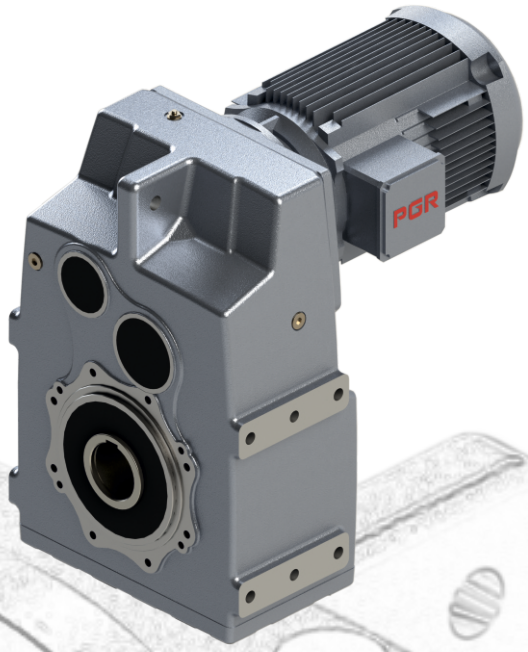
PGR®

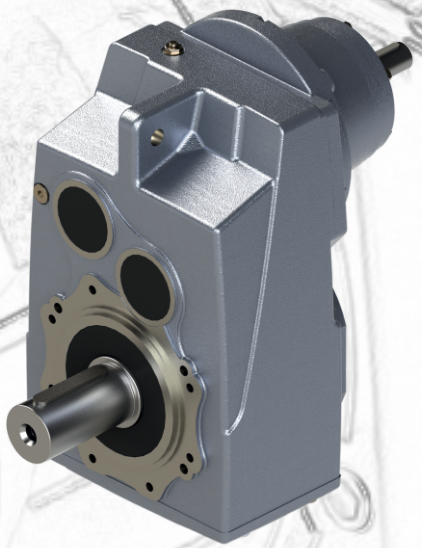
DRIVE TECHNOLOGIES

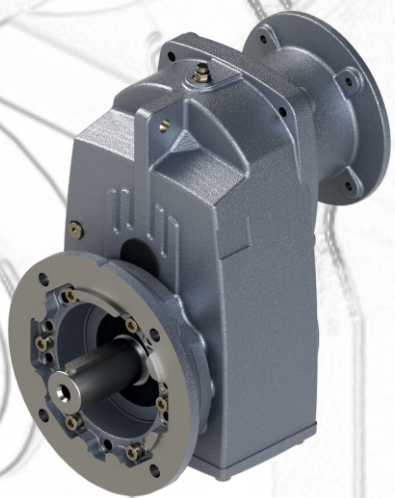
Parallel Shaft Mounted Gear Units

Paralel Şaft Montajlı Redüktör

PD/PM SERIES







K.No: PD/PM 05/2016

TR EN

PGR®
DRIVE TECHNOLOGIES

Kataloğumuzda yer alan bilgileri, önceden haber vermeksizin kısmen veya tamamen değiştirme veya iptal etme hakkını saklı tutmaktayız.
We reverse the right to without previous notice for changing or fully change-over or cancelling which information is specified at catalogue

PGR®

DRIVE TECHNOLOGIES

İÇİNDEKİLER / CONTENTS

TR KALİTE POLİTİKAMIZ

POLAT GROUP REDÜKTÖR A.Ş. ürünlerinin kalitesinde en iyiyi yakalamak için; sektöründeki teknolojik gelişmeleri takip etmeyi, pazar payındaki istikrarını sürdürmek için müşterilerinin istek ve beklentilerine eksiksiz ve zamanında cevap vererek, sürekli artan müşteri memnuniyetini sağlamayı, eğitimli çalışanlarının performansını huzurlu bir çalışma ortamı sağlayarak arttırmayı ve bu şekilde kalite yönetim sistemini sürekli iyileştirmeyi kalite politikası olarak benimsemiştir.

VİZYONUMUZ

Müşteri ve çalışan memnuniyetini en üst düzeyde tutan, gelişmeleri izleyen değil yaratan bir dünya şirketi olmaktır.

MİSYONUMUZ

Müşterilerimizin ihtiyaçlarını karşılayacak çözümleri bilgi teknolojilerini kullanarak en verimli ve kaliteli şekilde sunmaktır.

Polat Group Redüktör olarak birçok farklı ürün yelpazesi ile, müşteri ihtiyacını maksimum seviyede karşılamak için eş zamanlı mühendislik yöntemlerini kullanarak çalışmalarını sürdürmektedir. Tasarım faaliyetleri, ürün geliştirme programları ve bilgisayar destekli çalışmalarımız sürekli gelişen bir grafik çizmektedir. Rekabetçi ve güçlü kalite politikamız müşteri yelpazemizi genişletmektedir.

EN OUR QUALITY POLICY

To achieve the best quality of its products, POLAT GROUP REDÜKTÖR A.Ş. adopts with its own quality politics by following the technological developments of its sector, in order to keep up the stabilization on its own market share ensuring the customers' gladness increasing permanently by answering the customers' wishes and expectations completely at the right time, to have the well-educated staffs increase their performance by providing a peaceful working place and making better the quality management system all the time.

OUR VISION

Our vision is to become a world company which keeps the customer satisfaction at the top level and which does not only follow the developments but also creates the developments itself.

OUR MISSION

Our mission is to provide the solutions to our customers in most efficient and qualified way by make use of the information technologies.

Our reducer group carries out is works using simultaneous engineering methods in order to meet the demands of our customers by presenting several different product ranges. Promotion activities, product development programmes and computer supporting work show a continuously growing chart. Our competitive and strong quality policy is to develop our customer spectrum.

TR TEKNİK AÇIKLAMALAR

Dişli Ünitesini Seçme

Bir dişli ünitesini seçerken PGR üç fazlı asenkron AC motorlarını veya tek fazlı AC motorları kullanılır ve teknik olarak kıyaslanabilen motorlar için de geçerlidir. Başka motorlar kullanırken, lütfen PGR'e danışınız. Bir dişli ünitesini seçme ile ilgili aşağıdaki önemli ana esaslara bağlı kalınmazsa, aşırı bir yük durumunun olması muhtemeldir. Bu durumda, tüm garantiler geçersizdir. Şüpheli durumda, lütfen dişli ünitesi tasarımını kontrol etmek için birlikte çalışabileceğiniz teknik bilgilerden sorumlu PGR satış ofisi ile irtibata geçiniz. Karşılıklı çıkarlarımız açısından, dişli ünitelerinde aşırı yüklemenin neden olduğu tüm problemler her durumda, önlenmelidir.

Kriter

Seçme kriteri aşağıdakilerden oluşur:

1. Termal olarak transfer edilebilen güç (termal sınır)

Dişli ünitesinin aşırı ısınmaması için, bu güç transferi (3 saat) daha uzun bir çalışma zamanını aşmamalıdır. Termal olarak transfer edilebilen güç sadece PA/PF 62, PD/PM 62 ve daha büyük (iki kademeli dişli üniteleri için) gövdeler ve PA/PF 73, PD/PM 73, PKD 6390-7390 ve daha büyük gövdeler (üç kademeli dişli üniteleri) için olası bir sınırı gösterir. Aşağıdaki maddelerden iki veya daha fazlasının geçerli olması durumunda çalışma durumunu kontrol ediniz.

- Ortam sıcaklığı > 40°C
- Dönme hızı n_1 > 1500 min^{-1}
- Motor gücü P_1 > 100 kW
- W kovanlı ve IEC adaptörlü redüktörler
- Dik olarak montajı yapılan redüktörler (sayfa 34-39)
- Tahvil oranı i_{top}< 20 (Polat konik dişlili için i_{top}< 40)

2. Mekanik olarak transfer edilebilen güç "P"

Bu güç, katalogdaki ilgili tablodaki servis faktörü f_B tarafından göz önüne alınır. Bir sonraki bölüm, gerekli servis faktörünün saptanmasını tanımlar.

Genel olarak, dişli ünitesi ekleme, ısı radyasyonu, dar yer vs gibi özel montaj koşulları olduğunda bize danışınız. Özel ölçüler (veya su soğutucusu) termal aşırı yüküne karşı var olduğunda; lütfen PGR'e danışınız.

Giriş gücü ve servis faktörü

Her bir uygulama için gerekli giriş gücü, hesaplama ile saptanır. Motor anma gücü (P_1), bu giriş gücünden sonra seçilir. Normal olarak, belirli uygulama özel çalıştırma koşullarına ait güvenlik faktörleri gözleneceği ve anma motor çıkış seviyeleri genellikle standart çıkış seviyesi aralığında olduğu için motorun anma gücü istenilen güçten biraz daha yüksektir.

Montajı yapılacak 3 fazlı bir AC motorun anma gücünü seçerken kısa dönem ve seyrek tork tesirini göz önüne almak gerekmez. Bir frekans inventörü üzerindeki 3 fazlı bir AC motor çalıştırırken ilave faktörler anma çıkış gücünün seçimini etkiler. Motorun aksine, kısa dönem ve seyrek tork tesiri önemli derecede dişli ünitesinin seçimini etkiler. Dişli ünitesi servis faktörü f_B bu kısa dönem ve seyrek tork tesirini ve ayrıca yeterli doğrulukla dişli ünitesi üzerinde etkileri göz önüne alır.

4.sayfadaki **diyagram 1** çalışma saatine veya güne bağlı olarak yük sınıflandırması, devir ve minimum servis faktörü arasındaki ilişkiyi sunmaktadır.

EN EXPLANATORY NOTES

Selecting of Gear Unit

Gear unit selection includes PGR's three-phase AC motor or single phase AC motor and technically equal different motor could be applied. When you apply different motor please contact with PGR. There are some condition for selecting gear unit and these condition must be considered overloading could be effected badly if restirictions are not considered. In these situation, all guarantees could be invalidated. Under suspecious situation please refer to PGR sales office department which is responsible for giving technical information to you.

Conditions

Conditions of selecting gear unit;

1. Thermal Limit

Thermal transfer power should not be exceeded over running time (3 hours) for prevent overheated gear unit. In larger gear unit size this condition is important and units have thermal limit for instance PA\PF 62 and greater unit size, PA/PF 73, PD/PM 73, PKD 6390-7390. For these problems, you must check ambient and some other conditions which are explained below. Any suspicion please contact with PGR.

- Ambient temperature > 40°C
- Rotational speed n_1 > 1500 min^{-1}
- Input power P_1 > 100 kW
- With W-cylinder and IEC adapter gear units
- Vertical mounting position (see page 34-39)
- Reduction ratio i_{top} < 20 (for helical-bevel gear units i_{top} < 40)

2. Power transfer with service factor "P"

Service factor (f_B) is important for power transfer, determination of minium service factor will be given at following information.

For every operating conditions; eg. heat radiation in bounded field (place) which is required special devices (oil cooler or water cooler) for that reason please contact with PGR.

Input power and service factor

For every application requiring input power could be detected or determined by calculation. After determination input power, rated motor power (P_1) is defined. Motor power is greater than require input power due to safety factor is used according to operating conditions.

Selecting a motor type is important for right calculation for instance; three phase AC motor which is mounted to gear unit, affecting infrequent torque could not be considered but if you mount three-phase AC motor on frequency inverter latest available factor effects the output power. Besides of motor type short and infrequent torque impression effects selecting gear unit for that service factor is considered.

Diagram 1 which is shown on page 4, presents relation between types of load, revolution per hour and minimum service factor depend on operation hours or day.

TR SERVİS FAKTÖRÜ

Diyagram 1, günlük çalışma zamanına bağlı gerekli minimum servis faktörü $f_{B\,min}$, 'Z' saatteki çevrimleri, ve uygulama yükü sınıflandırması 'U', 'M', 'H' gösterir. Çalışma düzgünlüğüne ve kütle hız faktörüne bağlı olarak, üç yük sınıflandırması belirlenmiştir. Hareket ettiren makineden gelen etkiler çalışma düzgünlüğü sınıflandırmasında tanımlanırken, kütle hız faktörü en fazla olan yük üzerinde etkili olur.

Not : Elde edilen servis faktörü f_B kullanılan sürücü (tahrik) tipine göre "k" katsayısı ile çarpılır.

k = 1 ; elektrik motoru veya hidromotor,
k = 1.25 ; çok silindirli içten yanmalı motor,
k = 1.50 ; tek silindirli içten yanmalı motor

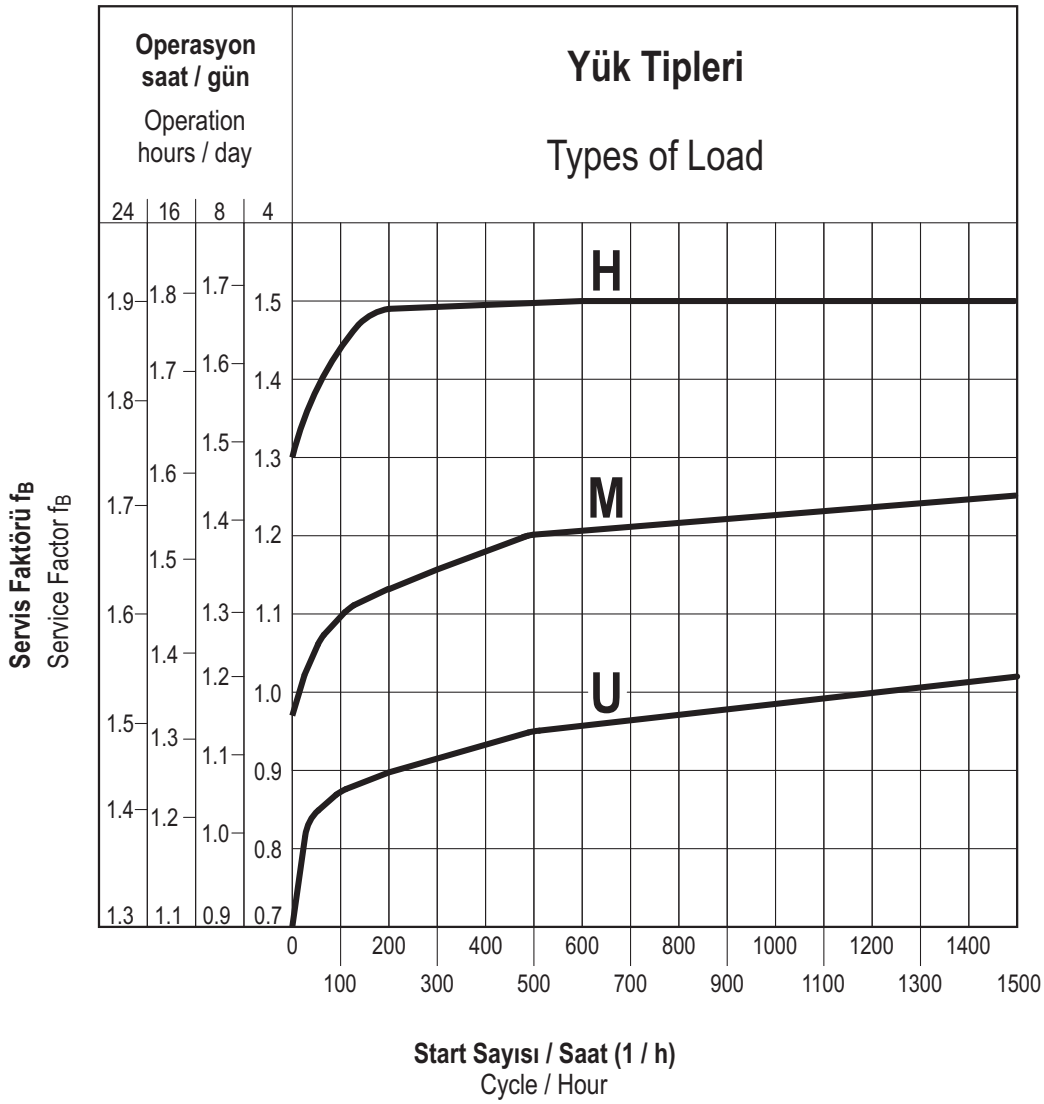
EN SERVICE FACTOR

Diagram 1 shows requiring minimum service factor depend on revolution per hours 'Z' and types of load 'U', 'M' or 'H'. In following information mass acceleration factor will be explained how it effects to or relation between load classification. Forces or loads which are applied from driven machin to gear unit while determine load classification, mass acceleration factor is played important role on the high load classification which is designated with 'H' sign.

Note : Service factor f_B which is acquired from diagram should be modified with factor "k" that, depends on driver type.

k = 1 ; hydraulic motor and electrical motor
k = 1.25 ; multi-cylinder engine
k = 1.50 ; single-cylinder engine

Diyagram - 1



TR TEKNİK BİLGİLER

Dişli Ünitesini Seçme

Bir çalışmanın sınıflandırılması :

Düzgün çalışma (U)

Küçük karıştırıcılar, asansörler, konveyörler, montaj bantları, doldurma makinaları, bantlı konveyörler, temizleme makinaları, fanlar, test makinaları.

Yumuşak şoklar, düzgün olmayan çalışma (M)

Ağır konveyör bantları, değirmenler, ahır gübre makinaları, vinç hareketli mekanizmalar, bükme makinaları, çimento karıştırıcılar, dişli makinaları, ahşap işleme makinaları için sürücüler, vinçler, kayar kapılar, dengeleme makinaları.

Ağır şoklar, aşırı düzgün olmayan çalışma (H)

Taş kırıcılar, eksantrik presler, doğrayıcılar, presler, taşlama milleri, çekiçli kırıcılar, kağıt öğütücüler, ağır karıştırıcılar, delme makinaları, katlama makinaları, dönen tezgahlar, yatay karıştırıcılar, kesiciler, vibratörler, santrifüj makinaları, döner tablalar.

Yük sınıflandırması, çalışma düzgünlüğünden ve aşağıdaki tabloya göre kütle hız faktörü 'm_{af}' den belirlenir. Burada, çalışma veya kütle hız faktöründen gelen daha yüksek sınıf yük sınıflandırmasında geçerlidir. (Örnek: aşırı düzgün olmayan çalışma ve m_{af} = 3,8 gibi durumda yük sınıfı 'H' olarak belirlenir.

Yük Sınıfı	Çalışma	Kütle hız faktörü
U	Düzgün çalışma	$m_{af} \leq 0.25$
M	Düzgün olmayan çalışma	$0.25 < m_{af} \leq 3$
H	Aşırı düzgün olmayan çalışma	$3 < m_{af} \leq 10$

$$m_{af} = \frac{J_{ex.red}}{J_{mot}} = \frac{J_{ex}}{J_{mot}} \times \left(\frac{1}{i_{ges}}\right)^2$$

i_{ges} = Toplam dişli ünitesi oranı
$J_{ex.red}$ = Hareket motoru üzerindeki azaltılmış tüm dış kütle atalet momenti
J_{ex} = Tüm dış kütle atalet momenti
J_{mot} = Motorun kütle atalet momenti

Kütle hız faktörü m_{af}, çıkış tarafındaki dış kütleler ile giriş tarafındaki yüksek hız kütlelerin arasındaki ilişkiyi gösterir. Kütle hız faktörü, başlatma ve frenleme işlemlerine ve titreşime göre dişli ünitesindeki tork tesir seviyesini önemli derecede etkiler.
Örneğin; bantlı konveyör sistemlerinde dış kütle atalet momenti taşınan ürün kadar yük uygular. m_{af} > 10 ise, transfer elemanlarında büyük bir oynama, yük sınıflamasında belirsizlik varsa veya şüphedeyseniz, PGR'e danışınız.

Servis faktörü f_B, maksimum dişli ünitesi çıkış momenti M_{amax} ile montajlanmış motor gücü P_1, çıkış hızı n_2 ve dişli ünitesi verimi (η) sonucu ortaya çıkan momenti Ma arasındaki ilişkidir.

EN EXPLANATORY NOTES

Selecting a Gear Unit

Operation classification;

Uniform application (U)

Small agitators, elevators, conveyors, assembly belts, filling machines, conveyor belts, cleaning machines, fans, testing machines.

Moderate shocks, non-uniform application (M)

Heavy conveyors belts, mills, stall dunging machines, crane traveling mechanisms, bending machines, cement mixers, gear pumps, decoilers, tapping units, packaging machines, feed drives for wood processing machines, hoists, winches sliding doors, balancing machines.

Heavy shocks, extreme non-uniform application (H)

Stone crusher, eccentric presses, choppers, presses, grinding mills, hammer mills, shredders, heavy mixers, punching machines, folding machines, rolling stands, tumbling barrels, shears, vibrators, centrifuges, roller tables.

Load classification is obtained from operation class and mass acceleration factor (m_{af}). For this reason in any situation which factor is greater than other you must take for calculation. (Eg; heavy - shock and m_{af} = 3,8 load classification must be'H')

Load Classification	Operation	Mass Acceleration Factor
U	Uniform application	$m_{af} \leq 0.25$
M	Non-uniform application	$0.25 < m_{af} \leq 3$
H	Extreme non-uniform application	$3 < m_{af} \leq 10$

i_{ges} = Total gear unit ratio
$J_{ex.red}$ = All external mass moment of inertia on the drive motor, reduced
J_{ex} = All external mass moment of inertia
J_{mot} = Mass moment of inertia of the motors

Technically mass acceleration factor m_{af} mass different between external output-side and high speed input-side. m_{af} is played important role at the level of torque propulsive in the gear unit.
It is mostly effected at start-up, braking operation and vibration. Please contact with PGR where m_{af} is greater than 10 and large play in transfer elements and vibration in the system.

Calculation of service factor is illuminated below. It depends on maximum output moment of gear unit and the output moment which is calculated from motor power, rotation speed and efficiency.

$$M_2 = \frac{9550 \cdot P1 \cdot \eta}{n_2} \ [Nm] \qquad P1 \ [kW], \ n_2 \ [min^{-1}]$$

$$f_B = \frac{M_{amax}}{M_2}$$

TR TEKNİK BİLGİLER

$$P_1 = \frac{M_2 \cdot n_2}{9550} \cdot \eta \ [kW]$$

Dişli ünitesini doğru şekilde seçtiğinizde, çıkış ve hız genel açıklamalarından alınan servis faktörü f_B, diyagram 1'e göre minimum servis faktörü $f_{B\,min}$'den büyük veya eşittir.

$$f_B \geq f_{B\,min}$$

Helisel ve paralel mil dişli ünitelerinde herbir kademe için çok yüksek bir seviyede verimlilik vardır (herbir kademe için yaklaşık %98 veyaη = 0,98). Bu yüzden hesaplamalarda verim η =1,0 alınması yeterli doğru sonuçlara ulaşılmasına yardımcı olur.
W kovanı montajlı (serbest hareket mili) redüktörde çıkış gücü aşağıdaki formülden hesaplanır.

$$P_1 = \frac{M_{amax} \cdot n_2}{9550 \cdot f_{Bmin}} \cdot \eta \ [kW] \qquad M_{amax}\ [Nm],\ n_2\ [min^{-1}]$$

Bu formülden hesaplanan P1 gücü tablolardaki P1max değerini aşmamalıdır.

$$P_1 \leq P_{1max}$$

W ve IEC tipi redüktörler için performans tablosunda herbir çıkış devri n_2, maksimum çıkış momenti $M_{amax.}$, maksimum motor gücü $P_{1max.}$ listelenmiştir.

Hareketli tarafa fren bağlandığında, (frenli motorlar gibi) fren momenti de bir dişli ünitesini seçmede göz önüne alınmalıdır. Gezinti hareketleri, çember dişliler, döner tablalar, kapı hareketleri, karıştırıcılar ve yüzey havalandırıcı ile ilgili uygulamalarda sıkça karşılaşılan yüksek dış kütle atalet momentli (m_{af} >2) kullanımlarda frenleme momentinin, seçilen anma momentinin 1,2 katını aşmamasını öneririz. Daha yüksek frenleme torkları kullanılacaksa, bu durum dişli ünitesini seçerken göz önünde bulundurulmalıdır. Lütfen PGR'e danışınız.

Radyal ve Eksenel Kuvvetler

Motorlu seçim sayfalarındaki tablolarda, çıkış mili üzerine izin verilen radyal kuvvetler F_R ve eksenel kuvvetler F_A listelenmiştir. Tercihen güçlendirilmiş çıkış mili yatakları bir çok dişli ünitesi tipi için geçerlidir. Güçlendirilmiş yataklardaki radyal ve eksenel kuvvetler tablolarda $F_{R\,GR}$ ve $F_{A\,GR}$ olarak belirtilmiştir. Listelenen radyal ve eksenel kuvvetler, mil çıkışlı ayak ve flanş bağlantılı dişli üniteleri için uygulanır. Radyal ve eksenel kuvvetler, bu kuvvetlerden biri 0 (sıfır)'a eşit iken hesaplanmıştır.

Ayrıca, radyal ve eksenel kuvvetlere ait bir servis faktörü f_B = 1 çıkış gücü ve devir açıklamalı genel tablolarda verilen kuvvetlerin temeline dayanır. Darbeli tipli kuvvetlerin olduğu ve aşırı çalışmalı (> 8 saat/gün) uygulamalarda uygun servis faktörü f_B > 1 radyal ve eksenel kuvvetler için de gözönünde bulundurulmalıdır. İzin verilen kuvvetler F_A ve F_R belirli oranda azaltılır.

EN EXPLANATORY NOTES

$M_2\ [Nm]$, $n_2\ [min^{-1}]$

If the selecting gear unit is right, service factor which is taken from selection of gear motors table, must be greater than minimum service factor $f_{B\,min}$ which is taken from diagram-1 (see page 4) according to types of load.

Efficiency is approximately 98 % at helical, helical bevel parallel shaft gear units. For that reason efficiency could be taken η = 1 it shows that efficiency does not effect the calculation.

With W cylinder (free drive shafts) ; the installed drive output P1 may, at the must be;

Value which calculated from equation P_1, must be less than P_{1max} which is taken from the selection of W cylinder tables.

P_{1max} is shown at performance table for W cylinder (with free input shaft) and IEC adapter.

However in selecting gear units brake can be equipped optionally and it is attached to the shaft or solid. It must be considered because of break torque. Application which have high external mass moment of inertia such as m_{af} > 2. We suggest break torque does not overrun 1,2 times motor torque.

Axial and Radial Forces

Permissible forces on the output shaft are given at the selection of gear motor. F_R represents radial load and F_A represents axial load. $F_{R\,GR}$ and $F_{A\,GR}$ represents permissible load with reinforced bearings. This values are calculated when one of them is equal to zero.

In selection of gear motor tables service factor is given with permissible axial and radial load but it must be considered when operating times is greater than 8 hours and service factor must be greater than 1 for that reason permissible radial and axial loads are reduced.

TR TEKNİK BİLGİLER

Listelenen radyal kuvvetler, milin ucunun orta kısmında etki eden bir kuvvete karşılık gelir. İzin verilen kuvvetleri saptarken, uygulanan kuvvetin hiç istenmeyen yönü ve dönme yönü varsayıldı. Tam bir hesaplama için, daha yüksek radyal ve eksenel kuvvetler muhtemeldir. Bu yüzden lütfen bize istenen servis süresinin yanısıra gerçek güç ve dönme yönünün detaylarını da belirtiniz.

Transfer elemanları, çıkış miline eklenirse, ilgili faktör f_z radyal kuvveti saptamada göz önüne alınmalıdır.

fz için Tablo

Transfer Elemanları	Faktör fz	Açıklama
Dişliler	1.1	z ≤ 17 diş
Zincir Dişliler	1.4	z ≤ 13 diş
Zincir Dişliler	1.2	z ≤ 20 diş
Dar V-Kayış Makaralar	1.7	ön gerilim kuvveti
Düz kayış Makaralar	2.5	

Mil üzerinde ortaya çıkan radyal kuvvet, aşağıdaki formül kullanılarak hesaplanmıştır.

$$F_{Rvorth} = \frac{2 \cdot M_a}{d_o} f_z \leq F_R$$

M_a : Dişli ünitesi çıkış momenti [kN]
f_z : Tablodan alınan katsayı
d_o : Etkili daire çapı [mm]
F_R : Devir ve çıkış gücü tablolarından alınan müsaade edilebilir radyal kuvvet [kN]
$F_{R\ vorth}$: Mil üzerindeki radyal kuvvet [kN]

Kuvvet mil ortasına uygulanmazsa, herhangi bir 'X' noktasında izin verilen radyal kuvvet **formül I ve II** kullanılarak hesaplanır.

Formül / Equation - I

$$F_{RXL} = F_R \cdot \frac{z}{y + x}$$

Formül / Equation - II

$$F_{RXW} = \frac{c}{(f + x) .1000}$$

X mil faturasından kuvvet uygulama noktasına olan uzaklık [mm]
X noktası - mil kararlılığı

F_{RXW} izin verilen radyal yük [kN]

F_R hız ve çıkış tabloları ve milin ortasına uygulanan kuvvetten alınan radyal kuvvet [kN]
X Noktası - yatak servis ömrü

F_{RXL} izin verilenradyal yük [kN]

c
C_{GR}
f
y
z

9 - 10

Belirtilmedir ki, hesaplamalarda **formül I** yatak servis ömrünü, **formül II** ise mil kararlılığını hesaplamada kullanılır. Hesaplamalar sonucunda küçük değer dikkate alınmalıdır.

EN EXPLANATORY NOTES

Axial and radial forces are calculated where force acting on the middle of the shaft end see page 39. Direction of rotation is played important role in calculation. For that reason this forces are calculated and result's value is found from forces to the shaft worse. Hence, please explain details in your orders.

For belt-pulleys operations or any other motion transfer applications f_z factor must be considered while calculating radial and axial load.

fz values are shown at table.

Transfer Elements	Factor fz	Notice
Gears	1.1	z ≤ 17 teeth
Sprockets	1.4	z ≤ 13 teeth
Sprockets	1.2	z ≤ 20 teeth
Narrow V-belt pulleys	1.7	by
Flat belt pulleys	2.5	Pre-Tensionnig

Radial load is determined with following equation;

M_a : Output torque of gear unit [kN]
f_Z : Factor which is taken from table
d_0 : Effective circular diameter [mm]
F_R : Permitted radial forcewhich is taken from the speed and output moment tables. [kN]
$F_{R\ vorth}$: Radial force on the gear unit shaft [kN]

Equation which is determined above is used for when force is not acting on the middle of shaft at other situations following equation is applied.

X distance from the shaft collar to the point of force application [mm]
point X - shaft stability

F_{RXW} permitted overhung force [kN]

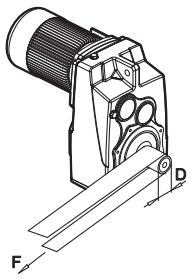
F_R overhung force from the speed and output tables, force applied at shaft middle [kN]
point X - bearing service life

F_{RXL} permitted overhung load [kN]

[Nmm]
[mm]
[mm]
[mm]

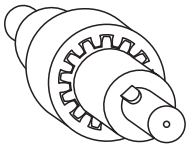
Notify that, **equation I** and **equation II** are applied for calculating radial load where **equation I** is used for sevice life and **equation II** is used for shaft stability. But small result must be considered.

TR RADYAL YÜK HESABI



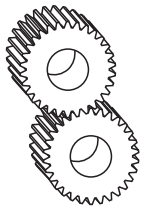
RADYAL YÜKLERİN HESABI

Radyal yük F_R (N)' nun hesaplanmasında gerekli tahrik momenti M_2 (Nm), kasnak veya dişli çapı D (mm) olmak üzere aşağıdaki formüller kullanılır.



1 - Elastik Kaplin

Çalışma sırasında oluşan sapmalar kaplinin güvenlik sınırları içerisinde ise kuvvetler ihmal edilebilir.

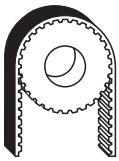


2 - Düz Dişli (20° kavrama açılı)

$$F_R = \frac{2100 \times M_2}{D}$$

3 - Küçük Hızlarda Zincir Dişli (Z < 17)

$$F_R = \frac{2100 \times M_2}{D}$$



4 - Triger Kayış

$$F_R = \frac{2500 \times M_2}{D}$$

5 - V Kayış

$$F_R = \frac{5000 \times M_2}{D}$$

6 - Gerdirme Makaralı Kayış

$$F_R = \frac{5000 \times M_2}{D}$$

EN CALCULATION OF RADIAL LOADS

CALCULATION OF OVERHUNG LOADS

Radial load F_R (N) is calculated with the following equations where required moment Ma (Nm) and hoop or gear diameter D (mm) is

1 - Elastik Coupling

If elastic coupling is working in its reliable working area, the overhung loads can be neglected.

2 - For Spur Gear (Pressure angle 20°)

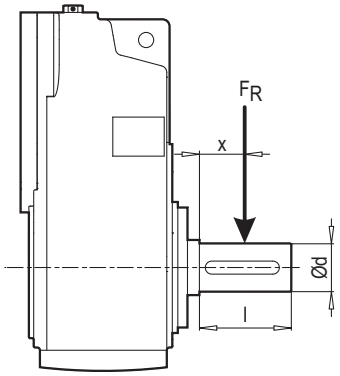
3 - For Chain Drive With Low Speed (Z < 17)

4 - For Trigger Belt

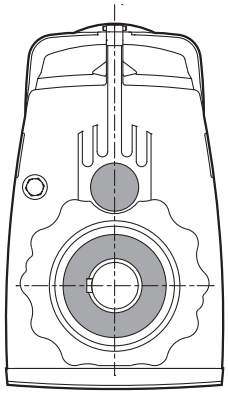
5 - For V Belt

6 - Flat Belt With Spanning Puley

TR RADYAL YÜK HESABI



EN CALCULATION OF RADIAL LOADS



ÇIKIŞ MİLİNDEKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER
VALUE TABLE FOR RADIAL AND AXIAL LOADS AT OUTPUT SHAFT

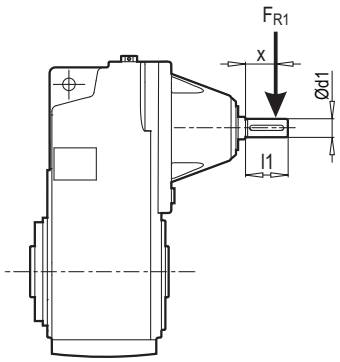
Redüktör Tipi Gearbox Type	**y** (mm)	**z** (mm)	**c Normal** Normal **(Nmm)**	**c Güçlendirilmiş** Reinforced **(Nmm)**	**f** (mm)	**Ød** (mm)	**l** (mm)
PM A02	80.0	104.5	0.13×10^6	0.18×10^6	0	25	50
PM B02	112.0	138.0	0.12×10^6	0.17×10^6	0	25	50
PM C13	145.0	176.0	0.16×10^6	0.26×10^6	0	30	60
PM 12 - PM 13	95.1	125.1	0.18×10^6	0.27×10^6	0	30	60
PM 22 - PM 23	109.6	144.6	0.27×10^6	0.44×10^6	0	35	70
PM 32 - PM 33	135.6	180.6	0.61×10^6	0.94×10^6	0	45	90
PM 42 - PM 43	158.1	213.1	0.90×10^6	1.48×10^6	0	55	110
PM 52 - PM 53	179.6	244.6	1.63×10^6	2.60×10^6	0	65	130
PM 62 - PM 63	235.6	305.6	1.82×10^6	3.42×10^6	0	75	140
PM 72 - PM 73	253.0	338.0	3.81×10^6	6.19×10^6	0	90	170
PM 82 - PM 83	300.0	405.0	8.31×10^6	12.79×10^6	0	110	210
PM 92 - PM 93	353.6	478.6	16.32×10^6	24.92×10^6	0	140	250
PM 102 - PM 103	425.0	575.0	-	18.95×10^6	0	160	300
PM 112 - PM 113	453.0	603.0	-	19.15×10^6	0	180	300
PM 123	453.0	603.0	-	20.30×10^6	0	180	300

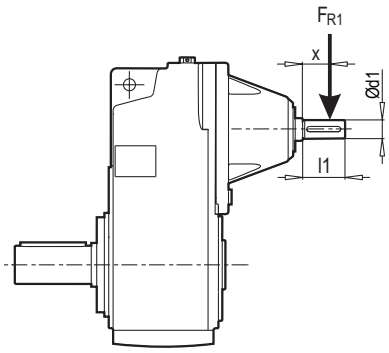
TR RADYAL YÜK HESABI

EN CALCULATION OF RADIAL LOADS

- W ADAPTÖR

- W ADAPTER





GİRİŞ ŞAFTINDAKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER
VALUE TABLE FOR RADIAL AND AXIAL LOADS AT INPUT SHAFT **f=0**

Paralel şaftlı redüktör Parallel shaft gear unit	**y** **(mm)**	**z** **(mm)**	**c** **(mm)**	**Ød1** **(mm)**	**l1** **(mm)**
PD/PM A02 **PD/PM B02**	58.5	78.5	0.027×10^6	14	40
PD/PM C13	58.5	78.5	0.037×10^6	16	40
PD/PM 12 **PD/PM 13** **PD/PM 23** **PD/PM 33**	70.0	90.0	3.64×10^4	16	40
PD/PM 22 **PD/PM 32** **PD/PM 43** **PD/PM 53**	96.5	121.5	1.07×10^5	24	50
PD/PM 42 **PD/PM 52** **PD/PM 63**	110.5	150.5	4.70×10^5	38	80
PD/PM 62 **PD/PM 72** **PD/PM 63*** **PD/PM 73** **PD/PM 83** **PD/PM 93**	149.5	204.5	4.60×10^5	42	110
PD/PM 82 **PD/PM 92** **PD/PM 83*** **PD/PM 93***	207.5	277.5	1.82×10^6	65	140
PD/PM 102 **PD/PM 103** **PD/PM 112** **PD/PM 113** **PD/PM 123**	413.0	482.0	-	70	140

*** Simgesi güçlendirilmiş W adaptörleri için verilen değerleri gösterir.**

* Sign shows that value which is given on table, for reinforced W adapter.

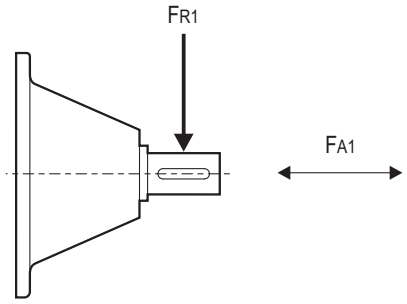
7

TR RADYAL YÜK HESABI

EN CALCULATION OF RADIAL LOADS

- W ADAPTÖR

- W ADAPTER



Tip / Type	PD/PM A02 PD/PM B02		PD/PM C13		PD/PM 12 PD/PM 13 PD/PM 23 PD/PM 33		PD/PM 22 PD/PM 32 PD/PM 43 PD/PM 53		PD/PM 42 PD/PM 52 PD/PM 63		PD/PM 62 PD/PM 72 PD/PM 63* PD/PM 73 PD/PM 83 PD/PM 93		PD/PM 82 PD/PM 92 PD/PM 83* PD/PM 93*		PD/PM 102 PD/PM 103 PD/PM 112 PD/PM 113 PD/PM 123	
	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]
P_1 (kW)	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}
0.12	1.2	0.55	1.2	0.85	1.2	0.85	2.9	2.1	-	-	-	-	-	-	-	-
0.18	1.1	0.54	1.1	0.82	1.1	0.82	2.9	2.1	-	-	-	-	-	-	-	-
0.25	1.0	0.53	1.0	0.78	1.0	0.78	2.8	2.1	-	-	-	-	-	-	-	-
0.37	0.89	0.50	0.89	0.75	0.89	0.75	2.6	2.1	4.1	2.1	-	-	-	-	-	-
0.55	0.77	0.47	0.77	0.72	0.77	0.72	2.5	2.0	3.9	2.8	-	-	-	-	-	-
0.75	0.58	0.44	0.58	0.70	0.58	0.70	2.3	1.9	3.8	2.4	6.1	4.4	-	-	-	-
1.10	0.35	0.37	0.35	0.61	0.35	0.61	2.1	1.8	3.5	2.7	5.9	4.3	-	-	-	-
1.50	0.29	0.30	0.29	0.43	0.29	0.43	2.0	1.8	3.3	2.6	5.8	4.2	-	-	-	-
2.20	-	-	0.20	0.42	0.20	0.42	1.7	1.7	2.7	2.4	5.5	4.1	-	-	-	-
3.00	-	-	0.15	0.23	0.15	0.23	1.5	1.6	2.5	2.3	5.2	3.9	4.3	11.0	-	-
4.00	-	-	-	-	-	-	0.98	1.1	2.3	2.1	4.9	3.7	4.2	10.9	-	-
5.50	-	-	-	-	-	-	0.65	1.0	1.6	1.8	4.4	3.4	4.1	10.8	-	-
7.50	-	-	-	-	-	-	0.27	1.0	1.4	1.3	4.3	3.4	3.8	10.4	-	-
9.20	-	-	-	-	-	-	-	-	1.0	0.98	3.9	3.1	3.6	10.1	-	-
11.0	-	-	-	-	-	-	-	-	0.59	0.47	3.3	2.7	3.4	9.9	13.4	17.3
15.0	-	-	-	-	-	-	-	-	-	-	3.3	2.7	3.1	9.5	13.7	17.1
18.5	-	-	-	-	-	-	-	-	-	-	2.7	2.3	3.0	9.3	13.4	16.9
22.0	-	-	-	-	-	-	-	-	-	-	2.2	1.8	2.9	9.3	13.1	11.7
30.0	-	-	-	-	-	-	-	-	-	-	1.1	1.2	2.3	8.4	12.5	16.1
37.0	-	-	-	-	-	-	-	-	-	-	0.74	0.87	2.0	8.1	12.0	15.7
45.0	-	-	-	-	-	-	-	-	-	-	-	-	2.2	8.3	11.7	15.2
55.0	-	-	-	-	-	-	-	-	-	-	-	-	1.5	7.4	11.0	14.5
75.0	-	-	-	-	-	-	-	-	-	-	-	-	0.78	4.6	9.6	13.2
90.0	-	-	-	-	-	-	-	-	-	-	-	-	0.24	5.2	8.5	12.1
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	10.7
132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	9.0
160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	6.9
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	3.6

$F_{A1} \rightarrow F_{R1} = 0$

$F_{R1} \rightarrow F_{a1} = 0$

7

*** Simgesi güçlendirilmiş W adaptörleri için verilen değerleri gösterir.**

* Sign shows that value which is given on table, for reinforced W adapter.

TR KISALTMALAR

EN ABBREVIATIONS

f_B	= Servis Faktörü (Mamax / Ma)	f_B	= Service factor (Mamax / Ma)
F_A	= Çıkış tarafındaki müsaade edilebilir eksenel yük [kN]	F_A	= Permissible axial load at the output side [kN]
F_R	= Çıkış tarafındaki, milin orta noktasına etkiyen müsaade edilebilir radyal yük [kN]	F_R	= Permissible overhung load at the output side, force acting at the shaft's midpoint [kN]
F_D	= Reaksiyon yükü [kN]	F_D	= Reaction [kN]
i_{toplam}	= Dişli ünitesindeki toplam tahvil oranı	i_{total}	= Gear units total ratio
i_{ges}	= Tahvil oranı	i_{ges}	= Reduction ratio
M_2	= Çıkış momenti [Nm]	M_2	= Output torque [Nm]
M_{amax}	= Müsaade edilebilir maksimum çıkış momenti [Nm]	M_{amax}	= Max. permissible output torque [Nm]
n_2	= Çıkış devri [d/dk]	n_2	= Output speed [min^{-1}]
P_e	= Mamax referans alınarak hesaplanan güç [kW]	P_e	= Calculated power [kW] with reference to Mamax
P_n	= Motor güç oranı [kW]	P_n	= Rated power of motor [kW]
η	= Verim [%]	η	= Efficiency [%]
kg	= Redüktörün ağırlığı	kg	= Weight of the geared motor

1) 4 ve 5 kademeli redüktörlerin 0,75 kW'a kadar olan 4 kutuplu motorlarında kayıp yaklaşık 40 W olarak hesaplanmıştır. Kayıp, motor hızına bağlı olarak o oranda değişir.

1) Gear units or gear motors which have 4 and 5 stage reduction 4 pole motor up to 0,75 kW losses are calculated nearly 40 W, losses are dependent motor speed.

TR PD/PM TANITIMI

EN DESCRIPTION OF PD\PM

POLAT PARALEL ŞAFTLI MOTORLU REDÜKTÖR (PD/PM)

POLAT PARALLEL SHAFT GEARED MOTOR (PD/PM)

Paralel şaftlı redüktör üniteleri için giriş ve çıkış şaftının paralel olma özelliği Polat Ayaklı (PA) ve Polat Flanşlı (PF) helisel serisine göre daha kompakt tasarım özelliği kazandırmaktadır. Delik milli redüktör üniteleri uygulanma alanındaki sisteme direk olarak montajlanabilir. Gövde büyüklüğü olarak PD/PM A02...52' ye kadar 2 kademeli redüktör ünitesi versiyonu olarak sunulmaktadır. PD/PM 12...52'ye kadar olan redüktör ünitelerine indirgeyici gövde montajlanarak 3 kademeli olarak (PD/PM 13 ...53) sunulmaktadır. Daha büyük gövde boyutları için PD/PM 62...112 ve PD/PM 63...123' e kadar 2 ve 3 kademeli olarak sağlanmaktadır. Büyük gövde redüktör tipleri (PD/PM 63...123' e kadar) olan dişli üniteleri küçük gövde redüktör tiplerinden (PD/PM 13...53) farklı olarak tüm iç yapısı aynı gövde içerisinde bulunmaktadır.

Polat parallel shaft gear unit series are provided compact design than Polat foot mounted and flange mounted helical gear series because of input and output shaft are parallel. Gear unit which have hollow shaft at output could be mounted directly to system at application areas. Case width, from PD/PM A02 to PD/PM 52 is presented as a two - stage version. Besides all these, third reduction gearcase is mounted to PD/PM 12 - 52 and these are presented as three - stage version whic are designated from PD/PM 13 to PD/PM 53. For greater case sizes from PD/PM 62 to PD/PM 112 and from PD/PM 63 to PD/PM 123 are presented as a two and three - stage versions. These three stage cases are different from smaller case size which are designated from PD/PM 13 to PD/PM 53, because all of the components are built in same case.

Delik milli ve mil çıkışlı olmak üzere paralel şaftlı redüktör ünitelerinin montajı için dört farklı tasarımı mevcuttur.

1) Ön yüzeyi B14 flanşı için işlenmiş flanş tasarımı

2) Ön yüzeyi B5 flanşı için işlenmiş flanş tasarımı

3) PD/PM A02... C13 ile PD/PM 92 ve üst gövde boyutları için ayak montajlı tasarım

4) Tork kolu tasarımı

Four different designs are available for Polat parallel shaft gear unit series with hollow shaft or solid shaft. These are;

1) Flange mounted design which are machined for B14 flange

2) Flange mounted design which are machined for B5 flange

3) Foot mounted design for PD/PM A02...C13 and PD/PM 92 and above gear units

4) Torque arm design

15 farklı gövde seçeneğiyle hizmete sunulmuş olan Polat Delik Milli ve Polat Milli serisi redüktör üniteleri 0,12 kW' dan 200 kW' a kadar değişen güçleri ile maksimum 94000 Nm moment sağlayabilmektedir.

Polat with hollow shaft or Polat with solid shaft gear unit series are provided maximum 94000 Nm moment according to output power range from 0,12 kW to 200 kW and these are become available at 15 different sizes.

Paralel Şaftlı Redüktör

0.12 kW dan 200 kW' ya kadar

94000 Nm 'ye kadar çıkış momenti bulunur.

Parallel Shaft Gear Unit

Approx. 94000 Nm output moment

altering power from 0,12 kW to 200 kW.

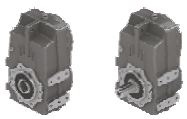
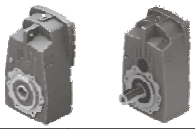
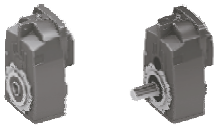
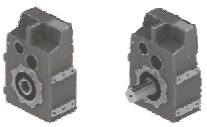
MAX. MÜSAADE EDİLEBİLİR ÇIKIŞ MOMENTİ $M_{a\ max.}$

MAX. PERMISSIBLE OUTPUT TORQUES $M_{a\ max.}$

171 - 193

İki ve Üç kademeli paralel şaftlı redüktör

Parallel shaft gear units, double and triple stage reduction

									
Tip/Type	$M_{a\ max.}$ (Nm)	**Tip**/Type	$M_{a\ max.}$ (Nm)	**Tip**/Type	$M_{a\ max.}$ (Nm)	**Tip**/Type	$M_{a\ max.}$ (Nm)	**Tip**/Type	$M_{a\ max.}$ (Nm)
PD/PM A02	120	**PD/PM 12**	300	**PD/PM 13**	270	**PD/PM 62**	4540	**PD/PM 92**	17930
PD/PM B02	170	**PD/PM 22**	560	**PD/PM 23**	560	**PD/PM 72**	6470	**PD/PM 102**	32000
PD/PM C13	370	**PD/PM 32**	1020	**PD/PM 33**	1040	**PD/PM 82**	10620	**PD/PM 112**	42000
		PD/PM 42	2000	**PD/PM 43**	2080	**PD/PM 63**	6000	**PD/PM 93**	25400
		PD/PM 52	3240	**PD/PM 53**	3200	**PD/PM 73**	8300	**PD/PM 103**	37200
						PD/PM 83	13200	**PD/PM 113**	69000
								PD/PM 123	90000

TR W ve IEC ADAPTÖR KULLANIMI

W ve IEC Adaptör

W kovanlı redüktörlerin max. tahrik gücü geçerli olan çıkış devri ve tahvil oranına göre tablolarda verilmiştir. (Bknz 171-193) IEC adaptörlü dişli ünitelerinde, her gövde büyüklüğünün standart gücü DIN EN 50347' ye göre verilir. P1 değeri W ve IEC seçim sayfalarında listelenmiştir. Bu listedeki değerlerden fazla bir güç istenirse özel hesaplamalar gerekmektedir. Lütfen danışınız.

W kovanlı redüktörlerin giriş mili rulmanları düzenli olarak yağlanmalıdır. 2 kademeli redüktörlerden PD/PM 62 ve üst gövdeler, 3 kademeli redüktörlerden PD/PM 73 ve üst gövdeler için her 4000 çalışma saatinde yaklaşık 20-25gr gres içeren otomatik yağlayıcı kullanılarak giriş şaftı rulmanı yağlamasını öneririz. Kullanılan yağlayıcı Petamo GHY 133 N' dir. Ayrıca W kovanlı redüktörlerde bu yağlayıcıdan ayrı opsiyon olarak dişli ünitesinin soğumasını sağlamak için dış fan da mevcuttur. Lütfen danışınız.

Otomatik yağlayıcı üniteleri IEC 160 motor büyüklüğünden başlayarak en düşük 2 kademeli redüktörlerden PD/PM 62, 3 kademeli redüktörlerden de PD/PM 73 gövdelerine bağlanmaktadır. Bu otomatik yağlayıcı rulmanlara kalıcı bir yağlama sağlar. Redüktörü çalıştırmadan önce devreye sokulmalıdır. Günlük ortalama 8 saat çalışıyorsa yılda 1 kez, bunun dışındaki çalışma saatlerinde 6 ayda bir değiştirilmelidir. Otomatik yağlayıcı içindeki gres dış ortam sıcaklığı 0º C - 40º C arasındaki çalışmalara uygundur. Çok uzun süreli çalışmalarda ve belirtilen dış ortam sıcaklığı değişimlerinde daha özel yağlayıcı kullanılmalıdır. Lütfen danışınız.

Otomatik yağlayıcılı IEC'ler belirtilen çalışma şartları içerisinde **dikey montaj pozisyonunda (M2 ve M4) önerilmez**. Bu gibi durumlarda direkt motor montajı önerilir. Eğer motor boyutu 160 ve daha büyük IEC'ler dikey montaj pozisyonunda kullanılacaksa, kullanım şartları göz önünde bulundurularak tarafımızdan kontrol edilmeli ve onaylanmalıdır. Lütfen buna dikkat ediniz. Dikey montaj pozisyonu çalışmalarında (M2) sızdırmazlık elemanlarının ömrü azalabilmektedir. Bu gibi durumlarda daha kısa aralıklarla bakım yapılmalıdır. 2 kademeli redüktörlerden PD/PM 52'ye kadar ve 3 kademeli redüktörlerden PD/PM 63'e kadar olan IEC adaptörlü dişli üniteleri çalışma ömürleri süresince sızdırmazlığa sahip yağlanmış rulman içerir. Bunlar için bakım süreleri kullanım kılavuzunda önerilen bakım süreleri geçerlidir.

Motor boyutu 63'ten 180'e kadar olan IEC adaptörün kaplini arızaya karşı emniyetli değildir. Fakat otomatik yağlayıcı kullanılan IEC 160-180 ve daha büyük boyutlu adaptörlerdeki kaplinler arızaya karşı emniyetlidir. Kaldırma, asansör ve bu gibi insan yaralanmalarına neden olabilecek çalışmalar için özel hesaplamalar gerekmektedir. Lütfen PGR' ye danışınız. Direk motor montajlı redüktörle karşılaştırmak gerekirse IEC ilave mil kaplinine ve extra rulman yataklanmasına sahiptir. Direk motor montajına göre IEC bağlantılı redüktörlerde güç kayıpları daha fazladır. PGR olarak biz direk motor montajını öneririz. Bu size sadece teknik avantaj değil finansal olarak da avantaj sağlar.

EN USING OF W AND IEC ADAPTER

W and IEC Adapter for Gear Units

Selection of W cylinder (with free input shaft) and IEC adapter are listed on page 171-193. Maximum power are given according to gear reduction ratio and output speed. Gear units with IEC adapter standard power is specified according to DIN EN 50347. For other power values which are not shown on table, must be required special calculation for operating safety limits. For these cases, please contact with PGR.

Polat gear unit series such as PD/PM 62 and greater case which are 2 stage reducers PD/PM 73 and greater case which are 3 stage reducers with W adapter (with free input shaft) input solid shaft bearings must be lubricated orderly. Automatic lubricator could be used for increasing service life of bearings. This unit includes approximately 20-25 g grease and it supplies fresh grase at every 4000 running hours. PGR recommends, Petamo GHY 133 N type of lubricate should be used. At the same time, fan option is available for cool gear unit to safe operation. For this option contact with PGR.

Automatic lubricator design is used from IEC 160 motor size and greater motor size to least gear units which are for 2 stage reducers PD/PM 62 and for 3 stage reducers PKD 6390. This unit provides permenant lubrication to bearings. Automatic lubricator must be changed once at year for where gear unit is run 8 hours or lesser at daily operation for other running hours it must be changed every 6 months. Automatic lubricator must be actuated before start the reducers. Grease is acceptable between 0 ºC - 40 ºC operation conditions. At long - term running and exception from specified ambient temperature special lubricate must be used. Please, consult us.

Under determined operating conditions, **IEC with automatic lubricator is not suggested for vertical mounting positions (M2 and M4 mounting positions).** For these cases direct motor mounting should be applied. If IEC 160 and greater size will be used at vertical mounting positions, it must be controled by PGR for suitable and safe operations with considering actual operating conditions. For mounting position M2 (vertical alignment) life cycle of seals are effected badly for that reason maintenance of these reducer must be at shorter times from which maintenance time is determined at manual. 2 stage reducers up to PD/PM 52 and 3 stage reducer up to PD/PM 63 gear units are included seals for bearings as long as their service life. For these gear units maintenance time is valid which time is specified at manual.

Coupling is used for installing motor to IEC adapter. At from IEC 63 to IEC 180, coupling is not safety for important application where person injuries could be occured. But IEC 160 - IEC 180 with automatic lubricator and greater size of IEC adapter is safe for application but on the other hand for operations where accident could be caused personnel damage special calculation must be required, please consult us. Direct motor mounting has a lot of advantage according to mounting of IEC adapter. At gear units with IEC adapter has additional solid shaft coupling and bearing seats for that reason power losses are greater than direct motor mounting. Last but not least direct motor mounting could be provided more technical and financial advantage.

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
KARIŞTIRICILAR	AGITATORS (MIXERS)
* Saf Sıvılar	* Pure Liquids
* Sıvılar ve Katılar	* Liquids and Solids
* Değişken Yoğunluklu Sıvılar	* Liquids - Variable Density
HAVALANDIRMA TERTİBATLARI	BLOWERS
* Santrifüj	* Centrifugal
* Lob	* Lobe
* Pervane	* Vane
MAYALAMA VE DAMITMA	BREWING AND DISTILLING
* Şişeleme Mekanizması	* Bottling Machinery
* Mayalama Kazanları - Kesintisiz İş	* Brew Kettles - Continuous Duty
* Fırınlar, Ocaklar - Kesintisiz İş	* Cookers - Continuous Duty
* Ezme, Karışım Kazanları - Kesintisiz İş	* Mash Tubs - Continuous Duty
* Ölçü Haznesi - Sık Sık Başlama	* Scale Hopper - Frequent Starts
TOPRAK İŞLEME MAKİNELERİ	CLAY WORKING MACHINERY
* Tuğla Presi	* Brick Press
* Briket Makinesi	* Briquette Machine
* Çamur Karma Makinesi	* Pug Mill
KOMPRESÖRLER	COMPRESSORS
* Santrifüj	* Centrifugal
* Lob	* Lobe
* Çok Pistonlu	* Reciprocating, Multi-Cylinder
* Tek Pistonlu	* Reciprocating, Single-Cylinder
KONVEYÖRLER - GENEL MAKSATLI	CONVEYORS - GENERAL PURPOSE
* Üniform Yüklü	* Uniformly Loaded or Fed
* Üniform Yüklü Olmayan	* Not Uniformly fed
* Pistonlu veya Karıştırıcılı	* Reciprocating Or Shaker
VİNÇLER	CRANES
* Kuru Havuz	* Dry Dock
Ana Kaldırma vinci	Main Hoist
Yardımcı Vinç	Auxiliary Hoist
Direkli Vinç	Boom Hoist
Döndürme İşi	Slewing Drive
Çekme İşi	Traction Drive
* Endüstriyel İşi	* Industrial Duty
Ana Kaldırma Vinci	Main Hoist
ASANSÖRLER	ELEVATORS
* Kova	* Bucket
* Santrifuj Boşaltma	* Centrifugal Discharge
* Yürüyen Merdiven	* Escalators
* Taşıma, Nakliye	* Freight
* Yerçekimi Boşaltım	* Gravity Discharge
KIRMA MAKİNELERİ	CRUSHER
* Taş ya da Maden	* Stone or Ore

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
TARAMA MAKİNELERİ	DREDGES
* Kablo Bobinleri	* Cable Reels
* Konveyörler	* Conveyors
* Pompalar	* Pumps
* İstifleme Makineleri	* Stackers
* Vinçler	* Winches
EKSTRUDERLER	EXTRUDERS
* Genel	* General
* Plastikler	* Plastics
Değişken Hızlı Tahrik	Variable Speed Drive
Sabit Hızlı Tahrik	Fixed Speed Drive
*Kauçuk, Lastik	*Rubber
Kesintisiz Vida İşlemleri	Continuous Screw Operation
Kesintili Vida İşlemleri	Intermittent Screw Operation
FANLAR	FANS
* Santrifüj	* Centrifugal
* Yüksek Emişli	* Forced Draft
* İndüklenmiş Çekiş	* Induced Draft
* Endüstriyel ve Maden Ocağı	* Industrial and Mine
BESLEME ÜNİTELERİ	FEEDERS
* Palet	* Apron
* Bant	* Belt
* Disk	* Disc
* Pistonlu	* Reciprocating
* Vida	* Screw
GIDA ENDÜSTRİSİ	FOOD INDUSTRY
* Hububat Fırını	* Cereal Cooker
* Hamur Karıştırıcı	* Dough Mixer
* Kıyma Makinesi	* Meat Grinder
* Dilimleyici	* Slicer
METAL İŞLEMELERİ	METAL MILLS
* Çekme Makinesi Taşıma ve Ana Tahrik	* Draw Bench Carriage and Main Drive
* Hammadde İticileri	* Slab Pushers
* Makaslar	* Shears
* Tel Çekme	* Wire Drawing
* Tel Sargı Makinesi	* Wire Winding Machine
* Salgı Tezgahı	* Runout Table
Geri Dönmesiz	Non-Reversing
Tek Tahrik	Individual Drives
Grup Tahriki	Group Drives
DÖNER İŞLEMELER	MILLS (ROTARY TYPE)
* Küresel ve Çubuk	* Ball and Rod
Düz Halka Dişli	Spur Ring Gear
Helisel Halka Dişli	Helical Ring Gear
Doğrudan Bağlı	Direct Connected
* Çimento Fırını	* Cement Kilns
* Kurutucular ve Soğutucular	* Dryers and Coolers

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
KERESTE ENDÜSTRİSİ	LUMBER INDUSTRY
* Kabuk Soyucular	* Barkers
Besleme Tamburu	Spindle Feed
Ana Tahrik	Main Drive
* Konveyörler	* Conveyors
Brülör	Burner
Ana Yük veya Ağır Yük	Main or Heavy Duty
Ana Kütük	Main Log
Hızar ve Taşıma Bandı	Re-saw, Merry-Go-Round
Kalın Dilim	Slab
Taşıma	Transfer
* Kesme Testereleri	* Cut-Off Saws
Zincir	Chain
Sürükleme	Drag
* İndirme Boşaltma Tamburları	* Debarking Drums
* Uzun Deste	* Long Deck
* Tomruk Çekme-Eğme	* Log Hauls - Incline
* Kütük Döndürme Aygıtları	* Log Turning Devices
* Sıralama Tablası	* Sorting Table
* Taşıma	* Transfers
Zincir	Chain
Kreynyolu	Causeway
* Tabla Tahriki	* Tray Drives
KAĞIT İŞLEMELERİ	PAPER MILLS
* Karıştırıcı	* Agitator (Mixer)
* Saf çözeltiler İçin Karıştırıcı	* Agitator for Pure Liquors
* Kabuk Soyma Tromelleri	* Barking Drums
* Mekanik Kabuk Soyucu	* Mechanical Barkers
* Dövücü - Öğütücü	* Beater
* Düzleştirme Makinesi	* Breaker Stack
* Kalenderleme	* Calender
* Yüzey Pürüzlendirici	* Chipper
* Çentik Besleyici	* Chip Feeder
* Kaplama Merdanesi	* Coating Rolls
* Konveyörler	* Conveyors
Çentik, Kabuk, Kimyasal	Chip, Bark, Chemical
Kalın Dilimler İçeren Kütükler	Log (including Slab)
* Kesici	* Cutter
* Silindir Kalıpları	* Cylinder Molds
* Kurutucu	* Dryer
Kağıt Makinesi	Paper Machine
Konveyör Tip	Conveyor Type
* Kabartmalı Basıcı	* Embosser
* Ekstrüder	* Extruder
* Kağıt Merdaneleri	* Paper Rolls
* Presler	* Presses
* Küspe Makinesi	* Pulper
* Pompalar	* Pumps
FİLTRELER	SCREENS
* Havalı Yıkama	* Air Washing
* Döner - Taş veya Çakıl	* Rotary - Stone or Gravel
* Hareketli Su Girişi	* Traveling Water Intake

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
PLASTİK ENDÜSTRİSİ İLK İŞLEMLER	PLASTIC INDUSTRY PRIMARY PROCESSING
* Yoğun İç Karıştırıcılar Harmanlayıcı Kesintisiz Karıştırıcı	* Intensive Internal Mixers Batch Mixers Continuous Mixers
PLASTİK ENDÜSTRİSİ İKİNCİL İŞLEMLER	PLASTIC INDUSTRY SECONDARY PROCESSING
* Hacim Kalıpçıları * Kaplama * Tabaka * Boru * Ön Plastikleştirme * Rot * Saç, Plaka * Borular	* Blow Molders * Coating * Film * Pipe * Pre-Plasticizers * Rods * Sheet * Tubing
POMPALAR	PUMPS
* Santrifüj * Oranlama * Pistonlu Tek Tesirli - 3 veya daha fazla Silindir Çift Tesirli - 2 veya daha fazla Silindir * Döner Şanzuman Tipi Lob Pervane	* Centrifugal * Proportioning * Reciprocating Single Acting - 3 or more cylinders Double Acting - 2 or more cylinders *Rotary Gear Type Lobe Vane
KAUÇUK - LASTİK ENDÜSTRİSİ	RUBBER INDUSTRY
* Yoğun İç Karıştırıcılar Harmanlayıcılar Kesintisiz Karıştırıcılar *Karıştırma İşlemi 2 Yumuşak Merdane 1 veya 2 Oluklu Merdane * Toplu İşleme - 2 Yumuşak Silindir * Kırıcı ve Isıtıcı - 2 Merdane, 1 Oluklu Merdane * Kırıcı - 2 Oluklu Merdane * Tutma, Besleme, Karıştırma İşlemi - 2 Merdane * Arıtıcı - 2 Merdane * Kalenderler	* Intensive Internal Mixers Batch Mixers Continuous Mixers * Mixing Mill 2 Smooth Rolls 1 or 2 corrugated Rolls * Batch Drop Mill - 2 Smooth Rolls * Cracker Warmer-2 Rolls,1 Corr. Roll * Cracker - 2 Corrugated Rolls * Holding, Feed and Blend Mill - 2 Rolls * Refiner - 2 Rolls * Calenders
ATIK SU BOŞALTIM EKİPMANLARI	SEWAGE DISPOSAI EQUIPMENT
* Çubuklu Elek * Kimyasal Besleme Üniteleri * Su Boşaltma Eleği * Köpük Kesici * Yavaş veya Hızlı Karıştırıcılar * Tortu Toplayıcı * Koyulaştırıcı * Vakumlu Filtre	* Bar Screens * Chemical Feeders * Dewatering Screen * Scum Breaker * Slow or Rapid Mixers * Sludge Collector * Thickener * Vacuum Filter
KOMPAKTÖRLER	COMPACTORS
ÇEKTİRMELER - YAVAŞ VE KUVVETLİ	PULLERS - BARGE HAUL

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
ŞEKER ENDÜSTRİSİ	SUGAR INDUSTRY
*** Pancar Dilimleme Aleti**	* Beet Slicer
*** Kamış Bıçakları**	* Cane Knives
*** Kırma Makineleri**	* Crushers
TEKSTİL ENDÜSTRİSİ	TEXTILE INDUSTRY
*** Harman Ölçer**	* Batcher
*** Kalenderler**	* Calenders
*** Şablonlar**	* Cards
*** Kuru Konserveler**	* Dry Cans
*** Boyama Makinesi**	* Dyeing Machinery
*** Dokuma Tezgahları**	* Looms
*** Çamaşır Sıkma Makinesi - Merdane**	* Mangle
*** Kaplama**	* Napper
*** Doldurma Makinesi**	* Pads
*** Haşıl Makinesi**	* Siashers
*** Halat Yıkama Makinesi**	* Soapers
*** Eğirme Makinesi**	* Spinners
*** Germe Kurutma Makineleri**	* Tenter Frames
*** Yıkama Makineleri**	* Washers
*** Masura Sarıcısı**	* Winders
DAMPERLİ ARAÇLAR	CAR DUMPERS
ÇEKİCİ ARAÇLAR	CAR PULLERS
ARITICILAR	CLARIFIERS
KONSERVE DOLUM MAKİNELERİ	CAN FILLING MACHINES

TR KULLANILAN TERİMLER

EN NOMENCLATURE

REDÜKTÖR TİPİ / GEAR TYPE

Delik Milli Seri (PD Serisi)
Hollow Shaft Series (PD Series)

PD A02 ... PD 112	=	**İki kademeli, paralel şaftlı redüktör** Double reduction, parallel shaft gear unit series
PD C13 ... PD 123	=	**Üç kademeli, paralel şaftlı redüktör** Triple reduction, parallel shaft gear unit series
PD 12/02 ... PD 52/12	=	**Dört kademeli, paralel şaftlı redüktör** Quadruple reduction ,parallel shaft gear unit series
PD 63/22 ... PD 113/52	=	**Beş kademeli, paralel şaftlı redüktör** Quintuple reduction,parallel shaft gear unit series

Çıkış Milli Seri (PM Serisi)
Solid Shaft Series (PM Series)

PM A02 ... PM 112	=	**İki kademeli, paralel şaftlı redüktör** Double reduction, parallel shaft gear unit series
PM C13 ... PM 123	=	**Üç kademeli, parallel şaftlı redüktör** Triple reduction, parallel shaft gear unit series
PM 12/02 ... PM 52/12	=	**Dört kademeli, paralel şaftlı redüktör** Quadruple reduction, parallel shaft gear unit series
PM 63/22 ... PM 113/52	=	**Beş kademeli, paralel şaftlı redüktör** Quintuple reduction, parallel shaft gear unit series

REDÜKTÖR DİZAYNI / GEAR DESIGN

PD...	=	**Delik milli** Hollow shaft
PM...	=	**Mil çıkışlı** Solid shaft
PD... LT	=	**Delik milli, Lastik takozlu** Hollow shaft, Rubber buffer for torque arm
PM... LT	=	**Mil çıkışlı, Lastik takozlu** Solid shaft, Rubber buffer for torque arm
PD... Ç	=	**Delik milli, Çektirmeli** Hollow shaft with fixing element
PD... Ç/LT	=	**Delik milli, Çektirmeli, Lastik takozlu** Hollow shaft with fixing element, Rubber buffer for torque arm
PD... KS	=	**Delik milli, Konik sıktırmalı** Hollow shaft with shrink disc connector
PD... KS/LT	=	**Delik milli, Konik sıktırmalı, Lastik takozlu** Hollow shaft with shrink disc connector, Rubber buffer for torque arm
PD... B14	=	**Delik milli, B14 flanşlı** Hollow shaft, B14 flange
PD... B5	=	**Delik milli, B5 flanşlı** Hollow shaft, B5 flange
PM... B14	=	**Mil çıkışlı, B14 flanşlı** Solid shaft, B14 flange
PM... B5	=	**Mil çıkışlı, B5 flanşlı** Solid shaft, B5 flange
PD... Ç/B5	=	**Delik milli, Çektirmeli, B5 flanşlı** Hollow shaft with fixing element, B5 flange
PD... Ç/B14	=	**Delik milli, Çektirmeli, B14 flanşlı** Hollow shaft with fixing element, B14 flange
PD... KS/B14	=	**Delik milli, Konik sıktırmalı, B14 flanşlı** Hollow shaft with shrink disc connector, B14 flange
PD... KS/B5	=	**Delik milli, Konik sıktırmalı, B5 flanşlı** Hollow shaft with shrink disc connector, B5 flange

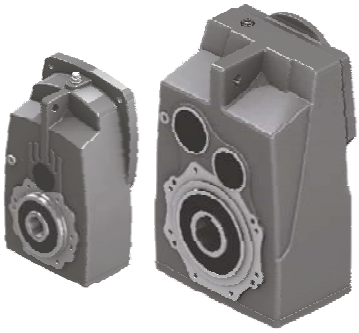
TR KULLANILAN TERİMLER

EN NOMENCLATURE

Giriş Aksamları Input Options	Motor Motor	Kutup Numarası Number of Poles	Motor Seçenekleri Motor Options
W = **Motorsuz girişli redüktörler için aksam** = With free input shaft **IEC** = **DIN 42677' ye göre standart motorlar için aksamlar** = For assembly with IEC standard motors acc. to DIN 42677 **T** = **Turbo kaplin** = Turbo coupling	**Üç fazlı motor** **Motor boyutu 63 - 315** Three phase motor Motor size 63 - 315 **EExell** = **Patlamaya karşı güvenliği arttırılmış üç fazlı motor** = Explosion proof three phase motor increased safety	**2** = **2 Kutuplu** = 2 - Poles **4** = **4 Kutuplu** = 4 - Poles **6** = **6 Kutuplu** = 6 - Poles **4 - 2** = **1:2 oranında hız değiştirici dahlander bağlantısı** = Pole changing 1:2 Dahlander connection **8 - 2** = **1:4 oranında hız değiştirici ayrılmış sarmal dizilişli** = Pole changing 1:4 Separate windings **Diğer kutup kombinasyonları talep karşısında karşılanacaktır** Other pole combinations on request	**BRE** = **Frenli** = With brake **EF** = **Tek fazlı, fanlı** = Separate fan, single phase **ZF** = **Çift fazlı, fanlı** = Separate fan, double phase **DF** = **Üç fazlı, fanlı** = Separate fan, three phase **IG** = **Enkoderli** = With encoder **KK/FK** = **Debriyajlı** = With clutches **SR** = **Toza karşı korumalı fren** = Brake dust - proof **TF** = **Termistörlü** = Thermistor **RG** = **Korozyon korumalı frenli** = Brake corrosion - protected **WU** = **Yumuşak kalkışlı rotor** = Soft start rotor **B** = **Geri dönmeye karşı kilitli** = Backstop **TW** = **Isıya duyarlı** = Thermal trip **HL** = **Manuel frenli motor** = Brake motor with hand release

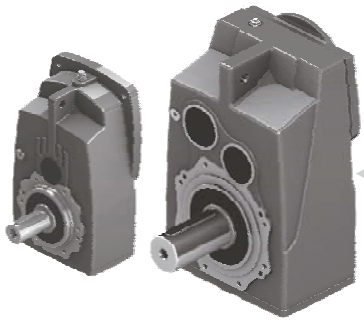
TR PD/PM MODÜLER SİSTEMİ

EN MODULAR SYSTEM OF PD/PM



Delik milli, Paralel şaftlı redüktör
Hollow shaft, Parallel shaft gear units.

24 - 29

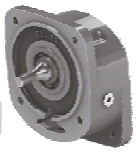


Mil çıkışlı, Paralel şaftlı redüktör
Solid shaft, Parallel shaft gear units.

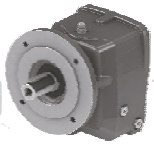
30 - 31

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)



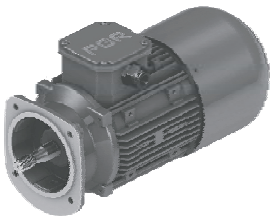
Helisel Dişlili İndirgeç
Helical Reduction Gearcase



Helisel Dişlili Flanşlı Redüktör
Helical Gearbox Flange Mounted

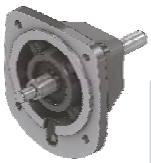
IEC Adaptörü
IEC Adapter

W Kovanı
Free Input Shaft

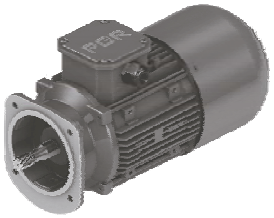


Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)



W Kovanı
Free Input Shaft



Elektrik Motoru (Frenli)
Electric Motor (With Brake)

IEC Adaptörü
IEC Adapter

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

TR MEVCUT DİZAYNLARA GENEL BAKIŞ

EN OVERVIEW TO AVAILABLE DESIGNS

Kısaltmalar Abbrev.	Anlamı Meaning	Paralel Şaftlı Redüktör Parallel Shaft Gear Units
D	**Delik milli** Hollow shaft	✓
M	**Mil çıkışlı** Solid shaft	✓
B5	**B5 Flanşı** Flange B5	✓
B14	**B14 Flanşı** Flange B14	✓
Ç	**Çektirme elemanı** Fixing element	✓
LT	**Lastik takoz** Rubber buffer for torque arm	✓
KS	**Konik sıktırma** Shrink disc connector	✓
DIN 5480	**Kayıcılı delik milli DIN 5480** Splined hollow shaft, DIN 5480	✓ (2)
KK	**Koruma kapağı** Cover as a touch guard	✓
IEC	**IEC Adaptörü** Adapter for mounting standard motors to gear unit	✓
W	**W Kovanı** Free input shaft	✓
B	**Kilit** Integrated Backstop	✓
GR	**Güçlendirilmiş rulman** Reinforced bearing	✓
WB	**W Kilidi** Backstop in W adapter	✓
GKS	**Güçlendirilmiş konik sıktırma** Hollow shaft with reinforced shrink disc connector	✓
GB5	**Güçlendirilmiş B5 Flanşı** Agitator design	✓
PD A - B - C	**Delik milli, ayak montajlı** Hollow shaft, foot mounted	✓ (1)
PM A - B - C	**Mil çıkışlı, ayak montajlı** Solid shaft, foot mounted	✓ (1)
PD... B5	**Delik milli, B5 Flanşlı** Hollow shaft, Flange B5	✓
PD... B14	**Delik milli, B14 Flanşlı** Hollow shaft, Flange B14	✓
PM... B5	**Mil çıkışlı, B5 Flanşlı** Solid shaft, Flange B5	✓
Ç-LT	**Çektirme elemanlı, Lastik takozlu** Hollow shaft with fixing element, Rubber buffer for torque arm	✓
KS-LT	**Konik sıktırmalı, Lastik takozlu** Hollow shaft with shrink disc connector, Rubber buffer for torque arm	✓
Ç-B5	**Çektirmeli, B5 Flanşlı** Hollow shaft with fixing element, Flange B5	✓
Ç-B14	**Çektirmeli, B14 Flanşlı** Hollow shaft with fixing element, Flange B14	✓
KS-B5	**Konik sıktırmalı, B5 Flanşlı** Hollow shaft with shrink disc connector, Flange B5	✓
KS-B14	**Konik sıktırmalı, B14 Flanşlı** Hollow shaft with shrink disc connector, Flange B14	✓

✓ Mevcut tasarımlar onay işareti ile belirtilmiştir.

1-) PD/PM A02 - B02 - C13 redüktör tipleri ayak montajı opsiyonu içermektedir.
2-) DIN 5480 opsiyonu PD A02 - B02 - C13 ile PD 102 dahil ve üst gövdeler için mevcut değildir.

✓ Sign is presented which designs are existed for gear units.

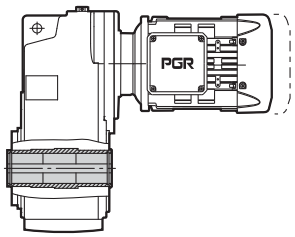
1-) PD/PM A02 - B02 - C13 gear unit series include foot mounted option
2-) DIN 5480 option is not available for PD A02 - B02 - C13 and PD 102 inclusive and higher gear unit types.

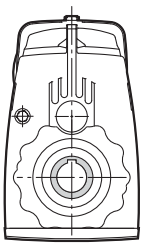
TR ÜRÜNLERİMİZ

1) PD 32... - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Motorlu redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With motor

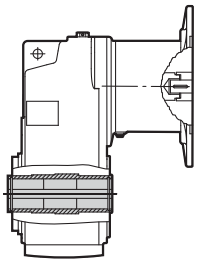


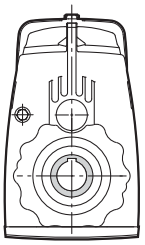


PD 32... - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, IEC adaptörlü redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With IEC adapter

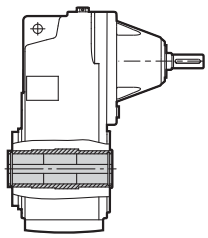


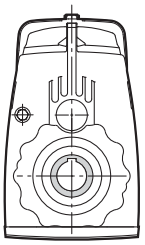


PD 32... - W

Delik milli, İki kademeli, Paralel şaftlı, W kovanlı redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With free input shaft



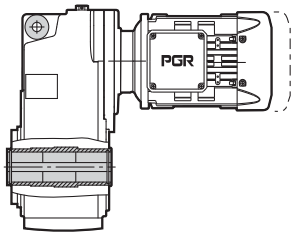


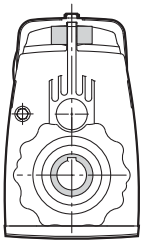
---

2) PD 32... LT - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Lastik takozlu, Motorlu redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and motor

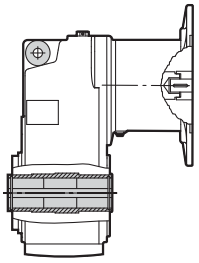


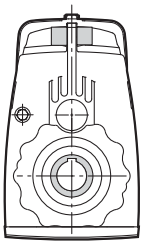


PD 32... LT - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Lastik takozlu, IEC adaptörlü redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for toque arm and IEC adapter

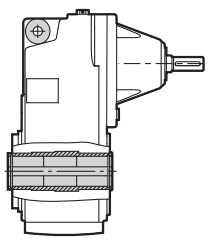


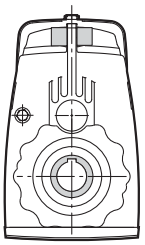


PD 32... LT - W

Delik milli, İki kademeli, Paralel şaftlı, Lastik takozlu, W kovanlı redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and free input shaft





EN PRODUCTS

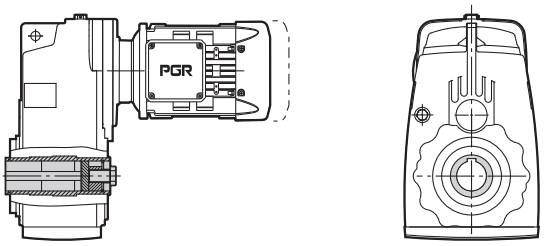
TR ÜRÜNLERİMİZ

EN PRODUCTS

3) PD 32... Ç - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, Motorlu redüktör

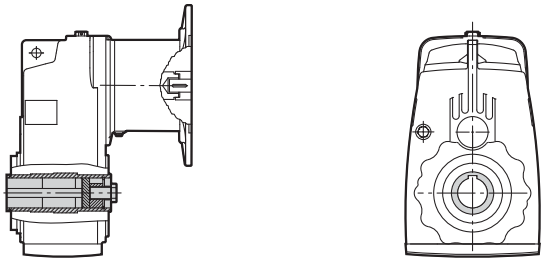
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element and motor



PD 32... Ç - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, IEC adaptörlü redüktör

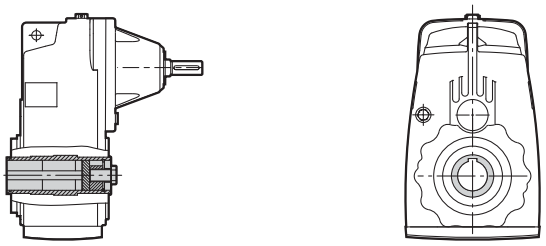
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing elements and IEC adapter



PD 32... Ç - W

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, W kovanlı redüktör

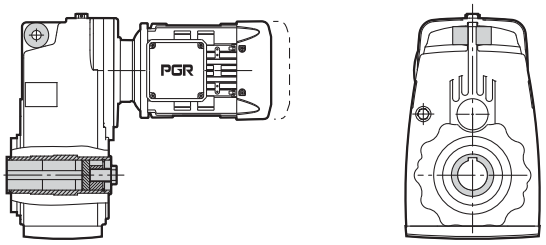
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing elements and free input shaft



4) PD 32... Ç / LT - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, Lastik takozlu, Motorlu redüktör

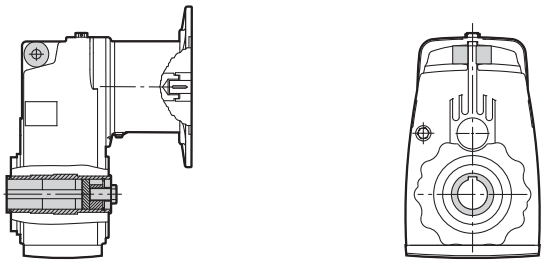
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, rubber buffer for torque arm and motor



PD 32... Ç / LT - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, Lastik takozlu, IEC adaptörlü redüktör

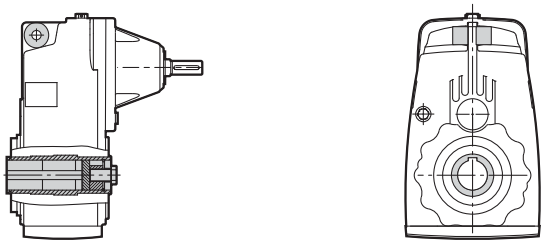
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, rubber buffer for toque arm and IEC adapter



PD 32... Ç / LT - W

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, Lastik takozlu, W kovanlı redüktör.

Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, rubber buffer for torque arm and free input shaft



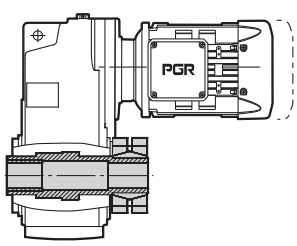
TR ÜRÜNLERİMİZ

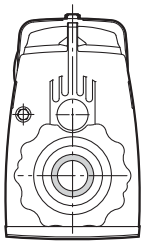
EN PRODUCTS

5) PD 32... KS - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, Motorlu redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With motor

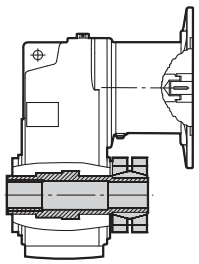


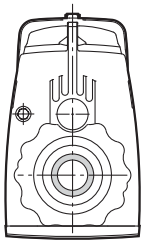


PD 32... KS - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, IEC adaptörlü redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With IEC adapter

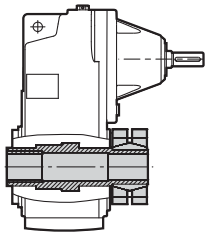


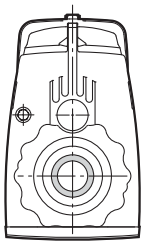


PD 32... KS - W

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, W kovanlı redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With free input shaft



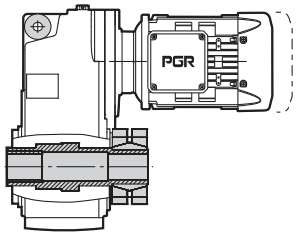


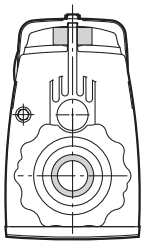
---

6) PD 32... KS/ LT - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, Lastik takozlu, Motorlu redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and motor

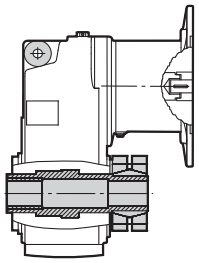


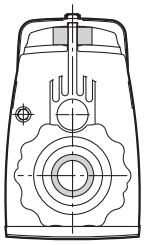


PD 32... KS / LT - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, Lastik takozlu, IEC adaptörlü redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With rubber buffer for toque arm and IEC adapter

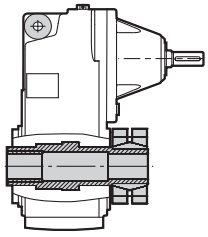


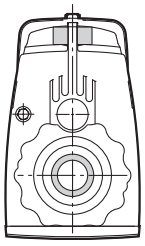


PD 32... KS / LT - W

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, Lastik takozlu, W kovanlı redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and free input shaft





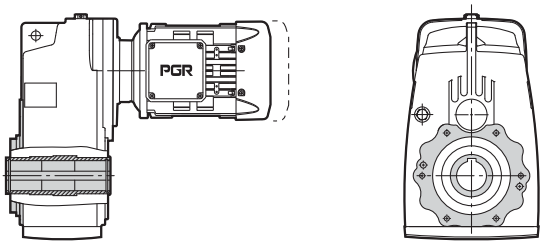
TR ÜRÜNLERİMİZ

EN PRODUCTS

7) PD 32... B14 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, B14 Flanşlı, Motorlu redüktör

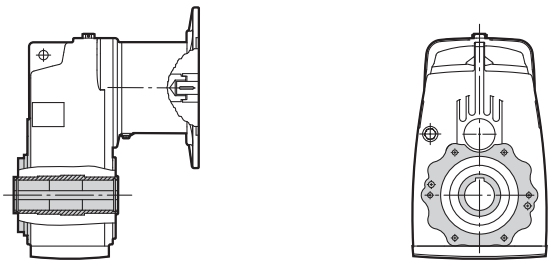
Hollow shaft, Double reduction, Parallel shaft gear unit, With B14 flange and motor



PD 32... B14 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, B14 Flanşlı, IEC adaptörlü redüktör

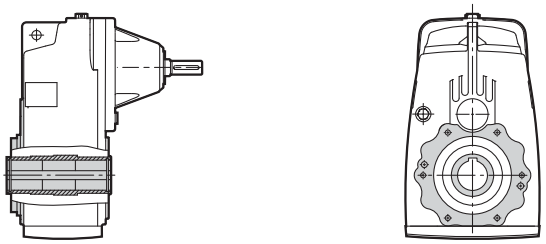
Hollow shaft, Double reduction, Parallel shaft gear unit, With B14 flange and IEC adapter



PD 32... B14 - W

Delik milli, İki kademeli, Paralel şaftlı, B14 Flanşlı, W kovanlı redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With B14 flange and free input shaft

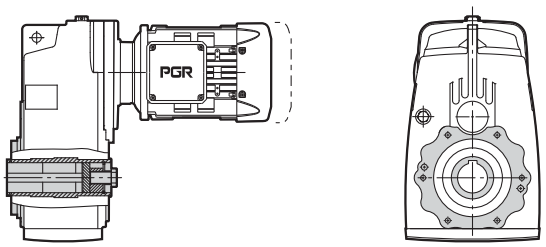


---

8) PD 32... Ç / B14 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B14 Flanşlı, Motorlu redüktör

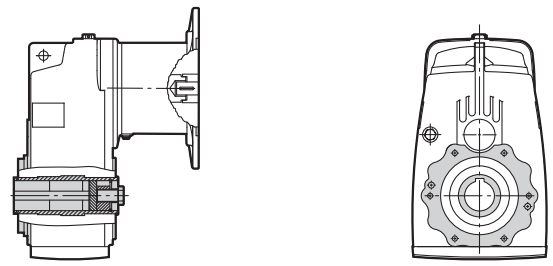
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, B14 flange and motor



PD 32... Ç / B14 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B14 Flanşlı, IEC adaptörlü redüktör

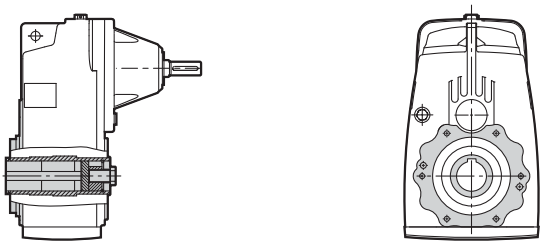
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, B14 flange and IEC adapter



PD 32... Ç / B14 - W

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B14 Flanşlı, W kovanlı redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, B14 flange and free input shaft



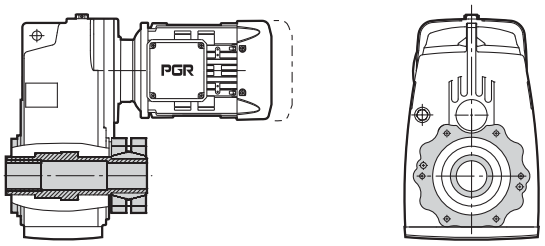
TR ÜRÜNLERİMİZ

EN PRODUCTS

9) PD 32... KS / B14 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B14 Flanşlı, Motorlu redüktör

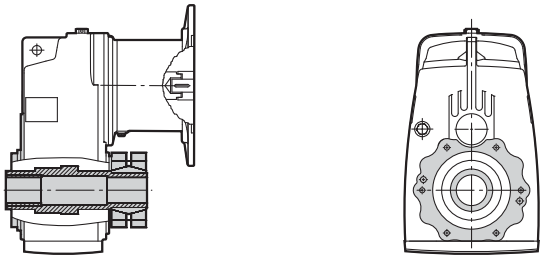
Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B14 flange and motor



PD 32... KS / B14 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B14 Flanşlı, IEC adaptörlü redüktör

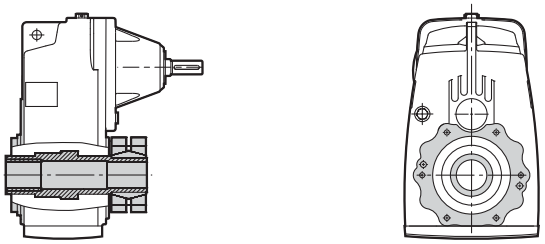
Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B14 flange and IEC adapter



PD 32... KS / B14 - W

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B14 Flanşlı, W kovanlı redüktör.

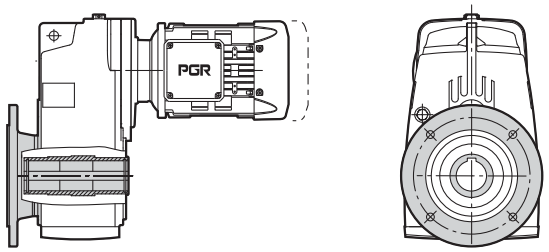
Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B14 flange and free input shaft



10) PD 32... B5 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, B5 Flanşlı, Motorlu redüktör

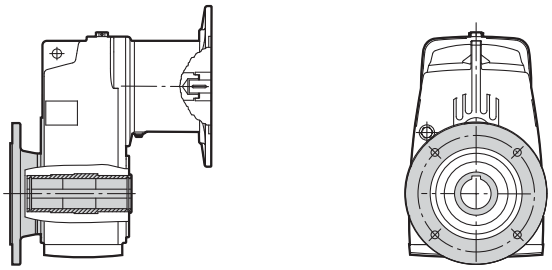
Hollow shaft, Double reduction, Parallel shaft gear unit, With B5 flange and motor



PD 32... B5 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, B5 Flanşlı, IEC adaptörlü redüktör

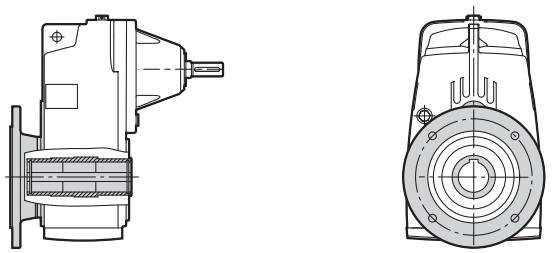
Hollow shaft, Double reduction, Parallel shaft gear unit, With B5 flange and IEC adapter



PD 32... B5 - W

Delik milli, İki kademeli, Paralel şaftlı, B5 Flanşlı, W kovanlı redüktör

Hollow shaft, Double reduction, Parallel shaft gear unit, With B5 flange and free input shaft



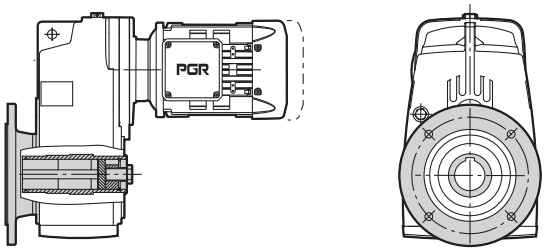
TR ÜRÜNLERİMİZ

EN PRODUCTS

11) PD 32... Ç / B5 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B5 Flanşlı, Motorlu redüktör

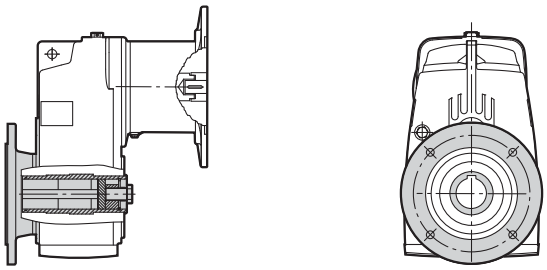
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, B5 flange and motor



PD 32... Ç / B5 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B5 Flanşlı, IEC adaptörlü redüktör

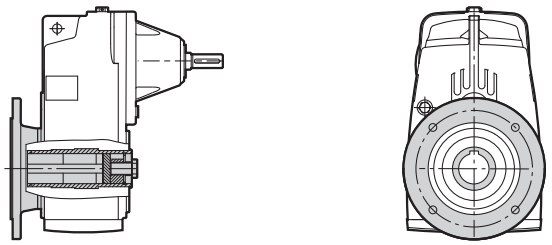
Hollow shaft, Double reduction, Parallel shaft gear unit, With fixing element, B5 flange and IEC adapter



PD 32... Ç / B5 - W

Delik milli, İki kademeli, Paralel şaftlı, Çektirmeli, B5 Flanşlı, W kovanlı redüktör.

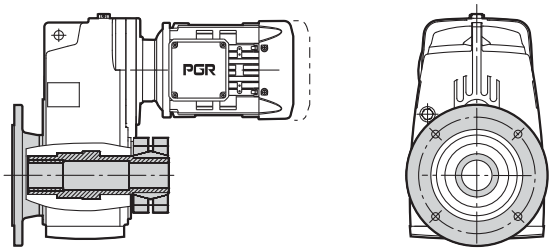
Hollow shaft, Double reduction, parallel shaft gear unit, With fixing element, B5 flange and free input shaft



12) PD 32... KS / B5 - 80M/4A

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B5 Flanşlı, Motorlu redüktör

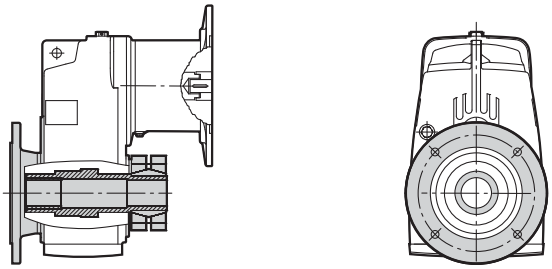
Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B5 flange and motor



PD 32... KS / B5 - IEC 90

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B5 Flanşlı, IEC adaptörlü redüktör

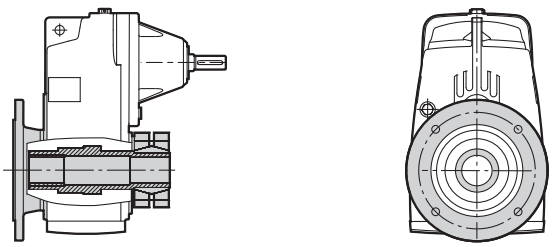
Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B5 flange and IEC adapter



PD 32... KS / B5 - W

Delik milli, İki kademeli, Paralel şaftlı, Konik sıktırmalı, B5 Flanşlı, W kovanlı redüktör

Hollow shaft with shrink disc connector, Double reduction, Parallel shaft gear unit, With B5 flange and free input shaft



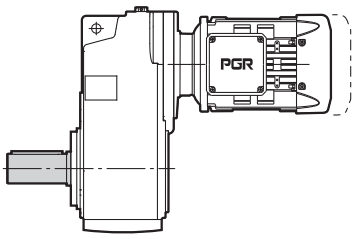
TR ÜRÜNLERİMİZ

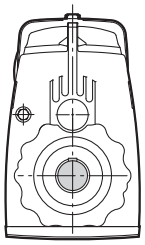
EN PRODUCTS

1) PM 32... - 80M/4A

Mil çıkışlı, İki kademeli, Paralel şaftlı, Motorlu redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With motor

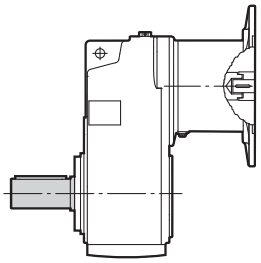


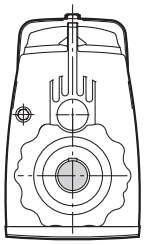


PM 32... - IEC 90

Mil çıkışlı, İki kademeli, Paralel şaftlı, IEC adaptörlü redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With IEC adapter

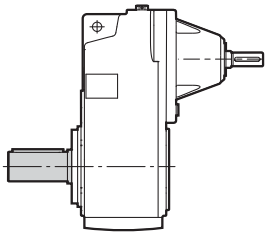


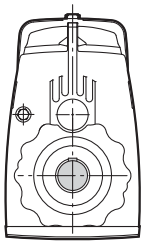


PM 32... - W

Mil çıkışlı, İki kademeli, Paralel şaftlı, W kovanlı redüktör.

Solid shaft, Double reduction, Parallel shaft gear unit, With free input shaft



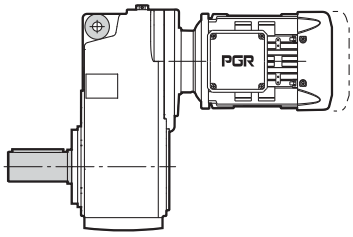


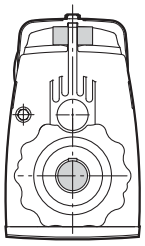
---

2) PM 32... LT - 80M/4A

Mil çıkışlı, İki kademeli, Paralel şaftlı, Lastik takozlu, Motorlu redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and motor

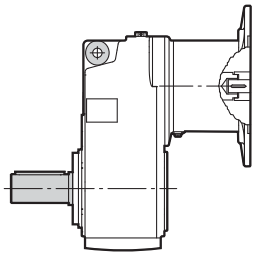


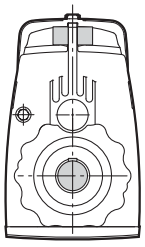


PM 32... LT - IEC 90

Mil çıkışlı, İki kademeli, Paralel şaftlı, Lastik takozlu, IEC adaptörlü redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for toque arm and IEC adapter

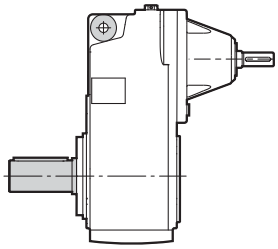


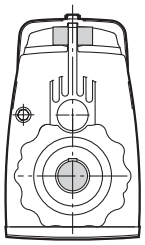


PM 32... LT - W

Mil çıkışlı, İki kademeli, Paralel şaftlı, Lastik takozlu, W kovanlı redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With rubber buffer for torque arm and free input shaft





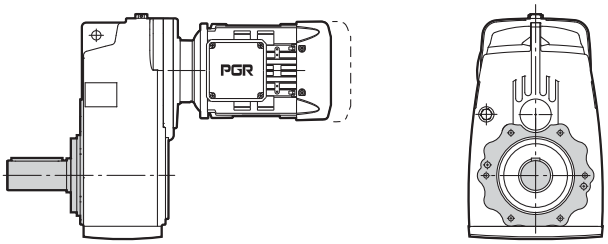
TR ÜRÜNLERİMİZ

EN PRODUCTS

3) PM 32... B14 - 80M/4A

Mil çıkışlı, İki kademeli, Paralel şaftlı, B14 Flanşlı, Motorlu redüktör

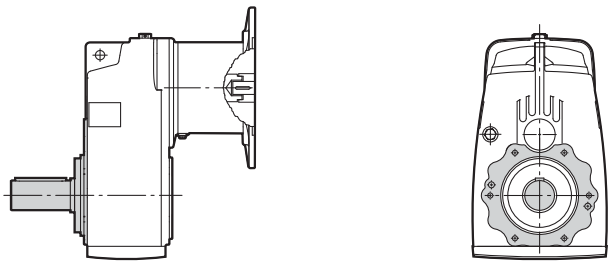
Solid shaft, Double reduction, Parallel shaft gear unit, With B14 flange and motor



PM 32... B14 - IEC 90

Mil çıkışlı, İki kademeli, Paralel şaftlı, B14 Flanşlı, IEC adaptörlü redüktör

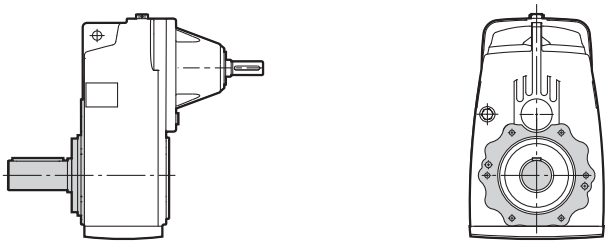
Solid shaft, Double reduction, Parallel shaft gear unit, With B14 flange and IEC adapter



PM 32... B14 - W

Mil çıkışlı, İki kademeli, Paralel şaftlı, B14 Flanşlı, W kovanlı redüktör.

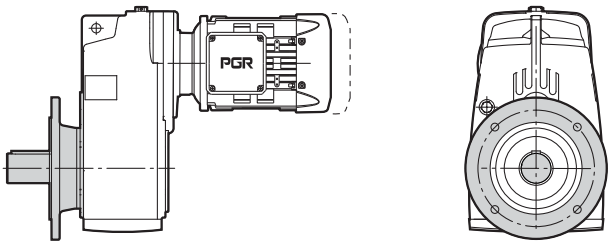
Solid shaft, Double reduction, Parallel shaft gear unit, With B14 flange and free input shaft



4) PM 32... B5 - 80M/4A

Mil çıkışlı, İki kademeli, Paralel şaftlı, B5 Flanşlı, Motorlu redüktör

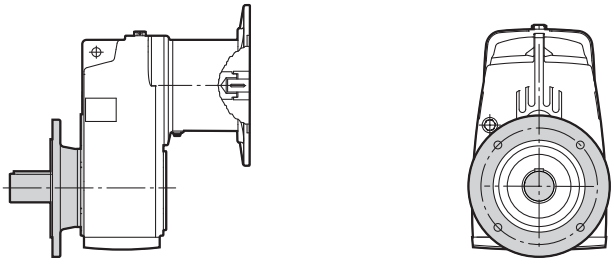
Solid shaft, Double reduction, Parallel shaft gear unit, With B5 flange and motor



PM 32... B5 - IEC 90

Mil çıkışlı, İki kademeli, Paralel şaftlı, B5 Flanşlı, IEC adaptörlü redüktör

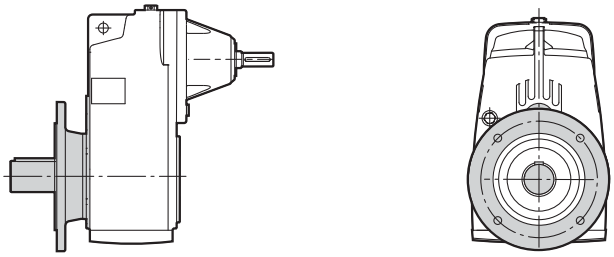
Solid shaft, Double reduction, Parallel shaft gear unit, With B5 flange and IEC adapter



PM 32... B5 - W

Mil çıkışlı, İki kademeli, Paralel şaftlı, B5 Flanşlı, W kovanlı redüktör

Solid shaft, Double reduction, Parallel shaft gear unit, With B5 flange and free input shaft

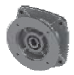


PGR DRIVE TECHNOLOGIES

TR SİPARİŞ ÖRNEĞİ

EN EXAMPLE FOR ORDERING

PD (PM) 93/52 410.49 B5 - 132 M / 4 BRE

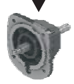

PAM

63
71
80
90
100
112
132
160
180
200
225
250
280
315


IEC

63
71
80
90
100
112
132
160
180
200
225
250
280
315

111 - 169


W

Motorlu
With Motor

Gövde Büyüklüğü
Case Width
132 M

63 M
71 M
80 M
90 S/L
100 L
112 M
132 S/M
160 M/L
180 M/L
200 L
225 S/M
250 S/M/L
280 S/M/L
315 S/M/L

Kutup sayısı
Number of Poles
4

2
4
6
4 - 2
8 - 2

Diğer Kutup kombinasyonları istendiğinde karşılanacaktır.
Other pole combinations on request

Motor Aksesuarları
Motor Accessories
BRE

BRE
RG
SR
HL
TF
TW
WU
EF
ZF
DF
IG
KK/FK
RLS

21

İges: Tahvil
İges: Reduction
69 - 108

Standart Ürünler
Available standard products
B5: B5 Flanşlı
B5: B5 Flange

LT	Ç*	Ç/LT*	KS*	KS/LT*	B5
B14	Ç/B14*	Ç/B5*	KS/B5*	KS/B14*	24 - 31

*** İşareti ile belirtilen opsiyonlar sadece Polat Delik Milli serisi için geçerlidir.**
* Sign shows that these option is acceptable for only Polat Hollow Shaft gear unit series.

9
Gövde Büyüklüğü
Case Width

A0
B0
C1
1
2
3
4
5
6
7
8
9
10
11
12

3
Kademe
Reduction

2
3

111 - 169

PF GÖVDE
PF CASE

5
Gövde Büyüklüğü
Case Width

0
1
2
3
4
5

2
Kademe
Reduction

2

171 - 193

Tip :POLAT Delik Milli Redüktör (POLAT Mil Çıkışlı Redüktör) PD/PM
Type :POLAT Hollow Shaft Gear Unit (POLAT Solid Shaft Gear Unit) PD/PM

Not :Redüktör tiplerinden PD/PM A02, PD/PM B02 dişli üniteleri 2 kademeli, PD/PM C13 dişli ünitesi de 3 kademeli olup A0, B0 ve C1 gövde büyüklüğünü göstermemektedir.

Note :Gear units which are PD/PM A02, PD/PM B02 and PD/PM C13 are 2, 2 and 3 stage reduction respectively, but A0, B0 and C1 codes in this gear unit type don't determine case width.

TR YAĞLAMA

Çalıştırmadan veya uzun süreli olarak depoya kaldırmadan önce ventildeki tapa sökülüp, havalandırma tapası takılarak aşırı basınç ve yağ sızıntısı önlenmelidir.

Redüktörler fabrikadan çalışmaya hazır ve mineral yağ doldurulmuş olarak gönderilirler. Bütün dişli üniteler aşağıdaki tablonun ortam sıcaklığı sütununda listesi verilen yağlayıcı (normal) ile dolu olarak sevk edilirler. Diğer ortam sıcaklıkları için listede verilen yağlayıcılar ek ücret karşılığında temin edilebilir.

Yağlayıcı her 10000 çalışma saatinde veya 2 yıl sonra değiştirilmelidir. Sentetik yağlar için yağ değişikliği her 20000 çalışma saatinde veya 4 yıl sonra yapılmalıdır. Zorlu çalışma koşullarında örneğin yüksek rutubet ve büyük sıcaklık değişimleri ve kötü çevre şartları gibi durumlarda daha kısa aralıklarla yağ değişimi yapılması tavsiye edilir. Yağ değişiminin üniteyi komple temizleme işlemi ile birleştirilmesi önerilir. Rulman içerisindeki gres her 10000 çalışma saatinde değiştirilmeli ve yeni gres ile doldurulmalıdır. Bu işlem yapılırken rulmanın 1/3 ünün gresle dolu olması sağlanmalıdır.

EN LUBRICATION

Lubricating oil properties and selection of oil must be correct for the reducers to have long life and to run with good performance. In order to prevent oil leakage during long period storage due to inner pressure, top plug should be removed according to assembly type and venting plug should be mounted.

Reducers are delivered as being filled with mineral oil. Following tables are presented properties of oils depend on ambient temperature. Gear units which is W or IEC adapter type and gear motors are charged with lubricant. Ambient temperature is played important role for choosing lubricant. Relation between ambient temperature and properties of oils are shown in table.

Lubricants must be changed every 10000 hours or after two years, but this time changes when synthetic oil is used. Lubricants must be changed every 20000 hours or after four years where synthetic oil is used. However, operating conditions should be considered for changing oil time eg. in aggressive environment large temperature changing, oil must be changed frequently. For bearings grease should be changed every 10000 running time and it should be done with fresh grease and least 1/3 of bearing must be covered.

Not: Sentetik ve mineral yağlayıcılar birbirine karıştırılmamalıdır.
Note: Consider that different kind of oil (synthetic and mineral oil) should not be mixed.

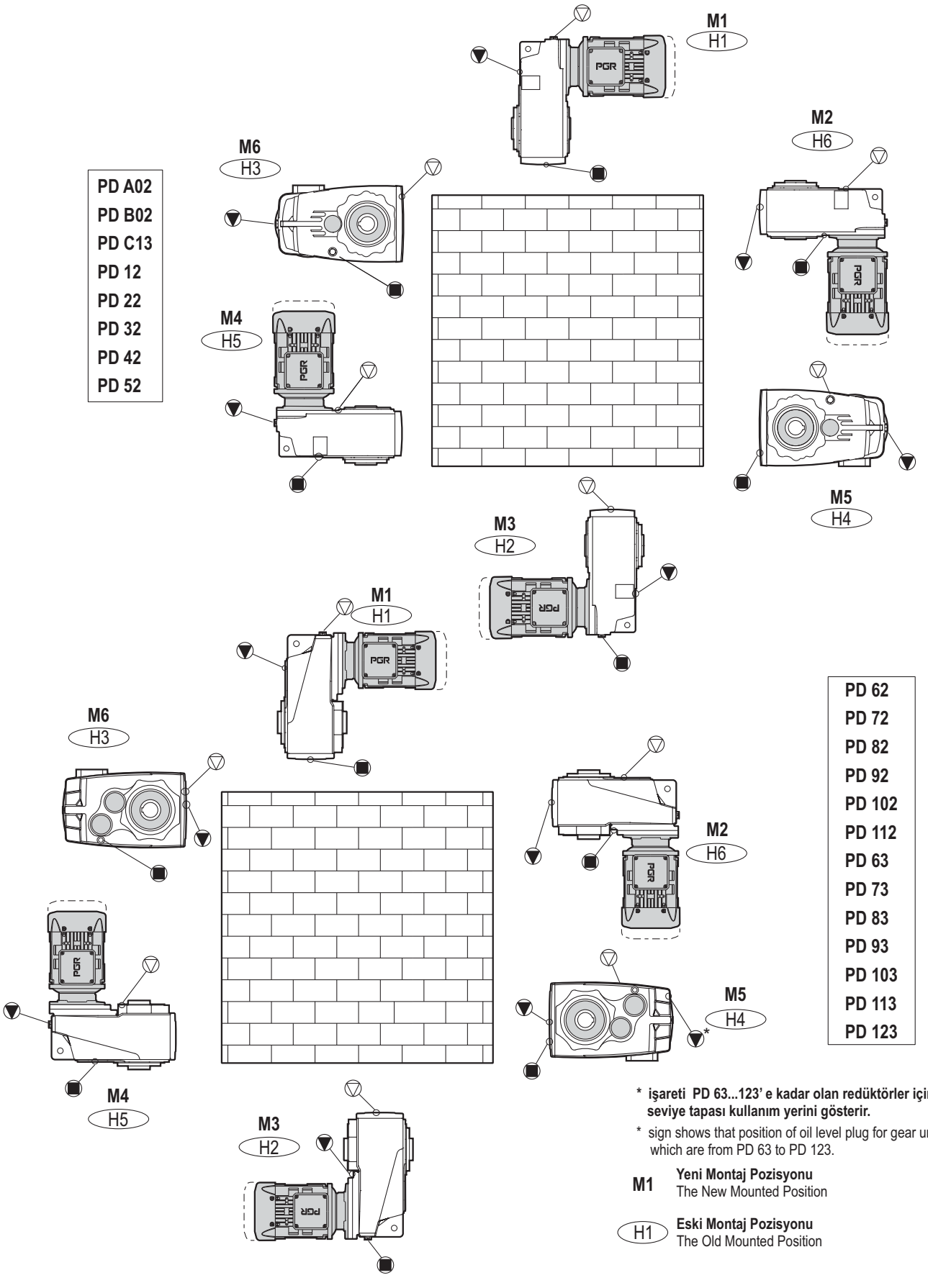
Redüktör Tipi Type of gearbox	Yağ Tipi Type of Lubricant	Ortam Sıcaklığı Ambient Temp. °C	ISO vizkozite sınıfı ISO viscosity class	SHELL	MOBİL	BP	ESSO	DEA	ARAL	CASTROL	TRIBOL	KLÜBER
Helisel Dişlili Redüktör Helical Gearboxes	Mineral yağ Mineral oil	- 5...40 Normal -15...25 # - 50...-15	ISO VG 220 ISO VG 100 ISO VG 15	Shell Omala Oel 220 Shell omala Oel 100 Shell Tellus Oel T 15	Mobilgear 600 XP 220 Mobilgear 600 XP 150 Mobil DTE 10 Excel 15	Energol GR-XP 220 Energol GR-XP 100 Bartran HV 15	Spartan EP 220 Spartan EP 100 Univis J 13	Deagear DX SAE 85W-90 Falcon CLP 220 Deagear DX SAE 80W Falcon CLP 150 Alrkraft Hydraulic Oil 15	Degol BG 220 Degol BG 100 Vitamol 1010	Alpha SP 220 Alpha MW 220 Alpha MAX 220 Alpha SP 100 Alpha MW 100 Alpha MAX 220 Hyspin AWS 15 Hyspin SP 15 Hyspin ZZ 15	Tribol 1100/220 Tribol 1100/100 Tribol 770	Klüberoil GEM 1-220 Klüberoil GEM 1-100 Isoflex MT 30 rot
	Sentetik yağ Synthetic oil	- 25...80	ISO VG 220	Shell Tivela Oel WB	Mobil Glygoyle 30	Enersyn SG-XP 220	ESSO Glycolube 220	Polydea PGLP 220	Degol GS 220	Alphasyn PG 220	Tribol 800/220	Klübersynth GH 6 - 220
	Biyolojik Sentetik yağ Biodegradable oil	- 25...80	ISO VG 220					Plantogear 220 S	Bio-Degol S 220	Carelube GES 220	Tribol Bio Top1418/220	Klüber - Bio GM 2 - 220
	Gıda yağları Food - grade oil	- 25...80	ISO VG 220	Cassida 220	Mobil SHC Cibus 220		GEAR OIL FM 220	Renolin 220	Degol FG 220	OPTIMOL optileb GE 220	Tribol Food Proof 1810/220	Klüberoil 4UH1 - 220
	Akışkan sentetik gres Synthetic fluid grease	- 35...60		Shell Tivela compound A	Mobil SHC Polyrex 005	Enersyn GSF	Fliessfett S 420	Glissando 6833 EP 00	Aralub SKA 00	Alpha Gel 00	Tribol 800/1000	Klübersynth GE 46 -1200
Rulmanlar Anti Friction Bearings	Mineral yağlı gres Mineral oil grease	- 30...60 Normal # - 50...110		Alvania Fett R 3 oder Alvania Fett RL 3	Mobilux 3 Mobilux 2	Energrease LS 3 Energrease LS 2	Beacon 3 Beacon 2	Glissando 30 Glissando 20 Glissando FT 3	Aralub HL 3 Aralub HL 2 Aralub BAB EP 2	Spheerol AP 3 Spheerol AP 2 LZV - EP Spheerol EPL 2	Tribol 3030/100-2 Tribol 4020/220-2 Tribol 3785	Centoplex 3 Centoplex 2
	Sentetik gres Synthetic grease	# - 50...110		Aero Shell Grease 16 oder 7	Mobiltemp SHC 32		Beacon 325	Discor 8 - EP 2	Aralub SKL 2	Product 783/46	Tribol 3499	Isoflex Topas NB52

-30°C altında ve 60°C üzerindeki ortam sıcaklıklarında şafttaki sızdırmazlık elemanı için özel kalitedeki malzeme kullanılmalıdır.

Different materials should be used for sealing rings at operation temperature where temperature is below -30 ºC and above 60 ºC.

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



* **işareti PD 63...123' e kadar olan redüktörler için yağ seviye tapası kullanım yerini gösterir.**

* sign shows that position of oil level plug for gear units which are from PD 63 to PD 123.

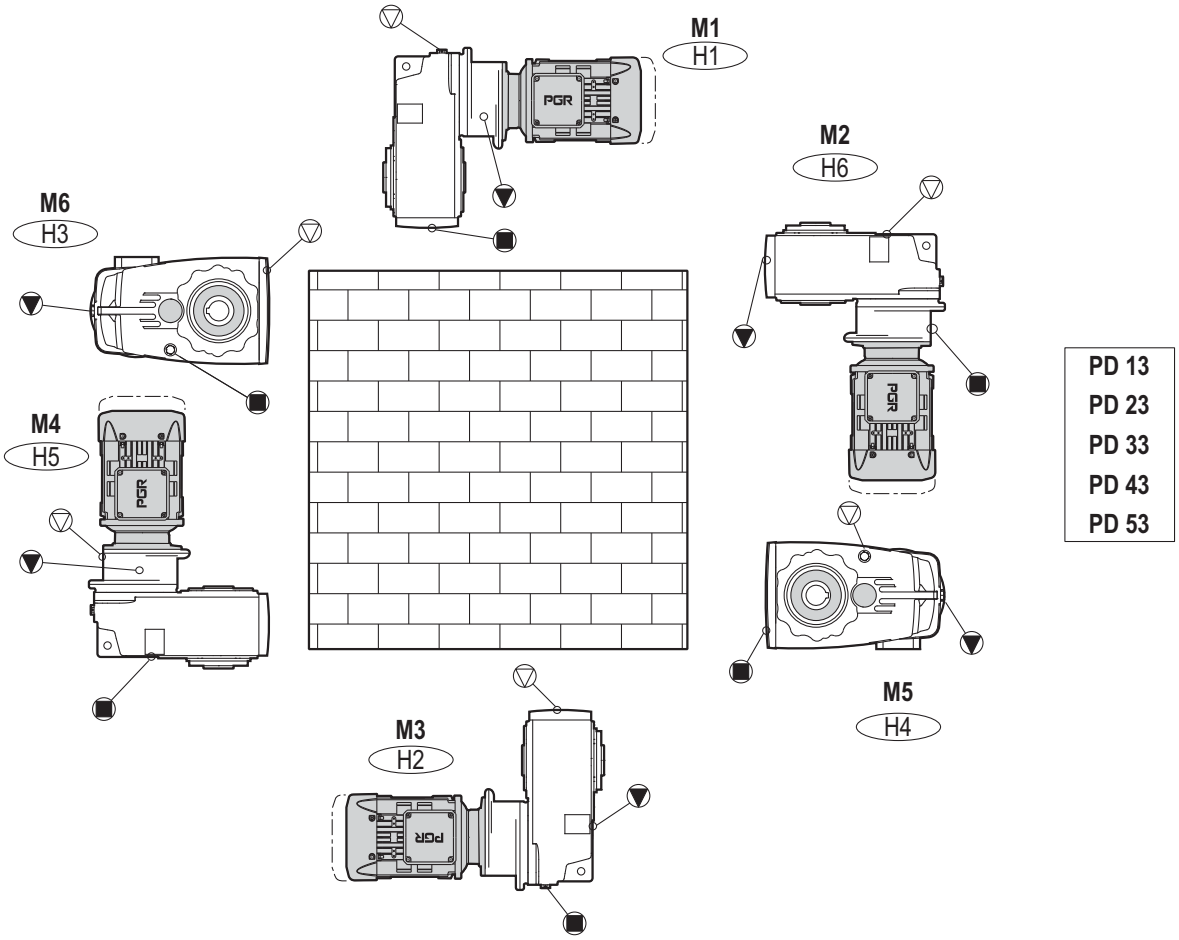
M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

H1 **Eski Montaj Pozisyonu**
The Old Mounted Position

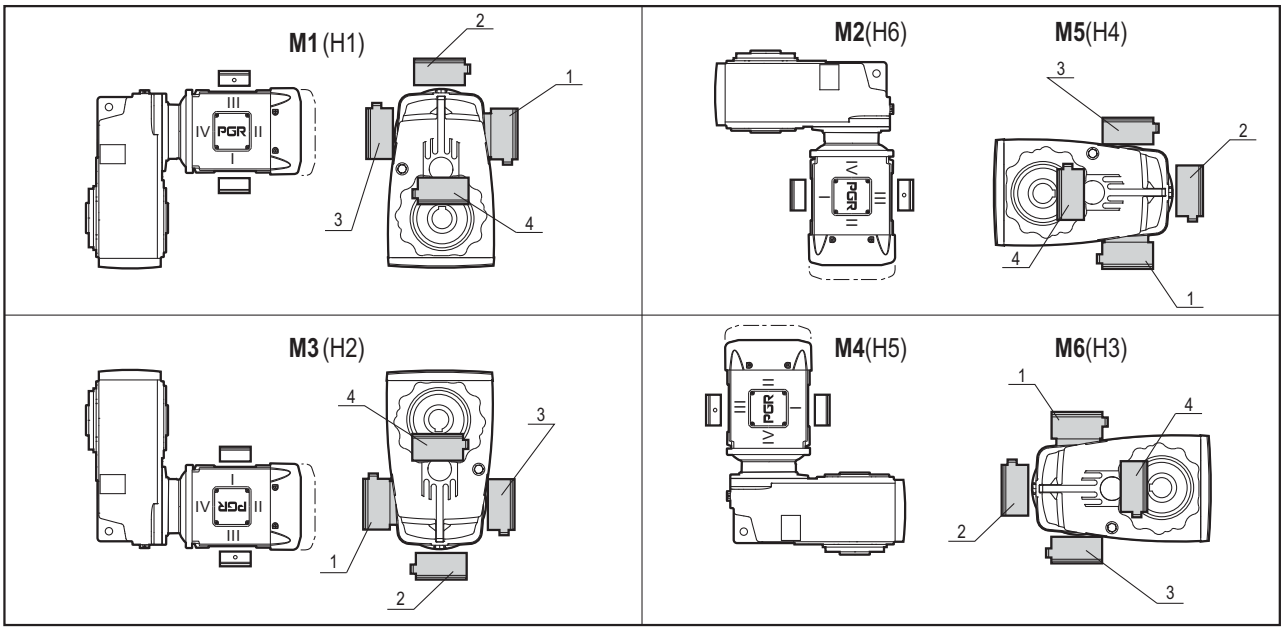
Havalandırma tapası / Vent plug **Boşaltma tapası** / Drain plug **Yağ Seviye tapası** / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



TERMİNAL KUTUSU VE KABLO GİRİŞ YÖNLERİ / POSITION OF TERMINAL BOX AND CABLE ENTRY



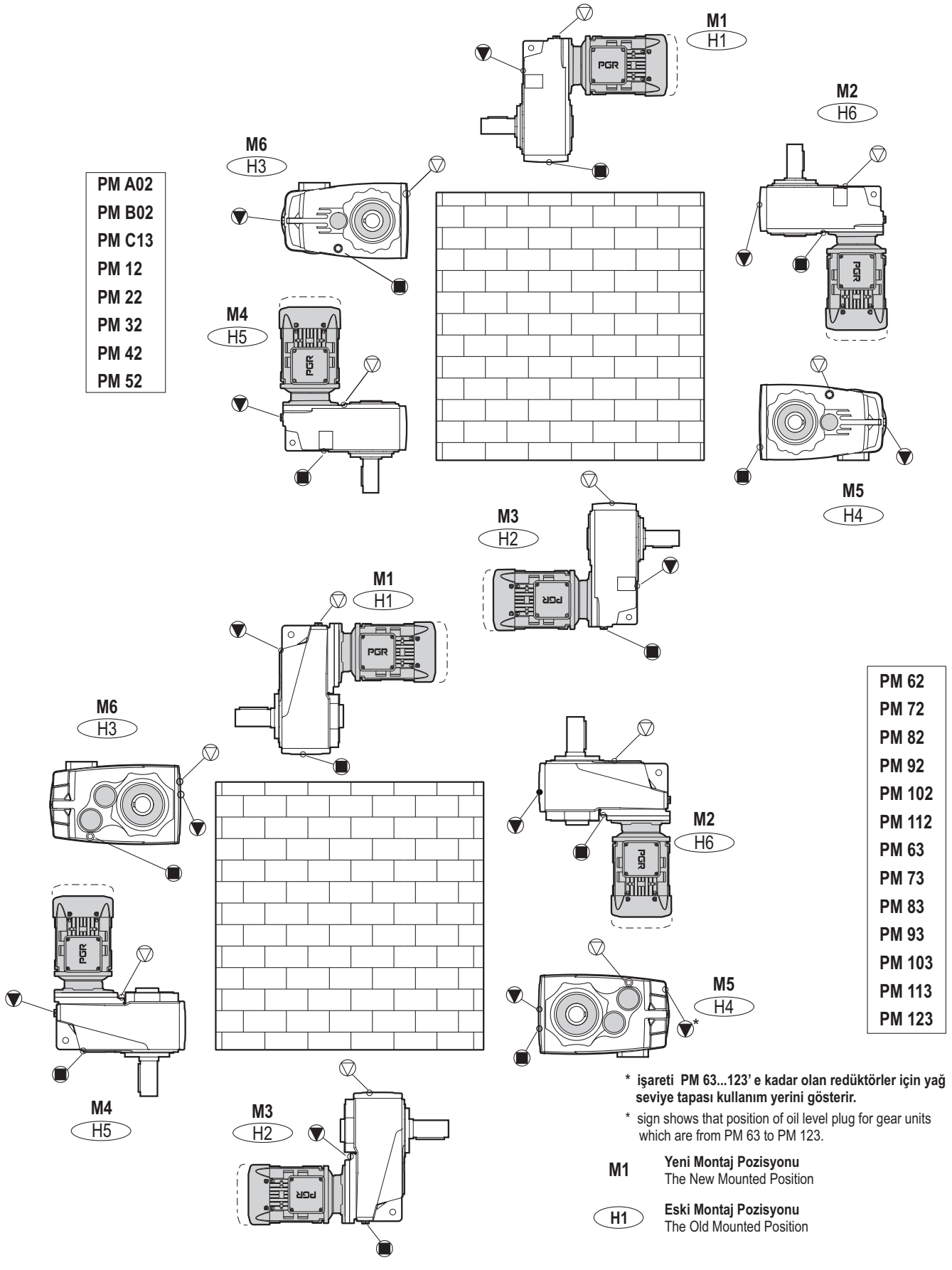
M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

(H1) **Eski Montaj Pozisyonu**
The Old Mounted Position

Havalandırma tapası / Vent plug **Boşaltma tapası** / Drain plug **Yağ Seviye tapası** / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



*** işareti PM 63...123' e kadar olan redüktörler için yağ seviye tapası kullanım yerini gösterir.**

* sign shows that position of oil level plug for gear units which are from PM 63 to PM 123.

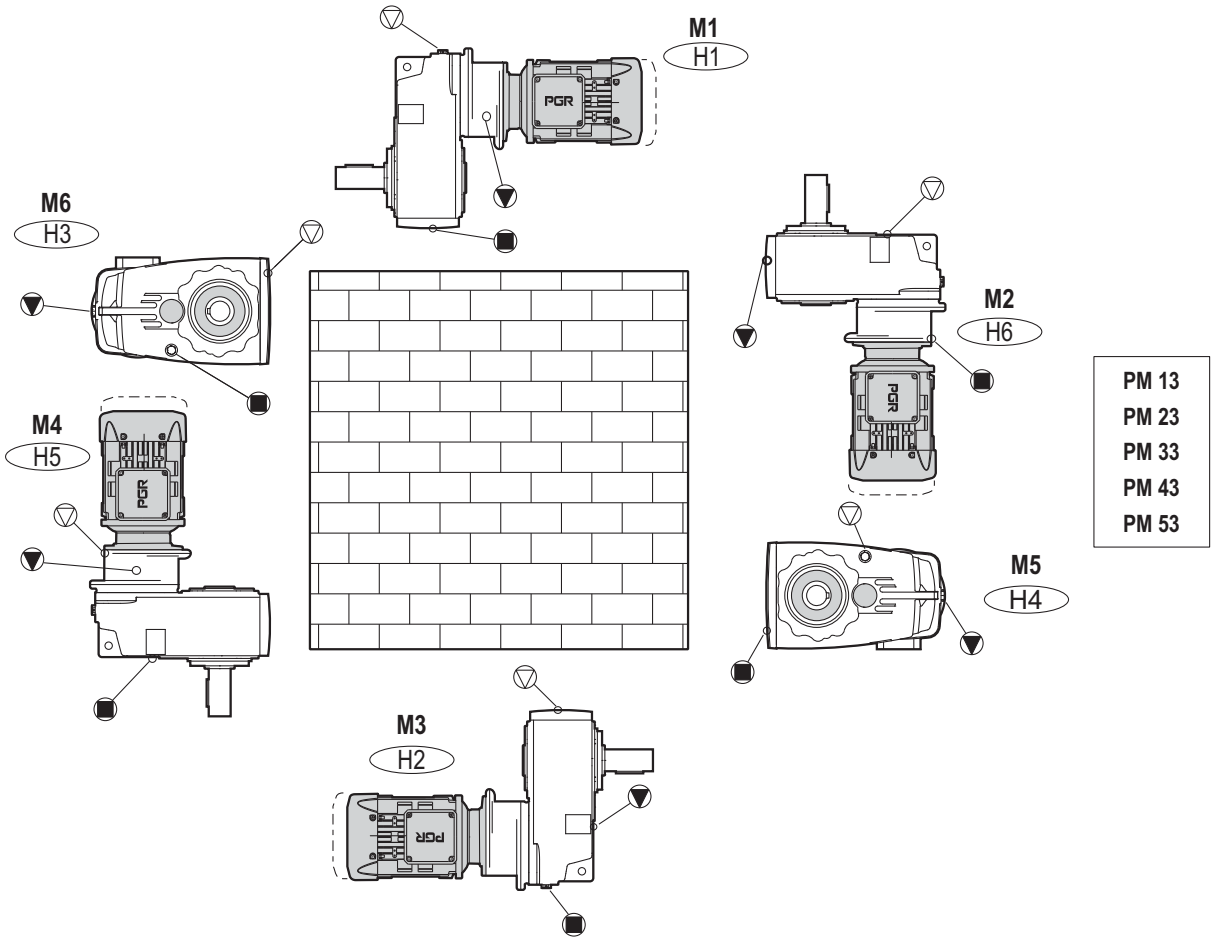
M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

H1 **Eski Montaj Pozisyonu**
The Old Mounted Position

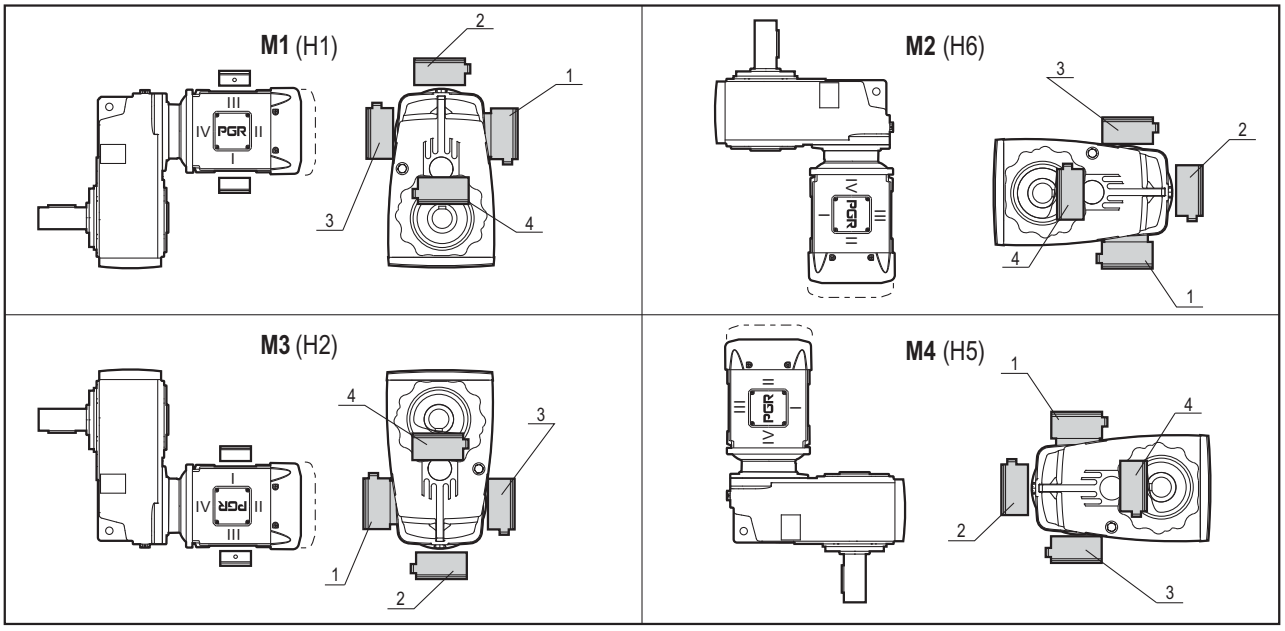
Havalandırma tapası / Vent plug **Boşaltma tapası** / Drain plug **Yağ Seviye tapası** / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



TERMİNAL KUTUSU VE KABLO GİRİŞ YÖNLERİ / POSITION OF TERMINAL BOX AND CABLE ENTRY



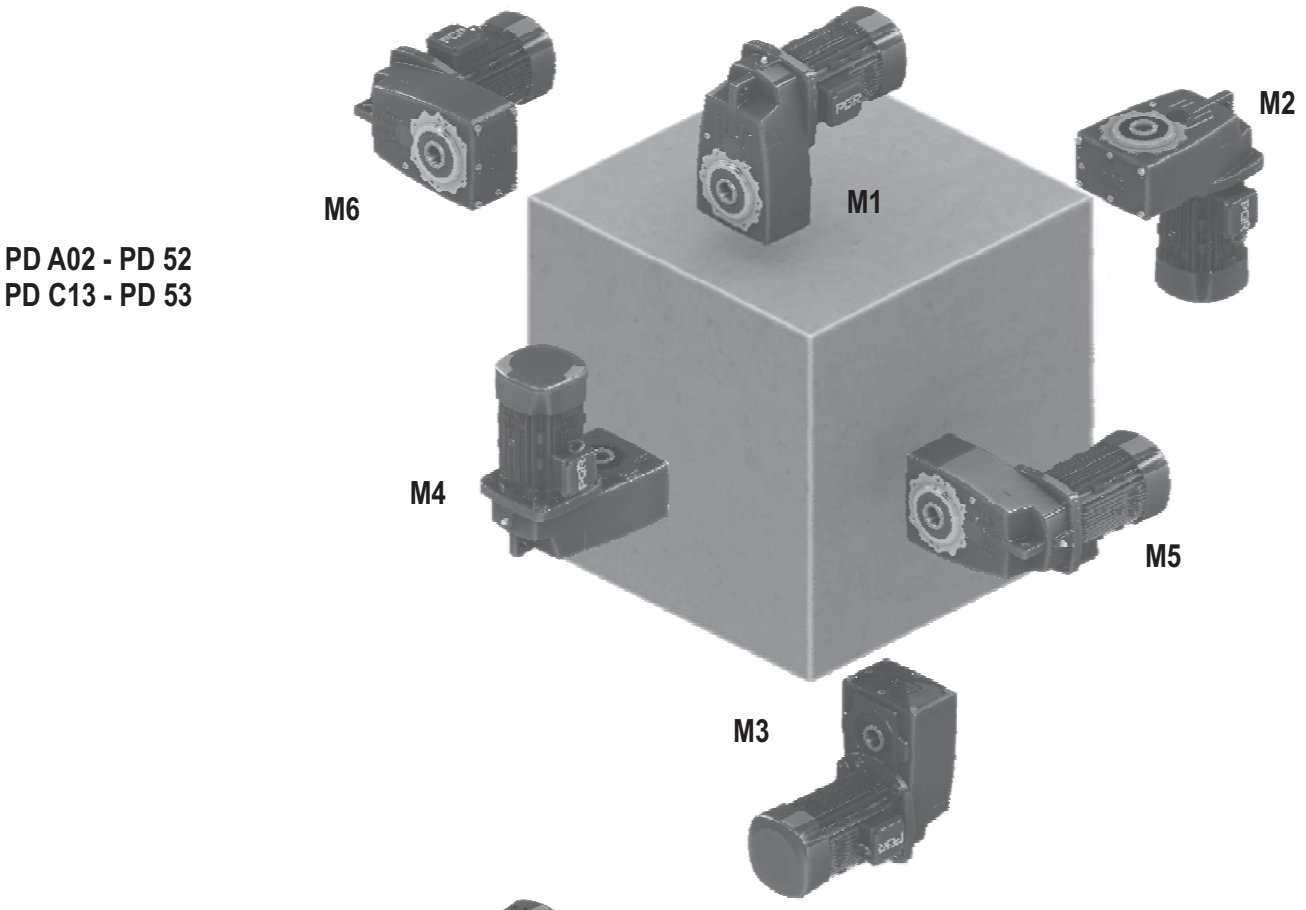
M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

(H1) **Eski Montaj Pozisyonu**
The Old Mounted Position

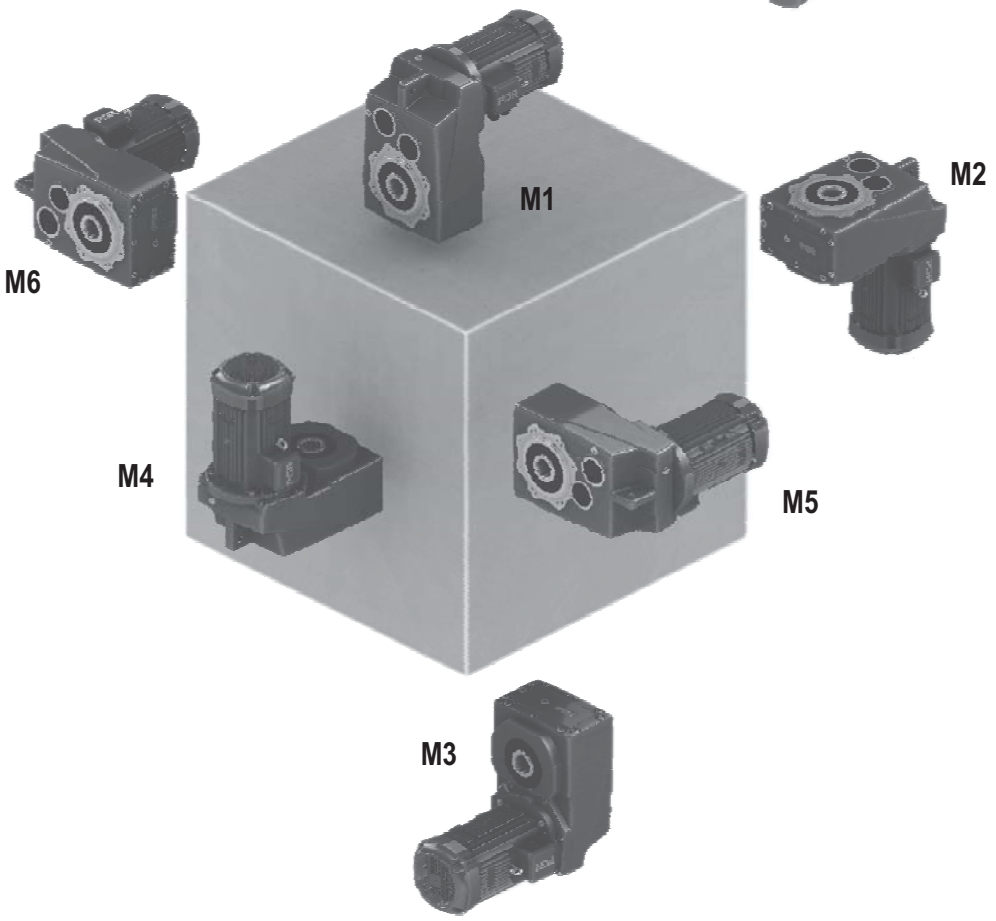
Havalandırma tapası / Vent plug **Boşaltma tapası** / Drain plug **Yağ Seviye tapası** / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



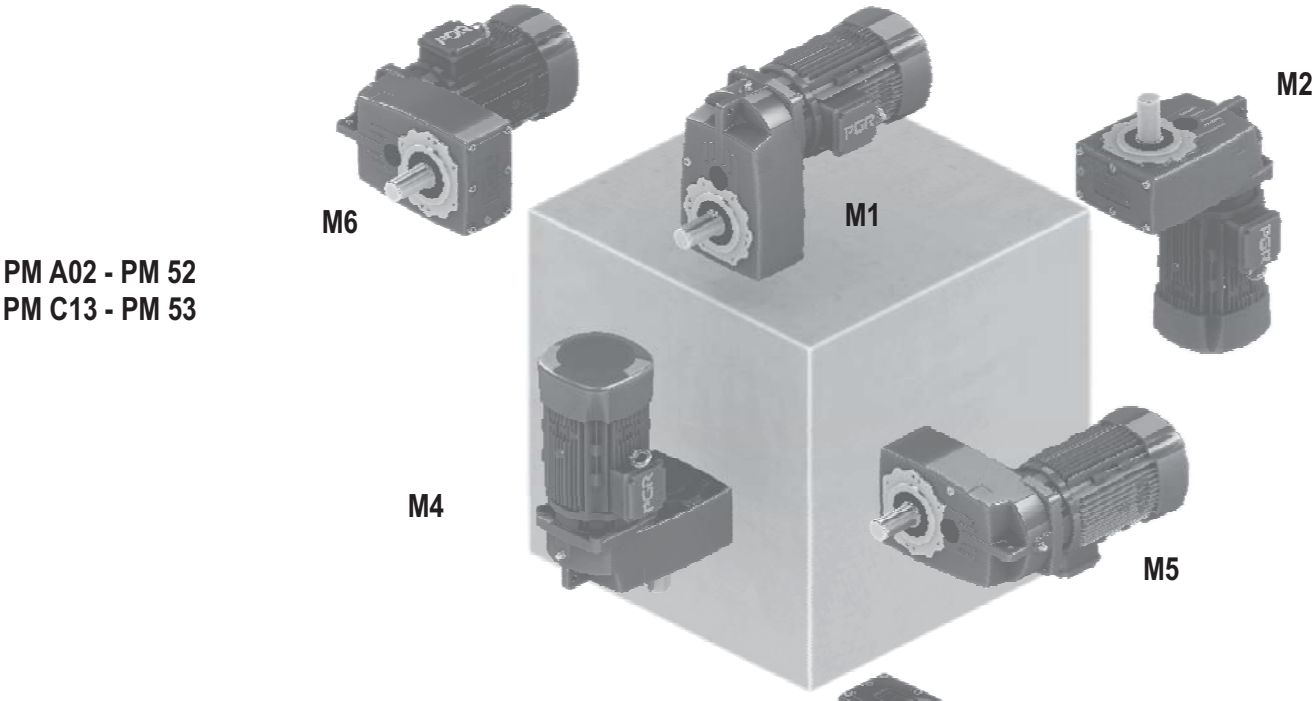
PD A02 - PD 52
PD C13 - PD 53



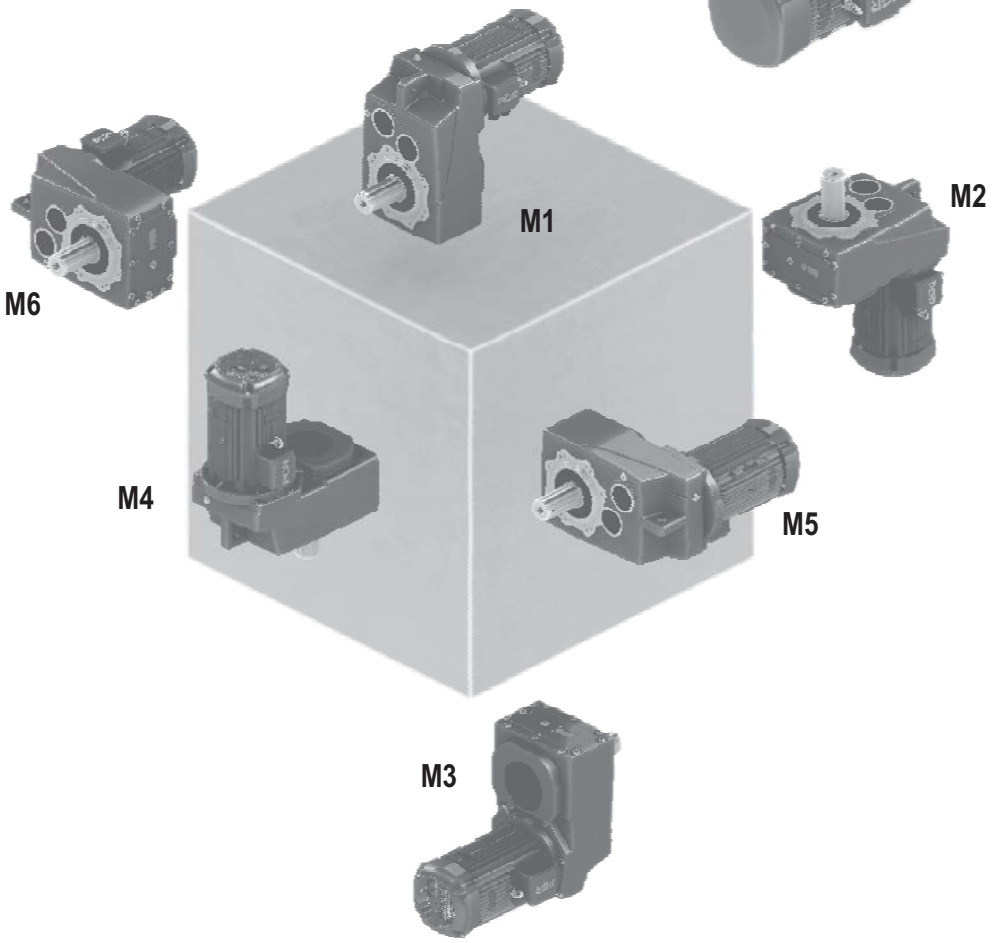
PD 62 - PD 112
PD 63 - PD 123

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS



PM A02 - PM 52
PM C13 - PM 53



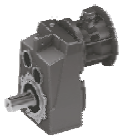
PM 62 - PM 112
PM 63 - PM 123

TR YAĞ MİKTAR TABLOSU

EN LUBRICATION LEVELS

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM A02	0.50	0.70	0.50	0.60	0.35	0.35
PD/PM B02	0.80	1.10	0.90	1.20	0.75	0.75

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 12	0.90	1.40	1.00	1.30	0.90	0.90
PD/PM 22	1.70	2.50	2.10	2.10	1.50	1.50
PD/PM 32	3.20	4.20	3.70	4.20	2.70	2.70
PD/PM 42	4.80	6.60	5.40	5.50	4.20	4.20
PD/PM 52	7.60	9.00	8.50	9.50	6.60	6.60

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 62	16.00	17.50	15.50	17.60	10.10	13.50
PD/PM 72	24.00	25.00	21.00	27.10	16.10	20.00
PD/PM 82	35.00	40.00	33.50	41.50	28.50	30.50

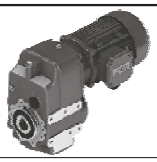
(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 92	68.00	77.00	55.50	75.00	50.00	56.00
PD/PM 102	90.10	90.10	40.10	90.10	60.10	82.10
PD/PM 112	166.00	161.00	146.00	196.00	101.00	141.00

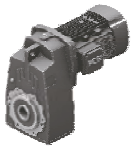
M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

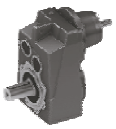
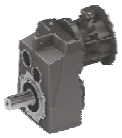
(H1) **Eski Montaj Pozisyonu**
The Old Mounted Position

TR YAĞ MİKTAR TABLOSU

EN LUBRICATION LEVELS

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM C13	1.40	2.40	1.50	2.20	1.80	1.80

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 13	1.50	1.70	1.50	1.80	1.10	1.10
PD/PM 23	1.80	2.70	2.00	3.10	1.60	1.60
PD/PM 33	4.20	4.40	3.40	5.50	3.00	3.00
PD/PM 43	6.00	7.80	5.00	8.70	4.70	4.70
PD/PM 53	11.50	12.00	6.80	13.50	7.00	7.00

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 63	16.00	17.50	10.50	18.10	14.50	12.50
PD/PM 73	22.10	20.10	16.10	26.00	22.00	18.50
PD/PM 83	33.80	37.50	25.10	38.50	34.00	29.00

(Litre) (L)						
34 - 39	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
34 - 37	(H1)	(H6)	(H2)	(H5)	(H4)	(H3)
PD/PM 93	70.00	73.00	45.10	74.10	62.50	54.00
PD/PM 103	84.50	97.50	74.00	101.00	74.00	66.00
PD/PM 113	161.00	156.00	141.00	211.00	156.00	136.00
PD/PM 123	161.00	156.00	141.00	211.00	156.00	136.00

M1 **Yeni Montaj Pozisyonu**
The New Mounted Position

(H1) **Eski Montaj Pozisyonu**
The Old Mounted Position

TR KİLİT

Opsiyonel olarak kilitlerimiz mevcuttur. Bu kilitler tek yöne dönmeye izin verirken, diğer yöne dönmeyi engeller. 63 gövde ve üzeri üç fazlı motorlar, W kovanları yağlanması yapılmış kilit ile donatılabilir. Bu kilitler çıkartılabilir, merkezkaç kuvveti tarafından kontrol edilir ve yaklaşık olarak 900 d/dk üzerine çıktıktan sonra aşınmaya maruz kalır.

Kilit mekanizmalı redüktörler için **çıkış şaftının veya milinin dönme yönünün verilmesi gerekir.** Dönme yönü çıkış şaftına veya çıkış miline göre düzenlenir.
Kararlaştırılan dönme yönü için, tarif edilen dönme yönü her zaman çıkış şaftına veya miline göre düzenlenir. Delik milli redüktörler ise konik sıktırma tarafından belirlenir.

DİKKAT: Motoru ve sistemi çalıştırmadan önce redüktörün dönme yönünü kontrol ediniz. Redüktör üzerindeki oklar dönme yönünü gösterir.

Bloke edilen yön **CCW** ise Dönme Yönü **CW**

Bloke edilen yön **CW** ise Dönme Yönü **CCW**

CW : Saat yönü

CCW : Saat yönü tersi

EN BACKSTOP

Backstop system is available for all type of helical gear unit. Lubricated backstop system could be used optionally for using motor size 63 and greater, W cylinder. Backstop system permits just one direction rotation it resists another direction rotation. Rotation speed is important for abrasion. Nearly 900 min-1 and greater rotation speed influece abration.

Please, determine direction of rotation when you offer. **Direction of rotation should be determined according to output shaft.**

Arrows which is designated by 'CW' or 'CCW' shows locking direction from viewing at face of output shaft end. For hollow shafts gearboxes this direction determined by shrinkdisc side.

Precaution: When you receive gear units, please check direction of rotation before running or installation for avoid damage.

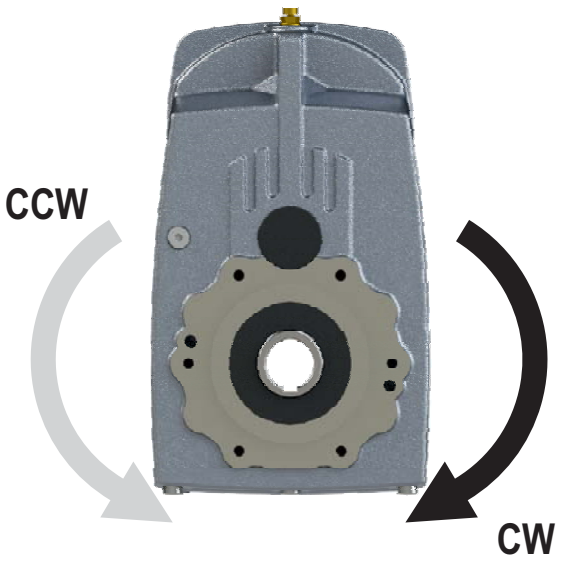
If Locking direction is **CCW,** Rotational direction is **CW**

If Locking direction is **CW,** Rotational direction is **CCW**

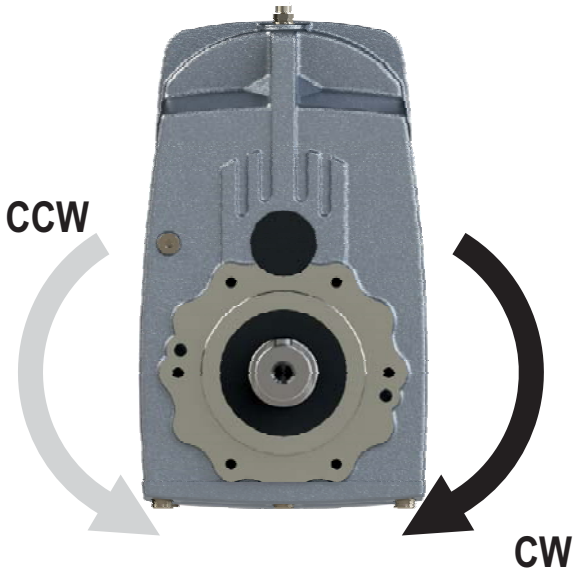
CW : Clockwise rotation

CCW : Counterclockwise rotation

PD



PM



TR TOLERANSLAR

MOTOR VE REDÜKTÖRLERDE BOYUT - ÇİZİM BİLGİLERİ

Motor ölçüleri, motor markasına göre farklılık gösterebilir.

DELİK MİLLİLER

Delik mil çapı toleransı için (DIN 748) ISO H7.
Müşteri mili çap toleransı ISO h6. "H" yükleme tipi bulunuyorsa ISO k6

IEC - ADAPTÖR

Flanş merkezi çap toleransı için ISO H7

GİRİŞ VE ÇIKIŞ ŞAFTLARI

Mil çapı toleransı (DIN 748) :

Ø 14 ile Ø 50 mm arası için ISO k6,
Ø 50 mm üzeri için ISO m6

Şaftta diş çekilmiş delikler için DIN 332/2 ye göre;

= Ø 13 - Ø 16	M5
> Ø 16 - Ø 21	M6
> Ø 21 - Ø 24	M8
> Ø 24 - Ø 30	M10
> Ø 30 - Ø 38	M12
> Ø 38 - Ø 50	M16
> Ø 50 - Ø 85	M20
> Ø 85 - Ø 130	M24

111 - 169

Kama yatakları DIN 6885

Şaft boyu "h" DIN 747

FLANŞLAR

Flanş merkezi çap toleransı (DIN 42948);

≤ Ø 230 mm' ye kadar ISO j6,
> Ø 230 mm üzeri için ISO h6

EN TOLERANCES

GEARED MOTORS AND GEARBOXES INFORMATION REFERRING TO DIMENSION - DRAWINGS

Motor dimension could be changed according to customer purchase.

HOLLOW SHAFTS

Tolerance of hollow shaft (DIN 748) ISO H7.
Tolerance of customer's solid shaft which is used for hollow shaft ISO h6, with type of load classification 'H' which is heavy-shock operation ISO k6.

IEC - ADAPTER

Diameter tolerance of flange centering is machined according to ISO H7.

INPUT AND OUTPUT SHAFT

Tolerances of solid shaft (DIN 748) :

between Ø 14 - Ø 50 mm to ISO k6,
greater than Ø 50 mm to ISO m6.

Tapped center hole is machined according to DIN 332, sheet 2;

= Ø 13 - Ø 16	M5
> Ø 16 - Ø 21	M6
> Ø 21 - Ø 24	M8
> Ø 24 - Ø 30	M10
> Ø 30 - Ø 38	M12
> Ø 38 - Ø 50	M16
> Ø 50 - Ø 85	M20
> Ø 85 - Ø 130	M24

111 - 169

Keyways are machined according to DIN 6885, sheet 1

Shaft heights are machined according to "h" to DIN 747

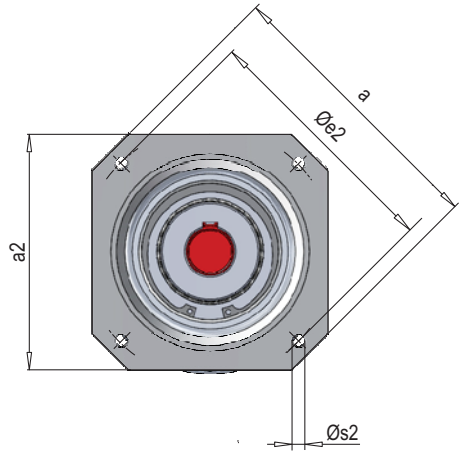
FLANGES

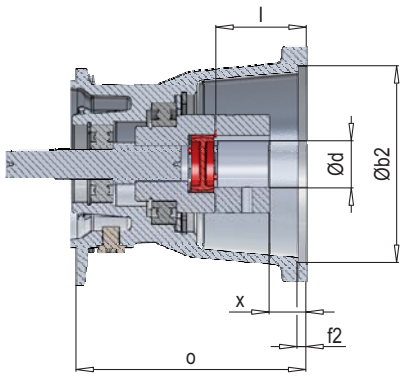
Diameter tolerance of flange centering is machined according to (DIN 42948);

≤ Ø 230 mm to ISO j6,
> Ø 230 mm to ISO h6

TR SERVOMOTOR ADAPTÖRÜ

EN SERVOMOTOR ADAPTERS





Redüktör Tipi Gear Unit Type	Motor Büyüklüğü / Motor Size							Şaft Ebatı Shaft Size		Silindir Cylinder	M_{knom} [Nm]	Adaptör Tipi Adapter Type
	a	a2	Øb2	Øe2	f2	s2	x	Ød	l	o		
PD/PM 12	120	96	80	100	4	M6	15	19	40	124	10	Servo 100 / 160 S
PD/PM 12	165	126	110	130	4	M8	20	24	50	136	35	Servo 130 / 160 S
PD/PM 22 , PD/PM 32	155	126	110	130	4	M8	20	24	50	150	35	Servo 130 / 250 S
PD/PM 12	186	155	130	165	5	M10	23	32	58	151	95	Servo 165 / 160 S
PD/PM 22 , PD/PM 32	186	155	130	165	5	M10	23	32	58	166	95	Servo 165 / 250 S
PD/PM 22 , PD/PM 32	240	192	180	215	5	M12	45	38	80	187	95	Servo 215/ 250 S
PD/PM 42 , PD/PM 52	240	192	180	215	5	M12	24	38	80	229	310	Servo 215/ 300 S
PD/PM 42 , PD/PM 52	350	260	250	300	5	M16	26	48	82	231	310	Servo 300/ 300 S
PD/PM 62 , PD/PM 72 PD/PM 82 , PD/PM 92	350	260	250	300	5	M16	26	48	82	249	310	Servo 300/ 350 S

SEP tipi servo motor bağlantı adaptörünün bağlantısı kamalı olarak yapılmaktadır. SEK tiplerinde ise servo motor adaptörünün bağlantısı setuskur civata sıktırması ile yapılmaktadır.
Servo motor bağlantı adaptörünün bağlantı flanşının farklı olması durumunda yüksek adetteki siparişler üretime alınır.

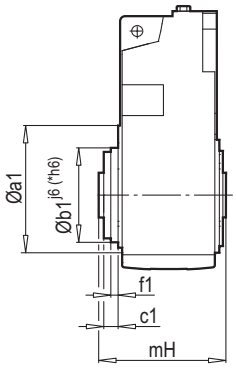
For connecting SEP adapter which is shown above on this page, servo motor's output shaft is designed with locking key. For connecting SEK type adapter, connecting is supplied with a clamp coupling sleeve.
An intermediate flange is required when other servo motor types are used with IEC adapter. Offers are manufactured gladly by PGR.

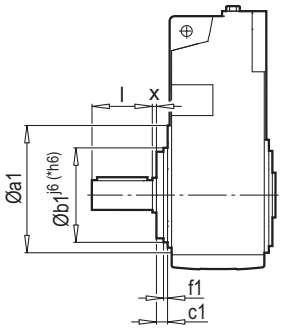
TR PD/PM B14 FLANŞLI

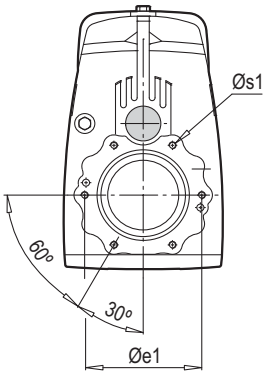
EN PD/PM WITH B14 FLANGE

PD\PM B14 FLANŞLI ÖLÇÜ TABLOSU

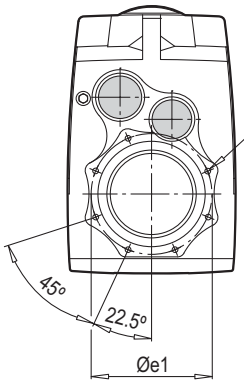
DIMENSION TABLE OF PD/PM WITH B14 FLANGE



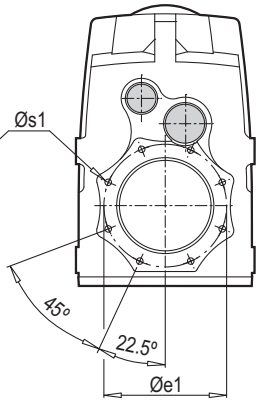




PD/PM A02
PD/PM 12...53



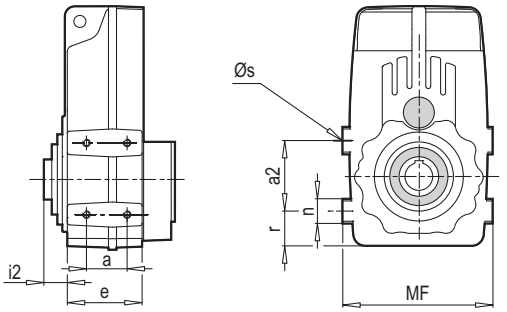
PD/PM B02...C13
PD/PM 62...83



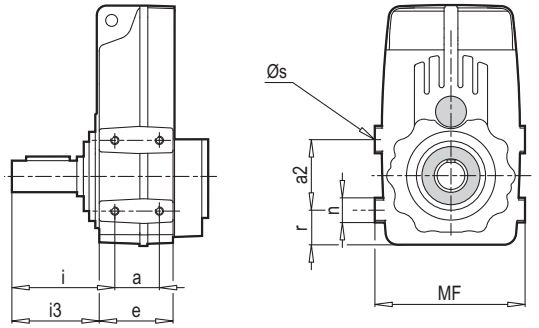
PD/PM 92...123

Tip / Type	Øa1	Øb1	c1	Øe1	f1	Øs1	mH	l	x
PD/PM A02 B14 **PD/PM B02 B14** **PD/PM C13 B14**	100 120 140	70 80 95	- - -	85 100 115	3 3 6	M8X14 M6X10 M8X13	100 122 176	50 50 60	3 3 3
PD/PM 12 B14 **PD/PM 13 B14**	140	95	13	115	6	M8X13	122	60	4
PD/PM 22 B14 **PD/PM 23 B14**	160	110	12	130	5	M8X13	139	70	5
PD/PM 32 B14 **PD/PM 33 B14**	200	130	-	165	7	M10X16	174	90	6
PD/PM 42 B14 **PD/PM 43 B14**	230	160	11	194	5	M12X20	195	110	7
PD/PM 52 B14 **PD/PM 53 B14**	250	180	9	215	5	M12X20	230	130	7.5
PD/PM 62 B14 **PD/PM 63 B14**	300	230	11	265	4	M12X20	290	140	8.5
PD/PM 72 B14 **PD/PM 73 B14**	350	*250	11	300	5	M16X25	310	170	6
PD/PM 82 B14 **PD/PM 83 B14**	400	*300	13	350	5	M16X25	366	210	7
PD/PM 92 B14 **PD/PM 93 B14**	450	*350	14	400	5	M20X30	430	250	10
PD 102-103 KS-B14 **PM 102-103 B14**	550	*450	-	500	8	M24X36	660	300	10
PD 112-113 KS-B14 **PM 112-113 B14**	550	*450	-	500	8	M24X36	675	300	10
PD 123 KS-B14 **PM 123 B14**	550	*450	18	500	8	M24X36	845	300	10

TR MONTAJ ÖLÇÜLERİ

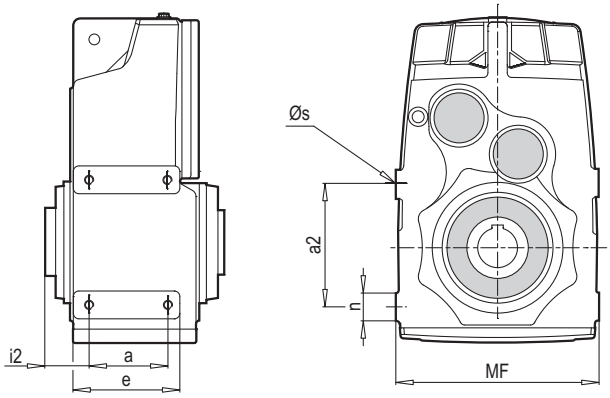


PD A02...C13

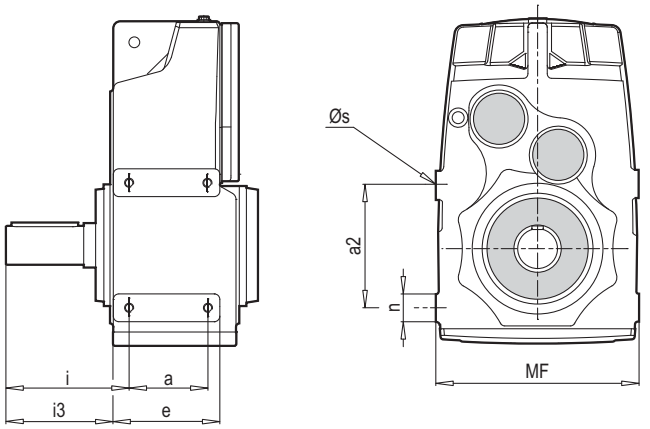


PM A02...C13

EN DIMENSIONS OF INSTALLING



PD 92 - PD 93



PM 92 - PM 93

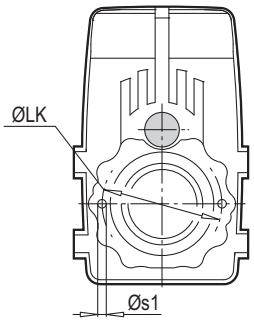
Tip / Type	a	e	MF	a2	n	Øs	r	i	i2	i3
PD A02	64	78	110	50	16	M6x12	27	—	13	—
PM A02	64	78	110	50	16	M6x12	27	70	—	63
PD B02	55	74.5	150	70	25	M8x13	35	—	14	—
PM B02	55	74.5	150	70	25	M8x13	35	74	—	64
PD C13	100	126	152	70	30	M10x13	42	—	19	—
PM C13	100	126	152	70	30	M10x13	42	91	—	79
PD 92 **PD 93**	245	306	640	360	80	M30x45	—	—	65	—
PM 92 **PM 93**	245	306	640	360	80	M30x45	—	315	—	283.5
PD/PM 102-103 **PD/PM 112-113** **PD/PM 123**	**Sayfa 156...165'ye bakınız** / See page 156...165									

TR MERKEZLEME PİMİ

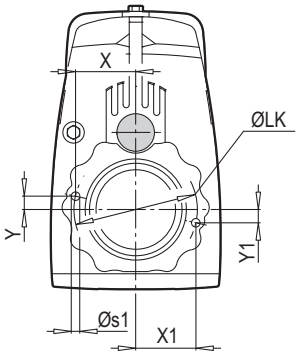
EN GUIDE PINS

MERKEZLEME PİMİ ÖLÇÜ TABLOSU

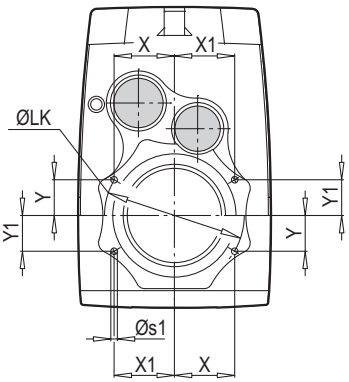
DIMENSION TABLES OF GUIDE PINS



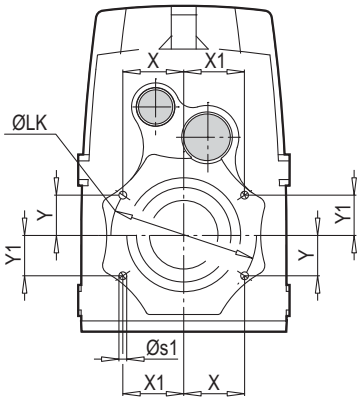
PD/PM B02
PD/PM C13



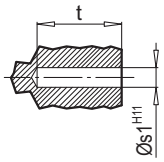
PD/PM A02
PD/PM 12 - PD/PM 53



PD/PM 62 - PD/PM 83

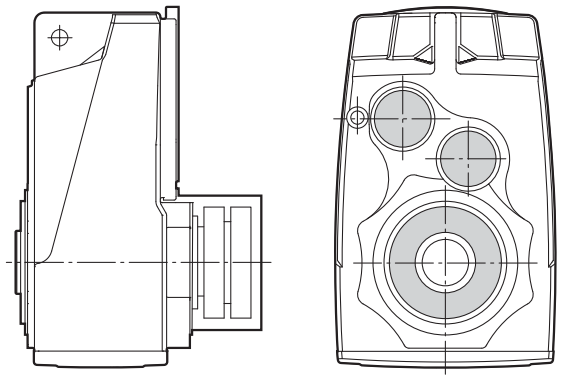


PD/PM 92 - PD/PM 123



Tip / Type	Øs1^{H11} x t	ØLK	X	X1	Y	Y1
PD/PM A02 B14	Ø 6 X 10	85	41.05	-	11.00	-
PD/PM B02 B14	Ø 6 X 12	100	-	-	-	-
PD/PM C13 B14	Ø 8 X 12	115	-	-	-	-
PD/PM 12 B14 **PD/PM 13 B14**	Ø 8 X 12	115	56.15	56.15	12.45	12.45
PD/PM 22 B14 **PD/PM 23 B14**	Ø 8 X 12	130	62.80	62.80	16.80	16.80
PD/PM 32 B14 **PD/PM 33 B14**	Ø 10 X 15	165	80.55	80.55	17.85	17.85
PD/PM 42 B14 **PD/PM 43 B14**	Ø 12 X 20	194	93.70	93.70	25.10	25.10
PD/PM 52 B14 **PD/PM 53 B14**	Ø 12 X 20	215	104.95	104.95	23.25	23.25
PD/PM 62 B14 **PD/PM 63 B14**	Ø 12 X 20	265	111.75	111.75	71.20	71.20
PD/PM 72 B14 **PD/PM 73 B14**	Ø 16 X 30	300	126.50	126.50	80.60	80.60
PD/PM 82 B14 **PD/PM 83 B14**	Ø 16 X 30	350	147.60	147.60	94.05	94.05
PD/PM 92 B14 **PD/PM 93 B14**	Ø 16 X 30	400	168.70	168.70	107.45	107.45
PD/PM 102 B14 **PD/PM 103 B14**	Ø 25 X 35	500	176.80	204.80	176.80	143.40
PD/PM 112 B14 **PD/PM 113 B14**	Ø 25 X 25	500	176.80	204.80	176.80	143.40
PD/PM 123 B14	Ø 25 X 25	500	176.80	204.80	176.80	143.40

TR KONİK SIKTIRMA



EN SHRINK DISC

S = **h6 veya f6 ile konik sıktırmanın güvenirliliği.**
S = Assurance of shrink disc (with h6 and f6 tolerance)

M_A = **Civatayı sıkmak için gerekli olan tork**
M_A = Screw torque for tightening

Z_S = **Vida miktarı**
Z_S = Amount of screw

M_{amax} = **max. izin verilebilir çıkış momenti**
M_{amax} = maximum allowable output moment

Konik sıktırma, genellikle kullanıcı milinin karşı tarafına montaj edilmelidir. Şaft çapı ISO h6 veya f6'ya göre imal edilmelidir.
(f6= Kolay montaj)

When customer shaft is installed to the gear unit, shrink disc should be mounted on opposite side of it. Customer diameter shaft should be machined according to ISO h6 or f6 tolerances.
(f6= For easy assembling)

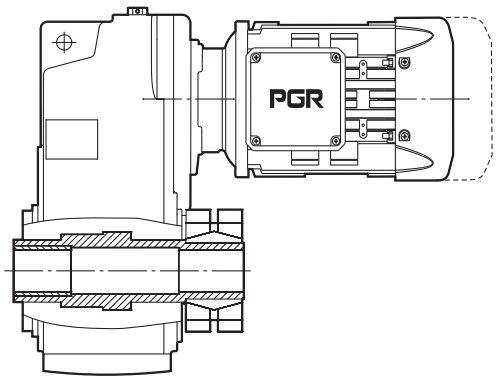
Paralel Şaftlı Redüktör Parallel Shaft Gear Unit	**Konik Sıktırma** Shrink Disc				**Altıköşe Başlı Civata** Hexagonal Screw DIN 931 / DIN 933* 10.9Vz		
	Tip Type	**M_{amax}** [Nm]	**s^{h6}**	**s^{f6}**	**d x l**	**Zs**	**M_A** [Nm]
PD B02 KS-KK	KS 30 / 40	165	5.9	5.2	M6 X 35*	8	12
PD C13 KS-KK	KS 35 / 46	370	3.8	3.4	M6 X 35*	10	12
PD 12 KS-KK	KS 30 / 40	296	3.3	2.9	M6 X 35*	8	12
PD 22 KS-KK	KS 35 / 46	563	2.6	2.2	M6 X 35*	10	12
PD 32 KS-KK	KS 40 / 55	1039	2.3	2.0	M8 X 40	8	30
PD 42 KS-KK	KS 50 / 62	2000	2.2	2.0	M8 X 40	10	30
PD 52 KS-KK	KS 60 / 76	3235	2.5	2.3	M10 X 50	10	59
PD 62 KS-KK	KS 70 / 90	6000	2.3	2.2	M12 X 70*	10	100
PD 72 KS-KK	KS 80 / 108	8300	2.5	2.4	M12 X 70*	14	100
PD 82 KS-KK	KS 100 / 128	13200	2.3	2.2	M16 X 80*	8	250
PD 92 KS-KK	KS 125 / 158	25400	2.3	2.2	M16 X 80*	12	250
PD 102 KS-KK	KS 160 / 210	37200	3.6	3.4	M20 X 100	14	490
PD 112 KS-KK	KS 180 / 230	69000	1.9	1.8	M20 X 100*	12	490
PD 122 KS-KK	KS 180 / 230	90000	4.5	4.4	M30 X 200	16	1700
Aşağıda verilen değerler güçlendirilmiş konik sıktırma ölçüleridir Given values on below is for reinforced shrink disc							
PD 72 GKS-KK	GKS 85 / 108	8300	3.90	3.65	M16 X 90	10	250
PD 82 GKS-KK	GKS 100 / 128	13200	3.57	3.35	M20 X 100	8	490
PD 92 GKS-KK	GKS 130 / 158	25400	3.89	3.71	M20 X 130	12	490
PD 112 GKS-KK	GKS 180 / 230	69000	3.69	3.57	M24 X 150	16	840

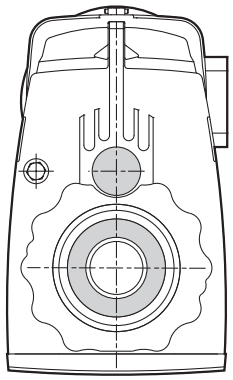
TR KONİK SIKTIRMA

Motorlu redüktör üniteleri için mevcut konik sıktırmalı tasarımlar.
Tüm çok kademeli motorlu redüktörleri için konik sıktırmalı tasarım mevcuttur.

EN SHRINK DISC

Parallel shaft geared motor with obtainable shrink disc design.
Shrink disc design is obtainable for all multi-stage parallel shaft geared motor.





Redüktör Tipi Type of Gear Unit	63 M	71 M	80 M	90 S/L	100 L	112 M	132 S/M	160 S/M	180 M/L	200 L	225 S/M	250 M*	280 S/M/L*	315 S/M/L*
PD B02 KS	✓													
PD C13 KS	✓													
PD 12 KS	✓	✓	✓											
PD 13 KS	✓	✓												
PD 22 KS		✓	✓	✓	✓									
PD 32 KS		✓	✓	✓	✓									
PD 33 KS			✓	✓										
PD 42 KS				✓	✓	✓	✓							
PD 52 KS				✓	✓	✓	✓	✓	*					
PD 62 KS					✓	✓	✓	✓	✓					
PD 63 KS				✓	✓	✓	✓	✓	✓					
PD 72 KS							✓	✓	✓	✓	*			
PD 73 KS					✓	✓	✓	✓	✓	✓	*			
PD 82 KS							✓	✓	✓	✓	✓			
PD 83 KS					✓	✓	✓	✓	✓	✓	✓			
PD 92 KS										✓	✓	✓	✓	
PD 93 KS							✓	✓	✓	✓	✓	✓	✓	
PD 102 KS													✓	✓
PD 103 KS								✓	✓	✓	✓	✓	✓	✓
PD 112 KS													✓	✓
PD 113 KS								✓	✓	✓	✓	✓	✓	✓
PD 123 KS										✓	✓	✓	✓	✓
Aşağıda verilen bilgiler güçlendirilmiş konik sıktırma içindir Given information on below is for reinforced shrink disc														
PD 72 GKS							✓	✓	✓					
PD 73 GKS					✓	✓	✓	✓	✓					
PD 82 GKS							✓	✓	✓	✓	*			
PD 83 GKS					✓	✓	✓	✓	✓	✓	*			
PD 92 GKS										✓	✓	✓	✓	
PD 93 GKS								✓	✓	✓	✓	✓	✓	
PD 112 GKS													✓	✓
PD 113 GKS								✓	✓	✓	✓	✓	✓	✓

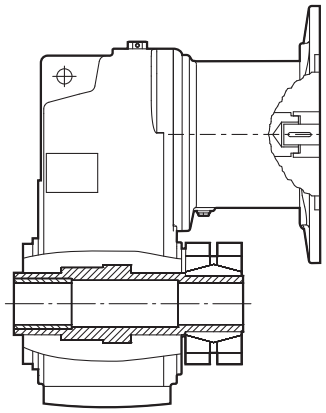
* **İşareti talep doğrultusunda temin edilebileceğini gösterir. Lütfen PGR'ye danışınız.**
* Sign shows that it could be obtained on your demand. Please, consult to PGR.

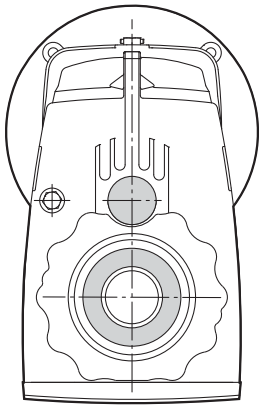
TR KONİK SIKTIRMA

IEC adaptörlü redüktör üniteleri için mevcut konik sıktırmalı tasarımlar. Tüm çok kademeli IEC adaptörlü redüktörler için konik sıktırmalı tasarım mevcuttur.

EN SHRINK DISC

Parallel shaft gear unit with IEC adapter and obtainable shrink disc designs. Shrink disc design is obtainable for all multi-stage parallel shaft gear unit with IEC adapter.

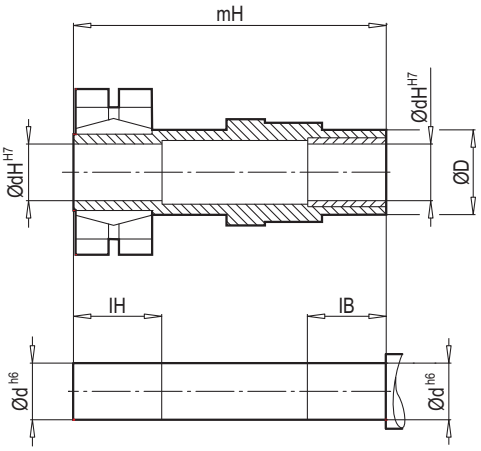


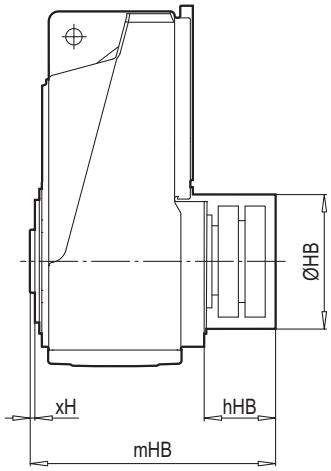


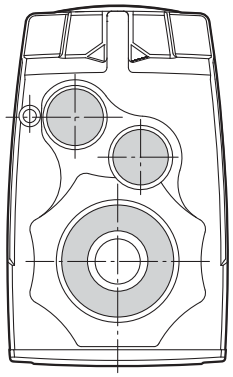
Redüktör Tipi Type of Gear Unit	IEC 63	IEC 71	IEC 80	IEC 90	IEC 100	IEC 112	IEC 132	IEC 160	IEC 180	IEC 200	IEC 225	IEC 250	IEC 280	IEC 315
PD B02 KS	✓	✓	✓	✓										
PD C13 KS	✓	✓	✓	✓										
PD 12 KS	✓	✓	✓	✓										
PD 13 KS	✓	✓												
PD 22 KS		✓	✓	✓	✓	✓								
PD 32 KS		✓	✓	✓	✓	✓	✓							
PD 33 KS	✓	✓	✓	✓										
PD 42 KS				✓	✓	✓	✓	✓						
PD 52 KS				✓	✓	✓	✓	✓	✓					
PD 62 KS					✓	✓	✓	✓	✓	✓	✓			
PD 63 KS				✓	✓	✓	✓	✓	✓					
PD 72 KS							✓	✓	✓	✓	✓			
PD 73 KS					✓	✓	✓	✓	✓	✓	✓			
PD 82 KS							✓	✓	✓	✓	✓	✓	✓	
PD 83 KS					✓	✓	✓	✓	✓	✓	✓			
PD 92 KS									✓	✓	✓	✓	✓	✓
PD 93 KS							✓	✓	✓	✓	✓	✓	✓	
PD 102 KS												✓	✓	✓
PD 103 KS								✓	✓	✓	✓	✓	✓	✓
PD 112 KS												✓	✓	✓
PD 113 KS								✓	✓	✓	✓	✓	✓	✓
PD 123 KS								✓	✓	✓	✓	✓	✓	✓
Aşağıda verilen bilgiler güçlendirilmiş konik sıktırma içindir Given information on below is for reinforced shrink disc														
PD 72 GKS							✓	✓	✓	✓	✓			
PD 73 GKS					✓	✓	✓	✓	✓	✓	✓			
PD 82 GKS							✓	✓	✓	✓	✓			
PD 83 GKS					✓	✓	✓	✓	✓	✓	✓			
PD 92 GKS									✓	✓	✓	✓	✓	✓
PD 93 GKS							✓	✓	✓	✓	✓	✓	✓	
PD 112 GKS												✓	✓	✓
PD 113 GKS								✓	✓	✓	✓	✓	✓	✓

TR GÜÇLENDİRİLMİŞ KONİK SIKTIRMA KAPAĞI

EN COVER OF REINFORCED SHRINK DISC







TİP / TYPE	ØD	ØdH H7	Ød h6	IB	IH	mH	xH	hHB	HB	mHB
PD 72 GKS - KK PD 73 GKS - KK	110	85	85	56	120	429	6.0	149	260	448
PD 82 GKS - KK PD 83 GKS - KK	130	100	100	71.5	149	510	7.0	200	308	546
PD 92 GKS - KK PD 93 GKS - KK	160	130	130	82	182	607	10.0	238	367	634
PD 112 GKS - KK PD 113 GKS - KK	240	180	180	101.5	195	755	10.0	258	458	786

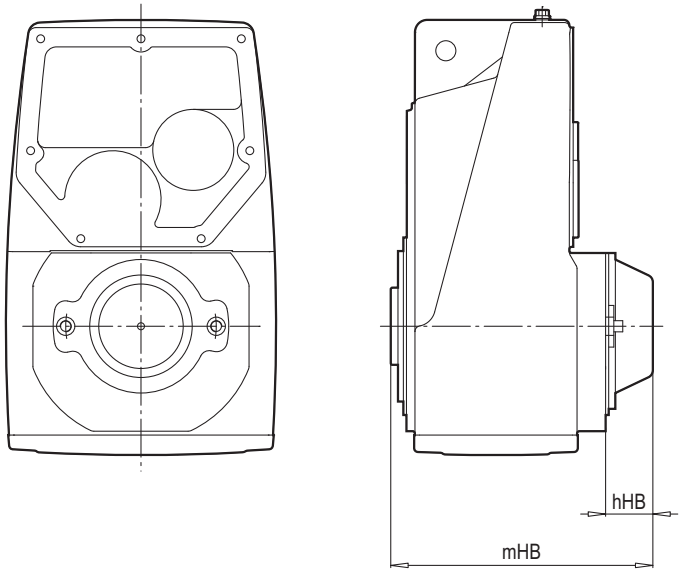
TR ŞAFT KORUMA KAPAĞI

EN SHAFT COVER

ŞAFT KORUMA KAPAĞI ÖLÇÜ TABLOSU

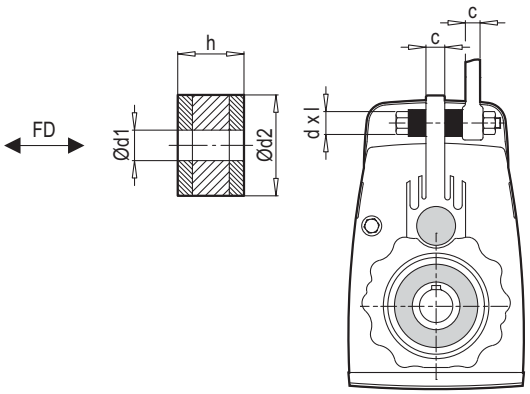
DIMENSION TABLE OF COVER

TİP / TYPE	hHB	mHB
PD A02 KK PD A02 B14-KK	26	123
PD B02 KK PD B02 B14-KK	32	151
PD C13 KK PD C13 B14-KK	37	210
PD 12 KK PD 12 B14-KK PD 13 KK PD 13 B14-KK	32	152
PD 22 KK PD 22 B14-KK PD 23 KK PD 23 B14-KK	44	176
PD 32 KK PD 32 B14-KK PD 33 KK PD 33 B14-KK	46	215
PD 42 KK PD 42 B14-KK PD 43 KK PD 43 B14-KK	46	235
PD 52 KK PD 52 B14-KK PD 53 KK PD 53 B14-KK	54	278
PD 62 KK PD 62 B14-KK PD 63 KK PD 63 B14-KK	55	337
PD 72 KK PD 72 B14-KK PD 73 KK PD 73 B14-KK	55	359
PD 82 KK PD 82 B14-KK PD 83 KK PD 83 B14-KK	59	418
PD 92 KK PD 92 B14-KK PD 93 KK PD 93 B14-KK	62	482

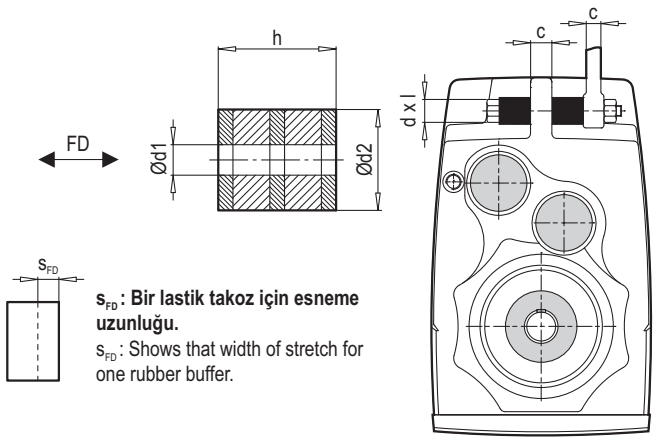


TR NORMAL VE GÜÇLENDİRİLMİŞ LASTİK TAKOZ TASARIMI (LT/GLT)

EN NORMAL AND REINFORCED DESIGN OF RUBBER BUFFER (LT/GLT)



PD/PM... LT



s_{FD}: Bir lastik takoz için esneme uzunluğu.
s_{FD}: Shows that width of stretch for one rubber buffer.

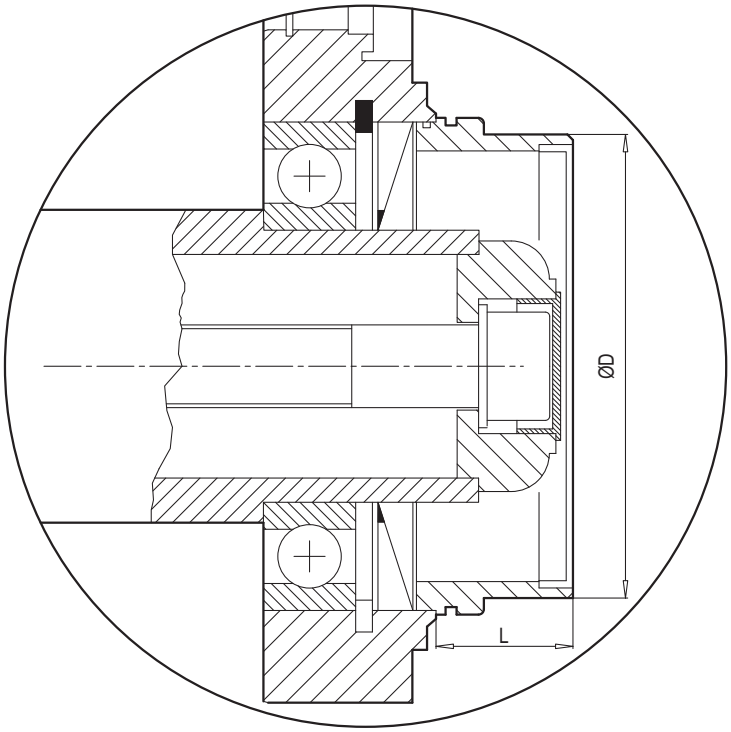
PD/PM... GLT

Tip / Type	Ød1	Ød2	h	c	d x l	FD [kN]	s_{FD} [mm]
PD/PM A02 LT	10.70	30	15	12	M10 x 70	0.95	1.5
PD/PM B02 LT	10.70	30	15	14	M10 x 70	1.05	1.7
PD/PM C13 LT	10.70	30	15	16	M10 x 80	2.25	3.6
PD/PM 12 LT **PD/PM 13 LT**	10.70	30	15	15	M10 x 80	1.80	2.8
PD/PM 22 LT **PD/PM 23 LT**	12.60	40	15	17	M12 x 90	2.65	1.8
PD/PM 32 LT **PD/PM 33 LT**	12.60	40	15	19	M12 x 90	4.15	2.9
PD/PM 42 LT **PD/PM 43 LT**	21.60	60	30	24	M20 x 150	7.40	7.3
PD/PM 52 LT **PD/PM 53 LT**	21.60	60	30	28	M20 x 150	9.50	9.4
PD/PM 62 LT **PD/PM 63 LT**	25.30	80	40	35	M24 x 190	16.80	9.2
PD/PM 72 LT **PD/PM 73 LT**	25.30	80	40	40	M24 x 200	20.80	11.4
PD/PM 82 LT **PD/PM 83 LT**	30.80	100	50	50	M30 x 260	28.40	16.3
PD/PM 92 LT **PD/PM 93 LT**	30.80	100	50	55	M30 x 260	43.50	24.9

TİP / TYPE	Ød1	Ød2	h	c	d x l	FD [kN]	s_{FD} [mm]
PD/PM 72 GLT **PD/PM 73 GLT**	25.0	85	60	40	M24 x 240	20.80	12.2
PD/PM 82 GLT **PD/PM 83 GLT**	31.0	110	90	50	M30 x 340	28.40	19.3
PD/PM 92 GLT **PD/PM 93 GLT**	**31.0**	140	110	**55**	M30 x 380	43.50	21.2
PD/PM 102 GLT **PD/PM 103 GLT**	31.0	140	110	80	M30 x 430	56.35	27.4
PD/PM 112 GLT **PD/PM 113 GLT**	49.0	180	150	90	M48 x 550	80.90	38.5
PD/PM 123 GLT	49.0	180	150	90	M48 x 550	105.50	50.2

TR IP 66 UYGULAMASI

EN PROTECTION IP 66



TİP / TYPE	ØD	L
PD 12 KK 66 **PD 12 B14/KK 66**	81	25
PD 22 KK 66 **PD 22 B14/KK 66**	57	38
PD 32 KK 66 **PD 32 B14/KK 66**	105	35
PD 42 KK 66 **PD 42 B14/KK 66**	105	34
PD 52 KK 66 **PD 52 B14/KK 66**	155	38
PD 62 KK 66 **PD 62 B14/KK 66**	189	44
PD 72 KK 66 **PD 72 B14/KK 66**	216	35
PD 82 KK 66 **PD 82 B14/KK 66**	246	50

TR PD SERİSİ İÇİN GÜÇLENDİRİLMİŞ B5 FLANŞI

Güçlendirilmiş B5 Flanşı;

PGR özellikle karıştırıcılarda kullanılan şaftların rulman mesafelerinin artması sebebiyle güçlendirilmiş B5 flanşı kullanarak şaftın rulman arası mesafelerini arttırmıştır. Bu tasarım daha uzun rulman ömrü ile birlikte yüksek radyal ve eksenel kuvvetlerin absorbe edilmesini sağlar.

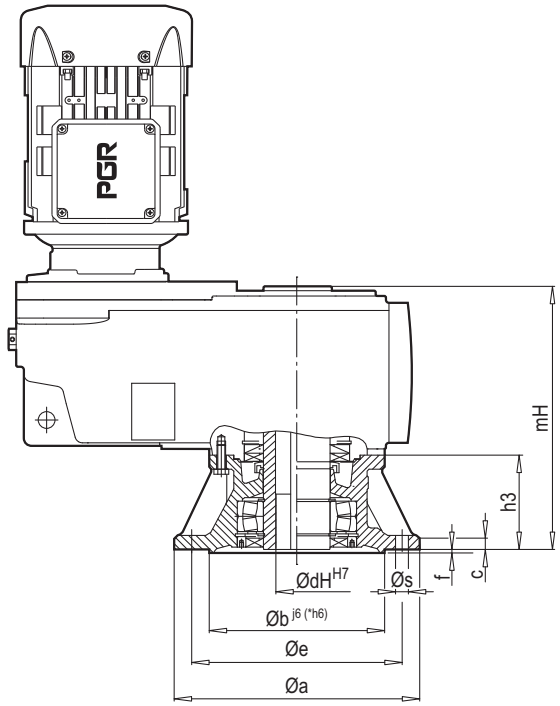
Özellikle oynak makaralı rulmanlar uzun karıştırıcı şaftların eksenel kaçıklıklarını karşılayabilirler.

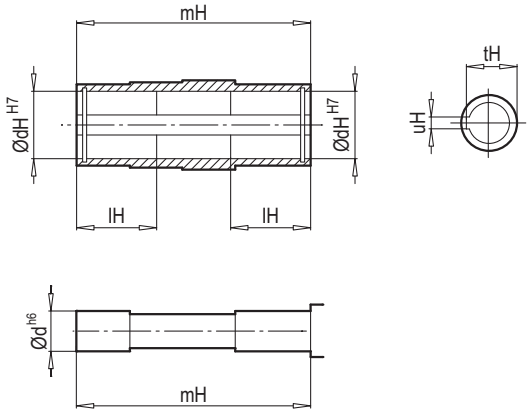
EN REINFORCED B5 FLANGE FOR AGITATOR DESIGN AT PD SERIES

Reinforced B5 Flange;

Longer shaft is used at agitator application that is caused increasing bearing distance for that reason, PGR is increased bearing distance with using reinforced B5 flange at that design. Reinforced B5 flange design provides longer bearing life and could be used where high radial and axial load is effected to the gear unit.

Due to increasing bearing distance and absorbing high radial and axial load spherical roller bearing are used however it is useful for recuperating misalignment at long shaft.

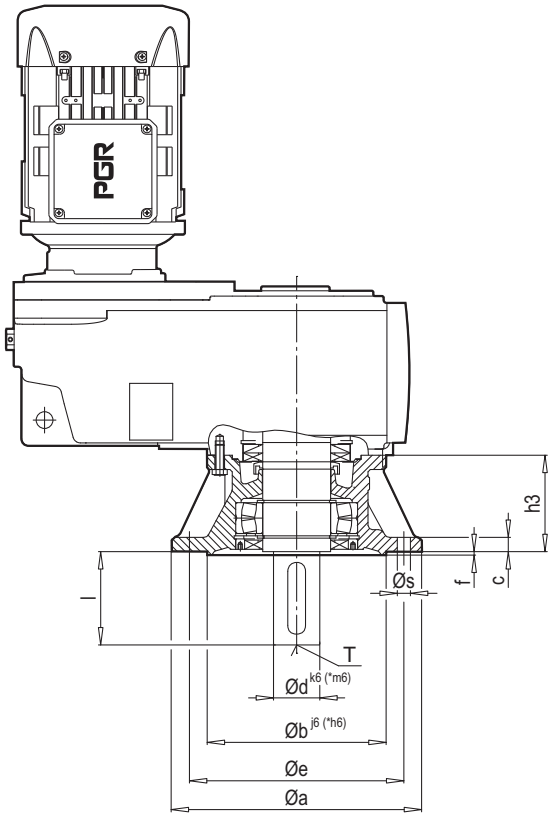


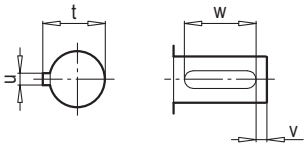


TİP / TYPE	a	b	c	e	f	h3	Øs	Ød h6	uH	tH	mH	ØdH H7	lH
PD 12 GB5 PD 13 GB5	200	130	12	165	3.5	75	4 x 11	30	8	33.3	180	30	40
PD 22 GB5 PD 23 GB5	250	180	16	215	4.0	86	4 x 14	35	10	38.3	208	35	50
PD 32 GB5 PD 33 GB5	300	230	20	265	4.0	85	4 x 14	40	12	43.3	246	40	58
PD 42 GB5 PD 43 GB5	300	230	20	265	4.0	113	4 x 14	50	14	53.8	290	50	65
PD 52 GB5 PD 53 GB5	350	*250	20	300	5.0	135	4 x 18	60	18	64.4	348	60	79
PD 62 GB5 PD 63 GB5	400	*300	22	350	5.0	166	4 x 18	70	20	74.9	437	70	120
PD 72 GB5 PD 73 GB5	450	*350	24	400	5.0	184	8 x 18	80	22	85.4	477	80	126
PD 82 GB5 PD 83 GB5	550	*450	28	500	5.0	210	8 x 18	100	28	106.4	556	100	154
PD 92 GB5 PD 93 GB5	660	*550	32	600	6.0	262	8 x 22	120	32	127.4	668	120	186

TR PD SERİSİ İÇİN GÜÇLENDİRİLMİŞ B5 FLANŞI

EN REINFORCED B5 FLANGE FOR AGITATOR DESIGN AT PM SERIES

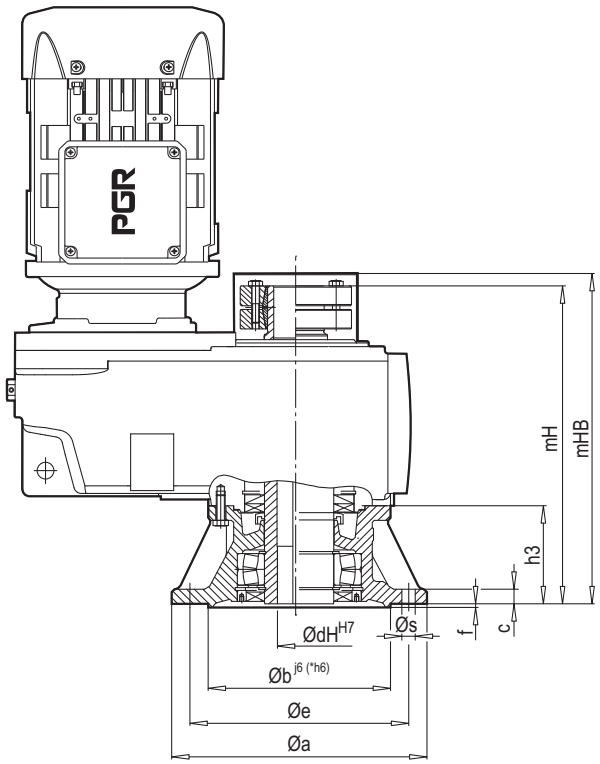


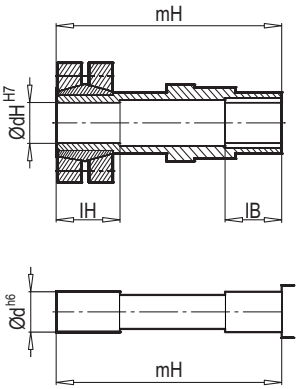


TİP / TYPE	a	b	c	e	f	h3	Øs	Ød	l	t	u	v	w	T
PM 12 GB5 PM 13 GB5	200	130	12	165	3.5	75	4 x 11	30	60	33.0	8	5	50	M10
PM 22 GB5 PM 23 GB5	250	180	16	215	4.0	86	4 x 14	35	70	38.0	10	5	60	M12
PM 32 GB5 PM 33 GB5	300	230	20	265	4.0	85	4 x 14	45	90	48.5	14	5	80	M16
PM 42 GB5 PM 43 GB5	300	230	20	265	4.0	113	4 x 14	*55	110	59.0	16	10	90	M20
PM 52 GB5 PM 53 GB5	350	*250	20	300	5.0	135	4 x 18	*65	130	69.0	18	15	100	M20
PM 62 GB5 PM 63 GB5	400	*300	22	350	5.0	166	4 x 18	*75	140	79.5	20	7.5	125	M20
PM 72 GB5 PM 73 GB5	450	*350	24	400	5.0	184	8 x 18	*90	170	95.0	25	15	140	M24
PM 82 GB5 PM 83 GB5	550	*450	28	500	5.0	210	8 x 18	*110	210	116.0	28	15	180	M24
PM 92 GB5 PM 93 GB5	660	*550	32	600	6.0	262	8 x 22	*140	250	148.0	36	25	200	M24
PM 102 GB5 PM 103 GB5	660	*550	35	600	8.0	302	8 x 26	*160	300	169.0	40	25	250	M24
PM 112 GB5 PM 113 GB5	660	*550	35	600	8.0	302	8 x 26	*180	300	190.0	45	25	250	M24
PM 123 GB5	660	*550	35	600	8.0	302	8 x 26	*180	300	190.0	45	25	250	M24

TR KONİK SIKTIRMALI GÜÇLENDİRİLMİŞ B5 FLANŞLI

EN WITH REINFORCED B5 FLANGE AND SHRINK DISC





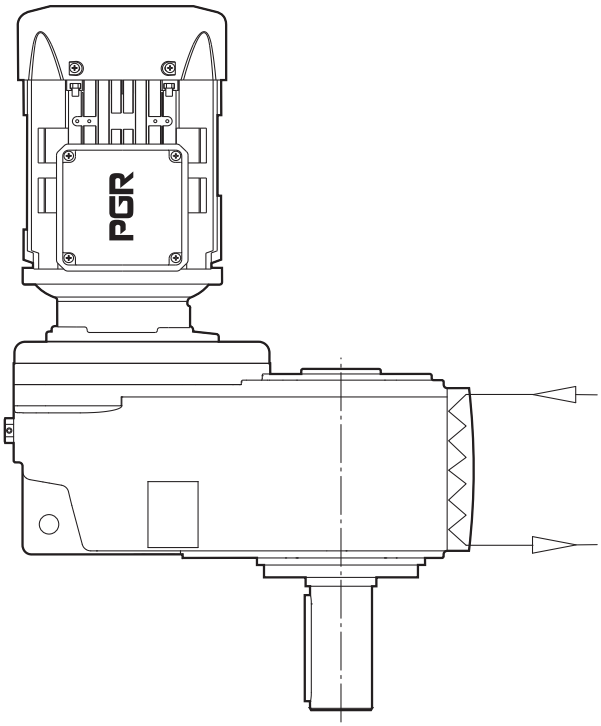
TİP / TYPE	a	b	c	e	f	h3	Øs	ØdH H7	mH	mHB	lB	lH	Ød h6
PD 12 KS-GB5 PD 13 KS-GB5	200	130	12	165	3.5	75	4 X 11	30	220	233	31	40	30
PD 22 KS-GB5	250	180	16	215	4.0	86	4 X 14	35	264	284	41	45	35
PD 32 KS-GB5 PD 33 KS-GB5	300	230	20	265	4.0	85	4 X 14	40	297	317	41	55	40
PD 42 KS-GB5	300	230	20	265	4.0	113	4 X 14	50	356	329	51	55	50
PD 52 KS-GB5	350	*250	20	300	5.0	135	4 X 18	60	413	437	60	70	60
PD 62 KS-GB5 PD 63 KS-GB5	400	*300	22	350	5.0	166	4 X 18	70	517	540	71	85	70
PD 72 KS-GB5 PD 73 KS-GB5	450	*350	24	400	5.0	184	4 X 18	80	562	582	81	90	80
PD 82 KS-GB5 PD 83 KS-GB5	550	*450	28	500	5.0	210	8 X 18	100	645	672	71	95	100
PD 92 KS-GB5 PD 93 KS-GB5	660	*550	32	600	6.0	262	8 X 22	125	773	797	82	110	125
PD 102 KS-GB5 PD 103 KS-GB5	660	*550	35	600	8.0	302	8 X 26	160	944	970	122	130	160
PD 112 KS-GB5 PD 113 KS-GB5	660	*550	35	600	8.0	302	8 X 26	180	958	1000	101	110	180
PD 123 KS-GB5	660	*550	35	600	8.0	302	8 X 26	180	1129	1169	101	269	180

TR SU SOĞUTMALI

Entegre edilmiş bir ısı dönüştürücüsü, helisel konik dişli üniteleri ve paralel dişli ünitelerinde isteğe bağlı olarak mevcuttur. Dişli ünitesini soğutan soğutma suyu ısı dönüştürücüsü içinden akar. PGR, redüktör sıcaklığının ve soğutma suyunun akışının izlenmesini önerir. Soğutma bobini, yağ odası içinde bulunmamaktadır. Soğutma suyu patlama olabilecek çalışma ortamlarında çalışması uygundur. Düşük sıcaklıklarda, ısı dönüştürücüsü, dişli ünitesine ısı sağlayabilir.

EN WATER COOLING

For cooling gear unit, conjugate heat exchanger is available optionally. (This design exist for helical - bevel and parallel shaft gear units.) Consider that, PGR suggests that cooling water flow and temperature of gear unit should be checked because, coil of heat exchanger is on the cover of gear unit. Heat transfer from oil or gear unit to cooling water should be monitored. This design could be used in explosive areas. Heat exchanger might be supplied heat to the gear unit in low temperature.



Su soğutma ünitesinin kullanılabileceği montaj pozisyonları

Table shows that suitability of water cooling for which mounting positions

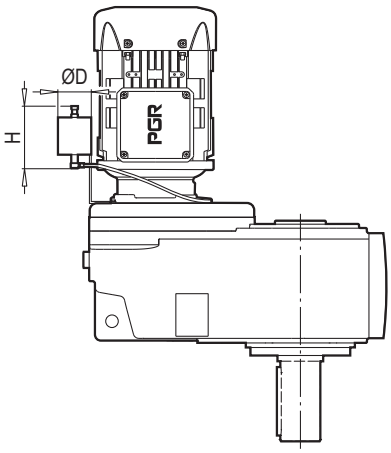
Tip / Type	**Montaj Pozisyonları** / Mounting Positions					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**
PD/PM 62 - PD/PM 63	✓	✓	—	✓	✓	✓
PD/PM 72 - PD/PM 73	✓	✓	—	✓	✓	✓
PD/PM 82 - PD/PM 83	✓	✓	—	✓	✓	✓
PD/PM 92 - PD/PM 93	✓	✓	—	✓	✓	✓
PD/PM 102 - PD/PM 103	✓	✓	—	✓	✓	✓
PD/PM 112 - PD/PM 113	✓	✓	—	✓	✓	✓
PD/PM 123	✓	✓	—	✓	✓	✓

TR M4 MONTAJ POZİSYONU İÇİN İLAVE YAĞ HACMİ VE YAĞ TANKI

İLAVE YAĞ HACMİ

ADDITIONAL LUBRICANT VOLUME

Tip Type	Boyut Size	Ø D [mm]	H [mm]	[kg]
PD/PM 42 - PD\PM 43	I	100	180	6
PD/PM 52 - PD\PM 53				
PD/PM 63				
PD/PM 62	II	150	300	7
PD/PM 72 - PD/PM 73				
PD/PM 82 - PD/PM 83	III	180	300	8



PD/PM 42...83

Bu ilave yağ hacim ünitesinin kullanılması, dikey montaj pozisyonlarında (M4) ve kötü çalışma şartları altında bile havalandırma tapasından yağ sızmasını önler. Dikey çalışma ortamlarında redüktör içindeki yağ köpüklenme yapabilir ve bu ünite ilave bir hacim sağlar.

İlave yağ hacim ünitesi, tahvil oranı 20' den küçük paralel şaftlı dişli üniteleri PD/PM 42...83 arasındaki gövdelerin dikey montaj pozisyonu uygulamalarında kullanımı önerilir.

YAĞ TANKI

Yağ tankları ek havalandırma tüpü içerdiği için ilave yağ hacmi ünitesine göre daha büyüktür. Yağ tankındaki yağ seviyesi sürekli olarak kontrol edilmelidir. PGR PD/PM 92...123 arasındaki büyük gövdelerin M4 dikey montaj pozisyonlarında yağ tankının kullanımı önerir. PGR M4 montaj pozisyonunda yağ tankı kullanılmayan uygulamalarda oluşabilecek problemlerden sorumlu değildir.

34 - 39

EN ADDITIONAL LUBRICANT VOLUME AND OIL TANK FOR MOUNTING POSITION M4

Additional lubricant volume unit uses for preventingoil laekage from venting plug when gear unit is mounted with M4 mounting position. It is important because at vertical mounting position oil could be foamed.

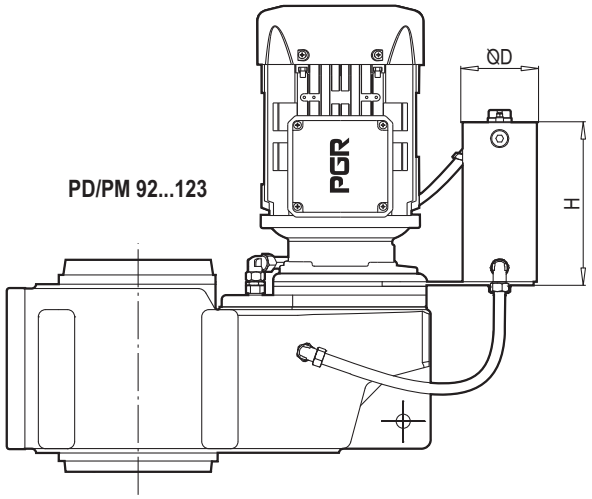
PGR suggest that additional lubrication volume units should be used where gear reduction is less than 20 and for polat hollow or solid shaft gear unit series such as from PD/PM 42 to PD/PM 83 when M4 vertical mounting position is applied.

OIL TANK

If we compare oil tank and additional lubricant volume, oil tank has large volume than additional lubricant volume because of there are two tubes which are one of them is vent tube and the other one is oil tube. Oil level must be checked at all the time. PGR is suggested, oil tanks should be used at M4 vertical mounting positions for large cases of parallel shaft gear units which are from PD/PM 92 to PD/PM 123. PGR is not responsible for any problem could be occured while oil tank is not used at M4 vertical mounting position for large cases of parallel shaft gear unit.

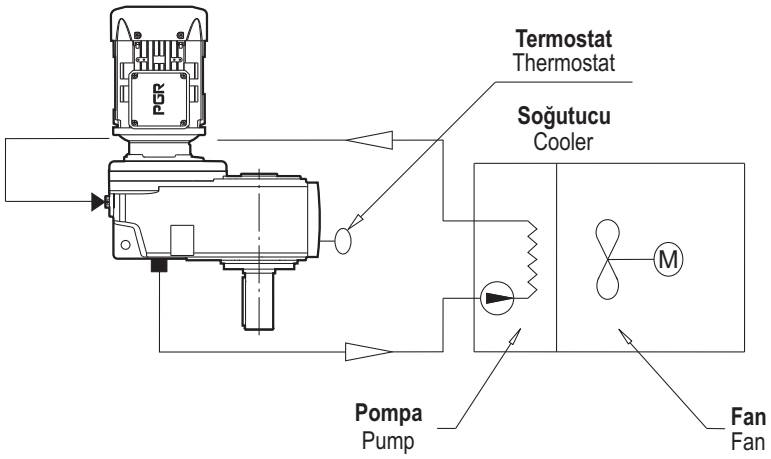
34 - 39

Tip Type	Boyut Size	Ø D [mm]	H [mm]
PD\PM 92 - PD\PM 93	A	185	390
PD\PM 102 - PD\PM 103			
PD\PM 112 - PD\PM 113	B	320	390
PD\PM 123			



PD/PM 92...123

TR YAĞ SOĞUTMALI



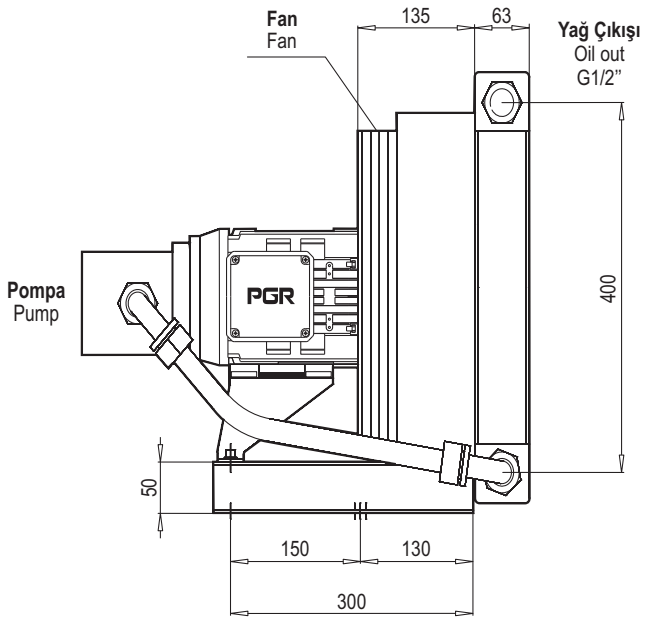
■ Çıkış = Emme hattı ▼ Yağ seviyesi = Basınç hattı

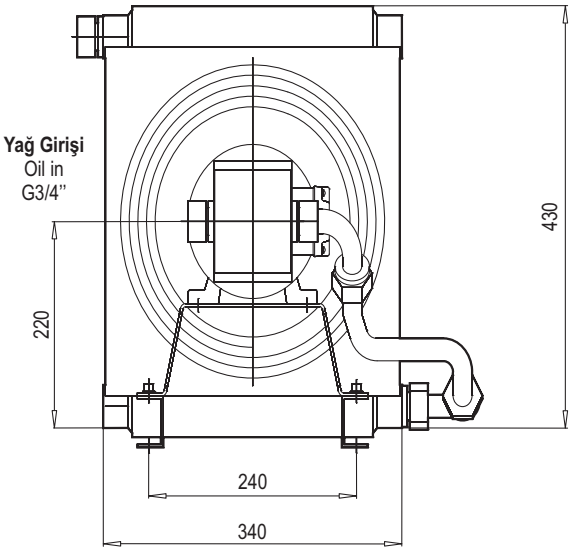
Dişli ünitesi yağı, bir pompa tarafından çekilir ve bir ısı dönüştürücüsü boyunca akar. Yağ, fan tarafından yaratılan bir hava akımı ile soğutulur. Yağ, ısı dönüştürücünün dışına taşınır ve tekrar haznesine geri gönderilir. Sıcaklık bir termostat tarafından kontrol edilir. PGR, sıcaklığın izlenmesini önerir.

EN OIL COOLING

■ Outlet = Suction line ▼ Oil level = Pressure line

Picture which is above on this page shows cycle of the cooling unit. There is a thermostat on the gear unit for checking oil temperature.Oil flows from suction line to pressure line which is provided by pump. In this way, oil temperature is cooled down by a fan which is supplying air flow to the coil. Then, oil flows to the house of gear unit.





*** Potansiyel patlayıcı atmosferli alanlar için uygun değildir.**

Dizayn

Soğutucu	: TFS/A 8,5-400-F-03-11
Düşürme	: Dış 1/2" - iç 3/4"
Motorlar	: Spannung 3x400 V
Çıkış gücü	: 0,55 kW
Hız	: 1350 d/dk
Koruma sınıfı	: IP 55
Yalıtım sınıfı	: F
Sıcaklık sınıfı	: B

Aşağıdaki özelliklerde mevcuttur:
- Özel voltaj 60 HZ - Özel motor

Ağırlık : 32 kg

* Not suited for areas with potantially explosive atmospheres

Design

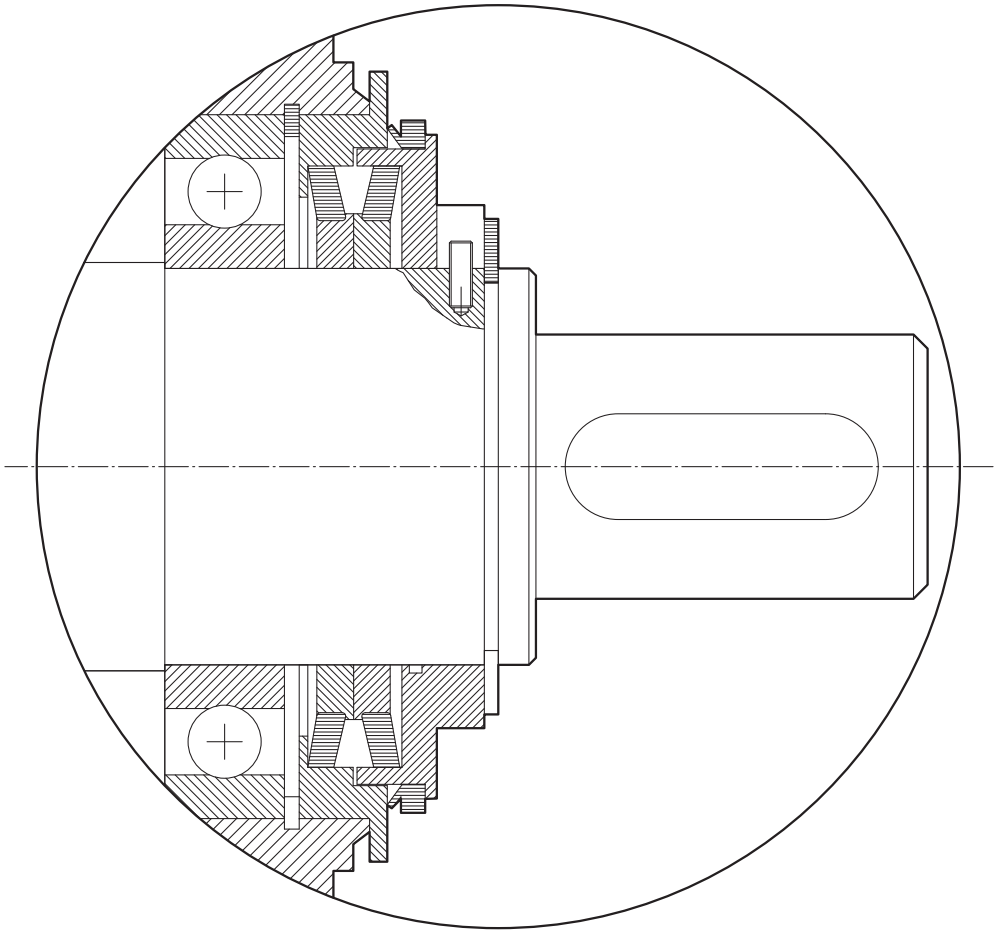
Cooler	: TFS/A 8,5-400-F-03-11
Reduction	: Out 1/2"/ in 3/4"
Motors	: Spannung 3x400 V
Output	: 0,55 kW
Speed	: 1350 rpm
Protection Class	: IP 55
Insulation Class	: F
Temperature Class	: B

Available with:
- Special voltage 60 HZ - Special motor

Weight : 32 kg

TR MEKANİK KEÇE

EN MECHANICAL SEAL



MEKANİK KEÇE

Özellikle aşırı çalışmalarda ve çok kötü çalışma koşullarında uygundur. Daldırmalı veya sulu çalışma ortamlarından etkilenmemektedir. Bu keçe tipi dış çevre koşullarından kesin koruma sağlar.

MECHANICAL SEAL

Seals are important for prevent oil leakage from gear unit and protect from environment. In hazardous environment and extreme operation conditions sealing must be considered. For that reason mechanical seals are applicable for using at hazardous environment, submerged operation.

TR ÇEKTİRME

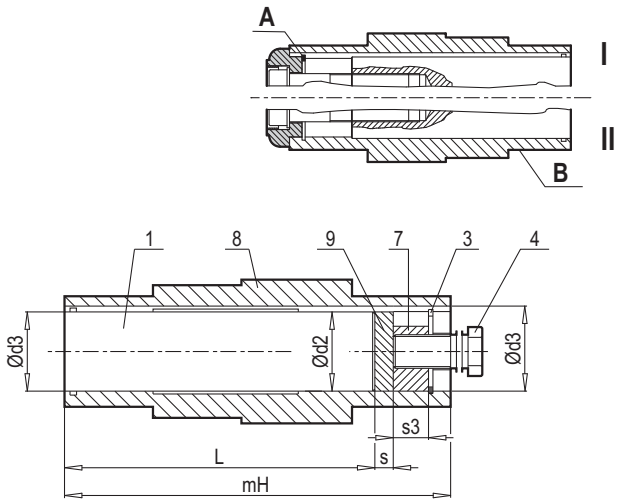
Çektirme elemanları
Çektirme elemanlar, şaft montajlı dişli ünitelerinde opsiyonel olarak bulunur.

Kullanım Şartları:
-Kullanılacak milin merkezinde DIN 332/2 standardında bir delik açılmalı.
-Mil, faturalı yada faturasız olsa da, çektirme elemanları ile sabitlenebilir.
-I 'deki montaj kullanıldığında, mil, şaftın içinde bulunan segman ile tutturulur. (Parça A)
-II 'deki montaj kullanıldığında,milin üzerinde bulununan bilezik (manşon) kullanılarak doğrudan delik mil üzerine tutturulur.(Parça B)

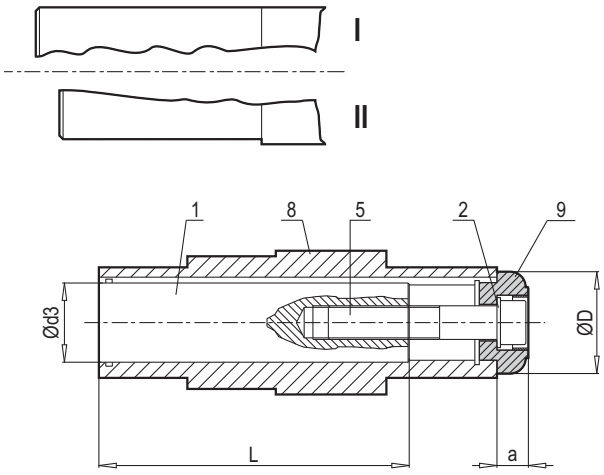
EN FIXING AND FORCING ELEMENTS

Fixing elements
This is used for shaft mounted designs and it should be specified when ordering because there are some requirements for use.

Using conditions:
-Centre bore must be machined appropriately DIN 332/2.
-Solid shaft could be mounted either with a shaft shoulder (II) or without shaft shoulder (I)
-Solid shaft which is without shaft shoulder is mounted with using retainin ring (A)
-Solid shaft which is with shaft shoulder is mounted with using spacer



DEMONTAJ / DISASSEMBLY



MONTAJ / ASSEMBLY

L= max. kullanıcı şaft boyu
L= maximum length of the solid shaft

1) Kullanıcı mili
2) Rondela DIN 127
3) * İç Segman DIN 472
4) * Çektirme civatası
5) Alyan başlı civata DIN 912
6) * Yaylı rondela
7) * Somun
8) Delik mil
9) Disk
*Dikkat, yıldızlı ürünler PGR tarafından temin edilmez.

DEMONTAJ:
1) Alyanbaşlı civatayı sökünüz. (poz.5)
2) Diski çıkarınız. (poz.9)
3) Yaylı rondelayı takınız. (poz.6)
4) Somunu yerleştiriniz. (poz.7)
5) Segmanı takınız. (poz.3)
6) Çektirme civatasını basarak çevirerek kullanıcı milini şafttan ayırınız.(poz.4)

KOŞULLAR:
Kullanıcı mili DIN332/2' e göre merkezine diş açılmış delik gerekmektedir. Müşteri mili "L" uzunluğunu geçmemelidir aksi halde çektirme elementi uygulanamaz. (poz. 5,6,7)

MONTAJ:
1) Kullanıcı milini şaftın içerisine yerleştiriniz. (poz.8)
2) Diski (poz.9) şaftın içerisine yerleştiriniz.
3) Disk ile alyan başlı civata ve rondelayı sabitleyiniz. (poz.2-5)
Yukarıdaki bütün ölçüler helisel konik dişli - Tip W, Tip IEC ve Helisel konik dişli motorları için geçerlidir.

1) Customer's shaft
2) Washer DIN 127
3) * Circlip DIN 472
4) * Jacking screw
5) Socket head screw DIN 912
6) * Pressure disc
7) * Jacking nut
8) Hollow shaft
9) Disc
*Star signs are shown this item are not provided by PGR

DISASSEMBLING:
1) Loosen the socket head screw (5)
2) Remove disc (9)
3) Immerse thrust washer (6)
4) Tuck jacking nut (7)
5) Mount circlip (3)
6) Remove solid shaft from hollow shaft with using jacking screw (4)

REQUIREMENTS:
Solid shaft which is connected to the hollow shaft, must have machined with a centre bore according to DIN 332/2. Consider that 'Lmax' length is important for jacking not using solid shaft's length must not greater than 'Lmax'.

ASSEMBLING:
1) Immerse customer shaft to the hollow shaft (8)
2) Mount disc to the hollow shaft (9)
3) Fasten disc and washer (2) by tightening socket head screw (5)
Dimensions which are shown above of this page are used for all type of helical - bevel gear units. (Type W, IEC adapter and helical - bevel geared motor.)

TR ÇEKTİRME ÖLÇÜ TABLOSU

EN DIMENSION TABLE OF FIXING ELEMENT

Tip / Type	1	2	3	4	5	6		7			8	9	
	L					d2	s	d3	s3		d x mH	a	D
PD A02 Ç	79	A10	I 25 x 1.5	M10	M10 X 45	24.9	3	24.9	12	M10	25 X 100	20	38
PD B02 Ç	100	A10	I 30 x 1.5	M12	M10 X 45	29.9	3	29.9	12	M12	30 X 122	20	40
PD C13 Ç	149	A12	I 35 x 1.75	M16	M12 X 55	34.9	3	34.9	16	M16	35 X 176	24.5	45
PD 12 Ç	100	A10	I 30 x 1.2	M12	M10 X 45	29.9	3	29.9	12	M12	30 X 122	20	40
PD 22 Ç	110	A12	I 35 x 1.5	M16	M12 X 55	34.9	3	34.9	16	M16	35 X 139	24.5	45
PD 32 Ç	140	A16	I 40 x 1.75	M16	M16 X 70	39.9	4	39.9	16	M16	40 X 174	24.7	55
PD 42 Ç	160	A16	I 50 x 2.0	M20	M16 X 70	49.9	4	49.9	20	M20	50 X 195	25.7	65
PD 52 Ç	185	A20	I 60 x 2.0	M24	M20 X 90	59.9	5	59.9	24	M24	60 X 230	30	75
PD 62 Ç	245	A20	I 70 x 2.5	M24	M20 X 90	69.9	5	69.9	24	M24	70 X 290	31.3	95
PD 72 Ç	250	A20	I 80 x 2.5	M30	M20 X 100	79.9	8	79.9	30	M30	80 X 310	31	102
PD 82 Ç	310	A24	I 100 x 3.0	M30	M24 X 110	99.9	8	99.9	30	M30	100 X 366	36.5	120
PD 92 Ç	370	A24	I 120 x 4.0	M36	M24 X 110	119.9	10	119.9	32	M36	120 X 430	36.5	150

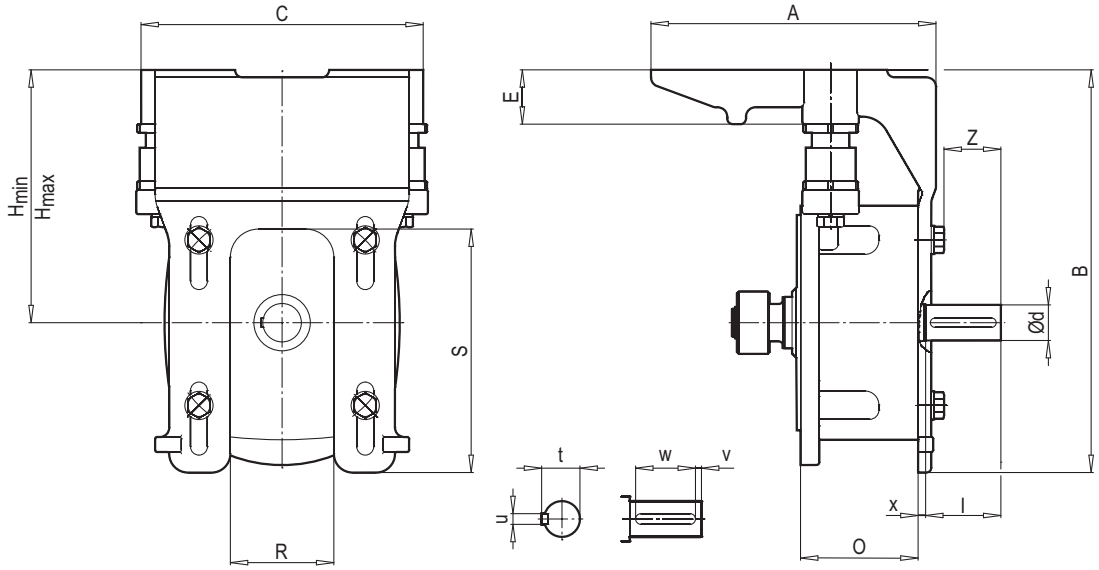
Tabloda belirtilen numaralar Sayfa 64'te açıklanmaktadır.

The numbers which are specified at table are explained on Page 64.

TR MOTOR PLATFORMU

EN INSTALLATION OF MOTOR PLATFORM

Motor Platformu Ölçüleri
Motor Platform Dimensions



Tip Type	Bağlantı boyutları ve platform ölçüleri Connection and platform dimensions										Mil Ölçüleri Shaft size				Flanş Flange
	A	B	C	E	R	S	H min	H max	Z	O	Ød l	t u	v w	x	
MK I 63 M - 100 L	224	253	206	45	60	140	153	173	41	121.5	24 50	27 8	5 40	8	160 S
MK II 80 M - 112 M	238	320	252	50	66	145	199	224	48	115.5	28 60	31 8	5 50	9	250 S
MK III-A 90 S - 132 M	305	430	302	58	110	260	254	286	61	127	38 80	41 10	5 70	8	300 S
MK III-B 90 S - 132 M	305	430	302	58	110	260	254	286	91	172	42 110	45 12	10 90	8	Ø250
MK IV 112 M - 200 L	478	530	402	75	130	315	315	355	116	254	65 140	69 18	15 110	8	Ø350
MK V 200 L - 250 M	664	690	572	105	382	369	465	515	119	247	65 140	69 18	15 110	12	Ø450

Motor Platform Montajı

Motor platform tasarımı PGR monoblok dişli ünitesi serilerinin tüm montaj pozisyonlarında kullanılabilir. 5 adet motor platformu boyutu tüm motor-redüktör kombinasyonlarını kapsar. Çok kademeli redüktörleri de karşılayan ayrı ayrı redüktörler için seçim tablolarından motor platformları bakılabilir.

* Her montaj pozisyonu için kullanılabilir.
* Optimum kayış gerilimi için kolayca yönlendirilebilen yükseklik ayarlaması yapılabilir.
* Sabitleme elemanlarıda dahil olmak üzere korozyona karşı dirençlidir.
* Hafif, vibrasyonu absorbe eden alümiyum yapı mevcuttur.
* Birçok motor boyutu için kullanım kolaylığı sağlar.
* Tabloya göre "i" oranının 1'e eşit olduğu durumlar için önerilir.
* Her yöne 90°' ye kadar eksen etrafında dönebilme özelliğine sahiptir.

Assembling of Motor Platform

Motor platform design could be used at all PGR monoblock gear unit series for all mounting positions. There are 5 motor platform designs. This platforms are provide using possibility with all motor-gear unit series. Motor platform type, dimension and suitable belt type could be followed from table which is shown on page 67-68, on the other hand this table is valid for multi stage gear units.

* It could be used for all mounting positions.
* It could be adjusted for optimum belt-tension and height easily.
* It has high corrosion resistance however fixing elements have this property.
* Alumium structure provide vibration absorbing and light weight.
* It could be used with all motor type.
* We recommend, it is suitable for while "i" ratio is equal to one, table is prepared according to this situation
* It could be adjusted to all direction up to 90°

TR MOTOR PLATFORMU

EN INSTALLATION OF MOTOR PLATFORM

Tip Type	PD/PM 12	PD/PM 22 PD/PM 32	PD/PM 42 PD/PM 52 PD/PM 63	PD/PM 62 PD/PM 72 PD/PM 73 PD/PM 83 PD/PM 93	PD/PM 82 PD/PM 92 PD/PM 103	PD/PM 93	PD/PM 113 PD/PM 123
Motor	W III	W II	W III	W III W IV	W IV W V	W V	W IV
63 M	MK I						
71 M	MK I						
80 M	MK I	MK II					
90 S **90 L**	MK I	MK II	MK III - A	MK III - B			
100 L	MK I	MK II	MK III - A	MK III - B			
112 M		MK II	MK III - A	MK III - B	MK IV		
132 S **132 M**			MK III - A	MK III - B	MK IV		
160 M **160 L**				MK IV	MK IV		
180 M **180 L**				MK IV	MK IV		
200 L				MK IV	MK IV		MK V
225 S **225 M**					MK V	MK V	MK V
250 M					MK V	MK V	MK V

Seçim Örneği:

Çıkış gücü ve hızına göre gerekli olan dişli ünitesinin temel tipini ve gerekli çıkış gücü veya çıkış dönüş hızına dayanan çıkış gücü ve dişli oranını saptayınız.

Örnek :

0.25 kW , 13.3 d/dk i = 109.45
PD 12 - 71 M

Bu esas dişli ünitesi tipi için, motor platformu MK I tayin edildiğini tablodan (yukarıya bakınız) saptayınız.
Bu nedenle, tam tip tanımı **PD 12 - MK I - 71**'dir.

MK I için, tablodan (sayfa 68) bant makarası ve bant tipi ile ilgili daha fazla bilgi alabilirsiniz. Esas boyutlar, tabloda gösterilmiştir.

Selection Example:

Motor platform assignment could be explained in one example hence, according to selecting gear unit reduction ratio, output speed and motor power is determined.

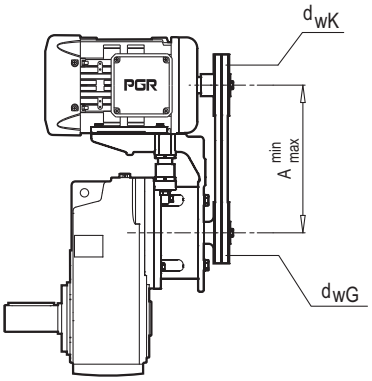
For instance ;

0.25 kW , 13.3 min^{-1} , i = 109.45
PD 12 - 71 M

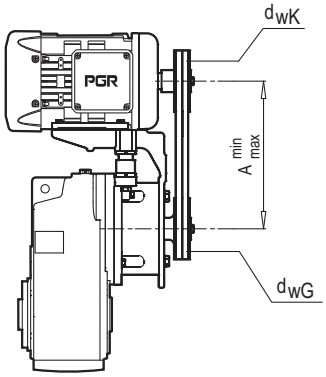
From table (see above of this page) type of gear unit (column) and motor type (row) are intersected. Hence, from this motor bracket MK I dimension should be used. Full designation is **PD 12 - MK I - 71.**

Following page shows more detail about belt pulley and type of belt (see page 68). You can see dimension of belt length with motor platform assignment.

TR MOTOR PLATFORMU



EN INSTALLATION OF MOTOR PLATFORM

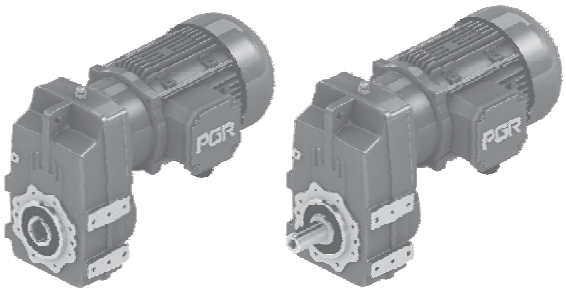


	Motor	Çıkış Output (kW)	Ayar aralığı Adjustment range Amin	Amax	Kayış uzunluğu Belt length	Mil merkezi uzaklığı Shaft centre distance A	Kayış sayısı Number of belts
MK I Kayış Tipi SPZ Belt type SPZ					**(dwg = 80) (i = 1) Lw**		
	63 M/4A	0.12	216	236	697	223	1
	63 M/4B	0.18	216	236	697	223	1
	71 M/4A	0.25	224	244	710	229	1
	71 M/4B	0.37	224	244	710	229	1
	80 M/4A	0.55	233	253	737	243	1
	80 M/4B	0.75	233	253	737	243	1
	90 S/4A	1.10	243	263	750	249	1
	90 L/4A	1.50	243	263	750	249	2
	100 L/4A	2.20	253	273	772	260	2
	100 L/4B	3.00	253	273	772	260	3
MK II Kayış Tipi XPZ Belt type XPZ					**(dwg = 112) (i = 1) Lw**		
	80 M/4A	0.55	279	304	930	289	1
	80 M/4B	0.75	279	304	930	289	1
	90 S/4A	1.10	289	314	950	299	1
	90 L/4A	1.50	289	314	950	299	1
	100 L/4A	2.20	299	324	980	314	1
	100 L/4B	3.00	299	324	980	314	2
	112 M/4B	4.00	311	336	1000	324	2
MK III Kayış Tipi SPZ Belt type SPZ					**(dwg = 160) (i = 1) Lw**		
	90 S/4A	1.10	344	376	1222	360	1
	90 L/4B	1.50	344	376	1222	360	1
	100 L/4A	2.20	354	386	1250	374	1
	100 L/4B	3.00	354	386	1250	374	1
	112 M/4B	4.00	366	398	1262	380	2
	132 S/4C	5.50	386	418	1312	405	2
	132 M/4B	7.50	386	418	1312	405	3
	132 M/4	9.20	386	418	1312	405	3
MK IV Kayış Tipi XPA Belt type XPA					**(dwg = 200) (i = 1) Lw**		
	112 M/4B	4.00	427	467	1500	436	1
	132 S/4C	5.50	447	487	1550	461	1
	132 M/4B	7.50	447	487	1550	461	2
	132 M/4	9.20	447	487	1550	461	2
	160 M/4B	11.0	475	515	1600	486	2
	160 L/4A	15.0	475	515	1600	486	3
	180 M/4B	18.5	495	535	1650	511	3
	180 L/4B	22.0	495	535	1650	511	4
	200 L/4C	30.0	515	555	1700	536	4
MKV KayışTipiSPA BelttypeSPA					**(dwg = 250) (i = 1) Lw**		
	200 L/4C	30.0	665	715	2182	698	4
	225 S/4A	37.0	690	740	2207	710	4
	225 M/4C	45.0	690	740	2207	710	5
MK V Kayış Tipi SPB Belt type SPB					**(dwg = 250) (i = 1) Lw**		
	250 M/4C	55.0	715	765	2240	727	4

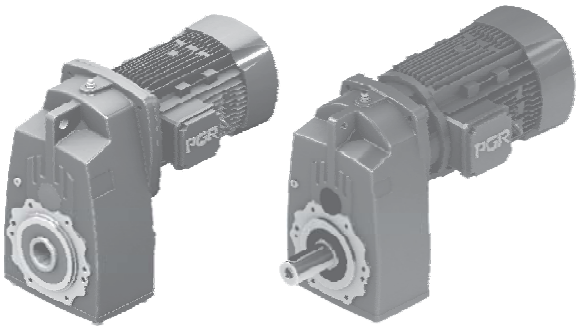
Motorlu Seçim Tabloları

Selection Tables of
Geared motors

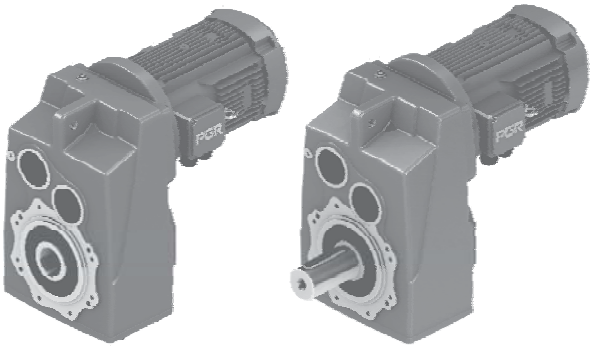
PD/PM A02...C13



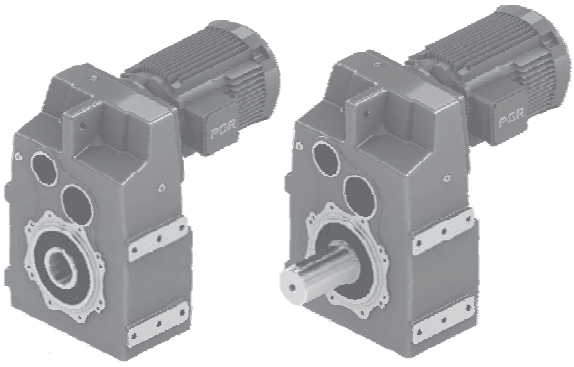
PD/PM 12...52
PD/PM 13...53



PD/PM 62 ... 82
PD/PM 63 ... 83



PD/PM 92 ... 112
PD/PM 93 ... 123



PD / PM

TR TEKNİK TANIMLAR

Motorlu redüktör performans tablolarının yapısı.
Notify about performance tables for Geared motor.

0.37 kW → **Redüktör motor gücü**
Gear unit motor power

Motor gücü
Rated motor power

Çıkış devri
Output speed

Çıkış momenti
Output torque

Servis faktörü
Service factor

Tahvil oranı
Reduction ratio

Redüktör tipi
Gear unit motor type

Ağırlık
Weight

Ölçü sayfaları
Drawing page

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\,GR}$ [kN]	$F_{A\,GR}$ [kN]	Tip / Type	Kg	Sayfa-Page mm
0.37	2.6 3.1 3.5	1375 1149 1009	1.5 1.5 2.0	532.76 445.16 391.14	20.0 21.0 21.0	22.0 22.0 22.0	29.0 30.0 30.0	30.0 30.0 30.0	**PD 43 - 71M/4B** **PM 43 - 71M/4B**	73	131

Müsaade edilebilir radyal yükler
Normal rulmanlarda
F_R için listelenmiş değerlerde
F_A = 0 (N) olarak hesaplanmıştır

Permissible radial force or load on output shaft while normal bearings are used. For this load F_A is assumed equal zero. F_A = 0 (N)

Müsaade edilebilir eksenel yükler
Güçlendirilmiş rulmanlarda
F_A için listelenmiş değerlerde
F_R = 0 (N) olarak hesaplanmıştır

Permissible axial force on output shaft while reinforced bearings are used. For this load F_R is assumed equal to zero.F_R = 0 (N)

Müsaade edilebilir eksenel yükler
Normal rulmanlarda
F_A için listelenmiş değerlerde
F_R = 0 (N) olarak hesaplanmıştır

Permissible axial force or load on output shaft while normal bearings are used. For this load F_R is assumed equal zero.
F_R = 0 (N)

Müsaade edilebilir radyal yükler
Güçlendirilmiş rulmanlarda
F_A için listelenmiş değerlerde
F_R = 0 (N) olarak hesaplanmıştır.

Permissible radial force or load on output shaft while reinforced bearings are used. For this load F_A is assumed equal to zero. F_A = 0 (N)

EN TECHNICAL DESCRIPTIONS

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.12	1.0 1.2 1.5 1.9	779 644 507 406	2.3 2.8 3.5 4.4	1343.79 1111.10 874.48 699.58	21.0 22.0 22.0 22.0	22.0 22.0 22.0 22.0	30.0 30.0 31.0 31.0	30.0 30.0 30.0 30.0	**PD 42/12 - 63M/4A** **PM 42/12 - 63M/4A**	71	164
	1.0 1.1	*1081 1061	0.8 1.0	918.90 808.52	14.0 14.0	15.0 15.0	21.0 21.0	20.0 20.0	**PD 33 - 63M/6** **PM 33 - 63M/6**	54	127
	1.3 1.4 1.6 1.8 2.3 2.7 3.2	890 799 703 632 508 420 355	0.9 1.0 1.5 1.5 2.0 2.1 2.2	1022.54 918.90 808.52 726.57 584.11 482.75 408.42	15.0 15.0 15.0 15.0 16.0 16.0 16.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0	**PD 33 - 63M/4A** **PM 33 - 63M/4A**	54	127
	0.9	*692	0.8	1423.90	7.0	12.0	12.0	15.0	**PD/PM 22/02 - 63M/4A**	39	164
	1.1 1.4	*567 *650	0.8 0.8	762.96 622.96	8.0 7.0	12.0 12.0	13.0 12.0	15.0 15.0	**PD 23 - 63M/6** **PM 23 - 63M/6**	38	123
	1.7 2.1 2.7 3.4 4.0 4.8 5.6	*540 542 420 340 287 240 205	0.8 1.0 1.2 1.5 2.0 2.3 2.3	762.96 622.96 482.49 390.87 330.43 276.32 235.73	8.0 8.0 9.0 9.0 10.0 10.0 10.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0	13.0 13.0 13.0 14.0 14.0 14.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0	**PD 23 - 63M/4A** **PM 23 - 63M/4A**	38	123
	1.0 1.2 1.6 2.0 2.4 3.2	*376 *352 *364 *347 317 235	0.8 0.8 0.8 0.8 0.9 1.2	1363.09 1064.65 824.73 662.28 546.25 405.92	5.0 5.0 5.0 5.0 6.0 6.0	7.0 7.0 7.0 7.0 7.0 7.0	8.0 8.0 8.0 8.0 9.0 9.0	7.0 7.0 7.0 7.0 7.0 7.0	**PD 12/02 - 63M/4A** **PM 12/02 - 63M/4A**	28	164
	3.5 4.4 5.1 6.5 8.3	331 262 224 177 138	1.1 1.4 1.7 2.1 2.7	380.81 301.44 257.36 203.72 158.21	6.0 6.0 7.0 7.0 7.0	7.0 7.0 7.0 7.0 7.0	8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0	**PD C13 - 63M/4A** **PM C13 - 63M/4A**	26	116
	1.4 1.6 1.8	*283 *287 *289	0.8 0.8 0.8	633.80 556.59 472.42	6.0 6.0 6.0	7.0 7.0 7.0	- - -	- - -	**PD 13 - 63M/6** **PM 13 - 63M/6**	24	119
	2.1 2.4 2.8 3.2 3.6 4.4 5.2 6.3	*281 *285 *282 *283 *283 262 219 182	0.8 0.8 0.8 0.8 0.8 1.0 1.3 1.3	633.80 556.59 472.42 414.87 368.83 301.08 251.58 209.76	6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	- - - - - - - -	- - - - - - - -	**PD 13 - 63M/4A** **PM 13 - 63M/4A**	24	119
	8.0 9.5 10.8	144 121 106	1.5 1.9 2.8	109.45 92.43 81.17	7.0 7.0 7.0	7.0 7.0 7.0	10.0 10.0 10.0	7.0 7.0 7.0	**PD 12 - 63M/6** **PM 12 - 63M/6**	20	118
	12.0 14.3 16.2	95 80 71	2.2 2.9 4.2	109.45 92.43 81.17	7.0 7.0 7.0	7.0 7.0 7.0	10.0 10.0 10.0	7.0 7.0 7.0	**PD 12 - 63M/4A** **PM 12 - 63M/4A**	20	118
	9.5 12.8 15.4 16.6 20.0	121 90 75 69 57	0.9 1.4 1.9 1.9 2.4	139.15 103.09 85.67 79.42 66.00	5.0 5.0 5.0 5.0 5.0	5.0 5.0 5.0 5.0 5.0	7.0 7.0 7.0 7.0 7.0	5.0 5.0 5.0 5.0 5.0	**PD B02 - 63M/4A** **PM B02 - 63M/4A**	14	114

*** max. çıkış momenti f_B = 0.8**

* max. output torque with f_B = 0.8

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.12	16.1	71	0.9	81.73	5.0	5.0	5.0	8.0			
	22.2	52	2.1	59.32	5.0	5.0	5.0	8.0			
	26.5	43	2.3	49.62	5.0	5.0	5.0	8.0			
	31.5	36	2.3	41.88	5.0	5.0	5.0	8.0			
	34.9	33	3.0	37.71	5.0	5.0	5.0	8.0			
	37.9	30	3.4	34.80	5.0	5.0	5.0	8.0			
	41.4	28	3.4	31.83	5.0	5.0	5.0	8.0			
	45.3	25	4.3	29.11	5.0	5.0	5.0	8.0			
	53.6	21	5.4	24.57	4.0	5.0	5.0	8.0			
	59.0	19	5.6	22.34	4.0	5.0	5.0	8.0			
	70.2	16	5.8	18.77	4.0	5.0	5.0	8.0	**PD A02 - 63M/4A** **PM A02 - 63M/4A**	10	112
	79.7	14	6.9	16.54	4.0	5.0	5.0	8.0			
	88.3	13	5.8	14.91	4.0	5.0	5.0	8.0			
	95.2	12	9.1	13.83	4.0	5.0	5.0	8.0			
	112.8	10	10.8	11.67	4.0	5.0	5.0	8.0			
	138.8	8	13.1	9.49	3.0	5.0	5.0	8.0			
	152.6	8	13.1	8.63	3.0	5.0	5.0	8.0			
	181.6	6	13.1	7.25	3.0	5.0	5.0	8.0			
	207.6	6	14.6	6.35	3.0	5.0	5.0	8.0			
	247.0	5	14.6	5.33	3.0	5.0	5.0	8.0			
	311.0	4	14.6	4.24	3.0	4.0	5.0	8.0			
0.18	1.2	1088	2.8	1094.40	31.0	32.0	44.0	40.0	**PD\PM 52/12 - 63M/4B**	107	164
	1.0	1336	1.3	1343.79	20.0	22.0	29.0	30.0			
	1.2	1104	1.6	1111.10	21.0	22.0	30.0	30.0			
	1.5	869	2.1	874.48	21.0	22.0	30.0	30.0			
	1.9	695	2.6	699.58	22.0	22.0	30.0	30.0	**PD 42/12 - 63M/4B** **PM 42/12 - 63M/4B**	71	164
	2.4	555	3.2	557.93	22.0	22.0	31.0	30.0			
	3.3	407	4.4	409.62	22.0	22.0	31.0	30.0			
	3.9	339	5.3	341.25	22.0	22.0	31.0	30.0			
	4.5	300	6.0	302.14	22.0	22.0	31.0	30.0			
	1.2	1465	1.0	782.28	20.0	22.0	29.0	30.0			
	1.4	1224	1.0	653.66	20.0	22.0	30.0	30.0	**PD 43 - 71M/6A** **PM 43 - 71M/6A**	81	131
	1.7	998	2.0	532.76	21.0	22.0	30.0	30.0			
	2.1	834	2.0	445.16	21.0	22.0	30.0	30.0			
	1.3	1062	0.8	1068.11	13.0	15.0	21.0	20.0	**PD/PM 32/12 - 63M/4B**	56	164
	1.7	1033	1.0	808.52	13.0	15.0	21.0	20.0			
	1.9	928	1.0	726.57	14.0	15.0	21.0	20.0			
	2.3	746	1.3	584.11	15.0	15.0	22.0	20.0			
	2.8	617	1.4	482.75	15.0	15.0	22.0	20.0	**PD 33 - 63M/4B** **PM 33 - 63M/4B**	54	127
	3.3	522	1.5	408.42	16.0	15.0	22.0	20.0			
	4.7	367	2.6	287.08	16.0	15.0	23.0	20.0			
	5.8	295	3.4	230.79	16.0	15.0	23.0	20.0			
	7.1	244	3.6	190.74	16.0	15.0	23.0	20.0			
	2.0	659	0.8	662.62	7.0	12.0	12.0	15.0	**PD 22/02 - 63M/4B** **PM 22/02 - 63M/4B**	39	164
	2.6	511	1.0	514.10	8.0	12.0	13.0	15.0			
	2.8	616	0.8	482.49	7.0	12.0	12.0	15.0			
	3.4	499	1.0	390.87	8.0	12.0	13.0	15.0			
	4.1	422	1.3	330.43	9.0	12.0	13.0	15.0	**PD 23 - 63M/4B** **PM 23 - 63M/4B**	38	123
	4.9	353	1.6	276.32	9.0	12.0	14.0	15.0			
	5.7	301	1.6	235.73	10.0	12.0	14.0	15.0			
	7.3	237	2.2	185.19	10.0	12.0	14.0	15.0			
	7.2	239	1.6	127.46	10.0	12.0	14.0	15.0	**PD 22 - 71M/6A** **PM 22 - 71M/6A**	36	122
	8.8	195	2.0	104.07	10.0	12.0	14.0	15.0			
	9.1	189	2.3	100.98	10.0	12.0	14.0	15.0			
	4.1	326	0.9	328.02	6.0	7.0	9.0	7.0	**PD 12/02 - 63M/4B** **PM 12/02 - 63M/4B**	28	164
	4.7	282	1.0	284.03	6.0	7.0	9.0	7.0			
	5.9	228	1.3	229.52	6.0	7.0	9.0	7.0			
	3.5	487	0.8	380.81	4.0	7.0	8.0	11.0			
	4.5	385	1.0	301.44	5.0	7.0	8.0	11.0			
	5.2	329	1.1	257.36	6.0	7.0	8.0	11.0			
	6.6	260	1.4	203.72	6.0	7.0	8.0	11.0			
	8.5	202	1.8	158.21	7.0	7.0	8.0	11.0	**PD C13 - 63M/4B** **PM C13 - 63M/4B**	26	116
	9.9	174	2.1	136.54	7.0	7.0	8.0	11.0			
	11.4	151	2.5	118.07	7.0	7.0	8.0	11.0			
	12.7	135	2.7	106.03	7.0	7.0	8.0	11.0			
	13.3	129	2.9	101.01	7.0	7.0	8.0	11.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.18	5.3 6.4	321 268	0.9 0.9	251.58 209.76	6.0 6.0	7.0 7.0	- -	- -	**PD 13 - 63M/4B** **PM 13 - 63M/4B**	24	119
	8.4 9.9 11.3	205 173 152	1.0 1.3 1.9	109.45 92.43 81.17	7.0 7.0 7.0	7.0 7.0 7.0	9.0 9.0 10.0	7.0 7.0 7.0	**PD 12 - 71M/6A** **PM 12 - 71M/6A**	23	118
	12.3 14.6 16.6 20.3	140 118 104 85	1.5 2.0 2.9 3.2	109.45 92.43 81.17 66.26	7.0 7.0 7.0 6.0	7.0 7.0 7.0 7.0	10.0 10.0 10.0 10.0	7.0 7.0 7.0 7.0	**PD 12 - 63M/4B** **PM 12 - 63M/4B**	20	118
	13.1 15.7 16.9 20.4 23.8 26.1 30.4 33.3	132 109 101 84 72 66 57 52	1.0 1.3 1.3 1.7 2.2 2.2 2.9 3.2	103.09 85.67 79.42 66.00 56.55 51.60 44.23 40.35	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	**PD B02 - 63M/4B** **PM B02 - 63M/4B**	14	114
	22.7 27.1 32.1 35.7 38.7 42.3 46.2 54.8 60.2 71.7 81.4 90.2 97.3 115.3 141.8 155.9 185.5 212.0 252.3 317.6	76 63 53 48 44 41 37 31 29 24 21 19 18 15 12 11 9 8 7 5	1.5 1.6 1.6 2.1 2.3 2.3 3.0 3.7 3.8 4.0 4.7 3.9 6.2 7.4 8.9 8.9 8.9 9.9 10.0 9.9	59.32 49.62 41.88 37.71 34.80 31.83 29.11 24.57 22.34 18.77 16.54 14.91 13.83 11.67 9.49 8.63 7.25 6.35 5.33 4.24	5.0 5.0 5.0 5.0 5.0 5.0 5.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 4.0 4.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	**PD A02 - 63M/4B** **PM A02 - 63M/4B**	10	112
0.25	1.3 1.6 2.0	1579 1243 994	1.9 2.4 3.0	1094.40 861.34 689.07	31.0 31.0 31.0	32.0 32.0 32.0	44.0 44.0 44.0	40.0 40.0 40.0	**PD 52/12 - 71M/4A** **PM 52/12 - 71M/4A**	110	164
	1.0 1.3 1.6 2.0 2.5	1939 1603 1262 1009 805	0.9 1.1 1.4 1.8 2.2	1343.79 1111.10 874.48 699.58 557.93	17.0 19.0 20.0 21.0 21.0	22.0 22.0 22.0 22.0 22.0	27.0 28.0 30.0 30.0 30.0	30.0 30.0 30.0 30.0 30.0	**PD 42/12 - 71M/4A** **PM 42/12 - 71M/4A**	74	164
	1.2 1.8 2.1 2.6 3.1 3.6 4.3 5.1	1940 1344 1123 915 765 672 561 468	0.8 1.1 1.1 2.2 2.2 3.0 3.4 3.4	1129.42 782.28 653.66 532.76 445.16 391.14 326.83 272.49	17.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0	22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	27.0 29.0 30.0 30.0 30.0 30.0 31.0 31.0	30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0	**PD 43 - 71M/4A** **PM 43 - 71M/4A**	81	131
	1.9 2.4 2.9 3.4 4.8 6.0 7.3	1248 1003 829 702 493 396 328	0.8 1.0 1.0 1.1 1.9 2.5 2.6	726.57 584.11 482.75 408.42 287.08 230.79 190.74	12.0 14.0 15.0 15.0 16.0 16.0 16.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0	20.0 21.0 22.0 22.0 23.0 23.0 23.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0	**PD 33 - 71M/4A** **PM 33 - 71M/4A**	57	127
	8.2 9.1	292 262	2.6 3.1	112.23 100.85	16.0 16.0	15.0 15.0	23.0 23.0	20.0 20.0	**PD 32 - 71M/6B** **PM 32 - 71M/6B**	53	126
	12.4	193	4.0	112.23	16.0	15.0	23.0	20.0	**PD/PM 32 - 71M/4A**	51	126
	3.3	612	0.8	424.03	7.0	12.0	12.0	15.0	**PD/PM 22/02 - 71M/4A**	42	164

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.25	3.6	671	0.8	390.87	7.0	12.0	12.0	15.0	**PD 23 - 71M/4A** **PM 23 - 71M/4A**	41	123
	4.2	568	1.0	330.43	8.0	12.0	13.0	15.0			
	5.0	475	1.2	276.32	9.0	12.0	13.0	15.0			
	5.9	405	1.2	235.73	9.0	12.0	13.0	15.0			
	7.2	331	1.1	127.46	9.0	12.0	14.0	15.0	**PD 22 - 71M/6B** **PM 22 - 71M/6B**	38	122
	8.8	270	1.5	104.07	10.0	12.0	14.0	15.0			
	9.1	262	1.7	100.98	10.0	12.0	14.0	15.0			
	10.9	219	1.7	127.46	10.0	12.0	14.0	15.0	**PD/PM 22 - 71M/4A**	36	122
	5.4	442	0.8	257.36	5.0	7.0	8.0	11.0	**PD C13 - 71M/4A** **PM C13 - 71M/4A**	29	116
	6.8	350	1.1	203.72	6.0	7.0	8.0	11.0			
	8.8	272	1.4	158.21	6.0	7.0	8.0	11.0			
	10.2	235	1.6	136.54	7.0	7.0	8.0	11.0			
	11.8	203	1.8	118.07	7.0	7.0	8.0	11.0			
	13.1	182	2.0	106.03	7.0	7.0	8.0	11.0			
	13.8	174	2.1	101.01	7.0	7.0	8.0	11.0			
	15.6	153	2.4	88.92	7.0	7.0	8.0	11.0			
	8.5	282	0.8	163.92	6.0	7.0	-	-	**PD/PM 13 - 71M/4A**	27	119
	9.9	240	1.0	92.43	6.0	7.0	9.0	7.0	**PD 12 - 71M/6B** **PM 12 - 71M/6B**	25	118
	11.3	211	1.4	81.17	6.0	7.0	9.0	7.0			
	12.7	188	1.1	109.45	7.0	7.0	9.0	7.0	**PD 12 - 71M/4A** **PM 12 - 71M/4A**	23	118
	15.0	159	1.5	92.43	7.0	7.0	9.0	7.0			
	17.1	139	2.1	81.17	6.0	7.0	10.0	7.0			
	21.0	114	2.4	66.26	6.0	7.0	10.0	7.0			
	25.1	95	2.5	55.37	6.0	7.0	10.0	7.0			
	30.1	79	2.5	46.16	6.0	7.0	10.0	7.0			
	16.2	147	1.0	85.67	5.0	5.0	7.0	5.0	**PD B02 - 71M/4A** **PM B02 - 71M/4A**	17	114
	17.5	136	0.9	79.42	5.0	5.0	7.0	5.0			
	21.1	113	1.2	66.00	5.0	5.0	7.0	5.0			
	24.6	97	1.6	56.55	5.0	5.0	7.0	5.0			
	26.9	89	1.6	51.60	5.0	5.0	7.0	5.0			
	31.4	76	2.2	44.23	5.0	5.0	7.0	5.0			
	34.4	69	2.4	40.35	5.0	5.0	7.0	5.0			
	40.7	59	2.6	34.16	5.0	5.0	7.0	5.0			
	46.2	52	2.5	30.08	4.0	5.0	7.0	5.0			
	23.4	102	1.1	59.32	5.0	5.0	5.0	8.0	**PD A02 - 71M/4A** **PM A02 - 71M/4A**	13	112
	28.0	85	1.2	49.62	5.0	5.0	5.0	8.0			
	33.2	72	1.2	41.88	5.0	5.0	5.0	8.0			
	36.9	65	1.5	37.71	5.0	5.0	5.0	8.0			
	39.9	60	1.7	34.80	5.0	5.0	5.0	8.0			
	43.7	55	1.7	31.83	4.0	5.0	5.0	8.0			
	47.8	50	2.2	29.11	4.0	5.0	5.0	8.0			
	56.6	42	2.7	24.57	4.0	5.0	5.0	8.0			
	62.2	38	2.8	22.34	4.0	5.0	5.0	8.0			
	74.0	32	2.9	18.77	4.0	5.0	5.0	8.0			
	84.1	28	3.5	16.54	4.0	5.0	5.0	8.0			
	93.2	26	2.9	14.91	4.0	5.0	5.0	8.0			
	100.5	24	4.6	13.83	4.0	5.0	5.0	8.0			
	119.1	20	5.5	11.67	3.0	5.0	5.0	8.0			
	146.4	16	6.6	9.49	3.0	5.0	5.0	8.0			
	161.1	15	6.6	8.63	3.0	5.0	5.0	8.0			
	191.6	12	6.7	7.25	3.0	5.0	5.0	8.0			
	219.0	11	7.4	6.35	3.0	5.0	5.0	8.0			
	260.6	9	7.4	5.33	3.0	4.0	5.0	8.0			
	328.1	7	7.4	4.24	2.0	4.0	5.0	8.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.37	1.0	3090	2.3	1342.44	57.0	58.0	81.0	80.0	**PD/PM 73/22 - 71M/4B**	277	166
	1.1 1.2 1.7 2.1	2902 2543 1890 1467	1.9 2.1 2.9 3.7	1260.77 1104.71 821.10 637.34	39.0 40.0 41.0 41.0	47.0 47.0 47.0 47.0	57.0 57.0 58.0 58.0	60.0 60.0 60.0 60.0	**PD 63/22 - 71M/4B** **PM 63/22 - 71M/4B**	204	166
	1.0 1.3	3070 2519	1.0 1.2	1333.49 1094.40	25.0 28.0	32.0 32.0	40.0 42.0	40.0 40.0	**PD 52/12 - 71M/4B** **PM 52/12 - 71M/4B**	112	164
	1.3 1.6 1.8 2.1 2.5 3.4	2687 2192 2015 1644 1389 1039	1.2 1.3 1.6 1.9 2.0 2.6	699.67 570.63 524.75 427.97 361.64 270.40	27.0 29.0 30.0 30.0 31.0 31.0	32.0 32.0 32.0 32.0 32.0 32.0	42.0 43.0 43.0 44.0 44.0 44.0	40.0 40.0 40.0 40.0 40.0 40.0	**PD 53 - 80M/6A** **PM 53 - 80M/6A**	123	135
	1.6	2013	0.9	874.48	17.0	22.0	27.0	30.0	**PD/PM 42/12 - 71M/4B**	76	164
	1.7 2.1	2046 1710	1.0 1.0	532.76 445.16	17.0 19.0	22.0 22.0	27.0 28.0	30.0 30.0	**PD 43 - 80M/6A** **PM 43 - 80M/6A**	83	131
	2.6 3.1 3.5 4.2 5.0 7.1 8.6	1375 1149 1009 843 703 494 413	1.5 1.5 2.0 2.2 2.2 4.0 4.0	532.76 445.16 391.14 326.83 272.49 191.52 160.03	20.0 21.0 21.0 21.0 22.0 22.0 22.0	22.0 22.0 22.0 22.0 22.0 22.0 22.0	29.0 30.0 30.0 30.0 30.0 31.0 31.0	30.0 30.0 30.0 30.0 30.0 30.0 30.0	**PD 43 - 71M/4B** **PM 43 - 71M/4B**	83	131
	3.0 3.8	1062 825	0.8 1.1	461.30 358.19	13.0 15.0	15.0 15.0	21.0 22.0	20.0 20.0	**PD 32/12 - 71M/4B** **PM 32/12 - 71M/4B**	61	164
	4.8 5.9 7.2	741 596 492	1.3 1.7 1.8	287.08 230.79 190.74	15.0 16.0 16.0	15.0 15.0 15.0	22.0 22.0 23.0	20.0 20.0 20.0	**PD 33 - 71M/4B** **PM 33 - 71M/4B**	59	127
	8.2 9.1 10.4	431 387 341	1.8 2.1 2.8	112.23 100.85 88.74	16.0 16.0 16.0	15.0 15.0 15.0	23.0 23.0 23.0	20.0 20.0 20.0	**PD 32 - 80M/6A** **PM 32 - 80M/6A**	53	126
	12.2 13.6	290 260	2.7 3.1	112.23 100.85	15.0 15.0	15.0 15.0	23.0 23.0	20.0 20.0	**PD 32 - 71M/4B** **PM 32 - 71M/4B**	53	126
	4.8	663	0.8	288.06	7.0	12.0	12.0	15.0	**PD/PM 22/02 - 71M/4B**	44	164
	5.0 5.8	713 608	0.8 0.8	276.32 235.73	6.0 7.0	12.0 12.0	11.0 12.0	15.0 15.0	**PD 23 - 71M/4B** **PM 23 - 71M/4B**	43	123
	7.2 8.8 9.1	490 400 388	0.8 1.0 1.1	127.46 104.07 100.98	9.0 9.0 9.0	12.0 12.0 12.0	13.0 13.0 13.0	15.0 15.0 15.0	**PD 22 - 80M/6A** **PM 22 - 80M/6A**	38	122
	10.7 13.6 16.6	329 261 213	1.2 1.7 2.2	127.46 100.98 82.45	9.0 10.0 10.0	12.0 12.0 12.0	14.0 14.0 14.0	15.0 15.0 15.0	**PD 22 - 71M/4B** **PM 22 - 71M/4B**	38	122
	8.7 10.0 11.6 13.6 15.4 17.4 20.1 22.8 25.7	408 352 305 261 229 203 176 155 137	0.9 1.1 1.2 1.4 1.6 1.8 2.1 2.4 2.6	158.21 136.54 118.07 101.01 88.92 78.83 68.27 60.09 53.28	5.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	**PD C13 - 71M/4B** **PM C13 - 71M/4B**	31	116
	13.0	272	1.0	105.32	6.0	7.0	-	-	**PD/PM 13 - 71M/4B**	29	119
	14.8 16.9 19.0 20.7 23.2 24.7 27.8 29.7 33.4 42.7 48.3 54.2	239 209 186 171 152 143 127 119 106 83 73 65	1.0 1.4 1.6 1.6 1.9 1.6 2.0 1.6 2.0 2.8 3.1 3.5	92.43 81.17 72.16 66.26 58.91 55.37 49.22 46.16 41.04 32.07 28.35 25.24	6.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 5.0 5.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	**PD 12 - 71M/4B** **PM 12 - 71M/4B**	25	118

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.37	20.7	170	0.8	66.00	5.0	5.0	7.0	5.0	PD B02 - 71M/4B PM B02 - 71M/4B	19	114
	24.2	146	1.1	56.55	5.0	5.0	7.0	5.0			
	26.5	133	1.1	51.60	5.0	5.0	7.0	5.0			
	31.0	114	1.4	44.23	5.0	5.0	7.0	5.0			
	33.9	104	1.6	40.35	4.0	5.0	7.0	5.0			
	40.1	88	1.7	34.16	4.0	5.0	7.0	5.0			
	45.5	78	1.7	30.08	4.0	5.0	7.0	5.0			
	52.7	67	1.9	25.96	4.0	5.0	7.0	5.0			
	60.4	59	2.2	22.68	4.0	5.0	7.0	5.0			
	63.5	56	2.5	21.58	4.0	5.0	7.0	5.0			
	68.7	51	2.5	19.94	4.0	5.0	7.0	5.0			
	77.7	45	2.8	17.62	4.0	5.0	7.0	5.0			
	27.6	128	0.8	49.62	5.0	5.0	5.0	8.0	PD A02 - 71M/4B PM A02 - 71M/4B	15	112
	32.7	108	0.8	41.88	4.0	5.0	5.0	8.0			
	36.3	97	1.0	37.71	4.0	5.0	5.0	8.0			
	39.3	90	1.1	34.80	4.0	5.0	5.0	8.0			
	43.0	82	1.2	31.83	4.0	5.0	5.0	8.0			
	47.0	75	1.5	29.11	4.0	5.0	5.0	8.0			
	55.7	63	1.8	24.57	4.0	5.0	5.0	8.0			
	61.3	58	1.9	22.34	4.0	5.0	5.0	8.0			
	72.9	48	2.0	18.77	4.0	5.0	5.0	8.0			
	82.8	43	2.3	16.54	4.0	5.0	5.0	8.0			
	91.8	38	1.9	14.91	3.0	5.0	5.0	8.0			
	99.0	36	3.1	13.83	3.0	5.0	5.0	8.0			
	117.3	30	3.7	11.67	3.0	5.0	5.0	8.0			
	144.2	24	4.4	9.49	3.0	5.0	5.0	8.0			
	158.6	22	4.4	8.63	3.0	5.0	5.0	8.0			
	188.8	19	4.4	7.25	3.0	5.0	5.0	8.0			
	215.7	16	4.9	6.35	3.0	5.0	5.0	8.0			
	256.7	14	4.9	5.33	3.0	4.0	5.0	8.0			
	323.2	11	4.9	4.24	2.0	4.0	5.0	8.0			
0.55	1.0	4742	2.6	1362.94	92.0	73.0	100.0	100.0	PD 83/32 - 80M/4A PM 83/32 - 80M/4A	413	166
	1.3	3694	3.3	1061.83	93.0	73.0	100.0	100.0			
	1.0	4670	1.5	1342.44	55.0	58.0	80.0	80.0	PD 73/22 - 80M/4A PM 73/22 - 80M/4A	277	166
	1.3	3625	2.0	1042.00	57.0	58.0	81.0	80.0			
	1.5	3243	2.2	932.25	57.0	58.0	81.0	80.0			
	2.0	2471	2.9	710.29	58.0	58.0	82.0	80.0			
	1.1	4386	1.2	1260.77	34.0	47.0	54.0	60.0	PD 63/22 - 80M/4A PM 63/22 - 80M/4A	204	166
	1.3	3843	1.4	1104.71	36.0	47.0	54.0	60.0			
	1.7	2857	1.9	821.10	39.0	47.0	57.0	60.0			
	2.2	2217	2.4	637.34	40.0	47.0	58.0	60.0			
	2.5	1984	2.7	570.21	41.0	47.0	58.0	60.0			
	3.2	1511	3.6	434.44	41.0	47.0	58.0	60.0			
	1.3	3995	0.8	699.67	20.0	32.0	37.0	40.0	PD/PM 53 - 80M/6B	125	135
	1.5	3514	0.8	936.55	24.0	32.0	39.0	40.0	PD 53 - 80M/4A PM 53 - 80M/4A	123	135
	2.0	2625	1.2	699.67	28.0	32.0	42.0	40.0			
	2.5	2141	1.3	570.63	29.0	32.0	43.0	40.0			
	2.7	1969	1.6	524.75	29.0	32.0	43.0	40.0			
	3.3	1606	2.0	427.97	30.0	32.0	44.0	40.0			
	3.9	1357	2.1	361.64	31.0	32.0	44.0	40.0			
	4.2	1244	2.6	331.54	31.0	32.0	44.0	40.0			
	5.2	1014	2.7	270.40	31.0	32.0	44.0	40.0			
	2.5	1941	0.9	557.93	17.0	22.0	28.0	30.0	PD/PM 42/12 - 80M/4A	76	164
	2.6	1999	1.0	532.76	17.0	22.0	27.0	30.0	PD 43 - 80M/4A PM 43 - 80M/4A	83	131
	3.1	1670	1.0	445.16	19.0	22.0	28.0	30.0			
	3.4	1548	1.3	412.63	19.0	22.0	29.0	30.0			
	3.6	1467	1.4	391.14	19.0	22.0	29.0	30.0			
	4.1	1294	1.3	344.78	20.0	22.0	29.0	30.0			
	4.3	1226	1.5	326.83	20.0	22.0	30.0	30.0			
	4.6	1137	1.8	302.94	21.0	22.0	30.0	30.0			
	5.1	1022	1.5	272.49	21.0	22.0	30.0	30.0			
	5.5	950	2.1	253.13	21.0	22.0	30.0	30.0			
	6.6	792	2.1	211.05	21.0	22.0	30.0	30.0			
	7.3	719	2.8	191.52	22.0	22.0	30.0	30.0			
	8.7	600	2.7	160.03	22.0	22.0	31.0	30.0			
	10.0	528	3.3	140.61	22.0	22.0	31.0	30.0			
	11.8	445	3.6	118.53	22.0	22.0	31.0	30.0			
	13.5	390	5.1	103.86	21.0	22.0	31.0	30.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.55	4.9	1077	0.9	287.08	13.0	15.0	21.0	20.0	**PD 33 - 80M/4A** **PM 33 - 80M/4A**	59	127
	6.1	866	1.2	230.79	15.0	15.0	22.0	20.0			
	7.3	716	1.2	190.74	15.0	15.0	22.0	20.0			
	8.2	641	1.2	112.23	15.0	15.0	22.0	20.0	**PD 32 - 80M/6B** **PM 32 - 80M/6B**	55	126
	9.1	576	1.4	100.85	16.0	15.0	22.0	20.0			
	10.4	507	1.9	88.74	15.0	15.0	22.0	20.0			
	11.5	455	1.9	79.75	15.0	15.0	23.0	20.0			
	12.5	421	1.8	112.23	15.0	15.0	23.0	20.0	**PD 32 - 80M/4A** **PM 32 - 80M/4A**	53	126
	13.9	378	2.1	100.85	14.0	15.0	23.0	20.0			
	15.8	333	2.8	88.74	14.0	15.0	23.0	20.0			
	17.6	299	2.8	79.75	13.0	15.0	23.0	20.0			
	19.9	265	2.1	70.52	13.0	15.0	23.0	20.0			
	21.2	247	3.1	65.91	13.0	15.0	23.0	20.0			
	8.0	611	0.9	175.52	7.0	12.0	12.0	15.0	**PD/PM 22/02 - 80M/4A**	44	164
	9.1	577	0.8	100.98	8.0	12.0	12.0	15.0	**PD/PM 22 - 80M/6B**	40	122
	11.0	478	0.8	127.46	9.0	12.0	13.0	15.0	**PD 22 - 80M/4A** **PM 22 - 80M/4A**	38	122
	13.5	390	1.0	104.07	9.0	12.0	13.0	15.0			
	13.9	379	1.2	100.98	9.0	12.0	13.0	15.0			
	17.0	309	1.5	82.45	10.0	12.0	14.0	15.0			
	20.1	261	1.7	69.70	10.0	12.0	14.0	15.0			
	21.9	240	2.2	63.86	10.0	12.0	14.0	15.0			
	25.9	203	2.5	53.98	10.0	12.0	14.0	15.0			
	31.0	169	2.7	45.14	10.0	12.0	14.0	15.0			
	11.9	443	0.8	118.07	5.0	7.0	8.0	11.0	**PD C13 - 80M/4A** **PM C13 - 80M/4A**	31	116
	13.2	398	0.9	106.03	5.0	7.0	8.0	11.0			
	13.9	379	1.0	101.01	5.0	7.0	8.0	11.0			
	15.7	334	1.1	88.92	6.0	7.0	8.0	11.0			
	17.8	296	1.3	78.83	6.0	7.0	8.0	11.0			
	20.5	256	1.4	68.27	6.0	7.0	8.0	11.0			
	23.3	225	1.6	60.09	7.0	7.0	8.0	11.0			
	26.3	200	1.8	53.28	6.0	7.0	8.0	11.0			
	31.6	166	2.0	44.33	6.0	7.0	8.0	11.0			
	36.1	146	2.2	38.83	6.0	7.0	8.0	11.0			
	39.2	134	2.2	35.71	6.0	7.0	8.0	11.0			
	47.1	111	2.5	29.71	6.0	7.0	8.0	11.0			
	19.4	271	1.1	72.16	5.0	7.0	9.0	7.0	**PD 12 - 80M/4A** **PM 12 - 80M/4A**	25	118
	23.8	221	1.3	58.91	5.0	7.0	9.0	7.0			
	28.4	185	1.4	49.22	5.0	7.0	9.0	7.0			
	34.1	154	1.4	41.04	5.0	7.0	9.0	7.0			
	43.7	120	1.9	32.07	5.0	7.0	10.0	7.0			
	49.4	106	2.1	28.35	5.0	7.0	10.0	7.0			
	55.5	95	2.4	25.24	4.0	7.0	10.0	7.0			
	67.9	77	2.9	20.61	4.0	7.0	10.0	7.0			
	81.3	65	3.5	17.22	4.0	7.0	10.0	7.0			
	27.1	194	0.8	51.60	4.0	5.0	7.0	5.0	**PD B02 - 80M/4A** **PM B02 - 80M/4A**	19	114
	31.7	166	1.0	44.23	4.0	5.0	7.0	5.0			
	34.7	151	1.1	40.35	4.0	5.0	7.0	5.0			
	41.0	128	1.2	34.16	4.0	5.0	7.0	5.0			
	46.5	113	1.1	30.08	4.0	5.0	7.0	5.0			
	53.9	97	1.3	25.96	4.0	5.0	7.0	5.0			
	61.7	85	1.5	22.68	4.0	5.0	7.0	5.0			
	64.9	81	1.7	21.58	4.0	5.0	7.0	5.0			
	70.2	75	1.7	19.94	4.0	5.0	7.0	5.0			
	79.4	66	2.0	17.62	4.0	5.0	7.0	5.0			
	84.5	62	2.3	16.57	3.0	5.0	7.0	5.0			
	98.6	53	3.1	14.20	3.0	5.0	7.0	5.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.55	40.2	131	0.8	34.80	4.0	5.0	5.0	8.0	**PD A02 - 80M/4A** **PM A02 - 80M/4A**	15	112
	44.0	119	0.8	31.83	4.0	5.0	5.0	8.0			
	48.1	109	1.0	29.11	4.0	5.0	5.0	8.0			
	57.0	92	1.3	24.57	4.0	5.0	5.0	8.0			
	62.7	84	1.3	22.34	4.0	5.0	5.0	8.0			
	74.6	70	1.3	18.77	3.0	5.0	5.0	8.0			
	84.7	62	1.6	16.54	3.0	5.0	5.0	8.0			
	93.9	56	1.3	14.91	3.0	5.0	5.0	8.0			
	101.2	52	2.1	13.83	3.0	5.0	5.0	8.0			
	119.9	44	2.5	11.67	3.0	5.0	5.0	8.0			
	147.5	36	3.1	9.49	3.0	5.0	5.0	8.0			
	162.2	32	3.1	8.63	3.0	5.0	5.0	8.0			
	193.0	27	3.1	7.25	3.0	5.0	5.0	8.0			
	220.6	24	3.4	6.35	3.0	4.0	5.0	8.0			
	262.5	20	3.4	5.33	3.0	4.0	5.0	8.0			
	330.5	16	3.4	4.24	2.0	4.0	5.0	8.0			
0.75	1.0	6601	1.8	1362.94	90.0	73.0	100.0	100.0	**PD 83/32 - 80M/4B** **PM 83/32 - 80M/4B**	415	166
	1.3	5143	2.4	1061.83	92.0	73.0	100.0	100.0			
	1.6	4306	2.8	889.06	92.0	73.0	100.0	100.0			
	1.0	6502	1.1	1342.44	50.0	58.0	77.0	80.0	**PD 73/22 - 80M/4B** **PM 73/22 - 80M/4B**	279	166
	1.3	5047	1.4	1042.00	54.0	58.0	79.0	80.0			
	1.5	4515	1.6	932.25	55.0	58.0	80.0	80.0			
	2.0	3440	2.1	710.29	57.0	58.0	81.0	80.0			
	2.5	2764	2.6	570.70	58.0	58.0	82.0	80.0			
	1.1	6106	0.9	1260.77	25.0	47.0	48.0	60.0	**PD 63/22 - 80M/4B** **PM 63/22 - 80M/4B**	206	166
	1.3	5350	1.0	1104.71	28.0	47.0	50.0	60.0			
	1.7	4171	1.2	552.15	35.0	47.0	54.0	60.0	**PD 63 - 90S/6A** **PM 63 - 90S/6A**	191	139
	2.1	3368	1.2	445.80	38.0	47.0	56.0	60.0			
	2.4	2972	2.0	393.43	39.0	47.0	57.0	60.0			
	3.0	2400	2.4	317.64	40.0	47.0	57.0	60.0			
	3.8	1901	2.4	251.63	41.0	47.0	58.0	60.0			
	4.2	1706	2.4	225.83	41.0	47.0	58.0	60.0			
	1.8	3964	0.8	524.75	21.0	32.0	38.0	40.0	**PD/PM 53 - 90S/6A**	127	135
	2.0	3580	0.9	699.67	23.0	32.0	39.0	40.0	**PD 53 - 80M/4B** **PM 53 - 80M/4B**	125	135
	2.5	2919	1.0	570.63	26.0	32.0	41.0	40.0			
	2.7	2685	1.2	524.75	27.0	32.0	41.0	40.0			
	3.3	2190	1.5	427.97	29.0	32.0	43.0	40.0			
	3.9	1850	1.5	361.64	30.0	32.0	43.0	40.0			
	4.2	1696	1.9	331.54	30.0	32.0	43.0	40.0			
	5.2	1383	2.0	270.40	31.0	32.0	44.0	40.0			
	5.6	1272	2.5	248.66	31.0	32.0	44.0	40.0			
	7.1	1013	2.6	134.05	31.0	32.0	44.0	40.0	**PD/PM 52 - 90S/6A**	110	134
	3.4	2111	0.9	412.63	16.0	22.0	27.0	30.0	**PD 43 - 80M/4B** **PM 43 - 80M/4B**	85	131
	3.6	2001	1.0	391.14	17.0	22.0	27.0	30.0			
	4.1	1764	0.9	344.78	18.0	22.0	28.0	30.0			
	4.3	1672	1.1	326.83	19.0	22.0	28.0	30.0			
	4.6	1550	1.3	302.94	19.0	22.0	29.0	30.0			
	5.1	1394	1.1	272.49	20.0	22.0	29.0	30.0			
	5.5	1295	1.5	253.13	20.0	22.0	29.0	30.0			
	6.6	1080	1.5	211.05	21.0	22.0	30.0	30.0			
	7.3	980	2.0	191.52	21.0	22.0	30.0	30.0			
	8.7	819	2.0	160.03	21.0	22.0	30.0	30.0			
	10.0	719	2.6	140.61	22.0	22.0	30.0	30.0			
	11.8	606	2.9	118.53	21.0	22.0	31.0	30.0			
	13.5	531	3.0	103.86	21.0	22.0	31.0	30.0			
	6.1	1174	1.1	155.40	21.0	22.0	30.0	30.0	**PD 42 - 90S/6A** **PM 42 - 90S/6A**	74	130
	8.6	836	1.9	110.73	21.0	22.0	30.0	30.0			
	10.5	684	2.3	90.52	22.0	22.0	30.0	30.0			
	6.1	1181	0.8	230.79	13.0	15.0	20.0	20.0	**PD 33 - 80M/4B** **PM 33 - 80M/4B**	61	127
	7.3	976	0.9	190.74	14.0	15.0	21.0	20.0			
	8.4	848	0.9	112.23	15.0	15.0	22.0	20.0	**PD 32 - 90S/6A** **PM 32 - 90S/6A**	57	126
	9.4	762	1.1	100.85	15.0	15.0	22.0	20.0			
	10.7	670	1.4	88.74	14.0	15.0	22.0	20.0			
	11.9	602	1.4	79.75	14.0	15.0	22.0	20.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
0.75	12.5	574	1.3	112.23	14.0	15.0	22.0	20.0	PD 32 - 80M/4B PM 32 - 80M/4B	55	126
	13.9	516	1.6	100.85	14.0	15.0	22.0	20.0			
	15.8	454	2.1	88.74	13.0	15.0	23.0	20.0			
	17.6	408	2.1	79.75	13.0	15.0	23.0	20.0			
	19.9	361	1.6	70.52	13.0	15.0	23.0	20.0			
	21.2	337	2.2	65.91	12.0	15.0	23.0	20.0			
	25.1	285	2.3	55.76	12.0	15.0	23.0	20.0			
	29.2	246	2.2	48.00	11.0	15.0	22.0	20.0			
	33.3	215	2.8	42.05	11.0	15.0	21.0	20.0			
	37.0	193	2.8	37.79	11.0	15.0	21.0	20.0			
	12.0	596	0.9	116.40	8.0	12.0	12.0	15.0	PD/PM 23 - 80M/4B	45	123
	13.6	527	0.8	69.70	8.0	12.0	13.0	15.0	PD/PM 22 - 90S/6A	42	122
	13.9	517	0.9	100.98	8.0	12.0	13.0	15.0	PD 22 - 80M/4B PM 22 - 80M/4B	40	122
	17.0	422	1.1	82.45	9.0	12.0	13.0	15.0			
	20.1	357	1.2	69.70	9.0	12.0	14.0	15.0			
	21.9	327	1.6	63.86	9.0	12.0	14.0	15.0			
	25.9	276	1.8	53.98	10.0	12.0	14.0	15.0			
	31.0	231	1.9	45.14	10.0	12.0	14.0	15.0			
	37.7	190	2.4	37.18	9.0	12.0	14.0	15.0			
	47.2	152	2.7	29.64	9.0	12.0	14.0	15.0			
	52.2	137	3.0	26.81	9.0	12.0	14.0	15.0			
	15.7	455	0.8	88.92	4.0	7.0	8.0	11.0	PD C13 - 80M/4B PM C13 - 80M/4B	33	119
	17.8	403	0.9	78.83	5.0	7.0	8.0	11.0			
	20.5	349	1.1	68.27	6.0	7.0	8.0	11.0			
	23.3	307	1.2	60.09	6.0	7.0	8.0	11.0			
	26.3	273	1.3	53.28	6.0	7.0	8.0	11.0			
	31.6	227	1.5	44.33	6.0	7.0	8.0	11.0			
	36.1	199	1.6	38.83	6.0	7.0	8.0	11.0			
	39.2	183	1.6	35.71	6.0	7.0	8.0	11.0			
	47.1	152	1.9	29.71	5.0	7.0	8.0	11.0			
	53.8	133	2.0	26.02	5.0	7.0	8.0	11.0			
	19.4	369	0.8	72.16	5.0	7.0	8.0	7.0	PD 12 - 80M/4B PM 12 - 80M/4B	27	118
	23.8	301	0.9	58.91	5.0	7.0	9.0	7.0			
	28.4	252	1.0	49.22	5.0	7.0	9.0	7.0			
	34.1	210	1.0	41.04	5.0	7.0	9.0	7.0			
	43.7	164	1.4	32.07	4.0	7.0	9.0	7.0			
	49.4	145	1.6	28.35	4.0	7.0	10.0	7.0			
	55.5	129	1.7	25.24	4.0	7.0	10.0	7.0			
	67.9	105	2.1	20.61	4.0	7.0	10.0	7.0			
	81.3	88	2.5	17.22	4.0	7.0	10.0	7.0			
	34.7	206	0.8	40.35	4.0	5.0	7.0	5.0	PD B02 - 80M/4B PM B02 - 80M/4B	21	114
	41.0	175	0.9	34.16	4.0	5.0	7.0	5.0			
	46.5	154	0.8	30.08	4.0	5.0	7.0	5.0			
	53.9	133	1.0	25.96	4.0	5.0	7.0	5.0			
	61.7	116	1.1	22.68	4.0	5.0	7.0	5.0			
	64.9	110	1.3	21.58	3.0	5.0	7.0	5.0			
	70.2	102	1.3	19.94	3.0	5.0	7.0	5.0			
	79.4	90	1.4	17.62	3.0	5.0	7.0	5.0			
	84.5	85	1.7	16.57	3.0	5.0	7.0	5.0			
	98.6	73	2.2	14.20	3.0	5.0	7.0	5.0			
	108.1	66	2.4	12.96	3.0	5.0	7.0	5.0			
	124.1	58	2.4	11.28	3.0	5.0	7.0	5.0			
	127.7	56	2.5	10.97	3.0	5.0	7.0	5.0			
	57.0	126	0.9	24.57	3.0	5.0	5.0	8.0	PD A02 - 80M/4B PM A02 - 80M/4B	17	112
	62.7	114	1.0	22.34	3.0	5.0	5.0	8.0			
	74.6	96	1.0	18.77	3.0	5.0	5.0	8.0			
	84.7	85	1.2	16.54	3.0	5.0	5.0	8.0			
	93.9	76	1.0	14.91	3.0	5.0	5.0	8.0			
	101.2	71	1.6	13.83	3.0	5.0	5.0	8.0			
	119.9	60	1.8	11.67	3.0	5.0	5.0	8.0			
	147.5	49	2.3	9.49	3.0	5.0	5.0	8.0			
	162.2	44	2.2	8.63	3.0	5.0	5.0	8.0			
	193.0	37	2.2	7.25	3.0	4.0	5.0	8.0			
	220.6	32	2.4	6.35	3.0	4.0	5.0	8.0			
	262.5	27	2.5	5.33	2.0	4.0	5.0	8.0			
	330.5	22	2.4	4.24	2.0	4.0	5.0	8.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
1.10	1.0 1.2 1.6	10562 8772 6599	2.3 2.7 3.6	1417.68 1177.36 885.67	120.0 120.0 115.0	102.0 102.0 102.0	120.0 120.0 120.0	130.0 130.0 130.0	**PD 93/42 - 90S/4A** **PM 93/42 - 90S/4A**	736	168
	1.0 1.3 1.6 2.0 2.3	10154 7911 6624 5339 4545	1.2 1.5 1.8 2.3 2.7	1362.94 1061.83 889.06 716.55 610.07	85.0 89.0 90.0 91.0 92.0	73.0 73.0 73.0 73.0 73.0	100.0 100.0 100.0 100.0 100.0	100.0 100.0 100.0 100.0 100.0	**PD 83/32 - 90S/4A** **PM 83/32 - 90S/4A**	417	166
	2.6 3.0	4100 3493	3.0 3.5	550.29 468.82	92.0 87.0	73.0 73.0	100.0 100.0	100.0 100.0	**PD 83/42 - 90S/4A** **PM 83/42 - 90S/4A**	434	168
	1.4 1.5 2.0 2.5 3.2	7763 6946 5292 4252 3240	0.9 1.0 1.3 1.7 2.2	1042.00 932.25 710.29 570.70 434.82	46.0 50.0 54.0 56.0 57.0	58.0 58.0 58.0 58.0 58.0	74.0 76.0 79.0 80.0 81.0	80.0 80.0 80.0 80.0 80.0	**PD 73/22 - 90S/4A** **PM 73/22 - 90S/4A**	281	166
	1.7 2.2 2.4	6023 4863 4292	0.9 0.9 1.4	552.15 445.80 393.43	25.0 32.0 35.0	47.0 47.0 47.0	48.0 52.0 54.0	60.0 60.0 60.0	**PD 63 - 90L/6B** **PM 63 - 90L/6B**	193	139
	2.6 3.2 3.6 4.4 5.6 6.2 8.8	4114 3321 2931 2367 1875 1683 1193	1.3 1.3 2.0 2.4 2.4 2.4 3.5	552.15 445.80 393.43 317.64 251.63 225.83 160.11	35.0 38.0 39.0 40.0 41.0 41.0 42.0	47.0 47.0 47.0 47.0 47.0 47.0 47.0	54.0 56.0 57.0 57.0 58.0 58.0 59.0	60.0 60.0 60.0 60.0 60.0 60.0 60.0	**PD 63 - 90S/4A** **PM 63 - 90S/4A**	191	139
	2.7 3.3 3.9 4.3 5.2 5.7	3910 3189 2694 2470 2015 1853	0.8 1.0 1.0 1.3 1.3 1.7	524.75 427.97 361.64 331.54 270.40 248.66	21.0 25.0 27.0 28.0 29.0 30.0	32.0 32.0 32.0 32.0 32.0 32.0	38.0 40.0 42.0 42.0 43.0 43.0	40.0 40.0 40.0 40.0 40.0 40.0	**PD 53 - 90S/4A** **PM 53 - 90S/4A**	127	135
	7.2 9.6	1462 1092	1.8 2.1	134.05 100.15	31.0 31.0	32.0 32.0	44.0 44.0	40.0 40.0	**PD 52 - 90L/6B** **PM 52 - 90L/6B**	112	134
	10.5	999	2.7	134.05	31.0	32.0	44.0	40.0	**PD/PM 52 - 90S/4A**	110	134
	4.3 4.7 5.2 5.6	2435 2257 2030 1886	0.8 0.9 0.8 1.1	326.83 302.94 272.49 253.13	14.0 15.0 17.0 18.0	22.0 22.0 22.0 22.0	25.0 26.0 27.0 28.0	30.0 30.0 30.0 30.0	**PD 43 - 90S/4A** **PM 43 - 90S/4A**	87	131
	6.2 8.7	1695 1208	0.8 1.3	155.40 110.73	18.0 20.0	22.0 22.0	28.0 30.0	30.0 30.0	**PD 42 - 90L/6B** **PM 42 - 90L/6B**	76	130
	9.1 12.7 15.6	1158 825 674	1.1 1.9 2.4	155.40 110.73 90.52	21.0 20.0 19.0	22.0 22.0 22.0	30.0 30.0 30.0	30.0 30.0 30.0	**PD 42 - 90S/4A** **PM 42 - 90S/4A**	74	130
	10.0	1054	0.9	141.42	13.0	15.0	21.0	20.0	**PD/PM 32/12 - 90S/4A**	65	164
	10.9 12.1	968 870	1.0 1.0	88.74 79.75	13.0 13.0	15.0 15.0	21.0 22.0	20.0 20.0	**PD 32 - 90L/6B** **PM 32 - 90L/6B**	59	126
	12.6 14.0 15.9 17.7 20.0 21.4 22.0 25.3 26.6 29.4 31.5 33.5 36.5 37.3 44.2	836 751 661 594 525 491 478 415 395 358 334 313 287 282 238	0.9 1.1 1.4 1.4 1.1 1.5 2.1 1.5 2.1 1.5 2.2 3.0 2.2 3.0 3.3	112.23 100.85 88.74 79.75 70.52 65.91 64.11 55.76 52.98 48.00 44.83 42.05 38.59 37.79 31.90	13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0 20.0 20.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	**PD 32 - 90S/4A** **PM 32 - 90S/4A**	57	126
	14.3	733	0.8	98.40	5.0	12.0	11.0	15.0	**PD/PM 23 - 90S/4A**	47	123

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
1.10	17.1	614	0.8	82.45	7.0	12.0	12.0	15.0	PD 22 - 90S/4A PM 22 - 90S/4A	42	122
	20.2	519	0.9	69.70	8.0	12.0	13.0	15.0			
	22.1	476	1.1	63.86	9.0	12.0	13.0	15.0			
	26.1	402	1.3	53.98	9.0	12.0	13.0	15.0			
	27.3	385	1.4	51.73	9.0	12.0	13.0	15.0			
	31.2	336	1.3	45.14	9.0	12.0	14.0	15.0			
	32.2	326	1.7	43.73	9.0	12.0	14.0	15.0			
	38.6	272	1.8	36.57	9.0	12.0	14.0	15.0			
	45.2	232	1.9	31.20	9.0	12.0	14.0	15.0			
	47.6	221	2.3	29.64	9.0	12.0	14.0	15.0			
	52.6	200	2.2	26.81	8.0	12.0	14.0	15.0			
	56.4	186	2.6	24.98	8.0	12.0	14.0	15.0			
	58.8	179	2.4	23.99	8.0	12.0	14.0	15.0			
	64.4	163	2.9	21.89	8.0	12.0	14.0	15.0			
	76.2	138	3.1	18.51	8.0	12.0	14.0	15.0			
	85.2	123	3.3	16.56	7.0	12.0	14.0	15.0			
	23.5	448	0.8	60.09	4.0	7.0	8.0	11.0	PD C13 - 90S/4A PM C13 - 90S/4A	35	116
	26.5	397	0.9	53.28	5.0	7.0	8.0	11.0			
	31.8	330	1.0	44.33	5.0	7.0	8.0	11.0			
	36.3	289	1.1	38.83	5.0	7.0	8.0	11.0			
	39.5	266	1.1	35.71	5.0	7.0	8.0	11.0			
	47.5	221	1.3	29.71	5.0	7.0	8.0	11.0			
	54.2	194	1.4	26.02	5.0	7.0	8.0	11.0			
	58.3	180	1.5	24.17	5.0	7.0	8.0	11.0			
	75.2	140	1.7	18.76	5.0	7.0	8.0	11.0			
	87.0	121	1.9	16.20	4.0	7.0	8.0	11.0			
	44.0	239	1.0	32.07	4.0	7.0	9.0	7.0	PD 12 - 90S/4A PM 12 - 90S/4A	29	118
	49.7	211	1.1	28.35	4.0	7.0	9.0	7.0			
	55.9	188	1.2	25.24	4.0	7.0	9.0	7.0			
	68.4	154	1.5	20.61	4.0	7.0	10.0	7.0			
	81.9	128	1.7	17.22	4.0	7.0	10.0	7.0			
	100.1	105	2.0	14.09	3.0	7.0	10.0	7.0			
	120.0	88	2.3	11.75	3.0	6.0	10.0	7.0			
	136.3	77	2.5	10.34	3.0	6.0	9.0	7.0			
	70.7	149	0.9	19.94	3.0	5.0	7.0	5.0	PD B02 - 90S/4A PM B02 - 90S/4A	23	114
	80.0	131	1.0	17.62	3.0	5.0	7.0	5.0			
	85.1	123	1.1	16.57	3.0	5.0	7.0	5.0			
	99.3	106	1.5	14.20	3.0	5.0	7.0	5.0			
	108.8	97	1.7	12.96	3.0	5.0	7.0	5.0			
	125.0	84	1.7	11.28	3.0	5.0	7.0	5.0			
	128.6	82	1.9	10.97	3.0	5.0	7.0	5.0			
	145.9	72	1.9	9.67	3.0	5.0	7.0	5.0			
	159.9	66	2.1	8.82	3.0	5.0	7.0	5.0			
	188.8	56	2.3	7.47	3.0	4.0	7.0	5.0			
1.50	1.0	14302	1.7	1417.68	120.0	102.0	120.0	130.0	PD 93/42 - 90L/4A PM 93/42 - 90L/4A	738	168
	1.2	11877	2.0	1177.36	119.0	102.0	120.0	130.0			
	1.6	8935	2.7	885.67	110.0	102.0	120.0	130.0			
	2.0	7217	3.3	715.36	105.0	102.0	120.0	130.0			
	2.3	6243	3.1	618.83	101.0	102.0	120.0	130.0			
	1.0	13749	0.9	1362.94	76.0	73.0	100.0	100.0	PD 83/32 - 90L/4A PM 83/32 - 90L/4A	419	166
	1.3	10712	1.1	1061.83	84.0	73.0	100.0	100.0			
	1.6	8969	1.3	889.06	87.0	73.0	100.0	100.0			
	2.0	7229	1.7	716.55	89.0	73.0	100.0	100.0			
	2.3	6154	2.0	610.07	90.0	73.0	100.0	100.0			
	2.6	5551	2.2	550.29	88.0	73.0	100.0	100.0	PD 83/42 - 90L/4A PM 83/42 - 90L/4A	436	168
	3.0	4730	2.6	468.82	84.0	73.0	100.0	100.0			
	4.1	3499	3.2	346.82	78.0	73.0	100.0	100.0			
	2.4	6009	2.1	386.39	89.0	73.0	100.0	105.0	PD 83 - 100L/6A PM 83 - 100L/6A	402	147
	2.9	4947	2.6	318.11	85.0	73.0	100.0	105.0			
	2.0	7165	1.0	710.29	49.0	58.0	76.0	80.0	PD 73/22 - 90L/4A PM 73/22 - 90L/4A	283	166
	2.5	5757	1.2	570.70	52.0	58.0	78.0	80.0			
	3.3	4386	1.6	434.82	55.0	58.0	80.0	80.0			
	3.8	3795	1.9	376.24	56.0	58.0	81.0	80.0			
	4.8	2977	2.4	295.06	57.0	58.0	81.0	80.0	PD 73/32 - 90L/4A PM 73/32 - 90L/4A	294	166
	6.4	2250	3.0	223.01	57.0	58.0	82.0	80.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
1.50	2.7	5262	1.4	338.37	54.0	58.0	79.0	80.0	**PD 73 - 100L/6A**	277	143
	3.4	4250	1.8	273.32	56.0	58.0	80.0	80.0	**PM 73 - 100L/6A**		
	2.2	6429	0.8	637.34	22.0	47.0	47.0	60.0	**PD/PM 63/22 - 90L/4A**	210	166
	2.3	6118	1.0	393.43	26.0	47.0	49.0	60.0	**PD/PM 63 - 100L/6A**	201	139
	2.6	5570	0.9	552.15	28.0	47.0	50.0	60.0	**PD 63 - 90L/4A** **PM 63 - 90L/4A**	193	139
	3.2	4497	0.9	445.80	34.0	47.0	53.0	60.0			
	3.6	3969	1.5	393.43	36.0	47.0	54.0	60.0			
	4.5	3204	1.8	317.64	38.0	47.0	56.0	60.0			
	5.6	2538	1.8	251.63	40.0	47.0	57.0	60.0			
	6.3	2278	1.8	225.83	40.0	47.0	58.0	60.0			
	8.9	1615	2.7	160.11	41.0	47.0	58.0	60.0			
	3.9	3648	0.8	361.64	23.0	32.0	39.0	40.0	**PD 53 - 90L/4A** **PM 53 - 90L/4A**	129	135
	4.3	3345	1.0	331.54	24.0	32.0	40.0	40.0			
	5.3	2728	1.0	270.40	27.0	32.0	41.0	40.0			
	5.7	2508	1.3	248.66	28.0	32.0	42.0	40.0			
	7.0	2046	1.6	202.80	29.0	32.0	43.0	40.0			
	6.9	2085	1.3	134.05	29.0	32.0	43.0	40.0	**PD 52 - 100L/6A** **PM 52 - 100L/6A**	120	134
	9.2	1557	1.4	100.15	31.0	32.0	44.0	40.0			
	10.0	1428	1.9	91.82	30.0	32.0	44.0	40.0			
	10.6	1352	2.0	134.05	30.0	32.0	44.0	40.0	**PD 52 - 90L/4A** **PM 52 - 90L/4A**	112	134
	14.2	1010	2.2	100.15	28.0	32.0	44.0	40.0			
	17.4	824	2.2	81.68	26.0	32.0	44.0	40.0			
	25.6	560	3.4	55.55	24.0	32.0	45.0	40.0			
	5.6	2554	0.8	253.13	12.0	22.0	25.0	30.0	**PD 43 - 90L/4A** **PM 43 - 90L/4A**	89	131
	6.7	2129	0.8	211.05	16.0	22.0	27.0	30.0			
	7.4	1932	1.0	191.52	17.0	22.0	28.0	30.0			
	8.3	1722	0.9	110.73	19.0	22.0	28.0	30.0	**PD/PM 42 - 100L/6A**	84	130
	9.1	1568	0.8	155.40	19.0	22.0	29.0	30.0	**PD 42 - 90L/4A** **PM 42 - 90L/4A**	76	130
	12.8	1117	1.4	110.73	19.0	22.0	30.0	30.0			
	15.7	913	1.8	90.52	19.0	22.0	30.0	30.0			
	31.5	455	2.6	45.06	16.0	22.0	30.0	30.0			
	12.5	1150	0.8	114.01	11.0	15.0	20.0	20.0	**PD/PM 32/12 - 90L/4A**	67	164
	14.4	997	1.0	64.11	11.0	15.0	21.0	20.0	**PD/PM 32 - 100L/6A**	68	126
	16.0	895	1.1	88.74	11.0	15.0	22.0	20.0	**PD 32 - 90L/4A** **PM 32 - 90L/4A**	59	126
	17.8	804	1.1	79.75	11.0	15.0	22.0	20.0			
	21.5	665	1.1	65.91	11.0	15.0	22.0	20.0			
	22.1	647	1.6	64.11	11.0	15.0	22.0	20.0			
	25.5	563	1.1	55.76	10.0	15.0	22.0	20.0			
	26.8	535	1.6	52.98	10.0	15.0	22.0	20.0			
	29.6	484	1.1	48.00	10.0	15.0	21.0	20.0			
	31.7	452	1.6	44.83	10.0	15.0	21.0	20.0			
	33.8	424	2.2	42.05	10.0	15.0	20.0	20.0			
	36.8	389	1.6	38.59	10.0	15.0	20.0	20.0			
	37.6	381	2.2	37.79	10.0	15.0	20.0	20.0			
	44.5	322	2.4	31.90	9.0	15.0	19.0	20.0			
	49.5	289	2.5	28.67	9.0	15.0	18.0	20.0			
	54.9	261	2.5	25.86	9.0	15.0	18.0	20.0			
	59.9	239	2.4	23.69	9.0	15.0	18.0	20.0			
	63.3	226	2.8	22.42	9.0	15.0	17.0	20.0			
	22.2	644	0.8	63.86	7.0	12.0	12.0	15.0	**PD 22 - 90L/4A** **PM 22 - 90L/4A**	44	122
	26.3	545	0.9	53.98	8.0	12.0	13.0	15.0			
	27.4	522	1.0	51.73	8.0	12.0	13.0	15.0			
	31.5	455	1.0	45.14	9.0	12.0	13.0	15.0			
	32.5	441	1.3	43.73	9.0	12.0	13.0	15.0			
	38.8	369	1.4	36.57	8.0	12.0	13.0	15.0			
	45.5	315	1.4	31.20	8.0	12.0	14.0	15.0			
	47.9	299	1.7	29.64	8.0	12.0	14.0	15.0			
	53.0	270	1.6	26.81	8.0	12.0	14.0	15.0			
	56.8	252	1.9	24.98	8.0	12.0	14.0	15.0			
	59.2	242	1.8	23.99	8.0	12.0	14.0	15.0			
	64.9	221	2.2	21.89	8.0	12.0	14.0	15.0			
	76.7	187	2.4	18.51	7.0	12.0	14.0	15.0			
	85.8	167	2.4	16.56	7.0	12.0	14.0	15.0			
	107.6	133	2.4	13.20	7.0	12.0	13.0	15.0			
	120.2	119	2.4	11.81	6.0	12.0	13.0	15.0			
	139.8	102	2.6	10.16	6.0	12.0	12.0	15.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
1.50	36.6	392	0.8	38.83	4.0	7.0	8.0	11.0	PD C13 - 90L/4A PM C13 - 90L/4A	37	116
	39.8	360	0.8	35.71	4.0	7.0	8.0	11.0			
	47.8	300	0.9	29.71	4.0	7.0	8.0	11.0			
	54.6	263	1.0	26.02	4.0	7.0	8.0	11.0			
	58.7	244	1.1	24.17	4.0	7.0	8.0	11.0			
	75.7	189	1.3	18.76	4.0	7.0	8.0	11.0			
	87.6	163	1.4	16.20	4.0	7.0	8.0	11.0			
	50.1	286	0.8	28.35	3.0	7.0	9.0	7.0	PD 12 - 90L/4A PM 12 - 90L/4A	31	118
	56.3	255	0.9	25.24	3.0	7.0	9.0	7.0			
	68.9	208	1.1	20.61	3.0	7.0	9.0	7.0			
	82.5	174	1.3	17.22	3.0	6.0	9.0	7.0			
	100.8	142	1.5	14.09	3.0	6.0	10.0	7.0			
	120.9	118	1.7	11.75	3.0	6.0	9.0	7.0			
	137.3	104	1.9	10.34	3.0	6.0	9.0	7.0			
	155.0	92	2.0	9.16	3.0	6.0	9.0	7.0			
	172.5	83	2.3	8.23	3.0	5.0	9.0	7.0			
	173.6	83	1.9	8.18	3.0	5.0	9.0	7.0			
	195.9	73	2.4	7.25	3.0	5.0	8.0	7.0			
	221.3	65	2.5	6.42	3.0	5.0	8.0	7.0			
	85.7	167	0.8	16.57	3.0	5.0	7.0	5.0	PD B02 - 90L/4A PM B02 - 90L/4A	25	114
	100.0	143	1.1	14.20	3.0	5.0	7.0	5.0			
	109.6	131	1.2	12.96	3.0	5.0	7.0	5.0			
	125.9	114	1.2	11.28	3.0	5.0	7.0	5.0			
	129.5	111	1.4	10.97	3.0	4.0	7.0	5.0			
	146.9	98	1.4	9.67	3.0	4.0	7.0	5.0			
	161.0	89	1.5	8.82	3.0	4.0	7.0	5.0			
	190.2	75	1.7	7.47	2.0	4.0	7.0	5.0			
	220.2	65	1.9	6.43	2.0	4.0	7.0	5.0			
	236.7	61	2.0	6.00	2.0	4.0	7.0	5.0			
	274.0	52	2.1	5.17	2.0	4.0	7.0	5.0			
	304.3	47	2.0	4.67	2.0	4.0	7.0	5.0			
	352.3	41	2.1	4.02	2.0	3.0	7.0	5.0			
2.20	1.0	20604	2.9	1382.74	-	-	142.0	170.0	PD/PM 113/52 - 100L/4A	2177	168
	1.0	21113	1.7	1416.90	-	-	127.0	150.0	PD 103/52 - 100L/4A PM 103/52 - 100L/4A	1339	168
	1.2	17368	2.0	1165.61	-	-	130.0	150.0			
	1.5	13647	2.6	915.84	-	-	134.0	150.0			
	1.0	21124	1.1	1417.68	111.0	102.0	120.0	130.0	PD 93/42 - 100L/4A PM 93/42 - 100L/4A	746	168
	1.2	17543	1.4	1177.36	109.0	102.0	120.0	130.0			
	1.6	13197	1.8	885.67	103.0	102.0	120.0	130.0			
	2.0	10659	2.3	715.36	99.0	102.0	120.0	130.0			
	2.3	9221	2.6	618.83	96.0	102.0	120.0	130.0			
	3.1	6718	3.5	450.86	89.0	102.0	120.0	130.0			
	3.4	6117	3.9	410.49	87.0	102.0	120.0	130.0	PD/PM 93/52 - 100L/4A	775	168
	1.6	13248	0.9	889.06	79.0	73.0	100.0	100.0	PD 83/32 - 100L/4A PM 83/32 - 100L/4A	428	166
	2.0	10677	1.1	716.55	84.0	73.0	100.0	100.0			
	2.3	9090	1.3	610.07	82.0	73.0	100.0	100.0			
	2.6	8200	1.4	550.29	81.0	73.0	100.0	100.0	PD 83/42 - 100L/4A PM 83/42 - 100L/4A	444	168
	3.0	6986	1.7	468.82	78.0	73.0	100.0	100.0			
	3.6	5757	2.2	386.39	76.0	73.0	100.0	105.0	PD 83 - 100L/4A PM 83 - 100L/4A	402	147
	4.4	4740	2.7	318.11	72.0	73.0	100.0	105.0			
	2.5	8504	0.8	570.70	45.0	58.0	73.0	80.0	PD 73/22 - 100L/4A PM 73/22 - 100L/4A	292	166
	3.2	6479	1.1	434.82	51.0	58.0	77.0	80.0			
	3.7	5606	1.3	376.24	53.0	58.0	79.0	80.0			
	4.2	5042	1.5	338.37	55.0	58.0	79.0	80.0	PD 73 - 100L/4A PM 73 - 100L/4A	277	143
	5.2	4073	1.9	273.32	56.0	58.0	81.0	80.0			
	6.5	3225	2.6	216.45	53.0	58.0	81.0	80.0			
	6.9	3050	2.5	204.72	53.0	58.0	81.0	80.0			
	3.2	6474	0.8	434.44	23.0	47.0	47.0	60.0	PD/PM 63/22 - 100L/4A	219	166

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
2.20	3.6	5862	1.0	393.43	28.0	47.0	50.0	60.0			
	4.4	4733	1.2	317.64	33.0	47.0	53.0	60.0			
	5.3	3992	1.5	267.94	36.0	47.0	55.0	60.0			
	5.6	3750	1.2	251.63	37.0	47.0	55.0	60.0			
	6.2	3365	1.2	225.83	38.0	47.0	56.0	60.0			
	6.6	3163	1.5	212.26	39.0	47.0	56.0	60.0			
	8.2	2554	2.2	171.37	40.0	47.0	57.0	60.0	**PD 63 - 100L/4A** **PM 63 - 100L/4A**	201	139
	8.8	2386	2.4	160.11	40.0	47.0	58.0	60.0			
	11.1	1890	2.4	126.84	41.0	47.0	58.0	60.0			
	12.3	1710	2.9	114.79	41.0	47.0	58.0	60.0			
	15.2	1381	2.9	92.68	39.0	47.0	59.0	60.0			
	18.7	1122	3.2	75.30	37.0	47.0	59.0	60.0			
	19.2	1094	2.9	73.42	37.0	47.0	59.0	60.0			
	5.2	4065	0.7	272.80	21.0	32.0	38.0	40.0	**PD/PM 52/12 - 100L/4A**	127	164
	5.7	3705	0.9	248.66	23.0	32.0	39.0	40.0			
	7.0	3022	1.1	202.80	26.0	32.0	41.0	40.0			
	8.2	2553	1.1	171.36	28.0	32.0	42.0	40.0	**PD 53 - 100L/4A** **PM 53 - 100L/4A**	138	135
	9.2	2292	1.4	153.85	28.0	32.0	43.0	40.0			
	10.2	2068	1.5	138.78	28.0	32.0	43.0	40.0			
	10.5	1998	1.3	134.05	28.0	32.0	43.0	40.0			
	14.1	1492	1.5	100.15	26.0	32.0	44.0	40.0			
	15.4	1368	2.0	91.82	26.0	32.0	44.0	40.0	**PD 52 - 100L/4A** **PM 52 - 100L/4A**	120	134
	17.3	1217	1.5	81.68	25.0	32.0	44.0	40.0			
	20.6	1022	2.9	68.60	24.0	32.0	44.0	40.0			
	9.2	2272	0.8	152.50	16.0	22.0	26.0	30.0	**PD/PM 42/12 - 100L/4A**	91	164
	10.0	2095	1.0	140.61	16.0	22.0	27.0	30.0	**PD 43 - 100L/4A**	99	131
	11.9	1766	1.1	118.53	17.0	22.0	28.0	30.0	**PM 43 - 100L/4A**		
	12.7	1650	1.0	110.73	17.0	22.0	29.0	30.0			
	15.6	1349	1.2	90.52	17.0	22.0	29.0	30.0			
	18.7	1124	1.4	75.41	16.0	22.0	30.0	30.0			
	22.9	919	2.0	61.64	16.0	22.0	30.0	30.0			
	27.0	778	2.3	52.23	15.0	22.0	30.0	30.0			
	31.3	671	2.4	45.06	15.0	22.0	29.0	30.0	**PD 42 - 100L/4A** **PM 42 - 100L/4A**	84	130
	32.3	650	2.5	43.64	15.0	22.0	29.0	30.0			
	34.6	608	2.6	40.79	14.0	22.0	29.0	30.0			
	38.3	549	2.5	36.84	14.0	22.0	28.0	30.0			
	38.7	542	2.5	36.39	14.0	22.0	28.0	30.0			
	43.6	481	2.9	32.31	14.0	22.0	27.0	30.0			
	22.0	955	1.1	64.11	9.0	15.0	21.0	20.0			
	26.6	790	1.1	52.98	9.0	15.0	20.0	20.0			
	31.5	668	1.1	44.83	9.0	15.0	20.0	20.0			
	33.5	627	1.5	42.05	9.0	15.0	20.0	20.0			
	36.5	575	1.1	38.59	9.0	15.0	19.0	20.0			
	37.3	563	1.5	37.79	9.0	15.0	19.0	20.0			
	44.2	475	1.8	31.90	9.0	15.0	18.0	20.0	**PD 32 - 100L/4A**	68	126
	49.2	427	2.0	28.67	9.0	15.0	18.0	20.0	**PM 32 - 100L/4A**		
	54.5	385	2.2	25.86	8.0	15.0	17.0	20.0			
	59.5	353	2.1	23.69	8.0	15.0	17.0	20.0			
	62.9	334	2.4	22.42	8.0	15.0	17.0	20.0			
	66.0	318	2.3	21.37	8.0	15.0	17.0	20.0			
	70.0	300	2.6	20.15	8.0	15.0	16.0	20.0			
	84.7	248	2.6	16.65	8.0	14.0	16.0	20.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
2.20	32.2	652	0.9	43.73	7.0	12.0	12.0	15.0	**PD 22 - 100L/4A** **PM 22 - 100L/4A**	53	122
	38.6	545	0.9	36.57	8.0	12.0	13.0	15.0			
	45.2	465	1.0	31.20	7.0	12.0	13.0	15.0			
	47.6	442	1.1	29.64	7.0	12.0	13.0	15.0			
	52.6	400	1.1	26.81	7.0	12.0	13.0	15.0			
	56.4	372	1.3	24.98	7.0	12.0	14.0	15.0			
	58.8	357	1.2	23.99	7.0	12.0	14.0	15.0			
	64.4	326	1.5	21.89	7.0	12.0	14.0	15.0			
	76.2	276	1.8	18.51	7.0	12.0	14.0	15.0			
	85.2	247	1.9	16.56	7.0	12.0	13.0	15.0			
	106.8	197	2.1	13.20	6.0	12.0	13.0	15.0			
	119.4	176	2.2	11.81	6.0	12.0	12.0	15.0			
	138.8	151	2.4	10.16	6.0	11.0	12.0	15.0			
	156.7	134	2.5	9.00	6.0	11.0	11.0	15.0			
	168.7	125	2.1	8.36	6.0	11.0	11.0	15.0			
	188.5	111	2.2	7.48	5.0	10.0	11.0	15.0			
	219.2	96	2.4	6.43	5.0	10.0	10.0	15.0			
	247.4	85	2.5	5.70	5.0	9.0	10.0	15.0			
	312.5	67	2.8	4.51	5.0	8.0	9.0	15.0			
	58.3	360	0.8	24.17	4.0	6.0	8.0	11.0	**PD C13 - 100L/4A** **PM C13 - 100L/4A**	46	116
	75.2	280	0.9	18.76	4.0	6.0	8.0	11.0			
	87.0	241	1.0	16.20	4.0	6.0	8.0	11.0			
	81.9	257	0.9	17.22	3.0	5.0	9.0	7.0	**PD 12 - 100L/4A** **PM 12 - 100L/4A**	40	118
	100.1	210	1.0	14.09	3.0	5.0	9.0	7.0			
	120.0	175	1.2	11.75	3.0	5.0	9.0	7.0			
	136.3	154	1.3	10.34	3.0	5.0	9.0	7.0			
	153.9	136	1.4	9.16	3.0	5.0	9.0	7.0			
	171.3	123	1.6	8.23	3.0	5.0	8.0	7.0			
	194.5	108	1.7	7.25	3.0	5.0	8.0	7.0			
	219.7	96	1.9	6.42	2.0	4.0	8.0	7.0			
	257.6	82	2.1	5.47	2.0	4.0	7.0	7.0			
	295.1	71	1.8	4.78	2.0	4.0	7.0	7.0			
3.00	1.0	28096	2.1	1382.74	-	-	134.0	170.0	**PD 113/52 - 100L/4B** **PM 113/52 - 100L/4B**	2180	168
	1.2	23464	2.6	1154.79	-	-	139.0	170.0			
	1.5	19550	2.7	962.15	-	-	144.0	170.0			
	1.9	14863	2.7	731.47	-	-	147.0	170.0			
	1.0	28790	1.2	1416.90	-	-	117.0	150.0	**PD 103/52 - 100L/4B** **PM 103/52 - 100L/4B**	1342	168
	1.2	23684	1.5	1165.61	-	-	124.0	150.0			
	1.5	18609	1.9	915.84	-	-	129.0	150.0			
	2.0	14065	2.5	692.20	-	-	133.0	150.0			
	2.4	11746	2.7	578.09	-	-	134.0	150.0			
	3.0	9691	3.0	476.93	-	-	135.0	150.0			
	1.0	28806	0.8	1417.68	97.0	102.0	120.0	130.0	**PD 93/42 - 100L/4B** **PM 93/42 - 100L/4B**	749	168
	1.2	23923	1.0	1177.36	97.0	102.0	120.0	130.0			
	1.6	17996	1.3	885.67	94.0	102.0	120.0	130.0			
	2.0	14536	1.7	715.36	93.0	102.0	120.0	130.0			
	2.3	12574	1.9	618.83	90.0	102.0	120.0	130.0			
	3.1	9161	2.6	450.86	85.0	102.0	120.0	130.0			
	3.4	8341	2.9	410.49	84.0	102.0	120.0	130.0	**PD/PM 93/52 - 100L/4B**	778	168
	2.0	14560	0.8	716.55	74.0	73.0	100.0	100.0	**PD 83/32 - 100L/4B** **PM 83/32 - 100L/4B**	431	166
	2.3	12396	1.0	610.07	74.0	73.0	100.0	100.0			
	2.6	11181	1.1	550.29	74.0	73.0	100.0	100.0	**PD 83/42 - 100L/4B** **PM 83/42 - 100L/4B**	447	168
	3.0	9526	1.3	468.82	73.0	73.0	100.0	100.0			
	3.6	7851	1.6	386.39	71.0	73.0	100.0	105.0	**PD 83 - 100L/4B** **PM 83 - 100L/4B**	405	147
	4.4	6464	2.0	318.11	68.0	73.0	100.0	105.0			
	7.0	4081	2.6	200.83	62.0	73.0	100.0	105.0			
	3.2	8835	0.8	434.82	43.0	58.0	72.0	80.0	**PD 73/22 - 100L/4B** **PM 73/22 - 100L/4B**	295	166
	3.7	7645	0.9	376.24	48.0	58.0	75.0	80.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
3.00	4.2	6875	1.1	338.37	50.0	58.0	76.0	80.0			
	5.2	5554	1.4	273.32	52.0	58.0	79.0	80.0			
	6.5	4398	1.9	216.45	50.0	58.0	80.0	80.0			
	6.9	4160	1.8	204.72	50.0	58.0	80.0	80.0	**PD 73 - 100L/4B** **PM 73 - 100L/4B**	280	143
	8.7	3294	1.9	162.12	47.0	58.0	81.0	80.0			
	9.4	3054	2.3	150.32	47.0	58.0	81.0	80.0			
	11.5	2502	2.5	123.12	45.0	58.0	82.0	80.0			
	4.0	7093	0.8	349.07	16.0	47.0	44.0	60.0	**PD/PM 63/22 - 100L/4B**	222	166
	4.4	6454	0.9	317.64	23.0	47.0	47.0	60.0			
	5.3	5444	1.1	267.94	30.0	47.0	51.0	60.0			
	5.6	5113	0.9	251.63	31.0	47.0	52.0	60.0			
	6.2	4589	0.9	225.83	34.0	47.0	53.0	60.0			
	6.6	4313	1.1	212.26	35.0	47.0	54.0	60.0			
	8.2	3482	1.6	171.37	38.0	47.0	56.0	60.0	**PD 63 - 100L/4B** **PM 63 - 100L/4B**	204	139
	8.8	3253	1.8	160.11	38.0	47.0	56.0	60.0			
	11.1	2577	1.8	126.84	40.0	47.0	57.0	60.0			
	12.3	2332	2.1	114.79	40.0	47.0	57.0	60.0			
	15.2	1883	2.1	92.68	38.0	47.0	58.0	60.0			
	18.7	1530	2.4	75.30	36.0	47.0	58.0	60.0			
	17.6	1631	2.5	80.26	37.0	47.0	58.0	60.0	**PD/PM 62 - 100L/4B**	210	138
	7.0	4121	0.8	202.80	20.0	32.0	37.0	40.0			
	8.2	3482	0.8	171.36	24.0	32.0	39.0	40.0	**PD 53 - 100L/4B** **PM 53 - 100L/4B**	141	135
	9.2	3126	1.0	153.85	26.0	32.0	40.0	40.0			
	10.2	2820	1.1	138.78	25.0	32.0	41.0	40.0			
	10.5	2724	1.0	134.05	26.0	32.0	42.0	40.0			
	14.1	2035	1.1	100.15	25.0	32.0	43.0	40.0			
	15.4	1866	1.5	91.82	24.0	32.0	43.0	40.0			
	17.3	1660	1.1	81.68	24.0	32.0	44.0	40.0			
	20.6	1394	2.1	68.60	23.0	32.0	44.0	40.0	**PD 52 - 100L/4B** **PM 52 - 100L/4B**	123	134
	25.2	1137	2.3	55.94	22.0	32.0	43.0	40.0			
	29.8	961	2.5	47.27	21.0	32.0	41.0	40.0			
	34.6	829	2.3	40.79	20.0	32.0	40.0	40.0			
	42.2	679	2.4	33.41	19.0	32.0	38.0	40.0			
	11.9	2408	0.8	118.53	14.0	22.0	26.0	30.0	**PD 43 - 100L/4B** **PM 43 - 100L/4B**	102	131
	13.6	2110	0.9	103.86	15.0	22.0	27.0	30.0			
	15.6	1839	0.9	90.52	15.0	22.0	28.0	30.0			
	18.7	1532	1.0	75.41	15.0	22.0	29.0	30.0			
	22.9	1253	1.4	61.64	15.0	22.0	30.0	30.0			
	27.0	1061	1.7	52.23	14.0	22.0	30.0	30.0			
	31.3	916	1.7	45.06	14.0	22.0	29.0	30.0			
	32.3	887	1.8	43.64	14.0	22.0	28.0	30.0			
	34.6	829	1.9	40.79	14.0	22.0	28.0	30.0			
	38.3	748	1.8	36.84	13.0	22.0	27.0	30.0	**PD 42 - 100L/4B** **PM 42 - 100L/4B**	87	130
	38.7	739	1.9	36.39	13.0	22.0	27.0	30.0			
	43.6	656	2.1	32.31	13.0	22.0	27.0	30.0			
	53.4	537	2.1	26.41	12.0	22.0	25.0	30.0			
	63.0	455	2.1	22.38	12.0	22.0	24.0	30.0			
	65.7	436	2.3	21.46	12.0	22.0	24.0	30.0			
	77.6	369	2.3	18.18	11.0	21.0	23.0	30.0			
	92.8	309	2.3	15.19	11.0	20.0	22.0	30.0			
	111.3	257	2.3	12.67	10.0	19.0	21.0	30.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
3.00	33.5	854	1.1	42.05	8.0	15.0	19.0	20.0			
	37.3	768	1.1	37.79	8.0	15.0	18.0	20.0			
	44.2	648	1.4	31.90	8.0	15.0	18.0	20.0			
	49.2	582	1.5	28.67	8.0	15.0	17.0	20.0			
	54.5	525	1.6	25.86	8.0	15.0	17.0	20.0			
	59.5	481	1.6	23.69	8.0	14.0	17.0	20.0			
	62.9	456	1.8	22.42	8.0	14.0	16.0	20.0			
	66.0	434	1.7	21.37	8.0	14.0	16.0	20.0	**PD 32 - 100L/4B**		
	70.0	409	1.9	20.15	8.0	14.0	16.0	20.0	**PM 32 - 100L/4B**	71	126
	84.7	338	1.9	16.65	7.0	13.0	15.0	20.0			
	100.1	286	1.9	14.09	7.0	13.0	15.0	20.0			
	124.2	231	2.1	11.35	7.0	12.0	14.0	20.0			
	144.3	199	2.1	9.77	6.0	11.0	13.0	20.0			
	170.1	168	1.9	8.29	6.0	11.0	13.0	19.0			
	211.0	136	2.1	6.68	6.0	10.0	12.0	18.0			
	249.2	115	2.2	5.66	6.0	9.0	11.0	18.0			
	47.6	602	0.8	29.64	7.0	12.0	12.0	15.0			
	52.6	545	0.8	26.81	7.0	12.0	13.0	15.0			
	56.4	508	1.0	24.98	7.0	12.0	13.0	15.0			
	58.8	487	0.9	23.99	7.0	12.0	13.0	15.0			
	64.4	445	1.1	21.89	7.0	12.0	13.0	15.0			
	76.2	376	1.3	18.51	6.0	12.0	13.0	15.0			
	85.2	336	1.4	16.56	6.0	12.0	13.0	15.0			
	106.8	268	1.5	13.20	6.0	12.0	12.0	15.0	**PD 22 - 100L/4B**		
	119.4	240	1.6	11.81	6.0	11.0	12.0	15.0	**PM 22 - 100L/4B**	56	122
	138.8	206	1.7	10.16	6.0	11.0	12.0	15.0			
	156.7	183	1.8	9.00	6.0	10.0	11.0	15.0			
	168.7	170	1.5	8.36	5.0	10.0	11.0	15.0			
	188.5	152	1.6	7.48	5.0	10.0	11.0	15.0			
	219.2	131	1.7	6.43	5.0	9.0	10.0	15.0			
	247.4	116	1.8	5.70	5.0	9.0	10.0	15.0			
	312.5	92	2.0	4.51	5.0	8.0	9.0	15.0			
	120.0	239	0.9	11.75	2.0	4.0	9.0	7.0			
	136.3	210	0.9	10.34	2.0	4.0	9.0	7.0			
	153.9	186	1.0	9.16	2.0	4.0	8.0	7.0			
	171.3	167	1.1	8.23	2.0	4.0	8.0	7.0	**PD 12 - 100L/4B**		
	194.5	147	1.3	7.25	2.0	4.0	8.0	7.0	**PM 12 - 100L/4B**	43	118
	219.7	130	1.4	6.42	2.0	4.0	8.0	7.0			
	257.6	111	1.5	5.47	2.0	4.0	7.0	7.0			
	295.1	97	1.3	4.78	2.0	4.0	7.0	7.0			
4.00	1.0	36937	1.6	1382.74	-	-	118.0	170.0			
	1.2	30848	1.9	1154.79	-	-	133.0	170.0	**PD 113/52 - 112M/4B**		
	1.5	25702	2.3	962.15	-	-	138.0	170.0	**PM 113/52 - 112M/4B**	2186	168
	2.0	19540	3.1	731.47	-	-	144.0	170.0			
	2.4	16121	3.3	603.47	-	-	146.0	170.0			
	1.0	37850	0.9	1416.90	-	-	98.0	150.0			
	1.2	31137	1.1	1165.61	-	-	111.0	150.0			
	1.6	24465	1.4	915.84	-	-	124.0	150.0	**PD 103/52 - 112M/4B**		
	2.1	18491	1.9	692.20	-	-	130.0	150.0	**PM 103/52 - 112M/4B**	1348	168
	2.5	15443	2.3	578.09	-	-	132.0	150.0			
	3.0	12740	2.7	476.93	-	-	134.0	150.0			
	1.2	31451	0.8	1177.36	82.0	102.0	120.0	130.0			
	1.6	23659	1.0	885.67	83.0	102.0	120.0	130.0			
	2.0	19110	1.3	715.36	84.0	102.0	120.0	130.0	**PD 93/42 - 112M/4B**		
	2.3	16531	1.5	618.83	83.0	102.0	120.0	130.0	**PM 93/42 - 112M/4B**	755	168
	3.2	12044	2.0	450.86	79.0	102.0	120.0	130.0			
	3.5	10966	2.2	410.49	78.0	102.0	120.0	130.0	**PD 93/52 - 112M/4B**		
	4.9	7859	3.1	294.19	73.0	102.0	120.0	130.0	**PM 93/52 - 112M/4B**	784	168
	2.3	16297	0.7	610.07	64.0	73.0	100.0	100.0	**PD/PM 83/32 - 112M/4B**	438	166
	2.6	14700	0.8	550.29	64.0	73.0	100.0	100.0	**PD 83/42 - 112M/4B**		
	3.1	12524	1.0	468.82	64.0	73.0	100.0	100.0	**PM 83/42 - 112M/4B**	453	168

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
4.00	3.7	10322	1.2	386.39	65.0	73.0	100.0	105.0			
	4.5	8498	1.5	318.11	63.0	73.0	100.0	105.0			
	7.1	5365	2.0	200.83	59.0	73.0	100.0	105.0			
	9.9	3844	2.0	143.91	55.0	73.0	100.0	105.0			
	12.1	3165	2.0	118.48	53.0	73.0	100.0	105.0			
	13.9	2755	2.1	103.13	51.0	73.0	100.0	105.0			
	15.8	2425	2.2	90.79	49.0	73.0	99.0	105.0	**PD 83 - 112M/4B**	413	147
	18.9	2022	2.3	75.70	47.0	73.0	94.0	105.0	**PM 83 - 112M/4B**		
	21.9	1741	2.4	65.16	45.0	73.0	91.0	105.0			
	24.9	1531	2.2	57.32	44.0	73.0	88.0	105.0			
	29.9	1277	2.3	47.79	41.0	68.0	83.0	105.0			
	32.9	1162	2.3	43.52	40.0	66.0	81.0	105.0			
	39.9	957	2.3	35.83	38.0	61.0	77.0	105.0			
	46.4	824	2.4	30.84	36.0	57.0	73.0	105.0			
	4.2	9039	0.8	338.37	43.0	58.0	72.0	80.0			
	5.2	7301	1.0	273.32	47.0	58.0	76.0	80.0			
	6.6	5782	1.4	216.45	46.0	58.0	78.0	80.0			
	7.0	5469	1.4	204.72	46.0	58.0	79.0	80.0			
	8.8	4331	1.4	162.12	44.0	58.0	80.0	80.0			
	9.5	4015	1.7	150.32	44.0	58.0	81.0	80.0			
	11.6	3289	1.8	123.12	42.0	58.0	81.0	80.0	**PD 73 - 112M/4B**	288	143
	13.4	2846	2.0	106.53	41.0	58.0	82.0	80.0	**PM 73 - 112M/4B**		
	15.4	2486	2.0	93.05	40.0	58.0	82.0	80.0			
	18.2	2104	1.8	78.75	39.0	58.0	82.0	80.0			
	21.0	1820	2.0	68.14	37.0	58.0	79.0	80.0			
	24.0	1590	2.1	59.52	36.0	58.0	77.0	80.0			
	26.8	1427	2.0	53.42	35.0	58.0	74.0	80.0			
	30.6	1246	2.1	46.66	34.0	58.0	72.0	80.0			
	5.3	7157	0.8	267.94	15.0	47.0	44.0	60.0			
	6.7	5670	0.8	212.26	28.0	47.0	50.0	60.0			
	8.3	4578	1.2	171.37	34.0	47.0	53.0	60.0			
	8.9	4277	1.3	160.11	35.0	47.0	54.0	60.0			
	11.3	3388	1.4	126.84	38.0	47.0	56.0	60.0			
	12.5	3066	1.6	114.79	37.0	47.0	57.0	60.0	**PD 63 - 112M/4B**	210	139
	15.4	2476	1.6	92.68	36.0	47.0	57.0	60.0	**PM 63 - 112M/4B**		
	19.0	2012	1.8	75.30	34.0	47.0	58.0	60.0			
	19.5	1961	1.7	73.42	34.0	47.0	58.0	60.0			
	24.0	1594	1.8	59.65	33.0	47.0	58.0	60.0			
	28.0	1363	1.9	51.01	31.0	47.0	58.0	60.0			
	33.7	1133	1.8	42.41	30.0	47.0	58.0	60.0			
	17.8	2144	1.9	80.26	35.0	47.0	58.0	60.0	**PD 62 - 112M/4B**	218	138
	21.8	1749	1.9	65.45	33.0	47.0	58.0	60.0	**PM 62 - 112M/4B**		
	9.3	4110	0.8	153.85	20.0	32.0	37.0	40.0			
	10.3	3707	0.9	138.78	22.0	32.0	38.0	40.0	**PD 53 - 112M/4B**	148	135
	12.2	3133	0.9	117.27	22.0	32.0	40.0	40.0	**PM 53 - 112M/4B**		
	15.6	2453	1.1	91.82	22.0	32.0	42.0	40.0			
	17.5	2182	0.8	81.68	22.0	32.0	43.0	40.0			
	20.8	1832	1.6	68.60	21.0	32.0	43.0	40.0			
	25.6	1494	1.7	55.94	20.0	32.0	42.0	40.0	**PD 52 - 112M/4B**	129	134
	30.3	1263	1.9	47.27	20.0	32.0	40.0	40.0	**PM 52 - 112M/4B**		
	35.1	1090	2.3	40.79	19.0	32.0	39.0	40.0			
	42.8	892	2.6	33.41	19.0	32.0	37.0	40.0			
	46.9	814	2.5	30.47	18.0	32.0	36.0	40.0			
	16.5	2318	0.9	86.78	12.0	22.0	26.0	30.0	**PD/PM 43 - 112M/4B**	108	131

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
4.00	19.0	2014	0.8	75.41	13.0	22.0	27.0	30.0			
	23.2	1647	1.1	61.64	13.0	22.0	28.0	30.0			
	27.4	1395	1.3	52.23	13.0	22.0	28.0	30.0			
	31.7	1204	1.3	45.06	13.0	22.0	28.0	30.0			
	32.8	1166	1.4	43.64	13.0	22.0	27.0	30.0			
	35.1	1090	1.4	40.79	13.0	22.0	27.0	30.0			
	38.8	984	1.4	36.84	12.0	22.0	27.0	30.0	**PD 42 - 112M/4B**		
	39.3	972	1.4	36.39	12.0	22.0	26.0	30.0	**PM 42 - 112M/4B**	93	130
	44.3	863	1.9	32.31	12.0	22.0	26.0	30.0			
	54.1	706	2.4	26.41	12.0	22.0	25.0	30.0			
	63.9	598	2.4	22.38	11.0	21.0	23.0	30.0			
	66.6	573	2.6	21.46	11.0	21.0	23.0	30.0			
	78.7	486	2.6	18.18	11.0	20.0	22.0	30.0			
	94.1	406	2.6	15.19	10.0	19.0	21.0	30.0			
	34.0	1123	0.8	42.05	7.0	13.0	18.0	20.0			
	37.8	1009	0.8	37.79	7.0	13.0	17.0	20.0			
	44.8	852	1.0	31.90	7.0	13.0	17.0	20.0			
	49.9	766	1.1	28.67	7.0	13.0	17.0	20.0			
	55.3	691	1.2	25.86	7.0	13.0	16.0	20.0			
	60.4	633	1.3	23.69	7.0	13.0	16.0	20.0			
	63.8	599	1.3	22.42	7.0	13.0	16.0	20.0			
	66.9	571	1.3	21.37	7.0	13.0	16.0	20.0	**PD 32 - 112M/4B**		
	71.0	538	1.5	20.15	7.0	13.0	15.0	20.0	**PM 32 - 112M/4B**	78	126
	85.9	445	1.9	16.65	7.0	12.0	15.0	20.0			
	101.5	376	2.1	14.09	7.0	12.0	14.0	20.0			
	125.9	303	2.4	11.35	6.0	11.0	14.0	20.0			
	146.3	261	2.4	9.77	6.0	11.0	13.0	20.0			
	172.5	221	2.1	8.29	6.0	10.0	12.0	19.0			
	214.0	179	2.4	6.68	6.0	9.0	12.0	18.0			
	252.7	151	2.5	5.66	5.0	9.0	11.0	17.0			
	65.3	585	0.8	21.89	6.0	11.0	12.0	15.0			
	77.3	494	1.0	18.51	6.0	11.0	13.0	15.0			
	86.4	442	1.1	16.56	6.0	11.0	13.0	15.0			
	108.3	353	1.1	13.20	5.0	10.0	12.0	15.0			
	121.1	316	1.2	11.81	5.0	10.0	12.0	15.0			
	140.8	271	1.3	10.16	5.0	10.0	11.0	15.0	**PD 22 - 112M/4B**		
	158.9	240	1.4	9.00	5.0	10.0	11.0	15.0	**PM 22 - 112M/4B**	63	122
	171.0	223	1.1	8.36	5.0	9.0	11.0	15.0			
	191.2	200	1.2	7.48	5.0	9.0	10.0	15.0			
	222.4	172	1.3	6.43	5.0	9.0	10.0	15.0			
	250.9	152	1.4	5.70	5.0	8.0	10.0	15.0			
	317.0	121	1.5	4.51	4.0	8.0	9.0	15.0			
	156.1	245	0.8	9.16	2.0	3.0	8.0	7.0			
	173.8	220	0.9	8.23	2.0	3.0	8.0	7.0			
	197.3	194	1.0	7.25	2.0	3.0	8.0	7.0	**PD 12 - 112M/4B**		
	222.8	171	1.1	6.42	2.0	3.0	7.0	7.0	**PM 12 - 112M/4B**	50	118
	261.3	146	1.2	5.47	2.0	3.0	7.0	7.0			
	299.2	128	1.0	4.78	2.0	3.0	7.0	7.0			
5.50	1.0	50262	1.2	1382.74	-	-	77.0	170.0			
	1.3	41976	1.4	1154.79	-	-	113.0	170.0	**PD 113/52 - 132S/4C**		
	1.5	34974	1.7	962.15	-	-	124.0	170.0	**PM 113/52 - 132S/4C**	2203	168
	2.0	26589	2.3	731.47	-	-	137.0	170.0			
	2.4	21936	2.7	603.47	-	-	141.0	170.0			
	1.2	42369	0.8	1165.61	-	-	81.0	150.0			
	1.6	33290	1.1	915.84	-	-	109.0	150.0			
	2.1	25161	1.4	692.20	-	-	122.0	150.0	**PD 103/52 - 132S/4C**		
	2.5	21013	1.7	578.09	-	-	127.0	150.0	**PM 103/52 - 132S/4C**	1365	168
	3.0	17336	2.0	476.93	-	-	130.0	150.0			
	3.9	13310	2.6	366.18	-	-	133.0	150.0			
	2.0	26003	0.9	715.36	70.0	102.0	120.0	130.0			
	2.3	22494	1.1	618.83	71.0	102.0	120.0	130.0	**PD 93/42 - 132S/4C**		
	3.2	16389	1.5	450.86	71.0	102.0	120.0	130.0	**PM 93/42 - 132S/4C**	772	168
	3.5	14921	1.6	410.49	71.0	102.0	120.0	130.0	**PD/PM 93/52 - 132S/4C**	801	168

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
5.50	4.1	12801	2.0	352.16	86.0	102.0	120.0	130.0	PD 93 - 132S/4C PM 93 - 132S/4C	730	151
	5.0	10576	2.3	290.94	82.0	102.0	120.0	130.0			
	7.1	7439	3.0	204.66	77.0	102.0	120.0	130.0			
	8.3	6362	3.4	175.03	75.0	102.0	120.0	130.0			
	3.7	14045	0.9	386.39	55.0	73.0	100.0	105.0	PD 83 - 132S/4C PM 83 - 132S/4C	428	147
	4.5	11563	1.1	318.11	55.0	73.0	100.0	105.0			
	4.9	10684	1.2	293.92	56.0	73.0	100.0	105.0			
	6.0	8796	1.5	241.98	55.0	73.0	100.0	105.0			
	7.2	7300	1.5	200.83	54.0	73.0	100.0	105.0			
	7.8	6745	1.9	185.56	54.0	73.0	100.0	105.0			
	9.5	5553	2.4	152.77	52.0	73.0	100.0	105.0			
	10.0	5231	2.4	143.91	52.0	73.0	100.0	105.0			
	11.5	4553	2.7	125.27	50.0	73.0	100.0	105.0			
	5.3	9935	0.8	273.32	38.0	58.0	69.0	80.0	PD 73 - 132S/4C PM 73 - 132S/4C	303	143
	6.7	7868	1.1	216.45	40.0	58.0	74.0	80.0			
	7.1	7441	1.0	204.72	40.0	58.0	75.0	80.0			
	8.9	5893	1.1	162.12	40.0	58.0	78.0	80.0			
	9.6	5464	1.4	150.32	40.0	58.0	79.0	80.0			
	11.7	4475	1.7	123.12	39.0	58.0	80.0	80.0			
	13.6	3872	1.9	106.53	38.0	58.0	81.0	80.0			
	15.5	3382	2.2	93.05	37.0	58.0	81.0	80.0			
	18.3	2863	2.6	78.75	36.0	58.0	81.0	80.0			
	8.4	6229	0.9	171.37	24.0	47.0	48.0	60.0	PD 63 - 132S/4C PM 63 - 132S/4C	227	139
	9.0	5820	1.0	160.11	27.0	47.0	49.0	60.0			
	11.4	4611	1.0	126.84	33.0	47.0	53.0	60.0			
	12.6	4173	1.4	114.79	34.0	47.0	55.0	60.0			
	15.6	3369	1.8	92.68	33.0	47.0	56.0	60.0			
	19.2	2737	2.2	75.30	32.0	47.0	57.0	60.0			
	19.7	2669	2.1	73.42	32.0	47.0	57.0	60.0			
	24.2	2168	2.5	59.65	31.0	47.0	58.0	60.0			
	28.3	1854	2.7	51.01	30.0	47.0	58.0	60.0			
	34.1	1542	2.7	42.41	29.0	47.0	57.0	60.0			
	39.8	1318	2.9	36.27	28.0	47.0	55.0	60.0			
	18.0	2917	1.4	80.26	33.0	47.0	57.0	60.0	PD 62 - 132S/4C PM 62 - 132S/4C	233	138
	22.1	2379	1.4	65.45	31.0	47.0	57.0	60.0			
	23.7	2219	2.0	61.05	31.0	47.0	58.0	60.0			
	29.0	1810	2.2	49.79	30.0	47.0	58.0	60.0			
	36.6	1434	2.2	39.44	28.0	47.0	56.0	60.0			
	15.7	3338	0.8	91.82	19.0	32.0	40.0	40.0	PD 52 - 132S/4C PM 52 - 132S/4C	146	134
	21.1	2493	1.2	68.60	19.0	32.0	42.0	40.0			
	25.8	2034	1.3	55.94	19.0	32.0	41.0	40.0			
	28.1	1870	1.7	51.45	19.0	32.0	40.0	40.0			
	30.6	1718	1.4	47.27	18.0	32.0	39.0	40.0			
	34.4	1525	2.1	41.96	18.0	32.0	38.0	40.0			
	35.4	1483	1.7	40.79	18.0	32.0	38.0	40.0			
	40.8	1289	2.1	35.45	17.0	32.0	37.0	40.0			
	43.3	1214	1.9	33.41	18.0	32.0	36.0	40.0			
	47.4	1108	2.6	30.47	17.0	32.0	36.0	40.0			
	57.9	907	2.9	24.96	16.0	31.0	34.0	40.0			
	23.4	2241	0.8	61.64	11.0	21.0	26.0	30.0	PD 42 - 132S/4C PM 42 - 132S/4C	110	130
	27.7	1899	1.0	52.23	11.0	21.0	27.0	30.0			
	32.1	1638	1.0	45.06	11.0	22.0	26.0	30.0			
	33.1	1586	1.0	43.64	11.0	21.0	26.0	30.0			
	35.4	1483	1.0	40.79	11.0	22.0	26.0	30.0			
	37.7	1394	1.4	38.35	11.0	21.0	25.0	30.0			
	39.2	1339	1.0	36.84	11.0	22.0	25.0	30.0			
	39.7	1323	1.0	36.39	11.0	21.0	25.0	30.0			
	45.1	1165	1.5	32.04	11.0	21.0	25.0	30.0			
	54.1	971	1.6	26.72	11.0	20.0	24.0	30.0			
	54.7	960	1.9	26.41	11.0	21.0	24.0	30.0			
	64.6	813	2.1	22.38	11.0	20.0	23.0	30.0			
	67.3	780	2.2	21.46	11.0	20.0	23.0	30.0			
	79.5	661	2.7	18.18	10.0	19.0	22.0	30.0			
	95.1	552	2.7	15.19	10.0	18.0	21.0	30.0			
	114.1	460	2.8	12.67	9.0	17.0	20.0	30.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
5.50	45.3	1160	0.8	31.90	6.0	10.0	16.0	20.0	**PD 32 - 132S/4C** **PM 32 - 132S/4C**	94	126
	50.4	1042	0.8	28.67	6.0	11.0	16.0	20.0			
	55.9	940	0.9	25.86	6.0	11.0	15.0	20.0			
	61.0	861	0.9	23.69	6.0	11.0	15.0	20.0			
	64.5	815	1.0	22.42	6.0	11.0	15.0	20.0			
	67.6	777	0.9	21.37	6.0	11.0	15.0	20.0			
	71.7	732	1.1	20.15	6.0	11.0	15.0	20.0			
	86.8	605	1.4	16.65	6.0	11.0	14.0	20.0			
	102.6	512	1.7	14.09	6.0	10.0	14.0	20.0			
	127.3	413	2.0	11.35	6.0	10.0	13.0	19.0			
	147.8	355	2.4	9.77	6.0	10.0	13.0	19.0			
	174.3	301	2.2	8.29	5.0	9.0	12.0	18.0			
	216.2	243	2.5	6.68	5.0	9.0	11.0	17.0			
	255.4	206	2.7	5.66	5.0	8.0	11.0	17.0			
	322.4	163	2.8	4.48	5.0	8.0	10.0	16.0			
7.50	1.0	68302	0.9	1382.74	-	-	36.0	170.0	**PD 113/52 - 132M/4B** **PM 113/52 - 132M/4B**	2214	168
	1.3	57043	1.1	1154.79	-	-	65.0	170.0			
	1.5	47527	1.3	962.15	-	-	94.0	170.0			
	2.0	36132	1.7	731.47	-	-	122.0	170.0			
	2.4	29809	2.0	603.47	-	-	132.0	170.0			
	1.6	45239	0.8	915.84	-	-	77.0	150.0	**PD 103/52 - 132M/4B** **PM 103/52 - 132M/4B**	1376	168
	2.1	34192	1.0	692.20	-	-	107.0	150.0			
	2.5	28556	1.2	578.09	-	-	117.0	150.0			
	3.0	23559	1.5	476.93	-	-	124.0	150.0			
	4.0	18088	1.9	366.18	-	-	129.0	150.0			
	4.1	17655	2.0	357.40	-	-	130.0	150.0	**PD 103 - 132M/4B** **PM 103 - 132M/4B**	1305	155
	4.4	16431	2.3	332.64	-	-	131.0	150.0			
	5.1	13972	2.4	282.85	-	-	133.0	150.0			
	5.5	13004	2.5	263.25	-	-	134.0	150.0			
	2.3	30568	0.8	618.83	56.0	102.0	120.0	130.0	**PD 93/42 - 132M/4B** **PM 93/42 - 132M/4B**	783	168
	3.2	22271	1.1	450.86	60.0	102.0	120.0	130.0			
	3.5	20277	1.2	410.49	61.0	102.0	120.0	130.0	**PD/PM 93/52 - 132M/4B**	812	168
	4.1	17396	1.5	352.16	78.0	102.0	120.0	130.0	**PD 93 - 132M/4B** **PM 93 - 132M/4B**	741	151
	5.0	14372	1.7	290.94	75.0	102.0	120.0	130.0			
	7.1	10109	2.2	204.66	72.0	102.0	120.0	130.0			
	8.3	8646	2.5	175.03	70.0	102.0	120.0	130.0			
	10.0	7143	2.5	144.60	67.0	102.0	120.0	130.0			
	10.7	6701	2.7	135.66	67.0	102.0	120.0	130.0			
	4.9	14519	0.9	293.92	46.0	73.0	100.0	105.0	**PD 83 - 132M/4B** **PM 83 - 132M/4B**	439	147
	6.0	11953	1.1	241.98	47.0	73.0	100.0	105.0			
	7.8	9166	1.4	185.56	48.0	73.0	100.0	105.0			
	9.5	7546	1.7	152.77	47.0	73.0	100.0	105.0			
	10.1	7109	1.8	143.91	47.0	73.0	100.0	105.0			
	12.2	5853	2.1	118.48	46.0	73.0	100.0	105.0			
	14.1	5094	2.4	103.13	45.0	73.0	97.0	105.0			
	16.0	4485	2.6	90.79	44.0	73.0	95.0	105.0			
	19.2	3740	2.7	75.70	43.0	73.0	91.0	105.0			
	20.1	3565	2.2	72.17	43.0	73.0	-	-	**PD/PM 82 - 132M/4B**	435	146
	8.9	8008	0.8	162.12	33.0	58.0	74.0	80.0	**PD 73 - 132M/4B** **PM 73 - 132M/4B**	314	143
	9.6	7425	1.0	150.32	34.0	58.0	75.0	80.0			
	11.8	6082	1.2	123.12	34.0	58.0	78.0	80.0			
	13.6	5262	1.4	106.53	34.0	58.0	79.0	80.0			
	15.6	4596	1.6	93.05	34.0	58.0	80.0	80.0			
	18.4	3890	1.9	78.75	33.0	58.0	78.0	80.0			
	21.3	3366	2.1	68.14	33.0	58.0	76.0	80.0			
	24.4	2940	2.3	59.52	32.0	57.0	73.0	80.0			
	27.1	2639	2.2	53.42	32.0	55.0	71.0	80.0			
	20.8	3448	1.7	69.80	33.0	58.0	76.0	80.0	**PD 72 - 132M/4B** **PM 72 - 132M/4B**	307	142
	25.5	2811	2.0	56.90	32.0	56.0	73.0	80.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
7.50	12.6	5670	1.0	114.79	29.0	47.0	50.0	60.0	**PD 63 - 132M/4B PM 63 - 132M/4B**	238	139
	15.6	4578	1.3	92.68	29.0	47.0	53.0	60.0			
	19.3	3720	1.6	75.30	29.0	47.0	55.0	60.0			
	19.7	3627	1.5	73.42	29.0	47.0	56.0	60.0			
	24.3	2947	1.9	59.65	28.0	47.0	57.0	60.0			
	28.4	2520	2.0	51.01	28.0	47.0	57.0	60.0			
	34.2	2095	2.2	42.41	27.0	46.0	56.0	60.0			
	40.0	1792	2.2	36.27	26.0	44.0	54.0	60.0			
	46.9	1526	2.3	30.90	25.0	42.0	52.0	60.0			
	50.6	1416	2.1	28.66	25.0	41.0	51.0	60.0			
	23.8	3016	1.5	61.05	29.0	47.0	57.0	60.0	**PD 62 - 132M/4B PM 62 - 132M/4B**	244	138
	29.1	2459	1.6	49.79	28.0	47.0	57.0	60.0			
	36.8	1948	1.6	39.44	26.0	45.0	55.0	60.0			
	48.5	1477	2.3	29.89	25.0	42.0	52.0	60.0			
	55.7	1285	2.4	26.02	25.0	40.0	50.0	60.0			
	26.1	2744	0.8	55.55	17.0	32.0	39.0	40.0	**PD 52 - 132M/4B PM 52 - 132M/4B**	157	134
	28.2	2541	1.3	51.45	17.0	32.0	38.0	40.0			
	34.6	2073	1.5	41.96	16.0	32.0	37.0	40.0			
	35.5	2015	1.2	40.79	17.0	31.0	37.0	40.0			
	40.9	1751	1.5	35.45	16.0	31.0	35.0	40.0			
	43.4	1650	1.4	33.41	16.0	30.0	35.0	40.0			
	47.6	1505	1.9	30.47	16.0	31.0	35.0	40.0			
	58.1	1233	2.1	24.96	15.0	29.0	33.0	40.0			
	71.2	1005	2.1	20.36	15.0	27.0	31.0	40.0			
	76.9	932	2.4	18.86	15.0	27.0	31.0	40.0			
	35.5	2015	0.8	40.79	9.0	17.0	24.0	30.0	**PD 42 - 132M/4B PM 42 - 132M/4B**	121	130
	37.8	1894	1.1	38.35	9.0	17.0	24.0	30.0			
	45.3	1583	1.1	32.04	9.0	17.0	23.0	30.0			
	54.3	1320	1.2	26.72	9.0	17.0	22.0	30.0			
	54.9	1305	1.4	26.41	10.0	18.0	23.0	30.0			
	64.8	1105	1.5	22.38	9.0	17.0	22.0	30.0			
	67.6	1060	1.6	21.46	10.0	17.0	22.0	30.0			
	79.8	898	2.0	18.18	9.0	17.0	21.0	30.0			
	95.4	750	2.0	15.19	9.0	16.0	20.0	30.0			
	114.5	626	2.0	12.67	9.0	15.0	19.0	30.0			
	133.9	535	2.1	10.83	9.0	15.0	19.0	30.0			
	157.1	456	2.3	9.23	8.0	14.0	18.0	30.0			
	174.0	412	2.0	8.33	8.0	14.0	17.0	29.0			
	203.5	352	2.2	7.13	8.0	13.0	17.0	28.0			
	238.8	300	2.3	6.07	8.0	13.0	16.0	27.0			
	72.0	995	0.8	20.15	5.0	8.0	14.0	19.0	**PD 32 - 132M/4B PM 32 - 132M/4B**	105	126
	87.1	822	1.0	16.65	5.0	8.0	13.0	19.0			
	102.9	696	1.2	14.09	5.0	8.0	13.0	19.0			
	127.7	561	1.5	11.35	5.0	8.0	13.0	18.0			
	148.4	483	1.7	9.77	5.0	8.0	12.0	18.0			
	174.9	410	1.7	8.29	5.0	8.0	12.0	17.0			
	217.0	330	1.8	6.68	5.0	8.0	11.0	17.0			
	256.3	279	2.0	5.66	5.0	7.0	11.0	16.0			
	323.6	221	2.1	4.48	5.0	7.0	10.0	15.0			
9.20	1.3	69973	0.9	1154.79	-	-	18.0	170.0	**PD 113/52 - 132M/4 PM 113/52 - 132M/4**	2214	168
	1.5	58300	1.0	962.15	-	-	42.0	170.0			
	2.0	44322	1.4	731.47	-	-	105.0	170.0			
	2.4	36566	1.6	603.47	-	-	121.0	170.0			
	3.0	29075	2.1	479.85	-	-	133.0	170.0			
	4.0	22008	2.3	363.21	-	-	141.0	170.0			
	4.6	18919	2.6	312.23	-	-	144.0	170.0			
	2.1	41943	0.8	692.20	-	-	87.0	150.0	**PD 103/52 - 132M/4 PM 103/52 - 132M/4**	1376	168
	2.5	35029	1.0	578.09	-	-	105.0	150.0			
	3.0	28899	1.2	476.93	-	-	116.0	150.0			
	4.0	22188	1.6	366.18	-	-	126.0	150.0			
	4.1	21656	1.6	357.40	-	-	126.0	150.0	**PD 103 - 132M/4 PM 103 - 132M/4**	1305	155
	4.4	20156	1.8	332.64	-	-	128.0	150.0			
	5.1	17139	1.9	282.85	-	-	130.0	150.0			
	5.5	15951	2.1	263.25	-	-	131.0	150.0			
	8.0	10948	3.2	180.68	-	-	135.0	150.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
9.20	3.2	27319	0.9	450.86	51.0	102.0	120.0	130.0	**PD\PM 93/42 - 132M/4**	783	168
	3.5	24873	1.0	410.49	52.0	102.0	120.0	130.0	**PD\PM 93/52 - 132M/4**	812	168
	4.1	21338	1.2	352.16	70.0	102.0	120.0	130.0	**PD 93 - 132M/4** **PM 93 - 132M/4**	741	151
	5.0	17629	1.4	290.94	69.0	102.0	120.0	130.0			
	7.1	12401	1.8	204.66	68.0	102.0	120.0	130.0			
	8.3	10606	2.4	175.03	67.0	102.0	120.0	130.0			
	10.0	8762	2.7	144.60	64.0	102.0	120.0	130.0			
	10.7	8220	3.1	135.66	64.0	102.0	120.0	130.0			
	12.6	6999	3.6	115.51	62.0	102.0	117.0	130.0			
	14.4	6101	3.9	100.70	61.0	102.0	115.0	130.0			
	6.0	14662	0.9	241.98	39.0	73.0	100.0	105.0	**PD 83 - 132M/4** **PM 83 - 132M/4**	439	147
	7.8	11243	1.1	185.56	42.0	73.0	100.0	105.0			
	9.5	9257	1.4	152.77	42.0	73.0	100.0	105.0			
	10.1	8720	1.4	143.91	43.0	73.0	100.0	105.0			
	11.6	7590	1.6	125.27	43.0	73.0	98.0	105.0			
	14.1	6249	1.9	103.13	42.0	73.0	95.0	105.0			
	16.0	5501	2.2	90.79	41.0	73.0	92.0	105.0			
	19.2	4587	2.6	75.70	41.0	70.0	89.0	105.0			
	22.3	3948	2.9	65.16	40.0	67.0	86.0	105.0			
	25.3	3473	3.3	57.32	39.0	65.0	83.0	105.0			
	20.1	4373	1.8	72.17	41.0	70.0	-	-	**PD 82 - 132M/4** **PM 82 - 132M/4**	435	146
	24.4	3600	1.8	59.41	39.0	66.0	-	-			
	9.6	9108	0.8	150.32	29.0	58.0	71.0	80.0	**PD 73 - 132M/4** **PM 73 - 132M/4**	314	143
	11.8	7460	1.0	123.12	31.0	58.0	75.0	80.0			
	13.6	6455	1.2	106.53	31.0	58.0	77.0	80.0			
	15.6	5638	1.3	93.05	31.0	58.0	78.0	80.0			
	18.4	4772	1.6	78.75	31.0	56.0	76.0	80.0			
	21.3	4129	1.7	68.14	31.0	55.0	74.0	80.0			
	24.4	3607	2.0	59.52	30.0	53.0	72.0	80.0			
	27.1	3237	2.2	53.42	30.0	52.0	70.0	80.0			
	31.1	2827	2.5	46.66	29.0	50.0	68.0	80.0			
	39.2	2239	3.0	36.95	28.0	47.0	64.0	80.0			
	20.8	4229	1.4	69.80	31.0	56.0	74.0	80.0	**PD 72 - 132M/4** **PM 72 - 132M/4**	307	142
	25.5	3448	1.6	56.90	30.0	53.0	71.0	80.0			
	32.2	2730	1.6	45.06	29.0	50.0	67.0	80.0			
	12.6	6956	0.8	114.79	19.0	47.0	45.0	60.0	**PD 63 - 132M/4** **PM 63 - 132M/4**	238	139
	15.6	5616	1.1	92.68	26.0	47.0	50.0	60.0			
	19.3	4563	1.3	75.30	26.0	47.0	53.0	60.0			
	19.7	4449	1.3	73.42	26.0	47.0	54.0	60.0			
	24.3	3615	1.5	59.65	26.0	47.0	55.0	60.0			
	28.4	3091	1.6	51.01	26.0	45.0	56.0	60.0			
	34.2	2570	1.8	42.41	25.0	44.0	55.0	60.0			
	40.0	2198	2.1	36.27	25.0	42.0	53.0	60.0			
	46.9	1872	2.4	30.90	24.0	40.0	51.0	60.0			
	50.6	1737	2.6	28.66	24.0	40.0	50.0	60.0			
	59.4	1480	2.9	24.42	23.0	38.0	48.0	60.0			
	23.8	3699	1.2	61.05	27.0	47.0	55.0	60.0	**PD 62 - 132M/4** **PM 62 - 132M/4**	244	138
	29.1	3017	1.3	49.79	26.0	46.0	56.0	60.0			
	36.8	2390	1.3	39.44	25.0	43.0	54.0	60.0			
	48.5	1811	2.5	29.89	24.0	40.0	51.0	60.0			
	55.7	1577	2.9	26.02	24.0	39.0	49.0	60.0			
	63.3	1388	3.3	22.91	23.0	37.0	48.0	60.0			
	28.2	3117	1.0	51.45	15.0	30.0	37.0	40.0	**PD 52 - 132M/4** **PM 52 - 132M/4**	157	134
	34.6	2542	1.3	41.96	15.0	29.0	35.0	40.0			
	35.5	2471	1.0	40.79	15.0	28.0	36.0	40.0			
	40.9	2148	1.3	35.45	15.0	29.0	34.0	40.0			
	43.4	2024	1.1	33.41	15.0	27.0	34.0	40.0			
	47.6	1846	1.6	30.47	15.0	28.0	33.0	40.0			
	58.1	1512	1.9	24.96	15.0	27.0	32.0	40.0			
	71.2	1233	2.5	20.36	14.0	26.0	31.0	40.0			
	76.9	1143	2.3	18.86	14.0	25.0	30.0	40.0			
	82.3	1067	2.6	17.61	14.0	25.0	30.0	40.0			
	94.3	932	2.8	15.38	13.0	24.0	29.0	40.0			
	111.5	788	3.1	13.00	13.0	23.0	27.0	40.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
9.20	37.8	2324	0.9	38.35	7.0	14.0	22.0	30.0	**PD 42 - 132M/4** **PM 42 - 132M/4**	121	130
	45.3	1942	0.9	32.04	8.0	14.0	22.0	30.0			
	54.3	1619	1.0	26.72	8.0	14.0	21.0	30.0			
	54.9	1600	1.1	26.41	8.0	15.0	22.0	30.0			
	64.8	1356	1.3	22.38	8.0	15.0	21.0	30.0			
	67.6	1300	1.3	21.46	9.0	15.0	21.0	30.0			
	79.8	1102	1.6	18.18	9.0	15.0	20.0	30.0			
	95.4	921	2.0	15.19	8.0	15.0	20.0	30.0			
	114.5	768	2.3	12.67	8.0	14.0	19.0	30.0			
	133.9	656	2.6	10.83	8.0	14.0	18.0	30.0			
	157.1	559	2.9	9.23	8.0	13.0	18.0	29.0			
	174.0	505	2.5	8.33	8.0	13.0	17.0	28.0			
	203.5	432	2.8	7.13	7.0	12.0	16.0	27.0			
	238.8	368	3.0	6.07	7.0	12.0	16.0	26.0			
	266.3	330	3.1	5.44	7.0	12.0	15.0	26.0			
	290.0	303	3.2	5.00	7.0	11.0	15.0	25.0			
	309.1	284	3.3	4.69	7.0	11.0	15.0	25.0			
	87.1	1009	0.8	16.65	4.0	7.0	13.0	18.0	**PD 32 - 132M/4** **PM 32 - 132M/4**	105	126
	102.9	854	1.0	14.09	4.0	7.0	12.0	18.0			
	127.7	688	1.2	11.35	4.0	7.0	12.0	17.0			
	148.4	592	1.4	9.77	4.0	7.0	12.0	17.0			
	174.9	502	1.3	8.29	4.0	7.0	11.0	16.0			
	217.0	405	1.5	6.68	4.0	7.0	11.0	16.0			
	256.3	343	1.6	5.66	4.0	7.0	10.0	16.0			
	323.6	272	1.7	4.48	4.0	7.0	10.0	15.0			
11.0	1.5	69706	0.9	962.15	-	-	21.0	170.0	**PD 113/52 - 160M/4B** **PM 113/52 - 160M/4B**	2245	168
	2.0	52994	1.1	731.47	-	-	77.0	170.0			
	2.4	43720	1.4	603.47	-	-	105.0	170.0			
	3.0	34764	1.7	479.85	-	-	124.0	170.0			
	4.0	26314	1.9	363.21	-	-	137.0	170.0			
	4.6	22621	2.2	312.23	-	-	141.0	170.0			
	6.5	16284	2.7	224.76	-	-	146.0	170.0	**PD/PM 113 - 160M/4B**	2171	159
	2.5	41882	0.8	578.09	-	-	87.0	150.0	**PD 103/52 - 160M/4B** **PM 103/52 - 160M/4B**	1407	168
	3.0	34553	1.0	476.93	-	-	107.0	150.0			
	4.0	26529	1.3	366.18	-	-	120.0	150.0			
	4.1	25893	1.4	357.40	-	-	121.0	150.0	**PD 103 - 160M/4B** **PM 103 - 160M/4B**	1333	155
	4.4	24099	1.5	332.64	-	-	124.0	150.0			
	5.1	20492	1.6	282.85	-	-	128.0	150.0			
	5.5	19072	1.7	263.25	-	-	129.0	150.0			
	8.0	13090	2.7	180.68	-	-	134.0	150.0			
	3.5	29739	0.8	410.49	43.0	91.0	120.0	130.0	**PD/PM 93/52 - 160M/4B**	843	168
	4.1	25513	1.0	352.16	62.0	102.0	120.0	130.0	**PD 93 - 160M/4B** **PM 93 - 160M/4B**	769	151
	5.0	21078	1.1	290.94	62.0	102.0	120.0	130.0			
	7.1	14827	1.5	204.66	64.0	102.0	120.0	130.0			
	8.3	12680	2.0	175.03	63.0	102.0	120.0	130.0			
	10.0	10476	2.3	144.60	61.0	102.0	120.0	130.0			
	10.7	9829	2.6	135.66	61.0	102.0	120.0	130.0			
	12.6	8369	3.0	115.51	59.0	102.0	115.0	130.0			
	14.4	7295	3.3	100.70	59.0	102.0	113.0	130.0			
	17.4	6027	3.3	83.19	56.0	96.0	106.0	130.0			
	7.8	13443	0.9	185.56	37.0	73.0	100.0	105.0	**PD 83 - 160M/4B** **PM 83 - 160M/4B**	467	147
	9.5	11068	1.2	152.77	38.0	72.0	98.0	105.0			
	10.1	10426	1.2	143.91	39.0	73.0	98.0	105.0			
	12.2	8584	1.5	118.48	39.0	71.0	95.0	105.0			
	14.1	7472	1.6	103.13	39.0	70.0	92.0	105.0			
	16.0	6578	1.8	90.79	39.0	68.0	90.0	105.0			
	19.2	5485	2.2	75.70	38.0	66.0	87.0	105.0			
	22.3	4720	2.4	65.16	38.0	64.0	84.0	105.0			
	25.3	4153	2.7	57.32	37.0	62.0	82.0	105.0			
	20.1	5228	1.5	72.17	38.0	66.0	-	-	**PD 82 - 160M/4B** **PM 82 - 160M/4B**	463	146
	24.4	4304	1.5	59.41	37.0	62.0	-	-			
	30.5	3442	3.1	47.51	36.0	59.0	-	-			
	37.1	2834	3.3	39.12	35.0	56.0	-	-			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
11.0	11.8	8920	0.8	123.12	26.0	53.0	72.0	80.0			
	13.6	7718	1.0	106.53	28.0	53.0	75.0	80.0			
	15.6	6742	1.1	93.05	28.0	53.0	75.0	80.0			
	18.4	5706	1.3	78.75	28.0	51.0	73.0	80.0			
	21.3	4937	1.5	68.14	28.0	51.0	72.0	80.0			
	24.4	4312	1.6	59.52	28.0	50.0	69.0	80.0	**PD 73 - 160M/4B**	342	143
	27.1	3870	1.8	53.42	28.0	49.0	69.0	80.0	**PM 73 - 160M/4B**		
	31.1	3381	2.1	46.66	28.0	48.0	67.0	80.0			
	39.2	2677	2.5	36.95	27.0	45.0	63.0	80.0			
	47.6	2209	2.8	30.49	26.0	43.0	60.0	80.0			
	53.9	1951	2.9	26.92	25.0	41.0	58.0	80.0			
	61.8	1700	2.9	23.47	25.0	40.0	57.0	80.0			
	20.8	5057	1.1	69.80	29.0	52.0	72.0	80.0			
	25.5	4122	1.3	56.90	28.0	50.0	69.0	80.0	**PD 72 - 160M/4B**		
	31.8	3308	1.8	45.66	28.0	48.0	66.0	80.0	**PM 72 - 160M/4B**	335	142
	39.0	2697	2.4	37.22	27.0	46.0	63.0	80.0			
	41.8	2513	2.3	34.69	27.0	45.0	62.0	80.0			
	15.6	6715	0.9	92.68	21.0	43.0	46.0	60.0			
	19.3	5456	1.1	75.30	23.0	44.0	50.0	60.0			
	19.7	5319	1.0	73.42	23.0	43.0	51.0	60.0			
	24.3	4322	1.3	59.65	24.0	43.0	54.0	60.0			
	28.4	3696	1.4	51.01	24.0	42.0	55.0	60.0	**PD 63 - 160M/4B**		
	34.2	3073	1.5	42.41	24.0	41.0	53.0	60.0	**PM 63 - 160M/4B**	269	139
	40.0	2628	1.7	36.27	23.0	40.0	51.0	60.0			
	46.9	2239	2.0	30.90	23.0	38.0	50.0	60.0			
	50.6	2076	2.2	28.66	23.0	38.0	49.0	60.0			
	59.4	1769	2.5	24.42	22.0	36.0	47.0	60.0			
	23.8	4423	1.0	61.05	24.0	44.0	54.0	60.0			
	29.1	3607	1.1	49.79	24.0	42.0	55.0	60.0			
	36.8	2858	1.1	39.44	23.0	40.0	52.0	60.0	**PD 62 - 160M/4B**		
	48.5	2166	2.1	29.89	23.0	38.0	50.0	60.0	**PM 62 - 160M/4B**	272	138
	55.7	1885	2.4	26.02	23.0	37.0	48.0	60.0			
	63.3	1659	2.7	22.91	22.0	36.0	47.0	60.0			
	35.5	2955	0.8	40.79	13.0	25.0	34.0	40.0			
	43.4	2420	1.0	33.41	14.0	25.0	33.0	40.0			
	47.6	2208	1.3	30.47	14.0	26.0	33.0	40.0			
	58.1	1808	1.6	24.96	14.0	26.0	31.0	40.0			
	71.2	1475	2.1	20.36	13.0	24.0	30.0	40.0	**PD 52 - 160M/4B**		
	76.9	1367	1.9	18.86	13.0	24.0	30.0	40.0	**PM 52 - 160M/4B**	188	134
	82.3	1276	2.2	17.61	13.0	24.0	29.0	40.0			
	94.3	1115	2.3	15.38	13.0	23.0	28.0	40.0			
	111.5	942	2.6	13.00	12.0	22.0	27.0	40.0			
	54.9	1913	0.9	26.41	7.0	13.0	21.0	30.0			
	55.2	1902	0.8	26.25	7.0	13.0	21.0	30.0			
	64.8	1621	1.0	22.38	7.0	13.0	20.0	30.0			
	67.6	1555	1.1	21.46	8.0	13.0	20.0	30.0			
	79.8	1317	1.4	18.18	8.0	13.0	20.0	30.0			
	95.4	1101	1.6	15.19	8.0	13.0	19.0	30.0			
	114.5	918	1.9	12.67	8.0	13.0	18.0	30.0			
	133.9	785	2.2	10.83	8.0	13.0	18.0	29.0	**PD 42 - 160M/4B**		
	157.1	669	2.4	9.23	7.0	13.0	17.0	28.0	**PM 42 - 160M/4B**	152	130
	174.0	604	2.1	8.33	7.0	12.0	17.0	27.0			
	203.5	516	2.3	7.13	7.0	12.0	16.0	27.0			
	238.8	440	2.5	6.07	7.0	11.0	16.0	26.0			
	266.3	394	2.7	5.44	7.0	11.0	15.0	25.0			
	290.0	362	2.7	5.00	7.0	11.0	15.0	25.0			
	309.1	340	2.8	4.69	7.0	11.0	15.0	24.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
15.0	2.0	72264	0.8	731.47	-	-	5.0	170.0			
	2.4	59618	1.0	603.47	-	-	31.0	170.0			
	3.0	47406	1.3	479.85	-	-	94.0	170.0	**PD 113/52 - 160L/4A** **PM 113/52 - 160L/4A**	2254	168
	4.0	35883	1.4	363.21	-	-	122.0	170.0			
	4.6	30847	1.6	312.23	-	-	131.0	170.0			
	6.5	22205	2.0	224.76	-	-	141.0	169.0	**PD/PM 113 - 160L/4A**	2180	159
	3.0	47117	0.7	476.93	-	-	72.0	150.0	**PD 103/52 - 160L/4A**	1416	168
	4.0	36176	1.0	366.18	-	-	103.0	150.0	**PM 103/52 - 160L/4A**		
	4.1	35309	1.0	357.40	-	-	105.0	150.0			
	4.4	32863	1.1	332.64	-	-	110.0	150.0			
	5.1	27943	1.2	282.85	-	-	118.0	150.0			
	5.5	26007	1.3	263.25	-	-	121.0	150.0	**PD 103 - 160L/4A** **PM 103 - 160L/4A**	1342	155
	8.0	17850	2.0	180.68	-	-	130.0	150.0			
	8.6	16613	2.0	168.16	-	-	131.0	150.0			
	10.3	13871	2.2	140.41	-	-	133.0	150.0			
	5.0	28743	0.8	290.94	47.0	101.0	120.0	130.0			
	7.1	20219	1.1	204.66	54.0	102.0	120.0	130.0			
	8.3	17292	1.5	175.03	55.0	102.0	120.0	130.0			
	10.0	14286	1.7	144.60	54.0	100.0	117.0	130.0			
	10.7	13403	1.9	135.66	55.0	100.0	116.0	130.0	**PD 93 - 160L/4A** **PM 93 - 160L/4A**	778	151
	12.6	11412	2.2	115.51	54.0	97.0	112.0	130.0			
	14.4	9948	2.4	100.70	54.0	95.0	110.0	130.0			
	17.4	8219	2.4	83.19	52.0	89.0	103.0	130.0			
	20.1	7129	2.5	72.17	51.0	87.0	101.0	130.0			
	22.3	6435	2.1	65.13	50.0	84.0	99.0	130.0			
	9.5	15092	0.9	152.77	27.0	56.0	89.0	105.0			
	10.1	14218	0.9	143.91	29.0	57.0	90.0	105.0			
	12.2	11705	1.1	118.48	30.0	58.0	88.0	105.0			
	14.1	10189	1.2	103.13	32.0	58.0	86.0	105.0			
	16.0	8970	1.3	90.79	33.0	58.0	85.0	105.0			
	19.2	7479	1.6	75.70	33.0	58.0	83.0	105.0	**PD 83 - 160L/4A** **PM 83 - 160L/4A**	476	147
	22.3	6437	1.8	65.16	33.0	57.0	81.0	105.0			
	25.3	5663	2.0	57.32	33.0	56.0	79.0	105.0			
	30.3	4722	2.2	47.79	33.0	54.0	76.0	105.0			
	33.3	4299	2.2	43.52	33.0	53.0	75.0	105.0			
	40.5	3539	2.2	35.83	32.0	50.0	71.0	102.0			
	47.0	3046	2.3	30.84	31.0	48.0	69.0	99.0			
	20.1	7129	1.1	72.17	34.0	58.0	-	-			
	24.4	5870	1.1	59.41	33.0	56.0	-	-	**PD 82 - 160L/4A** **PM 82 - 160L/4A**	472	146
	30.5	4694	2.3	47.51	33.0	54.0	-	-			
	37.1	3864	2.4	39.12	32.0	52.0	-	-			
	15.6	9193	0.8	93.05	21.0	42.0	70.0	80.0			
	18.4	7780	1.0	78.75	22.0	42.0	68.0	80.0			
	21.3	6732	1.1	68.14	23.0	42.0	67.0	80.0			
	24.4	5880	1.2	59.52	24.0	42.0	66.0	80.0			
	27.1	5278	1.3	53.42	24.0	43.0	65.0	80.0	**PD 73 - 160L/4A** **PM 73 - 160L/4A**	351	143
	31.1	4610	1.5	46.66	24.0	42.0	64.0	80.0			
	39.2	3651	1.8	36.95	24.0	40.0	60.0	80.0			
	47.6	3012	2.1	30.49	24.0	39.0	58.0	80.0			
	53.9	2660	2.1	26.92	23.0	38.0	57.0	80.0			
	20.8	6896	0.8	69.80	24.0	44.0	68.0	80.0			
	25.5	5622	1.0	56.90	24.0	43.0	66.0	80.0			
	31.8	4511	1.3	45.66	25.0	43.0	64.0	80.0	**PD 72 - 160L/4A** **PM 72 - 160L/4A**	344	142
	39.0	3677	1.8	37.22	24.0	41.0	61.0	80.0			
	41.8	3427	1.7	34.69	25.0	41.0	60.0	80.0			
	53.9	2657	2.2	26.89	24.0	39.0	57.0	80.0			
	19.3	7439	0.8	75.30	5.0	33.0	41.0	60.0			
	19.7	7253	0.8	73.42	14.0	33.0	43.0	60.0			
	24.3	5893	0.9	59.65	18.0	34.0	49.0	60.0			
	28.4	5040	1.0	51.01	19.0	35.0	51.0	60.0			
	34.2	4190	1.1	42.41	20.0	35.0	50.0	60.0	**PD 63 - 160L/4A** **PM 63 - 160L/4A**	278	139
	40.0	3583	1.3	36.27	20.0	35.0	49.0	60.0			
	46.9	3053	1.5	30.90	20.0	34.0	48.0	60.0			
	50.6	2832	1.6	28.66	20.0	34.0	47.0	60.0			
	59.4	2412	1.8	24.42	20.0	33.0	45.0	60.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
15.0	23.8	6031	0.8	61.05	19.0	36.0	49.0	60.0	PD 62 - 160L/4A PM 62 - 160L/4A	281	138
	29.1	4919	0.8	49.79	20.0	35.0	52.0	60.0			
	36.8	3897	0.8	39.44	20.0	35.0	49.0	60.0			
	48.5	2953	1.5	29.89	21.0	35.0	48.0	60.0			
	55.7	2570	1.8	26.02	21.0	34.0	46.0	60.0			
	63.3	2263	2.0	22.91	20.0	33.0	45.0	60.0			
	77.6	1846	2.0	18.68	20.0	31.0	43.0	60.0			
	98.0	1462	2.0	14.80	19.0	29.0	41.0	59.0			
	117.5	1219	2.2	12.34	18.0	28.0	39.0	56.0			
	47.6	3010	1.0	30.47	11.0	22.0	30.0	40.0	PD 52 - 160L/4A PM 52 - 160L/4A	197	134
	58.1	2466	1.2	24.96	12.0	22.0	30.0	40.0			
	71.2	2011	1.5	20.36	12.0	21.0	28.0	40.0			
	76.9	1864	1.4	18.86	12.0	21.0	28.0	40.0			
	82.3	1740	1.6	17.61	12.0	21.0	28.0	40.0			
	94.3	1520	1.7	15.38	12.0	21.0	27.0	40.0			
	111.5	1284	1.9	13.00	11.0	20.0	26.0	40.0			
	135.2	1060	2.1	10.73	11.0	19.0	25.0	40.0			
	153.1	936	2.2	9.47	11.0	18.0	24.0	40.0			
	166.8	859	1.9	8.69	11.0	18.0	24.0	40.0			
	202.2	708	2.1	7.17	10.0	17.0	23.0	38.0			
	229.0	626	2.2	6.33	10.0	16.0	22.0	37.0			
	254.3	563	2.3	5.70	10.0	16.0	22.0	36.0			
	271.1	528	2.3	5.35	10.0	15.0	21.0	35.0			
	64.8	2211	0.8	22.38	5.0	8.0	18.0	28.0	PD 42 - 160L/4A PM 42 - 160L/4A	161	130
	67.6	2120	0.8	21.46	5.0	9.0	18.0	28.0			
	79.8	1796	1.0	18.18	6.0	10.0	18.0	28.0			
	95.4	1501	1.2	15.19	6.0	10.0	18.0	28.0			
	114.5	1251	1.4	12.67	6.0	10.0	17.0	27.0			
	133.9	1070	1.6	10.83	6.0	10.0	17.0	27.0			
	157.1	912	1.8	9.23	7.0	11.0	16.0	26.0			
	174.0	823	1.5	8.33	6.0	10.0	16.0	26.0			
	203.5	704	1.7	7.13	6.0	10.0	15.0	25.0			
	238.8	600	1.8	6.07	6.0	10.0	15.0	24.0			
	266.3	538	1.9	5.44	6.0	10.0	15.0	24.0			
	290.0	494	2.0	5.00	6.0	10.0	14.0	24.0			
	309.1	463	2.0	4.69	6.0	10.0	14.0	23.0			
18.5	2.4	73529	0.8	603.47	-	-	2.0	170.0	PD 113/52 - 180M/4B PM 113/52 - 180M/4B	2290	168
	3.0	58467	1.0	479.85	-	-	39.0	170.0			
	4.0	44256	1.1	363.21	-	-	104.0	170.0			
	4.6	38044	1.3	312.23	-	-	119.0	170.0			
	6.5	27386	2.5	224.76	-	-	135.0	165.0	PD 113 - 180M/4B PM 113 - 180M/4B	2212	159
	8.4	20952	3.3	171.96	-	-	142.0	155.0			
	9.5	18627	3.5	152.87	-	-	144.0	151.0			
	4.0	44617	0.8	366.18	-	-	80.0	150.0	PD 103/52 - 180M/4B PM 103/52 - 180M/4B	1452	168
	4.8	36809	1.0	302.10	-	-	101.0	150.0			
	8.0	22015	1.6	180.68	-	-	126.0	150.0	PD 103 - 180M/4B PM 103 - 180M/4B	1374	155
	8.6	20490	1.6	168.16	-	-	128.0	150.0			
	10.3	17108	2.1	140.41	-	-	130.0	150.0			
	6.2	28426	0.8	233.30	27.0	57.0	98.0	123.0	PD 93/52 - 180M/4B PM 93/52 - 180M/4B	888	168
	7.2	24430	1.0	200.50	30.0	61.0	98.0	123.0			
	8.3	21326	1.2	175.03	47.0	91.0	117.0	130.0	PD 93 - 180M/4B PM 93 - 180M/4B	810	151
	10.0	17619	1.4	144.60	48.0	89.0	112.0	130.0			
	10.7	16530	1.5	135.66	49.0	91.0	112.0	130.0			
	12.6	14075	1.8	115.51	50.0	89.0	108.0	130.0			
	14.4	12269	2.1	100.70	50.0	88.0	107.0	130.0			
	17.4	10136	2.4	83.19	48.0	83.0	101.0	130.0			
	20.1	8793	2.7	72.17	48.0	82.0	99.0	129.0			
	22.3	7936	3.1	65.13	47.0	80.0	97.0	127.0			
	26.1	6758	3.3	55.46	46.0	76.0	93.0	122.0			
	30.0	5891	3.5	48.35	45.0	74.0	90.0	118.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
18.5	12.2	14436	0.9	118.48	23.0	46.0	82.0	105.0	PD 83 - 180M/4B PM 83 - 180M/4B	508	147
	14.1	12566	1.0	103.13	25.0	49.0	81.0	105.0			
	16.0	11062	1.1	90.79	27.0	50.0	80.0	105.0			
	19.2	9224	1.3	75.70	29.0	51.0	79.0	105.0			
	22.3	7939	1.4	65.16	29.0	51.0	77.0	105.0			
	25.3	6984	1.7	57.32	30.0	51.0	76.0	105.0			
	30.3	5823	2.1	47.79	30.0	49.0	73.0	105.0			
	33.3	5302	2.0	43.52	30.0	49.0	73.0	104.0			
	40.5	4365	2.8	35.83	30.0	47.0	69.0	99.0			
	47.0	3757	3.2	30.84	29.0	46.0	67.0	97.0			
	30.5	5789	1.8	47.51	30.0	50.0	-	-	PD 82 - 180M/4B PM 82 - 180M/4B	504	146
	37.1	4766	2.0	39.12	30.0	48.0	-	-			
	51.1	3454	2.9	28.35	29.0	45.0	66.0	95.0			
	18.4	9596	0.8	78.75	17.0	34.0	64.0	80.0	PD 73 - 180M/4B PM 73 - 180M/4B	383	143
	21.3	8303	0.9	68.14	18.0	35.0	63.0	80.0			
	24.4	7253	1.0	59.52	20.0	36.0	62.0	80.0			
	27.1	6509	1.1	53.42	21.0	37.0	62.0	80.0			
	31.1	5686	1.2	46.66	21.0	37.0	61.0	80.0			
	39.2	4503	1.5	36.95	22.0	36.0	58.0	80.0			
	47.6	3715	1.8	30.49	22.0	36.0	56.0	80.0			
	53.9	3280	2.0	26.92	22.0	35.0	55.0	80.0			
	61.8	2860	2.3	23.47	21.0	34.0	54.0	78.0			
	31.8	5563	1.0	45.66	22.0	38.0	61.0	80.0	PD 72 - 180M/4B PM 72 - 180M/4B	376	142
	39.0	4535	1.4	37.22	22.0	37.0	59.0	80.0			
	41.8	4227	1.4	34.69	22.0	38.0	58.0	80.0			
	53.9	3276	1.8	26.89	22.0	36.0	56.0	80.0			
	63.3	2790	2.1	22.90	22.0	35.0	54.0	78.0			
	72.6	2432	2.4	19.96	22.0	34.0	52.0	76.0			
	28.4	6216	0.8	51.01	15.0	29.0	48.0	60.0	PD 63 - 180M/4B PM 63 - 180M/4B	314	139
	34.2	5168	0.9	42.41	17.0	30.0	47.0	60.0			
	40.0	4419	1.0	36.27	17.0	30.0	47.0	60.0			
	46.9	3765	1.2	30.90	18.0	30.0	46.0	60.0			
	50.6	3492	1.3	28.66	18.0	30.0	45.0	60.0			
	59.4	2975	1.6	24.42	18.0	30.0	44.0	60.0			
	48.5	3642	1.2	29.89	19.0	31.0	46.0	60.0	PD 62 - 180M/4B PM 62 - 180M/4B	313	138
	55.7	3170	1.4	26.02	19.0	31.0	45.0	60.0			
	63.3	2791	1.6	22.91	19.0	30.0	44.0	60.0			
	77.6	2276	1.9	18.68	18.0	29.0	42.0	60.0			
	98.0	1803	2.5	14.80	18.0	27.0	40.0	57.0			
	117.5	1504	2.9	12.34	17.0	26.0	38.0	55.0			
	136.5	1294	3.3	10.62	17.0	25.0	37.0	53.0			
	58.1	3041	1.0	24.96	10.0	19.0	28.0	40.0	PD 52 - 180M/4B PM 52 - 180M/4B	233	134
	71.2	2480	1.2	20.36	10.0	19.0	27.0	40.0			
	76.9	2298	1.1	18.86	10.0	19.0	27.0	40.0			
	82.3	2146	1.3	17.61	10.0	19.0	27.0	40.0			
	94.3	1875	1.4	15.38	10.0	19.0	26.0	40.0			
	111.5	1584	1.7	13.00	10.0	18.0	25.0	40.0			
	135.2	1307	1.9	10.73	10.0	18.0	24.0	40.0			
	153.1	1154	2.0	9.47	10.0	17.0	24.0	40.0			
	166.8	1059	2.2	8.69	10.0	17.0	23.0	39.0			
	202.2	874	2.5	7.17	10.0	16.0	22.0	37.0			
	229.0	771	2.7	6.33	9.0	15.0	22.0	36.0			
	254.3	695	2.6	5.70	9.0	15.0	21.0	35.0			
	271.1	652	2.7	5.35	9.0	15.0	21.0	35.0			
	288.8	612	2.8	5.02	9.0	15.0	20.0	34.0			
	336.0	526	2.9	4.32	9.0	14.0	20.0	33.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
22.0	3.0	69289	0.9	479.85	-	-	18.0	170.0	**PD 113/52 - 180L/4B** **PM 113/52 - 180L/4B**	2298	168
	4.0	52448	1.0	363.21	-	-	77.0	170.0			
	4.7	45086	1.1	312.23	-	-	100.0	169.0			
	6.5	32456	2.1	224.76	-	-	128.0	160.0	**PD 113 - 180L/4B** **PM 113 - 180L/4B**	2220	159
	8.5	24831	2.7	171.96	-	-	138.0	152.0			
	9.5	22074	2.9	152.87	-	-	141.0	149.0			
	11.1	18877	3.0	130.73	-	-	144.0	144.0			
	12.9	16228	3.2	112.38	-	-	146.0	139.0			
	4.8	43622	0.8	302.10	-	-	81.0	150.0	**PD/PM 103/52 - 180L/4B**	1460	168
	8.1	26090	1.3	180.68	-	-	120.0	150.0	**PD 103 - 180L/4B** **PM 103 - 180L/4B**	1382	155
	8.7	24283	1.3	168.16	-	-	123.0	150.0			
	10.4	20275	1.7	140.41	-	-	127.0	150.0			
	13.9	15120	2.3	104.71	-	-	132.0	146.0			
	15.9	13191	2.7	91.35	-	-	134.0	141.0			
	7.3	28952	0.8	200.50	20.0	46.0	91.0	113.0	**PD/PM 93/52 - 180L/4B**	896	168
	8.3	25274	1.0	175.03	39.0	79.0	111.0	130.0	**PD 93 - 180L/4B** **PM 93 - 180L/4B**	818	151
	10.1	20880	1.1	144.60	41.0	79.0	108.0	130.0			
	10.7	19589	1.3	135.66	44.0	82.0	108.0	130.0			
	12.6	16680	1.5	115.51	45.0	81.0	105.0	130.0			
	14.4	14540	1.7	100.70	45.0	81.0	104.0	130.0			
	17.5	12013	2.0	83.19	45.0	78.0	100.0	129.0			
	20.2	10421	2.3	72.17	45.0	76.0	97.0	126.0			
	22.3	9405	2.6	65.13	44.0	75.0	95.0	124.0			
	26.2	8009	2.7	55.46	44.0	73.0	91.0	119.0			
	30.1	6981	2.9	48.35	43.0	70.0	88.0	116.0			
	34.7	6056	3.1	41.94	42.0	67.0	85.0	112.0			
	41.0	5125	3.3	35.49	41.0	65.0	82.0	108.0			
	14.1	14892	0.8	103.13	19.0	39.0	76.0	105.0	**PD 83 - 180L/4B** **PM 83 - 180L/4B**	516	147
	16.0	13110	0.9	90.79	21.0	42.0	76.0	105.0			
	19.2	10932	1.1	75.70	24.0	44.0	75.0	105.0			
	22.3	9408	1.2	65.16	25.0	45.0	74.0	105.0			
	25.4	8277	1.5	57.32	26.0	45.0	73.0	105.0			
	30.4	6901	1.8	47.79	27.0	45.0	71.0	102.0			
	33.4	6284	1.7	43.52	28.0	45.0	71.0	101.0			
	40.6	5173	2.3	35.83	28.0	44.0	68.0	97.0			
	47.2	4453	2.7	30.84	27.0	43.0	66.0	95.0			
	30.6	6861	1.5	47.51	28.0	46.0	-	-	**PD 82 - 180L/4B** **PM 82 - 180L/4B**	512	146
	37.2	5648	1.7	39.12	28.0	44.0	-	-			
	51.3	4094	2.4	28.35	27.0	43.0	65.0	93.0			
	59.4	3539	2.9	24.51	27.0	41.0	63.0	90.0			
	24.4	8595	0.8	59.52	15.0	29.0	59.0	80.0	**PD 73 - 180L/4B** **PM 73 - 180L/4B**	391	143
	27.2	7714	0.9	53.42	17.0	32.0	59.0	80.0			
	31.2	6738	1.1	46.66	18.0	33.0	58.0	80.0			
	39.4	5336	1.2	36.95	19.0	33.0	56.0	80.0			
	47.7	4402	1.5	30.49	20.0	33.0	55.0	80.0			
	54.0	3888	1.7	26.92	20.0	32.0	54.0	78.0			
	62.0	3389	2.0	23.47	20.0	32.0	52.0	76.0			
	31.9	6593	0.9	45.66	19.0	34.0	59.0	80.0	**PD 72 - 180L/4B** **PM 72 - 180L/4B**	384	142
	39.1	5375	1.2	37.22	19.0	33.0	57.0	80.0			
	41.9	5010	1.2	34.69	20.0	34.0	57.0	80.0			
	54.1	3883	1.5	26.89	21.0	33.0	54.0	79.0			
	63.5	3306	1.8	22.90	21.0	33.0	53.0	77.0			
	72.9	2882	2.0	19.96	20.0	32.0	51.0	75.0			
	89.4	2349	2.8	16.27	20.0	30.0	49.0	71.0			
	40.1	5237	0.9	36.27	15.0	26.0	44.0	60.0	**PD 63 - 180L/4B** **PM 63 - 180L/4B**	322	139
	47.1	4462	1.0	30.90	15.0	27.0	44.0	60.0			
	50.8	4139	1.1	28.66	16.0	27.0	43.0	60.0			
	59.6	3526	1.3	24.42	16.0	27.0	42.0	60.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
22.0	48.7	4316	1.1	29.89	16.0	28.0	44.0	60.0	**PD 62 - 180L/4B PM 62 - 180L/4B**	321	138
	55.9	3757	1.2	26.02	17.0	28.0	43.0	60.0			
	63.5	3308	1.4	22.91	17.0	28.0	43.0	60.0			
	77.9	2698	1.6	18.68	17.0	27.0	41.0	58.0			
	98.3	2137	2.1	14.80	17.0	26.0	39.0	56.0			
	117.9	1782	2.5	12.34	16.0	25.0	38.0	54.0			
	137.0	1534	2.8	10.62	16.0	24.0	36.0	52.0			
	155.3	1353	2.0	9.37	15.0	23.0	35.0	50.0			
	186.2	1128	2.4	7.81	15.0	22.0	34.0	48.0			
	58.3	3604	0.8	24.96	8.0	16.0	27.0	40.0	**PD 52 - 180L/4B PM 52 - 180L/4B**	241	134
	71.5	2939	1.1	20.36	8.0	16.0	26.0	40.0			
	77.1	2724	1.0	18.86	9.0	17.0	26.0	40.0			
	82.6	2543	1.1	17.61	9.0	16.0	26.0	40.0			
	94.6	2222	1.2	15.38	9.0	17.0	25.0	40.0			
	111.9	1877	1.4	13.00	9.0	16.0	25.0	40.0			
	135.7	1549	1.6	10.73	9.0	16.0	24.0	39.0			
	153.6	1368	1.7	9.47	9.0	16.0	23.0	39.0			
	167.4	1255	1.9	8.69	9.0	15.0	23.0	38.0			
	202.9	1035	2.1	7.17	9.0	15.0	22.0	36.0			
	229.8	914	2.3	6.33	9.0	15.0	21.0	35.0			
	255.2	823	2.2	5.70	9.0	14.0	21.0	35.0			
	272.1	772	2.3	5.35	9.0	14.0	20.0	34.0			
	289.8	725	2.3	5.02	9.0	14.0	20.0	34.0			
	337.2	623	2.5	4.32	9.0	13.0	19.0	33.0			
30.0	7.2	39591	2.3	201.75	-	-	116.0	136.0	**PD/PM 123 - 200L/4C**	2391	162
	6.5	44106	1.6	224.76	-	-	105.0	150.0	**PD 113 - 200L/4C PM 113 - 200L/4C**	2286	159
	8.5	33744	2.0	171.96	-	-	126.0	145.0			
	9.6	29998	2.3	152.87	-	-	132.0	142.0			
	11.2	25654	2.7	130.73	-	-	137.0	138.0			
	13.0	22053	3.1	112.38	-	-	141.0	134.0			
	10.4	27553	1.3	140.41	-	-	117.0	147.0	**PD 103 - 200L/4C PM 103 - 200L/4C**	1448	155
	13.9	20548	1.7	104.71	-	-	127.0	139.0			
	16.0	17927	2.0	91.35	-	-	130.0	136.0			
	20.1	14268	2.6	72.71	-	-	133.0	130.0			
	22.3	12842	2.7	65.44	-	-	134.0	128.0			
	10.8	26621	1.0	135.66	30.0	61.0	99.0	124.0	**PD 93 - 200L/4C PM 93 - 200L/4C**	884	151
	12.6	22668	1.1	115.51	34.0	64.0	98.0	124.0			
	14.5	19760	1.3	100.70	36.0	65.0	96.0	122.0			
	17.5	16325	1.5	83.19	36.0	65.0	93.0	119.0			
	20.2	14161	1.7	72.17	37.0	65.0	91.0	118.0			
	22.4	12782	1.9	65.13	38.0	65.0	90.0	116.0			
	26.3	10883	2.2	55.46	38.0	64.0	87.0	113.0			
	30.2	9487	2.3	48.35	38.0	63.0	85.0	111.0			
	34.8	8230	2.5	41.94	38.0	61.0	83.0	108.0			
	41.1	6965	2.7	35.49	38.0	59.0	80.0	104.0			
	42.5	6743	2.4	34.36	31.0	46.0	68.0	89.0	**PD/PM 92 - 200L/4C**	879	150
	19.3	14856	0.8	75.70	13.0	28.0	66.0	96.0	**PD 83 - 200L/4C PM 83 - 200L/4C**	582	147
	22.4	12786	0.9	65.16	16.0	31.0	66.0	96.0			
	25.5	11248	1.1	57.32	19.0	34.0	66.0	95.0			
	30.5	9379	1.3	47.79	21.0	36.0	65.0	94.0			
	33.6	8539	1.2	43.52	22.0	37.0	65.0	94.0			
	40.8	7030	1.7	35.83	23.0	37.0	64.0	91.0			
	47.3	6051	2.0	30.84	23.0	37.0	62.0	90.0			
	51.5	5563	1.8	28.35	24.0	37.0	62.0	88.0	**PD 82 - 200L/4C PM 82 - 200L/4C**	578	146
	59.6	4809	2.2	24.51	24.0	36.0	60.0	86.0			
	69.1	4149	2.5	21.14	24.0	36.0	58.0	84.0			
	83.9	3416	2.5	17.41	23.0	34.0	56.0	80.0			
	31.3	9157	0.8	46.66	11.0	22.0	52.0	76.0	**PD 73 - 200L/4C PM 73 - 200L/4C**	457	143
	39.5	7251	0.9	36.95	13.0	24.0	52.0	75.0			
	47.9	5982	1.1	30.49	15.0	26.0	51.0	74.0			
	54.2	5283	1.3	26.92	16.0	26.0	50.0	73.0			
	62.2	4605	1.4	23.47	16.0	26.0	49.0	72.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
30.0	54.3	5277	1.1	26.89	17.0	27.0	51.0	74.0	**PD 72 - 200L/4C** **PM 72 - 200L/4C**	450	142
	63.8	4493	1.3	22.90	17.0	28.0	50.0	72.0			
	73.2	3917	1.5	19.96	17.0	27.0	49.0	71.0			
	89.7	3193	2.0	16.27	17.0	27.0	47.0	68.0			
	113.3	2528	2.3	12.89	17.0	25.0	44.0	65.0			
	130.6	2193	2.5	11.18	17.0	25.0	43.0	63.0			
	147.3	1945	2.2	9.91	16.0	24.0	42.0	61.0			
	154.3	1856	2.7	9.46	17.0	24.0	42.0	60.0			
	169.0	1696	2.4	8.64	16.0	23.0	40.0	59.0			
	194.8	1471	2.5	7.50	16.0	22.0	39.0	57.0			
	63.7	4495	1.0	22.91	13.0	22.0	39.0	56.0	**PD 62 - 200L/4C** **PM 62 - 200L/4C**	387	138
	78.2	3666	1.2	18.68	14.0	22.0	38.0	55.0			
	98.7	2904	1.5	14.80	14.0	22.0	37.0	53.0			
	118.3	2421	1.8	12.34	14.0	22.0	36.0	51.0			
	137.5	2084	2.1	10.62	14.0	21.0	35.0	50.0			
	155.8	1839	1.5	9.37	14.0	20.0	33.0	48.0			
	186.8	1533	1.7	7.81	14.0	20.0	32.0	46.0			
	217.1	1320	2.3	6.73	13.0	19.0	31.0	45.0			
	243.6	1176	2.0	5.99	13.0	19.0	31.0	44.0			
	252.8	1133	2.1	5.78	13.0	18.0	30.0	44.0			
	266.0	1077	2.1	5.49	13.0	18.0	30.0	43.0			
	298.2	961	2.2	4.90	13.0	18.0	29.0	42.0			
	333.2	860	2.4	4.38	13.0	17.0	28.0	41.0			
37.0	7.2	48828	1.8	201.75	-	-	92.0	126.0	**PD 123 - 225S/4A** **PM 123 - 225S/4A**	2446	162
	9.5	37357	2.4	154.35	-	-	120.0	125.0			
	6.5	54398	1.3	224.76	-	-	68.0	142.0	**PD 113 - 225S/4A** **PM 113 - 225S/4A**	2341	159
	8.5	41617	1.7	171.96	-	-	111.0	138.0			
	9.6	36998	1.9	152.87	-	-	121.0	136.0			
	11.2	31640	2.2	130.73	-	-	129.0	133.0			
	13.0	27199	2.5	112.38	-	-	135.0	129.0			
	15.9	22283	2.8	92.07	-	-	141.0	124.0			
	19.0	18638	2.9	77.01	-	-	144.0	120.0			
	10.4	33982	1.0	140.41	-	-	104.0	140.0	**PD 103 - 225S/4A** **PM 103 - 225S/4A**	1503	155
	13.9	25342	1.4	104.71	-	-	122.0	134.0			
	16.0	22110	1.6	91.35	-	-	126.0	131.0			
	20.1	17598	2.1	72.71	-	-	130.0	126.0			
	22.3	15839	2.2	65.44	-	-	131.0	124.0			
	25.7	13738	2.5	56.76	-	-	133.0	120.0			
	30.4	11605	2.2	47.95	-	-	135.0	115.0			
	10.8	32833	0.8	135.66	18.0	43.0	91.0	112.0	**PD 93 - 225S/4A** **PM 93 - 225S/4A**	939	151
	12.6	27957	0.9	115.51	23.0	49.0	91.0	113.0			
	14.5	24371	1.0	100.70	27.0	52.0	90.0	113.0			
	17.5	20134	1.2	83.19	29.0	53.0	88.0	111.0			
	20.2	17466	1.4	72.17	31.0	55.0	87.0	111.0			
	22.4	15764	1.5	65.13	32.0	56.0	85.0	109.0			
	26.3	13423	1.8	55.46	33.0	56.0	84.0	108.0			
	30.2	11701	1.9	48.35	34.0	56.0	82.0	106.0			
	34.8	10150	2.0	41.94	34.0	56.0	80.0	104.0			
	41.1	8590	2.2	35.49	34.0	54.0	78.0	101.0			
	42.5	8317	2.0	34.36	28.0	42.0	66.0	85.0	**PD 92 - 225S/4A** **PM 92 - 225S/4A**	934	150
	47.4	7452	2.1	30.79	28.0	41.0	64.0	84.0			
	54.4	6498	2.2	26.85	28.0	40.0	63.0	82.0			
	63.0	5608	2.3	23.17	27.0	39.0	61.0	80.0			
	25.5	13872	0.9	57.32	12.0	24.0	60.0	87.0	**PD 83 - 225S/4A** **PM 83 - 225S/4A**	637	147
	30.5	11567	1.0	47.79	15.0	28.0	61.0	88.0			
	33.6	10532	1.0	43.52	17.0	30.0	61.0	88.0			
	40.8	8671	1.4	35.83	18.0	31.0	60.0	86.0			
	47.3	7463	1.6	30.84	20.0	32.0	59.0	85.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
37.0	51.5	6861	1.5	28.35	21.0	32.0	59.0	84.0	**PD 82 - 225S/4A PM 82 - 225S/4A**	633	146
	59.6	5931	1.8	24.51	21.0	32.0	58.0	83.0			
	69.1	5117	2.0	21.14	21.0	32.0	56.0	81.0			
	83.9	4213	2.0	17.41	21.0	31.0	54.0	78.0			
	96.1	3675	2.1	15.19	21.0	31.0	53.0	76.0			
	112.4	3143	2.3	12.99	21.0	30.0	51.0	74.0			
	134.2	2633	2.4	10.88	21.0	29.0	49.0	71.0			
	151.0	2340	2.1	9.67	20.0	27.0	48.0	68.0			
	176.6	2001	2.3	8.27	19.0	27.0	46.0	66.0			
	47.9	7378	0.9	30.49	11.0	20.0	47.0	69.0	**PD 73 - 225S/4A PM 73 - 225S/4A**	512	143
	54.2	6516	1.0	26.92	12.0	21.0	47.0	68.0			
	62.2	5680	1.2	23.47	13.0	22.0	47.0	68.0			
	54.3	6508	0.9	26.89	13.0	22.0	48.0	70.0	**PD 72 - 225S/4A PM 72 - 225S/4A**	505	142
	63.8	5541	1.0	22.90	14.0	23.0	47.0	69.0			
	73.2	4830	1.2	19.96	15.0	24.0	47.0	67.0			
	89.7	3938	1.6	16.27	15.0	23.0	45.0	65.0			
	113.3	3118	1.9	12.89	15.0	23.0	43.0	62.0			
	130.6	2705	2.1	11.18	15.0	23.0	42.0	61.0			
	147.3	2399	1.8	9.91	15.0	22.0	40.0	59.0			
	154.3	2289	2.2	9.46	15.0	22.0	40.0	59.0			
	169.0	2091	1.9	8.64	15.0	21.0	39.0	57.0			
	194.8	1814	2.0	7.50	15.0	21.0	38.0	56.0			
	230.2	1535	2.2	6.34	14.0	20.0	37.0	54.0			
	275.4	1283	2.3	5.30	14.0	19.0	35.0	51.0			
	342.4	1032	2.5	4.26	14.0	18.0	33.0	49.0			
	63.7	5544	0.8	22.91	10.0	17.0	37.0	52.0	**PD 62 - 225S/4A PM 62 - 225S/4A**	442	138
	78.2	4521	1.0	18.68	11.0	18.0	36.0	51.0			
	98.7	3582	1.2	14.80	12.0	19.0	35.0	50.0			
	118.3	2986	1.5	12.34	13.0	19.0	34.0	49.0			
	137.5	2570	1.7	10.62	13.0	19.0	33.0	48.0			
	155.8	2268	1.2	9.37	12.0	18.0	32.0	46.0			
	186.8	1891	1.4	7.81	12.0	18.0	31.0	45.0			
	217.1	1628	1.8	6.73	12.0	17.0	30.0	44.0			
	243.6	1450	1.6	5.99	12.0	17.0	30.0	43.0			
	252.8	1398	1.7	5.78	12.0	17.0	30.0	42.0			
	266.0	1328	1.7	5.49	12.0	17.0	29.0	42.0			
	298.2	1185	1.8	4.90	12.0	17.0	29.0	41.0			
	333.2	1060	1.9	4.38	12.0	16.0	28.0	40.0			
45.0	9.5	45434	2.0	154.35	-	-	101.0	116.0	**PD 123 - 225M/4C PM 123 - 225M/4C**	2491	162
	10.6	40391	2.2	137.22	-	-	116.0	116.0			
	8.5	50616	1.4	171.96	-	-	85.0	130.0	**PD 113 - 225M/4C PM 113 - 225M/4C**	2386	159
	9.6	44998	1.5	152.87	-	-	103.0	129.0			
	11.2	38481	1.8	130.73	-	-	116.0	127.0			
	13.0	33080	2.1	112.38	-	-	127.0	124.0			
	15.9	27101	2.4	92.07	-	-	136.0	120.0			
	19.0	22668	2.7	77.01	-	-	141.0	117.0			
	23.0	18675	3.2	63.44	-	-	144.0	113.0			
	13.9	30822	1.1	104.71	-	-	113.0	128.0	**PD 103 - 225M/4C PM 103 - 225M/4C**	1548	155
	16.0	26890	1.3	91.35	-	-	120.0	125.0			
	20.1	21402	1.7	72.71	-	-	126.0	122.0			
	22.3	19264	1.8	65.44	-	-	128.0	120.0			
	25.7	16708	2.1	56.76	-	-	131.0	116.0			
	30.4	14114	2.5	47.95	-	-	133.0	112.0			
	12.6	34002	0.7	115.51	11.0	32.0	83.0	101.0	**PD 93 - 225M/4C PM 93 - 225M/4C**	984	151
	14.5	29640	0.9	100.70	16.0	38.0	83.0	103.0			
	17.5	24487	1.0	83.19	20.0	41.0	82.0	102.0			
	20.2	21242	1.1	72.17	23.0	44.0	82.0	103.0			
	26.3	16325	1.4	55.46	27.0	48.0	80.0	102.0			
	30.2	14231	1.7	48.35	29.0	49.0	79.0	101.0			
	34.8	12345	1.9	41.94	30.0	49.0	77.0	99.0			
	41.1	10447	2.3	35.49	31.0	49.0	75.0	97.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
45.0	42.5	10115	1.6	34.36	25.0	37.0	64.0	82.0	PD 92 - 225M/4C PM 92 - 225M/4C	979	150
	47.4	9064	2.0	30.79	25.0	37.0	62.0	81.0			
	54.4	7903	2.2	26.85	25.0	37.0	61.0	79.0			
	63.0	6821	2.4	23.17	25.0	36.0	59.0	77.0			
	72.7	5914	2.7	20.09	25.0	35.0	57.0	75.0			
	84.2	5104	3.0	17.34	25.0	34.0	55.0	72.0			
	30.5	14068	0.9	47.79	8.0	18.0	55.0	80.0	PD 83 - 225M/4C PM 83 - 225M/4C	682	147
	33.6	12809	0.8	43.52	11.0	22.0	56.0	81.0			
	40.8	10546	1.1	35.83	13.0	24.0	56.0	80.0			
	47.3	9076	1.3	30.84	15.0	26.0	55.0	80.0			
	59.6	7213	1.5	24.51	18.0	28.0	55.0	79.0	PD 82 - 225M/4C PM 82 - 225M/4C	678	146
	69.1	6223	1.7	21.14	19.0	28.0	54.0	78.0			
	83.9	5124	1.9	17.41	19.0	28.0	52.0	75.0			
	96.1	4470	2.1	15.19	19.0	28.0	51.0	73.0			
	112.4	3823	2.7	12.99	19.0	27.0	50.0	71.0			
	134.2	3202	3.2	10.88	19.0	27.0	48.0	69.0			
	151.0	2846	2.3	9.67	18.0	25.0	46.0	67.0			
	176.6	2434	3.0	8.27	18.0	25.0	45.0	65.0			
	54.2	7925	0.8	26.92	8.0	15.0	44.0	63.0	PD 73 - 225M/4C PM 73 - 225M/4C	557	143
	62.2	6908	1.0	23.47	9.0	17.0	43.0	63.0			
	63.8	6739	0.9	22.90	11.0	18.0	44.0	65.0	PD 72 - 225M/4C PM 72 - 225M/4C	550	142
	73.2	5875	1.0	19.96	12.0	20.0	44.0	64.0			
	89.7	4789	1.4	16.27	13.0	20.0	43.0	62.0			
	113.3	3793	1.5	12.89	13.0	20.0	41.0	60.0			
	130.6	3290	1.9	11.18	14.0	20.0	40.0	59.0			
	147.3	2918	1.5	9.91	13.0	19.0	39.0	57.0			
	154.3	2784	2.2	9.46	14.0	20.0	39.0	57.0			
	169.0	2543	1.7	8.64	13.0	19.0	38.0	56.0			
	194.8	2206	2.0	7.50	13.0	19.0	37.0	54.0			
	230.2	1867	2.4	6.34	13.0	18.0	36.0	52.0			
	245.0	1754	2.5	5.96	13.0	18.0	35.0	52.0			
	275.4	1561	2.6	5.30	13.0	18.0	35.0	50.0			
	290.2	1481	2.7	5.03	13.0	18.0	34.0	50.0			
	342.4	1255	2.9	4.26	13.0	17.0	33.0	48.0			
	118.3	3632	1.2	12.34	10.0	16.0	32.0	46.0	PD 62 - 225M/4C PM 62 - 225M/4C	487	138
	137.5	3126	1.4	10.62	11.0	16.0	32.0	46.0			
	186.8	2300	1.2	7.81	11.0	16.0	30.0	43.0			
	217.1	1980	1.5	6.73	11.0	16.0	29.0	42.0			
	243.6	1764	1.4	5.99	11.0	16.0	29.0	41.0			
	252.8	1700	1.4	5.78	11.0	16.0	29.0	41.0			
	266.0	1615	1.4	5.49	11.0	15.0	28.0	41.0			
	298.2	1441	1.5	4.90	11.0	15.0	28.0	40.0			
	333.2	1290	1.6	4.38	11.0	15.0	27.0	39.0			
55.0	9.5	55341	1.6	154.35	-	-	67.0	105.0	PD 123 - 250M/4C PM 123 - 250M/4C	2644	162
	10.7	49198	1.8	137.22	-	-	94.0	106.0			
	12.5	42073	2.1	117.35	-	-	113.0	107.0			
	14.5	36167	2.5	100.88	-	-	124.0	106.0			
	8.5	61653	1.1	171.96	-	-	49.0	121.0	PD 113 - 250M/4C PM 113 - 250M/4C	2539	159
	9.6	54809	1.3	152.87	-	-	69.0	120.0			
	11.2	46871	1.5	130.73	-	-	94.0	120.0			
	13.0	40293	1.7	112.38	-	-	113.0	118.0			
	15.9	33011	2.0	92.07	-	-	128.0	116.0			
	19.0	27610	2.3	77.01	-	-	135.0	113.0			
	23.1	22747	2.6	63.44	-	-	140.0	109.0			
	27.0	19453	2.8	54.26	-	-	143.0	106.0			
	14.0	37542	0.9	104.71	-	-	99.0	119.0	PD 103 - 250M/4C PM 103 - 250M/4C	1701	155
	16.0	32753	1.1	91.35	-	-	109.0	119.0			
	20.1	26069	1.4	72.71	-	-	120.0	116.0			
	22.4	23464	1.5	65.44	-	-	125.0	114.0			
	25.8	20351	1.7	56.76	-	-	128.0	112.0			
	30.6	17191	2.0	47.95	-	-	131.0	109.0			
	35.7	14701	2.4	41.00	-	-	133.0	106.0			
	42.6	12316	2.8	34.35	-	-	134.0	102.0			
	49.2	10682	2.9	29.79	-	-	135.0	99.0			
	53.9	9746	2.7	27.18	-	-	135.0	97.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
55.0	17.6	29827	0.8	83.19	9.0	26.0	75.0	91.0	**PD 93 - 250M/4C** **PM 93 - 250M/4C**	1137	151
	20.3	25874	0.9	72.17	14.0	32.0	75.0	93.0			
	26.4	19885	1.2	55.46	21.0	38.0	75.0	94.0			
	30.3	17334	1.4	48.35	23.0	40.0	74.0	94.0			
	34.9	15037	1.6	41.94	25.0	41.0	73.0	93.0			
	41.3	12725	1.9	35.49	26.0	43.0	72.0	92.0			
	42.6	12320	1.3	34.36	20.0	31.0	61.0	77.0	**PD 92 - 250M/4C** **PM 92 - 250M/4C**	1132	150
	47.6	11040	1.6	30.79	21.0	32.0	60.0	77.0			
	54.6	9627	1.8	26.85	22.0	32.0	59.0	75.0			
	63.2	8308	2.0	23.17	23.0	32.0	57.0	74.0			
	72.9	7204	2.2	20.09	22.0	31.0	55.0	72.0			
	84.5	6217	2.5	17.34	22.0	31.0	54.0	70.0			
	99.7	5268	2.8	14.69	22.0	30.0	52.0	68.0			
	59.8	8786	1.2	24.51	14.0	22.0	52.0	74.0	**PD 82 - 250M/4C** **PM 82 - 250M/4C**	831	146
	69.3	7580	1.4	21.14	15.0	23.0	51.0	74.0			
	84.2	6241	1.6	17.41	16.0	24.0	50.0	72.0			
	96.5	5445	1.7	15.19	17.0	24.0	49.0	70.0			
	112.8	4656	2.2	12.99	17.0	24.0	48.0	69.0			
	134.7	3901	2.6	10.88	17.0	24.0	47.0	67.0			
	151.5	3467	1.9	9.67	17.0	23.0	45.0	65.0			
	177.2	2965	2.5	8.27	17.0	23.0	44.0	63.0			
	211.5	2483	2.7	6.93	17.0	22.0	42.0	61.0			
	324.3	1620	3.0	4.52	16.0	20.0	38.0	55.0			
75.0	9.6	74953	1.2	154.35	-	-	32.0	82.0	**PD 123 - 280M/4A** **PM 123 - 280M/4A**	2824	162
	10.7	66633	1.4	137.22	-	-	48.0	86.0			
	12.6	56983	1.6	117.35	-	-	65.0	90.0			
	14.6	48985	1.8	100.88	-	-	94.0	92.0			
	17.8	40132	2.2	82.65	-	-	115.0	93.0			
	21.3	33566	2.7	69.12	-	-	125.0	93.0			
	8.6	83502	0.8	171.96	-	-	26.0	102.0	**PD 113 - 280M/4A** **PM 113 - 280M/4A**	2719	159
	9.6	74233	0.9	152.87	-	-	32.0	104.0			
	11.3	63482	1.1	130.73	-	-	48.0	105.0			
	13.1	54572	1.3	112.38	-	-	65.0	106.0			
	16.0	44710	1.5	92.07	-	-	103.0	105.0			
	19.2	37395	1.7	77.01	-	-	119.0	104.0			
	23.2	30808	1.9	63.44	-	-	130.0	102.0			
	27.2	26346	2.0	54.26	-	-	136.0	100.0			
	31.6	22648	2.2	46.64	-	-	141.0	97.0			
	38.6	18555	2.3	38.21	-	-	144.0	94.0			
	16.1	44361	0.8	91.35	-	-	77.0	105.0	**PD 103 - 280M/4A** **PM 103 - 280M/4A**	1881	155
	20.3	35308	1.1	72.71	-	-	103.0	105.0			
	22.5	33180	1.1	65.44	-	-	113.0	104.0			
	26.0	27564	1.3	56.76	-	-	118.0	103.0			
	30.8	23284	1.5	47.95	-	-	124.0	102.0			
	36.0	19911	1.8	41.00	-	-	128.0	100.0			
	42.9	16680	2.0	34.35	-	-	131.0	97.0			
	49.5	14467	2.1	29.79	-	-	133.0	95.0			
	54.3	13201	2.0	27.18	-	-	134.0	93.1			
	62.6	11449	2.1	23.58	-	-	135.0	90.0			
	70.2	10196	2.2	21.00	-	-	135.0	88.0			
	26.6	26932	0.9	55.46	5.0	18.0	65.0	79.0	**PD 93 - 280M/4A** **PM 93 - 280M/4A**	1317	151
	30.5	23477	1.0	48.35	10.0	23.0	66.0	81.0			
	35.2	20365	1.2	41.94	13.0	26.0	66.0	82.0			
	41.6	17234	1.4	35.49	17.0	30.0	66.0	82.0			
	42.9	16687	1.0	34.36	12.0	20.0	55.0	69.0	**PD 92 - 280M/4A** **PM 92 - 280M/4A**	1312	150
	47.9	14952	1.2	30.79	13.0	22.0	55.0	69.0			
	54.9	13038	1.3	26.85	15.0	23.0	54.0	69.0			
	63.7	11252	1.5	23.17	17.0	25.0	53.0	68.0			
	73.4	9757	1.6	20.09	17.0	24.0	52.0	66.0			
	85.1	8420	1.8	17.34	18.0	25.0	51.0	65.0			
	100.4	7135	2.1	14.69	19.0	25.0	50.0	64.0			
	122.5	5847	2.2	12.04	19.0	25.0	48.0	62.0			
	144.5	4956	2.0	10.21	18.0	24.0	46.0	59.0			
	170.5	4200	2.1	8.65	18.0	24.0	44.0	58.0			
	208.1	3442	2.2	7.09	18.0	23.0	42.0	56.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
75.0	60.2	11900	0.9	24.51	5.0	12.0	45.0	65.0	**PD 82 - 280M/4A** **PM 82 - 280M/4A**	1011	146
	69.8	10267	1.0	21.14	8.0	14.0	45.0	65.0			
	84.7	8453	1.1	17.41	10.0	16.0	45.0	65.0			
	97.1	7374	1.3	15.19	11.0	17.0	45.0	64.0			
	113.6	6306	1.6	12.99	13.0	19.0	44.0	64.0			
	135.6	5283	1.9	10.88	14.0	19.0	43.0	62.0			
	152.6	4695	1.4	9.67	13.0	19.0	42.0	60.0			
	178.4	4015	1.8	8.27	14.0	19.0	41.0	59.0			
	212.9	3364	2.0	6.93	14.0	19.0	40.0	58.0			
	326.5	2194	2.2	4.52	14.0	18.0	37.0	53.0			
90.0	10.8	79690	1.1	137.22	-	-	23.0	71.0	**PD 123 - 280M/4B** **PM 123 - 280M/4B**	2874	162
	12.6	68148	1.3	117.35	-	-	28.0	77.0			
	14.7	58583	1.5	100.88	-	-	52.0	81.0			
	17.9	47996	1.9	82.65	-	-	94.0	84.0			
	21.4	40144	2.2	69.12	-	-	112.0	85.0			
	9.7	88779	0.8	152.87	-	-	21.0	92.0	**PD 113 - 280M/4B** **PM 113 - 280M/4B**	2769	159
	11.3	75921	0.9	130.73	-	-	32.0	94.0			
	13.2	65265	1.1	112.38	-	-	39.0	96.0			
	16.1	53470	1.2	92.07	-	-	72.0	98.0			
	19.2	44722	1.4	77.01	-	-	101.0	98.0			
	23.3	36845	1.6	63.44	-	-	120.0	97.0			
	27.3	31509	1.9	54.26	-	-	129.0	95.0			
	31.7	27086	2.2	46.64	-	-	136.0	94.0			
	38.7	22191	2.7	38.21	-	-	141.0	91.0			
	46.3	18561	2.9	31.96	-	-	144.0	88.0			
	42.5	20241	2.1	34.85	-	-	143.0	90.0	**PD 112 - 280M/4B** **PM 112 - 280M/4B**	2692	158
	49.5	17374	2.4	29.92	-	-	145.0	87.0			
	20.4	42226	0.9	72.71	-	-	84.0	97.0	**PD 103 - 280M/4B** **PM 103 - 280M/4B**	1931	155
	22.6	38007	0.9	65.44	-	-	100.0	97.0			
	26.1	32965	1.1	56.76	-	-	109.0	97.0			
	30.9	27846	1.3	47.95	-	-	118.0	96.0			
	36.1	23813	1.5	41.00	-	-	124.0	95.0			
	43.1	19948	1.8	34.35	-	-	128.0	93.0			
	49.7	17302	2.0	29.79	-	-	130.0	91.0			
	54.4	15787	2.1	27.18	-	-	132.0	89.0			
	62.8	13693	2.4	23.58	-	-	133.0	87.0			
	70.5	12194	2.5	21.00	-	-	134.0	86.0			
	81.1	10595	2.4	18.24	-	-	135.0	84.0	**PD 102 - 280M/4B** **PM 102 - 280M/4B**	1906	154
	97.4	8824	2.6	15.19	-	-	136.0	81.0			
	109.6	7843	2.7	13.50	-	-	136.0	79.0			
	127.3	6752	2.8	11.63	-	-	137.0	76.0			
	142.1	6049	2.9	10.42	-	-	137.0	74.0			
	160.8	5344	2.8	9.20	-	-	137.0	72.0			
	48.1	17882	1.0	30.79	7.0	14.0	51.0	63.0	**PD 92 - 280M/4B** **PM 92 - 280M/4B**	1362	150
	55.1	15593	1.1	26.85	10.0	17.0	51.0	63.0			
	63.9	13457	1.2	23.17	13.0	19.0	51.0	64.0			
	73.7	11668	1.4	20.09	13.0	20.0	49.0	62.0			
	85.4	10070	1.5	17.34	15.0	21.0	49.0	62.0			
	100.7	8533	1.7	14.69	16.0	22.0	48.0	61.0			
	122.9	6993	2.0	12.04	17.0	22.0	46.0	60.0			
	145.0	5928	1.8	10.21	16.0	21.0	44.0	57.0			
	171.1	5023	2.2	8.65	17.0	21.0	43.0	56.0			
	208.8	4116	2.5	7.09	17.0	21.0	41.0	54.0			
	256.0	3357	2.6	5.78	17.0	21.0	40.0	52.0			
	276.3	3111	2.7	5.36	17.0	20.0	39.0	51.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
110	10.8	97399	0.9	137.22	-	-	14.0	51.0	PD 123 - 315S/4 PM 123 - 315S/4	3054	162
	12.6	83293	1.1	117.35	-	-	17.0	60.0			
	14.7	71602	1.3	100.88	-	-	27.0	66.0			
	17.9	58662	1.5	82.65	-	-	44.0	72.0			
	21.4	49065	1.8	69.12	-	-	94.0	76.0			
	13.2	79769	0.9	112.38	-	-	23.0	84.0	PD 113 - 315S/4 PM 113 - 315S/4	2949	159
	16.1	65353	1.0	92.07	-	-	38.0	88.0			
	19.2	54661	1.1	77.01	-	-	64.0	89.0			
	23.3	45033	1.3	63.44	-	-	100.0	90.0			
	27.3	38511	1.6	54.26	-	-	117.0	89.0			
	31.7	33106	1.8	46.64	-	-	128.0	88.0			
	38.7	27123	2.2	38.21	-	-	136.0	87.0			
	46.3	22685	2.4	31.96	-	-	141.0	85.0			
	42.5	24739	1.7	34.85	-	-	139.0	86.0	PD 112 - 315S/4 PM 112 - 315S/4	2872	158
	49.5	21235	2.0	29.92	-	-	142.0	84.0			
	58.1	18076	2.3	25.47	-	-	145.0	82.0			
	69.1	15203	2.4	21.42	-	-	147.0	79.0			
	22.6	46452	0.8	65.44	-	-	74.0	87.0	PD 103 - 315S/4 PM 103 - 315S/4	2111	155
	26.1	40290	0.9	56.76	-	-	92.0	88.0			
	30.9	34034	1.0	47.95	-	-	107.0	89.0			
	36.1	29105	1.2	41.00	-	-	116.0	89.0			
	43.1	24381	1.4	34.35	-	-	123.0	88.0			
	49.7	21147	1.7	29.79	-	-	127.0	87.0			
	54.4	19295	1.7	27.18	-	-	129.0	85.0			
	62.8	16736	1.9	23.58	-	-	131.0	84.0			
	70.5	14904	2.0	21.00	-	-	132.0	82.0			
	81.1	12949	2.0	18.24	-	-	134.0	81.0	PD 102 - 315S/4 PM 102 - 315S/4	2086	154
	97.4	10785	2.1	15.19	-	-	135.0	78.0			
	109.6	9586	2.2	13.50	-	-	135.0	77.0			
	127.3	8253	2.3	11.63	-	-	136.0	74.0			
	142.1	7394	2.4	10.42	-	-	136.0	73.0			
	160.8	6531	2.3	9.20	-	-	137.0	70.0			
	179.5	5851	2.4	8.24	-	-	137.0	69.0			
	195.1	5383	2.1	7.58	-	-	137.0	67.0			
	48.1	21856	0.8	30.79	-	-	45.0	55.0	PD 92 - 315S/4 PM 92 - 315S/4	1542	150
	55.1	19058	0.9	26.85	3.0	9.0	46.0	57.0			
	63.9	16448	1.0	23.17	6.0	12.0	47.0	58.0			
	73.7	14261	1.1	20.09	8.0	13.0	46.0	57.0			
	85.4	12308	1.3	17.34	10.0	15.0	46.0	57.0			
	100.7	10430	1.4	14.69	12.0	17.0	45.0	57.0			
	122.9	8547	1.6	12.04	14.0	18.0	44.0	57.0			
	145.0	7245	1.5	10.21	14.0	18.0	43.0	54.0			
	171.1	6139	1.8	8.65	14.0	18.0	42.0	53.0			
	208.8	5031	2.0	7.09	15.0	19.0	40.0	52.0			
	256.0	4104	2.2	5.78	15.0	19.0	39.0	50.0			
	276.3	3802	2.2	5.36	15.0	18.0	38.0	50.0			
132	14.7	85922	1.0	100.88	-	-	26.0	50.0	PD 123 - 315M/4 PM 123 - 315M/4	3134	162
	17.9	70394	1.3	82.65	-	-	32.0	59.0			
	21.4	58877	1.5	69.12	-	-	52.0	65.0			
	16.1	78423	0.8	92.07	-	-	44.0	76.0	PD 113 - 315M/4 PM 113 - 315M/4	3029	159
	19.2	65593	0.9	77.01	-	-	52.0	80.0			
	23.3	54039	1.1	63.44	-	-	66.0	82.0			
	27.3	46213	1.3	54.26	-	-	97.0	83.0			
	31.7	39727	1.5	46.64	-	-	115.0	83.0			
	38.7	32547	1.8	38.21	-	-	128.0	82.0			
	46.3	27222	2.2	31.96	-	-	136.0	81.0			
	49.5	25483	1.6	29.92	-	-	138.0	80.0	PD 112 - 315M/4 PM 112 - 315M/4	2952	158
	58.1	21692	1.9	25.47	-	-	141.0	79.0			
	69.1	18243	2.3	21.42	-	-	144.0	77.0			

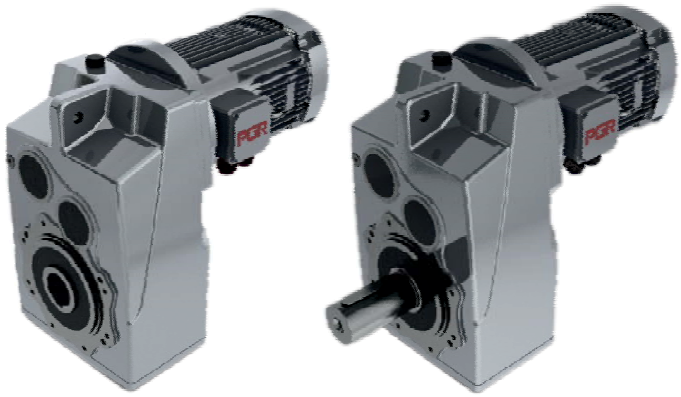
P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
132	36.1	34926	1.0	41.00	-	-	105.0	82.0			
	43.1	29258	1.2	34.35	-	-	116.0	82.0			
	49.7	25376	1.4	29.79	-	-	122.0	82.0	**PD 103 - 315M/4**		
	54.4	23154	1.4	27.18	-	-	125.0	81.0	**PM 103 - 315M/4**	2191	155
	62.8	20083	1.6	23.58	-	-	128.0	80.0			
	70.5	17885	1.5	21.00	-	-	130.0	79.0			
	81.1	15539	2.1	18.24	-	-	132.0	78.0			
	97.4	12942	2.3	15.19	-	-	134.0	76.0			
	109.6	11503	2.4	13.50	-	-	134.0	75.0			
	127.3	9903	2.5	11.63	-	-	135.0	72.0			
	142.1	8872	2.6	10.42	-	-	136.0	71.0			
	160.8	7837	2.5	9.20	-	-	136.0	69.0	**PD 102 - 315M/4**		
	179.5	7021	2.6	8.24	-	-	136.0	67.0	**PM 102 - 315M/4**	2166	154
	195.1	6460	2.3	7.58	-	-	137.0	65.0			
	219.6	5742	2.4	6.74	-	-	137.0	64.0			
	255.0	4943	2.5	5.80	-	-	137.0	62.0			
	284.6	4429	2.6	5.20	-	-	133.0	60.0			
	55.1	22870	0.8	26.85	-	-	41.0	49.0			
	63.9	19737	0.8	23.17	-	-	42.0	51.0			
	73.7	17114	0.9	20.09	1.0	6.0	42.0	51.0			
	85.4	14769	1.0	17.34	5.0	9.0	42.0	52.0			
	100.7	12516	1.2	14.69	8.0	12.0	42.0	53.0			
	122.9	10256	1.3	12.04	10.0	14.0	42.0	53.0	**PD 92 - 315M/4**		
	145.0	8694	1.2	10.21	10.0	14.0	40.0	51.0	**PM 92 - 315M/4**	1622	150
	171.1	7367	1.5	8.65	12.0	15.0	40.0	51.0			
	208.8	6037	1.7	7.09	13.0	16.0	39.0	50.0			
	256.0	4924	1.8	5.78	14.0	16.0	38.0	49.0			
	276.3	4563	1.8	5.36	14.0	16.0	37.0	48.0			
160	18.0	85039	1.1	82.65	-	-	30.0	42.0	**PD 123 - 315M/4**		
	21.5	71126	1.3	69.12	-	-	77.0	49.0	**PM 123 - 315M/4**	3284	162
	19.3	79239	0.8	77.01	-	-	42.0	68.0			
	23.4	65282	0.9	63.44	-	-	45.0	72.0			
	27.4	55827	1.1	54.26	-	-	56.0	74.0	**PD 113 - 315M/4**		
	31.8	47991	1.3	46.64	-	-	94.0	76.0	**PM 113 - 315M/4**	3179	159
	38.9	39318	1.5	38.21	-	-	116.0	76.0			
	46.5	32886	1.8	31.96	-	-	127.0	76.0			
	49.6	30784	1.4	29.92	-	-	131.0	76.0			
	58.3	26204	1.6	25.47	-	-	136.0	75.0			
	69.3	22038	1.9	21.42	-	-	141.0	74.0			
	81.3	18798	2.2	18.27	-	-	144.0	72.0			
	90.9	16804	2.3	16.33	-	-	145.0	71.0	**PD 112 - 315M/4**		
	105.7	14451	1.8	14.04	-	-	147.0	67.0	**PM 112 - 315M/4**	3102	158
	124.2	12302	2.0	11.96	-	-	148.0	66.0			
	147.7	10346	2.1	10.05	-	-	149.0	64.0			
	173.1	8825	2.2	8.58	-	-	150.0	61.0			
	193.7	7889	2.3	7.67	-	-	148.0	60.0			
	36.2	42192	0.8	41.00	-	-	85.0	74.0			
	43.2	35344	1.0	34.35	-	-	104.0	75.0			
	49.8	30656	1.1	29.79	-	-	114.0	76.0	**PD 103 - 315M/4**		
	54.6	27971	1.2	27.18	-	-	118.0	75.0	**PM 103 - 315M/4**	2341	155
	63.0	24261	1.4	23.58	-	-	123.0	75.0			
	70.7	21606	1.3	21.00	-	-	126.0	75.0			
	81.4	18771	1.7	18.24	-	-	129.0	74.0			
	97.7	15634	1.9	15.19	-	-	132.0	73.0			
	110.0	13896	2.0	13.50	-	-	133.0	72.0			
	127.7	11963	2.1	11.63	-	-	134.0	70.0			
	142.6	10718	2.1	10.42	-	-	135.0	69.0			
	161.4	9468	2.1	9.20	-	-	136.0	67.0	**PD 102 - 315M/4**		
	180.1	8482	2.1	8.24	-	-	136.0	66.0	**PM 102 - 315M/4**	2316	154
	195.8	7804	1.9	7.58	-	-	136.0	64.0			
	220.3	6936	2.0	6.74	-	-	136.0	62.0			
	255.9	5972	2.1	5.80	-	-	134.0	60.0			
	285.6	5350	2.1	5.20	-	-	131.0	59.0			

P_1 [kW]	n_2 [Min^{-1}]	M_2 [Nm]	f_B	i_{ges}	F_R [kN]	F_A [kN]	$F_{R\ GR}$ [kN]	$F_{A\ GR}$ [kN]	Tip / Type	Kg	mm
160	73.9	20674	0.8	20.09	-	-	36.0	43.0			
	85.6	17842	0.9	17.34	-	-	38.0	46.0			
	101.1	15119	1.0	14.69	2.0	6.0	39.0	47.0			
	123.3	12389	1.1	12.04	6.0	9.0	39.0	48.0			
	145.5	10502	1.0	10.21	6.0	9.0	38.0	47.0	**PD 92 - 315M/4** **PM 92 - 315M/4**	1772	150
	171.7	8900	1.3	8.65	8.0	11.0	37.0	47.0			
	209.5	7293	1.4	7.09	10.0	13.0	37.0	47.0			
	256.9	5949	1.5	5.78	11.0	14.0	36.0	46.0			
	277.2	5512	1.5	5.36	12.0	14.0	36.0	46.0			
200	21.5	89028	1.0	69.12	-	-	70.0	28.0	**PD/PM 123 - 315L/4**	3424	162
	31.8	60070	1.0	46.64	-	-	31.0	66.0			
	38.8	49214	1.2	38.21	-	-	90.0	68.0	**PD 113 - 315L/4** **PM 113 - 315L/4**	3319	159
	46.4	41163	1.5	31.96	-	-	111.0	69.0			
	49.6	38532	1.1	29.92	-	-	118.0	69.0			
	58.2	32800	1.3	25.47	-	-	127.0	69.0			
	69.2	27585	1.5	21.42	-	-	135.0	69.0			
	81.2	23529	1.8	18.27	-	-	140.0	68.0			
	90.8	21034	1.9	16.33	-	-	142.0	67.0	**PD 112 - 315L/4** **PM 112 - 315L/4**	3242	158
	105.6	18089	1.5	14.04	-	-	145.0	64.0			
	124.0	15398	1.6	11.96	-	-	146.0	62.0			
	147.5	12950	1.7	10.05	-	-	148.0	61.0			
	172.9	11046	1.8	8.58	-	-	147.0	59.0			
	193.4	9874	1.9	7.67	-	-	144.0	58.0			
	81.3	23496	1.4	18.24	-	-	124.0	69.0			
	97.6	19569	1.5	15.19	-	-	128.0	68.0			
	109.8	17393	1.6	13.50	-	-	130.0	68.0			
	127.6	14974	1.7	11.63	-	-	132.0	67.0			
	142.4	13416	1.7	10.42	-	-	133.0	66.0			
	161.2	11851	1.7	9.20	-	-	134.0	64.0	**PD 102 - 315L/4** **PM 102 - 315L/4**	2456	154
	179.9	10617	1.7	8.24	-	-	135.0	63.0			
	195.5	9768	1.5	7.58	-	-	135.0	61.0			
	220.0	8682	1.6	6.74	-	-	133.0	60.0			
	255.5	7475	1.6	5.80	-	-	130.0	58.0			
	285.2	6696	1.7	5.20	-	-	127.0	57.0			

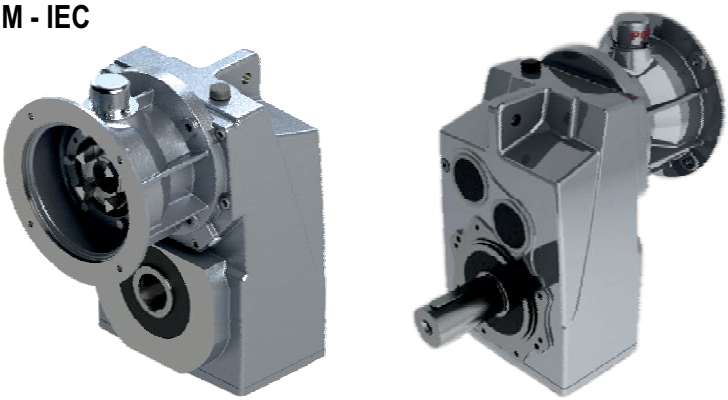
Ölçü Tabloları

Dimension Tables

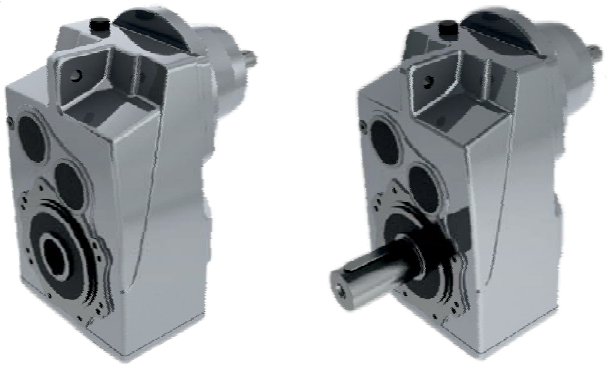
PD/PM - MOTOR



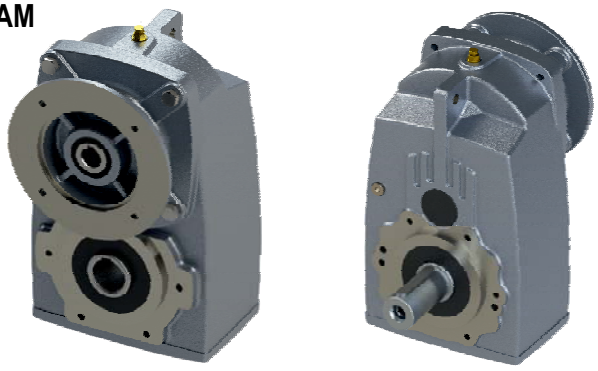
PD/PM - IEC



PD/PM - W

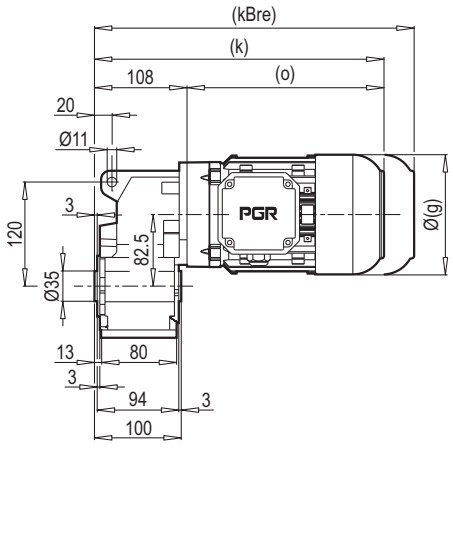


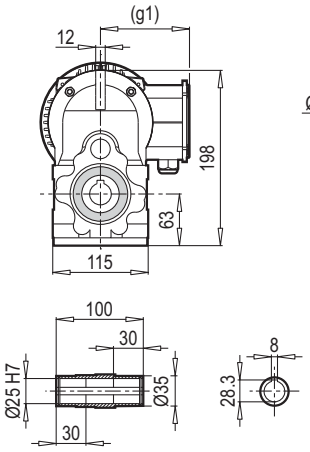
PD/PM - PAM



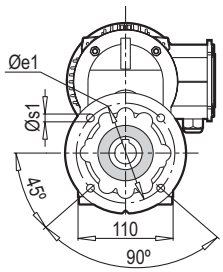
PD / PM

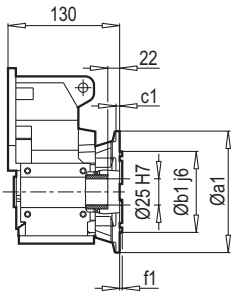
PD A02





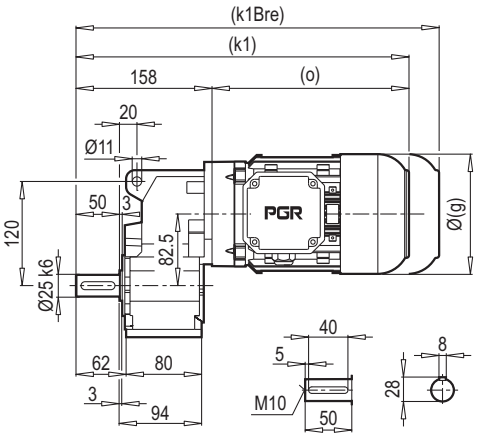
PD A02 B5

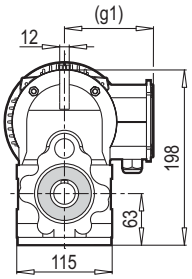




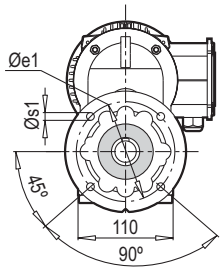
a1	b1	c1	e1	f1	s1
140	95	10	115	3	4x9

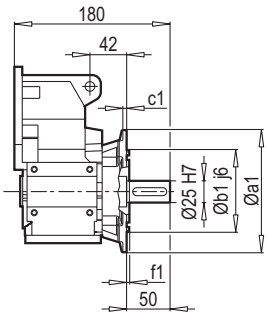
PM A02





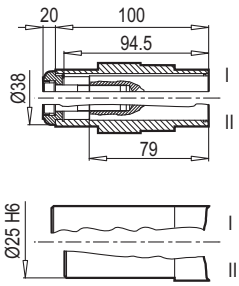
PM A02 B5





PD A02 Ç

62 - 63

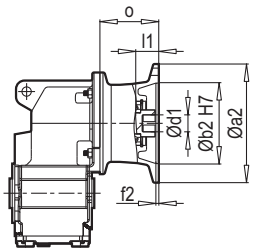


Ayak Delik Ölçüleri sayfa 46 / Dimension of foot is on page 46

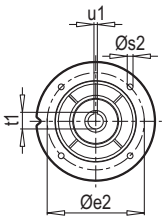
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k/k1	301/351	332/382	350/400					
kBre/k1Bre	353/403	392/442	412/462					
o	193	224	242					

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

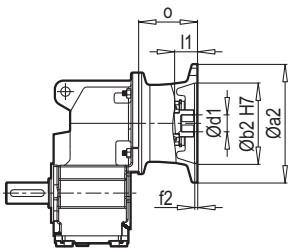
PD A02



IEC



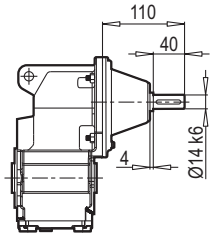
PM A02

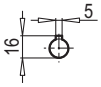


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM A02	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103

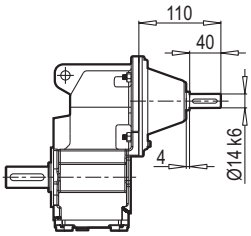
~ Kg	
IEC	PD/PM A02
63	7
71	8
80	10
90	10

PD A02

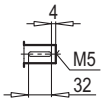


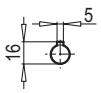


W



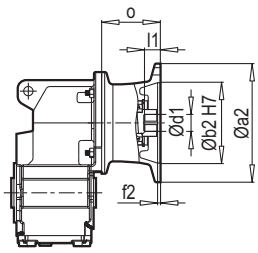
PM A02



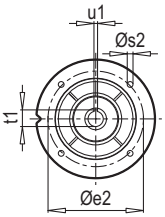


W ~ Kg	
PD/PM A02	6

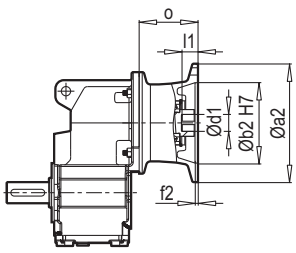
PD A02



PAM B5/B14



PM A02



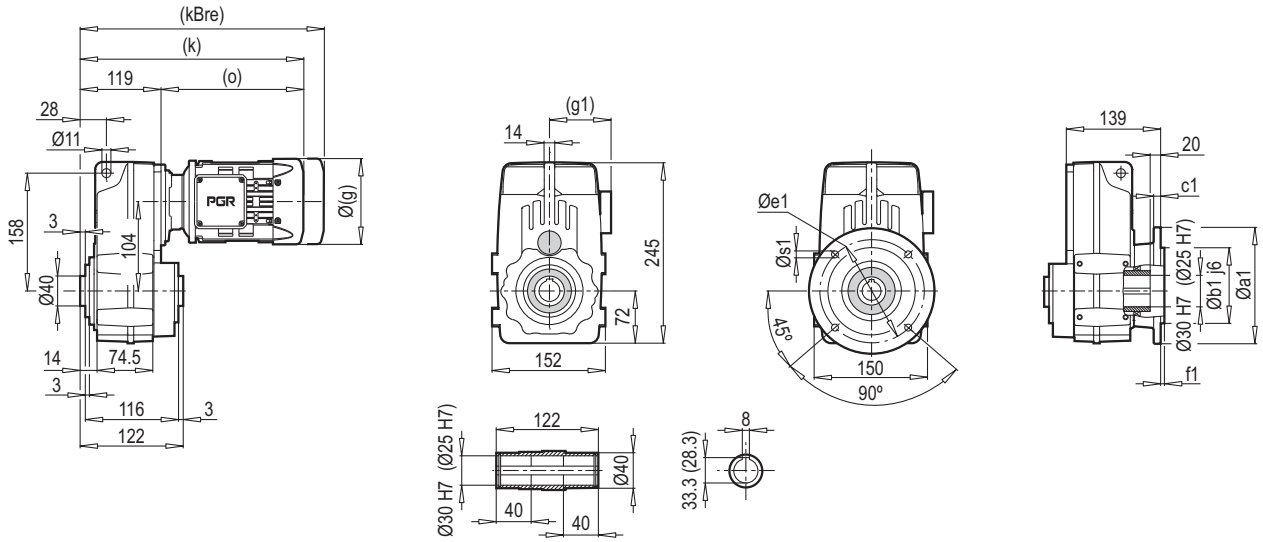
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM A02	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103

~ Kg	
PAM B5	PD/PM A02
63	7
71	8
80	10
90	10

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM A02	63	90	60	75	3.5	6	11	23	12.8	4	85
	71	105	70	85	4.0	7	14	30	16.3	5	85
	80	120	80	100	4.0	7	19	40	21.8	6	103
	90	140	95	115	4.0	9	24	50	27.3	8	103

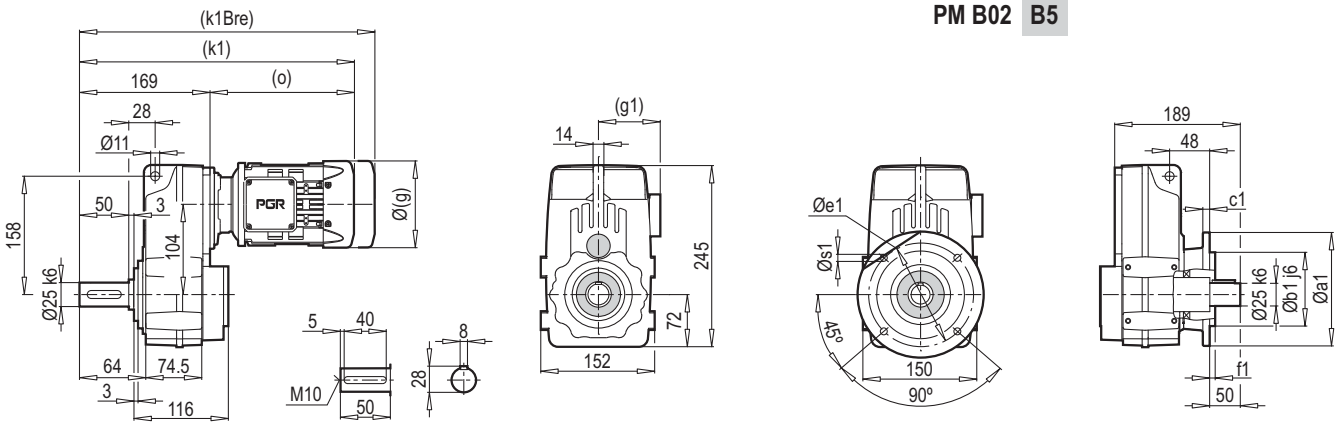
~ Kg	
PAM B14	PD/PM A02
63	6
71	7
80	9
90	9

PD B02

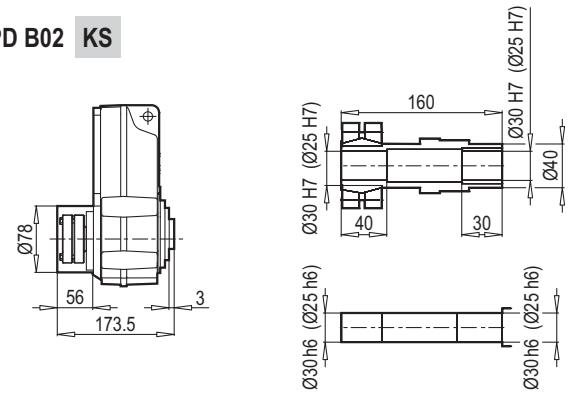


a1	b1	c1	e1	f1	s1
160	110	12	130	3.5	4x9

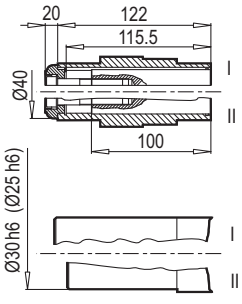
PM B02



PD B02 KS



PD B02 Ç



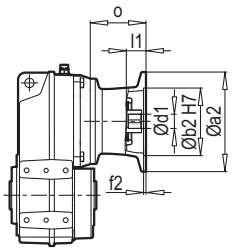
62 - 63

Ayak Delik Ölçüleri sayfa 46 / Dimension of foot is on page 46

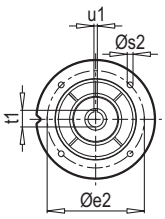
	63 M	71 M	80 M	90 S	90 L			
g	124	140	159	193	193			
g1	111	119	127	151	151			
k/k1	312/362	343/393	361/411	386/436	406/456			
kBre/k1Bre	364/414	403/453	423/473	459/509	479/529			
o	193	224	242	267	287			

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

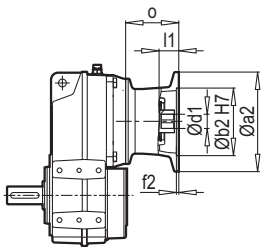
PD B02



IEC



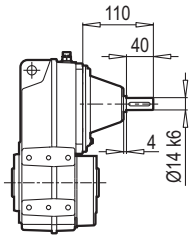
PM B02

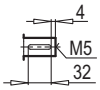


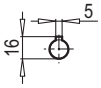
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM B02	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103

~ Kg	
IEC	PD/PM B02
63	11
71	12
80	15
90	15

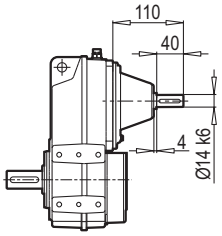
PD B02



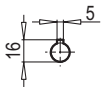




W

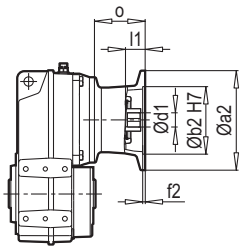


PM B02

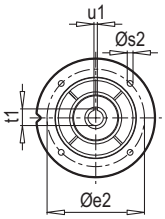


W ~ Kg	
PD/PM B02	10

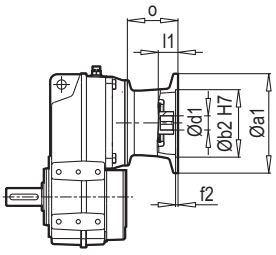
PD B02



PAM B5/B14



PM B02



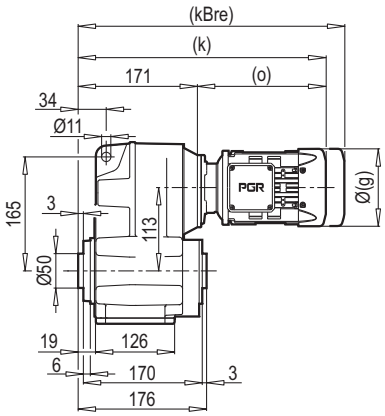
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM B02	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103

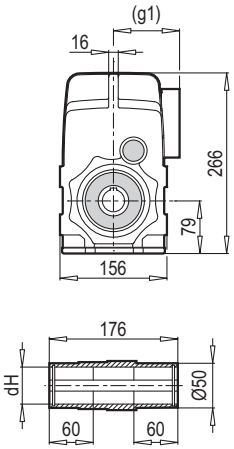
~ Kg	
PAM B5	PD/PM B02
63	10
71	11
80	14
90	14

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM B02	63	90	60	75	3.5	6	11	23	12.8	4	85
	71	105	70	85	4.0	7	14	30	16.3	5	85
	80	120	80	100	4.0	7	19	40	21.8	6	103
	90	140	95	115	4.0	9	24	50	27.3	8	103

~ Kg	
PAM B14	PD/PM B02
63	9
71	10
80	13
90	13

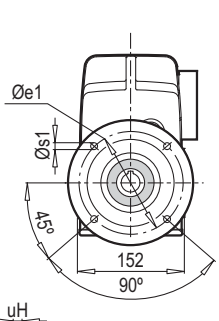
PD C13

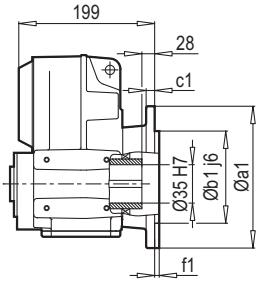




dH	Ø 35	(Ø 30)	(Ø 25)
uH	10	(8)	(8)
tH	38.3	(33.3)	(28.3)

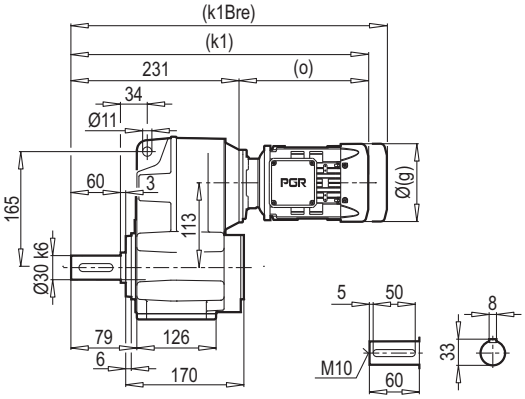
PD C13 B5

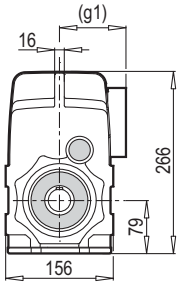




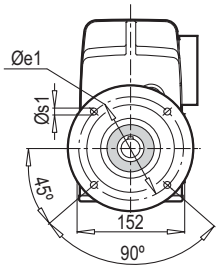
a1	b1	c1	e1	f1	s1
160	110	12	130	3.5	4x9
200	130	12	165	3.5	4x11

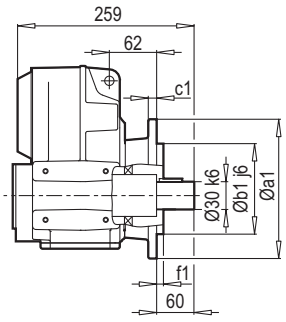
PM C13



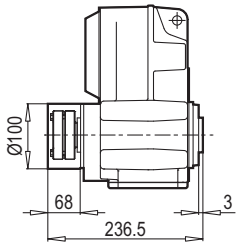


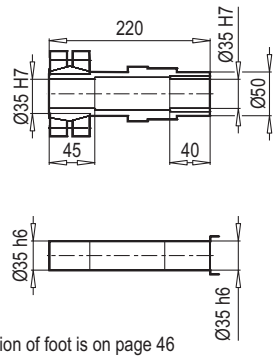
PM C13 B5



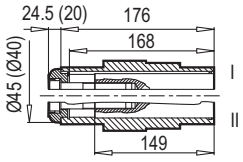


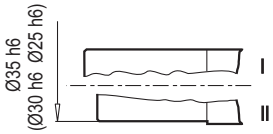
PD C13 KS





PD C13 Ç





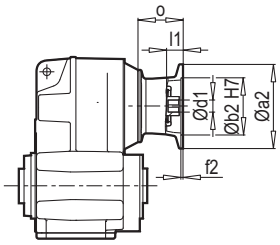
62 - 63

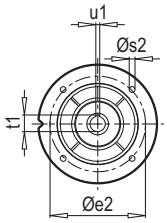
Ayak Delik Ölçüleri sayfa 46 / Dimension of foot is on page 46

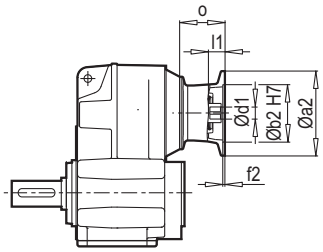
	63 M	71 M	80 M	90 S	90 L	100 L		
g	124	140	159	193	193	217		
g1	111	119	127	151	151	160		
k/k1	364/424	395/455	413/473	438/498	458/518	487/547		
kBre/k1Bre	416/476	455/515	475/535	511/571	531/591	568/628		
o	193	224	242	267	287	316		

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD C13 — IEC — PM C13



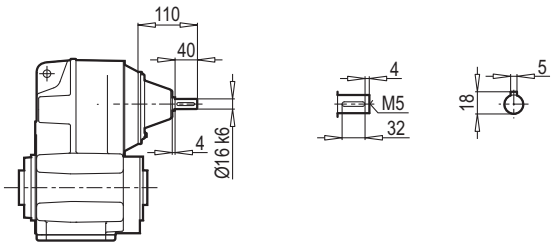


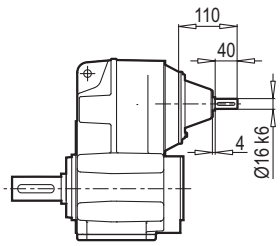


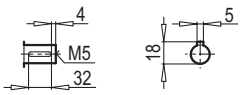
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM C13	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103
	100	250	180	215	5.0	M12	28	60	31.3	8	126

~ Kg	
IEC	PD/PM C13
63	24
71	25
80	27
90	27
100	32

PD C13 — W — PM C13

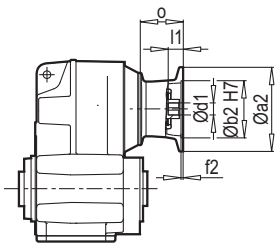


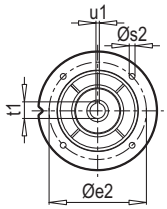


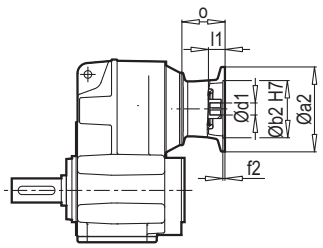


W ~ Kg	
PD/PM C13	23

PD C13 — PAM B5/B14 — PM C13







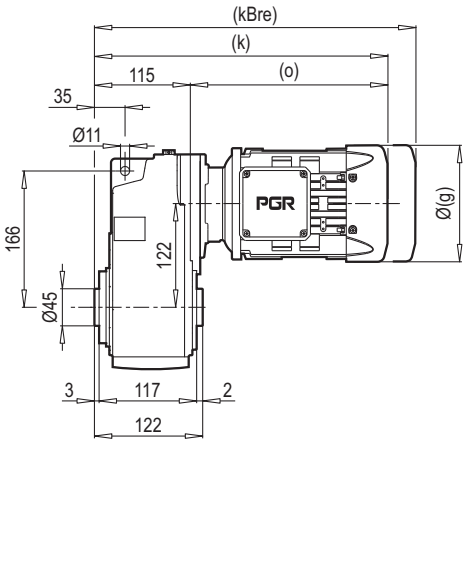
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM C13	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	85
	80	200	130	165	4.0	M10	19	40	21.8	6	103
	90	200	130	165	4.0	M10	24	50	27.3	8	103
	100	250	180	215	5.0	M12	28	60	31.3	8	126

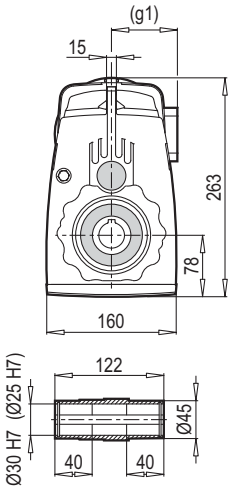
~ Kg	
PAM B5	PD/PM C13
63	23
71	24
80	26
90	26
100	31

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM C13	63	90	60	75	3.5	6	11	23	12.8	4	85
	71	105	70	85	4	7	14	30	16.3	5	85
	80	120	80	100	4	7	19	40	21.8	6	103
	90	140	95	115	4	9	24	50	27.3	8	103
	100	160	110	130	5	9	28	60	31.3	8	126

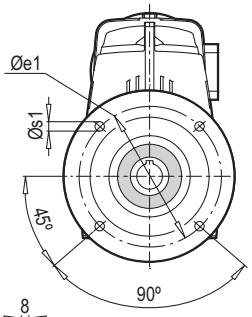
~ Kg	
PAM B14	PD/PM C13
63	22
71	23
80	25
90	25
100	30

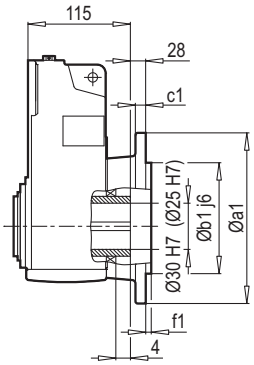
PD 12





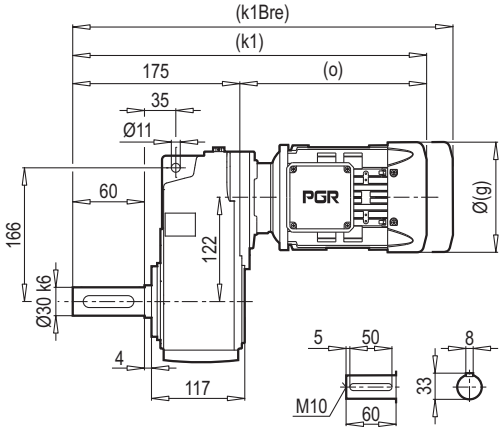
PD 12 B5

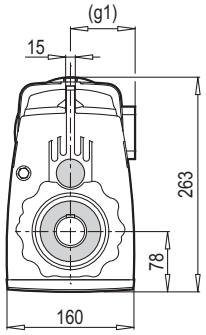




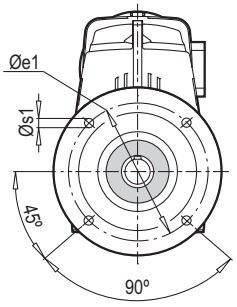
a1	b1	c1	e1	f1	s1
200	130	12	165	3.5	4x11

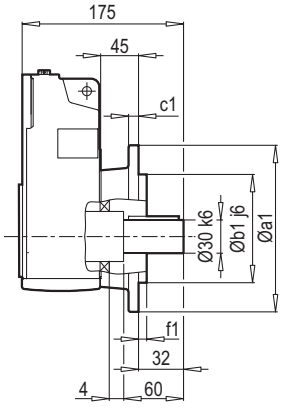
PM 12



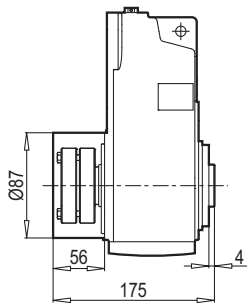


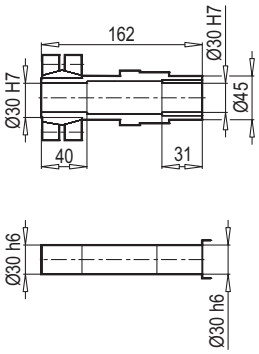
PM 12 B5



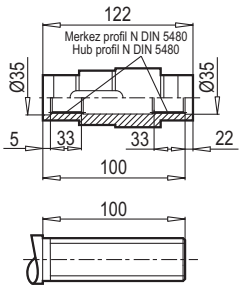


PD 12 KS



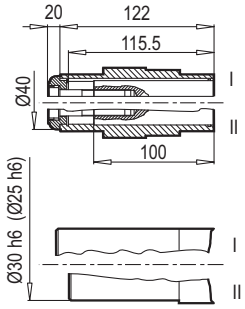


PD 12 DIN 5480



N30 x 1.25 x 30 x 22 x 9H

PD 12 Ç

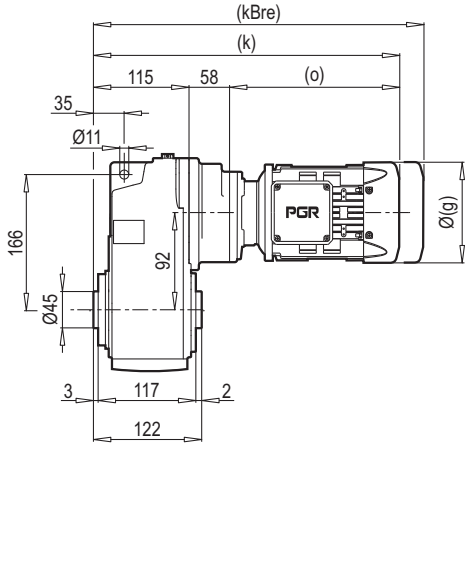


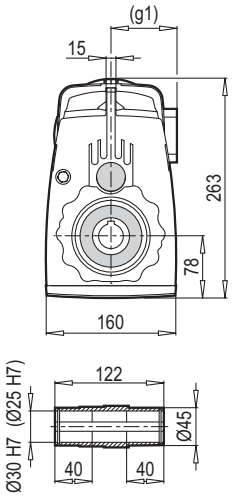
62 - 63

	63 M	71 M	80 M	90 S	90 L	100 L	112 M	
g	124	140	159	193	193	217	232	
g1	111	119	127	151	151	160	168	
k/k1	313/373	355/415	382/442	405/465	425/485	453/513	498/558	
kBre/k1Bre	365/425	415/475	444/504	478/538	498/558	534/594	578/638	
o	198	240	267	290	310	338	383	

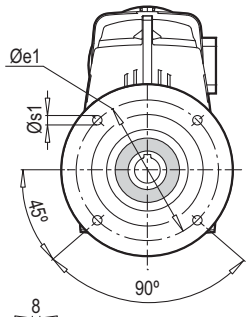
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

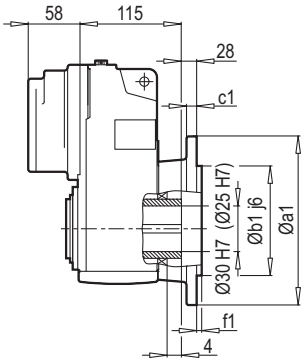
PD 13





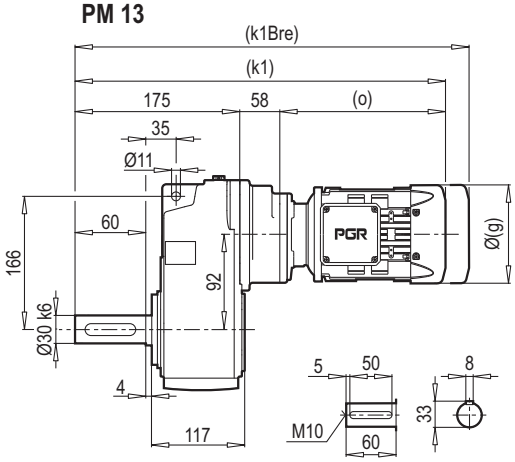
PD 13 B5

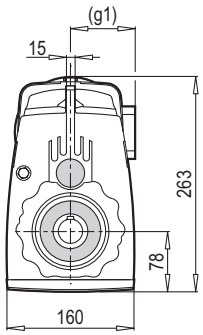




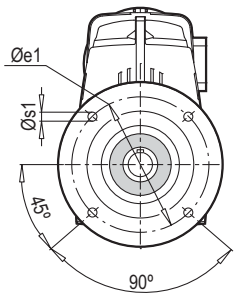
a1	b1	c1	e1	f1	s1
200	130	12	165	3.5	4x11

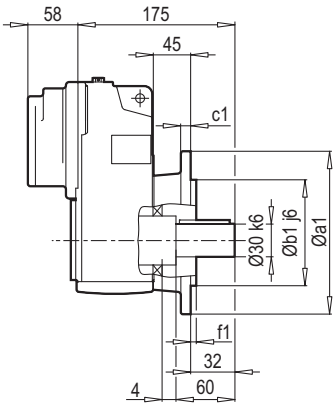
PM 13



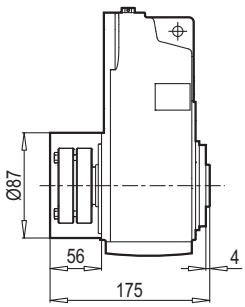


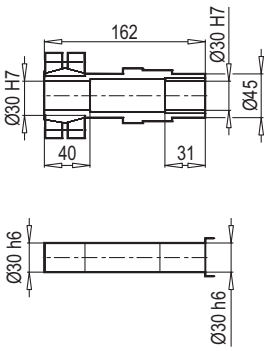
PM 13 B5



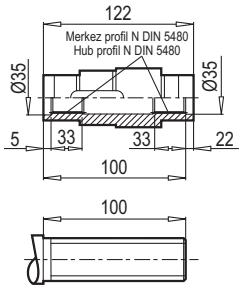


PD 13 KS



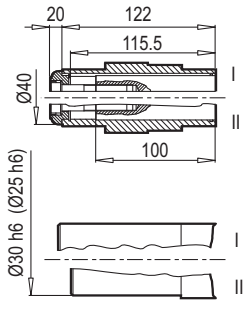


PD 13 DIN 5480



N30 x 1.25 x 30 x 22 x 9H

PD 13 Ç

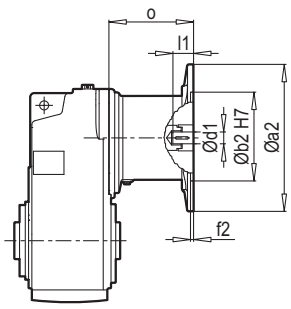


62 - 63

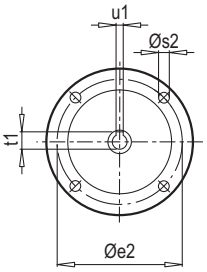
	63 M	71 M						
g	124	140						
g1	111	119						
k/k1	371/431	413/473						
kBre/k1Bre	423/483	473/533						
o	198	240						

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

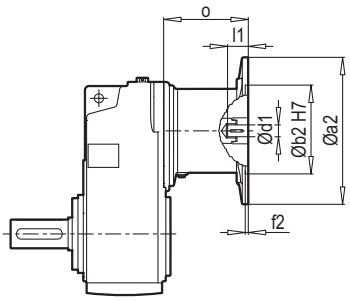
PD 12
PD 13



IEC



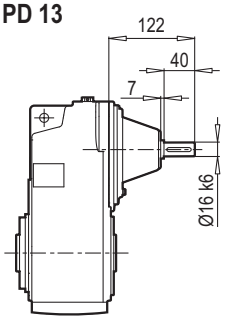
PM 12
PM 13

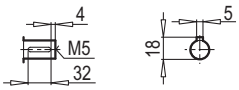


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PD/PM 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	89
PD/PM 12	80	200	130	165	4.0	M10	19	40	21.8	6	105
PD/PM 12	90	200	130	165	4.0	M10	24	50	27.3	8	105
PD/PM 12	100	250	180	215	5.0	M12	28	60	31.3	8	130
PD/PM 12	112	250	180	215	5.0	M12	28	60	31.3	8	130

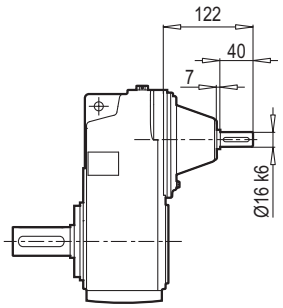
~ Kg		
IEC	PD/PM 12	PD/PM 13
63	20	24
71	21	25
80	24	-
90	24	-
100	31	-
112	31	-

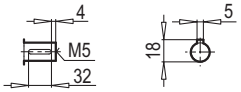
PD 12
PD 13





W

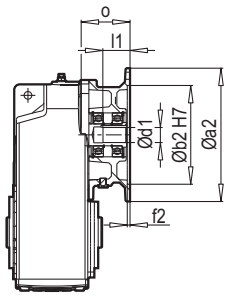




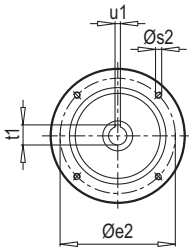
PM 12
PM 13

~ Kg	
PD/PM 12	19
PD/PM 13	23

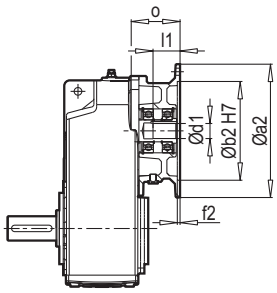
PD 12
PD 13



PAM B5/B14



PM 12
PM 13



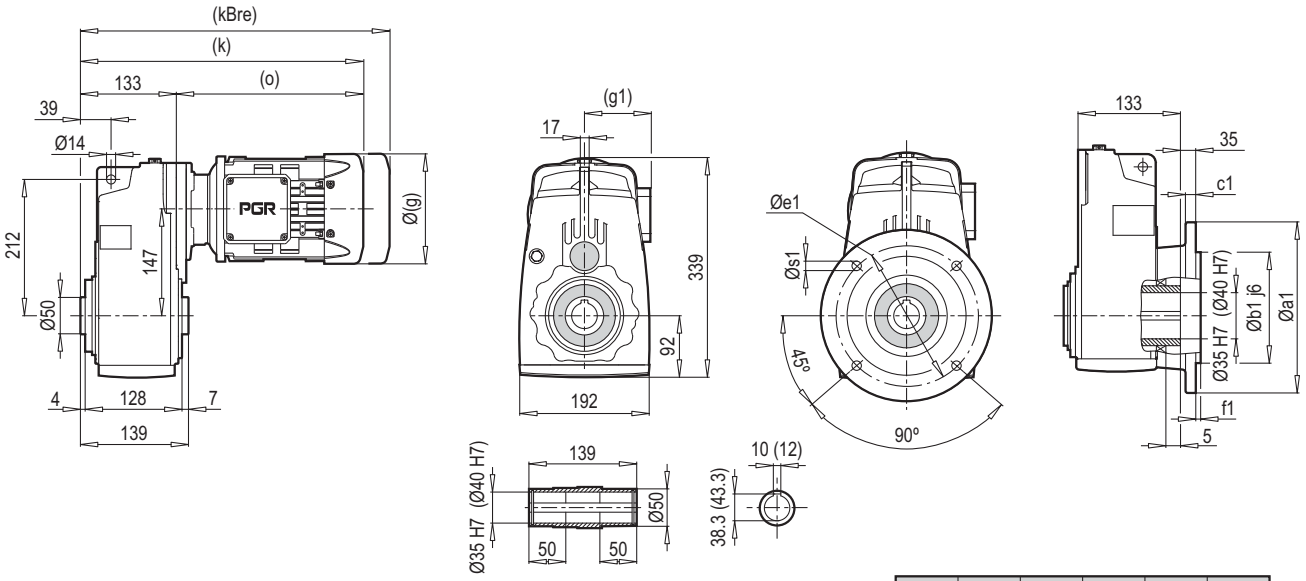
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PD/PM 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	55
PD/PM 12	80	200	130	165	4.0	M10	19	40	21.8	6	74
PD/PM 12	90	200	130	165	4.0	M10	24	50	27.3	8	74
PD/PM 12	100	250	180	215	5.0	M12	28	60	31.3	8	131.5
PD/PM 12	112	250	180	215	5.0	M12	28	60	31.3	8	131.5

~ Kg		
PAM B5	PD/PM 12	PD/PM 13
63	18	22
71	18	22
80	19	-
90	19	-
100	26	-
112	26	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12-13	63	90	60	75	3.5	6	11	23	12.8	4	60
PD/PM 12-13	71	105	70	85	4.0	7	14	30	16.3	5	55
PD/PM 12	80	120	80	100	4.0	7	19	40	21.8	6	74
PD/PM 12	90	140	95	115	4.0	9	24	50	27.3	8	74
PD/PM 12	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 12	112	160	110	130	5.0	9	28	60	31.3	8	75

~ Kg		
PAM B14	PD/PM 12	PD/PM 13
63	17	21
71	17	21
80	18	-
90	18	-
100	19	-
112	19	-

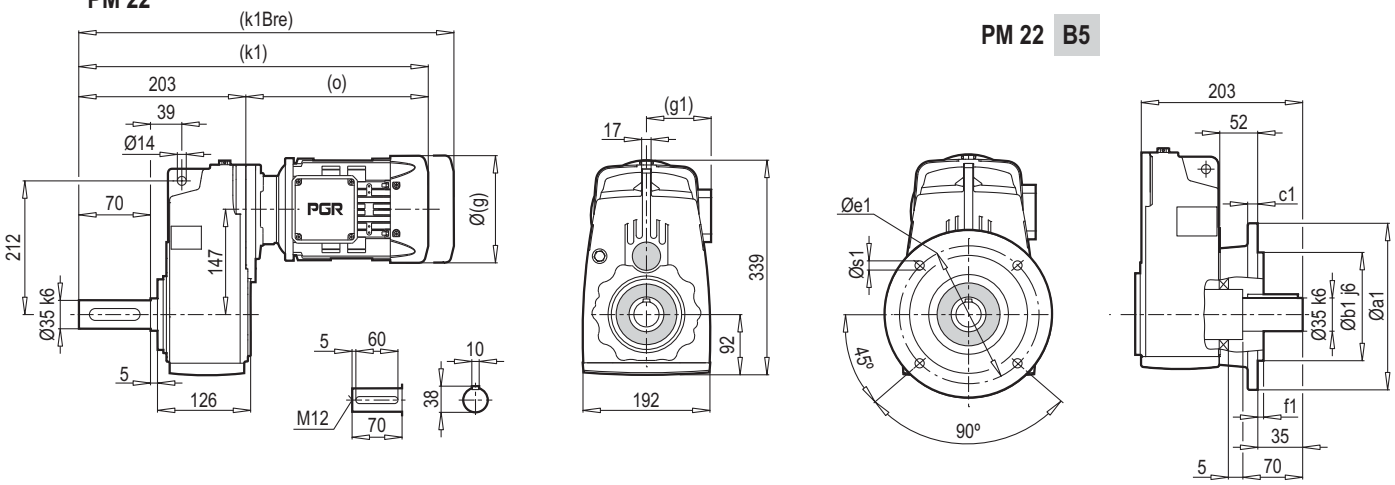
PD 22



PD 22 B5

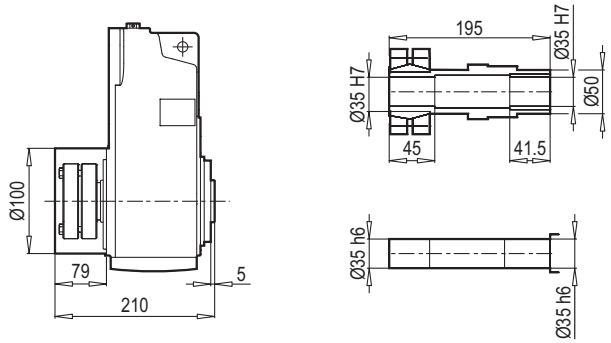
a1	b1	c1	e1	f1	s1
250	180	16	215	4	4x14

PM 22

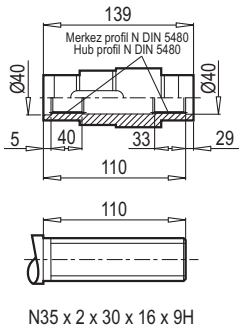


PM 22 B5

PD 22 KS

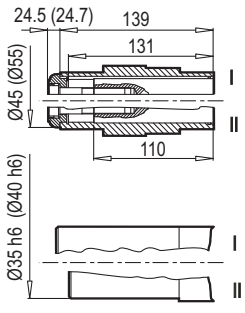


PD 22 DIN 5480



N35 x 2 x 30 x 16 x 9H

PD 22 Ç

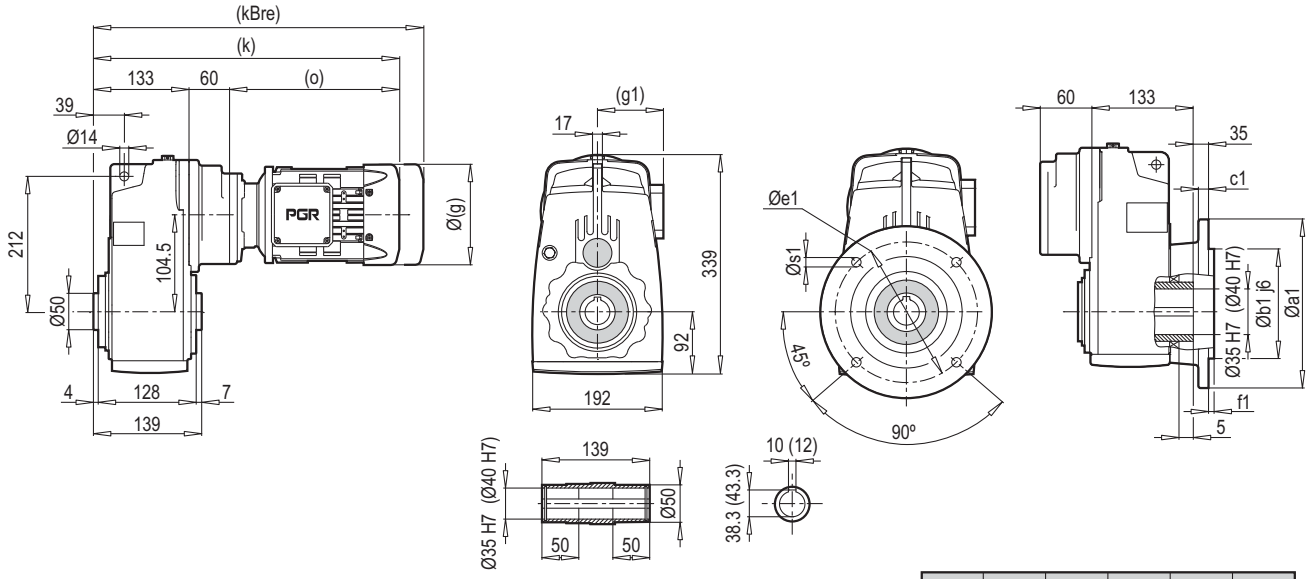


62 - 63

	71 M	80 M	90 S	90 L	100 L	112 M		
g	140	159	193	193	217	232		
g1	119	127	151	151	160	168		
k/k1	369/439	395/465	418/488	438/508	466/536	511/581		
kBre/k1Bre	429/499	457/527	491/561	511/581	547/617	591/661		
o	236	262	285	305	333	378		

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

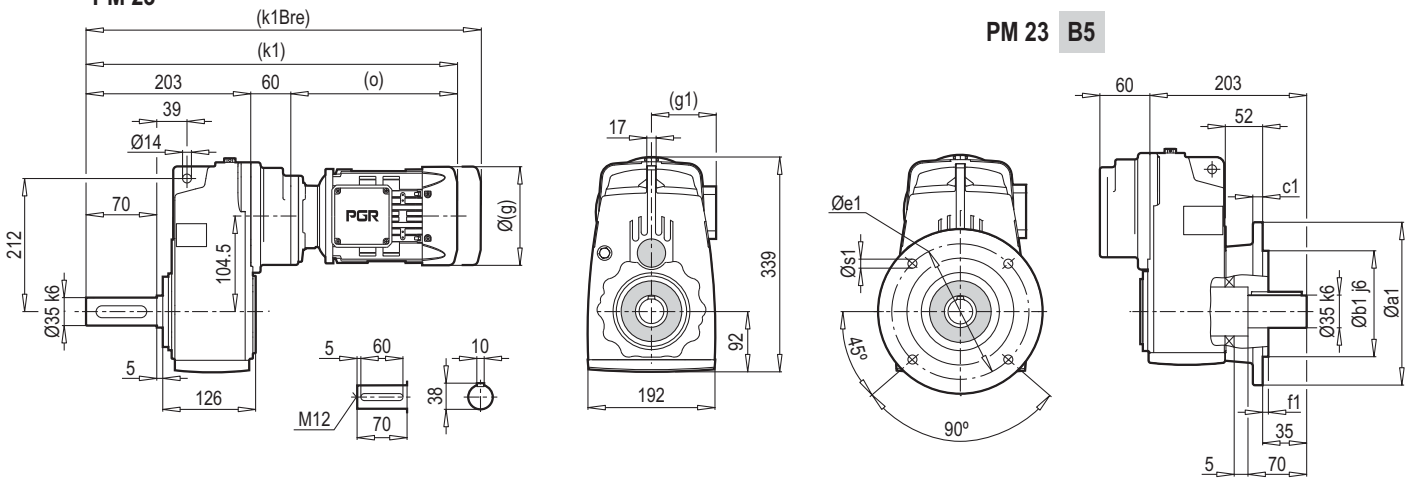
PD 23



PD 23 B5

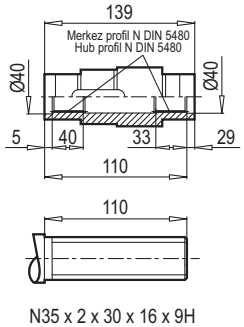
a1	b1	c1	e1	f1	s1
250	180	16	215	4	4x14

PM 23



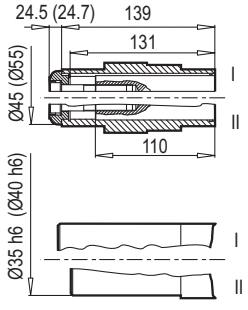
PM 23 B5

PD 23 DIN 5480



N35 x 2 x 30 x 16 x 9H

PD 23 Ç



62 - 63

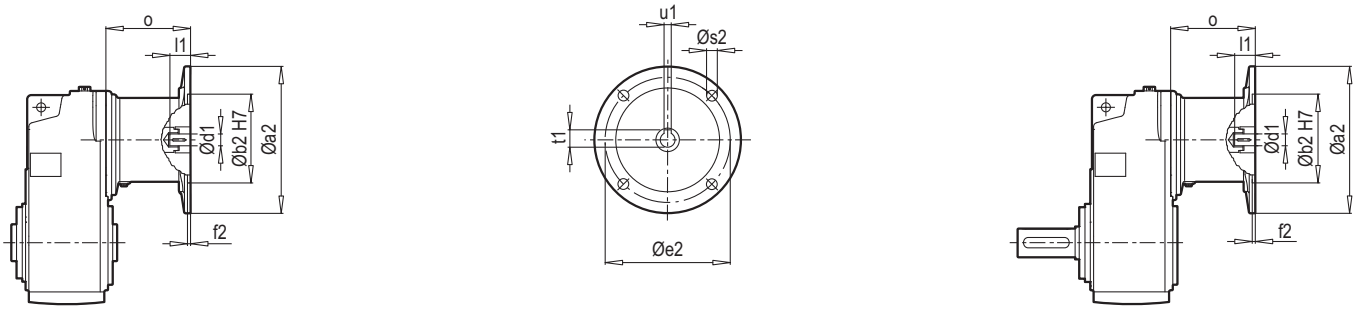
	63 M	71 M	80 M	90 S				
g	124	140	159	193				
g1	111	119	127	151				
k/k1	391/461	433/503	460/530	483/553				
kBre/k1Bre	443/513	493/563	522/592	556/626				
o	198	240	267	290				

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 22
PD 23

IEC

PM 22
PM 23



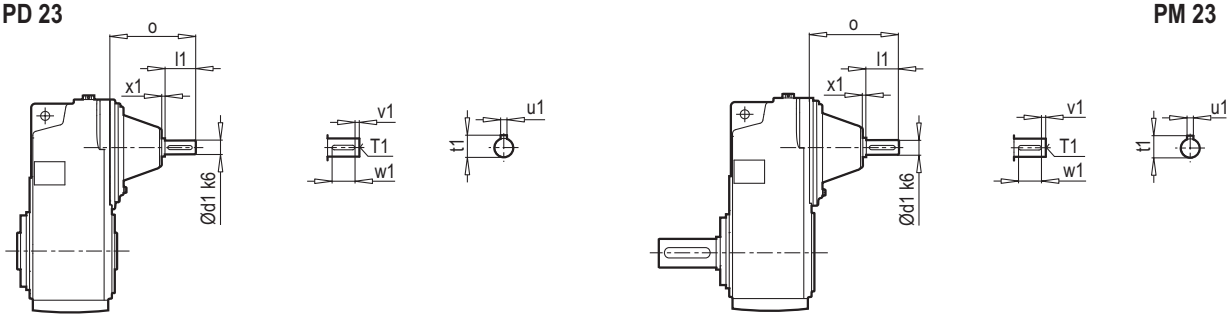
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PD/PM 22 o	PD/PM 23 o
PD/PM 23	63	140	95	115	3.5	M8	11	23	12.8	4	85	85
PD/PM 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PD/PM 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	105	105
PD/PM 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	105	105
PD/PM 22	100	250	180	215	5.0	M12	28	60	31.3	8	130	-
PD/PM 22	112	250	180	215	5.0	M12	28	60	31.3	8	130	-

~ Kg		
IEC	PD/PM 22	PD/PM 23
63	-	38
71	34	40
80	38	43
90	38	43
100	43	-
112	43	-

PD 22
PD 23

W

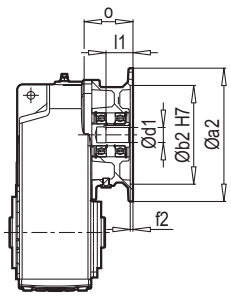
PM 22
PM 23



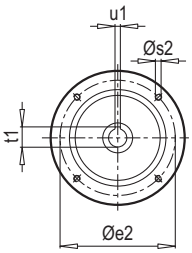
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 22	24	8	50	172	M8	27	8	5	40
PD/PM 23	16	7	40	122	M5	18	5	4	32

~ Kg	
PD/PM 22	36
PD/PM 23	37

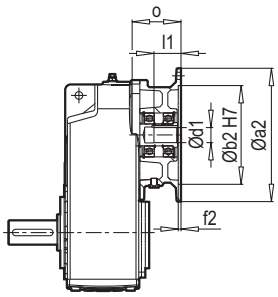
PD 22
PD 23



PAM B5/B14



PM 22
PM 23



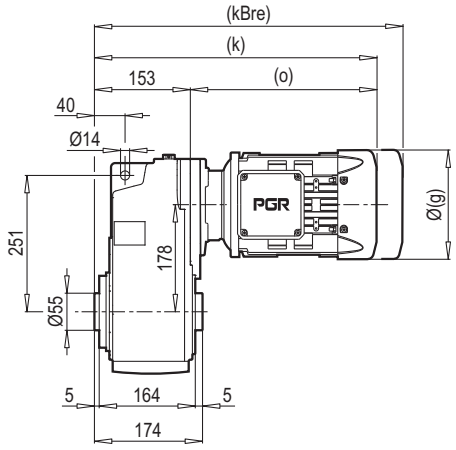
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 23	63	140	95	115	3.5	M8	11	23	12.8	4	85
PD/PM 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	55
PD/PM 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	74
PD/PM 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	74
PD/PM 22	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 22	112	250	180	215	5.0	M12	28	60	31.3	8	75

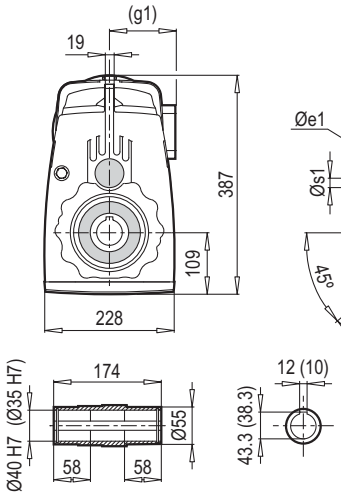
~ Kg		
PAM B5	PD/PM 22	PD/PM 23
63	-	36
71	32	36
80	33	37
90	33	37
100	34	-
112	34	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 23	63	90	60	75	3.5	6	11	23	12.8	4	60
PD/PM 22-23	71	105	70	85	4.0	7	14	30	16.3	5	55
PD/PM 22-23	80	120	80	100	4.0	7	19	40	21.8	6	74
PD/PM 22-23	90	140	95	115	4.0	9	24	50	27.3	8	74
PD/PM 22	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 22	112	160	110	130	5.0	9	28	60	31.3	8	75

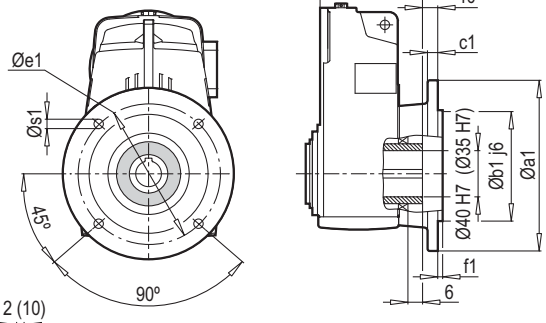
~ Kg		
PAM B14	PD/PM 22	PD/PM 23
63	-	35
71	30	35
80	31	36
90	31	36
100	33	-
112	33	-

PD 32



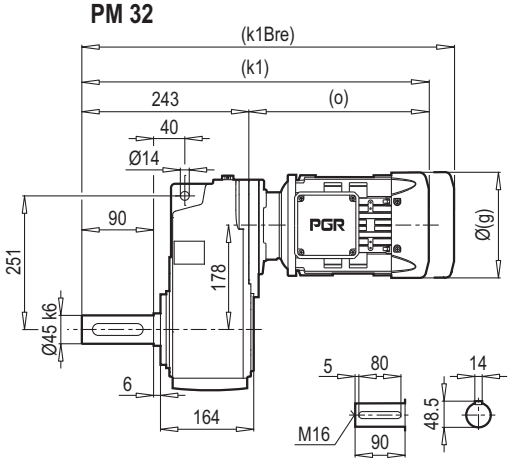


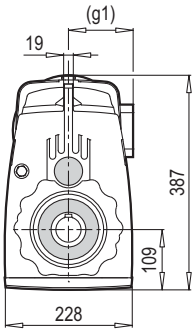
PD 32 B5



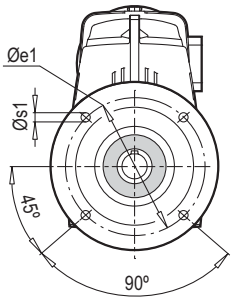
a1	b1	c1	e1	f1	s1
250	180	15	215	4	4x14
300	230	20	265	4	4x14

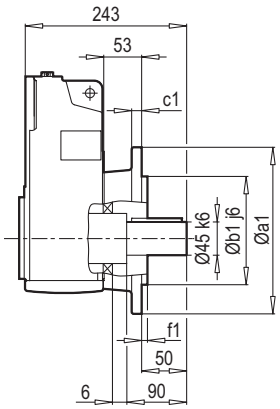
PM 32



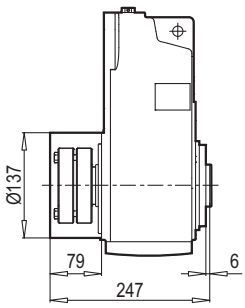


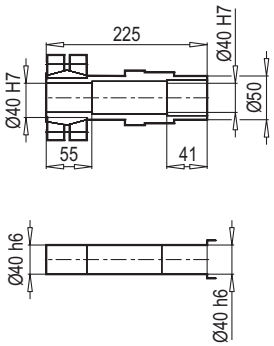
PM 32 B5



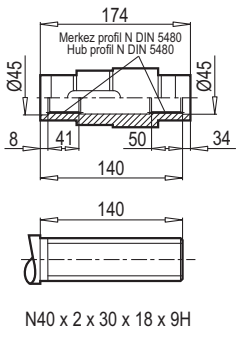


PD 32 KS



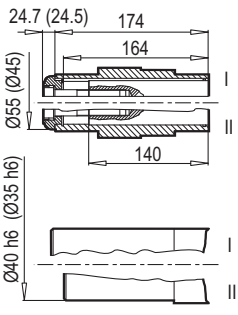


PD 32 DIN 5480



N40 x 2 x 30 x 18 x 9H

PD 32 Ç

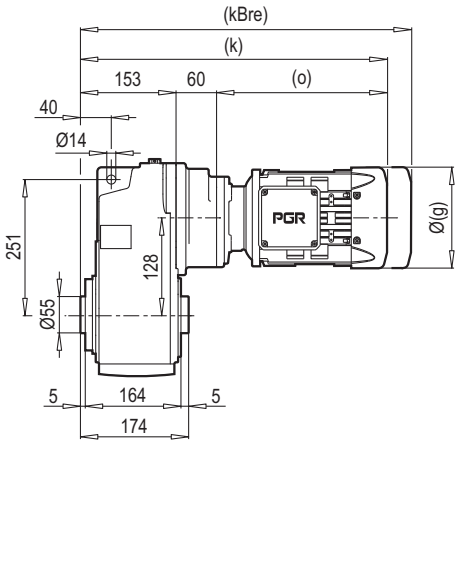


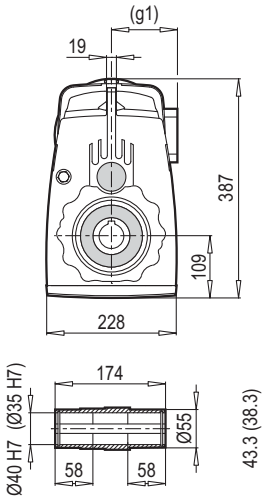
62 - 63

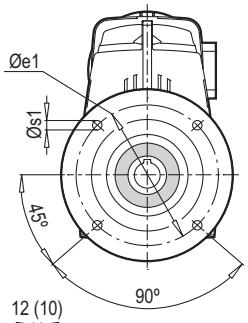
	71 M	80 M	90 S	90 L	100 L	112 M	132 S	132 M
g	140	159	193	193	217	232	279	279
g1	119	127	151	151	160	168	182	182
k/k1	389/479	415/505	438/528	458/548	486/576	531/621	538/628	573/663
kBre/k1Bre	449/539	477/567	511/601	531/621	567/657	611/701	646/736	714/804
o	236	262	285	305	333	378	385	420

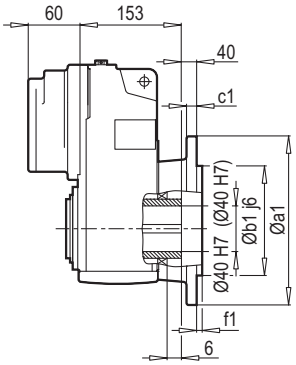
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

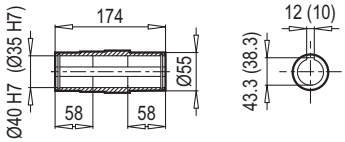
PD 33





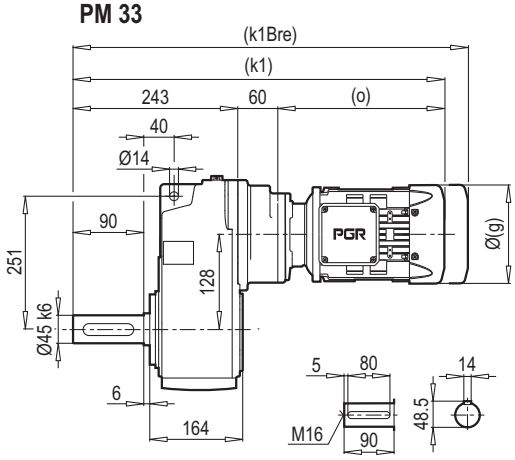


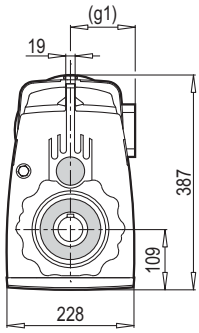


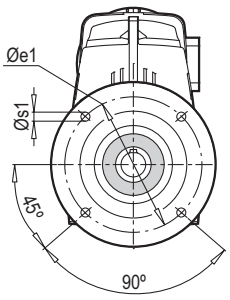


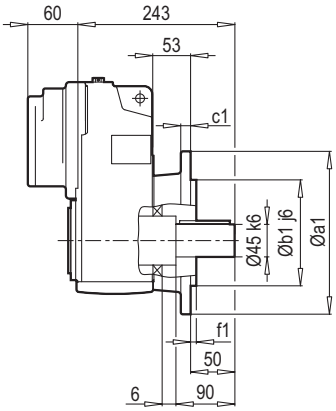
a1	b1	c1	e1	f1	s1
250	180	15	215	4	4x14
300	230	20	265	4	4x14

PM 33

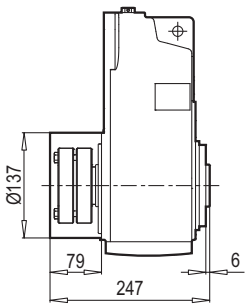


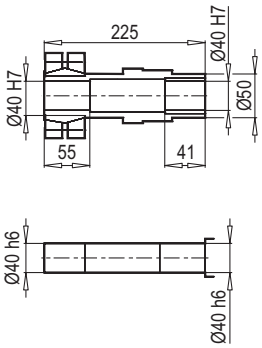




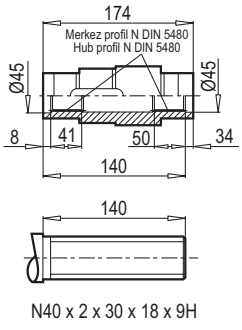


PD 33 KS



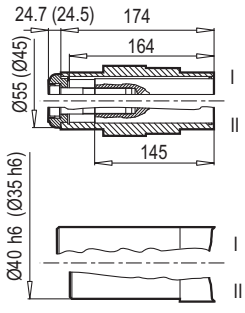


PD 33 DIN 5480



N40 x 2 x 30 x 18 x 9H

PD 33 Ç

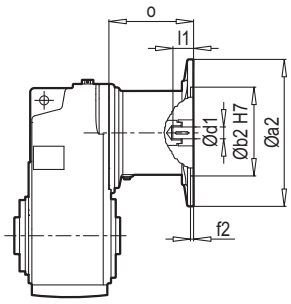


62 - 63

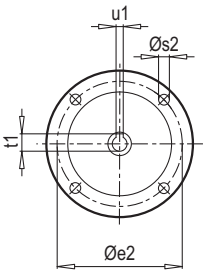
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k/k1	411/501	453/543	480/570					
kBre/k1Bre	463/553	513/603	542/632					
o	198	240	267					

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

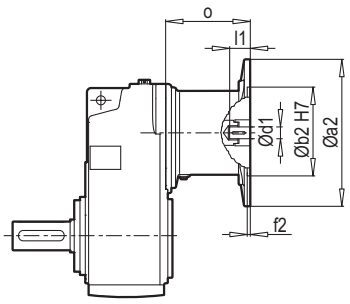
PD 32
PD 33



IEC



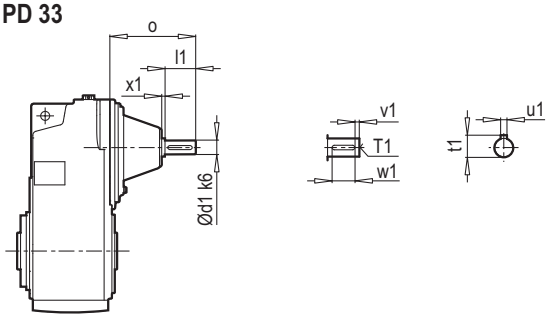
PM 32
PM 33



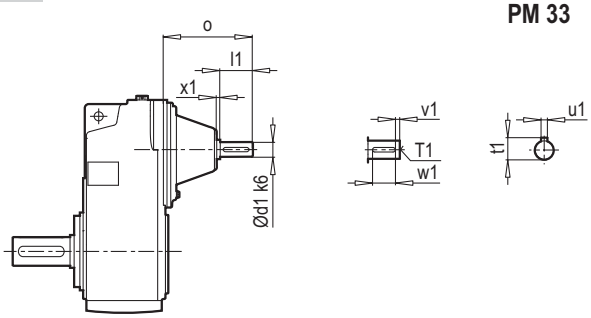
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PD/PM 32 o	PD/PM 33 o
PD/PM 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PD/PM 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PD/PM 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PD/PM 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PD/PM 32-33	100	250	180	215	5.0	M12	28	60	31.3	8	124	130
PD/PM 32-33	112	250	180	215	5.0	M12	28	60	31.3	8	124	130
PD/PM 32	132	300	230	265	5.0	M12	38	80	41.3	10	156	-

~ Kg		
IEC	PD/PM 32	PD/PM 33
63	-	55
71	50	56
80	54	59
90	54	59
100	58	67
112	58	67
132	68	-

PD 32
PD 33



W

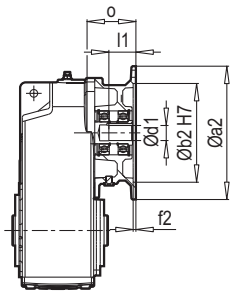


PM 32
PM 33

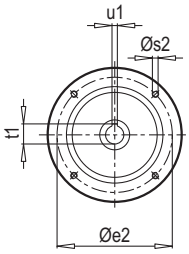
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 32	24	8	50	172	M8	27	8	5	40
PD/PM 33	16	7	40	122	M5	18	5	4	32

~ Kg	
PD/PM 32	52
PD/PM 33	54

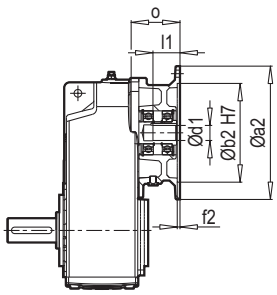
PD 32
PD 33



PAM B5/B14



PM 32
PM 33



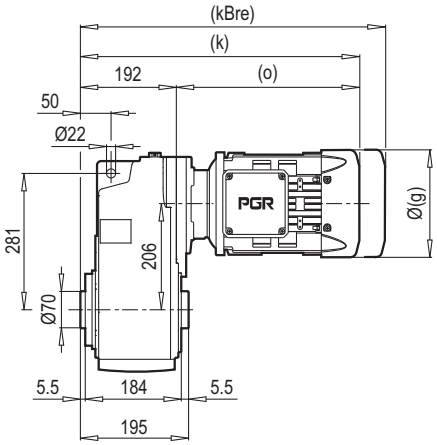
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o (32)	o (33)
PD/PM 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PD/PM 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PD/PM 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PD/PM 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PD/PM 32-33	100	250	180	215	5.0	M12	28	60	31.3	8	75	131.5
PD/PM 32-33	112	250	180	215	5.0	M12	28	60	31.3	8	75	131.5
PD/PM 32	132	300	230	265	5.0	M12	38	80	41.3	10	94	-

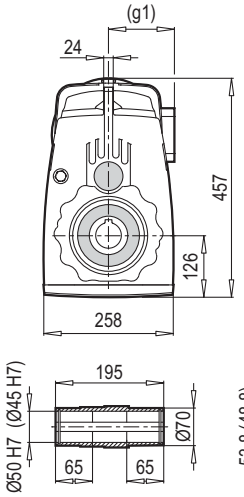
~ Kg		
PAM B5	PD/PM 32	PD/PM 33
63	-	52
71	47	52
80	48	53
90	48	53
100	49	60
112	49	60
132	59	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o (32)	o (33)
PD/PM 33	63	90	60	75	3.5	6	11	23	12.8	4	-	60
PD/PM 32-33	71	105	70	85	4	7	14	30	16.3	5	55	55
PD/PM 32-33	80	120	80	100	4	7	19	40	21.8	6	72	74
PD/PM 32-33	90	140	95	115	4	9	24	50	27.3	8	72	74
PD/PM 32-33	100	160	110	130	5	9	28	60	31.3	8	75	75
PD/PM 32-33	112	160	110	130	5	9	28	60	31.3	8	75	75
PD/PM 32	132	200	130	165	5	11	38	80	41.3	10	94	-

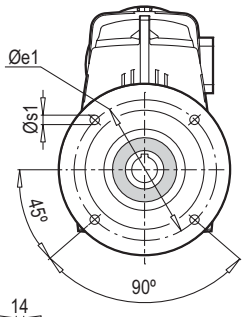
~ Kg		
PAM B14	PD/PM 32	PD/PM 33
63	-	51
71	45	51
80	46	52
90	46	52
100	48	53
112	48	53
132	52	-

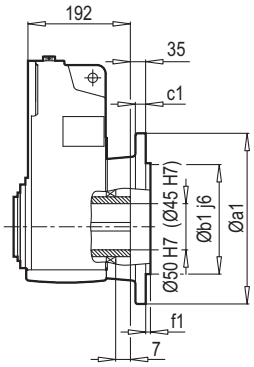
PD 42





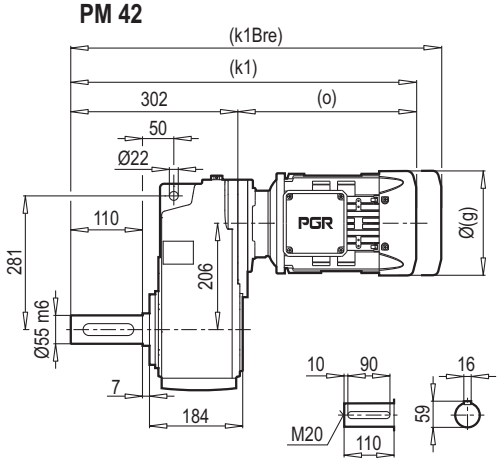
PD 42 B5

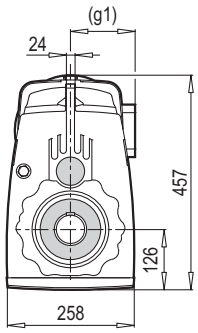




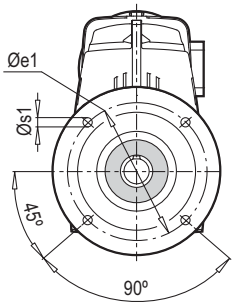
a1	b1	c1	e1	f1	s1
300	230	20	265	4	4x14

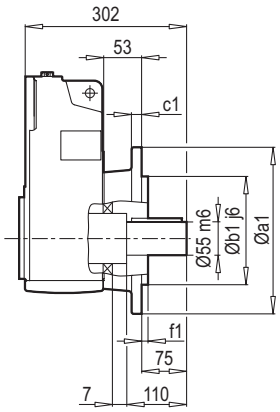
PM 42



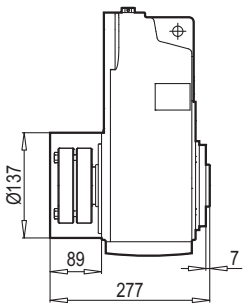


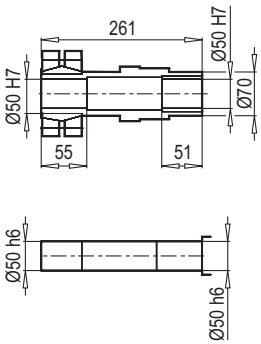
PM 42 B5



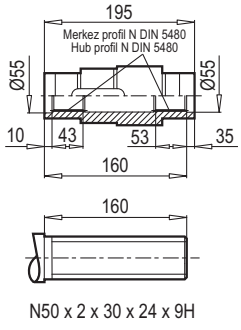


PD 42 KS

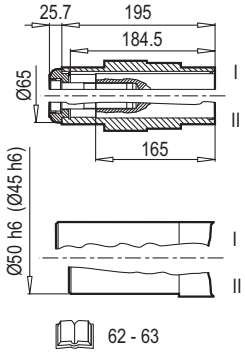




PD 42 DIN 5480



PD 42 Ç

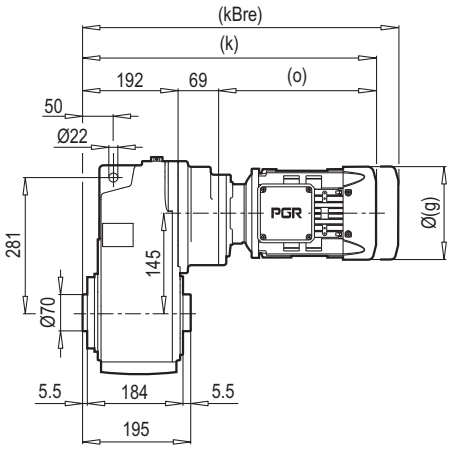


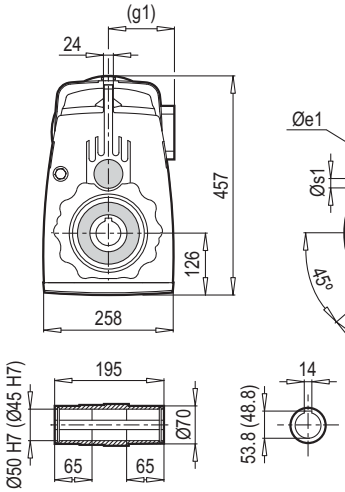
62 - 63

	90 S	90 L	100 L	112 M	132 S	132 M	160 M/L	
g	193	193	217	232	279	279	323	
g1	151	151	160	168	182	182	200	
k/k1	457/567	477/587	505/615	550/660	557/667	592/702	697/807	
kBre/k1Bre	530/640	550/660	586/696	630/740	665/775	733/843	849/959	
o	265	285	313	358	365	400	505	

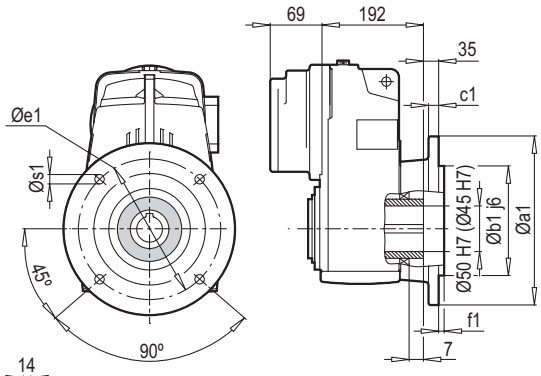
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 43



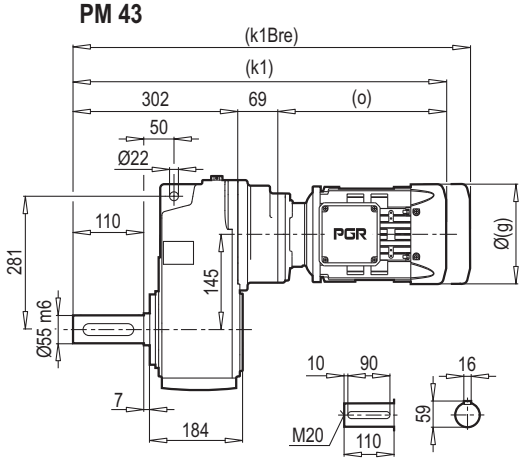


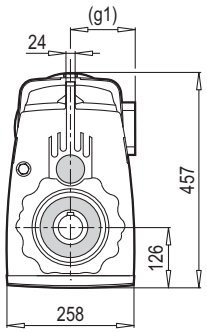
PD 43 B5



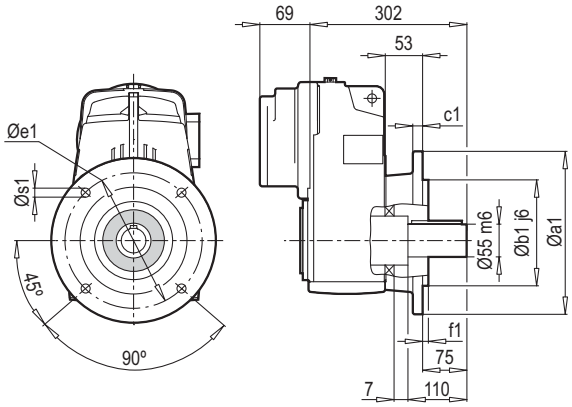
a1	b1	c1	e1	f1	s1
300	230	20	265	4	4x14

PM 43

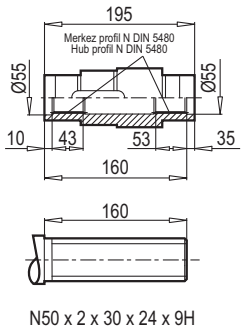




PM 43 B5

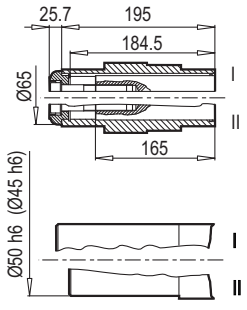


PD 43 DIN 5480



N50 x 2 x 30 x 24 x 9H

PD 43 Ç

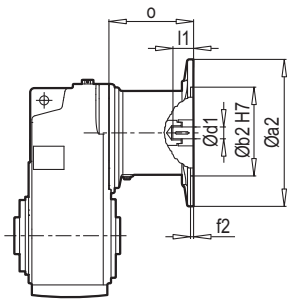


62 - 63

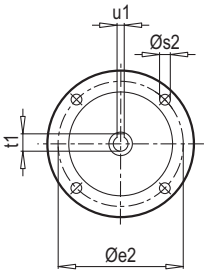
	71 M	80 M	90 S	90 L	100 L	112 M		
g	140	159	193	193	217	232		
g1	119	127	151	151	160	168		
k/k1	497/607	523/633	546/656	566/676	594/704	639/749		
kBre/k1Bre	557/667	585/695	619/729	639/749	675/785	719/829		
o	236	262	285	305	333	378		

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

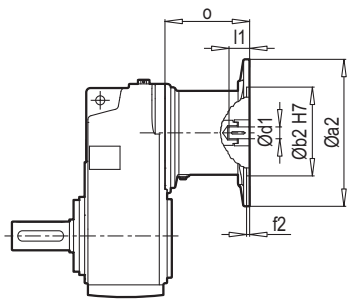
PD 42
PD 43



IEC



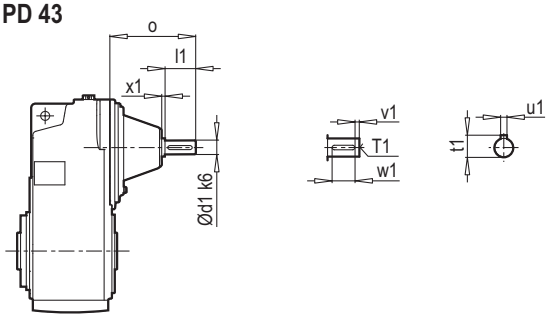
PM 42
PM 43



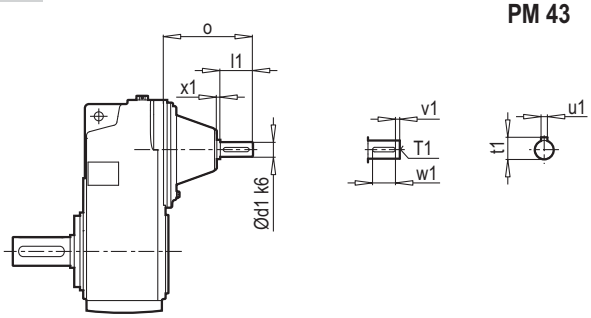
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PD/PM 42 o	PD/PM 43 o
PD/PM 43	71	160	110	130	4	M8	14	30	16.3	5	-	88
PD/PM 43	80	200	130	165	4	M10	19	40	21.8	6	-	107
PD/PM 42-43	90	200	130	165	4	M10	24	50	27.3	8	109	107
PD/PM 42-43	100	250	180	215	5	M12	28	60	31.3	8	133	124
PD/PM 42-43	112	250	180	215	5	M12	28	60	31.3	8	133	124
PD/PM 42	132	300	230	265	5	M12	38	80	41.3	10	190	-
PD/PM 42	160	350	250	300	6	M16	42	110	45.3	12	194	-

~ Kg		
IEC	PD/PM 42	PD/PM 43
71	-	81
80	-	85
90	73	85
100	80	89
112	80	89
132	95	-
160	105	-

PD 42
PD 43



W

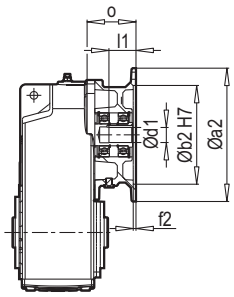


PM 42
PM 43

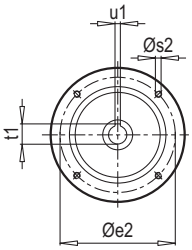
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 42	38	8	80	213	M12	41	10	5	70
PD/PM 43	24	8	50	172	M8	27	8	5	40

~ Kg	
PD/PM 42	78
PD/PM 43	83

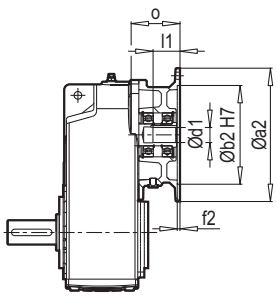
PD 42
PD 43



PAM B5/B14



PM 42
PM 43



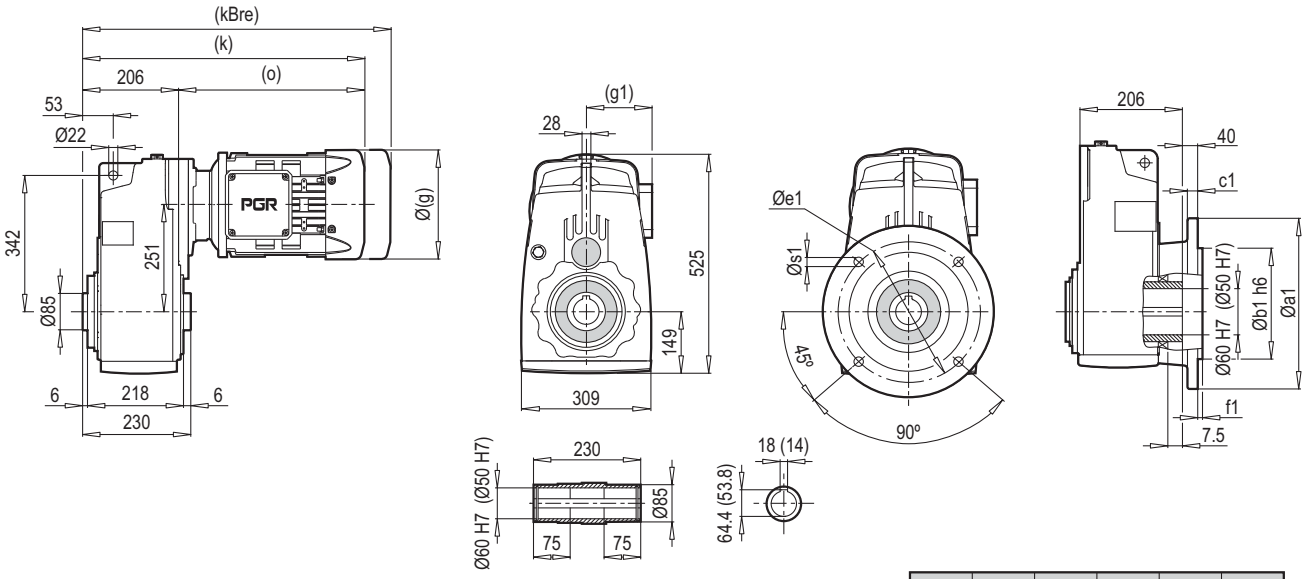
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 43	71	160	110	130	4.0	M8	14	30	16.3	5	88
PD/PM 43	80	200	130	165	4.0	M10	19	40	21.8	6	72
PD/PM 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	72
PD/PM 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 42-43	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 42	132	300	230	265	5.0	M12	38	80	41.3	10	94
PD/PM 42	160	350	250	300	6.0	M16	42	110	45.3	12	120

~ Kg		
PAM B5	PD/PM 42	PD/PM 43
71	-	77
80	-	78
90	66	78
100	67	79
112	67	79
132	76	-
160	84	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 43	71	105	70	85	4	7	14	30	16.3	5	55
PD/PM 43	80	120	80	100	4	7	19	40	21.8	6	72
PD/PM 42-43	90	140	95	115	4	9	24	50	27.3	8	72
PD/PM 42-43	100	160	110	130	5	9	28	60	31.3	8	75
PD/PM 42-43	112	160	110	130	5	9	28	60	31.3	8	75
PD/PM 42	132	200	130	165	5	11	38	80	41.3	10	94

~ Kg		
PAM B14	PD/PM 42	PD/PM 43
71	-	75
80	-	76
90	65	76
100	66	78
112	66	78
132	71	-

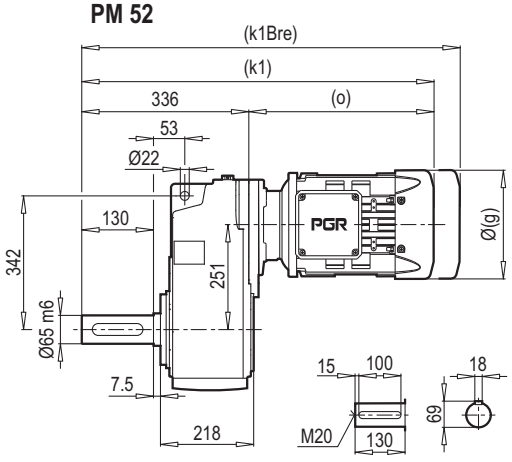
PD 52



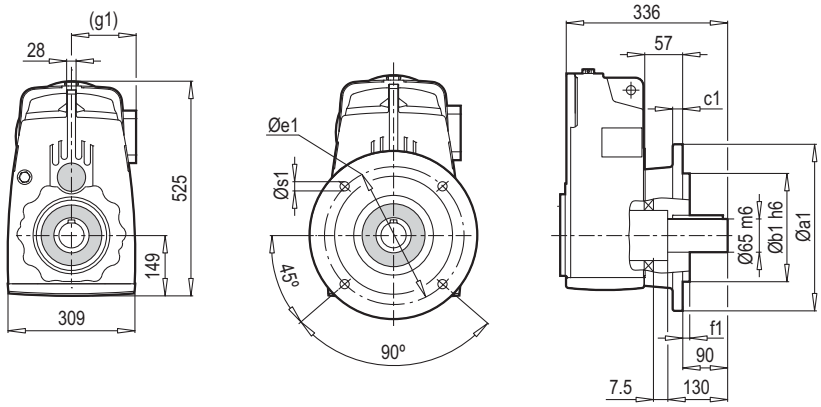
PD 52 B5

a1	b1	c1	e1	f1	s1
350	250	20	300	5	4x18

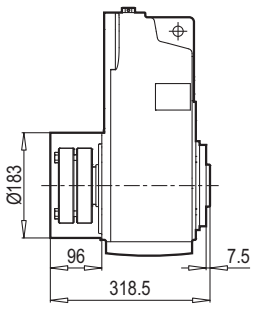
PM 52

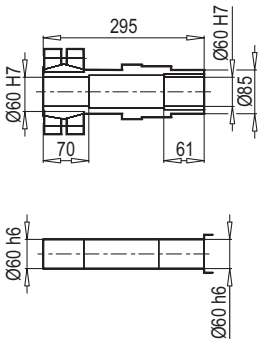


PM 52 B5

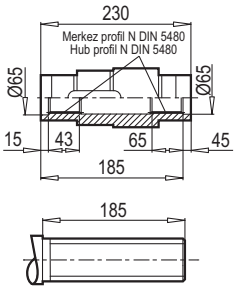


PD 52 KS



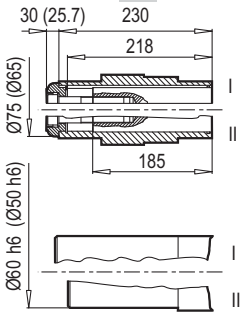


PD 52 DIN 5480



N60 x 2 x 30 x 28 x 9H

PD 52 Ç

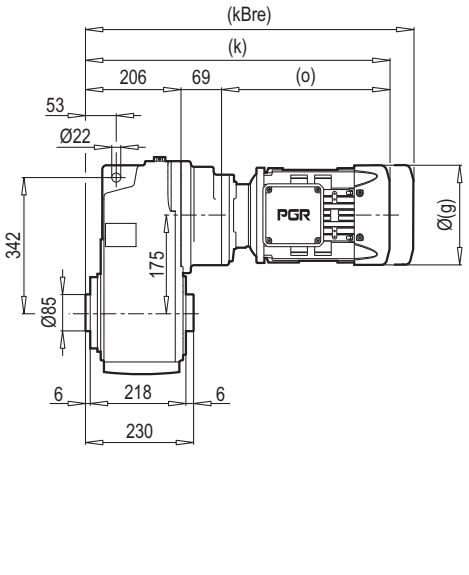


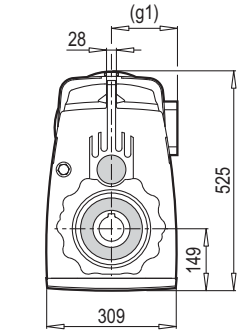
62 - 63

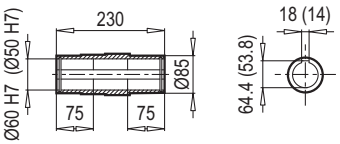
	90 S	90 L	100 L	112 M	132 S	132 M	160 M/L	180 M/L
g	193	193	217	232	279	279	323	370
g1	151	151	160	168	182	182	200	248
k/k1	471/601	491/621	519/649	564/694	571/701	606/736	711/841	785/915
kBre/k1Bre	544/674	564/694	600/730	644/774	679/809	747/877	863/993	947/1077
o	265	285	313	358	365	400	505	579

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

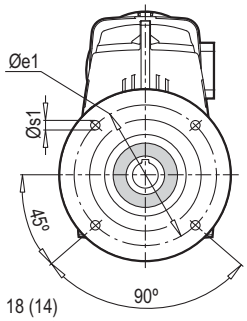
PD 53

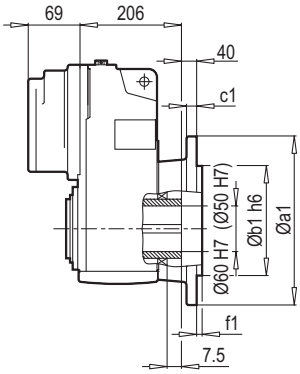






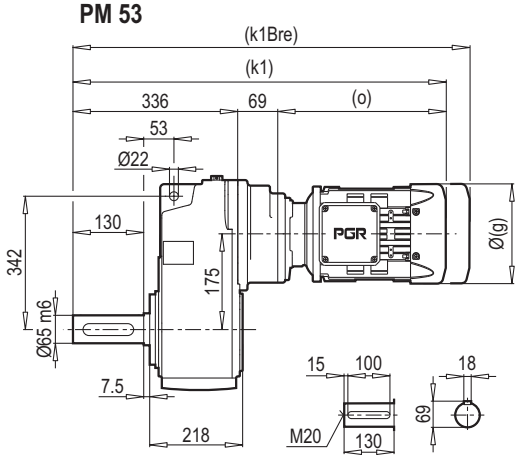
PD 53 B5

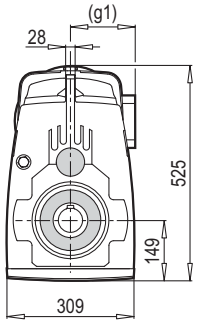




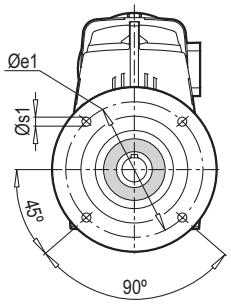
a1	b1	c1	e1	f1	s1
350	250	20	300	5	4x18

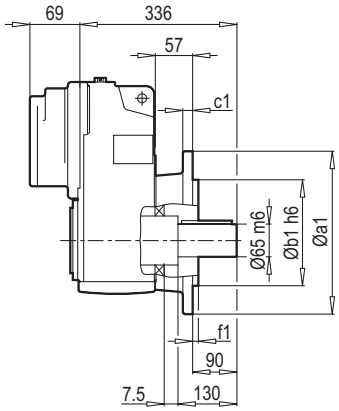
PM 53



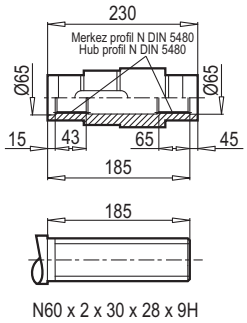


PM 53 B5



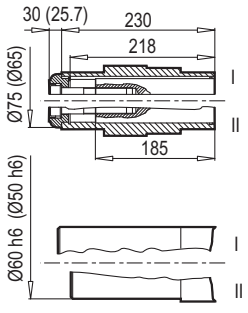


PD 53 DIN 5480



N60 x 2 x 30 x 28 x 9H

PD 53 Ç



62 - 63

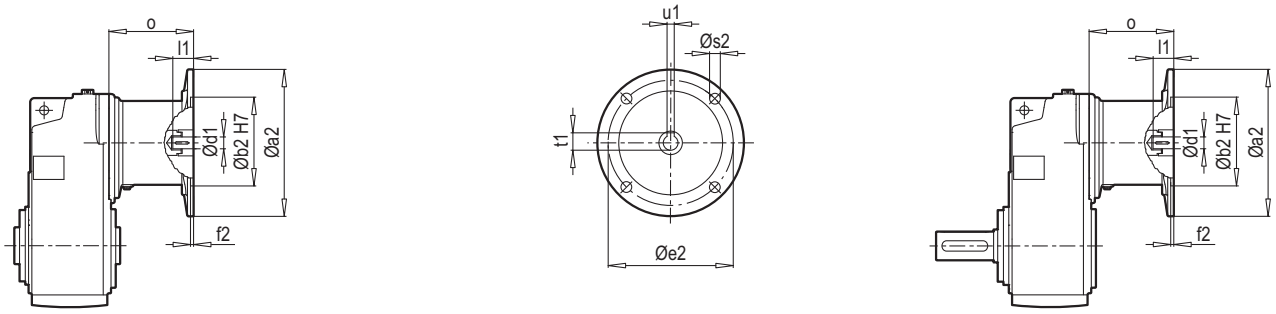
	80 M	90 S	90 L	100 L	112 M			
g	159	193	193	217	232			
g1	127	151	151	160	168			
k/k1	537/667	560/690	580/710	608/738	653/783			
kBre/k1Bre	599/729	633/763	653/783	689/819	733/863			
o	262	285	305	333	378			

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 52
PD 53

IEC

PM 52
PM 53



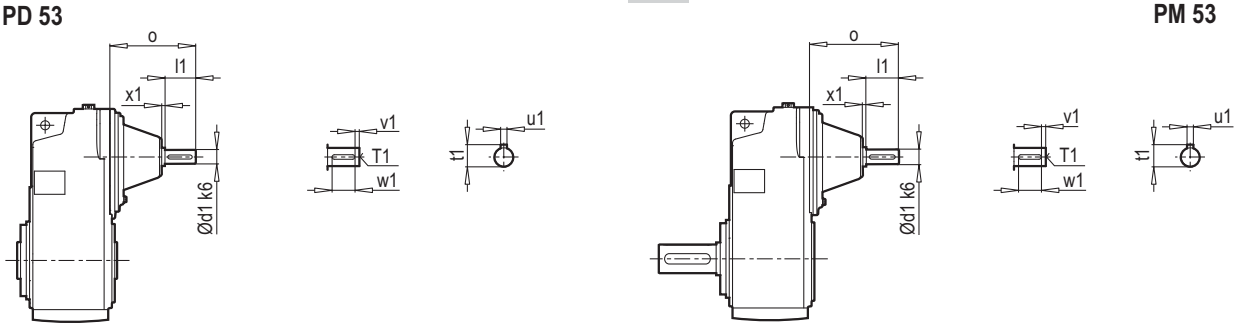
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PD/PM 52 o	PD/PM 53 o
PD/PM 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PD/PM 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PD/PM 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PD/PM 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PD/PM 52-53	112	250	180	215	5.0	M12	28	60	31.3	8	133	124
PD/PM 52	132	300	230	265	5.0	M12	38	80	41.3	10	190	-
PD/PM 52	160	350	250	300	6.0	M16	42	110	45.3	12	194	-
PD/PM 52	180	350	250	300	6.0	M16	48	110	51.8	14	194	-

~ Kg		
IEC	PD/PM 52	PD/PM 53
71	-	124
80	-	128
90	111	128
100	119	132
112	119	132
132	133	-
160	144	-
180	144	-

PD 52
PD 53

W

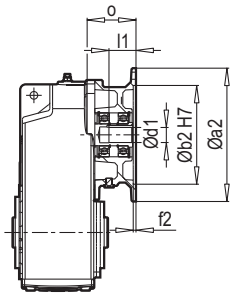
PM 52
PM 53



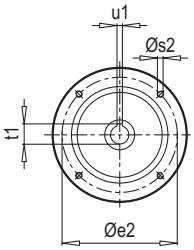
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 52	38	8	80	213	M12	41	10	5	70
PD/PM 53	24	8	50	172	M8	27	8	5	40

~ Kg	
PD/PM 52	117
PD/PM 53	126

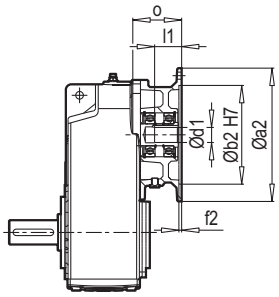
PD 52
PD 53



PAM B5/B14



PM 52
PM 53



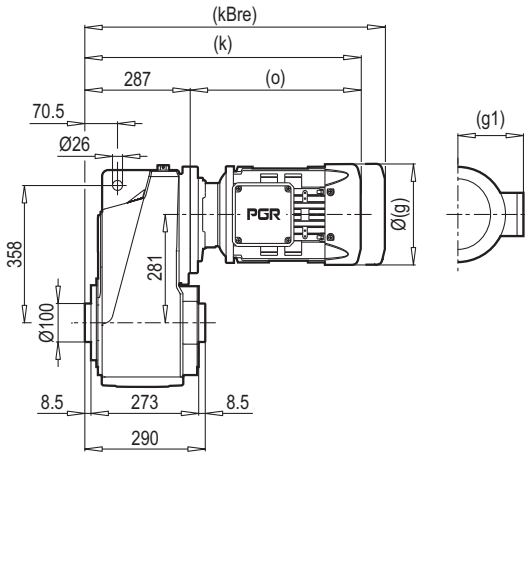
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 53	71	160	110	130	4.0	M8	14	30	16.3	5	88
PD/PM 53	80	200	130	165	4.0	M10	19	40	21.8	6	72
PD/PM 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	72
PD/PM 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 52-53	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 52	132	300	230	265	5.0	M12	38	80	41.3	10	94
PD/PM 52	160	350	250	300	6.0	M16	42	110	45.3	12	120
PD/PM 52	180	350	250	300	6.0	M16	48	110	51.8	14	120

~ Kg		
PAM B5	PD/PM 52	PD/PM 53
71	-	117
80	-	118
90	102	118
100	103	119
112	103	119
132	112	-
160	120	-
180	120	-

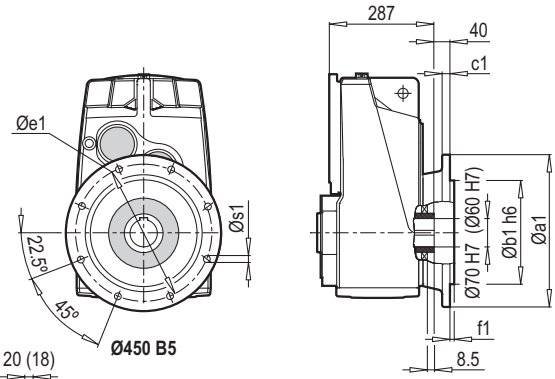
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 53	71	105	70	85	4.0	7	14	30	16.3	5	55
PD/PM 53	80	120	80	100	4.0	7	19	40	21.8	6	72
PD/PM 52-53	90	140	95	115	4.0	9	24	50	27.3	8	72
PD/PM 52-53	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 52-53	112	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 52	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg		
PAM B5	PD/PM 52	PD/PM 53
71	-	115
80	-	116
90	101	116
100	102	118
112	102	118
132	107	-

PD 62

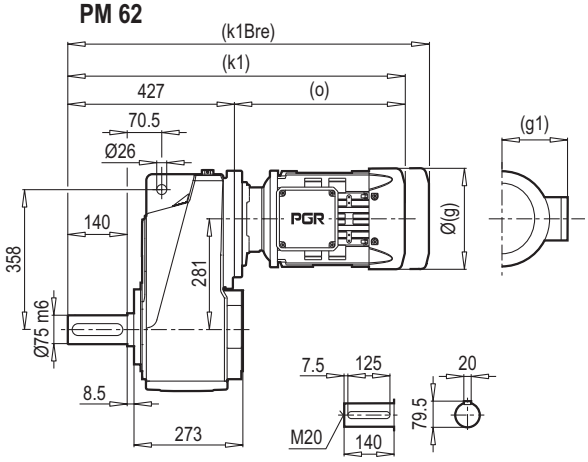


PD 62 B5

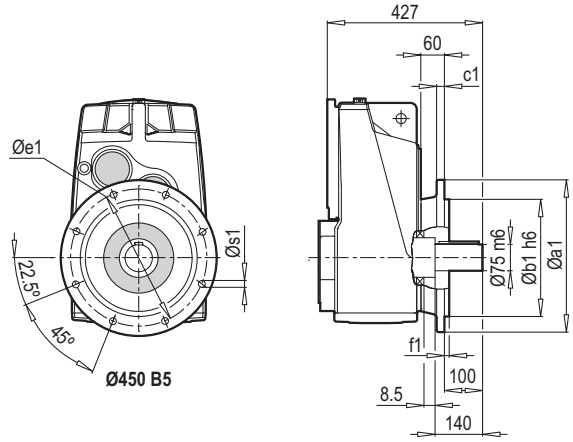


a1	b1	c1	e1	f1	s1
400	300	20	350	5	4x18
450	350	22	400	5	8x18

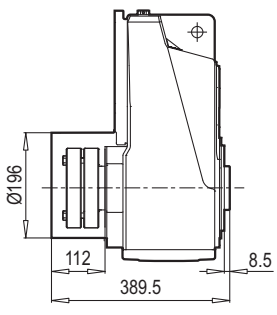
PM 62

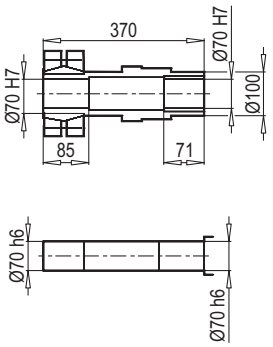


PM 62 B5

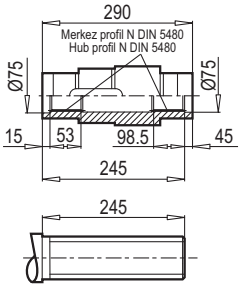


PD 62 KS



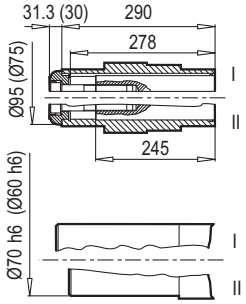


PD 62 DIN 5480



N70 x 2 x 30 x 34 x 9H

PD 62 Ç

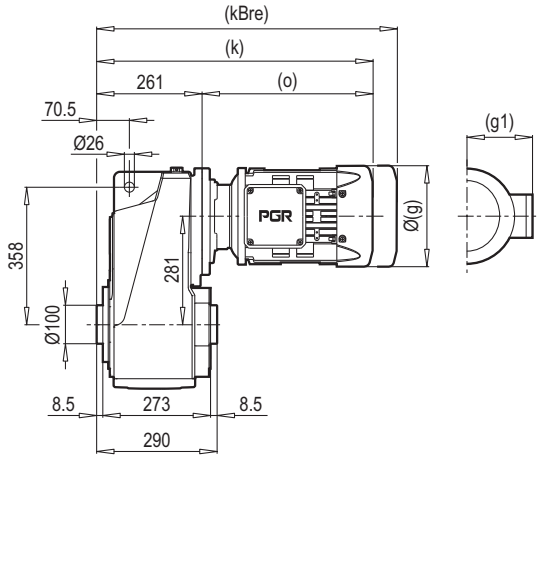


62 - 63

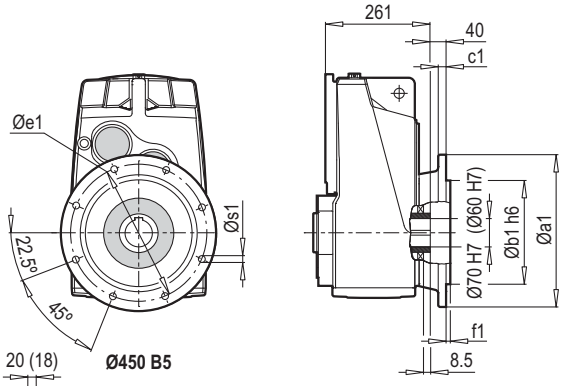
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k/k1	599/740	647/788	650/791	685/826	751/892	810/951	905/1046	987/1128
kBre/k1Bre	680/821	727/868	758/899	826/967	903/1044	972/1113	1052/1193	1159/1300
o	312	360	363	398	464	523	618	700

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 63

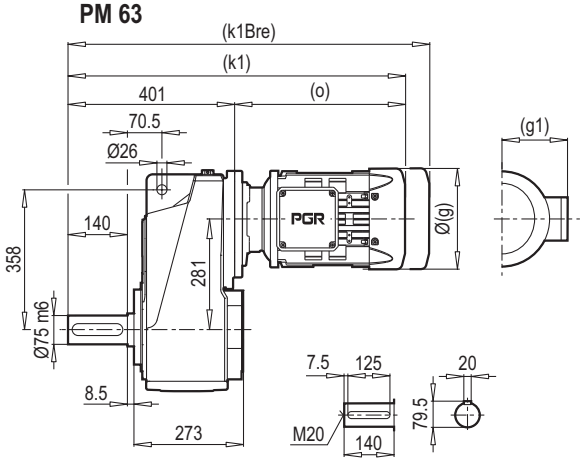


PD 63 B5

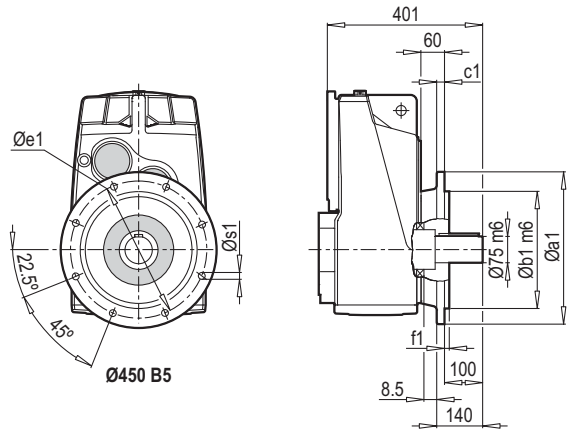


a1	b1	c1	e1	f1	s1
400	300	20	350	5	4x18
450	350	22	400	5	8x18

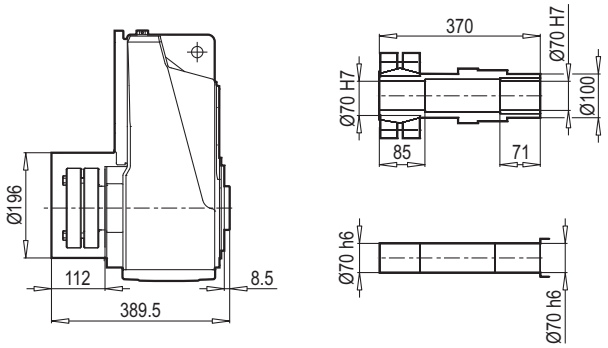
PM 63



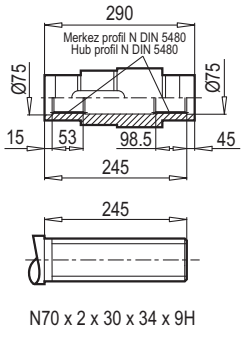
PM 63 B5



PD 63 KS

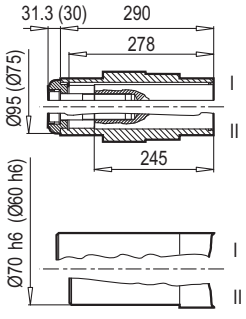


PD 63 DIN 5480



N70 x 2 x 30 x 34 x 9H

PD 63 Ç



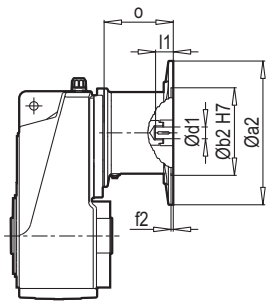
62 - 63

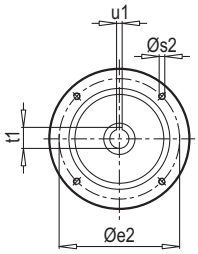
	90 S	90 L	100 L	112 M	132 S	132 M	160 M/L	180 M/L
g	193	193	217	232	279	279	323	370
g1	151	151	160	168	182	182	200	248
k/k1	526/666	546/686	574/714	619/759	626/766	661/801	766/906	840/980
kBre/k1Bre	599/739	619/759	655/795	699/839	734/874	802/942	918/1058	1002/1142
o	265	285	313	358	365	400	505	579

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

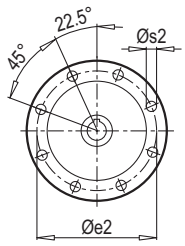
IEC

PD 62
PD 63



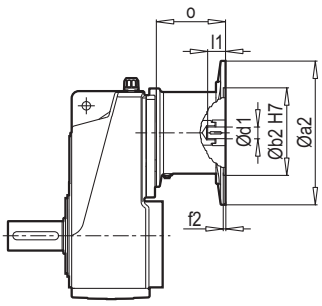


IEC 90...200



IEC 225...315

PM 62
PM 63

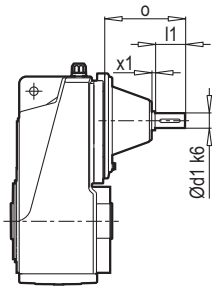


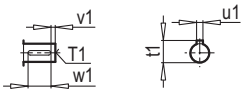
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PD/PM 62 o	PD/PM 63 o
PD/PM 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	109
PD/PM 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	127	133
PD/PM 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	127	133
PD/PM 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	177	190
PD/PM 62-63	160	350	250	300	6.0	M16	42	110	45.3	12	266	194
PD/PM 62-63	180	350	250	300	6.0	M16	48	110	51.8	14	266	194
PD/PM 62	200	400	300	350	6.0	M16	55	110	59.3	16	229	-
PD/PM 62	225	450	350	400	6.0	M16	60	140	64.4	18	303	-

~ Kg		
IEC	PD/PM 62	PD/PM 63
90	-	196
100	213	204
112	213	204
132	227	218
160	253	229
180	253	229
200	268	-
225	284	-

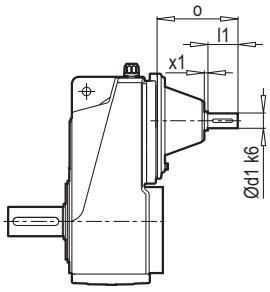
W

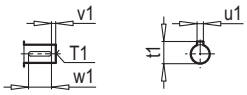
PD 62
PD 63





PM 62
PM 63

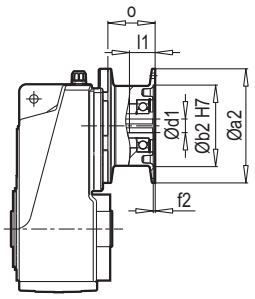




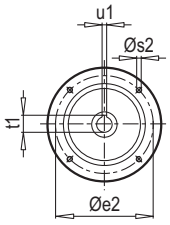
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 62	42	8	110	288	M16	45	12	10	90
PD/PM 63	38	8	80	213	M12	41	10	5	70

~ Kg	
PD/PM 62	226
PD/PM 63	202

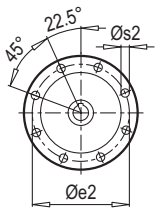
PD 62
PD 63



PAM B5/B14

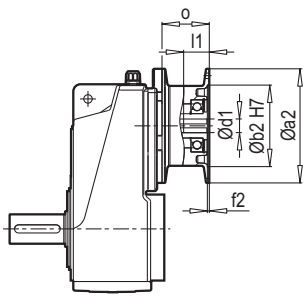


PAM 90...200



PAM 225...315

PM 62
PM 63



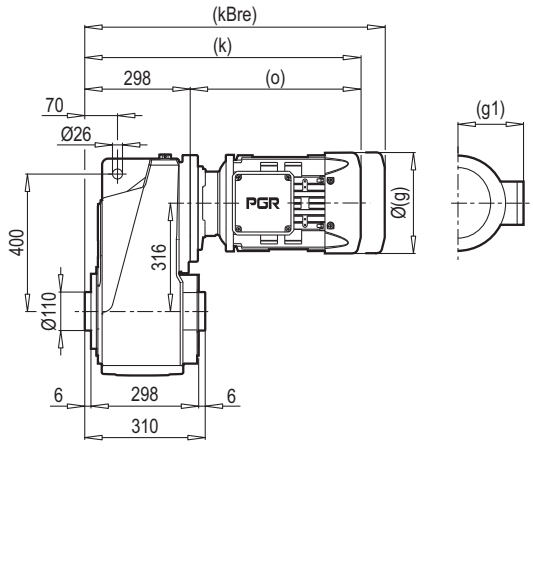
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o (62)	o (63)
PD/PM 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	72
PD/PM 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PD/PM 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	75	75
PD/PM 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	110	94
PD/PM 62-63	160	350	250	300	6.0	M16	42	110	45.3	12	145	120
PD/PM 62-63	180	350	250	300	6.0	M16	48	110	51.8	14	145	120
PD/PM 62	200	400	300	350	6.0	M16	55	110	59.3	16	157	-
PD/PM 62	225	450	350	400	6.0	M16	60	140	64.4	18	183	-

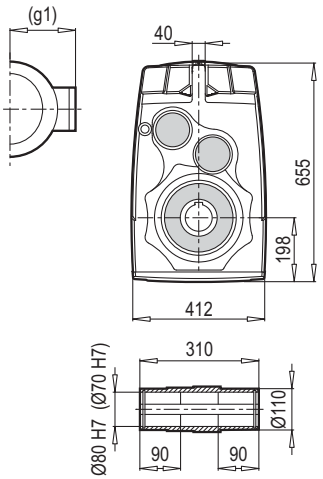
~ Kg		
PAM B5	PD/PM 62	PD/PM 63
90	-	183
100	190	184
112	190	184
132	201	193
160	218	201
180	218	201
200	225	-
225	225	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o (62)	o (63)
PD/PM 63	90	140	95	115	4.0	9	24	50	27.3	8	75	75
PD/PM 62-63	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PD/PM 62-63	112	160	110	130	5.0	9	28	60	31.3	8	110	94
PD/PM 62-63	132	200	130	165	5.0	11	38	80	41.3	10	110	94

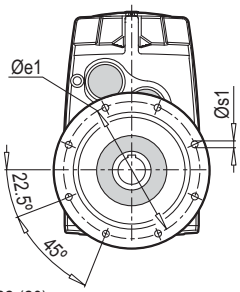
~ Kg		
PAM B14	PD/PM 62	PD/PM 63
90	-	182
100	189	183
112	189	183
132	196	188

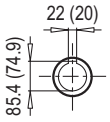
PD 72

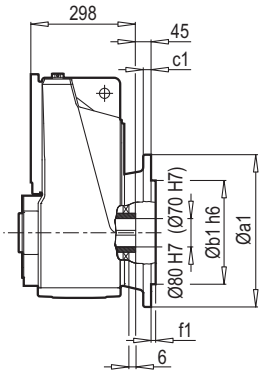




PD 72 B5

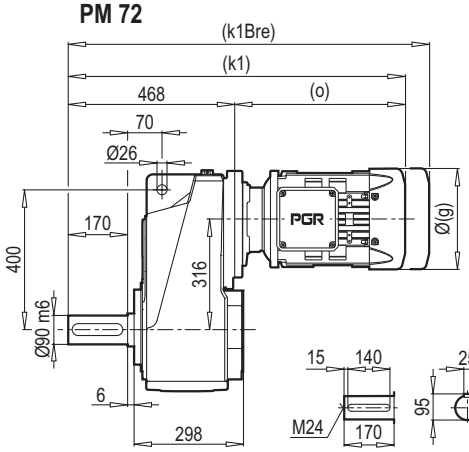


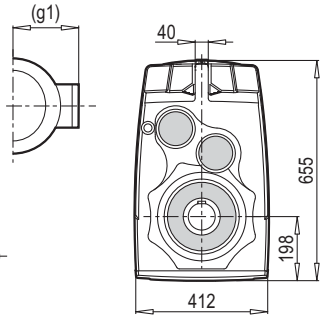




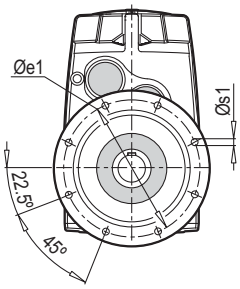
a1	b1	c1	e1	f1	s1
450	350	22	400	5	8x18
550	450	28	500	5	8x18

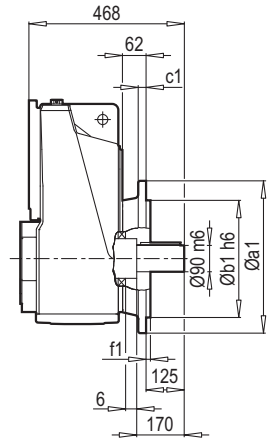
PM 72



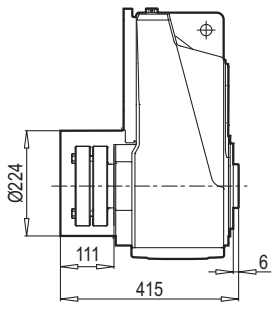


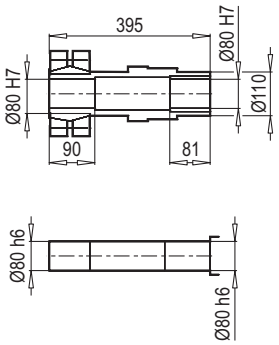
PM 72 B5



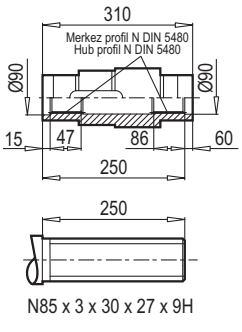


PD 72 KS

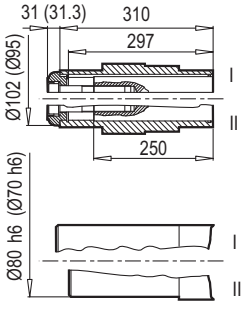




PD 72 DIN 5480



PD 72 Ç

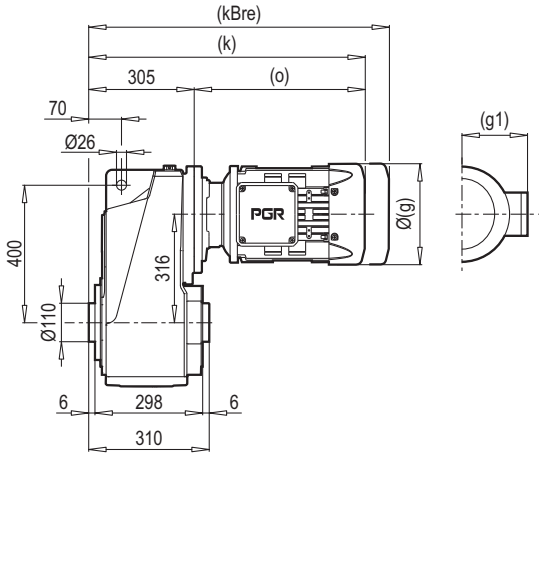


62 - 63

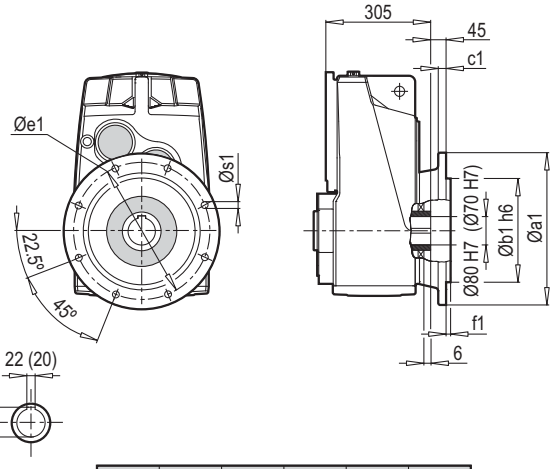
	132 M	160 M/L	180 M/L	200 L	225 S/M			
g	279	323	370	415	456			
g1	182	200	248	260	260			
k/k1	696/866	762/932	821/991	916/1086	998/1168			
kBre/k1Bre	837/1007	914/1084	983/1153	1063/1233	1170/1340			
o	398	464	523	618	700			

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 73

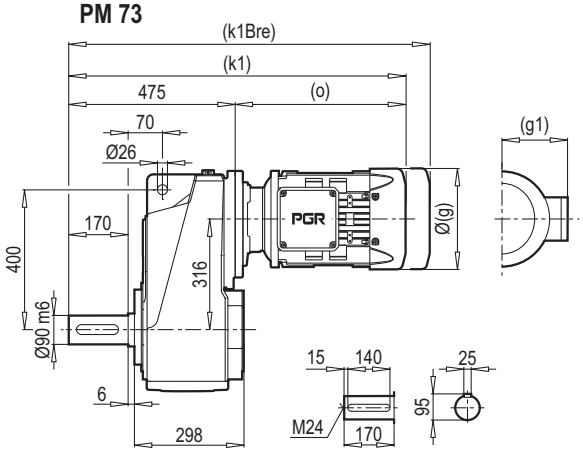


PD 73 B5

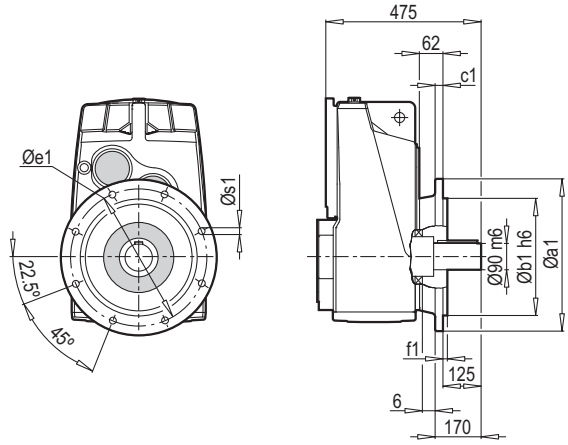


a1	b1	c1	e1	f1	s1
450	350	22	400	5	8x18
550	450	28	500	5	8x18

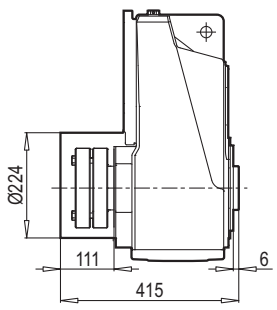
PM 73

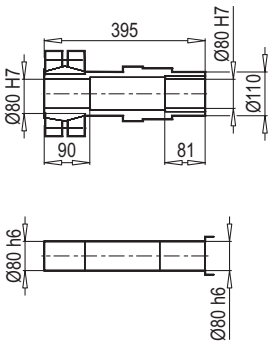


PM 73 B5

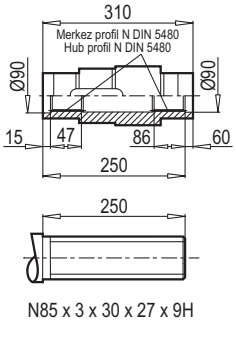


PD 73 KS



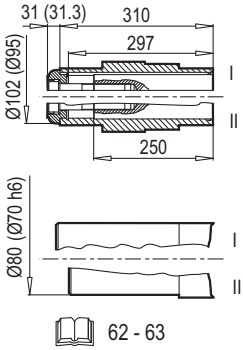


PD 73 DIN 5480



N85 x 3 x 30 x 27 x 9H

PD 73 Ç



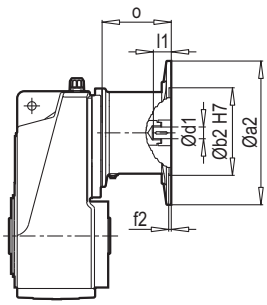
62 - 63

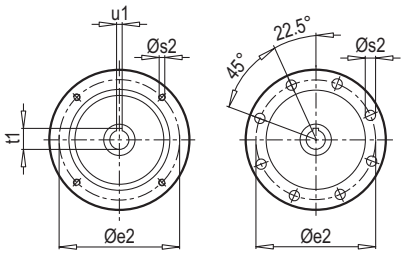
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k/k1	617/787	665/835	668/838	703/873	769/939	828/998	923/1093	1005/1175
kBre/k1Bre	698/868	745/915	776/946	844/1014	921/1091	990/1160	1070/1240	1177/1347
o	312	360	363	398	464	523	618	700

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

IEC

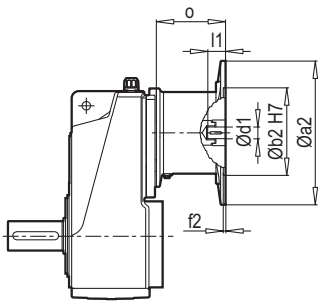
PD 72
PD 73





IEC 100...200 IEC 225...315

PM 72
PM 73

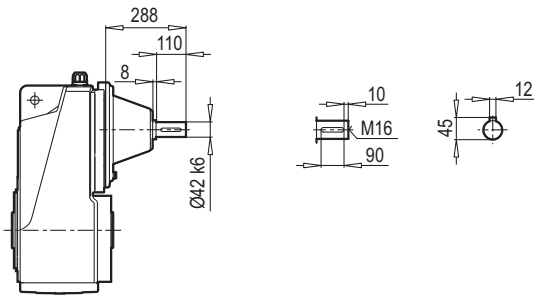


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 73	100	250	180	215	5.0	M12	28	60	31.3	8	127
PD/PM 73	112	250	180	215	5.0	M12	28	60	31.3	8	127
PD/PM 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	177
PD/PM 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	266
PD/PM 72-73	180	350	250	300	6.0	M16	48	110	51.8	14	266
PD/PM 72-73	200	400	300	350	6.0	M16	55	110	59.3	16	229
PD/PM 72-73	225	450	350	400	6.0	M16	60	140	64.4	18	303

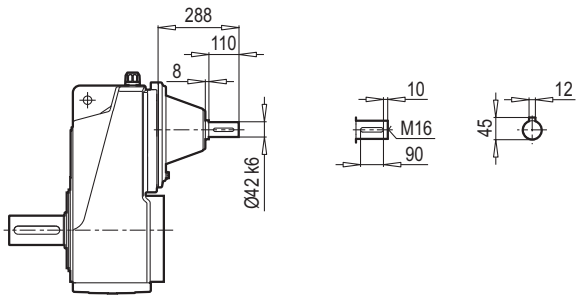
~ Kg		
IEC	PD/PM 72	PD/PM 73
100	-	287
112	-	287
132	293	300
160	319	327
180	319	327
200	334	341
225	350	357

W

PD 72
PD 73

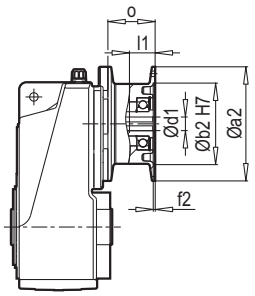


PM 72
PM 73

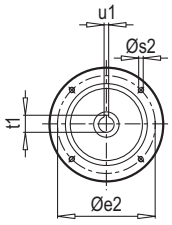


~ Kg	
PD/PM 72	292
PD/PM 73	299

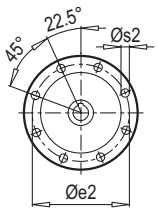
PD 72
PD 73



PAM B5/B14

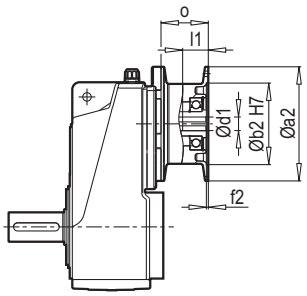


PAM 90...200



PAM 225...315

PM 72
PM 73



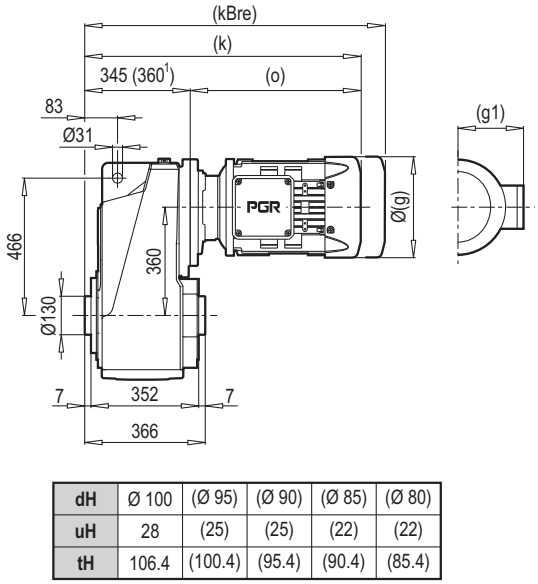
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 73	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 73	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	110
PD/PM 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	145
PD/PM 72-73	180	350	250	300	6.0	M16	48	110	51.8	14	145
PD/PM 72-73	200	400	300	350	6.0	M16	55	110	59.3	16	157
PD/PM 72-73	225	450	350	400	6.0	M16	60	140	64.4	18	183

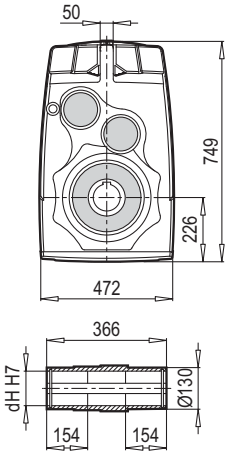
~ Kg		
PAM B5	PD/PM 72	PD/PM 73
100	-	260
112	-	260
132	264	271
160	281	288
180	281	288
200	288	295
225	298	305

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 73	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 73	112	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 72-73	132	200	130	165	5.0	11	38	80	41.3	10	110

~ Kg		
PAM B14	PD/PM 72	PD/PM 73
100	-	259
112	-	259
132	259	266

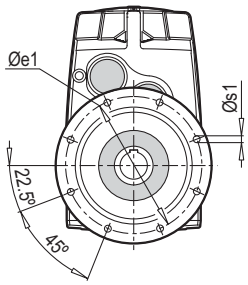
PD 82

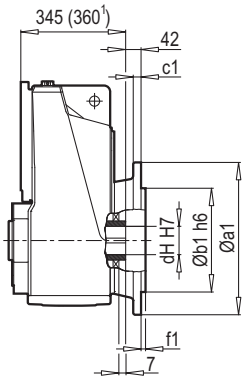




dH	Ø 100	(Ø 95)	(Ø 90)	(Ø 85)	(Ø 80)
uH	28	(25)	(25)	(22)	(22)
tH	106.4	(100.4)	(95.4)	(90.4)	(85.4)

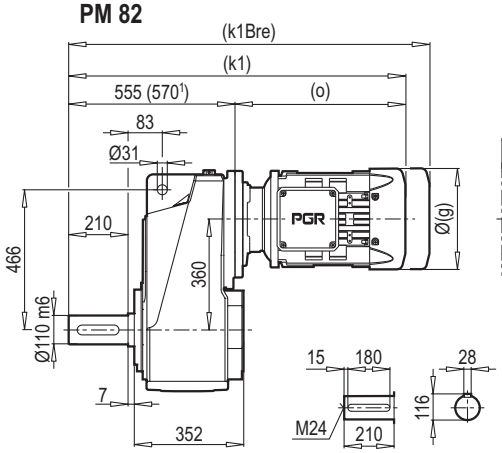
PD 82 B5

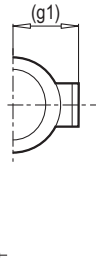


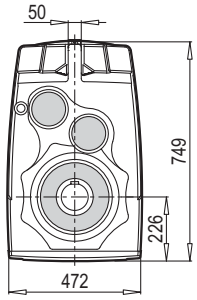


a1	b1	c1	e1	f1	s1
550	450	28	500	5	8x18

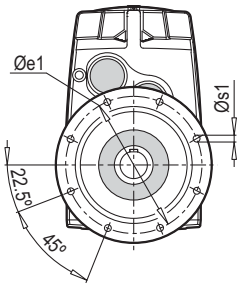
PM 82

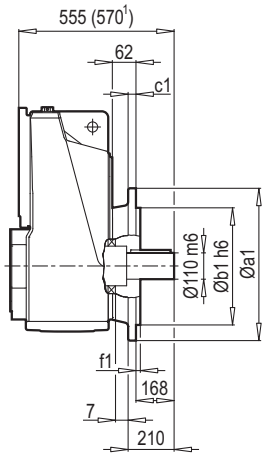




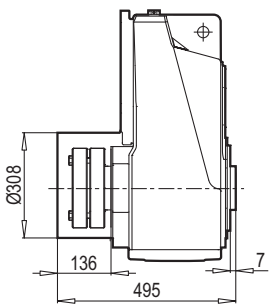


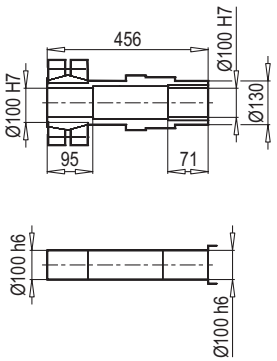
PM 82 B5



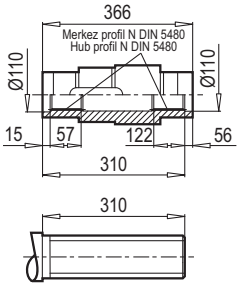


PD 82 KS



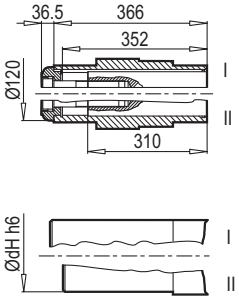


PD 82 DIN 5480



N105 x 3 x 30 x 34 x 9H

PD 82 Ç

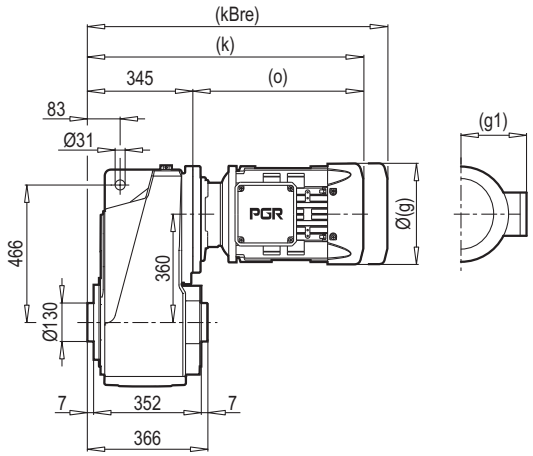


62 - 63

	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M [1)]	280 S [1)]	
g	279	323	370	415	456	495	527	
g1	182	200	248	260	260	392	367	
k/k1	743/953	809/1019	868/1078	963/1173	1045/1255	1004/1214	1259/1469	
kBre/k1Bre	884/1094	961/1171	1030/1240	1110/1320	1217/1427	1134/1344	-	
o	398	464	523	618	700	644	914	

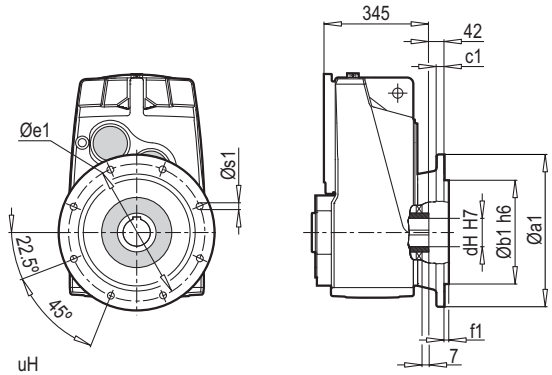
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 83



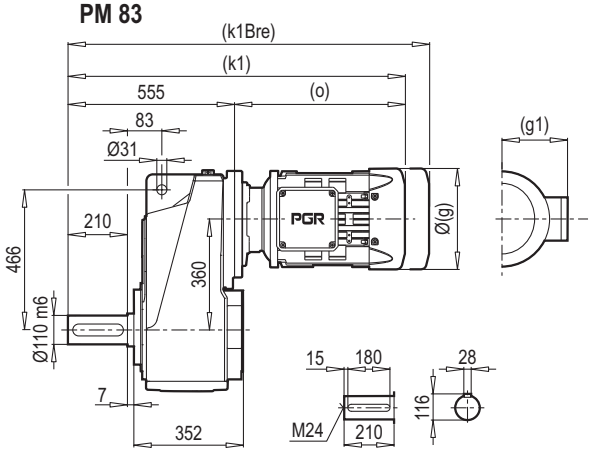
dH	Ø 100	(Ø 95)	(Ø 90)	(Ø 85)	(Ø 80)
uH	28	(25)	(25)	(22)	(22)
tH	106.4	(100.4)	(95.4)	(90.4)	(85.4)

PD 83 B5

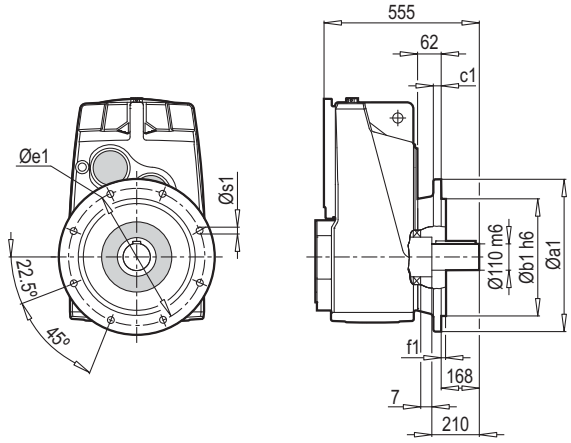


a1	b1	c1	e1	f1	s1
550	450	28	500	5	8x18

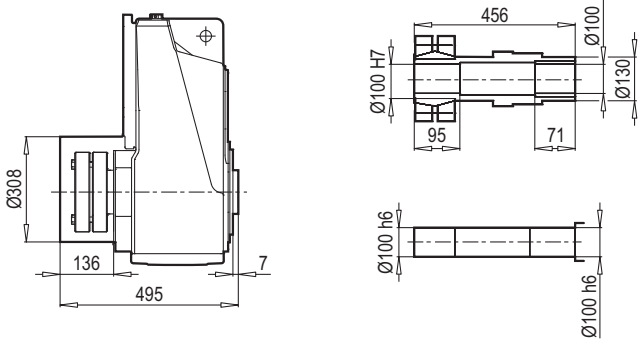
PM 83



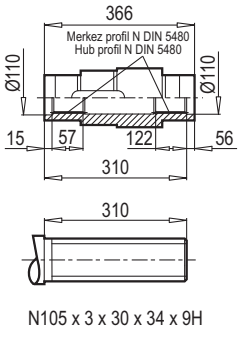
PM 83 B5



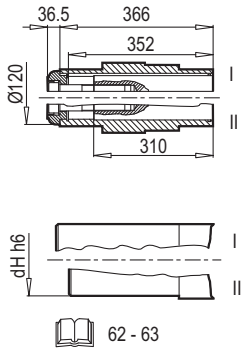
PD 83 KS



PD 83 DIN 5480



PD 83 Ç



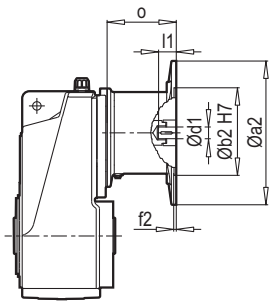
62 - 63

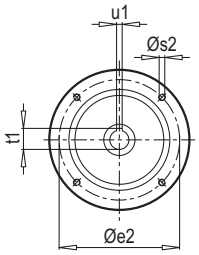
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k/k1	657/867	705/915	708/918	743/953	809/1019	868/1078	963/1173	1045/1255
kBre/k1Bre	738/948	785/995	816/1026	884/1094	961/1171	1030/1240	1110/1320	1217/1427
o	312	360	363	398	464	523	618	700

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

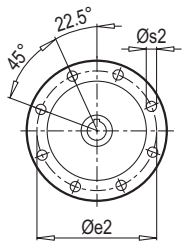
IEC

PD 82
PD 83



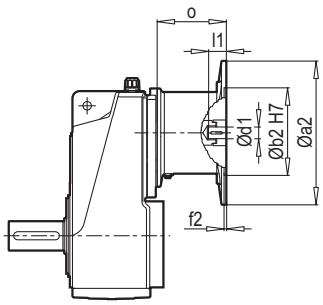


IEC 100...200



IEC 225...315

PM 82
PM 83

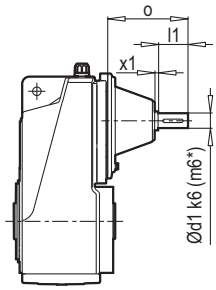


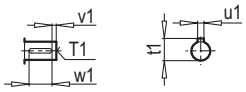
Tip / Type	IEC	Øa2	Øb2	Øe2	f1	Øs2	Ød1	l1	t1	u1	o
PD/PM 83	100	250	180	215	5.0	M12	28	60	31.3	8	127
PD/PM 83	112	250	180	215	5.0	M12	28	60	31.3	8	127
PD/PM 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	177
PD/PM 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	266
PD/PM 82-83	180	350	250	300	6.0	M16	48	110	51.8	14	266
PD/PM 82-83	200	400	300	350	6.0	M16	55	110	59.3	16	229
PD/PM 82-83	225	450	350	400	6.0	M16	60	140	64.4	18	303
PD/PM 82	250	550	450	500	6.0	M16	65	140	69.4	18	304
PD/PM 82	280	550	450	500	6.0	M16	75	140	79.9	20	304

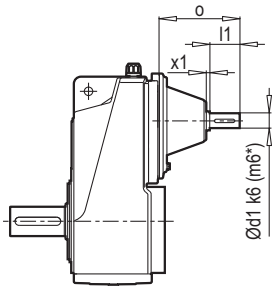
~ Kg		
IEC	PD/PM 82	PD/PM 83
100	-	422
112	-	422
132	431	436
160	458	462
180	458	462
200	473	477
225	489	493
250	547	-
280	547	-

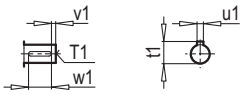
W

PD 82
PD 83







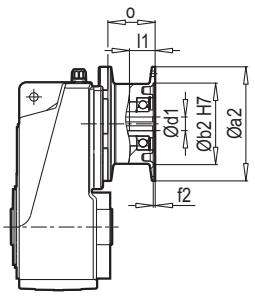


PM 82
PM 83

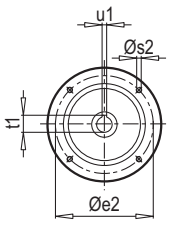
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 82	65*	12	140	397	M20	69	18	15	110
PD/PM 83	42	8	110	288	M16	45	12	10	90

~ Kg	
PD/PM 82	510
PD/PM 83	435

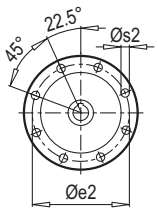
PD 82
PD 83



PAM B5/B14

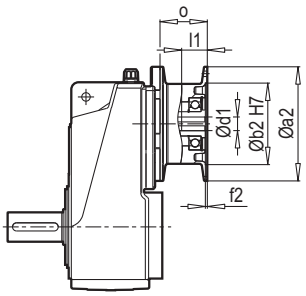


PAM 100...200



PAM 225...315

PM 82
PM 83



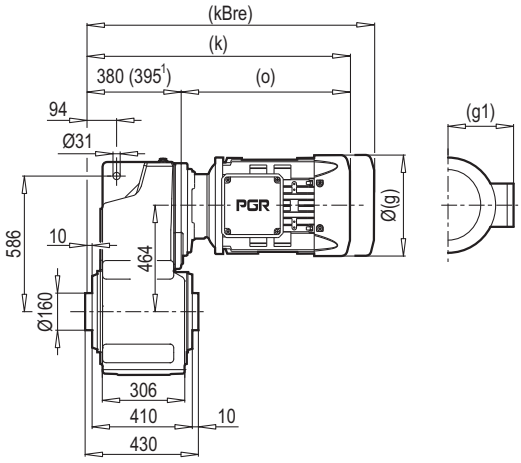
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 83	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 83	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	110
PD/PM 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	145
PD/PM 82-83	180	350	250	300	6.0	M16	48	110	51.8	14	145
PD/PM 82-83	200	400	300	350	6.0	M16	55	110	59.3	16	157
PD/PM 82-83	225	450	350	400	6.0	M16	60	140	64.4	18	183
PD/PM 82	250	550	450	500	6.0	M16	65	140	69.4	18	202
PD/PM 82	280	550	450	500	6.0	M16	75	140	79.9	20	202

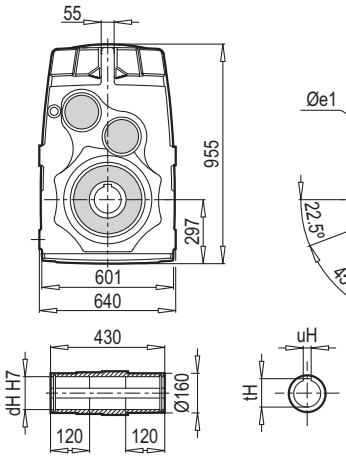
~ Kg		
PAM B5	PD/PM 82	PD/PM 83
100	-	385
112	-	385
132	392	396
160	409	413
180	409	413
200	416	419
225	426	430
250	486	-
280	486	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 83	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 83	112	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 82-83	132	200	130	165	5.0	11	38	80	41.3	10	110

~ Kg		
PAM B14	PD/PM 82	PD/PM 83
100	-	384
112	-	384
132	387	391

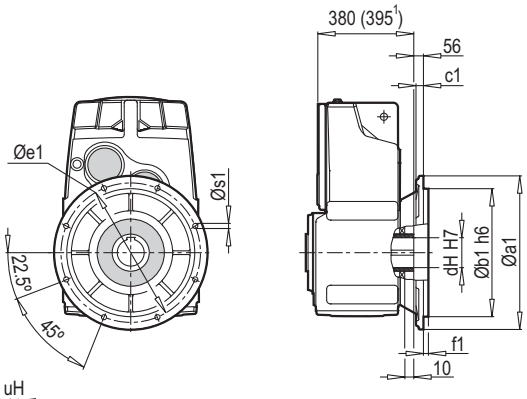
PD 92





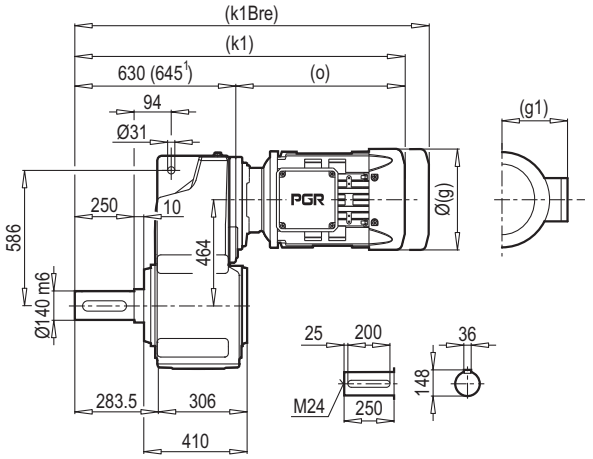
dH	Ø 120	(Ø 125)	(Ø 110)	(Ø 100)
uH	32	(32)	(28)	(28)
tH	127.4	(132.4)	(116.4)	(106.4)

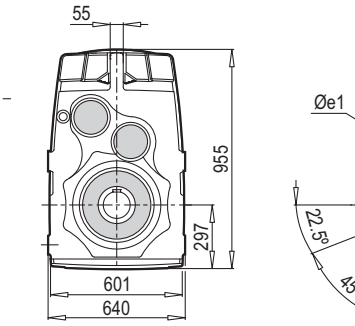
PD 92 B5



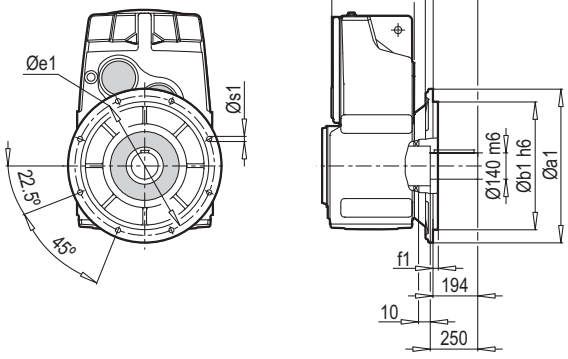
a1	b1	c1	e1	f1	s1
660	550	32	600	6	8x22

PM 92

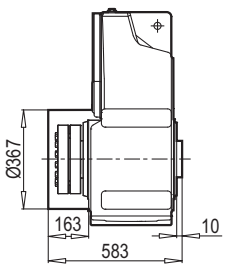


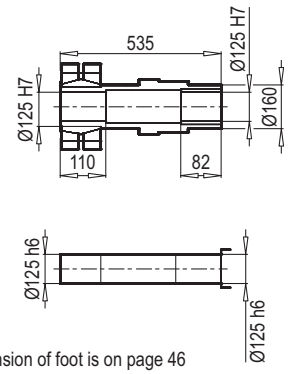


PM 92 B5

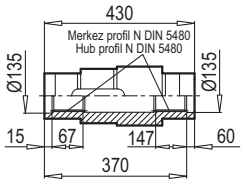


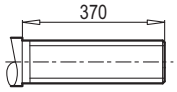
PD 92 KS





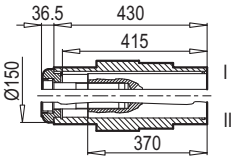
PD 92 DIN 5480

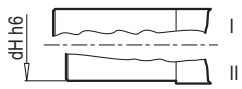




N130 x 5 x 30 x 24 x 9H

PD 92 Ç





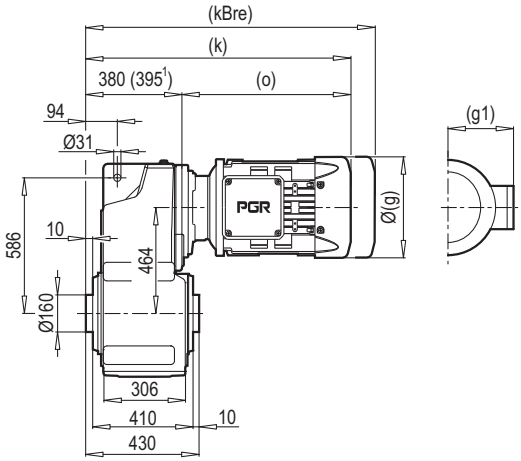
62 - 63

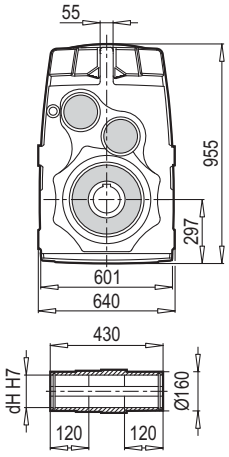
Ayak Delik Ölçüleri sayfa 46 / Dimension of foot is on page 46

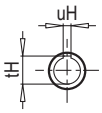
	200 L	225 S/M	250 M [1)]	280 S [1)]	280 M [1)]	315 S [1)]	315 M [1)]	
g	415	456	495	527	527	-	-	
g1	260	260	392	367	367	-	-	
k/k1	998/1248	1080/1330	1039/1289	1280/1530	1280/1530	-	-	
kBre/k1Bre	1145/1395	1252/1502	1169/1419	-	-	-	-	
o	618	700	644	885	885	-	-	

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 93

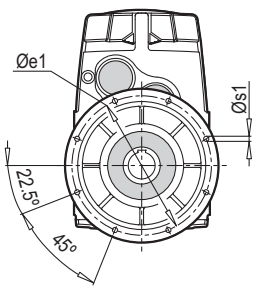


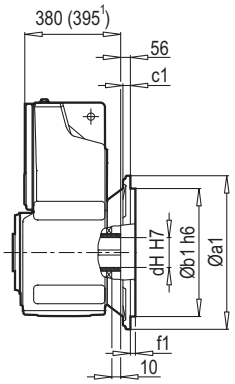




dH	Ø 120	(Ø 125)	(Ø 110)	(Ø 100)
uH	32	(32)	(28)	(28)
tH	127.4	(132.4)	(116.4)	(106.4)

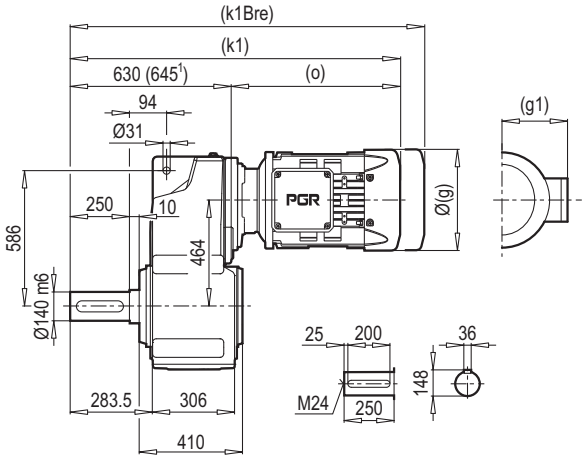
PD 93 B5

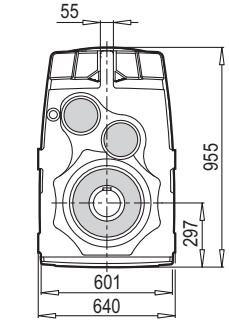




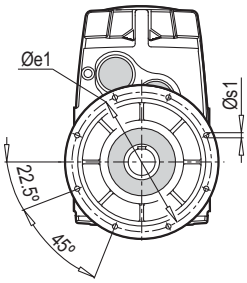
a1	b1	c1	e1	f1	s1
660	550	32	600	6	8x22

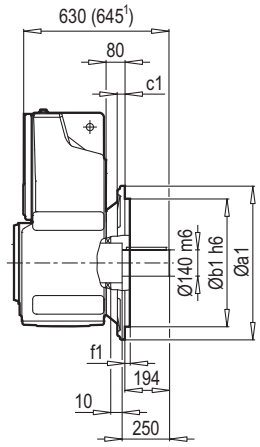
PM 93



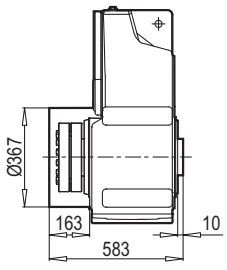


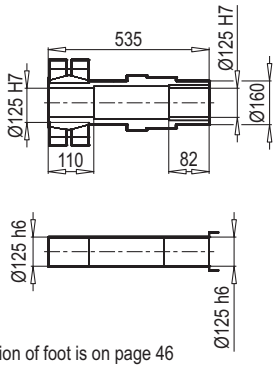
PM 93 B5



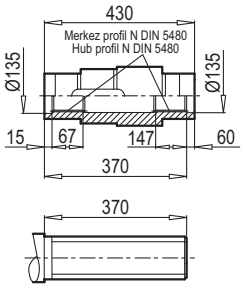


PD 93 KS



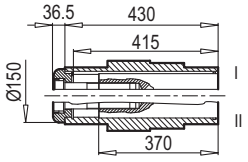


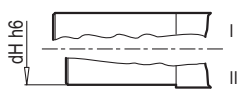
PD 93 DIN 5480



N130 x 5 x 30 x 24 x 9H

PD 93 Ç





62 - 63

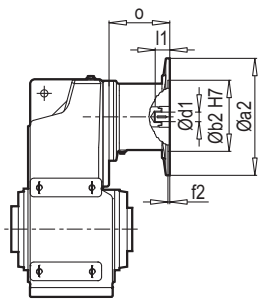
Ayak Delik Ölçüleri sayfa 46 / Dimension of foot is on page 46

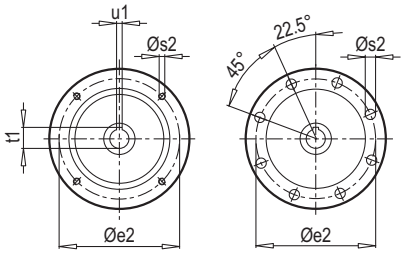
	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M [1)]	280 S [1)]
g	279	279	323	370	415	456	495	527
g1	182	182	200	248	260	260	392	367
k/k1	743/993	778/1028	844/1094	903/1153	998/1248	1080/1330	1039/1289	1280/1530
kBre/k1Bre	851/1101	919/1169	996/1246	1065/1315	1145/1395	1252/1502	1169/1419	-
o	363	398	464	523	618	700	644	885

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

IEC

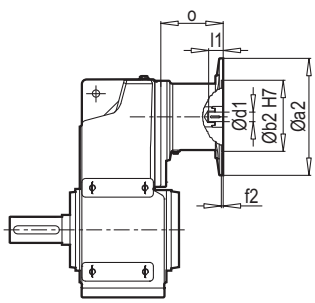
PD 92
PD 93





IEC 132...200 | IEC 225...315

PM 92
PM 93

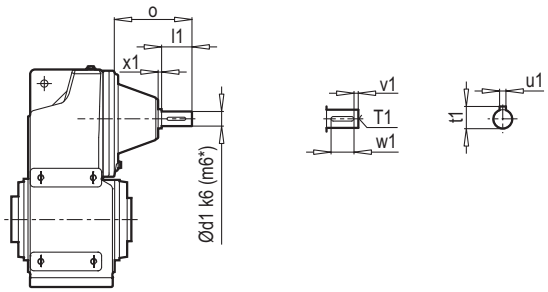


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 93	132	300	230	265	5.0	M12	38	80	41.3	10	177
PD/PM 93	160	350	250	300	6.0	M16	42	110	45.3	12	266
PD/PM 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	266
PD/PM 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	229
PD/PM 92-93	225	450	350	400	6.0	M16	60	140	64.4	18	303
PD/PM 92-93	250	550	450	500	6.0	M16	65	140	69.4	18	304
PD/PM 92-93	280	550	450	500	6.0	M16	75	140	79.9	20	304
PD/PM 92	315	660	550	600	7.0	M20	80	170	85.4	22	382

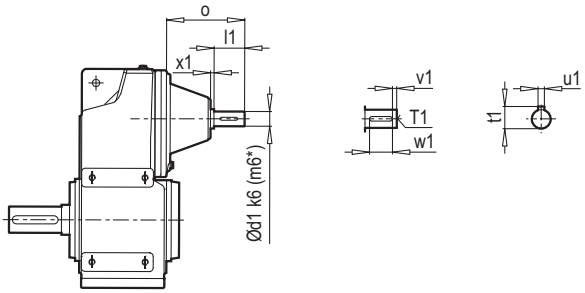
~ Kg		
IEC	PD/PM 92	PD/PM 93
132	-	756
160	-	782
180	777	782
200	792	797
225	808	813
250	866	871
280	866	871
315	951	-

W

PD 92
PD 93



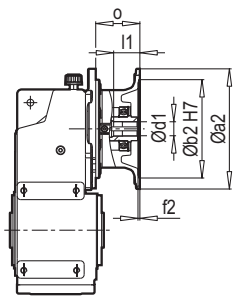
PM 92
PM 93



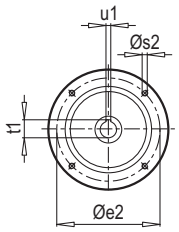
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PD/PM 92	65*	12	140	397	M20	69	18	15	110
PD/PM 93	42	8	110	288	M16	45	12	10	90

~ Kg	
PD/PM 92	829
PD/PM 93	755

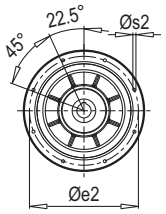
PD 92
PD 93



PAM B5/B14

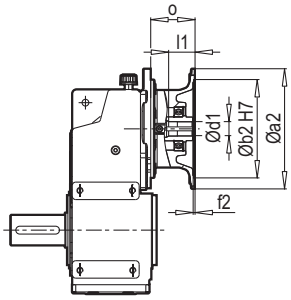


PAM 132...200



PAM 225...315

PM 92
PM 93



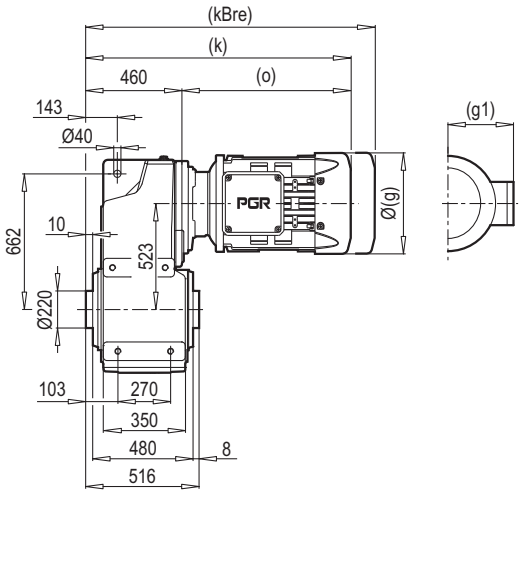
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 93	132	300	230	265	5.0	M12	38	80	41.3	10	110
PD/PM 93	160	350	250	300	6.0	M16	42	110	45.3	12	145
PD/PM 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	145
PD/PM 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	157
PD/PM 92-93	225	450	350	400	6.0	M16	60	140	64.4	18	183
PD/PM 92-93	250	550	450	500	6.0	M16	65	140	69.4	18	202
PD/PM 92-93	280	550	450	500	6.0	M16	75	140	79.9	20	202

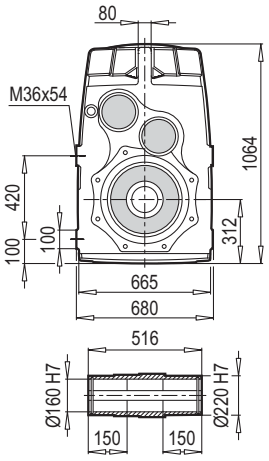
~ Kg		
PAM B5	PD/PM 92	PD/PM 93
132	-	698
160	-	715
180	710	715
200	717	722
225	727	722
250	787	792
280	787	792

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 93	132	200	130	165	5.0	11	38	80	41.3	10	110

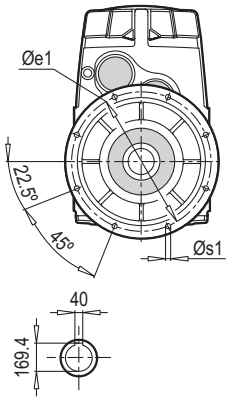
~ Kg		
PAM B14	PD/PM 92	PD/PM 93
132	-	693

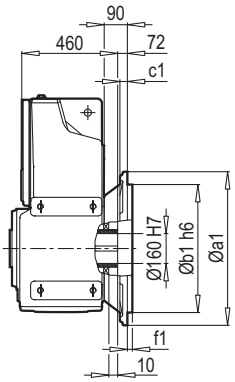
PD 102





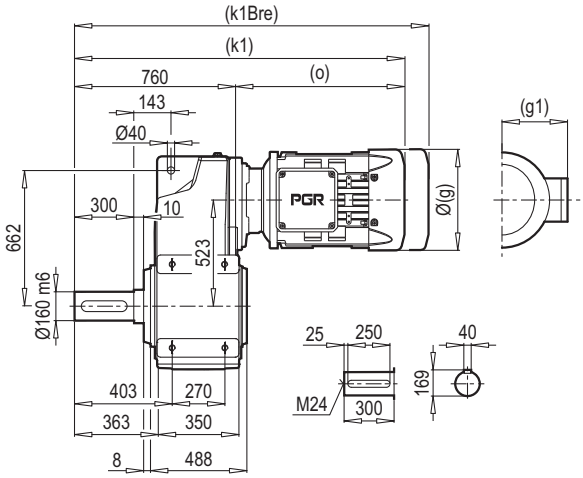
PD 102 B5

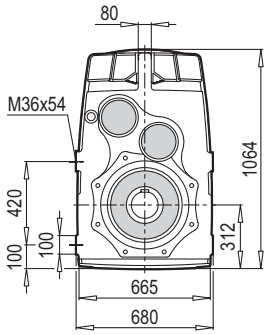




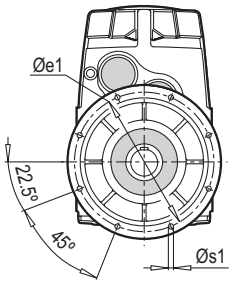
a1	b1	c1	e1	f1	s1
660	550	35	600	8	8x26

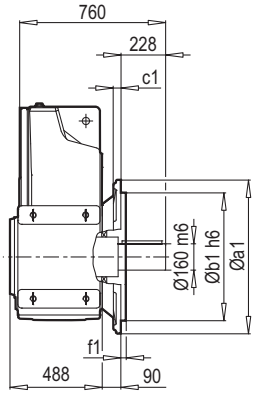
PM 102



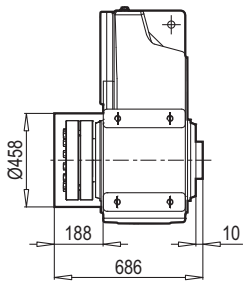


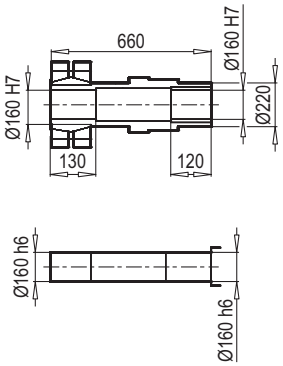
PM 102 B5



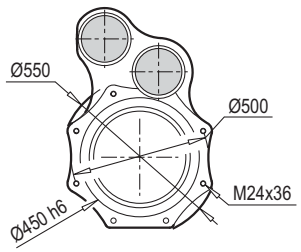


PD 102 KS





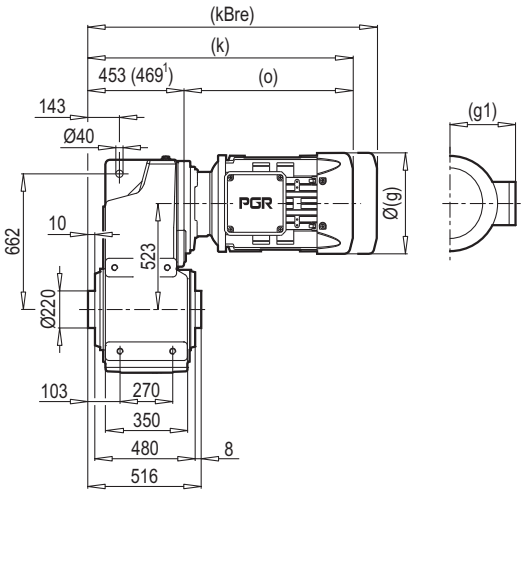
B14



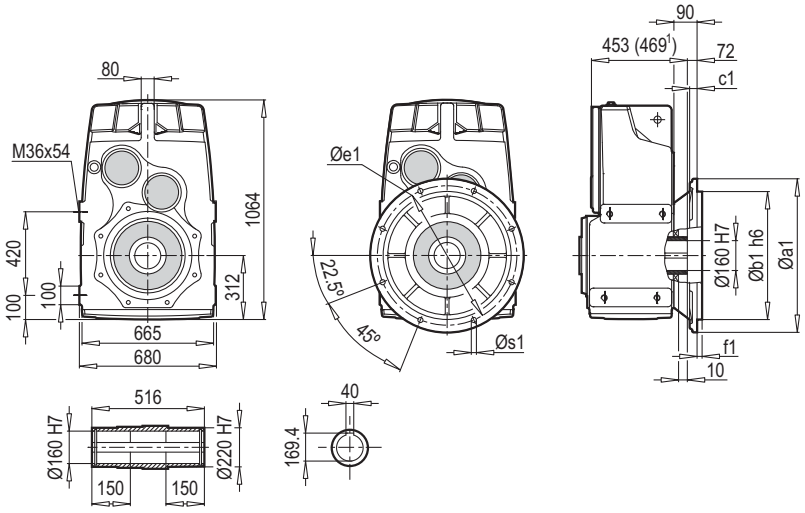
	280 S	280 M	315 S	315 M	315 L			
g	527	527	-	-	-			
g1	367	367	-	-	-			
k/k1	1345/1645	1345/1645	-	-	-			
kBre/k1Bre	-	-	-	-	-			
o	885	885	-	-	-			

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 103

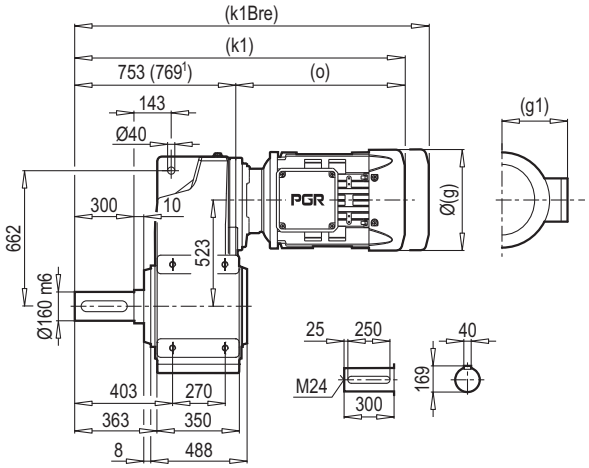


PD 103 B5

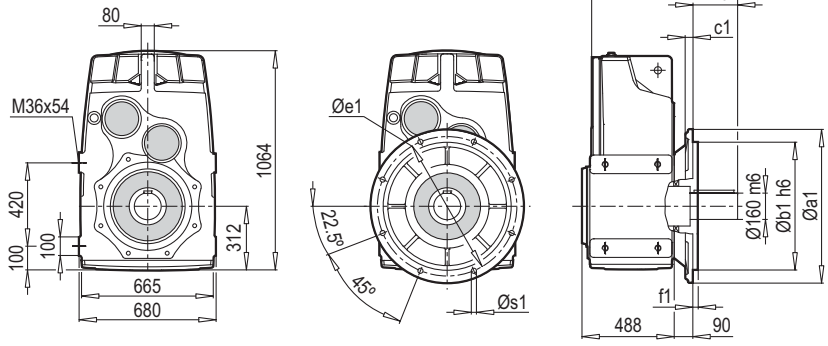


a1	b1	c1	e1	f1	s1
660	550	35	600	8	8x26

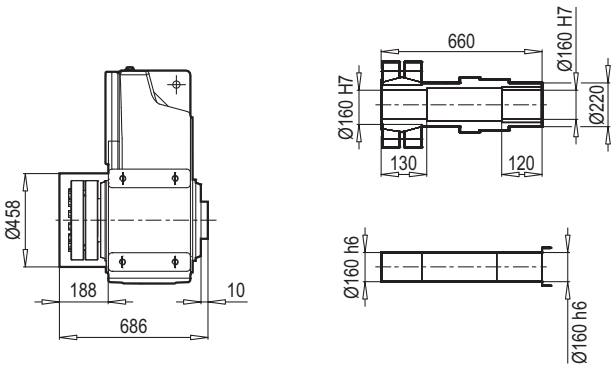
PM 103



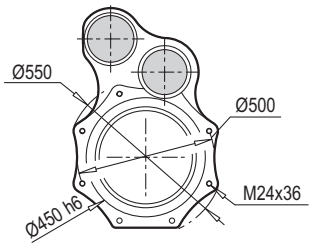
PM 103 B5



PD 103 KS



B14

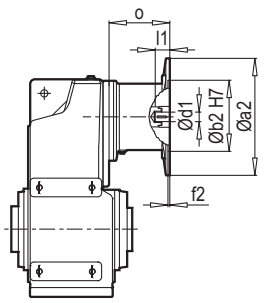


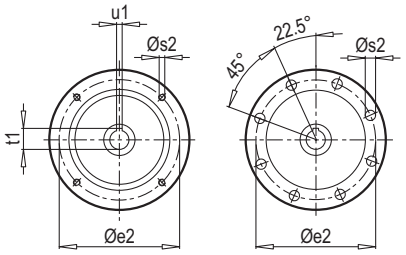
	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M [1)]	280 S [1)]	280 M [1)]	315 S [1)]	315 M [1)]
g	279	323	370	415	456	495	527	527	-	-
g1	182	200	248	260	260	392	367	367	-	-
k/k1	851/1151	917/1217	976/1276	1071/1371	1153/1453	1113/1413	1354/1654	1354/1654	-	-
kBre/k1Bre	992/1292	1069/1369	1138/1438	1218/1518	1325/1625	1243/1543	-	-	-	-
o	398	464	523	618	700	644	885	885	-	-

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

IEC

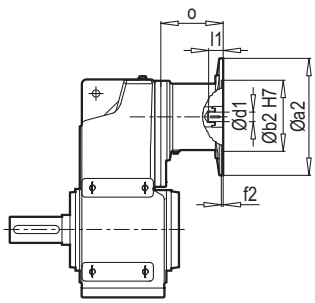
PD 102
PD 103





IEC 160...200 IEC 225...315

PM 102
PM 103

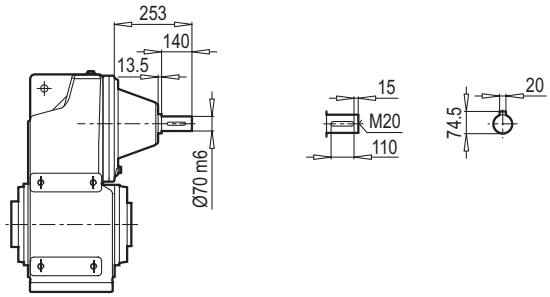


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 103	160	350	250	300	6.0	M16	42	110	45.3	12	266
PD/PM 103	180	350	250	300	6.0	M16	48	110	51.8	14	266
PD/PM 103	200	400	300	350	6.0	M16	55	110	59.3	16	229
PD/PM 103	225	450	350	400	6.0	M16	60	140	64.4	18	303
PD/PM 102-103	250	550	450	500	6.0	M16	65	140	69.4	18	304
PD/PM 102-103	280	550	450	500	6.0	M16	75	140	79.9	20	304
PD/PM 102-103	315	660	550	600	7.0	M20	80	170	85.4	22	382

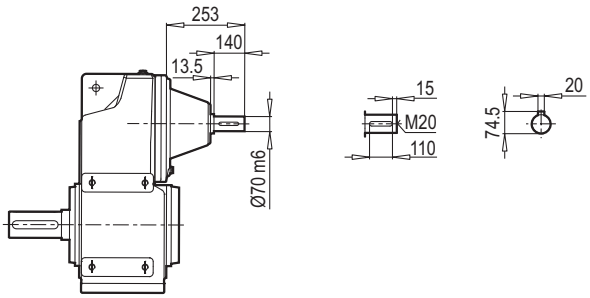
~ Kg		
IEC	PD/PM 102	PD/PM 103
132	-	756
160	-	782
180	777	782
200	792	797
225	808	813
250	866	871
280	866	871

W

PD 102
PD 103

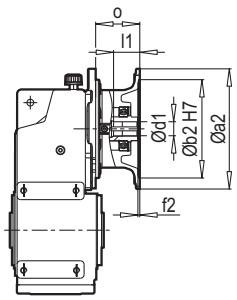


PM 102
PM 103

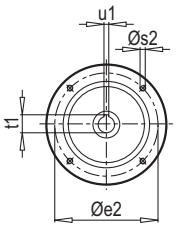


~ Kg	
PD/PM 102	1358
PD/PM 103	1384

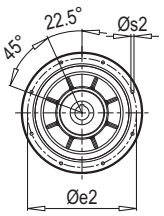
PD 102
PD 103



PAM B5

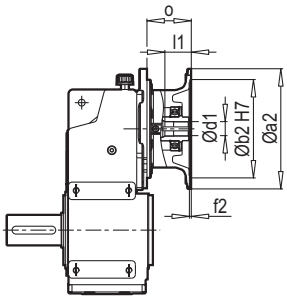


PAM 160...200



PAM 225...315

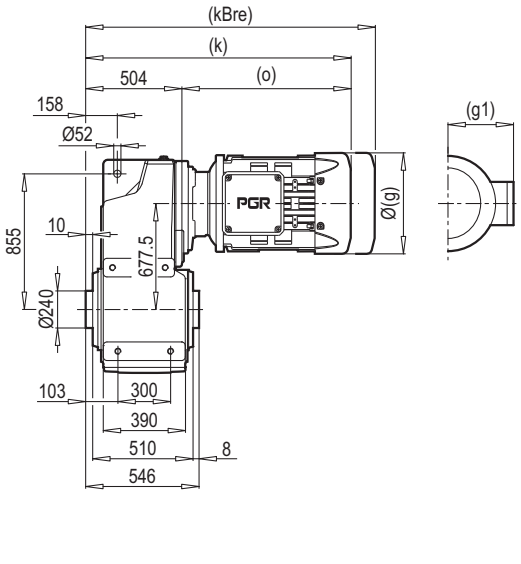
PM 102
PM 103



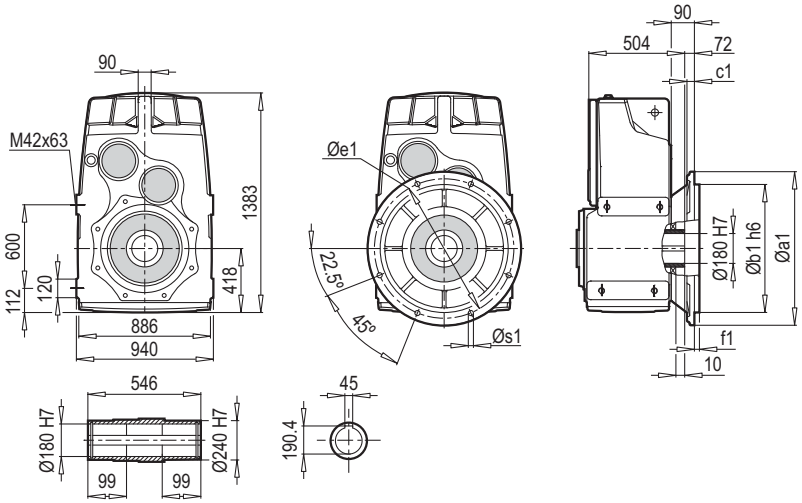
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 103	160	350	250	300	6.0	M16	42	110	45.3	12	145
PD/PM 103	180	350	250	300	6.0	M16	48	110	51.8	14	145
PD/PM 103	200	400	300	350	6.0	M16	55	110	59.3	16	157
PD/PM 103	225	450	350	400	6.0	M16	60	140	64.4	18	183
PD/PM 102-103	250	550	450	500	6.0	M16	65	140	69.4	18	202
PD/PM 102-103	280	550	450	500	6.0	M16	75	140	79.9	20	202

~ Kg		
PAM B5	PD/PM 102	PD/PM 103
160	-	1279
180	-	1279
200	-	1286
225	-	1296
250	1331	1356
280	1331	1356

PD 112

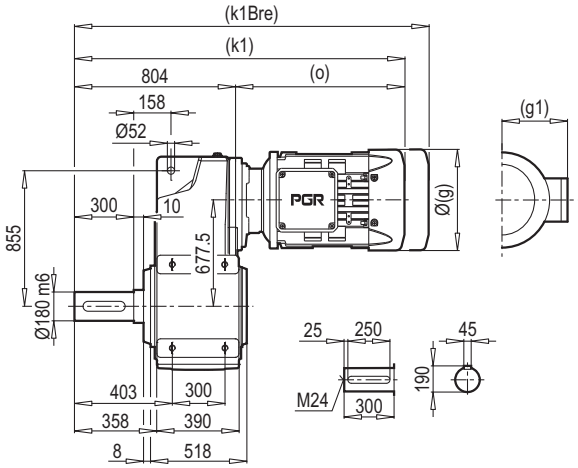


PD 112 B5

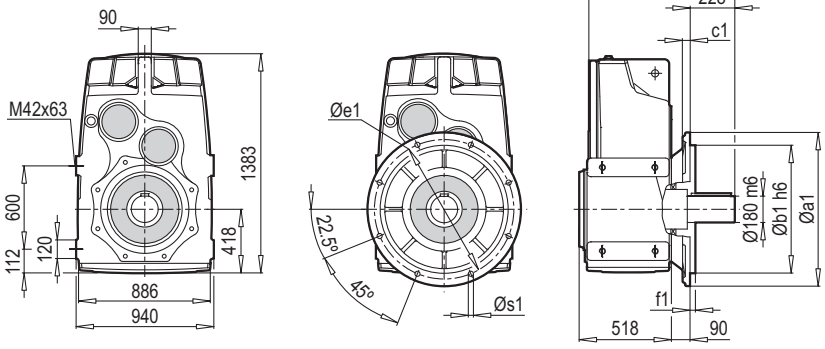


a1	b1	c1	e1	f1	s1
660	550	35	600	8	8x26

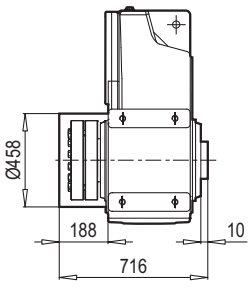
PM 112

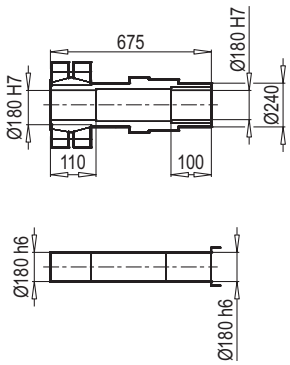


PM 112 B5

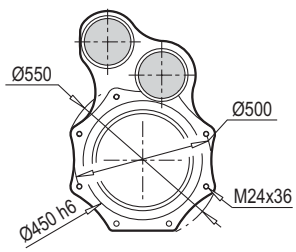


PD 112 KS





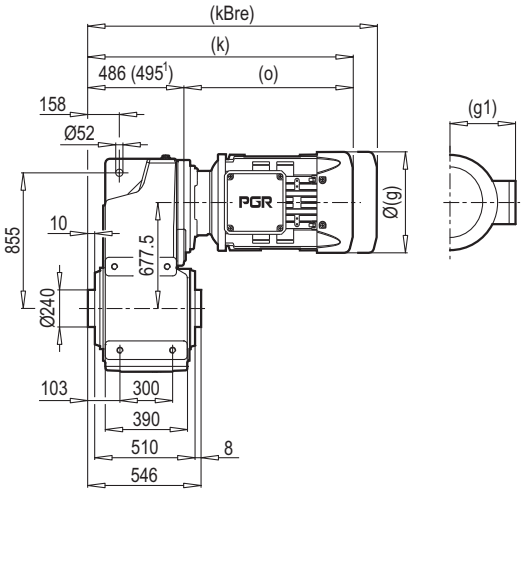
B14



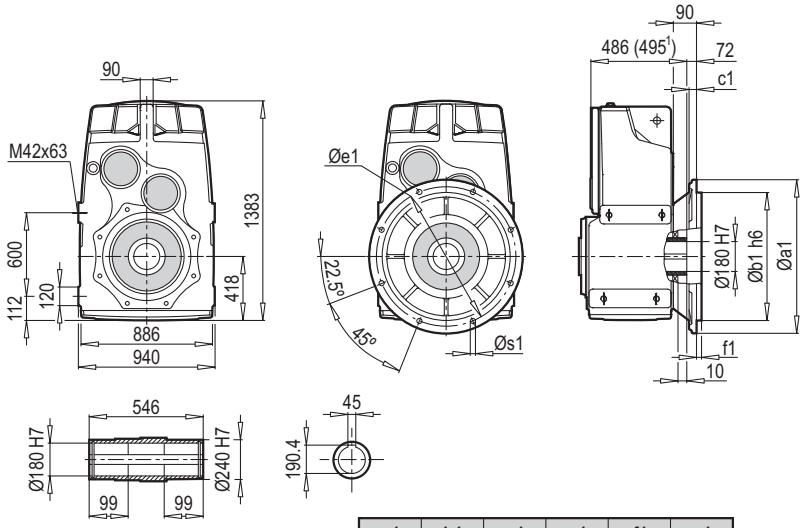
	280 S	280 M	315 S	315 M	315 L			
g	527	527	-	-	-			
g1	367	367	-	-	-			
k/k1	1389/1689	1389/1689	-	-	-			
kBre/k1Bre	-	-	-	-	-			
o	885	885	-	-	-			

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 113

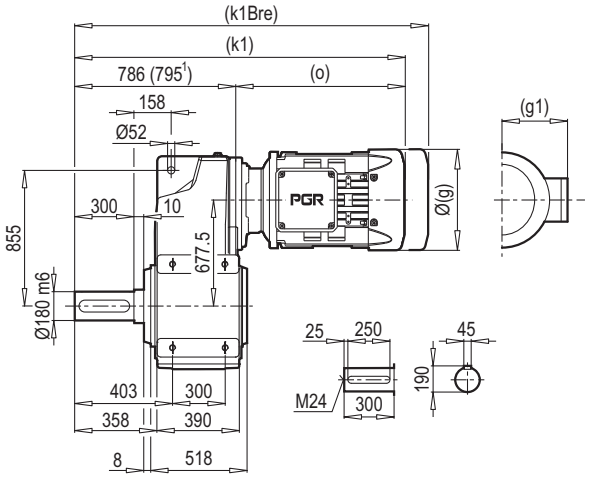


PD 113 B5

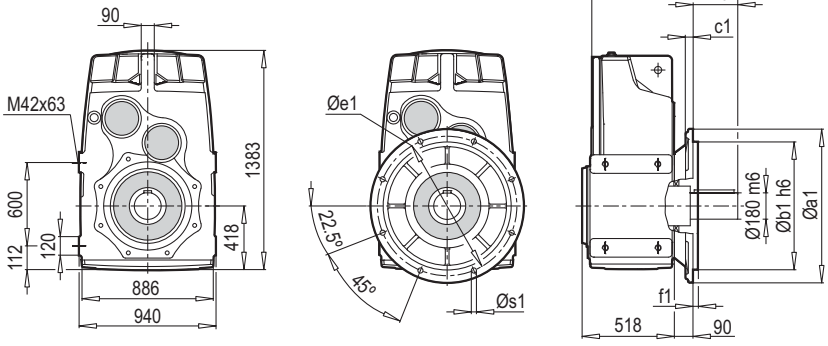


a1	b1	c1	e1	f1	s1
660	550	35	600	8	8x26

PM 113

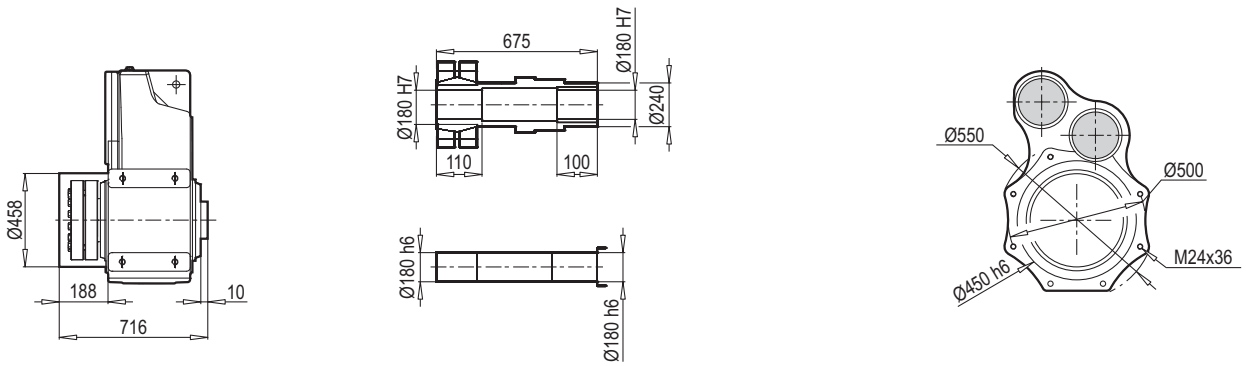


PM 113 B5



PD 113 KS

B14

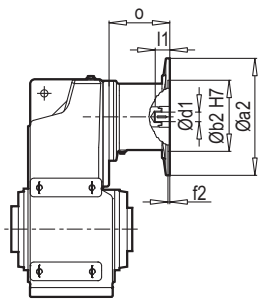


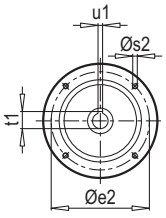
	160 M/L	180 M/L	200 L	225 S/M	250 M	280 S	280 M [1)]	315 S [1)]	315 M [1)]	315 L [1)]
g	323	370	415	456	495	527	527	-	-	-
g1	200	248	260	260	392	367	367	-	-	-
k/k1	950/1250	1009/1309	1104/1404	1186/1486	1130/1430	1380/1680	1380/1680	-	-	-
kBre/k1Bre	1102/1402	1171/1471	1251/1551	1358/1658	1260/1560	-	-	-	-	-
o	464	523	618	700	644	885	885	-	-	-

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

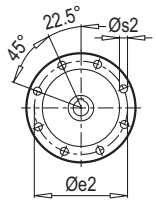
IEC

PD 112
PD 113



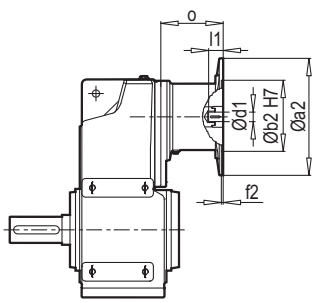


IEC 160...200



IEC 225...315

PM 112
PM 113

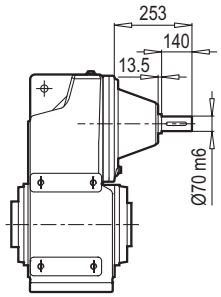


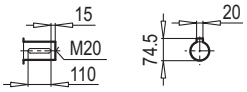
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 113	160	350	250	300	6.0	M16	42	110	45.3	12	266
PD/PM 113	180	350	250	300	6.0	M16	48	110	51.8	14	266
PD/PM 113	200	400	300	350	6.0	M16	55	110	59.3	16	229
PD/PM 113	225	450	350	400	6.0	M16	60	140	64.4	18	303
PD/PM 112-113	250	550	450	500	6.0	M16	65	140	69.4	18	304
PD/PM 112-113	280	550	450	500	6.0	M16	75	140	79.9	20	304
PD/PM 112-113	315	660	550	600	7.0	M20	80	170	85.4	22	382

~ Kg		
IEC	PD/PM 112	PD/PM 113
160	-	2268
180	-	2268
200	-	2283
225	-	2299
250	2276	2357
280	2276	2357
315	2361	2442

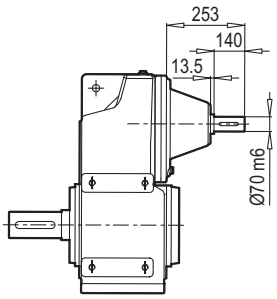
W

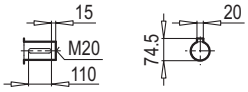
PD 112
PD 113





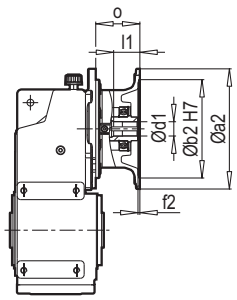
PM 112
PM 113



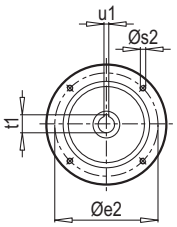


~ Kg	
PD/PM 112	2191
PD/PM 113	2273

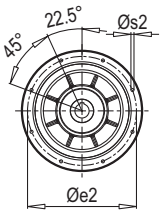
PD 112
PD 113



PAM B5

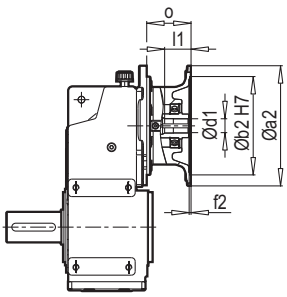


PAM 160...200



PAM 225...315

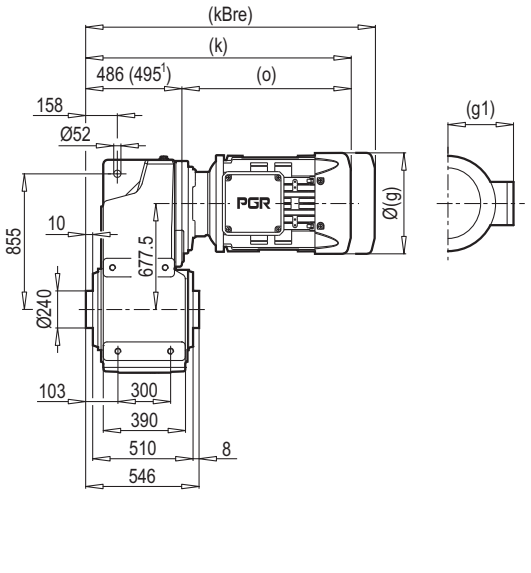
PM 112
PM 113



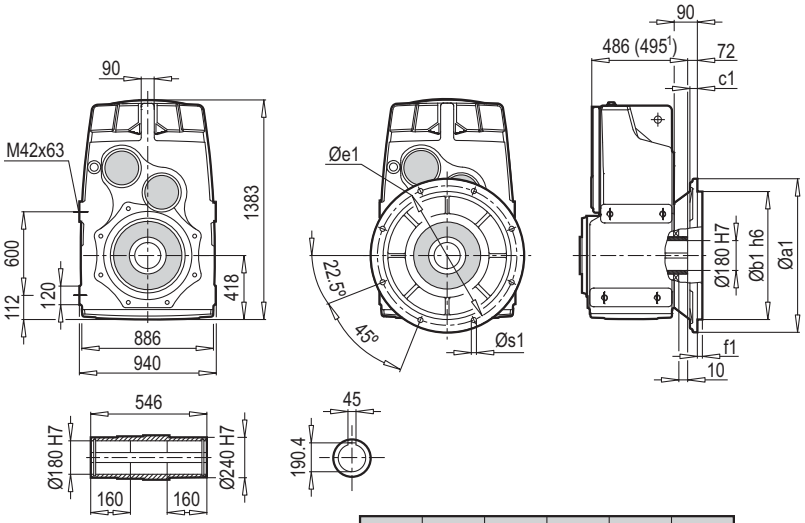
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 113	160	350	250	300	6.0	M16	42	110	45.3	12	145
PD/PM 113	180	350	250	300	6.0	M16	48	110	51.8	14	145
PD/PM 113	200	400	300	350	6.0	M16	55	110	59.3	16	157
PD/PM 113	225	450	350	400	6.0	M16	60	140	64.4	18	183
PD/PM 112-113	250	550	450	500	6.0	M16	65	140	69.4	18	202
PD/PM 112-113	280	550	450	500	6.0	M16	75	140	79.9	20	202

~ Kg		
PAM B5	PD/PM 112	PD/PM 113
160	-	2117
180	-	2117
200	-	2124
225	-	2134
250	2117	2194
280	2117	2194

PD 123

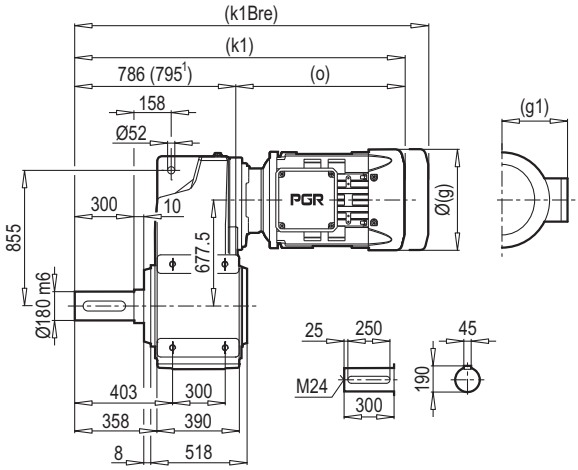


PD 123 B5

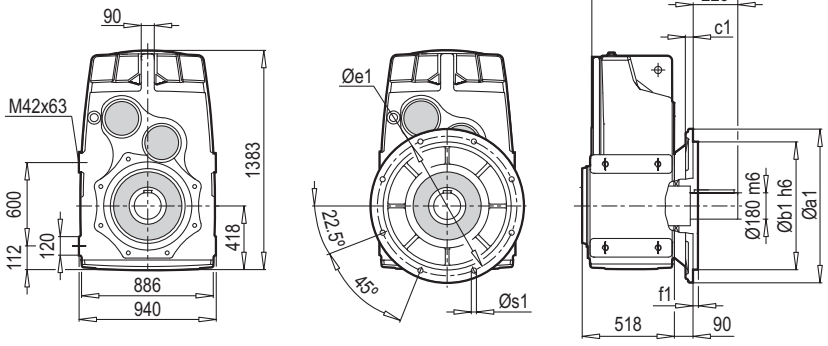


a1	b1	c1	e1	f1	s1
660	550	35	600	8	8x26

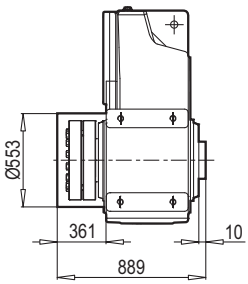
PM 123

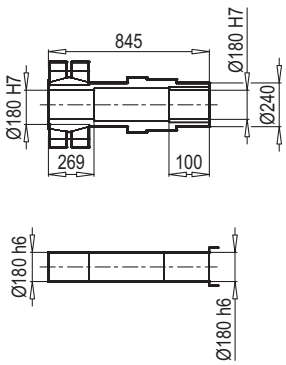


PM 123 B5

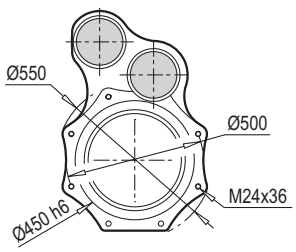


PD 123 KS





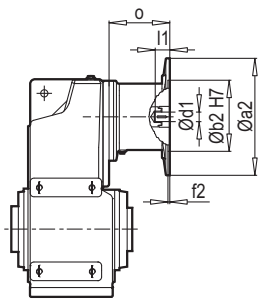
B14

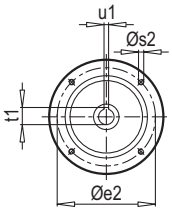


	200 L	225 S/M	250 M	280 S	280 M [1)]	315 S [1)]	315 M [1)]	315 L [1)]
g	415	456	495	527	527	-	-	-
g1	260	260	392	367	367	-	-	-
k/k1	1104/1404	1186/1486	1130/1430	1380/1680	1380/1680	-	-	-
kBre/k1Bre	1251/1551	1358/1658	1260/1560	-	-	-	-	-
o	618	700	644	885	885	-	-	-

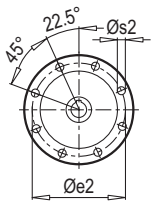
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir / Note : Dimension which is designated by (...) depends on marks of motor.

PD 123 — IEC — PM 123

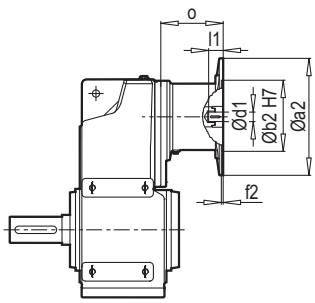




IEC 160...200



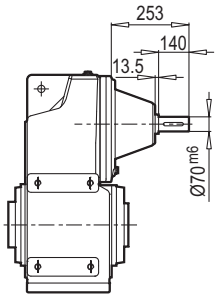
IEC 225...315

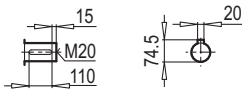


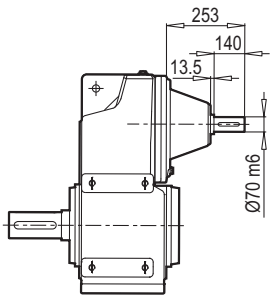
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 123	160	350	250	300	6.0	M16	42	110	45.3	12	266
	180	350	250	300	6.0	M16	48	110	51.8	14	266
	200	400	300	350	6.0	M16	55	110	59.3	16	229
	225	450	350	400	6.0	M16	60	140	64.4	18	303
	250	550	450	500	6.0	M16	65	140	69.4	18	304
	280	550	450	500	6.0	M16	75	140	79.9	20	304
	315	660	550	600	7.0	M20	80	170	85.4	22	382

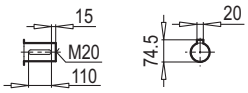
~ Kg	
IEC	PD/PM 123
160	2268
180	2268
200	2283
225	2299
250	2357
280	2357
315	2442

PD 123 — W — PM 123



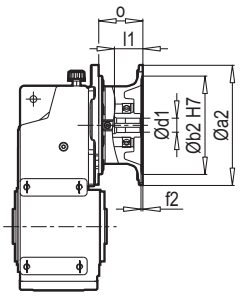


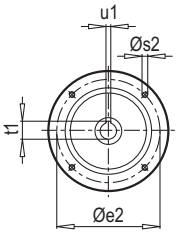




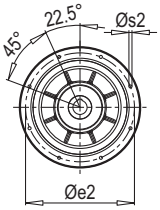
~ Kg	
PD/PM 123	2273

PD 123 — PAM B5/B14 — PM 123

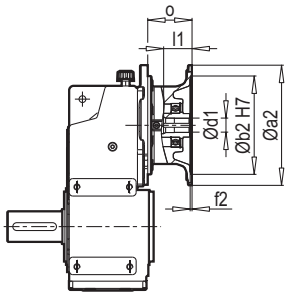




PAM 160...200



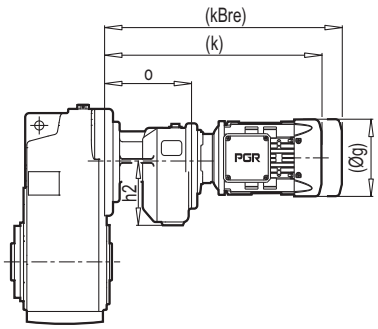
PAM 225...315

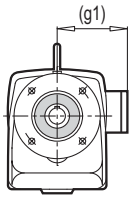


Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 123	160	350	250	300	6.0	M16	42	110	45.3	12	145
	180	350	250	300	6.0	M16	48	110	51.8	14	145
	200	400	300	350	6.0	M16	55	110	59.3	16	157
	225	450	350	400	6.0	M16	60	140	64.4	18	183
	250	550	450	500	6.0	M16	65	140	69.4	18	202
	280	550	450	500	6.0	M16	75	140	79.9	20	202

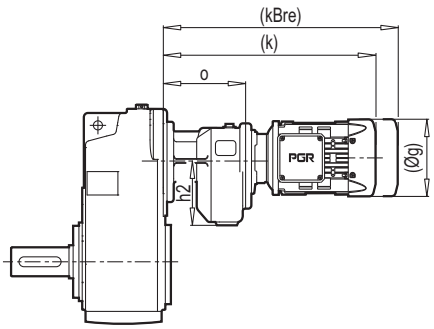
~ Kg	
PAM B5	PD/PM 123
160	2222
180	2222
200	2229
225	2239
250	2299
280	2299

PD 12/02 PD 32/12
PD 22/02 PD 42/12
PD 52/12





PM 12/02 PM 32/12
PM 22/02 PM 42/12
PM 52/12



Tip / Type	Motor	g	g1	h_2	o	k	kBre
PD/PM 12/02	63 M	124	111	91	143	341	393
PD/PM 22/02	63 M 71 M 80 M	124 140 159	111 119 127	91	159	373 415 442	425 475 504
PD/PM 32/12	63 M 71 M 90 S 90 L	124 140 193 193	111 119 151 151	108	172	386 428 478 498	438 488 551 571
PD/PM 42/12 **PD/PM 52/12**	63 M 71 M 80 M* 100 L	124 140 159 217	111 119 127 160	108	176	386 428 455 526	438 488 517 607

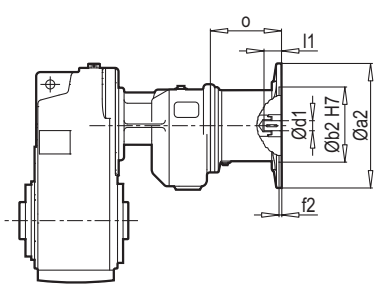
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

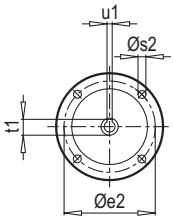
(*) İşaretli olan motor PD/PM 52/12'ye bağlanmamaktadır.
(*) The motor which has been marked is not applicable to PD/PM 52/12.

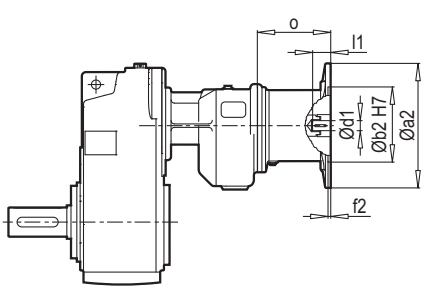
PD 12/02 PD 32/12
PD 22/02 PD 42/12
PD 52/12

IEC

PM 12/02 PM 32/12
PM 22/02 PM 42/12
PM 52/12







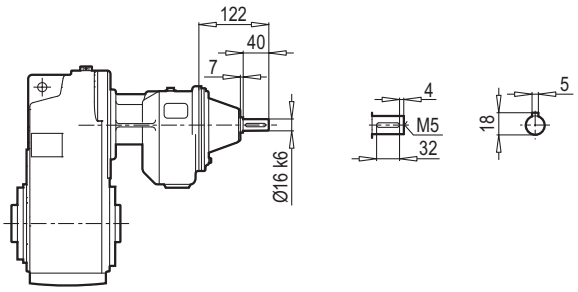
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**63**	140	95	115	3.5	M8	11	23	12.8	4	85
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**71**	160	110	130	4.0	M8	14	30	16.3	5	89
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**80**	200	130	165	4.0	M10	19	40	21.8	6	105
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**90**	200	130	165	4.0	M10	24	50	27.3	8	105
PD/PM 32/12 - 42/12 - 52/12	**100**	250	180	215	5.0	M12	28	60	31.3	8	130
PD/PM 32/12 - 42/12 - 52/12	**112**	250	180	215	5.0	M12	28	60	31.3	8	130

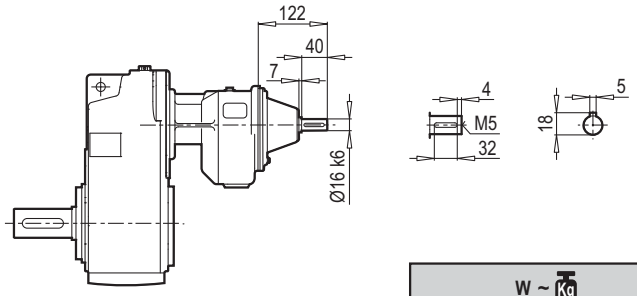
~ Kg					
IEC	PD/PM 12/02	PD/PM 22/02	PD/PM 32/12	PD/PM 42/12	PD/PM 52/12
63	28	40	57	73	111
71	29	41	58	74	112
80	32	44	61	77	116
90	32	44	61	77	116
100	-	-	69	84	123
112	-	-	69	84	123

PD 12/02 PD 32/12
PD 22/02 PD 42/12
PD 52/12

W

PM 12/02 PM 32/12
PM 22/02 PM 42/12
PM 52/12



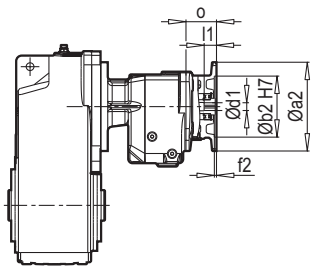


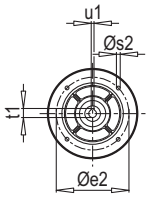
W ~ Kg	
PD/PM 12/02	27
PD/PM 22/02	38
PD/PM 32/12	56
PD/PM 43/12	72
PD/PM 53/12	110

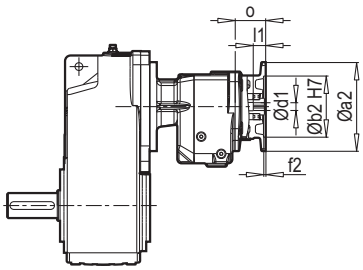
PD 12/02 PD 32/12
PD 22/02 PD 42/12
PD 52/12

PAM B5/B14

PM 12/02 PM 32/12
PM 22/02 PM 42/12
PM 52/12







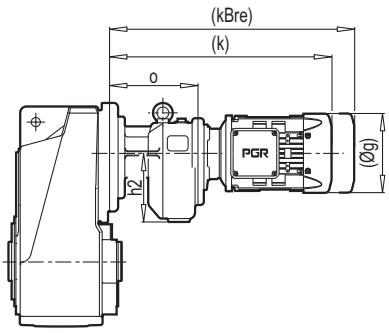
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	63	140	95	115	3.5	M8	11	23	12.8	4	85
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	71	160	110	130	4.0	M8	14	30	16.3	5	55
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	80	200	130	165	4.0	M10	19	40	21.8	6	74
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	90	200	130	165	4.0	M10	24	50	27.3	8	74
PD/PM 32/12 - 42/12 - 52/12	100	250	180	215	5.0	M12	28	60	31.3	8	131.5
PD/PM 32/12 - 42/12 - 52/12	112	250	180	215	5.0	M12	28	60	31.3	8	131.5

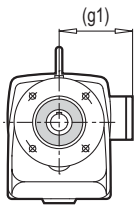
~ Kg					
PAM B5	PD/PM 12/02	PD/PM 22/02	PD/PM 32/12	PD/PM 42/12	PD/PM 52/12
63	26	37	54	69	105
71	26	37	54	69	105
80	27	38	55	70	106
90	27	38	55	70	106
100	-	-	62	77	113
112	-	-	62	77	113

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	63	90	60	75	3.5	6	11	23	12.8	4	60
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	71	105	70	85	4.0	7	14	30	16.3	5	55
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	80	120	80	100	4.0	7	19	40	21.8	6	74
PD/PM 12/02 - 22/02 - 32/12 - 42/12 - 52/12	90	140	95	115	4.0	9	24	50	27.3	8	74
PD/PM 32/12 - 42/12 - 52/12	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 32/12 - 42/12 - 52/12	112	160	110	130	5.0	9	28	60	31.3	8	75

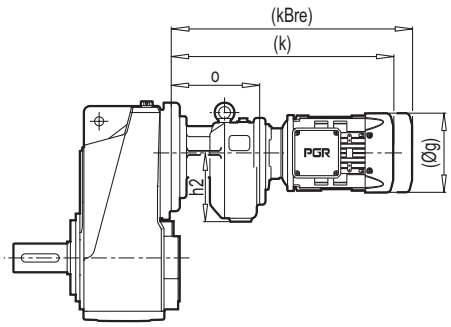
~ Kg					
PAM B14	PD/PM 12/02	PD/PM 22/02	PD/PM 32/12	PD/PM 42/12	PD/PM 52/12
63	25	36	53	68	104
71	25	36	53	68	104
80	26	37	54	69	105
90	26	37	54	69	105
100	-	-	55	70	106
112	-	-	55	70	106

PD 63/22 PD 73/32
PD 73/22 PD 83/32





PM 63/22 PM 73/32
PM 73/22 PM 83/32



Tip / Type	Motor	g	g1	h_2	o	k	kBre
PD/PM 63/22	71 M	140	119			416	476
	80 M	159	127			442	504
	90 S*	193	151	127	180	465	538
PD/PM 73/22	90 L	193	151			485	558
	100 L	217	160			513	594
PD/PM 73/32	90 L	193	151	159	220	525	598
PD/PM 83/32	80 M	159	127			482	544
	90 S	193	151			505	578
	90 L	193	151	159	220	525	598
	100 L	217	160			553	634
	112 M	232	168			598	678

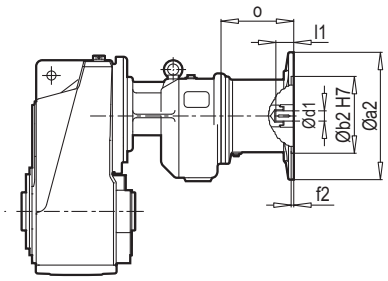
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

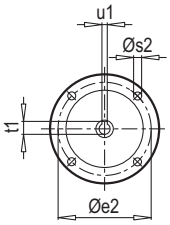
(*) İşaretli olan motor PD/PM 63/22'ye bağlanmamaktadır.
(*) The motor which has been marked is not applicable to PD/PM 63/22.

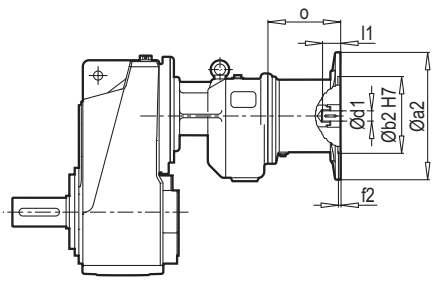
PD 63/22 PD 63/32
PD 73/22 PD 73/32
PD 83/32

IEC

PM 63/22 PM 63/32
PM 73/22 PM 73/32
PM 83/32







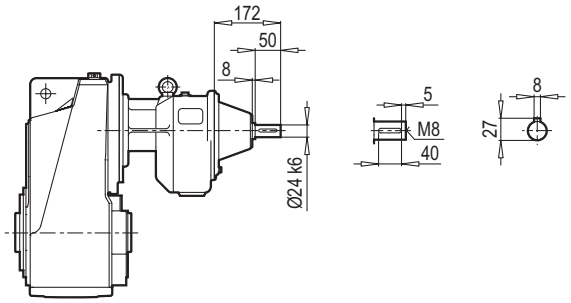
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88
PD/PM 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	107
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	107
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	100	250	180	215	5.0	M12	28	60	31.3	8	124
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	112	250	180	215	5.0	M12	28	60	31.3	8	124
PD/PM 63/32 - 73/32 - 83/32 -	132	300	230	265	5.0	M12	38	80	41.3	10	156

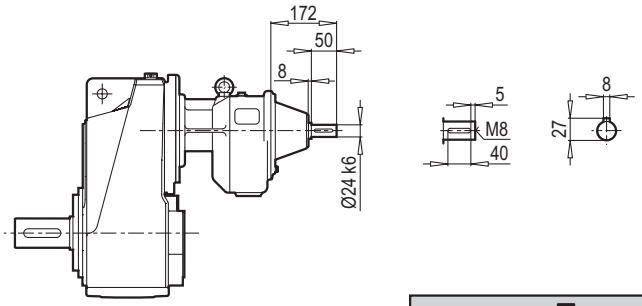
~ Kg					
IEC	PD/PM 63/22	PD/PM 73/22	PD/PM 63/32	PD/PM 73/32	PD/PM 83/32
71	209	286	-	-	432
80	213	290	-	-	437
90	213	290	225	301	437
100	217	294	229	306	441
112	217	294	229	306	441
132	-	-	238	315	451

PD 63/22 PD 63/32
PD 73/22 PD 73/32
PD 83/32

W

PM 63/22 PM 63/32
PM 73/22 PM 73/32
PM 83/32



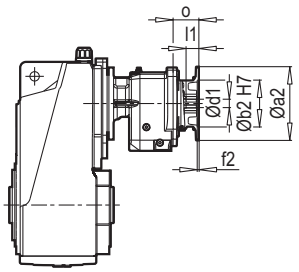


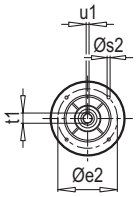
W ~ Kg	
PD/PM 63/22	211
PD/PM 73/22	288
PD/PM 63/32	223
PD/PM 73/32	299
PD/PM 83/32	435

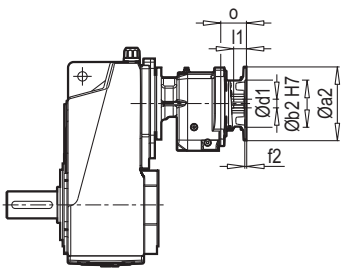
PD 63/22 PD 63/32
PD 73/22 PD 73/32
PD 83/32

PAM B5/B14

PM 63/22 PM 63/32
PM 73/22 PM 73/32
PM 83/32







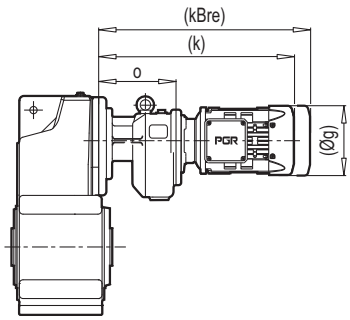
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88
PD/PM 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	72
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	72
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 63/32 - 73/32 - 83/32	132	300	230	265	5.0	M12	38	80	41.3	10	94

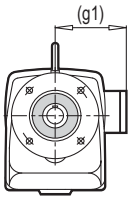
~ Kg					
PAM B5	PD/PM 63/22	PD/PM 73/22	PD/PM 63/32	PD/PM 73/32	PD/PM 83/32
71	198	271	-	-	407
80	199	272	-	-	408
90	199	272	210	283	408
100	200	273	211	284	409
112	200	273	211	284	409
132	-	-	221	294	419

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 63/22 - 73/22 - 83/32	71	105	70	85	4	7	14	30	16.3	5	55
PD/PM 63/22 - 73/22 - 83/32	80	120	80	100	4	7	19	40	21.8	6	72
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	90	140	95	115	4	9	24	50	27.3	8	72
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	100	160	110	130	5	9	28	60	31.3	8	75
PD/PM 63/22 - 73/22 - 63/32 - 73/32 - 83/32	112	160	110	130	5	9	28	60	31.3	8	75
PD/PM 63/32 - 73/32 - 83/32	132	200	130	165	5	11	38	80	41.3	10	94

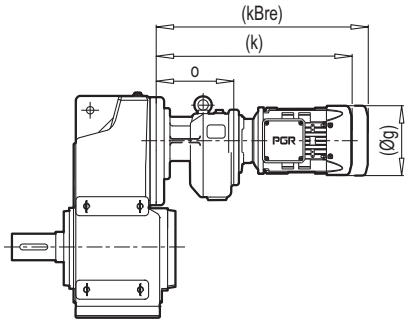
~ Kg					
PAM B14	PD/PM 63/22	PD/PM 73/22	PD/PM 63/32	PD/PM 73/32	PD/PM 83/32
71	196	269	-	-	405
80	197	270	-	-	406
90	197	270	208	281	406
100	199	272	210	283	408
112	199	272	210	283	408
132	-	-	214	287	412

PD 83/42 PD 93/52
PD 93/42 PD 103/52
PD 113/52





PM 83/42 PM 93/52
PM 93/42 PM 103/52
PM 113/52



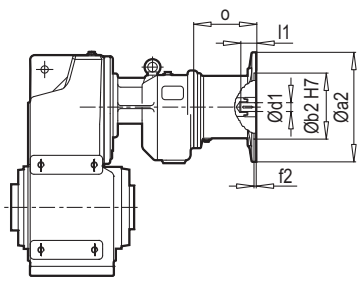
Tip / Type	Motor	g	g1	h_2	o	k	kBre
PD/PM 83/42	90 S 90 L 100 L 112 M	193 193 217 232	151 151 160 168	179	262	527 547 575 620	600 620 656 700
PD/PM 93/42	90 S 90 L 100 L 112 M 132 S 132 M	193 193 217 232 279 279	151 151 160 168 182 182	179	262	527 547 575 620 627 662	600 620 656 700 735 770
PD/PM 93/52 **PD/PM 103/52** **PD/PM 113/52**	100 L 112 M 132 S 132 M 160 M/L 180 M/L	217 232 279 279 323 370	160 168 182 182 200 248	218	301	614 659 666 701 806 880	695 739 774 809 958 1042

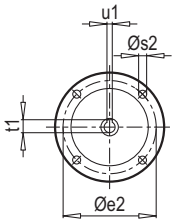
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

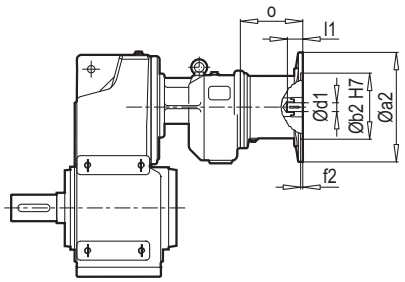
PD 83/42 PD 93/52
PD 93/42 PD 103/52
PD 113/52

IEC

PM 83/42 PM 93/52
PM 93/42 PM 103/52
PM 113/52







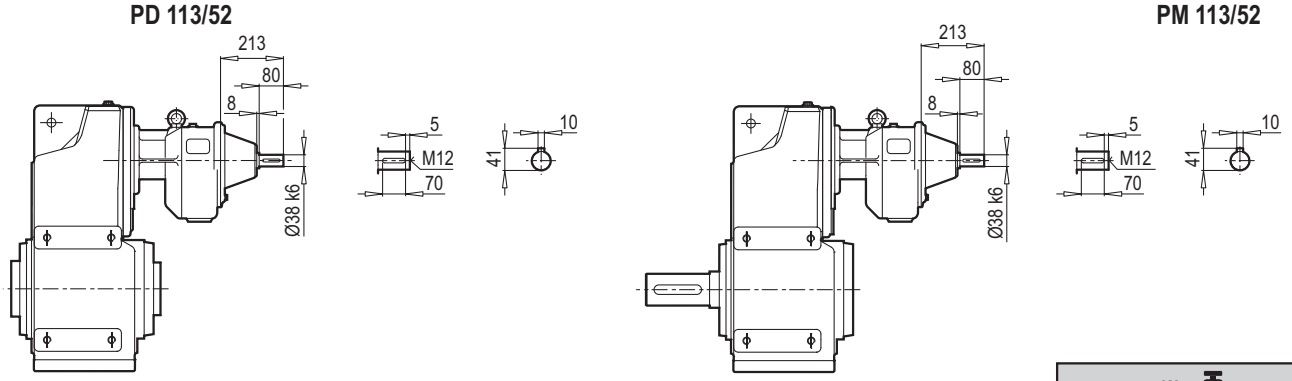
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 83/42 - 93/42 - 103/52 - 113/52	**90**	200	130	165	4.0	M10	24	50	27.3	8	109
PD/PM 83/42 -93/42 - 93/52 - 103/52 - 113/52	**100**	250	180	215	5.0	M12	28	60	31.3	8	133
PD/PM 83/42 -93/42 - 93/52 - 103/52 - 113/52	**112**	250	180	215	5.0	M12	28	60	31.3	8	133
PD/PM 83/42 -93/42 - 93/52 - 103/52 - 113/52	**132**	300	230	265	5.0	M12	38	80	41.3	10	190
PD/PM 83/42 -93/42 - 93/52 - 103/52 - 113/52	**160**	350	250	300	6.0	M16	42	110	45.3	12	194
PD/PM 93/52 - 103/52 - 113/52	**180**	350	250	300	6.0	M16	48	110	51.8	14	194

~ kg					
IEC	PD/PM 83/42	PD/PM 93/42	PD/PM 93/52	PD/PM 103/52	PD/PM 113/52
90	456	28	40	57	73
100	463	29	41	58	74
112	463	32	44	61	77
132	478	32	44	61	77
160	489	-	-	69	84
180	489	-	-	69	84

PD 93/42 **PD 93/52**
PD 103/52
PD 113/52

W

PM 93/42 **PM 93/52**
PM 103/52
PM 113/52

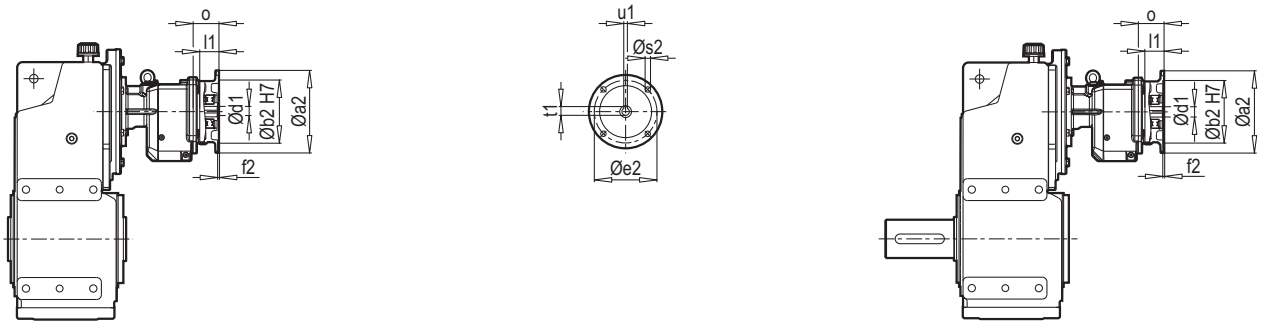


W ~ Kg	
PD/PM 93/42	781
PD/PM 93/52	812
PD/PM 103/52	1410
PD/PM 113/52	2298

PD 93/42 **PD 93/52**
PD 103/52
PD 113/52

PAM B5/B14

PM 93/42 **PM 93/52**
PM 103/52
PM 113/52



Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 93/42 - 103/52 - 113/52	90	200	130	165	4.0	M10	24	50	27.3	8	72
PD/PM 93/42 - 93/52 - 103/52 - 113/52	100	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 93/42 - 93/52 - 103/52 - 113/52	112	250	180	215	5.0	M12	28	60	31.3	8	75
PD/PM 93/42 - 93/52 - 103/52 - 113/52	132	300	230	265	5.0	M12	38	80	41.3	10	94
PD/PM 93/42 - 93/52 - 103/52 - 113/52	160	350	250	300	6.0	M16	42	110	45.3	12	120
PD/PM 93/52 - 103/52 - 113/52	180	350	250	300	6.0	M16	48	110	51.8	14	120

~ Kg				
PAM B5	PD/PM 93/42	PD/PM 93/52	PD/PM 103/52	PD/PM 113/52
90	728	-	1321	2159
100	729	758	1322	2160
112	729	758	1322	2160
132	738	767	1331	2169
160	746	775	1338	2177
180	746	-	1338	2177

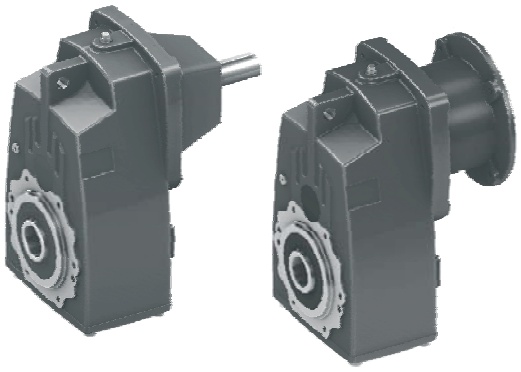
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PD/PM 93/42 - 103/52 - 113/52	90	140	95	115	4.0	9	24	50	27.3	8	72
PD/PM 93/42 - 93/52 - 103/52 - 113/52	100	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 93/42 - 93/52 - 103/52 - 113/52	112	160	110	130	5.0	9	28	60	31.3	8	75
PD/PM 93/42 - 93/52 - 103/52 - 113/52	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg				
PAM B14	PD/PM 93/42	PD/PM 93/52	PD/PM 103/52	PD/PM 113/52
90	727	-	1320	2159
100	728	757	1321	2160
112	728	757	1321	2160
132	733	762	1326	2165

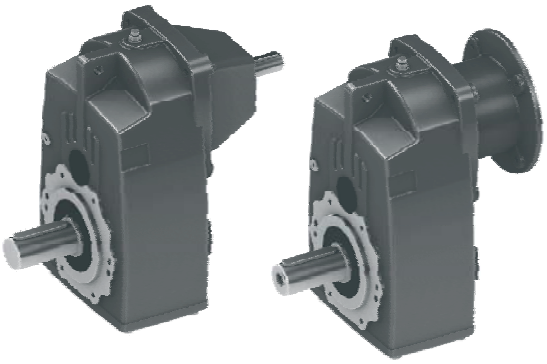
W - IEC ve PAM Adaptörü Seçim Tabloları

Selection of W - IEC and PAM Adapters

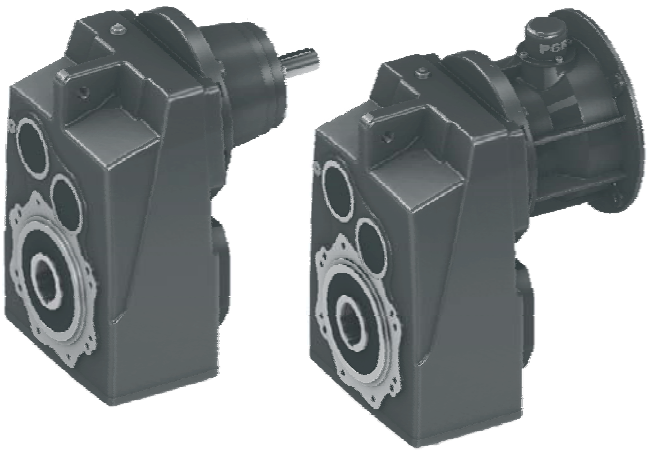
PD SERİSİ
PD SERIE



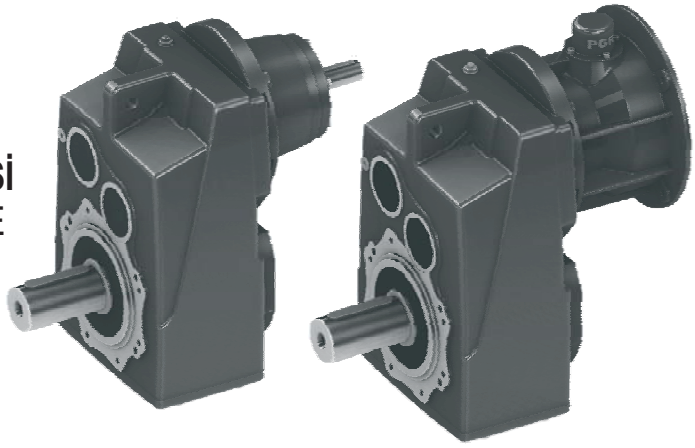
PM SERİSİ
PM SERIE



PD SERİSİ
PD SERIE



PM SERİSİ
PM SERIE



PD/PM

W - IEC ve PAM adaptörü için performans tablolarının yapısı

Notify about performance tables for W - IEC and PAM adapter type

PD 32
PM 32 → **Redüktör Tipi** ve Büyüklüğü / Gear unit type and size

Motor gövde büyüklüğü ile IEC gövde büyüklüğü aynı olan IEC montajlı redüktörler için Servis faktörü f_B motor seçim sayfalarından alınabilir.

Service factor f_B could be seen from selection of geared motor tables. Because this value is same for geared motor and geared motor with IEC adapters.

IEC motor büyüklükleri ve IEC standart çıkışları DIN 50347' e göredir.

According to DIN EN 50347 IEC motor sizes.

Tip / Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu / According to DIN 42677 IEC motor power depend on pole number of motor.						
PD 32 PM 32	112.23	12.50	770	1.01	0.67	0.50	0.33	71	80	90*							
	100.85	13.90	807	1.17	0.78	0.59	0.39	71	80	90*							
	88.74	15.80	945	1.56	1.04	0.78	0.52		80	90							
	79.75	17.60	850	1.56	1.04	0.78	0.52		80	90							
	70.52	19.90	564	1.17	0.78	0.59	0.39	71	80	90*							
	65.91	21.20	758	1.69	1.12	0.84	0.56		80	90							
	64.11	21.80	1015	2.32	1.54	1.16	0.77										
				⋮	⋮	⋮	⋮										
				9.20	*6.07*	*4.60*	*3.04*										
				9.20	*6.07*	*4.60*	*3.04*										

Tip W azami tahrik gücü hesaplanırken *italik* olmayan değerler alınmıştır. P_{1max} ile f_B = 1

P_{1max} value which is *non-italic* is calculated when service factor f_B is equal to one.

Yıldız işareti : Dikkat Tip W sütunundaki P_{1max} değerlerini aşmamalıdır.

Star sign is shown precautions which is value of P_{1max} must be greater than drive power.

P_{1max} hesaplanırken *italik* olan değerlerde f_B>1 alınmıştır.

P_{1max} value which is *italic*, is calculated when service factor f_B is greater than one.

71	80
71	80
	80
	80
	80

Rakamlı alanlar IEC adaptörünün, IEC motor büyüklüğü ve tahvil oranına uygun olduğunu belirtir.

This area which is colorless is shown IEC adapter is applicable for this IEC motor size and reduction ratio

Max.çıkış momenti
Max.output torque while service factor f_B =1

Çıkış Devri
Output speed

Redüktör Tahvili
Reduction ratio

Redüktör Tipi ve Büyüklüğü
Gear unit type and size

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD A02 PM A02 W mm 113 + IEC - PAM mm 113	81.73	17.10	65	0.12	0.08	0.06	0.04	63							
	59.32	23.60	110	0.27	0.18	0.14	0.09	63	71*						
	49.62	28.20	100	0.30	0.20	0.15	0.10	63	71*						
	41.88	33.40	85	0.30	0.20	0.15	0.10	63	71*						
	37.71	37.10	100	0.39	0.26	0.19	0.13	63	71	80*					
	34.80	40.20	103	0.43	0.29	0.22	0.14	63	71	80*					
	31.83	44.00	95	0.44	0.29	0.22	0.15	63	71	80*					
	29.11	48.10	110	0.55	0.37	0.28	0.18	63	71	80*					
	24.57	57.00	116	0.69	0.46	0.35	0.23	63	71	80*					
	22.34	62.70	109	0.72	0.48	0.36	0.24	63	71	80*					
	18.77	74.60	95	0.74	0.49	0.37	0.25	63	71	80					
	16.54	**84.60**	100	0.89	0.59	0.44	0.29	63	71	80	90*				
	14.91	93.90	75	0.74	0.49	0.37	0.24	63	71	80*					
	13.83	**101.20**	110	1.17	0.77	0.58	0.39	63	71	80	90*				
	11.67	**120.00**	110	1.38	0.92	0.69	0.46	63	71	80	90*				
	9.49	**147.50**	110	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	8.63	**162.20**	114	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	7.25	**193.10**	112	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	6.35	**220.50**	110	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	5.33	**262.70**	92	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	4.24	**330.20**	73	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
PD B02 PM B02 W mm 115 + IEC - PAM mm 115	139.15	10.10	110	0.12	0.08	0.06	0.04	63*							
	103.09	13.60	129	0.18	0.12	0.09	0.06	63	71*						
	85.67	16.30	140	0.24	0.16	0.12	0.08	63	71*						
	79.42	17.60	129	0.24	0.16	0.12	0.08	63	71*	80*					
	66.00	21.20	140	0.31	0.21	0.16	0.10	63	71*	80*					
	56.55	24.80	160	0.41	0.28	0.21	0.14	63	71	80*					
	51.60	27.10	146	0.41	0.28	0.21	0.14	63	71	80*					
	44.23	31.70	164	0.54	0.36	0.27	0.18	63	71	80*					
	40.35	34.70	165	0.60	0.40	0.30	0.20	63	71	80*					
	34.16	41.00	153	0.66	0.44	0.33	0.22	63	71	80*					
	30.08	**46.50**	129	0.63	0.42	0.31	0.21	63	71	80*	90*				
	25.96	**53.90**	129	0.73	0.48	0.36	0.24	63	71	80*	90*				
	22.68	**61.70**	129	0.83	0.55	0.42	0.28	63	71	80	90*				
	21.58	**64.90**	140	0.95	0.63	0.48	0.32	63	71	80	90*				
	19.94	**70.20**	129	0.95	0.63	0.47	0.32	63	71	80	90*				
	17.62	**79.50**	129	1.07	0.71	0.54	0.36	63	71	80	90*				
	16.57	**84.50**	140	1.24	0.82	0.62	0.41	63	71	80	90*				
	14.20	**98.60**	163	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	12.96	**108.00**	160	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	11.28	**124.10**	140	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	10.97	**127.60**	152	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	9.67	**144.80**	141	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	8.82	**158.70**	138	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	7.47	**187.40**	131	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	6.43	**217.70**	123	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	6.00	**233.30**	121	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	5.17	**270.80**	114	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	4.67	**299.80**	110	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				
	4.02	**348.30**	103	*1.50*	*0.99*	*0.75*	*0.50*	63	71	80	90				

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD 12/02 PM 12/02 W mm 165 + IEC - PAM mm 164-165	3607.45	0.39	290	0.05	0.03	0.03	0.02	63*	71*										
	2448.00	0.57	290	0.06	0.04	0.03	0.02	63*	71*										
	1965.82	0.71	290	0.06	0.04	0.03	0.02	63*	71*										
	1621.40	0.86	290	0.07	0.04	0.03	0.02	63*	71*										
	1363.09	1.00	290	0.07	0.05	0.04	0.02	63*	71*										
	1064.65	**1.30**	290	0.08	0.05	0.04	0.03	63*	71*	80*	90*								
	824.73	**1.70**	290	0.09	0.06	0.05	0.03	63*	71*	80*	90*								
	662.28	**2.10**	290	0.10	0.07	0.05	0.03	63*	71*	80*	90*								
	546.25	**2.60**	290	0.12	0.08	0.06	0.04	63*	71*	80*	90*								
	405.92	**3.40**	290	0.14	0.09	0.07	0.05	63*	71*	80*	90*								
	328.02	**4.30**	290	0.17	0.11	0.08	0.06	63*	71*	80*	90*								
	284.03	**4.90**	290	0.19	0.12	0.09	0.06	63	71*	80*	90*								
	229.52	**6.10**	290	0.23	0.15	0.11	0.07	63	71*	80*	90*								
PD C13 PM C13 W mm 117 + IEC - PAM mm 117	380.81	3.70	370	0.14	0.09	0.07	0.05	63*	71*										
	301.44	4.60	370	0.18	0.12	0.09	0.06	63	71*	80*	90*								
	257.36	5.40	370	0.21	0.14	0.11	0.07	63	71*										
	203.72	6.90	370	0.27	0.18	0.13	0.09	63	71*	80*	90*								
	158.21	8.80	370	0.34	0.23	0.17	0.11	63	71*	80*	90*								
	136.54	10.30	370	0.40	0.26	0.20	0.13	63	71	80*	90*								
	118.07	**11.90**	370	0.46	0.30	0.23	0.15	63	71	80*	90*								
	106.03	13.20	370	0.51	0.34	0.26	0.17	63	71	80*	90*								
	101.01	**13.90**	370	0.54	0.36	0.27	0.18	63	71	80*	90*								
	88.92	**15.70**	370	0.61	0.41	0.30	0.20	63	71	80*	90*								
	78.83	**17.80**	370	0.69	0.46	0.34	0.23	63	71	80*	90*	100*							
	68.27	**20.50**	370	0.79	0.53	0.40	0.26	63	71	80	90*								
	60.09	**23.30**	370	0.90	0.60	0.45	0.30	63	71	80	90*								
	53.28	**26.30**	357	0.98	0.65	0.49	0.33	63	71	80	90*	100*							
	44.33	**31.60**	337	1.11	0.74	0.56	0.37	63	71	80	90*	100*							
	38.83	**36.10**	324	1.23	0.81	0.61	0.41	63	71	80	90*	100*							
	35.71	**39.20**	300	1.23	0.82	0.62	0.41	63	71	80	90*	100*							
	29.71	**47.10**	282	1.39	0.92	0.69	0.46	63	71	80	90*	100*							
	26.02	**53.80**	271	1.53	1.01	0.76	0.51	63	71	80	90	100*							
	24.17	**57.90**	277	1.67	1.11	0.84	0.56			80	90	100*							
	18.76	**74.60**	243	1.90	1.26	0.95	0.63			80	90	100*							
	16.20	**86.40**	231	2.08	1.38	1.04	0.69			80	90	100*							

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD 13 PM 13 W mm 120 + IEC - PAM mm 120-121	633.80	2.20	222	0.05	0.03	0.03	0.02	63*	71*										
	556.59	2.50	225	0.06	0.04	0.03	0.02	63*	71*										
	472.42	3.00	225	0.07	0.05	0.03	0.02	63*	71*										
	414.87	3.40	225	0.08	0.05	0.04	0.03	63*	71*										
	368.83	3.80	225	0.09	0.06	0.04	0.03	63*	71*										
	301.08	4.60	270	0.13	0.09	0.07	0.04	63*	71*										
	251.58	5.60	274	0.16	0.11	0.08	0.05	63*	71*										
	209.76	6.70	235	0.16	0.11	0.08	0.05	63*	71*										
	163.92	8.50	225	0.20	0.13	0.10	0.07	63	71*										
	129.01	10.90	225	0.26	0.17	0.13	0.08	63	71*										
	105.32	13.30	270	*0.37*	*0.24*	*0.19*	*0.12*	63	71										
	88.00	15.90	274	*0.37*	*0.24*	*0.19*	*0.12*	63	71										
PD 12 PM 12 W mm 120 + IEC - PAM mm 120-121	109.45	12.80	209	0.28	0.19	0.14	0.09	63	71*										
	92.43	15.10	232	0.37	0.24	0.18	0.12	63	71*										
	81.17	17.20	296	0.53	0.36	0.27	0.18	63	71										
	72.16	19.40	296	0.60	0.40	0.30	0.20		71	80*	90*								
	66.26	21.10	270	0.60	0.40	0.30	0.20	63	71										
	58.91	23.80	283	0.70	0.47	0.35	0.23		71	80*	90*								
	55.37	25.30	235	0.62	0.41	0.31	0.21	63	71										
	49.22	28.40	260	0.77	0.51	0.39	0.26		71	80	90*								
	46.16	30.30	196	0.62	0.41	0.31	0.21	63	71										
	41.04	34.10	217	0.78	0.51	0.39	0.26		71	80	90*								
	32.07	**43.70**	230	1.05	0.70	0.53	0.35	63	71	80	90*								
	28.35	**49.40**	225	1.16	0.77	0.58	0.39	63	71	80	90*								
	25.24	**55.50**	225	1.31	0.87	0.65	0.43	63	71	80	90*	100*	112*						
	20.61	**67.90**	225	1.60	1.06	0.80	0.53	63	71	80	90	100*	112*						
	17.22	**81.30**	224	1.91	1.27	0.95	0.63	63	71	80	90	100*	112*						
	14.09	**99.40**	210	2.18	1.45	1.09	0.73	63	71	80	90	100*	112*						
	11.75	**119.10**	204	2.55	1.69	1.27	0.85	63	71	80	90	100*	112*						
	10.34	**135.40**	196	2.78	1.85	1.39	0.92	63	71	80	90	100*	112*						
	9.16	**152.80**	189	3.02	2.01	1.51	1.00	63	71	80	90	100	112*						
	8.23	**170.10**	191	3.40	2.26	1.70	1.13	63	71	80	90	100*	112*						
	8.18	**171.10**	160	2.87	1.90	1.43	0.95	63	71	80	90	100	112*						
	7.25	**193.10**	187	3.78	2.51	1.89	1.26	63	71	80	90	100	112*						
	6.42	**218.10**	181	*4.00*	*2.64*	*2.00*	*1.32*	63	71	80	90	100	112						
	5.47	**255.90**	172	*4.00*	*2.64*	*2.00*	*1.32*	63	71	80	90	100	112						
	4.78	**292.90**	128	3.93	2.61	1.96	1.30	63	71	80	90	100	112*						

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD 22/02 PM 22/02 W mm 165 + IEC - PAM mm 164-165	3425.64	0.41	520	0.06	0.04	0.03	0.02	63*	71*						
	2653.67	0.53	520	0.07	0.04	0.03	0.02	63*	71*						
	2130.98	0.66	520	0.08	0.05	0.04	0.02	63*	71*						
	1726.36	0.81	520	0.08	0.05	0.04	0.03	63*	71*						
	1423.90	0.98	520	0.09	0.06	0.05	0.03	63*	71*						
	1065.19	**1.30**	520	0.11	0.07	0.06	0.04	63*	71*	80*	90*				
	825.15	**1.70**	520	0.13	0.09	0.07	0.04	63*	71*	80*	90*				
	662.62	**2.10**	520	0.16	0.10	0.08	0.05	63*	71*	80*	90*				
	514.10	**2.70**	520	0.20	0.12	0.10	0.06	63	71*	80*	90*				
	424.03	**3.30**	520	0.22	0.14	0.11	0.07	63	71*	80*	90*				
	356.48	**3.90**	520	0.25	0.17	0.13	0.08	63	71*	80*	90*				
	288.06	**4.90**	520	0.30	0.20	0.15	0.10	63	71*	80*	90*				
	216.66	**6.50**	520	0.39	0.26	0.20	0.13	63	71	80*	90*				
	175.52	**8.00**	520	0.47	0.31	0.24	0.16	63	71	80*	90*				
PD 23 PM 23 W mm 124 + IEC - PAM mm 124-125	762.96	1.80	438	0.08	0.06	0.04	0.03	63*	71*						
	622.96	2.20	521	0.12	0.08	0.06	0.04	63*	71*						
	482.49	2.90	521	0.16	0.11	0.08	0.05	63*	71*						
	390.87	3.60	521	0.20	0.13	0.10	0.06	63	71*						
	330.43	4.20	563	0.25	0.17	0.12	0.08	63	71*						
	276.32	5.10	553	0.29	0.19	0.15	0.10	63	71*						
	235.73	5.90	473	0.29	0.20	0.15	0.10	63	71*						
	185.19	**7.60**	521	0.41	0.27	0.21	0.14	63	71	80*	90*				
	150.03	**9.30**	521	0.51	0.34	0.25	0.17	63	71	80*	90*				
	131.68	**10.60**	521	0.58	0.39	0.29	0.19	63	71	80*	90*				
	116.40	**12.00**	521	0.66	0.44	0.33	0.22	63	71	80*	90*				
	98.40	**14.20**	563	*0.75*	*0.50*	*0.38*	*0.25*	63	71	80	90*				
	82.29	**17.00**	561	*0.75*	*0.50*	*0.38*	*0.25*	63	71	80	90*				

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]												
PD 22 **PM 22** **W** mm 124 + **IEC - PAM** mm 124-125	127.46	11.00	380	0.44	0.29	0.22	0.15	71	80*										
	104.07	13.50	397	0.56	0.37	0.28	0.19	71	80*										
	100.98	13.90	440	0.64	0.42	0.32	0.21	71	80*	90*									
	82.45	17.00	477	0.85	0.56	0.42	0.28	71	80	90*									
	69.70	20.10	443	0.93	0.62	0.47	0.31	71	80	90*									
	63.86	21.90	521	1.20	0.79	0.60	0.40		80	90*									
	53.98	25.90	506	1.37	0.91	0.69	0.46		80	90*									
	51.73	27.10	521	1.48	0.98	0.74	0.49		80	90*	100*	112*							
	45.14	31.00	450	1.46	0.97	0.73	0.49		80	90*									
	43.73	32.00	563	1.89	1.25	0.94	0.63		80	90	100*	112*							
	37.18	**37.70**	460	1.81	1.20	0.91	0.60	71	80										
	36.57	38.30	501	2.01	1.33	1.00	0.67		80	90	100*	112*							
	31.20	44.90	445	2.09	1.39	1.05	0.69		80	90	100*	112*							
	29.64	**47.20**	500	2.47	1.64	1.24	0.82	71	80	90	100*	112*							
	26.81	**52.20**	439	2.40	1.59	1.20	0.80	71	80	90	100*	112*							
	24.98	**56.00**	490	2.88	1.91	1.44	0.96	71	80	90	100*	112*							
	23.99	**58.40**	435	2.66	1.77	1.33	0.88	71	80	90	100*	112*							
	21.89	**64.00**	480	3.21	2.14	1.61	1.07	71	80	90	100	112*							
	18.51	**75.60**	486	3.85	2.56	1.92	1.28	71	80	90	100	112*							
	16.56	**84.50**	471	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	13.20	**106.10**	405	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	11.81	**118.50**	384	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	10.16	**137.80**	356	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	9.00	**155.60**	335	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	8.36	**167.50**	256	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	7.48	**187.20**	243	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	6.43	**217.70**	226	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	5.70	**245.60**	212	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	4.51	**310.40**	186	*4.00*	*2.64*	*2.00*	*1.32*			90	100	112							

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD 32/12 PM 32/12 W mm 165 + IEC - PAM mm 164-165	3434.69	0.41	900	0.08	0.05	0.04	0.03	63*	71*										
	2794.50	0.50	900	0.09	0.06	0.04	0.03	63*	71*										
	2246.56	0.62	900	0.10	0.06	0.05	0.03	63*	71*										
	1696.40	**0.83**	900	0.12	0.08	0.06	0.04	63*	71*	80*	90*								
	1335.13	**1.00**	900	0.14	0.09	0.07	0.05	63*	71*	80*	90*	100*	112*						
	1068.11	**1.30**	900	0.16	0.11	0.08	0.05	63*	71*	80*	90*	100*	112*						
	851.83	**1.60**	900	0.19	0.13	0.10	0.06	63	71*	80*	90*	100*	112*						
	684.80	**2.00**	900	0.23	0.15	0.12	0.08	63	71*	80*	90*	100*	112*						
	521.00	**2.70**	900	0.29	0.19	0.15	0.10	63	71*	80*	90*	100*	112*						
	461.30	**3.00**	900	0.33	0.21	0.16	0.11	63	71*	80*	90*	100*	112*						
	358.19	**3.90**	900	0.41	0.27	0.20	0.13	63	71	80*	90*	100*	112*						
	270.47	**5.20**	900	0.53	0.35	0.26	0.17	63	71	80*	90*	100*	112*						
	217.44	**6.40**	900	0.65	0.43	0.32	0.21	63	71	80*	90*	100*	112*						
	179.71	**7.80**	900	0.77	0.51	0.39	0.26	63	71	80	90*	100*	112*						
	141.42	**9.90**	900	0.93	0.62	0.47	0.31	63	71	80	90*	100*	112*						
	114.01	**12.30**	900	1.16	0.77	0.58	0.38	63	71	80	90*	100*	112*						
	87.71	**16.00**	900	1.50	1.00	0.75	0.50	63	71	80	90	100*	112*						
PD 33 PM 33 W mm 128 + IEC - PAM mm 128-129	1022.54	1.40	787	0.11	0.07	0.06	0.04	63*	71*										
	918.90	1.50	822	0.13	0.09	0.07	0.04	63*	71*										
	808.52	1.70	1039	0.19	0.13	0.09	0.06	63	71*										
	726.57	1.90	944	0.19	0.13	0.10	0.06	63	71*										
	584.11	2.40	1000	0.25	0.17	0.13	0.08	63	71*										
	482.75	2.90	866	0.26	0.17	0.13	0.09	63	71*										
	408.42	3.40	796	0.29	0.19	0.14	0.09	63	71*										
	287.08	**4.90**	938	0.48	0.32	0.24	0.16	63	71	80*	90*								
	230.79	**6.10**	1000	0.64	0.42	0.32	0.21	63	71	80*	90*								
	190.74	**7.30**	866	0.67	0.44	0.33	0.22	63	71	80*	90*								
	161.38	**8.70**	788	0.72	0.48	0.36	0.24	63	71	80*	90*								
	127.01	**11.00**	774	0.89	0.59	0.45	0.30	63	71	80	90*	100*	112*						
	103.92	**13.50**	735	1.04	0.69	0.52	0.34	63	71	80	90*	100*	112*						
	89.45	**16.20**	621	1.05	0.68	0.53	0.34	63	71	80	90*	100*	112*						

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]								
PD 32 PM 32 W mm 128 + IEC - PAM mm 128-129	112.23	12.50	770	1.01	0.67	0.50	0.33	71	80	90*					
	100.85	13.90	807	1.17	0.78	0.59	0.39	71	80	90*					
	88.74	15.80	945	1.56	1.04	0.78	0.52		80	90					
	79.75	17.60	850	1.56	1.04	0.78	0.52		80	90					
	70.52	19.90	564	1.17	0.78	0.59	0.39	71	80	90*					
	65.91	21.20	758	1.69	1.12	0.84	0.56		80	90					
	64.11	21.80	1015	2.32	1.54	1.16	0.77		80	90	100*	112*			
	55.76	25.10	642	1.69	1.12	0.84	0.56		80	90					
	52.98	26.40	845	2.34	1.55	1.17	0.78		80	90	100*	112*			
	48.00	29.20	552	1.69	1.12	0.84	0.56		80	90					
	44.83	31.20	737	2.41	1.60	1.21	0.80		80	90	100*	112*			
	42.05	**33.30**	929	3.24	2.15	1.62	1.08	71	80	90	100	112*			
	38.59	36.30	634	2.41	1.60	1.20	0.80		80	90	100*	112*			
	37.79	**37.00**	835	3.24	2.15	1.62	1.08	71	80	90	100	112*			
	31.90	43.90	877	4.03	2.68	2.02	1.34	71	80	90	100	112			
	28.67	**48.80**	870	4.45	2.96	2.22	1.48	71	80	90	100	112			
	25.86	**54.10**	846	4.80	3.19	2.40	1.59	71	80	90	100	112			
	23.69	**59.10**	805	4.98	3.31	2.49	1.65	71	80	90	100	112			
	22.42	**62.40**	800	5.23	3.42	2.62	1.74	71	80	90	100	112	132*		
	21.37	**65.50**	722	4.95	3.29	2.48	1.65	71	80	90	100	112			
	20.15	**69.50**	822	5.98	3.97	2.99	1.99	71	80	90	100	112	132*		
	16.65	**84.10**	841	7.40	4.92	3.70	2.46	71	80	90	100	112	132*		
	14.09	**99.40**	857	8.92	5.92	4.46	2.96	71	80	90	100	112	132*		
	11.35	**123.30**	821	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	9.77	**143.30**	839	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	8.29	**168.90**	676	*9.20*	*6.07*	*4.60*	*3.04*	71	80	90	100	112	132		
	6.68	**209.60**	607	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	5.66	**247.30**	555	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	4.48	**312.50**	461	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							
								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
PD 42/12 PM 42/12 W mm 165 + IEC - PAM mm 164-165	2783.90	0.50	1800	0.13	0.09	0.07	0.04	63*	71*						
	2249.64	0.62	1800	0.16	0.10	0.08	0.05	63*	71*						
	1830.33	0.76	1800	0.18	0.12	0.09	0.06	63	71*						
	1343.79	1.00	1800	0.24	0.16	0.12	0.08	63	71*						
	1111.10	**1.30**	1800	0.28	0.18	0.14	0.09	63	71*	80*	90*				
	874.48	**1.60**	1800	0.34	0.23	0.17	0.11	63	71*	80*	90*	100*	112*		
	699.58	**2.00**	1800	0.42	0.28	0.21	0.14	63	71	80*	90*	100*	112*		
	557.93	**2.50**	1800	0.51	0.34	0.26	0.17	63	71	80*	90*	100*	112*		
	409.62	**3.40**	1800	0.68	0.45	0.34	0.23	63	71	80*	90*	100*	112*		
	341.25	**4.10**	1800	0.77	0.51	0.39	0.26	63	71	80	90*	100*	112*		
	302.14	**4.60**	1800	0.87	0.58	0.44	0.29	63	71	80	90*	100*	112*		
	234.61	**6.00**	1800	1.12	0.75	0.56	0.37	63	71	80	90*	100*	112*		
	177.15	**7.90**	1800	1.49	0.99	0.74	0.49	63	71	80	90*	100*	112*		
	152.50	**9.20**	1800	1.73	1.15	0.87	0.57	63	71	80	90	100*	112*		
	127.43	**11.00**	1800	2.07	1.38	1.04	0.69	63	71	80	90	100*	112*		
PD 43 PM 43 W mm 132 + IEC - PAM mm 132-133	1585.08	0.88	1420	0.13	0.09	0.07	0.04	71*	80*	90*					
	1129.42	1.20	1600	0.21	0.14	0.10	0.07	71*	80*	90*					
	1097.89	1.30	1088	0.15	0.10	0.07	0.05	71*	80*	90*					
	782.28	1.80	1476	0.28	0.18	0.14	0.09	71*	80*	90*					
	653.66	2.10	1233	0.28	0.18	0.14	0.09	71*	80*	90*					
	605.88	2.30	1475	0.36	0.24	0.18	0.12		80*	90*					
	532.76	2.60	2000	0.55	0.37	0.28	0.18	71	80*	90*					
	445.16	3.10	1666	0.55	0.36	0.27	0.18	71	80*	90*					
	412.63	3.40	1990	0.71	0.47	0.35	0.23		80*	90*					
	391.14	3.60	2000	0.75	0.50	0.37	0.25	71	80	90*					
	344.78	4.10	1662	0.71	0.47	0.35	0.23		80*	90*					
	326.83	4.30	1890	0.85	0.56	0.42	0.28	71	80	90*					
	302.94	4.60	2077	1.01	0.67	0.50	0.33		80	90*					
	272.49	5.10	1572	0.85	0.56	0.42	0.28	71	80	90*					
	253.13	5.50	1961	1.14	0.75	0.57	0.38		80	90*					
	211.05	6.60	1635	1.14	0.75	0.57	0.38		80	90*					
	191.52	**7.30**	1990	1.52	1.01	0.76	0.51	71	80	90	100*	112*			
	160.03	**8.70**	1657	1.52	1.01	0.76	0.50	71	80	90	100*	112*			
	140.61	**10.00**	2000	2.09	1.39	1.04	0.69	71	80	90	100*	112*			
	118.53	**11.80**	2000	2.47	1.64	1.24	0.82	71	80	90	100*	112*			
	103.86	**13.50**	2000	2.82	1.88	1.41	0.94	71	80	90	100*	112*			
	86.78	**16.10**	1980	*3.00*	*1.98*	*1.50*	*0.99*	71	80	90	100	112*			

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]								
PD 42 PM 42	155.40	9.00	1275	1.20	0.80	0.60	0.40	90*							
	110.73	12.60	1600	2.12	1.41	1.06	0.70	90	100*	112*					
	90.52	15.50	1600	2.59	1.72	1.30	0.86	90	100*	112*					
W mm 132	75.41	18.60	1589	3.09	2.05	1.54	1.03		100	112*	132*				
	61.64	22.70	1794	4.27	2.83	2.13	1.42		100	112	132*				
	52.23	26.80	1818	5.10	3.39	2.55	1.69		100	112	132*				
+	**45.06**	**31.10**	1594	5.19	3.44	2.59	1.72	90	100	112	132*				
	43.64	32.10	1600	5.37	3.57	2.69	1.79		100	112	132*				
IEC - PAM mm 132-133	**40.79**	**34.30**	1556	5.59	3.71	2.80	1.86	90	100	112	132*				
	38.35	36.50	2000	7.65	5.08	3.82	2.54				132*				
	36.84	**38.00**	1400	5.57	3.70	2.79	1.85	90	100	112	132*				
	36.39	38.50	1375	5.54	3.68	2.77	1.84		100	112	132*				
	32.31	**43.30**	1620	7.35	4.88	3.68	2.44	90	100	112	132*	160*			
	32.04	43.70	1785	8.17	5.43	4.08	2.71				132*				
	26.72	52.40	1600	8.78	5.83	4.39	2.92				132*				
	26.41	**53.00**	1787	9.92	6.59	4.96	3.29	90	100	112	132	160*			
	26.25	**53.30**	1608	8.98	5.97	4.49	2.98	90	100	112	132*	160*			
	22.38	**62.60**	1699	11.13	7.39	5.56	3.70	90	100	112	132	160*			
	21.46	**65.20**	1686	11.52	7.65	5.76	3.83	90	100	112	132	160*			
	18.18	**77.00**	1800	14.51	9.64	7.26	4.82	90	100	112	132	160*			
	15.19	**92.20**	1800	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	12.67	**110.50**	1750	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	10.83	**129.30**	1700	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	9.23	**151.70**	1634	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	8.33	**168.10**	1272	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	7.13	**196.40**	1202	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	6.07	**230.60**	1200	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160			
	5.44	**257.40**	1035	*15.00*	*9.90*	*7.50*	*4.95*				132	160			
	5.00	**280.00**	1035	*15.00*	*9.90*	*7.50*	*4.95*				132	160			
	4.69	**298.50**	1035	*15.00*	*9.90*	*7.50*	*4.95*				132	160			

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 52/12 PM 52/12 W mm 165 + IEC - PAM mm 164-165	2769.78	0.51	3000	0.20	0.13	0.10	0.07	63	71*						
	2215.83	0.63	3000	0.24	0.16	0.12	0.08	63	71*						
	1802.82	0.78	3000	0.28	0.19	0.14	0.09	63	71*						
	1333.49	1.00	3000	0.37	0.24	0.18	0.12		71*	80*	90*				
	1094.40	**1.30**	3000	0.44	0.29	0.22	0.15	63	71	80*	90*				
	861.34	**1.60**	3000	0.55	0.36	0.28	0.18	63	71	80*	90*	100*	112*		
	689.07	**2.00**	3000	0.68	0.45	0.34	0.22	63	71	80*	90*	100*	112*		
	549.54	**2.50**	3000	0.80	0.53	0.40	0.27	63	71	80	90*	100*	112*		
	448.15	**3.10**	3000	0.98	0.65	0.49	0.33	63	71	80	90*	100*	112*		
	338.40	**4.10**	3000	1.30	0.86	0.65	0.43	63	71	80	90*	100*	112*		
	272.80	**5.10**	3000	1.61	1.07	0.81	0.54	63	71	80	90	100*	112*		
	232.65	**6.00**	3000	1.89	1.26	0.95	0.63	63	71	80	90	100*	112*		
	174.49	**8.00**	3000	2.52	1.67	1.26	0.84	63	71	80	90	100*	112*		
	142.31	**9.80**	3000	*3.00*	*1.98*	*1.50*	*0.99*	63	71	80	90	100	112*		
PD 53 PM 53 W mm 136 + IEC - PAM mm 136-137	1367.36	1.00	2700	0.29	0.19	0.14	0.10		80*	90*					
	936.55	1.50	2700	0.42	0.28	0.21	0.14		80*	90*					
	699.67	2.00	3200	0.67	0.45	0.34	0.22		80*	90*					
	570.63	2.50	2800	0.72	0.48	0.36	0.24		80*	90*					
	524.75	2.70	3200	0.89	0.59	0.45	0.30		80	90*					
	427.97	3.30	3200	1.10	0.73	0.55	0.36		80	90*					
	361.64	3.90	2800	1.14	0.75	0.57	0.38		80	90*					
	331.54	**4.20**	3200	1.41	0.94	0.71	0.47	71	80	90*	100*	112*			
	270.40	**5.20**	2700	1.46	0.97	0.73	0.49	71	80	90*	100*	112*			
	248.66	**5.60**	3200	1.89	1.25	0.94	0.63	71	80	90	100*	112*			
	202.80	**6.90**	3200	2.31	1.54	1.16	0.77	71	80	90	100*	112*			
	171.36	**8.20**	2800	2.40	1.59	1.20	0.80	71	80	90	100*	112*			
	153.85	**9.10**	3200	3.05	2.03	1.52	1.01	71	80	90	100	112*			
	138.78	**10.10**	3200	3.38	2.25	1.69	1.12	71	80	90	100	112*			
	117.27	**11.90**	2750	3.44	2.28	1.72	1.14	71	80	90	100	112*			
	91.51	**15.30**	2900	4.65	3.09	2.32	1.54	71	80	90	100	112			
	82.55	**17.00**	2795	4.96	3.30	2.48	1.65	71	80	90	100	112			

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]								
PD 52 PM 52 W mm 136 + IEC - PAM mm 136-137	134.05	10.40	2654	2.90	1.93	1.45	0.96	90	100*	112*					
	100.15	14.00	2241	3.28	2.18	1.64	1.09	90	100	112*					
	91.82	15.20	2759	4.40	2.93	2.20	1.46		100	112	132*				
	81.68	17.10	1828	3.28	2.18	1.64	1.09	90	100	112*					
	68.60	20.40	2970	6.35	4.22	3.17	2.11		100	112	132*				
	55.94	25.00	2600	6.81	4.53	3.41	2.26		100	112	132*				
	55.55	**25.20**	2500	6.60	4.38	3.30	2.19	90	100	112	132*				
	51.45	27.20	3235	9.22	6.12	4.61	3.06				132*				
	47.27	29.60	2400	7.44	4.94	3.72	2.47		100	112	132*				
	41.96	33.40	3200	11.18	7.43	5.59	3.71				132				
	40.79	**34.30**	2500	8.98	5.97	4.49	2.98	90	100	112	132*	160*			
	35.45	39.50	2700	11.17	7.42	5.58	3.71				132				
	33.41	**41.90**	2300	10.09	6.70	5.05	3.35	90	100	112	132	160*	180*		
	30.47	**45.90**	2900	13.95	9.27	6.98	4.63	90	100	112	132	160*	180*		
	24.96	**56.10**	2900	17.03	11.31	8.52	5.66	90	100	112	132	160	180*		
	20.36	**68.80**	3100	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180		
	18.86	**74.20**	2600	20.21	13.42	10.10	6.71	90	100	112	132	160	180*		
	17.61	**79.50**	2750	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180		
	15.38	**91.00**	2600	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180		
	13.00	**107.70**	2629	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180		
	10.73	**130.50**	2500	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180		
	9.47	**147.80**	2300	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180		
	8.69	**161.10**	2360	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180		
	7.17	**195.30**	2161	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180		
	6.33	**221.20**	2114	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180		
	5.70	**245.60**	1800	*22.00*	*14.52*	*11.00*	*7.26*					160	180		
	5.35	**261.70**	1750	*22.00*	*14.52*	*11.00*	*7.26*					160	180		
	5.02	**278.90**	1700	*22.00*	*14.52*	*11.00*	*7.26*					160	180		
	4.32	**324.10**	1550	*22.00*	*14.52*	*11.00*	*7.26*					160	180		

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 63/22 PM 63/22 W mm 167 + IEC - PAM mm 166-167	4160.29	0.34	4780	0.21	0.14	0.10	0.07	71*	80*							
	3456.44	0.41	5400	0.27	0.18	0.13	0.09	71*	80*	90*						
	2738.15	0.51	4780	0.30	0.20	0.15	0.10	71*	80*	90*						
	2209.62	0.63	5400	0.40	0.26	0.20	0.13		80*	90*						
	1859.06	0.75	5400	0.47	0.31	0.23	0.15		80*	90*						
	1260.77	**1.10**	5400	0.67	0.44	0.33	0.22	71	80*	90*	100*	112*				
	1104.71	**1.30**	5400	0.76	0.50	0.38	0.25	71	80	90*	100*	112*				
	821.10	**1.70**	5400	0.96	0.64	0.48	0.32	71	80	90*	100*	112*				
	637.34	**2.20**	5400	1.24	0.83	0.62	0.41	71	80	90*	100*	112*				
	570.21	**2.50**	5400	1.39	0.92	0.69	0.46	71	80	90*	100*	112*				
	434.44	**3.20**	5400	1.82	1.21	0.91	0.61	71	80	90	100*	112*				
	349.07	**4.00**	5400	2.27	1.51	1.13	0.75	71	80	90	100*	112*				
	300.12	**4.70**	5400	2.64	1.75	1.32	0.88	71	80	90	100*	112*				
PD 63/32 PM 63/32 W mm 167 + IEC - PAM mm 166-167	**223.50**	**6.30**	4780	3.14	2.08	1.57	1.04	90	100	112*	132*					
	191.13	**7.30**	4780	3.67	2.44	1.83	1.22	90	100	112*	132*					
	158.90	**8.80**	4780	4.41	2.93	2.20	1.46	90	100	112	132*					
PD 63 PM 63 W mm 140 + IEC - PAM mm 140-141	552.15	2.50	5170	1.37	0.91	0.69	0.46	90*								
	445.80	3.10	4170	1.37	0.91	0.69	0.46	90*								
	393.43	3.60	5880	2.19	1.46	1.10	0.73	90	100*	112*						
	317.64	4.40	5640	2.60	1.73	1.30	0.86	90	100*	112*						
	267.94	5.20	5880	3.22	2.14	1.61	1.07		100	112*	132*					
	251.63	5.60	4480	2.61	1.73	1.30	0.87	90	100*	112*						
	225.83	6.20	4020	2.61	1.73	1.30	0.87	90	100*	112*						
	212.26	6.60	4670	3.23	2.14	1.61	1.07		100	112*	132*					
	171.37	8.20	5570	4.76	3.17	2.38	1.58		100	112	132*					
	160.11	**8.70**	5770	5.28	3.51	2.64	1.75	90	100	112	132*					
	126.84	**11.00**	4580	5.29	3.52	2.65	1.76	90	100	112	132*					
	114.79	**12.20**	5880	7.51	4.99	3.75	2.49	90	100	112	132*	160*				
	92.68	**15.10**	6000	9.49	6.30	4.75	3.15	90	100	112	132	160*				
	75.30	**18.60**	6000	11.68	7.76	5.84	3.88	90	100	112	132	160*				
	73.42	**19.10**	5570	11.10	7.39	5.56	3.69	90	100	112	132	160*				
	59.65	**23.50**	5500	13.52	8.98	6.76	4.49	90	100	112	132	160*				
	51.01	**27.40**	5080	14.60	9.70	7.30	4.85	90	100	112	132	160*				
	42.41	**33.00**	4550	15.73	10.45	7.86	5.22	90	100	112	132	160				
	36.27	**38.60**	4550	18.39	12.22	9.20	6.11	90	100	112	132	160				
	30.90	**45.30**	4550	21.59	14.34	10.79	7.17	90	100	112	132	160	180			
	28.66	**48.80**	4600	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	24.42	**57.30**	4690	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]								
PD 62 PM 62	80.26	17.40	4131	7.55	5.01	3.77	2.51	100	112	132*					
	65.45	21.40	3369	7.55	5.01	3.77	2.51	100	112	132*					
	61.05	22.90	4535	10.89	7.23	5.44	3.62			132	160*	180*			
W mm 140	49.79	28.10	4040	11.89	7.90	5.95	3.95			132	160*	180*			
	39.44	35.50	3200	11.89	7.90	5.95	3.95			132	160*	180*			
	29.89	**46.80**	4537	22.25	14.78	11.13	7.39	100	112	132	160	180			
+	**26.02**	**53.80**	4533	25.54	16.97	12.77	8.48	100	112	132	160	180			
IEC - PAM	**22.91**	**61.10**	4535	29.02	19.28	14.51	9.64	100	112	132	160	180	200*	225*	
mm	**18.68**	**74.90**	4427	34.74	23.08	17.37	11.54	100	112	132	160	180	200	225*	
140-141	**14.80**	**94.60**	4475	44.33	29.44	22.16	14.72	100	112	132	160	180	200	225*	
	12.34	**113.50**	4389	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	10.64	**131.60**	2026	27.91	18.54	13.96	9.27	100	112	132	160	180			
	10.62	**131.80**	4314	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	9.37	**149.40**	2754	43.09	28.62	21.54	14.31	100	112	132	160	180	200	225*	
	7.81	**179.30**	2682	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	6.73	**208.00**	2990	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	5.99	**233.70**	2392	*45.00*	*29.70*	*22.50*	*14.85*					180	200	225	
	5.78	**242.20**	2334	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225	
	5.49	**255.00**	2291	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225	
	4.90	**285.70**	2156	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225	
	4.38	**319.60**	2034	*45.00*	*29.70*	*22.50*	*14.85*					180	200	225	

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 73/22 PM 73/22 W mm 167 + IEC - PAM mm 166-167	5651.03	0.25	7080	0.22	0.15	0.11	0.07	71*	80*	90*					
	4889.70	0.29	7080	0.25	0.17	0.13	0.08	71*	80*	90*					
	3612.58	0.39	7080	0.33	0.22	0.16	0.11		80*	90*					
	2629.95	0.53	7080	0.43	0.29	0.22	0.14		80*	90*					
	2061.26	**0.68**	7080	0.54	0.36	0.27	0.18	71	80*	90*	100*	112*			
	1806.13	**0.78**	7080	0.61	0.41	0.31	0.20	71	80*	90*	100*	112*			
	1342.44	**1.00**	7080	0.77	0.51	0.39	0.26	71	80	90*	100*	112*			
	1042.00	**1.30**	7080	1.00	0.66	0.50	0.33	71	80	90*	100*	112*			
	932.25	**1.50**	7080	1.11	0.74	0.56	0.37	71	80	90*	100*	112*			
	710.29	**2.00**	7080	1.46	0.97	0.73	0.49	71	80	90*	100*	112*			
	570.70	**2.50**	7080	1.82	1.21	0.91	0.60	71	80	90	100*	112*			
	434.82	**3.20**	7080	2.39	1.59	1.19	0.79	71	80	90	100*	112*			
	376.24	**3.70**	7080	2.76	1.83	1.38	0.92	71	80	90	100*	112*			
PD 73/32 PM 73/32 W mm 167 + IEC - PAM mm 166-167	**295.06**	**4.70**	7060	3.51	2.33	1.75	1.17	90	100	112*	132*				
	223.01	**6.30**	7060	4.64	3.08	2.32	1.54	90	100	112	132*				
PD 73 PM 73 W mm 144 + IEC - PAM mm 144-145	338.37	4.10	7540	3.27	2.17	1.63	1.08	100	112*	132*					
	273.32	5.10	7540	4.04	2.69	2.02	1.34	100	112	132*					
	216.45	6.50	8300	5.62	3.73	2.81	1.87	100	112	132*					
	204.72	**6.80**	7540	5.40	3.59	2.70	1.79	100	112	132*					
	162.12	**8.60**	6270	5.67	3.77	2.83	1.88	100	112	132*					
	150.32	**9.30**	7540	7.35	4.88	3.68	2.44	100	112	132*					
	123.12	**11.40**	7540	8.98	5.96	4.49	2.98	100	112	132*	160*	180*			
	106.53	**13.10**	7540	10.38	6.89	5.19	3.45	100	112	132	160*	180*			
	93.05	**15.00**	7540	11.88	7.89	5.94	3.95	100	112	132	160*	180*	200*	225*	
	78.75	**17.80**	7420	13.81	9.18	6.91	4.59	100	112	132	160*	180*			
	68.14	**20.50**	7200	15.49	10.29	7.75	5.14	100	112	132	160	180*			
	59.52	**23.50**	7060	17.39	11.55	8.69	5.78	100	112	132	160	180*	200*	225*	
	53.42	**26.20**	7080	19.43	12.91	9.71	6.45	100	112	132	160	180*			
	46.66	**30.00**	7080	22.24	14.78	11.12	7.39	100	112	132	160	180	200*	225*	
	36.95	**37.90**	6620	26.26	17.45	13.13	8.72	100	112	132	160	180	200*	225*	
	30.49	**45.90**	6620	31.83	21.14	15.91	10.57	100	112	132	160	180	200	225*	
	26.92	**52.00**	6620	36.05	23.95	18.03	11.97	100	112	132	160	180	200	225*	
	23.47	**59.70**	6610	41.29	27.43	20.64	13.71	100	112	132	160	180	200	225*	

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]												
PD 72 **PM 72** **W** mm 144 + **IEC - PAM** mm 144-145	69.80	20.10	5804	12.19	8.10	6.09	4.05	132	160*	180*									
	56.90	24.60	5534	14.26	9.47	7.13	4.74	132	160*	180*									
	45.66	30.70	5809	18.65	12.39	9.33	6.19		160	180*	200*								
	45.06	31.10	4382	14.26	9.47	7.13	4.74	132	160*	180*									
	37.22	37.60	6473	25.49	16.94	12.75	8.47		160	180	200*								
	34.69	**40.40**	5804	24.53	16.29	12.26	8.15	132	160	180									
	26.89	**52.10**	5807	31.66	21.03	15.83	10.52	132	160	180	200	225*							
	22.90	**61.10**	5802	37.14	24.67	18.57	12.34	132	160	180	200	225*							
	19.96	**70.10**	5810	42.67	28.35	21.34	14.17	132	160	180	200	225*							
	16.27	**86.00**	6469	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	12.89	**108.60**	5864	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	11.18	**125.20**	6221	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	9.91	**141.30**	4273	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	9.46	**148.00**	6263	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	8.64	**162.00**	4222	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	7.50	**186.70**	4507	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	6.34	**220.80**	4450	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	5.96	**234.90**	4322	*45.00*	*29.70*	*22.50*	*14.85*					225							
	5.30	**264.20**	4065	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							
	5.03	**278.30**	3929	*45.00*	*29.70*	*22.50*	*14.85*					225							
	4.26	**328.60**	3619	*45.00*	*29.70*	*22.50*	*14.85*	132	160	180	200	225							

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 83/32 PM 83/32 W mm 167 + IEC - PAM mm 166-167	6601.35	0.21	12100	0.31	0.20	0.15	0.10	71*	80*	90*					
	5504.36	0.25	12100	0.36	0.24	0.18	0.12	71*	80*	90*					
	4202.93	0.33	12100	0.46	0.31	0.23	0.15		80*	90*					
	3519.07	0.40	12100	0.54	0.36	0.27	0.18		80*	90*					
	2996.11	0.47	12100	0.63	0.42	0.32	0.21		80*	90*					
	2408.64	0.58	12100	0.78	0.51	0.39	0.26		80	90*	100*	112*			
	1692.65	**0.83**	12100	1.05	0.70	0.52	0.35	71	80	90*	100*	112*			
	1362.94	**1.00**	12100	1.30	0.86	0.65	0.43	71	80	90*	100*	112*			
	1061.83	**1.30**	12100	1.67	1.11	0.84	0.55	71	80	90	100*	112*	132*		
	889.06	**1.60**	12100	2.00	1.33	1.00	0.66	71	80	90	100*	112*	132*		
	716.55	**2.00**	12100	2.48	1.64	1.24	0.82			90	100*	112*	132*		
	610.07	**2.30**	12100	2.91	1.93	1.45	0.97			90	100*	112*	132*		
PD 83/42 PM 83/42 W mm 169 + IEC - PAM mm 168-169	**550.29**	**2.50**	12100	3.22	2.14	1.61	1.07	90	100	112*	132*	160*			
	468.82	**3.00**	12100	3.78	2.51	1.89	1.26	90	100	112*	132*	160*			
	346.82	**4.00**	12100	5.11	3.40	2.56	1.70	90	100	112	132*	160*			
	295.48	**4.70**	12100	6.00	3.99	3.00	1.99	90	100	112	132*	160*			
	223.71	**6.30**	12100	7.93	5.27	3.96	2.63	90	100	112	132*	160*			
	186.54	**7.50**	12100	*9.20*	*6.07*	*4.60*	*3.04*	90	100	112	132	160*			
PD 83 PM 83 W mm 148 + IEC - PAM mm 148-149	386.39	3.60	12700	4.82	3.20	2.41	1.60	100	112	132*					
	318.11	4.40	13000	5.99	3.98	3.00	1.99	100	112	132*					
	293.92	4.80	12700	6.33	4.21	3.17	2.10			132*	160*	180*			
	241.98	5.80	13100	7.94	5.27	3.97	2.64			132*	160*	180*			
	200.83	7.00	10800	7.88	5.24	3.94	2.62	100	112	132*					
	185.56	7.50	12680	10.02	6.65	5.01	3.33			132	160*	180*			
	152.77	9.20	13200	12.67	8.41	6.33	4.21			132	160*	180*			
	143.91	**9.70**	12500	12.73	8.46	6.37	4.23	100	112	132	160*	180*			
	125.27	**11.20**	12190	14.27	9.48	7.13	4.74	100	112	132	160*	180*			
	118.48	**11.80**	12450	15.40	10.23	7.70	5.12	100	112	132	160	180*			
	103.13	**13.60**	12100	17.20	11.43	8.60	5.71	100	112	132	160	180*			
	90.79	**15.40**	12100	19.54	12.98	9.77	6.49	100	112	132	160	180*	200*	225*	
	75.70	**18.50**	12100	23.43	15.57	11.72	7.78	100	112	132	160	180	200*	225*	
	65.16	**21.50**	11300	25.42	16.89	12.71	8.44	100	112	132	160	180	200*	225*	
	57.32	**24.40**	12100	30.95	20.56	15.47	10.28	100	112	132	160	180	200	225*	
	47.79	**29.30**	12100	37.12	24.66	18.56	12.33	100	112	132	160	180	200	225*	
	43.52	**32.20**	10600	35.71	23.72	17.85	11.86	100	112	132	160	180	200	225*	
	35.83	**39.10**	12080	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	30.84	**45.40**	12090	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
PD 82 **PM 82** **W** mm 148 + **IEC - PAM** mm 148-149	72.17	19.40	7875	16.00	10.63	8.00	5.31	132	160	180*					
	59.41	23.60	6483	16.00	10.63	8.00	5.31	132	160	180*					
	47.51	29.50	10613	32.75	21.75	16.37	10.88		160	180	200				
	39.18	35.70	10615	39.72	26.38	19.86	13.19				200	225*			
	39.12	35.80	9342	35.01	23.26	17.50	11.63		160	180	200				
	32.25	43.40	10346	47.03	31.24	23.51	15.62				200	225			
	28.35	**49.40**	9998	51.70	34.34	25.85	17.17	132	160	180	200	225			
	24.51	**57.10**	10603	63.42	42.13	31.71	21.06	132	160	180	200	225	250		
	21.14	**66.20**	10618	73.63	48.91	36.82	24.46	132	160	180	200	225	250	280*	
	17.41	**80.40**	9697	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	15.19	**92.20**	9480	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	12.99	**107.80**	10294	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	10.88	**128.70**	10290	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	9.67	**144.80**	6521	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	8.27	**169.30**	7296	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	6.93	**202.00**	6786	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	4.52	**309.70**	4890	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PD 93/42 PM 93/42 W mm 169 + IEC - PAM mm 168-169	4158.29	0.34	24000	0.85	0.56	0.42	0.28		100*	112*	132*				
	2433.68	**0.58**	24000	1.45	0.96	0.72	0.48	90*	100*	112*					
	2202.85	**0.64**	24000	1.60	1.06	0.80	0.53	90	100*	112*					
	1744.83	**0.80**	24000	2.02	1.34	1.01	0.67	90	100*	112*	132*	160*			
	1417.68	**0.99**	24000	2.48	1.65	1.24	0.82	90	100*	112*	132*	160*			
	1177.36	**1.20**	24000	2.99	1.99	1.49	0.99	90	100	112*	132*	160*			
	885.67	**1.60**	24000	3.97	2.64	1.99	1.32	90	100	112	132*	160*			
	715.36	**2.00**	24000	4.92	3.27	2.46	1.63	90	100	112	132*	160*			
	618.83	**2.30**	24000	5.69	3.78	2.84	1.89	90	100	112	132*	160*			
	450.86	**3.10**	24000	7.80	5.18	3.90	2.59	90	100	112	132*	160*			
PD 93/52 PM 93/52 W mm 169 + IEC - PAM mm 168-169	**410.49**	**3.40**	24000	8.57	5.69	4.29	2.85	100	112	132*	160*	180*			
	294.19	**4.80**	24000	11.96	7.94	5.98	3.97	100	112	132	160*	180*			
	233.30	**6.00**	24000	15.08	10.02	7.54	5.01				160	180*			
	200.50	**7.00**	24000	17.55	11.66	8.77	5.83				160	180*			
PD 93 PM 93 W mm 152 + IEC - PAM mm 152-153	352.16	4.00	25400	10.57	7.02	5.29	3.51	132	160*	180*					
	290.94	4.80	24000	12.09	8.03	6.05	4.02	132	160*	180*					
	204.66	6.80	22000	15.76	10.47	7.88	5.23	132	160	180*					
	175.03	**8.00**	25400	21.27	14.13	10.64	7.07	132	160	180*					
	144.60	**9.70**	24000	24.33	16.16	12.17	8.08	132	160	180					
	135.66	**10.30**	25400	27.45	18.23	13.72	9.12	132	160	180	200*	225*			
	115.51	**12.10**	25400	32.24	21.41	16.12	10.71	132	160	180	200	225*	250*		
	100.70	**13.90**	25400	36.98	24.56	18.49	12.28	132	160	180	200	225*	250*	280*	
	83.19	**16.80**	24000	42.29	28.09	21.15	14.05	132	160	180	200	225*	250*	280*	
	72.17	**19.40**	24000	48.75	32.38	24.38	16.19	132	160	180	200	225	250*	280*	
	65.13	**21.50**	24260	54.61	36.27	27.30	18.14	132	160	180	200	225			
	55.46	**25.20**	24000	63.44	42.14	31.72	21.07	132	160	180	200	225	250		
	48.35	**29.00**	24000	72.77	48.34	36.38	24.17	132	160	180	200	225	250	280*	
	41.94	**33.40**	24000	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	35.49	**39.40**	24000	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
PD 92 PM 92 W mm 152 + IEC - PAM mm 152-153	**34.36**	**40.70**	16250	69.33	46.06	34.67	23.03	180	200	225	250				
	30.79	**45.50**	17930	85.37	56.71	42.68	28.35	180	200	225	250	280*			
	26.85	**52.10**	17200	93.91	62.38	46.95	31.19	180	200	225	250	280	315*		
	23.17	**60.40**	16426	103.93	69.04	51.96	34.52	180	200	225	250	280	315*		
	20.09	**69.70**	15926	116.21	77.20	58.11	38.60	180	200	225	250	280	315*		
	17.34	**80.70**	15492	130.97	87.00	65.49	43.50	180	200	225	250	280	315*		
	14.69	**95.30**	14715	146.85	97.55	73.42	48.77	180	200	225	250	280	315*		
	12.04	**116.30**	13808	*160.00*	*105.60*	*80.00*	*52.80*	180	200	225	250	280	315*		
	10.21	**137.10**	10792	154.95	102.93	77.48	51.47	180	200	225	250	280	315*		
	8.65	**161.80**	11160	*160.00*	*105.60*	*80.00*	*52.80*	180	200	225	250	280	315*		
	7.09	**197.50**	10116	*160.00*	*105.60*	*80.00*	*52.80*	180	200	225	250	280	315*		
	5.78	**242.20**	8825	*160.00*	*105.60*	*80.00*	*52.80*	180	200	255	250	280	315*		
	5.36	**261.20**	8336	*160.00*	*105.60*	*80.00*	*52.80*				250	280	315*		

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 103/52 PM 103/52 W mm 169 + IEC - PAM mm 168-169	4677.24	0.30	35000	1.10	0.73	0.55	0.36	90*	100*	112*					
	3520.13	0.40	35000	1.46	0.97	0.73	0.48		100*	112*	132*				
	2796.57	0.50	35000	1.83	1.22	0.92	0.61		100*	112*	132*				
	2402.69	0.58	35000	2.14	1.42	1.07	0.71				132*				
	1887.83	0.74	35000	2.72	1.81	1.36	0.90				132*				
	1416.90	**0.99**	35000	3.62	2.41	1.81	1.20	90	100	112*	132*	160*	180*		
	1165.61	**1.20**	35000	4.40	2.92	2.20	1.46	90	100	112	132*	160*	180*		
	915.84	**1.50**	35000	5.60	3.72	2.80	1.86	90	100	112	132*	160*	180*		
	692.20	**2.00**	35000	7.41	4.92	3.71	2.46	90	100	112	132*	160*	180*		
	578.09	**2.40**	35000	8.88	5.90	4.44	2.95	90	100	112	132*	160*	180*		
	476.93	**2.90**	35000	10.76	7.15	5.38	3.57		100	112	132	160*	180*		
	366.18	**3.80**	35000	14.01	9.31	7.01	4.65	90	100	112	132	160*	180*		
	302.10	**4.60**	35000	16.98	11.28	8.49	5.64		100	112	132	160	180*		
PD 103 PM 103 W mm 156 + IEC - PAM mm 156-157	357.40	3.90	35460	14.54	9.66	7.27	4.83	160	180*						
	332.64	4.20	37000	16.31	10.83	8.15	5.42	160	180*						
	282.85	4.90	33000	17.10	11.36	8.55	5.68	160	180*						
	263.25	5.30	33000	18.38	12.21	9.19	6.10	160	180*						
	180.68	**7.70**	35000	28.40	18.86	14.20	9.43	160	180						
	168.16	**8.30**	35000	30.51	20.27	15.26	10.13	160	180						
	140.41	**10.00**	35480	37.04	24.61	18.52	12.30	160	180	200	225*				
	104.71	**13.40**	35300	49.42	32.83	24.71	16.41	160	180	200	225	250*	280*		
	91.35	**15.30**	35380	56.78	37.72	28.39	18.86	160	180	200	225	250	280*	315*	
	72.71	**19.30**	37200	75.00	49.82	37.50	24.91	160	180	200	225	250	280*	315*	
	65.44	**21.40**	35100	78.63	52.23	39.32	26.12	160	180	200	225	250	280*	315*	
	56.76	**24.70**	35000	90.40	60.05	45.20	30.02	160	180	200	225	250	280	315*	
	47.95	**29.20**	35000	107.01	71.08	53.50	35.54	160	180	200	225	250	280	315*	
	41.00	**34.10**	35000	125.14	83.13	62.57	41.57	160	180	200	225	250	280	315*	
	34.35	**40.80**	35000	149.37	99.22	74.69	49.61	160	180	200	225	250	280	315*	
	29.79	**47.00**	35000	*160.00*	*105.60*	*80.00*	*52.80*	160	180	200	225	250	280	315*	
	27.18	**51.50**	33000	*160.00*	*105.60*	*80.00*	*52.80*	160	180	200	225	250	280	315*	
	23.58	**59.40**	33000	*160.00*	*105.60*	*80.00*	*52.80*	160	180	200	225	250	280	315*	
	21.00	**66.70**	33000	*160.00*	*105.60*	*80.00*	*52.80*	160	180	200	225	250	280	315*	
PD 102 PM 102 W mm 156 + IEC - PAM mm 156-157	**18.24**	**76.80**	32000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	15.19	**92.20**	32000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	13.50	**103.70**	32000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	11.63	**120.40**	32000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	10.42	**134.40**	32000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	9.20	**152.20**	30000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	8.24	**169.90**	30000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	7.58	**184.70**	19000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	6.74	**207.70**	19000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	5.80	**241.40**	19000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	5.20	**269.20**	19000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 113/52 PM 113/52 W mm 169 + IEC - PAM mm 168-171	4001.34	0.35	60000	2.20	1.46	1.10	0.73	90	100*	112*						
	3722.96	0.38	60000	2.36	1.57	1.18	0.78	90	100*	112*	132*	160*	180*			
	3062.69	0.46	60000	2.87	1.91	1.44	0.95	90	100*	112*	132*	160*	180*			
	2328.41	0.60	60000	3.78	2.51	1.89	1.25	90	100	112*	132*	160*	180*			
	1829.47	0.77	60000	4.81	3.19	2.40	1.60	90	100	112	132*	160*	180*			
	1382.74	1.00	60000	6.36	4.23	3.18	2.11	90	100	112	132*	160*	180*			
	1154.79	1.20	60000	7.62	5.06	3.81	2.53	90	100	112	132*	160*	180*			
	962.15	1.50	60000	9.14	6.07	4.57	3.04	90	100	112	132	160*	180*			
	731.47	1.90	60000	12.02	7.99	6.01	3.99	90	100	112	132	160*	180*			
	603.47	2.30	60000	14.58	9.68	7.29	4.84		100	112	132	160*	180*			
	479.85	2.90	60000	18.33	12.18	9.17	6.09					160	180*			
	363.21	3.90	50000	20.18	13.41	10.09	6.70					160	180*			
	312.23	4.50	50000	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
PD 113 PM 113 W mm 160 + IEC - PAM mm 160-161	224.76	6.20	69000	45.00	29.90	22.50	14.95	160	180							
	171.96	8.10	69000	58.82	39.08	29.41	19.54	160	180	200	225	250	280*			
	152.87	9.20	69000	66.17	43.95	33.08	21.98	160	180	200	225	250	280*	315*		
	130.73	10.70	69000	77.37	51.40	38.69	25.70	160	180	200	225	250	280*	315*		
	112.38	12.50	69000	90.01	59.79	45.00	29.90	160	180	200	225	250	280*	315*		
	92.07	15.20	65400	104.13	69.17	52.07	34.59	160	180	200	225	250	280	315*		
	77.01	18.20	62150	118.31	78.59	59.15	39.30	160	180	200	225	250	280	315*		
	63.44	22.10	60000	138.65	92.10	69.32	46.05	160	180	200	225	250	280	315*		
	54.26	25.80	60000	162.10	107.68	81.05	53.84	160	180	200	225	250	280	315*		
	46.64	30.00	60000	188.59	125.28	94.29	62.64	160	180	200	225	250	280	315*		
	38.21	36.60	60000	*200.00*	*132.00*	*100.00*	*66.00*	160	180	200	225	250	280	315		
	31.96	43.80	60000	*200.00*	*132.00*	*100.00*	*66.00*	160	180	200	225	250	280	315		
PD 112 PM 112 W mm 160 + IEC - PAM mm 160-161	34.85	40.20	42000	176.67	117.36	88.34	58.68	250	280	315*						
	29.92	46.80	42000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	25.47	55.00	42000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	21.42	65.40	42000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	18.27	76.60	42000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	16.33	85.70	42000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	14.04	99.70	26600	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	11.96	117.10	26300	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	10.05	139.30	26000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	8.58	163.20	24800	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						
	7.67	182.50	24000	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315						

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

W - IEC - PAM

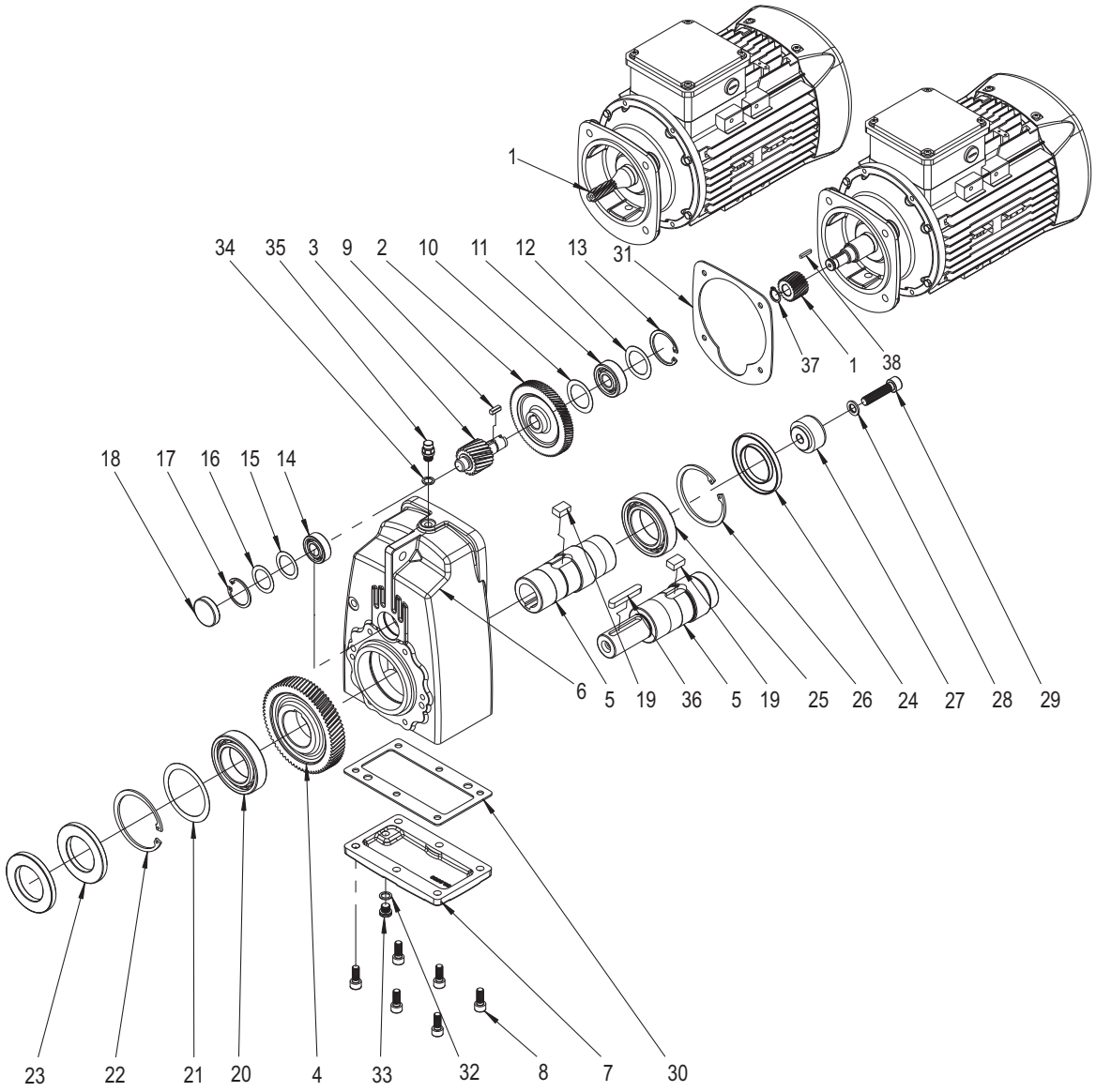
Tip Type	İges	4-pol. 50 Hz 1400 rpm n_2 [min^{-1}]	M_{amax} f_B=1 4 - pol. [Nm]	Max. Giriş Gücü / Max. Input Power P_{1max} W $f_B \geq 1$ 4 - pol. 1400 rpm [kW]	6 - pol. 930 rpm [kW]	8 - pol. 700 rpm [kW]	12 - pol. 465 rpm [kW]	IEC - PAM f_B ⇨ 69 - 108							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PD 123	**201.75**	**6.90**	90000	65.40	43.44	32.70	21.72	160	180	200	225				
PM 123	**154.35**	**9.10**	90000	85.48	56.78	42.74	28.39	160	180	200	225	250	280*		
W mm 163	**137.22**	**10.20**	90000	96.15	63.87	48.08	31.94	160	180	200	225	250	280	315*	
+	**117.35**	**11.90**	90000	112.43	74.69	56.22	37.34	160	180	200	225	250	280	315*	
IEC - PAM mm 163	**100.88**	**13.90**	90000	130.79	86.88	65.39	43.44	160	180	200	225	250	280	315*	
	82.65	**16.90**	90000	159.60	106.04	79.80	53.02	160	180	200	225	250	280	315*	
	69.12	**20.30**	90000	190.88	126.80	95.44	63.40	160	180	200	225	250	280	315*	

	IEC - PAM bağlantısı yoktur - No IEC - PAM assembling on empty fields
63	**IEC - PAM bağlantısı yapılır -** IEC - PAM assembling available on numbered fields
80*	**IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır -** Do not exceed the P_{1max} values indicated on fields with asterisk

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM A02 - PD/PM 12...52



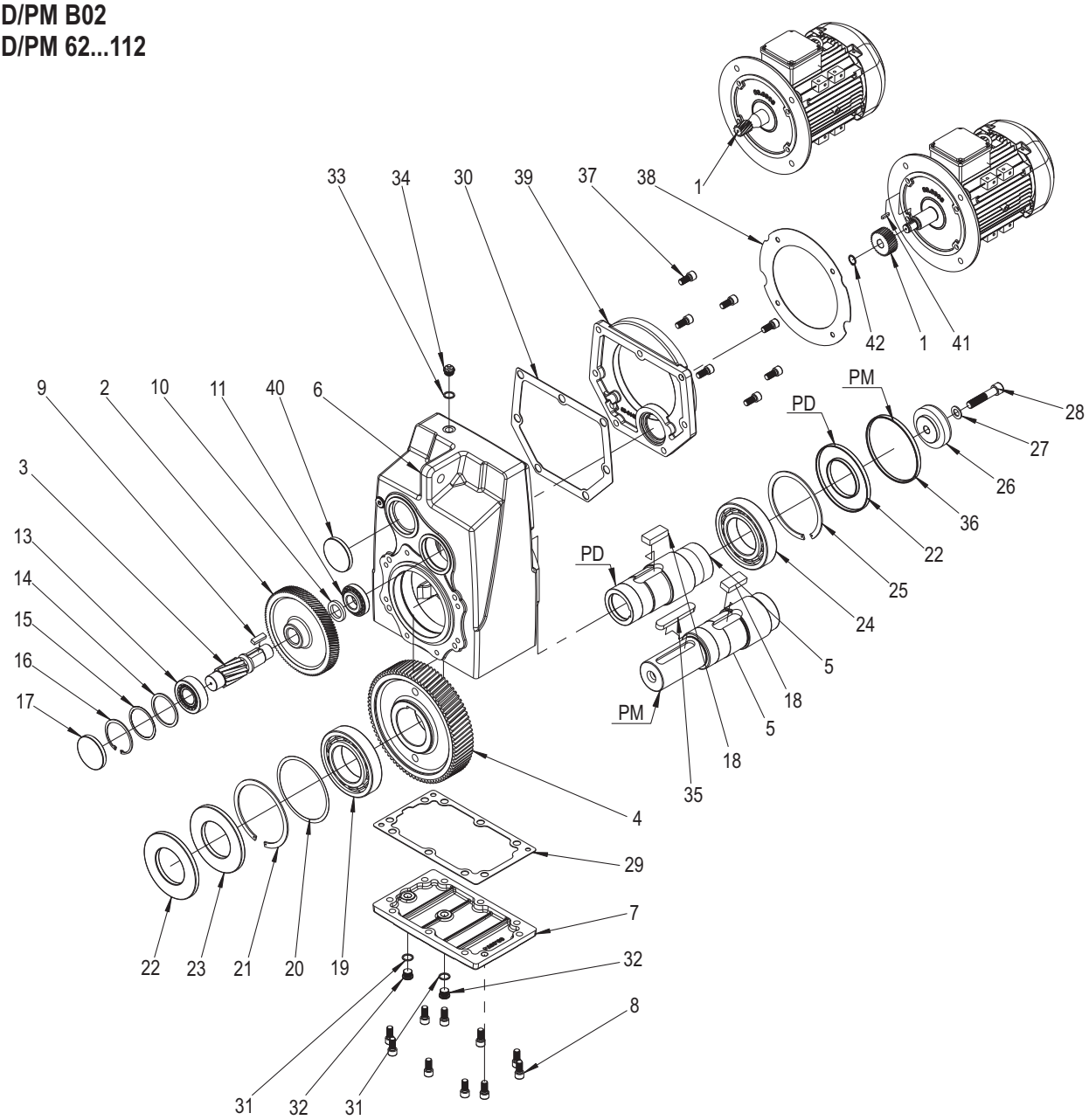
1. Z1 Dişlisi	**20. Rulman**
2. Z2 Dişlisi	**21. Layner**
3. Z3 Dişlisi	**22. Segman**
4. Z4 Dişlisi	**23. Şaft Keçesi**
5. Çıkış Şaftı	**24. Şaft Keçesi**
6. Gövde	**25. Rulman**
7. Gövde Kapağı	**26. Segman**
8. Alyan Başlı Civata	**27. Çektirme Rondelası**
9. Kama	**28. Yaylı Rondela**
10. Rondela	**29. Alyan Başlı Civata**
11. Rulman	**30. Conta**
12. Layner	**31. Conta**
13. Segman	**32. Conta**
14. Rulman	**33. Boşaltma Tapası**
15. Rondela	**34. Conta**
16. Layner	**35. Havalandırma Tapası**
17. Segman	**36. Kama**
18. Yağ Kapağı	**37. Segman**
19. Kama	**38. Kama**

1. Pinion	20. Bearing
2. Driven Gear	21. Shim
3. Pinion	22. Circlip
4. Driven Gear	23. Shaft Seal
5. Output Shaft	24. Shaft Seal
6. Gear Case	25. Bearing
7. Gear Case Cover	26. Circlip
8. Socket Head Screw	27. Fixing Element
9. Key	28. Spring Washer
10. Supporting Disc	29. Socket Head Screw
11. Bearing	30. Gasket
12. Shim	31. Gasket
13. Circlip	32. Gasket
14. Bearing	33. Drain Plug
15. Supporting Disc	34. Gasket
16. Shim	35. Vent Plug
17. Circlip	36. Key
18. Locking Cap	37. Circlip
19. Key	38. Key

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM B02
PD/PM 62...112



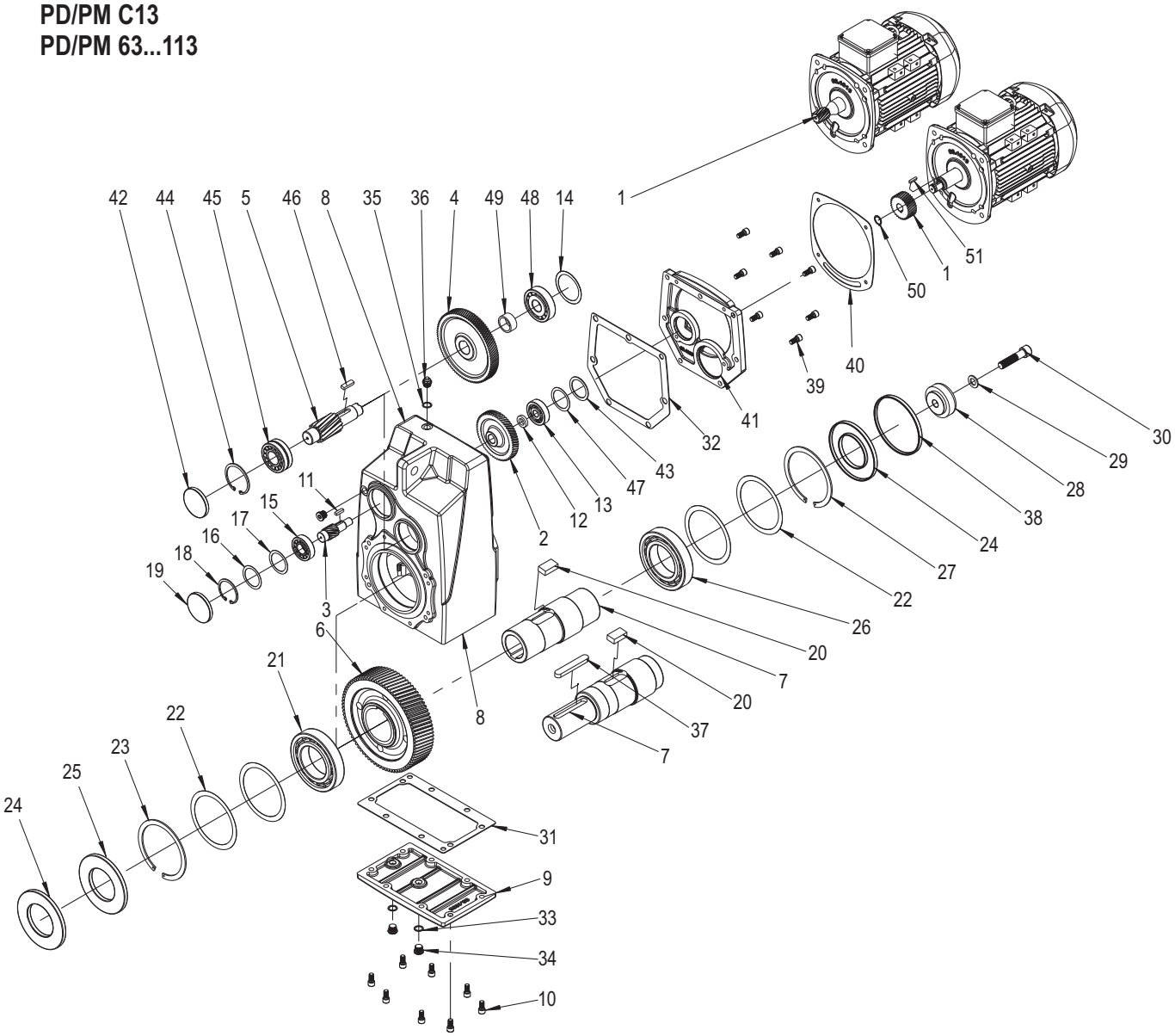
1. Z1 Dişlisi
2. Z2 Dişlisi
3. Z3 Dişlisi
4. Z4 Dişlisi
5. Çıkış Şaftı
6. Gövde
7. Gövde Kapağı
8. Alyan Başlı Civata
9. Kama
10. Rondela
11. Rulman
13. Rulman
14. Rondela
15. Layner
16. Segman
17. Yağ Kapağı
18. Kama
19. Rulman
20. Layner
21. Segman
22. Şaft Keçesi
23. Şaft Keçesi
24. Rulman
25. Segman
26. Çektirme Rondelası
27. Yaylı Rondela
28. Alyan Başlı Civata
29. Conta
30. Conta
31. Conta
32. Boşaltma Tapası
33. Conta
34. Havalandırma Tapası
35. Kama
36. Yağ Kapağı
37. Alyan Başlı Civata
38. Conta
39. Ara Bağlantı Flanşı
40. Yağ Kapağı
41. Kama
42. Segman

1. Pinion
2. Driven Gear
3. Pinion
4. Driven Gear
5. Output Shaft
6. Gear Case
7. Gear Case Cover
8. Socket Head Screw
9. Key
10. Supporting Disc
11. Bearing
13. Bearing
14. Supporting Disc
15. Shim
16. Circlip
17. Locking Cap
18. Key
19. Bearing
20. Shim
21. Circlip
22. Shaft Seal
23. Shaft Seal
24. Bearing
25. Circlip
26. Fixing Element
27. Spring Washer
28. Socket Head Screw
29. Gasket
30. Gasket
31. Gasket
32. Drain Plug
33. Gasket
34. Vent Plug
35. Key
36. Locking Cap
37. Socket Head Screw
38. Gasket
39. Intermediate Flange
40. Locking Cap
41. Key
42. Circlip

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM C13
PD/PM 63...113

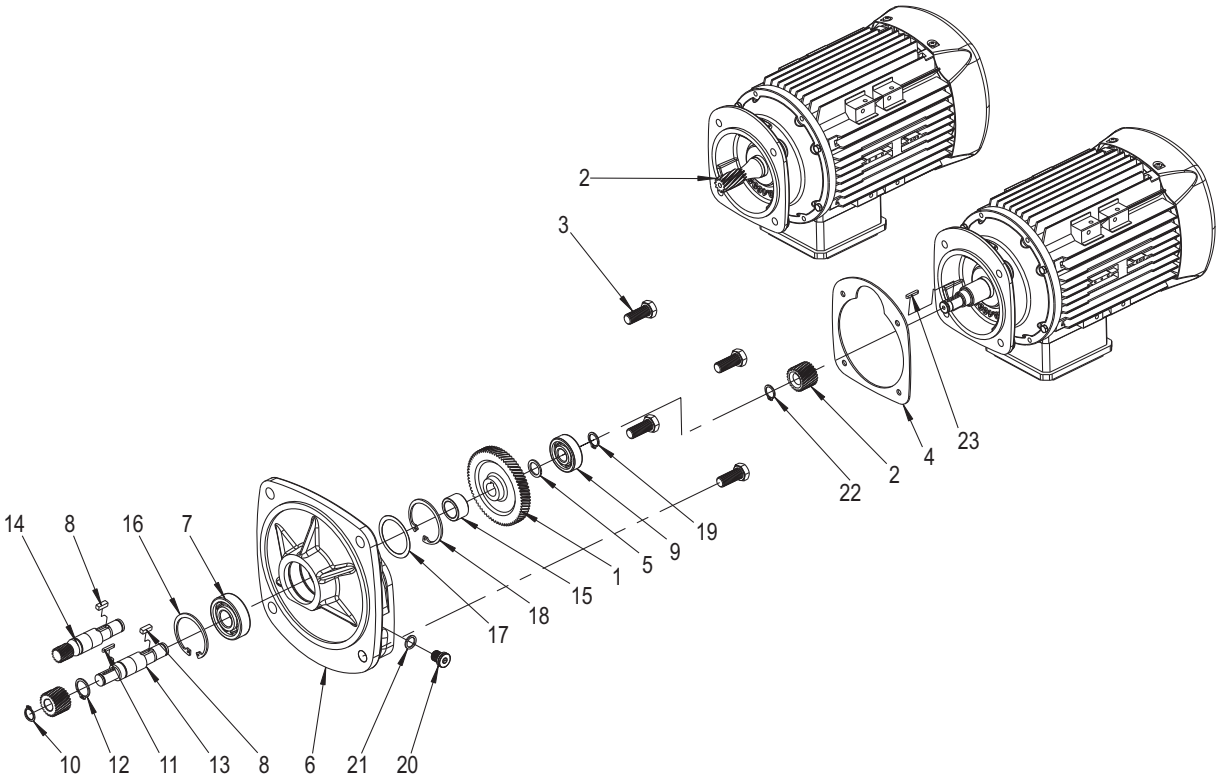


1. Z1 Dişlisi	**25. Şaft Keçesi**	1. Pinion	25. Shaft Seal
2. Z2 Dişlisi	**26. Rulman**	2. Driven Gear	26. Bearing
3. Z3 Dişlisi	**27. Segman**	3. Pinion	27. Circlip
4. Z4 Dişlisi	**28. Çektirme Rondelası**	4. Driven Gear	28. Fixing Element
5. Z5 Dişlisi	**29. Yaylı Rondela**	5. Pinion	29. Spring Washer
6. Z6 Dişlisi	**30. Alyan Başlı Civata**	6. Driven Gear	30. Socket Head Screw
7. Çıkış Şaftı	**31. Conta**	7. Output Shaft	31. Gasket
8. Gövde	**32. Conta**	8. Gear Case	32. Gasket
9. Gövde Kapağı	**33. Conta**	9. Gear Case Cover	33. Gasket
10. Alyan Başlı Civata	**34. Boşaltma Tapası**	10. Socket Head Screw	34. Drain Plug
11. Kama	**35. Conta**	11. Key	35. Gasket
12. Rondela	**36. Havalandırma Tapası**	12. Supporting Disc	36. Vent Plug
13. Rulman	**37. Kama**	13. Bearing	37. Kama
14. Layner	**38. Yağ Kapağı**	14. Shim	38. Locking Cap
15. Rulman	**39. Alyan Başlı Civata**	15. Bearing	39. Socket Head Screw
16. Rondela	**40. Conta**	16. Supporting Disc	40. Gasket
17. Layner	**41. Ara Bağlantı Flanşı**	17. Shim	41. Intermediate Flange
18. Segman	**42. Yağ Kapağı**	18. Circlip	42. Locking Cap
19. Yağ Kapağı	**43. Rondela**	19. Locking Cap	43. Supporting Disc
20. Kama	**44. Segman**	20. Key	44. Circlip
21. Rulman	**45. Rulman**	21. Bearing	45. Bearing
22. Layner	**46. Kama**	22. Shim	46. Key
23. Segman	**47. Layner**	23. Circlip	47. Shim
24. Şaft Keçesi	**48. Rulman**	24. Shaft Seal	48. Bearing

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM 13...53 (**İndirgeyici Gövde** / Reduction Case)

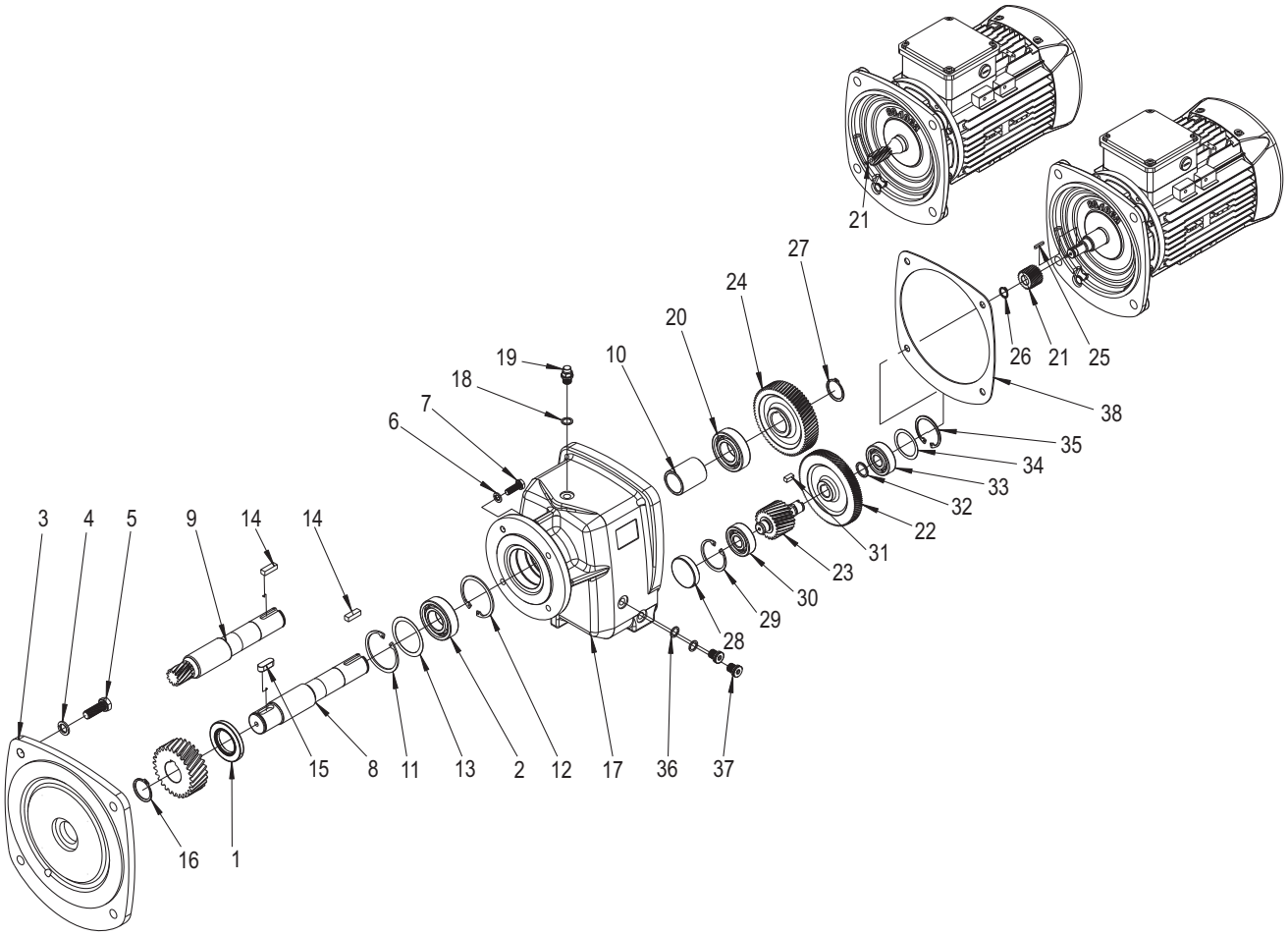


1. Z2 Dişlisi	1. Driven Gear
2. Z1 Dişlisi	2. Pinion
3. Civata	3. Bolt
4. Conta	4. Gasket
5. Rondela	5. Supporting Disc
6. İndirgeyici Gövdesi	6. Reduction Gear Case
7. Rulman	7. Bearing
8. Segman	8. Key
9. Rulman	9. Bearing
10. Segman	10. Circlip
11. Kama	11. Key
12. Segman	12. Circlip
13. İndirgeyici Mili Çakma	13. Intermediate Shaft, Plain
14. İndirgeyici Mili Yekpare	14. Intermadiate Shaft, Gearcut
15. Burç	15. Supporting Disc
16. Segman	16. Circlip
17. Layner	17. Shim
18. Segman	18. Circlip
19. Segman	19. Circlip
20. Tapa	20. Plug
21. Conta	21. Gasket
22. Segman	22. Circlip
23. Kama	23. Key

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM 12/02 ... PD/PM 113/52 (PF = 02 ... 52)



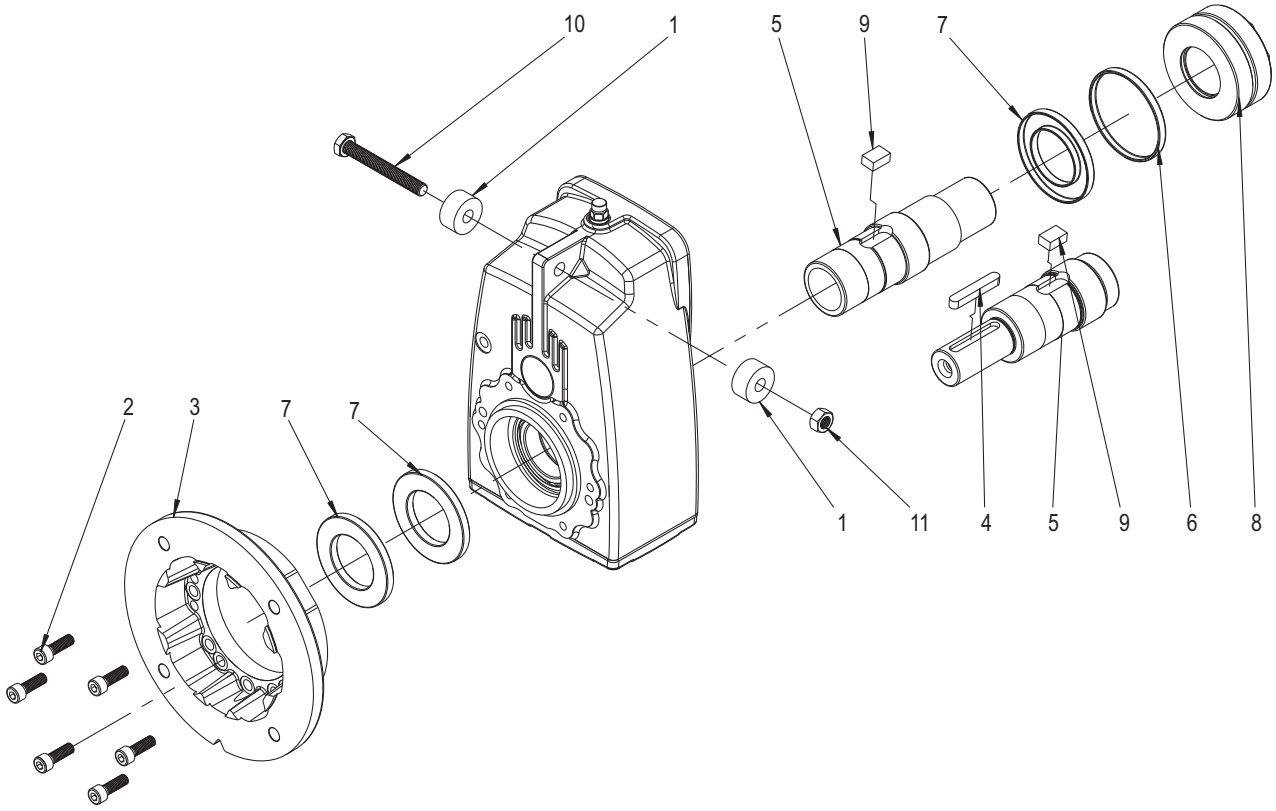
1. Şaft Keçesi	**20. Rulman**	1. Shaft Seal	20. Bearing
2. Rulman	**21. Z1 Dişlisi**	2. Bearing	21. Pinion
3. Ara Flanşı	**22. Z2 Dişlisi**	3. Intermediate Flange	22. Driven Gear
4. Yaylı Rondela	**23. Z3 Dişlisi**	4. Spring Washer	23. Pinion
5. Civata	**24. Z4 Dişlisi**	5. Bolt	24. Driven Gear
6. Yaylı Rondela	**25. Kama**	6. Spring Washer	25. Key
7. Civata	**26. Segman**	7. Bolt	26. Circlip
8. Ara Mil Çakma	**27. Segman**	8. Intermediate Shaft, Plain	27. Circlip
9. Ara Mil Yekpare	**28. Yağ Kapağı**	9. Intermediate Shaft, Gearcut	28. Locking Cap
10. Ara Burç	**29. Segman**	10. Supporting Disc	29. Circlip
11. Segman	**30. Rulman**	11. Circlip	30. Bearing
12. Segman	**31. Kama**	12. Circlip	31. Key
13. Layner	**32. Rondela**	13. Shim	32. Supporting Disc
14. Kama	**33. Rulman**	14. Key	33. Bearing
15. Kama	**34. Layner**	15. Key	34. Shim
16. Segman	**35. Segman**	16. Circlip	35. Circlip
17. Gövde	**36. Conta**	17. Gear Case	36. Gasket
18. Conta	**37. Boşaltma Tapası**	18. Gasket	37. Drain Plug
19. Havalandırma Tapası	**38. Conta**	19. Vent Plug	38. Gasket

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM A02...112
PD/PM C13...123

(AKSESUARLAR / ACCESSORIES)

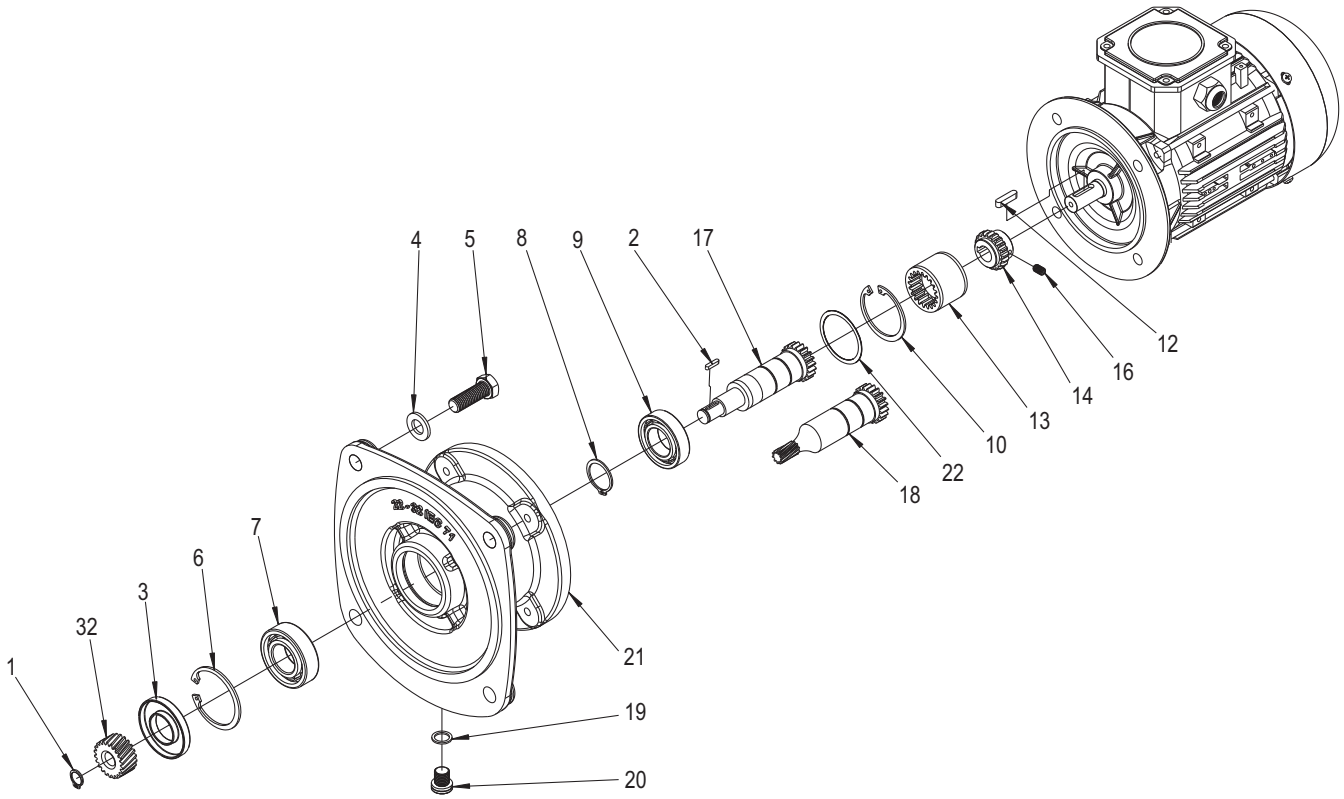


1. Lastik Takoz	1. Rubber Buffer
2. Alyan Başlı Civata	2. Socket Head Screw
3. B5 Flanşı	3. Flange B5
4. Kama	4. Key
5. Çıkış Şaftı	5. Output Shaft
6. Yağ Kapağı	6. Locking Cap
7. Şaft Keçesi	7. Shaft Seal
8. Konik Sıktırma	8. Shrink Disc
9. Kama	9. Key
10. Civata	10. Bolt
11. Somun	11. Nut

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

IEC 63...112



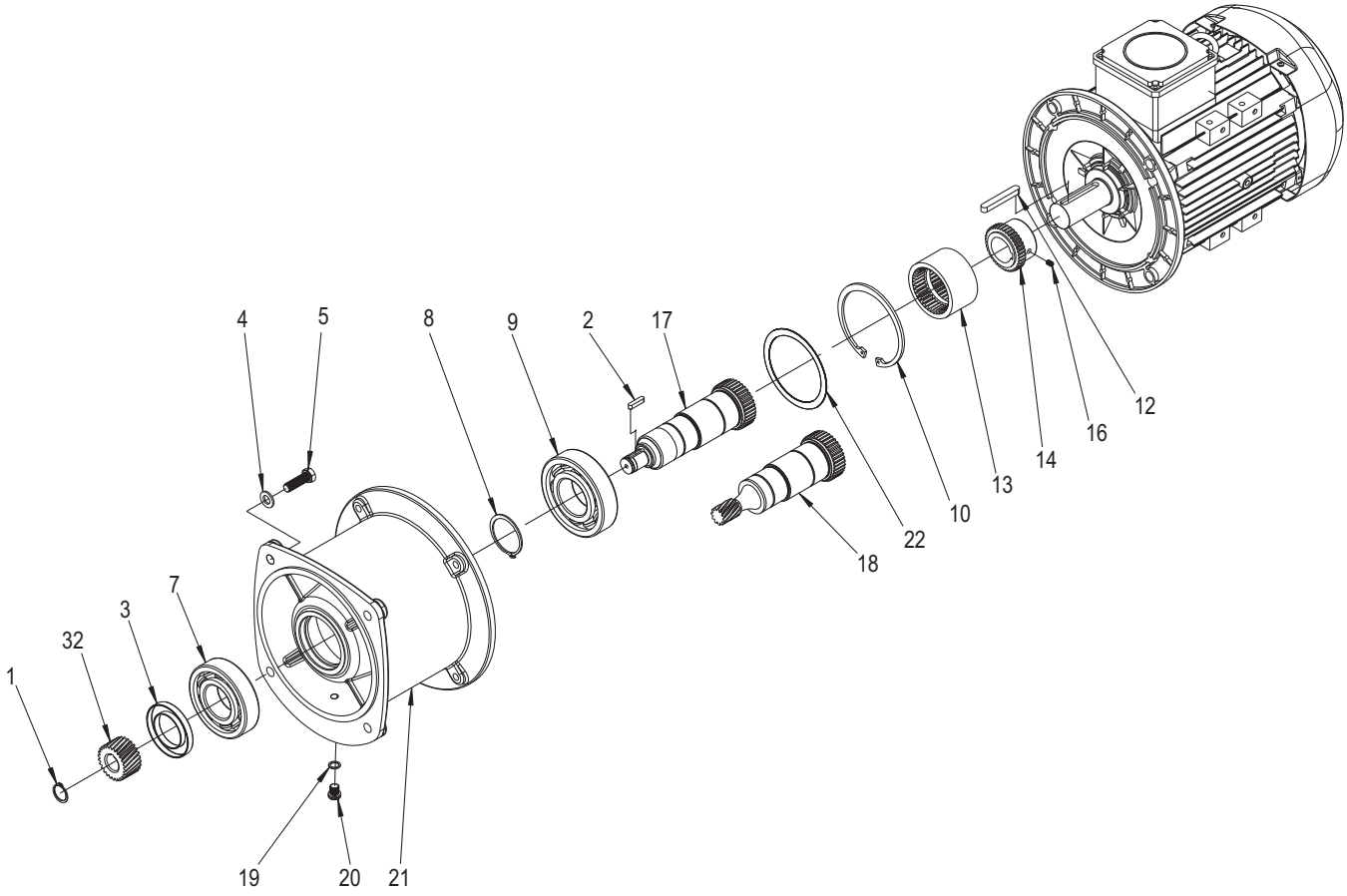
1. Segman
2. Kama
3. Şaft Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
6. Segman
7. Rulman
8. Segman
9. Rulman
10. Segman
12. Kama
13. Kaplin
14. Kaplin
16. Setuskur Civata
17. IEC Mili Çakma
18. IEC Mili Yekpare
19. Conta
20. Yağ Tapası
21. IEC Gövde
22. Layner
32. Z1 Dişlisi

1. Circlip
2. Key
3. Shaft Seal
4. Spring Washer
5. Bolt
6. Circlip
7. Bearing
8. Circlip
9. Bearing
10. Circlip
12. Key
13. Coupling
14. Coupling
16. Set Screw
17. Input Shaft, Plain
18. Input Shaft, Gearcut
19. Gasket
20. Oil Plug
21. IEC Adapter
22. Shim
32. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

IEC 132...180

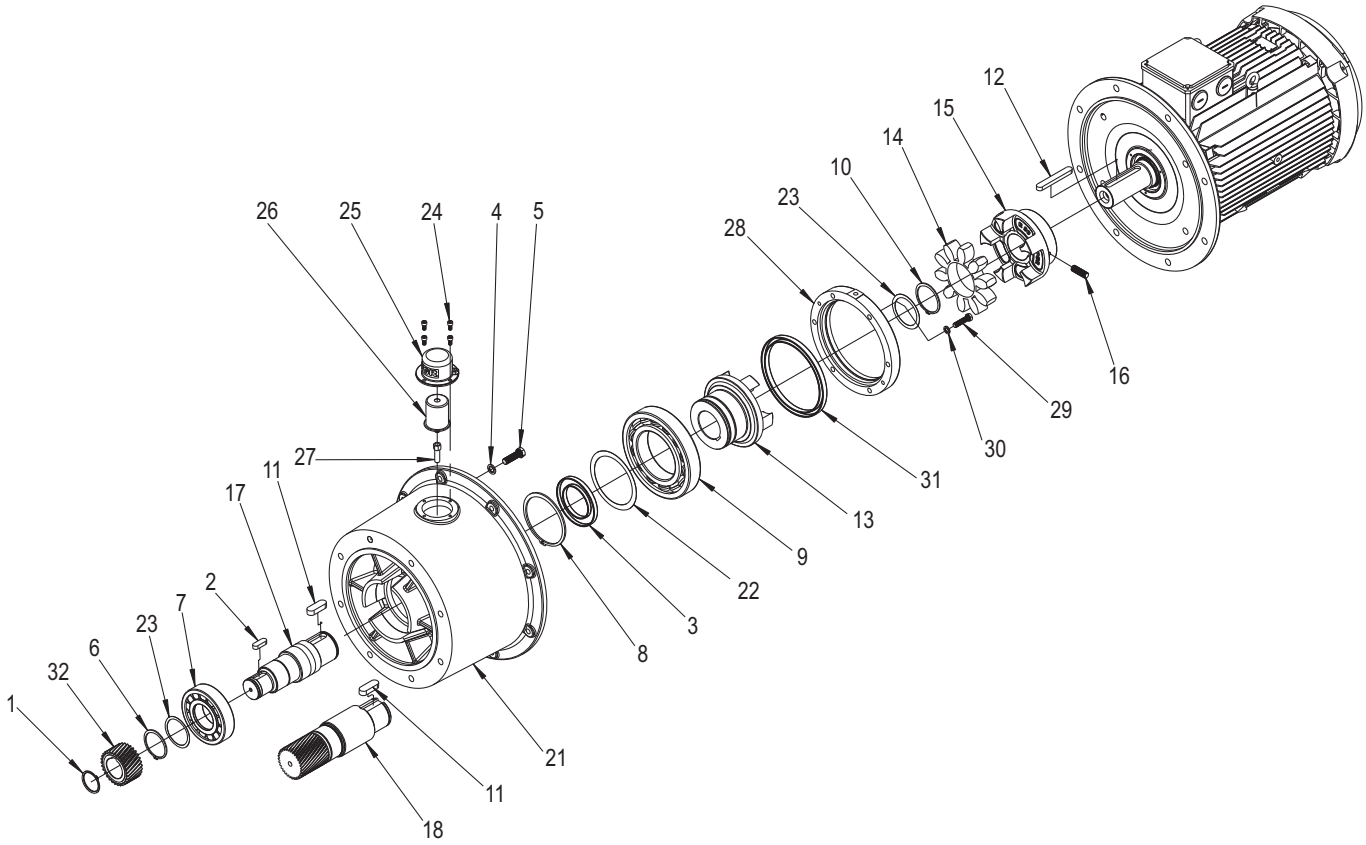


1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Bolt
7. Rulman	7. Bearing
8. Segman	8. Circlip
9. Rulman	9. Bearing
10. Segman	10. Circlip
12. Kama	12. Key
13. Kaplin	13. Coupling
14. Kaplin	14. Coupling
16. Setuskur Civata	16. Set Screw
17. IEC Mili Çakma	17. Input Shaft, Plain
18. IEC Mili Yekpare	18. Input Shaft, Gearcut
19. Conta	19. Gasket
20. Yağ Tapası	20. Oil Plug
21. IEC Gövde	21. IEC Adapter
22. Layner	22. Shim
32. Z1 Dişlisi	32. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

IEC 160...315



1. Segman
2. Kama
3. Şaft Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
6. Segman
7. Rulman
8. Segman
9. Rulman
10. Segman
11. Kama
12. Kama
13. Kaplin
14. Kaplin
15. Kaplin
16. Setuskur Civata
17. IEC Mili Çakma
18. IEC Mili Yekpare
21. IEC Gövde
22. Layner
23. Layner
24. Alyan Başlı Civata
25. Kapak
26. Otomatik Yağlayıcı
27. Adaptör
28. Rulman Kapağı
29. Altıköşe Başlı Civata
30. Yağlı Rondela
31. Şaft Keçesi
32. Z1 Dişlisi

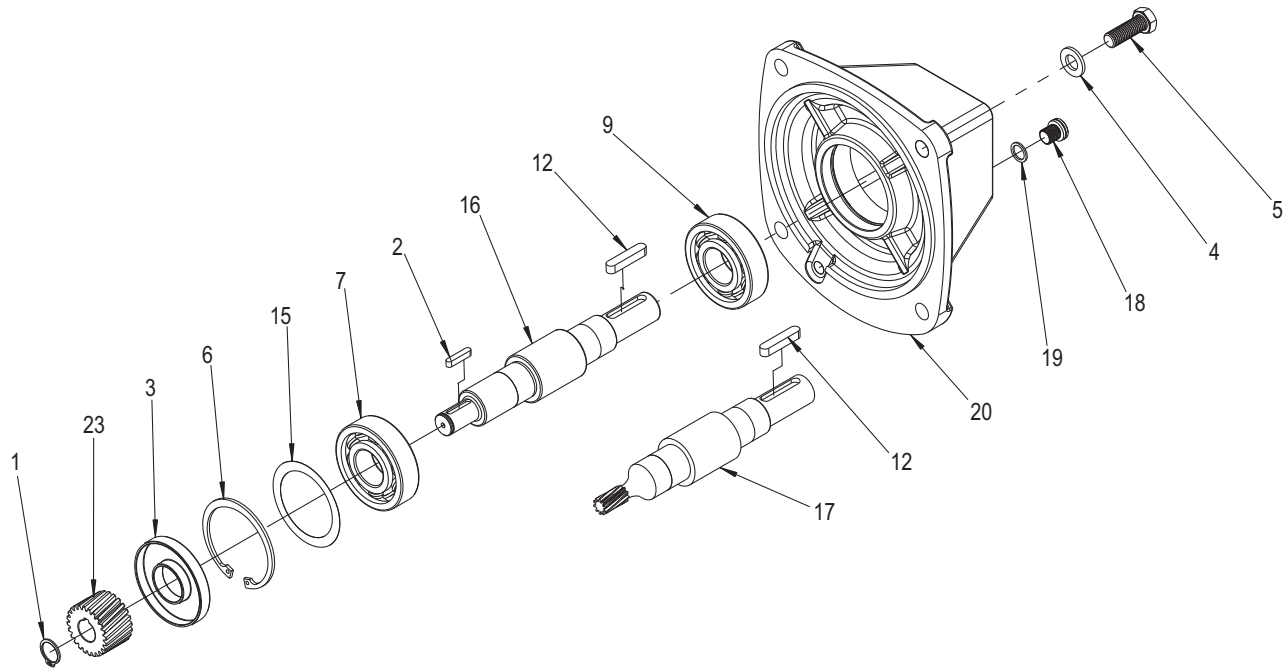
1. Circlip
2. Key
3. Shaft Seal
4. Spring Washer
5. Bolt
6. Circlip
7. Bearing
8. Circlip
9. Bearing
10. Circlip
11. Key
12. Key
13. Coupling
14. Coupling
15. Coupling
16. Set Screw
17. Input Shaft, Plain
18. Input Shaft, Gearcut
21. IEC Adapter
22. Shim
23. Shim
24. Socket Head Screw
25. Cover
26. Automatic Lubricator
27. Adapter
28. Bearing Cover
29. Bolt
30. Spring Washer
31. Shaft Seal
32. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM A02...C13
PD/PM 12...52
PD/PM 13...63

W



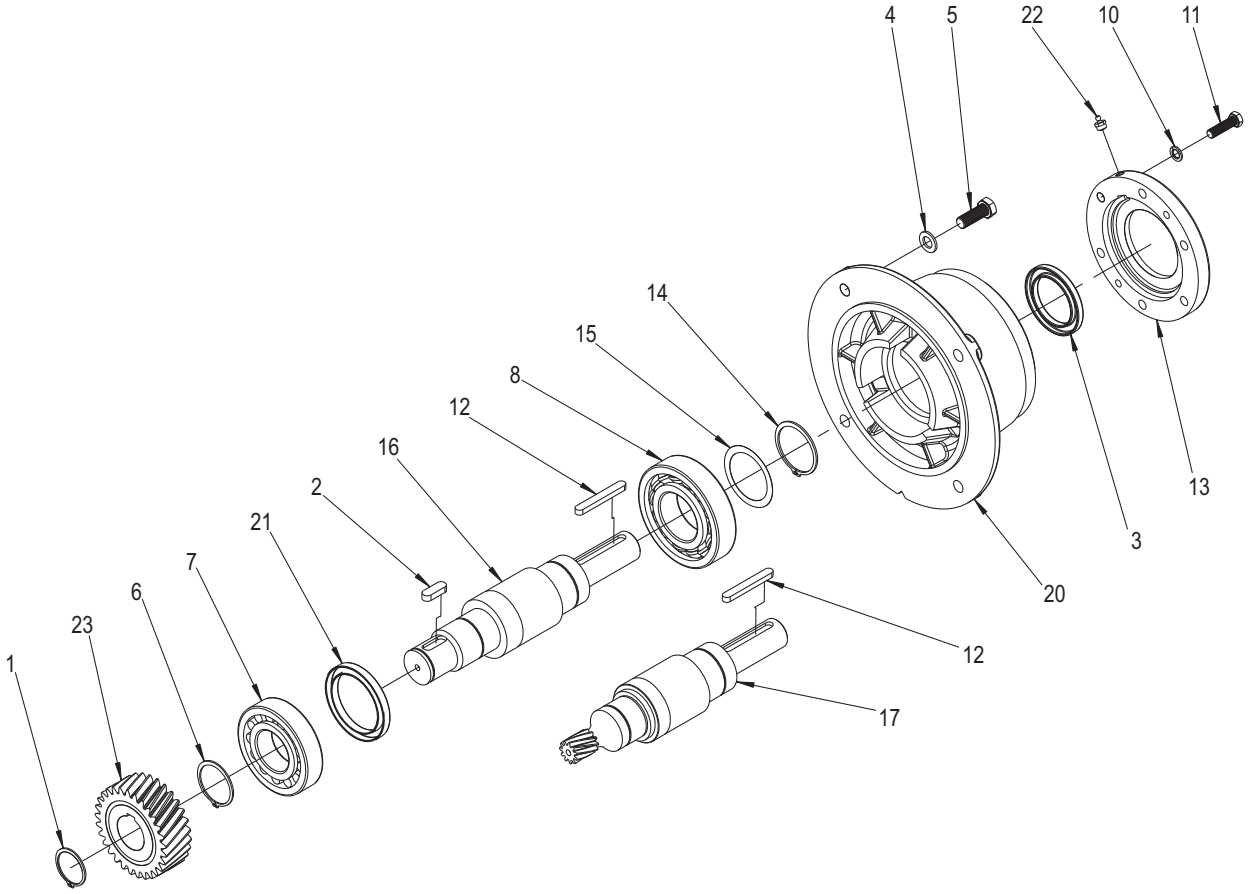
1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Seal
5. Altıköşe Başlı Civata	5. Hexagon Screw
6. Segman	6. Circlip
7. Rulman	7. Bearing
9. Rulman	9. Bearing
12. Kama	12. Key
15. Layner	15. Shim
16. W Mili Çakma	16. Input Shaft, Plain
17. W Mili Yekpare	17. Input Shaft, Gearcut
18. Yağ Tapası	18. Drain Plug
19. Conta	19. Gasket
20. W Gövdesi	20. W Input Housing
23. Z1 Dişlisi	23. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM 62...72 - PD/PM 73...93

W



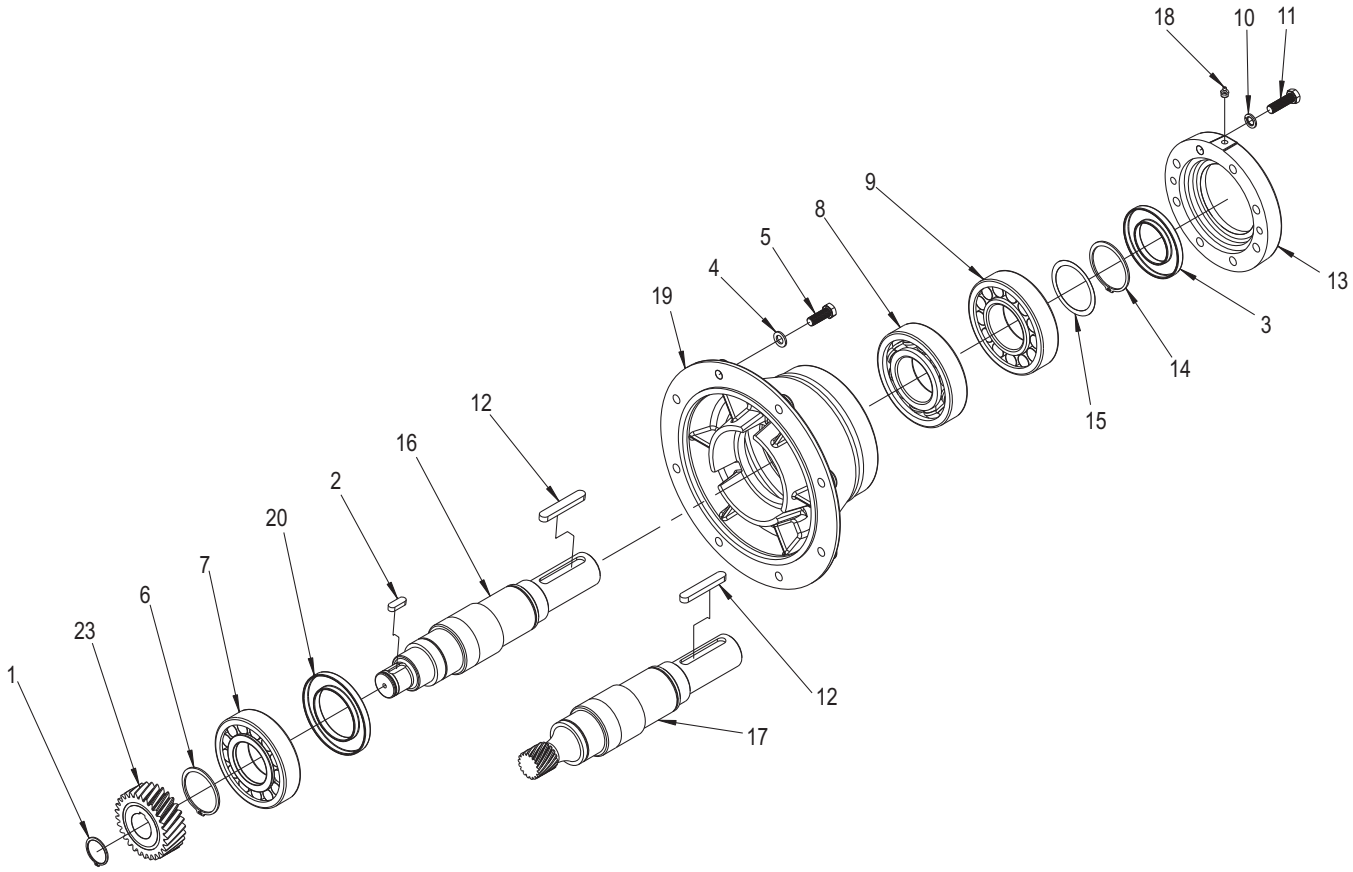
1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Hexagon Screw
6. Segman	6. Circlip
7. Rulman	7. Bearing
8. Rulman	8. Bearing
10. Yaylı Rondela	10. Spring Washer
11. Altıköşe Başlı Civata	11. Hexagon Screw
12. Kama	12. Key
13. Rulman Kapağı	13. Bearing Cover
14. Segman	14. Circlip
15. Layner	15. Shim
16. W Mili Çakma	16. Input Shaft, Plain
17. W Mili Yekpare	17. Input Shaft, Gearcut
20. W Gövdesi	20. W Input Housing
21. Şaft Keçesi	21. Shaft Seal
22. Gresörlük	22. Grease Nipple
23. Z1 Dişlisi	23. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM 82...92

W



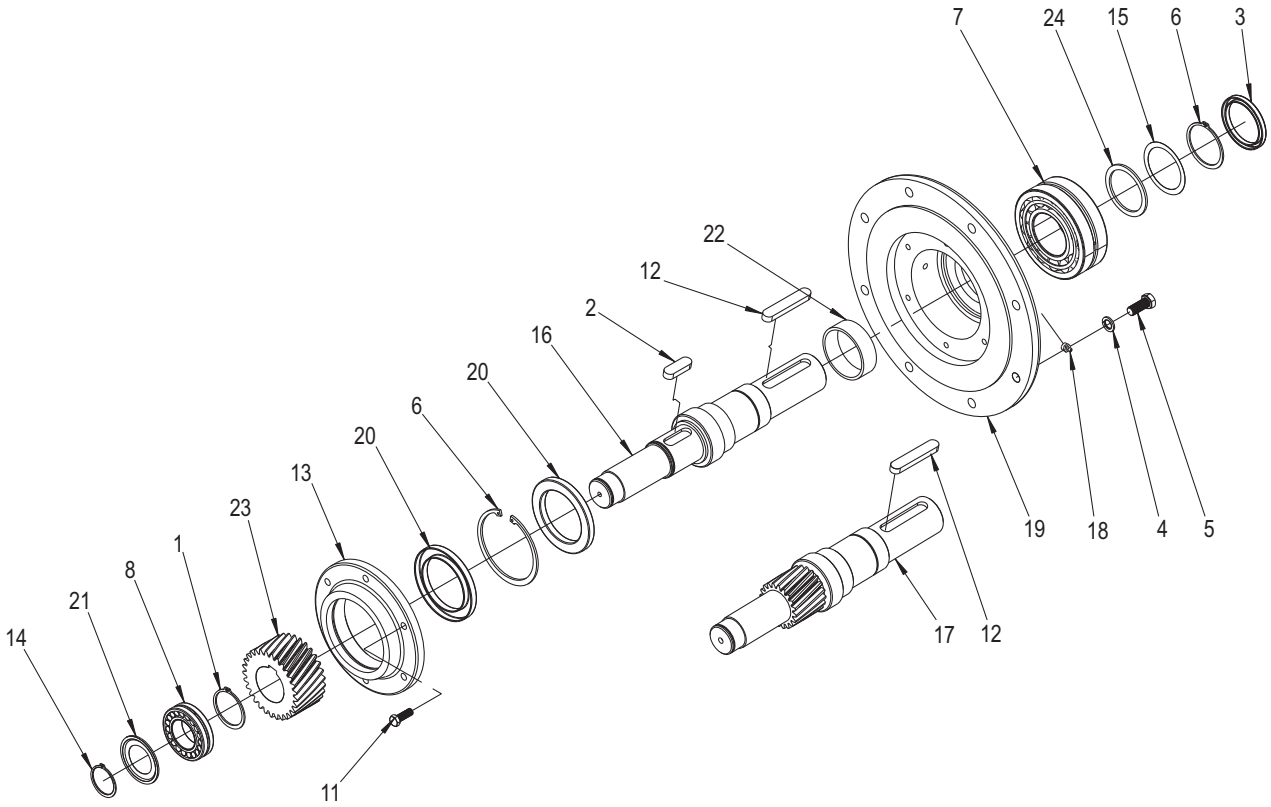
1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Hexagon Screw
6. Segman	6. Circlip
7. Rulman	7. Bearing
8. Rulman	8. Bearing
9. Rulman	9. Bearing
10. Yaylı Rondela	10. Spring Washer
11. Altıköşe Başlı Civata	11. Hexagon Screw
12. Kama	12. Key
13. Rulman Kapağı	13. Bearing Cover
14. Segman	14. Circlip
15. Layner	15. Shim
16. W Mili Çakma	16. Input Shaft, Plain
17. W Mili Yekpare	17. Input Shaft, Gearcut
18. Gresörlük	18. Grease Nipple
19. W Gövdesi	19. Input Bearing Housing
20. Şaft Keçesi	20. Shaft Seal
23. Z1 Dişlisi	23. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PD/PM 102...123

W



1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Hexagon Screw
6. Segman	6. Circlip
7. Rulman	7. Bearing
8. Rulman	8. Bearing
11. Altıköşe Başlı Civata	11. Hexagon Screw
12. Kama	12. Key
13. Rulman Kapağı	13. Bearing Cover
14. Segman	14. Circlip
15. Layner	15. Shim
16. W Mili Çakma	16. Input Shaft, Plain
17. W Mili Yekpare	17. Input Shaft, Gearcut
18. Gresörlük	18. Grease Nipple
19. W Gövdesi	19. Input Bearing Housing
20. Şaft Keçesi	20. Shaft Seal
21. Nilosring	21. Nilosring
22. Rondela	22. Supporting Disc
23. Z1 Dişlisi	23. Pinion
24. Rondela	24. Supporting Disc
25. Segman	25. Circlip

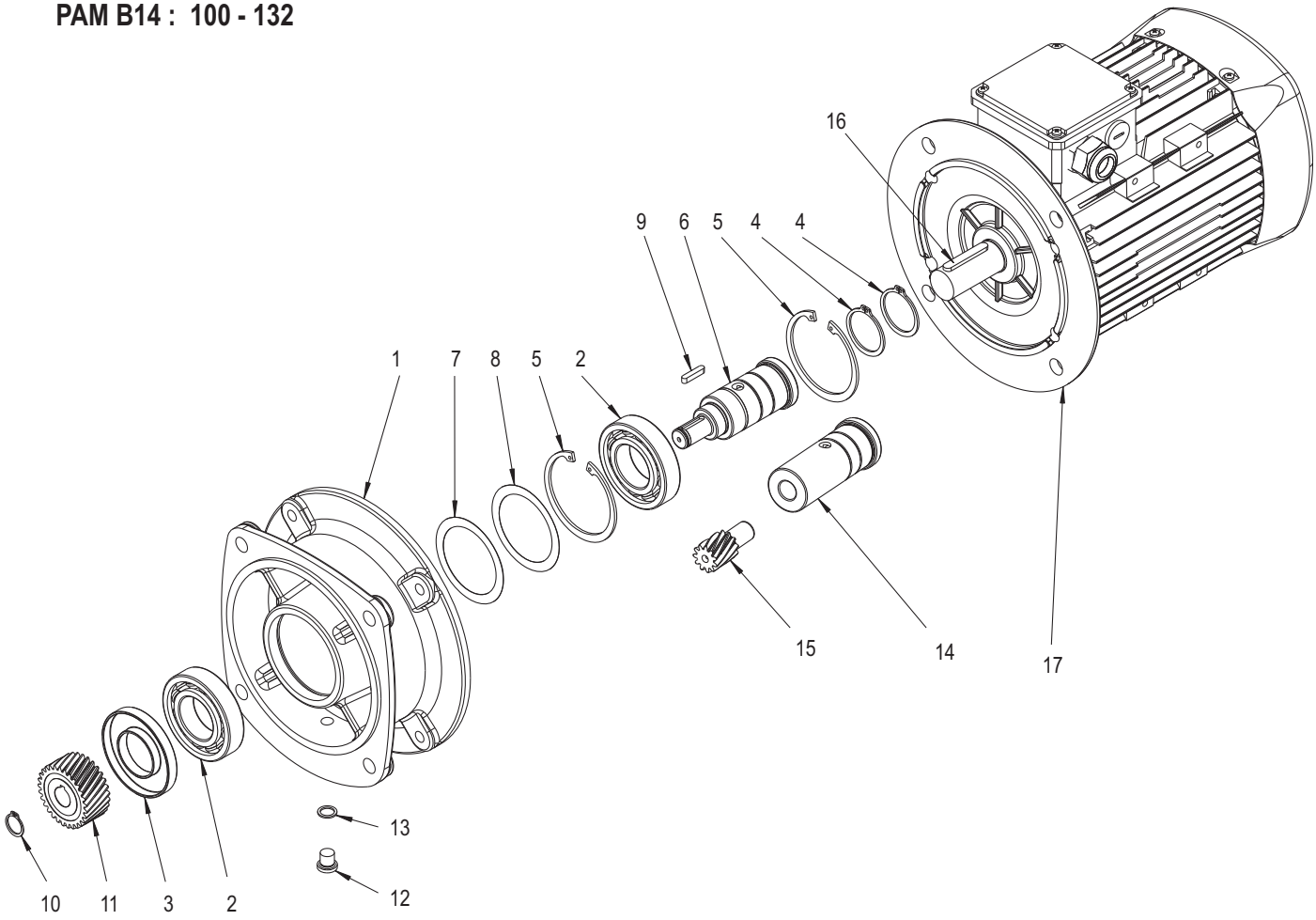
TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PAM B5 : 63 - 71
PAM B5 : 100...315

PAM B14 : 63 - 71
PAM B14 : 100 - 132

PAM (B5/B14)



1. Pam Gövde (B5/B14)	1. Pam Adapter (B5/B14)
2. Rulman	2. Bearing
3. Keçe	3. Seal
4. Segman	4. Circlip
5. Segman	5. Circlip
6. Pam mili çakma	6. Input Shaft, Plain
7. Layner	7. Shim
8. Layner	8. Shim
9. Kama	9. Key
10. Segman	10. Circlip
11. Z1 Dişlisi	11. Pinion
12. Yağ Tapası	12. Oil plug
13. Conta	13. Gasket
14. Pam mili yekpare çakma	14. Input Shaft, Gearcut
15. Z1 Dişlisi	15. Pinion
16. Motor Kaması	16. Key
17. Motor	17. Motor

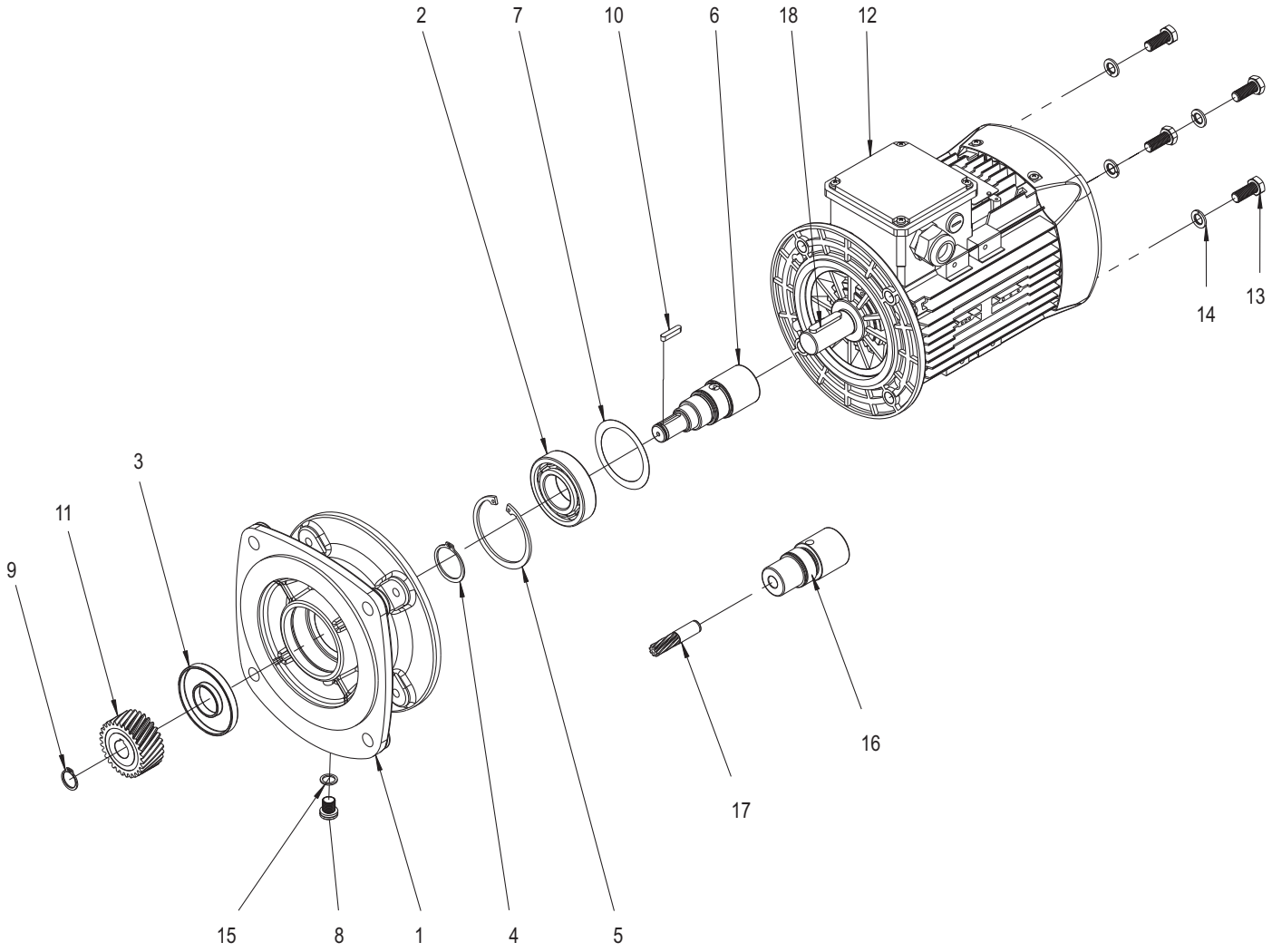
TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PAM B5 : 80 - 90

PAM B14 : 80 - 90

PAM (B5/B14)



1. Pam Gövde (B5/B14)	1. Pam Adapter (B5/B14)
2. Rulman	2. Bearing
3. Keçe	3. Seal
4. Segman	4. Circlip
5. Segman	5. Circlip
6. Pam mili çakma	6. Input Shaft, Plain
7. Layner	7. Shim
8. Yağ Tapası	8. Oil plug
9. Segman	9. Circlip
10. Kama	10. Key
11. Z1 Dişlisi	11. Pinion
12. Motor	12. Motor
13. Cıvata	13. Bolt
14. Yaylı Rondela	14. Spring Washer
15. Conta	15. Gasket
16. Pam mili yekpare çakma	16. Input Shaft, Gearcut
17. Z1 Dişlisi	17. Pinion
18. Motor Kaması	18. Key

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi Motor Type	Gövde Tipi Housing Type	Nominal / Rated Values					Kalkıştaki Değerler / Starting Values				Devrilme Momenti Oranı Breakdown Torque Ratio	Verim * Efficiency* η%			Cos ϕ	J	Ağırlık (B3) Weight (B3)	Ses Seviyesi dBA** Sound Pressure Level dBA**
			Güç / Power		Devir Speed	Akım Current	Moment Torque	Akım Current I_A / A_N		Moment Torque M_A / M_N									
			kW	HP	d/d	A	Nm	⅄	Δ	⅄	Δ	Mk/Mn	4/4	3/4	2/4	4/4	kgm²	kg	
	2kutup3000d/d																		
220/380V	Q3E80M2C	Alüminyum	0,75	1,0	2880	1,7	2,5	7,4	-	4,0	-	4,8	80,7	79,1	77,4	0,86	0,00109	12,2	58
	Q3E80M2D	Alüminyum	1,1	1,5	2895	2,4	3,7	8,4	-	4,9	-	5,1	82,7	82,1	78,9	0,84	0,00150	13	58
	Q3E90L2C	Alüminyum	1,5	2,0	2910	3,2	4,9	8,9	-	4,2	-	4,9	84,2	84,7	82,3	0,86	0,00182	17,5	62
	Q3E90L2D	Alüminyum	2,2	3,0	2900	4,6	7,2	8,6	-	4,6	-	4,0	85,9	87,0	85,5	0,84	0,00182	18	62
	Q3E100L2D	Alüminyum	3,0	4,0	2920	5,6	9,8	9,8	-	4,1	-	4,4	87,1	86,9	84,5	0,89	0,00335	25	64
380/660V	Q3E112M2C	Alüminyum	4,0	5,5	2915	7,8	13,2	3,2	9,7	1,3	3,8	5,1	88,1	87,9	85,7	0,87	0,00489	31	67
	Q3E132S2C	Alüminyum	5,5	7,5	2900	10,4	18,0	3,6	10,8	1,0	3,0	3,5	89,2	88,9	86,7	0,91	0,01410	48	70
	Q3E132M2A	Alüminyum	7,5	10,0	2930	13,7	24,5	3,2	9,7	1,3	3,8	4,4	90,1	90,3	88,9	0,91	0,01596	51	70
	Q3E160L2A	Alüminyum	11,0	15,0	2940	19,8	35,9	2,9	8,8	1,0	3,0	5,1	91,2	91,4	90,3	0,93	0,03317	77	71
	Q3E160L2C	Alüminyum	15,0	20,0	2945	26,7	48,8	3,6	10,8	1,1	3,2	3,9	91,9	91,0	90,3	0,93	0,04075	91	71
	Q3E160L2D	Alüminyum	18,5	25,0	2940	33,4	60,0	2,9	8,8	1,3	3,8	4,1	92,4	92,0	90,9	0,91	0,04075	101	71
	Q3E180M2A	Alüminyum	22,0	30,0	2955	38,7	71,3	3,5	10,5	1,1	3,2	3,2	92,7	92,9	91,7	0,93	0,06193	139	77
	Q3E200L2C	Alüminyum	30,0	40,0	2950	52,9	97,4	3,0	9,1	0,8	2,4	3,5	93,3	93,8	93,4	0,93	0,11917	167	80
	Q3E200L2D	Alüminyum	37,0	50,0	2950	65,2	119,5	3,2	9,7	0,9	2,7	3,5	93,7	94,1	93,8	0,92	0,15010	179	80
	Q3E225M2C	Alüminyum	45,0	60,0	2965	80,3	145,2	2,7	8,0	0,8	2,4	3,4	94,0	94,0	93,2	0,91	0,23505	249	81
	Q3EP250M2C	Pik	55,0	75,0	2980	95,9	178,5	2,1	6,4	0,7	2,1	3,1	94,3	94,0	92,6	0,91	0,48707	488	82
	Q3EP280M2C	Pik	75,0	100,0	2975	125,4	240,8	2,7	8,0	0,6	1,9	4,0	94,7	94,0	92,7	0,92	0,54033	585	84
	Q3EP280M2D	Pik	90,0	125,0	2975	151,3	289,4	2,7	8,0	0,7	2,1	4,9	95,0	94,2	92,7	0,93	0,64510	587	84
400/690V	Q3EP315S2C	Pik	110,0	127,0	2.983	187	358	2,4	7,2	0,6	1,7	2,6	95,2	95,2	94,0	0,89	2,19900	963	83
	Q3EP315M2B	Pik	132,0	152,0	2.983	224	418	2,5	7,5	0,6	1,8	2,6	95,4	95,4	94,4	0,89	2,37790	1.007	83
	Q3EP315L2A	Pik	160,0	184,0	2.983	271	513	2,5	7,5	0,6	1,8	2,6	95,6	95,6	94,4	0,89	2,62170	1.065	83
	Q3EP315L2C	Pik	200,0	230,0	2.983	339	641	2,5	7,5	0,6	1,9	2,6	95,8	95,8	94,9	0,89	2,90860	1.180	83
	Q3EP355M2C	Pik	250,0	280,0	2.983	419	800	2,4	7,3	0,6	1,7	2,5	95,8	95,8	94,7	0,90	3,81300	1.612	91
	Q3EP355L2B	Pik	315,0	353,0	2.984	527	1.008	2,4	7,3	0,6	1,8	2,5	95,8	95,7	94,4	0,90	4,52000	1.771	91
	Q3EP355L2C	Pik	355,0	398,0	2.981	594	1.137	2,6	7,9	0,7	2,2	2,5	95,8	95,8	95,0	0,90	5,58000	2.002	91
	4kutup1500d/d																		
220/380V	Q3E80M4D	Alüminyum	0,75	1,0	1430	1,8	5,0	6,1	-	3,0	-	3,1	82,5	81,2	78,0	0,77	0,00268	12	49
	Q3E90L4C	Alüminyum	1,1	1,5	1440	2,5	7,4	7,5	-	2,9	-	3,3	84,1	84,1	81,3	0,80	0,00365	18	54
	Q3E90L4D	Alüminyum	1,5	2,0	1440	3,5	10,0	7,9	-	3,2	-	3,6	85,3	84,9	82,0	0,76	0,00365	18	55
	Q3E100L4C	Alüminyum	2,2	3,0	1445	5,1	14,6	7,6	-	3,7	-	4,0	86,7	84,4	82,0	0,78	0,00545	26	56
	Q3E100L4D	Alüminyum	3,0	4,0	1435	7,1	19,9	8,2	-	3,8	-	4,1	87,7	87,3	85,5	0,73	0,00581	26	56
380/660V	Q3E112M4D	Alüminyum	4,0	5,5	1445	8,3	26,3	2,8	8,3	1,0	3,0	4,0	88,6	87,6	85,8	0,83	0,01123	31	58
	Q3E132M4B	Alüminyum	5,5	7,5	1465	11,4	36,2	2,3	6,8	1,1	3,2	3,9	89,6	89,0	86,8	0,80	0,02763	54	61
	Q3E132M4C	Alüminyum	7,5	10,0	1450	15,8	49,4	2,5	7,4	1,0	3,0	4,1	90,4	89,3	87,4	0,82	0,02980	57	61
	Q3E160L4A	Alüminyum	11,0	15,0	1470	23,0	71,9	2,4	7,1	1,0	3,0	3,6	91,4	90,7	89,4	0,81	0,06922	90	63
	Q3E160L4B	Alüminyum	15,0	20,0	1465	30,8	98,0	2,7	8,0	0,9	2,6	3,4	92,1	91,7	90,7	0,82	0,07991	107	63
	Q3E180M4B	Alüminyum	18,5	25,0	1470	35,3	120,7	2,8	8,3	0,8	2,4	3,1	92,6	92,5	92,2	0,86	0,11220	148	69
	Q3E180L4B	Alüminyum	22,0	30,0	1475	42,0	142,4	2,7	8,0	0,8	2,4	2,5	93,0	93,0	93,0	0,86	0,12773	157	69
	Q3E200L4D	Alüminyum	30,0	40,0	1480	54,3	193,6	2,4	7,1	0,7	2,2	2,5	93,6	93,6	93,7	0,86	0,26448	183	70
	Q3E225M4D	Alüminyum	37,0	50,0	1485	77,8	239,6	2,8	8,3	0,9	2,7	3,3	93,9	92,6	90,6	0,81	0,36429	280	71
	Q3E225M4DE	Alüminyum	45,0	60,0	1480	84,3	289,9	2,9	8,6	0,9	2,7	3,3	94,2	93,1	91,6	0,85	0,43513	282	71
	Q3EP250M4E	Pik	55,0	75,0	1450	100,0	356,1	2,6	7,7	0,9	2,7	3,2	94,6	94,0	92,8	0,87	0,90782	506	72
	Q3EP280M4C	Pik	75,0	100,0	1485	141,7	482,0	2,5	7,4	0,9	2,7	2,9	95,0	94,7	93,5	0,84	1,06114	624	73
	Q3EP280M4D	Pik	90,0	125,0	1485	163,5	584,2	2,5	7,4	0,9	2,7	2,9	95,2	94,5	93,7	0,86	1,14768	653	73
400/690V	Q3EP315S4C	Pik	110,0	127,0	1.489	194	705	2,5	7,5	0,7	2,0	2,5	95,4	95,4	94,7	0,86	3,46500	867	70
	Q3EP315M4B	Pik	132,0	152,0	1.489	232	846	2,5	7,6	0,7	2,1	2,5	95,6	95,6	95,0	0,86	3,96600	993	70
	Q3EP315L4A	Pik	160,0	184,0	1.489	274	1.026	2,5	7,6	0,7	2,2	2,5	95,8	95,8	95,4	0,88	4,88320	1.165	70
	Q3EP315L4C	Pik	200,0	230,0	1.489	346	1.282	2,7	8,2	0,7	2,2	2,5	96,0	96,0	95,5	0,87	5,23440	1.223	70
	Q3EP355M4C	Pik	250,0	280,0	1.491	422	1.601	2,5	7,5	0,6	1,9	2,4	96,0	96,0	95,5	0,89	9,30600	1.692	82
	Q3EP355L4B	Pik	315,0	353,0	1.491	532	2.017	2,5	7,5	0,6	1,9	2,4	96,0	96,0	95,5	0,89	10,06700	1.879	82
	Q3EP355L4C	Pik	355,0	398,0	1.491	600	2.273	2,5	7,5	0,7	2,0	2,3	96,0	96,0	95,5	0,89	11,90000	1.953	82

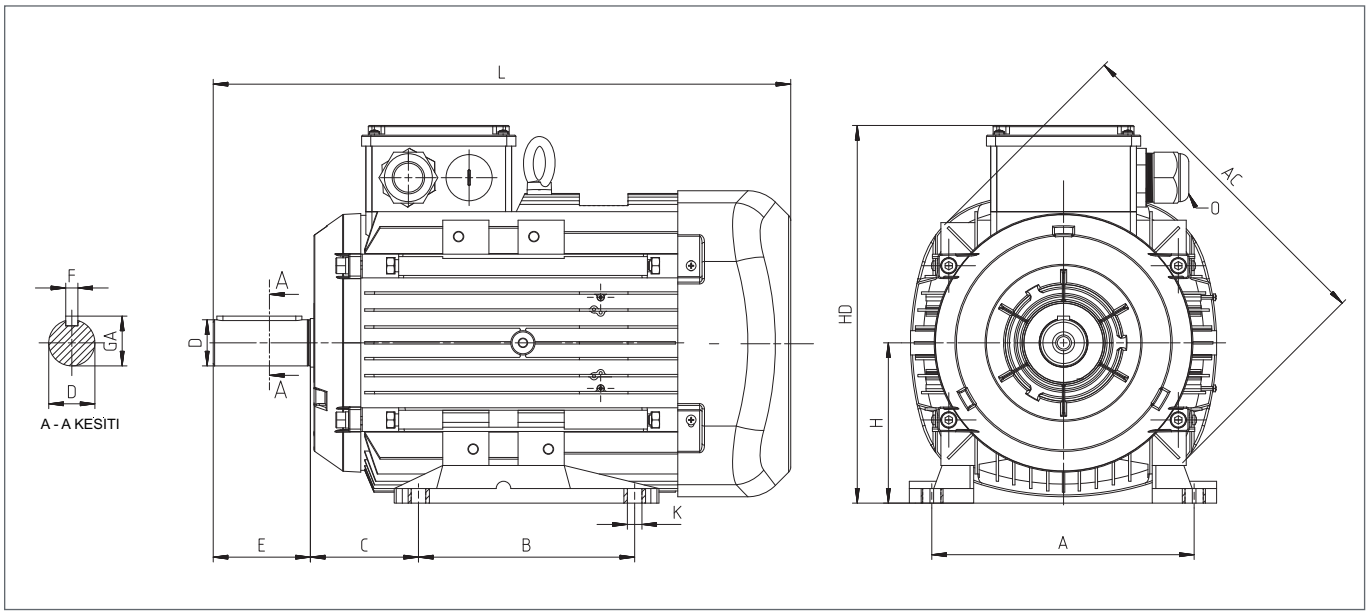
ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi Motor Type	Gövde Tipi Housing Type	Nominal / Rated Values					Kalkıştaki Değerler / Starting Values				Devrilme Momenti Oranı Breakedown Torque Ratio	Verim * Efficiency* η%			Cos ϕ	J	Ağırlık (B3) Weight (B3)	Ses Seviyesi dBA** Sound Pressure Level dBA**
			Güç / Power		Devir Speed	Akım Current	Moment Torque	Akım Current I_A / A_N		Moment Torque M_A / M_N									
			kW	HP	d/d	A	Nm	⅄	Δ	⅄	Δ	Mk/Mn	4/4	3/4	2/4	4/4	kgm²	kg	
	6kutup1000d/d																		
220/380V	Q3E90L6C	Alüminyum	0,75	1,0	940	2,2	7,6	4,0	-	2,3	-	2,5	78,9	77,7	76,1	0,65	0,00365	18	54
	Q3E90L6D	Alüminyum	1,1	1,5	940	3,1	11,2	4,2	-	2,3	-	2,6	81,0	80,5	79,9	0,66	0,00451	20	55
	Q3E100L6D	Alüminyum	1,5	2,0	940	3,9	15,2	4,5	-	2,3	-	2,7	82,5	81,9	79,0	0,68	0,00570	26	56
	Q3E112M6D	Alüminyum	2,2	3,0	950	5,4	22,0	4,7	-	2,4	-	2,7	84,3	83,7	80,7	0,73	0,01107	32	58
380/660V	Q3E132M6B	Alüminyum	3,0	4,0	960	7,5	29,7	1,7	5,2	0,6	1,7	2,3	85,6	85,2	82,8	0,70	0,02709	58,5	61
	Q3E132M6C	Alüminyum	4,0	5,5	955	9,5	39,8	1,8	5,3	0,6	1,9	2,3	86,8	85,7	82,8	0,74	0,02921	67	61
	Q3E132M6D	Alüminyum	5,5	7,5	950	12,7	55,0	1,7	5,0	0,6	1,8	2,3	88,0	87,6	85,3	0,75	0,03347	76	61
	Q3E160L6C	Alüminyum	7,5	10,0	970	17,7	74,2	1,8	5,5	0,6	1,9	2,7	89,1	89,0	88,0	0,72	0,07663	96	63
	Q3E160L6D	Alüminyum	11,0	15,0	955	25,3	109,4	1,8	5,5	0,6	1,9	2,7	90,3	90,1	89,3	0,75	0,08129	100,5	63
	Q3E180L6B	Alüminyum	15,0	20,0	978	32,2	146,2	2,0	5,9	0,6	1,8	2,6	91,2	90,9	88,7	0,79	0,22951	155	69
	Q3E200L6C	Alüminyum	18,5	25,0	975	37,7	180,3	1,8	5,5	0,5	1,6	2,4	91,7	91,5	90,9	0,82	0,31281	165	70
	Q3E200L6D	Alüminyum	22,0	30,0	975	44,5	214,4	1,8	5,5	0,5	1,6	2,4	92,2	92,0	91,4	0,82	0,33078	170	70
	Q3E225M6C	Alüminyum	30,0	40,0	970	62,1	293,8	1,8	5,4	0,5	1,6	2,3	92,9	92,8	91,8	0,79	0,52901	237,5	71

*** IEC 60034-2-1'e göre belirlenen verim değerleri**
**** Ses seviyesi ölçümleri motordan 1 metre uzaklıktan alınır.**
**** Tolerans + 3 dBA**

*** According to IEC 60034-2-1**
**** The sound pressure measurement are taken 1m away from the motor.**
**** Tolerance + 3 dBA**

BOYUTLAR / DIMENSIONS - B3



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal	
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side
	2	Q3E80M2C	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
0,75	4	Q3E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	6	Q3E90L6C	Alüminyum	193	316,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	2	Q3E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
1,1	4	Q3E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	6	Q3E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	2	Q3E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
1,5	4	Q3E90L4D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	6	Q3E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*47*7
	2	Q3E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
2,2	4	Q3E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	6	Q3E112M6D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	2	Q3E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
3,0	4	Q3E100L4D	Alüminyum	217	377,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	6	Q3E132M6B	Alüminyum	260	481,0	2*M32	178	216	132	323	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	2	Q3E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
4,0	4	Q3E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	6	Q3E132M6C	Alüminyum	260	481,0	2*M32	178	216	132	323	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	2	Q3E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
5,5	4	Q3E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	6	Q3E132M6D	Alüminyum	260	481,0	2*M32	178	216	132	323	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	2	Q3E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
7,5	4	Q3E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	6	Q3E160L6C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	2	Q3E160L2A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
11,0	4	Q3E160L4A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	6	Q3E160L6D	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	2	Q3E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
15,5	4	Q3E160L4B	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	6	Q3E180L6B	Alüminyum	347	689,0	2*M40	279	279	180	452	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	2	Q3E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
18,5	4	Q3E180M4B	Alüminyum	370	629,0	2*M40	241	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	6	Q3E200L6C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10

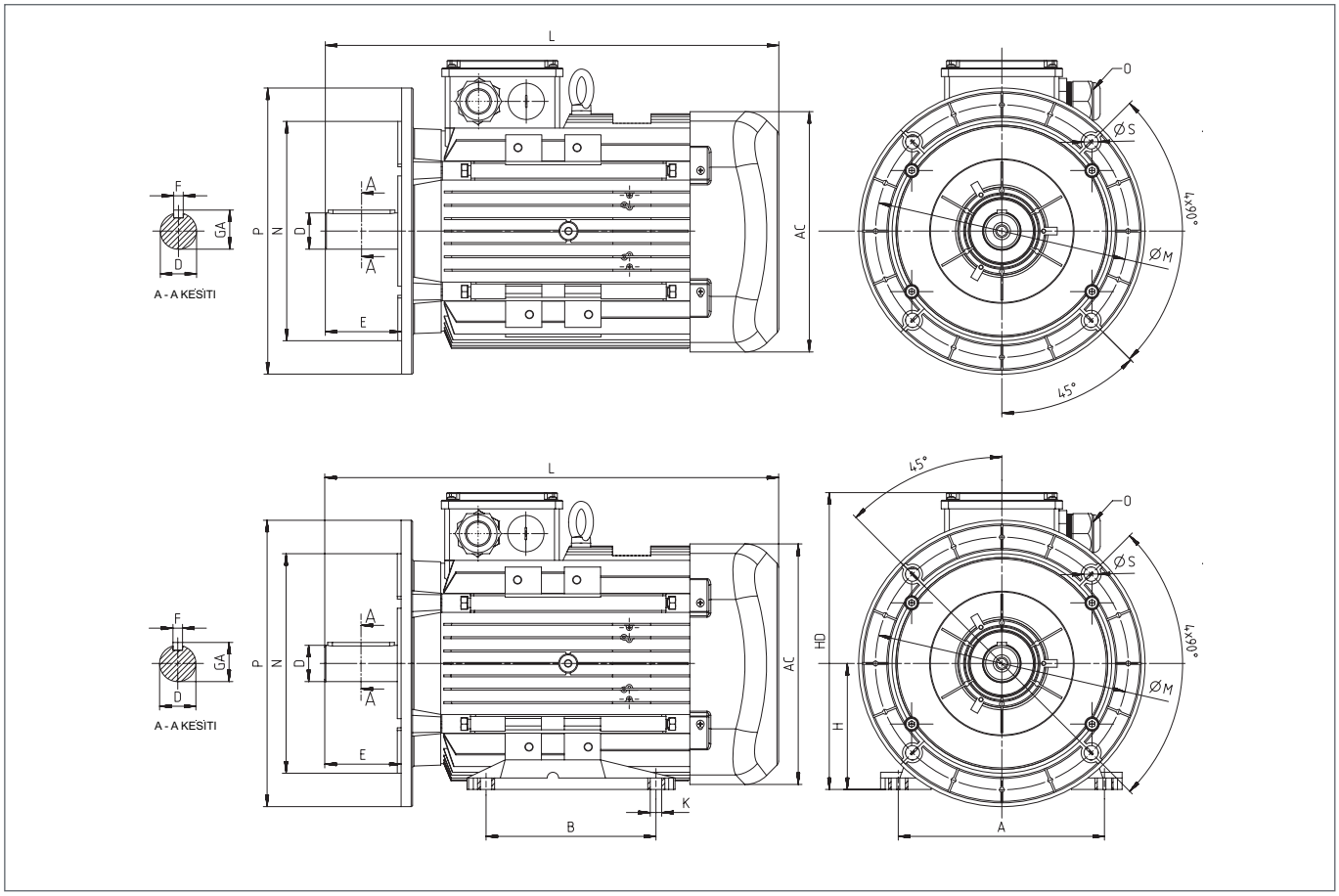
BOYUTLAR / DIMENSIONS - B3

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal	
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side
22,0	2	Q3E160L2D	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	2	Q3E180M2A	Alüminyum	370	629,0	2*M40	241	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	4	Q3E180L4B	Alüminyum	370	629,0	2*M40	279	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	6	Q3E200L6D	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
30,0	2	Q3E200L2B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10
	4	Q3E200L4D	Alüminyum	415	665,0	2*M50	311	318	200	461	19	133	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10
	6	Q3E225M6C	Alüminyum	456	765,0	2*M40	311	356	225	485	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
37,0	2	Q3E200L2C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10
	4	Q3E225M4C	Alüminyum	456	765,0	2*M50	286	356	225	504	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
45,0	2	Q3E225M2B	Alüminyum	456	735,0	2*M50	311	356	225	504	19	149	55	110	59	16	6313-2Z	6313-2Z	65*100*13	65*100*13
	4	Q3E225M4D	Alüminyum	456	765,0	2*M50	311	356	225	504	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
55,0	2	Q3EP250M2C	Pik	527	886,0	2*M50	349	406	250	615	24	168	60	140	64	18	6316	6316	80*100*10	80*100*10
	4	Q3EP250M4E	Pik	527	886,0	2*M50	349	406	250	615	24	168	65	140	69	18	6316	6316	80*100*10	80*100*10
75,0	2	Q3EP280M2C	Pik	527	1025,0	2*M50	419	457	280	647	24	190	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q3EP280M4C	Pik	527	1025,0	2*M50	419	457	280	647	24	190	75	140	80	20	6316	6316	80*100*10	80*100*10
90,0	2	Q3EP280M2D	Pik	527	1025,0	2*M50	419	457	280	647	24	190	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q3EP280M4D	Pik	527	1025,0	2*M50	419	457	280	647	24	190	75	140	80	20	6316	6316	80*100*10	80*100*10
110,0	2	Q3EP315S2C	Pik	652	1176,0	2*M63	406	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
	4	Q3EP315S4C	Pik	652	1206,0	2*M63	406	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
132,0	2	Q3EP315M2B	Pik	652	1176,0	2*M63	457	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
	4	Q3EP315M4B	Pik	652	1206,0	2*M63	457	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
160,0	2	Q3EP315L2A	Pik	652	1287,0	2*M63	508	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
	4	Q3EP315L4A	Pik	652	1317,0	2*M63	508	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
200,0	2	Q3EP315L2C	Pik	652	1287,0	2*M63	508	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
	4	Q3EP315L4C	Pik	652	1317,0	2*M63	508	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
250,0	2	Q3EP355M2C	Pik	762	1512,0	4*M63	560	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q3EP355M4C	Pik	762	1542,0	4*M63	560	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
315,0	2	Q3EP355L2B	Pik	762	1512,0	4*M63	630	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q3EP355L4B	Pik	762	1542,0	4*M63	630	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
355,0	2	Q3EP355L2C	Pik	762	1512,0	4*M63	630	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q3EP355L4C	Pik	762	1542,0	4*M63	630	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5,5	110*130*5,5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885

BOYUTLAR / DIMENSIONS - B5, B35



				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
	2	Q3E80M2C	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
0,75	4	Q3E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	6	Q3E90L6C	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	2	Q3E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
1,1	4	Q3E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	6	Q3E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	2	Q3E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
1,5	4	Q3E90L4D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	6	Q3E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*47*7	250	180	215	0	15
	2	Q3E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
2,2	4	Q3E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	6	Q3E112M6D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
	2	Q3E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
3,0	4	Q3E100L4D	Alüminyum	217	377,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	6	Q3E132M6B	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q3E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
4,0	4	Q3E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
	6	Q3E132M6C	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q3E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
5,5	4	Q3E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	6	Q3E132M6D	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q3E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
7,5	4	Q3E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	6	Q3E160L6C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	2	Q3E160L2A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
11,0	4	Q3E160L4A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	6	Q3E160L6D	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19

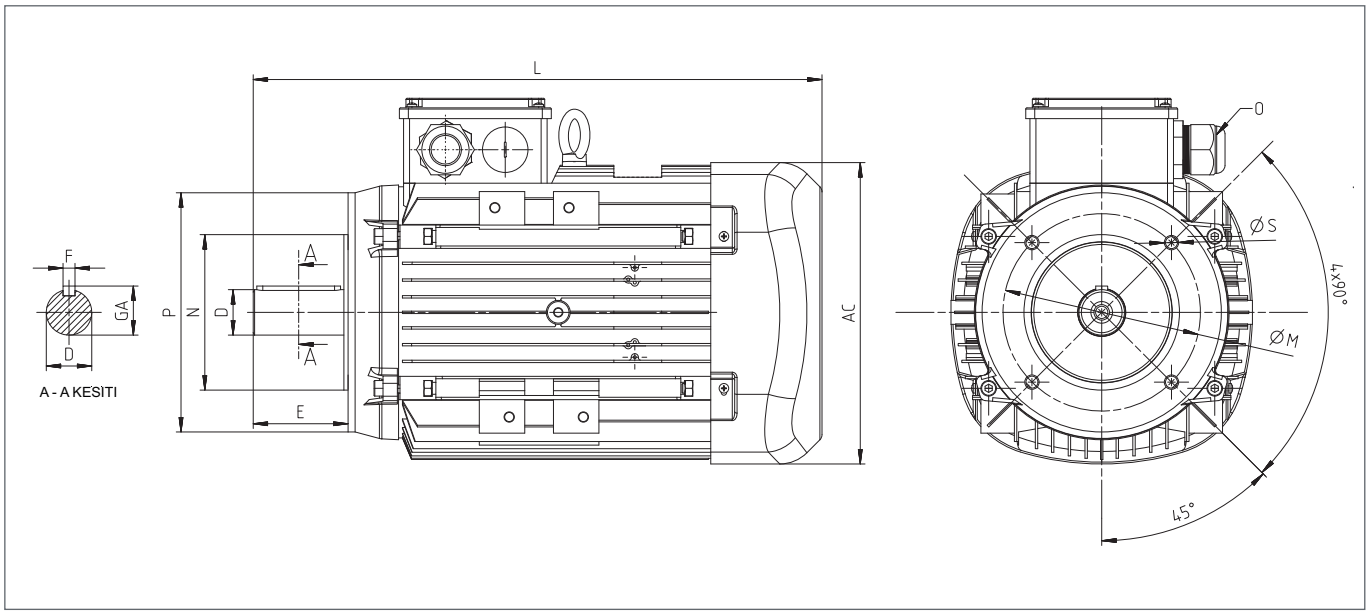
BOYUTLAR / DIMENSIONS - B5, B35

				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N(3)	M	R	S
15,0	2	Q3E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	4	Q3E160L4B	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	6	Q3E180L6B	Alüminyum	347	689,0	2*M40	279	279	180	452	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
18,5	2	Q3E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	4	Q3E180M4B	Alüminyum	370	629,0	2*M40	241	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	6	Q3E200L6C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
22,0	2	Q3E160L2D	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	2	Q3E180M2A	Alüminyum	370	629,0	2*M40	241	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	4	Q3E180L4B	Alüminyum	370	629,0	2*M40	279	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	6	Q3E200L6D	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
30,0	2	Q3E200L2B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10	400	300	350	0	19
	4	Q3E200L4D	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10	400	300	350	0	19
	6	Q3E225M6C	Alüminyum	456	765,0	2*M40	311	356	225	485	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
37,0	2	Q3E200L2C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6310-2Z	60*90*10	50*80*10	400	300	350	0	19
	4	Q3E225M4C	Alüminyum	456	765,0	2*M50	286	356	225	504	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
45,0	2	Q3E225M2B	Alüminyum	456	735,0	2*M50	311	356	225	504	19	55	110	59	16	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
	4	Q3E225M4D	Alüminyum	456	765,0	2*M50	311	356	225	504	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
55,0	2	Q3EP250M2C	Pik	527	886,0	2*M50	349	406	250	615	24	60	140	64	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q3EP250M4E	Pik	527	886,0	2*M50	349	406	250	615	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
75,0	2	Q3EP280M2C	Pik	527	1025,0	2*M50	419	457	280	647	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q3EP280M4C	Pik	527	1025,0	2*M50	419	457	280	647	24	75	140	80	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
90,0	4	Q3EP280M2D	Pik	527	1025,0	2*M50	419	457	280	647	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q3EP280M4D	Pik	527	1025,0	2*M50	419	457	280	647	24	75	140	80	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
110,0	2	Q3EP315S2C	Pik	652	1176,0	2*M63	406	508	315	833	28	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5	660	550	600	0	24
	4	Q3EP315S4C	Pik	652	1206,0	2*M63	406	508	315	833	28	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
132,0	2	Q3EP315M2B	Pik	652	1176,0	2*M63	457	508	315	833	28	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5	660	550	600	0	24
	4	Q3EP315M4B	Pik	652	1206,0	2*M63	457	508	315	833	28	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
160,0	2	Q3EP315L2A	Pik	652	1287,0	2*M63	508	508	315	833	28	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5	660	550	600	0	24
	4	Q3EP315L4A	Pik	652	1317,0	2*M63	508	508	315	833	28	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
200,0	2	Q3EP315L2C	Pik	652	1287,0	2*M63	508	508	315	833	28	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5	660	550	600	0	24
	4	Q3EP315L4C	Pik	652	1317,0	2*M63	508	508	315	833	28	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
250,0	2	Q3EP355M2C	Pik	762	1512,0	4*M63	560	610	355	997	28	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5	800	680	740	0	24
	4	Q3EP355M4C	Pik	762	1542,0	4*M63	560	610	355	997	28	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5	800	680	740	0	24
315,0	2	Q3EP355L2B	Pik	762	1512,0	4*M63	630	610	355	997	28	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5	800	680	740	0	24
	4	Q3EP355L4B	Pik	762	1542,0	4*M63	630	610	355	997	28	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5	800	680	740	0	24
355,0	2	Q3EP355L2C	Pik	762	1512,0	4*M63	630	610	355	997	28	75	140	80	20	6317	6317	85*105*5,5	85*105*5,5	800	680	740	0	24
	4	Q3EP355L4C	Pik	762	1542,0	4*M63	630	610	355	997	28	95	170	100	25	6322	6322	110*130*5,5	110*130*5,5	800	680	740	0	24

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

BOYUTLAR / DIMENSIONS - B14a, B34a

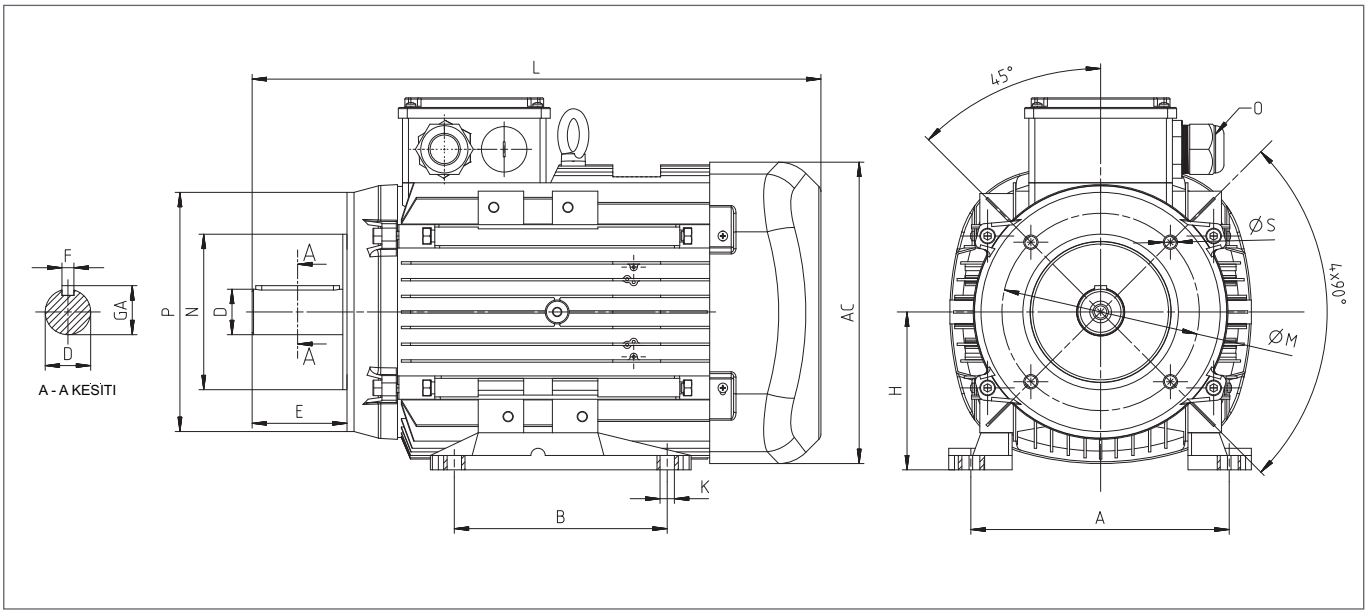


				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
	2	Q3E80M2C	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
0,75	4	Q3E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	6	Q3E90L6C	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	2	Q3E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
1,1	4	Q3E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	6	Q3E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	2	Q3E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
1,5	4	Q3E90L4D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	6	Q3E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*47*7	250	180	215	0	15
	2	Q3E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
2,2	4	Q3E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	6	Q3E112M6D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
	2	Q3E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
3,0	4	Q3E100L4D	Alüminyum	217	377,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	6	Q3E132M6B	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q3E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
4,0	4	Q3E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
	6	Q3E132M6C	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q3E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
5,5	4	Q3E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
	6	Q3E132M6D	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
7,5	2	Q3E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
	4	Q3E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

BOYUTLAR / DIMENSIONS - B14b, B34b



				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FB) (B14b)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N(3)	M	R	S
0,75	2	Q3E80M2C	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	4	Q3E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	6	Q3E90L6C	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
1,1	2	Q3E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	4	Q3E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	6	Q3E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
1,5	2	Q3E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	4	Q3E90L4D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	6	Q3E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*47*7	250	180	215	0	15
2,2	2	Q3E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	4	Q3E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	6	Q3E112M6D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
3,0	2	Q3E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	4	Q3E100L4D	Alüminyum	217	377,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	6	Q3E132M6B	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
4,0	2	Q3E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	4	Q3E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	6	Q3E132M6C	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
5,5	2	Q3E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	4	Q3E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	6	Q3E132M6D	Alüminyum	260	481,0	2*M32	178	216	132	323	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
7,5	2	Q3E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	4	Q3E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi / Motor Type	Gövde Tipi / Housing Type	Nominal / Rated Values: Güç / Power kW	HP	Devir / Speed d/d	Akım / Current A	Moment / Torque Nm	Kalkıştaki Değerler / Starting Values: Akım / Current I_A / A_N ⅄	Δ	Moment / Torque M_A / M_N ⅄	Δ	Devrilme Momenti Oranı / Breakdown Torque Ratio Mk/Mn	Verim * / Efficiency* η% 4/4	3/4	2/4	Cos ϕ 4/4	J kgm²	Ağırlık (B3) / Weight (B3) kg	Ses Seviyesi dBA** / Sound Pressure Level dBA**
	2kutup3000d/d																		
220/380V	Q2E71M2C*	Alüminyum	0,37	1/2	2850	1,0	1,2	7,7	-	3,6	-	3,8	69,5	69,6	67,3	0,80	0,00067	8	54
	Q2E71M2D*	Alüminyum	0,55	3/4	2860	1,2	1,8	7,8	-	3,7	-	3,9	74,1	74,2	72,0	0,82	0,00086	9,7	54
	Q2E80M2B	Alüminyum	0,75	1,0	2860	1,7	2,5	7,7	-	3,7	-	4,0	77,4	77,0	73,6	0,84	0,00109	11	58
	Q2E80M2D	Alüminyum	1,1	1,5	2860	2,4	3,6	7,7	-	3,7	-	4,1	79,6	79,1	77,1	0,84	0,00150	13	58
	Q2E90L2C	Alüminyum	1,5	2,0	2900	3,2	5,0	7,8	-	3,4	-	4,0	81,3	80,8	77,7	0,83	0,00182	17	62
	Q2E90L2D	Alüminyum	2,2	3,0	2900	4,7	7,3	7,9	-	3,5	-	4,1	83,2	82,9	80,5	0,84	0,00182	18	62
	Q2E100L2C	Alüminyum	3,0	4,0	2875	6,0	9,9	9,1	-	3,9	-	4,6	84,6	84,5	83,1	0,90	0,00335	21	64
380/660V	Q2E112M2C	Alüminyum	4,0	5,5	2900	7,7	13,2	2,9	8,6	1,3	3,8	4,5	85,8	85,7	84,3	0,88	0,00489	31	67
	Q2E132S2C	Alüminyum	5,5	7,5	2900	10,4	18,0	3,0	8,9	1,1	3,2	4,2	87,0	86,9	85,2	0,91	0,01410	46	70
	Q2E132M2A	Alüminyum	7,5	10,0	2920	13,6	24,5	2,9	8,6	1,0	3,0	3,7	88,1	87,7	85,9	0,90	0,01596	53	70
	Q2E160M2B	Alüminyum	11,0	15,0	2930	20,3	35,9	3,1	9,4	1,0	3,0	3,8	89,4	89,3	87,5	0,91	0,02644	76	71
	Q2E160L2A	Alüminyum	15,0	20,0	2930	27,0	48,7	2,9	8,6	1,0	3,0	3,3	90,3	90,2	88,4	0,93	0,03317	82	71
	Q2E160L2C	Alüminyum	18,5	25,0	2930	32,8	60,0	3,3	10,0	0,5	1,4	4,3	90,9	90,8	89,0	0,91	0,04075	90	71
	Q2E180M2A	Alüminyum	22,0	30,0	2945	38,7	71,3	2,6	7,9	0,7	2,2	3,4	91,3	90,9	89,5	0,91	0,06193	114	77
	Q2E200L2B	Alüminyum	30,0	40,0	2955	56,6	97,1	2,6	7,9	0,6	1,9	4,1	92,0	91,4	89,6	0,86	0,11917	167	80
	Q2E200L2C	Alüminyum	37,0	50,0	2955	66,8	119,4	2,8	8,3	0,6	1,9	3,1	92,5	91,9	90,1	0,91	0,15010	167	80
	Q2E225M2B	Alüminyum	45,0	60,0	2965	85,7	145,2	2,8	8,3	0,7	2,2	3,4	92,9	92,6	91,1	0,86	0,23505	235	81
	Q2EP250M2B	Pik	55,0	75,0	2970	97,9	178,5	1,7	5,1	0,7	2,1	3,1	93,2	92,1	90,9	0,91	0,48707	486	82
	Q2EP280M2B	Pik	75,0	100,0	2970	135,0	241,1	3,0	9,1	0,7	2,1	2,6	93,8	93,7	92,5	0,90	0,54033	576	84
	Q2EP280M2C	Pik	90,0	125,0	2970	156,5	291,3	3,3	10,0	1,1	3,2	3,6	94,1	93,9	92,9	0,93	0,64510	585	84
400/690V	Q2EP315S2C	Pik	110,0	127,0	2.975	185	353	2,6	7,8	0,7	2,2	2,4	94,3	94,3	93,1	0,91	1,43600	920	87
	Q2EP315M2C	Pik	132,0	152,0	2.975	221	423	2,6	7,8	0,8	2,3	2,4	94,6	94,6	93,4	0,91	1,72300	970	87
	Q2EP315L2C	Pik	160,0	184,0	2.975	268	513	2,5	7,5	0,8	2,3	2,4	94,8	94,8	93,6	0,91	1,95300	1.170	87
	Q2EP315L2D	Pik	200,0	230,0	2.975	334	643	2,7	8,0	0,8	2,4	2,6	95,0	95,0	93,8	0,91	2,52700	1.200	87
	Q2EP355M2C	Pik	250,0	280,0	2.985	422	799	2,3	7,0	0,7	2,0	2,4	95,0	95,0	93,8	0,90	3,92000	1.690	87
	Q2EP355L2C	Pik	315,0	353,0	2.985	532	1.007	2,5	7,4	0,7	2,0	2,3	95,0	95,0	93,8	0,90	4,17000	1.870	87
	Q2EP355L2D	Pik	355,0	398,0	2.985	599	1.135	2,5	7,5	0,6	1,8	2,1	95,0	95,0	93,8	0,90	4,44000	1.953	87
	4kutup1500d/d																		
220/380V	Q2E71M4C*	Alüminyum	0,25	1/3	1415	0,7	1,7	4,4	-	2,3	-	3,4	68,5	68,8	68,8	0,74	0,00095	9	45
	Q2E71M4D*	Alüminyum	0,37	1/2	1415	1,1	2,5	4,4	-	2,3	-	3,4	72,7	73,1	72,0	0,75	0,00095	8,5	45
	Q2E80M4B*	Alüminyum	0,55	3/4	1415	1,5	3,7	4,8	-	2,8	-	3,2	77,1	77,6	76,4	0,76	0,00205	10,5	49
	Q2E80M4D	Alüminyum	0,75	1,0	1435	2	5,1	5,2	-	2,9	-	3,2	79,6	78,9	75,3	0,7	0,00268	12	49
	Q2E90L4C	Alüminyum	1,1	1,5	1430	2,5	7,4	6,7	-	2,9	-	3,3	81,4	80,8	78,1	0,81	0,00365	18	54
	Q2E90L4D	Alüminyum	1,5	2,0	1430	3,5	10,0	7,0	-	3,2	-	3,6	82,8	82,0	79,3	0,76	0,00365	18	55
	Q2E100L4C	Alüminyum	2,2	3,0	1430	5,0	14,6	7,1	-	3,9	-	4,2	84,3	83,8	81,2	0,77	0,00545	26	56
	Q2E100L4D	Alüminyum	3,0	4,0	1440	6,4	20,0	7,1	-	3,4	-	3,8	85,5	85,1	83,0	0,75	0,00581	26	56
380/660V	Q2E112M4C	Alüminyum	4,0	5,5	1440	8,7	26,3	2,6	7,9	0,9	2,8	3,9	86,6	86,0	84,5	0,81	0,01123	31	58
	Q2E132M4B	Alüminyum	5,5	7,5	1450	11,7	36,2	2,4	7,1	1,1	3,2	3,9	87,7	87,6	85,2	0,81	0,02763	54	61
	Q2E132M4C	Alüminyum	7,5	10,0	1450	15,8	49,4	2,9	8,7	0,9	2,8	4,1	88,7	88,5	86,6	0,80	0,02980	57	61
	Q2E160M4B	Alüminyum	11,0	15,0	1460	22,5	72,5	2,0	6,0	0,7	2,2	2,7	89,8	89,7	88,2	0,83	0,05547	76	63
	Q2E160L4A	Alüminyum	15,0	20,0	1460	28,8	98,5	2,0	6,0	0,8	2,3	2,7	90,6	90,5	89,5	0,83	0,06922	92	63
	Q2E180M4B	Alüminyum	18,5	25,0	1465	36,5	121,4	2,5	7,4	1,0	3,0	4,1	91,2	91,1	90,2	0,84	0,11220	119	69
	Q2E180L4B	Alüminyum	22,0	30,0	1465	44,5	143,5	2,6	7,7	0,8	2,4	3,4	91,6	91,5	90,6	0,82	0,12773	127	69
	Q2E200L4D	Alüminyum	30,0	40,0	1465	57,3	195,6	2,4	7,3	0,8	2,5	3,2	92,3	92,1	91,1	0,86	0,26448	177	70
	Q2E225M4C	Alüminyum	37,0	50,0	1480	70,7	240,0	2,5	7,5	1,0	2,9	3,5	92,7	92,6	91,5	0,84	0,36429	260	71
	Q2E225M4D	Alüminyum	45,0	60,0	1470	85,9	292,3	2,6	7,7	1,0	2,9	3,5	93,1	93,0	91,9	0,85	0,43513	280	71
	Q2EP250M4D	Pik	55,0	75,0	1480	105,0	359,0	2,4	7,1	0,7	2,1	2,9	93,5	93,2	90,7	0,83	0,90782	506	72
	Q2EP280M4B	Pik	75,0	100,0	1475	147,0	485,7	2,5	7,4	0,7	2,1	3,1	94,0	93,9	93,2	0,85	1,06114	624	73
	Q2EP280M4C	Pik	90,0	125,0	1470	173,8	584,2	2,5	7,4	0,7	2,1	3,0	94,2	94,4	93,6	0,85	1,14768	638	73

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi Motor Type	Gövde Tipi Housing Type	Nominal / Rated Values					Kalkıştaki Değerler / Starting Values				Devrilme Momenti Oranı Breakedown Torque Ratio	Verim * Efficiency* η%			Cos ϕ	J	Ağırlık (B3) Weight (B3)	Ses Seviyesi dBA** Sound Pressure Level dBA**
			Güç / Power		Devir Speed	Akım Current	Moment Torque	Akım Current I_A / A_N		Moment Torque M_A / M_N									
			kW	HP	d/d	A	Nm	⅄	Δ	⅄	Δ	Mk/Mn	4/4	3/4	2/4	4/4	kgm²	kg	
	4kutup1500d/d																		
400/690V	Q2EP315S4C	Pik	110,0	127,0	1.480	191	709	2,4	7,2	0,7	2,2	2,5	94,5	94,5	93,9	0,88	3,03500	925	70
	Q2EP315M4C	Pik	132,0	152,0	1.480	229	851	2,3	7,0	0,7	2,1	2,4	94,7	94,7	94,1	0,88	3,41500	1.010	70
	Q2EP315L4C	Pik	160,0	184,0	1.480	273	1.032	2,5	7,5	0,7	2,2	2,5	94,9	94,9	94,3	0,89	4,11900	1.080	76
	Q2EP315L4D	Pik	200,0	230,0	1.480	341	1.290	2,5	7,5	0,8	2,3	2,5	95,1	95,1	94,5	0,89	5,20300	1.200	76
	Q2EP355M4C	Pik	250,0	280,0	1.485	426	1.607	2,6	7,9	0,8	2,3	2,5	95,1	95,1	94,5	0,89	8,79000	1.720	76
	Q2EP355L4C	Pik	315,0	353,0	1.485	531	2.025	2,5	7,4	0,7	2,0	2,3	95,1	95,1	94,5	0,90	10,13300	1.920	87
	Q2EP355L4D	Pik	355,0	398,0	1.485	605	2.283	2,9	8,8	0,6	1,8	2,0	95,1	95,1	94,5	0,89	10,67800	1.953	87
	6kutup1000d/d																		
220/380V	Q2E90L6C	Alüminyum	0,75	1,0	940	2,6	7,7	4,0	-	2,3	-	2,5	75.9	74,7	73,2	0,68	0,00371	18	53
	Q2E90L6D	Alüminyum	1,1	1,5	940	3,2	11,3	4,0	-	2,6	-	2,6	78,1	77,6	74,8	0,65	0,00444	20	53
	Q2E100L6D	Alüminyum	1,5	2,0	940	4	15,3	4,5	-	2,4	-	2,7	79,8	79,3	76,4	0,71	0,00570	26	56
	Q2E112M6C	Alüminyum	2,2	3,0	950	5,4	22,1	5,0	-	2,3	-	2,7	81,8	81,2	78,3	0,71	0,00916	31	58
380/660V	Q2E132M6A	Alüminyum	3,0	4,0	945	7,3	29,8	1,7	5,2	1,0	3,0	3,0	83,3	82,3	79,4	0,64	0,02057	53	62
	Q2E132M6B	Alüminyum	4,0	5,5	965	10,5	39,8	1,8	5,3	0,6	1,9	2,3	84,6	83,5	80,7	0,65	0,02070	54	62
	Q2E132M6C	Alüminyum	5,5	7,5	945	13,1	54,7	1,6	4,9	0,8	2,4	2,6	86,1	85,7	83,9	0,76	0,02709	67	62
	Q2E160L6B	Alüminyum	7,5	10,0	965	18,7	74,6	2,0	6,0	1,1	3,2	3,4	87,2	84,3	81,7	0,66	0,07040	94	63
	Q2E160L6C	Alüminyum	11,0	15,0	960	25,1	109,4	1,6	4,9	0,9	2,7	2,8	88,7	88,5	86,3	0,74	0,07040	95,5	63
	Q2E180L6A	Alüminyum	15,0	20,0	960	31,8	147,7	2,0	5,9	0,6	1,8	2,6	89,7	89,5	87,3	0,80	0,18369	115	64
	Q2E200L6B	Alüminyum	18,5	25,0	970	38,0	182,2	1,8	5,5	0,5	1,6	2,4	90,4	90,2	89,6	0,83	0,27088	155	64
	Q2E200L6C	Alüminyum	22,0	30,0	970	45,6	216,6	1,8	5,5	0,5	1,6	2,4	90,9	90,7	90,1	0,83	0,31281	165	64
	Q2E225M6B	Alüminyum	30,0	40,0	980	60,9	287,6	1,8	5,4	0,5	1,6	2,3	91,7	91,6	90,7	0,82	0,49334	221	65

*** IEC 60034-2-1'e göre belirlenen verim değerleri**
**** Ses seviyesi ölçümleri motordan 1 metre uzaklıktan alınır.**
**** Tolerans + 3 dBA**

*** According to IEC 60034-2-1**
**** The sound pressure measurement are taken 1 m away from the motor.**
**** Tolerance + 3 dBA**

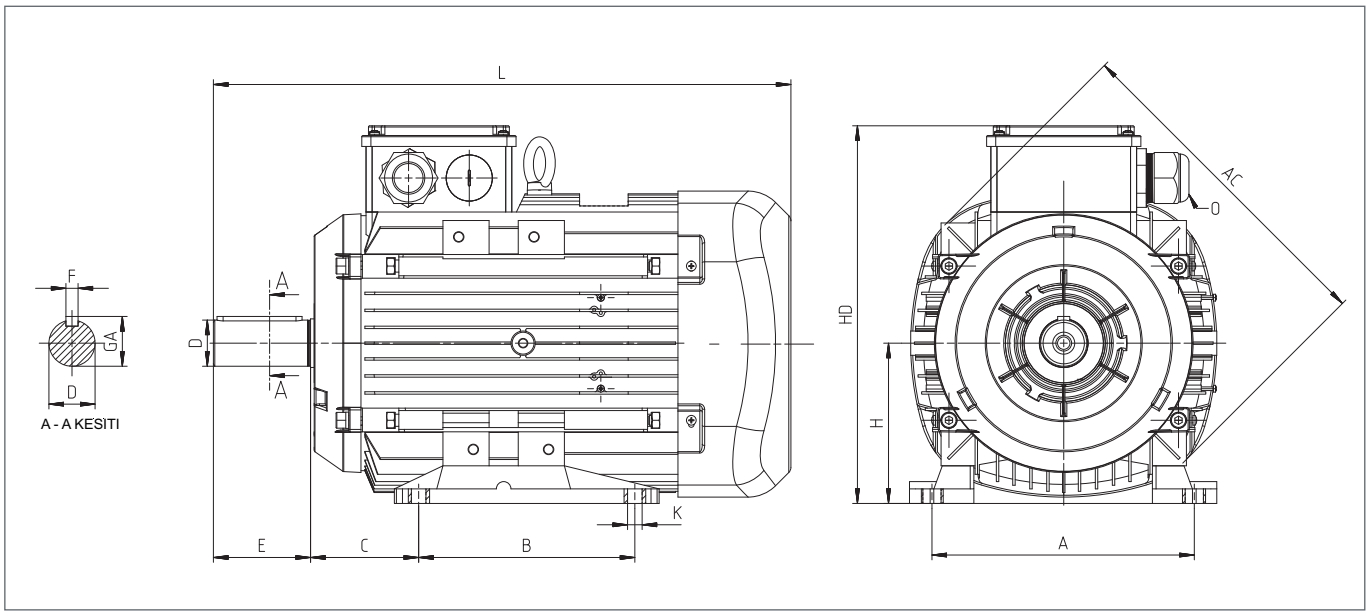
ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi / Motor Type	Gövde Tipi / Housing Type	Nominal / Rated Values: Güç / Power kW	Güç / Power HP	Devir / Speed d/d	Akım / Current A	Moment / Torque Nm	Kalkıştaki Değerler / Starting Values: Akım / Current I_A / A_N 人	Akım / Current I_A / A_N Δ	Moment / Torque M_A / M_N 人	Moment / Torque M_A / M_N Δ	Devrilme Momenti Oranı / Breakedown Torque Ratio Mk/Mn	Verim * / Efficiency* η% 4/4	Verim * / Efficiency* η% 3/4	Verim * / Efficiency* η% 2/4	Cosϕ 4/4	J kgm²	Ağırlık (B3) / Weight (B3) kg	Ses Seviyesi dBA** / Sound Pressure Level dBA**
	2kutup3000d/d																		
220/380V	Q2E71M2DE	Alüminyum	0,75	1,0	2870	1,7	2,4	8,8	-	5,0	-	5,2	77,4	77,5	75,9	0,77	0,00110	11	56
220/380V	Q2E80M2DE	Alüminyum	1,5	2,0	2875	3,0	5,0	8,1	-	4,0	-	4,3	81,5	82,0	80,9	0,76	0,00150	13	58
220/380V	Q2E90L2DE	Alüminyum	3,0	4,0	2880	6,1	9,9	8,3	-	4,0	-	4,5	84,6	84,1	80,8	0,75	0,00182	18	62
380/660V	Q2E100L2DE	Alüminyum	4,0	5,5	2900	7,9	13,3	3,0	9,3	1,4	4,3	5,2	85,9	86,0	84,1	0,77	0,00335	27	64
380/660V	Q2E112M2CE	Alüminyum	5,5	7,5	2910	9,1	17,9	3,1	9,5	1,4	4,2	5,0	86,3	86,5	84,7	0,87	0,00489	31	67
380/660V	Q2E132M2AE	Alüminyum	11,0	15,0	2923	13,6	24,5	2,9	9,0	1,2	3,6	4,0	88,3	87,9	86,1	0,89	0,01596	53	70
380/660V	Q2E160L2DE	Alüminyum	22,0	30,0	2943	31,4	60,0	2,6	8,2	1,1	3,3	3,9	91,4	91,8	91,2	0,92	0,04075	92	71
380/660V	Q2EP250M2C	Pik	75,0	100,0	2975	125,4	241,1	2,5	7,5	0,8	2,8	3,3	93,8	93,7	92,5	0,92	0,54033	576	84
380/660V	Q2EP280M2D	Pik	110,0	150,0	2980	191,0	352,4	2,6	7,7	0,9	2,9	3,4	94,3	94,3	93,6	0,88	0,74111	640	84
	4kutup1500d/d																		
220/380V	Q2E80M4DE	Alüminyum	1,1	1,5	1438	1,9	4,9	5,5	-	3,2	-	3,5	79,9	79,4	76,3	0,72	0,00268	12,5	49
220/380V	Q2E90L4DE	Alüminyum	2,2	3,0	1440	4,8	14,5	7,5	-	3,5	-	4,0	84,3	83,5	80,6	0,70	0,00365	18	54
380/660V	Q2E112M4DE	Alüminyum	5,5	7,5	1458	8,5	26,2	2,8	8,6	1,1	3,2	4,3	86,7	86,7	85,1	0,77	0,01123	34	58
380/660V	Q2EP250M4E	Pik	75,0	100,0	1485	134,2	485,7	2,6	7,8	0,8	2,9	3,4	94,0	93,9	93,2	0,86	1,06114	624	73
380/660V	Q2EP280M4D	Pik	110,0	150,0	1485	200,3	714,0	2,8	7,9	0,8	2,9	3,4	94,5	94,3	93,1	0,84	1,25586	654	73

*** IEC 60034-2-1'e göre belirlenen verim değerleri**
**** Ses seviyesi ölçümleri motordan 1 metre uzaklıktan alınır.**
**** Tolerans + 3 dBA**

*** According to IEC 60034-2-1**
**** The sound pressure measurement are taken 1 m away from the motor.**
**** Tolerance + 3 dBA**

BOYUTLAR / DIMENSIONS - B3



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal	
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side
0,25	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	45	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5
0,37	2	Q2E71M2C	Alüminyum	138	252,5	1*M20	90	112	71	190	7	45	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5
	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	45	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5
0,55	2	Q2E71M2D	Alüminyum	138	252,5	1*M20	90	112	71	190	7	45	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5
	4	Q2E80M4B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
0,75	2	Q2E71M2DE	Alüminyum	138	252,5	1*M20	90	112	71	190	7	45	14	30	16,0	5	6202-2Z	6202-2Z	15*24*5	15*24*5
	2	Q2E80M2B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	4	Q2E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	6	Q2E90L6C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
1,1	2	Q2E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	4	Q2E80M4DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	4	Q2E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	6	Q2E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
1,5	2	Q2E80M2DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	50	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7
	2	Q2E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	4	Q2E90L4D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	6	Q2E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
2,2	2	Q2E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	4	Q2E90L4DE	Alüminyum	193	344,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	4	Q2E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	6	Q2E112M6C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
3,0	2	Q2E90L2DE	Alüminyum	193	316,5	1*M25	125	140	90	222	10	56	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7
	2	Q2E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	4	Q2E100L4D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	6	Q2E132M6A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10

BOYUTLAR / DIMENSIONS - B3

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal	
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side
4,0	2	Q2E100L2DE	Alüminyum	217	352,0	1*M25	140	160	100	241	12	63	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7
	2	Q2E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	4	Q2E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	6	Q2E132M6B	Alüminyum	279	475,5	2*M32	178	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
5,5	2	Q2E112M2CE	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	4	Q2E112M4D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	70	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7
	2	Q2E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	4	Q2E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	6	Q2E132M6C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
7,5	2	Q2E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	4	Q2E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	6	Q2E160M6B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
11,0	2	Q2E132M2AE	Alüminyum	279	475,5	2*M32	140	216	132	314	12	89	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10
	2	Q2E160M2B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	4	Q2E160M4B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	6	Q2E160L6B	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
15,0	2	Q2E160L2A	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	4	Q2E160L4A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	6	Q2E180L6A	Alüminyum	370	629,0	2*M40	279	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
18,5	2	Q2E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	4	Q2E180M4B	Alüminyum	370	629,0	2*M40	241	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	6	Q2E200L6B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
22,0	2	Q2E160L2D	Alüminyum	302	576,0	2*M32	210	254	160	360	15	108	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10
	2	Q2E180M2A	Alüminyum	370	629,0	2*M40	241	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	4	Q2E180L4B	Alüminyum	370	629,0	2*M40	279	279	180	428	15	121	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10
	6	Q2E200L6C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
30,0	2	Q2E200L2B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
	4	Q2E200L4D	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
	6	Q2E225M6B	Alüminyum	456	765,0	2*M50	311	356	225	504	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
37,0	2	Q2E200L2C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	133	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10
	4	Q2E225M4C	Alüminyum	456	765,0	2*M50	286	356	225	504	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
45,0	2	Q2E225M2B	Alüminyum	456	735,0	2*M50	311	356	225	504	19	149	55	110	59	16	6313-2Z	6313-2Z	65*100*13	65*100*13
	4	Q2E225M4D	Alüminyum	456	765,0	2*M50	311	356	225	504	19	149	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13
55,0	2	Q2EP250M2B	Pik	527	886,0	2*M50	349	406	250	615	24	168	60	140	64	18	6316	6316	80*100*10	80*100*10
	4	Q2EP250M4D	Pik	527	886,0	2*M50	349	406	250	615	24	168	65	140	69	18	6316	6316	80*100*10	80*100*10
75,0	2	Q2EP250M2C	Pik	527	886,0	2*M50	349	406	250	615	24	168	60	140	64	18	6316	6316	80*100*10	80*100*10
	2	Q2EP280M2B	Pik	527	1025,0	2*M50	419	457	280	647	24	190	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q2EP250M4E	Pik	527	886,0	2*M50	349	406	250	615	24	168	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q2EP280M4B	Pik	527	1025,0	2*M50	419	457	280	647	24	190	75	140	80	20	6316	6316	80*100*10	80*100*10
90,0	2	Q2EP280M2C	Pik	527	1025,0	2*M50	419	457	280	647	24	190	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q2EP280M4C	Pik	527	1025,0	2*M50	419	457	280	647	24	190	75	140	80	20	6316	6316	80*100*10	80*100*10
110,0	2	Q2EP280M2D	Pik	527	1025,0	2*M50	419	457	280	647	24	190	65	140	69	18	6316	6316	80*100*10	80*100*10
	4	Q2EP280M4D	Pik	527	1025,0	2*M50	419	457	280	647	24	190	75	140	80	20	6316	6316	80*100*10	80*100*10

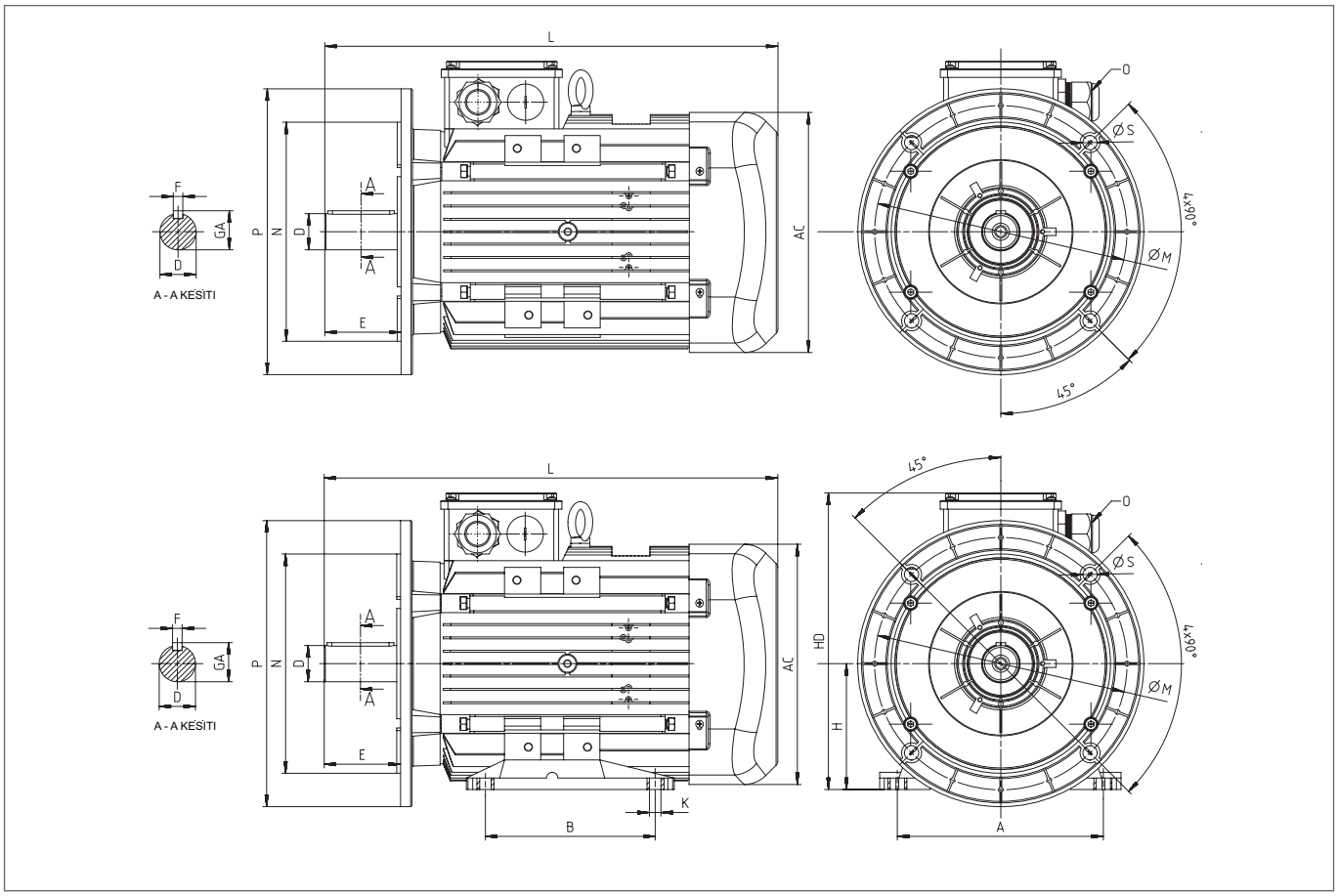
BOYUTLAR / DIMENSIONS - B3

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal	
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side
110,0	2	Q2EP315S2C	Pik	630	1180,0	2*M63	406	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP315S4C	Pik	630	1210,0	2*M63	406	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
132,0	2	Q2EP315M2C	Pik	630	1290,0	2*M63	457	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP315M4C	Pik	630	1320,0	2*M63	457	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
160,0	2	Q2EP315L2C	Pik	630	1290,0	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP315L4C	Pik	630	1320,0	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
200,0	2	Q2EP315L2D	Pik	630	1290,0	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP315L4D	Pik	630	1320,0	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
250,0	2	Q2EP355M2C	Pik	710	1486,0	4*M63	560	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP355M4C	Pik	710	1517,0	4*M63	560	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
315,0	2	Q2EP355L2C	Pik	710	1486,0	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP355L4C	Pik	710	1517,0	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
355,0	2	Q2EP355L2D	Pik	710	1486,0	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
	4	Q2EP355L4D	Pik	710	1517,0	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885

BOYUTLAR / DIMENSIONS - B5, B35



				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
0,25	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	160	110	130	0	10
0,37	2	Q2E71M2C	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	160	110	130	0	10
	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	160	110	130	0	10
0,55	2	Q2E71M2D	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	160	110	130	0	10
	4	Q2E80M4B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
0,75	2	Q2E71M2DE	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16,0	5	6202-2Z	6202-2Z	15*24*5	15*24*5	160	110	130	0	10
	2	Q2E80M2B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	4	Q2E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	6	Q2E90L6C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
1,1	2	Q2E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	4	Q2E80M4DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	4	Q2E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	6	Q2E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
1,5	2	Q2E80M2DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	200	130	165	0	12
	2	Q2E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	4	Q2E90L4D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	6	Q2E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
2,2	2	Q2E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	4	Q2E90L4DE	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	4	Q2E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	6	Q2E112M6C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
3,0	2	Q2E90L2DE	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	200	130	165	0	12
	2	Q2E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	4	Q2E100L4D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	6	Q2E132M6A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15

BOYUTLAR / DIMENSIONS - B5, B35

				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
	2	Q2E100L2DE	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	250	180	215	0	15
	2	Q2E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
4,0	4	Q2E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
	6	Q2E132M6B	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q2E112M2CE	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
	4	Q2E112M4D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	250	180	215	0	15
5,5	2	Q2E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	4	Q2E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	6	Q2E132M6C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q2E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
7,5	4	Q2E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	6	Q2E160M6B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	2	Q2E132M2AE	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	300	230	265	0	15
	2	Q2E160M2B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
11,0	4	Q2E160M4B	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	6	Q2E160L6B	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	2	Q2E160L2A	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
15,0	4	Q2E160L4A	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	6	Q2E180L6A	Alüminyum	370	629,0	2*M40	279	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	2	Q2E160L2C	Alüminyum	302	576,0	2*M32	254	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
18,5	4	Q2E180M4B	Alüminyum	370	629,0	2*M40	241	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	6	Q2E200L6B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
	2	Q2E160L2D	Alüminyum	302	576,0	2*M32	210	254	160	360	15	42	110	45	12	6309-2Z	6209-2Z	45*72*10	45*72*10	350	250	300	0	19
	2	Q2E180M2A	Alüminyum	370	629,0	2*M40	241	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
22,0	4	Q2E180L4B	Alüminyum	370	629,0	2*M40	279	279	180	428	15	48	110	51,5	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	6	Q2E200L6C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
	2	Q2E200L2B	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
30,0	4	Q2E200L4D	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
	6	Q2E225M6B	Alüminyum	456	765,0	2*M50	311	356	225	504	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
	2	Q2E200L2C	Alüminyum	415	665,0	2*M50	305	318	200	461	19	55	110	59	16	6312-2Z	6312-2Z	60*90*10	60*90*10	400	300	350	0	19
37,0	4	Q2E225M4C	Alüminyum	456	765,0	2*M50	286	356	225	504	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
	2	Q2E225M2B	Alüminyum	456	735,0	2*M50	311	356	225	504	19	55	110	59	16	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
45,0	4	Q2E225M4D	Alüminyum	456	765,0	2*M50	311	356	225	504	19	60	140	64	18	6313-2Z	6313-2Z	65*100*13	65*100*13	450	350	400	0	19
55,0	2	Q2EP250M2B	Pik	527	886,0	2*M50	349	406	250	615	24	60	140	64	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP250M4D	Pik	527	886,0	2*M50	349	406	250	615	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	2	Q2EP250M2C	Pik	527	886,0	2*M50	349	406	250	615	24	60	140	64	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
75,0	2	Q2EP280M2B	Pik	527	1025,0	2*M50	419	457	280	647	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP250M4E	Pik	527	886,0	2*M50	349	406	250	615	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP280M4B	Pik	527	1025,0	2*M50	419	457	280	647	24	75	140	80	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
90,0	2	Q2EP280M2C	Pik	527	1025,0	2*M50	419	457	280	647	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP280M4C	Pik	527	1025,0	2*M50	419	457	280	647	24	75	140	80	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
110,0	2	Q2EP280M2D	Pik	527	1025,0	2*M50	419	457	280	647	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP280M4D	Pik	527	1025,0	2*M50	419	457	280	647	24	75	140	80	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19

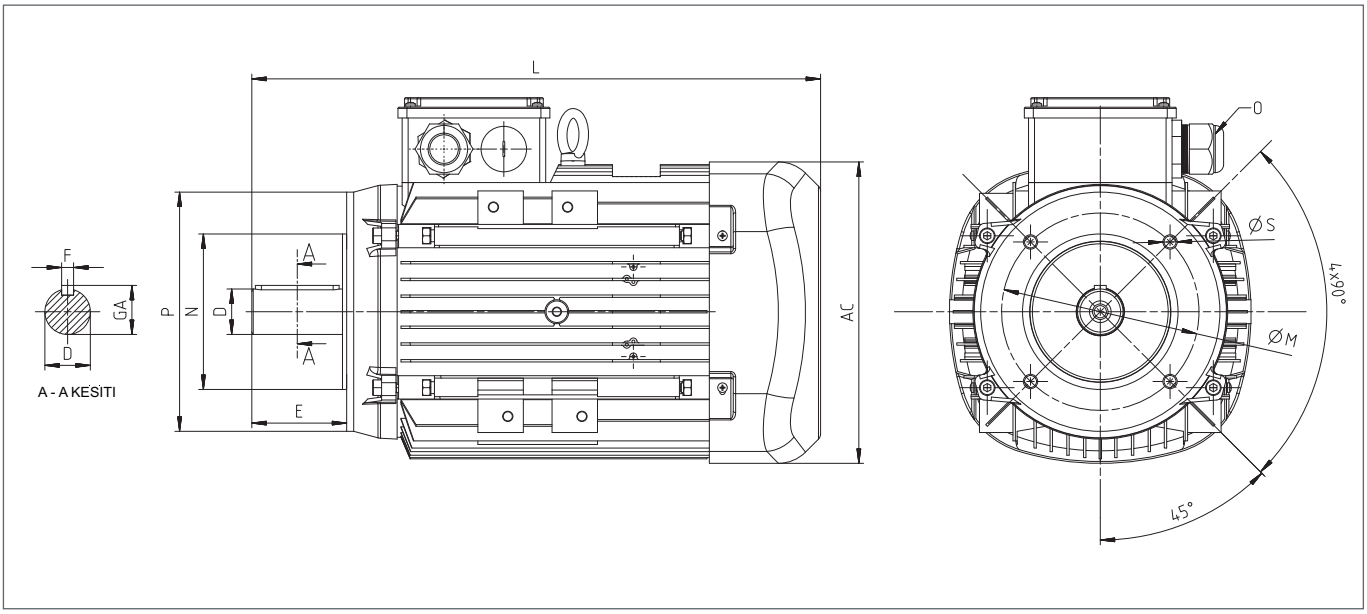
BOYUTLAR / DIMENSIONS - B5, B35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar / Foot Mounted Motors						Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N(3)	M	R	S
110,0	2	Q2EP315S2C	Pik	630	1180,0	2*M63	406	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5	660	550	600	0	24
	4	Q2EP315S4C	Pik	630	1210,0	2*M63	406	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
132,0	2	Q2EP315M2C	Pik	630	1290,0	2*M63	457	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5	660	550	600	0	24
	4	Q2EP315M4C	Pik	630	1320,0	2*M63	457	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
160,0	2	Q2EP315L2C	Pik	630	1290,0	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5	660	550	600	0	24
	4	Q2EP315L4C	Pik	630	1320,0	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
200,0	2	Q2EP315L2D	Pik	630	1290,0	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5	660	550	600	0	24
	4	Q2EP315L4D	Pik	630	1320,0	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5	660	550	600	0	24
250,0	2	Q2EP355M2C	Pik	710	1486,0	4*M63	560	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5	800	680	740	0	24
	4	Q2EP355M4C	Pik	710	1517,0	4*M63	560	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5	800	680	740	0	24
315,0	2	Q2EP355L2C	Pik	710	1486,0	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5	800	680	740	0	24
	4	Q2EP355L4C	Pik	710	1517,0	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5	800	680	740	0	24
355,0	2	Q2EP355L2D	Pik	710	1486,0	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5	800	680	740	0	24
	4	Q2EP355L4D	Pik	710	1517,0	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5	800	680	740	0	24

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

BOYUTLAR / DIMENSIONS - B14a, B34a



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
0,25	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	105	70	85	0	M6
0,37	2	Q2E71M2C	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	105	70	85	0	M6
	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	105	70	85	0	M6
0,55	2	Q2E71M2D	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	105	70	85	0	M6
	4	Q2E80M4B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
0,75	2	Q2E71M2DE	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16,0	5	6202-2Z	6202-2Z	15*24*5	15*24*5	105	70	85	0	M6
	2	Q2E80M2B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	4	Q2E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	6	Q2E90L6C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
1,1	2	Q2E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	4	Q2E80M4DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	4	Q2E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	6	Q2E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
1,5	2	Q2E80M2DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	120	80	100	0	M6
	2	Q2E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	4	Q2E90L4D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	6	Q2E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
2,2	2	Q2E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	4	Q2E90L4DE	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	4	Q2E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	6	Q2E112M6C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
3,0	2	Q2E90L2DE	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	140	95	115	0	M8
	2	Q2E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	4	Q2E100L4D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	6	Q2E132M6A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
4,0	2	Q2E100L2DE	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	160	110	130	0	M8
	2	Q2E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
	4	Q2E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
	6	Q2E132M6B	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10

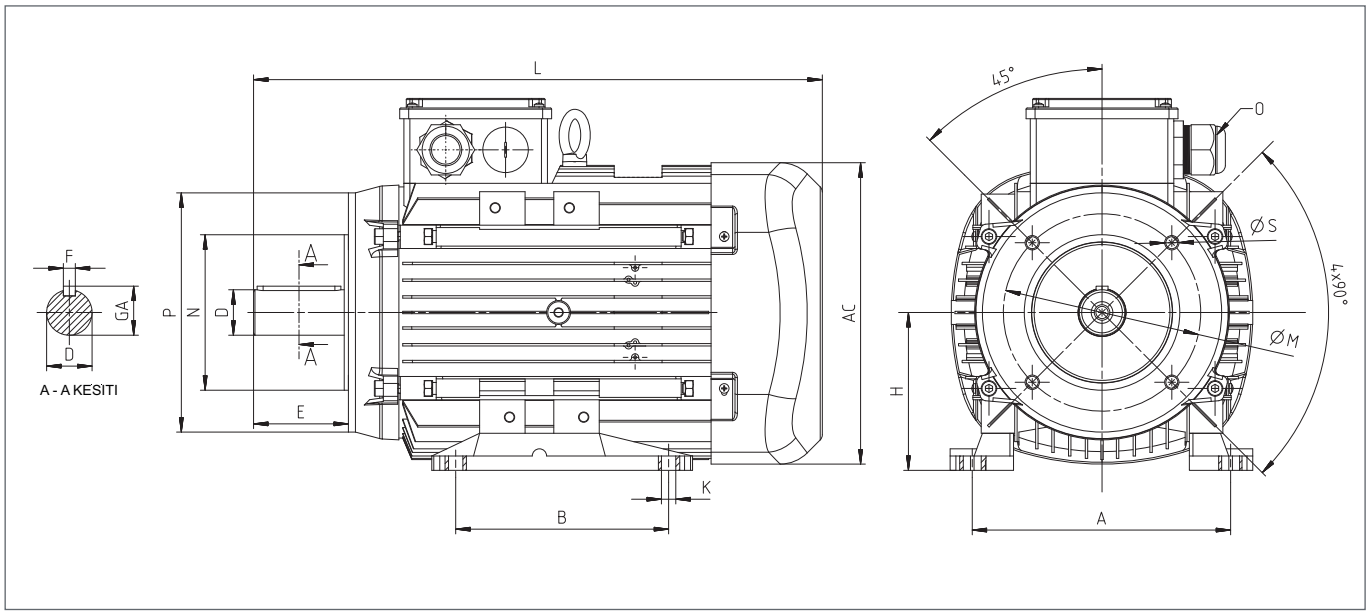
BOYUTLAR / DIMENSIONS - B14a, B34a

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	GövdeTipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
5,5	2	Q2E112M2CE	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
	4	Q2E112M4D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	160	110	130	0	M8
	2	Q2E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
	4	Q2E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
	6	Q2E132M6C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
7,5	2	Q2E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
	4	Q2E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10
11,0	2	Q2E132M2AE	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	200	130	165	0	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

(1) Tolerance DIN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

BOYUTLAR / DIMENSIONS - B14b, B34b



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FB) (B14b)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D (1)	E	GA	F (2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N (3)	M	R	S
0,25	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	140	95	115	0	M8
0,37	2	Q2E71M2C	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	140	95	115	0	M8
	4	Q2E71M4B	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	140	95	115	0	M8
0,55	2	Q2E71M2D	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16	5	6202-2Z	6202-2Z	15*24*5	15*24*5	140	95	115	0	M8
	4	Q2E80M4B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
0,75	2	Q2E71M2DE	Alüminyum	138	252,5	1*M20	90	112	71	190	7	14	30	16,0	5	6202-2Z	6202-2Z	15*24*5	15*24*5	140	95	115	0	M8
	2	Q2E80M2B	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	4	Q2E80M4D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	6	Q2E90L6C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
1,1	2	Q2E80M2D	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	4	Q2E80M4DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	4	Q2E90L4C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	6	Q2E90L6D	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
1,5	2	Q2E80M2DE	Alüminyum	158	283,5	1*M20	100	125	80	195	10	19	40	21,5	6	6204-2Z	6204-2Z	20*30*7	20*30*7	160	110	130	0	M8
	2	Q2E90L2C	Alüminyum	193	316,5	1*M25	100	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	4	Q2E90L4D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	6	Q2E100L6D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
2,2	2	Q2E90L2D	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	4	Q2E90L4DE	Alüminyum	193	344,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	4	Q2E100L4C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	6	Q2E112M6C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
3,0	2	Q2E90L2DE	Alüminyum	193	316,5	1*M25	125	140	90	222	10	24	50	27	8	6305-2Z	6205-2Z	25*40*7	25*40*7	160	110	130	0	M8
	2	Q2E100L2C	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	4	Q2E100L4D	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	6	Q2E132M6A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
4,0	2	Q2E100L2DE	Alüminyum	217	352,0	1*M25	140	160	100	241	12	28	60	31	8	6306-2Z	6205-2Z	30*47*7	25*40*7	200	130	165	0	M10
	2	Q2E112M2C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	4	Q2E112M4C	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	6	Q2E132M6B	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15

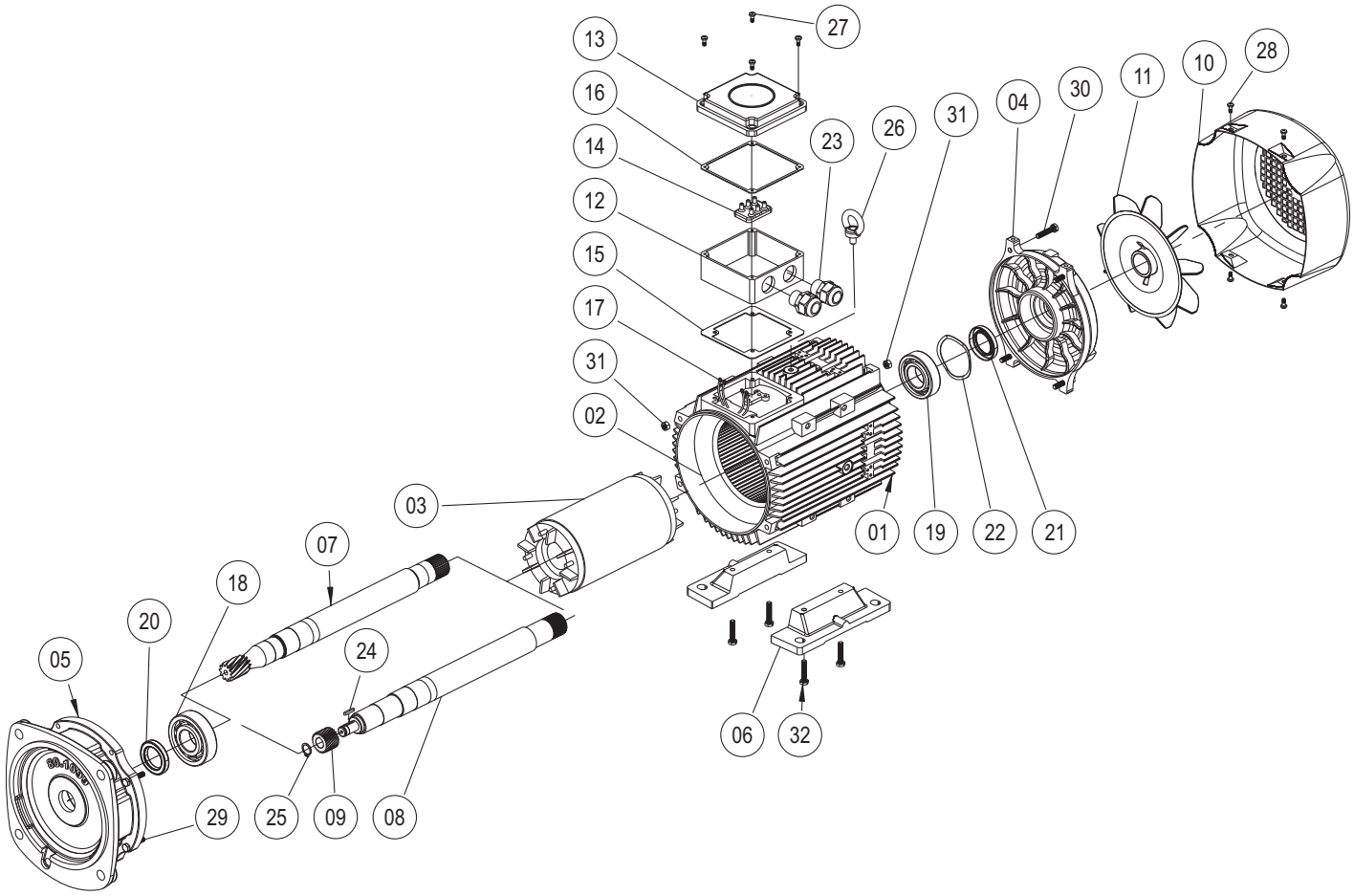
BOYUTLAR / DIMENSIONS - B14b, B34b

				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FB) (B14b)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	Kasnak Tarafı Drive Side	Kasnak Tarafı Aksi Non Drive Side	P	N(3)	M	R	S
5,5	2	Q2E112M2CE	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	4	Q2E112M4D	Alüminyum	232	395,5	2*M25	140	190	112	261	12	28	60	31	8	6306-2Z	6206-2Z	30*47*7	30*47*7	200	130	165	0	M10
	2	Q2E132S2C	Alüminyum	279	440,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	4	Q2E132M4B	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	6	Q2E132M6C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
7,5	2	Q2E132M2A	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
	4	Q2E132M4C	Alüminyum	279	475,5	2*M32	178	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215	0	M12 veya 15
11,0	2	Q2E132M2AE	Alüminyum	279	475,5	2*M32	140	216	132	314	12	38	80	41	10	6208-2Z	6208-2Z	40*62*10	40*62*10	250	180	215		M12 veya 15

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6"
(2) DIN 6885'e göre
(3) Tolerans DIN EN 50347 "j6"

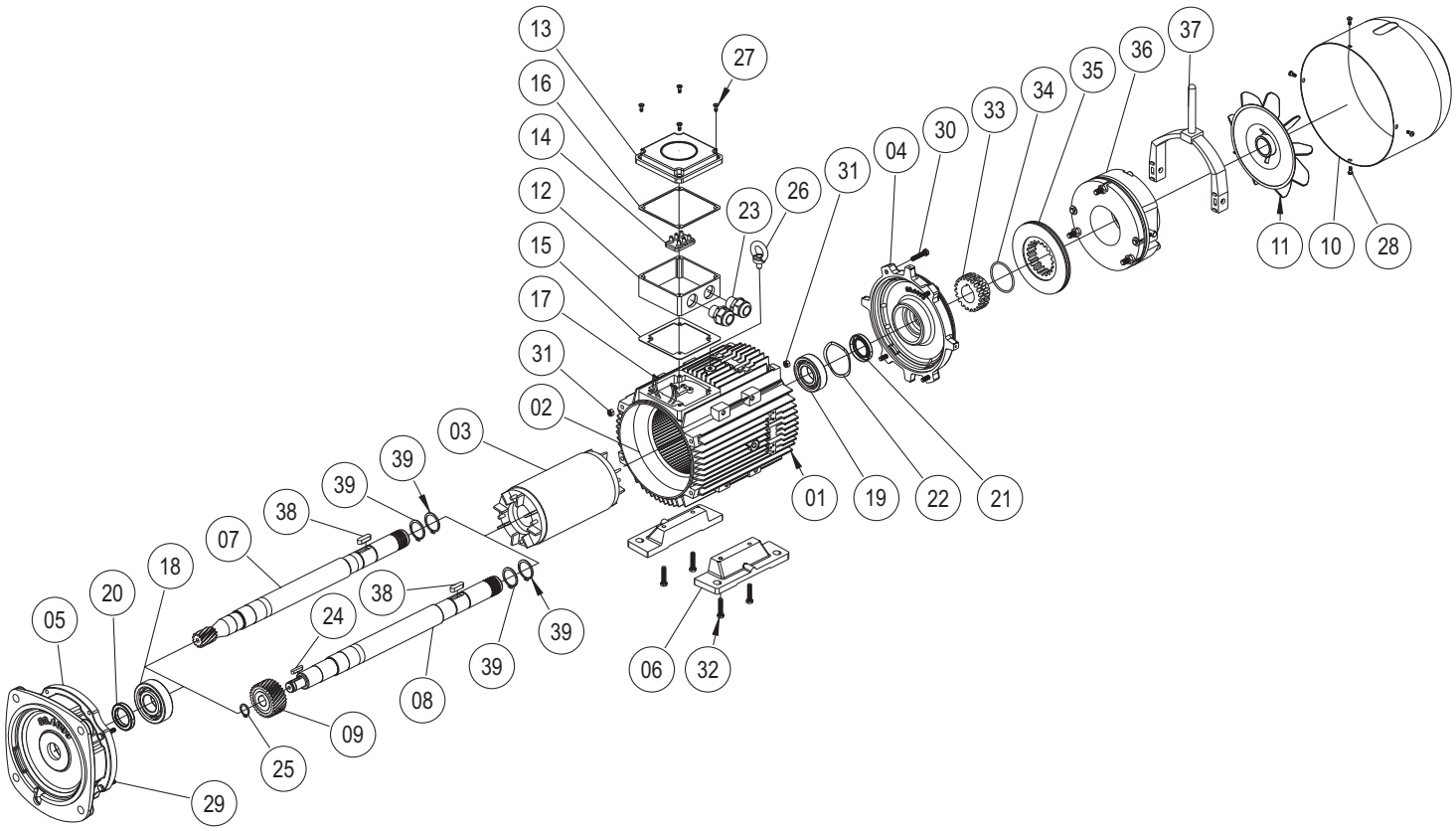
(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

MOTOR PARÇA LİSTESİ / MOTOR PART LIST



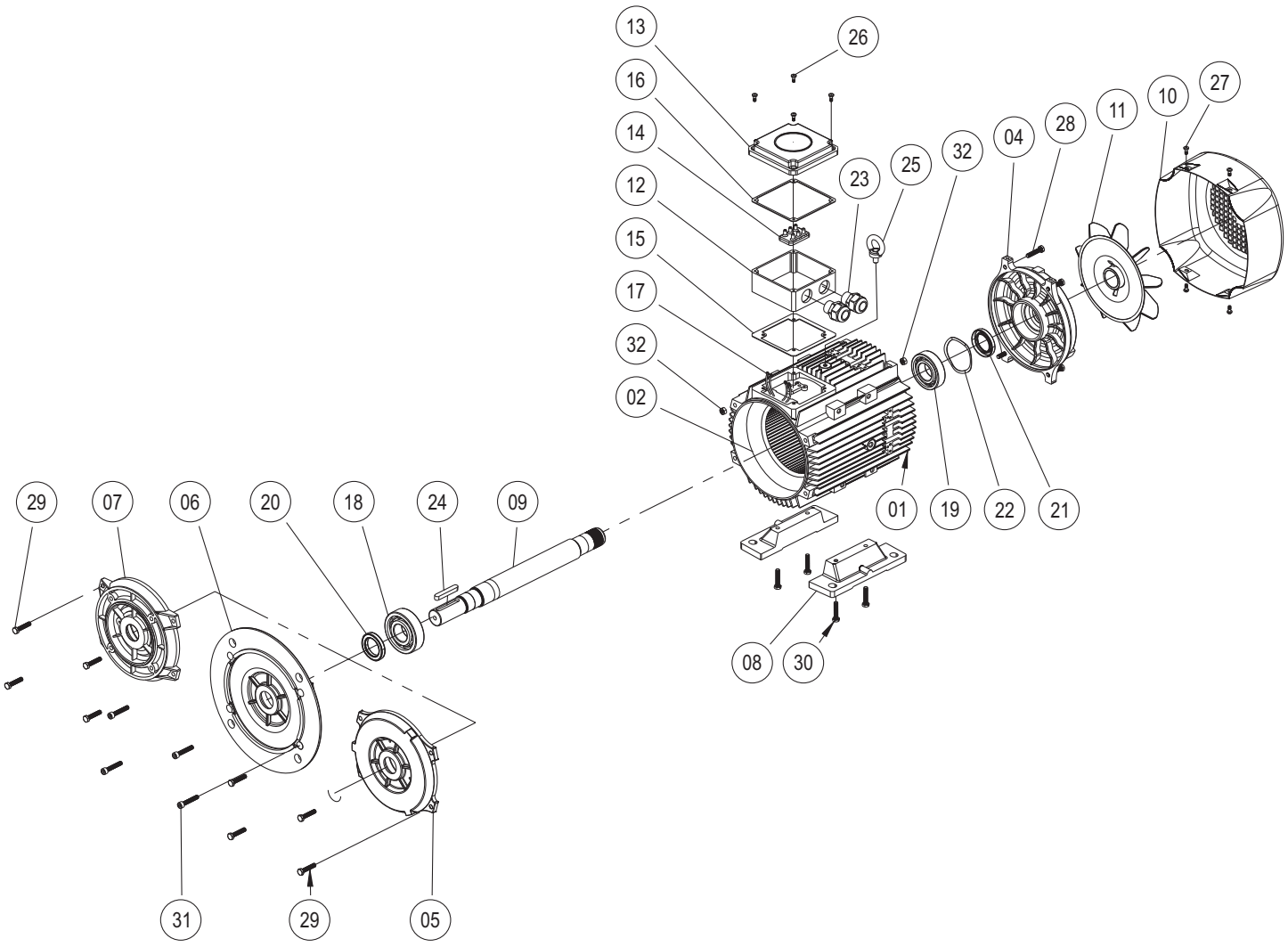
01	**Gövde**	01	Housing	**17**	**Kablo Grubu**	17	Lead Cables
02	**Sargılı Stator**	02	Wound Stator	**18**	**Ön Rulman**	18	Bal Bearing (Drive-Side)
03	**Rotor**	03	Rotor	**19**	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)
04	**Motor Arka Kapağı**	04	Nondrive - Endshield	**20**	**Keçe (Ön)**	20	Seal Ring (Front)
05	**PGR Motor Bağlantı Flanşı**	05	Moter Connection Flange	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
06	**Ayak**	06	Foot	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
07	**Motor Mili (Yekpare)**	07	Drive Shaft (Gearcut)	**23**	**Rakor**	23	Conduit
08	**Motor Mili (Çakma)**	08	Drive Shaft (Plain)	**24**	**Kama**	24	Key
09	**Z1 Dişlisi**	09	Z1 Gear	**25**	**Segman**	25	Circilip DIN 471
10	**Fan Kapağı**	10	Fan Cover	**26**	**Mapa**	26	Eye Bolt
11	**Fan**	11	Fan	**27**	**Yıldız Başlı Civata**	27	Pan Head Secrews
12	**Terminal Kutusu**	12	Terminal Box	**28**	**Yıldız Başlı Civata**	28	Pan Head Secrews
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover	**29**	**Civata DIN 933**	29	Bolt
14	**Klemens Plakası**	14	Terminal Plate	**30**	**Civata DIN 933**	30	Bolt
15	**Terminal Contası Alt**	15	Terminal Gasket Down	**31**	**Somun**	31	Nut
16	**Terminal Contası Üst**	16	Terminal Gasket Up	**32**	**Civata DIN 933**	32	Bolt

FRENLİ MOTOR PARÇA LİSTESİ / BRAKE MOTOR PART LIST



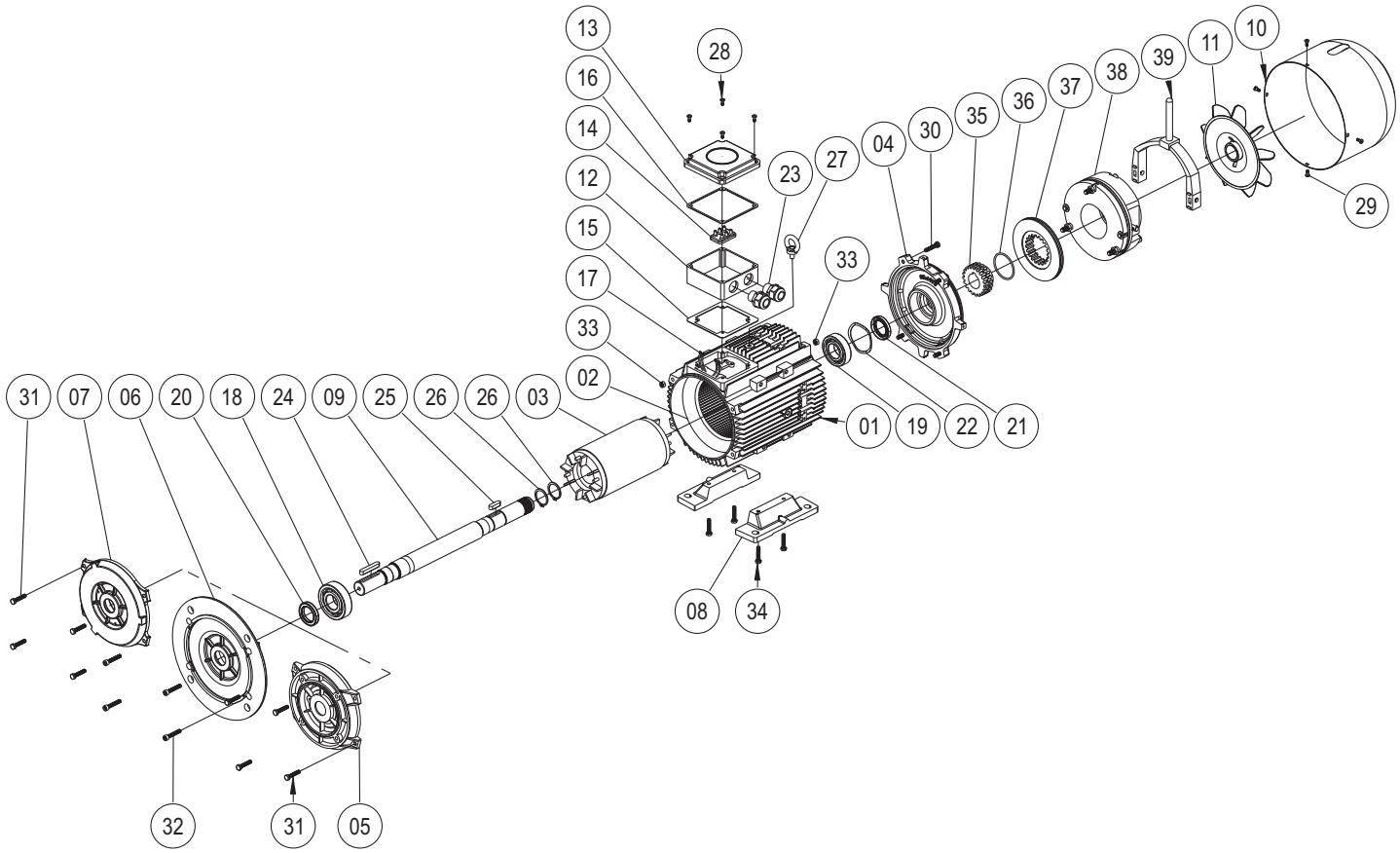
01	**Gövde**	01	Housing	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
02	**Sargılı Stator**	02	Wound Stator	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
03	**Rotor**	03	Rotor	**23**	**Rakor**	23	Conduit
04	**Fren Flanşı**	04	Brake Connection Flange	**24**	**Kama**	24	Key
05	**PGR Motor Bağlantı Flanşı**	05	Motor Connection Flange	**25**	**Segman**	25	Circilip DIN 471
06	**Ayak**	06	Foot	**26**	**Mapa**	26	Eye Bolt
07	**Motor Mili (Yekpare)**	07	Drive Shaft (Gearcut)	**27**	**Yıldız Başlı Civata**	27	Pan Head Secrews
08	**Motor Mili (Çakma)**	08	Drive Shaft (Plain)	**28**	**Yıldız Başlı Civata**	28	Pan Head Secrews
09	**Z1 Dişlisi**	09	Z1 Gear	**29**	**Civata DIN 933**	29	Bolt
10	**Fan Kapağı**	10	Fan Cover	**30**	**Civata DIN 933**	30	Bolt
11	**Fan**	11	Fan	**31**	**Somun**	31	Nut
12	**Terminal Kutusu**	12	Terminal Box	**32**	**Civata DIN 933**	32	Bolt
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover	**33**	**Fren Kaplini / Coupling**	33	Coupling
14	**Klemens Plakası**	14	Terminal Plate	**34**	**O-Ring / O-Ring**	34	O-Ring
15	**Terminal Contası Alt**	15	Terminal Gasket Down	**35**	**Fren Balatası / Break Lining**	35	Brake Lining
16	**Terminal Contası Üst**	16	Terminal Gasket Up	**36**	**Fren / Break**	36	Brake
17	**Kablo Grubu**	17	Lead Cables	**37**	**Manuel Kolu / Hand Release**	37	Hand Release
18	**Ön Rulman**	18	Bal Bearing (Drive-Side)	**38**	**Kama / Key**	38	Key
19	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)	**39**	**Segman / Circilip DIN 471**	39	Circilip DIN 471
20	**Keçe (Ön)**	20	Seal Ring (Front)				

B3-B5-B14 FLANŞLI MOTOR PARÇA LİSTESİ / B3-B5-B14 FLANGE MOTOR PART LIST



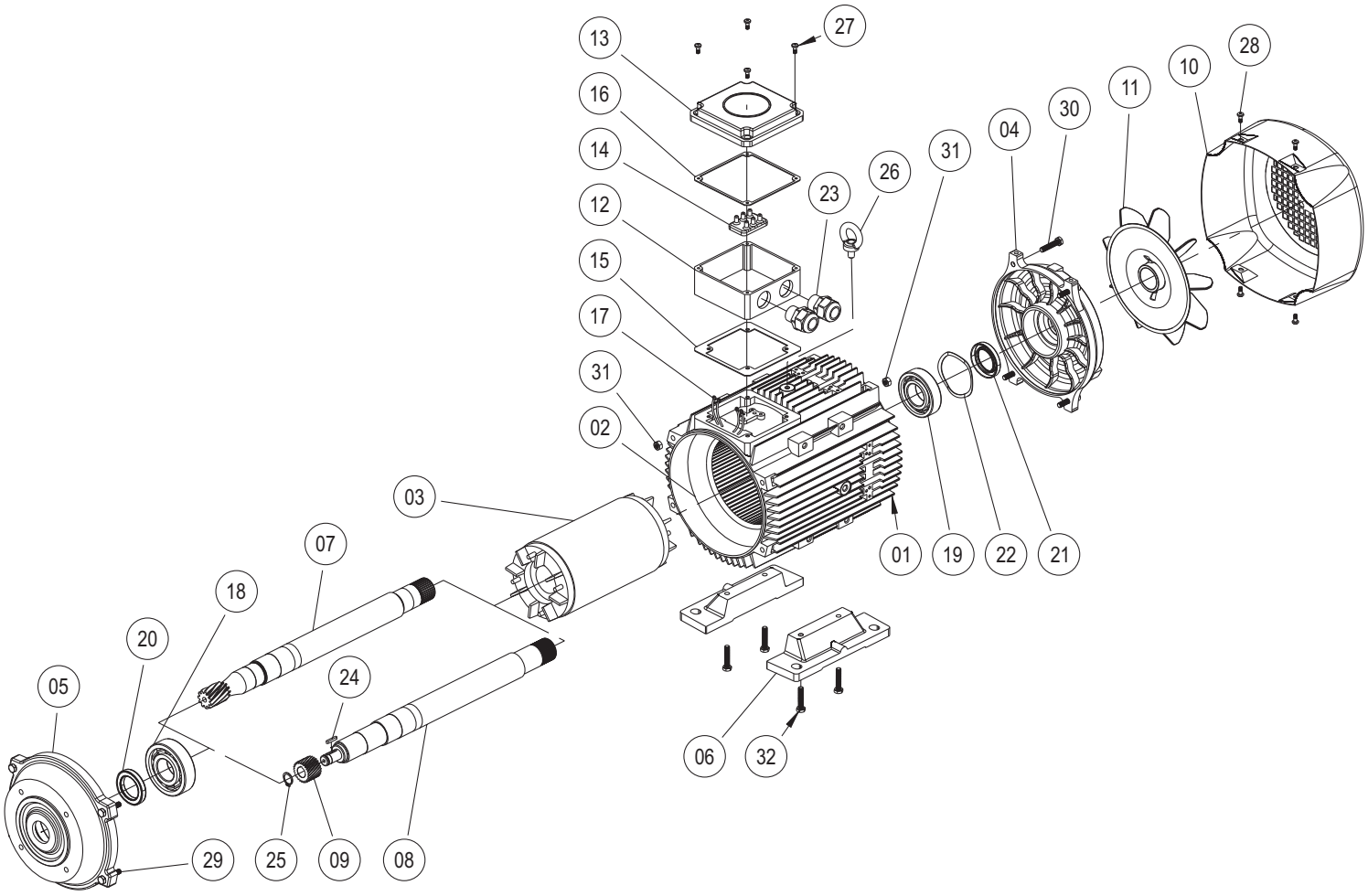
01	**Gövde**	01	Housing
02	**Sargılı Stator**	02	Wound Stator
03	**Rotor**	03	Rotor
04	**Motor Arka Kapağı**	04	Nondrive - Endshield
05	**B3 Motor Bağlantı Flanşı**	05	Flange
06	**B5 Motor Bağlantı Flanşı**	06	Flange
07	**B14 Motor Bağlantı Flanşı**	07	Flange
08	**Ayak**	08	Foot
09	**Motor Mili (Standart)**	09	Drive Shaft (Gearcut)
10	**Fan Kapağı**	10	Fan Cover
11	**Fan**	11	Fan
12	**Terminal Kutusu**	12	Terminal Box
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover
14	**Klemens Plakası**	14	Terminal Plate
15	**Terminal Contası Alt**	15	Terminal Gasket Down
16	**Terminal Contası Üst**	16	Terminal Gasket Up
17	**Kablo Grubu /**	17	Lead Cables
18	**Ön Rulman /**	18	Bal Bearing (Drive-Side)
19	**Arka Rulman /**	19	Bal Bearing (Non-Drive-Side)
20	**Keçe (Ön) /**	20	Seal Ring (Front)
21	**Keçe (Arka) /**	21	Seal Ring (Back)
22	**Rulman Gergi Yayı /**	22	Bearing Shim
23	**Rakor /**	23	Conduit
24	**Kama /**	24	Key
25	**Mapa /**	25	Eye Bolt
26	**Yıldız Başlı Civata /**	26	Pan Head Secrews
27	**Yıldız Başlı Civata /**	27	Pan Head Secrews
28	**Civata DIN 933 /**	28	Bolt
29	**Civata DIN 933 /**	29	Bolt
30	**Civata DIN 933 /**	30	Bolt
31	**Civata DIN 912 /**	31	Bolt
32	**Somun /**	32	Nut

FRENLİ B3-B5-B14 FLANŞLI MOTOR PARÇA LİSTESİ / BRAKE B3-B5-B14 FLANGE MOTOR PART LIST



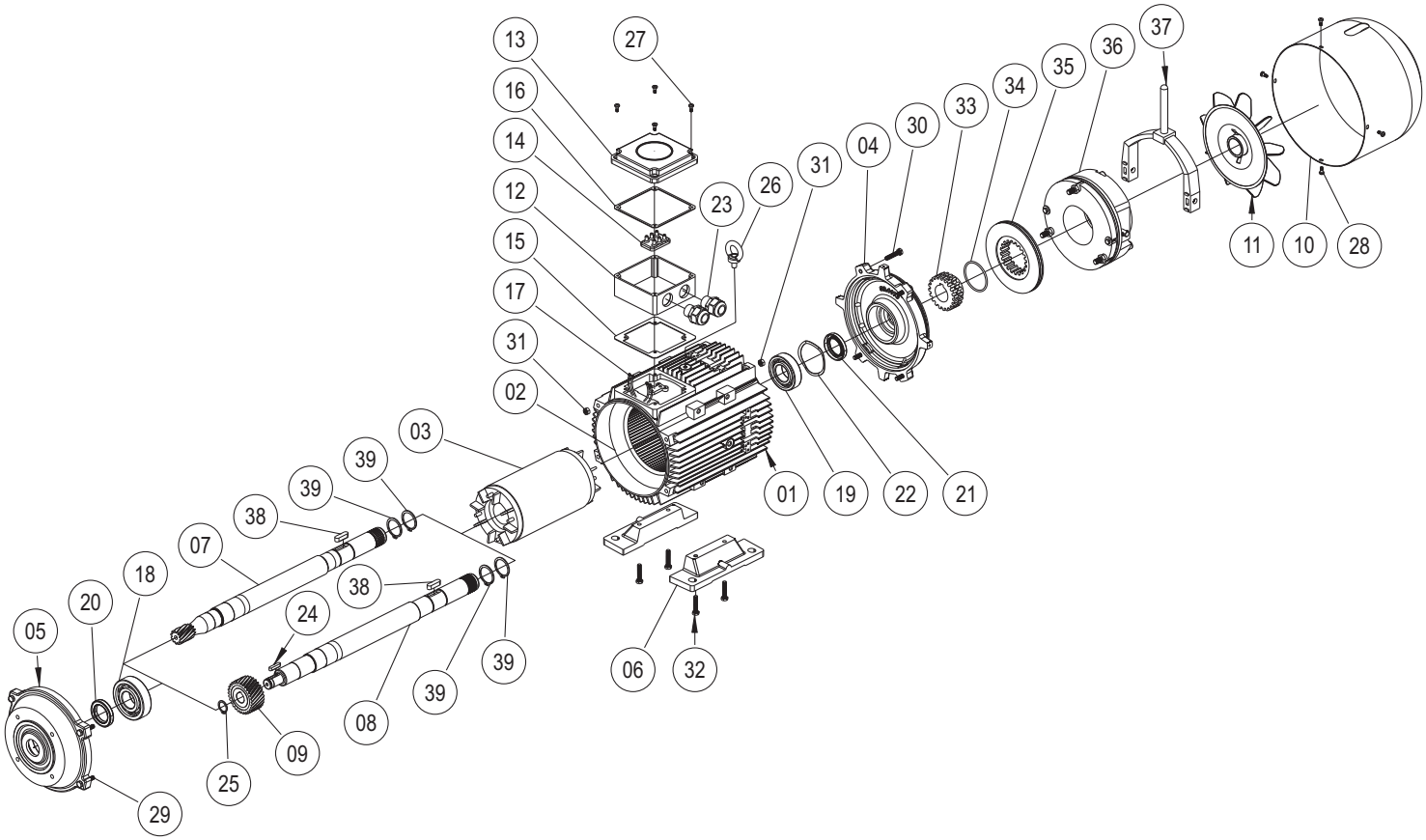
01	**Gövde**	01	Housing
02	**Sargılı Stator**	02	Wound Stator
03	**Rotor**	03	Rotor
04	**Fren Flanşı**	04	Brake Connection Flange
05	**B3 Motor Bağlantı Flanşı**	05	Flange
06	**B5 Motor Bağlantı Flanşı**	06	Flange
07	**B14 Motor Bağlantı Flanşı**	07	Flange
08	**Ayak**	08	Foot
09	**Motor Mili (Standart)**	09	Drive Shaft (Gearcut)
10	**Fan Kapağı**	10	Fan Cover
11	**Fan**	11	Fan
12	**Terminal Kutusu**	12	Terminal Box
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover
14	**Klemens Plakası**	14	Terminal Plate
15	**Terminal Contası Alt**	15	Terminal Gasket Down
16	**Terminal Contası Üst**	16	Terminal Gasket Up
17	**Kablo Grubu**	17	Lead Cables
18	**Ön Rulman**	18	Bal Bearing (Drive-Side)
19	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)
20	**Keçe (Ön)**	20	Seal Ring (Front)
21	**Keçe (Arka)**	21	Seal Ring (Back)
22	**Rulman Gergi Yayı**	22	Bearing Shim
23	**Rakor**	23	Conduit
24	**Kama**	24	Key
25	**Kama**	25	Key
26	**Segman**	26	Circilip DIN 471
27	**Mapa**	27	Eye Bolt
28	**Yıldız Başlı Civata**	28	Pan Head Secrews
29	**Yıldız Başlı Civata**	29	Pan Head Secrews
30	**Civata DIN 933**	30	Bolt
31	**Civata DIN 933**	31	Bolt
32	**Civata DIN 912**	32	Bolt
33	**Somun**	33	Nut
34	**Civata DIN 933**	34	Bolt
35	**Fren Kaplini**	35	Brake Coupling
36	**O-Ring**	36	O-Ring
37	**Fren Balatası**	37	Brake Lining
38	**Fren**	38	Brake
39	**Manuel Kolu**	39	Hand Release

MOTOR PARÇA LİSTESİ / THE MOTOR PART LIST



01	**Gövde**	01	Housing	**17**	**Kablo Grubu**	17	Lead Cables
02	**Sargılı Stator**	02	Wound Stator	**18**	**Ön Rulman**	18	Bal Bearing (Drive-Side)
03	**Rotor**	03	Rotor	**19**	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)
04	**Motor Arka Kapağı**	04	Nondrive - Endshield	**20**	**Keçe (Ön)**	20	Seal Ring (Front)
05	**PGR Motor Bağlantı Flanşı**	05	Moter Connection Flange	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
06	**Ayak**	06	Foot	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
07	**Motor Mili (Yekpare)**	07	Drive Shaft (Gearcut)	**23**	**Rakor**	23	Conduit
08	**Motor Mili (Çakma)**	08	Drive Shaft (Plain)	**24**	**Kama**	24	Key
09	**Z1 Dişlisi**	09	Z1 Gear	**25**	**Segman**	25	Circilip DIN 471
10	**Fan Kapağı**	10	Fan Cover	**26**	**Mapa**	26	Eye Bolt
11	**Fan**	11	Fan	**27**	**Yıldız Başlı Civata**	27	Pan Head Secrews
12	**Terminal Kutusu**	12	Terminal Box	**28**	**Yıldız Başlı Civata**	28	Pan Head Secrews
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover	**29**	**Civata DIN 933**	29	Bolt
14	**Klemens Plakası**	14	Terminal Plate	**30**	**Civata DIN 933**	30	Bolt
15	**Terminal Contası Alt**	15	Terminal Gasket Down	**31**	**Somun**	31	Nut
16	**Terminal Contası Üst**	16	Terminal Gasket Up	**32**	**Civata DIN 933**	32	Bolt

FRENLİ MOTOR PARÇA LİSTESİ / THE MOTOR PART LIST WITH BRAKE

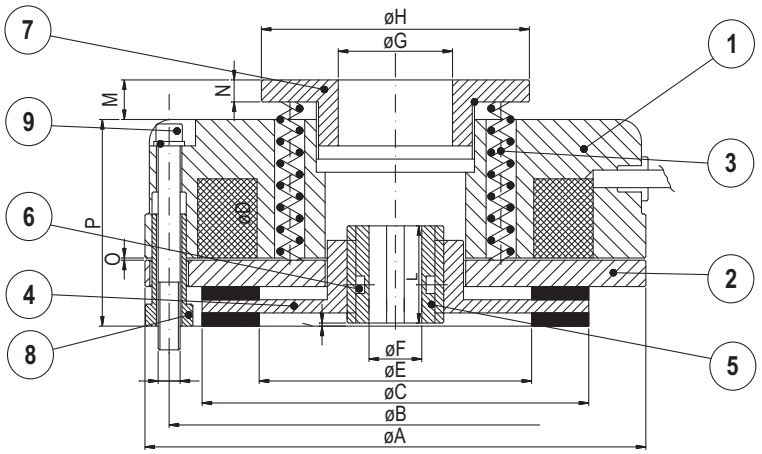


01	**Gövde**	01	Housing	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
02	**Sargılı Stator**	02	Wound Stator	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
03	**Rotor**	03	Rotor	**23**	**Rakor**	23	Conduit
04	**Fren Flanşı**	04	Brake Connection Flange	**24**	**Kama**	24	Key
05	**PGR Motor Bağlantı Flanşı**	05	Flange	**25**	**Segman**	25	Circilip DIN 471
06	**Ayak**	06	Foot	**26**	**Mapa**	26	Eye Bolt
07	**Motor Mili (Yekpare)**	07	Drive Shaft (Gearcut)	**27**	**Yıldız Başlı Civata**	27	Pan Head Secrews
08	**Motor Mili (Çakma)**	08	Drive Shaft (Plain)	**28**	**Yıldız Başlı Civata**	28	Pan Head Secrews
09	**Z1 Dişlisi**	09	Z1 Gear	**29**	**Civata DIN 933**	29	Bolt
10	**Fan Kapağı**	10	Fan Cover	**30**	**Civata DIN 933**	30	Bolt
11	**Fan**	11	Fan	**31**	**Somun**	31	Nut
12	**Terminal Kutusu**	12	Terminal Box	**32**	**Civata DIN 933**	32	Bolt
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover	**33**	**Fren Kaplini**	33	Coupling
14	**Klemens Plakası**	14	Terminal Plate	**34**	**O-Ring**	34	O-Ring
15	**Terminal Contası Alt**	15	Terminal Gasket Down	**35**	**Fren Balatası**	35	Brake Lining
16	**Terminal Contası Üst**	16	Terminal Gasket Up	**36**	**Fren**	36	Brake
17	**Kablo Grubu**	17	Lead Cables	**37**	**Manuel Kolu**	37	Hand Release
18	**Ön Rulman**	18	Bal Bearing (Drive-Side)	**38**	**Kama**	38	Key
19	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)	**39**	**Segman**	39	Circilip DIN 471
20	**Keçe (Ön)**	20	Seal Ring (Front)				

TR FREN PARÇA LİSTESİ VE ÖZELLİKLERİ

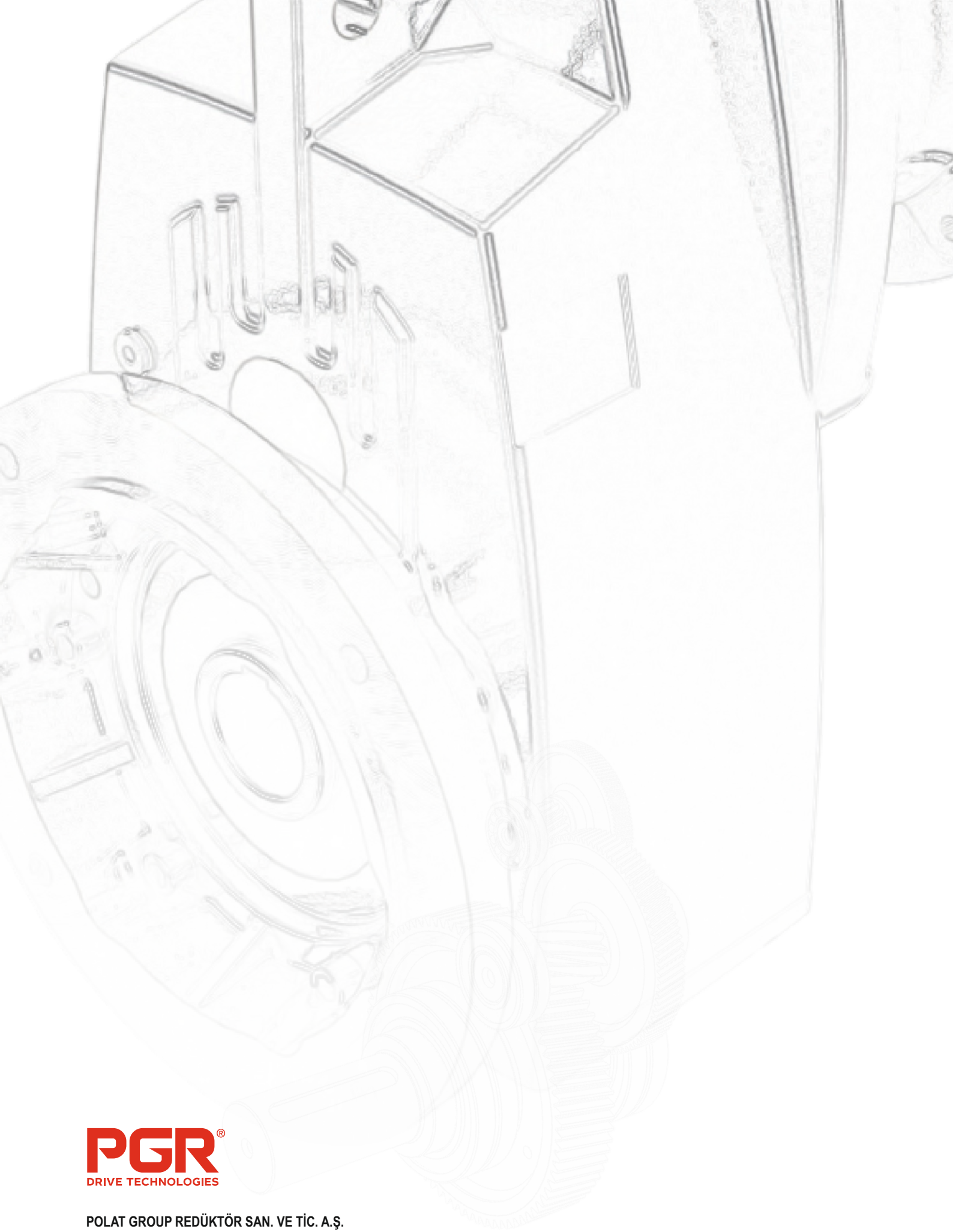
1 Elektro mıknatıs	**1** Electromagnet
2 Endüvi plakası	**2** Armature plate
3 Tork yayı	**3** Torque springs
4 Disk	**4** Disc
5 Kamalı burç	**5** Splined hub
6 O-ring	**6** O-ring
7 Ayar halkası	**7** Adjuster rings
8 Ayar somunu	**8** Adjuster nuts
9 Bağlantı cıvataları	**9** Fixing screws

EN BRAKE PART LIST AND PROPERTIES



Tip / Type Fren Modeli / Brake Model		K1	K2	K3	K4	K5	K6	K7	K7/D	K8	K8/D	K9	K9/D	K9/T
Statik Fren Momenti Static Braking Torque	(Nm)	5	12	16	20	40	60	90	180	200	400	300	600	900
Motorun Max. Hızı Max Speed of the motor	(rpm)	3000	3000	3000	3000	3000	3000	3000	3000	1500	1500	1500	1500	1500
Giriş Gücü Input Power	(W)	15	20	25	30	45	50	55	55	60	60	65	65	65
Max. Ses Max noisiness	(≤dB-A)	68	69	68	69	70	70	70	70	70	69	69	69	70
Ağırlık Weight	(Kg.)	1,1	1,85	2,55	2,84	4,8	7	12	15	14,3	18	23	28	34
	A	84	104	114	124	148	159	189	189	218	218	248	248	248
	B	72	90	103	112	132	145	170	170	196	196	230	230	230
	C	61	77	88	98	119	128	151	151	176	176	204	204	204
	D	3xM4	3xM5	3xM5	3xM6	3xM6	3xM8	3xM8	3xM8	6xM10	6xM10	6xM10	6xM10	9xM10
Delik toleransı K3'e kadar H7, diğerleri + 0,01/-0,01 Tollerance hole till size K3 H7, others + 0,01/-0,01	E	35	44	62	69	79	80	90	90	103	103	132	132	132
	F	10-11 12	11-14 15	11-15	14-25	24-25 28	25-30 34	25-30 34	25 H40 34 H60	24-34	34 H60 48	44-45 48	44-45 48	44-45 48-50
	G	20	26	26	42	60	60	60	60	60	60	60	60	60
	H	50	61	61	79	104	104	104	104	104	104	104	104	104
	I	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
	L	18	20	20	20	25	30	30	60	40	60	40	60	80
	M (max)	9	9	9	9,5	18	16	14	14	18	18	18	18	18
	N	4	4	4	5,5	8	8	8	8	8	8	8	8	8
	O	0,2	0,2	0,2	0,2	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,4	0,4÷0,5
	P	38,5	41,5	47	46,5	64	69,5	79	101,5	78	98	80	105	130

Not : Fren çalıştırılmadan önce statik fren momenti tabloda verilen değerlere göre ± % 20 değişiklik gösterebilir.
Note : The brake before running in, the static braking torque value could change by +20% from the reported value.



PGR®
DRIVE TECHNOLOGIES

POLAT GROUP REDÜKTÖR SAN. VE TİC. A.Ş.
Ata Mahallesi. Astim Organize Sanayi Bölgesi. 1.Cadde. No: 4 Efeler- AYDIN / TÜRKİYE
Tel: +90 256 231 19 12 (Pbx) Fax: +90 256 231 19 17
info@pgr.com.tr - www.pgr.com.tr

POLATGROUP