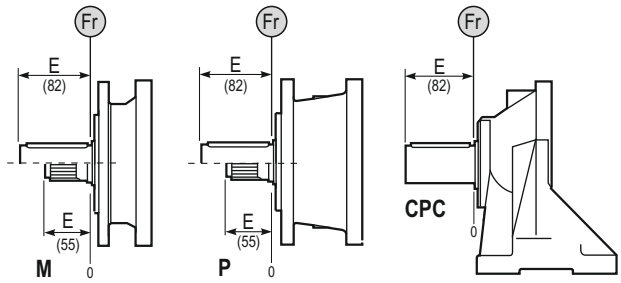
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - P - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

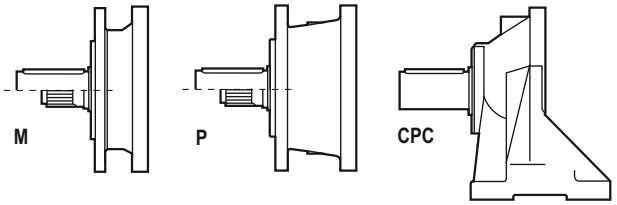
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	P - CPC	
	16000	18000	←
	16000	18000	→



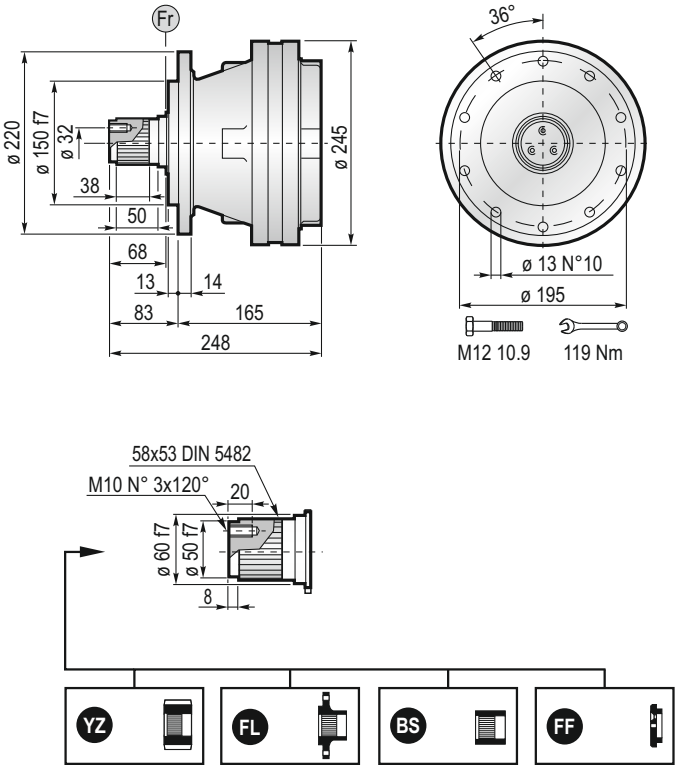
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 2501	20	2800	3.78 4.13 5.17 6.00 7.25	4.06 3.67 3.07 2.57 1.99	3.59 3.25 2.71 2.27 1.76	3.06 2.76 2.31 1.94 1.50	2.70 2.45 2.04 1.71 1.33	30	39	21	32	43
PL 2502	12	2800	13.4 16.2 18.4 23.1 28.9 34.9 40.5 48.9 62.8	4.06 4.06 3.07 3.67 3.07 3.07 2.57 1.99 1.99	3.59 3.59 2.71 3.25 2.71 2.71 2.27 1.76 1.76	3.06 3.06 2.31 2.76 2.31 2.31 1.94 1.50 1.50	2.70 2.70 2.04 2.45 2.04 2.04 1.71 1.33 1.33	36	45	28	38	49
PL 2503	8	2800	52.1 57.6 62.9 75.2 82.1 90.7 99.0 119.3 129.4 149.5 155.9 162.0 173.6 195.3 235.4 273.4 302.2 330.3 424.1	3.67 4.06 3.67 4.06 3.67 4.06 3.67 3.67 3.67 3.07 3.67 3.07 2.57 3.07 3.07 2.57 3.07 1.99 1.99	3.25 3.59 3.25 3.59 3.25 3.59 3.25 3.25 3.25 2.71 3.25 2.71 2.27 2.71 2.71 2.27 2.71 1.76 1.76	2.76 3.06 2.76 3.06 2.76 3.06 2.76 2.76 2.76 2.31 2.76 2.31 1.94 2.31 2.31 1.94 2.31 1.50 1.50	2.45 2.70 2.45 2.70 2.45 2.70 2.45 2.45 2.45 2.04 2.45 2.04 1.71 2.04 2.04 1.71 2.04 1.33 1.33	42	51	33	44	55
PL 2504	4	2800	352.0 365.8 388.6 413.9 424.3 468.4 511.4 554.4 612.0 668.2 737.7 805.5 858.0 907.3 1052.5 1121.1 1318.3 1589.0 1845.3 2369.2	3.67 3.07 4.06 4.06 3.67 4.06 3.67 3.67 4.06 3.67 4.06 3.67 3.67 3.07 3.67 3.67 3.07 3.07 2.57 2.57	3.25 2.71 3.59 3.59 3.25 3.59 3.25 3.25 3.59 3.25 3.59 3.25 3.25 2.71 3.25 3.25 2.71 2.71 2.27 2.27	2.76 2.31 3.06 3.06 2.76 3.06 2.76 2.76 3.06 2.76 3.06 2.76 2.76 2.31 2.76 2.76 2.31 2.31 1.94 1.94	2.45 2.04 2.70 2.70 2.45 2.70 2.45 2.45 2.70 2.45 2.70 2.45 2.45 2.04 2.45 2.45 2.04 2.04 1.71 1.71	48	57	39	50	61

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 2502	12	2800	12.1	3.67	3.25	2.76	2.45	48	57	36	50	61
			15.2	3.07	2.71	2.31	2.04					
			17.6	2.57	2.27	1.94	1.71					
			21.3	1.99	1.76	1.50	1.33					
PLB 2503	8	2800	39.4	4.06	3.59	3.06	2.70	54	63	46	56	67
			47.5	4.06	3.59	3.06	2.70					
			53.9	3.07	2.71	2.31	2.04					
			67.8	3.67	3.25	2.76	2.45					
			75.4	2.57	2.27	1.94	1.71					
			84.9	3.07	2.71	2.31	2.04					
			91.1	1.99	1.76	1.50	1.33					
			102.3	3.07	2.71	2.31	2.04					
			118.8	2.57	2.27	1.94	1.71					
			143.5	1.99	1.76	1.50	1.33					
PLB 2504	4	2800	140.1	4.06	3.59	3.06	2.70	60	69	51	62	73
			168.9	4.06	3.59	3.06	2.70					
			184.4	3.67	3.25	2.76	2.45					
			220.6	4.06	3.59	3.06	2.70					
			240.9	3.67	3.25	3.78	2.45					
			265.9	4.06	3.59	3.06	2.70					
			290.4	3.67	3.25	2.76	2.45					
			320.6	4.06	3.59	3.06	2.70					
			350.0	3.67	3.25	2.76	2.45					
			422.4	2.57	2.27	1.94	1.71					
			449.4	3.67	3.25	2.76	2.45					
			475.3	3.07	2.71	2.31	2.04					
			509.1	2.57	2.27	1.94	1.71					
			551.9	2.57	2.27	1.94	1.71					
			615.2	1.99	1.76	1.50	1.33					
			665.3	2.57	2.27	1.94	1.71					
			735.5	3.07	2.71	2.31	2.04					
			801.9	2.57	2.27	1.94	1.71					
			1244.1	1.99	1.76	1.50	1.33					

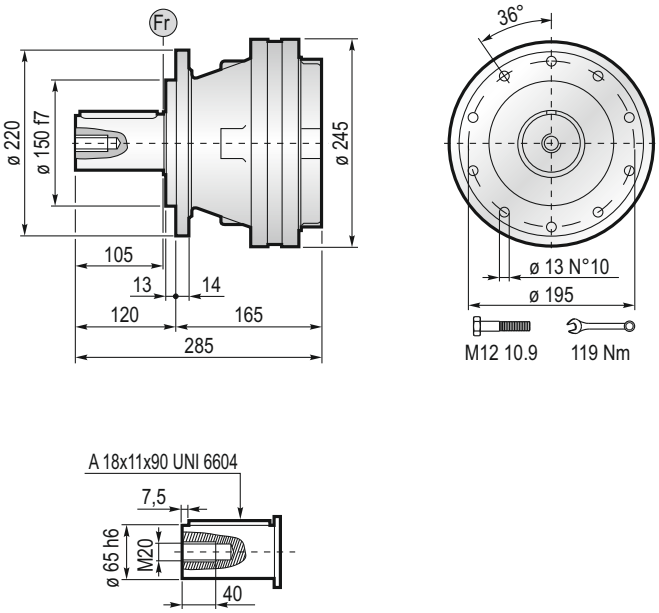
(n_2 x h = 20.000)

$$M_{max} = M_c \times 2$$

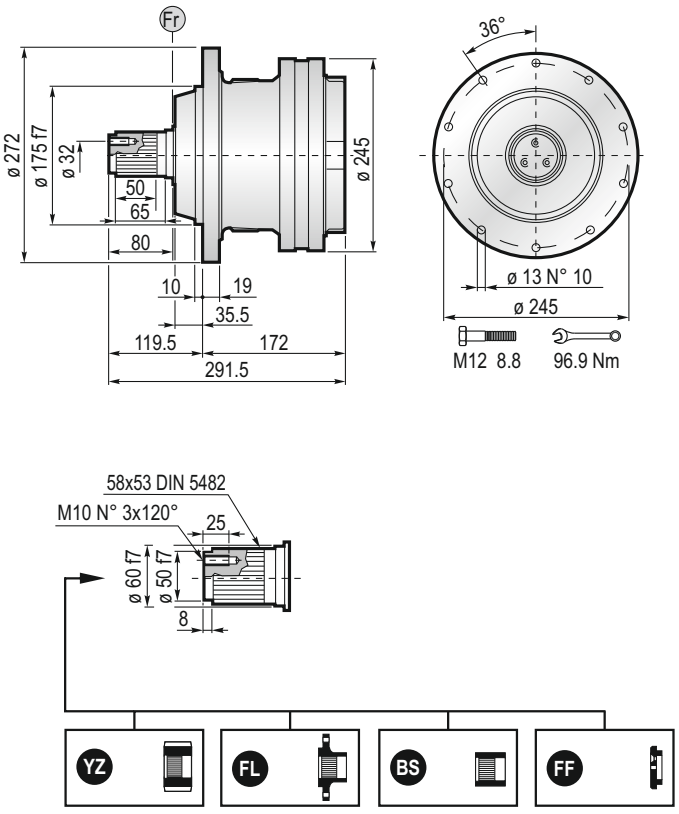
MS... 2500



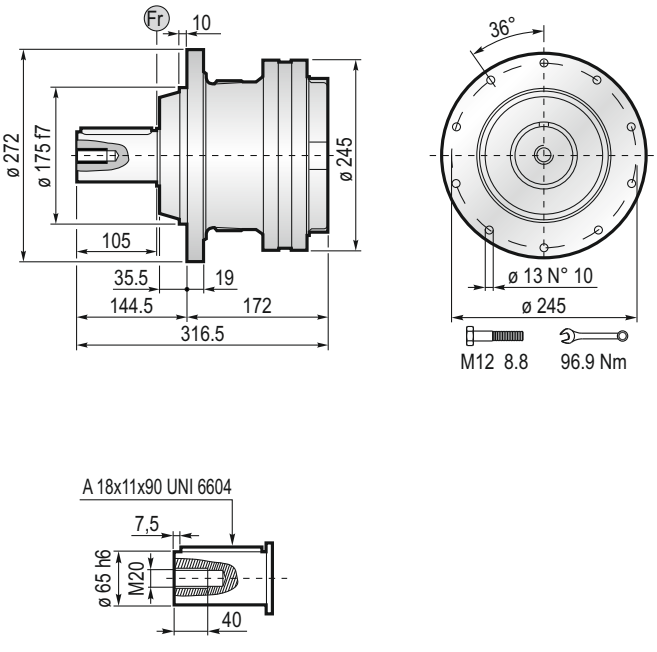
MC... 2500



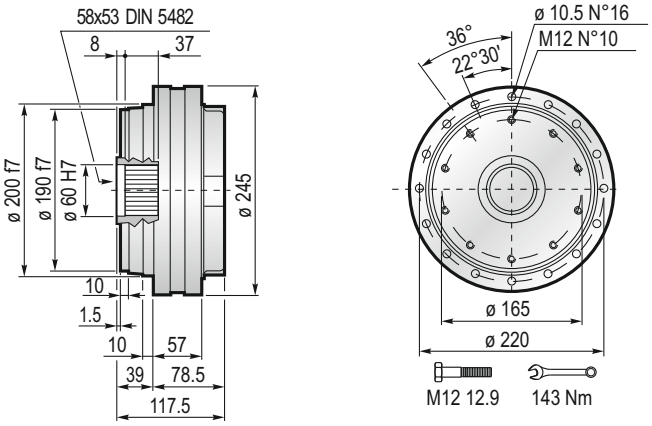
PS... 2500

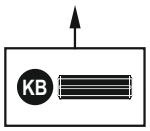


PC... 2500

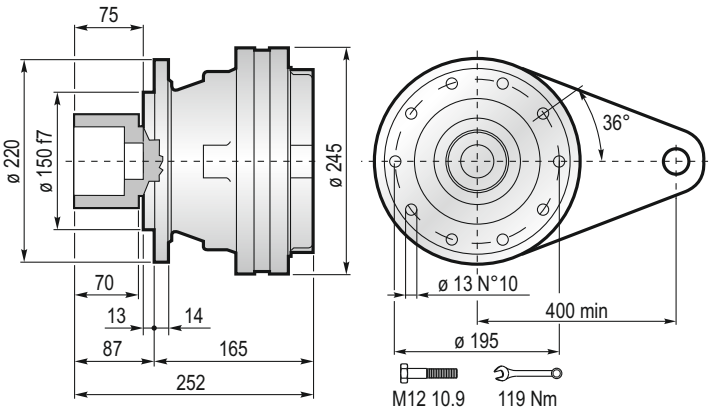


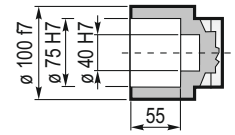
F... 2500

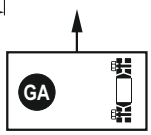




FS... 2500

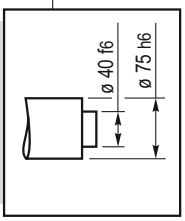




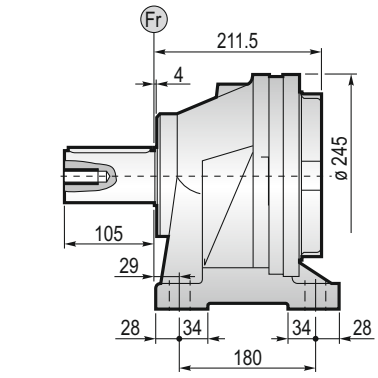


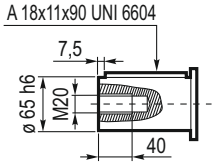
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

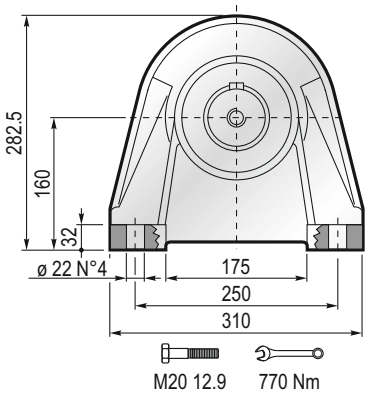
M_{max}= 7.5 kNm



CPC... 2500

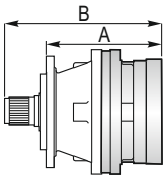




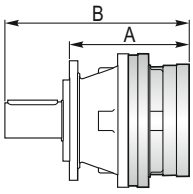


FL YZ BS FF KB GA → 118

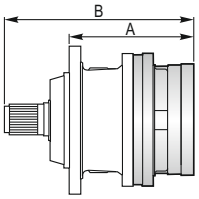
PL ...MS	A	B	RA	RB	EF	EDF
PL 2501	165	248	•	○	•	
PL 2502	213	296	•			•
PL 2503	261	344	•			•
PL 2504	309	392	•			•



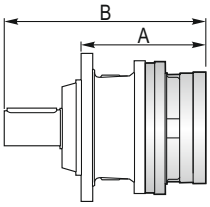
PL ...MC	A	B	RA	RB	EF	EDF
PL 2501	165	285	•	○	•	
PL 2502	213	333	•			•
PL 2503	261	381	•			•
PL 2504	309	429	•			•



PL ...PS	A	B	RA	RB	EF	EDF
PL 2501	172	291.5	•	○	•	
PL 2502	220	339.5	•			•
PL 2503	268	387.5	•			•
PL 2504	316	435.5	•			•

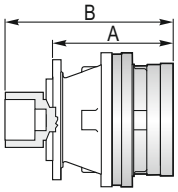


PL ...PC	A	B	RA	RB	EF	EDF
PL 2501	172	316.5	•	○	•	
PL 2502	220	364.5	•			•
PL 2503	268	412.5	•			•
PL 2504	316	460.5	•			•

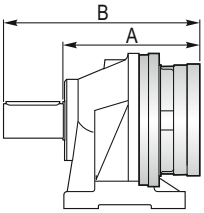


PL ...F	A	B	RA	RB	EF	EDF
PL 2501	78.5	117.5	•	○	•	
PL 2502	126.5	165.5	•			•
PL 2503	174.5	213.5	•			•
PL 2504	222.5	261.5	•			•

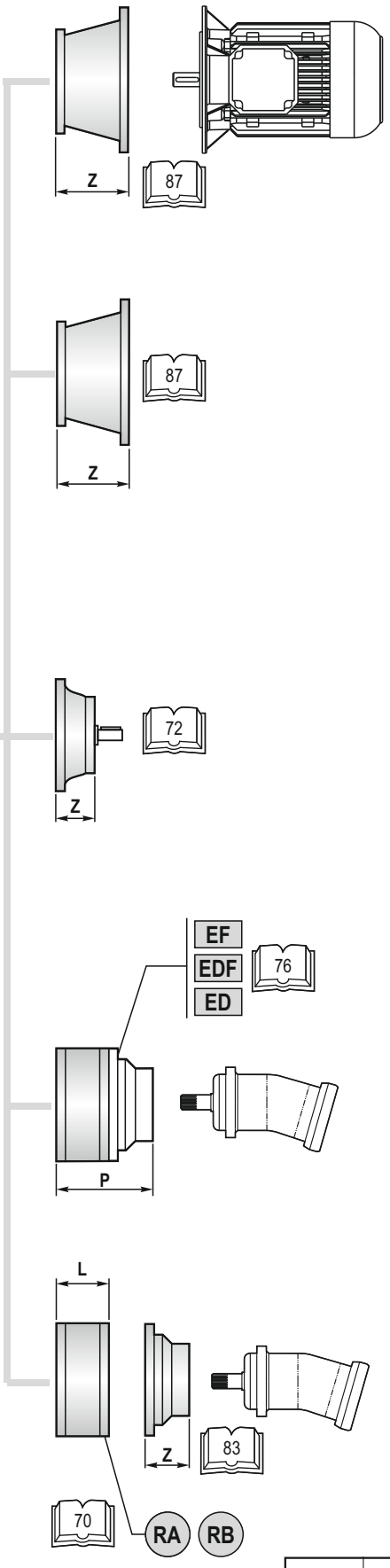
PL ...FS	A	B	RA	RB	EF	EDF
PL 2501	165	252	•	○	•	
PL 2502	213	300	•			•
PL 2503	261	348	•			•
PL 2504	309	396	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 2501	211.5	316.5	•	○	•	
PL 2502	259.5	364.5	•			•
PL 2503	307.5	412.5	•			•
PL 2504	355.5	460.5	•			•

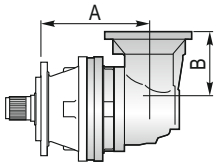


A+13.5	B+13.5	

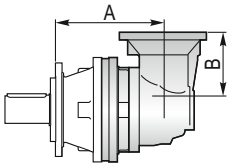


	L
RA	81
RB	125

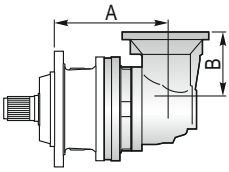
PLB ...MS	A	B	RA	RB	EF
PLB 2502	240	160	•		•
PLB 2503	288	160	•		•
PLB 2504	336	160	•		•



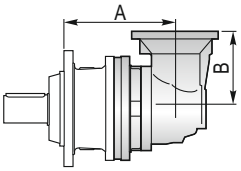
PLB ...MC	A	B	RA	RB	EF
PLB 2502	240	160	•		•
PLB 2503	288	160	•		•
PLB 2504	336	160	•		•



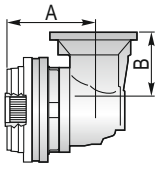
PLB ...PS	A	B	RA	RB	EF
PLB 2502	247	160	•		•
PLB 2503	295	160	•		•
PLB 2504	343	160	•		•



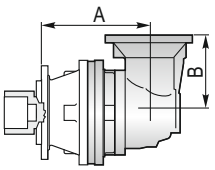
PLB ...PC	A	B	RA	RB	EF
PLB 2502	247	160	•		•
PLB 2503	295	160	•		•
PLB 2504	343	160	•		•



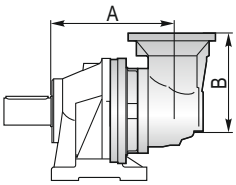
PLB ...F	A	B	RA	RB	EF
PLB 2502	191	160	•		•
PLB 2503	239	160	•		•
PLB 2504	287	160	•		•

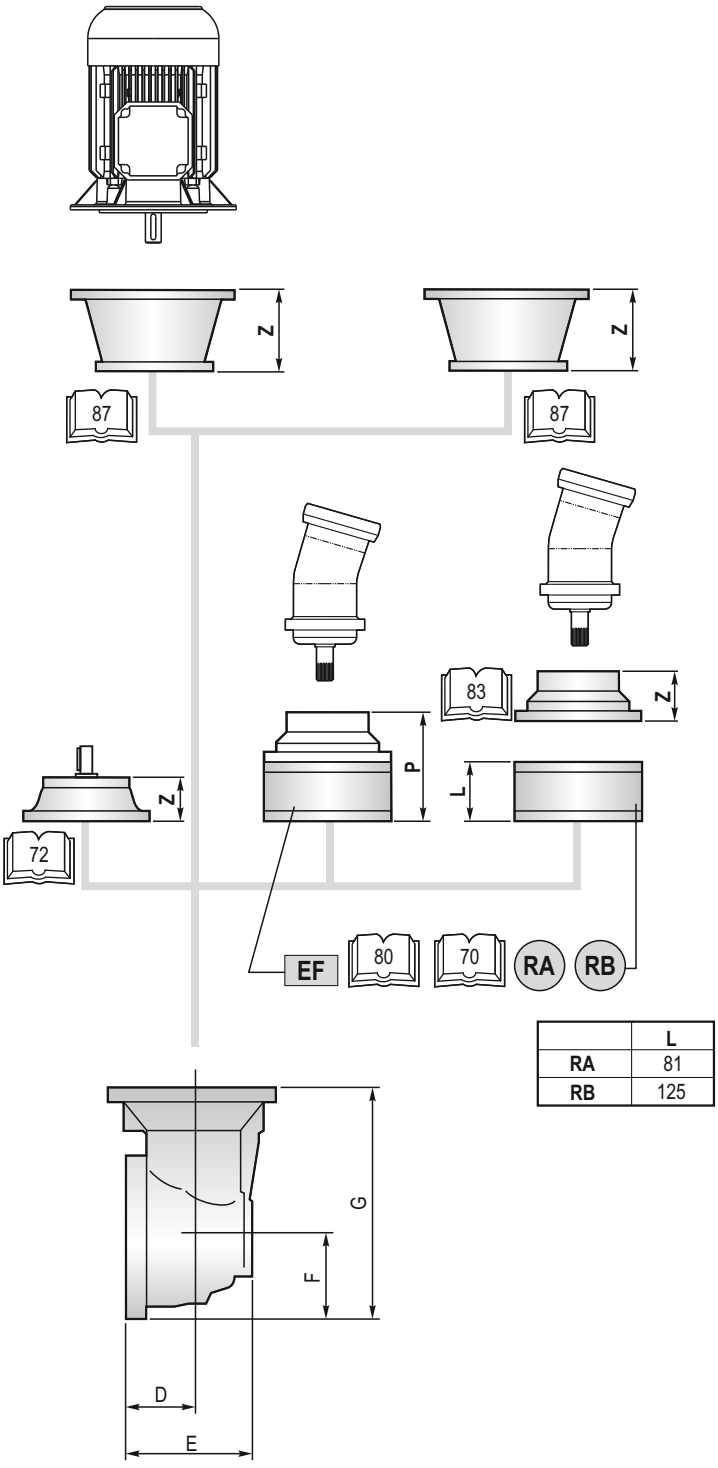


PLB ...FS	A	B	RA	RB	EF
PLB 2502	240	160	•		•
PLB 2503	288	160	•		•
PLB 2504	336	160	•		•



PLB ...CPC	A	B	RA	RB	EF
PLB 2502	286.5	160	•		•
PLB 2503	334.5	160	•		•
PLB 2504	382.5	160	•		•



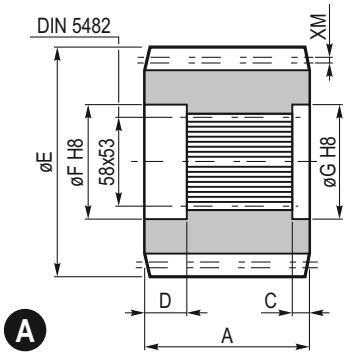


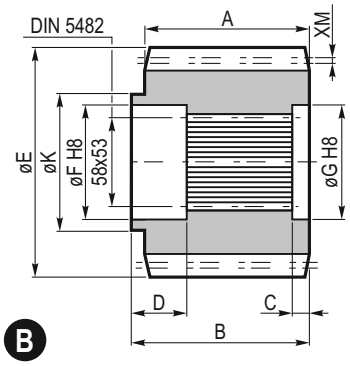
	L
RA	81
RB	125

	D	E	F	G
PLB 2502	75	141.5	93	252
PLB 2503	75	141.5	93	252
PLB 2504	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

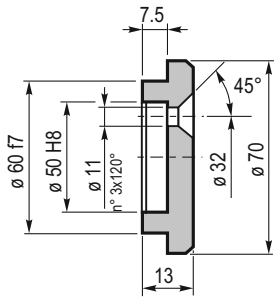




	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
	M	8	13	0	68	-	8.5	22.5	120	60	60	-	18NiCrMo5	1071.218.042
A	M	8	11	5	68	-	8.5	22.5	110.8	60	60	-	38NiCrMo4	1071.258.042
	M	8	12	0	68	-	8	21	112.8	60	60	-	38NiCrMo4	1071.196.042
B	P	10	14	3.2	103	116	9.5	22.5	162.4	60	60	105	18NiCrMo5	1071.298.042
	M	8	15	0	68	-	8.5	22.5	136	60	60	-	38NiCrMo4	1071.163.042
A	P	6	14	3	95	-	23	21	99.6	60	60	-	38NiCrMo4	1071.160.042
	P	10	11	8	90	-	8.5	22.5	142.1	60	60	-	18NiCrMo5	1071.297.042

FF

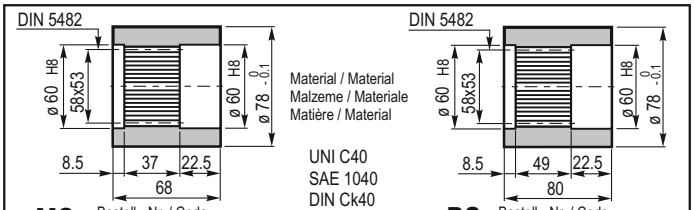
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.015.000

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

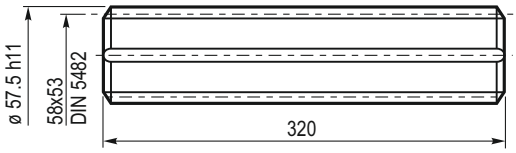


MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
2171.101.076

PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
4171.101.076

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada



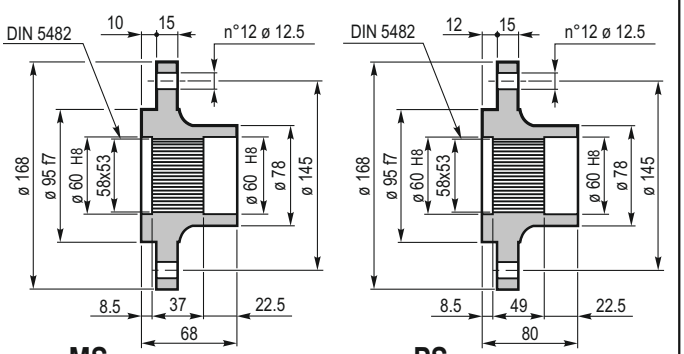
Material / Material
Malzeme / Materiale
Matière / Material

UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.181.042

FL

Flansch / Flange
Flanş / Flangia
Bride / Brida

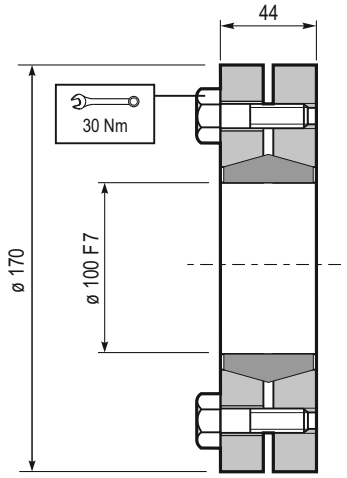


MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
2171.103.025

PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
4171.103.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
7.5 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.100.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

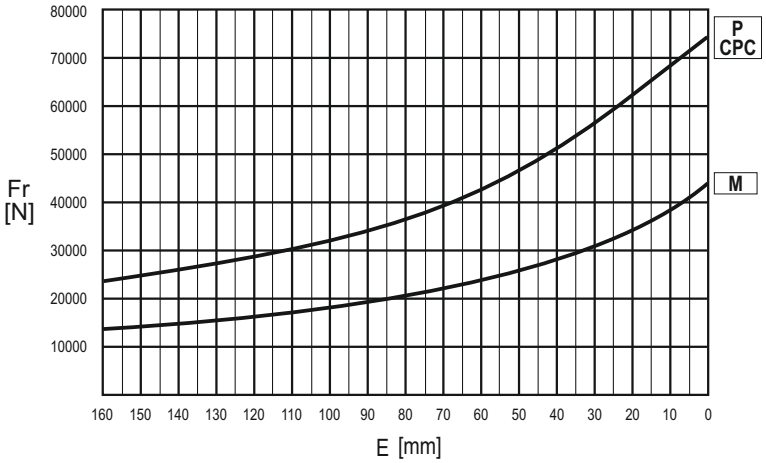
FR CHARGES RADIALES (Fr)

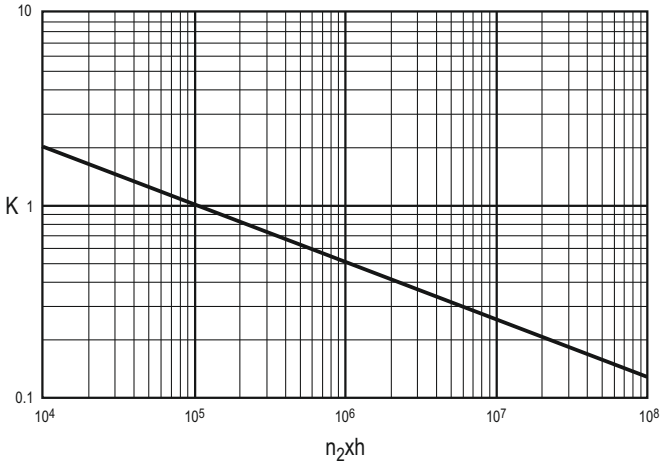
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

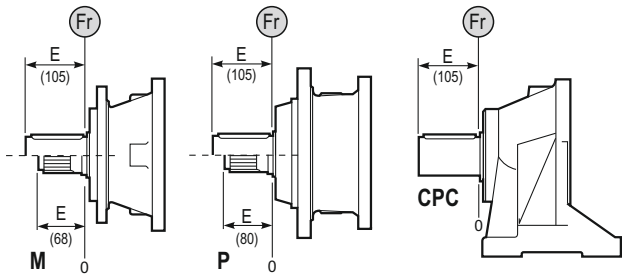
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - P - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

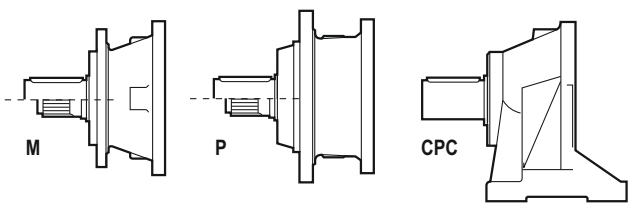
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	P - CPC	
	32000	32000	←
	32000	48000	→



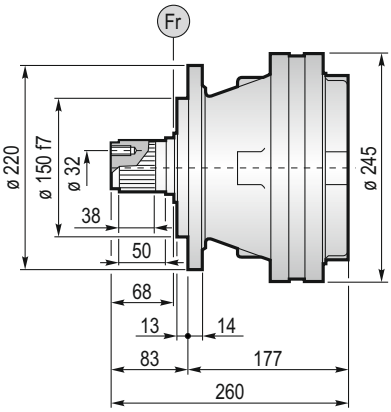
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 5001	20	2800	3.78 4.13 5.17 6.00 7.25	5.89 5.37 4.39 3.85 3.01	5.21 4.75 3.89 3.41 2.66	4.44 4.05 3.30 2.90 2.26	3.93 3.58 2.93 2.57 2.01	34	43	26	36	47
PL 5002	15	2800	13.4 16.2 18.4 23.1 28.9 34.9 40.5 48.9	5.89 5.89 4.39 5.37 4.39 4.39 3.85 3.01	5.21 5.21 3.89 4.75 3.89 3.89 3.41 2.66	4.44 4.44 3.30 4.05 3.30 3.30 2.90 2.26	3.93 3.93 2.93 3.58 2.93 2.93 2.57 2.01	42	51	33	44	55
PL 5003	10	2800	52.1 57.6 62.9 75.2 82.1 90.7 99.0 119.3 129.4 149.5 155.9 162.0 173.6 195.3 235.4 273.4 302.2 330.3	5.37 5.89 5.37 5.89 5.37 5.89 5.37 5.37 5.37 4.39 5.37 4.39 3.85 4.39 4.39 3.85 4.39 3.01	4.75 5.21 4.75 5.21 4.75 5.21 4.75 4.75 4.75 3.89 4.75 3.89 3.41 3.89 3.89 3.41 3.89 2.66	4.05 4.44 4.05 4.44 4.05 4.44 4.05 4.05 4.05 3.30 4.05 3.30 2.90 3.30 3.30 2.90 3.30 2.26	3.58 3.93 3.58 3.93 3.58 3.93 3.58 3.58 3.58 2.93 3.58 2.93 2.57 2.93 2.93 2.57 2.93 2.01	48	57	39	50	61
PL 5004	6	2800	352.0 365.8 388.6 413.9 424.3 468.4 511.4 554.4 612.0 668.2 737.7 805.5 858.0 907.3 1052.5 1121.1 1318.3 1589.0 1845.3	5.37 4.39 5.89 5.89 5.37 5.89 5.37 5.37 5.89 5.37 5.89 5.37 5.37 4.39 5.37 5.37 4.39 4.39 3.85	4.75 3.89 5.21 5.21 4.75 5.21 4.75 4.75 5.21 4.75 5.21 4.75 4.75 3.89 4.75 4.75 3.89 3.89 3.41	4.05 3.30 4.44 4.44 4.05 4.44 4.05 4.05 4.44 4.05 4.44 4.05 4.05 3.30 4.05 4.05 3.30 3.30 2.90	3.58 2.93 3.93 3.93 3.58 3.93 3.58 3.58 3.93 3.58 3.93 3.58 3.58 2.93 3.58 3.58 2.93 2.93 2.57	54	63	45	56	67

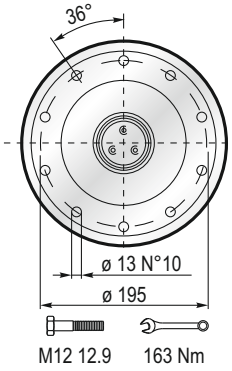
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 5002	15	2800	13.1	5.89	5.21	4.44	3.93	52	61	44	54	65
			14.2	5.37	4.75	4.05	3.58					
			17.8	4.39	3.89	3.30	2.93					
			20.6	5.89	5.21	4.44	3.93					
			22.5	5.37	4.75	4.05	3.58					
			28.1	4.39	3.89	3.30	2.93					
			32.7	3.85	3.41	2.90	2.57					
			39.5	3.01	2.66	2.26	2.01					
PLB 5003	10	2800	39.4	5.89	5.21	4.44	3.93	60	69	51	62	73
			47.5	5.89	5.21	4.44	3.93					
			53.9	4.39	3.89	3.30	2.93					
			67.8	5.37	4.75	4.05	3.58					
			75.4	3.85	3.41	2.90	2.57					
			84.9	4.39	3.89	3.30	2.93					
			91.1	3.01	2.66	2.26	2.01					
			102.3	4.39	3.89	3.30	2.93					
			118.8	3.85	3.41	2.90	2.57					
			143.5	3.01	2.66	2.26	2.01					
PLB 5004	6	2800	140.1	5.89	5.21	4.44	3.93	66	75	57	68	79
			168.9	5.89	5.21	4.44	3.93					
			184.4	5.37	4.75	4.05	3.58					
			220.6	5.89	5.21	4.44	3.93					
			240.9	5.37	4.75	4.05	3.58					
			265.9	5.89	5.21	4.44	3.93					
			290.4	5.37	4.75	4.05	3.58					
			320.6	5.89	5.21	4.44	3.93					
			350.0	5.37	4.75	4.05	3.58					
			422.4	3.85	3.41	2.90	2.57					
			449.4	5.37	4.75	4.05	3.58					
			475.3	4.39	3.89	3.30	2.93					
			509.1	3.85	3.41	2.90	2.57					
			551.9	3.85	3.41	2.90	2.57					
			615.2	3.01	2.66	2.26	2.01					
			665.3	3.85	3.41	2.90	2.57					
			735.5	4.39	3.89	3.30	2.93					
			801.9	3.85	3.41	2.90	2.57					
			1244.1	3.01	2.66	2.26	2.01					

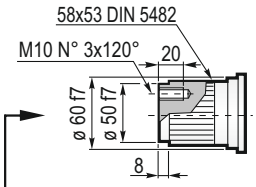
(n_2 x h = 20.000)

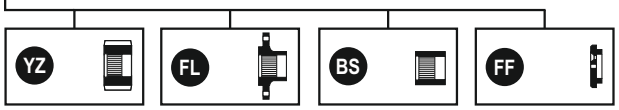
$M_{max} = M_c \times 2$

MS... 5000

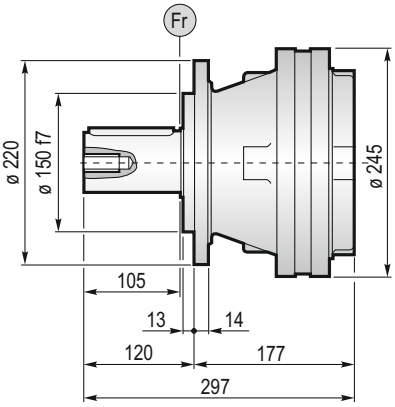


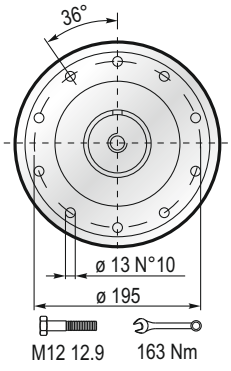


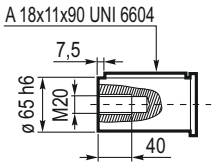




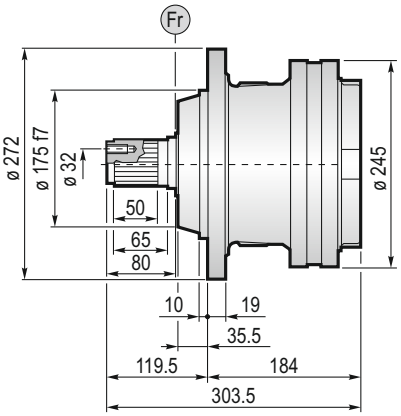
MC... 5000

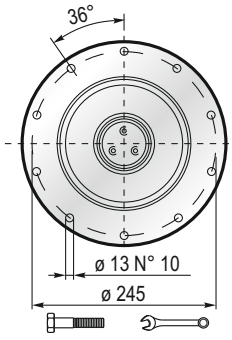


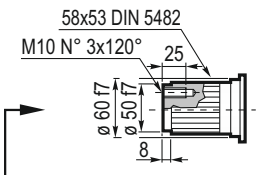


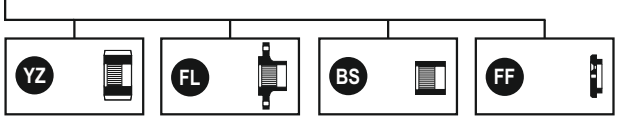


PS... 5000

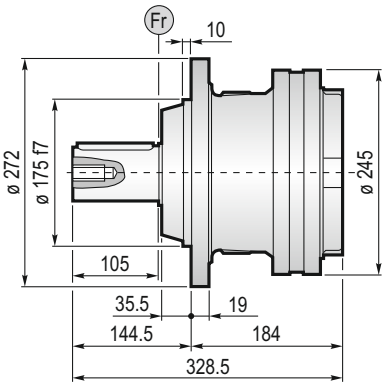


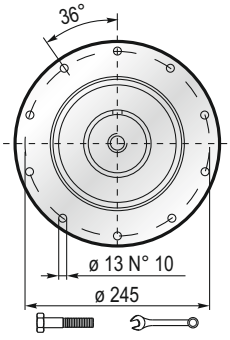


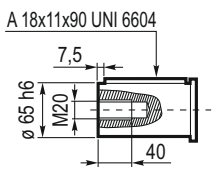




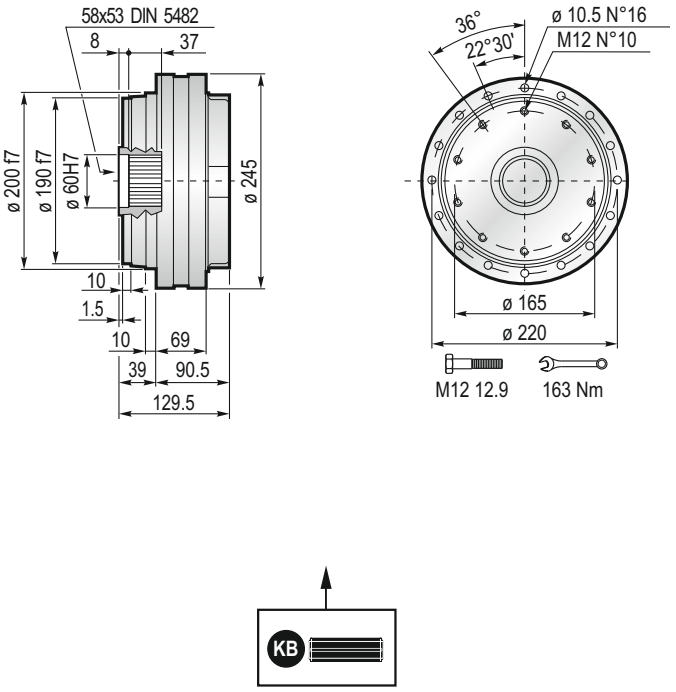
PC... 5000



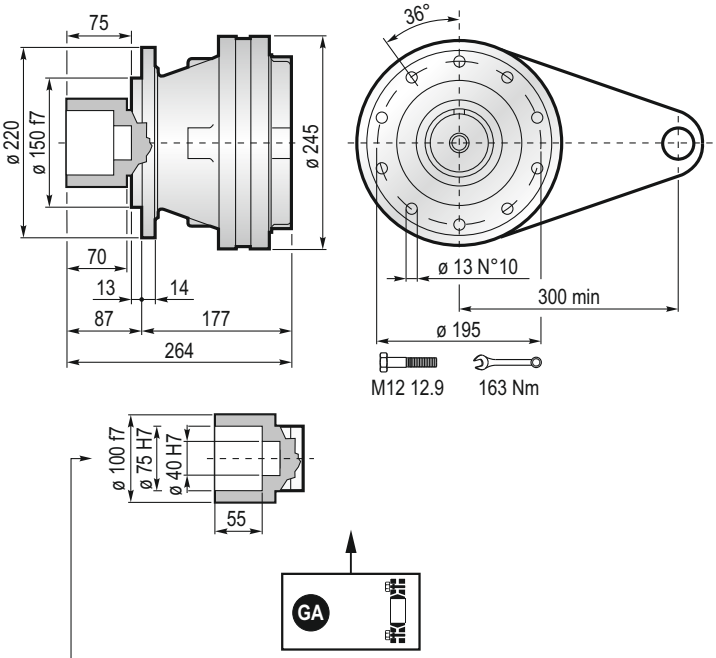




F... 5000

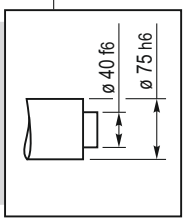


FS... 5000

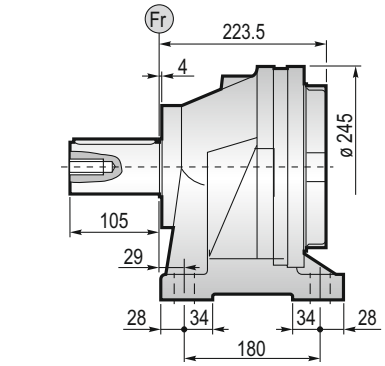


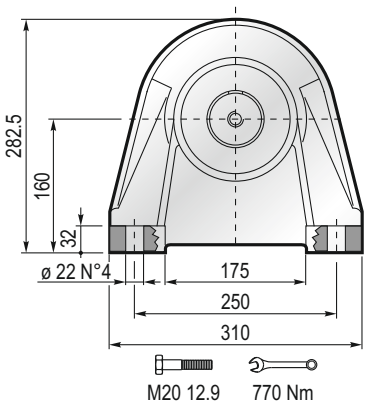
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

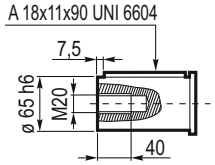
M_{max}= 7.5 kNm



CPC... 5000

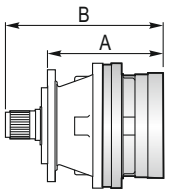




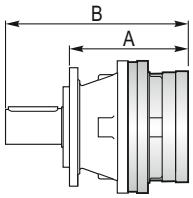


FL YZ BS FF KB GA → 126

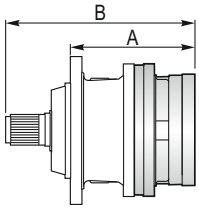
PL ...MS	A	B	RA	RB	EF	EDF
PL 5001	177	260	•	○	•	
PL 5002	238	321	•			•
PL 5003	286	369	•			•
PL 5004	334	417	•			•



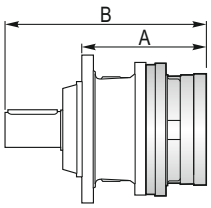
PL ...MC	A	B	RA	RB	EF	EDF
PL 5001	177	297	•	○	•	
PL 5002	238	358	•			•
PL 5003	286	406	•			•
PL 5004	334	454	•			•



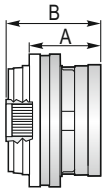
PL ...PS	A	B	RA	RB	EF	EDF
PL 5001	184	303.5	•	○	•	
PL 5002	245	364.5	•			•
PL 5003	293	412.5	•			•
PL 5004	341	460.5	•			•



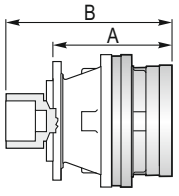
PL ...PC	A	B	RA	RB	EF	EDF
PL 5001	184	328.5	•	○	•	
PL 5002	245	389.5	•			•
PL 5003	293	437.5	•			•
PL 5004	341	485.5	•			•



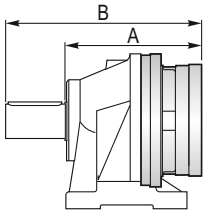
PL ...F	A	B	RA	RB	EF	EDF
PL 5001	90.5	129.5	•	○	•	
PL 5002	151.5	190.5	•			•
PL 5003	199.5	238.5	•			•
PL 5004	247.5	286.5	•			•



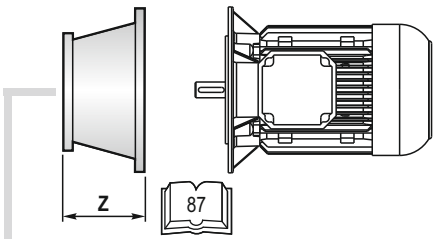
PL ...FS	A	B	RA	RB	EF	EDF
PL 5001	177	264	•	○	•	
PL 5002	238.5	325	•			•
PL 5003	286	373	•			•
PL 5004	334	421	•			•

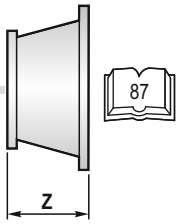


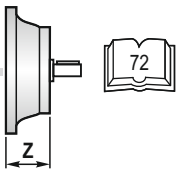
PL ...CPC	A	B	RA	RB	EF	EDF
PL 5001	223.5	328.5	•	○	•	
PL 5002	284.5	389.5	•			•
PL 5003	332.5	437.5	•			•
PL 5004	380.5	485.5	•			•

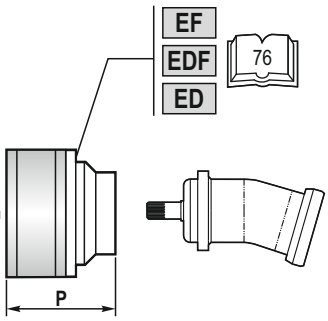


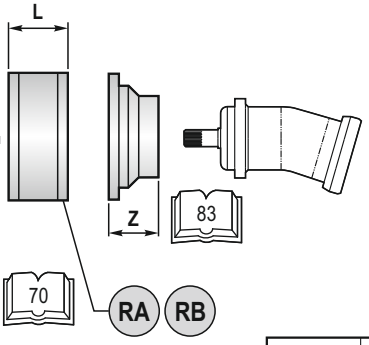
A+13.5	B+13.5	○





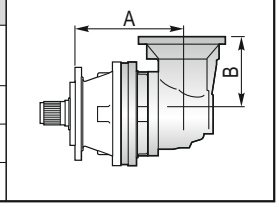




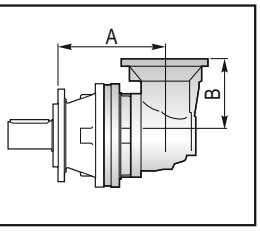


	L
RA	81
RB	125

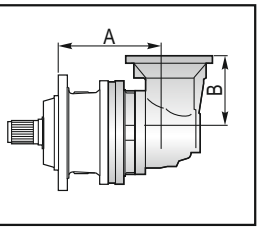
PLB ...MS	A	B	RA	RB	EF
PLB 5002	278.5	240	•		•
PLB 5003	313	160	•		•
PLB 5004	361	160	•		•



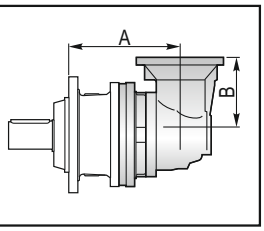
PLB ...MC	A	B	RA	RB	EF
PLB 5002	278.5	240	•		•
PLB 5003	313	160	•		•
PLB 5004	361	160	•		•



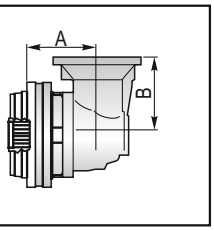
PLB ...PS	A	B	RA	RB	EF
PLB 5002	285.5	240	•		•
PLB 5003	320	160	•		•
PLB 5004	368	160	•		•



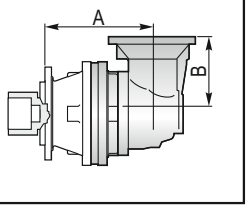
PLB ...PC	A	B	RA	RB	EF
PLB 5002	285.5	240	•		•
PLB 5003	320	160	•		•
PLB 5004	368	160	•		•



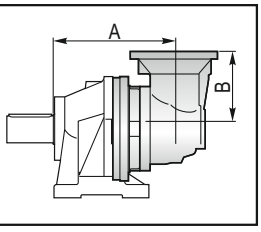
PLB ...F	A	B	RA	RB	EF
PLB 5002	192	240	•		•
PLB 5003	226.5	160	•		•
PLB 5004	274.5	160	•		•

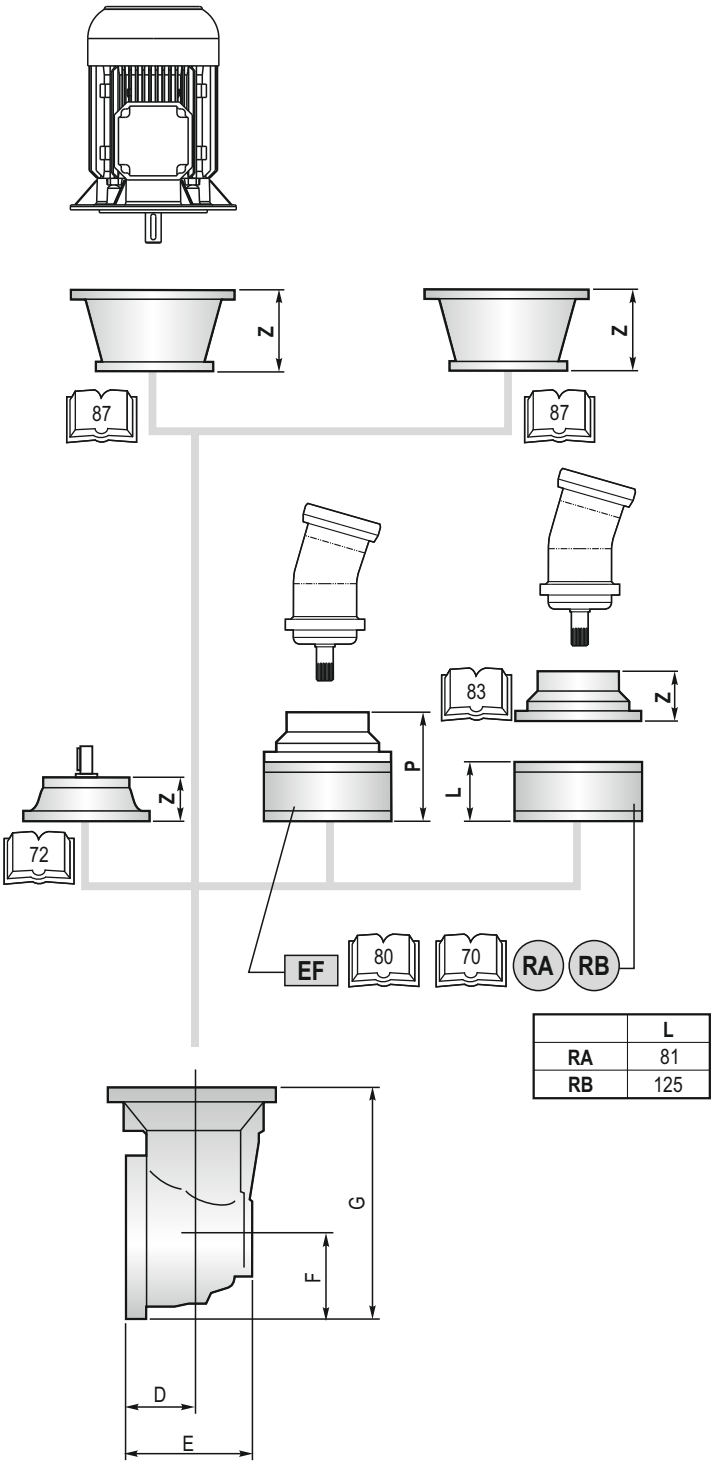


PLB ...FS	A	B	RA	RB	EF
PLB 5002	278.5	240	•		•
PLB 5003	313	160	•		•
PLB 5004	361	160	•		•



PLB ...CPC	A	B	RA	RB	EF
PLB 5002	325	240	•		•
PLB 5003	359.5	160	•		•
PLB 5004	407.5	160	•		•

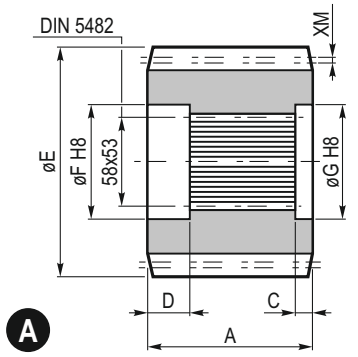


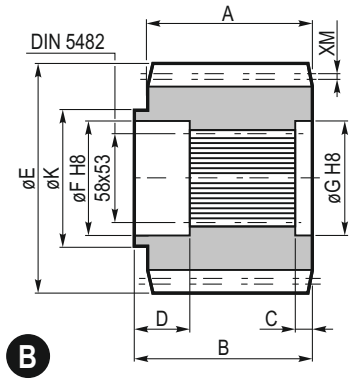


	L
RA	81
RB	125

	D	E	F	G
PLB 5002	88	164	140	380
PLB 5003	75	141.5	93	252
PLB 5004	75	141.5	93	252

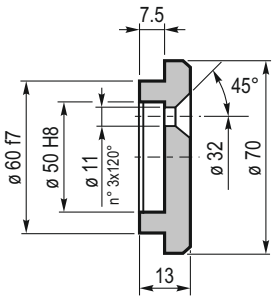
YZ
Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones





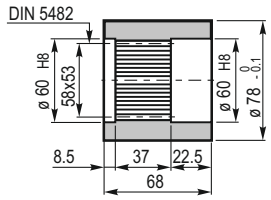
	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
	M	8	13	0	68	-	8.5	22.5	120	60	60	-	18NiCrMo5	1071.218.042
A	M	8	11	5	68	-	8.5	22.5	110.8	60	60	-	38NiCrMo4	1071.258.042
	M	8	12	0	68	-	8	21	112.8	60	60	-	38NiCrMo4	1071.196.042
B	P	10	14	3.2	103	116	9.5	22.5	162.4	60	60	105	18NiCrMo5	1071.298.042
	M	8	15	0	68	-	8.5	22.5	136	60	60	-	38NiCrMo4	1071.163.042
A	P	6	14	3	95	-	23	21	99.6	60	60	-	38NiCrMo4	1071.160.042
	P	10	11	8	90	-	8.5	22.5	142.1	60	60	-	18NiCrMo5	1071.297.042

FF
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



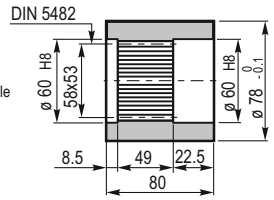
Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.015.000

BS
Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



Material / Material
Malzeme / Materiale
Matière / Material

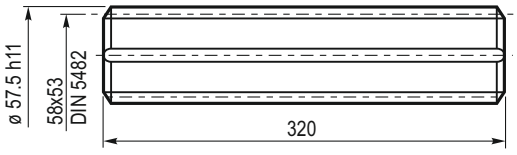
UNI C40
SAE 1040
DIN Ck40



MS Bestell - Nr. / Code
Kod / Codice
Code / Código
2171.101.076

PS Bestell - Nr. / Code
Kod / Codice
Code / Código
4171.101.076

KB
Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada



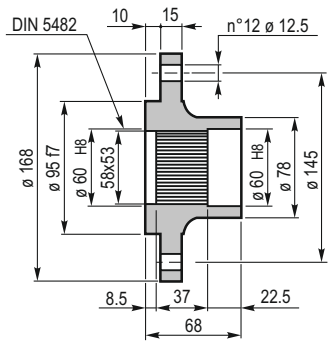
UNI 39NiCrMo3

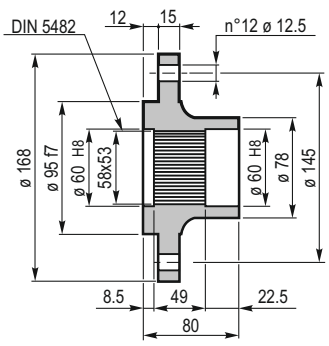
Material / Material
Malzeme / Materiale
Matière / Material

Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.181.042

FL
Flansch / Flange
Flanş / Flangia
Bride / Brida

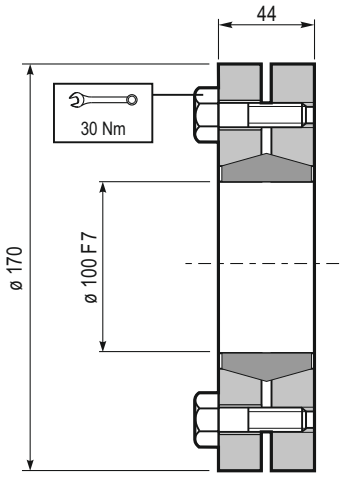




MS Bestell - Nr. / Code
Kod / Codice
Code / Código
2171.103.025

PS Bestell - Nr. / Code
Kod / Codice
Code / Código
4171.103.098

GA
Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
7.5 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.100.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

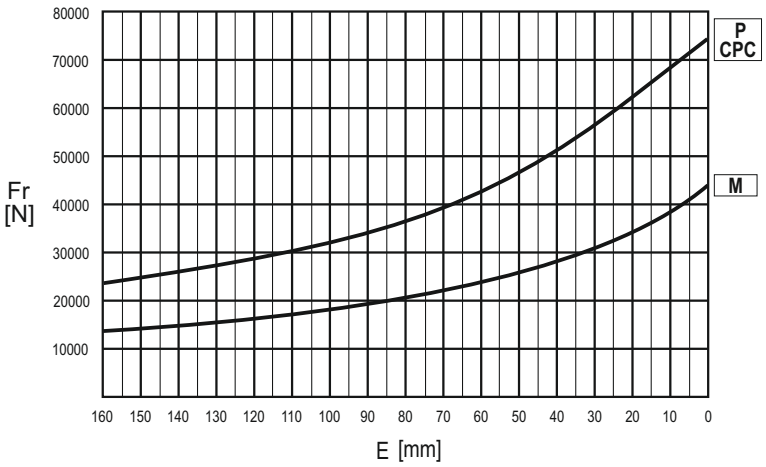
FR CHARGES RADIALES (Fr)

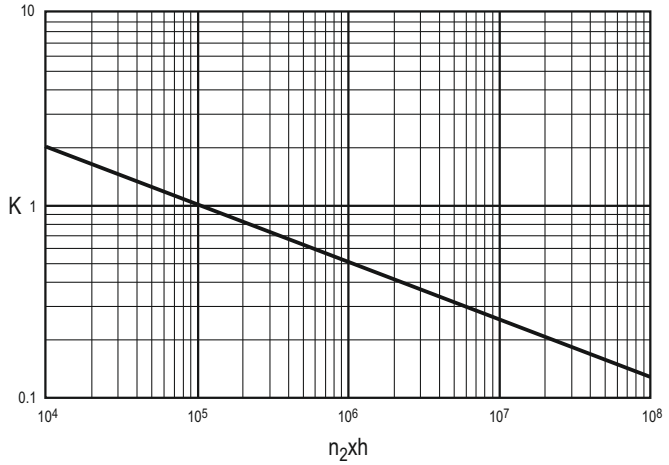
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

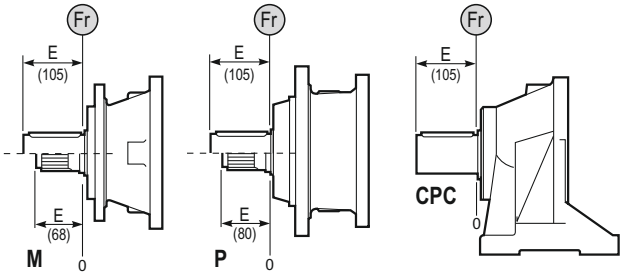
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - P - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

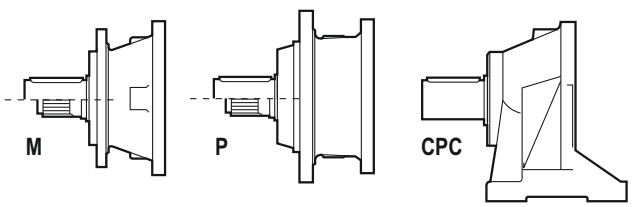
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	P - CPC	
	32000	32000	←
	32000	48000	→



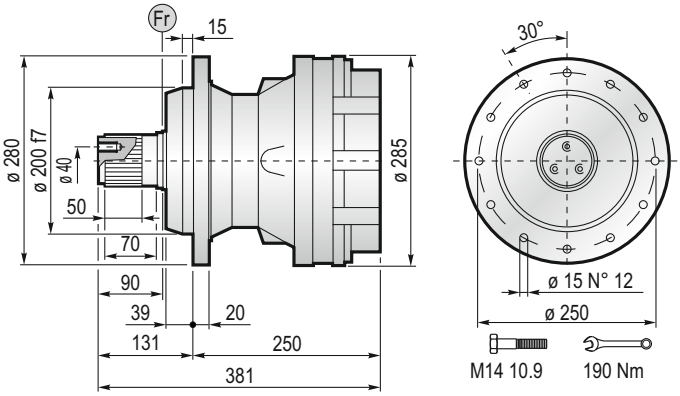
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 7001	30	2800	3.67	8.09	7.16	6.09	5.40	–	68	50	71	84
			4.43	7.38	6.54	5.56	4.93					
			5.00	6.49	5.74	4.89	4.32					
			5.80	5.49	4.86	4.13	3.66					
			7.00	4.44	3.93	3.35	2.96					
PL 7002	18	2800	13.9	8.09	7.16	6.09	5.40	–	80	62	83	96
			18.3	7.38	6.54	5.56	4.93					
			20.6	6.49	5.74	4.89	4.32					
			22.9	7.38	6.54	5.56	4.93					
			26.6	7.38	6.54	5.56	4.93					
			30.0	6.49	5.74	4.89	4.32					
			36.3	6.49	5.74	4.89	4.32					
			42.1	5.49	4.86	4.13	3.66					
			50.8	4.44	3.93	3.35	2.96					
PL 7003	14	2800	53.8	8.09	7.16	6.09	5.40	–	86	68	89	103
			64.8	8.09	7.16	6.09	5.40					
			71.7	7.38	6.54	5.56	4.93					
			78.3	7.38	6.54	5.56	4.93					
			88.4	6.49	5.74	4.89	4.32					
			93.7	7.38	6.54	5.56	4.93					
			102.1	8.09	7.16	6.09	5.40					
			112.9	7.38	6.54	5.56	4.93					
			127.9	8.09	7.16	6.09	5.40					
			139.2	6.49	5.74	4.89	4.32					
			148.8	7.38	6.54	5.56	4.93					
			155.4	6.49	5.74	4.89	4.32					
			174.4	6.49	5.74	4.89	4.32					
			194.9	5.49	4.86	4.13	3.66					
			216.7	7.38	6.54	5.56	4.93					
			244.7	6.49	5.74	4.89	4.32					
			283.8	5.49	4.86	4.13	3.66					
			342.6	4.44	3.93	3.35	2.96					
PL 7004	8	2800	301.1	8.09	7.16	6.09	5.40	–	92	74	95	109
			332.4	8.09	7.16	6.09	5.40					
			347.9	8.09	7.16	6.09	5.40					
			400.7	8.09	7.16	6.09	5.40					
			434.4	8.09	7.16	6.09	5.40					
			474.3	8.09	7.16	6.09	5.40					
			523.6	8.09	7.16	6.09	5.40					
			571.7	8.09	7.16	6.09	5.40					
			632.4	7.38	6.54	5.56	4.93					
			661.9	7.38	6.54	5.56	4.93					
			747.3	6.49	5.74	4.89	4.32					
			768.7	7.38	6.54	5.56	4.93					
			832.3	7.38	6.54	5.56	4.93					
			870.0	6.49	5.74	4.89	4.32					
			976.5	6.49	5.74	4.89	4.32					
			1048.7	6.49	5.74	4.89	4.32					
			1177.0	6.49	5.74	4.89	4.32					
			1366.9	6.49	5.74	4.89	4.32					
			1651.6	6.49	5.74	4.89	4.32					
			2968.9	4.44	3.93	3.35	2.96					

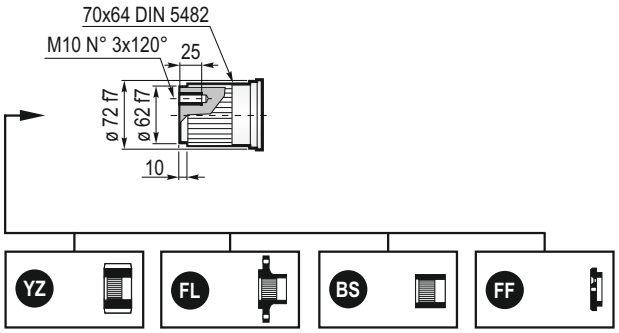
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		**10.000**	**20.000**	**50.000**	**100.000**	**M**				
PLB 7002	18	2800	12.7	8.09	7.16	6.09	5.40	–	106	87	109	122
			15.3	7.38	6.54	5.56	4.93					
			17.3	6.49	5.74	4.89	4.32					
			20.0	5.49	4.86	4.13	3.66					
			24.1	7.38	6.54	5.56	4.93					
			27.2	6.49	5.74	4.89	4.32					
			31.6	5.49	4.86	4.13	3.66					
			38.1	4.44	3.93	3.35	2.96					
PLB 7003	14	2800	53.6	7.38	6.54	5.56	4.93	–	95	77	98	112
			55.6	7.38	6.54	5.56	4.93					
			60.5	6.49	5.74	4.89	4.32					
			67.1	7.38	6.54	5.56	4.93					
			77.9	7.38	6.54	5.56	4.93					
			88.0	6.49	5.74	4.89	4.32					
			94.2	7.38	6.54	5.56	4.93					
			106.3	6.49	5.74	4.89	4.32					
			123.3	5.49	4.86	4.13	3.66					
			148.9	4.44	3.93	3.35	2.96					
PLB 7004	8	2800	157.7	8.09	7.16	6.09	5.40	–	102	83	105	118
			174.1	8.09	7.16	6.09	5.40					
			190.1	8.09	7.16	6.09	5.40					
			210.3	7.38	6.54	5.56	4.93					
			229.6	7.38	6.54	5.56	4.93					
			248.4	8.09	7.16	6.09	5.40					
			274.8	7.38	6.54	5.56	4.93					
			300.1	7.38	6.54	5.56	4.93					
			331.2	7.38	6.54	5.56	4.93					
			361.7	7.38	6.54	5.56	4.93					
			393.0	5.49	4.86	4.13	3.66					
			453.0	7.38	6.54	5.56	4.93					
			511.5	6.49	5.74	4.89	4.32					
			557.0	5.49	4.86	4.13	3.66					
			594.0	6.49	5.74	4.89	4.32					
			656.7	6.49	5.74	4.89	4.32					
			717.7	6.49	5.74	4.89	4.32					
			832.6	5.49	4.86	4.13	3.66					
			921.5	6.49	5.74	4.89	4.32					
			1069.0	5.49	4.86	4.13	3.66					

(n_2 x h = 20.000)

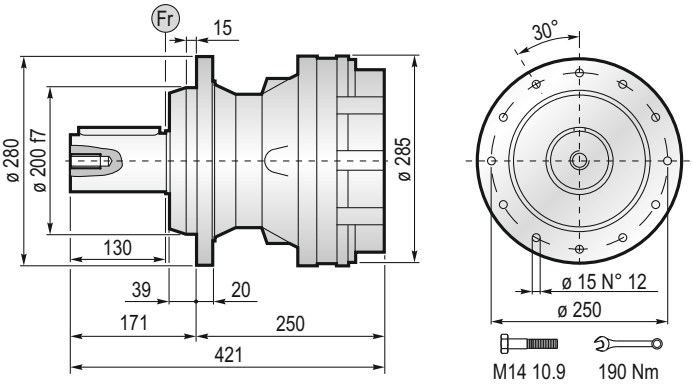
$M_{max} = M_c$ x 2

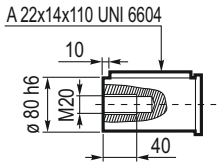
PS... 7000



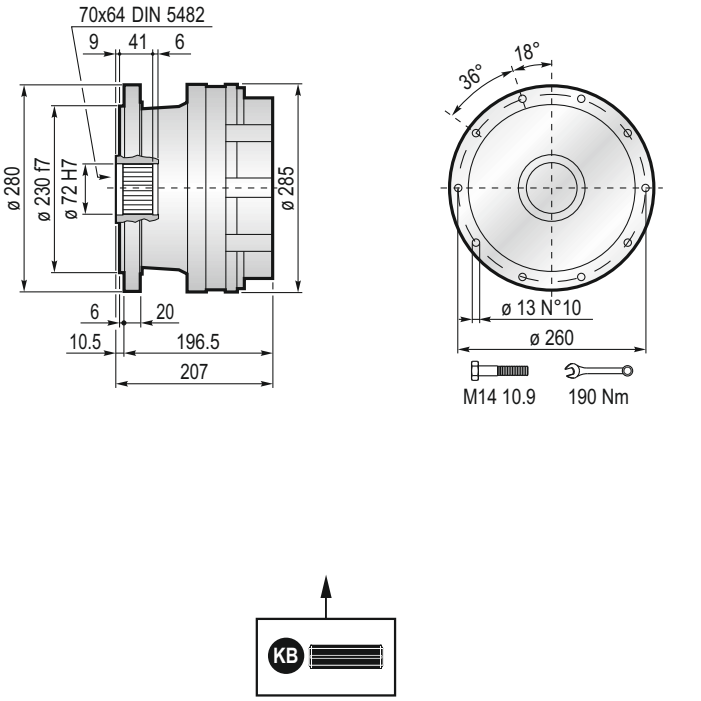


PC... 7000

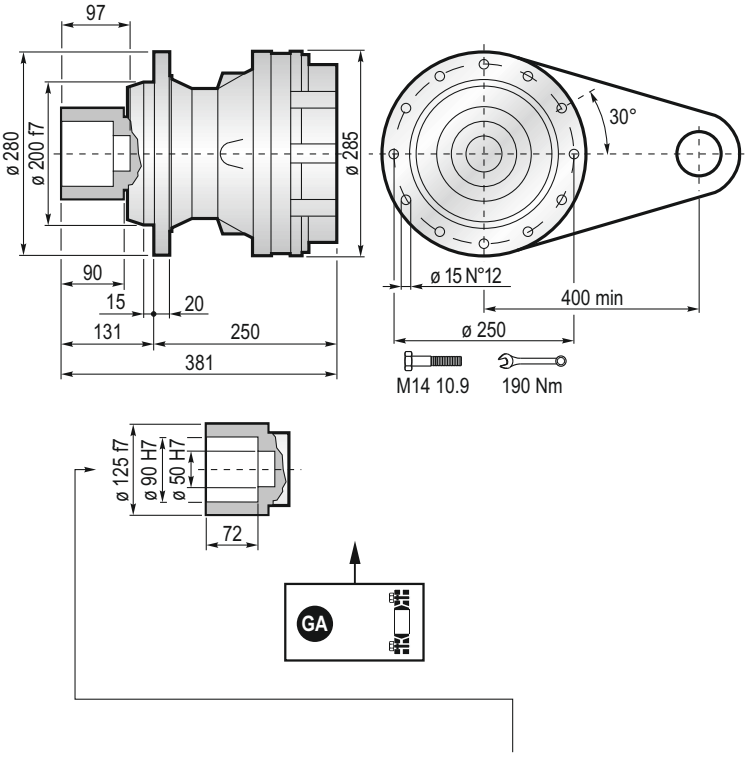




F... 7000

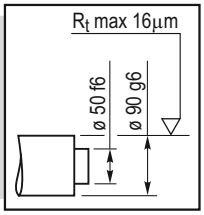


FS... 7000

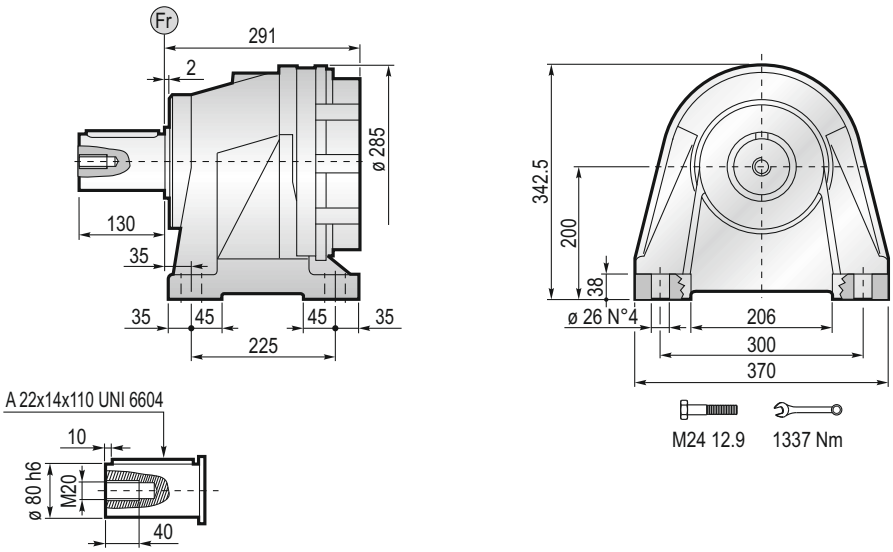


Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 13 kNm

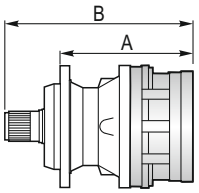


CPC... 7000

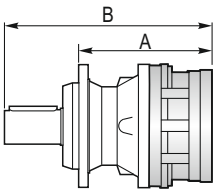


FL YZ BS FF KB GA → 134

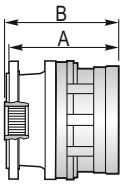
PL ...PS	A	B	RA	RB	EF	EDF
PL 7001	250	381		•		
PL 7002	309.5	440.5	•	○	•	
PL 7003	357.5	488.5	•			•
PL 7004	405.5	536.5	•			•



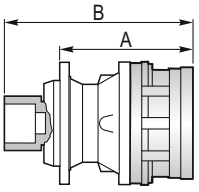
PL ...PC	A	B	RA	RB	EF	EDF
PL 7001	250	421		•		
PL 7002	309.5	480.5	•	○	•	
PL 7003	357.5	528.5	•			•
PL 7004	405.5	576.5	•			•



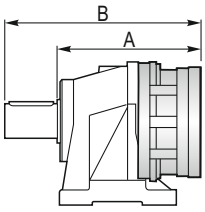
PL ...F	A	B	RA	RB	EF	EDF
PL 7001	196.5	207		•		
PL 7002	256	266.5	•	○	•	
PL 7003	304	314.5	•			•
PL 7004	352	362.5	•			•



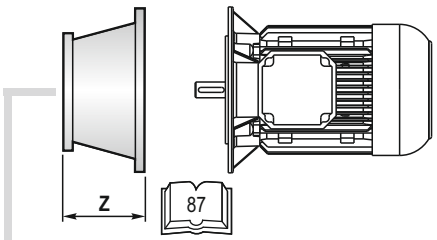
PL ...FS	A	B	RA	RB	EF	EDF
PL 7001	250	381		•		
PL 7002	309.5	440.5	•	○	•	
PL 7003	357.5	488.5	•			•
PL 7004	405.5	536.5	•			•

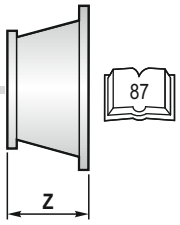


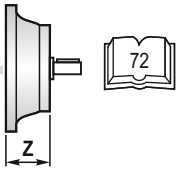
PL ...CPC	A	B	RA	RB	EF	EDF
PL 7001	291	421		•		
PL 7002	350.5	480.5	•	○	•	
PL 7003	398.5	528.5	•			•
PL 7004	446.5	576.5	•			•

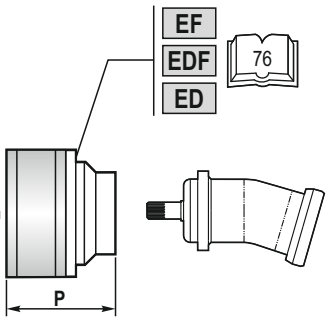


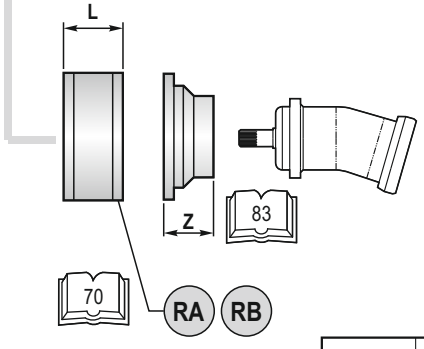
A+13.5	B+13.5	○





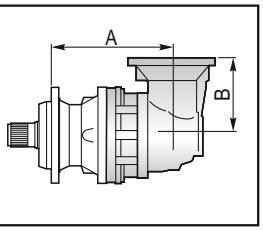




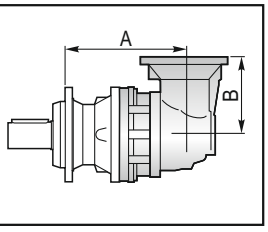


	L
RA	81
RB	125

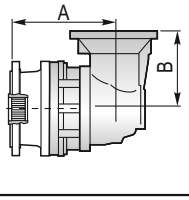
PLB ...PS	A	B	RA	RB	EF
PLB 7002	338	240	•	○	•
PLB 7003	384.5	160	•		•
PLB 7004	432.5	160	•		•



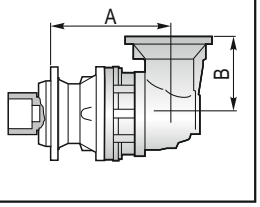
PLB ...PC	A	B	RA	RB	EF
PLB 7002	338	240	•	○	•
PLB 7003	384.5	160	•		•
PLB 7004	432.5	160	•		•



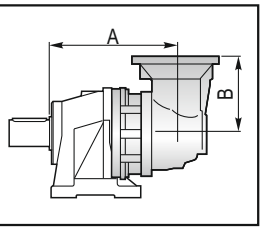
PLB ...F	A	B	RA	RB	EF
PLB 7002	284.5	240	•	○	•
PLB 7003	331	160	•		•
PLB 7004	379	160	•		•



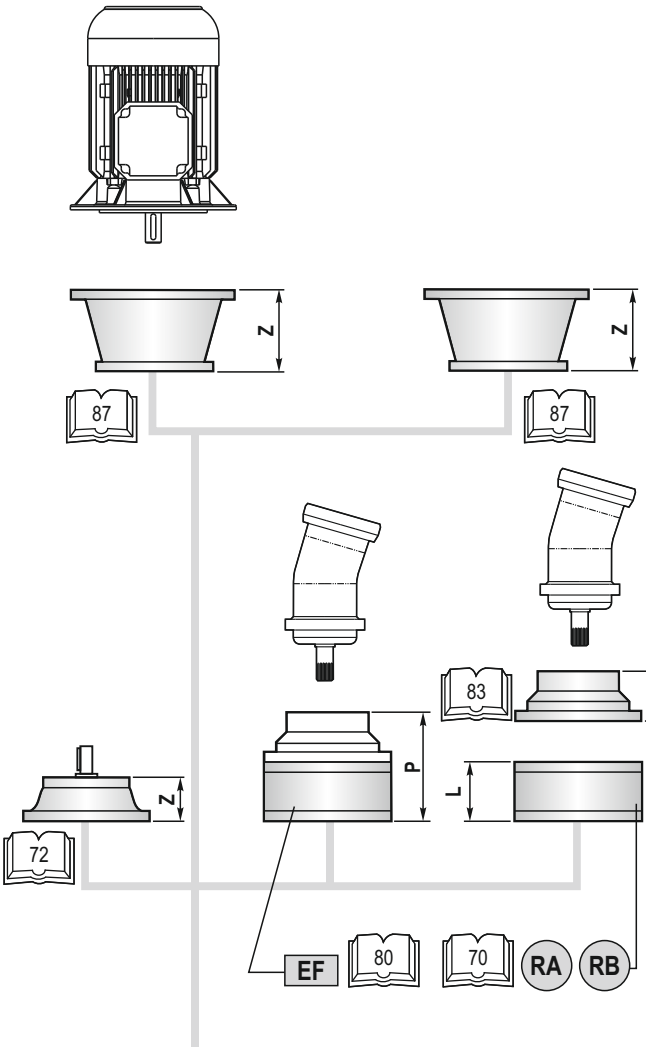
PLB ...FS	A	B	RA	RB	EF
PLB 7002	338	240	•	○	•
PLB 7003	384.5	160	•		•
PLB 7004	432.5	160	•		•



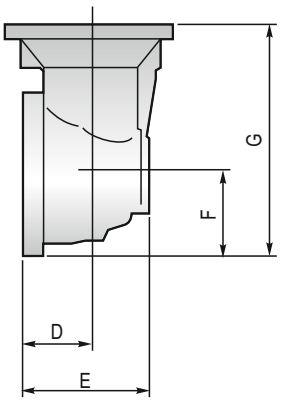
PLB ...CPC	A	B	RA	RB	EF
PLB 7002	379	240	•	○	•
PLB 7003	425.5	160	•		•
PLB 7004	473.5	160	•		•



A	B+16.5	○



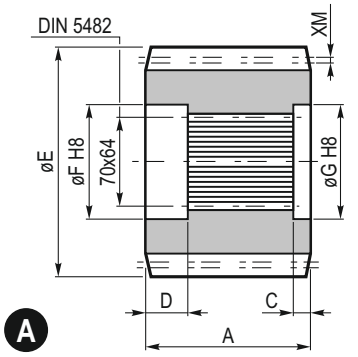
	L
RA	81
RB	125

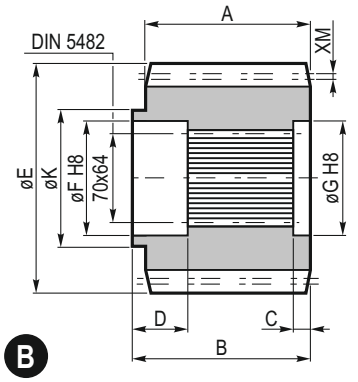


	D	E	F	G
PLB 7002	88	164	140	380
PLB 7003	75	141.5	93	252
PLB 7004	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

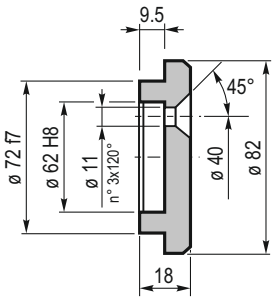




	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	P	10	11	8.06	90	-	10	31	142.1	72	72	-	18NiCrMo5	1071.267.042
B	P	10	11	8.06	90	99	18.5	31	142.1	72	72	84	18NiCrMo5	1071.285.042
A	P	10	12	0	90	-	10	31	140	72	72	-	38NiCrMo4	1071.166.042
	P	10	13	0	90	-	10	30	155	72	72	-	38NiCrMo4	1071.201.042

FF

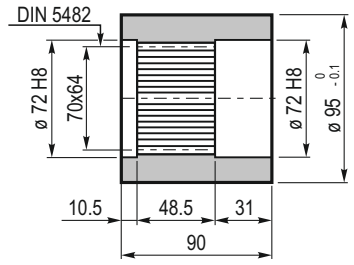
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.012.000

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

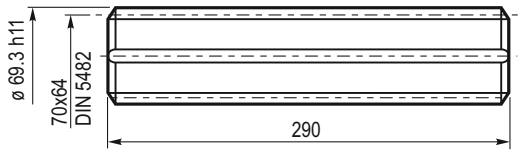


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
5171.102.076

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

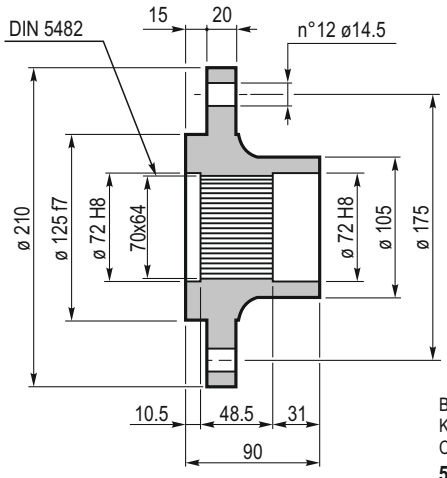


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.405.042

FL

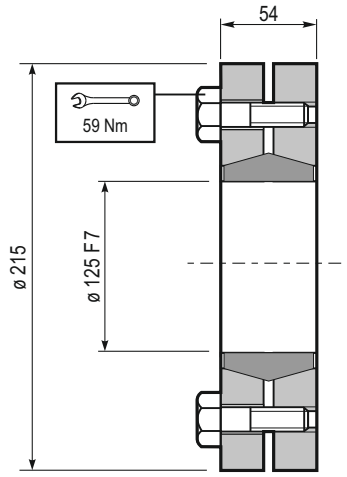
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
5171.108.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
13 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.125.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

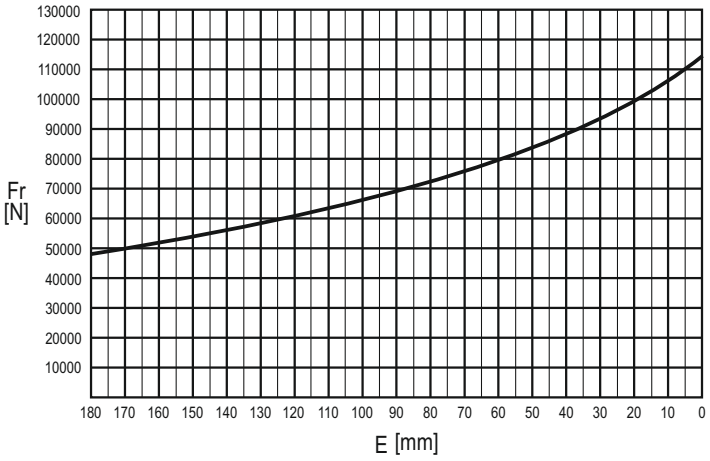
FR CHARGES RADIALES (Fr)

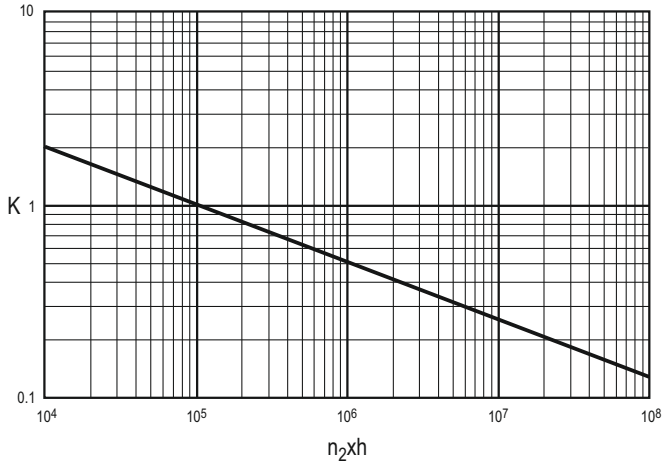
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

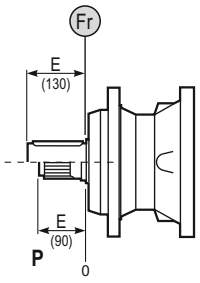
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

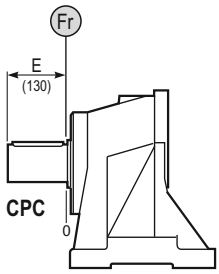
P - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
P	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

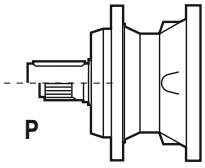
FR CHARGES AXIALES (Fa)

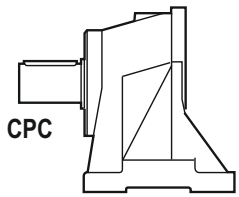
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	P	CPC	
	40000	40000	←
	60000	60000	→



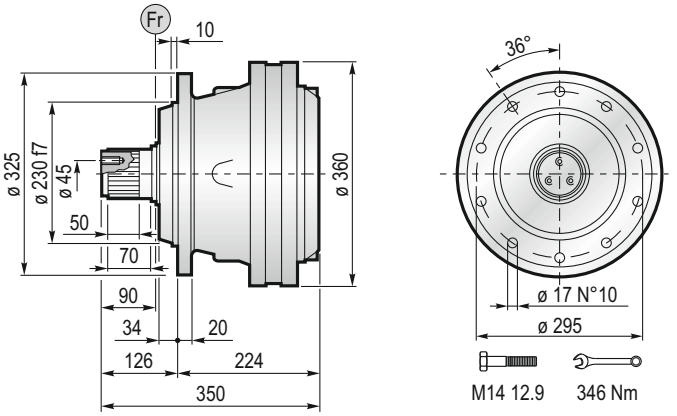


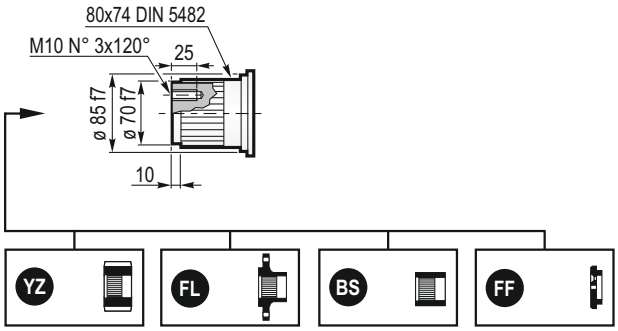
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 10001	40	2000	3.56	14.08	12.45	10.60	9.38	98	–	66	104	149
			4.29	12.10	10.71	9.12	8.07					
			5.60	9.40	8.32	7.08	6.27					
			6.75	7.18	6.35	5.41	4.78					
			8.67	5.08	4.50	3.83	3.39					
PL 10002	23	2800	13.4	14.08	12.45	10.60	9.38	115	–	82	120	165
			16.2	12.10	10.71	9.12	8.07					
			18.4	14.08	12.45	10.60	9.38					
			22.1	12.10	10.71	9.12	8.07					
			25.7	12.10	10.71	9.12	8.07					
			28.9	9.40	8.32	7.08	6.27					
			33.6	9.40	8.32	7.08	6.27					
			40.5	7.18	6.35	5.41	4.78					
			48.9	7.18	6.35	5.41	4.78					
PL 10003	15	2800	57.6	14.08	12.45	10.60	9.38	123	–	90	128	173
			62.9	14.08	12.45	10.60	9.38					
			75.2	14.08	12.45	10.60	9.38					
			82.1	14.08	12.45	10.60	9.38					
			94.9	12.10	10.71	9.12	8.07					
			109.3	12.10	10.71	9.12	8.07					
			118.5	9.40	8.32	7.08	6.27					
			124.0	12.10	10.71	9.12	8.07					
			129.4	9.40	8.32	7.08	6.27					
			144.0	12.10	10.71	9.12	8.07					
			155.9	9.40	8.32	7.08	6.27					
			173.6	12.10	10.71	9.12	8.07					
			188.2	9.40	8.32	7.08	6.27					
			195.3	9.40	8.32	7.08	6.27					
			209.7	7.18	6.35	5.41	4.78					
			226.8	9.40	8.32	7.08	6.27					
			235.4	7.18	6.35	5.41	4.78					
			274.1	9.40	8.32	7.08	6.27					
			330.3	7.18	6.35	5.41	4.78					
PL 10004	11	2800	352.0	14.08	12.45	10.60	9.38	129	–	96	134	179
			388.6	14.08	12.45	10.60	9.38					
			421.2	14.08	12.45	10.60	9.38					
			440.9	12.10	10.71	9.12	8.07					
			459.9	14.08	12.45	10.60	9.38					
			507.7	14.08	12.45	10.60	9.38					
			531.4	12.10	10.71	9.12	8.07					
			554.4	14.08	12.45	10.60	9.38					
			576.1	9.40	8.32	7.08	6.27					
			612.0	12.10	10.71	9.12	8.07					
			640.5	12.10	10.71	9.12	8.07					
			724.4	9.40	8.32	7.08	6.27					
			806.4	9.40	8.32	7.08	6.27					
			907.3	9.40	8.32	7.08	6.27					
			1008.9	12.10	10.71	9.12	8.07					
			1093.7	9.40	8.32	7.08	6.27					
			1270.1	9.40	8.32	7.08	6.27					
			1530.9	9.40	8.32	7.08	6.27					
			1849.8	9.40	8.32	7.08	6.27					
			2229.7	7.18	6.35	5.41	4.78					

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		**10.000**	**20.000**	**50.000**	**100.000**	**M**	**P**	**F**	**FS**	**CPC**
PLB 10002	23	2800	12.3 14.8 19.3 23.3 30.5 36.7	14.08 12.10 9.40 7.18 9.40 7.18	12.45 10.71 8.32 6.35 8.32 6.35	10.60 9.12 7.08 5.41 7.08 5.41	9.38 8.07 6.27 4.78 6.27 4.78	136	–	104	141	186
PLB 10003	15	2800	46.4 50.7 61.1 73.1 88.8 96.2 116.1 120.6 125.8 140.0 157.5 182.9 221.0 266.4	14.08 14.08 12.10 14.08 12.10 12.10 9.40 12.10 9.40 12.10 9.40 9.40 9.40 7.18	12.45 12.45 10.71 12.45 10.71 10.71 8.32 10.71 8.32 10.71 8.32 8.32 8.32 6.35	10.60 10.60 9.12 10.60 9.12 9.12 7.08 9.12 7.08 9.12 7.08 7.08 7.08 5.41	9.38 9.38 8.07 9.38 8.07 8.07 6.27 8.07 6.27 8.07 6.27 6.27 6.27 4.78	155	–	123	160	205
PLB 10004	11	2800	140.1 168.9 184.4 203.5 230.9 265.9 278.4 301.8 320.6 350.0 379.5 418.9 457.4 510.4 551.9 665.3 803.9 969.0	14.08 14.08 12.10 12.10 14.08 12.10 12.10 14.08 12.10 12.10 9.40 9.40 9.40 9.40 9.40 9.40 9.40 7.18	12.45 12.45 10.71 10.71 12.45 10.71 10.71 12.45 10.71 10.71 8.32 8.32 8.32 8.32 8.32 8.32 8.32 6.35	10.60 10.60 9.12 9.12 10.60 9.12 9.12 10.60 9.12 9.12 7.08 7.08 7.08 7.08 7.08 7.08 7.08 5.41	9.38 9.38 8.07 8.07 9.38 8.07 8.07 9.38 8.07 8.07 6.27 6.27 6.27 6.27 6.27 6.27 6.27 4.78	138	–	106	143	188

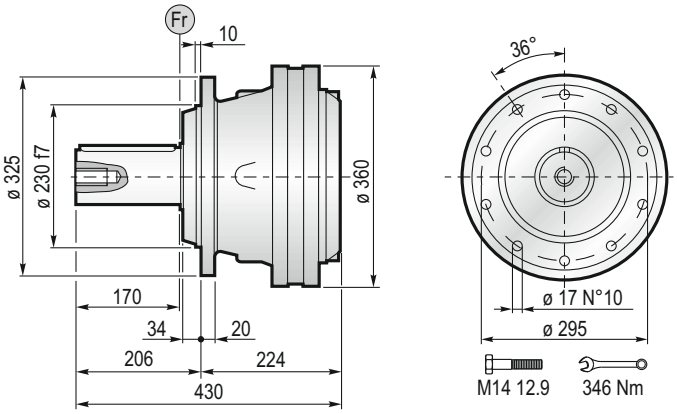
$$M_{max} = M_c \times 2 \quad (n_2 \times h = 20.000)$$

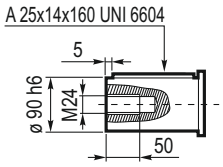
MS... 10000



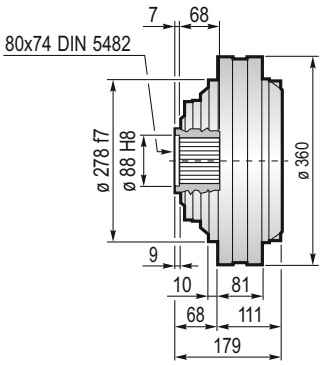


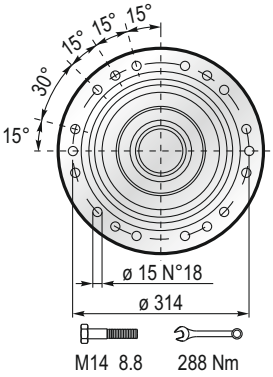
MC... 10000

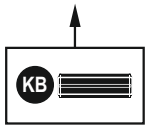




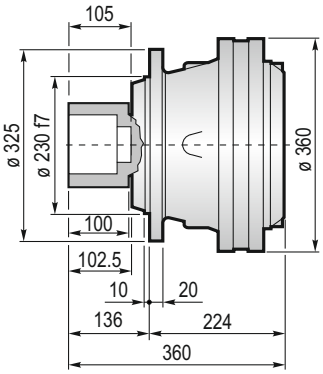
F... 10000

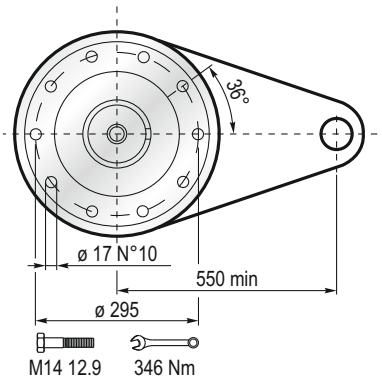


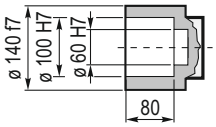


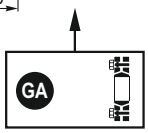


FS... 10000



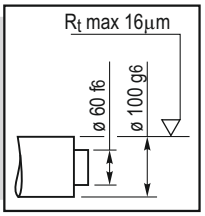




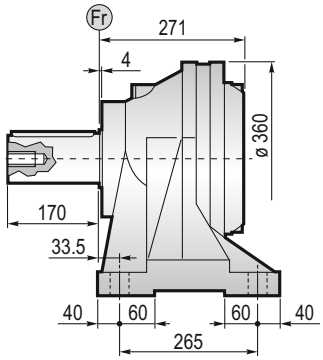


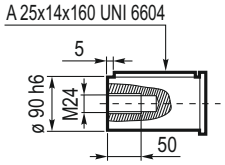
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

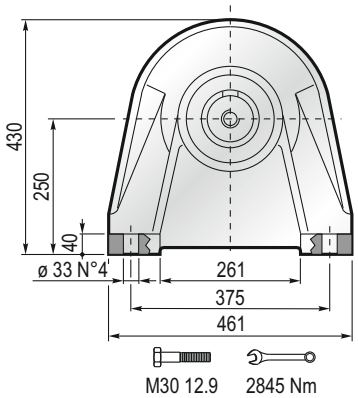
M_{max}= 17.6 kNm



CPC... 10000

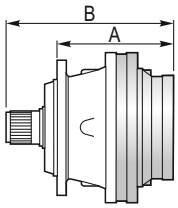




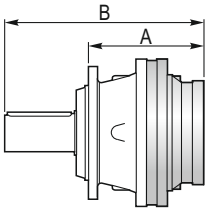


FL YZ BS FF KB GA → 142

PL ...MS	A	B	RA	RB	EF	EDF
PL 10001	224	350		•		
PL 10002	295.5	421.5	•	○	•	
PL 10003	356.5	482.5	•			•
PL 10004	404.5	530.5	•			•

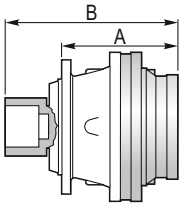


PL ...MC	A	B	RA	RB	EF	EDF
PL 10001	224	430		•		
PL 10002	295.5	501.5	•	○	•	
PL 10003	356.5	562.5	•			•
PL 10004	404.5	610.5	•			•

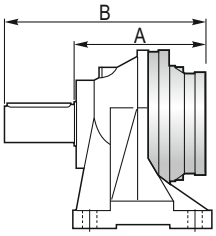


PL ...F	A	B	RA	RB	EF	EDF
PL 10001	111	179		•		
PL 10002	182.5	250.5	•	○	•	
PL 10003	243.5	311.5	•			•
PL 10004	291.5	359.5	•			•

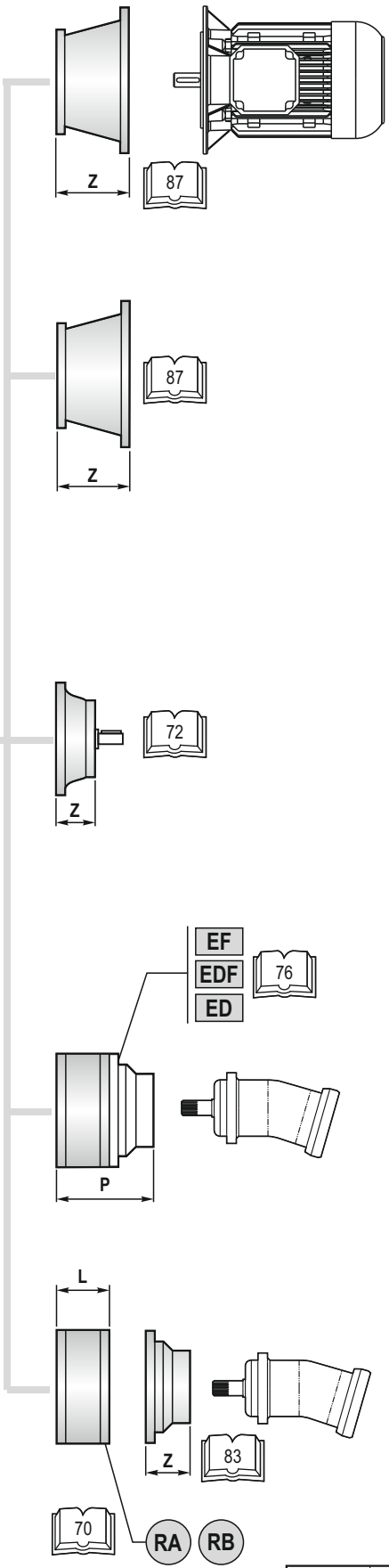
PL ...FS	A	B	RA	RB	EF	EDF
PL 10001	224	360		•		
PL 10002	295.5	431.5	•	○	•	
PL 10003	356.5	492.5	•			•
PL 10004	404.5	540.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 10001	271	441		•		
PL 10002	342.5	512.5	•	○	•	
PL 10003	403.5	573.5	•			•
PL 10004	451.5	621.5	•			•

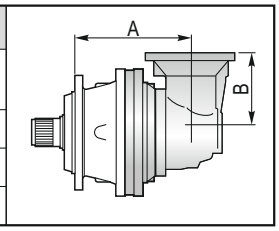


A+13.5	B+13.5	○

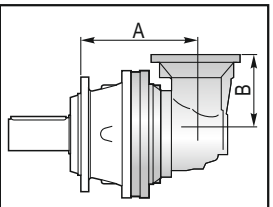


	L
RA	81
RB	125

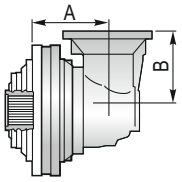
PLB ...MS	A	B	RA	RB	EF
PLB 10002	312	240	•	○	•
PLB 10003	397	240	•	○	•
PLB 10004	431.5	160	•		•



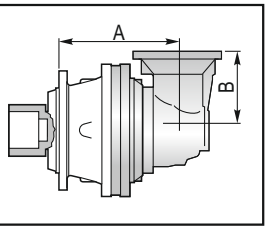
PLB ...MC	A	B	RA	RB	EF
PLB 10002	312	240	•	○	•
PLB 10003	397	240	•	○	•
PLB 10004	431.5	160	•		•



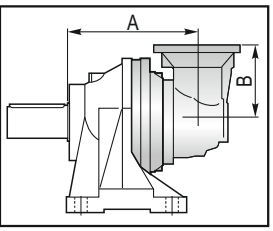
PLB ...F	A	B	RA	RB	EF
PLB 10002	199	240	•	○	•
PLB 10003	284	240	•	○	•
PLB 10004	318.5	160	•		•



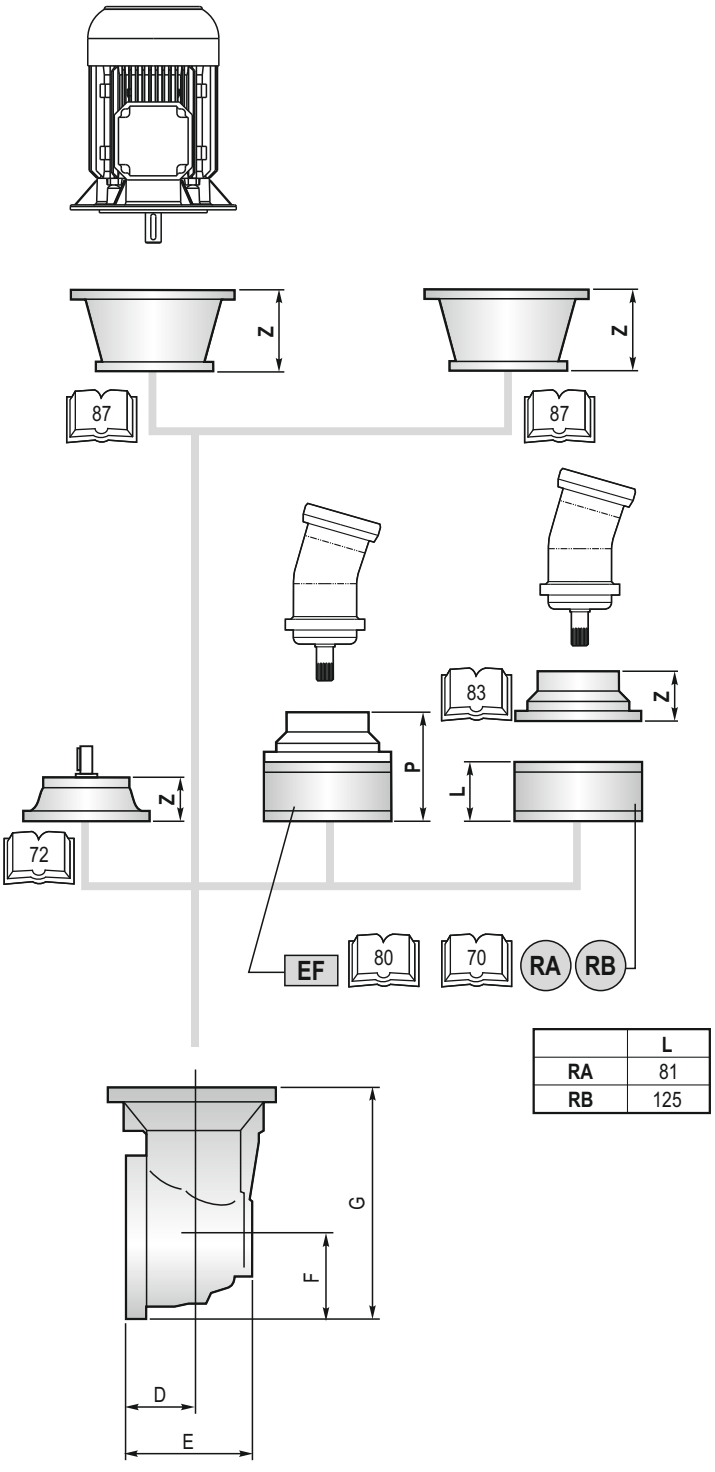
PLB ...FS	A	B	RA	RB	EF
PLB 10002	312	240	•	○	•
PLB 10003	397	240	•	○	•
PLB 10004	431.5	160	•		•



PLB ...CPC	A	B	RA	RB	EF
PLB 10002	359	240	•	○	•
PLB 10003	444	240	•	○	•
PLB 10004	478.5	160	•		•



A	B+16.5	○

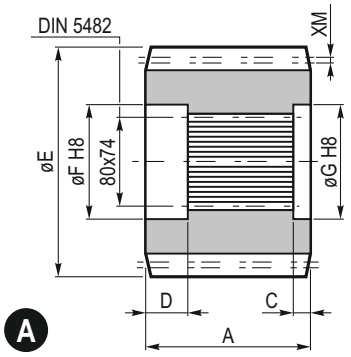


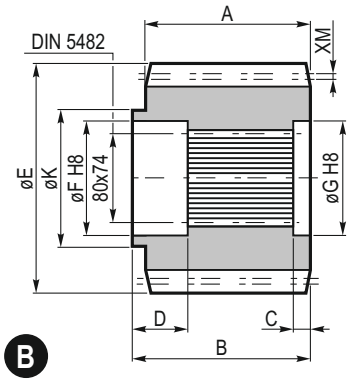
	L
RA	81
RB	125

	D	E	F	G
PLB 10002	88	164	140	380
PLB 10003	88	164	140	380
PLB 10004	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

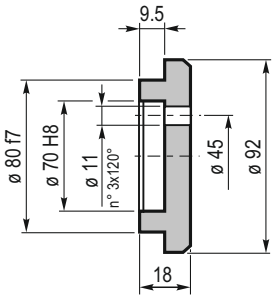




	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	M	10	12	0	90	-	10	31	140	85	80	-	38NiCrMo4	1071.236.042
	M	10	14	0	90	-	10	31	160	85	80	-	38NiCrMo4	1071.238.042
B	M	12	14	3	90	115	25	31	194.5	85	80	130	39NiCrMo3	1071.286.042

FF

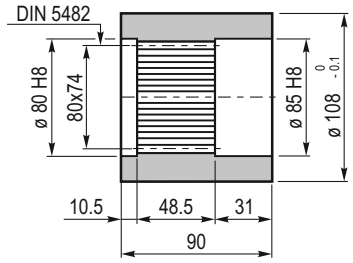
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.030.000

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

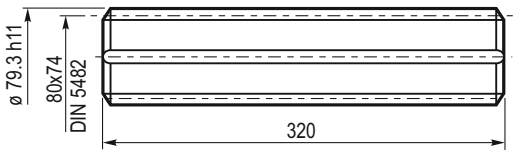


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.103.076

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

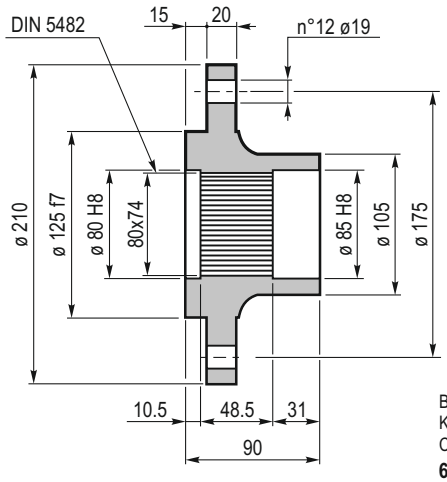


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.406.042

FL

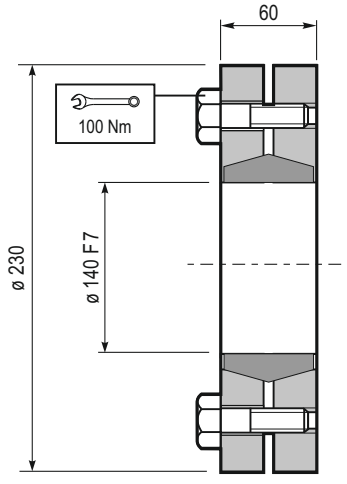
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.105.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
17,6 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.140.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

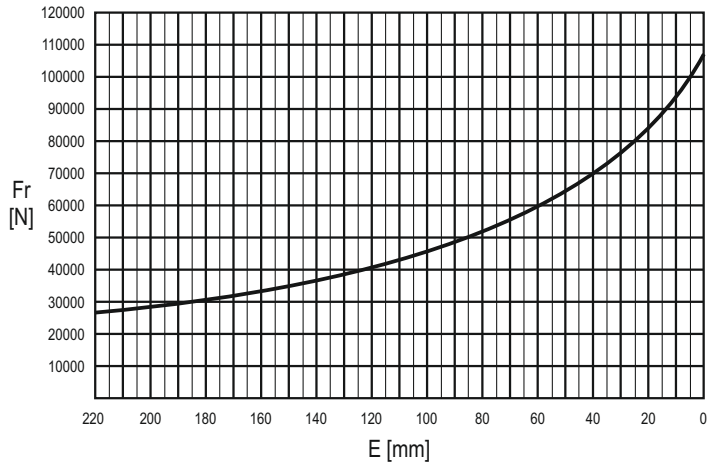
FR CHARGES RADIALES (Fr)

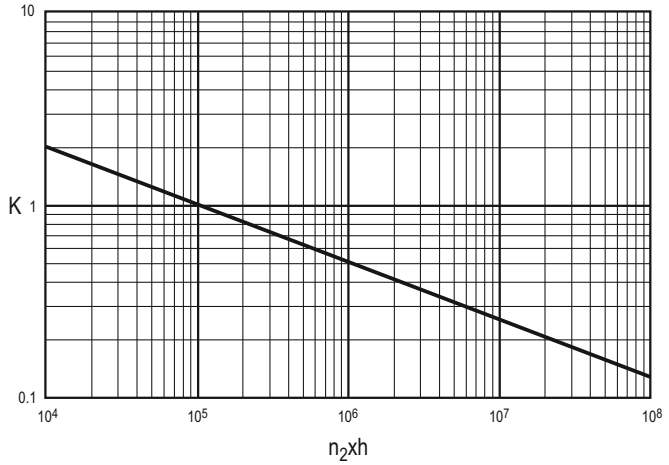
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

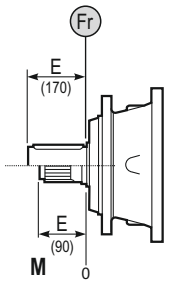
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

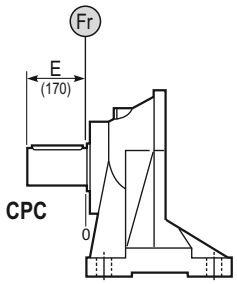
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

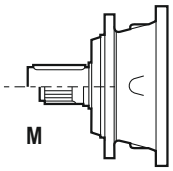
FR CHARGES AXIALES (Fa)

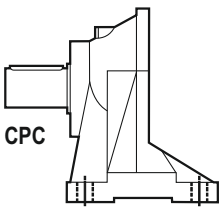
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	40000	40000	←
	65000	65000	→



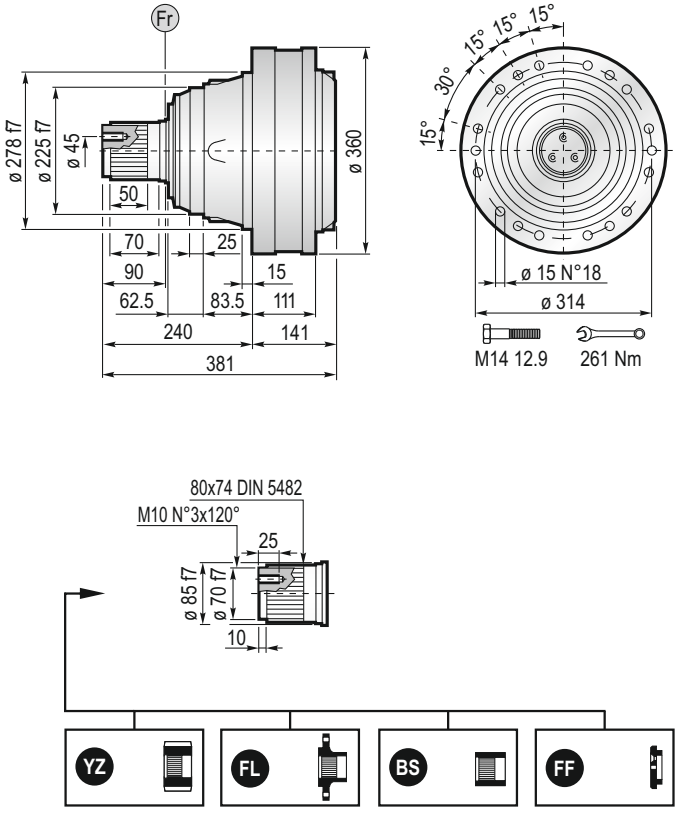


	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 16001	40	2000	3.56 4.29 5.60 6.75	20.77 18.09 13.84 10.53	18.38 16.01 12.25 9.31	15.64 13.63 10.42 7.93	13.84 12.07 9.23 7.02	107	134	75	112	157
PL 16002	23	2800	13.4 16.2 22.1 28.9 33.6 40.5 48.9	20.77 18.09 18.09 13.84 13.84 10.53 10.53	18.38 16.01 16.01 12.25 12.25 9.31 9.31	15.64 13.63 13.63 10.42 10.42 7.93 7.93	13.84 12.07 12.07 9.23 9.23 7.02 7.02	123	150	91	128	173
PL 16003	15	2800	57.6 62.9 75.2 82.1 94.9 109.3 118.5 124.0 129.4 144.0 155.9 188.2 195.3 209.7 226.8 235.4 274.1 330.3	20.77 20.77 20.77 20.77 18.09 18.09 13.84 18.09 13.84 13.84 13.84 13.84 13.84 10.53 13.84 10.53 13.84 10.53	18.38 18.38 18.38 18.38 16.01 16.01 12.25 16.01 12.25 12.25 12.25 12.25 12.25 9.31 12.25 9.31 12.25 9.31	15.64 15.64 15.64 15.64 13.63 13.63 10.42 13.63 10.42 10.42 10.42 10.42 10.42 7.93 10.42 7.93 10.42 7.93	13.84 13.84 13.84 13.84 12.07 12.07 9.23 12.07 9.23 9.23 9.23 9.23 9.23 7.02 9.23 7.02 9.23 7.02	131	158	99	136	181
PL 16004	11	2800	352.0 388.6 421.2 440.9 459.9 507.7 531.4 554.4 576.1 612.0 640.5 724.4 806.4 907.3 1008.9 1093.7 1270.1 1530.9 1849.8 2229.7	20.77 20.77 20.77 18.09 20.77 20.77 18.09 20.77 13.84 18.09 18.09 13.84 13.84 13.84 18.09 13.84 13.84 13.84 13.84 10.53	18.38 18.38 18.38 16.01 18.38 18.38 16.01 18.38 12.25 16.01 16.01 12.25 12.25 12.25 16.01 12.25 12.25 12.25 12.25 9.31	15.64 15.64 15.64 13.63 15.64 15.64 13.63 15.64 10.42 13.63 13.63 10.42 10.42 10.42 13.63 10.42 10.42 10.42 10.42 7.93	13.84 13.84 13.84 12.07 13.84 13.84 12.07 13.84 9.23 12.07 12.07 9.23 9.23 9.23 12.07 9.23 9.23 9.23 9.23 7.02	137	164	106	142	187

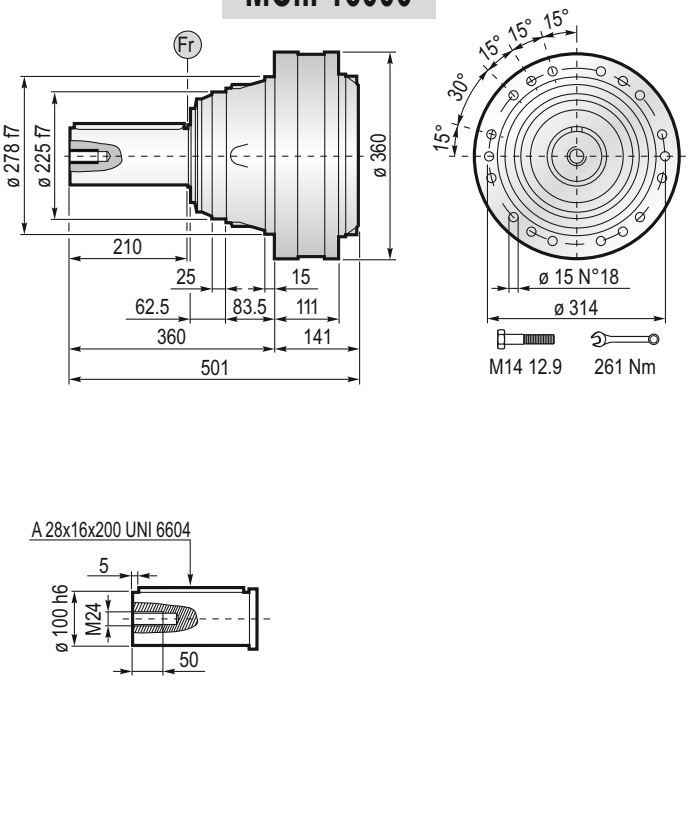
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 16002	23	2800	12.3 14.8 19.3 23.3 30.5 36.7	20.77 18.09 13.84 10.53 13.84 10.53	18.38 16.01 12.25 9.31 12.25 9.31	15.64 13.63 10.42 7.93 10.42 7.93	13.84 12.07 9.23 7.02 9.23 7.02	144	171	113	149	194
PLB 16003	15	2800	46.4 50.7 61.1 76.5 88.8 96.2 116.1 120.6 125.8 140.0 157.5 182.9 221.0 266.4	20.77 20.77 18.09 18.09 18.09 18.09 13.84 18.09 13.84 18.09 13.84 13.84 13.84 10.53	18.38 18.38 16.01 16.01 16.01 16.01 12.25 16.01 12.25 16.01 12.25 12.25 12.25 9.31	15.64 15.64 13.63 13.63 13.63 13.63 10.42 13.63 10.42 13.63 10.42 10.42 10.42 7.93	13.84 13.84 12.07 12.07 12.07 12.07 9.23 12.07 9.23 12.07 9.23 9.23 9.23 7.02	163	190	132	168	213
PLB 16004	11	2800	140.1 168.9 184.4 203.5 230.9 240.9 290.4 301.8 320.6 347.5 379.5 418.9 457.4 510.4 551.9 665.3 803.9 969.0	20.77 20.77 18.09 18.09 18.09 13.84 18.09 13.84 18.09 13.84 13.84 13.84 13.84 13.84 13.84 13.84 13.84 10.53	18.38 18.38 16.01 16.01 16.01 12.25 16.01 12.25 16.01 12.25 12.25 12.25 12.25 12.25 12.25 12.25 12.25 9.31	15.64 15.64 13.63 13.63 13.63 10.42 13.63 10.42 13.63 10.42 10.42 10.42 10.42 10.42 10.42 10.42 10.42 7.93	13.84 13.84 12.07 12.07 12.07 9.23 12.07 9.23 12.07 9.23 9.23 9.23 9.23 9.23 9.23 9.23 9.23 7.02	146	173	115	151	196

$$M_{max} = M_c \times 2 \quad (n_2 \times h = 20.000)$$

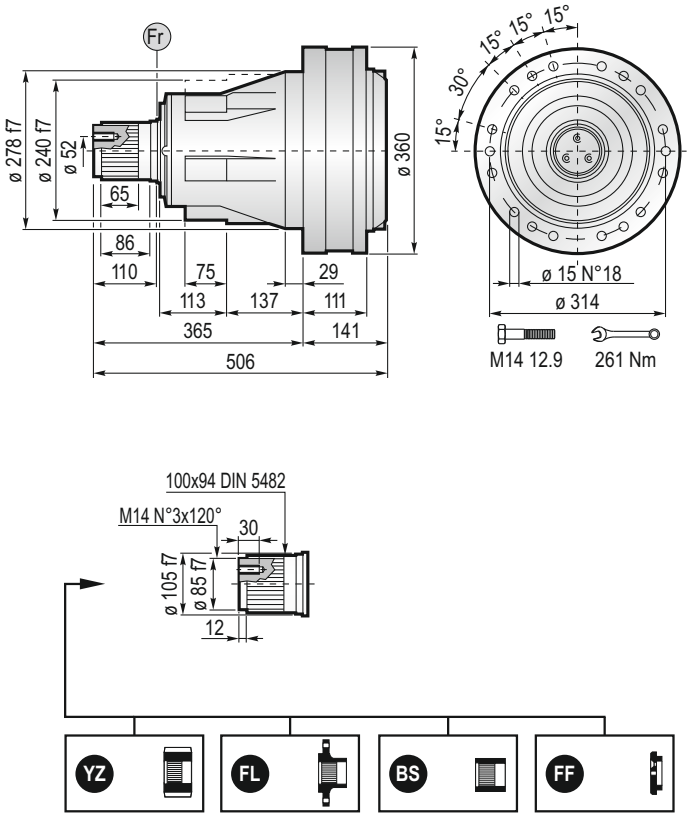
MS... 16000



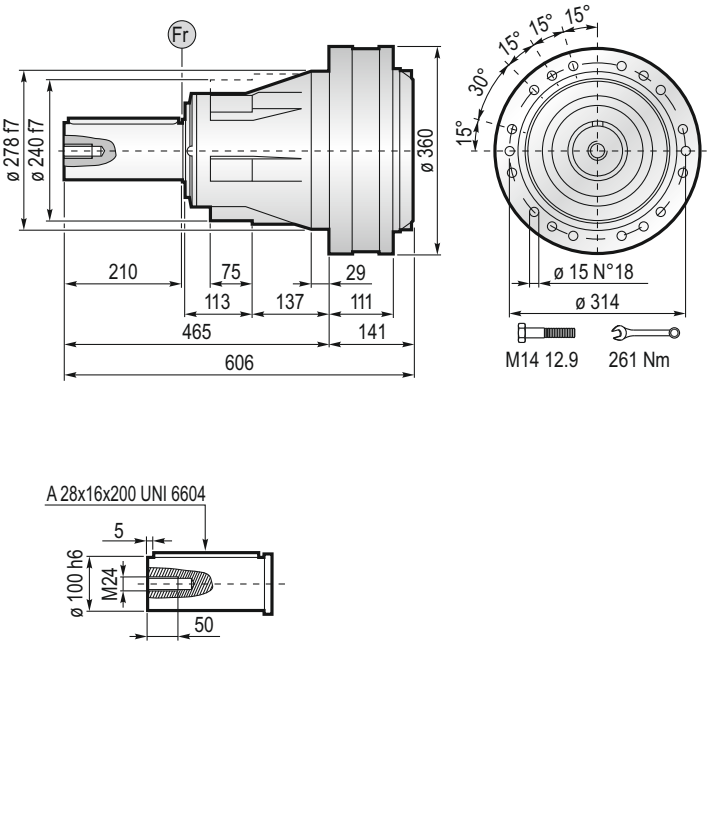
MC... 16000



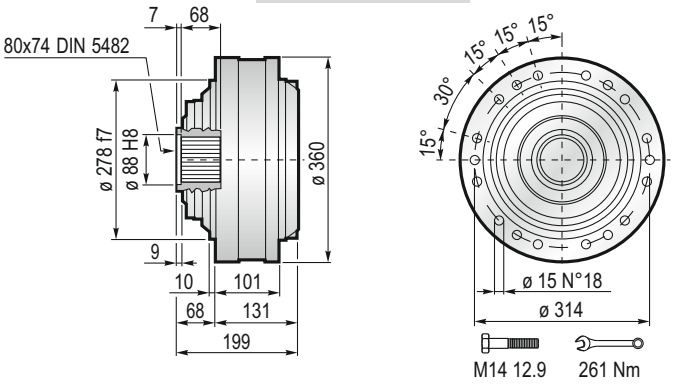
PS... 16000

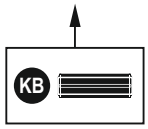


PC... 16000

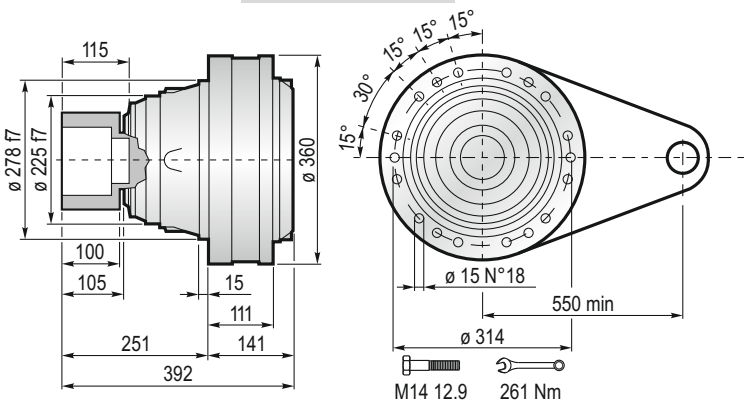


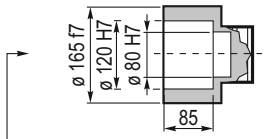
F... 16000

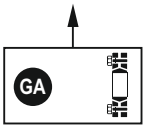




FS... 16000

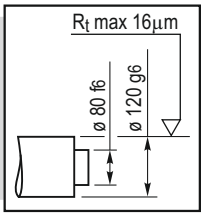




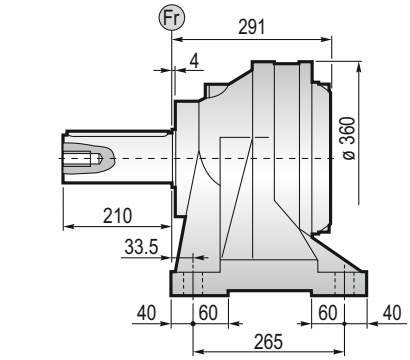


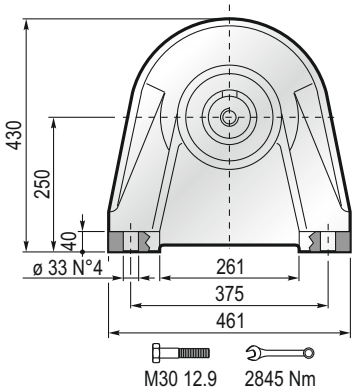
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

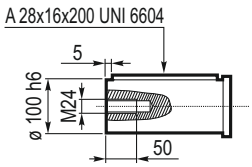
M_{max}= 35 kNm



CPC... 16000

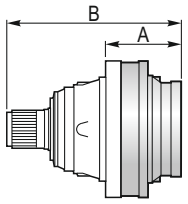




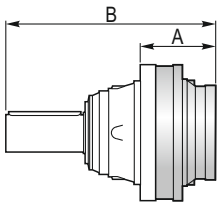


FL YZ BS FF KB GA → 150

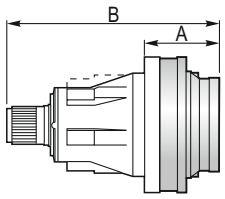
PL ...MS	A	B	RA	RB	EF	EDF
PL 16001	141	381		•		
PL 16002	212.5	452.5	•	○	•	
PL 16003	273.5	513.5	•			•
PL 16004	321.5	561.5	•			•



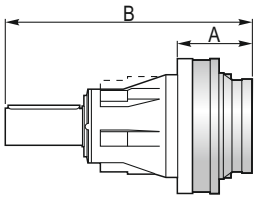
PL ...MC	A	B	RA	RB	EF	EDF
PL 16001	141	501		•		
PL 16002	212.5	572.5	•	○	•	
PL 16003	273.5	633.5	•			•
PL 16004	321.5	681.5	•			•



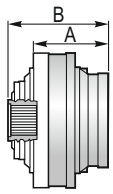
PL ...PS	A	B	RA	RB	EF	EDF
PL 16001	141	506		•		
PL 16002	212.5	577.5	•	○	•	
PL 16003	273.5	638.5	•			•
PL 16004	321.5	686.5	•			•



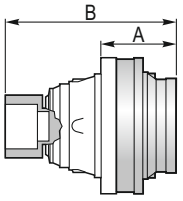
PL ...PC	A	B	RA	RB	EF	EDF
PL 16001	141	606		•		
PL 16002	212.5	677.5	•	○	•	
PL 16003	273.5	738.5	•			•
PL 16004	321.5	786.5	•			•



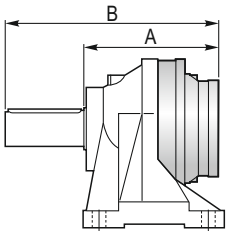
PL ...F	A	B	RA	RB	EF	EDF
PL 16001	131	199		•		
PL 16002	202.5	270.5	•	○	•	
PL 16003	263.5	331.5	•			•
PL 16004	311.5	379.5	•			•



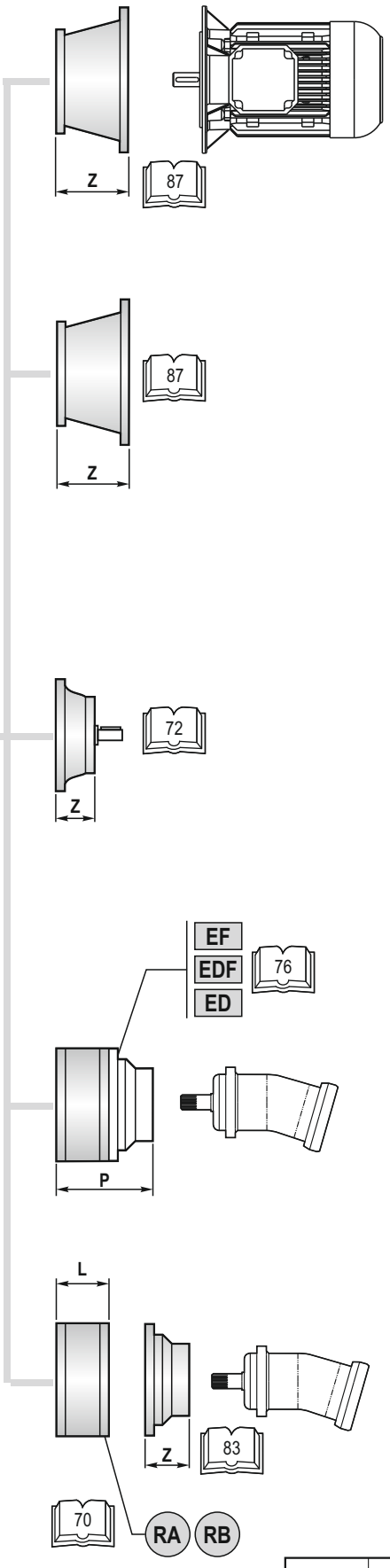
PL ...FS	A	B	RA	RB	EF	EDF
PL 16001	141	392		•		
PL 16002	212.5	463.5	•	○	•	
PL 16003	273.5	524.5	•			•
PL 16004	321.5	572.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 16001	291	501		•		
PL 16002	312.5	572.5	•	○	•	
PL 16003	423.5	633.5	•			•
PL 16004	471.5	681.5	•			•

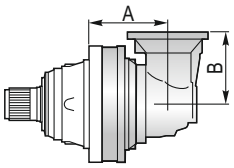


A+13.5	B+13.5	○

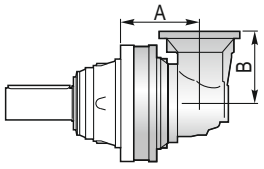


	L
RA	81
RB	125

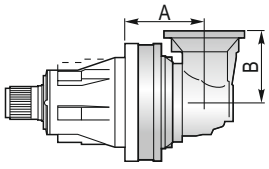
PLB ...MS					
	A	B	RA	RB	EF
PLB 16002	229	240	•	○	•
PLB 16003	314	240	•	○	•
PLB 16004	348.5	160	•		•



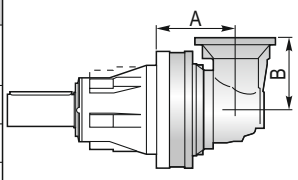
PLB ...MC					
	A	B	RA	RB	EF
PLB 16002	229	240	•	○	•
PLB 16003	314	240	•	○	•
PLB 16004	348.5	160	•		•



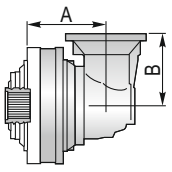
PLB ...PS					
	A	B	RA	RB	EF
PLB 16002	229	240	•	○	•
PLB 16003	314	240	•	○	•
PLB 16004	348.5	160	•		•



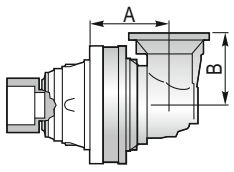
PLB ...PC					
	A	B	RA	RB	EF
PLB 16002	229	240	•	○	•
PLB 16003	314	240	•	○	•
PLB 16004	348.5	160	•		•



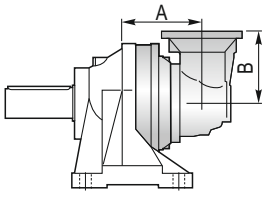
PLB ...F					
	A	B	RA	RB	EF
PLB 16002	219	240	•	○	•
PLB 16003	304	240	•	○	•
PLB 16004	338.5	160	•		•



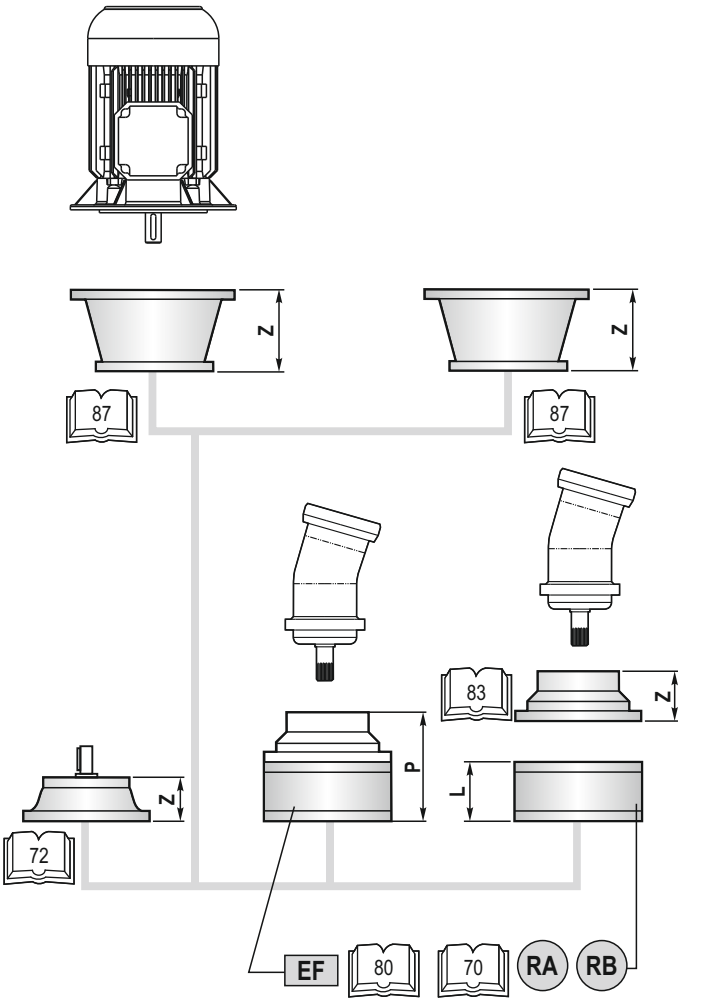
PLB ...FS					
	A	B	RA	RB	EF
PLB 16002	229	240	•	○	•
PLB 16003	314	240	•	○	•
PLB 16004	348.5	160	•		•



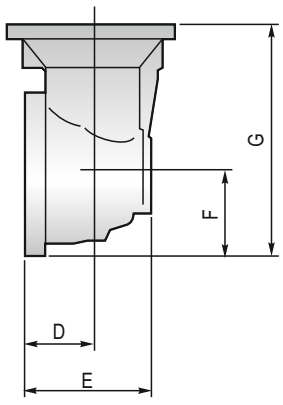
PLB ...CPC					
	A	B	RA	RB	EF
PLB 16002	379	240	•	○	•
PLB 16003	462	240	•	○	•
PLB 16004	498.5	160	•		•



A	B+16.5	○



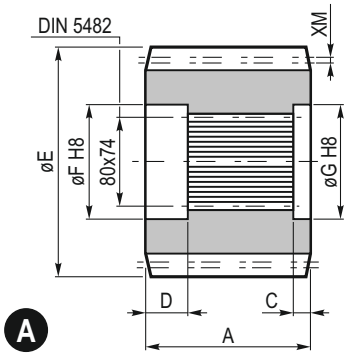
	L
RA	81
RB	125

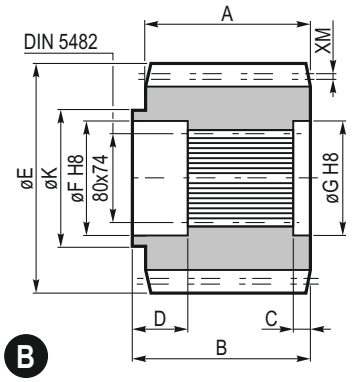


	D	E	F	G
PLB 16002	88	164	140	380
PLB 16003	88	164	140	380
PLB 16004	75	141.5	93	252

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

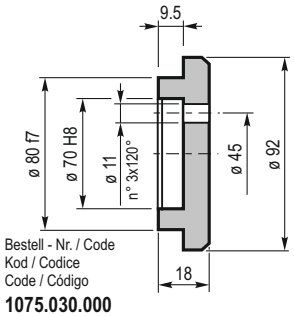




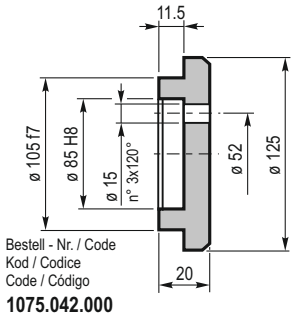
	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	M	10	12	0	90	-	10	31	140	85	80	-	38NiCrMo4	1071.236.042
A	M	10	14	0	90	-	10	31	160	85	80	-	38NiCrMo4	1071.238.042
A	P	14	13	7	122	-	24	33	224	105	105	-	18NiCrMo5	1071.293.042
B	M	12	14	3	90	115	25	31	194.5	85	80	130	39NiCrMo3	1071.286.042

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



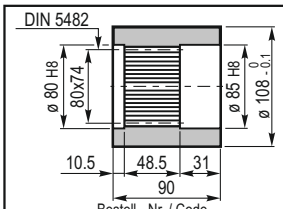
Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.030.000



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.042.000

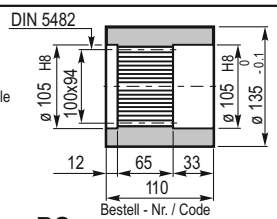
BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.103.076

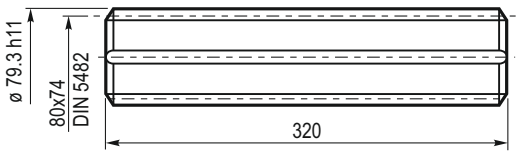
Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40



PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.112.041

KB

Außenverzahnte Welle/ Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

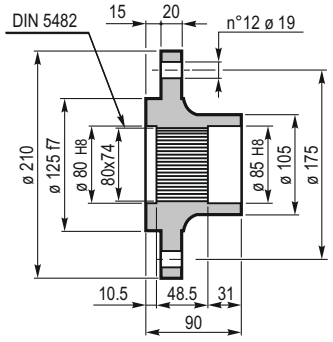


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

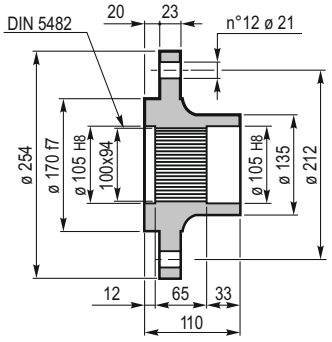
Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.406.042

FL

Flansch / Flange
Flanş / Flangia
Bride / Brida



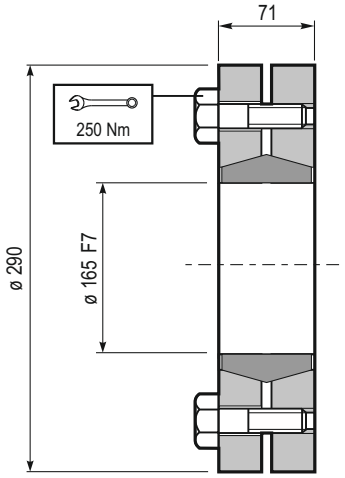
MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.105.098



PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.104.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
35 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.165.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

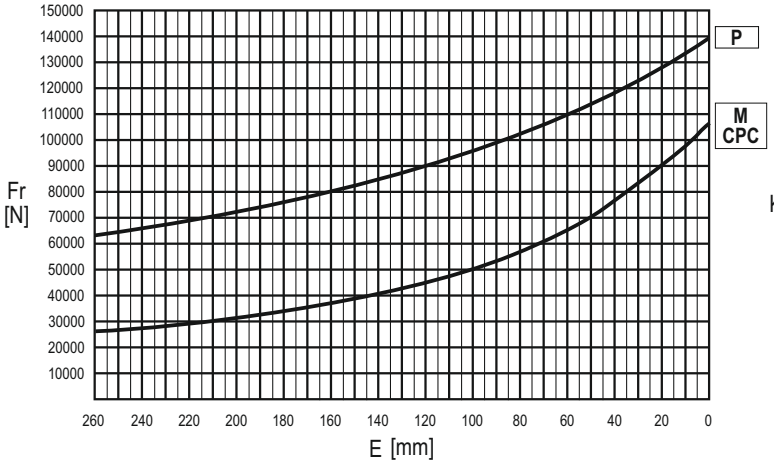
FR CHARGES RADIALES (Fr)

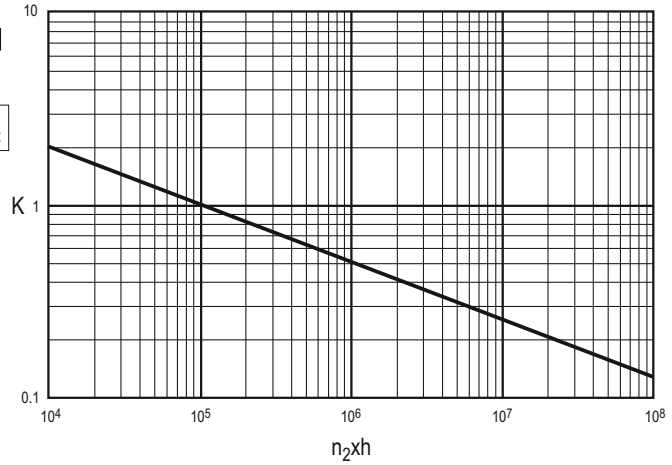
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

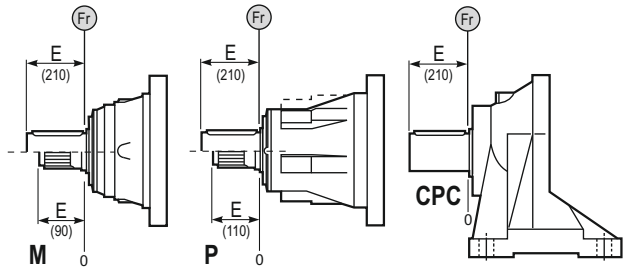
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

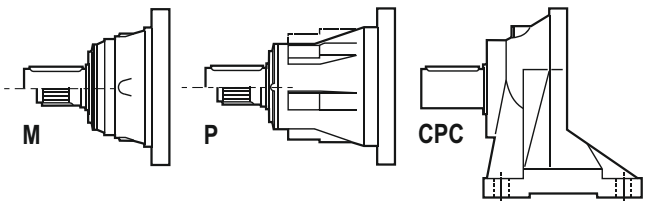
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M - CPC	P	
	45000	85000	←
	65000	85000	→

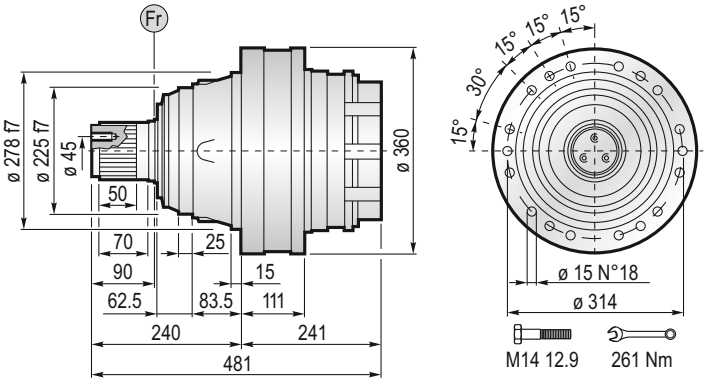


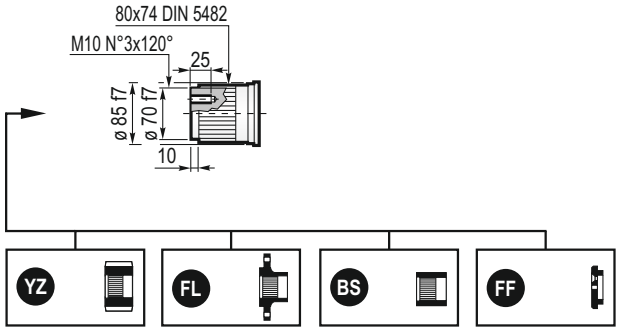
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 18002	25	2800	13.0 15.7 19.0 21.4 24.9 30.0	20.77 20.77 18.09 18.09 18.09 18.09	18.38 18.38 16.01 16.01 16.01 16.01	15.64 15.64 13.63 13.63 13.63 13.63	13.84 13.84 12.07 12.07 12.07 12.07	132	159	100	137	182
PL 18003	17	2800	53.8 65.0 73.3 81.4 94.5 106.7 128.4 149.1 180.2	20.77 20.77 20.77 20.77 20.77 20.77 18.09 18.09 18.09	18.38 18.38 18.38 18.38 18.38 18.38 16.01 16.01 16.01	15.64 15.64 15.64 15.64 15.64 15.64 13.63 13.63 13.63	13.84 13.84 13.84 13.84 13.84 13.84 12.07 12.07 12.07	144	171	113	149	194
PL 18004	13	2800	348.6 377.2 438.4 489.2 549.1 620.0 677.9 720.0 770.5 818.8 849.8 928.8 987.4 1113.0 1216.4	20.77 20.77 20.77 20.77 20.77 20.77 20.77 20.77 20.77 20.77 18.09 18.09 18.09 18.09 18.09	18.38 18.38 18.38 18.38 18.38 18.38 18.38 18.38 18.38 18.38 16.01 16.01 16.01 16.01 16.01	15.64 15.64 15.64 15.64 15.64 15.64 15.64 15.64 15.64 15.64 13.63 13.63 13.63 13.63 13.63	13.84 13.84 13.84 13.84 13.84 13.84 13.84 13.84 13.84 13.84 12.07 12.07 12.07 12.07 12.07	151	178	120	156	201

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 18002	25	2000	10.9 13.2 16.6 20.0	20.77 18.09 20.77 18.09	18.38 16.01 18.38 16.01	15.64 13.63 15.64 13.63	13.84 12.07 13.84 12.07	199	226	168	204	249
PLB 18003	17	2800	54.4 71.2 85.7 103.3 116.7 135.5 163.3	20.77 20.77 20.77 18.09 18.09 20.77 18.09	18.38 18.38 18.38 16.01 16.01 18.38 16.01	15.64 15.64 15.64 13.63 13.63 15.64 13.63	13.84 13.84 13.84 12.07 12.07 13.84 12.07	169	196	138	174	219
PLB 18004	13	2800	185.8 224.4 281.0 323.8 353.6 394.3 442.9 500.1 558.2 580.7 622.5 699.2 749.1 812.0 981.2	20.77 20.77 20.77 20.77 20.77 20.77 20.77 20.77 18.09 20.77 18.09 18.09 18.09 18.09 18.09	18.38 18.38 18.38 18.38 18.38 18.38 18.38 18.38 16.01 18.38 16.01 16.01 16.01 16.01 16.01	15.64 15.64 15.64 15.64 15.64 15.64 15.64 15.64 13.63 15.64 13.63 13.63 13.63 13.63 13.63	13.84 13.84 13.84 13.84 13.84 13.84 13.84 13.84 12.07 13.84 12.07 12.07 12.07 12.07 12.07	171	198	140	176	221

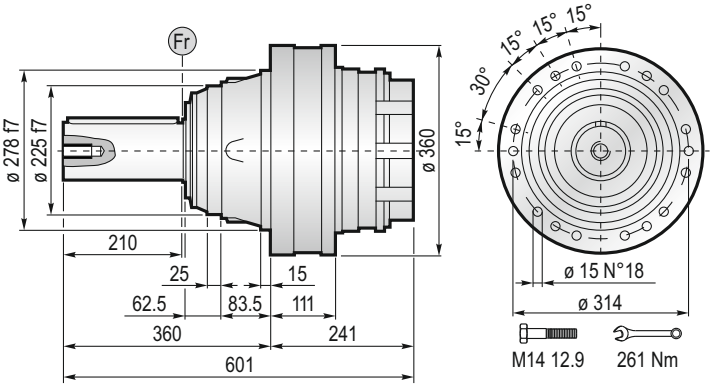
$$M_{max} = M_c \times 2 \quad (n_2 \times h = 20.000)$$

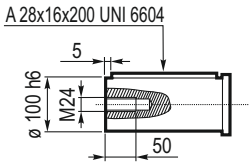
MS... 18000



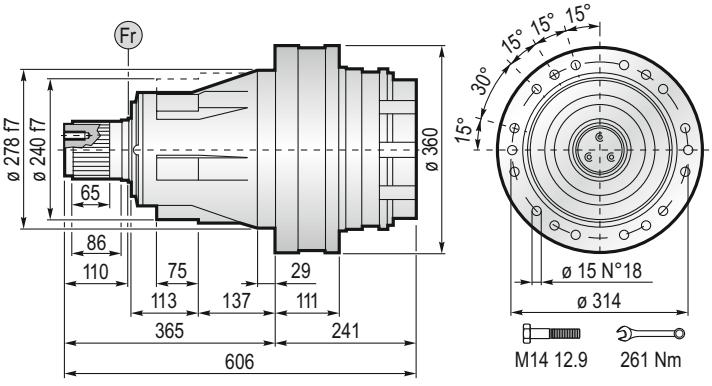


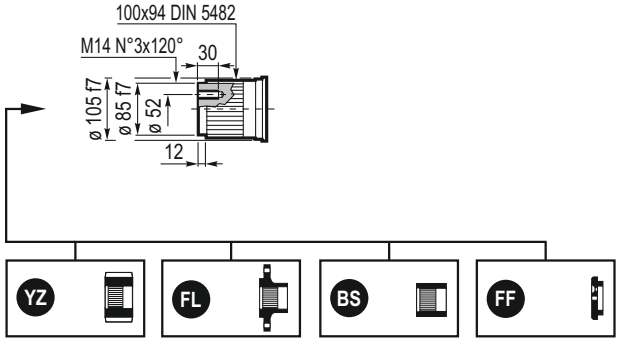
MC... 18000



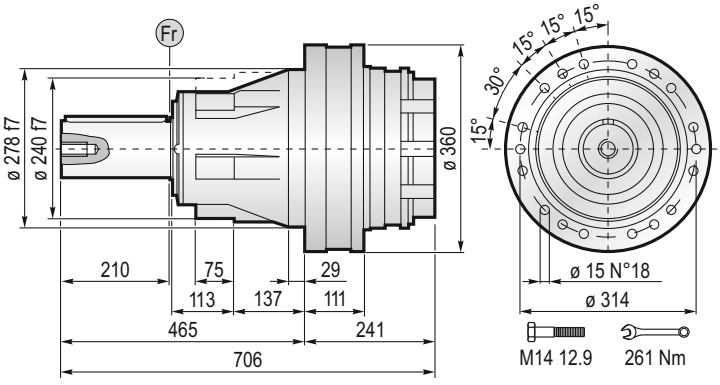


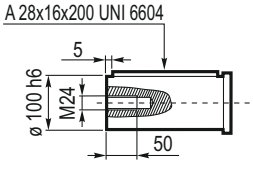
PS... 18000



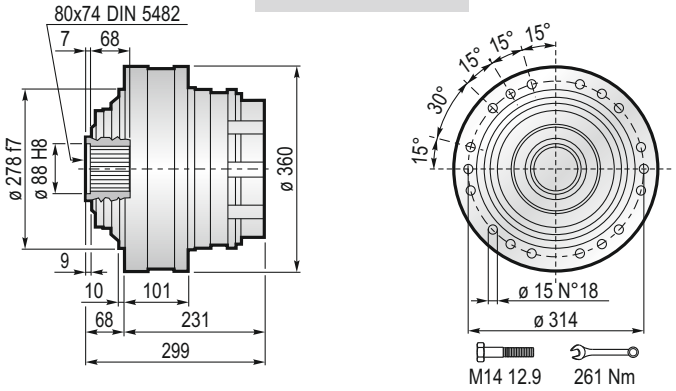


PC... 18000

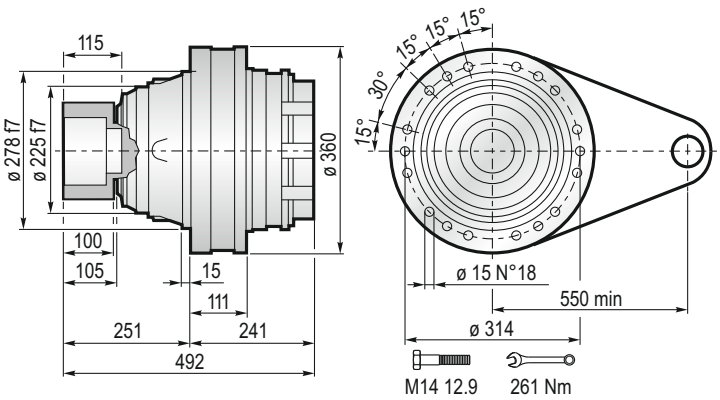


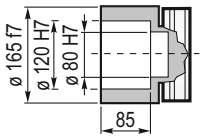


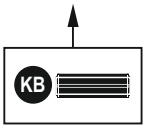
F... 18000

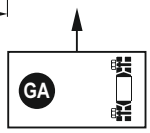


FS... 18000



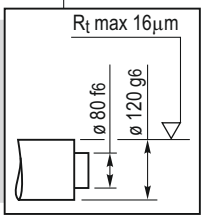




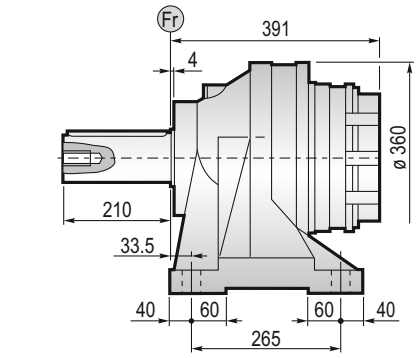


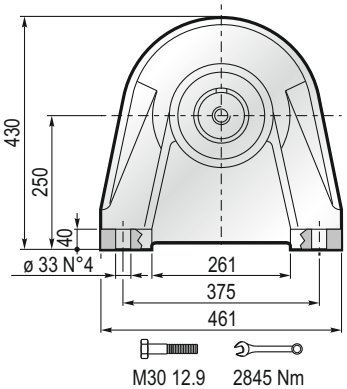
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

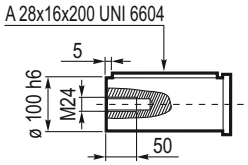
M_{max}= 35 kNm



CPC... 18000

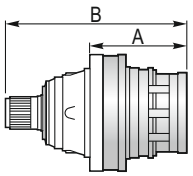




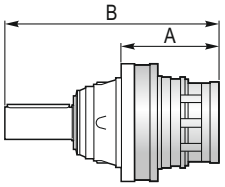


FL YZ BS FF KB GA → 158

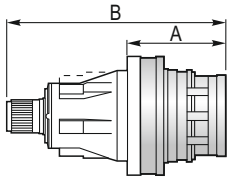
PL ...MS	A	B	RA	RB	EF	EDF
PL 18002	241	481		•		
PL 18003	300.5	540.5	•	○	•	
PL 18004	348.5	588.5	•			•



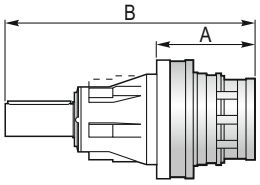
PL ...MC	A	B	RA	RB	EF	EDF
PL 18002	241	601		•		
PL 18003	300.5	660.5	•	○	•	
PL 18004	348.5	708.5	•			•



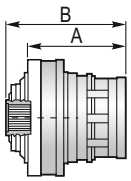
PL ...PS	A	B	RA	RB	EF	EDF
PL 18002	241	606		•		
PL 18003	300.5	665.5	•	○	•	
PL 18004	348.5	709.5	•			•



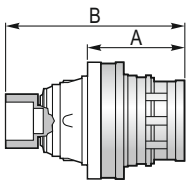
PL ...PC	A	B	RA	RB	EF	EDF
PL 18002	241	706		•		
PL 18003	300.5	765.5	•	○	•	
PL 18004	348.5	813.5	•			•



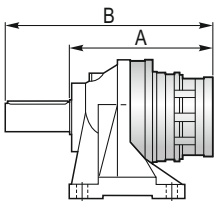
PL ...F	A	B	RA	RB	EF	EDF
PL 18002	231	299		•		
PL 18003	290.5	358.5	•	○	•	
PL 18004	338.5	406.5	•			•



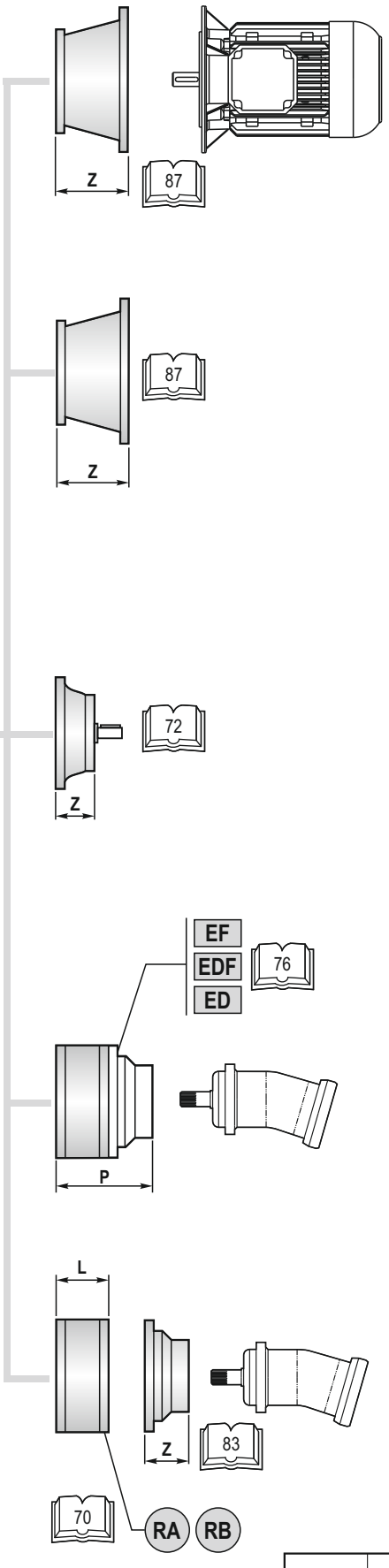
PL ...FS	A	B	RA	RB	EF	EDF
PL 18002	241	492		•		
PL 18003	300.5	551.5	•	○	•	
PL 18004	348.5	599.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 18002	391	601		•		
PL 18003	450.5	660.5	•	○	•	
PL 18004	498.5	708.5	•			•

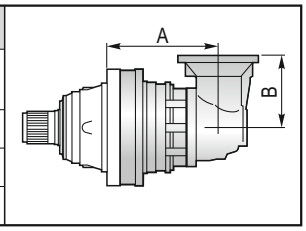


A+13.5	B+13.5	○

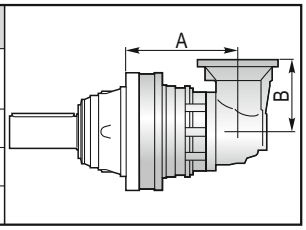


	L
RA	81
RB	125

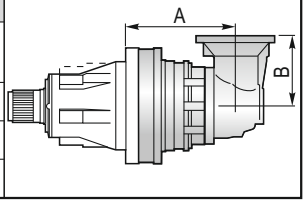
PLB ...MS					
	A	B	RA	RB	EF
PLB 18002	276	315		•	
PLB 18003	329	240	•	○	•
PLB 18004	402	240	•		•



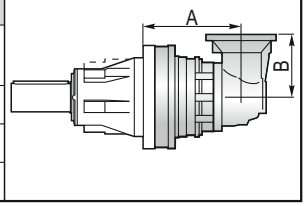
PLB ...MC					
	A	B	RA	RB	EF
PLB 18002	276	315		•	
PLB 18003	329	240	•	○	•
PLB 18004	402	240	•		•



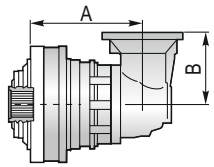
PLB ...PS					
	A	B	RA	RB	EF
PLB 18002	276	315		•	
PLB 18003	329	240	•	○	•
PLB 18004	402	240	•		•



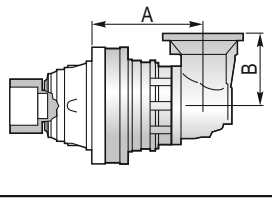
PLB ...PC					
	A	B	RA	RB	EF
PLB 18002	276	315		•	
PLB 18003	329	240	•	○	•
PLB 18004	402	240	•		•



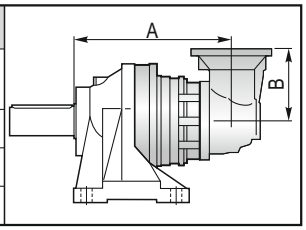
PLB ...F					
	A	B	RA	RB	EF
PLB 18002	266	315		•	
PLB 18003	323	240	•	○	•
PLB 18004	396	240	•		•



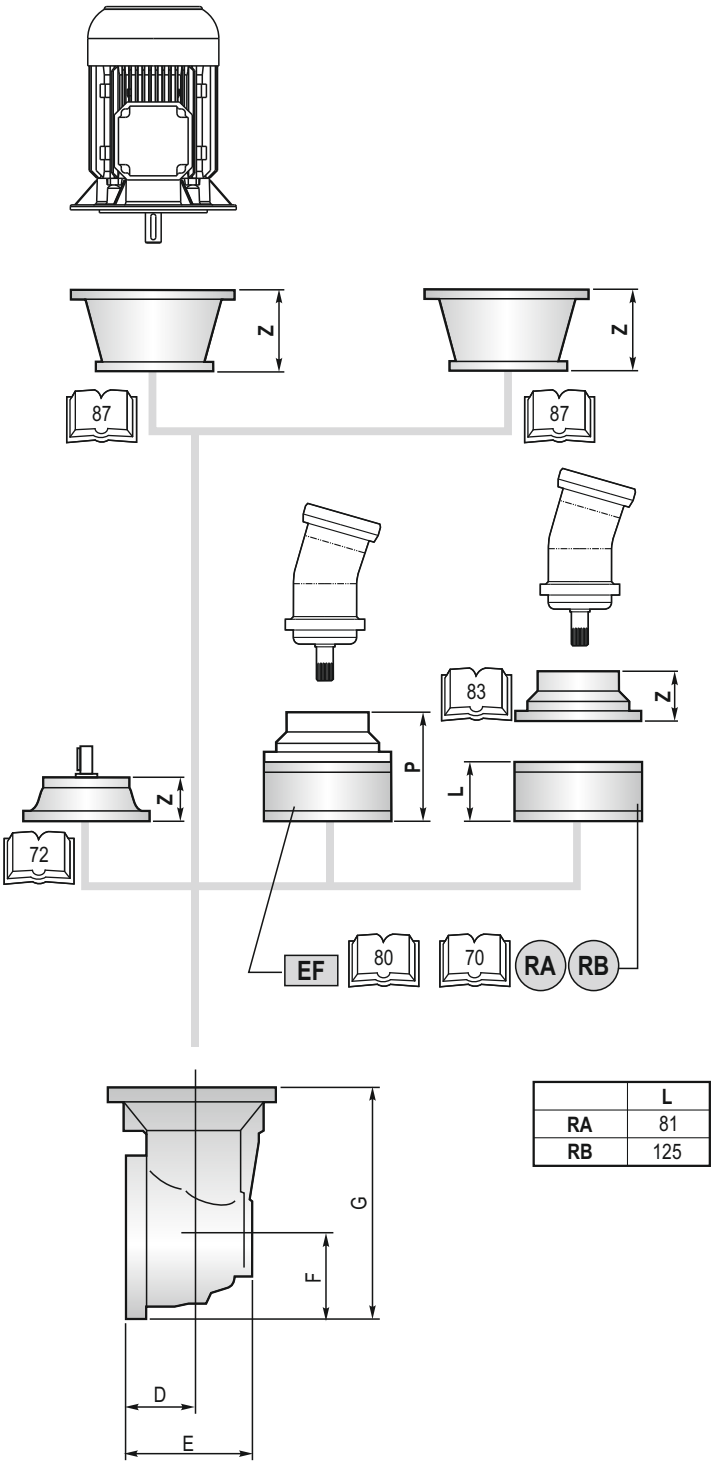
PLB ...FS					
	A	B	RA	RB	EF
PLB 18002	276	315		•	
PLB 18003	329	240	•	○	•
PLB 18004	402	240	•		•



PLB ...CPC					
	A	B	RA	RB	EF
PLB 18002	427	315		•	
PLB 18003	479	240	•	○	•
PLB 18004	552	240	•		•



A	B+16.5	○

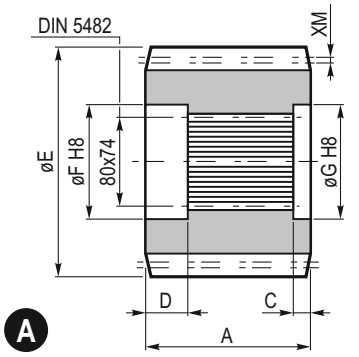


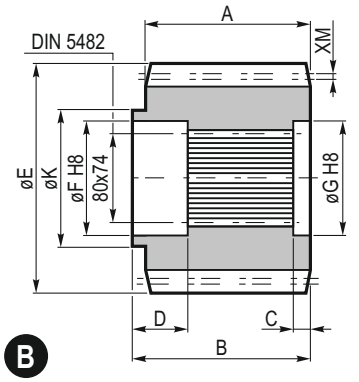
	L
RA	81
RB	125

	D	E	F	G
PLB 18002	88	256	235	550
PLB 18003	88	164	140	380
PLB 18004	88	164	140	380

YZ

Ritzel / Pinion
Pinyon / Pignoni
Pignon / Piñones

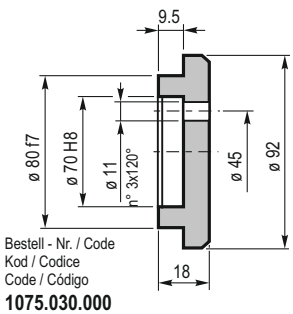




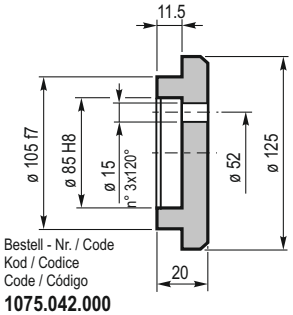
	Abtriebs-version Output type Çıkış tipi Versione Version Versión	M	Z	XM	A	B	C	D	E	F	G	K	Material Material Malzeme Materiale Matière Material	Bestell-Nr. Code Kod Codice Code Código
A	M	10	12	0	90	-	10	31	140	85	80	-	38NiCrMo4	1071.236.042
	M	10	14	0	90	-	10	31	160	85	80	-	38NiCrMo4	1071.238.042
	M	10	15	5	90	-	10	31	180	85	80	-	38NiCrMo4	1071.138.042
B	M	10	18	5	85	114	31	24	209.3	85	95	160	42CrMo4	1071.261.042
	M	12	14	3	90	105	15	31	194.5	85	95	130	38NiCrMo4	1071.269.042

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



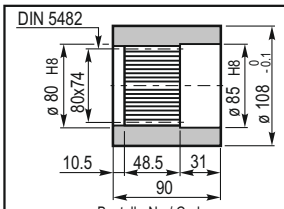
Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.030.000



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.042.000

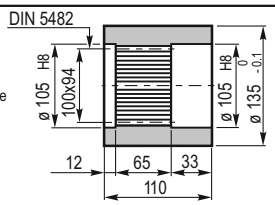
BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.103.076

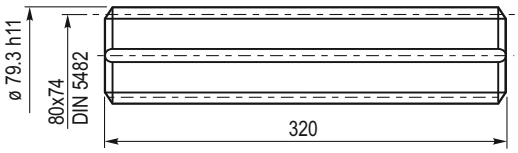
Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40



PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.112.041

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

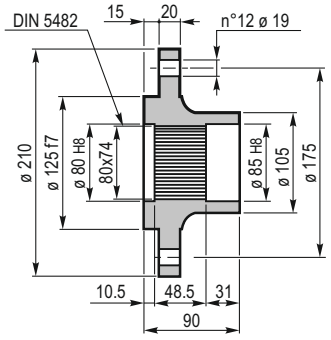


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

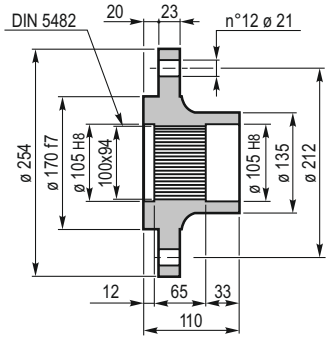
Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.406.042

FL

Flansch / Flange
Flanş / Flangia
Bride / Brida



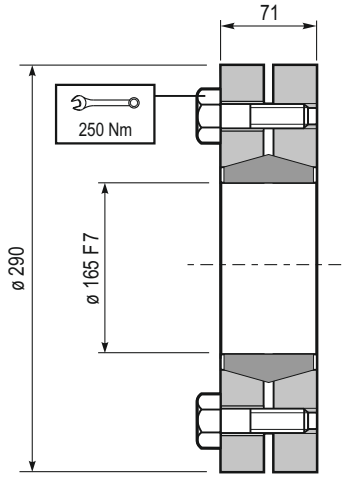
MS
Bestell - Nr. / Code
Kod / Codice
Code / Código
6171.105.098



PS
Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.104.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
35 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.165.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

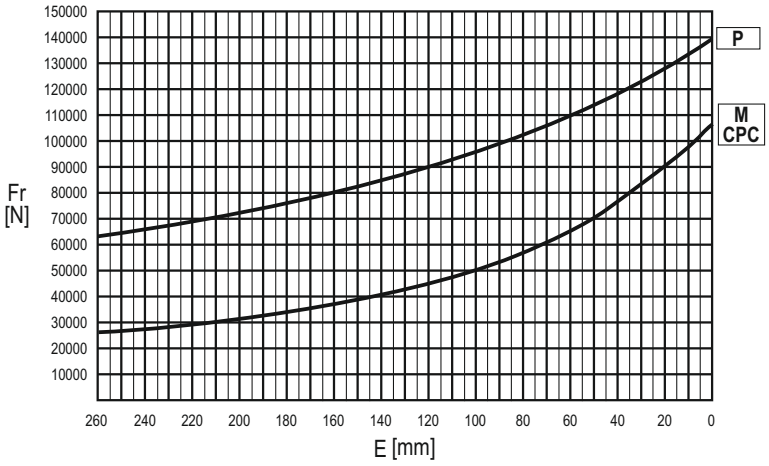
FR CHARGES RADIALES (Fr)

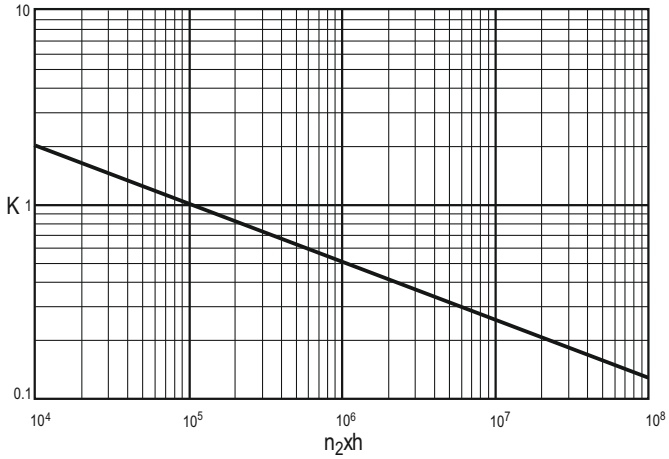
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

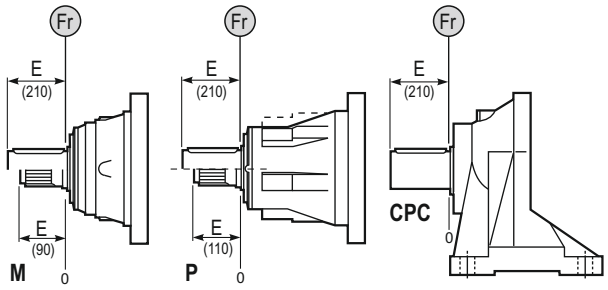
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M - CPC* - P





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

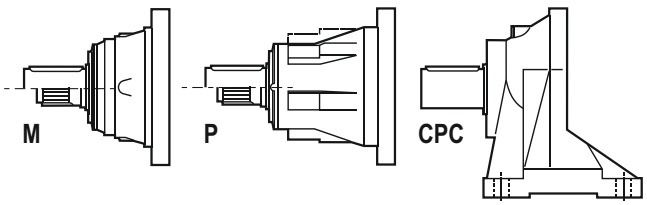
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M - CPC	P	
	45000	85000	←
	65000	85000	→



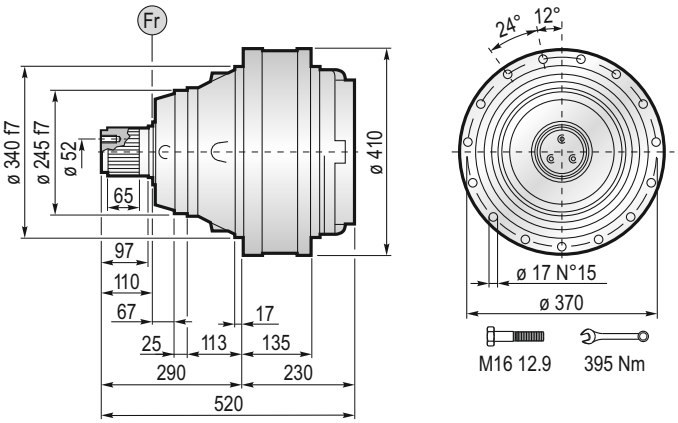
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 25001	50	1500	4.00 5.20 6.25	35.45 27.41 21.14	31.38 24.26 18.72	26.70 20.64 15.93	23.63 18.27 14.10	185	–	149	157	246
PL 25002	30	2800	14.7 17.7 20.0 23.0 26.0 30.2 36.3 43.8	35.45 35.45 35.45 27.41 27.41 27.41 21.14 21.14	31.38 31.38 31.38 24.26 24.26 24.26 18.72 18.72	26.70 26.70 26.70 20.64 20.64 20.64 15.93 15.93	23.63 23.63 23.63 18.27 18.27 18.27 14.10 14.10	212	–	176	184	273
PL 25003	20	2800	55.4 60.5 73.1 88.0 95.0 106.3 114.4 128.4 134.3 156.0 167.0 188.5 218.7 226.6 262.8 317.2	35.45 35.45 35.45 35.45 27.41 35.45 27.41 35.45 27.41 27.41 27.41 27.41 27.41 21.14 21.14 21.14	31.38 31.38 31.38 31.38 24.26 31.38 24.26 31.38 24.26 24.26 24.26 24.26 24.26 18.72 18.72 18.72	26.70 26.70 26.70 26.70 20.64 26.70 20.64 26.70 20.64 20.64 20.64 20.64 20.64 15.93 15.93 15.93	23.63 23.63 23.63 23.63 18.27 23.63 18.27 23.63 18.27 18.27 18.27 18.27 18.27 14.10 14.10 14.10	224	–	188	196	285
PL 25004	15	2800	338.8 374.0 408.4 424.3 455.5 493.2 556.9 617.8 697.5 752.3 803.1 873.6 934.9 1013.4 1126.9 1272.4 1354.5 1476.0 1529.3 1774.0	35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 27.38 27.38 27.38 27.38 27.38 27.38 27.38 21.14 27.38 21.14 21.14	31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 24.24 24.24 24.24 24.24 24.24 24.24 24.24 18.72 24.24 18.72 18.72	26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 20.62 20.62 20.62 20.62 20.62 20.62 20.62 15.93 20.62 15.93 15.93	23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 18.26 18.26 18.26 18.26 18.26 18.26 18.26 14.10 18.26 14.10 14.10	230	–	194	202	291

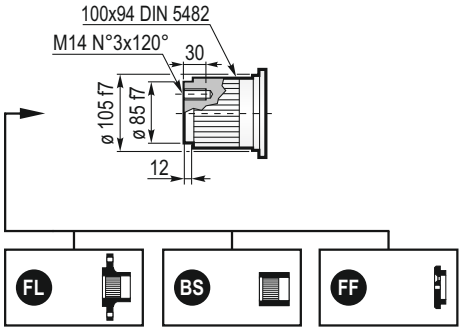
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		**10.000**	**20.000**	**50.000**	**100.000**	**M**	**P**	**F**	**FS**	**CPC**
PLB 25002	30	2000	12.3	35.45	31.38	26.70	23.63	281	–	244	252	344
			16.0	27.41	24.26	20.64	18.27					
			19.2	21.14	18.72	15.93	14.10					
			24.3	27.41	24.26	20.64	18.27					
			29.2	21.14	18.72	15.93	14.10					
PLB 25003	20	2800	50.7	35.45	31.38	26.70	23.63	249	–	213	221	312
			61.2	35.45	31.38	26.70	23.63					
			69.1	35.45	31.38	26.70	23.63					
			79.6	27.41	24.26	20.64	18.27					
			89.8	27.41	24.26	20.64	18.27					
			96.4	35.45	31.38	26.70	23.63					
			104.2	27.41	24.26	20.64	18.27					
			125.4	27.41	24.26	20.64	18.27					
			141.6	27.41	24.26	20.64	18.27					
			164.2	27.41	24.26	20.64	18.27					
			197.4	21.14	18.72	15.93	14.10					
			238.2	21.14	18.72	15.93	14.10					
PLB 25004	15	2800	252.4	35.45	31.38	26.70	23.63	264	–	228	236	327
			285.0	35.45	31.38	26.70	23.63					
			304.0	35.45	31.38	26.70	23.63					
			364.3	35.45	31.38	26.70	23.63					
			397.8	35.45	31.38	26.70	23.63					
			449.2	35.45	31.38	26.70	23.63					
			498.3	35.45	31.38	26.70	23.63					
			562.6	35.45	31.38	26.70	23.63					
			651.2	27.41	24.26	20.64	18.27					
			731.4	27.41	24.26	20.64	18.27					
			789.4	35.45	31.38	26.70	23.63					
			985.2	27.41	24.26	20.64	18.27					
			1190.5	27.41	24.26	20.64	18.27					
			1430.9	21.14	18.72	15.93	14.10					
			1726.9	21.14	18.72	15.93	14.10					

(n_2 x h = 20.000)

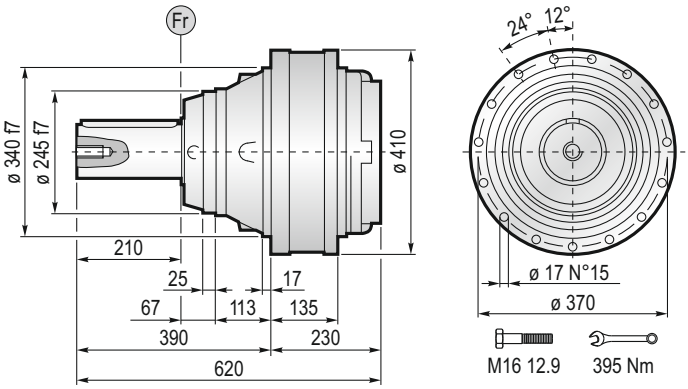
$M_{max} = M_c \times 2$

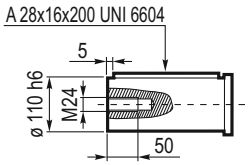
MS... 25000



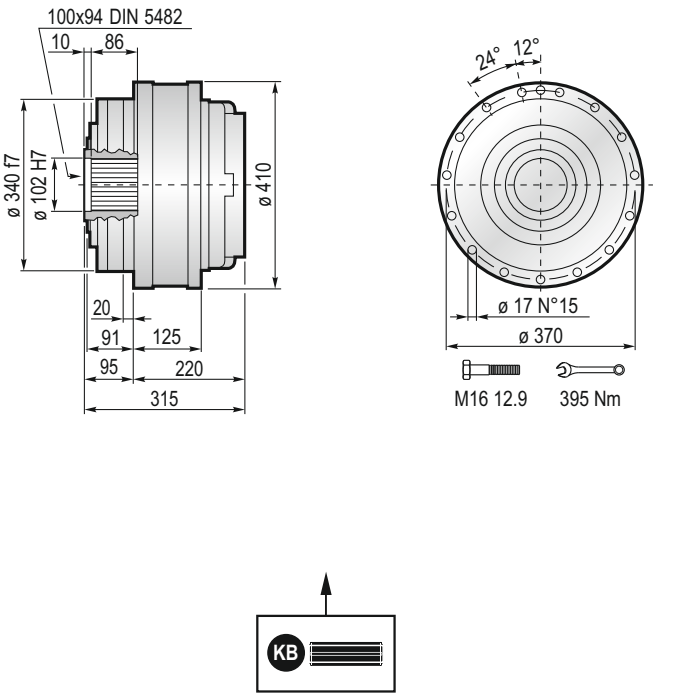


MC... 25000

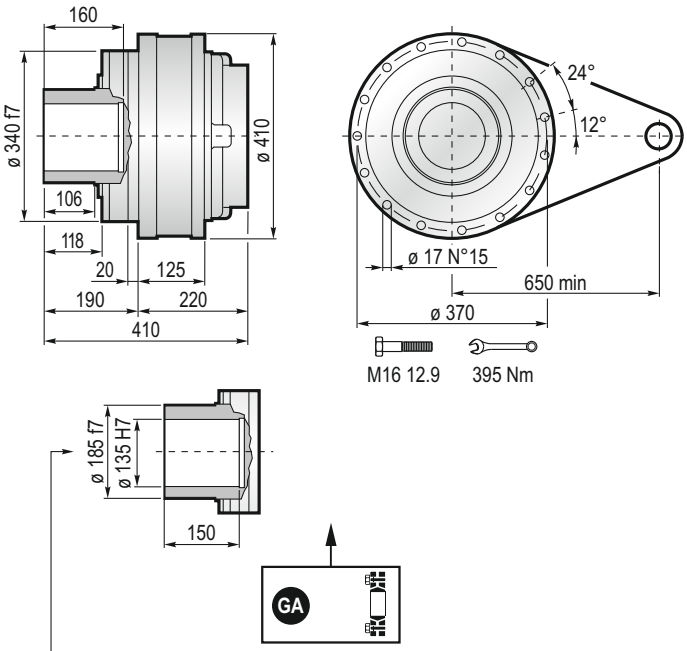




F... 25000

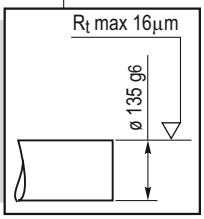


FS... 25000

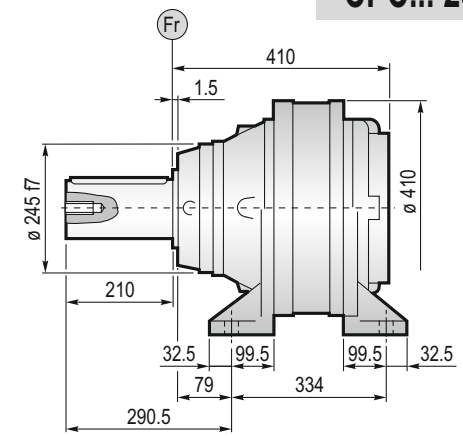


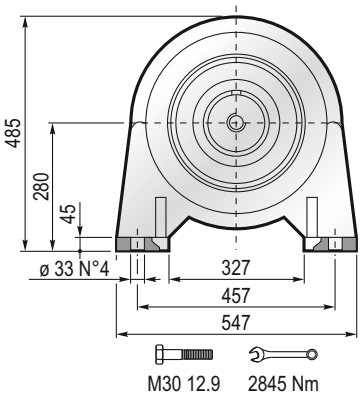
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

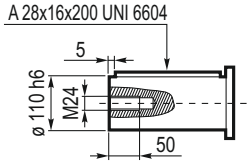
M_{max}= 52 kNm



CPC... 25000

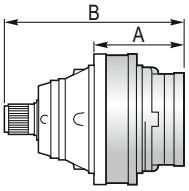




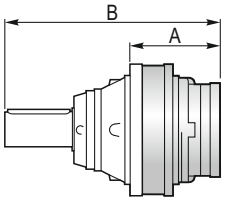


FL BS FF KB GA → 166

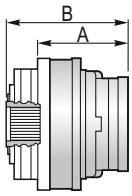
PL ...MS	A	B	RA	RB	EF	EDF
PL 25001	230	520				
PL 25002	324	614		•		
PL 25003	383.5	673.5	•	○	•	
PL 25004	431.5	721.5	•			•



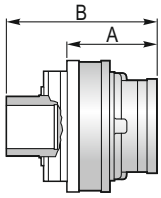
PL ...MC	A	B	RA	RB	EF	EDF
PL 25001	230	620				
PL 25002	324	714		•		
PL 25003	383.5	773.5	•	○	•	
PL 25004	431.5	821.5	•			•



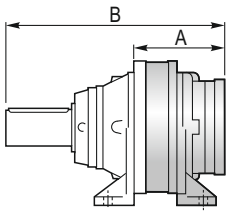
PL ...F	A	B	RA	RB	EF	EDF
PL 25001	220	315				
PL 25002	314	409		•		
PL 25003	373.5	468.5	•	○	•	
PL 25004	421.5	516.5	•			•



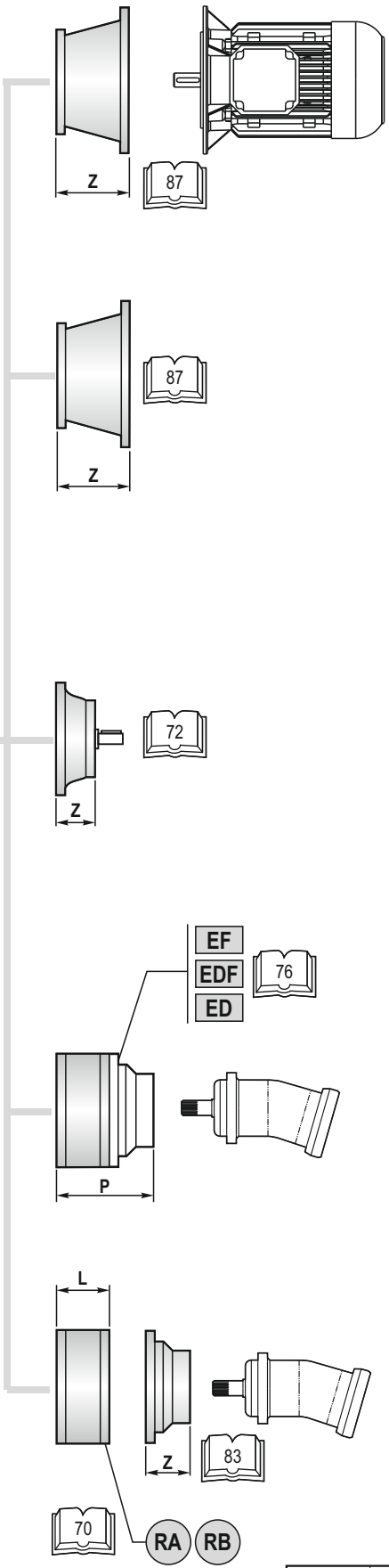
PL ...FS	A	B	RA	RB	EF	EDF
PL 25001	220	410				
PL 25002	314	504		•		
PL 25003	373.5	563.5	•	○	•	
PL 25004	421.5	611.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 25001	410	620				
PL 25002	504	714		•		
PL 25003	563.5	773.5	•	○	•	
PL 25004	611.5	821.5	•			•

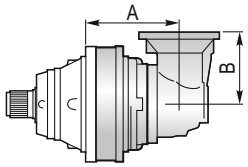


A+13.5	B+13.5	○

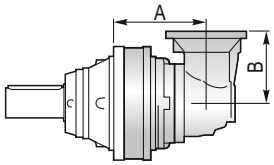


	L
RA	81
RB	125

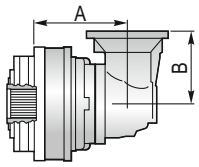
PLB ...MS	A	B	RA	RB	EF
PLB 25002	295	315			
PLB 25003	397	240			
PLB 25004	470	240			



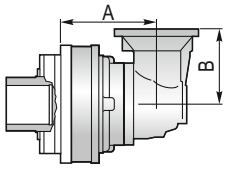
PLB ...MC	A	B	RA	RB	EF
PLB 25002	295	315			
PLB 25003	397	240			
PLB 25004	470	240			



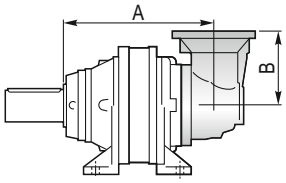
PLB ...F	A	B	RA	RB	EF
PLB 25002	285	315		•	
PLB 25003	387	240	•	○	•
PLB 25004	460	240	•		•



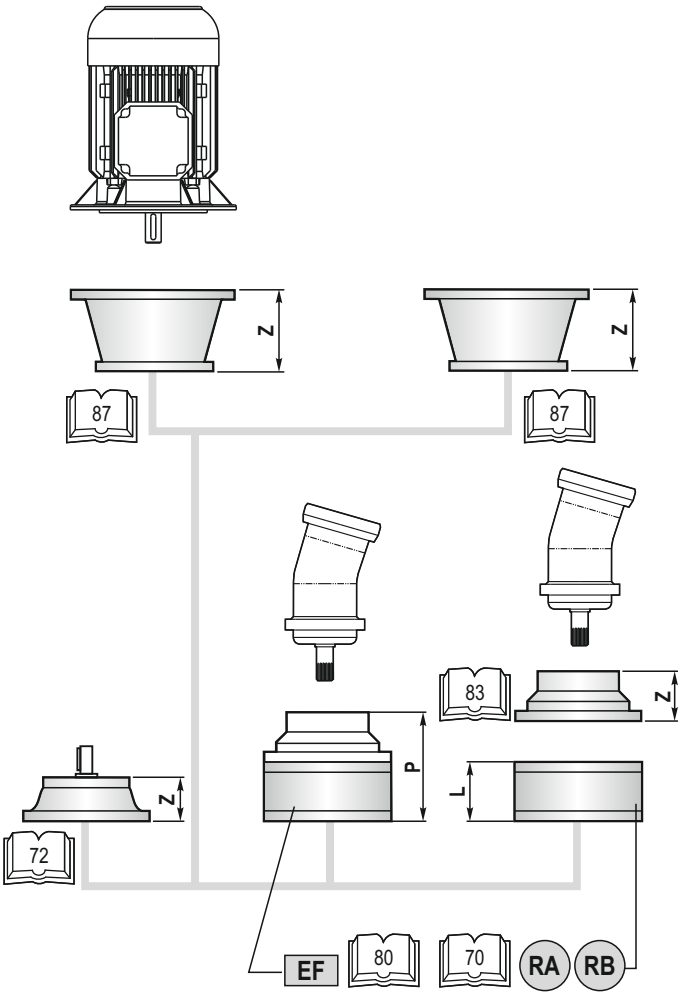
PLB ...FS	A	B	RA	RB	EF
PLB 25002	285	315			
PLB 25003	387	240			
PLB 25004	460	240			



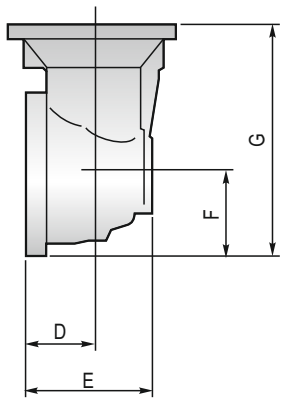
PLB ...CPC	A	B	RA	RB	EF
PLB 25002	475	315			
PLB 25003	577	240			
PLB 25004	650	240			



A	B+16.5	○



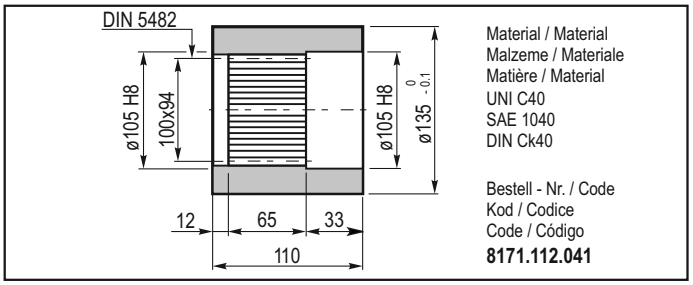
	L
RA	81
RB	125



	D	E	F	G
PLB 25002	88	256	235	550
PLB 25003	88	164	140	380
PLB 25004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

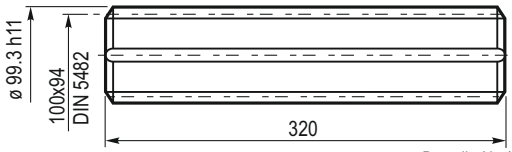


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.112.041

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada

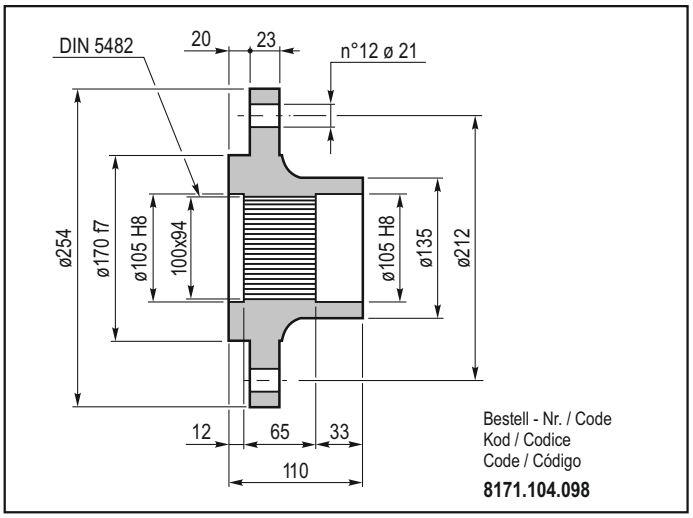


Material / Material
Malzeme / Materiale
Matière / Material
UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.407.042

FL

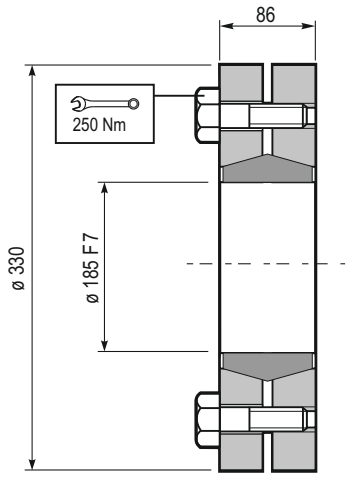
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.104.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

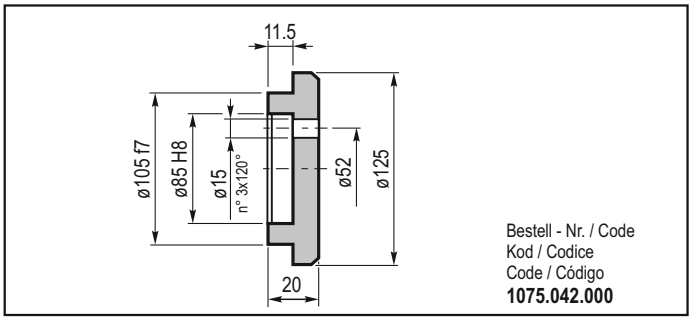


Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
52 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.185.000

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.042.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

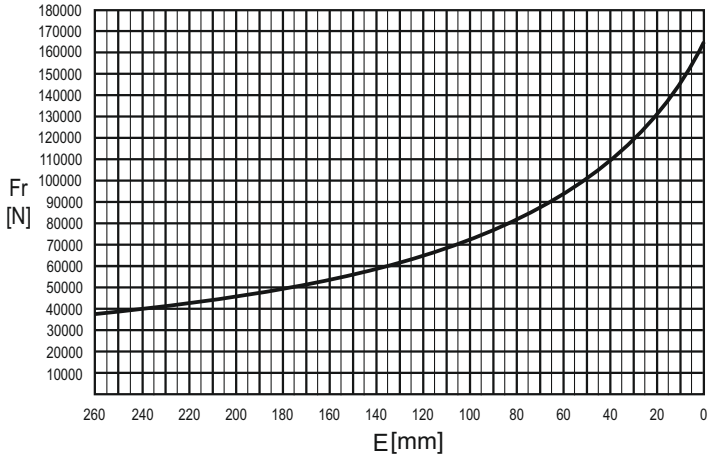
FR CHARGES RADIALES (Fr)

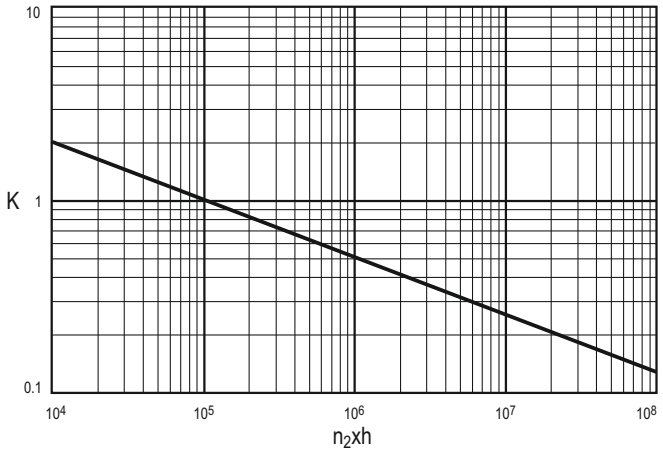
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

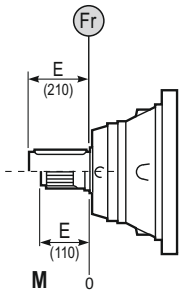
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

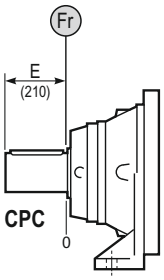
M - CPC* - P





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

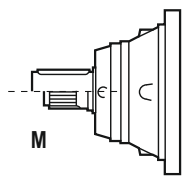
FR CHARGES AXIALES (Fa)

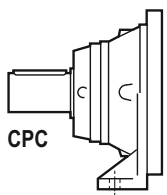
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	75000	75000	←
	95000	95000	→





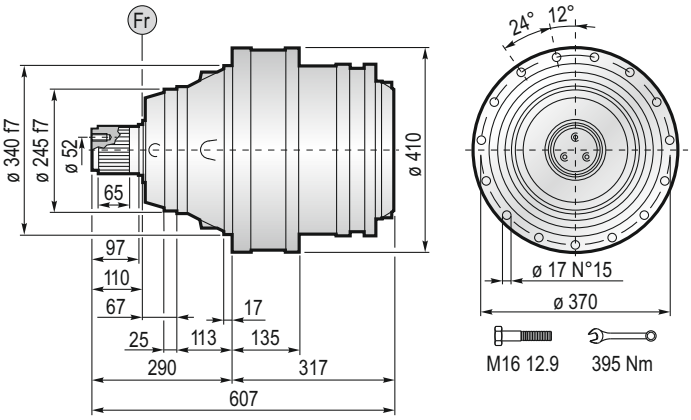
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 30002	34	2000	14.2 17.1 22.4 29.1 35.1	35.45 35.45 35.45 27.41 27.41	31.38 31.38 31.38 24.26 24.26	26.70 26.70 26.70 20.64 20.64	23.63 23.63 23.63 18.27 18.27	239	–	198	206	300
PL 30003	23	2800	64.8 73.5 88.6 102.9 124.3 134.4	35.45 35.45 35.45 35.45 35.45 35.45	31.38 31.38 31.38 31.38 31.38 31.38	26.70 26.70 26.70 26.70 26.70 26.70	23.63 23.63 23.63 23.63 23.63 23.63	255	–	214	222	318
PL 30004	17	2800	251.4 300.9 314.9 328.5 362.7 379.6 396.0 427.1 477.3 517.4 576.0 623.7 694.3 752.6 838.9 1015.5 1425.1	35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 35.45 27.41 27.41	31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 31.38 24.26 24.26	26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 26.70 20.64 20.64	23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 23.63 18.27 18.27	263	–	222	230	326

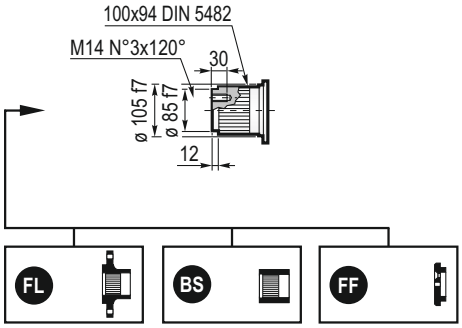
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		**10.000**	**20.000**	**50.000**	**100.000**	**M**	**P**	**F**	**FS**	**CPC**
PLB 30003	23	2800	52.7	35.45	31.38	26.70	23.63	340	–	301	311	401
			66.4	35.45	31.38	26.70	23.63					
			80.0	35.45	31.38	26.70	23.63					
			104.5	35.45	31.38	26.70	23.63					
			135.9	27.41	24.26	20.64	18.27					
			163.8	27.41	24.26	20.64	18.27					
PLB 30004	17	2800	306.0	35.45	31.38	26.70	23.63	295	–	254	262	358
			352.6	35.45	31.38	26.70	23.63					
			385.0	35.45	31.38	26.70	23.63					
			460.7	35.45	31.38	26.70	23.63					
			519.8	27.41	24.26	20.64	18.27					
			598.9	27.41	24.26	20.64	18.27					
			676.7	35.45	31.38	26.70	23.63					
			729.3	27.41	24.26	20.64	18.27					
			819.1	27.41	24.26	20.64	18.27					
			951.2	27.41	24.26	20.64	18.27					
			1385.5	27.41	24.26	20.64	18.27					

(n_2 x h = 20.000)

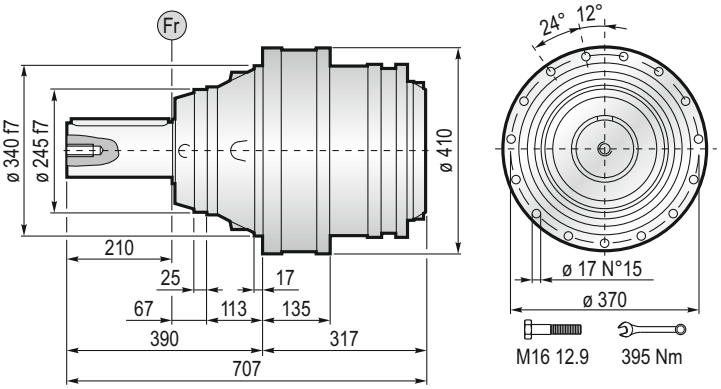
$M_{max} = M_c \times 2$

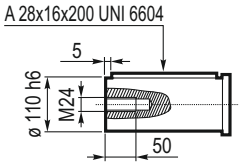
MS... 30000



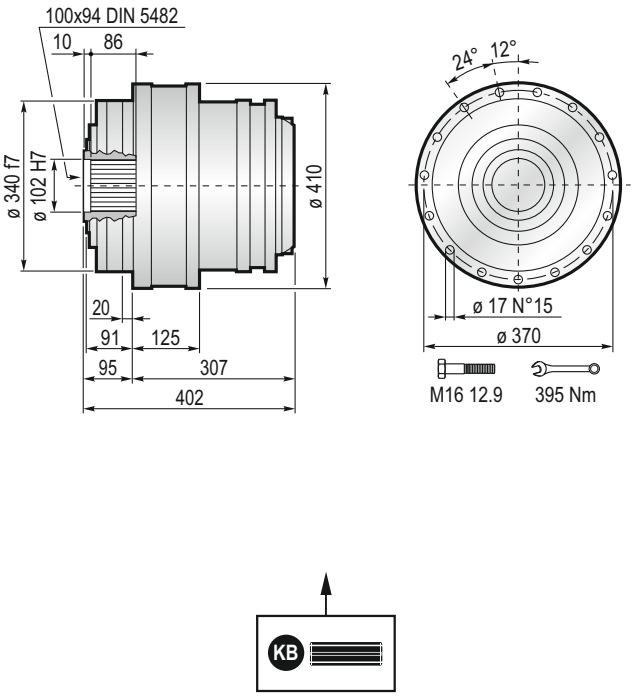


MC... 30000

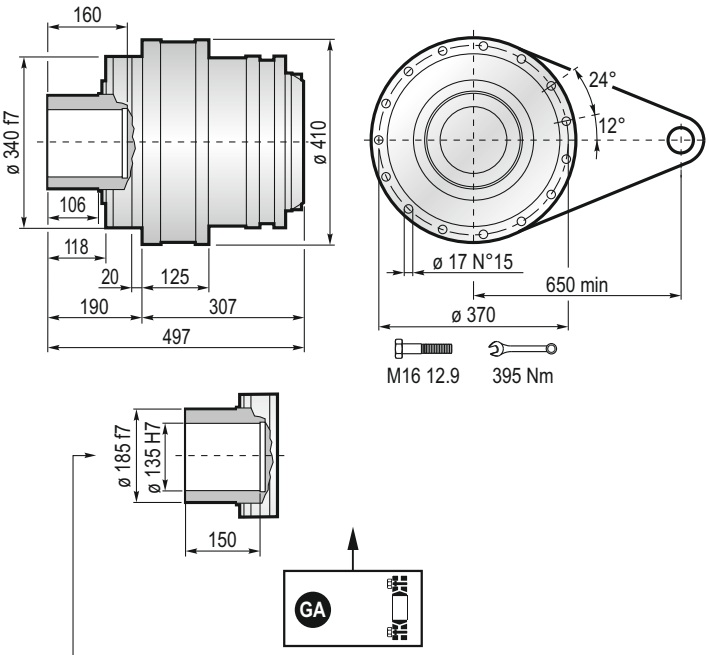




F... 30000

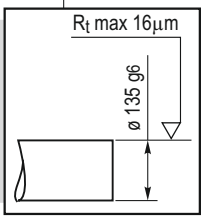


FS... 30000

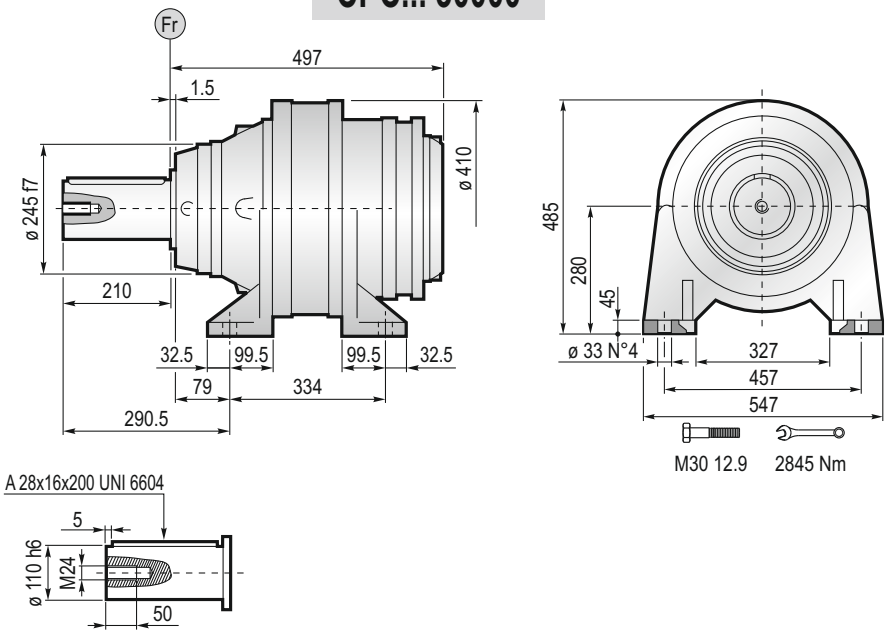


Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 52 kNm

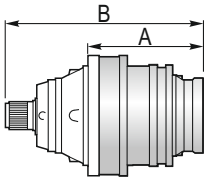


CPC... 30000

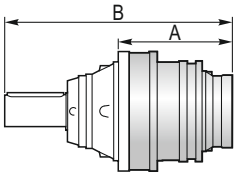


FL BS FF KB GA → 174

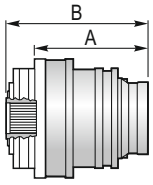
PL ...MS	A	B	RA	RB	EF	EDF
PL 30002	317	607		•		
PL 30003	388.5	678.5	•	○	•	
PL 30004	449.5	739.5	•			•



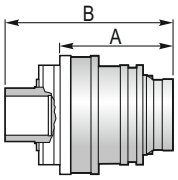
PL ...MC	A	B	RA	RB	EF	EDF
PL 30002	317	707		•		
PL 30003	388.5	778.5	•	○	•	
PL 30004	449.5	839.5	•			•



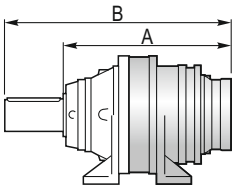
PL ...F	A	B	RA	RB	EF	EDF
PL 30002	307	402		•		
PL 30003	378.5	473.5	•	○	•	
PL 30004	439.5	534.5	•			•



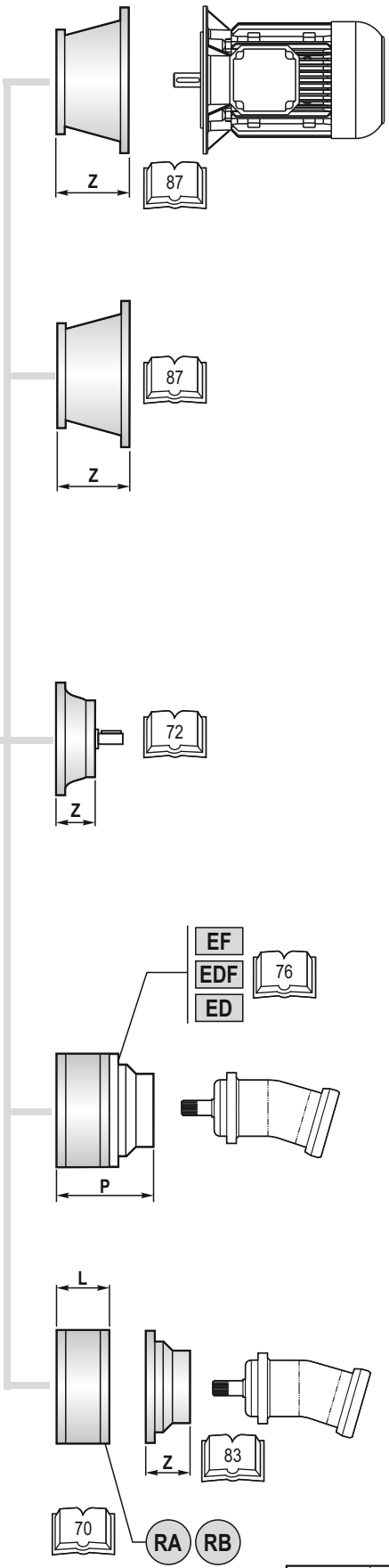
PL ...FS	A	B	RA	RB	EF	EDF
PL 30002	307	497		•		
PL 30003	378.5	568.5	•	○	•	
PL 30004	439.5	629.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 30002	497	707		•		
PL 30003	568.5	778.5	•	○	•	
PL 30004	629.5	839.5	•			•

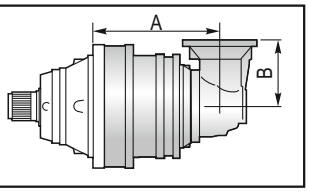


A+13.5	B+13.5	○

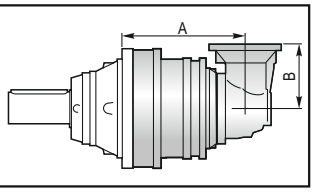


	L
RA	81
RB	125

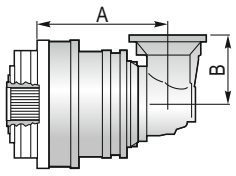
PLB ...MS	A	B	RA	RB	EF
PLB 30003	452	240	•	○	•
PLB 30004	490	240	•	○	•



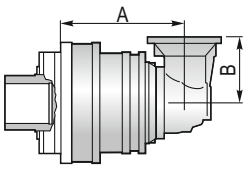
PLB ...MC	A	B	RA	RB	EF
PLB 30003	452	240	•	○	•
PLB 30004	490	240	•	○	•



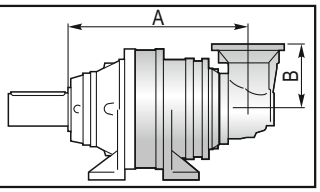
PLB ...F	A	B	RA	RB	EF
PLB 30003	442	240	•	○	•
PLB 30004	480	240	•	○	•



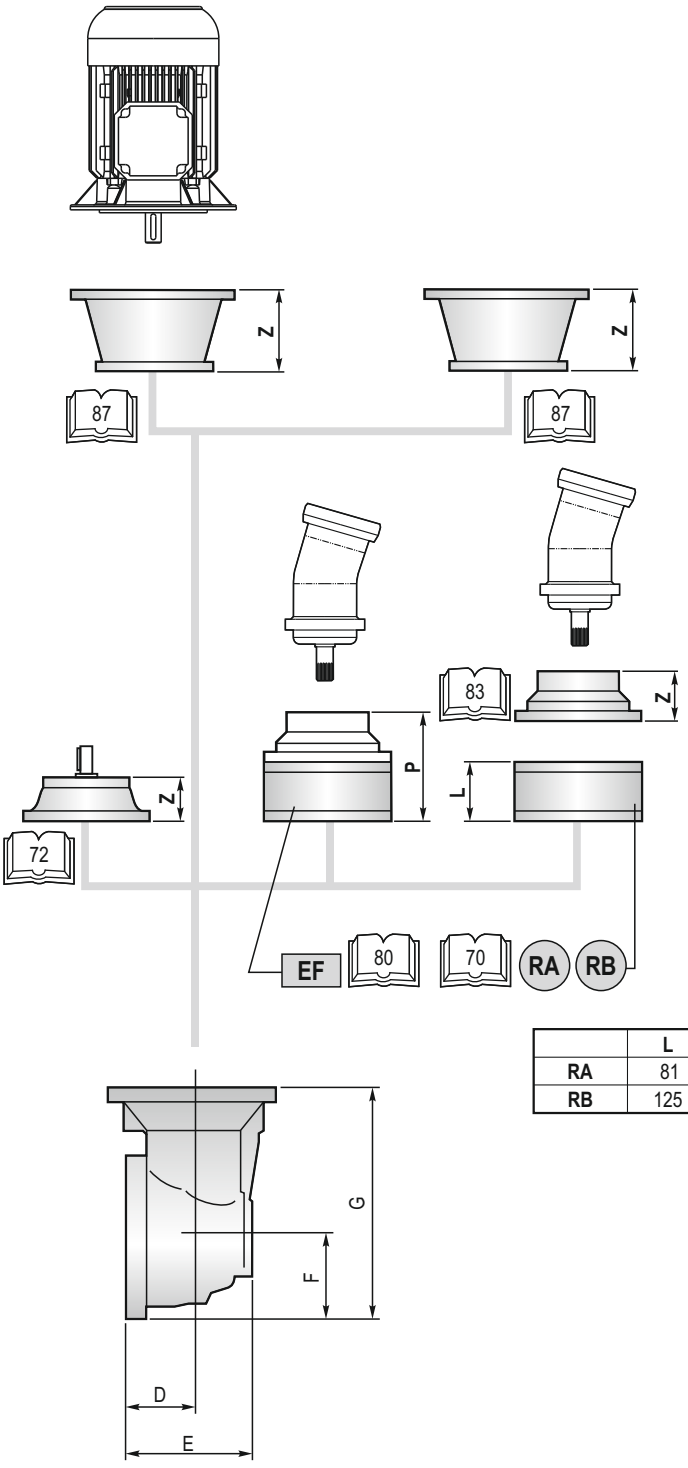
PLB ...FS	A	B	RA	RB	EF
PLB 30003	442	240	•	○	•
PLB 30004	482	240	•	○	•



PLB ...CPC	A	B	RA	RB	EF
PLB 30003	632	240	•	○	•
PLB 30004	670	240	•	○	•



A+16.5	B	○

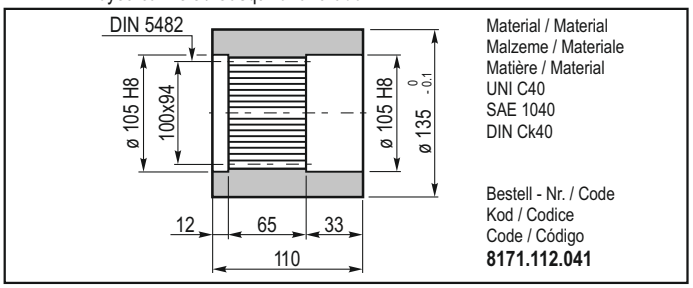


	L
RA	81
RB	125

	D	E	F	G
PLB 30003	88	256	235	550
PLB 30004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

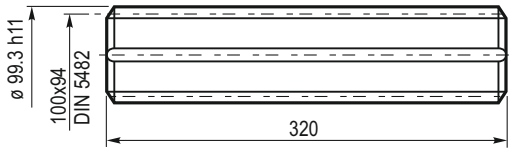


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.112.041

KB

Außenverzahnte Welle / Splined rod
Spline mil / Barra scanalata
Arbre cannelé / Barra ranurada



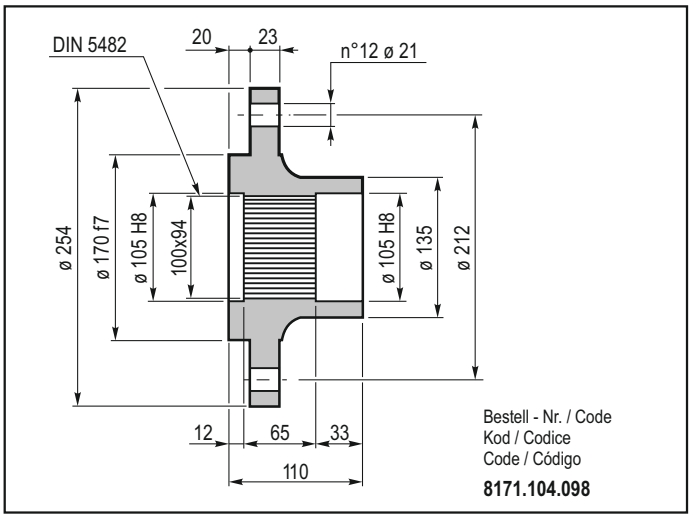
Material / Material
Malzeme / Materiale
Matière / Material

UNI 39NiCrMo3
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.407.042

FL

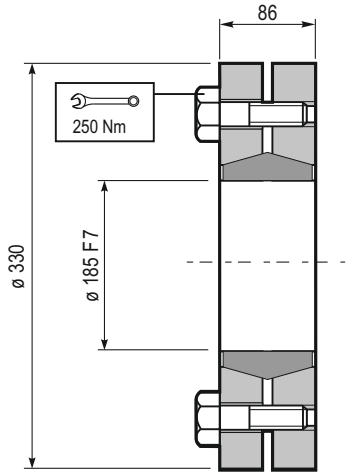
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
8171.104.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

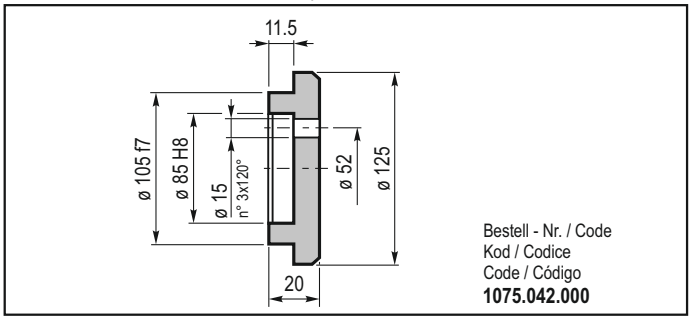


Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
52 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.185.000

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.042.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

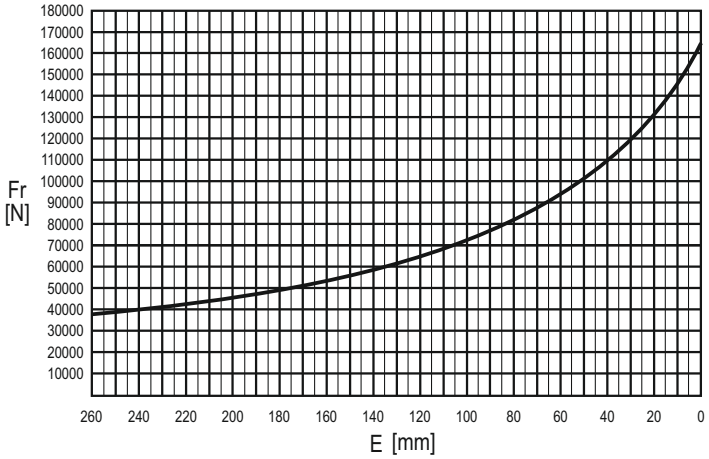
FR CHARGES RADIALES (Fr)

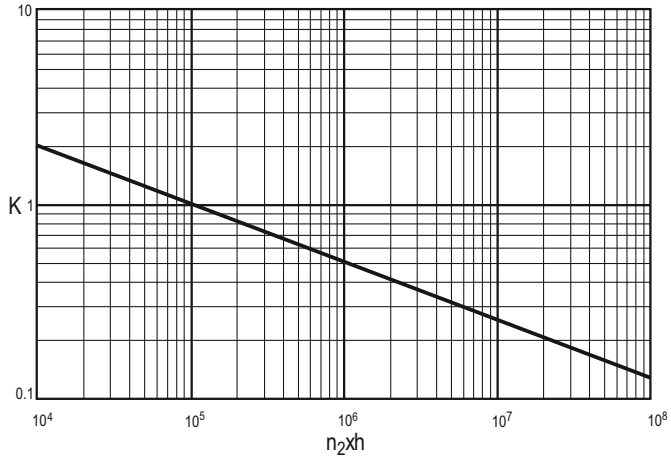
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

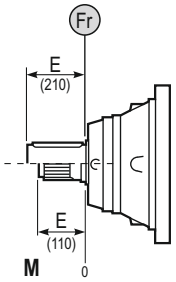
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

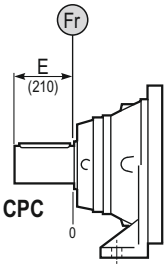
M - CPC* - P





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

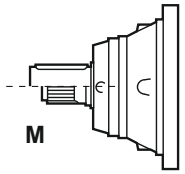
FR CHARGES AXIALES (Fa)

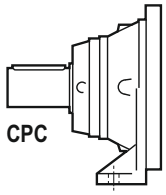
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	75000	75000	←
	95000	95000	→



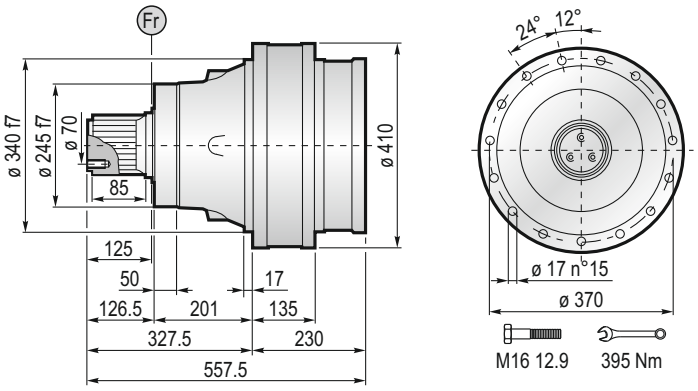


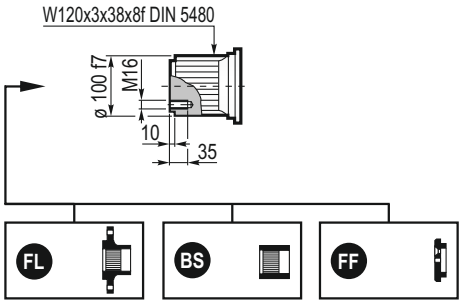
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 35001	54	1500	4.00 4.71	43.22 36.83	38.25 32.60	32.55 27.74	28.82 24.55	195	–	159	167	256
PL 35002	34	2000	14.2 17.1 20.2 22.4 27.0	43.22 43.22 36.83 43.22 36.83	38.25 38.25 32.60 38.25 32.60	32.55 32.55 27.74 32.55 27.74	28.82 28.82 24.55 28.82 24.55	245	–	209	217	308
PL 35003	23	2800	53.7 58.7 64.8 70.7 83.2 88.6 99.6 108.7 121.0 136.2 158.1 164.1 191.1 230.3	43.22 43.22 43.22 43.22 36.83 43.22 36.83 36.83 36.83 36.83 36.83 36.83 36.83 36.83	38.25 38.25 38.25 38.25 32.60 38.25 32.60 32.60 32.60 32.60 32.60 32.60 32.60 32.60	32.55 32.55 32.55 32.55 27.74 32.55 27.74 27.74 27.74 27.74 27.74 27.74 27.74 27.74	28.82 28.82 28.82 28.82 24.55 28.82 24.55 24.55 24.55 24.55 24.55 24.55 24.55 24.55	261	–	225	233	324
PL 35004	17	2800	191.0 208.6 230.3 251.4 277.5 303.1 328.5 362.7 379.6 437.1 496.0 583.5 677.7 703.4 762.5 816.8 987.0 1067.3 1289.7	43.22 43.22 43.22 43.22 43.22 43.22 43.22 43.22 43.22 43.22 43.22 36.83 36.83 36.83 36.83 36.83 36.83 36.83 36.83	38.25 38.25 38.25 38.25 38.25 38.25 38.25 38.25 38.25 38.25 38.25 32.60 32.60 32.60 32.60 32.60 32.60 32.60 32.60	32.55 32.55 32.55 32.55 32.55 32.55 32.55 32.55 32.55 32.55 32.55 27.74 27.74 27.74 27.74 27.74 27.74 27.74 27.74	28.82 28.82 28.82 28.82 28.82 28.82 28.82 28.82 28.82 28.82 28.82 24.55 24.55 24.55 24.55 24.55 24.55 24.55 24.55	269	–	233	241	332

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 35002	34	2000	12.3 14.5 18.7 22.0	43.22 36.83 43.22 36.83	38.25 32.60 38.25 32.60	32.55 27.74 32.55 27.74	28.82 24.55 28.82 24.55	287	–	250	258	350
PLB 35003	23	2800	43.7 52.7 66.4 80.0 94.1 123.0	43.22 43.22 43.22 43.22 36.83 36.83	38.25 38.25 38.25 38.25 32.60 32.60	32.55 32.55 32.55 32.55 27.74 27.74	28.82 28.82 28.82 28.82 24.55 24.55	346	–	309	317	407
PLB 35004	17	2800	185.6 202.7 223.7 244.3 292.5 319.4 352.6 385.0 414.8 452.9 542.0 591.8 658.8 741.3 860.9 1037.7 1253.8	43.22 43.22 43.22 43.22 43.22 43.22 43.22 43.22 36.83 36.83 36.83 36.83 36.83 36.83 36.83 36.83 36.83	38.25 38.25 38.25 38.25 38.25 38.25 38.25 38.25 32.60 32.60 32.60 32.60 32.60 32.60 32.60 32.60 32.60	32.55 32.55 32.55 32.55 32.55 32.55 32.55 32.55 27.74 27.74 27.74 27.74 27.74 27.74 27.74 27.74 27.74	28.82 28.82 28.82 28.82 28.82 28.82 28.82 28.82 24.55 24.55 24.55 24.55 24.55 24.55 24.55 24.55 24.55	301	–	265	273	364

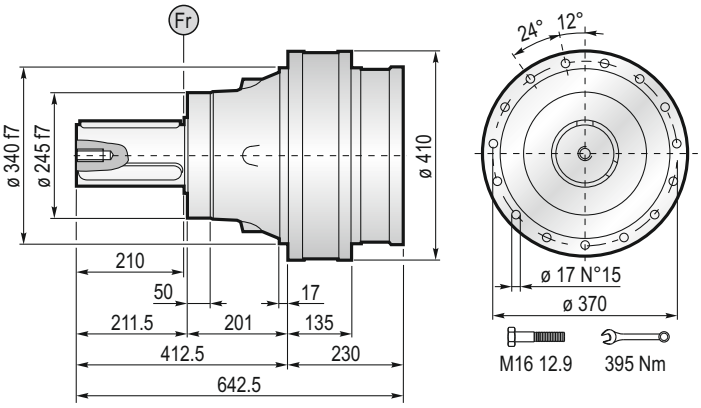
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.65$$

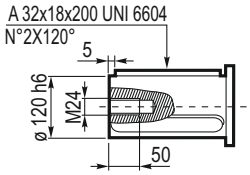
MS...35000



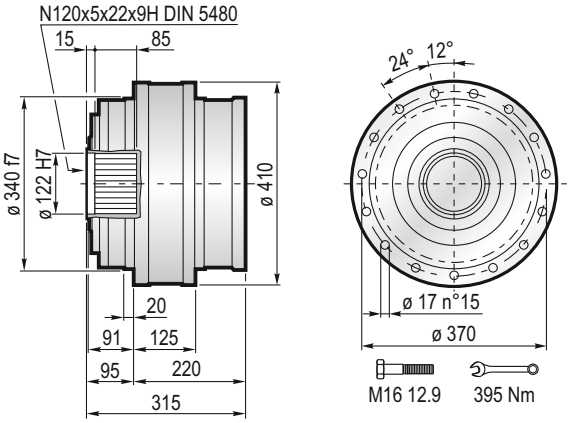


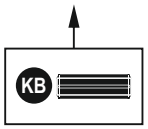
MC...35000



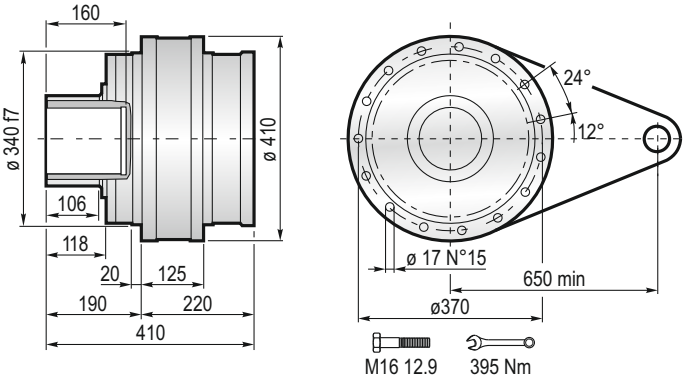


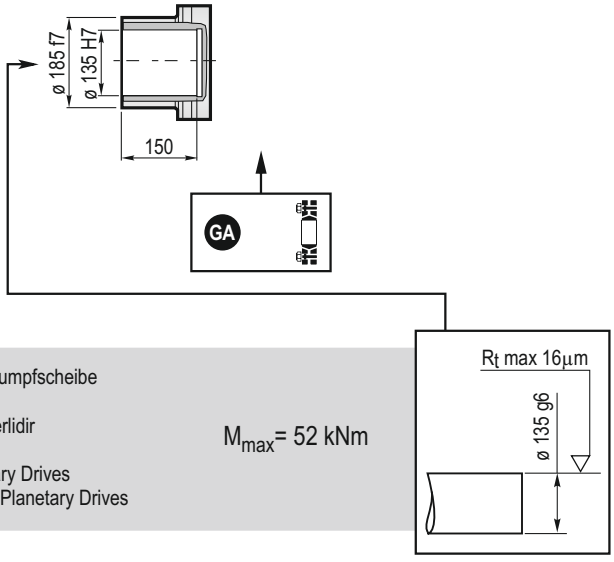
F... 35000





FS... 35000

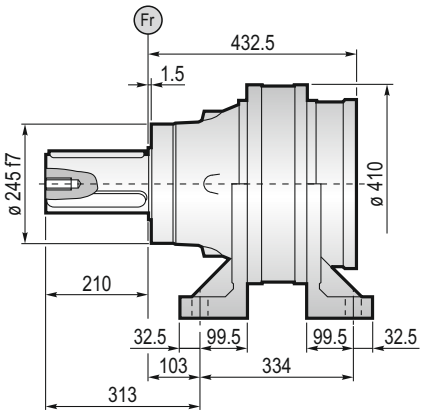


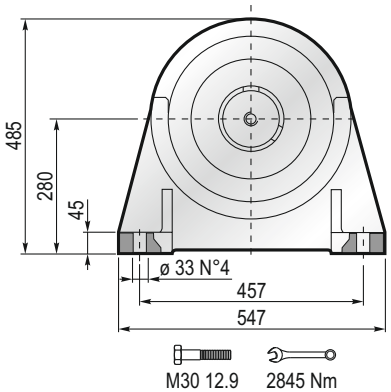


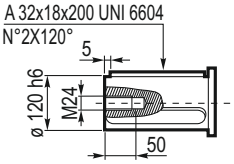
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 52 kNm

CPC... 35000

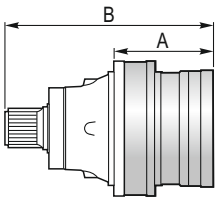




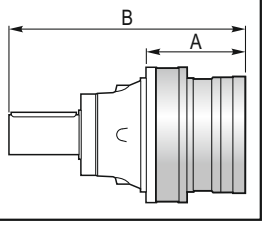


FL BS FF KB GA → 182

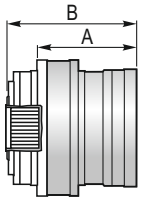
PL ...MS	A	B	RA	RB	EF	EDF
PL 35001	230	557.5				
PL 35002	317	644.5		•		
PL 35003	388.5	716	•	○	•	
PL 35004	449.5	777	•			•



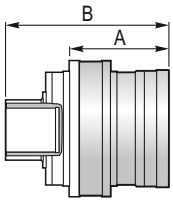
PL ...MC	A	B	RA	RB	EF	EDF
PL 35001	230	642.5				
PL 35002	317	729.5		•		
PL 35003	388.5	801	•	○	•	
PL 35004	449.5	862	•			•



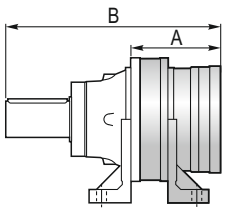
PL ...F	A	B	RA	RB	EF	EDF
PL 35001	220	315				
PL 35002	307	402		•		
PL 35003	378.5	473.5	•	○	•	
PL 35004	439.5	535.5	•			•



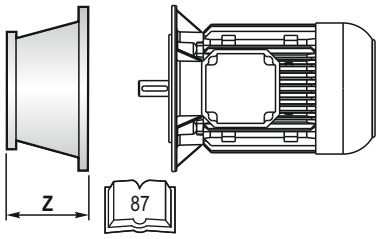
PL ...FS	A	B	RA	RB	EF	EDF
PL 35001	220	410				
PL 35002	307	497		•		
PL 35003	378.5	568.5	•	○	•	
PL 35004	439.5	629.5	•			•

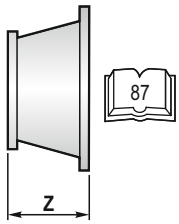


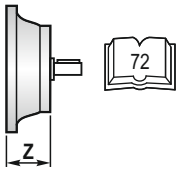
PL ...CPC	A	B	RA	RB	EF	EDF
PL 35001	432.5	642.5				
PL 35002	519.5	729.5		•		
PL 35003	591	801	•	○	•	
PL 35004	652	652	•			•

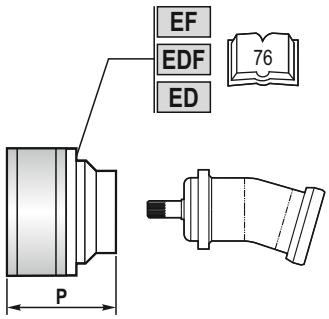


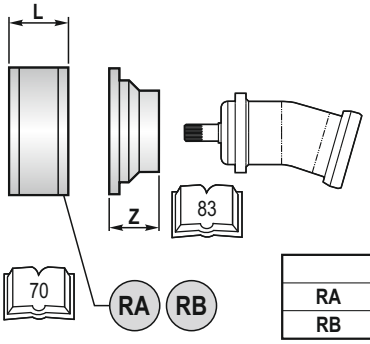
A+13.5	B+13.5	○





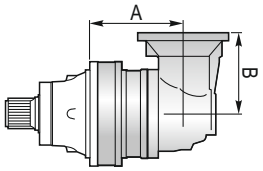




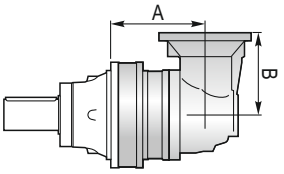


	L
RA	81
RB	125

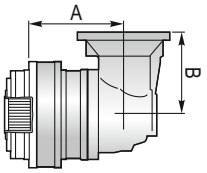
PLB ...MS	A	B	RA	RB	EF
PLB 35002	295	315		•	
PLB 35003	452	240	•	○	•
PLB 35004	490	240	•		•



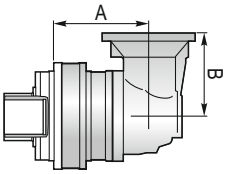
PLB ...MC	A	B	RA	RB	EF
PLB 35002	295	315		•	
PLB 35003	452	240	•	○	•
PLB 35004	490	240	•		•



PLB ...F	A	B	RA	RB	EF
PLB 35002	285	315		•	
PLB 35003	442	240	•	○	•
PLB 35004	480	240	•		•

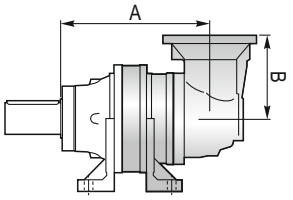


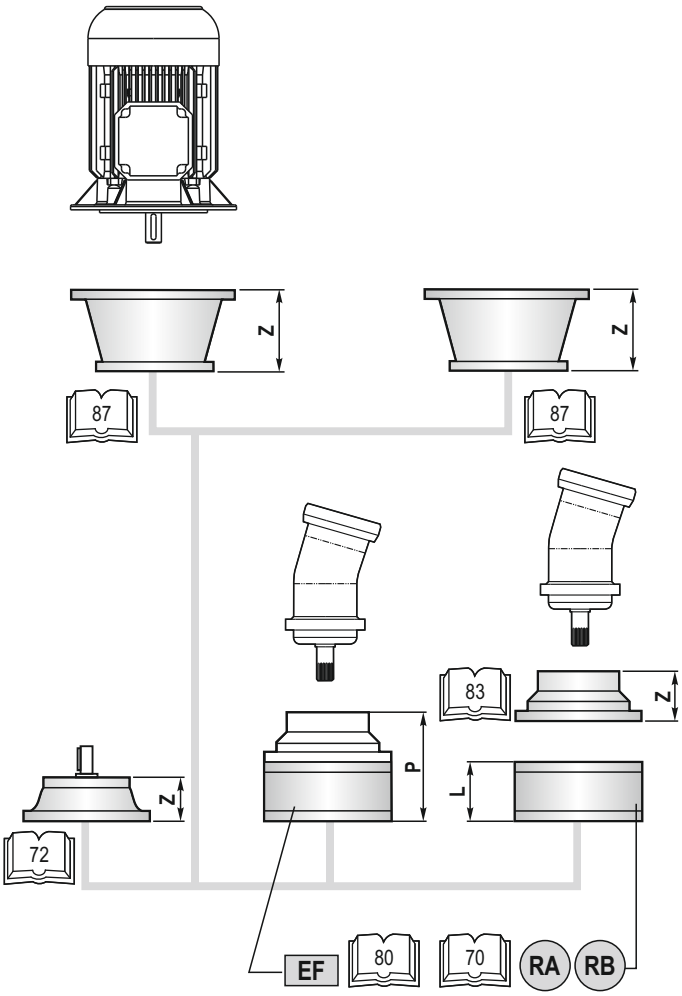
PLB ...FS	A	B	RA	RB	EF
PLB 35002	285	315		•	
PLB 35003	442	240	•	○	•
PLB 35004	480	240	•		•



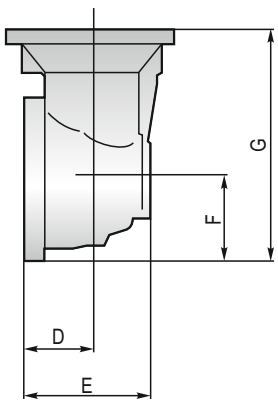
PLB ...CPC	A	B	RA	RB	EF
PLB 35002	497.5	315		•	
PLB 35003	654.5	240	•	○	•
PLB 35004	692.5	240	•		•

A	B+16.5	○





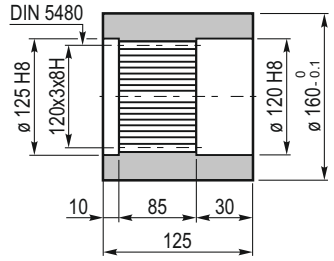
	L
RA	81
RB	125



	D	E	F	G
PLB 35002	88	256	235	550
PLB 35003	88	164	140	380
PLB 35004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



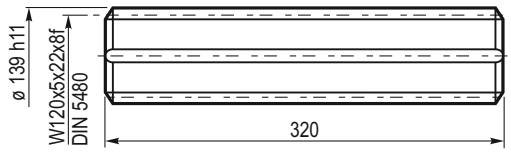
Material / Material
Malzeme / Materiale
Matière / Material

UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
9171.104.076

KB

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



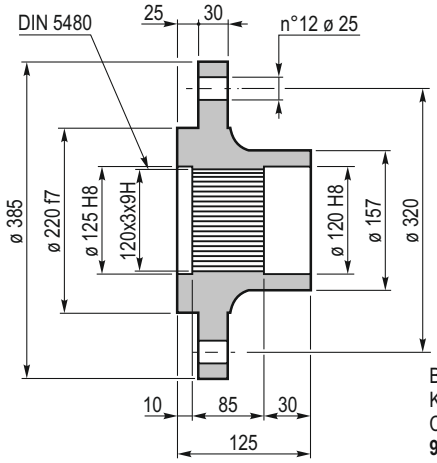
Material / Material
Malzeme / Materiale
Matière / Material

UNI 16CrNi4
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.588.042

FL

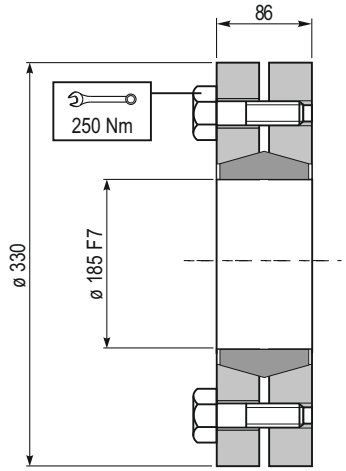
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
9171.103.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

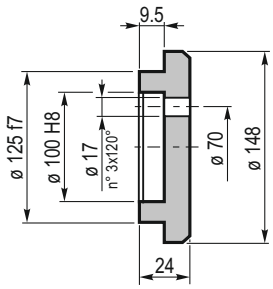


Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
92,5 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.185.000

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.005.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

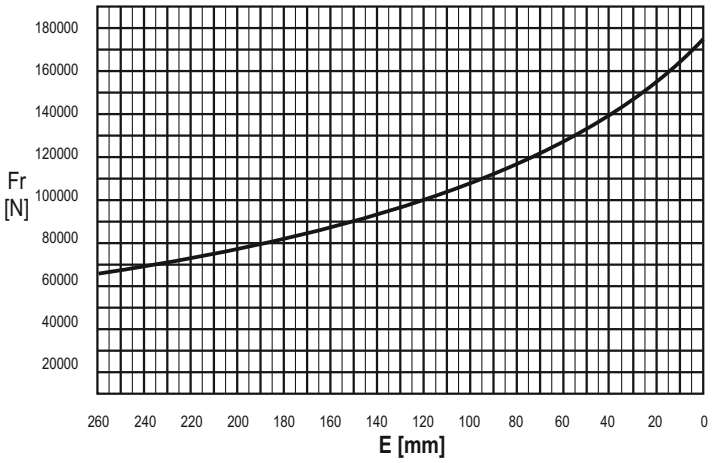
FR CHARGES RADIALES (Fr)

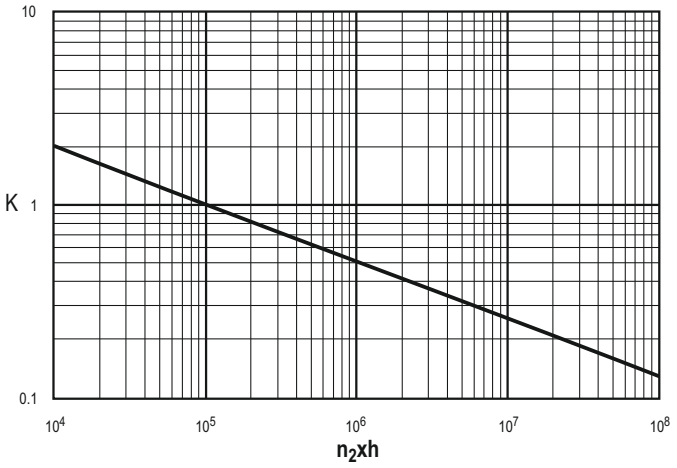
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

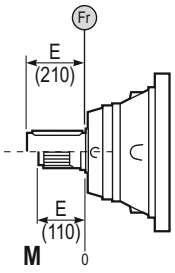
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

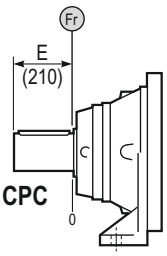
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

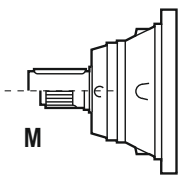
FR CHARGES AXIALES (Fa)

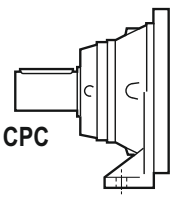
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	80000	80000	←
	100000	100000	→



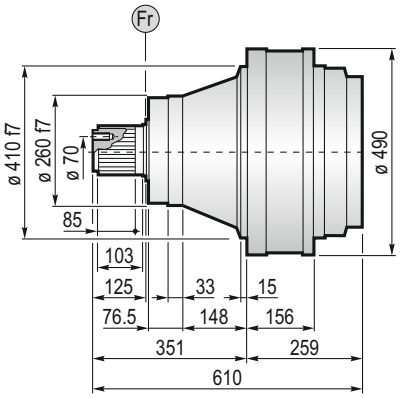


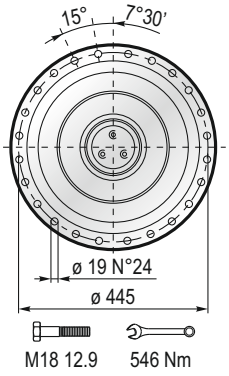
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 50001	60	1200	3.95 5.06 6.00	70.06 51.29 40.91	62.02 45.39 36.21	52.77 38.63 30.81	46.72 34.19 27.27	318	–	258	271	422
PL 50002	38	2000	14.1 16.9 21.7 26.7 28.4 33.6 40.5	70.06 70.06 51.29 70.06 51.29 40.91 40.91	62.02 62.02 45.39 62.02 45.39 36.21 36.21	52.77 52.77 38.63 52.77 38.63 30.81 30.81	46.72 46.72 34.19 46.72 34.19 27.27 27.27	377	–	319	332	481
PL 50003	25	2800	53.1 64.0 74.2 84.4 93.0 108.0 116.9 130.2 138.6 157.3 170.1 205.5 247.7 293.6	70.06 70.06 51.29 70.06 51.29 51.29 51.29 51.29 40.91 51.29 51.29 51.29 51.29 40.91	62.02 62.02 45.39 62.02 45.39 45.39 45.39 45.39 36.21 45.39 45.39 45.39 45.39 36.21	52.77 52.77 38.63 52.77 38.63 38.63 38.63 38.63 30.81 38.63 38.63 38.63 38.63 30.81	46.72 46.72 34.19 46.72 34.19 34.19 34.19 34.19 27.27 34.19 34.19 34.19 34.19 27.27	393	–	335	348	497
PL 50004	20	2800	324.8 358.5 391.5 432.2 471.9 511.6 564.7 591.0 616.6 686.4 789.4 878.7 952.6 1061.8 1151.0 1258.4 1387.4 1672.3 1982.0	70.06 70.06 70.06 70.06 70.06 70.06 70.06 70.06 70.06 70.06 51.29 51.29 51.29 51.29 51.29 40.91 51.29 51.29 40.91	62.02 62.02 62.02 62.02 62.02 62.02 62.02 62.02 62.02 62.02 45.39 45.39 45.39 45.39 45.39 36.21 45.39 45.39 36.21	52.77 52.77 52.77 52.77 52.77 52.77 52.77 52.77 52.77 52.77 38.63 38.63 38.63 38.63 38.63 30.81 38.63 38.63 30.81	46.72 46.72 46.72 46.72 46.72 46.72 46.72 46.72 46.72 46.72 34.19 34.19 34.19 34.19 34.19 27.27 34.19 34.19 27.27	401	–	343	356	509

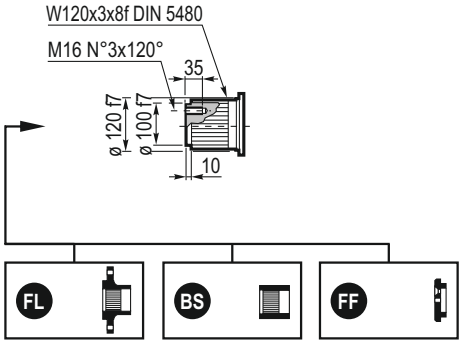
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 50002	38	2000	12.1 15.5 18.4 23.6 28.0	70.06 51.29 40.91 51.29 40.91	62.02 45.39 36.21 45.39 36.21	52.77 38.63 30.81 38.63 30.81	46.72 34.19 27.27 34.19 27.27	368	–	310	323	472
PLB 50003	25	2800	58.5 76.5 97.9 118.1 139.9 154.3 220.5	70.06 70.06 51.29 51.29 40.91 51.29 40.91	62.02 62.02 45.39 45.39 36.21 45.39 36.21	52.77 52.77 38.63 38.63 30.81 38.63 30.81	46.72 46.72 34.19 34.19 27.27 34.19 27.27	414	–	295	310	522
PLB 50004	20	2800	241.5 289.0 315.8 351.3 395.2 455.5 506.3 543.4 587.6 669.0 708.7 797.5 856.4 926.1 961.2 1119.0 1348.8 1598.6	70.06 70.06 70.06 70.06 70.06 70.06 51.29 51.29 51.29 51.29 51.29 51.29 51.29 51.29 51.29 51.29 51.29 40.91	62.02 62.02 62.02 62.02 62.02 62.02 45.39 45.39 45.39 45.39 45.39 45.39 45.39 45.39 45.39 45.39 45.39 36.21	52.77 52.77 52.77 52.77 52.77 52.77 38.63 38.63 38.63 38.63 38.63 38.63 38.63 38.63 38.63 38.63 38.63 30.81	46.72 46.72 46.72 46.72 46.72 46.72 34.19 34.19 34.19 34.19 34.19 34.19 34.19 34.19 34.19 34.19 34.19 27.27	433	–	375	388	541

$$M_{max} = M_C \text{ x } 2 \quad (n_2 \text{ x } h = 20.000)$$

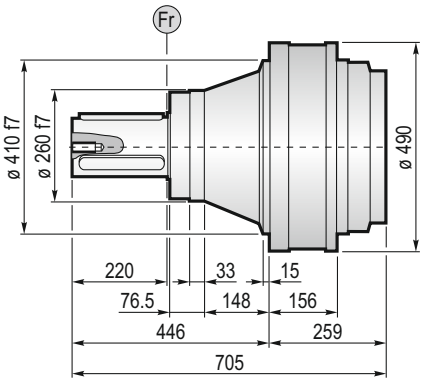
MS...50000

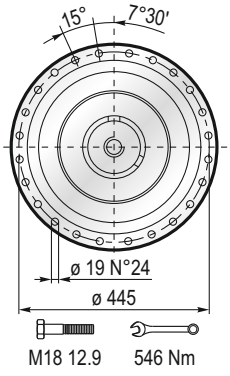


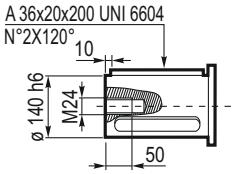




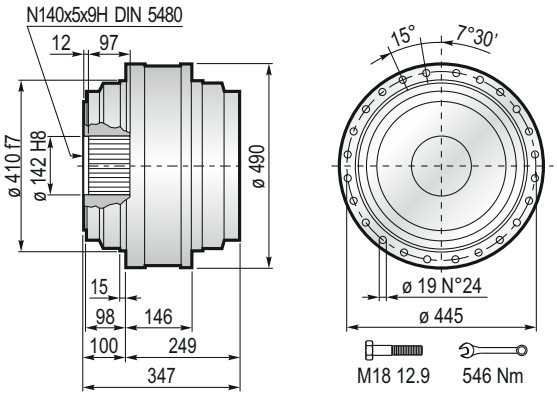
MC...50000

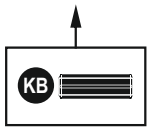




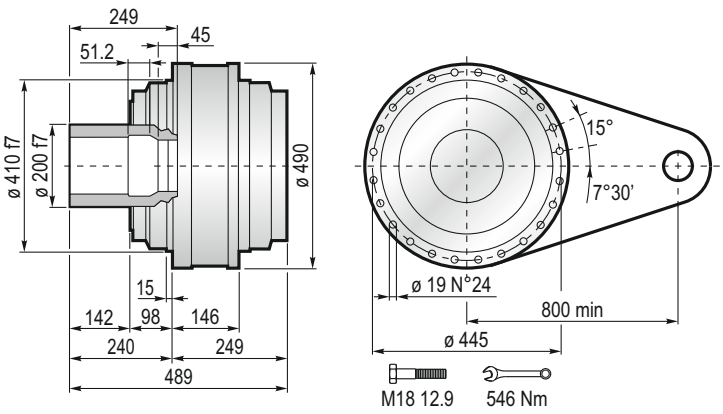


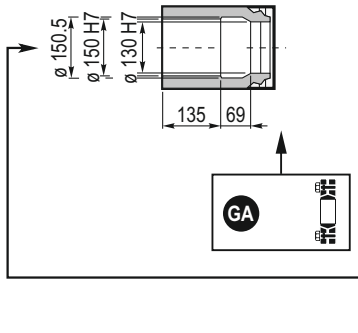
F... 50000





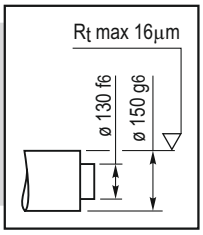
FS... 50000



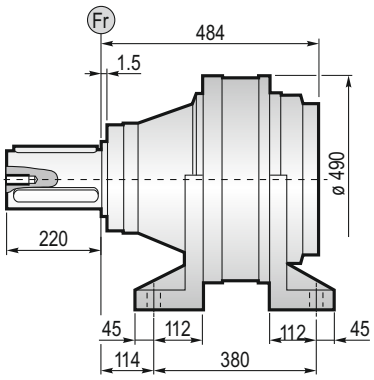


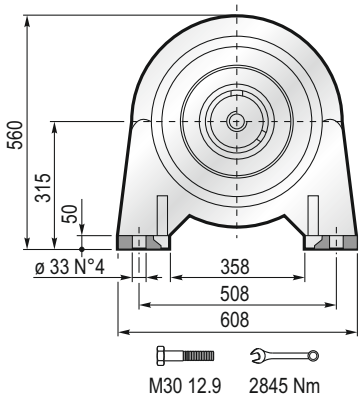
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

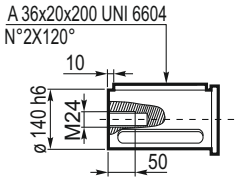
M_{max}= 92.5 kNm



CPC... 50000

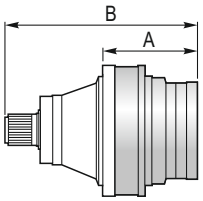




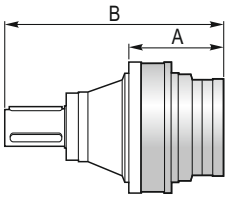


FL BS FF KB GA → 190

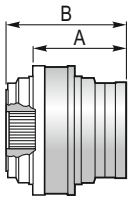
PL ...MS	A	B	RA	RB	EF	EDF
PL 50001	259	610				
PL 50002	366	717		•		
PL 50003	437.5	788.5	•	○	•	
PL 50004	498.5	849.5	•			•



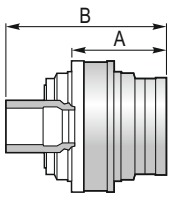
PL ...MC	A	B	RA	RB	EF	EDF
PL 50001	259	705				
PL 50002	366	812		•		
PL 50003	437.5	883.5	•	○	•	
PL 50004	498.5	944.5	•			•



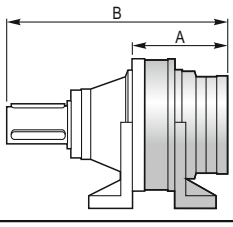
PL ...F	A	B	RA	RB	EF	EDF
PL 50001	249	349				
PL 50002	356	456		•		
PL 50003	427.5	527.5	•	○	•	
PL 50004	488.5	588.5	•			•



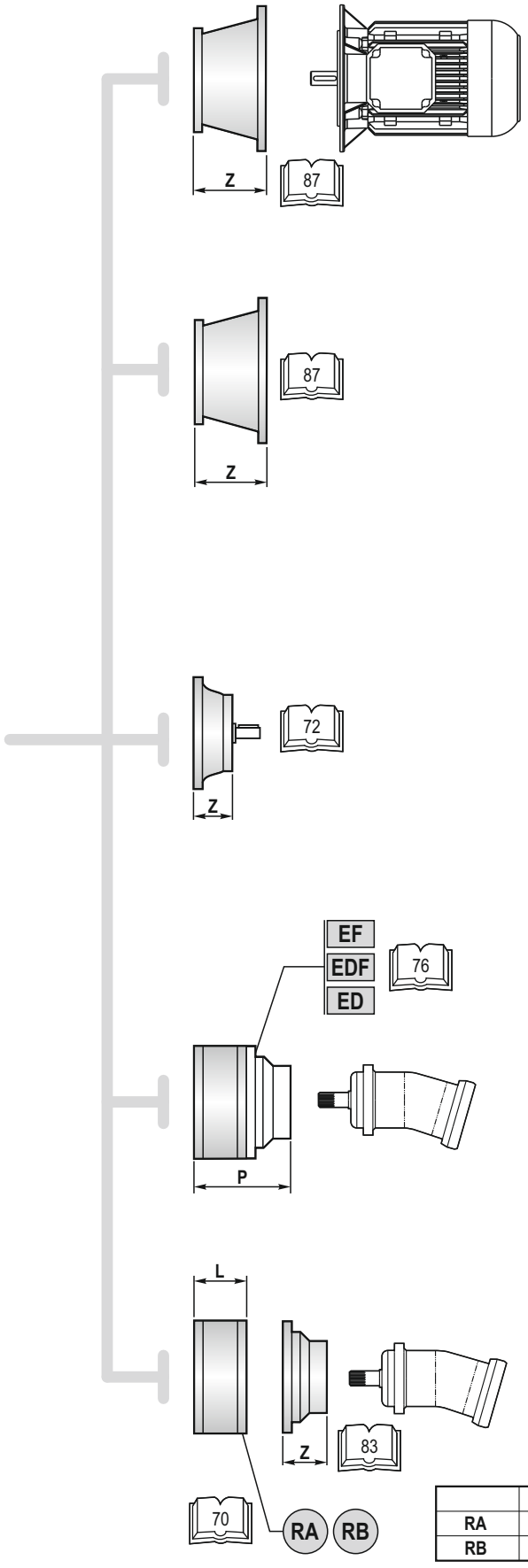
PL ...FS	A	B	RA	RB	EF	EDF
PL 50001	249	489				
PL 50002	356	596		•		
PL 50003	427.5	667.5	•	○	•	
PL 50004	488.5	728.5	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 50001	485	705				
PL 50002	592	812		•		
PL 50003	663.5	882.5	•	○	•	
PL 50004	723.5	944.5	•			•

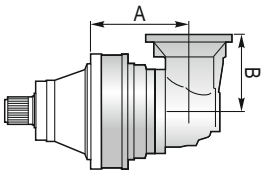


A+13.5	B+13.5	○

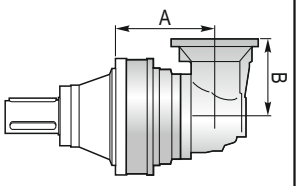


	L
RA	81
RB	125

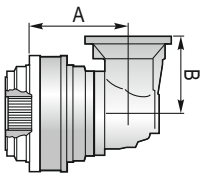
PLB ...MS	A	B	RA	RB	EF
PLB 50002	440	315		•	
PLB 50003	454	240	•	○	•
PLB 50004	539	240	•		•



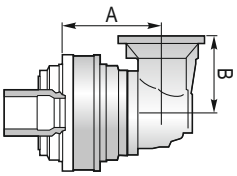
PLB ...MC	A	B	RA	RB	EF
PLB 50002	440	315		•	
PLB 50003	454	240	•	○	•
PLB 50004	539	240	•		•



PLB ...F	A	B	RA	RB	EF
PLB 50002	430	315		•	
PLB 50003	444	240	•	○	•
PLB 50004	529	240	•		•

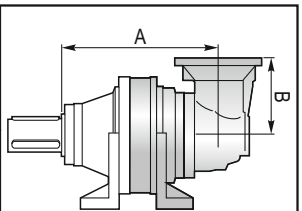


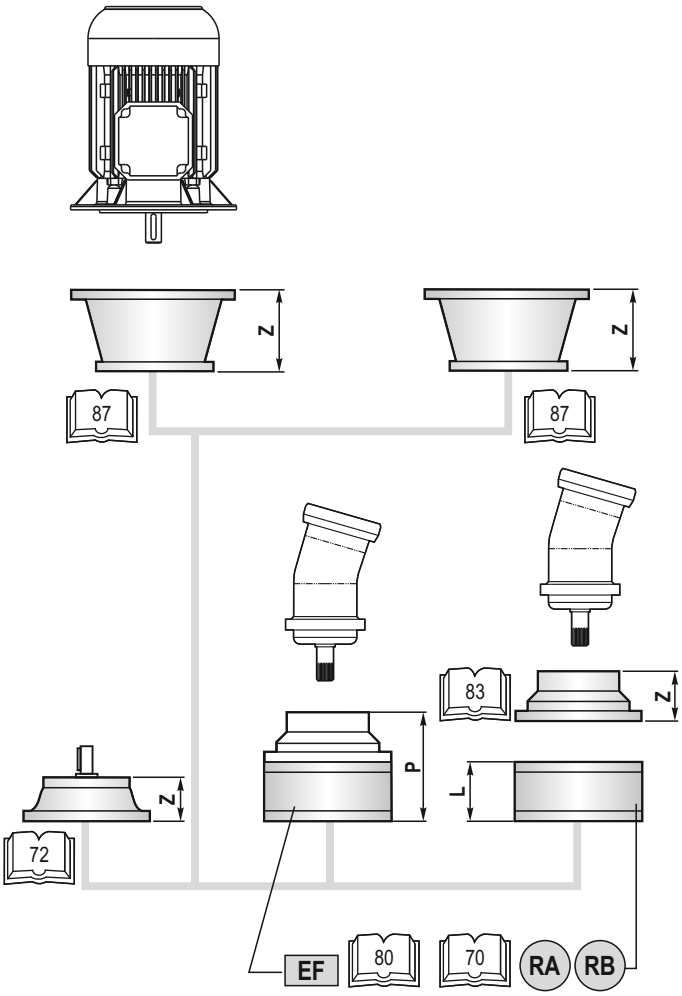
PLB ...FS	A	B	RA	RB	EF
PLB 50002	430	315		•	
PLB 50003	444	240	•	○	•
PLB 50004	529	240	•		•



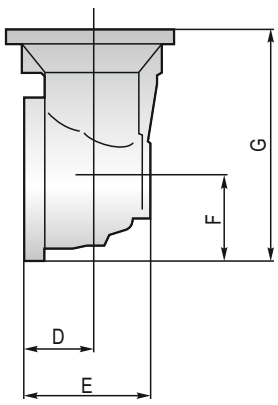
PLB ...CPC	A	B	RA	RB	EF
PLB 50002	668	315		•	
PLB 50003	682	240	•	○	•
PLB 50004	767	240	•		•

A	B+16.5	○





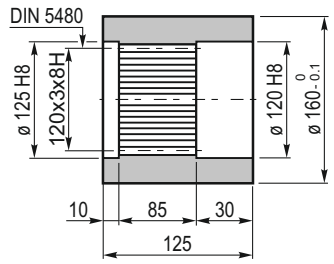
	L
RA	81
RB	125



	D	E	F	G
PLB 50002	88	256	235	550
PLB 50003	88	164	140	380
PLB 50004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

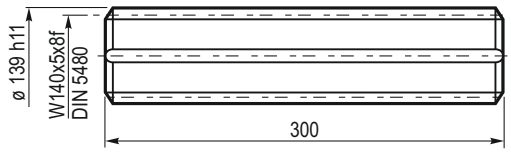


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
9171.104.076

KB

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención

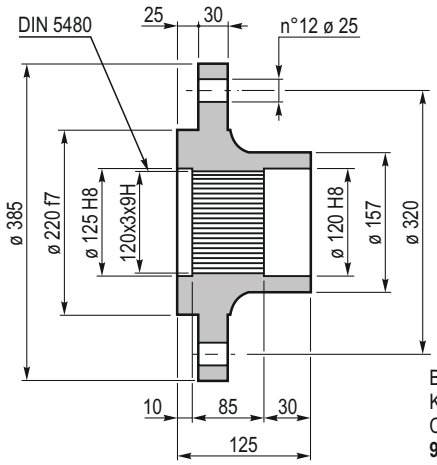


Material / Material
Malzeme / Materiale
Matière / Material
UNI 16CrNi4
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.564.042

FL

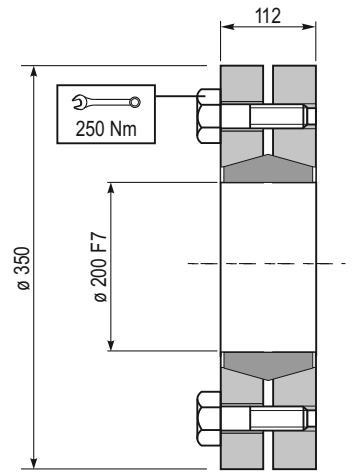
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
9171.103.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

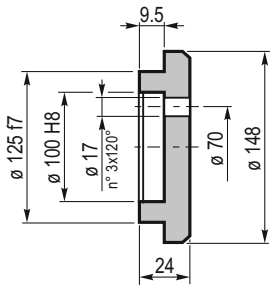


Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
92,5 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.200.000

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.005.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

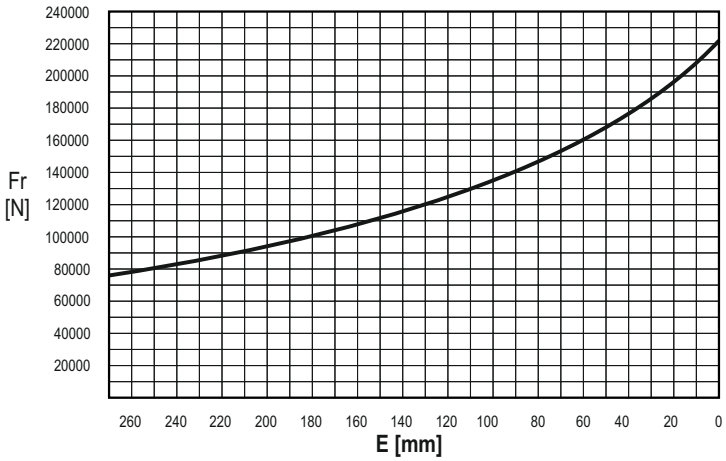
FR CHARGES RADIALES (Fr)

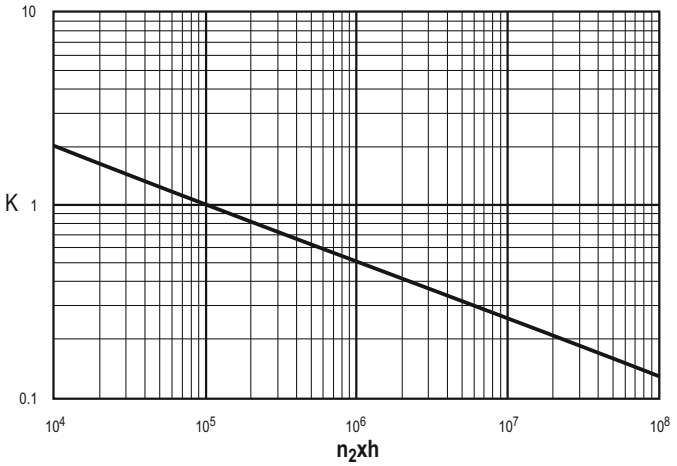
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

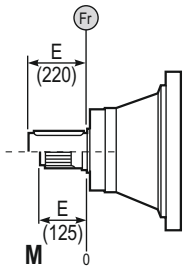
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

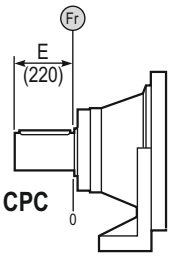
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

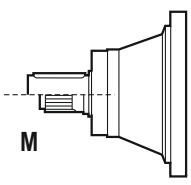
FR CHARGES AXIALES (Fa)

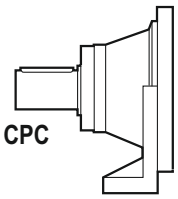
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	80000	80000	←
	120000	120000	→





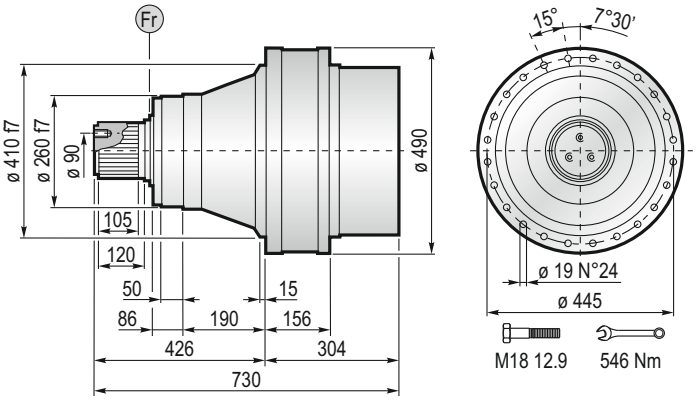
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 65001	60	1000	3.84	79.88	70.70	60.16	53.25	338	–	278	292	442
PL 65002	50	1500	15.3 19.9 24.0	79.88 79.88 79.88	70.70 70.70 70.70	60.16 60.16 60.16	53.25 53.25 53.25	454	–	396	410	562
PL 65003	35	2500	56.3 68.0 73.1 88.3 99.7 115.7 139.1 167.8	79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88	70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70	60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16	53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25	481	–	423	437	589
PL 65004	25	2800	212.5 256.7 280.3 301.7 333.7 364.4 407.7 456.4 515.3 556.2 640.4 694.2 838.8 1008.1	79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88	70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70	60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16	53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25	493	–	435	449	601

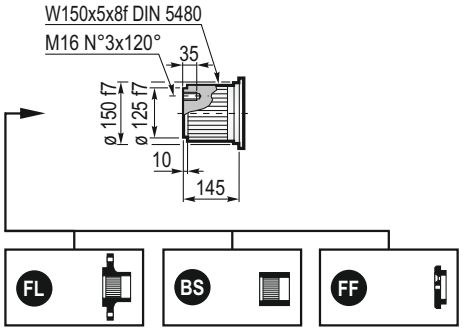
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 65003	35	2500	47.1 61.3 71.6 93.1 111.9	79.88 79.88 79.88 79.88 79.88	70.70 70.70 70.70 70.70 70.70	60.16 60.16 60.16 60.16 60.16	53.25 53.25 53.25 53.25 53.25	547	–	485	499	651
PLB 65004	25	2800	194.4 234.7 252.7 265.0 305.2 344.5 399.7 417.7 484.5 578.0 629.9 757.1 913.7	79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88 79.88	70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70 70.70	60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16 60.16	53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25 53.25	522	–	460	474	626

⚠

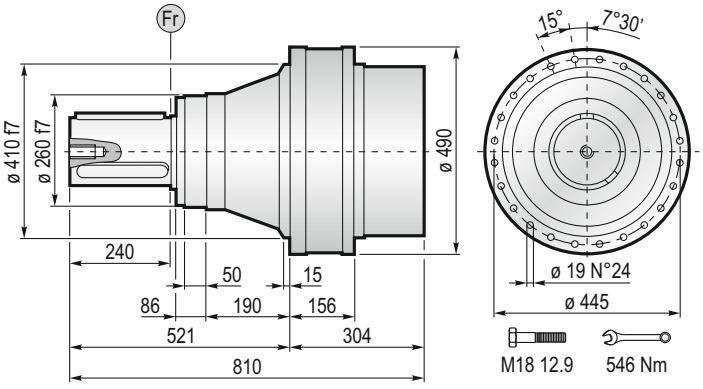
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 2$$

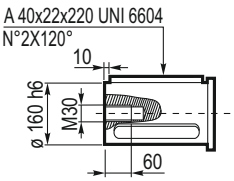
MS...65000



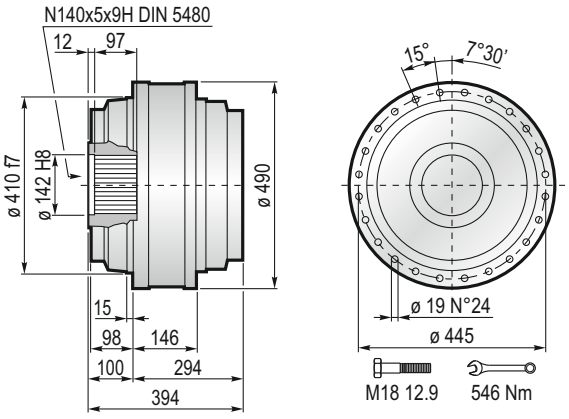


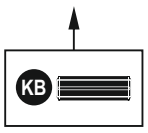
MC...65000



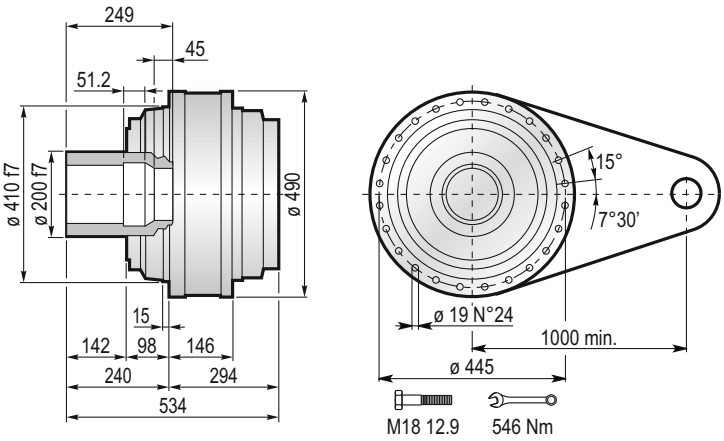


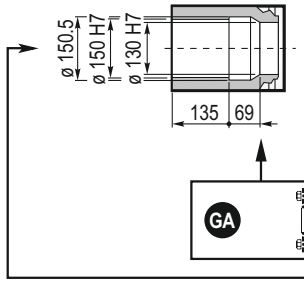
F... 65000





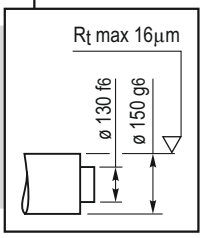
FS... 65000



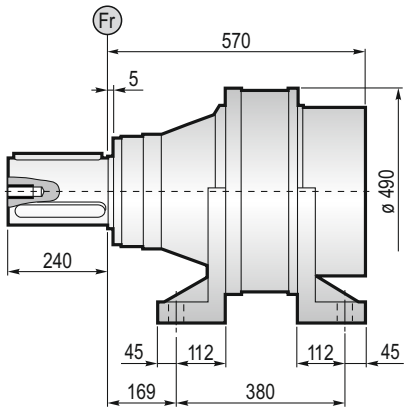


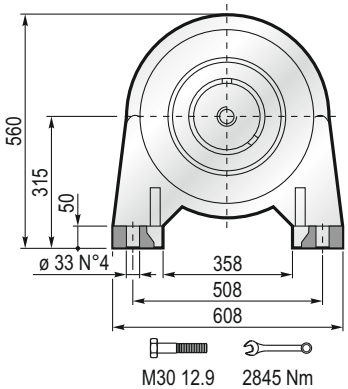
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

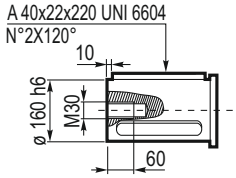
M_{max}= 92,5 kNm



CPC... 65000

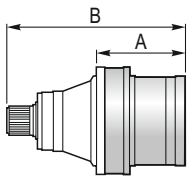




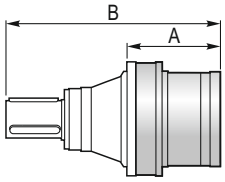


FL BS FF KB GA → 198

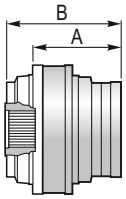
PL ...MS	A	B	RA	RB	EF	EDF
PL 65001	304	730				
PL 65002	501	927				
PL 65003	580	1006		•		
PL 65004	639.5	1065.5	•	○	•	



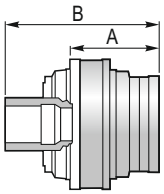
PL ...MC	A	B	RA	RB	EF	EDF
PL 65001	304	810				
PL 65002	501	1022				
PL 65003	580	1086		•		
PL 65004	639.5	1145.5	•	○	•	



PL ...F	A	B	RA	RB	EF	EDF
PL 65001	294	394				
PL 65002	491	591				
PL 65003	570	670		•		
PL 65004	629.5	629.5	•	○	•	

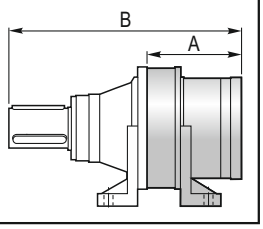


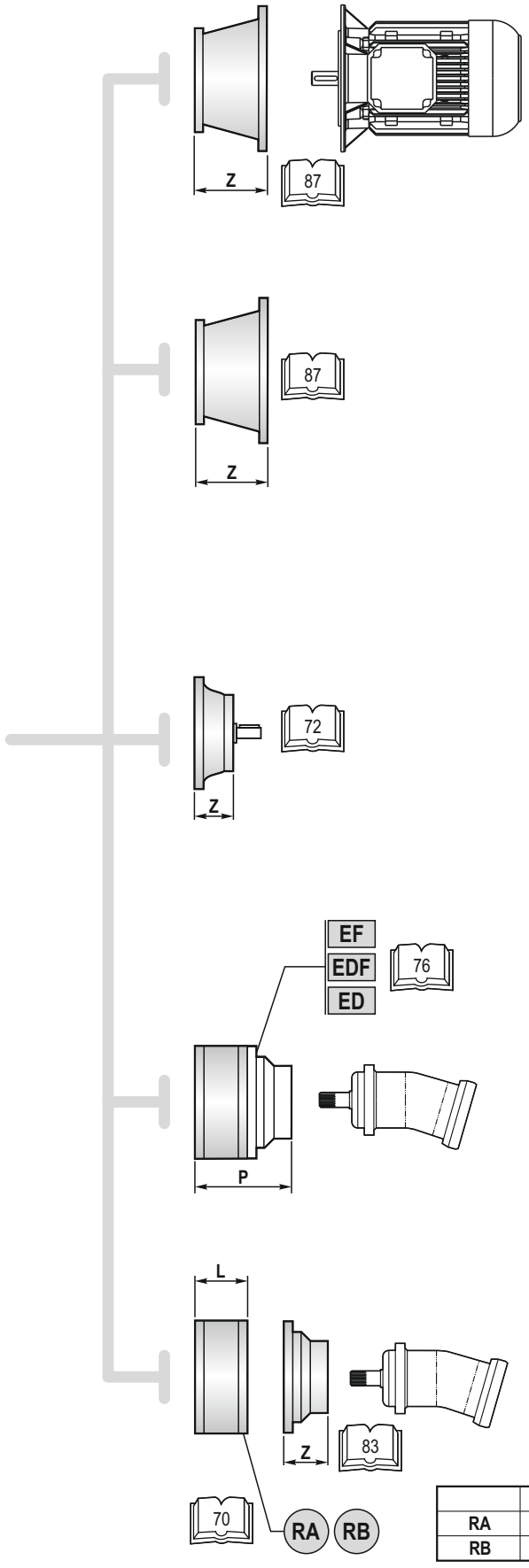
PL ...FS	A	B	RA	RB	EF	EDF
PL 65001	294	534				
PL 65002	491	731				
PL 65003	570	810		•		
PL 65004	629.5	869.5	•	○	•	



PL ...CPC	A	B	RA	RB	EF	EDF
PL 65001	570	810				
PL 65002	782	1022				
PL 65003	861	1101		•		
PL 65004	920.5	1160.5	•	○	•	

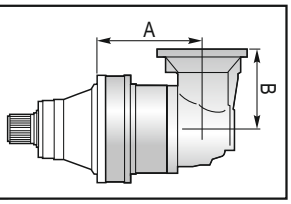
A+13.5	B+13.5	○



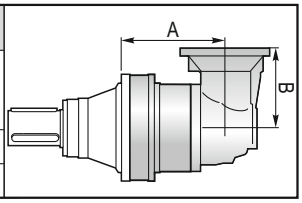


	L
RA	81
RB	125

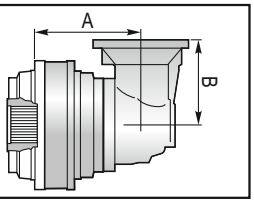
PLB ...MS	A	B	RA	RB	EF
PLB 65003	566	315		•	
PLB 65004	668	240	•	○	•



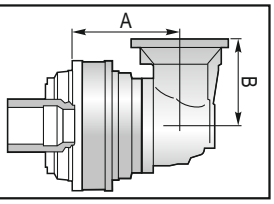
PLB ...MC	A	B	RA	RB	EF
PLB 65003	566	315		•	
PLB 65004	668	240	•	○	•



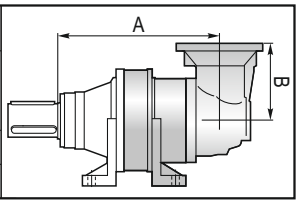
PLB ...F	A	B	RA	RB	EF
PLB 65003	556	315		•	
PLB 65004	658	240	•	○	•



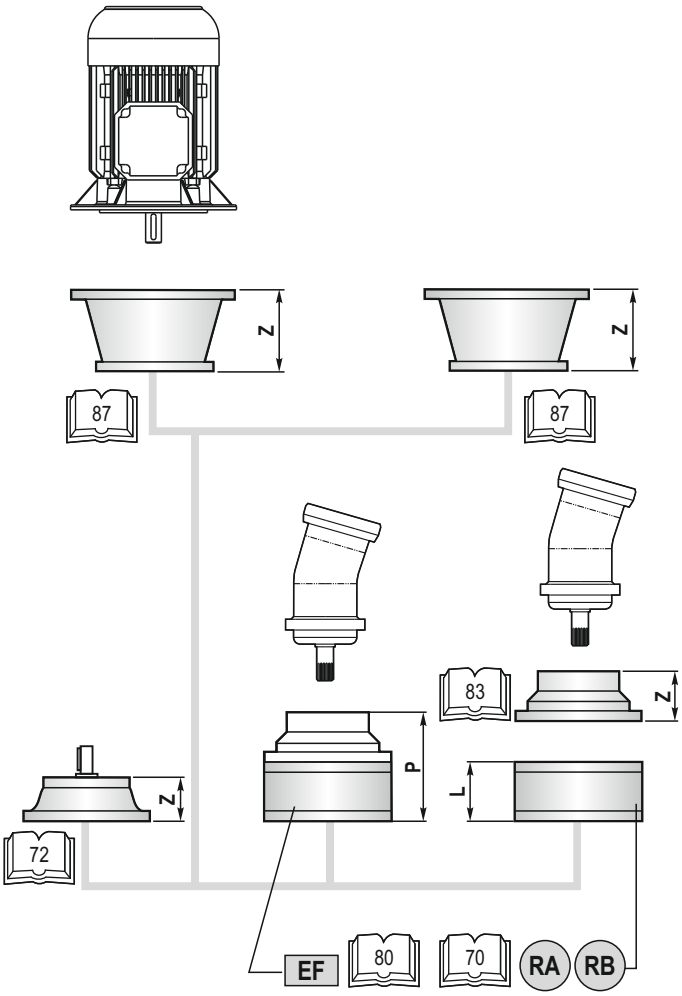
PLB ...FS	A	B	RA	RB	EF
PLB 65003	556	315		•	
PLB 65004	658	240	•	○	•



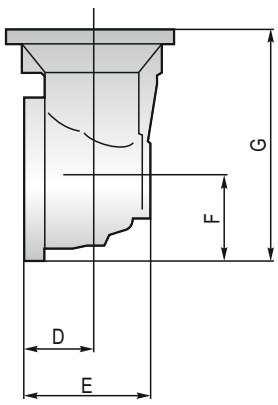
PLB ...CPC	A	B	RA	RB	EF
PLB 65003	847	315		•	
PLB 65004	949	240	•	○	•



A	B+16.5	○



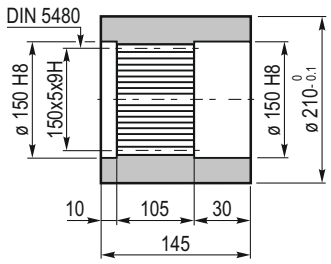
	L
RA	81
RB	125



	D	E	F	G
PLB 65003	88	256	235	550
PLB 65004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

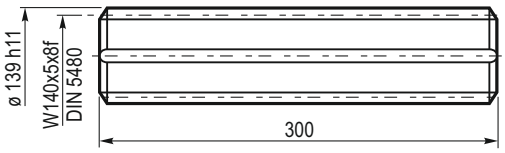


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
0271.102.076

KB

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



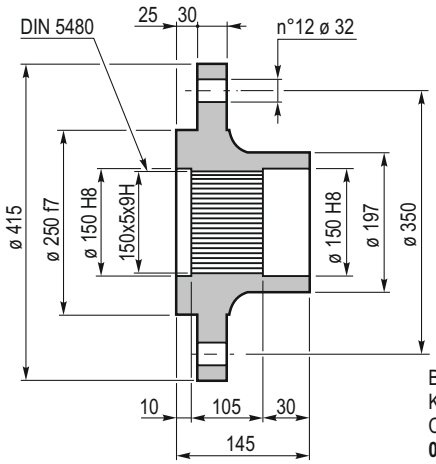
Material / Material
Malzeme / Materiale
Matière / Material

UNI 16CrNi4
Vergütet / Hardened and tempered
Sertleşmiş ve tavlanmış / Bonifié
Bonificado / Endurecido e temperado

Bestell - Nr. / Code
Kod / Codice
Code / Código
3071.564.042

FL

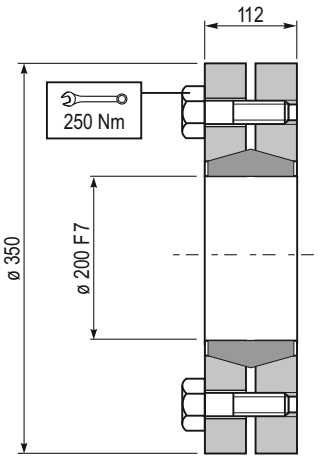
Flansch / Flange
Flanş / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
0271.106.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

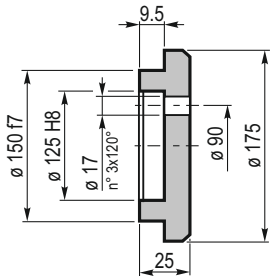


Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
92,5 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.200.000

FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.043.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

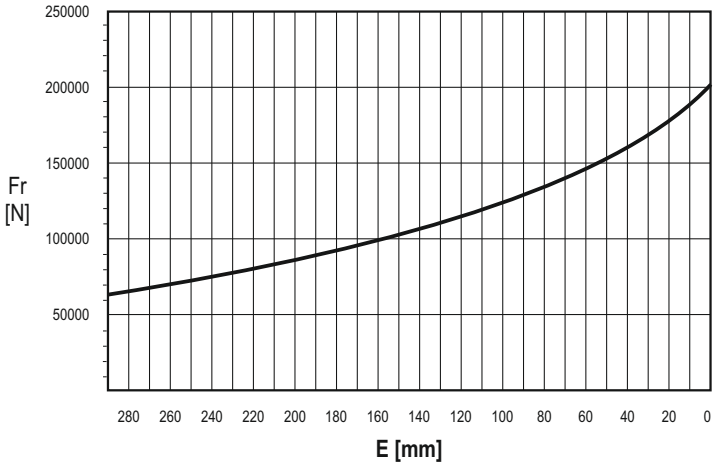
FR CHARGES RADIALES (Fr)

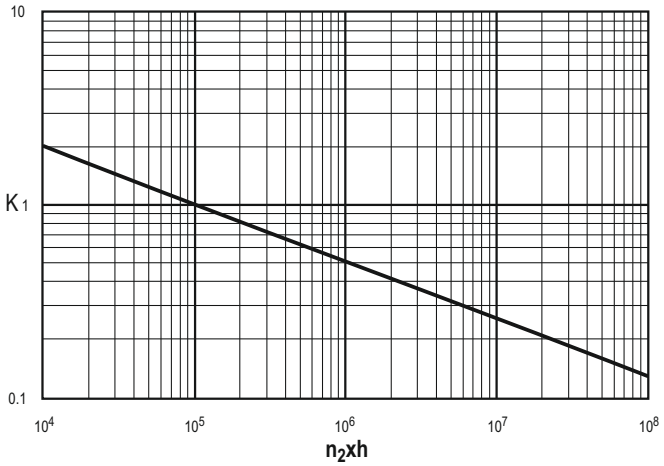
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

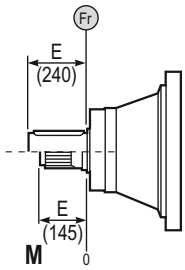
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

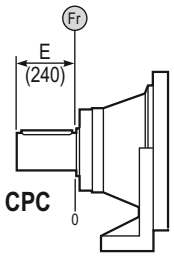
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

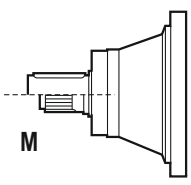
FR CHARGES AXIALES (Fa)

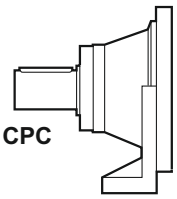
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	50000	50000	←
	100000	100000	→



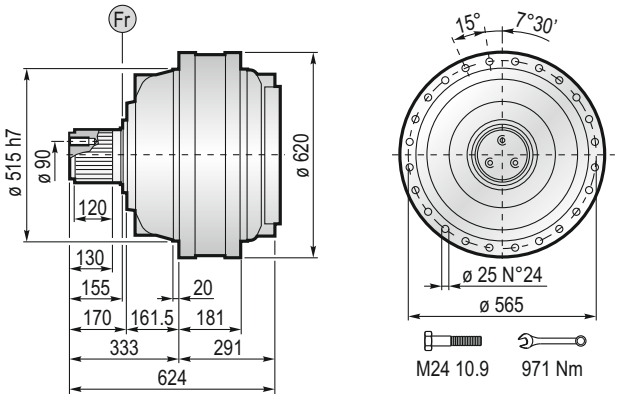


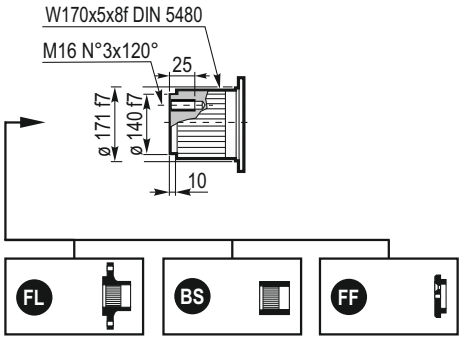
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 90001	80	750	4.04 5.12	114.09 91.05	100.98 80.58	85.94 68.57	76.06 60.69	527	–	427	449	699
PL 90002	65	1500	16.2 20.5 21.0 26.6 32.0	114.09 91.05 114.09 91.05 91.05	100.98 80.58 100.98 80.58 80.58	85.94 68.57 85.94 68.57 68.57	76.06 60.69 76.06 60.69 60.69	643	–	547	569	817
PL 90003	45	2500	59.3 71.6 80.9 93.1 105.1 117.8 121.9 133.1 154.3 185.5	114.09 114.09 114.09 114.09 114.09 91.05 114.09 91.05 91.05 91.05	100.98 100.98 100.98 100.98 100.98 80.58 100.98 80.58 80.58 80.58	85.94 85.94 85.94 85.94 85.94 68.57 85.94 68.57 68.57 68.57	76.06 76.06 76.06 76.06 76.06 60.69 76.06 60.69 60.69 60.69	670	–	574	596	844
PL 90004	30	2800	224.0 244.6 270.6 306.4 355.8 398.3 429.7 462.6 504.1 543.9 585.4 630.8 687.5 742.1 798.3 854.4 926.1 1119.0 1345.0 1623.2	114.09 114.09 114.09 114.09 114.09 114.09 114.09 114.09 91.05 91.05 91.05 114.09 91.05 91.05 91.05 91.05 91.05 91.05 91.05 91.05	100.98 100.98 100.98 100.98 100.98 100.98 100.98 100.98 80.58 80.58 80.58 100.98 80.58 80.58 80.58 80.58 80.58 80.58 80.58 80.58	85.94 85.94 85.94 85.94 85.94 85.94 85.94 85.94 68.57 68.57 68.57 85.94 68.57 68.57 68.57 68.57 68.57 68.57 68.57 68.57	76.06 76.06 76.06 76.06 76.06 76.06 76.06 76.06 60.69 60.69 60.69 76.06 60.69 60.69 60.69 60.69 60.69 60.69 60.69 60.69	681	–	585	607	855

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		**10.000**	**20.000**	**50.000**	**100.000**	**M**	**P**	**F**	**FS**	**CPC**
PLB 90003	45	2500	49.7	114.09	100.98	85.94	76.06	707	–	611	633	881
			64.6	114.09	100.98	85.94	76.06					
			81.7	91.05	80.58	68.57	60.69					
			95.5	91.05	80.58	68.57	60.69					
			124.2	91.05	80.58	68.57	60.69					
			149.3	91.05	80.58	68.57	60.69					
PLB 90004	30	2800	247.4	114.09	100.98	85.94	76.06	728	–	632	654	902
			266.3	114.09	100.98	85.94	76.06					
			322.9	114.09	100.98	85.94	76.06					
			390.0	114.09	100.98	85.94	76.06					
			419.7	114.09	100.98	85.94	76.06					
			459.6	91.05	80.58	68.57	60.69					
			506.9	114.09	100.98	85.94	76.06					
			572.4	114.09	100.98	85.94	76.06					
			638.5	91.05	80.58	68.57	60.69					
			663.9	114.09	100.98	85.94	76.06					
			724.4	91.05	80.58	68.57	60.69					
			771.2	91.05	80.58	68.57	60.69					
			840.3	91.05	80.58	68.57	60.69					
			1010.0	91.05	80.58	68.57	60.69					

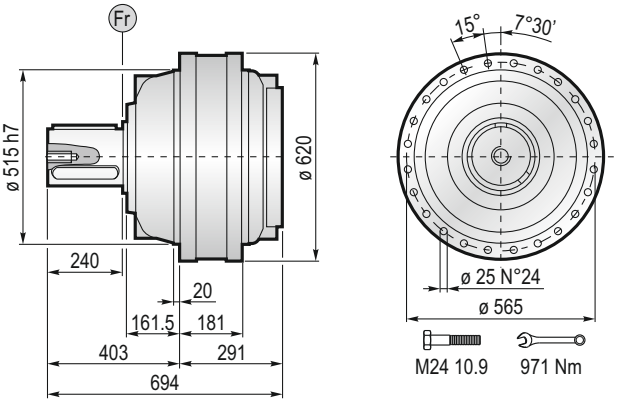
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 2$$

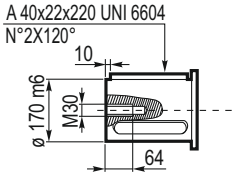
MS...90000



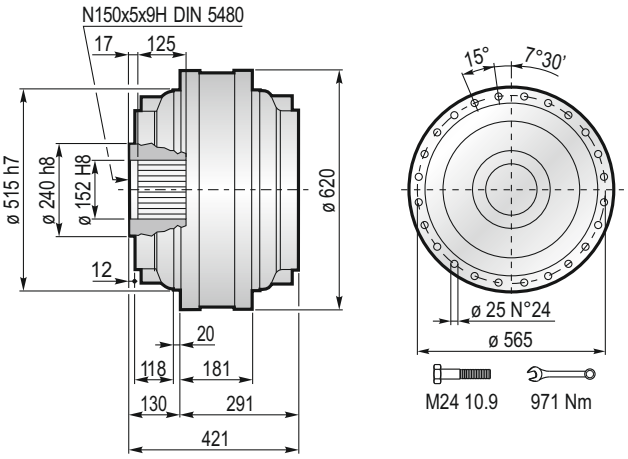


MC...90000

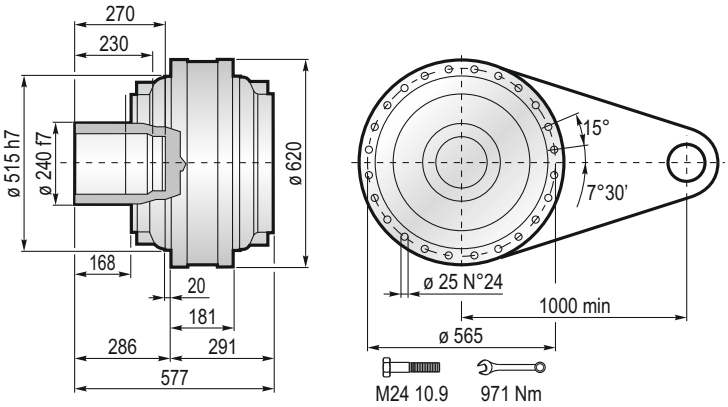


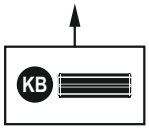


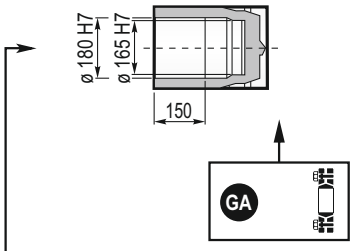
F... 90000



FS... 90000

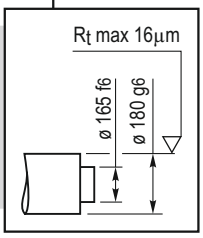




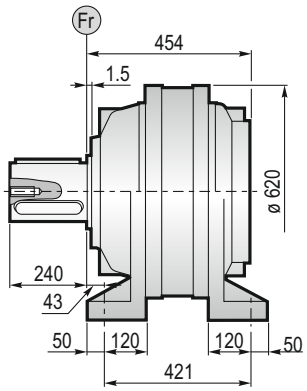


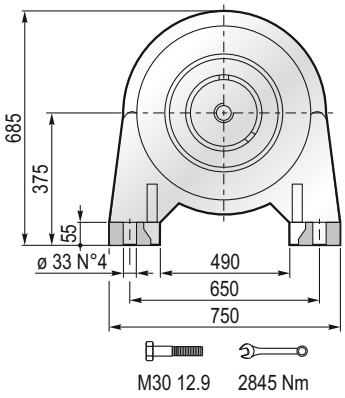
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

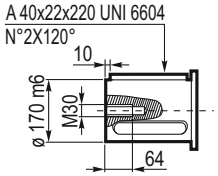
M_{max}= 176 kNm



CPC... 90000

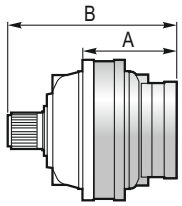




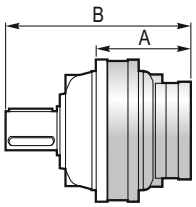


BS FF GA → 206

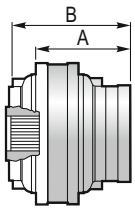
PL ...MS	A	B	RA	RB	EF	EDF
PL 90001	291	624				
PL 90002	473	806				
PL 90003	567	900		•		
PL 90004	626.5	959.5	•	○	•	



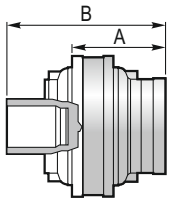
PL ...MC	A	B	RA	RB	EF	EDF
PL 90001	291	694				
PL 90002	473	876				
PL 90003	567	970		•		
PL 90004	626.5	1029.5	•	○	•	



PL ...F	A	B	RA	RB	EF	EDF
PL 90001	291	421				
PL 90002	473	603				
PL 90003	567	697		•		
PL 90004	626.5	756.5	•	○	•	

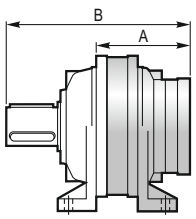


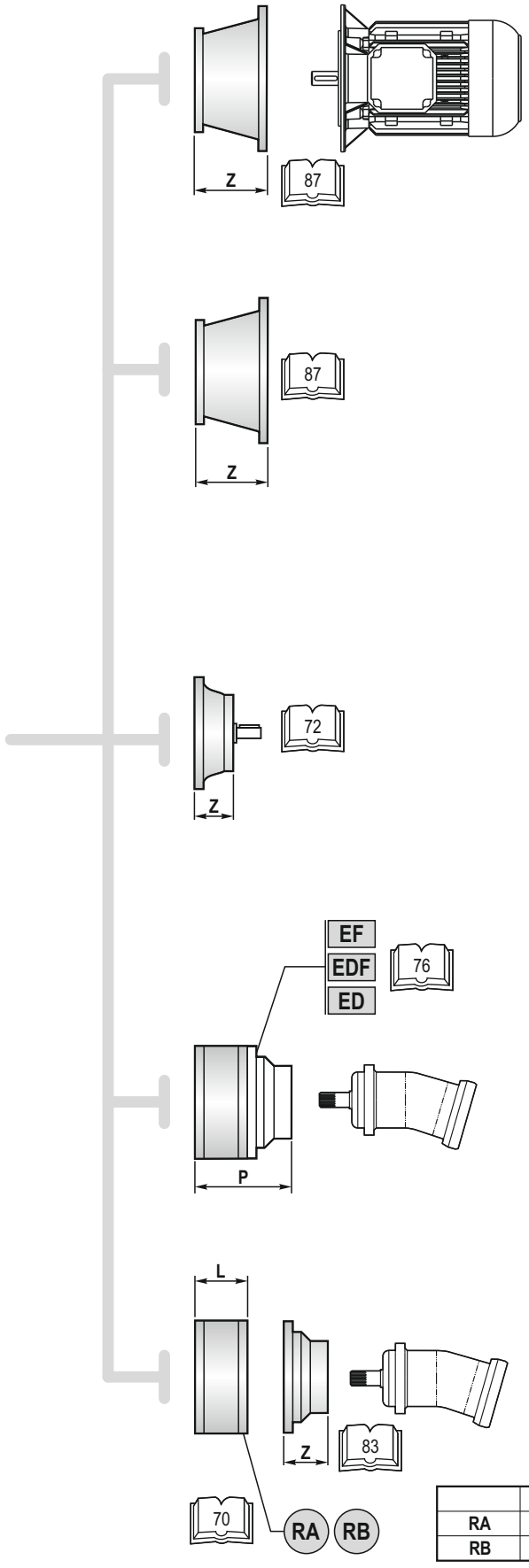
PL ...FS	A	B	RA	RB	EF	EDF
PL 90001	291	577				
PL 90002	473	759				
PL 90003	567	853		•		
PL 90004	626.5	912.5	•	○	•	



PL ...CPC	A	B	RA	RB	EF	EDF
PL 90001	454	694				
PL 90002	636	876				
PL 90003	730	970		•		
PL 90004	789.5	1029.5	•	○	•	

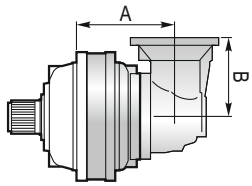
A+13.5	B+13.5	○



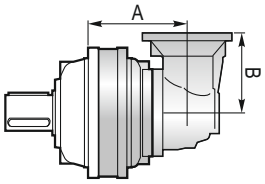


	L
RA	81
RB	125

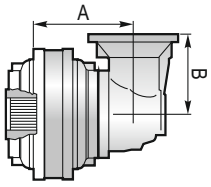
PLB ...MS	A	B	RA	RB	EF
PLB 90003	553	315		•	
PLB 90004	655	240	•	○	•



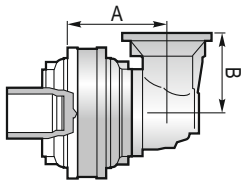
PLB ...MC	A	B	RA	RB	EF
PLB 90003	553	315		•	
PLB 90004	655	240	•	○	•



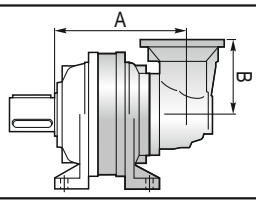
PLB ...F	A	B	RA	RB	EF
PLB 90003	553	315		•	
PLB 90004	655	240	•	○	•



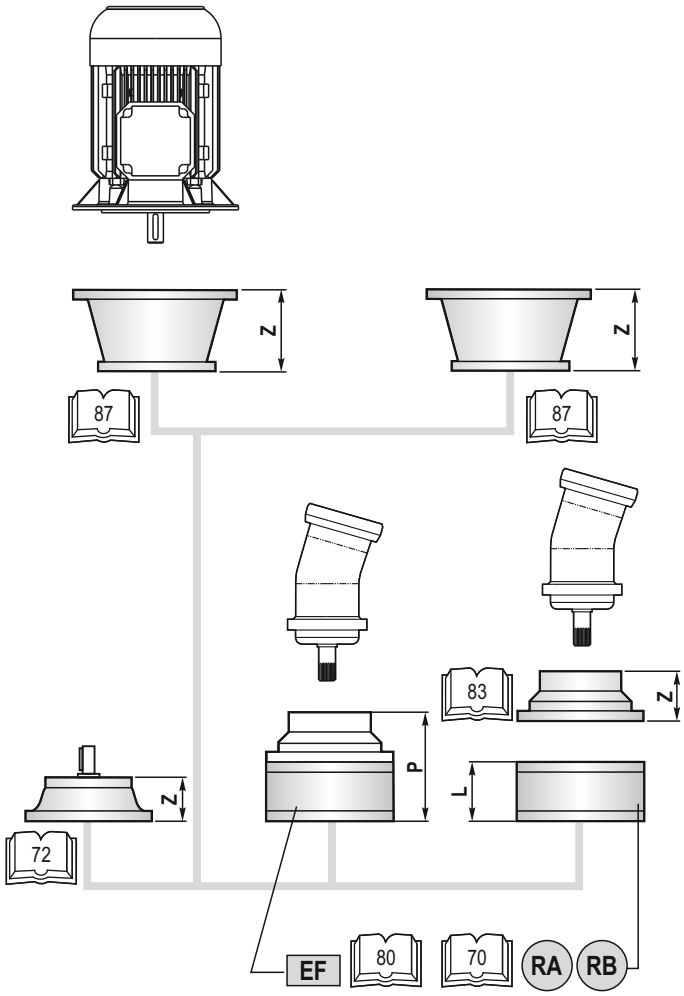
PLB ...FS	A	B	RA	RB	EF
PLB 90003	553	315		•	
PLB 90004	655	240	•	○	•



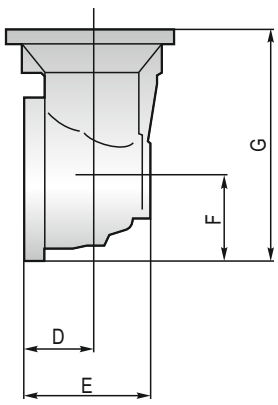
PLB ...CPC	A	B	RA	RB	EF
PLB 90003	716	315		•	
PLB 90004	818	240	•	○	•



A	B+16.5	○



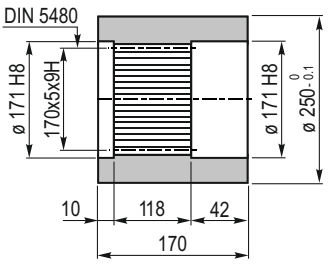
	L
RA	81
RB	125



	D	E	F	G
PLB 90003	88	256	235	550
PLB 90004	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

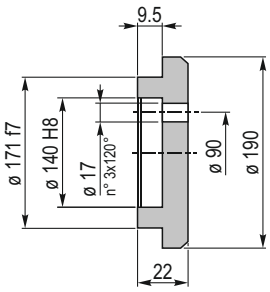


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
1271.115.076

FF

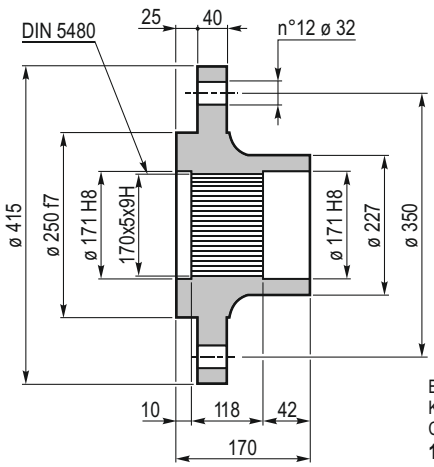
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.044.000

FL

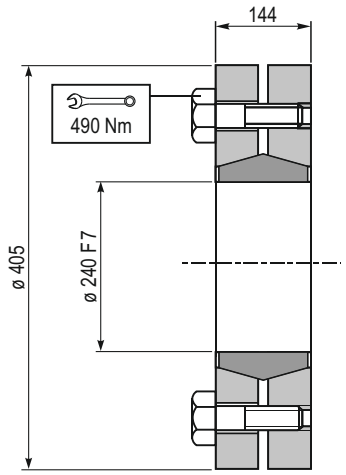
Flanş / Flange
FlanşFlansch / Flangia
Bride / Brida



Bestell - Nr. / Code
Kod / Codice
Code / Código
1271.133.098

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
176 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.240.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

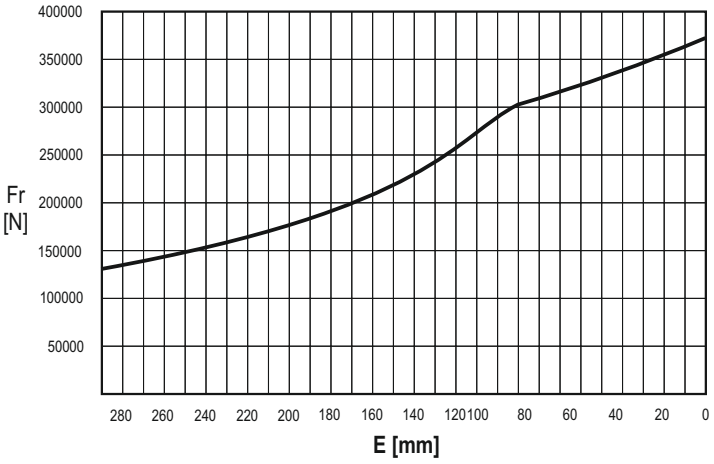
FR CHARGES RADIALES (Fr)

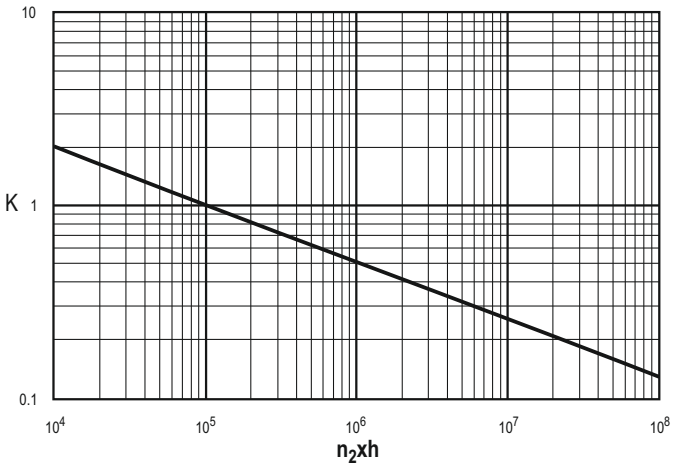
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

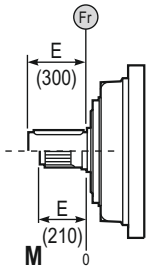
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

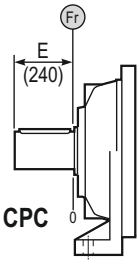
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

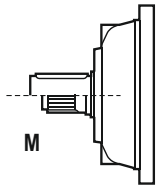
FR CHARGES AXIALES (Fa)

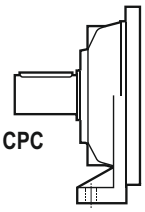
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M	CPC	
	40000	40000	←
	70000	70000	→



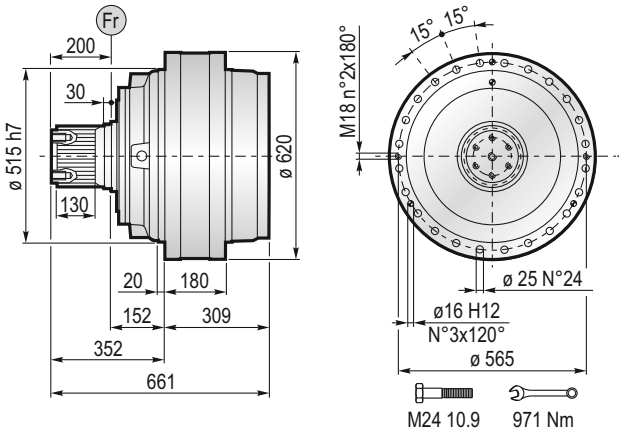


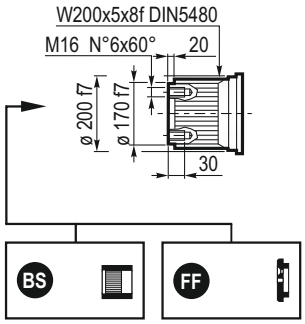
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 140001	87	750	3.69	150.8	133.3	113.2	103.0	646	–	528	555	860
PL 140002	70	1200	14.6 18.7 22.2	150.8 150.8 150.8	133.3 133.3 133.3	113.2 113.2 113.2	103.0 103.0 103.0	789	–	671	698	1003
PL 140003	49	2000	51.9 62.6 80.1 98.6 104.7 124.1 149.5	150.8 150.8 150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0 103.0 103.0	824	–	704	731	1041
PL 140004	33	2800	196.1 236.4 274.1 311.5 343.4 398.8 431.8 480.7 511.8 580.8 628.1 758.9 914.8 1083.4	150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0	838	–	718	745	1054
PL 140005	25	2800	1198.1 1322.9 1444.3 1594.5 1740.9 1887.4 2083.4 2180.8 2275.3 2532.5 2912.5 3242.4 3514.7 3917.7 4247.2 4643.1 5119.1 6170.4 7313.2	150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0	846	–	726	753	1062

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 140003	49	2000	44.7 57.2 67.9 87.1 103.0	150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0	870	–	746	773	1086
PLB 140004	33	2800	215.9 282.3 361.3 435.8 516.2 569.4 813.3	150.8 150.8 150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0 103.0 103.0	896	–	772	803	1112
PLB 140005	25	2800	891.1 1066.0 1164.9 1295.9 1458.3 1680.4 1868.2 2004.8 2168.2 2468.2 2615.1 2942.4 3159.7 3416.9 3546.8 4129.1 4977.1 5898.8	150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8 150.8	133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3 133.3	113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2	103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0 103.0	880	–	760	787	1096

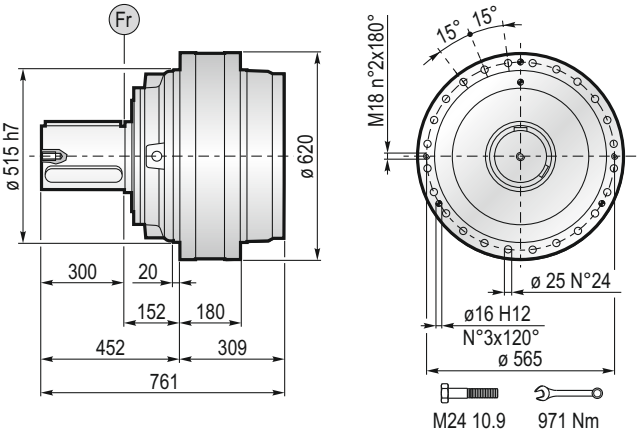
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

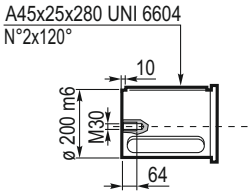
MS...140000



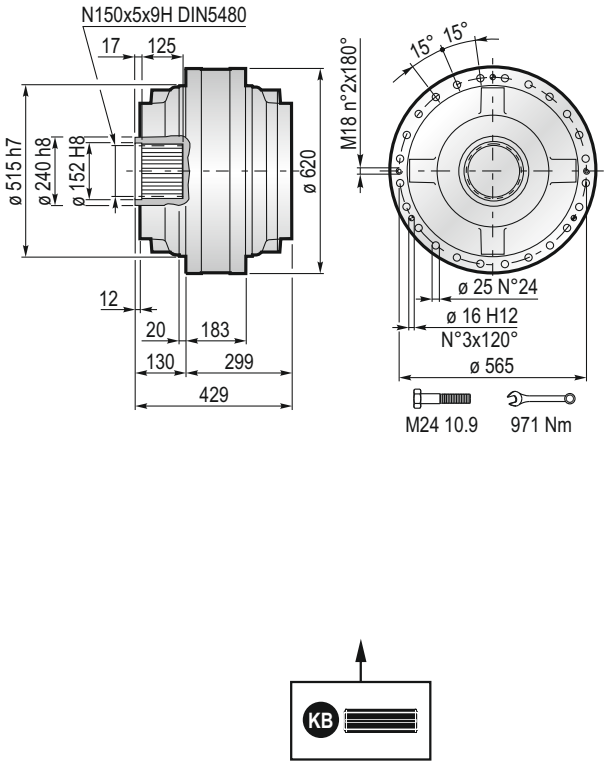


MC...140000

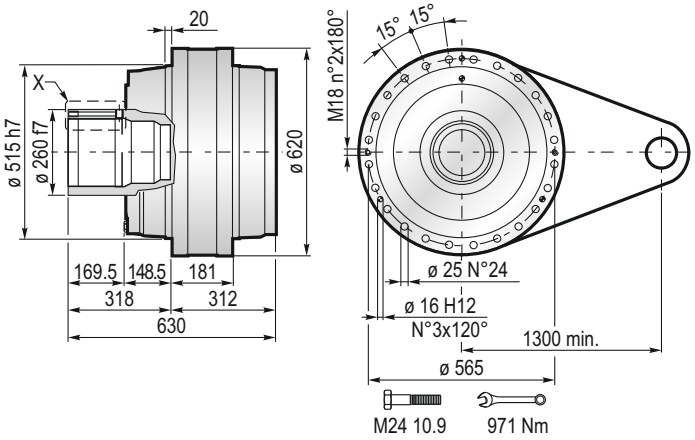


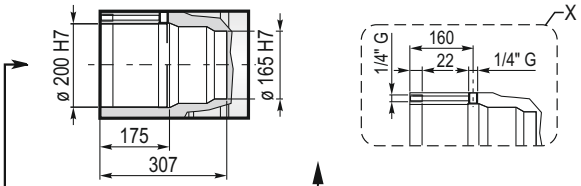


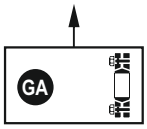
F... 140000



FS...140000

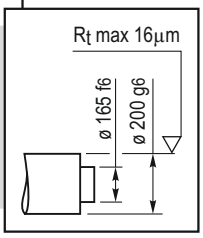




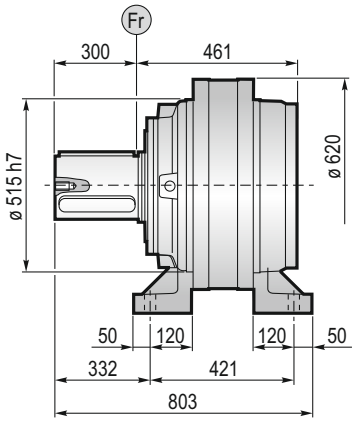


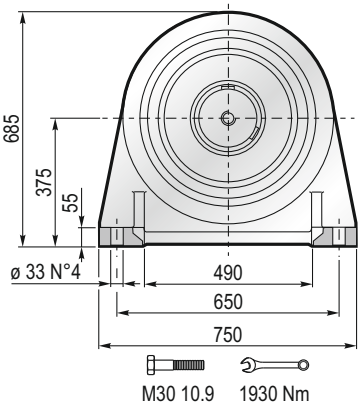
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

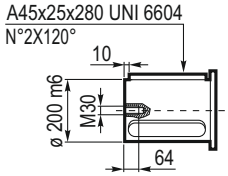
M_{max}= 198 kNm



CPC...140000

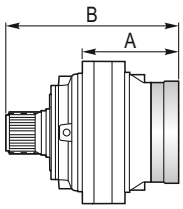




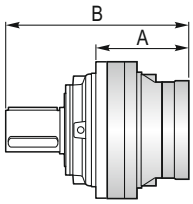


BS FF GA → 214

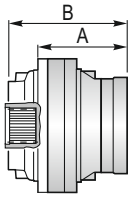
PL ...MS	A	B	RA	RB	EF	EDF
PL 140002	529	881				
PL 140003	635	987		•		
PL 140004	720	1073	•	○	•	
PL 140005	781	1134	•			•



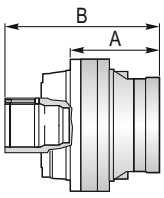
PL ...MC	A	B	RA	RB	EF	EDF
PL 140002	529	981				
PL 140003	635	1087		•		
PL 140004	720	1158.5	•	○	•	
PL 140005	781	1119.5	•			•



PL ...F	A	B	RA	RB	EF	EDF
PL 140002	529	681				
PL 140003	635	787		•		
PL 140004	720	859	•	○	•	
PL 140005	781	920	•			•

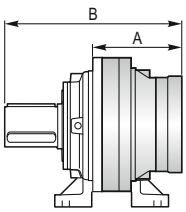


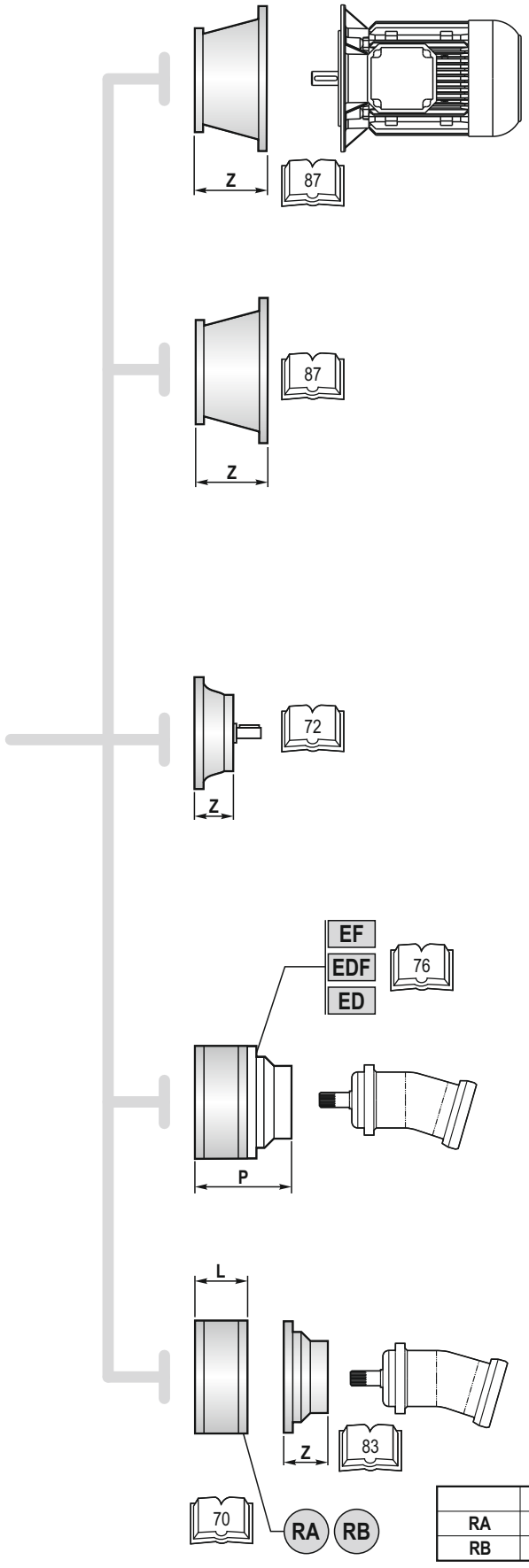
PL ...FS	A	B	RA	RB	EF	EDF
PL 140002	529	848				
PL 140003	635	954		•		
PL 140004	720	1026	•	○	•	
PL 140005	781	1087	•			•



PL ...CPC	A	B	RA	RB	EF	EDF
PL 140002	529	981				
PL 140003	635	1087		•		
PL 140004	720	1158.5	•	○	•	
PL 140005	781	1119.5	•			•

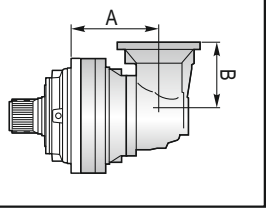
A+13.5	B+13.5	○



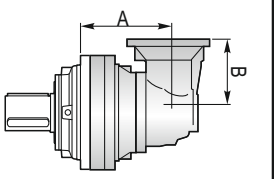


	L
RA	81
RB	125

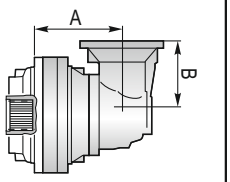
PLB ...MS					
	A	B	RA	RB	EF
PLB 140003	705	315			
PLB 140004	766	320		•	
PLB 140005	804	245	•	○	•



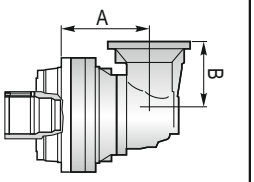
PLB ...MC					
	A	B	RA	RB	EF
PLB 140003	705	315			
PLB 140004	766	320		•	
PLB 140005	804	245	•	○	•



PLB ...F					
	A	B	RA	RB	EF
PLB 140003	705	315			
PLB 140004	766	320		•	
PLB 140005	804	245	•	○	•

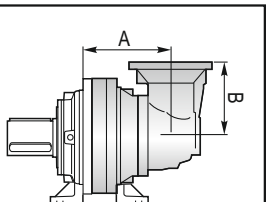


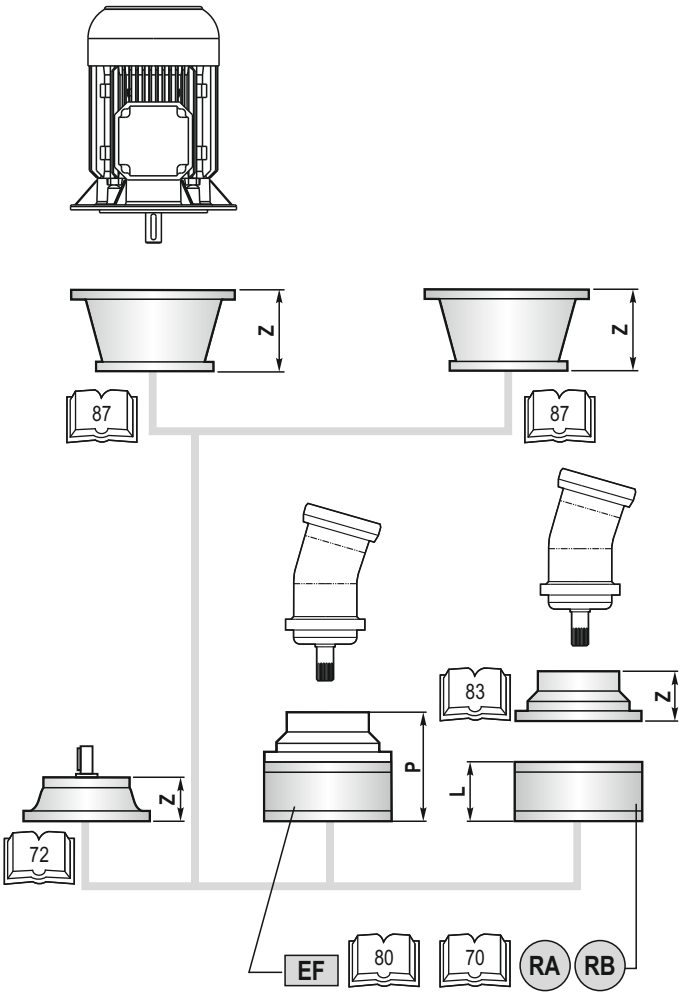
PLB ...FS					
	A	B	RA	RB	EF
PLB 140003	705	315			
PLB 140004	766	320		•	
PLB 140005	804	245	•	○	•



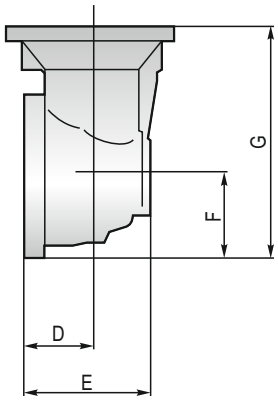
PLB ...CPC					
	A	B	RA	RB	EF
PLB 140003	705	315			
PLB 140004	766	320		•	
PLB 140005	804	245	•	○	•

A	B+16.5	○





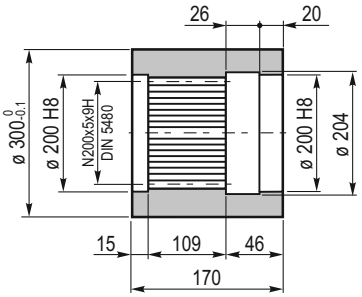
	L
RA	81
RB	125



	D	E	F	G
PLB 140004	88	256	235	550
PLB 140005	88	164	140	380

BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado

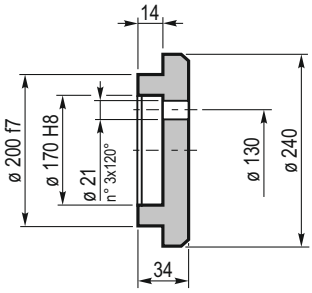


Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

Bestell - Nr. / Code
Kod / Codice
Code / Código
2271.103.076

FF

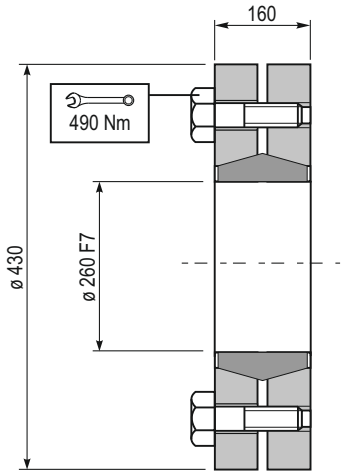
Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



Bestell - Nr. / Code
Kod / Codice
Code / Código
1075.076.000

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
198 kNm

Bestell - Nr. / Code
Kod / Codice
Code / Código
5109.260.000

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

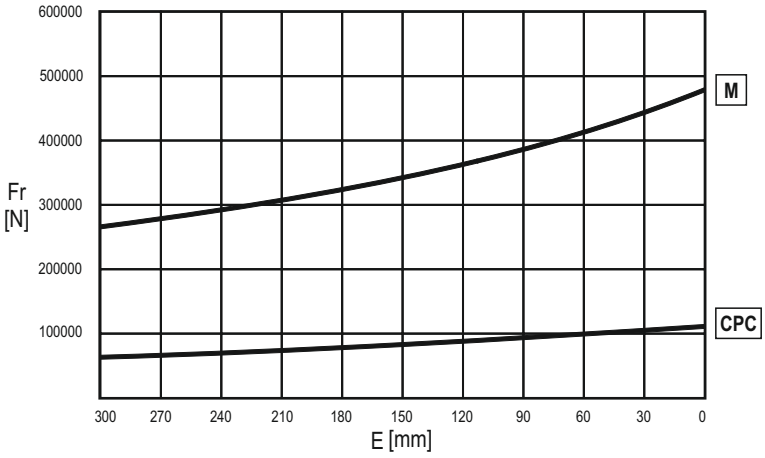
FR CHARGES RADIALES (Fr)

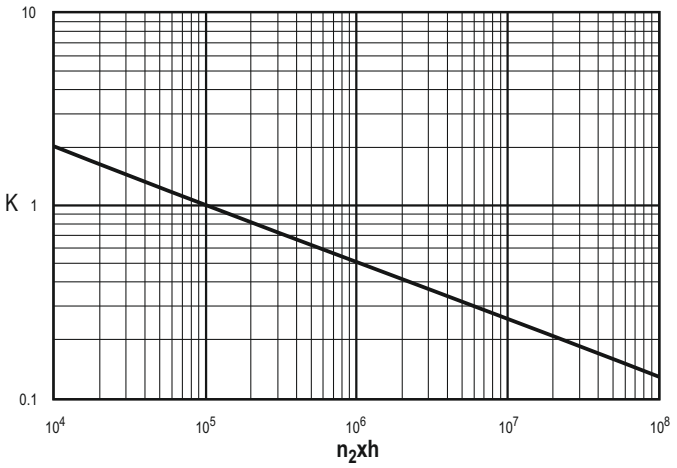
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

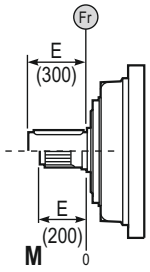
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

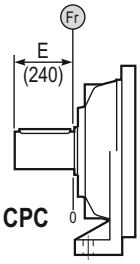
M - CPC*





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			
CPC*	Fr • 0.75	Fr • K • 0.75			





DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

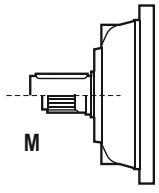
FR CHARGES AXIALES (Fa)

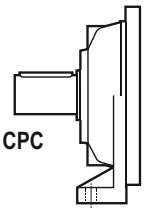
Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M - CPC
	45000 ←
	45000 →



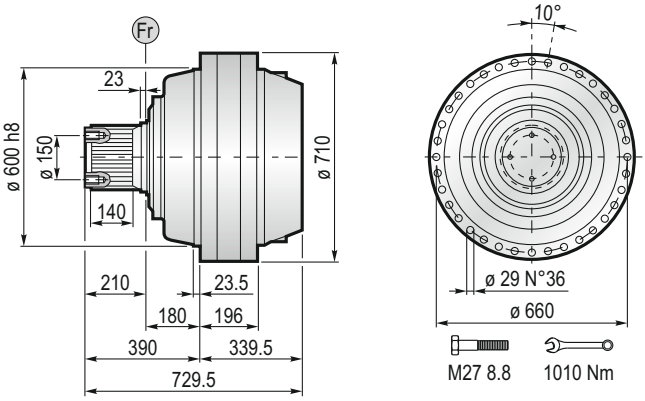


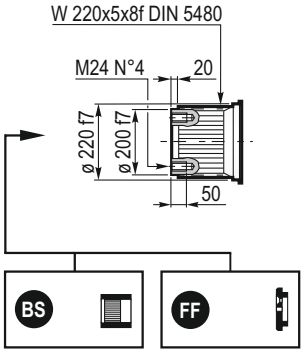
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 180001	83	200	3.91 4.94	208.1 162.2	187.7 145.9	163.2 127.5	156.1 127.5	1165	–	1065	1086	–
PL 180002	67	1200	15.47 19.81 25.01 29.65	208.1 208.1 162.2 162.2	187.7 187.7 145.9 145.9	163.2 163.2 127.5 127.5	156.1 156.1 127.5 127.5	1347	–	1248	1286	–
PL 180003	47	2000	55.02 66.32 74.79 86.66 95.75 107.21 120.91 133.71 166.02 200.12	208.1 208.1 208.1 208.1 208.1 162.2 162.2 280.1 162.2 162.2	187.7 187.7 187.7 187.7 187.7 145.9 145.9 187.7 145.9 145.9	163.2 163.2 163.2 163.2 163.2 127.5 127.5 163.2 127.5 127.5	156.1 156.1 156.1 156.1 156.1 127.5 127.5 156.1 127.5 127.5	1406	–	1307	1345	–
PL 180004	37	2800	250.53 327.36 386.42 438.64 487.96 519.93 574.48 624.68 684.72 725.43 793.33 840.50 969.43 1038.88 1203.68 1450.86	208.1 208.1 208.1 208.1 162.2 208.1 208.1 162.2 162.2 162.2 162.2 162.2 208.1 162.2 162.2 162.2	187.7 187.7 187.7 187.7 145.9 187.7 187.7 145.9 145.9 145.9 145.9 145.9 187.7 145.9 145.9 145.9	163.2 163.2 163.2 163.2 127.5 163.2 163.2 127.5 127.5 127.5 127.5 127.5 163.2 127.5 127.5 127.5	156.1 156.1 156.1 156.1 127.5 156.1 156.1 127.5 127.5 127.5 127.5 127.5 156.1 127.5 127.5 127.5	1422	–	1323	1361	–
PL 180005	27	2800	1531.94 1604.90 1727.69 1811.16 1907.19 2001.73 2091.27 2181.66 2363.88 2476.47 2608.36 2792.91 2960.82 3900.44 5145.91 5888.65 6979.14 8124.82 9793.30	208.1 162.2 208.1 208.1 208.1 208.1 162.2 162.2 208.1 162.2 208.1 162.2 208.1 162.2 162.2 162.2 162.2 162.2 162.2	187.7 145.9 187.7 187.7 187.7 187.7 145.9 145.9 187.7 145.9 187.7 145.9 187.7 145.9 145.9 145.9 145.9 145.9 145.9	163.2 127.5 163.2 163.2 163.2 163.2 127.5 127.5 163.2 127.5 163.2 127.5 163.2 127.5 127.5 127.5 127.5 127.5 127.5	156.1 127.5 156.1 156.1 156.1 156.1 127.5 127.5 156.1 127.5 156.1 127.5 156.1 127.5 127.5 127.5 127.5 127.5 127.5	1430	–	1331	1369	–

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 180003	45	2500	60.02	162.2	145.9	127.5	127.5	1488	–	1472	1510	–
			72.11	208.1	187.7	163.2	156.1					
			76.83	162.2	145.9	127.5	127.5					
			91.06	162.2	145.9	127.5	127.5					
			116.74	162.2	145.9	127.5	127.5					
			138.35	162.2	145.9	127.5	127.5					
PLB 180004	35	2500	256.76	208.1	187.7	163.2	156.1	1525	–	1416	1454	–
			328.69	208.1	187.7	163.2	156.1					
			390.80	162.2	145.9	127.5	127.5					
			440.74	162.2	145.9	127.5	127.5					
			500.30	162.2	145.9	127.5	127.5					
			564.22	162.2	145.9	127.5	127.5					
			653.72	162.2	145.9	127.5	127.5					
			787.97	162.2	145.9	127.5	127.5					
			933.89	162.2	145.9	127.5	127.5					
PLB 180005	25	2800	1183.67	208.1	187.7	163.2	156.1	1468	–	1369	1407	–
			1334.92	208.1	187.7	163.2	156.1					
			1440.05	162.2	145.9	127.5	127.5					
			1550.23	208.1	187.7	163.2	156.1					
			1685.69	162.2	145.9	127.5	127.5					
			1759.71	208.1	187.7	163.2	156.1					
			1880.74	162.2	145.9	127.5	127.5					
			1996.18	162.2	145.9	127.5	127.5					
			2205.01	162.2	145.9	127.5	127.5					
			2407.67	162.2	145.9	127.5	127.5					
			2656.68	162.2	145.9	127.5	127.5					
			3085.18	162.2	145.9	127.5	127.5					
			3949.56	162.2	145.9	127.5	127.5					
			4576.05	162.2	145.9	127.5	127.5					
			5423.46	162.2	145.9	127.5	127.5					
			6537.21	162.2	145.9	127.5	127.5					
			7899.13	162.2	145.9	127.5	127.5					

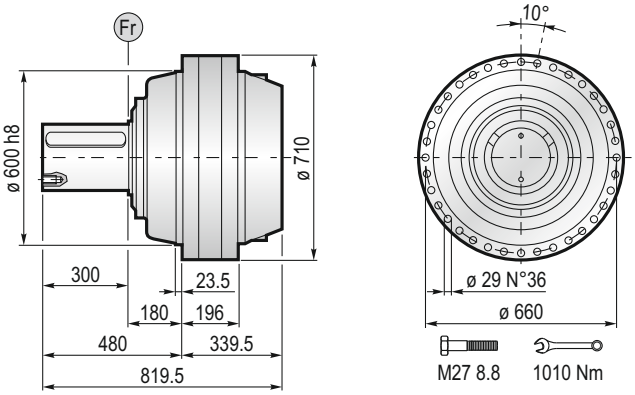
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

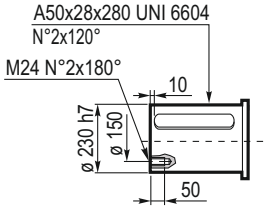
MS...180000



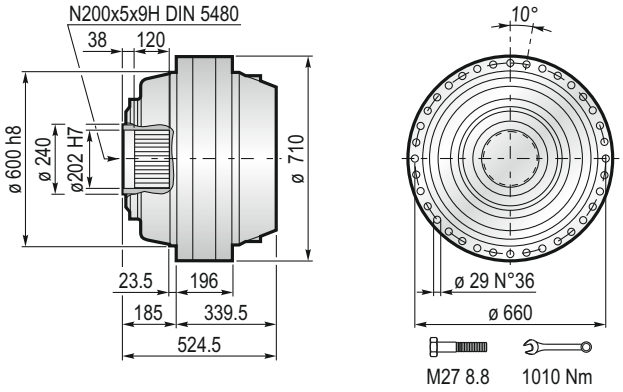


MC...180000

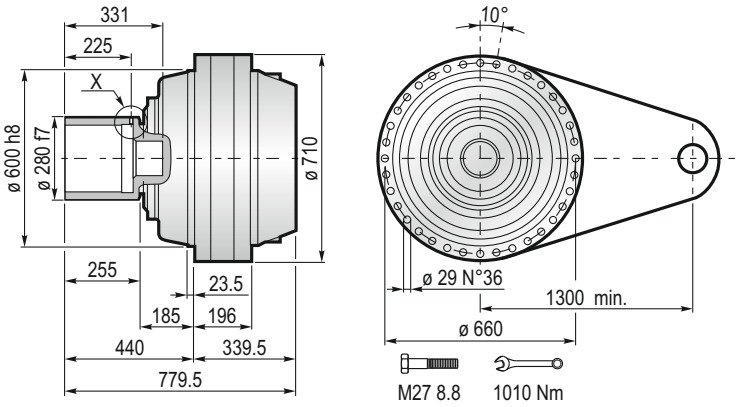


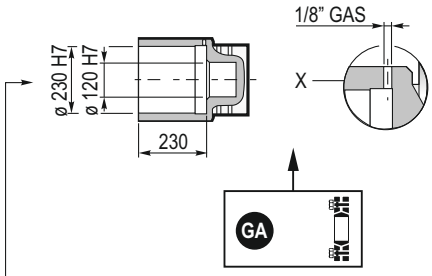


F... 180000



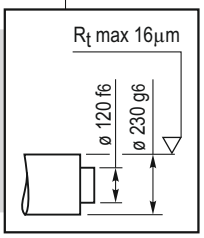
FS...180000





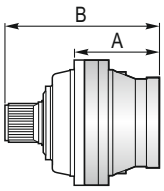
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 355 kNm

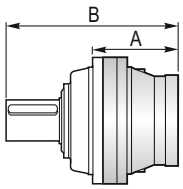


BS FF GA → 222

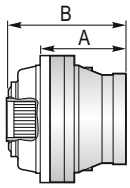
PL ...MS	A	B	RA	RB	EF	EDF
PL 180002	560.5	950.5				
PL 180003	667.5	1057.5		•		
PL 180004	739	1129	•	○	•	
PL 180005	800	1190	•			•



PL ...MC	A	B	RA	RB	EF	EDF
PL 180002	560.5	1040.5				
PL 180003	667.5	1147.5		•		
PL 180004	739	1219	•	○	•	
PL 180005	800	1280	•			•

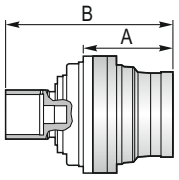


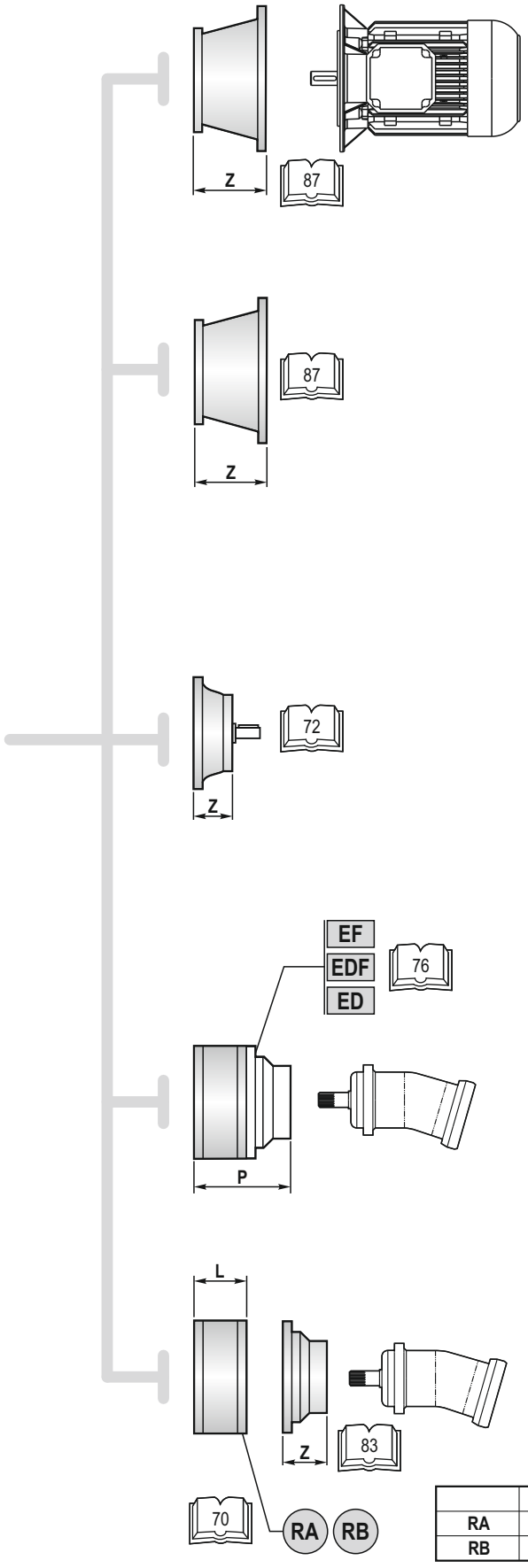
PL ...F	A	B	RA	RB	EF	EDF
PL 180002	560.5	745.5				
PL 180003	667.5	852.5		•		
PL 180004	739	924	•	○	•	
PL 180005	800	985	•			•



PL ...FS	A	B	RA	RB	EF	EDF
PL 180002	560.5	1000.5				
PL 180003	667.5	1107.5		•		
PL 180004	739	1179	•	○	•	
PL 180005	800	1240	•			•

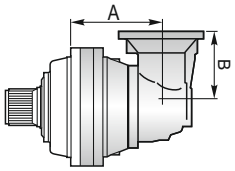
A+13.5	B+13.5	○



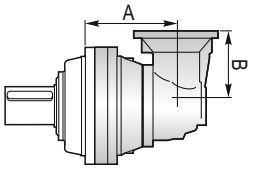


	L
RA	81
RB	125

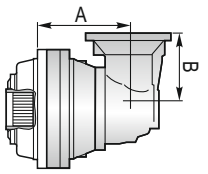
PLB ...MS	A	B	RA	RB	EF
PLB 180003	741.5	315		•	
PLB 180004	802.5	315		•	
PLB 180005	840.5	240	•	○	•



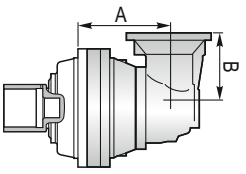
PLB ...MC	A	B	RA	RB	EF
PLB 180003	741.5	315		•	
PLB 180004	802.5	315		•	
PLB 180005	840.5	240	•	○	•



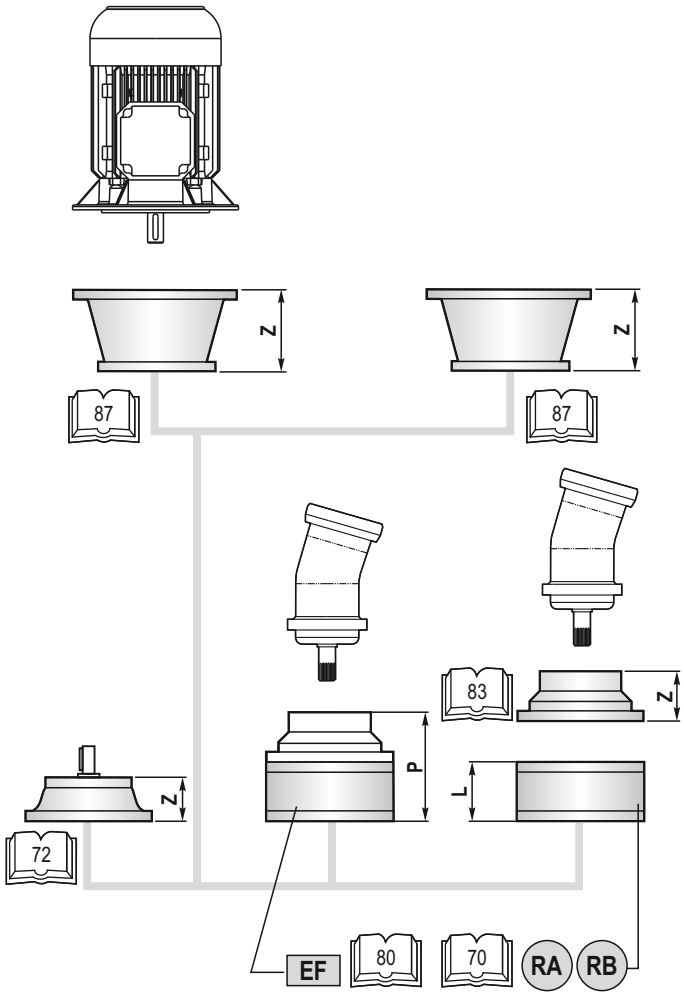
PLB ...F	A	B	RA	RB	EF
PLB 180003	741.5	315		•	
PLB 180004	802.5	315		•	
PLB 180005	840.5	240	•	○	•



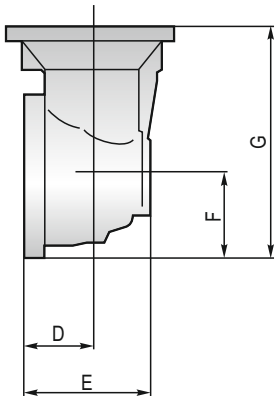
PLB ...FS	A	B	RA	RB	EF
PLB 180003	741.5	315		•	
PLB 180004	802.5	315		•	
PLB 180005	840.5	240	•	○	•



A	B+16.5	○



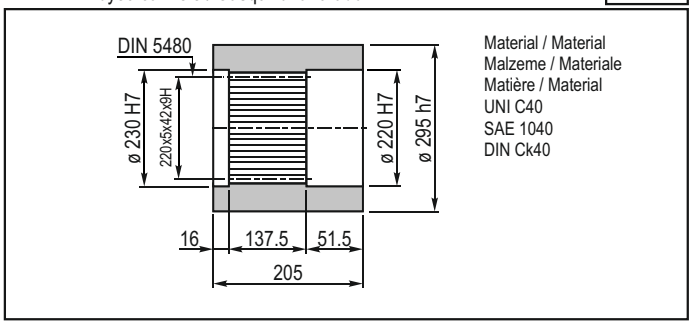
	L
RA	81
RB	125



	D	E	F	G
PLB 180003	88	256	235	550
PLB 180004	88	256	235	550
PLB 180005	88	164	140	380

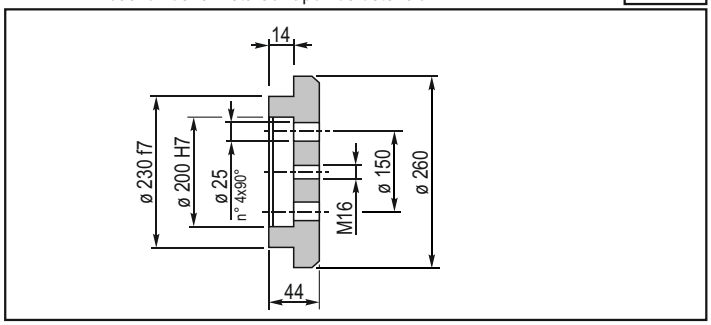
BS

Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



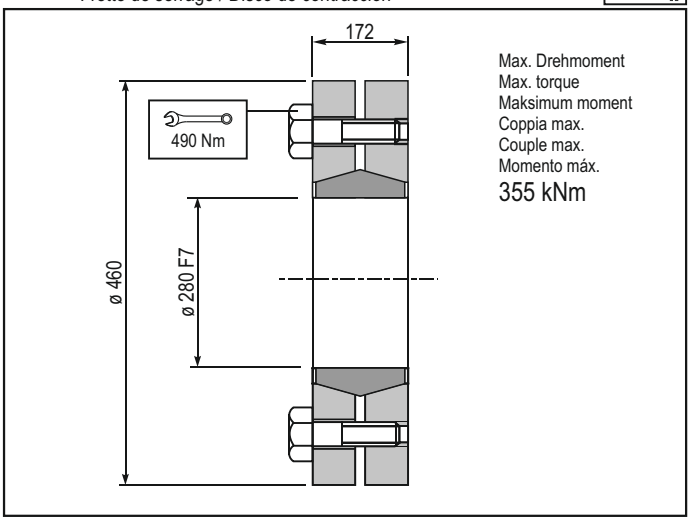
FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

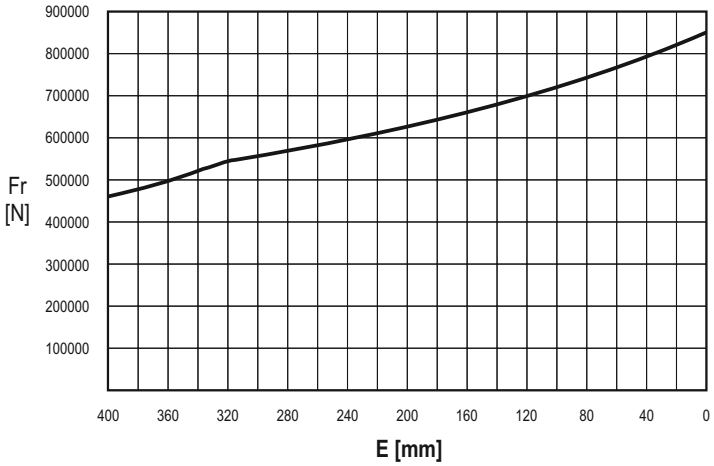
FR CHARGES RADIALES (Fr)

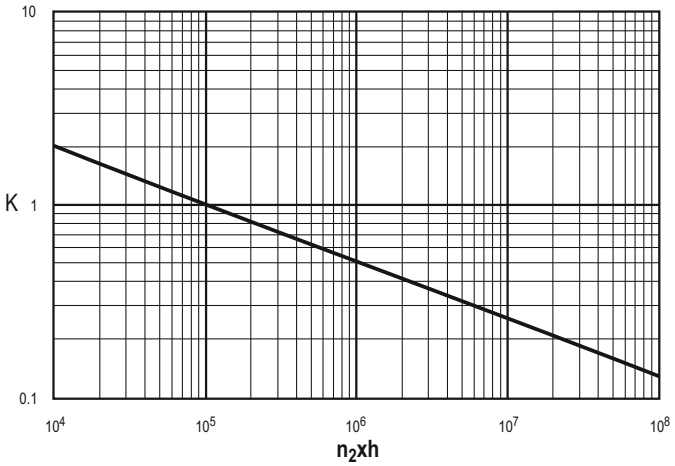
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

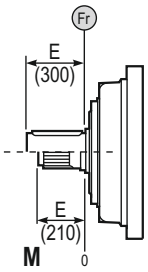
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

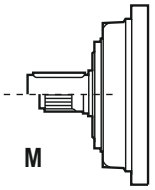
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M
	80000 ←
	80000 →

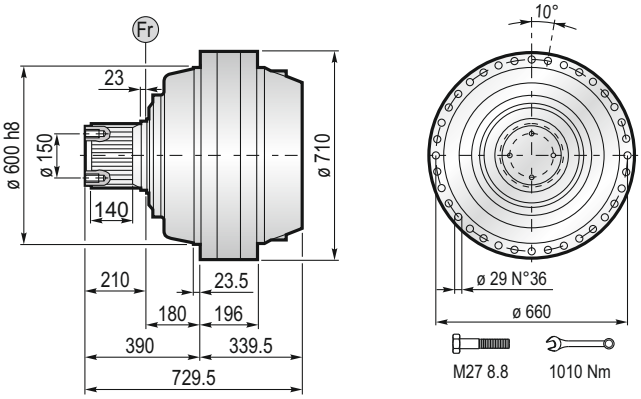


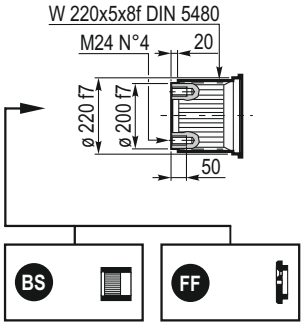
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 220001	83	200	3.68 4.94	242.8 191.8	219.3 172.4	193.8 157.1	193.8 157.1	1165	–	1065	1086	–
PL 220002	67	1200	14.55 19.54 25.01 29.65	242.8 191.8 191.8 191.8	219.3 172.4 172.4 172.4	193.8 157.1 157.1 157.1	193.8 157.1 157.1 157.1	1359	–	1259	1297	–
PL 220003	47	2000	62.37 70.34 83.74 94.44 107.21 120.91 140.08 168.85 200.12	242.8 242.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8	219.3 219.3 172.4 172.4 172.4 172.4 172.4 172.4 172.4	193.8 193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1	193.8 193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1	1418	–	1318	1356	–
PL 220004	37	2800	257.27 336.00 389.58 432.68 487.96 533.65 577.84 624.68 681.46 725.43 793.33 840.50 921.18 1013.10 1200.71 1450.86	242.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8	219.3 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4	193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1	193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1	1434	–	1334	1372	–
PL 220005	27	2800	1497.10 1590.41 1669.64 1736.58 1804.54 1854.33 1934.48 1998.02 2091.27 2181.66 2268.01 2314.95 2422.99 2476.47 2677.18 3166.03 4216.56 6217.97 8263.10	242.8 242.8 191.8 191.8 242.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8 191.8	219.3 219.3 172.4 172.4 219.3 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4 172.4	193.8 193.8 157.1 157.1 193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1	193.8 193.8 157.1 157.1 193.8 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1 157.1	1442	–	1342	1380	–

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 220003	45	2500	60.02	191.8	172.4	157.1	157.1	1500	–	1483	1531	–
			76.83	191.8	172.4	157.1	157.1					
			91.06	191.8	172.4	157.1	157.1					
			103.04	242.8	219.3	193.8	193.8					
			116.74	191.8	172.4	157.1	157.1					
			138.35	191.8	172.4	157.1	157.1					
PLB 220004	35	2500	250.31	242.8	219.3	193.8	193.8	1537	–	1427	1465	–
			336.09	191.8	172.4	157.1	157.1					
			390.80	191.8	172.4	157.1	157.1					
			440.74	191.8	172.4	157.1	157.1					
			500.30	191.8	172.4	157.1	157.1					
			564.22	191.8	172.4	157.1	157.1					
			592.94	191.8	172.4	157.1	157.1					
			653.72	191.8	172.4	157.1	157.1					
			787.97	191.8	172.4	157.1	157.1					
			933.89	191.8	172.4	157.1	157.1					
PLB 220005	25	2800	1113.19	242.8	219.3	193.8	193.8	1480	–	1380	1418	–
			1267.42	191.8	172.4	157.1	157.1					
			1399.10	191.8	172.4	157.1	157.1					
			1494.70	191.8	172.4	157.1	157.1					
			1587.47	191.8	172.4	157.1	157.1					
			1689.17	242.8	219.3	193.8	193.8					
			1735.78	191.8	172.4	157.1	157.1					
			1880.74	191.8	172.4	157.1	157.1					
			1997.48	191.8	172.4	157.1	157.1					
			2157.97	191.8	172.4	157.1	157.1					
			2269.56	191.8	172.4	157.1	157.1					
			2355.68	191.8	172.4	157.1	157.1					
			2486.76	191.8	172.4	157.1	157.1					
			2656.68	191.8	172.4	157.1	157.1					
			2903.54	191.8	172.4	157.1	157.1					
			3472.89	191.8	172.4	157.1	157.1					
			4231.67	191.8	172.4	157.1	157.1					
			6537.21	191.8	172.4	157.1	157.1					
			7899.13	191.8	172.4	157.1	157.1					

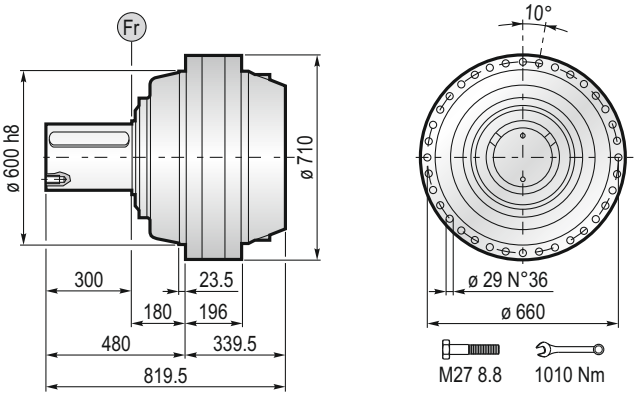
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

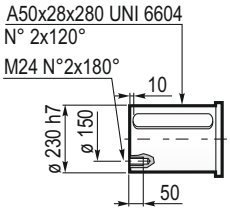
MS...220000



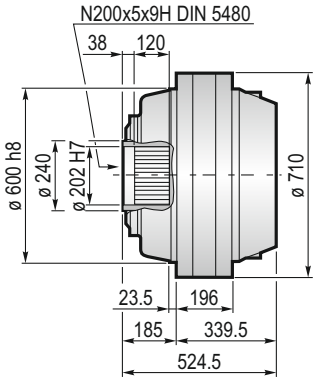


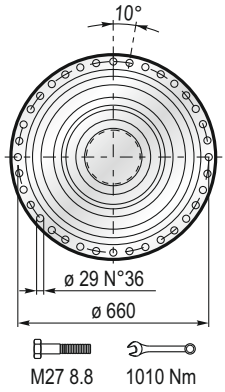
MC...220000



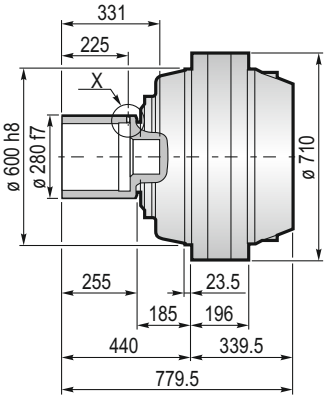


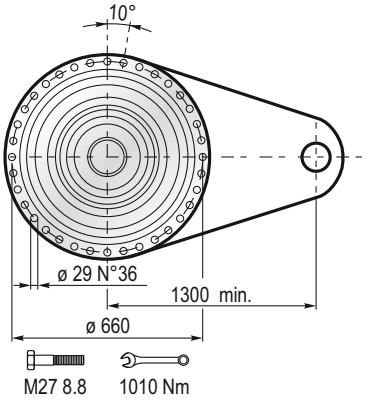
F... 220000

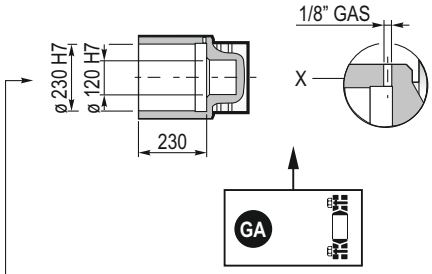




FS...220000

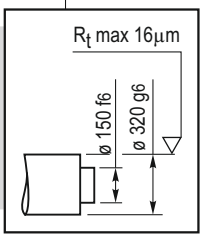






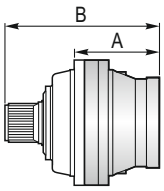
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 814.5 kNm

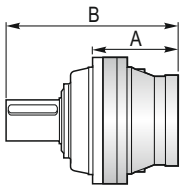


BS FF GA → 230

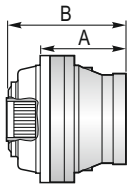
PL ...MS	A	B	RA	RB	EF	EDF
PL 220002	560.5	950.5				
PL 220003	667.5	1057.5		•		
PL 220004	739	1129	•	○	•	
PL 220005	800	1190	•			•



PL ...MC	A	B	RA	RB	EF	EDF
PL 220002	560.5	1040.5				
PL 220003	667.5	1147.5		•		
PL 220004	739	1219	•	○	•	
PL 220005	800	1280	•			•

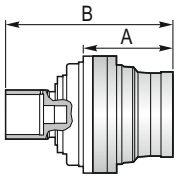


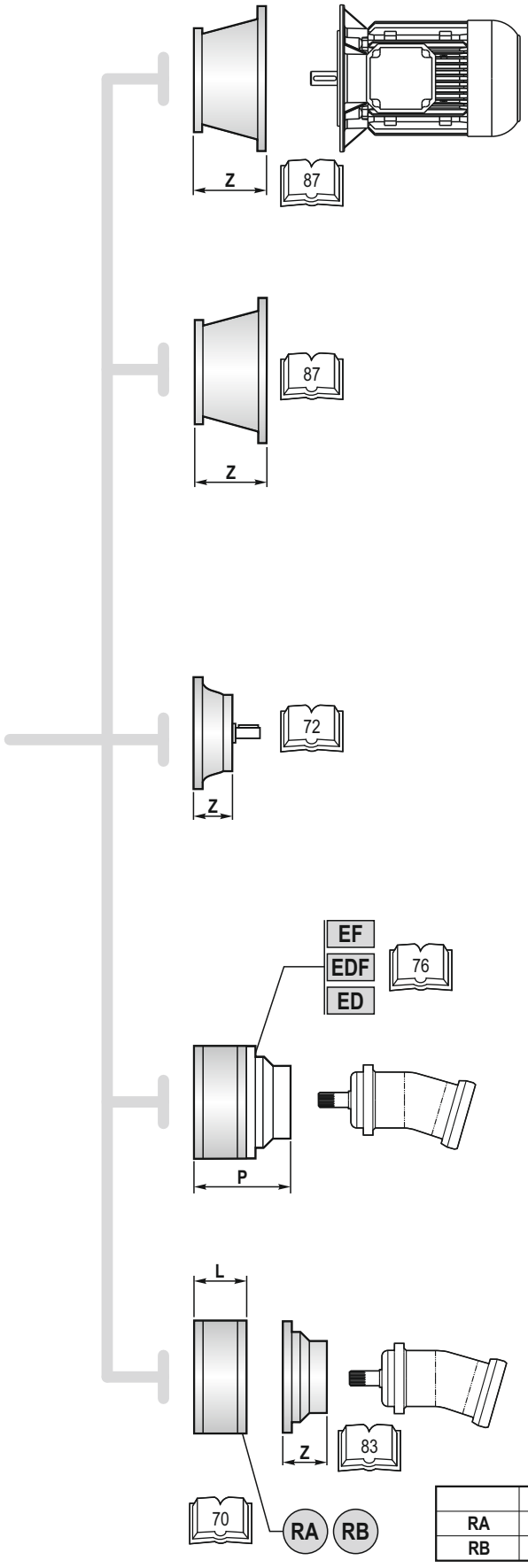
PL ...F	A	B	RA	RB	EF	EDF
PL 220002	560.5	745.5				
PL 220003	667.5	852.5		•		
PL 220004	739	924	•	○	•	
PL 220005	800	985	•			•



PL ...FS	A	B	RA	RB	EF	EDF
PL 220002	560.5	1000.5				
PL 220003	667.5	1107.5		•		
PL 220004	739	1179	•	○	•	
PL 220005	800	1240	•			•

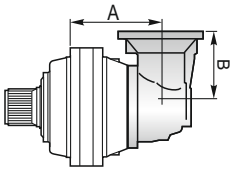
A+13.5	B+13.5	○



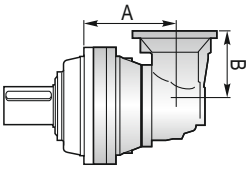


	L
RA	81
RB	125

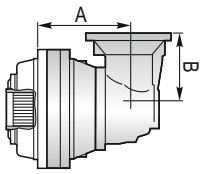
PLB ...MS	A	B	RA	RB	EF
PLB 220003	741.5	315		•	
PLB 220004	802.5	315		•	
PLB 220005	840.5	240	•	○	•



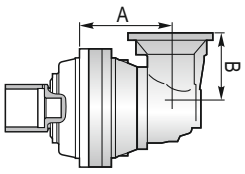
PLB ...MC	A	B	RA	RB	EF
PLB 220003	741.5	315		•	
PLB 220004	802.5	315		•	
PLB 220005	840.5	240	•	○	•



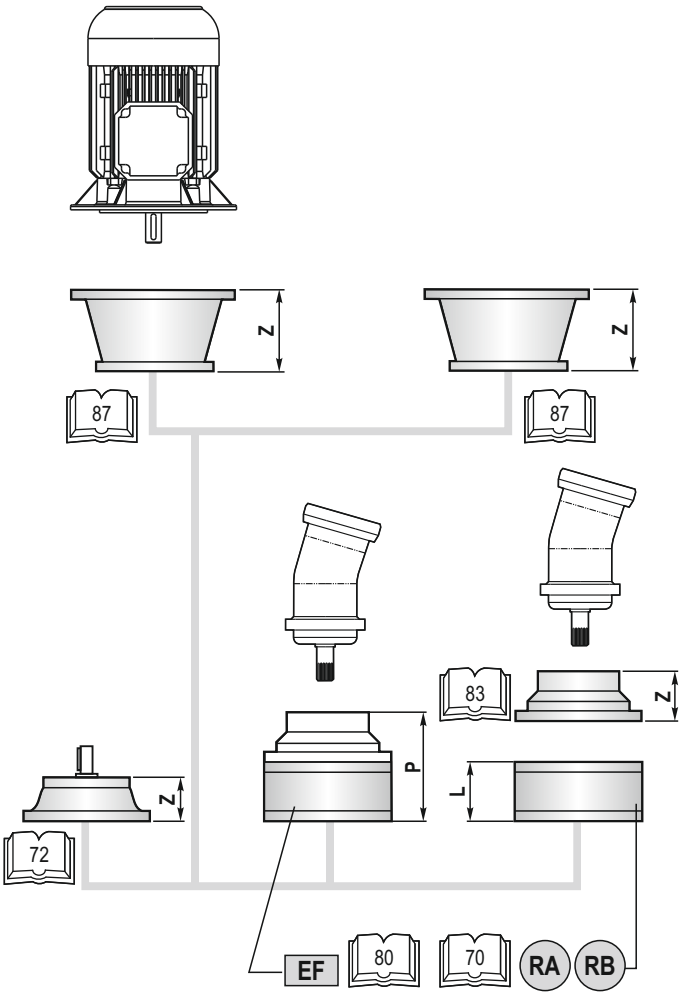
PLB ...F	A	B	RA	RB	EF
PLB 220003	741.5	315		•	
PLB 220004	802.5	315		•	
PLB 220005	840.5	240	•	○	•



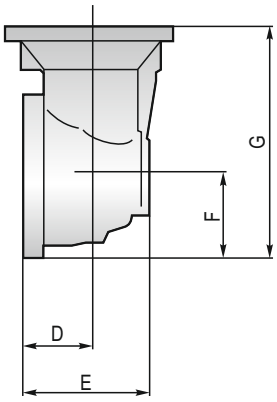
PLB ...FS	A	B	RA	RB	EF
PLB 220003	741.5	315		•	
PLB 220004	802.5	315		•	
PLB 220005	840.5	240	•	○	•



A	B+16.5	○



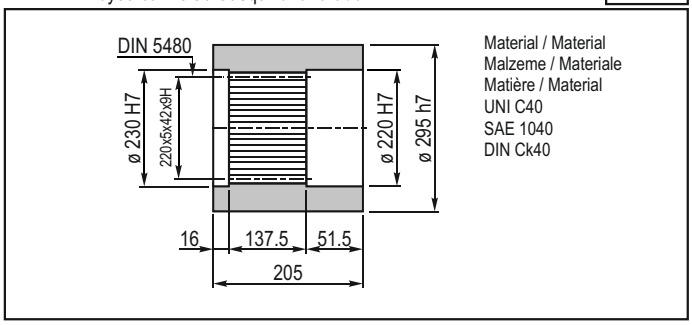
	L
RA	81
RB	125



	D	E	F	G
PLB 220003	88	256	235	550
PLB 220004	88	256	235	550
PLB 220005	88	164	140	380

BS

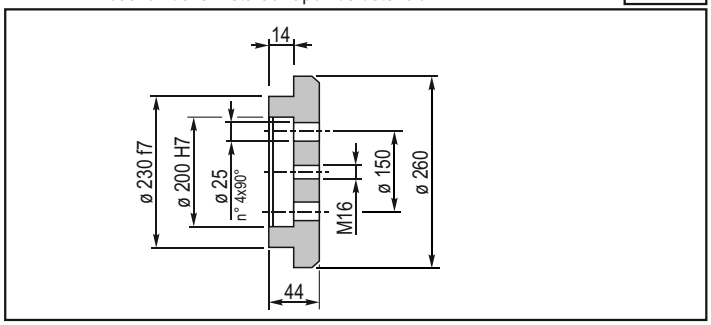
Innenverzahnte Buchse / Splined bushing
Spline kaplin / Boccola scanalata
Moyeu cannelé / Casquillo ranurado



Material / Material
Malzeme / Materiale
Matière / Material
UNI C40
SAE 1040
DIN Ck40

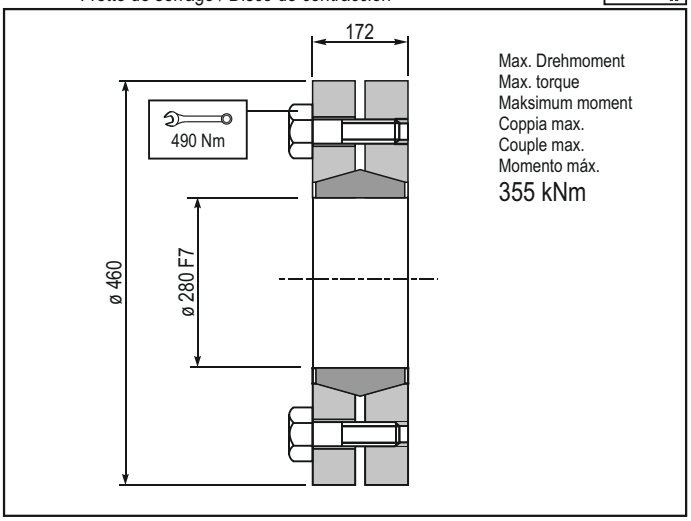
FF

Endscheibe / Stop bottom plate
Sabitleme rondelası / Fondello di arresto
Bouchon de fermeture / Tapón de detención



GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
355 kNm

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

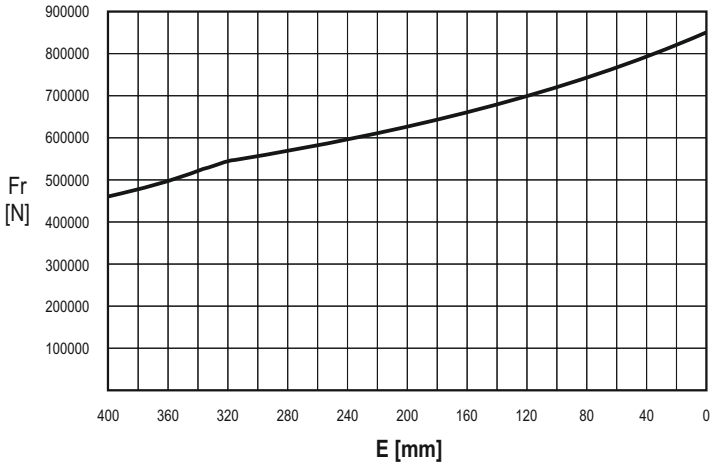
FR CHARGES RADIALES (Fr)

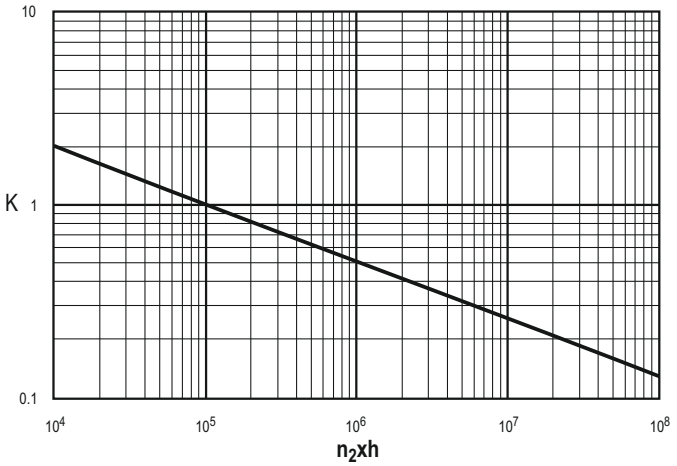
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

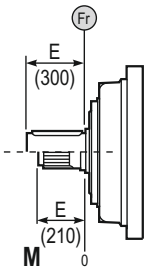
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

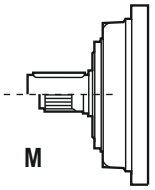
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M
	80000 ←
	80000 →

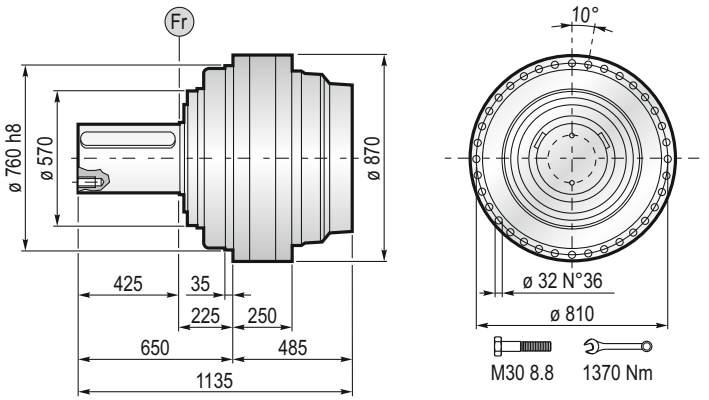


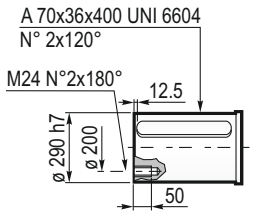
	Pt [kW]	n_{1max} [min^{-1}]	i_{ges}	Mc [kNm] n_2 x h 10.000	Mc [kNm] n_2 x h 20.000	Mc [kNm] n_2 x h 50.000	Mc [kNm] n_2 x h 100.000	~ Kg M	~ Kg P	~ Kg F	~ Kg FS	~ Kg CPC
PL 340001	110	200	4.09 5.25	377.0 280.6	339.5 252.7	295.4 219.9	270.3 211.1	1975	–	1895	1933	–
PL 340002	80	750	16.54 20.94 26.87	377.0 377.0 280.6	339.5 339.5 252.7	295.4 295.4 219.9	270.3 270.3 211.1	2298	–	2229	2267	–
PL 340003	71	1500	86.02 103.38 110.39 120.90 132.68 167.92	377.0 377.0 280.6 280.6 280.6 280.6	339.5 339.5 252.7 252.7 252.7 252.7	295.4 295.4 219.9 219.9 219.9 219.9	270.3 270.3 211.1 211.1 211.1 211.1	2414	–	2345	2383	–
PL 340004	50	2800	242.61 315.39 380.93 430.08 482.12 551.93 618.72 698.56 758.92 810.33 973.95	377.0 377.0 377.0 377.0 377.0 280.6 280.6 280.6 377.0 280.6 280.6	339.5 339.5 339.5 339.5 339.5 252.7 252.7 252.7 339.5 252.7 252.7	295.4 295.4 295.4 295.4 295.4 219.9 219.9 219.9 295.4 219.9 219.9	270.3 270.3 270.3 270.3 270.3 211.1 211.1 211.1 270.3 211.1 211.1	2441	–	2372	2410	–
PL 340005	37	2800	1513.94 1586.47 1629.52 1758.12 1846.79 1942.89 2006.73 2113.14 2256.26 2364.35 2506.11 2646.76 2726.32 2855.65 3570.59 4461.95 5064.55 6733.34 8522.08	377.0 377.0 377.0 377.0 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6 280.6	339.5 339.5 339.5 339.5 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7 252.7	295.4 295.4 295.4 295.4 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9 219.9	270.3 270.3 270.3 270.3 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1 211.1	2453	–	2384	2422	–

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 340004	45	2500	264.19	377.0	339.5	295.4	270.3	2536	–	2466	2504	–
			401.41	377.0	339.5	295.4	270.3					
			501.53	280.6	252.7	219.9	211.1					
			652.00	280.6	252.7	219.9	211.1					
			783.64	280.6	252.7	219.9	211.1					
PLB 340005	40	2800	1142.87	377.0	339.5	295.4	270.3	2478	–	2409	2447	–
			1315.93	377.0	339.5	295.4	270.3					
			1485.72	377.0	339.5	295.4	270.3					
			1644.16	280.6	252.7	219.9	211.1					
			1688.78	280.6	252.7	219.9	211.1					
			1769.68	280.6	252.7	219.9	211.1					
			1856.31	280.6	252.7	219.9	211.1					
			1906.68	280.6	252.7	219.9	211.1					
			2029.78	280.6	252.7	219.9	211.1					
			2127.02	280.6	252.7	219.9	211.1					
			2211.75	280.6	252.7	219.9	211.1					
			2413.20	280.6	252.7	219.9	211.1					
			2569.00	280.6	252.7	219.9	211.1					
			2925.59	280.6	252.7	219.9	211.1					
			3368.61	280.6	252.7	219.9	211.1					
			4411.79	280.6	252.7	219.9	211.1					
			5324.57	280.6	252.7	219.9	211.1					
			6399.72	280.6	252.7	219.9	211.1					

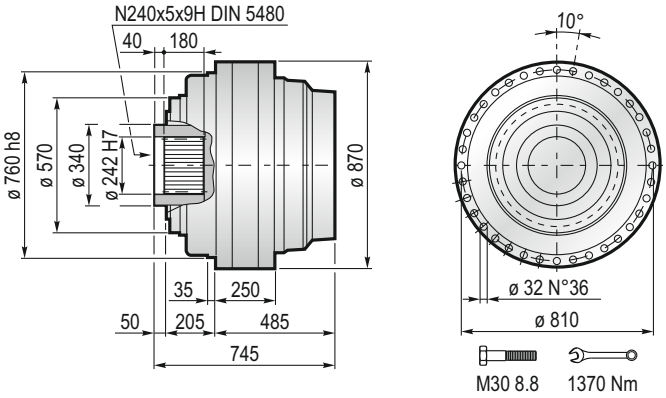
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

MC...340000

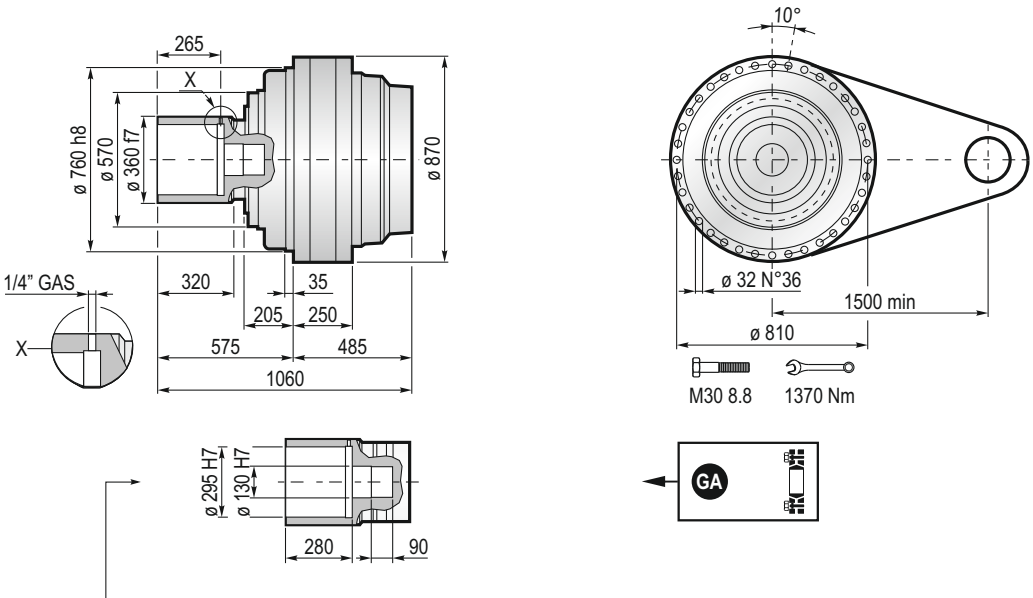




F... 340000

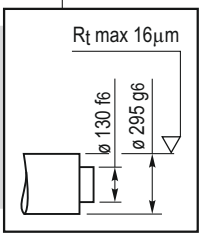


FS... 340000



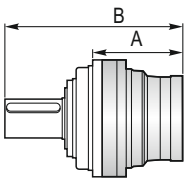
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 689 kNm

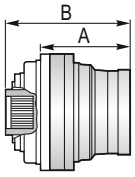


GA → 236

PL ...MC	A	B	RA	RB	EF	EDF
PL 340002	740	1390				
PL 340003	922	1572				
PL 340004	1016	1666		•		
PL 340005	1075.5	1725.5	•	○	•	

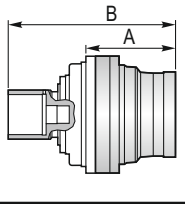


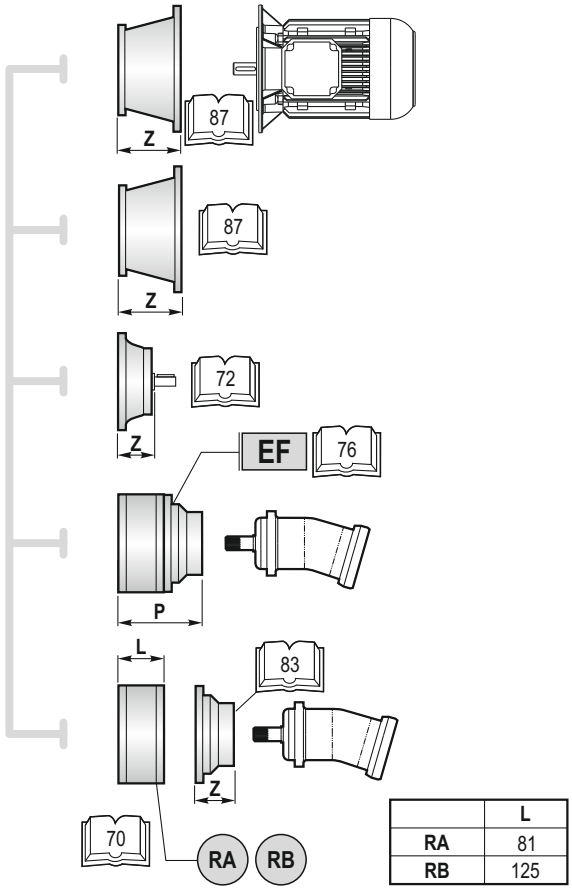
PL ...F	A	B	RA	RB	EF	EDF
PL 340002	740	995				
PL 340003	922	1177				
PL 340004	1016	1271		•		
PL 340005	1075.5	1330.5	•	○	•	



PL ...FS	A	B	RA	RB	EF	EDF
PL 340002	740	1315				
PL 340003	922	1497				
PL 340004	1016	1591		•		
PL 340005	1075.5	1650.5	•	○	•	

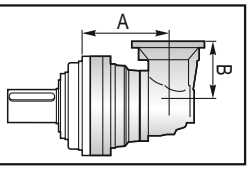
A+13.5	B+13.5	○



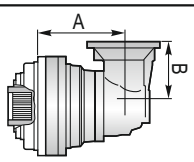


	L
RA	81
RB	125

PLB ...MC	A	B	RA	RB	EF
PLB 340004	1002	315		•	
PLB 340005	1104	240		•	

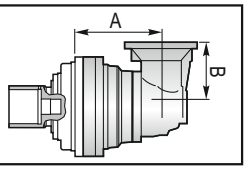


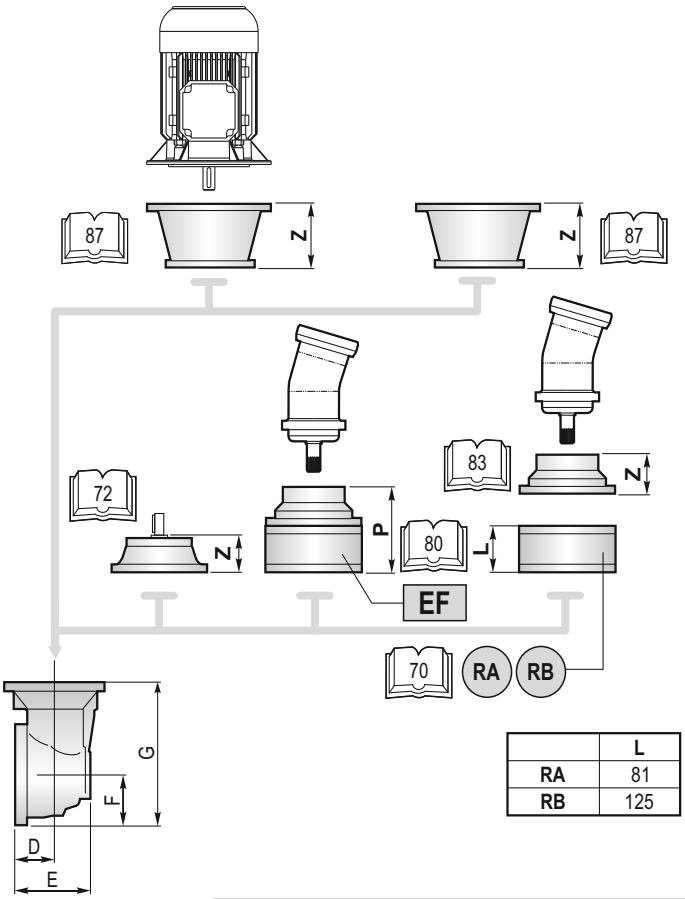
PLB ...F	A	B	RA	RB	EF
PLB 340004	1002	315		•	
PLB 340004	1104	240		•	



PLB ...FS	A	B	RA	RB	EF
PLB 340004	1002	315		•	
PLB 340004	1104	240		•	

A	B+16.5	○



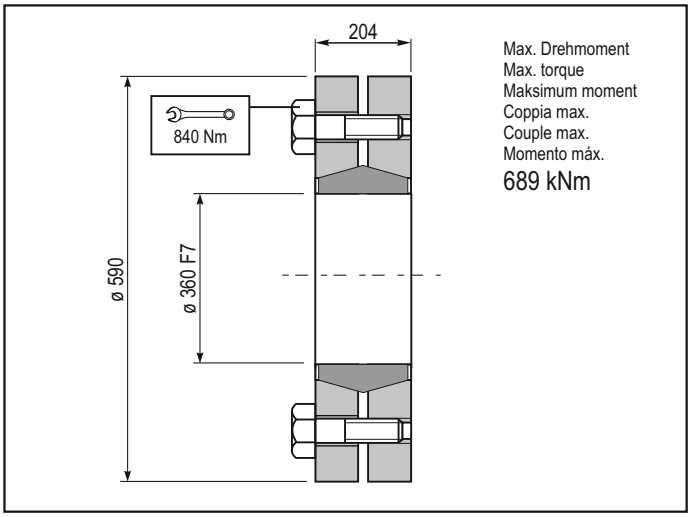


	L
RA	81
RB	125

	D	E	F	G
PLB 340004	88	256	235	550
PLB 340005	88	164	140	380

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



Max. Drehmoment
Max. torque
Maksimum moment
Coppia max.
Couple max.
Momento máx.
689 kNm

DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

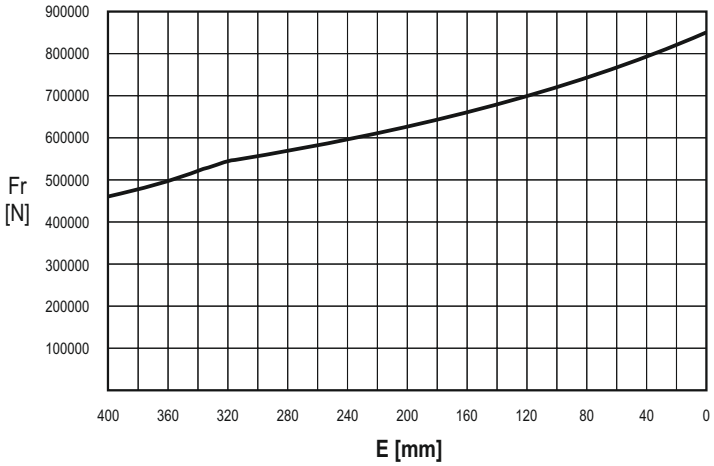
FR CHARGES RADIALES (Fr)

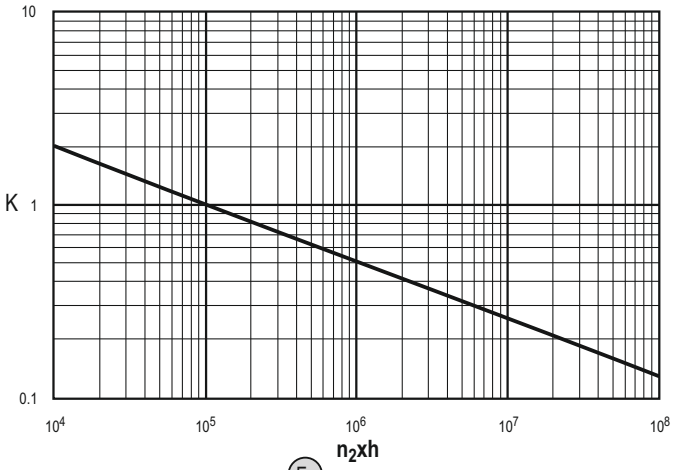
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

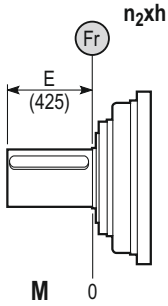
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

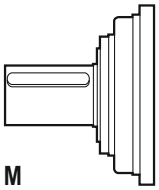
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M
	110000 ←
	110000 →

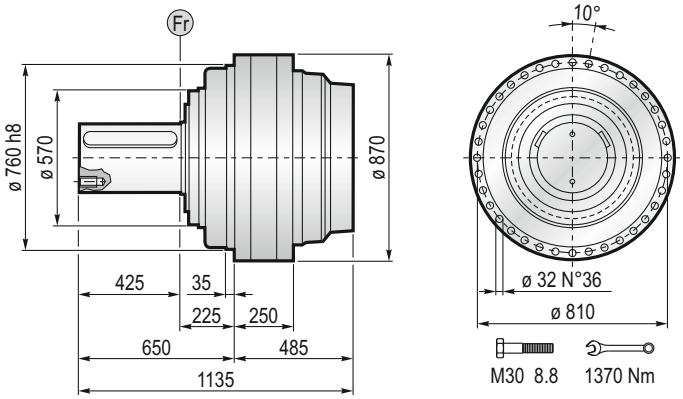


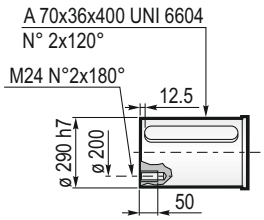
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 400001	110	200	3.83	442.7	397.8	346.8	336.6	1975	–	1895	1933	–
PL 400002	80	750	15.50 19.62	442.7 442.7	397.8 397.8	346.8 346.8	336.6 336.6	2318	–	2248	2286	–
PL 400003	71	1500	62.00 80.60 96.87 122.61	442.7 442.7 442.7 442.7	397.8 397.8 397.8 397.8	346.8 346.8 346.8 346.8	336.6 336.6 336.6 336.6	2434	–	2364	2402	–
PL 400004	50	2800	227.33 295.53 356.94 403.00 467.48 510.05 591.66 711.13	442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7	397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8	346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8	336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6	2461	–	2391	2429	–
PL 400005	37	2800	858.81 1037.26 1278.74 1418.61 1601.65 1844.19 2082.15 2157.58 2415.29 2635.28 3257.90 3550.00 4266.80 4444.59 5155.72	442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7 442.7	397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8 397.8	346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8 346.8	336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6 336.6	2473	–	2403	2441	–

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 400004	45	2500	190.43	442.7	397.8	346.8	336.6	2556	–	2486	2524	–
			247.56	442.7	397.8	346.8	336.6					
			313.32	442.7	397.8	346.8	336.6					
			366.19	442.7	397.8	346.8	336.6					
			476.05	442.7	397.8	346.8	336.6					
			572.18	442.7	397.8	346.8	336.6					
PLB 400005	45	2500	677.07	442.7	397.8	346.8	336.6	2576	–	2506	2544	–
			816.12	442.7	397.8	346.8	336.6					
			1028.73	442.7	397.8	346.8	336.6					
			1240.00	442.7	397.8	346.8	336.6					
			1386.31	442.7	397.8	346.8	336.6					
			1620.25	442.7	397.8	346.8	336.6					
			1953.00	442.7	397.8	346.8	336.6					
			2106.33	442.7	397.8	346.8	336.6					
			2471.80	442.7	397.8	346.8	336.6					
			2665.89	442.7	397.8	346.8	336.6					
			3204.19	442.7	397.8	346.8	336.6					
			3862.19	442.7	397.8	346.8	336.6					
			4958.86	442.7	397.8	346.8	336.6					

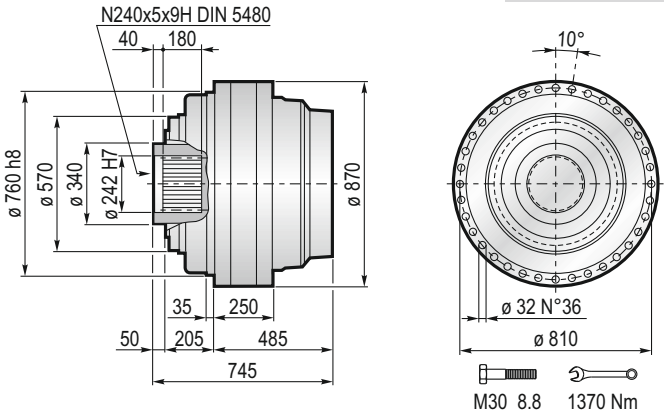
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

MC...400000

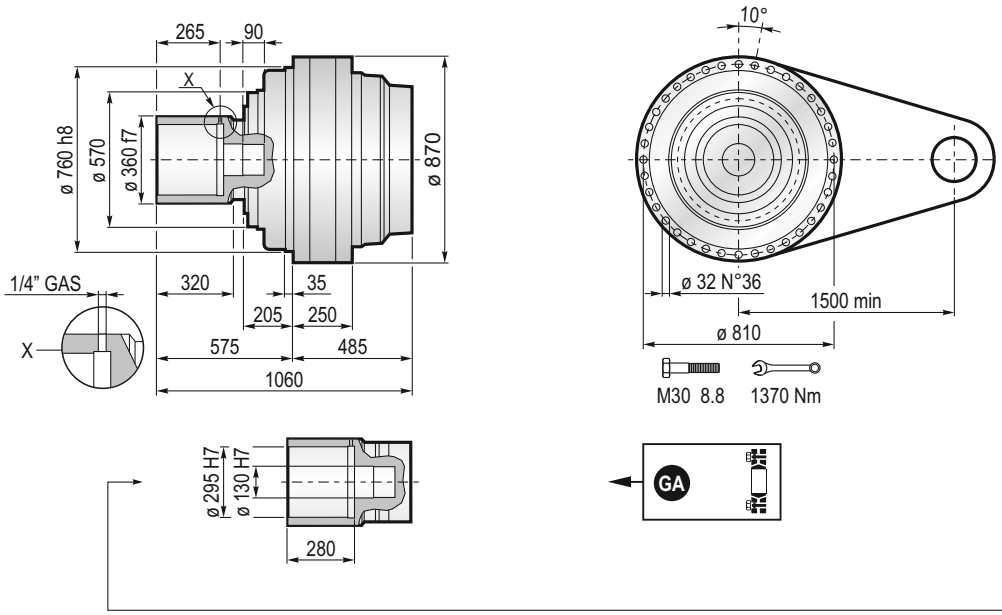




F... 400000

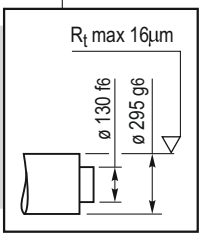


FS... 400000



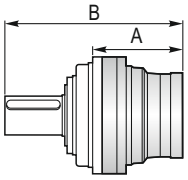
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 689 kNm

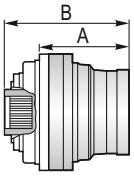


GA → 242

PL ...MC	A	B	RA	RB	EF	EDF
PL 400002	818	1468				
PL 400003	1000	1650				
PL 400004	1055	1744		•		
PL 400005	1153.5	1803.5	•	○	•	

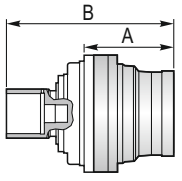


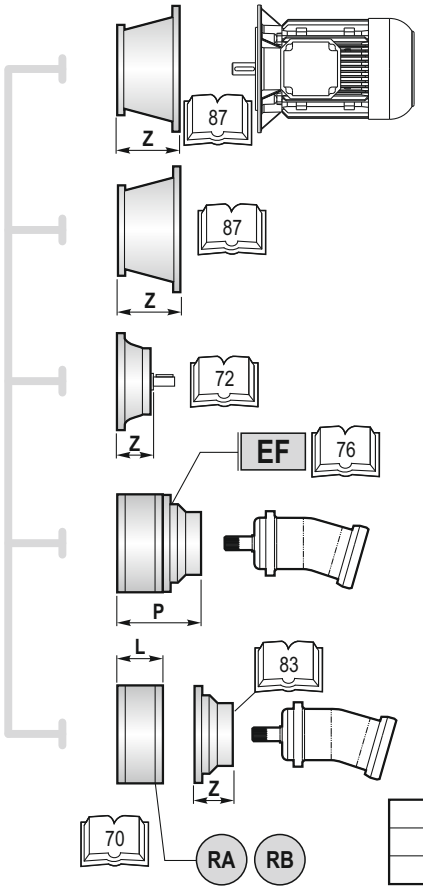
PL ...F	A	B	RA	RB	EF	EDF
PL 400002	818	1073				
PL 400003	1000	1255				
PL 400004	1055	1349		•		
PL 400005	1153.5	1408.5	•	○	•	



PL ...FS	A	B	RA	RB	EF	EDF
PL 400002	818	1393				
PL 400003	1000	1575				
PL 400004	1055	1669		•		
PL 400005	1153.5	1728.5	•	○	•	

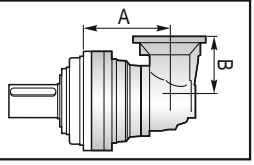
A+13.5	B+13.5	○



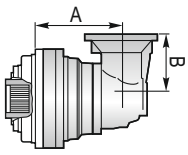


	L
RA	81
RB	125

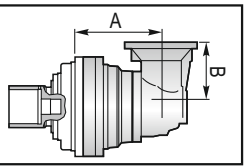
PLB ...MC	A	B	RA	RB	EF
PLB 400004	1002	315		•	
PLB 400005	1159	240		•	

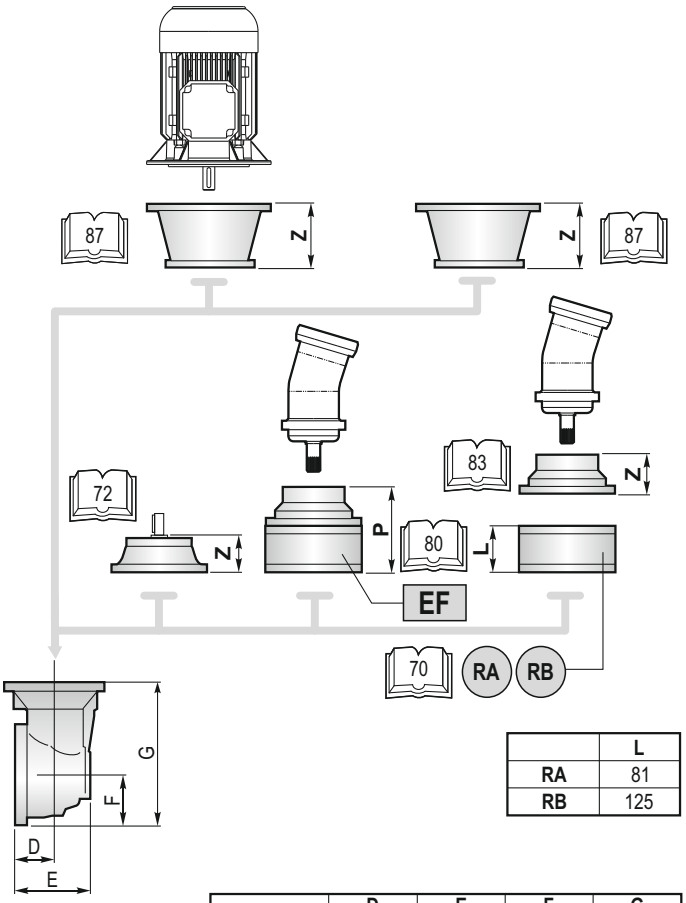


PLB ...F	A	B	RA	RB	EF
PLB 400004	1002	315		•	
PLB 400005	1159	240		•	



PLB ...FS	A	B	RA	RB	EF
PLB 400004	1002	315		•	
PLB 400005	1159	240		•	



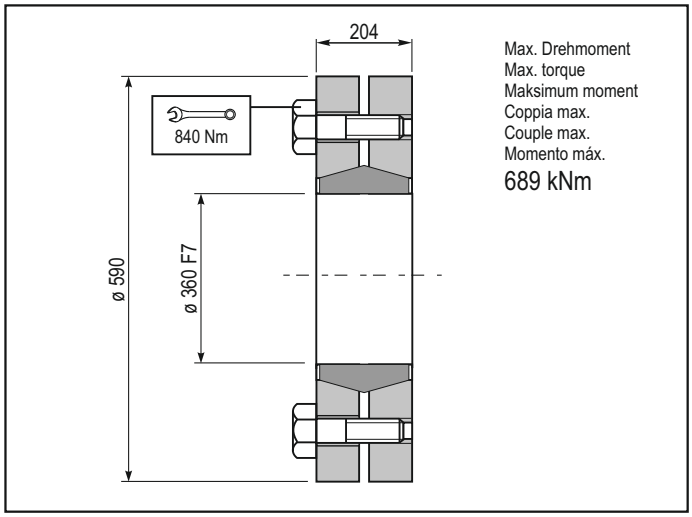


	L
RA	81
RB	125

	D	E	F	G
PLB 400004	88	256	235	550
PLB 400005	88	256	235	550

GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción



DE RADIALLAST (Fr)

In den nachstehenden Diagrammen ist die Radiallast un der Koeffizient K dargestellt und kann mit dem gewünschten Wert $n_2$xh verglichen werden.

EN RADIAL LOADS (Fr)

The following curves show the radial loads and the K factors to obtain the required $n_2$xh value.

TR RADYAL YÜKLER (Fr)

Aşağıdaki grafikler istenilen $n_2$xh değerinin elde edilmesi için gerekli olan radyal yükleri ve K faktörlerini göstermektedir.

IT CARICHI RADIALI (Fr)

Nei diagrammi seguenti sono riportati i carichi radiali e i coefficienti K per rapportarli al valore $n_2$xh desiderato.

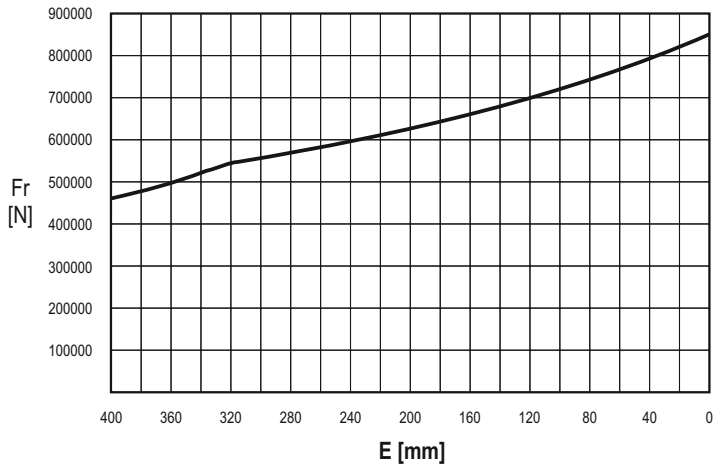
FR CHARGES RADIALES (Fr)

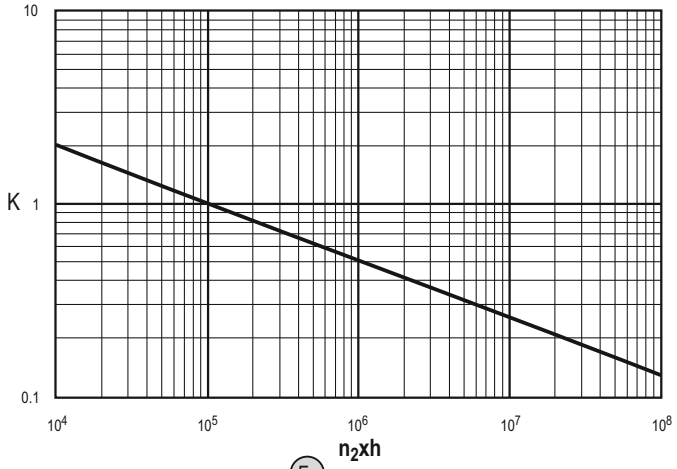
Dans les diagrammes suivants sont indiqués les charges radiales et les facteurs K de façon à obtenir la valeur $n_2$xh désirée.

ES CARGAS RADIALES (Fr)

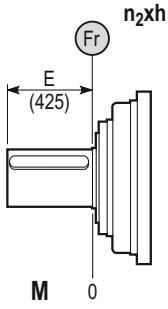
En los siguientes diagramas se indican las cargas radiales y los coefici-entes K para obtener el valor requerido $n_2$xh.

M





	n x h				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr • K			



DE AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

EN AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

TR EKSENEL YÜKLER (Fa)

Tabloda yer alan eksenel yük değerleri, çıkış tipine ve uygulamanın yük yönüne göre değişir.

IT CARICHI ASSIALI (Fa)

I valori dei carichi assiali indicati in tabella sono riferiti alle versioni e alla direzione di applicazione del carico.

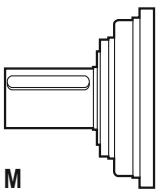
FR CHARGES AXIALES (Fa)

Les valeurs des charges axiales indiquées dans le tableau se réfèrent aux versions et à la direction d'application de la charge.

ES CARGAS AXIALES (Fa)

Los valores de las cargas axiales indicados en la tabla se refieren a las versiones y a la dirección de aplicación de la carga.

Fa [N]	M
←	110000
→	110000



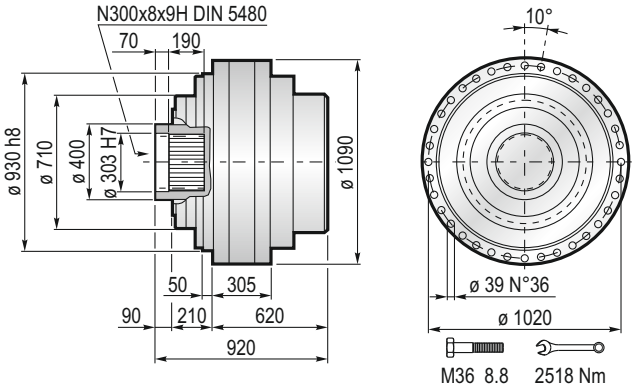
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 550001	160	100	3.84	648.4	583.7	508.2	459.0	3225	–	2900	2957	–
PL 550002	110	200	15.03 19.00	648.4 648.4	583.7 583.7	508.2 508.2	459.0 459.0	4022	–	3700	3757	–
PL 550003	93	1200	59.42 75.00 90.15 96.06 113.85	648.4 648.4 648.4 648.4 648.4	583.7 583.7 583.7 583.7 583.7	508.2 508.2 508.2 508.2 508.2	459.0 459.0 459.0 459.0 459.0	4216	–	3894	3951	–
PL 550004	70	2000	211.27 254.66 266.79 332.76 362.67 420.19 506.48 648.38	648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4	583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7	508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2	459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0	4275	–	3953	4010	–
PL 550005	49	2800	798.14 871.50 1050.47 1100.50 1214.84 1483.87 1600.73 1846.29 2082.20 2176.00 2398.76 2629.33 3046.40 3227.51 3722.61 3890.31 4700.79 5571.30	648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4 648.4	583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7	508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2 508.2	459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0 459.0	4291	–	3969	4026	–

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 550004	57	2500	276.91	648.4	583.7	508.2	459.0	4357	–	4035	4092	–
			295.03	648.4	583.7	508.2	459.0					
			349.67	648.4	583.7	508.2	459.0					
			448.27	648.4	583.7	508.2	459.0					
			531.28	648.4	583.7	508.2	459.0					
PLB 550005	50	2500	648.91	648.4	583.7	508.2	459.0	4397	–	4075	4138	–
			782.17	648.4	583.7	508.2	459.0					
			830.72	648.4	583.7	508.2	459.0					
			985.94	648.4	583.7	508.2	459.0					
			1113.90	648.4	583.7	508.2	459.0					
			1245.00	648.4	583.7	508.2	459.0					
			1426.00	648.4	583.7	508.2	459.0					
			1593.83	648.4	583.7	508.2	459.0					
			1869.12	648.4	583.7	508.2	459.0					
			1960.90	648.4	583.7	508.2	459.0					
			2396.17	648.4	583.7	508.2	459.0					
			2839.90	648.4	583.7	508.2	459.0					
			3025.79	648.4	583.7	508.2	459.0					
			3586.13	648.4	583.7	508.2	459.0					

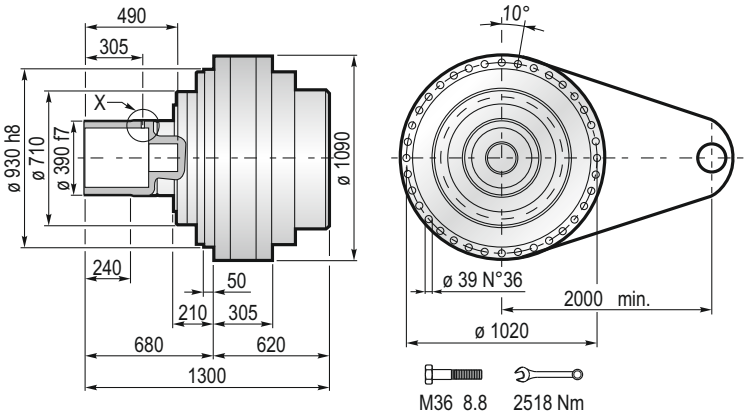
⚠

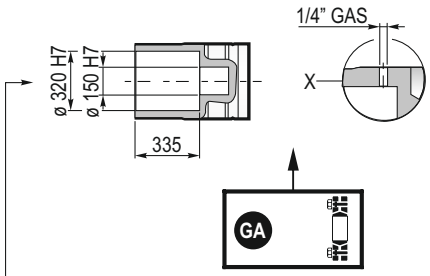
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

F... 550000



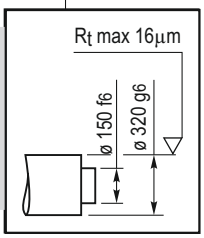
FS...550000





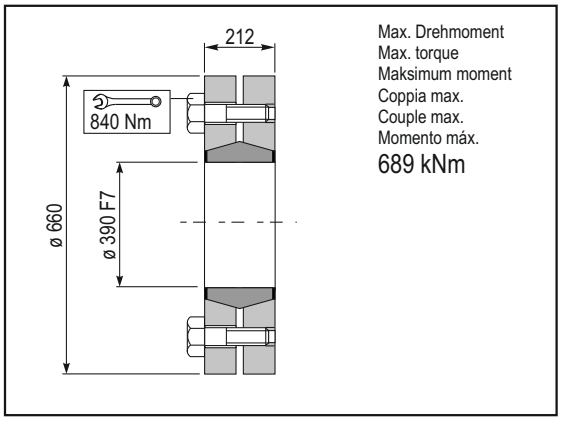
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 814.5 kNm

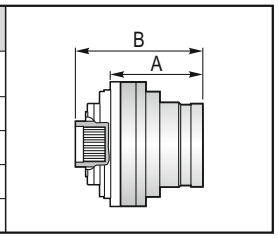


GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

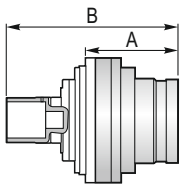


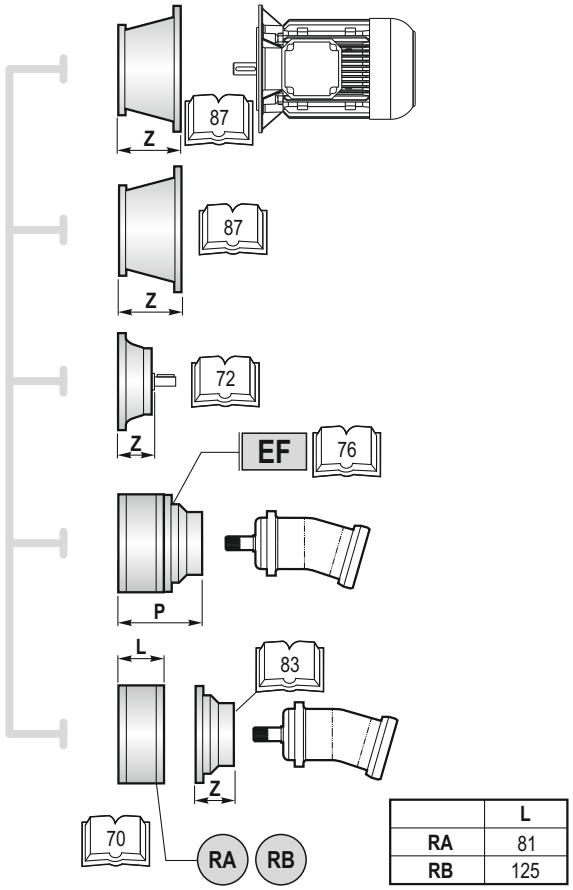
PL ...F	A	B	RA	RB	EF	EDF
PL 550002	903.5	1203.5				
PL 550003	1124.5	1424.5				
PL 550004	1231.5	1531.5		•		
PL 550005	1303	1603	•	○	•	



PL ...FS	A	B	RA	RB	EF	EDF
PL 550002	903.5	1583.5				
PL 550003	1124.5	1804.5				
PL 550004	1231.5	1911.5		•		
PL 550005	1303	1983	•	○	•	

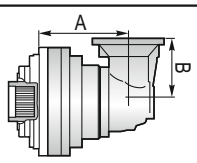
A+13.5	B+13.5	○



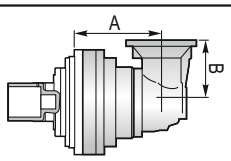


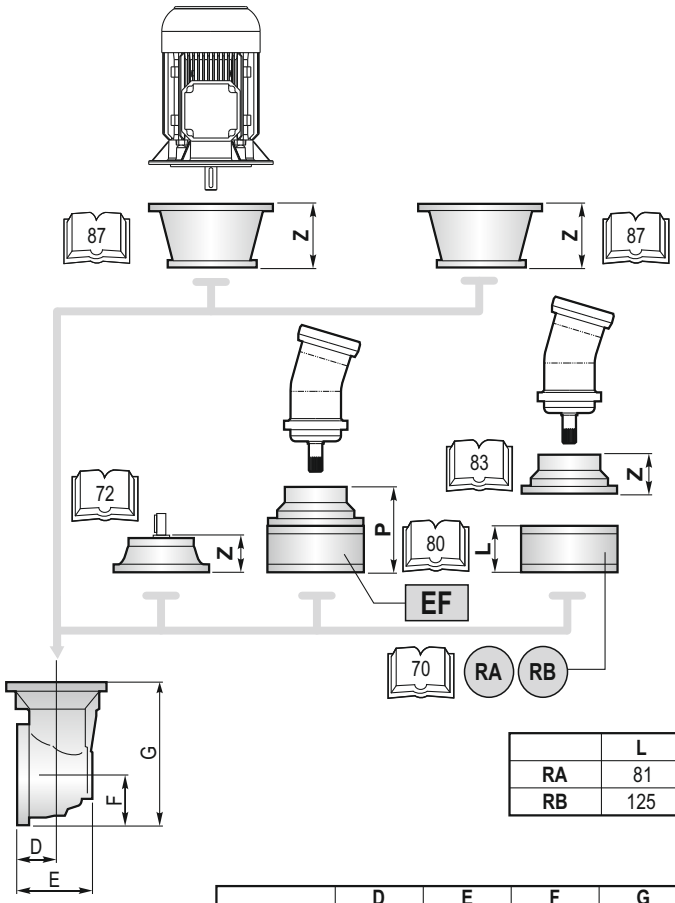
	L
RA	81
RB	125

PLB ...F	A	B	RA	RB	EF
PLB 550004	1305.5	315		•	
PLB 550005	1366.5	315		•	



PLB ...FS	A	B	RA	RB	EF
PLB 550004	1305.5	315		•	
PLB 550005	1366.5	315		•	





	L
RA	81
RB	125

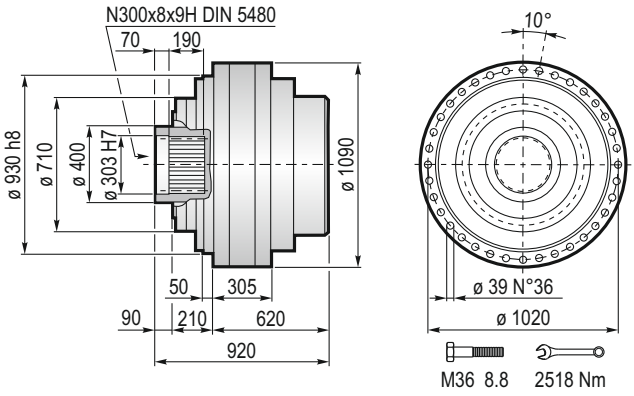
	D	E	F	G
PLB 550004	88	256	235	550
PLB 550005	88	256	235	550

	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PL 660001	160	100	3.84	744.9	670.7	583.7	550.8	3225	–	2900	2957	–
PL 660002	110	200	14.13 19.00	744.9 744.9	670.7 670.7	583.7 583.7	550.8 550.8	4065	–	3740	3797	–
PL 660003	93	1200	55.88 75.00 96.06	744.9 744.9 744.9	670.7 670.7 670.7	583.7 583.7 583.7	550.8 550.8 550.8	4259	–	3936	3991	–
PL 660004	70	2000	198.69 266.79 306.60 362.67 411.67 482.89 537.92 648.38 768.46	744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9	670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7	583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7	550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8	4318	–	3993	4050	–
PL 660005	49	2800	1026.58 1214.84 1326.50 1496.00 1616.87 1736.35 1873.78 1958.22 2127.00 2218.92 2403.72 2779.25 3046.40 3500.95 3899.91 4610.73 5571.30	744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9 744.9	670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7 670.7	583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7 583.7	550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8 550.8	4334	–	4009	4066	–

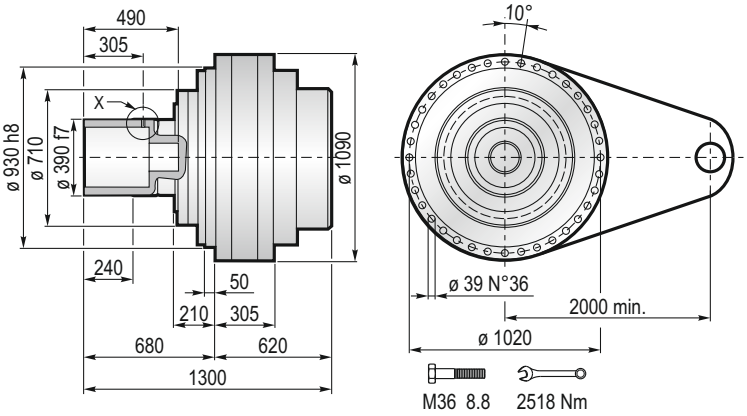
	Pt	n_{1max}	i_{ges}	Mc [kNm]				~ Kg				
				n_2 x h	n_2 x h	n_2 x h	n_2 x h					
	[kW]	[min^{-1}]		10.000	20.000	50.000	100.000	M	P	F	FS	CPC
PLB 660005	50	2500	610.27	744.9	670.7	583.7	550.8	4440	–	4115	4172	–
			735.60	744.9	670.7	583.7	550.8					
			819.42	744.9	670.7	583.7	550.8					
			927.24	744.9	670.7	583.7	550.8					
			987.70	744.9	670.7	583.7	550.8					
			1113.90	744.9	670.7	583.7	550.8					
			1246.00	744.9	670.7	583.7	550.8					
			1426.00	744.9	670.7	583.7	550.8					
			1500.69	744.9	670.7	583.7	550.8					
			1692.44	744.9	670.7	583.7	550.8					
			1960.90	744.9	670.7	583.7	550.8					
			2166.62	744.9	670.7	583.7	550.8					
			2510.29	744.9	670.7	583.7	550.8					
			3025.79	744.9	670.7	583.7	550.8					
			3586.13	744.9	670.7	583.7	550.8					

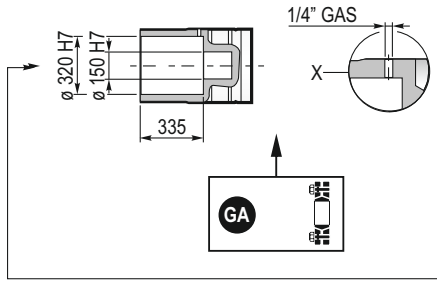
$$M_{max} = M_C \text{ (}n_2 \text{ x h = 20.000)} \times 1.3$$

F... 660000



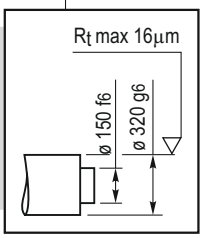
FS...660000





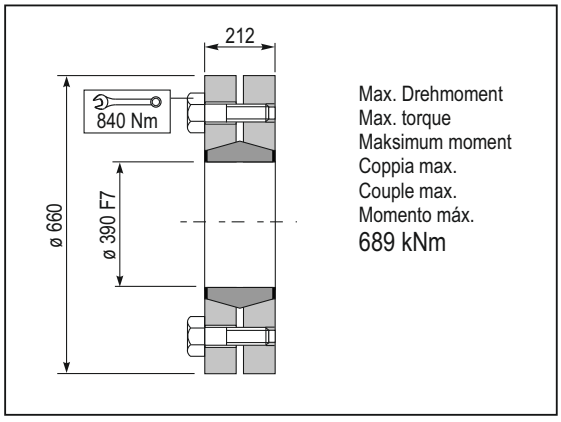
Das dargestellte, maximale Drehmoment gilt nur mit von Planetary Drives gelieferter Schrumpfscheibe
The maximum torque indicated is valid only with shrink discs supplied by Planetary Drives
Belirtilen maksimum moment sadece konik sıktırma ile verilen Planet dişli ünitesi için geçerlidir
La coppia massima indicata è valida solo con calettatori forniti Planetary Drives
Le couple maximal indiqué n'est valable qu'avec les frettes de serrage fournis par Planetary Drives
El momento máximo indicado sólo es válido con discos de contracción suministrados por Planetary Drives

M_{max}= 814.5 kNm

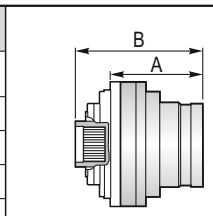


GA

Schrumpfscheibe / Shrink disc
Konik sıktırma / Giunto di attrito
Frette de serrage / Disco de contracción

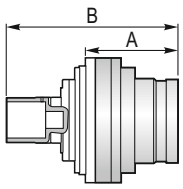


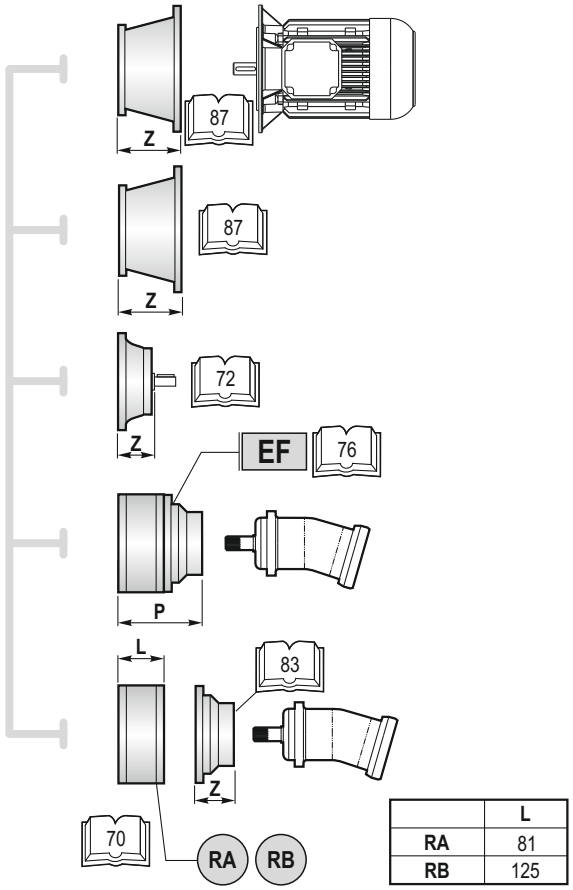
PL ...F	A	B	RA	RB	EF	EDF
PL 660002	903.5	1203.5				
PL 660003	1124.5	1424.5				
PL 660004	1231.5	1531.5		•		
PL 660005	1303	1603	•	○	•	



PL ...FS	A	B	RA	RB	EF	EDF
PL 660002	903.5	1583.5				
PL 660003	1124.5	1804.5				
PL 660004	1231.5	1911.5		•		
PL 660005	1303	1983	•	○	•	

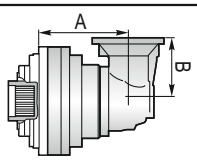
A+13.5	B+13.5	○



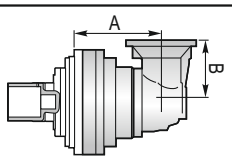


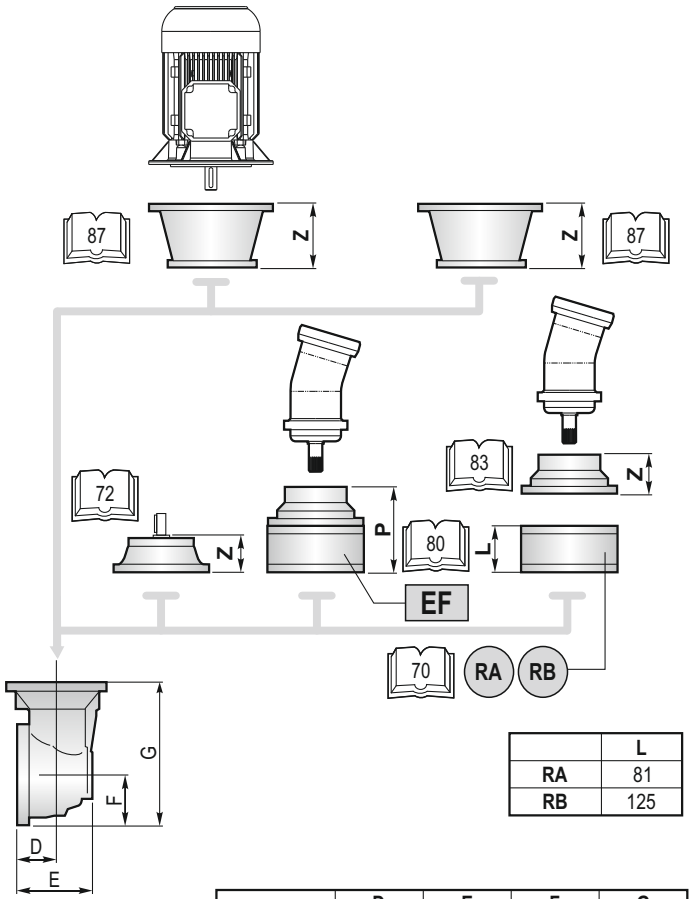
	L
RA	81
RB	125

PLB ...F	A	B	RA	RB	EF
PLB 660005	1366.5	315		•	



PLB ...FS	A	B	RA	RB	EF
PLB 660005	1366.5	315		•	





	L
RA	81
RB	125

	D	E	F	G
PLB 660005	88	256	235	550

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