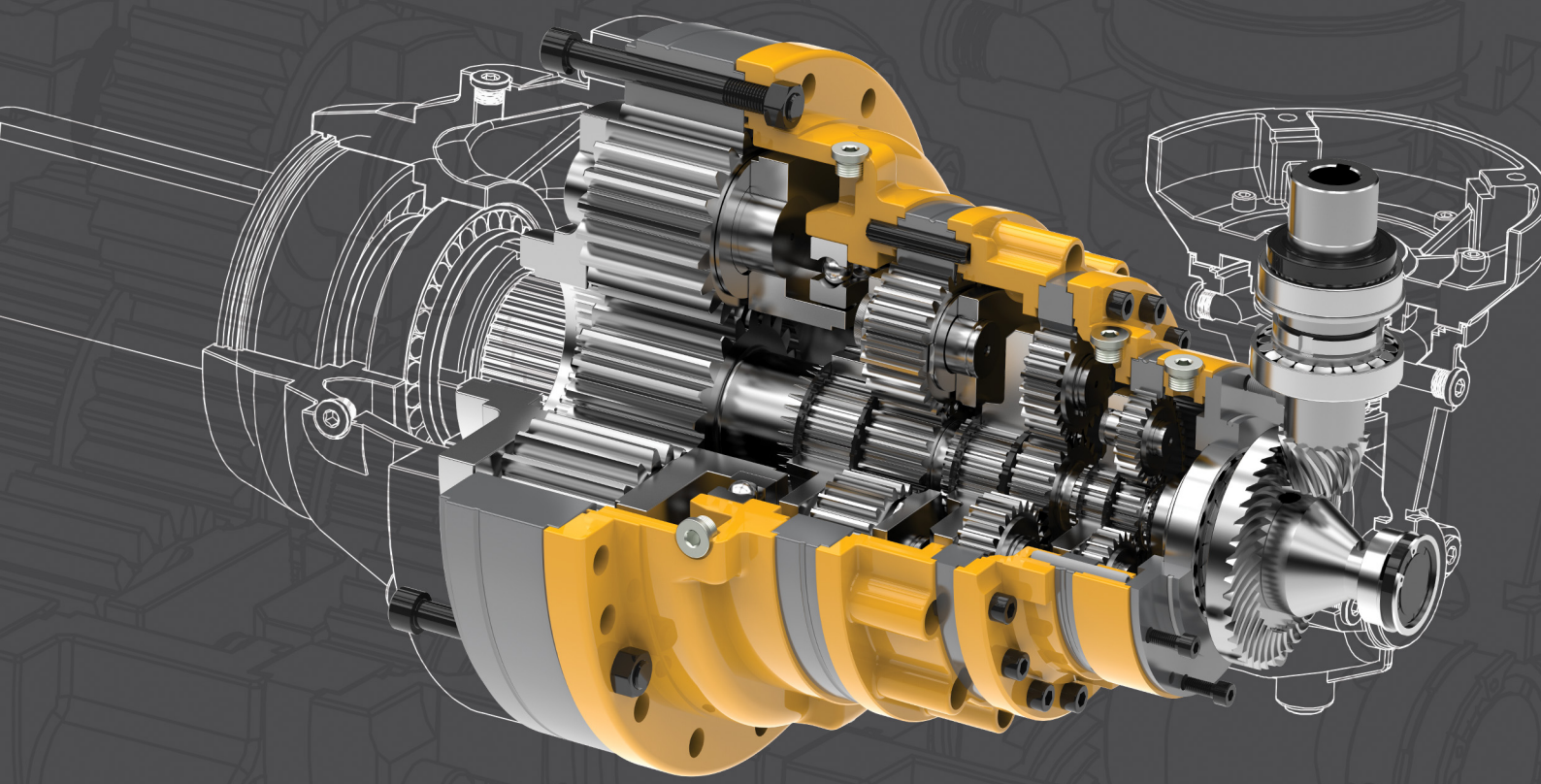
pds

Planet Redüktör



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Semboller — Symbols — Symbole

Sembol / Symbols	Birim / Unit	Tanım	Description	Beschreibung
C_{rt}		Enerji değişimi sabiti	Energy exchange coefficient	Warmeaustauschcoeffizient
$k_{r,1}, k_{r,2}$		Radyal yük düzeltme sabiti	Corrective coefficients of the shafts	Korrecturkoeffizient querlast am eingang/Ausgang
$f_{h,1}, f_{h,2}$		Süre faktörü	Energy exchange coefficient	Warmeaustauschcoeffizient
$F_{r,1}, F_{r,2}$	N	Giriş ve çıkış milleri üzerinde müsade edilen radyal yük	Permitted radial load on the input output shafts	Zulassige Querlast Auf Eingangs Ausgangswelle
$F_{a,2}$	N	Çıkış mili üzerinde izin verilen eksenel yük	Permitted axial lod on output shaft	Zulassige Acshlast Auf Ausgangswelle
η		Dinamik verim	Dynamic efficiency	Wirkungsgrad
h_r	h	İstenen süre	Duration required	Verlangte Dauer
f_s		Servis Faktörü	Service factor	Betriebsfactor
i		Çevrim Oranı	Reduction Ratio	Untersetzungsverhaltnis
i_r		İstenen çevrim oranı	Reduction ratio required	Verlangtes Untersetzungsverhaltnis
K_t		Isı faktörü	Temperture factor	Temperaturfaktor
K_v		Hız faktörü	Speed factor	Geschwindigkeitsfactor
n_1	min-1	Giriş devri	Input speed	Winkelgeschwindigkeit am Eingang
n_{1max}	min-1	Azami giriş devri	Maximum input speed	Max. Winkelgeschwindigkeit am Eingang
n_2	min-1	Çıkış devri	Output speed	Winkelgeschwindigkeit am Ausgang
n_{2req}	min-1	Yaklaşık devir sayısı	Equavalent output speed	Verlangte geshwindigkeit am Ausgang
P_1, P_2	kW	Giriş/çıkış güçleri	Input/output power	Leistung am Eingang Ausgang
P_t	kW	Isıl güç	Termal Power	Warmeleistung
P'_t	kW	Düzeltilmiş ısıl güç	Corrected termal power	Korrigierte Warmeleistung
q	l/min	Yedek soğutucu için yağ debisi	Oil flow rate for auxilary cooling device	Öldurchsatz im Hilfskühlkreislauf
$t_1, t_2 \ldots t_i$		Yük altında kalış yüzdesi	Duration percentage of load level	Prozentuale dauer der stufen vom Lastzyklus
T_2	Nm	İletilebilecek çıkış momenti	Transmisible output torque	Übertragbares drehmoment am Ausgang
T_{2c}	Nm	Düzeltilmiş çıkış momenti	Corrected output torque	Korrigiertes drehmoment am Ausgang
T_{2max}	Nm	Azami çıkış momenti	Maximum output torque	Max. Drehmoment am ausgang
T_{2n}	Nm	Ortalama çıkış momenti	Nominal output torque	Nenndrehmoment am Ausgang
T_{2r}	Nm	İstenilen çıkış momenti	Required output torque	Verlangtes drehmoment am ausgang
T_{2req}	Nm	İstenilen eşdeğer çıkış momenti	Required equivalent output torque	Aquivalented Drehmoment am Ausgang
F_f	Nm	Fren momenti	Braking torque	Bremsdrehmoment
t_a	°C	Ortam sıcaklığı	Ambient temperature	Umgebungstemperatur
t_r	°C	Çalışma sıcaklığı	Operating temperature	Betriebstemperatur
t_s	°C	Soğutucu çıkış hattındaki sıcaklık	Temperature of oil on outlet side of cooling device	Öltemperature am ausgang vom kühlkreislauf

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Teknik Özellikler

Planet redüktörlerin güç transferinde kullanılması, basit yapı ve küçük alanlarda uygulama talepleri için verilebilecek en modern cevap niteliğindedir. Planet Dişli Sistemli redüktörler her türlü makine ve techizat tahriki için dizayn edilmiştir. Planet dişli kutuları direk veya dolaylı olarak bir elektrik veya hidrolik motora akuple edilebilir. Planet dişli kutuları her çeşit uygulamada ister endüstriyel, ister mobil, sabit veya hareketli sahada olsun; kimya sanayii, makina sanayii, tarım, orman, madencilik, inşaat, denizcilik sektörü, rüzgar jeneratörleri ve enerji alanlarında başarı ile kullanılmaktadır.

Technical Characteristics

The use of planetary gear unıts in the field of power transmission is the modern answerto the demand for compactness , constructivesimplicity and product reliability.The Planetary drive Systems gearboxes are designed for transmitting power inside operating devices. Gear boxes can be connected directlyor indirectly to either an electric motor or hydraulic motor. The planetary gearboxes are used for many different type of applications ,both industrial or mobile some of which are mechanical industry , the chemical and plastic sindustry , the food industry , building and constructions ,mining , agriculture and foresty,transporting and lifting , marine sector , windgenerators and energy.

Technische Beschreıbung

Im Vergleich zum stirnradgetriebe , bei dem nurein Zahn die Krafte übertragt, wird das momentam Zentrairad des platengetriebes auf drei Zahneingriffe aufgetilt. Diese Konstruktion fuehrtzu kleinen Getriebeabmessungen, kompakter Bauweise und einem geringen Eigengenwicth. Die planetengetriebe von Planetary drive Systems werden für die Leistungsübertragung im innerenvon Arbeitsmaschinen konzipiert und gefertigt.Sie können direkt oder indirekt an einen Elektromotor oder einen Hydraulikmotor angeschlossen werden. Die Planetengetriebe werden sowohlin der industrie ,als auch im Fahrzeugbau in verschiedenen Anwendungen eingesetzt, darunter. Maschinenbau, chemischeund Kuntstsoff verarbeitende Industrie , Lebensmittelindustrie, Bauwirtschaft, Bergbau, Land-und-Forstwirtschaft, Tranport-und Hubtechnik, Schiffbau, Windkraftanlangen.

Dizayn Özellikleri

* Yüksek moment değerleri
* M ve FV modellerinde konik seri rulmanların kullanılması ile yüksek eksenel ve radyal yük taşıma kapasiteleri.
* Yüksek Verim
* Dişli kutuları içinde parçalar frezeli geçişler kullanılarak yüksek emniyetli olarak yapılmaktadır.
* Planet dişlileri kendi kendini merkezleyen taşıyıcılar ile montaj edilerek, planet dişlileri arasında en uygun yük dağılımı sağlanmaktadır.

More Design Features

* High torque density
* High overhang and axial load capacity due to heavy duty tapered rollerbearings featured on M and FV versions.
* High Efficiency
* Inner parts are coupled to each others with splined connectors rather than keys.
* Planetary gears mounted onto selfcentering carriers to ensure the most even load distribution among planetary gears.

Mehr Design

* Hohes übertragbares
* Hohe Belastungskapazitat für Radial-undAxialkrafte an den Abtriebswellen , dank desEinsatzes von Kegelrollenlager bei den Versionen M und FV.
* Hohe Wirkungsgrade
* Verbindungen zwischen den inneren Organen mittels Nut-profilen ,es werden keine Passfedern verwendet.
* Untersetzungstufen mit schwimmenden Planetenrad-tragern zur Belastungsverteilung auf die planetenrader.

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Sembollerin Açıklaması

T_{2n}(Nm)

Nominal Çıkış Momenti
Bu değer dişli kutusunun emniyetli olarak sabit yük ve emniyet katsayısı 1 ve farklı ömür saatleri ile nakledebileceği hesaplanan moment değeridir. Bu değerler dişliler için ISO DP 6336 ve rulman için ISO 281 standartlarına göredir.

T_2(Nm)

Çıkış Momenti
Giriş gücüne göre dişli kutusunun çıkış mili üzerinde verebileceği net moment değeridir. Bu değer 10000 saat ömür giriş gücü emniyet katsayısı ve dişli kutusu verimi göz önüne alınarak hesaplanır.

$T_{2max.}$(Nm)

Maksimum Çıkış Momenti
Dişli kutusuna uygulanabilecek yük altında kalan elemanlarda kalıcı bir hasar bırakmadan maksimum moment değeridir.

T_{2r}(Nm)

İstenilen Çıkış Momenti
Redüktörün çalışması sırasında istenilen çıkış momenti.

Explanation of Symbols

T_{2n}(Nm)

Nominal Output Torque
This is the torque output the gearbox candeliver safely, based on; uniform loadingand safety factor f_s= 1 , and with different theoretical life times .T_{2n} (Nm) values are incompliance with following standarts; ISO DP 6336 for gears ISO 281 for ISO281 for bearings.

T_2(Nm)

Output Torque
This is the net torque delivered to the out-put shaft ,with installed power P1, fs safetyfactor which will yield a theoretical lifetime of 10000 hours . This torque value takes gearbox efficiency into consideration.

$T_{2max.}$(Nm)

Maximum Output Torque
It is maximum torque value applicable in reduction gear output for short lengths of time or for occacional peaks,without any permanent damage to the most stressed elements.

T_{2r}(Nm)

Required Output Torque
It is the value of output torque one intends applying to the reduction gear based on the operating data of the application.

Erklärung der Symbole

T_{2n}(Nm)

Nominales Ausgangsdrehmoment
Ist das vom Getribe am Abtrieb übertragene Drehmoment mit gleichmabiger Dauerbelastung und Sicherheitsfaktor f_s=1 undmit unterschiedlichen Laufzeiten. Die WerteT_{2n} werden den folgenden Normen gemabgeprüft. ISO DP 6336 für ZahnraderISO 281 für Lager.

T_2(Nm)

Ausgangsdrehmoment
Ist das an der Abtriebswelle des Getriebemotorsübertragene Drehmoment bei gleichmabiger Dauerbelastung und einem ,aus den Tabellen der technischen Daten in bezug auf eine Dauervon 10000 Std.resultierenden Sicherheitsfaktor fs.

$T_{2max.}$(Nm)

Maxsimales Ausgangsdrehmoment
Dabei handelt es sich um den Wert vom Drehmoment,das maximal am Ausgang des platengetriebes für kurze Zeit oder gelegentliche Spitzen angelegt werden kann, ohne dass zu einer dauerhaften Schadigung der am starksten Belasteten Bautelie führt.

T_{2r}(Nm)

Verlangtes Ausgangsdrehmoment Dabei handelt es sich um den Wert vom Ausgangdrehmoment,das an das Planetengetriebeangelegt werden soll. Der Wert basiert auf den Funktionsdaten der Anwendung.

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Sembollerin Açıklaması

T_{2c}(Nm)

Düzenlenmiş Çıkış Momenti
Servis faktörü ve uygulama göz önüne alınarak hesaplanan düzeltilmiş moment değeri.

n_1[min-1]

Giriş Devri
Dişli kutusuna bağlanan motorun devri veya giriş mili üzerindeki devir.

n_2[min-1]

Çıkış Devri
Giriş hızı ve dişli kutusu tahvil oranı ile bulunan çıkış mili gerçek devri.

i

Tahvil Oranı
Giriş devri ile çıkış devri arasındaki gerçek oranı gösterir.

Tahvil oranları her bir dişli grubu için tablolarda verilmiştir.

Explanation of Symbols

T_{2c}(Nm)

Corrected Output Torque
It is the calculated on the basis of torque required and on the service factor and is the value on the basis of which the reduction gear is chosen suitable for a given application.

n_1[min-1]

Input Speed
It is the speed of motor connected to the reducer input, or in the case of an indirect connection ,of gearbox input shaft.

n_2[min-1]

Output Speed
It is the speed of gearbox's output shaft, asa function of the input speed n_1 and the actualreduction ratio İ.

i

Reduction Ratio
It indicates the actual ratio between the reduction gear's input speed n_1 and output speed n_2.

$$i = \frac{n_1}{n_2}$$

The reduction ratios available are given in the technical data table for each reduction gear size. Other reduction ratios can be obtained onrequest.

Erklärung der Symbole

T_{2c}(Nm)

Korrigiertes Ausgangsdrehmoment
Dieser Wert wird aus dem Betriebsfaktor errechnet und stellt den Ausgangswert für die Auswahl der Untersetzung dar,die sich für die jeweiligieAnwendung eignet.

n_1[min-1]

Eingangsgeschwindigkeit
Dabei handelt es sich um die Geschwindigkeit vom Motor, der am Eingang vom Planetengetriebe angeschlossen ist oder bei indirektem Anschluss, von der Eingangswelle des Platengetriebes.

n_2[min-1]

Ausgangsgeschwindikeit
Dabei handelt es sich um die Geschwindigkeit der Ausgangswelle vom planetengetriebe, diesich aus der Eingangsgeschwindigkeit n1 und dem effektiven Untersetzungsverhaltnis i ergibt.

i

Reduction Ratio
Dabei handelt es sich um das effektive Verhaltnisvon Eingangsgeschwindigkeit n_1 vom planetengetriebe.

Die verfügbaren Untersetzungsverhaltnisse sindfür jede Gröbe vom Planetengetriebe in der Tabellemit den technischen Daten zusammengestellt. Untersetzungsverhaltnisse erhaltlich.

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Sembollerin Açıklaması	Explanation of Symbols	Erklärung der Symbole

n_{1max}[min-1]

Düzenlenmiş Çıkış Momenti
Servis faktörü ve uygulama göz önüne alınarak hesaplanan düzeltilmiş moment değeri.

n_{1max}[min-1]

Maximum Input Speed
It indicates the maximum permitted input speed for short lengths of time or intermittently : the reduction gear's input speed is limited by the peripheral speed of the gear sby the bearings and by the seals.

n_{1max}[min-1]

Maximale Eingangsgeschwindigkeit
Dabei handelt es sich um die maximal zulassige Eingangsgeschwindigkeit für kurze Dauer oder bei unterbrochemen Betrieb. Die Eingangsgeschwindigkeit vom planetengetriebe ist durch die Peripheriegeschwindigkeit von Zahnradern ,Lagern und Dichtungenbeschrankt.

$f_{h,1}$,$f_{h,2}$

Giriş/Çıkış Süre Faktörü
Giriş/çıkış devri ile arzu edilen süre çarpımıdır.

$f_{h,1}$,$f_{h,2}$

Input/output Duration Factor
It is the product of the input/output speedfor the duration required.

$f_{h,1}$,$f_{h,2}$

Zeitfaktor Eingang/Ausgang
Dabei handelt es sich um das Product aus der Eingang/Ausgangsgeschwindigkeit und der verlangten Zeitdauer.

$$f_{h1} = n_1 \,.\, h_1 \qquad f_{h2} = n_2 \,.\, h_r$$

P_1 (kW)

Giriş Gücü
Direk veya dolaylı veya ek nakil parçaları ile bağlı motor gücü.

P_1 (kW)

Input Power
It is the power applied in input to the reduction gear by either a direct or indirect connection (with additional transmission parts)of a motor.

P_1 (kW)

Eingangsleistung
Dabei handelt es sich um die Leistung , die am Eingang vom Planetengetriebe über einen direkt oder indirekt (mit weiteren Übertragungsorganen) angeschlossenen Motor anliegt.

$$P_2 = \frac{T_{2r} . N_2}{9559}$$

η

Verim
Giriş ve çıkış güçleri arasında birimsiz bir sabittir.

η

Efficiency
It is a dimensionless coefficient given by the ratio between the output power P_2 and input power P_1 ;

η

Wirkungsgrad
Dabei handelt es sich um einen dimension-slosen Wert, der sich aus dem Verhaltnisder Ausgangsleistung P2 zur Eingangsleistung P1 ergibt;

$$\eta = \frac{P_1}{P_2}$$

Planet sistemlerde bu değer her bir kademe için 0,97-0,98 civarındadır.

It is usually high in planetary transmission saverage values are 0,98-0,97 for each reduction stage.

Der Wirkungsgrad des planetengetriebes lieght pro Planetenstufe bei 98% d.h. Beieinem dreistufigem.Getriebe η gesamt= 0,98x0,98x0,98=0,94. Dieser Anhaltswertnimmt beim Betrieb mit hohen Geschwindigkeiten sowie bei Getriben in der Winkelausführung ab.

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Sembollerin Açıklaması — Explanation of Symbols — Erklärung der Symbole

f_s

Servis Faktörü
Servis faktörü tahrik edilecek ekipman için bir çarpım sabitidir. Aşırı yüklemelerin duruş ve kalkış anlarında meydana getirdiği şoklar bu faktör ile hesaplanarak dikkate alınmalıdır. Aşağıdaki tablo bu değerleri çalışma durumuna göre vermektedir.

f_s

Service Factor
Sevice factor fs is a multipication coefficient introduced into formula for selecting the drive .This factor takes into account the applicationload conditions.The effect of shocks generated by intermittentmotion and overloads during starts and stops must be calcutated, intoducing a service factor f_s. Below table indicates the service factors fs in relation to the type of operation.

f_s

Betriebsfactor
Die stöbe die auf Unregelmassigkeit des Betriebes zurückzuführen sind,sowie die Spitzenbelastungen wahrend des Einschaltoder Bremsvorgangs werden mittels des Betriebsfaktors berück-sichtigt. Die tabelle zeigt die Betriebsfaktoren fseingestuft nach Einsatzbedingungen.

	Yük Sınıflaması / Load Classification / Belastungskennwert								
	U Düzgün / Uniform / Gleichmassig			**M** Orta / Moderate / Mittelschwer			**H** Ağır / Heavy/ Schwer		
Saat - Gün / Hours - Day/ Stunden pro Tag									
Duruş - Kalkış	0 - 4	4 - 8	8 - 24	0 - 4	4 - 8	8 - 24	0 - 4	4 - 8	8 - 24
Start - Time									
Starts pro Stunde									
< 5	0,85	1,0	1,5	0,95	1,3	1,9	1,25	1,9	2,4
5-50	1,0	1,0	1,7	1,15	1,6	1,9	1,6	2,1	2,5
> 50	1,3	1,7	1,9	1,55	1,9	2,2	1,9	2,5	2,9
	f_s								

$F_{a,2}$

Çıkış Eksenel Yük
Çıkış mili yatağı üzerinde itme veya çekme yönünde bir eksenel yüke izin verilmiş olup bunun eksantrik olmaması gerekmektedir.

$F_{a,2}$

Output Axial Load
An axial load, incomig or outgoing,is allowed on all types of output support providedit is not applied eccentrically in relation to the output shaft.

$F_{a,2}$

Achslas am Ausgang
Bei anliegen von Achslast am Lager am Ausgans ist das Anliegen einer Achslas in eingehende oder ausgehende Richtung zulassig, vorausgesetzt, die Last liegt nicht aubermitting bezogen aur die Augangswelleanliegt.

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P_t (kW)

Termal Güç

Termal güç sürekli çalışma durumunda, çarpmalı yağlama ile redüktör yağ sıcaklığı 90°C yi aşmayacak şekilde transfer edebileceği maksimum güçtür. Redüktör teknik sayfalarındaki değerler;

* Devamlı çalışma
* Giriş devri 1500 d/d
* Yağ ISO 150
* Ortam sıcaklığı 20°C
* Dişli kutusu yatay şekilde
* Soğutma düşünülmeksizin tablolanmıştır.

Kullanılmak istenen güç termal gücü aşıyor ise bu durumda soğutmaya ihtiyaç duyulur.
Pt değerleri ayaklı tiplerde %15 fazla alınabilir. (PD 111 - PD 113 tiplerinde)

P_t (kW)

Termal Power

The termal power is the maximum power the planetary gearbox can transmit in continuous duty with oil splash lubrication and without exceeding an oil temperature of 90°C. The Ptvalues shown in the single product technical card indicate the maximum values at the belowconditions.

* Continuous duty
* Input speed 1500 min^{-1}
* Oil ISO VG 150
* Ambient temperature 20°C.
* Gearbox in horizontal position
* Not subject to air recirculationIf the required power exceeds the values indicacated in the gearbox tecnical information , a lubricant cooling system is needed. Pt value can be given %15 higher from given value for foot version planetary gearboxes from PD111- PD 113 serie

P_t (kW)

Termal Power

WarmeleistungEs handelt sich um die maximale Leistung,die das getriebe bei Dauerbetrieb und normaler Schmierweise übertragen kann,ohne dab die Öltemperatur von 90°C überschritten wird.Die in den jeweiligen technischen Datenblatternaufgefführten Pt werten sind maximalwerte unterden folgenden Betriebsbedingunden;

* Dauerbetrieb ohne Unterbrechungen
* Drehzahl n1 = 1500 min^{-1}
* Öl ISO 150
* Umbgebungstemperature 20°C
* Waagerechte Einbaulage
* Nicht der Luftzirkulation ausgesetzt

Solte die geforderte Leistung die im technischen Datenblatt das Getriebes aufgeführten Werte übersteigen wird ein Schmiermittel Kühlsystem eforderlich.Der $P_t$wert der getriebe in Faussaussfuehrung kann um 15% erhöht werden PD111- PD 113 serie

Giriş gücü müsade edilen ısıl gücü aşıyor veya dişli kutusu ufak bir hacim içinde çalışıyor ve hava akışı çok zayıf ise, bir yağ soğutma düzeneği tavsiye edilir.

If the power applied in input to the gearbox exceeds the permitted thermal power or if the gearbox is working inside a small compartment or with only a small change of air,we suggest an oil recirculation type cooling device.

Falls die am Eingang vom Planeten-getriebe anliegende Leistung die zulassige warmeleistung übersteigt oder falls das Planetengetriebe in einem Fach mit reduzierten Abmessungen oder schlecter Luftzirkulation montiert wird, muss eine Olkühlung installiert werden.

F_{r1},F_{r2}

Giriş/çıkış Radyal Yük

Giriş ve çıkış milleri üzerindeki radyal yüklerin her bir tip planet redüktör bilgi kartındaki değerden daha küçük veya eşdeğer olduğunu görün. Eğer radyal yük listedeki değerden büyük ise redüktör giriş/çıkış mil tipini, büyüklüğünü veya rulman aranjmanını değiştirmek gerekir. Giriş ve çıkış miller üzerindeki radyal yükleri tanımlamak;

F_{r1},F_{r2}

Input/output Radial Load

Check that radial loads exerted on input and output shafts are lower than or equal to values indicated in the tables on gearbox technical charts for each type of gearbox. In case they are greater the indicted value,change either gearbox output version,gearbox size or systembearing arrangement .
To check proceed as follows ;Define radial loads F_{r1} at input and F_{r2} at output.

F_{r1},F_{r2}

Querlast am Eingang/Ausgang

Überprüfen,ob die auf die Antriebs-und Abtriebswelleneinwirkenden Radialkrafte unter den Wertendie in den entsprechenden Tabellen der technischen Eingenschaften oder in den Diagrammen fürjede Getriebebauform angegeben werden liegen ,oder gleichwertig sind. Erhalt man bei dieser Kontrolle ein negatives ergebnis mub man die Abtriebsversion des Getriebes für diese Baugröben wodiese Möglichkeit vorgesehen ist andern,die Getriebebaugröbe wechsein,oder die Last durch anderweitige Mittel stützen.Für die Durchführungdieser Kontrolle geht man wie folgt vor; die Radialkrafte F_{1r} am AntriebundF_{2r} am Antriebbestimmen

$T_{1,2req}$:Giriş ve Çıkış için istenen moment Nm
d : Mil üzerine monte edilen parçanın çapı mm
K_r: Radyal yük stres sabiti;
Zincir dişli : 1

$$F_{r1},F_{r2}=\frac{2000.T_{1,2req}.Kr}{d}$$

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Yük Sınıflaması — Load Classification — Belastungskennwert

U Sabit / Uniform / Gleichmassig - **M** Orta / Moderate / Mittelschwer - **H** Ağır / Heavy / Schwer

Kompresörler, Fanlar	Blowers, Ventilators	Genlase, Förderer	
Bloverler	Blowers	Geblase	U
Soğutma kule fanları	Cooling tower fans	Kühlturmlüfter	M
Induced cereyanlı fanlar	Induced draught fans	Saugzuggeblase	M
Döner piston blovırları	Rotary piston blowers	Drehkolbengeblase	M
Turbo bloverler	Turbo blowers	Turbogeblase	U

Kompresörler	Compressors	Verdicter, kompressoren	
Pistonlu kompresörler	Piston compressors	Kolbenkompressoren	H
Turbo kompresörler	Turbo compressors	Turbokompressoren	M

Kimya Endüstrisi	Chemical Industry	Chemische Industrie	
Sıvı materyal hazırlayıcılar	Stirrers (liquid materials)	Rührwerke (flüssige Stoffe)	U
Yarı sıvı materyal hazırlayıcılar	Stirrers (semi-liquid materials)	Rührwerke (halbflüssige Stoffe)	M
Ağır santrifüj	Centrifugal machines (Heavy)	Zentrifugen (schwer)	M
Hafif santrifüj	Centrifugal machines (light)	Zentrifugen (leicht)	U
Soğutma tamburu	Cooling drums	Kühltrommein	M
Kurutma tamburu	Drying drums	Trocknungstrommein	M
Karıştırıcılar	Mixers	Mischer	M

Taşıyıcılar	Conveyors	Förderer	
Düz konveyörler	Slat conveyors	Plattenförderband	M
Asansör konveyörler	Ballast elevators	Ballastheber	M
Bant konveyörler	Belt pocket conveyors	Sackförderband	M
Bant konveyörler (dökme malz.)	Belt conveyors (bulk material)	Fördermaschinen (Schüttgut)	M
Bant konveyörler (tane malz.)	Belt conveyors (piece goods)	Fördermaschinen (Stückgut)	H
Kova konveyörler	Bucket conveyors for flours	Becherförderwerke	U
Zincir konveyör	Chain conveyör Circular	Kettenförderer	M
Dairesel konveyörler	Conveyors	Kreiselförderer	M
Vinç	HoistsInclined hoist	Lastenaufzüge	H
Eğimli vinç	Steel conveyor belt	Geneigte Lastenaufzüge	H
Çelik bantlı konveyör	Passanger lifts	Förderbander aus	M
İnsan asansörleri	Screw conveyors	Personenautzüge	M
Vidalı konveyörler	Concave belt conveyor	Schneckenförderer	M
İç bükey bant konveyör	Winches hauling	Hohlbandförderer	M
Vinç konveyör	Conveyor crane	Förderwinden	M

Vinçler	Cranes	Krane	
Derik Vinçler	Derricking jib gear	Bohrvorrichtung	M
Kaldırma mekanizması	Hoist mechanism	Hebewerke	U
Dönme mekanizması	Slewing mechanism	Rotationmeckanik	M
Yürüyüş mekanizması	Travelling mechanism	Fahrwerke	H

Uygulamalar	Dredgers	Begger	
Kova konveyörler	Bucket conveyors	Eimerkettenbagger	M
Kova dişliler	Bucket wheels	Schaufelräder	M
Kesme kafaları	Cutter heads	Schneidköpfe	M
Manevra vinci	Manoeuvring winch	Manövrierwinden	M
Pompalar	Pumps	Saugpumpen	H
Dönüş dişlileri	Slewing gear	Schwenkwerke	U
Caterpiller yürütme	Travelling gear (tracked vehicle)	Fahrwerke (Raupe)	M
Ray yürütme	Travelling gear (rails)	Fahrwerke (Schiene)	M

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Yük Sınıflaması — Load Classification — Belastungskennwert

U Sabit / Uniform / Gleichmassig - **M** Orta / Moderate / Mittelschwer - **H** Ağır / Heavy / Schwer

İnşaat Makinaları	Building Machinery	Baumaschinen	
Beton mikserleri	Concrete mixers	Betonmischmaschinen	M
Vinçler	Hoists	Bauaufzüge	M
Yol yapım makinaları	Road construction machines	Stassenbaumaschinen	M

Çamaşırhane	Laundries	Waschereimaschinen	
Merkezkaç	Tumblers	Trommeltrocker	M
Yıkama makinaları	Washing machines	Waschmaschinen	M
Pres makinaları	Pressing machines	Bügelmaschinen	M

Yiyecek Endüstrisi Makinaları	Food Industry Machinery	Nahrungsmittelmaschinen	
Şişeleme ve teneke dolum mak.	Bottling and container filling mach.	Abfüllmaschinen	U
Kamış kırıcı	Cane crushers	Zuckerrohrbecher	M
Kamış bıçakları	Cane knives	Zuckerrohrschneider	H
Kamış değirmenleri	Cane mills	Zuckerrohrmühlen	M
Yoğurma makinaları	Kneading machines	Knetmaschinen	M
Ezme	Mash tubs (crystallizers)	Maischen	H
Paketleme makinaları	Packaging machines	Verpackungsmaschinen	U
Pancar kesiciler	Sugar beet cutters	Zuckerrübenschneider	M
Pancar yıkama	Sugar beet washing machines	Zuckerrübenwascher	M

Jeneratör ve Transformatörler	Generators and Transformars	Generatoren und Transformatoren	
Frekans transformatörler	Frequecy transformers	Frequenztransformatoren	H
Jeneratörler	Generators	Generatoren	H
Kaynak makinası jeneratörleri	Generators for welding mach.	Generatoren fur Schweibmaschinen	H

Metal Silindirleri	Metal Rollers	Walzwerke	
Hadde makasları	Shears for rolling mills	Scheren für Walzstraben	H
Zincir tahriki	Chain transfers	Kettenschlepper	M
Soğuk haddeleme	Cold rolling mills	Kaltwalzwerke	H
Devamlı döküm hattı	Continuos casting plant	Stangggussanlagen	H
Soğutma yatakları	Cooling beds	Kühlbetten	M
Kırpma makasları	Cropping shears	Schopsfscheren	H
Ağır ve orta plaka eziciler	Heavy and medium plate mills	Plattenwalz-werk	H
Kabuk soyucular	Descaling machines	Blocktransportanlagen	H
Manipülatör	Manipulators	Verschiebevomchtungen	H
Külçe iticileri	Ingot pushers	Blechpressen	H
Rulo düzeltici	Plate tilters	Rollenrichtmaschinen	M
Ağır ezici levhalar	Roller tables (heavy)	Rollgange (schwer)	H
Hafif ezici levhalar	Roller tables (light)	Rollgange (leicht)	H
Tüp kaynak makinaları	Tube welding machines	Rohrschweissmaschinen	M
Şerit ve tel sarma makinaları	Winding machines (strip and wire)	Wickler	M
Tel çekme makinaları	Wire drawing banches	Drahtzüge	M

Metal İşleri Makinaları	Machines For Working Metal	Metallbearbeitungsmaschinen	
Sayaç milleri	Counter shafts,shafts in line	Gegenwellen,Welle in Linie	U
Sıcak ezme	Press for hot-pressing	Presse für Heibstanzung	H
Çekiçleme	Hammers	Hammer	H
Yardımcı kılavuz tezgahları	Auxiliary guides,machine tools	Werkzeugmaschinen Hilfsantriebe	U
Ana kılavuz tezgahları	Main guides,machine tools	Hauptführungen Werkzeugmaschine	M
Metal işleme makinası	Machine for metal planning	Hobelmaschinen fur Metall	H
Sac düzeltici	Rectifier for metal sheet	Gleichrichter für Bleche	H
Presler	Presses	Pressen	H
Dövme presleri	Presses for forging	Stanzpressen	H
Makaslar	Shears	Scheren	M
Katlanır metal makinası	Machine for folding metals	Metallbiegenmaschinen	M

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Yük Sınıflaması	Load Classification	Belastungskennwert

U Sabit / Uniform / Gleichmassig - M Orta / Moderate / Mittelschwer - H Ağır / Heavy / Schwer

Pompalar	Pumps	Pumpen	
Santrifüj pompalar, hafif sıvı	Centrifugal pumps(light liquids)	Kreiselpumpen(zahne Flüssigkeit)	U
Santrifüj pompalar, yoğun sıvı	Centrifugal pumps(viscous liquids)	Kreiselpumpen(leichte Flüssigkeit)	H
Piston pompalar	Piston pumps	Kolbenpumpen	H
Dalgıç pompalar	Plunger pumps	Plungerpumpen	H
Basınçlı pompalar	Presure pumps	Presspumpen	H

Petrol Endüstrisi	Oil industry	Ölindustrie	
Boru hattı pompaları	Pipeline pumps	Pompes pour pipeline	M
Döner delme ekipmanları	Rotary drilling equipment	Bohrvorrichtungen	H

Kağıt Makinaları	Paper Machines	Papiermaschinen	
Pres makinası	Calendars	Kalander	H
Kol	Couches	Gautschen	H
Kurutma silindirleri	Drying cylinders	Trockenzylinder	H
Cam silindirler	Glazing cylinders	Glaltzylinder	H
Kağıt hamuru makinası	Pulpers	Hollander	H
Taşlama	Pulp grinders	Holzschleifer	H
Emiş makaraları	Suction rolls	Saugwalzen	H
Emiş presleri	Suction presses	Saugpressen	H
Yaş presler	Wet presses	Nasspressen	H
Kıyma makinası	Willows	Reisswolf	H

Kauçuk Makinaları	Rubber Machinery	Kunstoffmaschinen	
Pres makinası	Calendars	Kalander	M
Ekstruder	Extruders	Extruder	H
Karıştırıcılar	Mixers	Mischer	M
Buldog değirmenler	Pug mills	Knetwerke	H
Döner değirmen	Rolling mills	Walzwerke	H

Plastik Makinaları	Plastic Industry Machinery	Kunstoffmaschinen	
Pres makinası	Calendars	Kalander	M
Kırıcılar	Crushers	Zerkleinerungsmaschinen	M
Ekstruder	Extruders	Extruder	M
Karıştırıcılar	Mixers	Mischer	M

Tekstil Makinaları	Textile Machines	Textilmaschinen	
Dozajlama	Batchers	Dosierer	M
Dokuma tezgahı	Looms	Webstühle	M
Baskı boyama makinası	Printing and dyeing machines	Druckerei-Farbereimaschinen	M
Boyama tankı	Tanning vats	Gerbwanne	M
Kıyma tezgahı	Willows	Reisswolf	M

Taş ve Kil Makinaları	Stone and Clay Machines	Steine, Erden	
Çekiç değirmenler	Hammer mills	Hammermühlen	H
Çırpıcı değirmenler	Beater mills	Walzwerk	H
Kırıcılar	Breakers	Brecher	H
Tuğla presleri	Brick presses	Ziegelpressen	H
Döner fırınlar	Rotary ovens	Drehöfen	H
Tüp değirmenler	Tube mills	Rohrmühlen	H

Su Arıtma	Water Treatment	Wasseraufbereitung	
Aeratör	Aerators	Kreiselbelüfter	M
Vidalı pompalar	Screw pumps	Wasserschnecken	M

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Redüktör Seçimi

Planet dişlili bir redüktör ana tahrik ile güç aktarılan sistem arasına yerleştirilecek ise aşağıdaki bilgilere ihtiyacımız vardır.
* Giriş hızı (devir/dakika)
* İstenilen çıkış hızı (devir/dakika)
* İstenilen çıkış momenti (Nm)
* Çalışma ömrü (saat)
* Çalışma periyodu

Verilen bu bilgilerle çevrim oranını buluruz;

Gearbox Selection

In a mechanical transmission system, a planetary unit is a device positioned between the prime mover and the driven equipment.ıt is neccesary to know for selection;
* Input speed n_1 (min^{-1})
* Required output speed n_{2r} (min^{-1})
* Required output torque T_{2r} (Nm)
* Duration required H_r (h)
* Service factor fs based on application and conditions of use

With given values we can determine ratio;

Getrıebeauswahl

In einem mechanischen system ist das Getriebeeine Einheit zwischen Motor und anzutribenderMaschine. Um das planetengetriebe auszuwahlen das für die geplante Anwendung am bestengeeignet ist müssen folgende Werte bekannt sein.
* Die Geschwindigkeit am Eingang n1 min^{-1}
* Die verlangte Geschwindigkeit am Ausgangn2 min^{-1}
* Das verglangte Drehmoment am AusgangT_2 (Nm)
* Die verlangte Dauer hr (h)
* Der Betriebsfaktor fs

Wir können feststellen , Verhaltnis

$$i_r = \frac{n_1}{n_2}$$

Hesaplanmış çıkış momenti

The corrected output torque ;

Die korrigierten Abtriebsmoment;

$$T_{2c} = T_{2r} . f_s$$

Çalışma ömrü ;

and the duration factor ;

und der Zeitfaktor berechnet ;

$$f_{h2} = n_{2r} . h_r$$

Daha sonra planet redüktörün seçim parametrelerini aşağıdaki gibi doğrulamalıyız;
I) Giriş devri ≤ n_1 max
II) Çalışma momenti ≤ T_1
III) Miller üzerindeki yükler ≤ F_r , F_a
IV) Nakledilen güç ≤ P_t (Sürekli çalışma)
V) Ortam sıcaklığı I ve V kolaylıkla doğrulanır. II, III, ve IV takiben doğrulanır.

Subsequently we verify some distictive parameters of the planetary unit as follows;
I) Input rotation speed ≤ n_1 max
II) Working torque ≤ T_2
III) Loads on output shafts ≤ F_r, F_a
IV) Horsepower to be transmitted ≤ P_t (If under continuous duty)
V) Ambient temperature Relations I and v can be easily verified; as for relations II, III, IV we must proceed as follows;

Danach sind folgende Parameter zu überprüfen;
I) Getriebedrehzahl ≤ n_1 max
II) Betrebsdrehmoment ≤ T_2
III) Belastungen auf der Antrebswelle undAntriebswelle ≤ F_r; F_a
IV) Warmeleistung ≤ P_t
V) UmgebungstemperaturDie parameter I und V kann man ohne weiteresprüfen Was II,III,IVbetrifft,ist wie folgt vorzugehen

Örnek

Aynı eksende çalışacak bir planet redüktör seçmek istiyoruz. Şartlar aşağıdaki gibi;

Giriş devri: 1500 dev/dak
İstenilen çıkış devri: 25 dev/dak
İstenilen çıkış momenti: 10000 Nm
Ömür süresi: 10000 saat
Servis faktörü: 1.3

Example

We want to select inline planetary reductionunit which operetes with below conditions;

Input speed: n_1= 1500 rpm
Rq. Output speed . n_{2r} = 25 rpm
Rq. Output torque . T_{2r} = 10000 Nm Duration: h_r = 10000 h
Service factor: S_f = 1.3

Beispiel

Wir möchten, wählen Sie Inline-Einheit, die Planeten-Reduzierung operetes mit unter Bedingunden.

Geschwindigkeit am Eingang:
n_1=1500 min^{-1}
Verlangte Geschwindigkeit am Ausgang
n_2= 25 min^{-1}
Verlangtes Drehmoment am Ausgang
T_2 = 10000 Nm
Verlangte Dauer h_r10000 h
Betriebsfaktor f_s=1.3

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Değişken Çalışma

Çalışma şartları değişken ise dişli kutusu farklı yük ve çıkış hızları altındadır. Bu durumda eşdeğer hız ve moment aşağıdaki formül ile hesaplanır.

Variable Operation

If opearting conditions are variable,which is, thegearbox is under different torque levels and/or output speeds, we have to calculate the equivalent output torque with the below formula.

Variabler Betrieb

Bei variablen Betriebsbedingugen d.h.dann,wenndas planetengetriebe einem Arbeitszyklus mitunterschiedlichen drehmomentstufen u/o Geschwindenkeiten am Ausgang unterlieght,muss daserforderliche aquivalente Drehmoment anhand fol-

$$T_{2r,eq}=\sqrt[6,7]{\frac{T_{2r,1}^{6,7}.n_{2r,1}t_1\%+T_{2r,2}^{6,7}.n_{2r,2}t_2\%+...+T_{2r,i}^{6,7}.n_{2r,i}t_i\%}{n_{2r,1}.t_1\%+n_{2r,2}.t_2\%+...+n_{2r,i}.t\%}}$$

Ve eşdeğer çıkış hızı formülü aşağıdaki gibidir;

and the equivalent output speed with the following

genger Formel berechnet werden: Und die erforderliche aquivalente Geschwindenkeitam Ausgang mit folgender Formel ;

$$n_{2r,eq}=\frac{n_{2r,1}t_1\%+n_{2r,2}t_2\%+...+n_{2r,i}t_i\%}{100\%}$$

$t_1,t_2,.....t_i$ tam döngünün zaman yüzdeleri dir; çıkış hızları üzerindeki moment değerlerine göre; Eşdeğer çıkış hızı ve moment değerini biliyoruz. Şimdi daha önce seçilmiş redüktörü eğer gerekli ise, eşdeğer çıkış momentini servis faktörü ile ve süre hesaplama faktörü, toplam süre ile çarpılan eşdeğer hız ile çarpılır.

Where $t_1,t_2,.....t_i$ are the percentages of time (on100% cycle) when the torques $T_{2r,1},T_{2r,2}.... T_{2r,i}$ act at the speed of $n_{2r,1}$, $n_{2r,2},...,n_{2r,i}$ .Once you have the equivalent output speed and the torque values,you can proceed with selecting the gearbox as described earlier,multiplying, if neccesaary , the equivalent output torque by the service factor and calculating the duration factor as the product of the equivalent speed by the total durationrequired.

wobei $t_1,t_2,.....t_i$ (auf 100% vom Zyklus sind, indenen die Drehmomente $T_{2r,1},T_{2r,2}.... T_{2r,i}$ mitden Geschwindenkeiten $n_{2r,1},n_{2r,2},..,n_{2r,i}$ anliegen Nachdem die werte wom aquivalenten drehmomentund der aquivalenten Geschwindigkeit am Ausgangberechnet worden sind,kann das Planetengetriabewie oben beschriben ausgewahlt werdwn,wobei dasaquivalente Ausgangsdrehmoment ggf. Mit dem Betriebsfaktor multipliziert und der Zeitfaktor als Product von aquivalenter Geschwindigkeit und ingesamt verlangter Dauer berechnet wird.

Örnek

Aşagıdaki şekilde çalışan bir redüktör;

Example

A gearbox is working with below cycle;

Beispiel

Ein getriebe ist die Arbeit mit unter Zyklu;

Aralık/Level/Stüfe	t%	t_{2r}	n_{2r}
1	15	15000	15
2	30	12000	20
3	55	8500	65

Eşdeğer moment;

Equivalent torque ;

Gleichwertige Drehmoment;

$$T_{2r,eq}=\frac{(15000^{6,7}.15.15\%+12000^{6,7}.20.30\%+8500^{6,7}.65.55\%)^{1/6,7}}{(15.15\%+30.20\%+55.65\%)^{1/6,7}}$$

Eşdeğer çıkış hızı;

Equivalent output speed ;

Äquivalente Drehzahl;

$$n_{2r,eq}=\frac{15.15\%+20.30\%+65.50\%}{100\%}=44min^{-1}$$

Bundan sonra, eski örneğe devam edebilirsiniz.

from this point you can proceed as for the previous example.

Von diesem Punkt an können Sie wie bei dem vorherigen Beispiel.

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Çevrim oranı için gereken değer;

The reduction ratio required ;

$i_r=\frac{n_1}{n_{2r}}(1500/25=60)$

Das erforderliche Untersetzungsverhaltnis betragt ;

Düzenlenmiş çıkış momenti;

While corrected output torque ;

$T_{2c}=T_{2r}.f_s=10000.1,3=13000Nm$

Das korrigierte Drehmoment ist;

Ömür faktörü eşittir;

and duration factor is equvalent to ;

$f_{h2}=n_{2r}.h_r=25.4000=100000$

Der Zeitfaktor entspricht ;

Nominal moment tablolarından redüktör tipi nominal moment hesaplanan momentten büyük olacak şekilde seçilir. Bu durumda **PD 113** 57.5 tahvil oranı ve 100000 saat opsiyonu ile 13570 Nm uygulanabilir momenti ile seçim tamamlanmıştır.

From nominal torque table select a gearbox type size that has a nominal torque value T_{2n} greater than T_{2c} ; in this case the suitable size is **PD 113** In the technical data table of the **PD 113** size,there is a triple stage linear gearbox (S2) with a ratio 57.5 close to required value in the column relative to $n_2 . h = 10000 > f_{h,2}$ You can see the value of the applicable torque T_2which is 13750 Nm.

Aus der Tabelle mit den Nenndrehmomenten wird eine Größe vom Planetengetriebe ausgewählt, deren Nenndrehmoment T_{2n} größer ist als T_{2c}. In diesem Fall ist die geeignete Größe **PD 113**. In der Tabelle mit den Leistungen der Planetengetriebe der Größe **PD 113** gibt es ein lineares dreistufiges (L3) Planetengetriebe mit einem Untersetzungsverhältnis von 57.5, das in etwa dem verlangten Untersetzungsverhältnis entspricht. In der Spalte vom Wert $n_2 .h = 100000 > f_{h,2}$ kann der Wert vom anlegbaren Drehmoment T_2 abgelesen werden, der 13750 Nm entspricht.

	i	T_2 [Nm] $n_2$xh 10 000	20 000	50 000	100 000	n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
PD 113 S1	3.55	20360	18020	15330	13570	2000	36040	40
	4.28	17740	15700	13360	11830	2000	31400	40
	5.60	13570	12010	10220	9050	2000	24020	40
	6.75	10320	9130	7770	6880	2000	18260	40
PD 113 S2	13.4	20360	18020	15330	13570	2000	36040	40
	16.1	17740	15700	13360	11830	2800	31400	23
	22.1	17740	15700	13360	11830	2800	31400	23
	28.9	13570	12010	10220	9050	2800	24020	23
	33.6	13570	12010	10220	9050	2800	24020	23
	40.5	10320	9130	7770	6880	2800	18260	23
	48.9	10320	9130	7770	6880	2800	18260	23
PD 113 S3	57.5	20360	18020	15330	13570	2800	36040	23
	62.8	20360	18020	15330	13570	2800	36040	23

Böylece seçilen dişli kutusu momenti T_{2c} den büyüktür böylece verilen şartlar sağlanmıştır.

Since this value is greater than torque T_{2c} the gearbox size selected is suitable for the conditions.

Da dieser Wert gröber ist als das Drehmoment T_{2c} eignet sich das ausgewahlte Planeten getriebe für den Einsatz unterdenverlangen Bedingungen.

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Kontrol	Checks	Kontrollen
Nominal moment tablolarından redüktör tipi önce nominal moment hesaplanan momentten büyük olacak şekilde seçilir. Bu durumda PD 113 54.1 tahvil oranı ve 100000 saat opsiyonu ile 1288 Nm uygulanabilir momenti ile seçim tamamlanmıştır.	The gearbox has been selected based on operating parameters , it is advisable to proceed with the following checks to prove complete compatibility of the reduction gear with the application.	Nachdem das Getriebe gewählt wurde auf der Grundlage von Betriebsparametern, ist est ratsam, mit der folgenden Prüfungen zu beweisen, vollständige Kompatibilität der Reduziergetriebe mit der Anwendung.
Maksimum giriş hızını kontrol	Checking max. input speed	Prüfen max. Eingangsdrehzahl
Her redüktör modeli için müsade edilen maksimum giriş devirleri kataloğumuzun ilerleyen teknik sayfalarında bulabilirsiniz. PD ve PDA modellerimiz için giriş devirleri devamlı çalışma durumu için 1500 dev/dakikayı ses seviyesinin ve yağın çarpmasından dolayı sıcaklığın aşırı artmaması için aşmamalıdır. Hızlı giriş devirleri için PDS 1500 devir dakikanın üzerindeki hızları devamlı çalışma durumu için yağın aşırı ısınmasını engellemek için tavsiye etmemektedir. Fren uygulamalarında devir seçenekleri aşağıdadır.	The value of maximum input speed of each gearbox both for in line and angular types are tabulated on technical data tables.For angulartypes max. input speed must not exceed 1500 min-1 in continuous operation to prevent in creasing sound level and the temperature dueto oil splash.For fast input PDS offer to you not exceeding 1500 min-1 in continuous working in order to avoid overheat the oil. For negative brake applications use below informations.	Der wert det maximalen Eingangsgeschwindigkeit von jedem Planetengetriebe mit linearerKonfiguration oder mit Winkelkfonfiguration istin der entsprechenden Spalte der Tabelle mitden technischen Daten angegeben. Bei Plane-tengetriebe mit Winkelkonfiguration wird dazu geraten, den Wert von 1500 min-1 bei Dauerbetrieb nicht zu überschreiten,um ein deutliches Ansteigen vom Schallpegel und eine Zuhahmeder Temperatur durch das Schlagen vom Öl zuvermeiden.Wenn ein schneller Eingang vorhanden ist,wird dazu geraten,den Wert von 1500 min -1 bei Dauerbetrieb nicht zu übersteigen.daes sonst zu einem beachtlichen Anstieg der Öltemperatur kommen kann.
HF 11500 dev/dk **HF 21000 dev/dk** **HF 3750 dev/dk**	**HF 11500 min-1** **HF 21000 min-1** **HF 3750 min-1**	**HF 11500 min-1** **HF 21000 min-1** **HF 3750 min-1**
Genelde yük şartlarında; maksimum giriş devrine yakın veya aşan durumlar uzun süreli ise PDS teknik servisine danışılmalıdır.	In general, when load conditions entail long periods of operation at a speed close to n_{1max} or peaks with speed higherthan n_{1max}, contact the PDS technical service.	Bei Belastungsbedingungen, die langeBetriebszeiten mit einer Geschwindigkeitvon etwa n_{1max} oder Spitzen mit einer Geschwindigkeit von n_{1max}, vorsehen, bitte Rücksprache mit dem Technischen Kundendienst von PDS getriebe halten.
Maksimum moment kontrolü. Maksimum tork, başlangıç esnasında izin verilen maksimum tork veya ara sıra oluşan en yüksek tork değeri, T_2 maksimum değerini asla geçmemelidir. Maksimum tork değeri, teknik tabloda seçili dişli kısmına bulunmaktadır. Yük seviyesi sürekli ve ani tork değişimi, yön değiştirme içeriyor ve uzun süreli çalışmalarda izin verilen maksimum Tmax değerine yakın ise, daha büyük bir planet dişli tipi seçilmesi önerilir.	Checking maximum torque maximum torque, that is, the level of torque permitted during start-up or occasional peaks,must never exceed T_{2max} which is given in the relative column in the technical tables for the gearbox selected. When the load conditionsentail frequent startups, direction reversals or long periods of operation at a torque close toT_{2max} it is advisable to select a bigger size gearbox type.	Kontrolle vom maximalen Drehmoment Das maximale Drehmoment, d.h. Das Drehmoment, das beim Anlaufen oder bei gelegentlichen Spitzen zugelassen ist, darf auf keinen Fall den Wert T_{2max} übersteigen, der in derentsprechenden Spalte der Tabelle mit dentechnischen Daten vom ausgewählten Planetengetriebe angegeben ist.Wenn die Belastungs bedingungen ein häufiges Starten, häufige Umkehrungen der Laufbewegung oder lange Betriebszeiten mit einem Drehmoment vonT_{2max} vorsehen, sollte ein größer ausgelegtes Planetengetriebe gewählt werden.

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Radyal Ve Aksiyel Yük Kontrolü

Giriş ve çıkış milleri üzerinde, müsade edilen yükü rulman ömrü ve mil üzerindeki yük noktası biliniyorsa nasıl tayin edebiliriz.

Radyal yük eğrileri her bir redüktör çıkış mili için katalog sayfalarında verilmiştir.

Ömür faktörü 10^5'den farklı ise bu durumda radyal yük düzeltme katsayısı ilgili diyagramdan bulunarak radyal yük ile çarpılır. Bu durumda uygulanan yük bu çarpımdan küçük ise daha büyük redüktör seçilmelidir.

Radyal yükü ve uygulama noktasını bildiğimiz durumda, giriş/çıkış mil rulman ömrünü nasıl tayin edebiliriz.

Bu durumda x mesafesinde uygulanan yükü maksimum müsade edilen yüke oranlarız, buradan çıkan katsayı yardımı ile diyagramdan $n_2 xh$ değerini buluruz.

Checking Radial And Axial Loads

How we can determine the admissible radialload of an input or output shaft version knowingthe required bearing life time and the load position.

The curves of the radial loads are given in the sections relative to each reduction gear size, based on the type of output support.

If the duration factor required $f_{h,2}$ is different from 10^5(value on the basis of which the curves are obtained) you have to multiply the maximum applicable load by a corrective coefficient $k_{r,2}$, which is found by way of the relative curves.If the radial load you intend applying is greater than the applicable load, you have to go to the next higher size gearbox.

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

Wanting to calculate the duration factor consequential to the application of a radial load $F_{r,2}$ in position x, $k_{r,2}$ has to be calculated as the ratio between the applied load and the maximum applicable load in x (gleaned from the curve relative to the output support considered); entering with this value on the curve that provides $k_{r,2}$ as a function of the duration factor, it is possible to find the duration of the output support in terms of n2 . h.

Kontrolle von Querlasten Und Achslasten

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

Die Kurven der Querlasten sind in denAbschnitten der einzelnen Planetengetriebegrößen angegeben, je nach Ausgangslager

Wenn ein anderer Zeitfaktor $f_{h,2}$ als 10^5 verlangt wird (Wert, anhand dessen dieKurven berechnet wurden), muss die maximalanlegbare Last mit einem Korrekturkoeffizienten $k_{r,2}$ multipliziert werden, der den entsprechenden Kurven entnommen werden kann.

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

Solte die Querlast, die angelegt werden soll, größer sein als der Wert der maximal anlegbaren Querlast, muss ein größer ausgelegtes Planetengetriebe.
Wenn der Zeitfaktor für das Einwirken einer Querlast $F_{r,2}$ in Position x berechnet werden soll, muss $k_{r,2}$ als das Verhältnis von anliegender last und maximal anlegbarer last in Punkt x berechnet werden (welche der ger Kurve vom berücksichtigten Ausganglager entnommen werden kann). Mit diesem Wert kann anhand der Kurve von $k_{r,2}$ in Abhängigkeit vom Zeitfaktor die Dauer vom Ausgangslager als n_2 . h abgeleitet werden.

Örnek 1

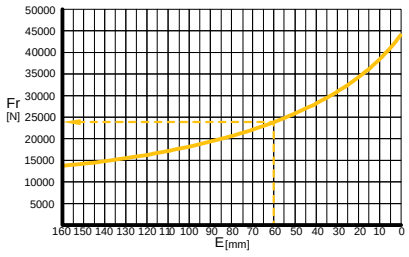
Radyal yükün etki noktasını ve ömür katsayısını bilmemiz durumunda PD 117 MS tipi dişli kutusunda çıkış mili üzerinde uygulanabilecek radyal yükün bulunması.

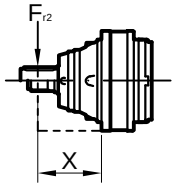
Example 1

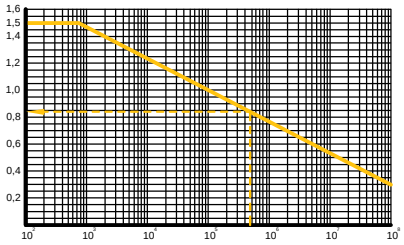
Knowing the position of the radial load x=60mm and the duration factor required n_2 . h = 500000, we want to know the radialload $F_{r,2}$ that can be applied on the output shaft of the PD117 MS gearbox.

Beispiel 1

Bei einer Position der Achslast x=60mm und einem verlangten Zeitfaktor von n_2 . h = 500000, soll die Querlast $F_{r,2}$ ermitteltwerden, die an der Ausgangswelle vom Planetengetriebe PD117 MS angelegt werden kenn.







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Radyal yük eğrisinden 60mm mesafede uygulanabilecek değeri 2400 N olarak bulabiliriz. Bu değer ömür değeri 10^5 ten farklı olduğu için düzeltme yapılmalıdır. İkinci eğriden $k_{r,2}$ 0,84 olarak bulunur ve aşağıdaki şekilde;

In the radial load graph we can find the nominalapplicable value at 60mm, equal to 2400 N. This value has to be corrected by means of $k_{r,2}$ in order to take into account the duration factor different from 10^5; in the second graph, where the abscissa $n_2 . h = 500000$ is, we can find the $k_{r,2}$ value we are looking for, equal to 0,84.So, the maximum radial load can be applied in position x equal to ;

Aus der Querlastkurve wird der bei 60mm anlegbare Nennwert ermittelt, der 2400 N entspricht. Dieser Wert muss mit dem Faktor $k_{r,2}$ korrigiert werden, um den von 10^5abweichenden Zeitfaktor zu berücksichtigen.Aus der zweiten Kurve kann auf Höheder X-Koordinate $n_2 . h = 500000$ der gesuchteWert $k_{r,2}$ entnommen werden,der 0,84 entsprichtIn Position x kann also eine maximale Querlast mit folgendem Wert angelegt werden ;

$$F_{r,2} = F_{r,nom} \times k_{2,r} = 2400 \times 0,82 = 2016 \text{ N}$$

Örnek 2

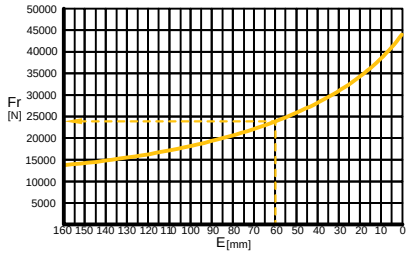
60 mm mesafedeki uygulanan yükün 1750 N olduğunu biliyoruz. Bu durumda çıkış PD 117 MS için yatağının ömür sabitini bilmek istiyoruz.

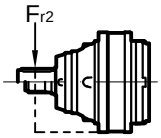
Example 2

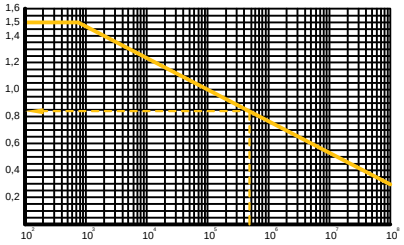
Knowing the position of the radial load x=60mm and its $F_{r,2}$=1750 N value, we want to know the output support's duration factor for the PD 117 MS reduction gear

Beispiel 2

Bei einer Position der Achslast x=60mm und deren Wert $F_{r,2}$ = 1750 N soll der Zeitfaktor vom Ausgangslager für das Planetengetriebe PD 117 MS ermittelt







1, eğriden uygulanabilecek yük 2400 N. Buradan düzeltme katsayısı $k_{r,2}$ bulunur.

From the ratio between the nominal loadapplicable in x, equal to 2400 N, and the load applied, we have the corrective coefficient $k_{r,2}$.

Aus dem Verhältnis von anlegbarer Nennlast in x, die 2400 N entspricht,und angelegter Last erhält man den Korrektur faktor $k_{r,2}$.

$$k_{r,2} = F_{r,2} / F_{r,2\,nom} = 1750 / 2400 = 0,73$$

Termal güç kontrolü

Checking thermal power

Kontrolle der Wärmeleistung

Nakledilecek güç katalog bilgi sayfalarındaki termal güç değerinden büyükse yardımcı soğutma sistemi gereklidir. Termal güçler 20°C ortam sıcaklığı ve 1500 Dev/dak. Esas alınarak tablolanmıştır. Çalışma koşulları bu değerlerden sapma gösterirse bu durumda P_t ; K_t ve K_v sabiti ile tekrar düzenlenmelidir.

If the power transmitted by the reductiongear, that is, the power required in input P_{r1}, is higher than thermal power P_t an auxiliary cooling system is necessary.Since the value of the reduction gears'thermal power is calculated hypothesising t_a=20°C and n_1=1000 min-1, when the actual operating conditions deviate from this condition the Pt value has to be corrected by means of the Kt factors, the temperature factor, and K_v and the speed factor which can be found in the following tables.

Wenn die vom Planetengetriebe übertragene Leistung, d.h. die am Eingangverlangte Leistung P_{r1} größer ist als die Wärmeleistung P_t, muss ein zusätzlichen Kühlsystem vorgesehen werden. Da derWert der Wärmeleistung der Planetengetriebeunter der Annahme berechnet wird,dass t_a=20°C und n_1=1000 min-1, mussder Wert Pt bei Abweichung von diesen Bedingungen mit dem Temperatur faktor Kt und dem Geschwindigkeitsfaktor K_v korrigiert werden, die den Tabellen untenentnommen werden können

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K_t	Bir saat içinde çalışma zamanı Operating minutes per hour Minuten Betrieb/pro Stunde		t_a			
			10 C°	20C°	30C°	40C°
Devamlı çalışma Continuous duty Dauerbetrieb	60	100%	0,9	1	1,15	1,45
Aralıklı çalışma Intermittent duty Aussetzbetrieb	48	80%	0,8	0,9	1	1,25
	36	60%	0,7	0,75	0,9	1,1
	24	40%	0,6	0,65	0,8	0,95
	12	20%	0,5	0,6	0,7	0,85

n_1 min-1	K_v
500	1,08
750	1,04
1000	1,00
1500	0,89
1750	0,82
2250	0,66
2500	0,59
2900	0,49

Modifiye edilmiş termal güç P_t aşağıdaki formül ile hesap edilir;

The corrected thermal power P_t is calculated with the formula;

Die korrigierte Wärmeleistung P_t wirdanhand folgen der Formel berechnet:

$$P_t = \frac{P_t \times K_v}{K_t}$$

Sonuç $P_{r1} > P_t$ ise yardımcı bir soğutma sistemi kullanılmalı, bunun ısı kapasitesi aşağıdaki formül ile bulunur:

If the result is $P_{r1} > P_t$ an auxiliary coolingsystem has to be installed to get rid of the thermal power in excess, found with the formula:

Wenn $P_{r1} > P_t$ muss ein zusätzlichen Kühlsystem installiert werden, um dieübermäßige Wärmeleistung abzuleiten,die anhand folgender Formel berechnet werden kann:

$$P_s = \frac{(P_{r1} - P'_t) x C_{rt}}{860}$$

C_{rt} sabiti ise aşağıdaki tablodan dişli kutusu modeline ve yağ seviyesine göre bulunur.

where C_{rt} is a coefficient that is found in the following table, based on the configuration of the reduction gear and on the filling up type (illustrated further on in the lubricating tables)

wobei der Koeffizient Crt anhand der Konfiguration vom Planetengetriebe und der Art der Füllung der Tabelle unten entnommen werden kann (siehe auch Kapitel Schmierung.)

C_{rt}	Yarım dolu Filled halfway Halb gefüllt	Tam dolu Filled to the top Ganz gefüllt
S1	21	25
S2	43	52
S3	62	77
S4	84	97

Lt/dak. Akış oranı, gücü Ps bulmak için aşağıdaki şekilde hesaplanır.

The flow rate of oil in litres a minute, necessary to get rid of power Ps, is calculated as:

Der Öldurchsatz in Litern pro Minute, derzum Ableiten der Leistung Ps erforderlichist, wird wie folgt berechnet:

$$q = \frac{(P_{rt} - P'_t) \times C_{rt} \times 0{,}07}{t_r - t_s}$$

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Örnek

Aşağıdaki şartlarda çalışan bir PD113 S3 tablosundan 17 kW olarak bulunur.
- Giriş devri: n_1=1500 d/dk
- Giriş gücü: P_{r1}=30 kW
- Yağ seviyesi: Yarım
- Ortam Sıcaklığı: t_a=30°
- Her saatte 24 dk çalışma
- Termal güç kapasitesi PD 113 S3 tablosundan 17 kW olarak bulunur. K_t ve K_v değerleri ile ilgili tablolardan bulunur.

Example

An PD 113 S3 reduction gear works at the following conditions:
- Input speed n_1=1500 min-1;
- Power required in input P_{r1} = 30 kW;
- Filled halfway;
- Ambient temperature t_a=30°C;
- 24 Minutes working every hour.

The thermal power value P_t=17 kW of the subject reduction gear is found in the PD 113 S3 reduction gears table and has to be corrected by introducing factors K_t and K_v taken from the relative tables:

Beispiel

Ein Planetengetriebe PD113 S3 funktioniert unter folgenden Bedingungen:
- Geschwindigkeit am Eingang n_1=1500 min-1;
- Verlangte Leistung am Eingang P_{r1} = 30 kW;
- Halbe Füllung;
- Umgebungstemperatur t_a=30°C;
- 24 Minuten Betrieb pro Stunde.

Aus der Tabelle mit den technischen Daten der Planetengetriebe PD 113 S3 kann der Wert für die Wärmeleistung P_t=17 kW vom Planetengetriebe entnommen werden. Dieser Wert muss mit den Faktoren K_t und K_v korrigiert werden, die den jeweiligen Tabellen entnommen werden können:

$$\frac{P_t \times K_v}{K_t} = \frac{17 \times 0{,}89}{0{,}80} = 18{,}9 \text{ kW}$$

Böylece termal gücün redüktör termal kapasitesinden küçük olduğu görülür. Bu durumda yardımcı bir soğutma ünitesine ihtiyaç duyulur. Bunun gücü;

Since the power required is greater than the thermal power the reduction gear is able to get rid of, an auxiliary cooling system needs to be installed to get rid of a power equivalent to;

Da die verlangte Leistung größer ist als die Wärmeleistung, die das Planetengetriebe ableiten kann, muss ein zusätzliches Kühlsystem zur Wärmeableitung mit folgender Leistung installiert werden;

$$\frac{(P_{r1} - P_t) \times C_{rt}}{860} = \frac{(30 - 18{,}9) \times 50}{860} = 0{,}64 \text{kW}$$

Crt değeri tablodan alınır.
Yağ sirkülasyonunda soğutucu radyatöre giren yoğun t_r:90°C, çıkan yoğun ise 65°C olduğu varsayılarak yağ debisi hesaplanır.

where the Crt value was taken from the relative table for the L3 reduction gear. Utilising an oil recirculating cooling system, assuming that the temperature of the oil entering the exchanger is t_r=90°C while when it leaves the exchanger it is t_s=65°C, the rate necessary to get rid of such a power is equivalent to:

wobei der Wert Crt der entsprechenden Tabelle für das Planetengetriebe L3 entnommen werden kann.
Bei Einsatz eines Kühlsystems mit Ölrücklauf nd unter der Annahme, dass die temperatur vom Öl am Eingang vom Wärmeaustauscher t_r=90°C und am Ausgang t_s=65°C beträgt, ist folgender Durchsatz zur Ableitung der Wärmeleistung erforderlich:

$$\frac{(P_{rt} - P_t) \times C_{rt} \times 0{,}07}{t_r - t_s} = \frac{(30 - 18{,}9) \times 50 \times 0{,}07}{90 - 65} = 1{,}6 \text{ l/min}$$

Bu sonuca göre soğutucu modellerinden uygun olan seçilir.

Consult the lubrication chapter to choose the most suitable auxiliary cooling system out of those proposed.

Nähere Informationen zur Auswahl vom geeigneten zusätzlichen Kühlsystem können dem Kapitel “Schmierung” entnommen werden.

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Yağlama

Doğru bir yağlama dişli kutularının verimli çalışması için gereklidir. Bundan dolayı aşağıdaki kriterler çalışma esnasında kontrol edilmelidir.

•Bütün yağ tapalarının önerilen çalışma pozisyonuna göre uygun monte edilip edilmediği kontrol edilmelidir.

• Yatay montaj edilmiş redüktörleri ; düz veya ayna mahrutili oluşuna bakılmaksızın yarısına kadar yağ ile doldurunuz. Görsel olarak kontrol için merkez hattı üzerindeki tapa gevşetilir ve yağ seviyesi kontrol edilir.

• Doksan derece ayna mahruti ünitesi montajlı tiplerde yağ serbestçe dolaşmalıdır.Doldurma işlemi montaj pozisyonuna göre yerde her iki yönden ama aynı anda yapılmamalıdır.Bu şekilde yağın bölümler arasında yer değişmesine olanak vericek ve uygun miktarda yağ almasını sağlayacak şekilde olmalıdır.

• Dik olarak montaj edilmesi gereken modellere daha özel bir ihtimam gösterilmelidir. Bu durumda ünite tamamıyla doldurulmalıdır. Bu gibi durumlarda yağ genleşme kabı kullanımı tavsiye edilir ki ayrı olarak talep edilmesi halinde temin edilir. Bu tank dişli kutusu ünitesinin en uç noktasına monte edilerek genleşen yağ miktarını rezerve etmesi sağlanır. Dişli kutusu soğumaya başladığında bu yağ tekrar redüktör içine giderek yağ kaybını önleyerek zaman içinde olası tahribatları engeller.

• Devamlı çalışma şartları altında ve fazla yağ ile çalışan dişli kutularında daha düşük vizkositeli yağlar kullanılmalıdır.

Dişli kutularının ilk çalışma zamanlarında temas yüzeylerine bağlı olarak metal parçalarına rastlanabilir. Hiç kuşkusuz bu metal parçaları dişli kutusu içinde hem dişli grupları hem de rulmanlar için bazı olumsuzluklar meydana getirebilirler. Bunu önlemek için redüktör yağını ilk 100 saat sonunda değiştirin. Manyetik tapaları düzenli olarak temizleyin tavsiye edilen yağ listesi devam eden sayfalarda bulabilirsiniz.

Lubrication

Correct lubrication is required to run drives efficiently. Therefore, check the followingconditions during installation:

• Make sure that all plugs are correctly mounted with respect to the installation position specified in the order and according to the MOUNTING POSITIONS

• Fill horizontally mounted units up to the central line regardless of a linear or angular configuration. To visually check the oil level, unscrewthe 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 anycase, 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 of 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 vertically mounted 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.

• 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.

During the first hours of operation of the reduction gears, due to the contact between surfaces that have not been runin, you will find metallic particles in the oil. Undoubtedly the separticles have a negative effect on the life of gears and bearings.To reduce the number of metallic particles in the oil we recommend:

-Changing the oil after the first 100 hours of operation;

-Cleaning the magnetic plugs regularly;The recommended lubricants are listed below;

Schmierung

Nur eine korrekte Schmierung gewährleistet denproblemlosen Betrieb des Getriebes.Es wird deshalb empfohlen, bei der Installationfolgende Bedingungen zu überprüfen:

• Kontrollieren, ob je nach bestellter Montageposition die Einfüllstutzen korrekt montiert sind, vgl.dazu die Angaben im Abschnitt EINBAULAGE.

• 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 rechtwinkligeTeil so angebaut, daß das Öel ungehindertzirkulieren 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, dieerforderliche 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 müssenmit Hilfe der beigelegten Kniestücke und Verlängerungen vollständig aufgefüllt werden. Für diese Einbauposition wird die Verwendung eines Ausgleichsbehälter empfohlen, der auf Anfrageseparat geliefert wird. Das Gefäß muß oberhalbdes höchsten Getriebepunktes positioniert werden und soll überschüssige Ölmengen aufnehmen bzw. bei Getrieben in unzugänglichen Positionen ein sicheres Einfüllen gewährleisten.

• 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 niedri Während der ersten Betriebsstunden der Planetengetriebe gelangen durch den Kontakt der nicht eingelaufenen Oberflächen Metallpartikel ins Öl. Das, Vorhandenseindieser Metallpartikel wird sich deutlich zum Nachteil der Lebensdauer von Zahnrädern und Lagern aus. Zur Reduzierung der Metallpartikelim Öl wie folgt vorgehen:

- Nach den ersten 100 Betriebsstunden einen Ölwechsel durchführen; machen; Kühlsystem filtern.
- Die empfohlenen Schmiermittel könnender Tabelle unten entnommen werden.

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Yağ Değişimi

• İlk yağ değişimi redüktör işletmeye alındığı zamandan itibaren 100 saatir.
• Daha sonraki değişimler ise 2000 saat veya yılda birkezdir, hangisi önce gelirse.
• Değişim esnasında yağ kalıntılarından kurtulmak için sıcak olmasında fayda vardır.
• Bütün tapalar temizlenmelidir.
• Yeni yağı koymadan önce yağ üreticisinin tavsiye edeceği sıvı bir deterjanla dişli kutusu temizlenmelidir.
• Redüktör çalışmadığı durumlarda belli periyodlar içinde yağ kaçakları ve seviyesi kontrol edilmelidir. Gerekirse aynı tip yağ ile tamamlanmalıdır.

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 ayear.
• 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,

Mineral yağ
Mineral oils
Mineralöle

Schmierung

• Der erste Ölwechsel sollte nach 100 Betriebstunden vorgenommen werden.
• Weitere Ölwechsel sollten nach 2000 Betriebsstundenbzw. mindestens einmaljährlich erfolgen.
• Das Öl bitte bei noch warmen Getriebeablassen. Auf diese Weise werden Ablagerungen vermieden.
• Ölstopfen reinigen.• Vor dem Auffüllen mit neuem Öl, das Getriebe innen mit einem vom Schmierstoffherstellerempfohlenen Reinigungsmittel auswaschen.
• Getriebe regelmäßig auf Dichtigkeit prüfensowie sicherstellen, daß bei Stillstand das Öl bis zum vorgesehenen Ölstand reicht. Sofern erforderlich, ist Öl nachzufüllen;der Öltyp mußmit dem im Getriebe bereits enthaltenen Oelunbedingt übereinstimmen.

Genel maksat yağları — General purpose lubricants — Schmiermittel für allgemeinen Gebrauch

	Mineral yağ Mineral oils Mineralöle			Poly-Alpha-Olefin sentetik yağlar (PAO) Poly-Alpha-Olefin synthetic oils (PAO) Synthetische Poly-Alpha-Olefin-Öle (PAO)			Polyglycol sentetik yağlar (PG) Polyglycol synthetic oils(PG) Synthetische Polyglykolöle (PG)		
Ortam sıcaklığı Ambient Temp. Umgebungs temp	**-10°C +30°C**	**+10°C +45°C**	**+30°C +60°C**	**-20°C +60°C**			**-20°C +60°C**		
Üretici Manufacturer Hersteller	**ISO VG 150**	**ISO VG 220**	**ISO VG 320**	**ISO VG 150**	**ISO VG 220**	**ISO VG 320**	**ISO VG 150**	**ISO VG 220**	**ISO VG 320**
AGIP	Blasia 150	Blasia 220	Blasia 320	-	Blasia SX 220	Blasia SX 320	Blasia S 150	Blasia S 220	Blasia S 320
BP	Energol GR-XP 150	Energol GR-XP 220	Energol GR-XP 320	EnersynEPX 150	EnersynEPX 220	EnersynEPX 320	Enesyn SG 150	Enesyn SG 220	Enesyn SG 320
CASTROL	Alpha SP 150	Alpha SP 220	Alpha SP 320	Alphasyn EP 150	Alphasyn EP 220	Alphasyn EP 320	Alphasyn PG 150	Alphasyn PG 220	Alphasyn PG 320
CHEVRON	Ultra Gear 150	Ultra Gear 220	Ultra Gear 320	Tegra Synt. 150	Tegra Synt. 220	Tegra Synt. 320	HiPerSYN 150	HiPerSYN 220	HiPerSYN 320
ESSO	Spartan EP 150	Spartan EP 220	Spartan EP 320	Spartan S EP 150	Spartan S EP 220	Spartan S EP 320	Glycolube 150	Glycolube 220	Glycolube 320
KLUBER	Klüberoil GEM 1-150	Klüberoil GEM 1-220	Klüberoil GEM 1-320	Klübersynth EG 4-150	Klübersynth EG 4-220	Klübersynth EG 4-320	Klübersynth GH 6-150	Klübersynth GH 6-220	Klübersynth GH 6-320
MOLIKOTE	L-0115	L-0122	L-0132	L-1115	L-1122	L-1132	-	-	-
MOBIL	Mobilgear XMP 150	Mobilgear XMP 220	Mobilgear XMP 320	Mobilgear SHC XMP 150	Mobilgear SHC XMP 220	Mobilgear SHC XMP 320	Glygoyle 22	Glygoyle 30	Glygoyle 22
SHELL	Omala 150	Omala 220	Omala 320	Omala HD 150	Omala HD 220	Omala HD 320	Tivela S150	Tivela S220	Tivela S320
TEXACO	Meropa 150	Meropa 220	Meropa 320	Pinnacle EP 150	Pinnacle EP 220	Pinnacle EP 320	-	Synlube CLP 220	Synlube CLP 320
TOTAL	Carter EP 150	Carter EP 220	Carter EP 320	Carter SH 150	Carter SH 220	Carter SH 320	Carter SY 150	Carter SY 220	Carter SY 320
TRIBOL	1100/ 150	1100/ 220	1100/ 320	1510/ 150	1510/ 220	1510/ 320	800\ 150	800\ 220	800\ 320

Genellikle Planet redüktörler yağsız olarak sevk edilirler.

Generally, Planetary Drives are supplied without lubricant.

HINWEIS: saemtliche Getriebe Planetary Driveswerden ohne Oelfullung ausgeliefert.

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Yağ Değişimi — Oil Changes — Schmierung

Üretici Manufacturer Hersteller	Hidrolik Yağı / Hydraulic Oils / Hydrauliköle			Dişli Yağı / Gear Oils / Getriebeöle		
	ISO VG 32	**ISO VG 46**	**ISO VG 68**	**ISO VG 150**	**ISO VG 220**	**ISO VG 320**
AGIP	Rocol Foodlube Hi Power 32	-	-	Rocol Foodlube Hi-Torque 150	-	Rocol Foodlube Hi-Torque 320
BP	Enerpar M 32	Enerpar M 46	Enerpar M 68	-	-	
ESSO	Nuto FG 32	Nuto FG 46	Nuto FG 68	-	Gear Oil FM 220	
KLUBER	Summit Hysyn FG 32	Summit Hysyn FG 46	Summit Hysyn FG 68	Klüberoil 4 UH1 N 150	Klüberoil 4 UH1 N 220	Klüberoil 4 UH1 N 320
MOBIL	DTE FM 32	DTE FM 46	DTE FM 68	DTE FM 150	DTE FM 220	DTE FM 320
SHELL	Cassida Fluid HF 32	Cassida Fluid HF 46	Cassida Fluid HF 68	Cassida Fluid GL 150	Cassida Fluid GL 220	Cassida Fluid GL 320
TEXACO	Cygnus Hydraulic Oil 32	Cygnus Hydraulic Oil 46	Cygnus Hydraulic Oil 68	Cygnus Gear PAO 150	Cygnus Gear PAO 220	Cygnus Gear PAO 320
TRIBOL	Food Proof 1840/32	Food Proof 1840/46	Food Proof 1840/68	-	Food Proof 1810/220	Food Proof 1810/320

Kullanılacak olan diğer sentetik yağların NBR tip yağ keçesi ile uyumlu olduğu kontrol edilmelidir.

If other synthetic lubricants are use dalways check their compatibility with the NBR oil seals used in the reduction gear.

Bei Verwendung synthetischer Schmiermittel muss die Kompatibilität mit den im Planetengetriebe montierten Öldichtungen aus NBR geprüft werden.

Farklı tiplerdeki sentetik yağlar birbirine karıştırılmamalıdır.

Do not mix different kinds of synthetic lubricant together.

Unterschiedliche Typen von synthetischen Schmiermitteln dürfen nicht gemischt werden

Eğer planet dişli kutusunun çalışma sıcaklığı devamlı olarak 60°C ve üzerinde seyrediyorsa bu durumda sentetik yağ kullanılması sağlık verilerek dişli kutusu içindeki parçaların aşırı ısınmadan meydana gelebilecek aşınmalardan korunması sağlanır. Dişli kutusu içindeki yağ sıcaklığının 90°C yi aşmaması gerekir.

If the operating conditions of the reduction gear entail prolonged peririods of operation such to cause the oil temperature to rise considerably (>60°C) we suggest using a synthetic oil to guarantee less wear of the components and to prolongthe intervals between replacingthem. Maximum temperature of the lubricant inside the reduction gear must not go above 90°C.

Wenn die Betriebsbedingungen vom Planetengetriebe längere Betriebszeiten vorsehen, die zu hohen Öltemperaturen führen (>60°C), wird zur Verwendung von synthetischem Öl geraten, das für einen geringeren Verschleiß der Teile und größere Abstände zwischen den Ölwechseln garantiert. Die Temperatur vom Schmiermittel im Planetengetriebe darf 90°C nicht übersteigen

Montaj ve tapa pozisyonları

Aşağıdaki resimlerde montaj pozisyonlarını bulabilirsiniz. Sipariş esnasında montaj pozisyonu da bildirilmelidir. Bu şekilde uygun tapalama ve yağ miktarı seçilir.

Mounting positions and plugsposition

You can see the possible mounting positions in the figures below. The relative initial must be specified when ordering the reduction gear. The layout and type of plugs as well as the minimum lubricant level are also indicated, as per the legend.

Montageposition und Anordnung der Deckel

Die Abbildungen unten zeigen die möglichen Montagepositionen, deren Kürzel bei der Bestellung vom Planetengetriebe angegeben werden muss. Außerdem sind die Anordnung und der Typ der Deckel sowie der Mindestölstand angegeben (siehe Legende).

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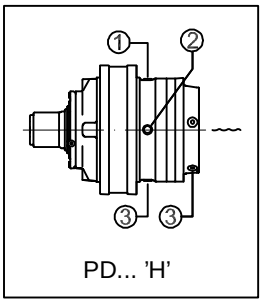
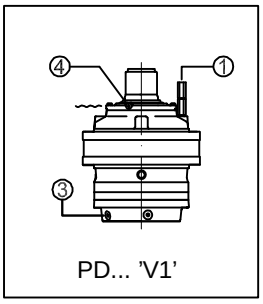
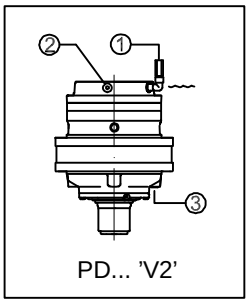
Montaj Pozisyonları Mounting Positions Montageposition



PD... 'H'

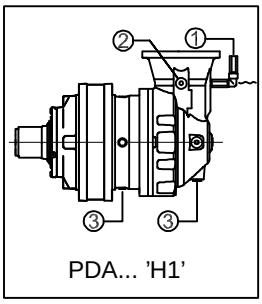


PD... 'V1'

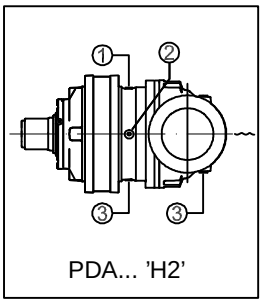


PD... 'V2'

1	Nefeslik / Vent plug Entlüftungstopfen
2	Seviye / Level plug Ölstandstopfen
3	Boşaltma / Drainage Ablassstopfen
4	Doldurma / Filling Einfüllstopfen



PDA... 'H1'



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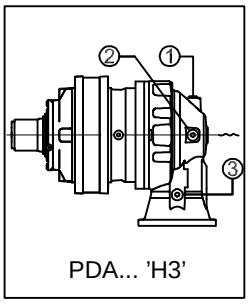
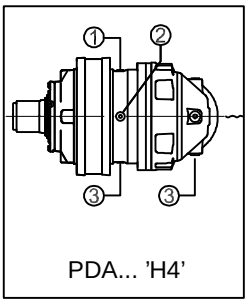
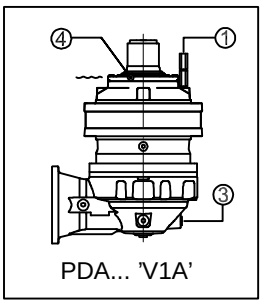


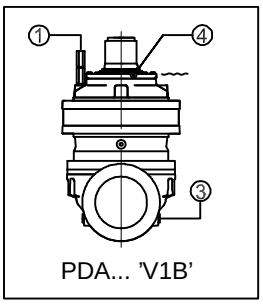
PDA... 'H3'



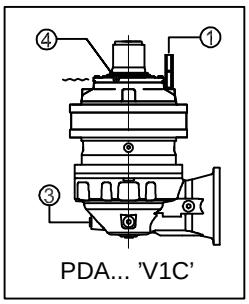
PDA... 'H4'



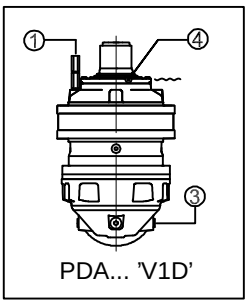
PDA... 'V1A'



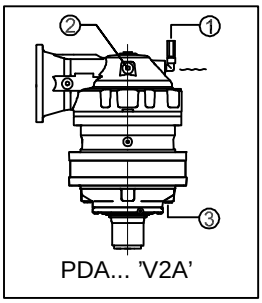
PDA... 'V1B'



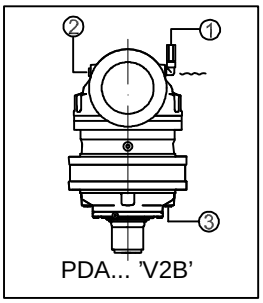
PDA... 'V1C'



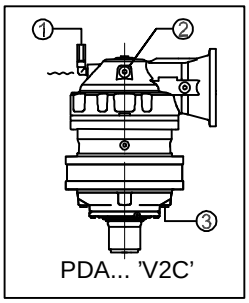
PDA... 'V1D'



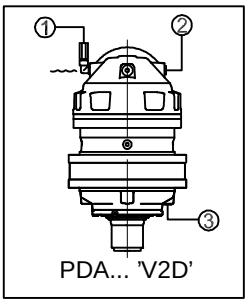
PDA... 'V2A'



PDA... 'V2B'



PDA... 'V2C'



PDA... 'V2D'

Sipariş esnasında montaj pozisyonunu dikkatlice belirtilmesi doğru tapa yerleşimi için gereklidir.

Please specify the mounting position carefully with the order for the correct pluging.

Bitte geben Sie die Position Montage sorgfältig mit dem Auftrag für die korrekte pluging.

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Genleşme Tankı

Dikey montaj uygulamalarında, genleşen yağın toplanması için genleşme kabı kullanılması tavsiye edilir. Bu düzenek talep halinde servis edilir.

Genleşme tankı redüktör üzerine öyle yerleştirilmelidir ki, yağ seviyesi tüp üzerindeki ufak göstergelerden görünecek şekilde montaj pozisyonuna göre en üst seviyede ve daima nefeslik tapasının altında olmalıdır.

Expansion Tank

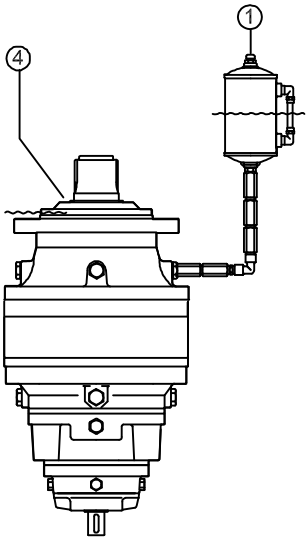
For vertical applications, it is recommended to use an expansion tank that can absorb any oil expansions and/or ensure topping up in hard to reach places. This fitting can be supplied onrequest.

The expansion tank must always be placed sothe level of oil, which can be seen by means of a small transparent tube placed in parallel withthe tank for instance (standard in some kits), isabove the highest point you wish to lubricate and, hence, above the venting plugs (4).

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.

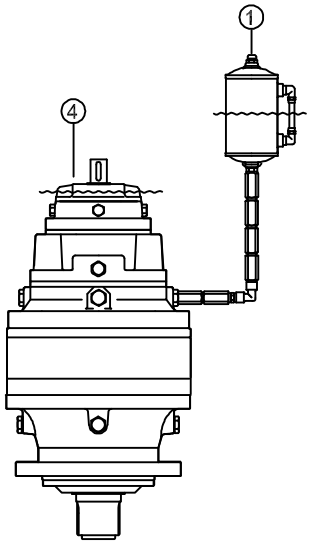
Das Ausdehnungsgefäß muss so positioniertsein, dass sich der Ölstand,der zum Beispielüber eine durchsichtige Ölstandsanzeige parallelzum Gefäß (serienmäßig bei einigen Kits) angezeigt wird, oberhalb der höchsten Stelle befindet,die geschmiert werden soll, und damit oberhalbder Entlüftungsdeckel (4).



1 Doldurma ve havalandırma
Filling up and venting
Füllen und Entlüften

4 Doldurma ve havalandırma
Venting while filling up
Entlüften beim Füllen

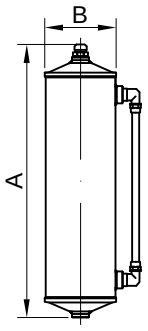
Minimum seviye
Minimum level
Mindestölstand



Aşağıdaki tablodan uygun tank tipi seçililir.

Please refer to the following table andrelative figure for the sales codes andtechnical specifications of the tank kits.

Die Bestellnummern und technischen Datender Kits für Ausdehnungsgefäße könnender Tabelle unten und der dazugehörigen Abbildung entnommen werden.



ET...

Tip/Type/Typ	A (mm)	B (mm)	Kapasite / Capacity Fassung-vermögen [ml]
ET 150	115	60	135
ET 300	155	75	290
ET 1000	200	110	900
ET 1500	235	110	1500
ET 2000	300	120	2000

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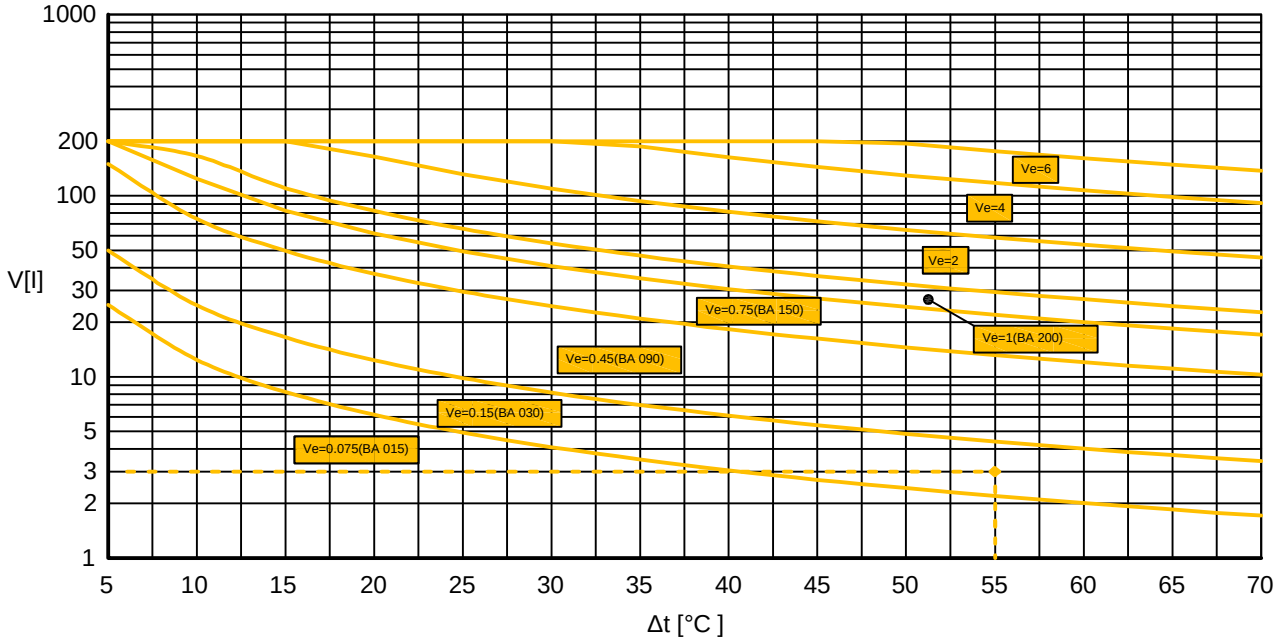
Genleşme tankının seçimi genleşen yağ miktarının hacmine Ve'ye bağlı olarak yapılır. Bu seçim aşağıdaki yol ile yapılır. Aşağıdaki grafikte, Δt farkını planet dişli kutusunun içindeki yağ sıcaklığı ile ortam sıcaklığının farkı alınır. Ve, redüktör içindeki gerekli yağ hacmi V ekseni ile Δ sıcaklık farkı ekseni birleştirilir. Bulunan nokta genleşen yağ miktarı Ve'yi verir. Ve, tank bu hacmin iki misli olarak seçilir.

The choice of tank should be based on the volume of expanded oil Ve; this can be found in the following way: in the following graph, find the point which has Δt difference between thereduction gear's oil temperature and ambient temperature as the abscissa and volume V ofoil necessary to fill the reduction gear as the ordinate. On the basis of the area in which thepoint falls, you find the volume of expanded oilVe and the tank is sized for double the volumecalculated.

Für die Auswahl vom Behälter ist das Volumenvom ausgedehnten Öl Ve entscheidend,das wiefolgt ermittelt werden kann: Auf der Grafik den Punkt ermitteln, dessen X-Koordinate die Differenz Δt zwischen der Öltemperatur im Getriebe und der Umgebungstemperatur ist und dessen Y-Koordinate das Volumen V vom Öl, das zum Füllen vom Getriebe erforderlich ist. Anhand des Bereichs auf der Grafik, in den der Punkt fällt, kann das Volumen Ve vom ausgedehnten Öl ermittelt werden. Der Behälter wird dann auf das doppelte Volumen des errechneten Werts ausgelegt.



Örnek

3 litre yağ kapasitesi olan bir planet dişlili redüktör, 80°C de çalışıyor ve ortam sıcaklığı 25°C olan şartlarda bulunuyor. Δt = 80-25 = 55°C dereceyi Δt ekseninden 3 litreyi de V ekseninden alarak kesiştirelim. Bulunan noktanın genleşen yağ miktarı V= 0,15 litre alanında olduğu grafikten bulunur. Bu durumda tavsiye edilen tank hacmi iki misli olarak 0,30 litre olarak seçilir. Devam eden sayfalarda montaj şekline göre redüktörlerin yağ miktarları verilmiştir.

Example

Consider a reduction gear with an oil capacity of 3 litres at an operating temperature of 80°C and with an ambient temperature of 25°C. Finding the abscissa Δt = 80-25 = 55°C and ordinate V = 3 litres point on the graph, it belongs to the area with an expanded volume of Ve = 0,15 litres. The tank recommended should have a volume double that of Ve - that is 0.30 litres - so the ideal tank is the BA 030. On the following pages you will find the volumes of oil, purely indicative, necessary to fill up according to the assembly position.

Beispiel

Es wird von einem Getriebe mit einem Ölfassungsvermögen von 3 Litern bei Betriebstemperatur 80°C und Umgebungstemperatur 25°C ausgegangen. Es wird ein Punkt mit der X-Koordinate Δt = 80-25 = 55°C und der Y-Koordinate V = 3 ermittelt, der in den Bereichmit ausgedehntem Volumen von Ve = 0,15 lt fällt. Der Behälter sollte das Doppelte von Vefassen, also 0,30 Liter. Geeignet ist damit der Behälter BA 030.Auf den folgenden Seiten sind reine Richtwertefür die Ölmengen angegeben, die zum Füllen inder entsprechenden Montageposition erforderlich sind.

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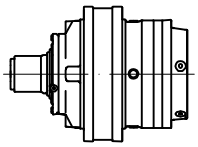
Yağ Miktarı — Oil Quantity — Schmieroimenge



		Montaj pozisyonları (lt) 'H' Mounting positions (lt) 'H' Einbaulagen (lt) 'H'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PD 101	S1	0,5	0,5	0,5	0,5	0,5	-	0,8
	S2	0,7	0,7	0,7	0,7	0,7	-	1
	S3	0,9	0,9	0,9	0,9	0,9	-	1,2
	S4	1,1	1,1	1,1	1,1	1,1	-	1,4
PD 103	S1	-	0,6	0,6	0,6	0,6	-	0,9
	S2	-	0,8	0,8	0,8	0,8	-	1,1
	S3	-	1	1	1	1	-	1,3
	S4	-	1,2	1,2	1,2	1,2	-	1,5
PD 105	S1	-	1	1,2	0,8	1	1	1,5
	S2	-	1,3	1,5	1,1	1,3	1,3	1,8
	S3	-	1,5	1,7	1,3	1,5	1,5	2
	S4	-	1,7	1,9	1,5	1,7	1,7	2,2
PD 107	S1	-	1,1	1,3	0,9	1,1	1,1	1,6
	S2	-	1,5	1,7	1,3	1,5	1,5	2
	S3	-	1,8	2	1,6	1,8	1,8	2,3
	S4	-	2	2,2	1,8	2	2	2,5
PD 109	S1	-	-	1,6	1,6	1,6	-	2,4
	S2	-	-	2	2	2	-	2,8
	S3	-	-	2,3	2,3	2,3	-	3,1
	S4	-	-	2,5	2,5	2,5	-	3,3
PD 111	S1	-	2,4	-	2,4	2,4	2,4	3,6
	S2	-	3,1	-	3,1	3,1	3,1	4,3
	S3	-	3,5	-	3,5	3,5	3,5	4,7
	S4	-	3,8	-	3,8	3,8	3,8	5
PD 113	S1	2,6	-	4,3	1,9	2,6	2,6	3,9
	S2	3,3	-	5	2,6	3,3	3,3	4,6
	S3	3,7	-	5,4	3	3,7	3,7	5
	S4	4	-	5,7	3,3	4	4	5,3
PD 115	S2	3,9	-	5,6	3,2	3,9	3,9	5,2
	S3	4,6	-	6,3	3,9	4,6	4,6	5,9
	S4	4,9	-	6,6	4,2	4,9	4,9	6,2
PD 117	S1	3,7	3,7	-	2,9	-	2,9	3,7
	S2	4,6	4,6	-	3,8	-	3,8	4,6
	S3	5	5	-	4,2	-	4,2	5
	S4	5,3	5,3	-	4,5	-	4,5	5,3
PD 119	S2	5,3	5,3	-	4,5	-	4,5	5,3
	S3	5,8	5,8	-	5	-	5	5,8
	S4	6,1	6,1	-	5,3	-	5,3	6,1
PD 121	S1	4	4	-	3,3	-	3,3	4
	S2	5,5	5,5	-	4,7	-	4,7	5,5
	S3	6	6	-	5,2	-	5,2	6
	S4	6,3	6,3	-	5,5	-	5,5	6,3
PD 123	S1	5,2	5,2	-	4,5	-	4,5	5,2
	S2	6,5	6,5	-	5,8	-	5,8	6,5
	S3	7,1	7,1	-	6,4	-	6,4	7,1
	S4	7,5	7,5	-	6,9	-	6,9	7,5

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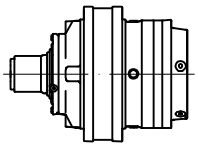

		Montaj pozisyonları (lt) 'H' Mounting positions (lt) 'H' Einbaulagen (lt) 'H'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PD 125	S1	7,2	7,2	-	6,2	-	6,2	7,2
	S2	8,5	8,5	-	7,5	-	7,5	8,5
	S3	9,7	9,7	-	8,7	-	8,7	9,7
	S4	10,1	10,1	-	9,1	-	9,1	10,1
PD 127	S1	8,7	-	-	8,7	-	8,7	8,7
	S2	10	-	-	10	-	10	10
	S3	11,2	-	-	11,2	-	11,2	11,2
	S4	11,6	-	-	11,6	-	11,6	11,6
PD 129	S1	15	-	-	16,4	-	16,4	-
	S2	16,4	-	-	16,9	-	16,9	-
	S3	17,6	-	-	17,5	-	17,5	-
	S4	18,1	-	-	18,2	-	18,2	-
	S5	18,4	-	-	18,5	-	18,5	-
PD 131	S1	21	-	-	21	-	21	-
	S2	23,4	-	-	23,4	-	23,4	-
	S3	24,8	-	-	24,8	-	24,8	-
	S4	25,2	-	-	25,2	-	25,2	-
	S5	25,5	-	-	25,5	-	25,5	-
PD 133	S1	21	-	-	21	-	21	-
	S2	23,4	-	-	23,4	-	23,4	-
	S3	24,8	-	-	24,8	-	24,8	-
	S4	25,2	-	-	25,2	-	25,2	-
	S5	25,5	-	-	25,5	-	25,5	-
PD 135	S1	42,5	-	-	42,5	-	42,5	-
	S2	46,5	-	-	46,5	-	46,5	-
	S3	47,9	-	-	47,9	-	47,9	-
	S4	48,7	-	-	48,7	-	48,7	-
	S5	49,1	-	-	49,1	-	49,1	-
PD 137	S1	42,5	-	-	42,5	-	42,5	-
	S2	46,5	-	-	46,5	-	46,5	-
	S3	47,9	-	-	47,9	-	47,9	-
	S4	48,7	-	-	48,7	-	48,7	-
	S5	49,1	-	-	49,1	-	49,1	-
PD 139	S1	50	-	-	50	-	50	-
	S2	60	-	-	60	-	60	-
	S3	62,5	-	-	62,5	-	62,5	-
	S4	63,5	-	-	63,5	-	63,5	-
	S5	64	-	-	64	-	64	-
PD 141	S1	50	-	-	50	-	50	-
	S2	60	-	-	60	-	60	-
	S3	62,5	-	-	62,5	-	62,5	-
	S4	63,5	-	-	63,5	-	63,5	-
	S5	64	-	-	64	-	64	-

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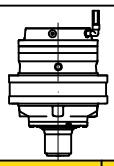

		Montaj pozisyonları (lt) 'H' Mounting positions (lt) 'H' Einbaulagen (lt) 'H'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PD 101	S1	-	1	1	1	1	-	1,6
	S2	-	1,4	1,4	1,4	1,4	-	2
	S3	-	1,8	1,8	1,8	1,8	-	2,4
	S4	-	2,2	2,2	2,2	2,2	-	2,8
PD 103	S1	-	1,2	1,2	1,2	1,2	-	1,8
	S2	-	1,6	1,6	1,6	1,6	-	2,2
	S3	-	2	2	2	2	-	2,6
	S4	-	2,4	2,4	2,4	2,4	-	3
PD 105	S1	-	2	2,4	1,6	2	2	3
	S2	-	2,6	3	2,2	2,6	2,6	3,6
	S3	-	3	3,4	2,6	3	3	4
	S4	-	3,4	3,8	3	3,4	3,4	4,4
PD 107	S1	-	2,2	2,6	1,8	2,2	2,2	3,2
	S2	-	3	3,4	2,6	3	3	4
	S3	-	3,6	4	3,2	3,6	3,6	4,6
	S4	-	4	4,4	3,6	4	4	5
PD 109	S1	-	-	3,2	3,2	3,2	-	4,8
	S2	-	-	4	4	4	-	5,6
	S3	-	-	4,6	4,6	4,6	-	6,2
	S4	-	-	5	5	5	-	6,6
PD 111	S1	-	4,8	-	4,8	4,8	4,8	7,2
	S2	-	6,2	-	6,2	6,2	6,2	8,6
	S3	-	7	-	7	7	7	9,4
	S4	-	7,6	-	7,6	7,6	7,6	10
PD 113	S1	5,2	-	8,6	3,8	5,2	5,2	7,8
	S2	6,6	-	10	5,2	6,6	6,6	9,2
	S3	7,4	-	10,8	6	7,4	7,4	10
	S4	8	-	11,4	6,6	8	8	10,6
PD 115	S2	7,8	-	11,2	6,4	7,8	7,8	10,4
	S3	9,2	-	12,6	7,8	9,2	9,2	11,8
	S4	9,8	-	13,2	8,4	9,8	9,8	12,4
PD 117	S1	7,4	7,4	-	5,8	-	5,8	7,4
	S2	9,2	9,2	-	7,6	-	7,6	9,2
	S3	10	10	-	8,4	-	8,4	10
	S4	10,6	10,6	-	9	-	9	10,6
PD 119	S2	10,6	10,6	-	9	-	9	10,6
	S3	11,6	11,6	-	10	-	10	11,6
	S4	12,2	12,2	-	10,6	-	10,6	12,2
PD 121	S1	8	8	-	6,6	-	6,6	8
	S2	11	11	-	9,4	-	9,4	11
	S3	12	12	-	10,4	-	10,4	12
	S4	12,6	12,6	-	11	-	11	12,6
PD 123	S1	10,4	10,4	-	9	-	9	10,4
	S2	13	13	-	11,6	-	11,6	13
	S3	14,2	14,2	-	12,8	-	12,8	14,2
	S4	15	15	-	13,8	-	13,8	15

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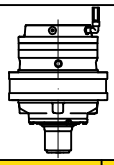

		Montaj pozisyonları (lt) 'H' Mounting positions (lt) 'H' Einbaulagen (lt) 'H'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PD 125	S1	14,4	12,4	-	12,4	-	12,4	14,4
	S2	17	15	-	15	-	15	17
	S3	19,4	17,4	-	17,4	-	17,4	19,4
	S4	20,2	18,2	-	18,2	-	18,2	20,2
PD 127	S1	17,4	17,4	-	17,4	-	17,4	17,4
	S2	20	20	-	20	-	20	20
	S3	22,4	22,4	-	22,4	-	22,4	22,4
	S4	23,2	23,2	-	23,2	-	23,2	23,2
PD 129	S1	-	-	-	-	-	-	-
	S2	32,8	32,8	-	32,8	-	32,8	32,8
	S3	35,2	35,2	-	35,2	-	35,2	35,2
	S4	36,2	36,2	-	36,2	-	36,2	36,2
	S5	36,8	36,8	-	36,8	-	36,8	36,8
PD 131	S1	-	-	-	-	-	-	-
	S2	46,8	-	-	46,8	-	46,8	46,8
	S3	49,6	-	-	49,6	-	49,6	49,6
	S4	50,4	-	-	50,4	-	50,4	50,4
	S5	51	-	-	51	-	51	51
PD 133	S1	-	-	-	-	-	-	-
	S2	46,8	-	-	46,8	-	46,8	46,8
	S3	49,6	-	-	49,6	-	49,6	49,6
	S4	50,4	-	-	50,4	-	50,4	50,4
	S5	51	-	-	51	-	51	51
PD 135	S1	-	-	-	-	-	-	-
	S2	93	-	-	93	-	93	93
	S3	95,8	-	-	95,8	-	95,8	95,8
	S4	97,4	-	-	97,4	-	97,4	97,4
	S5	98,2	-	-	98,2	-	98,2	98,2
PD 137	S1	-	-	-	-	-	-	-
	S2	93	-	-	93	-	93	93
	S3	95,8	-	-	95,8	-	95,8	95,8
	S4	97,4	-	-	97,4	-	97,4	97,4
	S5	98,2	-	-	98,2	-	98,2	98,2
PD 139	S1	-	-	-	-	-	-	-
	S2	120	-	-	120	-	120	120
	S3	125	-	-	125	-	125	125
	S4	127	-	-	127	-	127	127
	S5	128	-	-	128	-	128	128
PD 141	S1	-	-	-	-	-	-	-
	S2	120	-	-	120	-	120	120
	S3	125	-	-	125	-	125	125
	S4	127	-	-	127	-	127	127
	S5	128	-	-	128	-	128	128

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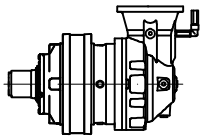

		Montaj pozisyonları (lt) 'H1,H2,H3,H4' Mounting positions (lt) 'H1,H2,H3,H4' Einbaulagen (lt) 'H1,H2,H3,H4'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PDA 101	S2	-	2	2	2	2	-	2,3
	S3	-	2,2	2,2	2,2	2,2	-	1,2
	S4	-	2,4	2,4	2,4	2,4	-	1,4
PDA 103	S2	-	2,1	2,1	2,1	2,1	-	2,1
	S3	-	2,3	2,3	2,3	2,3	-	2,3
	S4	-	2,5	2,5	2,5	2,5	-	2,8
PDA 105	S2	-	2,6	2,8	2,8	2,8	2,8	3,1
	S3	-	2,8	3	3	3	3	3,3
	S4	-	3	3,2	3,2	3,2	3,2	3,5
PDA 107	S2	-	3,1	3,1	3,1	3,1	3,1	1,6
	S3	-	3,2	3,2	3,2	3,2	3,2	2
	S4	-	3,3	3,3	3,3	3,3	3,3	2,3
PDA 109	S2	-	-	3,6	3,6	3,6	-	4,4
	S3	-	-	3,8	3,8	3,8	-	4,6
	S4	-	-	4	4	4	-	4,8
PDA 111	S2	-	4,4	-	4,4	4,4	4,4	5,6
	S3	-	5,1	-	5,1	5,1	5,1	6,3
	S4	-	6,5	-	6,5	6,5	6,5	7,7
PDA 113	S2	4,6	4,6	-	4,6	4,6	4,6	5,9
	S3	5,3	5,3	-	5,3	5,3	5,3	6,6
	S4	6,5	6,5	-	6,5	6,5	6,5	7,8
PDA 115	S2	5,6	5,6	-	5,6	5,6	5,6	6,9
	S3	5,9	5,9	-	5,9	5,9	5,9	7,2
	S4	6,6	6,6	-	6,6	6,6	6,6	7,9
PDA 117	S2	6,6	6,6	-	5,8	-	5,8	6,6
	S3	7	7	-	6,2	-	6,2	7
	S4	9,1	9,1	-	8,3	-	8,3	9,1
PDA 119	S2	-	-	-	-	-	-	-
	S3	8,2	8,2	-	7	-	7	8,2
	S4	10,2	10,2	-	9,4	-	9,4	10,2
PDA 121	S2	6,7	6,7	-	5,8	-	5,8	6,7
	S3	8,2	8,2	-	7	-	7	8,2
	S4	10,2	10,2	-	9,4	-	9,4	10,2
PDA 123	S2	8,5	8,5	-	5,8	-	5,8	8,5
	S3	9,1	9,1	-	7	-	7	9,1
	S4	10,5	10,5	-	9,4	-	9,4	10,5
PDA 125	S2	-	-	-		-		-
	S3	11,7	11,7	-	10,7	-	10,7	11,7
	S4	14,2	14,2	-	13,2	-	13,2	14,2
PDA 127	S2	-	-	-	-	-	-	-
	S3	13,2	13,2	-	13,2	-	13,2	13,2
	S4	15,7	15,7	-	15,7	-	15,7	15,7
PDA 129	S2	-	-	-	-	-	-	-
	S3	20,1	20,1	-	20,1	-	20,1	-
	S4	20,6	20,6	-	20,6	-	20,6	-

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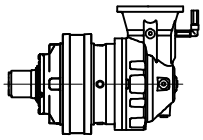
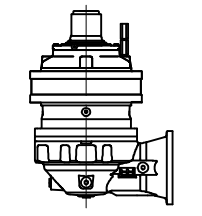


Montaj pozisyonları (lt) 'H1,H2,H3,H4'
Mounting positions (lt) 'H1,H2,H3,H4'
Einbaulagen (lt) 'H1,H2,H3,H4'

		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PDA 131	S2	26,4	-	-	26,4	-	26,4	-
	S3	27,2	-	-	27,2	-	27,2	-
	S4	27,8	-	-	27,8	-	27,8	-
PDA 133	S2	26,4	-	-	26,4	-	26,4	-
	S3	27,2	-	-	27,2	-	27,2	-
	S4	27,8	-	-	27,8	-	27,8	-
PDA 135	S4	50,7	-	-	50,7	-	50,7	-
	S5	50,9	-	-	50,9	-	50,9	-
PDA 137	S3	50,7	-	-	50,7	-	50,7	-
	S4	50,9	-	-	50,9	-	50,9	-
PDA 139	S4	66,5	-	-	66,5	-	66,5	-
	S5	66,5	-	-	66,5	-	66,5	-
PDA 141	S5	66,5	-	-	66,5	-	66,5	-



Montaj pozisyonları (lt) 'V1,V2, (A,B,C,D)'
Mounting positions (lt) 'V1,V2, (A,B,C,D)'
Einbaulagen (lt) 'V1,V2, (A,B,C,D)'

		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PDA 101	S2	4	4	4	4	4	-	4,6
	S3	4,4	4,4	4,4	4,4	4,4	-	5
	S4	4,8	4,8	4,8	4,8	4,8	-	5,4
PDA 103	S2	4,2	4,2	4,2	4,2	4,2	-	4,8
	S3	4,6	4,6	4,6	4,6	4,6	-	5,2
	S4	5	5	5	5	5	-	5,6
PDA 105	S2	-	5,2	6	4,8	5,2	5,2	6,2
	S3	-	5,6	6,4	5,2	5,6	5,6	6,6
	S4	-	6	7,6	5,6	6	6	7
PDA 107	S2	-	6,2	6	6,2	6,2	6,2	7,2
	S3	-	6,4	6,4	6,4	6,4	6,4	7,4
	S4	-	6,6	7,6	6,6	6,6	6,6	7,6
PDA 109	S2	-	-	7,2	7,2	7,2	-	8,8
	S3	-	-	7,6	7,6	7,6	-	9,2
	S4	-	-	8	8	8	-	9,6
PDA 111	S2	-	8,8	8,8	8,8	8,8	8,8	11,2
	S3	-	10,2	10,2	10,2	10,2	10,2	12,6
	S4	-	13	13	13	13	13	15,4
PDA 113	S2	9,2	-	12,6	7,8	9,2	9,2	11,8
	S3	10,6	-	14	9,2	10,6	10,6	13,2
	S4	13	-	14,6	11,6	13	13	15,6
PDA 115	S2	11,2	-	14,6	9,8	11,2	11,2	13,8
	S3	11,8	-	15,2	10,4	11,8	11,8	14,4
	S4	13,2	-	16,6	11,8	13,2	13,2	15,8

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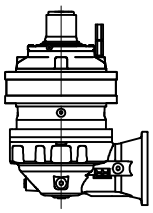


		Montaj pozisyonları (lt) 'V1,V2, (A,B,C,D)' Mounting positions (lt) 'V1,V2, (A,B,C,D)' Einbaulagen (lt) 'V1,V2, (A,B,C,D)'						
		MS - MC	FS - FC	HS - HC	SD	SF	S	FVS - C
PDA 117	S2	13,2	13,2	-	7,8	-	9,2	11,8
	S3	14	14	-	9,2	-	10,6	13,2
	S4	18,2	18,2	-	11,6	-	13	15,6
PDA 119	S3	16,4	16,4	-	14	-	14	16,4
	S4	20,4	20,4	-	18,8	-	18,8	20,4
PDA 121	S2	13,4	4,2	-	11,6	-	11,6	13,4
	S3	16,4	4,6	-	14	-	14	16,4
	S4	20,4	5	-	18,8	-	18,8	20,4
PDA 123	S2	17	17	-	15,6	-	15,6	17
	S3	18,2	18,2	-	16,8	-	16,8	18,2
	S4	22	22	-	20,6	-	20,6	22
PDA 125	S3	23,4	23,4	-	21,4	-	21,4	23,4
	S4	28,4	28,4	-	26,4	-	26,4	28,4
PDA 127	S3	26,4	-	-	26,4	-	26,4	24,4
	S4	31,4	-	-	31,4	-	31,4	28,9
PDA 129	S3	24,4	-	-	22,5	-	22,5	24,4
	S4	28,9	-	-	27	-	27	28,9
PDA 131	S3	52,8	-	-	52,8	-	52,8	-
	S4	54,4	-	-	54,4	-	54,4	-
	S5	55,6	-	-	55,6	-	55,6	-
PDA 133	S3	52,8	-	-	52,8	-	52,8	-
	S4	54,4	-	-	54,4	-	54,4	-
	S5	55,6	-	-	55,6	-	55,6	-
PDA 135	S4	101,4	-	-	101,4	-	101,4	-
	S5	101,8	-	-	101,8	-	101,8	-
PDA 137	S4	101,4	-	-	101,4	-	101,4	-
	S5	101,8	-	-	101,8	-	101,8	-
PDA 139	S4	131	-	-	131	-	131	-
	S5	133	-	-	133	-	133	-
PDA 141	S4	131	-	-	131	-	131	-

Genellikle Planet dişli kutularımız, yağsız sevk edilirler.

Generally, Planetary Drives are supplied without lubricant.

HINWEIS: saemtliche Getriebe Planetary Drives werden ohne Oelfullung ausgeliefert.

BİLGİ/ INFORMATION / INFORMATIONEN

Yardımcı Soğutma

Sisteminin ana elemanları; yağ hava ısı eşanjörü, sabit debili bir dişli pompa, bir elektrik motor bir dönüş hattı üzerinde bir filtre(60µm filtreli)bir koaksiyel fan pompalı ve iki adet termostat dişli kutusu üzerine monteli bir adedi minimum çalışma sıcaklığı için 60°C'ye ayarlanmıştır. Bir diğeri ise maksimum sıcaklığa ayarlanmıştır. Bu sıcaklık aşılırsa bir alarm verilebilir veya redüktör durdurulur. Aynı zamanda sistem basıncıda ölçülür.

Ek olarak montaj pozisyonlarına uygun olarak dik çalışma durumda sisteme yağ genleşme tanklarından ilave edilmelidir. Uygun olan 2 lt.'lik modeldir.(ET2000)

Talep edilmesi halinde isteğe bağlı parçalar temin edilebilir.

- Akım ölçer görsel olarak yağ akışının izlenebilmesi için
- Basınç şalteri redüktör içindeki aşırı basıncı belirtmek için
- Devamlı sıcaklık ayarı ve bypass valfi ile kontrol edilir.
- Farklı filtreleme seçenekleri (10,25,90 ve 125µm;
- Termostat farklı çalışma sıcaklıkları için(40°C veya 50°C)

Elektriksel ve hidrolik sistemlerin montajı çalıştırılması müşterinin sorumluluğundadır.

En uygun soğutma sistemi seçimi ısıl güç ps dayak yapılmalıdır. Isıl güç ve sıcaklık farkı kullanılarak grafikten seçilir. $\Delta t=t_R-t_a$ dır.
t_R:Redüktör içindeki istenen yağ sıcaklığı
t_a:Ortam sıcaklığı

Auxilary Cooling

Fundamental components of the auxiliary cooling system are: an oil-air heat exchanger, a gear pump (constant displacement type), an electric motor, a spin-on filter (with a filtering degree of 60 mm), a fan coaxial with the pump and two thermostats to install on the reduction gear, one set for the minimum system start-up temperature, which prevents the cooling unit starting until a temperature of 60°C is reached, and the other set for a maximum temperature which, when exceeded, can trigger an alarm and/or stop the reduction gear working and a gauge to see delivery pressure.

In addition, for the assembly positions with a vertical axis and, of course, wherever the reduction gear is filled up completely with lubricant, an expansion tank has to be mounted.
In these cases we recommend using the BA 200 expansion tank.

On request optional components can be supplied, such as:

- a flow meter so as to have a visual of the oil's passage;
- a pressure switch to indicate overpressures inside the reduction gear by the switching of an electrical contact;
- control unit with continuous adjustment of the temperature by means of a bypass valve;
- filter with a different filtering degree (10,25,90 or 125µm);
- Thermostat with different start-up temperature (either 50°C or 40°C)

Connection of the electrical contacts and hydraulic circuit and all the material needed for it are the responsibility of the customer.

The choice of the most suitable system must be made based on the thermal power PS you need to dissipate and on the D_t difference between the temperature of the oil inside the reduction gear t_R and ambient temperatureta, using this graph to help you.

Kühlsystem

Das zusätzliche Kühlsystem umfasst folgende Komponenten: ein Öl-Luft-Wärmeaustauscher, eine Zahnradpumpe (mit vorgegebene Hubraum), ein Elektromotor, ein Spin-on Filter (Filterstärke 60 mm), ein koaxiales Gebläse zur Pumpe und zwei Thermostate, die am Planetengetriebe installiert werden. Ein Thermostat wird auf die Mindesttemperatur zum Starten vom Kühlsystem geeicht und verhindert das Einschalten vom Kühlsystem bis zu einer Temperatur von 60°C, der andere Thermostat wird auf die Höchsttemperatur geeicht, bei deren Überschreiten ein Alarm ausgelöst u/o das Planetengetriebe abgeschaltet werden kann und eine Manometer zu Anzeige vom Druck am Eingang.

Bei Montage in Position mit vertikaler Achse und immer dann, wenn mit voller Ölfüllung gearbeitet wird, muss außerdem ein Ausdehnungsgefäß installiert werden.

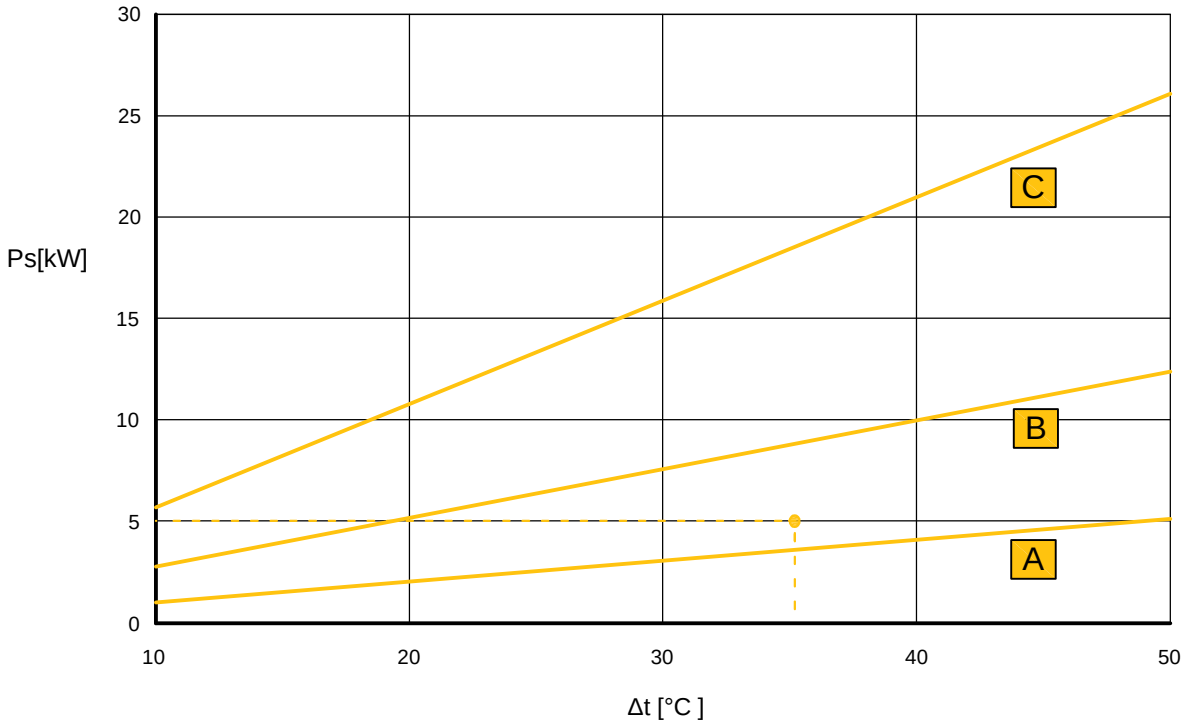
In diesen Fällen wird dazu geraten, das Ausdehnungsgefäß BA 200 zu installieren.

Auf Wunsch ist folgendes Zubehör erhältlich:
- Durchflussmesser mit Sichtglas für Ölfluss;
- Druckwächter zur Anzeige vom Überdruck im Planetengetriebe durch Umschalten eines elektrischen Kontakts;
- Steuergerät für stufenlose Temperaturregelung mittels Bypass-Ventil;
- Filter mit anderer Filterstärke (10, 25, 90 oder 125 µm);
- Thermostat mit unterschiedlicher Starttemperatur (50°C oder 40°C)

Für den Anschluss der elektrischen Kontakte und vom Ölkreislauf sowie die Bereitstellung des erforderlichen Materials ist der Kunde zuständig.

Das geeignete System wird anhand der Wärmeleistung P_S ausgewählt, die abgeleitet werden muss, und der Differenz Dt zwischen der Öltemperatur im Planetengetriebe t_R und der Umgebungstemperatur t_a, und zwar mit folgender Grafik:

BİLGİ/ INFORMATION / INFORMATIONEN



Örnek

Yardımcı bir soğutma sistemin termal güç Ps =5 kW için kullanıldığını düşünelim. Redüktör çalışma sıcaklığı 65°C ortam sıcaklığı 30°C'dir. Bu durumda sıcaklık farkı Δ_t=65-30=35°C bulunur. Δ_t ekseninde 35 ile Ps eksenindeki 5 kesiştirilirse bulunan noktanın B bölgesinde olduğu görülürki uygun soğutma B tipidir.

Example

An auxiliary cooling system has to be sized to get rid of a thermal power of Ps = 15 kW from a reduction gear working at an operating temperature of 65°C with an ambient temperature of 30°C. Finding the abscissa Δ_t=65-30=35°C *and ordinate Ps = 5 kW, point on the graph, it comes in the area marked with B. This means that the suitable system is, in fact, the B.*

Beispiel

Ein zusätzlichen Kühlsystem soll darauf ausgelegt werden, eine Wärmeleistung von Ps = 5 kW von einem Planetengetriebe abzuleiten, das mit einer Betriebstemperatur von 65°C und bei einer Umgebungstemperatur von 30°C läuft. Es wird ein Punkt mit der X-Koordinate Δt=65-30=35°C und der Y-Koordinate Ps = 5 kW, ermittelt, der im Bereich B liegt. Am besten geeignet ist damit das System B.

Yardımcı soğutma sisteminin hidrolik tesisatı montaj pozisyonlarına bağlı olarak yağ girişlerinin ve çıkışlarının düzenli yağ akışına uygun olarak bağlanması gerekir.Bu şekilde yağın redüktör içinde düzenli değişmesi sağlanmalıdır. Eğer yağ girişi ufaksa bir kaç yerden giriş verilmeli ve pompa yağ akışına direnç azaltılmalıdır. Montaja bağlı olarak yağ genleşme tankı kullanılıyorsa ileriki sayfada görüleceği üzere, yağ çevrimine eklenmelidir.

The hydraulic connection of the auxiliary cooling system must be done so as to intake the oil (and any detritus) from the lowest point (point (3) in the assembly positions figures) and have the delivery from a point far enough away from the intake to facilitate changing the oil from inside the reduction gear. If the intake hole is not big enough to get rid of the pump's flow, two or more intake points must be foreseen to guarantee against the risk of cavitation. Two or more connection holes may also be used for delivery, for example, in the case of multi-stage reduction gears

Der Hydraulikanschluss vom zusätzlichen Kühlsystem muss so erfolgen, dass das Öl (mit eventuellen Verunreinigungen) an der am weitesten unten liegenden Stelle (Punkt (3) auf den Abbildungen mit der Montageposition) angesaugt und die Druckleitung an einer Stelle angelegt wird, die sich in ausreichender Entfernung von der Ansaugleitung befindet, um den Ölaustausch im Planetengetriebe zu fördern. Sollte die Ansaugöffnung nicht groß genug sein, um den Durchsatz der Pumpe zu bedienen, müssen zwei oder mehr Ansaugstellen vorgesehen werden, um Hohlsogbildung zu vermeiden. Auch für die Druckleitung können zwei oder mehr Anschlüsse vorgesehen werden, zum Beispiel bei mehrstufigen Planetengetrieben

BİLGİ / INFORMATION / INFORMATIONEN

Soğutma Sistemi Montaj Örnekleri

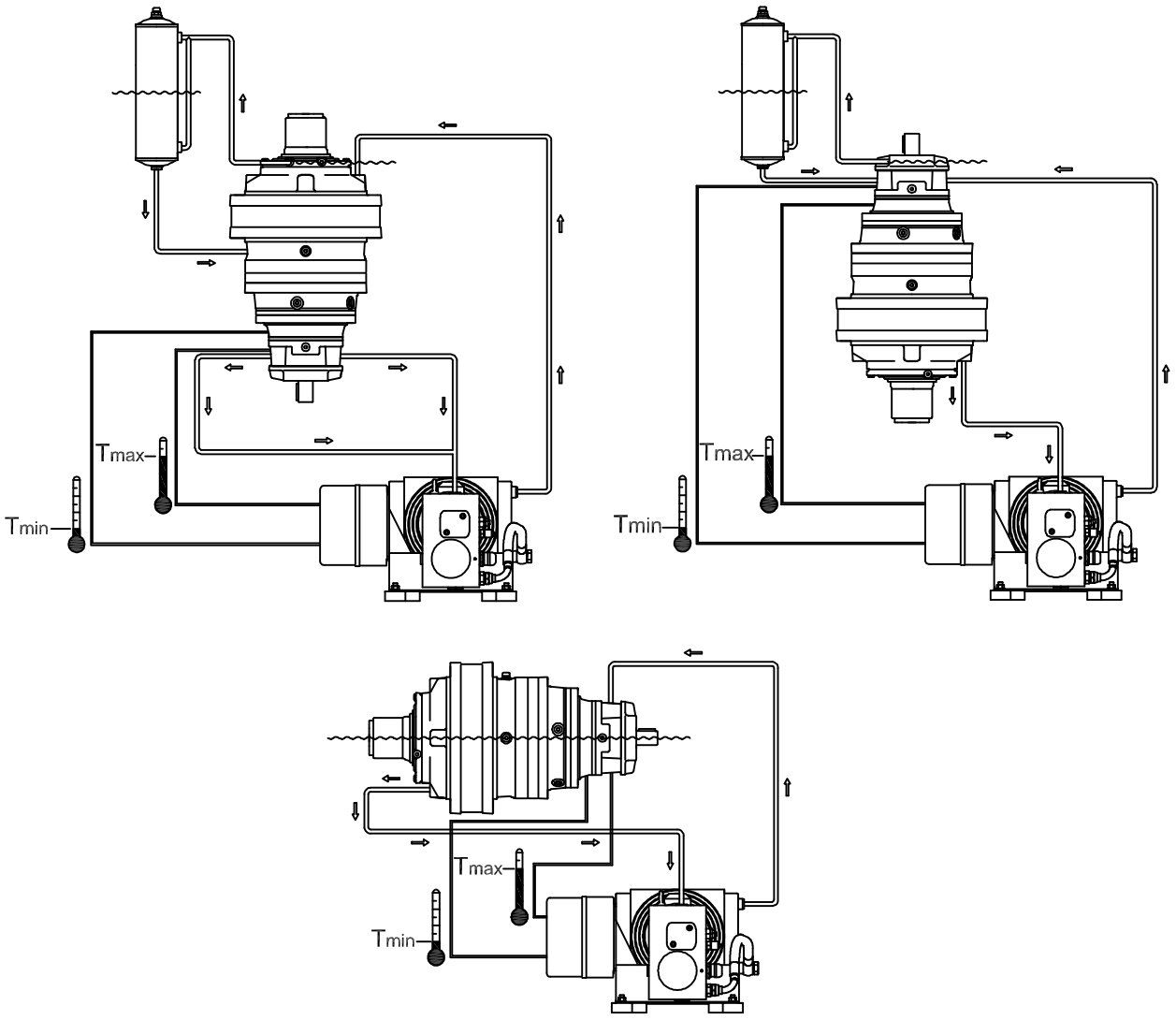
Yardımcı soğutma sisteminin montaj pozisyonlarına göre bağlantı şekillerine birkaç örnek görülmektedir. Yağ sisteminin giriş ve çıkış bağlantı şekilleri ve termostat montajları sistem çalışması düzenlemektir. Dik Çalışma durumunda yağ dengeleme tankının yağ sirkülasyonun ilavesine dikkat edilmektedir. Yağ sistem borularının montajında sistem basıncının çalışma sıcaklık aralığında (30°-90°) 2-3 bardan fazla müsade edilmemelidir.

Cooling System Mounting Examples

The figure gives a few examples of connecting the auxiliary cooling system to the reduction gear, where you can see the intake and delivery hydraulic connections as well as the electrical connections of the thermostats that regulate system operation.
The size of the delivery pipes must take into account the distance between the cooling unit and the reduction gear, being careful not to exceed an overall line pressure drop of 2-3 bar in the operating temperature range (30°C -90°C).

Kühlanlage Einbaumöglichkeiten

Die Abbildung zeigt einige Anschlussbeispiele vom Kühlsystem an das Planetengetriebe mit Angabe der Hydraulikanschlüsse von Saugund Druckleitung und der elektrischen Anschlüsse der Thermostate, die den Betrieb vom Kühlsystem regeln. Die Auslegung der Druckleitung muss den Abstand zwischen Kühlsystem und Planetengetriebe berücksichtigen. Dabei muss darauf geachtet werden, dass im Bereich der Betriebstemperatur (30°C-90°C) ein Druckabfall von insgesamt 2-3 Bar in der Leitung nicht überschritten
wird.



BİLGİ/ INFORMATION / INFORMATIONEN

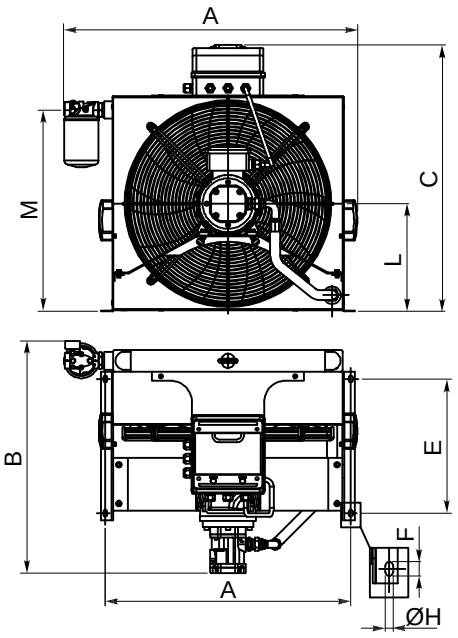
Eşanjör — Heat Exchanger — Wärmeaustauscher

		A	B	C
Yağ Debisi Oil Flow Rate Öldurchsatz	[l/min]	8	10	23
Isıl Güç Kapasitesi Thermal Power Dissipated Abgeleitete Wärmeleistung (per/where/für Dt=t_R-T_a=40°C)	[kW]	4	10	20
Hava Debisi Air Folw Rate Luftdurchsatz	[m³/h]	200	4080	4500
Güç Tüketimi Power Consumption Leistungsaufnahme	[kW]	5	0,75	1,1
Maksimum Basınç Maximum Pressure Höchstdurck	[bar]	6	6	6
Voltaj Power Voltage Versorgungsfrequenz	[V]	230/400	230/400	230/400
Güç Frekansı Power Frequency Versorgungsfrequenz	[Hz]	50/60	50/60	50/60
Koruma Sınırı Protection level Schutzart	IP	55	55	55
PDS KODU PDS Riduttori Code Code von PDS Riduttori	[-]	EA	EB	EC

Eşanjör yardımı ile kazanılan ısıl güç ISO VG 150 yağ vizkozitesi ile deniz seviyesindeki değerlerdir.

Power dissipated by the exhanger with oil viscosity:ISO VG 150 at 0 metres above sea level

Vom Wärmeauscher abgeleitete Leistung mit Öl mit Viskosität von ISO VG 150 bei 0 m ü. NN.



	A	B	C	D	E	F	ØH	L	M
EA	465	537	418,5	347	280	20	9	179,5	273,5
EB	682	549	616,5	555	300	20	9	278,5	471,5
EC	830	657	755	695	380	20	9	305	570,5

D,E,F,H: 4 sabitleme deliğin boyutları
D,E,F,H: Dimensions for the 4 fixing holes
D,E,F,H: Abmessungen bezogen auf die 4 Befestigungslöcher

BİLGİ/ INFORMATION / INFORMATIONEN

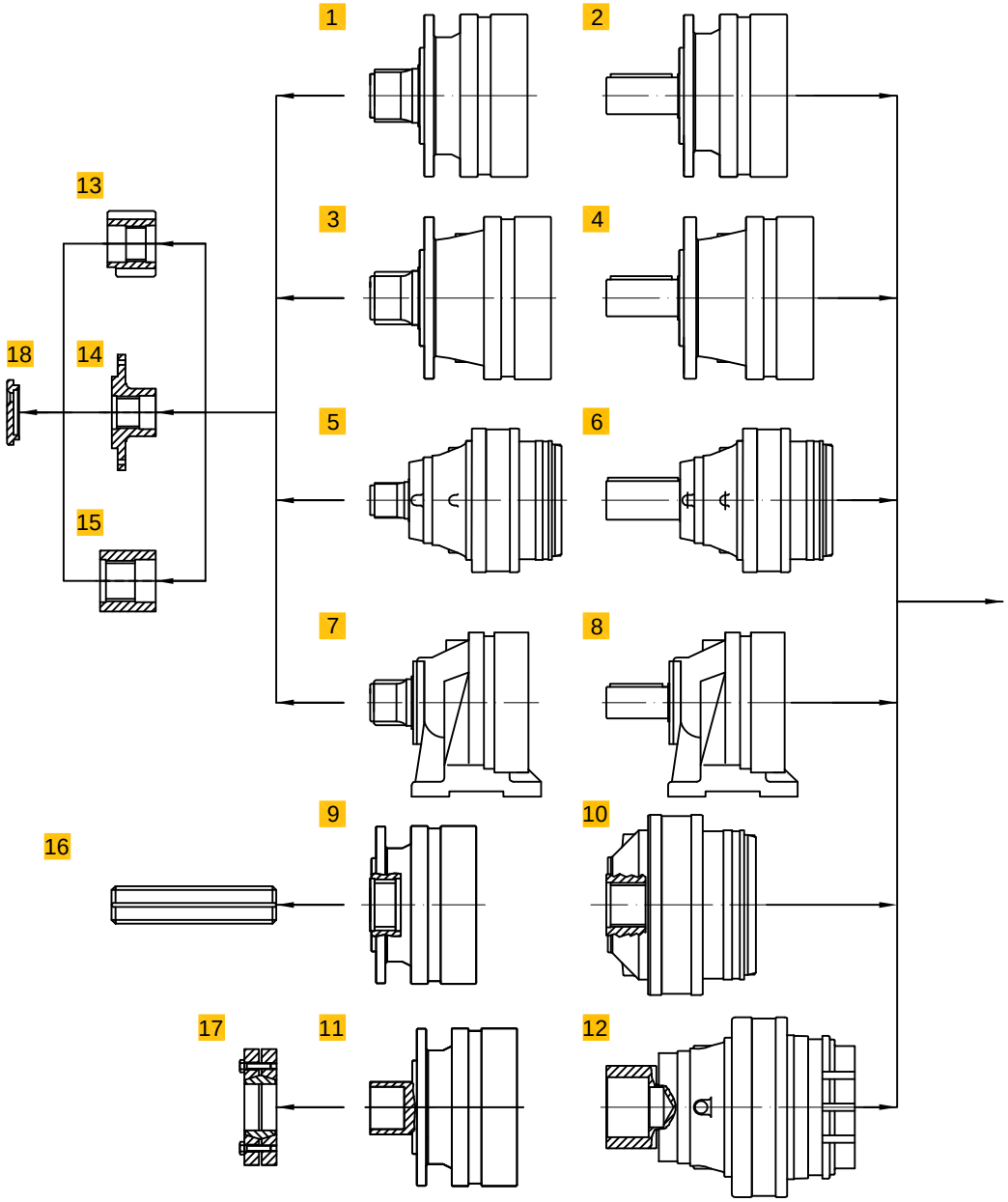
Redüktör Seçenekleri | Gearbox Options | Getriebe Optionen

Çıkış Tipleri / Output Types / Output-Typen

1 FS
2 FC
3 HS
4 HC
5 MS
6 MC
7 FVS
8 FVC
9 SF
10 S
11 SDF
12 SD

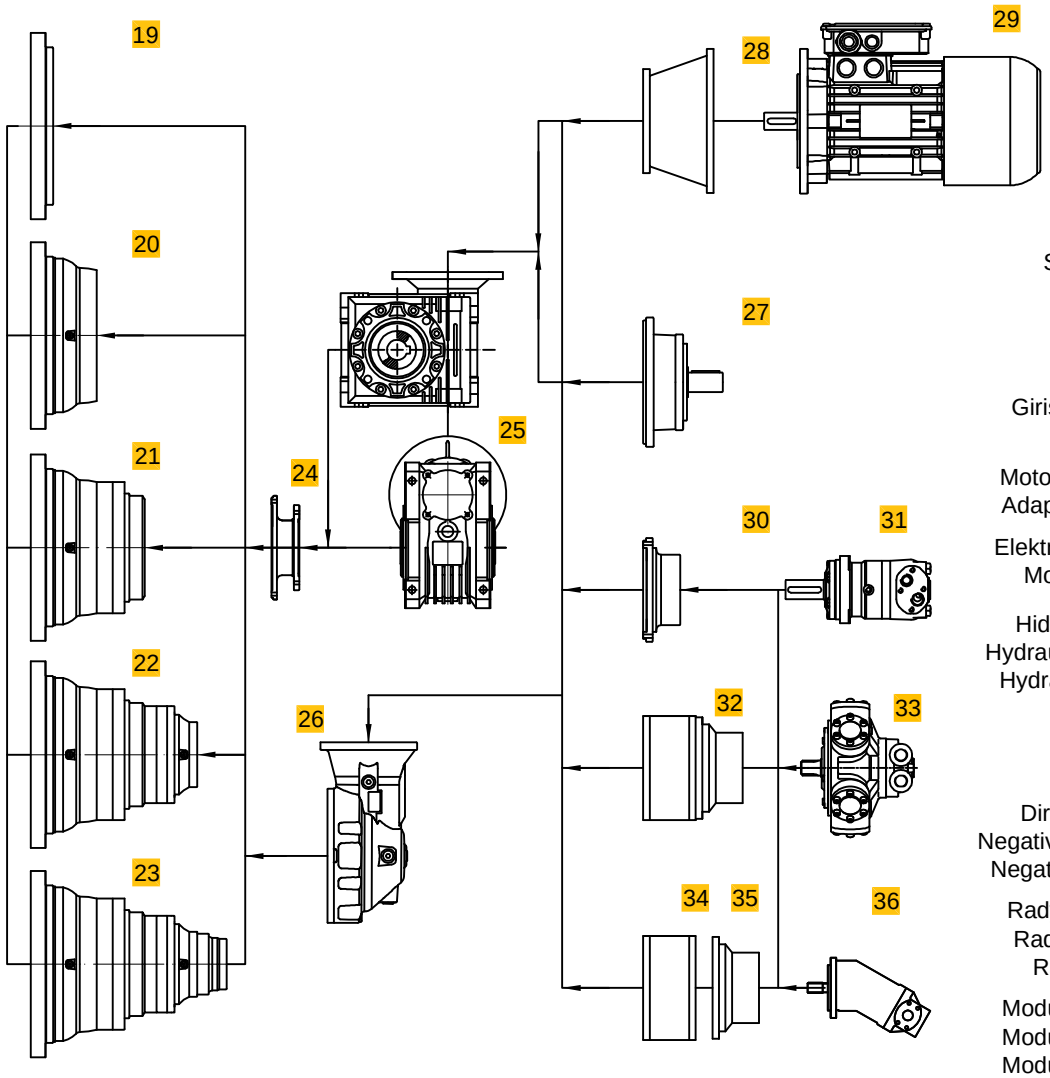
Aksesuarlar / Accessories / Zubehör

13 PA / PB
14 FL
15 FK
16 FM
17 SB
18 SP



BİLGİ/ INFORMATION / INFORMATIONEN

Redüktör Seçenekleri | Gearbox Options | Getriebe Optionen



Redüktör kademeleri / Reduction Stages/ Stufenanzahl

S1 19

S2 20

S3 21

S4 22

S5 23

Adaptör / Adapter / 24

Sonsuz vida / Worm gear / Schneckengetriebe 25

Ayna Mahruti / Bevel gear / Kegelradgetriebe 26

Giriş mili / Input shaft / Antriebswelle 27

Motor Adaptorü / Motor Adapter / Motor Adapter 28

Elektrik Motoru / Electric Motor / Elektromotors 29

Hidromotor adaptörü / Hydraulıcmotor adapter / Hydraulikmotor adapter 30

Orbit motor / Orbital motor / Orbital motor 31

Direk fren adaptörü / Negative brake adapter / Negative brake adapter 32

Radyal piston motor / Radial piston motor / Radialkolbenmotor 33

Modüler fren adaptörü/ Modular break adapter/ Modular break adapter/ 34

Hidromotor adaptör / Hydraulıcmotor adapter / Hydraulikmotor adapter 35

Aksiyel piston motor / Axial piston motor / Axialkolbenmotor 36

BİLGİ/ INFORMATION / INFORMATIONEN

Sipariş Kodlaması — Ordering Code — Um Encoding

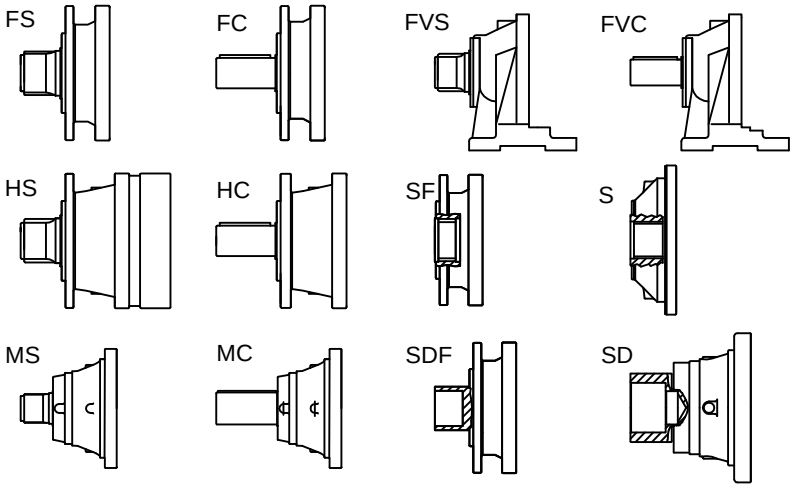
REDÜKTÖR / GEAR UNIT / GETRIEBE

P	D			1	0	1		S1		F	V	S		1	5	.	2	0

Tahvil oranı / Gear Ratio / Verhältnis rapport

i Teknik sayfalara bakınız / See technical sheets
Siehe datenblätter

Çıkış tipi / Output version / Ausgangsversion



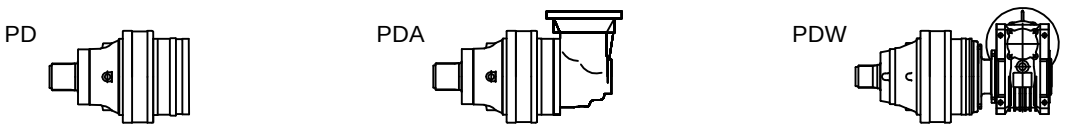
Redüksiyon kademesi / Reductions / N°Stufen

S1 , S2 , S3 , S4 , S5 , ...

Redüktör boyutu / Gearbox frame size / Getriebebaugrösse

101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,
131,133,135,137,139,141,143,145,147,149

Redüktör tipi / Type of reduction unit / Bauform getrıebestufen



Planet dişli redüktör
Inline gearbox
Inline getriebe

Ayna mahruti girişli planet dişli redüktör
Bevel stages planetary gear unit
Bevel Stufen Planetengetriebe

Sonsuz vida girişli planet dişli redüktör
Worm gear stages planetary gear unit
Schneckengetriebe Stufen Planetengetriebe

BİLGİ/ INFORMATION / INFORMATIONEN

Sipariş Kodlaması — Ordering Code — Um Encoding

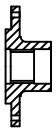
AKSESUARLAR / FITTINGS / BAUTEILE

G	M			V	1	M		P	B					

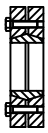
Çıkış Aksesuarları / Output Fittings / Zubehör Abtrieb

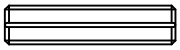
PA / PB 

SP 

FL 

FK 

FB 

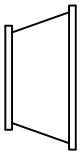
FM 

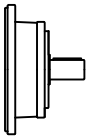
Çıkış aksesuarları için ilerideki teknik sayfalara bakınız. / For detailed information of output accesories see data pages. / Siehe datenblätter

MONTAJ POZİSYONU / MOUNTING POSITION / EINBAULAGEN

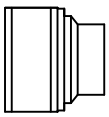
22

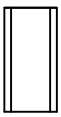
GİRİŞ / INPUT / EINGANG

EM 

GM 

HM 

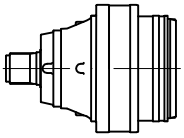
FNA 

FN 

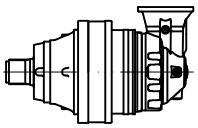
HM 

252 236 250 240 234 250

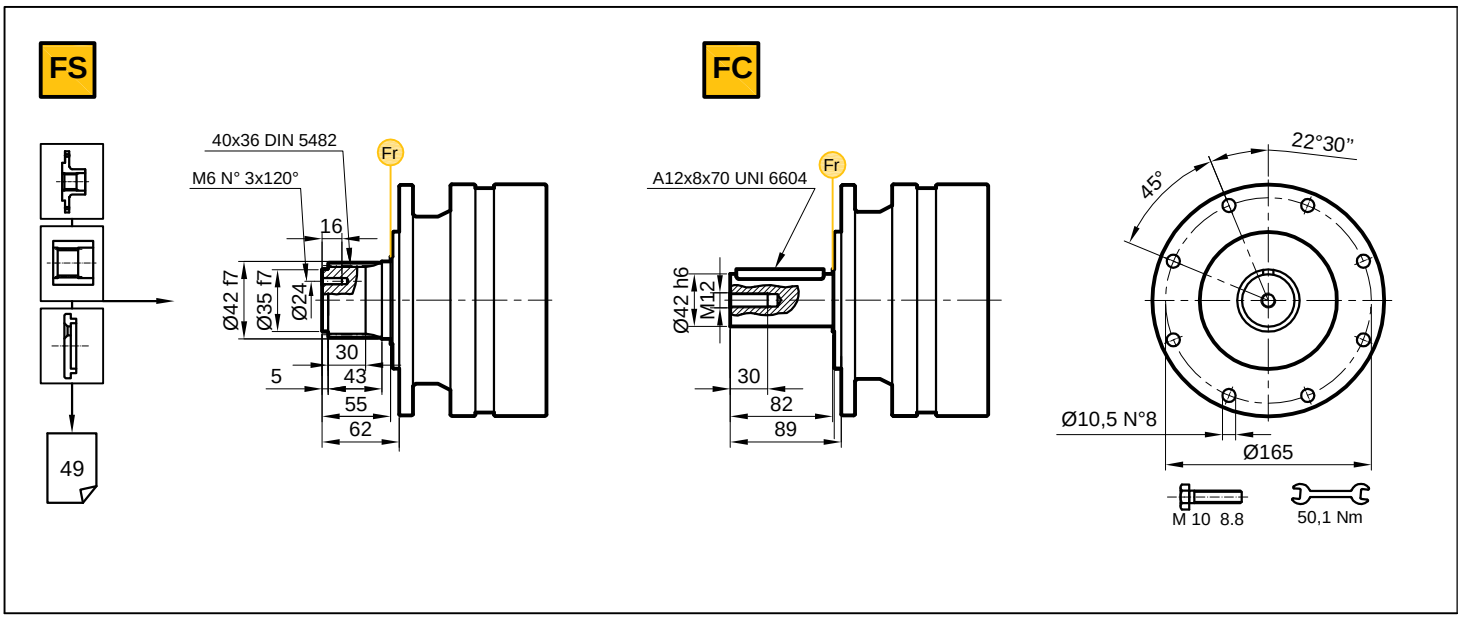
PD 101

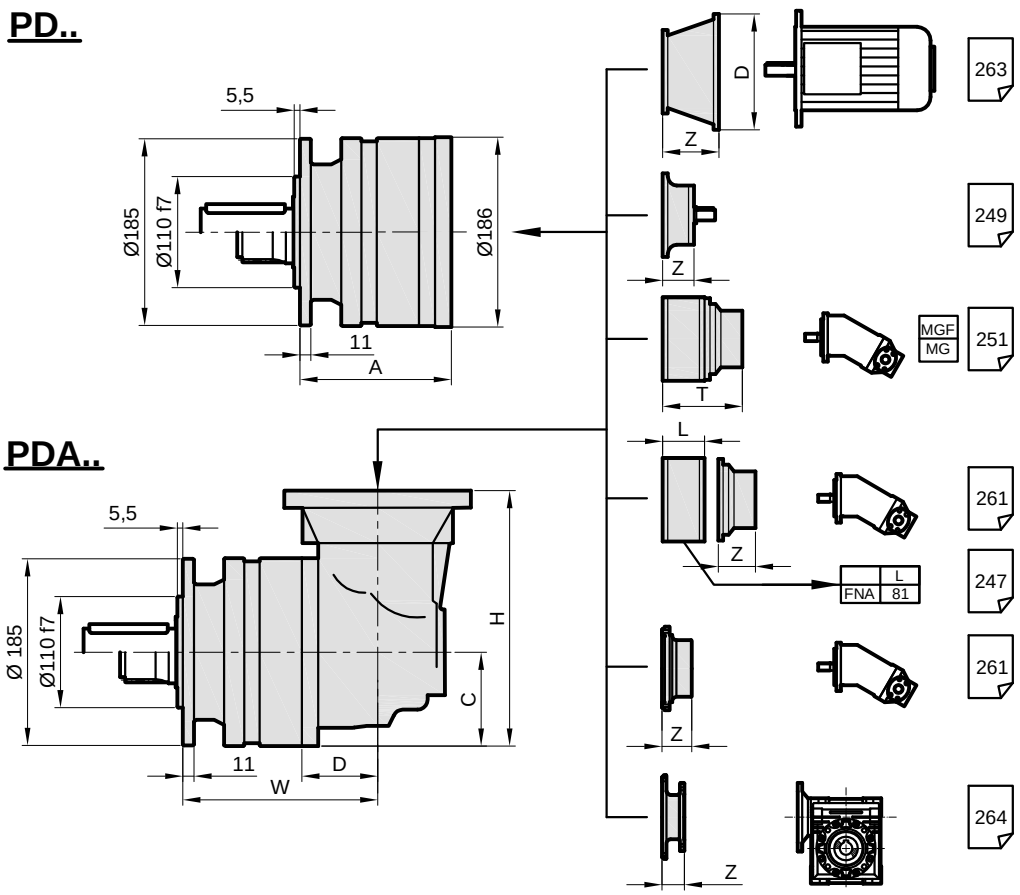
	i	T_2[Nm] n2xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 101 S1	3.55	1244	1100	945	832	2800	2220	12
	4.28	1244	1100	945	832	2800	2220	12
	5.60	901	800	683	601	2800	1590	12
	6.75	799	700	606	539	2800	1402	12
	8.67	512	450	388	343	2800	925	12
PD 101 S2	12.6	1244	1100	945	832	2800	2220	8
	15.2	1244	1100	945	832	2800	2220	8
	19.9	1244	1100	945	832	2800	2220	8
	23.9	1244	1100	945	832	2800	2220	8
	28.9	1244	1100	945	832	2800	2220	8
	31.4	901	800	683	601	2800	1590	8
	37.8	901	800	683	601	2800	1590	8
	45.5	799	700	606	539	2800	1402	8
	58.5	799	700	606	539	2800	1402	8
PD 101 S3	54.1	1244	1100	945	832	2800	2220	5
	65.3	1244	1100	945	832	2800	2220	5
	70.7	1244	1100	945	832	2800	2220	5
	78.7	1244	1100	945	832	2800	2220	5
	85.3	1244	1100	945	832	2800	2220	5
	102.8	1244	1100	945	832	2800	2220	5
	111.5	1244	1100	945	832	2800	2220	5
	134.3	1244	1100	945	832	2800	2220	5
	161.9	1244	1100	945	832	2800	2220	5
	172.5	1244	1100	945	832	2800	2220	5
	207.9	901	1100	683	601	2800	1590	5
	211.6	901	800	683	601	2800	1590	5
	255.1	901	800	683	601	2800	1590	5
	271.7	901	800	683	601	2800	1590	5
	307.5	799	700	606	539	2800	1402	5
	327.5	901	800	683	601	2800	1590	5
	394.8	799	700	606	539	2800	1402	5
PD 101 S4	337.3	1244	1100	945	832	2800	2220	1.5
	365.7	1244	1100	945	832	2800	2220	1.5
	396.4	1244	1100	945	832	2800	2220	1.5
	440.8	1244	1100	945	832	2800	2220	1.5
	477.8	1244	1100	945	832	2800	2220	1.5
	531.3	1244	1100	945	832	2800	2220	1.5
	575.9	1244	1100	945	832	2800	2220	1.5
	624.4	1244	1100	945	832	2800	2220	1.5
	694.2	1244	1100	945	832	2800	2220	1.5
	752.6	1244	1100	945	832	2800	2220	1.5
	836.8	1244	1100	945	832	2800	2220	1.5
	907.1	1244	1100	945	832	2800	2220	1.5
	966.3	1244	1100	945	832	2800	2220	1.5
	1093.4	1244	1100	945	832	2800	2220	1.5
	1144.5	1244	1100	945	832	2800	2220	1.5
	1185.4	901	800	683	601	2800	1590	1.5
	1318.0	1244	1100	945	832	2800	2220	1.5
	1428.8	901	800	683	601	2800	1590	1.5
	1692.3	1244	1100	945	832	2800	2220	1.5
	3422.1	799	700	606	539	2800	1402	1.5

PDA 101

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 101 S2	10.4	1244	1100	945	832	2800	2220	8
	12.5	1244	1100	945	832	2800	2220	8
	16.4	901	800	683	601	2800	1590	8
	19.7	799	700	606	539	2800	1402	8
PDA 101 S3	37	1244	1100	945	832	2800	2220	5
	44.6	1244	1100	945	832	2800	2220	5
	53.8	1244	1100	945	832	2800	2220	5
	58.4	1244	1100	945	832	2800	2220	5
	70.3	1244	1100	945	832	2800	2220	5
	84.8	1244	1100	945	832	2800	2220	5
	91.9	901	800	683	601	2800	1590	5
	110.8	901	800	683	601	2800	1590	5
	133.6	799	700	606	539	2800	1402	5
	171.5	799	700	606	539	2800	1402	5
PDA 101 S4	131.8	1244	1100	945	832	2800	2220	1.5
	158.9	1244	1100	945	832	2800	2220	1.5
	191.5	1244	1100	945	832	2800	2220	1.5
	207.6	1244	1100	945	832	2800	2220	1.5
	230.8	1244	1100	945	832	2800	2220	1.5
	301.7	1244	1100	945	832	2800	2220	1.5
	327	1244	1100	945	832	2800	2220	1.5
	363.6	1244	1100	945	832	2800	2220	1.5
	394.2	1244	1100	945	832	2800	2220	1.5
	475.1	1244	1100	945	832	2800	2220	1.5
	515.3	901	800	683	601	2800	1590	1.5
	527.7	1244	1100	945	832	2800	2220	1.5
	610.1	1244	1100	945	832	2800	2220	1.5
	735.4	1244	1100	945	832	2800	2220	1.5
	797.2	901	800	683	601	2800	1590	1.5
	960.9	901	800	683	601	2800	1590	1.5
	1158.2	799	700	606	539	2800	1402	1.5
	1233.7	901	800	683	601	2800	1590	1.5
	1487.1	799	700	606	539	2800	1402	1.5

PD/PDA 101

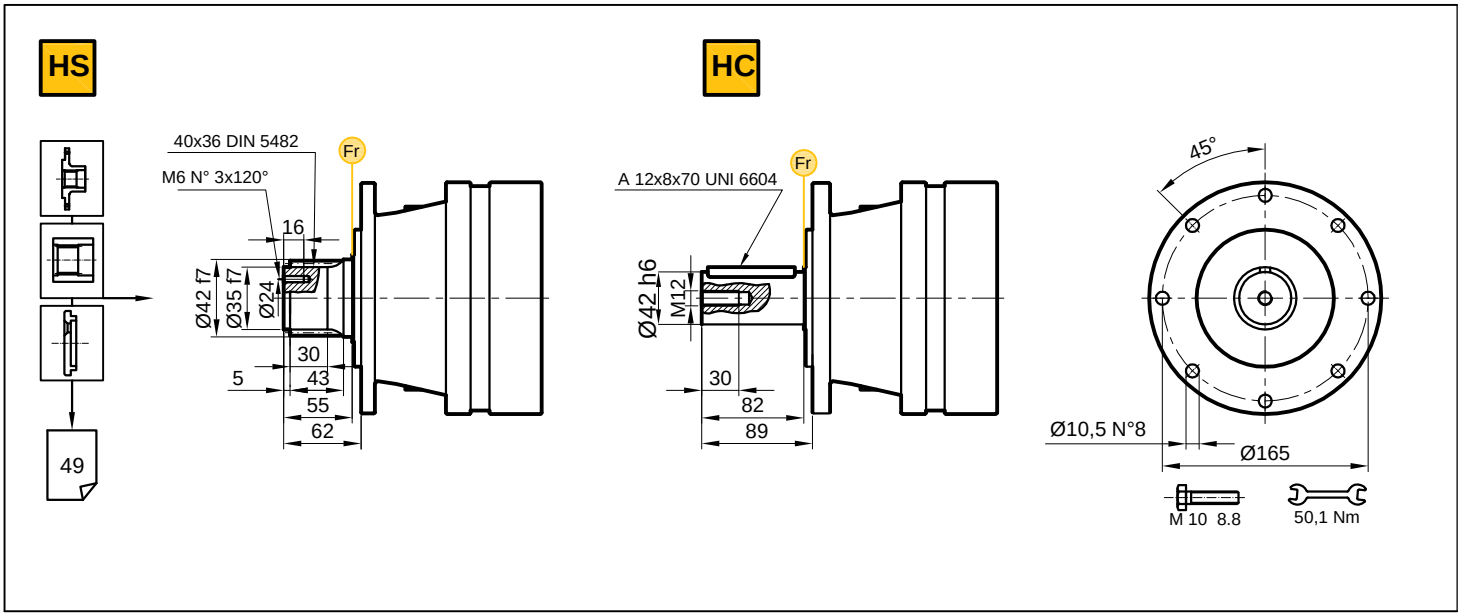


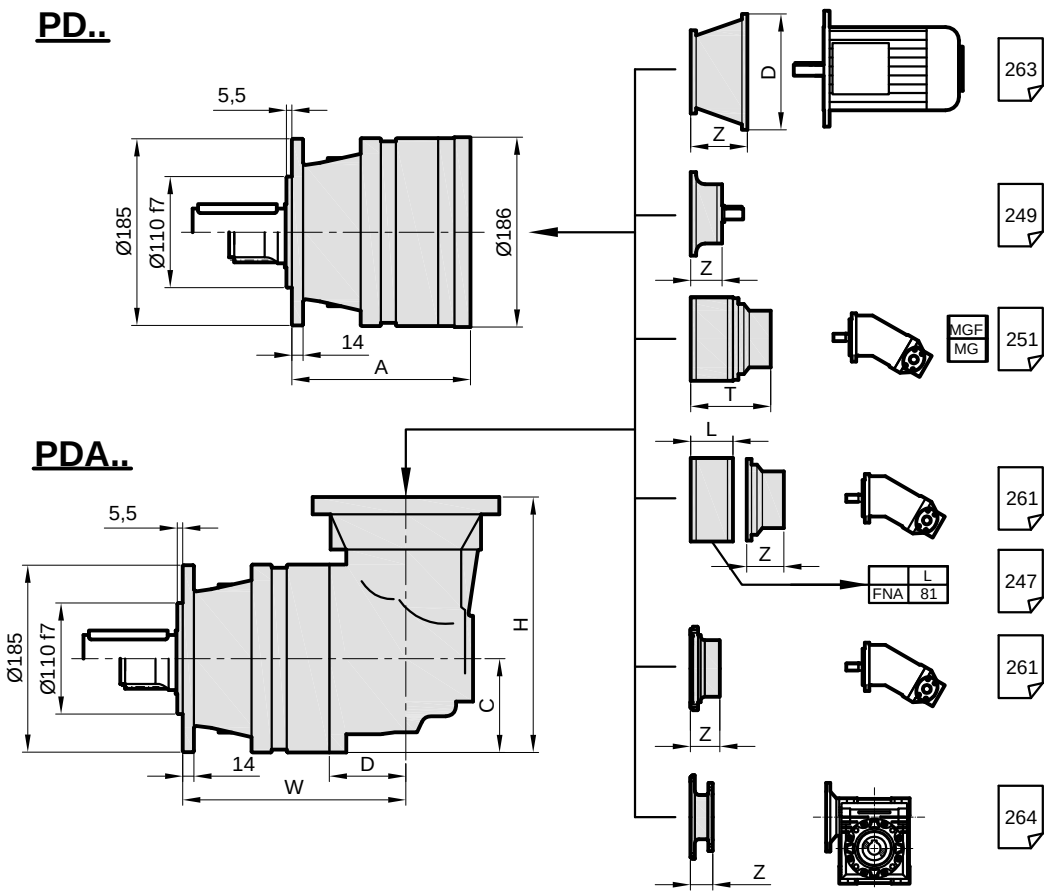


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	105	13	-
S2	180	75	93	252	153	19	28
S3	228	75	93	252	201	25	34
S4	276	75	93	252	249	31	40

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101

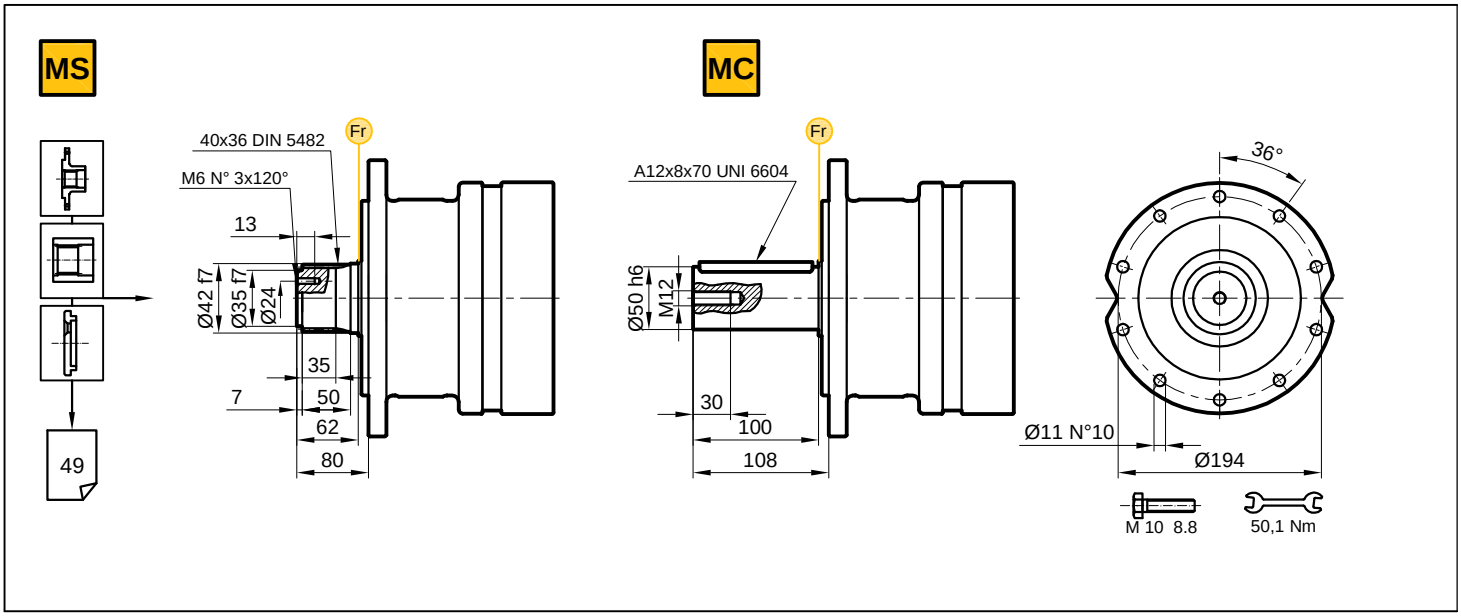


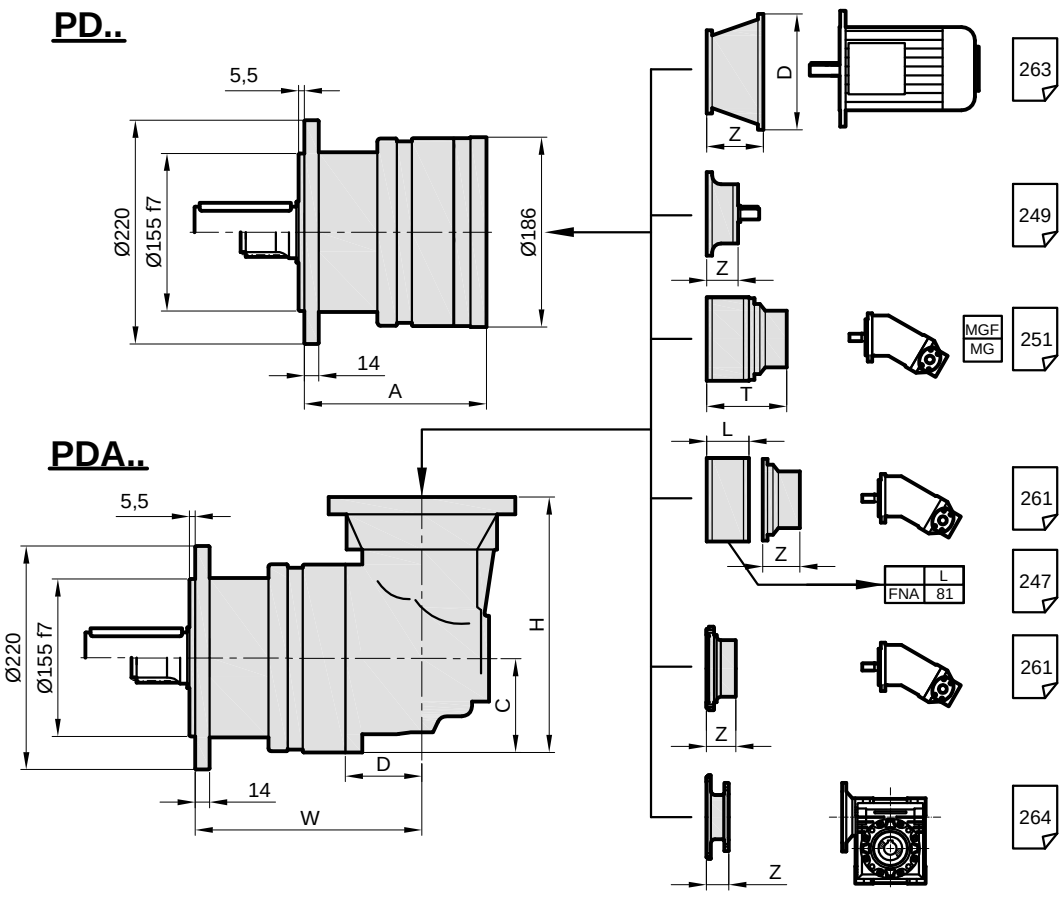


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	135	15	-
S2	210	75	93	252	183	21	30
S3	258	75	93	252	231	27	36
S4	306	75	93	252	279	33	42

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101



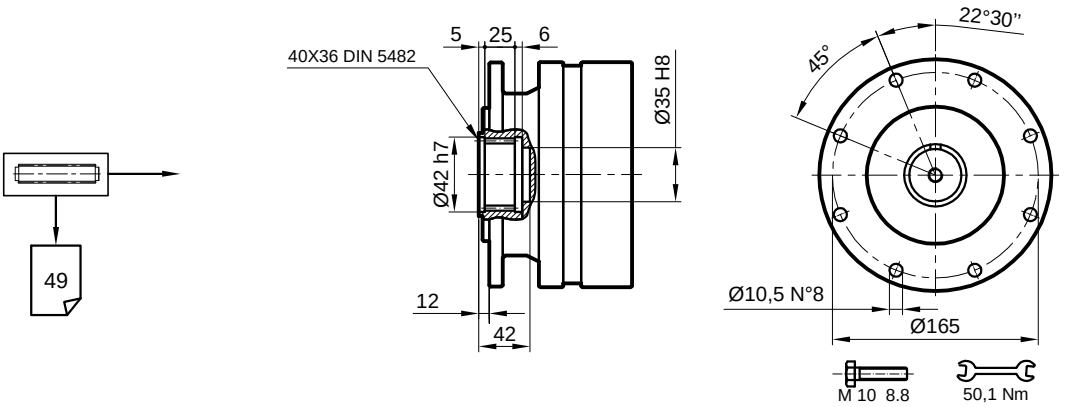


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	135	15	-
S2	210	75	93	252	183	21	30
S3	258	75	93	252	231	27	36
S4	306	75	93	252	279	33	42

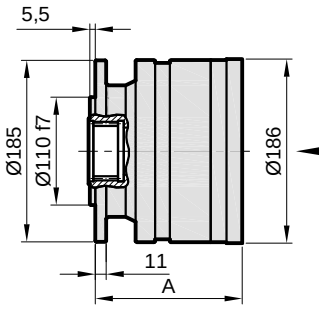
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101

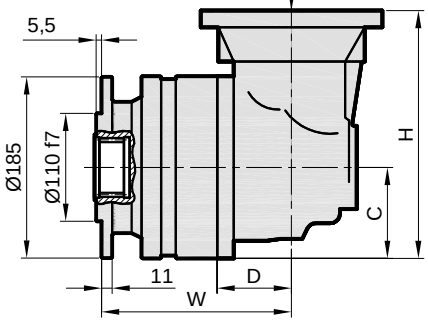
SF

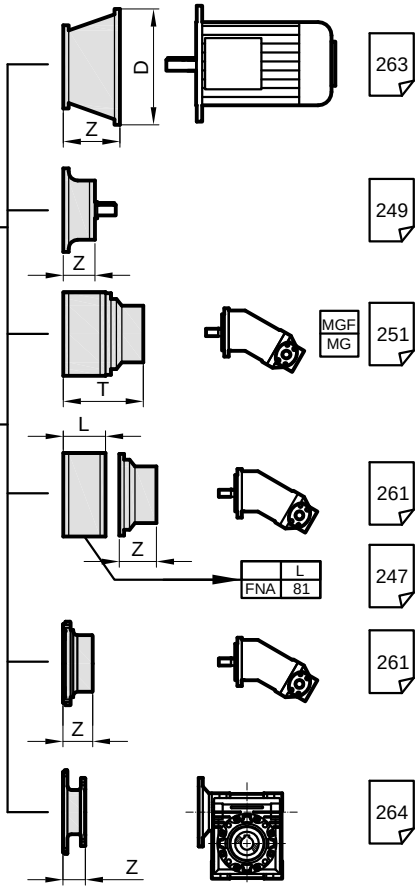


PD..



PDA..



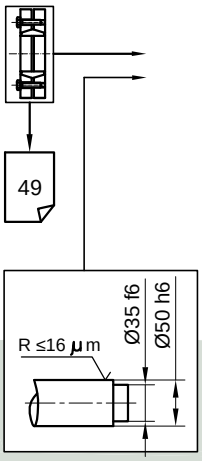


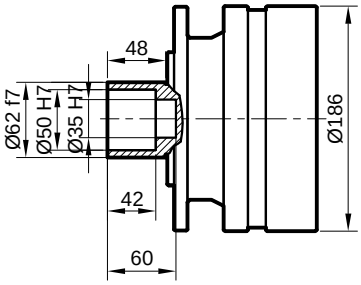
Stage	W	D	C	H	A	PD SF	PDA SF
S1	-	-	-	-	105	11	-
S2	180	75	93	252	153	17	26
S3	228	75	93	252	201	23	32
S4	276	75	93	252	249	29	38

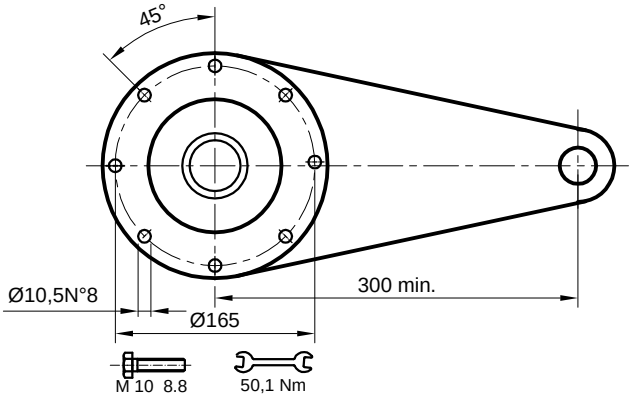
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101

SDF



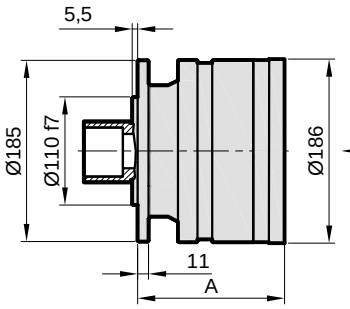




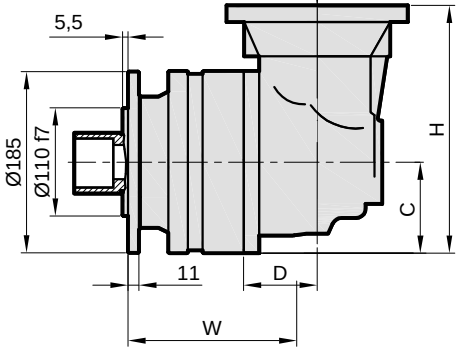
M_{max} = 2.2 kNm

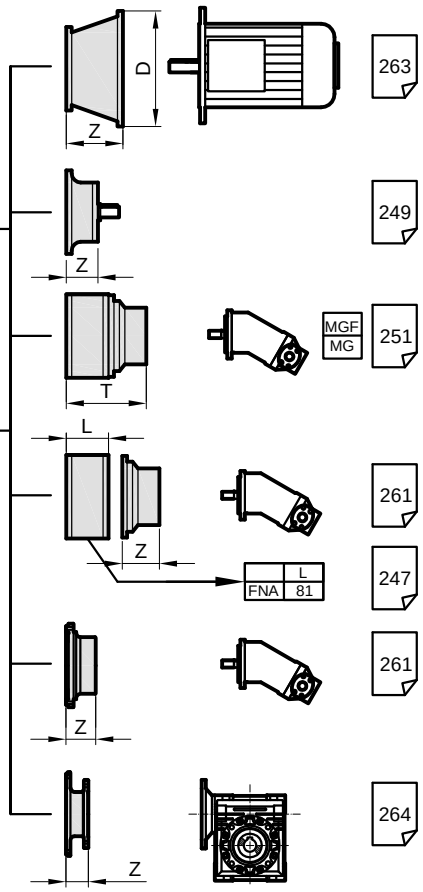
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



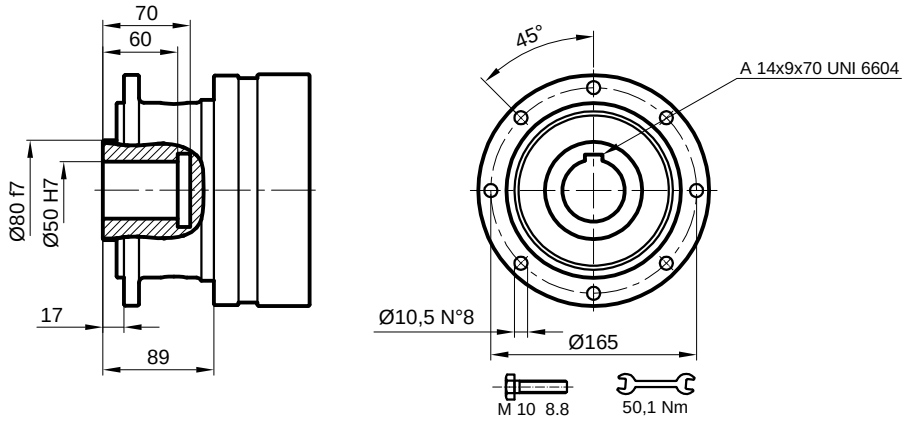


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	105	14	-
S2	180	75	93	252	153	20	29
S3	228	75	93	252	201	26	35
S4	276	75	93	252	249	32	41

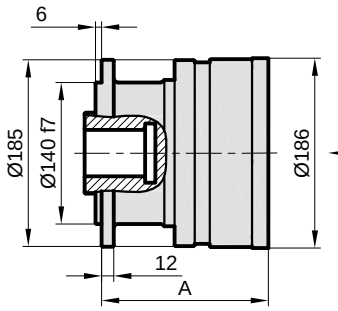
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101

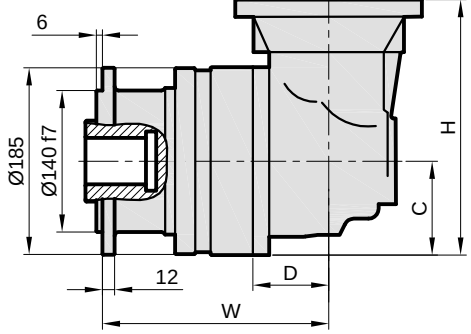
DKM

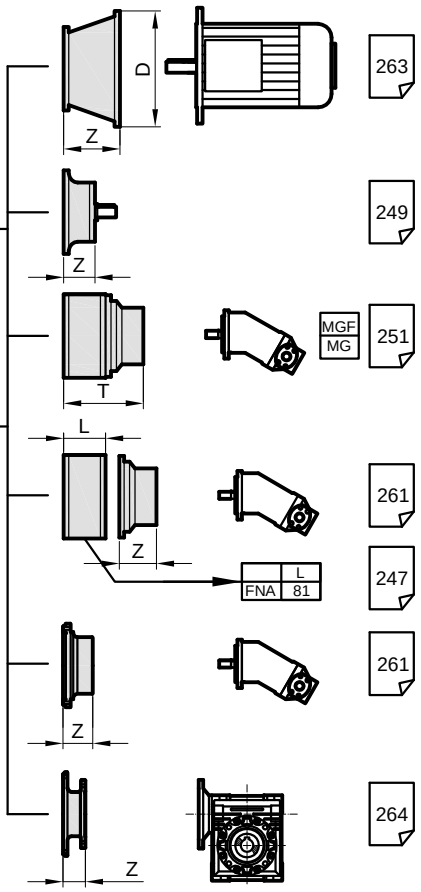


PD..



PDA..

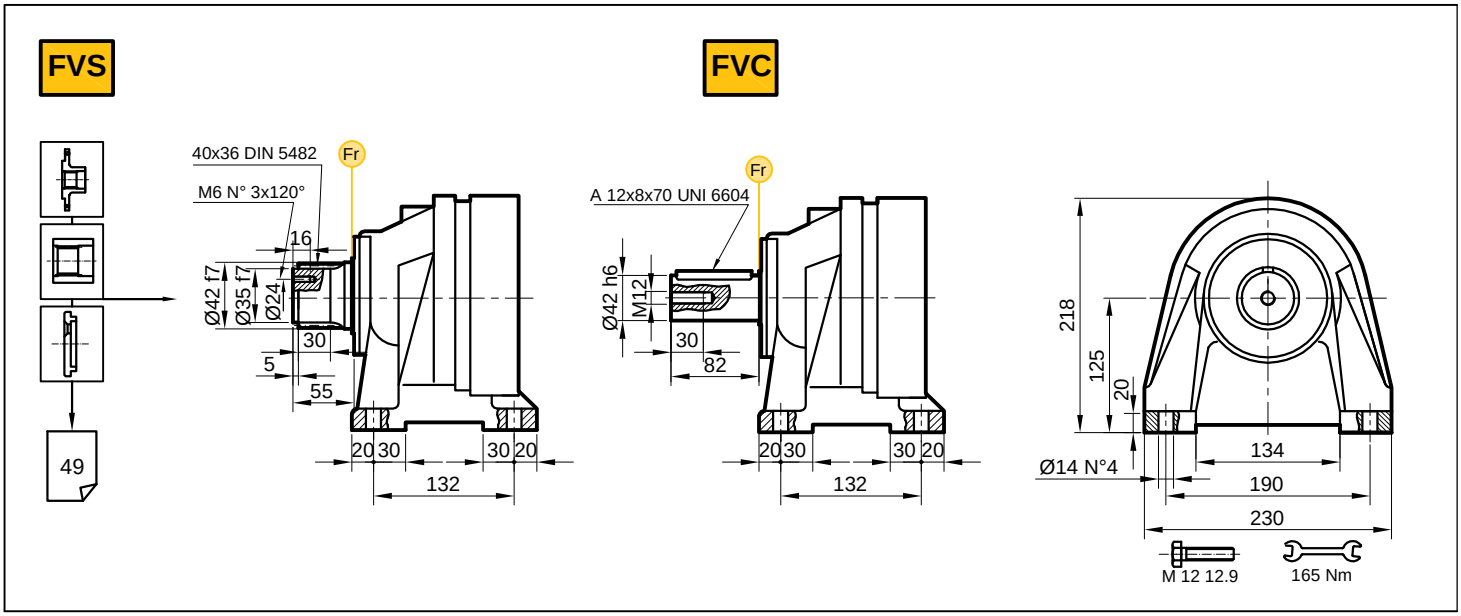




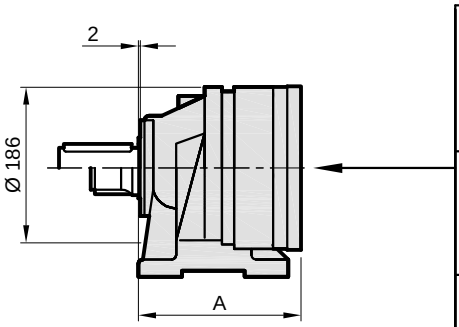
Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	135	13	-
S2	210	75	93	252	185	19	28
S3	260	75	93	252	230	25	34
S4	305	75	93	252	280	31	40

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 101



PD..



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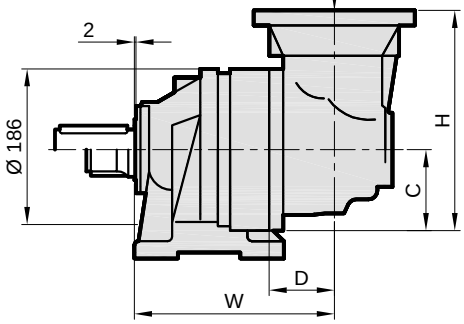
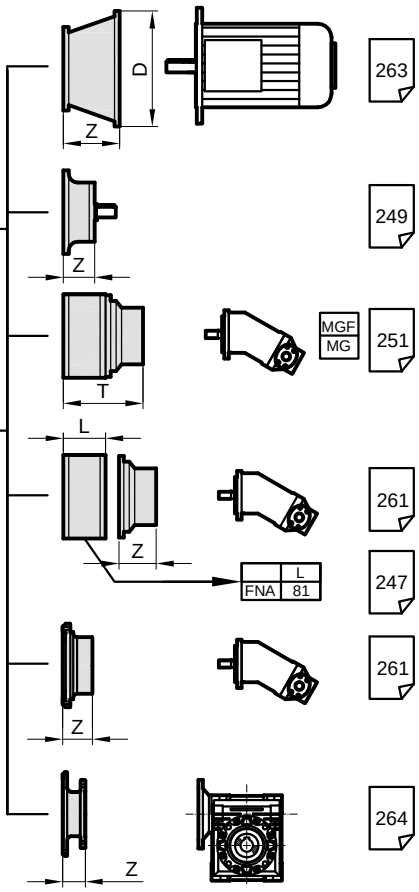


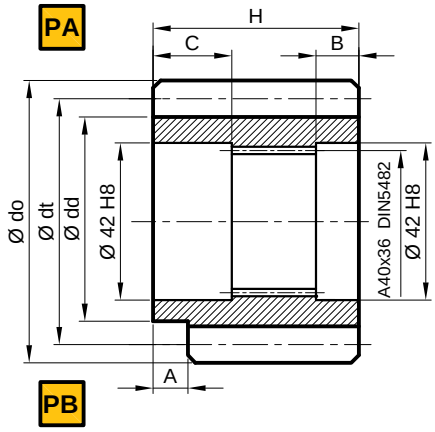


Stage	A	D	C	H	W	PD FVC	PDA FVC
S1	135	-	-	-	-	18	-
S2	183	75	93	252	217	24	33
S3	231	75	93	252	265	30	39
S4	279	75	93	252	313	36	45

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

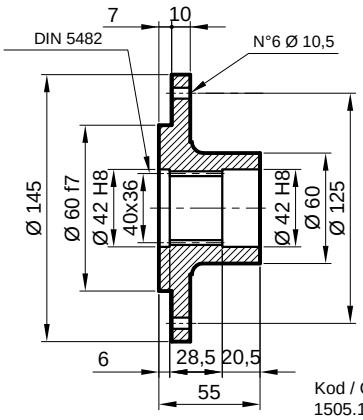
PD/PDA 101

P *Pinyon / Pinion / Ritzel*



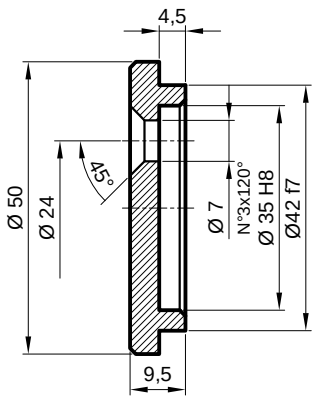
	m	z	x	dt	dd	do	H	A	B	C	Malzeme *Material* Material	Kod Code Bestell
PA	5	14	0,500	70	62,5	62,5	65	0	10	53	39NiCrMo3	1501.101.001
PA	6	12	0,250	72	61	62,5	59	14	4	54	39NiCrMo3	1501.101.002
PB	6	14	0,500	84	73	62,5	65	0	10	54	39NiCrMo3	1502.101.001

FL Flanş / *Flange* / Flansch



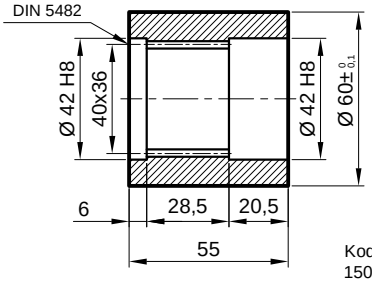
Kod / Code / Bestell
1505.101.200

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.101.250

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

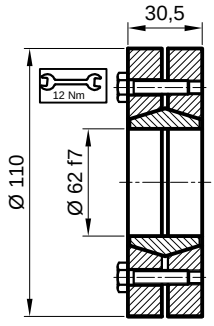


Malzeme /*Material*
Material

UNI C40
SAE 1040
DIN Ck40

Kod / Code / Bestell
1503.101.100

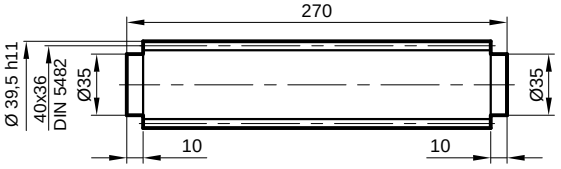
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
2,2 kNm

Kod / Code / Bestell
2501.101.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.101.260

PD/PDA 101

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

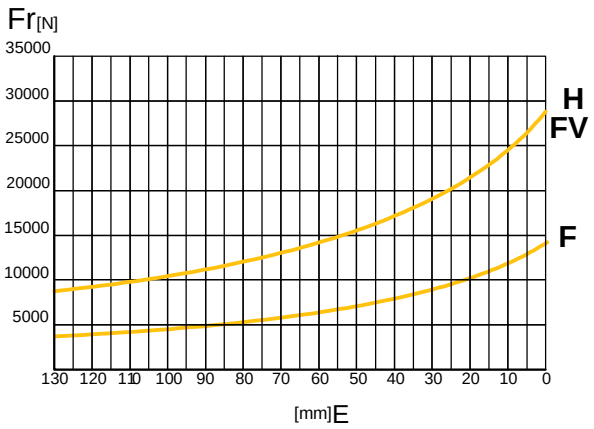
RADIAL LOADS(Fr)

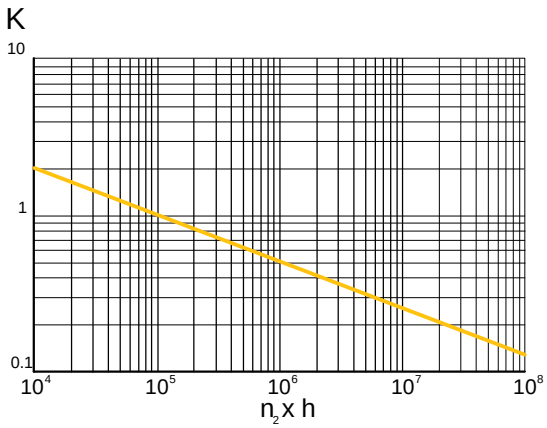
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

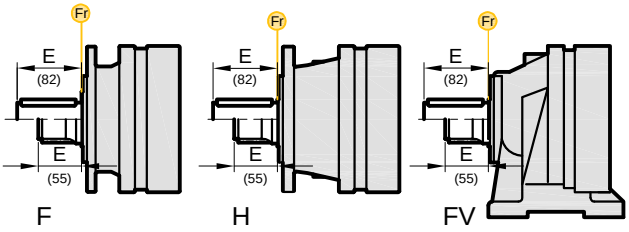
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

F-H-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

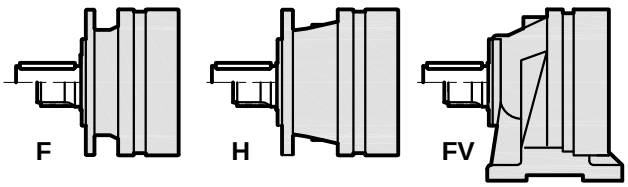
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

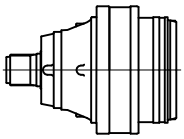
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

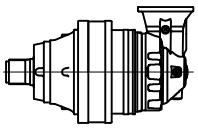
Fa [N]	F	H-FV
	16000	18000
	16000	18000



PD 103

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 103 S1	3.55	1920	1700	1450	1280	2800	3400	12
	4.28	1920	1700	1450	1280	2800	3400	12
	5.60	1370	1210	1030	910	2800	2420	12
	6.75	1130	1000	850	750	2800	2000	12
	8.67	740	650	560	490	2800	1300	12
PD 103 S2	12.6	1920	1700	1450	1280	2800	3400	8
	15.2	1920	1700	1450	1280	2800	3400	8
	19.9	1920	1700	1450	1280	2800	3400	8
	23.9	1920	1700	1450	1280	2800	3400	8
	28.9	1920	1700	1450	1280	2800	3400	8
	31.4	1370	1210	1030	910	2800	2420	8
	37.8	1370	1210	1030	910	2800	2420	8
	45.5	1130	1000	850	750	2800	2000	8
	58.5	1130	1000	850	750	2800	2000	8
PD 103 S3	54.1	1920	1700	1450	1280	2800	3400	5
	65.3	1920	1700	1450	1280	2800	3400	5
	70.7	1920	1700	1450	1280	2800	3400	5
	78.7	1920	1700	1450	1280	2800	3400	5
	85.3	1920	1700	1450	1280	2800	3400	5
	102.8	1920	1700	1450	1280	2800	3400	5
	111.5	1920	1700	1450	1280	2800	3400	5
	134.3	1920	1700	1450	1280	2800	3400	5
	161.9	1920	1700	1450	1280	2800	3400	5
	172.5	1920	1700	1450	1280	2800	3400	5
	207.9	1920	1700	1450	1280	2800	3400	5
	211.6	1370	1210	1030	910	2800	2420	5
	255.1	1370	1210	1030	910	2800	2420	5
	271.7	1370	1210	1030	910	2800	2420	5
	307.5	1130	1000	0850	750	2800	2000	5
	327.5	1370	1210	1030	910	2800	2420	5
	394.8	1130	1000	850	750	2800	2000	5
PD 103 S4	337.3	1920	1700	1450	1280	2800	3400	1.5
	365.7	1920	1700	1450	1280	2800	3400	1.5
	396.4	1920	1700	1450	1280	2800	3400	1.5
	440.8	1920	1700	1450	1280	2800	3400	1.5
	477.8	1920	1700	1450	1280	2800	3400	1.5
	531.3	1920	1700	1450	1280	2800	3400	1.5
	575.9	1920	1700	1450	1280	2800	3400	1.5
	624.4	1920	1700	1450	1280	2800	3400	1.5
	694.2	1920	1700	1450	1280	2800	3400	1.5
	752.6	1920	1700	1450	1280	2800	3400	1.5
	836.8	1920	1700	1450	1280	2800	3400	1.5
	907.1	1920	1700	1450	1280	2800	3400	1.5
	966.3	1920	1700	1450	1280	2800	3400	1.5
	1093.4	1920	1700	1450	1280	2800	3400	1.5
	1144.5	1920	1700	1450	1280	2800	3400	1.5
	1185.4	1370	1210	1030	910	2800	2420	1.5
	1318.0	1920	1700	1450	1280	2800	3400	1.5
	1428.8	1370	1210	1030	910	2800	2420	1.5
	1692.3	1920	1700	1450	1280	2800	3400	1.5
	3422.1	1130	1000	850	750	2800	2000	1.5

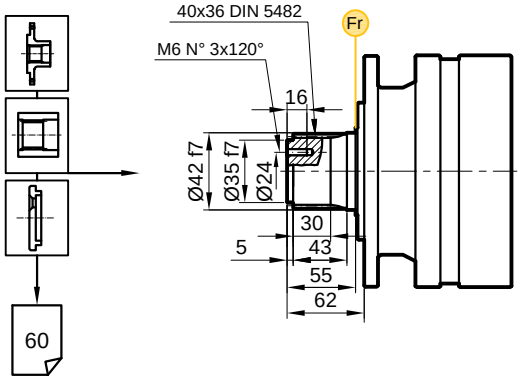
PDA 103



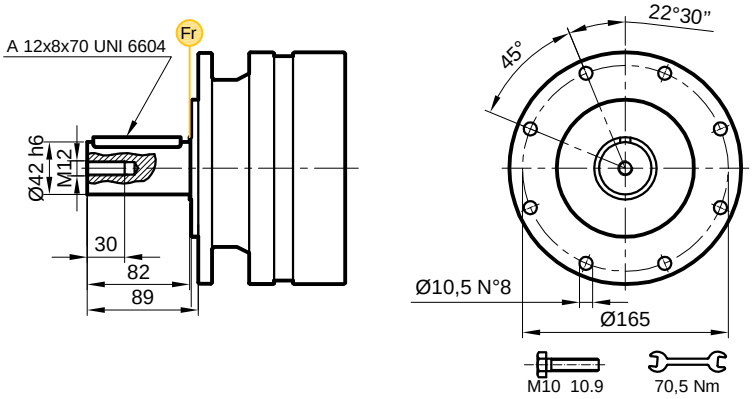
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 103 S2	10.4	1920	1700	1450	1280	2800	3400	8
	12.5	1920	1700	1450	1280	2800	3400	8
	16.4	1370	1210	1030	910	2800	2420	8
	19.7	1130	1000	850	750	2800	2000	8
PDA 103 S3	37.0	1920	1700	1450	1280	2800	3400	5
	44.6	1920	1700	1450	1280	2800	3400	5
	53.8	1920	1700	1450	1280	2800	3400	5
	58.4	1920	1700	1450	1280	2800	3400	5
	70.3	1920	1700	1450	1280	2800	3400	5
	84.8	1920	1700	1450	1280	2800	3400	5
	91.9	1370	1210	1030	910	2800	2420	5
	110.8	1370	1210	1030	910	2800	2420	5
	133.6	1130	1000	850	750	2800	2000	5
	171.5	1130	1000	850	750	2800	2000	5
PDA 103 S4	131.8	1920	1700	1450	1280	2800	3400	1.5
	158.9	1920	1700	1450	1280	2800	3400	1.5
	191.5	1920	1700	1450	1280	2800	3400	1.5
	207.6	1920	1700	1450	1280	2800	3400	1.5
	230.8	1920	1700	1450	1280	2800	3400	1.5
	301.7	1920	1700	1450	1280	2800	3400	1.5
	327.0	1920	1700	1450	1280	2800	3400	1.5
	363.6	1920	1700	1450	1280	2800	3400	1.5
	394.2	1920	1700	1450	1280	2800	3400	1.5
	475.1	1920	1700	1450	1280	2800	3400	1.5
	515.3	1370	1210	1030	910	2800	2420	1.5
	572.7	1920	1700	1450	1280	2800	3400	1.5
	610.1	1920	1700	1450	1280	2800	3400	1.5
	735.4	1920	1700	1450	1280	2800	3400	1.5
	797.2	1370	1210	1030	910	2800	2420	1.5
	960.9	1370	1210	1030	910	2800	2420	1.5
	1158.2	1130	1000	850	750	2800	2000	1.5
	1233.7	1370	1210	1030	910	2800	2420	1.5
	1487.1	1130	1000	850	750	2800	2000	1.5

PD/PDA 103

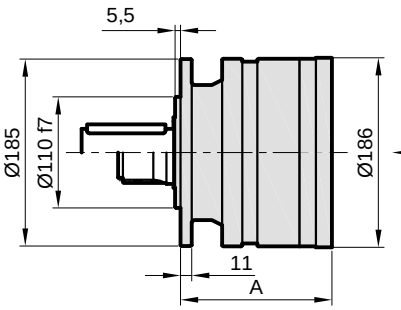
FS



FC



PD..



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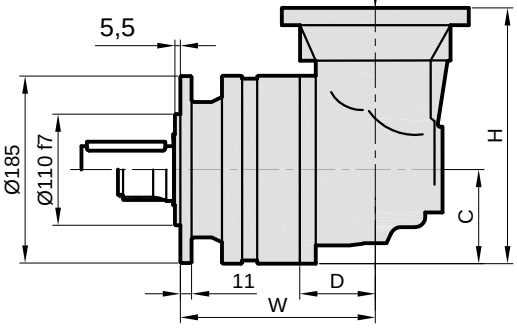
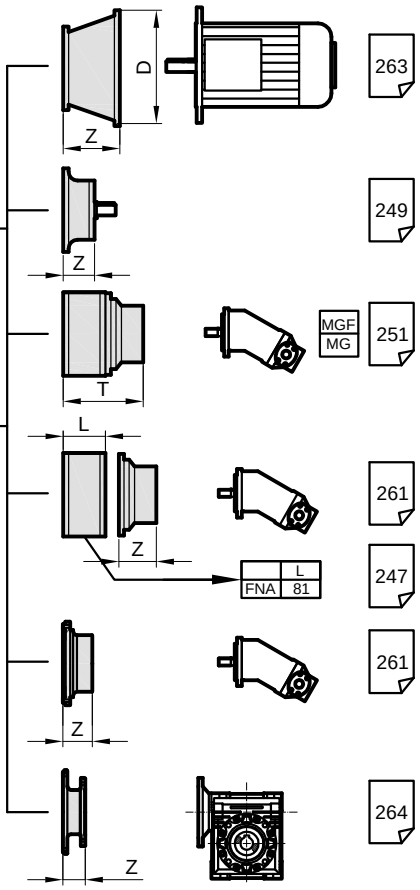
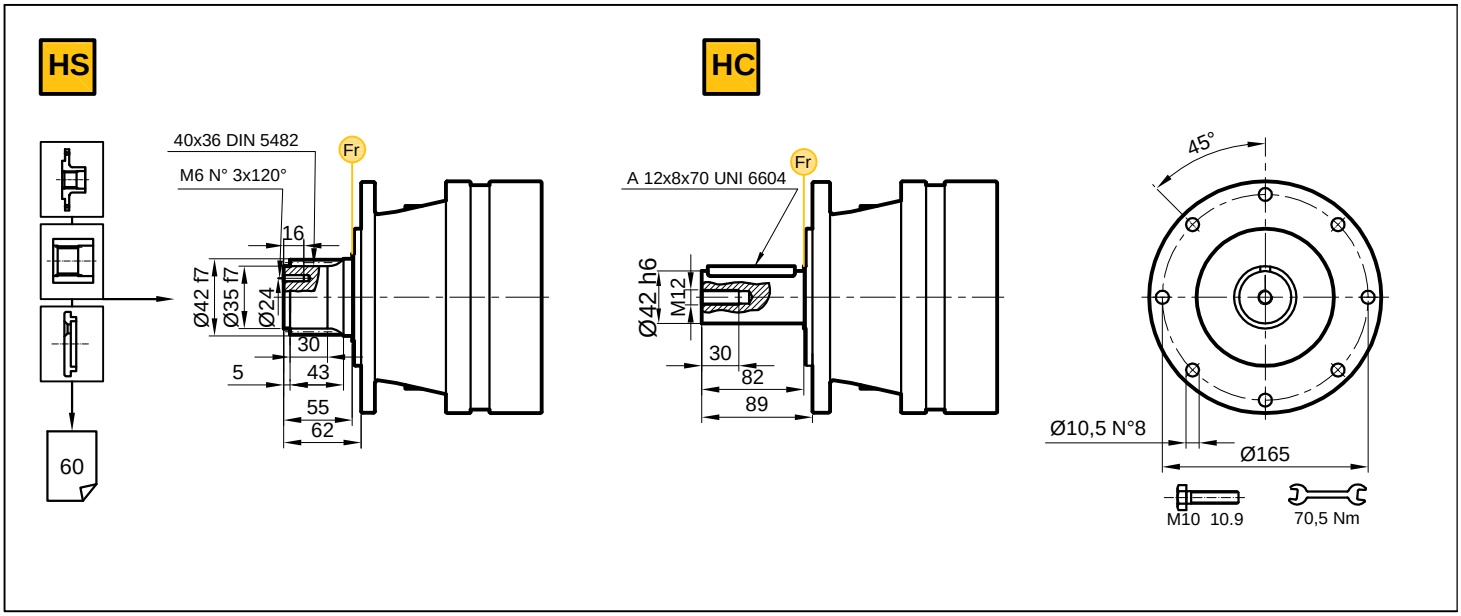


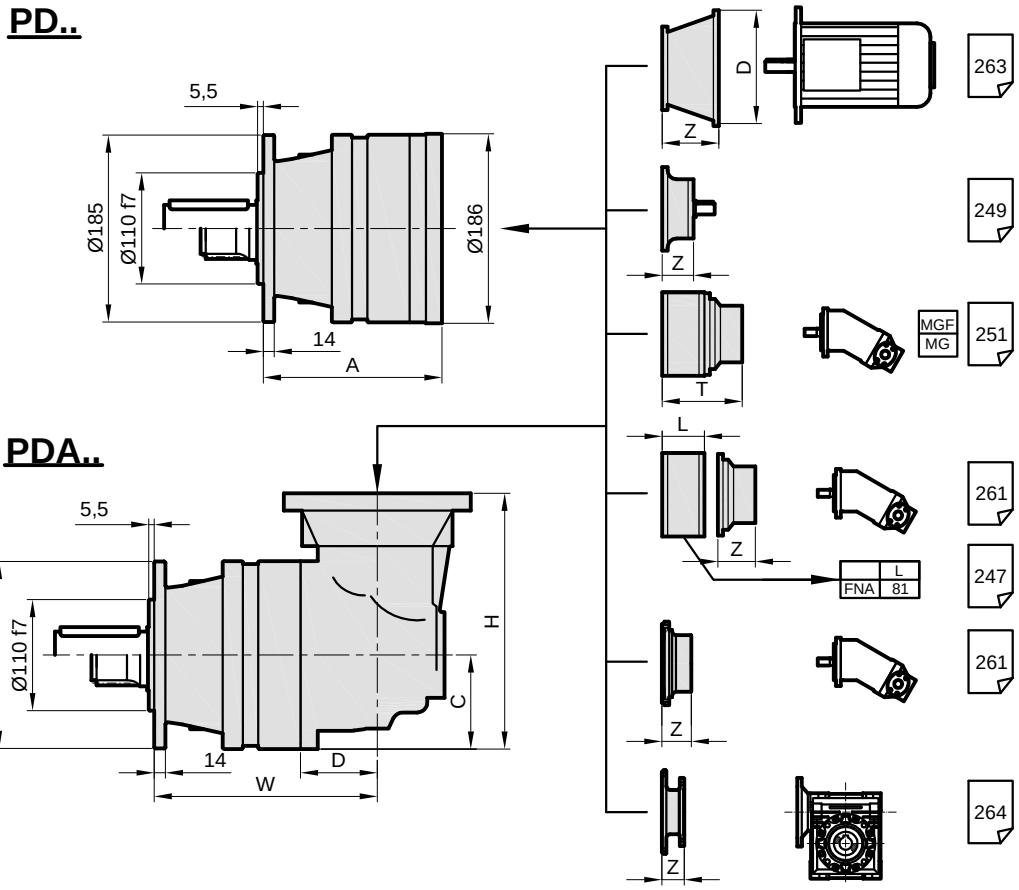


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	118	15	-
S2	193	75	93	252	166	21	30
S3	241	75	93	252	214	27	36
S4	289	75	93	252	262	33	42

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103

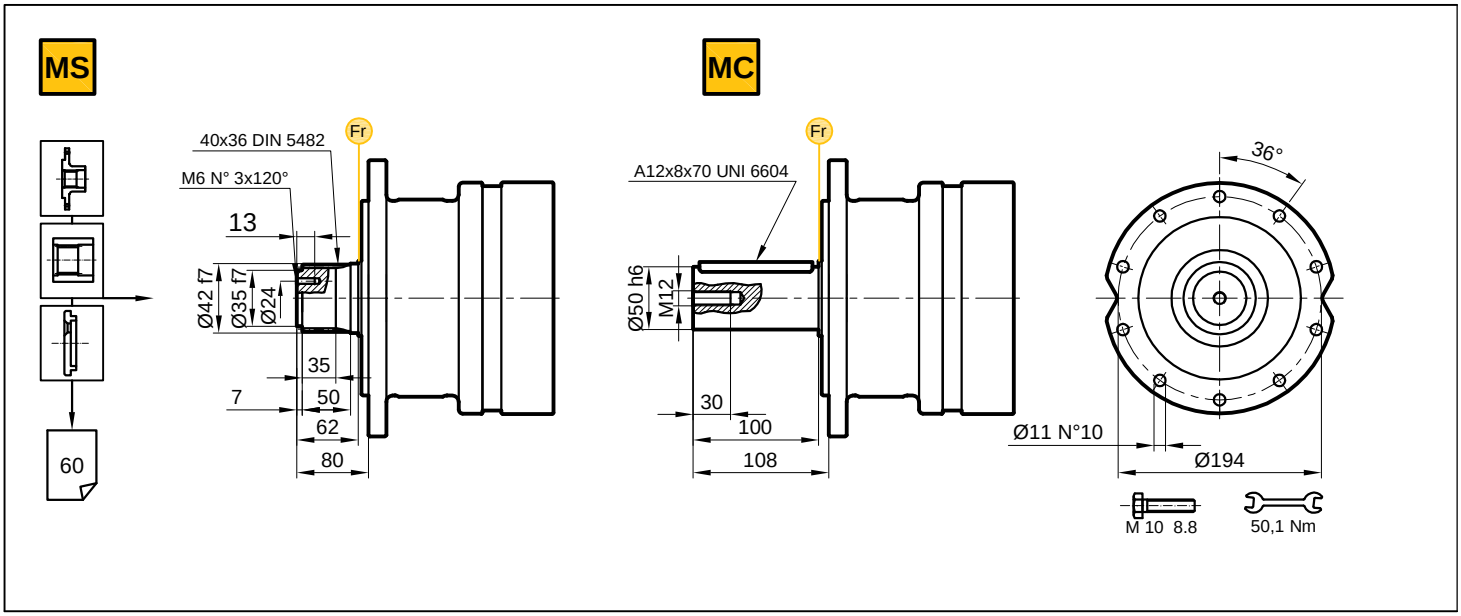


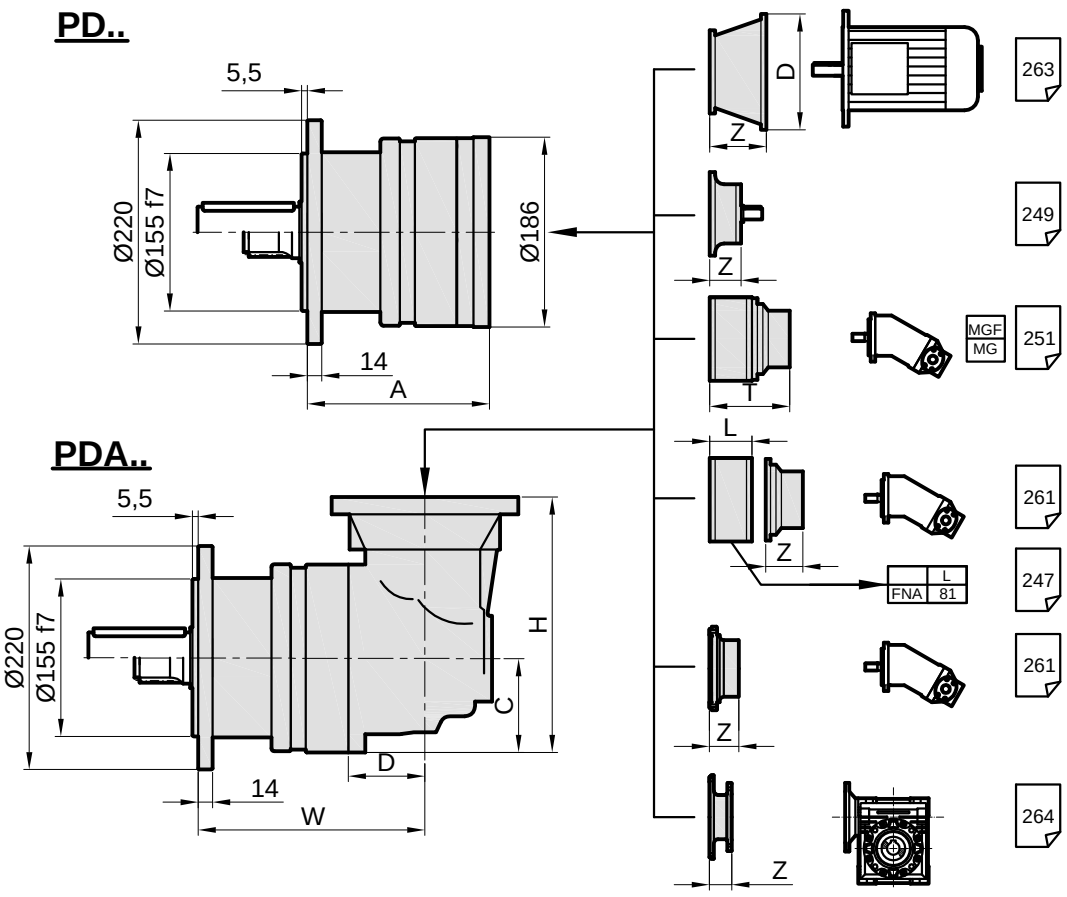


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	148	17	-
S2	223	75	93	252	196	23	32
S3	271	75	93	252	244	29	38
S4	319	75	93	252	292	35	44

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103



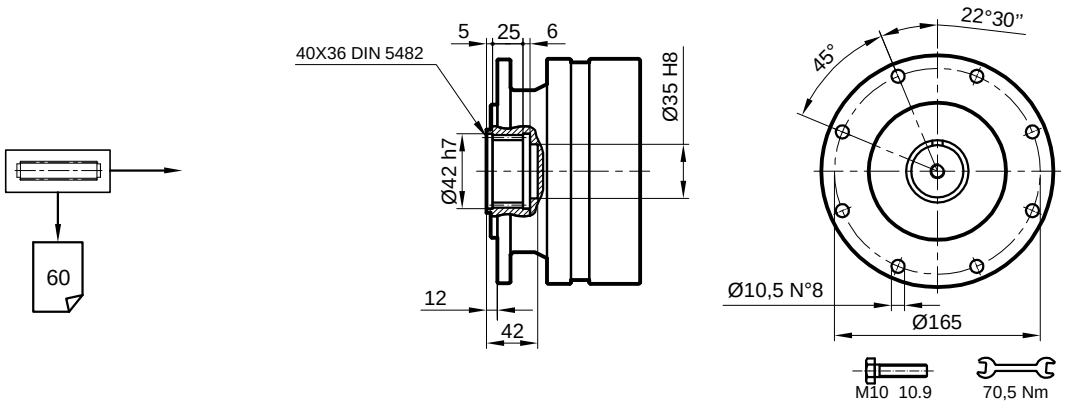


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	135	15	-
S2	210	75	93	252	183	21	30
S3	258	75	93	252	231	27	36
S4	306	75	93	252	279	33	42

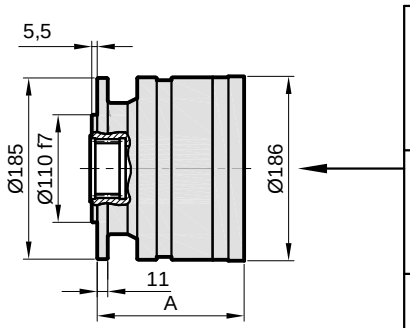
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103

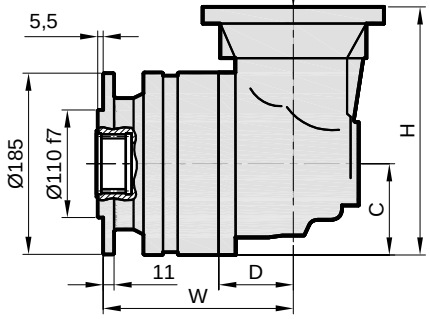
SF

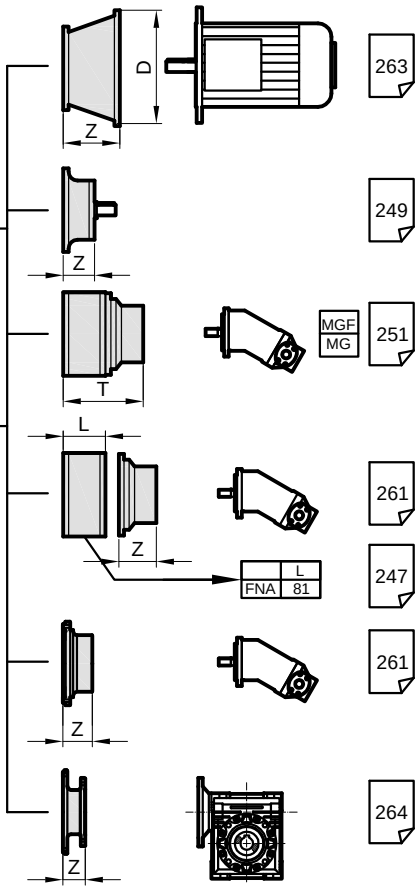


PD..



PDA..



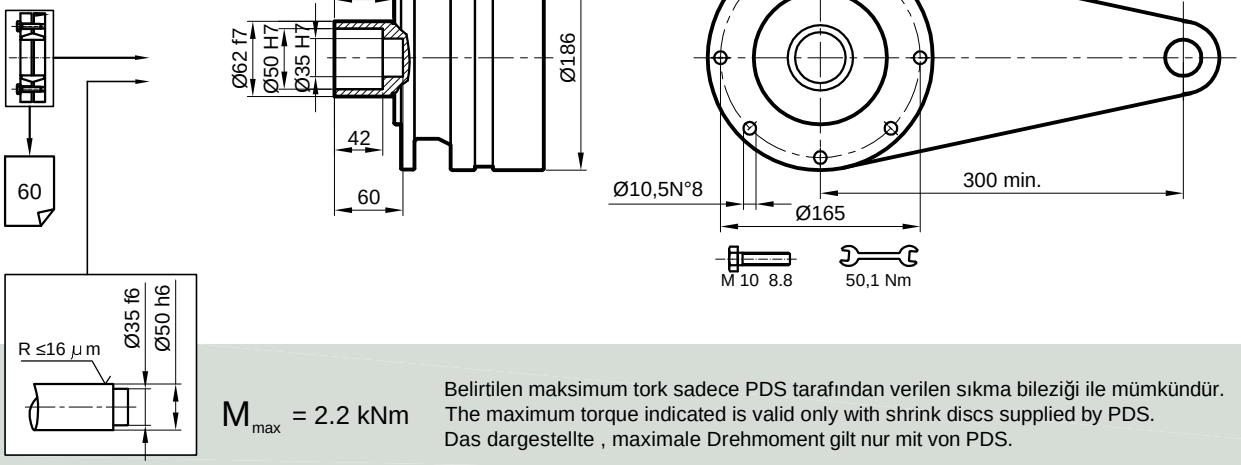


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	118	13	-
S2	193	75	93	252	166	19	28
S3	241	75	93	252	214	25	34
S4	289	75	93	252	262	31	40

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103

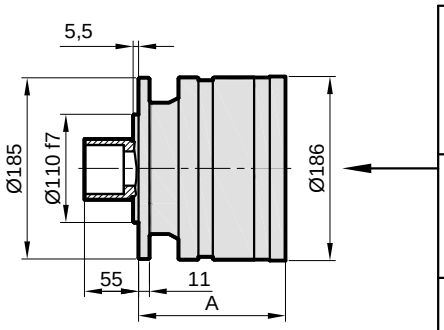
SDF



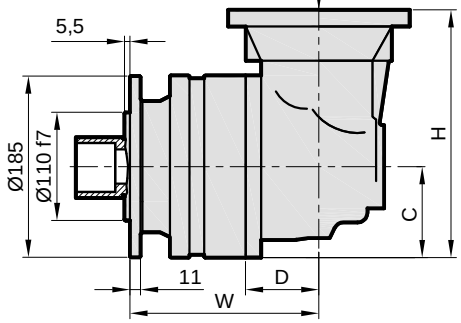
M_{max} = 2.2 kNm

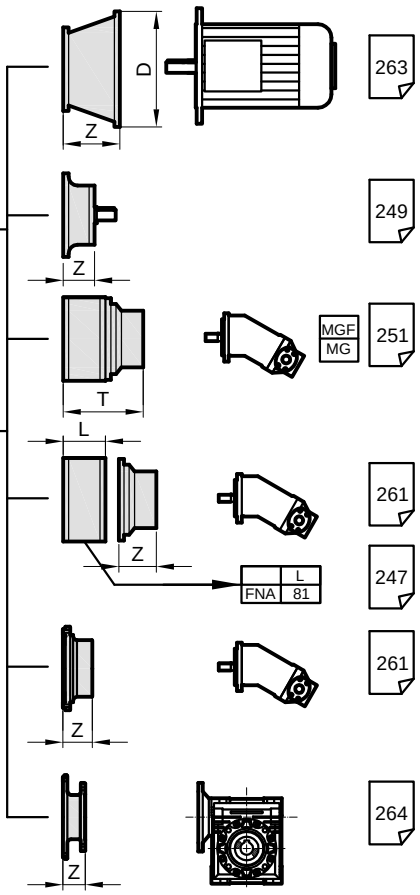
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



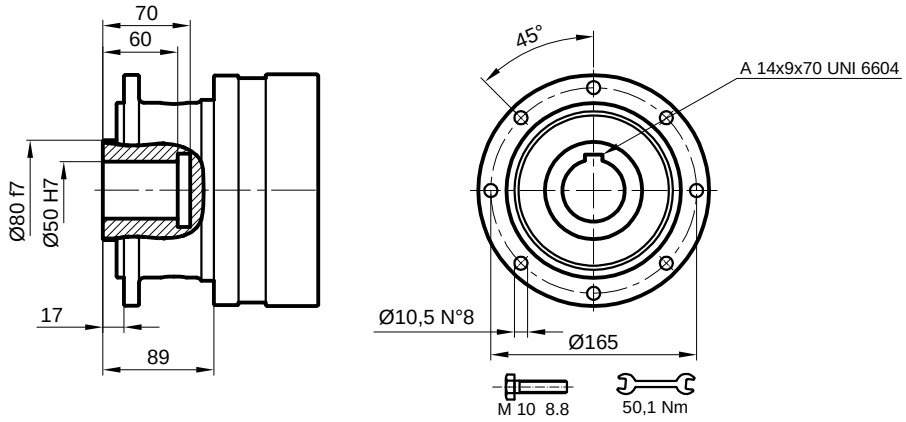


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	118	16	–
S2	193	75	93	252	166	22	31
S3	241	75	93	252	214	28	37
S4	289	75	93	252	262	34	43

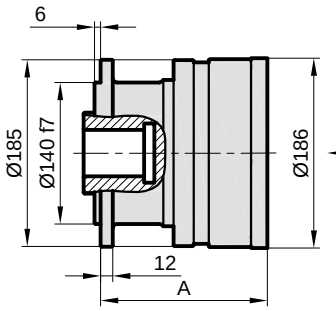
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103

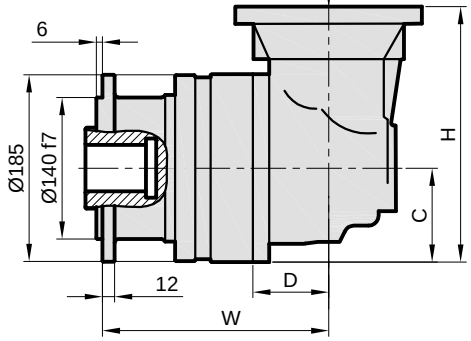
DKM

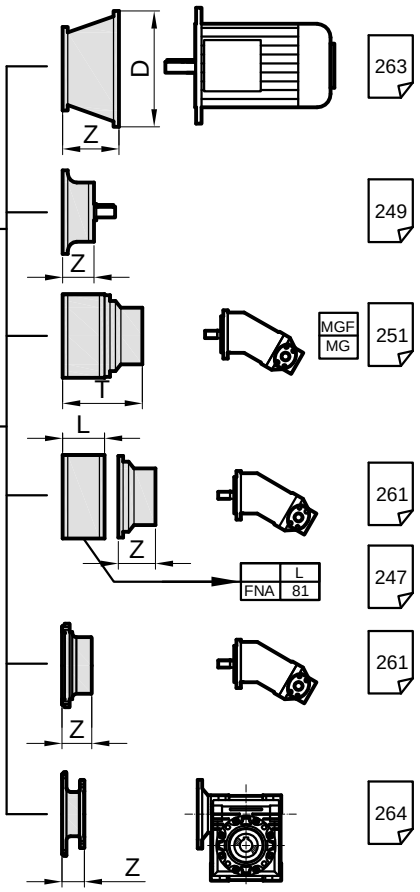


PD..



PDA..



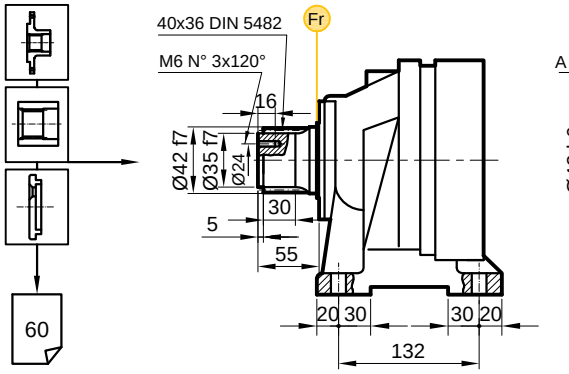


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	150	13	-
S2	215	75	93	252	195	19	28
S3	270	75	93	252	245	25	34
S4	320	75	93	252	295	31	40

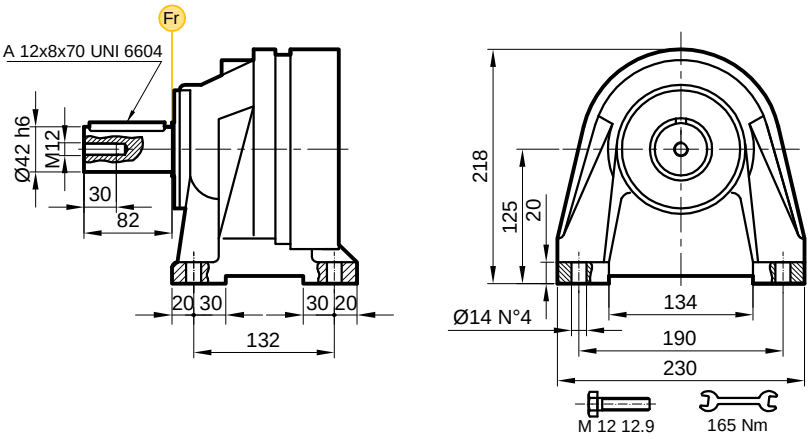
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 103

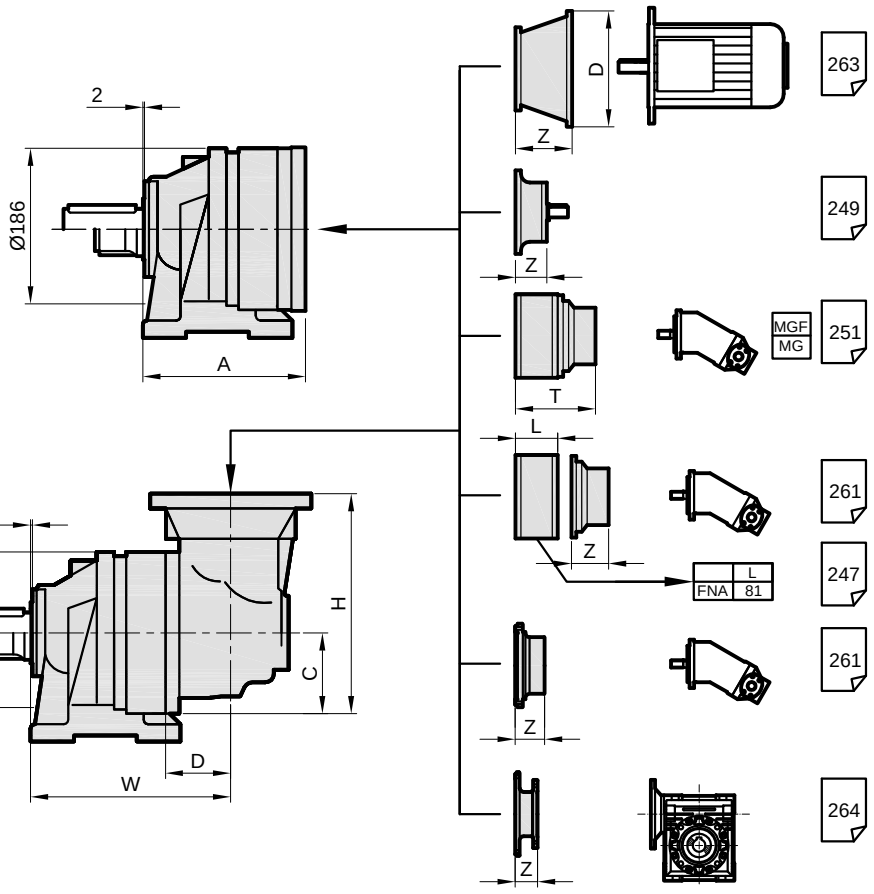
FVS



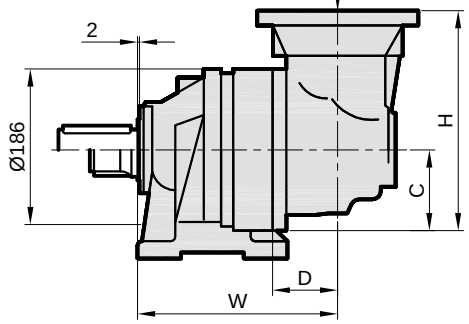
FVC



PD..



PDA..

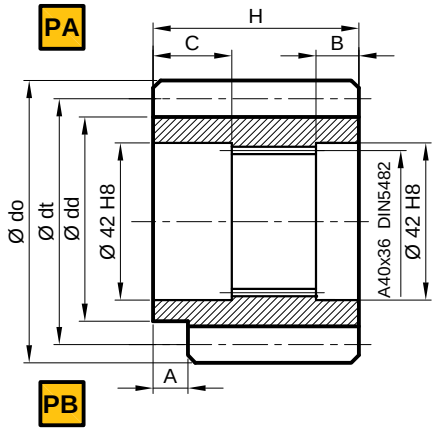


Stage	W	D	C	H	A	PD FVC	PDA FVC
S1	-	-	-	-	148	20	-
S2	230	75	93	252	196	26	35
S3	278	75	93	252	244	32	41
S4	326	75	93	252	292	38	47

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

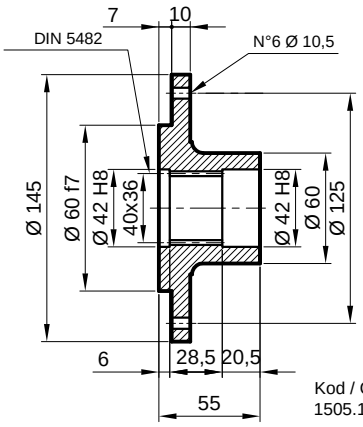
PD/PDA 103

P *Pinyon / Pinion / Ritzel*



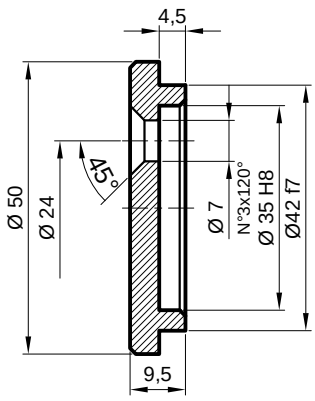
	m	z	x	dt	dd	do	H	A	B	C	Malzeme *Material* Material	Kod Code Bestell
PA	5	14	0,500	70	62,5	62,5	65	0	10	53	39NiCrMo3	1501.101.001
PA	6	12	0,250	72	61	62,5	59	14	4	54	39NiCrMo3	1501.101.002
PB	6	14	0,500	84	73	62,5	65	0	10	54	39NiCrMo3	1502.101.001

FL Flanş / *Flange* / Flansch



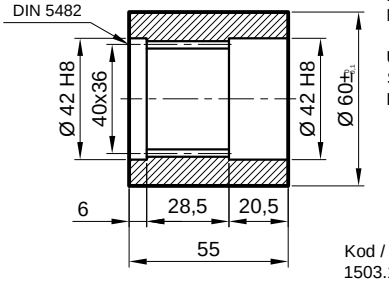
Kod / Code / Bestell
1505.101.200

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.101.250

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

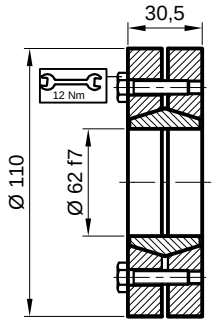


Malzeme /*Material*
Material

UNI C40
SAE 1040
DIN Ck40

Kod / Code / Bestell
1503.101.100

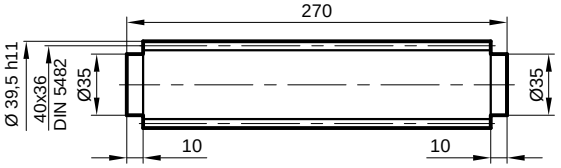
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
2,2 kNm

Kod / Code / Bestell
2501.101.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.101.260

PD/PDA 103

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

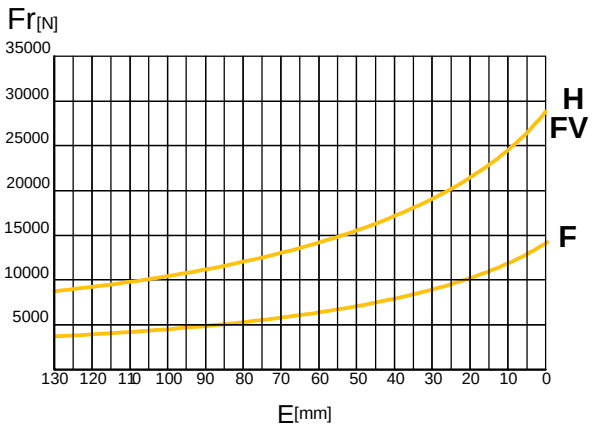
RADIAL LOADS(Fr)

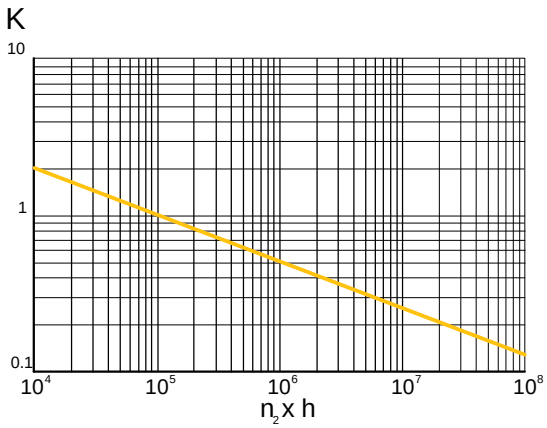
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

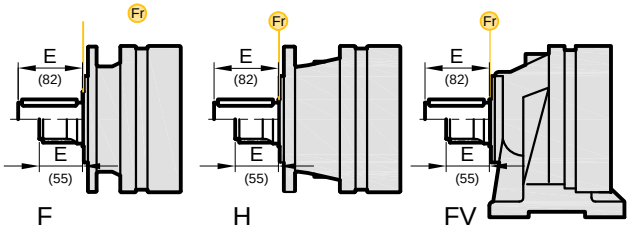
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

F-H-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

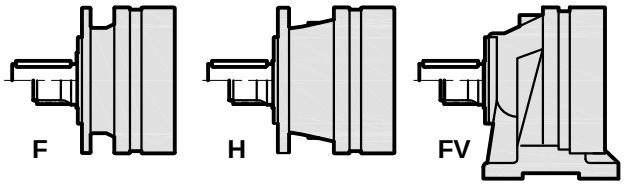
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

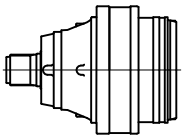
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	F	H-FV	
	16000	18000	←
	16000	18000	→

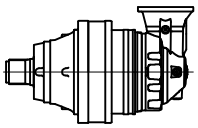


PD 105



	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 105 S1	3.77	3980	3520	3000	2650	2800	7040	20
	4.12	3600	3190	2710	2400	2800	6380	20
	5.16	3010	2660	2260	2000	2800	5320	20
	6.00	2520	2230	1900	1680	2800	4460	20
	7.25	1950	1730	1470	1300	2800	3460	20
PD 105 S2	13.4	3980	3520	3000	2650	2800	7040	12
	16.1	3980	3520	3000	2650	2800	7040	12
	18.3	3010	2660	2260	2000	2800	5320	12
	23.1	3600	3190	2710	2400	2800	6380	12
	28.9	3010	2660	2260	2000	2800	5320	12
	34.8	3010	2660	2260	2000	2800	5320	12
	40.5	2520	2230	1900	1680	2800	4460	12
	48.9	1950	1730	1470	1300	2800	3460	12
	62.8	1950	1730	1470	1300	2800	3460	12
PD 105 S3	52.1	3600	3190	2710	2400	2800	6380	8
	57.5	3980	3520	3000	2650	2800	7040	8
	62.8	3600	3190	2710	2400	2800	6380	8
	75.2	3980	3520	3000	2650	2800	7040	8
	82.1	3600	3190	2710	2400	2800	6380	8
	90.6	3980	3520	3000	2650	2800	7040	8
	98.9	3600	3190	2710	2400	2800	6380	8
	119.3	3600	3190	2710	2400	2800	6380	8
	129.3	3600	3190	2710	2400	2800	6380	8
	149.4	3010	2660	2260	2000	2800	5320	8
	155.9	3600	3190	2710	2400	2800	6380	8
	162.0	3010	2660	2260	2000	2800	5320	8
	173.5	2520	2230	1900	1680	2800	4460	8
	195.2	3010	2660	2260	2000	2800	5320	8
	235.4	3010	2660	2260	2000	2800	5320	8
	273.3	2520	2230	1900	1680	2800	4460	8
	302.2	3010	2660	2260	2000	2800	5320	8
	330.3	1950	1730	1470	1300	2800	3460	8
	424.1	1950	1730	1470	1300	2800	3460	8
PD 105 S4	351.9	3600	3190	2710	2400	2800	6380	4
	365.7	3010	2660	2260	2000	2800	5320	4
	388.5	3980	3520	3000	2650	2800	7040	4
	413.8	3980	3520	3000	2650	2800	7040	4
	424.2	3600	3190	2710	2400	2800	6380	4
	468.3	3980	3520	3000	2650	2800	7040	4
	511.4	3600	3190	2710	2400	2800	6380	4
	554.3	3600	3190	2710	2400	2800	6380	4
	611.9	3980	3520	3000	2650	2800	7040	4
	668.2	3600	3190	2710	2400	2800	6380	4
	737.6	3980	3520	3000	2650	2800	7040	4
	805.4	3600	3190	2710	2400	2800	6380	4
	857.9	3600	3190	2710	2400	2800	6380	4
	907.3	3010	2660	2260	2000	2800	5320	4
	1052.4	3600	3190	2710	2400	2800	6380	4
	1121.1	3600	3190	2710	2400	2800	6380	4
	1318.2	3010	2660	2260	2000	2800	5320	4
	1588.9	3010	2660	2260	2000	2800	5320	4
	1845.2	2520	2230	1900	1680	2800	4460	4
	2369.2	2520	2230	1900	1680	2800	4460	4

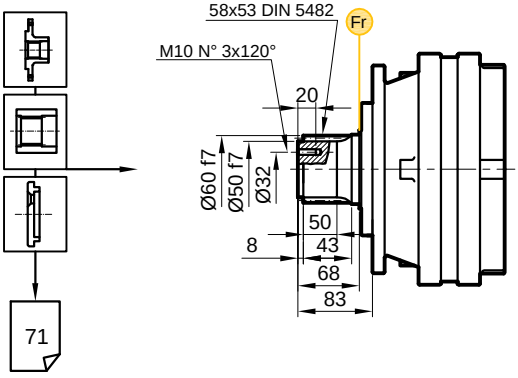
PDA 105



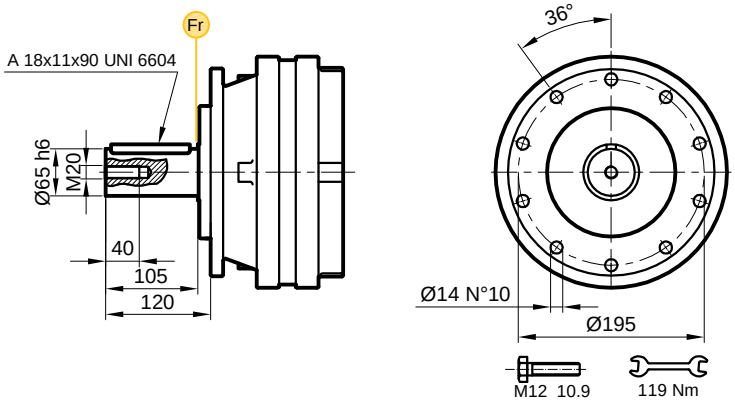
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 105 S2	12.0	3600	3190	2710	2400	2800	6380	12
	15.1	3010	2660	2260	2000	2800	5320	12
	17.5	2520	2230	1900	1680	2800	4460	12
	21.2	1950	1730	1470	1300	2800	3460	12
PDA 105 S3	39.3	3980	3520	3000	2650	2800	7040	8
	47.4	3980	3520	3000	2650	2800	7040	8
	53.8	3010	2660	2260	2000	2800	5320	8
	67.7	3600	3190	2710	2400	2800	6380	8
	75.4	2520	2230	1900	1680	2800	4460	8
	84.8	3010	2660	2260	2000	2800	5320	8
	91.1	1950	1730	1470	1300	2800	3460	8
	102.2	3010	2660	2260	2000	2800	5320	8
	118.7	2520	2230	1900	1680	2800	4460	8
	143.5	1950	1730	1470	1300	2800	3460	8
PDA 105 S4	140.0	3980	3520	3000	2650	2800	7040	4
	168.8	3980	3520	3000	2650	2800	7040	4
	184.3	3600	3190	2710	2400	2800	6380	4
	220.6	3980	3520	3000	2650	2800	7040	4
	240.9	3600	3190	3710	2400	2800	6380	4
	265.9	3980	3520	3000	2650	2800	7040	4
	290.3	3600	3190	2710	2400	2800	6380	4
	320.5	3980	3520	3000	2650	2800	7040	4
	350.0	3600	3190	2710	2400	2800	6380	4
	422.3	2520	2230	1900	1680	2800	4460	4
	449.4	3600	3190	2710	2400	2800	6380	4
	475.2	3010	2660	2260	2000	2800	5320	4
	509.1	2520	2230	1900	1680	2800	4460	4
	551.9	2520	2230	1900	1680	2800	4460	4
	615.2	1950	1730	1470	1300	2800	3460	4
	665.2	2520	2230	1900	1680	2800	4460	4
	735.5	3010	2660	2260	2000	2800	5320	4
	801.8	2520	2230	1900	1680	2800	4460	4
	1244.0	1950	1730	1470	1300	2800	3460	4

PD/PDA 105

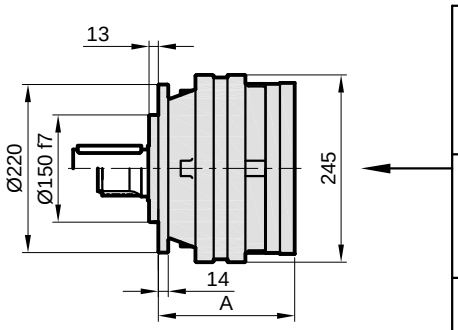
FS



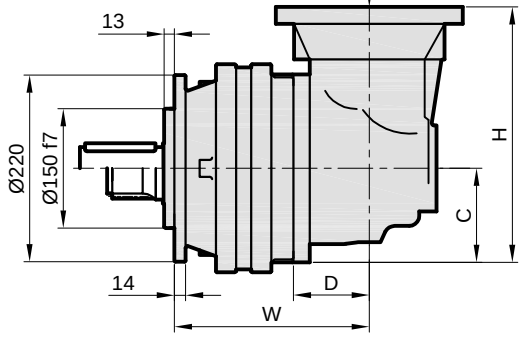
FC

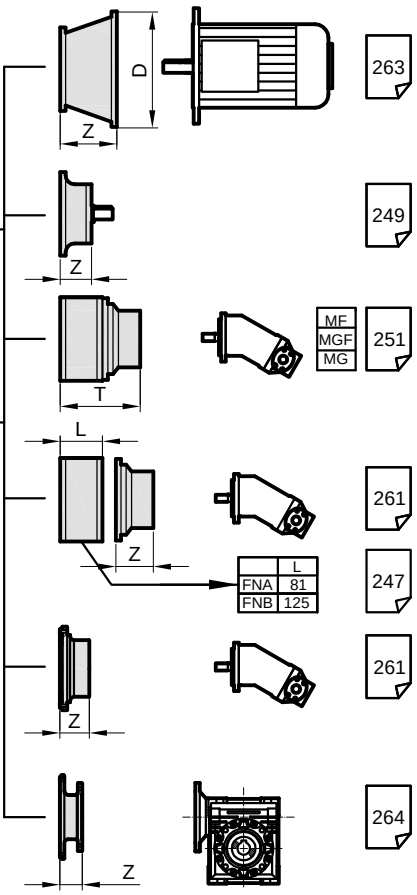


PD..



PDA..

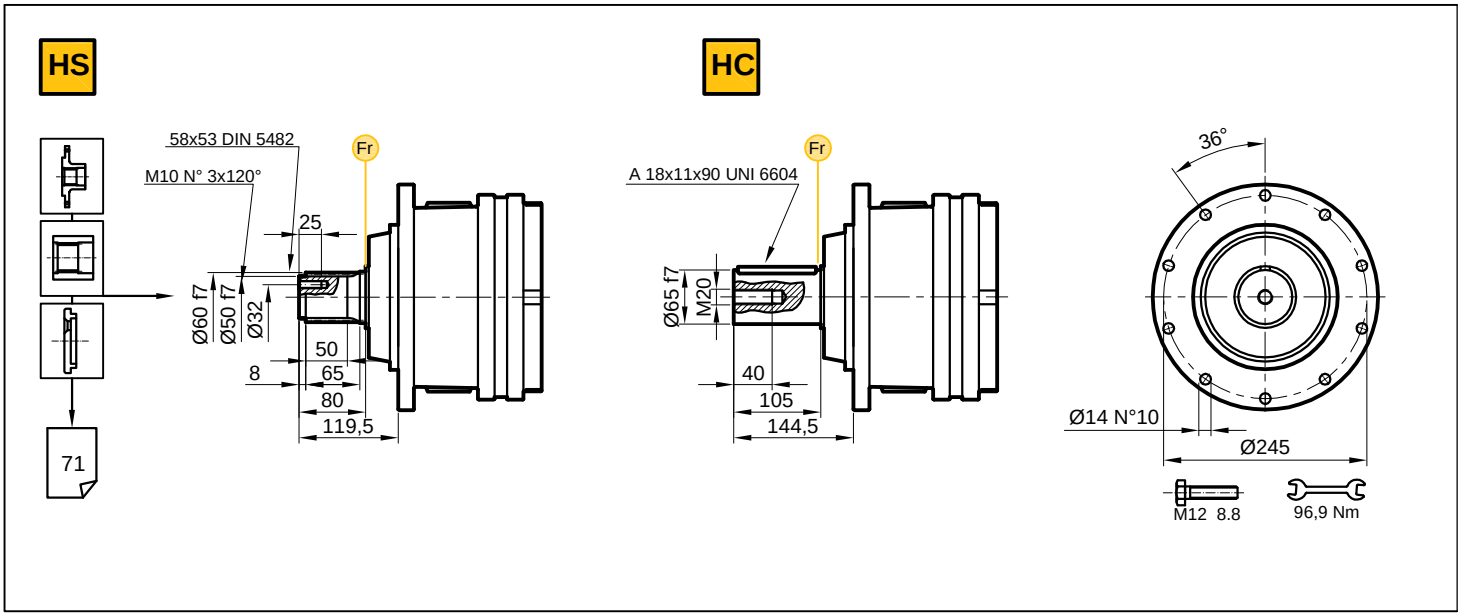


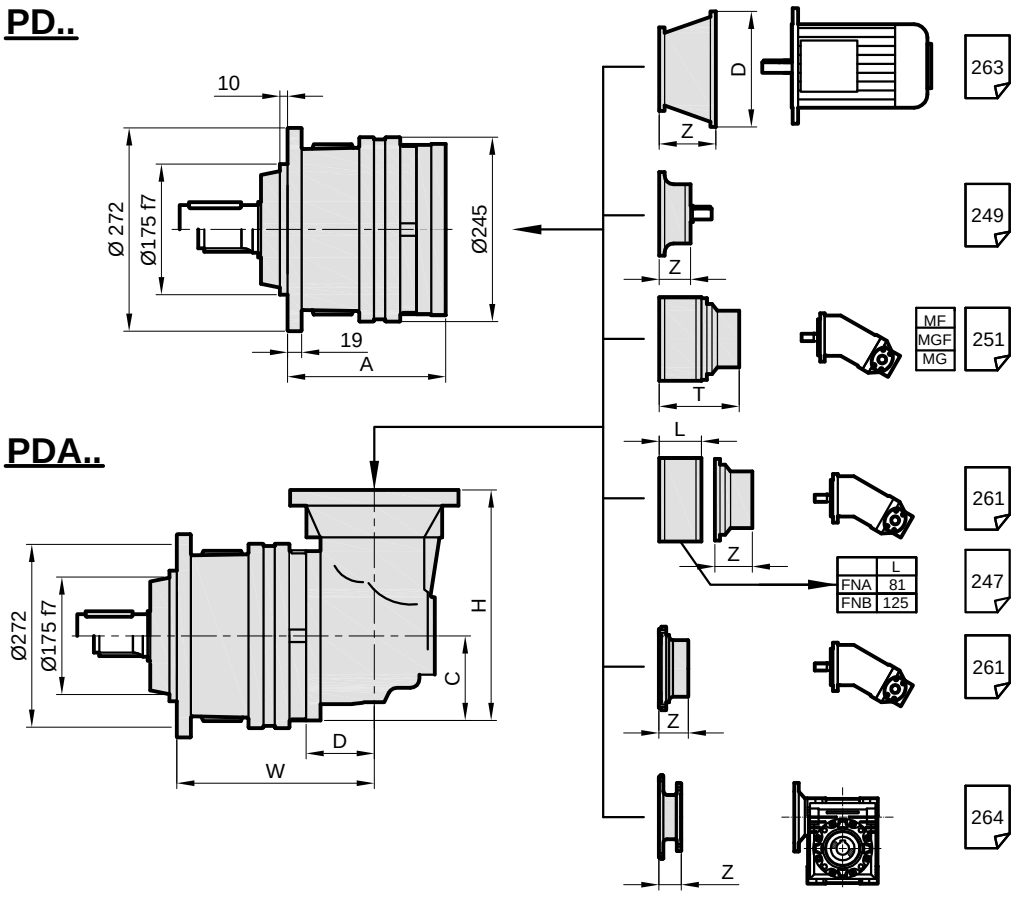


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	166	29	-
S2	241	75	93	252	214	35	47
S3	289	75	93	252	262	41	53
S4	337	75	93	252	310	47	59

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105



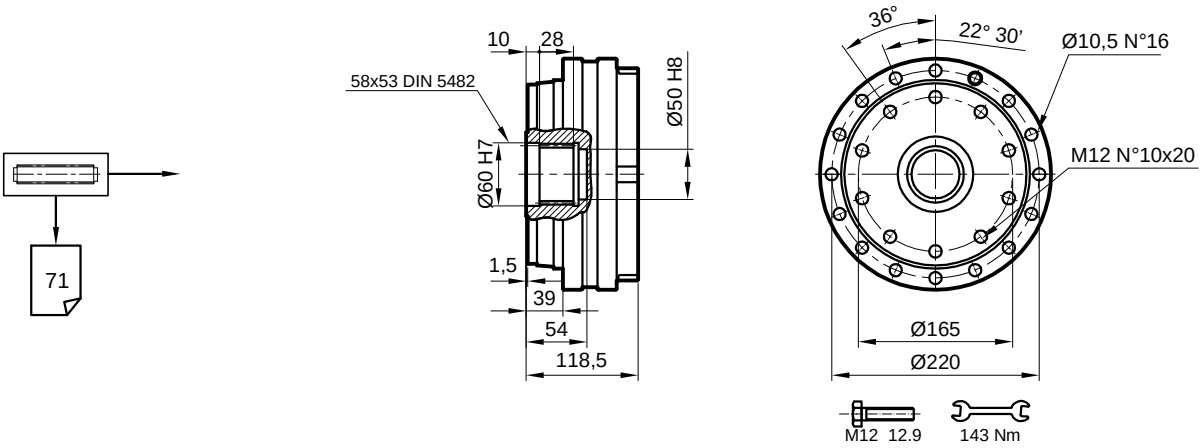


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	173	38	-
S2	248	75	93	252	221	44	56
S3	296	75	93	252	269	50	62
S4	344	75	93	252	317	56	68

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

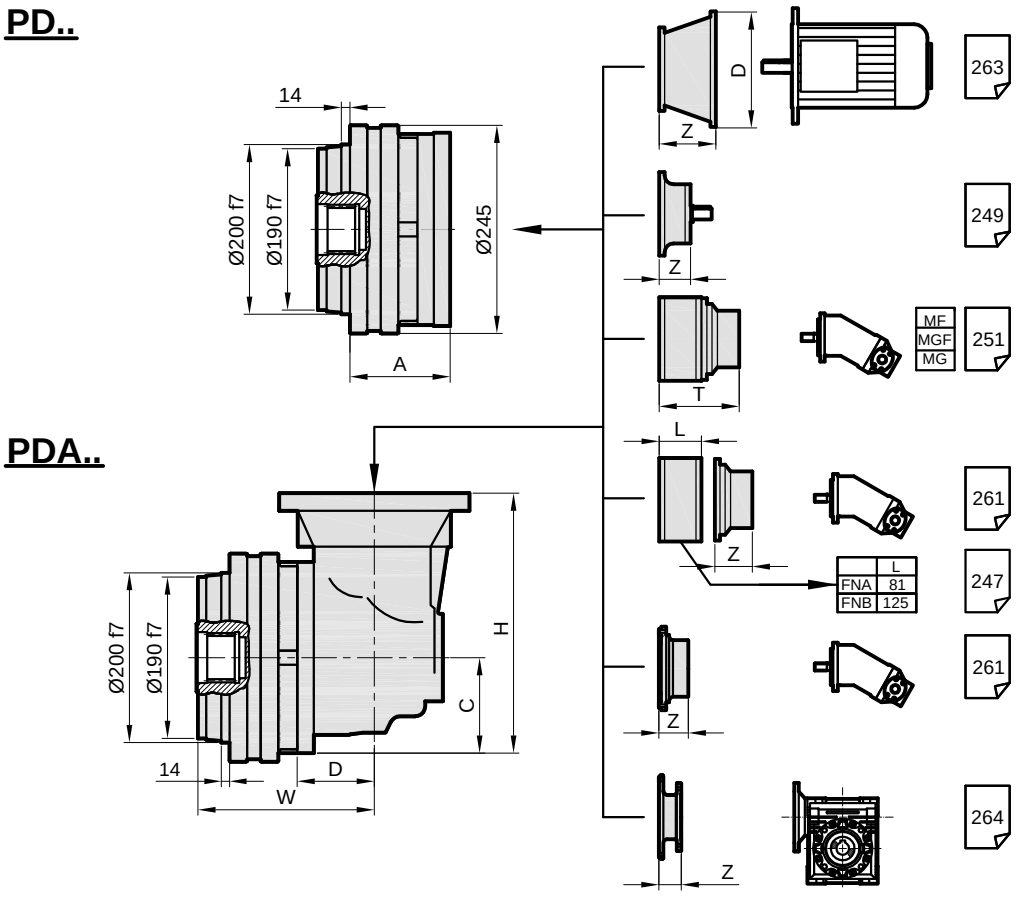
PD/PDA 105

S



PD..

PDA..

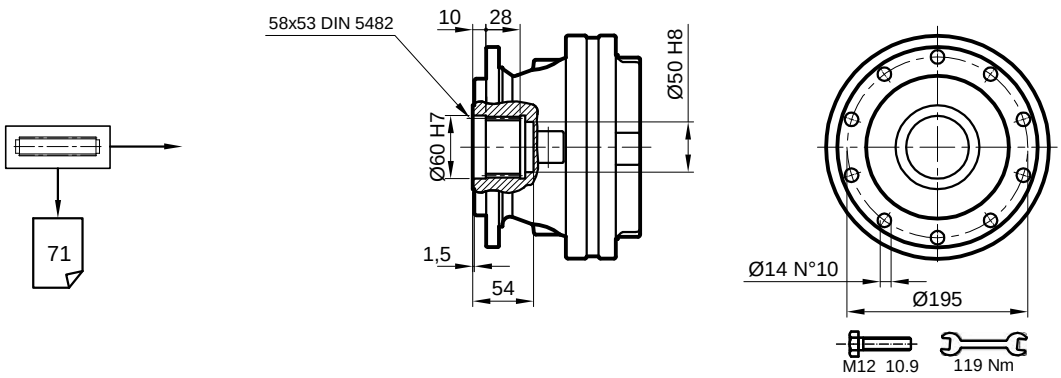


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	79.5	20	-
S2	192	75	93	252	127.5	27	35
S3	240	75	93	252	175.5	32	41
S4	288	75	93	252	223.5	38	47

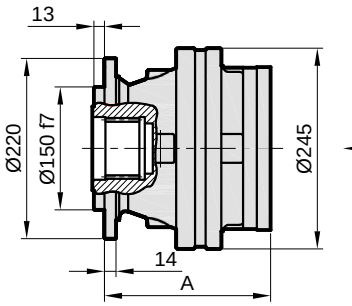
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105

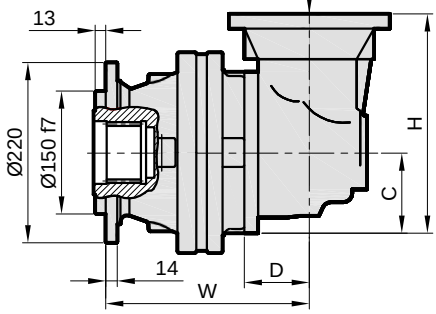
SF

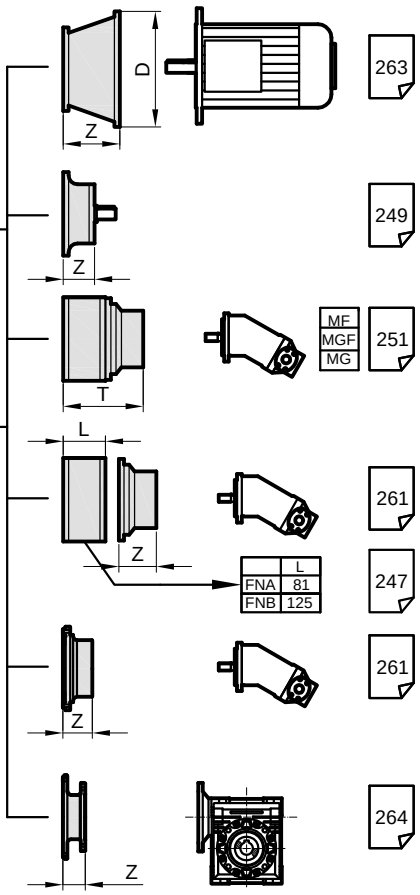


PD..



PDA..



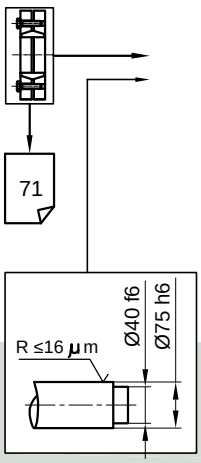


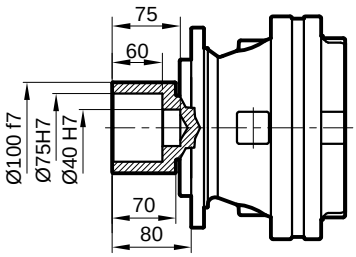
Stage	W	D	C	H	A	PD SF	PDA SF
S1	-	-	-	-	166	31	-
S2	241	75	93	252	214	37	49
S3	289	75	93	252	262	43	55
S4	337	75	93	252	310	49	61

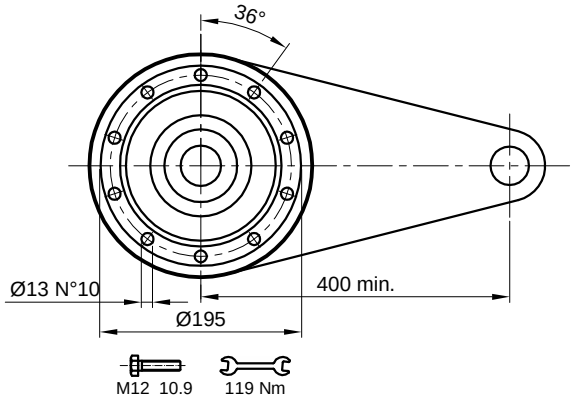
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105

SDF



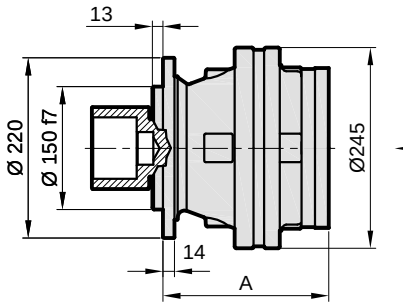




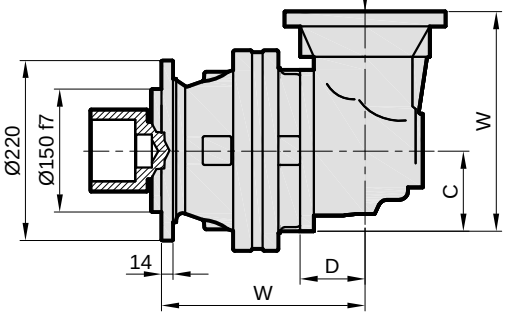
M_{max} = 7.5 kNm

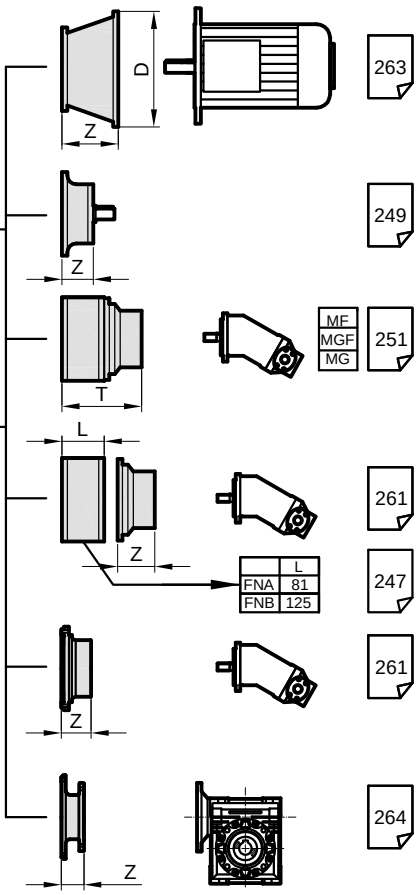
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



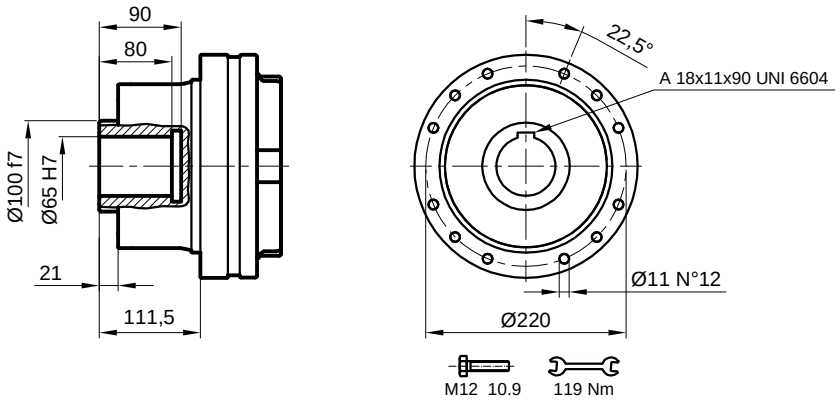


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	166	31	–
S2	241	75	93	252	214	37	49
S3	289	75	93	252	262	43	55
S4	337	75	93	252	310	46	61

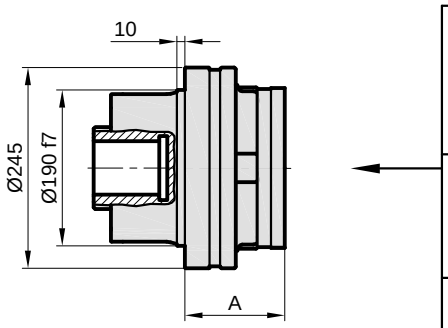
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105

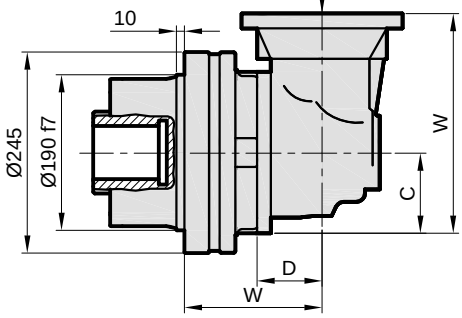
DKM

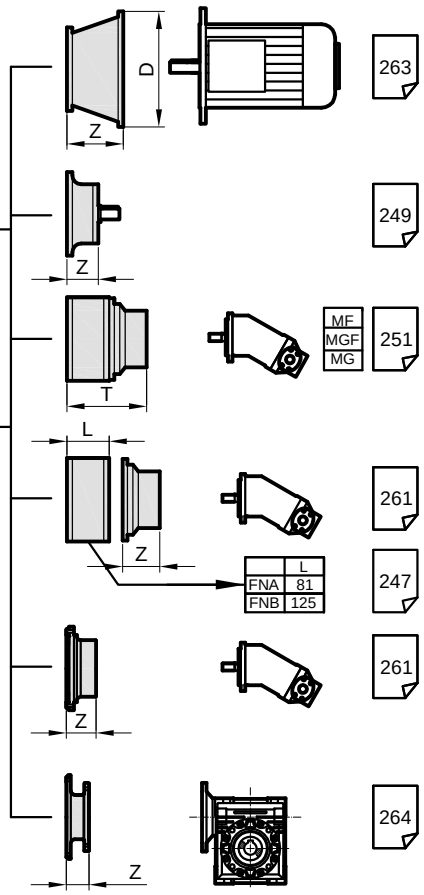


PD..



PDA..



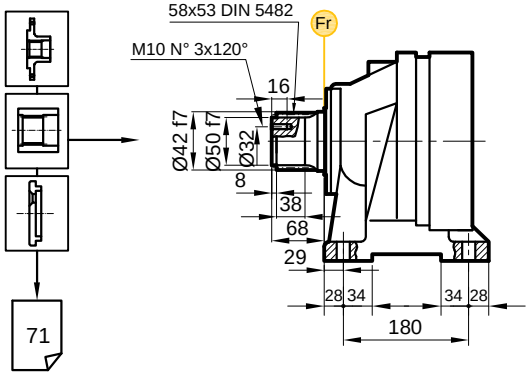


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	85.5	20	-
S2	198	75	93	252	133.5	27	35
S3	246	75	93	252	181.5	32	41
S4	294	75	93	252	229.5	38	47

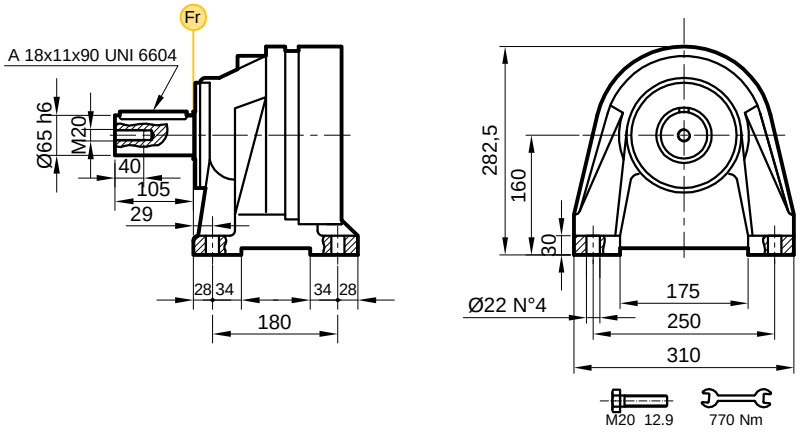
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105

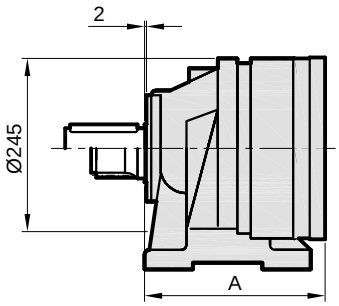
FVS



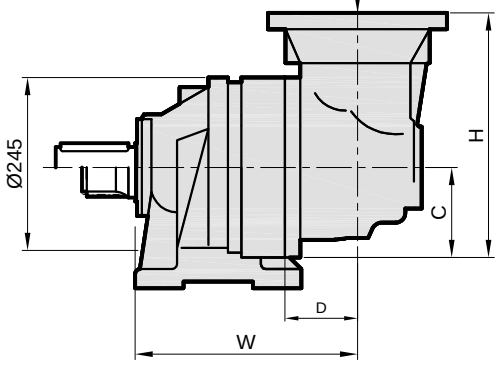
FVC

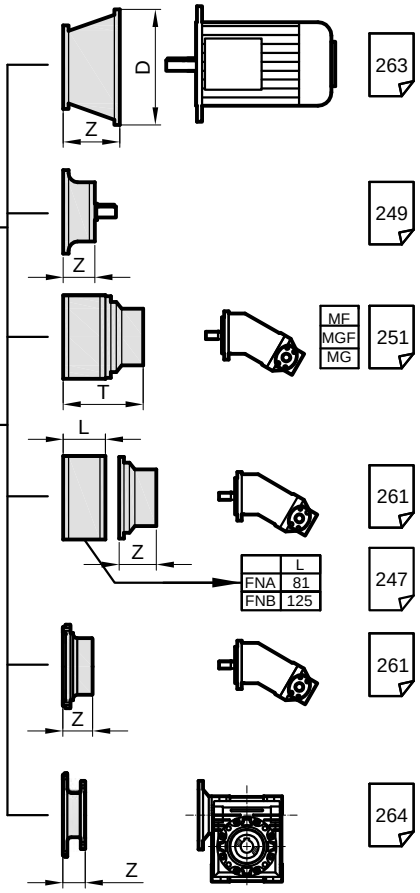


PD..



PDA..



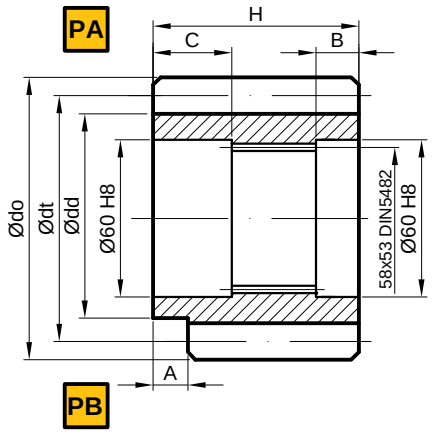


Stage	W	D	C	H	A	PD FVC	PDA FVC
S1	-	-	-	-	212,5	42	-
S2	287,5	75	93	252	260,5	48	60
S3	335,5	75	93	252	308,5	54	66
S4	383,5	75	93	252	356,5	60	72

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 105

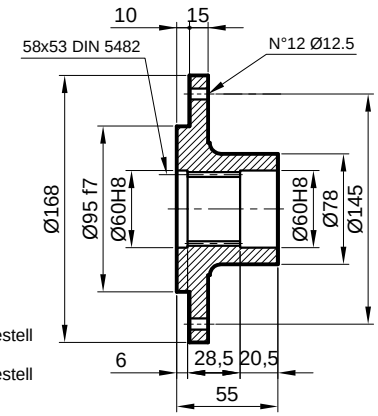
P *Pinyon / Pinion / Ritzel*



	m	z	x	dd	dt	do	H	A	B	C	Malzeme *Material* Material	Kod / Code Bestell
PA	8	13	0	88	104	120	68	0	8.5	22.5	18NiCrMo5	1501.105.001
PA	8	11	0.85	74.8	88	110.8	68	0	8.5	22.5	38NiCrMo4	1501.105.002
PA	8	12	0.1	88	96	112.8	68	0	8	21	38NiCrMo4	1501.105.003
PB	10	14	0.24	117.4	140	162.4	116	13	9.5	22.5	18NiCrMo4	1502.105.001
PA	8	15	0	100	120	136	68	0	8.5	22.5	38NiCrMo4	1501.105.004
PA	6	14	0.6	72.6	84	99.6	95	0	23	21	38NiCrMo4	1501.105.005
PA	10	11	1.21	97.1	110	142.1	90	0	8	22.5	38NiCrMo5	1501.105.006

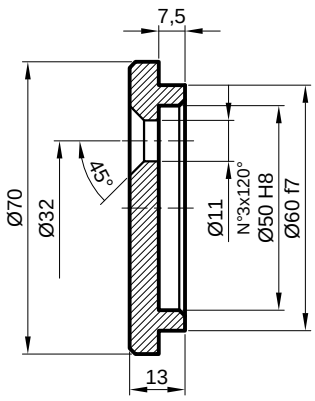
FL Flanş / *Flange* / Flansch

	A	B
FS	68	37
HS	80	49



FS Kod / Code / Bestell 1505.105.200
HS Kod / Code / Bestell 1506.105.201

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe

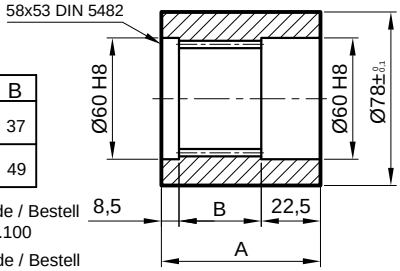


Kod / Code / Bestell
1507.105.250

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

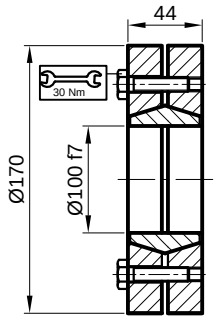
Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40

	A	B
FS	68	37
HS	80	49



FS Kod / Code / Bestell 1503.105.100
HS Kod / Code / Bestell 1504.105.101

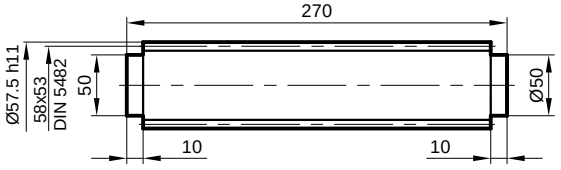
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
7,5 kNm

Kod / Code / Bestell
2501.105.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material
UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.105.260

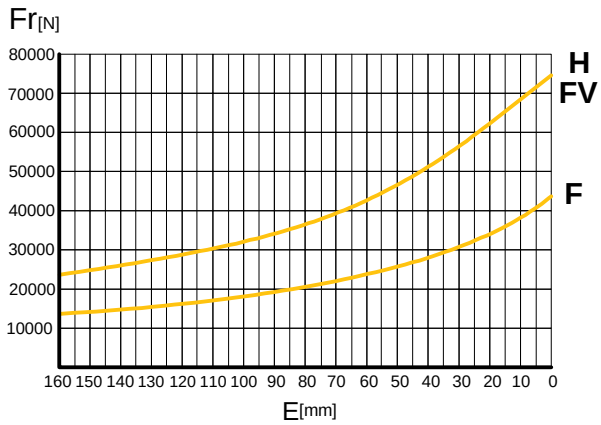
PD/PDA 105

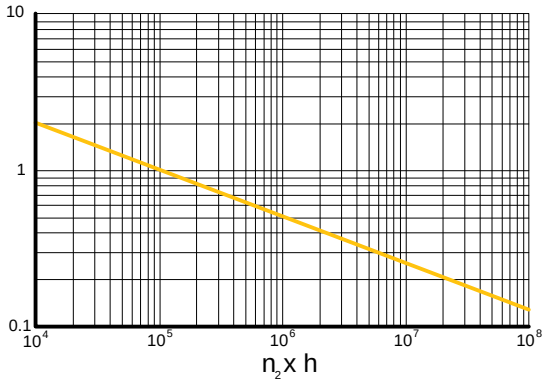
RADYAL YÜK(Fr)
Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

RADIAL LOADS(Fr)
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

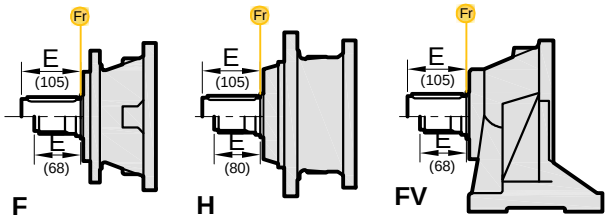
RADIALLAST (Fr)
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

F-H-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			

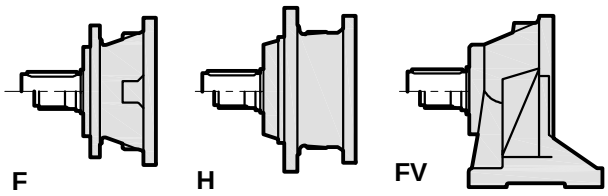


AKSİYEL YÜKLER (Fa)
Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

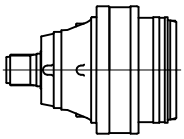
AXIAL LOADS (Fa)
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

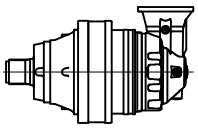
Fa [N]	F	H-FV	
	32000	32000	←
	32000	48000	→



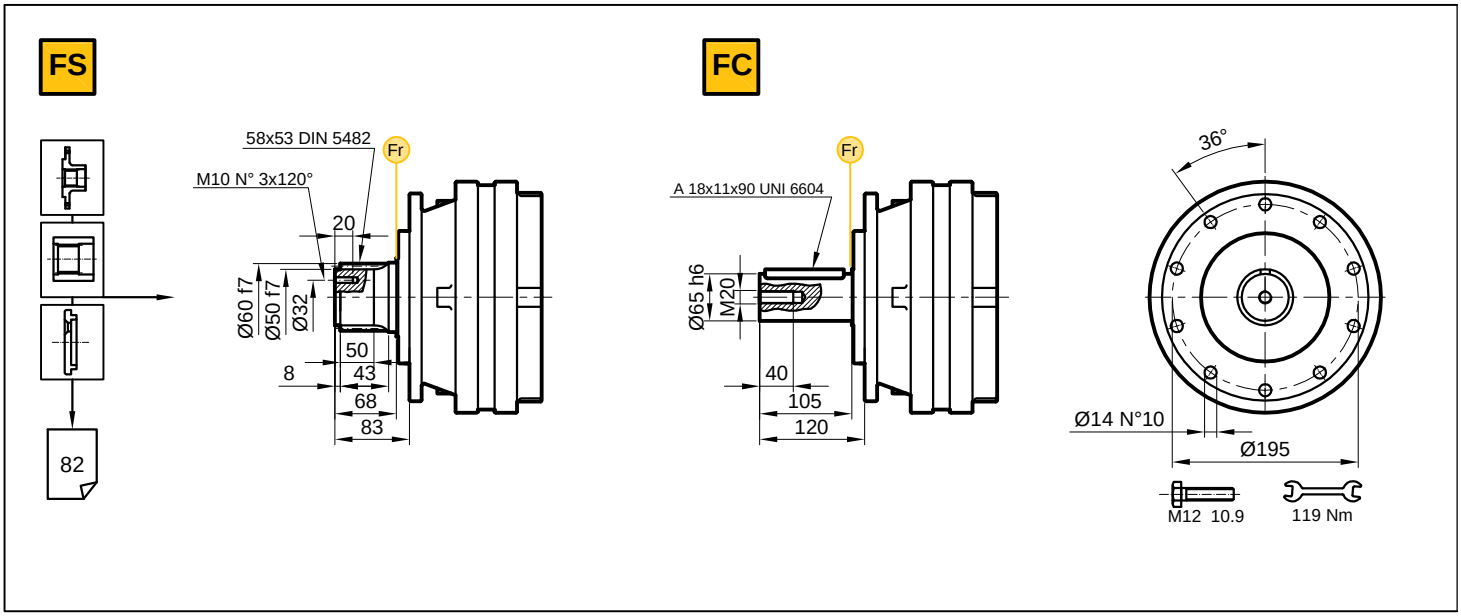
PD 107

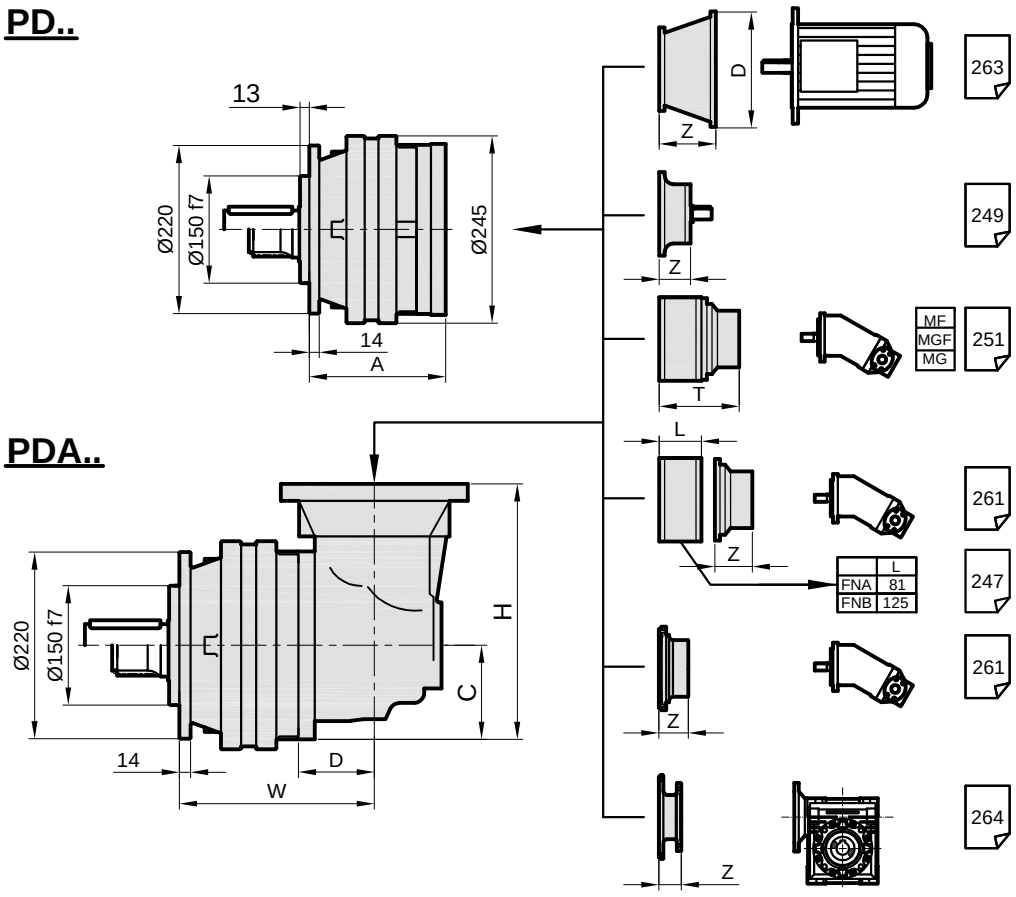
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 107 S1	3.77	5770	5110	4350	3850	2800	10220	20
	4.12	5260	4660	3970	3510	2800	9320	20
	5.16	4300	3810	3240	2870	2800	7620	20
	6.00	3770	3340	2840	2520	2800	6680	20
	7.25	2950	2610	2220	1970	2800	5220	20
PD 107 S2	13.4	5770	5110	4350	3850	2800	10220	15
	16.1	5770	5110	4350	3850	2800	10220	15
	18.3	4300	3810	3240	2870	2800	7620	15
	23.1	5260	4660	3970	3510	2800	9320	15
	28.9	4300	3810	3240	2870	2800	7620	15
	34.8	4300	3810	3240	2870	2800	7620	15
	40.5	3770	3340	2840	2520	2800	6680	15
	48.9	2950	2610	2220	1970	2800	5220	15
PD 107 S3	52.1	5260	4660	3970	3510	2800	9320	10
	57.5	5770	5110	4350	3850	2800	10220	10
	62.8	5260	4660	3970	3510	2800	9320	10
	75.2	5770	5110	4350	3850	2800	10220	10
	82.1	5260	4660	3970	3510	2800	9320	10
	90.6	5770	5110	4350	3850	2800	10220	10
	98.9	5260	4660	3970	3510	2800	9320	10
	119.3	5260	4660	3970	3510	2800	9320	10
	129.3	5260	4660	3970	3510	2800	9320	10
	149.4	4300	3810	3240	2870	2800	7620	10
	155.9	5260	4660	3970	3510	2800	9320	10
	162.0	4300	3810	3240	2870	2800	7620	10
	173.5	3770	3340	2840	2520	2800	6680	10
	195.2	4300	3810	3240	2870	2800	7620	10
	235.4	4300	3810	3240	2870	2800	7620	10
	273.3	3770	3340	2840	2520	2800	6680	10
	302.2	4300	3810	3240	2870	2800	7620	10
	330.3	2950	2610	2220	1970	2800	5220	10
PD 107 S4	351.9	5260	4660	3970	3510	2800	9320	6
	365.7	4300	3810	3240	2870	2800	7620	6
	388.5	5770	5110	4350	3850	2800	10220	6
	413.8	5770	5110	4350	3850	2800	10220	6
	424.2	5260	4660	3970	3510	2800	9320	6
	468.3	5770	5110	4350	3850	2800	10220	6
	511.4	5260	4660	3970	3510	2800	9320	6
	554.3	5260	4660	3970	3510	2800	9320	6
	611.9	5770	5110	4350	3850	2800	10220	6
	668.2	5260	4660	3970	3510	2800	9320	6
	737.6	5770	5110	4350	3850	2800	10220	6
	805.4	5260	4660	3970	3510	2800	9320	6
	857.9	5260	4660	3970	3510	2800	9320	6
	907.3	4300	3810	3240	2870	2800	7620	6
	1052.4	5260	4660	3970	3510	2800	9320	6
	1121.1	5260	4660	3970	3510	2800	9320	6
	1318.2	4300	3810	3240	2870	2800	7620	6
	1588.9	4300	3810	3240	2870	2800	7620	6
	1845.2	3770	3340	2840	2520	2800	6680	6

PDA 107

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 107 S2	13.0	5770	5110	4350	3850	2800	10220	15
	14.2	5260	4660	3970	3510	2800	9320	15
	17.8	4300	3810	3240	2870	2800	7620	15
	20.5	5770	5110	4350	3850	2800	10220	15
	22.4	5260	4660	3970	3510	2800	9320	15
	28.1	4300	3810	3240	2870	2800	7620	15
	32.6	3770	3340	2840	2520	2800	6680	15
	39.7	2950	2610	2220	1970	2800	5220	15
PDA 107 S3	39.3	5770	5110	4350	3850	2800	10220	10
	47.4	5770	5110	4350	3850	2800	10220	10
	53.8	4300	3810	3240	2870	2800	7620	10
	67.7	5260	4660	3970	3510	2800	9320	10
	75.4	3770	3340	2840	2520	2800	6680	10
	84.8	4300	3810	3240	2870	2800	7320	10
	91.1	2950	2610	2220	1970	2800	5220	10
	102.2	4300	3810	3240	2870	2800	7620	10
	118.7	3770	3340	2840	2520	2800	6680	10
	143.5	2950	2610	2220	1970	2800	5220	10
PDA 107 S4	140.0	5770	5110	4350	3850	2800	10220	6
	168.8	5770	5110	4350	3850	2800	10220	6
	184.3	5260	4660	3970	3510	2800	9320	6
	220.6	5770	5110	4350	3850	2800	10220	6
	240.9	5260	4660	3970	3510	2800	9320	6
	265.9	5770	5110	4350	3850	2800	10220	6
	290.3	5260	4660	3970	3510	2800	9320	6
	320.5	5770	5110	4350	3850	2800	10220	6
	350.0	5260	4660	3970	3510	2800	9320	6
	422.3	3770	3340	2840	2520	2800	6680	6
	449.4	5260	4660	3970	3510	2800	9320	6
	475.2	4300	3810	3240	2870	2800	7620	6
	509.1	3770	3340	2840	2520	2800	6680	6
	551.9	3770	3340	2840	2520	2800	6680	6
	615.2	2950	2610	2220	1970	2800	5220	6
	665.2	3770	3340	2840	2520	2800	6680	6
	735.5	4300	3810	3240	2870	2800	7620	6
	801.8	3770	3340	2840	2520	2800	6680	6
	1244.0	2950	2610	2220	1970	2800	5220	6

PD/PDA 107

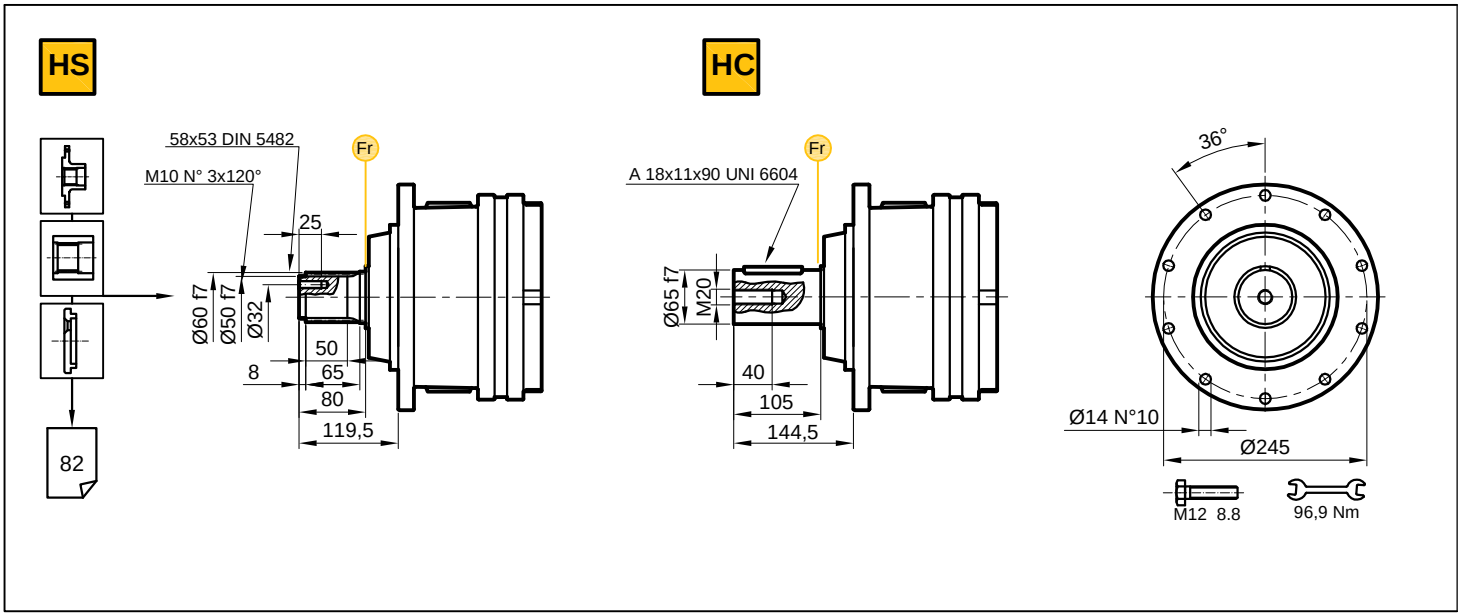


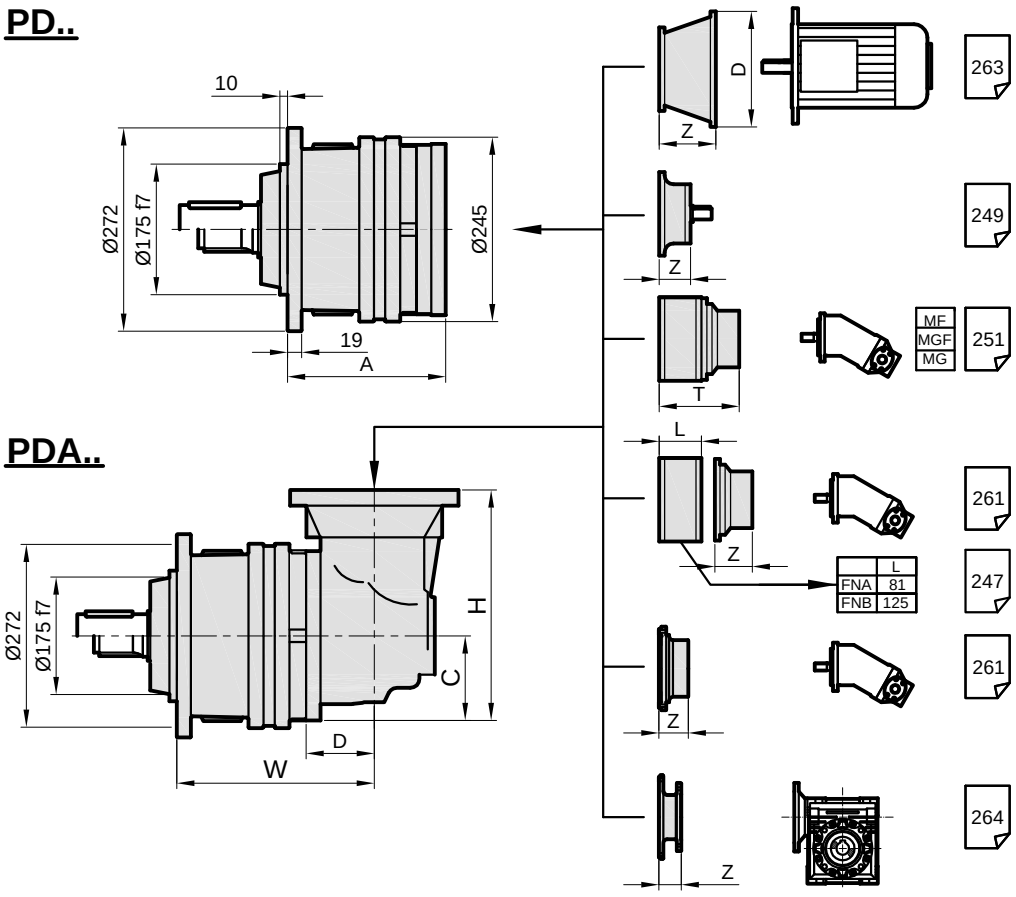


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	178	33	-
S2	279,5	88	140	380	239	41	51
S3	314	75	93	252	287	47	59
S4	362	75	93	252	335	53	65

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107



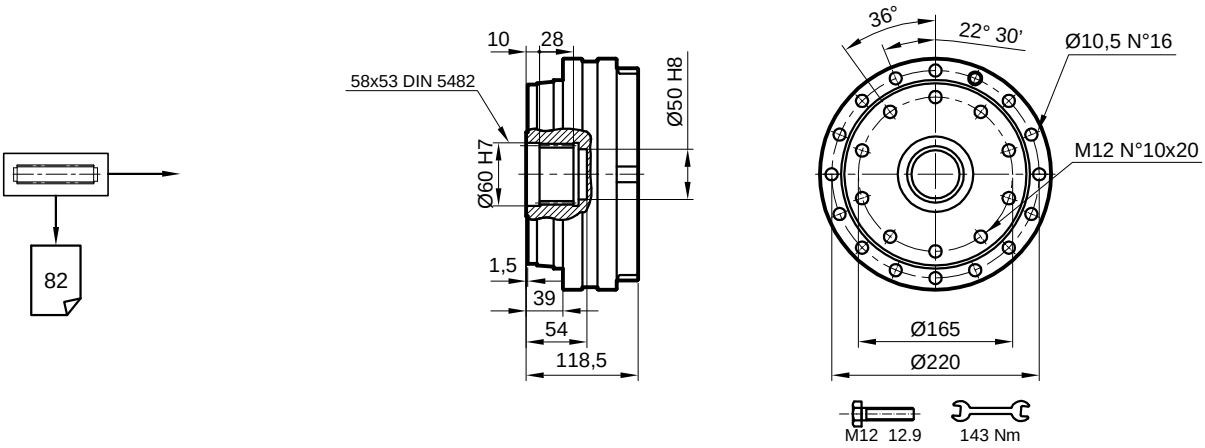


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	185	42	-
S2	286,5	88	140	380	246	50	60
S3	321	75	93	252	294	56	68
S4	369	75	93	252	342	62	74

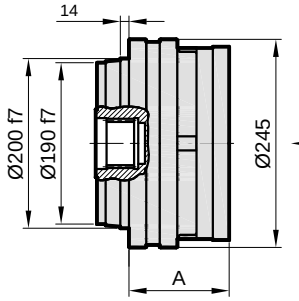
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

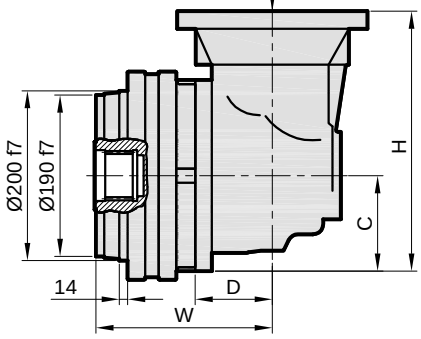
S

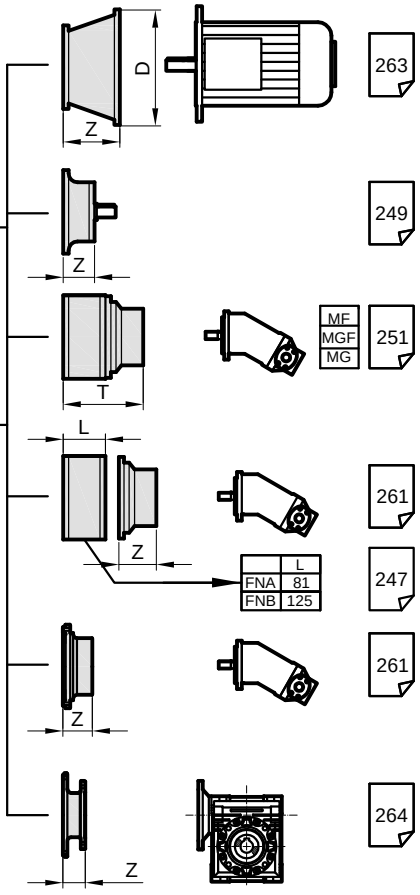


PD..



PDA..



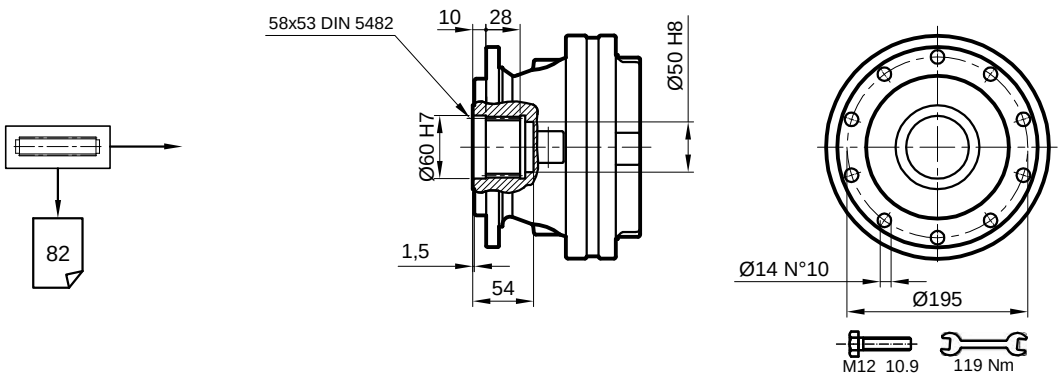


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	91.5	25	-
S2	193	88	140	380	152.5	32	43
S3	227,5	75	93	252	200.5	38	50
S4	275,5	75	93	252	248.5	44	56

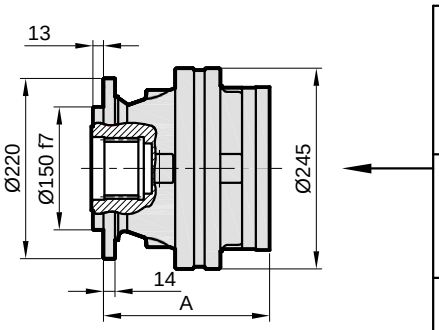
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

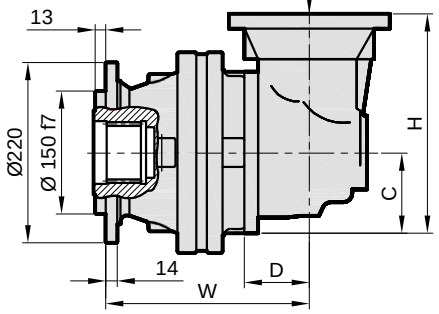
SF

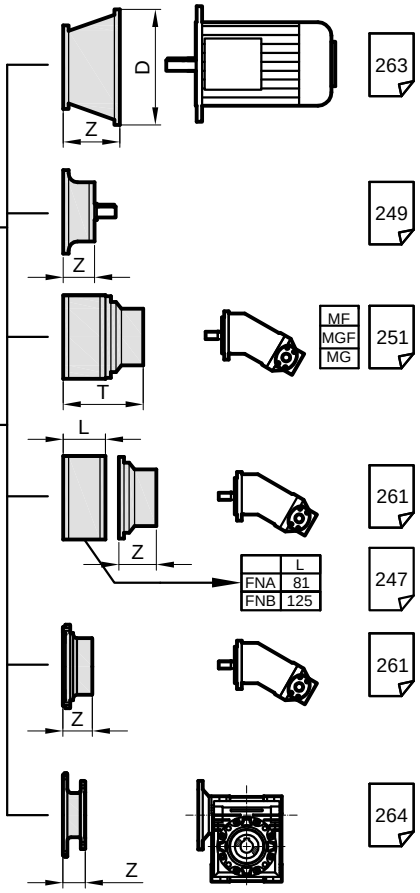


PD..



PDA..



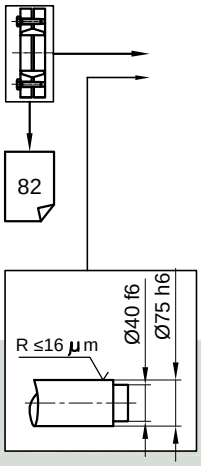


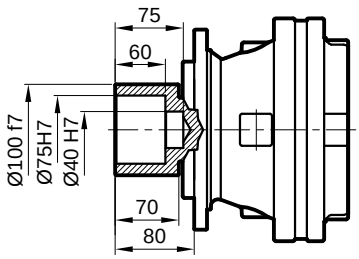
Stage	W	D	C	H	A	PD / SF	PDA / SF
S1	-	-	-	-	178	35	-
S2	279,5	88	140	380	239,5	43	53
S3	314	75	93	252	287	49	61
S4	362	75	93	252	335	55	67

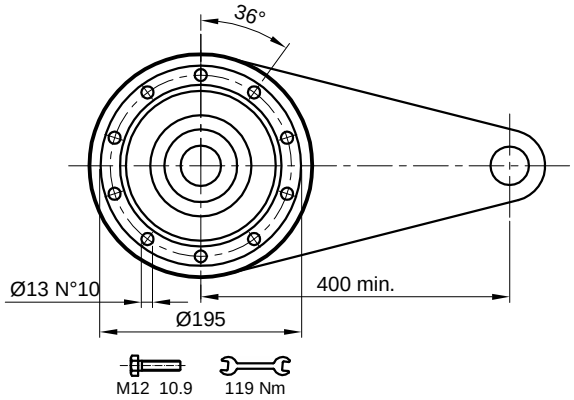
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

SDF



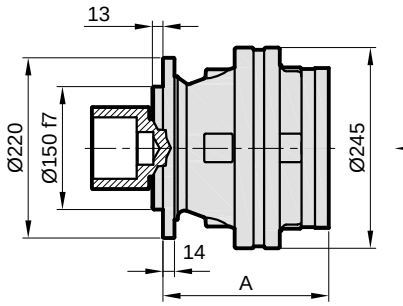




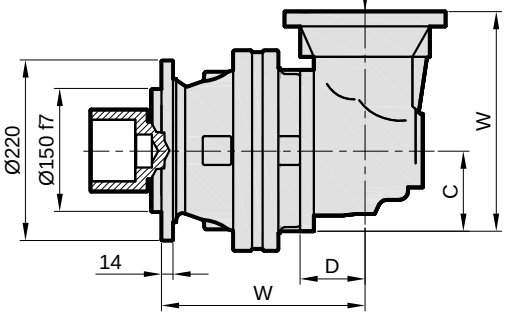
M_{max} = 7.5 kNm

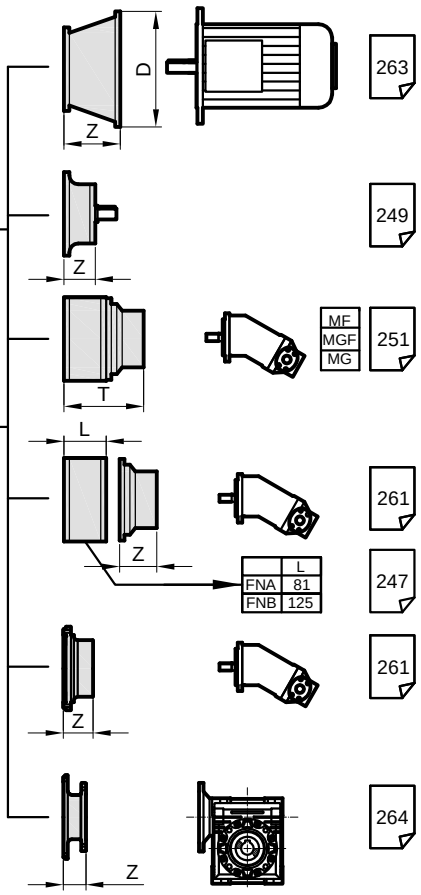
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



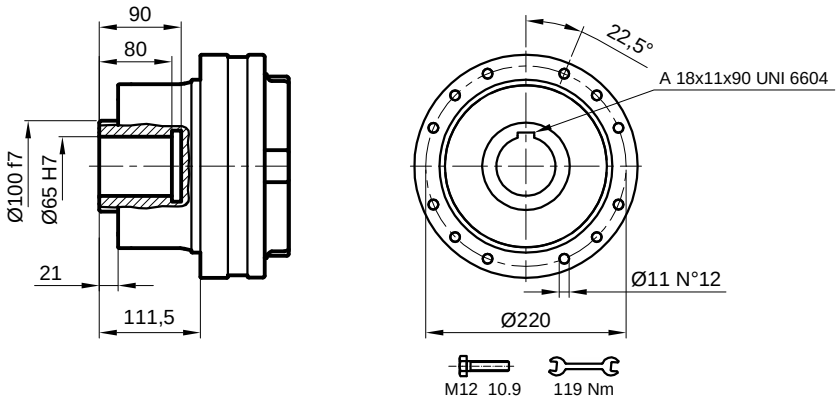


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	178	35	–
S2	279,5	88	140	380	239,5	45	53
S3	314	75	93	252	287	49	61
S4	362	75	93	252	335	55	67

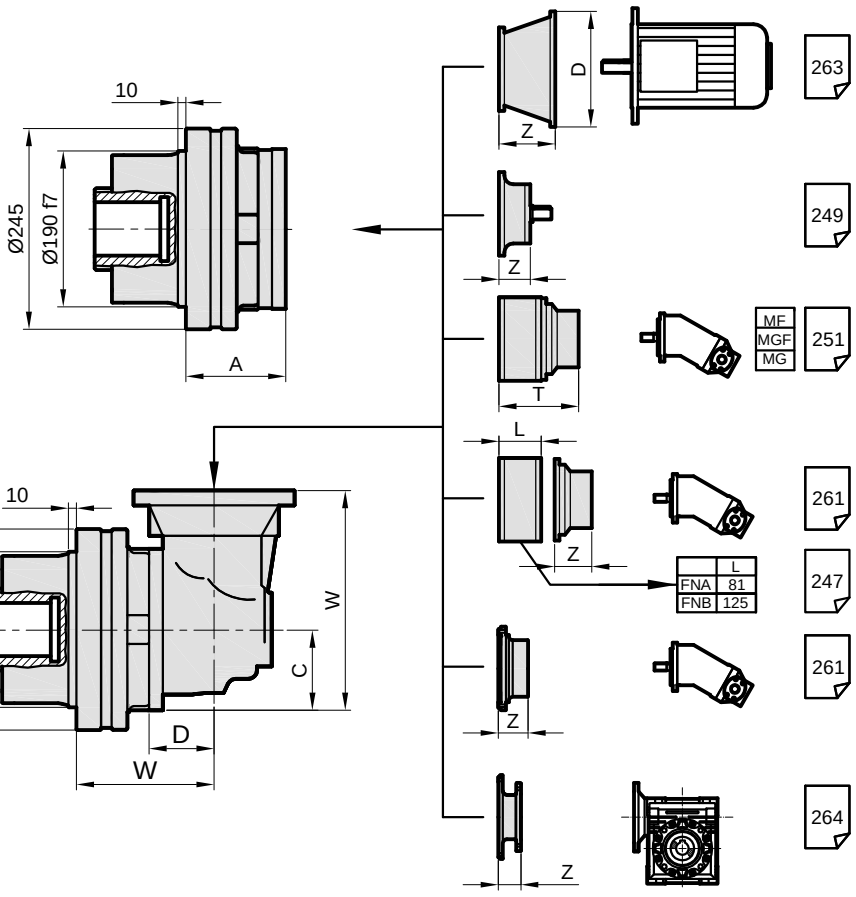
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

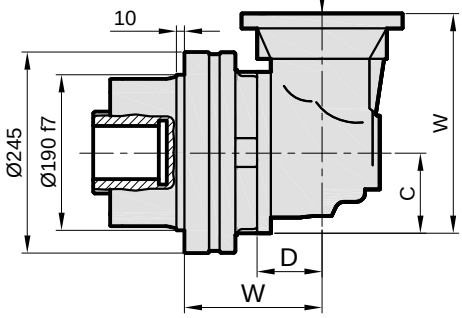
DKM



PD..



PDA..

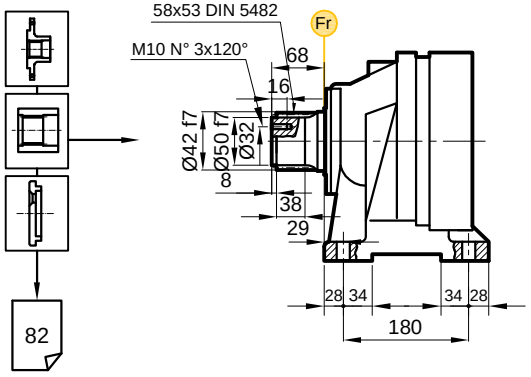


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	96.5	25	-
S2	199	88	140	380	158.5	32	43
S3	233.5	75	93	252	206.5	38	50
S4	281.5	75	93	252	254.5	44	56

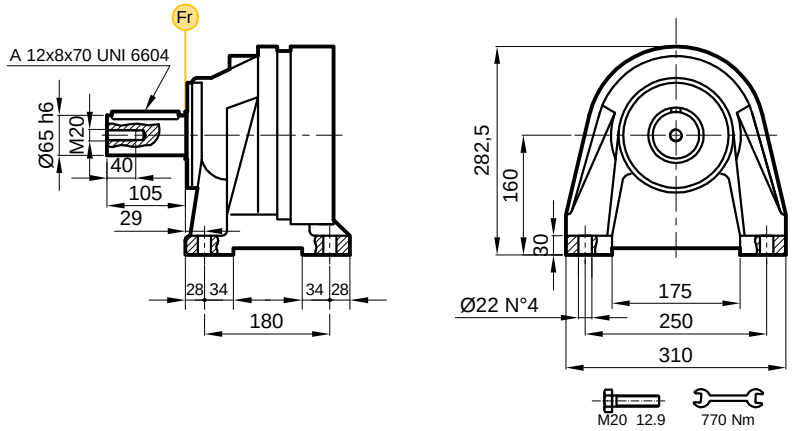
	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

FVS

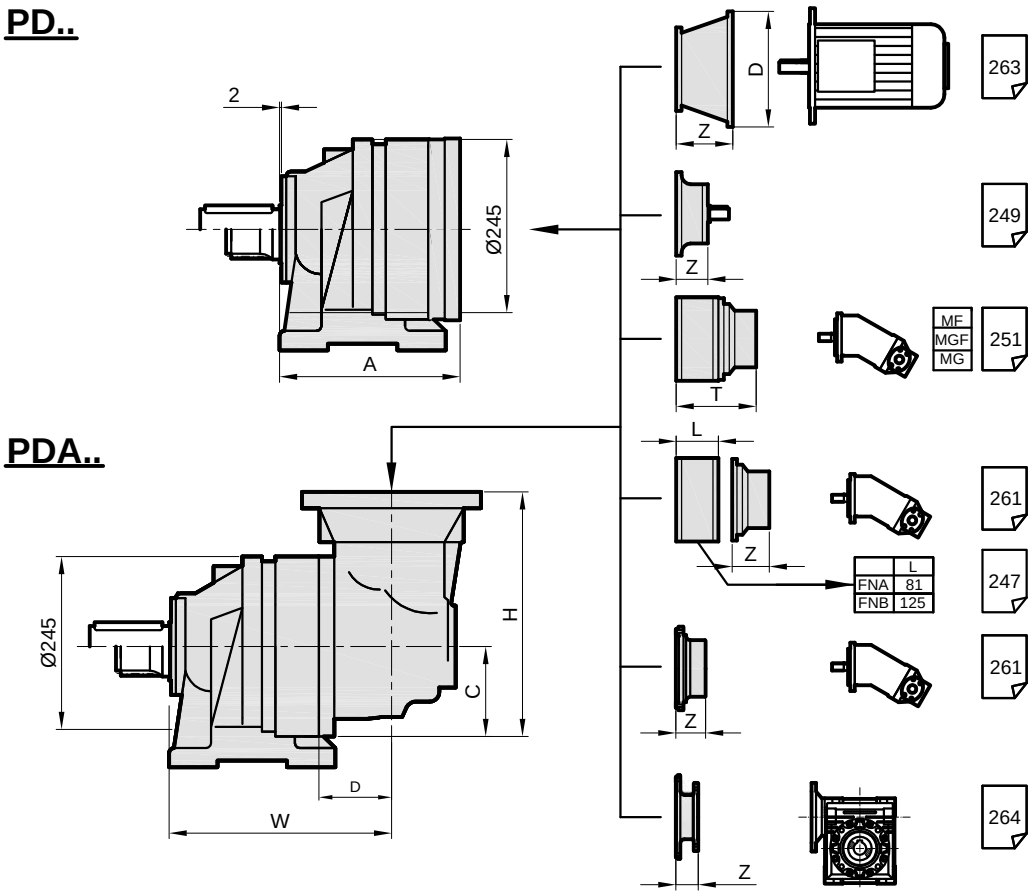


FVC



PD..

PDA..

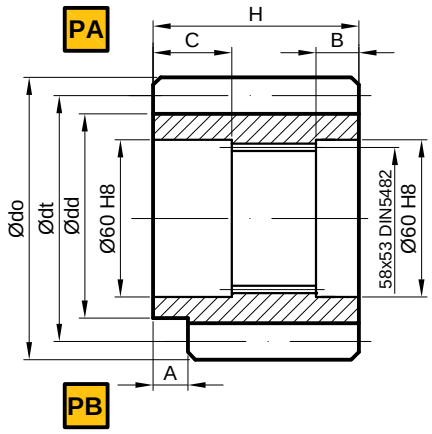


Stage	W	D	C	H	A	PD FVC	PDA FVC
S1	-	-	-	-	224,5	46	-
S2	326	88	140	380	285,5	54	64
S3	360,5	75	93	252	333,5	60	72
S4	408,5	75	93	252	381,5	66	78

	H71		H80 / 90		H100 / 112		H132		H160 / 180	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z
S1	185	32	200	60	250	71	300	104	350	120
S2	185	32	200	60	250	71	300	104	350	120
S3	185	32	200	60	-	-	300	104	350	120
S4	185	32	200	60	-	-	300	104	350	120

PD/PDA 107

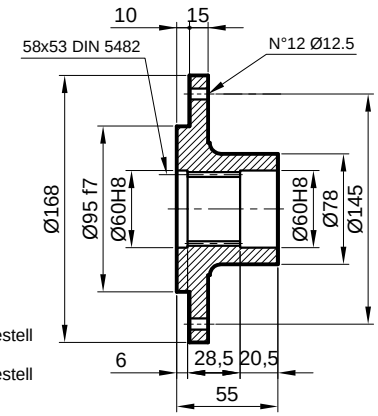
P *Pinyon / Pinion / Ritzel*



	m	z	x	dd	dt	do	H	A	B	C	Malzeme *Material* Material	Kod / Code Bestell
PA	8	13	0	88	104	120	68	0	8.5	22.5	18NiCrMo5	1501.105.001
PA	8	11	0.85	74.8	88	110.8	68	0	8.5	22.5	38NiCrMo4	1501.105.002
PA	8	12	0.1	88	96	112.8	68	0	8	21	38NiCrMo4	1501.105.003
PB	10	14	0.24	117.4	140	162.4	116	13	9.5	22.5	18NiCrMo4	1502.105.001
PA	8	15	0	100	120	136	68	0	8.5	22.5	38NiCrMo4	1501.105.004
PA	6	14	0.6	72.6	84	99.6	95	0	23	21	38NiCrMo4	1501.105.005
PA	10	11	1.21	97.1	110	142.1	90	0	8	22.5	38NiCrMo5	1501.105.006

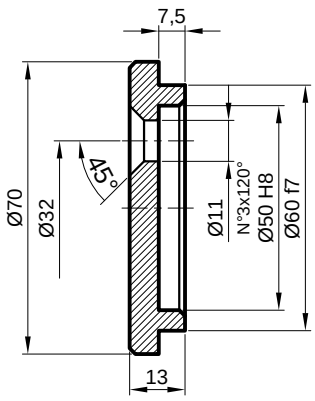
FL Flanş / *Flange* / Flansch

	A	B
FS	68	37
HS	80	49



FS Kod / Code / Bestell 1505.105.200
HS Kod / Code / Bestell 1506.105.201

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe

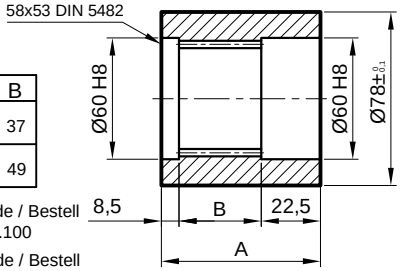


Kod / Code / Bestell
1507.105.250

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

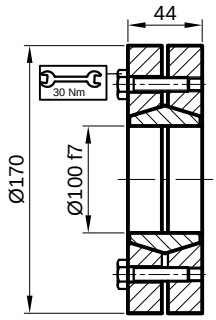
Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40

	A	B
FS	68	37
HS	80	49



FS Kod / Code / Bestell 1503.105.100
HS Kod / Code / Bestell 1504.105.101

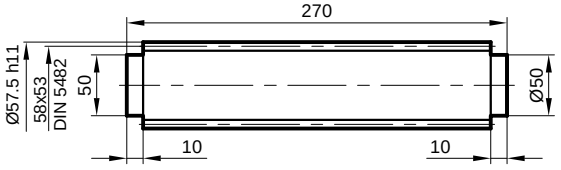
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
7,5 kNm

Kod / Code / Bestell
2501.105.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material
UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.105.260

PD/PDA 107

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

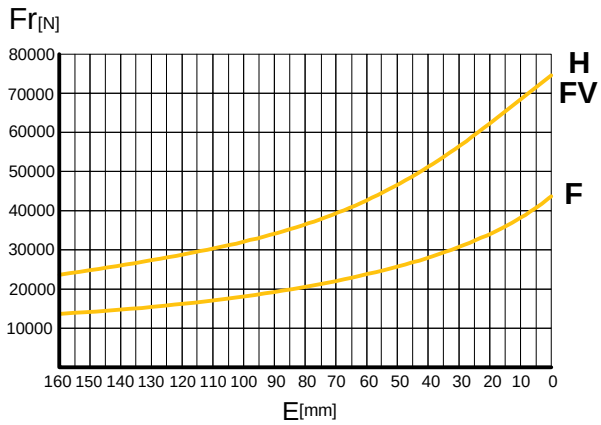
RADIAL LOADS(Fr)

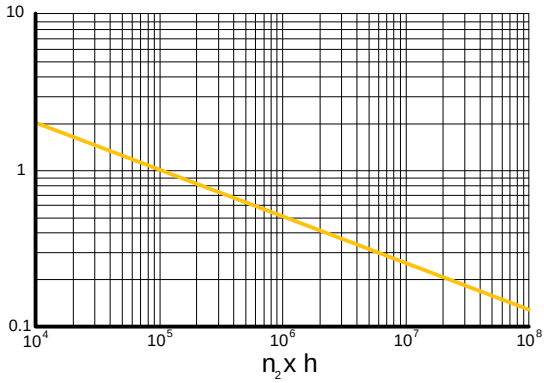
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

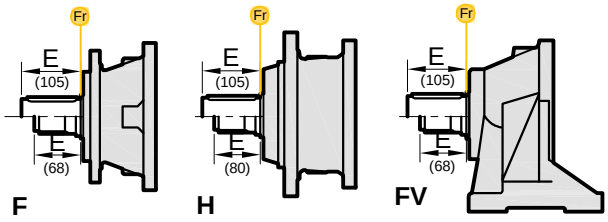
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

F-H-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

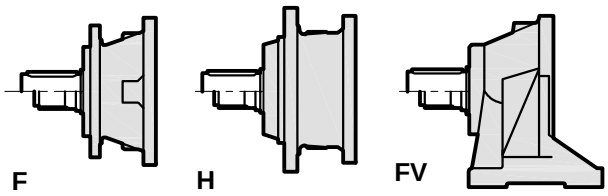
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

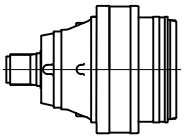
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	F	H-FV	
	32000	32000	←
	32000	48000	→

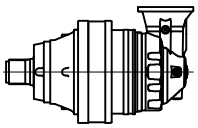


PD 109

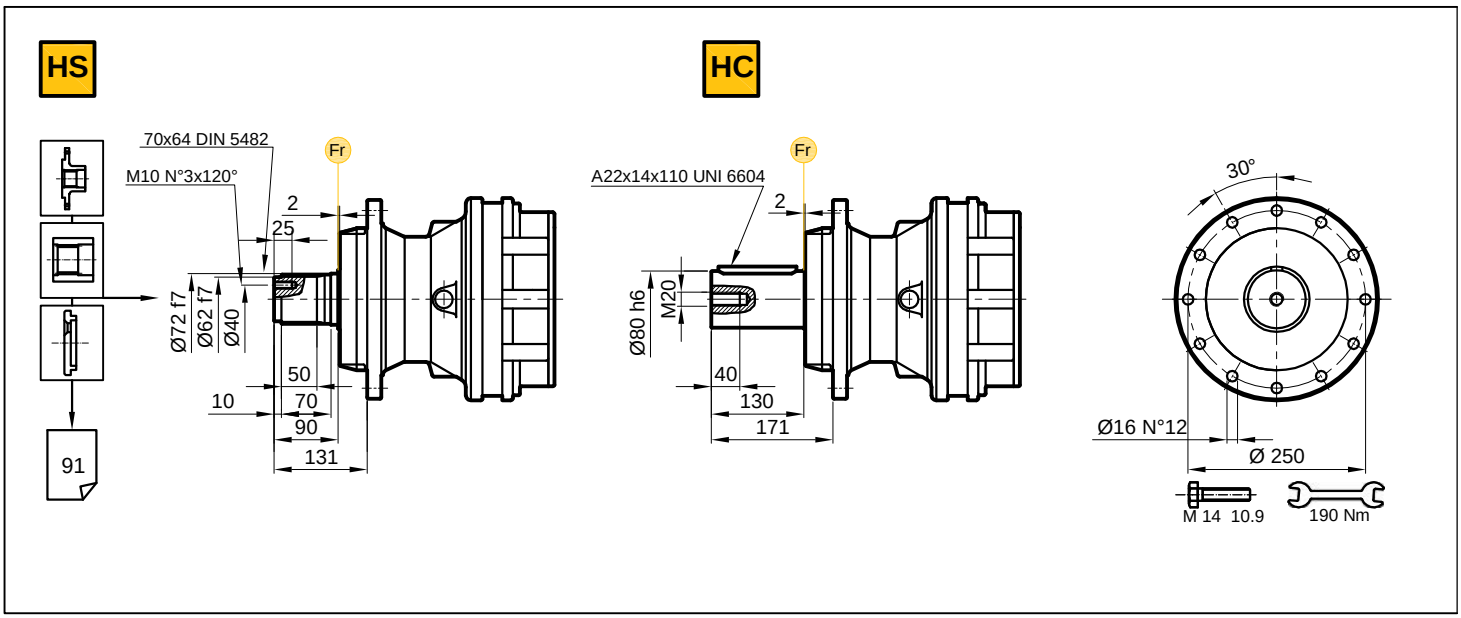


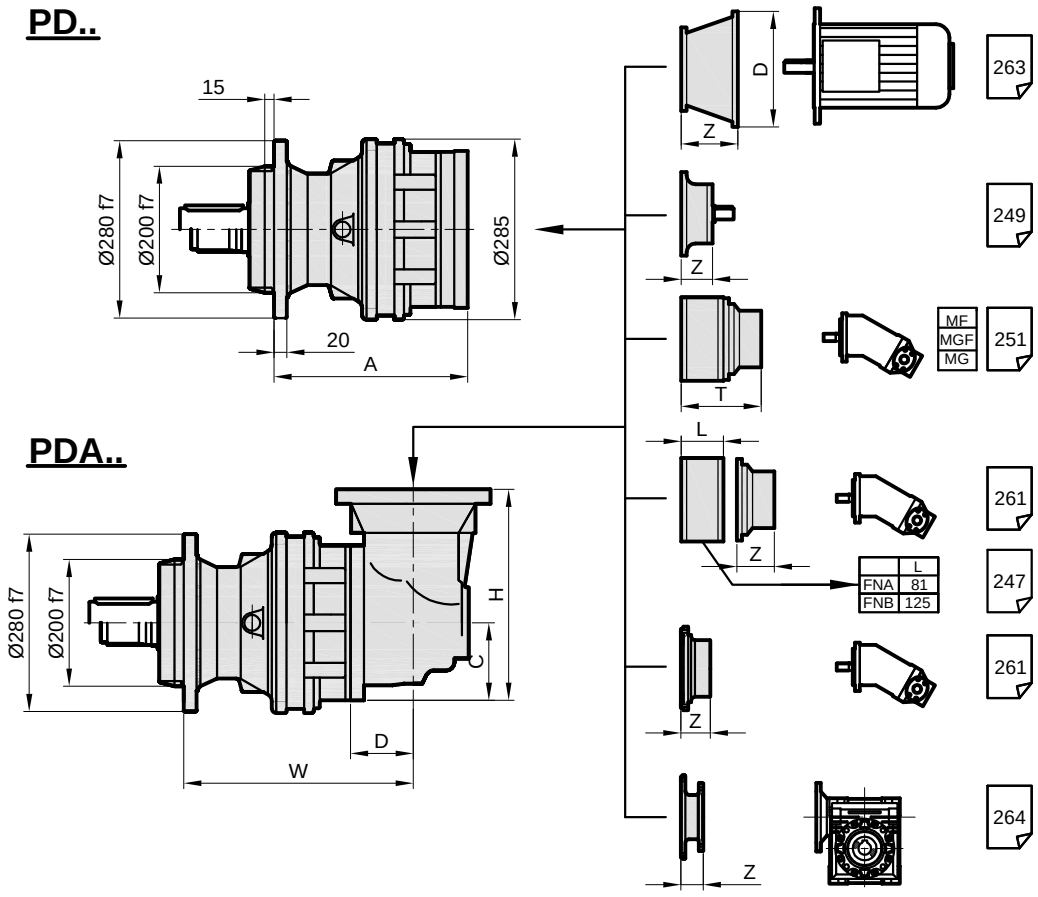
	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 109 S1	3.66	7930	7020	5970	5290	2800	14040	30
	4.42	7240	6410	5450	4830	2800	12820	30
	5.00	6360	5630	4790	4240	2800	11260	30
	5.80	5380	4760	4050	3590	2800	9520	30
	7.00	4350	3850	3280	2900	2800	7700	30
PD 109 S2	13.8	7930	7020	5970	5290	2800	14020	18
	18.2	7240	6410	5450	4830	2800	12820	18
	20.6	6360	5630	4790	4240	2800	11260	18
	22.8	7240	6410	5450	4830	2800	12820	18
	26.5	7240	6410	5450	4830	2800	12820	18
	30.0	6360	5630	4790	4240	2800	11260	18
	36.2	6360	5630	4790	4240	2800	11260	18
	42.0	5380	4760	4050	3590	2800	9520	18
	50.7	4350	3850	3280	2900	2800	7700	18
PD 109 S3	53.7	7930	7020	5970	5290	2800	14040	14
	64.8	7930	7020	5970	5290	2800	14040	14
	71.6	7240	6410	5450	4830	2800	12820	14
	78.2	7240	6410	5450	4830	2800	12820	14
	88.3	6360	5630	4790	4240	2800	11260	14
	93.6	7240	6410	5450	4830	2800	12820	14
	102.1	7930	7020	5970	5290	2800	14040	14
	112.9	7240	6410	5450	4830	2800	12820	14
	127.8	7930	7020	5970	5290	2800	14040	14
	139.2	6360	5630	4790	4240	2800	11260	14
	148.7	7240	6410	5450	4830	2800	12820	14
	155.3	6360	5630	4790	4240	2800	11260	14
	174.3	6360	5630	4790	4240	2800	11260	14
	194.8	5380	4760	4050	3590	2800	9520	14
	216.7	7240	6410	5450	4830	2800	12820	14
	244.6	6360	5630	4790	4240	2800	11260	14
	283.8	5380	4760	4050	3590	2800	9520	14
	342.5	4350	3850	3280	2900	2800	7700	14
PD 109 S4	301.1	7930	7020	5970	5290	2800	14040	8
	332.4	7930	7020	5970	5290	2800	14040	8
	347.9	7930	7020	5970	5290	2800	14040	8
	400.6	7930	7020	5970	5290	2800	14400	8
	434.3	7930	7020	5970	5290	2800	14400	8
	474.3	7930	7020	5970	5290	2800	14400	8
	523.5	7930	7020	5970	5290	2800	14400	8
	571.7	7930	7020	5970	5290	2800	14400	8
	632.7	7240	6410	5450	4830	2800	12820	8
	661.8	7240	6410	5450	4830	2800	12820	8
	747.3	6360	5630	4790	4240	2800	11260	8
	768.6	7240	6410	5450	4830	2800	12820	8
	832.3	7240	6410	5450	4830	2800	12820	8
	869.9	6360	5630	4790	4240	2800	11260	8
	976.4	6360	5630	4790	4240	2800	11260	8
	1048.6	6360	5630	4790	4240	2800	11260	8
	1177.0	6360	5630	4790	4240	2800	11260	8
	1366.8	6360	5630	4790	4240	2800	11260	8
	1651.4	6360	5630	4790	4240	2800	11260	8
	2968.8	4350	3850	3280	2900	2800	7700	8

PDA 109

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 109 S2	12.6	7930	7020	5970	5290	2800	14040	18
	15.2	7240	6410	5450	4830	2800	12820	18
	17.2	6360	5630	4790	4240	2800	11260	18
	20.0	5380	4760	4050	3590	2800	9520	18
	24.1	7240	6410	5450	4830	2800	12820	18
	27.2	6360	5630	4790	4240	2800	11260	18
	31.5	5380	4760	4050	3590	2800	9520	18
	38.1	4350	3850	3280	2900	2800	7700	18
PDA 109 S3	53.8	7240	6410	5450	4830	2800	12820	14
	55.5	7240	6410	5450	4830	2800	12820	14
	60.4	6360	5630	4790	4240	2800	11260	14
	67.1	7240	6410	5450	4830	2800	12820	14
	77.9	7240	6410	5450	4830	2800	12820	14
	87.9	6360	5630	4790	4240	2800	11260	14
	94.1	7240	6410	5450	4830	2800	12820	14
	106.3	6360	5630	4790	4240	2800	11260	14
	123.3	5380	4760	4050	3590	2800	9520	14
	148.8	4350	3850	3280	2900	2800	7700	14
PDA 109 S4	157.7	7930	7020	5970	5290	2800	14040	8
	174.1	7930	7020	5970	5290	2800	14040	8
	190.1	7930	7020	5970	5290	2800	14040	8
	210.3	7240	6410	5450	4830	2800	12820	8
	229.6	7240	6410	5450	4830	2800	12820	8
	248.4	7930	7020	5970	5290	2800	14040	8
	274.8	7240	6410	5450	4830	2800	12820	8
	300.7	7240	6410	5450	4830	2800	12820	8
	331.2	7240	6410	5450	4830	2800	12820	8
	361.6	7240	6410	5450	4830	2800	12820	8
	393.0	5380	4760	4050	3590	2800	9520	8
	453.0	7240	6410	5450	4830	2800	12820	8
	511.4	6360	5630	4790	4240	2800	11260	8
	557.0	5380	4760	4050	3590	2800	9520	8
	593.9	6360	5630	4790	4240	2800	11260	8
	656.7	6360	5630	4790	4240	2800	11260	8
	717.7	6360	5630	4790	4240	2800	11260	8
	832.5	5380	4760	4050	3590	2800	9520	8
	921.5	6360	5630	4790	4240	2800	11260	8
	1068.9	5380	4760	4050	3590	2800	11260	8

PD/PDA 109



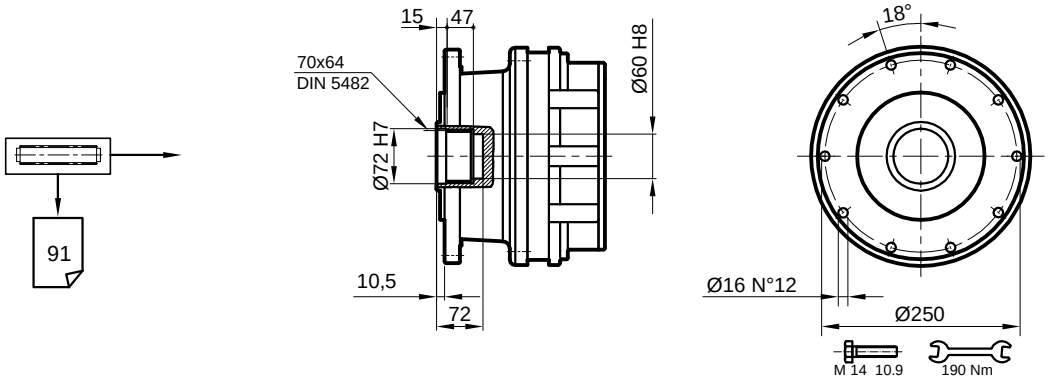


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	251	67	-
S2	339	88	140	380	310	79	104
S3	385	75	93	252	358	85	94
S4	433	75	93	252	406	91	100

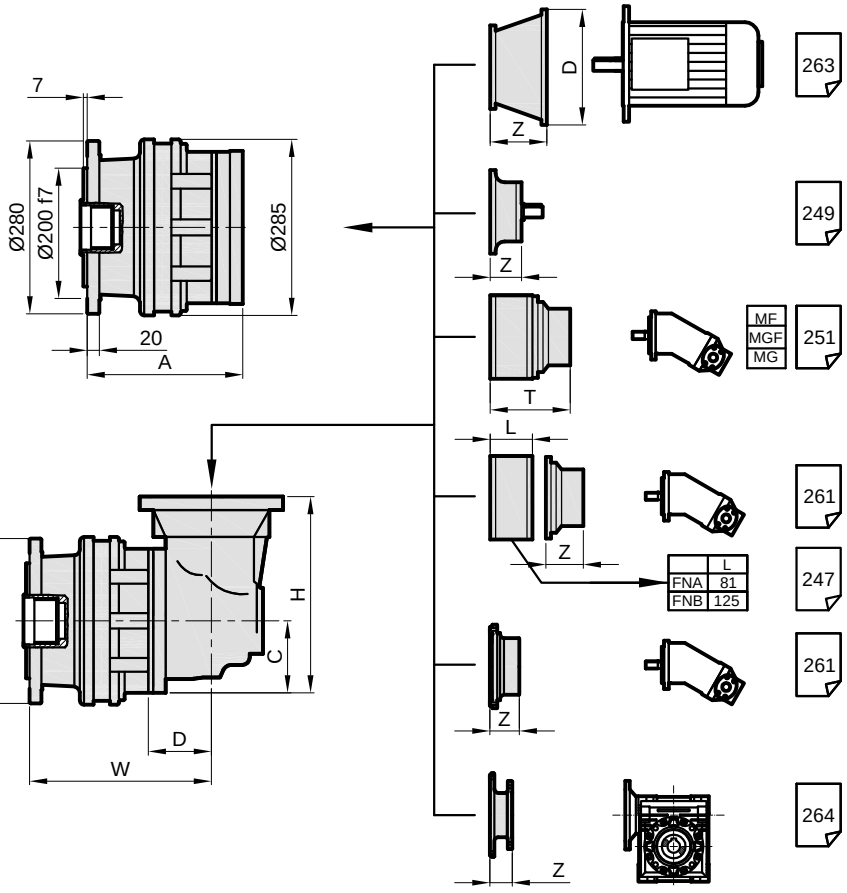
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 109

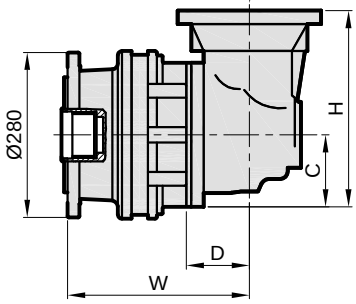
SF



PD..



PDA..

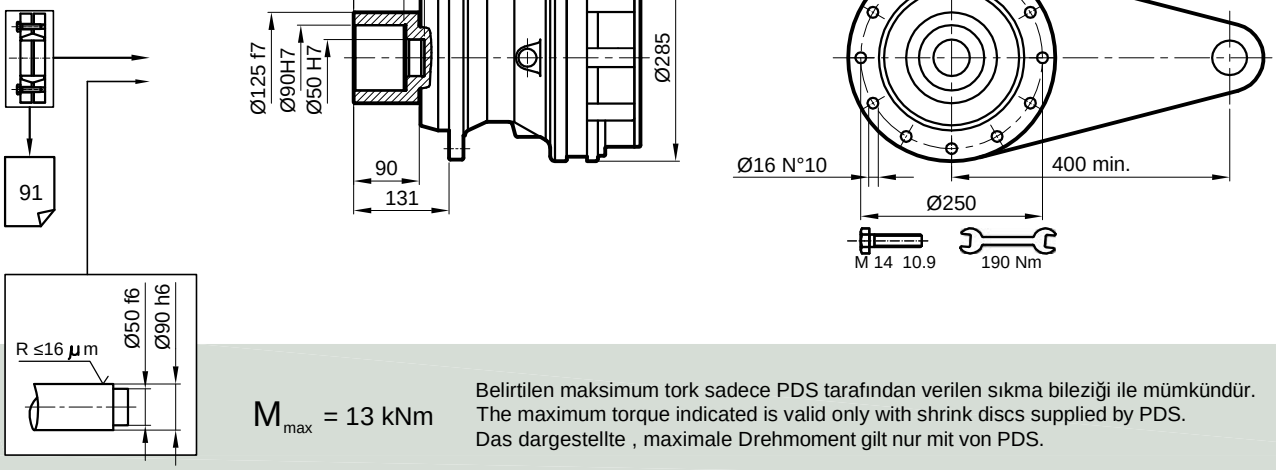


Stage	A	D	C	H	W	PD / SF	PDA / SF
S1	197	-	-	-	-	49	-
S2	257	88	140	380	285	61	86
S3	305	75	93	252	332	67	76
S4	353	75	93	252	380	73	82

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 109

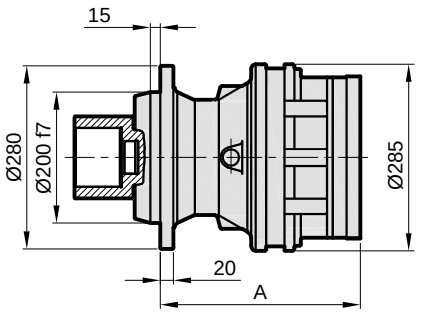
SDF



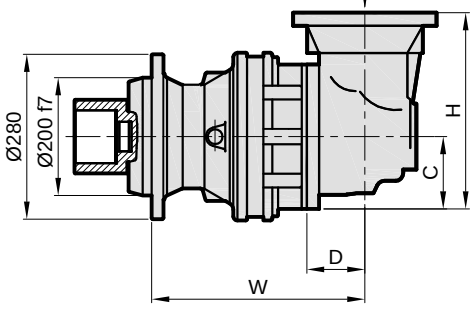
M_{max} = 13 kNm

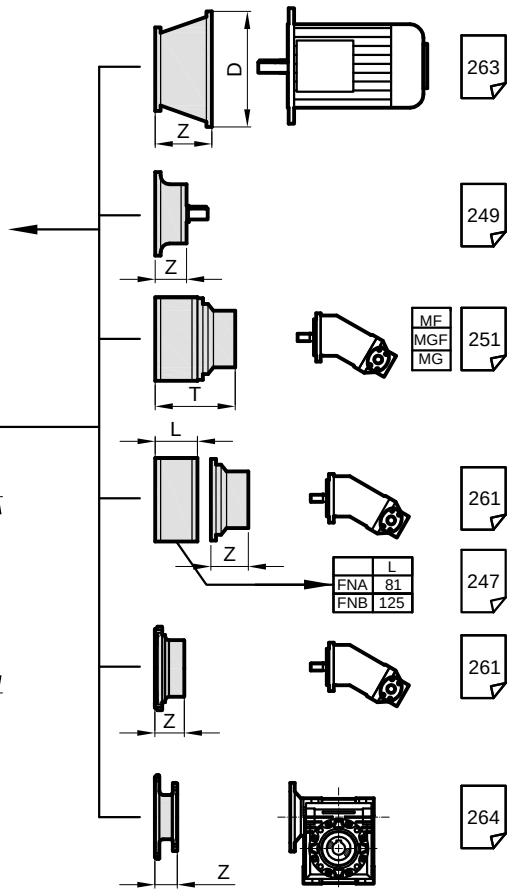
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



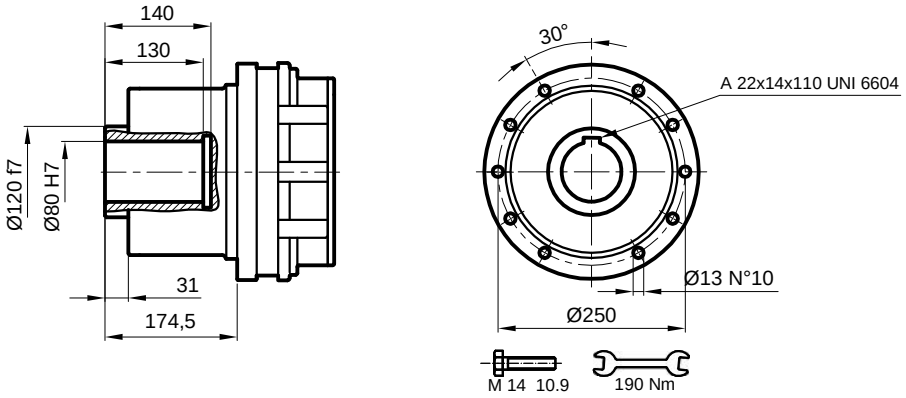


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	251	70	–
S2	339	88	140	380	310	82	107
S3	385	75	93	252	358	88	97
S4	433	75	93	252	406	94	103

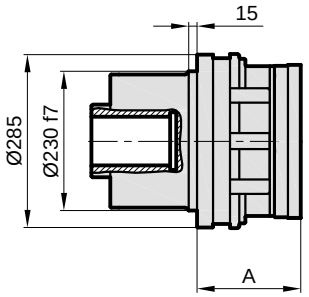
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 109

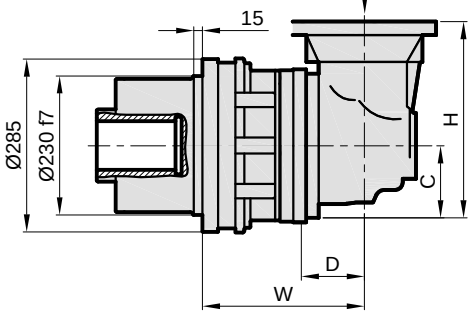
DKM

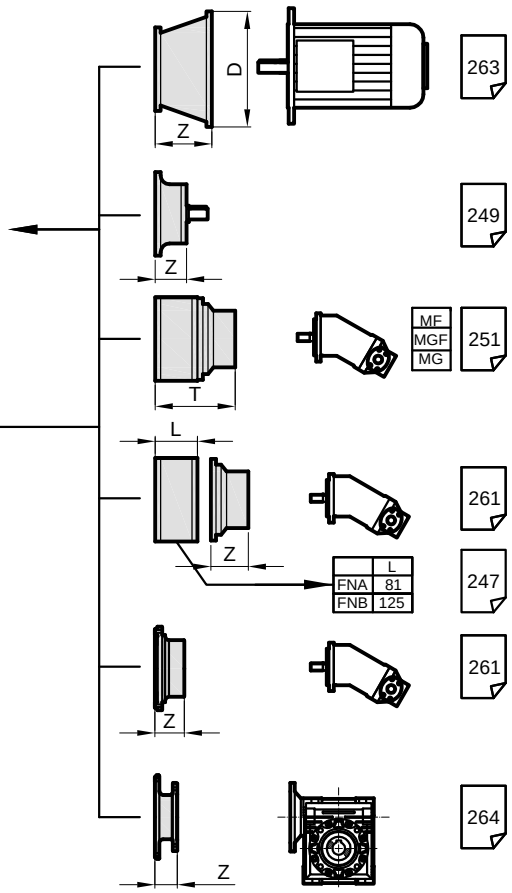


PD..



PDA..



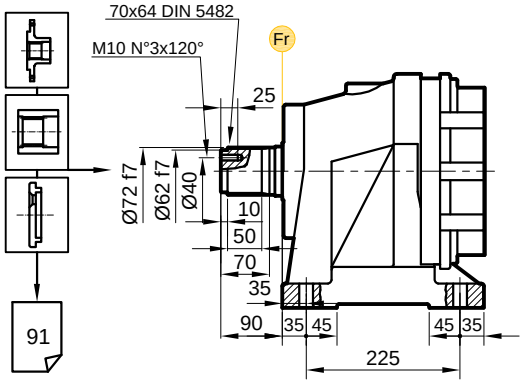


Stage	W	D	C	H	A	PD / SDF	PDA / SDF
S1	-	-	-	-	218	70	–
S2	307	88	140	380	277	82	107
S3	352	75	93	252	325	88	97
S4	400	75	93	252	373	94	103

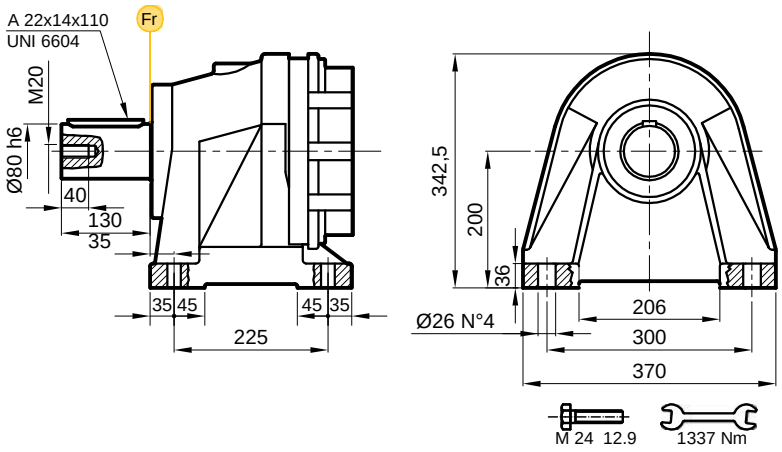
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 109

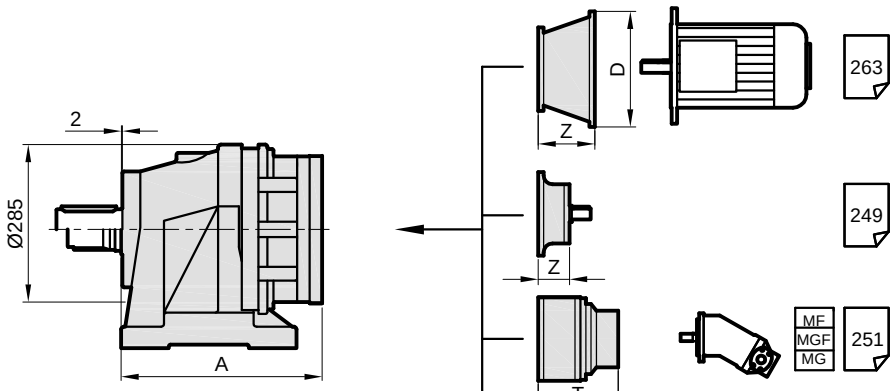
FVS



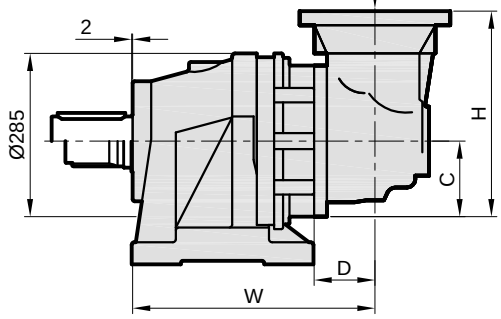
FVC



PD..



PDA..

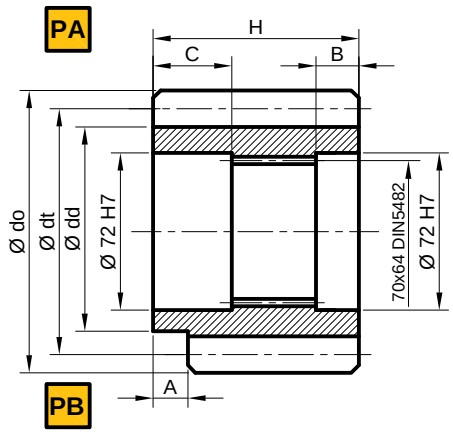


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	292	83	-
S2	380	88	140	380	351	95	120
S3	426	75	93	252	400	101	110
S4	475	75	93	252	447	107	116

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

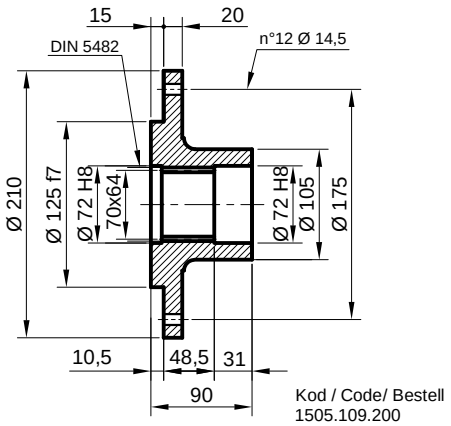
PD/PDA 109

P *Pinyon / Pinion / Ritzel*



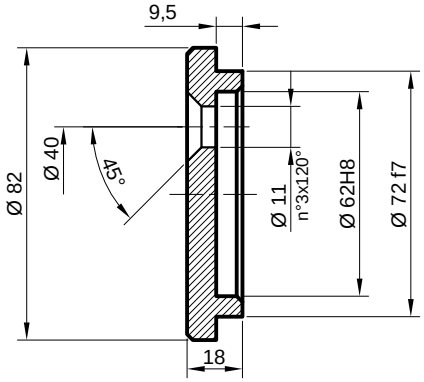
	m	z	x	dd	dt	do	H	A	B	C	Malzeme *Material* Material	Kod / Code / Bestell
PA	10	11	1,21	72,9	110	142,1	90	0	10	31	18NiCrMo5	1501.109.001
PB	10	11	1,21	72,9	110	142,1	90	9	18,5	31	18NiCrMo5	1502.109.001
PA	10	12	0	95	120	140	90	0	10	31	38NiCrMo4	1501.109.002
PA	10	13	0	95	120	155	90	0	10	30	38NiCrMo4	1501.109.003

FL Flanş / *Flange* / Flansch



Kod / Code/ Bestell
1505.109.200

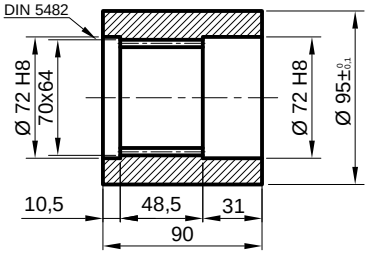
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.109.250

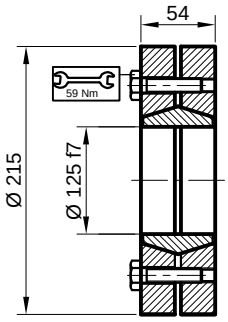
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.109.100

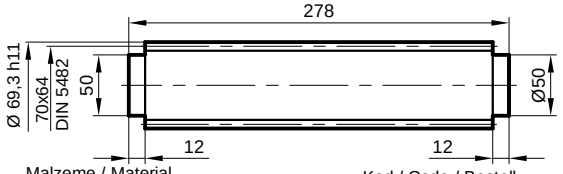
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
13 kNm

Kod / Code / Bestell
2501.109.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material
UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.109.260

PD/PDA 109

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

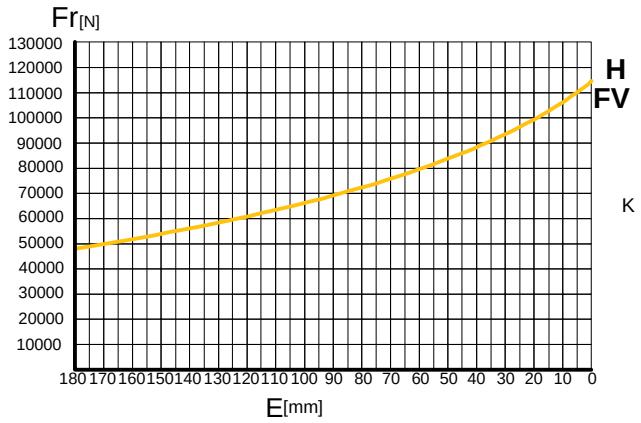
RADIAL LOADS(Fr)

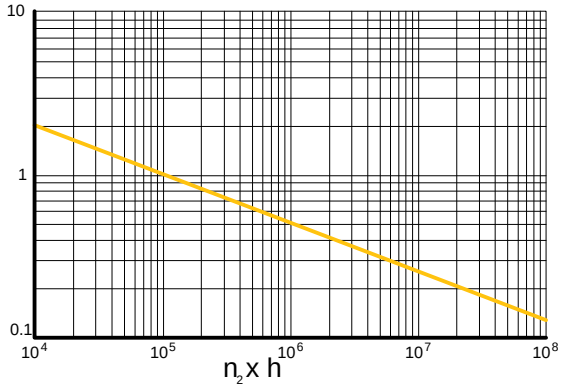
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

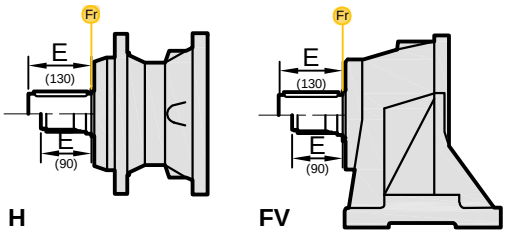
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

H-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

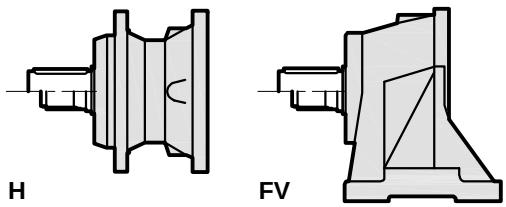
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

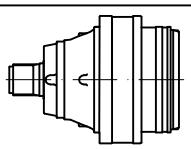
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

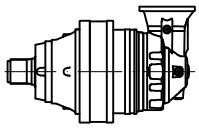
Fa [N]	H	FV	
	40000	40000	←
	60000	60000	→



PD 111

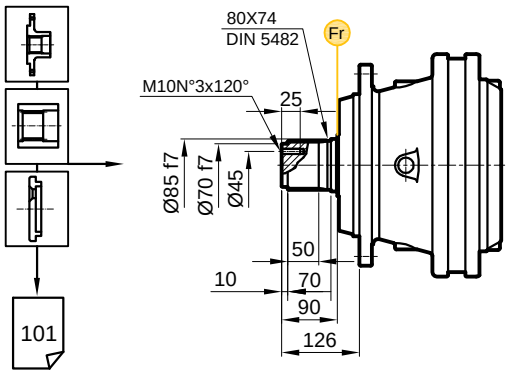
	i	T_2[Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 111 S1	3.55	13800	12210	10390	9200	2000	24420	40
	4.28	11860	10500	8940	7910	2000	21000	40
	5.60	9220	8160	6940	6150	2000	16320	40
	6.75	7040	6230	5300	4690	2000	12460	40
	8.66	4980	4410	3750	3320	2000	8820	40
PD 111 S2	13.4	13800	12210	10390	9200	2800	24420	23
	16.1	11860	10500	8940	7910	2800	21000	23
	18.3	13800	12210	10390	9200	2800	24420	23
	22.1	11860	10500	8940	7910	2800	21000	23
	25.7	11860	10500	8940	7910	2800	21000	23
	28.9	9220	8160	6940	6150	2800	16320	23
	33.6	9220	8160	6940	6150	2800	16320	23
	40.5	7040	6230	5300	4690	2800	12460	23
	48.9	7040	6230	5300	4690	2800	12460	23
PD 111 S3	57.5	13800	12210	10390	9200	2800	24420	23
	62.8	13800	12210	10390	9200	2800	24420	15
	75.2	13800	12210	10390	9200	2800	24420	15
	82.1	1380	12210	10390	9200	2800	24420	15
	94.8	11860	10500	8940	7910	2800	21000	15
	109.2	11860	10500	8940	7910	2800	21000	15
	118.4	9220	8160	6940	6150	2800	16320	15
	123.9	11860	10500	8940	7910	2800	21000	15
	129.3	9220	8160	6940	6150	2800	16320	15
	143.9	11860	10500	8940	7910	2800	21000	15
	155.9	9220	8160	6940	6150	2800	16320	15
	173.5	11860	10500	8940	7910	2800	21000	15
	188.1	9220	8160	6940	6150	2800	16320	15
	195.2	9220	8160	6940	6150	2800	16320	15
	209.7	7040	6230	5300	4690	2800	12460	15
	226.8	9220	8160	6940	6150	2800	16320	15
	235.4	7040	6230	5300	4690	2800	12460	15
	274.0	9220	8160	6940	6150	2800	16320	15
PD 111 S4	330.3	7040	6230	5300	4690	2800	12460	11
	351.9	13800	12210	10390	9200	2800	24420	11
	388.5	13800	12210	10390	9200	2800	24420	11
	421.2	13800	12210	10390	9200	2800	24420	11
	440.8	11860	10500	8940	7910	2800	21000	11
	459.9	13800	12210	10390	9200	2800	24420	11
	507.7	13800	12210	10390	9200	2800	24420	11
	531.4	11860	10500	8940	7910	2800	21000	11
	554.3	13800	12210	10390	9200	2800	24420	11
	576.0	9220	8160	6940	6150	2800	16320	11
	611.9	11860	10500	8940	7910	2800	21000	11
	640.5	11860	10500	8940	7910	2800	21000	11
	724.4	9220	8160	6940	6150	2800	16320	11
	806.4	9220	8160	6940	6150	2800	16320	11
	907.3	9220	8160	6940	6150	2800	16320	11
	1008.8	11860	10500	8940	7910	2800	21000	11
	1093.6	9220	8160	6940	6150	2800	16320	11
	1270.0	9220	8160	6940	6150	2800	16320	11
	1530.9	9220	8160	6940	6150	2800	16320	11
	1849.8	9220	8160	6940	6150	2800	16320	11
	2229.7	7040	6230	5300	4690	2800	12460	11

PDA 111

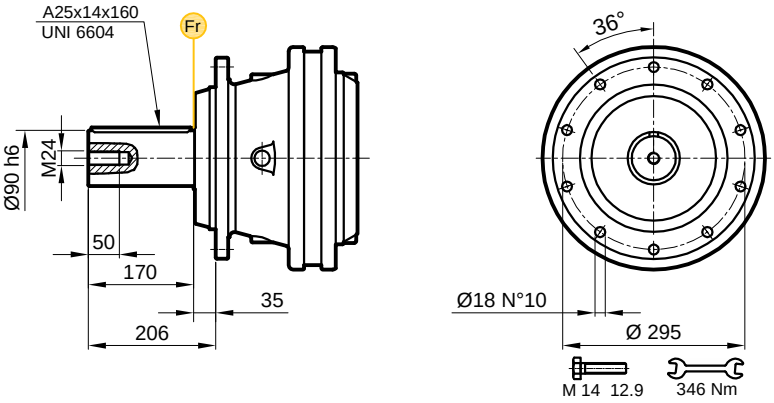
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 111 S2	12.2	13800	12210	10390	9200	2800	24420	23
	14.8	11860	10500	8940	7910	2800	21000	23
	19.3	9220	8160	6940	6150	2800	16320	23
	23.3	7040	6230	5300	4690	2800	12460	23
	30.4	9220	8160	6940	6150	2800	16320	23
	36.7	7040	6230	5300	4690	2800	12460	23
PDA 111 S3	46.4	13800	12210	10390	9200	2800	24420	15
	50.6	13800	12210	10390	9200	2800	24420	15
	61.0	11860	10500	8940	7910	2800	21000	15
	73.1	13800	12210	10390	9200	2800	24420	15
	88.8	11860	10500	8940	7910	2800	21000	15
	96.2	11860	10500	8940	7910	2800	21000	15
	116.0	9220	8160	6940	6150	2800	16320	15
	120.5	11860	10500	8940	7910	2800	21000	15
	125.7	9220	8160	6940	6150	2800	16320	15
	139.9	11860	10500	8940	7910	2800	21000	15
	157.5	9220	8160	6940	6150	2800	16320	15
	182.9	9220	8160	6940	6150	2800	16320	15
	221.0	9220	8160	6940	6150	2800	16320	15
	266.4	7040	6230	5300	4690	2800	12640	15
PDA 111 S4	140.0	13800	12210	10390	9200	2800	24420	11
	168.8	13800	12210	10390	9200	2800	24420	11
	184.3	11860	10500	8940	7910	2800	21000	11
	203.5	11860	10500	8940	7910	2800	21000	11
	230.9	13800	12210	10390	9200	2800	24420	11
	265.9	11860	10500	8940	7910	2800	21000	11
	278.3	11860	10500	8940	7910	2800	21000	11
	301.7	13800	12210	10390	9200	2800	24420	11
	320.5	11860	10500	8940	7910	2800	21000	11
	350.0	11860	10500	8940	7910	2800	21000	11
	379.4	9220	8160	6940	6150	2800	16320	11
	418.8	9220	8160	6940	6150	2800	16320	11
	457.3	9220	8160	6940	6150	2800	16320	11
	510.3	9220	8160	6940	6150	2800	16320	11
	551.9	9220	8160	6940	6150	2800	16320	11
	665.2	9220	8160	6940	6150	2800	16320	11
	803.8	9220	8160	6940	6150	2800	16320	11
	968.9	7040	6230	5300	4690	2800	12460	11

PD/PDA 111

FS



FC



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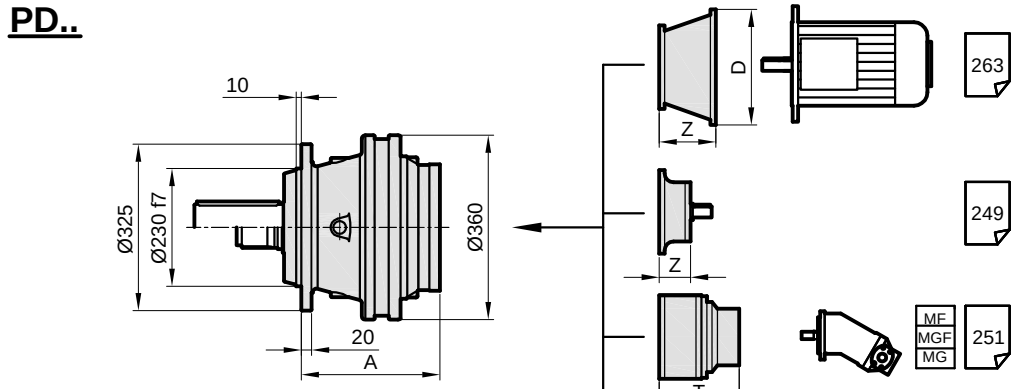
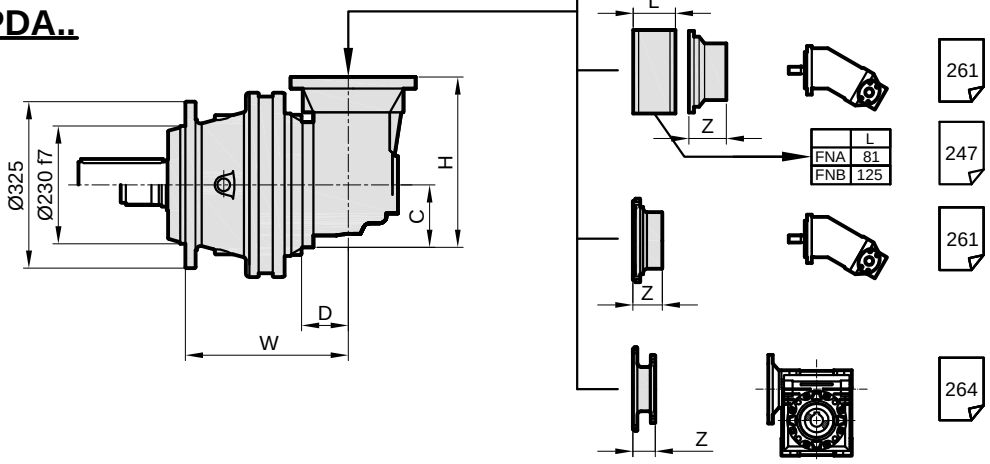


PDA..

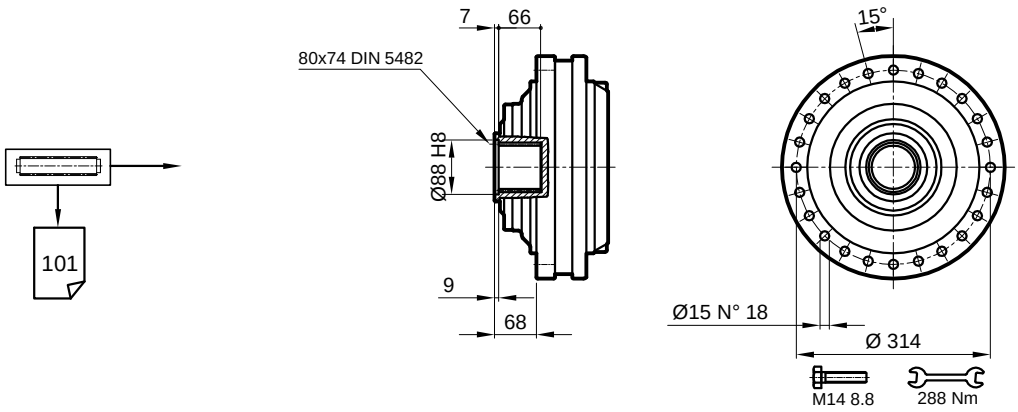


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	225	97	-
S2	313	88	140	380	296,5	113	134
S3	398	88	140	380	357,5	121	153
S4	432,5	75	93	252	405,5	127	136

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

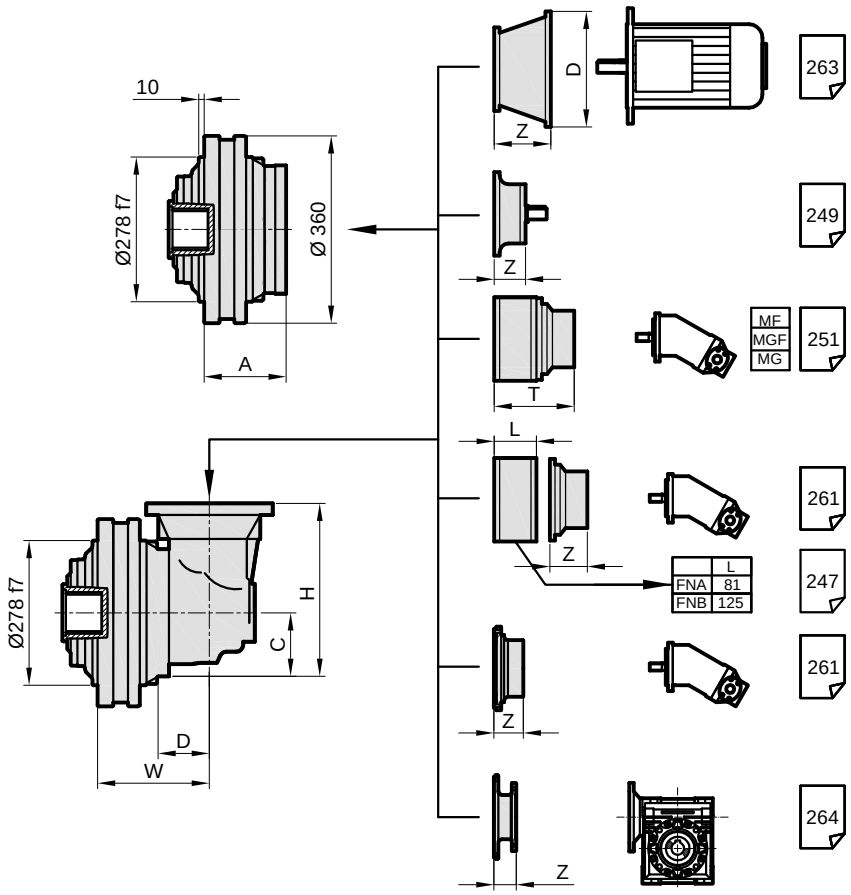
PD/PDA 111

S



PD..

PDA..

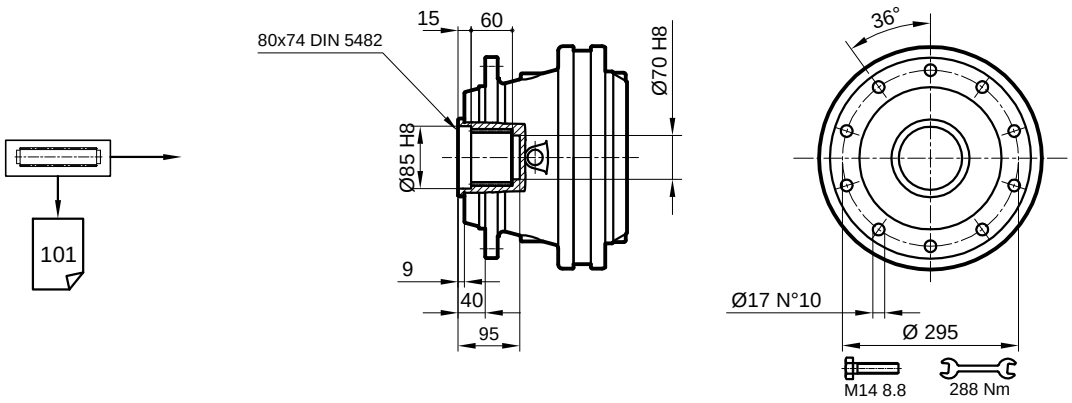


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	112	65	-
S2	200	88	140	380	183,5	81	102
S3	285	88	140	380	244,5	89	121
S4	319,5	75	93	252	292,5	95	104

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

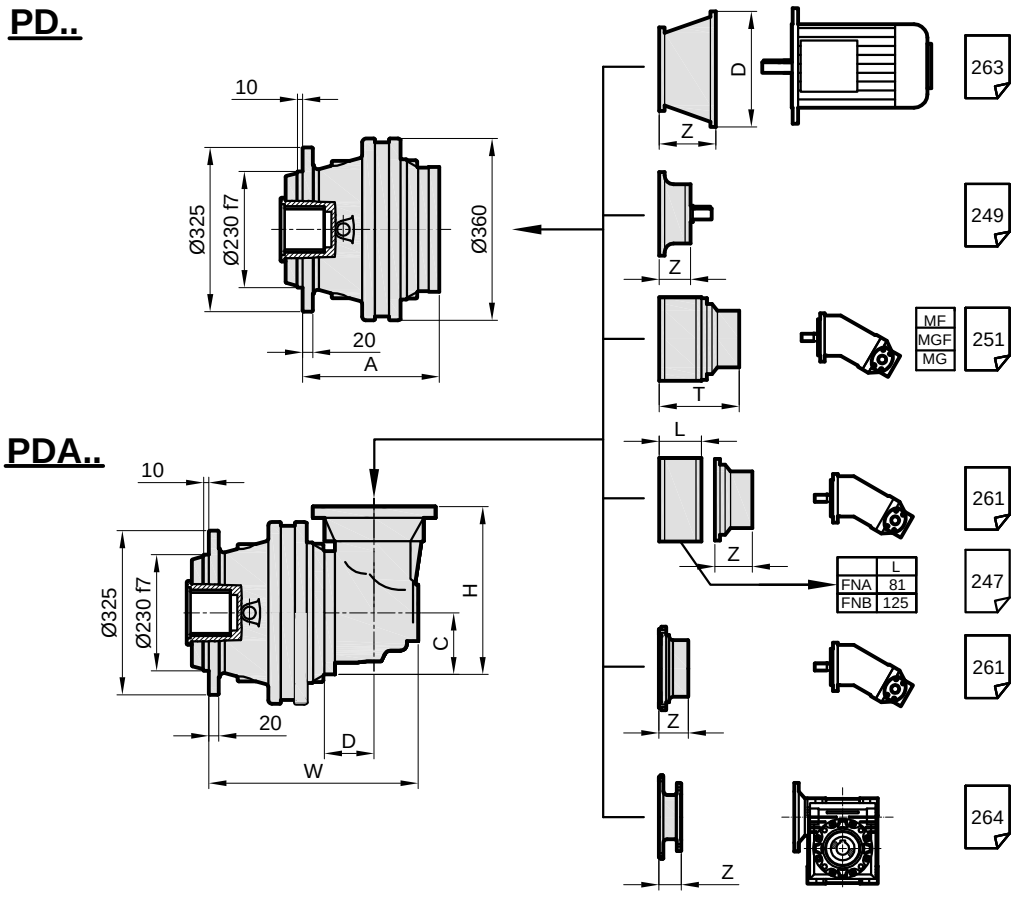
PD/PDA 111

SF



PD..

PDA..

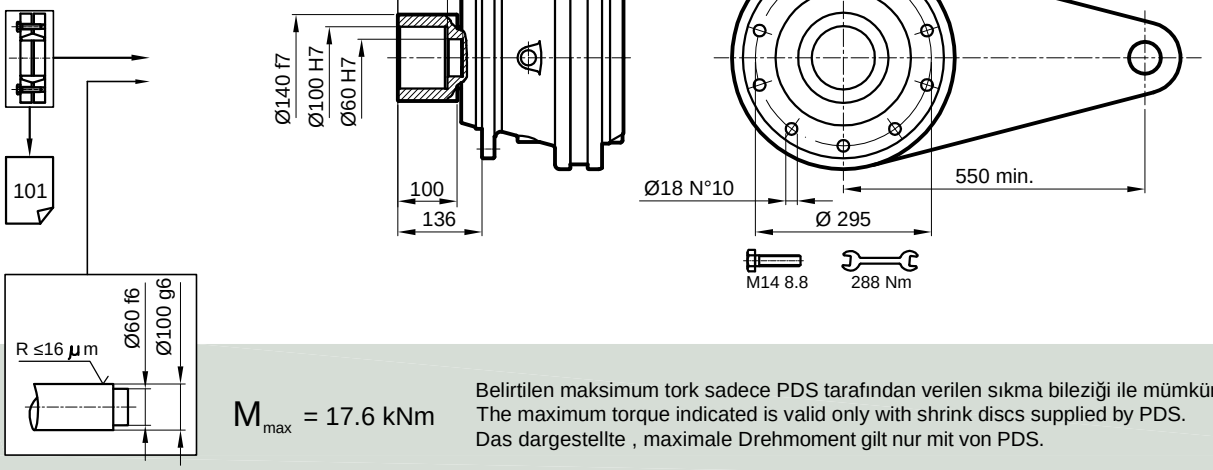


Stage	W	D	C	H	A	PD SF	PDA SF
S1	-	-	-	-	225	102	-
S2	313	88	140	380	296,5	118	139
S3	398	88	140	380	357,5	126	158
S4	432,5	75	93	252	405,5	132	141

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 111

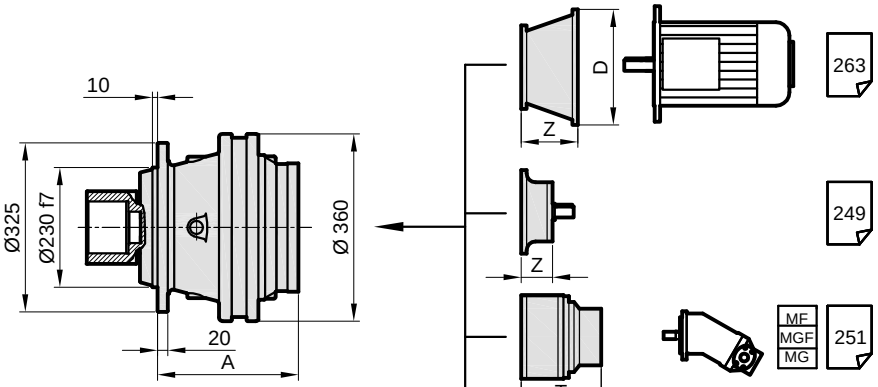
SDF



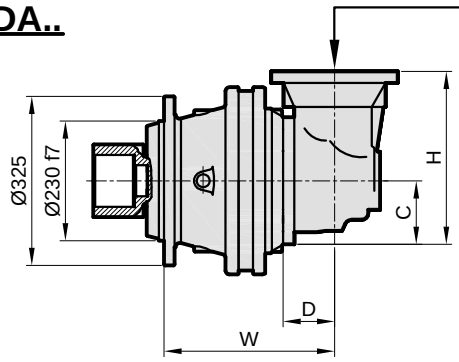
M_{max} = 17.6 kNm

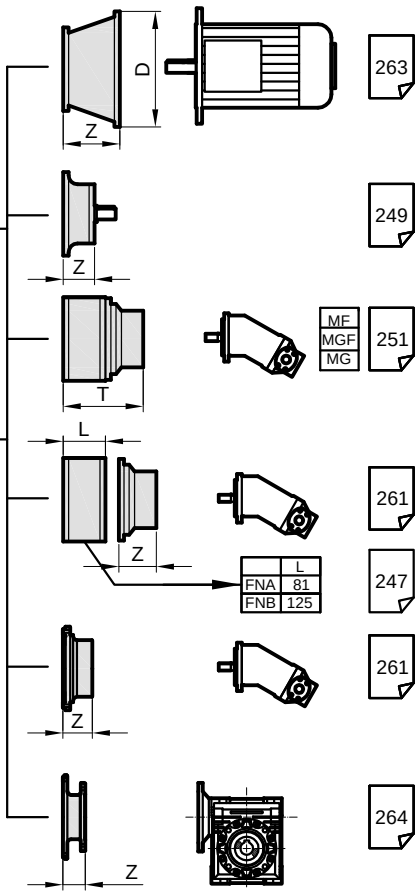
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



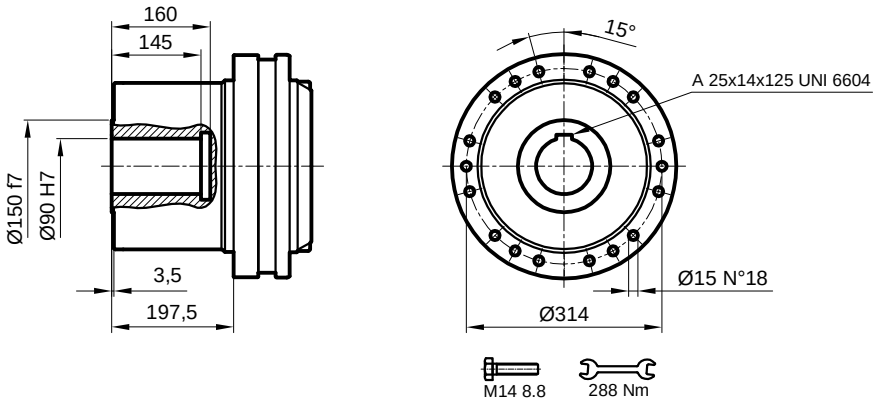


Stage	W	D	C	H	A	PD SDF	PDA SDF
S1	-	-	-	-	225	102	–
S2	313	88	140	380	296,5	118	139
S3	398	88	140	380	357,5	126	158
S4	432,5	75	93	252	405,5	132	141

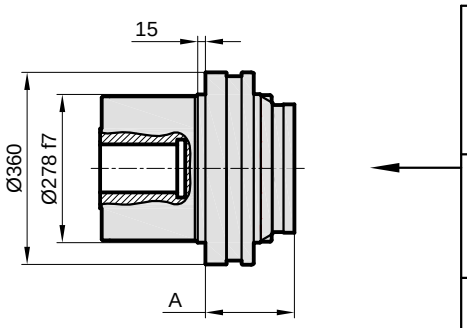
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 111

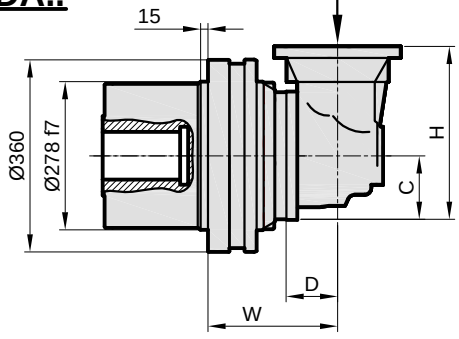
DKM

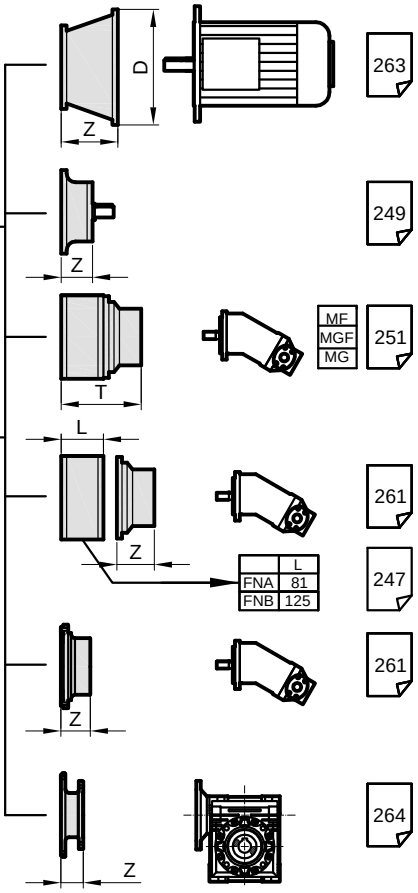


PD..



PDA..

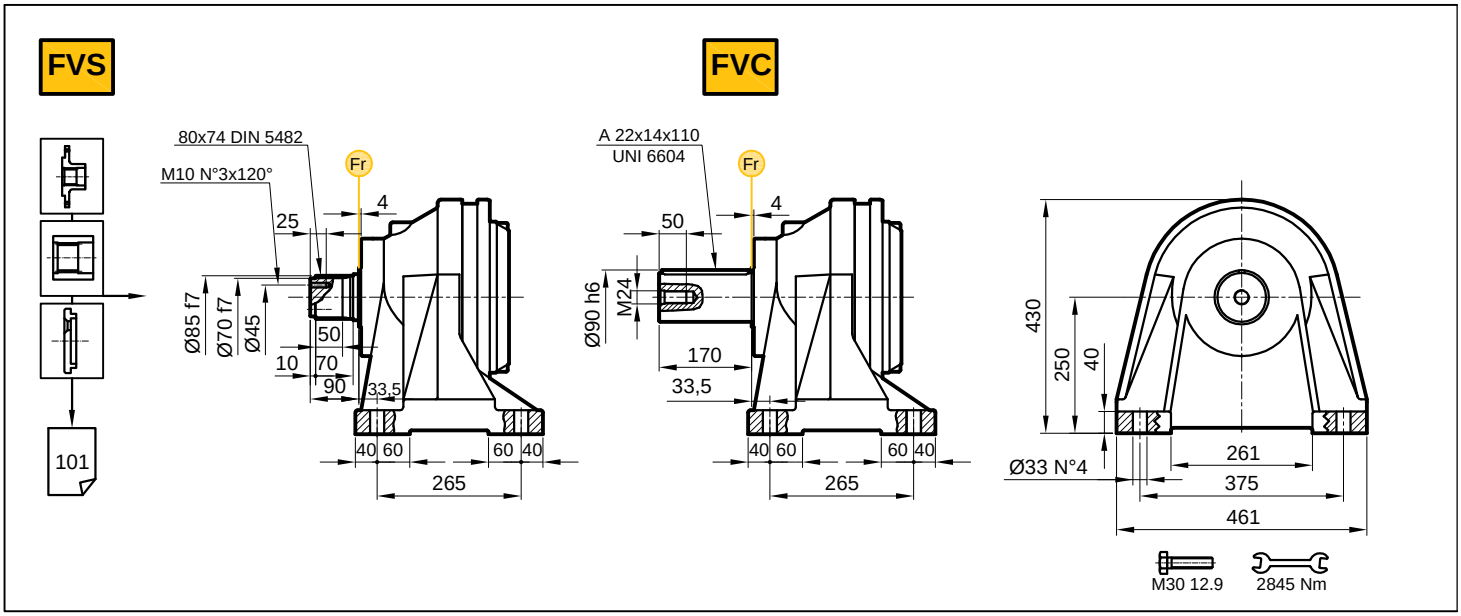




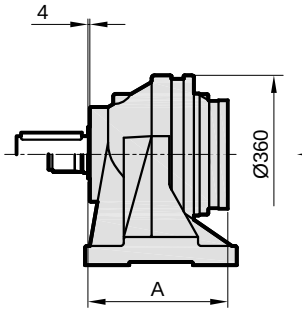
Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	122	65	-
S2	210	88	140	380	193	81	102
S3	295	88	140	380	255	89	121
S4	330	75	93	252	302	95	104

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

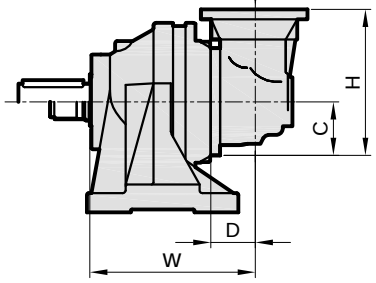
PD/PDA 111

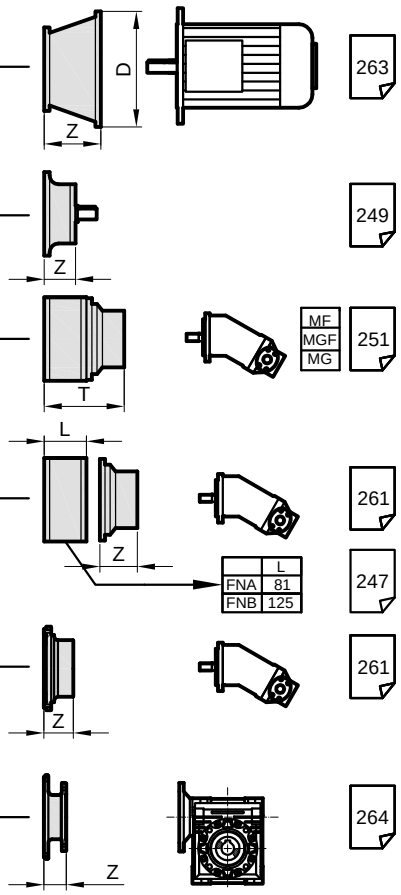


PD..



PDA..



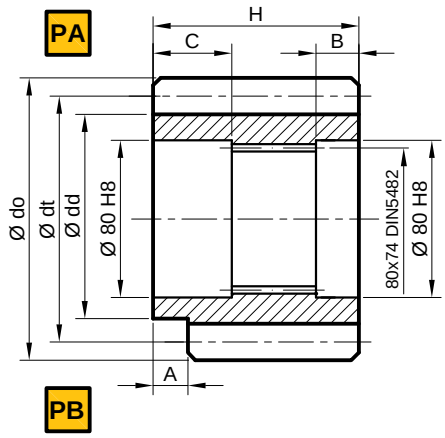


Stage	W	D	C	H	A	PD FVC	PDA FVC
S1	-	-	-	-	272	147	-
S2	360	88	140	380	343,5	163	184
S3	445	88	140	380	404,5	171	203
S4	479,5	75	93	252	452,5	177	186

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

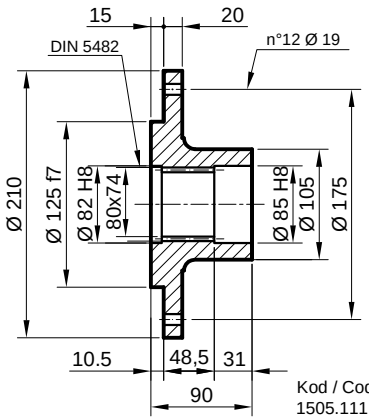
PD/PDA 111

P *Pinyon / Pinion / Ritzel*



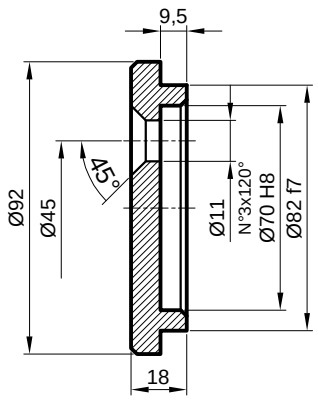
	m	z	x	dt	dd	do	H	A	B	C	Malzeme *Material* Material	Kod Code Bestell
PA	10	12	0	120	95	140	90	0	10	31	38NiCrMo4	1501.111.001
PA	10	14	0	140	95	160	90	0	10	31	38NiCrMo4	1501.111.002
PB	12	14	2,5	168	135,5	194,5	90	25	25	31	39NiCrMo3	1502.111.001

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.111.200

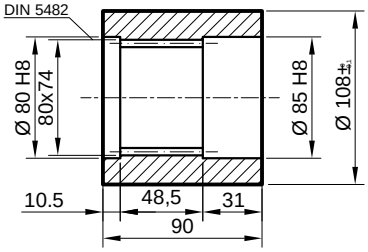
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.111.250

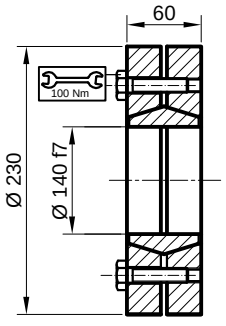
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.111.100

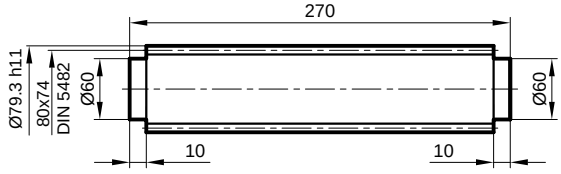
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
17,6 kNm

Kod / Code / Bestell
2501.111.101

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.111.260

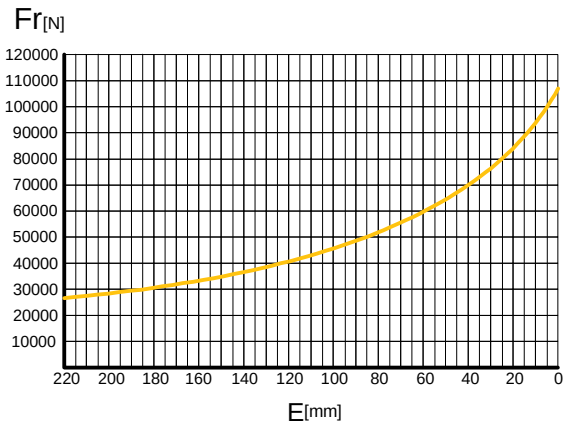
PD/PDA 111

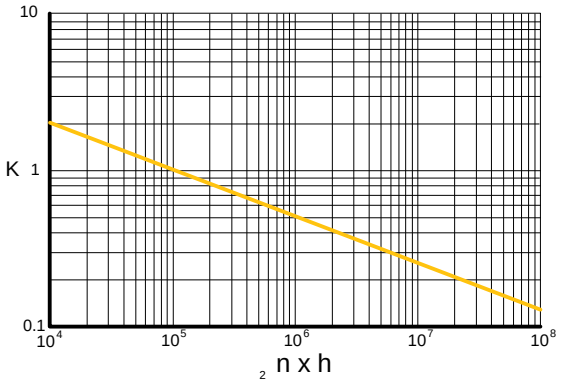
RADYAL YÜK(Fr)
Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

RADIAL LOADS(Fr)
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

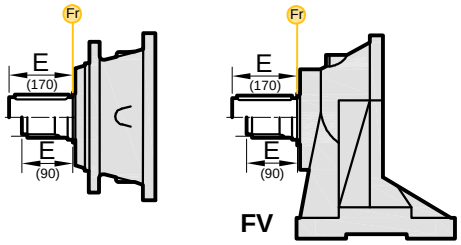
RADIALLAST (Fr)
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

F-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
F	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			

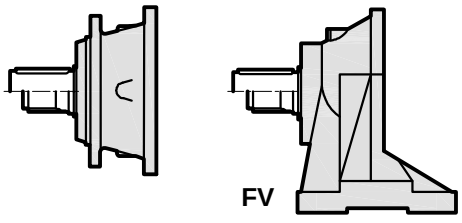


AKSİYEL YÜKLER (Fa)
Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

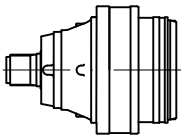
AXIAL LOADS (Fa)
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	F	FV	
	40000	40000	←
	65000	65000	→



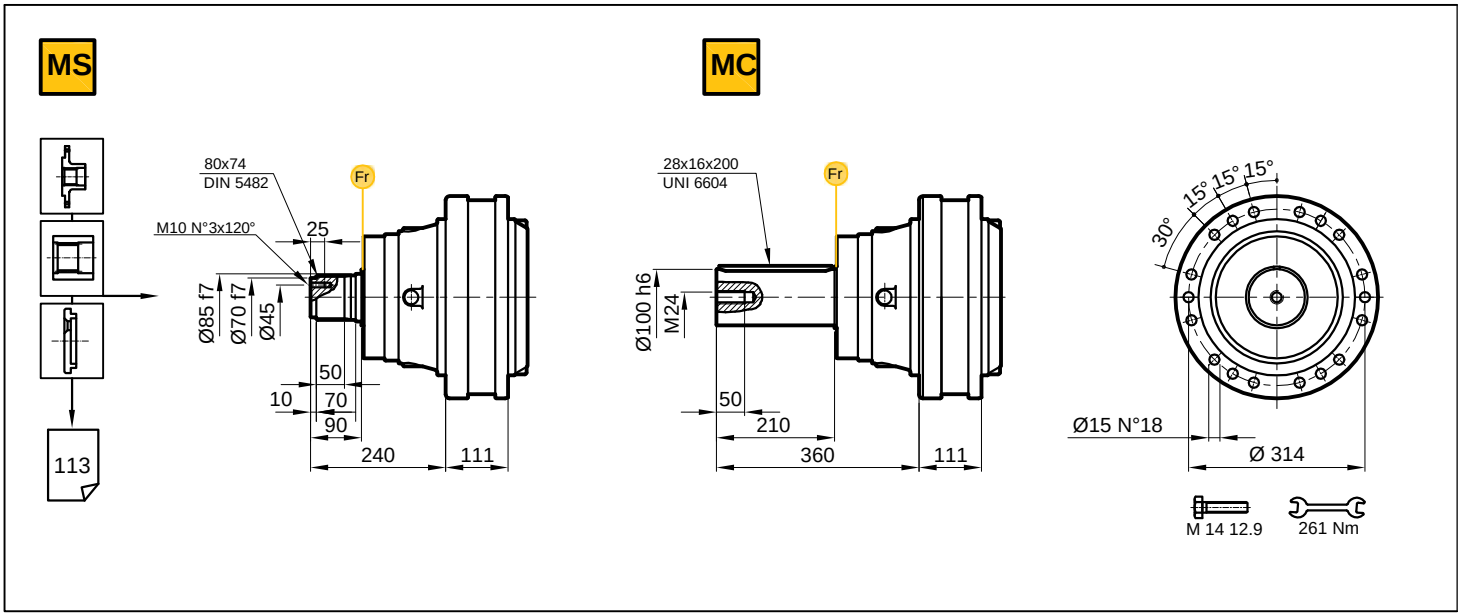
PD 113

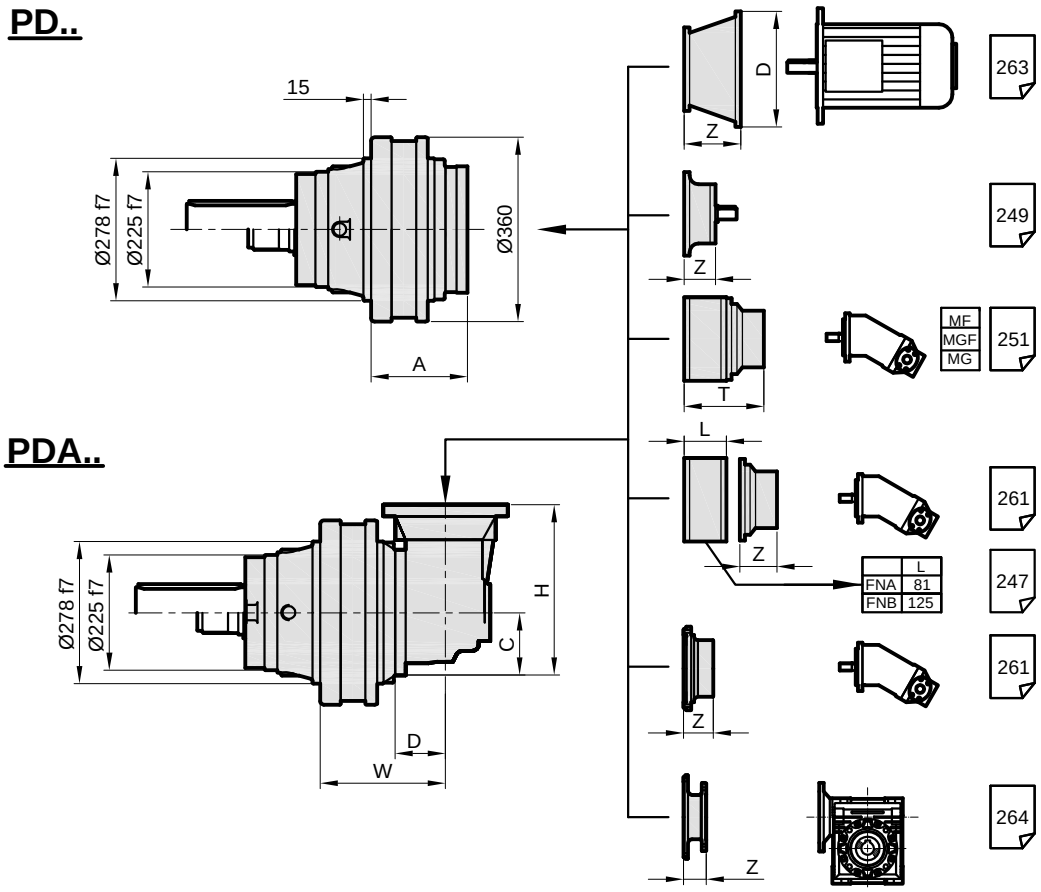
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 113 S1	3.55	20360	18020	15330	13570	2000	36040	40
	4.28	17740	15700	13360	11830	2000	31400	40
	5.60	13570	12010	10220	9050	2000	24020	40
	6.75	10320	9130	7770	6880	2000	18260	40
PD 113 S2	13.4	20360	18020	15330	13570	2000	36040	40
	16.1	17740	15700	13360	11830	2800	31400	23
	22.1	17740	15700	13360	11830	2800	31400	23
	28.9	13570	12010	10220	9050	2800	24020	23
	33.6	13570	12010	10220	9050	2800	24020	23
	40.5	10320	9130	7770	6880	2800	18260	23
	48.9	10320	9130	7770	6880	2800	18260	23
PD 113 S3	57.5	20360	18020	15330	13570	2800	36040	23
	62.8	20360	18020	15330	13570	2800	36040	23
	75.2	20360	18020	15330	13570	2800	36040	23
	82.1	20360	18020	15330	13570	2800	36040	23
	94.8	17740	15700	13360	11830	2800	31400	15
	109.2	17740	15700	13360	11830	2800	31400	15
	118.4	13570	12010	10220	9050	2800	24020	15
	123.9	17740	15700	13360	11830	2800	31400	15
	129.3	13570	12010	10220	9050	2800	24020	15
	143.9	13570	12010	10220	9050	2800	24020	15
	155.9	13570	12010	10220	9050	2800	24020	15
	188.1	13570	12010	10220	9050	2800	24020	15
	195.2	13570	12010	10220	9050	2800	24020	15
	209.7	10320	9130	7770	6880	2800	18260	15
	226.8	13570	12010	10220	9050	2800	24020	15
	235.4	10320	9130	7770	6880	2800	18260	15
	274.0	13570	12010	10220	9050	2800	24020	15
	330.3	10320	9130	7770	6880	2800	18260	15
PD 113 S4	351.9	20360	18020	15330	13570	2800	36040	15
	388.5	20360	18020	15330	13570	2800	36040	15
	421.2	20360	18020	15330	13570	2800	36040	15
	440.8	17740	15700	13360	11830	2800	31400	11
	459.9	20360	18020	15330	13570	2800	36040	11
	507.7	20360	18020	15330	13570	2800	36040	11
	531.4	17740	15700	13360	11830	2800	31400	11
	554.3	20360	18020	15330	13570	2800	36040	11
	576.0	13570	12010	10220	9050	2800	24020	11
	611.9	17740	15700	13360	11830	2800	31400	11
	640.5	17740	15700	13360	11830	2800	31400	11
	724.4	13570	12010	10220	9050	2800	24020	11
	806.4	13570	12010	10220	9050	2800	24020	11
	907.3	13570	12010	10220	9050	2800	24020	11
	1008.8	17740	15700	13360	11830	2800	31400	11
	1093.6	13570	12010	10220	9050	2800	24020	11
	1270.0	13570	12010	10220	9050	2800	24020	11
	1530.9	13570	12010	10220	9050	2800	24020	11
	1849.8	13570	12010	10220	9050	2800	24020	11
	2229.7	10320	9130	7770	6880	2800	18260	11

PDA 113

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 113 S2	12.2	20360	18020	15330	13570	2800	36040	23
	14.8	17740	15700	13360	11830	2800	31400	23
	19.3	13570	12010	10220	9050	2800	24020	23
	23.3	10320	9130	7770	6880	2800	18260	23
	30.4	13570	12010	10220	9050	2800	24020	23
	36.7	10320	9130	7770	6880	2800	18260	23
PDA 113 S3	46.4	20360	18020	15330	13570	2800	36040	15
	50.6	20360	18020	15330	13570	2800	36040	15
	61.0	17740	15700	13360	11830	2800	31400	15
	76.5	17740	15700	13360	11830	2800	31400	15
	88.8	17740	15700	13360	11830	2800	31400	15
	96.2	17740	15700	13360	11830	2800	31400	15
	116.0	13570	12010	10220	9050	2800	24020	15
	120.5	17740	15700	13360	11830	2800	31400	15
	125.7	13570	12010	10220	9050	2800	24020	15
	139.9	17740	15700	13360	11830	2800	31400	15
	157.5	13570	12010	10220	9050	2800	24020	15
	182.9	13570	12010	10220	9050	2800	24020	15
	221.0	13570	12010	10220	9050	2800	24020	15
	226.4	10320	9130	7770	6880	2800	18260	15
PDA 113 S4	140.0	20360	18020	15330	13570	2800	36040	11
	168.8	20360	18020	15330	13570	2800	36040	11
	184.3	17740	15700	13360	11830	2800	31400	11
	203.5	17740	15700	13360	11830	2800	31400	11
	230.9	17740	15700	13360	11830	2800	31400	11
	240.9	13570	12010	10220	9050	2800	24020	11
	290.4	17740	15700	13360	11830	2800	31400	11
	301.7	13570	12010	10220	9050	2800	24020	11
	320.6	17740	15700	13360	11830	2800	31400	11
	347.5	13570	12010	10220	9050	2800	24020	11
	379.4	13570	12010	10220	9050	2800	24020	11
	418.8	13570	12010	10220	9050	2800	24020	11
	457.3	13570	12010	10220	9050	2800	24020	11
	510.3	13570	12010	10220	9050	2800	24020	11
	551.9	13570	12010	10220	9050	2800	24020	11
	665.2	13570	12010	10220	9050	2800	24020	11
	803.8	13570	12010	10220	9050	2800	24020	11
	968.9	10320	9130	7770	6880	2800	18260	11

PD/PDA 113

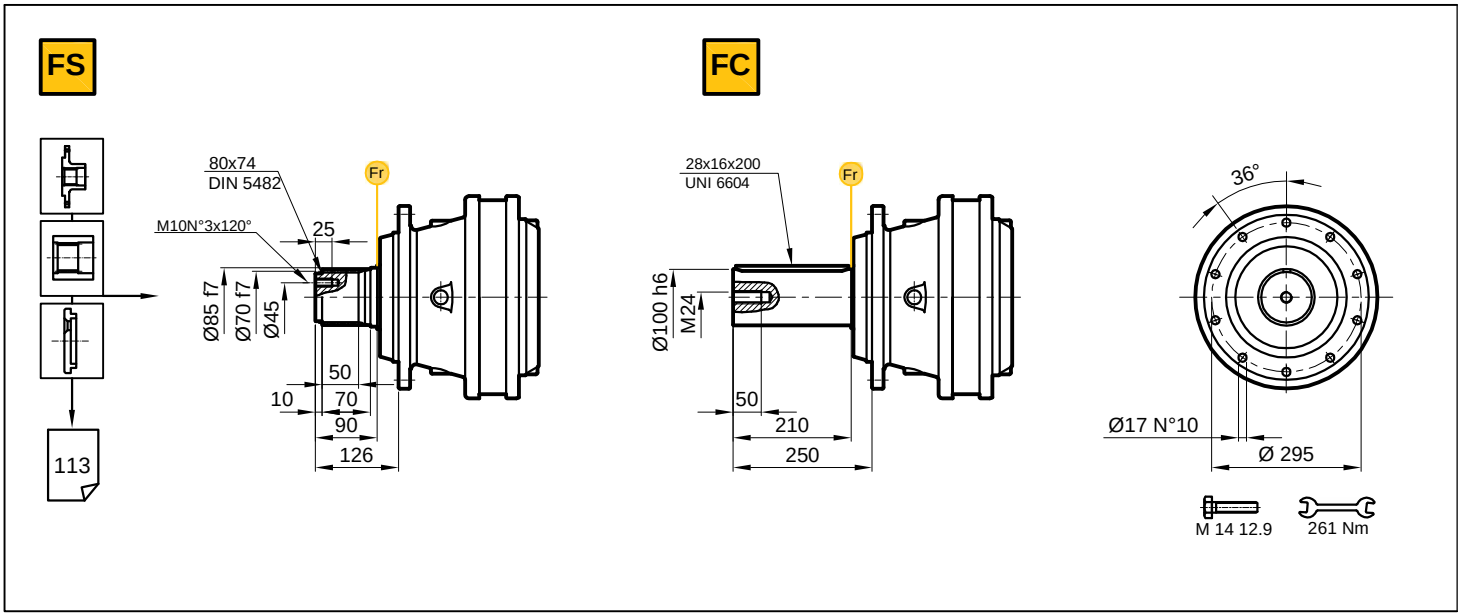


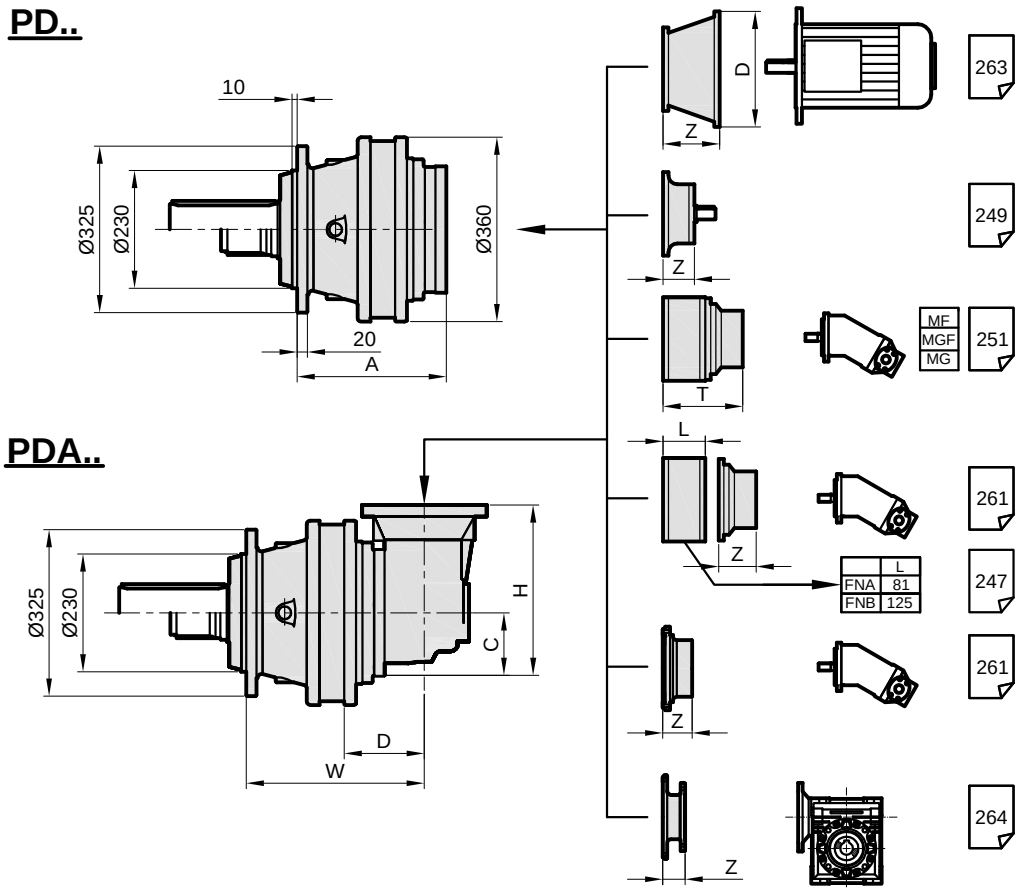


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	142	105	-
S2	230	88	140	380	213,5	121	142
S3	315	88	140	380	274,5	129	161
S4	349,5	75	93	252	322,5	135	144

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 113

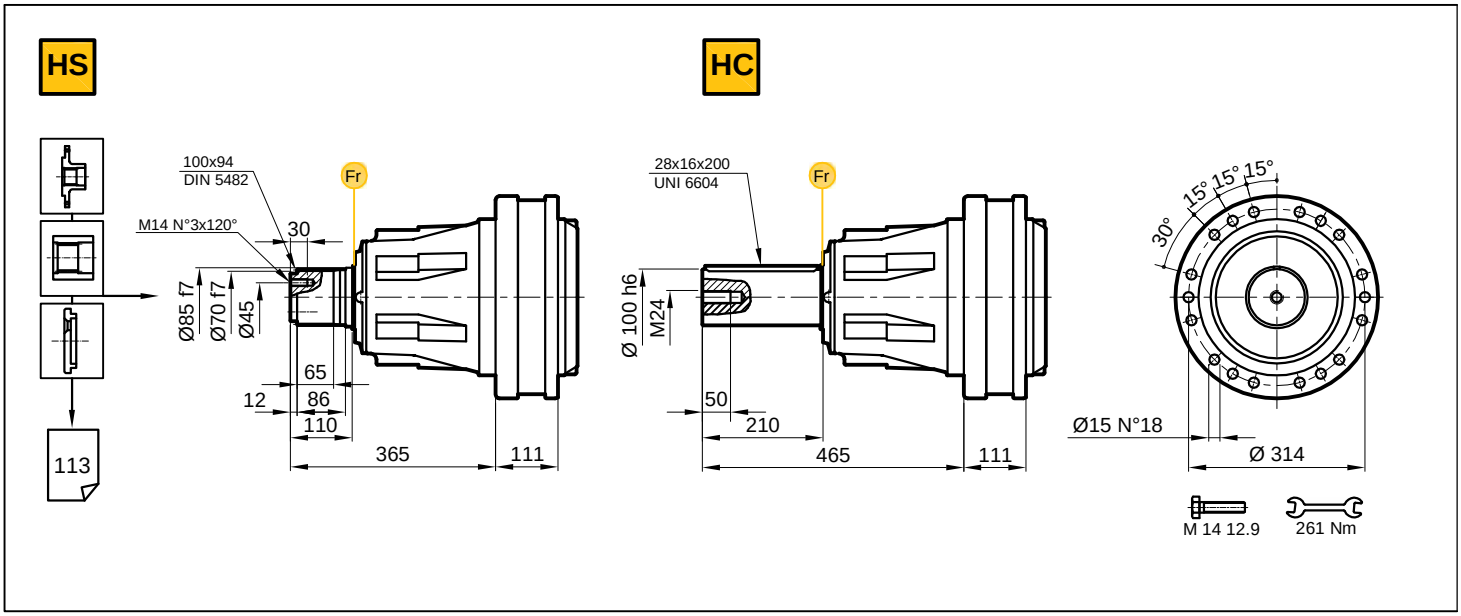




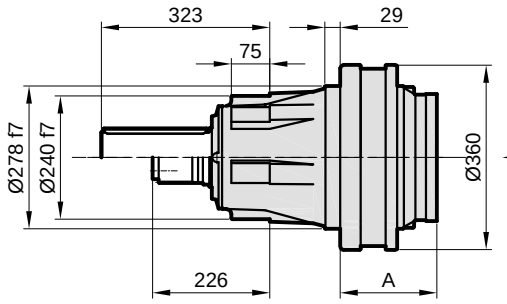
Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	260	120	-
S2	348	88	140	380	331,5	136	157
S3	433	88	140	380	392,5	144	176
S4	467,5	75	93	252	440,5	150	159

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

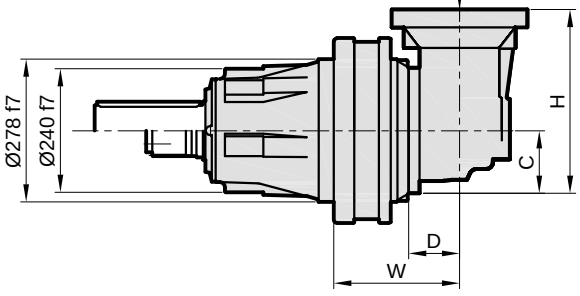
PD/PDA 113

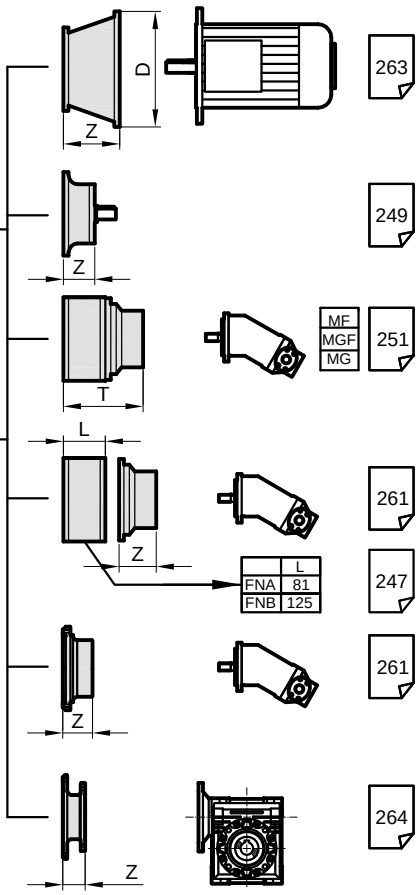


PD..



PDA..



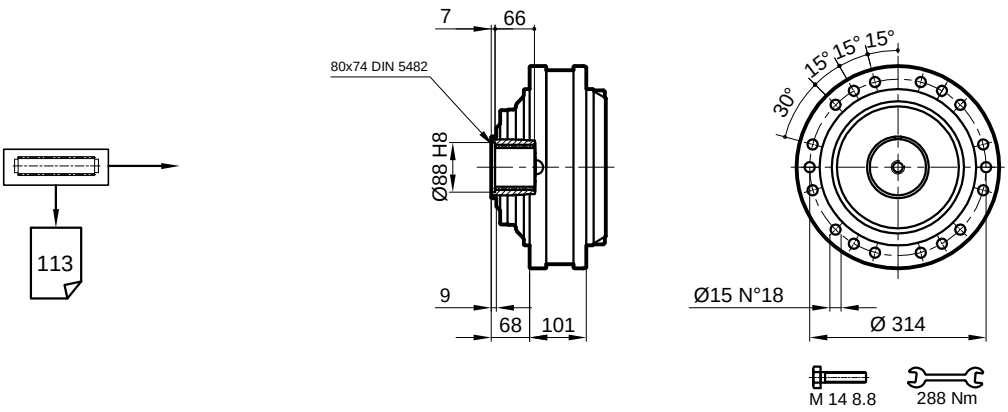


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	142	132	-
S2	230	88	140	380	213,5	148	169
S3	315	88	140	380	274,5	156	188
S4	349,5	75	93	252	322,5	162	171

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

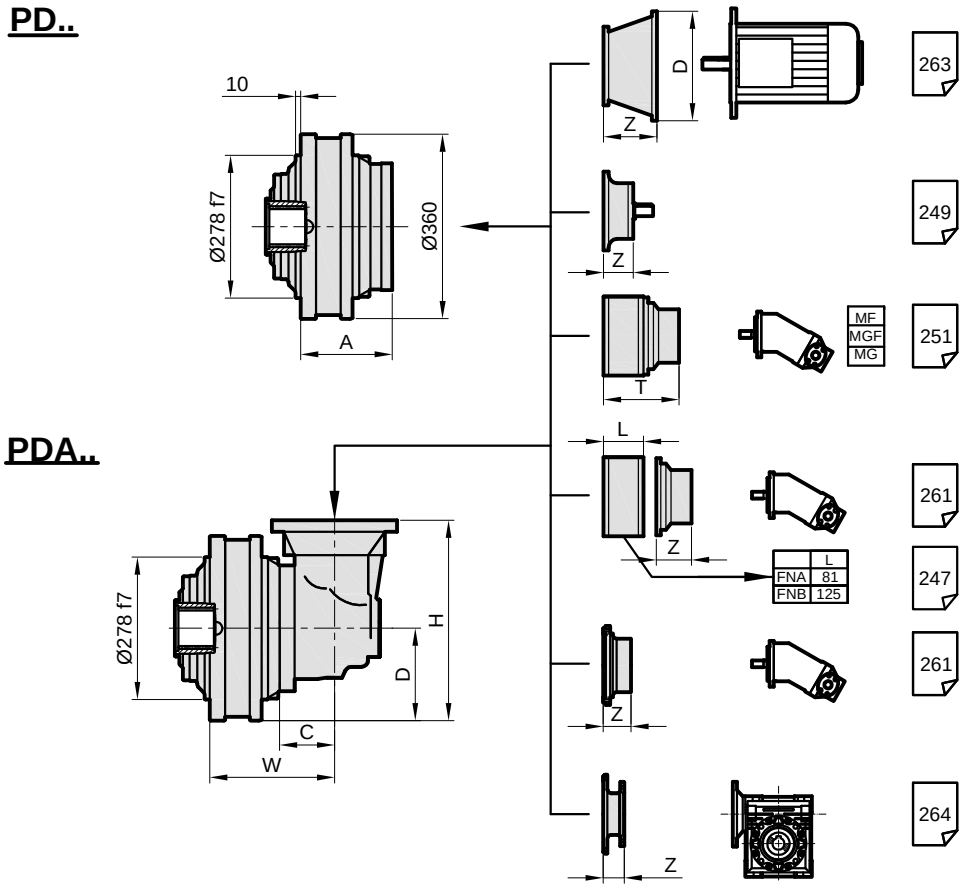
PD/PDA 113

S



PD..

PDA..

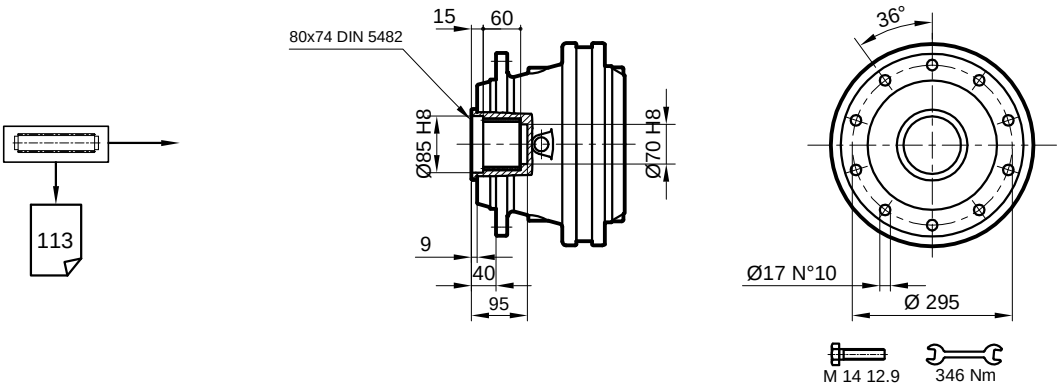


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	132	74	-
S2	220	88	140	380	203.5	90	111
S3	305	88	140	380	264.5	98	130
S4	339,5	75	93	252	312.5	104	113

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

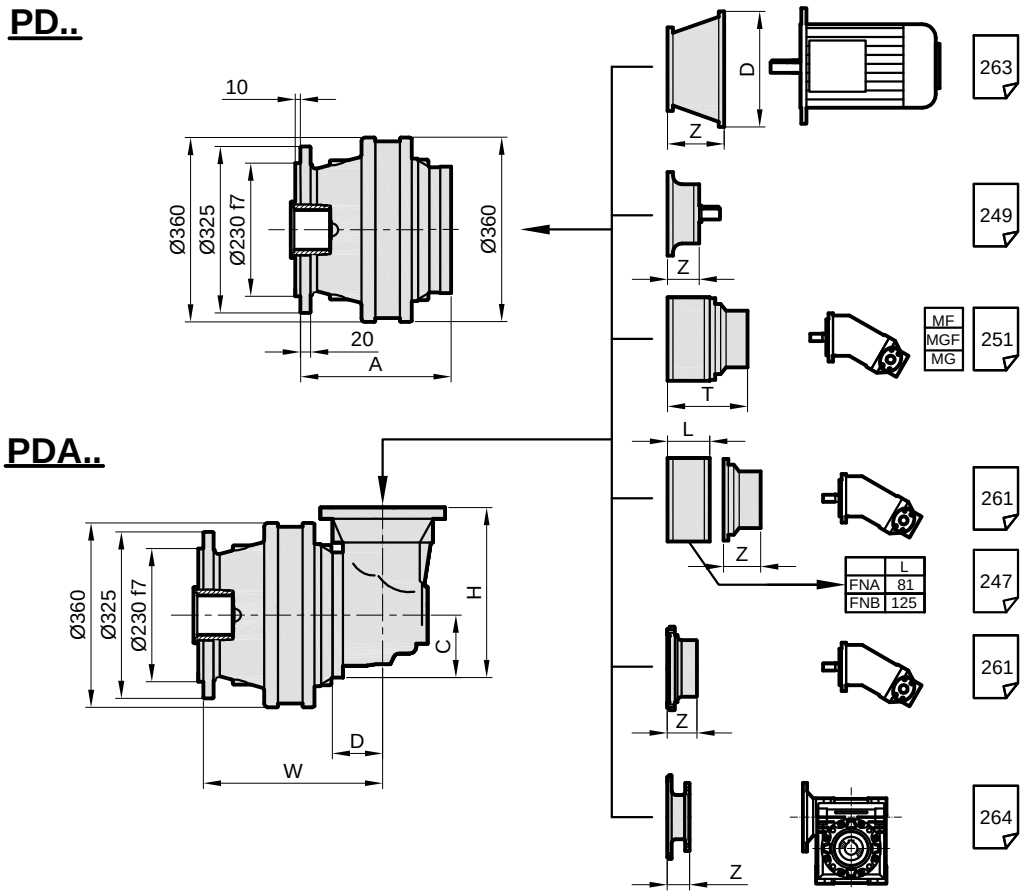
PD/PDA 113

SF



PD..

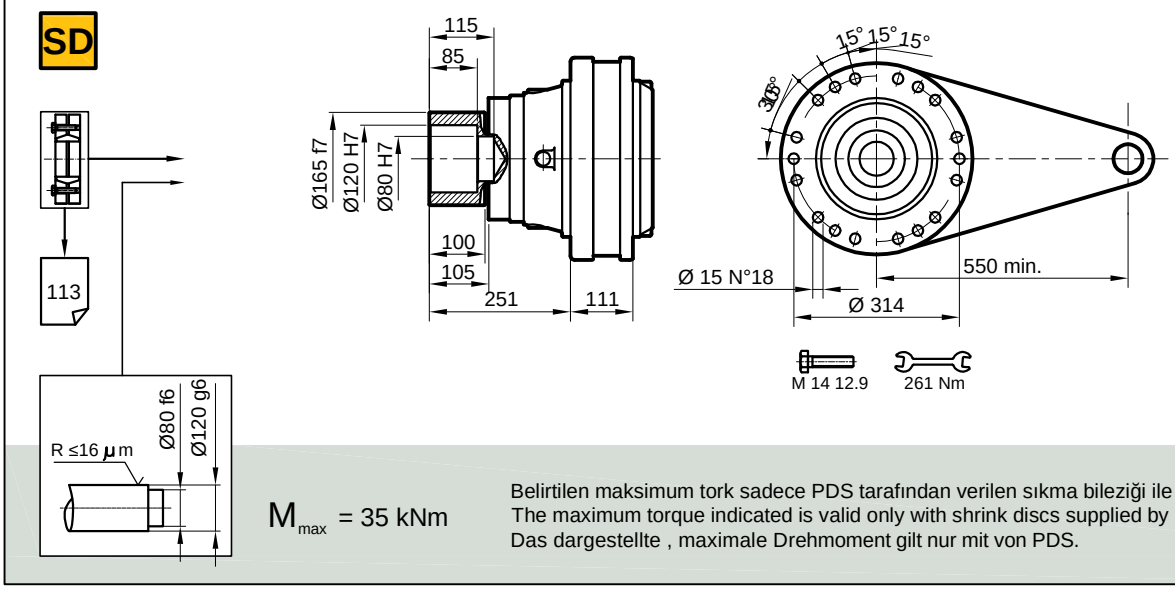
PDA..



Stage	W	D	C	H	A	PD / SF	PDA / SF
S1	-	-	-	-	142	110	-
S2	230	88	140	380	213,5	126	147
S3	315	88	140	380	274.5	134	166
S4	349,5	75	93	252	322.5	140	149

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

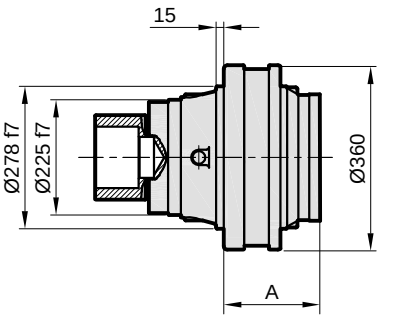
PD/PDA 113



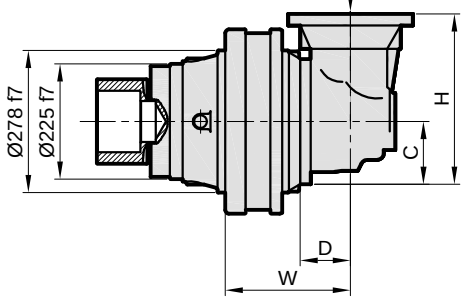
M_{max} = 35 kNm

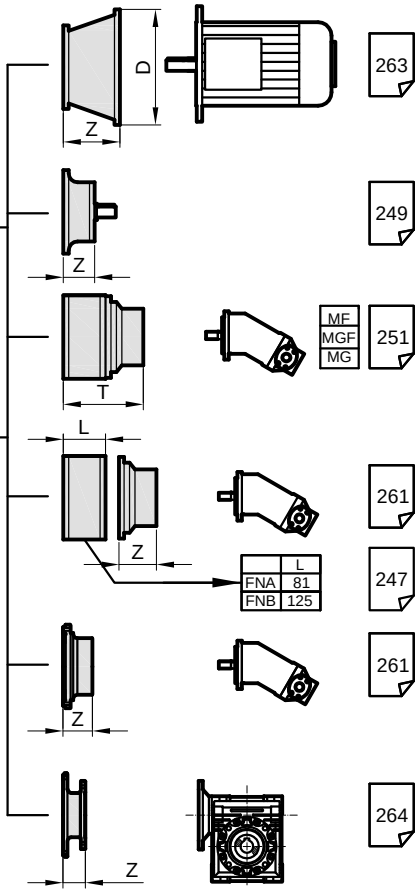
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



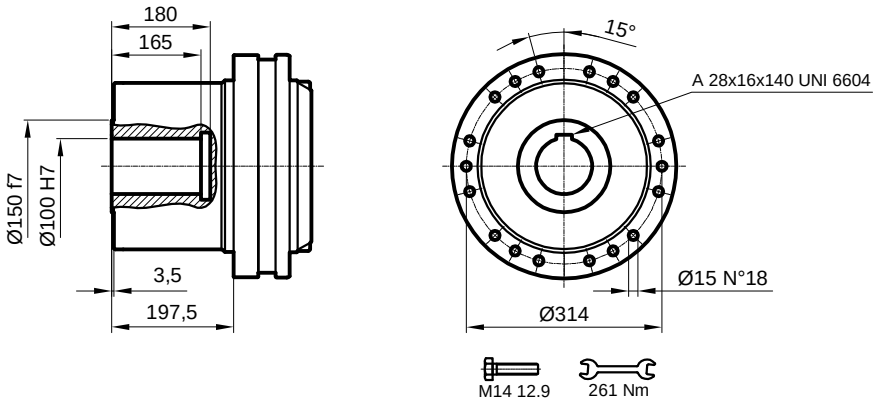


Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	142	110	-
S2	230	88	140	380	213,5	126	147
S3	315	88	140	380	274.5	134	166
S4	349,5	75	93	252	322.5	140	149

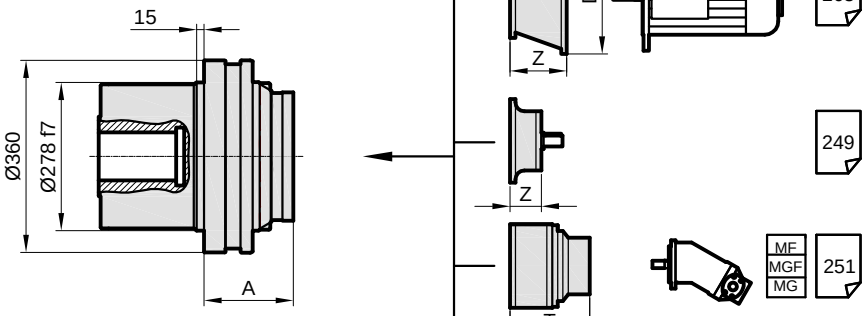
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 113

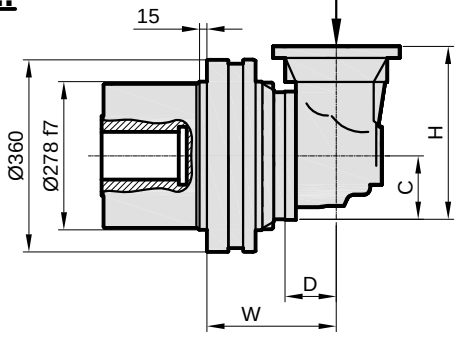
DKM

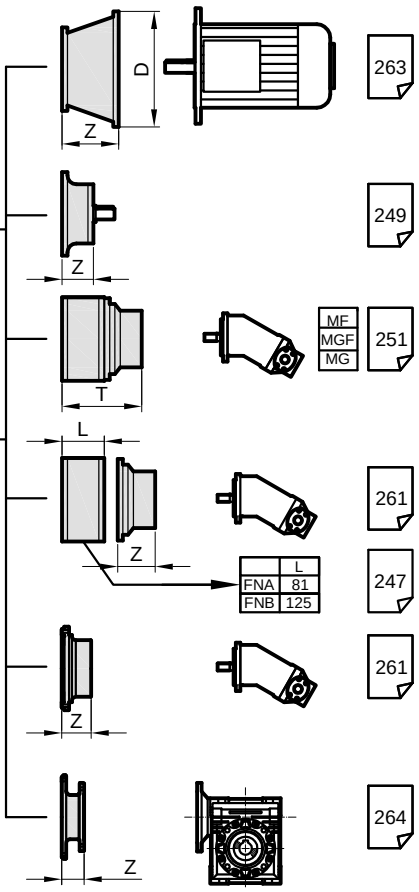


PD..



PDA..



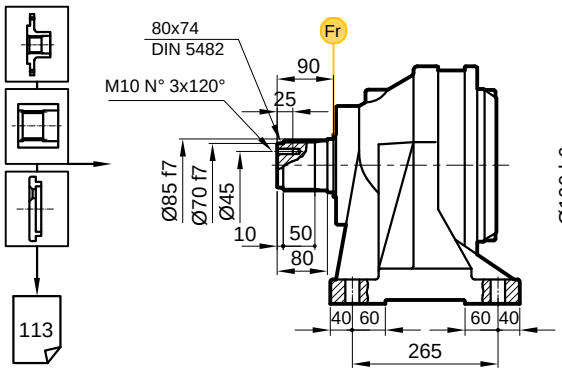


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	142	74	-
S2	230	88	140	380	213	90	111
S3	315	88	140	380	275	98	130
S4	350	75	93	252	322	104	113

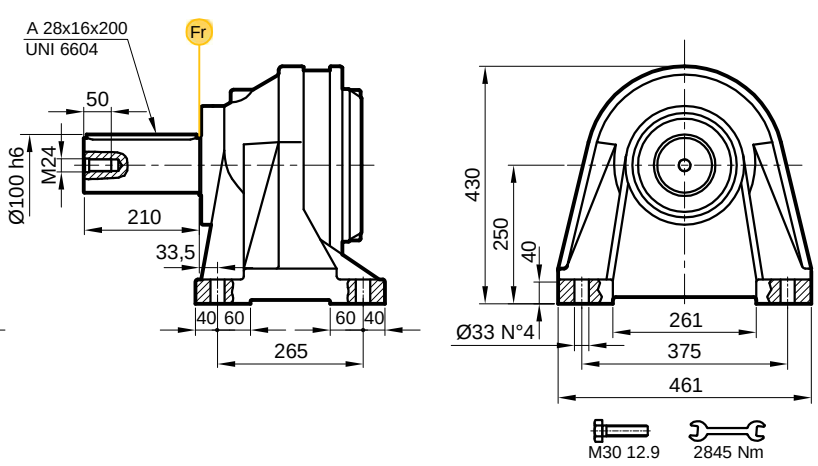
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 113

FVS

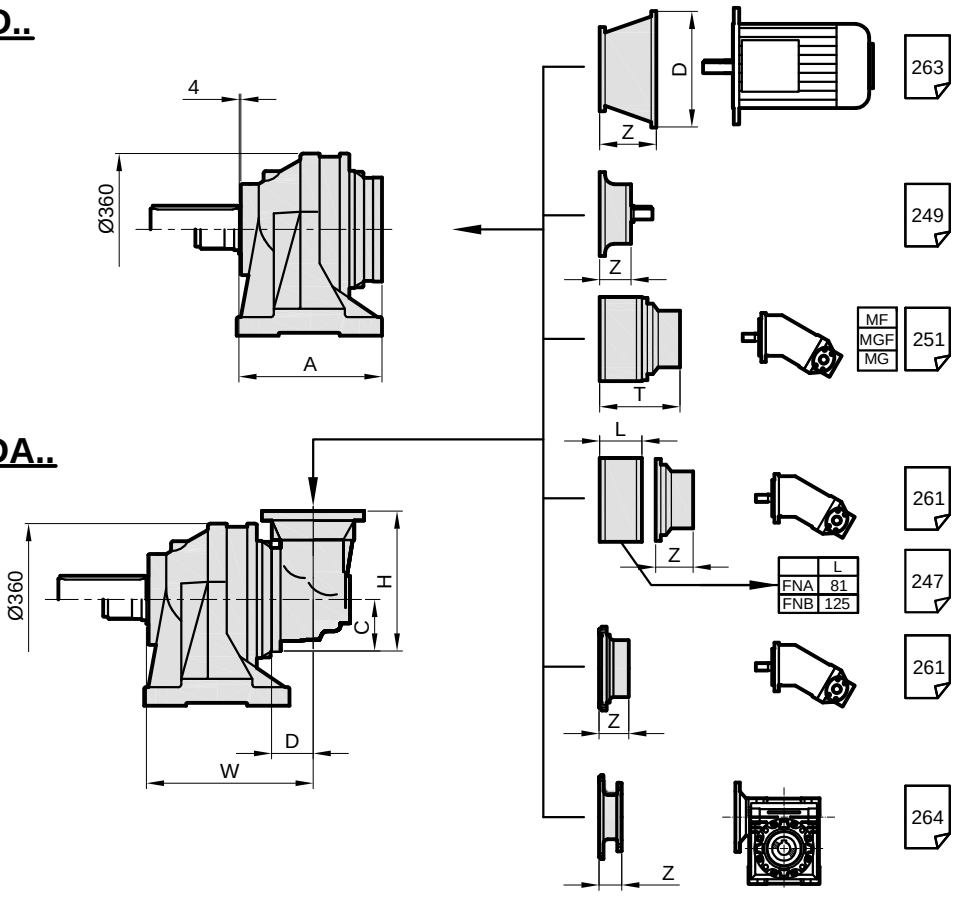


FVC



PD..

PDA..

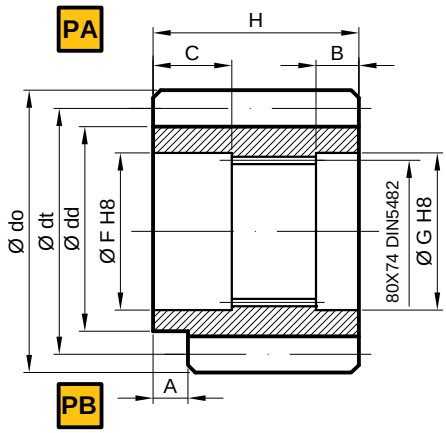


Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	296	105	-
S2	384	88	140	380	317,5	121	142
S3	469	88	140	380	428,5	129	161
S4	503,5	75	93	252	476,5	135	144

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

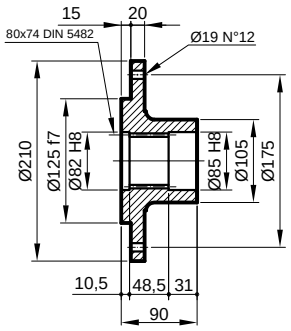
PD/PDA 113

P *Pinyon / Pinion / Ritzel*

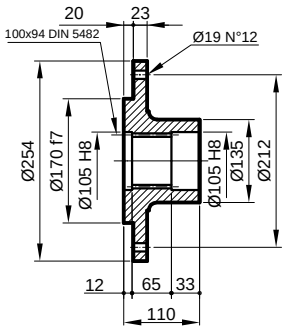


		m	z	x	dd	dt	do	H	A	B	C	F	G	Malzeme *Material* Material	Kod / Code Bestell
PA	M	10	12	0	95	120	140	90	0	10	31	85	80	38NiCrMo4	1501.113.001
PA	M	10	14	0	115	140	160	90	0	10	31	85	80	38NiCrMo4	1501.113.002
PA	P	14	13	1	161	182	224	122	0	24	33	105	105	18NiCrMo5	1501.113.003
PB	M	12	14	0,5	144	168	198	90	13	25	31	85	80	39NiCrMo3	1502.113.001

FL Flanş / *Flange* / Flansch

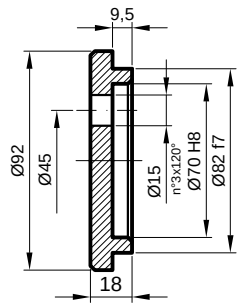


MS Kod / Code / Bestell
1505.111.200



HS Kod / Code / Bestell
1506.113.201

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



MS
Kod / Code / Bestell
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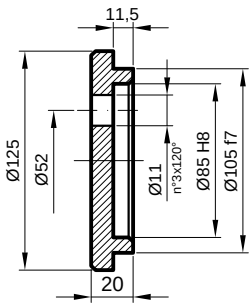
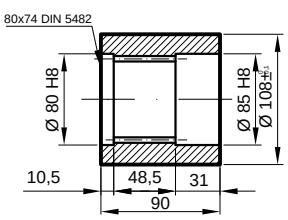


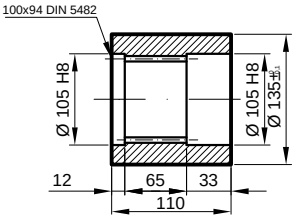
HS
Kod / Code / Bestell
1508.113.251

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40 / SAE 1040 / DIN Ck40

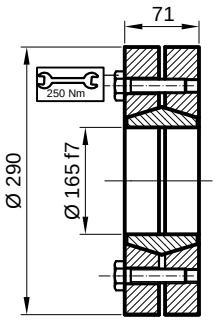


FS Kod / Code / Bestell
1503.111.100



HS Kod / Code / Bestell
1504.113.101

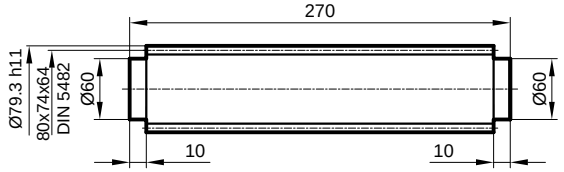
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
35 kNm

Kod / Code / Bestell
2501.113.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code /Bestell
1509.113.001

PD/PDA 113

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

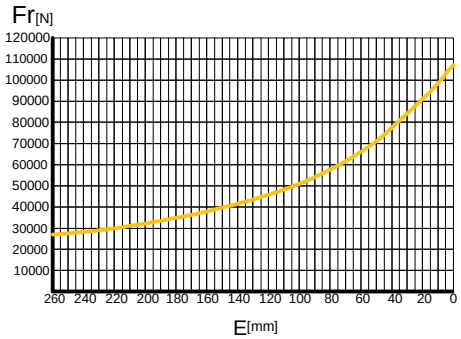
RADIAL LOADS(Fr)

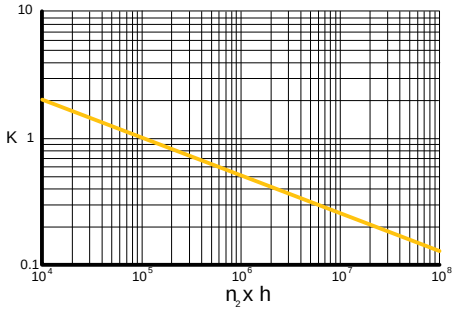
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

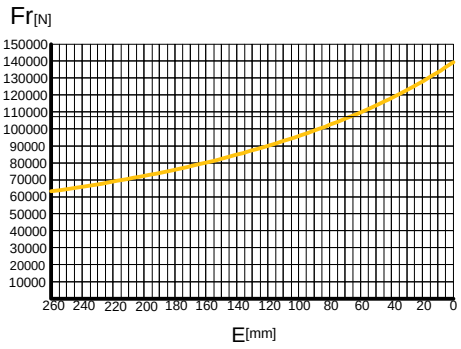
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

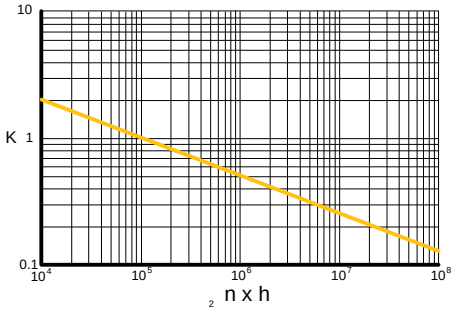
M-FV



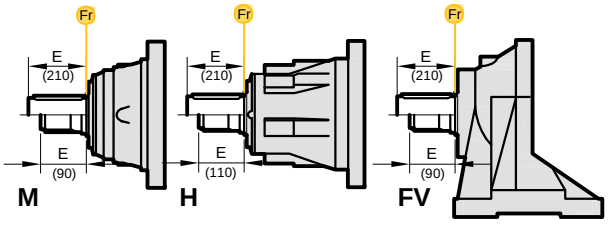


H





	nxh				
	10^5	10^4	10^6	10^7	10^8
M-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

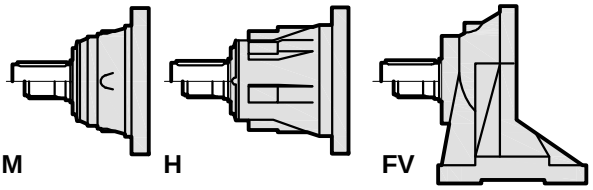
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

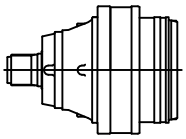
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

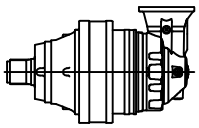
Fa [N]	M-CPC	H	
	45000	85000	←
	65000	85000	→



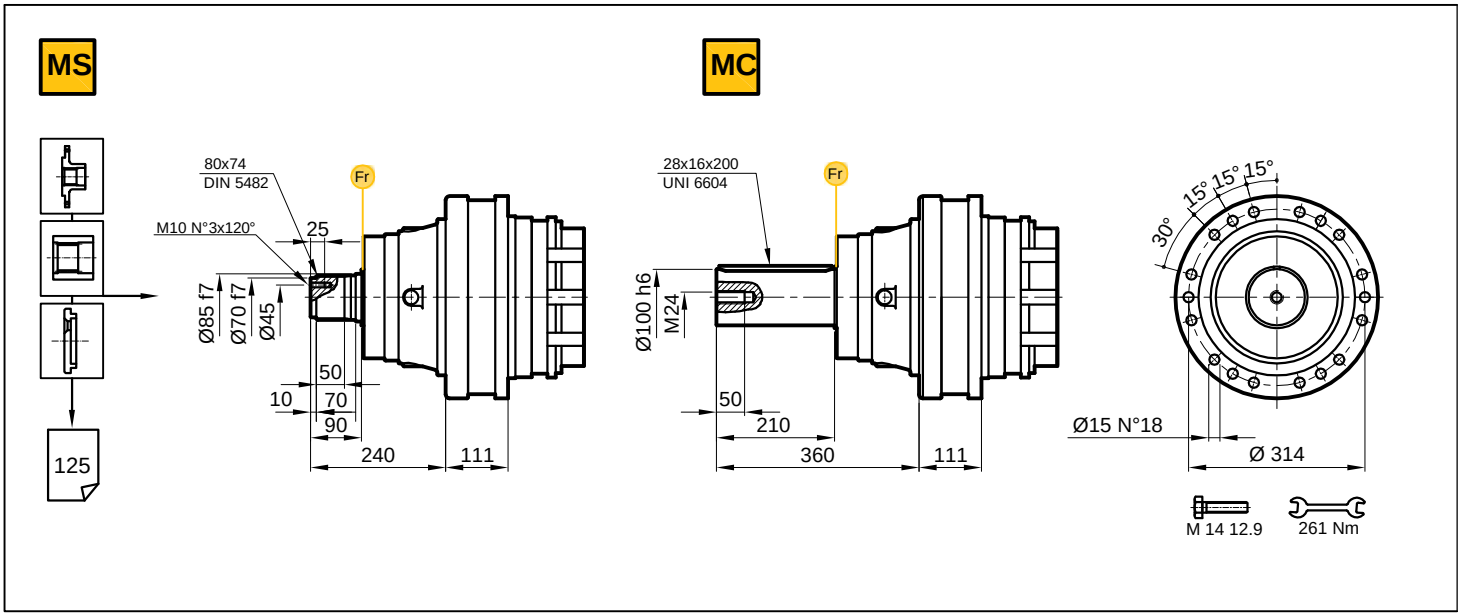
PD 115

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 115 S2	13.0	20360	18020	15330	13570	2800	36040	25
	15.7	20360	18020	15330	13570	2800	36040	25
	19.0	17740	15700	13360	11830	2800	31400	25
	21.4	17740	15700	13360	11830	2800	31400	25
	24.9	17740	15700	13360	11830	2800	31400	25
	30.0	17740	15700	13360	11830	2800	31400	25
PD 115 S3	53.8	20360	18020	15330	13570	2800	36040	17
	65.0	20360	18020	15330	13570	2800	36040	17
	73.3	20360	18020	15330	13570	2800	36040	17
	81.3	20360	18020	15330	13570	2800	36040	17
	94.5	20360	18020	15330	13570	2800	36040	17
	106.6	20360	18020	15330	13570	2800	36040	17
	128.4	17740	15700	13360	11830	2800	31400	17
	149.1	17740	15700	13360	11830	2800	31400	17
	180.2	17740	15700	13360	11830	2800	31400	17
PD 115 S4	348.6	20360	18020	15330	13570	2800	36040	13
	377.2	20360	18020	15330	13570	2800	36040	13
	438.4	20360	18020	15330	13570	2800	36040	13
	489.2	20360	18020	15330	13570	2800	36040	13
	549.1	20360	18020	15330	13570	2800	36040	13
	620.0	20360	18020	15330	13570	2800	36040	13
	677.9	20360	18020	15330	13570	2800	36040	13
	720.0	20360	18020	15330	13570	2800	36040	13
	770.5	20360	18020	15330	13570	2800	36040	13
	818.8	20360	18020	15330	13570	2800	36040	13
	849.8	17740	15700	13360	11830	2800	31400	13
	928.8	17740	15700	13360	11830	2800	31400	13
	987.4	17740	15700	13360	11830	2800	31400	13
	1113.0	17740	15700	13360	11830	2800	31400	13
	1216.4	17740	15700	13360	11830	2800	31400	13

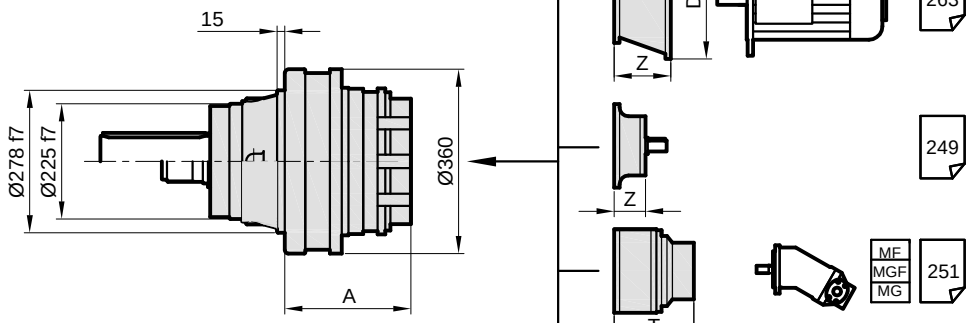
PDA 115

	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 115 S2	10.9	20360	18020	15330	13570	2000	36040	25
	13.2	17740	15700	13360	11830	2000	31400	25
	16.6	20360	18020	15330	13570	2000	36040	25
	20.0	17740	15700	13360	11830	2000	31400	25
PDA 115 S3	54.4	20360	18020	15330	13570	2800	36040	17
	71.2	20360	18020	15330	13570	2800	36040	17
	85.7	20360	18020	15330	13570	2800	36040	17
	103.3	17740	15700	13360	11830	2800	31400	17
	116.7	17740	15700	13360	1183	2800	31400	17
	135.5	20360	18020	15330	13570	2800	36040	17
	163.3	17740	15700	13360	11830	2800	31400	17
PDA 115 S4	185.8	20360	18020	15330	13570	2800	36040	13
	224.4	20360	18020	15330	13570	2800	36040	13
	281.0	20360	18020	15330	13570	2800	36040	13
	323.8	20360	18020	15330	13570	2800	36040	13
	353.6	20360	18020	15330	13570	2800	36040	13
	394.3	20360	18020	15330	13570	2800	36040	13
	442.9	20360	18020	15330	13570	2800	36040	13
	500.0	20360	18020	15330	13570	2800	36040	13
	558.2	17740	15700	13360	11830	2800	31400	13
	580.7	20360	18020	15330	13570	2800	36040	13
	622.5	17740	15700	13360	11830	2800	31400	13
	699.2	17740	15700	13360	11830	2800	31400	13
	749.1	17740	15700	13360	11830	2800	31400	13
	812.0	17740	15700	13360	11830	2800	31400	13
	981.1	17740	15700	13360	11830	2800	31400	13

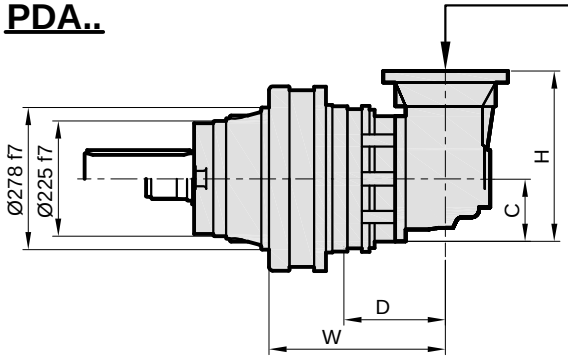
PD/PDA 115

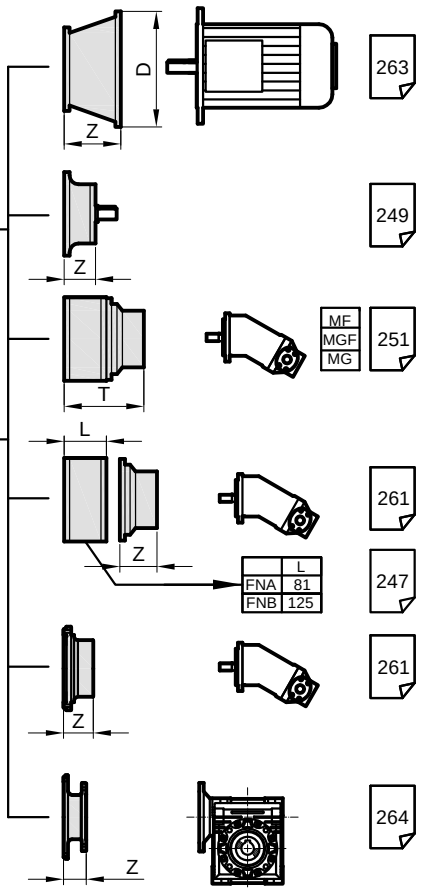


PD..



PDA..

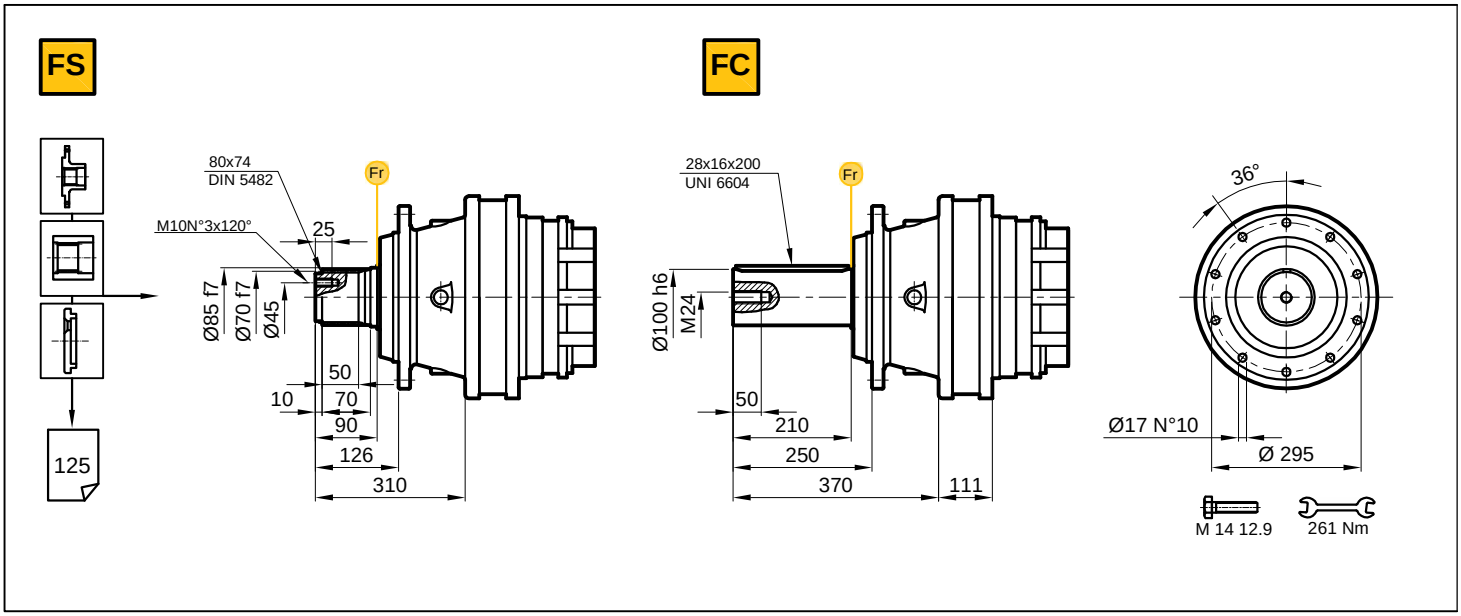


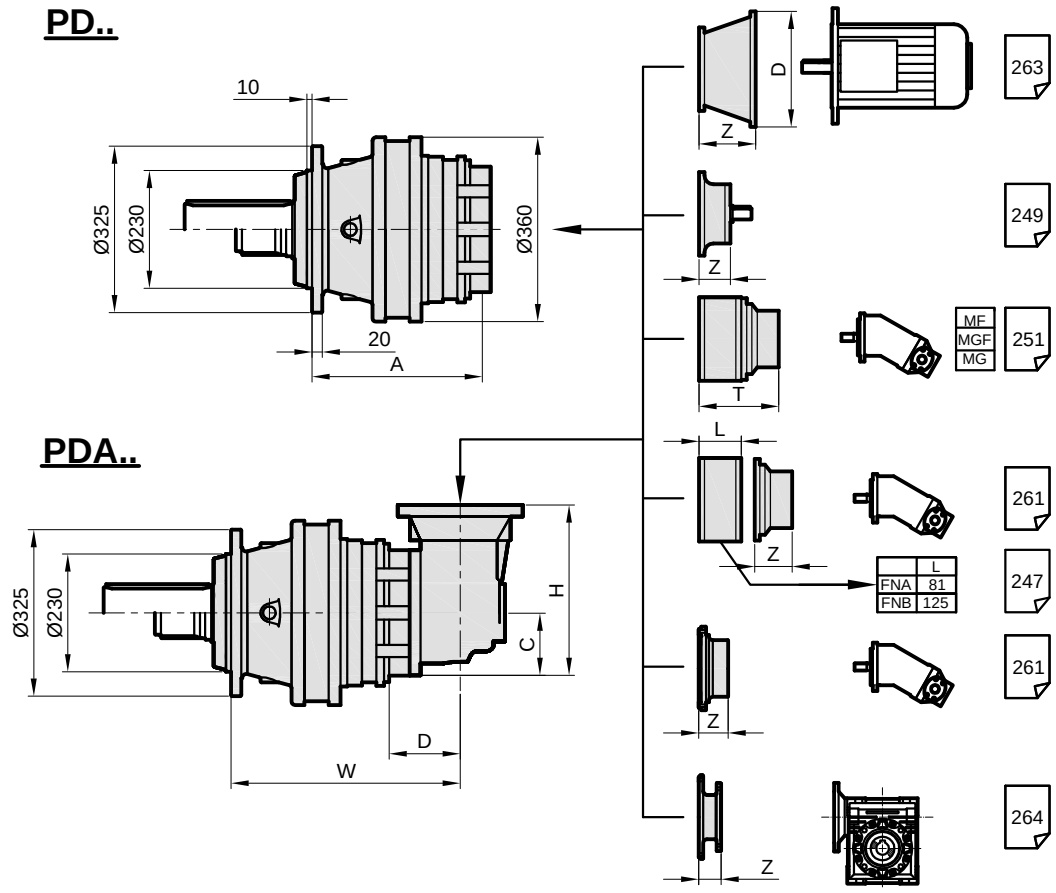


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	142	105	-
S2	230	88	140	380	213,5	121	142
S3	315	88	140	380	274,5	129	161
S4	349,5	75	93	252	322,5	135	144

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 115



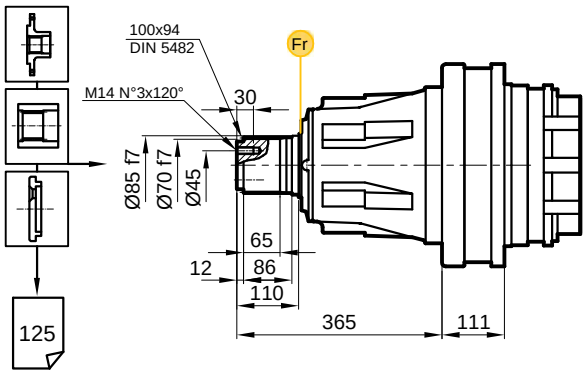


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	260	120	-
S2	348	88	140	380	331,5	136	157
S3	433	88	140	380	392,5	144	176
S4	467,5	75	93	252	440,5	150	159

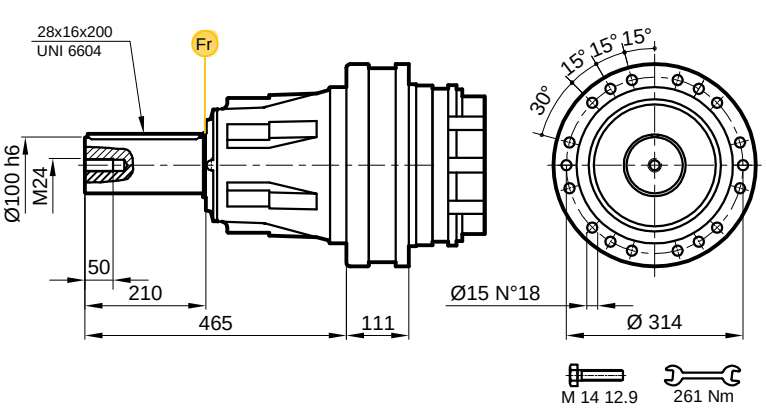
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 115

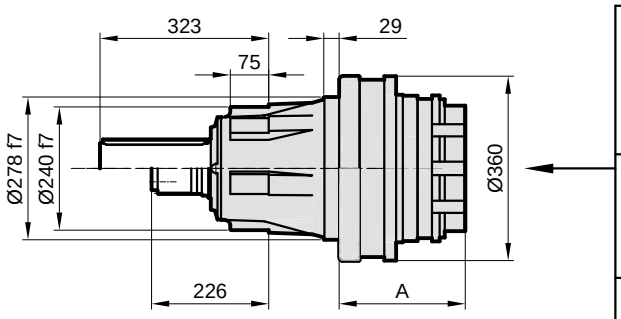
HS



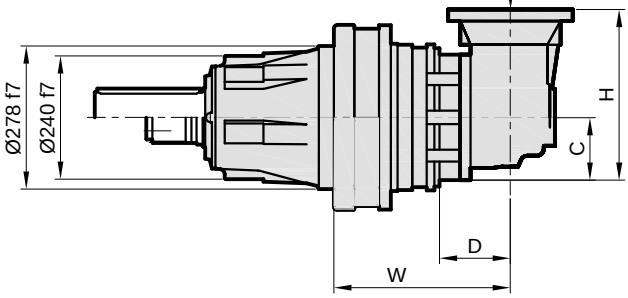
HC

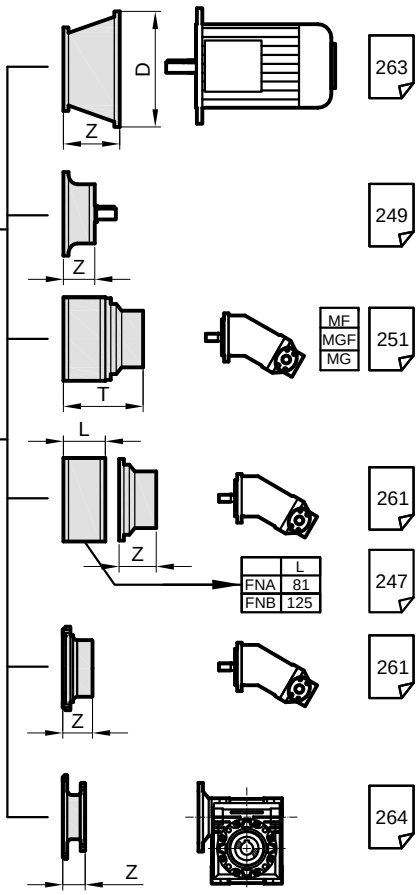


PD..



PDA..



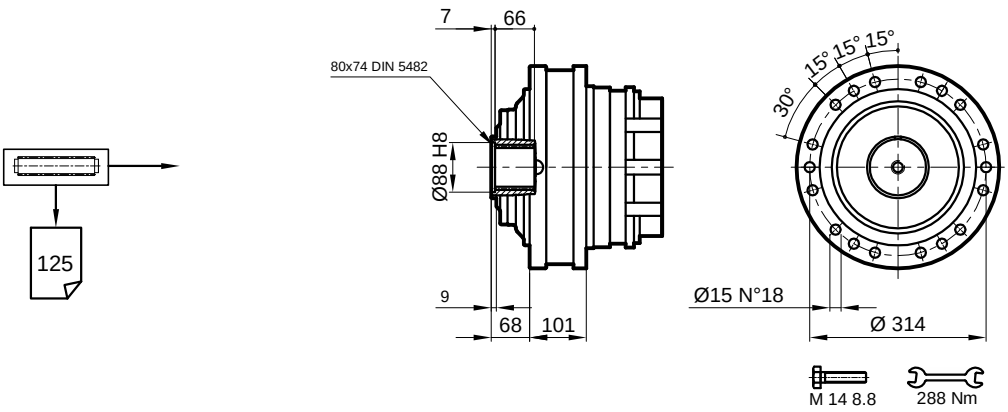


Stage	W	D	C	H	A	PD H	PDA H
S1	-	-	-	-	142	132	-
S2	230	88	140	380	213,5	148	169
S3	315	88	140	380	274,5	156	188
S4	349,5	75	93	252	322,5	162	171

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

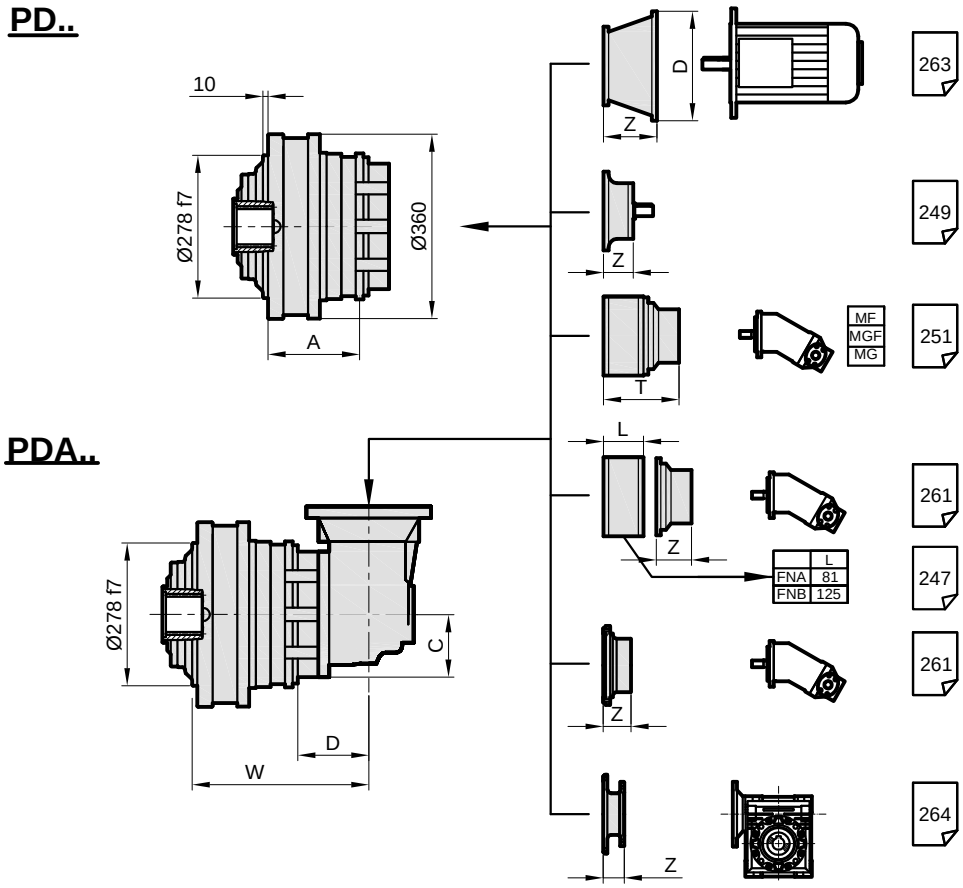
PD/PDA 115

S



PD..

PDA..

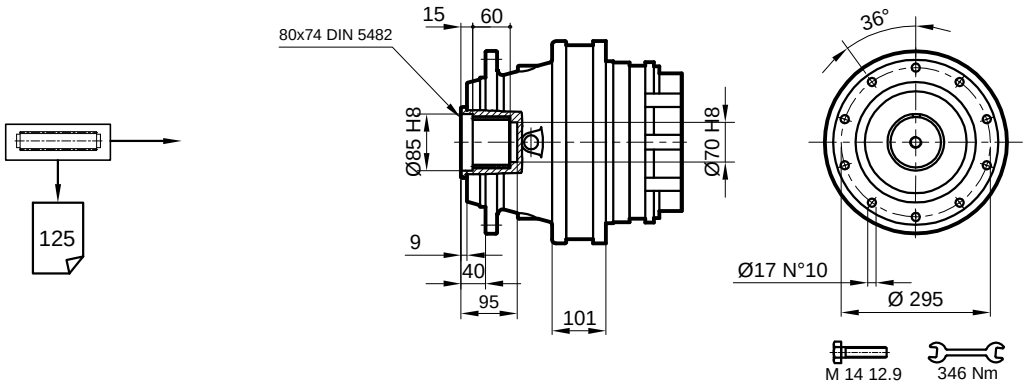


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	132	74	-
S2	220	88	140	380	203,5	90	111
S3	305	88	140	380	264,5	98	130
S4	339,5	75	93	252	312,5	104	113

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

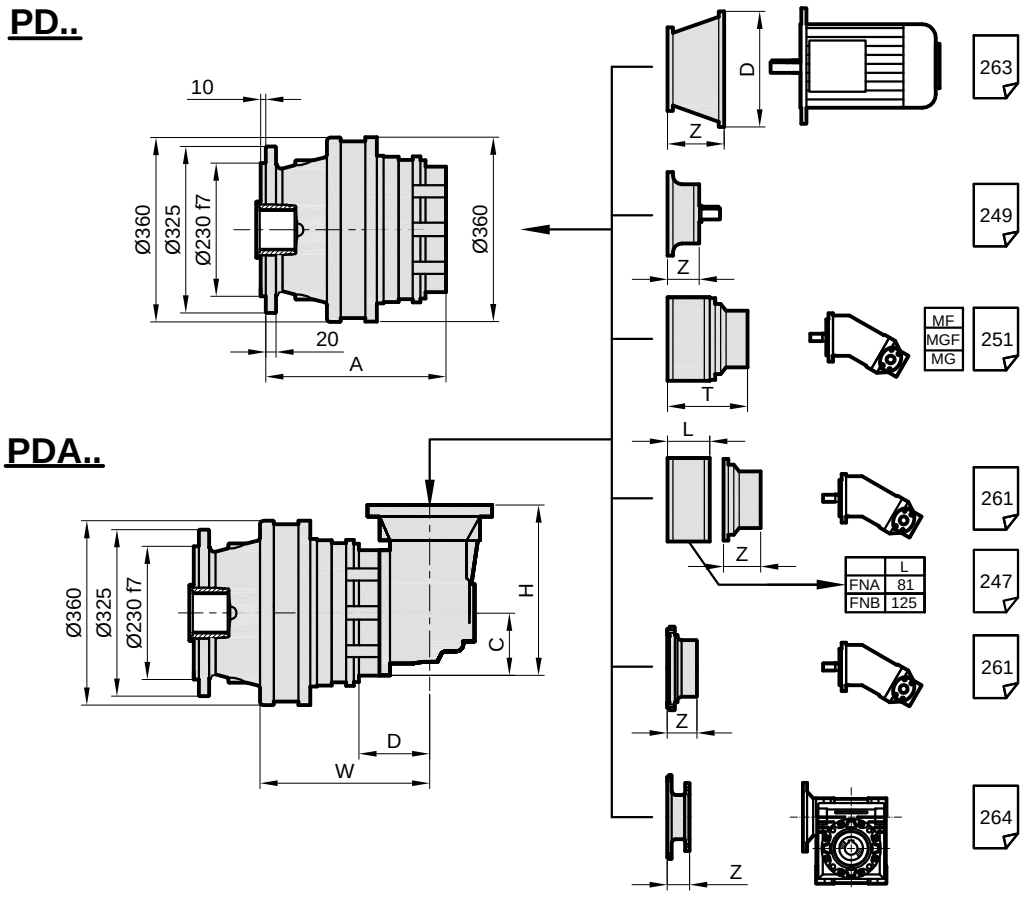
PD/PDA 115

SF



PD..

PDA..

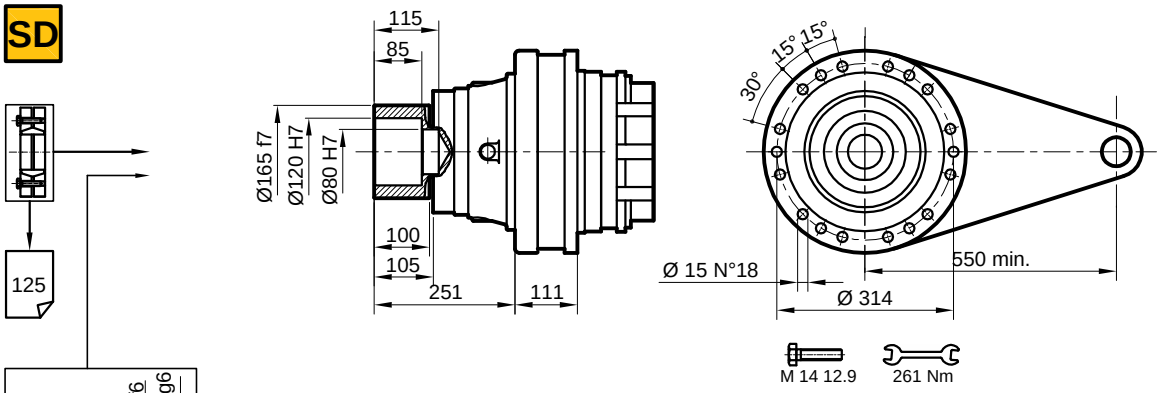


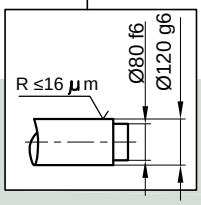
Stage	W	D	C	H	A	PD / SF	PDA / SF
S1	-	-	-	-	142	110	-
S2	230	88	140	380	213,5	126	147
S3	315	88	140	380	274,5	134	166
S4	349,5	75	93	252	322,5	140	149

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 115

SD

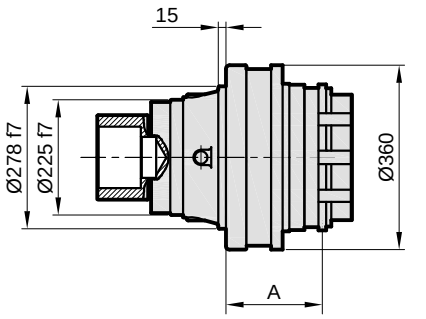




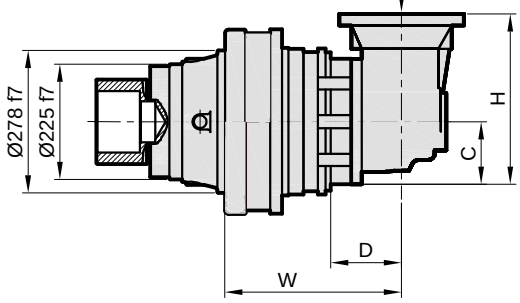
M_{max} = 35 kNm

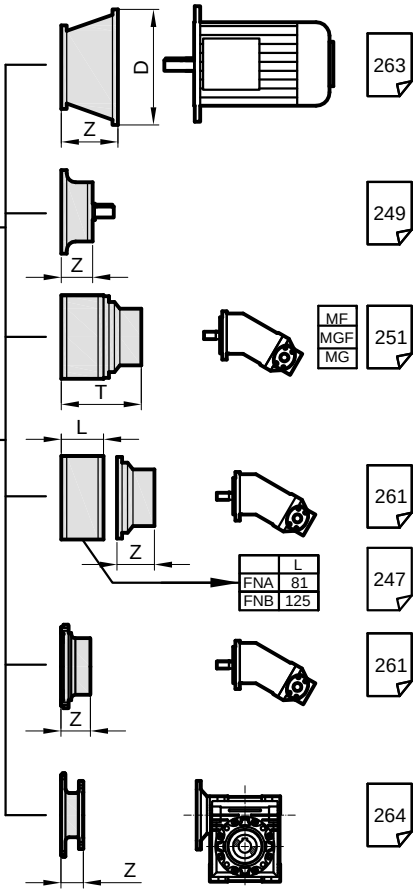
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



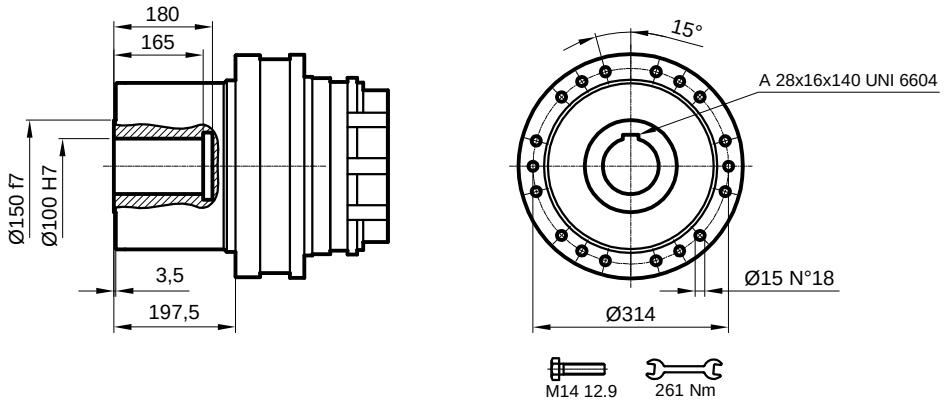


Stage	W	D	C	H	A	PD / SD	PDA / SD
S1	-	-	-	-	142	110	-
S2	230	88	140	380	213,5	126	147
S3	315	88	140	380	274,5	134	166
S4	349,5	75	93	252	322,5	140	149

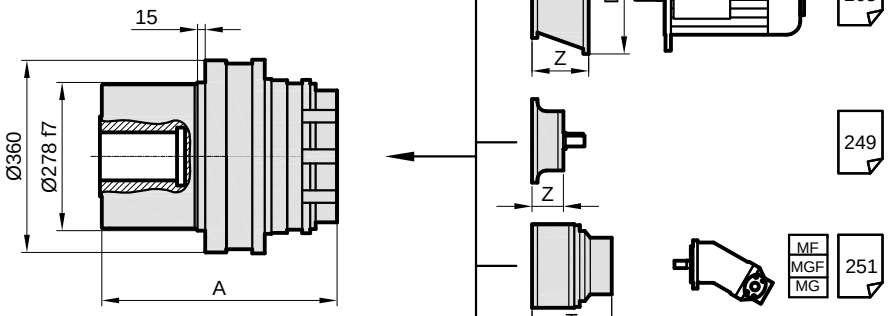
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 115

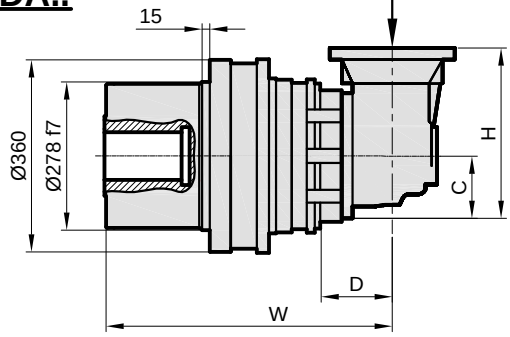
DKM

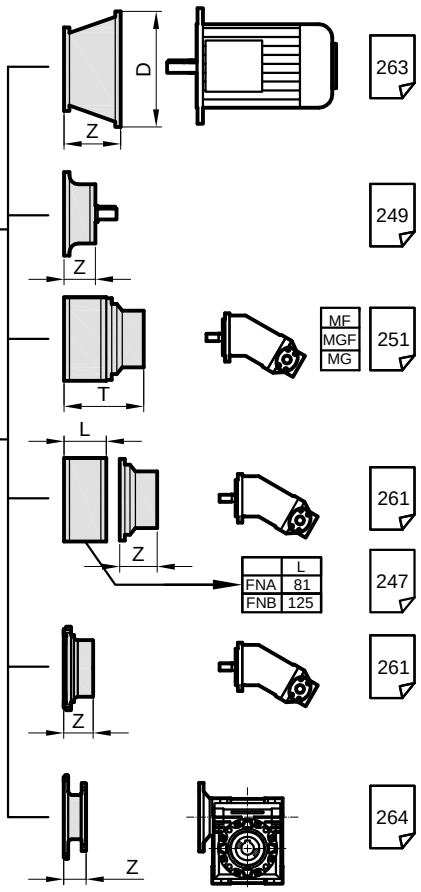


PD..



PDA..



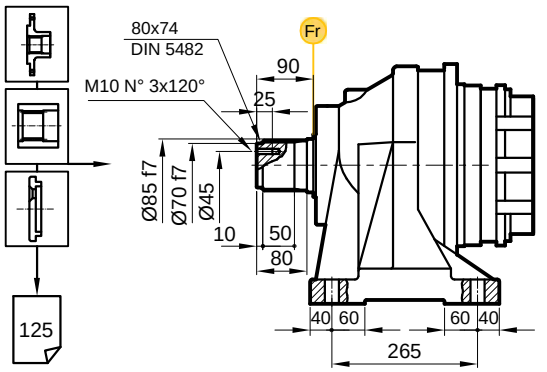


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	142	74	-
S2	230	88	140	380	213	90	111
S3	315	88	140	380	275	98	130
S4	350	75	93	252	322	104	113

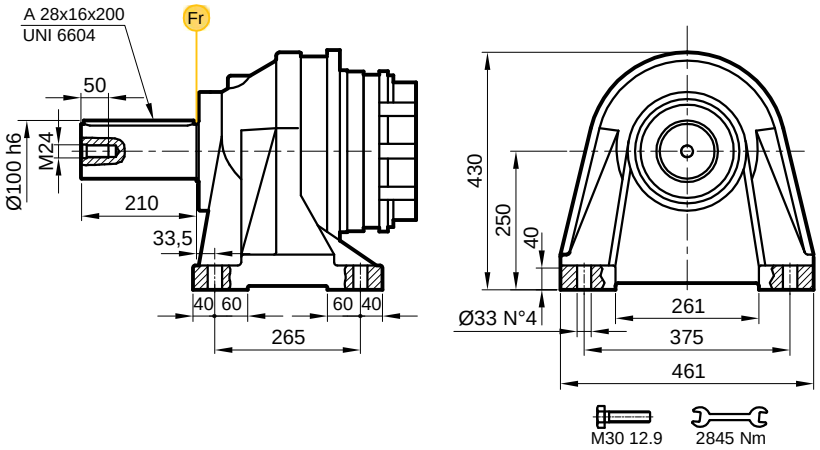
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 115

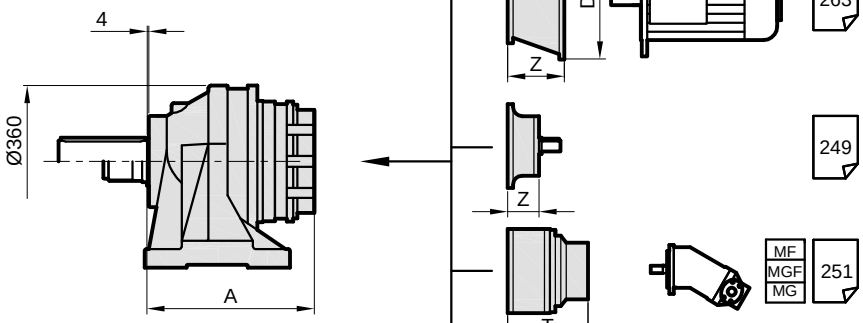
FVS



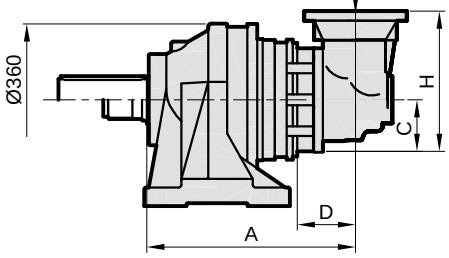
FVC

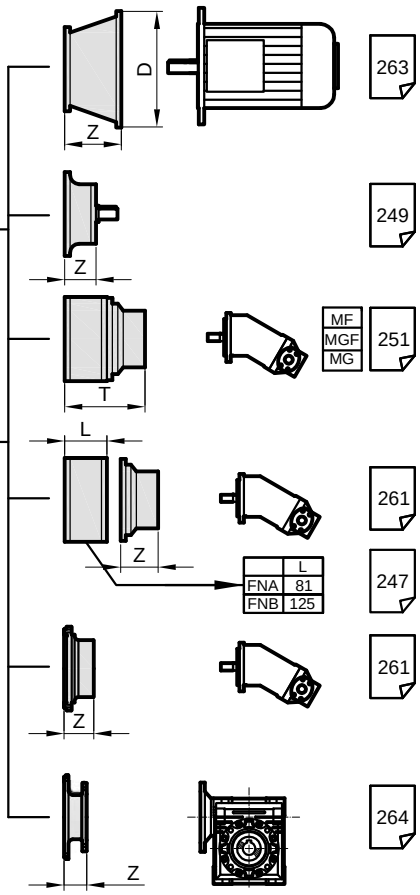


PD..



PDA..



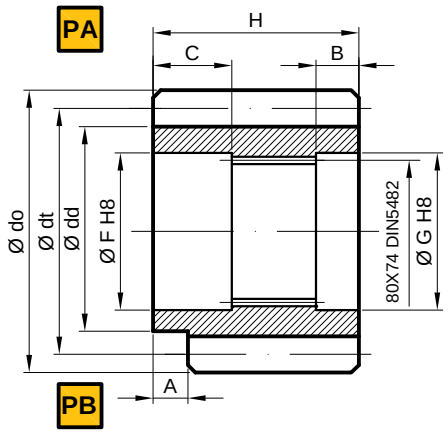


Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	296	105	-
S2	384	88	140	380	317,5	121	142
S3	469	88	140	380	428,5	129	161
S4	503,5	75	93	252	476,5	135	144

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

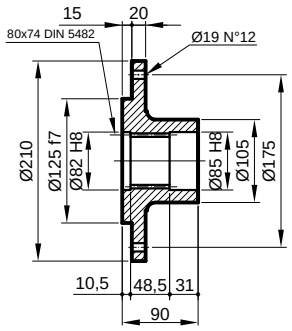
PD/PDA 115

P *Pinyon / Pinion / Ritzel*

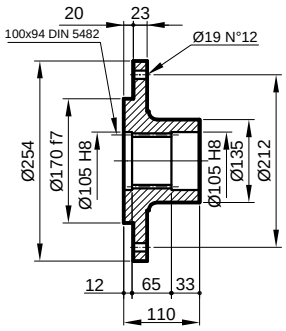


		m	z	x	dd	dt	do	H	A	B	C	F	G	Malzeme *Material* Material	Kod / Code Bestell
PA	M	10	12	0	95	120	140	90	0	10	31	85	80	38NiCrMo4	1501.113.001
PA	M	10	14	0	115	140	160	90	0	10	31	85	80	38NiCrMo4	1501.113.002
PA	P	14	13	1	161	182	224	122	0	24	33	105	105	18NiCrMo5	1501.113.003
PB	M	12	14	0,5	144	168	198	90	13	25	31	85	80	39NiCrMo3	1502.113.001

FL Flanş / *Flange* / Flansch

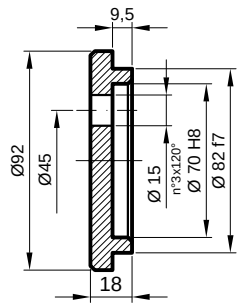


MS Kod / Code / Bestell
1505.111.200



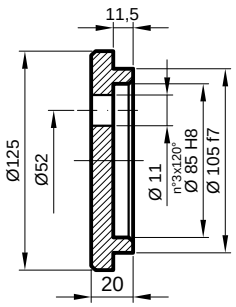
HS Kod / Code / Bestell
1506.113.201

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



MS

Kod / Code / Bestell
1507.111.250

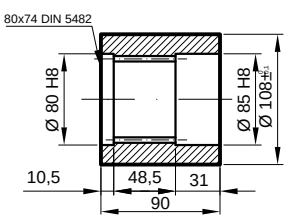


HS

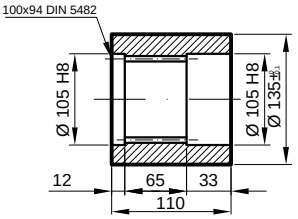
Kod / Code / Bestell
1508.113.251

FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40 / SAE 1040 / DIN Ck40

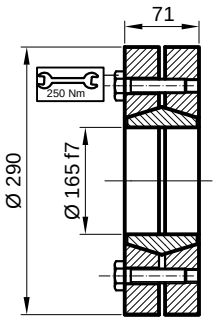


FS Kod / Code / Bestell
1503.111.100



HS Kod / Code / Bestell
1504.113.101

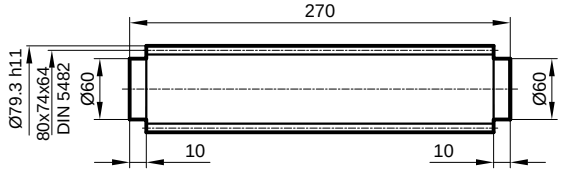
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
35 kNm

Kod / Code / Bestell
2501.113.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo3
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code /Bestell
1509.113.001

PD/PDA 115

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

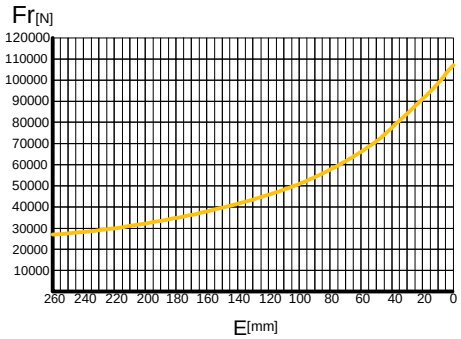
RADIAL LOADS(Fr)

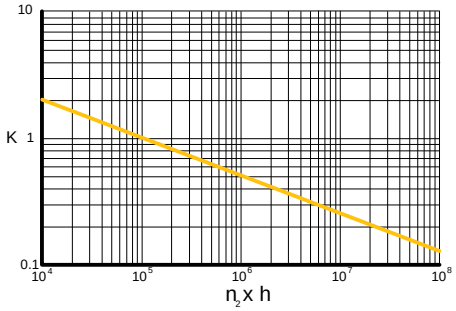
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

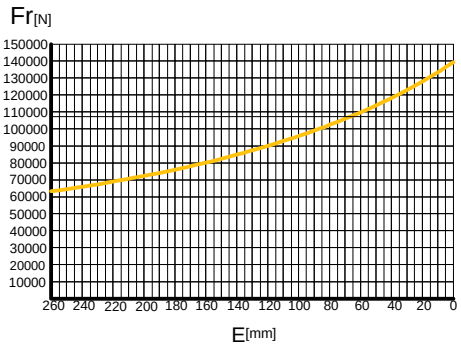
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

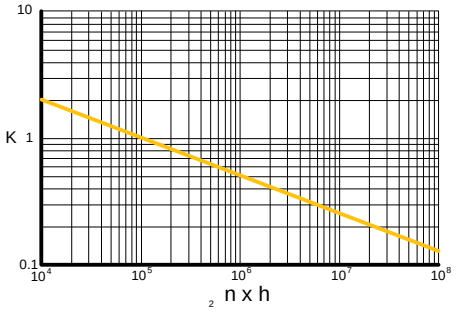
M-FV



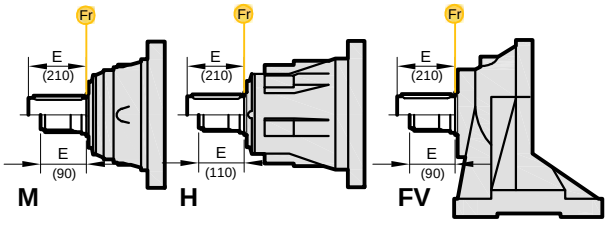


H





	nxh				
	10^5	10^4	10^6	10^7	10^8
M-H	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

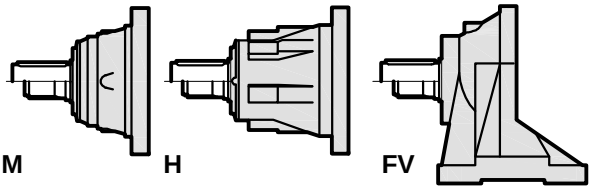
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

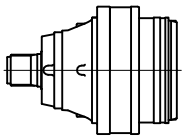
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

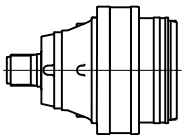
Fa [N]	M-CPC	H	
	45000	85000	←
	65000	85000	→



PD 117

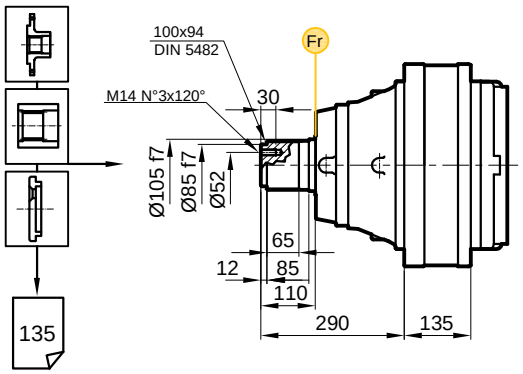
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 117 S1	4.00	34750	30760	26180	23170	1500	61520	50
	5.20	26870	23780	20240	17910	1500	47560	50
	6.25	20730	18350	15620	13820	1500	36700	50
PD 117 S2	14.6	34750	30760	26180	23170	2800	61520	30
	17.7	34750	30760	26180	23170	2800	61520	30
	20.0	34750	30760	26180	23170	2800	61520	30
	23.0	26870	23780	20240	17910	2800	47560	30
	26.0	26870	23780	20240	17910	2800	47560	30
	30.1	26870	23780	20240	17910	2800	47560	30
	36.2	20730	18350	15620	13820	2800	36700	30
	43.7	20730	18350	15620	13820	2800	36700	30
PD 117 S3	55.4	34750	30760	26180	23170	2800	61520	20
	60.5	34750	30760	26180	23170	2800	61520	20
	73.0	34750	30760	26180	23170	2800	61520	20
	88.0	34750	30760	26180	23170	2800	61520	20
	95.0	26870	23780	20240	17910	2800	47560	20
	106.3	34750	30760	26180	23170	2800	61520	20
	114.4	26870	23780	20240	17910	2800	47560	20
	128.4	34750	30760	26180	23170	2800	61520	20
	134.3	26870	23780	20240	17910	2800	47560	20
	156.0	26870	23780	20240	17910	2800	47560	20
	167.0	26870	23780	20240	17910	2800	47560	20
	188.5	26870	23780	20240	17910	2800	47560	20
	218.6	26870	23780	20240	17910	2800	47560	20
	226.5	20730	18350	15620	13820	2800	36700	20
	262.8	20730	18350	15620	13820	2800	36700	20
	317.1	20730	18350	15620	13820	2800	36700	20
PD 117 S4	338.7	34750	30760	26180	23170	2800	61520	15
	373.9	34750	30760	26180	23170	2800	61520	15
	408.3	34750	30760	26180	23170	2800	61520	15
	424.3	34750	30760	26180	23170	2800	61520	15
	455.5	34750	30760	26180	23170	2800	61520	15
	493.2	34750	30760	26180	23170	2800	61520	15
	556.8	34750	30760	26180	23170	2800	61520	15
	617.7	34750	30760	26180	23170	2800	61520	15
	697.4	34750	30760	26180	23170	2800	61520	15
	752.2	26840	23760	20220	17900	2800	47560	15
	803.0	26840	23760	20220	17900	2800	47560	15
	873.6	26840	23760	20220	17900	2800	47560	15
	934.9	26840	23760	20220	17900	2800	47560	15
	1013.3	26840	23760	20220	17900	2800	47560	15
	1126.9	26840	23760	20220	17900	2800	47560	15
	1272.3	26840	23760	20220	17900	2800	47560	15
	1354.4	20730	18350	15620	13820	2800	36700	15
	1475.9	26840	23760	20220	17900	2800	47560	15
	1529.3	20730	18350	15620	13820	2800	36700	15
	1773.9	20730	18350	15620	13820	2800	36700	15
PD 117 S5	840	34750	30760	26180	23170	1500	61520	11
	1012	34750	30760	26180	23170	1500	61520	11
	1220	34750	30760	26180	23170	1500	61520	11
	1316	26870	23780	20240	17910	2800	47560	11
	1438	26870	23780	20240	17910	2800	47560	11
	1627	26870	23780	20240	17910	2800	47560	11
	2457	26870	23780	20240	17910	2800	47560	11

PDA 117

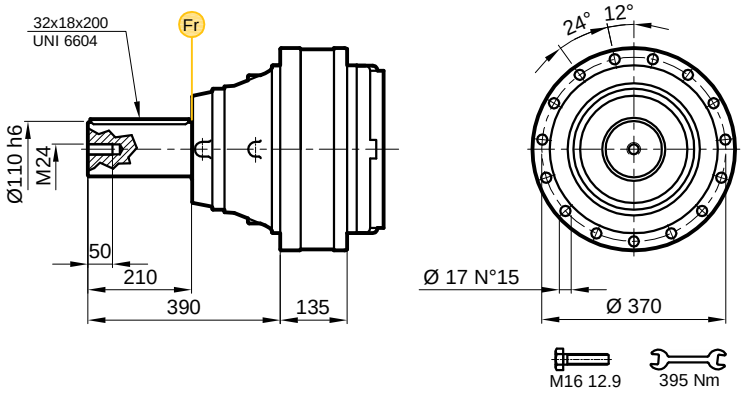
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 117 S2	12.2	34750	30760	26180	23170	2000	61520	30
	15.9	26870	23780	20240	17910	2000	47560	30
	19.1	20730	18350	15620	13820	2000	36700	30
	24.2	26870	23780	20240	17910	2000	47560	30
	29.1	20730	18350	15620	13820	2000	36700	30
PDA 117 S3	50.6	34750	30760	26180	23170	2800	61520	20
	61.2	34750	30760	26180	23170	2800	61520	20
	69.0	34750	30760	26180	23170	2800	61520	20
	79.5	26870	23780	20240	17910	2800	47560	20
	89.8	26870	23780	20240	17910	2800	47560	20
	96.4	34750	30760	26180	23170	2800	61520	20
	104.1	26870	23780	20240	17910	2800	47560	20
	125.3	26870	23780	20240	17910	2800	47560	20
	141.5	26870	23780	20240	17910	2800	47560	20
	164.2	26870	23780	20240	17910	2800	47560	20
	197.3	20730	18350	15620	13820	2800	36700	20
	238.1	20730	18350	15620	13820	2800	36700	20
PDA 117 S4	252.4	34750	30760	26180	23170	2800	61520	15
	284.9	34750	30760	26180	23170	2800	61520	15
	303.9	34750	30760	26180	23170	2800	61520	15
	364.3	34750	30760	26180	23170	2800	61520	15
	397.8	34750	30760	26180	23170	2800	61520	15
	449.1	34750	30760	26180	23170	2800	61520	15
	498.2	34750	30760	26180	23170	2800	61520	15
	562.5	34750	30760	26180	23170	2800	61520	15
	651.1	26870	23780	20240	17910	2800	47560	15
	731.3	26870	23780	20240	17910	2800	47560	15
	789.4	34750	30760	26180	23170	2800	61520	15
	985.2	26870	23780	20240	17910	2800	47560	15
	1190.4	26870	23780	20240	17910	2800	47560	15
	1430.8	20730	18350	15620	13820	2800	36700	15
	1726.8	20730	18350	15620	13820	2800	36700	15

PD/PDA 117

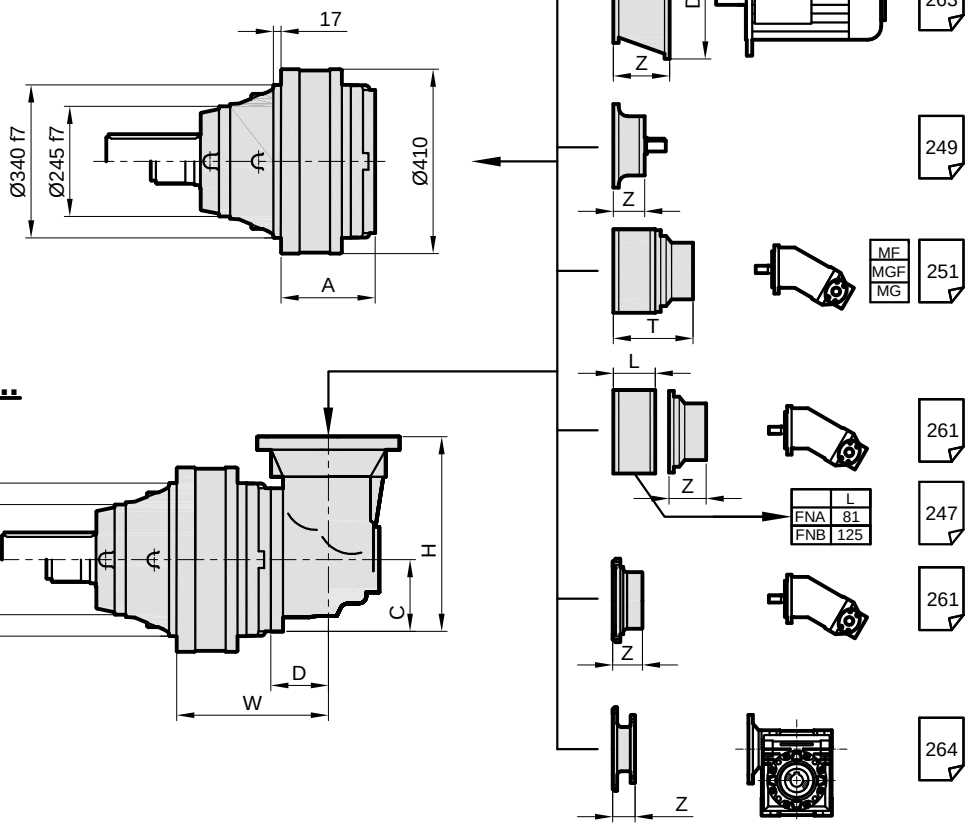
MS



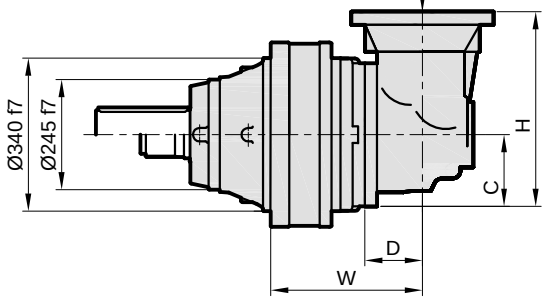
MC



PD..



PDA..

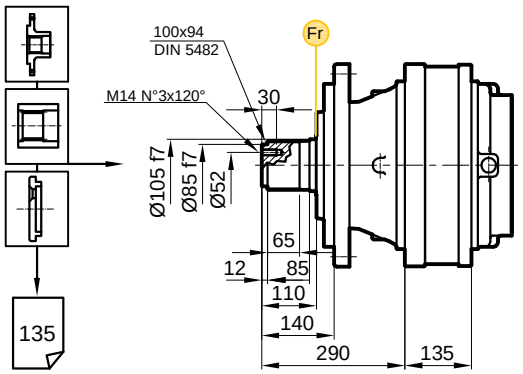


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	217	183	-
S2	297	88	235	550	311	210	279
S3	399	88	140	380	370,5	222	247
S4	472	88	140	380	418,5	228	262

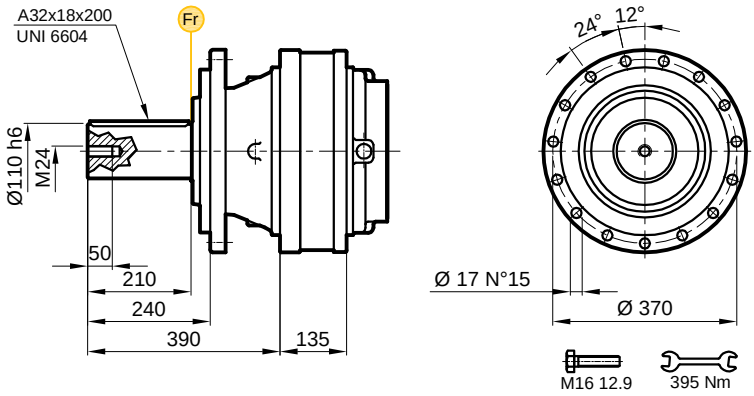
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 117

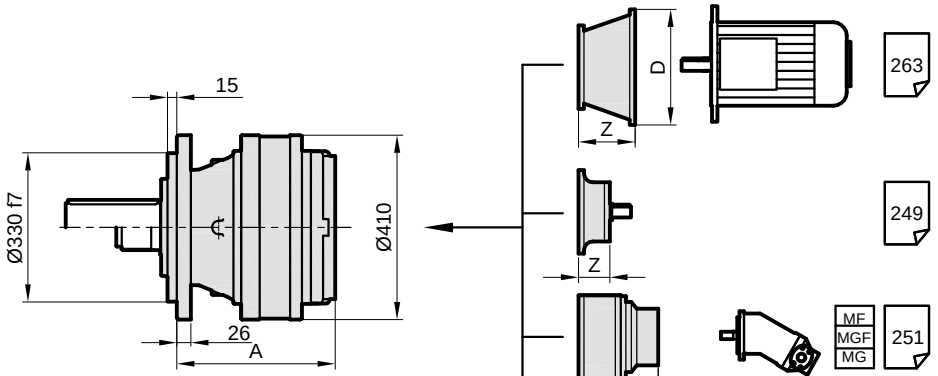
FS



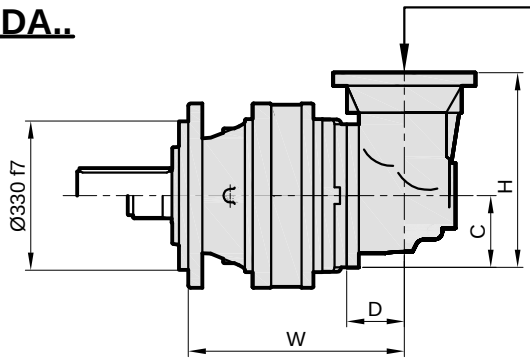
FC

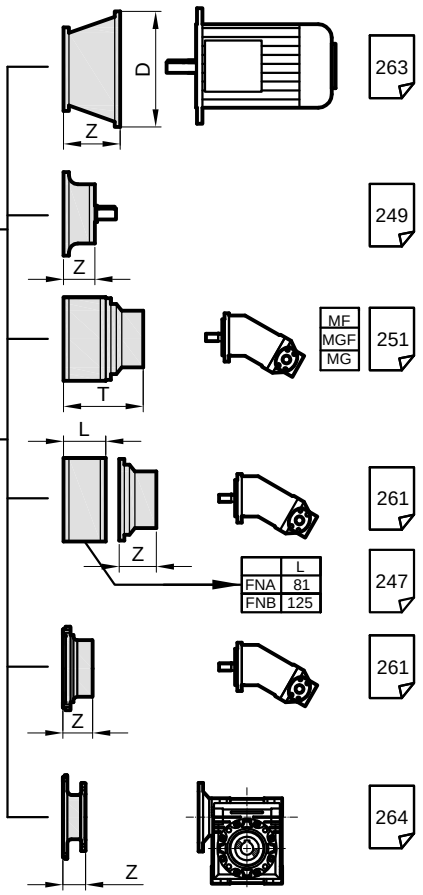


PD..



PDA..



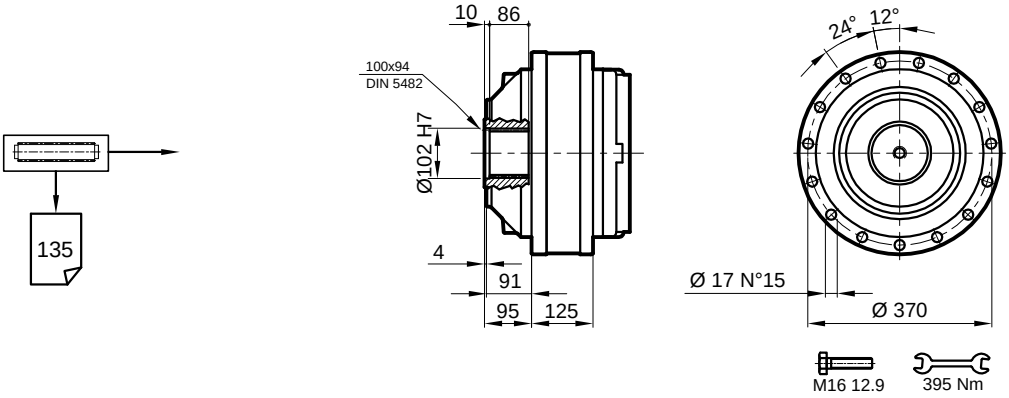


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	371	206	-
S2	451	88	235	550	465	233	302
S3	553	88	140	380	524,5	245	270
S4	626	88	140	380	572,5	251	285

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

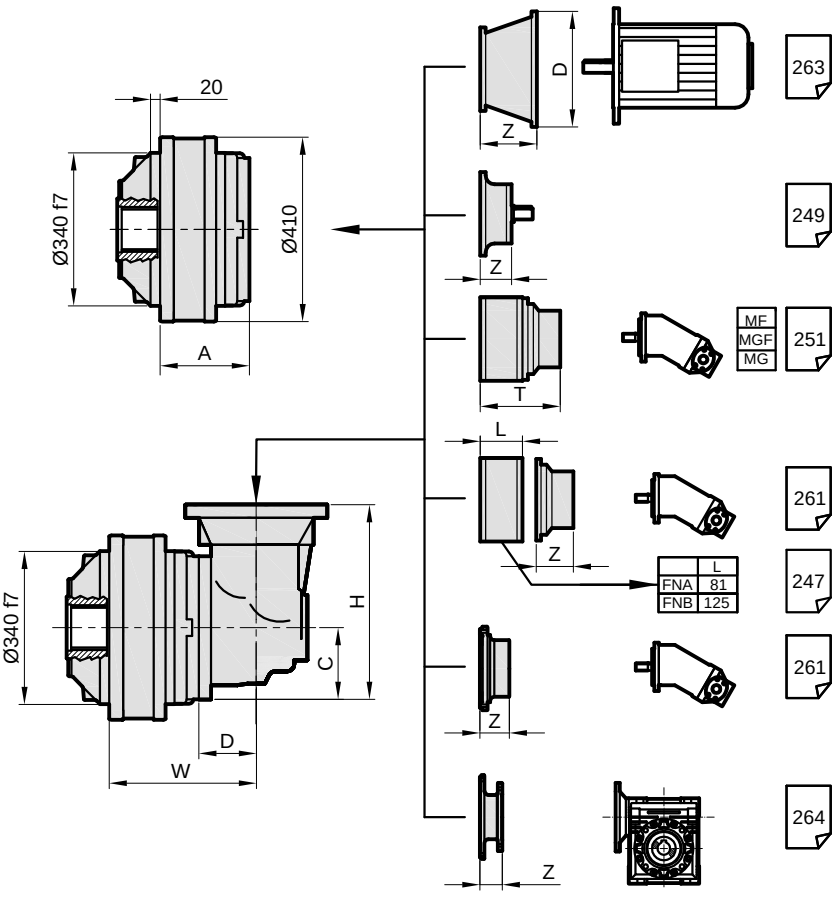
PD/PDA 117

S



PD..

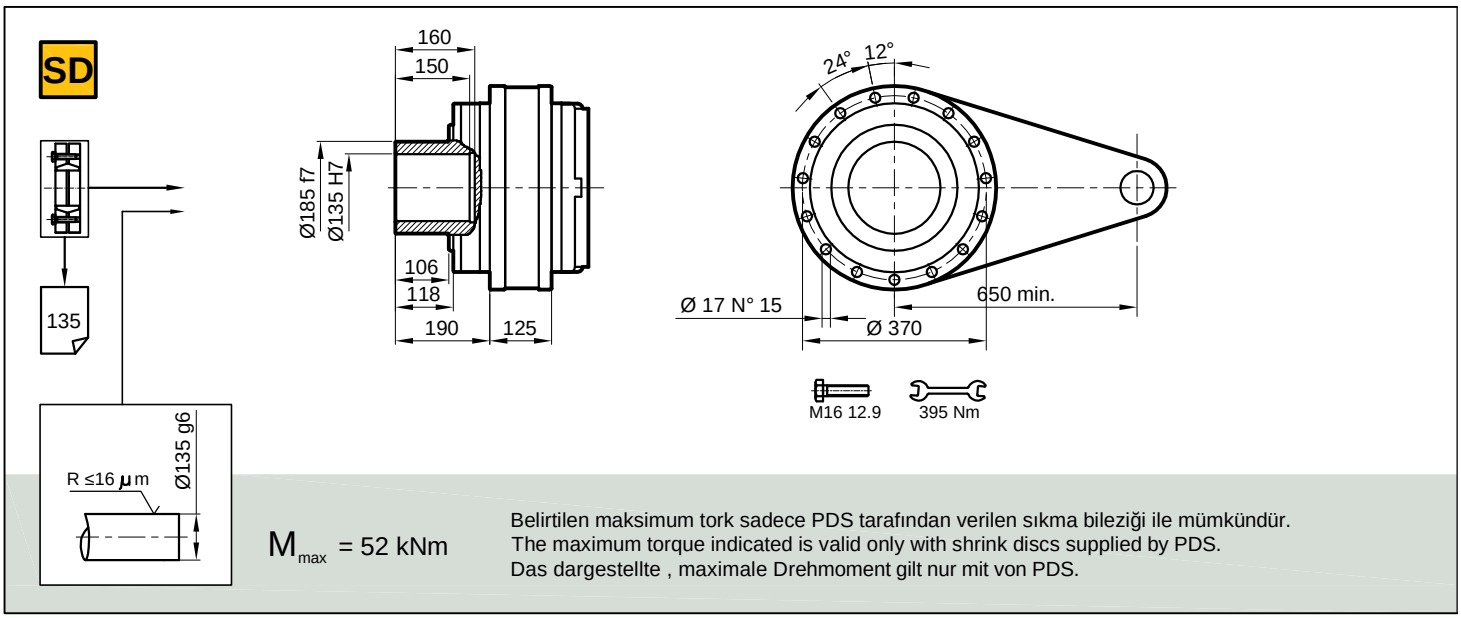
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	207	147	-
S2	287	88	235	550	301	174	242
S3	389	88	140	380	360,5	186	211
S4	462	88	140	380	408,5	192	226

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

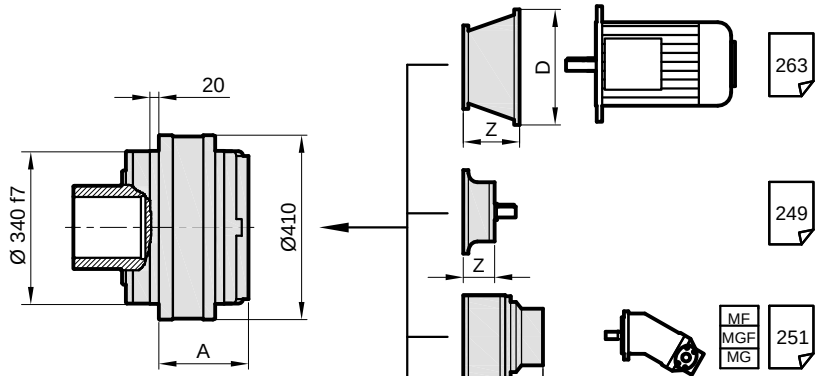
PD/PDA 117



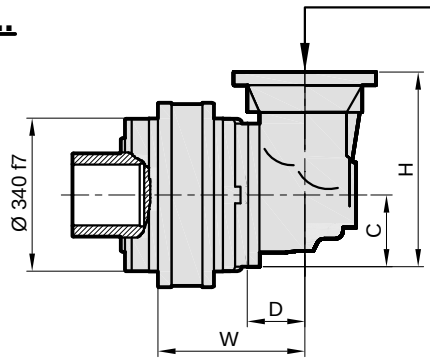
M_{max} = 52 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..

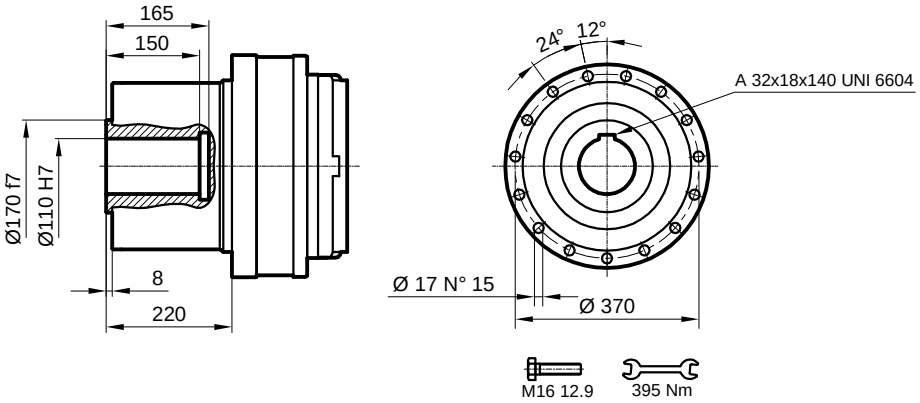


Stage	W	D	C	H	A	PD / SD	PDA / SD
S1	-	-	-	-	207	155	-
S2	287	88	235	550	301	182	250
S3	389	88	140	380	360,5	194	219
S4	462	88	140	380	408,5	200	234

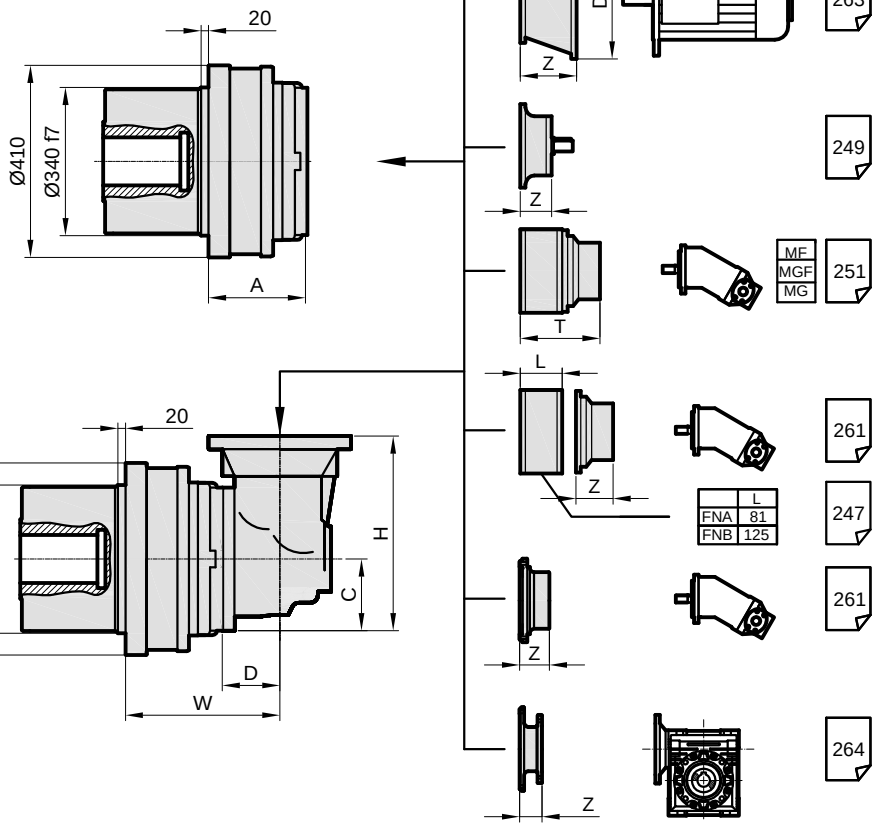
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 117

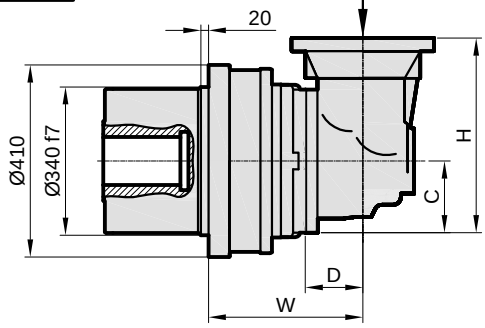
DKM



PD..



PDA..

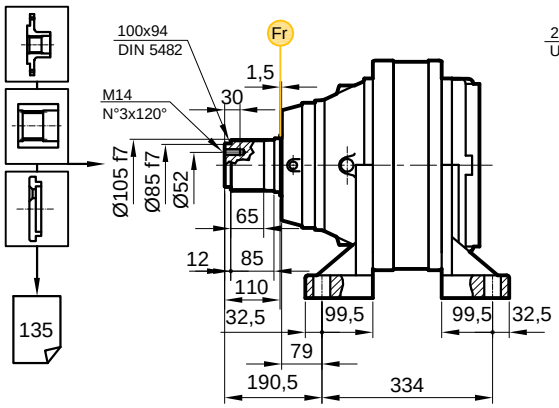


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	221	147	-
S2	301	88	235	550	315	174	242
S3	403	88	140	380	375	186	211
S4	476	88	140	380	422	192	226

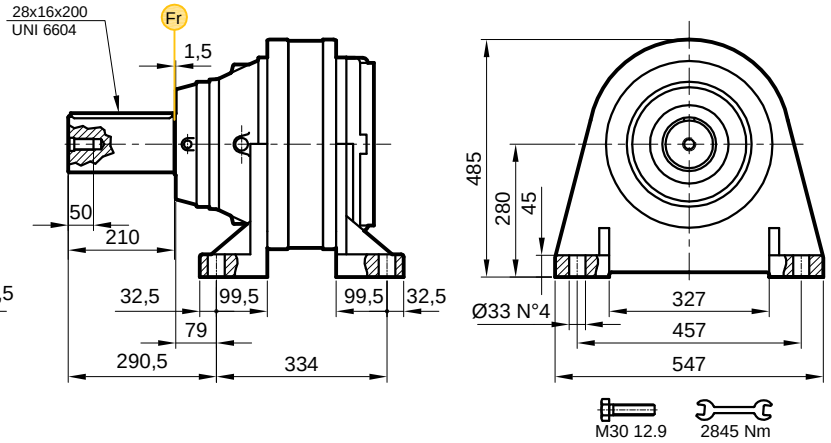
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 117

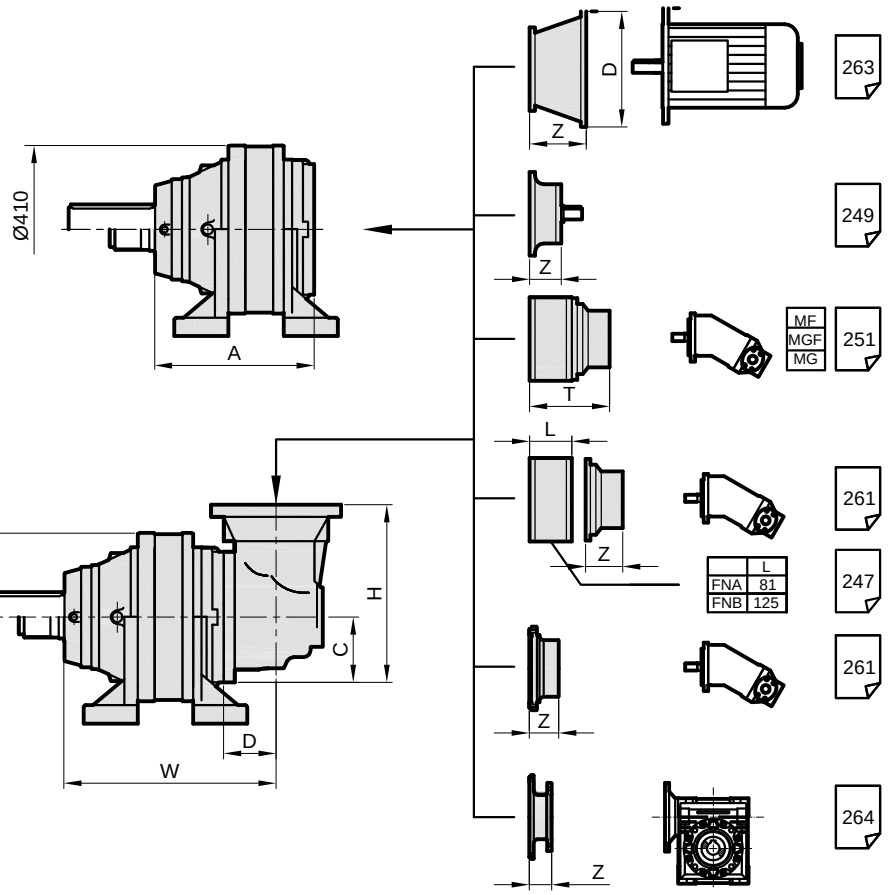
FVS



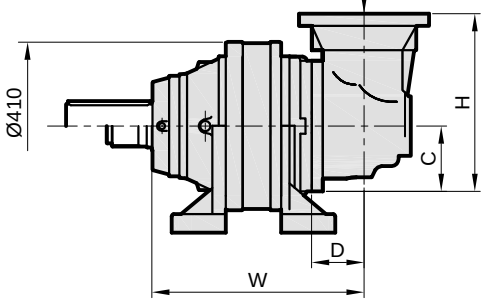
FVC



PD..



PDA..

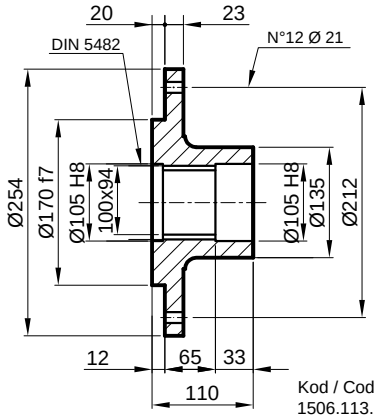


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	397	244	-
S2	477	88	235	550	491	271	340
S3	579	88	140	380	550,5	283	308
S4	638,5	88	140	380	598,5	289	323

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

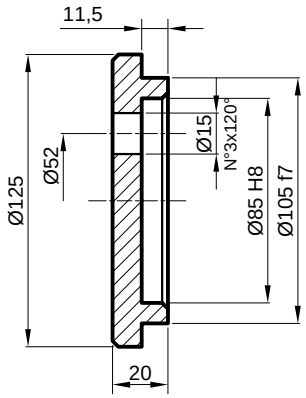
PD/PDA 117

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1506.113.201

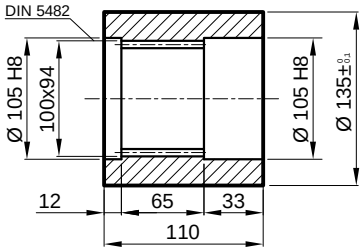
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1508.113.251

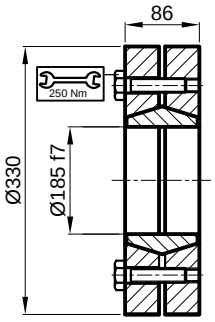
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1504.113.101

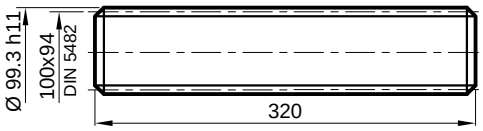
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
52 kNm

Kod / Code / Bestell
2501.117.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo5
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.117.260

PD/PDA 117

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

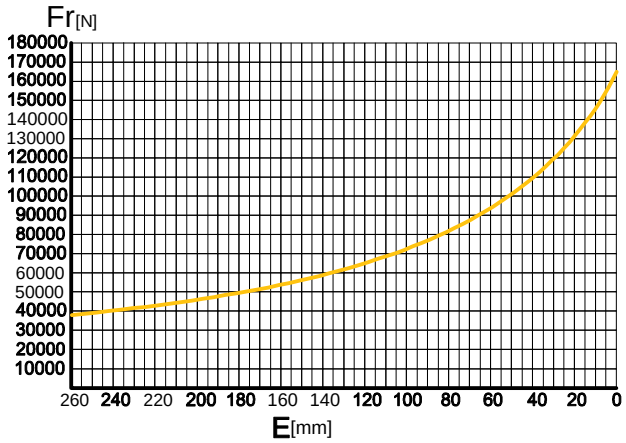
RADIAL LOADS(Fr)

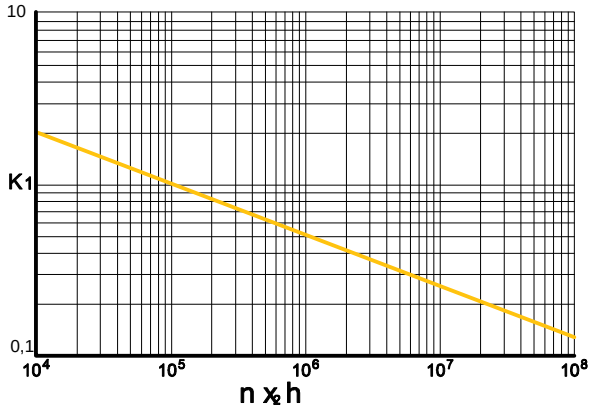
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

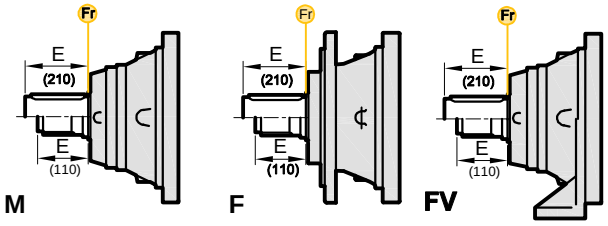
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-F-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M-F	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

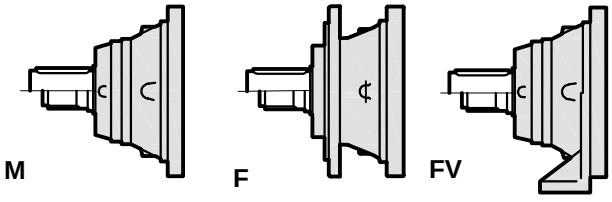
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

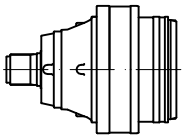
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

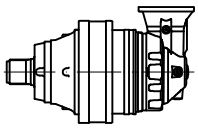
Fa [N]	M-F	FV	
	75000	75000	←
	95000	95000	→



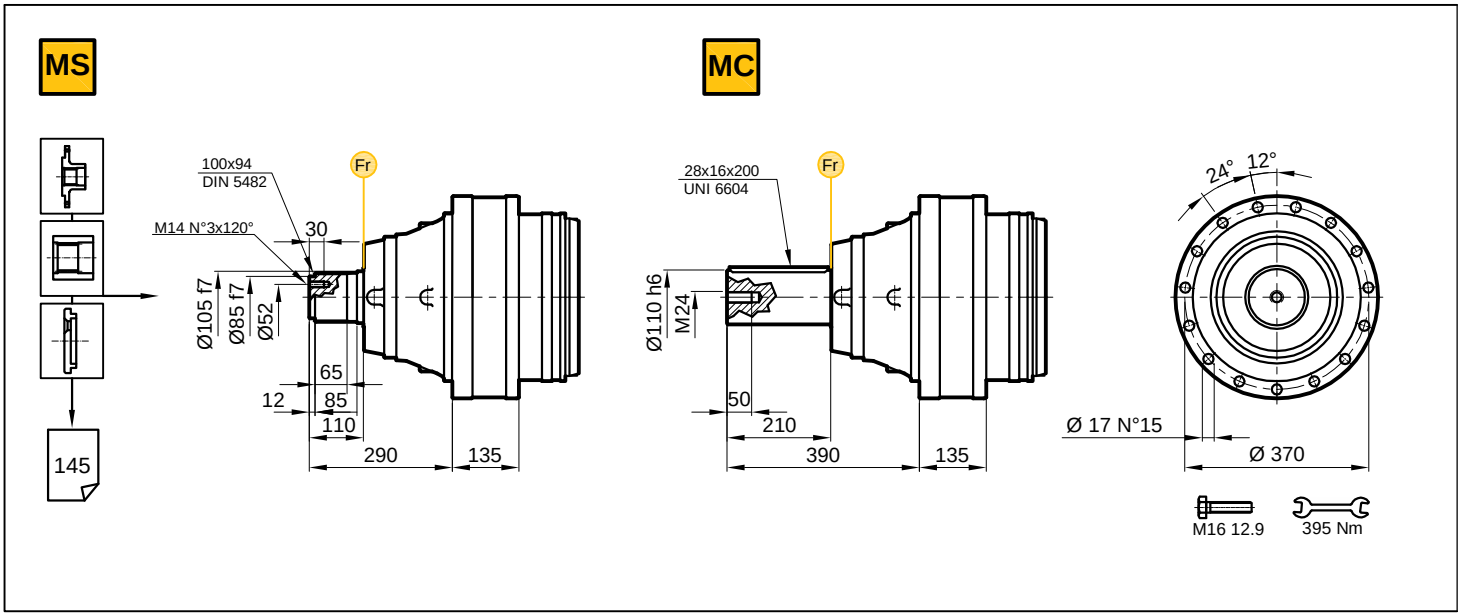
PD 119

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 119 S2	14.2	34750	30760	26180	23170	2000	61520	34
	17.1	34750	30760	26180	23170	2000	61520	34
	22.4	34750	30760	26180	23170	2000	61520	34
	29.1	26870	23780	20240	17910	2000	47560	34
	35.1	26870	23780	20240	17910	2000	47560	34
PD 119 S3	64.6	34750	30760	26180	23170	2800	61520	23
	73.5	34750	30760	26180	23170	2800	61520	23
	88.6	34750	30760	26180	23170	2800	61520	23
	102.9	34750	30760	26180	23170	2800	61520	23
	124.3	34750	30760	26180	23170	2800	61520	23
	134.4	34750	30760	26180	23170	2800	61520	23
PD 119 S4	251.4	34750	30760	26180	23170	2800	61520	17
	300.9	34750	30760	26180	23170	2800	61520	17
	314.9	34750	30760	26180	23170	2800	61520	17
	328.5	34750	30760	26180	23170	2800	61520	17
	362.6	34750	30760	26180	23170	2800	61520	17
	379.6	34750	30760	26180	23170	2800	61520	17
	396.0	34750	30760	26180	23170	2800	61520	17
	427.0	34750	30760	26180	23170	2800	61520	17
	477.3	34750	30760	26180	23170	2800	61520	17
	517.4	34750	30760	26180	23170	2800	61520	17
	576.0	34750	30760	26180	23170	2800	61520	17
	623.7	34750	30760	26180	23170	2800	61520	17
	694.3	34750	30760	26180	23170	2800	61520	17
	752.6	34750	30760	26180	23170	2800	61520	17
	838.9	34750	30760	26180	23170	2800	61520	17
	1015.5	26870	23780	20240	17910	2800	47560	17
	1425.0	26870	23780	20240	17910	2800	47560	17

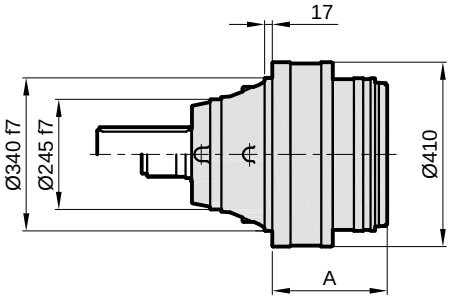
PDA 119

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 119 S3	59.2	34750	30760	26180	23170	2800	61520	23
	77.4	34750	30760	26180	23170	2800	61520	23
	93.3	34750	30760	26180	23170	2800	61520	23
	121.0	34750	30760	26180	23170	2800	61520	23
	158.6	26870	23780	20240	17910	2800	47560	23
	191.1	26870	23780	20240	17910	2800	47560	23
PDA 119 S4	306.0	34750	30760	26180	23170	2800	61520	17
	352.6	34750	30760	26180	23170	2800	61520	17
	385.0	34750	30760	26180	23170	2800	61520	17
	460.7	34750	30760	26180	23170	2800	61520	17
	519.8	26870	23780	20240	17910	2800	47560	17
	598.9	26870	23780	20240	17910	2800	47560	17
	676.7	34750	30760	26180	23170	2800	61520	17
	729.3	26870	23780	20240	17910	2800	47560	17
	819.1	26870	23780	20240	17910	2800	47560	17
	951.2	26870	23780	20240	17910	2800	47560	17
	1385.5	26870	23780	20240	17910	2800	47560	17

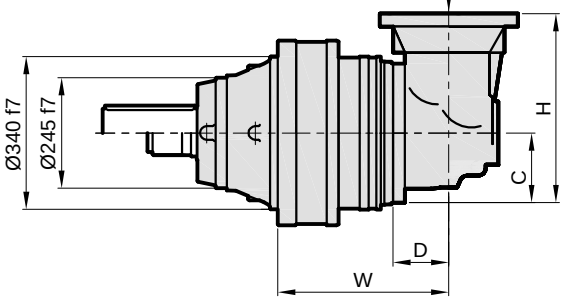
PD/PDA 119

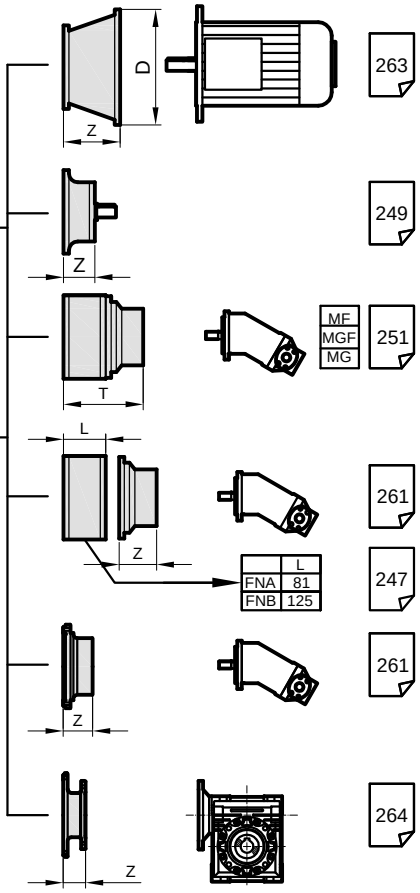


PD..



PDA..

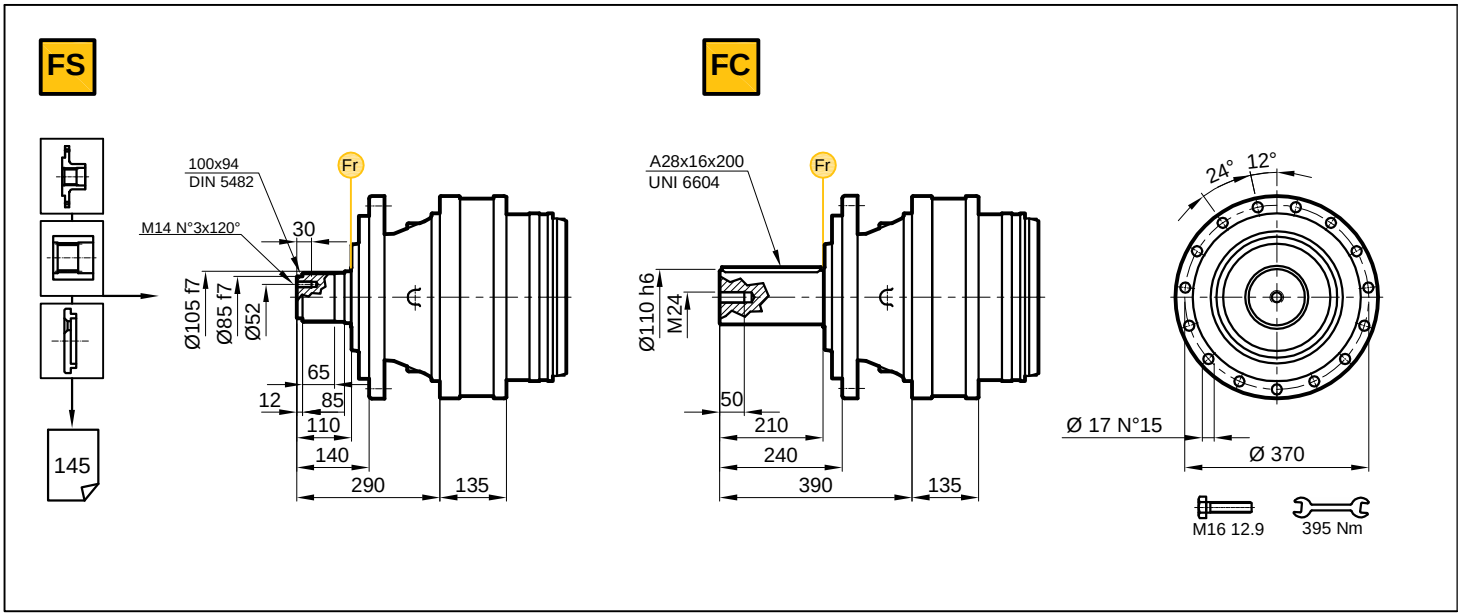




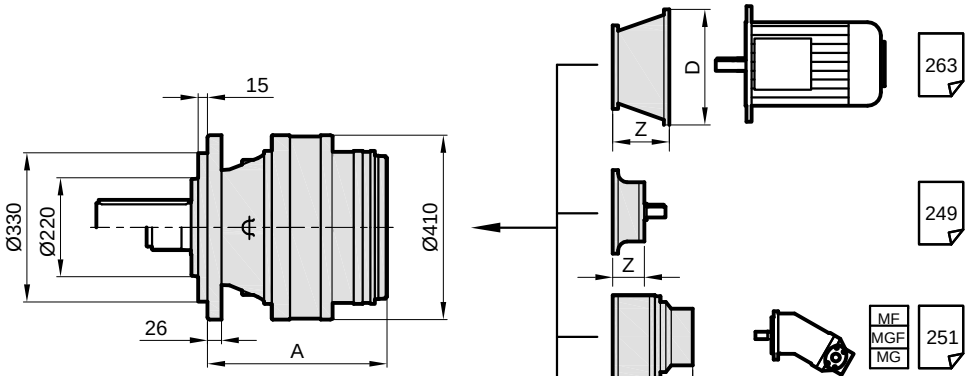
Stage	W	D	C	H	A	PD M	PDA M
S2	-	-	-	-	319	237	-
S3	407	88	140	380	390,5	253	336
S4	478,5	88	140	380	451,5	261	293

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

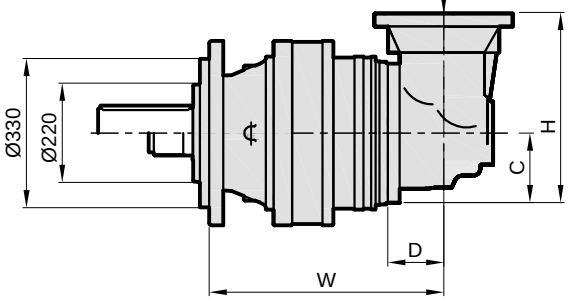
PD/PDA 119

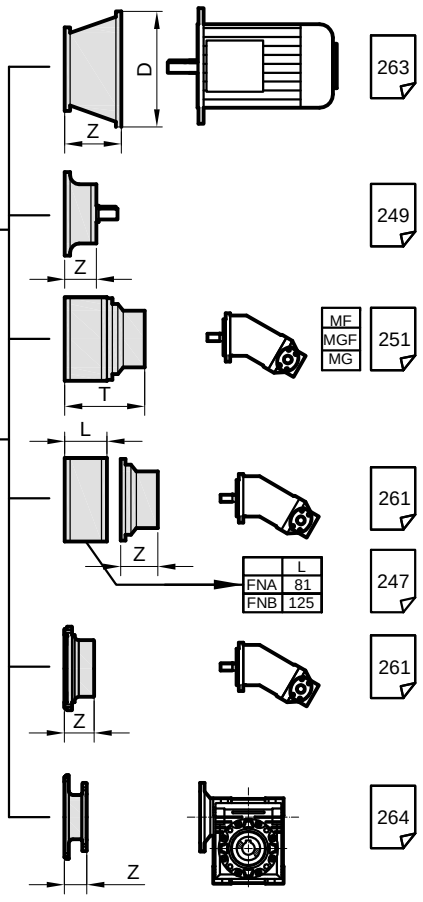


PD..



PDA..



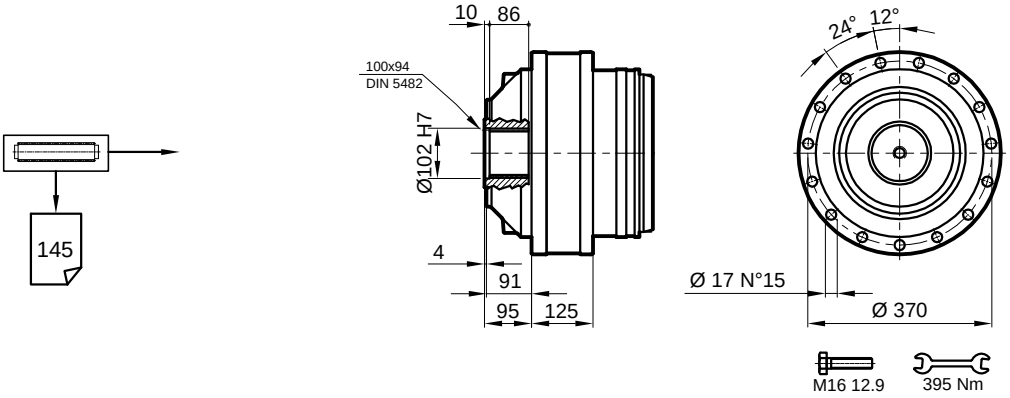


Stage	W	D	C	H	A	PD F	PDA F
S2	-	-	-	-	473	260	-
S3	561	88	140	380	544,5	276	359
S4	632,5	88	140	380	605,5	284	316

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

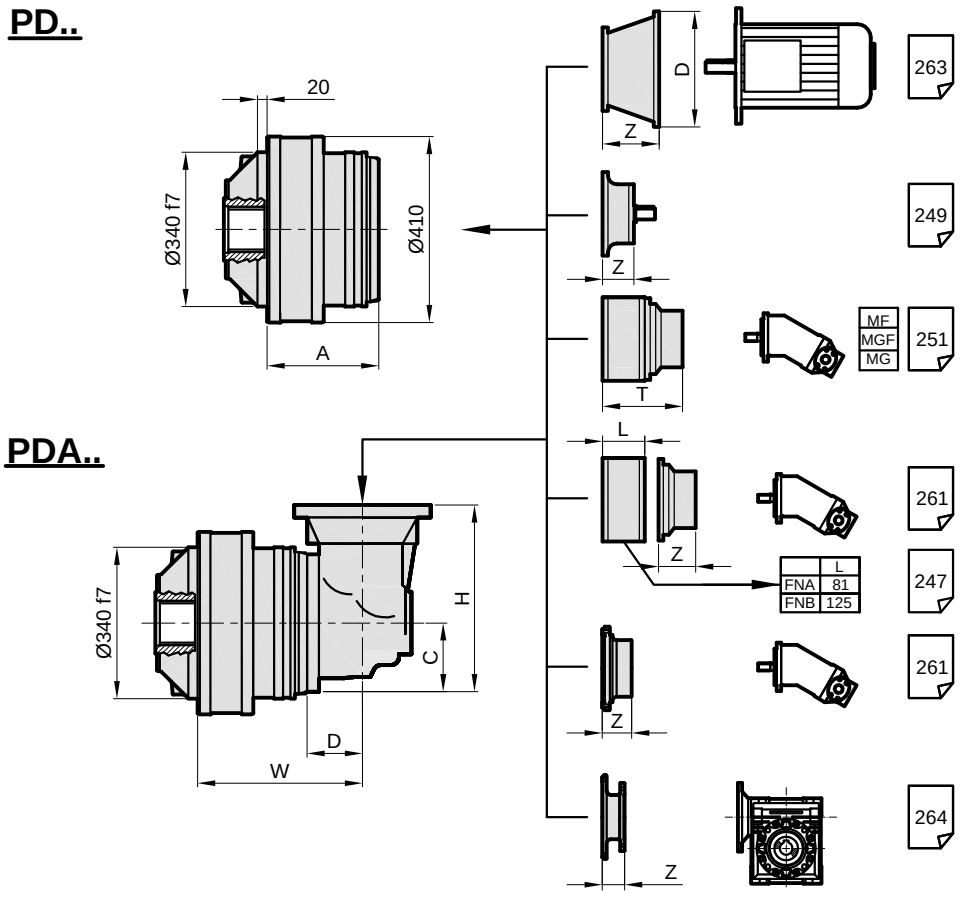
PD/PDA 119

S



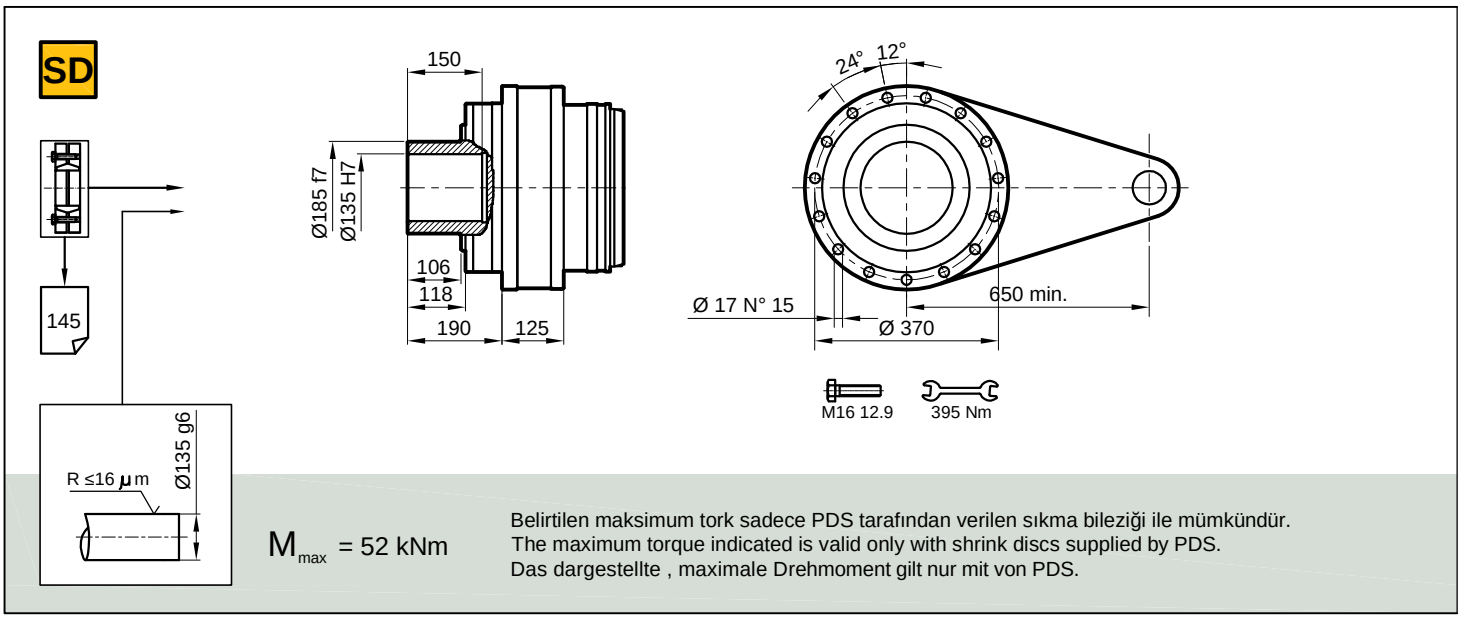
PD..

PDA..



	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

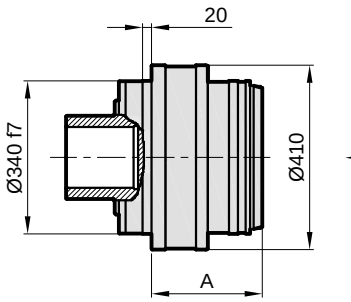
PD/PDA 119



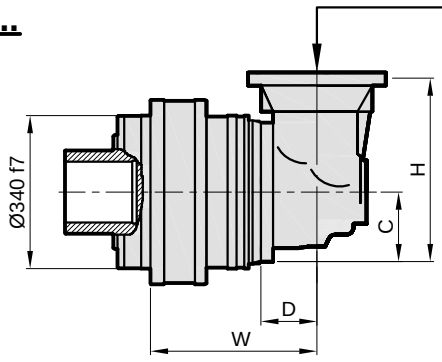
M_{max} = 52 kNm

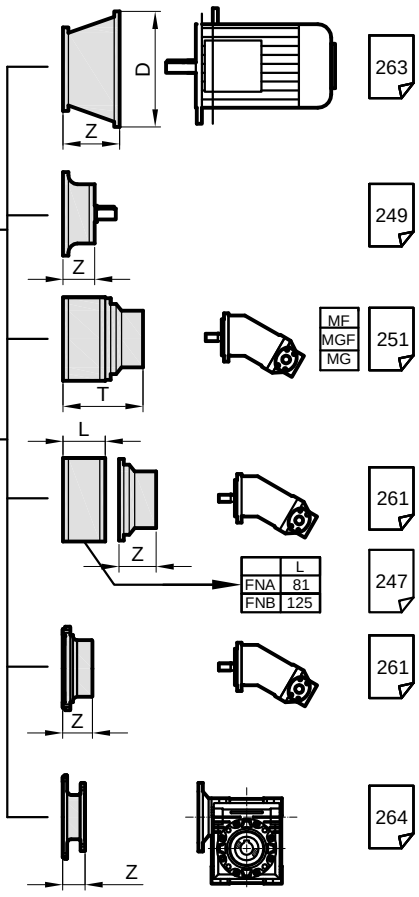
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



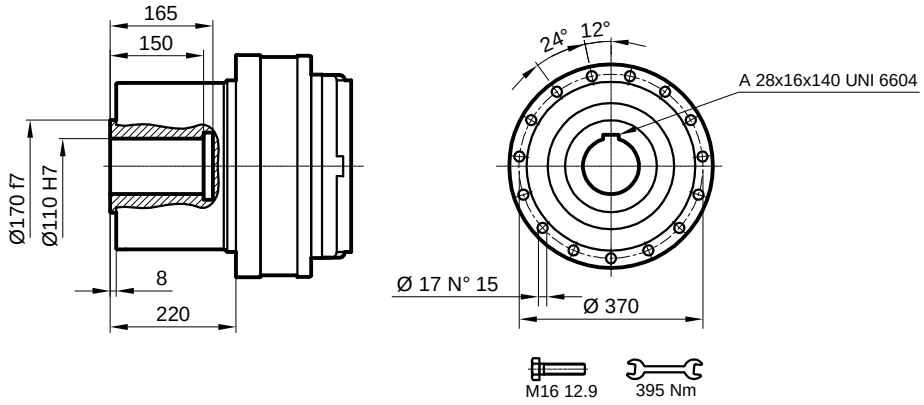


Stage	W	D	C	H	A	PD SD	PDA SD
S2	-	-	-	-	309	204	-
S3	397	88	140	380	380,5	220	307
S4	468,5	88	140	380	441,5	228	260

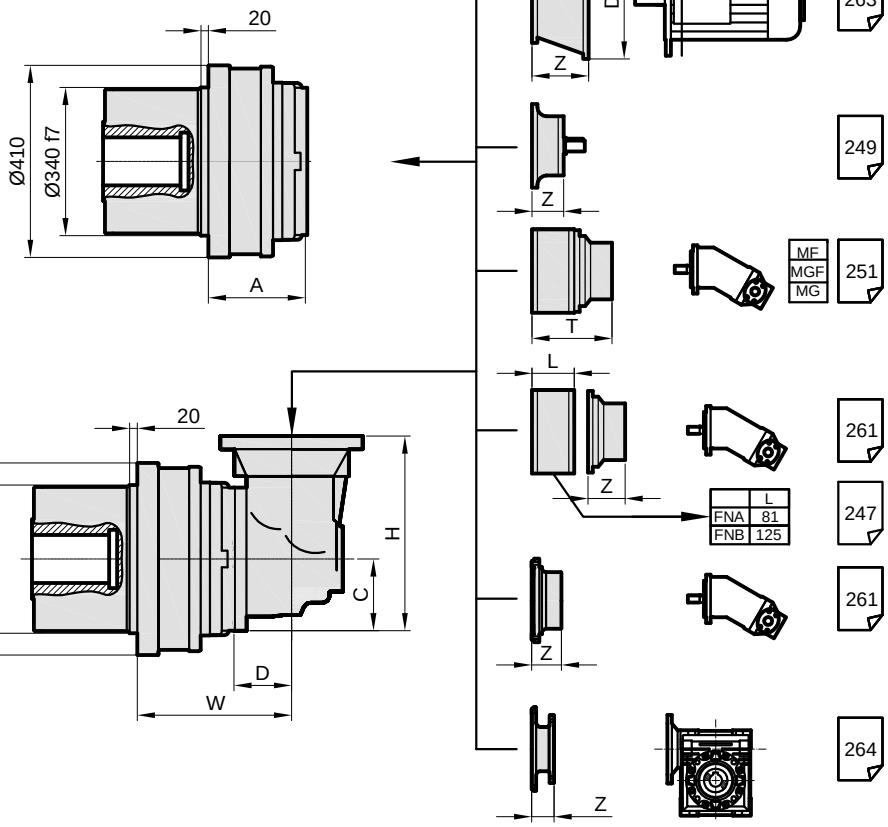
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 119

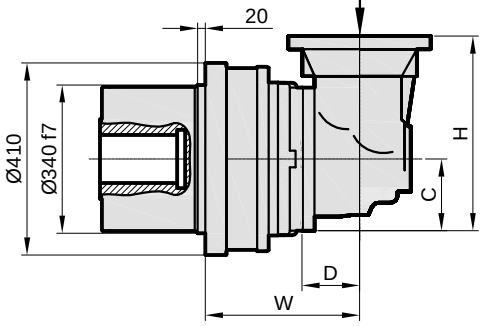
DKM



PD..



PDA..

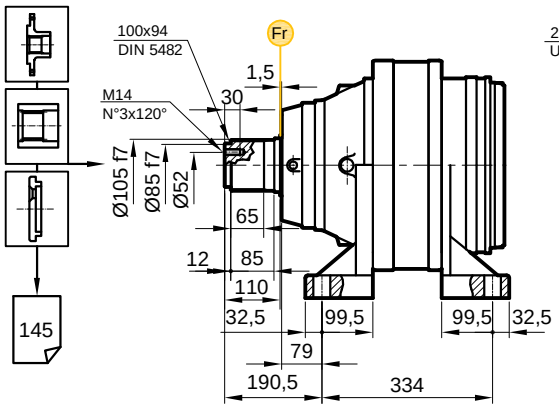


Stage	W	D	C	H	A	PD S	PDA S
S2	-	-	-	-	323	196	-
S3	411	88	140	380	395	212	299
S4	482	88	140	380	455	220	252

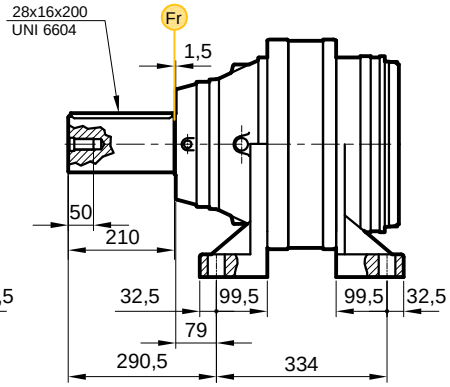
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

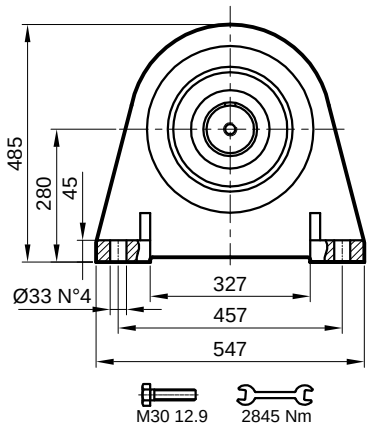
PD/PDA 119

FVS

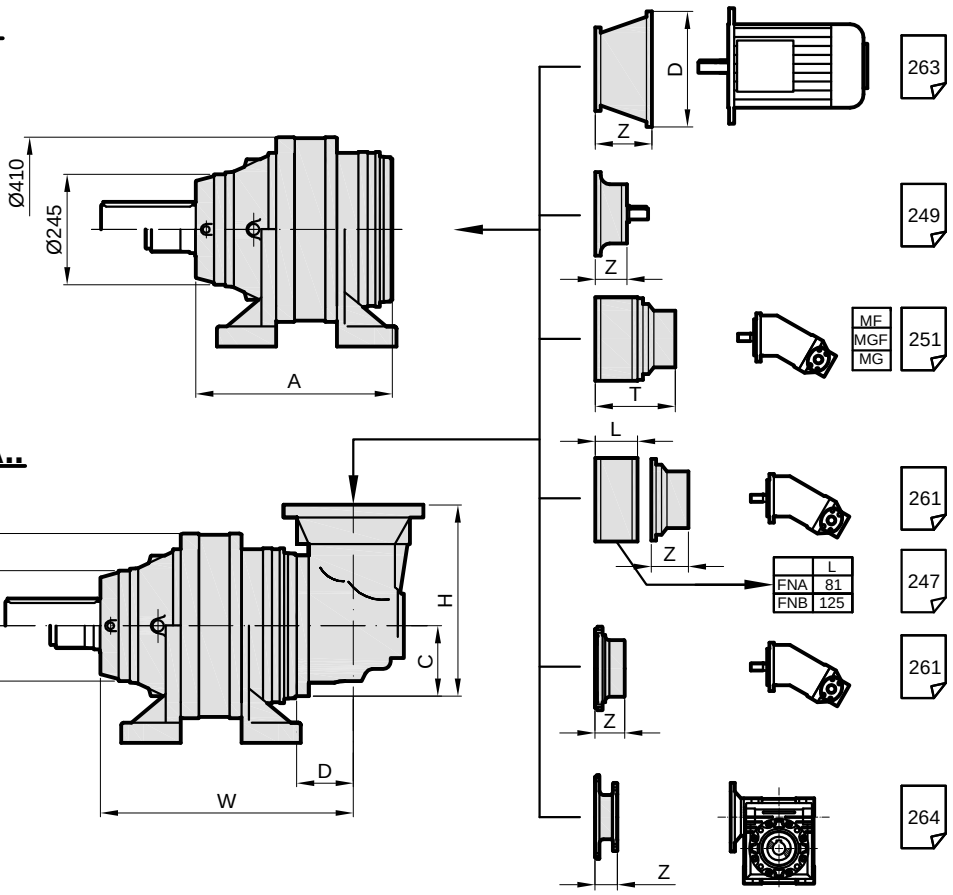


FVC





PD..

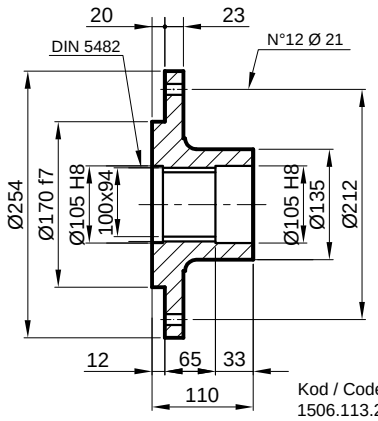


Stage	W	D	C	H	A	PD FVC	PDA FVC
S2	-	-	-	-	499	298	-
S3	585,5	88	140	380	570,5	314	397
S4	657	88	140	380	631,5	322	354

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

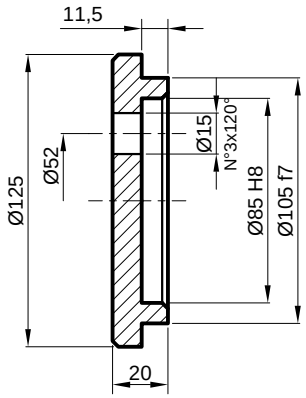
PD/PDA 119

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1506.113.201

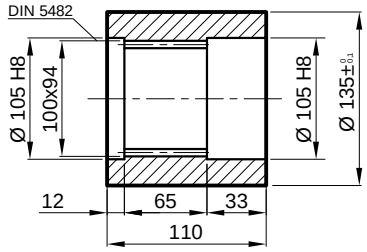
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1508.113.251

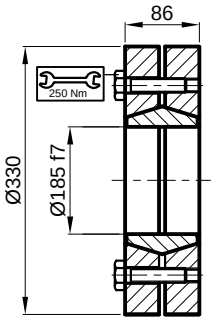
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1504.113.101

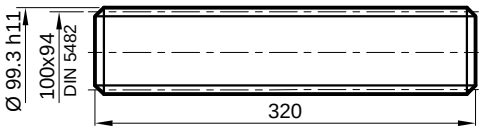
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
52 kNm

Kod / Code / Bestell
2501.117.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo5
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.117.260

PD/PDA 119

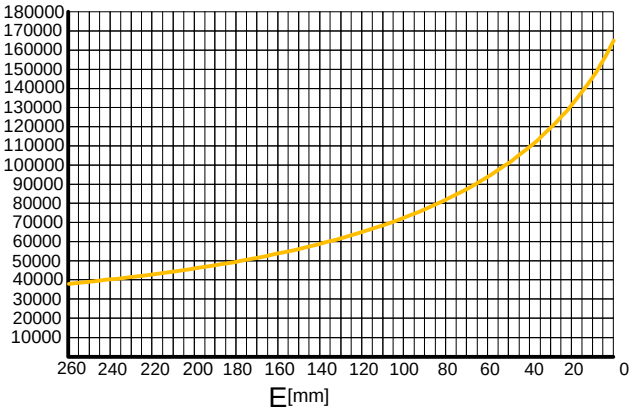
RADYAL YÜK(Fr)
Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

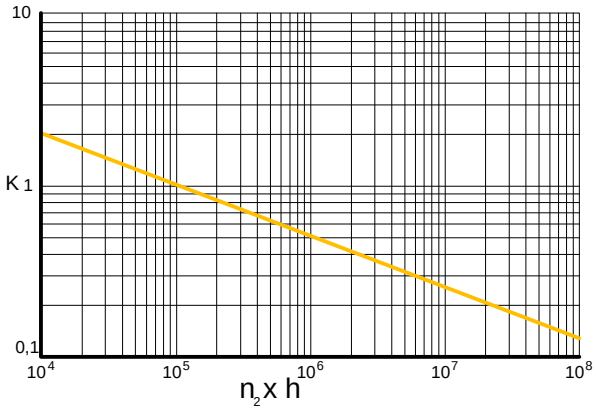
RADIAL LOADS(Fr)
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

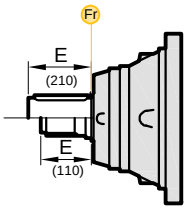
M-FV

Fr[N]

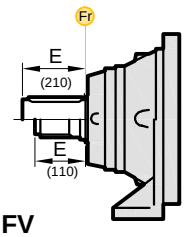




	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



M



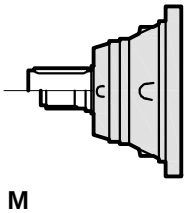
FV

AKSİYEL YÜKLER (Fa)
Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

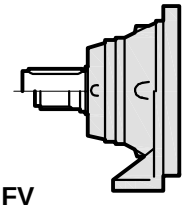
AXIAL LOADS (Fa)
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	75000	75000	←
	95000	95000	→

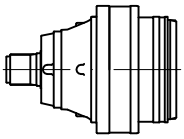


M

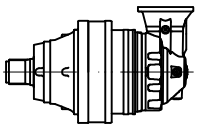


FV

PD 121

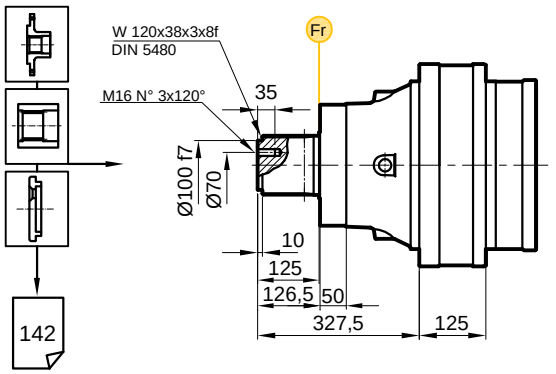
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 121 S1	4.00	42370	37500	31910	28250	1500	61875	54
	4.71	36110	31960	27200	24070	1500	52764	54
	5.85	26710	23640	20120	17800	1500	47280	54
PD 121 S2	14.2	42370	37500	31910	28250	2000	61875	34
	17.1	42370	37500	31910	28250	2000	61875	34
	20.2	36110	31960	27200	24070	2000	52764	34
	22.4	42370	37500	31910	28250	2000	61875	34
	26.4	36110	31960	27200	24070	2000	52764	34
	31.8	36110	31960	27200	24070	2000	52764	34
	40.8	36110	31960	27200	24070	2000	52764	34
	50.7	26710	23640	20120	17800	2000	47820	34
PD 121 S3	53.7	42370	37500	31910	28250	2800	61875	23
	58.7	42370	37500	31910	28250	2800	61875	23
	64.8	42370	37500	31910	28250	2800	61875	23
	70.7	42370	37500	31910	28250	2800	61875	23
	83.2	36110	31960	27200	24070	2800	52764	23
	88.6	42370	37500	31910	28250	2800	61875	23
	99.6	36110	31960	27200	24070	2800	52764	23
	108.7	36110	31960	27200	24070	2800	52764	23
	121.0	36110	31960	27200	24070	2800	52764	23
	136.2	36110	31960	27200	24070	2800	52764	23
	158.1	36110	31960	27200	24070	2800	52764	23
	164.1	36110	31960	27200	24070	2800	52764	23
	191.1	36110	31960	27200	24070	2800	52764	23
	230.3	36110	31960	27200	24070	2800	52764	23
	191.0	42370	37500	31910	28250	2800	61875	23
	208.6	42370	37500	31910	28250	2800	61875	23
	230.3	42370	37500	31910	28250	2800	61875	23
	286.3	26710	23640	20120	17800	2800	47820	23
PD 121 S4	251.4	42370	37500	31910	28250	2800	61875	17
	277.6	42370	37500	31910	28250	2800	61875	17
	303.1	42370	37500	31910	28250	2800	61875	17
	328.5	42370	37500	31910	28250	2800	61875	17
	362.7	42370	37500	31910	28250	2800	61875	17
	379.6	42370	37500	31910	28250	2800	61875	17
	437.1	42370	37500	31910	28250	2800	61875	17
	496.0	42370	37500	31910	28250	2800	61875	17
	583.5	36110	31960	27200	24070	2800	52764	17
	677.7	36110	31960	27200	24070	2800	52764	17
	703.4	36110	31960	27200	24070	2800	52764	17
	762.5	36110	31960	27200	24070	2800	52764	17
	816.8	36110	31960	27200	24070	2800	52764	17
	987.0	36110	31960	27200	24070	2800	52764	17
	1067.3	36110	31960	27200	24070	2800	52764	17
	1289.7	36110	31960	27200	24070	2800	52764	17
	1555.8	36110	31960	27200	24070	2800	52764	17
	2482.1	26710	23640	20120	17800	2800	47820	17

PDA 121

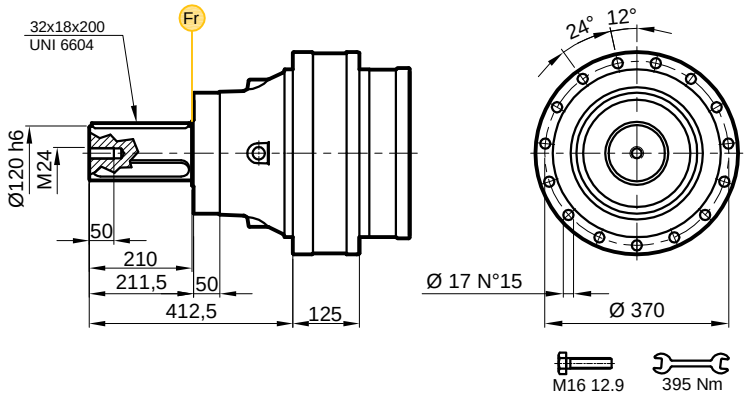
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 121 S2	12.3	42370	37500	31910	28250	2000	61875	34
	14.5	36110	31960	27200	24070	2000	52734	34
	18.7	42370	37500	31910	28250	2000	64875	34
	22.0	36110	31960	27200	24070	2000	52734	34
PDA 121 S3	43.7	42370	37500	31910	28250	2800	61875	34
	52.7	42370	37500	31910	28250	2800	61875	23
	66.4	42370	37500	31910	28250	2800	61875	23
	80.0	42370	37500	31910	28250	2800	61875	23
	94.1	36110	31960	27200	24070	2800	52734	23
	123.0	36110	31960	27200	24070	2800	52734	23
PDA 121 S4	185.6	42370	37500	31910	28250	2800	61875	17
	202.7	42370	37500	31910	28250	2800	61875	17
	223.7	42370	37500	31910	28250	2800	61875	17
	244.3	42370	37500	31910	28250	2800	61875	17
	292.5	42370	37500	31910	28250	2800	61875	17
	319.4	42370	37500	31910	28250	2800	61875	17
	352.6	42370	37500	31910	28250	2800	61875	17
	385.0	42370	37500	31910	28250	2800	61875	17
	414.8	36110	31960	27200	24070	2800	52724	17
	452.9	36110	31960	27200	24070	2800	52724	17
	542.0	36110	31960	27200	24070	2800	52724	17
	591.8	36110	31960	27200	24070	2800	52724	17
	658.8	36110	31960	27200	24070	2800	52724	17
	741.3	36110	31960	27200	24070	2800	52724	17
	860.9	36110	31960	27200	24070	2800	52724	17
	1037.7	36110	31960	27200	24070	2800	52724	17
	1253.8	36110	31960	27200	24070	2800	52724	17

PD/PDA 121

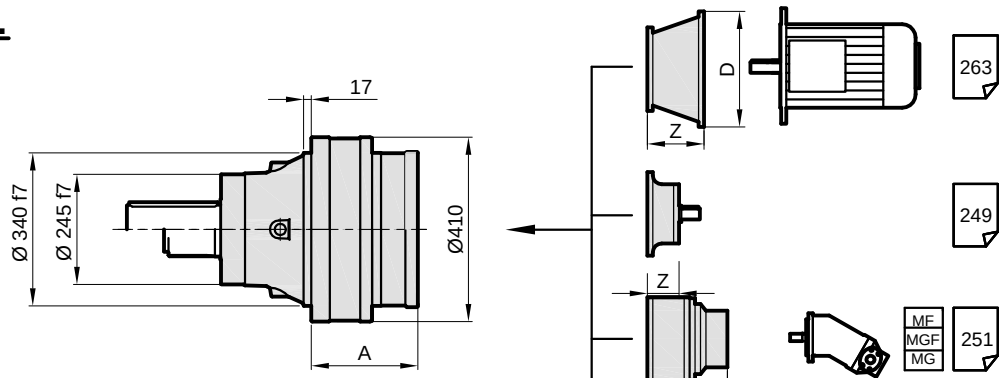
MS



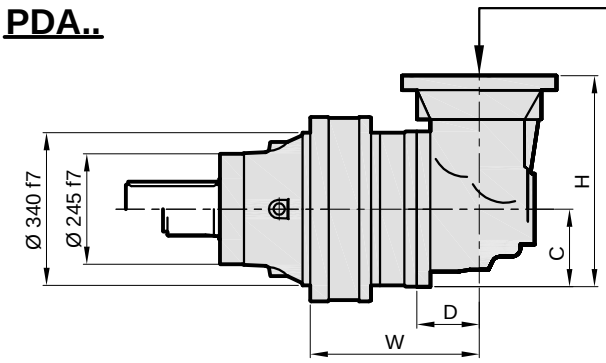
MC

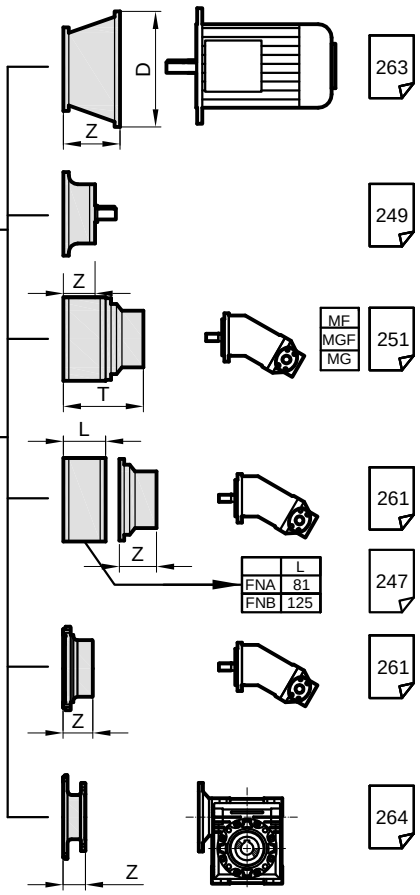


PD..



PDA..



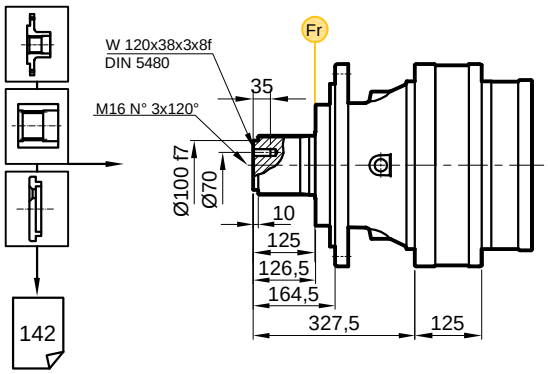


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	232	193	-
S2	297	88	235	550	319	243	285
S3	454	88	235	550	390,5	259	342
S4	492	88	140	380	451,5	267	299

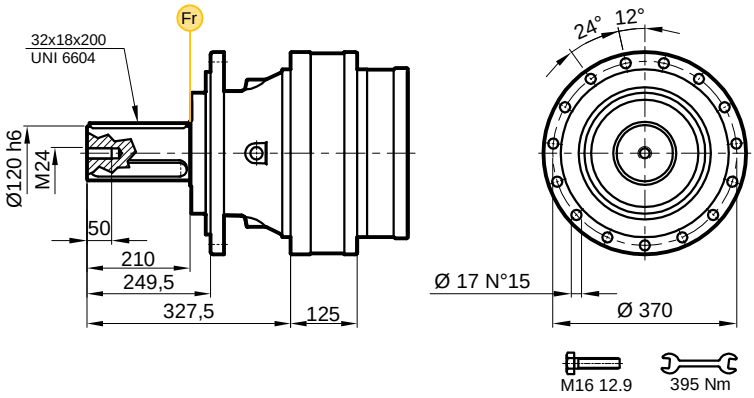
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 121

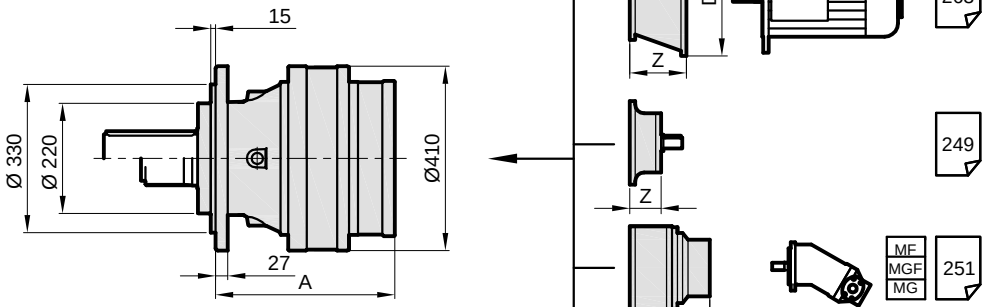
FS



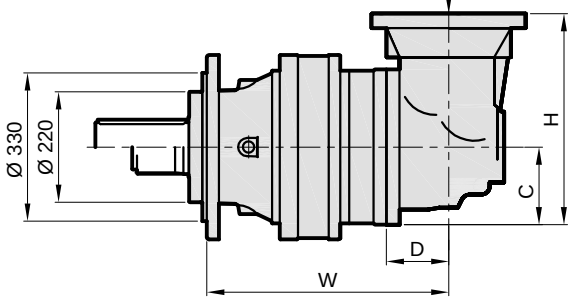
FC

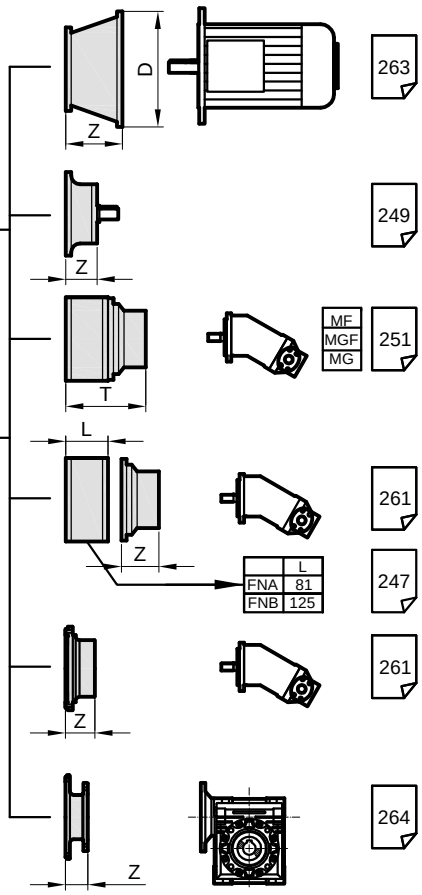


PD..



PDA..



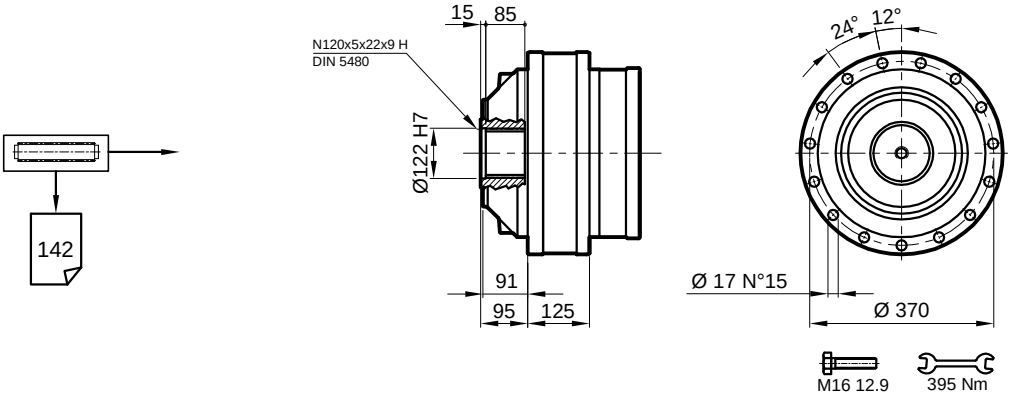


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	408	216	-
S2	473	88	235	550	495	266	308
S3	630	88	235	550	566,5	282	365
S4	668	88	140	380	627,5	290	322

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

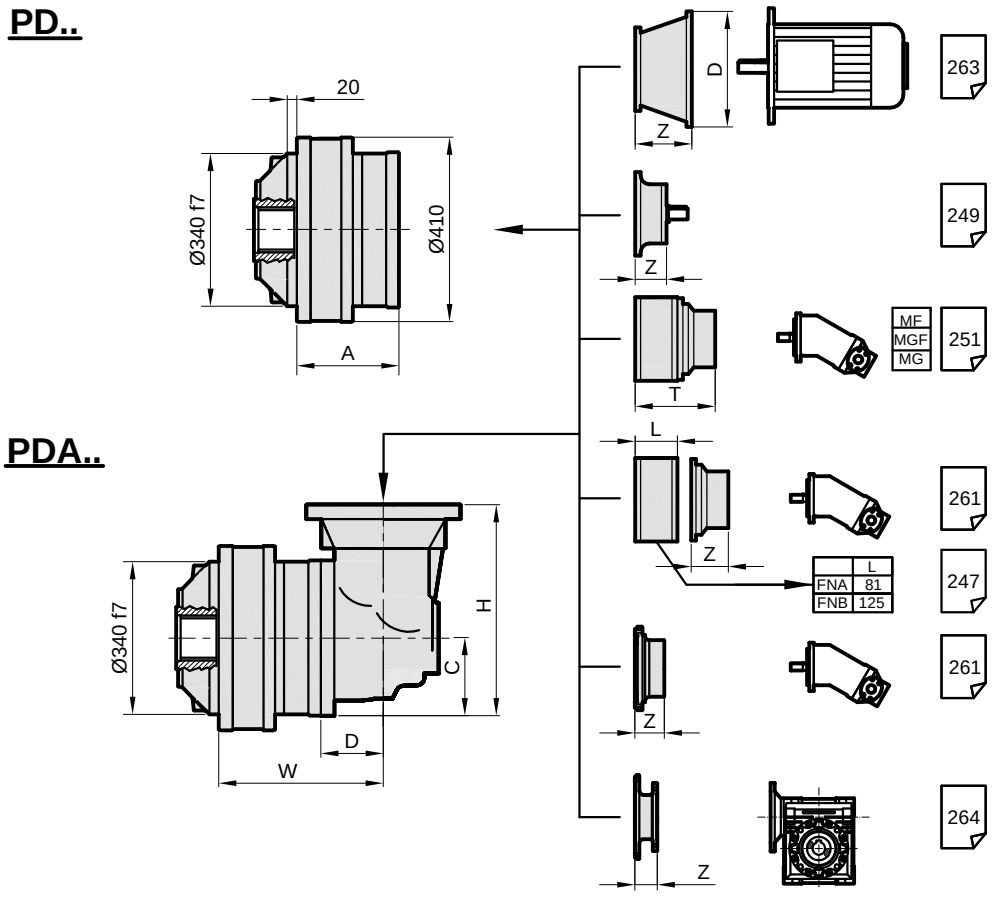
PD/PDA 121

S



PD..

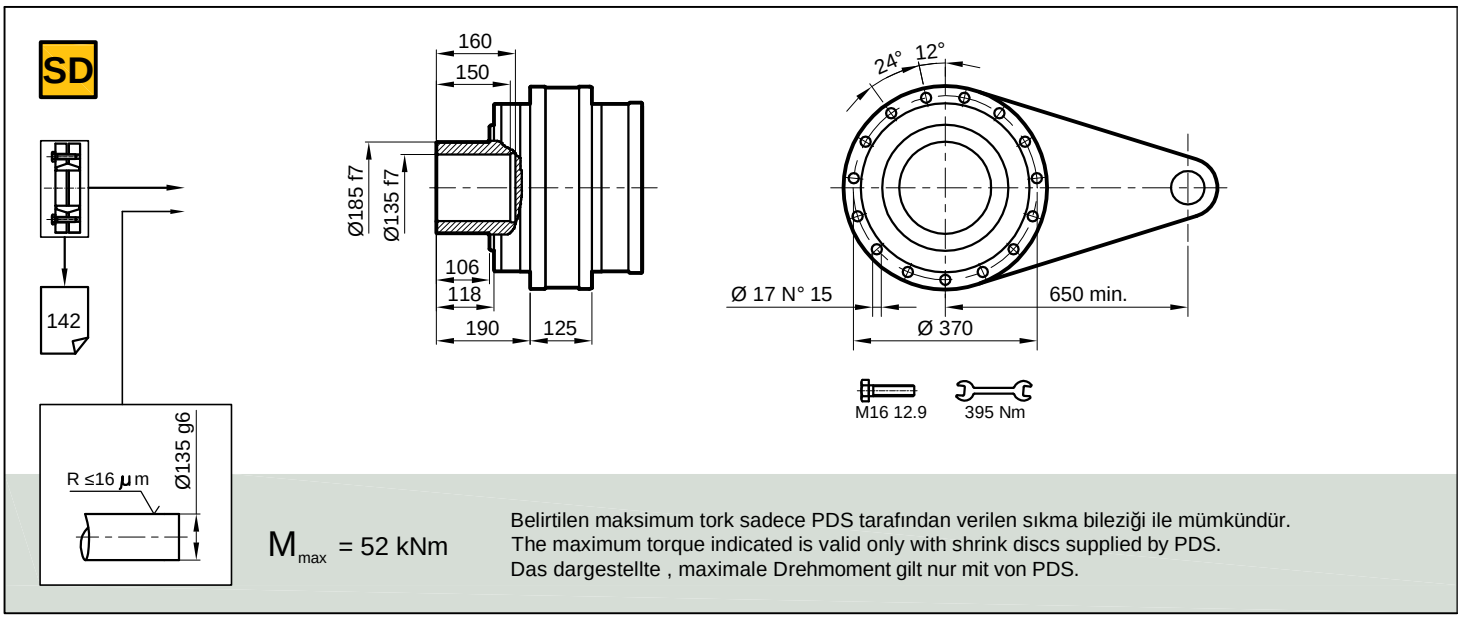
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	222	157	-
S2	287	88	235	550	309	207	248
S3	444	88	235	550	380,5	223	305
S4	482	88	140	380	441,5	231	263

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

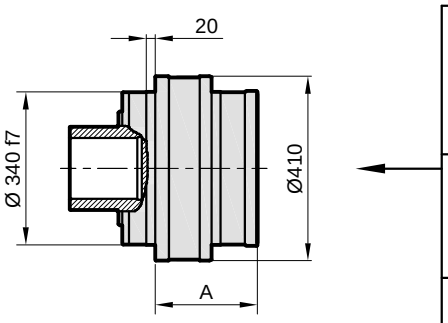
PD/PDA 121



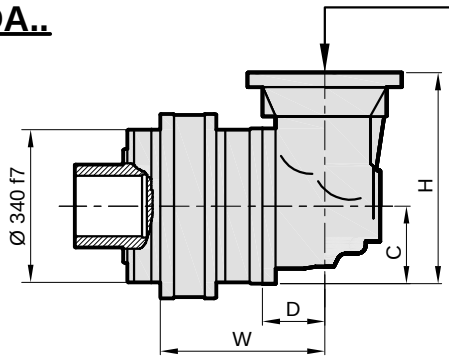
M_{max} = 52 kNm

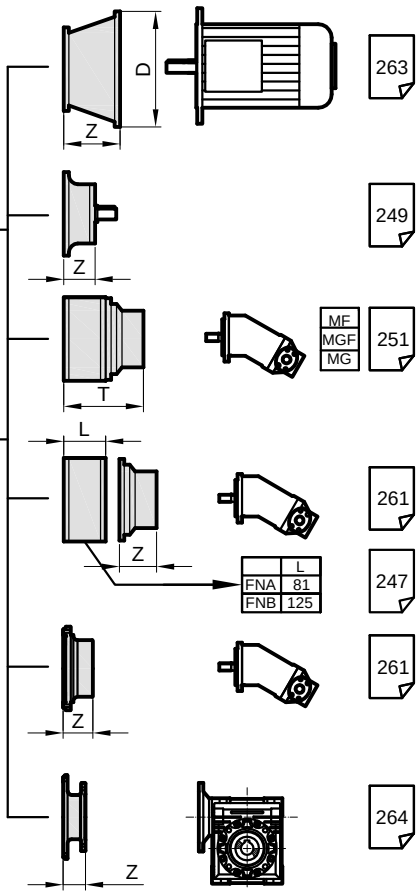
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



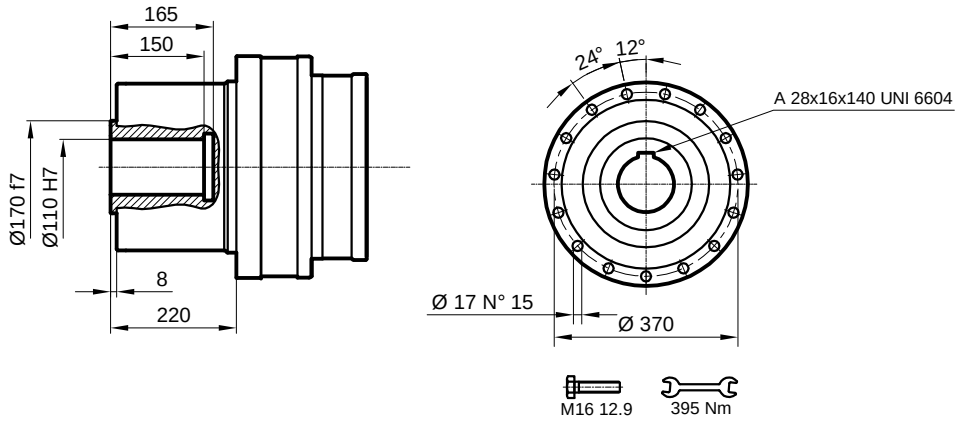


Stage	W	D	C	H	A	PD / SD	PDA / SD
S1	-	-	-	-	222	165	-
S2	287	88	235	550	309	215	256
S3	444	88	235	550	380,5	231	313
S4	482	88	140	380	441,5	239	271

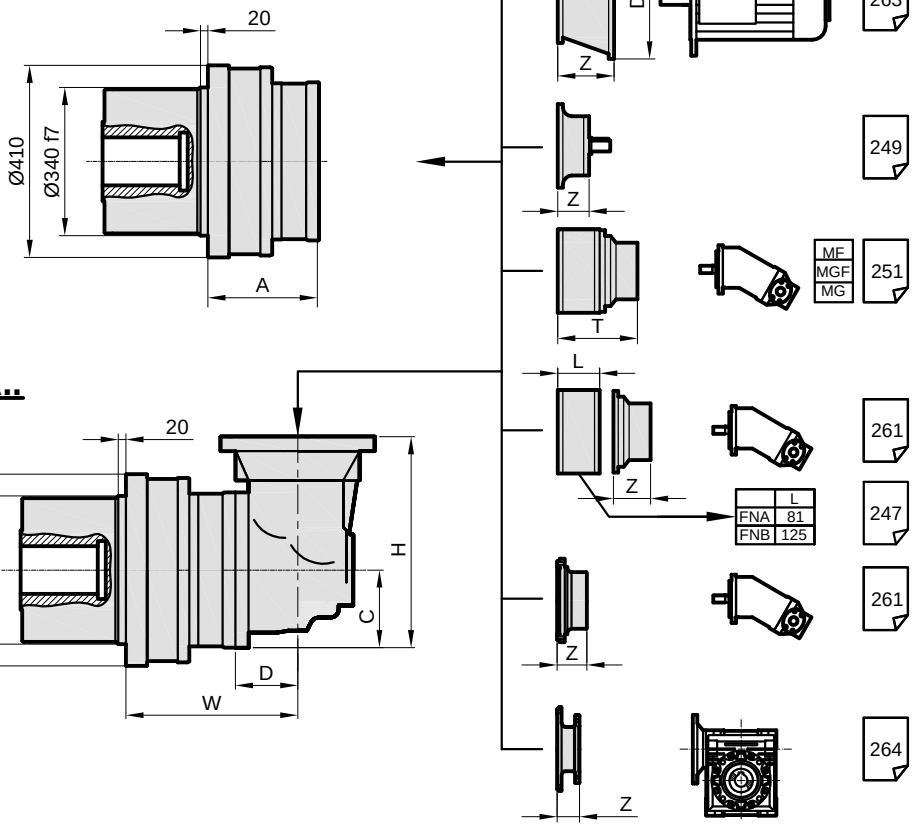
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 121

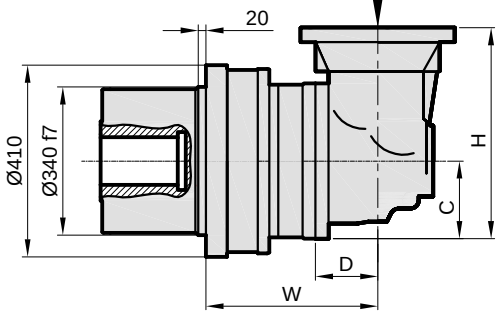
DKM



PD..



PDA..

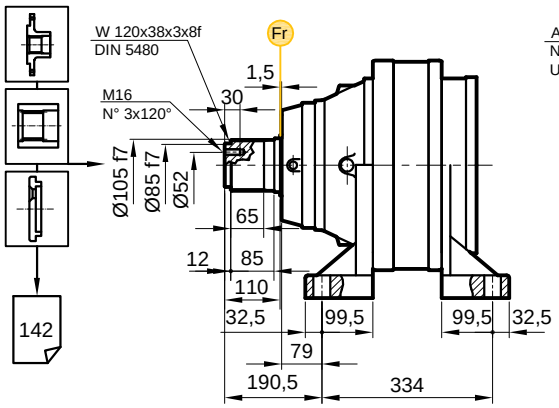


Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	236	157	-
S2	291	88	235	550	323	207	248
S3	458	88	235	550	395	223	305
S4	496	88	140	380	455	231	263

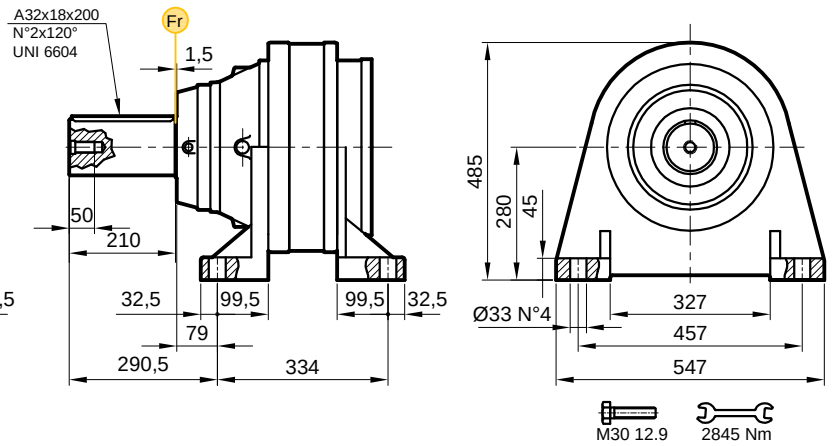
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

PD/PDA 121

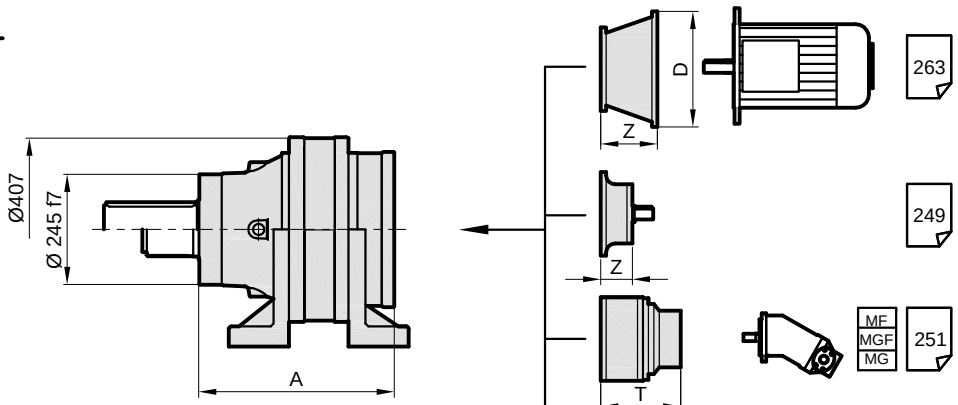
FVS



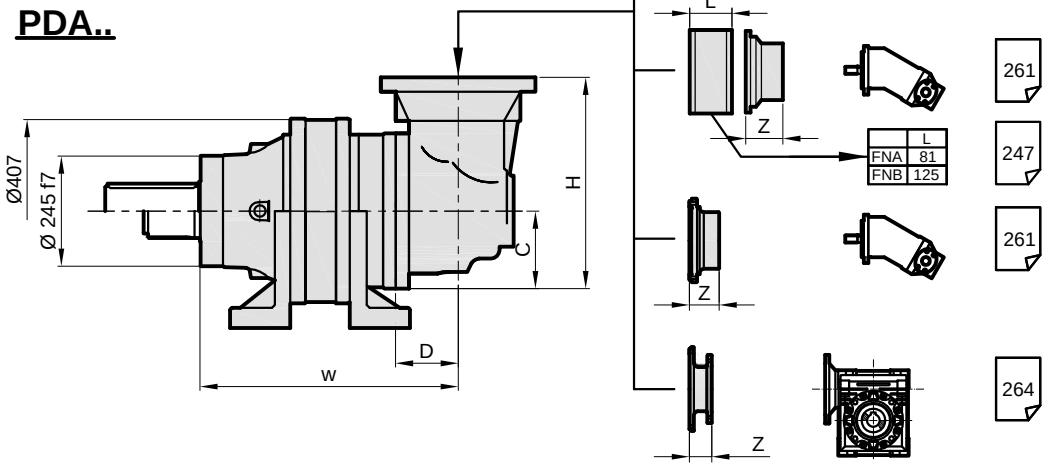
FVC



PD..



PDA..

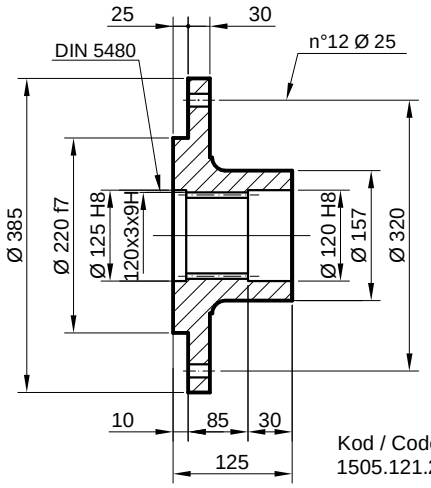


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	434,5	254	-
S2	499,5	88	235	550	521,5	304	346
S3	656,5	88	235	550	593	320	403
S4	694,5	88	140	380	654	328	360

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	-	-
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	350	120	-	-	-	-	-	-

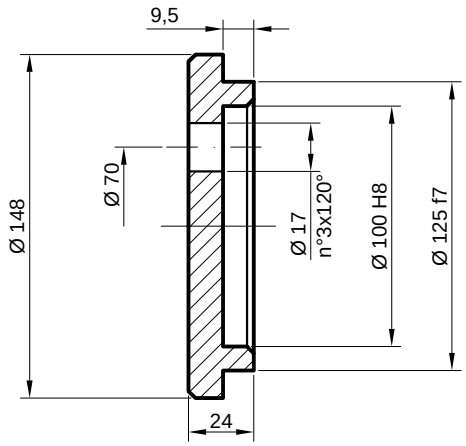
PD/PDA 121

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.121.200

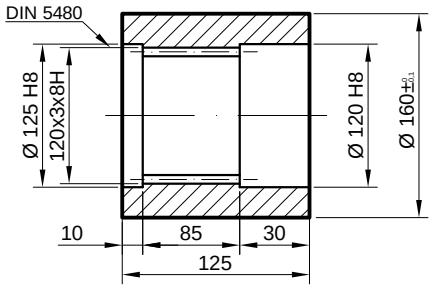
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.121.250

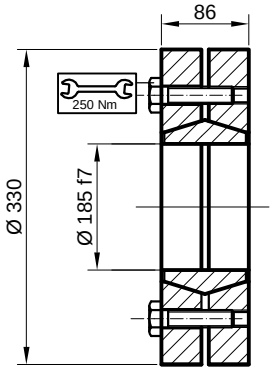
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.121.100

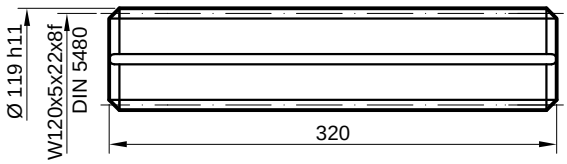
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
52 kNm

Kod / Code / Bestell
2501.119.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo5
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.121.260

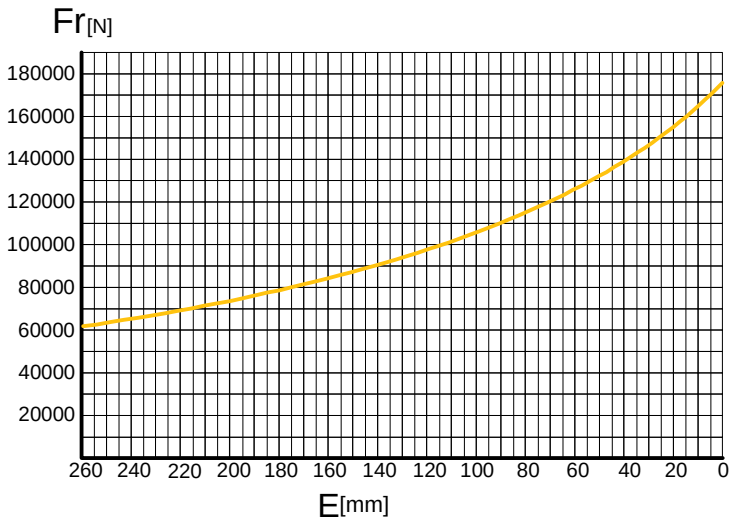
PD/PDA 121

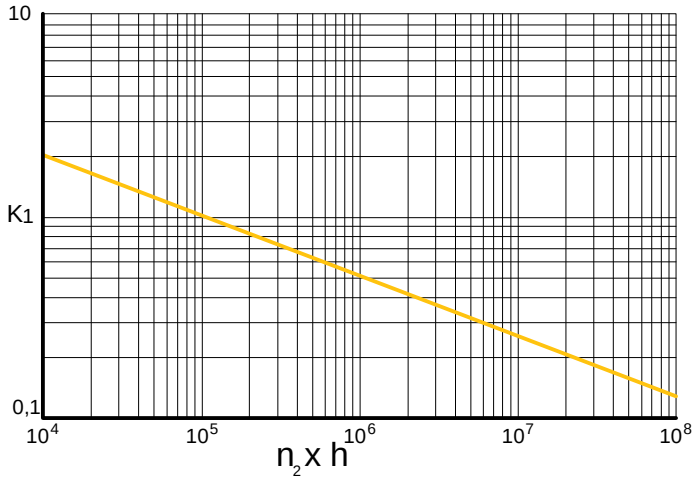
RADYAL YÜK(Fr)
Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

RADIAL LOADS(Fr)
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

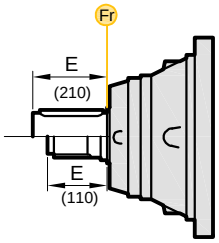
RADIALLAST (Fr)
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-FV

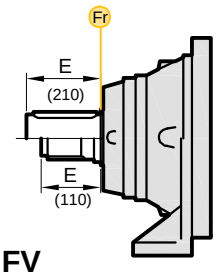




	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



M



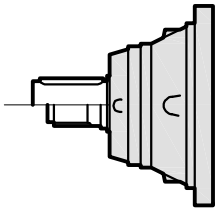
FV

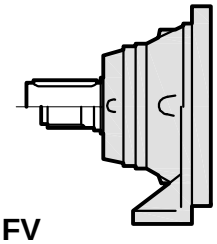
AKSİYEL YÜKLER (Fa)
Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

AXIAL LOADS (Fa)
The values of the awial loads in the table refer to the output versions and load directions of application.

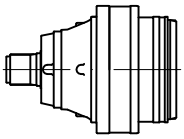
AXIALLAST (Fa)
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	80000	80000	←
	100000	100000	→


M

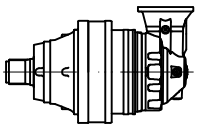

FV

PD 123



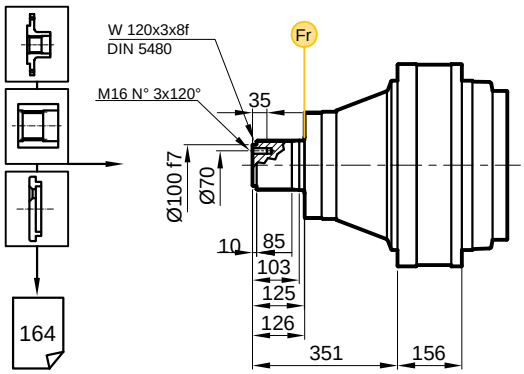
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 123 S1	4.00	68690	60800	51740	45800	1200	121600	60
	5.10	50280	44500	37870	33520	1200	89000	60
	6.00	40110	35500	30210	26740	1200	71000	60
PD 123 S2	14.0	68690	60800	51740	45800	2000	121600	38
	16.9	68690	60800	51740	45800	2000	121600	38
	21.6	50280	44500	37870	33520	2000	89000	38
	26.9	68690	60800	51740	45800	2000	121600	38
	28.3	50280	44500	37870	33520	2000	121600	38
	33.6	40110	35500	30210	26740	2000	71000	38
	40.5	40110	35500	30210	26740	2000	71000	38
PD 123 S3	53.1	68690	60800	51740	45800	2800	121600	25
	64.0	68690	60800	51740	45800	2800	121600	25
	74.2	50280	44500	37870	33520	2800	89000	25
	84.3	68690	60800	51740	45800	2800	121600	25
	92.9	50280	44500	37870	33520	2800	89000	25
	107.9	50280	44500	37870	33520	2800	89000	25
	116.9	50280	44500	37870	33520	2800	89000	25
	130.1	50280	44500	37870	33520	2800	89000	25
	138.6	40110	35500	30210	26740	2800	71000	25
	157.2	50280	44500	37870	33520	2800	89000	25
	170.1	50280	44500	37870	33520	2800	89000	25
	205.5	50280	44500	37870	33520	2800	89000	25
	247.7	50280	44500	37870	33520	2800	89000	25
	293.6	40110	35500	30210	26740	2800	71000	25
PD 123 S4	324.7	68690	60800	51740	45800	2800	121600	25
	358.5	68690	60800	51740	45800	2800	121600	20
	391.4	68690	60800	51740	45800	2800	121600	20
	432.1	68690	60800	51740	45800	2800	121600	20
	471.8	68690	60800	51740	45800	2800	121600	20
	511.5	68690	60800	51740	45800	2800	121600	20
	564.6	68690	60800	51740	45800	2800	121600	20
	591.0	68690	60800	51740	45800	2800	121600	20
	616.6	68690	60800	51740	45800	2800	121600	20
	686.3	68690	60800	51740	45800	2800	121600	20
	789.3	50280	44500	37870	33520	2800	89000	20
	878.7	50280	44500	37870	33520	2800	89000	20
	952.5	50280	44500	37870	33520	2800	89000	20
	1061.7	50280	44500	37870	33520	2800	89000	20
	1151.0	50280	44500	37870	33520	2800	89000	20
	1258.3	40110	35500	30210	26740	2800	71000	20
	1387.3	50280	44500	37870	33520	2800	89000	20
	1672.2	50280	44500	37870	33520	2800	89000	20
	1981.9	40110	35500	30210	26740	2800	71000	20

PDA 123

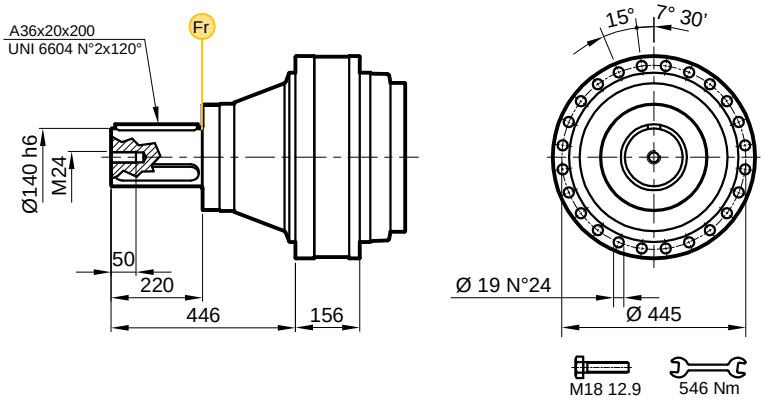
	i	T_2[Nm] $n_2$xh				n_{1max} [min]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 123 S2	12.1	68690	60800	51740	45800	2000	121600	38
	15.5	50280	44500	37870	33520	2000	89000	38
	18.4	40110	35500	30210	26740	2000	71000	38
	23.6	50280	44500	37870	33520	2000	89000	38
	27.9	40110	35500	30210	26740	2000	71000	38
PDA 123 S3	58.5	68690	60800	51740	45800	2800	121600	25
	76.5	68690	60800	51740	45800	2800	121600	25
	97.9	50280	44500	37870	33520	2800	89000	25
	118.1	50280	44500	37870	33520	2800	89000	25
	139.9	40110	35500	30210	26740	2800	71000	25
	154.3	50280	44500	37870	33520	2800	89000	25
	220.4	40110	35500	30210	26740	2800	71000	25
PDA 123 S4	241.5	68690	60800	51740	45800	2800	121600	20
	288.9	68690	60800	51740	45800	2800	121600	20
	315.7	68690	60800	51740	45800	2800	121600	20
	351.2	68690	60800	51740	45800	2800	121600	20
	395.2	68690	60800	51740	45800	2800	121600	20
	455.4	68690	60800	51740	45800	2800	121600	20
	506.3	50280	44500	37870	33520	2800	89000	20
	543.3	50280	44500	37870	33520	2800	89000	20
	587.6	50280	44500	37870	33520	2800	89000	20
	668.9	50280	44500	37870	33520	2800	89000	20
	708.7	50280	44500	37870	33520	2800	89000	20
	797.4	50280	44500	37870	33520	2800	89000	20
	856.3	50280	44500	37870	33520	2800	89000	20
	926.0	50280	44500	37870	33520	2800	89000	20
	961.2	50280	44500	37870	33520	2800	89000	20
	1119.0	50280	44500	37870	33520	2800	89000	20
	1348.8	50280	44500	37870	33520	2800	89000	20
	1598.6	40110	35500	30210	26740	2800	71000	20

PD/PDA 123

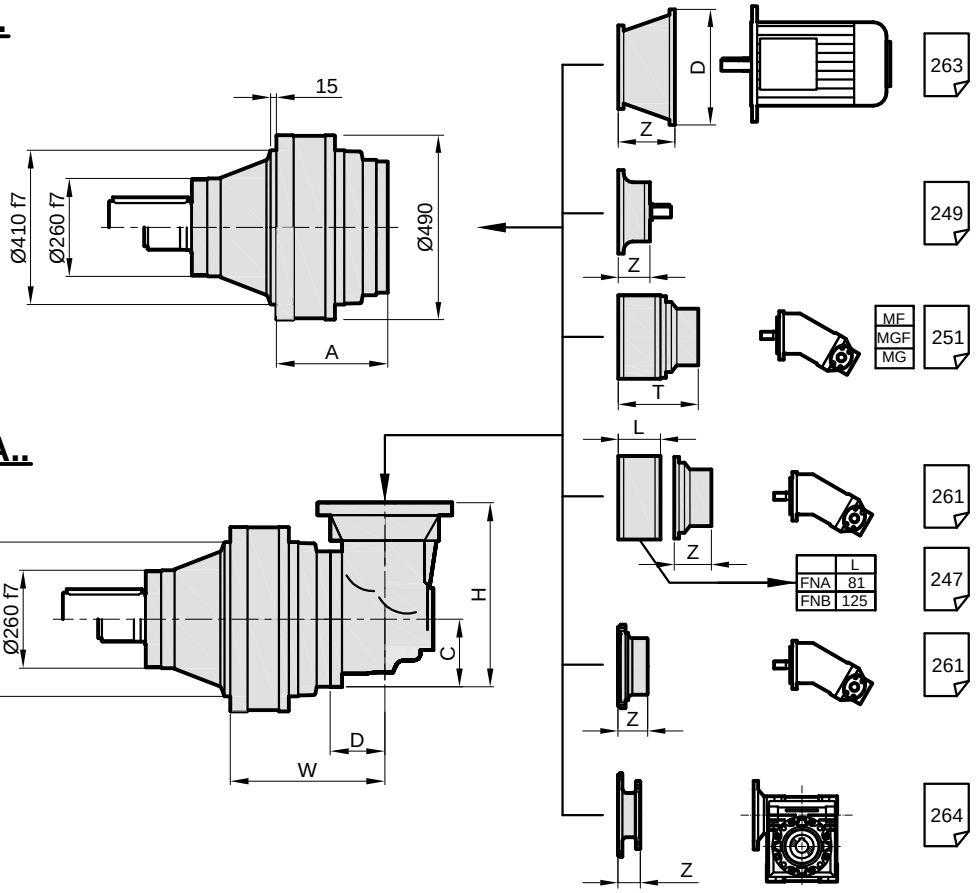
MS



MC



PD..



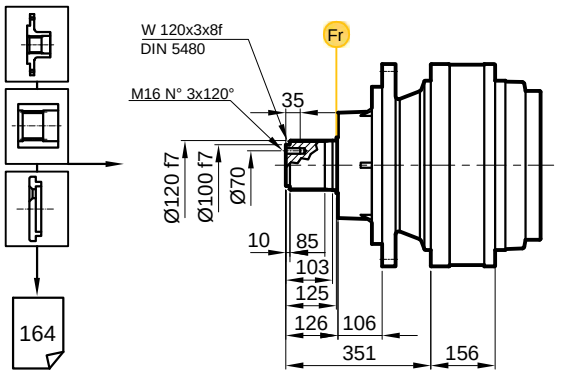
PDA..

Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	261	314	-
S2	442	88	235	550	368	373	364
S3	456	88	140	380	439,5	389	410
S4	541	88	140	380	500,5	397	429

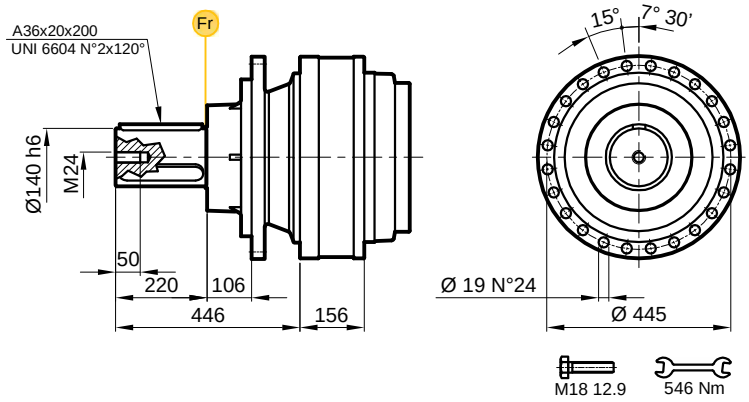
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	-	-	-	-	-	-	-	-

PD/PDA 123

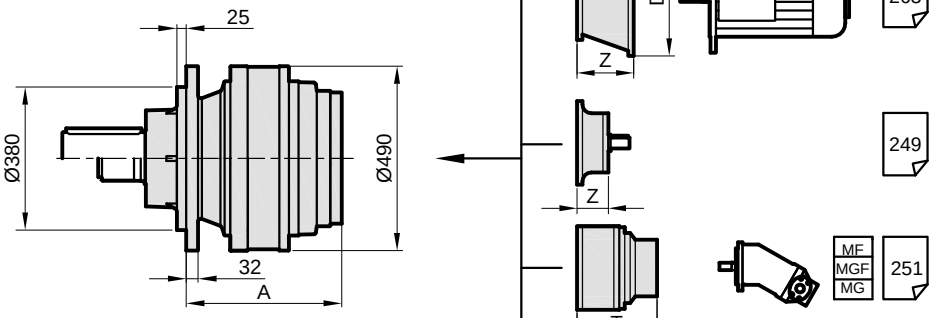
FS



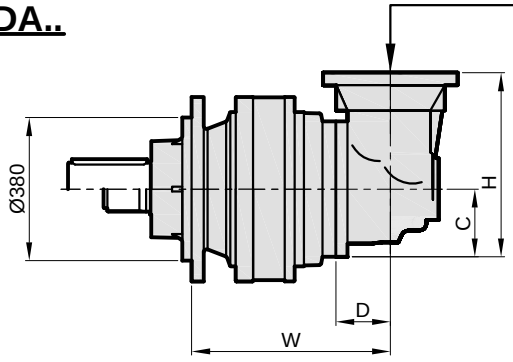
FC

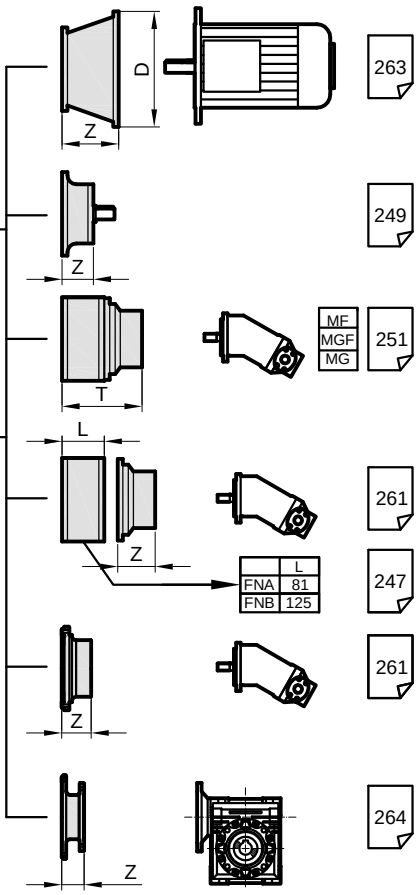


PD..



PDA..



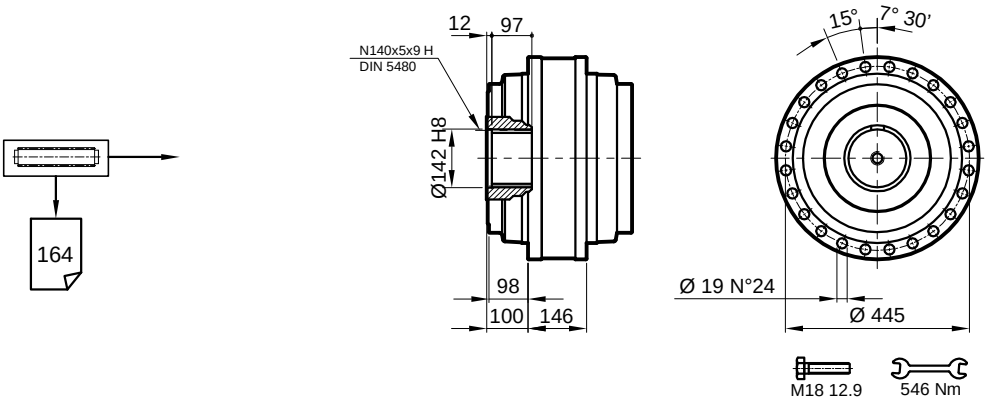


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	379,5	360	-
S2	560,5	88	235	550	486,5	419	410
S3	574,5	88	140	380	558	435	456
S4	659,5	88	140	380	619	443	475

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	-	-	-	-	-	-	-	-

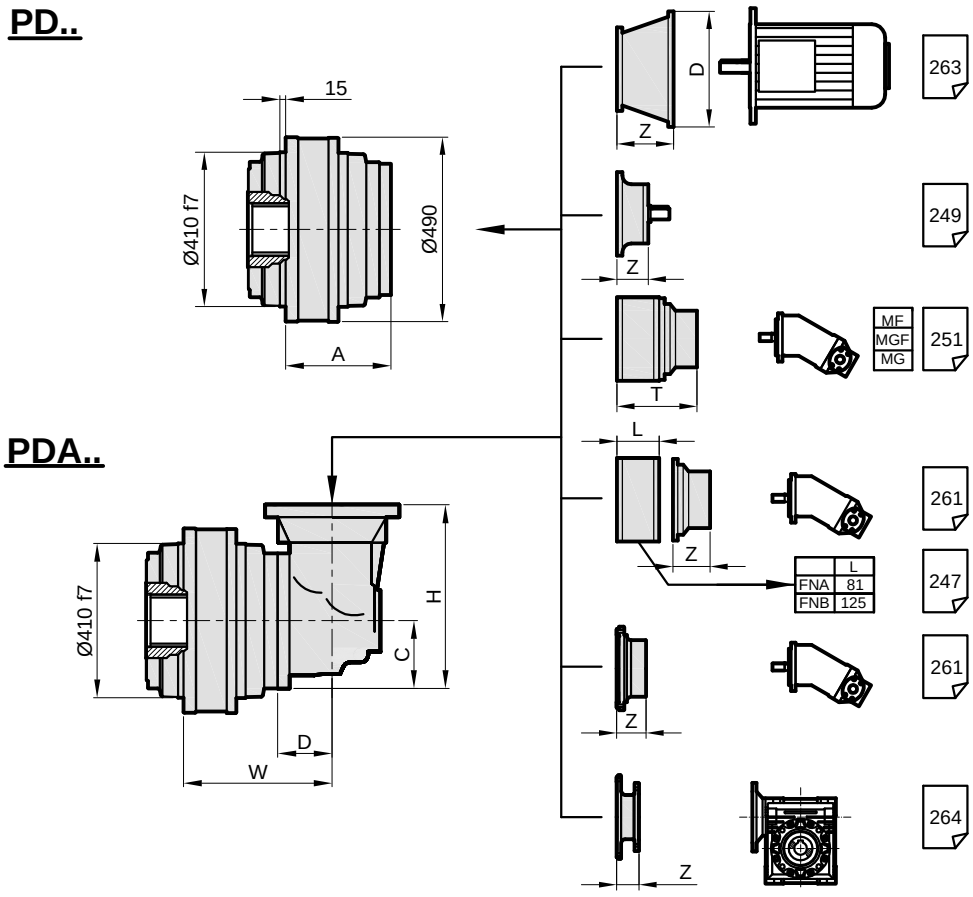
PD/PDA 123

S



PD..

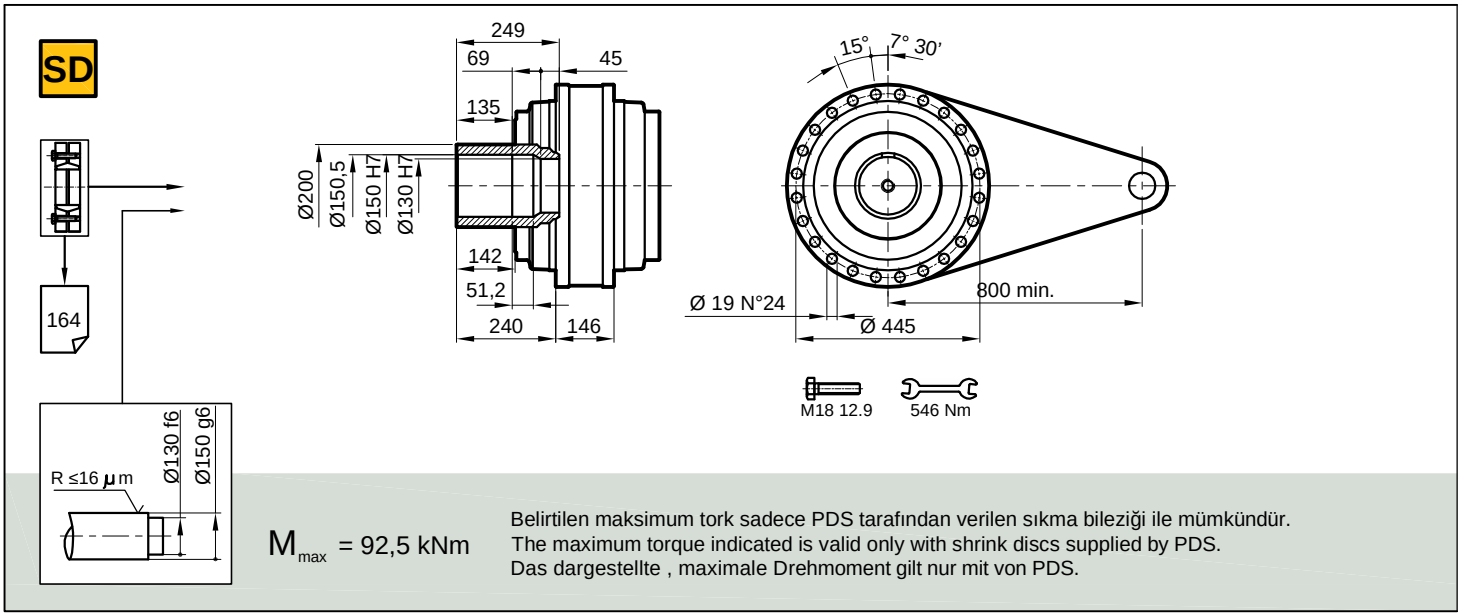
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	251	256	-
S2	432	88	235	550	358	315	306
S3	446	88	140	380	429,5	331	293
S4	531	88	140	380	490,5	339	371

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	-	-	-	-	-	-	-	-

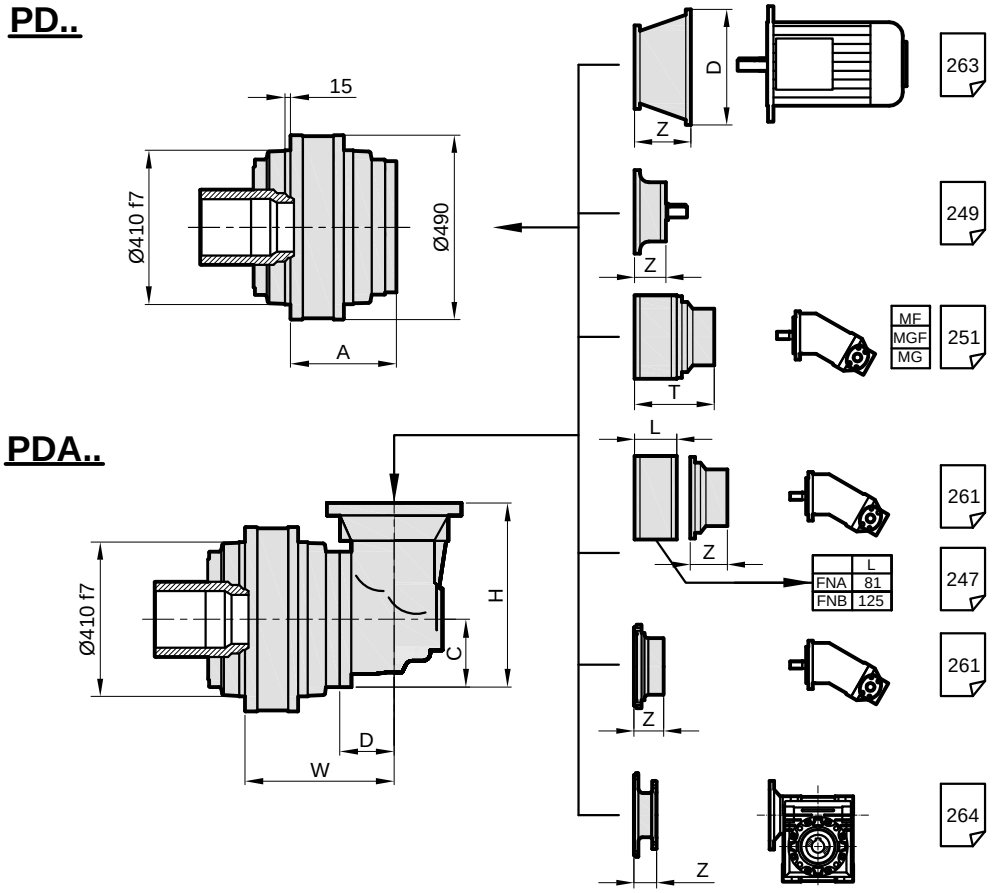
PD/PDA 123



M_{max} = 92,5 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



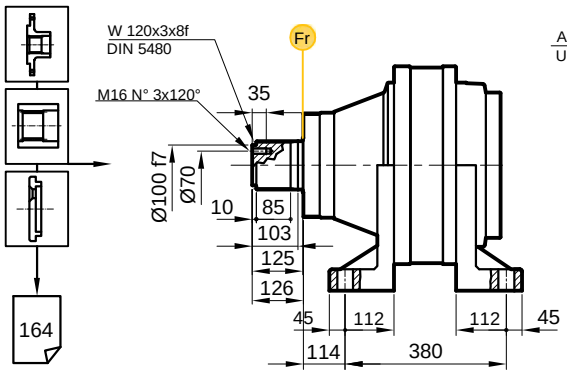
PDA..

Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	251	269	-
S2	432	88	235	550	358	328	319
S3	446	88	140	380	429,5	344	306
S4	531	88	140	380	490,5	352	384

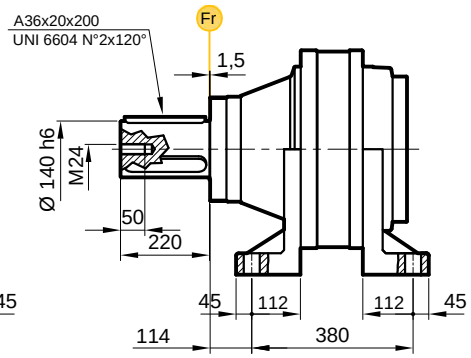
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	-	-	-	-	-	-	-	-

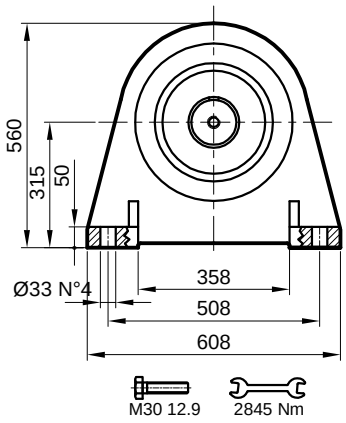
PD/PDA 123

FVS

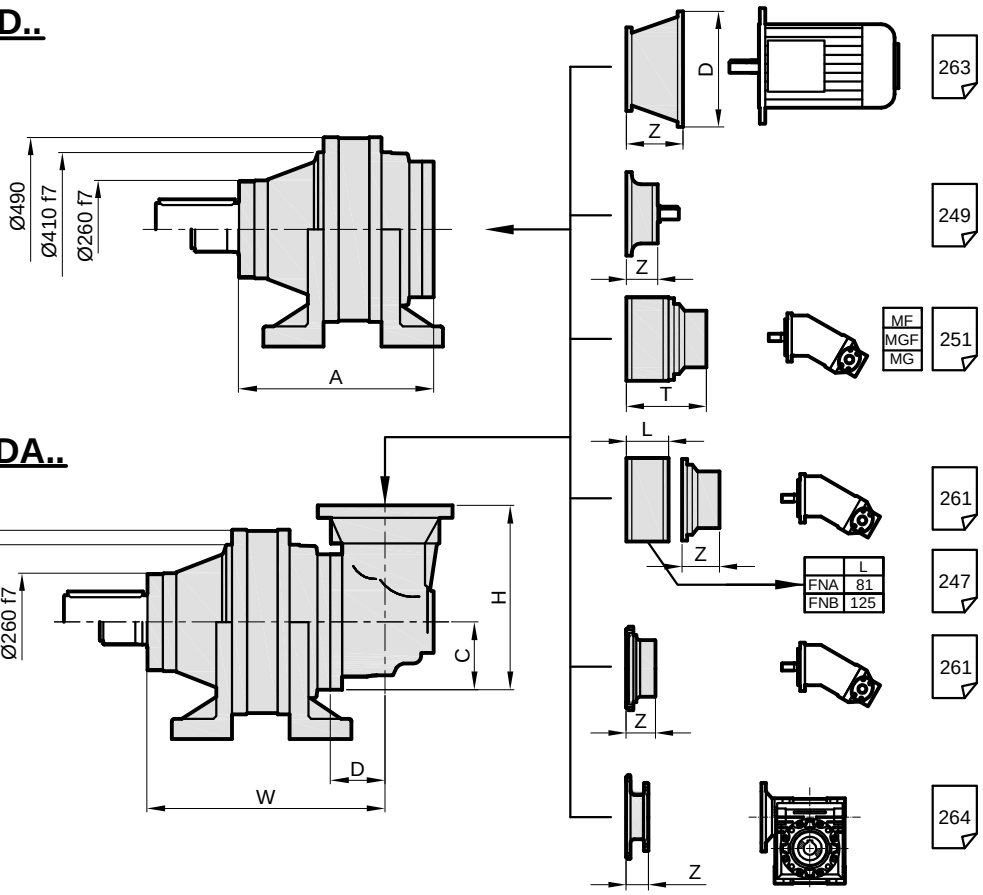


FVC

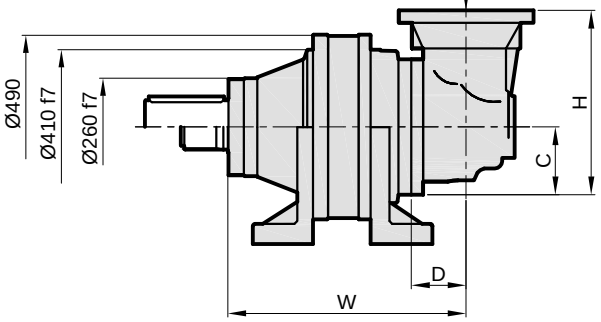




PD..



PDA..

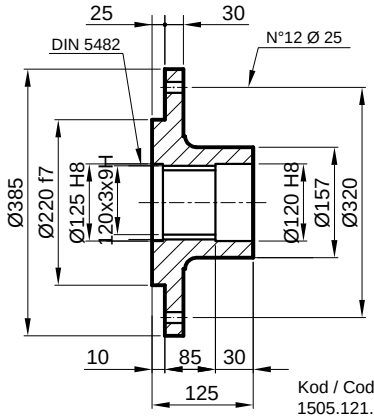


Stage	W	D	C	H	A	PD FVC	PDA FVC
S1	-	-	-	-	486	418	-
S2	667	88	235	550	593	477	468
S3	681	88	140	380	664,5	493	514
S4	766	88	140	380	725	501	533

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	185	32	200	60	250	71	300	104	350	120	400	148	450	148	-	-
S4	185	32	200	60	250	71	300	104	-	-	-	-	-	-	-	-

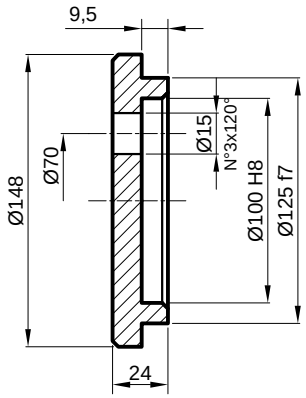
PD/PDA 123

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.121.200

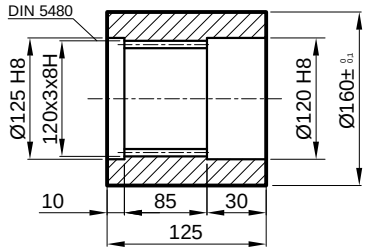
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1505.123.200

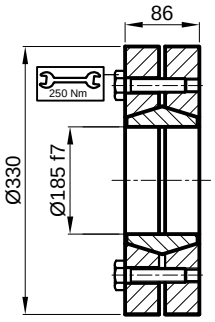
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.123.100

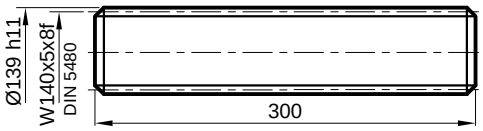
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
92,5 kNm

Kod / Code / Bestell
2501.117.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo5
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.123.260

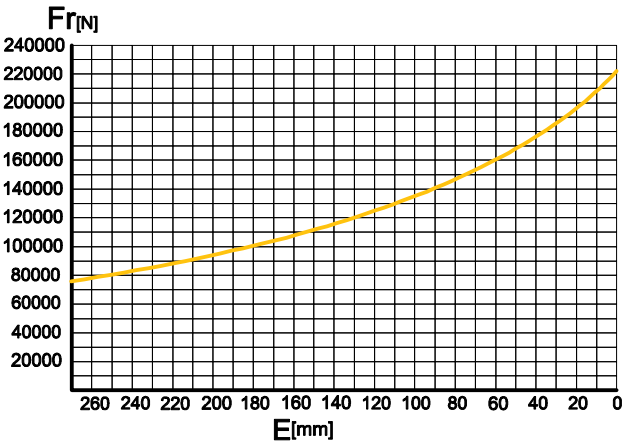
PD/PDA 123

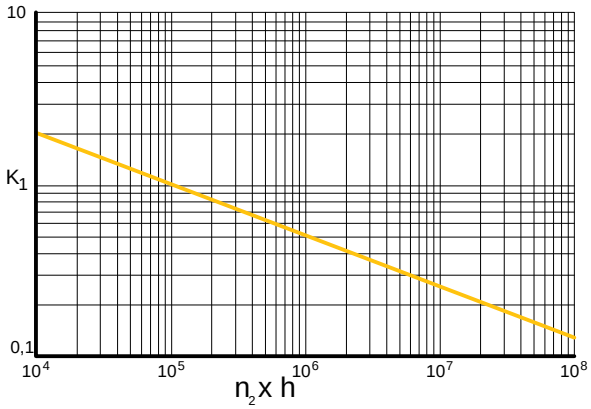
RADYAL YÜK(Fr)
Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

RADIAL LOADS(Fr)
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

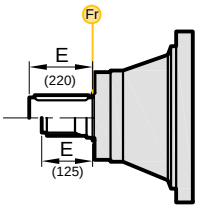
RADIALLAST (Fr)
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-FV

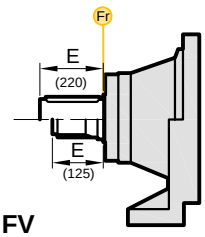




	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



M



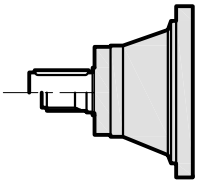
FV

AKSİYEL YÜKLER (Fa)
Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

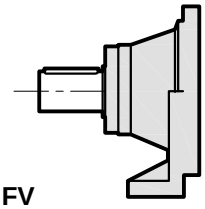
AXIAL LOADS (Fa)
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	80000	80000	←
	120000	120000	→

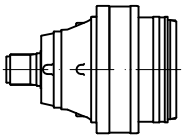


M

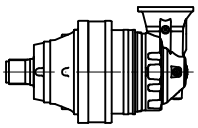


FV

PD 125

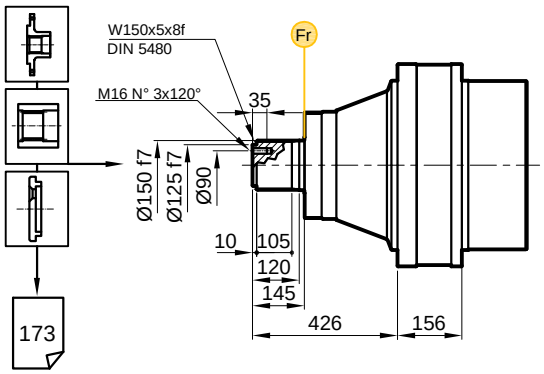
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 125 S1	3.83	78310	69310	58980	52210	1000	138620	60
PD 125 S2	15.3	78310	69310	58980	52210	1500	138620	50
	19.9	78310	69310	58980	52210	1500	138620	50
	23.9	78310	69310	58980	52210	1500	138620	50
PD 125 S3	56.2	78310	69310	58980	52210	2500	138620	35
	67.9	78310	69310	58980	52210	2500	138620	35
	73.1	78310	69310	58980	52210	2500	138620	35
	88.3	78310	69310	58980	52210	2500	138620	35
	99.7	78310	69310	58980	52210	2500	138620	35
	115.6	78310	69310	58980	52210	2500	138620	35
	139.0	78310	69310	58980	52210	2500	138620	35
	167.8	78310	69310	58980	52210	2500	138620	35
PD 125 S4	212.5	78310	69310	58980	52210	2800	138620	25
	256.6	78310	69310	58980	52210	2800	138620	25
	280.2	78310	69310	58980	52210	2800	138620	25
	301.6	78310	69310	58980	52210	2800	138620	25
	333.7	78310	69310	58980	52210	2800	138620	25
	364.3	78310	69310	58980	52210	2800	138620	25
	407.7	78310	69310	58980	52210	2800	138620	25
	456.3	78310	69310	58980	52210	2800	138620	25
	515.2	78310	69310	58980	52210	2800	138620	25
	556.2	78310	69310	58980	52210	2800	138620	25
	640.4	78310	69310	58980	52210	2800	138620	25
	694.1	78310	69310	58980	52210	2800	138620	25
	838.7	78310	69310	58980	52210	2800	138620	25
	1008.1	78310	69310	58980	52210	2800	138620	25

PDA 125

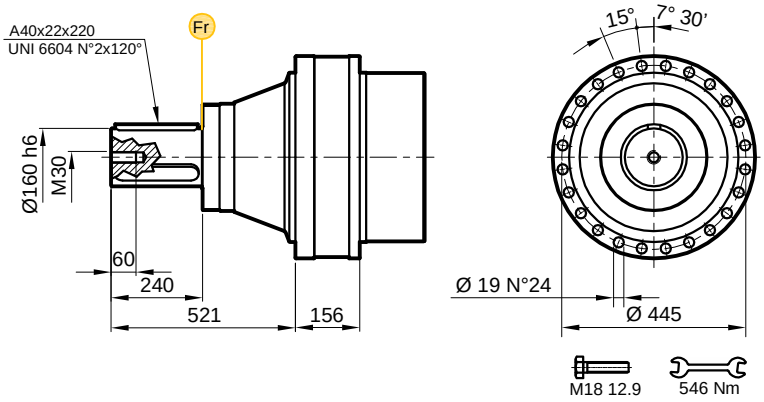
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 125 S3	47.1	78310	69310	58980	52210	2500	138620	35
	61.2	78310	69310	58980	52210	2500	138620	35
	71.6	78310	69310	58980	52210	2500	138620	35
	93.0	78310	69310	58980	52210	2500	138620	35
	111.8	78310	69310	58980	52210	2500	138620	35
PDA 125 S4	194.3	78310	69310	58980	52210	2800	138620	25
	234.7	78310	69310	58980	52210	2800	138620	25
	252.6	78310	69310	58980	52210	2800	138620	25
	265.0	78310	69310	58980	52210	2800	138620	25
	305.1	78310	69310	58980	52210	2800	138620	25
	344.5	78310	69310	58980	52210	2800	138620	25
	399.6	78310	69310	58980	52210	2800	138620	25
	417.6	78310	69310	58980	52210	2800	138620	25
	484.5	78310	69310	58980	52210	2800	138620	25
	578.0	78310	69310	58980	52210	2800	138620	25
	629.8	78310	69310	58980	52210	2800	138620	25
	757.0	78310	69310	58980	52210	2800	138620	25
	913.7	78310	69310	58980	52210	2800	138620	25

PD/PDA 125

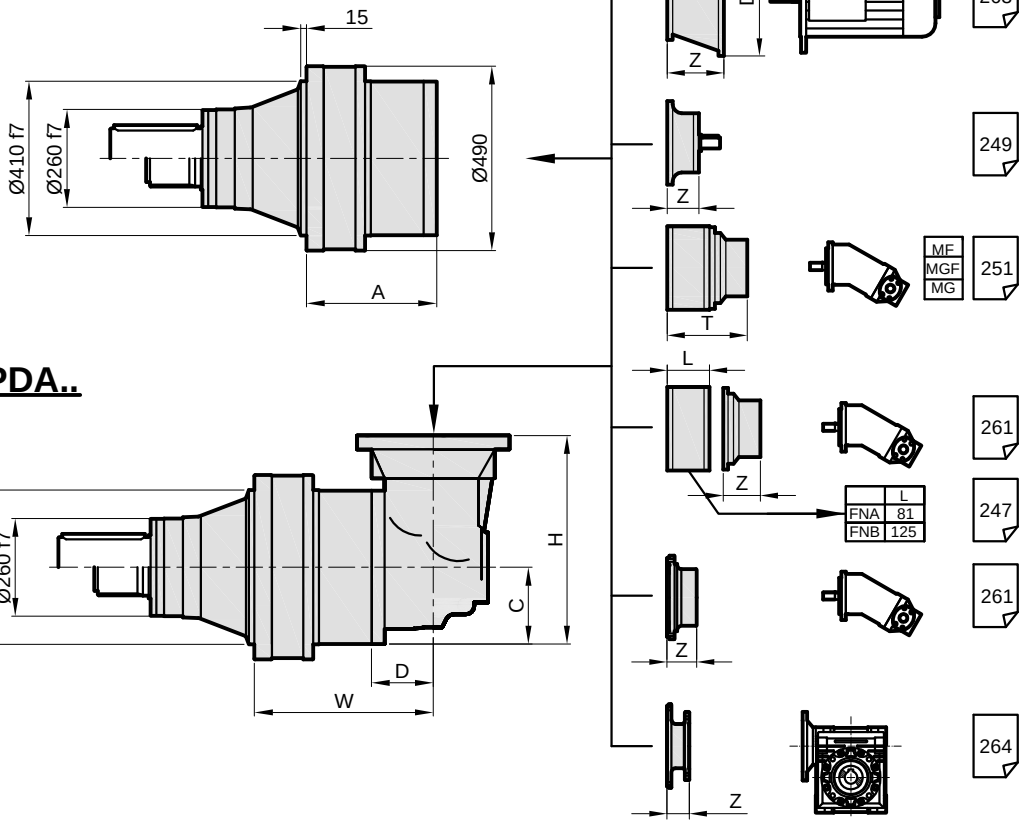
MS



MC



PD..



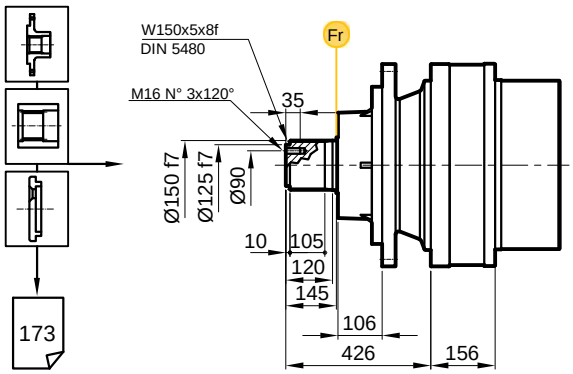
PDA..

Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	572	334	-
S2	-	-	-	-	754	450	-
S3	568	88	235	550	848	477	539
S4	670	88	140	380	907,5	489	514

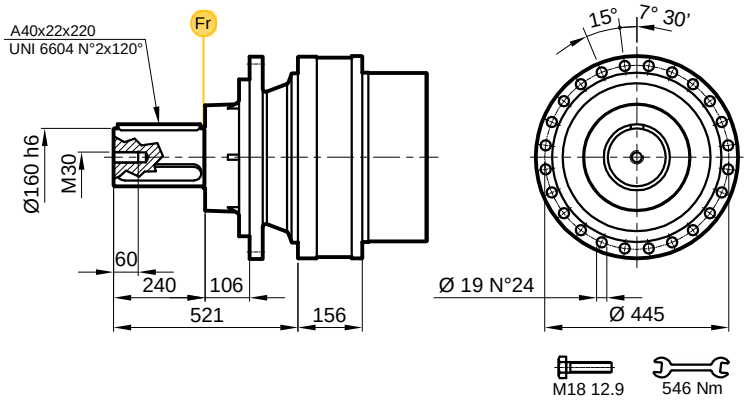
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 125

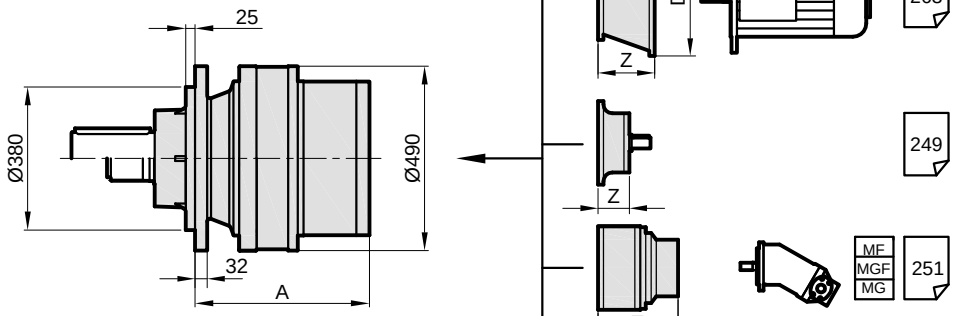
FS



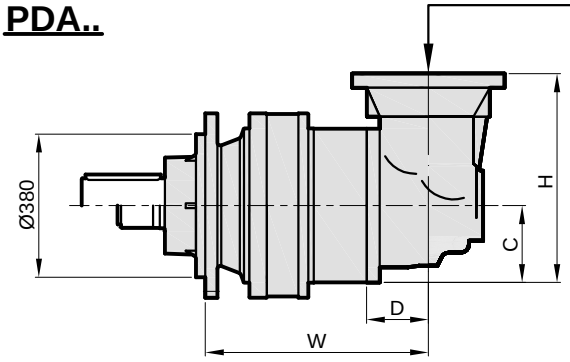
FC

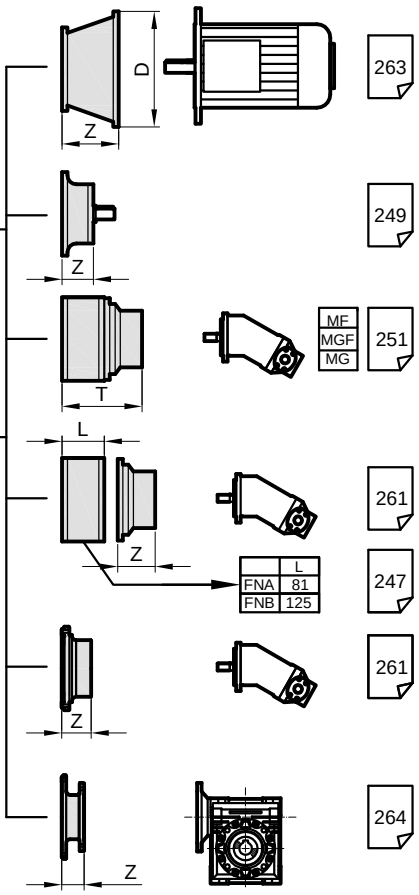


PD..



PDA..



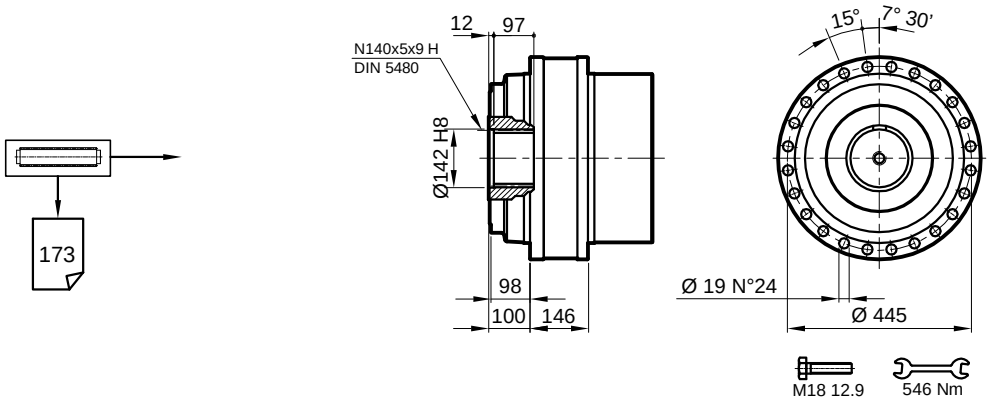


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	424,5	380	-
S2	-	-	-	-	531,5	439	-
S3	619,5	88	235	550	603	455	476
S4	704,5	88	140	380	664	463	495

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

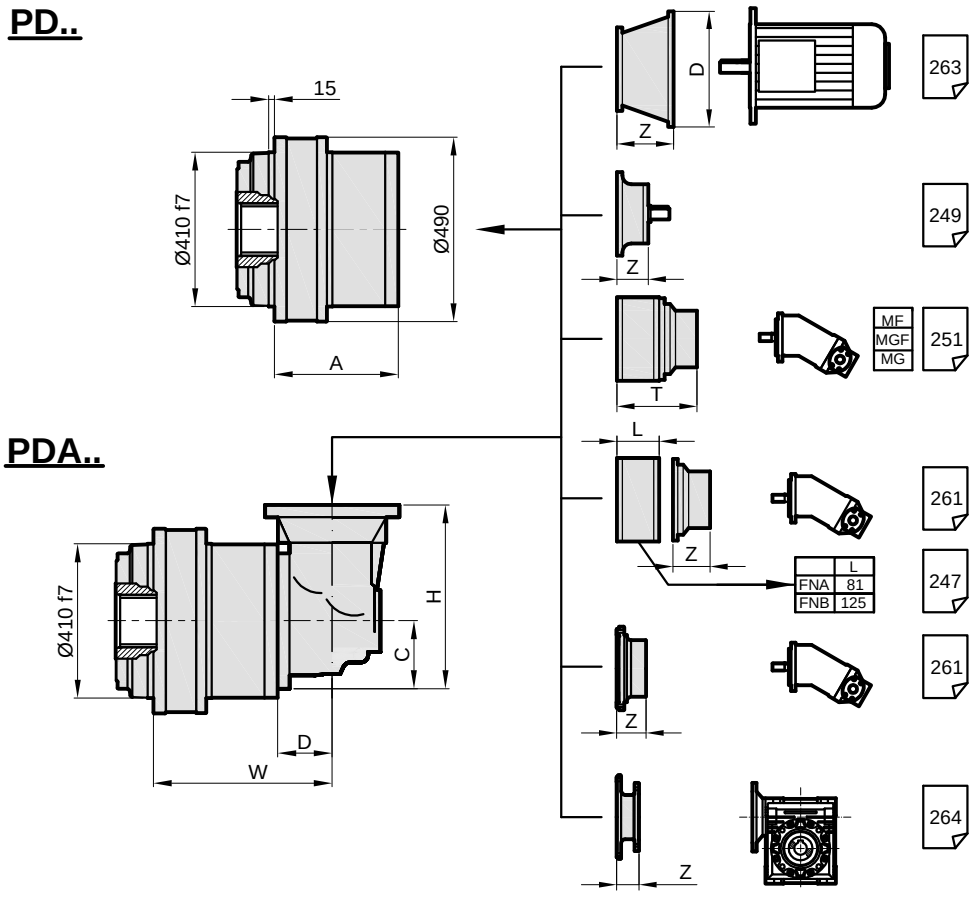
PD/PDA 125

S



PD..

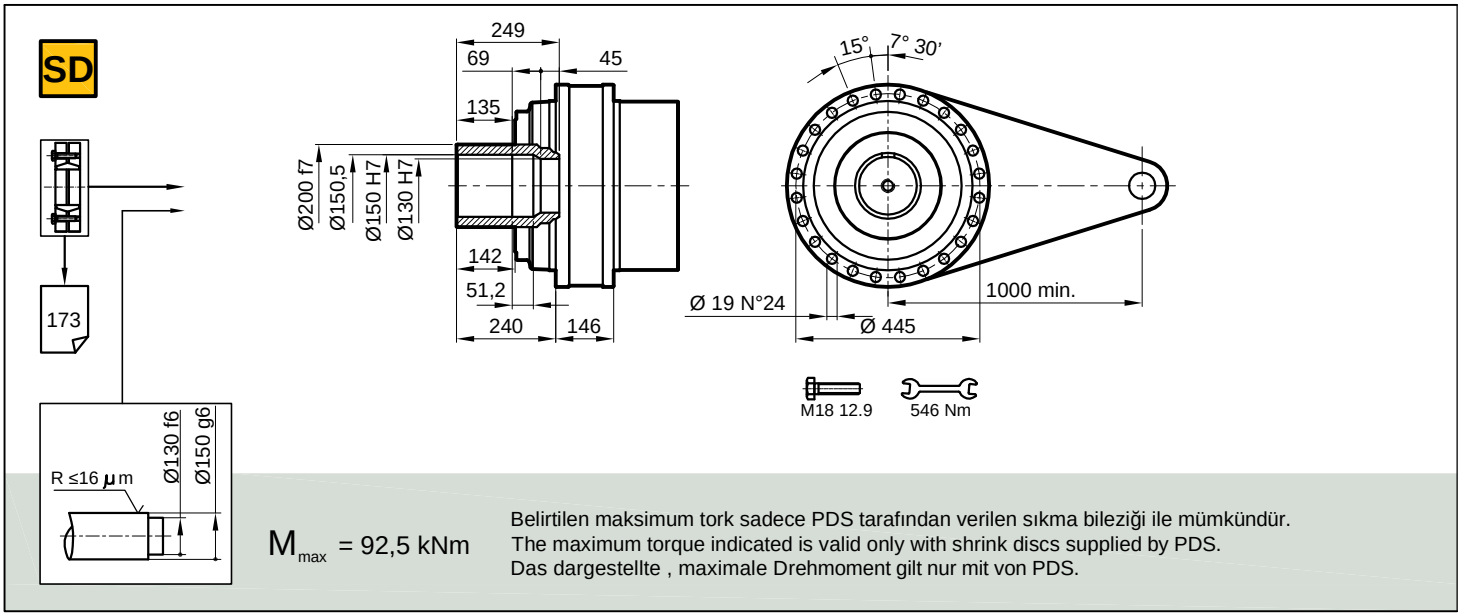
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	296	276	-
S2	-	-	-	-	478	392	-
S3	558	88	235	550	572	419	481
S4	660	88	140	380	631,5	431	456

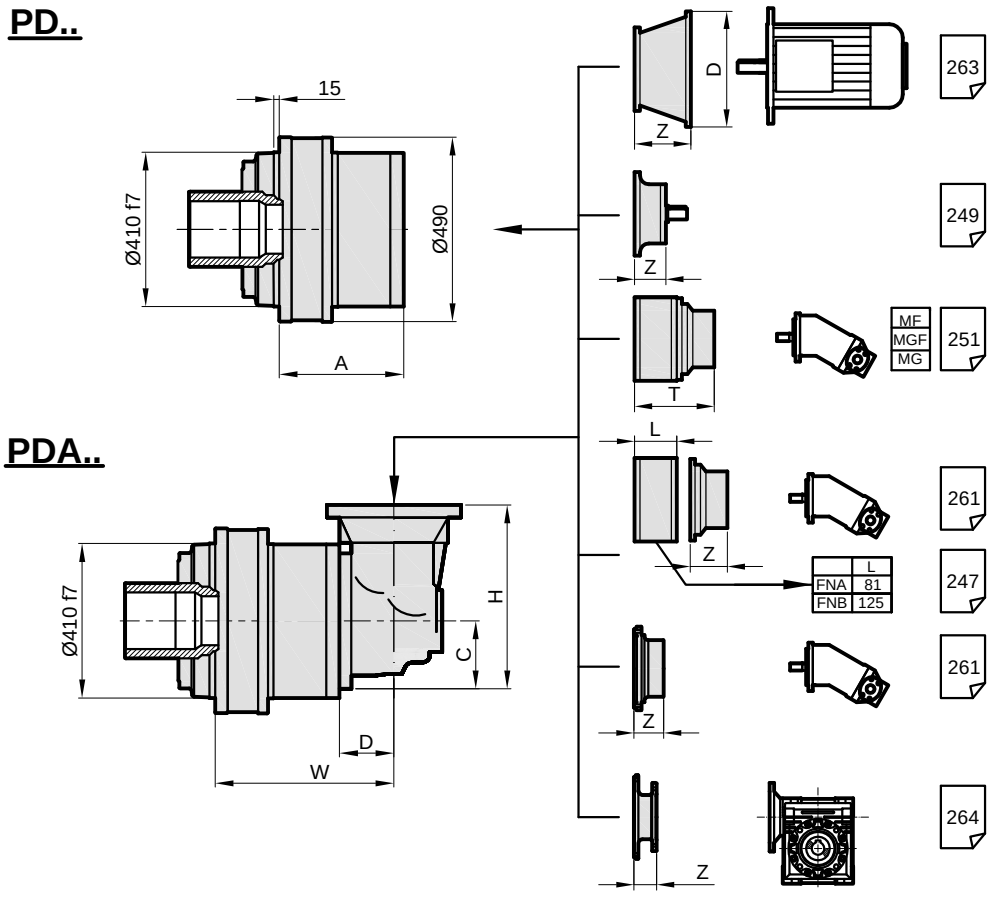
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 125



M_{max} = 92,5 kNm

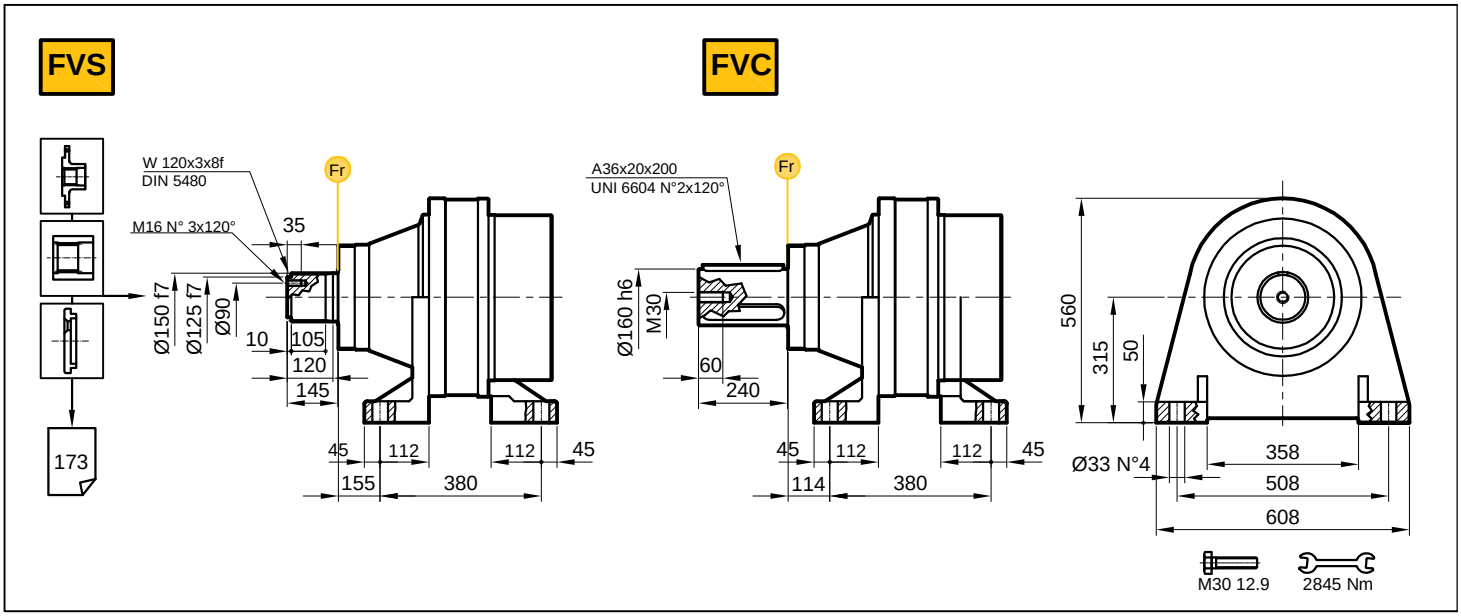
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

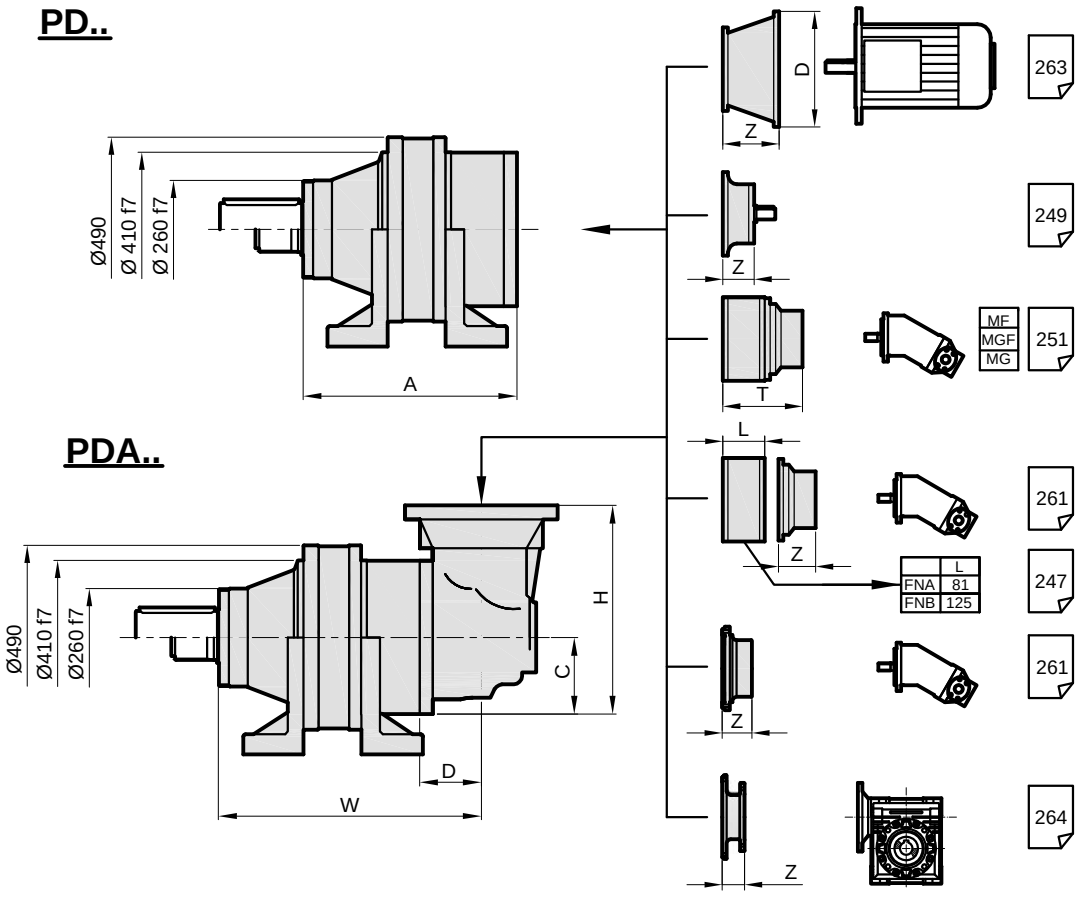


Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	296	290	-
S2	-	-	-	-	478	406	-
S3	558	88	235	550	572	433	495
S4	660	88	140	380	631,5	445	470

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 125



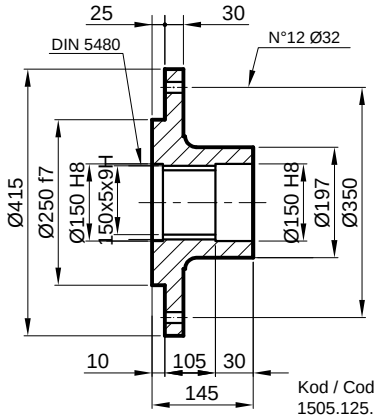


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	572	438	-
S2	-	-	-	-	754	554	-
S3	834	88	235	550	848	581	643
S4	936	88	140	380	907,5	593	618

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	300	104	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

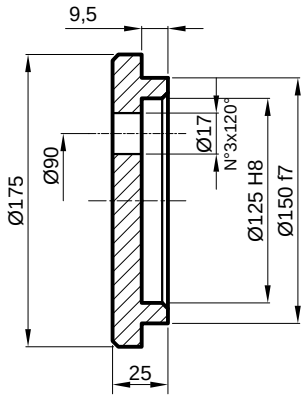
PD/PDA 125

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.125.200

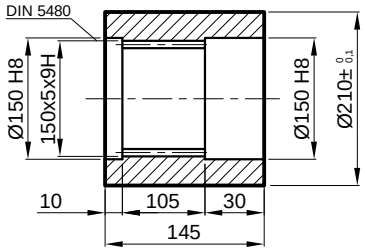
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.125.250

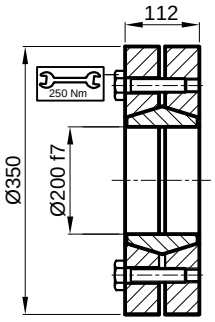
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.125.100

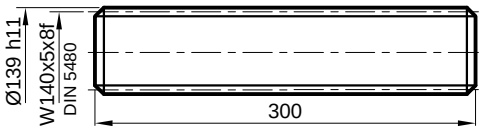
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
92,5 kNm

Kod / Code / Bestell
2501.123.001

FM Frezeli Mil / Splined rod Außenverzahnte Welle



Malzeme / Material
Material

UNI 39NiCrMo5
Sertleştirilmiş ve Temperlenmiş
Hardened and Tempered
Vergütet

Kod / Code / Bestell
1509.123.260

PD/PDA 125

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

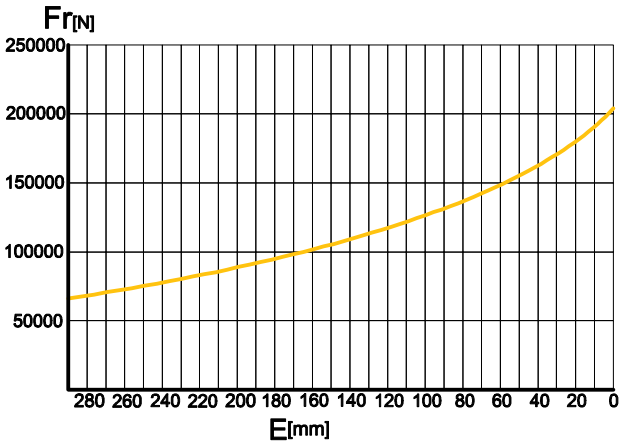
RADIAL LOADS(Fr)

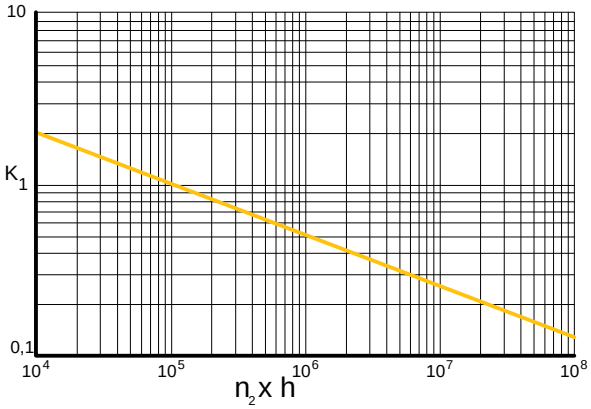
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

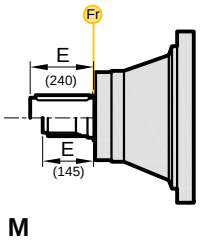
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-FV

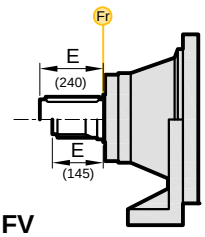




	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



M



FV

AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

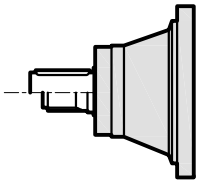
AXIAL LOADS (Fa)

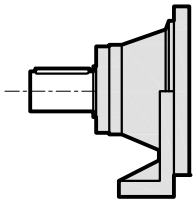
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)

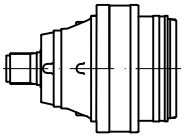
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	50000	50000	←
	100000	100000	→

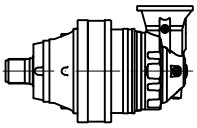




PD 127

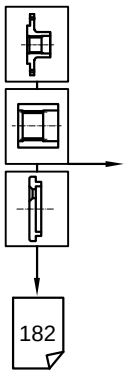
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 127 S1	4.00	111850	99000	84250	74570	750	198000	80
	5.10	89260	79000	67230	59500	750	158000	80
PD 127 S2	16.1	111850	99000	84250	74570	1500	198000	65
	20.4	89260	79000	67230	59500	1500	158000	65
	21.0	111850	99000	84250	74570	1500	198000	65
	26.6	89260	79000	67230	59500	1500	158000	65
	31.9	89260	79000	67230	59500	1500	158000	65
PD 127 S3	59.3	111850	99000	84250	74570	1500	198000	45
	71.6	111850	99000	84250	74570	1500	198000	45
	80.8	111850	99000	84250	74570	1500	198000	45
	93.1	111850	99000	84250	74570	2500	198000	45
	105.1	111850	99000	84250	74570	2500	198000	45
	117.8	89260	79000	67230	59500	2500	158000	45
	121.9	111850	99000	84250	74570	2500	198000	45
	133.0	89260	79000	67230	59500	2500	158000	45
	154.3	89260	79000	67230	59500	2500	158000	45
	185.5	89260	79000	67230	59500	2500	158000	45
PD 127 S4	224.0	111850	99000	84250	74570	2500	198000	30
	244.6	111850	99000	84250	74570	2500	198000	30
	270.5	111850	99000	84250	74570	2500	198000	30
	306.3	111850	99000	84250	74570	2500	198000	30
	355.8	111850	99000	84250	74570	2500	198000	30
	398.3	111850	99000	84250	74570	2500	198000	30
	429.7	111850	99000	84250	74570	2500	198000	30
	462.5	111850	99000	84250	74570	2500	198000	30
	504.1	89260	79000	67230	59500	2800	158000	30
	543.9	89260	79000	67230	59500	2800	158000	30
	585.4	89260	79000	67230	59500	2800	158000	30
	630.7	111850	99000	84250	74570	2800	198000	30
	687.4	89260	79000	67230	59500	2800	158000	30
	742.0	89260	79000	67230	59500	2800	158000	30
	798.3	89260	79000	67230	59500	2800	158000	30
	854.4	89260	79000	67230	59500	2800	158000	30
	926.0	89260	79000	67230	59500	2800	158000	30
	1119.0	89260	79000	67230	59500	2800	158000	30
	1344.9	89260	79000	67230	59500	2800	158000	30
	1623.2	89260	79000	67230	59500	2800	158000	30
PD 127 S5	1431.1	89260	79000	67230	59500	2800	158000	26
	1579.8	89260	79000	67230	59500	2800	158000	26
	1662	89260	79000	67230	59500	2800	158000	26
	1787.2	89260	79000	67230	59500	2800	158000	26
	1908.1	89260	79000	67230	59500	2800	158000	26
	2064.3	89260	79000	67230	59500	2800	158000	26
	2154.3	89260	79000	67230	59500	2800	158000	26
	2493.2	89260	79000	67230	59500	2800	158000	26
	3430	89260	79000	67230	59500	2800	158000	26
	4470.8	89260	79000	67230	59500	2800	158000	26
	5402.2	89260	79000	67230	59500	2800	158000	26
	6511.5	89260	79000	67230	59500	2800	158000	26
	7405	89260	79000	67230	59500	2800	158000	26
	8360.5	89260	79000	67230	59500	2800	158000	26

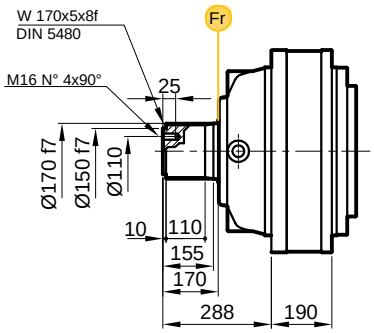
PDA 127

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 127 S3	49.6	111850	99000	84250	74570	2500	198000	45
	64.5	111850	99000	84250	74570	2500	198000	45
	81.7	89260	79000	67230	59500	2500	158000	45
	95.5	89260	79000	67230	59500	2500	158000	45
	124.1	89260	79000	67230	59500	2500	158000	45
	149.2	89260	79000	67230	59500	2500	158000	45
PDA 127 S4	247.4	111850	99000	84250	74570	2800	198000	30
	266.3	111850	99000	84250	74570	2800	198000	30
	322.8	111850	99000	84250	74570	2800	198000	30
	389.9	111850	99000	84250	74570	2800	198000	30
	419.7	111850	99000	84250	74570	2800	198000	30
	459.6	89260	79000	67230	59500	2800	158000	30
	506.9	111850	99000	84250	74570	2800	198000	30
	572.3	111850	99000	84250	74570	2800	198000	30
	638.4	89260	79000	67230	59500	2800	158000	30
	663.9	111850	99000	84250	74570	2800	198000	30
	724.4	89260	79000	67230	59500	2800	158000	30
	771.1	89260	79000	67230	59500	2800	158000	30
	840.3	89260	79000	67230	59500	2800	158000	30
	1010.0	89260	79000	67230	59500	2800	158000	30

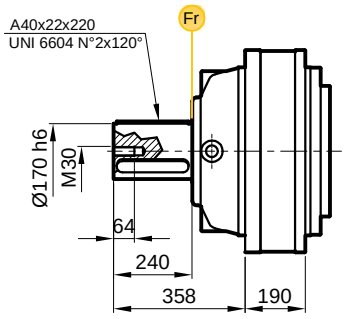
PD/PDA 127

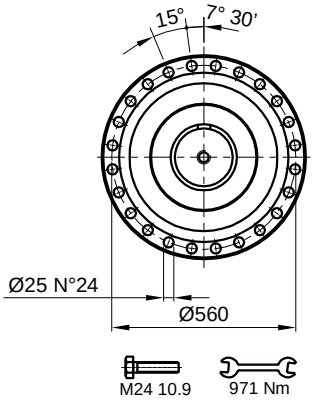
MS



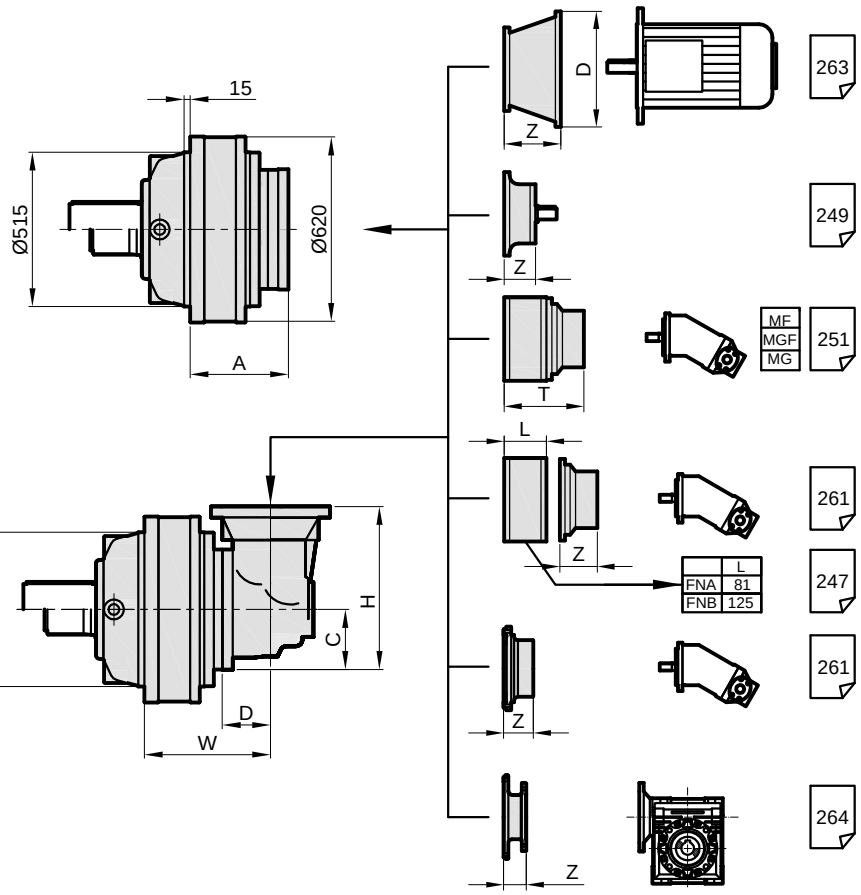


MC

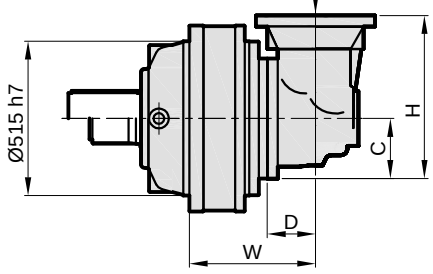




PD..



PDA..

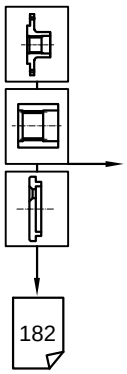


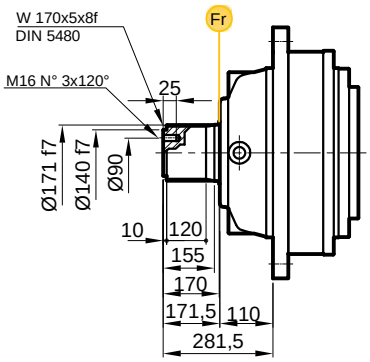
Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	293	519	-
S2	-	-	-	-	475	635	-
S3	610	225	200	450	385	662	699
S4	650	122	140	310	528	673	720

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

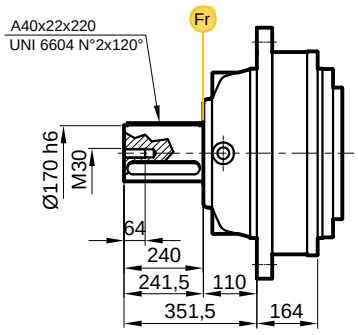
PD/PDA 127

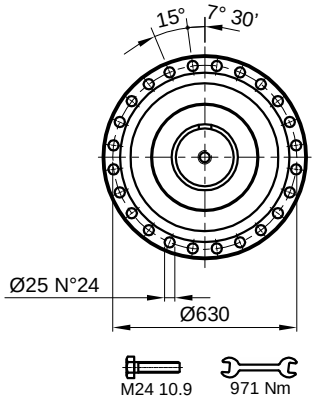
FS





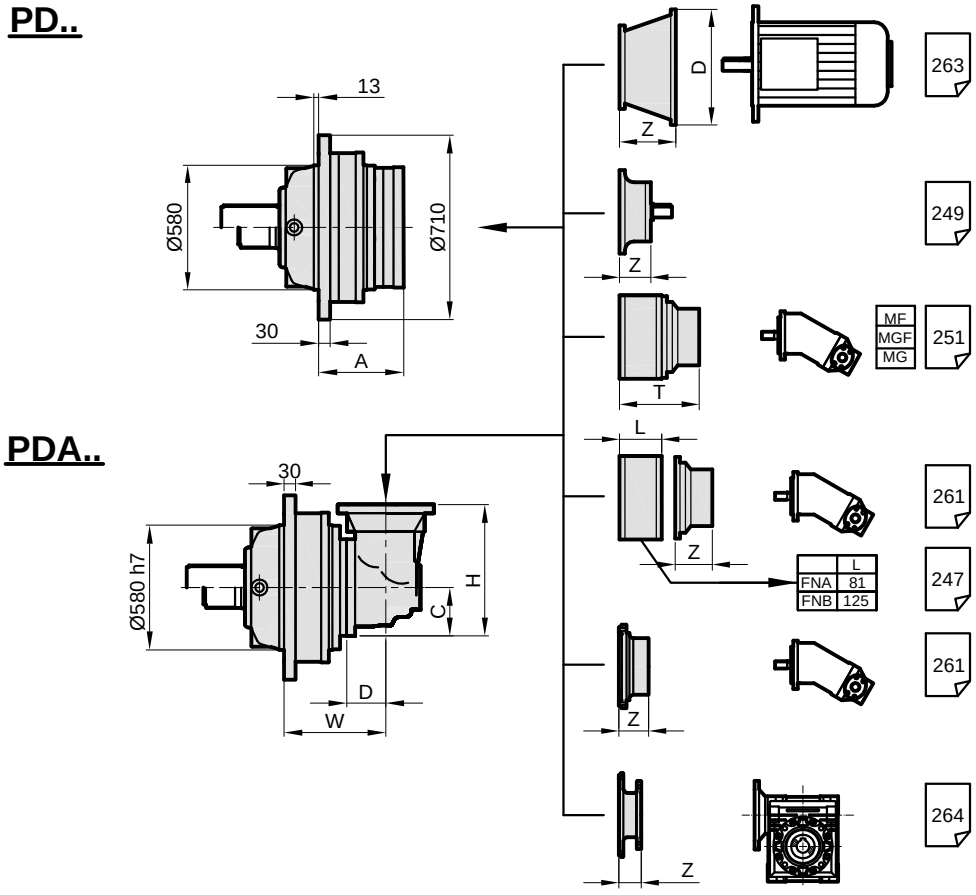
FC





PD..

PDA..

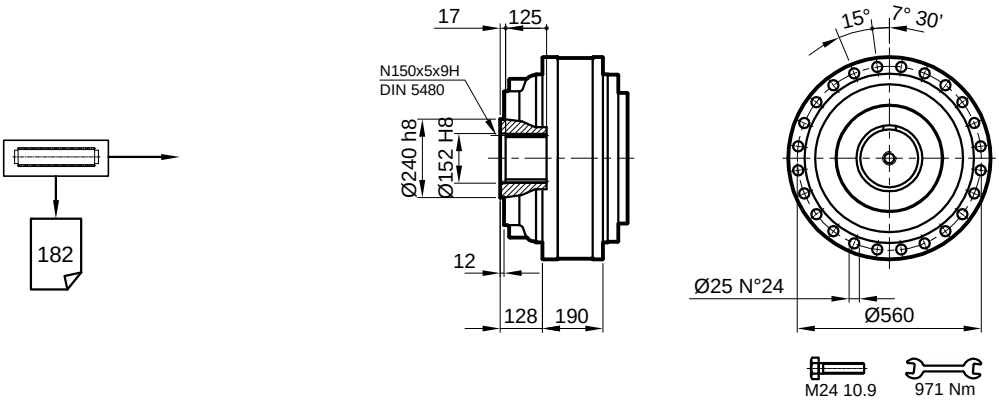


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	276	519	-
S2	-	-	-	-	458	635	-
S3	538	88	235	550	552	662	699
S4	640	88	140	380	611,5	673	720

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

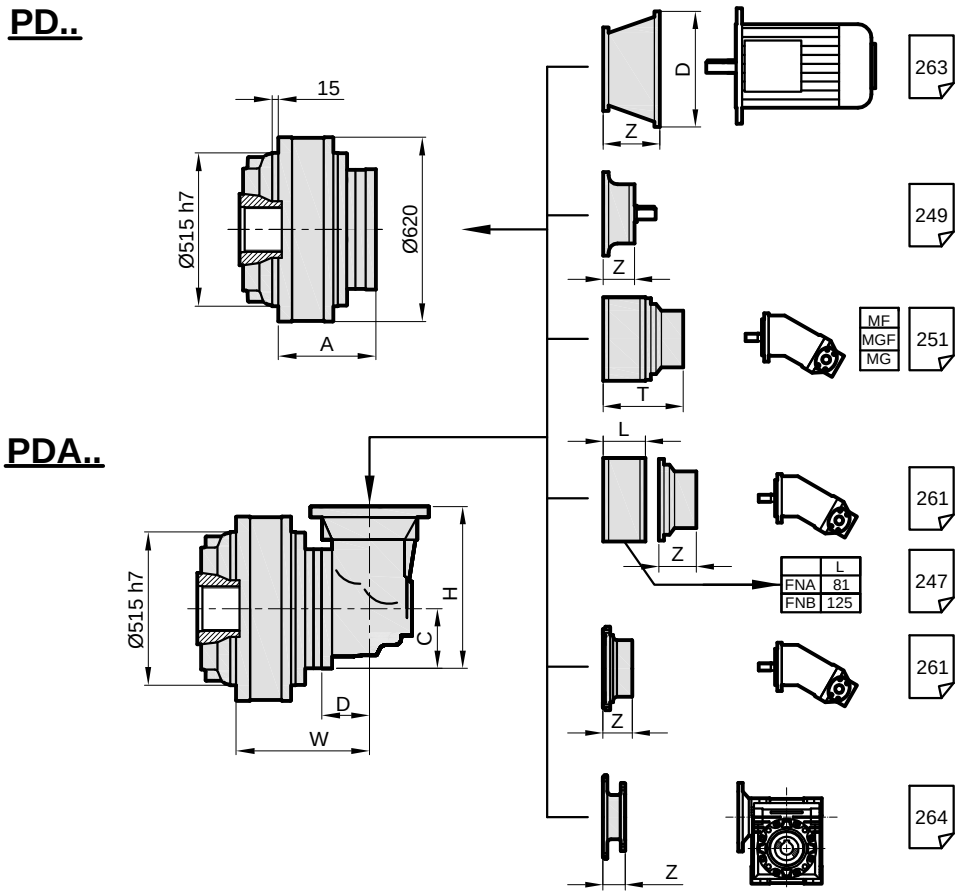
PD/PDA 127

S



PD..

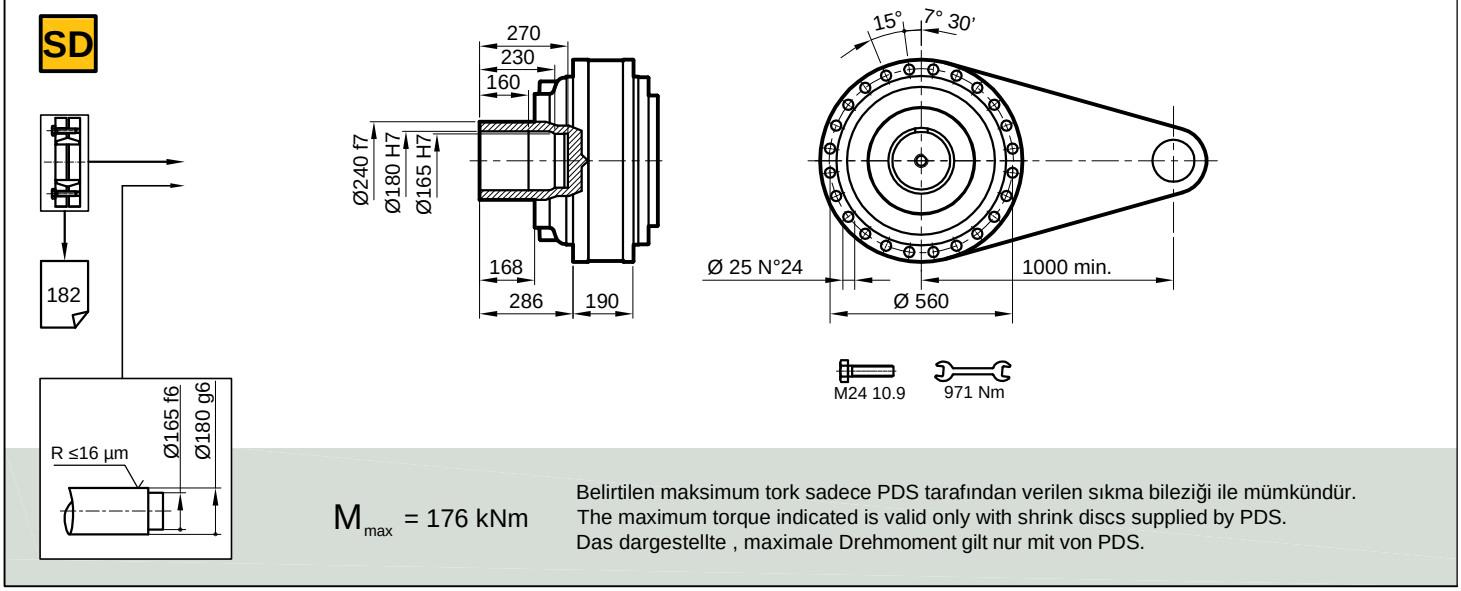
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	293	423	-
S2	-	-	-	-	475	539	-
S3	555	88	235	550	569	566	603
S4	657	88	140	380	628,5	577	624

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 127

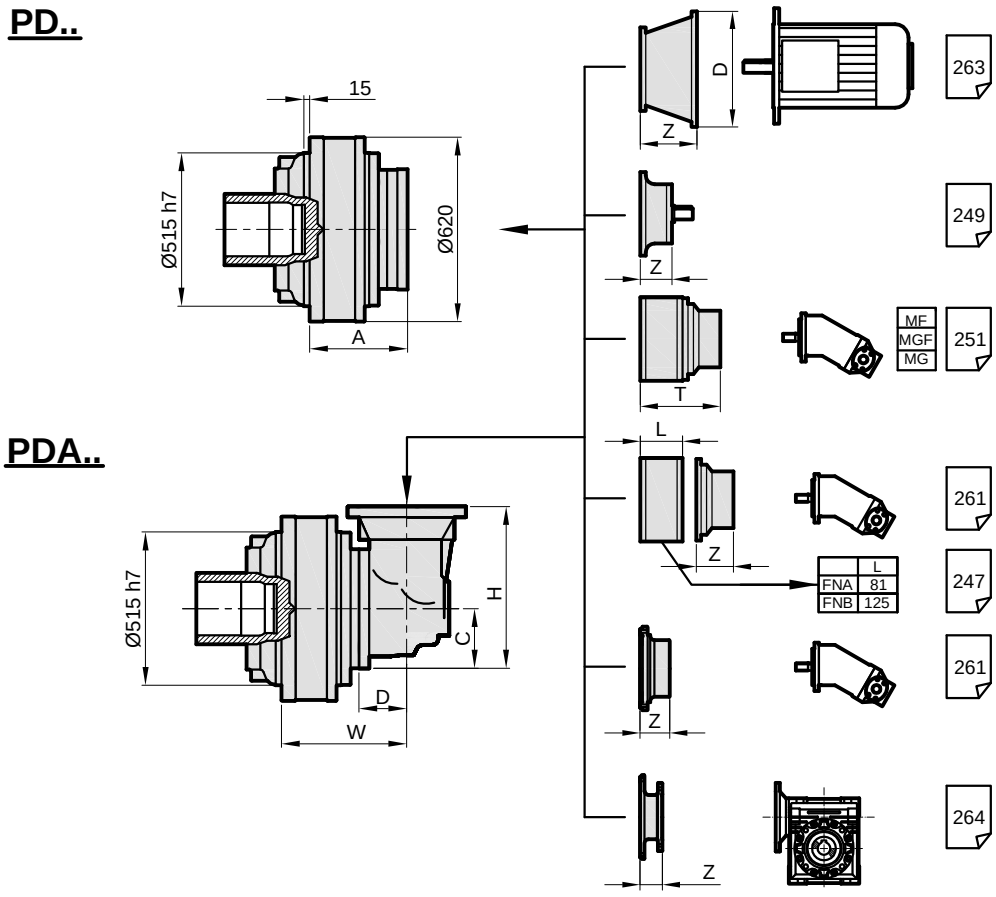


M_{max} = 176 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..

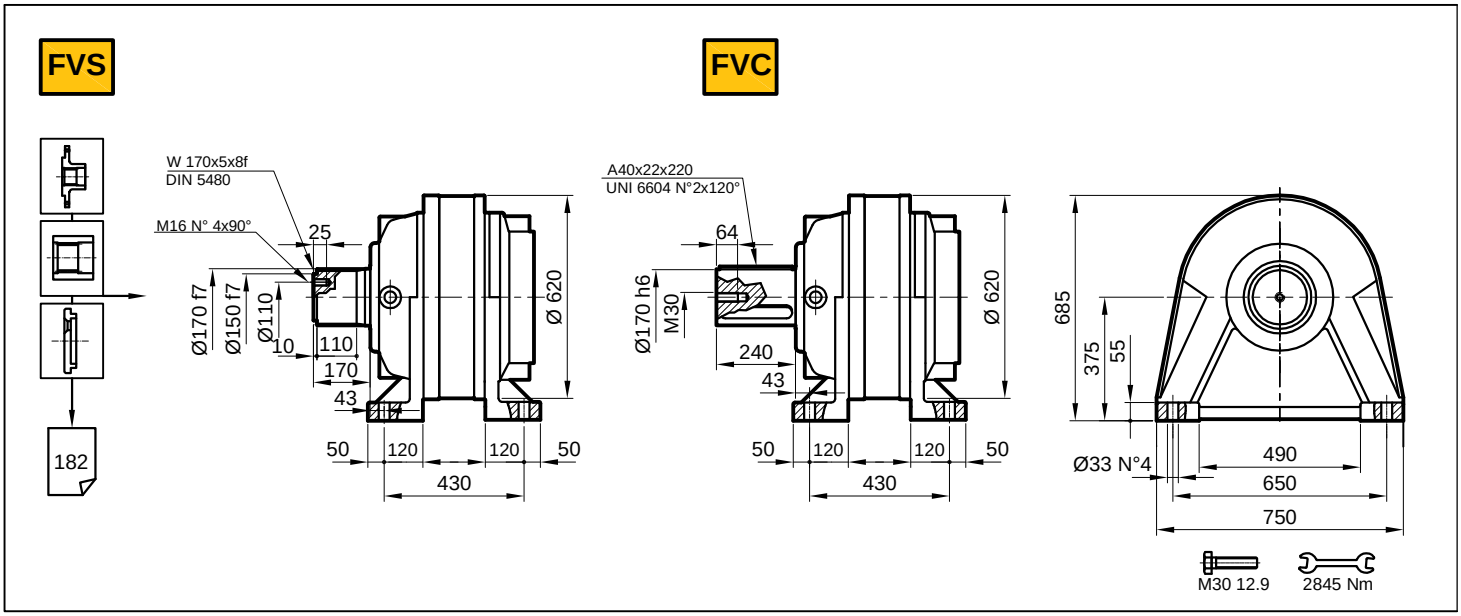
PDA..

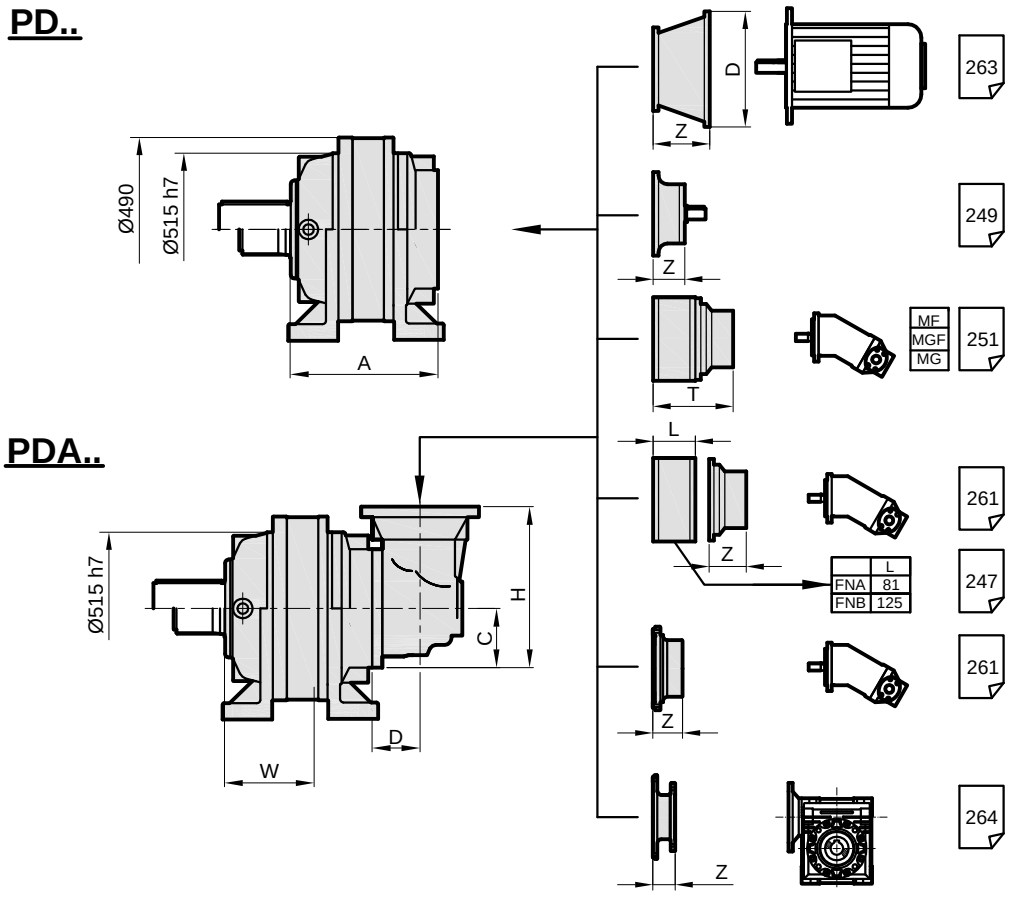


Stage	W	D	C	H	A	PD / SD	PDA / SD
S1	-	-	-	-	293	445	-
S2	-	-	-	-	475	561	-
S3	555	88	235	550	569	588	625
S4	657	88	140	380	628,5	599	646

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 127



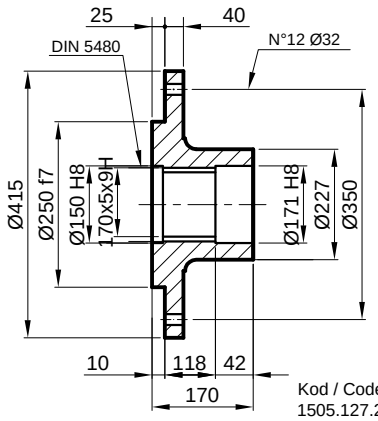


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	456	691	-
S2	-	-	-	-	638	807	-
S3	718	88	235	550	732	834	871
S4	820	88	140	380	791,5	845	892

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

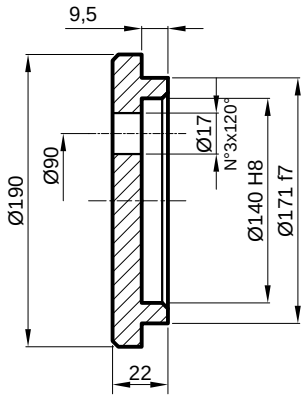
PD/PDA 127

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.127.200

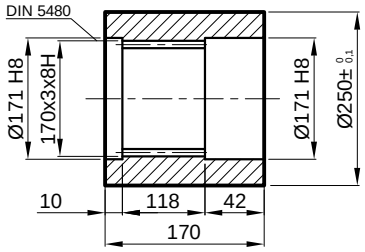
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.127.250

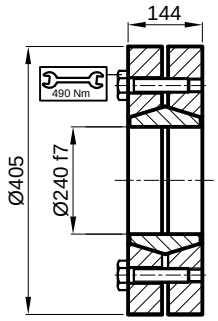
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.127.100

SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
176 kNm

Kod / Code / Bestell
2501.127.001

PD/PDA 127

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

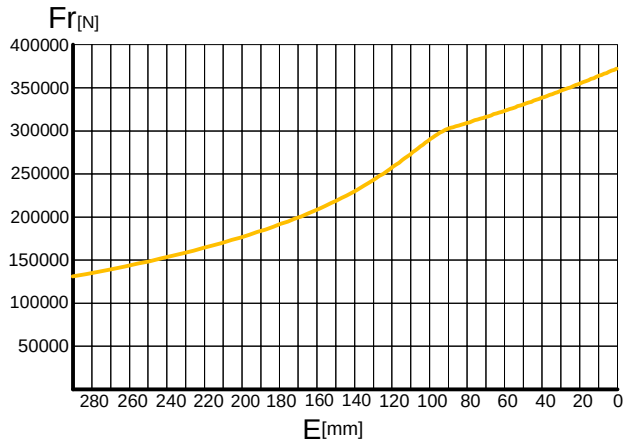
RADIAL LOADS(Fr)

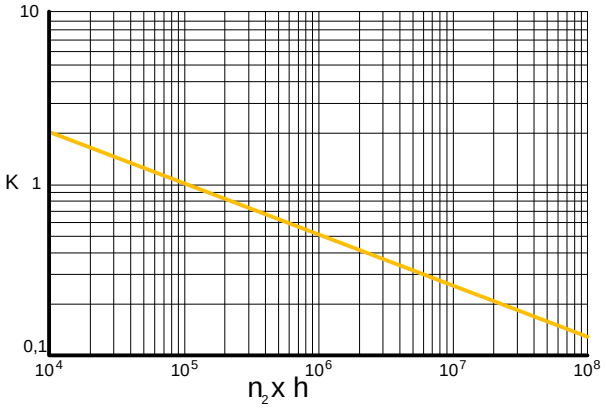
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

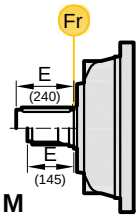
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

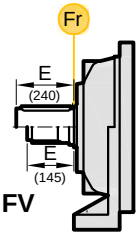
M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			





AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

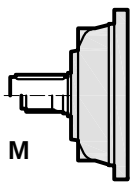
AXIAL LOADS (Fa)

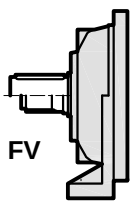
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)

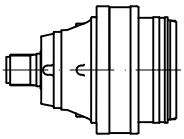
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	40000	40000	←
	70000	70000	→

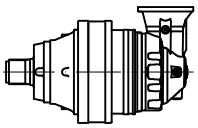




PD 129

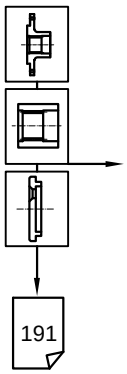
	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 129 S1	3.83	156600	140900	122700	115000	200	211350	75
	4.40	144800	130300	113400	110000	200	195450	75
PD 129 S2	15.33	156600	140900	122700	115000	1500	211350	60
	18.04	156600	140900	122700	115000	1500	211350	60
	20.71	144800	130300	113400	110000	1500	195450	60
PD 129 S3	54.52	156600	140900	122700	115000	2000	211350	40
	65.71	156600	140900	122700	115000	2000	211350	40
	75.43	144800	130300	113400	110000	2000	195450	40
	88.74	144800	130300	113400	110000	2000	195450	40
	115.95	144800	130300	113400	110000	2000	195450	40
	139.77	144800	130300	113400	110000	2000	195450	40
PD 129 S4	205.96	156600	140900	122700	115000	2000	211350	40
	248.25	156600	140900	122700	115000	2000	211350	40
	271.07	156600	140900	122700	115000	2000	211350	40
	281.68	156600	140900	122700	115000	2800	211350	30
	311.14	144800	130300	113400	110000	2800	195450	30
	335.24	144800	130300	113400	110000	2800	195450	30
	380.38	144800	130300	113400	110000	2800	195450	30
	395.26	156600	140900	122700	115000	2800	211350	30
	443.64	156600	140900	122700	115000	2800	211350	30
	476.43	156600	140900	122700	115000	2800	211350	30
	546.86	144800	130300	113400	110000	2800	195450	30
	599.09	144800	130300	113400	110000	2800	195450	30
	643.36	144800	130300	113400	110000	2800	195450	30
	695.72	144800	130300	113400	110000	2800	195450	30
	840.66	144800	130300	113400	110000	2800	195450	30
	1113.29	144800	130300	113400	110000	2800	195450	30
PD 129 S5	732.30	156600	140900	122700	115000	2800	211350	21
	799.61	156600	140900	122700	115000	2800	211350	21
	882.68	156600	140900	122700	115000	2800	211350	21
	963.81	156600	140900	122700	115000	2800	211350	21
	1001.53	156600	140900	122700	115000	2800	211350	21
	1063.95	156600	140900	122700	115000	2800	211350	21
	1153.37	156600	140900	122700	115000	2800	211350	21
	1207.20	156600	140900	122700	115000	2800	211350	21
	1390.22	156600	140900	122700	115000	2800	211350	21
	1577.40	156600	140900	122700	115000	2800	211350	21
	1693.97	156600	140900	122700	115000	2800	211350	21
	1829.73	156600	140900	122700	115000	2800	211350	21
	2208.00	156600	140900	122700	115000	2800	211350	21
	2661.43	156600	140900	122700	115000	2800	211350	21
	2956.80	144800	130300	113400	110000	2800	195450	21
	3228.56	144800	130300	113400	110000	2800	195450	21
	3691.29	144800	130300	113400	110000	2800	195450	21
	4043.86	144800	130300	113400	110000	2800	195450	21
	5674.45	144800	130300	113400	110000	2800	195450	21

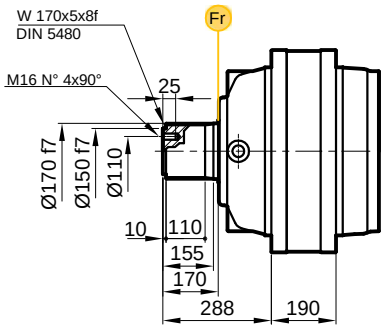
PDA 129

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 129 S4	167.45	156600	140900	122700	115000	2500	211350	28
	201.84	156600	140900	122700	115000	2500	211350	28
	272.56	144800	130300	113400	110000	2500	195450	28
	306.67	156600	140900	122700	115000	2500	211350	28
	356.14	144800	130300	113400	110000	2500	195450	28
	414.12	144800	130300	113400	110000	2500	195450	28
	459.95	144800	130300	113400	110000	2500	195450	28
	541.11	144800	130300	113400	110000	2500	195450	28
	652.24	144800	130300	113400	110000	2500	195450	28
PDA 129 S5	711.49	156600	140900	122700	115000	2800	211350	20
	857.60	156600	140900	122700	115000	2800	211350	20
	973.07	156600	140900	122700	115000	2800	211350	20
	1074.8	144800	130300	113400	110000	2800	195450	20
	1224.4	156600	140900	122700	115000	2800	211350	20
	1351.6	156600	140900	122700	115000	2800	211350	20
	1514.2	144800	130300	113400	110000	2800	195450	20
	1694.0	144800	130300	113400	110000	2800	195450	20
	1992.9	144800	130300	113400	110000	2800	195450	20
	2146.6	156600	140900	122700	115000	2800	195450	20
	2496.2	144800	130300	113400	110000	2800	195450	20
	2772.4	144800	130300	113400	110000	2800	195450	20
	3138.8	144800	130300	113400	110000	2800	195450	20
	3219.6	144800	130300	113400	110000	2800	195450	20
	3502.7	144800	130300	113400	110000	2800	195450	20
	3931.5	144800	130300	113400	110000	2800	195450	20
	4576.9	144800	130300	113400	110000	2800	195450	20
	5516.8	144800	130300	113400	110000	2800	195450	20

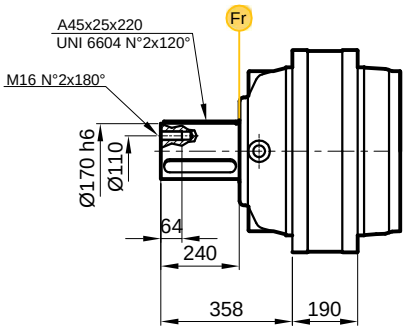
PD/PDA 129

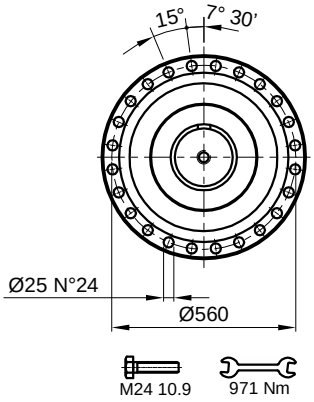
MS



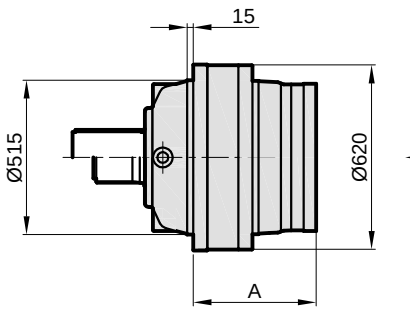


MC

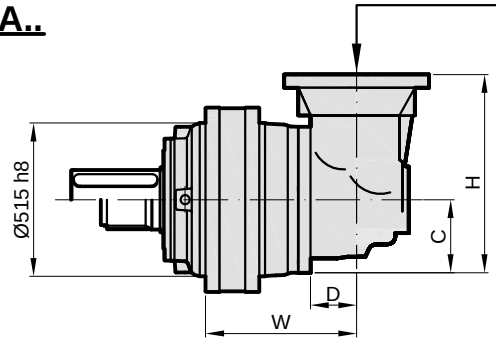


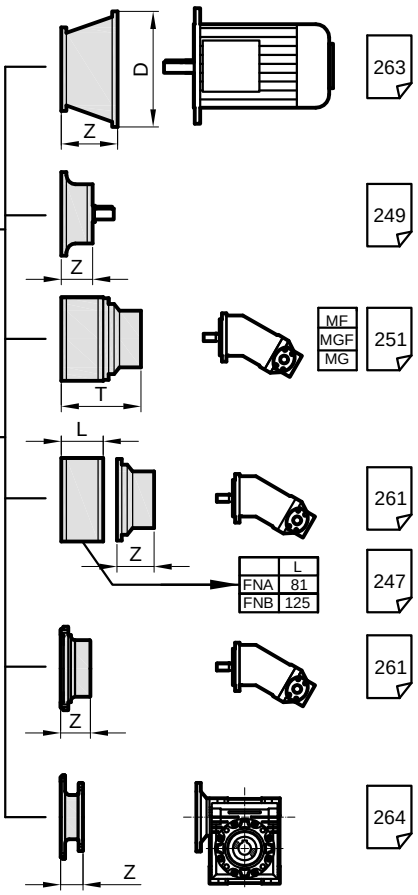


PD..



PDA..



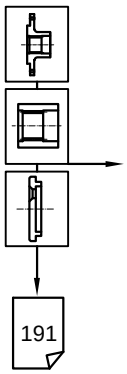


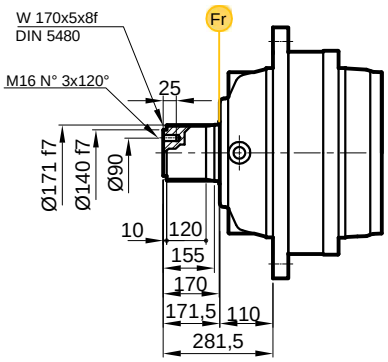
Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	293	805	-
S2	-	-	-	-	475	855	-
S3	555	88	235	550	569	871	964
S4	657	88	140	380	628,5	879	913

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

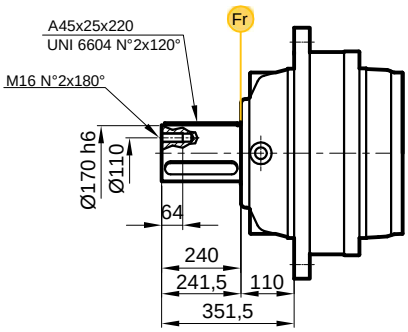
PD/PDA 129

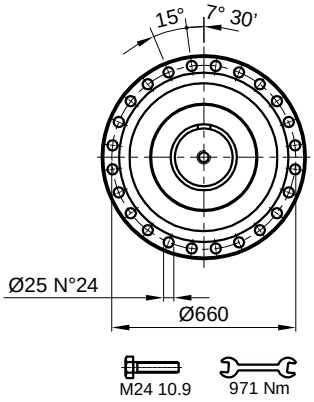
FS



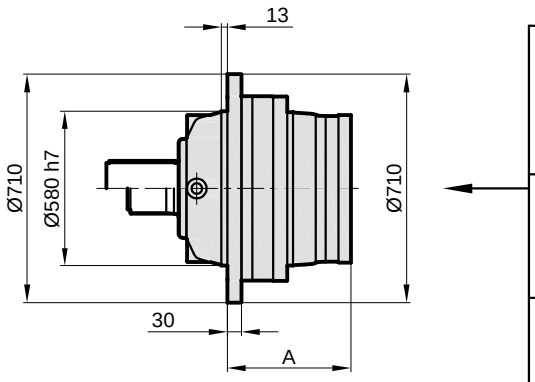


FC

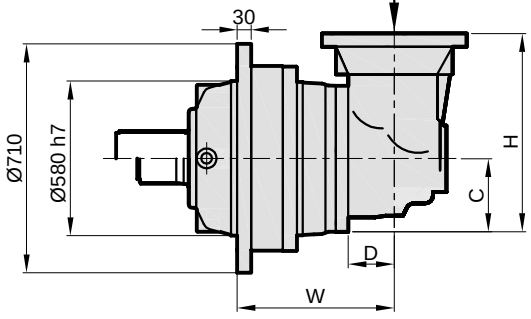


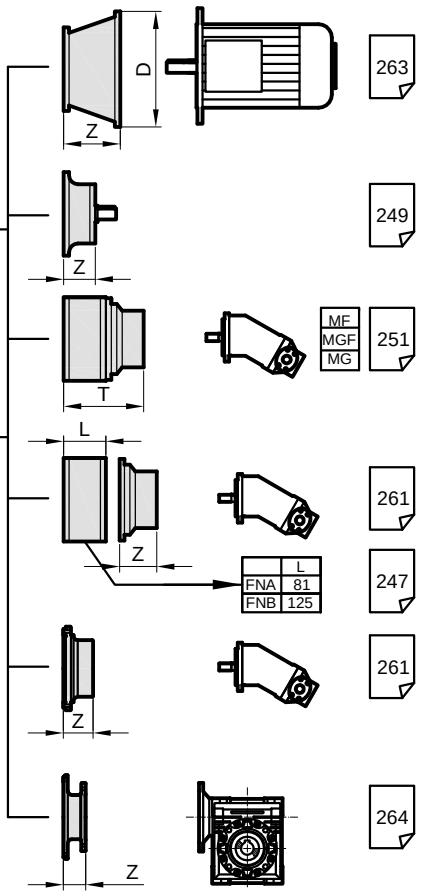


PD..



PDA..



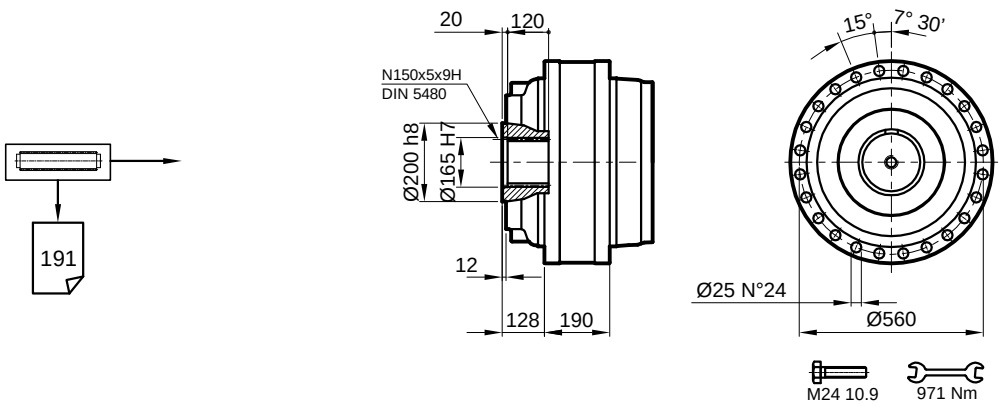


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	276	805	-
S2	-	-	-	-	458	855	-
S3	538	88	235	550	552	871	964
S4	640	88	140	380	611,5	879	913

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

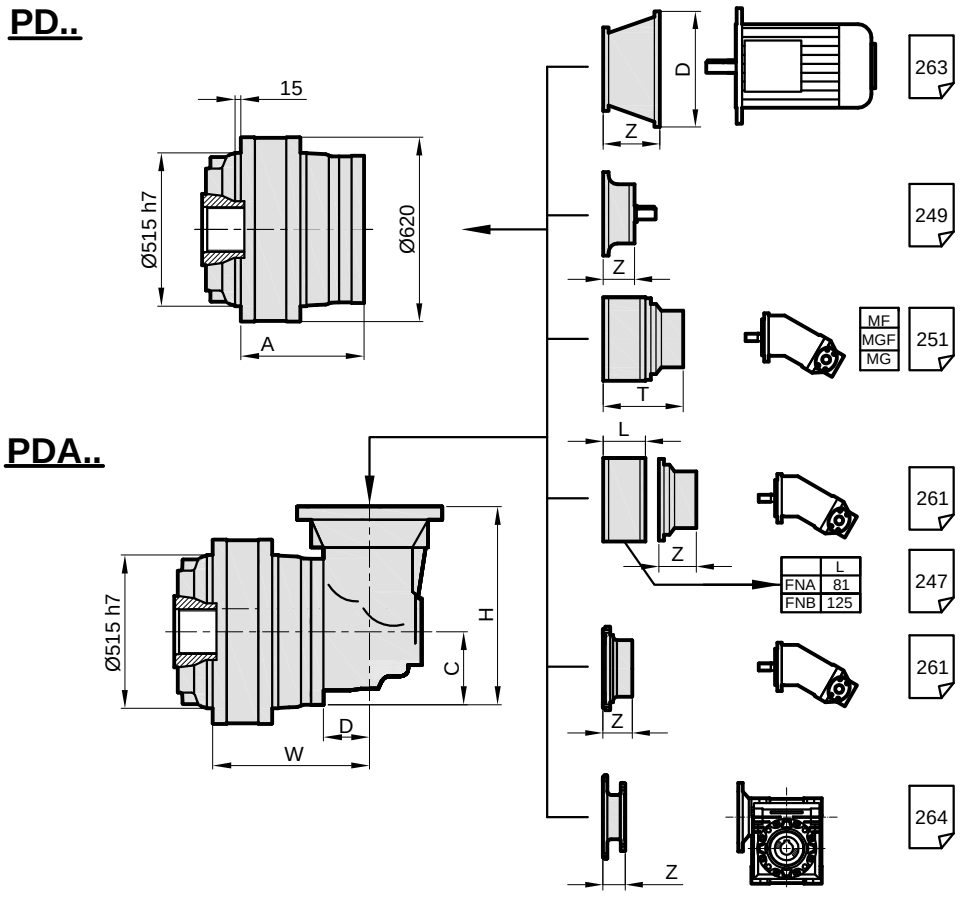
PD/PDA 129

S



PD..

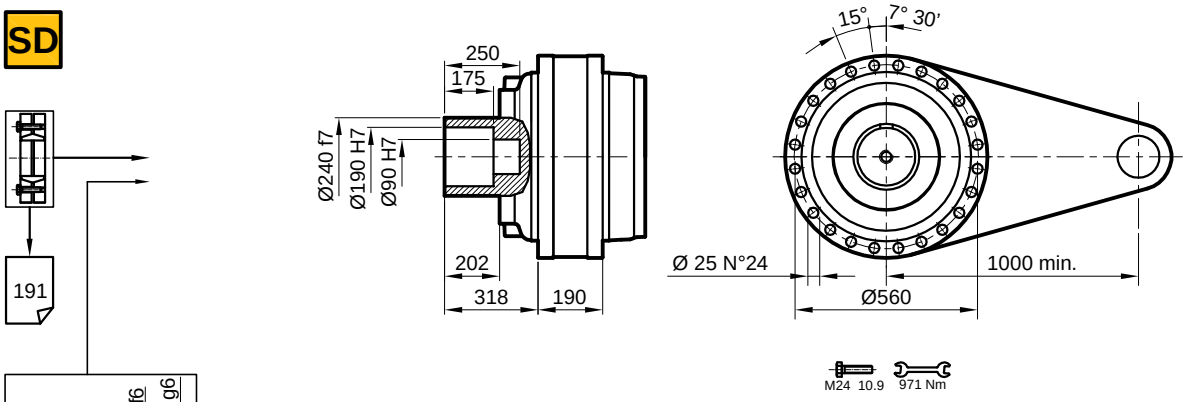
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	293	735	-
S2	-	-	-	-	475	785	-
S3	555	88	235	550	569	801	894
S4	657	88	140	380	628,5	809	843

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 129

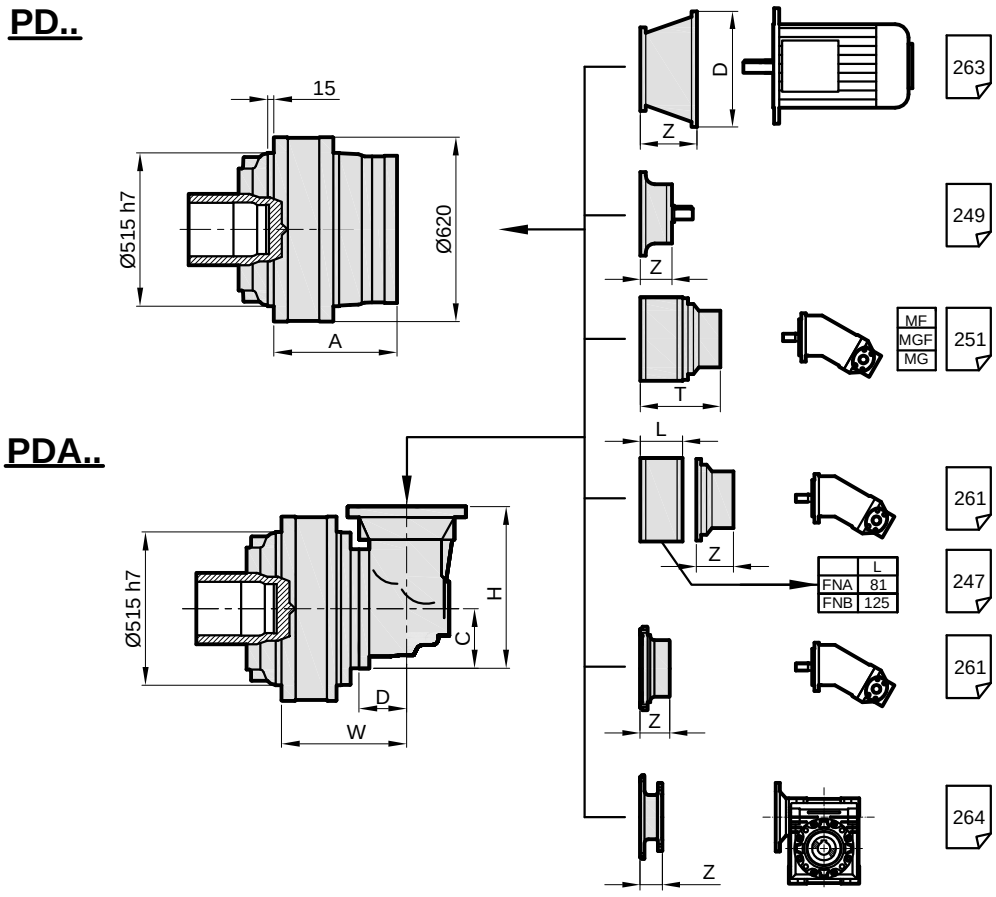


M_{max} = 176 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..

PDA..

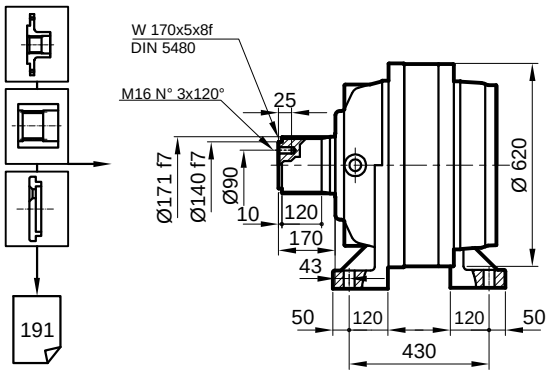


Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	293	773	-
S2	-	-	-	-	475	823	-
S3	555	88	235	550	569	839	932
S4	657	88	140	380	628,5	847	891

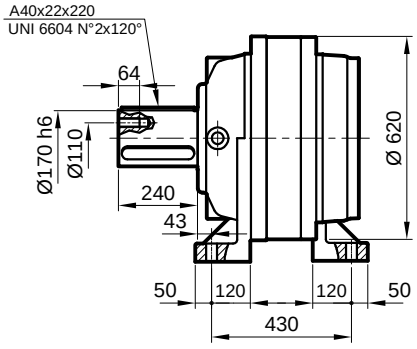
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

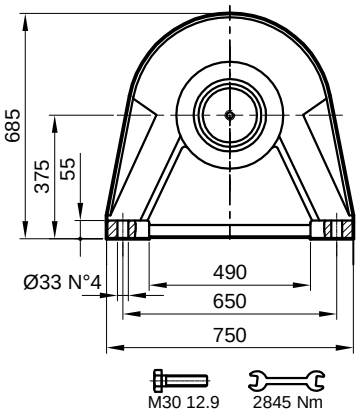
PD/PDA 129

FVS

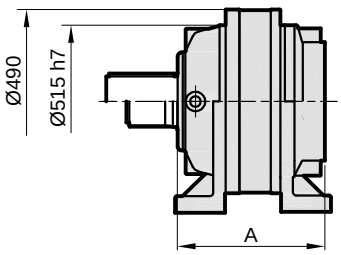


FVC

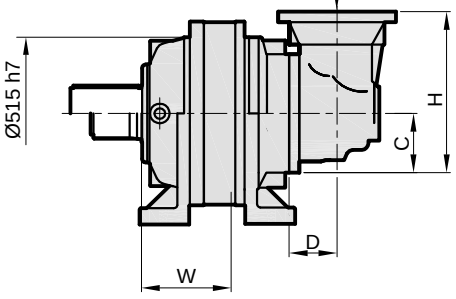


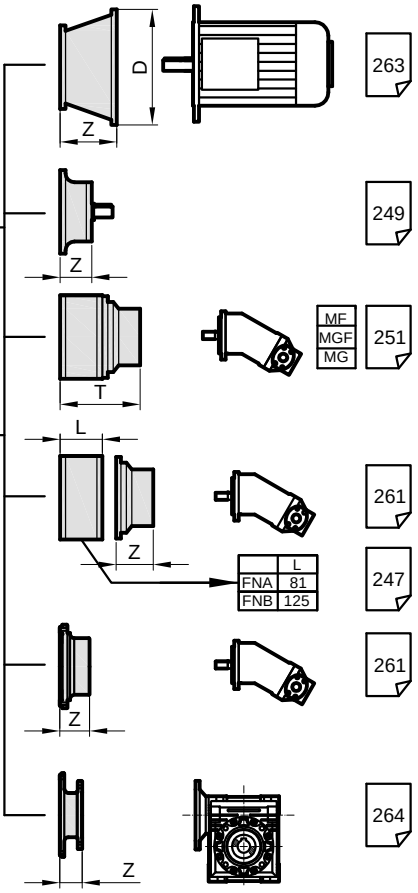


PD..



PDA..



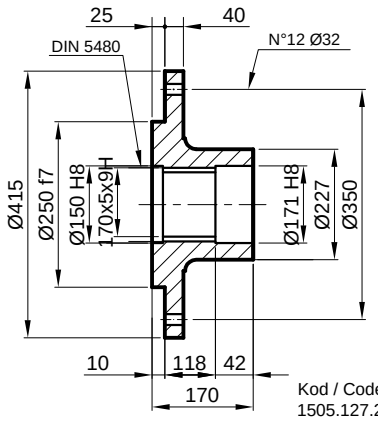


Stage	W	D	C	H	A	PD / FVC	PDA / FVC
S1	-	-	-	-	456	977	-
S2	-	-	-	-	638	1027	-
S3	718	88	235	550	732	1043	1136
S4	820	88	140	380	791,5	1051	1085

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

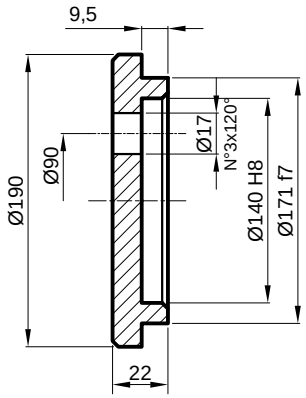
PD/PDA 129

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.127.200

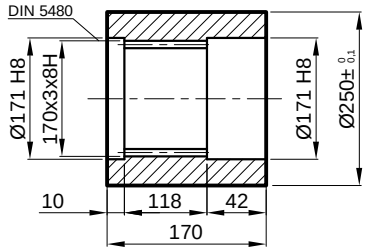
SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.127.250

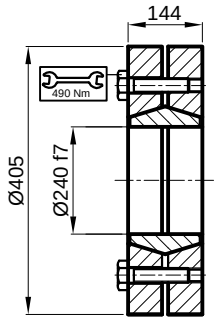
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.127.100

SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
176 kNm

Kod / Code / Bestell
2501.127.001

PD/PDA 129

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

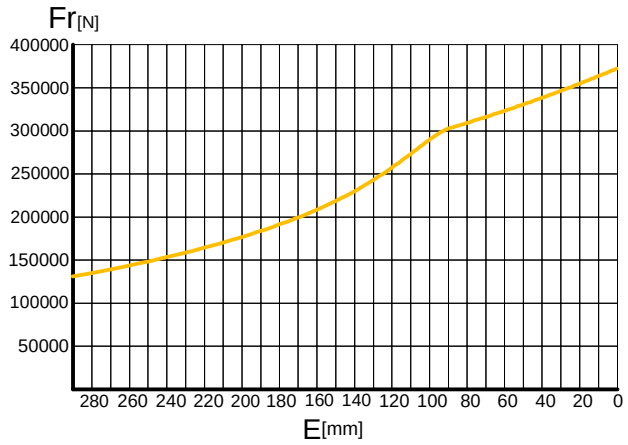
RADIAL LOADS(Fr)

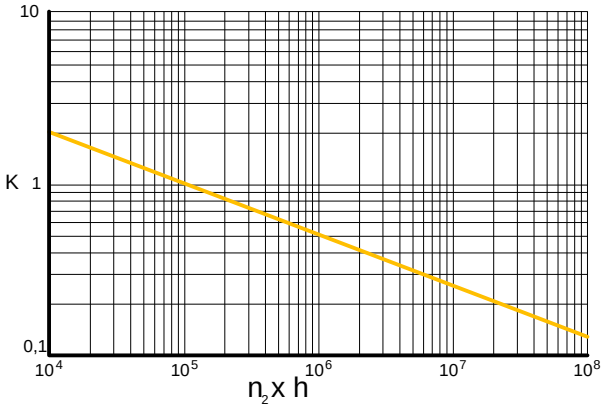
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

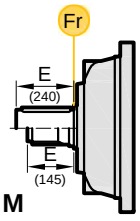
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

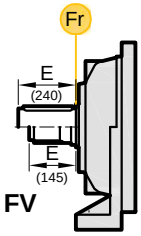
M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			





AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

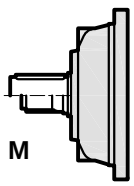
AXIAL LOADS (Fa)

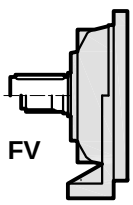
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)

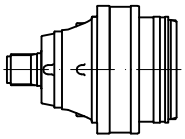
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	40000	40000	←
	70000	70000	→

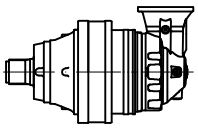




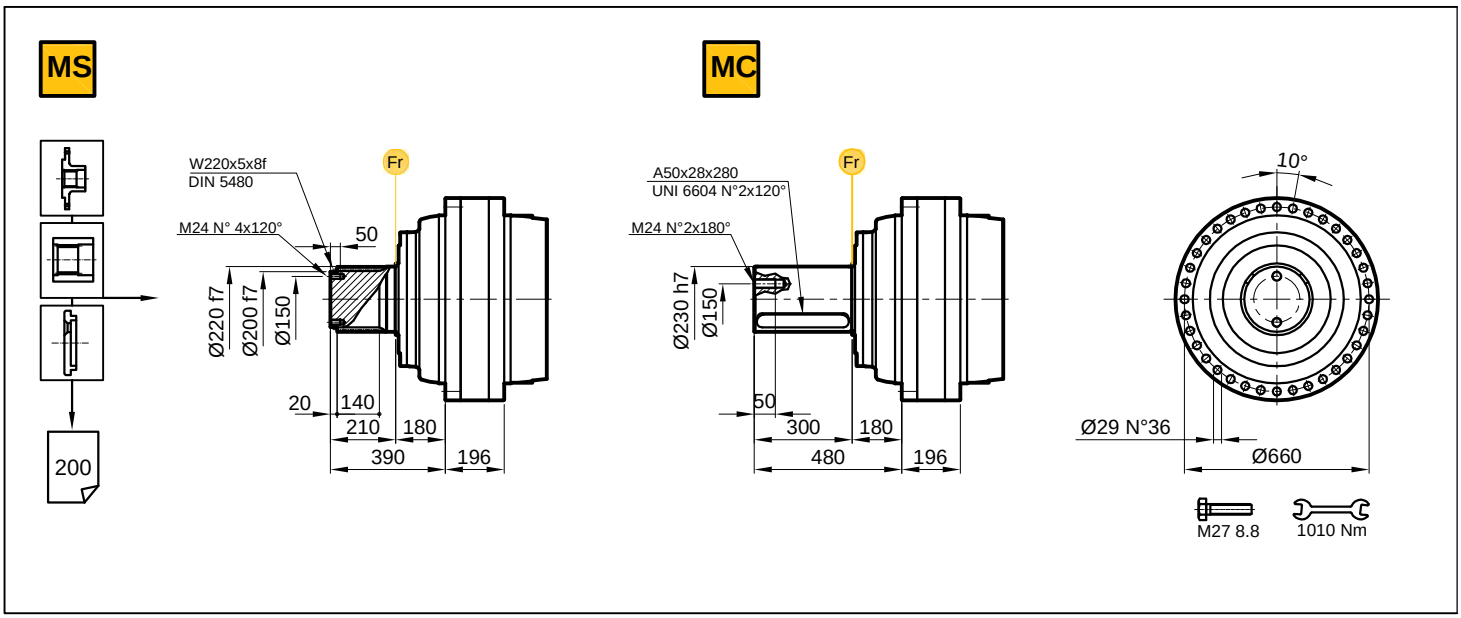
PD 131

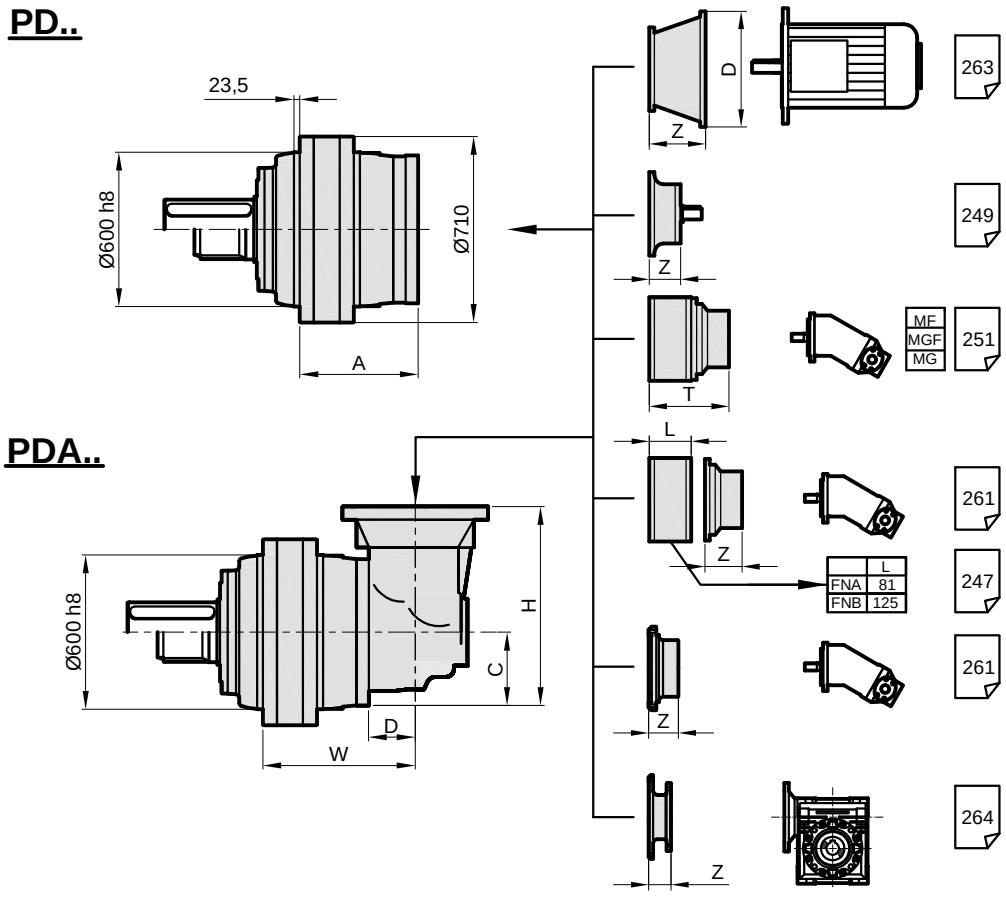
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 131 S1	3.91	204000	184000	160000	153000	200	276000	83
	4.94	159000	143000	125000	125000	200	214500	83
PD 131 S2	15.47	204000	184000	160000	153000	1200	276000	67
	19.81	204000	184000	160000	153000	1200	276000	67
	25.01	159000	143000	125000	125000	1200	214500	67
PD 131 S3	29.65	159000	143000	125000	125000	2000	214500	47
	55.02	204000	184000	160000	153000	2000	276000	47
	66.32	204000	184000	160000	153000	2000	276000	47
	74.79	204000	184000	160000	153000	2000	276000	47
	86.66	204000	184000	160000	153000	2000	276000	47
	95.75	204000	184000	160000	153000	2000	276000	47
	107.21	159000	143000	125000	125000	2000	214500	47
	120.91	159000	143000	125000	125000	2000	214500	47
	133.71	204000	184000	160000	153000	2000	276000	47
	166.02	159000	143000	125000	125000	2000	214500	47
	200.12	159000	143000	125000	125000	2000	214500	47
PD 131 S4	250.53	204000	184000	160000	153000	2800	276000	37
	327.36	204000	184000	160000	153000	2800	276000	37
	386.42	204000	184000	160000	153000	2800	276000	37
	438.64	204000	184000	160000	153000	2800	276000	37
	487.96	159000	143000	125000	125000	2800	214500	37
	519.93	204000	184000	160000	153000	2800	276000	37
	574.48	204000	184000	160000	153000	2800	276000	37
	624.68	159000	143000	125000	125000	2800	214500	37
	684.72	159000	143000	125000	125000	2800	214500	37
	725.43	159000	143000	125000	125000	2800	214500	37
	793.33	159000	143000	125000	125000	2800	214500	37
	840.50	159000	143000	125000	125000	2800	214500	37
	969.43	204000	184000	160000	153000	2800	276000	37
	1038.88	159000	143000	125000	125000	2800	214500	37
	1203.68	159000	143000	125000	125000	2800	214500	37
	1450.86	159000	143000	125000	125000	2800	214500	37
PD 131 S5	1531.94	204000	184000	160000	153000	2800	276000	27
	1604.90	159000	143000	125000	125000	2800	214500	27
	1727.69	204000	184000	160000	153000	2800	276000	27
	1811.16	204000	184000	160000	153000	2800	276000	27
	1907.19	204000	184000	160000	153000	2800	276000	27
	2001.73	204000	184000	160000	153000	2800	276000	27
	2091.27	159000	143000	125000	125000	2800	214500	27
	2181.66	159000	143000	125000	125000	2800	214500	27
	2363.88	204000	184000	160000	153000	2800	276000	27
	2476.47	159000	143000	125000	125000	2800	214500	27
	2608.36	204000	184000	160000	153000	2800	276000	27
	2792.91	159000	143000	125000	125000	2800	214500	27
	2960.82	204000	184000	160000	153000	2800	276000	27
	3900.44	159000	143000	125000	125000	2800	214500	27
	5145.91	159000	143000	125000	125000	2800	214500	27
	5888.65	159000	143000	125000	125000	2800	214500	27
	6979.14	159000	143000	125000	125000	2800	214500	27
	8124.82	159000	143000	125000	125000	2800	214500	27
	9793.30	159000	143000	125000	125000	2800	214500	27

PDA 131

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 131 S3	60.02	159000	143000	125000	125000	2500	214500	45
	72.11	204000	184000	160000	153000	2500	276750	45
	76.83	159000	143000	125000	125000	2500	214500	45
	91.06	159000	143000	125000	125000	2500	214500	45
	116.74	159000	143000	125000	125000	2500	214500	45
	138.35	159000	143000	125000	125000	2500	214500	45
PDA 131 S4	256.76	204000	184000	160000	153000	2500	276750	35
	328.69	204000	184000	160000	153000	2500	276750	35
	390.80	159000	143000	125000	125000	2500	214500	35
	440.74	159000	143000	125000	125000	2500	214500	35
	500.30	159000	143000	125000	125000	2500	214500	35
	564.22	159000	143000	125000	125000	2500	214500	35
	653.72	159000	143000	125000	125000	2500	214500	35
	787.97	159000	143000	125000	125000	2500	214500	35
	933.89	159000	143000	125000	125000	2500	214500	35
PDA 131 S5	1183.67	204000	184000	160000	153000	2800	276750	25
	1334.92	204000	184000	160000	153000	2800	276750	25
	1440.05	159000	143000	125000	125000	2800	214500	25
	1550.23	204000	184000	160000	153000	2800	276750	25
	1685.69	159000	143000	125000	125000	2800	214500	25
	1759.71	204000	184000	160000	153000	2800	276750	25
	1880.74	159000	143000	125000	125000	2800	214500	25
	1996.18	159000	143000	125000	125000	2800	214500	25
	2205.01	159000	143000	125000	125000	2800	214500	25
	2407.67	159000	143000	125000	125000	2800	214500	25
	2656.68	159000	143000	125000	125000	2800	214500	25
	3085.18	159000	143000	125000	125000	2800	214500	25
	3949.56	159000	143000	125000	125000	2800	214500	25
	4576.05	159000	143000	125000	125000	2800	214500	25
	5423.46	159000	143000	125000	125000	2800	214500	25
	6537.21	159000	143000	125000	125000	2800	214500	25
	7899.13	159000	143000	125000	125000	2800	214500	25

PD/PDA 131

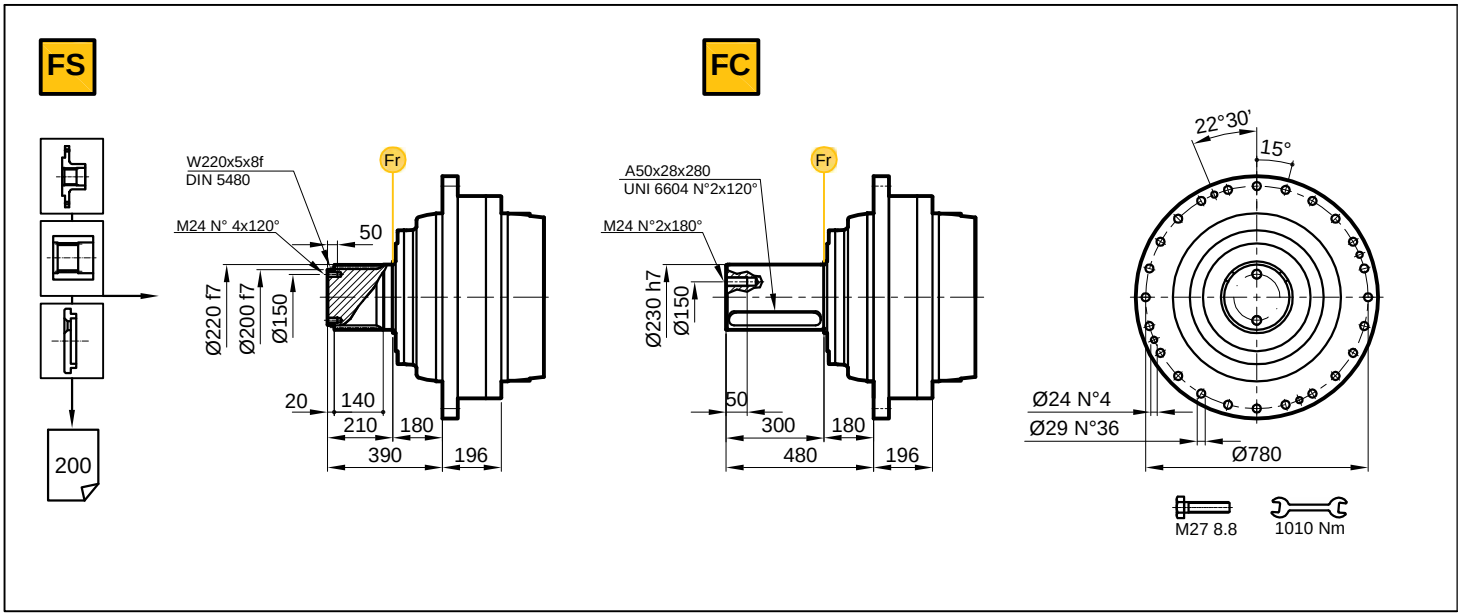


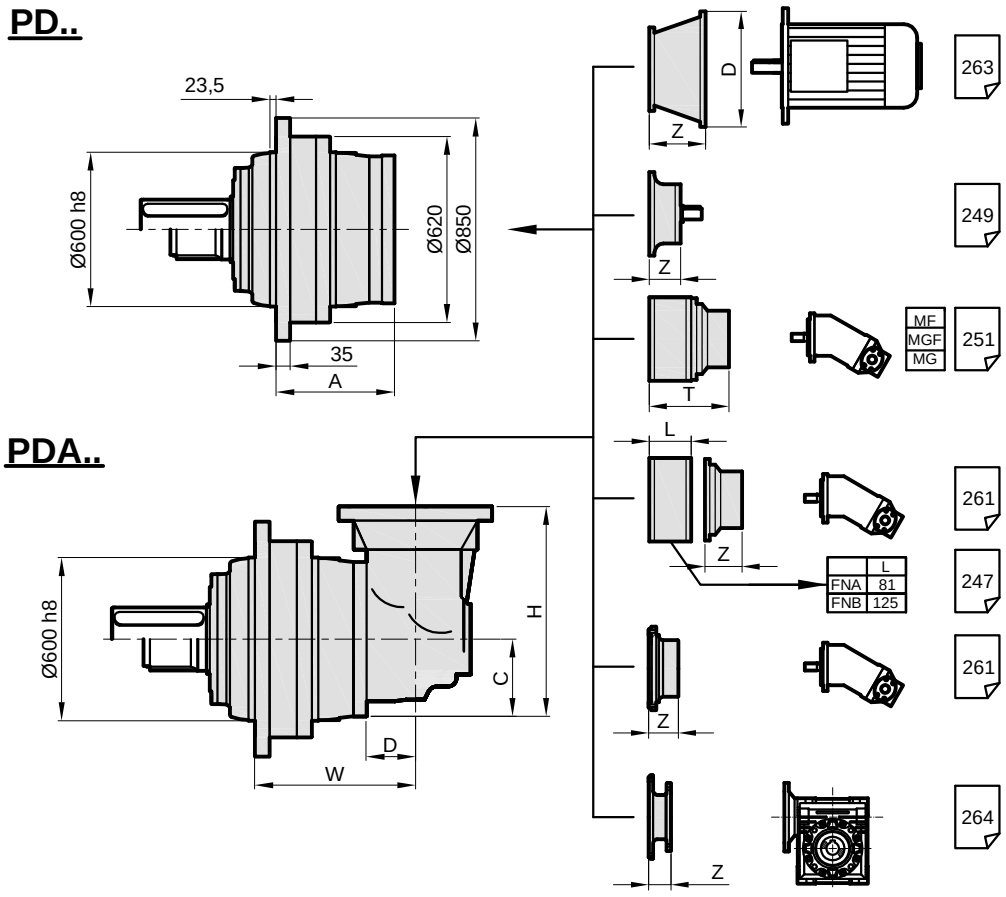


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	-	1150	-
S2	-	-	-	-	562,5	1332	-
S3	743,5	88	235	550	669,5	1391	1473
S4	804,5	88	235	550	741	1407	1500
S5	842,5	88	140	380	802	1415	1453

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 131



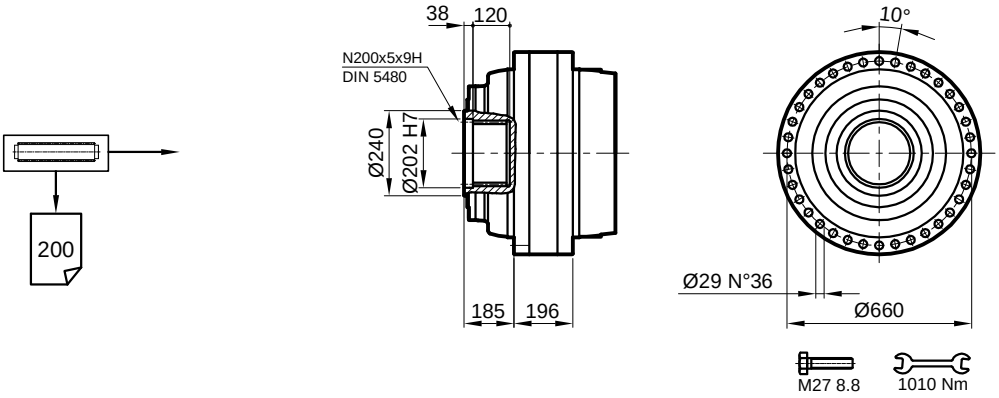


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	-	1160	-
S2	-	-	-	-	562,5	1354	-
S3	743,5	88	235	550	669,5	1413	1495
S4	804,5	88	235	550	741	1429	1522
S5	842,5	88	140	380	802	1437	1475

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

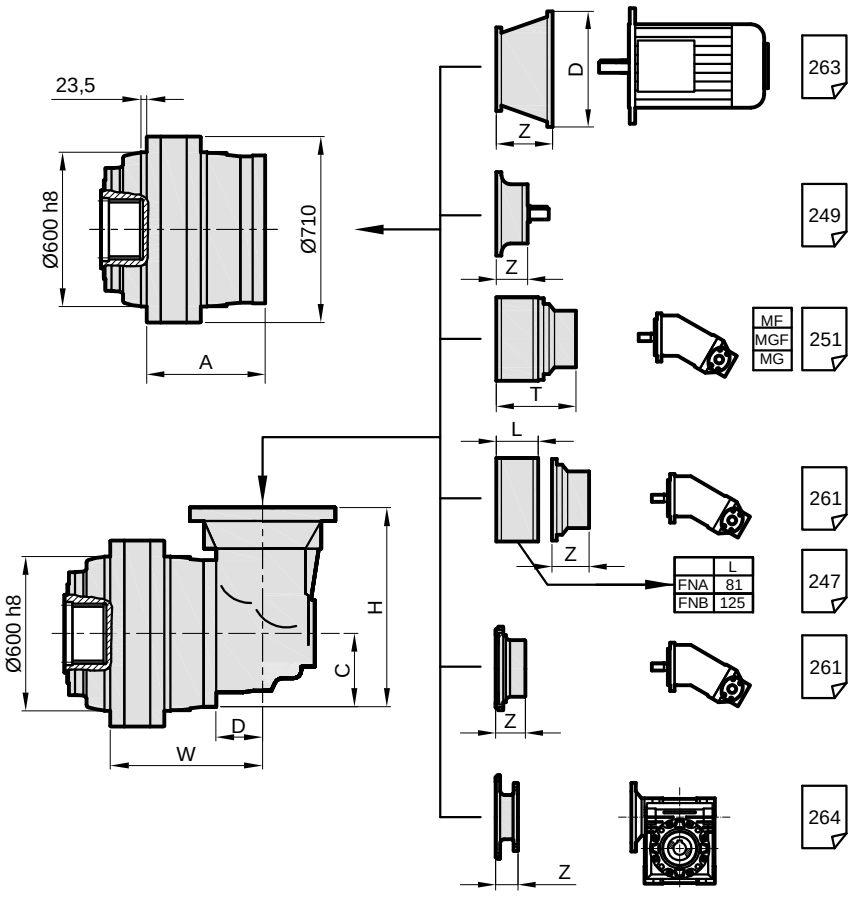
PD/PDA 131

S



PD..

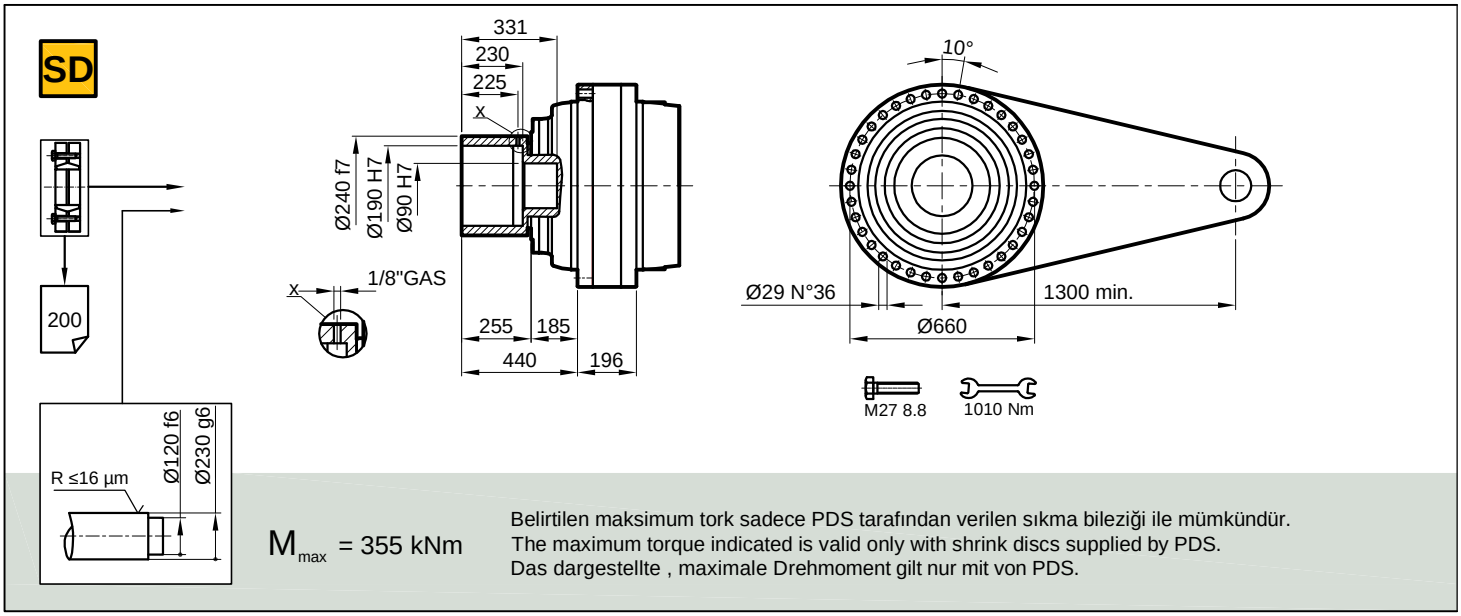
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	1050	-
S2	-	-	-	-	562,5	1232	-
S3	743,5	88	235	550	669,5	1292	1457
S4	804,5	88	235	550	741	1308	1401
S5	842,5	88	140	380	802	1316	1354

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

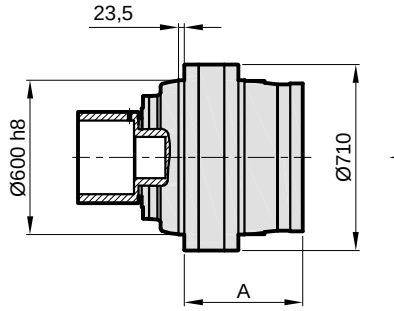
PD/PDA 131



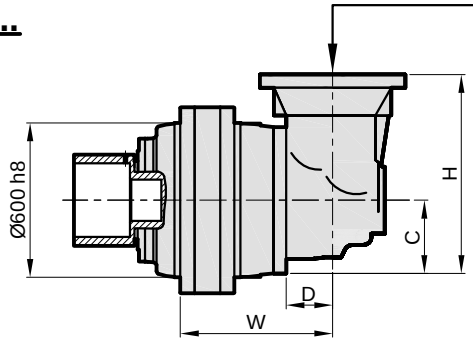
M_{max} = 355 kNm

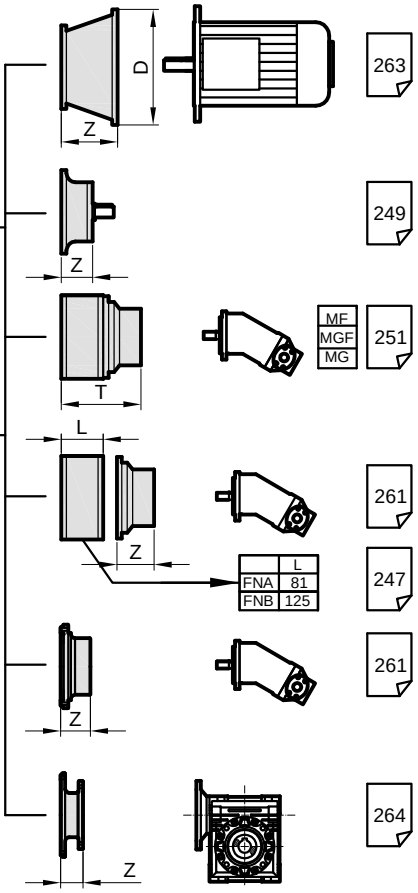
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..



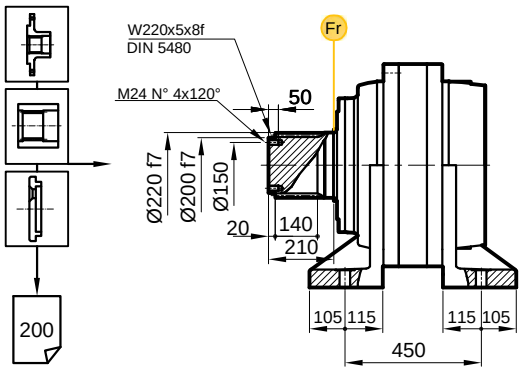


Stage	W	D	C	H	A	PD / SD	PDA / SD
S1	-	-	-	-	-	1071	-
S2	-	-	-	-	562,5	1271	-
S3	743,5	88	235	550	669,5	1330	1495
S4	804,5	88	235	550	741	1346	1439
S5	842,5	88	140	380	802	1354	1392

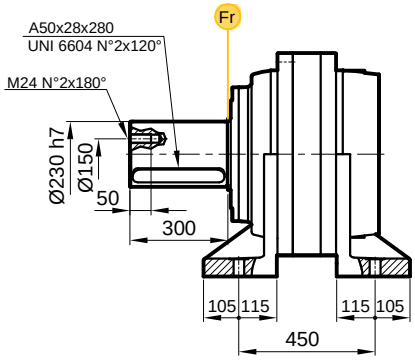
Stage	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

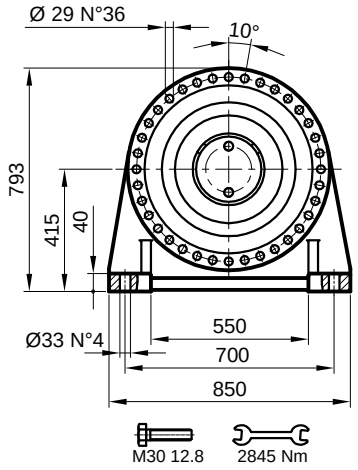
PD/PDA 131

FVS

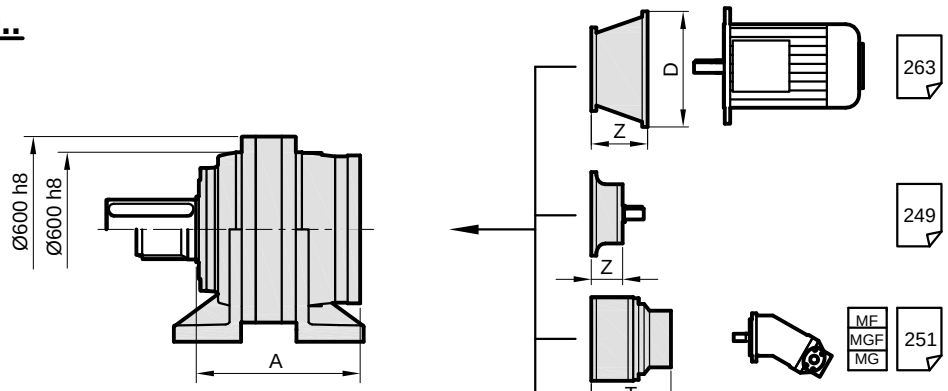


FVC

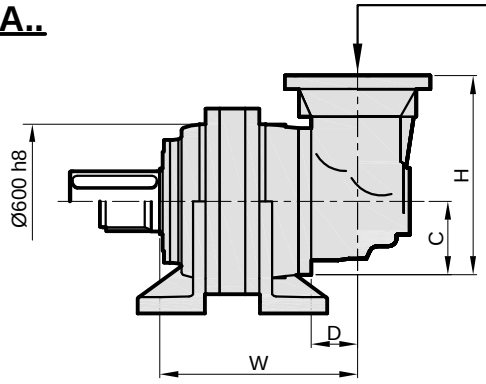




PD..



PDA..



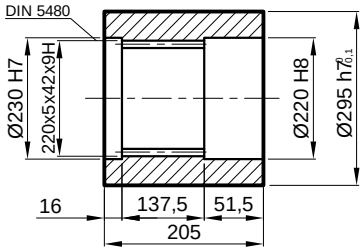
Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	-	1150	-
S2	-	-	-	-	742,5	1332	-
S3	923,5	88	235	550	849,5	1391	1473
S4	984,5	88	235	550	921	1407	1500
S5	1022,5	88	140	380	982	1415	1453

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 131

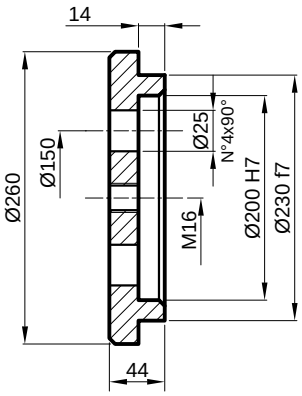
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



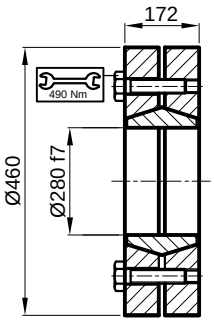
Kod / Code / Bestell
1503.131.100

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.131.250

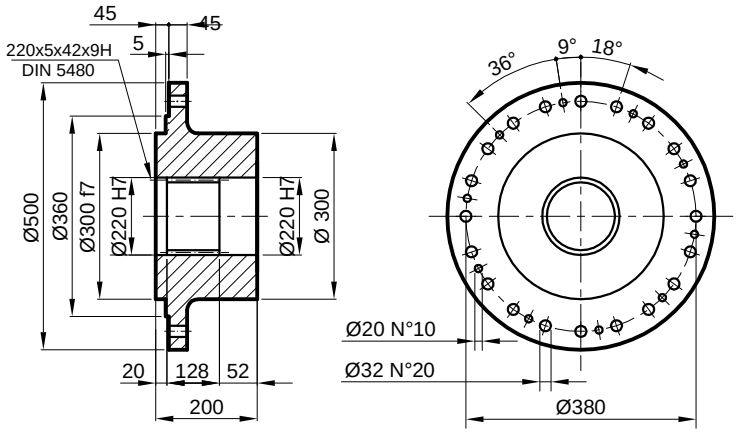
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
355 kNm

Kod / Code / Bestell
2501.131.001

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.131.200

PD/PDA 131

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

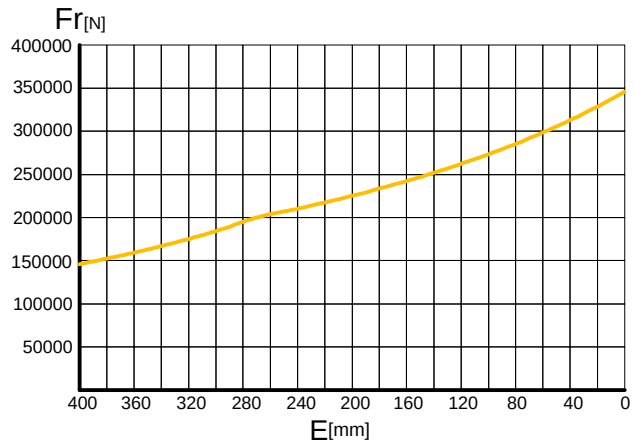
RADIAL LOADS(Fr)

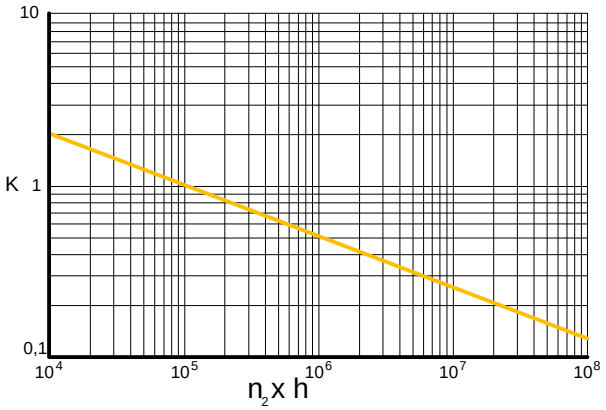
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

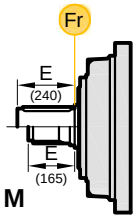
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

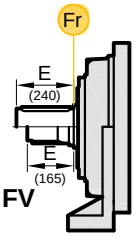
M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			





AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

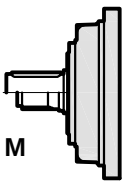
AXIAL LOADS (Fa)

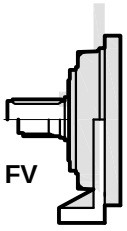
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)

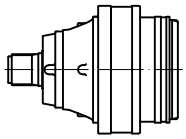
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	45000	45000	←
	75000	75000	→

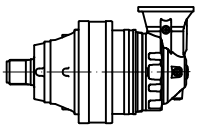




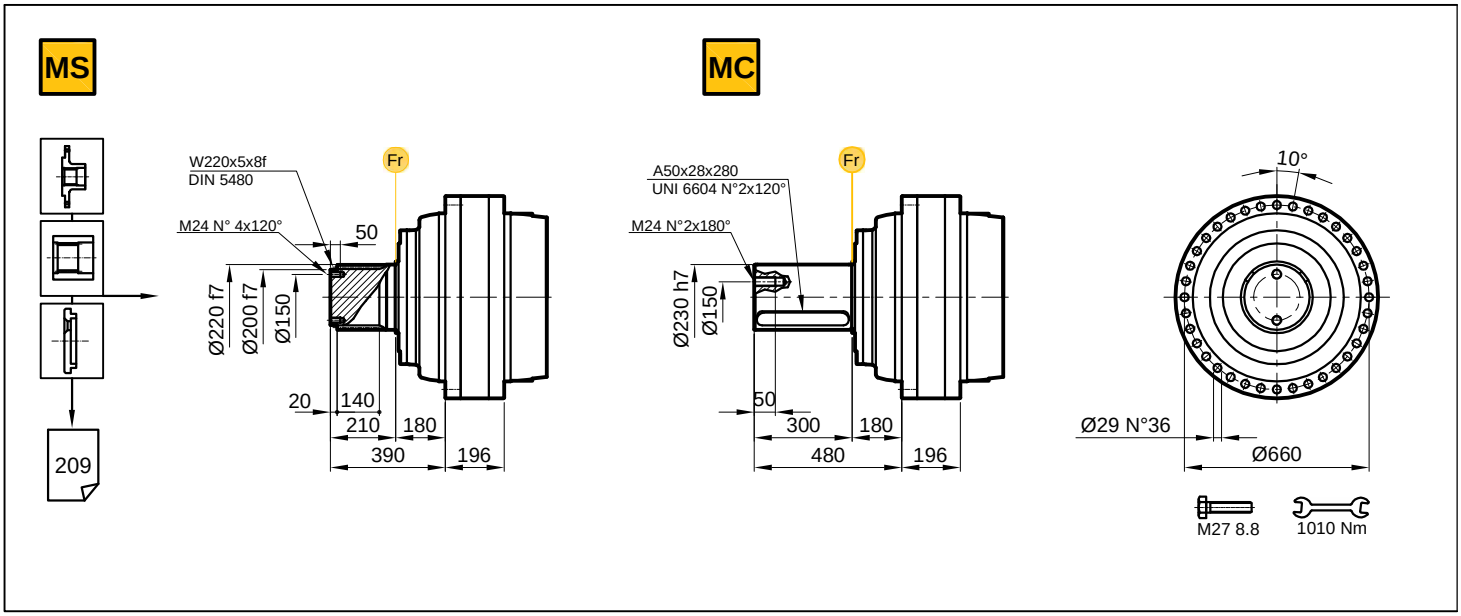
PD 133

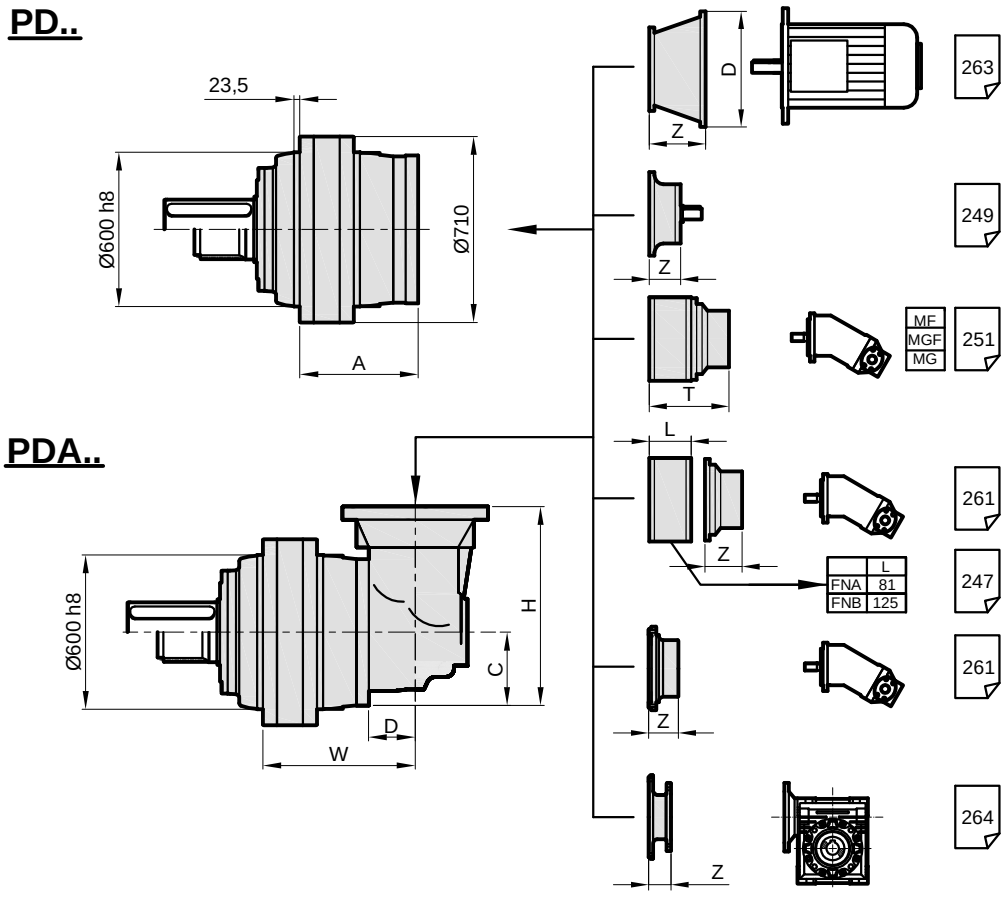
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 133 S1	3.68	238000	215000	190000	190000	200	322500	83
	4.94	188000	169000	154000	154000	200	253500	83
PD 133 S2	14.55	238000	215000	190000	190000	1200	322500	67
	19.54	188000	169000	154000	154000	1200	253500	67
	25.01	188000	169000	154000	154000	1200	253500	67
PD 133 S3	29.65	188000	169000	154000	154000	2000	253500	47
	62.37	238000	215000	190000	190000	2000	322500	47
	70.34	238000	215000	190000	190000	2000	322500	47
	83.74	188000	169000	154000	154000	2000	253500	47
	94.44	188000	169000	154000	154000	2000	253500	47
	107.21	188000	169000	154000	154000	2000	253500	47
	120.91	188000	169000	154000	154000	2000	253500	47
	140.08	188000	169000	154000	154000	2000	253500	47
	168.85	188000	169000	154000	154000	2000	253500	47
	200.12	188000	169000	154000	154000	2000	253500	47
	257.27	238000	215000	190000	190000	2000	322500	47
PD 133 S4	336.00	188000	169000	154000	154000	2800	253500	37
	389.58	188000	169000	154000	154000	2800	253500	37
	432.68	188000	169000	154000	154000	2800	253500	37
	487.96	188000	169000	154000	154000	2800	253500	37
	533.65	188000	169000	154000	154000	2800	253500	37
	577.84	188000	169000	154000	154000	2800	253500	37
	624.68	188000	169000	154000	154000	2800	253500	37
	681.46	188000	169000	154000	154000	2800	253500	37
	725.43	188000	169000	154000	154000	2800	253500	37
	793.33	188000	169000	154000	154000	2800	253500	37
	840.50	188000	169000	154000	154000	2800	253500	37
	921.18	188000	169000	154000	154000	2800	253500	37
	1013.10	188000	169000	154000	154000	2800	253500	37
	1200.71	188000	169000	154000	154000	2800	253500	37
	1450.86	188000	169000	154000	154000	2800	253500	37
	1497.10	238000	215000	190000	190000	2800	322500	37
PD 133 S5	1590.41	238000	215000	190000	190000	2800	322500	27
	1669.64	188000	169000	154000	154000	2800	253500	27
	1736.58	188000	169000	154000	154000	2800	253500	27
	1804.54	238000	215000	190000	190000	2800	322500	27
	1854.33	188000	169000	154000	154000	2800	253500	27
	1934.48	188000	169000	154000	154000	2800	253500	27
	1998.02	188000	169000	154000	154000	2800	253500	27
	2091.27	188000	169000	154000	154000	2800	253500	27
	2181.66	188000	169000	154000	154000	2800	253500	27
	2268.01	188000	169000	154000	154000	2800	253500	27
	2314.95	188000	169000	154000	154000	2800	253500	27
	2422.99	188000	169000	154000	154000	2800	253500	27
	2476.47	188000	169000	154000	154000	2800	253500	27
	2677.18	188000	169000	154000	154000	2800	253500	27
	3166.03	188000	169000	154000	154000	2800	253500	27
	4216.56	188000	169000	154000	154000	2800	253500	27
	6217.97	188000	169000	154000	154000	2800	253500	27
	8263.10	188000	169000	154000	154000	2800	253500	27

PDA 133

	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 133 S3	60.02	188000	169000	154000	154000	2500	253500	45
	76.83	188000	169000	154000	154000	2500	253500	45
	91.06	188000	169000	154000	154000	2500	253500	45
	103.04	238000	215000	190000	190000	2500	322500	45
	116.74	188000	169000	154000	154000	2500	253500	45
	138.35	188000	169000	154000	154000	2500	253500	45
PDA 133 S4	250.31	238000	215000	190000	190000	2500	322500	35
	336.09	188000	169000	154000	154000	2500	253500	35
	390.80	188000	169000	154000	154000	2500	253500	35
	440.74	188000	169000	154000	154000	2500	253500	35
	500.30	188000	169000	154000	154000	2500	253500	35
	564.22	188000	169000	154000	154000	2500	253500	35
	592.94	188000	169000	154000	154000	2500	253500	35
	653.72	188000	169000	154000	154000	2500	253500	35
	787.97	188000	169000	154000	154000	2500	253500	35
PDA 133 S5	933.89	188000	169000	154000	154000	2800	253500	25
	1113.19	238000	215000	190000	190000	2800	322500	25
	1267.42	188000	169000	154000	154000	2800	253500	25
	1399.10	188000	169000	154000	154000	2800	253500	25
	1494.70	188000	169000	154000	154000	2800	253500	25
	1587.47	188000	169000	154000	154000	2800	253500	25
	1689.17	238000	215000	190000	190000	2800	322500	25
	1735.78	188000	169000	154000	154000	2800	253500	25
	1880.74	188000	169000	154000	154000	2800	253500	25
	1997.48	188000	169000	154000	154000	2800	253500	25
	2157.97	188000	169000	154000	154000	2800	253500	25
	2269.56	188000	169000	154000	154000	2800	253500	25
	2355.68	188000	169000	154000	154000	2800	253500	25
	2486.76	188000	169000	154000	154000	2800	253500	25
	2656.68	188000	169000	154000	154000	2800	253500	25
	2903.54	188000	169000	154000	154000	2800	253500	25
	3472.89	188000	169000	154000	154000	2800	253500	25
	4231.67	188000	169000	154000	154000	2800	253500	25
	6537.21	188000	169000	154000	154000	2800	253500	25
	7899.13	188000	169000	154000	154000	2800	253500	25

PD/PDA 133

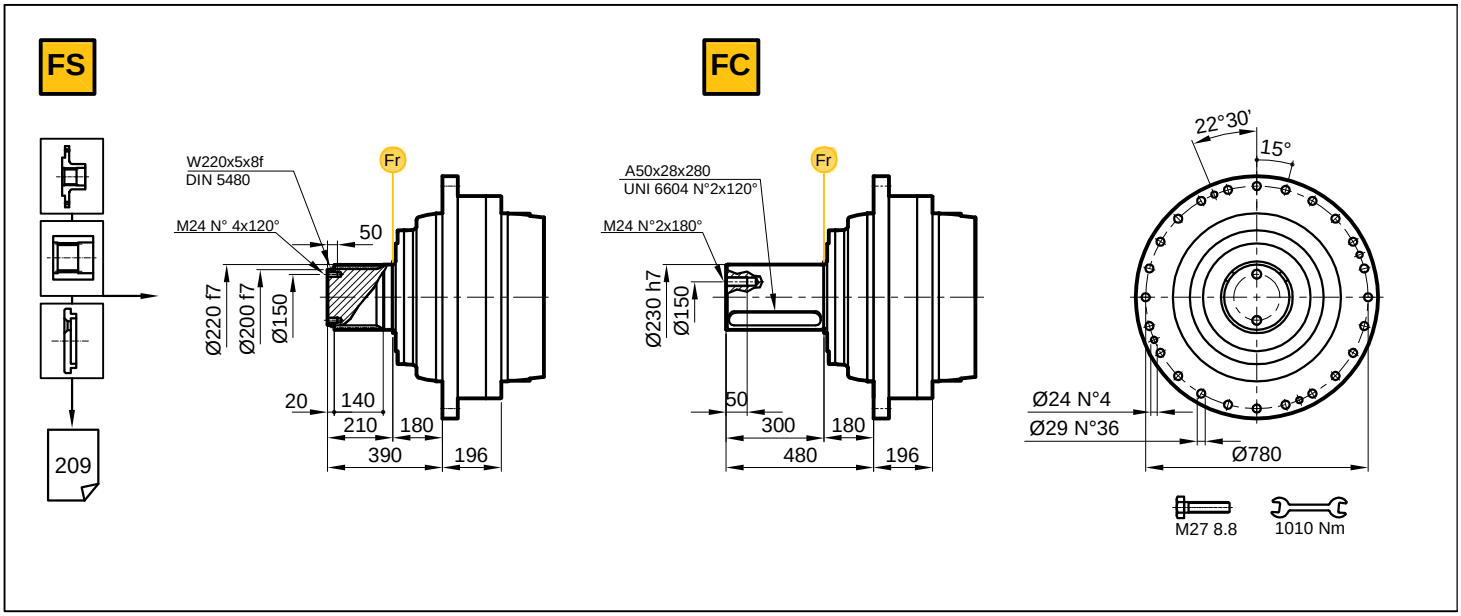




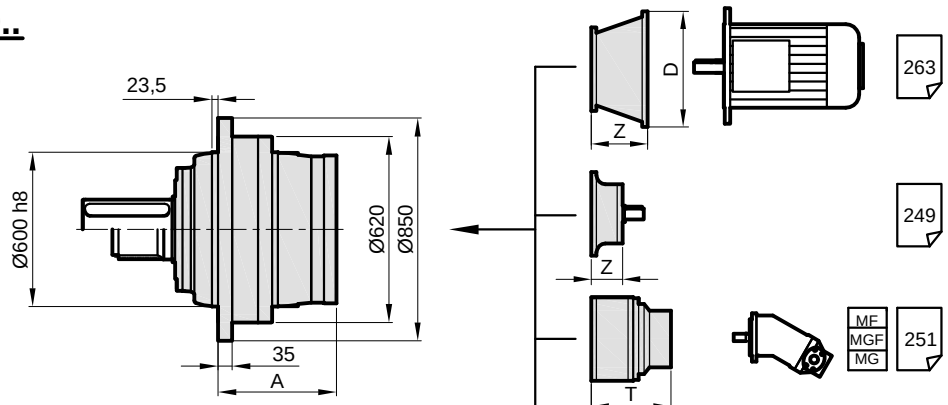
Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	-	1150	-
S2	-	-	-	-	562,5	1332	-
S3	743,5	88	235	550	669,5	1391	1473
S4	804,5	88	235	550	741	1407	1500
S5	842,5	88	140	380	802	1415	1453

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

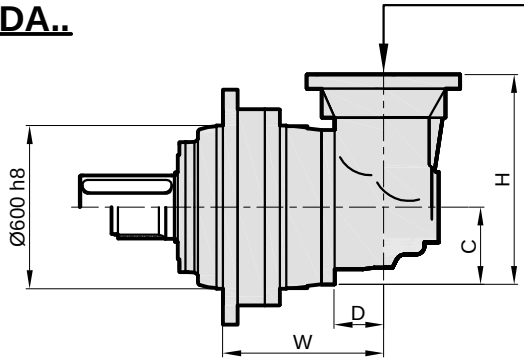
PD/PDA 133

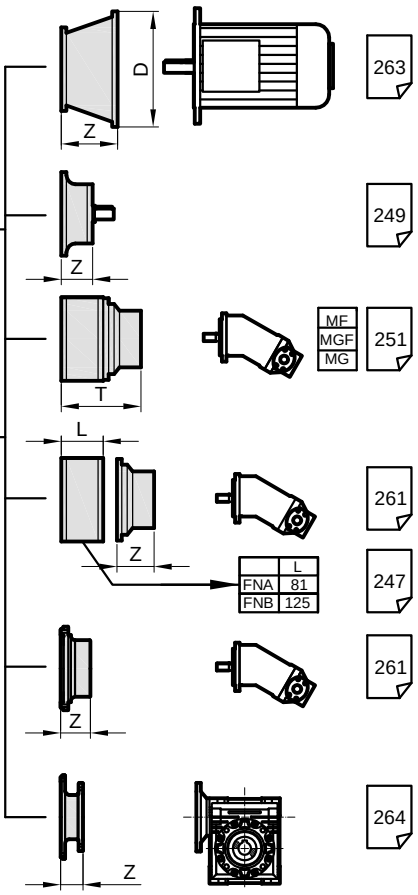


PD..



PDA..



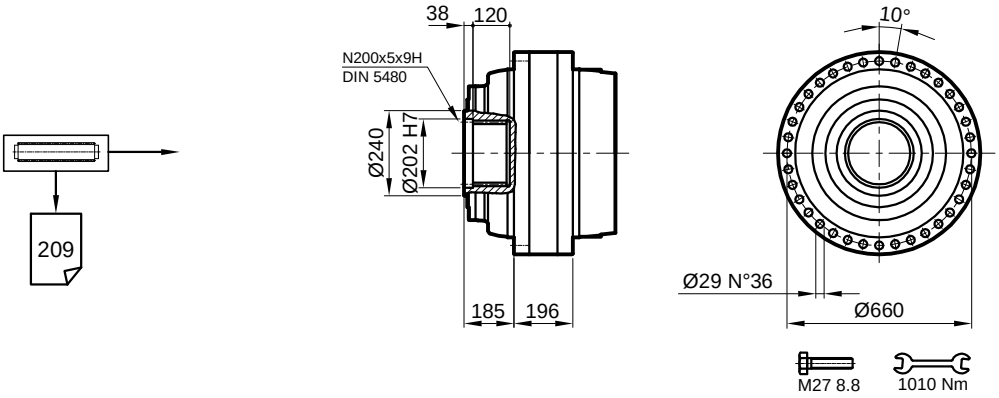


Stage	W	D	C	H	A	PD F	PDA F
S1	-	-	-	-	-	1160	-
S2	-	-	-	-	562,5	1354	-
S3	743,5	88	235	550	669,5	1413	1495
S4	804,5	88	235	550	741	1429	1522
S5	842,5	88	140	380	802	1437	1475

Stage	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

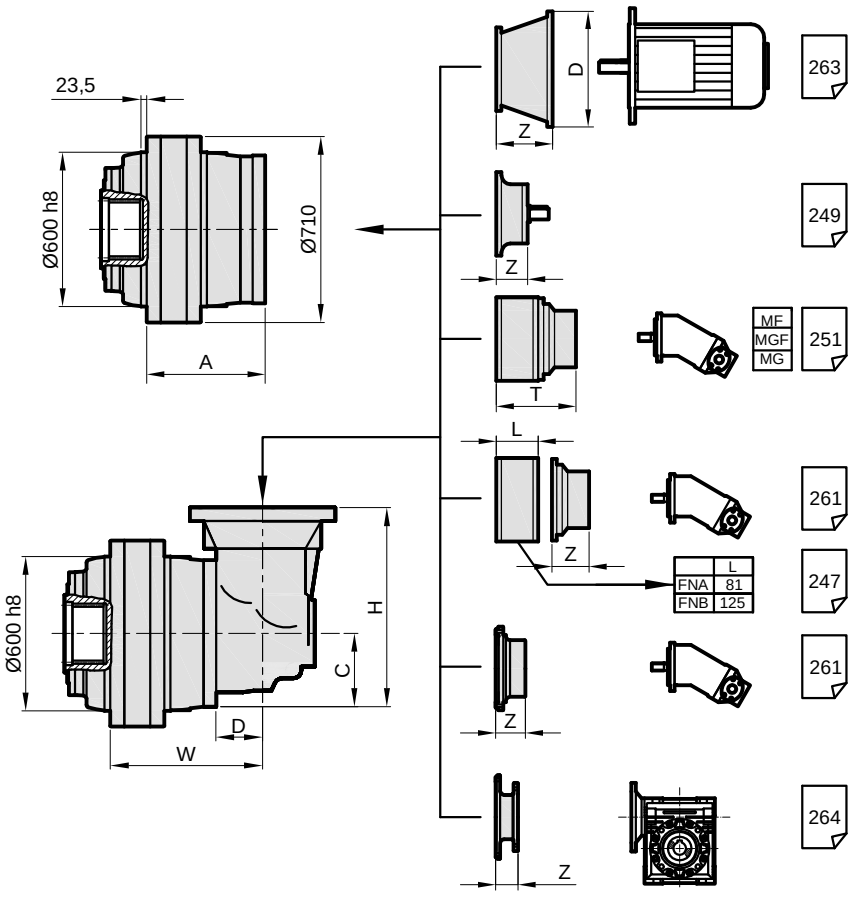
PD/PDA 133

S



PD..

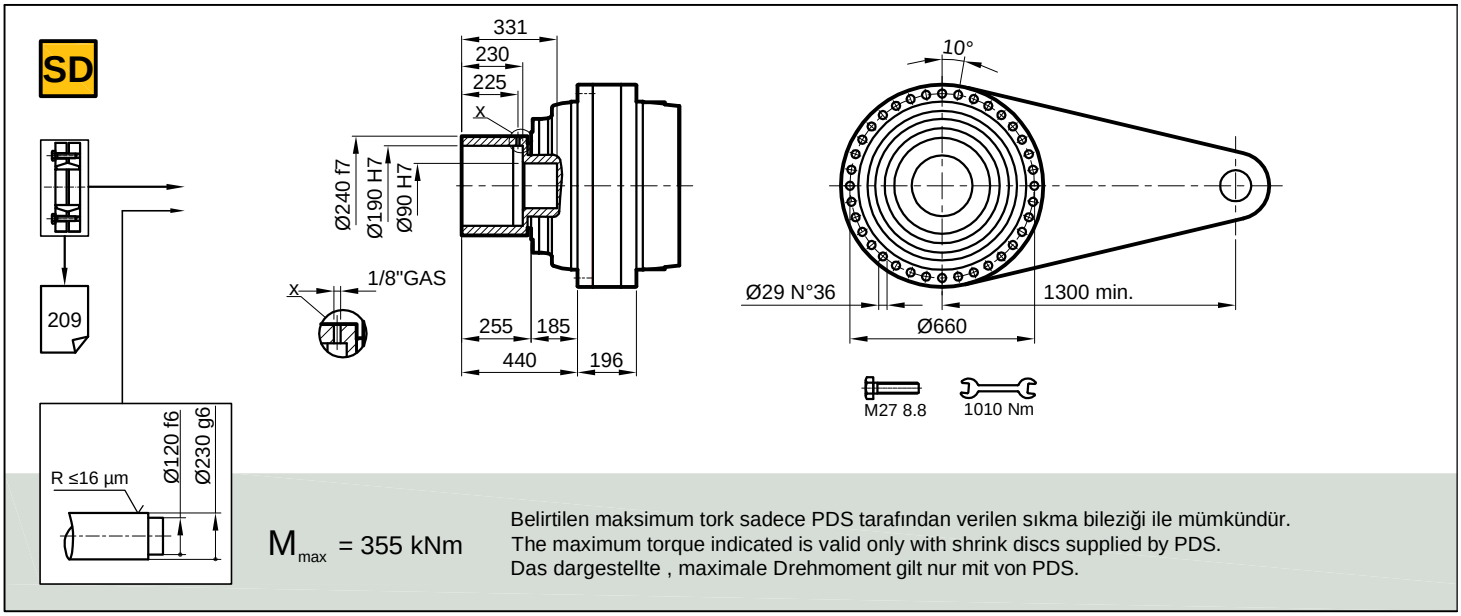
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	1050	-
S2	-	-	-	-	562,5	1232	-
S3	743,5	88	235	550	669,5	1292	1457
S4	804,5	88	235	550	741	1308	1401
S5	842,5	88	140	380	802	1316	1354

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

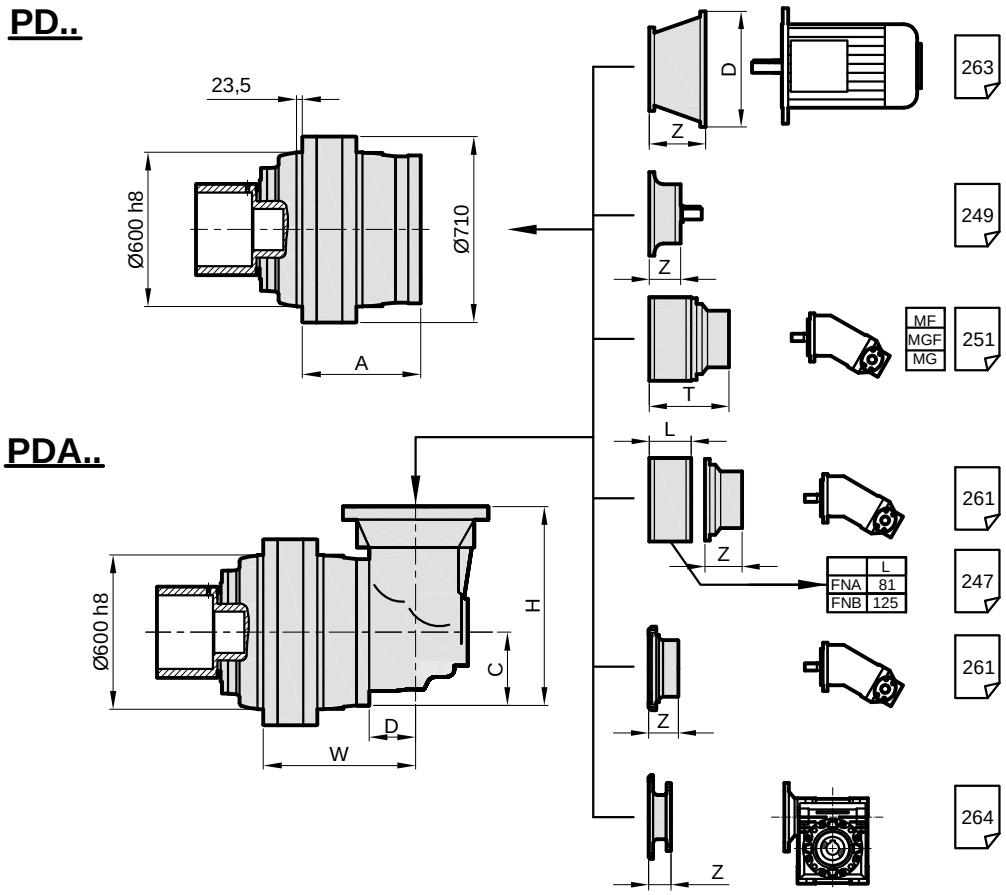
PD/PDA 133



M_{max} = 355 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



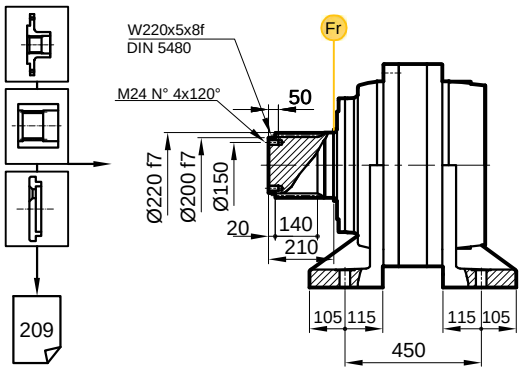
PDA..

Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	1071	-
S2	-	-	-	-	562,5	1271	-
S3	743,5	88	235	550	669,5	1330	1495
S4	804,5	88	235	550	741	1346	1439
S5	842,5	88	140	380	802	1354	1392

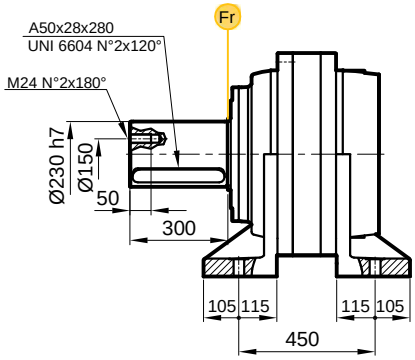
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

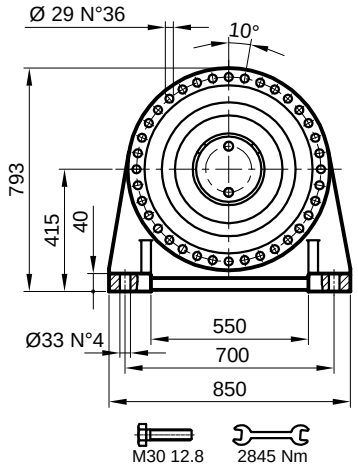
PD/PDA 133

FVS

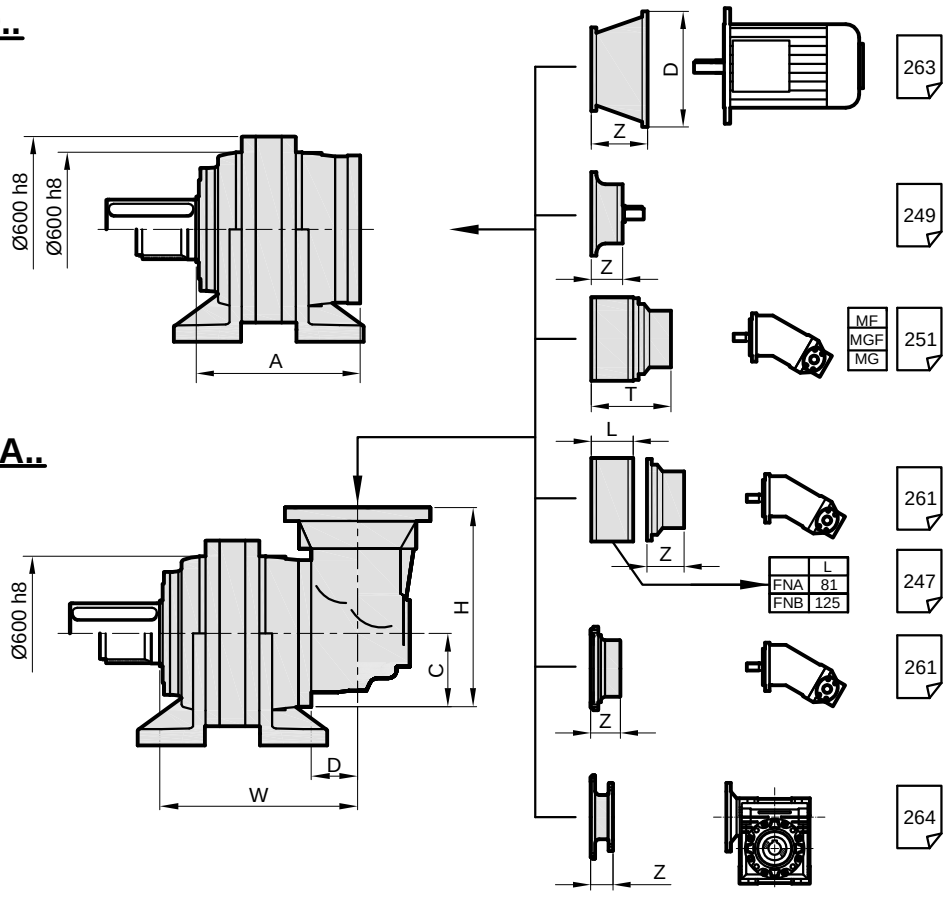


FVC





PD..



PDA..

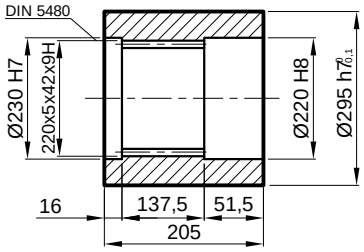
Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	-	1150	-
S2	-	-	-	-	742,5	1332	-
S3	923,5	88	235	550	849,5	1391	1473
S4	984,5	88	235	550	921	1407	1500
S5	1022,5	88	140	380	982	1415	1453

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S2	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S3	-	-	-	-	-	-	-	-	350	120	400	148	450	148	550	183
S4	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-
S5	-	-	-	-	250	71	300	104	350	120	400	148	450	148	-	-

PD/PDA 133

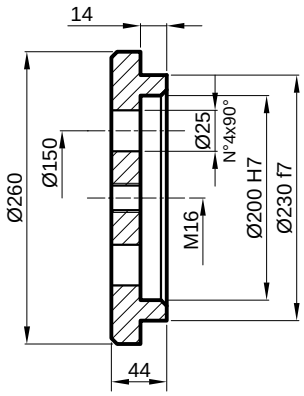
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



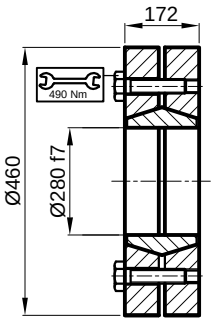
Kod / Code / Bestell
1503.131.100

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.131.250

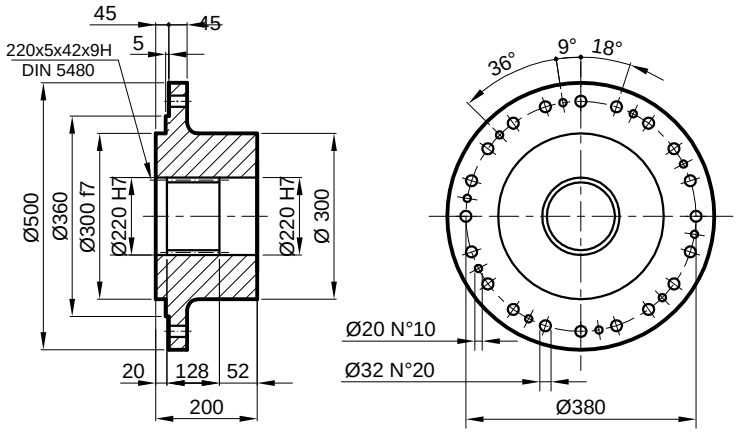
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
355 kNm

Kod / Code / Bestell
2501.131.001

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.131.200

PD/PDA 133

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

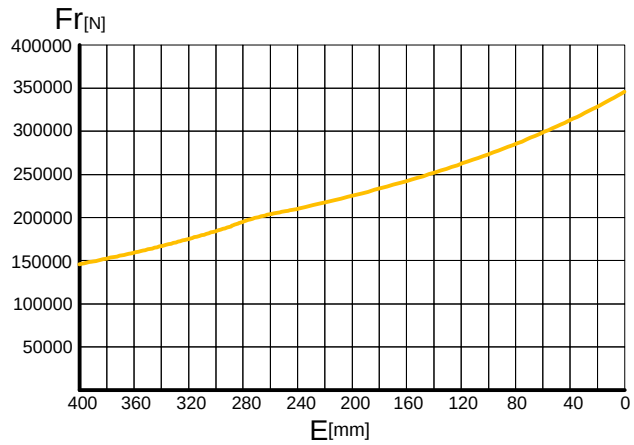
RADIAL LOADS(Fr)

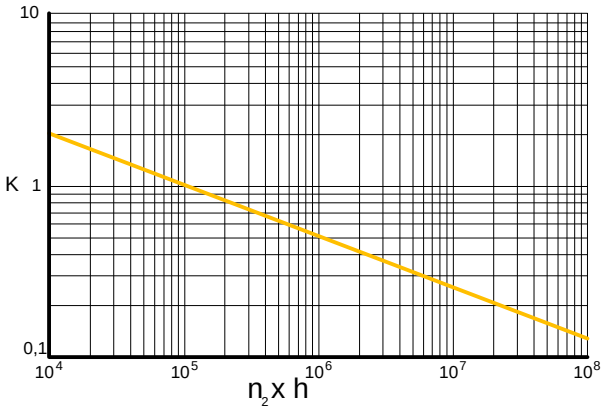
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

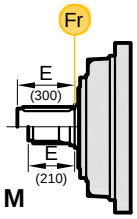
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

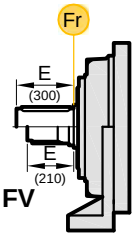
M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			





AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

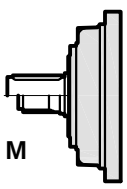
AXIAL LOADS (Fa)

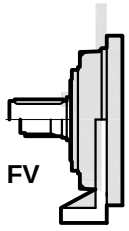
The values of the awial loads in the table refer to the output versions and load directions of application.

AXIALLAST (Fa)

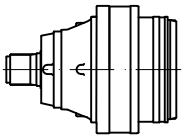
Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

Fa [N]	M	FV	
	45000	45000	←
	75000	75000	→

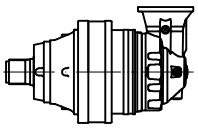




PD/PDA 135

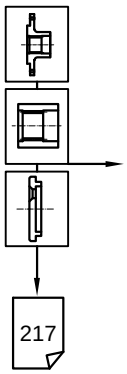
	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 135 S1	4.09	369600	332800	289600	265000	200	432640	110
	5.25	275100	247700	215600	207000	200	322010	110
PD 135 S2	16.54	369600	332800	289600	265000	750	432640	80
	20.94	369600	332800	289600	265000	750	432640	80
	26.87	275100	247700	215600	207000	750	322010	80
PD 135 S3	86.02	369600	332800	289600	265000	1500	432640	71
	103.38	369600	332800	289600	265000	1500	432640	71
	110.39	275100	247700	215600	207000	1500	322010	71
	120.90	275100	247700	215600	207000	1500	322010	71
	132.68	275100	247700	215600	207000	1500	322010	71
	167.92	275100	247700	215600	207000	1500	322010	71
PD 135 S4	242.61	369600	332800	289600	265000	2800	432640	50
	315.39	369600	332800	289600	265000	2800	432640	50
	380.93	369600	332800	289600	265000	2800	432640	50
	430.08	369600	332800	289600	265000	2800	432640	50
	482.12	369600	332800	289600	265000	2800	432640	50
	551.93	275100	247700	215600	207000	2800	322010	50
	618.72	275100	247700	215600	207000	2800	322010	50
	698.56	275100	247700	215600	207000	2800	322010	50
	758.92	369600	332800	289600	265000	2800	432640	50
	810.33	275100	247700	215600	207000	2800	322010	50
	973.95	275100	247700	215600	207000	2800	322010	50
PD 135 S5	1513.94	369600	332800	289600	265000	2800	432640	37
	1586.47	369600	332800	289600	265000	2800	432640	37
	1629.52	369600	332800	289600	265000	2800	432640	37
	1758.12	369600	332800	289600	265000	2800	432640	37
	1846.79	275100	247700	215600	207000	2800	322010	37
	1942.89	275100	247700	215600	207000	2800	322010	37
	2006.73	275100	247700	215600	207000	2800	322010	37
	2113.14	275100	247700	215600	207000	2800	322010	37
	2256.26	275100	247700	215600	207000	2800	322010	37
	2364.35	275100	247700	215600	207000	2800	322010	37
	2506.11	275100	247700	215600	207000	2800	322010	37
	2646.76	275100	247700	215600	207000	2800	322010	37
	2726.32	275100	247700	215600	207000	2800	322010	37
	2855.65	275100	247700	215600	207000	2800	322010	37
	3570.59	275100	247700	215600	207000	2800	322010	37
	4461.95	275100	247700	215600	207000	2800	322010	37
	5064.55	275100	247700	215600	207000	2800	322010	37
	6733.34	275100	247700	215600	207000	2800	322010	37
	8522.08	275100	247700	215600	207000	2800	322010	37

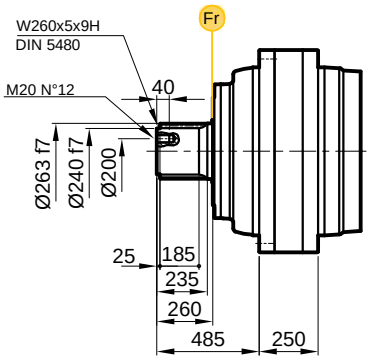
PD/PDA 135

	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 135 S4	264.19	369600	332800	289600	265000	2500	432640	45
	401.41	369600	332800	289600	265000	2500	432640	45
	501.53	275100	247700	215600	207000	2500	332010	45
	652.00	275100	247700	215600	207000	2500	332010	45
	783.64	275100	247700	215600	207000	2500	332010	45
PDA 135 S5	1142.87	369600	332800	289600	265000	2800	432640	40
	1315.93	369600	332800	289600	265000	2800	432640	40
	1485.72	369600	332800	289600	265000	2800	432640	40
	1644.16	275100	247700	215600	207000	2800	332010	40
	1688.78	275100	247700	215600	207000	2800	332010	40
	1769.68	275100	247700	215600	207000	2800	332010	40
	1856.31	275100	247700	215600	207000	2800	332010	40
	1906.68	275100	247700	215600	207000	2800	332010	40
	2029.78	275100	247700	215600	207000	2800	332010	40
	2127.02	275100	247700	215600	207000	2800	332010	40
	2211.75	275100	247700	215600	207000	2800	332010	40
	2413.20	275100	247700	215600	207000	2800	332010	40
	2569.00	275100	247700	215600	207000	2800	332010	40
	2925.59	275100	247700	215600	207000	2800	332010	40
	3368.61	275100	247700	215600	207000	2800	332010	40
	4411.79	275100	247700	215600	207000	2800	332010	40
	5324.57	275100	247700	215600	207000	2800	332010	40
	6399.72	275100	247700	215600	207000	2800	332010	40

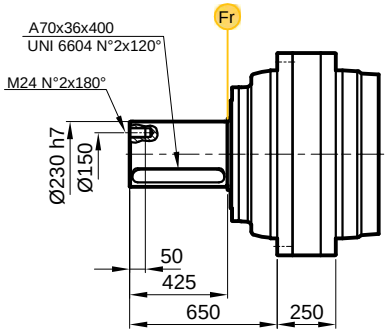
PD/PDA 135

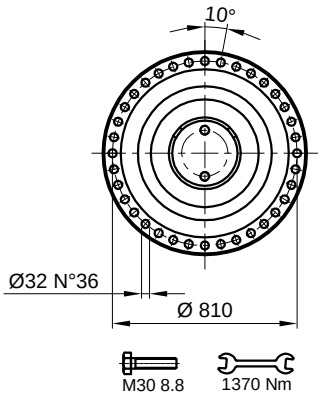
MS



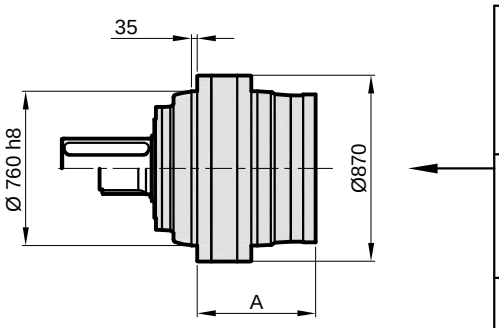


MC

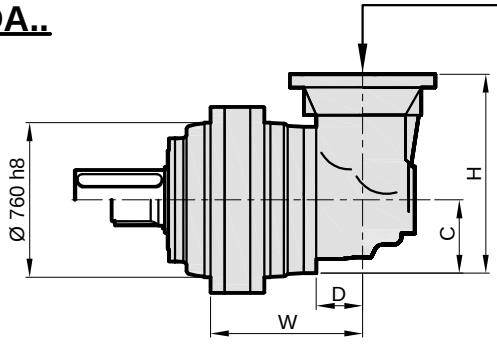


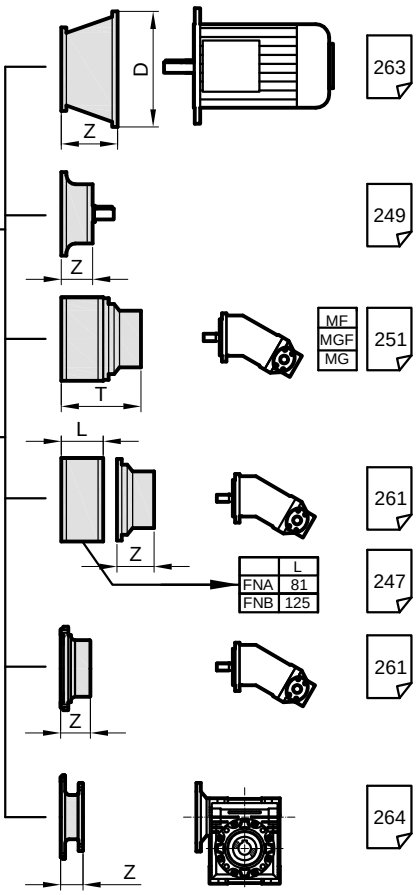


PD..



PDA..



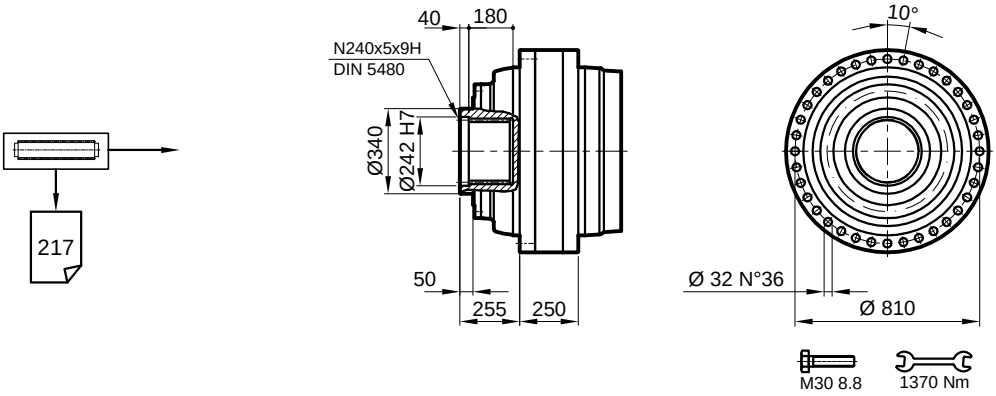


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	-	1950	-
S2	-	-	-	-	740	2263	-
S3	-	-	-	-	922	2379	-
S4	1002	88	235	550	1016	2406	2501
S5	1104	88	140	380	1075,5	2418	2443

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

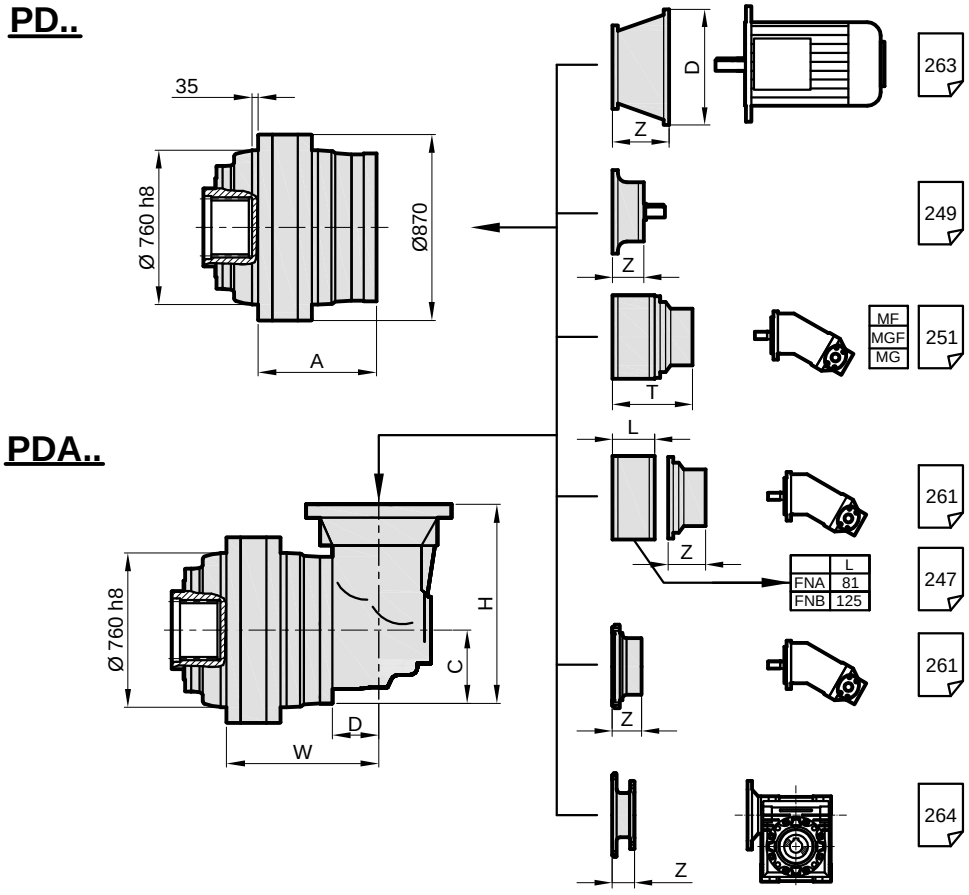
PD/PDA 135

S



PD..

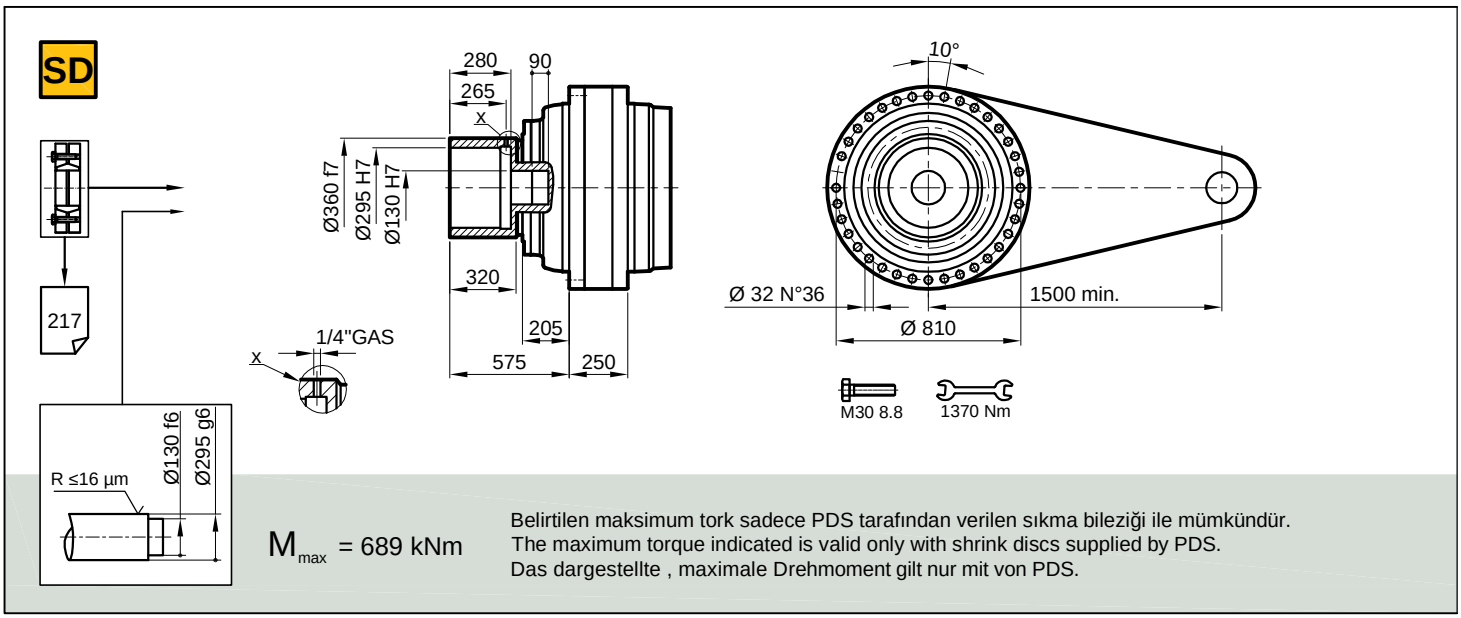
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	1870	-
S2	-	-	-	-	740	2194	-
S3	-	-	-	-	922	2310	-
S4	1002	88	235	550	1016	2337	2431
S5	1104	88	140	380	1075,5	2349	2374

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

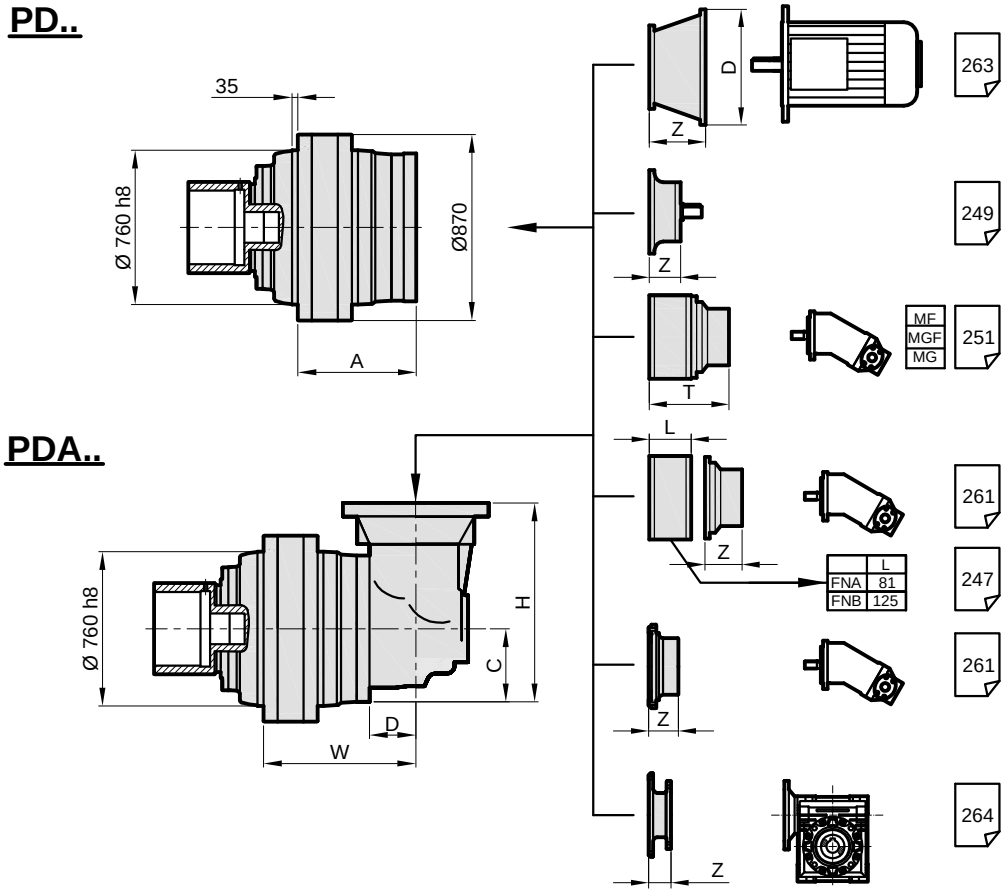
PD/PDA 135



M_{max} = 689 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



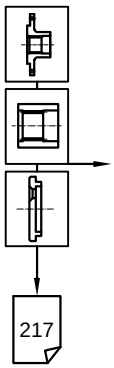
PDA..

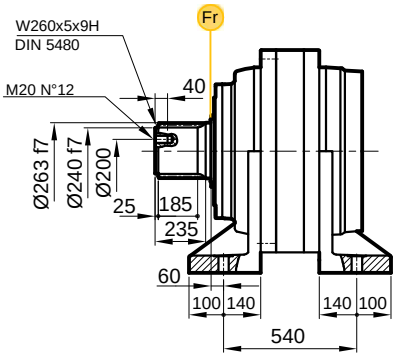
Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	1908	-
S2	-	-	-	-	740	2232	-
S3	-	-	-	-	922	2348	-
S4	1002	88	235	550	1016	2375	2469
S5	1104	88	140	380	1075,5	2387	2412

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

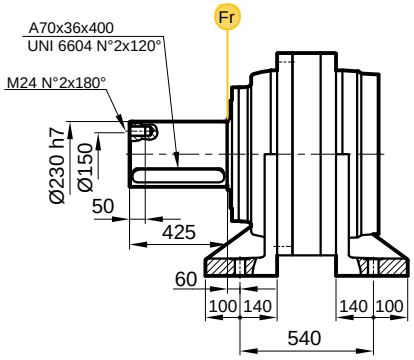
PD/PDA 135

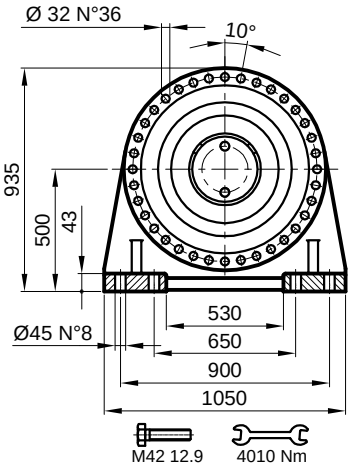
FVS



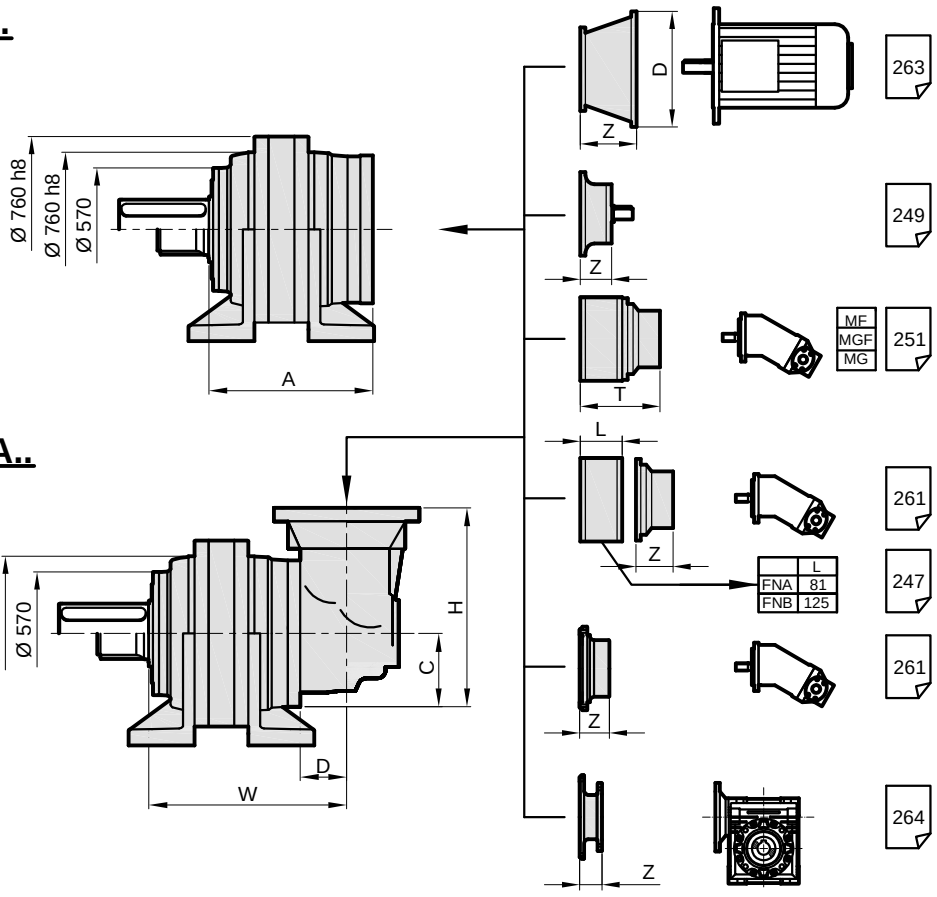


FVC





PD..



PDA..

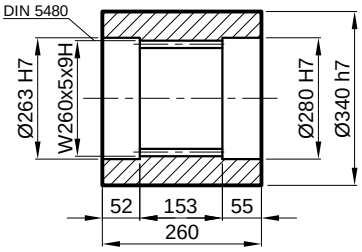
Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	-	2035	-
S2	-	-	-	-	965	2348	-
S3	-	-	-	-	1147	2464	-
S4	1227	88	235	550	1241	2491	2586
S5	1329	88	140	380	1300,5	2503	2528

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 135

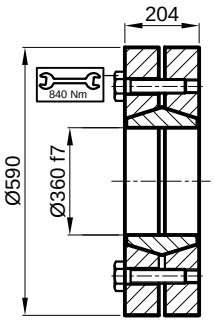
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.135.100

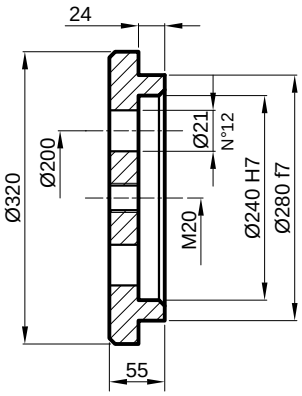
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
689 kNm

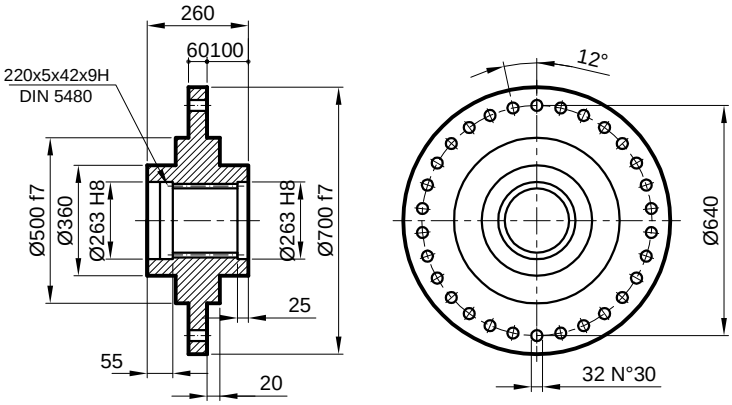
Kod / Code / Bestell
2501.135.001

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.135.250

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.135.200

PD/PDA 135

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

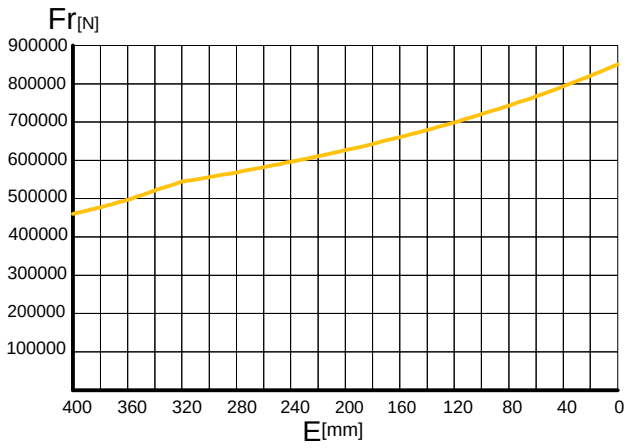
RADIAL LOADS(Fr)

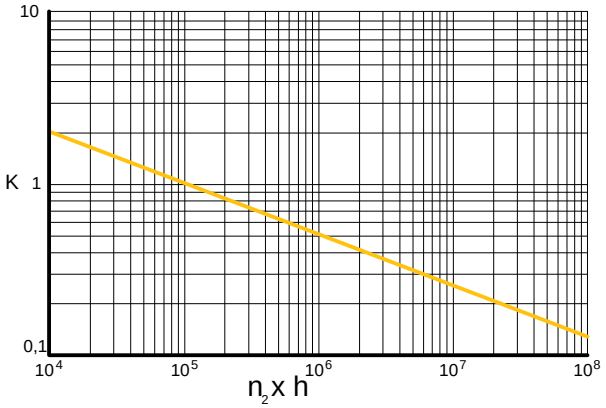
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

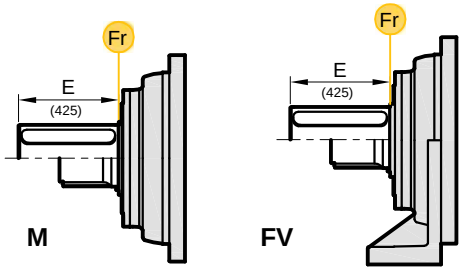
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

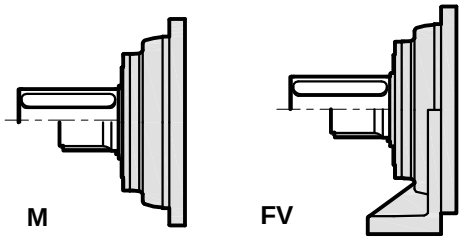
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

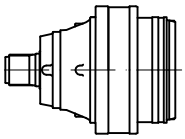
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

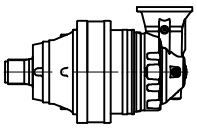
Fa [N]	M	FV	
	110000	80000	←
	110000	100000	→



PD 137

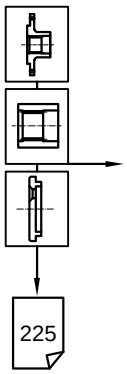
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 137 S1	3.83	434000	390000	340000	330000	200	507000	110
PD 137 S2	15.50	434000	390000	340000	330000	750	507000	80
	19.62	434000	390000	340000	330000	750	507000	80
PD 137 S3	62.00	434000	390000	340000	330000	1500	507000	71
	80.60	434000	390000	340000	330000	1500	507000	71
	96.87	434000	390000	340000	330000	1500	507000	71
	122.61	434000	390000	340000	330000	1500	507000	71
PD 137 S4	227.33	434000	390000	340000	330000	2800	507000	50
	295.53	434000	390000	340000	330000	2800	507000	50
	356.94	434000	390000	340000	330000	2800	507000	50
	403.00	434000	390000	340000	330000	2800	507000	50
	467.48	434000	390000	340000	330000	2800	507000	50
	510.05	434000	390000	340000	330000	2800	507000	50
	591.66	434000	390000	340000	330000	2800	507000	50
	711.13	434000	390000	340000	330000	2800	507000	50
PD 137 S5	858.81	434000	390000	340000	330000	2800	507000	37
	1037.26	434000	390000	340000	330000	2800	507000	37
	1278.74	434000	390000	340000	330000	2800	507000	37
	1418.61	434000	390000	340000	330000	2800	507000	37
	1601.65	434000	390000	340000	330000	2800	507000	37
	1844.19	434000	390000	340000	330000	2800	507000	37
	2082.15	434000	390000	340000	330000	2800	507000	37
	2157.58	434000	390000	340000	330000	2800	507000	37
	2415.29	434000	390000	340000	330000	2800	507000	37
	2635.28	434000	390000	340000	330000	2800	507000	37
	3257.90	434000	390000	340000	330000	2800	507000	37
	3550.00	434000	390000	340000	330000	2800	507000	37
	4266.80	434000	390000	340000	330000	2800	507000	37
	4444.59	434000	390000	340000	330000	2800	507000	37
	5155.72	434000	390000	340000	330000	2800	507000	37

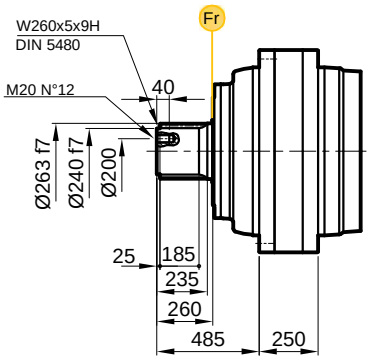
PDA 137

	i	T_2[Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 137 S4	190.43	434000	390000	340000	330000	2500	507000	45
	247.56	434000	390000	340000	330000	2500	507000	45
	313.32	434000	390000	340000	330000	2500	507000	45
	366.19	434000	390000	340000	330000	2500	507000	45
	476.05	434000	390000	340000	330000	2500	507000	45
	572.18	434000	390000	340000	330000	2500	507000	45
PDA 137 S5	677.07	434000	390000	340000	330000	2500	507000	45
	816.12	434000	390000	340000	330000	2500	507000	45
	1028.73	434000	390000	340000	330000	2500	507000	45
	1240.00	434000	390000	340000	330000	2500	507000	45
	1386.31	434000	390000	340000	330000	2500	507000	45
	1620.25	434000	390000	340000	330000	2500	507000	45
	1953.00	434000	390000	340000	330000	2500	507000	45
	2106.33	434000	390000	340000	330000	2500	507000	45
	2471.80	434000	390000	340000	330000	2500	507000	45
	2665.89	434000	390000	340000	330000	2500	507000	45
	3204.19	434000	390000	340000	330000	2500	507000	45
	3862.19	434000	390000	340000	330000	2500	507000	45
	4958.86	434000	390000	340000	330000	2500	507000	45

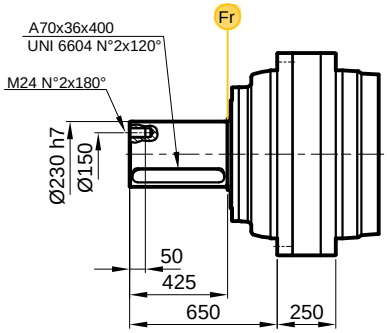
PD/PDA 137

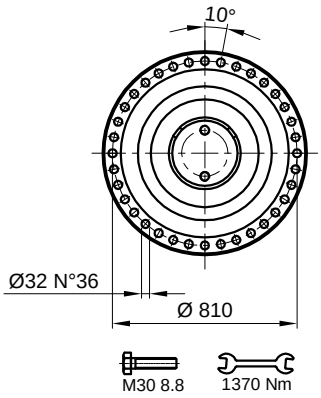
MS



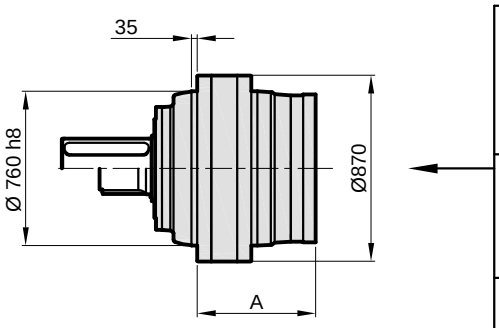


MC

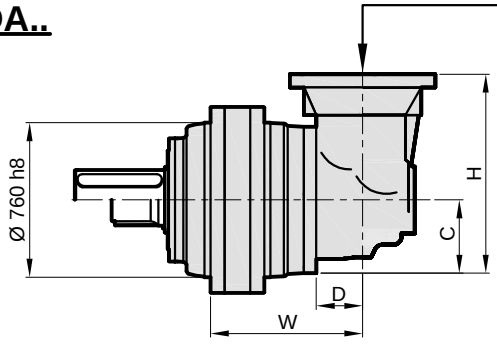


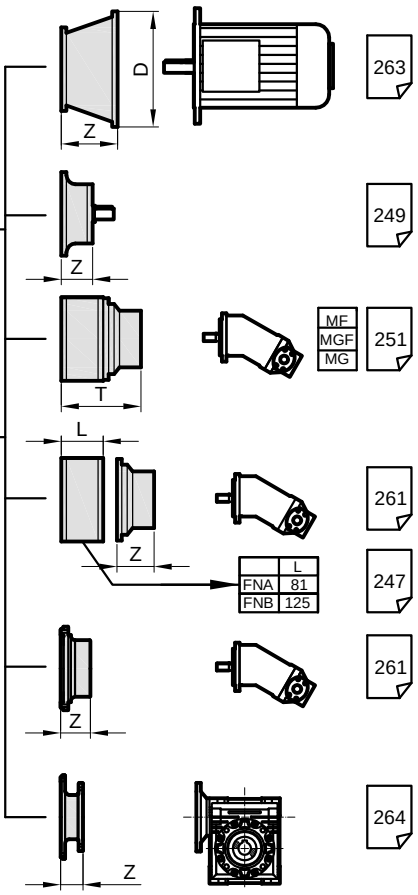


PD..



PDA..



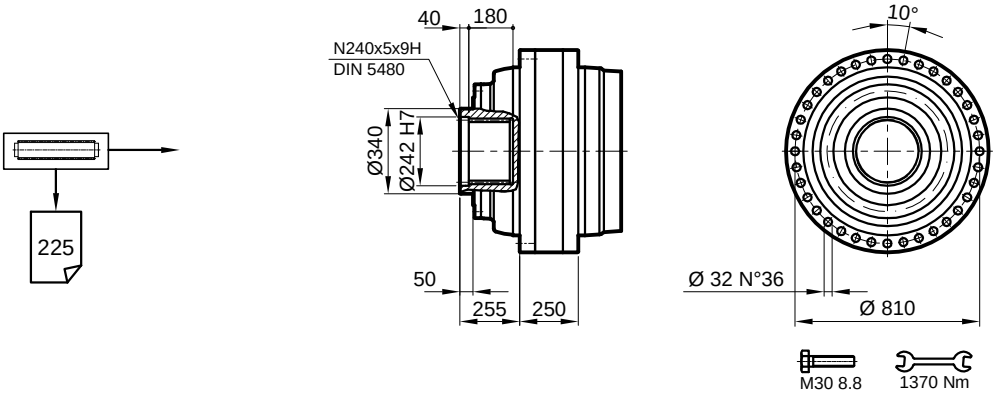


Stage	W	D	C	H	A	PD M	PDA M
S1	-	-	-	-	-	1950	-
S2	-	-	-	-	740	2263	-
S3	-	-	-	-	922	2379	-
S4	1002	88	235	550	1016	2406	2501
S5	1104	88	140	380	1075,5	2418	2443

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

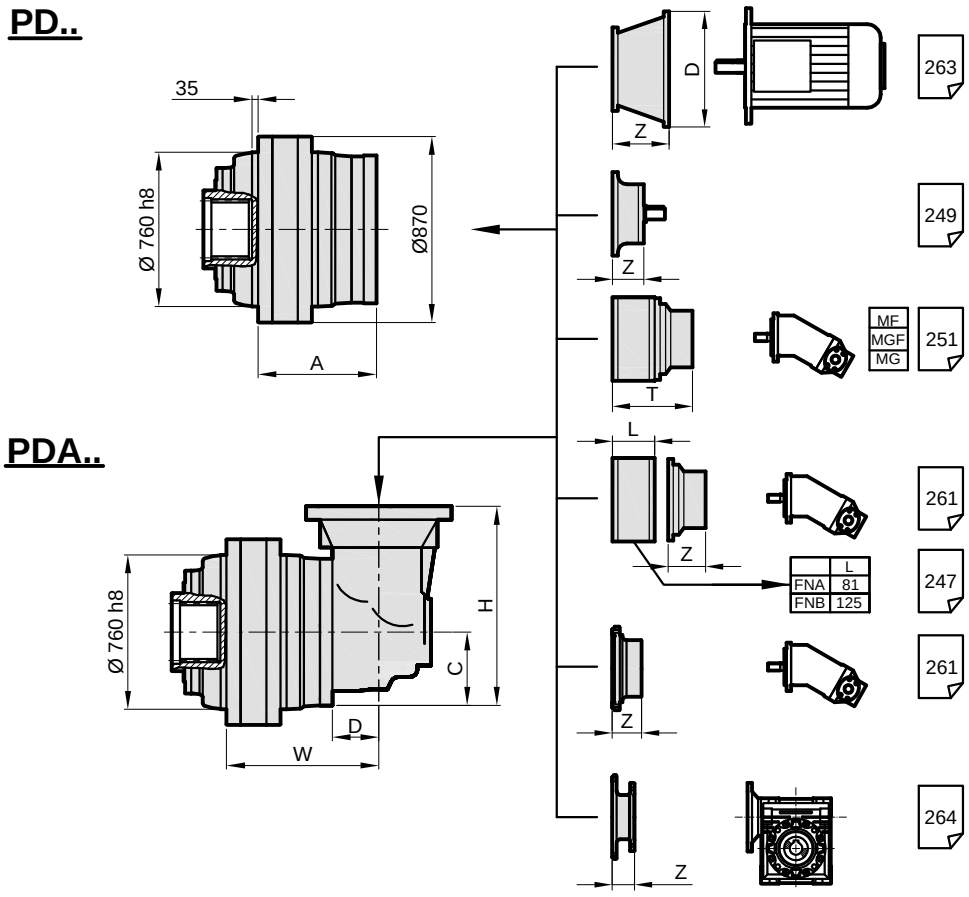
PD/PDA 137

S



PD..

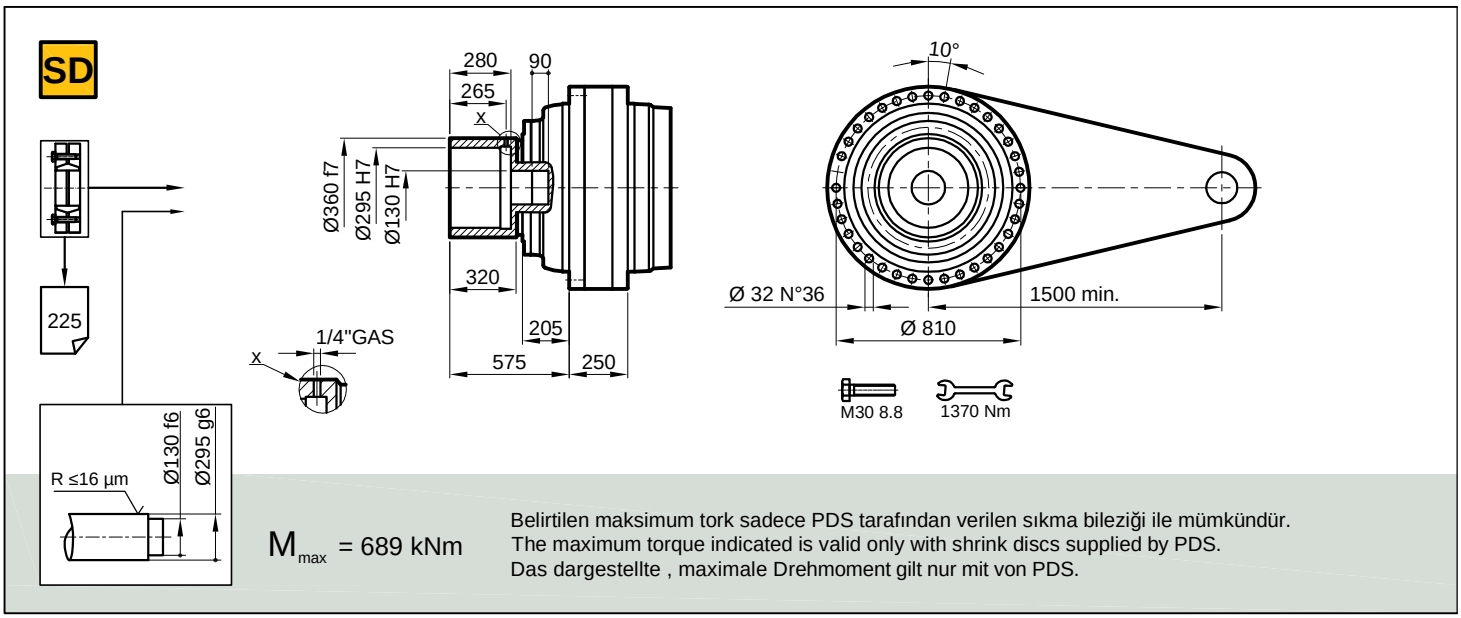
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	1870	-
S2	-	-	-	-	740	2194	-
S3	-	-	-	-	922	2310	-
S4	1002	88	235	550	1016	2337	2431
S5	1104	88	140	380	1075,5	2349	2374

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

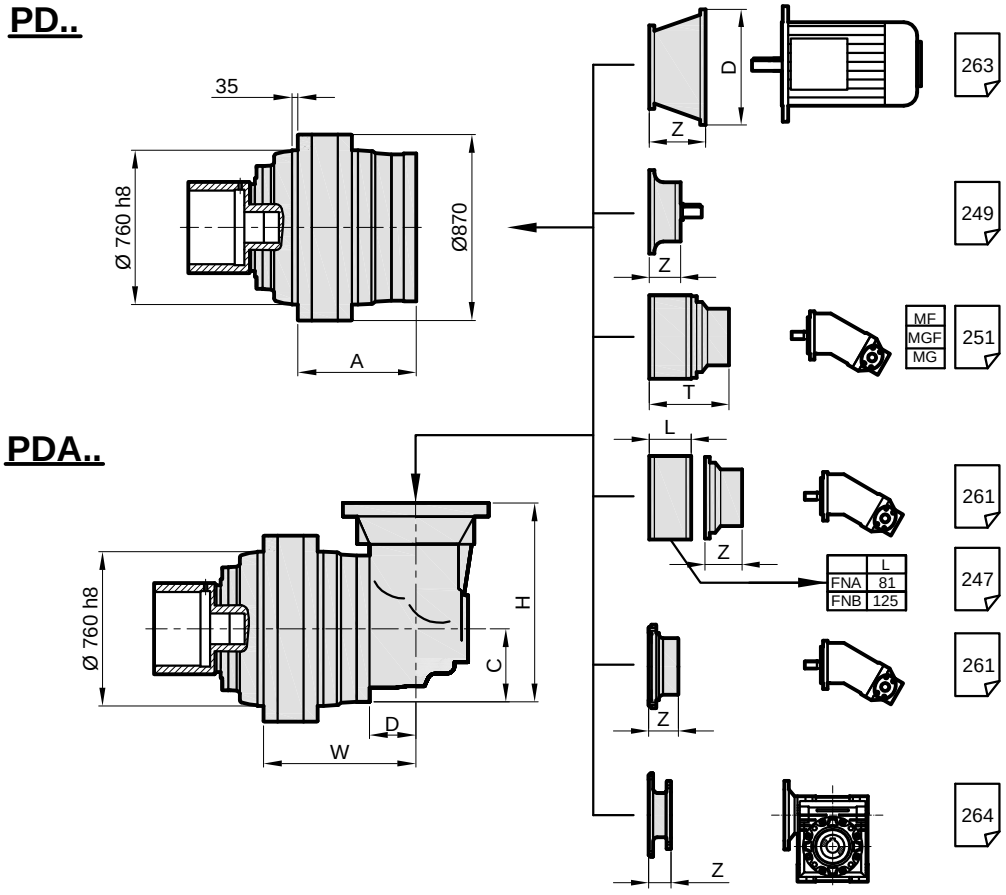
PD/PDA 137



M_{max} = 689 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



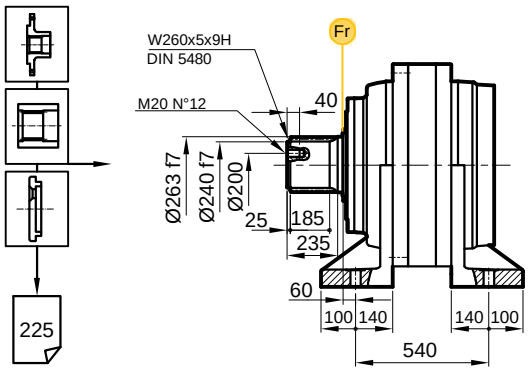
PDA..

Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	1908	-
S2	-	-	-	-	740	2232	-
S3	-	-	-	-	922	2348	-
S4	1002	88	235	550	1016	2375	2469
S5	1104	88	140	380	1075,5	2387	2412

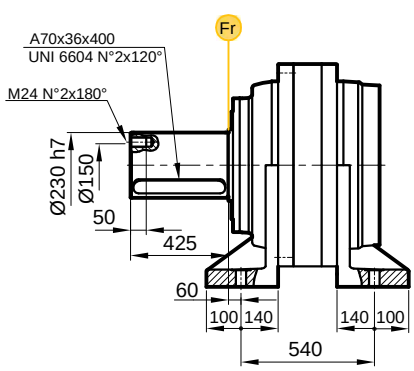
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

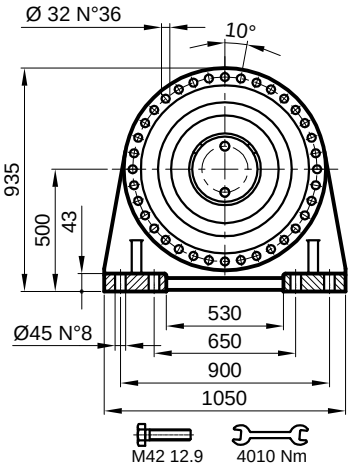
PD/PDA 137

FVS

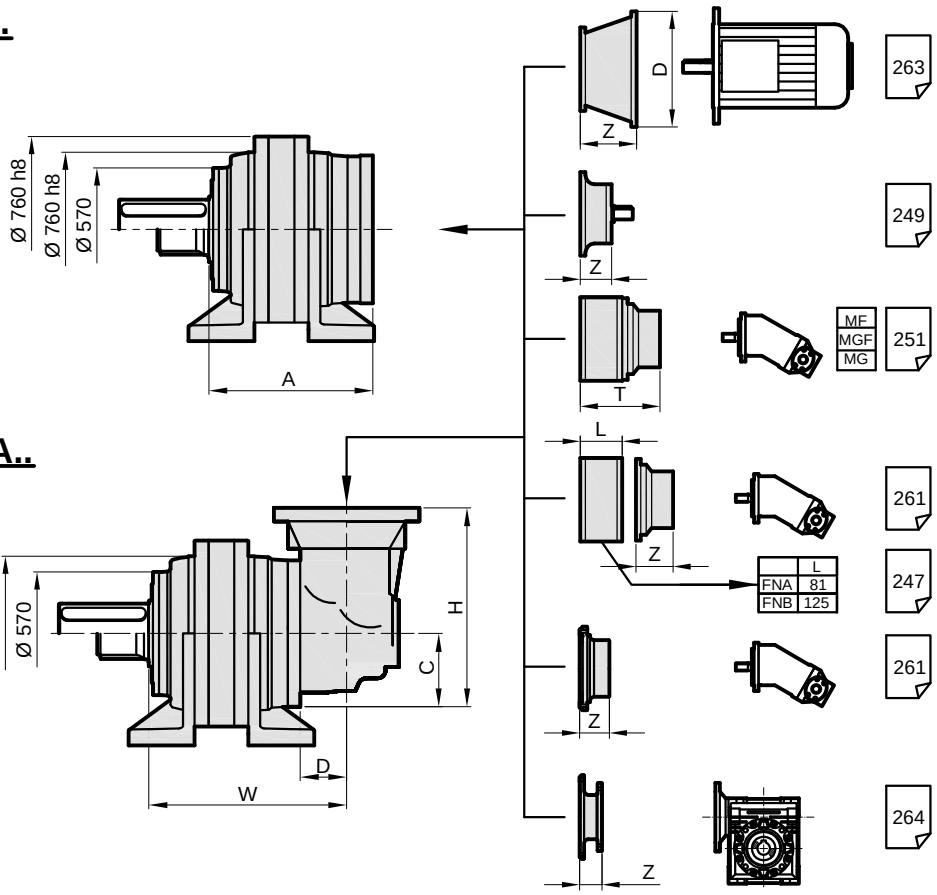


FVC





PD..



PDA..

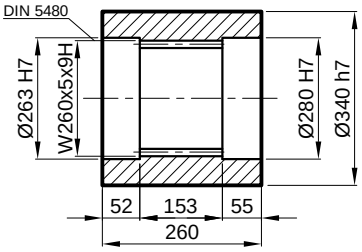
Stage	W	D	C	H	A	PD FV	PDA FV
S1	-	-	-	-	-	2035	-
S2	-	-	-	-	965	2348	-
S3	-	-	-	-	1147	2464	-
S4	1227	88	235	550	1241	2491	2586
S5	1329	88	140	380	1300,5	2503	2528

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S3	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 137

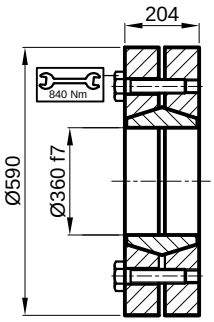
FK Frezeli Kaplin / *Spined bushing* Innenverzahnte Buchse

Malzeme /*Material* Material
UNI C40
SAE 1040
DIN Ck40



Kod / Code / Bestell
1503.135.100

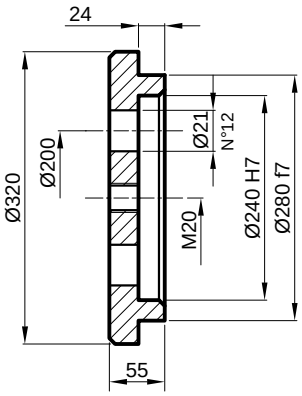
SB Sıkma Bileziği / Shrink disc Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
689 kNm

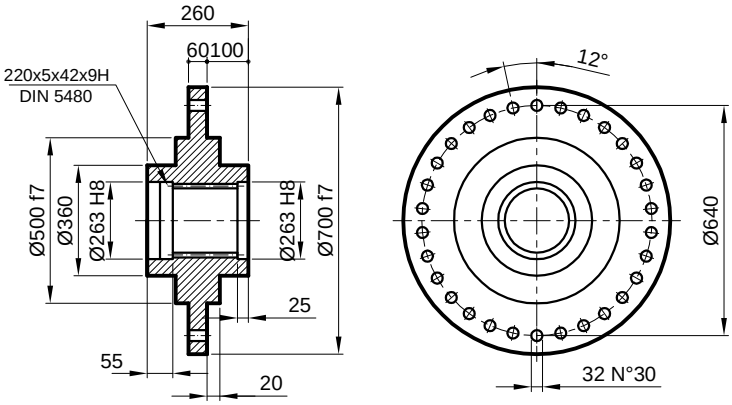
Kod / Code / Bestell
2501.135.001

SP Sabitleme Pulu / *Stop bottom plate* / Endscheibe



Kod / Code / Bestell
1507.135.250

FL Flanş / *Flange* / Flansch



Kod / Code / Bestell
1505.135.200

PD/PDA 137

RADYAL YÜK(Fr)

Aşağıdaki diyagramlar radyal yükleri ve k faktörlerini arzu edilen n_2x h değerlerinde verir.

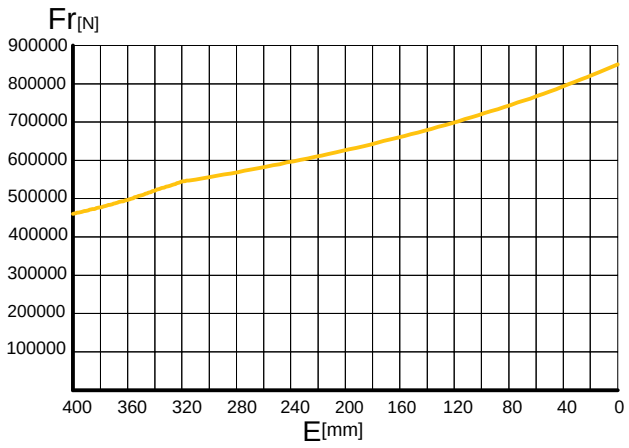
RADIAL LOADS(Fr)

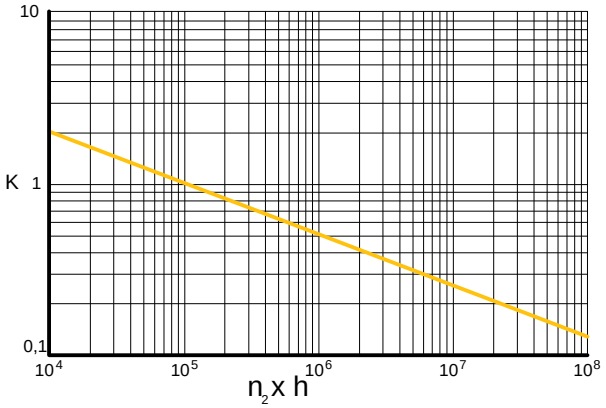
The following curves show the radial loads and the K factors to obtain the required n_2x h value.

RADIALLAST (Fr)

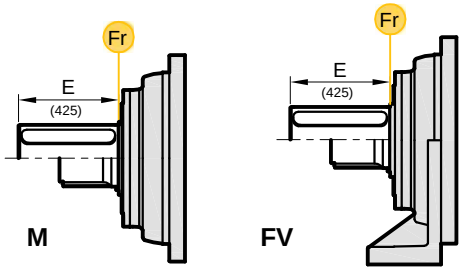
In den nachstehenden Diagrammen ist die Radiallast und der Koeffizient K dargestellt und kann mit dem gewünschten Wert n_2x h verglichen werden.

M-FV





	nxh				
	10^5	10^4	10^6	10^7	10^8
M	Fr	Fr . K			
FV	Fr .0,75	Fr . K . 0,75			



AKSİYEL YÜKLER (Fa)

Tablodaki aksiyel yük değerleri çıkış tipi ve tatbik edilen yük yönünde verilmiştir.

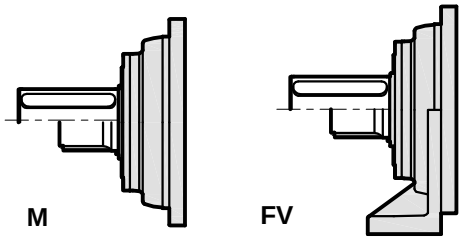
AXIAL LOADS (Fa)

The values of the awial loads in the table refer to the output versions and load directions of application.

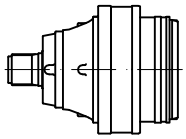
AXIALLAST (Fa)

Die dargestellten Werte der Axiallast basieren auf der Version und der applizierten Lastrichtung.

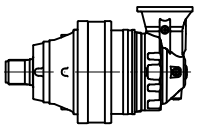
Fa [N]	M	FV	
	110000	80000	←
	110000	100000	→



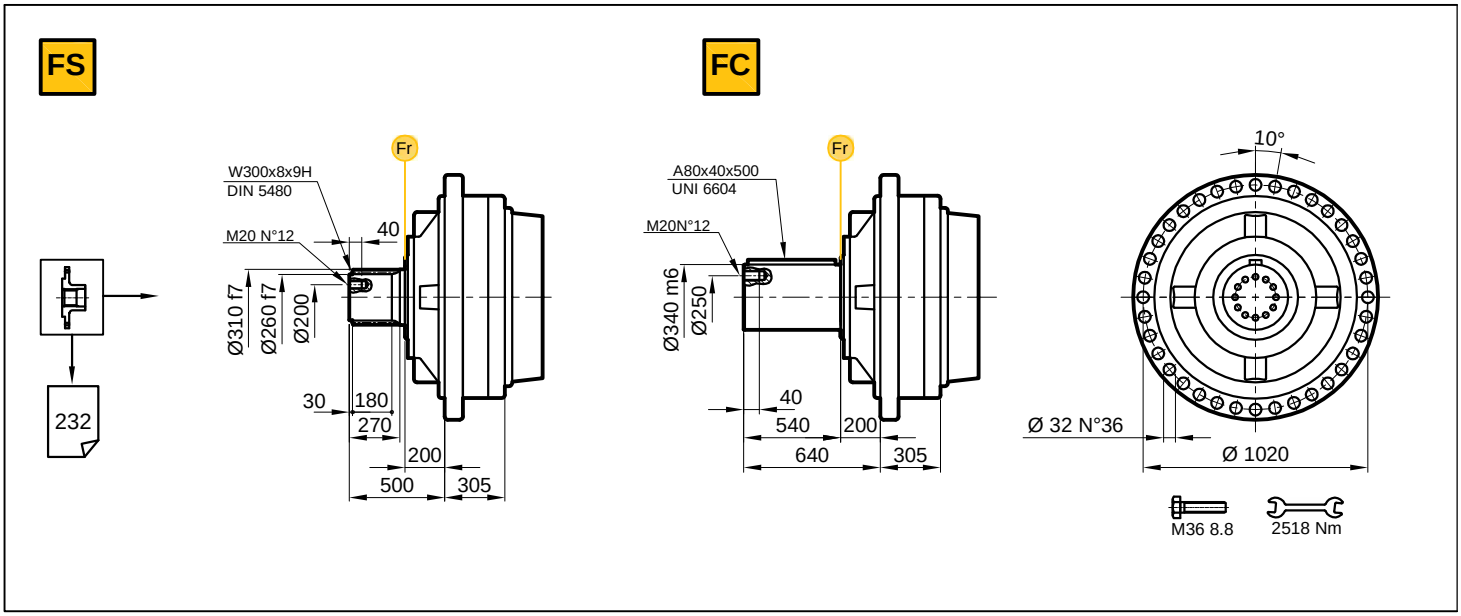
PD 139

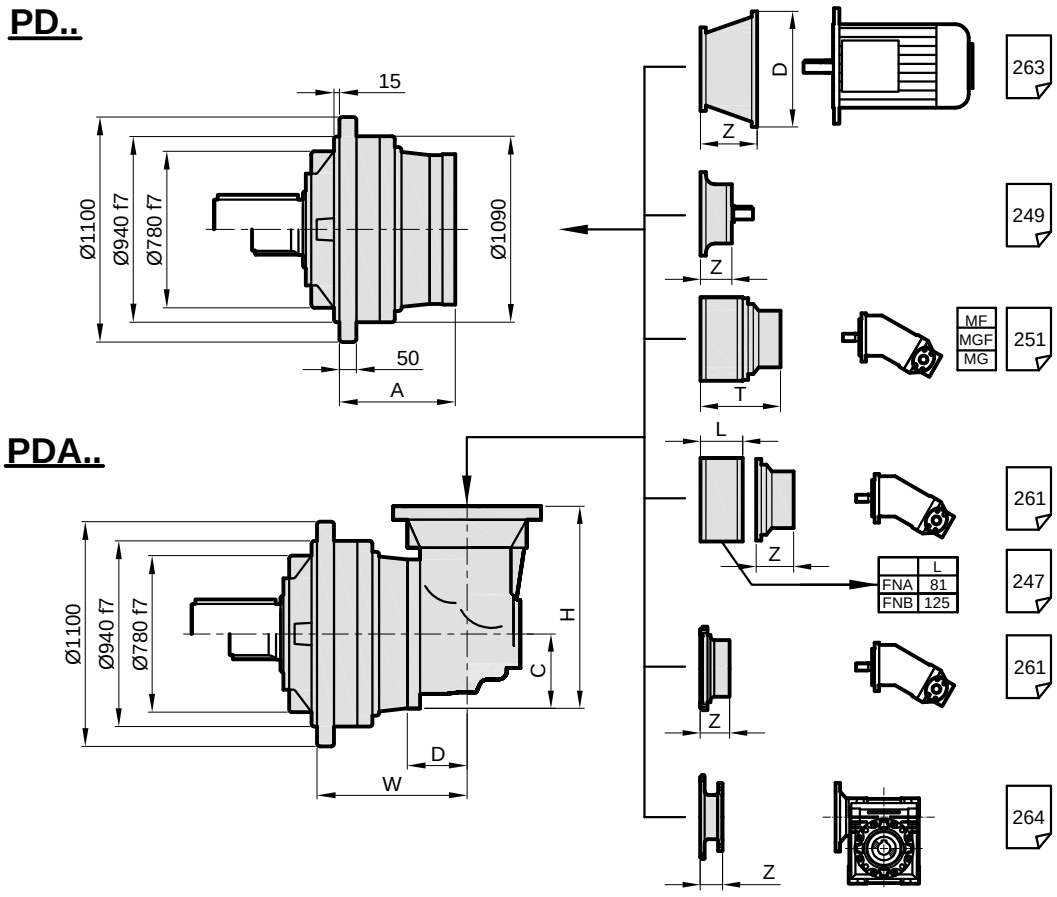
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 139 S1	3.84	635700	572300	498200	450000	100	743990	160
PD 139 S2	15.03	635700	572300	498200	450000	200	743990	110
	19.00	635700	572300	498200	450000	200	743990	110
PD 139 S3	59.42	635700	572300	498200	450000	1200	743990	93
	75.00	635700	572300	498200	450000	1200	743990	93
	90.15	635700	572300	498200	450000	1200	743990	93
	96.06	635700	572300	498200	450000	1200	743990	93
	113.85	635700	572300	498200	450000	1200	743990	93
PD 139 S4	211.27	635700	572300	498200	450000	2000	743990	70
	254.66	635700	572300	498200	450000	2000	743990	70
	266.79	635700	572300	498200	450000	2000	743990	70
	332.76	635700	572300	498200	450000	2000	743990	70
	362.67	635700	572300	498200	450000	2000	743990	70
	420.19	635700	572300	498200	450000	2000	743990	70
	506.48	635700	572300	498200	450000	2000	743990	70
	648.38	635700	572300	498200	450000	2000	743990	70
PD 139 S5	798.14	635700	572300	498200	450000	2800	743990	49
	871.50	635700	572300	498200	450000	2800	743990	49
	1050.47	635700	572300	498200	450000	2800	743990	49
	1100.50	635700	572300	498200	450000	2800	743990	49
	1214.84	635700	572300	498200	450000	2800	743990	49
	1483.87	635700	572300	498200	450000	2800	743990	49
	1600.73	635700	572300	498200	450000	2800	743990	49
	1846.29	635700	572300	498200	450000	2800	743990	49
	2082.20	635700	572300	498200	450000	2800	743990	49
	2176.00	635700	572300	498200	450000	2800	743990	49
	2398.76	635700	572300	498200	450000	2800	743990	49
	2629.33	635700	572300	498200	450000	2800	743990	49
	3046.40	635700	572300	498200	450000	2800	743990	49
	3227.51	635700	572300	498200	450000	2800	743990	49
	3722.61	635700	572300	498200	450000	2800	743990	49
	3890.31	635700	572300	498200	450000	2800	743990	49
	4700.79	635700	572300	498200	450000	2800	743990	49
	5571.30	635700	572300	498200	450000	2800	743990	49

PDA 139

	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 139 S4	276.91	635700	572300	498200	450000	2500	743990	57
	295.03	635700	572300	498200	450000	2500	743990	57
	349.67	635700	572300	498200	450000	2500	743990	57
	448.27	635700	572300	498200	450000	2500	743990	57
	531.28	635700	572300	498200	450000	2500	743990	57
PDA 139 S5	648.91	635700	572300	498200	450000	2500	743990	50
	782.17	635700	572300	498200	450000	2500	743990	50
	830.72	635700	572300	498200	450000	2500	743990	50
	985.94	635700	572300	498200	450000	2500	743990	50
	1113.90	635700	572300	498200	450000	2500	743990	50
	1245.00	635700	572300	498200	450000	2500	743990	50
	1426.00	635700	572300	498200	450000	2500	743990	50
	1593.83	635700	572300	498200	450000	2500	743990	50
	1869.12	635700	572300	498200	450000	2500	743990	50
	1960.90	635700	572300	498200	450000	2500	743990	50
	2396.17	635700	572300	498200	450000	2500	743990	50
	2839.90	635700	572300	498200	450000	2500	743990	50
	3025.79	635700	572300	498200	450000	2500	743990	50
	3586.13	635700	572300	498200	450000	2500	743990	50

PD/PDA 139



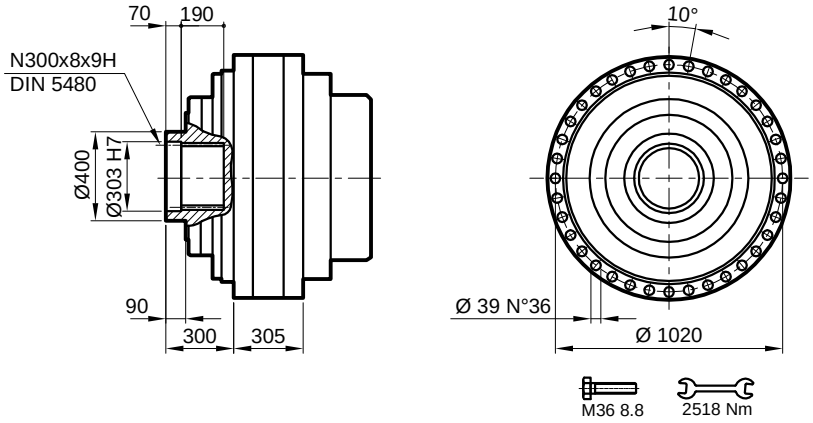


Stage	W	D	C	H	A	PD F	PDA F
S3	-	-	-	-	904	4053	4135
S4	1174	88	235	550	1053	4069	4175

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

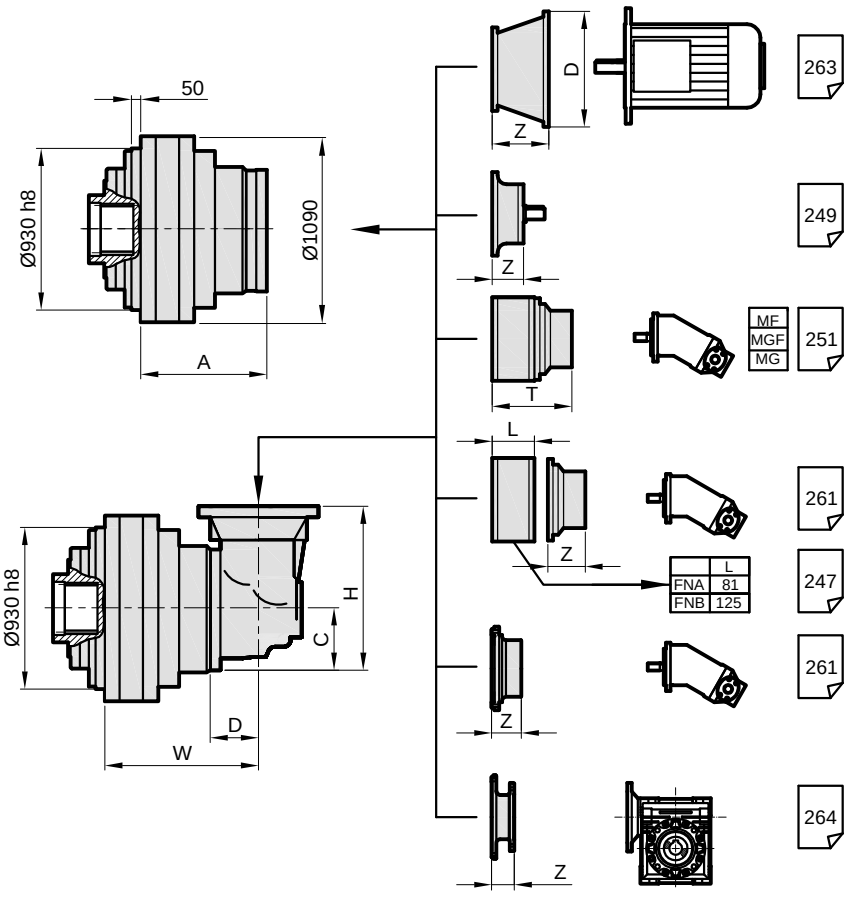
PD/PDA 139

S



PD..

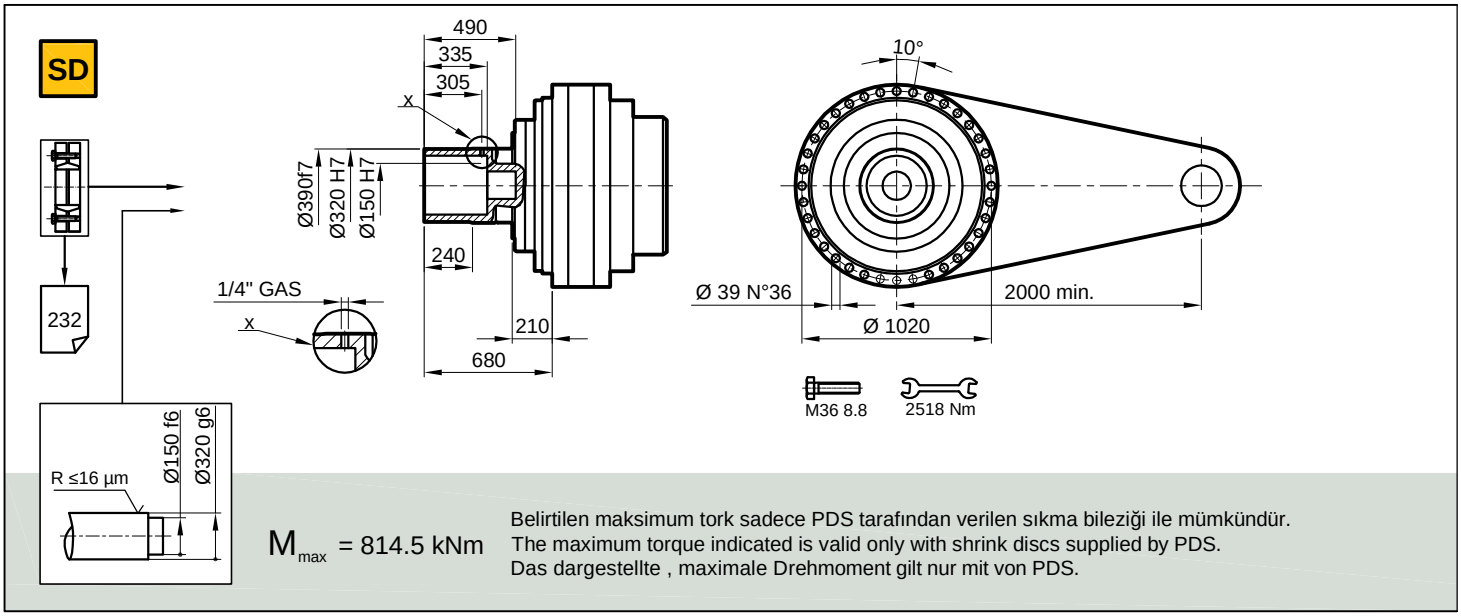
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	2850	-
S2	-	-	-	-	903,5	3650	-
S3	-	-	-	-	1124,5	3844	-
S4	1305,5	88	235	550	1231,5	3903	3985
S5	1366,5	88	235	550	1303	3919	4025

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

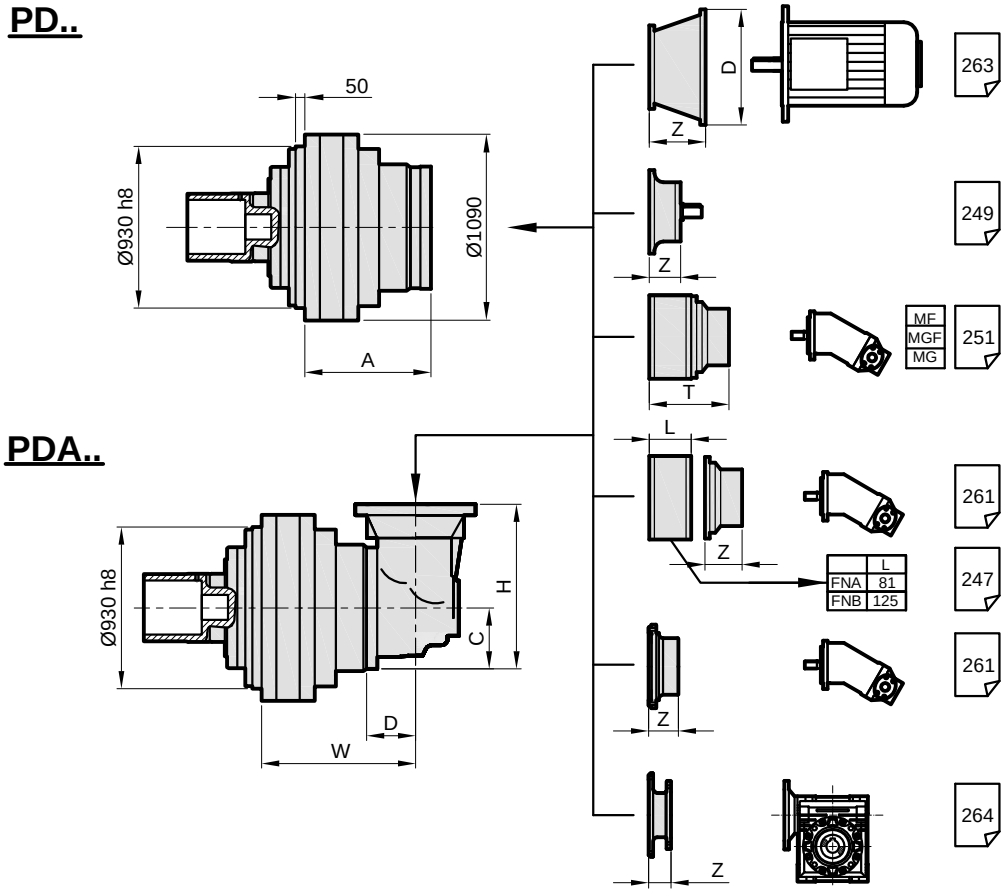
PD/PDA 139



M_{max} = 814.5 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



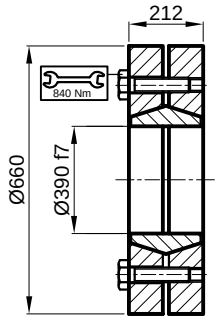
PDA..

Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	2907	-
S2	-	-	-	-	903,5	3707	-
S3	-	-	-	-	1124,5	3901	-
S4	1305,5	88	235	550	1231,5	3960	4042
S5	1366,5	88	235	550	1303	3976	4082

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	300	104	350	120	400	148	450	148	-	-

PD/PDA 139

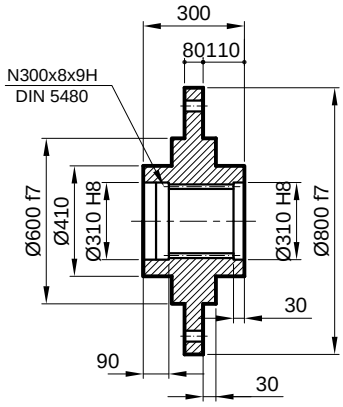
SB Sıkma Bileziği / Shrink disc
Schrumpfscheibe

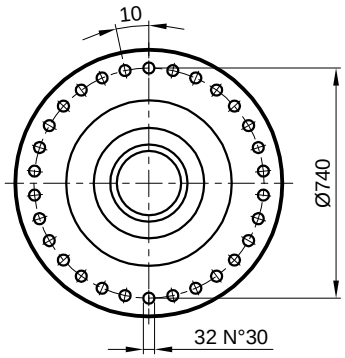


Maksimum tork
Max. torque
Max.Drehmoment
814,5 kNm

Kod / Code / Bestell
2501.139.001

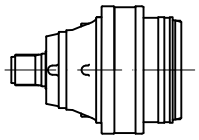
FL Flanş / *Flange* / Flansch



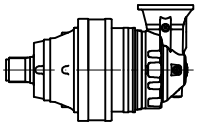


Kod / Code / Bestell
1505.139.200

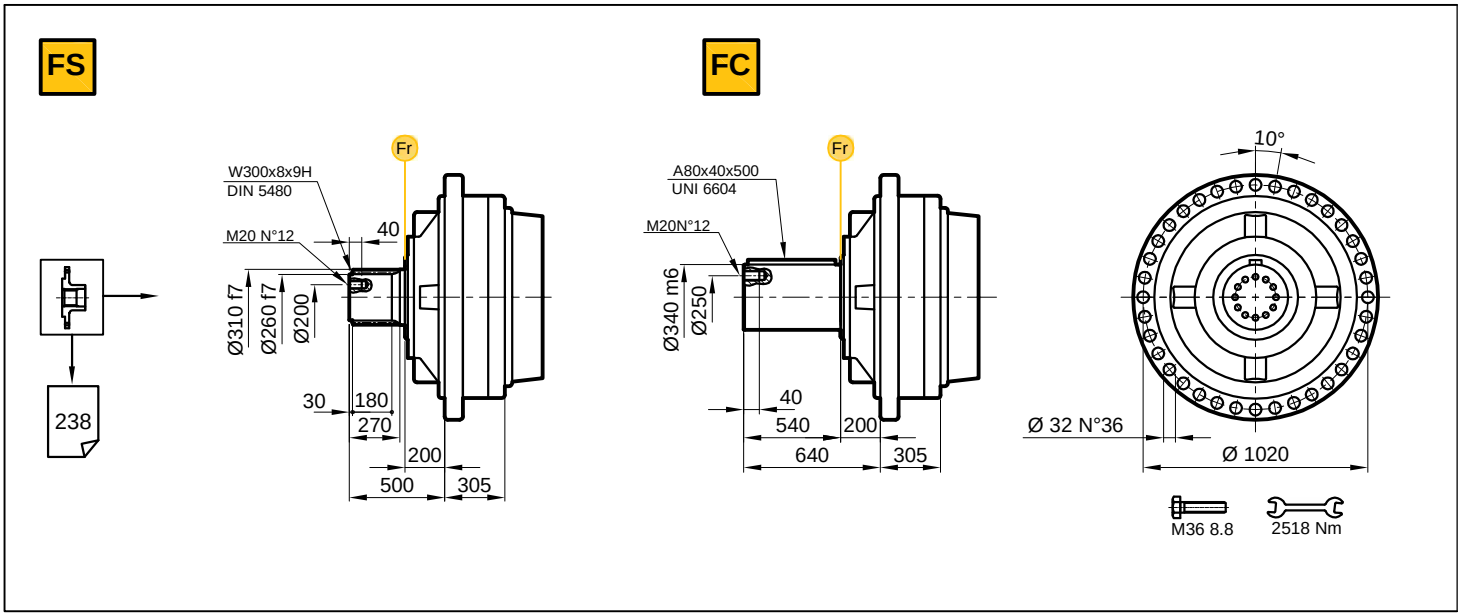
PD 141

	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PD 141 S1	3.84	730300	657500	572300	540000	100	854750	160
PD 141 S2	14.13	730300	657500	572300	540000	200	854750	110
	19.00	730300	657500	572300	540000	200	854750	110
PD 141 S3	55.88	730300	657500	572300	540000	1200	854750	93
	75.00	730300	657500	572300	540000	1200	854750	93
	96.06	730300	657500	572300	540000	1200	854750	93
PD 141 S4	198.69	730300	657500	572300	540000	2000	854750	70
	266.79	730300	657500	572300	540000	2000	854750	70
	306.60	730300	657500	572300	540000	2000	854750	70
	362.67	730300	657500	572300	540000	2000	854750	70
	411.67	730300	657500	572300	540000	2000	854750	70
	482.89	730300	657500	572300	540000	2000	854750	70
	537.92	730300	657500	572300	540000	2000	854750	70
	648.38	730300	657500	572300	540000	2000	854750	70
	768.46	730300	657500	572300	540000	2000	854750	70
	1026.58	730300	657500	572300	540000	2000	854750	70
PD 141 S5	1214.84	730300	657500	572300	540000	2800	854750	49
	1326.50	730300	657500	572300	540000	2800	854750	49
	1496.00	730300	657500	572300	540000	2800	854750	49
	1616.87	730300	657500	572300	540000	2800	854750	49
	1736.35	730300	657500	572300	540000	2800	854750	49
	1873.78	730300	657500	572300	540000	2800	854750	49
	1958.22	730300	657500	572300	540000	2800	854750	49
	2127.00	730300	657500	572300	540000	2800	854750	49
	2218.92	730300	657500	572300	540000	2800	854750	49
	2403.72	730300	657500	572300	540000	2800	854750	49
	2779.25	730300	657500	572300	540000	2800	854750	49
	3046.40	730300	657500	572300	540000	2800	854750	49
	3500.95	730300	657500	572300	540000	2800	854750	49
	3899.91	730300	657500	572300	540000	2800	854750	49
	4610.73	730300	657500	572300	540000	2800	854750	49
	5571.30	730300	657500	572300	540000	2800	854750	49

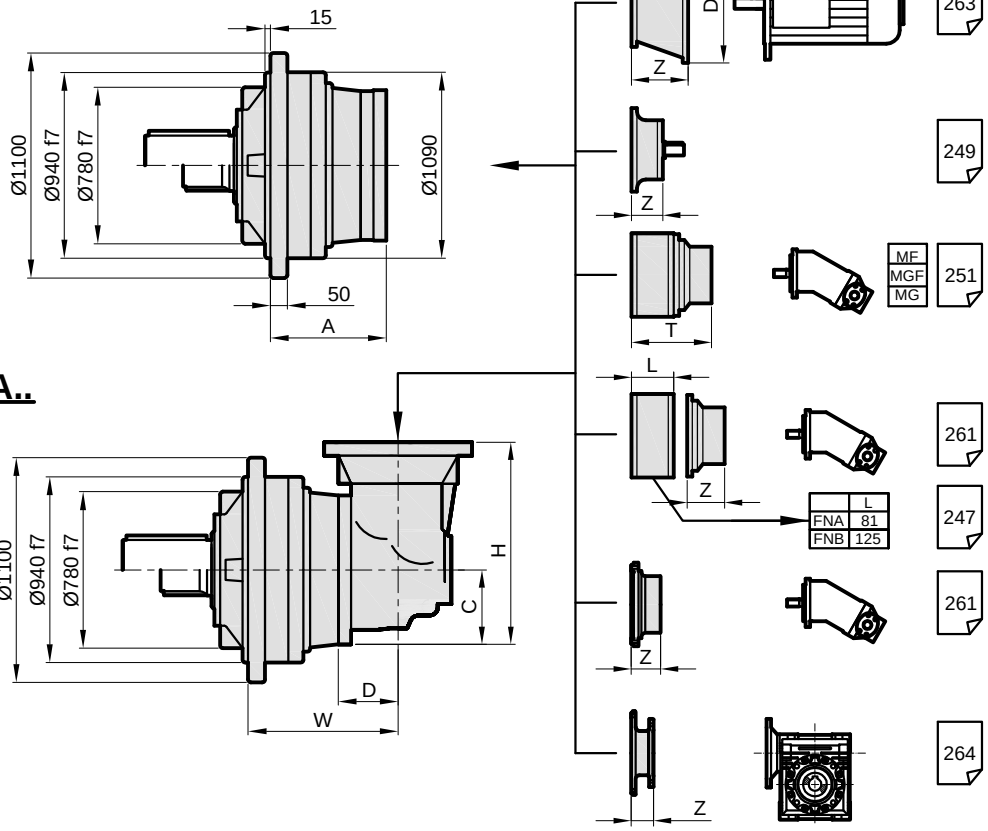
PDA 141

	i	T_2[Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 141 S5	610.27	730300	657500	572300	540000	2500	854750	50
	735.60	730300	657500	572300	540000	2500	854750	50
	819.42	730300	657500	572300	540000	2500	854750	50
	927.24	730300	657500	572300	540000	2500	854750	50
	987.70	730300	657500	572300	540000	2500	854750	50
	1113.90	730300	657500	572300	540000	2500	854750	50
	1246.00	730300	657500	572300	540000	2500	854750	50
	1426.00	730300	657500	572300	540000	2500	854750	50
	1500.69	730300	657500	572300	540000	2500	854750	50
	1692.44	730300	657500	572300	540000	2500	854750	50
	1960.90	730300	657500	572300	540000	2500	854750	50
	2166.62	730300	657500	572300	540000	2500	854750	50
	2510.29	730300	657500	572300	540000	2500	854750	50
	3025.79	730300	657500	572300	540000	2500	854750	50
	3586.13	730300	657500	572300	540000	2500	854750	50

PD/PDA 141



PD..



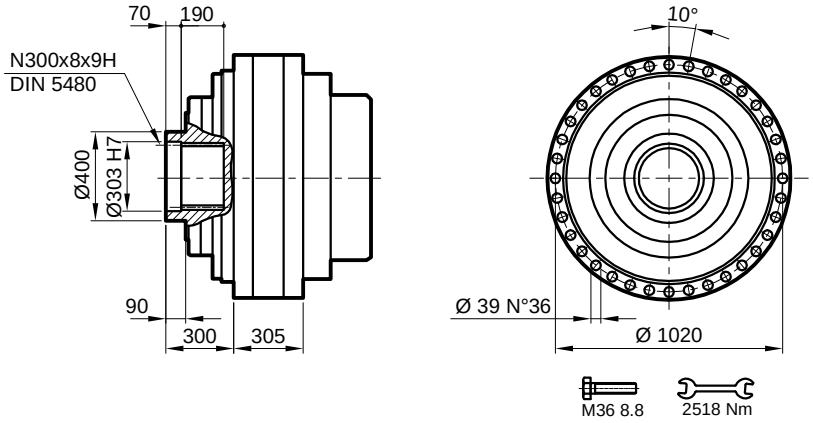
PDA..

Stage	W	D	C	H	A	PD F	PDA F
S3	-	-	-	-	904	4053	4135
S4	1174	88	235	550	1053	4069	4175

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

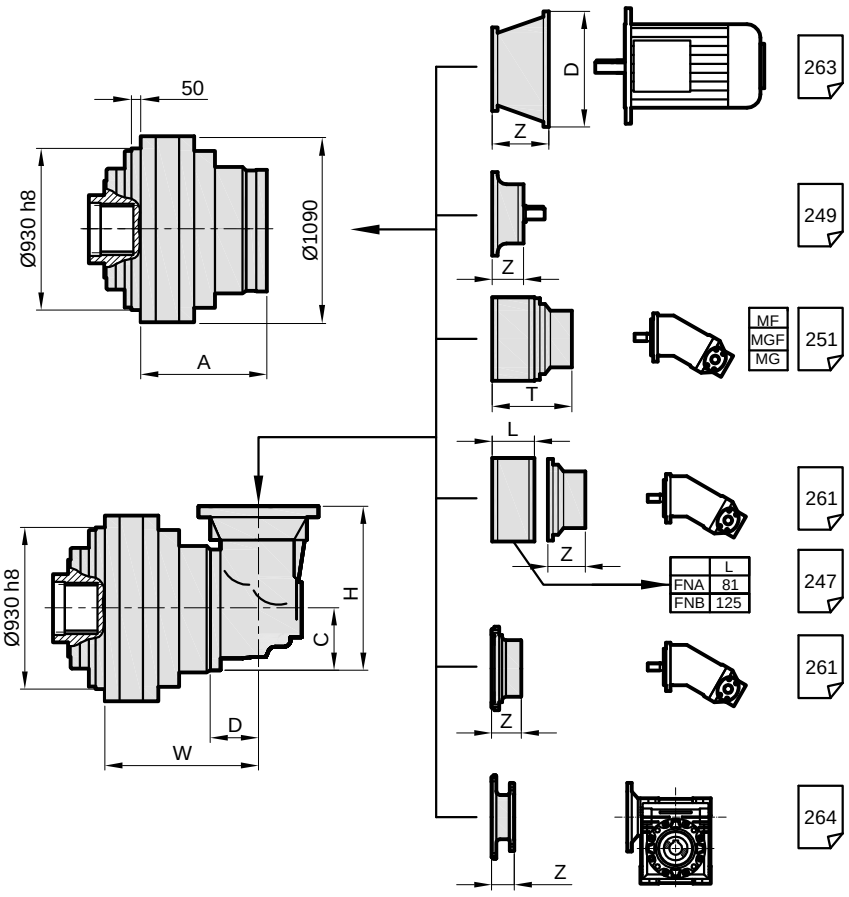
PD/PDA 141

S



PD..

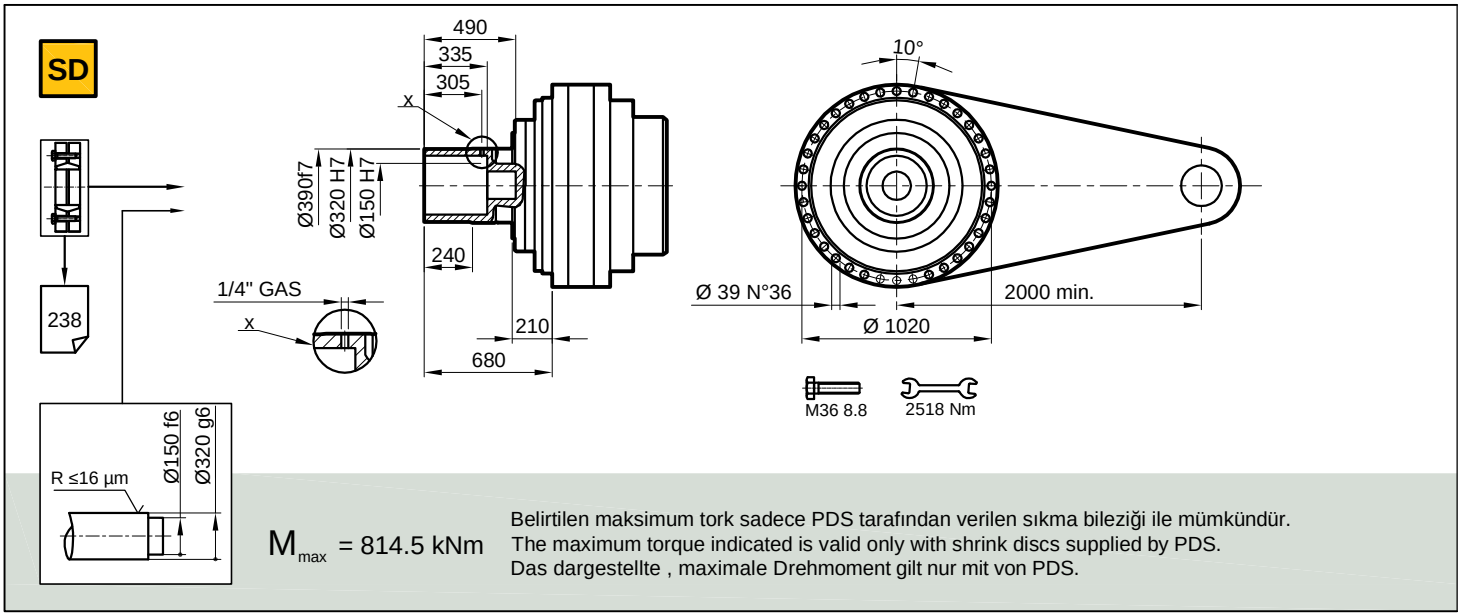
PDA..



Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	2850	-
S2	-	-	-	-	903,5	3650	-
S3	-	-	-	-	1124,5	3844	-
S4	-	-	-	-	1231,5	3903	-
S5	1366,5	88	235	550	1303	3919	4025

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

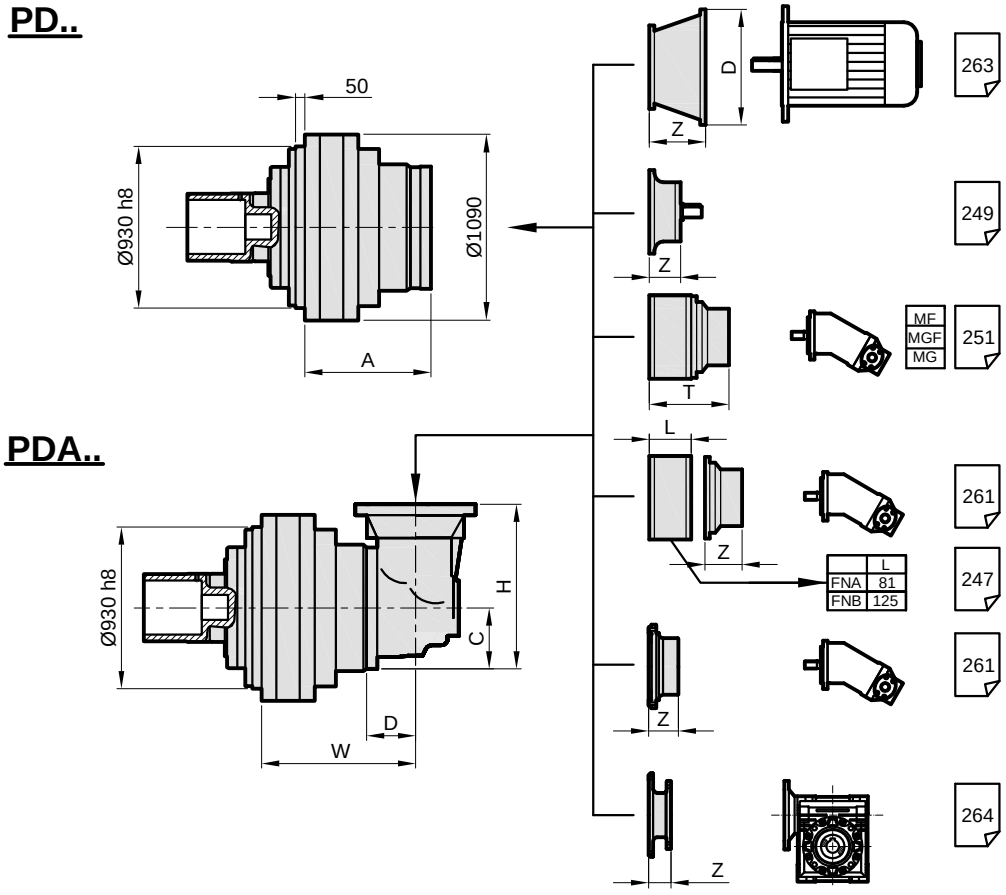
PD/PDA 141



M_{max} = 814.5 kNm

Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



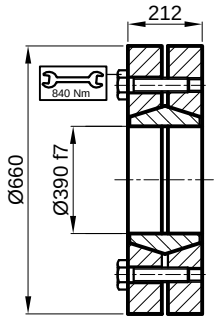
PDA..

Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	2907	-
S2	-	-	-	-	903,5	3707	-
S3	-	-	-	-	1124,5	3901	-
S4	-	-	-	-	1231,5	3960	-
S5	1366,5	88	235	550	1303	3976	4082

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

PD/PDA 141

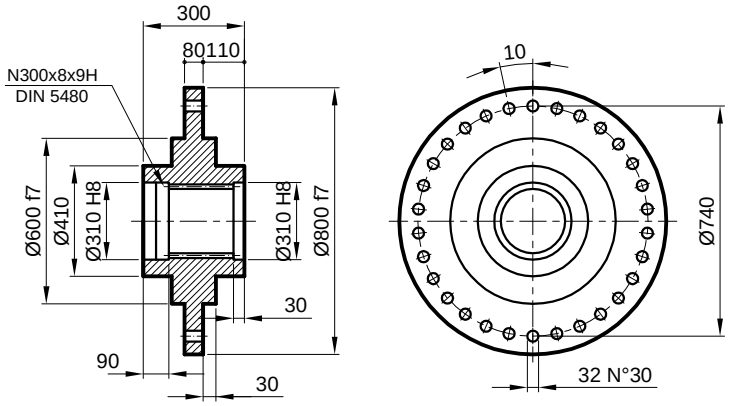
SB Sıkma Bileziği / Shrink disc
Schrumpfscheibe



Maksimum tork
Max. torque
Max.Drehmoment
814,5 kNm

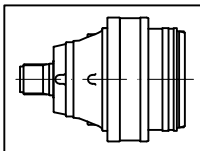
Kod / Code / Bestell
2501.139.001

FL Flanş / *Flange* / Flansch



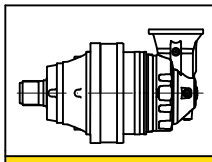
Kod / Code / Bestell
1505.139.200

PD 143



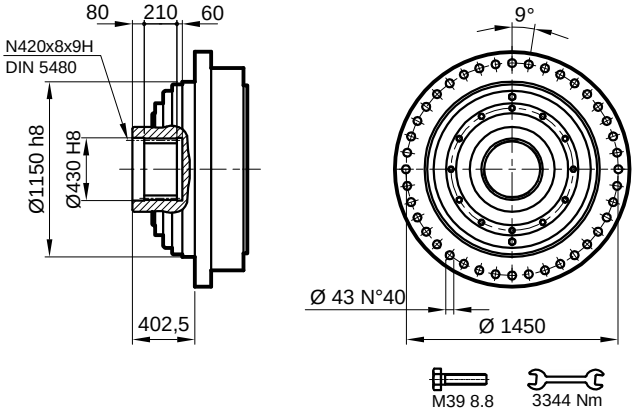
	i	T_2 [Nm] $n_2$xh 10 000	T_2 [Nm] $n_2$xh 20 000	T_2 [Nm] $n_2$xh 50 000	T_2 [Nm] $n_2$xh 100 000	n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
PD 143 S1	4,32	1347223	1172864	1056123	967096	750	1524723	278
PD 143 S2	14,81	1347223	1172864	1056123	948814	1300	1524723	187
	17,67	1347223	1172864	1056123	938104	1300	1524723	187
	22,68	1303050	1172864	1056123	910790	1300	1524723	187
	26,92	1008221	938380	901939	866913	1300	1219894	187
PD 143 S3	56,78	1347223	1172864	999152	811562	1600	1524723	140
	67,75	1347223	1172864	1056123	918366	1600	1524723	140
	77,76	1347223	1172864	1056123	902792	1600	1524723	140
	86,94	1303050	1172864	1056123	910790	1600	1524723	140
	99,79	1303050	1172864	1056123	910790	1600	1524723	140
	118,43	1008221	938380	901939	866913	1600	1219894	140
PD 143 S4	218,02	1347223	1104683	897280	728816	2100	1436088	111
	260,14	1347223	1172864	1015365	824731	2100	1524723	111
	298,60	1347223	1172864	1056123	902792	2100	1524723	111
	320,90	1347223	1172864	989934	804075	2100	1524723	111
	368,34	1347223	1172864	1056123	885543	2100	1524723	111
	411,82	1303050	1172864	1056123	910790	2100	1524723	111
	422,82	1347223	1172864	1056123	872839	2100	1524723	111
	502,45	1347223	1172864	1051752	854286	2100	1524723	111
	561,77	1303050	1172864	1056123	910790	2100	1524723	111
	644,81	1303050	1172864	1056123	910790	2100	1524723	111
	765,27	1008221	938380	901939	866913	2100	1219894	111
PD 143 S5	776,71	1012847	769415	624958	507622	2500	1000240	91
	926,76	1146141	870673	707205	574427	2500	1131875	91
	1063,76	1262267	958888	778858	632628	2500	1246554	91
	1189,34	1303050	1036794	842136	684026	2500	1347832	91
	1262,42	1347223	1080988	878033	713183	2500	1405284	91
	1365,16	1303050	1141840	927461	753330	2500	1484392	91
	1559,45	1347223	1172864	954993	775694	2500	1524723	91
	1789,98	1347223	1172864	1051752	854286	2500	1524723	91
	1963,67	1303050	1172864	1056123	858567	2500	1524723	91
	2297,14	1303050	1172864	1056123	910790	2500	1524723	91
	2562,49	1347223	1172864	1051752	854286	2500	1524723	91
	2865,01	1303050	1172864	1056123	910790	2500	1524723	91
	3159,96	1303050	1172864	1056123	910790	2500	1524723	91
	3445,37	1347223	1172864	1046026	849636	2500	1524723	91

PDA 143

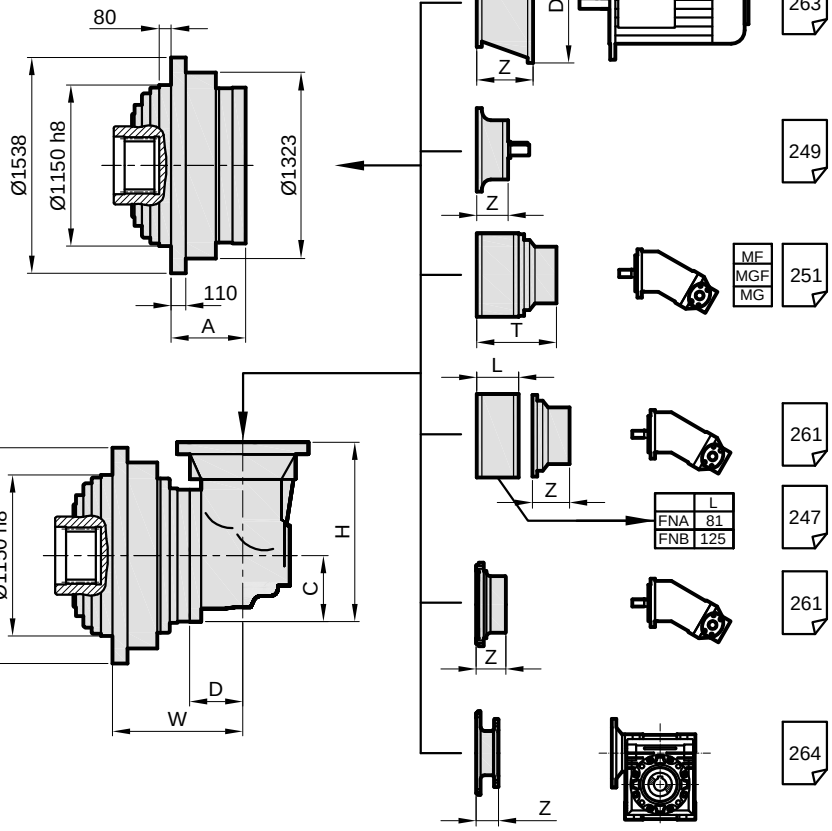
	i	T_2 [Nm]				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		$n_2$xh						
		10 000	20 000	50 000	100 000			
PDA 143 S6	2385,61	1012847	769415	624958	507622	3500	1000240	57
	2942,78	1173151	891191	723870	587964	3500	1158548	57
	3267,25	1262267	958888	778858	632628	3500	1246554	57
	3652,97	1303050	1036794	842136	684026	3500	1347832	57
	4030,65	1347223	1110714	902178	732795	3500	1443928	57
	4626,48	1347223	1172864	993586	807041	3500	1524723	57
	5172,26	1303050	1172864	1056123	872561	3500	1524723	57
	5497,78	1347223	1172864	1051752	854286	3500	1524723	57
	6410,37	1347223	1172864	1051752	854286	3500	1524723	57
	7029,38	1347223	1172864	993586	807041	3500	1524723	57
	7870,51	1347223	1172864	1051752	854286	3500	1524723	57
	8987,09	1347223	1172864	1051752	854286	3500	1524723	57
	9739,79	1347223	1172864	1051752	854286	3500	1524723	57
	10582,20	1347223	1172864	1046026	849636	3500	1524723	57
	11958,29	1347223	1172864	1051752	854286	3500	1524723	57
	13654,80	1347223	1172864	1051752	854286	3500	1524723	57
	16078,38	1347223	1172864	1046026	849636	3500	1524723	57
	17523,65	1303050	1172864	1056123	910790	3500	1524723	57
	20633,92	1303050	1172864	1056123	910790	3500	1524723	57

PD/PDA 143

S



PD..



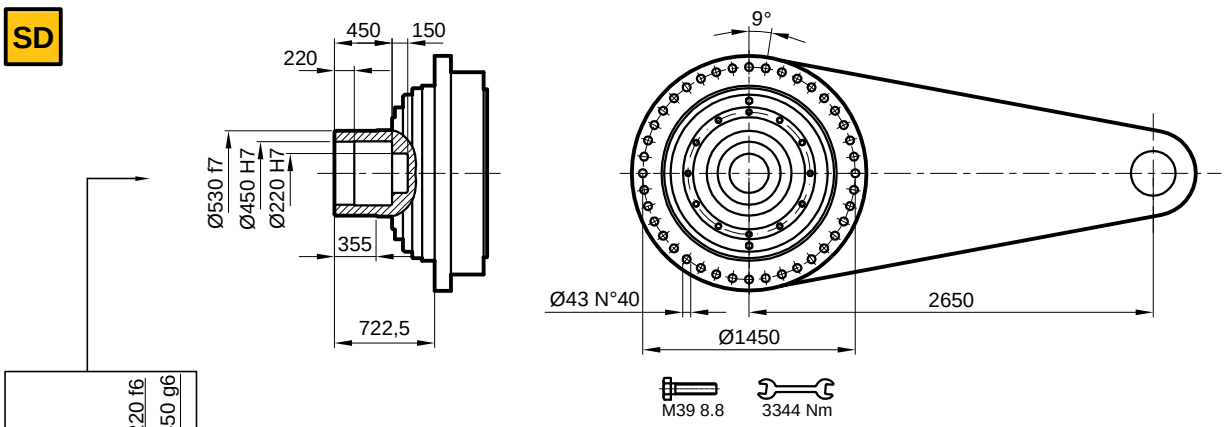
PDA..

Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	4152	-
S2	-	-	-	-	646,5	4992	-
S3	-	-	-	-	1026,5	5188	-
S4	-	-	-	-	1263,5	5247	-
S5	-	-	-	-	1374,5	5263	-
S6	1892,5	101	235	550	1694,5	5279	5660

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

PD/PDA 143

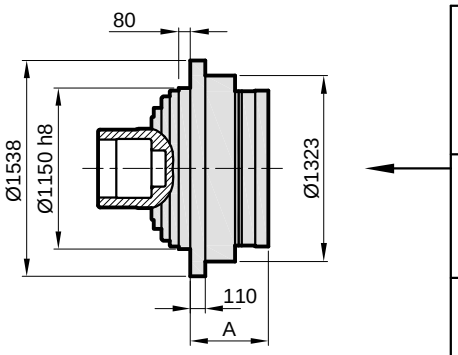
SD



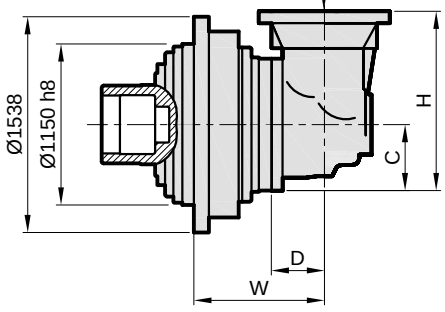
M_{max} = 689 kNm

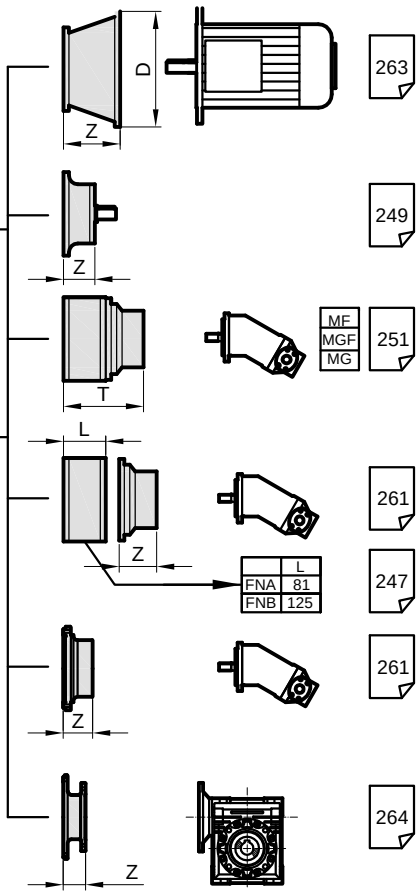
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..

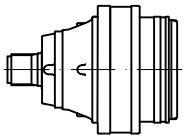




Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	4232	-
S2	-	-	-	-	646,5	5072	-
S3	-	-	-	-	1026,5	5268	-
S4	-	-	-	-	1263,5	5327	-
S5	-	-	-	-	1374,5	5343	-
S6	1892,5	101	235	550	1694,5	5359	5740

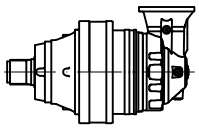
	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

PD 145



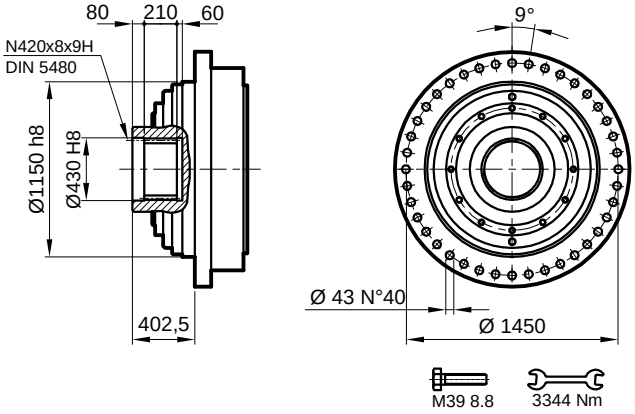
	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PD 145 S1	4,32	1590867	1384976	1247122	1173336	750	1800468	278
PD 145 S2	14,81	1478117	1286818	1168130	948814	1300	1672863	187
	17,67	1590867	1384976	1154944	938104	1300	1800468	187
	22,68	1303050	1189316	1121316	910790	1300	1546110	187
	26,92	1008221	938380	901939	866913	1300	1219894	187
PD 145 S3	56,78	1478117	1230102	999152	811562	1600	1599132	140
	67,75	1590867	1384976	1130644	918366	1600	1800468	140
	77,76	1590867	1368382	1111469	902792	1600	1778896	140
	86,94	1303050	1189316	1121316	910790	1600	1546110	140
	99,79	1303050	1189316	1121316	910790	1600	1546110	140
	118,43	1008221	938380	901939	866913	1600	1219894	140
PD 145 S4	218,02	1454190	1104683	897280	728816	2100	1436088	111
	260,14	1590867	1250064	1015365	824731	2100	1625083	111
	298,60	1590867	1368382	1111469	902792	2100	1778896	111
	320,90	1590867	1218754	989934	804075	2100	1584380	111
	368,34	1590867	1342237	1090233	885543	2100	1744908	111
	411,82	1303050	1189316	1121316	910790	2100	1546110	111
	422,82	1590867	1322982	1074593	872839	2100	1719876	111
	502,45	1590867	1294861	1051752	854286	2100	1683320	111
	561,77	1303050	1189316	1121316	910790	2100	1546110	111
	644,81	1303050	1189316	1121316	910790	2100	1546110	111
	765,27	1008221	938380	901939	866913	2100	1219894	111
PD 145 S5	776,71	1012847	769415	624958	507622	2500	1000240	91
	926,76	1146141	870673	707205	574427	2500	1131875	91
	1063,76	1262267	958888	778858	632628	2500	1246554	91
	1189,34	1303050	1036794	842136	684026	2500	1347832	91
	1262,42	1422997	1080988	878033	713183	2500	1405284	91
	1365,16	1303050	1141840	927461	753330	2500	1484392	91
	1559,45	1419223	1175737	954993	775694	2500	1528458	91
	1789,98	1590867	1294861	1051752	854286	2500	1683320	91
	1963,67	1303050	1189316	1057022	858567	2500	1546110	91
	2297,14	1303050	1189316	1121316	910790	2500	1546110	91
	2562,49	1590867	1294861	1051752	854286	2500	1683320	91
	2865,01	1303050	1189316	1121316	910790	2500	1546110	91
	3159,96	1303050	1189316	1121316	910790	2500	1546110	91
	3445,37	1590867	1287812	1046026	849636	2500	1674155	91

PDA 145

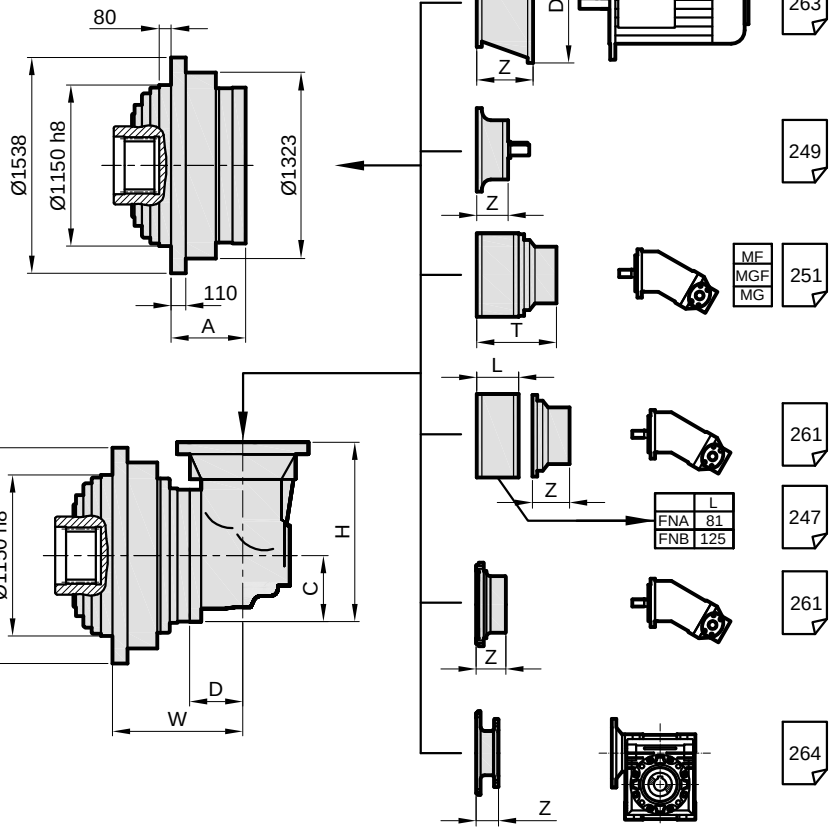
	i	T_2 [Nm] $n_2$xh				n_{1max} [min^{-1}]	T_{2max} [Nm]	P_t [kW]
		10 000	20 000	50 000	100 000			
PDA 145 S6	2385,61	1012847	769415	624958	507622	3500	1000240	57
	2942,78	1173151	891191	723870	587964	3500	1158548	57
	3267,25	1262267	958888	778858	632628	3500	1246554	57
	3652,97	1303050	1036794	842136	684026	3500	1347832	57
	4030,65	1462128	1110714	902178	732795	3500	1443928	57
	4626,48	1590867	1223250	993586	807041	3500	1590225	57
	5172,26	1303050	1189316	1074250	872561	3500	1546110	57
	5497,78	1590867	1294861	1051752	854286	3500	1683319	57
	6410,37	1590867	1294861	1051752	854286	3500	1683319	57
	7029,38	1590867	1223250	993586	807041	3500	1590225	57
	7870,51	1590867	1294861	1051752	854286	3500	1683319	57
	8987,09	1590867	1294861	1051752	854286	3500	1683319	57
	9739,79	1590867	1294861	1051752	854286	3500	1683319	57
	10582,20	1590867	1287812	1046026	849636	3500	1674155	57
	11958,29	1590867	1294861	1051752	854286	3500	1683319	57
	13654,80	1590867	1294861	1051752	854286	3500	1683319	57
	16078,38	1590867	1287812	1046026	849636	3500	1674155	57
	17523,65	1303050	1189316	1121316	910790	3500	1546110	57
	20633,92	1303050	1189316	1121316	910790	3500	1546110	57

PD/PDA 145

S



PD..



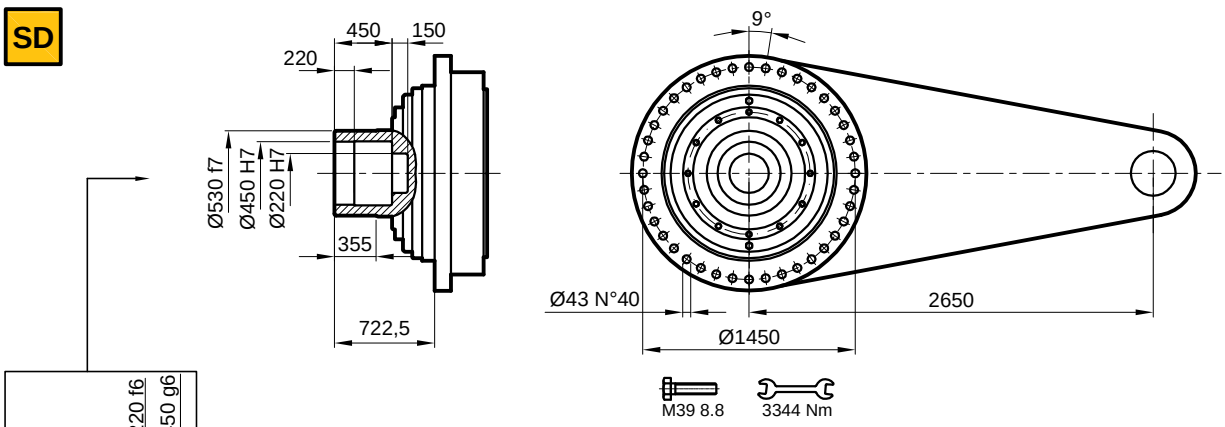
PDA..

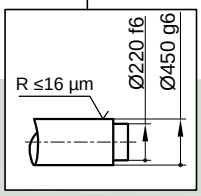
Stage	W	D	C	H	A	PD S	PDA S
S1	-	-	-	-	-	4152	-
S2	-	-	-	-	646,5	4992	-
S3	-	-	-	-	1026,5	5188	-
S4	-	-	-	-	1263,5	5247	-
S5	-	-	-	-	1374,5	5263	-
S6	1892,5	101	235	550	1694,5	5279	5660

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

PD/PDA 145

SD

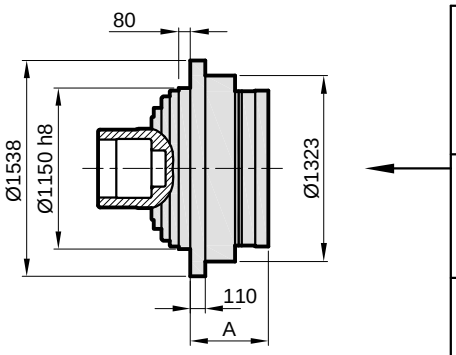




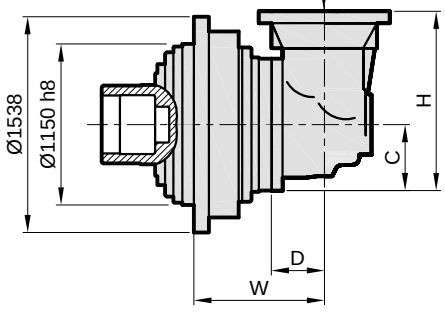
M_{max} = 689 kNm

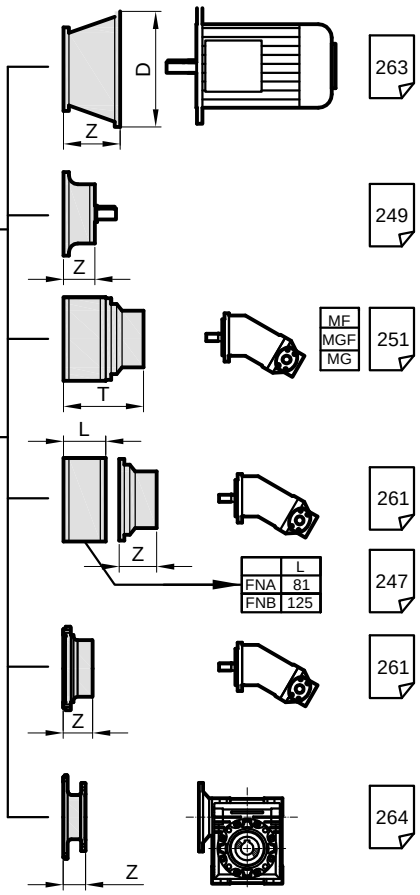
Belirtilen maksimum tork sadece PDS tarafından verilen sıkma bileziği ile mümkündür.
The maximum torque indicated is valid only with shrink discs supplied by PDS.
Das dargestellte , maximale Drehmoment gilt nur mit von PDS.

PD..



PDA..





Stage	W	D	C	H	A	PD SD	PDA SD
S1	-	-	-	-	-	4232	-
S2	-	-	-	-	646,5	5072	-
S3	-	-	-	-	1026,5	5268	-
S4	-	-	-	-	1263,5	5327	-
S5	-	-	-	-	1374,5	5343	-
S6	1892,5	101	235	550	1694,5	5359	5740

	H71		H80-90		H100		H132		H160-180		H200		H225		H250-280	
Stage	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z	D	Z
S4	-	-	-	-	-	-	-	-	-	-	400	148	450	148	550	183
S5	-	-	-	-	-	-	-	-	-	-	400	148	450	148	-	-

FREN MODÜLÜ
MODULER BRAKES
BREMS MODULE

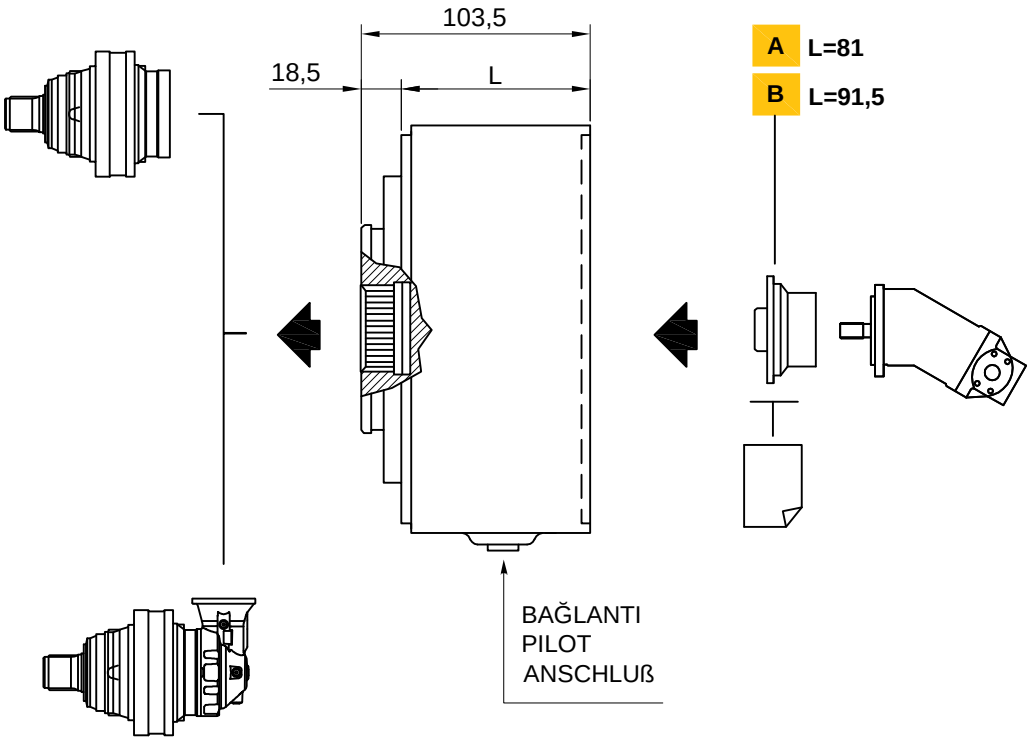
PDS Planet Redüktörleri hidrolik frenlerle ve yağ banyolu disklerle donatılmış olup frenleme için özel olarak dizayn edilmiştir. Frenleme için kullanılan yağlama, planet dişlileri için kullanılan yağlamadan bağımsızdır. Böylelikle yağ koyma sırasında dış yüzeyde bulunan girişten aynı zamanda frenleri de yağlayabilmek mümkündür. Yağ olarak ISO VG 32 kullanmanızı öneririz.(hidrolik yağ kullanmakta mümkündür)

PDS planetary reduction units are equipped with hydraulic brakes with oilbath 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).

Fuer die PDS - Planetengetriebe stehen hydraulische Federdruck-Lamellenbremsen zur Verfuegung. Diese sind ausschliesslich als statische Haltebremsen ausgelegt. Die Lamellen liegen im Oelbad, 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.

	FNA
PD 101	1-2-3-4
PD 103	1-2-3-4
PD 105	1-2-3-4
PD 107	1-2-3-4
PD 109	2-3-4
PD 111	2-3-4
PD 113	2-3-4
PD 115	3-4
PD 117	3-4
PD 119	3-4
PD 121	3-4
PD 123	3-4
PD 125	4
PD 127	4
PD 129	4-5
PD 131	5
PD 133	5
PD 135	5
PD 137	5
PD 139	—
PD 141	—

	FNA
PD 101	2-3-4
PD 103	2-3-4
PD 105	2-3-4
PD 107	2-3-4
PD 109	2-3-4
PD 111	2-3-4
PD 113	2-3-4
PD 115	3-4
PD 117	3-4
PD 119	3-4
PD 121	3-4
PD 123	3-4
PD 125	4
PD 127	4
PD 129	5
PD 131	5
PD 133	5
PD 135	5
PD 137	—
PD 139	—
PD 141	—



FNA

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil / Oil [lt]		Kg
					V1	B5	
FNA 10	90	15	1801.110.001	320	0,4	0,2	14
FNA 16	140	21	1801.110.002				
FNA 25	220	17	1801.110.003				
FNA 35	330	21	1801.110.004				
FNA 45	430	28	1801.110.005				
FNA 55	550	34	1801.110.006				

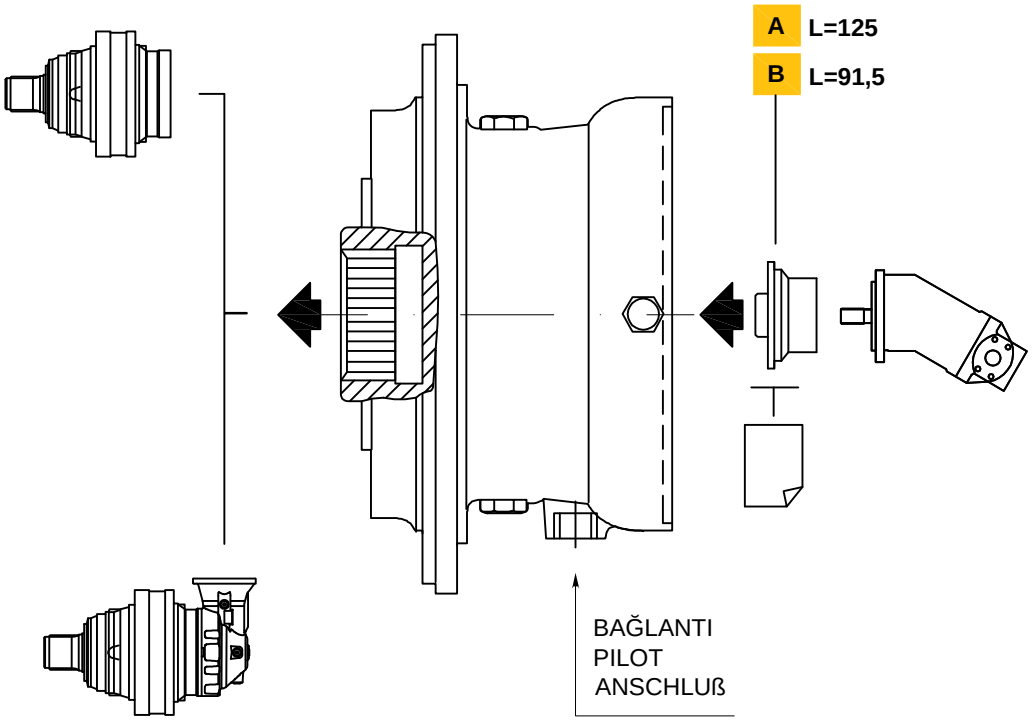
N.B.: 1-2-3-4-5 numaralı planet dişli redüktör kademelerine bakınız.

N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

FREN MODÜLÜ
MODULER BRAKES
BREMS MODULE

	FNB
PD 101	—
PD 103	—
PD 105	1
PD 107	1
PD 109	1-2
PD 111	1-2
PD 113	1-2
PD 115	2-3
PD 117	2-3
PD 119	2-3
PD 121	2-3
PD 123	2-3
PD 125	3-4
PD 127	3-4
PD 129	3-4
PD 131	3-4
PD 133	3-4
PD 135	4-5
PD 137	4-5
PD 139	4-5
PD 141	4-5



	FNB
PD 101	—
PD 103	—
PD 105	—
PD 107	—
PD 109	—
PD 111	—
PD 113	—
PD 115	2
PD 117	2
PD 119	—
PD 121	2-3
PD 123	2
PD 125	3
PD 127	3
PD 129	4
PD 131	4
PD 133	4
PD 135	4
PD 137	4-5
PD 139	4-5
PD 141	5

FNB

	Cfs_{min} [Nm]	Pa_{min} [bar]	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil / Oil [lt]		Kg
					V1	B5	
FNB 25	250	20	1802.110.001	320	0,3	21	0,6
FNB 40	400	30	1802.110.002				
FNB 63	650	45	1802.110.003				
FNB 80	800	33	1802.110.004				
FNB 100	1000	40	1802.110.005				
FNB 125	1250	40	1802.110.006				
FNB 160	1500	40	1802.110.007				
FNB 180	1700	45	1802.110.008				

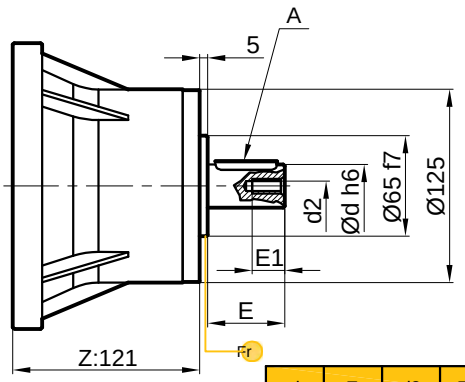
N.B.: 1-2-3-4-5 numaralı planet dişli redüktör kademelerine bakınız.

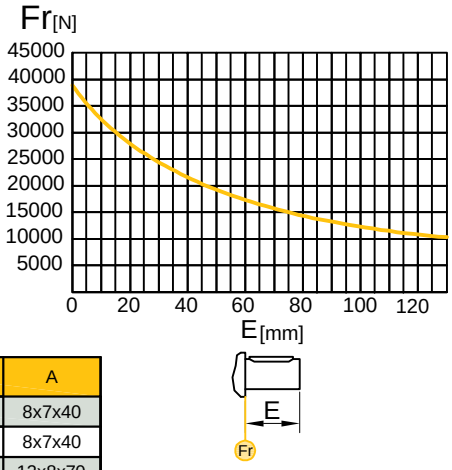
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

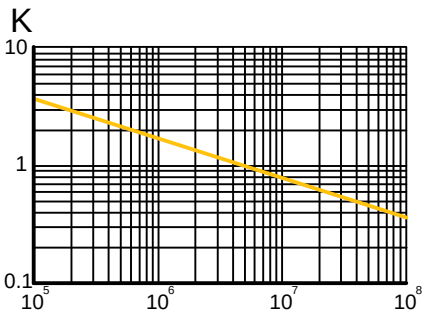
N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

GİRİŞ MİLİ
INPUT SHAFTS
ANTRIEBSWELLEN

GM25-28-42



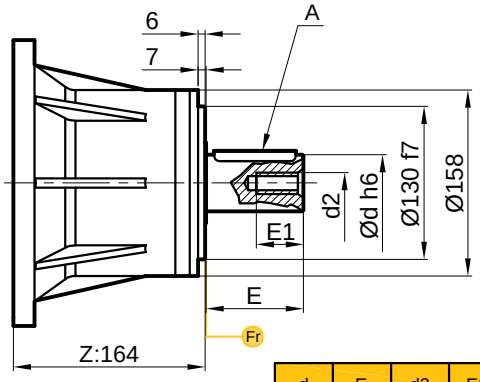


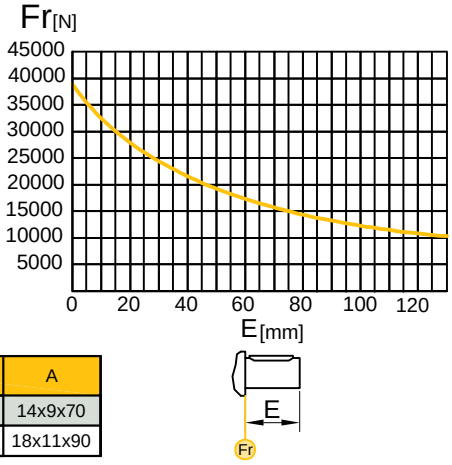


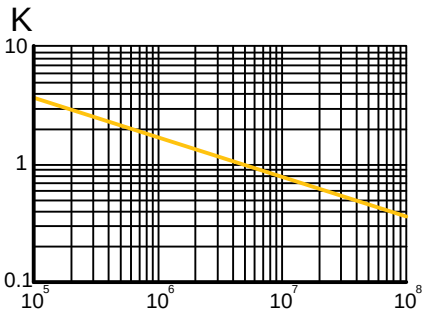
d	E	d2	E2	A
25	50	M8	22	8x7x40
28	50	M10	22	8x7x40
42	82	M12	30	12x8x70

Kilogram
Weight 10 kg
Gewicht

GM48-65



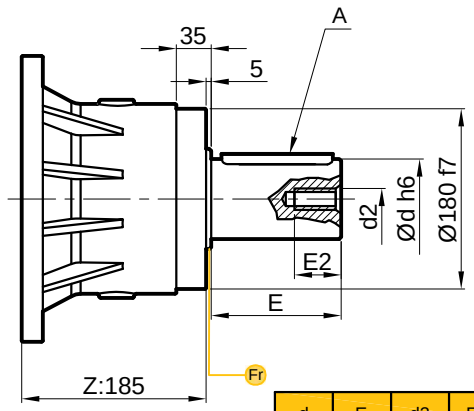


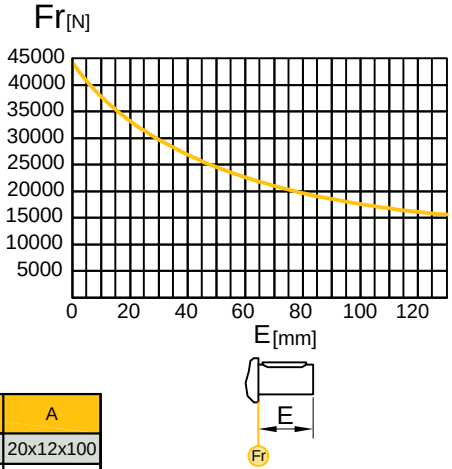


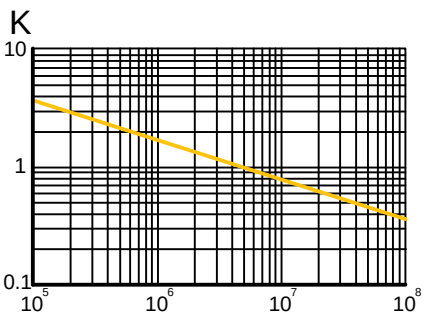
d	E	d2	E2	A
48	82	M12	30	14x9x70
65	105	M20	40	18x11x90

Kilogram
Weight 20 kg
Gewicht

GM70-80





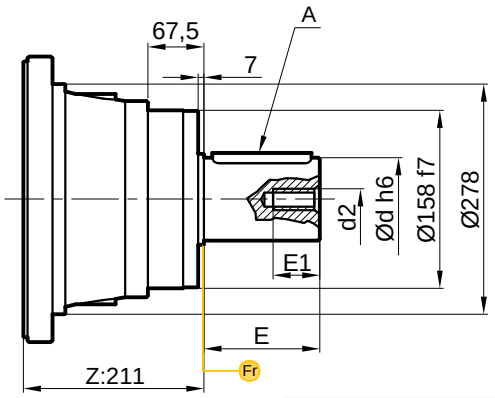


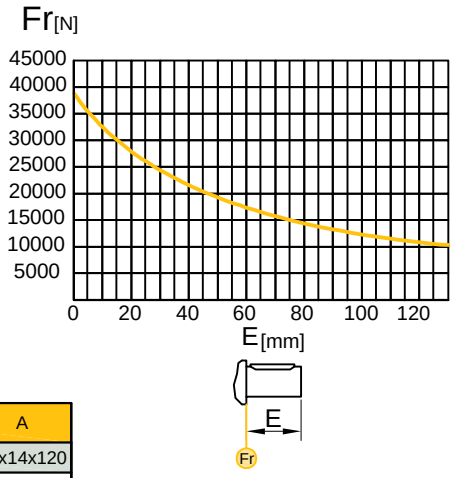
d	E	d2	E2	A
70	120	M18	35	20x12x100
80	130	M20	40	22x14x110

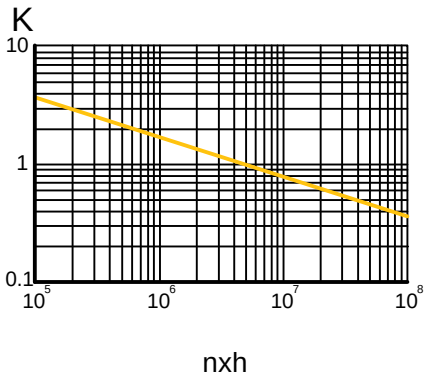
Kilogram
Weight 35 kg
Gewicht

GİRİŞ MİLİ
INPUT SHAFTS
ANTRIEBSWELLEN

GM90-100



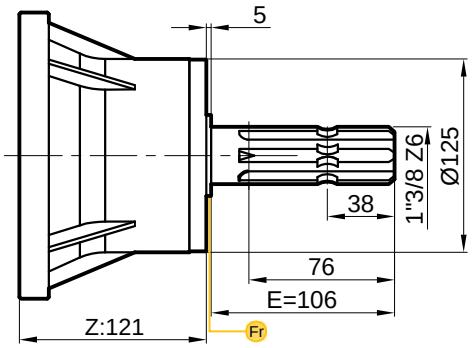


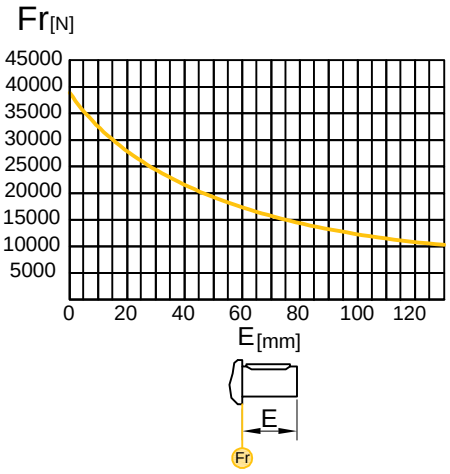


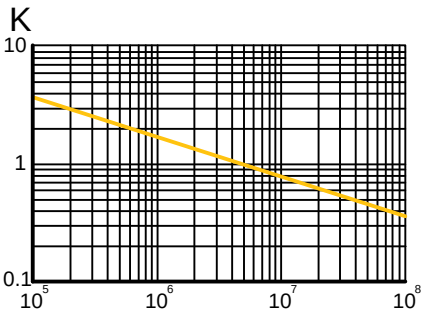
Kilogram
Weight 80 kg
Gewicht

d	E	d2	E2	A
90	140	M24	50	25x14x120
100	140	M24	50	28x16x120

GMS 1"3/8 Z=6

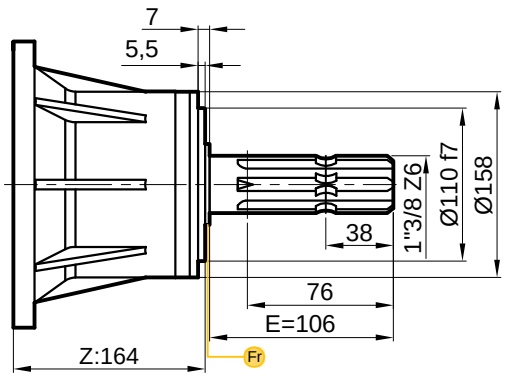


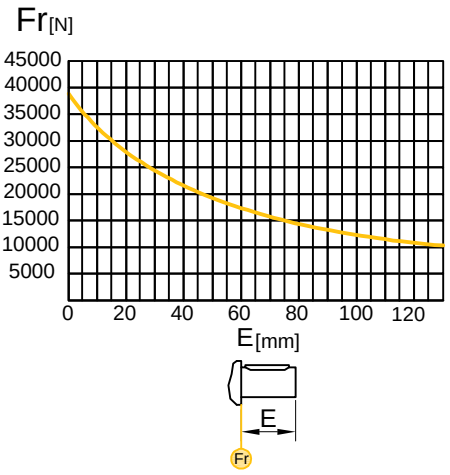


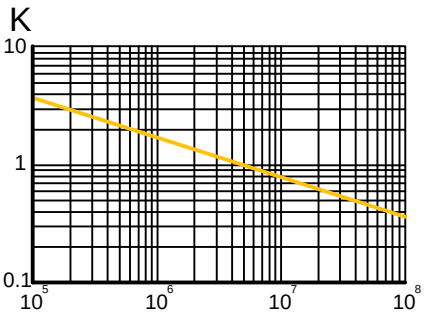


Kilogram
Weight 10 kg
Gewicht

GMS 1"3/8 Z=6







Kilogram
Weight 20 kg
Gewicht

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE

Aşağıdaki tabloda PD planet redüktörleri üzerine doğrudan giriş ED uygulamaları gösterilmiştir.

The following table shows how to apply direct inputs ED on PD planetary gear units.

Die nachfolgende Tabelle zeigt die Anbaumöglichkeiten des ED-Antriebs an die Getriebe der Serie PD.

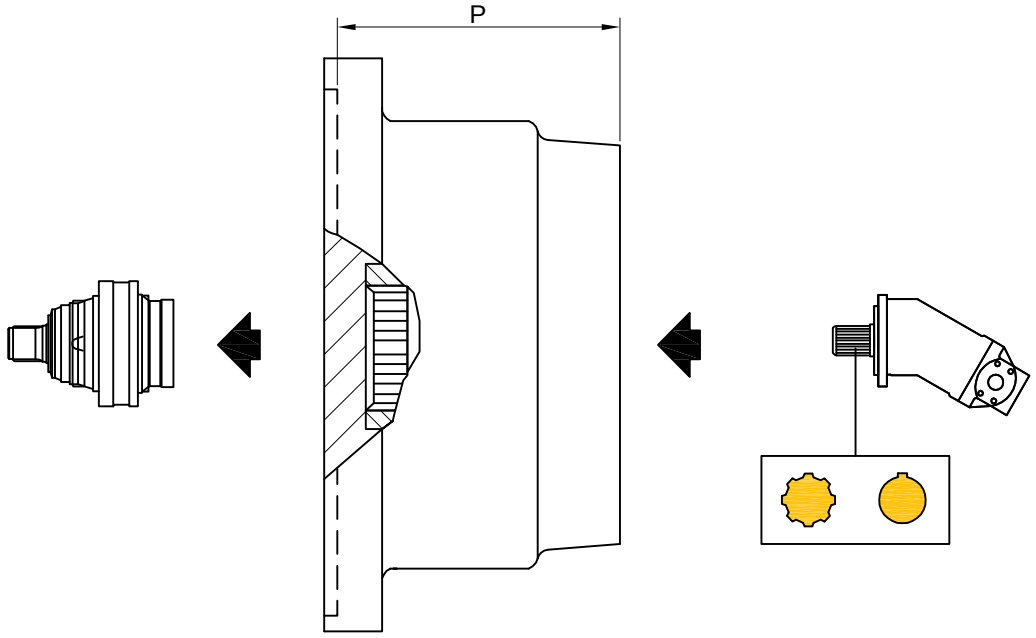
	MG
PD 101	1-2-3-4
PD 103	1-2-3-4
PD 105	2-3-4
PD 107	2-3-4
PD 109	3-4
PD 111	3-4
PD 113	3-4
PD 115	4
PD 117	4
PD 119	4
PD 121	4

	MG
PD 123	4
PD 125	—
PD 127	—
PD 129	5
PD 131	5
PD 133	5
PD 135	—
PD 137	—
PD 139	—
PD 141	—

N.B.: 1-2-3-4-5 numaralı planet dişli redüktör kademelerine bakınız.

N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.



MG		
	P	Kod / Code Bestell
MG SAE A 2-4 F 16/32 DP 9TH	62	1803.200.001
MG SAE A 2-4 F 16/32 DP 13TH	62	1803.200.002
MG SAE A 2-4 F 12/24 DP 14TH	78	1803.200.003
MG SAE A 2-4 F 12/24 DP 14TH	78	1803.200.004
MG SAE A 2-4 F 1" 6B	62	1803.200.005
MG SAE A 2-4 F 1" 6B	78	1803.200.006
MG SAE A 2-4 F 25x22 DIN 5482	62	1803.200.007

MG		
	P	Kod / Code Bestell
MG SAE A 2-4 F D. 19.5 CH 4.8	62	1803.200.010
MG SAE A 2-4 F D. 25 CH 8	62	1803.200.011
MG SAE A 2-4 F D. 25.4 CH 6.35	78	1803.200.012
MG SAE A 2-4 F D. 25.4 CH 6.35	78	1803.200.013
MG SAE A 2-4 F D. 31.75 CH 7.96	62	1803.200.014
MG SAE A 2-4 F D. 31.75 CH 7.96	78	1803.200.015
MG SAE A 2-4 F D. 32 CH 10	62	1803.200.016

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE

Aşağıdaki tabloda PD planet redüktörleri üzerine doğrudan giriş MGF, PDA planet redüktörleri üzerine doğrudan giriş MF uygulamaları gösterilmiştir.

The following tables show how to apply direct inputs MGF, MF on PD, PDA planetary gear units.

Die nachfolgenden Tabellen zeigen die Anbaumöglichkeiten der MF- und MGF-Antriebe an die Getriebe der Serien PD und PDA.

	MGF-MF
PD 101	1-2-3-4
PD 103	1-2-3-4
PD 105	2-3-4
PD 107	2-3-4
PD 109	3-4
PD 111	3-4
PD 113	3-4
PD 115	4
PD 117	4
PD 119	4
PD 121	4

	MGF-MF
PD 123	4
PD 125	-
PD 127	-
PD 129	5
PD 131	5
PD 133	5
PD 135	-
PD 137	-
PD 139	-
PD 141	-

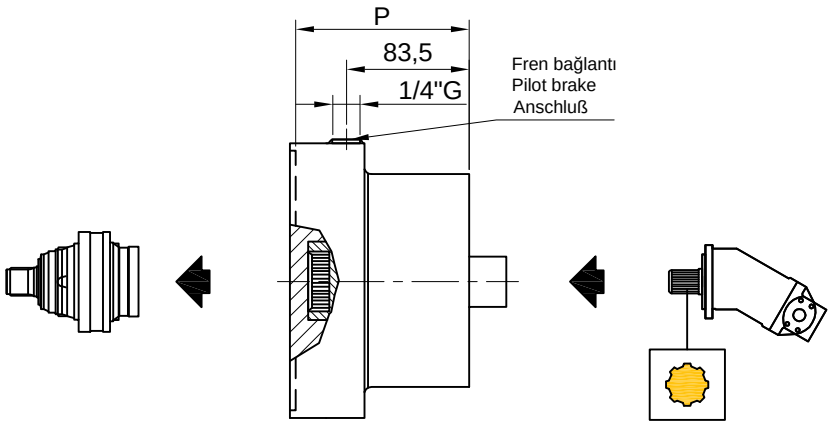
	MF
PDA 101	2-3-4
PDA 103	2-3-4
PDA 105	2-3-4
PDA 107	2-3-4
PDA 109	2-3-4
PDA 111	2-3-4
PDA 113	2-3-4
PDA 115	3-4
PDA 117	3-4
PDA 119	3-4
PDA 121	4

	MF
PDA 123	4
PDA 125	4
PDA 127	4
PDA 129	5
PDA 131	5
PDA 133	5
PDA 135	5
PDA 137	-
PDA 139	-
PDA 141	-

N.B.: 1-2-3-4-5 numaralı planet dişli redüktör kademelerine bakınız.

N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.

N.B.: Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.



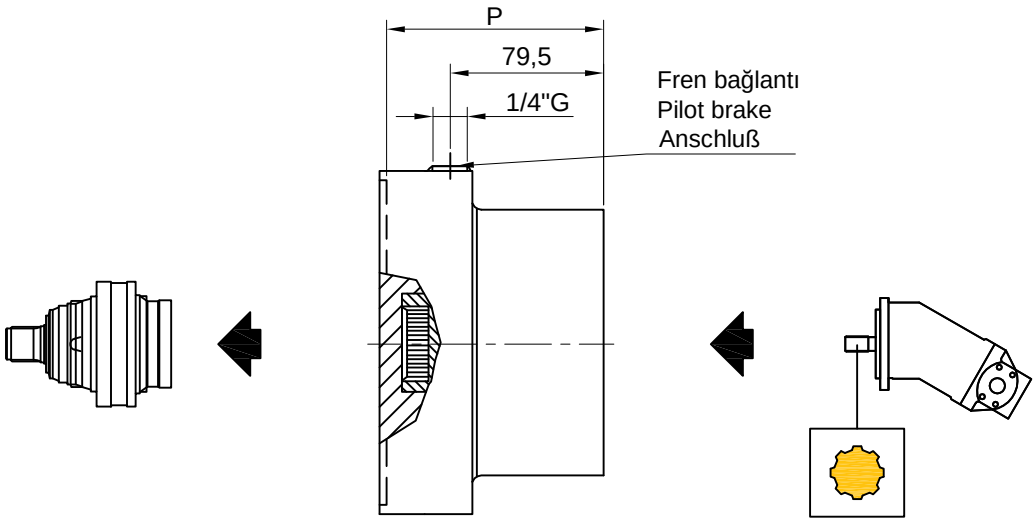
MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 per/for GLC-OMSS-HPRC	110	11	118	1803.201.001	320	0,3	0,15	20
MGF 16 per/for GLC-OMSS-HPRC	160	15	118	1803.201.002				
MGF 20 per/for GLC-OMSS-HPRC	220	21	118	1803.201.003				
MGF 25 per/for GLC-OMSS-HPRC	260	15	118	1803.201.004				
MGF 35 per/for GLC-OMSS-HPRC	360	15	118	1803.201.005				
MGF 45 per/for GLC-OMSS-HPRC	470	21	118	1803.201.006				
MGF 55 per/for GLC-OMSS-HPRC	600	25	118	1803.201.007				

MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	[bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 per/for EATON 2000 BEARINGLESS	110	11	118	1803.202.001	320	0,3	0,15	20
MGF 16 per/for EATON 2000 BEARINGLESS	160	15	118	1803.202.002				
MGF 20 per/for EATON 2000 BEARINGLESS	220	21	118	1803.202.003				
MGF 25 per/for EATON 2000 BEARINGLESS	260	15	118	1803.202.004				
MGF 35 per/for EATON 2000 BEARINGLESS	360	15	118	1803.202.005				
MGF 45 per/for EATON 2000 BEARINGLESS	470	21	118	1803.202.006				
MGF 55 per/for EATON 2000 BEARINGLESS	600	25	118	1803.202.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 SAE A 2-4 F 16/32 DP 9TH	110	11	114	1803.203.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F 16/32 DP 9TH	160	15	114	1803.203.002				
MGF 20 SAE A 2-4 F 16/32 DP 9TH	220	21	114	1803.203.003				
MGF 25 SAE A 2-4 F 16/32 DP 9TH	260	15	114	1803.203.004				
MGF 25 SAE A 2-4 F 16/32 DP 9TH	360	15	114	1803.203.005				
MGF 45 SAE A 2-4 F 16/32 DP 9TH	470	21	114	1803.203.006				
MGF 55 SAE A 2-4 F 16/32 DP 9TH	600	25	114	1803.203.007				

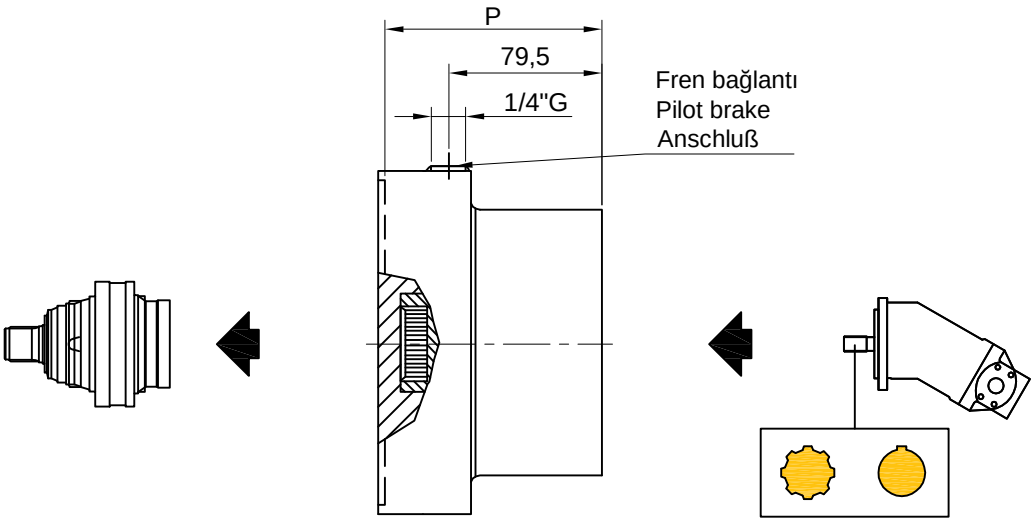
MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 SAE A 2-4 F 16/32 DP 13TH	110	11	114	1803.204.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F 16/32 DP 13TH	160	15	114	1803.204.002				
MGF 20 SAE A 2-4 F 16/32 DP 13TH	220	21	114	1803.204.003				
MGF 25 SAE A 2-4 F 16/32 DP 13TH	260	15	114	1803.204.004				
MGF 35 SAE A 2-4 F 16/32 DP 13TH	360	15	114	1803.204.005				
MGF 45 SAE A 2-4 F 16/32 DP 13TH	470	21	114	1803.204.006				
MGF 55 SAE A 2-4 F 16/32 DP 13TH	600	25	114	1803.204.007				

MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]	Kg
MGF 10 SAE A 2-4 F 12/24 DP 14TH	110	11	118	1803.205.001	320	0,3 0,15	20
MGF 16 SAE A 2-4 F 12/24 DP 14TH	160	15	118	1803.205.002			
MGF 20 SAE A 2-4 F 12/24 DP 14TH	220	21	118	1803.205.003			
MGF 25 SAE A 2-4 F 12/24 DP 14TH	260	15	118	1803.205.004			
MGF 35 SAE A 2-4 F 12/24 DP 14TH	360	15	118	1803.205.005			
MGF 45 SAE A 2-4 F 12/24 DP 14TH	470	21	118	1803.205.006			
MGF 55 SAE A 2-4 F 12/24 DP 14TH	600	25	118	1803.205.007			

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 SAE A 2-4 F 1" 6B	110	11	114	1803.206.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F 1" 6B	160	15	114	1803.206.002				
MGF 20 SAE A 2-4 F 1" 6B	220	21	114	1803.206.003				
MGF 25 SAE A 2-4 F 1" 6B	260	15	114	1803.206.004				
MGF 35 SAE A 2-4 F 1" 6B	360	15	114	1803.206.005				
MGF 45 SAE A 2-4 F 1" 6B	470	21	114	1803.206.006				
MGF 55 SAE A 2-4 F 1" 6B	600	25	114	1803.206.007				

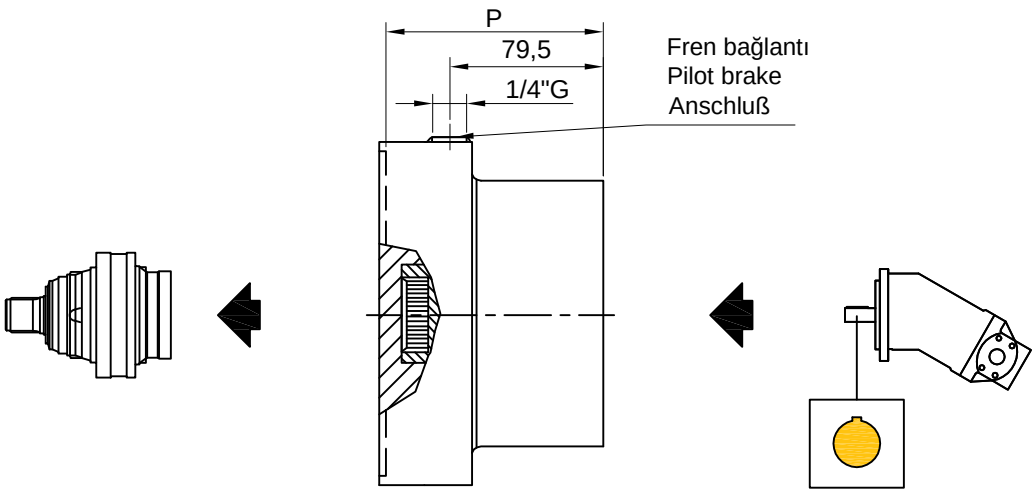
MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 SAE A 2-4 F D. 25 CH 8	110	11	114		320	0,3	0,15	20
MGF 16 SAE A 2-4 F D. 25 CH 8	160	15	114	1803.207.000				
MGF 20 SAE A 2-4 F D. 25 CH 8	220	21	114					
MGF 25 SAE A 2-4 F D. 25 CH 8	260	15	114	1803.207.004				
MGF 35 SAE A 2-4 F D. 25 CH 8	360	15	114					
MGF 45 SAE A 2-4 F D. 25 CH 8	470	21	114	1803.207.006				
MGF 55 SAE A 2-4 F D. 25 CH 8	600	25	114					

MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MGF 10 SAE A 2-4 F D. 25.4 CH 6.35	110	11	114	1803.208.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F D. 25.4 CH 6.35	160	15	114	1803.208.002				
MGF 20 SAE A 2-4 F D. 25.4 CH 6.35	220	21	114	1803.208.003				
MGF 25 SAE A 2-4 F D. 25.4 CH 6.35	260	15	114	1803.208.004				
MGF 35 SAE A 2-4 F D. 25.4 CH 6.35	360	15	114	1803.208.005				
MGF 45 SAE A 2-4 F D. 25.4 CH 6.35	470	21	114	1803.208.006				
MGF 55 SAE A 2-4 F D. 25.4 CH 6.35	600	25	114	1803.208.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



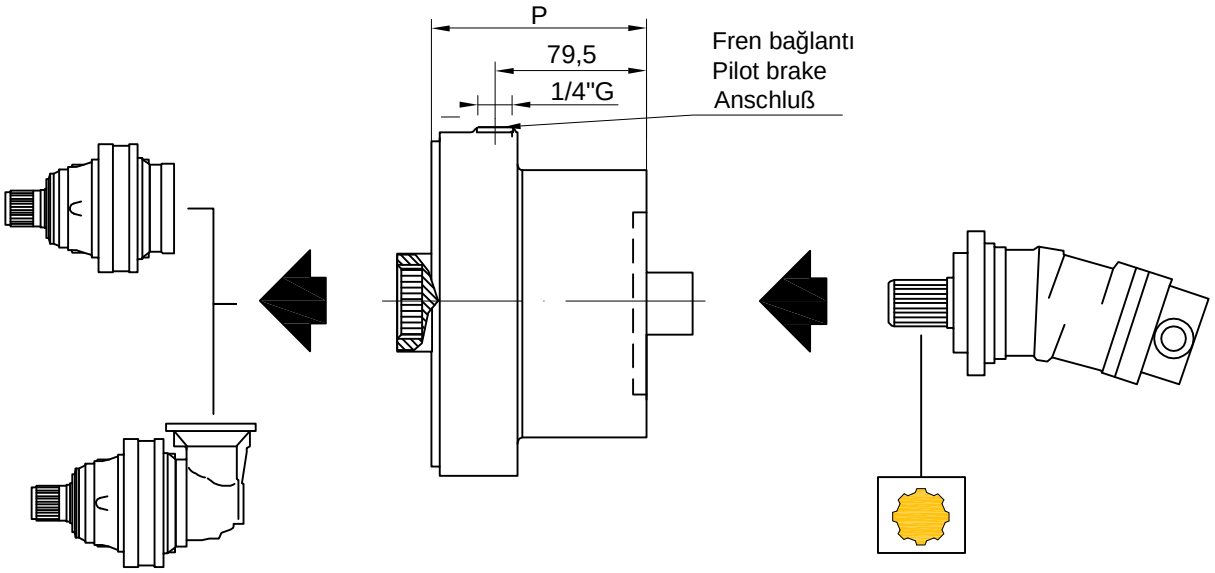
MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MGF 10 SAE A 2-4 F D. 31.75 CH 7.96	110	11	114	1803.209.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F D. 31.75 CH 7.96	160	15	114	1803.209.002				
MGF 20 SAE A 2-4 F D. 31.75 CH 7.96	220	21	114	1803.209.003				
MGF 25 SAE A 2-4 F D. 31.75 CH 7.96	260	15	114	1803.209.004				
MGF 35 SAE A 2-4 F D. 31.75 CH 7.96	360	15	114	1803.209.005				
MGF 45 SAE A 2-4 F D. 31.75 CH 7.96	470	21	114	1803.209.006				
MGF 55 SAE A 2-4 F D. 31.75 CH 7.96	600	25	114	1803.209.007				

MGF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MGF 10 SAE A 2-4 F D. 32 CH 10	110	11	114	1803.210.001	320	0,3	0,15	20
MGF 16 SAE A 2-4 F D. 32 CH 10	160	15	114	1803.210.002				
MGF 20 SAE A 2-4 F D. 32 CH 10	220	21	114	1803.210.003				
MGF 25 SAE A 2-4 F D. 32 CH 10	260	15	114	1803.210.004				
MGF 35 SAE A 2-4 F D. 32 CH 10	360	15	114	1803.210.005				
MGF 45 SAE A 2-4 F D. 32 CH 10	470	21	114	1803.210.006				
MGF 55 SAE A 2-4 F D. 32 CH 10	600	25	114	1803.210.007				

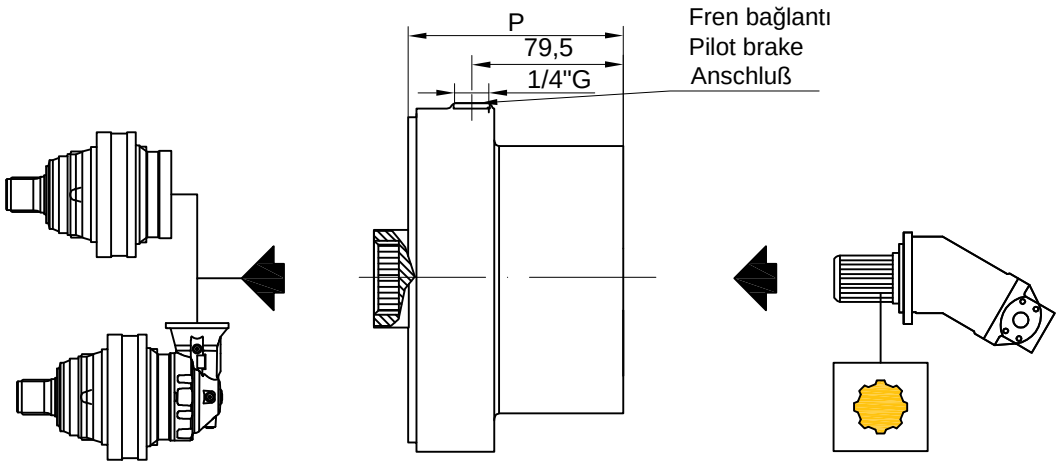
FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt]		
						V1	B5	
MF 10 per/for GLC-OMSS-HPRC	110	11	118	1804.301.001	320	0,3	0,15	20
MF 16 per/for GLC-OMSS-HPRC	160	15	118	1804.301.002				
MF 20 per/for GLC-OMSS-HPRC	220	21	118	1804.301.003				
MF 25 per/for GLC-OMSS-HPRC	260	15	118	1804.301.004				
MF 35 per/for GLC-OMSS-HPRC	360	15	118	1804.301.005				
MF 45 per/for GLC-OMSS-HPRC	470	21	118	1804.301.006				
MF 55 per/for GLC-OMSS-HPRC	600	25	118	1804.301.007				

MF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MF 10 per/for EATON 2000 BEARINGLESS	110	11	118	1804.302.001	320	0,3	0,15	20
MF 16 per/for EATON 2000 BEARINGLESS	160	15	118	1804.302.002				
MF 20 per/for EATON 2000 BEARINGLESS	220	21	118	1804.302.003				
MF 25 per/for EATON 2000 BEARINGLESS	260	15	118	1804.302.004				
MF 35 per/for EATON 2000 BEARINGLESS	360	15	118	1804.302.005				
MF 45 per/for EATON 2000 BEARINGLESS	470	21	118	1804.302.006				
MF 55 per/for EATON 2000 BEARINGLESS	600	25	118	1804.302.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MF 10 SAE A 2-4 F 16/32 DP 9TH	110	11	114	1804.303.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F 16/32 DP 9TH	160	15	114	1804.303.002				
MF 20 SAE A 2-4 F 16/32 DP 9TH	220	21	114	1804.303.003				
MF 25 SAE A 2-4 F 16/32 DP 9TH	260	15	114	1804.303.004				
MF 35 SAE A 2-4 F 16/32 DP 9TH	360	15	114	1804.303.005				
MF 45 SAE A 2-4 F 16/32 DP 9TH	470	21	114	1804.303.006				
MF 55 SAE A 2-4 F 16/32 DP 9TH	600	25	114	1804.303.007				

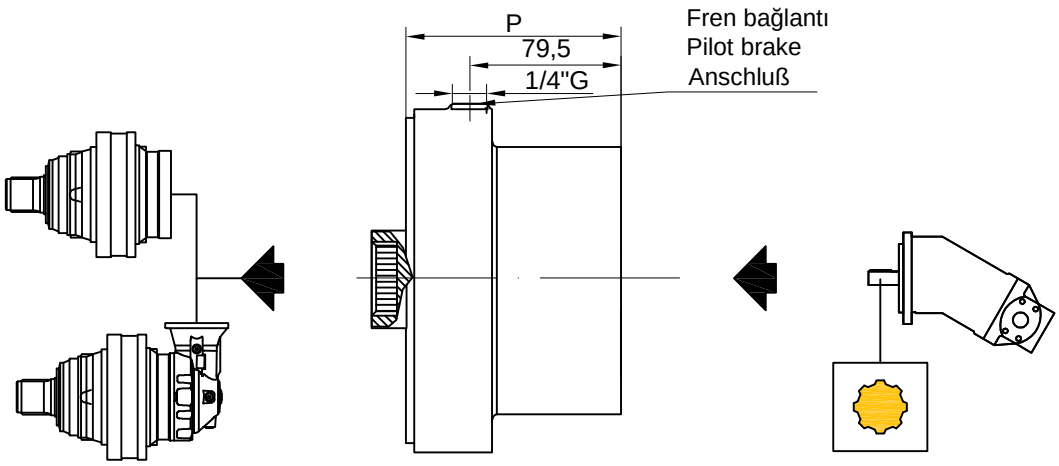
MF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MF 10 SAE A 2-4 F 16/32 DP 13TH	110	11	114	1804.304.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F 16/32 DP 13TH	160	15	114	1804.304.002				
MF 20 SAE A 2-4 F 16/32 DP 13TH	220	21	114	1804.304.003				
MF 25 SAE A 2-4 F 16/32 DP 13TH	260	15	114	1804.304.004				
MF 35 SAE A 2-4 F 16/32 DP 13TH	360	15	114	1804.304.005				
MF 45 SAE A 2-4 F 16/32 DP 13TH	470	21	114	1804.304.006				
MF 55 SAE A 2-4 F 16/32 DP 13TH	600	25	114	1804.304.007				

MF

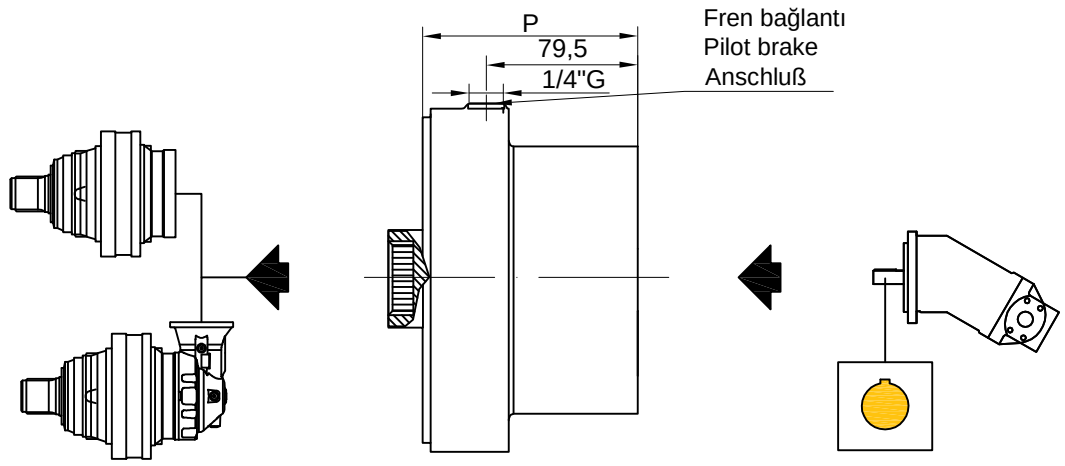
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MF 10 SAE A 2-4 F 12/24 DP 14TH	110	11	114	1804.305.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F 12/24 DP 14TH	160	15	114	1804.305.002				
MF 20 SAE A 2-4 F 12/24 DP 14TH	220	21	114	1804.305.003				
MF 25 SAE A 2-4 F 12/24 DP 14TH	260	15	114	1804.305.004				
MF 35 SAE A 2-4 F 12/24 DP 14TH	360	15	114	1804.305.005				
MF 45 SAE A 2-4 F 12/24 DP 14TH	470	21	114	1804.305.006				
MF 55 SAE A 2-4 F 12/24 DP 14TH	600	25	114	1804.305.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MF								
	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MF 10 SAE A 2-4 F 1" 6B	110	11	114	1804.323.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F 1" 6B	160	15	114	1804.323.002				
MF 20 SAE A 2-4 F 1" 6B	220	21	114	1804.323.003				
MF 25 SAE A 2-4 F 1" 6B	260	15	114	1804.323.004				
MF 35 SAE A 2-4 F 1" 6B	360	15	114	1804.323.005				
MF 45 SAE A 2-4 F 1" 6B	470	21	114	1804.323.006				
MF 55 SAE A 2-4 F 1" 6B	600	25	114	1804.323.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE



MF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MF 10 SAE A 2-4 F D. 25 CH 8	110	11	114	1804.320.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F D. 25 CH 8	160	15	114	1804.320.002				
MF 20 SAE A 2-4 F D. 25 CH 8	220	21	114	1804.320.003				
MF 25 SAE A 2-4 F D. 25 CH 8	260	15	114	1804.320.004				
MF 35 SAE A 2-4 F D. 25 CH 8	360	15	114	1804.320.005				
MF 45 SAE A 2-4 F D. 25 CH 8	470	21	114	1804.320.006				
MF 55 SAE A 2-4 F D. 25 CH 8	600	25	114	1804.320.007				

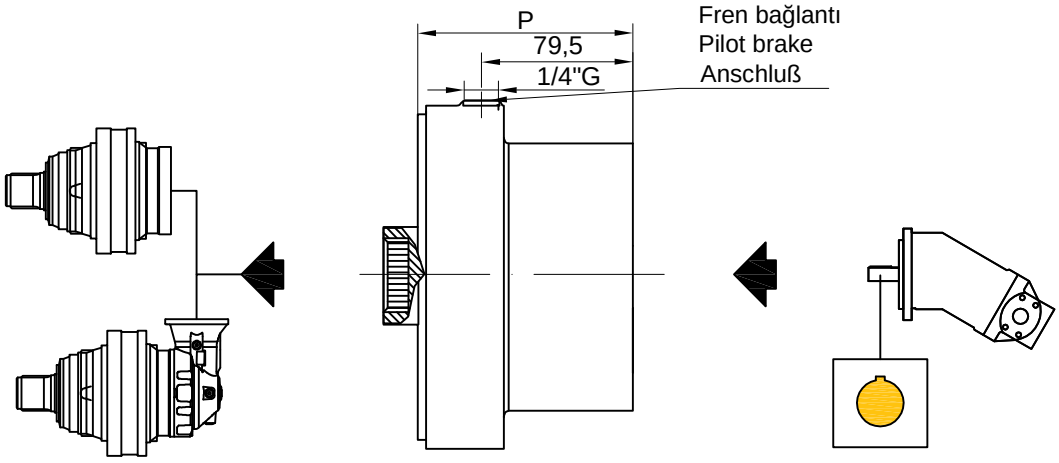
MF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MF 10 SAE A 2-4 F D. 25.4 CH 6.35	110	11	114	1804.321.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F D. 25.4 CH 6.35	160	15	114	1804.321.002				
MF 20 SAE A 2-4 F D. 25.4 CH 6.35	220	21	114	1804.321.003				
MF 25 SAE A 2-4 F D. 25.4 CH 6.35	260	15	114	1804.321.004				
MF 35 SAE A 2-4 F D. 25.4 CH 6.35	360	15	114	1804.321.005				
MF 45 SAE A 2-4 F D. 25.4 CH 6.35	470	21	114	1804.321.006				
MF 55 SAE A 2-4 F D. 25.4 CH 6.35	600	25	114	1804.321.007				

MF

	Cfs$_{min}$ [Nm]	Pa$_{min}$ [bar]	P	Kod / Code Bestell	P$_{max}$ [bar]	Yağ / Oil [lt]		Kg
						V1	B5	
MF 10 SAE A 2-4 F D. 31.75 CH 7.96	110	11	114	1804.322.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F D. 31.75 CH 7.96	160	15	114	1804.322.002				
MF 20 SAE A 2-4 F D. 31.75 CH 7.96	220	21	114	1804.322.003				
MF 25 SAE A 2-4 F D. 31.75 CH 7.96	260	15	114	1804.322.004				
MF 35 SAE A 2-4 F D. 31.75 CH 7.96	360	15	114	1804.322.005				
MF 45 SAE A 2-4 F D. 31.75 CH 7.96	470	21	114	1804.322.006				
MF 55 SAE A 2-4 F D. 31.75 CH 7.96	600	25	114	1804.322.007				

FREN İLE DOĞRUDAN MOTOR GİRİŞ ADAPTÖR
DIRECT INPUT MOTOR ADAPTOR WITH BRAKE
MOTORFLANSCH MIT INTEGRIERTER BREMSE

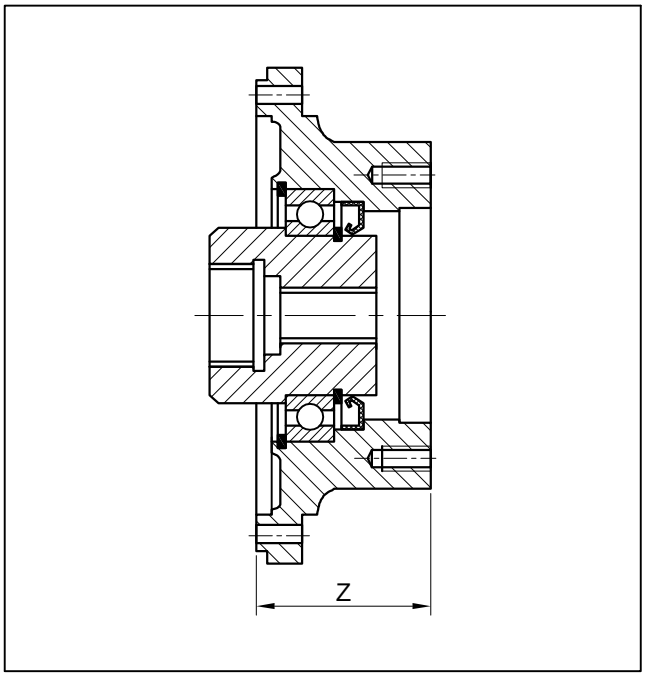


MF

	Cfs_{min} [Nm]	Pa_{min} [bar]	P	Kod / Code Bestell	P_{max} [bar]	Yağ / Oil [lt] V1	Yağ / Oil [lt] B5	Kg
MF 10 SAE A 2-4 F D. 32 CH 10	110	11	114	1804.323.001	320	0,3	0,15	20
MF 16 SAE A 2-4 F D. 32 CH 10	160	15	114	1804.323.002				
MF 20 SAE A 2-4 F D. 32 CH 10	220	21	114	1804.323.003				
MF 25 SAE A 2-4 F D. 32 CH 10	260	15	114	1804.323.004				
MF 35 SAE A 2-4 F D. 32 CH 10	360	15	114	1804.323.005				
MF 45 SAE A 2-4 F D. 32 CH 10	470	21	114	1804.323.006				
MF 55 SAE A 2-4 F D. 32 CH 10	600	25	114	1804.323.007				

HİDROLİK MOTOR BAĞLANTI ADAPTÖRÜ
HYDROLIC MOTOR COUPLINGS
ANBAUVORRICHTUNG FUER HYDRAULIKMOTORE

	A	B		C	D	
	Z	Z	Z+13.5	Z+15	Z	Z+31
PD 101	1-2-3-4	-	-	-	-	-
PD 103	1-2-3-4	-	-	-	-	-
PD 105	1-2-3-4	-	1	-	-	-
PD 107	1-2-3-4	-	1	-	-	-
PD 109	2-3-4	1	2	-	-	-
PD 111	2-3-4	1	2	-	-	-
PD 113	2-3-4	1	2	-	-	-
PD 115	3-4	2	3	-	-	-
PD 117	3-4	2	3	1	-	-
PD 119	3-4	2	3	-	-	2
PD 121	3-4	2	3	-	-	2
PD 123	3	2	3	-	1	2
PD 125	4	3	4	2	-	-
PD 127	4	3	4	2	-	-
PD 129	4-5	3	4	2	-	3
PD 131	4-5	3	4	2	-	3
PD 133	4-5	3	4	-	2	3
PD 135	5	4	5	3	-	-
PD 137	5	4	5	3	-	-
PD 139	5	4	5	-	3	4
PD 141	5	4	5	-	3	4



	A	B		C	D
	Z	Z	Z+16		
PD 101	2-3-4	-	-	-	-
PD 103	2-3-4	-	-	-	-
PD 105	2-3-4	-	2-3-4	-	-
PD 107	2-3-4	-	2-3-4	-	-
PD 109	2-3-4	-	2-3-4	-	-
PD 111	2-3-4	-	2-3-4	-	-
PD 113	2-3-4	-	2-3-4	-	-
PD 115	3-4	2	3-4	-	-
PD 117	3-4	2	3-4	-	-
PD 119	3-4	-	3-4	-	-
PD 121	4	2-3	4	-	-
PD 123	4	-	2-3-4	-	-
PD 125	4	-	3-4	-	-
PD 127	4	-	3-4	-	-
PD 129	5	4	5	-	-
PD 131	5	4	5	-	-
PD 133	5	4	5	-	-
PD 135	5	4	5	-	-
PD 137	-	4-5	-	-	-
PD 139	-	4-5	-	-	-
PD 141	-	4-5	-	-	-

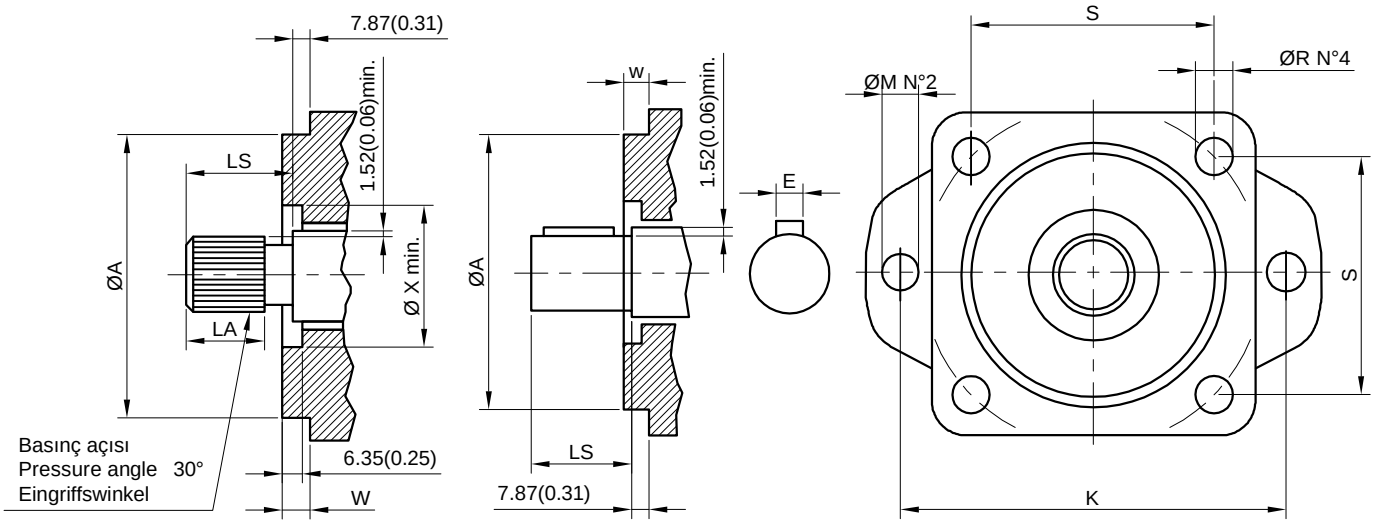
1-2-3-4-5 numaralı planet dişli redüktör kademelerine bakınız.
N.B.: Numbers 1-2-3-4-5 refer to the number of stages of the planetary gear unit.
Die Ziffern 1-2-3-4-5 geben die Anzahl der Getriebestufen an.

Eksenel Pompa / Axial Pump / Axialpumpe			
Motor Tip / Motor type / Motortyp	**Z**	**Kod / Code Bestell**	
M2-AMVCS 34-40-50-55/32 DP TH13	52	1804.323.001	A
M2-AMVCS 34-40-50-55/32 DP TH15	52	1804.323.002	
AMF 24-34	81	1804.323.003	
AMF 55	81	1804.323.004	

GEOLINK Eksenel Pompa / Axial Pump / Axialpumpe			
Motor Tip / Motor type / Motortyp	**Z**	**Kod / Code Bestell**	
GHL/GFS/GFS Ø 25 CH8	61.5	1804.324.001	A
GHL/GFS/GFS Ø 25.4 CH6.35	61.5	1804.324.002	
GHL/GFS/GFS SAE 1”6B	61.5	1804.323.011	
GHL/GFS/GFS 25x22 DIN 5482 TH14	61.5	1804.323.012	
GLS Ø 32 CH10	77.5	1804.324.003	
GLC	38	1804.323.005	
GWS/GWP/GWR - ED	61	1803.200.051	
GWS/GWP/GWR - EDF	61	1803.200.056	

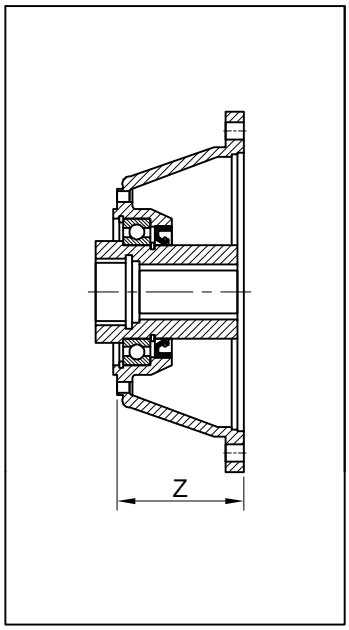
DANFOSS			
Motor Tip / Motor type / Motortyp	**Z**	**Kod / Code Bestell**	
OMM Ø CH5	70.5	1804.324.021	A
OMP - OMR Ø 25	61.5	1804.324.001	
OMP - OMR Ø 25.4	61.5	1804.324.002	
OMP - OMR SAE 1”6B	61.5	1804.323.011	
OMS Ø 32	77.5	1804.324.003	
OMS 12/24 DP TH14	77.5	1804.324.022	
OMSS	38	1804.323.005	
OMT Ø 40	134	1804.324.022	
OMTS	78	1804.323.023	

SAEJ 744C GÖRE MOTORLAR İÇİN FLANŞLAR
FLANGES FOR MOTORS ACCORDING TO THE SAEJ 744C STD
FLANSCHE FÜR MOTORE NQACH SAEJ 744C-NORM



	A	W	Xmin	K	M	S	R	Frezeli Mil Splined Shaft Zahnwelle			Kamalı Mil Parallel Shaft Zylinderwelle			
								DP	LS	LAmin	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)	50.80 (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)	12.70 (0.50)	50.80 (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)	63.50 (2.50)	180.98 (7.175)	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)	63.50 (2.50)	180.98 (7.175)	17.50 (0.688)	114.50 (4.508)	14.27 (0.562)	12/24 14T	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)	26.97 (1.062)	247.52 (9.745)	20.98 (1.062)	8/16 15T	79.38 (3.125)	25.40 (1.00)	- -	79.38 (3.129)	- -	- -

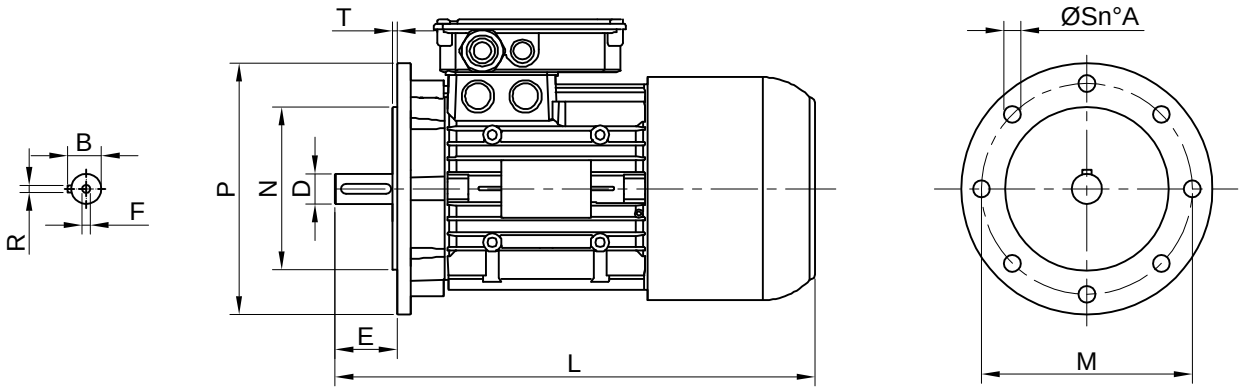
ELEKTRİK MOTORU BAĞLANTI ADAPTÖRÜ
ELECTRIC MOTOR COUPLINGS
ANBAUVORRICHTUNG FÜR ELEKTROMOTORE



UNEL/IEC B5			
	Z	Kod / Code Bestell	
H63	36	1804.380.001	A
H71	36	1804.380.002	
H80	56	1804.380.003	
H90	56	1804.380.004	
H100-112	66	1804.380.005	
H132	100	1804.380.006	
H160	118	1804.380.001	B
H180	118	1804.380.002	
H200	148	1804.380.003	
H225	139	1804.380.04	
H160	150	1804.380.001	C
H180	150	1804.380.002	
H200	150	1804.380.003	
H225	139	1804.380.004	
H250	139	1804.380.005	
H280	139	1804.380.006	
H160	150	1804.380.001	D
H180	150	1804.380.002	
H200	150	1804.380.003	
H225	139	1804.380.004	
H250	139	1804.380.005	
H280	139	1804.380.006	

NEMA C			
	Z	Kod / Code Bestell	
143TC - 145TC 182TC - 184TC	80	1804.380.007	A
182TC - 184TC 213TC - 215TC	88,5	1804.380.008	
213TC - 215TC	88,5	1804.380.009	B
286TC	139	1804.380.005	
326TC	149	1804.380.006	
365TC	149	1804.380.007	

Z ölçüleri sayfa 213'deki tablolarla doğrulanır.
Z dimensions have to be verified in the tables on page 213.
Das Mass Z wird in den entsprechenden Tabelle auf der Seite 213 festgestellt.



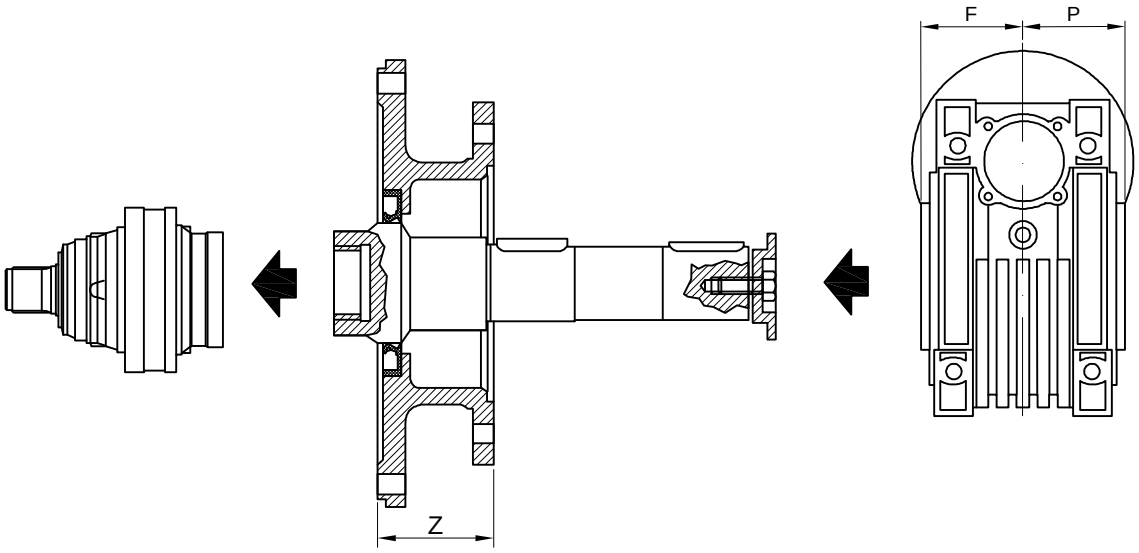
	Kutup Sayısı-Number Of Poles-Anzahl Pole									D	E	P	M	N	S	A	T	R	B	F	L
	2			4			6														
	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]												
63	0,18	-	0,25	0,12	-	0,18	0,06	-	0,09	11	23	140	115	95	9,5	4	3	4	12,5	M4	215
71	0,37	-	0,55	0,25	-	0,37	0,18	-	0,25	14	30	160	130	110	9,5	4	3,5	5	16	M5	247
80	0,75	-	1,1	0,55	-	0,75	0,37	-	0,55	19	40	200	165	130	11,5	4	3,5	6	21,5	M6	278
90	1,5	-	2,2	1,1	-	1,5	0,75	-	1,1	24	50	200	165	130	11,5	4	3,5	8	27	M8	308-333
100-112	3	-	4	2,2	3	4	1,5	-	2,2	28	60	250	215	180	14	4	4	8	31	M10	375-392
132	5,5	-	7,5	5,5	-	7,5	3	4	5,5	38	80	300	265	230	14	4	4	10	41	M12	455-501
160	11	15	11	11	-	15	7,5	-	11	42	110	350	300	250	18	4	4	12	45	M16	601
180	22	-	-	18,5	-	22	15	-	-	48	110	350	300	250	18	4	5	14	51,5	M16	659
200	30	-	37	30		-	18,5	-	22	55	110	400	350	300	18	4	5	16	59	M20	747
225	45	-	-	37	-	45	30	-	-	60 (55-2p)	140	450	400	350	18	8	5	18 (16-2p)	64 (59-29)	M20	780-820
250	55	-	-	55	-	-	37	-	-	65 (60-2p)	140	550	500	450	18	8	5	18	69 (64-2p)	M20	895
280	75	-	90	75	-	90	45	-	55	75 (65-2p)	140	550	500	450	18	8	5	20 (18-2p)	79,5 (69-2p)	M20	907-958

SONSUZ DİŞLİ KUTUSU ADAPTÖRÜ
WORM GEARBOX ADAPTORS
ANSCHLUSS FÜR SCHNECKENGETRIEBE

PDS kombine redüktörleri aşağıdaki şekillerde sağlayabilmektedir.
1) Sonsuz vida redüktörlü üniteler.
2) Sonsuz vida redüktör hazırlıklı üniteler.
Planet dişli redüktörler ile ilave takılan sonsuz vida redüktörlerin yağlama sistemleri birbirinden bağımsızdır.

PDS 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.

PDS kann kombinierte Getriebe wie folgt liefern:
1) komplett mit Schneckengetriebe.
2) Vorrichtung für Schneckengetriebe.
Weiterhin weisen wir darauf hin, das die Schmierung der Planetengetriebe getrennt von der des Schneckengetriebes erfolgt.



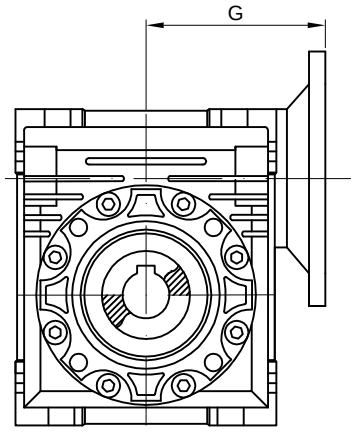
Sonsuz Dişli Kutusu Adaptörü Worm Gearbox Adaptors Anschluss Für Schneckengetriebe			
Tip/ Type/ Typ	Z	Kod / Code Bestell	
NMRV 50 / NRV 50	82	1804.460.001	A
NMRV 63 / NRV 63	82	1804.460.002	
NMRV 75 / NRV 75	57	1804.460.003	
NMRV 90 / NRV 90	57	1804.460.004	
NMRV 110 / NRV 110	64	1804.480.001	B
NMRV 130 / NRV 130	64	1804.480.002	

Sonsuz Dişli Redüksiyon Ünitesi Worm Reduction Units Schneckengetrıebe		
Tip/ Type/ Typ	F	P
NMRV 50 / NRV 50	46	46
NMRV 63 / NRV 63	56	56
NMRV 75 / NRV 75	60	60
NMRV 90 / NRV 90	70	70
NMRV 110 / NRV 110	77.5	77.5
NMRV 130 / NRV 130	85	85

	A	B	
	Z	Z	Z+13.5
PD 101	1-2-3-4	-	-
PD 103	1-2-3-4	-	-
PD 105	1-2-3-4	-	1
PD 107	1-2-3-4	-	1
PD 109	2-3-4	1	2
PD 111	2-3-4	1	2
PD 113	2-3-4	1	2
PD 115	3-4	2	3
PD 117	3-4	2	3
PD 119	3-4	2	3
PD 121	3-4	2	3

	A	B	
	Z	Z	Z+13.5
PD 123	3-4	2	3
PD 125	4	3	4
PD 127	4	3	4
PD 129	4-5	3	4
PD 131	4-5	3	4
PD 133	4-5	3	4
PD 135	5	4	5
PD 137	5	4	5
PD 139	5	4	5
PD 141	5	4	5

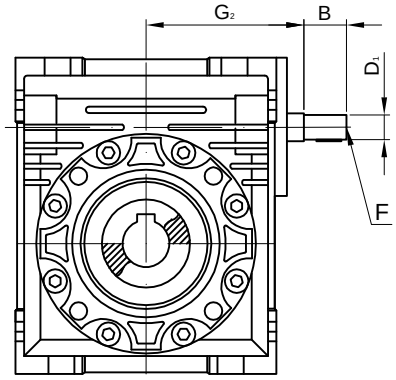
SONSUZ DİŞLİ KUTUSU ADAPTÖRÜ
WORM GEARBOX ADAPTORS
ANSCHLUSS FÜR SCHNECKENGETRIEBE



NMRV

Sonsuz Dişli Redüksiyon Ünitesi Worm Reduction Units Schneckengetrıebe	
Tip/ Type/ Typ	G
NMRV 50 PAM 63-71-80	80
NMRV 63 PAM 71-80-90	95
NMRV 75 PAM 71-80-90-112	112.5
NMRV 90 PAM 80-90-100-112	129.5
NMRV 100 PAM 80-90-100-112-132	160
NMRV 130 PAM 90-100-112-132	180

Elektrik motoru için giriş adaptörü ile sonsuz dişli redüksiyon ünitesi (PAM/IEC).
Worm gear reduction unit with input adaptor for electric motor (PAM/IEC).
Schneckengetriebe vorgesehen für Elektromotoranbau (PAM/IEC).



NRV

Sonsuz Dişli Kutusu Adaptörü Worm Gearbox Adaptors Anschluss Für Schneckengetriebe				
Tip/ Type/ Typ	G_2	B	D_1(j6)	**F**
NMRV 50	72	30	14	M6
NMRV 63	90	40	19	M6
NMRV 75	105	50	24	M8
NMRV 90	125	50	24	M8
NMRV 110	142	60	28	M10
NMRV 130	162	80	30	M10

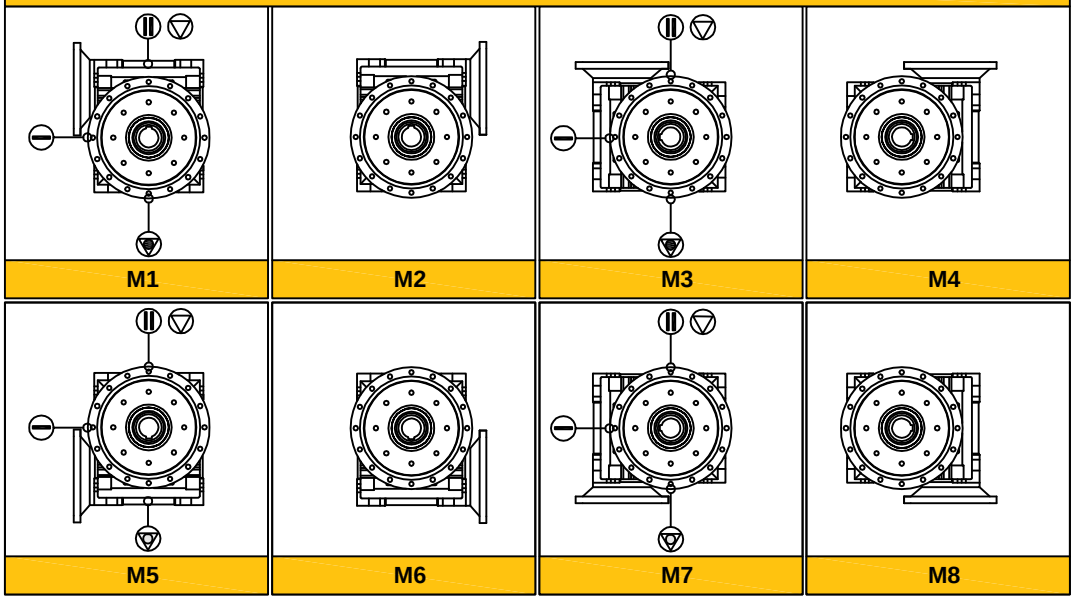
Sonsuz vidalı redüktör giriş mili.
Worm gear reduction unit with input shaft.
Schneckengetriebe mit Zapfwelle am Eingang.

Sonsuz dişli redüksiyon ünitesi seçimi için lütfen PDS müşteri hizmetleri ile temasa geçiniz.

To select the worm reduction unit please contact the PDS Technical - Commercial Service Department.

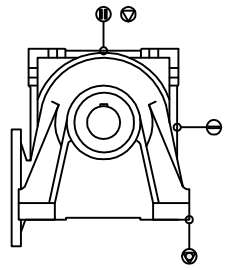
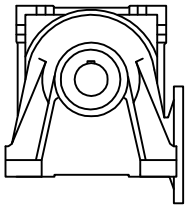
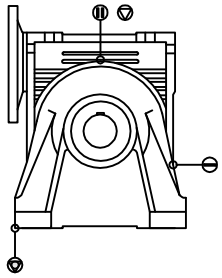
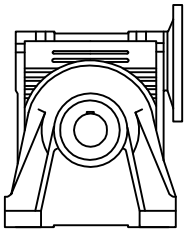
Für die auswahl des Schneckengetriebes kontaktieren sie bitte den Kundenservice von PDS.

F-S-SD-H



SONSUZ DİŞLİ KUTUSU ADAPTÖRÜ
WORM GEARBOX ADAPTORS
ANSCHLUSS FÜR SCHNECKENGETRIEBE

FVC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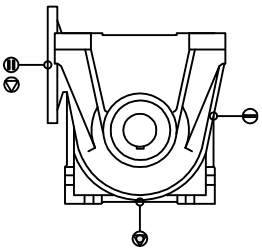	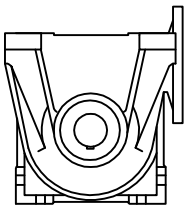	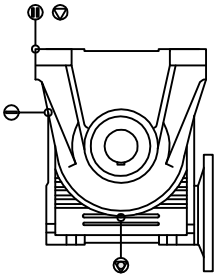	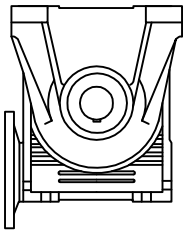
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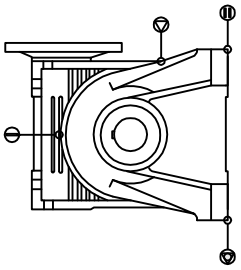	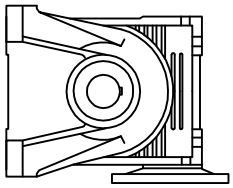	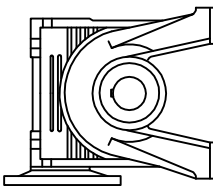	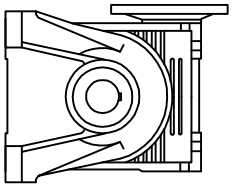
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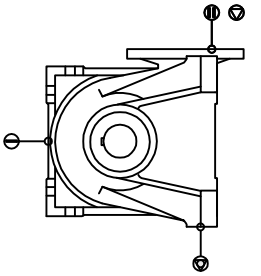
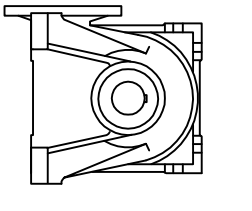
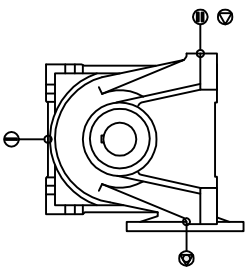
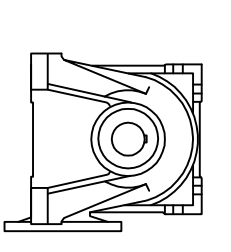
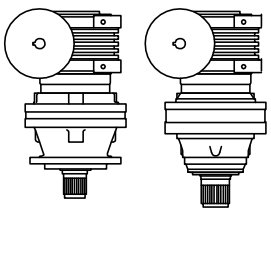
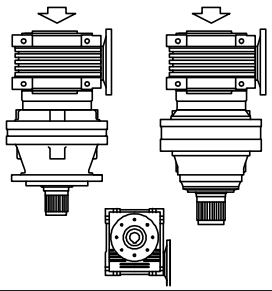
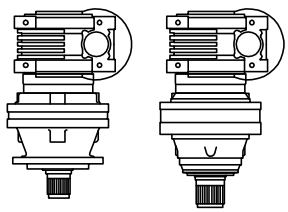
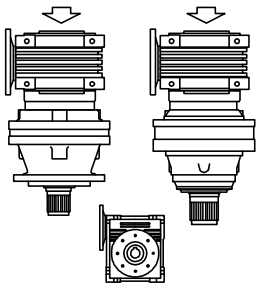
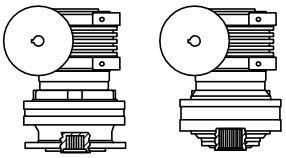
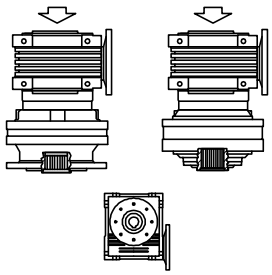
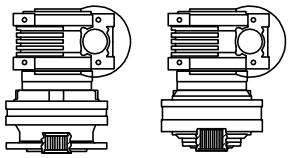
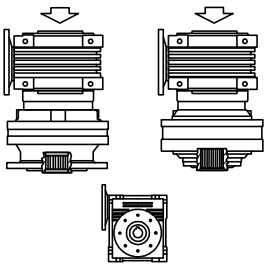
			
M20	M21	M22	M23

SONSUZ DİŞLİ KUTUSU ADAPTÖRÜ
WORM GEARBOX ADAPTORS
ANSCHLUSS FÜR SCHNECKENGETRIEBE

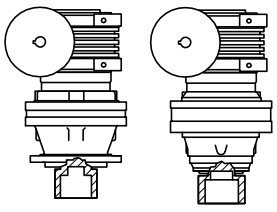
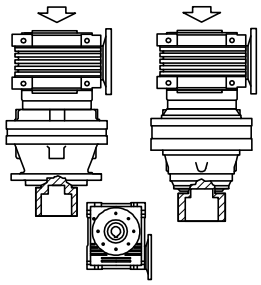
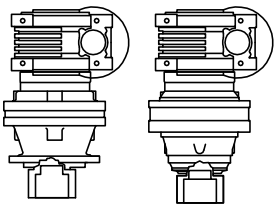
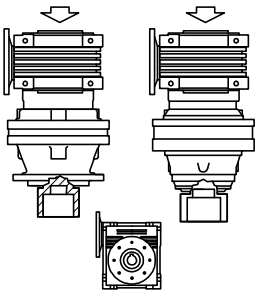
M-F-H

			
M25	M26	M27	M28

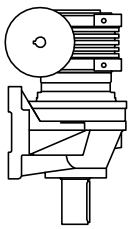
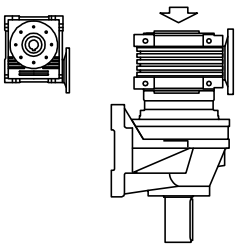
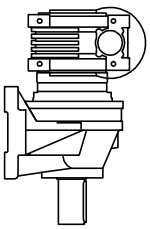
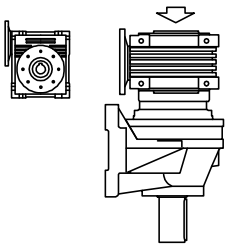
S-SF

			
M25	M26	M27	M28

SD
SDF

			
M25	M26	M27	M28

FVC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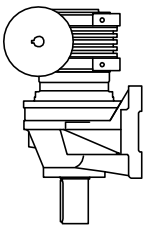	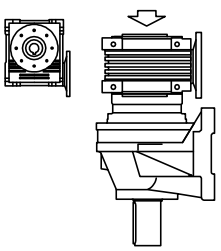	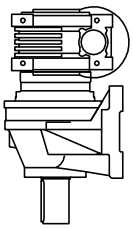	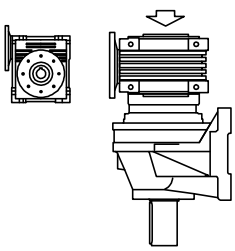
M45	M46	M47	M48

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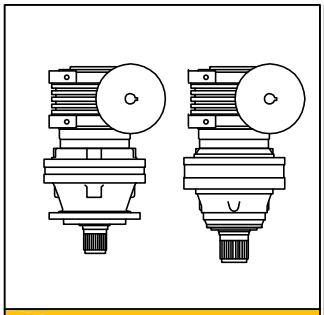
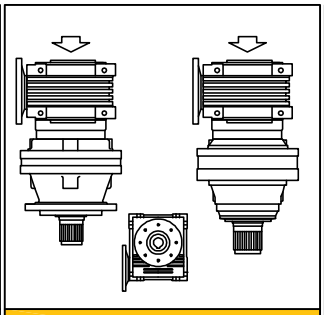
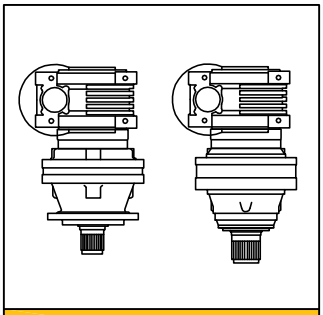
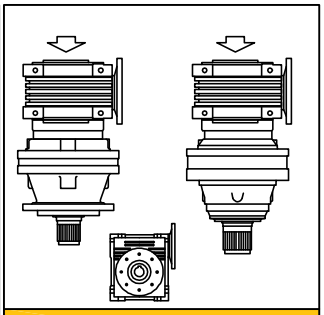
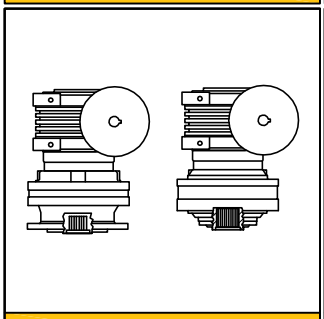
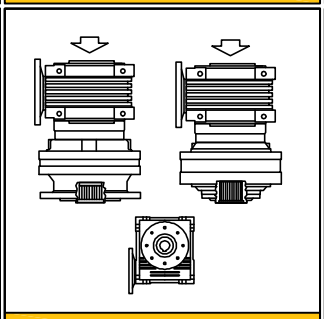
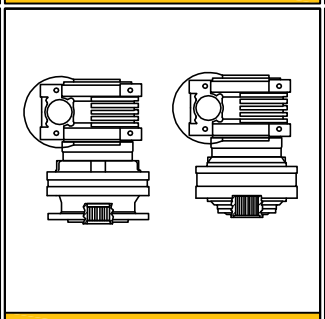
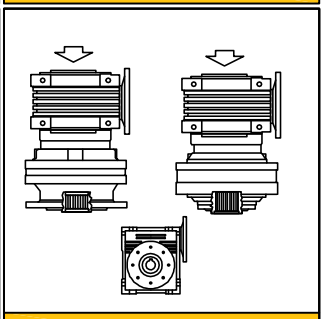
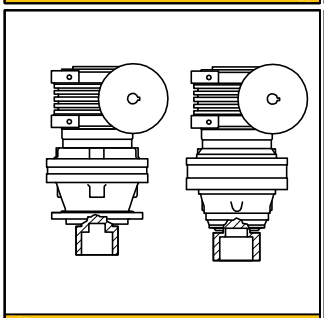
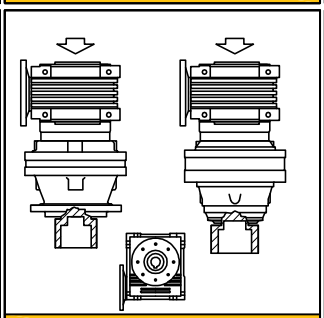
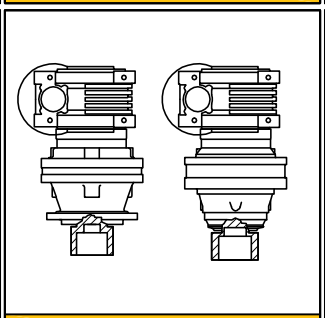
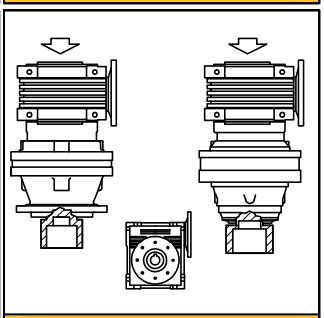
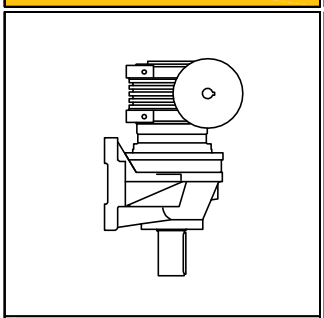
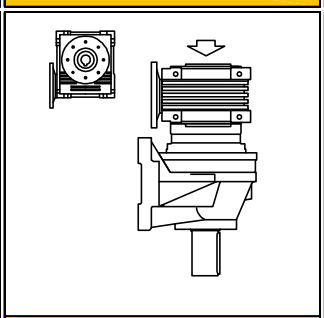
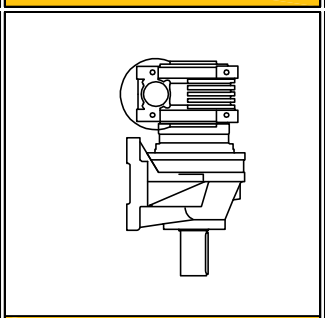
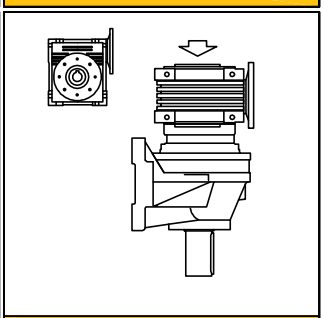
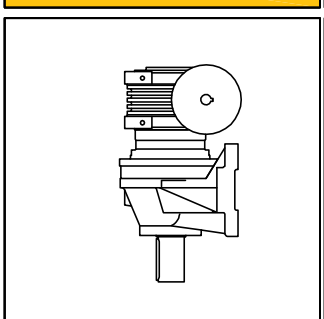
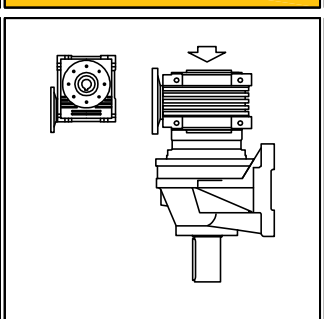
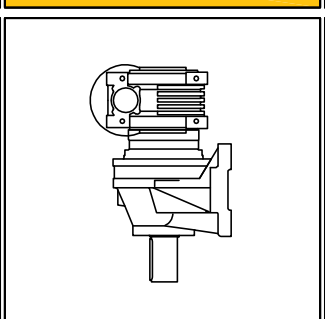
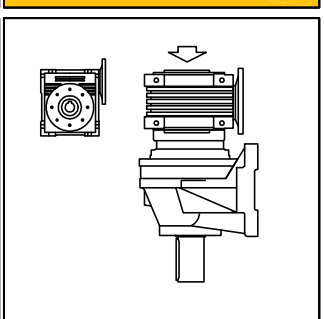
WORM GEARBOX ADAPTORS
ANSCHLUSS FÜR SCHNECKENGETRIEBE

M-F-H	 M29	 M30	 M31	 M32
S-SF	 M29	 M30	 M31	 M32
SD SDF	 M29	 M30	 M31	 M32
FVC	 M49	 M50	 M51	 M52
	 M53	 M54	 M55	 M56

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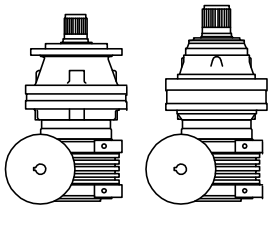
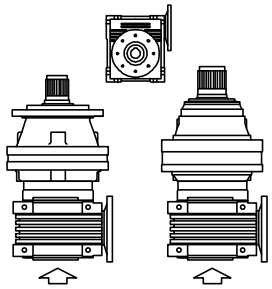
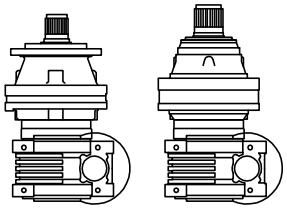
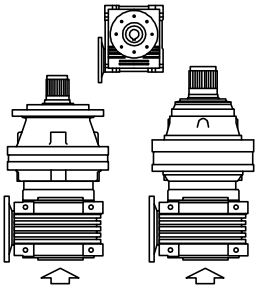
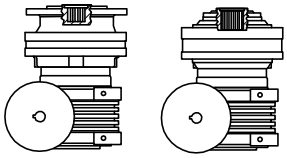
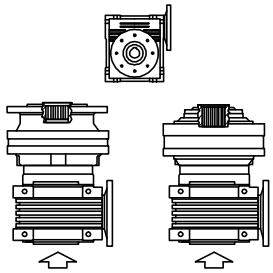
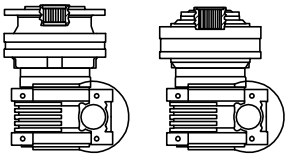
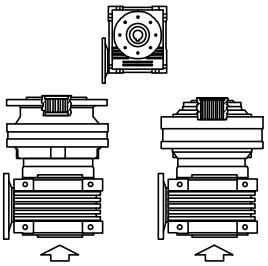
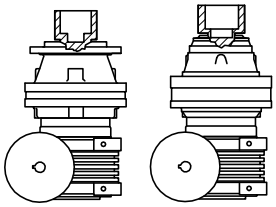
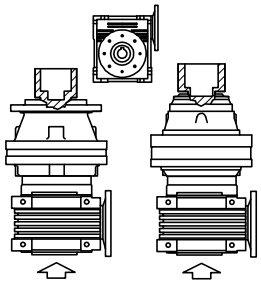
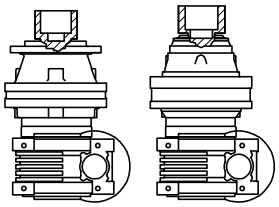
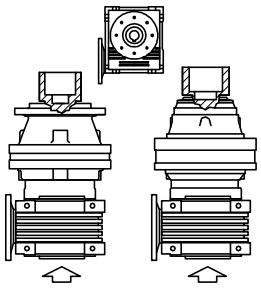
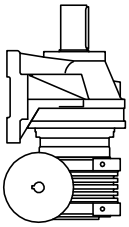
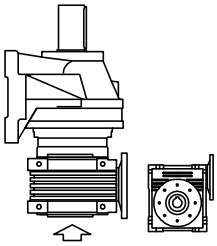
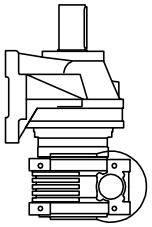
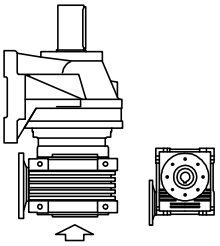
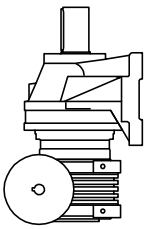
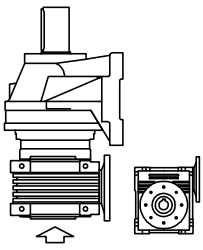
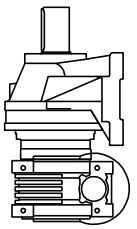
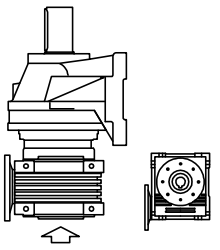
M-F-H				
	M33	**M34**	**M35**	**M36**
S-SF				
	M33	**M34**	**M35**	**M36**
SD **SDF**				
	M33	**M34**	**M35**	**M36**
FVC				
	M57	**M58**	**M59**	M60
				
	M61	**M62**	**M63**	**M64**

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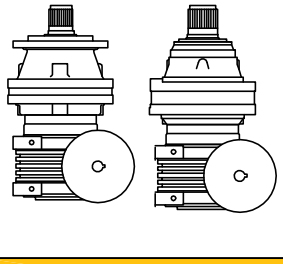
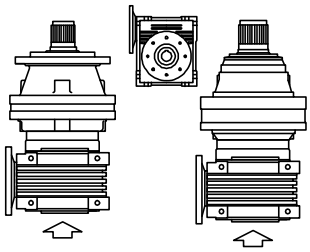
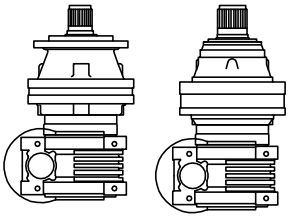
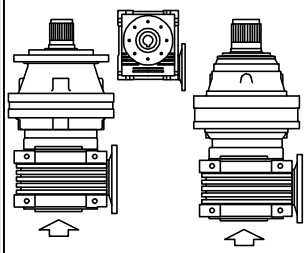
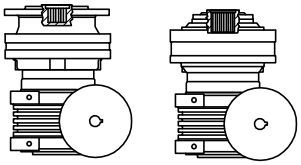
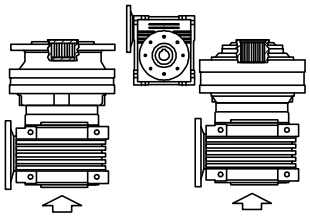
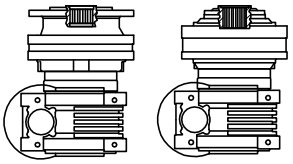
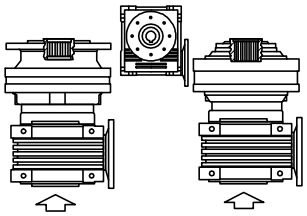
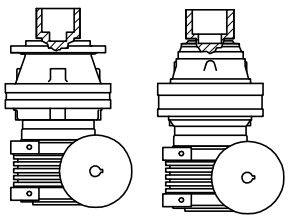
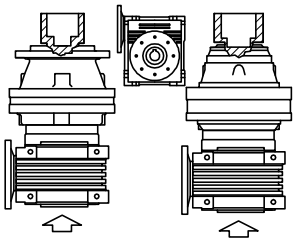
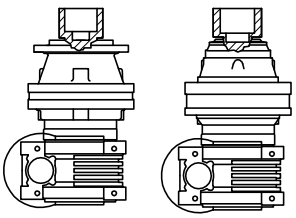
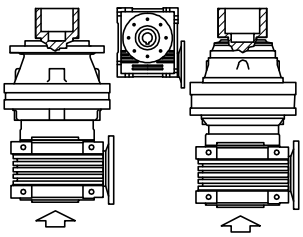
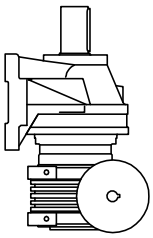
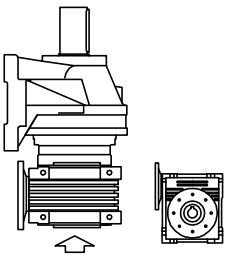
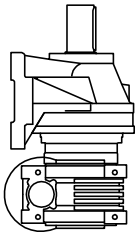
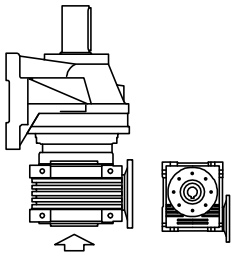
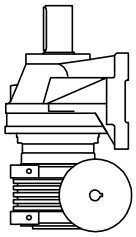
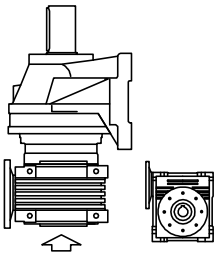
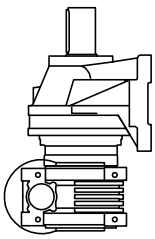
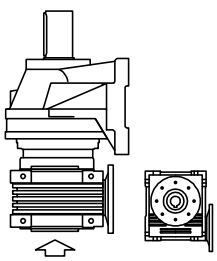
M-F-H	 **M37**	 **M38**	 **M39**	 **M40**
S-SF	 **M37**	 **M38**	 **M39**	 **M40**
SD SDF	 **M37**	 **M38**	 **M39**	 **M40**
FVC	 **M65**	 **M66**	 **M67**	 **M68**
	 **M69**	 **M70**	 **M71**	 **M72**