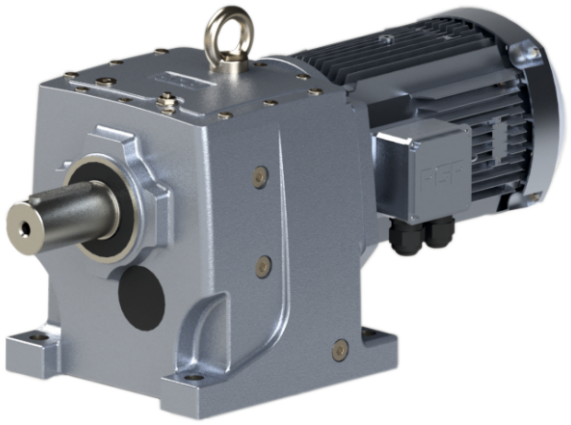
PGR®

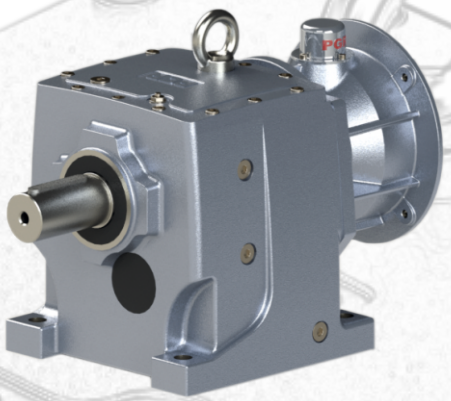
DRIVE TECHNOLOGIES

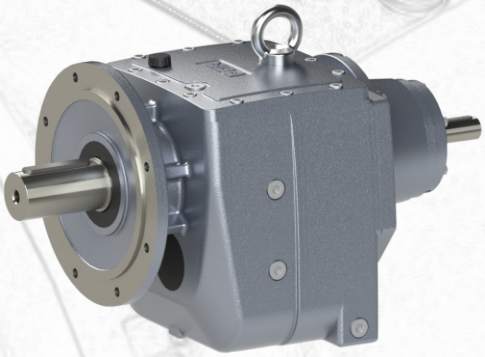
Helisel Dişlili Redüktör

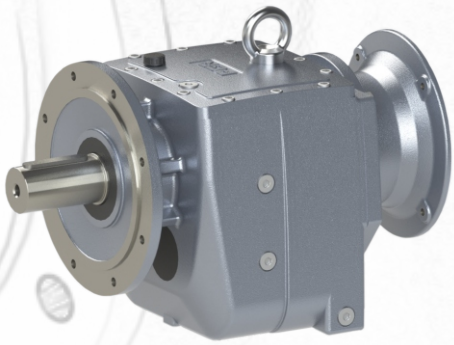
Helical Gear Units

PA/PF SERIES









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DRIVE TECHNOLOGIES

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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 BİLGİLER

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. 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 28-31)
- 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. 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 28-31)
- 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

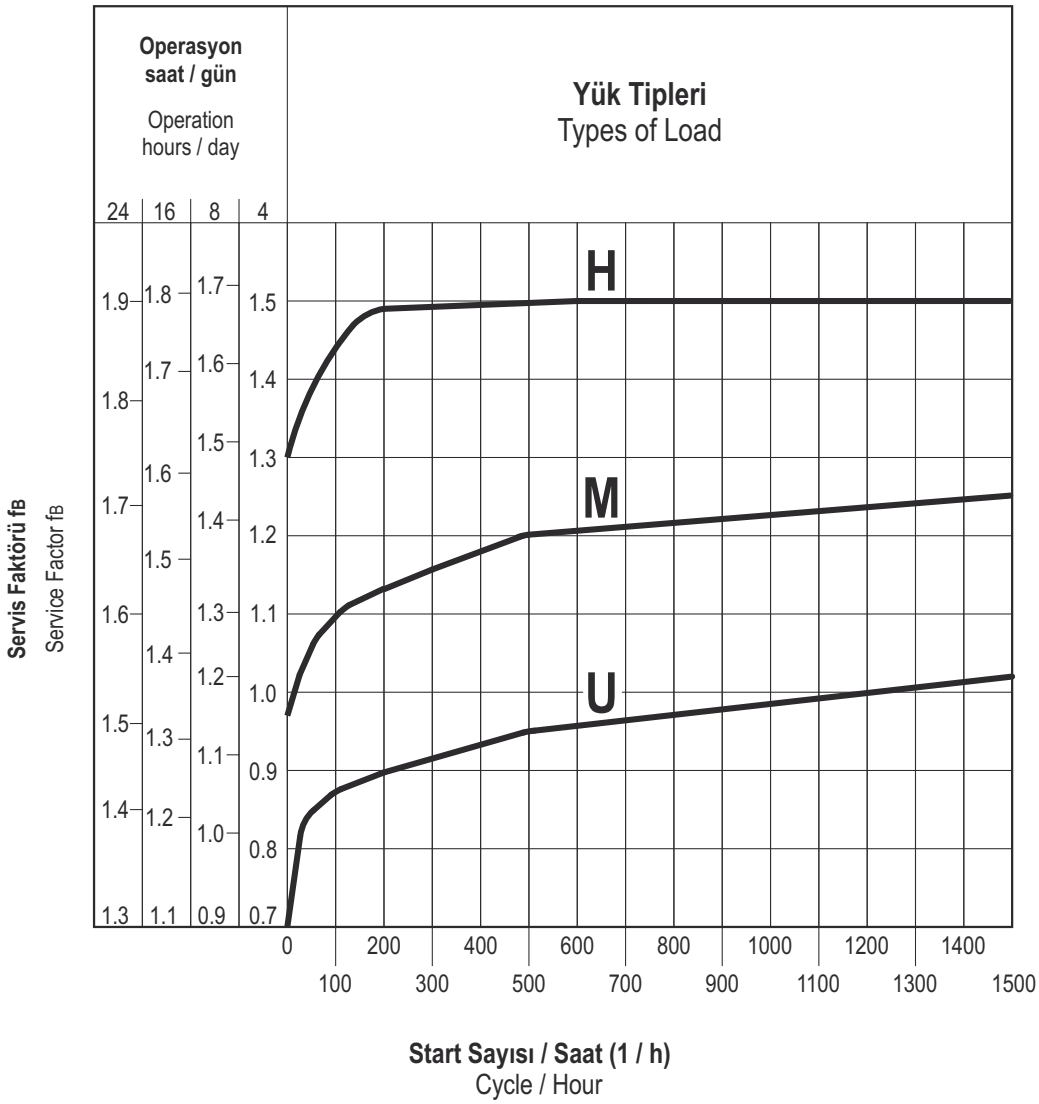
EN SERVICE FACTOR

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 :

a) Düzgün çalışma (U)

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

b) 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.

c) 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} = 2,8 gibi durumda yük sınıfı 'M' 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;

a) Uniform application (U)

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

b) 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.

c) 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} = 2,8 load classification must be'M')

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.

TR TEKNİK BİLGİLER

EN EXPLANATORY NOTES

$$P_1 = \frac{M_2 \cdot n_2}{\eta\ 9550} \quad [\,kW\,], \quad M_2\ [\,Nm\,], n_2\ [\,min^{-1}\,]$$

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

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.

$$f_B \geq f_{Bmin}$$

Helisel, parallel mil ve helisel konik dişli ünitelerinde her bir kademe için çok yüksek bir seviyede verimlilik vardır (her bir kademe için yaklaşık %98 veya η = 0,98). Bu yüzden hesaplamalarda verim η =1,0 alınması yeterli doğru sonuçlara ulaşılmasına yardımcı olur. Helisel sonsuz dişliler ile ilgili dişli ünitesi verimliliği, herbir çıkış hızı n_2'ye ait çıkış ve diş oran tablolarında listelenmiştir. W kovanı montajlı (serbest hareket mili) redüktörde çıkış gücü aşağıdaki formülden hesaplanır.

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. But, for helical worm gear efficiency is given at table which is depended on output speed and gear ratio.
With W cylinder (free drive shafts) ;

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

Burada, azami hareket gücü P_{1max} aşılamaz.

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

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

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

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

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.

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.

Radyal ve Eksenel Kuvvetler

Çıkış momenti ve hız genel açıklamalarındaki 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 göz önünde bulundurulmalıdır. İzin verilen kuvvetler F_A ve F_R belirli oranda azaltılır.

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 yanı sıra 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.

$$F_{rvorth} = \frac{2 \cdot M_2}{d_o} f_z \leq F_R$$

M_2 : Dişli ünitesi çıkış momenti [Nm]
f_Z : Tablodan alınan katsayı
d_0 : 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 bileziğinden 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 — 9 - 11
y
z

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

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 34-36. 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;

$$F_{rvorth} = \frac{2 \cdot M_2}{d_o} f_z \leq F_R$$

M_2 : Output torque of gear unit [Nm]
f_Z : Factor which is taken from table
d_0 : Effective circular diameter [mm]
F_R : Permitted radial force which 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

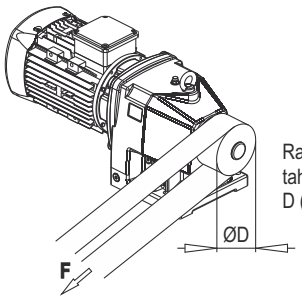
F_{RXW} permitted overhung force [kN]

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]

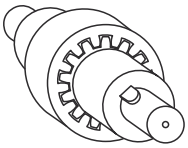
Notify that, **equation I** and **equation II** are applied for calculating radial load where **equation I** is used for sevice life and **equation II** is used for shaft stability. But small result must be considered.

TR RADYAL YÜK HESABI



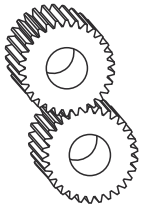
RADYAL YÜKLERİN HESABI

Radyal yük F(N)' nun hesaplanmasında gerekli tahrik momenti M (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.

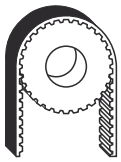


2 - Düz Dişli (20° kavrama açılı)

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

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 (N) is calculated with the following equations where required moment M (Nm) and hoop or gear diameter D (mm) is used.

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)

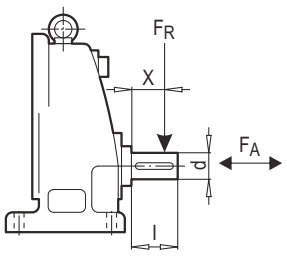
4 - For Trigger Belt

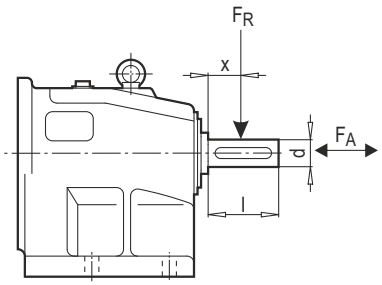
5 - For V Belt

6 - Flat Belt With Spanning Puley

TR RADYAL YÜK HESABI

EN CALCULATION OF RADIAL LOADS





ÇIKIŞ ŞAFTINDAKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER

VALUE TABLE FOR RADIAL AND AXIAL LOADS AT OUTPUT SHAFT

Helisel dişlili redüktör Helical gearboxes	**y (mm)**	**z (mm)**	**c Normal** Normal **(Nmm)**	**c Güçlendirilmiş** Reinforced **(Nmm)**	**f (mm)**	**d (mm)**	**l (mm)**
PA\PF 11	65.0	85.0	#	-	39.0	20	40
PA\PF 21	77.0	102.0	#	-	50.0	25	50
PA\PF 31	104.5	134.5	#	-	69.5	30	60
PA\PF 41	111.5	146.5	#	-	67.0	35	70
PA\PF 51	125.0	165.0	#	-	74.0	40	80
PA\PF 02 - PA\PF 03	63.8	83.8	0.06×10^6	0.10×10^6	11.8	20	40
PA\PF 12 - PA\PF 13	73.5	98.5	0.12×10^6	0.18×10^6	14.0	25	50
PA\PF 22 - PA\PF 23	86.0	116.0	0.19×10^6	0.30×10^6	14.0	30	60
PA\PF 32- PA\PF 33	112.5	152.5	0.39×10^6	0.60×10^6	30.0	40	80
PA\PF 42 - PA\PF 43	123.0	168.0	0.42×10^6	0.73×10^6	30.0	45	90
PA\PF 52 - PA\PF 53	149.5	204.5	0.92×10^6	1.56×10^6	35.0	55	110
PA\PF 62 - PA\PF 63	191.0	256.0	1.46×10^6	2.46×10^6	35.0	65	130
PA\PF 72 - PA\PF 73	212.0	282.0	2.13×10^6	4.45×10^6	37.0	75	140
PA\PF 82 - PA\PF 83	248.5	333.5	4.24×10^6	6.89×10^6	38.0	90	170
PA\PF 92- PA\PF 93	278.0	383.0	8.07×10^6	12.50×10^6	41.0	110	210
PA\PF 102 - PA\PF 103	323.5	448.5	14.86×10^6	22.84×10^6	46.0	130	250

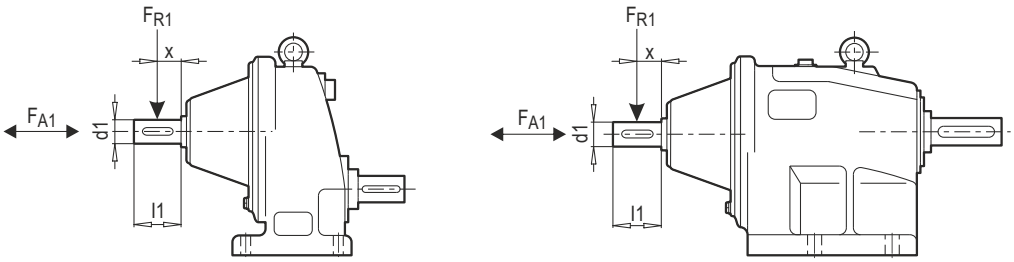
 # İstediğinde hesaplanacaktır.

It will be calculated when you demand.

TR RADYAL YÜK HESABI

EN CALCULATION OF RADIAL LOADS

W



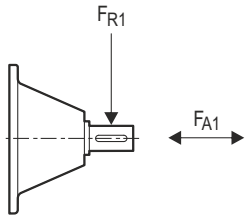
GİRİŞ ŞAFTINDAKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER VALUE TABLE FOR RADIAL AND AXIAL LOADS AT INPUT SHAFT f=0					
Helisel dişlili redüktör Helical gearboxes	**y** **(mm)**	**z** **(mm)**	**c** **(Nmm)**	**d1** **(mm)**	**l1** **(mm)**
PA\PF 03 **PA\PF 11** **PA\PF 02** **PA\PF 12** **PA\PF 13** **PA\PF 23** **PA\PF 33**	70.0	90.0	3.64×10^4	16	40
PA\PF 21 **PA\PF 31** **PA\PF 22** **PA\PF 32** **PA\PF 43** **PA\PF 53**	96.5	121.5	1.07×10^5	24	50
PA\PF 41 **PA\PF 51** **PA\PF 42** **PA\PF 52** **PA\PF 63**	110.5	150.5	4.70×10^5	38	80
PA\PF 62 **PA\PF 63*** **PA\PF 72** **PA\PF 73** **PA\PF 83** **PA\PF 93**	149.5	204.5	4.60×10^5	42	110
PA\PF 82 **PA\PF 83*** **PA\PF 92** **PA\PF 93*** **PA\PF 103**	207.5	277.5	1.82×10^6	65	140
PA\PF 102	224.5	294.5	1.66×10^6	65	140

*** W Adaptörlerde Güçlendirilmiş Rulman Kullanılmıştır. /** * Reinforced bearing is used at W Adapters.

TR RADYAL YÜK HESABI

EN CALCULATION OF RADIAL LOADS

W



Tip / Type	PA\PF 11 PA\PF 02 PA\PF 12 PA\PF 03 PA\PF 13 PA\PF 23 PA\PF 33		PA\PF 21 PA\PF 31 PA\PF 22 PA\PF 32 PA\PF 43 PA\PF 53		PA\PF 41 PA\PF 51 PA\PF 42 PA\PF 52 PA\PF 63		PA\PF 62 PA\PF 72 PA\PF 63* PA\PF 73 PA\PF 83 PA\PF 93		PA\PF 82 PA\PF 92 PA\PF 102 PA\PF 83* PA\PF 93* PA\PF 103	
P_1 (kW)	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}	F_{A1}	F_{R1}
0.12	1.2	0.85	2.9	2.1	-	-	-	-	-	-
0.18	1.1	0.82	2.9	2.1	-	-	-	-	-	-
0.25	1.0	0.78	2.8	2.1	-	-	-	-	-	-
0.37	0.89	0.75	2.6	2.1	4.1	2.1	-	-	-	-
0.55	0.77	0.72	2.5	2.0	3.9	2.8	-	-	-	-
0.75	0.58	0.70	2.3	1.9	3.8	2.4	6.1	4.4	-	-
1.10	0.35	0.61	2.1	1.8	3.5	2.7	5.9	4.3	-	-
1.50	0.29	0.43	2.0	1.8	3.3	2.6	5.8	4.2	-	-
2.20	0.20	0.42	1.7	1.7	2.7	2.4	5.5	4.1	-	-
3.00	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
15.0	-	-	-	-	-	-	3.3	2.7	3.1	9.5
18.5	-	-	-	-	-	-	2.7	2.3	3.0	9.3
22.0	-	-	-	-	-	-	2.2	1.8	2.9	9.3
30.0	-	-	-	-	-	-	1.1	1.2	2.3	8.4
37.0	-	-	-	-	-	-	0.74	0.87	2.0	8.1
45.0	-	-	-	-	-	-	-	-	2.2	8.3
55.0	-	-	-	-	-	-	-	-	1.5	7.4
75.0	-	-	-	-	-	-	-	-	0.78	4.6
90.0	-	-	-	-	-	-	-	-	0.24	5.2

*** W Adaptörlerde Güçlendirilmiş Rulman Kullanılmıştır.**
* Reinforced bearing is used at W Adapters.

$F_{A1} \Rightarrow F_{r1} = 0$
$F_{R1} \Rightarrow F_{a1} = 0$

7

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 thrust 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 hızı [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 4 kutuplu olan 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 40W, losses are dependent motor speed.

TR PA/PF TANITIMI

POLAT HELİSEL DİŞLİLİ REDÜKTÖR (PA/PF)

2 ve 3 kademeli helisel tip redüktörle (PA/PF 62-63'den PA/PF 102-103'e) motor ve çıkış miline eşmerkezli olarak montaj edilmiştir. PA/PF 02'den 52'ye kadar 2 kademeli redüktörlerimiz mevcuttur. PA/PF 02'den PA/PF 52'ye kadar olan 2 kademeli redüktörlerimiz daha yüksek tahvil oranlarında gövde dayanımını arttırarak 3 kademeli olarak üretilebilmektedir.
Bu 3 kademeli redüktörler PA/PF 03 - PA/PF 53 adı altında dizayn edilmiştir. PA/PF 62/63 ve üzeri boyutlardaki helisel dişlili redüktörler aynı gövde içerisinde 2 veya 3 kademeli redüktörler haline getirilebilirler. Yüksek tahvil oranlar için 4, 5 ve 6 kademeli helisel dişlili redüktörlerimiz de mevcuttur. Helisel dişlili redüktörlerin ayaklı ve flanşlı versiyonları bulunmaktadır. Flanşlı helisel tip redüktörlerde flanş gövdeyle bir döküm olduğundan dolayı flanş ile gövde arasında herhangi bir bağlantı civatası mevcut değildir. 0,12 - 160 Kw'dan 26000 Nm'ye kadar çıkış oranı 11 farklı boyuttaki redüktörlerimizle elde edebiliyoruz.

Helisel Dişli Redüktör:
0.12 kW dan 160 kW' ya kadar
26000 Nm 'ye kadar çıkış momenti bulunur.

EN DESCRIPTION OF PA/PF

POLAT HELICAL GEARED MOTOR (PA/PF)

High quality Polat helical gears can be supplied foot or flange mounted products. Foot mounted is designated by 'PA' which is Polat foot mounted helical gear and flange mounted is designated by 'PF' which is Polat flange mounted helical gear.
There are available 2,3 or multistage designs. From PA/PF 02 to PA/PF 52 helical gear units are available in two stage reduction. This designs could be produced in three stage reduction at high ratio with increasing strength of unit case which are designated from PA/PF 03 to PA/PF 53.
Greater cases which are designated from PA/PF 62-63 to PA/PF 102-103 to and three stage helical gear units are designed input and output shaft concentrically. Polat multistage helical gear units are designed for high reduction ratios. At flange mounted helical gears, flange is intended on case for strength mounted or installation. Approximately 26000 Nm moment could be obtained with eleven different size of Polat helical gear unit altering from 0,12 kW to 160 kW.

Helical Gear Reducer :
Approx. 26000 Nm output moment
altering power from 0,12 kW to 160 kW.

MAX. MÜSAADE EDİLEBİLİR ÇIKIŞ MOMENTİ $M_{amax.}$

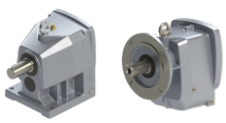
MAX. PERMISSIBLE OUTPUT TORQUES $M_{amax.}$

147 - 169

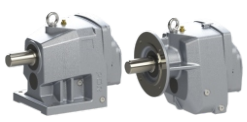
Bir, İki ve Üç kademeli helisel dişlili redüktör

Helical gear boxes single, double and triple reduction

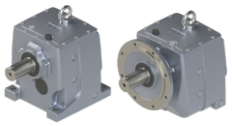
Tip / Type	$M_{a\ max.}$ (Nm)
PA/PF 11	60
PA/PF 21	80
PA/PF 31	190
PA/PF 41	290
PA/PF 51	490



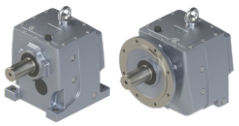
Tip / Type	$M_{a\ max.}$ (Nm)
PA/PF 02	100
PA/PF 12	180
PA/PF 22	370
PA/PF 32	710
PA/PF 42	1240
PA/PF 52	2020



Tip / Type	$M_{a\ max.}$ (Nm)
PA/PF 03	110
PA/PF 13	200
PA/PF 23	340
PA/PF 33	670
PA/PF 43	1290
PA/\PF 53	2230



Tip / Type	$M_{a\ max.}$ (Nm)
PA/PF 62	3120
PA/PF 72	4710
PA/PF 82	7250
PA/PF 92	10780
PA/PF 102	17370



Tip / Type	$M_{a\ max.}$ (Nm)
PA/PF 63	3700
PA/PF 73	5650
PA/PF 83	9180
PA/PF 93	14000
PA/PF 103	23160

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 147-169) 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 PA/PF 62, PD/PM 62 ve üst gövdeler, 3 kademeli redüktörlerden PA/PF 73, PD/PM 73, PKD 6390 ve üst gövdeler için her 4000 çalışma saatinde yaklaşık 20-25 gr 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 PA/PF 62, PD/PM 62, 3 kademeli redüktörlerden de PA/PF 73, PD/PM 73, PKD 6390 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 PA/PF 52, PD/PM 52'ye kadar ve 3 kademeli redüktörlerden PA/PF 63, PD/PM 63, PKD 5390'a 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 147-169. 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 PA/PF 62, PD/PM 62 and greater case which are 2 stage reducers, PA/PF 73, PD/PM 73, PKD 6390 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 20-25g 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 IEC160 motor size and greater motor size to least gear units which are for 2 stage reducers PA\PF 62, PD/PM 62 and for 3 stage reducers PA/PF 73, PD/PM 73 and 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 PA/PF 52, PD/PM 52 and 3 stage reducer up to PA/PF 63, PD/PM 63, PKD 5390 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

KERESTE ENDÜSTRİSİ

* **Kabuk Soyucular**
  - **Besleme Tamburu**
  - **Ana Tahrik**
* **Konveyörler**
  - **Brülör**
  - **Ana Yük veya Ağır Yük**
  - **Ana Kütük**
  - **Hızar ve Taşıma Bandı**
  - **Kalın Dilim**
  - **Taşıma**
* **Kesme Testereleri**
  - **Zincir**
  - **Sürükleme**
* **İndirme Boşaltma Tamburları**
* **Uzun Deste**
* **Tomruk Çekme-Eğme**
* **Kütük Döndürme Aygıtları**
* **Sıralama Tablası**
* **Taşıma**
  - **Zincir**
  - **Kreynyolu**
* **Tabla Tahriki**

KAĞIT İŞLEMELERİ

* **Karıştırıcı**
* **Saf çözeltiler İçin Karıştırıcı**
* **Kabuk Soyma Tromelleri**
* **Mekanik Kabuk Soyucu**
* **Dövücü - Öğütücü**
* **Düzleştirme Makinesi**
* **Kalenderleme**
* **Yüzey Pürüzlendirici**
* **Çentik Besleyici**
* **Kaplama Merdanesi**
* **Konveyörler**
  - **Çentik, Kabuk, Kimyasal**
  - **Kalın Dilimler İçeren Kütükler**
* **Kesici**
* **Silindir Kalıpları**
* **Kurutucu**
  - **Kağıt Makinesi**
  - **Konveyör Tip**
* **Kabartmalı Basıcı**
* **Ekstruder**
* **Kağıt Merdaneleri**
* **Presler**
* **Hamurlaştırıcı**
* **Pompalar**

FİLTRELER

* **Havalı Yıkama**
* **Döner - Taş veya Çakıl**
* **Hareketli Su Girişi**

APPLICATIONS

LUMBER INDUSTRY

* Barkers
  - Spindle Feed
  - Main Drive
* Conveyors
  - Burner
  - Main or Heavy Duty
  - Main Log
  - Re-saw, Merry-Go-Round
  - Slab
  - Transfer
* Cut-Off Saws
  - Chain
  - Drag
* Debarking Drums
* Long Deck
* Log Hauls - Incline
* Log Turning Devices
* Sorting Table
* Transfers
  - Chain
  - Causeway
* Tray Drives

PAPER MILLS

* Agitator (Mixer)
* Agitator for Pure Liquors
* Barking Drums
* Mechanical Barkers
* Beater
* Breaker Stack
* Calender
* Chipper
* Chip Feeder
* Coating Rolls
* Conveyors
  - Chip, Bark, Chemical
  - Log (including Slab)
* Cutter
* Cylinder Molds
* Dryer
  - Paper Machine
  - Conveyor Type
* Embosser
* Extruder
* Paper Rolls
* Presses
* Pulper
* Pumps

SCREENS

* Air Washing
* Rotary - Stone or Gravel
* Traveling Water Intake

TR KULLANIM ALANLARI

EN APPLICATION AREAS

UYGULAMALAR	APPLICATIONS
PLASTİK ENDÜSTRİSİ İLK İŞLEMLER	PLASTIC INDUSTRY PRIMARY PROCESSING
*** Yoğun İç Karıştırıcılar**	* Intensive Internal Mixers
Harmanlayıcı	Batch Mixers
Kesintisiz Karıştırıcı	Continuous Mixers
PLASTİK ENDÜSTRİSİ İKİNCİL İŞLEMLER	PLASTIC INDUSTRY SECONDARY PROCESSING
*** Hacim Kalıpçıları**	* Blow Molders
*** Kaplama**	* Coating
*** Tabaka**	* Film
*** Boru**	* Pipe
*** Ön Plastikleştirme**	* Pre-Plasticizers
*** Rot**	* Rods
*** Saç, Plaka**	* Sheet
*** Borular**	* Tubing
POMPALAR	PUMPS
*** Santrifüj**	* Centrifugal
*** Oranlama**	* Proportioning
*** Pistonlu**	* Reciprocating
Tek Tesirli - 3 veya daha fazla Silindir	Single Acting - 3 or more cylinders
Çift Tesirli - 2 veya daha fazla Silindir	Double Acting - 2 or more cylinders
*** Döner**	*Rotary
Şanzuman Tipi	Gear Type
Lob	Lobe
Pervane	Vane
KAUÇUK - LASTİK ENDÜSTRİSİ	RUBBER INDUSTRY
*** Yoğun İç Karıştırıcılar**	* Intensive Internal Mixers
Harmanlayıcılar	Batch Mixers
Kesintisiz Karıştırıcılar	Continuous Mixers
***Karıştırma İşlemi**	* Mixing Mill
2 Yumuşak Merdane	2 Smooth Rolls
1 veya 2 Oluklu Merdane	1 or 2 corrugated Rolls
*** Toplu İşleme - 2 Yumuşak Silindir**	* Batch Drop Mill - 2 Smooth Rolls
*** Kırıcı ve Isıtıcı - 2 Merdane, 1 Oluklu Merdane**	* Cracker Warmer-2 Rolls,1 Corr. Roll
*** Kırıcı - 2 Oluklu Merdane**	* Cracker - 2 Corrugated Rolls
*** Tutma, Besleme, Karıştırma İşlemi - 2 Merdane**	* Holding, Feed and Blend Mill - 2 Rolls
*** Arıtıcı - 2 Merdane**	* Refiner - 2 Rolls
*** Kalenderler**	* Calenders
ATIK SU BOŞALTIM EKİPMANLARI	SEWAGE DISPOSAI EQUIPMENT
*** Çubuklu Elek**	* Bar Screens
*** Kimyasal Besleme Üniteleri**	* Chemical Feeders
*** Su Boşaltma Eleği**	* Dewatering Screen
*** Köpük Kesici**	* Scum Breaker
*** Yavaş veya Hızlı Karıştırıcılar**	* Slow or Rapid Mixers
*** Tortu Toplayıcı**	* Sludge Collector
*** Koyulaştırıcı**	* Thickener
*** Vakumlu Filtre**	* 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** *** Kamış Bıçakları** *** Kırma Makineleri**	* Beet Slicer * Cane Knives * Crushers
TEKSTİL ENDÜSTRİSİ	TEXTILE INDUSTRY
*** Harman Ölçer** *** Kalenderler** *** Şablonlar** *** Kuru Konserveler** *** Boyama Makinesi** *** Dokuma Tezgahları** *** Çamaşır Sıkma Makinesi - Merdane** *** Kaplama** *** Doldurma Makinesi** *** Haşıl Makinesi** *** Halat Yıkama Makinesi** *** Eğirme Makinesi** *** Germe Kurutma Makineleri** *** Yıkama Makineleri** *** Masura Sarıcısı**	* Batcher * Calenders * Cards * Dry Cans * Dyeing Machinery * Looms * Mangle * Napper * Pads * Siashers * Soapers * Spinners * Tenter Frames * Washers * Winders
DAMPERLİ ARAÇLAR	CAR DUMPERS
ÇEKİCİ ARAÇLAR	CAR PULLERS
ARITICILAR	CLARIFIERS
KONSERVE DOLUM MAKİNELERİ	CAN FILLING MACHINES

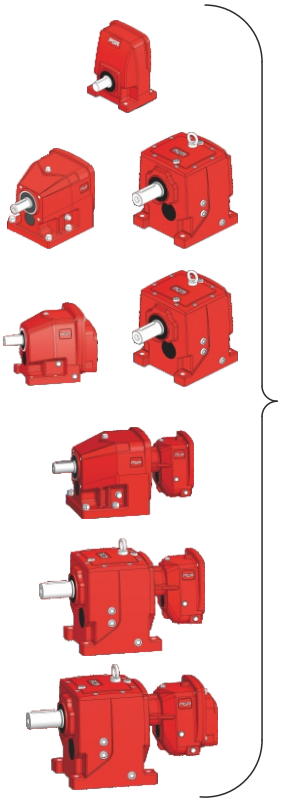
TR KULLANILAN TERİMLER

EN NOMENCLATURE

REDÜKTÖR TİPİ / GEAR TYPE

Ayak Montajlı
Foot Mounted

PA 11...PA 51	=	**Tek kademeli, Ayak montajlı, Helisel dişlili redüktör** Single reduction, Foot mounted, Helical gearboxes
PA 02...PA 102	=	**İki kademeli, Ayak montajlı, Helisel dişlili redüktör** Double reduction, Foot mounted, Helical gearboxes
PA 03...PA 103	=	**Üç kademeli, Ayak montajlı, Helisel dişlili redüktör** Triple reduction, Foot mounted, Helical gearboxes
PA 02/12...PA 52/12	=	**Dört kademeli, Ayak montajlı, Helisel dişlili redüktör** Quadruple reduction, Foot mounted, Helical gearboxes
PA 63/22...PA 103/52	=	**Beş kademeli, Ayak montajlı, Helisel dişlili redüktör** Quintuple reduction, Foot mounted, Helical gearboxes
PA 63/23...PA 103/53	=	**Altı kademeli, Ayak montajlı, Helisel dişlili redüktör** Sixtuple reduction, Foot mounted, Helical gearboxes



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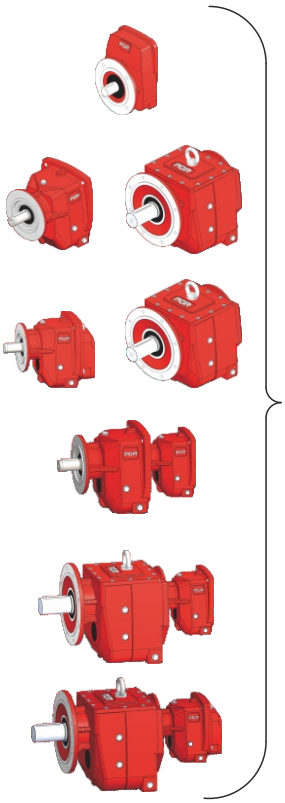
Flanş Montajlı
Flange Mounted

PF 11...PF 51	=	**Tek kademeli, Flanş montajlı, Helisel dişlili redüktör** Single reduction, Flange mounted, Helical gearboxes
PF 02...PF 102	=	**İki kademeli, Flanş montajlı, Helisel dişlili redüktör** Double reduction, Flange mounted, Helical gearboxes
PF 03...PF 103	=	**Üç kademeli, Flanş montajlı, Helisel dişlili redüktör** Triple reduction, Flange mounted, Helical gearboxes
PF 02/12...PF 52/12	=	**Dört kademeli, Flanş montajlı, Helisel dişlili redüktör** Quadruple reduction, Flange mounted, Helical gearboxes
PF 63/22...PF 103/52	=	**Beş kademeli, Flanş montajlı, Helisel dişlili redüktör** Quintuple reduction, Flange mounted, Helical gearboxes
PF 63/23...PF 103/53	=	**Altı kademeli, Flanş montajlı, Helisel dişlili redüktör** Sixtuple reduction, Flange mounted, Helical gearboxes



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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	**Üç fazlı motor** **Motor boyutu 63 - 315** Three phase motor Motor size 63 - 315	**2** **= 2 Kutuplu** = 2 - Poles	**BRE** **= Frenli** = With brake
IEC **= DIN 42677' ye göre standart motorlar için aksamlar** = For assembly with IEC standard motors acc. to DIN 42677	**EExell** **= Patlamaya karşı güvenliği arttırılmış üç fazlı motor** = Explosion proof three phase motor increased safety	**4** **= 4 Kutuplu** = 4 - Poles	**EF** **= Tek fazlı, fanlı** = Separate fan, single phase
T = **Turbo kaplin** = Turbo coupling		**6** **= 6 Kutuplu** = 6 - Poles	**ZF** **= Çift fazlı, fanlı** = Separate fan, double phase
		4 - 2 **= 1:2 oranında hız değiştirici dahlander bağlantısı** = Pole changing 1:2 Dahlander connection	**DF** **= Üç fazlı, fanlı** = Separate fan, three phase
		8 - 2 **= 1:4 oranında hız değiştirici ayrılmış sarmal dizilişli** = Pole changing 1:4 Separate windings	**IG** **= Enkoderli** = With encoder
		Diğer kutup kombinasyonları istendiğinde karşılanacaktır Other pole combinations on request	**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
			RLS **= Geri dönmeye karşı kilitli** = Backstop
			TW **= Isıya duyarlı** = Thermal trip
			HL **= Manuel frenli motor** = Brake motor with hand release
			F **= Extra Fan** = Auxiliary Fan

TR PA MODÜLER SİSTEMİ

EN MODULAR SYSTEM OF PA

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

Helisel Dişlili, Ayaklı, Tek Kademeli Redüktör
Helical Gear, Foot Mounted, Single Reduction
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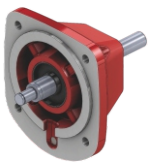
Helisel Dişlili İndirgeç
Helical Reduction Gearcase

Helisel Dişlili, Ayaklı, Monoblok Redüktör
Helical Gear, Foot Mounted, Monoblock Case
24

Helisel Dişlili, Flanşlı Redüktör
Helical Gearbox, Flange Mounted

Helisel Dişlili, Ayaklı, Blok Redüktör
Helical Gear, Foot Mounted, Block Case,
24

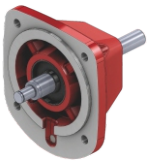
IEC Adaptörü
IEC Adapter



W Kovanı
Free Input Shaft

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)



W Kovanı
Free Input Shaft

IEC Adaptörü
IEC Adapter

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

TR PF MODÜLER SİSTEMİ

EN MODULAR SYSTEM OF PF

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

Helisel Dişlili, Flanşlı, Tek Kademeli Redüktör
Helical Gear, Flange Mounted, Single Reduction

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Helisel Dişlili İndirgeç
Helical Reduction Gearcase

Elektrik Motoru (Frenli)
Electric Motor (With Brake)

Helisel Dişlili, Flanşlı, Monoblok Redüktör
Helical Gear, Flange Mounted, Monoblock Case

25

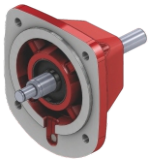
Helisel Dişlili, Flanşlı Redüktör
Helical Gearbox, Flange Mounted

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

Helisel Dişlili, Flanşlı, Blok Redüktör
Helical Gear, Flange Mounted, Block Case

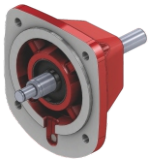
25

IEC Adaptörü
IEC Adapter



W Kovanı
Free Input Shaft

Elektrik Motoru (Frenli)
Electric Motor (With Brake)



W Kovanı
Free Input Shaft

IEC Adaptörü
IEC Adapter

Elektrik Motoru (Frensiz)
Electric Motor (None Brake)

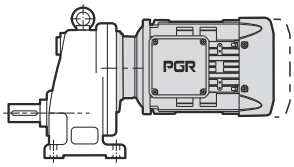
TR ÜRÜNLERİMİZ

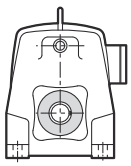
EN PRODUCTS

1) PA 11...PA 51

Ayak montajlı, Tek kademeli,
Helisel dişlili, Motorlu redüktör

Helical geared motor, Foot mounted,
Single reduction

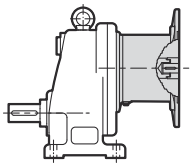


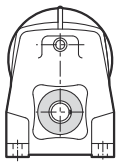


PA 11...PA 51

Ayak montajlı, Tek kademeli,
Helisel dişlili, IEC adaptörlü redüktör

Helical gear unit, Foot mounted,
Single reduction, With IEC adapter

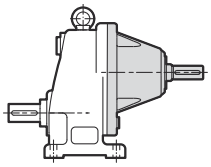


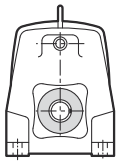


PA 11...PA 51

Ayak montajlı, Tek kademeli,
Helisel dişlili, W kovanlı redüktör

Helical gear unit, Foot mounted,
Single reduction, With free input shaft

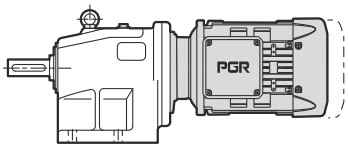


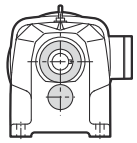


2) PA 02...PA 52

Ayak montajlı, İki kademeli,
Helisel dişlili, Motorlu redüktör

Helical geared motor, Foot mounted,
Double reduction

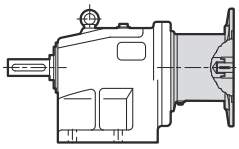


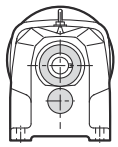


PA 02...PA 52

Ayak montajlı, İki kademeli,
Helisel dişlili, IEC adaptörlü redüktör

Helical gear unit, Foot mounted,
Double reduction, With IEC adapter

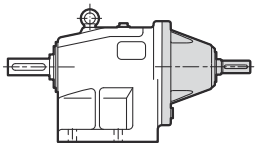


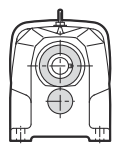


PA 02...PA 52

Ayak montajlı, İki kademeli,
Helisel dişlili, W kovanlı redüktör

Helical gear unit, Foot mounted,
Double reduction, With free input shaft

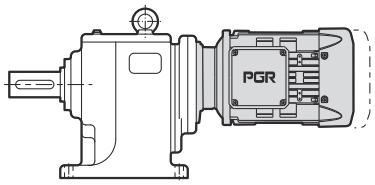


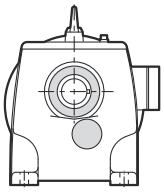


3) PA 62...102 - PA 63...103

Ayak montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, Motorlu redüktör

Helical geared motor, Foot mounted,
Double reduction - Triple reduction

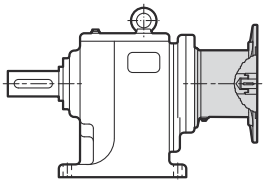


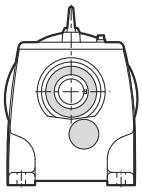


PA 62...102 - PA 63...103

Ayak montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, IEC adaptörlü redüktör

Helical gear unit, Foot mounted,
Double reduction - Triple reduction,
With IEC adapter

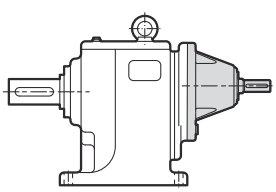


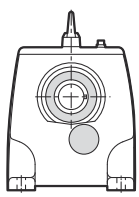


PA 62...102 - PA 63...103

Ayak montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, W kovanlı redüktör

Helical gear unit, Foot mounted,
Double reduction - Triple reduction,
With free input shaft





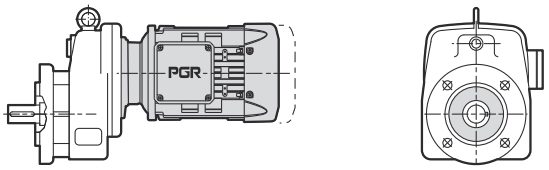
TR ÜRÜNLERİMİZ

EN PRODUCTS

1) **PF 11...PF 51**

Flanş montajlı, Tek kademeli,
Helisel dişlili, Motorlu redüktör

Helical geared motor, Flange mounted,
Single reduction



PF 11...PF 51

Flanş montajlı, Tek kademeli,
Helisel dişlili, IEC adaptörlü redüktör

Helical gear unit, Flange mounted,
Single reduction, With IEC adapter

PF 11...PF 51

Flanş montajlı, Tek kademeli,
Helisel dişlili, W kovanlı redüktör

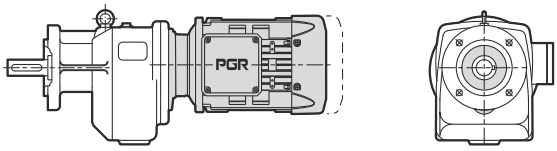
Helical gear unit, Flange mounted,
Single reduction, With free input shaft

---

2) **PF 02...PF 52**

Flanş montajlı, İki kademeli,
Helisel dişlili, Motorlu redüktör

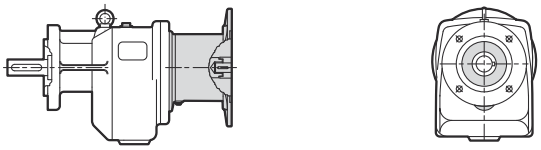
Helical geared motor, Flange mounted,
Double reduction



PF 02...PF 52

Flanş montajlı, İki kademeli,
Helisel dişlili, IEC adaptörlü redüktör

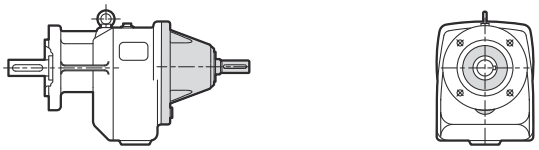
Helical gear unit, Flange mounted,
Double reduction, With IEC adapter



PF 02...PF 52

Flanş montajlı, İki kademeli,
Helisel dişlili, W kovanlı redüktör

Helical gear unit, Flange mounted,
Double reduction, With free input shaft



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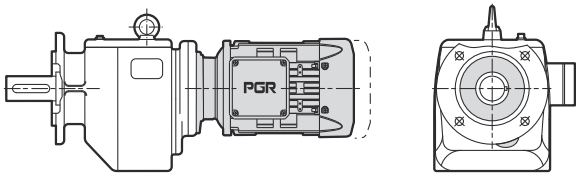
3) **PF 62...102 - PA 63...103**

Flanş montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, Motorlu redüktör

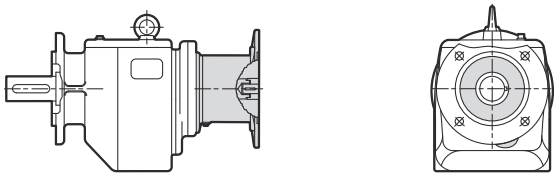
Helical geared motor, Flange mounted,
Double reduction - Triple reduction



PF 62...102 - PA 63...103

Flanş montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, IEC adaptörlü redüktör

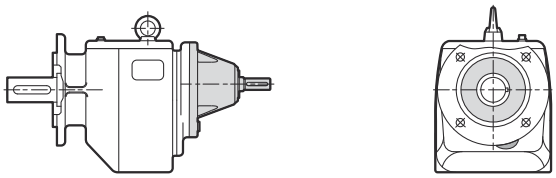
Helical gear unit, Flange mounted,
Double reduction - Triple reduction,
With IEC adapter



PF 62...102 - PA 63...103

Flanş montajlı, İki kademeli - Üç kademeli,
Helisel dişlili, W kovanlı redüktör

Helical gear unit, Flange mounted,
Double reduction - Triple reduction,
With free input shaft



TR SİPARİŞ ÖRNEĞİ

EN EXAMPLE FOR ORDERING

PA (PF) 103/52 817.82 - 132M / 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

W

Motorlu
With Motor

Gövde Büyüklüğü
Case Width

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
250 S/M/L
280 S/M/L
315 S/M/L

Kutup sayısı
Number of Poles

2
4
6
4 - 2
8 - 2

Diğer Kutup kombinasyonları istendiğinde karşılanacaktır.

Other pole combinations on request

Motor Aksesuarları
Motor Accessories

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

21

İges: Tahvil Oranı
İges: Reduction Ratio

49 - 82

10
Gövde Büyüklüğü
Case Width

0
1
2
3
4
5
6
7
8
9
10

3
Kademe
Reduction

1
2
3

83 - 145

PF GÖVDE
PF CASE

5
Gövde Büyüklüğü
Case Width

0
1
2
3
4
5

2
Kademe
Reduction

2
3

83 - 145

Tip :POLAT Ayaklı Redüktör (POLAT Flanşlı Redüktör)
Type : POLAT Helical Foot Mounted Geared Motor (POLAT Helical Flange Mounted Geared Motor)

TR MONTAJ POZİSYONLARI

M4 montaj pozisyonunda ilave yağlama ünitesi kullanılır.

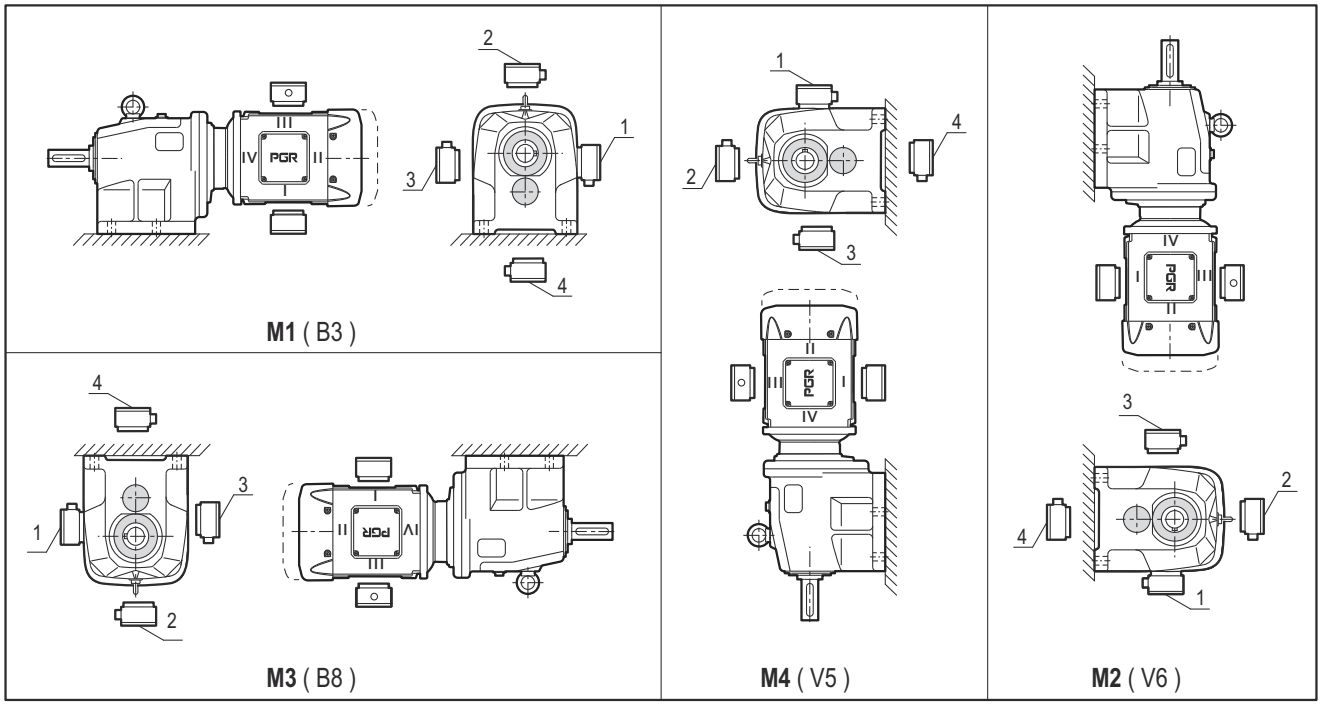
Tabloda gösterilen bu montaj pozisyonları helisel dişlili redüktörlerin W kovanı ve IEC adaptör olanlar için de geçerlidir.

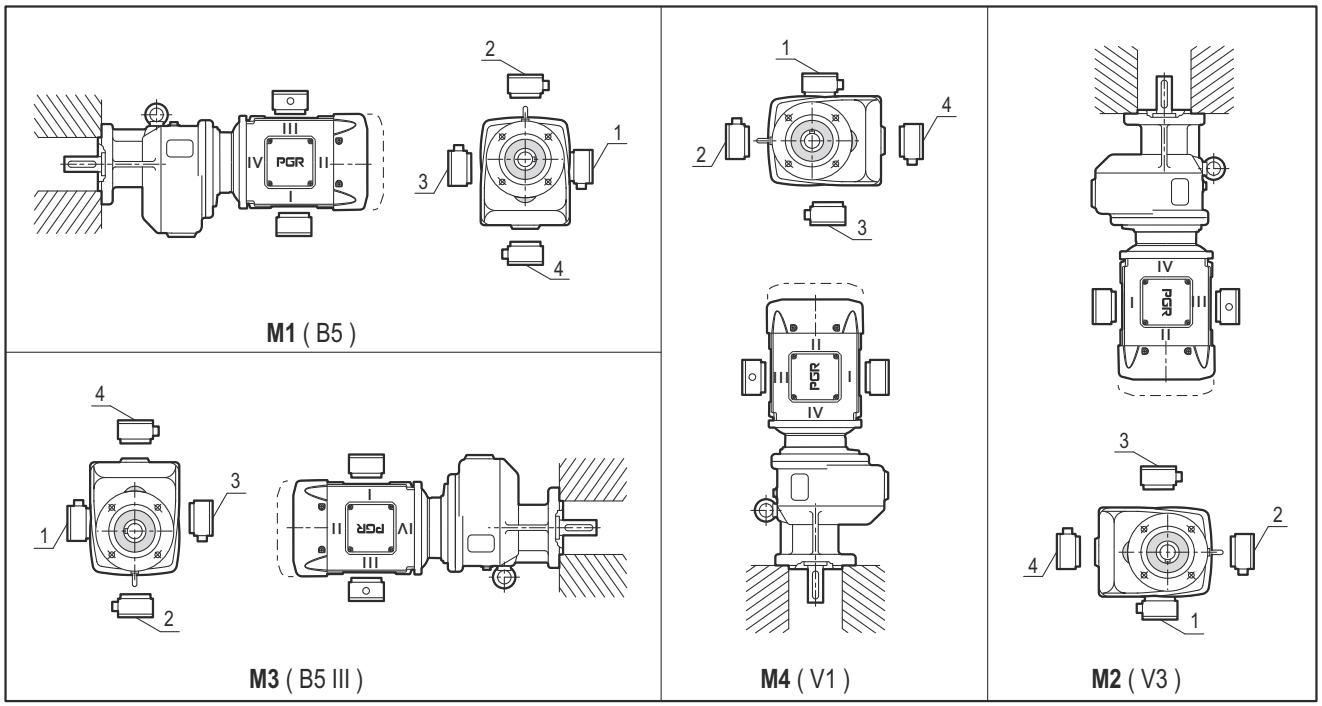
EN MOUNTING POSITIONS

Mounting position M4 with additional lubricant volume

Mounting positions which are shown below of this page are used for all types of helical gear units. (Type W cylinder, IEC adapter and geared motor)

32 - 33

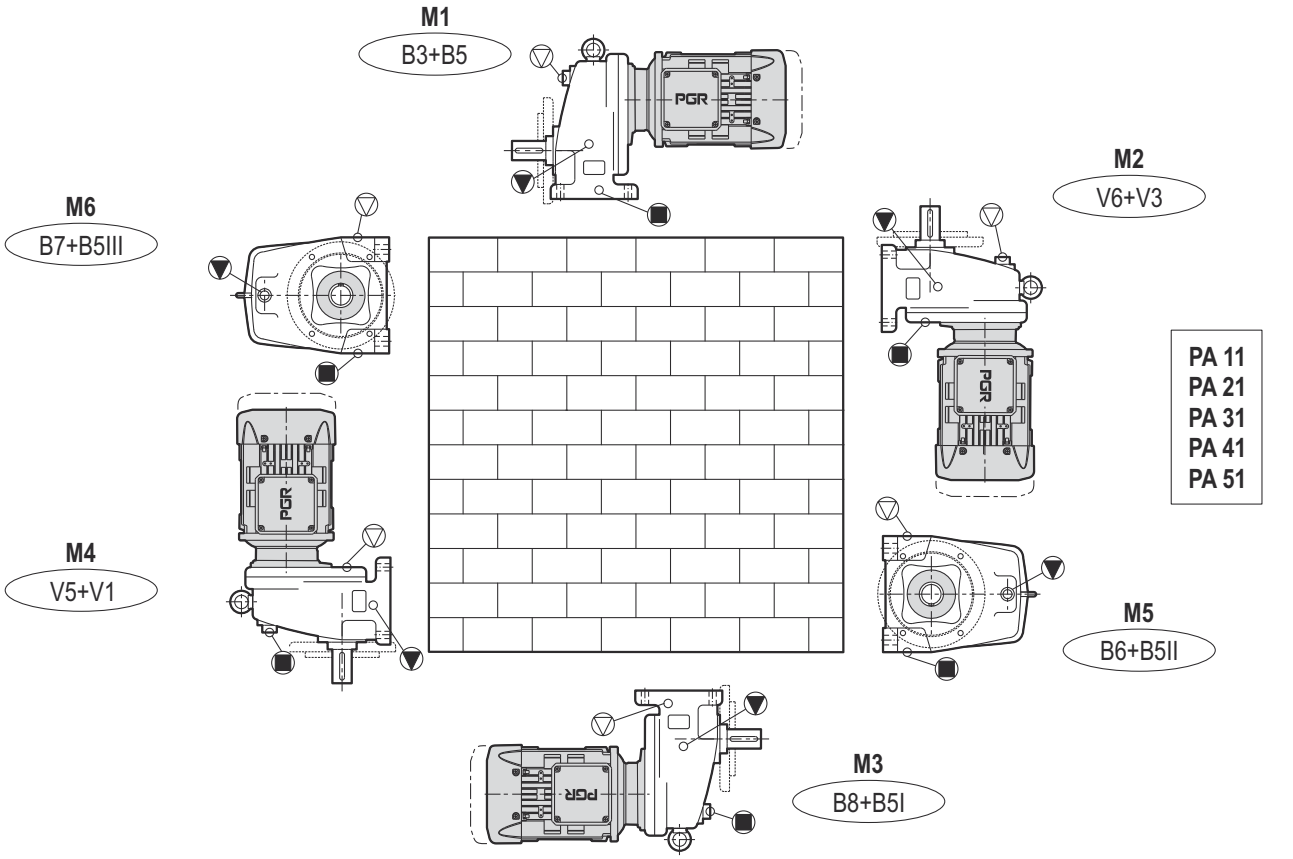


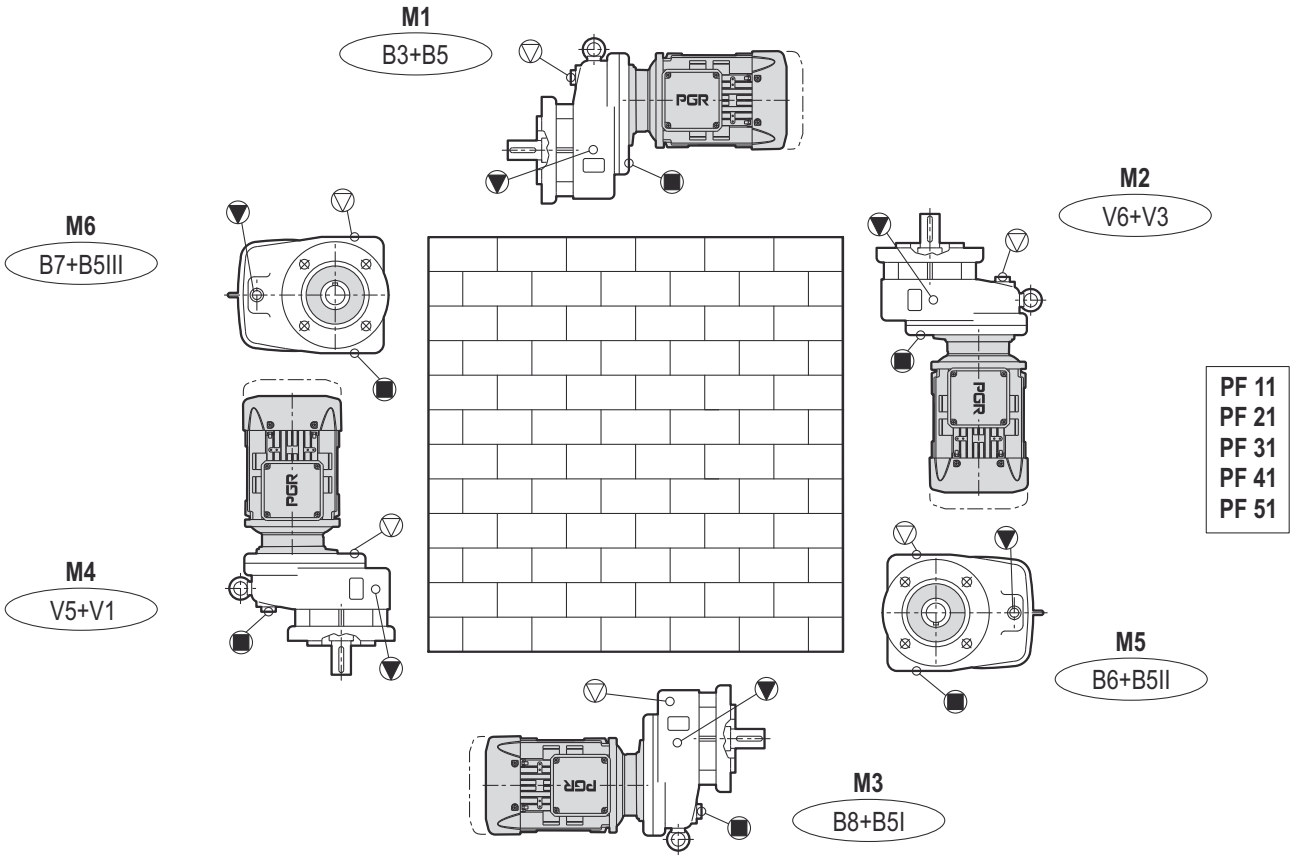


Montaj yüzeyi / Mounting surface

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS

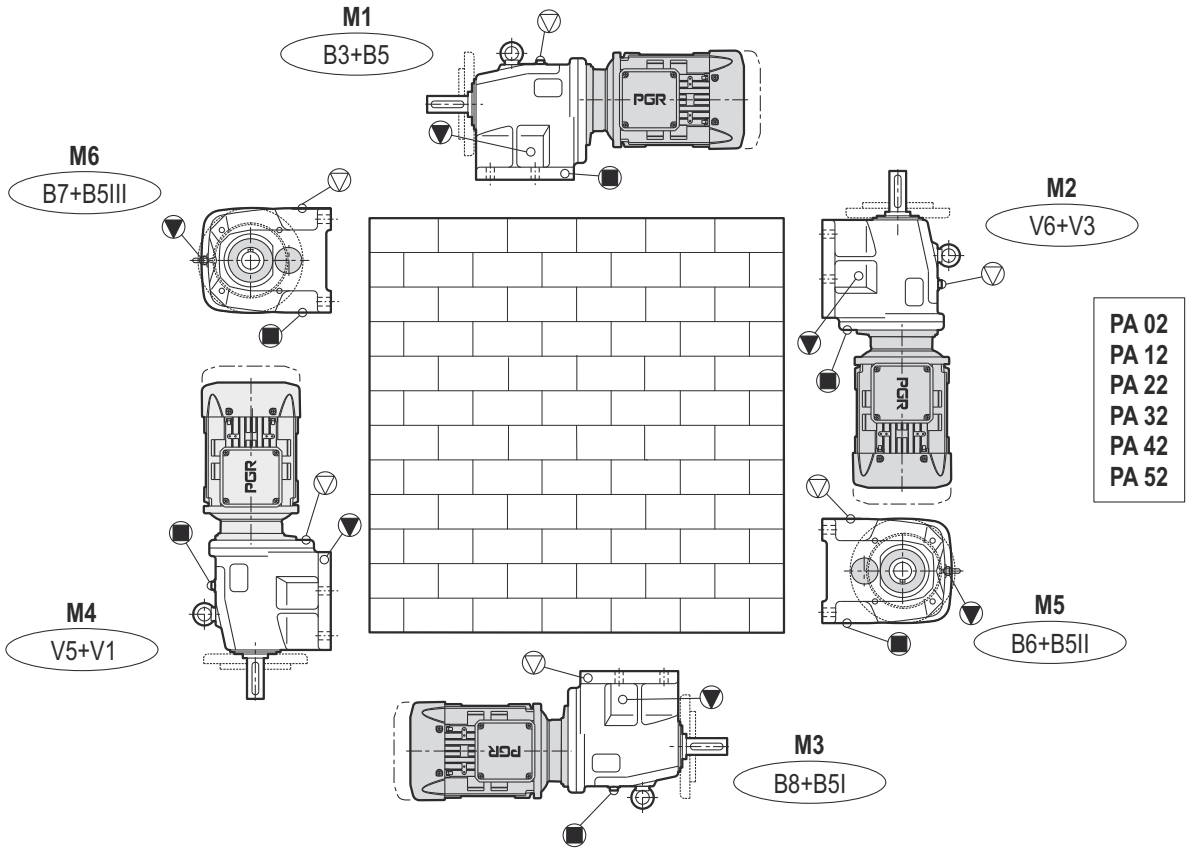


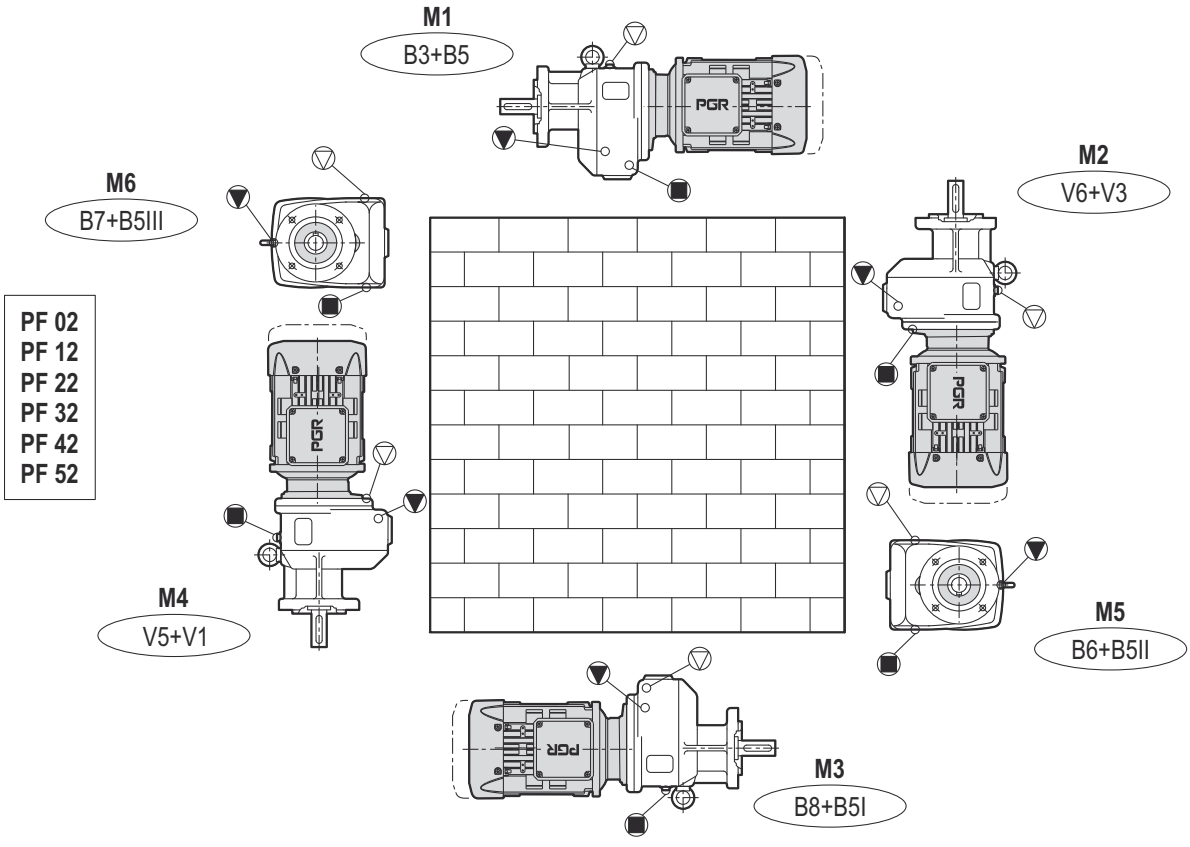


Havalandırma tapası / Vent plug Boşaltma tapası / Drain plug Yağ Seviye tapası / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS

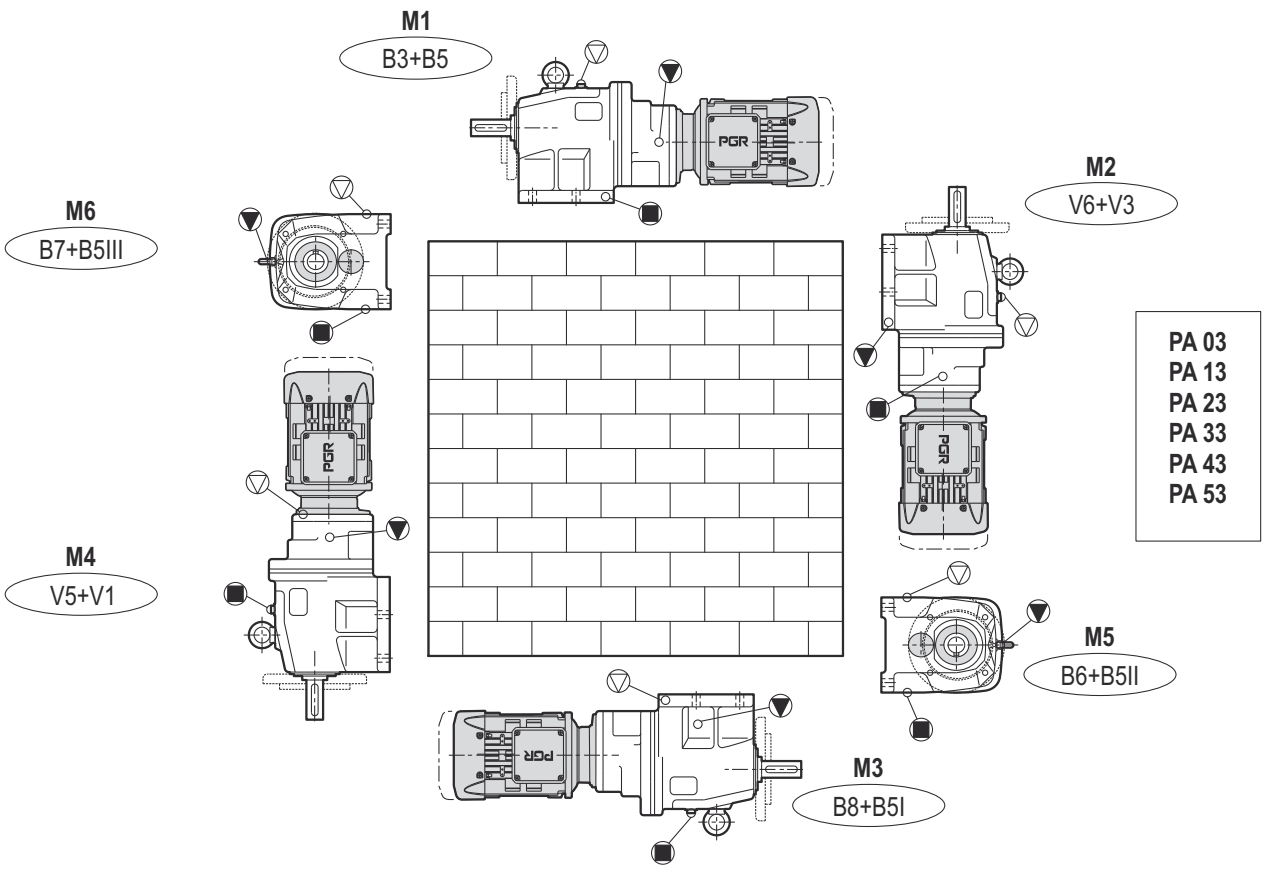


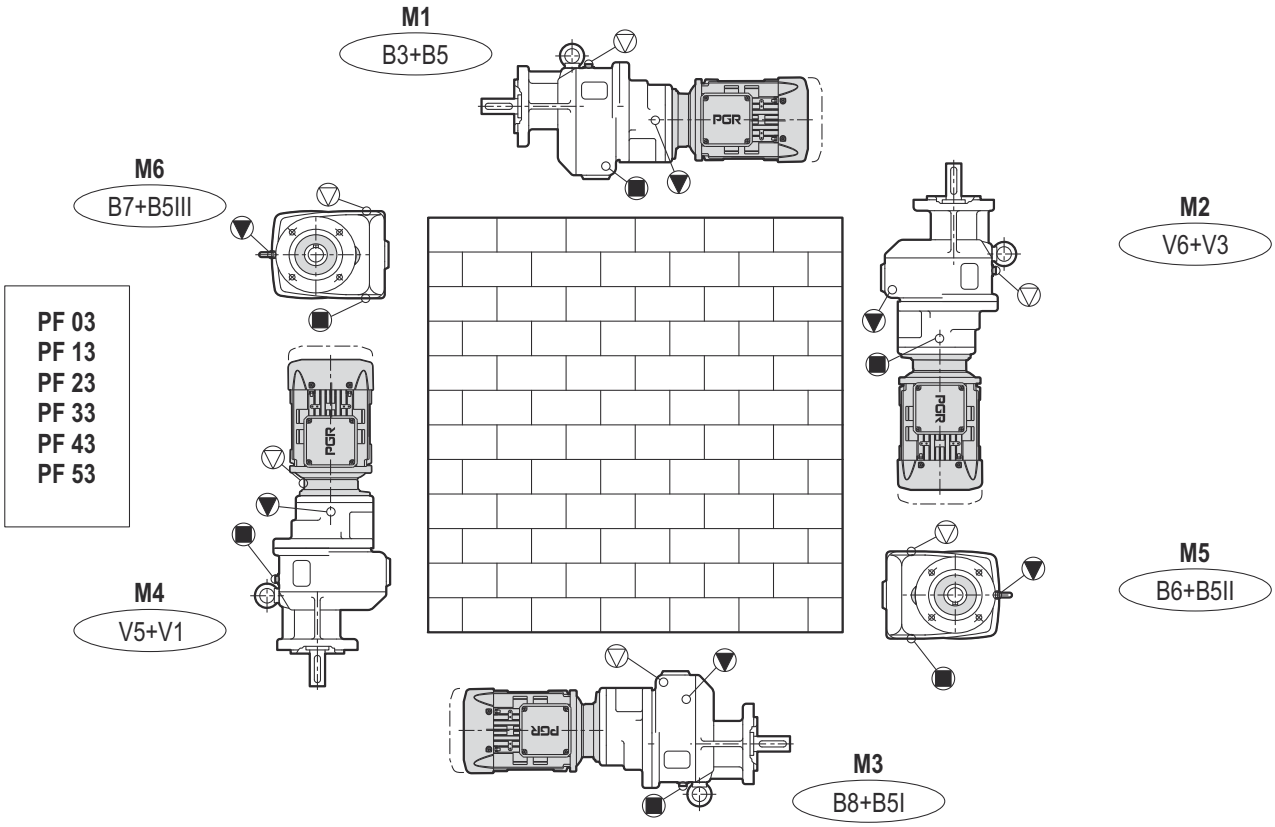


Havalandırma tapası / Vent plug Boşaltma tapası / Drain plug Yağ Seviye tapası / Oil level

TR MONTAJ POZİSYONLARI

EN MOUNTING POSITIONS

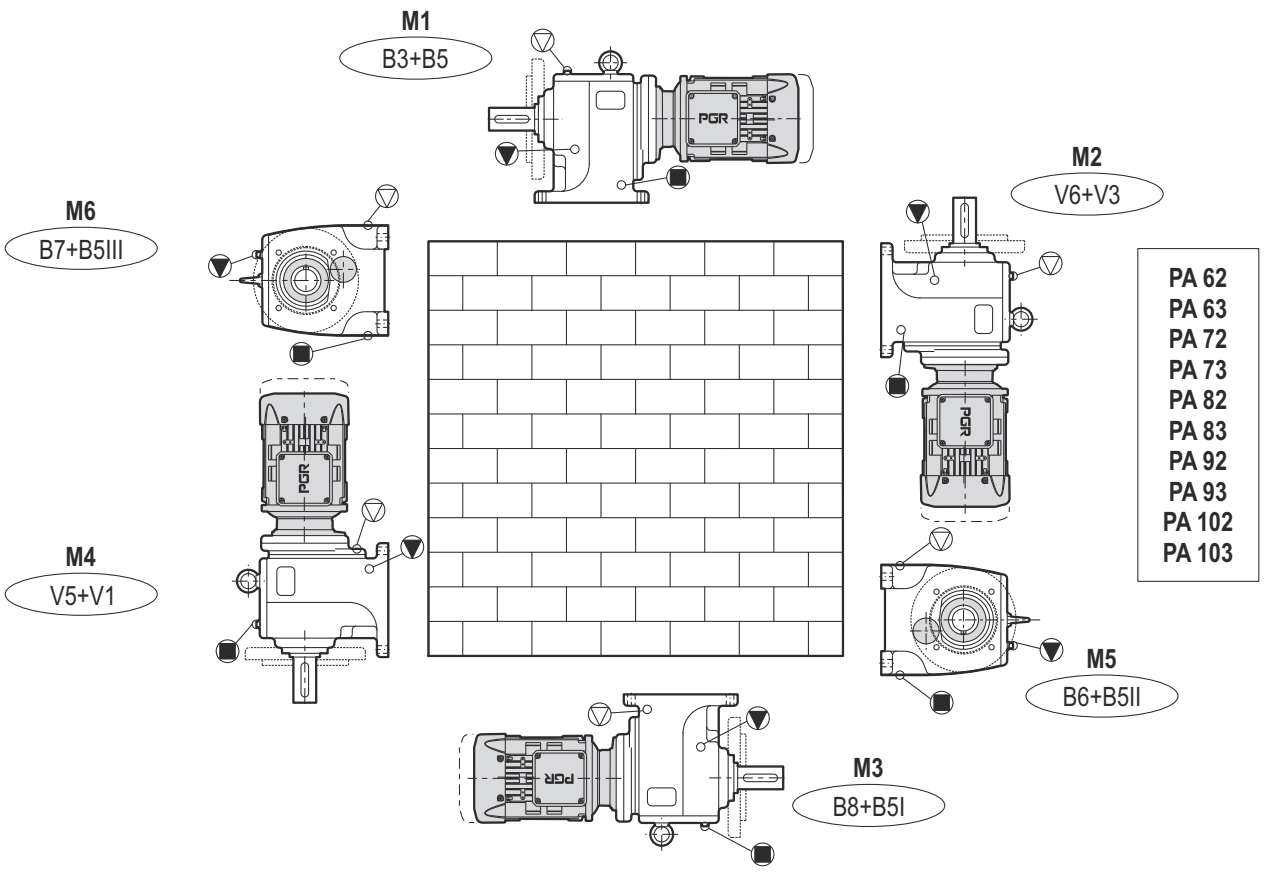


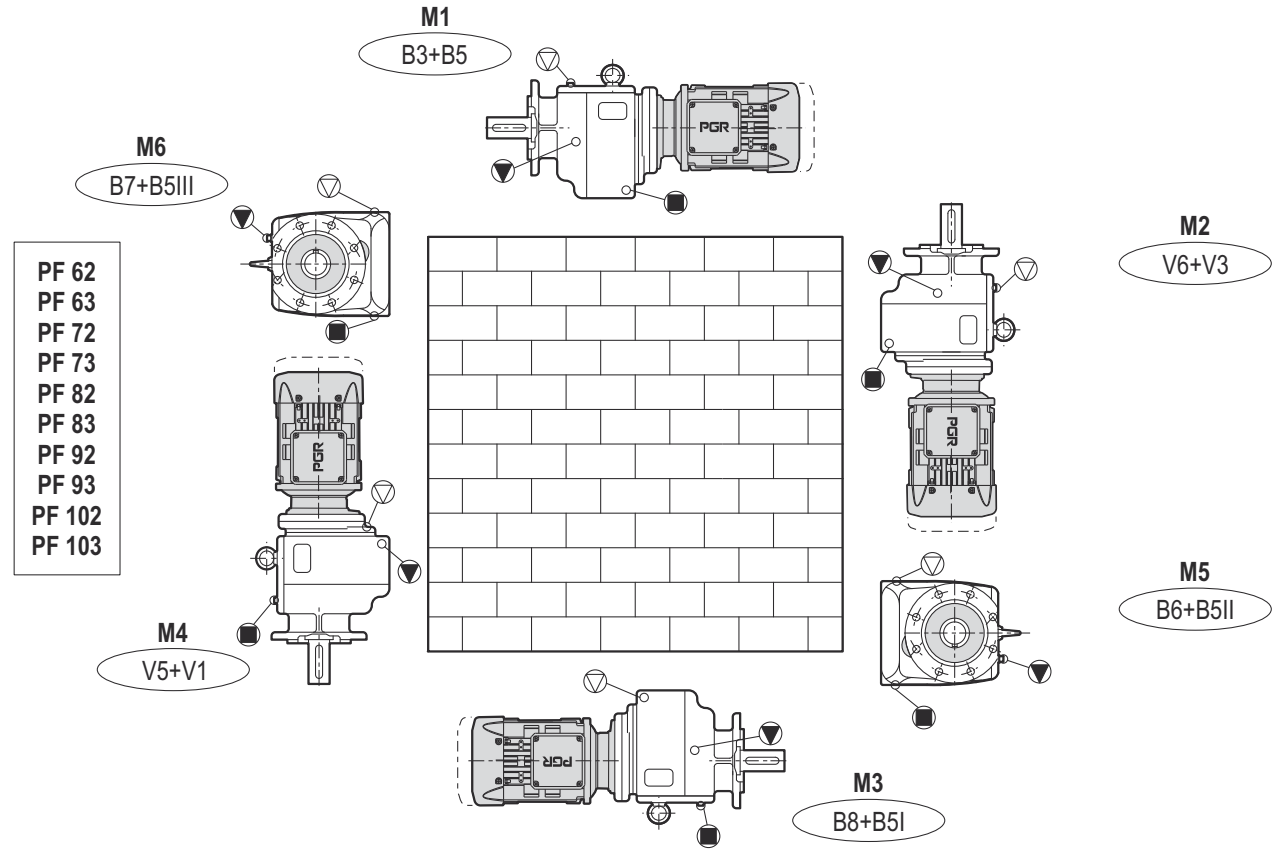


Havalandırma tapası / Vent plug Boşaltma tapası / Drain plug Yağ Seviye tapası / Oil level

TR MONTAJ POZİSYONLARI

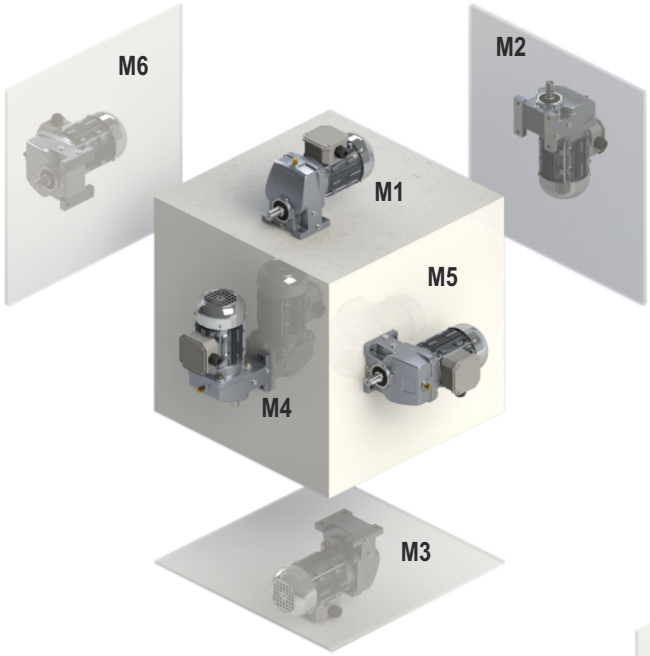
EN MOUNTING POSITIONS



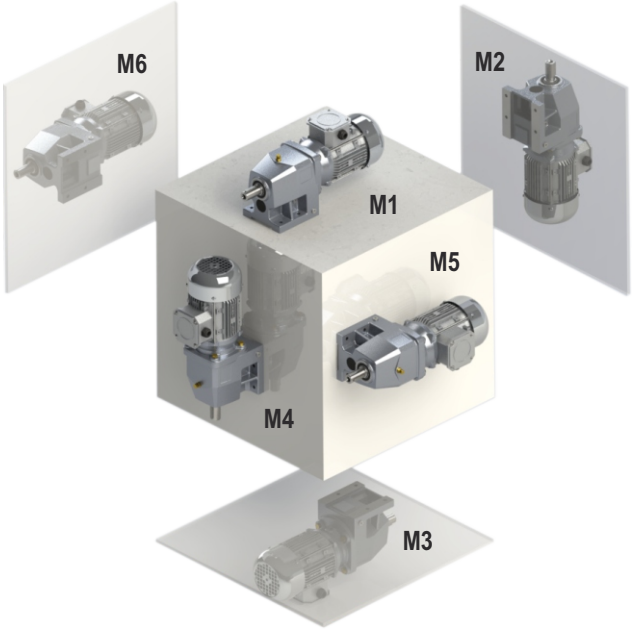


Havalandırma tapası / Vent plug Boşaltma tapası / Drain plug Yağ Seviye tapası / Oil level

TR PA MONTAJ POZİSYONLARI

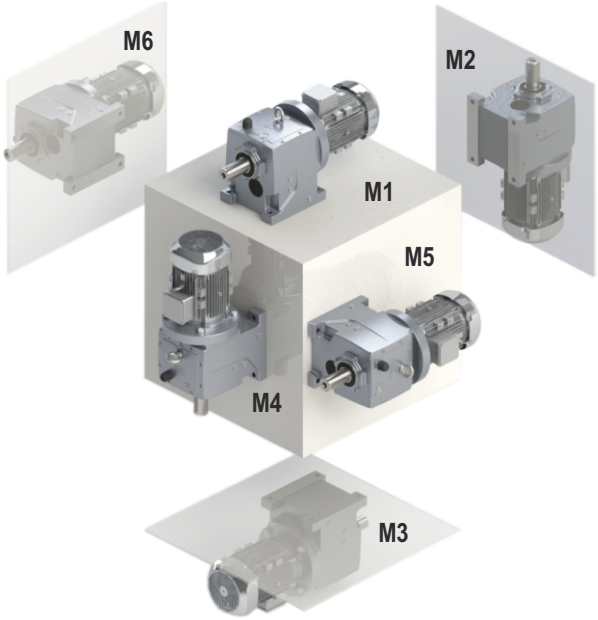


PA TEK KADEME
PA SINGLE REDUCTION



PA İKİ VE ÜÇ KADEME (MONOBLOK)

PA DOUBLE AND TRIBLE REDUCTION (MONOBLOC)



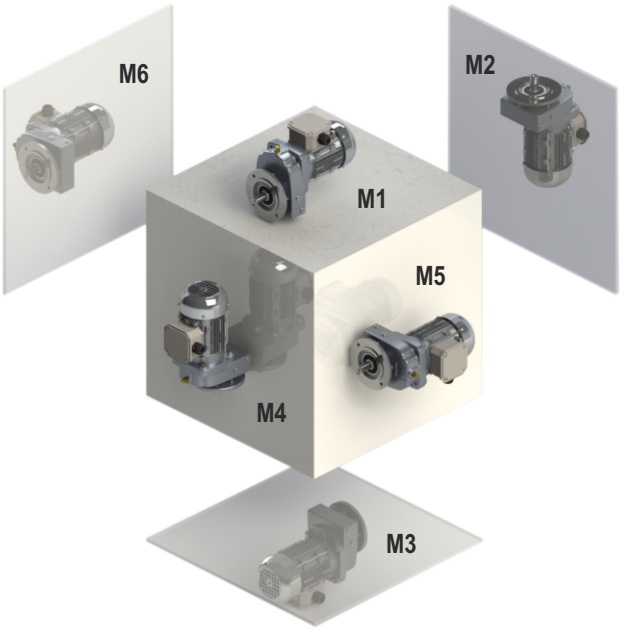
PA İKİ VE ÜÇ KADEME (BLOK)

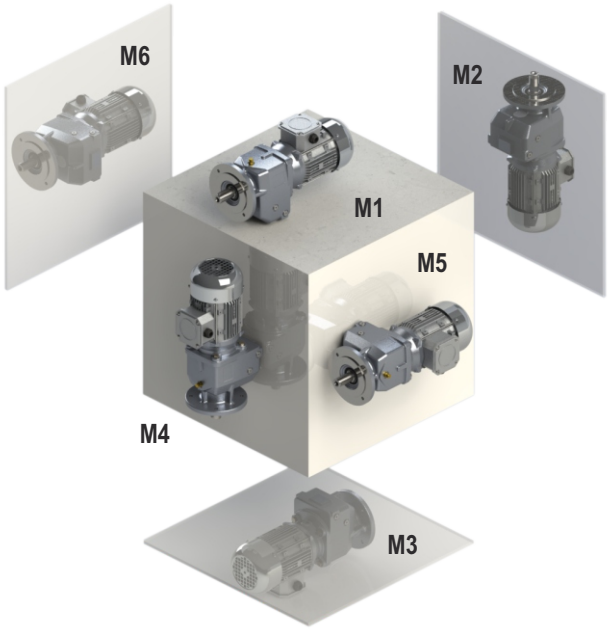
PA DOUBLE AND TRIBLE REDUCTION (BLOC)

EN PA MOUNTING POSITIONS

TR PF MONTAJ POZİSYONLARI

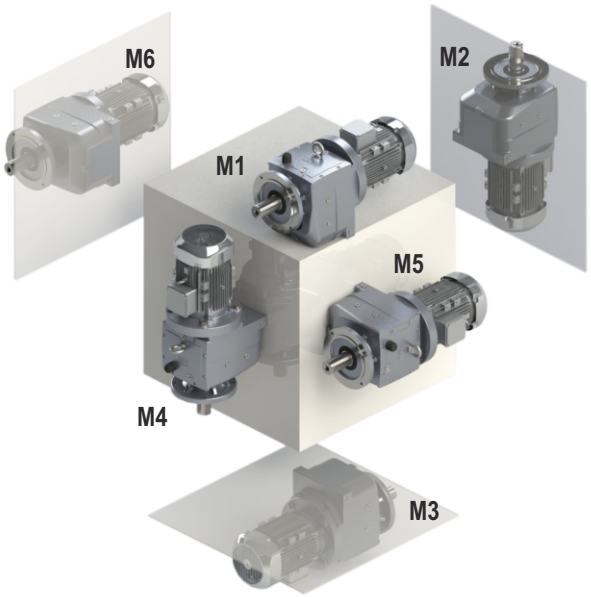
PF TEK KADEME
PF SINGLE REDUCTION





PF İKİ VE ÜÇ KADEME (MONOBLOK)
PF DOUBLE AND TRIBLE REDUCTION (MONOBLOC)

PF İKİ VE ÜÇ KADEME (BLOK)
PF DOUBLE AND TRIBLE REDUCTION (BLOC)



EN PF MOUNTING POSITIONS

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 10 000 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 olil. 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.

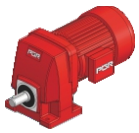
Not: Sentetik ve mineral yağlayıcılar birbirine karıştırılmamalıdır.
Note: Consider that different kind of oil (synthetic and mineral oil) should not be mixed.

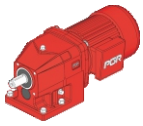
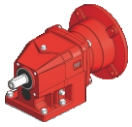
Redüktör Tipi Type of gearbox	Yağ Tipi Type of Lubricant	Ortam Sıcaklığı Ambient Temp. °C	ISO vizkozite sınıfı ISO viscosity class	SHELL	MOBİL	BP	ESSO	DEA	ARAL	CASTROL	TRIBOL	KLÜBER
Helisel Dişlili Redüktör Helical Gearboxes	Mineral yağ Mineral oil	- 5...40 Normal -15...25 # - 50...-15	ISO VG 220 ISO 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

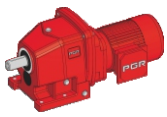
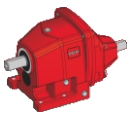
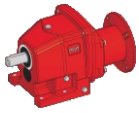
-30°C altında ve 60°C üzerindeki ortam sıcaklıklarında şafttaki sızdırmazlık elemanı için özel kalitedeki malzeme kullanılmalıdır.

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

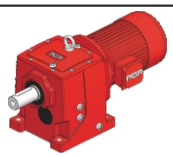
TR YAĞ MİKTAR TABLOSU

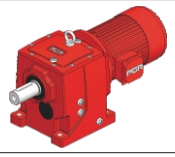
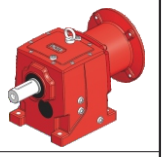
(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B3	V6	B8	V5	B6	B7
PA 11	0.25	0.50	0.55	0.40	0.40	0.40
PA 21	0.60	1.20	1.20	1.00	1.00	1.00
PA 31	1.00	1.80	2.20	2.00	1.60	1.60
PA 41	1.30	2.60	3.10	2.50	2.60	2.60
PA 51	2.00	3.50	4.40	4.00	3.40	3.40

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B3	V6	B8	V5	B6	B7
PA 02	0.15	0.60	0.75	0.60	0.45	0.45
PA 12	0.25	0.75	0.85	0.75	0.50	0.50
PA 22	0.50	1.80	2.00	1.80	1.35	1.35
PA 32	0.90	3.00	2.90	2.90	2.00	2.00
PA 42	1.20	4.50	4.20	4.30	3.20	3.20
PA 52	2.50	7.20	6.80	6.80	5.10	5.10

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B3	V6	B8	V5	B6	B7
PA 03	0.50	1.10	0.85	1.05	0.60	0.60
PA 13	0.70	1.30	1.10	1.20	0.70	0.70
PA 23	1.40	2.40	1.90	2.40	1.40	1.40
PA 33	1.60	2.90	2.90	3.70	2.00	2.00
PA 43	3.00	5.60	4.40	5.70	3.20	3.20
PA 53	4.50	8.70	6.80	9.20	5.00	5.00

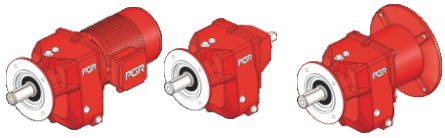
EN LUBRICATION LEVELS

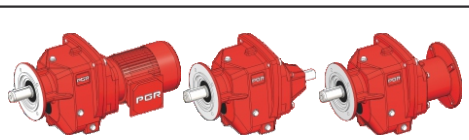
(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B3	V6	B8	V5	B6	B7
PA 62	6.50	15.00	13.00	18.00	13.00	13.00
PA 72	9.00	23.00	18.00	26.50	18.00	18.00
PA 82	14.00	35.00	27.00	40.00	28.00	28.00
PA 92	25.00	73.00	47.00	74.00	50.00	50.00
PA 102	36.00	79.00	66.00	102.00	71.00	71.00

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B3	V6	B8	V5	B6	B7
PA 63	13.00	14.50	13.50	17.00	13.00	13.00
PA 73	19.00	20.00	19.00	25.00	19.20	19.20
PA 83	27.00	31.00	29.00	37.00	30.50	30.50
PA 93	51.50	56.00	51.00	72.00	53.50	53.50
PA 103	69.00	71.00	69.00	92.50	67.00	67.00

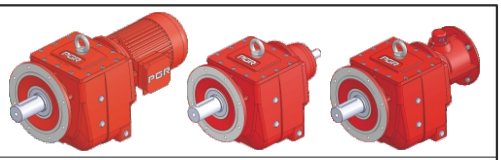
TR YAĞ MİKTAR TABLOSU

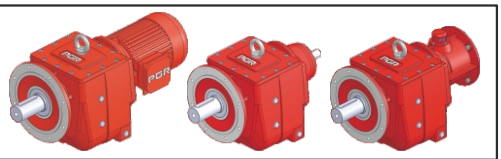
(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 11	0.25	0.50	0.45	0.30	0.35	0.35
PF 21	0.50	1.30	1.20	0.80	1.00	1.00
PF 31	0.80	1.60	1.65	1.30	1.20	1.20
PF 41	1.00	2.60	2.80	1.90	2.40	2.40
PF 51	1.80	3.50	3.90	3.30	3.40	3.40

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 02	0.25	0.65	0.70	0.70	0.50	0.50
PF 12	0.35	0.85	0.90	0.90	0.60	0.60
PF 22	0.70	2.00	2.00	2.15	1.55	1.55
PF 32	1.30	3.50	3.00	3.10	2.15	2.15
PF 42	1.80	5.00	4.00	4.50	3.20	3.20
PF 52	3.00	7.70	6.20	7.40	5.10	5.10

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 03	0.50	1.10	0.90	1.10	0.65	0.65
PF 13	0.85	1.40	1.10	1.35	0.80	0.80
PF 23	1.80	2.90	2.10	2.90	1.50	1.50
PF 33	1.90	3.40	2.90	4.00	2.20	2.20
PF 43	3.50	6.10	4.20	6.10	3.00	3.00
PF 53	5.20	8.80	6.50	9.20	5.00	5.00

EN LUBRICATION LEVELS

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 62	7.00	15.00	14.00	18.70	13.50	13.50
PF 72	10.00	23.00	20.50	31.00	21.00	21.00
PF 82	15.00	37.00	30.00	45.50	30.00	30.00
PF 92	26.00	73.00	48.00	76.00	50.00	50.00
PF 102	40.00	81.00	66.00	104.00	72.00	72.00

(Litre) (L)						
32 - 33	M1	M2	M3	M4	M5	M6
28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 63	13.50	14.70	14.00	18.00	14.00	14.00
PF 73	21.50	22.50	22.00	29.00	22.00	22.00
PF 83	31.00	34.00	32.50	40.00	34.00	34.00
PF 93	53.00	70.00	53.00	74.00	54.50	54.50
PF 103	69.00	78.00	78.00	99.00	67.00	67.00

TR KİLİT

Opsiyonel olarak kilitlerimiz mevcuttur. Bu kilitler tek yöne dönmeye izin verirken, diğer yöne dönmeyi engeller. 80 gövde ve üzeri üç fazlı motorlar, W kovanları ve IEC adaptörleri 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 için 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 80 and greater, W cylinder and IEC adapters. Backstop system permits just one direction rotation it resists, another direction rotation. Rotation speed is important for tear. 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.

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

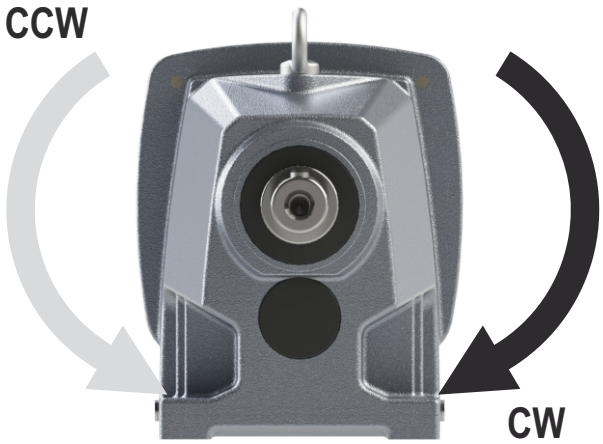
If Locking direction is **CCW,** Rotational direction is **CW**

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

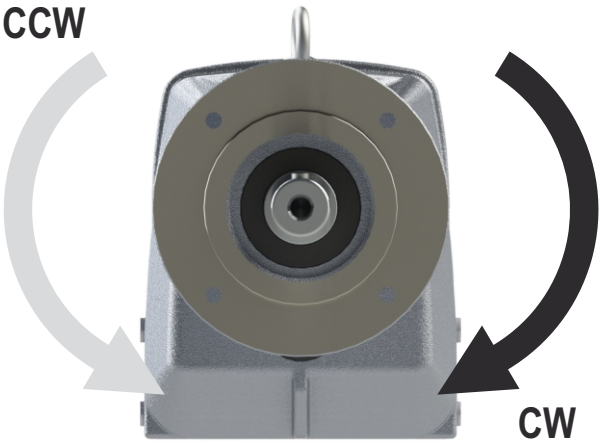
CW : Clockwise rotation

CCW : Counterclockwise rotation

PA



PF



TR TOLERANSLAR

MOTOR VE REDÜKTÖRLERDE BOYUT - ÇİZİM BİLGİLERİ

Motor ölçüleri istenen opsiyona göre ölçüleri değişebilir.

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

83 - 145

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

83 - 145

Keyways are machined according to DIN 6885, sheet 1

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

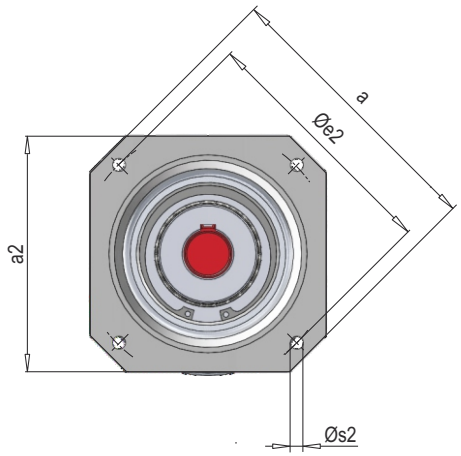
FLANGES

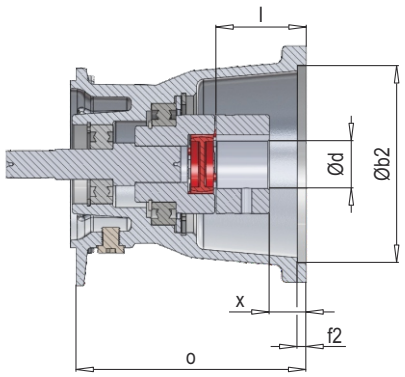
Diameter tolerance of flange centering is machined according to (DIN 42948);

< ø 230 mm to ISO j6,
> ø 230 mm to ISO h6

TR SERVOMOTOR ADAPTÖRÜ

EN SERVOMOTOR ADAPTERS





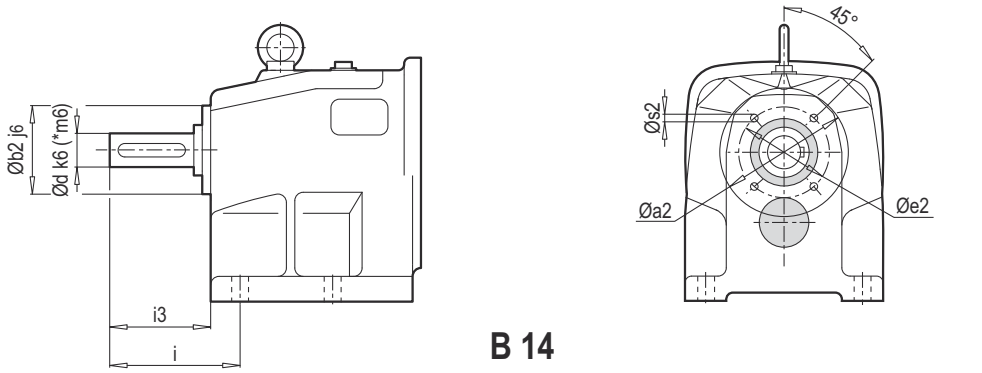
Redüktör Tipi Gear Unit Type	**Motor Büyüklüğü /** Motor Size							**Şaft Ebatı** Shaft Size		**Silindir** Cylinder	M_{knom}	**Adaptör tipi** Adapter type
	a	**a2**	**b2**	**e2**	**f2**	**s2**	**x**	**d**	**l**	**o**	**[Nm]**	
PA/PF 02 , PA/PF 12	120	96	80	100	4	M6	15	19	40	124	10	Servo 100 / 160 S
PA/PF 02 , PA/PF 12	165	126	110	130	4	M8	20	24	50	136	35	Servo 130 / 160 S
PA/PF 22 , PA/PF 32	155	126	110	130	4	M8	20	24	50	150	35	Servo 130 / 250 S
PA/PF 02 , PA/PF 12	186	155	130	165	5	M10	23	32	58	151	95	Servo 165 / 160 S
PA/PF 22 , PA/PF 32	186	155	130	165	5	M10	23	32	58	166	95	Servo 165 / 250 S
PA/PF 22 , PA/PF 32	240	192	180	215	5	M12	45	38	80	187	95	Servo 215/ 250 S
PA/PF 42 , PA/PF 52	240	192	180	215	5	M12	24	38	80	229	310	Servo 215/ 300 S
PA/PF 42 , PA/PF 52	350	260	250	300	5	M16	26	48	82	231	310	Servo 300/ 300 S
PA/PF 62 , PA/PF 72 PA/PF 82 , PA/PF 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.

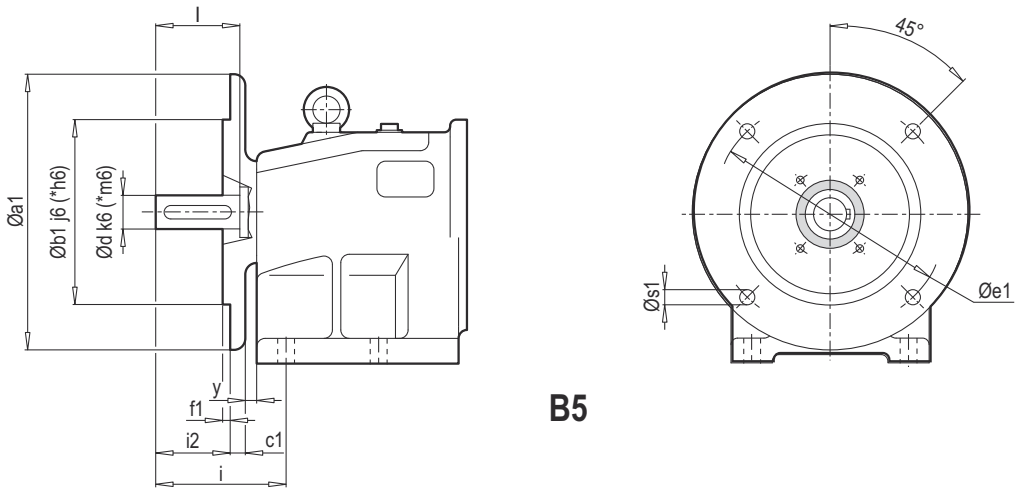
For connecting SEP adapter which is shown above on this page, servo motor's output shaft is designed with locking key. For connecting SEK type adapter, connecting is supplied with a clamp coupling sleeve.
An intermediate flange is required when other servo motor types are used with IEC adapter. Offers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

TR PA / B14 - B5

EN PA / B14 - B5

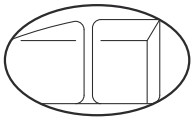


B 14



B5

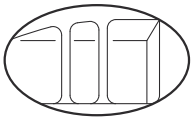
94 - 117



PA 02-12-22

NOT : PA 02-12-22 Gövdelerde tek feder,
PA 32-42-52 Gövdelerde çift feder bulunmaktadır.

NOTE : PA 02-12-22 Cases have single support,
PA 32-42-52 Cases have double support.



PA 32-42-52

Tip / Type	a2	b2	e2	f2	s2	i	i3	a1	b1	c1	e1	f1	s1	i2	y	d	l	x
PA 02 PA 03	90	55	72	8	M 8x13	52	42	160	110	11	130	3,5	9	27	5	20	40	3
PA 12 PA 13	95	60	80	9	M 8x13	78	60	200	130	14	165	3,5	11	43	5	25	50	4
PA 22 PA 23	130	72	100	10	M 12x20	74	59	250	180	16	215	4,0	14	38	5	30	60	5
PA 32 PA 33	150	90	120	11	M 16x25	96	79	300	230	20	265	4,0	14	54	5	40	80	6
PA 42 PA 43	165	105	135	14	M 16x25	130	106	300	230	20	265	4,0	14	81	5	45	90	6
PA 52 PA 53	200	134	165	19	M 16x25	140	120	350	250	20	300	5,0	18	95	5	55*	110	6

TR M4 MONTAJ POZİSYONU İÇİN İLAVE YAĞ HACMİ

EN ADDITIONAL LUBRICANT VOLUME FOR MOUNTING POSITION M4

Tip Type	Boyut Size	ø D [mm]	H [mm]	[kg]
PF 42 - PF 43	I	100	180	6
PF 52 - PF 53				
PF 63				
PF 62	II	150	300	7
PF 72 - PF 73				
PF 82 - PF 83	III	180	300	8
PF 92 - PF 93				
PF 102 - PF 103				

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.

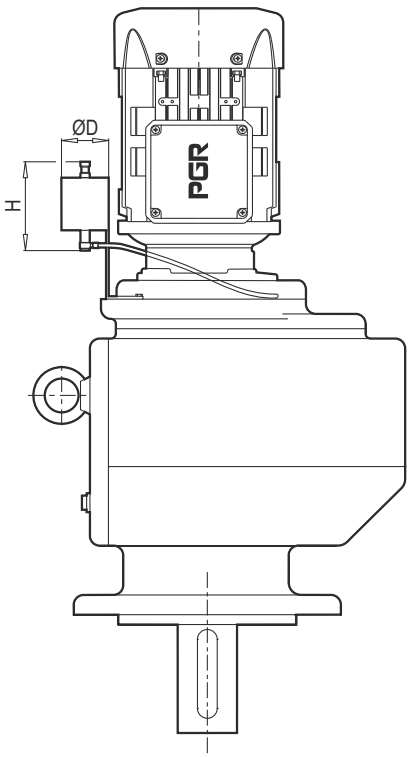
İlave yağ hacim ünitesi, tahvil oranı 20' den küçük helisel dişli üniteleri PA/PF42 ve daha üst gövdelerin dikey montaj pozisyonu uygulamalarında kullanımı önerilir.

34

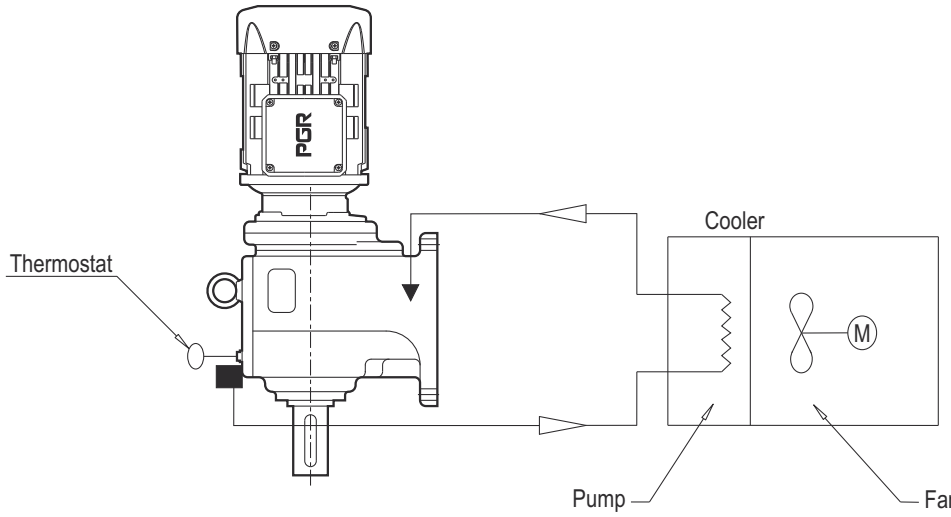
Additional lubricant volume unit uses for preventing oil laekage from venting plug when gear unit is mounted with M4 mounting position. It is important because at vertical mounting position oil could be foamed.

PGR suggest that additional lubrication volume units should be used where gear reduction is less than 20 and for polat helical gear unit series such as PA/PF 42 and greater case when M4 vertical mounting position is applied.

34

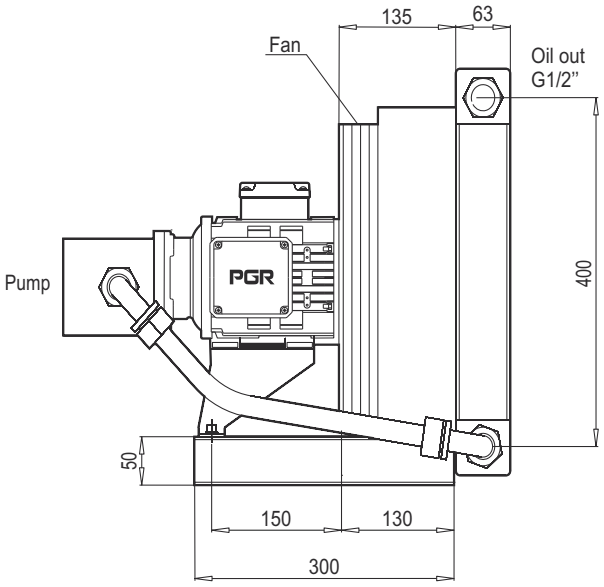


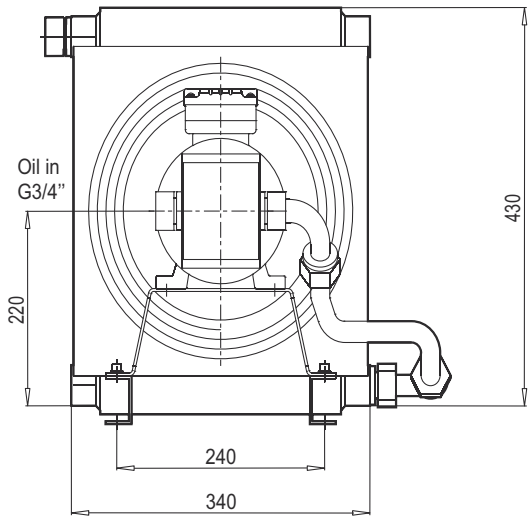
TR YAĞ SOĞUTMALI



■ Çıkış = Emme hattı ▼ Yağ seviyesi = Basınç hattı

Dişli ünitesi yağı, bir pompa tarafından çekilir ve bir ısı dönüştürücüsü boyunca akar. Yağ, bir 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.





* 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 minimum
Koruma sınıfı	: IP 55
Yalıtım sınıfı	: F
Sıcaklık sınıfı	: B

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

Ağırlık : 32 kg

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.

* Not suited for areas with potantially explosive atmospheres

Design

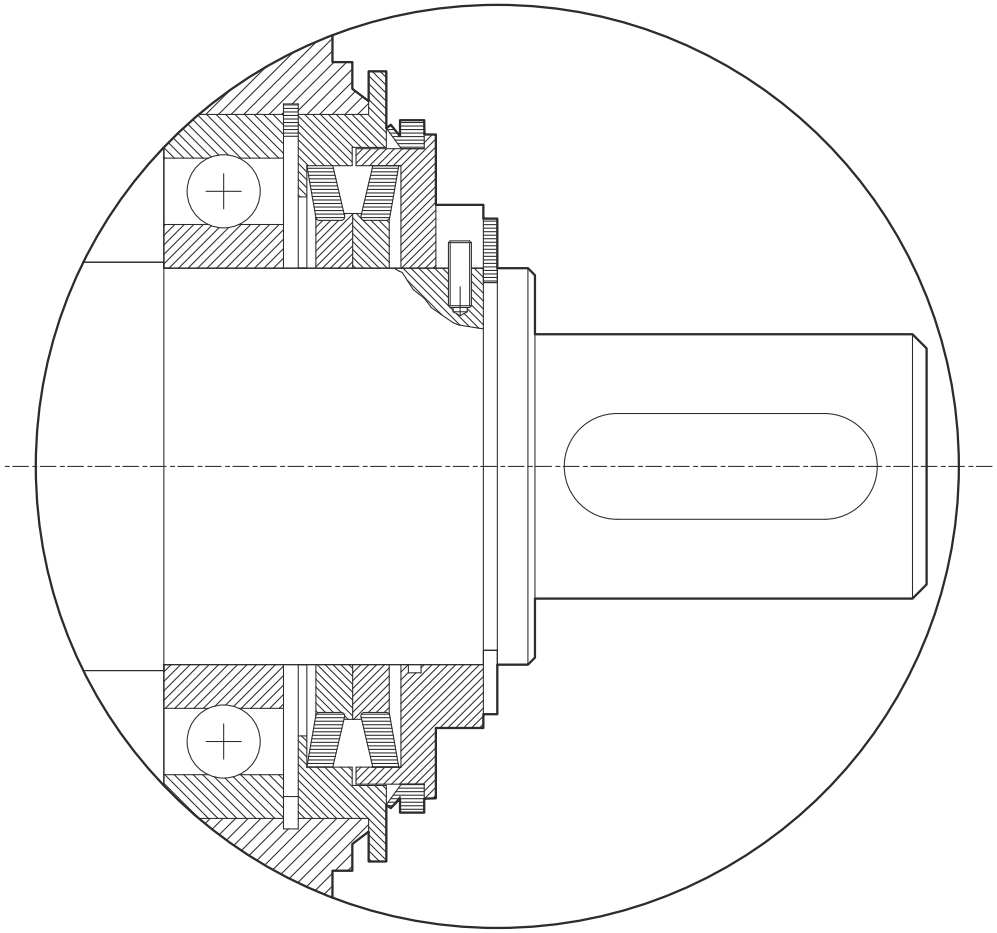
Cooler	: TFS/A 8,5-400-F-03-11
Reduction	: Out 1/2"/ in 3/4"
Motors	: Spannung 3x400 V
Output	: 0.55 kW
Speed	: 1350 minimum
Protection Class	: IP 55
Insulation Class	: F
Temperature Class	: B

Available with:
- Special voltage 60 HZ - Special motor

Weight : 32 kg

TR MEKANİK KEÇE

EN MECHANICAL SEAL



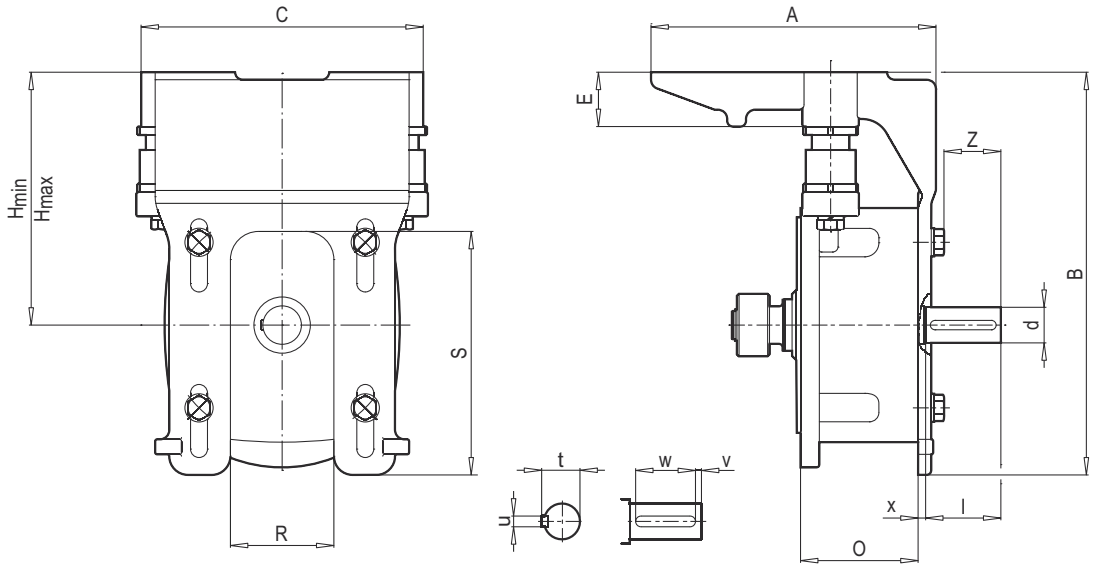
Özellikle aşırı çalışmalarda ve çok kötü çalışma koşullarında uygundur. Daldırmalı veya sulu çalışma ortamlarından etkilenmemektedir. Bu keçe tipi dış çevre koşullarından kesin koruma sağlar.

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 MOTOR PLATFORMU

EN MOTOR PLATFORM INSTALLATION

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	d 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 motor platformu boyutu tüm motor-redüktör kombinasyonlarını kapsar. Çok kademeli redüktörleri de karşılayan ayrı ayrı redüktörler için seçim tablolarından motor platformları bakılabilir.
(Sayfa 45-46 bakınız)

* 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 alüminyum 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 motorgear unit series. Motor platform type, dimension and suitable belt type could be followed from table which is shown on page 45-46, 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 MOTOR PLATFORM INSTALLATION

Tip Type	PA/PF 11 PA/PF 12	PA/PF 21 PA/PF 31 PA/PF 22 PA/PF 32	PA/PF 41 PA/PF 51 PA/PF 42 PA/PF 52 PA/PF 63	PA/PF 62 PA/PF 72 PA/PF 73 PA/PF 83	PA/PF 93	PA/PF 82 PA/PF 92 PA/PF 103	PA/PF 102
Motor	W III	W II	W III	W III W IV	W V W IV	W V W IV	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	MK IV	
132 S **132 M**			MK III - A	MK III - B	MK IV	MK IV	
160 M **160 L**				MK IV	MK IV	MK IV	
180 M **180 L**				MK IV	MK IV	MK IV **	
200 L				MK IV	MK IV	MK IV **	MK V
225 S **225 M**					MK V	MK V	MK V
250 M					MK V	MK V	MK V

**** Ayarlanabilir mesafe (sınırlı)**

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 , 19.4 d/dk = 72.60
PA 12 - 71 M

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

MK I tablodan (sayfa 46) bant makarası ve bant tipi ile ilgili daha fazla bilgi alırsınız.

Esas boyutlar, tabloda gösterilmiştir (sayfa 44)

** There is a limit distance for adjustment.

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 ;

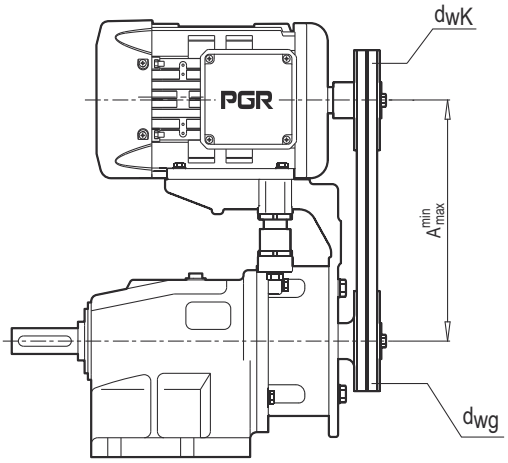
0.25 kW , 19.4 min^{-1} , i = 72.60
PA 12 - 71 M

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 PA 12 - MK I - 71.

Following page shows more detail about belt pulley and type of belt (see page 46).
You can see dimension of belt length with motor platform assignment. (Page 44)

TR MOTOR PLATFORMU

EN MOTOR PLATFORM INSTALLATION



	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
MK V Kayış Tipi SPA Belt type SPA					**(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

Motorlu Seçim Sayfaları

Selection Of Gearmotors

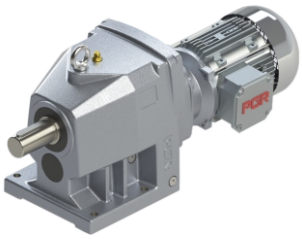
PA / PF

PA 11 ... 51

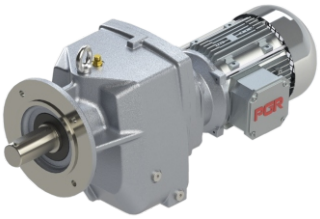
PF 11 ... 51

PA 02 ... 52

PF 02 ... 52



PA 03 ... 53



PF 03 ... 53

PA 62 ... 102
63 ... 103

PF 62 ... 102
63 ... 103

TR TEKNİK AÇIKLAMALAR

EN TECHNICAL EXPLANATIONS

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

0.12 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
0.12	3.1	* 207	0.8	420.39	3.0	4.0	5.0	15.0	**PA 13 - 63M/4A** **PF 13 - 63M/4A**	21	99
	3.6	* 216	0.8	369.18	3.0	4.0	5.0	15.0			
	4.2	* 204	0.8	313.35	3.0	4.0	5.0	15.0			

Servis Faktörü 0.8'e göre Max. moment
Maximum output torque with $f_{B\,=\,0.8}$

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 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 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 radyal yükler Güçlendirilmiş rulmanlarda F_R için listelenmiş değerlerde F_A = 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)

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
0.12	0.9 1.2 1.8 2.4 3.0	808 647 435 319 251	1.5 1.9 2.8 3.8 4.8	1393.57 1114.85 750.00 550.63 433.11	7.0 8.0 8.0 8.0 8.0	12.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 12.0 12.0	30.0 30.0 29.0 27.0 25.0	**PA 42/12 - 63M/4A** **PF 42/12 - 63M/4A**	67	138
	1.0 1.2	756 627	0.8 1.0	1304.13 1080.92	5.0 6.0	9.0 9.0	9.0 9.0	25.0 25.0	**PA 32/12 - 63M/4A** **PF 32/12 - 63M/4A**	49	138
	1.2 1.3 1.5	*733 *697 *805	0.8 0.8 0.8	740.46 662.46 585.48	6.0 6.0 5.0	9.0 9.0 9.0	9.0 9.0 8.0	25.0 25.0 25.0	**PA 33 - 63M/6A** **PF 33 - 63M/6A**	45	107
	1.8 2.0 2.2 2.5 3.1 3.9 5.3 6.4	681 576 509 456 366 295 216 180	0.8 1.0 1.2 1.5 1.8 2.2 3.1 3.7	740.46 662.46 585.48 523.81 421.10 339.07 248.21 206.97	6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 23.0	**PA 33 - 63M/4A** **PF 33 - 63M/4A**	45	107
	1.0 1.1 1.5	*425 *411 *426	0.8 0.8 0.8	1440.59 1156.84 881.08	4.0 4.0 4.0	6.0 6.0 6.0	6.0 6.0 6.0	20.0 20.0 20.0	**PA 22/02 - 63M/4A** **PF 22/02 - 63M/4A**	36	138
	1.7 2.1	*348 *430	0.8 0.8	516.35 417.44	5.0 4.0	6.0 6.0	7.0 6.0	20.0 20.0	**PA 23 - 63M/6A** **PF 23 - 63M/6A**	33	103
	2.6 3.2 4.1 5.0 6.1 7.3 8.7 10.6 13.1	336 363 281 228 189 156 131 108 87	0.8 0.9 1.2 1.5 1.8 2.0 2.2 3.1 3.9	516.35 417.44 323.31 261.93 217.60 179.61 151.11 124.10 100.53	5.0 4.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	6.0 6.0 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 8.0	20.0 20.0 19.0 18.0 17.0 16.0 15.0 15.0 14.0	**PA 23 - 63M/4A** **PF 23 - 63M/4A**	33	103
	1.0 1.2 1.5	*218 *216 *227	0.8 0.8 0.8	1277.78 1053.91 886.01	3.0 3.0 3.0	4.0 4.0 4.0	5.0 5.0 5.0	15.0 15.0 15.0	**PA 12/02 - 63M/4A** **PF 12/02 - 63M/4A**	24	138
	2.1 2.3 2.8	*213 *216 *212	0.8 0.8 0.8	420.39 369.18 313.35	3.0 3.0 3.0	4.0 4.0 4.0	5.0 5.0 5.0	15.0 15.0 15.0	**PA 13 - 63M/6A** **PF 13 - 63M/6A**	21	99
	3.1 3.6 4.2 4.8 5.4 6.7 8.3 9.9 12.1	*207 *216 *204 *216 *217 170 139 115 95	0.8 0.8 0.8 0.8 0.8 1.1 1.2 1.3 1.9	420.39 369.18 313.35 275.17 244.64 195.71 159.23 132.48 108.73	3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	15.0 15.0 15.0 15.0 14.0 14.0 13.0 12.0 12.0	**PA 13 - 63M/4A** **PF 13 - 63M/4A**	21	99
	11.9 14.1	96 81	1.4 1.9	72.60 61.31	4.0 4.0	4.0 4.0	5.0 5.0	12.0 11.0	**PA 12 - 63M/6A** **PF 12 - 63M/6A**	16	98
	18.1 21.5 24.5 30.6	63 53 47 37	2.2 2.9 3.8 4.3	72.60 61.31 53.84 43.07	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	5.0 5.0 5.0 5.0	11.0 10.0 10.0 9.0	**PA 12 - 63M/4A** **PF 12 - 63M/4A**	16	98
	4.2 4.8 6.2 7.7 8.7 10.6	*108 *108 *131 *131 *134 109	0.8 0.8 0.8 0.8 0.8 1.0	312.98 274.18 212.39 170.56 151.24 124.74	2.0 2.0 2.0 2.0 2.0 2.0	3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0	6.0 6.0 6.0 6.0 6.0 6.0	**PA 03 - 63M/4A** **PF 03 - 63M/4A**	18	95
	11.8 14.1 16.1	97 81 71	0.9 1.1 1.3	73.03 61.24 53.64	2.0 2.0 2.0	3.0 3.0 3.0	3.0 3.0 3.0	6.0 6.0 6.0	**PA 02 - 63M/6A** **PF 02 - 63M/6A**	14	94

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
0.12	18.0	64	1.4	73.03	2.0	3.0	3.0	6.0	**PA 02 - 63M/4A** **PF 02 - 63M/4A**	14	94
	21.5	53	1.7	61.24	2.0	3.0	3.0	6.0			
	24.6	47	1.9	53.64	2.0	3.0	3.0	6.0			
	31.7	36	2.7	41.56	2.0	3.0	3.0	6.0			
	39.5	29	3.3	33.37	2.0	3.0	3.0	6.0			
	47.9	24	3.6	27.52	2.0	3.0	3.0	6.0			
	56.9	20	3.9	23.14	2.0	3.0	3.0	6.0			
	64.0	18	4.1	20.59	2.0	3.0	3.0	6.0			
	82.6	14	5.2	15.95	2.0	3.0	3.0	6.0			
	102.8	11	6.3	12.81	2.0	3.0	3.0	5.0			
	117.2	10	6.8	11.24	2.0	3.0	3.0	5.0			
	132.6	9	7.4	9.94	2.0	3.0	3.0	5.0			
	142.1	8	8.1	9.27	2.0	3.0	3.0	5.0			
	160.7	7	8.8	8.20	2.0	3.0	3.0	5.0			
	169.0	7	9.3	7.80	2.0	3.0	3.0	5.0			
	191.2	6	10.2	6.89	2.0	3.0	3.0	5.0			
	236.6	5	11.8	5.57	2.0	3.0	3.0	4.0			
	273.2	4	13.6	4.82	2.0	3.0	3.0	4.0			
	338.1	3	15.5	3.90	2.0	3.0	3.0	4.0			
	388.2	3	16.3	3.39	2.0	3.0	3.0	4.0			
	444.0	3	16.9	2.97	2.0	3.0	2.0	3.0			
	465.5	2	16.4	2.83	-	4.0	-	-	**PA 11 - 63M/4A** **PF 11 - 63M/4A**	12	84
	567.8	2	17.6	2.32	-	3.0	-	-			
	645.7	2	18.3	2.04	-	3.0	-	-			
	727.7	2	18.9	1.81	-	3.0	-	-			
0.18	0.9	1419	1.3	1427.20	13.0	24.0	19.0	40.0	**PA 52/12 - 63M/4B** **PF 52/12 - 63M/4B**	96	138
	1.5	915	2.0	920.36	14.0	24.0	19.0	40.0			
	1.9	686	2.7	690.27	14.0	24.0	20.0	40.0			
	1.0	1385	0.9	1393.57	5.0	12.0	9.0	30.0	**PA 42/12 - 63M/4B** **PF 42/12 - 63M/4B**	67	138
	1.2	1108	1.1	1114.85	6.0	12.0	10.0	29.0			
	1.8	745	1.6	750.00	8.0	12.0	11.0	27.0			
	2.4	547	2.2	550.63	8.0	12.0	11.0	26.0			
	3.1	430	2.8	433.11	8.0	12.0	11.0	24.0			
	3.9	345	3.5	346.69	8.0	12.0	11.0	23.0			
	4.9	275	4.4	276.49	8.0	12.0	12.0	22.0			
	1.9	695	0.9	699.71	6.0	9.0	9.0	25.0	**PA/PF 32/12 - 63M/4B**	49	138
	2.3	748	0.8	585.48	6.0	9.0	9.0	25.0	**PA 33 - 63M/4B** **PF 33 - 63M/4B**	45	107
	2.6	669	1.0	523.81	6.0	9.0	9.0	25.0			
	3.2	538	1.2	421.10	6.0	9.0	9.0	25.0			
	4.0	433	1.5	339.07	7.0	9.0	9.0	25.0			
	5.4	317	2.1	248.21	7.0	9.0	9.0	23.0			
	6.5	264	2.5	206.97	7.0	9.0	9.0	22.0			
	8.1	213	3.2	166.39	7.0	9.0	9.0	21.0			
	10.0	171	3.8	133.98	7.0	9.0	9.0	20.0			
	11.1	155	3.3	81.27	7.0	9.0	9.0	19.0	**PA/PF 32 - 71M/6A**	41	106
	3.0	441	0.8	444.02	4.0	6.0	6.0	19.0	**PA 22/02 - 63M/4B** **PF 22/02 - 63M/4B**	36	138
	3.9	342	1.0	344.50	4.0	6.0	7.0	18.0			
	4.2	413	0.8	323.31	4.0	6.0	7.0	17.0	**PA 23 - 63M/4B** **PF 23 - 63M/4B**	33	103
	5.1	335	1.0	261.93	5.0	6.0	7.0	17.0			
	6.2	278	1.2	217.60	5.0	6.0	7.0	16.0			
	7.5	229	1.4	179.61	5.0	6.0	7.0	15.0			
	8.9	193	1.5	151.11	5.0	6.0	7.0	15.0			
	10.4	165	1.5	86.26	5.0	6.0	7.0	14.0	**PA 22 - 71M/6A** **PF 22 - 71M/6A**	30	102
	12.9	133	2.0	69.74	5.0	6.0	7.0	14.0			
	16.3	106	3.0	55.25	5.0	6.0	8.0	13.0			
	19.6	88	3.3	45.90	5.0	6.0	8.0	12.0			
	6.3	212	0.8	213.21	3.0	4.0	5.0	13.0	**PA/PF 12/02 - 63M/4B**	24	138
	6.9	250	0.8	195.71	3.0	4.0	4.0	13.0	**PA 13 - 63M/4B** **PF 13 - 63M/4B**	21	99
	8.5	203	0.8	159.23	3.0	4.0	5.0	12.0			
	10.2	169	0.9	132.48	3.0	4.0	5.0	12.0			
	12.4	139	1.3	108.73	3.0	4.0	5.0	11.0			
	12.4	139	1.0	72.60	3.0	4.0	5.0	11.0	**PA 12 - 71M/6A** **PF 12 - 71M/6A**	19	98
	14.7	117	1.3	61.31	4.0	4.0	5.0	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	Sayfa Page mm
0.18	18.5	93	1.5	72.60	4.0	4.0	5.0	10.0	PA 12 - 63M/4B PF 12 - 63M/4B	16	98
	21.9	78	2.0	61.31	4.0	4.0	5.0	10.0			
	25.0	69	2.6	53.84	4.0	4.0	5.0	10.0			
	31.2	55	2.9	43.07	4.0	4.0	5.0	9.0			
	38.4	45	3.3	35.04	4.0	4.0	5.0	9.0			
	16.5	104	1.0	81.52	2.0	3.0	3.0	6.0	PA/PF 03 - 63M/4B	18	95
	14.7	117	0.8	61.24	2.0	3.0	3.0	6.0	PA 02 - 71M/6A PF 02 - 71M/6A	17	94
	16.8	102	0.9	53.64	2.0	3.0	3.0	6.0			
	18.4	93	1.0	73.03	2.0	3.0	3.0	6.0	PA 02 - 63M/4B PF 02 - 63M/4B	14	94
	22.0	78	1.1	61.24	2.0	3.0	3.0	6.0			
	25.1	69	1.3	53.64	2.0	3.0	3.0	6.0			
	32.4	53	1.9	41.56	2.0	3.0	3.0	6.0			
	40.3	43	2.3	33.37	2.0	3.0	3.0	6.0			
	48.9	35	2.5	27.52	2.0	3.0	3.0	6.0			
	58.1	30	2.6	23.14	2.0	3.0	3.0	6.0			
	65.3	26	2.8	20.59	2.0	3.0	3.0	6.0			
	84.4	20	3.5	15.95	2.0	3.0	3.0	6.0			
	105.0	16	4.3	12.81	2.0	3.0	3.0	5.0			
	119.7	14	4.7	11.24	2.0	3.0	3.0	5.0			
	135.4	13	5.0	9.94	2.0	3.0	3.0	5.0			
	145.1	12	5.5	9.27	2.0	3.0	3.0	5.0			
	164.2	10	6.0	8.20	2.0	3.0	3.0	5.0			
	172.6	10	6.3	7.80	2.0	3.0	3.0	5.0			
	195.3	9	6.9	6.89	2.0	3.0	3.0	4.0			
	241.6	7	8.0	5.57	2.0	3.0	3.0	4.0			
	279.1	6	9.3	4.82	2.0	3.0	3.0	4.0			
	345.3	5	10.5	3.90	2.0	3.0	3.0	4.0			
	396.6	4	11.0	3.39	2.0	3.0	3.0	4.0			
	453.5	4	11.5	2.97	2.0	3.0	2.0	3.0			
	475.4	4	11.2	2.83	-	4.0	-	-	PA 11 - 63M/4B PF 11 - 63M/4B	12	84
	580.0	3	12.0	2.32	-	3.0	-	-			
	659.6	3	12.4	2.04	-	3.0	-	-			
	743.4	2	12.9	1.81	-	3.0	-	-			
0.25	1.0	2036	1.6	1410.80	19.0	45.0	27.0	45.0	PA 63/23 - 71M/4A PF 63/23 - 71M/4A	165	144
	1.3	1539	2.1	1066.44	20.0	45.0	28.0	45.0			
	1.0	2059	0.9	1427.20	11.0	24.0	18.0	40.0	PA 52/12 - 71M/4A PF 52/12 - 71M/4A	99	138
	1.5	1328	1.4	920.36	13.0	24.0	19.0	40.0			
	2.0	996	1.8	690.27	14.0	24.0	19.0	40.0			
	2.6	783	2.3	542.36	14.0	24.0	20.0	40.0			
	2.8	709	2.6	491.74	14.0	24.0	20.0	40.0			
	1.8	1312	0.8	763.70	5.0	12.0	10.0	25.0	PA 43 - 71M/4A PF 43 - 71M/4A	71	111
	2.2	1062	1.0	618.49	7.0	12.0	10.0	24.0			
	2.6	907	1.1	528.04	7.0	12.0	11.0	23.0			
	3.3	723	1.6	421.21	8.0	12.0	11.0	22.0			
	3.9	618	2.1	359.61	8.0	12.0	11.0	22.0			
	4.7	513	2.2	298.65	8.0	12.0	11.0	21.0			
	5.3	453	2.8	264.02	8.0	12.0	11.0	20.0			
	6.3	377	3.2	219.26	8.0	12.0	11.0	19.0			
	7.6	314	3.2	182.86	8.0	12.0	12.0	19.0			
	2.5	801	0.8	554.87	5.0	9.0	8.0	25.0	PA 32/12 - 71M/4A PF 32/12 - 71M/4A	52	138
	3.1	644	1.0	446.08	6.0	9.0	9.0	25.0			
	3.3	723	0.9	421.10	6.0	9.0	9.0	24.0	PA 33 - 71M/4A PF 33 - 71M/4A	48	107
	4.1	582	1.1	339.07	6.0	9.0	9.0	23.0			
	5.6	426	1.6	248.21	7.0	9.0	9.0	22.0			
	6.7	355	1.9	206.97	7.0	9.0	9.0	21.0			
	8.4	286	2.4	166.39	7.0	9.0	9.0	20.0			
	10.4	230	2.8	133.98	7.0	9.0	9.0	19.0			
	11.2	213	2.4	81.27	7.0	9.0	9.0	19.0	PA 32 - 71M/6B PF 32 - 71M/6B	43	106
	12.5	191	2.9	72.71	7.0	9.0	9.0	18.0			
	17.1	140	3.7	81.27	7.0	9.0	10.0	17.0	PA 32 - 71M/4A PF 32 - 71M/4A	41	106
	19.1	125	4.5	72.71	7.0	9.0	10.0	16.0			
	4.9	410	0.8	284.14	4.0	6.0	7.0	16.0	PA/PF 22/02 - 71M/4A	39	138
	5.3	450	0.8	261.93	4.0	6.0	6.0	16.0	PA 23 - 71M/4A PF 23 - 71M/4A	36	103
	6.4	374	0.9	217.60	4.0	6.0	7.0	15.0			
	7.7	308	1.0	179.61	5.0	6.0	7.0	15.0			
	9.2	260	1.1	151.11	5.0	6.0	7.0	14.0			

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	Sayfa Page mm
0.25	10.5 13.0	226 183	1.1 1.4	86.26 69.74	5.0 5.0	6.0 6.0	7.0 7.0	14.0 13.0	**PA 22 - 71M/6B** **PF 22 - 71M/6B**	32	102
	16.1 19.9 25.2 30.3	148 120 95 79	1.7 2.2 3.4 3.7	86.26 69.74 55.25 45.90	5.0 5.0 5.0 5.0	6.0 6.0 6.0 6.0	7.0 7.0 8.0 8.0	13.0 12.0 11.0 11.0	**PA 22 - 71M/4A** **PF 22 - 71M/4A**	30	102
	10.4	192	0.9	133.10	3.0	4.0	5.0	11.0	**PA/PF 12/02 - 71M/4A**	27	138
	12.8	187	0.9	108.73	3.0	4.0	5.0	11.0	**PA/PF 13 - 71M/4A**	24	99
	14.8	161	1.0	61.31	3.0	4.0	5.0	10.0	**PA/PF 12 - 71M/6B**	21	98
	19.1 22.7 25.8 32.3 39.7 47.7	125 105 92 74 60 50	1.1 1.5 1.9 2.2 2.5 2.5	72.60 61.31 53.84 43.07 35.04 29.16	4.0 4.0 4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0 4.0 4.0	5.0 5.0 5.0 5.0 5.0 5.0	10.0 10.0 9.0 9.0 8.0 8.0	**PA 12 - 71M/4A** **PF 12 - 71M/4A**	19	98
	17.1 21.2	140 112	0.8 1.0	81.52 65.46	2.0 2.0	3.0 3.0	3.0 3.0	6.0 6.0	**PA 03 - 71M/4A** **PF 03 - 71M/4A**	21	95
	22.7 25.9 33.4 41.7 50.5 60.1 67.5 87.1 108.5 123.6 139.9 149.9 169.6 178.3 201.7 249.6 288.3 356.8 409.7 468.5	105 92 71 57 47 40 35 27 22 19 17 16 14 13 12 10 8 7 6 5	0.8 1.0 1.4 1.7 1.8 2.0 2.1 2.6 3.2 3.5 3.7 4.1 4.5 4.7 5.2 6.0 6.9 7.8 8.2 8.6	61.24 53.64 41.56 33.37 27.52 23.14 20.59 15.95 12.81 11.24 9.94 9.27 8.20 7.80 6.89 5.57 4.82 3.90 3.39 2.97	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 2.0 2.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 5.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0	**PA 02 - 71M/4A** **PF 02 - 71M/4A**	17	94
	491.2 599.1 681.4 768.0	5 4 4 3	8.3 8.9 9.3 9.6	2.83 2.32 2.04 1.81	- - - -	4.0 3.0 3.0 3.0	- - - -	- - - -	**PA 11 - 71M/4A** **PF 11 - 71M/4A**	15	84
0.37	1.1 1.2 1.5 1.9 2.4	2883 2526 2041 1695 1304	1.7 2.0 2.5 2.9 3.8	1252.41 1097.40 886.40 736.40 566.43	27.0 27.0 27.0 28.0 28.0	46.0 45.0 43.0 41.0 39.0	39.0 39.0 40.0 40.0 40.0	50.0 50.0 50.0 50.0 50.0	**PA 73/22 - 71M/4B** **PF 73/22 - 71M/4B**	242	140
	1.0 1.3	3248 2455	1.0 1.3	1410.80 1066.44	16.0 18.0	45.0 45.0	25.0 27.0	45.0 45.0	**PA 63/23 - 71M/4B** **PF 63/23 - 71M/4B**	167	144
	1.6 1.9 2.5	1959 1675 1276	1.6 1.9 2.5	851.02 727.77 554.24	19.0 19.0 20.0	45.0 43.0 41.0	27.0 28.0 28.0	45.0 45.0 45.0	**PA 63/22 - 71M/4B** **PF 63/22 - 71M/4B**	161	140
	1.5 1.7 1.8 2.3 2.5 3.1	2331 2107 1918 1507 1438 1130	0.8 0.9 1.0 1.2 1.3 2.0	606.94 548.64 499.30 392.31 374.48 294.23	10.0 11.0 12.0 13.0 13.0 13.0	24.0 24.0 24.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0	40.0 40.0 40.0 40.0 40.0 40.0	**PA 53 - 80M/6A** **PF 53 - 80M/6A**	106	115
	5.8	611	3.1	236.60	14.0	24.0	20.0	40.0	**PA/PF 53 - 71M/4B**	106	115
	2.0 2.5 3.2	1545 1268 997	0.8 0.9 1.2	670.92 550.63 433.11	3.0 6.0 7.0	12.0 12.0 12.0	9.0 10.0 10.0	22.0 22.0 21.0	**PA 42/12 - 71M/4B** **PF 42/12 - 71M/4B**	72	138

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	3.3	1087	1.1	421.21	6.0	12.0	10.0	21.0	PA 43 - 71M/4B PF 43 - 71M/4B	73	111
	3.8	928	1.4	359.61	7.0	12.0	11.0	20.0			
	4.6	771	1.5	298.65	8.0	12.0	11.0	19.0			
	5.2	681	1.9	264.02	8.0	12.0	11.0	19.0			
	6.2	566	2.1	219.26	8.0	12.0	11.0	19.0			
	7.5	472	2.2	182.86	8.0	12.0	11.0	18.0			
	10.6	334	3.7	129.27	8.0	12.0	12.0	16.0			
	5.1	615	1.0	267.35	6.0	9.0	9.0	22.0	PA/PF 32/12 - 71M/4B	54	138
	5.5	641	1.0	248.21	6.0	9.0	9.0	21.0	PA 33 - 71M/4B PF 33 - 71M/4B	50	107
	6.6	534	1.3	206.97	6.0	9.0	9.0	20.0			
	8.2	429	1.6	166.39	7.0	9.0	9.0	19.0			
	10.2	346	1.9	133.98	7.0	9.0	9.0	18.0			
	11.3	312	1.6	81.27	7.0	9.0	9.0	18.0	PA 32 - 80M/6A PF 32 - 80M/6A	43	106
	12.7	279	2.0	72.71	7.0	9.0	9.0	17.0			
	14.3	247	2.6	64.26	7.0	9.0	9.0	17.0			
	16.8	210	2.5	81.27	7.0	9.0	9.0	16.0	PA 32 - 71M/4B PF 32 - 71M/4B	43	106
	18.8	188	3.0	72.71	7.0	9.0	9.0	16.0			
	8.2	385	0.9	167.14	4.0	6.0	7.0	14.0	PA 22/02 - 71M/4B PF 22/02 - 71M/4B	41	138
	10.1	311	1.1	135.06	5.0	6.0	7.0	13.0			
	11.0	320	1.1	124.10	5.0	6.0	7.0	13.0	PA 23 - 71M/4B PF 23 - 71M/4B	38	103
	13.6	259	1.3	100.53	5.0	6.0	7.0	12.0			
	15.5	228	1.5	88.24	5.0	6.0	7.0	12.0			
	17.6	201	1.7	78.00	5.0	6.0	7.0	12.0			
	21.1	167	2.0	64.80	5.0	6.0	7.0	11.0			
	10.7	331	0.8	86.26	5.0	6.0	7.0	13.0	PA 22 - 80M/6A PF 22 - 80M/6A	32	102
	13.2	268	1.0	69.74	5.0	6.0	7.0	13.0			
	15.9	223	1.1	86.26	5.0	6.0	7.0	12.0	PA 22 - 71M/4B PF 22 - 71M/4B	32	102
	19.6	180	1.5	69.74	5.0	6.0	7.0	12.0			
	24.8	143	2.2	55.25	5.0	6.0	7.0	11.0			
	29.8	118	2.5	45.90	5.0	6.0	7.0	10.0			
	14.8	212	0.8	92.29	3.0	4.0	5.0	10.0	PA/PF 12/02 - 71M/4B	29	138
	16.0	221	0.8	85.57	3.0	4.0	5.0	10.0	PA 13 - 71M/4B PF 13 - 71M/4B	26	99
	20.0	177	1.1	68.46	3.0	4.0	5.0	9.0			
	22.3	158	1.0	61.31	3.0	4.0	5.0	9.0	PA 12 - 71M/4B PF 12 - 71M/4B	21	98
	25.4	139	1.3	53.84	3.0	4.0	5.0	9.0			
	28.6	124	1.4	47.86	4.0	4.0	5.0	9.0			
	31.8	111	1.5	43.07	4.0	4.0	5.0	8.0			
	35.8	99	1.9	38.29	4.0	4.0	5.0	8.0			
	39.1	90	1.6	35.04	4.0	4.0	5.0	8.0			
	43.9	80	2.1	31.15	4.0	4.0	5.0	8.0			
	47.0	75	1.6	29.16	4.0	4.0	5.0	8.0			
	52.8	67	2.0	25.92	3.0	4.0	5.0	8.0			
	64.4	55	3.0	21.27	3.0	4.0	5.0	7.0			
	72.8	49	3.3	18.80	3.0	4.0	5.0	7.0			
	81.8	43	3.6	16.74	3.0	4.0	5.0	7.0			
	102.2	35	4.3	13.39	3.0	4.0	5.0	6.0			
	32.9	107	0.9	41.56	2.0	3.0	3.0	6.0	PA 02 - 71M/4B PF 02 - 71M/4B	19	94
	41.0	86	1.1	33.37	2.0	3.0	3.0	6.0			
	46.3	76	1.2	29.59	2.0	3.0	3.0	6.0			
	49.7	71	1.2	27.52	2.0	3.0	3.0	6.0			
	56.1	63	1.4	24.41	2.0	3.0	3.0	6.0			
	59.2	60	1.3	23.14	2.0	3.0	3.0	6.0			
	66.5	53	1.4	20.59	2.0	3.0	3.0	6.0			
	85.8	41	1.7	15.95	2.0	3.0	3.0	5.0			
	106.9	33	2.1	12.81	2.0	3.0	3.0	5.0			
	121.8	29	2.3	11.24	2.0	3.0	3.0	5.0			
	137.8	26	2.5	9.94	2.0	3.0	3.0	5.0			
	147.7	24	2.7	9.27	2.0	3.0	3.0	5.0			
	167.0	21	3.0	8.20	2.0	3.0	3.0	4.0			
	175.6	20	3.1	7.80	2.0	3.0	3.0	4.0			
	198.7	18	3.4	6.89	2.0	3.0	3.0	4.0			
	245.9	14	4.0	5.57	2.0	3.0	3.0	4.0			
	284.0	12	4.6	4.82	2.0	3.0	3.0	4.0			
	351.4	10	5.2	3.90	2.0	3.0	3.0	4.0			
	403.5	9	5.4	3.39	2.0	3.0	2.0	3.0			
	461.5	8	5.7	2.97	2.0	3.0	2.0	3.0			

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	Sayfa Page mm
0.37	483.8	7	5.5	2.83	-	4.0	-	-	PA 11 - 71M/4B PF 11 - 71M/4B	17	84
	590.2	6	5.9	2.32	-	3.0	-	-			
	671.2	5	6.1	2.04	-	3.0	-	-			
	756.4	5	6.3	1.81	-	3.0	-	-			
0.55	1.2	4008	2.0	1151.94	44.0	65.0	62.0	65.0	PA 83/32 - 80M/4A PF 83/32 - 80M/4A	360	140
	1.6	3122	2.6	897.44	44.0	65.0	62.0	65.0			
	1.1	4357	1.1	1252.41	24.0	42.0	37.0	50.0	PA 73/22 - 80M/4A PF 73/22 - 80M/4A	242	140
	1.3	3818	1.3	1097.40	25.0	41.0	38.0	50.0			
	1.6	3084	1.6	886.40	26.0	40.0	39.0	50.0			
	1.9	2562	2.0	736.40	27.0	39.0	39.0	50.0			
	2.5	1971	2.5	566.43	27.0	37.0	40.0	50.0			
	3.1	1592	3.1	457.52	28.0	35.0	40.0	50.0			
	1.3	3710	0.9	1066.44	14.0	43.0	24.0	45.0	PA/PF 63/23 - 80M/4A	167	144
	1.6	2961	1.1	851.02	17.0	42.0	26.0	45.0	PA 63/22 - 80M/4A PF 63/22 - 80M/4A	161	140
	1.9	2532	1.3	727.77	18.0	41.0	27.0	45.0			
	2.5	1928	1.7	554.24	19.0	39.0	27.0	45.0			
	3.3	1497	2.1	430.20	20.0	37.0	28.0	45.0			
	3.8	1280	2.5	367.90	20.0	36.0	28.0	45.0			
	2.0	2401	0.8	690.27	10.0	24.0	17.0	40.0	PA/PF 52/12 - 80M/4A	101	138
	2.3	2277	0.8	606.94	10.0	24.0	17.0	40.0	PA 53 - 80M/4A PF 53 - 80M/4A	106	115
	2.6	2058	0.9	548.64	11.0	24.0	18.0	40.0			
	2.8	1873	1.0	499.30	12.0	24.0	18.0	40.0			
	3.6	1472	1.2	392.31	13.0	24.0	19.0	40.0			
	3.7	1405	1.4	374.48	13.0	24.0	19.0	40.0			
	4.8	1104	2.0	294.23	13.0	24.0	19.0	40.0			
	5.7	922	2.0	245.73	14.0	24.0	20.0	40.0			
	5.9	888	2.2	236.60	14.0	24.0	20.0	40.0			
	7.5	697	2.6	185.90	14.0	24.0	20.0	40.0			
	7.9	666	2.9	177.45	14.0	24.0	20.0	40.0			
	10.0	523	3.8	139.42	14.0	24.0	20.0	40.0			
	3.2	1507	0.8	433.11	4.0	12.0	9.0	18.0	PA/PF 42/12 - 80M/4A	72	138
	3.9	1349	1.0	359.61	5.0	12.0	9.0	18.0	PA 43 - 80M/4A PF 43 - 80M/4A	73	111
	4.7	1120	1.0	298.65	6.0	12.0	10.0	18.0			
	5.0	1045	1.2	278.52	7.0	12.0	10.0	18.0			
	5.3	991	1.3	264.02	7.0	12.0	10.0	17.0			
	6.1	868	1.3	231.31	7.0	12.0	11.0	17.0			
	6.4	823	1.5	219.26	7.0	12.0	11.0	17.0			
	6.8	767	1.7	204.49	8.0	12.0	11.0	17.0			
	7.7	686	1.5	182.86	8.0	12.0	11.0	17.0			
	8.2	637	1.8	169.82	8.0	12.0	11.0	16.0			
	9.9	531	2.0	141.63	8.0	12.0	11.0	16.0			
	10.8	485	2.6	129.27	8.0	12.0	11.0	16.0			
	13.0	403	2.8	107.36	8.0	12.0	11.0	15.0			
	14.8	356	3.5	94.91	8.0	12.0	11.0	15.0			
	17.5	300	3.9	80.01	8.0	12.0	12.0	14.0			
	6.5	749	0.8	215.28	6.0	9.0	9.0	19.0	PA/PF 32/12 - 80M/4A	54	138
	6.8	776	0.9	206.97	5.0	9.0	8.0	19.0	PA 33 - 80M/4A PF 33 - 80M/4A	50	107
	8.4	624	1.1	166.39	6.0	9.0	9.0	18.0			
	10.4	503	1.3	133.98	6.0	9.0	9.0	17.0			
	11.3	464	1.1	81.27	6.0	9.0	9.0	17.0	PA 32 - 80M/6B PF 32 - 80M/6B	45	106
	12.7	415	1.3	72.71	7.0	9.0	9.0	17.0			
	14.3	367	1.7	64.26	7.0	9.0	9.0	16.0			
	17.2	305	1.7	81.27	7.0	9.0	9.0	16.0	PA 32 - 80M/4A PF 32 - 80M/4A	43	106
	19.3	273	2.1	72.71	7.0	9.0	9.0	15.0			
	21.8	241	2.7	64.26	7.0	9.0	9.0	15.0			
	24.4	216	2.8	57.49	7.0	9.0	9.0	15.0			
	30.2	174	3.1	46.29	7.0	9.0	9.0	14.0			
	11.9	409	0.8	117.62	4.0	6.0	7.0	12.0	PA/PF 22/02 - 80M/4A	41	138
	13.9	377	0.9	100.53	4.0	6.0	7.0	11.0	PA 23 - 80M/4A PF 23 - 80M/4A	38	102
	15.9	331	1.0	88.24	5.0	6.0	7.0	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	Sayfa Page mm
0.55	16.2	324	0.8	86.26	5.0	6.0	7.0	11.0	PA 22 - 80M/4A PF 22 - 80M/4A	32	102
	20.1	262	1.0	69.74	5.0	6.0	7.0	11.0			
	25.3	207	1.5	55.25	5.0	6.0	7.0	10.0			
	30.5	172	1.7	45.90	5.0	6.0	7.0	10.0			
	32.7	161	2.1	42.79	5.0	6.0	7.0	10.0			
	39.4	133	2.5	35.55	5.0	6.0	7.0	9.0			
	47.7	110	2.7	29.34	5.0	6.0	7.0	9.0			
	56.7	93	2.7	24.69	5.0	6.0	8.0	9.0			
	29.2	180	1.0	47.86	3.0	4.0	5.0	8.0	PA 12 - 80M/4A PF 12 - 80M/4A	21	98
	36.6	144	1.3	38.29	3.0	4.0	5.0	8.0			
	44.9	117	1.4	31.15	3.0	4.0	5.0	7.0			
	54.0	97	1.4	25.92	3.0	4.0	5.0	7.0			
	65.8	80	2.1	21.27	3.0	4.0	5.0	7.0			
	74.5	71	2.3	18.80	3.0	4.0	5.0	7.0			
	83.6	63	2.5	16.74	3.0	4.0	5.0	7.0			
	104.5	50	3.0	13.39	3.0	4.0	5.0	6.0			
	131.1	40	3.3	10.68	3.0	4.0	5.0	6.0			
	145.1	36	3.7	9.65	3.0	4.0	5.0	6.0			
	47.3	111	0.8	29.59	2.0	3.0	3.0	6.0	PA 02 - 80M/4A PF 02 - 80M/4A	19	94
	57.4	92	1.0	24.41	2.0	3.0	3.0	5.0			
	68.0	77	1.0	20.59	2.0	3.0	3.0	5.0			
	87.8	60	1.2	15.95	2.0	3.0	3.0	5.0			
	109.3	48	1.5	12.81	2.0	3.0	3.0	5.0			
	124.5	42	1.6	11.24	2.0	3.0	3.0	5.0			
	140.9	37	1.7	9.94	2.0	3.0	3.0	5.0			
	151.0	35	1.9	9.27	2.0	3.0	3.0	4.0			
	170.8	31	2.0	8.20	2.0	3.0	3.0	4.0			
	179.6	29	2.2	7.80	2.0	3.0	3.0	4.0			
	203.2	26	2.4	6.89	2.0	3.0	3.0	4.0			
	251.4	21	2.7	5.57	2.0	3.0	3.0	4.0			
	290.4	18	3.2	4.82	2.0	3.0	3.0	4.0			
	359.3	15	3.6	3.90	2.0	3.0	2.0	3.0			
	412.6	13	3.8	3.39	2.0	3.0	2.0	3.0			
	471.9	11	3.9	2.97	2.0	3.0	2.0	3.0			
	494.7	11	3.8	2.83	-	3.0	-	-	PA 11 - 80M/4A PF 11 - 80M/4A	17	84
	603.4	9	4.1	2.32	-	3.0	-	-			
	686.3	8	4.3	2.04	-	3.0	-	-			
	773.5	7	4.4	1.81	-	3.0	-	-			
0.75	1.2	5579	1.4	1151.94	42.0	65.0	61.0	65.0	PA 83/32 - 80M/4B PF 83/32 - 80M/4B	362	140
	1.6	4346	1.8	897.44	43.0	65.0	62.0	65.0			
	1.9	3500	2.3	722.63	44.0	65.0	62.0	65.0			
	1.1	6066	0.8	1252.41	18.0	38.0	34.0	50.0	PA 73/22 - 80M/4B PF 73/22 - 80M/4B	244	140
	1.3	5315	0.9	1097.40	21.0	38.0	36.0	50.0			
	1.6	4293	1.2	886.40	23.0	38.0	37.0	50.0			
	1.9	3566	1.4	736.40	25.0	36.0	38.0	50.0			
	2.5	2743	1.8	566.43	27.0	35.0	39.0	50.0			
	3.1	2216	2.3	457.52	27.0	34.0	39.0	50.0			
	4.0	1679	3.0	346.75	28.0	32.0	40.0	50.0			
	1.6	4122	0.8	851.02	12.0	39.0	23.0	45.0	PA 63/22 - 80M/4B PF 63/22 - 80M/4B	163	140
	1.9	3525	0.9	727.77	15.0	38.0	25.0	45.0			
	2.5	2684	1.2	554.24	18.0	37.0	26.0	45.0			
	3.3	2084	1.5	430.20	19.0	35.0	27.0	45.0			
	3.8	1782	1.8	367.90	19.0	34.0	28.0	45.0			
	4.9	1371	2.3	283.00	20.0	32.0	28.0	45.0			
	6.2	1091	2.9	225.22	20.0	31.0	28.0	45.0			
	2.5	2886	1.1	372.70	17.0	36.0	26.0	45.0	PA 63 - 90S/6A PF 63 - 90S/6A	148	119
	3.1	2330	1.4	300.91	18.0	35.0	27.0	45.0			
	3.5	2056	1.8	265.56	19.0	34.0	27.0	45.0			
	4.3	1660	2.2	214.41	19.0	33.0	28.0	45.0			
	2.8	2554	0.8	499.30	9.0	24.0	17.0	40.0	PA 53 - 80M/4B PF 53 - 80M/4B	108	115
	3.6	2007	0.9	392.31	11.0	24.0	18.0	40.0			
	3.7	1916	1.0	374.48	12.0	24.0	18.0	40.0			
	4.8	1505	1.5	294.23	13.0	24.0	19.0	40.0			
	5.7	1257	1.5	245.73	13.0	24.0	19.0	40.0			
	5.9	1210	1.6	236.60	13.0	24.0	19.0	40.0			
	7.5	951	1.9	185.90	14.0	24.0	19.0	40.0			
	7.9	908	2.1	177.45	14.0	24.0	20.0	40.0			
	10.0	713	2.7	139.42	14.0	24.0	20.0	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	Sayfa Page mm
0.75	10.6	673	2.6	86.88	14.0	24.0	20.0	40.0	**PA 52 - 90S/6A**	93	114
	11.8	608	2.6	78.53	14.0	24.0	20.0	40.0	**PF 52 - 90S/6A**		
	5.0	1425	0.9	278.52	4.0	12.0	9.0	16.0	**PA 43 - 80M/4B** **PF 43 - 80M/4B**	75	111
	5.3	1351	0.9	264.02	5.0	12.0	9.0	16.0			
	6.1	1183	0.9	231.31	6.0	12.0	10.0	15.0			
	6.4	1122	1.1	219.26	6.0	12.0	10.0	15.0			
	6.8	1046	1.2	204.49	7.0	12.0	10.0	15.0			
	7.7	936	1.1	182.86	7.0	12.0	11.0	15.0			
	8.2	869	1.3	169.82	7.0	12.0	11.0	15.0			
	9.9	725	1.5	141.63	8.0	12.0	11.0	15.0			
	10.8	661	1.9	129.27	8.0	12.0	11.0	15.0			
	13.0	549	2.0	107.36	8.0	12.0	11.0	14.0			
	14.8	486	2.6	94.91	8.0	12.0	11.0	14.0			
	17.5	409	2.9	80.01	8.0	12.0	11.0	14.0			
	20.0	359	3.0	70.10	8.0	12.0	11.0	13.0			
	8.8	814	1.1	105.08	7.0	12.0	11.0	15.0	**PA 42 - 90S/6A** **PF 42 - 90S/6A**	64	110
	10.9	659	1.2	85.10	8.0	12.0	11.0	15.0			
	12.4	580	1.9	74.87	8.0	12.0	11.0	15.0			
	15.3	470	2.1	60.64	8.0	12.0	11.0	14.0			
	8.4	851	0.8	166.39	5.0	9.0	8.0	17.0	**PA 33 - 80M/4B** **PF 33 - 80M/4B**	52	107
	10.4	685	0.9	133.98	6.0	9.0	9.0	16.0			
	11.4	629	0.8	81.27	6.0	9.0	9.0	16.0	**PA 32 - 90S/6A** **PF 32 - 90S/6A**	47	106
	12.7	563	1.0	72.71	6.0	9.0	9.0	16.0			
	14.4	498	1.3	64.26	6.0	9.0	9.0	15.0			
	17.2	416	1.2	81.27	7.0	9.0	9.0	15.0	**PA 32 - 80M/4B** **PF 32 - 80M/4B**	45	106
	19.3	372	1.5	72.71	7.0	9.0	9.0	15.0			
	21.8	329	1.9	64.26	7.0	9.0	9.0	15.0			
	24.4	294	2.1	57.49	7.0	9.0	9.0	14.0			
	30.2	237	2.3	46.29	7.0	9.0	9.0	13.0			
	36.1	198	2.2	38.76	6.0	9.0	9.0	13.0			
	42.4	169	2.3	33.00	6.0	9.0	9.0	12.0			
	60.6	118	3.1	23.10	6.0	9.0	10.0	11.0			
	67.7	106	3.1	20.67	5.0	9.0	10.0	11.0			
	75.1	95	3.2	18.64	5.0	9.0	10.0	11.0			
	15.9	451	0.8	88.24	1.0	6.0	6.0	10.0	**PA 23 - 80M/4B** **PF 23 - 80M/4B**	40	103
	17.9	399	0.9	78.00	2.0	6.0	7.0	10.0			
	21.6	332	1.0	64.80	3.0	6.0	7.0	10.0			
	20.2	355	0.8	45.90	3.0	6.0	7.0	10.0	**PA/PF 22 - 90S/6A**	36	102
	25.3	283	1.1	55.25	5.0	6.0	7.0	10.0	**PA 22 - 80M/4B** **PF 22 - 80M/4B**	34	102
	30.5	235	1.2	45.90	5.0	6.0	7.0	9.0			
	32.7	219	1.6	42.79	5.0	6.0	7.0	9.0			
	39.4	182	1.8	35.55	5.0	6.0	7.0	9.0			
	47.7	150	1.9	29.34	5.0	6.0	7.0	9.0			
	56.7	126	1.9	24.69	5.0	6.0	7.0	8.0			
	83.6	86	2.9	16.74	4.0	6.0	8.0	8.0			
	95.4	75	3.0	14.67	4.0	6.0	8.0	7.0			
	36.6	196	0.9	38.29	1.0	4.0	5.0	7.0	**PA 12 - 80M/4B** **PF 12 - 80M/4B**	23	98
	44.9	159	1.0	31.15	1.0	4.0	5.0	7.0			
	54.0	133	1.0	25.92	2.0	4.0	5.0	7.0			
	65.8	109	1.5	21.27	3.0	4.0	5.0	7.0			
	74.5	96	1.7	18.80	3.0	4.0	5.0	6.0			
	83.6	86	1.8	16.74	3.0	4.0	5.0	6.0			
	104.5	69	2.2	13.39	3.0	4.0	5.0	6.0			
	131.1	55	2.5	10.68	3.0	4.0	5.0	6.0			
	145.1	49	2.7	9.65	3.0	4.0	5.0	6.0			
	178.3	40	3.1	7.85	2.0	4.0	5.0	5.0			
	192.1	37	3.4	7.29	2.0	4.0	5.0	5.0			
	214.3	33	3.1	6.53	2.0	4.0	5.0	5.0			
	242.0	30	3.2	5.78	2.0	4.0	5.0	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	Sayfa Page mm
0.75	87.8	82	0.9	15.95	2.0	3.0	3.0	5.0	PA 02 - 80M/4B PF 02 - 80M/4B	21	94
	109.3	66	1.1	12.81	2.0	3.0	3.0	5.0			
	124.5	58	1.2	11.24	2.0	3.0	3.0	4.0			
	140.9	51	1.3	9.94	2.0	3.0	3.0	4.0			
	151.0	47	1.4	9.27	2.0	3.0	3.0	4.0			
	170.8	42	1.5	8.20	2.0	3.0	3.0	4.0			
	179.6	40	1.6	7.80	2.0	3.0	3.0	4.0			
	203.2	35	1.7	6.89	2.0	3.0	3.0	4.0			
	251.4	28	2.0	5.57	2.0	3.0	3.0	4.0			
	290.4	25	2.3	4.82	2.0	3.0	3.0	4.0			
	359.3	20	2.7	3.90	2.0	3.0	2.0	3.0			
	412.6	17	2.7	3.39	2.0	3.0	2.0	3.0			
	471.9	15	2.8	2.97	2.0	3.0	2.0	3.0			
	494.7	14	2.7	2.83	-	3.0	-	-	PA 11 - 80M/4B PF 11 - 80M/4B	19	84
	603.4	12	3.0	2.32	-	3.0	-	-			
	686.3	10	3.1	2.04	-	3.0	-	-			
	773.5	9	3.3	1.81	-	3.0	-	-			
1.10	1.0	10532	1.9	1413.66	99.0	120.0	120.0	120.0	PA 103/52 - 90S/4A PF 103/52 - 90S/4A	808	142
	1.2	8549	2.3	1147.52	100.0	120.0	120.0	120.0			
	1.5	7033	2.8	944.01	101.0	120.0	120.0	120.0			
	1.1	9673	1.3	1299.17	62.0	80.0	90.0	80.0	PA 93/42 - 90S/4A PF 93/42 - 90S/4A	560	142
	1.3	8128	1.5	1090.99	63.0	80.0	91.0	80.0			
	1.7	6049	2.0	811.95	65.0	80.0	92.0	80.0			
	1.9	5638	2.2	756.80	65.0	80.0	92.0	80.0			
	2.6	4082	3.0	547.88	66.0	80.0	93.0	80.0			
	1.0	10183	0.8	1366.81	30.0	65.0	53.0	65.0	PA 83/32 - 90S/4A PF 83/32 - 90S/4A	364	140
	1.2	8582	0.9	1151.94	36.0	65.0	57.0	65.0			
	1.6	6686	1.2	897.44	39.0	65.0	59.0	65.0			
	2.0	5384	1.5	722.63	42.0	63.0	61.0	65.0			
	2.7	3912	2.0	525.11	44.0	59.0	62.0	65.0	PA 83/42 - 90S/4A PF 83/42 - 90S/4A	381	142
	3.2	3263	2.5	437.93	44.0	57.0	62.0	65.0			
	3.8	2790	2.9	374.50	45.0	55.0	63.0	65.0			
	1.6	6604	0.8	886.40	16.0	32.0	33.0	50.0	PA 73/22 - 90S/4A PF 73/22 - 90S/4A	246	140
	1.9	5486	0.9	736.40	20.0	32.0	35.0	50.0			
	2.5	4220	1.2	566.43	24.0	31.0	37.0	50.0			
	3.1	3409	1.5	457.52	26.0	31.0	38.0	50.0			
	4.1	2583	1.9	346.75	27.0	30.0	39.0	50.0			
	5.0	2087	2.4	280.08	27.0	29.0	40.0	50.0			
	6.2	1687	3.0	226.38	28.0	27.0	40.0	50.0	PA/PF 73/32 - 90S/4A	257	140
	2.5	4187	0.8	372.70	12.0	32.0	23.0	45.0	PA 63 - 90L/6B PF 63 - 90L/6B	150	119
	3.1	3381	0.9	300.91	16.0	32.0	25.0	45.0			
	3.5	2984	1.2	265.56	17.0	32.0	26.0	45.0			
	3.8	2777	1.2	372.70	17.0	31.0	26.0	45.0	PA 63 - 90S/4A PF 63 - 90S/4A	148	119
	4.7	2242	1.4	300.91	18.0	30.0	27.0	45.0			
	5.3	1979	1.8	265.56	19.0	30.0	27.0	45.0			
	6.6	1597	2.3	214.41	20.0	29.0	28.0	45.0			
	4.8	2192	1.0	294.23	11.0	24.0	17.0	40.0	PA 53 - 90S/4A PF 53 - 90S/4A	110	115
	5.7	1831	1.0	245.73	12.0	24.0	18.0	40.0			
	6.0	1763	1.1	236.60	12.0	24.0	18.0	40.0			
	7.6	1385	1.3	185.90	13.0	24.0	19.0	40.0			
	7.9	1322	1.5	177.45	13.0	24.0	19.0	40.0			
	10.1	1039	2.1	139.42	14.0	24.0	19.0	40.0			
	10.8	976	1.8	86.88	14.0	24.0	19.0	40.0	PA 52 - 90L/6B PF 52 - 90L/6B	95	114
	11.9	882	1.8	78.53	14.0	24.0	20.0	40.0			
	13.1	803	2.0	71.47	14.0	24.0	20.0	40.0			
	16.2	647	2.7	86.88	14.0	24.0	20.0	40.0	PA 52 - 90S/4A PF 52 - 90S/4A	93	114
	18.0	585	2.7	78.53	14.0	24.0	20.0	40.0			
	6.9	1523	0.8	204.49	3.0	12.0	9.0	13.0	PA 43 - 90S/4A PF 43 - 90S/4A	77	111
	8.3	1265	0.9	169.82	6.0	12.0	10.0	13.0			
	10.0	1055	1.0	141.63	7.0	12.0	10.0	13.0			
	11.0	956	0.8	85.10	7.0	12.0	11.0	13.0	PA 42 - 90L/6B PF 42 - 90L/6B	66	110
	12.5	841	1.3	74.87	7.0	12.0	11.0	13.0			

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	Sayfa Page mm
1.10	13.4	783	1.1	105.08	7.0	12.0	11.0	13.0	**PA 42 - 90S/4A** **PF 42 - 90S/4A**	64	110
	16.6	634	1.3	85.10	8.0	12.0	11.0	13.0			
	18.8	558	1.9	74.87	8.0	12.0	11.0	13.0			
	23.3	452	2.2	60.64	8.0	12.0	11.0	12.0			
	14.6	722	0.9	64.26	6.0	9.0	9.0	14.0	**PA/PF 32 - 90L/6B**	49	106
	17.3	605	0.9	81.27	6.0	9.0	9.0	14.0	**PA 32 - 90S/4A** **PF 32 - 90S/4A**	47	106
	19.4	542	1.0	72.71	6.0	9.0	9.0	14.0			
	21.9	479	1.3	64.26	6.0	9.0	9.0	13.0			
	24.5	428	1.4	57.49	7.0	9.0	9.0	13.0			
	30.5	345	1.5	46.29	6.0	9.0	9.0	13.0			
	30.5	344	2.0	46.22	6.0	9.0	9.0	13.0			
	36.4	289	1.5	38.76	6.0	9.0	9.0	12.0			
	37.9	277	2.1	37.22	6.0	9.0	9.0	12.0			
	42.7	246	1.5	33.00	6.0	9.0	9.0	12.0			
	45.3	232	2.2	31.16	6.0	9.0	9.0	12.0			
	53.1	198	2.2	26.53	5.0	9.0	9.0	11.0			
	61.0	172	3.4	23.10	5.0	9.0	9.0	11.0			
	68.2	154	3.4	20.67	5.0	9.0	9.0	11.0			
	25.5	412	0.8	55.25	-	-	7.0	9.0	**PA 22 - 90S/4A** **PF 22 - 90S/4A**	36	102
	30.7	342	0.9	45.90	1.0	6.0	7.0	9.0			
	33.0	319	1.1	42.79	2.0	6.0	7.0	9.0			
	39.7	265	1.2	35.55	3.0	6.0	7.0	8.0			
	40.7	258	1.3	34.67	4.0	6.0	7.0	8.0			
	48.1	219	1.3	29.34	4.0	6.0	7.0	8.0			
	49.0	215	1.7	28.80	4.0	6.0	7.0	8.0			
	57.1	184	1.3	24.69	4.0	6.0	7.0	8.0			
	59.3	177	1.8	23.77	4.0	6.0	7.0	8.0			
	70.5	149	1.9	20.00	4.0	6.0	7.0	8.0			
	84.2	125	2.7	16.74	4.0	6.0	7.0	7.0			
	96.1	109	3.1	14.67	4.0	6.0	7.0	7.0			
	115.7	91	3.1	12.19	4.0	6.0	8.0	7.0			
	129.3	81	3.3	10.90	4.0	6.0	8.0	7.0			
	166.6	63	3.1	8.46	3.0	6.0	8.0	6.0			
	66.3	158	1.1	21.27	1.0	4.0	5.0	6.0	**PA 12 - 90S/4A** **PF 12 - 90S/4A**	25	98
	75.0	140	1.1	18.80	1.0	4.0	5.0	6.0			
	84.2	125	1.2	16.74	2.0	4.0	5.0	6.0			
	105.3	100	1.5	13.39	2.0	4.0	5.0	6.0			
	132.0	80	1.7	10.68	2.0	4.0	5.0	5.0			
	146.1	72	1.9	9.65	2.0	4.0	5.0	5.0			
	179.6	59	2.2	7.85	2.0	4.0	5.0	5.0			
	193.5	54	2.3	7.29	2.0	4.0	5.0	5.0			
	215.8	49	2.6	6.53	2.0	4.0	5.0	5.0			
	243.8	43	2.8	5.78	2.0	4.0	5.0	5.0			
	285.8	37	3.2	4.93	2.0	3.0	5.0	5.0			
	313.9	33	3.2	4.49	2.0	3.0	5.0	4.0			
	327.3	32	3.4	4.31	2.0	3.0	5.0	4.0			
	354.5	30	3.4	3.98	2.0	3.0	5.0	4.0			
	125.4	84	0.8	11.24	1.0	3.0	3.0	4.0	**PA 02 - 90S/4A** **PF 02 - 90S/4A**	23	94
	141.9	74	0.9	9.94	2.0	3.0	3.0	4.0			
	152.1	69	0.9	9.27	2.0	3.0	3.0	4.0			
	172.0	61	1.0	8.20	2.0	3.0	3.0	4.0			
	180.9	58	1.1	7.80	2.0	3.0	3.0	4.0			
	204.6	51	1.2	6.89	2.0	3.0	3.0	4.0			
	253.2	41	1.4	5.57	2.0	3.0	3.0	3.0			
	292.4	36	1.6	4.82	2.0	3.0	2.0	3.0			
	361.9	29	1.8	3.90	2.0	3.0	2.0	3.0			
	415.6	25	2.0	3.39	2.0	3.0	2.0	3.0			
	475.2	22	2.1	2.97	2.0	3.0	2.0	3.0			
	498.2	21	2.6	2.83	-	3.0	-	-	**PA 11 - 90S/4A** **PF 11 - 90S/4A**	21	84
	607.8	17	2.8	2.32	-	3.0	-	-			
	691.2	15	3.2	2.04	-	3.0	-	-			
	779.0	13	3.4	1.81	-	3.0	-	-			

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	Sayfa Page mm
1.50	1.0 1.2 1.5 1.7 2.2	14261 11576 9523 8250 6482	1.4 1.7 2.1 2.4 3.1	1413.66 1147.52 944.01 817.82 642.57	97.0 98.0 100.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0	120.0 120.0 120.0 120.0 120.0	120.0 120.0 120.0 120.0 120.0	**PA 103/52 - 90L/4A** **PF 103/52 - 90L/4A**	810	142
	1.1 1.3 1.7 1.9 2.6 3.1	13097 11006 8191 7635 5527 4609	0.9 1.1 1.5 1.6 2.2 2.6	1299.17 1090.99 811.95 756.80 547.88 456.91	57.0 60.0 63.0 63.0 65.0 66.0	80.0 80.0 80.0 80.0 80.0 80.0	87.0 89.0 91.0 91.0 92.0 93.0	80.0 80.0 80.0 80.0 80.0 80.0	**PA 93/42 - 90L/4A** **PF 93/42 - 90L/4A**	562	142
	1.6 2.0	9053 7290	0.9 1.1	897.44 722.63	33.0 38.0	60.0 58.0	55.0 58.0	65.0 65.0	**PA 83/32 - 90L/4A** **PF 83/32 - 90L/4A**	366	140
	2.7 3.2 3.8 5.1 6.0	5297 4418 3778 2784 2381	1.5 1.8 2.1 2.9 3.2	525.11 437.93 374.50 276.00 236.03	42.0 43.0 44.0 45.0 45.0	56.0 54.0 53.0 49.0 48.0	61.0 62.0 62.0 63.0 63.0	65.0 65.0 65.0 65.0 65.0	**PA 83/42 - 90L/4A** **PF 83/42 - 90L/4A**	383	142
	4.3	3299	2.7	216.49	44.0	51.0	62.0	65.0	**PA/PF 83 - 100L/6A**	349	127
	2.5 3.1 4.1 5.1	5714 4616 3498 2826	0.9 1.1 1.4 1.8	566.43 457.52 346.75 280.08	20.0 23.0 25.0 27.0	28.0 28.0 27.0 27.0	35.0 36.0 38.0 39.0	50.0 50.0 50.0 50.0	**PA 73/22 - 90L/4A** **PF 73/22 - 90L/4A**	248	140
	6.3 8.3 10.1 11.4	2284 1726 1424 1258	2.2 2.9 3.0 3.0	226.38 171.10 141.16 124.66	27.0 28.0 28.0 28.0	26.0 25.0 24.0 23.0	39.0 40.0 40.0 40.0	50.0 50.0 50.0 50.0	**PA 73/32 - 90L/4A** **PF 73/32 - 90L/4A**	259	140
	4.6 5.7	3133 2531	1.7 2.2	205.59 166.07	26.0 27.0	27.0 26.0	39.0 39.0	50.0 50.0	**PA 73 - 100L/6A** **PF 73 - 100L/6A**	242	123
	3.5	4047	0.9	265.56	13.0	29.0	24.0	45.0	**PA/PF 63 - 100L/6A**	158	119
	3.8 4.7 5.3 6.6 13.2 16.3	3760 3036 2679 2163 1081 880	0.9 1.1 1.4 1.7 2.6 2.6	372.70 300.91 265.56 214.41 107.21 87.26	14.0 17.0 18.0 19.0 20.0 20.0	28.0 28.0 28.0 27.0 24.0 23.0	24.0 26.0 26.0 27.0 28.0 28.0	45.0 45.0 45.0 45.0 45.0 45.0	**PA 63 - 90L/4A** **PF 63 - 90L/4A**	150	119
	6.0 7.6 8.0 10.2	2387 1875 1790 1407	0.8 1.0 1.1 1.6	236.60 185.90 177.45 139.42	10.0 12.0 12.0 13.0	24.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0	40.0 40.0 40.0 40.0	**PA 53 - 90L/4A** **PF 53 - 90L/4A**	112	115
	10.8 12.0 13.2	1324 1197 1089	1.3 1.3 1.5	86.88 78.53 71.47	13.0 13.0 13.0	24.0 24.0 24.0	19.0 19.0 19.0	40.0 40.0 40.0	**PA 52 - 100L/6A** **PF 52 - 100L/6A**	103	114
	16.3 18.1 19.9 39.4 43.6	876 792 721 363 328	2.0 2.0 2.2 3.3 3.3	86.88 78.53 71.47 36.00 32.54	14.0 14.0 14.0 14.0 14.0	24.0 24.0 24.0 24.0 24.0	20.0 20.0 20.0 20.0 20.0	40.0 40.0 40.0 40.0 40.0	**PA 52 - 90L/4A** **PF 52 - 90L/4A**	95	114
	11.0	1304	1.0	129.27	3.0	12.0	10.0	11.0	**PA/PF 43 - 90L/4A**	79	111
	13.5 16.7 19.0 23.4 46.6 57.5	1060 858 755 612 307 249	0.8 0.9 1.4 1.6 2.6 2.6	105.08 85.10 74.87 60.64 30.47 24.68	6.0 7.0 8.0 8.0 8.0 7.0	12.0 12.0 12.0 12.0 12.0 12.0	10.0 11.0 11.0 11.0 12.0 12.0	12.0 12.0 12.0 11.0 10.0 10.0	**PA 42 - 90L/4A** **PF 42 - 90L/4A**	66	110

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
1.50	22.1	648	1.0	64.26	6.0	9.0	9.0	12.0	**PA 32 - 90L/4A** **PF 32 - 90L/4A**	49	106
	24.7	580	1.1	57.49	6.0	9.0	9.0	12.0			
	30.7	467	1.1	46.29	6.0	9.0	9.0	12.0			
	30.7	466	1.4	46.22	6.0	9.0	9.0	12.0			
	36.6	391	1.1	38.76	6.0	9.0	9.0	11.0			
	38.2	375	1.6	37.22	6.0	9.0	9.0	12.0			
	43.0	333	1.1	33.00	5.0	9.0	9.0	11.0			
	45.6	314	1.6	31.16	5.0	9.0	9.0	11.0			
	53.5	268	1.6	26.53	5.0	9.0	9.0	11.0			
	61.5	233	2.5	23.10	5.0	9.0	9.0	11.0			
	68.7	208	2.5	20.67	5.0	9.0	9.0	10.0			
	76.2	188	2.5	18.64	5.0	9.0	9.0	10.0			
	33.2	432	0.8	42.79	0.3	0.4	6.0	8.0	**PA 22 - 90L/4A** **PF 22 - 90L/4A**	38	102
	39.9	359	0.9	35.55	0.3	0.4	7.0	8.0			
	41.0	350	1.0	34.67	0.3	0.4	7.0	8.0			
	48.4	296	1.0	29.34	0.4	6.0	7.0	7.0			
	49.3	291	1.3	28.80	1.0	6.0	7.0	8.0			
	57.5	249	1.0	24.69	1.0	6.0	7.0	7.0			
	59.7	240	1.4	23.77	2.0	6.0	7.0	7.0			
	71.0	202	1.4	20.00	3.0	6.0	7.0	7.0			
	84.8	169	2.0	16.74	4.0	6.0	7.0	7.0			
	96.8	148	2.3	14.67	4.0	6.0	7.0	7.0			
	116.5	123	2.4	12.19	4.0	6.0	7.0	7.0			
	130.2	110	2.4	10.90	4.0	6.0	7.0	7.0			
	167.8	85	2.3	8.46	3.0	6.0	8.0	6.0			
	187.5	76	2.4	7.57	3.0	5.0	8.0	6.0			
	207.1	69	2.7	6.86	3.0	5.0	8.0	6.0			
	218.1	66	2.5	6.51	3.0	5.0	8.0	6.0			
	66.8	215	0.8	21.27	-	-	5.0	6.0	**PA 12 - 90L/4A** **PF 12 - 90L/4A**	27	98
	75.5	190	0.8	18.80	-	-	5.0	6.0			
	84.8	169	0.9	16.74	-	-	5.0	5.0			
	106.0	135	1.1	13.39	1.0	4.0	5.0	5.0			
	132.9	108	1.2	10.68	2.0	4.0	5.0	5.0			
	147.1	97	1.4	9.65	2.0	4.0	5.0	5.0			
	180.8	79	1.7	7.85	2.0	4.0	5.0	5.0			
	194.8	74	1.7	7.29	2.0	4.0	5.0	5.0			
	217.3	66	1.9	6.53	2.0	3.0	5.0	5.0			
	245.5	58	2.1	5.78	2.0	3.0	5.0	5.0			
	287.8	50	2.3	4.93	2.0	3.0	5.0	4.0			
	316.1	45	2.4	4.49	2.0	3.0	5.0	4.0			
	329.6	43	2.6	4.31	2.0	3.0	5.0	4.0			
	357.1	40	2.5	3.98	2.0	3.0	5.0	4.0			
	418.7	34	2.6	3.39	2.0	3.0	5.0	4.0			
	479.5	30	2.7	2.96	2.0	3.0	5.0	4.0			
	182.2	79	0.8	7.80	0.4	3.0	2.0	3.0	**PA 02 - 90L/4A** **PF 02 - 90L/4A**	25	94
	206.1	70	0.9	6.89	1.0	3.0	2.0	3.0			
	255.0	56	1.0	5.57	1.0	3.0	2.0	3.0			
	294.5	49	1.2	4.82	1.0	3.0	2.0	3.0			
	364.5	39	1.3	3.90	2.0	2.0	2.0	3.0			
	418.5	34	1.5	3.39	2.0	2.0	2.0	3.0			
	478.6	30	1.5	2.97	1.0	2.0	2.0	3.0			
	524.3	27	2.3	2.71	-	4.0	-	-	**PA 21 - 90L/4A** **PF 21 - 90L/4A**	31	86
	586.0	24	2.4	2.42	-	4.0	-	-			
	501.8	29	1.9	2.83	-	3.0	-	-	**PA 11 - 90L/4A** **PF 11 - 90L/4A**	23	84
	612.1	23	2.1	2.32	-	3.0	-	-			
	696.1	21	2.4	2.04	-	3.0	-	-			
	784.5	18	2.5	1.81	-	3.0	-	-			
2.20	1.0	21065	0.9	1413.66	89.0	120.0	120.0	120.0	**PA 103/52 - 100L/4A** **PF 103/52 - 100L/4A**	818	142
	1.2	17099	1.2	1147.52	95.0	120.0	120.0	120.0			
	1.5	14066	1.4	944.01	97.0	120.0	120.0	120.0			
	1.7	12186	1.6	817.82	99.0	120.0	120.0	120.0			
	2.2	9575	2.1	642.57	100.0	120.0	120.0	120.0			
	3.0	6976	2.9	468.19	101.0	120.0	120.0	120.0			

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	Sayfa Page mm
2.20	1.3	16257	0.8	1090.99	51.0	80.0	83.0	80.0	PA 93/42 - 100L/4A PF 93/42 - 100L/4A	570	142
	1.7	12099	1.0	811.95	59.0	80.0	88.0	80.0			
	1.9	11277	1.1	756.80	60.0	80.0	89.0	80.0			
	2.6	8164	1.5	547.88	63.0	80.0	91.0	80.0			
	3.1	6808	1.8	456.91	64.0	80.0	92.0	80.0			
	4.2	4960	2.5	332.89	66.0	80.0	93.0	80.0			
	4.9	4291	2.8	287.97	66.0	80.0	93.0	80.0			
	2.0	10768	0.7	722.63	30.0	51.0	53.0	65.0	PA/PF 83/32 - 100L/4A	375	140
	2.7	7825	1.0	525.11	38.0	51.0	58.0	65.0	PA 83/42 - 100L/4A PF 83/42 - 100L/4A	391	142
	3.2	6525	1.2	437.93	41.0	50.0	60.0	65.0			
	3.8	5580	1.4	374.50	42.0	49.0	61.0	65.0			
	5.1	4113	1.9	276.00	44.0	46.0	62.0	65.0			
	6.0	3517	2.3	236.03	44.0	45.0	62.0	65.0			
	7.0	2996	2.7	201.09	44.0	44.0	63.0	65.0			
	6.5	3226	2.8	216.49	44.0	44.0	62.0	65.0	PA/PF 83 - 100L/4A	349	127
	4.1	5167	1.0	346.75	22.0	24.0	36.0	50.0	PA 73/22 - 100L/4A PF 73/22 - 100L/4A	257	140
	5.0	4173	1.2	280.08	24.0	24.0	38.0	50.0			
	6.2	3373	1.5	226.38	26.0	23.0	38.0	50.0	PA/PF 73/32 - 100L/4A	268	140
	6.9	3064	1.7	205.59	26.0	23.0	39.0	50.0	PA 73 - 100L/4A PF 73 - 100L/4A	242	123
	8.5	2474	2.3	166.07	27.0	23.0	39.0	50.0			
	11.3	1853	2.6	124.38	28.0	22.0	40.0	50.0			
	5.0	4217	0.8	283.00	13.0	24.0	23.0	45.0	PA/PF 63/22 - 100L/4A	176	140
	5.3	3957	0.9	265.56	14.0	24.0	24.0	45.0	PA 63 - 100L/4A PF 63 - 100L/4A	158	119
	6.6	3195	1.1	214.41	16.0	24.0	26.0	45.0			
	7.8	2695	1.4	180.86	18.0	24.0	27.0	45.0			
	9.7	2176	1.7	146.02	19.0	23.0	27.0	45.0			
	13.0	1610	2.3	108.08	20.0	22.0	28.0	45.0			
	16.2	1300	2.4	87.26	20.0	21.0	28.0	45.0			
	18.2	1155	2.9	77.49	20.0	21.0	28.0	45.0			
	22.4	938	3.1	62.96	20.0	20.0	28.0	43.0			
	10.1	2078	1.1	139.42	11.0	24.0	18.0	40.0	PA 53 - 100L/4A PF 53 - 100L/4A	121	115
	13.3	1576	1.4	105.77	13.0	24.0	19.0	40.0			
	14.8	1422	1.6	95.41	13.0	24.0	19.0	40.0			
	16.2	1295	1.3	86.88	13.0	24.0	19.0	40.0	PA 52 - 100L/4A PF 52 - 100L/4A	103	114
	18.0	1170	1.4	78.53	13.0	24.0	19.0	40.0			
	19.7	1065	1.5	71.47	14.0	24.0	19.0	40.0			
	23.7	887	2.1	59.50	14.0	24.0	20.0	40.0			
	26.2	801	2.4	53.79	14.0	24.0	20.0	40.0			
	28.8	729	2.6	48.95	14.0	24.0	20.0	40.0			
	14.9	1414	0.9	94.91	0.4	0.4	9.0	9.0	PA 43 - 100L/4A PF 43 - 100L/4A	88	111
	17.6	1192	1.0	80.01	1.0	12.0	10.0	10.0			
	18.8	1116	1.0	74.87	3.0	12.0	10.0	10.0	PA 42 - 100L/4A PF 42 - 100L/4A	74	110
	23.3	904	1.1	60.64	6.0	12.0	11.0	10.0			
	27.7	760	1.4	50.99	8.0	12.0	11.0	10.0			
	34.1	615	1.9	41.30	8.0	12.0	11.0	10.0			
	40.0	525	2.3	35.26	7.0	12.0	11.0	10.0			
	46.3	454	2.4	30.47	7.0	12.0	11.0	10.0			
	48.2	436	2.3	29.28	7.0	12.0	11.0	9.0			
	57.1	368	2.4	24.68	7.0	12.0	11.0	9.0			
	57.7	364	2.4	24.42	7.0	12.0	11.0	9.0			
	64.5	326	2.9	21.85	7.0	12.0	12.0	9.0			
	30.5	689	1.0	46.22	3.0	9.0	9.0	11.0	PA 32 - 100L/4A PF 32 - 100L/4A	58	106
	37.9	555	1.1	37.22	4.0	9.0	9.0	10.0			
	45.3	464	1.1	31.16	5.0	9.0	9.0	10.0			
	53.1	395	1.1	26.53	5.0	9.0	9.0	10.0			
	61.0	344	1.8	23.10	5.0	9.0	9.0	10.0			
	68.2	308	2.1	20.67	5.0	9.0	9.0	10.0			
	75.6	278	2.3	18.64	5.0	9.0	9.0	10.0			
	84.7	248	2.1	16.64	4.0	9.0	9.0	9.0			
	86.9	242	2.5	16.23	4.0	9.0	9.0	9.0			
	93.9	224	2.3	15.01	4.0	8.0	9.0	9.0			
	97.1	216	2.5	14.52	4.0	9.0	9.0	9.0			
	120.6	174	2.5	11.70	4.0	8.0	9.0	9.0			

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	Sayfa Page mm
2.20	49.0	429	0.9	28.80	0.3	0.2	7.0	6.0			
	59.3	354	0.9	23.77	0.3	0.4	7.0	6.0			
	70.5	298	1.0	20.00	0.4	0.3	7.0	6.0			
	84.2	249	1.4	16.74	1.0	6.0	7.0	6.0			
	96.1	219	1.5	14.67	2.0	6.0	7.0	6.0			
	115.7	182	1.8	12.19	2.0	6.0	7.0	6.0			
	129.3	162	2.0	10.90	3.0	5.0	7.0	6.0	**PA 22 - 100L/4A**	47	102
	166.6	126	2.1	8.46	3.0	5.0	7.0	6.0	**PF 22 - 100L/4A**		
	186.2	113	2.2	7.57	3.0	5.0	7.0	6.0			
	205.6	102	2.5	6.86	3.0	5.0	8.0	6.0			
	216.6	97	2.4	6.51	3.0	5.0	8.0	5.0			
	244.4	86	2.5	5.77	3.0	5.0	8.0	5.0			
	272.1	77	2.1	5.18	3.0	4.0	8.0	5.0			
	304.2	69	2.2	4.64	3.0	4.0	8.0	5.0			
	105.3	200	0.7	13.39	0.2	0.2	5.0	5.0			
	132.0	159	0.8	10.68	0.2	0.2	5.0	5.0			
	146.1	144	0.9	9.65	0.2	0.2	5.0	5.0			
	179.6	117	1.1	7.85	0.2	3.0	5.0	4.0			
	193.5	109	1.1	7.29	1.0	3.0	5.0	4.0			
	215.8	97	1.3	6.53	1.0	3.0	5.0	4.0	**PA 12 - 100L/4A**	36	98
	243.8	86	1.4	5.78	1.0	3.0	5.0	4.0	**PF 12 - 100L/4A**		
	285.8	74	1.6	4.93	1.0	3.0	5.0	4.0			
	313.9	67	1.8	4.49	1.0	3.0	5.0	4.0			
	327.3	64	1.7	4.31	2.0	3.0	5.0	4.0			
	354.5	59	1.9	3.98	1.0	3.0	5.0	4.0			
	415.7	51	2.2	3.39	2.0	3.0	5.0	4.0			
	476.1	44	2.4	2.96	2.0	2.0	5.0	4.0			
	520.6	40	1.9	2.71	-	4.0	-	-			
	581.9	36	2.0	2.42	-	4.0	-	-	**PA 21 - 100L/4A**	40	86
	676.8	31	2.2	2.08	-	4.0	-	-	**PF 21 - 100L/4A**		
	763.8	28	2.3	1.85	-	3.0	-	-			
	498.2	42	1.3	2.83	-	3.0	-	-			
	607.8	35	1.4	2.32	-	3.0	-	-	**PA 11 - 100L/4A**	32	84
	691.2	30	1.9	2.04	-	3.0	-	-	**PF 11 - 100L/4A**		
	779.0	27	2.0	1.81	-	2.0	-	-			
3.00	1.2	23317	0.9	1147.52	85.0	120.0	120.0	120.0			
	1.5	19181	1.0	944.01	92.0	120.0	120.0	120.0			
	1.7	16617	1.2	817.82	94.0	120.0	120.0	120.0	**PA 103/52 - 100L/4B**	821	142
	2.2	13057	1.5	642.57	98.0	120.0	120.0	120.0	**PF 103/52 - 100L/4B**		
	3.0	9513	2.1	468.19	100.0	120.0	120.0	120.0			
	4.1	6931	2.9	341.11	101.0	120.0	120.0	120.0			
	1.9	15377	0.8	756.80	53.0	80.0	84.0	80.0			
	2.6	11132	1.1	547.88	60.0	80.0	89.0	80.0			
	3.1	9284	1.3	456.91	62.0	80.0	90.0	80.0	**PA 93/42 - 100L/4B**	573	142
	4.2	6764	1.8	332.89	64.0	80.0	92.0	80.0	**PF 93/42 - 100L/4B**		
	4.9	5851	2.1	287.97	65.0	77.0	92.0	80.0			
	5.9	4890	2.5	240.68	66.0	74.0	93.0	80.0			
	2.7	10670	0.7	525.11	30.0	45.0	53.0	65.0			
	3.2	8898	0.9	437.93	35.0	45.0	56.0	65.0			
	3.8	7610	1.1	374.50	38.0	45.0	58.0	65.0			
	5.1	5608	1.4	276.00	42.0	44.0	61.0	65.0	**PA 83/42 - 100L/4B**	394	142
	6.0	4796	1.7	236.03	43.0	43.0	61.0	65.0	**PF 83/42 - 100L/4B**		
	7.0	4086	2.0	201.09	44.0	42.0	62.0	65.0			
	9.5	3028	2.5	149.01	44.0	39.0	63.0	65.0			
	11.1	2580	2.6	126.95	45.0	38.0	63.0	65.0			
	6.5	4399	2.0	216.49	43.0	42.0	62.0	65.0	**PA 83 - 100L/4B**	352	127
	10.3	2777	2.7	136.67	45.0	39.0	63.0	65.0	**PF 83 - 100L/4B**		
	5.0	5691	0.9	280.08	20.0	20.0	35.0	50.0	**PA/PF 73/22 - 100L/4B**	260	140
	6.2	4600	1.1	226.38	23.0	21.0	37.0	50.0	**PA/PF 73/32 - 100L/4B**	271	140
	6.9	4178	1.3	205.59	24.0	21.0	37.0	50.0			
	8.5	3374	1.7	166.07	26.0	21.0	38.0	50.0			
	11.3	2527	1.9	124.38	27.0	20.0	39.0	50.0	**PA 73 - 100L/4B**	245	123
	14.0	2041	1.9	100.47	27.0	20.0	40.0	50.0	**PF 73 - 100L/4B**		
	15.4	1856	2.3	91.33	28.0	20.0	40.0	50.0			

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	Sayfa Page mm
3.00	6.6	4357	0.8	214.41	12.0	21.0	23.0	45.0			
	7.8	3675	1.0	180.86	15.0	21.0	25.0	45.0			
	9.7	2967	1.2	146.02	17.0	21.0	26.0	45.0			
	13.0	2196	1.7	108.08	19.0	21.0	27.0	45.0			
	16.2	1773	1.8	87.26	19.0	20.0	28.0	45.0	**PA 63 - 100L/4B**	161	119
	18.2	1574	2.1	77.49	20.0	20.0	28.0	44.0	**PF 63 - 100L/4B**		
	22.4	1279	2.3	62.96	20.0	19.0	28.0	42.0			
	26.2	1094	2.4	53.84	20.0	19.0	28.0	40.0			
	27.7	1033	2.3	50.83	20.0	19.0	28.0	40.0			
	32.4	883	2.5	43.47	20.0	18.0	28.0	38.0			
	10.1	2833	0.8	139.42	7.0	24.0	16.0	40.0			
	13.3	2149	1.0	105.77	11.0	24.0	17.0	40.0	**PA 53 - 100L/4B**	124	115
	14.8	1939	1.2	95.41	12.0	24.0	18.0	40.0	**PF 53 - 100L/4B**		
	16.2	1765	1.0	86.88	12.0	24.0	18.0	40.0			
	18.0	1596	1.0	78.53	13.0	24.0	19.0	40.0			
	19.7	1452	1.1	71.47	13.0	24.0	19.0	40.0			
	23.7	1209	1.6	59.50	13.0	24.0	19.0	40.0			
	26.2	1093	1.7	53.79	13.0	24.0	19.0	40.0			
	28.8	995	1.9	48.95	14.0	24.0	19.0	40.0	**PA 52 - 100L/4B**	106	114
	36.7	782	2.1	38.46	14.0	24.0	20.0	40.0	**PF 52 - 100L/4B**		
	39.2	731	1.9	36.00	14.0	24.0	20.0	40.0			
	43.3	661	1.9	32.54	14.0	24.0	20.0	39.0			
	43.9	653	2.1	32.12	14.0	24.0	20.0	39.0			
	53.3	537	2.2	26.43	14.0	24.0	20.0	37.0			
	59.0	486	2.2	23.89	14.0	24.0	20.0	36.0			
	17.6	1626	0.8	80.01	0.4	0.3	9.0	7.0	**PA 43 - 100L/4B**	91	111
	20.1	1424	0.9	70.10	0.3	0.3	9.0	8.0	**PF 43 - 100L/4B**		
	23.3	1232	0.8	60.64	0.4	0.4	10.0	8.0			
	27.7	1036	1.1	50.99	1.0	12.0	10.0	9.0			
	34.1	839	1.4	41.30	3.0	12.0	11.0	9.0			
	40.0	716	1.7	35.26	5.0	12.0	11.0	9.0			
	46.3	619	1.7	30.47	7.0	12.0	11.0	9.0			
	48.2	595	1.7	29.28	6.0	12.0	11.0	9.0			
	57.1	501	1.8	24.68	6.0	12.0	11.0	9.0			
	57.7	496	1.7	24.42	6.0	12.0	11.0	8.0	**PA 42 - 100L/4B**	77	110
	64.5	444	2.1	21.85	6.0	12.0	11.0	8.0	**PF 42 - 100L/4B**		
	79.7	359	2.1	17.69	6.0	11.0	11.0	8.0			
	93.3	307	2.1	15.10	6.0	11.0	12.0	8.0			
	98.1	292	2.3	14.38	6.0	11.0	12.0	8.0			
	114.9	249	2.3	12.27	6.0	10.0	12.0	8.0			
	138.3	207	2.3	10.19	5.0	10.0	12.0	7.0			
	165.9	173	2.3	8.50	5.0	9.0	12.0	7.0			
	61.0	469	1.3	23.10	4.0	8.0	9.0	9.0			
	68.2	420	1.6	20.67	4.0	8.0	9.0	9.0			
	75.6	379	1.7	18.64	4.0	8.0	9.0	9.0			
	84.7	338	1.6	16.64	4.0	8.0	9.0	9.0			
	86.9	330	1.9	16.23	4.0	8.0	9.0	9.0			
	93.9	305	1.7	15.01	4.0	8.0	9.0	9.0			
	97.1	295	1.9	14.52	4.0	8.0	9.0	9.0			
	120.6	238	1.9	11.70	4.0	7.0	9.0	8.0			
	144.0	199	1.9	9.79	4.0	7.0	9.0	8.0	**PA 32 - 100L/4B**	61	106
	178.7	160	2.1	7.89	4.0	7.0	9.0	8.0	**PF 32 - 100L/4B**		
	209.8	137	2.1	6.72	3.0	6.0	10.0	7.0			
	247.8	116	2.2	5.69	3.0	6.0	10.0	7.0			
	256.8	112	1.9	5.49	3.0	6.0	10.0	7.0			
	266.4	108	2.3	5.29	3.0	6.0	10.0	7.0			
	318.7	90	2.1	4.42	3.0	5.0	10.0	7.0			
	376.3	76	2.2	3.75	3.0	5.0	10.0	6.0			
	475.2	60	2.3	2.97	3.0	5.0	10.0	6.0			

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	Sayfa Page mm
3.00	84.2	340	1.0	16.74	0.3	0.3	7.0	6.0			
	96.1	298	1.1	14.67	0.4	0.3	7.0	6.0			
	115.7	248	1.3	12.19	0.3	0.3	7.0	6.0			
	129.3	222	1.4	10.90	0.3	5.0	7.0	6.0			
	166.6	172	1.5	8.46	1.0	4.0	7.0	5.0			
	186.2	154	1.6	7.57	2.0	4.0	7.0	5.0			
	205.6	139	1.8	6.86	2.0	4.0	7.0	5.0	**PA 22 - 100L/4B**	50	102
	216.6	132	1.7	6.51	2.0	4.0	7.0	5.0	**PF 22 - 100L/4B**		
	244.4	117	1.8	5.77	3.0	4.0	7.0	5.0			
	272.1	105	1.5	5.18	2.0	4.0	7.0	5.0			
	304.2	94	1.6	4.64	2.0	4.0	8.0	5.0			
	353.8	81	1.7	3.99	2.0	4.0	8.0	5.0			
	399.2	72	1.8	3.53	2.0	4.0	8.0	5.0			
	504.3	57	2.0	2.80	2.0	3.0	7.0	4.0			
	179.6	160	0.8	7.85	0.2	0.2	5.0	4.0			
	193.5	148	0.8	7.29	0.2	0.2	5.0	4.0			
	215.8	133	0.9	6.53	0.2	0.2	5.0	4.0			
	243.8	118	1.0	5.78	0.2	0.2	5.0	4.0			
	285.8	100	1.2	4.93	0.2	0.2	5.0	4.0	**PA 12 - 100L/4B**	39	98
	313.9	91	1.3	4.49	0.2	0.2	5.0	4.0	**PF 12 - 100L/4B**		
	327.3	88	1.3	4.31	0.4	2.0	5.0	4.0			
	354.5	81	1.4	3.98	0.2	2.0	5.0	4.0			
	415.7	69	1.6	3.39	1.0	2.0	5.0	4.0			
	476.1	60	1.7	2.96	1.0	2.0	5.0	4.0			
	546.5	52	1.9	2.58	-	4.0	-	-			
	677.9	42	2.1	2.08	-	4.0	-	-	**PA 31 - 100L/4B**	48	88
	801.1	36	2.2	1.76	-	4.0	-	-	**PF 31 - 100L/4B**		
	520.6	55	1.4	2.71	-	4.0	-	-			
	581.9	49	1.5	2.42	-	4.0	-	-	**PA 21 - 100L/4B**	43	86
	676.8	42	1.6	2.08	-	3.0	-	-	**PF 21 - 100L/4B**		
	763.8	38	1.7	1.85	-	3.0	-	-			
	498.2	58	0.9	2.83	-	2.0	-	-			
	607.8	47	1.0	2.32	-	2.0	-	-	**PA 11 - 100L/4B**	35	84
	691.2	41	1.4	2.04	-	2.0	-	-	**PF 11 - 100L/4B**		
	779.0	37	1.5	1.81	-	2.0	-	-			
4.00	1.5	25218	0.8	944.01	83.0	120.0	120.0	120.0			
	1.7	21847	0.9	817.82	89.0	120.0	120.0	120.0			
	2.2	17165	1.2	642.57	94.0	120.0	120.0	120.0			
	3.1	12507	1.6	468.19	98.0	120.0	120.0	120.0	**PA 103/52 - 112M/4B**	827	142
	4.2	9112	2.2	341.11	100.0	116.0	120.0	120.0	**PF 103/52 - 112M/4B**		
	4.8	7922	2.5	296.56	101.0	112.0	120.0	120.0			
	5.8	6536	3.1	244.66	101.0	108.0	120.0	120.0			
	7.7	4936	3.3	184.77	102.0	101.0	120.0	120.0			
	2.6	14636	0.8	547.88	54.0	80.0	85.0	80.0			
	3.1	12206	1.0	456.91	59.0	78.0	88.0	80.0			
	4.3	8893	1.4	332.89	62.0	75.0	90.0	80.0	**PA 93/42 - 112M/4B**	579	142
	5.0	7693	1.6	287.97	64.0	74.0	91.0	80.0	**PF 93/42 - 112M/4B**		
	5.9	6429	1.9	240.68	65.0	71.0	92.0	80.0			
	7.9	4862	2.5	182.00	66.0	67.0	93.0	80.0			
	8.9	4297	2.8	160.87	66.0	66.0	93.0	80.0	**PA/PF 93/52 - 112M/4B**	608	142
	3.8	10004	0.8	374.50	33.0	39.0	55.0	65.0			
	5.2	7373	1.1	276.00	39.0	40.0	59.0	65.0			
	6.1	6305	1.3	236.03	41.0	39.0	60.0	65.0	**PA 83/42 - 112M/4B**	400	142
	7.1	5372	1.5	201.09	42.0	39.0	61.0	65.0	**PF 83/42 - 112M/4B**		
	9.6	3981	2.0	149.01	44.0	37.0	62.0	65.0			
	6.6	5783	1.5	216.49	42.0	39.0	61.0	65.0			
	10.5	3651	2.0	136.67	44.0	37.0	62.0	65.0			
	17.7	2154	2.0	80.63	45.0	33.0	63.0	65.0	**PA 83 - 112M/4B**	360	127
	20.4	1875	2.0	70.19	45.0	32.0	63.0	65.0	**PF 83 - 112M/4B**		
	23.1	1651	2.1	61.79	45.0	32.0	63.0	65.0			
	6.3	6047	0.8	226.38	19.0	17.0	34.0	50.0	**PA/PF 73/32 - 112M/4B**	278	140

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
4.00	7.0	5492	1.0	205.59	21.0	18.0	35.0	50.0	**PA 73 - 112M/4B** **PF 73 - 112M/4B**	253	123
	8.6	4436	1.3	166.07	24.0	18.0	37.0	50.0			
	11.5	3323	1.4	124.38	26.0	18.0	39.0	50.0			
	14.2	2684	1.4	100.47	27.0	18.0	39.0	50.0			
	15.7	2440	1.7	91.33	27.0	18.0	39.0	50.0			
	19.1	1998	1.9	74.80	27.0	18.0	40.0	50.0			
	23.7	1614	1.9	60.42	28.0	17.0	40.0	47.0			
	27.4	1397	2.0	52.28	28.0	17.0	40.0	46.0			
	31.3	1220	2.1	45.67	28.0	16.0	40.0	44.0			
	38.0	1006	2.2	37.68	28.0	16.0	40.0	42.0			
	43.0	889	2.2	33.27	28.0	15.0	40.0	41.0			
	50.4	757	2.1	28.35	28.0	15.0	40.0	39.0			
	7.9	4831	0.8	180.86	9.0	18.0	21.0	45.0	**PA 63 - 112M/4B** **PF 63 - 112M/4B**	167	119
	9.8	3901	0.9	146.02	14.0	18.0	24.0	45.0			
	13.2	2887	1.3	108.08	17.0	19.0	26.0	44.0			
	16.4	2331	1.4	87.26	19.0	19.0	27.0	42.0			
	18.5	2070	1.7	77.49	19.0	18.0	27.0	42.0			
	22.7	1682	1.8	62.96	19.0	18.0	28.0	40.0			
	26.6	1438	1.9	53.84	20.0	18.0	28.0	39.0			
	28.1	1358	1.8	50.83	20.0	18.0	28.0	38.0			
	32.9	1161	1.9	43.47	20.0	17.0	28.0	37.0			
	39.6	965	1.8	36.14	20.0	17.0	28.0	35.0			
	46.3	826	1.9	30.90	20.0	16.0	28.0	34.0			
	29.3	1302	1.9	48.75	20.0	17.0	28.0	38.0	**PA/PF 62 - 112M/4B**	174	118
	13.5	2825	0.8	105.77	8.0	24.0	16.0	40.0	**PA 53 - 112M/4B** **PF 53 - 112M/4B**	131	115
	15.0	2549	0.9	95.41	9.0	24.0	17.0	40.0			
	17.9	2129	0.9	79.69	11.0	24.0	18.0	40.0			
	21.9	1745	1.1	65.31	12.0	24.0	18.0	40.0			
	24.0	1590	1.2	59.50	13.0	24.0	19.0	40.0	**PA 52 - 112M/4B** **PF 52 - 112M/4B**	112	104
	26.6	1437	1.3	53.79	13.0	24.0	19.0	40.0			
	29.2	1308	1.5	48.95	13.0	24.0	19.0	40.0			
	37.2	1027	1.6	38.46	14.0	24.0	19.0	39.0			
	39.7	962	1.4	36.00	14.0	24.0	19.0	39.0			
	43.9	869	1.4	32.54	14.0	24.0	20.0	38.0			
	44.5	858	1.6	32.12	14.0	24.0	20.0	37.0			
	54.1	706	2.6	26.43	14.0	24.0	20.0	36.0			
	59.8	638	2.5	23.89	14.0	24.0	20.0	35.0			
	66.0	578	2.8	21.65	14.0	24.0	20.0	34.0			
	73.1	523	2.8	19.57	14.0	24.0	20.0	33.0			
	80.3	476	2.8	17.81	14.0	24.0	20.0	32.0			
	24.6	1555	0.7	58.22	0.4	0.3	9.0	6.0	**PA/PF 43 - 112M/4B**	98	111
	28.0	1362	0.8	50.99	0.4	0.3	9.0	7.0	**PA 42 - 112M/4B** **PF 42 - 112M/4B**	83	110
	34.6	1103	1.1	41.30	1.0	0.3	10.0	7.0			
	40.6	942	1.3	35.26	1.0	0.3	11.0	7.0			
	46.9	814	1.3	30.47	2.0	11.0	11.0	8.0			
	48.8	782	1.3	29.28	2.0	10.0	11.0	7.0			
	57.9	659	1.4	24.68	4.0	11.0	11.0	8.0			
	58.6	652	1.3	24.42	3.0	10.0	11.0	7.0			
	65.5	584	1.9	21.85	5.0	11.0	11.0	8.0			
	80.8	473	2.4	17.69	6.0	10.0	11.0	8.0			
	94.7	404	2.4	15.10	5.0	10.0	11.0	7.0			
	99.5	384	2.6	14.38	5.0	10.0	11.0	7.0			
	116.5	328	2.6	12.27	5.0	9.0	12.0	7.0			
	61.9	617	1.0	23.10	1.0	7.0	9.0	8.0	**PA 32 - 112M/4B** **PF 32 - 112M/4B**	68	106
	69.2	552	1.2	20.67	2.0	7.0	9.0	8.0			
	76.7	498	1.3	18.64	2.0	7.0	9.0	8.0			
	85.9	445	1.2	16.64	3.0	7.0	9.0	8.0			
	88.1	434	1.5	16.23	4.0	7.0	9.0	8.0			
	95.3	401	1.3	15.01	3.0	7.0	9.0	8.0			
	98.5	388	1.7	14.52	4.0	7.0	9.0	8.0			
	122.3	312	2.1	11.70	4.0	6.0	9.0	8.0			
	146.0	262	2.1	9.79	3.0	6.0	9.0	8.0			
	181.2	211	2.4	7.89	3.0	6.0	9.0	7.0			
	212.8	179	2.4	6.72	3.0	6.0	9.0	7.0			
	251.3	152	2.5	5.69	3.0	6.0	10.0	7.0			
	260.5	147	2.1	5.49	3.0	5.0	10.0	7.0			
	270.2	141	2.6	5.29	3.0	5.0	10.0	7.0			
	323.2	118	2.4	4.42	3.0	5.0	10.0	6.0			
	381.7	100	2.5	3.75	3.0	5.0	10.0	6.0			
	481.9	79	2.6	2.97	3.0	5.0	10.0	6.0			

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	Sayfa Page mm
4.00	85.4	447	0.8	16.74	0.3	0.2	6.0	5.0	**PA 22 - 112M/4B PF 22 - 112M/4B**	57	102
	97.5	392	0.9	14.67	0.3	0.2	7.0	5.0			
	117.3	326	1.0	12.19	0.3	0.2	7.0	5.0			
	131.1	291	1.1	10.90	0.3	0.2	7.0	5.0			
	169.0	226	1.1	8.46	0.3	0.2	7.0	5.0			
	188.9	202	1.2	7.57	0.3	0.2	7.0	5.0			
	208.5	183	1.4	6.86	0.3	4.0	7.0	5.0			
	219.6	174	1.3	6.51	0.3	4.0	7.0	5.0			
	247.9	154	1.4	5.77	1.0	4.0	7.0	5.0			
	276.0	138	1.1	5.18	1.0	3.0	7.0	5.0			
	308.5	124	1.2	4.64	1.0	3.0	7.0	4.0			
	358.8	106	1.3	3.99	2.0	3.0	7.0	4.0			
	404.9	94	1.4	3.53	2.0	3.0	8.0	4.0			
	511.4	75	1.5	2.80	2.0	3.0	7.0	4.0			
	247.2	155	0.8	5.78	-	-	5.0	4.0	**PA 12 - 112M/4B PF 12 - 112M/4B**	46	98
	289.9	132	0.9	4.93	-	-	5.0	4.0			
	318.4	120	1.0	4.49	-	-	5.0	3.0			
	332.0	115	1.0	4.31	-	-	5.0	4.0			
	359.6	106	1.1	3.98	-	-	5.0	3.0			
	421.6	91	1.2	3.39	-	-	5.0	3.0			
	482.9	79	1.3	2.96	-	-	5.0	3.0			
	499.6	76	2.9	2.86	-	7.0	-	-	**PA 51 - 112M/4B PF 51 - 112M/4B**	73	92
	572.0	67	3.0	2.50	-	6.0	-	-			
	693.3	55	3.3	2.06	-	6.0	-	-			
	785.1	49	3.0	1.82	-	6.0	-	-			
	572.0	67	2.6	2.50	-	5.0	-	-	**PA 41 - 112M/4B PF 41 - 112M/4B**	64	90
	668.9	57	2.8	2.14	-	5.0	-	-			
	785.1	49	2.9	1.82	-	4.0	-	-			
	554.3	69	2.1	2.58	-	4.0	-	-	**PA 31 - 112M/4B PF 31 - 112M/4B**	55	88
	687.5	56	2.4	2.08	-	4.0	-	-			
	812.5	47	2.5	1.76	-	4.0	-	-			
	528.0	72	1.1	2.71	-	3.0	-	-	**PA 21 - 112M/4B PF 21 - 112M/4B**	50	86
	590.2	65	1.1	2.42	-	3.0	-	-			
	686.4	56	1.2	2.08	-	3.0	-	-			
	774.6	49	1.3	1.85	-	3.0	-	-			
	978.4	39	1.5	1.46	-	3.0	-	-			
	616.4	62	0.8	2.32	-	2.0	-	-	**PA 11 - 112M/4B PF 11 - 112M/4B**	42	84
	701.0	54	1.1	2.04	-	2.0	-	-			
	790.1	48	1.1	1.81	-	2.0	-	-			
	928.6	41	1.2	1.54	-	2.0	-	-			
	1059.3	36	1.4	1.35	-	2.0	-	-			
5.50	2.2	23357	0.9	642.57	85.0	120.0	120.0	120.0	**PA 103/52 - 132S/4C PF 103/52 - 132S/4C**	844	142
	3.1	17018	1.2	468.19	94.0	116.0	120.0	120.0			
	4.2	12399	1.6	341.11	98.0	111.0	120.0	120.0			
	4.9	10780	1.9	296.56	99.0	108.0	120.0	120.0			
	5.9	8893	2.2	244.66	100.0	104.0	120.0	120.0			
	7.0	7537	3.1	207.36	101.0	100.0	120.0	120.0	**PA/PF 103 - 132S/4C**	773	135
	4.3	12100	1.0	332.89	58.0	69.0	88.0	80.0	**PA 93/42 - 132S/4C PF 93/42 - 132S/4C**	596	142
	5.0	10468	1.2	287.97	61.0	69.0	89.0	80.0			
	6.0	8749	1.4	240.68	63.0	67.0	91.0	80.0			
	7.7	6833	2.0	187.99	64.0	65.0	92.0	80.0	**PA 93 - 132S/4C PF 93 - 132S/4C**	554	131
	13.2	3971	2.9	109.25	66.0	58.0	93.0	80.0			
	5.2	10033	0.8	276.00	32.0	34.0	54.0	65.0	**PA 83/42 - 132S/4C PF 83/42 - 132S/4C**	417	142
	6.1	8580	0.9	236.03	36.0	34.0	57.0	65.0			
	6.7	7869	1.1	216.49	38.0	35.0	58.0	65.0	**PA 83 - 132S/4C PF 83 - 132S/4C**	375	127
	8.8	5986	1.5	164.68	41.0	34.0	60.0	65.0			
	10.6	4968	1.5	136.67	43.0	34.0	61.0	65.0			
	13.9	3779	2.4	103.97	44.0	33.0	62.0	65.0			
	17.9	2931	3.1	80.63	44.0	32.0	63.0	65.0			
	20.6	2551	3.3	70.19	45.0	31.0	63.0	65.0			
	23.4	2246	3.5	61.79	45.0	30.0	63.0	65.0			
	8.4	6219	0.8	171.10	18.0	14.0	33.0	50.0	**PA/PF 73/32 - 132S/4C**	294	140

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
5.50	8.7	6036	0.9	166.07	19.0	14.0	34.0	50.0	PA 73 - 132S/4C PF 73 - 132S/4C	268	123
	11.6	4527	1.2	124.55	24.0	16.0	37.0	50.0			
	11.6	4521	1.1	124.38	24.0	16.0	37.0	50.0			
	14.4	3652	1.0	100.47	25.0	16.0	38.0	50.0			
	15.8	3320	1.6	91.33	26.0	16.0	38.0	49.0			
	19.3	2719	2.0	74.80	27.0	16.0	39.0	48.0			
	23.9	2196	2.6	60.42	27.0	16.0	39.0	46.0			
	27.6	1900	2.9	52.28	28.0	16.0	40.0	44.0			
	10.9	4827	0.8	132.78	9.0	15.0	21.0	41.0	PA 63 - 132S/4C PF 63 - 132S/4C	184	119
	13.4	3928	0.9	108.08	13.0	16.0	24.0	40.0			
	13.5	3897	0.9	107.21	14.0	16.0	24.0	40.0			
	16.6	3172	1.0	87.26	17.0	16.0	26.0	40.0			
	18.6	2817	1.3	77.49	17.0	16.0	26.0	39.0			
	23.0	2288	1.6	62.96	18.0	16.0	27.0	38.0			
	26.8	1957	1.9	53.84	19.0	16.0	27.0	37.0			
	28.4	1848	2.0	50.83	19.0	16.0	27.0	37.0			
	33.2	1580	2.3	43.47	20.0	16.0	28.0	36.0			
	40.0	1314	2.7	36.14	20.0	16.0	28.0	34.0			
	46.8	1123	2.9	30.90	20.0	15.0	28.0	33.0			
	29.6	1772	1.4	48.75	19.0	16.0	28.0	36.0	PA 62 - 132S/4C PF 62 - 132S/4C	189	118
	39.0	1348	2.2	37.08	20.0	16.0	28.0	34.0			
	24.3	2163	0.9	59.50	11.0	24.0	18.0	40.0	PA 52 - 132S/4C PF 52 - 132S/4C	129	114
	26.9	1955	1.0	53.79	12.0	24.0	18.0	40.0			
	29.5	1779	1.1	48.95	12.0	24.0	18.0	40.0			
	35.8	1466	1.3	40.34	13.0	24.0	19.0	39.0			
	37.6	1398	1.2	38.46	13.0	24.0	19.0	38.0			
	40.1	1309	1.1	36.71	13.0	24.0	19.0	38.0			
	39.4	1335	1.4	36.00	13.0	24.0	19.0	37.0			
	44.4	1183	1.1	32.54	13.0	24.0	19.0	38.0			
	45.0	1168	1.2	32.12	13.0	24.0	19.0	36.0			
	50.1	1049	1.9	28.85	14.0	24.0	19.0	36.0			
	54.7	961	2.0	26.43	14.0	24.0	19.0	35.0			
	60.0	876	1.9	24.09	14.0	24.0	20.0	34.0			
	60.5	869	2.2	23.89	14.0	24.0	20.0	34.0			
	66.7	787	2.4	21.65	14.0	24.0	20.0	33.0			
	73.8	711	2.7	19.57	13.0	24.0	20.0	33.0			
	81.1	647	2.9	17.81	13.0	24.0	20.0	32.0			
	35.0	1501	0.8	41.30	0.4	0.2	9.0	5.0	PA 42 - 132S/4C PF 42 - 132S/4C	100	110
	41.0	1282	1.0	35.26	0.4	0.2	10.0	6.0			
	47.4	1108	1.0	30.47	1.0	0.3	10.0	6.0			
	49.4	1064	1.0	29.28	1.0	0.3	10.0	6.0			
	55.8	941	1.3	25.88	1.0	0.3	11.0	6.0			
	58.6	897	1.0	24.68	1.0	0.3	11.0	6.0			
	59.2	888	1.0	24.42	1.0	0.3	11.0	6.0			
	66.1	794	1.4	21.85	1.0	9.0	11.0	7.0			
	67.2	781	1.5	21.50	1.0	0.3	11.0	6.0			
	80.6	652	1.5	17.93	1.0	8.0	11.0	6.0			
	81.7	643	1.8	17.69	2.0	8.0	11.0	7.0			
	95.7	549	2.3	15.10	3.0	8.0	11.0	7.0			
	100.5	523	2.2	14.38	4.0	8.0	11.0	7.0			
	117.7	446	2.7	12.27	5.0	8.0	11.0	7.0			
	141.8	370	2.8	10.19	5.0	8.0	11.0	6.0			
	170.0	309	2.7	8.50	5.0	8.0	12.0	6.0			
	62.6	840	0.8	23.10	0.4	0.3	8.0	7.0	PA 32 - 132S/4C PF 32 - 132S/4C	84	106
	69.9	751	0.9	20.67	0.4	0.3	9.0	7.0			
	77.5	678	0.9	18.64	0.4	0.3	9.0	7.0			
	86.8	605	0.9	16.64	0.4	0.3	9.0	7.0			
	89.0	590	1.1	16.23	0.4	0.3	9.0	7.0			
	96.3	546	0.9	15.01	0.4	0.3	9.0	7.0			
	99.5	528	1.3	14.52	0.3	5.0	9.0	7.0			
	123.6	425	1.7	11.70	2.0	5.0	9.0	7.0			
	147.6	356	1.8	9.79	2.0	5.0	9.0	7.0			
	183.1	287	2.3	7.89	3.0	5.0	9.0	7.0			
	215.0	244	2.5	6.72	3.0	5.0	9.0	7.0			
	254.0	207	2.7	5.69	3.0	5.0	9.0	6.0			
	263.2	200	2.2	5.49	3.0	5.0	9.0	6.0			
	273.0	192	2.8	5.29	3.0	5.0	9.0	6.0			
	326.6	161	2.5	4.42	3.0	5.0	9.0	6.0			
	385.7	136	2.7	3.75	3.0	4.0	10.0	6.0			
	487.0	108	2.8	2.97	3.0	4.0	9.0	6.0			

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	Sayfa Page mm
5.50	504.9	104	3.1	2.86	-	6.0	-	-	**PA/PF 51 - 132S/4C**	90	92
	578.0 675.9 793.3	91 78 66	2.7 2.9 3.1	2.50 2.14 1.82	- - -	5.0 4.0 4.0	- - -	- - -	**PA 41 - 132S/4C** **PF 41 - 132S/4C**	81	90
	560.1 694.7	94 76	2.0 2.2	2.58 2.08	- -	4.0 3.0	- -	- -	**PA 31 - 132S/4C** **PF 31 - 132S/4C**	71	88
7.50	3.1 4.3 4.9 5.9 7.8 9.4	23127 16850 14649 12086 9127 7646	0.9 1.2 1.4 1.7 2.2 2.6	468.19 341.11 296.56 244.66 184.77 154.79	86.0 94.0 96.0 98.0 100.0 101.0	106.0 103.0 101.0 99.0 94.0 91.0	120.0 120.0 120.0 120.0 120.0 120.0	120.0 120.0 120.0 120.0 120.0 120.0	**PA 103/52 - 132M/4B** **PF 103/52 - 132M/4B**	855	142
	7.0	10243	2.3	207.36	100.0	96.0	120.0	120.0	**PA/PF 103 - 132M/4B**	784	135
	5.0 6.0	14225 11889	0.9 1.0	287.97 240.68	55.0 59.0	62.0 61.0	85.0 88.0	80.0 80.0	**PA 93/42 - 132M/4B** **PF 93/42 - 132M/4B**	607	142
	7.7 13.3 15.5	9286 5397 4615	1.5 2.1 2.5	187.99 109.25 93.43	62.0 65.0 66.0	60.0 56.0 54.0	90.0 92.0 93.0	80.0 80.0 80.0	**PA 93 - 132M/4B** **PF 93 - 132M/4B**	565	131
	7.2	9933	0.8	201.09	32.0	29.0	54.0	65.0	**PA/PF 83/42 - 132M/4B**	428	142
	8.8 13.9 18.0 20.7 23.5	8135 5136 3983 3467 3052	1.1 1.8 2.3 2.5 2.6	164.68 103.97 80.63 70.19 61.79	37.0 42.0 44.0 44.0 44.0	30.0 30.0 30.0 29.0 29.0	58.0 61.0 62.0 62.0 62.0	65.0 65.0 65.0 65.0 65.0	**PA 83 - 132M/4B** **PF 83 - 132M/4B**	386	127
	11.7 14.4 15.9 19.4 24.0 27.7 31.8 38.5	6152 4963 4511 3695 2985 2583 2256 1861	0.9 0.8 1.2 1.4 1.9 2.2 2.4 2.5	124.55 100.47 91.33 74.80 60.42 52.28 45.67 37.68	19.0 22.0 24.0 25.0 26.0 27.0 27.0 28.0	12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	34.0 36.0 37.0 38.0 39.0 39.0 39.0 40.0	46.0 46.0 45.0 45.0 43.0 42.0 41.0 40.0	**PA 73 - 132M/4B** **PF 73 - 132M/4B**	279	123
	33.2	2158	1.9	43.70	27.0	14.0	39.0	41.0	**PA/PF 72 - 132M/4B**	269	122
	18.7 23.0 26.9 28.5 33.4 40.1 46.9 55.1 66.0 69.7	3828 3110 2659 2511 2147 1785 1527 1301 1085 1028	1.0 1.2 1.4 1.5 1.7 2.0 2.2 2.3 2.3 2.3	77.49 62.96 53.84 50.83 43.47 36.14 30.90 26.33 21.97 20.81	14.0 17.0 18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	24.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0	36.0 35.0 35.0 34.0 34.0 33.0 32.0 31.0 29.0 29.0	**PA 63 - 132M/4B** **PF 63 - 132M/4B**	195	119
	39.1	1832	1.6	37.08	19.0	14.0	28.0	33.0	**PA/PF 62 - 132M/4B**	200	118
	35.9 40.3 39.5 44.6 50.3 54.9 60.2 60.7 67.0 74.1 81.4 103.6 107.7	1993 1778 1814 1607 1425 1306 1190 1180 1069 967 880 691 665	1.0 0.8 1.1 0.8 1.4 1.4 1.4 1.6 1.8 2.0 2.1 2.1 2.4	40.34 36.71 36.00 32.54 28.85 26.43 24.09 23.89 21.65 19.57 17.81 13.99 13.46	11.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	37.0 36.0 36.0 35.0 34.0 34.0 33.0 33.0 32.0 32.0 31.0 29.0 29.0	**PA 52 - 132M/4B** **PF 52 - 132M/4B**	140	114

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
7.50	56.0 66.4 67.5 80.9 82.0 96.0 100.9 118.1 142.3 170.6 199.5 234.1 270.7 316.5 371.5	1279 1079 1062 886 874 746 710 606 503 420 359 306 265 226 193	1.0 1.0 1.1 1.1 1.4 1.7 1.6 2.0 2.0 2.0 2.1 2.3 2.0 2.2 2.3	25.88 21.85 21.50 17.93 17.69 15.10 14.38 12.27 10.19 8.50 7.27 6.19 5.36 4.58 3.90	0.4 1.0 1.0 1.0 1.0 1.0 1.0 1.0 2.0 3.0 4.0 4.0 4.0 4.0 4.0	0.2 0.2 0.2 0.2 0.2 0.2 0.2 7.0 7.0 7.0 6.0 6.0 6.0 6.0 6.0	10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	4.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0	**PA 42 - 132M/4B** **PF 42 - 132M/4B**	111	110
	89.3 99.8 124.0 148.1 183.7 215.8 254.8 264.1 274.0 327.7 387.0 488.6	802 717 578 484 390 332 281 271 261 219 185 147	0.8 0.9 1.2 1.3 1.7 1.8 2.0 1.6 2.1 1.8 2.0 2.1	16.23 14.52 11.70 9.79 7.89 6.72 5.69 5.49 5.29 4.42 3.75 2.97	- - - - 1.0 1.0 2.0 1.0 3.0 2.0 2.0 2.0	- - - - 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0	**PA 32 - 132M/4B** **PF 32 - 132M/4B**	95	106
	506.6	141	2.3	2.86		6.0			**PA/PF 51 - 132M/4B**	101	92
	580.0 678.2	123 106	2.0 2.1	2.50 2.14	- -	4.0 4.0	- -	- -	**PA 41 - 132M/4B** **PF 41 - 132M/4B**	92	90
	562.0 697.1	127 103	1.4 1.6	2.58 2.08	- -	3.0 3.0	- -	- -	**PA 31 - 132M/4B** **PF 31 - 132M/4B**	82	88
9.20	4.3 4.9 5.9 7.8 9.4 11.8 13.7	20699 17970 14825 11196 9379 7438 6392	1.0 1.1 1.3 1.8 2.1 2.7 3.1	341.11 296.56 244.66 184.77 154.79 122.75 105.49	90.0 93.0 96.0 99.0 100.0 101.0 101.0	97.0 96.0 94.0 90.0 88.0 84.0 81.0	120.0 120.0 120.0 120.0 120.0 120.0 120.0	120.0 120.0 120.0 120.0 120.0 120.0 120.0	**PA 103/52 - 132M/4** **PF 103/52 - 132M/4**	855	142
	7.0	12565	1.8	207.36	98.0	92.0	120.0	120.0	**PA/PF 103 - 132M/4**	784	135
	6.0	14584	0.8	240.68	54.0	57.0	85.0	80.0	**PA/PF 93/42 - 132M/4**	607	142
	7.7 13.3 15.5 20.0	11391 6620 5662 4388	1.2 1.7 2.5 3.1	187.99 109.25 93.43 72.42	59.0 64.0 65.0 66.0	56.0 53.0 52.0 50.0	88.0 92.0 92.0 93.0	80.0 80.0 80.0 80.0	**PA 93 - 132M/4** **PF 93 - 132M/4**	565	131
	8.8 13.9 18.0 20.7 23.5 28.1	9979 6300 4886 4253 3744 3122	0.9 1.5 1.8 2.1 2.4 2.9	164.68 103.97 80.63 70.19 61.79 51.52	32.0 41.0 43.0 43.0 44.0 44.0	26.0 28.0 28.0 27.0 27.0 27.0	54.0 60.0 61.0 62.0 62.0 62.0	65.0 65.0 65.0 65.0 65.0 65.0	**PA 83 - 132M/4** **PF 83 - 132M/4**	386	127
	29.7	2955	1.8	48.76	44.0	26.0	63.0	65.0	**PA/PF 82 - 132M/4**	378	126
	11.7 15.9 19.4 24.0 27.7 31.8 38.5 43.6 51.1	7537 5534 4533 3661 3168 2767 2283 2016 1718	0.7 1.0 1.2 1.5 1.8 1.9 2.2 2.5 2.9	124.38 91.33 74.80 60.42 52.28 45.67 37.68 33.27 28.35	11.0 21.0 23.0 25.0 26.0 27.0 27.0 28.0 28.0	9.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	31.0 35.0 37.0 38.0 39.0 39.0 39.0 40.0 40.0	42.0 42.0 42.0 41.0 40.0 40.0 38.0 38.0 36.0	**PA 73 - 132M/4** **PF 73 - 132M/4**	279	123
	33.2 43.8	2648 2005	1.5 1.6	43.70 33.08	27.0 28.0	13.0 13.0	39.0 40.0	40.0 37.0	**PA 72 - 132M/4** **PF 72 - 132M/4**	269	122

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
9.20	18.7	4695	0.8	77.49	10.0	11.0	22.0	33.0	**PA 63 - 132M/4 PF 63 - 132M/4**	195	119
	23.0	3815	1.0	62.96	14.0	12.0	24.0	33.0			
	26.9	3262	1.1	53.84	16.0	13.0	25.0	33.0			
	28.5	3080	1.2	50.83	17.0	13.0	26.0	32.0			
	33.4	2634	1.4	43.47	18.0	13.0	26.0	32.0			
	40.1	2190	1.7	36.14	19.0	13.0	27.0	31.0			
	46.9	1873	1.9	30.90	19.0	13.0	27.0	31.0			
	55.1	1595	2.0	26.33	20.0	13.0	28.0	30.0			
	66.0	1331	2.4	21.97	20.0	13.0	28.0	29.0			
	69.7	1261	2.5	20.81	20.0	13.0	28.0	29.0			
	83.5	1052	2.9	17.36	20.0	12.0	28.0	27.0			
	39.1	2247	1.3	37.08	19.0	13.0	27.0	31.0	**PA 62 - 132M/4 PF 62 - 132M/4**	200	118
	79.9	1100	2.8	18.16	20.0	13.0	28.0	28.0			
	91.7	958	3.1	15.80	20.0	12.0	28.0	27.0			
	35.9	2444	0.8	40.34	4.0	24.0	17.0	35.0	**PA 52 - 132M/4 PF 52 - 132M/4**	140	114
	39.5	2225	0.9	36.71	6.0	24.0	18.0	35.0			
	50.3	1748	1.2	28.85	9.0	24.0	18.0	33.0			
	54.9	1602	1.2	26.43	13.0	24.0	19.0	33.0			
	60.2	1460	1.2	24.09	11.0	24.0	19.0	32.0			
	60.7	1448	1.3	23.89	13.0	24.0	19.0	32.0			
	67.0	1312	1.4	21.65	13.0	24.0	19.0	32.0			
	74.1	1186	1.6	19.57	12.0	24.0	19.0	31.0			
	81.4	1079	1.8	17.81	12.0	24.0	19.0	30.0			
	103.6	848	2.3	13.99	11.0	22.0	20.0	29.0			
	107.7	816	2.3	13.46	11.0	22.0	20.0	28.0			
	137.1	641	2.7	10.58	11.0	21.0	20.0	27.0			
	164.2	535	3.1	8.83	10.0	19.0	20.0	26.0			
	56.0	1568	0.8	25.88	0.3	0.2	7.0	3.0	**PA 42 - 132M/4 PF 42 - 132M/4**	111	110
	66.4	1324	0.8	21.85	0.4	0.2	10.0	4.0			
	67.5	1303	0.9	21.50	1.0	0.2	10.0	4.0			
	80.9	1086	0.9	17.93	1.0	0.2	10.0	4.0			
	82.0	1072	1.1	17.69	1.0	0.2	10.0	4.0			
	96.0	915	1.4	15.10	1.0	0.2	11.0	5.0			
	100.9	871	1.3	14.38	1.0	0.2	11.0	5.0			
	118.1	744	1.6	12.27	1.0	0.2	11.0	5.0			
	142.3	618	1.9	10.19	1.0	0.2	11.0	5.0			
	170.6	515	2.1	8.50	1.0	6.0	11.0	5.0			
	199.5	440	2.4	7.27	2.0	6.0	11.0	5.0			
	234.1	375	2.9	6.19	3.0	6.0	11.0	5.0			
	270.7	325	2.5	5.36	2.0	5.0	11.0	5.0			
	316.5	278	2.8	4.58	3.0	5.0	11.0	5.0			
	371.5	236	3.0	3.90	3.0	5.0	10.0	5.0			
	99.8	880	0.8	14.52	0.3	0.2	7.0	5.0	**PA 32 - 132M/4 PF 32 - 132M/4**	95	106
	124.0	709	1.0	11.70	0.4	0.2	8.0	5.0			
	148.1	593	1.1	9.79	0.4	0.2	9.0	5.0			
	183.7	478	1.4	7.89	0.4	0.2	9.0	5.0			
	215.8	407	1.5	6.72	0.4	0.2	9.0	5.0			
	254.8	345	1.8	5.69	0.3	3.0	9.0	5.0			
	264.1	333	1.3	5.49	0.4	0.3	9.0	5.0			
	274.0	321	2.0	5.29	1.0	4.0	9.0	6.0			
	327.7	268	1.7	4.42	1.0	3.0	9.0	5.0			
	387.0	227	2.0	3.75	2.0	3.0	9.0	5.0			
	488.6	180	2.4	2.97	2.0	3.0	9.0	5.0			
	506.6	173	2.6	2.86	-	6.0	-	-	**PA/PF 51 - 132M/4**	101	92
	580.0	151	1.8	2.50	-	4.0	-	-	**PA 41 - 132M/4 PF 41 - 132M/4**	92	90
	678.2	130	1.9	2.14	-	4.0	-	-			
	562.0	156	1.2	2.58	-	3.0	-	-	**PA 31 - 132M/4 PF 31 - 132M/4**	82	88
	697.1	126	1.3	2.08	-	3.0	-	-			
11.0	4.3	24713	0.8	341.11	84.0	91.0	120.0	120.0	**PA 103/52 - 160M/4B PF 103/52 - 160M/4B**	886	142
	4.9	21485	0.9	296.56	89.0	90.0	120.0	120.0			
	5.9	17725	1.1	244.66	94.0	89.0	120.0	120.0			
	7.8	13387	1.5	184.77	97.0	87.0	120.0	120.0			
	9.4	11214	1.8	154.79	99.0	85.0	120.0	120.0			
	11.8	8893	2.2	122.75	100.0	81.0	120.0	120.0			
	13.7	7643	2.6	105.49	101.0	79.0	120.0	120.0			

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	Sayfa Page mm
11.0	7.0 10.6	15023 9891	1.5 2.3	207.36 136.52	96.0 100.0	88.0 83.0	120.0 120.0	120.0 120.0	**PA 103 - 160M/4B** **PF 103 - 160M/4B**	812	135
	8.0	13186	0.9	182.00	57.0	52.0	87.0	80.0	**PA/PF 93/42 - 160M/4B**	638	142
	9.0 11.4 13.5	11654 9226 7793	1.0 1.3 1.6	160.87 127.35 107.56	59.0 62.0 64.0	52.0 52.0 51.0	88.0 90.0 91.0	80.0 80.0 80.0	**PA 93/52 - 160M/4B** **PF 93/52 - 160M/4B**	667	142
	7.7 11.8 13.3 15.5 20.0	13620 8909 7915 6769 5247	1.0 1.6 1.5 2.1 2.6	187.99 122.97 109.25 93.43 72.42	56.0 63.0 63.0 64.0 65.0	52.0 52.0 51.0 50.0 48.0	86.0 91.0 91.0 92.0 92.0	80.0 80.0 80.0 80.0 80.0	**PA 93 - 160M/4B** **PF 93 - 160M/4B**	593	131
	8.8 13.9 18.0 20.7 23.5 28.1 32.7 37.2	11931 7532 5842 5085 4476 3733 3213 2826	0.7 1.2 1.5 1.8 2.0 2.4 2.8 2.8	164.68 103.97 80.63 70.19 61.79 51.52 44.34 39.01	25.0 38.0 41.0 42.0 43.0 44.0 44.0 45.0	22.0 25.0 26.0 26.0 26.0 25.0 25.0 25.0	50.0 58.0 60.0 61.0 62.0 62.0 62.0 63.0	65.0 65.0 65.0 65.0 65.0 64.0 62.0 61.0	**PA 83 - 160M/4B** **PF 83 - 160M/4B**	414	127
	29.7 35.9	3533 2929	1.5 1.4	48.76 40.43	44.0 44.0	25.0 25.0	62.0 63.0	63.0 61.0	**PA 82 - 160M/4B** **PF 82 - 160M/4B**	406	126
	15.9 19.4 24.0 27.7 31.8 38.5 43.6 51.1 62.0	6617 5419 4377 3788 3309 2730 2411 2054 1695	0.8 1.0 1.3 1.5 1.6 1.8 2.1 2.4 2.8	91.33 74.80 60.42 52.28 45.67 37.68 33.27 28.35 23.39	16.0 21.0 24.0 25.0 26.0 27.0 27.0 27.0 28.0	9.0 10.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	33.0 36.0 37.0 38.0 38.0 39.0 39.0 40.0 40.0	39.0 39.0 39.0 39.0 38.0 37.0 36.0 35.0 34.0	**PA 73 - 160M/4B** **PF 73 - 160M/4B**	307	123
	33.2 43.8 50.7	3166 2397 2071	1.3 1.3 2.0	43.70 33.08 28.58	26.0 27.0 27.0	12.0 12.0 12.0	39.0 39.0 40.0	38.0 36.0 36.0	**PA 72 - 160M/4B** **PF 72 - 160M/4B**	297	122
	23.0 26.9 28.5 33.4 40.1 46.9 55.1 66.0 69.7	4561 3901 3683 3149 2618 2239 1908 1592 1507	0.8 0.9 1.0 1.2 1.4 1.6 1.7 2.0 2.1	62.96 53.84 50.83 43.47 36.14 30.90 26.33 21.97 20.81	10.0 14.0 15.0 17.0 18.0 19.0 19.0 20.0 20.0	10.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	22.0 24.0 25.0 26.0 27.0 27.0 27.0 28.0 28.0	30.0 30.0 30.0 30.0 30.0 29.0 29.0 28.0 28.0	**PA 63 - 160M/4B** **PF 63 - 160M/4B**	226	119
	39.1 79.9 91.7 104.2 125.0 137.8	2687 1315 1145 1008 841 762	1.1 2.3 2.6 2.8 3.0 2.8	37.08 18.16 15.80 13.91 11.60 10.52	18.0 20.0 20.0 20.0 20.0 20.0	12.0 12.0 12.0 12.0 11.0 11.0	26.0 28.0 28.0 28.0 28.0 28.0	30.0 27.0 26.0 26.0 25.0 24.0	**PA 62 - 160M/4B** **PF 62 - 160M/4B**	228	118
	54.9 60.7 67.0 74.1 81.4 103.6 107.7 137.1 164.2	1915 1731 1569 1418 1290 1014 975 766 640	1.0 1.1 1.2 1.3 1.5 1.9 1.9 2.3 2.6	26.43 23.89 21.65 19.57 17.81 13.99 13.46 10.58 8.83	8.0 9.0 11.0 12.0 12.0 11.0 11.0 10.0 10.0	24.0 24.0 24.0 24.0 23.0 21.0 22.0 20.0 19.0	18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0	32.0 31.0 31.0 30.0 30.0 28.0 28.0 26.0 25.0	**PA 52 - 160M/4B** **PF 52 - 160M/4B**	171	114

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
11.0	82.0	1282	0.9	17.69	0.4	0.2	9.0	3.0	**PA 42 - 160M/4B** **PF 42 - 160M/4B**	142	110
	96.0	1094	1.1	15.10	0.4	0.2	10.0	4.0			
	100.9	1041	1.1	14.38	1.0	0.2	10.0	4.0			
	118.1	889	1.3	12.27	1.0	0.2	10.0	4.0			
	142.3	738	1.6	10.19	1.0	0.2	11.0	5.0			
	170.6	616	1.7	8.50	1.0	0.2	11.0	5.0			
	199.5	527	2.0	7.27	1.0	0.2	11.0	5.0			
	234.1	449	2.4	6.19	1.0	5.0	11.0	5.0			
	270.7	388	2.1	5.36	1.0	5.0	10.0	5.0			
	316.5	332	2.3	4.58	2.0	5.0	10.0	5.0			
	371.5	283	2.5	3.90	2.0	5.0	10.0	5.0			
	414.3	254	2.6	3.50	3.0	5.0	10.0	5.0			
	451.1	233	2.7	3.21	3.0	5.0	10.0	5.0			
	480.8	218	2.8	3.02	3.0	5.0	10.0	5.0			
	506.6	207	2.2	2.86	-	5.0	-	-	**PA 51 - 160M/4B** **PF 51 - 160M/4B**	132	92
	580.0	181	2.4	2.50	-	5.0	-	-			
	703.0	149	2.6	2.06	-	5.0	-	-			
	580.0	181	1.5	2.50	-	3.0	-	-	**PA 41 - 160M/4B** **PF 41 - 160M/4B**	123	90
	678.2	155	1.6	2.14	-	3.0	-	-			
15.0	5.9	24171	0.8	244.66	85.0	79.0	120.0	120.0	**PA 103/52 - 160L/4A** **PF 103/52 - 160L/4A**	895	142
	7.8	18254	1.1	184.77	93.0	79.0	120.0	120.0			
	9.4	15292	1.3	154.79	96.0	78.0	120.0	120.0			
	11.8	12127	1.6	122.75	98.0	76.0	120.0	120.0			
	13.7	10422	1.9	105.49	100.0	75.0	120.0	120.0			
	7.0	20486	1.1	207.36	90.0	79.0	120.0	120.0	**PA 103 - 160L/4A** **PF 103 - 160L/4A**	821	135
	10.6	13487	1.7	136.52	98.0	77.0	120.0	120.0			
	17.8	8048	2.2	81.46	101.0	72.0	120.0	120.0			
	20.6	6957	2.4	70.42	101.0	70.0	120.0	119.0			
	7.7	18572	0.8	187.99	45.0	43.0	80.0	80.0	**PA 93 - 160L/4A** **PF 93 - 160L/4A**	602	131
	11.8	12149	1.1	122.97	59.0	46.0	88.0	80.0			
	13.3	10793	1.1	109.25	60.0	46.0	89.0	80.0			
	15.5	9231	1.5	93.43	62.0	46.0	90.0	80.0			
	20.0	7155	1.9	72.42	64.0	45.0	92.0	80.0			
	23.5	6092	2.1	61.66	65.0	44.0	92.0	80.0			
	27.0	5311	2.3	53.75	65.0	43.0	92.0	80.0			
	31.1	4607	2.5	46.63	66.0	42.0	93.0	80.0			
	13.9	10271	0.9	103.97	31.0	20.0	54.0	64.0	**PA 83 - 160L/4A** **PF 83 - 160L/4A**	423	127
	18.0	7966	1.1	80.63	37.0	21.0	58.0	63.0			
	20.7	6934	1.3	70.19	40.0	22.0	59.0	62.0			
	23.5	6104	1.5	61.79	41.0	22.0	60.0	62.0			
	28.1	5090	1.8	51.52	42.0	23.0	61.0	60.0			
	32.7	4381	2.0	44.34	43.0	23.0	62.0	59.0			
	37.2	3854	2.0	39.01	44.0	22.0	62.0	58.0			
	44.6	3213	2.2	32.53	44.0	22.0	62.0	56.0			
	51.8	2766	2.3	27.99	45.0	22.0	63.0	54.0			
	59.5	2409	2.2	24.38	45.0	21.0	63.0	53.0			
	29.7	4817	1.1	48.76	43.0	23.0	61.0	60.0	**PA 82 - 160L/4A** **PF 82 - 160L/4A**	415	126
	35.9	3995	1.0	40.43	44.0	22.0	62.0	58.0			
	45.2	3171	2.1	32.10	44.0	22.0	62.0	56.0			
	54.5	2630	2.4	26.62	45.0	22.0	63.0	54.0			
	24.0	5969	0.9	60.42	19.0	7.0	34.0	34.0	**PA 73 - 160L/4A** **PF 73 - 160L/4A**	316	123
	27.7	5165	1.1	52.28	22.0	8.0	36.0	34.0			
	31.8	4512	1.2	45.67	24.0	9.0	37.0	34.0			
	38.5	3722	1.3	37.68	25.0	10.0	38.0	34.0			
	43.6	3287	1.5	33.27	26.0	10.0	39.0	34.0			
	51.1	2801	1.8	28.35	27.0	10.0	39.0	33.0			
	62.0	2311	2.1	23.39	27.0	10.0	39.0	32.0			
	33.2	4317	0.9	43.70	24.0	9.0	37.0	35.0	**PA 72 - 160L/4A** **PF 72 - 160L/4A**	306	122
	43.8	3269	1.0	33.08	26.0	10.0	39.0	34.0			
	50.7	2824	1.4	28.58	27.0	10.0	39.0	33.0			
	67.0	2146	1.9	21.72	27.0	10.0	39.0	32.0			
	86.1	1663	2.2	16.83	28.0	11.0	39.0	31.0			
	101.2	1416	2.3	14.33	28.0	10.0	37.0	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	Sayfa Page mm
15.0	33.4	4294	0.9	43.47	12.0	9.0	23.0	26.0	PA 63 - 160L/4A PF 63 - 160L/4A	235	119
	40.1	3570	1.0	36.14	15.0	9.0	25.0	27.0			
	46.9	3053	1.2	30.90	17.0	10.0	26.0	27.0			
	55.1	2601	1.2	26.33	18.0	10.0	27.0	26.0			
	66.0	2171	1.5	21.97	19.0	10.0	27.0	26.0			
	69.7	2056	1.6	20.81	19.0	11.0	27.0	26.0			
	39.1	3664	0.8	37.08	15.0	9.0	25.0	27.0	PA 62 - 160L/4A PF 62 - 160L/4A	237	118
	79.9	1794	1.7	18.16	19.0	11.0	28.0	26.0			
	91.7	1561	1.9	15.80	20.0	11.0	28.0	25.0			
	104.2	1375	2.1	13.91	20.0	11.0	28.0	24.0			
	125.0	1146	2.2	11.60	20.0	11.0	28.0	24.0			
	137.8	1040	2.0	10.52	20.0	10.0	28.0	23.0			
	165.2	867	2.2	8.78	20.0	10.0	28.0	22.0			
	192.0	746	2.3	7.55	20.0	10.0	28.0	22.0			
	60.7	2361	0.8	23.89	1.0	1.0	12.0	29.0	PA 52 - 160L/4A PF 52 - 160L/4A	180	114
	67.0	2139	0.9	21.65	2.0	21.0	15.0	29.0			
	74.1	1933	1.0	19.57	4.0	21.0	16.0	28.0			
	81.4	1760	1.1	17.81	5.0	20.0	17.0	28.0			
	103.6	1383	1.4	13.99	8.0	19.0	18.0	27.0			
	107.7	1330	1.4	13.46	10.0	19.0	19.0	27.0			
	137.1	1045	1.7	10.58	10.0	18.0	19.0	25.0			
	164.2	873	1.9	8.83	9.0	17.0	20.0	24.0			
	199.0	720	2.1	7.29	9.0	16.0	20.0	23.0			
	225.3	636	2.2	6.44	9.0	16.0	20.0	23.0			
	259.1	553	1.9	5.60	8.0	15.0	20.0	22.0			
	314.1	456	2.1	4.62	8.0	14.0	20.0	21.0			
	355.7	403	2.2	4.08	8.0	14.0	20.0	20.0			
	395.0	363	2.3	3.67	8.0	13.0	20.0	20.0			
	421.1	340	2.3	3.44	7.0	13.0	20.0	19.0			
	96.0	1492	0.8	15.10	0.1	0.1	3.0	2.0	PA 42 - 160L/4A PF 42 - 160L/4A	151	110
	100.9	1420	0.8	14.38	0.3	0.1	5.0	2.0			
	118.1	1212	1.0	12.27	0.3	0.1	7.0	3.0			
	142.3	1007	1.2	10.19	0.4	0.1	8.0	3.0			
	170.6	840	1.3	8.50	0.4	0.1	8.0	3.0			
	199.5	718	1.5	7.27	0.4	0.1	9.0	4.0			
	234.1	612	1.8	6.19	0.4	0.1	9.0	4.0			
	270.7	529	1.5	5.36	0.4	0.2	9.0	4.0			
	316.5	453	1.7	4.58	0.4	0.2	9.0	4.0			
	371.5	386	1.8	3.90	0.4	0.2	9.0	4.0			
	414.3	346	1.9	3.50	0.4	4.0	9.0	4.0			
	451.1	318	2.0	3.21	1.0	4.0	9.0	4.0			
	480.8	298	2.0	3.02	1.0	4.0	9.0	4.0			
	506.6	283	1.6	2.86	-	5.0	-	-	PA 51 - 160L/4A PF 51 - 160L/4A	141	92
	580.0	247	1.7	2.50	-	5.0	-	-			
	703.0	204	1.9	2.06	-	4.0	-	-			
	580.0	247	1.1	2.50	-	3.0	-	-	PA 41 - 160L/4A PF 41 - 160L/4A	132	90
	678.2	211	1.2	2.14	-	3.0	-	-			
18.5	7.8	22514	0.9	184.77	88.0	72.0	120.0	120.0	PA 103/52 - 180M/4B PF 103/52 - 180M/4B	931	142
	9.4	18860	1.1	154.79	92.0	73.0	120.0	120.0			
	11.8	14957	1.3	122.75	96.0	72.0	120.0	120.0			
	13.7	12854	1.6	105.49	98.0	71.0	120.0	120.0			
	10.6	16634	1.4	136.52	95.0	72.0	120.0	120.0	PA 103 - 180M/4B PF 103 - 180M/4B	853	135
	17.8	9926	2.1	81.46	100.0	69.0	120.0	119.0			
	20.6	8580	2.3	70.42	101.0	67.0	120.0	116.0			
	23.9	7402	2.7	60.75	101.0	66.0	120.0	113.0			
	27.4	6458	3.1	53.00	101.0	64.0	120.0	109.0			
	11.4	15517	0.8	127.35	51.0	40.0	83.0	80.0	PA 93/52 - 180M/4B PF 93/52 - 180M/4B	712	142
	13.5	13106	0.9	107.56	58.0	41.0	87.0	80.0			
	11.8	14983	0.9	122.97	54.0	41.0	85.0	80.0	PA 93 - 180M/4B PF 93 - 180M/4B	634	131
	15.5	11385	1.2	93.43	60.0	42.0	89.0	80.0			
	20.0	8824	1.5	72.42	63.0	42.0	91.0	80.0			
	23.5	7514	1.7	61.66	64.0	41.0	91.0	80.0			
	27.0	6550	1.9	53.75	65.0	41.0	92.0	80.0			
	31.1	5682	2.1	46.63	65.0	40.0	92.0	80.0			
	36.7	4808	2.5	39.46	66.0	39.0	93.0	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	Sayfa Page mm
18.5	40.9	4322	2.2	35.47	66.0	39.0	93.0	80.0	**PA/PF 92 - 180M/4B**	623	130
	18.0 20.7 23.5 28.1 32.7 37.2 44.6 51.8 59.5 69.1	9825 8552 7529 6278 5403 4753 3963 3411 2971 2557	0.9 1.0 1.2 1.4 1.6 1.9 2.2 2.4 2.7 3.1	80.63 70.19 61.79 51.52 44.34 39.01 32.53 27.99 24.38 20.99	32.0 36.0 39.0 41.0 42.0 43.0 44.0 44.0 44.0 45.0	17.0 19.0 19.0 20.0 20.0 21.0 21.0 20.0 20.0 20.0	55.0 57.0 59.0 60.0 61.0 61.0 62.0 62.0 63.0 62.0	58.0 58.0 58.0 57.0 56.0 55.0 54.0 52.0 51.0 50.0	**PA 83 - 180M/4B** **PF 83 - 180M/4B**	455	127
	45.2 54.5	3911 3244	1.7 2.0	32.10 26.62	44.0 44.0	21.0 20.0	62.0 62.0	54.0 52.0	**PA 82 - 180M/4B** **PF 82 - 180M/4B**	447	126
	24.0 27.7 31.8 38.5 43.6 51.1 62.0	7362 6370 5564 4591 4054 3455 2850	0.8 0.9 1.0 1.1 1.2 1.4 1.8	60.42 52.28 45.67 37.68 33.27 28.35 23.39	11.0 17.0 20.0 23.0 25.0 26.0 26.0	4.0 5.0 7.0 8.0 8.0 9.0 9.0	25.0 29.0 31.0 34.0 35.0 36.0 36.0	30.0 31.0 31.0 31.0 31.0 31.0 31.0	**PA 73 - 180M/4B** **PF 73 - 180M/4B**	348	123
	50.7 66.8 86.1 101.2 116.0	3483 2637 2051 1746 1522	1.2 1.7 2.0 2.3 2.7	28.58 21.64 16.83 14.33 12.49	26.0 27.0 27.0 27.0 27.0	9.0 9.0 10.0 10.0 10.0	37.0 37.0 37.0 36.0 35.0	32.0 31.0 30.0 29.0 28.0	**PA 72 - 180M/4B** **PF 72 - 180M/4B**	338	122
	40.1 46.9 55.1 66.0 69.7	4403 3766 3208 2677 2535	0.8 1.0 1.0 1.2 1.3	36.14 30.90 26.33 21.97 20.81	11.0 14.0 16.0 18.0 18.0	7.0 8.0 9.0 9.0 9.0	21.0 24.0 26.0 26.0 27.0	24.0 24.0 24.0 24.0 24.0	**PA 63 - 180M/4B** **PF 63 - 180M/4B**	271	119
	79.9 91.7 104.2 125.0 137.8 165.2 192.0 228.4 274.0	2212 1926 1695 1414 1282 1069 920 773 645	1.4 1.6 1.8 2.2 2.4 2.8 3.3 2.5 2.9	18.16 15.80 13.91 11.60 10.52 8.78 7.55 6.35 5.29	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0	10.0 10.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0	27.0 27.0 28.0 28.0 28.0 27.0 27.0 25.0 25.0	24.0 24.0 23.0 23.0 22.0 22.0 21.0 20.0 19.0	**PA 62 - 180M/4B** **PF 62 - 180M/4B**	269	118
	74.1 81.4 103.6 107.7 137.1 164.2 199.0 225.3 259.1 314.1 355.7 395.0 421.1 448.5 521.9	2385 2170 1705 1640 1289 1076 888 784 682 562 497 447 420 394 339	0.8 0.9 1.1 1.1 1.4 1.6 1.8 1.9 1.7 2.1 2.3 2.4 2.4 2.4 2.6	19.57 17.81 13.99 13.46 10.58 8.83 7.29 6.44 5.60 4.62 4.08 3.67 3.44 3.23 2.78	- - 2.0 5.0 7.0 9.0 9.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0	- - 17.0 18.0 17.0 16.0 15.0 15.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0	9.0 11.0 13.0 15.0 16.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	27.0 27.0 25.0 26.0 24.0 24.0 23.0 22.0 21.0 20.0 20.0 19.0 19.0 19.0 18.0	**PA 52 - 180M/4B** **PF 52 - 180M/4B**	216	114
	580.0 703.0	305 251	1.4 1.5	2.50 2.06	- -	4.0 4.0	- -	- -	**PA 51 - 180M/4B** **PF 51 - 180M/4B**	177	92
22.0	7.8 9.3 11.8 13.7	26842 22486 17832 15325	0.7 0.9 1.1 1.3	184.77 154.79 122.75 105.49	81.0 88.0 94.0 96.0	66.0 67.0 67.0 67.0	120.0 120.0 120.0 120.0	120.0 120.0 120.0 120.0	**PA 103/52 - 180L/4B** **PF 103/52 - 180L/4B**	939	142
	10.6 17.8 20.5 23.8 27.3 31.9	19832 11834 10230 8826 7700 6585	1.2 1.7 2.0 2.3 2.6 3.0	136.52 81.46 70.42 60.75 53.00 45.33	92.0 99.0 100.0 100.0 101.0 101.0	67.0 66.0 65.0 63.0 62.0 61.0	120.0 120.0 120.0 120.0 120.0 120.0	120.0 115.0 113.0 110.0 107.0 104.0	**PA 103 - 180L/4B** **PF 103 - 180L/4B**	861	135

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
22.0	11.8	17864	0.8	122.97	48.0	36.0	81.0	80.0	**PA 93 - 180L/4B** **PF 93 - 180L/4B**	642	131
	15.5	13573	1.0	93.43	57.0	38.0	87.0	80.0			
	20.0	10521	1.3	72.42	61.0	39.0	89.0	80.0			
	23.5	8958	1.4	61.66	63.0	39.0	91.0	80.0			
	26.9	7809	1.6	53.75	64.0	39.0	91.0	80.0			
	31.0	6774	1.8	46.63	64.0	38.0	92.0	80.0			
	36.7	5733	2.1	39.46	65.0	38.0	92.0	80.0			
	46.3	4538	2.7	31.24	66.0	37.0	91.0	80.0			
	40.8	5153	1.9	35.47	65.0	37.0	93.0	80.0	**PA/PF 92 - 180L/4B**	631	130
	17.9	11714	0.8	80.63	25.0	14.0	51.0	53.0	**PA 83 - 180L/4B** **PF 83 - 180L/4B**	463	127
	20.6	10196	0.9	70.19	32.0	15.0	54.0	54.0			
	23.4	8976	1.0	61.79	35.0	16.0	56.0	54.0			
	28.1	7484	1.2	51.52	38.0	17.0	58.0	54.0			
	32.6	6442	1.4	44.34	41.0	18.0	60.0	53.0			
	37.1	5667	1.6	39.01	42.0	19.0	61.0	53.0			
	44.5	4725	1.8	32.53	43.0	19.0	61.0	52.0			
	51.7	4067	2.0	27.99	44.0	19.0	62.0	51.0			
	59.3	3542	2.3	24.38	44.0	19.0	62.0	50.0			
	68.9	3049	2.6	20.99	44.0	19.0	61.0	48.0			
	87.3	2405	2.7	16.56	45.0	19.0	58.0	46.0	**PA/PF 82 - 180L/4B**	455	126
	31.7	6634	0.8	45.67	15.0	4.0	24.0	28.0	**PA 73 - 180L/4B** **PF 73 - 180L/4B**	356	123
	38.4	5473	0.9	37.68	19.0	6.0	28.0	29.0			
	43.5	4833	1.0	33.27	21.0	6.0	30.0	29.0			
	51.0	4119	1.2	28.35	22.0	7.0	32.0	29.0			
	61.8	3398	1.5	23.39	24.0	8.0	33.0	29.0			
	50.9	4132	1.0	28.58	23.0	8.0	33.0	30.0	**PA 72 - 180L/4B** **PF 72 - 180L/4B**	346	122
	66.9	3139	1.3	21.72	25.0	8.0	34.0	29.0			
	86.3	2433	1.7	16.83	25.0	9.0	34.0	28.0			
	100.8	2084	1.9	14.33	25.0	9.0	34.0	28.0			
	115.6	1817	2.2	12.49	25.0	9.0	34.0	27.0			
	133.3	1576	2.8	10.84	24.0	9.0	33.0	26.0			
	46.8	4494	0.8	30.90	11.0	6.0	18.0	22.0	**PA 63 - 180L/4B** **PF 63 - 180L/4B**	279	119
	54.9	3829	0.8	26.33	14.0	7.0	21.0	22.0			
	65.8	3195	1.0	21.97	16.0	7.0	22.0	22.0			
	69.4	3026	1.1	20.81	17.0	8.0	24.0	23.0			
	79.6	2640	1.2	18.16	18.0	8.0	25.0	23.0	**PA 62 - 180L/4B** **PF 62 - 180L/4B**	277	118
	91.4	2298	1.3	15.80	18.0	9.0	26.0	23.0			
	103.8	2023	1.5	13.91	19.0	9.0	26.0	22.0			
	124.5	1687	1.8	11.60	19.0	9.0	26.0	22.0			
	137.3	1530	2.0	10.52	20.0	9.0	26.0	21.0			
	164.7	1276	2.4	8.78	20.0	9.0	26.0	21.0			
	191.3	1098	2.8	7.55	20.0	9.0	25.0	20.0			
	227.6	923	2.1	6.35	20.0	8.0	24.0	19.0			
	273.0	770	2.5	5.29	20.0	8.0	24.0	19.0			
	317.2	662	2.8	4.56	19.0	8.0	23.0	18.0			
	356.0	590	2.9	4.06	19.0	8.0	23.0	18.0			
	369.3	569	2.9	3.91	19.0	8.0	23.0	18.0			
	388.7	541	3.0	3.72	19.0	8.0	23.0	17.0			
	103.2	2035	0.9	13.99	0.4	1.0	8.0	24.0	**PA 52 - 180L/4B** **PF 52 - 180L/4B**	224	114
	107.3	1958	0.9	13.46	1.0	1.0	10.0	25.0			
	136.6	1538	1.1	10.58	2.0	15.0	13.0	24.0			
	163.6	1285	1.3	8.83	5.0	15.0	14.0	23.0			
	198.3	1060	1.5	7.29	7.0	14.0	16.0	22.0			
	224.5	936	1.6	6.44	8.0	14.0	16.0	22.0			
	258.2	814	1.4	5.60	8.0	13.0	15.0	21.0			
	313.0	671	1.8	4.62	7.0	13.0	16.0	20.0			
	354.4	593	1.9	4.08	7.0	12.0	17.0	19.0			
	393.6	534	2.0	3.67	7.0	12.0	17.0	19.0			
	419.6	501	2.0	3.44	7.0	12.0	17.0	19.0			
	446.9	470	2.0	3.23	7.0	12.0	17.0	18.0			
	520.0	404	2.2	2.78	7.0	11.0	17.0	18.0			
	577.9	364	1.2	2.50	-	3.0	-	-	**PA 51 - 180L/4B** **PF 51 - 180L/4B**	185	92
	700.5	300	1.3	2.06	-	3.0	-	-			

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	Sayfa Page mm
30.0	17.9	15986	1.3	81.46	95.0	59.0	120.0	107.0	**PA 103 - 200L/4C** **PF 103 - 200L/4C**	927	135
	20.7	13818	1.4	70.42	97.0	59.0	120.0	105.0			
	24.0	11922	1.7	60.75	98.0	58.0	120.0	104.0			
	27.5	10401	1.9	53.00	100.0	58.0	120.0	101.0			
	32.2	8895	2.2	45.33	100.0	57.0	120.0	99.0			
	38.5	7451	2.7	37.97	101.0	55.0	120.0	95.0			
	20.2	14211	0.9	72.42	55.0	32.0	80.0	80.0	**PA 93 - 200L/4C** **PF 93 - 200L/4C**	708	131
	23.7	12101	1.0	61.66	59.0	33.0	83.0	80.0			
	27.2	10548	1.2	53.75	61.0	34.0	84.0	80.0			
	31.3	9150	1.3	46.63	62.0	34.0	84.0	80.0			
	37.0	7744	1.6	39.46	64.0	34.0	84.0	79.0			
	46.7	6130	2.0	31.24	65.0	34.0	83.0	76.0			
	53.9	5318	2.3	27.10	65.0	33.0	82.0	74.0			
	63.7	4500	2.7	22.93	66.0	33.0	81.0	72.0			
	23.6	12125	0.7	61.79	24.0	10.0	41.0	45.0	**PA 83 - 200L/4C** **PF 83 - 200L/4C**	529	127
	28.3	10110	0.9	51.52	31.0	12.0	46.0	47.0			
	32.9	8701	1.0	44.34	36.0	13.0	50.0	47.0			
	37.4	7655	1.2	39.01	38.0	14.0	52.0	47.0			
	44.9	6383	1.3	32.53	41.0	15.0	54.0	47.0			
	52.2	5493	1.5	27.99	42.0	16.0	55.0	47.0			
	59.9	4785	1.7	24.38	43.0	16.0	55.0	46.0			
	69.6	4118	1.9	20.99	43.0	17.0	55.0	45.0			
	88.2	3249	2.0	16.56	43.0	17.0	55.0	44.0	**PA 82 - 200L/4C** **PF 82 - 200L/4C**	521	126
	102.2	2803	2.3	14.29	43.0	17.0	54.0	43.0			
	123.2	2325	2.5	11.85	41.0	16.0	52.0	41.0			
	43.9	6529	0.8	33.27	11.0	3.0	18.0	24.0	**PA 73 - 200L/4C** **PF 73 - 200L/4C**	422	123
	51.5	5564	0.9	28.35	14.0	4.0	22.0	25.0			
	62.4	4590	1.1	23.39	17.0	5.0	25.0	25.0			
	70.7	4053	1.2	20.66	18.0	6.0	27.0	26.0			
	81.1	3533	1.4	18.01	20.0	6.0	28.0	26.0			
	86.7	3303	1.2	16.83	21.0	7.0	29.0	26.0	**PA 72 - 200L/4C** **PF 72 - 200L/4C**	412	122
	101.9	2813	1.4	14.33	21.0	7.0	30.0	26.0			
	116.9	2452	1.7	12.49	22.0	8.0	30.0	25.0			
	134.7	2127	2.2	10.84	21.0	8.0	29.0	25.0			
	154.3	1856	2.4	9.46	22.0	8.0	29.0	24.0			
	177.9	1610	2.5	8.21	21.0	8.0	29.0	24.0			
	210.2	1363	2.7	6.94	21.0	8.0	29.0	23.0			
	227.3	1260	2.2	6.42	20.0	7.0	27.0	22.0			
	260.8	1099	2.4	5.60	20.0	7.0	27.0	22.0			
	300.6	953	2.5	4.86	20.0	7.0	26.0	21.0			
	104.9	2730	1.1	13.91	18.0	7.0	21.0	20.0	**PA 62 - 200L/4C** **PF 62 - 200L/4C**	343	118
	125.8	2277	1.4	11.60	18.0	7.0	22.0	20.0			
	138.7	2065	1.5	10.52	18.0	7.0	21.0	19.0			
	166.4	1722	1.7	8.78	19.0	8.0	22.0	19.0			
	193.3	1482	2.1	7.55	19.0	8.0	22.0	19.0			
	230.0	1246	1.5	6.35	18.0	7.0	21.0	18.0			
	275.9	1039	1.8	5.29	18.0	7.0	21.0	18.0			
	320.5	894	2.3	4.56	18.0	7.0	21.0	17.0			
	359.7	796	2.4	4.06	18.0	7.0	21.0	17.0			
	373.2	768	2.4	3.91	18.0	7.0	21.0	17.0			
	392.8	729	2.5	3.72	17.0	7.0	21.0	17.0			
	440.2	651	2.6	3.32	17.0	7.0	21.0	16.0			
	492.0	582	2.7	2.97	17.0	7.0	20.0	16.0			
37.0	17.9	19716	1.0	81.46	91.0	53.0	120.0	100.0	**PA 103 - 225S/4A** **PF 103 - 225S/4A**	982	135
	20.7	17043	1.2	70.42	94.0	54.0	120.0	99.0			
	24.0	14703	1.4	60.75	96.0	54.0	120.0	98.0			
	27.5	12828	1.6	53.00	98.0	54.0	120.0	96.0			
	32.2	10970	1.8	45.33	99.0	53.0	119.0	95.0			
	38.5	9190	2.2	37.97	100.0	52.0	115.0	92.0			
	49.3	7169	2.2	29.62	101.0	51.0	111.0	88.0			
	57.6	6131	2.3	25.33	101.0	50.0	107.0	86.0			

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	Sayfa Page mm
37.0	20.2	17527	0.8	72.42	47.0	26.0	64.0	76.0	**PA 93 - 225S/4A** **PF 93 - 225S/4A**	763	131
	23.7	14924	0.9	61.66	54.0	28.0	70.0	77.0			
	27.2	13010	0.9	53.75	57.0	29.0	72.0	76.0			
	31.3	11285	1.1	46.63	60.0	30.0	75.0	76.0			
	37.0	9551	1.3	39.46	62.0	31.0	77.0	75.0			
	46.7	7561	1.6	31.24	64.0	31.0	77.0	73.0			
	53.9	6559	1.9	27.10	65.0	31.0	77.0	71.0			
	63.7	5550	2.2	22.93	65.0	31.0	76.0	69.0			
	76.2	4639	2.3	19.17	66.0	30.0	75.0	67.0			
	88.7	3985	2.1	16.47	66.0	30.0	74.0	66.0	**PA 92 - 225S/4A** **PF 92 - 225S/4A**	752	130
	101.7	3475	2.2	14.36	66.0	29.0	72.0	64.0			
	117.8	2999	2.3	12.39	64.0	29.0	70.0	61.0			
	32.9	10732	0.8	44.34	28.0	9.0	39.0	42.0	**PA 83 - 225S/4A** **PF 83 - 225S/4A**	584	127
	37.4	9441	1.0	39.01	32.0	11.0	42.0	43.0			
	44.9	7872	1.1	32.53	35.0	12.0	46.0	43.0			
	52.2	6775	1.2	27.99	37.0	13.0	48.0	43.0			
	59.9	5901	1.4	24.38	38.0	14.0	49.0	43.0			
	69.6	5079	1.6	20.99	39.0	15.0	50.0	43.0			
	88.2	4007	1.6	16.56	40.0	15.0	51.0	42.0	**PA 82 - 225S/4A** **PF 82 - 225S/4A**	576	126
	102.2	3457	1.9	14.29	40.0	15.0	50.0	41.0			
	123.2	2867	2.0	11.85	39.0	15.0	49.0	40.0			
	141.3	2501	2.1	10.33	39.0	15.0	49.0	39.0			
	165.2	2139	2.3	8.84	38.0	15.0	47.0	38.0			
	197.2	1792	2.4	7.40	37.0	15.0	46.0	36.0			
	235.3	1502	2.1	6.21	35.0	14.0	43.0	35.0			
	275.1	1284	2.3	5.31	34.0	14.0	42.0	33.0			
	62.4	5661	0.9	23.39	11.0	3.0	18.0	22.0	**PA 73 - 225S/4A** **PF 73 - 225S/4A**	477	123
	70.7	4999	1.0	20.66	13.0	4.0	20.0	23.0			
	81.1	4358	1.1	18.01	15.0	5.0	23.0	23.0			
	86.7	4074	1.0	16.83	17.0	5.0	24.0	24.0	**PA 72 - 225S/4A** **PF 72 - 225S/4A**	467	122
	101.9	3469	1.2	14.33	18.0	6.0	26.0	24.0			
	116.9	3024	1.3	12.49	19.0	6.0	27.0	24.0			
	134.7	2623	1.8	10.84	19.0	6.0	26.0	23.0			
	154.3	2290	1.9	9.46	19.0	7.0	27.0	23.0			
	177.9	1986	2.0	8.21	20.0	7.0	27.0	22.0			
	210.2	1681	2.2	6.94	20.0	7.0	27.0	22.0			
	227.3	1554	1.8	6.42	18.0	6.0	25.0	21.0			
	260.8	1355	1.9	5.60	19.0	7.0	25.0	21.0			
	300.6	1175	2.0	4.86	18.0	7.0	25.0	20.0			
	355.3	995	2.2	4.11	18.0	7.0	25.0	20.0			
	104.9	3367	0.9	13.91	14.0	5.0	16.0	18.0	**PA 62 - 225S/4A** **PF 62 - 225S/4A**	398	118
	125.8	2808	1.1	11.60	16.0	6.0	18.0	18.0			
	138.7	2547	1.2	10.52	15.0	6.0	18.0	18.0			
	166.4	2124	1.4	8.78	16.0	6.0	19.0	18.0			
	193.3	1828	1.7	7.55	17.0	7.0	20.0	18.0			
	230.0	1536	1.3	6.35	16.0	6.0	19.0	17.0			
	275.9	1281	1.5	5.29	16.0	7.0	19.0	17.0			
	320.5	1102	1.8	4.56	16.0	7.0	20.0	16.0			
	359.7	982	1.9	4.06	16.0	7.0	20.0	16.0			
	373.2	947	2.0	3.91	16.0	7.0	20.0	16.0			
	392.8	900	2.0	3.72	16.0	7.0	20.0	16.0			
	440.2	803	2.1	3.32	16.0	7.0	19.0	16.0			
	492.0	718	2.2	2.97	16.0	7.0	19.0	15.0			
45.0	20.7	20727	1.0	70.42	90.0	48.0	108.0	91.0	**PA 103 - 225M/4C** **PF 103 - 225M/4C**	1027	135
	24.0	17882	1.1	60.75	93.0	49.0	110.0	91.0			
	27.5	15601	1.3	53.00	96.0	49.0	112.0	91.0			
	32.2	13342	1.5	45.33	97.0	50.0	113.0	90.0			
	38.5	11177	1.8	37.97	99.0	49.0	111.0	88.0			
	49.3	8719	2.3	29.62	100.0	48.0	107.0	85.0			
	57.6	7457	2.7	25.33	101.0	48.0	104.0	83.0			
	68.8	6246	3.2	21.22	101.0	46.0	101.0	81.0			

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	Sayfa Page mm
45.0	27.2	15823	0.8	53.75	52.0	24.0	60.0	70.0	**PA 93 - 225M/4C** **PF 93 - 225M/4C**	808	131
	31.3	13726	0.9	46.63	56.0	26.0	64.0	70.0			
	37.0	11615	1.1	39.46	59.0	27.0	67.0	70.0			
	46.7	9195	1.3	31.24	62.0	28.0	70.0	69.0			
	53.9	7977	1.5	27.10	63.0	28.0	71.0	68.0			
	63.7	6750	1.8	22.93	64.0	29.0	71.0	67.0			
	76.2	5642	2.2	19.17	65.0	28.0	71.0	65.0			
	88.7	4846	2.2	16.47	65.0	28.0	70.0	64.0	**PA 92 - 225M/4C** **PF 92 - 225M/4C**	797	130
	101.7	4226	2.5	14.36	63.0	28.0	69.0	62.0			
	117.8	3647	2.9	12.39	62.0	27.0	68.0	60.0			
	44.9	9574	0.9	32.53	27.0	9.0	36.0	39.0	**PA 83 - 225M/4C** **PF 83 - 225M/4C**	629	127
	52.2	8240	1.0	27.99	30.0	10.0	40.0	39.0			
	59.9	7177	1.1	24.38	32.0	11.0	42.0	40.0			
	69.6	6177	1.3	20.99	34.0	12.0	44.0	40.0			
	88.2	4874	1.3	16.56	36.0	14.0	46.0	40.0	**PA 82 - 225M/4C** **PF 82 - 225M/4C**	621	126
	102.2	4205	1.6	14.29	37.0	14.0	47.0	39.0			
	123.2	3487	2.0	11.85	36.0	14.0	46.0	38.0			
	141.3	3042	2.3	10.33	36.0	14.0	46.0	37.0			
	165.2	2602	2.5	8.84	36.0	14.0	45.0	36.0			
	197.2	2179	2.9	7.40	35.0	14.0	44.0	35.0			
	235.3	1827	2.4	6.21	33.0	13.0	42.0	34.0			
	275.1	1562	3.1	5.31	33.0	13.0	41.0	33.0			
	70.7	6080	0.8	20.66	6.0	1.0	13.0	19.0	**PA 73 - 225M/4C** **PF 73 - 225M/4C**	522	123
	81.1	5300	0.9	18.01	10.0	2.0	16.0	20.0			
	101.9	4219	1.0	14.33	14.0	4.0	21.0	22.0	**PA 72 - 225M/4C** **PF 72 - 225M/4C**	512	122
	116.9	3678	1.1	12.49	16.0	5.0	22.0	22.0			
	134.7	3190	1.5	10.84	16.0	5.0	23.0	21.0			
	154.3	2785	1.7	9.46	17.0	5.0	24.0	21.0			
	177.9	2416	1.9	8.21	17.0	6.0	24.0	21.0			
	210.2	2044	2.1	6.94	18.0	6.0	25.0	21.0			
	227.3	1890	1.5	6.42	16.0	6.0	23.0	20.0			
	260.8	1648	1.7	5.60	17.0	6.0	23.0	20.0			
	300.6	1429	2.0	4.86	17.0	6.0	23.0	19.0			
	355.3	1210	2.2	4.11	17.0	6.0	23.0	19.0			
	378.2	1136	2.3	3.86	17.0	6.0	23.0	19.0			
	425.0	1011	2.4	3.44	17.0	6.0	23.0	18.0			
	125.8	3415	0.9	11.60	12.0	4.0	13.0	16.0	**PA 62 - 225M/4C** **PF 62 - 225M/4C**	443	118
	166.4	2583	1.2	8.78	14.0	5.0	15.0	16.0			
	193.3	2223	1.4	7.55	14.0	6.0	17.0	16.0			
	275.9	1558	1.2	5.29	14.0	6.0	17.0	16.0			
	320.5	1341	1.6	4.56	15.0	6.0	17.0	15.0			
	359.7	1195	1.6	4.06	15.0	6.0	18.0	15.0			
	373.2	1152	1.7	3.91	15.0	6.0	18.0	15.0			
	392.8	1094	1.9	3.72	15.0	6.0	18.0	15.0			
	440.2	976	2.0	3.32	15.0	6.0	18.0	15.0			
	492.0	874	2.2	2.97	15.0	6.0	18.0	15.0			
55.0	20.8	25247	0.8	70.42	83.0	41.0	89.0	82.0	**PA 103 - 250M/4C** **PF 103 - 250M/4C**	1180	135
	24.1	21782	0.9	60.75	88.0	43.0	94.0	83.0			
	27.6	19003	1.1	53.00	92.0	44.0	99.0	84.0			
	32.3	16251	1.2	45.33	95.0	45.0	102.0	84.0			
	38.6	13614	1.5	37.97	97.0	45.0	103.0	83.0			
	49.5	10621	1.9	29.62	99.0	45.0	102.0	81.0			
	57.8	9082	2.2	25.33	100.0	45.0	100.0	80.0			
	69.0	7608	2.6	21.22	97.0	44.0	97.0	77.0			
	75.7	6939	2.4	19.35	97.0	44.0	96.0	77.0	**PA 102 - 250M/4C** **PF 102 - 250M/4C**	1171	134
	88.2	5957	2.9	16.61	95.0	43.0	94.0	75.0			
	37.1	14148	0.9	39.46	55.0	22.0	55.0	64.0	**PA 93 - 250M/4C** **PF 93 - 250M/4C**	961	131
	46.9	11200	1.1	31.24	59.0	25.0	61.0	64.0			
	54.1	9716	1.3	27.10	60.0	25.0	63.0	64.0			
	63.9	8222	1.5	22.93	61.0	26.0	65.0	63.0			
	76.4	6872	1.8	19.17	61.0	26.0	65.0	62.0			
	89.0	5903	1.8	16.47	61.0	26.0	66.0	61.0	**PA 92 - 250M/4C** **PF 92 - 250M/4C**	950	130
	102.0	5148	2.1	14.36	60.0	26.0	65.0	60.0			
	118.2	4443	2.4	12.39	59.0	26.0	64.0	58.0			
	139.5	3765	2.7	10.50	58.0	26.0	63.0	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	Sayfa Page mm
55.0	88.5	5937	1.1	16.56	31.0	11.0	41.0	37.0	**PA 82 - 250M/4C PF 82 - 250M/4C**	774	126
	102.6	5122	1.3	14.29	32.0	12.0	42.0	37.0			
	123.7	4247	1.7	11.85	33.0	12.0	42.0	36.0			
	141.8	3705	1.9	10.33	33.0	13.0	42.0	36.0			
	165.8	3169	2.1	8.84	33.0	13.0	43.0	35.0			
	197.9	2655	2.4	7.40	33.0	13.0	42.0	34.0			
	236.1	2225	1.9	6.21	31.0	12.0	40.0	32.0			
	276.1	1903	2.5	5.31	31.0	12.0	39.0	32.0			
	329.5	1594	2.7	4.45	30.0	12.0	38.0	30.0			
	402.8	1304	3.0	3.64	30.0	12.0	37.0	29.0			
	505.2	1040	3.0	2.90	29.0	11.0	35.0	28.0			
75.0	27.8	25738	0.8	53.00	69.0	33.0	71.0	70.0	**PA 103 - 280M/4A PF 103 - 280M/4A**	1360	135
	32.5	22010	0.9	45.33	78.0	36.0	78.0	72.0			
	38.8	18438	1.1	37.97	84.0	38.0	84.0	73.0			
	49.8	14384	1.4	29.62	89.0	39.0	89.0	73.0			
	58.2	12301	1.6	25.33	89.0	40.0	90.0	73.0			
	69.5	10305	1.9	21.22	89.0	40.0	90.0	72.0			
	76.2	9399	1.8	19.35	90.0	40.0	90.0	72.0	**PA 102 - 280M/4A PF 102 - 280M/4A**	1351	134
	88.8	8068	2.1	16.61	88.0	40.0	89.0	71.0			
	103.3	6937	2.2	14.29	86.0	39.0	86.0	69.0			
	124.5	5755	2.3	11.85	84.0	38.0	84.0	67.0			
	148.3	4828	2.4	9.94	82.0	37.0	81.0	64.0			
	196.5	3646	2.2	7.51	76.0	35.0	75.0	60.0			
	47.2	15170	0.8	31.24	45.0	18.0	43.0	55.0	**PA 93 - 280M/4A PF 93 - 280M/4A**	1141	131
	54.4	13159	0.9	27.10	48.0	19.0	47.0	56.0			
	64.3	11136	1.1	22.93	51.0	21.0	51.0	57.0			
	76.9	9308	1.3	19.17	52.0	22.0	54.0	56.0			
	89.6	7995	1.3	16.47	54.0	23.0	57.0	56.0	**PA 92 - 280M/4A PF 92 - 280M/4A**	1130	130
	102.7	6972	1.5	14.36	54.0	23.0	57.0	56.0			
	119.0	6017	1.8	12.39	54.0	23.0	58.0	55.0			
	140.5	5099	2.0	10.50	53.0	23.0	57.0	53.0			
	189.6	3778	1.6	7.78	50.0	22.0	54.0	49.0			
	219.9	3257	2.0	6.71	49.0	21.0	53.0	48.0			
	259.5	2760	2.1	5.68	48.0	21.0	52.0	47.0			
	89.1	8041	0.8	16.56	21.0	7.0	29.0	31.0	**PA 82 - 280M/4A PF 82 - 280M/4A**	954	126
	103.3	6937	0.9	14.29	24.0	8.0	32.0	32.0			
	124.5	5752	1.2	11.85	26.0	9.0	34.0	32.0			
	142.7	5019	1.4	10.33	27.0	10.0	35.0	32.0			
	166.9	4292	1.5	8.84	28.0	10.0	36.0	32.0			
	199.2	3595	1.7	7.40	29.0	11.0	37.0	32.0			
	237.7	3013	1.4	6.21	27.0	10.0	35.0	30.0			
	277.9	2577	1.9	5.31	28.0	11.0	35.0	29.0			
	331.8	2159	2.0	4.45	28.0	11.0	35.0	29.0			
	405.5	1766	2.2	3.64	27.0	11.0	35.0	28.0			
	508.7	1408	2.2	2.90	27.0	11.0	34.0	27.0			
90.0	32.7	26323	0.8	45.33	58.0	29.0	60.0	63.0	**PA 103 - 280M/4B PF 103 - 280M/4B**	1410	135
	39.0	22051	0.9	37.97	67.0	32.0	69.0	66.0			
	50.0	17203	1.2	29.62	77.0	35.0	77.0	68.0			
	58.4	14711	1.4	25.33	81.0	36.0	81.0	68.0			
	69.7	12324	1.6	21.22	83.0	37.0	83.0	68.0			
	76.5	11240	1.5	19.35	84.0	37.0	85.0	68.0	**PA 102 - 280M/4B PF 102 - 280M/4B**	1401	134
	89.1	9649	1.8	16.61	83.0	37.0	85.0	67.0			
	103.6	8296	2.0	14.29	82.0	37.0	83.0	66.0			
	124.9	6882	2.3	11.85	81.0	37.0	81.0	64.0			
	148.8	5774	2.6	9.94	79.0	36.0	79.0	63.0			
	197.1	4360	2.4	7.51	73.0	33.0	73.0	58.0			
	237.6	3617	2.6	6.23	71.0	33.0	70.0	56.0			
	283.2	3035	2.7	5.23	69.0	32.0	68.0	54.0			
	89.9	9562	1.1	16.47	48.0	20.0	50.0	53.0	**PA 92 - 280M/4B PF 92 - 280M/4B**	1180	130
	103.1	8338	1.3	14.36	49.0	21.0	51.0	52.0			
	119.4	7196	1.5	12.39	50.0	21.0	52.0	52.0			
	141.0	6098	1.7	10.50	50.0	21.0	53.0	51.0			
	190.2	4518	1.3	7.78	47.0	20.0	50.0	47.0			
	220.6	3895	2.0	6.71	46.0	20.0	50.0	46.0			
	260.4	3301	2.2	5.68	46.0	20.0	49.0	45.0			
	421.6	2039	2.7	3.51	43.0	19.0	47.0	41.0			

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	Sayfa Page mm
110	50.0	21026	1.0	29.62	60.0	29.0	62.0	60.0	**PA 103 - 315S/4** **PF 103 - 315S/4**	1590	135
	58.4	17981	1.1	25.33	67.0	31.0	68.0	61.0			
	69.7	15063	1.3	21.22	72.0	32.0	72.0	62.0			
	76.5	13738	1.2	19.35	76.0	34.0	76.0	63.0	**PA 102 - 315S/4** **PF 102 - 315S/4**	1581	134
	89.1	11793	1.5	16.61	77.0	34.0	77.0	63.0			
	103.6	10140	1.6	14.29	77.0	34.0	78.0	63.0			
	124.9	8412	1.9	11.85	76.0	34.0	77.0	61.0			
	148.8	7058	2.1	9.94	75.0	34.0	75.0	60.0			
	197.1	5329	2.0	7.51	70.0	32.0	70.0	56.0			
	237.6	4421	2.1	6.23	68.0	31.0	68.0	54.0			
	283.2	3709	2.3	5.23	66.0	30.0	66.0	53.0			
	89.9	11687	0.9	16.47	41.0	16.0	40.0	48.0	**PA 92 - 315S/4** **PF 92 - 315S/4**	1360	130
	103.1	10191	1.1	14.36	43.0	17.0	43.0	48.0			
	119.4	8795	1.2	12.39	44.0	18.0	45.0	48.0			
	141.0	7453	1.4	10.50	45.0	19.0	47.0	48.0			
	190.2	5522	1.1	7.78	43.0	18.0	45.0	45.0			
	220.6	4761	1.6	6.71	43.0	18.0	46.0	44.0			
	260.4	4035	1.8	5.68	43.0	18.0	46.0	43.0			
	421.6	2492	2.2	3.51	41.0	18.0	45.0	40.0			
132	89.1	14151	1.2	16.61	69.0	31.0	68.0	58.0	**PA 102 - 315M/4** **PF 102 - 315M/4**	1661	134
	103.6	12168	1.4	14.29	71.0	31.0	71.0	59.0			
	124.9	10094	1.6	11.85	71.0	32.0	72.0	58.0			
	148.8	8469	1.8	9.94	71.0	32.0	72.0	57.0			
	197.1	6395	1.8	7.51	66.0	30.0	67.0	53.0			
	237.6	5305	2.2	6.23	65.0	29.0	66.0	52.0			
	283.2	4451	2.4	5.23	64.0	29.0	64.0	51.0			
	345.5	3649	2.6	4.28	62.0	28.0	62.0	49.0			
	119.4	10554	1.0	12.39	38.0	15.0	37.0	45.0	**PA 92 - 315M/4** **PF 92 - 315M/4**	1440	130
	141.0	8943	1.1	10.50	40.0	16.0	41.0	45.0			
	220.6	5713	1.4	6.71	39.0	16.0	41.0	42.0			
	260.4	4842	1.5	5.68	40.0	17.0	42.0	41.0			
	421.6	2990	1.9	3.51	39.0	17.0	42.0	39.0			
160	89.4	17096	1.0	16.61	56.0	26.0	56.0	53.0	**PA 102 - 315M/4** **PF 102 - 315M/4**	1811	134
	104.0	14700	1.1	14.29	60.0	27.0	61.0	54.0			
	125.3	12194	1.3	11.85	64.0	28.0	64.0	54.0			
	149.3	10231	1.5	9.94	66.0	29.0	66.0	54.0			
	197.8	7725	1.5	7.51	62.0	27.0	62.0	51.0			
	238.4	6409	1.8	6.23	61.0	28.0	62.0	50.0			
	284.2	5377	2.0	5.23	61.0	27.0	61.0	49.0			
	346.7	4408	2.1	4.28	59.0	27.0	59.0	47.0			
	119.8	12750	0.8	12.39	27.0	11.0	27.0	39.0	**PA 92 - 315M/4** **PF 92 - 315M/4**	1590	130
	141.4	10804	0.9	10.50	33.0	13.0	32.0	41.0			
	221.4	6902	1.1	6.71	34.0	14.0	35.0	39.0			
	261.3	5849	1.2	5.68	35.0	15.0	37.0	39.0			
	423.0	3613	1.5	3.51	36.0	16.0	39.0	37.0			

Ölçü Tabloları

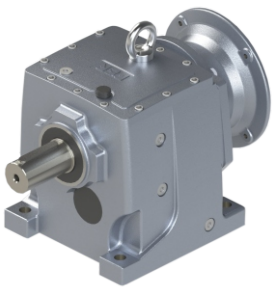
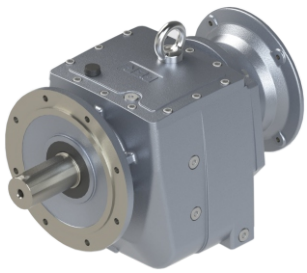
Dimension Tables

PA / PF


PA/PF - MOTOR

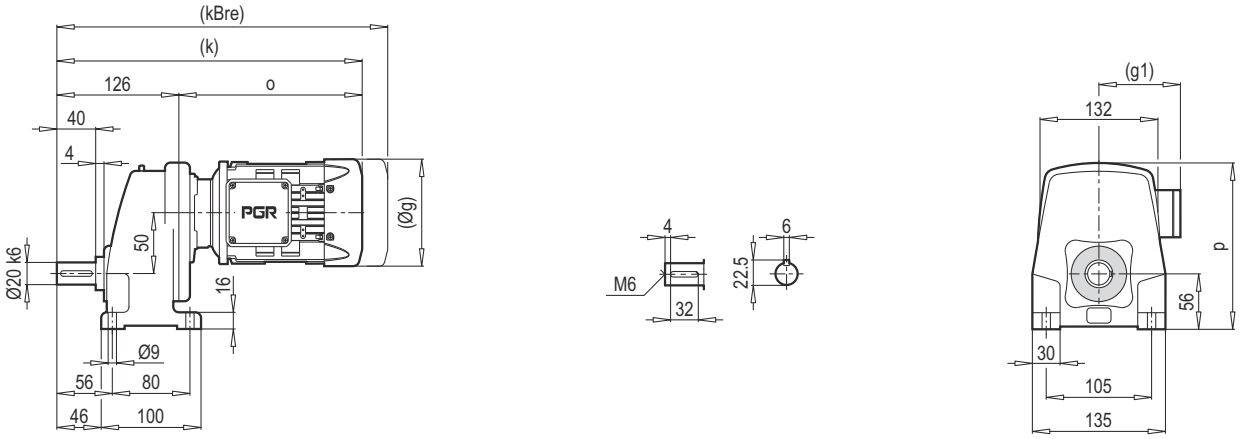

PA/PF - IEC


PA/PF - W

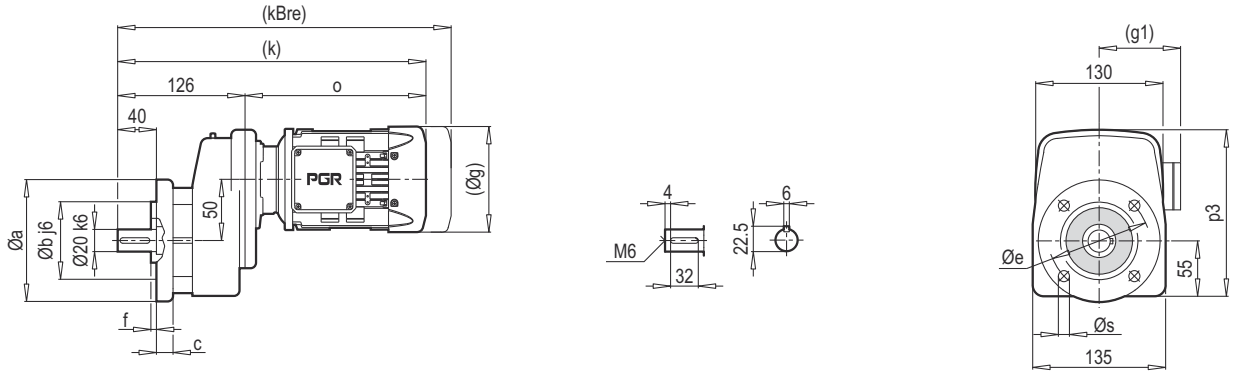



PA/PF - PAM

PA 11



PF 11

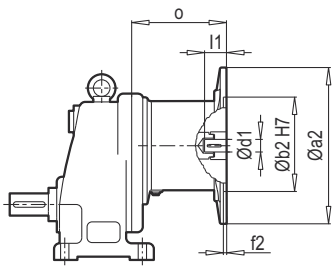


a	b	c	e	f	s
120	80	10	100	3.0	7
140	95	10	115	3.0	9

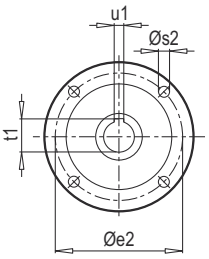
	63 M	71 M	80 M	90 S/L	100 L	112 M		
g	124	140	159	193	217	232		
g1	111	119	127	151	160	168		
k	324	366	393	416/436	464	509		
kBre	376	426	455	489/509	545	589		
o	198	240	267	290/310	338	383		
p	171	179	189	199	208	220		
p3	171	179	189	199	208	220		

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

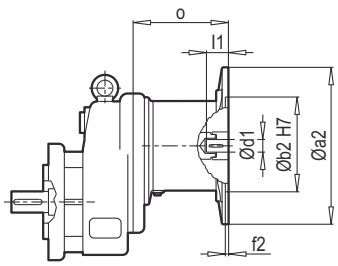
PA 11



IEC



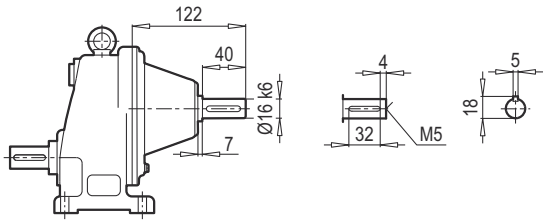
PF 11



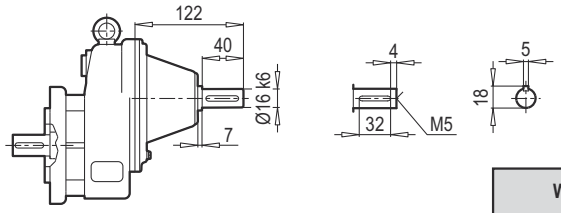
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	89
	80	200	130	165	4.0	M10	19	40	21.8	6	105
	90	200	130	165	4.0	M10	24	50	27.3	8	105
	100	250	180	215	5.0	M12	28	60	31.3	8	130
	112	250	180	215	5.0	M12	28	60	31.3	8	130

~ Kg	
IEC	PA/PF 11
63	11
71	12
80	16
90	16
100	23
112	23

PA 11



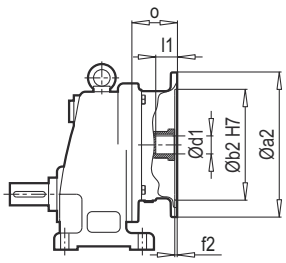
W



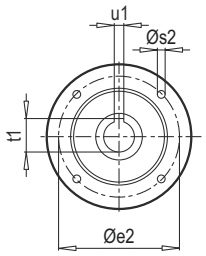
PF 11

W ~ Kg	
PA/PF 11	10

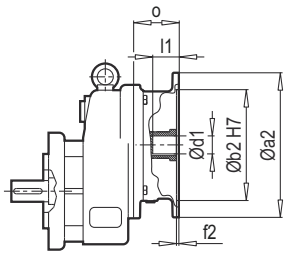
PA 11



PAM B5/B14



PF 11



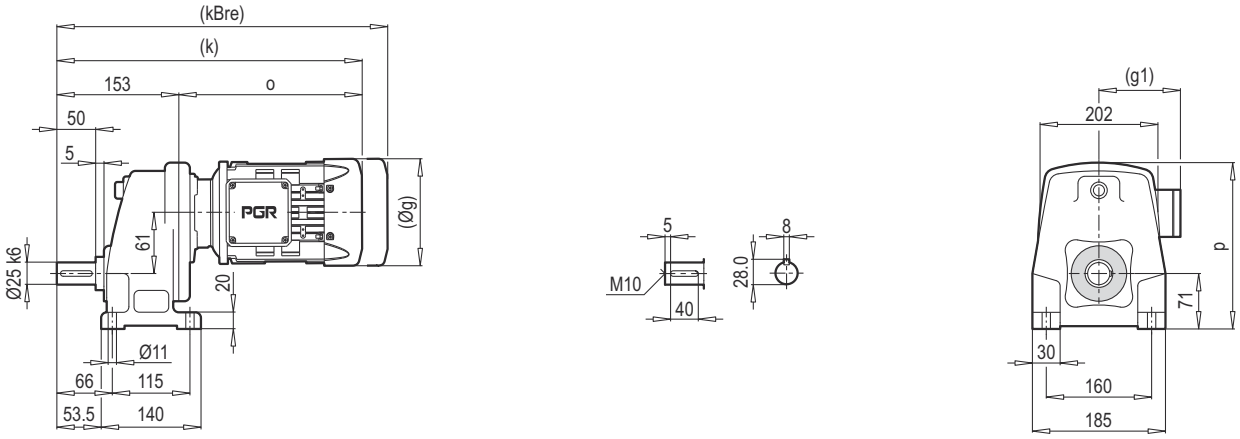
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	55
	80	200	130	165	4.0	M10	19	40	21.8	6	74
	90	200	130	165	4.0	M10	24	50	27.3	8	74
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75

~ Kg	
PAM B5	PA/PF 11
63	10
71	10
80	11
90	11
100	18
112	18

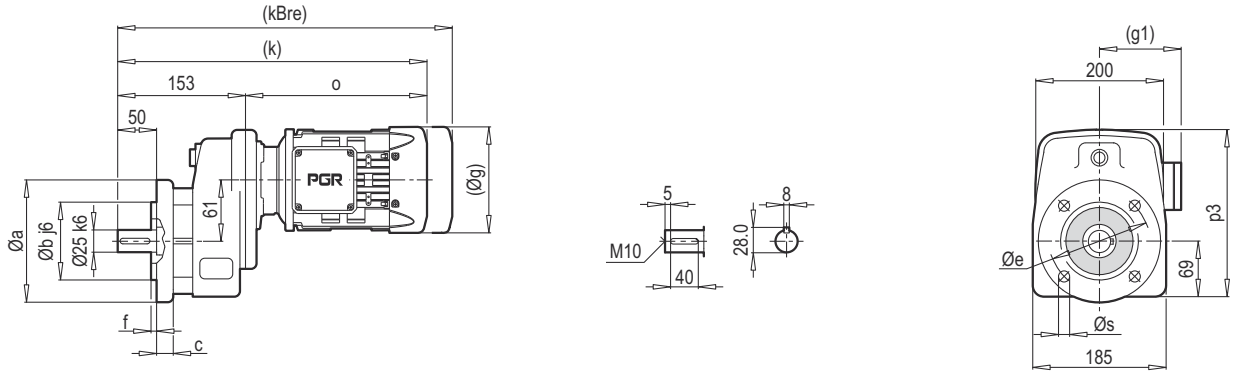
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	90	60	75	4	6	11	23	12.8	4	60
	71	105	70	85	4	7	14	30	16.3	5	55
	80	120	80	100	4	7	19	40	21.8	6	74
	90	140	95	115	4	9	24	50	27.3	8	74
	100	160	110	130	5	9	28	60	31.3	8	75
	112	160	110	130	5	9	28	60	31.3	8	75

~ Kg	
PAM B14	PA/PF 11
63	9
71	9
80	10
90	10
100	11
112	11

PA 21



PF 21

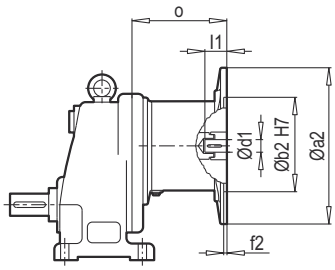


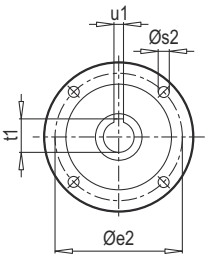
a	b	c	e	f	s
140	95	10	115	3.0	9
160	110	10	130	3.5	9

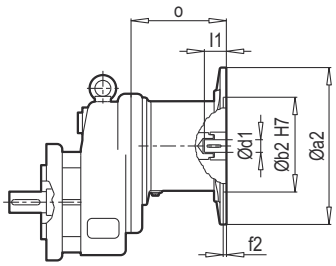
	90 L	100 L	112 M					
g	193	217	232					
g1	151	160	168					
k	458	486	531					
kBre	531	567	611					
o	305	333	378					
p	232	234	246					
p3	227	229	241					

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

PA 21 — IEC — PF 21



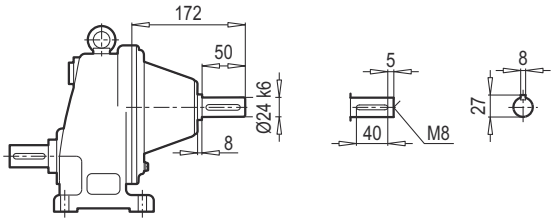


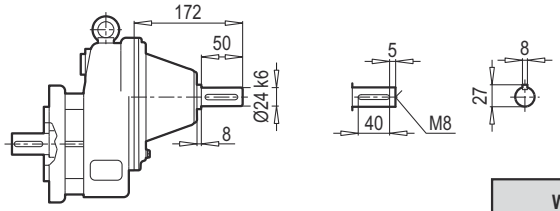


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	107
	90	200	130	165	4.0	M10	24	50	27.3	8	107
	100	250	180	215	5.0	M12	28	60	31.3	8	124
	112	250	180	215	5.0	M12	28	60	31.3	8	124

~ Kg	
IEC	PA/PF 21
71	21
80	25
90	25
100	29
112	29

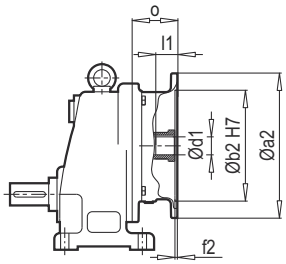
PA 21 — W — PF 21

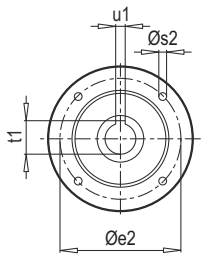


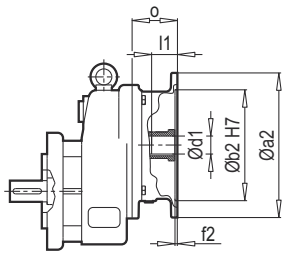


W ~ Kg	
PA/PF 21	23

PA 21 — PAM B5/B14 — PF 21







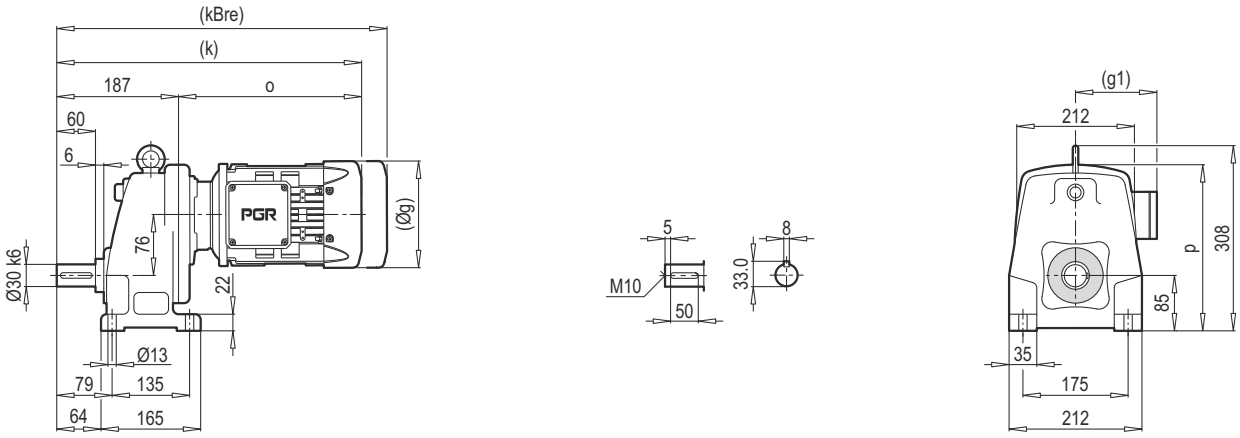
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	72
	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75

~ Kg	
PAM B5	PA/PF 21
71	19
80	20
90	20
100	21
112	21

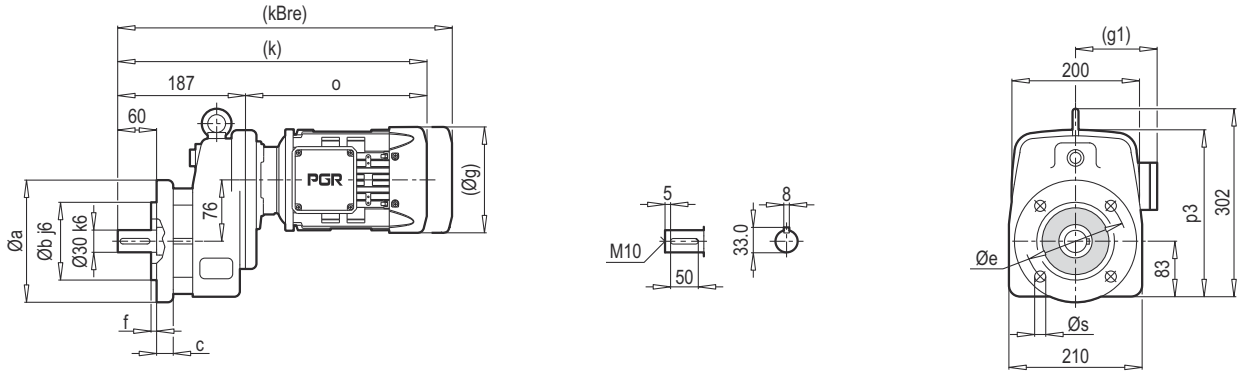
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	105	70	85	4.0	7	14	30	16.3	5	88
	80	120	80	100	4.0	7	19	40	21.8	6	72
	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75

~ Kg	
PAM B14	PA/PF 21
71	17
80	18
90	18
100	20
112	20

PA 31



PF 31

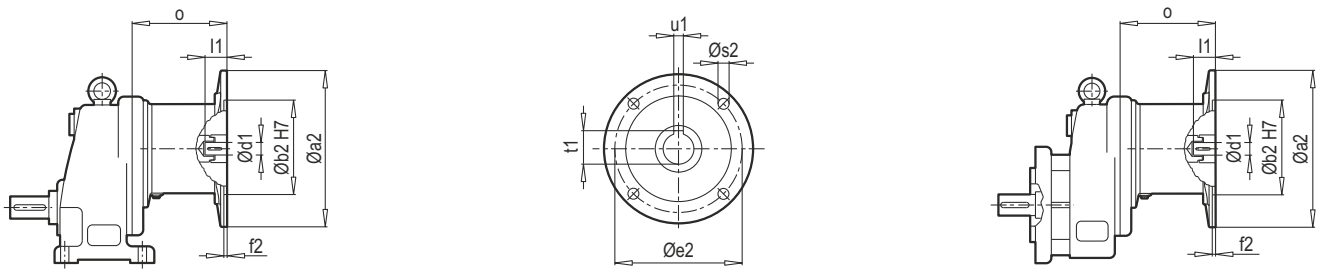


a	b	c	e	f	s
200	130	12	165	3.5	11

	100 L	112 M	132 S/M					
g	217	232	279					
g1	160	168	182					
k	520	565	572/607					
kBre	601	645	680/748					
o	333	378	385/420					
p	263	275	294					
p3	260	272	291					

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

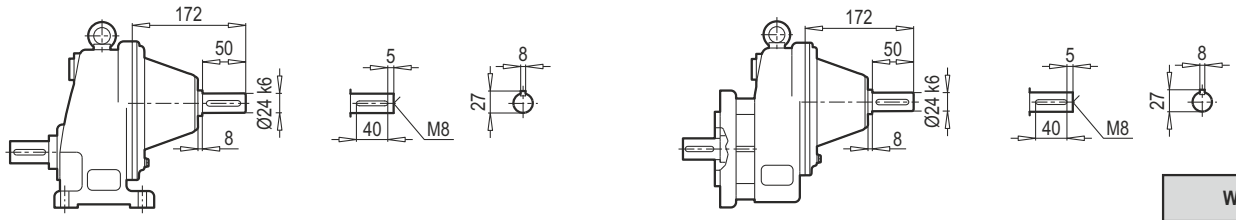
PA 31 — IEC — PF 31



Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	107
	90	200	130	165	4.0	M10	24	50	27.3	8	107
	100	250	180	215	5.0	M12	28	60	31.3	8	124
	112	250	180	215	5.0	M12	28	60	31.3	8	124
	132	300	230	265	5.0	M12	38	80	41.3	10	156

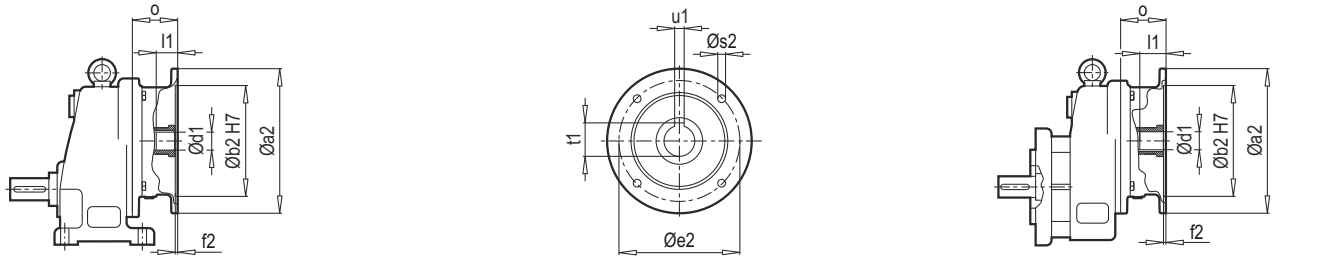
~ Kg	
IEC	PA/PF 31
71	26
80	30
90	30
100	34
112	34
132	44

PA 31 — W — PF 31



W ~ Kg	
PA/PF 31	28

PA 31 — PAM B5/B14 — PF 31



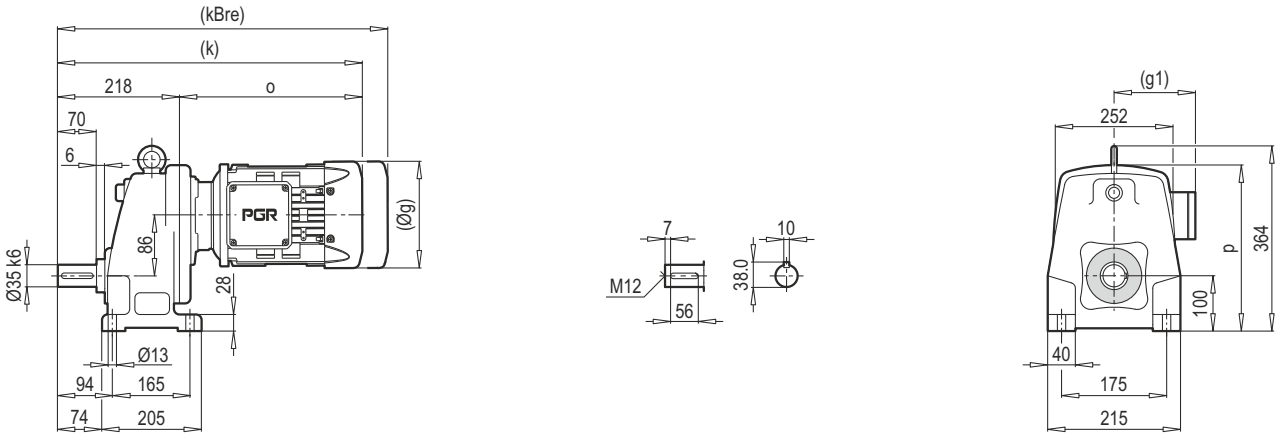
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	72
	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94

~ Kg	
PAM B5	PA/PF 31
71	24
80	25
90	25
100	26
112	26
132	36

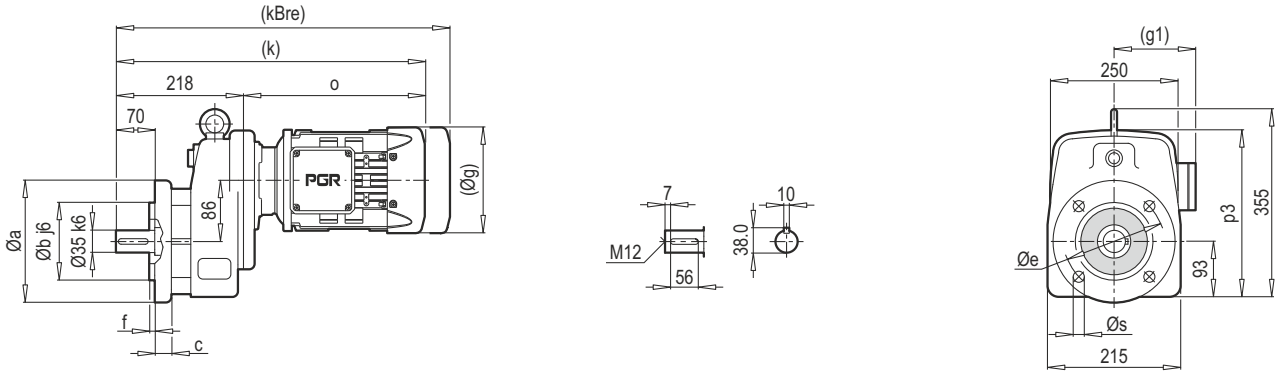
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	105	70	85	4.0	7	14	30	16.3	5	88
	80	120	80	100	4.0	7	19	40	21.8	6	72
	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg	
PAM B14	PA/PF 31
71	22
80	23
90	23
100	25
112	25
132	29

PA 41



PF 41

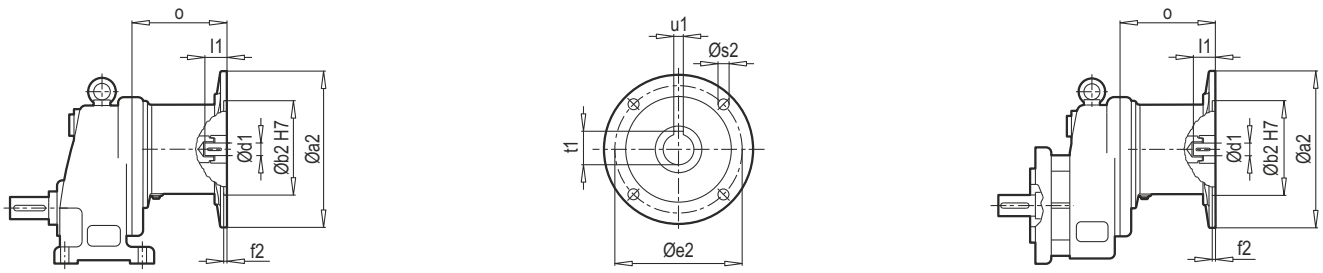


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

	112 M	132 S/M	160 M/L					
g	232	279	323					
g1	168	182	200					
k	576	583/618	723					
kBre	656	691/759	875					
o	358	365/400	505					
p	311	319	346					
p3	302	310	337					

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

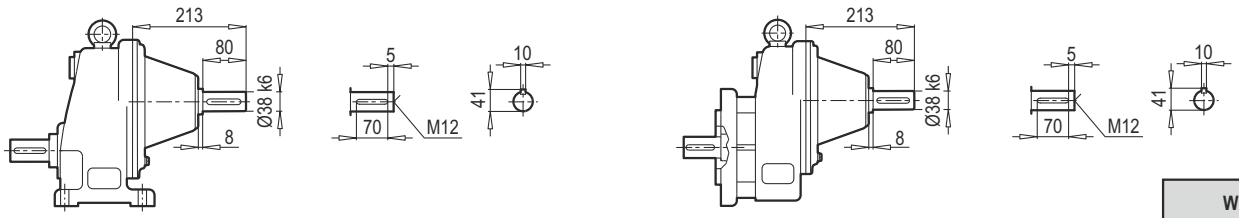
PA 41 — IEC — PF 41



Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.0	M10	24	50	27.3	8	109
	100	250	180	215	5.0	M12	28	60	31.3	8	133
	112	250	180	215	5.0	M12	28	60	31.3	8	133
	132	300	230	265	5.0	M12	38	80	41.3	10	190
	160	350	250	300	6.0	M16	42	110	45.3	12	194

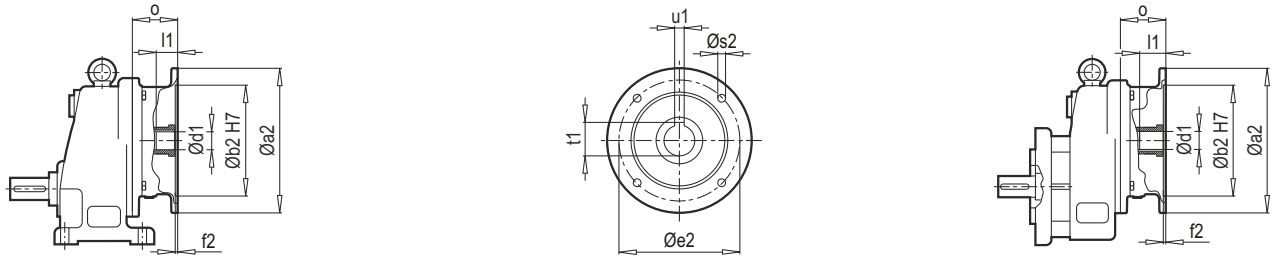
~ Kg	
IEC	PA/PF 41
90	43
100	50
112	50
132	64
160	75

PA 41 — W — PF 41



W ~ Kg	
PA/PF 41	48

PA 41 — PAM B5/B14 — PF 41



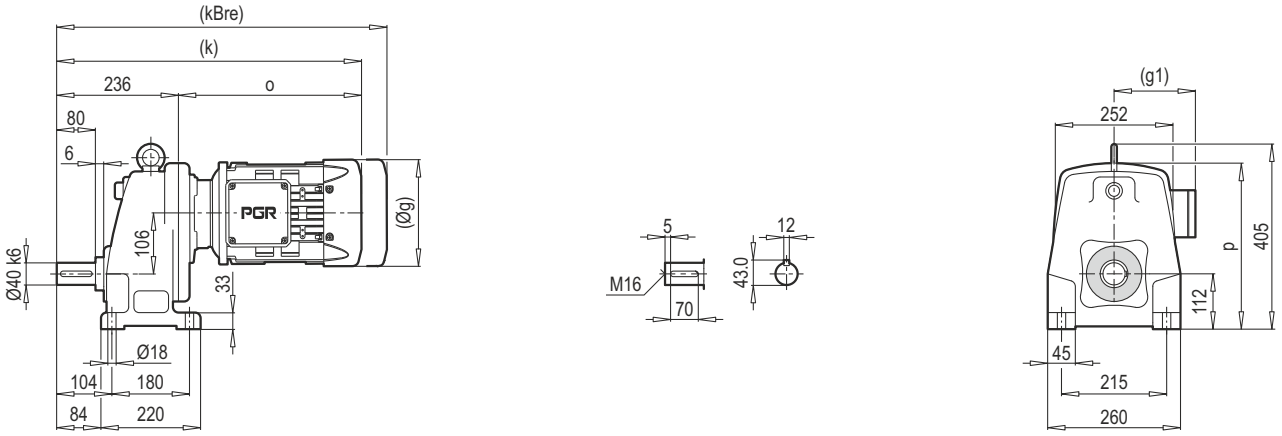
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94
	160	350	250	300	6.0	M16	42	110	45.3	12	120

~ Kg	
PAM B5	PA/PF 41
90	37
100	38
112	38
132	47
160	55

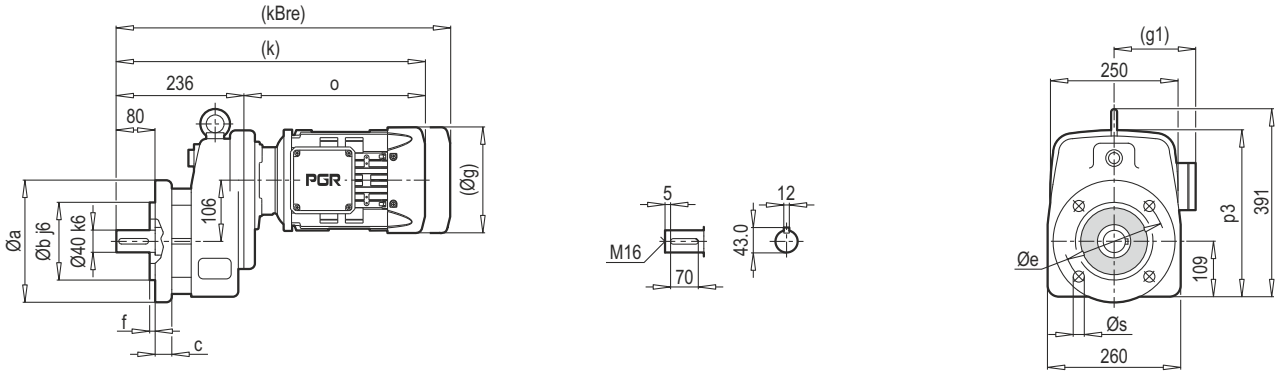
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg	
PAM B14	PA/PF 41
90	36
100	37
112	37
132	42

PA 51



PF 51

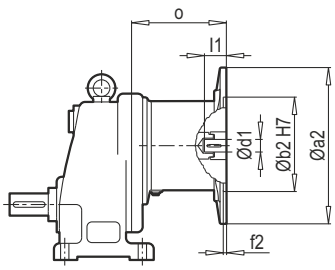


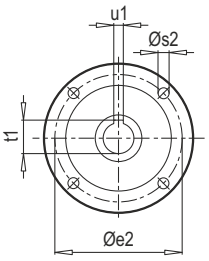
a	b	c	e	f	s
250	180	20	215	4.0	14
300	230	20	265	4.0	14

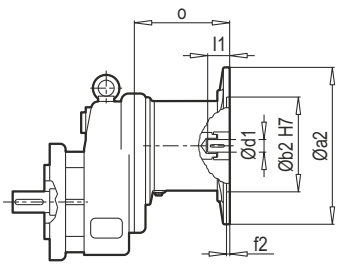
	112 M	132 S/M	160 M/L	180 M/L				
g	232	279	323	370				
g1	168	182	200	248				
k	594	601/636	741	815				
kBre	674	709/777	893	977				
o	358	365/400	505	579				
p	343	351	378	378				
p3	341	349	376	376				

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

PA 51 — IEC — PF 51



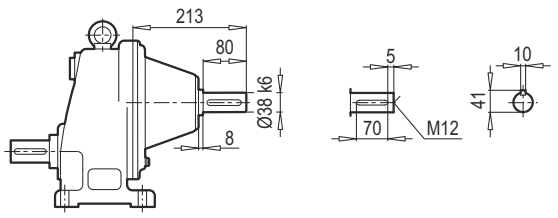


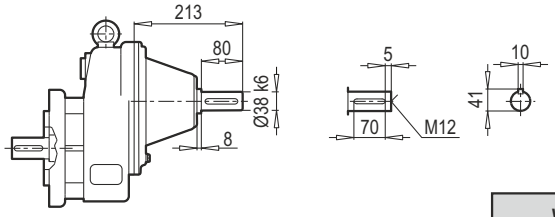


Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.0	M10	24	50	27.3	8	109
	100	250	180	215	5.0	M12	28	60	31.3	8	133
	112	250	180	215	5.0	M12	28	60	31.3	8	133
	132	300	230	265	5.0	M12	38	80	41.3	10	190
	160	350	250	300	6.0	M16	42	110	45.3	12	194
	180	350	250	300	6.0	M16	48	110	51.8	14	194

~ Kg	
IEC	PA/PF 51
90	53
100	60
112	60
132	75
160	85
180	85

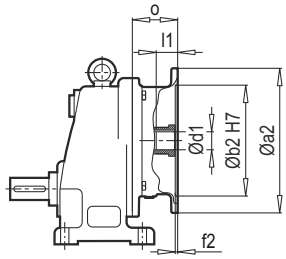
PA 51 — W — PF 51

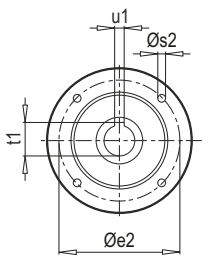


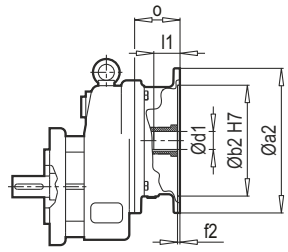


W ~ Kg	
PA/PF 51	58

PA 51 — PAM B5/B14 — PF 51







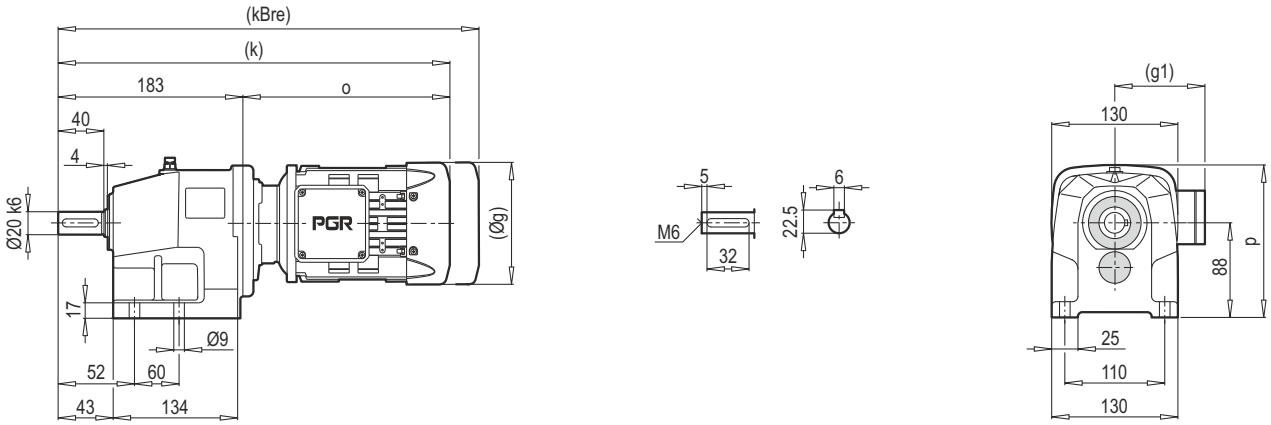
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94
	160	350	250	300	6.0	M16	42	110	45.3	12	120
	180	350	250	300	6.0	M16	48	110	51.8	14	120

~ Kg	
PAM B5	PA/PF 51
90	46
100	47
112	47
132	56
160	64
180	64

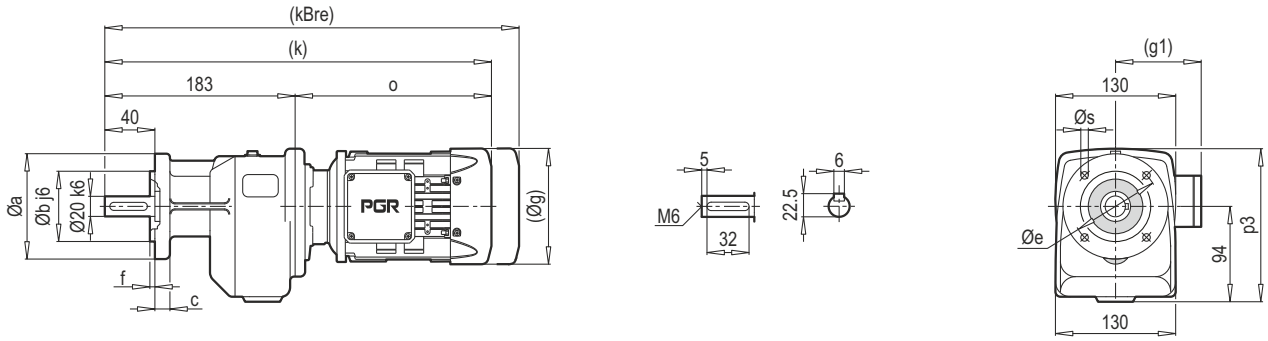
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg	
PAM B14	PA/PF 51
90	45
100	46
112	46
132	51

PA 02



PF 02

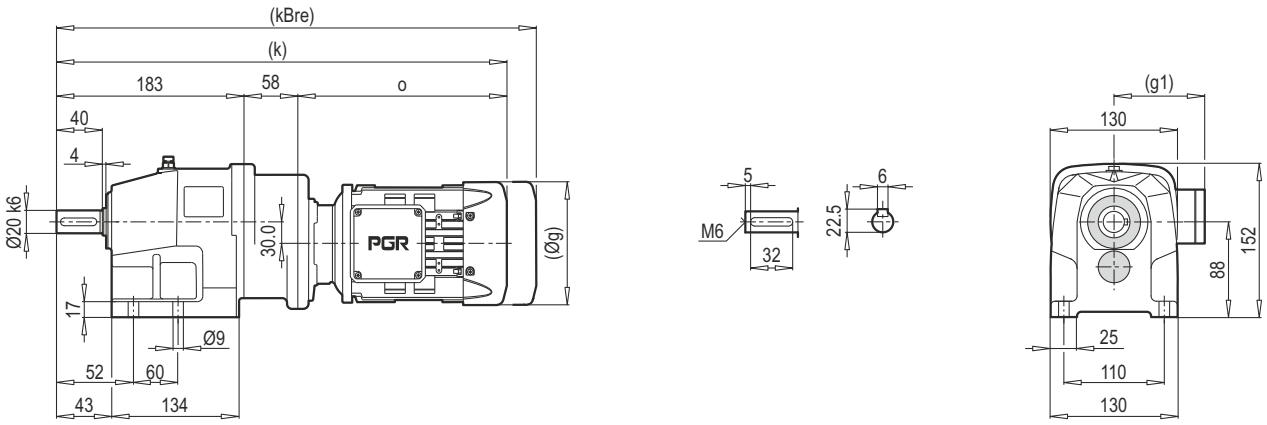


a	b	c	e	f	s
120	80	11	100	3.0	7
140	95	11	115	3.0	9
160	110	11	130	3.5	9

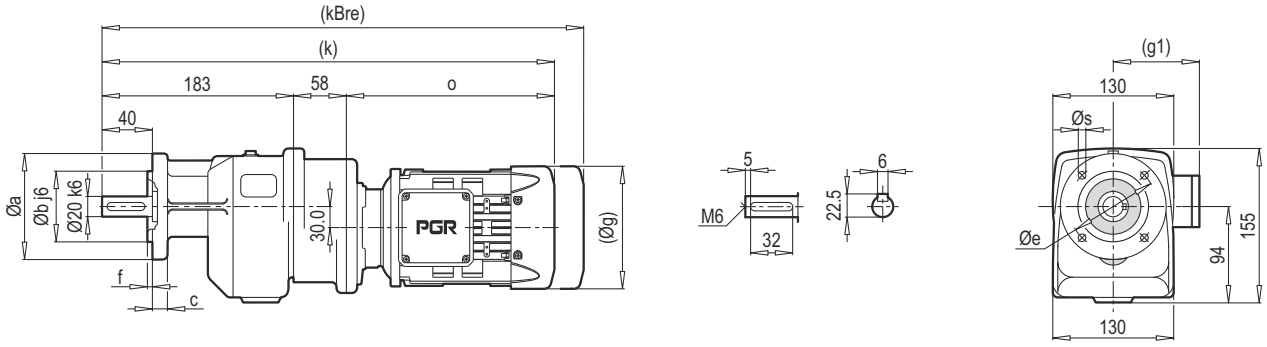
	63 M	71 M	80 M	90 S/L				
g	124	140	159	193				
g1	111	119	127	151				
k	381	423	450	473/493				
kBre	433	483	512	546/566				
o	198	240	267	290/310				
p	152	160	170	180				
p3	155	163	173	183				

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

PA 03



PF 03



a	b	c	e	f	s
120	80	11	100	3.0	7
140	95	11	115	3.0	9
160	110	11	130	3.5	9

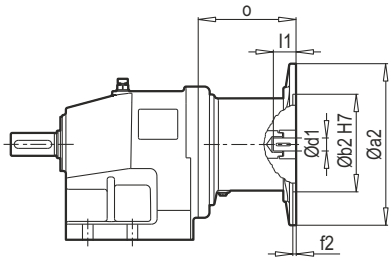
	63 M	71 M						
g	124	140						
g1	111	119						
k	439	481						
kBre	491	541						
o	198	240						
p								
p3								

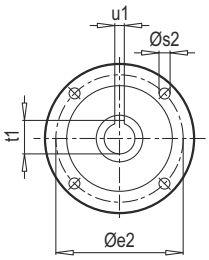
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

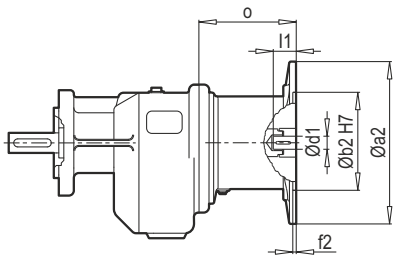
PA 02
PA 03

IEC

PF 02
PF 03







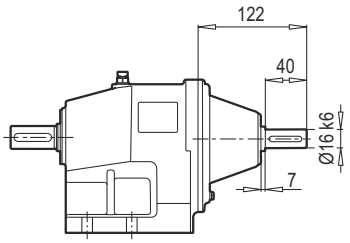
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 02-03	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 02	80	200	130	165	4.0	M10	19	40	21.8	6	105
PA/PF 02	90	200	130	165	4.0	M10	24	50	27.3	8	105

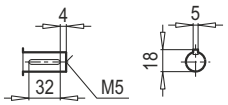
~ Kg		
IEC	PA/PF 02	PA/PF 03
63	14	18
71	15	19
80	18	-
90	18	-

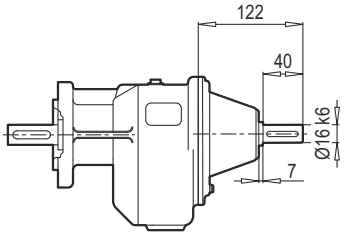
PA 02
PA 03

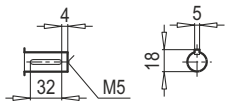
W

PF 02
PF 03



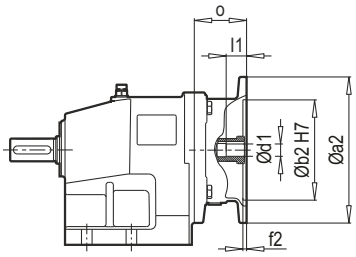




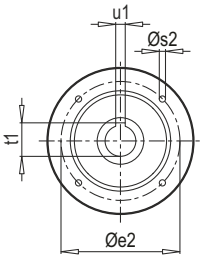


W ~ Kg	
PA/PF 02	12
PA/PF 03	17

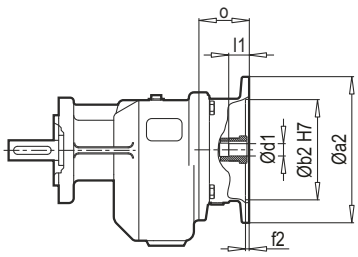
PA 02
PA 03



PAM B5/B14



PF 02
PF 03



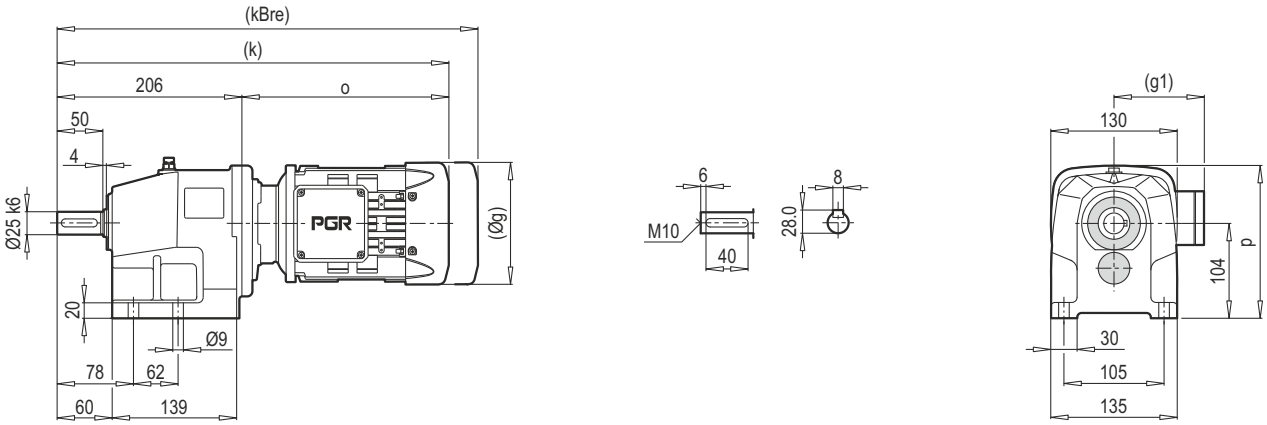
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 02 PA/PF 03 o
PA/PF 02-03	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4.0	M8	14	30	16.3	5	55
PA/PF 02	80	200	130	165	4.0	M10	19	40	21.8	6	74
PA/PF 02	90	200	130	165	4.0	M10	24	50	27.3	8	74

~ Kg		
PAM B5	PA/PF 02	PA/PF 03
63	12	16
71	12	16
80	13	-
90	13	-

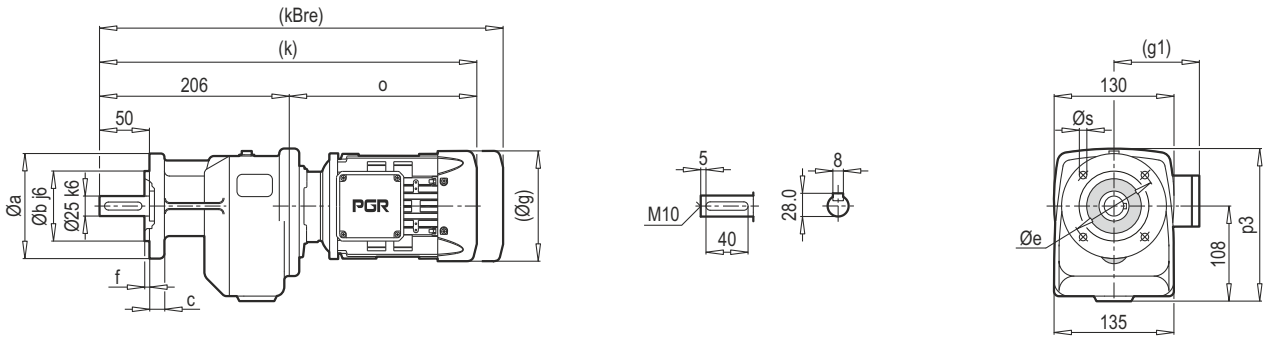
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 02 PA/PF 03 o
PA/PF 02-03	63	90	60	75	4.0	6	11	23	12.8	4	60
PA/PF 02-03	71	105	70	85	4.0	7	14	30	16.3	5	55
PA/PF 02	80	120	80	100	4.0	7	19	40	21.8	6	74
PA/PF 02	90	140	95	115	4.0	9	24	50	27.3	8	74

~ Kg		
PAM B14	PA/PF 02	PA/PF 03
63	11	15
71	11	15
80	12	-
90	12	-

PA 12



PF 12

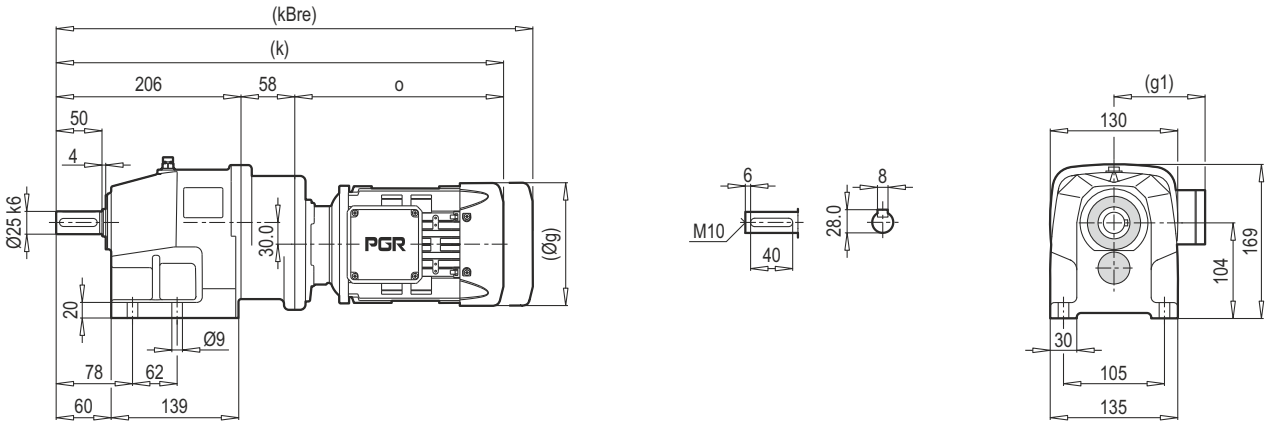


a	b	c	e	f	s
120	80	13	100	3.0	7
140	95	13	115	3.0	9
160	110	13	130	3.5	9

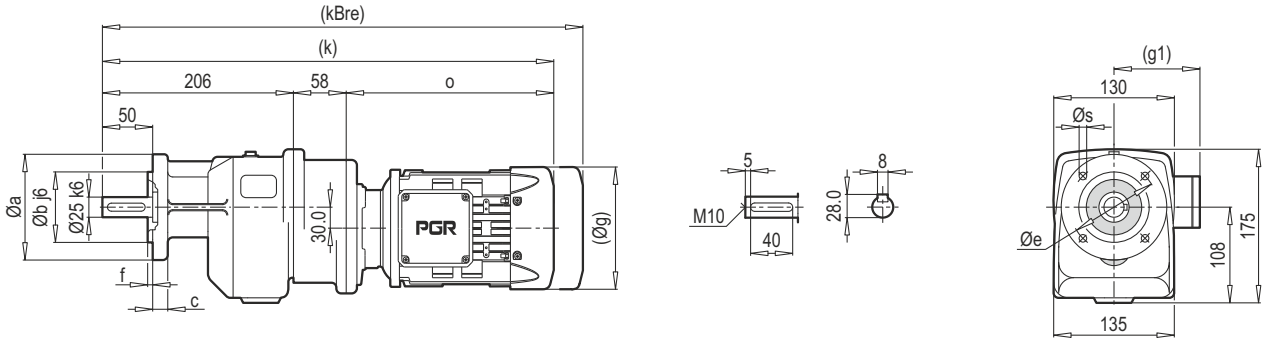
	63 M	71 M	80 M	90 S/L	100 L	112 M		
g	124	140	159	193	217	232		
g1	111	119	127	151	160	168		
k	404	446	473	496/516	544	589		
kBre	456	506	535	569/589	625	669		
o	198	240	267	290/310	338	383		
p	169	176	186	196	205	216		
p3	175	180	190	200	209	220		

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

PA 13



PF 13



a	b	c	e	f	s
120	80	13	100	3.0	7
140	95	13	115	3.0	9
160	110	13	130	3.5	9

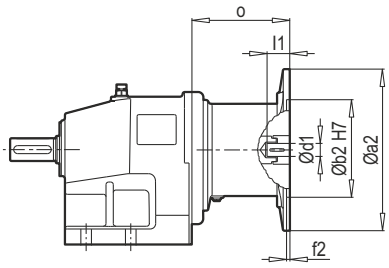
	63 M	71 M						
g	124	140						
g1	111	119						
k	462	504						
kBre	514	564						
o	198	240						

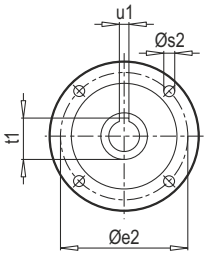
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

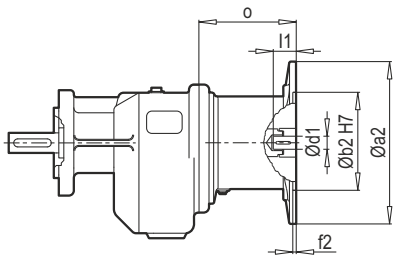
PA 12
PA 13

IEC

PF 12
PF 13







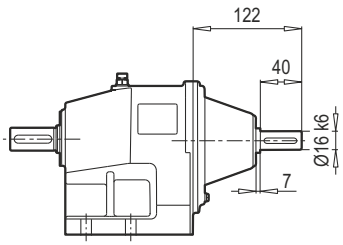
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 12	80	200	130	165	4.0	M10	19	40	21.8	6	105
PA/PF 12	90	200	130	165	4.0	M10	24	50	27.3	8	105
PA/PF 12	100	250	180	215	5.0	M12	28	60	31.3	8	130
PA/PF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

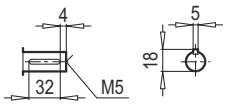
~ Kg		
IEC	PA/PF 12	PA/PF 13
63	16	21
71	17	22
80	20	-
90	20	-
100	27	-
112	27	-

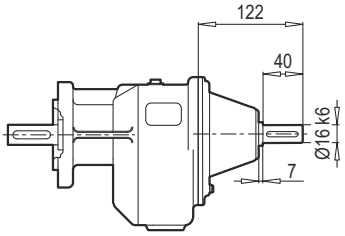
PA 12
PA 13

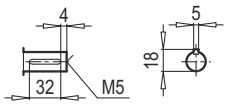
W

PF 12
PF 13







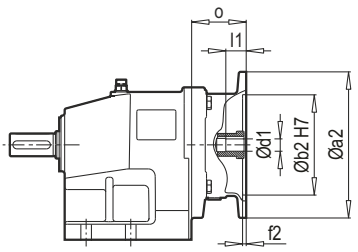


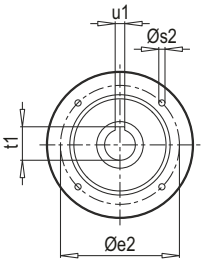
W ~ Kg	
PA/PF 12	15
PA/PF 13	20

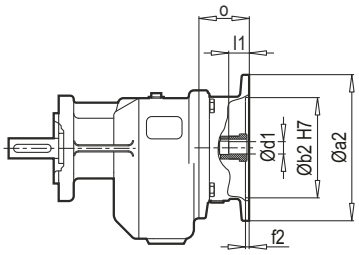
PA 12
PA 13

PAM B5/B14

PF 12
PF 13







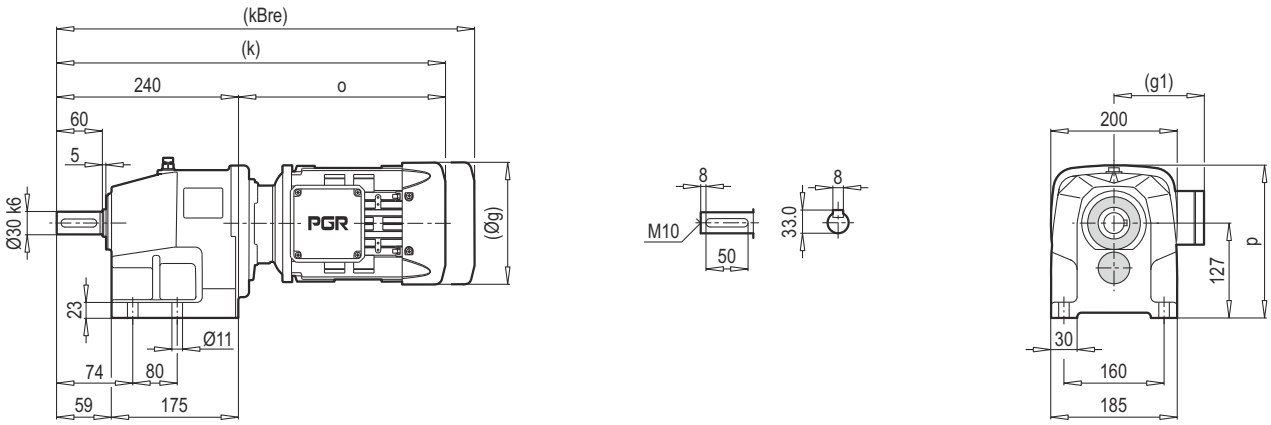
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	55
PA/PF 12	80	200	130	165	4.0	M10	19	40	21.8	6	74
PA/PF 12	90	200	130	165	4.0	M10	24	50	27.3	8	74
PA/PF 12	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 12	112	250	180	215	5.0	M12	28	60	31.3	8	75

~ Kg		
PAM B5	PA/PF 12	PA/PF 13
63	14	19
71	14	19
80	15	-
90	15	-
100	22	-
112	22	-

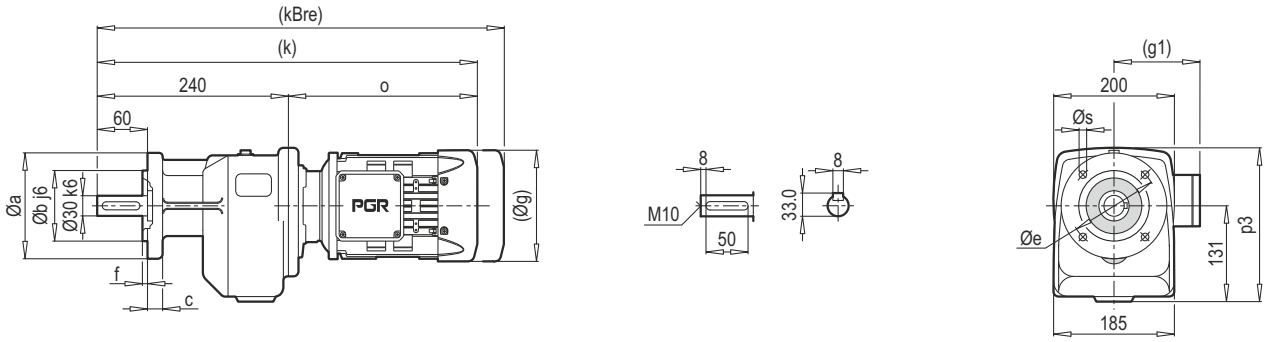
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	90	60	75	4.0	6	11	23	12.8	4	60
PA/PF 12-13	71	105	70	85	4.0	7	14	30	16.3	5	55
PA/PF 12	80	120	80	100	4.0	7	19	40	21.8	6	74
PA/PF 12	90	140	95	115	4.0	9	24	50	27.3	8	74
PA/PF 12	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 12	112	160	110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

~ Kg		
PAM B14	PA/PF 12	PA/PF 13
63	13	18
71	13	18
80	14	-
90	14	-
100	15	-
112	15	-

PA 22



PF 22

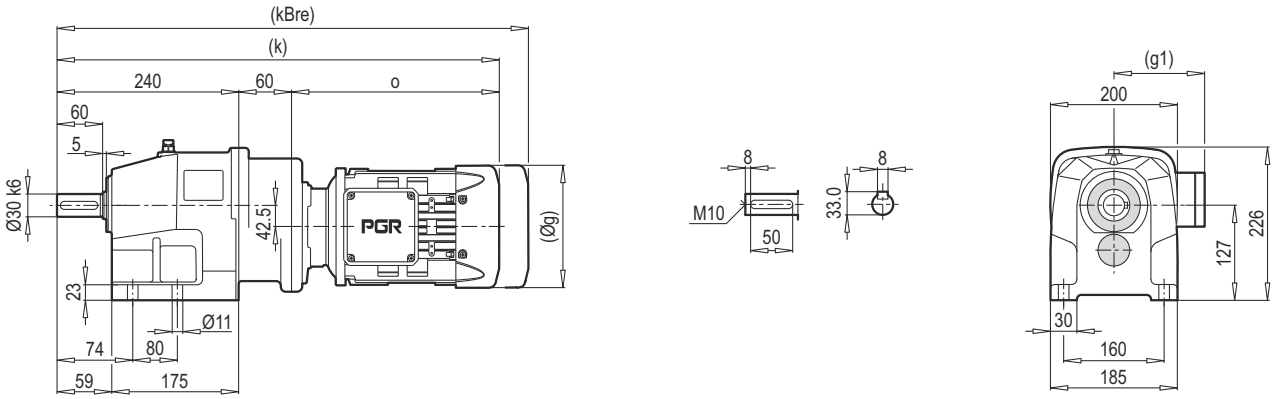


a	b	c	e	f	s
160	110	14	130	3.5	9
200	130	14	165	3.5	11

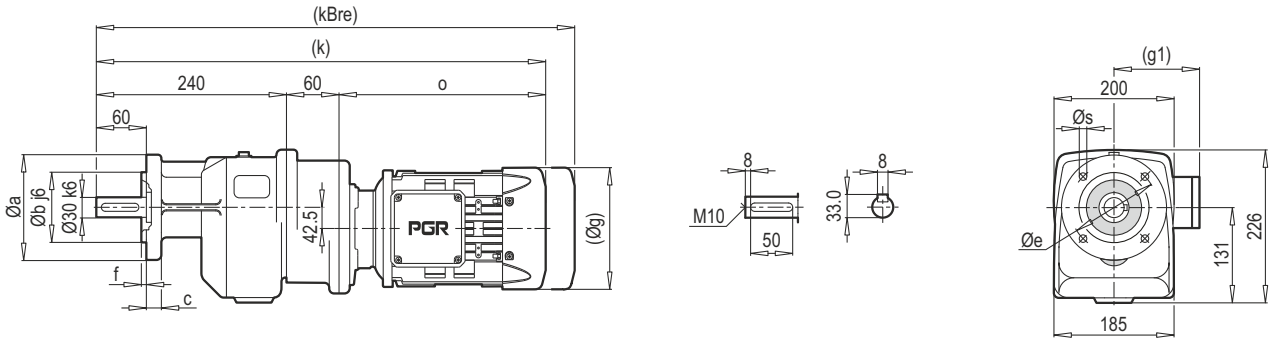
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	476	502	525/545	573	618			
kBre	536	564	598/618	654	698			
o	236	262	285/305	333	378			
p	226	226	226	228	240			
p3	226	226	226	228	240			

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

PA 23



PF 23



a	b	c	e	f	s
160	110	14	130	3.5	9
200	130	14	165	3.5	11

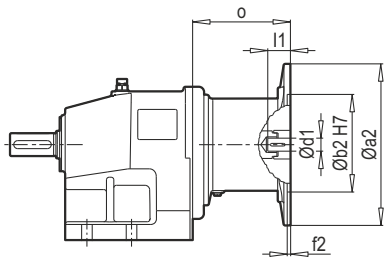
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k	498	540	567					
kBre	550	600	629					
o	198	240	267					

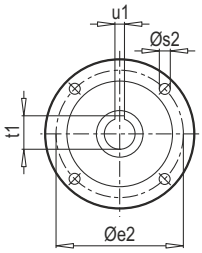
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

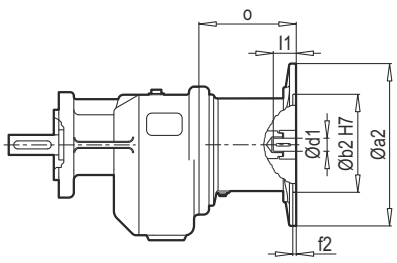
PA 22
PA 23

IEC

PF 22
PF 23







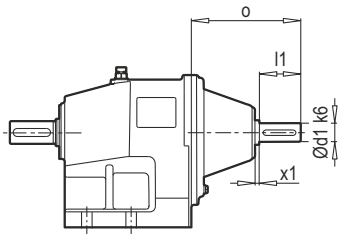
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 22	100	250	180	215	5.0	M12	28	60	31.3	8	124	-
PA/PF 22	112	250	180	215	5.0	M12	28	60	31.3	8	124	-

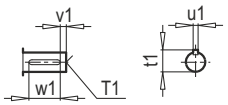
~ Kg		
IEC	PA/PF 22	PA/PF 23
63	-	33
71	28	34
80	32	37
90	32	37
100	36	-
112	36	-

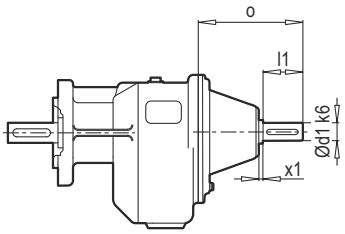
PA 22
PA 23

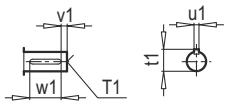
W

PF 22
PF 23









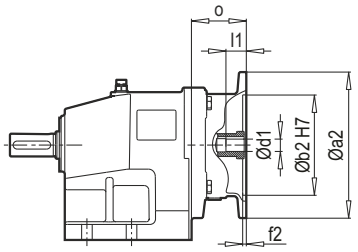
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 22	24	8	50	172	M8	27	8	5	40
PA/PF 23	16	7	40	122	M5	18	5	4	32

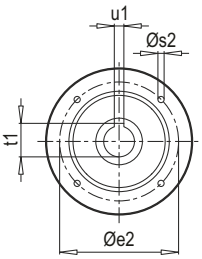
W ~ Kg	
PA/PF 22	30
PA/PF 23	32

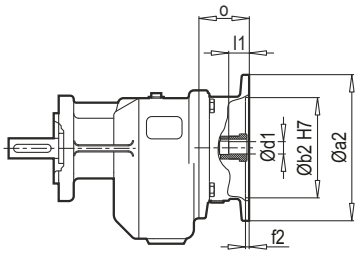
PA 22
PA 23

PAM B5/B14

PF 22
PF 23







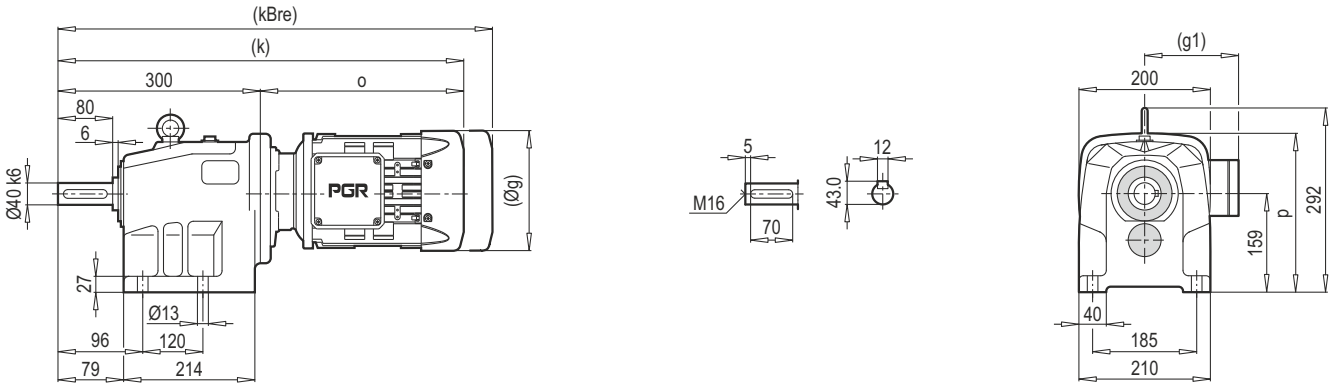
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 22	100	250	180	215	5.0	M12	28	60	31.3	8	75	-
PA/PF 22	112	250	180	215	5.0	M12	28	60	31.3	8	75	-

~ Kg		
PAM B5	PA/PF 22	PA/PF 23
63	-	31
71	26	31
80	27	32
90	27	32
100	28	-
112	28	-

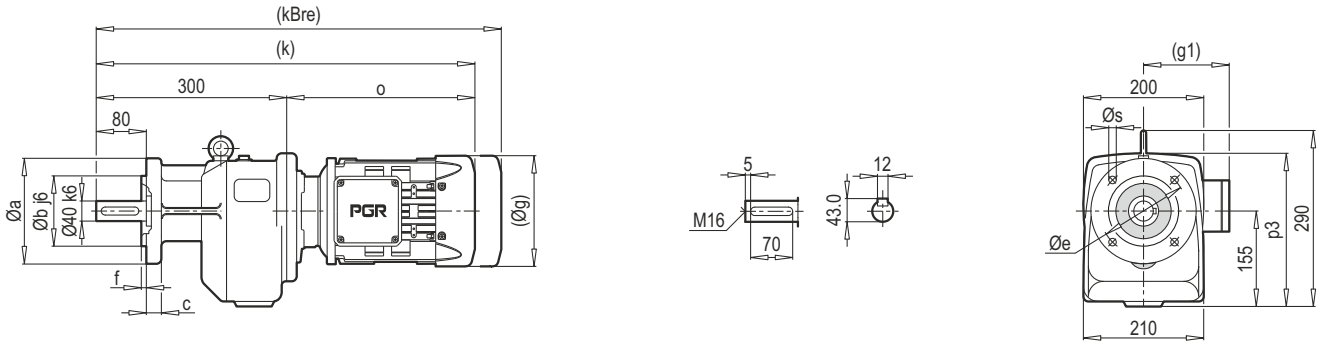
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	90	60	75	4.0	6	11	23	12.8	4	-	60
PA/PF 22-23	71	105	70	85	4.0	7	14	30	16.3	5	88	55
PA/PF 22-23	80	120	80	100	4.0	7	19	40	21.8	6	72	74
PA/PF 22-23	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 22	100	160	110	130	5.0	9	28	60	31.3	8	75	-
PA/PF 22	112	160	110	130	5.0	9	28	60	31.3	8	75	-

~ Kg		
PAM B14	PA/PF 22	PA/PF 23
63	-	30
71	24	30
80	25	31
90	25	31
100	27	-
112	27	-

PA 32



PF 32

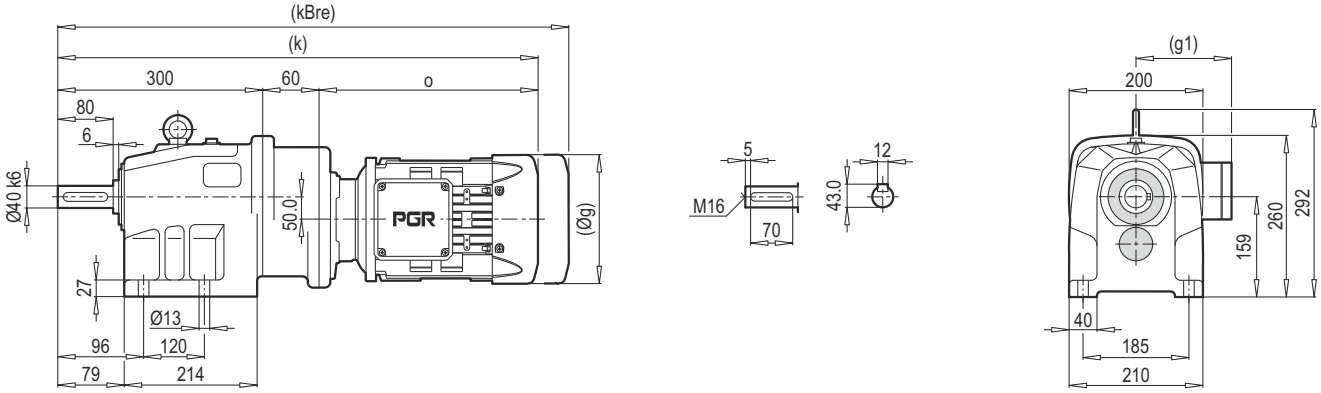


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

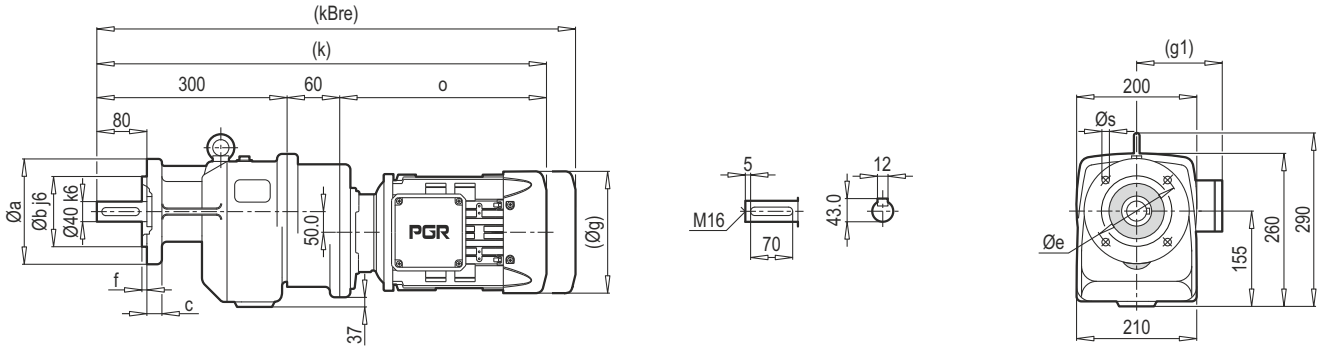
	71 M	80 M	90 S/L	100 L	112 M	132 S/M		
g	140	159	193	217	232	279		
g1	119	127	151	160	168	182		
k	536	562	585/605	633	678	685/720		
kBre	596	624	658/678	714	758	793/861		
o	236	262	285/305	333	378	385/420		
p	260	260	260	260	271	290		
p3	260	260	260	260	271	290		

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

PA 33



PF 33



a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

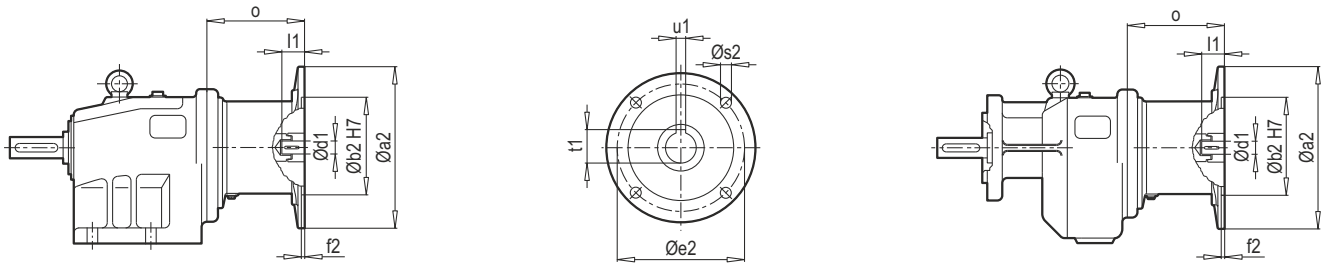
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k	558	600	627					
kBre	610	660	689					
o	198	240	267					

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

PA 32
PA 33

IEC

PF 32
PF 33



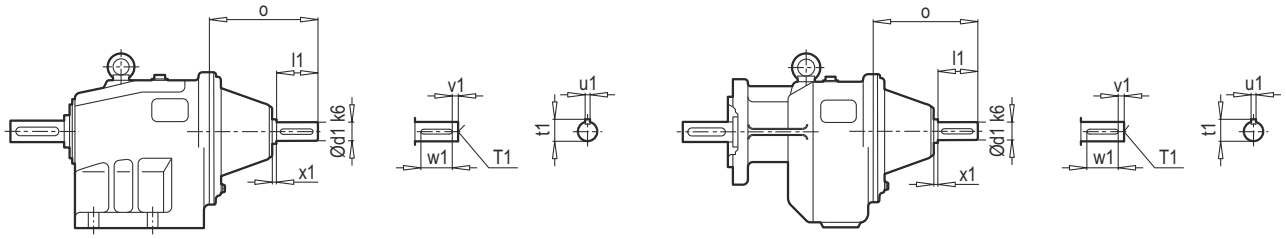
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 32-33	100	250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

~ Kg		
IEC	PA/PF 32	PA/PF 33
63	-	46
71	40	47
80	44	50
90	44	50
100	48	57
112	48	57
132	57	-

PA 32
PA 33

W

PF 32
PF 33



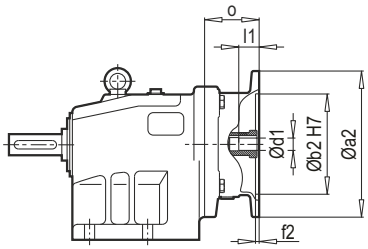
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 32	24	8	50	172	M8	27	8	5	40
PA/PF 33	16	7	40	122	M5	18	5	4	32

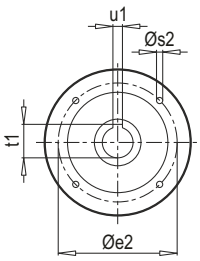
W ~ Kg	
PA/PF 32	42
PA/PF 33	45

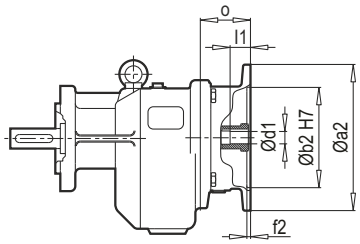
PA 32
PA 33

PAM B5/B14

PF 32
PF 33







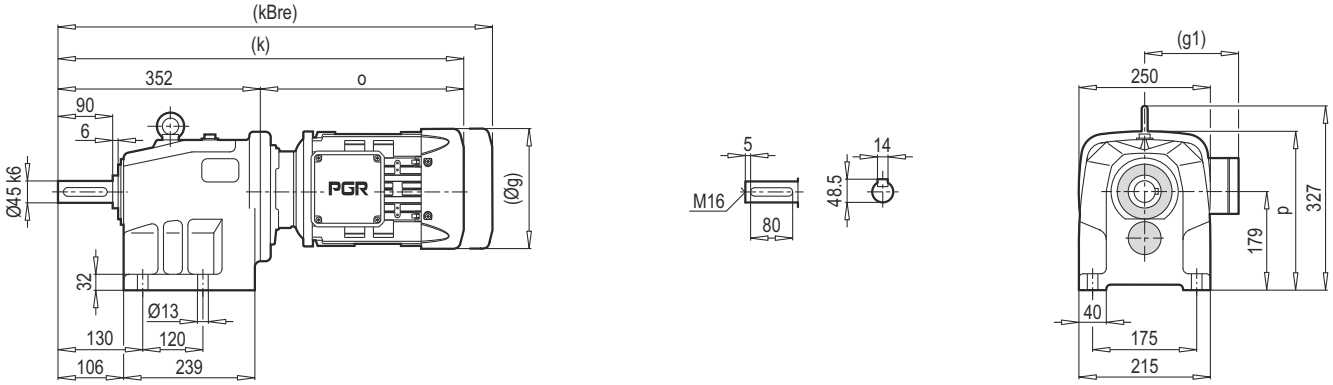
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 32-33	100	250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

~ Kg		
PAM B5	PA/PF 32	PA/PF 33
63	-	43
71	37	43
80	38	44
90	38	44
100	39	51
112	39	51
132	49	-

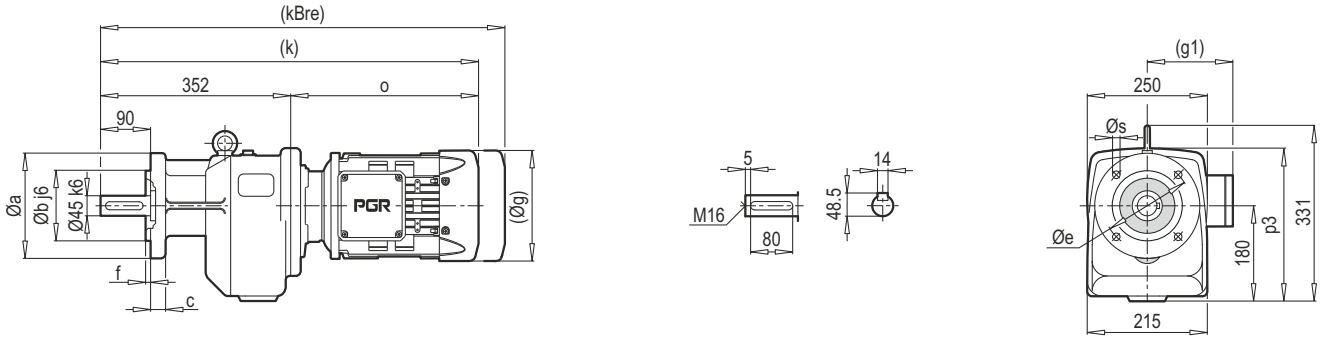
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	90	60	75	4.0	6	11	23	12.8	4	-	60
PA/PF 32-33	71	105	70	85	4.0	7	14	30	16.3	5	88	55
PA/PF 32-33	80	120	80	100	4.0	7	19	40	21.8	6	72	74
PA/PF 32-33	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 32-33	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 32-33	112	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 32	132	200	130	165	5.0	11	38	80	41.3	10	94	-

~ Kg		
PAM B14	PA/PF 32	PA/PF 33
63	-	42
71	35	42
80	36	43
90	36	43
100	38	44
112	38	44
132	42	-

PA 42



PF 42

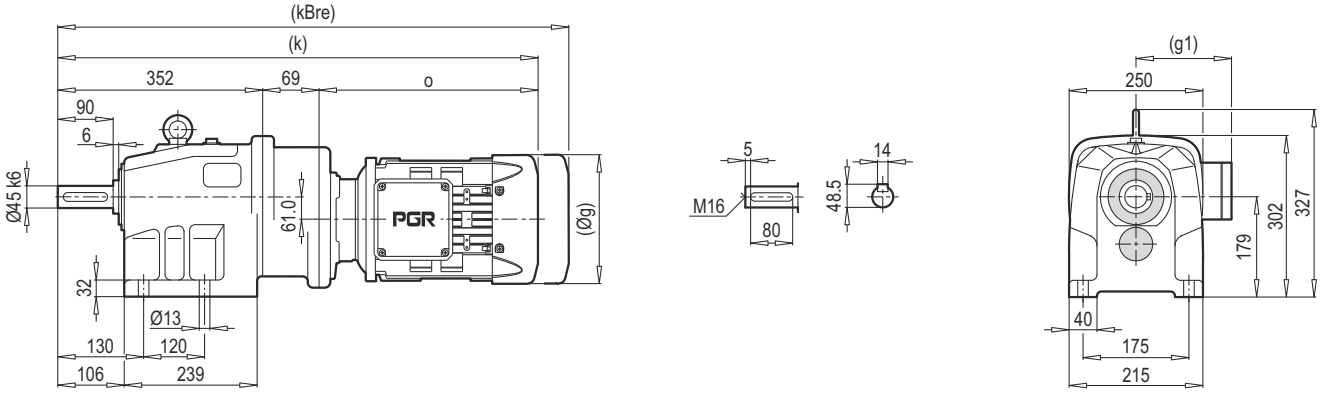


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

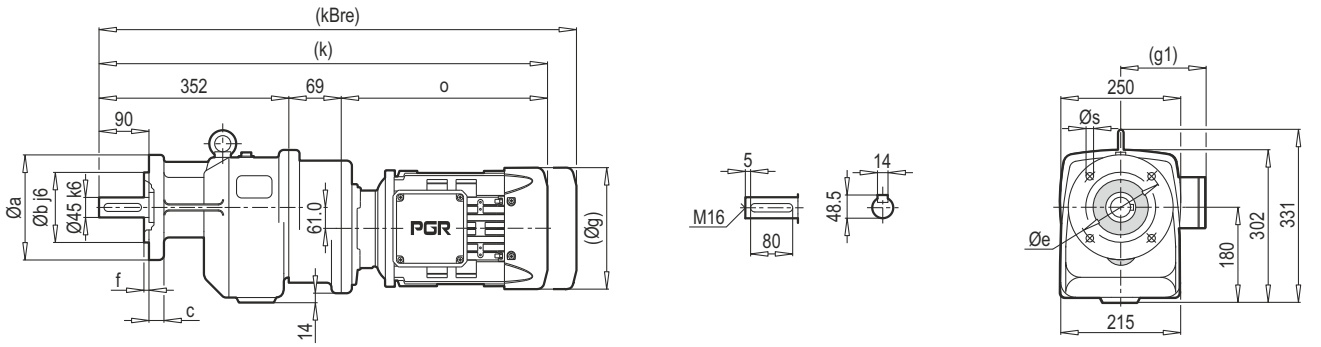
	90 S/L	100 L	112 M	132 S/M	160 M/L			
g	193	217	232	279	323			
g1	151	160	168	182	200			
k	617/637	665	710	717/752	857			
kBre	690/710	746	790	825/893	1009			
o	265/285	313	358	365/400	505			
p	302	302	302	310	337			
p3	302	302	302	310	337			

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

PA 43



PF 43



a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

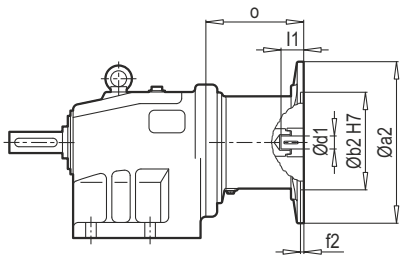
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	657	683	706/726	754	799			
kBre	717	745	779/799	835	879			
o	236	262	285/305	333	378			

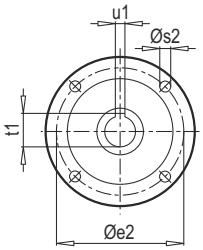
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

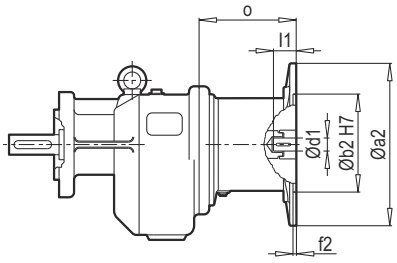
PA 42
PA 43

IEC

PF 42
PF 43







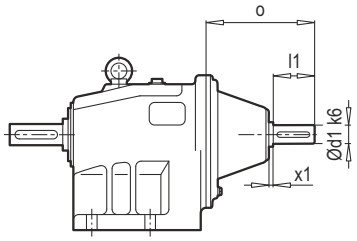
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 43	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PA/PF 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PA/PF 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 42-43	112	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 42	132	300	230	265	5.0	M12	38	80	41.3	10	190	-
PA/PF 42	160	350	250	300	6.0	M16	42	110	45.3	12	194	-

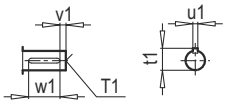
~ Kg		
IEC	PA/PF 42	PA/PF 43
71	-	71
80	-	75
90	62	75
100	70	79
112	70	79
132	84	-
160	95	-

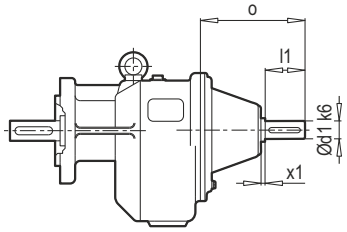
PA 42
PA 43

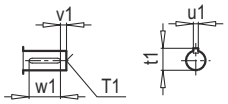
W

PF 42
PF 43









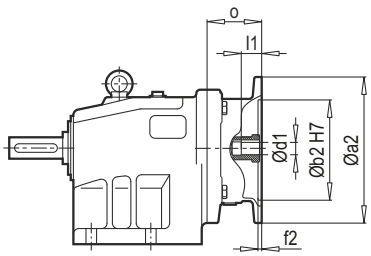
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 42	38	8	80	213	M12	41	10	5	70
PA/PF 43	24	8	50	172	M8	27	8	5	40

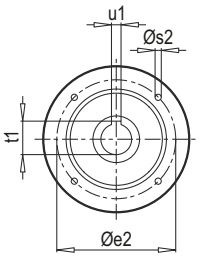
W ~ Kg	
PA/PF 42	68
PA/PF 43	73

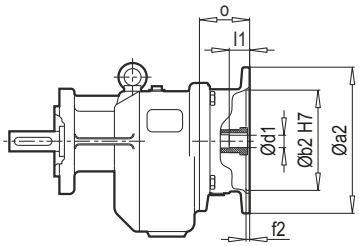
PA 42
PA 43

PAM B5/B14

PF 42
PF 43







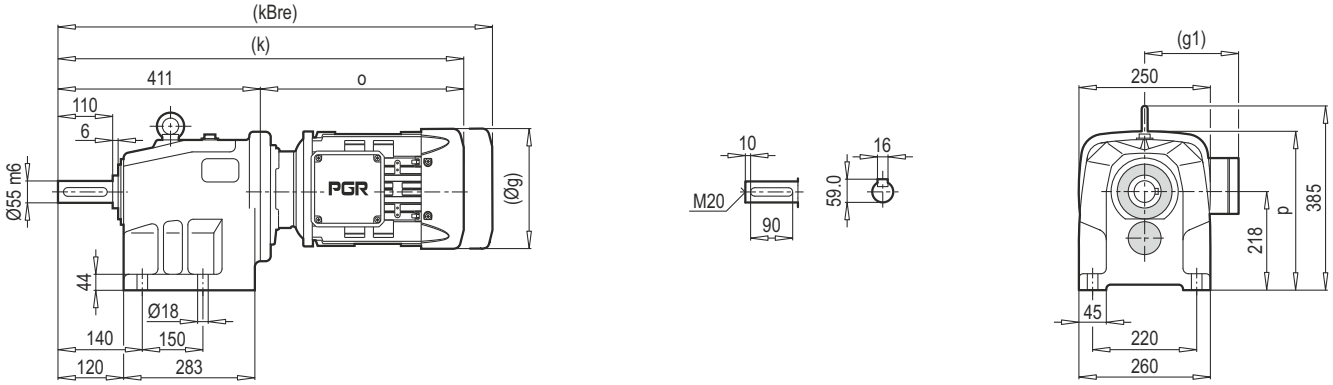
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 43	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 42-43	112	250	180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

~ Kg		
PAM B5	PA/PF 42	PA/PF 43
71	-	67
80	-	68
90	56	68
100	57	69
112	57	69
132	66	-
160	74	-

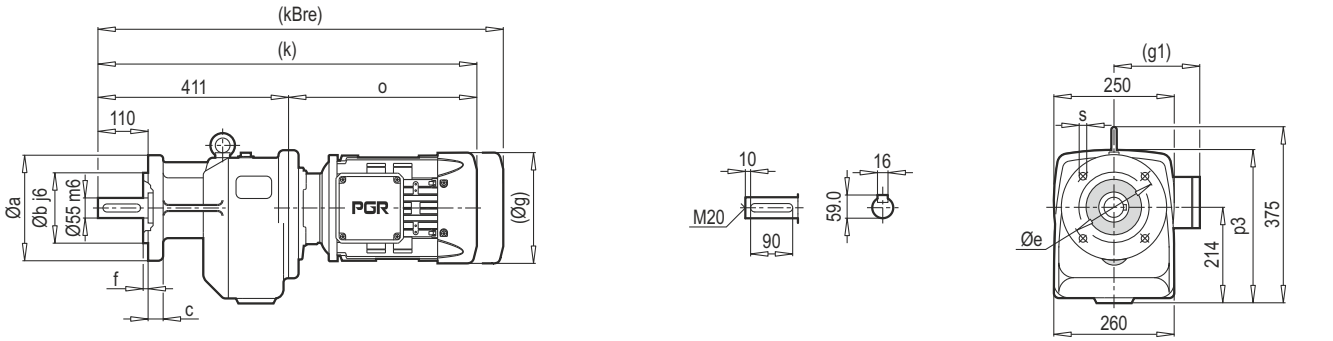
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	105	70	85	4.0	7	14	30	16.3	5	-	55
PA/PF 43	80	120	80	100	4.0	7	19	40	21.8	6	-	74
PA/PF 42-43	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 42-43	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 42-43	112	160	110	130	5.0	9	28	60	31.3	8	75	-
PA/PF 42	132	200	130	165	5.0	11	38	80	41.3	10	94	-

~ Kg		
PAM B14	PA/PF 42	PA/PF 43
71	-	65
80	-	66
90	55	66
100	56	68
112	56	-
132	61	-

PA 52



PF 52

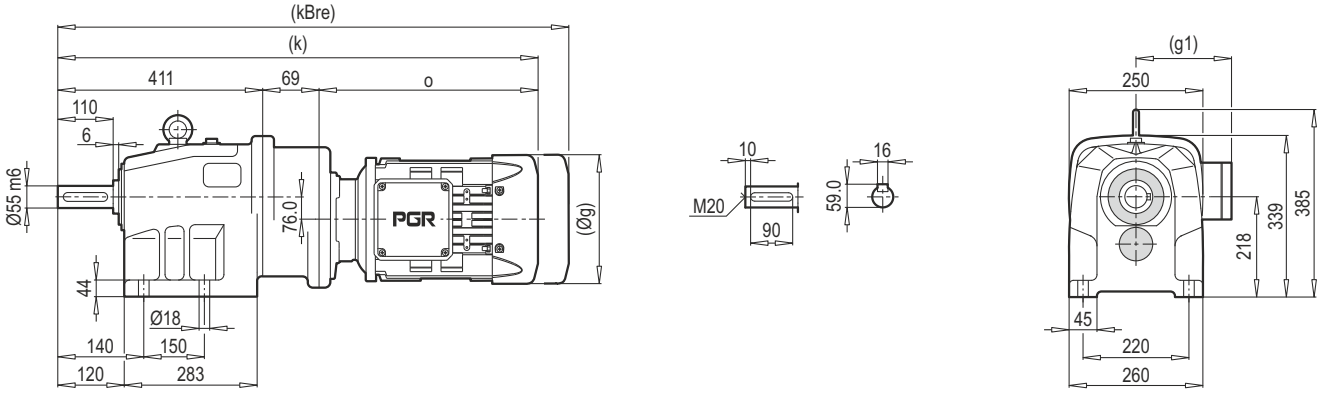


a	b	c	e	f	s
250	180	20	215	4.0	14
300	230	20	265	4.0	14

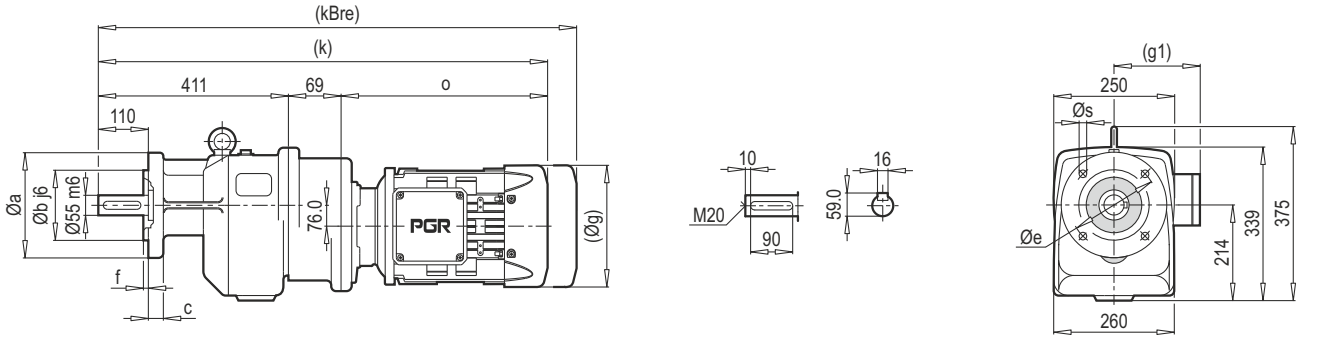
	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	193	217	232	279	323	370		
g1	151	160	168	182	200	248		
k	676/696	724	769	776/811	916	990		
kBre	749/769	805	849	884/952	1068	1152		
o	265/285	313	358	365/400	505	579		
p	339	339	339	347	374	374		
p3	339	339	339	347	374	374		

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

PA 53



PF 53



a	b	c	e	f	s
250	180	20	215	4.0	14
300	230	20	265	4.0	14

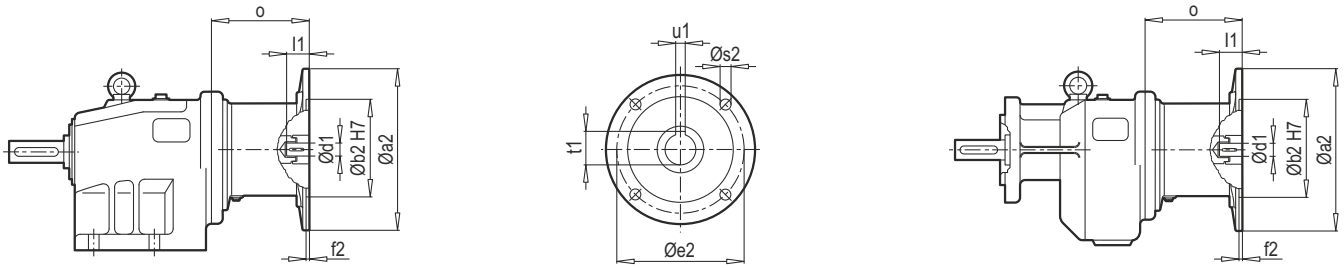
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	716	742	765/785	813	858			
kBre	776	804	838/858	894	938			
o	236	262	285/305	333	378			

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

PA 52
PA 53

IEC

PF 52
PF 53



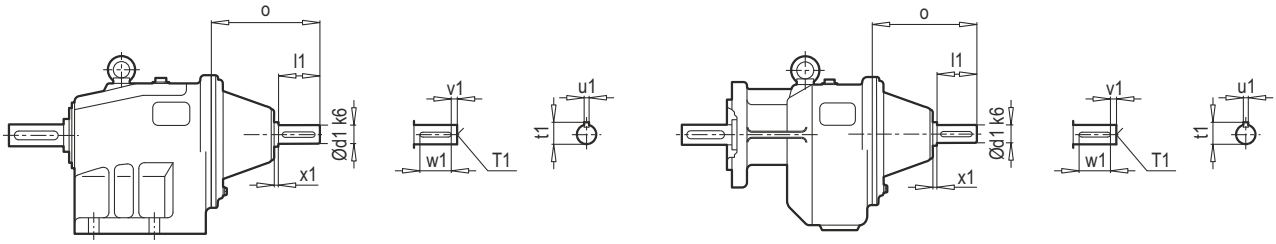
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 52-53	112	250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

~ Kg		
IEC	PA/PF 52	PA/PF 53
71	-	106
80	-	110
90	93	110
100	101	114
112	101	114
132	116	-
160	126	-
180	126	-

PA 52
PA 53

W

PF 52
PF 53



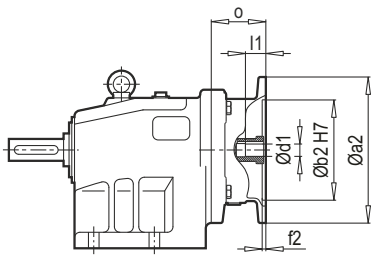
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 52	38	8	80	213	M12	41	10	5	70
PA/PF 53	24	8	50	172	M8	27	8	5	40

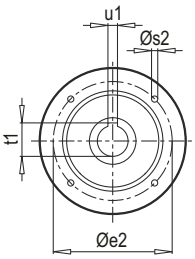
W ~ Kg	
PA/PF 52	99
PA/PF 53	108

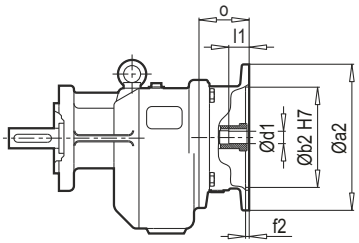
PA 52
PA 53

PAM B5/B14

PF 52
PF 53







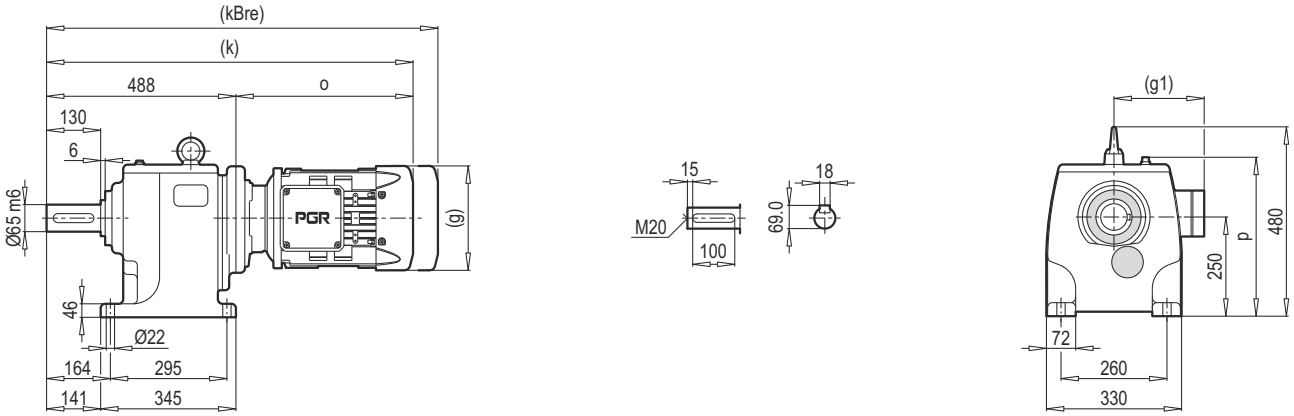
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 52-53	112	250	180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

~ Kg		
PAM B5	PA/PF 52	PA/PF 53
71	-	100
80	-	101
90	85	101
100	86	102
112	86	102
132	95	-
160	103	-
180	103	-

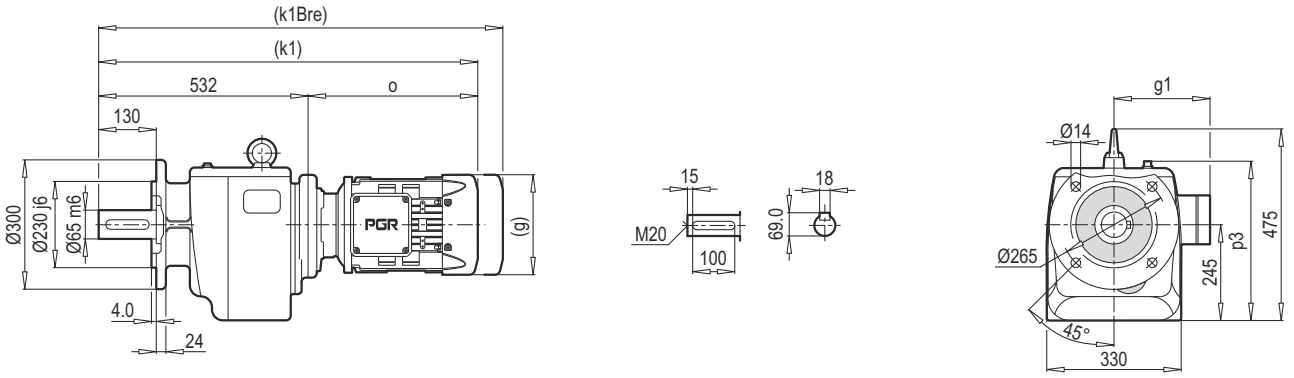
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	105	70	85	4.0	7	14	30	16.3	5	-	55
PA/PF 53	80	120	80	100	4.0	7	19	40	21.8	6	-	74
PA/PF 52-53	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 52-53	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 52-53	112	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 52	132	200	130	165	5.0	11	38	80	41.3	10	94	-

~ Kg		
PAM B14	PA/PF 52	PA/PF 53
71	-	98
80	-	99
90	84	99
100	85	101
112	85	101
132	89	-

PA 62



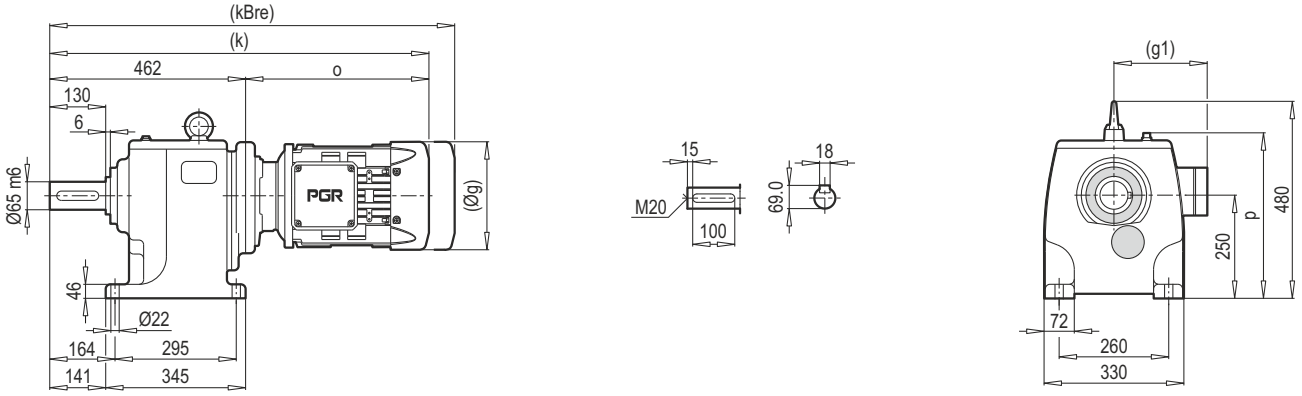
PF 62



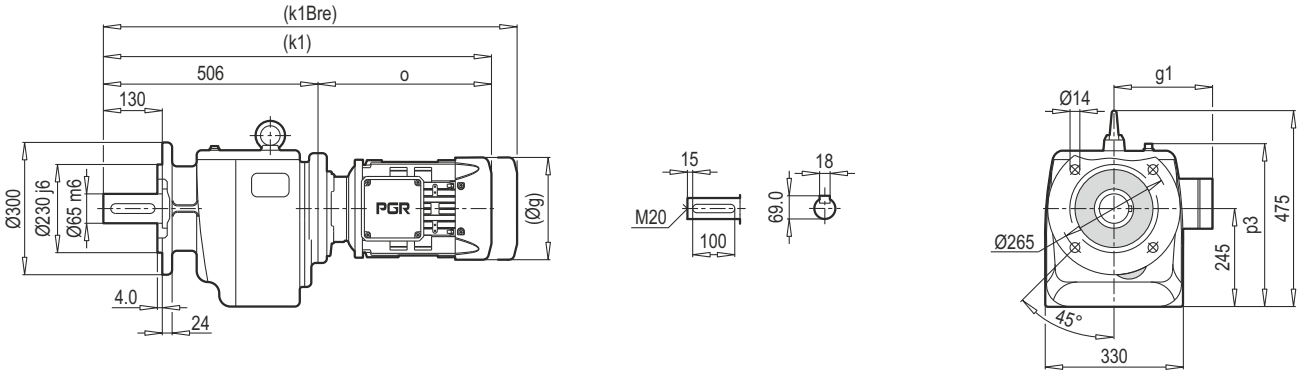
	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	
g	232	279	279	323	370	415	456	
g1	168	182	182	200	248	260	260	
k	848	851	886	952	1011	1106	1188	
kBre	928	959	1027	1104	1173	1253	1360	
k1	892	895	930	996	1055	1150	1232	
k1Bre	972	1003	1071	1148	1217	1297	1404	
o	360	363	398	464	523	618	700	
p	400	400	400	425	425	449	485	
p3	395	395	395	420	420	449	485	

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

PA 63



PF 63



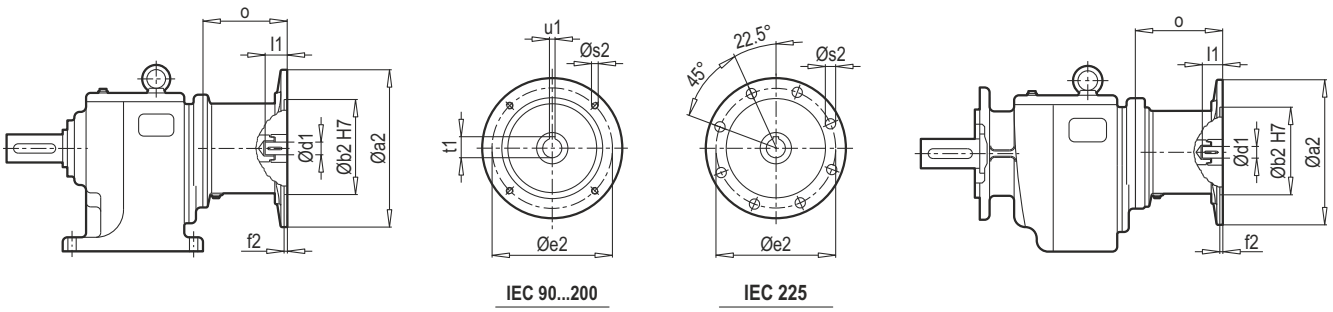
	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	193	217	232	279	323	370		
g1	151	160	168	182	200	248		
k	727/747	775	820	827/862	967	1041		
kBre	800/820	856	900	935/1003	1119	1203		
k1	771/791	819	864	871/906	1011	1085		
k1Bre	844/864	900	944	979/1047	1163	1247		
o	265/285	313	358	365/400	505	579		
p	400	400	400	400	410	410		
p3	395	395	395	395	405	405		

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

PA 62
PA 63

IEC

PF 62
PF 63



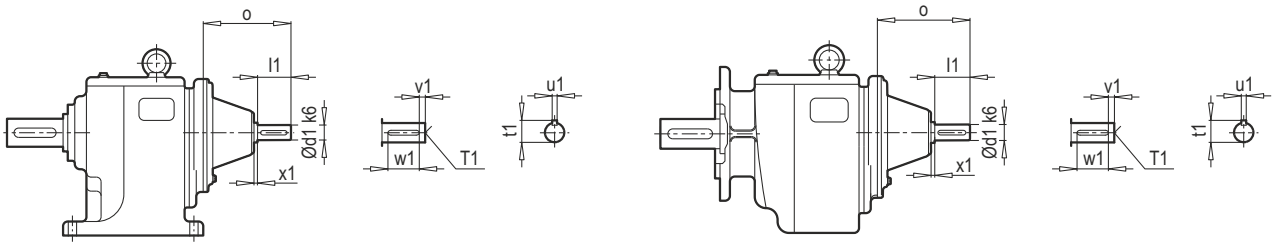
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	109
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	177	190
PA/PF 62-63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

~ kg		
IEC	PA/PF 62	PA/PF 63
90	-	151
100	167	159
112	167	159
132	181	173
160	207	184
180	207	184
200	222	-
225	237	-

PA 62
PA 63

W

PF 62
PF 63



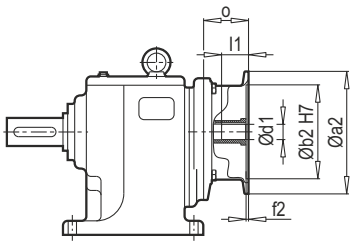
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 62	42	8	110	288	M16	45	12	10	90
PA/PF 63	38	8	80	213	M12	41	10	5	70

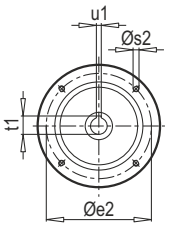
W ~ kg	
PA/PF 62	180
PA/PF 63	156

PA 62
PA 63

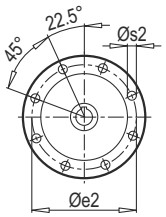
PAM B5/B14

PF 62
PF 63

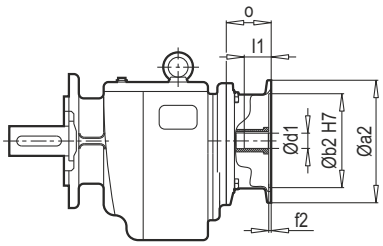




PAM 90...200



PAM 225



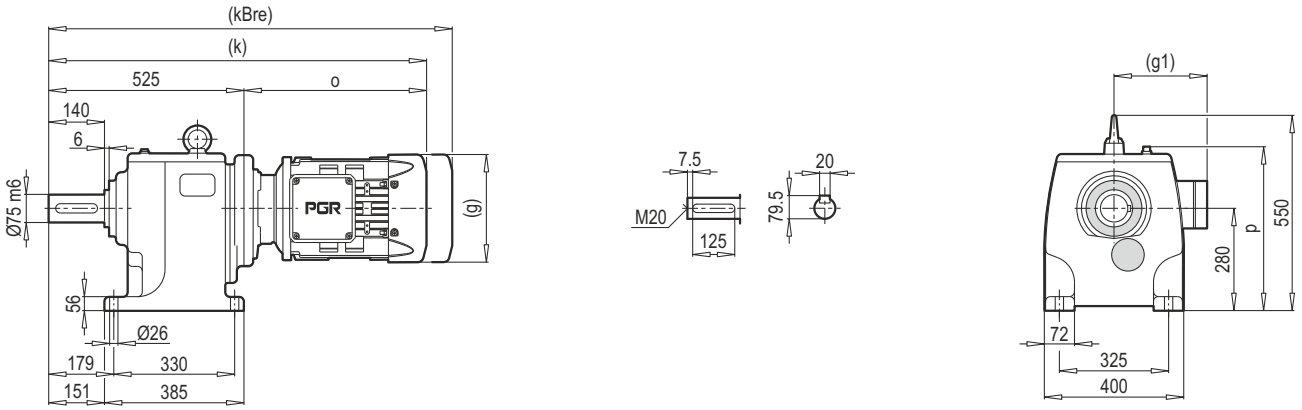
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	72
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	110	94
PA/PF 62-63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

~ Kg		
PAM B5	PA/PF 62	PA/PF 63
90	-	140
100	146	141
112	146	141
132	157	150
160	174	158
180	174	158
200	181	-
225	191	-

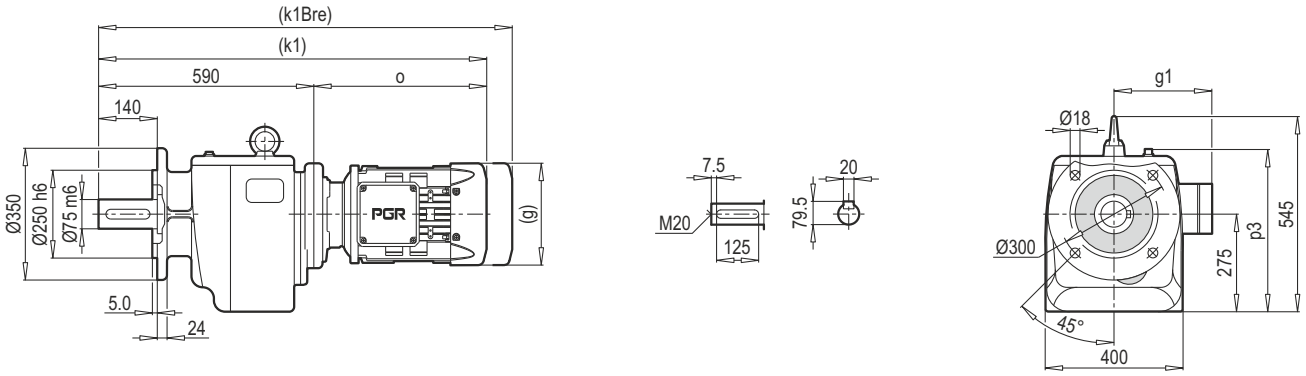
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	140	95	115	4.0	9	24	50	27.3	8	-	72
PA/PF 62-63	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 62-63	112	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 62-63	132	200	130	165	5.0	11	38	80	41.3	10	110	94

~ Kg		
PAM B14	PA/PF 62	PA/PF 63
90	-	139
100	145	140
112	145	140
132	152	145

PA 72



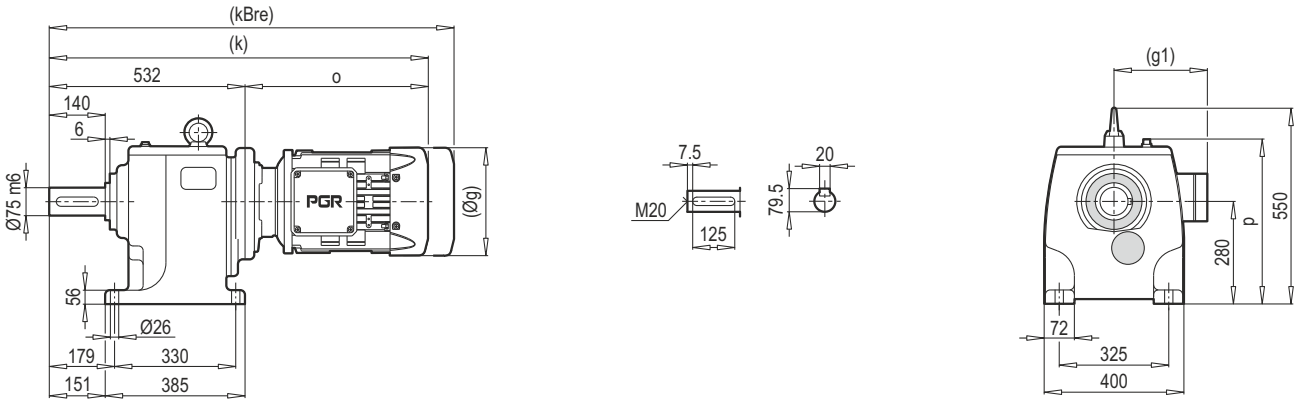
PF 72



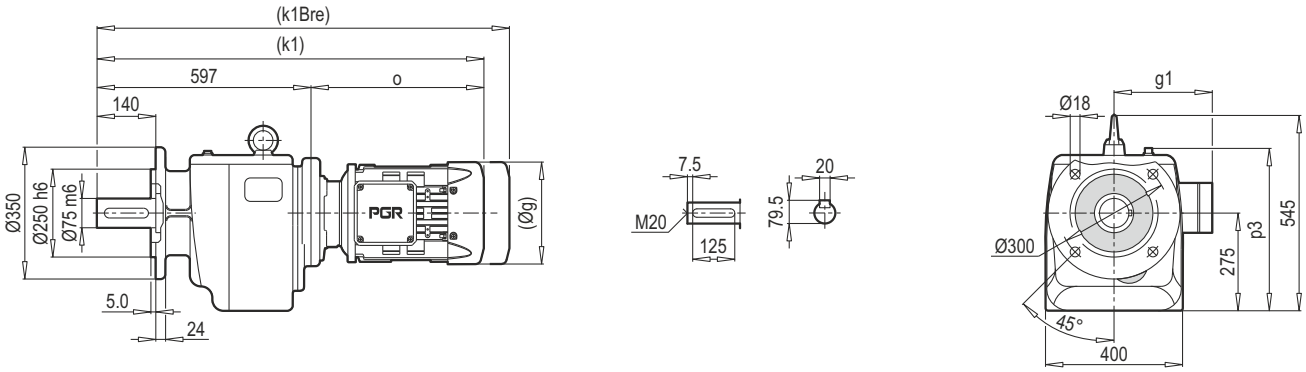
	132 M	160 M/L	180 M/L	200 L	225 S/M			
g	279	323	370	415	456			
g1	182	200	248	260	260			
k	923	989	1048	1143	1225			
kBre	1064	1141	1210	1290	1397			
k1	988	1054	1113	1208	1290			
k1Bre	1129	1206	1275	1355	1462			
o	398	464	523	618	700			
p	447	455	459	479	479			
p3	442	450	450	479	479			

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

PA 73



PF 73



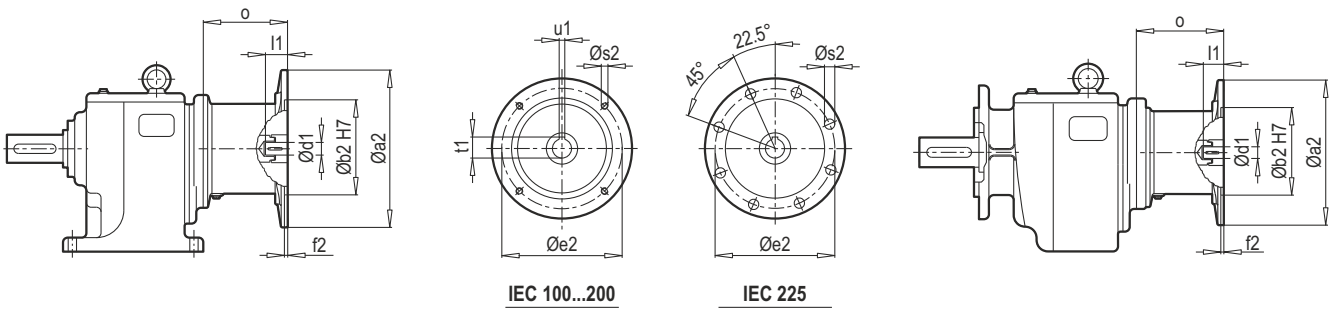
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k	844	892	895	930	996	1055	1150	1232
kBre	925	972	1003	1071	1148	1217	1297	1404
k1	909	957	960	995	1061	1120	1215	1297
k1Bre	990	1037	1068	1136	1213	1282	1362	1469
o	312	360	363	398	464	523	618	700
p	447	447	447	447	455	455	479	479
p3	442	442	442	442	450	450	474	474

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

PA 72
PA 73

IEC

PF 72
PF 73



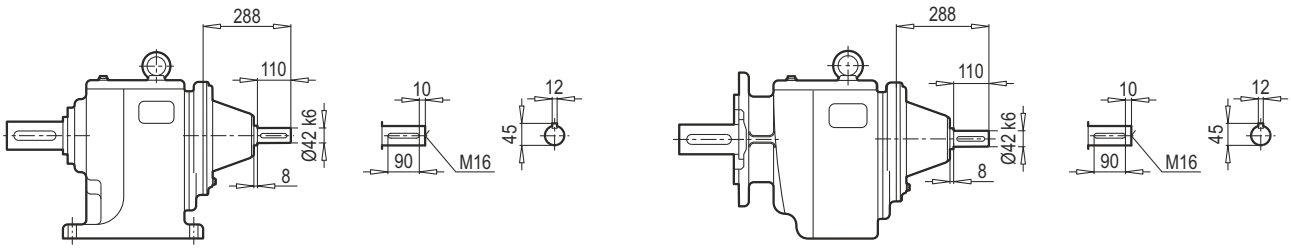
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 72-73	180	350	250	300	6.0	M16	48	110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

~ Kg		
IEC	PA/PF 72	PA/PF 73
100	-	250
112	-	250
132	253	264
160	279	290
180	279	290
200	294	305
225	310	320

PA 72
PA 73

W

PF 72
PF 73

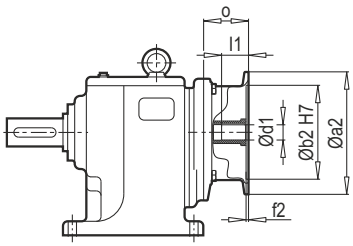


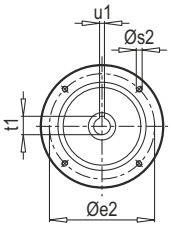
W ~ Kg	
PA/PF 72	252
PA/PF 73	263

PA 72
PA 73

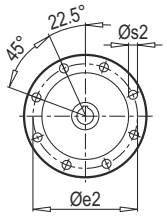
PAM B5/B14

PF 72
PF 73

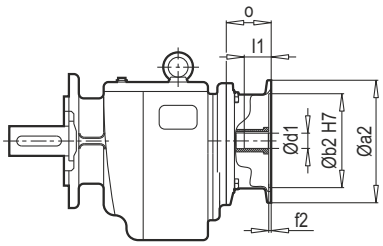




PAM 100...200



PAM 225



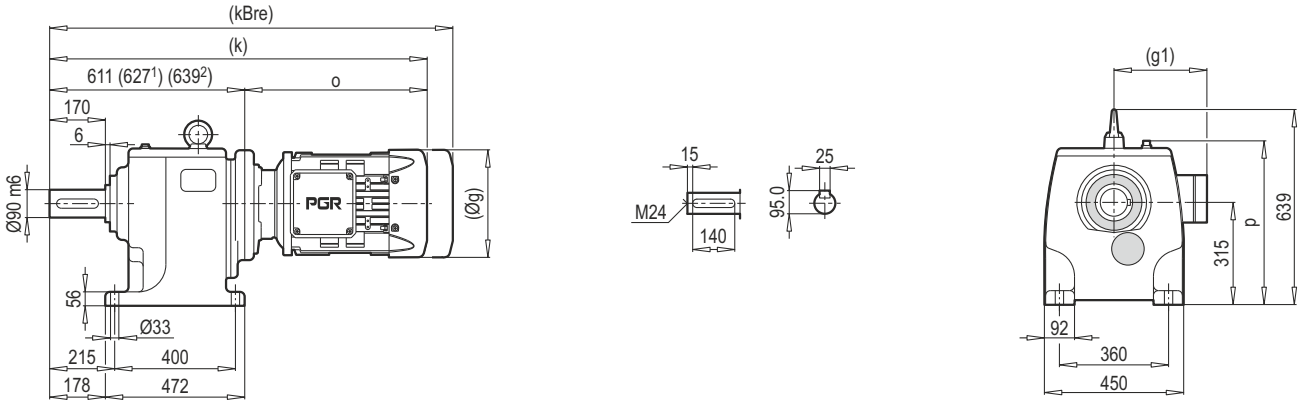
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 72-73	180	350	250	300	6.0	M16	48	110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

~ Kg		
PAM B5	PA/PF 72	PA/PF 73
100	-	225
112	-	225
132	226	236
160	243	253
180	243	253
200	250	260
225	260	270

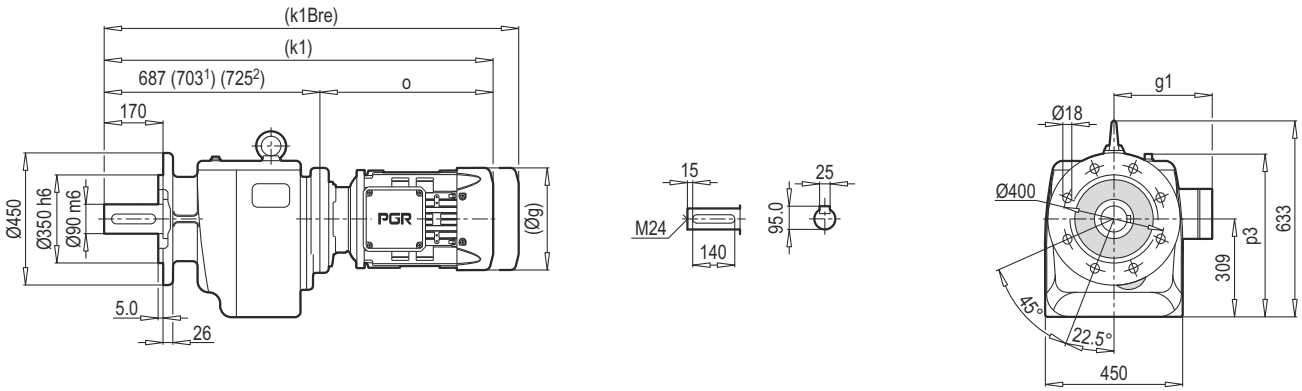
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 73	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 72-73	132	200	130	165	5.0	11	38	80	41.3	10	110

~ Kg		
PAM B14	PA/PF 72	PA/PF 73
100	-	224
112	-	224
132	221	231

PA 82



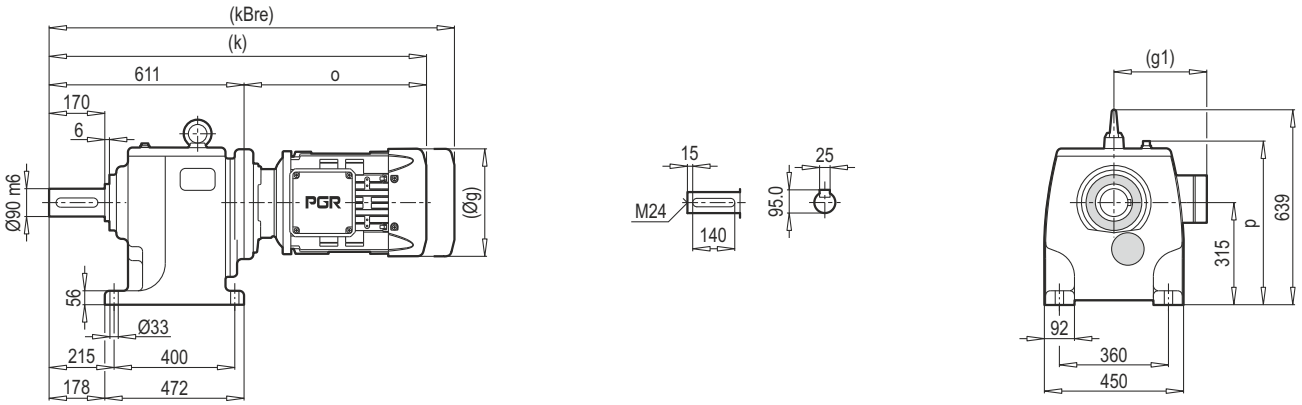
PF 82



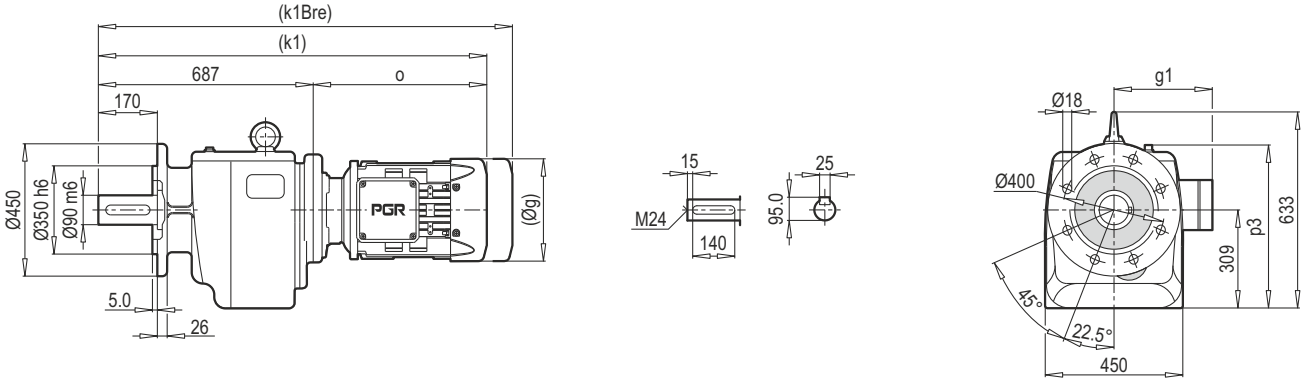
	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M [1)]	280 M [2)]	
g	279	323	370	415	456	495	510	
g1	182	200	248	260	260	392	372	
k	1009	1075	1134	1229	1311	1271	1527	
kBre	1150	1227	1296	1376	1483	1401	-	
k1	1085	1151	1210	1305	1387	1347	1613	
k1Bre	1226	1303	1372	1452	1559	1477	-	
o	398	464	523	618	700	644	888	
p	512	512	512	514	514	575	564	
p3	506	506	506	508	508	569	561	

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

PA 83



PF 83



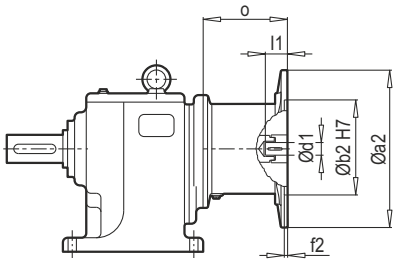
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k	923	971	974	1009	1075	1134	1229	1311
kBre	1004	1051	1082	1150	1227	1296	1376	1483
k1	999	1047	1050	1085	1151	1210	1305	1387
k1Bre	1080	1127	1158	1226	1303	1372	1452	1559
o	312	360	363	398	464	523	618	700
p	512	512	512	512	512	512	514	514
p3	506	506	506	506	506	506	508	508

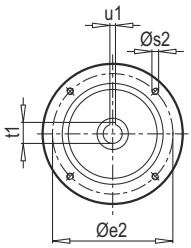
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

PA 82
PA 83

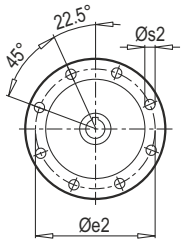
IEC

PF 82
PF 83

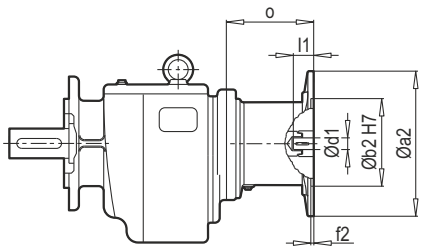




IEC 100...200



IEC 225...280



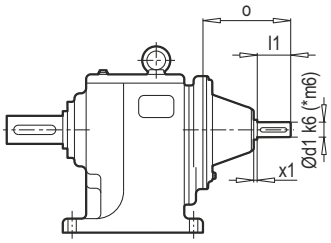
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 82-83	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 82-83	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 82-83	225	450	350	400	6.0	M16	60	140	64.4	18	303
PA/PF 82	250	550	450	500	6.0	M16	65	140	69.4	18	304
PA/PF 82	280	550	450	500	6.0	M16	75	140	79.9	20	304

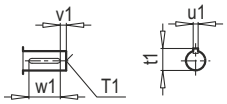
~ Kg		
IEC	PA/PF 82	PA/PF 83
100	-	366
112	-	366
132	371	379
160	398	406
180	398	406
200	412	421
225	428	437
250	487	-
280	487	-

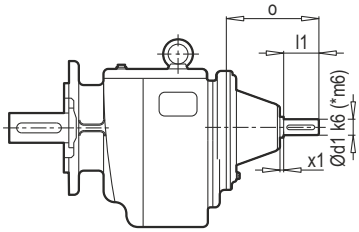
PA 82
PA 83

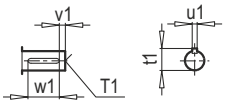
W

PF 82
PF 83









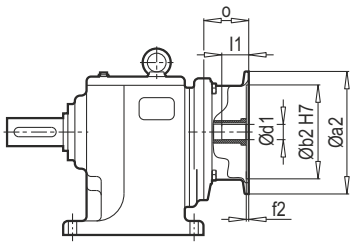
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 82	65*	12	140	397	M20	69	18	15	110
PA/PF 83	42	8	110	288	M16	45	12	10	90

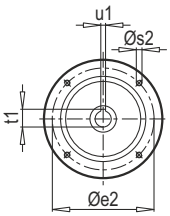
W ~ Kg	
PA/PF 82	449
PA/PF 83	378

PA 82
PA 83

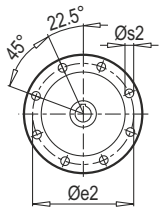
PAM B5/B14

PF 82
PF 83

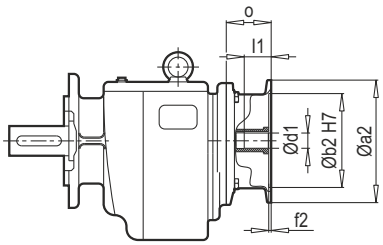




PAM 100...200



PAM 225...280



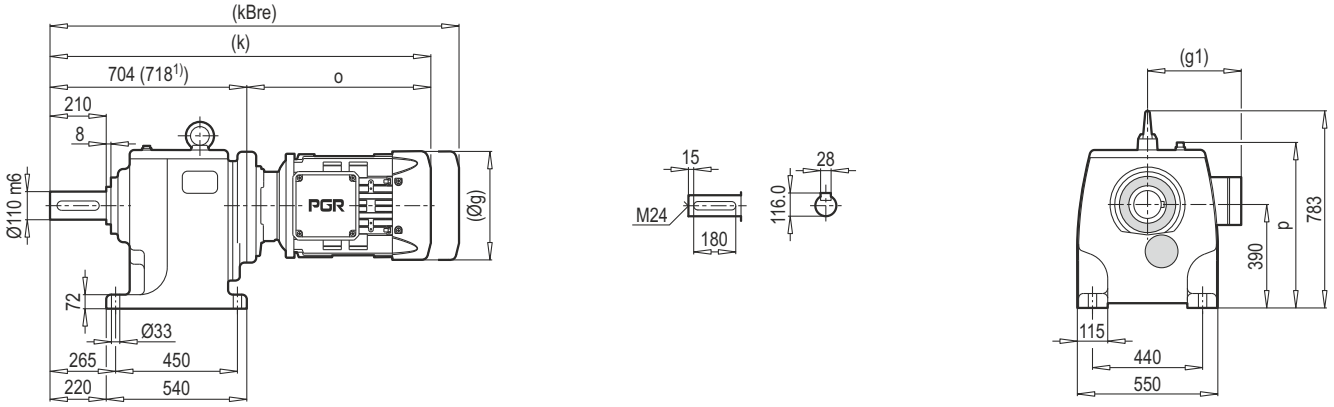
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 82-83	180	350	250	300	6.0	M16	48	110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

~Kg		
PAM B5	PA/PF 82	PA/PF 83
100	-	332
112	-	332
132	335	343
160	352	360
180	352	360
200	359	367
225	369	377
250	429	-
280	429	-

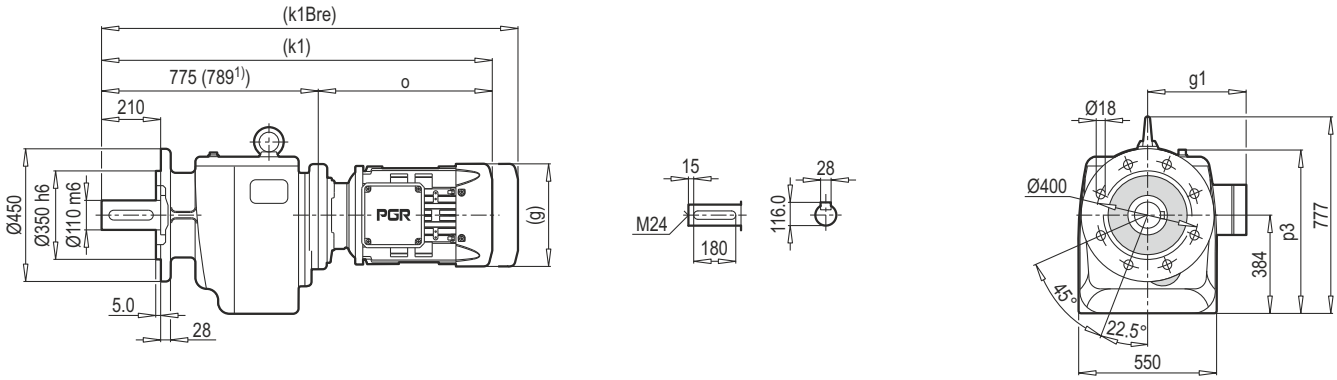
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 82-83	132	200	130	165	5.0	11	38	80	41.3	10	110

~Kg		
PAM B14	PA/PF 82	PA/PF 83
100	-	331
112	-	331
132	330	338

PA 92



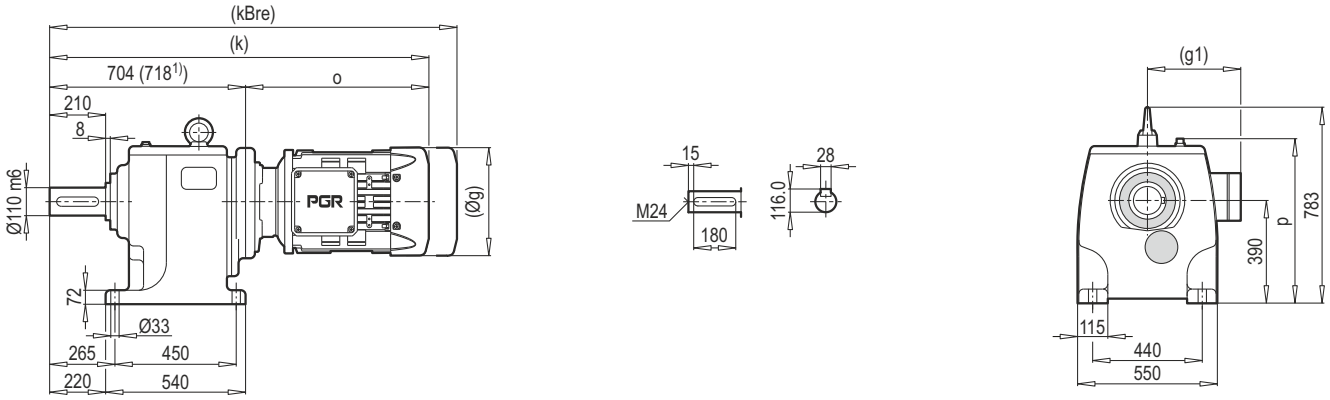
PF 92



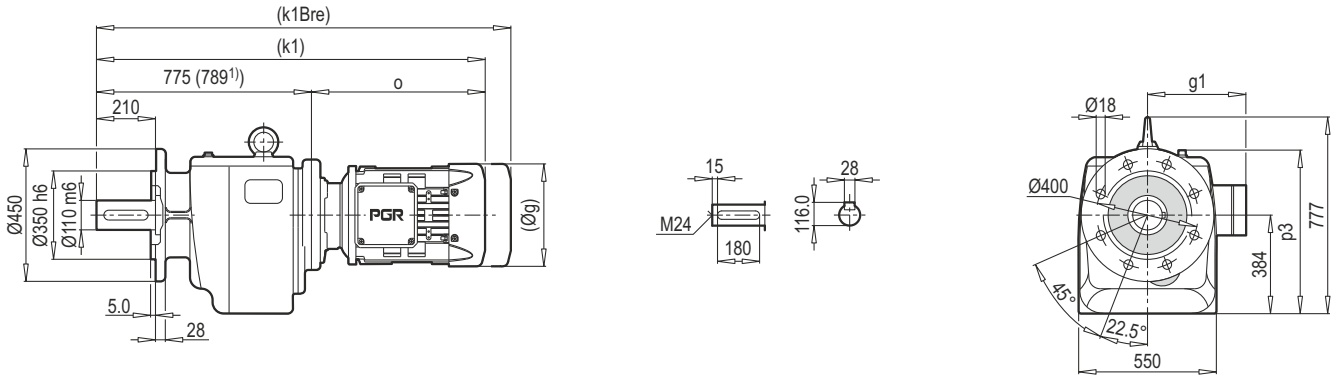
	180 M/L	200 L	225 S/M	250 M [1)]	280 M[1)]	315 S [1)]	315 M [1)]	
g	370	415	456	495	510	-	-	
g1	248	260	260	392	372	-	-	
k	1227	1322	1404	1362	1606	-	-	
kBre	1389	1469	1576	1492	-	-	-	
k1	1298	1393	1475	1433	1677	-	-	
k1Bre	1460	1540	1647	1563	-	-	-	
o	523	618	700	644	888	-	-	
p	622	622	622	650	682	-	-	
p3	616	616	616	644	676	-	-	

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

PA 93



PF 93



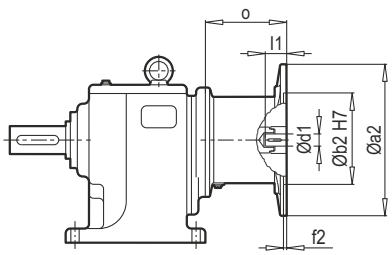
	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M 1)	280 M 1)
g	279	279	323	370	415	456	495	510
g1	182	182	200	248	260	260	392	372
k	1067	1102	1168	1227	1322	1404	1362	1606
kBre	1175	1243	1320	1389	1469	1576	1492	-
k1	1138	1173	1239	1298	1393	1475	1433	1677
k1Bre	1246	1303	1391	1460	1540	1647	1563	-
o	363	398	464	523	618	700	644	888
p	622	622	622	622	622	622	650	682
p3	616	616	616	616	616	616	644	676

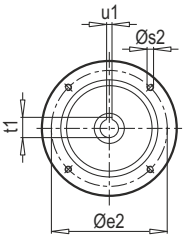
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

PA 92
PA 93

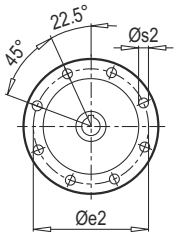
IEC

PF 92
PF 93

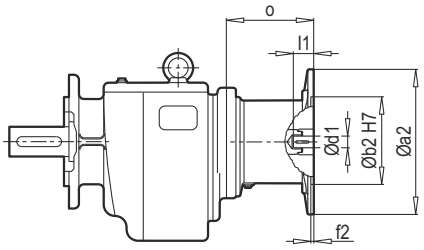




IEC 132...200



IEC 225...315



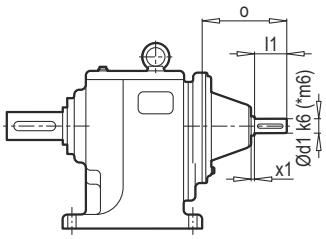
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 92-93	225	450	350	400	6.0	M16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

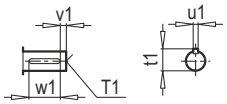
~ Kg		
IEC	PA/PF 92	PA/PF 93
132	-	569
160	584	596
180	584	596
200	599	611
225	615	626
250	673	685
280	673	685
315	758	-

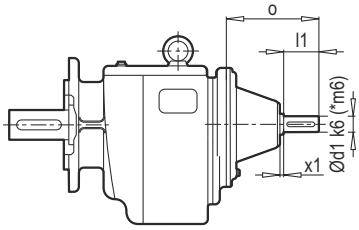
PA 92
PA 93

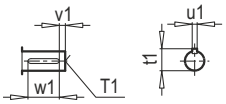
W

PF 92
PF 93









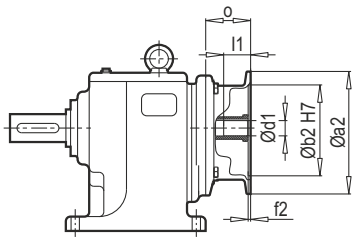
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 92	65*	12	140	397	M20	69	18	15	110
PA/PF 93	42	8	110	288	M16	45	12	10	90

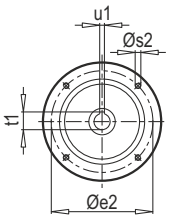
W ~ Kg	
PA/PF 92	610
PA/PF 93	568

PA 92
PA 93

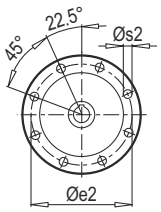
PAM B5/B14

PF 92
PF 93

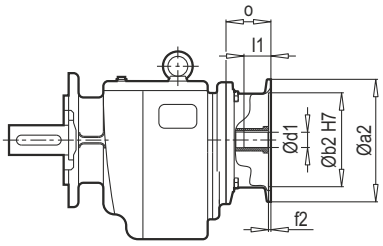




PAM 132...200



PAM 225...315



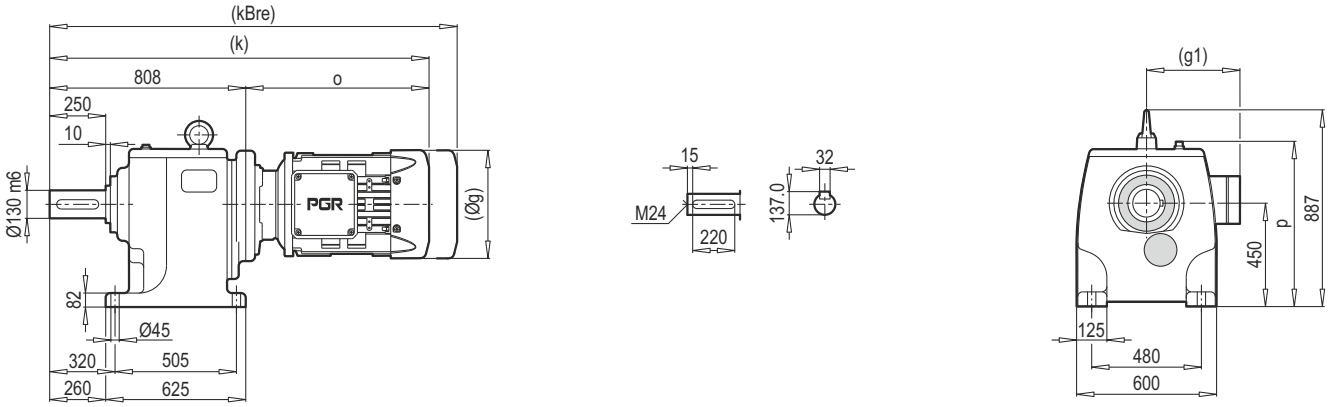
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	145
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	157
PA/PF 92-93	225	450	350	400	6.0	M16	60	140	64.4	18	183
PA/PF 92-93	250	550	450	500	6.0	M16	65	140	69.4	18	202
PA/PF 92-93	280	550	450	500	6.0	M16	75	140	79.9	20	202
PA/PF 92	315	660	550	600	7.0	M20	80	170	85.4	22	-

~ Kg		
PAM B5	PA/PF 92	PA/PF 93
132	-	522
160	528	539
180	528	539
200	535	546
225	545	556
250	605	616
280	605	616
315	-	-

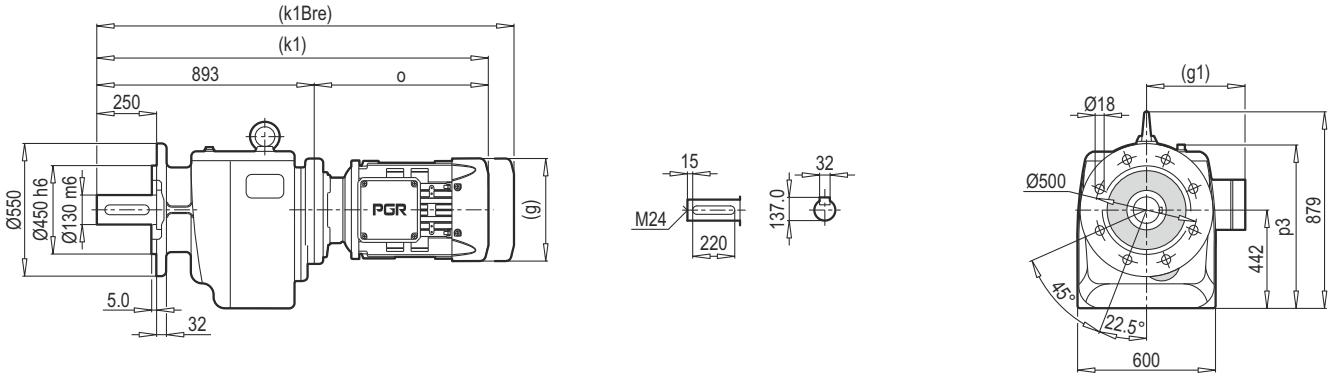
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	200	130	165	5.0	11	38	80	41.3	10	110

~ Kg	
PAM B14	PA/PF 93
132	517

PA 102



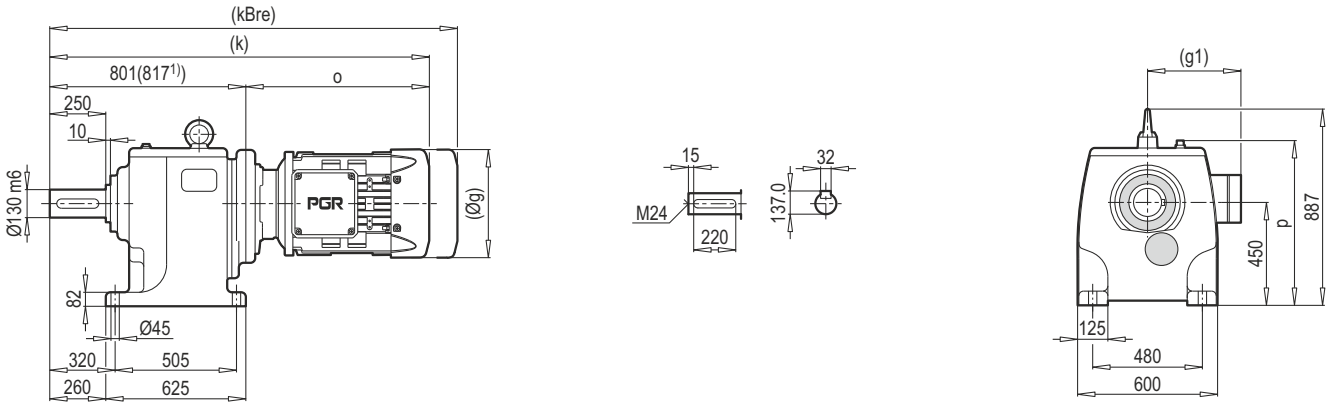
PF 102



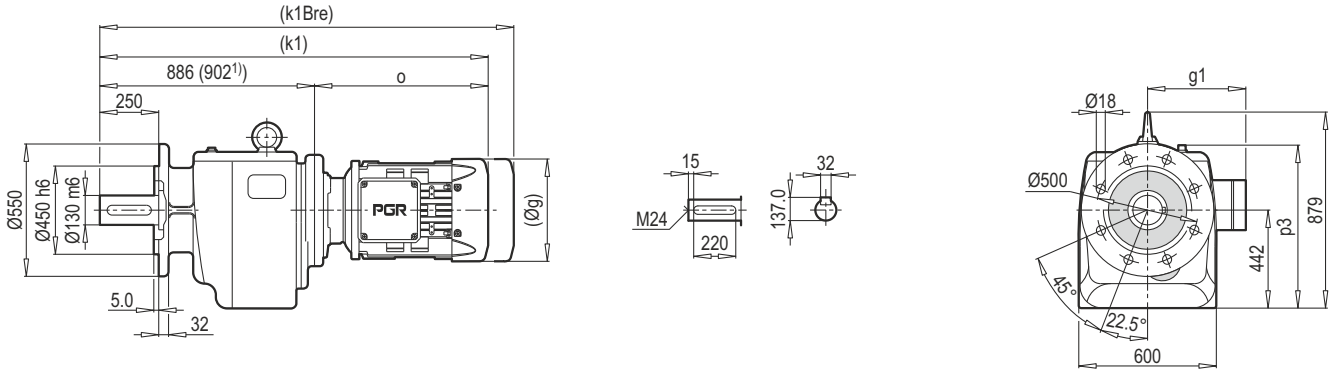
	250 M	280 M	315 S	315 M				
g	495	510	-	-				
g1	392	372	-	-				
k	1452	1696	-	-				
kBre	1582	-	-	-				
k1	1537	1781	-	-				
k1Bre	1667	-	-	-				
o	644	888	-	-				
p	702	754	-	-				
p3	706	758	-	-				

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

PA 103



PF 103



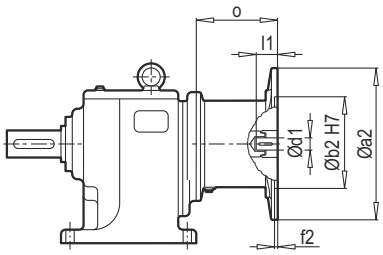
	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ¹⁾	315 S ¹⁾	315 M ¹⁾
g	279	279	323	370	415	456	495	510	-	-
g1	182	182	200	248	260	260	392	372	-	-
k	1164	1199	1265	1324	1419	1501	1461	1705	-	-
kBre	1272	1340	1417	1486	1566	1673	1591	-	-	-
k1	1249	1284	1350	1409	1504	1586	1546	1790	-	-
k1Bre	1357	1425	1502	1571	1651	1758	1676	-	-	-
o	363	398	464	523	618	700	644	888	-	-
p	702	702	702	702	702	702	710	754	-	-
p3	706	706	706	706	706	706	710	758	-	-

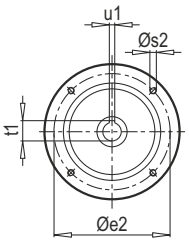
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

PA 102
PA 103

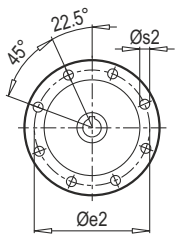
IEC

PF 102
PF 103

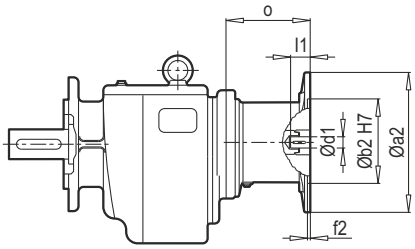




IEC 132...200



IEC 225...315



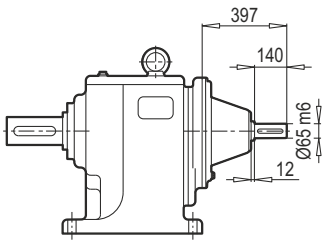
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 103	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 103	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 103	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 103	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 103	225	450	350	400	6.0	M16	60	140	64.4	18	303
PA/PF 102-103	250	550	450	500	6.0	M16	65	140	69.4	18	304
PA/PF 102-103	280	550	450	500	6.0	M16	75	140	79.9	20	304
PA/PF 102-103	315	660	550	600	7.0	M20	80	170	85.4	22	382

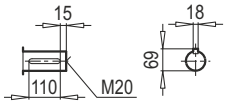
~ Kg		
IEC	PA/PF 102	PA/PF 103
132	-	801
160	-	828
180	-	828
200	-	843
225	-	859
250	907	917
280	907	917
315	992	1002

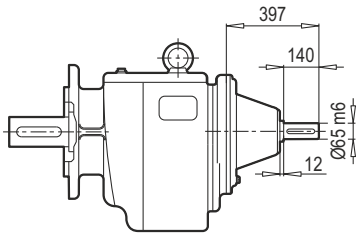
PA 102
PA 103

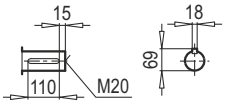
W

PF 102
PF 103







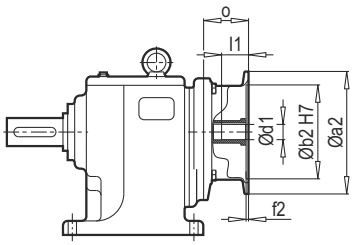


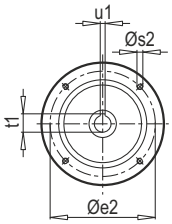
W ~ Kg	
PA/PF 102	870
PA/PF 103	880

PA 102
PA 103

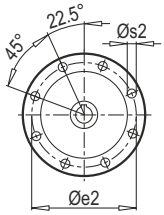
PAM B5/B14

PF 102
PF 103

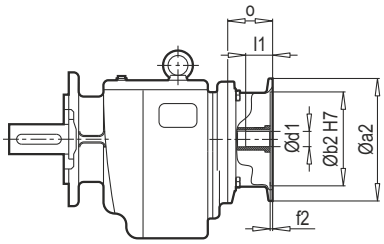




PAM 132...200



PAM 225...315



Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 103	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 103	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 103	180	350	250	300	6.0	M16	48	110	51.8	14	145
PA/PF 103	200	400	300	350	6.0	M16	55	110	59.3	16	157
PA/PF 103	225	450	350	400	6.0	M16	60	140	64.4	18	183
PA/PF 102-103	250	550	450	500	6.0	M16	65	140	69.4	18	202
PA/PF 102-103	280	550	450	500	6.0	M16	75	140	79.9	20	202
PA/PF 102-103	315	660	550	600	7.0	M20	80	170	85.4	22	-

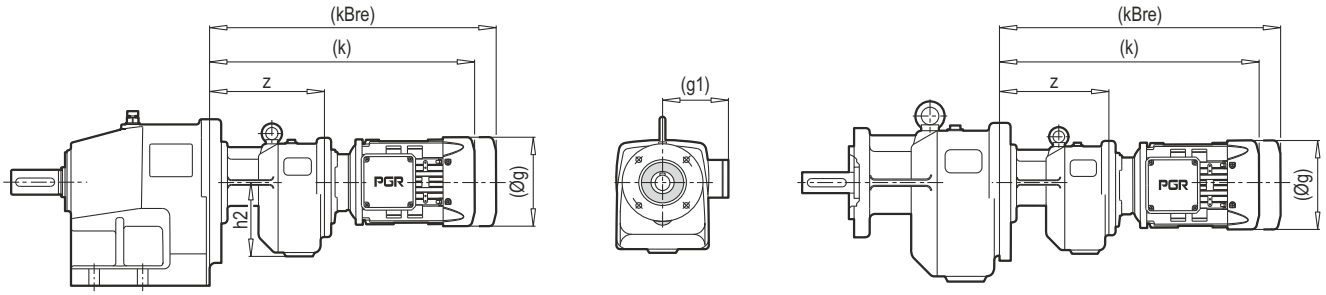
~ Kg		
PAM B5	PA/PF 102	PA/PF 103
132	-	741
160	-	758
180	-	758
200	-	765
225	-	775
250	826	835
280	826	835
315	-	-

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 103	132	200	130	165	5.0	11	38	80	41.3	10	110

~ Kg	
PAM B14	PA/PF 103
132	736

PA 12/02 **PA 32/12**
PA 22/02 **PA 42/12**
PA 52/12

PF 12/02 **PF 32/12**
PF 22/02 **PF 42/12**
PF 52/12



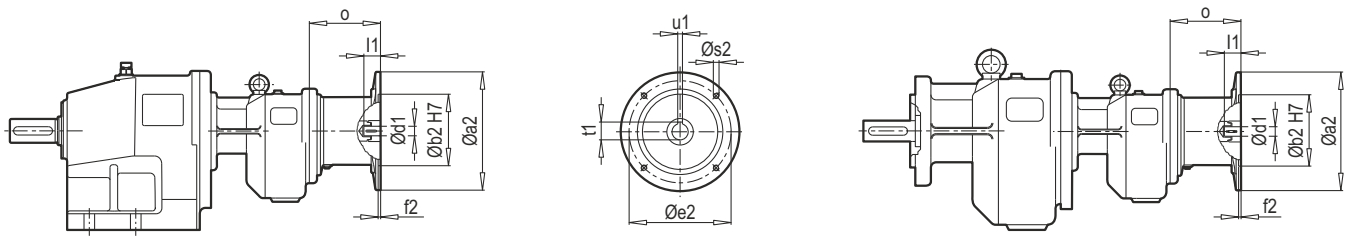
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 12/02	63 M 71 M	124 140	111 119	91	143	341 383	393 443
PA/PF 22/02	63 M 71 M 80 M	124 140 159	111 119 127	91	159	357 399 426	409 459 488
PA/PF 32/12	63 M 71 M 80 M	124 140 159	111 119 127	108	172	370 412 439	422 472 501
PA/PF 42/12 **PA/PF 52/12**	63 M 71 M 80 M	124 140 159	111 119 127	108	176	374 416 443	426 476 505

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

PA 12/02 **PA 32/12**
PA 22/02 **PA 42/12**
PA 52/12

IEC

PF 12/02 **PF 32/12**
PF 22/02 **PF 42/12**
PF 52/12



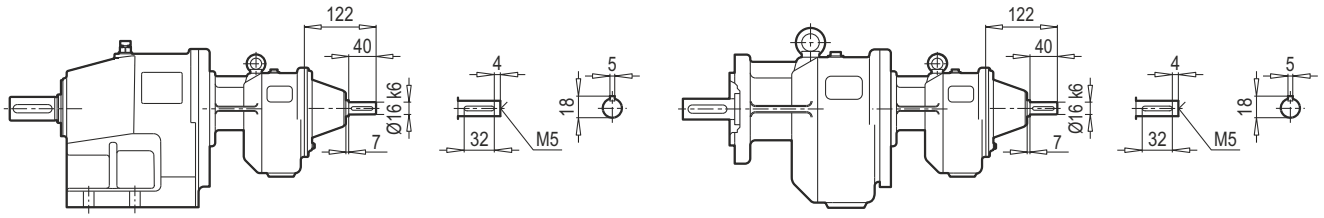
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**63**	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**71**	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	**80**	200	130	165	4.0	M10	19	40	21.8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

~ Kg					
IEC	**PA/PF 12/02**	**PA/PF 22/02**	**PA/PF 32/12**	**PA/PF 42/12**	**PA/PF 52/12**
63	24	37	51	69	100
71	25	38	52	70	101
80	28	42	55	73	104
90	28	42	55	73	104
100	-	-	62	80	111
112	-	-	62	80	111

PA 12/02 **PA 32/12**
PA 22/02 **PA 42/12**
PA 52/12

W

PF 12/02 **PF 32/12**
PF 22/02 **PF 42/12**
PF 52/12

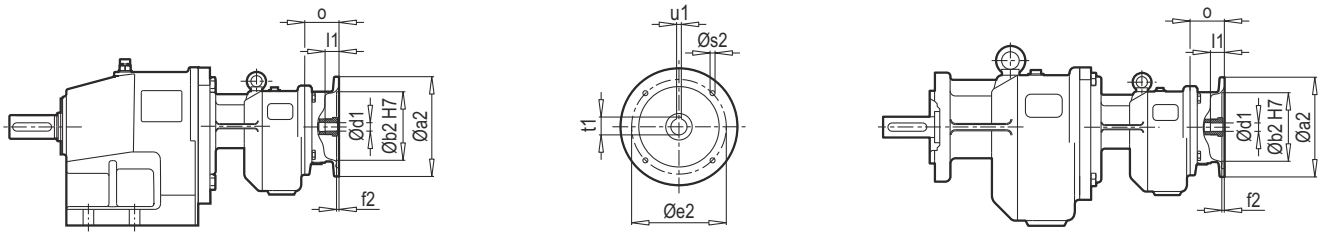


W ~ Kg	
PA/PF 12/02	23
PA/PF 22/02	36
PA/PF 32/12	50
PA/PF 42/12	68
PA/PF 52/12	99

PA 12/02 **PA 32/12**
PA 22/02 **PA 42/12**
PA 52/12

PAM B5/B14

PF 12/02 **PF 32/12**
PF 22/02 **PF 42/12**
PF 52/12



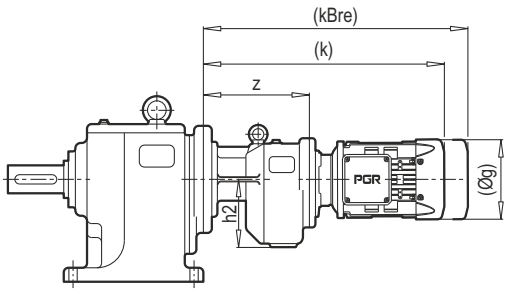
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	71	160	110	130	4.0	M8	14	30	16.3	5	55
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	80	200	130	165	4.0	M10	19	40	21.8	6	74
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	90	200	130	165	4.0	M10	24	50	27.3	8	74
PA/PF 32/12 - 42/12 - 52/12	100	250	180	215	5.0	M12	28	60	31.3	8	132
PA/PF 32/12 - 42/12 - 52/12	112	250	180	215	5.0	M12	28	60	31.3	8	132

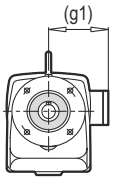
~ Kg					
PAM B5	PA/PF 12/02	PA/PF 22/02	PA/PF 32/12	PA/PF 42/12	PA/PF 52/12
63	22	34	47	65	94
71	22	34	47	65	94
80	23	35	48	66	95
90	23	35	48	66	95
100	-	-	55	73	102
112	-	-	55	73	102

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

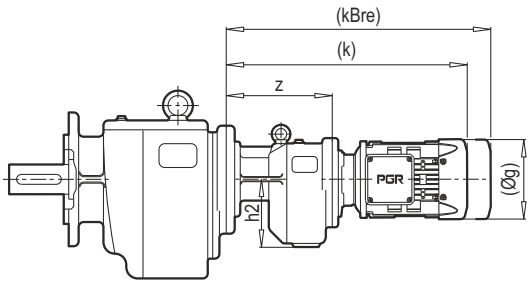
~ Kg					
PAM B14	PA/PF 12/02	PA/PF 22/02	PA/PF 32/12	PA/PF 42/12	PA/PF 52/12
63	21	33	46	64	93
71	21	33	46	64	93
80	22	34	47	65	94
90	22	34	47	65	94
100	-	-	48	66	95
112	-	-	48	66	95

PA 63/22 PA 73/32
PA 73/22 PA 83/32





PF 63/22 PF 73/32
PF 73/22 PF 83/32



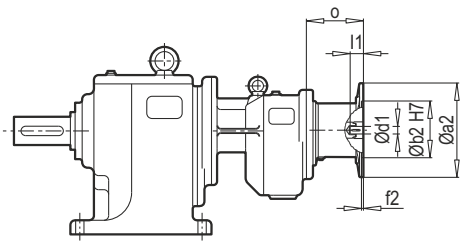
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 63/22 **PA/PF 73/22**	71 M 80 M 90 S/L 100 L	140 159 193 217	119 127 151 160	127	196	432 458 481/501 529	492 520 554/574 610
PA/PF 73/32 **PA/PF 83/32**	80 M 90 S/L 100 L 112 M 132 S/M	159 193 217 232 279	127 151 160 168 182	159	238	500 523/543 571 616 623/658	562 596/616 652 696 731/799

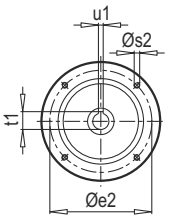
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

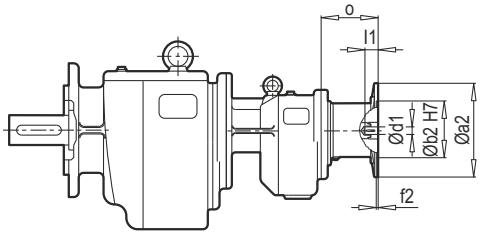
PA 63/22 PA 73/32
PA 73/22 PA 83/32

IEC

PF 63/22 PF 73/32
PF 73/22 PF 83/32







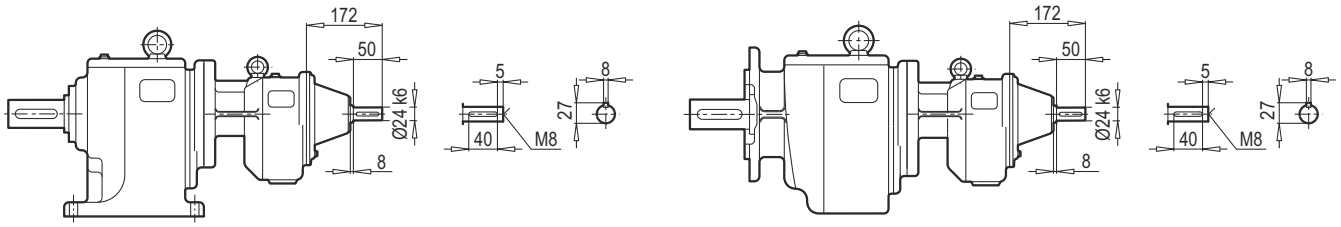
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	**71**	160	110	130	4.0	M8	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	**80**	200	130	165	4.0	M10	19	40	21.8	6	107
PA/PF 63/22 - 73/22 - 73/32 - 83/32	**90**	200	130	165	4.0	M10	24	50	27.3	8	107
PA/PF 63/22 - 73/22 - 73/32 -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

~ Kg				
IEC	**PA/PF 63/22**	**PA/PF 73/22**	**PA/PF 73/32**	**PA/PF 83/32**
71	164	249	-	376
80	168	253	-	381
90	168	253	265	381
100	172	257	269	385
112	172	257	269	385
132	-	-	278	394

PA 63/22 PA 73/32
PA 73/22 PA 83/32

W

PF 63/22 PF 73/32
PF 73/22 PF 83/32

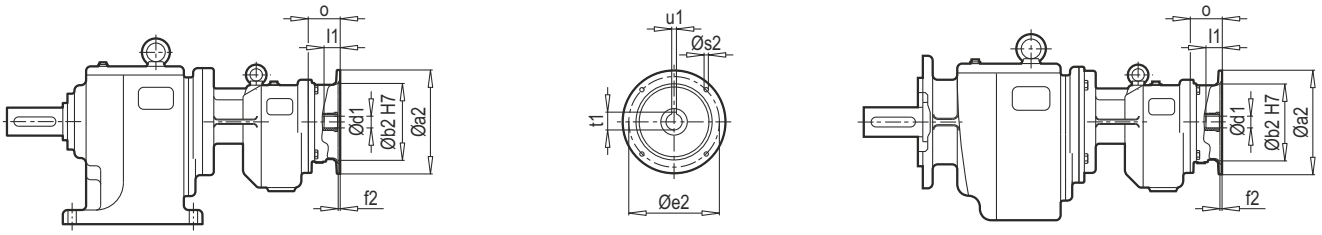


W ~ Kg	
PA/PF 63/22	166
PA/PF 73/22	251
PA/PF 73/32	263
PA/PF 83/32	378

PA 63/22 PA 73/32
PA 73/22 PA 83/32

PAM B5/B14

PF 63/22 PF 73/32
PF 73/22 PF 83/32



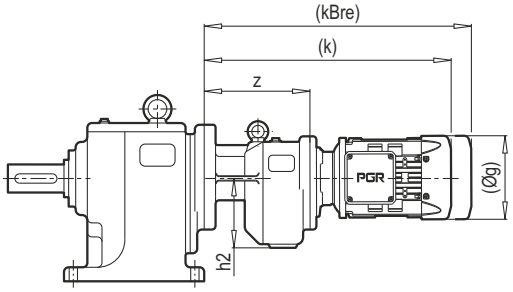
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	250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

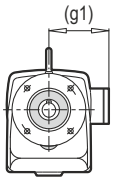
~ Kg				
PAM B5	PA/PF 63/22	PA/PF 73/22	PA/PF 73/32	PA/PF 83/32
71	155	236	-	354
80	156	237	-	355
90	156	237	248	355
100	157	238	249	356
112	157	238	249	356
132	-	-	259	366

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	71	105	70	85	4.0	7	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	80	120	80	100	4.0	7	19	40	21.8	6	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	140	95	115	4.0	9	24	50	27.3	8	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 63/22 - 73/22 - 73/32 - 83/32	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 73/32 - 83/32	132	200	130	165	5.0	11	38	80	41.3	10	94

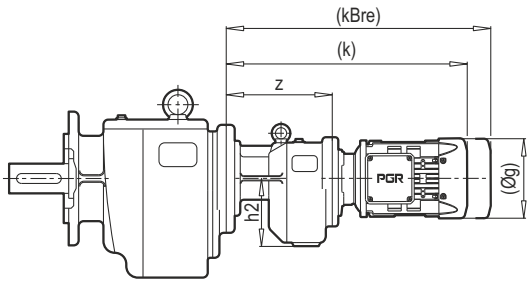
~ Kg				
PAM B14	PA/PF 63/22	PA/PF 73/22	PA/PF 73/32	PA/PF 83/32
71	153	234	-	352
80	154	235	-	353
90	154	235	246	353
100	156	237	248	355
112	156	237	248	355
132	-	-	252	359

PA 83/42 PA 93/52
PA 93/42 PA 103/52





PF 83/42 PF 93/52
PF 93/42 PF 103/52



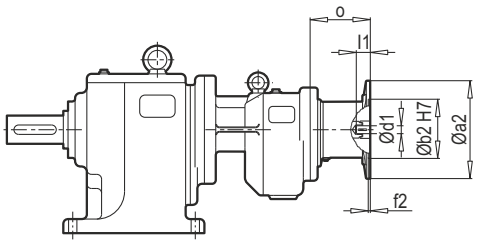
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 83/42 PA/PF 93/42	90 S/L 100 L 112 M 132 S/M	193 217 232 279	151 160 168 182	179	282	547/567 595 640 647/682	620/640 676 720 755/896
PA/PF 93/52 PA/PF 103/52	90 S/L 100 L 112 M 132 S/M 160 M/L 180 M/L	193 217 232 279 323 370	151 160 168 182 200 248	218	321	586/606 634 679 686/721 826 900	659/679 715 759 794/862 978 1062

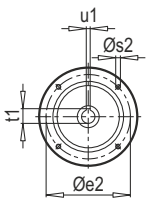
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

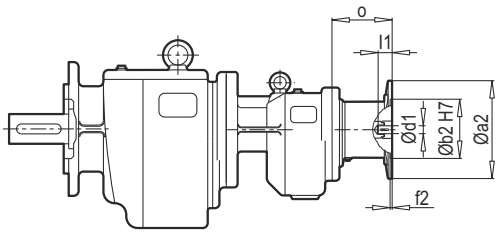
PA 83/42 PA 93/52
PA 93/42 PA 103/52

IEC

PF 83/42 PF 93/52
PF 93/42 PF 103/52







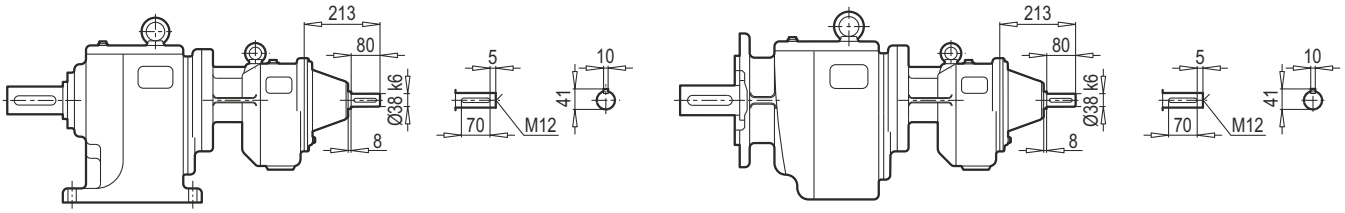
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	**90**	200	130	165	4.0	M10	24	50	27.3	8	109
PA/PF 83/42 - 93/42 - 93/52 - 103/52	**100**	250	180	215	5.0	M12	28	60	31.3	8	133
PA/PF 83/42 - 93/42 - 93/52 - 103/52	**112**	250	180	215	5.0	M12	28	60	31.3	8	133
PA/PF 83/42 - 93/42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

~ Kg				
IEC	**PA/PF 83/42**	**PA/PF 93/42**	**PA/PF 93/52**	**PA/PF 103/52**
90	400	589	-	852
100	407	597	628	860
112	407	597	628	860
132	422	612	642	875
160	432	622	653	885
180	-	622	653	885

PA 83/42 PA 93/52
PA 93/42 PA 103/52

W

PF 83/42 PF 93/52
PF 93/42 PF 103/52

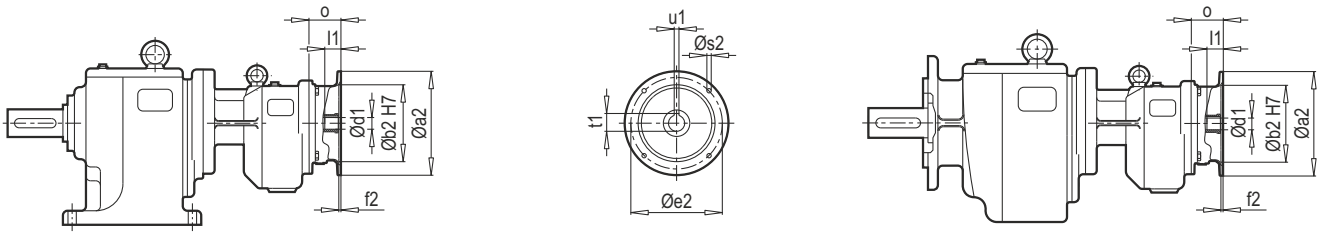


W ~ Kg	
PA/PF 83/42	405
PA/PF 93/42	595
PA/PF 93/52	625
PA/PF 103/52	858

PA 83/42 PA 93/52
PA 93/42 PA 103/52

PAM B5/B14

PF 83/42 PF 93/52
PF 93/42 PF 103/52



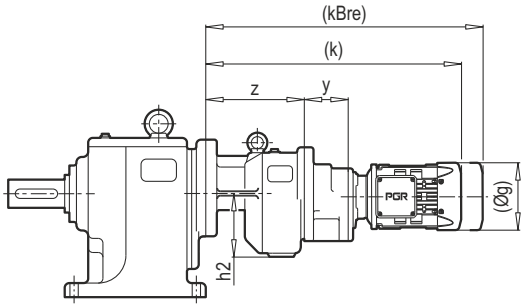
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	200	130	165	4.0	M10	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	132	300	230	265	5.0	M12	38	80	41.3	10	94
PA/PF 83/42 - 93/42 - 93/52 - 103/52	160	350	250	300	6.0	M16	42	110	45.3	12	120
PA/PF 93/52 - 103/52	180	350	250	300	6.0	M16	48	110	51.8	14	120

~ Kg				
PAM B5	PA/PF 83/42	PA/PF 93/42	PA/PF 93/52	PA/PF 103/52
90	373	552	-	800
100	374	553	582	801
112	374	553	582	801
132	383	562	591	810
160	391	570	599	818
180	-	570	599	818

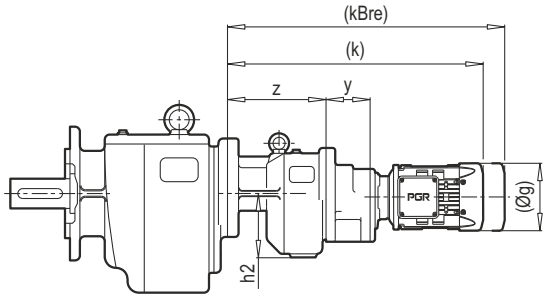
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	140	95	115	4.0	9	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	132	200	130	165	5.0	11	38	80	41.3	10	94

~ Kg				
PAM B14	PA/PF 83/42	PA/PF 93/42	PA/PF 93/52	PA/PF 103/52
90	372	551	-	799
100	373	552	582	800
112	373	552	582	800
132	378	557	586	805

PA 63/23



PF 63/23



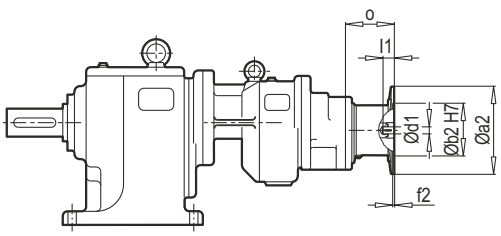
Tip / Type	Motor	g	g1	h2	z	y	k	kBre
PA/PF 63/23	71 M 80 M	140 159	119 127	127	196	60	496 523	556 585

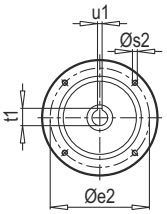
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

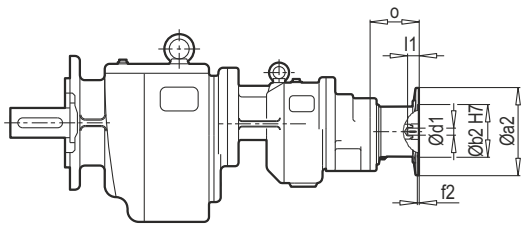
PA 63/23 PA 83/33 PA 93/43 PA 103/53
PA 73/23

IEC

PF 63/23 PF 83/33 PF 93/43 PF 103/53
PF 73/23



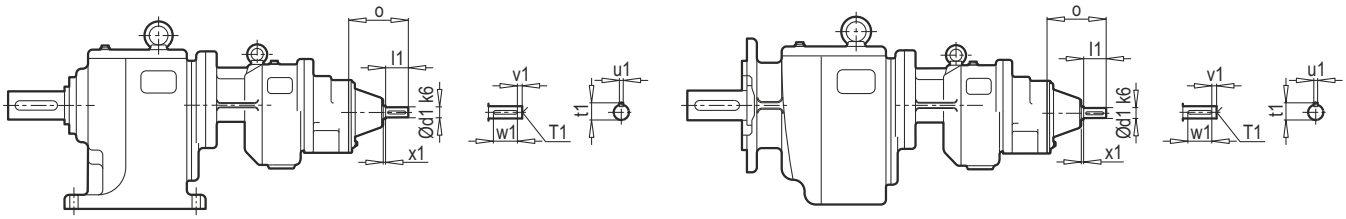




Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 63/23 73/23 83/33 o	PA/PF 93/43 103/53 o
PA/PF 63/23-73/23-83/33	63	140	95	115	3.5	M8	11	23	12.8	4	85	-
PA/PF 63/23-73/23-83/33-93/43-103/53	71	160	110	130	4.0	M8	14	30	16.3	5	89	88
PA/PF 63/23-73/23-83/33-93/43-103/53	80	200	130	165	4.0	M10	19	40	21.8	6	105	107
PA/PF 63/23-73/23-83/33-93/43-103/53	90	200	130	165	4.0	M10	24	50	27.3	8	105	107
PA/PF 93/43-103/53	100	250	180	215	5.0	M12	28	60	31.3	8	-	124
PA/PF 93/43-103/53	112	250	180	215	5.0	M12	28	60	31.3	8	-	124

~Kg					
IEC	PA/PF 63/23	PA/PF 73/23	PA/PF 83/33	PA/PF 93/43	PA/PF 103/53
63	169	254	383	-	-
71	170	255	384	598	865
80	173	258	387	602	869
90	173	258	387	602	869
100	-	-	-	606	873
112	-	-	-	606	873

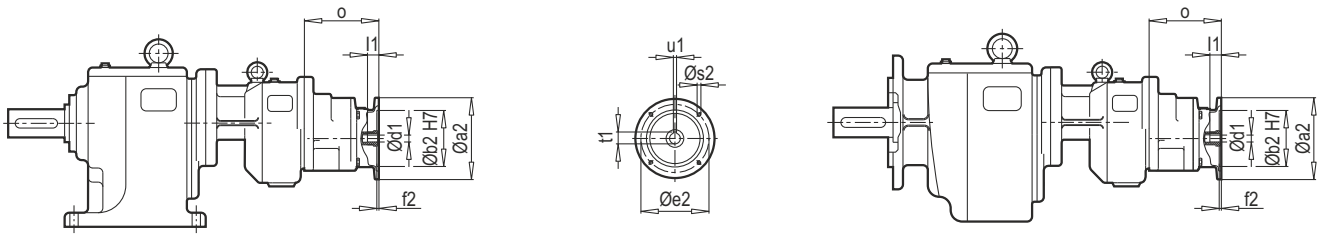
PA 63/23 PA 83/33 PA 93/43 PA 103/53 PA 73/23 **W** **PF 63/23 PF 83/33 PF 93/43 PF 103/53 PF 73/23**



Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 63/23 PA/PF 73/23 PA/PF 83/33	16	7	40	122	M5	18	5	4	32
PA/PF 93/43 PA/PF 103/53	24	8	50	172	M8	27	8	5	40

W ~ Kg	
PA/PF 63/23	168
PA/PF 73/23	253
PA/PF 83/33	382
PA/PF 93/43	600
PA/PF 103/53	867

PA 63/23 PA 83/33 PA 93/43 PA 103/53 PA 73/23 **PAM B5/B14** **PF 63/23 PF 83/33 PF 93/43 PF 103/53 PF 73/23**



Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 63/23 73/23 83/33 o	PA/PF 93/43 103/53 o
PA/PF 63/23 - 73/23 - 83/33	63	140	95	115	3.5	M8	11	23	12.8	4	85	-
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	71	160	110	130	4.0	M8	14	30	16.3	5	55	88
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	80	200	130	165	4.0	M10	19	40	21.8	6	74	72
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	90	200	130	165	4.0	M10	24	50	27.3	8	74	72
PA/PF 93/43 - 103/53	100	250	180	215	5.0	M12	28	60	31.3	8	-	75
PA/PF 93/43 - 103/53	112	250	180	215	5.0	M12	28	60	31.3	8	-	75

~ Kg					
PAM B5	PA/PF 63/23	PA/PF 73/23	PA/PF 83/33	PA/PF 93/43	PA/PF 103/53
63	160	241	360	-	-
71	160	241	360	563	815
80	161	242	361	564	816
90	161	242	361	564	816
100	-	-	-	565	817
112	-	-	-	565	817

Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 63/23 73/23 83/33 o	PA/PF 93/43 103/53 o
PA/PF 63/23 - 73/23 - 83/33	63	90	60	75	4.0	6	11	23	12.8	4	60	-
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	71	105	70	85	4.0	7	14	30	16.3	5	55	88
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	80	120	80	100	4.0	7	19	40	21.8	6	74	72
PA/PF 63/23 - 73/23 - 83/33 - 93/43 - 103/53	90	140	95	115	4.0	9	24	50	27.3	8	74	72
PA/PF 93/43 - 103/53	100	160	110	130	5.0	9	28	60	31.3	8	-	75
PA/PF 93/43 - 103/53	112	160	110	130	5.0	9	28	60	31.3	8	-	75

~ Kg					
PAM B14	PA/PF 63/23	PA/PF 73/23	PA/PF 83/33	PA/PF 93/43	PA/PF 103/53
63	159	240	359	-	-
71	159	240	359	561	813
80	160	241	360	562	814
90	160	241	360	562	814
100	-	-	-	564	816
112	-	-	-	564	816

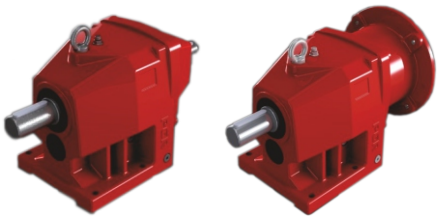
W - IEC ve PAM Adaptörü Seçim Tabloları

Selection Of W-IEC and PAM Adapters

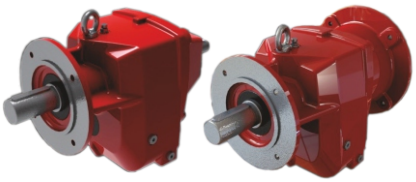
PA
TEK KADEME
SINGLE REDUCTION

PF
TEK KADEME
SINGLE REDUCTION

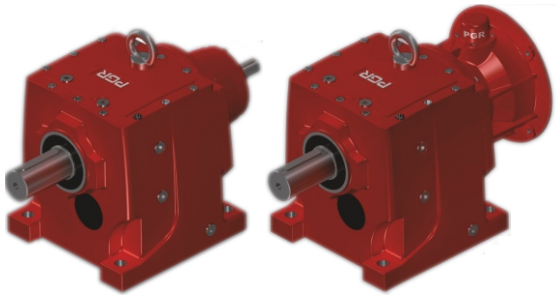
PA
İKİ KADEME
DOUBLE REDUCTION



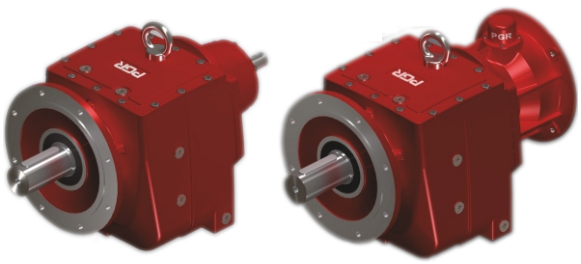
PF
İKİ KADEME
DOUBLE REDUCTION



PA
ÜÇ KADEME
TRIBLE REDUCTION



PF
ÜÇ KADEME
TRIBLE REDUCTION



PA / PF

TR TEKNİK AÇIKLAMALAR

EN TECHNICAL EXPLANATIONS

W - IEC ve PAM adaptörü için performans tablolarının yapısı
Notify about performance tables for W - IEC and PAM adapter type

PA 32
PF 32 → **Redüktör Tipi** / Gear unit type

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	Tahvil / Reduction i_{ges}	Çıkış Hızı / Output speed 4-pol. 50 Hz 1400rpm 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. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82	DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu / According to DIN 42677 IEC motor power depend on pole number of motor.
PA 32 PF 32	81.27	17.20	515	0.93	0.62	0.46	0.31	71 80 90*	
	72.71	19.30	560	1.13	0.75	0.56	0.38	71 80 90*	
	64.26	21.80	640	1.46	0.97	0.73	0.48	80 90*	
	57.49	24.40	613	1.56	1.04	0.78	0.52	80	
	46.29	30.20	533	1.69	1.12	0.84	0.56	80	
	46.22	30.30	672	2.13	1.42	1.07	0.71	100* 112*	
	38.76	36.10	446	1.69	1.12	0.84	0.56		
				:	:	:	:		
				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
Gear unit type

W - IEC - PAM

Tip / Type	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 03 PF 03 W mm 96 + IEC - PAM mm 96-97	312.98	4.50	89	0.04	0.03	0.02	0.01	63*	71*							
	274.18	5.10	89	0.05	0.03	0.02	0.02	63*	71*							
	212.39	6.60	106	0.07	0.05	0.04	0.02	63*	71*							
	170.56	8.20	108	0.09	0.06	0.05	0.03	63*	71*							
	151.24	9.30	110	0.11	0.07	0.05	0.04	63*	71*							
	124.74	11.20	106	0.12	0.08	0.06	0.04	63*	71*							
	105.24	13.30	95	0.13	0.09	0.07	0.04	63*	71*							
	81.52	17.20	106	0.19	0.13	0.10	0.06	63	71*							
	65.46	21.40	110	0.25	0.16	0.12	0.08	63	71*							
PA 02 PF 02 W mm 96 + IEC - PAM mm 96 - 97	73.03	19.20	89	0.18	0.12	0.09	0.06	63	71*							
	61.24	22.90	89	0.21	0.14	0.11	0.07	63	71*							
	53.64	26.10	89	0.24	0.16	0.12	0.08	63	71*							
	41.56	33.70	99	0.35	0.23	0.17	0.12	63	71*							
	33.37	42.00	96	0.42	0.28	0.21	0.14	63	71	80*						
	29.59	47.30	92	0.46	0.30	0.23	0.15		71	80*						
	27.52	50.90	87	0.46	0.31	0.23	0.15	63	71	80*						
	24.41	57.40	89	0.53	0.36	0.27	0.18		71	80*						
	23.14	60.50	78	0.49	0.33	0.25	0.16	63	71							
	20.59	**68.00**	74	0.53	0.35	0.26	0.17	63	71	80*	90*					
	15.95	**87.80**	72	0.66	0.44	0.33	0.22	63	71	80*	90					
	12.81	**109.30**	70	0.80	0.53	0.40	0.27	63	71	80	90*					
	11.24	**124.60**	67	0.87	0.58	0.44	0.29	63	71	80	90*					
	9.94	**140.80**	64	0.94	0.63	0.47	0.31	63	71	80	90*					
	9.27	**151.00**	65	1.03	0.68	0.51	0.34	63	71	80	90*					
	8.20	**170.70**	63	1.13	0.75	0.56	0.37	63	71	80	90*					
	7.80	**179.50**	63	1.18	0.79	0.59	0.39	63	71	80	90*					
	6.89	**203.20**	61	1.30	0.86	0.65	0.43	63	71	80	90*					
	5.57	**251.30**	57	*1.50*	*0.96*	*0.75*	*0.48*	63	71	80	90					
	4.82	**290.50**	57	*1.50*	*0.96*	*0.75*	*0.48*	63	71	80	90					
	3.90	**359.00**	53	*1.50*	*0.96*	*0.75*	*0.48*	63	71	80	90					
	3.39	**413.00**	51	*1.50*	*0.96*	*0.75*	*0.48*	63	71	80	90					
	2.97	**471.40**	46	*1.50*	*0.96*	*0.75*	*0.48*	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 12/02 PF 12/02 W mm 139 + IEC - PAM mm 138-139	2796.33	0.50	180	0.05	0.03	0.03	0.02	63*	71*										
	2054.09	0.68	180	0.05	0.03	0.03	0.02	63*	71*										
	1591.20	0.88	180	0.06	0.04	0.03	0.02	63*	71*										
	1277.78	1.10	180	0.06	0.04	0.03	0.02	63*	71*										
	1053.91	1.30	180	0.07	0.04	0.03	0.02	63*	71*										
	886.01	1.60	180	0.07	0.04	0.03	0.02	63*	71*										
	619.95	2.30	180	0.08	0.05	0.04	0.03	63*	71*										
	536.07	**2.60**	180	0.09	0.06	0.04	0.03	63*	71*	80*	90*								
	430.48	**3.30**	180	0.10	0.07	0.05	0.03	63*	71*	80*	90*								
	340.07	**4.10**	180	0.12	0.08	0.06	0.04	63*	71*	80*	90*								
	263.85	**5.30**	180	0.14	0.09	0.07	0.05	63*	71*	80*	90*								
	213.21	**6.60**	180	0.16	0.11	0.08	0.05	63*	71*	80*	90*								
	165.75	**8.40**	180	0.20	0.13	0.10	0.07	63	71*	80*	90*								
	133.10	**10.50**	164	0.22	0.14	0.11	0.07	63	71*	80*	90*								
	109.78	**12.80**	164	0.26	0.17	0.13	0.09	63	71*	80*	90*								
	92.29	**15.20**	164	0.30	0.20	0.15	0.10	63	71*	80*	90*								
PA 13 PF 13 W mm 100 + IEC - PAM mm 100 - 101	420.39	3.30	167	0.06	0.04	0.03	0.02	63*	71*										
	369.18	3.80	176	0.07	0.05	0.03	0.02	63*	71*										
	313.35	4.50	167	0.08	0.05	0.04	0.03	63*	71*										
	275.17	5.10	176	0.09	0.06	0.05	0.03	63*	71*										
	244.64	5.70	177	0.11	0.07	0.05	0.04	63*	71*										
	195.71	7.20	194	0.15	0.10	0.07	0.05	63*	71*										
	159.23	8.80	167	0.15	0.10	0.08	0.05	63*	71*										
	132.48	10.60	148	0.16	0.11	0.08	0.05	63*	71*										
	108.73	12.90	177	0.24	0.16	0.12	0.08	63	71*										
	85.57	16.40	176	0.30	0.20	0.15	0.10	63	71*										
	68.46	20.40	196	*0.37*	*0.24*	*0.19*	*0.12*	63	71										

	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.	
PA 12 PF 12 W mm 📖 100 + IEC - PAM mm 📖 100 - 101	72.60	19.30	139	0.28	0.19	0.14	0.09	63	71*								
	61.31	22.80	154	0.37	0.24	0.18	0.12	63	71								
	53.84	26.00	176	0.48	0.32	0.24	0.16	63	71								
	47.86	29.30	177	0.54	0.36	0.27	0.18		71	80*							
	43.07	32.50	162	0.55	0.37	0.28	0.18	63	71								
	38.29	36.60	184	0.70	0.47	0.35	0.23		71	80*							
	35.04	40.00	149	0.62	0.41	0.31	0.21	63	71								
	31.15	44.90	165	0.78	0.52	0.39	0.26		71	80							
	29.16	48.00	124	0.62	0.41	0.31	0.21	63	71								
	25.92	54.00	137	0.77	0.51	0.39	0.26		71	80							
	21.27	**65.80**	167	1.15	0.76	0.58	0.38	63	71	80	90*						
	18.80	**74.50**	161	1.26	0.83	0.63	0.42	63	71	80	90*						
	16.74	**83.60**	154	1.35	0.90	0.67	0.45	63	71	80	90*	100*	112*				
	13.39	**104.60**	149	1.63	1.08	0.82	0.54	63	71	80	90	100*	112*				
	10.68	**131.10**	134	1.84	1.22	0.92	0.61	63	71	80	90	100*	112*				
	9.65	**145.10**	135	2.05	1.36	1.03	0.68	63	71	80	90	100*	112*				
	7.85	**178.30**	131	2.45	1.63	1.22	0.81	63	71	80	90	100*	112*				
	7.29	**192.00**	124	2.49	1.66	1.25	0.83	63	71	80	90	100*	112*				
	6.53	**214.40**	126	2.83	1.88	1.41	0.94	63	71	80	90	100*	112*				
	5.78	**242.20**	122	3.09	2.06	1.55	1.03	63	71	80	90	100	112*				
	4.93	**284.00**	116	3.45	2.29	1.72	1.15	63	71	80	90	100	112*				
	4.49	**311.80**	118	3.85	2.56	1.93	1.28	63	71	80	90	100	112*				
	4.31	**324.80**	112	3.81	2.53	1.90	1.27	63	71	80	90	100	112*				
	3.98	**351.80**	114	*4.00*	*2.64*	*2.00*	*1.32*	63	71	80	90	100	112				
	3.39	**413.00**	109	*4.00*	*2.64*	*2.00*	*1.32*	63	71	80	90	100	112				
	2.96	**473.00**	105	*4.00*	*2.64*	*2.00*	*1.32*	63	71	80	90	100	112				
PA 11 PF 11 W mm 📖 85 + IEC - PAM mm 📖 85	9.11	153.70	23	0.37	0.25	0.19	0.12	63	71								
	8.10	172.80	30	0.54	0.36	0.27	0.18		71	80*							
	3.60	**388.90**	42	1.71	1.14	0.86	0.57	63	71	80	90						
	3.18	**440.30**	40	1.84	1.22	0.92	0.61	63	71	80	90						
	2.83	**494.70**	54	2.80	1.86	1.40	0.93	63	71	80	90	100*	112*				
	2.32	**603.40**	48	*3.00*	*1.98*	*1.50*	*0.99*	63	71	80	90	100	112*				
	2.04	**686.30**	58	*3.00*	*1.98*	*1.50*	*0.99*	63	71	80	90	100	112*				
	1.81	**773.50**	55	*3.00*	*1.98*	*1.50*	*0.99*	63	71	80	90	100	112*				
	1.54	**909.10**	50	*3.00*	*1.98*	*1.50*	*0.99*	63	71	80	90	100	112*				
	1.35	**1037.00**	50	*3.00*	*1.98*	*1.50*	*0.99*	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 22/02 PF 22/02 W mm 139 + IEC - PAM mm 138-139	2531.66	0.55	340	0.06	0.03	0.03	0.02	63*	71*										
	2122.90	0.66	340	0.06	0.04	0.03	0.02	63*	71*										
	1778.23	0.79	340	0.07	0.04	0.03	0.02	63*	71*										
	1440.59	0.97	340	0.07	0.04	0.04	0.02	63*	71*										
	1156.84	1.20	340	0.08	0.05	0.04	0.02	63*	71*										
	881.08	**1.60**	340	0.10	0.06	0.05	0.03	63*	71*	80*	90*								
	682.53	**2.10**	340	0.11	0.07	0.06	0.03	63*	71*	80*	90*								
	552.93	**2.50**	340	0.13	0.08	0.07	0.04	63*	71*	80*	90*								
	444.02	**3.20**	340	0.15	0.09	0.08	0.05	63*	71*	80*	90*								
	344.50	**4.10**	340	0.18	0.12	0.09	0.06	63	71*	80*	90*								
	284.14	**4.90**	340	0.22	0.14	0.11	0.07	63	71*	80*	90*								
	238.88	**5.90**	340	0.25	0.16	0.12	0.08	63	71*	80*	90*								
	167.14	**8.40**	340	0.34	0.22	0.17	0.11	63	71*	80*	90*								
	135.06	**10.40**	340	0.41	0.27	0.20	0.13	63	71	80*	90*								
	117.62	**11.90**	340	0.46	0.30	0.23	0.15	63	71	80*	90*								
PA 23 PF 23 W mm 104 + IEC - PAM mm 104-105	516.35	2.70	274	0.08	0.05	0.04	0.03	63*	71*										
	417.44	3.40	340	0.12	0.08	0.06	0.04	63*	71*										
	323.31	4.30	340	0.15	0.10	0.08	0.05	63*	71*										
	261.93	5.30	340	0.19	0.13	0.10	0.06	63	71*										
	217.60	6.40	340	0.23	0.15	0.11	0.08	63	71*										
	179.61	7.80	312	0.25	0.17	0.13	0.08	63	71*										
	151.11	9.30	294	0.29	0.19	0.14	0.09	63	71*										
	124.10	**11.30**	340	0.40	0.27	0.20	0.13	63	71	80*	90*								
	100.53	**13.90**	340	0.50	0.33	0.25	0.16	63	71	80*	90*								
	88.24	**15.90**	340	0.56	0.38	0.28	0.19	63	71	80*	90*								
	78.00	**17.90**	340	0.64	0.42	0.32	0.21	63	71	80*	90*								
	64.80	**21.60**	340	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 22 PF 22 W mm 104 + IEC - PAM mm 104-105	86.26	16.20	250	0.42	0.28	0.21	0.14	71	80*										
	69.74	20.10	263	0.55	0.37	0.28	0.18	71	80*										
	55.25	25.30	320	0.85	0.56	0.42	0.28	71	80	90*									
	45.90	30.50	292	0.93	0.62	0.47	0.31	71	80	90*									
	42.79	32.70	340	1.16	0.77	0.58	0.39		80	90*									
	35.55	39.40	330	1.36	0.90	0.68	0.45		80	90*									
	34.67	40.40	340	1.44	0.96	0.72	0.48			90*	100*	112*							
	29.34	47.70	292	1.46	0.97	0.73	0.48		80	90*									
	28.80	48.60	374	1.90	1.26	0.95	0.63			90	100*	112*							
	24.69	56.70	246	1.46	0.97	0.73	0.49		80	90*									
	23.77	58.90	326	2.01	1.34	1.01	0.67			90	100*	112*							
	20.00	70.00	285	2.09	1.39	1.04	0.69			90	100*	112*							
	16.74	**83.60**	339	2.97	1.97	1.48	0.99	71	80	90	100*	112*							
	14.67	**95.40**	337	3.37	2.24	1.68	1.12	71	80	90	100	112*							
	12.19	**114.80**	329	3.96	2.63	1.98	1.31	71	80	90	100	112*							
	10.90	**128.40**	317	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	8.46	**165.50**	259	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	7.57	**184.90**	246	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	6.86	**204.10**	255	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	6.51	**215.10**	228	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	5.77	**242.60**	215	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	5.18	**270.30**	159	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	4.64	**301.70**	150	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	3.99	**350.90**	139	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	3.53	**396.60**	131	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	2.80	**500.00**	115	*4.00*	*2.64*	*2.00*	*1.32*			90	100	112							
PA 21 PF 21 W mm 87 + IEC - PAM mm 87	10.20	137.30	40	0.57	0.38	0.29	0.19	71	80*	90*									
	7.90	177.20	60	1.11	0.74	0.56	0.37		80	90*									
	6.40	218.80	65	1.49	0.99	0.74	0.49			90*	100*	112*							
	4.60	**304.30**	56	1.78	1.19	0.89	0.59	71	80										
	3.67	**381.50**	68	2.72	1.80	1.36	0.90	71	80	90	100*	112*							
	3.09	**453.10**	62	2.94	1.95	1.47	0.98	71	80	90	100*	112*							
	2.71	**516.60**	77	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	2.42	**578.50**	73	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	2.08	**673.10**	68	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	1.85	**756.80**	64	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112							
	1.46	**958.90**	60	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.	
PA 32/12 PF 32/12 W mm 139 + IEC - PAM mm 138-139	2702.77	0.52	620	0.07	0.04	0.04	0.02	63*	71*								
	2003.62	0.70	620	0.09	0.05	0.04	0.03	63*	71*								
	1602.89	0.87	620	0.10	0.06	0.05	0.03	63*	71*								
	1304.13	1.10	620	0.11	0.07	0.05	0.03	63*	71*								
	1080.92	**1.30**	620	0.12	0.08	0.06	0.04	63*	71*	80*	90*						
	868.98	**1.60**	620	0.14	0.09	0.07	0.05	63*	71*	80*	90*						
	699.71	**2.00**	620	0.17	0.11	0.08	0.05	63*	71*	80*	90*						
	554.87	**2.50**	620	0.20	0.13	0.10	0.06	63	71*	80*	90*	100*	112*				
	446.08	**3.10**	620	0.24	0.16	0.12	0.08	63	71*	80*	90*	100*	112*				
	362.93	**3.90**	620	0.29	0.19	0.15	0.09	63	71*	80*	90*	100*	112*				
	267.35	**5.20**	620	0.38	0.25	0.19	0.12	63	71	80*	90*	100*	112*				
	215.28	**6.50**	620	0.46	0.30	0.23	0.15	63	71	80*	90*	100*	112*				
	167.16	**8.40**	620	0.58	0.38	0.29	0.19	63	71	80*	90*	100*	112*				
	148.00	**9.50**	620	0.65	0.43	0.33	0.21	63	71	80*	90*	100*	112*				
	126.22	**11.10**	620	0.75	0.50	0.38	0.25	63	71	80	90*	100*	112*				
	82.19	**17.00**	620	1.10	0.73	0.55	0.37	63	71	80	90*	100*	112*				
PA 33 PF 33 W mm 108 + IEC - PAM mm 108-109	740.46	1.90	570	0.11	0.07	0.06	0.04	63*	71*								
	662.46	2.10	560	0.12	0.08	0.06	0.04	63*	71*								
	585.48	2.40	634	0.16	0.11	0.08	0.05	63*	71*								
	523.81	2.70	672	0.19	0.12	0.09	0.06	63	71*								
	421.10	3.30	672	0.23	0.16	0.12	0.08	63	71*								
	339.07	4.10	651	0.28	0.19	0.14	0.09	63	71*								
	248.21	5.60	672	0.40	0.26	0.20	0.13	63	71								
	206.97	**6.80**	672	0.48	0.32	0.24	0.16	63	71	80*	90*						
	166.39	**8.40**	672	0.59	0.39	0.30	0.20	63	71	80*	90*						
	133.98	**10.40**	651	0.71	0.47	0.36	0.24	63	71	80*	90*						
	112.18	**12.50**	548	0.72	0.48	0.36	0.24	63	71	80*	90*						
	88.29	**15.90**	537	0.89	0.59	0.45	0.30	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
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W - IEC - PAM

Tip / Type	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power $P1_{max}$ W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
PA 32 PF 32 W mm 108 + IEC - PAM mm 108-109	81.27	17.20	515	0.93	0.62	0.46	0.31	71	80	90*					
	72.71	19.30	560	1.13	0.75	0.56	0.38	71	80	90*					
	64.26	21.80	640	1.46	0.97	0.73	0.48		80	90*					
	57.49	24.40	613	1.56	1.04	0.78	0.52		80	90					
	46.29	30.20	533	1.69	1.12	0.84	0.56		80	90					
	46.22	30.30	672	2.13	1.42	1.07	0.71			90	100*	112*			
	38.76	36.10	446	1.69	1.12	0.84	0.56		80	90					
	37.22	37.60	589	2.32	1.54	1.16	0.77			90	100*	112*			
	33.00	42.40	380	1.69	1.12	0.84	0.56		80	90					
	31.16	44.90	512	2.41	1.60	1.20	0.80			90	100*	112*			
	30.45	**46.00**	639	3.08	2.04	1.54	1.02	71	80	90	100	112*			
	27.24	**51.40**	602	3.24	2.15	1.62	1.08	71	80	90	100	112*			
	26.53	52.80	436	2.41	1.60	1.20	0.80			90	100*	112*			
	23.10	**60.60**	630	4.00	2.66	2.00	1.33	71	80	90	100	112			
	20.67	**67.70**	658	4.67	3.10	2.33	1.55	71	80	90	100	112			
	18.64	**75.10**	631	4.96	3.30	2.48	1.65	71	80	90	100	112			
	16.64	**84.10**	530	4.67	3.10	2.33	1.55	71	80	90	100	112			
	16.23	**86.30**	639	5.77	3.83	2.89	1.92	71	80	90	100	112	132*		
	15.01	**93.30**	508	4.96	3.30	2.48	1.65	71	80	90	100	112			
	14.52	**96.40**	672	6.78	4.51	3.39	2.25	71	80	90	100	112	132*		
	11.70	**119.70**	710	8.90	5.91	4.45	2.95	71	80	90	100	112	132*		
	9.79	**143.00**	647	*9.20*	*6.07*	*4.60*	*3.04*	71	80	90	100	112	132		
	7.89	**177.40**	655	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	6.72	**208.30**	604	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	5.69	**246.00**	604	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	5.49	**255.00**	448	*9.20*	*6.07*	*4.60*	*3.04*	71	80	90	100	112	132		
	5.29	**264.70**	639	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	4.42	**316.70**	463	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	3.75	**373.30**	459	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	2.97	**471.40**	436	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
PA 31 PF 31 W mm 89 + IEC - PAM mm 89	10.20	137.30	90	1.29	0.86	0.65	0.43		80	90*					
	8.20	170.70	105	1.88	1.25	0.94	0.62			90	100*	112*			
	4.83	**289.90**	98	2.97	1.98	1.49	0.99	71	80	90	100*	112*			
	3.67	**381.50**	110	4.39	2.92	2.20	1.46	71	80	90	100	112			
	3.31	**423.00**	105	4.65	3.09	2.33	1.54	71	80	90	100	112			
	2.58	**542.60**	185	*9.20*	*6.07*	*4.60*	*3.04*	71	80	90	100	112	132		
	2.08	**673.10**	165	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	1.76	**795.50**	150	*9.20*	*6.07*	*4.60*	*3.04*			90	100	112	132		
	1.39	**1007.20**	143	*9.20*	*6.07*	*4.60*	*3.04*						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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 42/12 PF 42/12 W mm 139 + IEC - PAM mm 138-139	2560.48	0.55	1200	0.11	0.07	0.05	0.03	63*	71*										
	2161.45	0.65	1200	0.12	0.07	0.06	0.04	63*	71*										
	1561.18	0.90	1200	0.15	0.09	0.08	0.05	63*	71*										
	1393.57	1.00	1200	0.17	0.10	0.08	0.05	63*	71*										
	1114.85	1.30	1200	0.20	0.12	0.10	0.06	63	71*										
	750.00	**1.90**	1200	0.27	0.18	0.14	0.09	63	71*	80*	90*								
	670.92	2.10	1200	0.30	0.19	0.15	0.10		71*	80*									
	550.63	**2.50**	1200	0.36	0.23	0.18	0.12	63	71*	80*	90*								
	433.11	**3.20**	1200	0.45	0.29	0.22	0.14	63	71	80*	90*	100*	112*						
	346.69	**4.00**	1200	0.55	0.36	0.27	0.18	63	71	80*	90*	100*	112*						
	276.49	**5.10**	1200	0.68	0.44	0.34	0.22	63	71	80*	90*	100*	112*						
	229.62	**6.10**	1200	0.77	0.51	0.38	0.25	63	71	80	90*	100*	112*						
	169.11	**8.30**	1200	1.04	0.69	0.52	0.35	63	71	80	90*	100*	112*						
	140.44	**10.00**	1200	1.25	0.83	0.63	0.42	63	71	80	90*	100*	112*						
	116.26	**12.00**	1200	1.51	1.01	0.76	0.50	63	71	80	90	100*	112*						
	87.79	**15.90**	1200	2.00	1.33	1.00	0.67	63	71	80	90	100*	112*						
PA 43 PF 43 W mm 112 + IEC - PAM mm 112-113	1071.82	1.30	960	0.13	0.09	0.07	0.04	71*	80*	90*									
	868.02	1.60	860	0.15	0.10	0.07	0.05	71*	80*	90*									
	763.70	1.80	1031	0.20	0.13	0.10	0.07	71*	80*	90*									
	618.49	2.30	1112	0.26	0.18	0.13	0.09	71*	80*	90*									
	528.04	2.70	990	0.27	0.18	0.14	0.09	71*	80*	90*									
	421.21	3.30	1186	0.41	0.27	0.21	0.14	71	80*	90*									
	359.61	3.90	1286	0.52	0.35	0.26	0.17	71	80*	90*									
	298.65	4.70	1118	0.55	0.36	0.27	0.18	71	80*	90*									
	278.52	5.00	1279	0.67	0.45	0.34	0.22		80*	90*									
	264.02	5.30	1267	0.70	0.47	0.35	0.23	71	80*	90*									
	231.31	6.10	1116	0.71	0.47	0.35	0.23		80*	90*									
	219.26	6.40	1200	0.80	0.53	0.40	0.27	71	80	90*									
	204.49	6.80	1289	0.92	0.61	0.46	0.31		80	90*									
	182.86	7.70	1017	0.82	0.54	0.41	0.27	71	80	90*									
	169.82	8.20	1166	1.01	0.67	0.50	0.33		80	90*									
	141.63	9.90	1053	1.09	0.72	0.54	0.36		80	90*									
	129.27	**10.80**	1240	1.41	0.93	0.70	0.47	71	80	90*	100*	112*							
	107.36	**13.00**	1116	1.52	1.01	0.76	0.51	71	80	90	100*	112*							
	94.91	**14.80**	1240	1.92	1.27	0.96	0.64	71	80	90	100*	112*							
	80.01	**17.50**	1230	2.25	1.50	1.13	0.75	71	80	90	100*	112*							
	70.10	**20.00**	1260	2.63	1.75	1.32	0.88	71	80	90	100*	112*							
	58.22	**24.00**	1166	2.94	1.95	1.47	0.98	71	80	90	100*	112*							
	48.55	**28.80**	1045	3.16	2.10	1.58	1.05	71	80	90	100	112*							
	40.91	**34.20**	1041	3.73	2.48	1.87	1.24	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 42 PF 42 W mm 112 + IEC - PAM mm 112-113	105.08	13.30	862	1.20	0.80	0.60	0.40	90*								
	85.10	16.50	796	1.37	0.91	0.69	0.46	90*								
	74.87	18.70	1080	2.11	1.40	1.06	0.70	90	100*	112*						
	60.64	23.10	1004	2.43	1.61	1.21	0.81	90	100*	112*						
	50.99	27.50	1098	3.16	2.10	1.58	1.05		100	112*	132*					
	41.30	33.90	1186	4.21	2.80	2.10	1.40		100	112	132*					
	35.26	39.70	1228	5.11	3.39	2.55	1.70		100	112	132*					
	30.47	**45.90**	1078	5.19	3.45	2.59	1.72	90	100	112						
	29.28	47.80	1021	5.11	3.40	2.56	1.70		100	112	132*					
	25.88	54.10	1243	7.04	4.68	3.52	2.34				132*					
	24.68	**56.70**	891	5.29	3.52	2.65	1.76	90	100	112						
	24.42	57.30	858	5.15	3.42	2.58	1.71		100	112	132*					
	21.85	**64.10**	1096	7.35	4.88	3.68	2.44	90	100	112	132*	160*				
	21.50	65.10	1163	7.93	5.27	3.96	2.63				132*					
	17.93	78.10	998	8.16	5.42	4.08	2.71				132*					
	17.69	**79.10**	1186	9.83	6.53	4.91	3.26	90	100	112	132	160*				
	15.10	**92.70**	1244	12.08	8.02	6.04	4.01	90	100	112	132	160*				
	14.38	**97.40**	1158	11.81	7.84	5.90	3.92	90	100	112	132	160*				
	12.27	**114.10**	1196	14.29	9.49	7.14	4.75	90	100	112	132	160*				
	10.19	**137.40**	1167	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	8.50	**164.70**	1076	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	7.27	**192.60**	1076	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	6.19	**226.20**	1075	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	5.36	**261.20**	817	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	4.58	**305.70**	772	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	3.90	**359.00**	700	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	3.50	**400.00**	665	*15.00*	*9.90*	*7.50*	*4.95*				132	160				
	3.21	**436.10**	620	*15.00*	*9.90*	*7.50*	*4.95*				132	160				
	3.02	**463.60**	604	*15.00*	*9.90*	*7.50*	*4.95*				132	160				
PA 41 PF 41 W mm 91 + IEC - PAM mm 91	14.80	94.60	133	1.32	0.88	0.66	0.44	90								
	10.55	132.70	190	2.64	1.75	1.32	0.88	90	100*	112*						
	7.18	195.00	190	3.88	2.58	1.94	1.29		100	112*	132*					
	5.27	265.70	195	5.42	3.60	2.71	1.80				132*					
	4.29	**326.30**	155	5.30	3.52	2.65	1.76	90	100	112						
	3.88	**360.80**	145	5.48	3.64	2.74	1.82	90	100	112						
	3.42	**409.40**	140	6.00	3.99	3.00	1.99	90	100	112						
	3.08	**454.50**	290	13.80	9.17	6.90	4.58	90	100	112	132	160*				
	2.50	**560.00**	271	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	2.14	**654.20**	248	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	1.82	**769.20**	223	*15.00*	*9.90*	*7.50*	*4.95*	90	100	112	132	160				
	1.63	**858.90**	200	*15.00*	*9.90*	*7.50*	*4.95*				132	160				
	1.50	**933.30**	190	*15.00*	*9.90*	*7.50*	*4.95*				132	160				
	1.41	**992.90**	180	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.	
PA 52/12 PF 52/12 W mm 📖 139 + IEC - PAM mm 📖 138-139	2635.45	0.53	1830	0.14	0.09	0.07	0.04	63*	71*								
	2108.36	0.66	1830	0.17	0.10	0.08	0.05	63*	71*								
	1715.38	0.82	1830	0.20	0.12	0.10	0.06	63	71*								
	1427.20	0.98	1830	0.23	0.14	0.11	0.07	63	71*								
	1143.76	1.20	1830	0.27	0.18	0.14	0.09		71*	80*							
	920.36	**1.50**	1830	0.33	0.21	0.17	0.11	63	71*	80*	90*						
	690.27	**2.00**	1830	0.43	0.28	0.21	0.14	63	71	80*	90*						
	542.36	**2.60**	1830	0.53	0.35	0.27	0.17	63	71	80*	90*						
	491.74	**2.80**	1830	0.59	0.38	0.29	0.19	63	71	80*	90*	100*	112				
	354.34	**4.00**	1830	0.76	0.50	0.38	0.25	63	71	80	90*	100*	112*				
	283.16	**4.90**	1830	0.95	0.63	0.47	0.31	63	71	80	90*	100*	112*				
	219.87	**6.40**	1830	1.22	0.81	0.61	0.41	63	71	80	90*	100*	112*				
	194.67	**7.20**	1830	1.38	0.92	0.69	0.46	63	71	80	90*	100*	112*				
	146.01	**9.60**	1830	1.84	1.22	0.92	0.61	63	71	80	90	100*	112*				
	124.52	**11.20**	1830	2.15	1.43	1.08	0.72	63	71	80	90	100*	112*				
	97.84	**14.30**	1830	2.74	1.82	1.37	0.91	63	71	80	90	100*	112*				
PA 53 PF 53 W mm 📖 116 + IEC - PAM mm 📖 116-117	728.98	1.90	1595	0.32	0.21	0.16	0.11		80*	90*							
	606.94	2.30	1882	0.45	0.30	0.23	0.15		80*	90*							
	548.64	2.60	1911	0.51	0.34	0.26	0.17		80*	90*							
	499.30	2.80	1920	0.56	0.37	0.28	0.19		80*	90*							
	392.31	3.60	1823	0.68	0.45	0.34	0.23		80*	90*							
	374.48	3.70	1920	0.75	0.50	0.38	0.25		80*	90*							
	294.23	4.80	2227	1.11	0.74	0.55	0.37		80	90*							
	245.73	5.70	1859	1.11	0.74	0.55	0.37		80	90*							
	236.60	**5.90**	1920	1.19	0.79	0.59	0.40	71	80	90*	100*	112*					
	185.90	**7.50**	1820	1.44	0.95	0.72	0.48	71	80	90*	100*	112*					
	177.45	**7.90**	1920	1.59	1.05	0.79	0.53	71	80	90	100*	112*					
	139.42	**10.00**	2232	2.35	1.56	1.17	0.78	71	80	90	100*	112*					
	105.77	**13.20**	2224	3.08	2.05	1.54	1.02	71	80	90	100	112*					
	95.41	**14.70**	2231	3.43	2.28	1.71	1.14	71	80	90	100	112*					
	79.69	**17.60**	1862	3.43	2.28	1.71	1.14	71	80	90	100	112					
	65.31	**21.40**	1920	*4.00*	*2.64*	*2.00*	*1.32*	71	80	90	100	112					
	58.91	**23.80**	1920	*4.00*	*2.64*	*2.00*	*1.32*	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 52 PF 52 W mm 116 + IEC - PAM mm 116-117	86.88	16.10	1721	2.90	1.93	1.45	0.96	90	100*	112*						
	78.53	17.80	1596	2.98	1.98	1.49	0.99	90	100	112*						
	71.47	19.60	1588	3.26	2.16	1.63	1.08	90	100	112*						
	59.50	23.50	1893	4.66	3.10	2.33	1.55		100	112	132*					
	53.79	26.00	1911	5.21	3.46	2.60	1.73		100	112	132*					
	48.95	28.60	1920	5.75	3.82	2.88	1.91		100	112	132*					
	40.34	34.70	1911	6.94	4.61	3.47	2.31				132*					
	38.46	36.40	1668	6.36	4.22	3.18	2.11		100	112	132*					
	36.71	38.10	1920	7.67	5.09	3.83	2.55				132*					
	36.00	**38.90**	1396	5.68	3.78	2.84	1.89	90	100	112						
	32.54	**43.00**	1260	5.68	3.77	2.84	1.89	90	100	112						
	32.12	43.60	1393	6.36	4.22	3.18	2.11		100	112	132*					
	28.85	48.50	2024	10.28	6.83	5.14	3.42				132					
	26.43	**53.00**	1893	10.50	6.97	5.25	3.49	90	100	112	132	160*				
	24.09	58.10	1689	10.28	6.83	5.14	3.41				132					
	23.89	**58.60**	1911	11.73	7.79	5.86	3.89	90	100	112	132	160*				
	21.65	**64.70**	1893	12.82	8.51	6.41	4.26	90	100	112	132	160*				
	19.57	**71.50**	1911	14.32	9.51	7.16	4.75	90	100	112	132	160*				
	17.81	**78.60**	1920	15.80	10.50	7.90	5.25	90	100	112	132	160				
	13.99	**100.10**	1920	20.12	13.36	10.06	6.68	90	100	112	132	160				
	13.46	**104.00**	1851	20.16	13.39	10.08	6.70	90	100	112	132	160	180*			
	10.58	**132.30**	1761	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	8.83	**158.60**	1676	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	7.29	**192.00**	1565	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180			
	6.44	**217.40**	1498	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180			
	5.60	**250.00**	1170	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	4.62	**303.00**	1195	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180			
	4.08	**343.10**	1127	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180			
	3.67	**381.50**	1057	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	3.44	**407.00**	1009	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	3.23	**433.40**	959	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	2.78	**503.60**	888	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
PA 51 PF 51 W mm 93 + IEC - PAM mm 93	13.27	105.50	290	3.20	2.13	1.60	1.06	90	100	112*						
	9.09	154.00	320	5.16	3.43	2.58	1.71		100	112	132*					
	6.82	205.30	400	8.60	5.71	4.30	2.86				132*					
	5.50	**254.50**	220	5.86	3.90	2.93	1.95	90	100	112						
	4.04	**346.50**	410	14.88	9.88	7.44	4.94	90	100	112	132	160*				
	3.31	**423.00**	492	21.79	14.47	10.90	7.24	90	100	112	132	160				
	2.86	**489.50**	456	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160				
	2.50	**560.00**	426	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	2.06	**679.60**	382	*22.00*	*14.52*	*11.00*	*7.26*		100	112	132	160	180			
	1.82	**769.20**	341	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	1.64	**853.70**	325	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	1.54	**909.10**	310	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	1.44	**972.20**	305	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	1.24	**1129.00**	275	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 63/23 PF 63/23 W mm 📖 145 + IEC - PAM mm 📖 144-145	13313.68	0.11	3200	0.08	0.04	0.04	0.02	63*	71*										
	11060.60	0.13	3200	0.08	0.05	0.04	0.02	63*	71*										
	8135.65	0.17	3200	0.10	0.06	0.05	0.03	63*	71*										
	6681.18	**0.21**	3200	0.11	0.07	0.06	0.03	63*	71*	80*	90*								
	5394.24	**0.26**	3200	0.13	0.08	0.06	0.04	63*	71*	80*	90*								
	4370.02	**0.32**	3200	0.15	0.09	0.07	0.05	63*	71*	80*	90*								
	3390.53	**0.41**	3200	0.18	0.11	0.09	0.06	63	71*	80*	90*								
	2816.75	**0.50**	3200	0.21	0.13	0.10	0.07	63	71*	80*	90*								
	2162.48	**0.65**	3200	0.26	0.16	0.13	0.08	63	71*	80*	90*								
	1677.79	**0.83**	3200	0.32	0.21	0.16	0.10	63	71*	80*	90*								
	1410.80	**1.00**	3200	0.37	0.24	0.19	0.12	63	71	80*	90*								
	1066.44	**1.30**	3200	0.48	0.31	0.24	0.16	63	71	80*	90*								
PA 63/22 PF 63/22 W mm 📖 141 + IEC - PAM mm 📖 140-141	**851.02**	**1.60**	3200	0.59	0.39	0.30	0.19	71	80*	90*	100*	112*							
	727.77	**1.90**	3200	0.68	0.45	0.34	0.22	71	80*	90*	100*	112*							
	554.24	**2.50**	3200	0.85	0.56	0.42	0.28	71	80	90*	100*	112*							
	430.20	**3.30**	3200	1.09	0.72	0.55	0.36	71	80	90*	100*	112*							
	367.90	**3.80**	3200	1.28	0.85	0.64	0.42	71	80	90*	100*	112*							
	283.00	**4.90**	3200	1.66	1.10	0.83	0.55	71	80	90	100*	112*							
	225.22	**6.20**	3200	2.08	1.38	1.04	0.69	71	80	90	100*	112*							
	173.24	**8.10**	3200	2.71	1.80	1.35	0.90	71	80	90	100*	112*							
	153.52	**9.10**	3200	3.06	2.03	1.53	1.01	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power $P1_{max}$ W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 63 PF 63 W mm 120 + IEC - PAM mm 120-121	372.70	3.80	3200	1.26	0.84	0.63	0.42	90*								
	300.91	4.70	3200	1.56	1.04	0.78	0.52	90								
	265.56	5.30	3640	2.01	1.33	1.00	0.67	90	100*	112*						
	214.41	6.50	3640	2.49	1.65	1.24	0.83	90	100*	112*						
	180.86	7.70	3660	2.97	1.97	1.48	0.99		100*	112*	132*					
	146.02	9.60	3700	3.71	2.47	1.86	1.23		100	112*	132*					
	132.78	10.50	3700	4.09	2.71	2.04	1.36				132*					
	108.08	**13.00**	3650	4.95	3.29	2.48	1.64	90	100	112						
	107.21	13.10	3700	5.06	3.36	2.53	1.68				132*					
	87.26	**16.00**	3200	5.38	3.57	2.69	1.79	90	100	112						
	77.49	**18.10**	3700	7.00	4.65	3.50	2.32	90	100	112	132*	160*				
	62.96	**22.20**	3670	8.55	5.68	4.27	2.84	90	100	112	132*	160*				
	53.84	**26.00**	3700	10.07	6.69	5.04	3.35	90	100	112	132	160*				
	50.83	**27.50**	3700	10.67	7.09	5.34	3.54	90	100	112	132	160*				
	43.47	**32.20**	3680	12.40	8.24	6.21	4.12	90	100	112	132	160*				
	36.14	**38.70**	3690	14.97	9.94	7.48	4.97	90	100	112	132	160				
	30.90	**45.30**	3590	17.03	11.31	8.52	5.66	90	100	112	132	160				
	26.33	**53.20**	3200	17.82	11.84	8.91	5.92	90	100	112	132	160	180*			
	21.97	**63.70**	3200	21.35	14.18	10.68	7.09	90	100	112	132	160	180*			
	20.81	**67.28**	3200	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
	17.36	**80.60**	3200	*22.00*	*14.52*	*11.00*	*7.26*	90	100	112	132	160	180			
PA 62 PF 62 W mm 120 + IEC - PAM mm 120-121	48.75	28.70	2510	7.55	5.01	3.77	2.51	100	112	132*						
	37.08	37.80	3010	11.90	7.91	5.95	3.95			132	160*	180*				
	18.16	**77.10**	3077	24.84	16.50	12.42	8.25	100	112	132	160	180				
	15.80	**88.60**	3004	27.87	18.51	13.94	9.26	100	112	132	160	180				
	13.91	**100.60**	3080	32.46	21.56	16.23	10.78	100	112	132	160	180	200	225*		
	11.60	**120.70**	3077	38.89	25.83	19.44	12.92	100	112	132	160	180	200	225*		
	10.52	**133.10**	3093	43.10	28.63	21.55	14.32	100	112	132	160	180	200	225*		
	8.78	**159.50**	3012	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225		
	7.55	**185.40**	3120	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225		
	6.35	**220.50**	1930	44.56	29.60	22.28	14.80	100	112	132	160	180	200	225		
	5.29	**264.70**	1882	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225		
	4.56	**307.00**	2081	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225		
	4.06	**344.80**	1885	*45.00*	*29.70*	*22.50*	*14.85*					180	200	225		
	3.91	**358.10**	2009	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225		
	3.72	**376.30**	2030	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225		
	3.32	**421.70**	1980	*45.00*	*29.70*	*22.50*	*14.85*			132	160	180	200	225		
	2.97	**471.40**	1960	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 73/23 **PF 73/23** **W** mm 📖 145 + **IEC - PAM** mm 📖 144-145	13435.41	0.10	5000	0.09	0.07	0.05	0.03	63*	71*										
	11303.83	0.12	5000	0.10	0.07	0.05	0.04	63*	71*										
	8164.87	0.17	5000	0.13	0.09	0.06	0.04	63*	71*	80*	90*								
	6600.95	**0.21**	5000	0.15	0.10	0.08	0.05	63*	71*	80*	90*								
	5483.87	**0.26**	5000	0.17	0.12	0.09	0.06	63*	71*	80*	90*								
	4429.50	**0.32**	5000	0.21	0.14	0.10	0.07	63	71*	80*	90*								
PA 73/22 **PF 73/22** **W** mm 📖 141 + **IEC - PAM** mm 📖 140-141	3433.54	0.41	5000	0.25	0.17	0.13	0.09	71*	80*	90*									
	2773.38	0.50	5000	0.30	0.21	0.15	0.10	71*	80*	90*									
	2194.98	0.64	5000	0.37	0.25	0.19	0.13		80*	90*									
	1772.96	0.79	5000	0.45	0.30	0.23	0.15		80*	90*									
	1252.41	**1.10**	5000	0.63	0.42	0.31	0.21	71	80*	90*	100*	112*							
	1097.40	**1.30**	5000	0.71	0.47	0.35	0.24	71	80*	90*	100*	112*							
	886.40	**1.60**	5000	0.83	0.55	0.41	0.27	71	80	90*	100*	112*							
	736.40	**1.90**	5000	1.00	0.66	0.50	0.33	71	80	90*	100*	112*							
	566.43	**2.50**	5000	1.29	0.86	0.65	0.43	71	80	90*	100*	112*							
	457.52	**3.10**	5000	1.60	1.06	0.80	0.53	71	80	90	100*	112*							
	346.75	**4.00**	5000	2.11	1.40	1.06	0.70	71	80	90	100*	112*							
	280.08	**5.00**	5000	2.62	1.74	1.31	0.87	71	80	90	100*	112*							
PA 73/32 **PF 73/32** **W** mm 📖 141 + **IEC - PAM** mm 📖 140-141	**226.38**	**6.20**	5000	3.24	2.15	1.62	1.08	90	100	112*	132*								
	171.10	**8.20**	5000	4.28	2.85	2.14	1.42	90	100	112	132*								
	141.16	**9.90**	5000	5.19	3.45	2.60	1.72	90	100	112	132*								
	124.66	**11.20**	5000	5.88	3.91	2.94	1.95	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 73 PF 73 W mm 124 + IEC - PAM mm 124-125	205.59	6.80	5330	3.80	2.52	1.90	1.26	100	112*	132*						
	166.07	8.40	5630	4.97	3.30	2.48	1.65	100	112	132*						
	124.55	11.20	5620	6.61	4.39	3.31	2.20			132*	160*	180*				
	124.38	**11.30**	5000	5.89	3.91	2.95	1.96	100	112	132*						
	100.47	**13.90**	4000	5.84	3.88	2.92	1.94	100	112	132*						
	91.33	**15.30**	5330	8.56	5.68	4.28	2.84	100	112	132*						
	74.80	**18.70**	5330	10.45	6.94	5.22	3.47	100	112	132	160*	180*				
	60.42	**23.20**	5650	13.71	9.11	6.85	4.55	100	112	132	160*	180*				
	52.28	**26.80**	5560	15.59	10.36	7.80	5.18	100	112	132	160	180*				
	45.67	**30.70**	5370	17.24	11.45	8.62	5.73	100	112	132	160	180*	200*	225*		
	37.68	**37.20**	5000	19.45	12.92	9.73	6.46	100	112	132	160	180*	200*	225*		
	33.27	**42.10**	5000	22.03	14.64	11.02	7.32	100	112	132	160	180*	200*	225*		
	28.35	**49.40**	5000	25.85	17.17	12.93	8.59	100	112	132	160	180	200*	225*		
	23.39	**59.90**	5000	31.34	20.82	15.67	10.41	100	112	132	160	180	200	225*		
	20.66	**67.80**	5000	35.48	23.57	17.74	11.78	100	112	132	160	180	200	225*		
	18.01	**77.70**	5000	40.70	27.04	20.35	13.52	100	112	132	160	180	200	225*		
PA 72 PF 72 W mm 124 + IEC - PAM mm 124-125	43.70	32.00	4050	13.59	9.03	6.79	4.51	132	160*	180*						
	33.08	42.30	3217	14.26	9.47	7.13	4.74	132	160*	180*						
	28.58	49.00	4053	20.79	13.81	10.39	6.91		160	180*	200*					
	21.64	64.70	4492	30.43	20.21	15.22	10.11		160	180	200					
	21.72	**64.50**	4053	27.36	18.17	13.68	9.09	132	160	180						
	16.83	**83.20**	4053	35.30	23.45	17.65	11.73	132	160	180	200	225*				
	14.33	**97.70**	4053	41.46	27.54	20.73	13.77	132	160	180	200	225*				
	12.49	**112.10**	4053	47.57	31.60	23.79	15.80	132	160	180	200	225				
	10.84	**129.20**	4677	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	9.46	**148.00**	4708	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	8.21	**170.50**	4657	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	6.94	**201.70**	4292	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	6.42	**218.10**	2770	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	5.60	**250.00**	2831	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	4.86	**288.10**	2910	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	4.11	**340.60**	2673	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	3.86	**362.70**	2589	*55.00*	*36.30*	*27.50*	*18.15*					225				
	3.44	**407.00**	2423	*55.00*	*36.30*	*27.50*	*18.15*	132	160	180	200	225				
	3.26	**429.40**	2333	*55.00*	*36.30*	*27.50*	*18.15*					225				
	2.76	**507.20**	2135	*55.00*	*36.30*	*27.50*	*18.15*	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 83/33 **PF 83/33** **W** mm 📖 145 + **IEC - PAM** mm 📖 144-145	12787.88	0.11	8000	0.13	0.09	0.07	0.05	63*	71*							
	10858.81	**0.13**	8000	0.15	0.10	0.07	0.05	63*	71*	80*	90*					
	8572.29	**0.16**	8000	0.18	0.12	0.09	0.06	63*	71*	80*	90*					
	6931.18	**0.20**	8000	0.21	0.14	0.10	0.07	63	71*	80*	90*					
	5432.52	**0.26**	8000	0.26	0.17	0.13	0.09	63	71*	80*	90*					
	4548.59	**0.31**	8000	0.30	0.20	0.15	0.10	63	71*	80*	90*					
PA 83/32 **PF 83/32** **W** mm 📖 141 + **IEC - PAM** mm 📖 140-141	3552.27	0.39	8000	0.37	0.25	0.19	0.12		80*	90*						
	2860.33	0.49	8000	0.45	0.30	0.23	0.15		80*	90*						
	2039.02	0.69	8000	0.62	0.41	0.31	0.21		80*	90*						
	1683.27	**0.83**	8000	0.74	0.49	0.37	0.25	71	80*	90*	100*	112*				
	1366.81	1.00	8000	0.86	0.57	0.43	0.28			90*	100*	112*				
	1151.94	**1.20**	8000	1.02	0.68	0.51	0.34	71	80	90*	100*	112*				
	897.44	**1.60**	8000	1.31	0.87	0.65	0.43	71	80	90*	100*	112*	132*			
	722.63	**1.90**	8000	1.62	1.08	0.81	0.54	71	80	90	100*	112*	132*			
PA 83/42 **PF 83/42** **W** mm 📖 143 + **IEC - PAM** mm 📖 142-143	**525.11**	**2.70**	8000	2.23	1.48	1.12	0.74	90	100*	112*	132*	160*				
	437.93	**3.20**	8000	2.68	1.78	1.34	0.89	90	100*	112*	132*	160*				
	374.50	**3.70**	8000	3.13	2.08	1.57	1.04	90	100	112*	132*	160*				
	276.00	**5.10**	8000	4.25	2.82	2.12	1.41	90	100	112	132*	160*				
	236.03	**5.90**	8000	4.97	3.30	2.48	1.65	90	100	112	132*	160*				
	201.09	**7.00**	8000	5.83	3.87	2.92	1.94	90	100	112	132*	160*				
	149.01	**9.40**	8000	7.87	5.23	3.94	2.61	90	100	112	132*	160*				
	126.95	**11.00**	8000	9.24	6.14	4.62	3.07	90	100	112	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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 83 PF 83 W mm 128 + IEC - PAM mm 128-129	216.49	6.50	8890	6.02	4.00	3.01	2.00	100	112	132*					
	164.68	8.50	8930	7.95	5.28	3.97	2.64			132*	160*	180*			
	136.67	10.20	7380	7.92	5.26	3.96	2.63	100	112	132*					
	103.97	13.50	9180	12.94	8.60	6.47	4.30			132	160*	180*			
	80.63	**17.40**	8980	16.30	10.85	8.16	5.42	100	112	132	160	180*			
	70.19	**19.90**	8960	18.71	12.43	9.36	6.22	100	112	132	160	180*			
	61.79	**22.70**	9000	21.35	14.18	10.68	7.09	100	112	132	160	180*	200*	225*	
	51.52	**27.20**	8930	25.41	16.88	12.70	8.44	100	112	132	160	180	200*	225*	
	44.34	**31.60**	8890	29.39	19.52	14.70	9.76	100	112	132	160	180	200*	225*	
	39.01	**35.90**	9000	33.82	22.47	16.91	11.23	100	112	132	160	180	200	225*	
	32.53	**43.00**	8550	38.50	25.60	19.27	12.80	100	112	132	160	180	200	225*	
	27.99	**50.00**	8130	42.58	28.29	21.29	14.14	100	112	132	160	180	200	225*	
	24.38	**57.40**	8000	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
	20.99	**66.70**	8000	*45.00*	*29.70*	*22.50*	*14.85*	100	112	132	160	180	200	225	
PA 82 PF 82 W mm 128 + IEC - PAM mm 128-129	48.76	28.70	5320	16.00	10.62	8.00	5.31	132	160	180*					
	40.43	34.60	4144	15.03	9.98	7.51	4.99	132	160	180*					
	32.10	43.60	6591	30.10	20.00	15.05	10.00		160	180	200				
	26.62	52.60	6357	35.01	23.26	17.50	11.63		160	180	200				
	26.47	52.90	6591	36.50	24.25	18.25	12.12				200	225*			
	21.95	63.80	7246	48.39	32.15	24.20	16.07				200	225			
	16.56	**84.50**	6579	58.24	38.69	29.12	19.34	132	160	180	200	225	250		
	14.29	**98.00**	6581	67.51	44.85	33.76	22.42	132	160	180	200	225	250	280*	
	11.85	**118.10**	7135	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	10.33	**135.50**	6866	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	8.84	**158.40**	6569	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	7.40	**189.20**	6256	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	6.21	**225.40**	4304	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	5.31	**263.70**	4784	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	4.45	**314.60**	4344	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	3.64	**384.60**	3950	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	2.90	**482.80**	3127	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 📖 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 93/43 **PF 93/43** **W** mm 📖 145 + **IEC - PAM** mm 📖 144-145	13926.28	0.10	12200	0.17	0.11	0.08	0.05	71*	80*	90*						
	11275.92	0.12	12200	0.20	0.13	0.10	0.06	71*	80*	90*						
	8526.73	0.16	12200	0.25	0.16	0.12	0.08	71*	80*	90*						
	6948.97	**0.20**	12200	0.30	0.19	0.15	0.10	71*	80*	90*	100*	112*				
	5771.01	**0.24**	12200	0.35	0.23	0.17	0.11	71*	80*	90*	100*	112*				
	4300.67	**0.33**	12200	0.46	0.30	0.23	0.15	71	80*	90*	100*	112*				
	3730.70	**0.38**	12200	0.52	0.34	0.26	0.17	71	80*	90*	100*	112*				
	2714.80	**0.52**	12200	0.70	0.46	0.35	0.23	71	80*	90*	100*	112*				
	2199.04	**0.64**	12200	0.81	0.54	0.41	0.27	71	80	90*	100*	112*				
PA 93/42 **PF 93/42** **W** mm 📖 143 + **IEC - PAM** mm 📖 142-143	1644.01	0.85	12200	1.09	0.72	0.54	0.36		100*	112*	132*					
	1299.17	**1.10**	12200	1.38	0.91	0.69	0.46	90*	100*	112*						
	1090.99	**1.30**	12200	1.64	1.09	0.82	0.54	90	100*	112*	132*	160*				
	811.95	**1.70**	12200	2.20	1.46	1.10	0.73	90	100*	112*	132*	160*				
	756.80	**1.80**	12200	2.36	1.57	1.18	0.78	90	100*	112*	132*	160*				
	547.88	**2.60**	12200	3.26	2.17	1.63	1.08	90	100	112*	132*	160*				
	456.91	**3.10**	12200	3.91	2.60	1.96	1.30	90	100	112*	132*	160*				
	332.89	**4.20**	12200	5.37	3.57	2.69	1.78	90	100	112	132*	160*				
	287.97	**4.90**	12200	6.21	4.13	3.11	2.06	90	100	112	132*	160*				
	240.68	**5.80**	12200	7.43	4.94	3.72	2.47	90	100	112	132*	160*				
	182.00	**7.70**	12200	9.83	6.53	4.91	3.26	90	100	112	132	160*				
PA 93/52 **PF 93/52** **W** mm 📖 143 + **IEC - PAM** mm 📖 142-143	**160.87**	**8.70**	12200	11.12	7.39	5.56	3.69	100	112	132	160*	180*				
	127.35	**11.00**	12200	14.04	9.33	7.02	4.66	100	112	132	160*	180*				
	107.56	**13.00**	12200	16.63	11.05	8.31	5.52				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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 93 **PF 93** **W** mm 132 + **IEC - PAM** mm 132-133	187.99	7.40	13980	10.90	7.24	5.45	3.62	132	160*	180*					
	122.97	11.40	13950	16.63	11.05	8.32	5.52		160	180*	200*				
	109.25	12.80	11560	15.51	10.30	7.76	5.15	132	160	180*					
	93.43	**15.00**	14000	21.97	14.59	10.98	7.30	132	160	180*					
	72.42	**19.30**	13400	27.13	18.02	13.56	9.01	132	160	180	200*	225*			
	61.66	**22.70**	12700	30.19	20.06	15.10	10.03	132	160	180	200	225*	250*		
	53.75	**26.00**	12250	33.41	22.19	16.71	11.10	132	160	180	200	225*	250*	280*	
	46.63	**30.00**	12200	38.35	25.48	19.18	12.74	132	160	180	200	225*	250*	280*	
	39.46	**35.50**	12200	45.32	30.11	22.66	15.05	132	160	180	200	225*	250*	280*	
	31.24	**44.80**	12200	57.25	38.03	28.62	19.02	132	160	180	200	225	250	280*	
	27.10	**51.70**	12200	66.00	43.84	33.00	21.92	132	160	180	200	225	250	280*	
	22.93	**61.10**	12200	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
	19.17	**73.00**	12200	*75.00*	*49.50*	*37.50*	*24.75*	132	160	180	200	225	250	280*	
PA 92 **PF 92** **W** mm 132 + **IEC - PAM** mm 132-133	35.47	39.50	9640	39.84	26.47	19.92	13.23	160	180	200					
	29.30	47.80	10775	53.91	35.81	26.96	17.91			200	225				
	16.47	**85.00**	10613	94.46	62.75	47.23	31.38		180	200	225	250	280		
	14.36	**97.50**	10774	109.99	73.06	54.99	36.53		180	200	225	250	280		
	12.39	**113.00**	10592	125.32	83.25	62.66	41.63		180	200	225	250	280	315*	
	10.50	**133.30**	10112	141.18	93.78	70.59	46.89		180	200	225	250	280	315*	
	7.78	**179.90**	6085	114.66	76.17	57.33	38.08		180	200	225	250	280		
	6.71	**208.60**	7012	153.19	101.77	76.60	50.88		180	200	225	250	280	315*	
	5.68	**246.50**	7212	*160.00*	*105.60*	*80.00*	*52.80*		180	200	225	250	280	315*	
	3.51	**398.90**	5572	*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	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82								DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.
PA 103/53 **PF 103/53** **W** mm 145 + **IEC - PAM** mm 144-145	**14373.83**	**0.10**	20000	0.24	0.16	0.12	0.08	71*	80*	90*	100*	112*				
	11293.72	**0.12**	20000	0.30	0.19	0.15	0.10	71*	80*	90*	100*	112*				
	8470.29	**0.17**	20000	0.39	0.25	0.19	0.12	71	80*	90*	100*	112*				
	7155.29	**0.20**	20000	0.45	0.29	0.22	0.15	71	80*	90*	100*	112*				
	5796.64	**0.24**	20000	0.55	0.36	0.27	0.18	71	80*	90*	100*	112*				
	4223.52	**0.33**	20000	0.73	0.48	0.37	0.24	71	80*	90*	100*	112*				
	3461.37	**0.40**	20000	0.85	0.56	0.42	0.28	71	80	90*	100*	112*				
	2719.64	**0.51**	20000	1.08	0.72	0.54	0.36	71	80	90*	100*	112*				
PA 103/52 **PF 103/52** **W** mm 143 + **IEC - PAM** mm 142-143	2038.56	0.69	20000	1.44	0.96	0.72	0.48		100*	112*	132*					
	1702.50	0.82	20000	1.72	1.14	0.86	0.57		100*	112*	132*					
	1413.66	**0.99**	20000	2.07	1.38	1.04	0.69	90	100*	112*						
	1147.52	**1.20**	20000	2.56	1.70	1.28	0.85	90	100*	112*	132*	160*				
	944.01	**1.50**	20000	3.11	2.06	1.55	1.03	90	100	112*	132*	160*				
	817.82	**1.70**	20000	3.59	2.38	1.79	1.19	90	100	112*	132*	160*	180*			
	642.57	**2.20**	20000	4.56	3.03	2.28	1.52	90	100	112	132*	160*	180*			
	468.19	**3.00**	20000	6.26	4.16	3.13	2.08	90	100	112	132*	160*	180*			
	341.11	**4.10**	20000	8.60	5.71	4.30	2.85		100	112	132*	160*	180*			
	296.56	**4.70**	20000	9.89	6.57	4.94	3.28	90	100	112	132	160*	180*			
	244.66	**5.70**	20000	11.98	7.96	5.99	3.98		100	112	132	160*	180*			
	184.77	**7.60**	20000	15.87	10.54	7.93	5.27		100	112	132	160	180*			
	154.79	**9.00**	20000	18.94	12.58	9.47	6.29		100	112	132	160	180*			
	122.75	**11.40**	20000	*22.00*	*14.52*	*11.00*	*7.26*					160	180			
	105.49	**13.30**	20000	*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

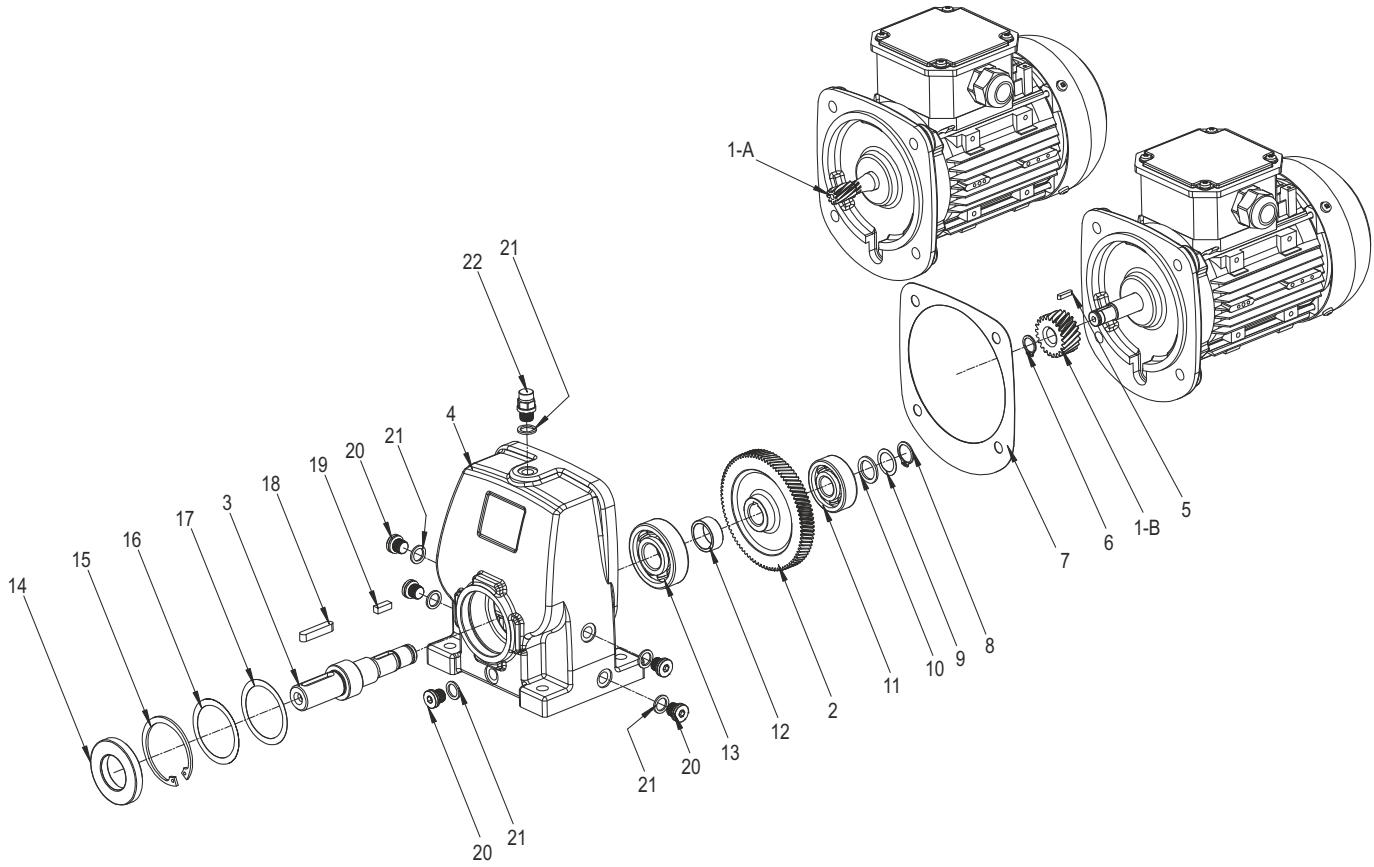
Tip / Type	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min^{-1}]	M_{amax} f_B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W $f_B \geq 1$ 4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	IEC - PAM f_B ⇨ 49 - 82			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.				
PA 103 PF 103 W mm 136 + IEC - PAM mm 136-137	207.36	6.80	23160	16.37	10.88	8.19	5.44	132	160	180*					
	136.52	10.30	23000	24.70	16.41	12.35	8.20		160	180	200*				
	112.57	12.40	23160	30.16	20.04	15.08	10.02				200*	225*			
	81.46	**17.20**	20500	36.89	24.51	18.45	12.25	132	160	180	200	225*			
	70.42	**19.90**	20000	41.64	27.66	20.82	13.83	132	160	180	200	225*	250*		
	60.75	**23.00**	20000	48.26	32.06	24.13	16.03	132	160	180	200	225	250*	280*	
	53.00	**26.40**	20000	55.32	36.75	27.66	18.37	132	160	180	200	225	250*	280*	315*
	45.33	**30.90**	20000	64.68	42.97	32.34	21.48	132	160	180	200	225	250	280*	315*
	37.97	**36.90**	20000	77.22	51.29	38.61	25.65	132	160	180	200	225	250	280*	315*
	29.62	**47.30**	20000	98.99	65.75	49.49	32.88	132	160	180	200	225	250	280	315*
	25.33	**55.30**	20000	*110.00*	*72.60*	*55.00*	*36.30*	132	160	180	200	225	250	280	315*
	21.22	**66.00**	20000	*110.00*	*72.60*	*55.00*	*36.30*	132	160	180	200	225	250	280	315*
PA 102 PF 102 W mm 136 + IEC - PAM mm 136-137	38.77	36.10	16059	60.72	40.34	30.36	20.17								
	19.35	**72.40**	16808	127.34	84.59	63.67	42.29	250	280	315					
	16.61	**84.30**	17367	153.28	101.82	76.64	50.91	250	280	315*					
	14.29	**98.00**	16620	170.50	113.26	85.25	56.63	250	280	315*					
	11.85	**118.10**	15773	195.13	129.62	97.56	64.81	250	280	315*					
	9.94	**140.80**	15004	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	7.51	**186.40**	11270	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	6.23	**224.70**	11491	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	5.23	**267.70**	10602	*200.00*	*132.00*	*100.00*	*66.00*	250	280	315					
	4.28	**327.10**	9387	*200.00*	*132.00*	*100.00*	*66.00*			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

PA 11 ... 51

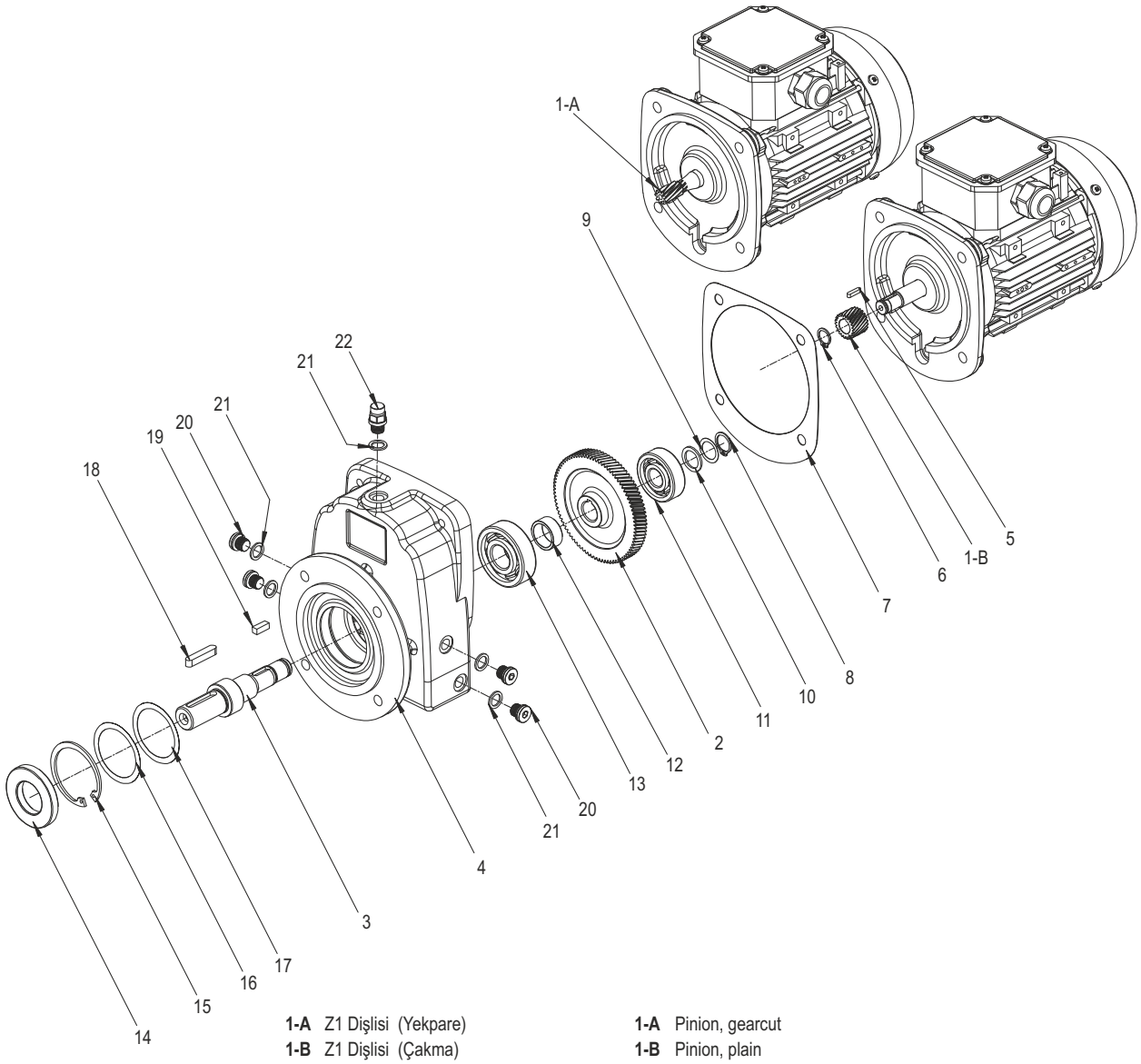


1-A	Z1 Dişlisi (Yekpare)	**1-A**	Pinion, gearcut
1-B	Z1 Dişlisi (Çakma)	**1-B**	Pinion, planin
2	Z2 Dişlisi	**2**	Driving Gear
3	Çıkış mili	**3**	Solid Shaft
4	Gövde	**4**	Gear Case
5	Kama	**5**	Key
6	Segman	**6**	Circlip
7	Conta	**7**	Gasket
8	Segman	**8**	Circlip
9	Layner	**9**	Shim
10	Rondela	**10**	Washer
11	Rulman	**11**	Bearing
12	Ara Burcu	**12**	Supporting Disc
13	Rulman	**13**	Bearing
14	Yağ keçesi	**14**	Oil seal
15	Segman	**15**	Circlip
16	Layner	**16**	Shim
17	Layner	**17**	Shim
18	Kama	**18**	Key
19	Kama	**19**	Key
20	Yağ tapası	**20**	Oil plug
21	Tapa Rondelası	**21**	Washer
22	Havalandırma Tapası	**22**	Vent plug

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PF 11 ... 51

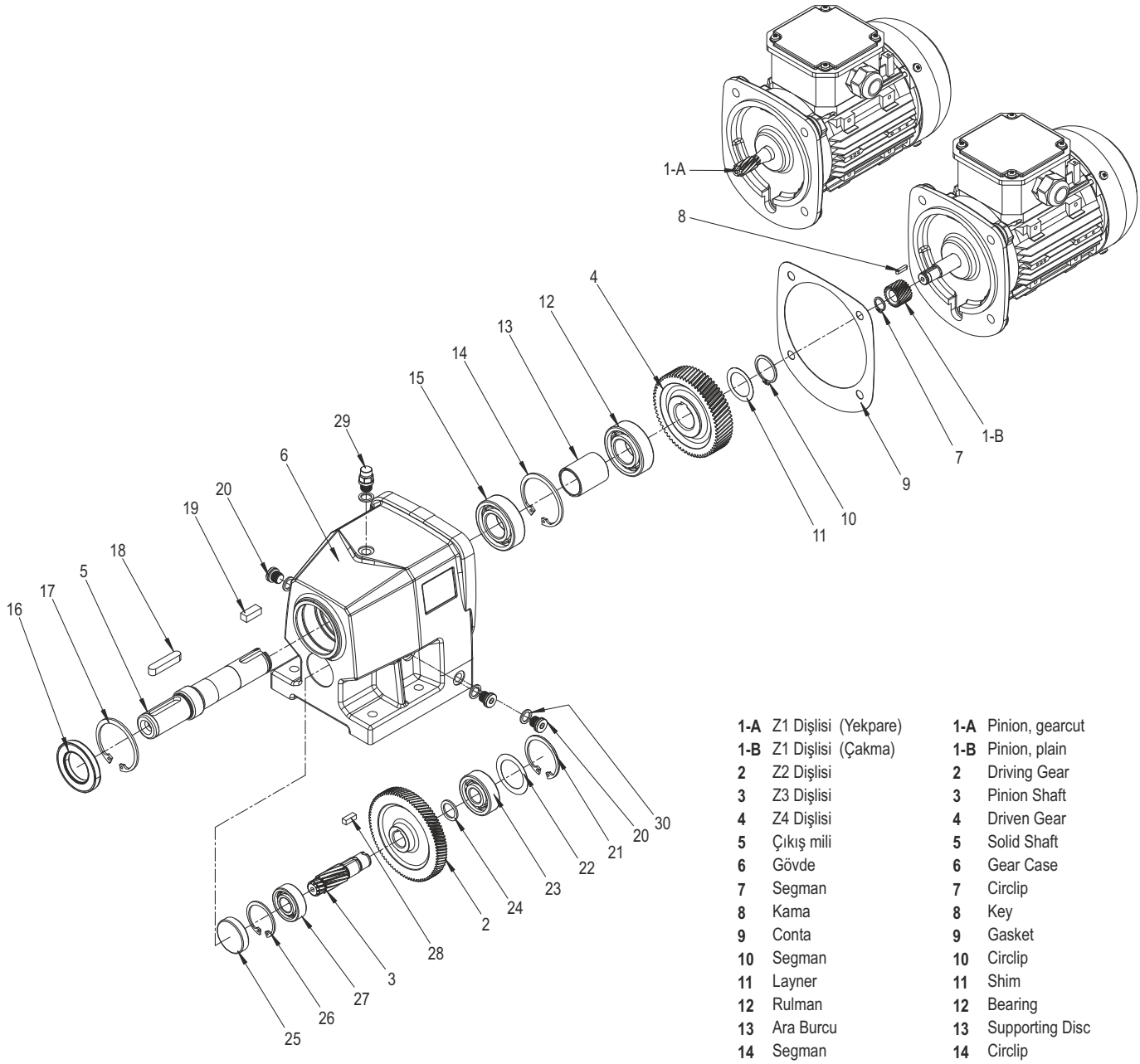


1-A	Z1 Dişlisi (Yekpare)	**1-A**	Pinion, gearcut
1-B	Z1 Dişlisi (Çakma)	**1-B**	Pinion, plain
2	Z2 Dişlisi	**2**	Driving Gear
3	Çıkış Mili	**3**	Solid Shaft
4	Gövde	**4**	Gear Case
5	Kama	**5**	Key
6	Segman	**6**	Circlip
7	Conta	**7**	Gasket
8	Segman	**8**	Circlip
9	Layner	**9**	Shim
10	Rondela	**10**	Washer
11	Rulman	**11**	Bearing
12	Ara Burcu	**12**	Supporting Disc
13	Rulman	**13**	Bearing
14	Yağ keçesi	**14**	Oil seal
15	Segman	**15**	Circlip
16	Layner	**16**	Shim
17	Layner	**17**	Shim
18	Kama	**18**	Key
19	Kama	**19**	Key
20	Yağ Tapası	**20**	Oil plug
21	Tapa Rondelası	**21**	Washer
22	Havalandırma Tapası	**22**	Vent plug

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA 12 ... 52

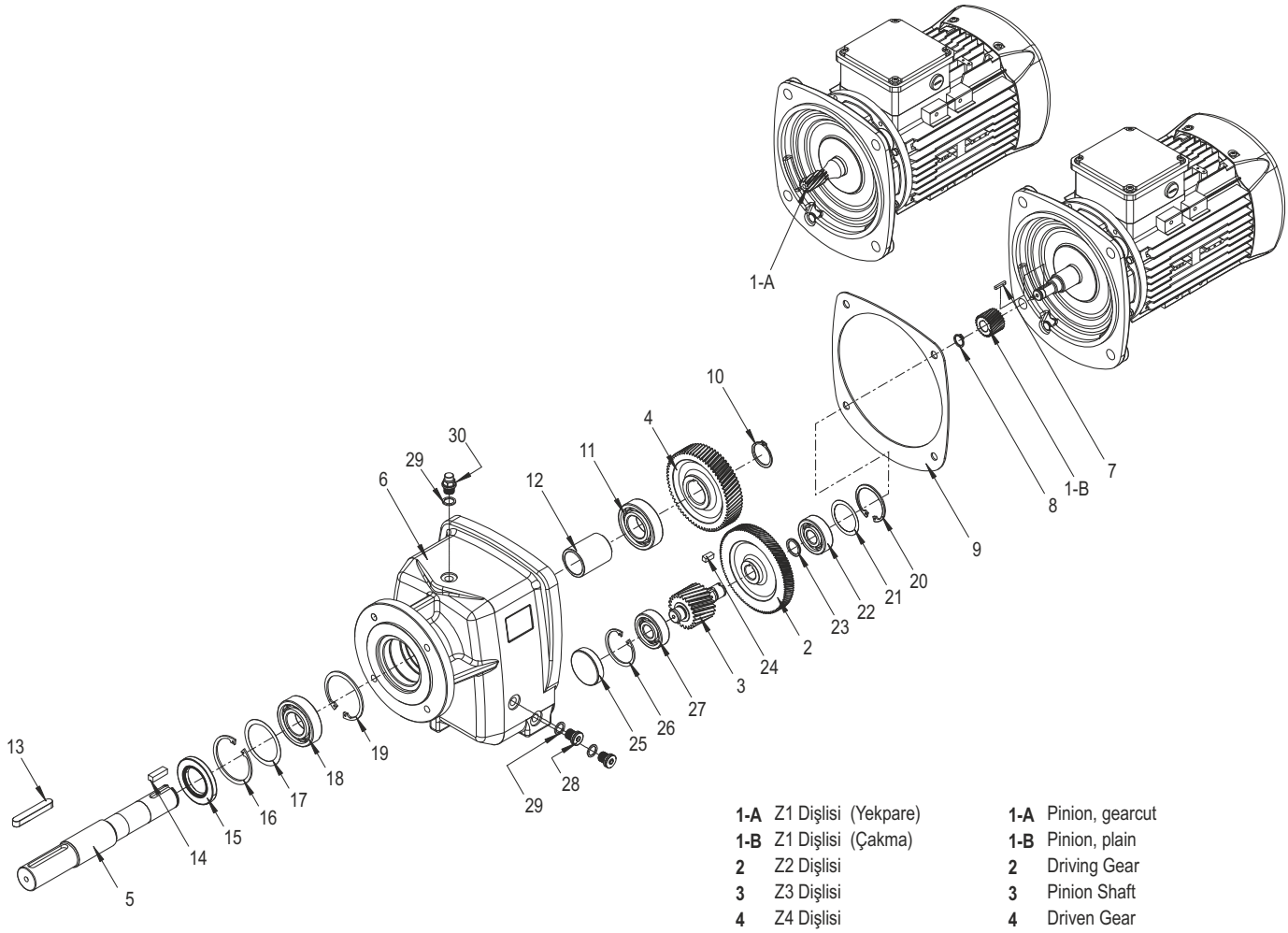


	TR	EN
1-A	Z1 Dişlisi (Yekpare)	Pinion, gearcut
1-B	Z1 Dişlisi (Çakma)	Pinion, plain
2	Z2 Dişlisi	Driving Gear
3	Z3 Dişlisi	Pinion Shaft
4	Z4 Dişlisi	Driven Gear
5	Çıkış mili	Solid Shaft
6	Gövde	Gear Case
7	Segman	Circlip
8	Kama	Key
9	Conta	Gasket
10	Segman	Circlip
11	Layner	Shim
12	Rulman	Bearing
13	Ara Burcu	Supporting Disc
14	Segman	Circlip
15	Rulman	Bearing
16	Yağ keçesi	Oil seal
17	Segman	Circlip
18	Kama	Key
19	Kama	Key
20	Tapa	Oil plug
21	Segman	Circlip
22	Layner	Shim
23	Rulman	Bearing
24	Z3 Ayar Rondelası	Z3 Washer
25	Yağ kapağı	Oil Filler Cup
26	Segman	Circlip
27	Rulman	Bearing
28	Kama	Key
29	Havalandırma Tapası	Vent plug
30	Tapa Rondelası	Washer

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PF 12 ... 52

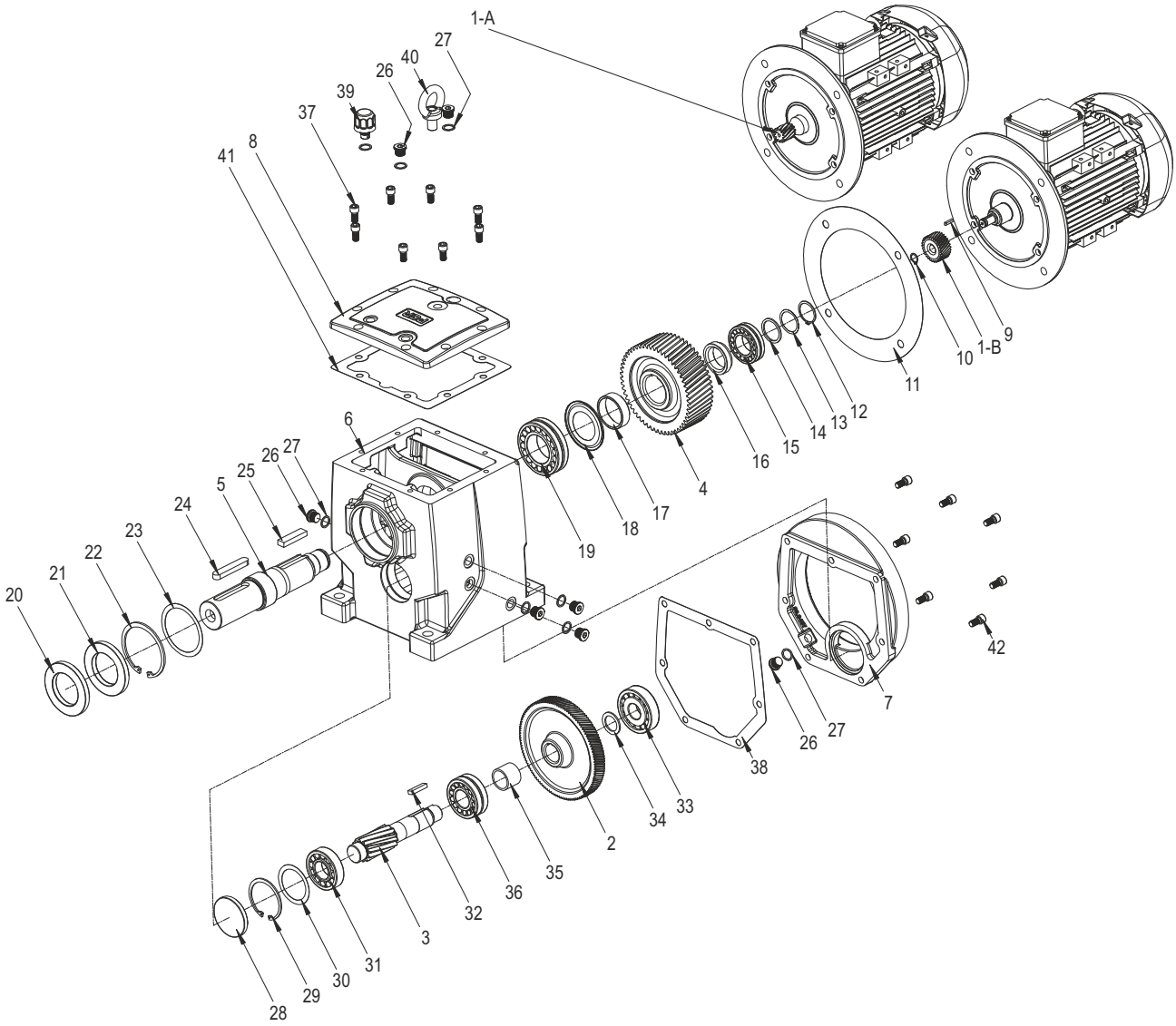


1-A	Z1 Dişlisi (Yekpare)	**1-A**	Pinion, gearcut
1-B	Z1 Dişlisi (Çakma)	**1-B**	Pinion, plain
2	Z2 Dişlisi	**2**	Driving Gear
3	Z3 Dişlisi	**3**	Pinion Shaft
4	Z4 Dişlisi	**4**	Driven Gear
5	Çıkış Mili	**5**	Solid Shaft
6	Gövde	**6**	Gear Case
7	Kama	**7**	Key
8	Segman	**8**	Circlip
9	Conta	**9**	Gasket
10	Segman	**10**	Circlip
11	Rulman	**11**	Bearing
12	Ara Burcu	**12**	Supporting Disc
13	Kama	**13**	Key
14	Kama	**14**	Key
15	Yağ keçesi	**15**	Oil seal
16	Segman	**16**	Circlip
17	Layner	**17**	Shim
18	Rulman	**18**	Bearing
19	Segman	**19**	Circlip
20	Segman	**20**	Circlip
21	Layner	**21**	Shim
22	Rulman	**22**	Bearing
23	Rondela	**23**	Rondela
24	Kama	**24**	Key
25	Yağ kapağı	**25**	Oil Filler Cup
26	Segman	**26**	Circlip
27	Rulman	**27**	Bearing
28	Tapa	**28**	Oil plug
29	Tapa Rondelası	**29**	Washer
30	Havalandırma Tapası	**30**	Vent plug

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA 62 ... 102

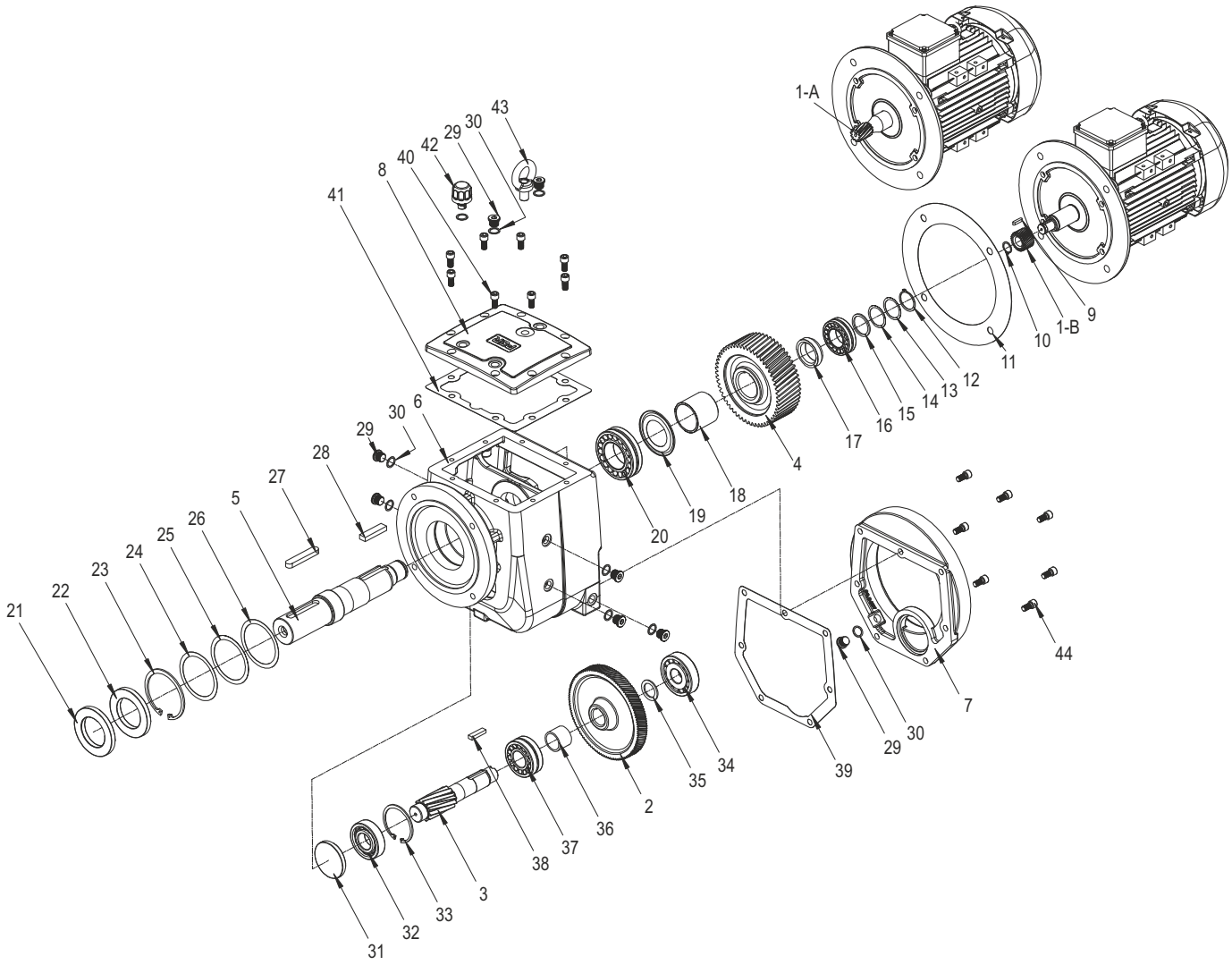


	TR		EN
1-A	Z1 Dişlisi (Yekpare)	**1-A**	Pinion, gearcut
1-B	Z1 Dişlisi (Çakma)	**1-B**	Pinion, plain
2	Z2 Dişlisi	**2**	Driving Gear
3	Z3 Dişlisi	**3**	Pinion Shaft
4	Z4 Dişlisi	**4**	Driven Gear
5	Çıkış mili	**5**	Solid Shaft
6	Gövde	**6**	Gear Case
7	Ara Bağlantı Flanşı	**7**	Intermediate Flange
8	Gövde Kapağı	**8**	Gear Case Cover
9	Kama	**9**	Key
10	Segman	**10**	Circlip
11	Conta	**11**	Gasket
12	Segman	**12**	Circlip
13	Layner	**13**	Shim
14	Rondela	**14**	Washer
15	Rulman	**15**	Bearing
16	Çıkış Mili Konik Burcu	**16**	Spacer
17	Çıkış Mili Ara Burcu	**17**	Spacer
18	Nilosring	**18**	Nilosring
19	Rulman	**19**	Bearing
20	Yağ keçesi	**20**	Oil seal
21	Yağ keçesi	**21**	Oil seal
22	Segman	**22**	Circlip
23	Layner	**23**	Shim
24	Kama	**24**	Key
25	Kama	**25**	Key
26	Tapa	**26**	Oil plug
27	Tapa Rondelası	**27**	Washer
28	Yağ kapağı	**28**	Oil Filler Cup
29	Segman	**29**	Circlip
30	Layner	**30**	Shim
31	Rulman	**31**	Bearing
32	Kama	**32**	Key
33	Rulman	**33**	Bearing
34	Rondela	**34**	Washer
35	Burç	**35**	Spacer
36	Rulman	**36**	Bearing
37	Alyan Başlı Civata	**37**	Socket head screw
38	Conta	**38**	Gasket
39	Havalandırma Tapası	**39**	Vent plug
40	Halkalı Civata	**40**	Eyebolt
41	Conta	**41**	Gasket
42	Alyan Başlı Civata	**42**	Socket head screw

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PF 62 ... 102



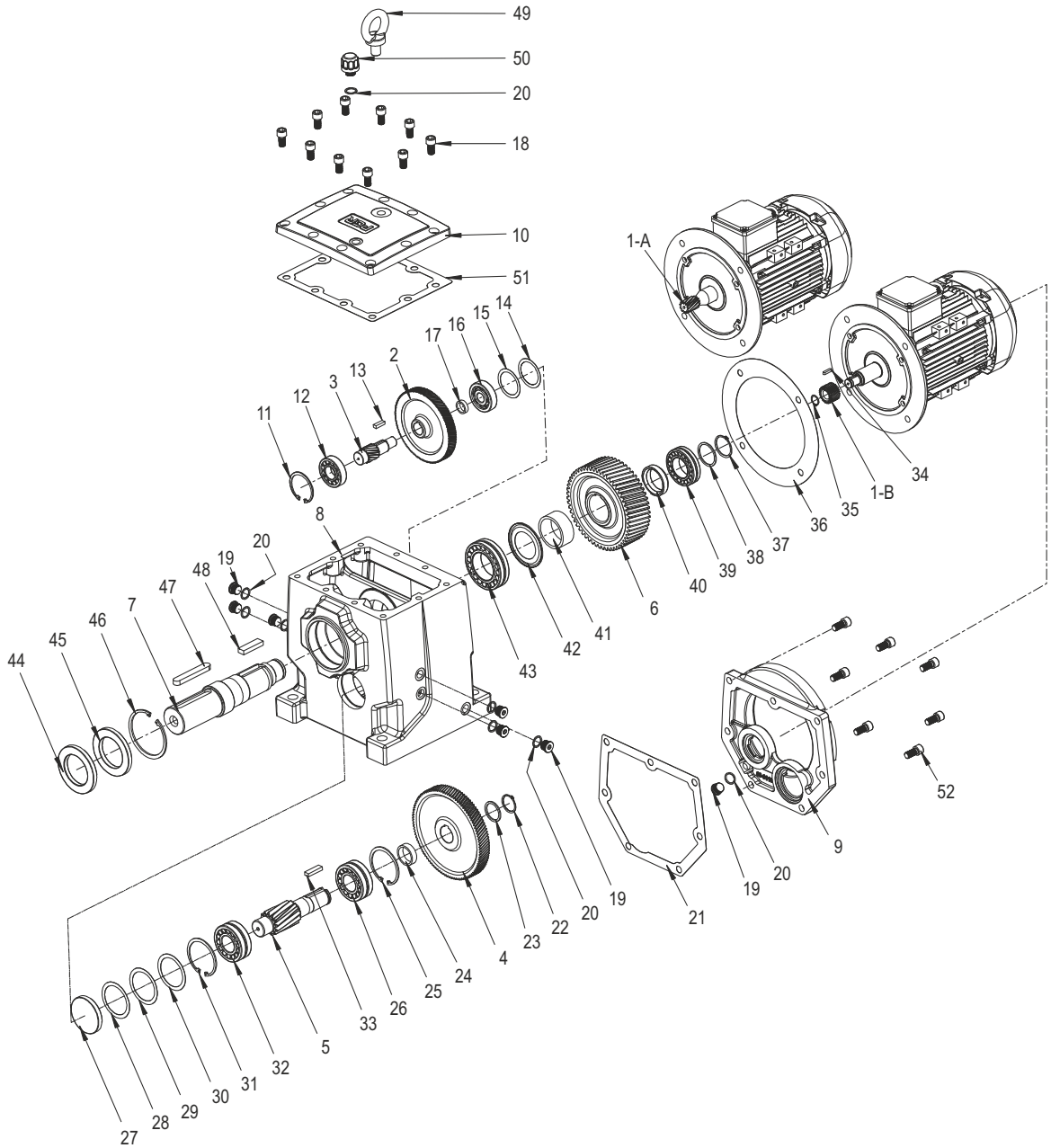
1-A	Z1 Dişlisi (Yekpare)	**23**	Segman
1-B	Z1 Dişlisi (Çakma)	**24**	Layner
2	Z2 Dişlisi	**25**	Layner
3	Z3 Dişlisi	**26**	Layner
4	Z4 Dişlisi	**27**	Kama
5	Çıkış mili	**28**	Kama
6	Gövde	**29**	Tapa
7	Ara Bağlantı Flanşı	**30**	Tapa Rondelası
8	Gövde Kapağı	**31**	Yağ kapağı
9	Kama	**32**	Rulman
10	Segman	**33**	Segman
11	Conta	**34**	Rulman
12	Segman	**35**	Rondela
13	Layner	**36**	Burç
14	Layner	**37**	Rulman
15	Z6 Rondela	**38**	Kama
16	Rulman	**39**	Conta
17	Çıkış Mili Konik Burcu	**40**	Alyan Başlı Civata
18	Çıkış Mili Ara Burcu	**41**	Conta
19	Nilosring	**42**	Havalandırma Tapası
20	Rulman	**43**	Halkalı Civata
21	Yağ keçesi	**44**	Alyan Başlı Civata
22	Yağ keçesi		

1-A	Pinion, gearcut	**23**	Circlip
1-B	Pinion, plain	**24**	Shim
2	Driving Gear	**25**	Shim
3	Pinion Shaft	**26**	Shim
4	Driven Gear	**27**	Key
5	Solid Shaft	**28**	Key
6	Gear Case	**29**	Oil plug
7	Intermediate Flange	**30**	Washer
8	Gear Case Cover	**31**	Oil Filler Cup
9	Key	**32**	Bearing
10	Circlip	**33**	Circlip
11	Gasket	**34**	Bearing
12	Circlip	**35**	Washer
13	Shim	**36**	Spacer
14	Shim	**37**	Bearing
15	Washer	**38**	Key
16	Bearing	**39**	Gasket
17	Spacer	**40**	Socket head screw
18	Spacer	**41**	Gasket
19	Nilosring	**42**	Vent plug
20	Bearing	**43**	Eyebolt
21	Oil seal	**44**	Socket head screw
22	Oil seal		

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA 63 ... 103

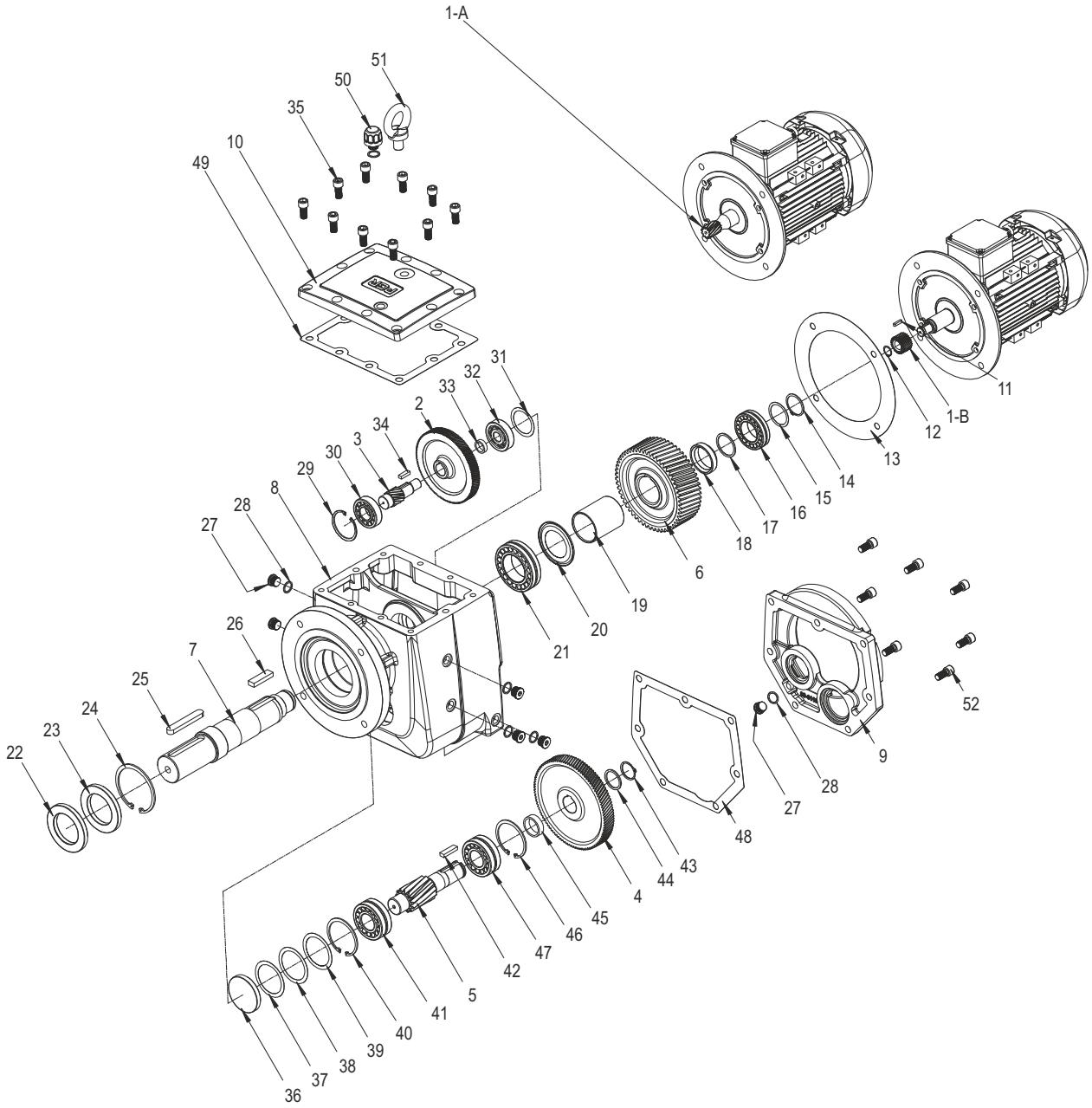


1-A	Z1 Dişlisi (Yekpare)	**18**	Alyan Başlı Civata	**36**	Conta	**1-A**	Pinion, gearcut	**18**	Socket head screw	**36**	Gasket
1-B	Z1 Dişlisi (Çakma)	**19**	Tapa	**37**	Segman	**1-B**	Pinion, plain	**19**	Oil plug	**37**	Circlip
2	Z2 Dişlisi	**20**	Tapa Rondelası	**38**	Rondela	**2**	Driving Gear	**20**	Washer	**38**	Washer
3	Z3 Dişlisi	**21**	Conta	**39**	Rulman	**3**	Pinion Shaft	**21**	Gasket	**39**	Bearing
4	Z4 Dişlisi	**22**	Segman	**40**	Konik burç	**4**	Driven Gear	**22**	Circlip	**40**	...
5	Z5 Dişlisi	**23**	Rondela	**41**	Burç	**5**	Output pinion shaft	**23**	Washer	**41**	Spacer
6	Z6 Dişlisi	**24**	Burç	**42**	Nilosring	**6**	Output gear	**24**	Spacer	**42**	Nilosring
7	Çıkış mili	**25**	Segman	**43**	Rulman	**7**	Solid Shaft	**25**	Circlip	**43**	Bearing
8	Gövde	**26**	Rulman	**44**	Yağ keçesi	**8**	Gear Case	**26**	Bearing	**44**	Oil seal
9	Ara Bağlantı Flanşı	**27**	Yağ kapağı	**45**	Yağ keçesi	**9**	Intermediate Flange	**27**	Oil Filler Cup	**45**	Oil seal
10	Üst kapak	**28**	Layner	**46**	Segman	**10**	Gear Case Cover	**28**	Shim	**46**	Circlip
11	Segman	**29**	Layner	**47**	Kama	**11**	Circlip	**29**	Shim	**47**	Key
12	Rulman	**30**	Layner	**48**	Kama	**12**	Bearing	**30**	Shim	**48**	Key
13	Kama	**31**	Segman	**49**	Halkalı Civata	**13**	Key	**31**	Circlip	**49**	Eyebolt
14	Layner	**32**	Rulman	**50**	Havalandırma Tapası	**14**	Shim	**32**	Bearing	**50**	Vent plug
15	Layner	**33**	Kama	**51**	Conta	**15**	Shim	**33**	Key	**51**	Gasket
16	Rulman	**34**	Kama	**52**	Alyan Başlı Civata	**16**	Bearing	**34**	Key	**52**	Socket head screw
17	Rondela	**35**	Segman			**17**	Washer	**35**	Circlip		

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PF 63 ... 103

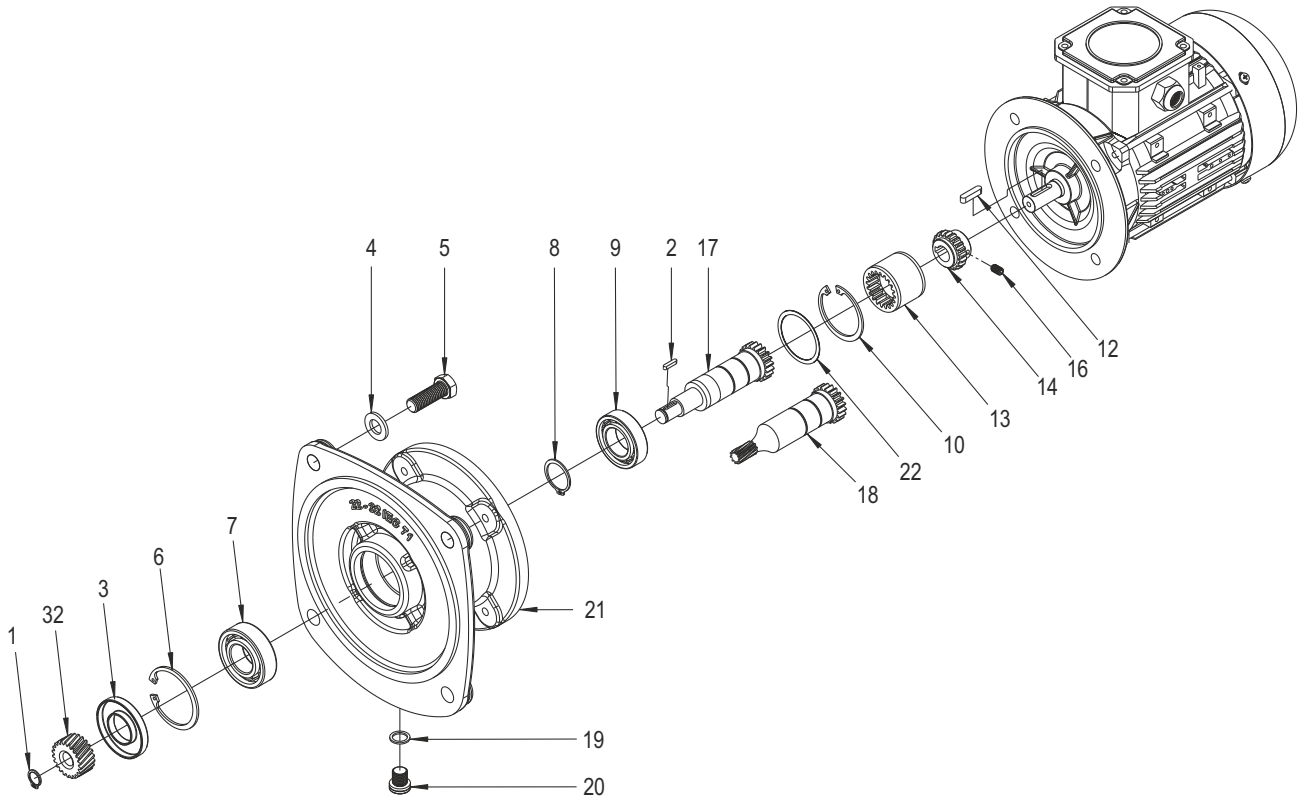


1-A	Z1 Dişlisi (Yekpare)	**18**	Konik Burç	**36**	Yağ Kapağı	**1-A**	Pinion, gearcut	**18**	Spacer	**36**	Oil Filler Cup
1-B	Z1 Dişlisi (Çakma)	**19**	Çıkış Mili Ara Burcu	**37**	Layner	**1-B**	Pinion, plain	**19**	Spacer	**37**	Shim
2	Z2 Dişlisi	**20**	Nilosring	**38**	Layner	**2**	Driving Gear	**20**	Nilosring	**38**	Shim
3	Z3 Dişlisi	**21**	Rulman	**39**	Layner	**3**	Pinion Shaft	**21**	Bearing	**39**	Shim
4	Z4 Dişlisi	**22**	Yağ Keçesi	**40**	Segman	**4**	Driven Gear	**22**	Oil seal	**40**	Circlip
5	Z5 Dişlisi	**23**	Yağ Keçesi	**41**	Rulman	**5**	Output pinion shaft	**23**	Oil seal	**41**	Bearing
6	Z6 Dişlisi	**24**	Segman	**42**	Kama	**6**	Output Gear	**24**	Circlip	**42**	Key
7	Çıkış Mili	**25**	Kama	**43**	Segman	**7**	Solid Shaft	**25**	Key	**43**	Circlip
8	Gövde	**26**	Kama	**44**	Rondela	**8**	Gear Case	**26**	Key	**44**	Washer
9	Ara Bağlantı Flanşı	**27**	Tapa	**45**	Burç	**9**	Intermediate Flange	**27**	Oil plug	**45**	Spacer
10	Üst kapak	**28**	Tapa Rondelası	**46**	Segman	**10**	Gear Case Cover	**28**	Washer	**46**	Circlip
11	Kama	**29**	Segman	**47**	Rulman	**11**	Key	**29**	Circlip	**47**	Bearing
12	Segman	**30**	Rulman	**48**	Conta	**12**	Circlip	**30**	Bearing	**48**	Gasket
13	Conta	**31**	Layner	**49**	Conta	**13**	Gasket	**31**	Shim	**49**	Gasket
14	Segman	**32**	Rulman	**50**	Havalandırma Tapası	**14**	Circlip	**32**	Bearing	**50**	Vent plug
15	Layner	**33**	Rondela	**51**	Halkalı Civata	**15**	Shim	**33**	Washer	**51**	Eyebolt
16	Rulman	**34**	Kama	**52**	Alyan Başlı Civata	**16**	Bearing	**34**	Key	**52**	Socket head screw
17	Rondela	**35**	Alyan Başlı Civata			**17**	Washer	**35**	Socket head screw		

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

IEC 63...112



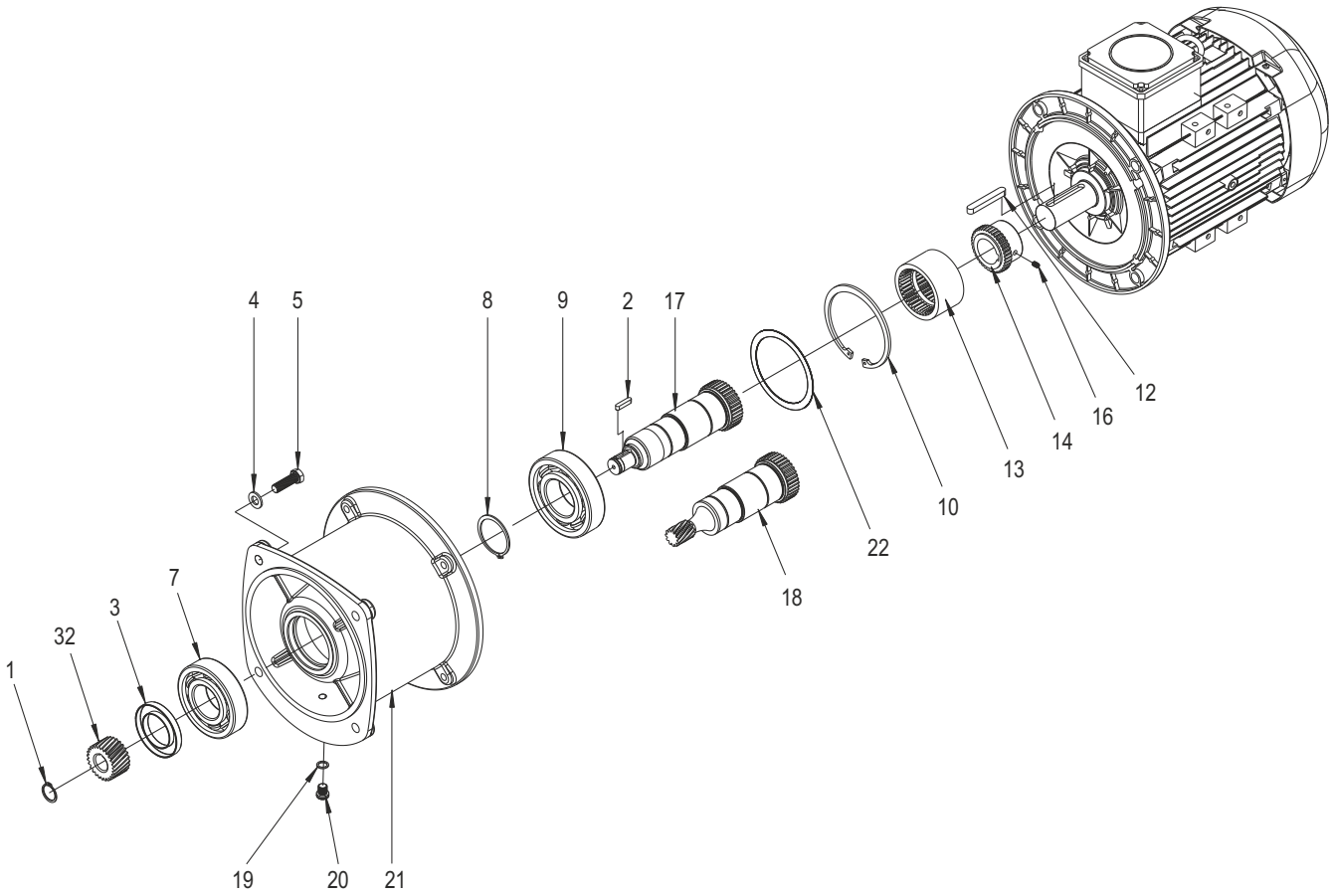
1. Segman
2. Kama
3. Yağ Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
6. Segman
7. Rulman
8. Segman
9. Rulman
10. Segman
12. Kama
13. Kaplin
14. Kaplin
16. Setuskur Civata
17. IEC Mili Çakma
18. IEC Mili Yekpare
19. Rondela
20. Yağ Tapası
21. IEC Gövde
22. Layner
32. Z1 Dişlisi

1. Circlip
2. Key
3. Oil 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. Washer
20. Oil Plug
21. IEC Adapter
22. Shim
32. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

IEC 132...180

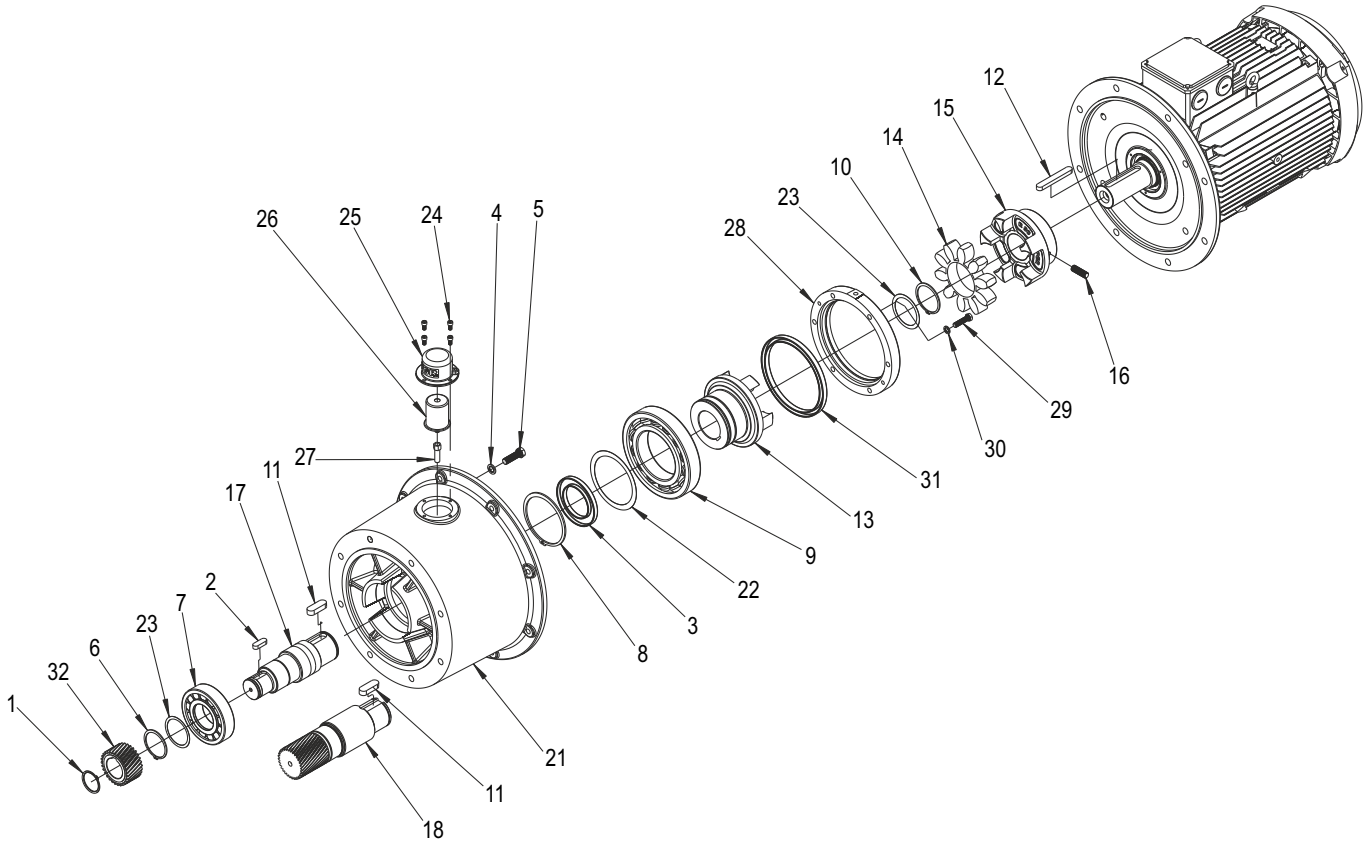


1. Segman	1. Circlip
2. Kama	2. Key
3. Şaft Keçesi	3. Shaft Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Bolt
7. Rulman	7. Bearing
8. Segman	8. Circlip
9. Rulman	9. Bearing
10. Segman	10. Circlip
12. Kama	12. Key
13. Kaplin	13. Coupling
14. Kaplin	14. Coupling
16. Setuskur Civata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

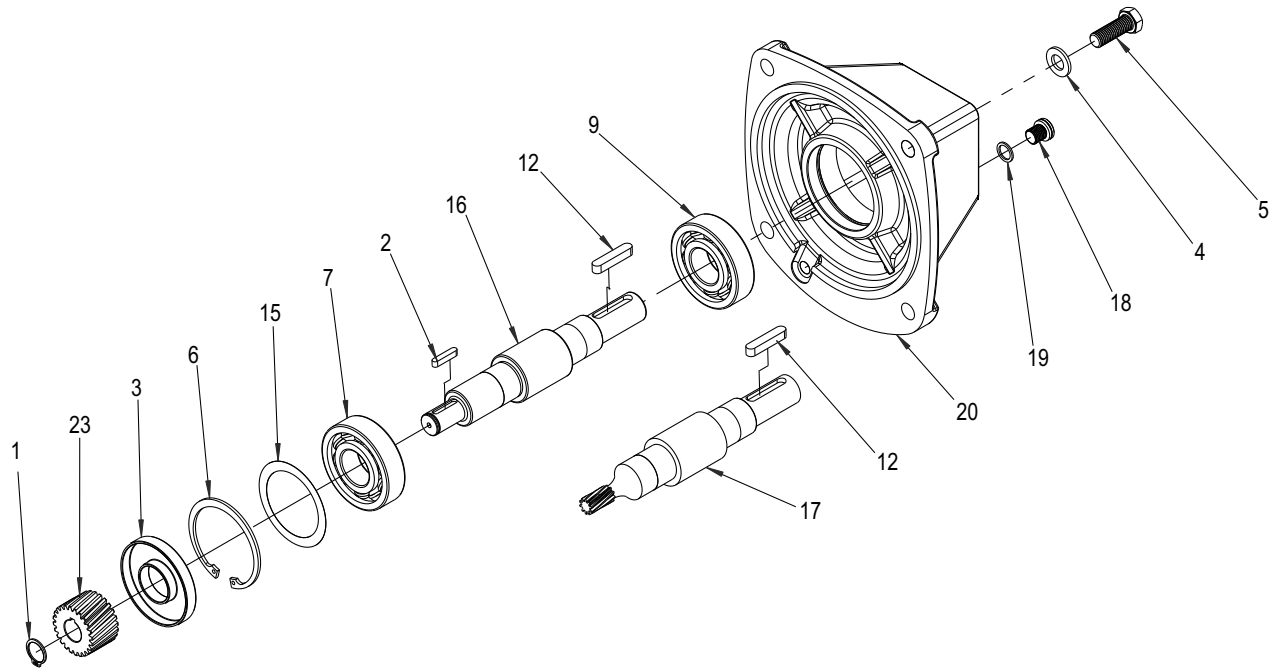
1. Circlip
2. Key
3. Shaft Seal
4. Spring Washer
5. Bolt
6. Circlip
7. Bearing
8. Circlip
9. Bearing
10. Circlip
11. Key
12. Key
13. Coupling
14. Coupling
15. Coupling
16. Set Screw
17. Input Shaft, Plain
18. Input Shaft, Gearcut
21. IEC Adapter
22. Shim
23. Shim
24. Socket Head Screw
25. Cover
26. Automatic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

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA/PF 12...52
PA/PF 13...63

W 122 - 172 - 213



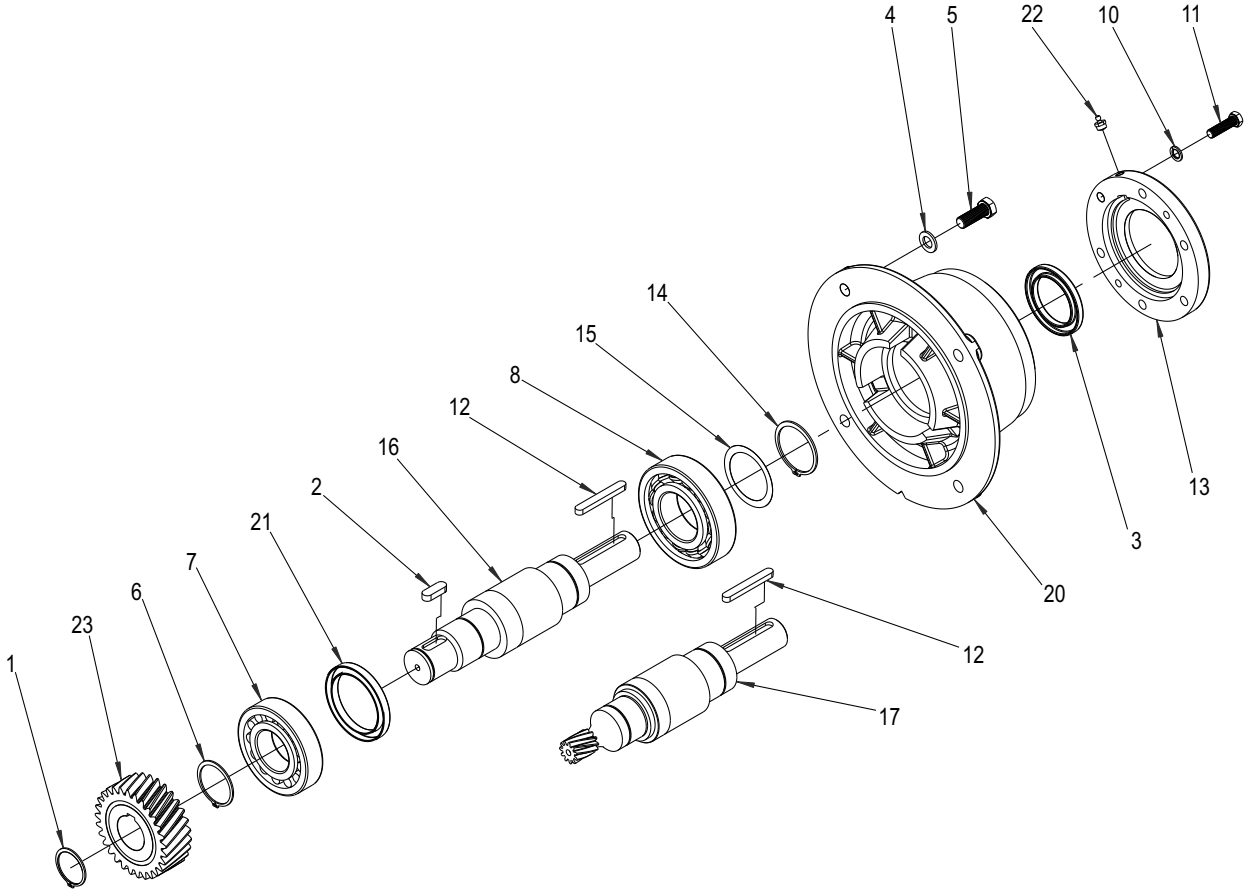
1. Segman	1. Circlip
2. Kama	2. Key
3. Yağ Keçesi	3. Oil Seal
4. Yaylı Rondela	4. Spring Seal
5. Altıköşe Başlı Civata	5. Bolt
6. Segman	6. Circlip
7. Rulman	7. Bearing
9. Rulman	9. Bearing
12. Kama	12. Key
15. Layner	15. Shim
16. W Mili Çakma	16. Input Shaft, Plain
17. W Mili Yekpare	17. Input Shaft,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

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA/PF 62...72 - PA/PF 73...93

W 288



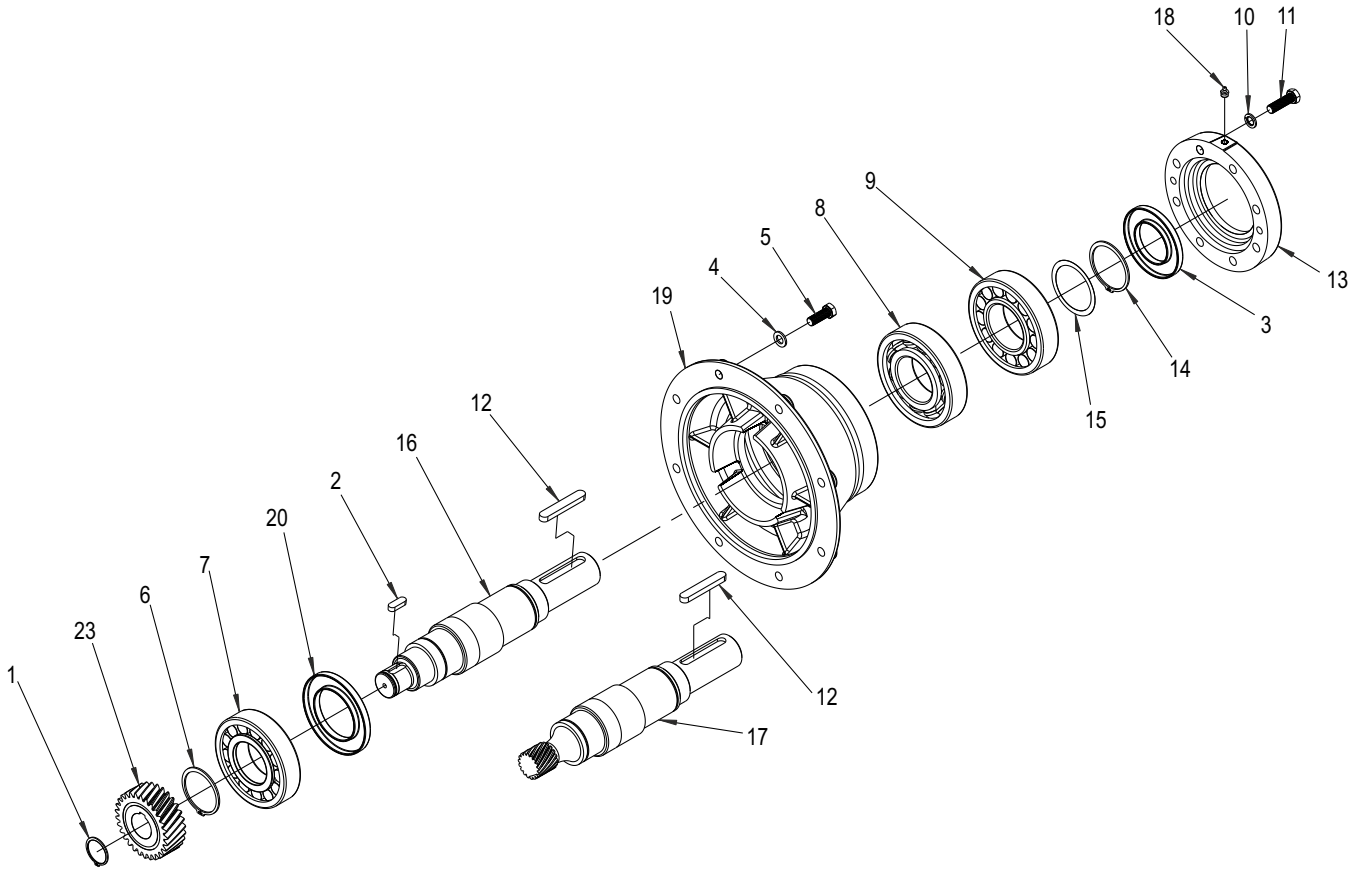
1. Segman	1. Circlip
2. Kama	2. Key
3. Yağ Keçesi	3. Oil Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Bolt
6. Segman	6. Circlip
7. Rulman	7. Bearing
8. Rulman	8. Bearing
10. Yaylı Rondela	10. Spring Washer
11. Altıköşe Başlı Civata	11. Bolt
12. Kama	12. Key
13. Rulman Kapağı	13. 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. Yağ Keçesi	21. Oil Seal
22. Gresörlük	22. Grease Nipple
23. Z1 Dişlisi	23. Pinion

TR GENEL PARÇA LİSTESİ

EN GENERAL PART LIST

PA/PF 82...92

W 397



1. Segman	1. Circlip
2. Kama	2. Key
3. Yağ Keçesi	3. Oil Seal
4. Yaylı Rondela	4. Spring Washer
5. Altıköşe Başlı Civata	5. Bolt
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. Bolt
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. W input housing
20. Yağ Keçesi	20. Oil Seal
23. Z1 Dişlisi	23. Pinion

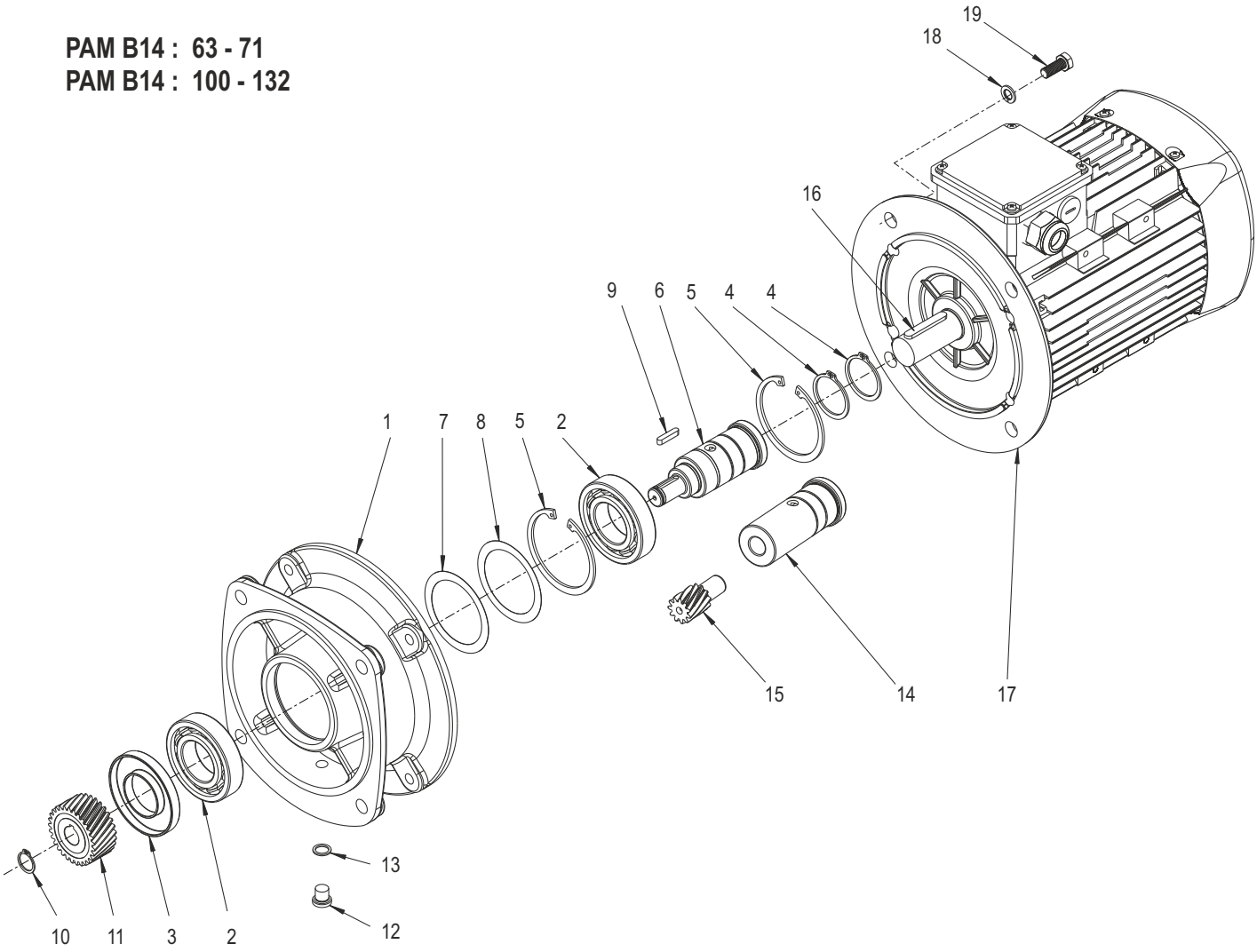
TR GENEL PARÇA LİSTESİ

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. Yağ Keçesi	3. Oil 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. Rondela	13. Washer
14. Pam mili yekpare çakma	14. Input Shaft, Gearcut
15. Z1 Dişlisi	15. Pinion
16. Motor mili Kaması	16. Key
17. Motor	17. Motor
18. Rondela	18. Washer
19. Altı köşe başlı cıvata	19. Bolt

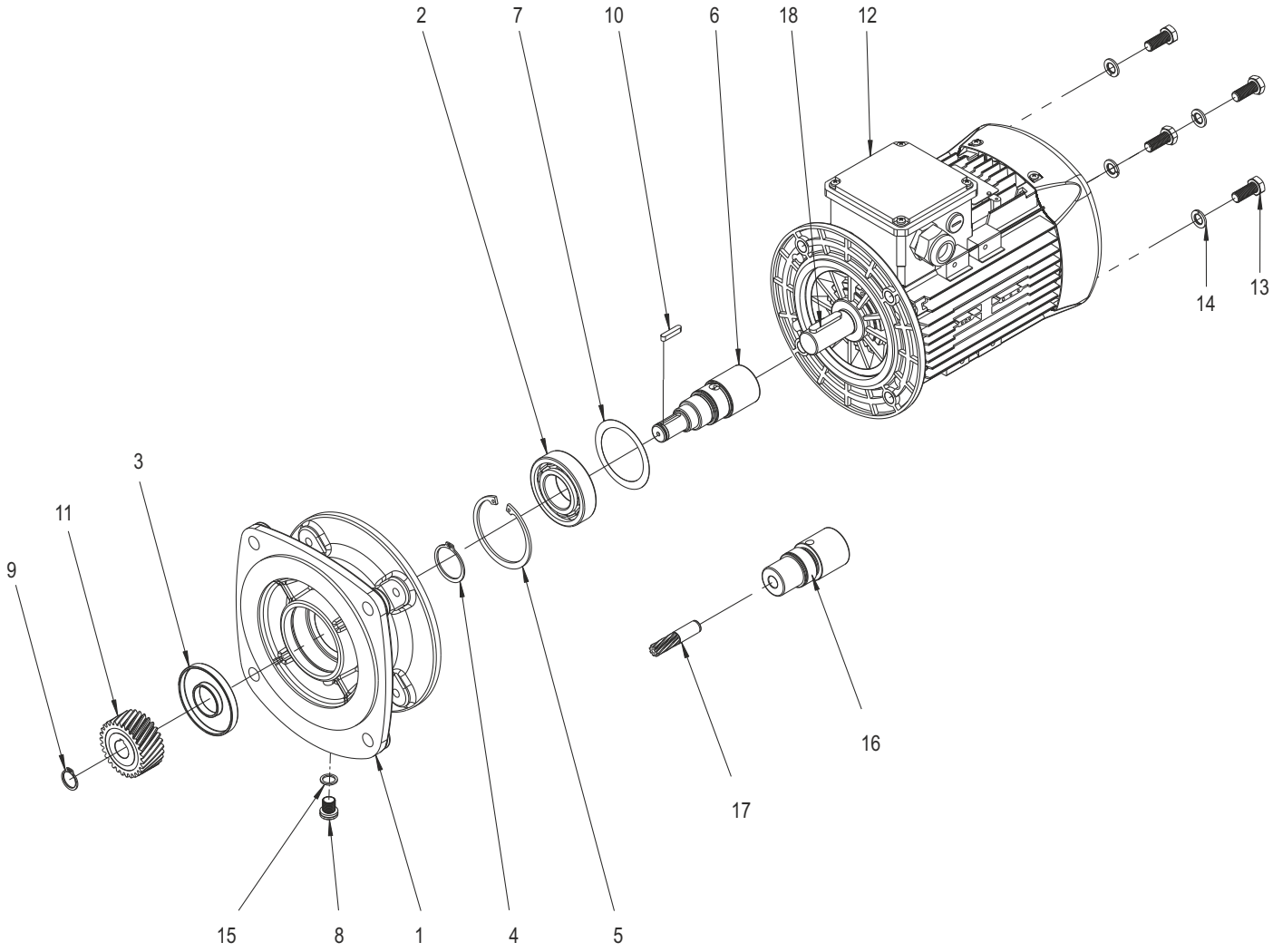
TR GENEL PARÇA LİSTESİ

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. Yağ Keçesi	3. Oil 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. Rondela	15. Washer
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: 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	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

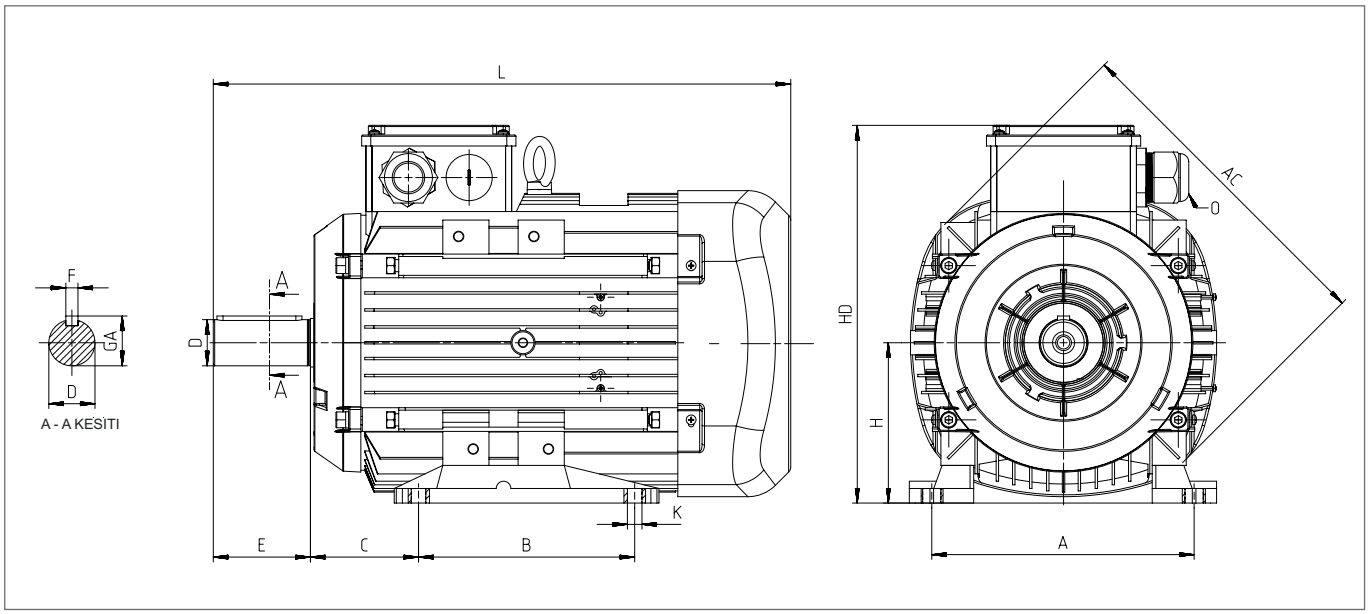
ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	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

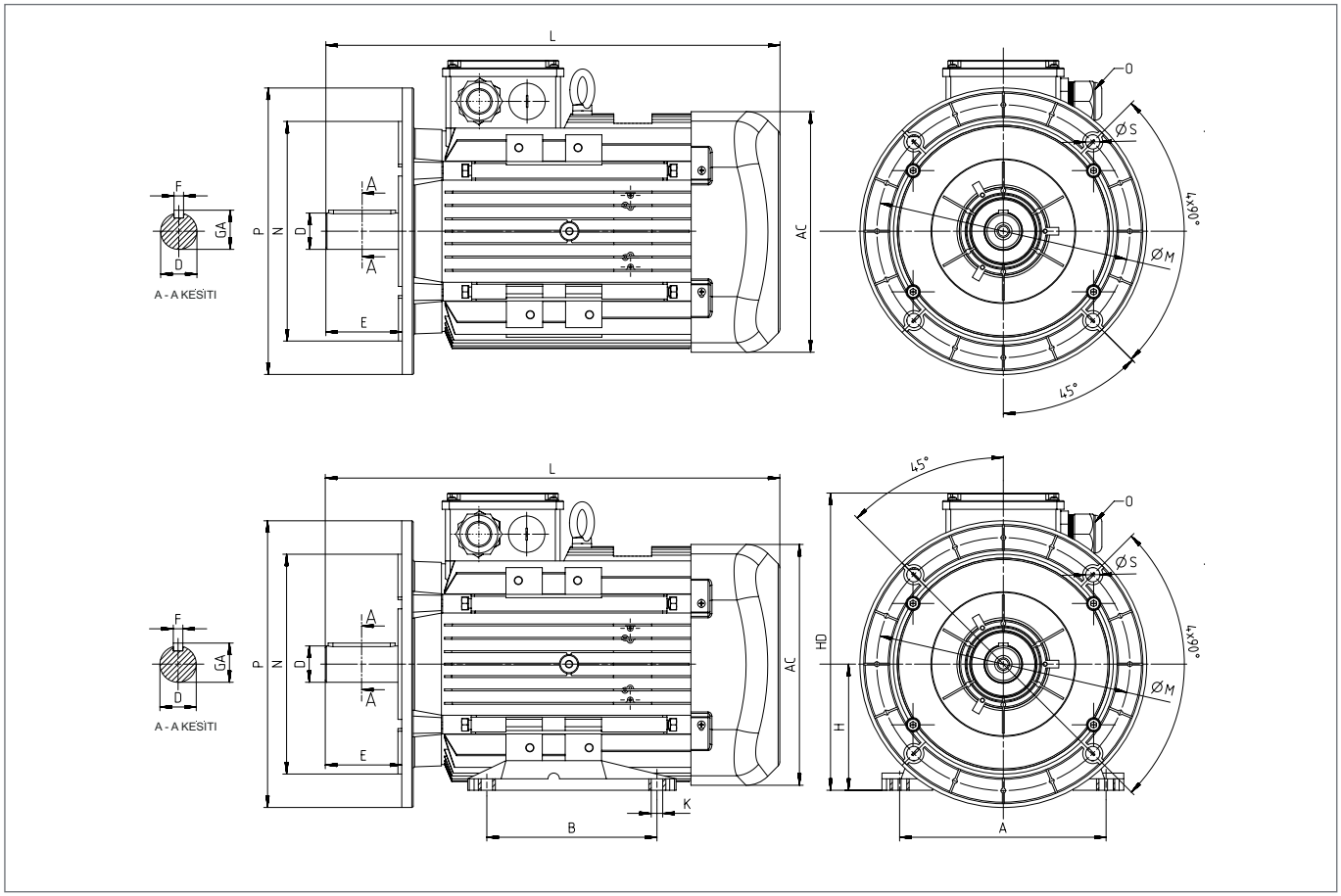
BOYUTLAR / DIMENSIONS - B3

				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

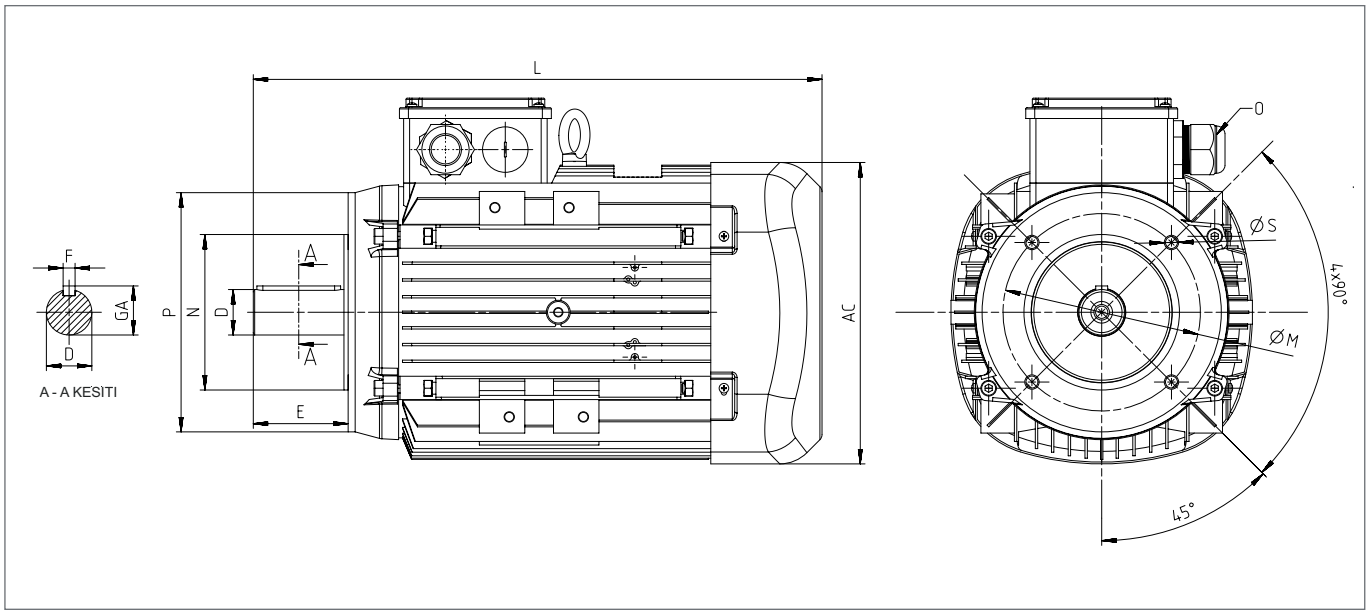
BOYUTLAR / DIMENSIONS - B5, B35

				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

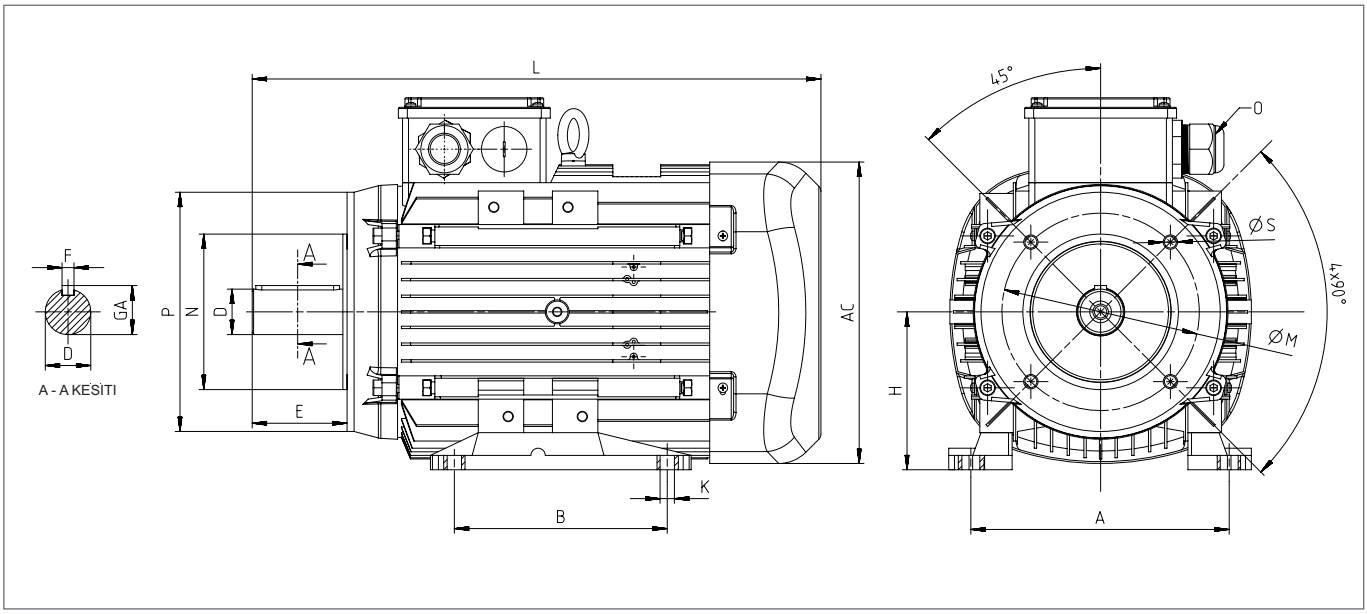


				Ana Boyutlar Main Dimesions			Ayaklı Motorlar Foot Mounted Motors					Mil / Shaft				Rulman / Bearing		Keçe / Seal		Flanş / Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D(1)	E	GA	F(2)	Kasnak Tarafı Drive Side	Kasnak 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					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	
	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 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	
	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**

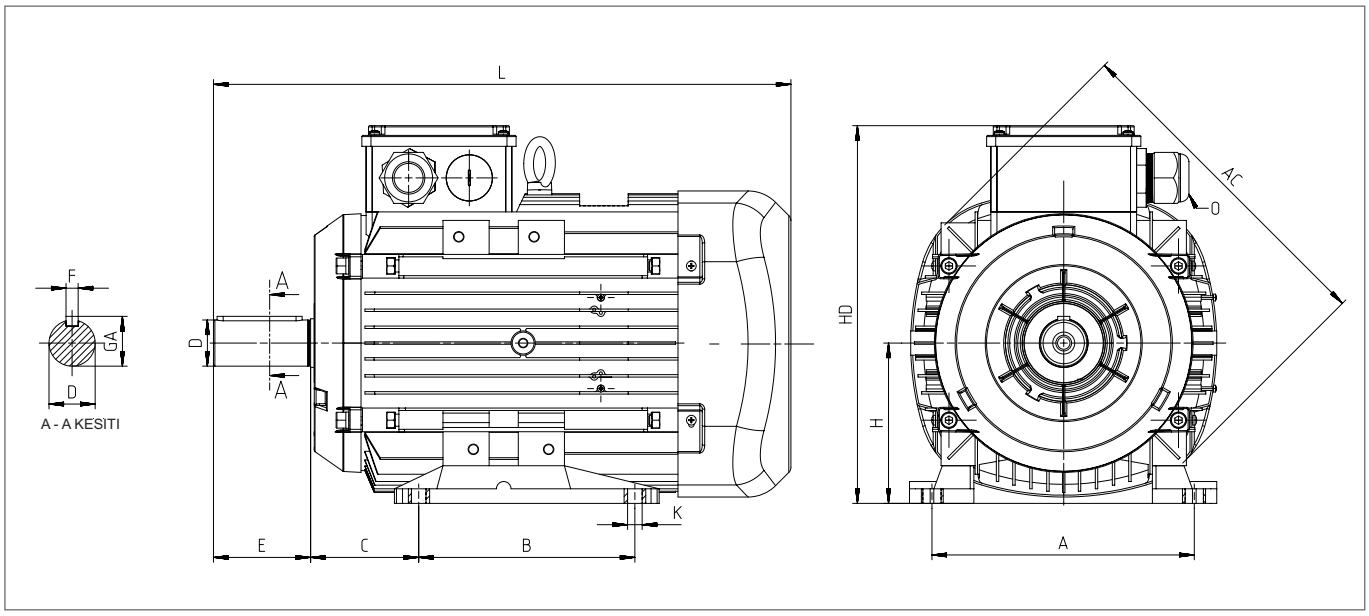
ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	Motor Tipi / Motor Type	Gövde Tipi / Housing Type	Nominal / Rated Values: Güç / Power kW	HP	Devir / Speed d/d	Akım / Current A	Moment / Torque Nm	Kalkıştaki Değerler / Starting Values: Akım / Current I_A / A_N 人	Δ	Moment / Torque M_A / M_N 人	Δ	Devrilme Momenti Oranı / Breakdown Torque Ratio Mk/Mn	Verim * / Efficiency* η% 4/4	3/4	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

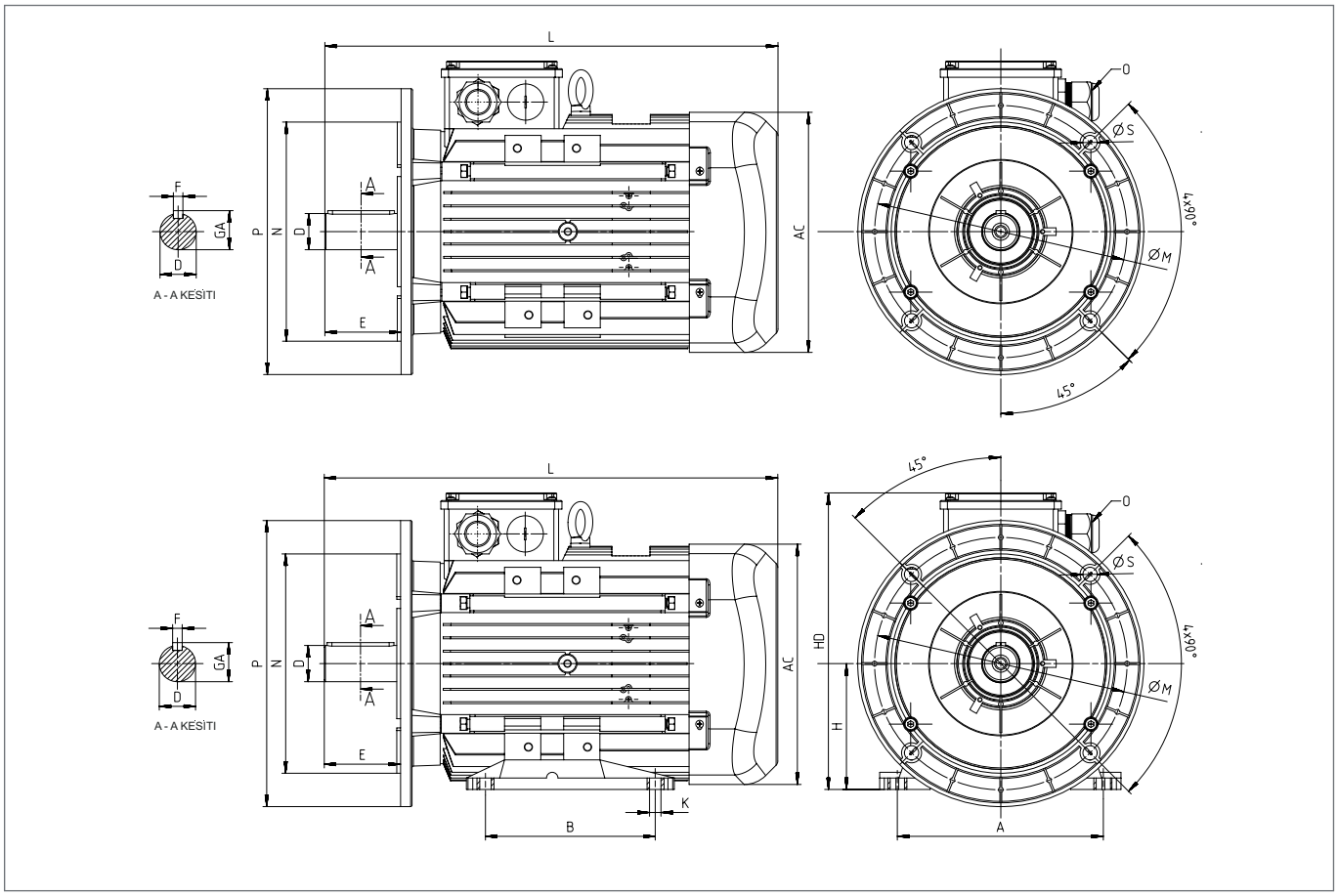
BOYUTLAR / DIMENSIONS - B3

				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

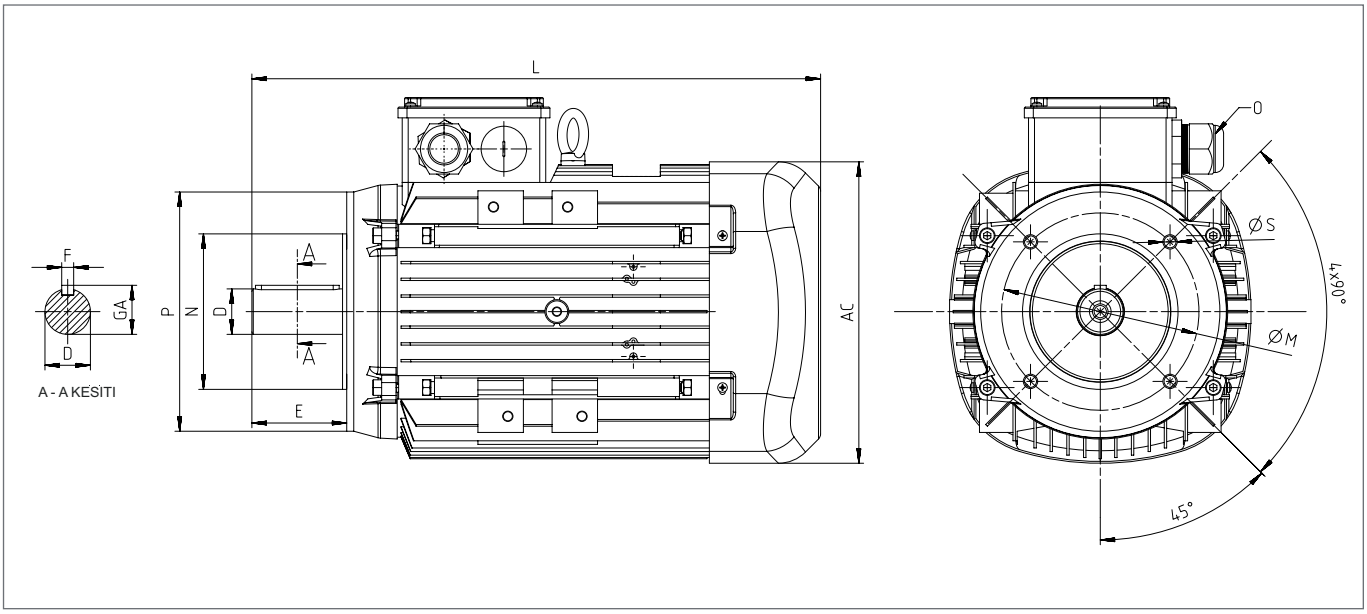
BOYUTLAR / DIMENSIONS - B5, B35

				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

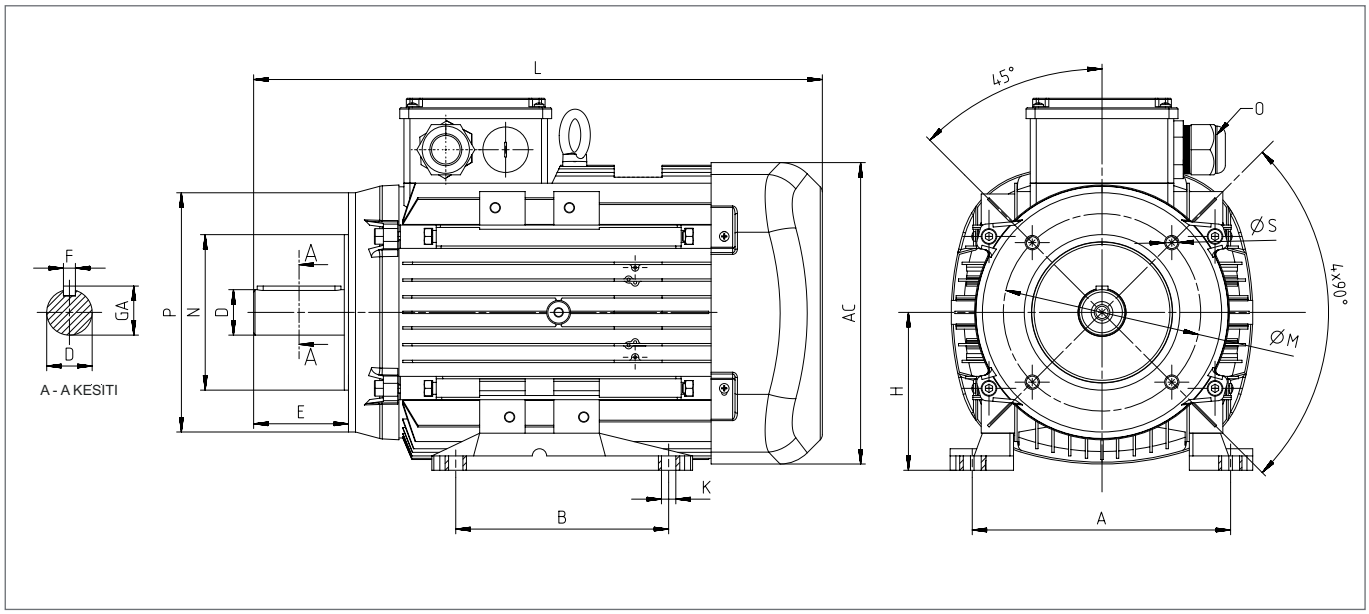
BOYUTLAR / DIMENSIONS - B14a, B34a

				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

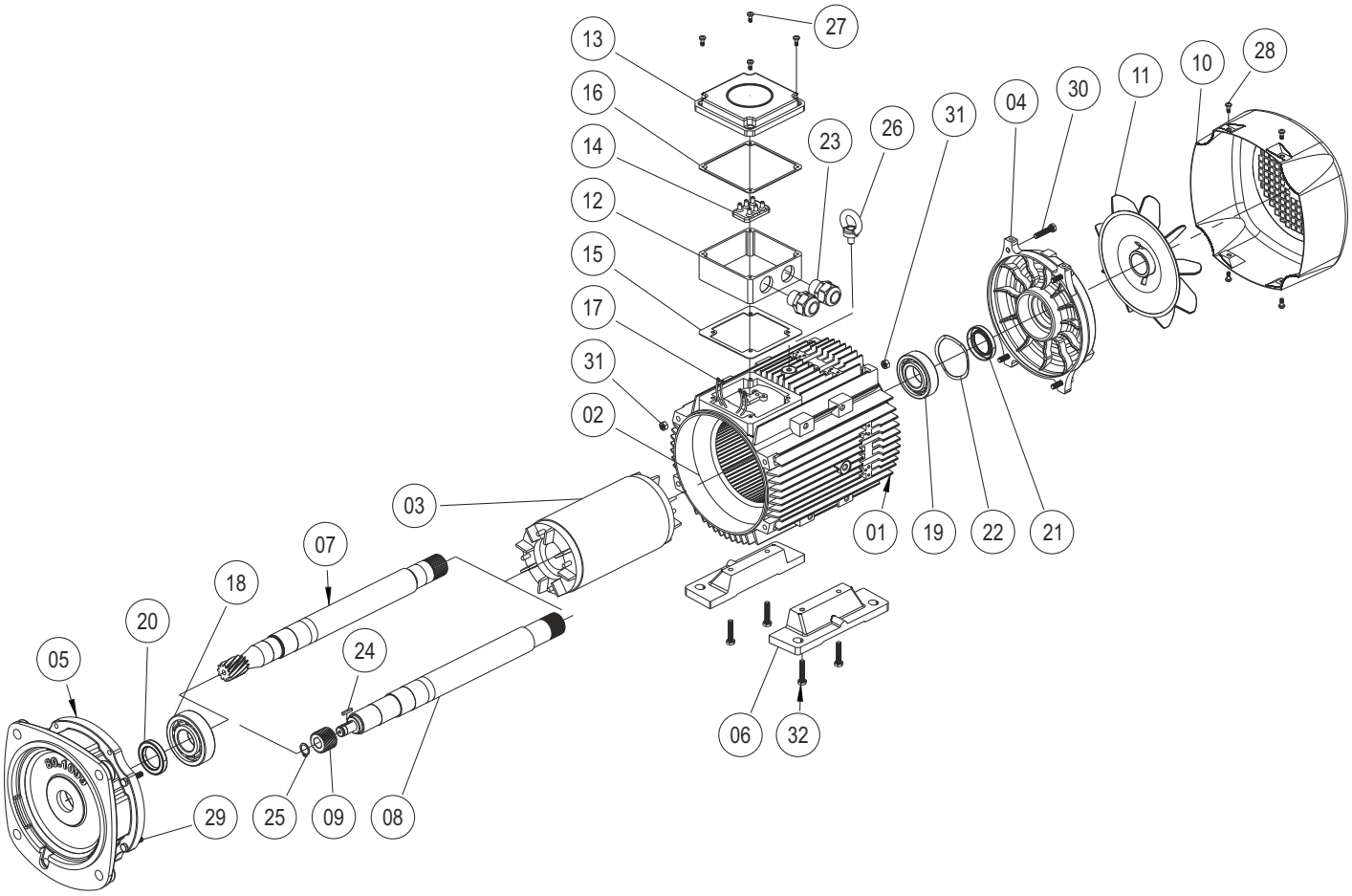
BOYUTLAR / DIMENSIONS - B14b, B34b

				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"

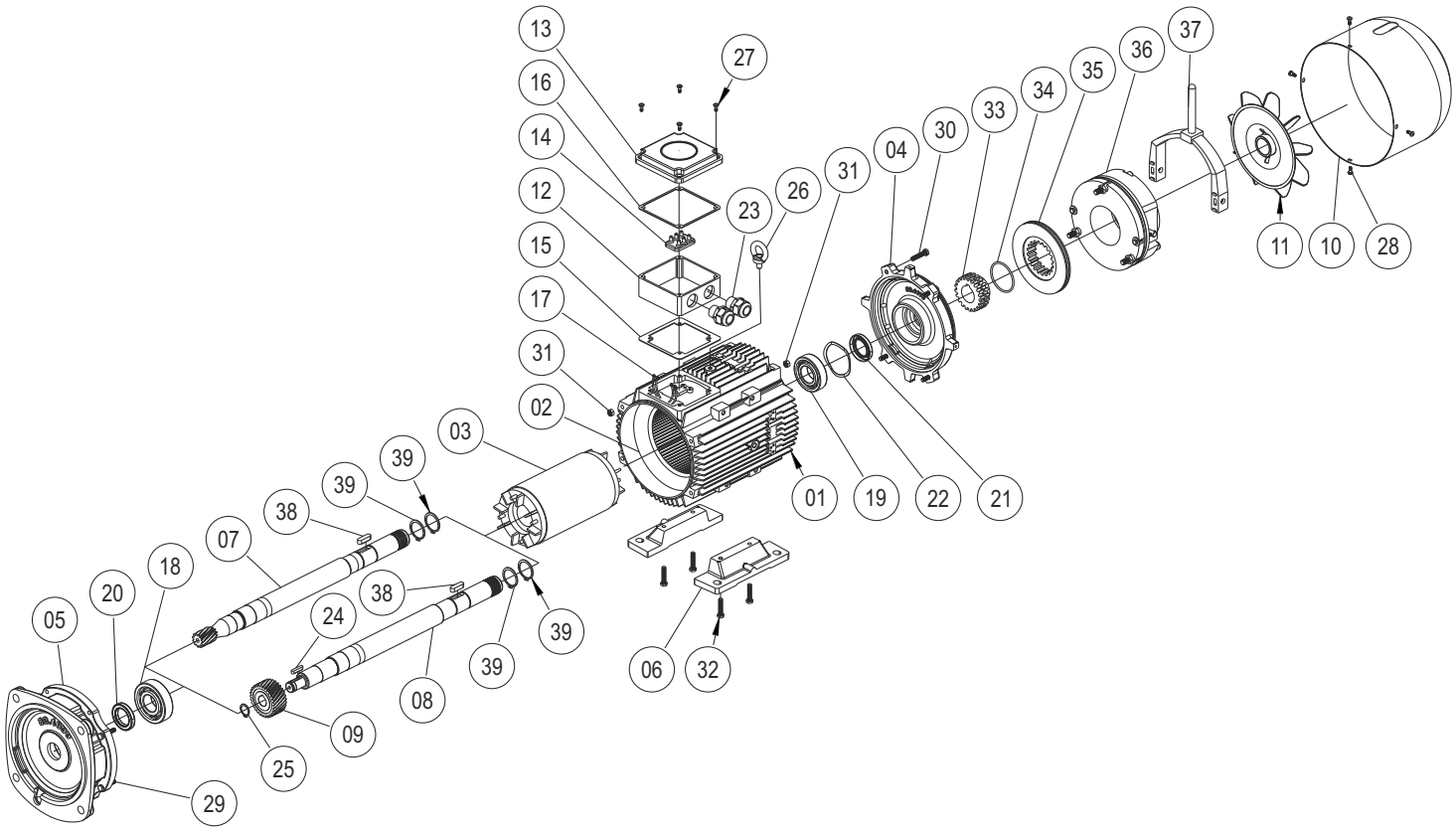
(1) Tolerance DIN EN 50347 "j6" up to 28 mm "k6" above 28 mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

MOTOR PARÇA LİSTESİ / MOTOR PART LIST



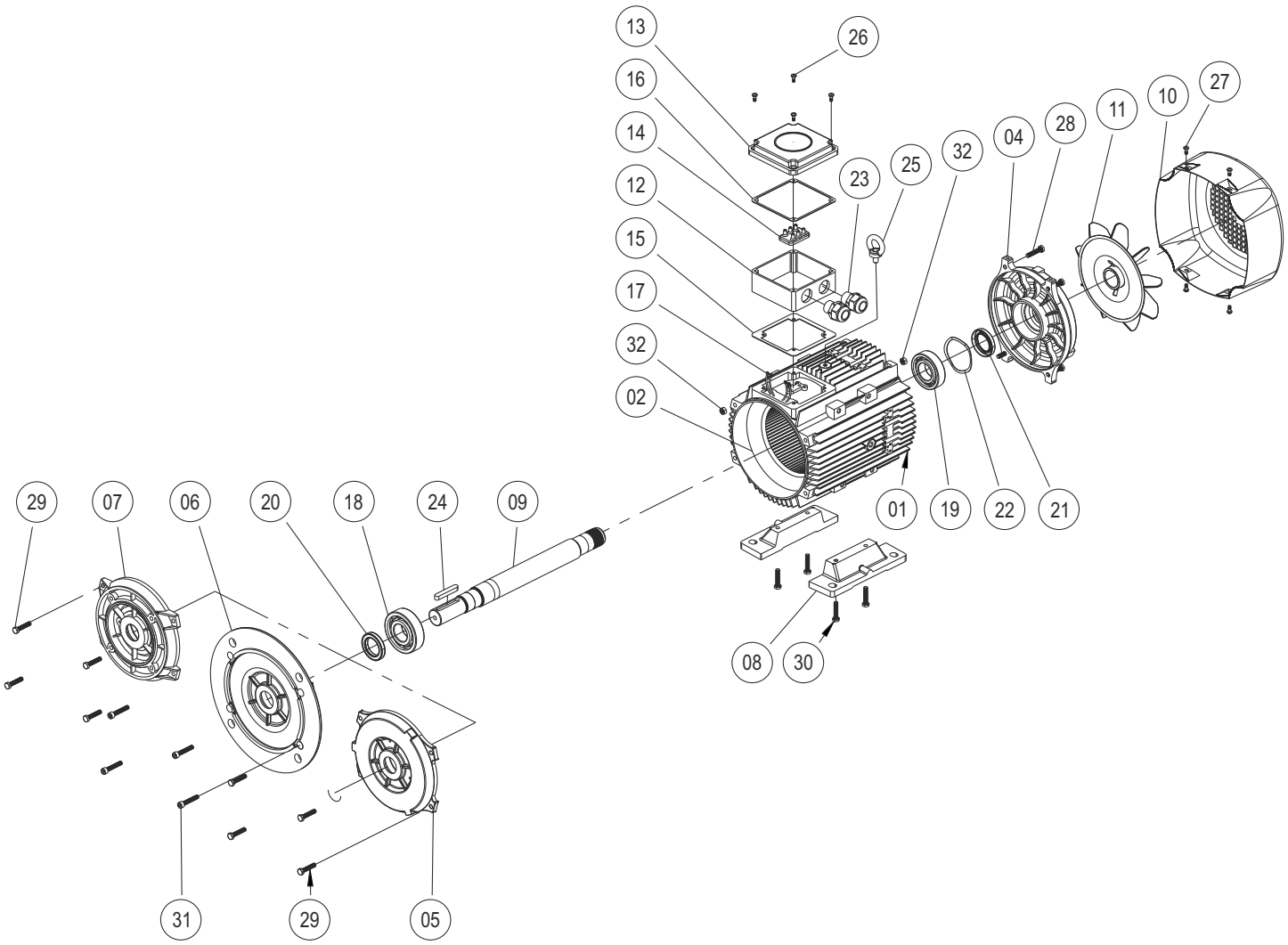
01	**Gövde**	01	Housing	**17**	**Kablo Grubu**	17	Lead Cables
02	**Sargılı Stator**	02	Wound Stator	**18**	**Ön Rulman**	18	Bal Bearing (Drive-Side)
03	**Rotor**	03	Rotor	**19**	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)
04	**Motor Arka Kapağı**	04	Nondrive - Endshield	**20**	**Keçe (Ön)**	20	Seal 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



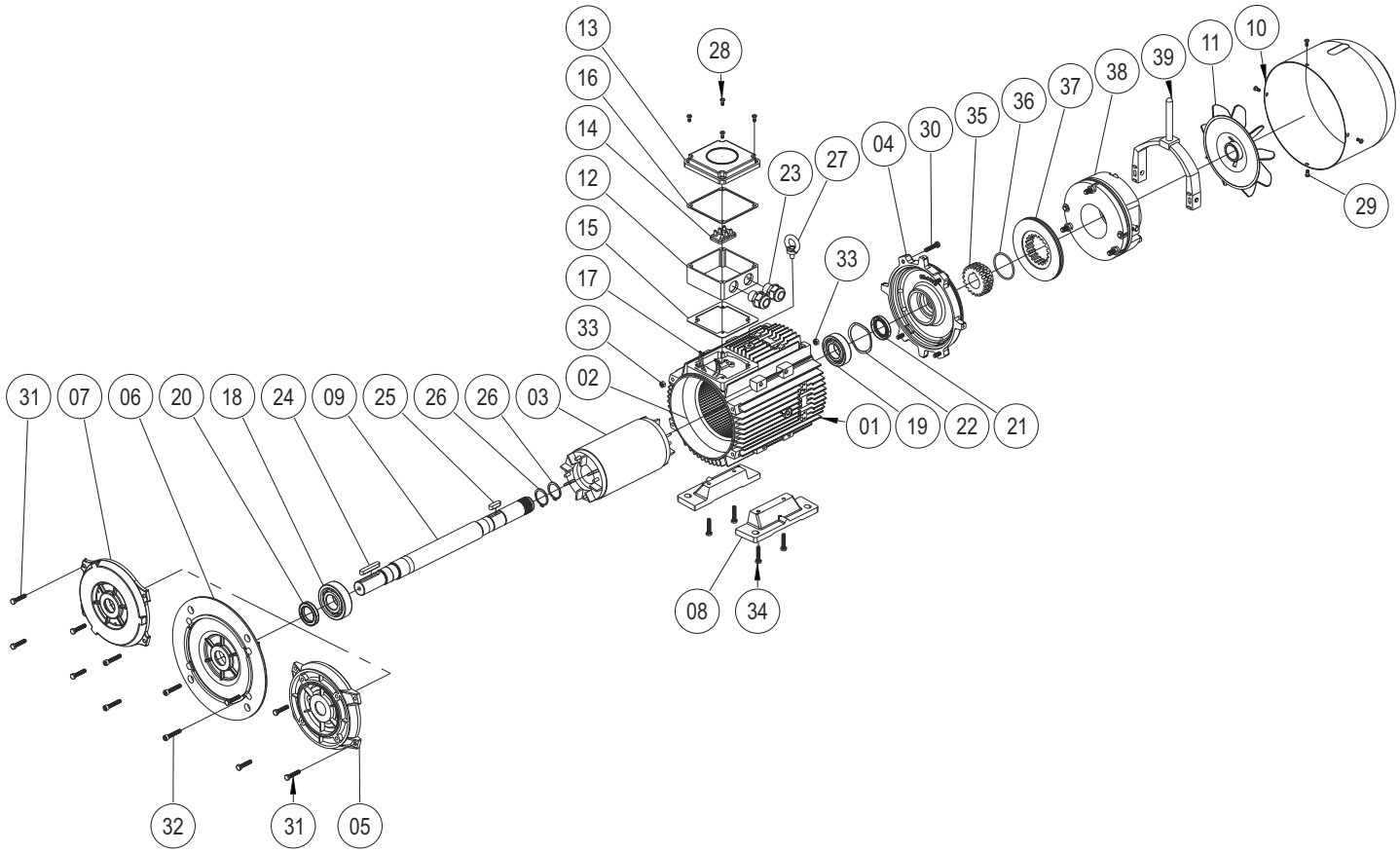
01	**Gövde**	01	Housing	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
02	**Sargılı Stator**	02	Wound Stator	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
03	**Rotor**	03	Rotor	**23**	**Rakor**	23	Conduit
04	**Fren Flanşı**	04	Brake Connection Flange	**24**	**Kama**	24	Key
05	**PGR Motor Bağlantı Flanşı**	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**	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)				

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

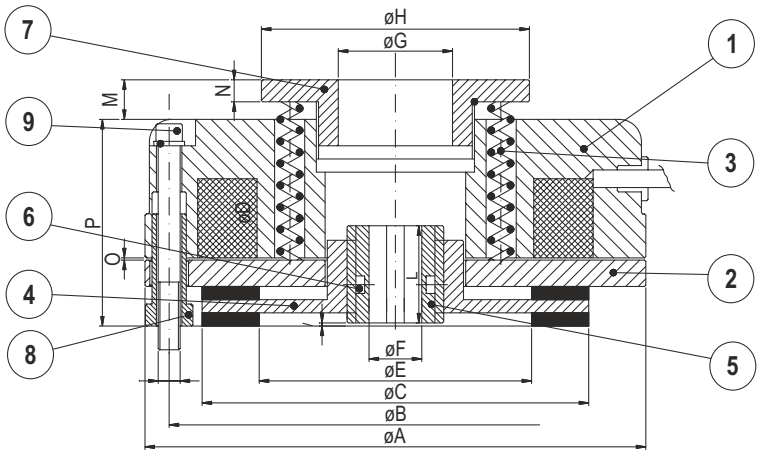


01	**Gövde**	01	Housing	**21**	**Keçe (Arka)**	21	Seal Ring (Back)
02	**Sargılı Stator**	02	Wound Stator	**22**	**Rulman Gergi Yayı**	22	Bearing Shim
03	**Rotor**	03	Rotor	**23**	**Rakor**	23	Conduit
04	**Fren Flanşı**	04	Brake Connection Flange	**24**	**Kama**	24	Key
05	**B3 Motor Bağlantı Flanşı**	05	Flange	**25**	**Kama**	25	Key
06	**B5 Motor Bağlantı Flanşı**	06	Flange	**26**	**Segman**	26	Circilip DIN 471
07	**B14 Motor Bağlantı Flanşı**	07	Flange	**27**	**Mapa**	27	Eye Bolt
08	**Ayak**	08	Foot	**28**	**Yıldız Başlı Civata**	28	Pan Head Secrews
09	**Motor Mili (Standart)**	09	Drive Shaft (Gearcut)	**29**	**Yıldız Başlı Civata**	29	Pan Head Secrews
10	**Fan Kapağı**	10	Fan Cover	**30**	**Civata DIN 933**	30	Bolt
11	**Fan**	11	Fan	**31**	**Civata DIN 933**	31	Bolt
12	**Terminal Kutusu**	12	Terminal Box	**32**	**Civata DIN 912**	32	Bolt
13	**Terminal Kutu Kapağı**	13	Terminal Box Cover	**33**	**Somun**	33	Nut
14	**Klemens Plakası**	14	Terminal Plate	**34**	**Civata DIN 933**	34	Bolt
15	**Terminal Contası Alt**	15	Terminal Gasket Down	**35**	**Fren Kaplini**	35	Brake Coupling
16	**Terminal Contası Üst**	16	Terminal Gasket Up	**36**	**O-Ring**	36	O-Ring
17	**Kablo Grubu**	17	Lead Cables	**37**	**Fren Balatası**	37	Brake Lining
18	**Ön Rulman**	18	Bal Bearing (Drive-Side)	**38**	**Fren**	38	Brake
19	**Arka Rulman**	19	Bal Bearing (Non-Drive-Side)	**39**	**Manuel Kolu**	39	Hand Release
20	**Keçe (Ön)**	20	Seal Ring (Front)				

TR FREN PARÇA LİSTESİ VE ÖZELLİKLERİ

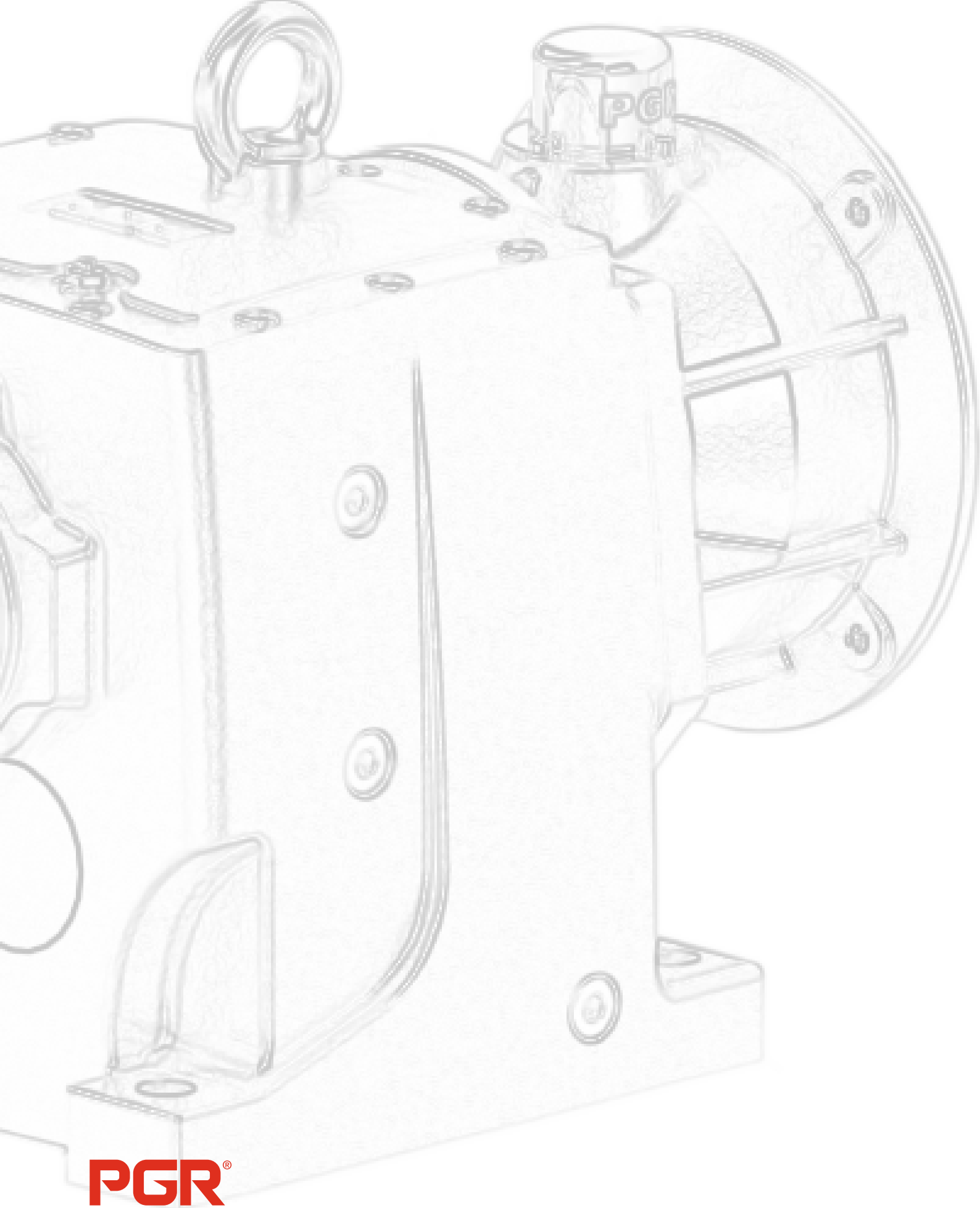
EN BRAKE PART LIST AND PROPERTIES

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



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.



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