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KALİTE POLİTİKAMIZ

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

VİZYONUMUZ

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

MİSYONUMUZ

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

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

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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 its 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 $> 40^{\circ}\text{C}$
- Dönme hızı $n_1 > 1500 \text{ min}^{-1}$
- Motor gücü $P_1 > 100 \text{ kW}$
- W kovanlı ve IEC adaptörlü redüktörler
- Dik olarak montajı yapılan redüktörler (sayfa 28-31)
- Tahvil oranı $i_{\text{top}} < 20$ (Polat konik dişli için $i_{\text{top}} < 40$)

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 çalışma 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.

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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 restrictions are not considered. In these situation, all guarantees could be invalidated. Under suspicious 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 $> 40^{\circ}\text{C}$
- Rotational speed $n_1 > 1500 \text{ min}^{-1}$
- Input power $P_1 > 100 \text{ kW}$
- With W-cylinder and IEC adapter gear units
- Vertical mounting position (see page 28-31)
- Reduction ratio $i_{\text{top}} < 20$ (for helical-bevel gear units $i_{\text{top}} < 40$)

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.



SERVİS FAKTÖRÜ

Diyafram 1, günlük çalışma zamanına bağlı gerekli minimum servis faktörü f_{min} , 'Z' saatteki çevrimleri ve uygulamaya yükü sınıflandırması 'U', 'M', 'H' gösterir. Çeşitli çalışma düzgünlüğüne ve kütle yük faktörüne bağlı olarak, yük sınıflandırması belirlenmiştir. Hareket ettiren makineden gelen etkiler çalışma düzgünlüğü sınıflandırılmasında tanımlanırken, kütle yük faktörü en fazla olan yük üzerinde etkili olur.

Not : Elde edilen servis faktörü fb 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

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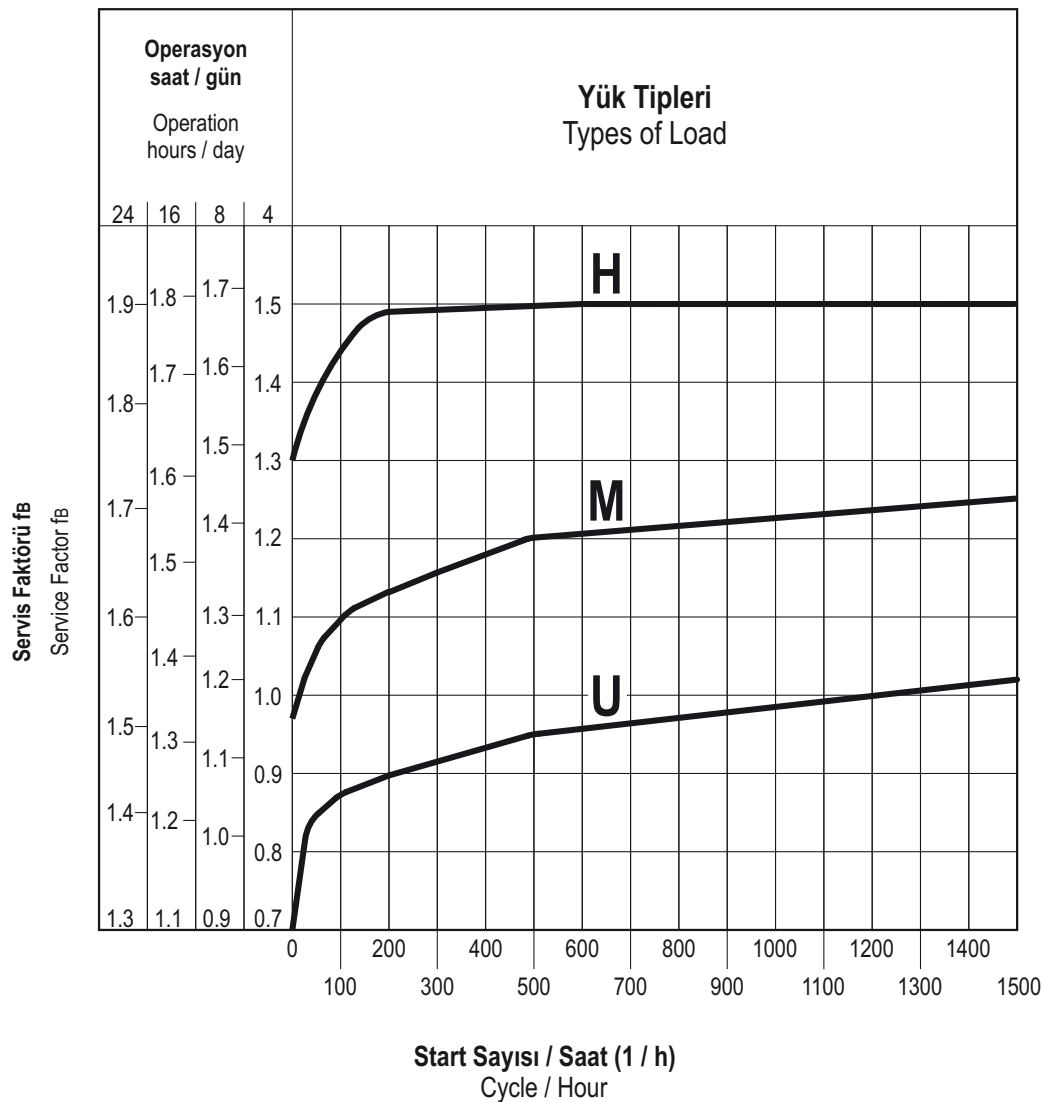
SERVICE FACTOR

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 machine 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



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TEKNİK BİLGİLER

Dişli Ünitesini Seçme

Bir çalışmanın sınıflandırılması :

a) Düzgün çalışma (U)

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

b) Yumuşak şoklar, düzgün olmayan çalışma (M)

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

c) Ağır şoklar, aşırı düzgün olmayan çalışma (H)

Taş kırıcılar, eksantrik presler, doğrayıcılar, presler, taşlama milleri, çekiçli kırıcılar, kağıt öğütücüler, ağır karıştırıcılar, delme makineleri, katlama makineleri, dönen tezgahlar, yatay karıştırıcılar, kesiciler, vibratörler, santrifüj makineleri, 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 taşıyan 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 M_a arasındaki ilişkidir.

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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 dunting 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.

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TEKNİK BİLGİLER

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EXPLANATORY NOTES

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

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

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

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

Efficiency is approximately 98% at helical, helical bevel parallel shaft gear units. For that reason efficiency could be taken $\eta = 1$ 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) ;

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

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

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

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

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

$P_{1 \max}$ 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 momenti ($m_{af} > 2$) 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.

Radial 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_{RGR} ve F_{AGR} 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 açıklama 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_{RGR} and F_{AGR} 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.

f_z için Tablo

Transfer Elemanları	Faktör f_z	Açıklama
Dişliler	1.1	$z \leq 17$ diş
Zincir Dişliler	1.4	$z \leq 13$ diş
Zincir Dişliler	1.2	$z \leq 20$ 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.

$$F_{rorth} = \frac{2 \cdot M_2}{d_0} f_z \leq F_R$$

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_{Rorth} : 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

$$F_{RXW} = \frac{C}{(f + x) \cdot 1000}$$

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 verilen radyal yük [kN]



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

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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.

f_z values are shown at table.

Transfer Elements	Factor f_z	Notice
Gears	1.1	$z \leq 17$ teeth
Sprockets	1.4	$z \leq 13$ teeth
Sprockets	1.2	$z \leq 20$ teeth
Narrow V-belt pulleys	1.7	by
Flat belt pulleys	2.5	Pre-Tensioning

Radial load is determined with following equation;

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_{Rorth} : Radial force on the gear unit shaft [kN]

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

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

F_{RXW} : permitted overhung force [kN]

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

F_{RXL} : permitted overhung load [kN]

[Nmm]

[mm]

[mm]

[mm]

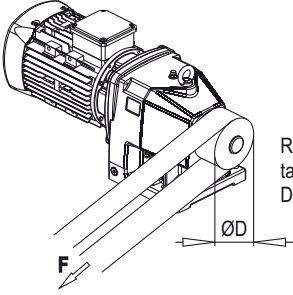
Notify that, **equation I** and **equation II** are applied for calculating radial load where **equation I** is used for service life and **equation II** is used for shaft stability. But small result must be considered.

TR

RADYAL YÜK HESABI

EN

CALCULATION OF RADIAL LOADS

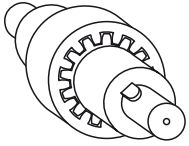


RADYAL YÜKLERİN HESABI

Radyal yük $F(N)$ 'nin hesaplanmasında gerekli tahrik momenti $M(Nm)$, kasnak veya dişli çapı $D(mm)$ olmak üzere aşağıdaki formüller kullanılır.

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.

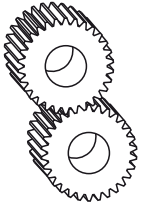


1 - Elastik Kaplin

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

1 - Elastik Coupling

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



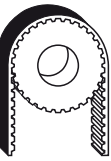
2 - Düz Dişli (20° kavrama açılı)

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

2 - For Spur Gear (Pressure angle 20°)

3 - Küçük Hızlarda Zincir Dişli ($Z < 17$)

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

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

4 - Triger Kayış

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

4 - For Trigger Belt



5 - V Kayış

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

5 - For V Belt



6 - Gerdirme Makaralı Kayış

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

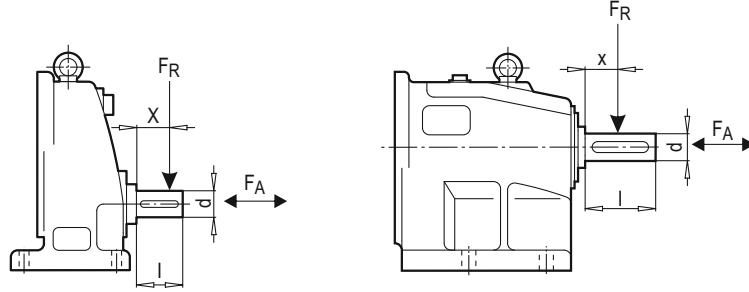
6 - Flat Belt With Spanning Puley

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 x 10 ⁶	0.10 x 10 ⁶	11.8	20	40
PA\PF 12 - PA\PF 13	73.5	98.5	0.12 x 10 ⁶	0.18 x 10 ⁶	14.0	25	50
PA\PF 22 - PA\PF 23	86.0	116.0	0.19 x 10 ⁶	0.30 x 10 ⁶	14.0	30	60
PA\PF 32- PA\PF 33	112.5	152.5	0.39 x 10 ⁶	0.60 x 10 ⁶	30.0	40	80
PA\PF 42 - PA\PF 43	123.0	168.0	0.42 x 10 ⁶	0.73 x 10 ⁶	30.0	45	90
PA\PF 52 - PA\PF 53	149.5	204.5	0.92 x 10 ⁶	1.56 x 10 ⁶	35.0	55	110
PA\PF 62 - PA\PF 63	191.0	256.0	1.46 x 10 ⁶	2.46 x 10 ⁶	35.0	65	130
PA\PF 72 - PA\PF 73	212.0	282.0	2.13 x 10 ⁶	4.45 x 10 ⁶	37.0	75	140
PA\PF 82 - PA\PF 83	248.5	333.5	4.24 x 10 ⁶	6.89 x 10 ⁶	38.0	90	170
PA\PF 92- PA\PF 93	278.0	383.0	8.07 x 10 ⁶	12.50 x 10 ⁶	41.0	110	210
PA\PF 102 - PA\PF 103	323.5	448.5	14.86 x 10 ⁶	22.84 x 10 ⁶	46.0	130	250

İstediğinde hesaplanacaktır.

It will be calculated when you demand.

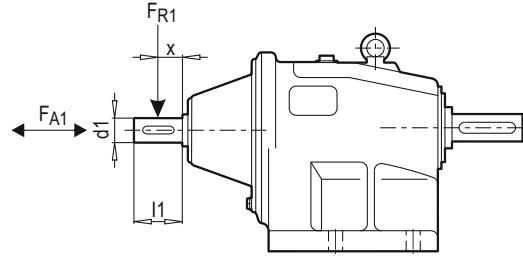
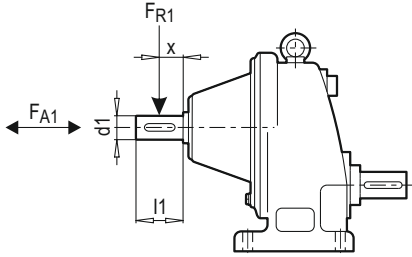
TR

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 dişlil 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.

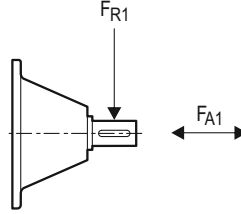
TR

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.

$$\begin{aligned} F_{A1} &\Rightarrow F_{r1} = 0 \\ F_{R1} &\Rightarrow F_{a1} = 0 \end{aligned}$$



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
M₂	= Çıkış momenti [Nm]	M₂	= Output torque [Nm]
Mamax	= Müsaade edilebilir maksimum çıkış momenti [Nm]	Mamax	= Max. permissible output torque [Nm]
n₂	= Çıkış hızı [d/dk]	n₂	= 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 üretilmektedir.

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 oranları 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.

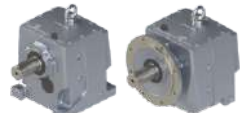
MAX. MÜSAADE EDİLEBİLİR ÇIKIŞ MOMENTİ M_{max} .

MAX. PERMISSIBLE OUTPUT TORQUES M_{max} .

147 - 169

Bir, İki ve Üç kademeli helisel dişlili redüktör

Helical gear boxes single, double and triple reduction

									
Tip / Type	Ma max. (Nm)	Tip / Type	Ma max. (Nm)	Tip / Type	Ma max. (Nm)	Tip / Type	Ma max. (Nm)	Tip / Type	Ma max. (Nm)
PA/PF 11	60	PA/PF 02	100	PA/PF 03	110	PA/PF 62	3120	PA/PF 63	3700
PA/PF 21	80	PA/PF 12	180	PA/PF 13	200	PA/PF 72	4710	PA/PF 73	5650
PA/PF 31	190	PA/PF 22	370	PA/PF 23	340	PA/PF 82	7250	PA/PF 83	9180
PA/PF 41	290	PA/PF 32	710	PA/PF 33	670	PA/PF 92	10780	PA/PF 93	14000
PA/PF 51	490	PA/PF 42	1240	PA/PF 43	1290	PA/PF 102	17370	PA/PF 103	23160
		PA/PF 52	2020	PA/PF 53	2230				

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 sayılarında 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 0° C - 40° 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 grease 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 permanent 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 °C - 40 °C 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 controlled 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 occurred. 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	
<u>KARIŞTIRICILAR</u>		<u>AGITATORS (MIXERS)</u>	
* Saf Sıvılar * Sıvılar ve Katılar * Değişken Yoğunluklu Sıvılar		* Pure Liquids * Liquids and Solids * Liquids - Variable Density	
<u>HAVALANDIRMA TERTİBATLARI</u>		<u>BLOWERS</u>	
* Santrifüj * Lob * Pervane		* Centrifugal * Lobe * Vane	
<u>MAYALAMA VE DAMITMA</u>		<u>BREWING AND DISTILLING</u>	
* Şişeleme Mekanizması * Mayalama Kazanları - Kesintisiz İş * Fırınlr, Ocaklar - Kesintisiz İş * Ezme, Karışım Kazanları - Kesintisiz İş * Ölçü Haznesi - Sık Sık Başlama		* Bottling Machinery * Brew Kettles - Continuous Duty * Cookers - Continuous Duty * Mash Tubs - Continuous Duty * Scale Hopper - Frequent Starts	
<u>TOPRAK İŞLEME MAKİNELERİ</u>		<u>CLAY WORKING MACHINERY</u>	
* Tuğla Presi * Briket Makinesi * Çamur Karma Makinesi		* Brick Press * Briquette Machine * Pug Mill	
<u>KOMPRESÖRLER</u>		<u>COMPRESSORS</u>	
* Santrifüj * Lob * Çok Pistonlu * Tek Pistonlu		* Centrifugal * Lobe * Reciprocating, Multi-Cylinder * Reciprocating, Single-Cylinder	
<u>KONVEYÖRLER - GENEL MAKSATLI</u>		<u>CONVEYORS - GENERAL PURPOSE</u>	
* Üniform Yüklü * Üniform Yüklü Olmayan * Pistonlu veya Karıştırıcı		* Uniformly Loaded or Fed * Not Uniformly fed * Reciprocating Or Shaker	
<u>VİNÇLER</u>		<u>CRANES</u>	
* Kuru Havuz - Ana Kaldırma vinci - Yardımcı Vinç - Direkli Vinç - Döndürme İşi - Çekme İşi * Endüstriyel İşi - Ana Kaldırma Vinci		* Dry Dock - Main Hoist - Auxiliary Hoist - Boom Hoist - Slewing Drive - Traction Drive * Industrial Duty - Main Hoist	
<u>ASANSÖRLER</u>		<u>ELEVATORS</u>	
* Kova * Santrifuj Boşaltma * Yürüyen Merdiven * Taşıma, Nakliye * Yerçekimi Boşaltım		* Bucket * Centrifugal Discharge * Escalators * Freight * Gravity Discharge	
<u>KIRMA MAKİNELERİ</u>		<u>CRUSHER</u>	
* Taş ya da Maden		* Stone or Ore	

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

KAĞIT İŞLEMELERİ

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

TR	KULLANIM ALANLARI	EN	APPLICATION AREAS
UYGULAMALAR		APPLICATIONS	
<u>ŞEKER ENDÜSTRİSİ</u>		<u>SUGAR INDUSTRY</u>	
* Pancar Dilimleme Aleti * Kamış Bıçakları * Kıрма Makineleri		* Beet Slicer * Cane Knives * Crushers	
<u>TEKSTİL ENDÜSTRİSİ</u>		<u>TEXTILE INDUSTRY</u>	
* 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	
<u>DAMPERLİ ARAÇLAR</u>		<u>CAR DUMPERS</u>	
<u>ÇEKİCİ ARAÇLAR</u>		<u>CAR PULLERS</u>	
<u>ARITICILAR</u>		<u>CLARIFIERS</u>	
<u>KONSERVE DOLUM MAKİNELERİ</u>		<u>CAN FILLING MACHINES</u>	

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

Flanş Montajlı
Flange Mounted

PF 11...PF 51 = **Tek kademeli, Flanş montajlı, Helisel dişlili redüktör**
Single reduction, Flange mounted, Helical gearboxes

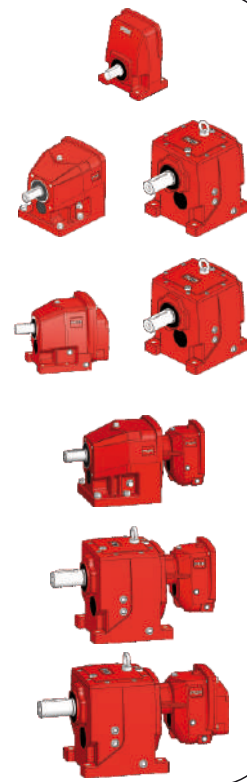
PF 02...PF 102 = **İki kademeli, Flanş montajlı, Helisel dişlili redüktör**
Double reduction, Flange mounted, Helical gearboxes

PF 03...PF 103 = **Üç kademeli, Flanş montajlı, Helisel dişlili redüktör**
Triple reduction, Flange mounted, Helical gearboxes

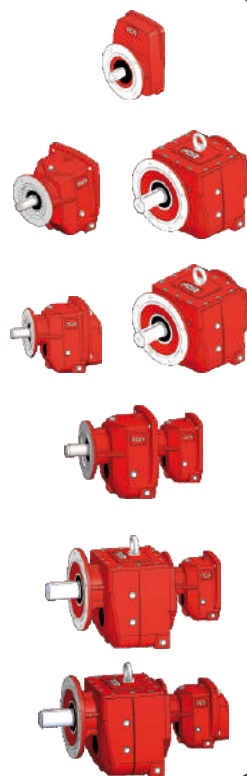
PF 02/12...PF 52/12 = **Dört kademeli, Flanş montajlı, Helisel dişlili redüktör**
Quadruple reduction, Flange mounted, Helical gearboxes

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



24



25

TR

KULLANILAN TERİMLER

EN

NOMENCLATURE

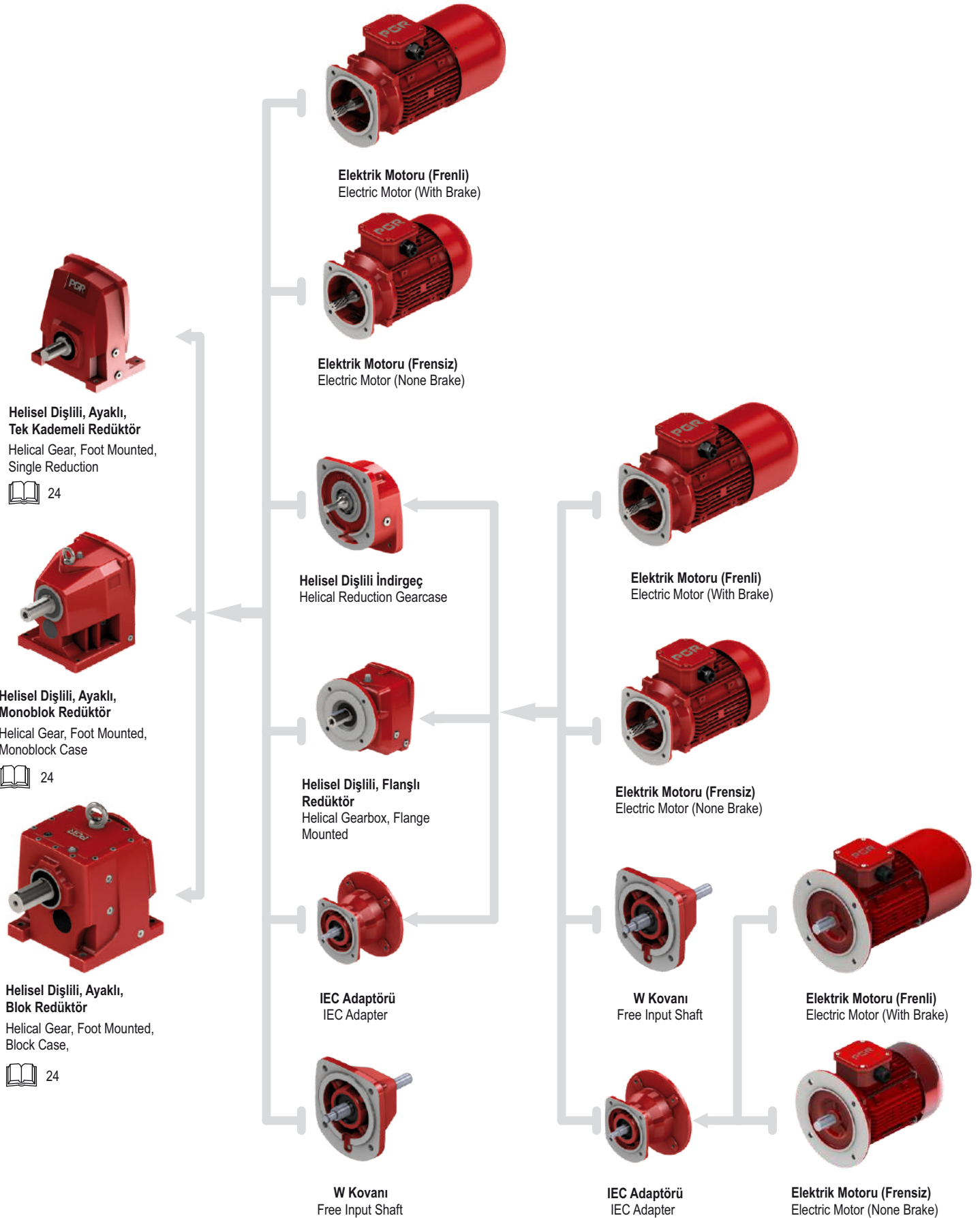
Giriş Aksamları Input Options	Motor Motor	Kutup Numarası Number of Poles	Motor Seçenekleri Motor Options
W = Motorsuz girişli redüktörler için aksam = With free input shaft IEC = DIN 42677' ye göre standart motorlar için aksamlar = For assembly with IEC standard motors acc. to DIN 42677 T = Turbo kaplin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

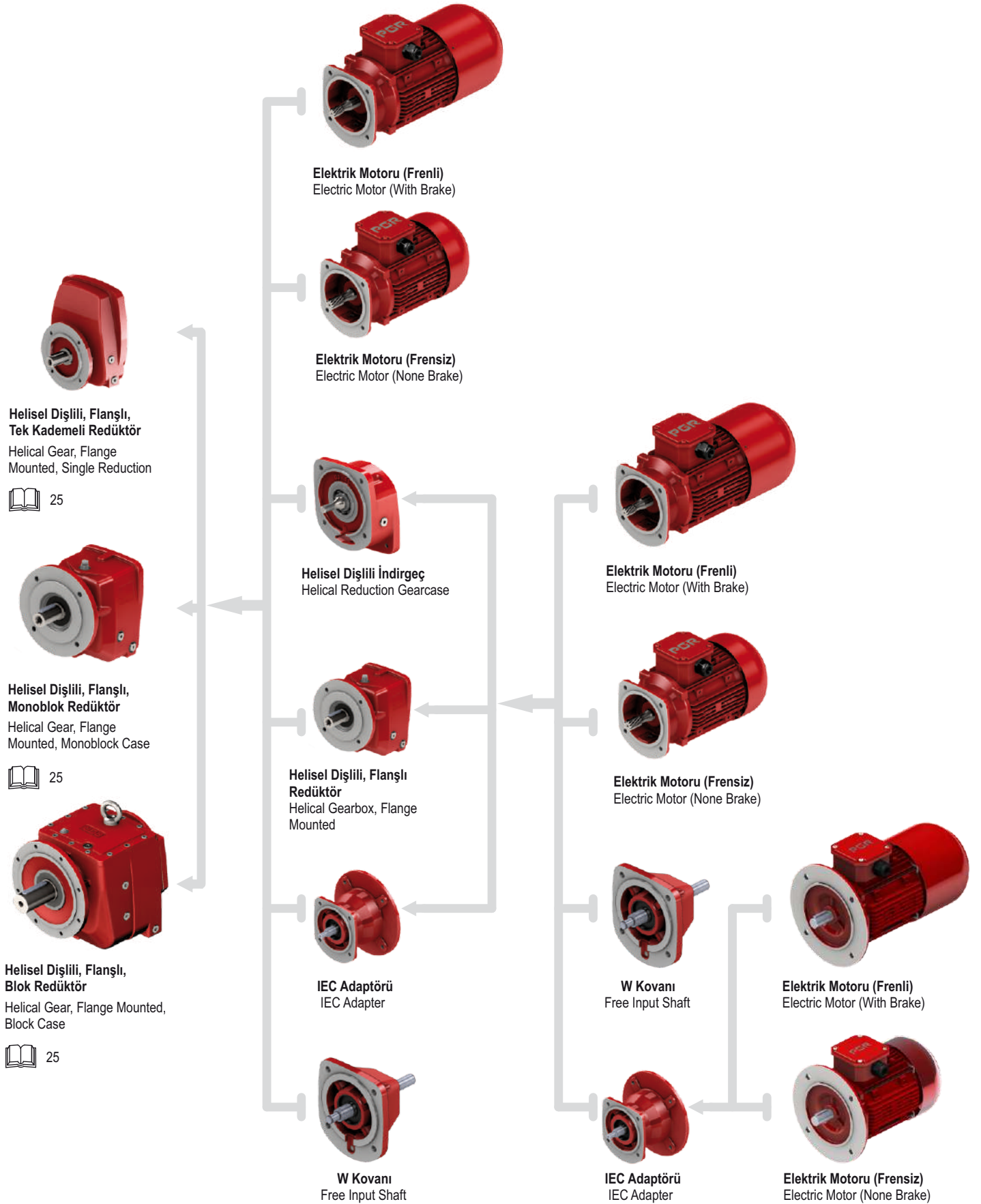


TR

PF MODÜLER SİSTEMİ

EN

MODULAR SYSTEM OF PF



TR

ÜRÜNLERİMİZ

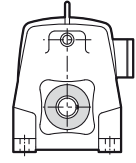
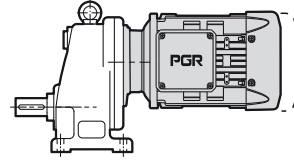
EN

PRODUCTS

1) PA 11...PA 51

**Ayak montajlı, Tek kademeli,
Helisel dişlili, Motorlu redüktör**

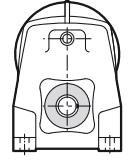
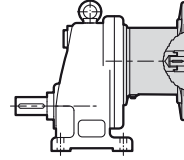
Helical geared motor, Foot mounted,
Single reduction



PA 11...PA 51

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

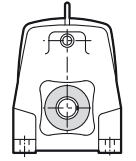
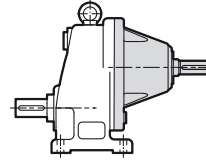
Helical gear unit, Foot mounted,
Single reduction, With IEC adapter



PA 11...PA 51

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

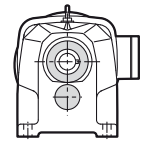
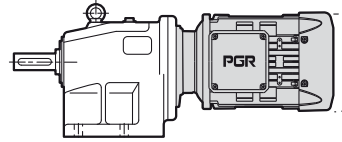
Helical gear unit, Foot mounted,
Single reduction, With free input shaft



2) PA 02...PA 52

**Ayak montajlı, İki kademeli,
Helisel dişlili, Motorlu redüktör**

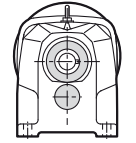
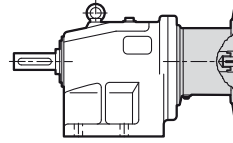
Helical geared motor, Foot mounted,
Double reduction



PA 02...PA 52

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

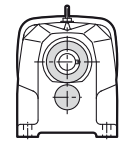
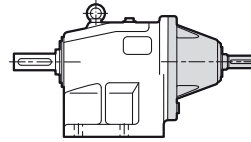
Helical gear unit, Foot mounted,
Double reduction, With IEC adapter



PA 02...PA 52

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

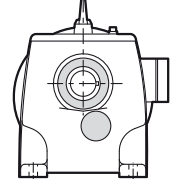
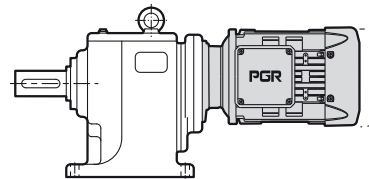
Helical gear unit, Foot mounted,
Double reduction, With free input shaft



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

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

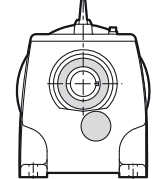
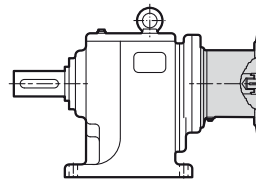
Helical geared motor, Foot mounted,
Double reduction - Triple reduction



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

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

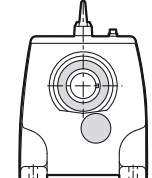
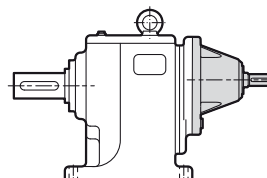
Helical gear unit, Foot mounted,
Double reduction - Triple reduction,
With IEC adapter



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

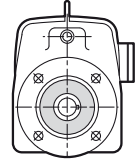
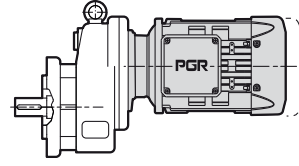
EN

PRODUCTS

1) PF 11...PF 51

**Flanş montajlı, Tek kademeli,
Helisel dişlili, Motorlu redüktör**

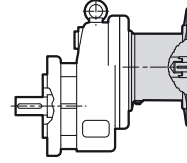
Helical geared motor, Flange mounted,
Single reduction



PF 11...PF 51

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

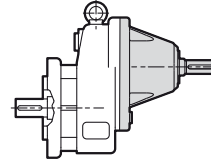
Helical gear unit, Flange mounted,
Single reduction, With IEC adapter



PF 11...PF 51

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

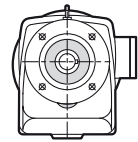
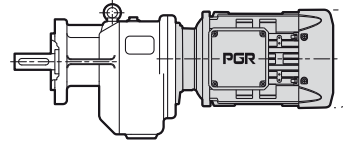
Helical gear unit, Flange mounted,
Single reduction, With free input shaft



2) PF 02...PF 52

**Flanş montajlı, İki kademeli,
Helisel dişlili, Motorlu redüktör**

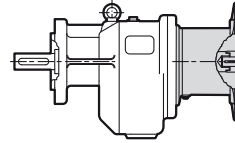
Helical geared motor, Flange mounted,
Double reduction



PF 02...PF 52

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

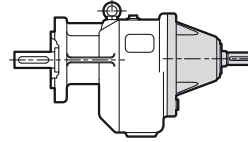
Helical gear unit, Flange mounted,
Double reduction, With IEC adapter



PF 02...PF 52

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

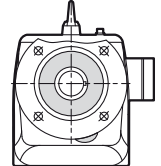
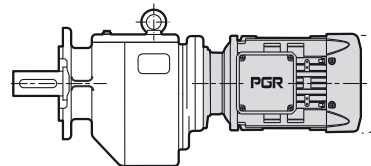
Helical gear unit, Flange mounted,
Double reduction, With free input shaft



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

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

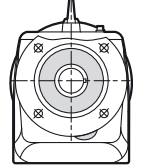
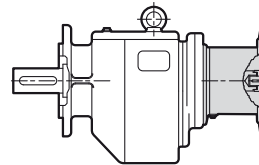
Helical geared motor, Flange mounted,
Double reduction - Triple reduction



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

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

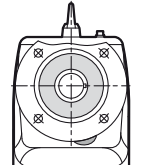
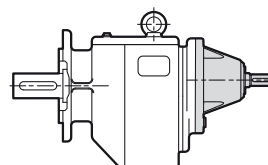
Helical gear unit, Flange mounted,
Double reduction - Triple reduction,
With IEC adapter



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

63
71
80
90
100
112
132
160
180
200
225
250
280
315Motorlu
With MotorGövde Büyüklüğü
Case Width63 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/LKutup sayısı
Number of Poles2
4
6
4 - 2
8 - 2Diğer Kutup
kombinasyonları
istendiğinde
karşılacaktır.Other pole
combinations
on requestMotor Aksesuarları
Motor AccessoriesBRE
RG
SR
HL
TF
TW
WU
EF
ZF
DF
IG
KK/FK
RLS

21

İşes: Tahvil Oranı
İşes: Reduction Ratio
 49 - 8210
Gövde Büyüklüğü
Case Width0
1
2
3
4
5
6
7
8
9
103
Kademe
Reduction1
2
3

83 - 145

PF GÖVDE
PF CASE5
Gövde Büyüklüğü
Case Width0
1
2
3
4
52
Kademe
Reduction2
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 dişli redüktörlerin W kovani ve IEC adaptör olanlar için de geçerlidir.

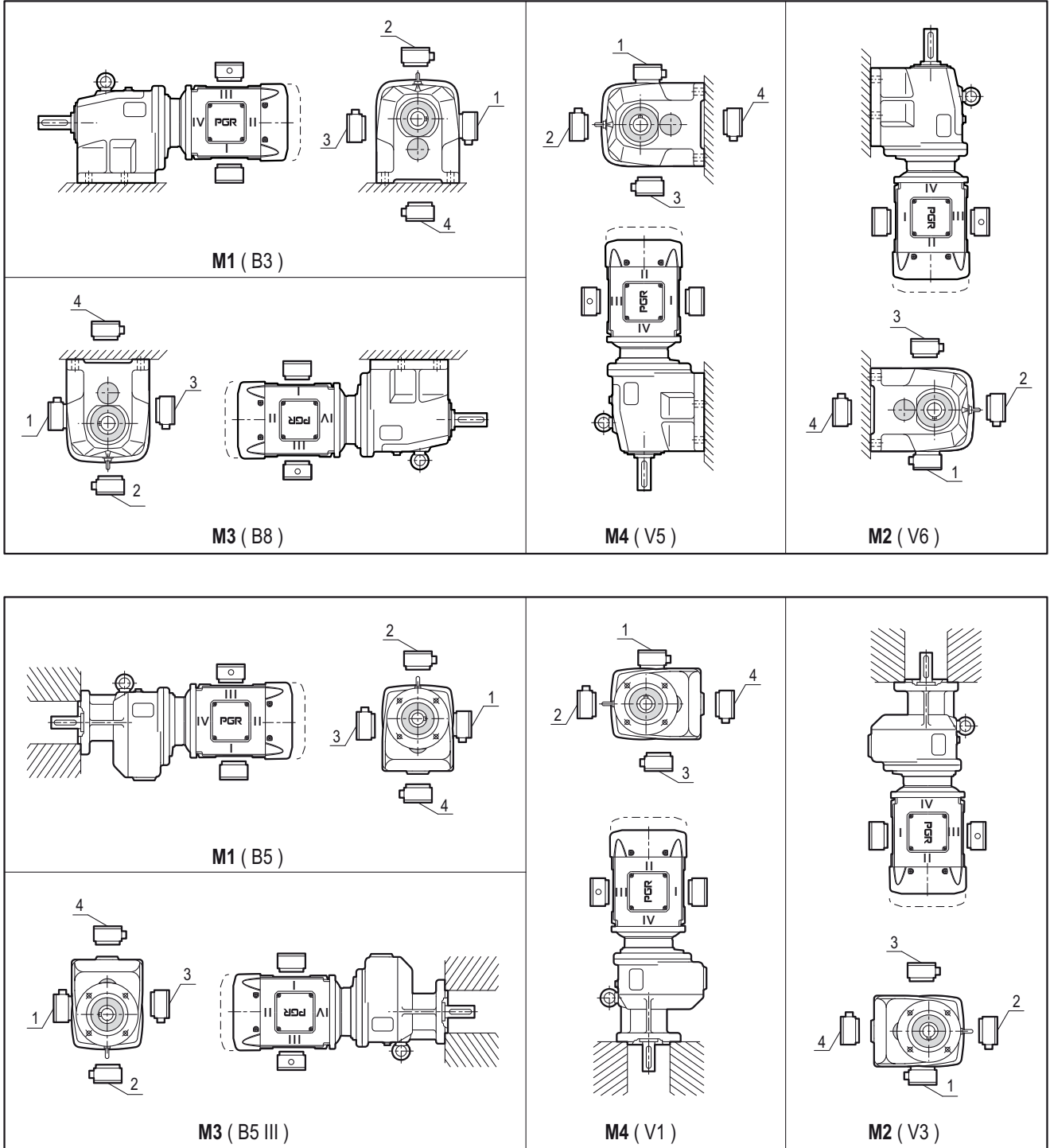
EN

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



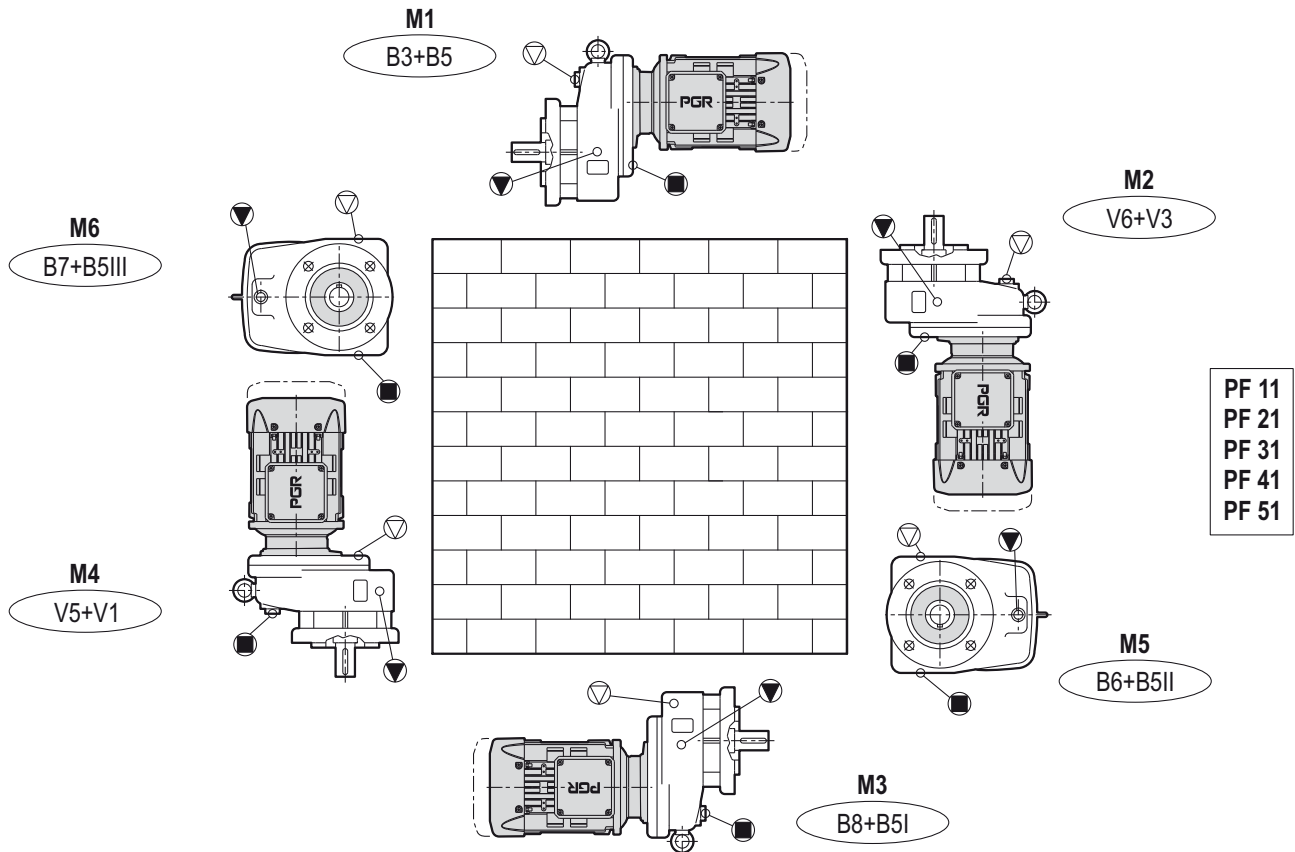
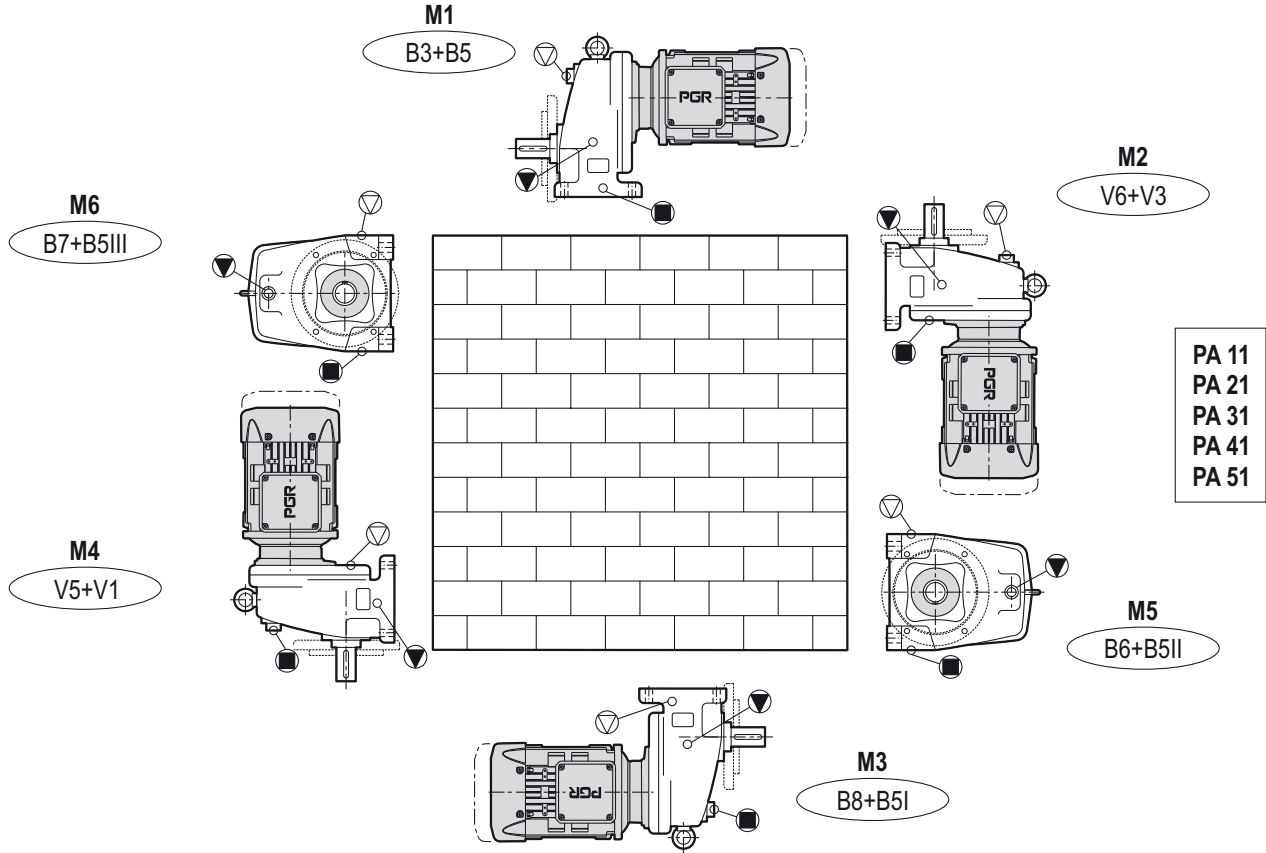
Montaj yüzeyi / Mounting surface

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS



Havalandırma tapası / Vent plug

Boşaltma tapası / Drain plug

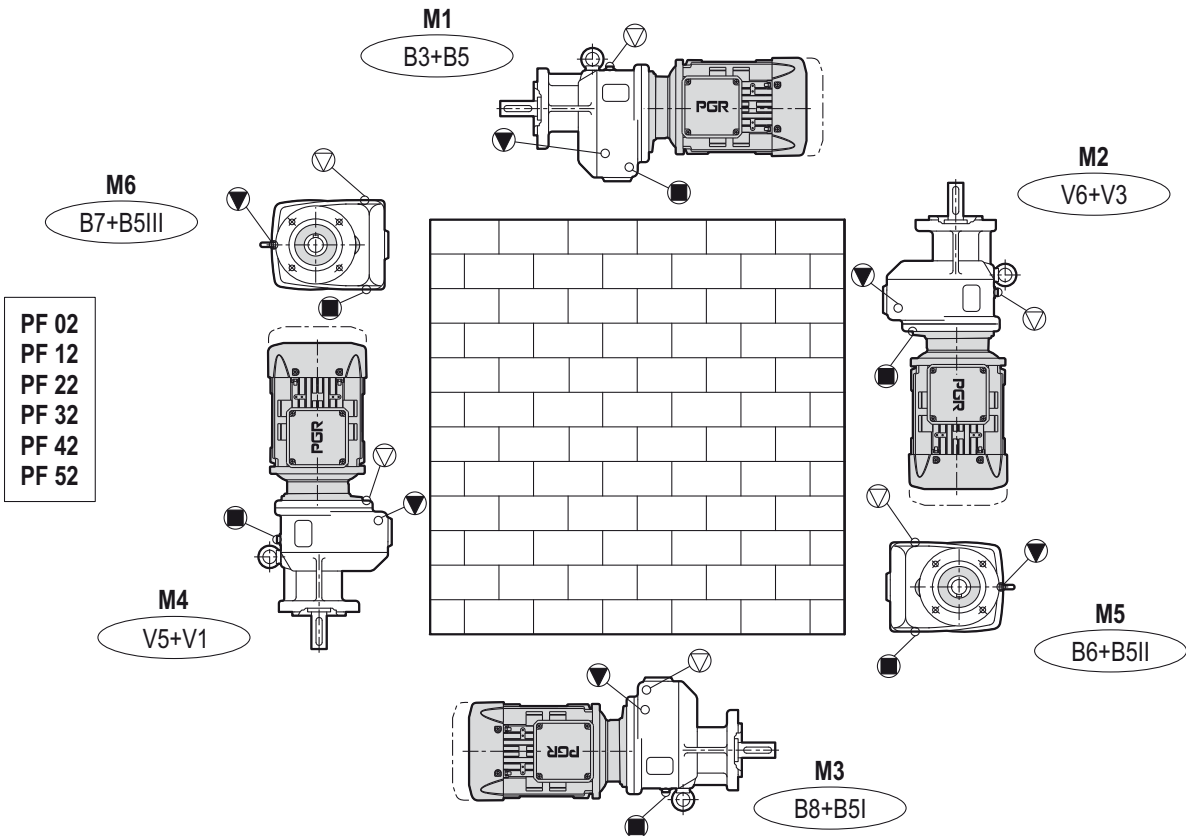
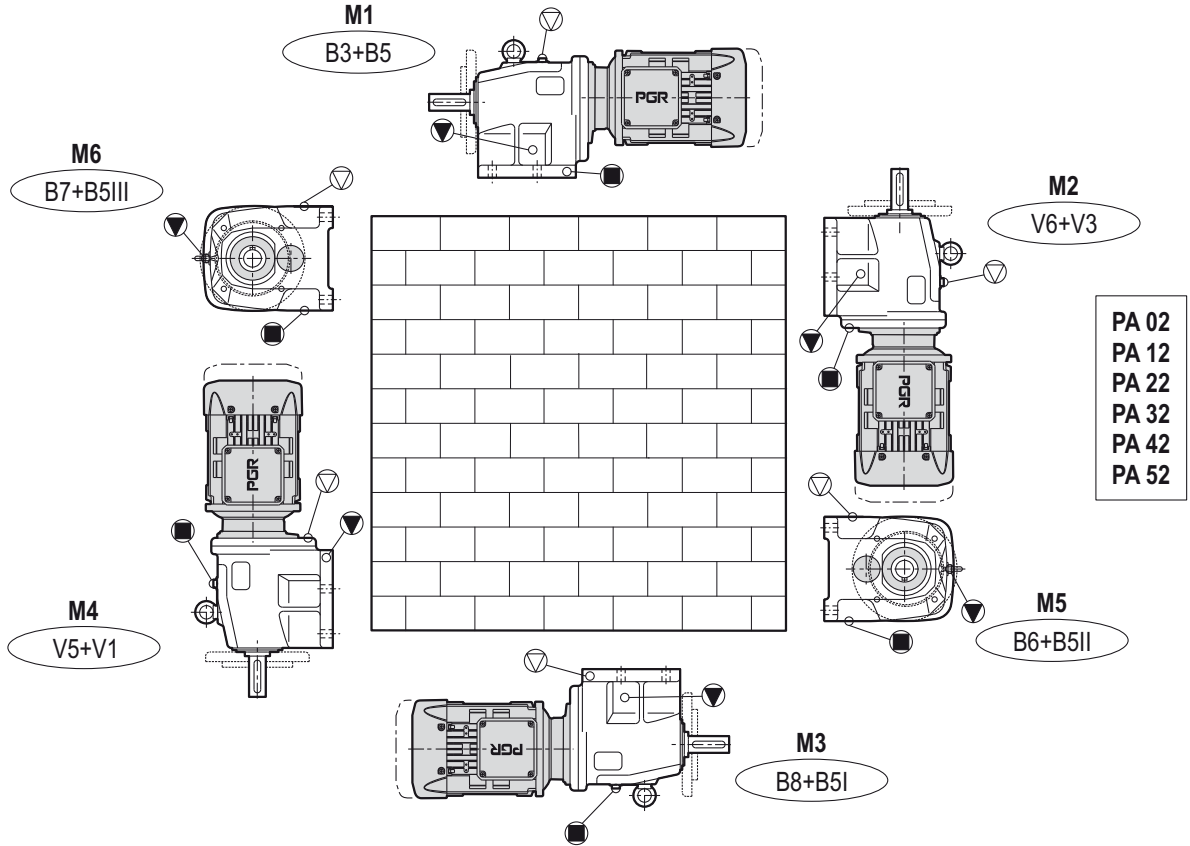
Yağ Seviye tapası / Oil level

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS



○ Havalandırma tapası / Vent plug

● Boşaltma tapası / Drain plug

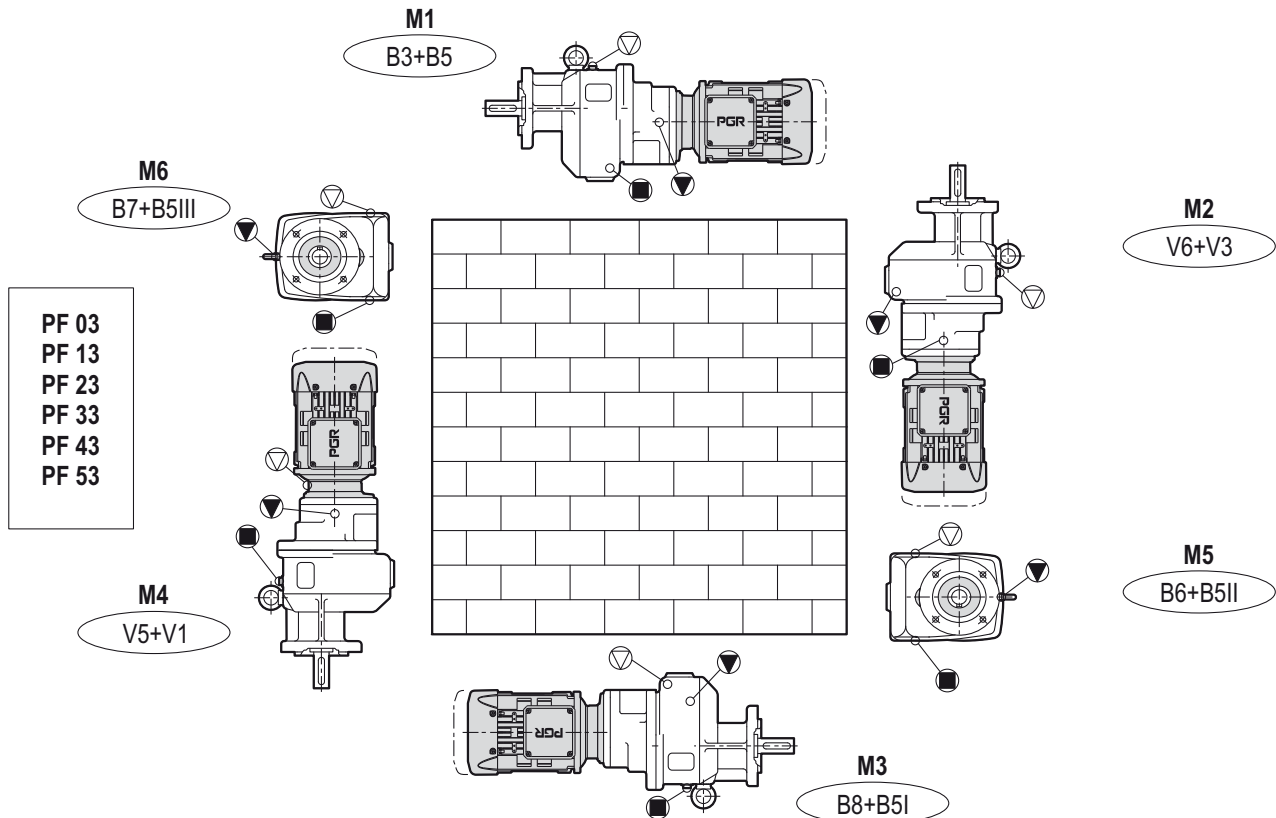
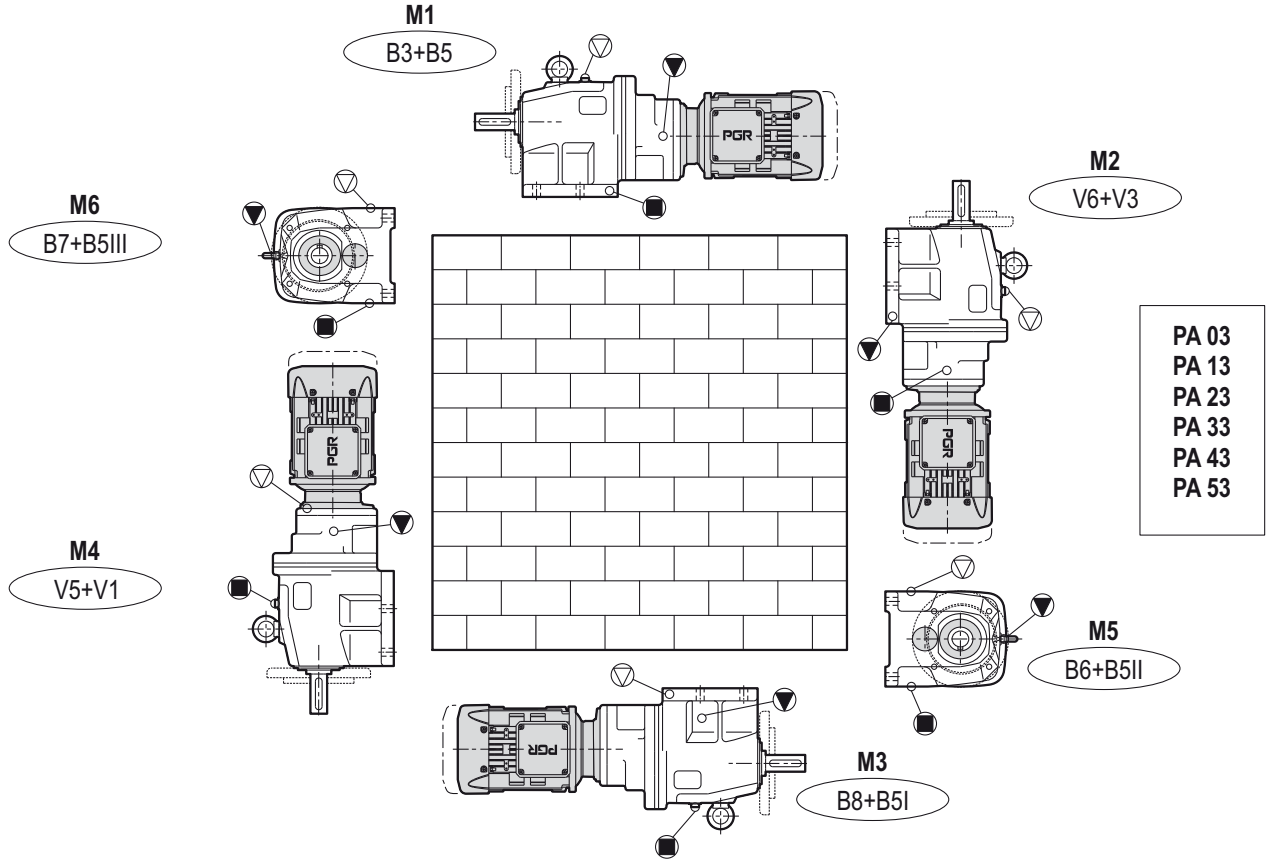
▼ Yağ Seviye tapası / Oil level

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS



Havalandırma tapası / Vent plug

Boşaltma tapası / Drain plug

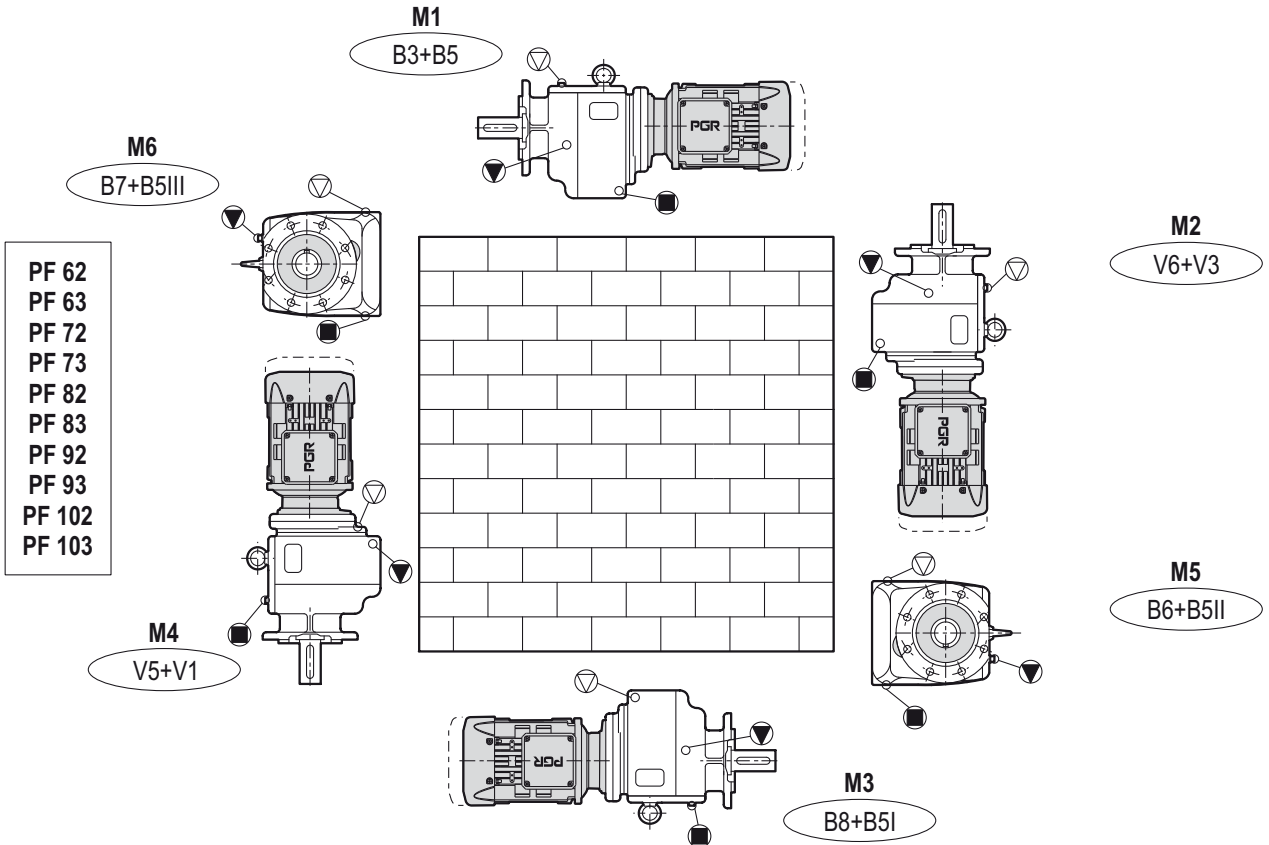
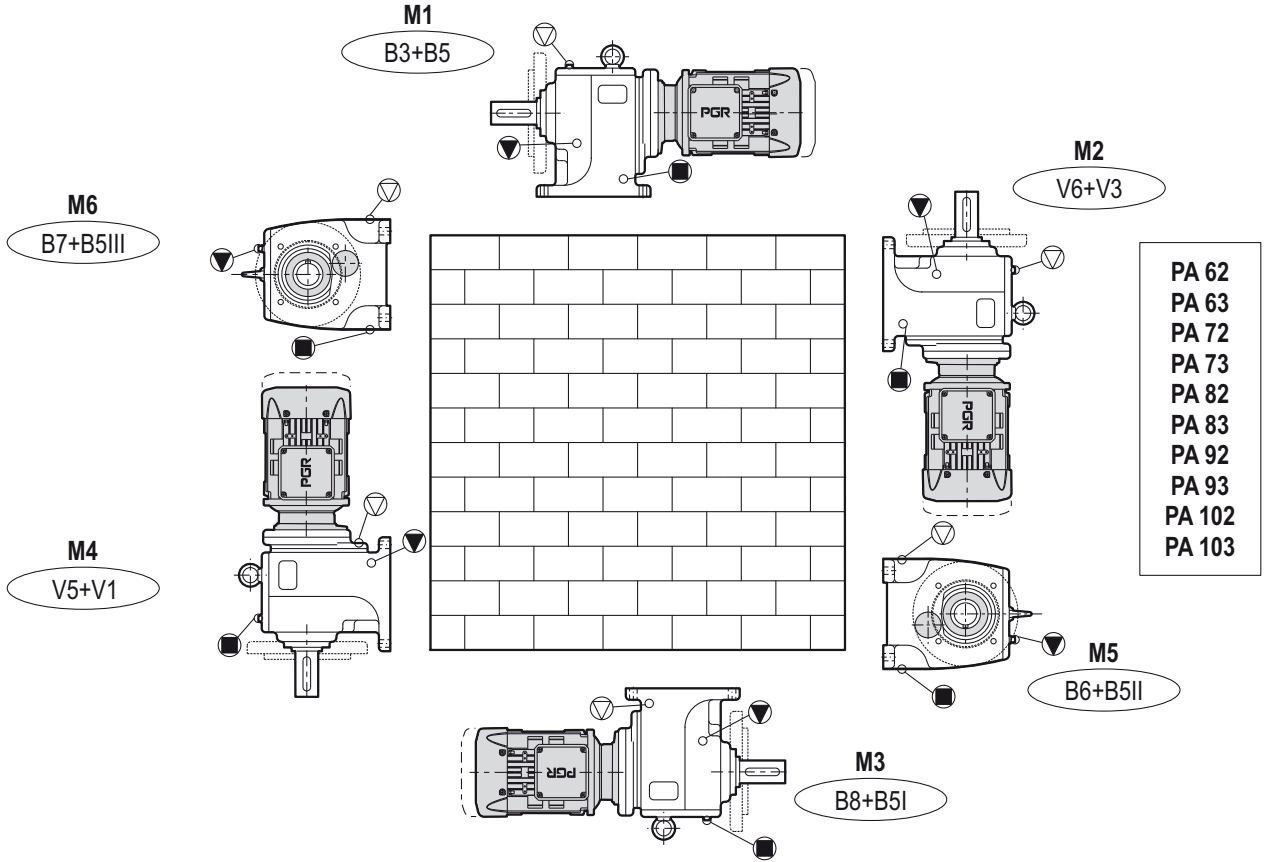
Yağ Seviye tapası / Oil level

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS



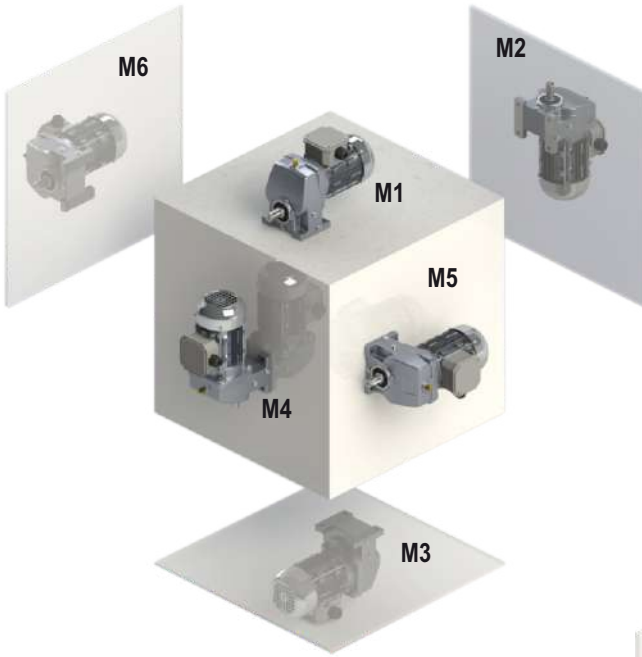
○ Havalandırma tapası / Vent plug

● Boşaltma tapası / Drain plug

▼ Yağ Seviye tapası / Oil level

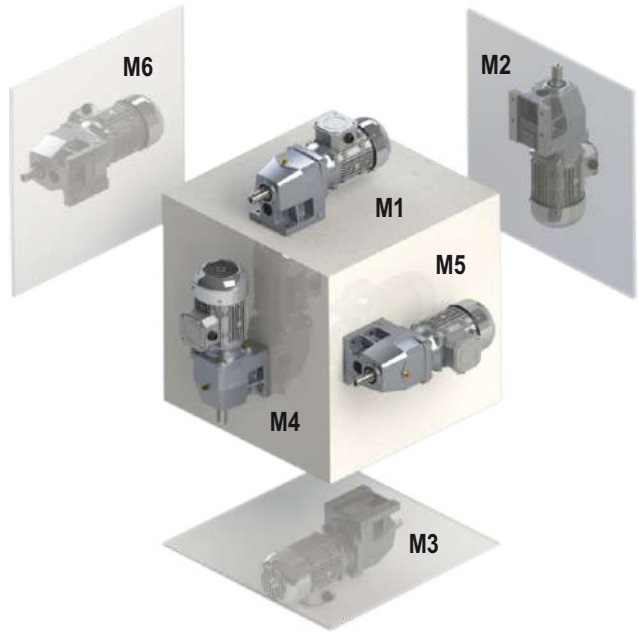
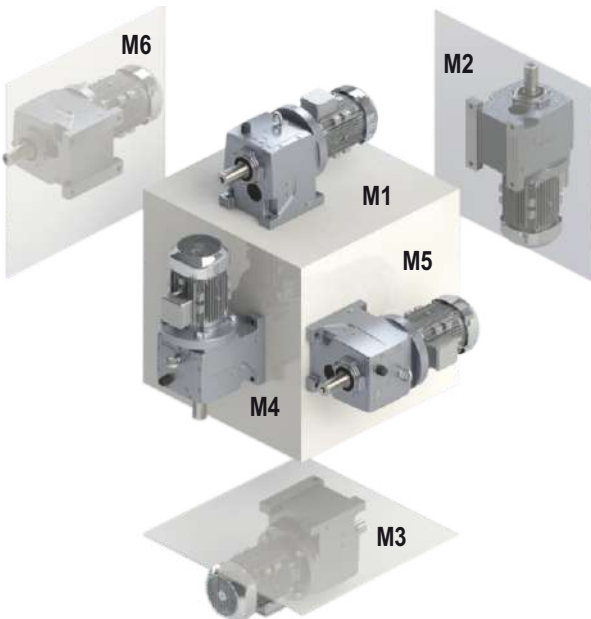
TR

PA MONTAJ POZİSYONLARI



EN

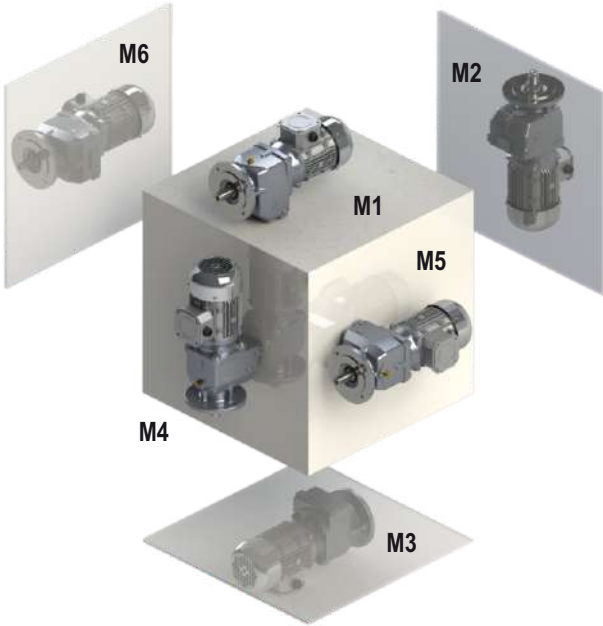
PA MOUNTING POSITIONS

PA TEK KADEME
PA SINGLE REDUCTIONPA İKİ VE ÜÇ KADEME
(MONOBLOK)
PA DOUBLE AND TRIPLE
REDUCTION (MONOBLOC)PA İKİ VE ÜÇ KADEME
(BLOK)
PA DOUBLE AND TRIPLE
REDUCTION (BLOC)

TR

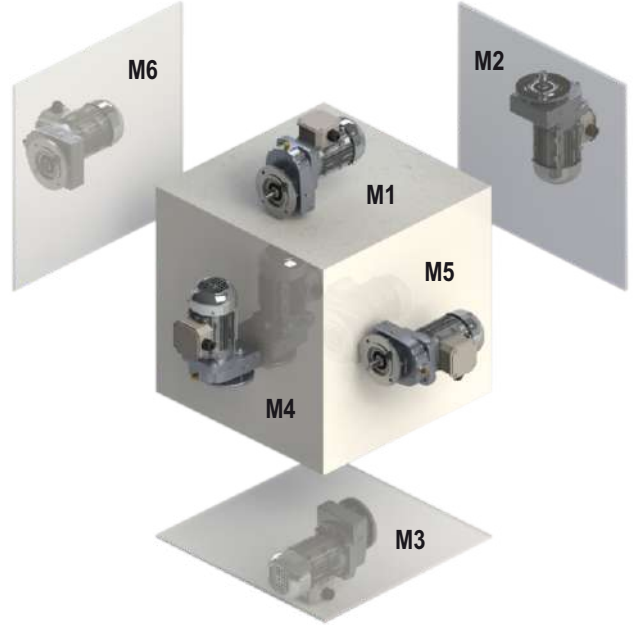
PF MONTAJ POZİSYONLARI

PF TEK KADEME
PF SINGLE REDUCTION

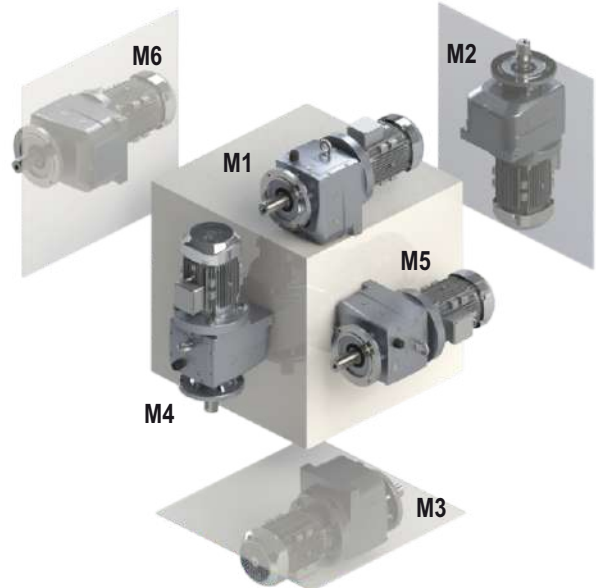


EN

PF MOUNTING POSITIONS



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



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

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.

Note: Sentetik ve mineral yağlayıcılar birbirine karıştırılmamalıdır.

Note: Consider that different kind of oil (synthetic and mineral oil) should not be mixed.

EN

LUBRICATION

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

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

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

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 Dişli Redüktör	Mineral yağ	- 5...40 Normal	ISO VG 220	Shell Omala Oel 220	Mobilgear 600 XP 220	Energol GR-XP 220	Spartan EP 220	Deagear DX SAE 85W-90 Falcon CLP 220	Degol BG 220	Alpha SP 220 Alpha MW 220 Alpha MAX 220	Tribol 1100/220	Klüberoil GEM 1-220
	Mineral oil	-15...25 # - 50...-15	ISO VG 100 ISO VG 15	Shell omala Oel 100 Shell Tellus Oel T 15	Mobilgear 600 XP 150 Mobil DTE 10 Excel 15	Energol GR-XP 100 Bartran HV 15	Spartan EP 100 Univis J 13	Deagear DX SAE 80W Falcon CLP 150 Alkraft Hydraulic Oil 15	Degol BG 100 Vitalol 1010	Alpha SP 100 Alpha MW 100 Alpha MAX 220 Hyspin AWS 15 Hyspin SP 15 Hyspin ZZ 15	Tribol 1100/100 Tribol 770	Klüberoil GEM 1-100 Isoflex MT 30 rot
	Sentetik yağ Synthetic oil	- 25...80	ISO VG 220	Shell Tivela Oel WB	Mobil Glygoyle 30	Energol 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
Helical Gearboxes	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	Energol GSF	Fliessfett S 420	Glissando 6833 EP 00	Aralub SKA 00	Alpha Gel 00	Tribol 800/1000	Klübersynth GE 46 -1200
	Mineral yağlı gres Mineral oil grease	- 30...60 Normal # - 50...110		Alvania Fett R 3 oder Alvania Fett RL 3	Mobilux 3 Mobilux 2	Energol LS 3 Energol 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
Rulmanlar Anti Friction Bearings	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 °C and above 60 °C.

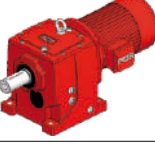
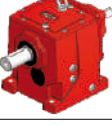
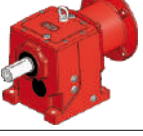
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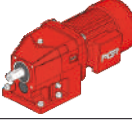
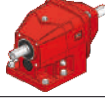
YAĞ MİKTAR TABLOSU

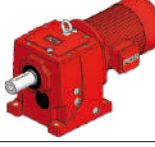
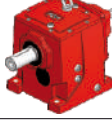
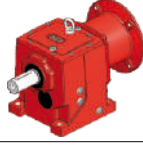
(Litre) (L)						
	M1	M2	M3	M4	M5	M6
 32 - 33						
 28 - 31	B3	V6	B8	V5	B6	B7
PA 11	0.25	0.50	0.55	0.40	0.35	0.35
PA 21	0.60	1.20	1.20	1.00	1.00	1.00
PA 31	1.10	2.70	2.20	2.30	1.70	1.70
PA 41	1.70	2.60	3.30	2.50	2.60	2.60
PA 51	2.20	4.40	4.70	4.00	3.40	3.40

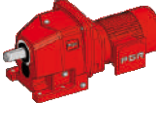
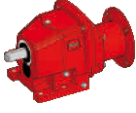
EN

LUBRICATION LEVELS

(Litre) (L)						
	M1	M2	M3	M4	M5	M6
 32 - 33						
 28 - 31	B3	V6	B8	V5	B6	B7
PA 62	6.50	15.0	13.0	16.0	15.0	15.0
PA 72	9.00	23.0	18.0	26.0	23.0	23.0
PA 82	14.0	35.0	27.0	44.0	32.0	32.0
PA 92	25.0	73.0	47.0	76.0	52.0	52.0
PA 102	36.0	79.0	66.0	102	71.0	71.0

(Litre) (L)						
	M1	M2	M3	M4	M5	M6
 32 - 33						
 28 - 31	B3	V6	B8	V5	B6	B7
PA 02	0.15	0.60	0.70	0.60	0.40	0.40
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	2.50	3.00	2.90	2.00	2.00
PA 42	1.30	4.50	4.50	4.30	3.20	3.20
PA 52	2.50	7.00	6.80	6.80	5.10	5.10

(Litre) (L)						
	M1	M2	M3	M4	M5	M6
 32 - 33						
 28 - 31	B3	V6	B8	V5	B6	B7
PA 63	13.0	14.5	14.5	16.0	13.0	13.0
PA 73	20.5	20.0	22.5	27.0	20.0	20.0
PA 83	30.0	31.0	34.0	37.0	33.0	33.0
PA 93	53.0	70.0	59.0	72.0	49.0	49.0
PA 103	69.0	71.0	74.0	97.0	67.0	67.0

(Litre) (L)						
	M1	M2	M3	M4	M5	M6
 32 - 33						
 28 - 31	B3	V6	B8	V5	B6	B7
PA 03	0.30	1.00	0.80	0.90	0.60	0.60
PA 13	0.60	1.25	1.10	1.20	0.70	0.70
PA 23	1.30	2.40	2.30	2.35	1.60	1.60
PA 33	1.60	2.90	3.20	3.70	2.30	2.30
PA 43	3.00	5.60	5.20	6.60	3.60	3.60
PA 53	4.50	8.70	7.70	8.70	6.00	6.00

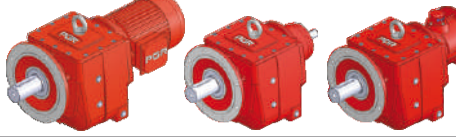
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YAĞ MİKTAR TABLOSU

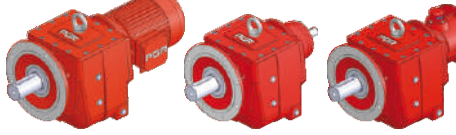
(Litre) (L)						
 32 - 33	M1	M2	M3	M4	M5	M6
 28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 11	0.30	0.35	0.50	0.30	0.40	0.40
PF 21	0.50	1.40	1.10	0.70	0.90	0.90
PF 31	0.80	1.30	1.65	1.10	2.00	2.00
PF 41	1.00	2.60	2.80	1.60	3.30	3.30
PF 51	1.80	3.50	4.10	3.00	3.80	3.80

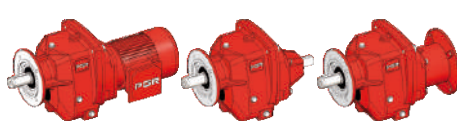
EN

LUBRICATION LEVELS

(Litre) (L)						
 32 - 33	M1	M2	M3	M4	M5	M6
 28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 62	7.00	15.0	14.0	18.5	16.0	16.0
PF 72	10.0	23.0	18.5	28.0	23.0	23.0
PF 82	15.0	37.0	29.0	45.0	34.5	34.5
PF 92	26.0	73.0	47.0	78.0	52.0	52.0
PF 102	40.0	81.0	66.0	104	72.0	72.0

(Litre) (L)						
 32 - 33	M1	M2	M3	M4	M5	M6
 28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 02	0.25	0.60	0.60	0.60	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	1.80	1.55	1.55
PF 32	1.30	2.90	3.30	3.10	2.40	2.40
PF 42	1.80	4.40	4.50	4.00	3.70	3.70
PF 52	3.00	6.80	6.20	7.40	5.60	5.60

(Litre) (L)						
 32 - 33	M1	M2	M3	M4	M5	M6
 28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 63	13.5	14.0	15.5	18.0	14.0	14.0
PF 73	22.0	22.5	23.0	27.5	20.0	20.0
PF 83	31.0	34.0	35.0	40.0	34.0	34.0
PF 93	53.0	70.0	59.0	74.0	49.0	49.0
PF 103	69.0	78.0	78.0	99.0	67.0	67.0

(Litre) (L)						
 32 - 33	M1	M2	M3	M4	M5	M6
 28 - 31	B5	V3	B5I	VI	B5II	B5III
PF 03	0.50	0.80	0.90	1.10	0.80	0.80
PF 13	0.85	1.20	1.20	1.20	0.95	0.95
PF 23	1.50	2.60	2.50	2.80	2.80	2.80
PF 33	1.90	3.40	3.50	4.40	2.60	2.60
PF 43	3.50	5.70	5.00	6.10	4.10	4.10
PF 53	5.20	8.40	7.00	8.90	6.70	6.70

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 millî redüktörler için konik sıkırma 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 influence 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.

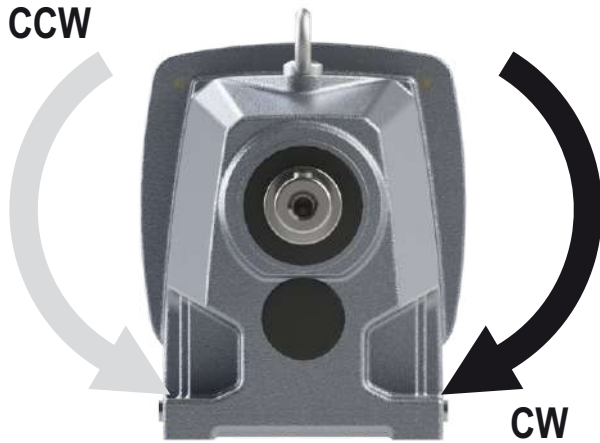
If Locking direction is **CCW**, Rotational direction is **CW**

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

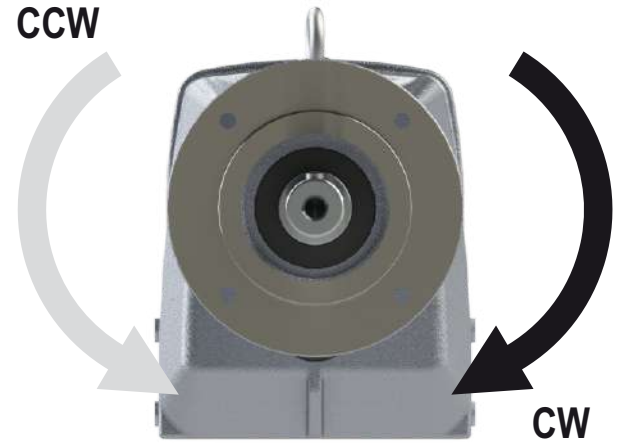
CW : Clockwise rotation

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 dış 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

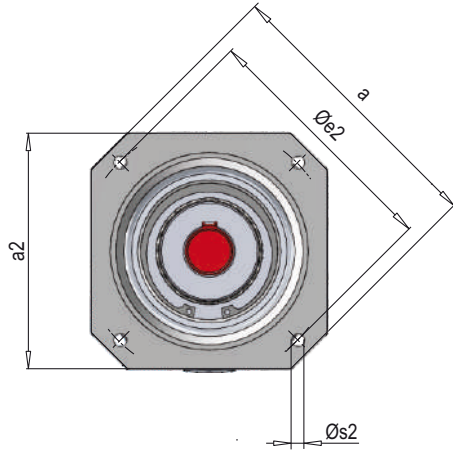
FLANGES

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

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

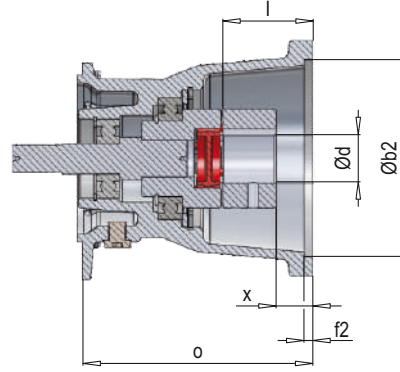
TR

SERVOMOTOR ADAPTÖRÜ



EN

SERVOMOTOR ADAPTERS



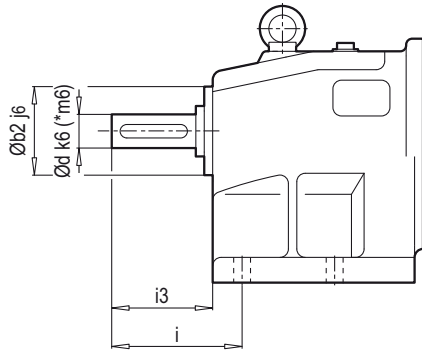
Redüktör Tipi Gear Unit Type	Motor Büyüklüğü / Motor Size							Şaft Ebatı Shaft Size		Silindir Cylinder	M _{knom} [Nm]	Adaptör tipi Adapter type
	a	a2	b2	e2	f2	s2	x	d	l			
PA/PF 02 , PA/PF 12	120	96	80	100	4	M6	15	19	40	124	10	Servo 100 / 160 S
PA/PF 02 , PA/PF 12	165	126	110	130	4	M8	20	24	50	136	35	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 sıkırtması ile yapılmaktadır. Servo motor bağlantı adaptörünün bağlantı flanşının farklı olması durumunda yüksek adetli siparişler üretime alınır.

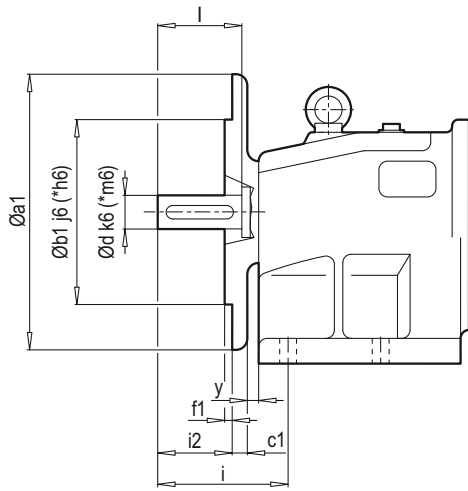
For connecting SEP adapter which is shown above on this page, servo motor's output shaft is designed with locking key. For connecting SEK type adapter, connecting is supplied with a clamp coupling sleeve. An intermediate flange is required when other servo motor types are used with IEC adapter. Offers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

TR

PA / B14 - B5



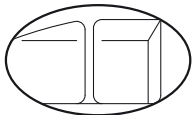
B 14



B5



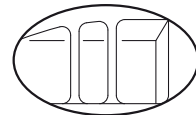
94 - 117



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.



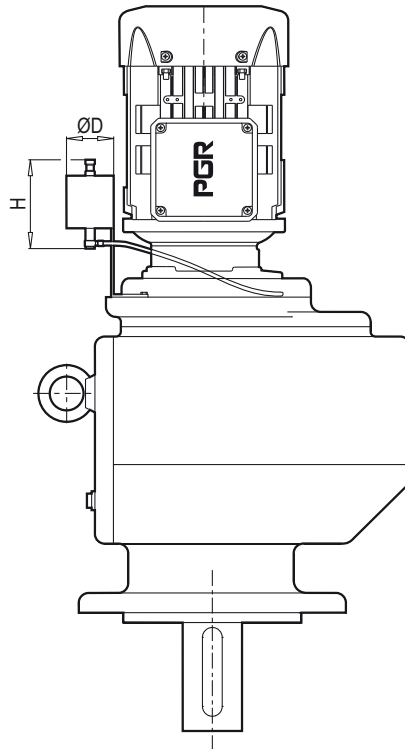
34

Additional lubricant volume unit uses for preventing oil leakage 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.

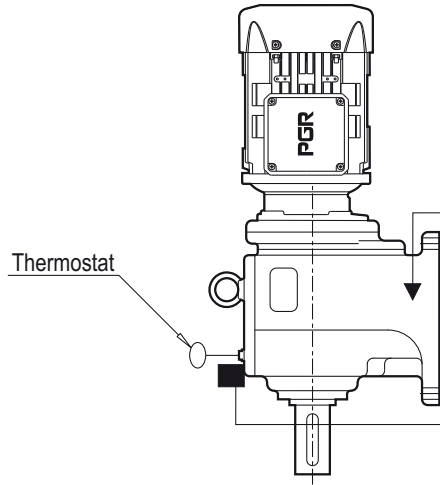


34



TR

YAĞ SOĞUTMALI



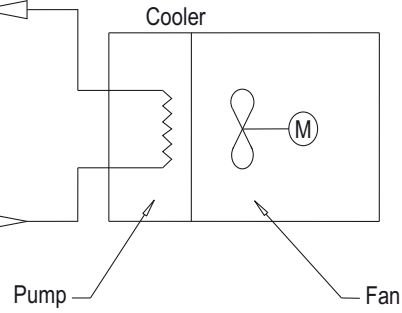
■ Çıkış = Emme hattı

▼ Yağ seviyesi = Basınç hattı

Dışli 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.

EN

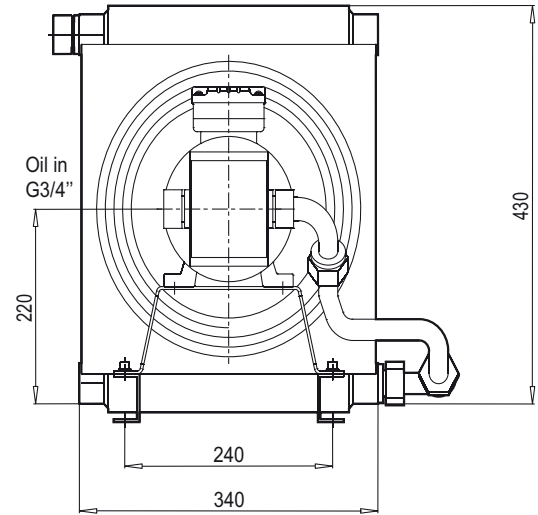
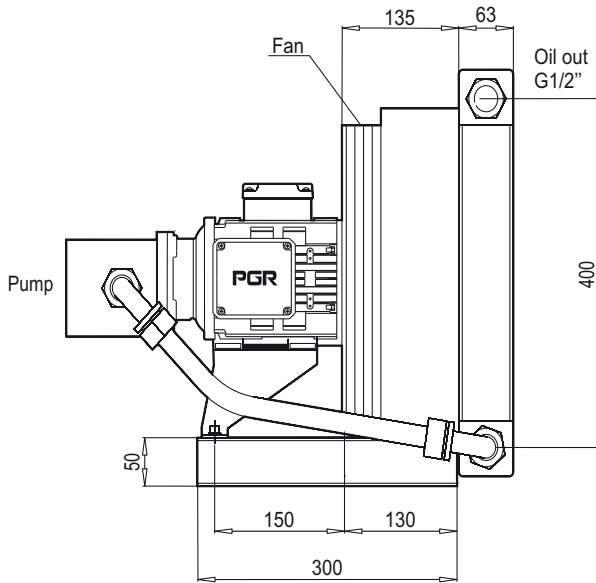
OIL COOLING



■ Outlet = Suction line

▼ Oil level = Pressure line

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



* Potansiyel patlayıcı atmosferli alanlar için uygun değildir.

Dizayn

Soğutucu	: TFS/A 8,5-400-F-03-11
Düşürme	: Dış 1/2" iç 3/4"
Motorlar	: Spannung 3x400 V
Çıkış gücü	: 0.55 kW
Hız	: 1350 minimum
Koruma sınıfı	: IP 55
Yalıtım sınıfı	: F
Sıcaklık sınıfı	: B

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

Ağırlık : 32 kg

* Not suited for areas with potentially 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

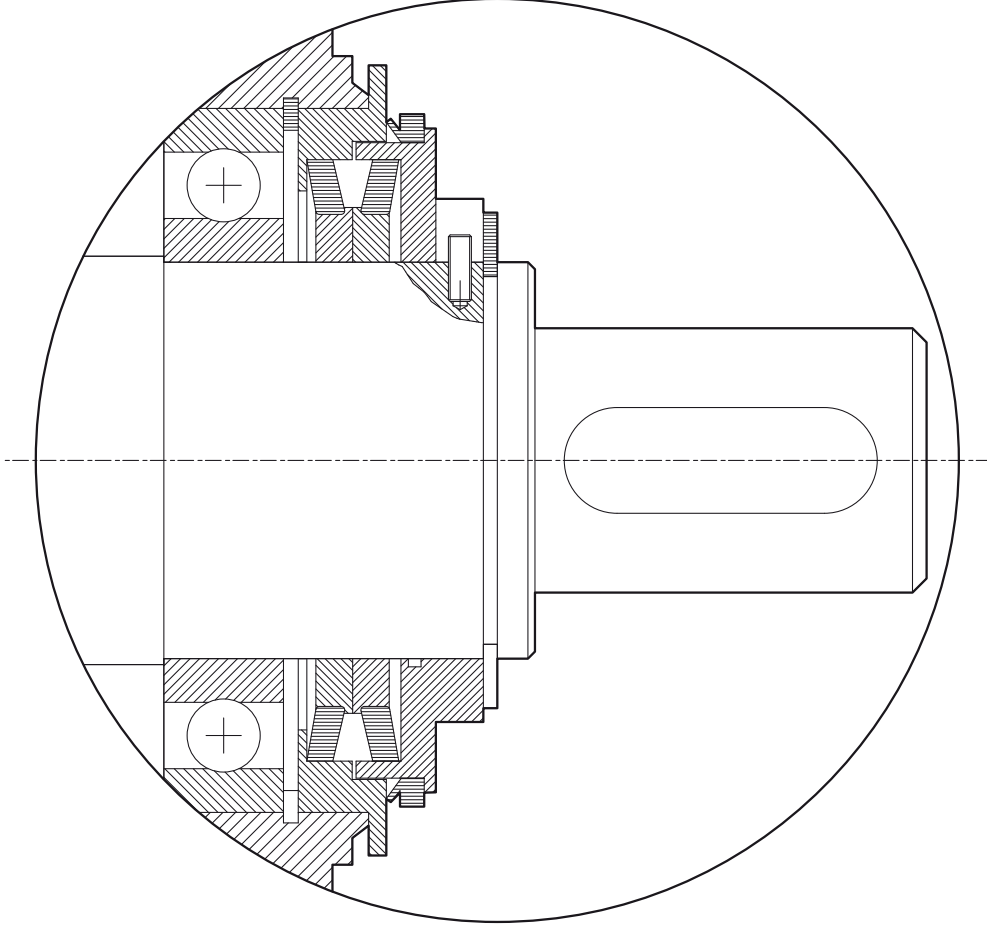
Weight : 32 kg

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.

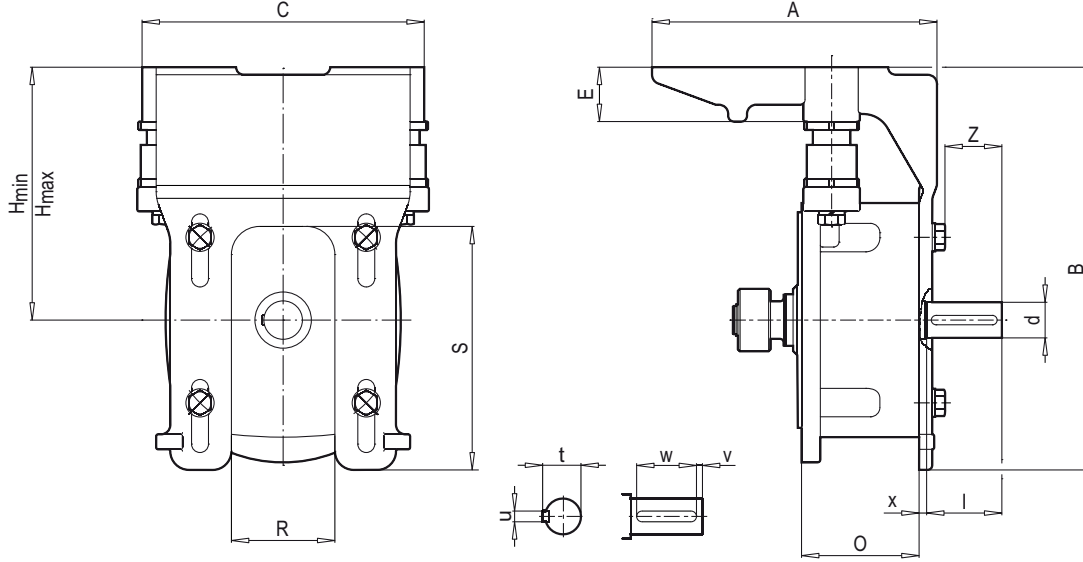
Seals are important for prevent oil leakage from gear unit and protect from environment. In hazardous environment and extreme operation conditions sealing must be considered. For that reason mechanical seals are applicable for using at hazardous environment, submerged operation.

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 elemanlarında dahil olmak üzere korozyona karşı dirençlidir.
- * Hafif, vibrasyonu absorbe eden alüminyum yapı mevcuttur.
- * Birçok motor boyutu için kullanım kolaylığı sağlar.
- * Tabloya göre "l" 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.
- * Aluminum structure provide vibration absorbing and light weight.
- * It could be used with all motor type.
- * We recommend, it is suitable for while "l" 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).

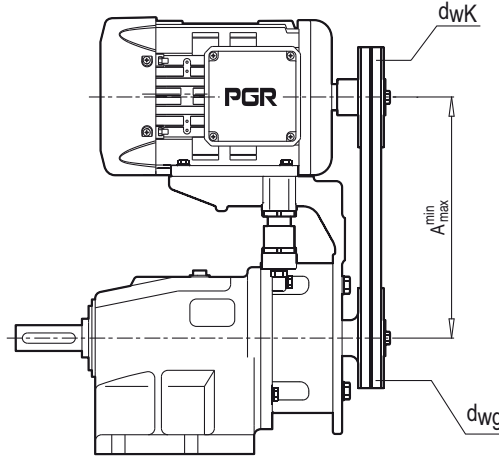
You can see dimension of belt length with motor platform assignment. (Page 44)

TR

MOTOR PLATFORMU

EN

MOTOR PLATFORM INSTALLATION



	Motor	Çıkış Output (kW)	Ayar aralığı Adjustment range		Kayış uzunluğu Belt length	Mil merkezi uzaklığı Shaft centre distance A	Kayış sayısı Number of belts
			Amin	Amax			
MK I Kayış Tipi SPZ Belt type SPZ	63 M/4A	0.12	216	236	(dwg =80) (i = 1) Lw 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	80 M/4A	0.55	279	304	(dwg =112) (i = 1) Lw 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	90 S/4A	1.10	344	376	(dwg =160) (i = 1) Lw 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	112 M/4B	4.00	427	467	(dwg =200) (i = 1) Lw 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	200 L/4C	30.0	665	715	(dwg =250) (i = 1) Lw 2182	698	4
	225 S/4A	37.0	690	740	2207	710	4
	225 M/4C	45.0	690	740	2207	710	5



Handwriting practice area with 20 horizontal dotted lines.



Blank lined area for writing, consisting of multiple horizontal dotted lines.

Motorlu Seçim Sayfaları
Selection Of Gearmotors



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

PA / PF

TR

TEKNİK AÇIKLAMALAR

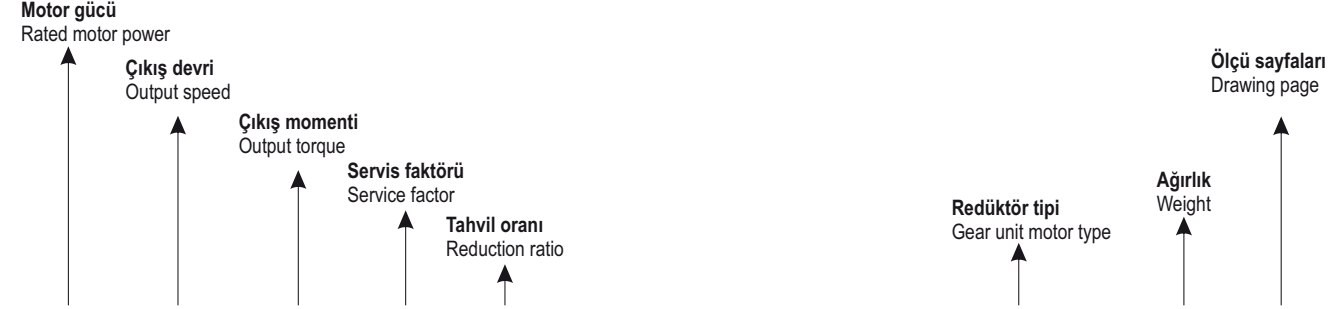
EN

TECHNICAL EXPLANATIONS

Motorlu redüktör performans tablolarının yapısı.

Notify about performance tables for Geared motor.

0.12 kW

Redüktör motor gücü
Gear unit motor power

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 değerlerdeF_A = 0 (N) olarak hesaplanmıştırPermissible 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 değerlerdeF_R = 0 (N) olarak hesaplanmıştırPermissible 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 değerlerdeF_R = 0 (N) olarak hesaplanmıştırPermissible 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 değerlerdeF_A = 0 (N) olarak hesaplanmıştırPermissible 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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm
0.12	0.9	808	1.5	1393.57	7.0	12.0	11.0	30.0	PA 42/12 - 63M/4A PF 42/12 - 63M/4A	67	138
	1.2	647	1.9	1114.85	8.0	12.0	11.0	30.0			
	1.8	435	2.8	750.00	8.0	12.0	11.0	29.0			
	2.4	319	3.8	550.63	8.0	12.0	12.0	27.0			
	3.0	251	4.8	433.11	8.0	12.0	12.0	25.0			
	1.0	756	0.8	1304.13	5.0	9.0	9.0	25.0	PA 32/12 - 63M/4A PF 32/12 - 63M/4A	49	138
	1.2	627	1.0	1080.92	6.0	9.0	9.0	25.0			
	1.2	*733	0.8	740.46	6.0	9.0	9.0	25.0	PA 33 - 63M/6A PF 33 - 63M/6A	45	107
	1.3	*697	0.8	662.46	6.0	9.0	9.0	25.0			
	1.5	*805	0.8	585.48	5.0	9.0	8.0	25.0			
	1.8	681	0.8	740.46	6.0	9.0	9.0	25.0	PA 33 - 63M/4A PF 33 - 63M/4A	45	107
	2.0	576	1.0	662.46	6.0	9.0	9.0	25.0			
	2.2	509	1.2	585.48	6.0	9.0	9.0	25.0			
	2.5	456	1.5	523.81	6.0	9.0	9.0	25.0			
	3.1	366	1.8	421.10	7.0	9.0	9.0	25.0			
	3.9	295	2.2	339.07	7.0	9.0	9.0	25.0			
	5.3	216	3.1	248.21	7.0	9.0	9.0	24.0			
	6.4	180	3.7	206.97	7.0	9.0	9.0	23.0			
	1.0	*425	0.8	1440.59	4.0	6.0	6.0	20.0	PA 22/02 - 63M/4A PF 22/02 - 63M/4A	36	138
	1.1	*411	0.8	1156.84	4.0	6.0	6.0	20.0			
	1.5	*426	0.8	881.08	4.0	6.0	6.0	20.0			
	1.7	*348	0.8	516.35	5.0	6.0	7.0	20.0	PA 23 - 63M/6A PF 23 - 63M/6A	33	103
	2.1	*430	0.8	417.44	4.0	6.0	6.0	20.0			
	2.6	336	0.8	516.35	5.0	6.0	7.0	20.0	PA 23 - 63M/4A PF 23 - 63M/4A	33	103
	3.2	363	0.9	417.44	4.0	6.0	7.0	20.0			
	4.1	281	1.2	323.31	5.0	6.0	7.0	19.0			
	5.0	228	1.5	261.93	5.0	6.0	7.0	18.0			
	6.1	189	1.8	217.60	5.0	6.0	7.0	17.0			
	7.3	156	2.0	179.61	5.0	6.0	7.0	16.0			
	8.7	131	2.2	151.11	5.0	6.0	7.0	15.0			
	10.6	108	3.1	124.10	5.0	6.0	7.0	15.0			
	13.1	87	3.9	100.53	5.0	6.0	8.0	14.0			
	1.0	*218	0.8	1277.78	3.0	4.0	5.0	15.0	PA 12/02 - 63M/4A PF 12/02 - 63M/4A	24	138
	1.2	*216	0.8	1053.91	3.0	4.0	5.0	15.0			
	1.5	*227	0.8	886.01	3.0	4.0	5.0	15.0			
	2.1	*213	0.8	420.39	3.0	4.0	5.0	15.0	PA 13 - 63M/6A PF 13 - 63M/6A	21	99
	2.3	*216	0.8	369.18	3.0	4.0	5.0	15.0			
	2.8	*212	0.8	313.35	3.0	4.0	5.0	15.0			
	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			
	4.8	*216	0.8	275.17	3.0	4.0	5.0	15.0			
	5.4	*217	0.8	244.64	3.0	4.0	5.0	14.0			
	6.7	170	1.1	195.71	3.0	4.0	5.0	14.0			
	8.3	139	1.2	159.23	3.0	4.0	5.0	13.0			
	9.9	115	1.3	132.48	4.0	4.0	5.0	12.0			
	12.1	95	1.9	108.73	4.0	4.0	5.0	12.0			
	11.9	96	1.4	72.60	4.0	4.0	5.0	12.0	PA 12 - 63M/6A PF 12 - 63M/6A	16	98
	14.1	81	1.9	61.31	4.0	4.0	5.0	11.0			
	18.1	63	2.2	72.60	4.0	4.0	5.0	11.0	PA 12 - 63M/4A PF 12 - 63M/4A	16	98
	21.5	53	2.9	61.31	4.0	4.0	5.0	10.0			
	24.5	47	3.8	53.84	4.0	4.0	5.0	10.0			
	30.6	37	4.3	43.07	4.0	4.0	5.0	9.0			
	4.2	*108	0.8	312.98	2.0	3.0	3.0	6.0	PA 03 - 63M/4A PF 03 - 63M/4A	18	95
	4.8	*108	0.8	274.18	2.0	3.0	3.0	6.0			
	6.2	*131	0.8	212.39	2.0	3.0	3.0	6.0			
	7.7	*131	0.8	170.56	2.0	3.0	3.0	6.0			
	8.7	*134	0.8	151.24	2.0	3.0	3.0	6.0			
	10.6	109	1.0	124.74	2.0	3.0	3.0	6.0			
	11.8	97	0.9	73.03	2.0	3.0	3.0	6.0	PA 02 - 63M/6A PF 02 - 63M/6A	14	94
	14.1	81	1.1	61.24	2.0	3.0	3.0	6.0			
	16.1	71	1.3	53.64	2.0	3.0	3.0	6.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA/PF 32/12 - 63M/4B	49	138
	1.9	695	0.9	699.71	6.0	9.0	9.0	25.0			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	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 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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA 02 - 80M/4A PF 02 - 80M/4A	19	94
	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			
	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	PA 11 - 80M/4A PF 11 - 80M/4A	17	84
	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	-	-			
	603.4	9	4.1	2.32	-	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm 
0.75	10.6 11.8	673 608	2.6 2.6	86.88 78.53	14.0 14.0	24.0 24.0	20.0 20.0	40.0 40.0	PA 52 - 90S/6A PF 52 - 90S/6A	93	114
	5.0 5.3 6.1 6.4 6.8 7.7 8.2 9.9 10.8 13.0 14.8 17.5 20.0	1425 1351 1183 1122 1046 936 869 725 661 549 486 409 359	0.9 0.9 0.9 1.1 1.2 1.1 1.3 1.5 1.9 2.0 2.6 2.9 3.0	278.52 264.02 231.31 219.26 204.49 182.86 169.82 141.63 129.27 107.36 94.91 80.01 70.10	4.0 5.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0	PA 43 - 80M/4B PF 43 - 80M/4B	75	111
	8.8 10.9 12.4 15.3	814 659 580 470	1.1 1.2 1.9 2.1	105.08 85.10 74.87 60.64	7.0 8.0 8.0 8.0	12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0	15.0 15.0 15.0 14.0	PA 42 - 90S/6A PF 42 - 90S/6A	64	110
	8.4 10.4	851 685	0.8 0.9	166.39 133.98	5.0 6.0	9.0 9.0	8.0 9.0	17.0 16.0	PA 33 - 80M/4B PF 33 - 80M/4B	52	107
	11.4 12.7 14.4	629 563 498	0.8 1.0 1.3	81.27 72.71 64.26	6.0 6.0 6.0	9.0 9.0 9.0	9.0 9.0 9.0	16.0 16.0 15.0	PA 32 - 90S/6A PF 32 - 90S/6A	47	106
	17.2 19.3 21.8 24.4 30.2 36.1 42.4 60.6 67.7 75.1	416 372 329 294 237 198 169 118 106 95	1.2 1.5 1.9 2.1 2.3 2.2 2.3 3.1 3.1 3.2	81.27 72.71 64.26 57.49 46.29 38.76 33.00 23.10 20.67 18.64	7.0 7.0 7.0 7.0 7.0 6.0 6.0 6.0 5.0 5.0	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 9.0 10.0 10.0 10.0	15.0 15.0 15.0 14.0 13.0 13.0 12.0 11.0 11.0 11.0	PA 32 - 80M/4B PF 32 - 80M/4B	45	106
	15.9 17.9 21.6	451 399 332	0.8 0.9 1.0	88.24 78.00 64.80	1.0 2.0 3.0	6.0 6.0 6.0	6.0 7.0 7.0	10.0 10.0 10.0	PA 23 - 80M/4B PF 23 - 80M/4B	40	103
	20.2	355	0.8	45.90	3.0	6.0	7.0	10.0	PA/PF 22 - 90S/6A	36	102
	25.3 30.5 32.7 39.4 47.7 56.7 83.6 95.4	283 235 219 182 150 126 86 75	1.1 1.2 1.6 1.8 1.9 1.9 2.9 3.0	55.25 45.90 42.79 35.55 29.34 24.69 16.74 14.67	5.0 5.0 5.0 5.0 5.0 5.0 4.0 4.0	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 8.0 8.0	10.0 9.0 9.0 9.0 9.0 8.0 8.0 7.0	PA 22 - 80M/4B PF 22 - 80M/4B	34	102
	36.6 44.9 54.0 65.8 74.5 83.6 104.5 131.1 145.1 178.3 192.1 214.3 242.0	196 159 133 109 96 86 69 55 49 40 37 33 30	0.9 1.0 1.0 1.5 1.7 1.8 2.2 2.5 2.7 3.1 3.4 3.1 3.2	38.29 31.15 25.92 21.27 18.80 16.74 13.39 10.68 9.65 7.85 7.29 6.53 5.78	1.0 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 2.0 2.0 2.0 2.0	4.0 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 5.0 5.0 5.0 5.0 5.0 5.0 5.0	7.0 7.0 7.0 7.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0	PA 12 - 80M/4B PF 12 - 80M/4B	23	98

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	Kg	Sayfa Page mm
1.50	1.0	14261	1.4	1413.66	97.0	120.0	120.0	120.0	PA 103/52 - 90L/4A PF 103/52 - 90L/4A	810	142
	1.2	11576	1.7	1147.52	98.0	120.0	120.0	120.0			
	1.5	9523	2.1	944.01	100.0	120.0	120.0	120.0			
	1.7	8250	2.4	817.82	101.0	120.0	120.0	120.0			
	2.2	6482	3.1	642.57	101.0	120.0	120.0	120.0			
	1.1	13097	0.9	1299.17	57.0	80.0	87.0	80.0	PA 93/42 - 90L/4A PF 93/42 - 90L/4A	562	142
	1.3	11006	1.1	1090.99	60.0	80.0	89.0	80.0			
	1.7	8191	1.5	811.95	63.0	80.0	91.0	80.0			
	1.9	7635	1.6	756.80	63.0	80.0	91.0	80.0			
	2.6	5527	2.2	547.88	65.0	80.0	92.0	80.0			
	3.1	4609	2.6	456.91	66.0	80.0	93.0	80.0			
	1.6	9053	0.9	897.44	33.0	60.0	55.0	65.0	PA 83/32 - 90L/4A PF 83/32 - 90L/4A	366	140
	2.0	7290	1.1	722.63	38.0	58.0	58.0	65.0			
	2.7	5297	1.5	525.11	42.0	56.0	61.0	65.0	PA 83/42 - 90L/4A PF 83/42 - 90L/4A	383	142
	3.2	4418	1.8	437.93	43.0	54.0	62.0	65.0			
	3.8	3778	2.1	374.50	44.0	53.0	62.0	65.0			
	5.1	2784	2.9	276.00	45.0	49.0	63.0	65.0			
	6.0	2381	3.2	236.03	45.0	48.0	63.0	65.0			
	4.3	3299	2.7	216.49	44.0	51.0	62.0	65.0	PA/PF 83 - 100L/6A	349	127
	2.5	5714	0.9	566.43	20.0	28.0	35.0	50.0	PA 73/22 - 90L/4A PF 73/22 - 90L/4A	248	140
	3.1	4616	1.1	457.52	23.0	28.0	36.0	50.0			
	4.1	3498	1.4	346.75	25.0	27.0	38.0	50.0			
	5.1	2826	1.8	280.08	27.0	27.0	39.0	50.0			
	6.3	2284	2.2	226.38	27.0	26.0	39.0	50.0	PA 73/32 - 90L/4A PF 73/32 - 90L/4A	259	140
	8.3	1726	2.9	171.10	28.0	25.0	40.0	50.0			
	10.1	1424	3.0	141.16	28.0	24.0	40.0	50.0			
	11.4	1258	3.0	124.66	28.0	23.0	40.0	50.0			
	4.6	3133	1.7	205.59	26.0	27.0	39.0	50.0	PA 73 - 100L/6A PF 73 - 100L/6A	242	123
	5.7	2531	2.2	166.07	27.0	26.0	39.0	50.0			
	3.5	4047	0.9	265.56	13.0	29.0	24.0	45.0	PA/PF 63 - 100L/6A	158	119
	3.8	3760	0.9	372.70	14.0	28.0	24.0	45.0	PA 63 - 90L/4A PF 63 - 90L/4A	150	119
	4.7	3036	1.1	300.91	17.0	28.0	26.0	45.0			
	5.3	2679	1.4	265.56	18.0	28.0	26.0	45.0			
	6.6	2163	1.7	214.41	19.0	27.0	27.0	45.0			
	13.2	1081	2.6	107.21	20.0	24.0	28.0	45.0			
	16.3	880	2.6	87.26	20.0	23.0	28.0	45.0			
	6.0	2387	0.8	236.60	10.0	24.0	17.0	40.0	PA 53 - 90L/4A PF 53 - 90L/4A	112	115
	7.6	1875	1.0	185.90	12.0	24.0	18.0	40.0			
	8.0	1790	1.1	177.45	12.0	24.0	18.0	40.0			
	10.2	1407	1.6	139.42	13.0	24.0	19.0	40.0			
	10.8	1324	1.3	86.88	13.0	24.0	19.0	40.0	PA 52 - 100L/6A PF 52 - 100L/6A	103	114
	12.0	1197	1.3	78.53	13.0	24.0	19.0	40.0			
	13.2	1089	1.5	71.47	13.0	24.0	19.0	40.0			
	16.3	876	2.0	86.88	14.0	24.0	20.0	40.0	PA 52 - 90L/4A PF 52 - 90L/4A	95	114
	18.1	792	2.0	78.53	14.0	24.0	20.0	40.0			
	19.9	721	2.2	71.47	14.0	24.0	20.0	40.0			
	39.4	363	3.3	36.00	14.0	24.0	20.0	40.0			
	43.6	328	3.3	32.54	14.0	24.0	20.0	40.0			
	11.0	1304	1.0	129.27	3.0	12.0	10.0	11.0	PA/PF 43 - 90L/4A	79	111
	13.5	1060	0.8	105.08	6.0	12.0	10.0	12.0	PA 42 - 90L/4A PF 42 - 90L/4A	66	110
	16.7	858	0.9	85.10	7.0	12.0	11.0	12.0			
	19.0	755	1.4	74.87	8.0	12.0	11.0	12.0			
	23.4	612	1.6	60.64	8.0	12.0	11.0	11.0			
	46.6	307	2.6	30.47	8.0	12.0	12.0	10.0			
	57.5	249	2.6	24.68	7.0	12.0	12.0	10.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA 12 - 90L/4A PF 12 - 90L/4A	27	98
	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			
	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	PA 02 - 90L/4A PF 02 - 90L/4A	25	94
	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			
	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	PA 21 - 90L/4A PF 21 - 90L/4A	31	86
	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	PA 11 - 90L/4A PF 11 - 90L/4A	23	84
	524.3	27	2.3	2.71	-	4.0	-	-			
	586.0	24	2.4	2.42	-	4.0	-	-			
	501.8	29	1.9	2.83	-	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm
2.20	49.0	429	0.9	28.80	0.3	0.2	7.0	6.0	PA 22 - 100L/4A PF 22 - 100L/4A	47	102
	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			
	166.6	126	2.1	8.46	3.0	5.0	7.0	6.0			
	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	PA 12 - 100L/4A PF 12 - 100L/4A	36	98
	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			
	243.8	86	1.4	5.78	1.0	3.0	5.0	4.0			
	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	-	-	PA 21 - 100L/4A PF 21 - 100L/4A	40	86
	581.9	36	2.0	2.42	-	4.0	-	-			
	676.8	31	2.2	2.08	-	4.0	-	-			
	763.8	28	2.3	1.85	-	3.0	-	-			
	498.2	42	1.3	2.83	-	3.0	-	-	PA 11 - 100L/4A PF 11 - 100L/4A	32	84
	607.8	35	1.4	2.32	-	3.0	-	-			
	691.2	30	1.9	2.04	-	3.0	-	-			
	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	PA 103/52 - 100L/4B PF 103/52 - 100L/4B	821	142
	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			
	2.2	13057	1.5	642.57	98.0	120.0	120.0	120.0			
	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	PA 93/42 - 100L/4B PF 93/42 - 100L/4B	573	142
	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			
	4.2	6764	1.8	332.89	64.0	80.0	92.0	80.0			
	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	PA 83/42 - 100L/4B PF 83/42 - 100L/4B	394	142
	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			
	6.0	4796	1.7	236.03	43.0	43.0	61.0	65.0			
	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 PF 83 - 100L/4B	352	127
	10.3	2777	2.7	136.67	45.0	39.0	63.0	65.0			
	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	PA 73 - 100L/4B PF 73 - 100L/4B	245	123
	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			
	14.0	2041	1.9	100.47	27.0	20.0	40.0	50.0			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm
3.00	6.6	4357	0.8	214.41	12.0	21.0	23.0	45.0	PA 63 - 100L/4B PF 63 - 100L/4B	161	119
	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			
	18.2	1574	2.1	77.49	20.0	20.0	28.0	44.0			
	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	PA 53 - 100L/4B PF 53 - 100L/4B	124	115
	13.3	2149	1.0	105.77	11.0	24.0	17.0	40.0			
	14.8	1939	1.2	95.41	12.0	24.0	18.0	40.0			
	16.2	1765	1.0	86.88	12.0	24.0	18.0	40.0	PA 52 - 100L/4B PF 52 - 100L/4B	106	114
	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			
	36.7	782	2.1	38.46	14.0	24.0	20.0	40.0			
	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 PF 43 - 100L/4B	91	111
	20.1	1424	0.9	70.10	0.3	0.3	9.0	8.0			
	23.3	1232	0.8	60.64	0.4	0.4	10.0	8.0	PA 42 - 100L/4B PF 42 - 100L/4B	77	110
	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			
	64.5	444	2.1	21.85	6.0	12.0	11.0	8.0			
	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	PA 32 - 100L/4B PF 32 - 100L/4B	61	106
	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			
	178.7	160	2.1	7.89	4.0	7.0	9.0	8.0			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm
3.00	84.2	340	1.0	16.74	0.3	0.3	7.0	6.0	PA 22 - 100L/4B PF 22 - 100L/4B	50	102
	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			
	216.6	132	1.7	6.51	2.0	4.0	7.0	5.0			
	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	PA 12 - 100L/4B PF 12 - 100L/4B	39	98
	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			
	313.9	91	1.3	4.49	0.2	0.2	5.0	4.0			
	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	-	-	PA 31 - 100L/4B PF 31 - 100L/4B	48	88
	677.9	42	2.1	2.08	-	4.0	-	-			
	801.1	36	2.2	1.76	-	4.0	-	-			
	520.6	55	1.4	2.71	-	4.0	-	-	PA 21 - 100L/4B PF 21 - 100L/4B	43	86
	581.9	49	1.5	2.42	-	4.0	-	-			
	676.8	42	1.6	2.08	-	3.0	-	-			
	763.8	38	1.7	1.85	-	3.0	-	-			
	498.2	58	0.9	2.83	-	2.0	-	-	PA 11 - 100L/4B PF 11 - 100L/4B	35	84
	607.8	47	1.0	2.32	-	2.0	-	-			
	691.2	41	1.4	2.04	-	2.0	-	-			
	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	PA 103/52 - 112M/4B PF 103/52 - 112M/4B	827	142
	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			
	4.2	9112	2.2	341.11	100.0	116.0	120.0	120.0			
	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	PA 93/42 - 112M/4B PF 93/42 - 112M/4B	579	142
	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			
	5.0	7693	1.6	287.97	64.0	74.0	91.0	80.0			
	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	PA 83/42 - 112M/4B PF 83/42 - 112M/4B	400	142
	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			
	7.1	5372	1.5	201.09	42.0	39.0	61.0	65.0			
	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	PA 83 - 112M/4B PF 83 - 112M/4B	360	127
	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			
	20.4	1875	2.0	70.19	45.0	32.0	63.0	65.0			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA 52 - 112M/4B PF 52 - 112M/4B	112	104
	24.0	1590	1.2	59.50	13.0	24.0	19.0	40.0			
	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	PA 43 - 112M/4B	98	111
	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	PA 32 - 112M/4B PF 32 - 112M/4B	68	106
	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			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 13.0 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 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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	Tip / Type	 Kg	Sayfa Page mm
7.50	56.0	1279	1.0	25.88	0.4	0.2	10.0	4.0	PA 42 - 132M/4B PF 42 - 132M/4B	111	110
	66.4	1079	1.0	21.85	1.0	0.2	10.0	5.0			
	67.5	1062	1.1	21.50	1.0	0.2	10.0	5.0			
	80.9	886	1.1	17.93	1.0	0.2	11.0	5.0			
	82.0	874	1.4	17.69	1.0	0.2	11.0	6.0			
	96.0	746	1.7	15.10	1.0	0.2	11.0	6.0			
	100.9	710	1.6	14.38	1.0	0.2	11.0	6.0			
	118.1	606	2.0	12.27	1.0	7.0	11.0	6.0			
	142.3	503	2.0	10.19	2.0	7.0	11.0	6.0			
	170.6	420	2.0	8.50	3.0	7.0	11.0	6.0			
	199.5	359	2.1	7.27	4.0	6.0	11.0	6.0			
	234.1	306	2.3	6.19	4.0	6.0	12.0	6.0			
	270.7	265	2.0	5.36	4.0	6.0	11.0	5.0			
	316.5	226	2.2	4.58	4.0	6.0	11.0	5.0			
	371.5	193	2.3	3.90	4.0	6.0	11.0	5.0			
	89.3	802	0.8	16.23	-	-	8.0	6.0	PA 32 - 132M/4B PF 32 - 132M/4B	95	106
	99.8	717	0.9	14.52	-	-	9.0	6.0			
	124.0	578	1.2	11.70	-	-	9.0	6.0			
	148.1	484	1.3	9.79	-	-	9.0	6.0			
	183.7	390	1.7	7.89	1.0	4.0	9.0	6.0			
	215.8	332	1.8	6.72	1.0	4.0	9.0	6.0			
	254.8	281	2.0	5.69	2.0	4.0	9.0	6.0			
	264.1	271	1.6	5.49	1.0	4.0	9.0	6.0			
	274.0	261	2.1	5.29	3.0	4.0	9.0	6.0			
	327.7	219	1.8	4.42	2.0	4.0	9.0	6.0			
	387.0	185	2.0	3.75	2.0	4.0	9.0	6.0			
	488.6	147	2.1	2.97	2.0	4.0	9.0	5.0			
	506.6	141	2.3	2.86		6.0			PA/PF 51 - 132M/4B	101	92
	580.0	123	2.0	2.50	-	4.0	-	-	PA 41 - 132M/4B PF 41 - 132M/4B	92	90
	678.2	106	2.1	2.14	-	4.0	-	-			
	562.0	127	1.4	2.58	-	3.0	-	-	PA 31 - 132M/4B PF 31 - 132M/4B	82	88
	697.1	103	1.6	2.08	-	3.0	-	-			
9.20	4.3	20699	1.0	341.11	90.0	97.0	120.0	120.0	PA 103/52 - 132M/4 PF 103/52 - 132M/4	855	142
	4.9	17970	1.1	296.56	93.0	96.0	120.0	120.0			
	5.9	14825	1.3	244.66	96.0	94.0	120.0	120.0			
	7.8	11196	1.8	184.77	99.0	90.0	120.0	120.0			
	9.4	9379	2.1	154.79	100.0	88.0	120.0	120.0			
	11.8	7438	2.7	122.75	101.0	84.0	120.0	120.0			
	13.7	6392	3.1	105.49	101.0	81.0	120.0	120.0			
	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	11391	1.2	187.99	59.0	56.0	88.0	80.0	PA 93 - 132M/4 PF 93 - 132M/4	565	131
	13.3	6620	1.7	109.25	64.0	53.0	92.0	80.0			
	15.5	5662	2.5	93.43	65.0	52.0	92.0	80.0			
	20.0	4388	3.1	72.42	66.0	50.0	93.0	80.0			
	8.8	9979	0.9	164.68	32.0	26.0	54.0	65.0	PA 83 - 132M/4 PF 83 - 132M/4	386	127
	13.9	6300	1.5	103.97	41.0	28.0	60.0	65.0			
	18.0	4886	1.8	80.63	43.0	28.0	61.0	65.0			
	20.7	4253	2.1	70.19	43.0	27.0	62.0	65.0			
	23.5	3744	2.4	61.79	44.0	27.0	62.0	65.0			
	28.1	3122	2.9	51.52	44.0	27.0	62.0	65.0			
	29.7	2955	1.8	48.76	44.0	26.0	63.0	65.0	PA/PF 82 - 132M/4	378	126
	11.7	7537	0.7	124.38	11.0	9.0	31.0	42.0	PA 73 - 132M/4 PF 73 - 132M/4	279	123
	15.9	5534	1.0	91.33	21.0	11.0	35.0	42.0			
	19.4	4533	1.2	74.80	23.0	12.0	37.0	42.0			
	24.0	3661	1.5	60.42	25.0	12.0	38.0	41.0			
	27.7	3168	1.8	52.28	26.0	13.0	39.0	40.0			
	31.8	2767	1.9	45.67	27.0	13.0	39.0	40.0			
	38.5	2283	2.2	37.68	27.0	13.0	39.0	38.0			
	43.6	2016	2.5	33.27	28.0	13.0	40.0	38.0			
	51.1	1718	2.9	28.35	28.0	13.0	40.0	36.0			
	33.2	2648	1.5	43.70	27.0	13.0	39.0	40.0	PA 72 - 132M/4 PF 72 - 132M/4	269	122
	43.8	2005	1.6	33.08	28.0	13.0	40.0	37.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA 62 - 160L/4A PF 62 - 160L/4A	237	118
	39.1	3664	0.8	37.08	15.0	9.0	25.0	27.0			
	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	PA 52 - 160L/4A PF 52 - 160L/4A	180	114
	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			
	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	PA 42 - 160L/4A PF 42 - 160L/4A	151	110
	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			
	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	-	-	PA 41 - 160L/4A PF 41 - 160L/4A	132	90
	580.0	247	1.1	2.50	-	3.0	-	-			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	9825	0.9	80.63	32.0	17.0	55.0	58.0	PA 83 - 180M/4B PF 83 - 180M/4B	455	127
	20.7	8552	1.0	70.19	36.0	19.0	57.0	58.0			
	23.5	7529	1.2	61.79	39.0	19.0	59.0	58.0			
	28.1	6278	1.4	51.52	41.0	20.0	60.0	57.0			
	32.7	5403	1.6	44.34	42.0	20.0	61.0	56.0			
	37.2	4753	1.9	39.01	43.0	21.0	61.0	55.0			
	44.6	3963	2.2	32.53	44.0	21.0	62.0	54.0			
	51.8	3411	2.4	27.99	44.0	20.0	62.0	52.0			
	59.5	2971	2.7	24.38	44.0	20.0	63.0	51.0			
	69.1	2557	3.1	20.99	45.0	20.0	62.0	50.0			
	45.2	3911	1.7	32.10	44.0	21.0	62.0	54.0	PA 82 - 180M/4B PF 82 - 180M/4B	447	126
	54.5	3244	2.0	26.62	44.0	20.0	62.0	52.0	PA 73 - 180M/4B PF 73 - 180M/4B	348	123
	24.0	7362	0.8	60.42	11.0	4.0	25.0	30.0			
	27.7	6370	0.9	52.28	17.0	5.0	29.0	31.0			
	31.8	5564	1.0	45.67	20.0	7.0	31.0	31.0			
	38.5	4591	1.1	37.68	23.0	8.0	34.0	31.0			
	43.6	4054	1.2	33.27	25.0	8.0	35.0	31.0			
	51.1	3455	1.4	28.35	26.0	9.0	36.0	31.0			
	62.0	2850	1.8	23.39	26.0	9.0	36.0	31.0	PA 72 - 180M/4B PF 72 - 180M/4B	338	122
	50.7	3483	1.2	28.58	26.0	9.0	37.0	32.0			
	66.8	2637	1.7	21.64	27.0	9.0	37.0	31.0			
	86.1	2051	2.0	16.83	27.0	10.0	37.0	30.0			
	101.2	1746	2.3	14.33	27.0	10.0	36.0	29.0	PA 63 - 180M/4B PF 63 - 180M/4B	271	119
	116.0	1522	2.7	12.49	27.0	10.0	35.0	28.0			
	40.1	4403	0.8	36.14	11.0	7.0	21.0	24.0			
	46.9	3766	1.0	30.90	14.0	8.0	24.0	24.0			
	55.1	3208	1.0	26.33	16.0	9.0	26.0	24.0	PA 62 - 180M/4B PF 62 - 180M/4B	269	118
	66.0	2677	1.2	21.97	18.0	9.0	26.0	24.0			
	69.7	2535	1.3	20.81	18.0	9.0	27.0	24.0			
	79.9	2212	1.4	18.16	19.0	10.0	27.0	24.0			
	91.7	1926	1.6	15.80	19.0	10.0	27.0	24.0			
	104.2	1695	1.8	13.91	19.0	10.0	28.0	23.0			
	125.0	1414	2.2	11.60	20.0	10.0	28.0	23.0			
	137.8	1282	2.4	10.52	20.0	10.0	28.0	22.0			
	165.2	1069	2.8	8.78	20.0	9.0	27.0	22.0	PA 52 - 180M/4B PF 52 - 180M/4B	216	114
	192.0	920	3.3	7.55	20.0	9.0	27.0	21.0			
	228.4	773	2.5	6.35	20.0	9.0	25.0	20.0			
	274.0	645	2.9	5.29	20.0	9.0	25.0	19.0			
	74.1	2385	0.8	19.57	-	-	9.0	27.0			
	81.4	2170	0.9	17.81	-	-	11.0	27.0			
	103.6	1705	1.1	13.99	2.0	17.0	13.0	25.0			
	107.7	1640	1.1	13.46	5.0	18.0	15.0	26.0			
	137.1	1289	1.4	10.58	7.0	17.0	16.0	24.0			
	164.2	1076	1.6	8.83	9.0	16.0	17.0	24.0			
	199.0	888	1.8	7.29	9.0	15.0	18.0	23.0			
	225.3	784	1.9	6.44	8.0	15.0	19.0	22.0			
	259.1	682	1.7	5.60	8.0	14.0	18.0	21.0			
	314.1	562	2.1	4.62	8.0	13.0	18.0	20.0			
	355.7	497	2.3	4.08	8.0	13.0	18.0	20.0			
	395.0	447	2.4	3.67	7.0	13.0	18.0	19.0			
	421.1	420	2.4	3.44	7.0	12.0	18.0	19.0			
	448.5	394	2.4	3.23	7.0	12.0	18.0	19.0			
	521.9	339	2.6	2.78	7.0	12.0	18.0	18.0	PA 51 - 180M/4B PF 51 - 180M/4B	177	92
	580.0	305	1.4	2.50	-	4.0	-	-			
	703.0	251	1.5	2.06	-	4.0	-	-	PA 103/52 - 180L/4B PF 103/52 - 180L/4B	939	142
22.0	7.8	26842	0.7	184.77	81.0	66.0	120.0	120.0			
	9.3	22486	0.9	154.79	88.0	67.0	120.0	120.0			
	11.8	17832	1.1	122.75	94.0	67.0	120.0	120.0			
	13.7	15325	1.3	105.49	96.0	67.0	120.0	120.0			
	10.6	19832	1.2	136.52	92.0	67.0	120.0	120.0	PA 103 - 180L/4B PF 103 - 180L/4B	861	135
	17.8	11834	1.7	81.46	99.0	66.0	120.0	115.0			
	20.5	10230	2.0	70.42	100.0	65.0	120.0	113.0			
	23.8	8826	2.3	60.75	100.0	63.0	120.0	110.0			
	27.3	7700	2.6	53.00	101.0	62.0	120.0	107.0			
	31.9	6585	3.0	45.33	101.0	61.0	120.0	104.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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	PA 82 - 225S/4A PF 82 - 225S/4A	576	126
	88.2	4007	1.6	16.56	40.0	15.0	51.0	42.0			
	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	PA 73 - 225S/4A PF 73 - 225S/4A	477	123
	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			
	70.7	4999	1.0	20.66	13.0	4.0	20.0	23.0	PA 72 - 225S/4A PF 72 - 225S/4A	467	122
	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			
	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	PA 62 - 225S/4A PF 62 - 225S/4A	398	118
	104.9	3367	0.9	13.91	14.0	5.0	16.0	18.0			
	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 [N]	F _A [N]	F _{R GR} [N]	F _{A GR} [N]	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 - MOTOR



PA/PF - IEC



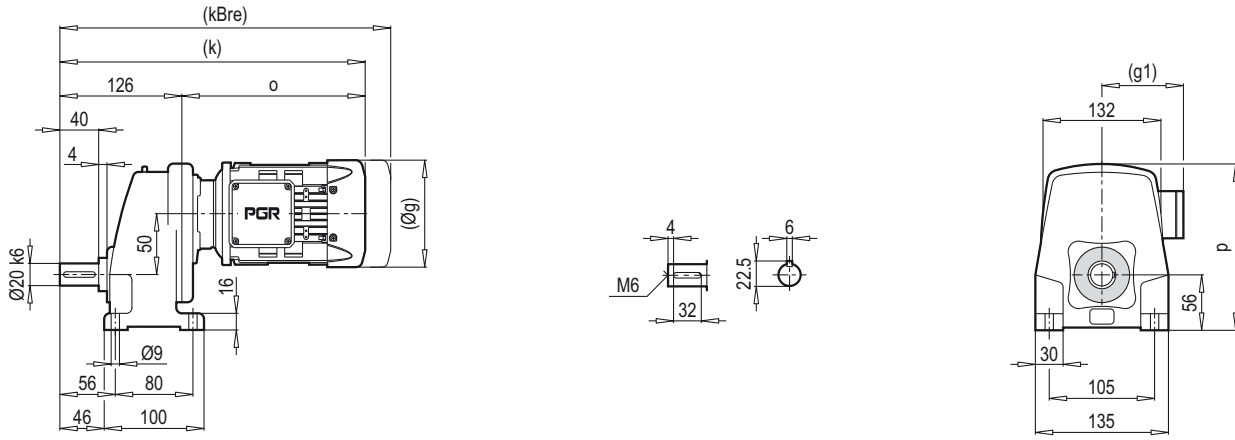
PA/PF - W



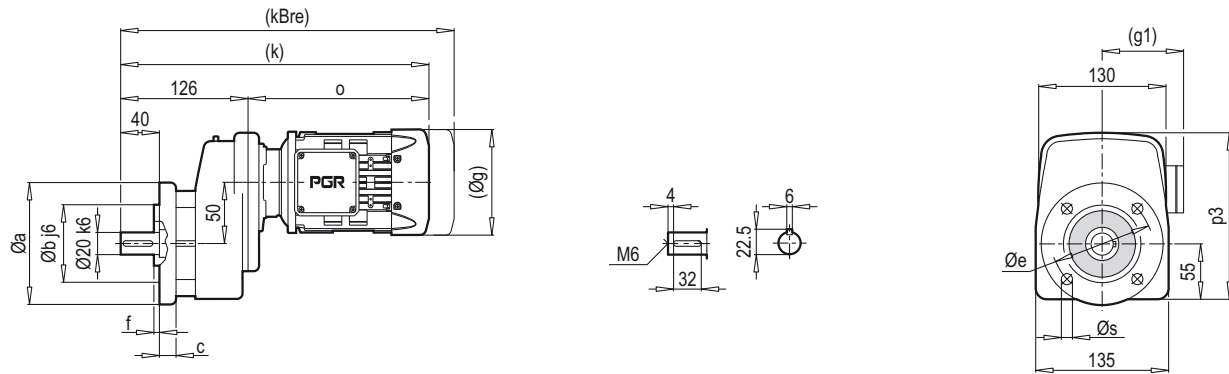
PA/PF - PAM

PA / PF

PA 11



PF 11

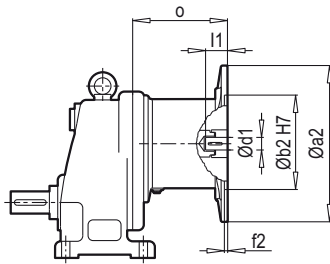


a	b	c	e	f	s
120	80	10	100	3.0	7
140	95	10	115	3.0	9

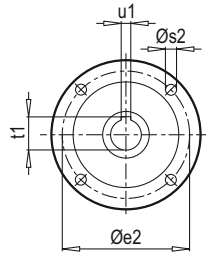
	63 M	71 M	80 M	90 S/L	100 L	112 M		
g	124	140	159	193	217	232		
g1	111	119	127	151	160	168		
k	324	366	393	416/436	464	509		
kBre	376	426	455	489/509	545	589		
o	198	240	267	290/310	338	383		
p	171	179	189	199	208	220		
p3	171	179	189	199	208	220		

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

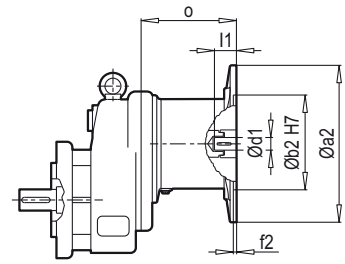
PA 11



IEC



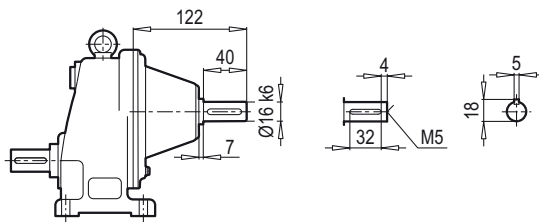
PF 11



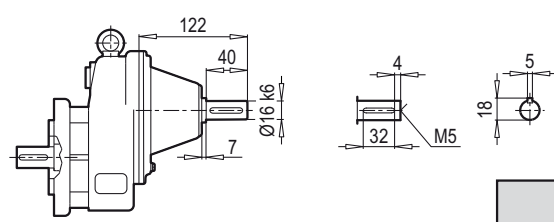
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	89
	80	200	130	165	4.0	M10	19	40	21.8	6	105
	90	200	130	165	4.0	M10	24	50	27.3	8	105
	100	250	180	215	5.0	M12	28	60	31.3	8	130
	112	250	180	215	5.0	M12	28	60	31.3	8	130

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

PA 11



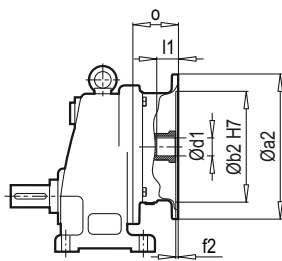
W



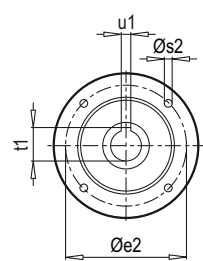
PF 11

W ~ Kg	
PA/PF 11	10

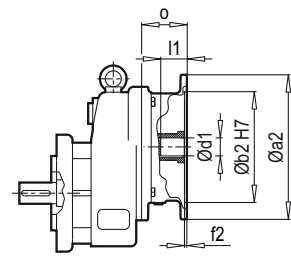
PA 11



PAM B5/B14



PF 11



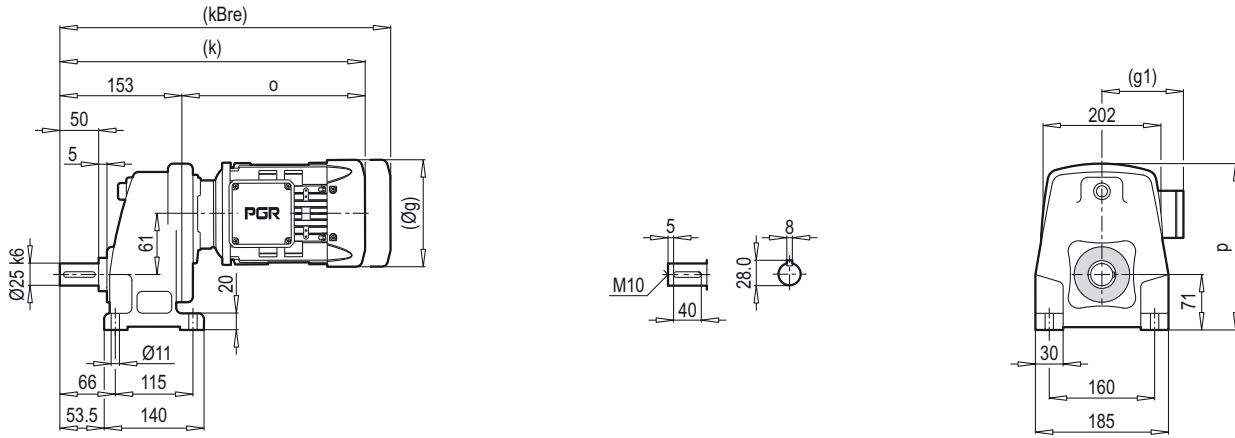
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	3.5	M8	11	23	12.8	4	85
	71	160	110	130	4.0	M8	14	30	16.3	5	55
	80	200	130	165	4.0	M10	19	40	21.8	6	74
	90	200	130	165	4.0	M10	24	50	27.3	8	74
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75

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

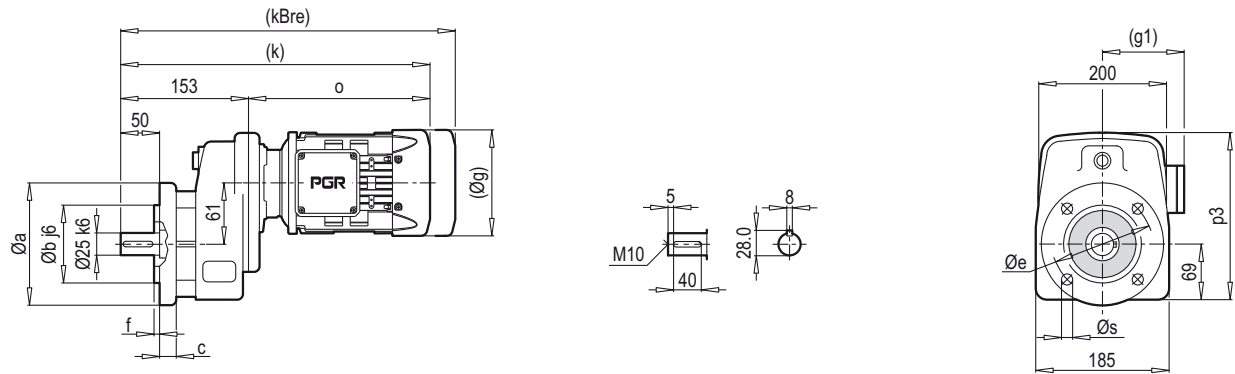
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	90	60	75	4	6	11	23	12.8	4	60
	71	105	70	85	4	7	14	30	16.3	5	55
	80	120	80	100	4	7	19	40	21.8	6	74
	90	140	95	115	4	9	24	50	27.3	8	74
	100	160	110	130	5	9	28	60	31.3	8	75
	112	160	110	130	5	9	28	60	31.3	8	75

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

PA 21



PF 21

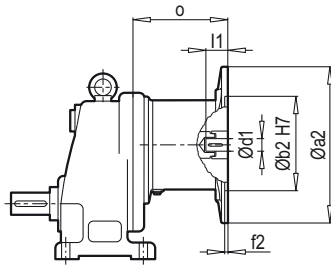


a	b	c	e	f	s
140	95	10	115	3.0	9
160	110	10	130	3.5	9

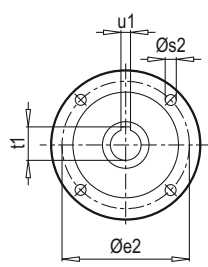
	90 L	100 L	112 M					
g	193	217	232					
g1	151	160	168					
k	458	486	531					
kBre	531	567	611					
o	305	333	378					
p	232	234	246					
p3	227	229	241					

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

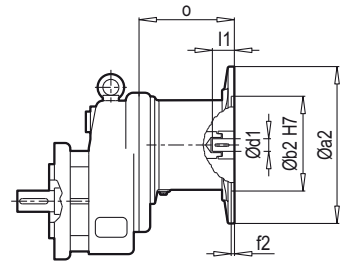
PA 21



IEC



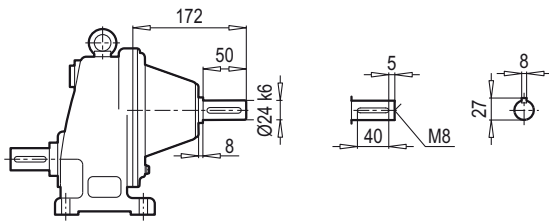
PF 21



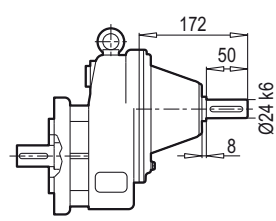
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	107
	90	200	130	165	4.0	M10	24	50	27.3	8	107
	100	250	180	215	5.0	M12	28	60	31.3	8	124
	112	250	180	215	5.0	M12	28	60	31.3	8	124

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

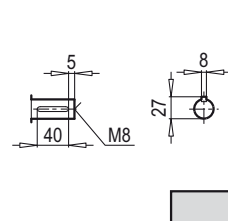
PA 21



W

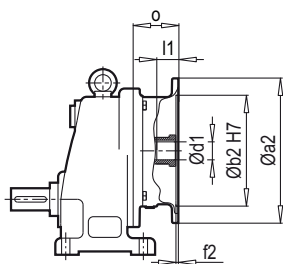


PF 21

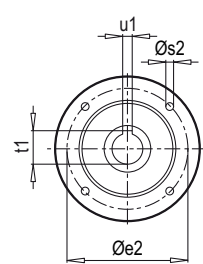


W ~ Kg	
PA/PF 21	23

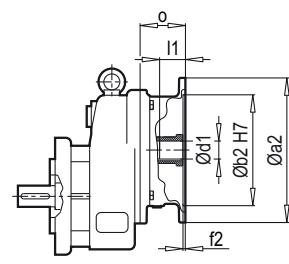
PA 21



PAM B5/B14



PF 21



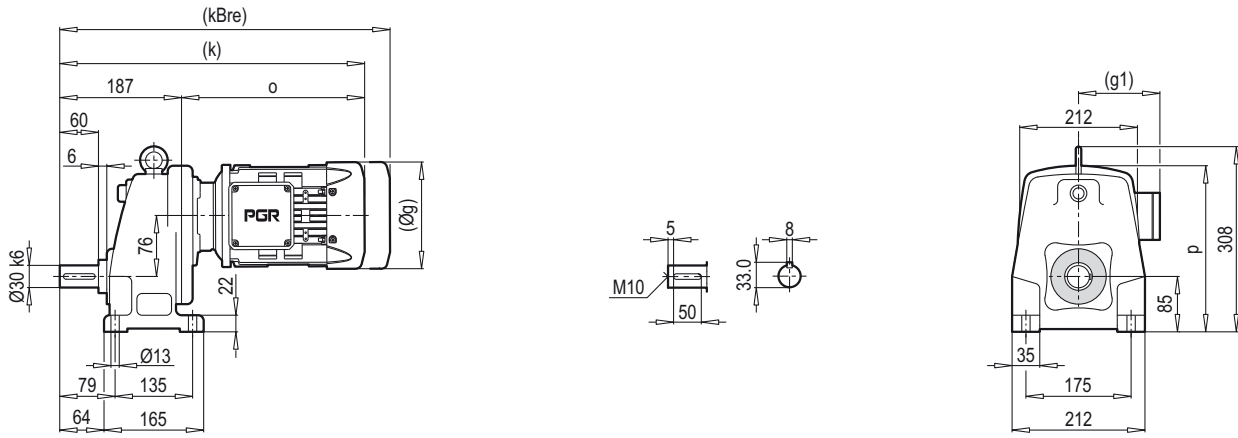
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	72
	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75

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

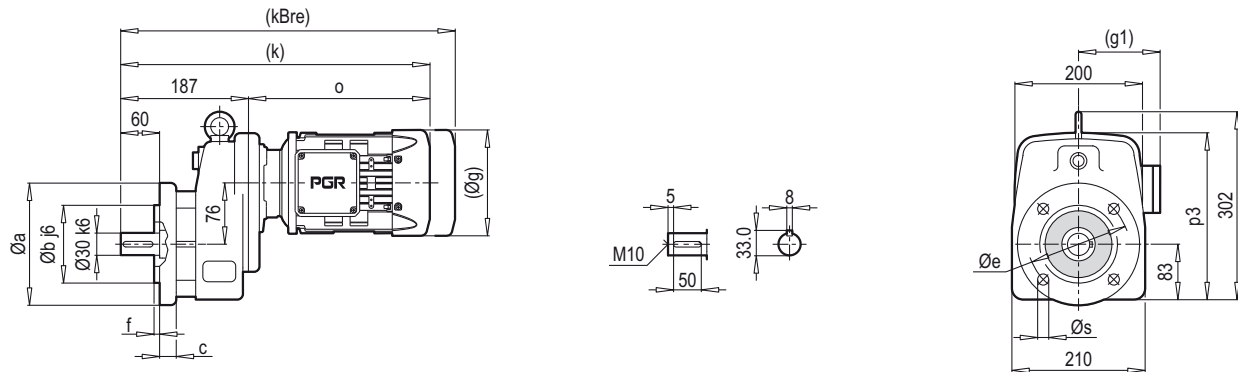
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	105	70	85	4.0	7	14	30	16.3	5	88
	80	120	80	100	4.0	7	19	40	21.8	6	72
	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75

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

PA 31



PF 31

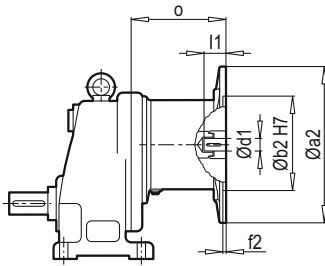


a	b	c	e	f	s
200	130	12	165	3.5	11

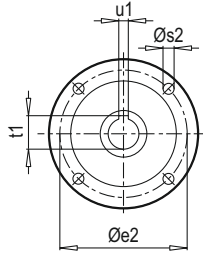
	100 L	112 M	132 S/M					
g	217	232	279					
g1	160	168	182					
k	520	565	572/607					
kBre	601	645	680/748					
o	333	378	385/420					
p	263	275	294					
p3	260	272	291					

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

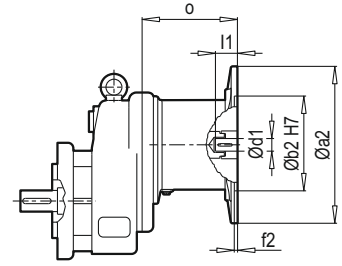
PA 31



IEC



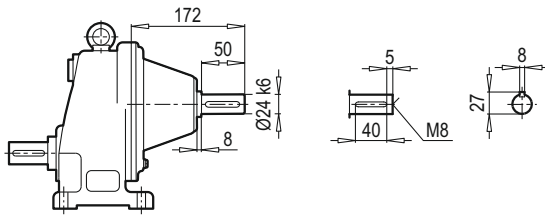
PF 31



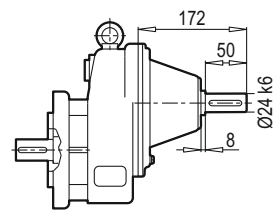
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	107
	90	200	130	165	4.0	M10	24	50	27.3	8	107
	100	250	180	215	5.0	M12	28	60	31.3	8	124
	112	250	180	215	5.0	M12	28	60	31.3	8	124
	132	300	230	265	5.0	M12	38	80	41.3	10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

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

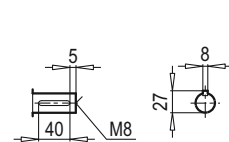
PA 31



W

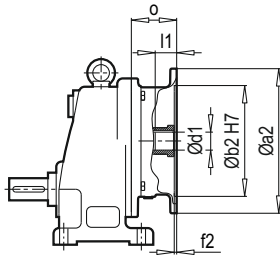


PF 31

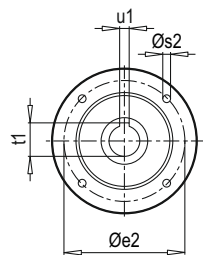


W ~ Kg	
PA/PF 31	28

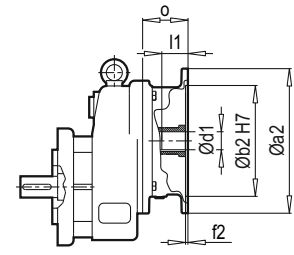
PA 31



PAM B5/B14



PF 31



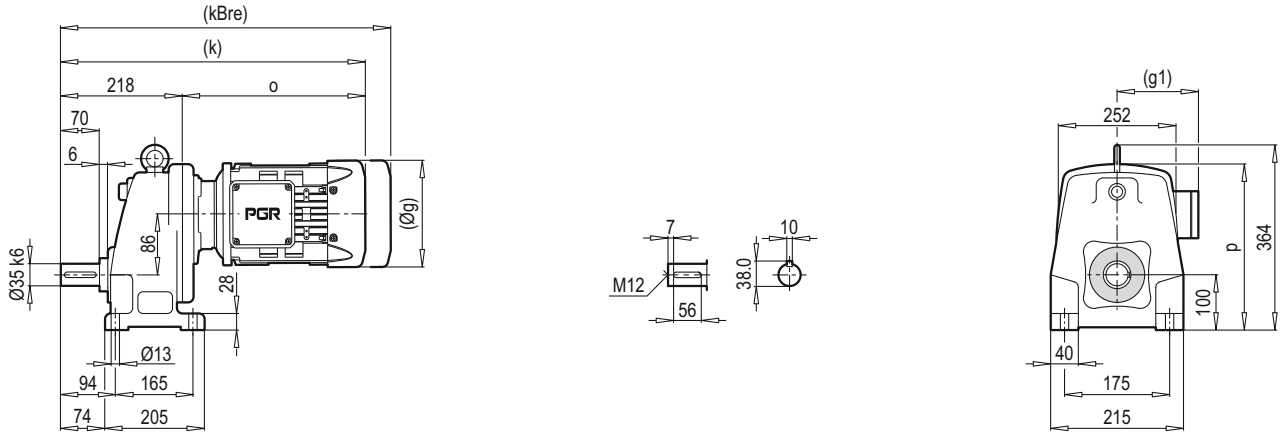
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4.0	M8	14	30	16.3	5	88
	80	200	130	165	4.0	M10	19	40	21.8	6	72
	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94

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

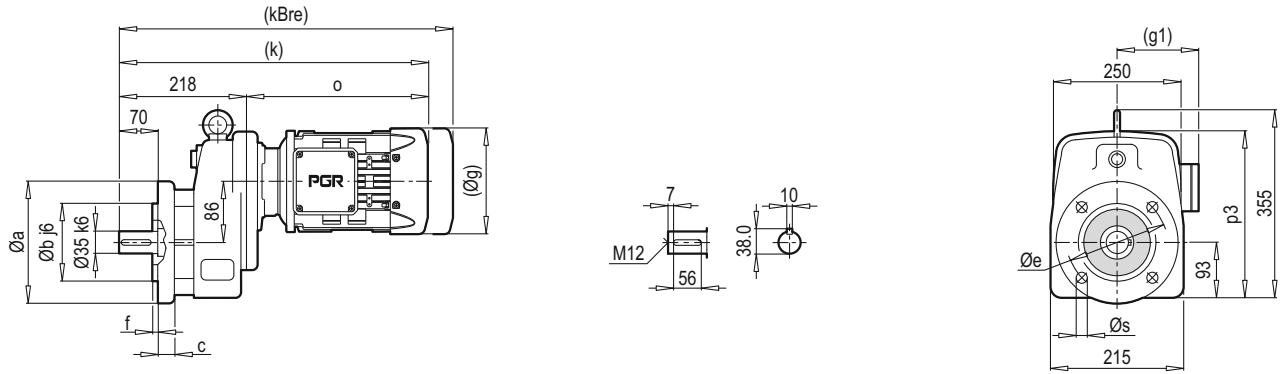
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	105	70	85	4.0	7	14	30	16.3	5	88
	80	120	80	100	4.0	7	19	40	21.8	6	72
	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

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

PA 41



PF 41

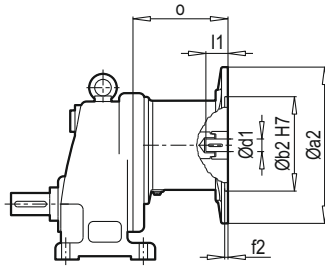


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

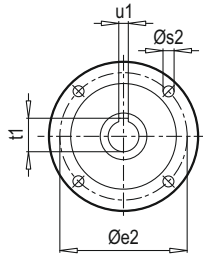
	112 M	132 S/M	160 M/L					
g	232	279	323					
g1	168	182	200					
k	576	583/618	723					
kBre	656	691/759	875					
o	358	365/400	505					
p	311	319	346					
p3	302	310	337					

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

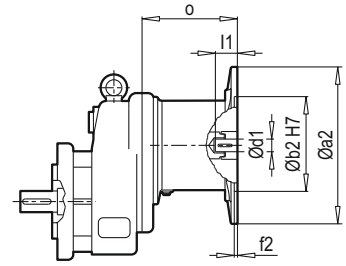
PA 41



IEC



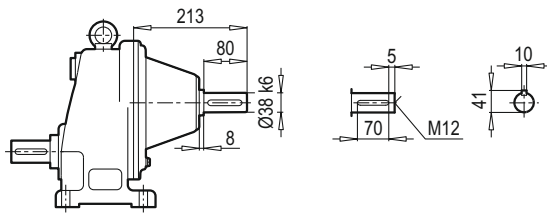
PF 41



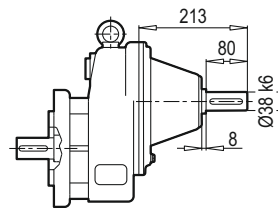
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.0	M10	24	50	27.3	8	109
	100	250	180	215	5.0	M12	28	60	31.3	8	133
	112	250	180	215	5.0	M12	28	60	31.3	8	133
	132	300	230	265	5.0	M12	38	80	41.3	10	190
	160	350	250	300	6.0	M16	42	110	45.3	12	194

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

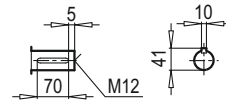
PA 41



W

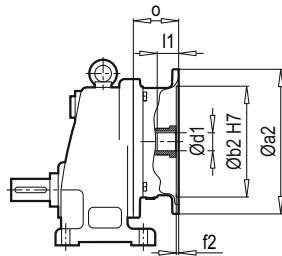


PF 41

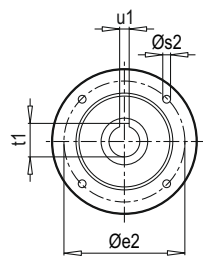


W ~ Kg	
PA/PF 41	48

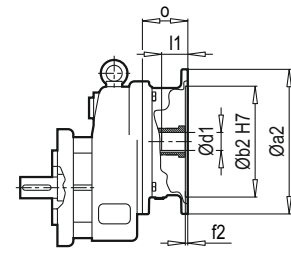
PA 41



PAM B5/B14



PF 41



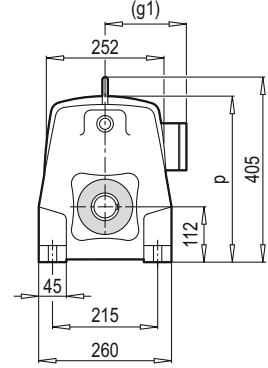
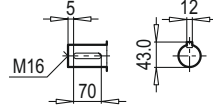
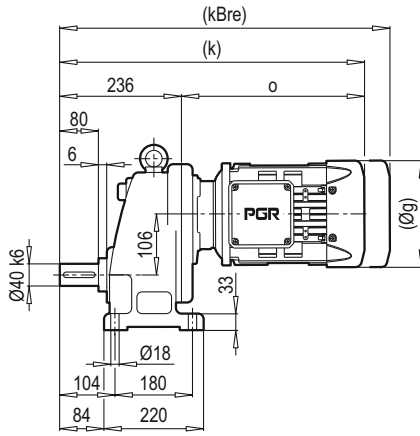
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94
	160	350	250	300	6.0	M16	42	110	45.3	12	120

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

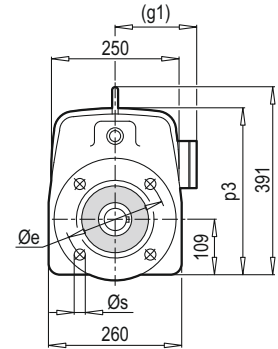
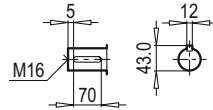
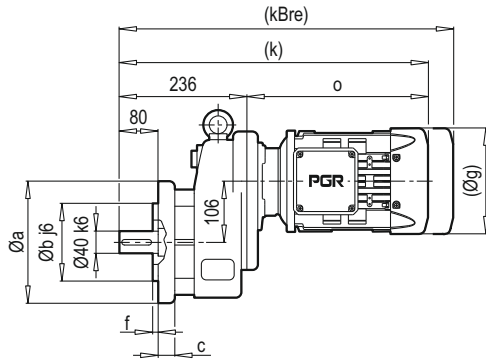
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

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

PA 51



PF 51

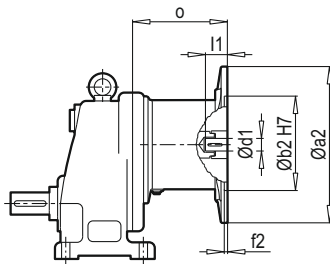


a	b	c	e	f	s
250	180	20	215	4.0	14
300	230	20	265	4.0	14

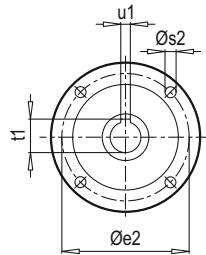
	112 M	132 S/M	160 M/L	180 M/L				
g	232	279	323	370				
g1	168	182	200	248				
k	594	601/636	741	815				
kBre	674	709/777	893	977				
o	358	365/400	505	579				
p	343	351	378	378				
p3	341	349	376	376				

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

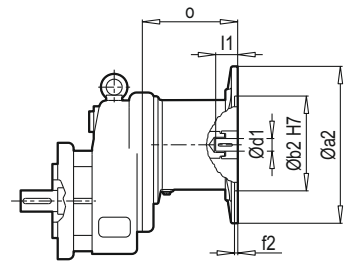
PA 51



IEC



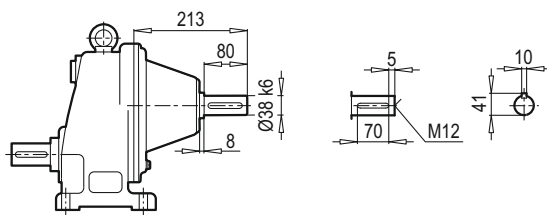
PF 51



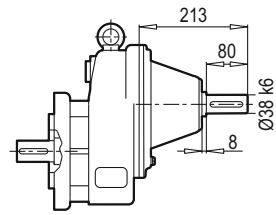
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.0	M10	24	50	27.3	8	109
	100	250	180	215	5.0	M12	28	60	31.3	8	133
	112	250	180	215	5.0	M12	28	60	31.3	8	133
	132	300	230	265	5.0	M12	38	80	41.3	10	190
	160	350	250	300	6.0	M16	42	110	45.3	12	194
	180	350	250	300	6.0	M16	48	110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

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

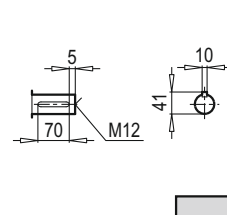
PA 51



W

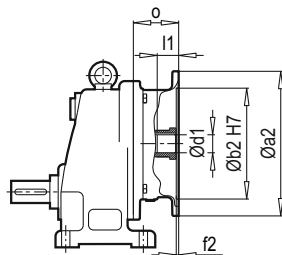


PF 51

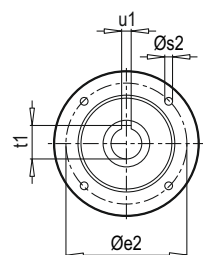


W ~ Kg	
PA/PF 51	58

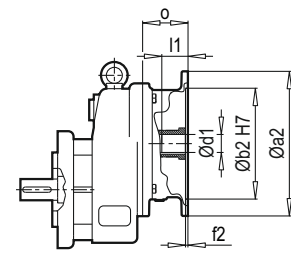
PA 51



PAM B5/B14



PF 51



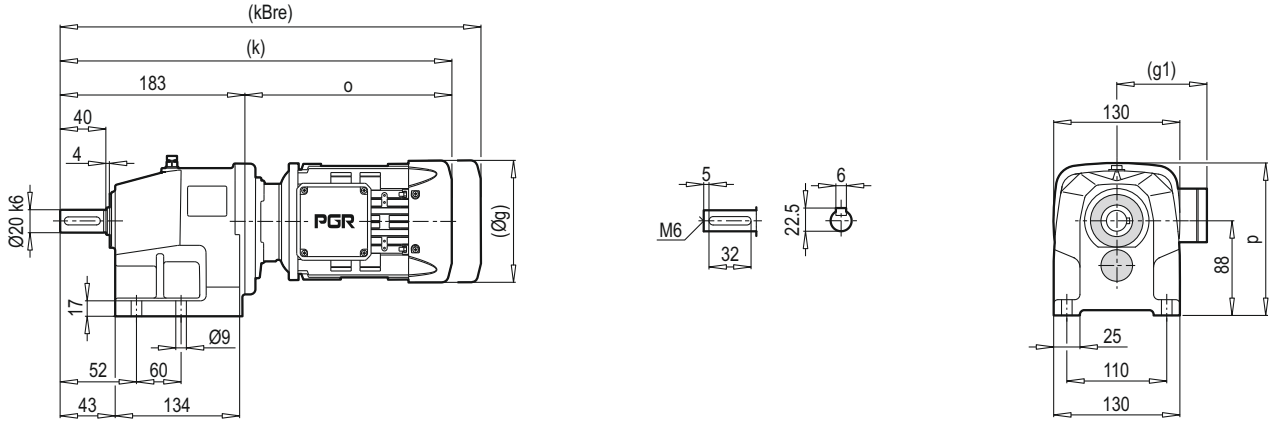
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.0	M10	24	50	27.3	8	72
	100	250	180	215	5.0	M12	28	60	31.3	8	75
	112	250	180	215	5.0	M12	28	60	31.3	8	75
	132	300	230	265	5.0	M12	38	80	41.3	10	94
	160	350	250	300	6.0	M16	42	110	45.3	12	120
	180	350	250	300	6.0	M16	48	110	51.8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

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

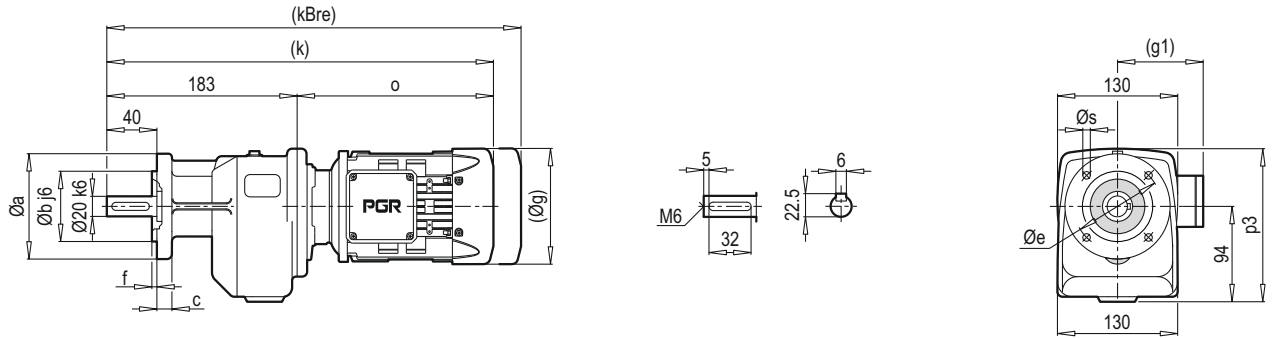
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	140	95	115	4.0	9	24	50	27.3	8	72
	100	160	110	130	5.0	9	28	60	31.3	8	75
	112	160	110	130	5.0	9	28	60	31.3	8	75
	132	200	130	165	5.0	11	38	80	41.3	10	94

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

PA 02



PF 02



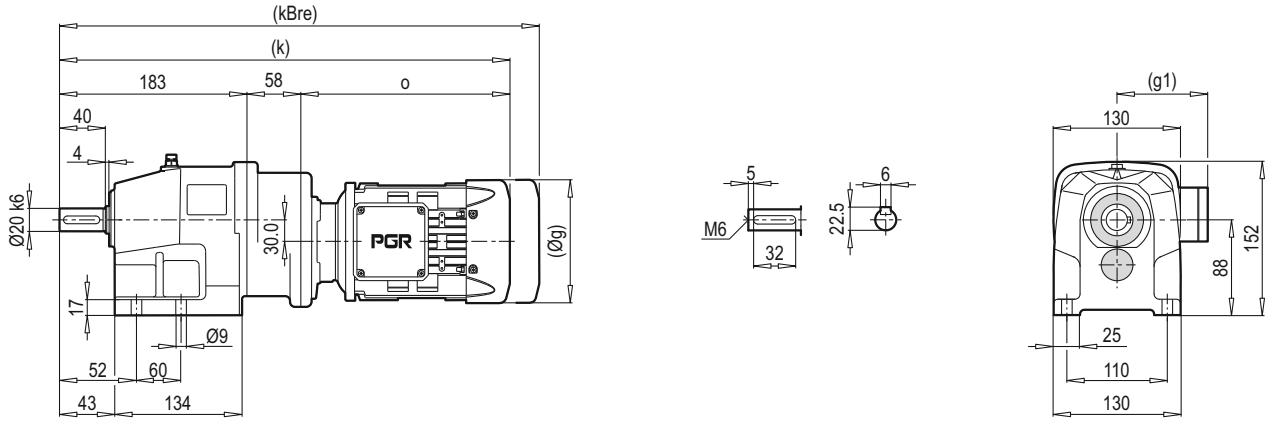
a	b	c	e	f	s
120	80	11	100	3.0	7
140	95	11	115	3.0	9
160	110	11	130	3.5	9

	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				

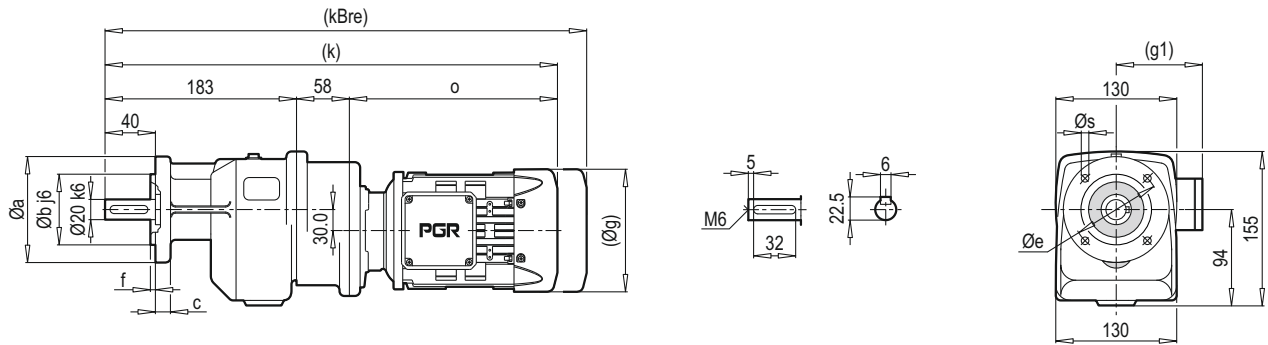
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.

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

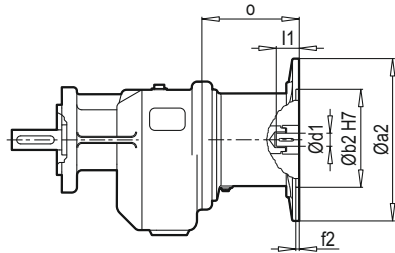
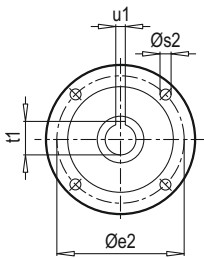
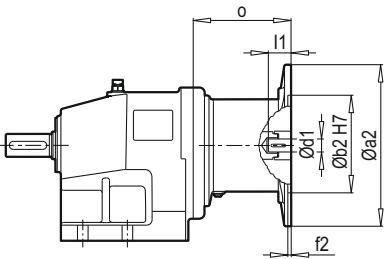
	63 M	71 M						
g	124	140						
g1	111	119						
k	439	481						
kBre	491	541						
o	198	240						
p								
p3								

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



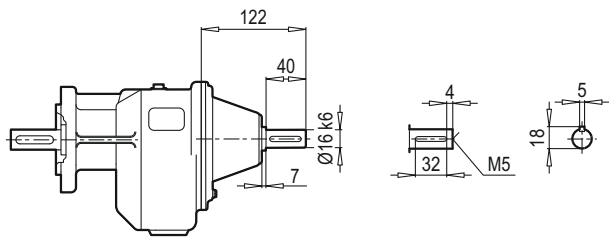
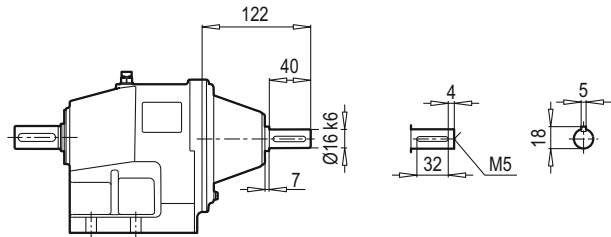
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 02-03	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 02	80	200	130	165	4.0	M10	19	40	21.8	6	105
PA/PF 02	90	200	130	165	4.0	M10	24	50	27.3	8	105

~ 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

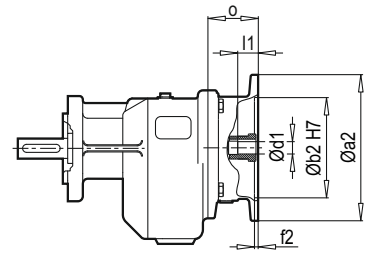
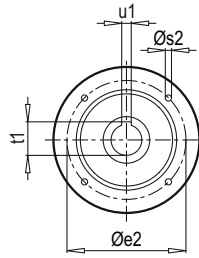
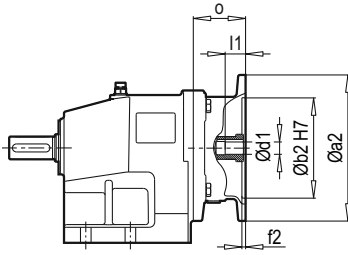


W ~ Kg	
PA/PF 02	12
PA/PF 03	17

PA 02
PA 03

PAM B5/B14

PF 02
PF 03



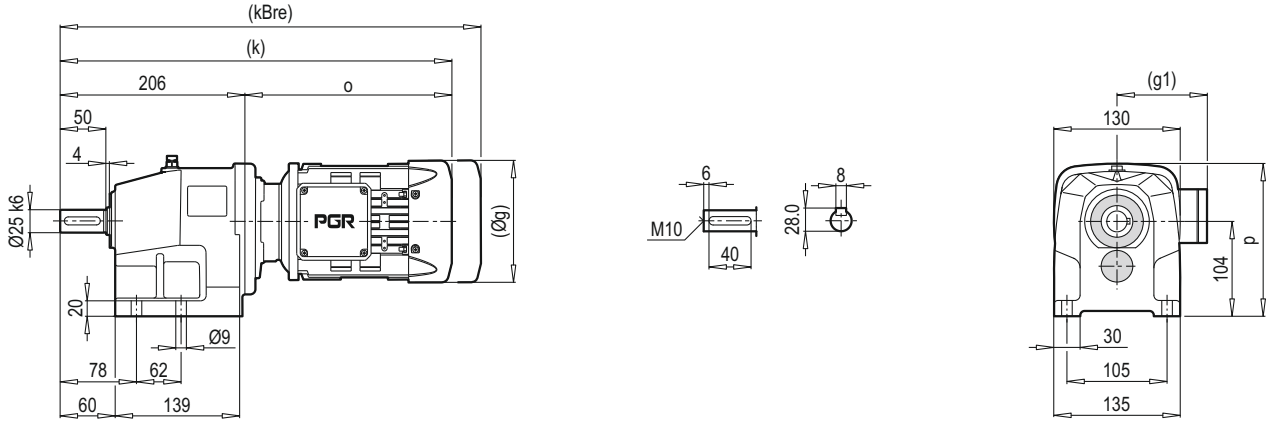
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 02 PA/PF 03 o
PA/PF 02-03	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4.0	M8	14	30	16.3	5	55
PA/PF 02	80	200	130	165	4.0	M10	19	40	21.8	6	74
PA/PF 02	90	200	130	165	4.0	M10	24	50	27.3	8	74

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

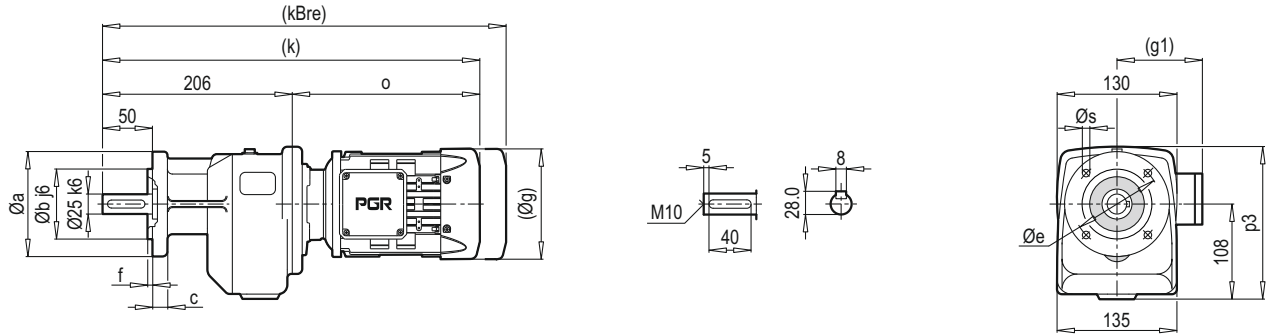
~ Kg		
PAM B5	PA/PF 02	PA/PF 03
63	12	16
71	12	16
80	13	-
90	13	-

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

PA 12



PF 12



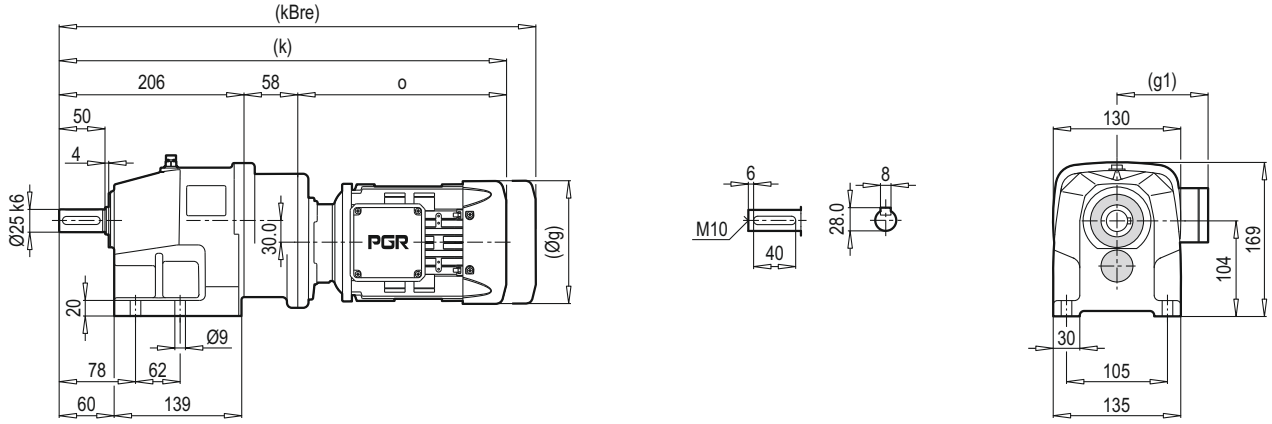
a	b	c	e	f	s
120	80	13	100	3.0	7
140	95	13	115	3.0	9
160	110	13	130	3.5	9

	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		

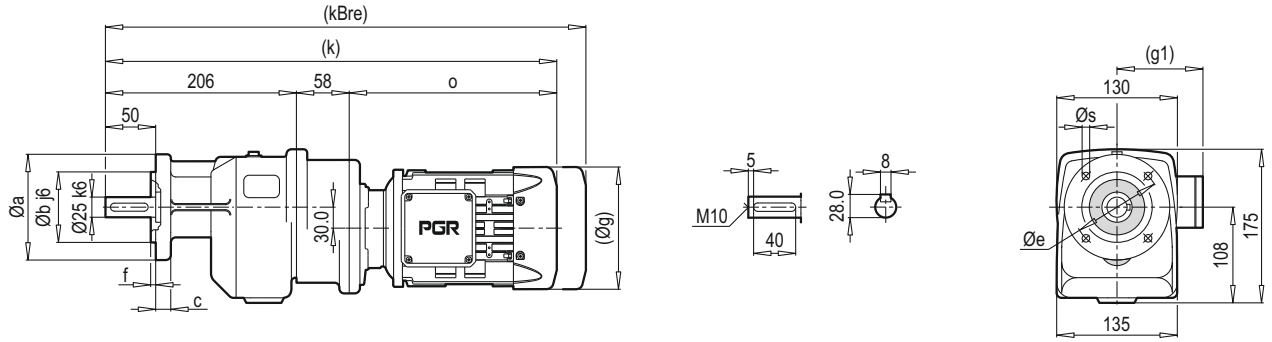
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.

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

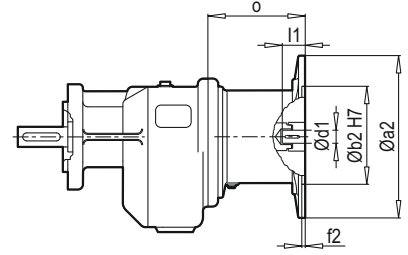
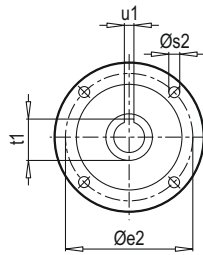
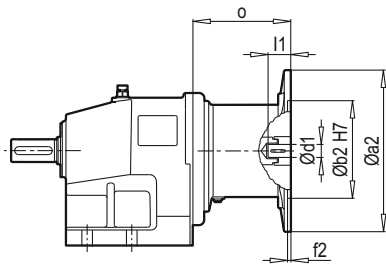
	63 M	71 M						
g	124	140						
g1	111	119						
k	462	504						
kBre	514	564						
o	198	240						

Not : (...) İşaretili 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



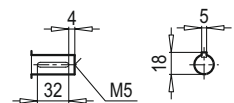
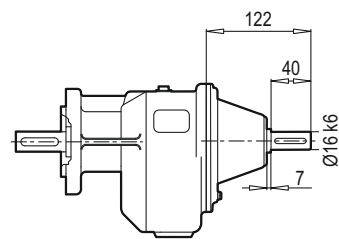
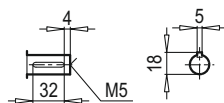
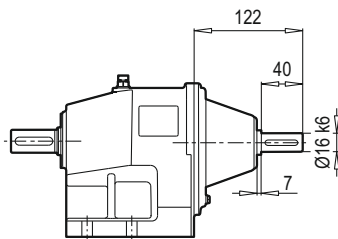
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 12	80	200	130	165	4.0	M10	19	40	21.8	6	105
PA/PF 12	90	200	130	165	4.0	M10	24	50	27.3	8	105
PA/PF 12	100	250	180	215	5.0	M12	28	60	31.3	8	130
PA/PF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

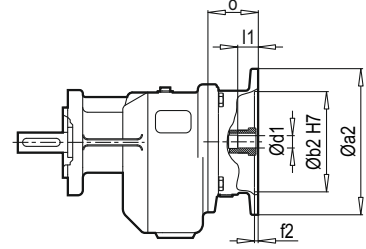
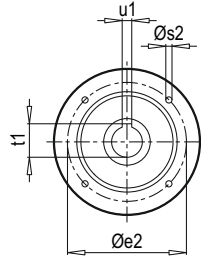
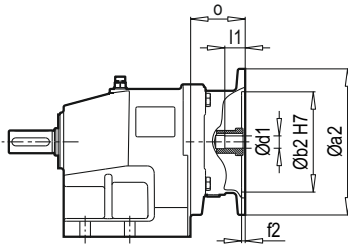


W ~ Kg	
PA/PF 12	15
PA/PF 13	20

PA 12
PA 13

PAM B5/B14

PF 12
PF 13



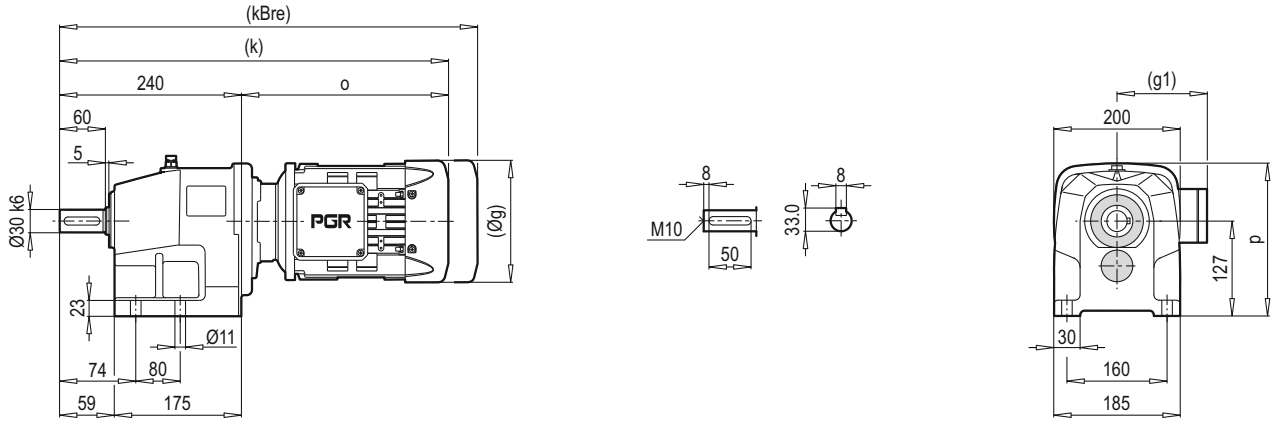
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4.0	M8	14	30	16.3	5	55
PA/PF 12	80	200	130	165	4.0	M10	19	40	21.8	6	74
PA/PF 12	90	200	130	165	4.0	M10	24	50	27.3	8	74
PA/PF 12	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF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

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

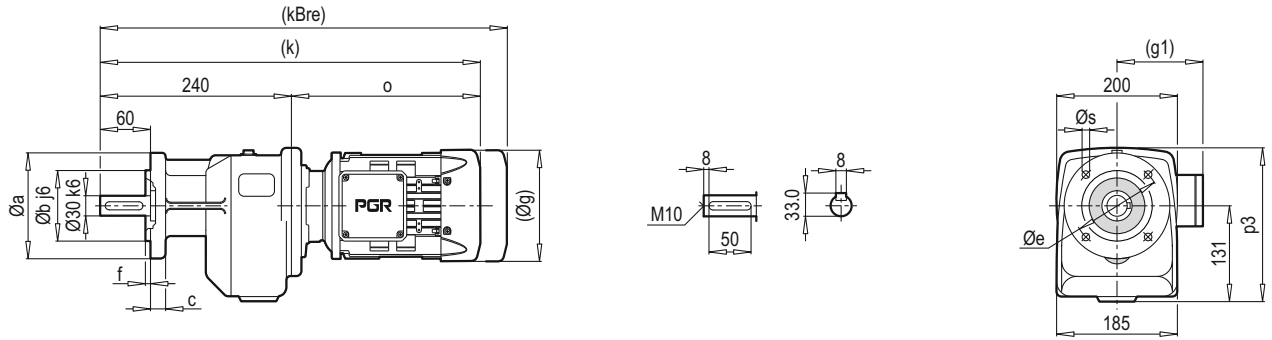
~ Kg		
PAM B5	PA/PF 12	PA/PF 13
63	14	19
71	14	19
80	15	-
90	15	-
100	22	-
112	22	-

~ 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

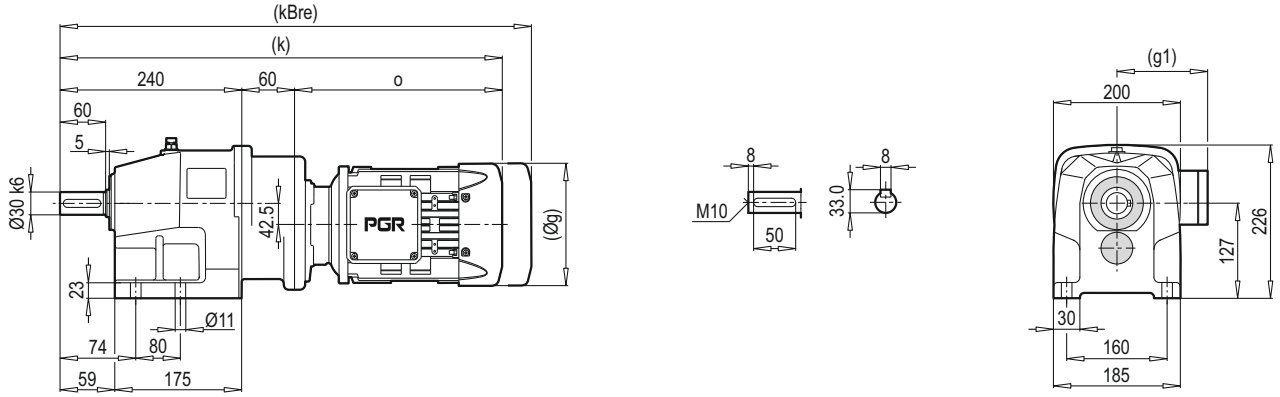


a	b	c	e	f	s
160	110	14	130	3.5	9
200	130	14	165	3.5	11

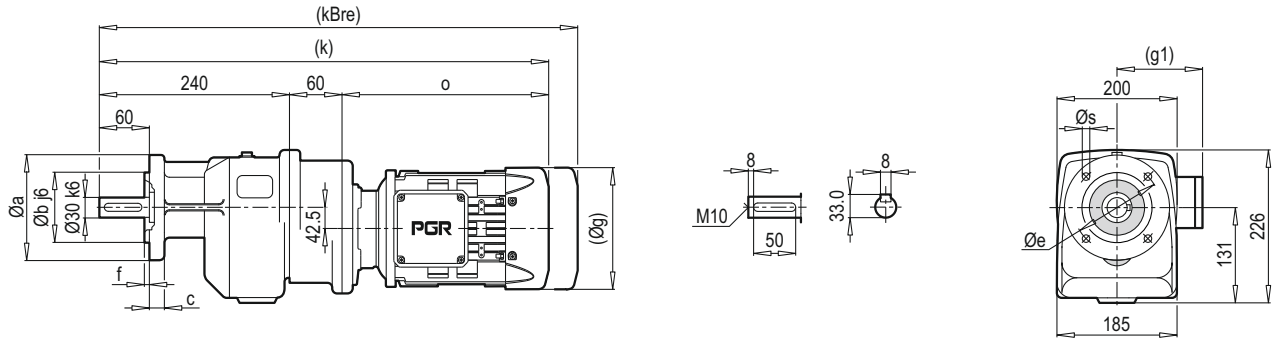
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	476	502	525/545	573	618			
kBre	536	564	598/618	654	698			
o	236	262	285/305	333	378			
p	226	226	226	228	240			
p3	226	226	226	228	240			

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

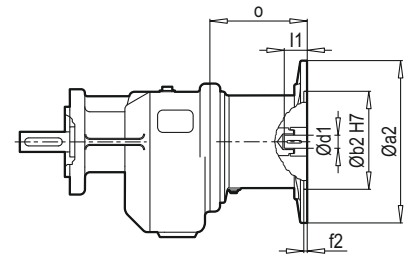
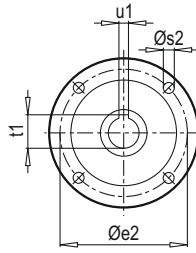
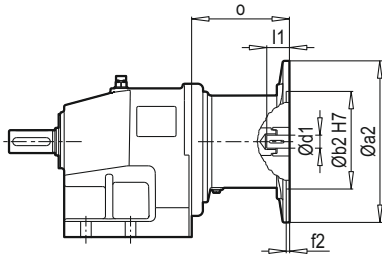
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k	498	540	567					
kBre	550	600	629					
o	198	240	267					

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



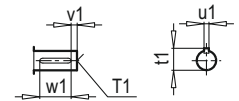
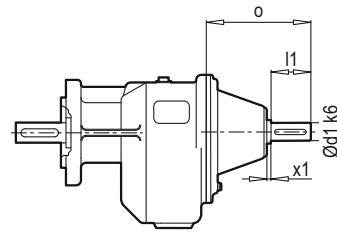
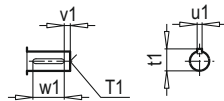
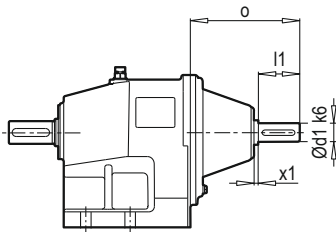
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 22	100	250	180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



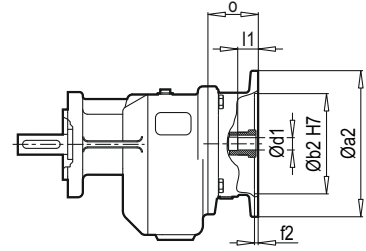
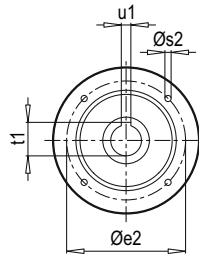
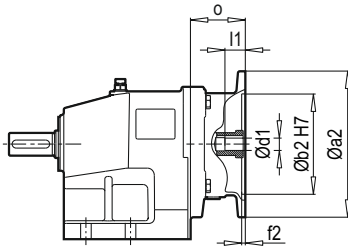
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 22	24	8	50	172	M8	27	8	5	40
PA/PF 23	16	7	40	122	M5	18	5	4	32

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

PA 22
PA 23

PAM B5/B14

PF 22
PF 23



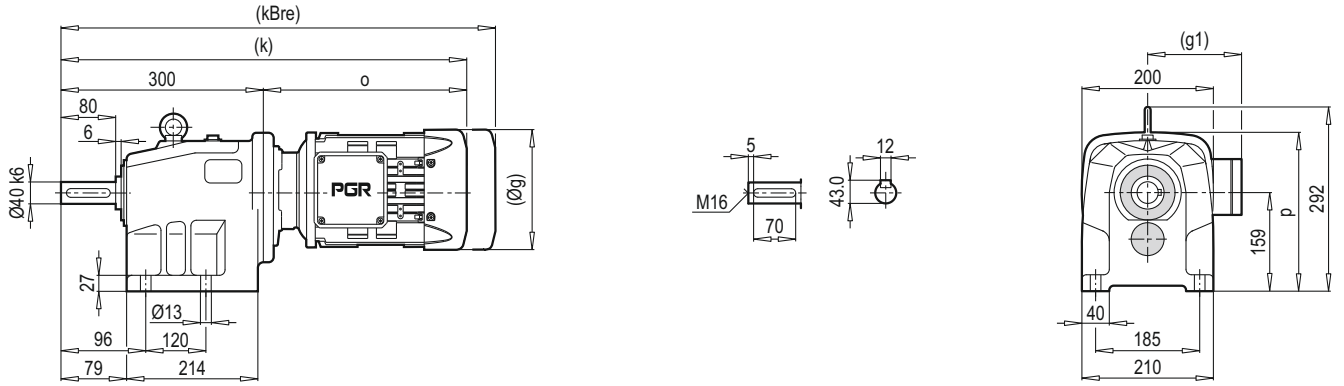
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 22	100	250	180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

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	-

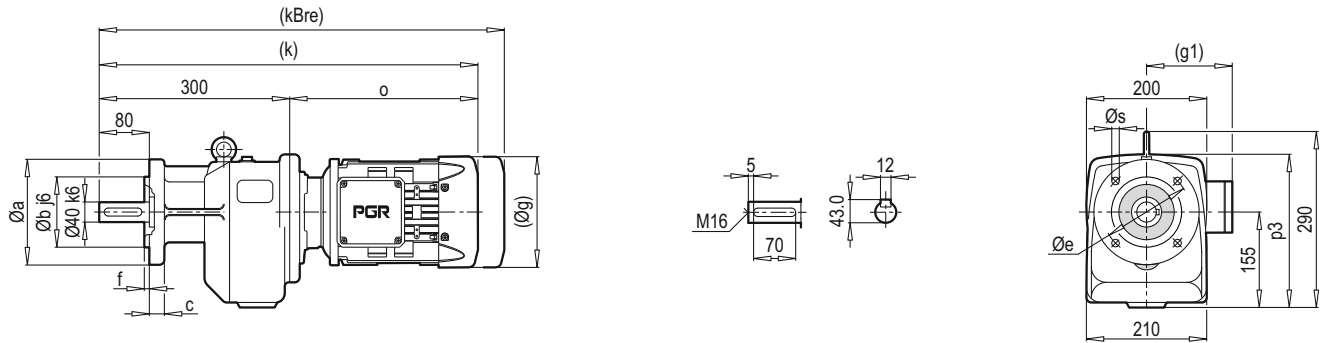
~ Kg		
PAM B5	PA/PF 22	PA/PF 23
63	-	31
71	26	31
80	27	32
90	27	32
100	28	-
112	28	-

~ 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

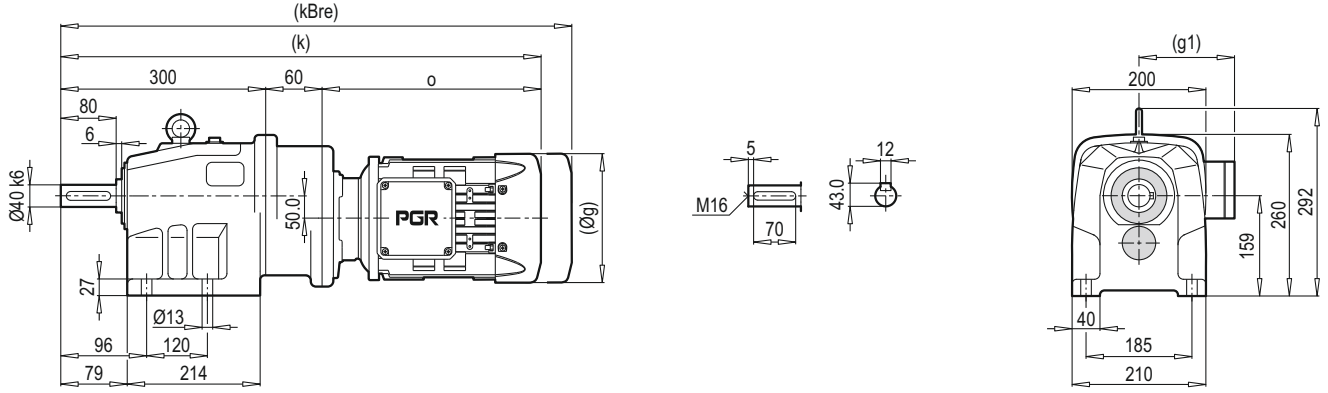


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

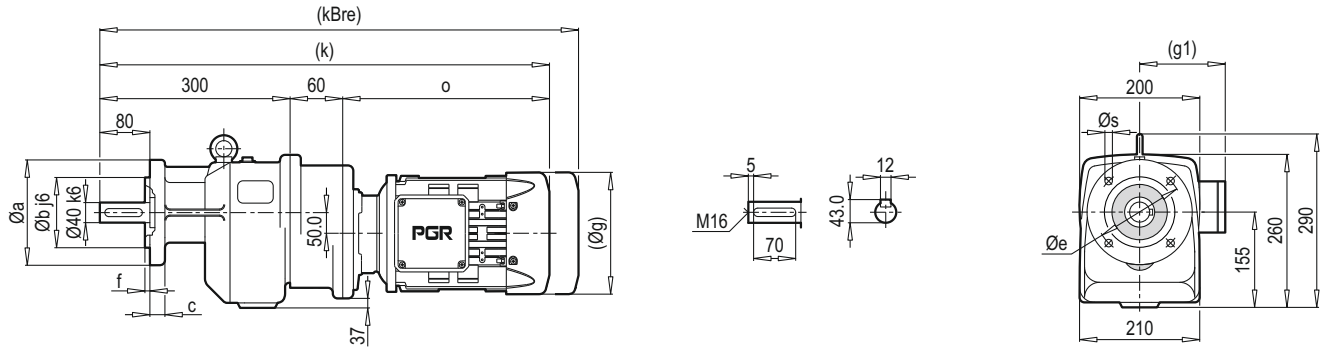
	71 M	80 M	90 S/L	100 L	112 M	132 S/M		
g	140	159	193	217	232	279		
g1	119	127	151	160	168	182		
k	536	562	585/605	633	678	685/720		
kBre	596	624	658/678	714	758	793/861		
o	236	262	285/305	333	378	385/420		
p	260	260	260	260	271	290		
p3	260	260	260	260	271	290		

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

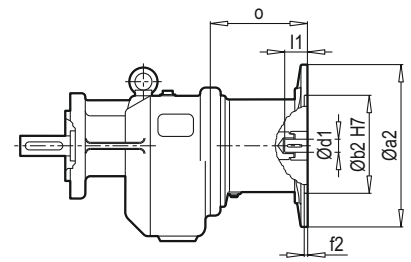
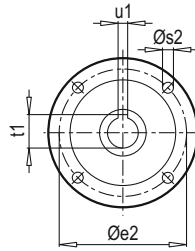
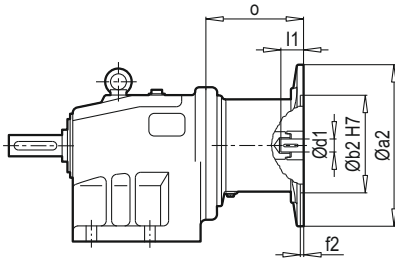
	63 M	71 M	80 M					
g	124	140	159					
g1	111	119	127					
k	558	600	627					
kBre	610	660	689					
o	198	240	267					

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



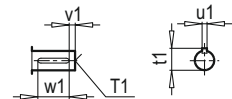
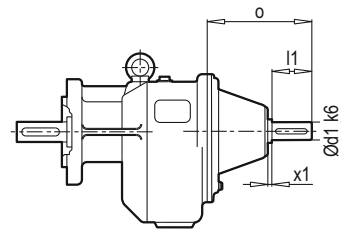
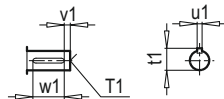
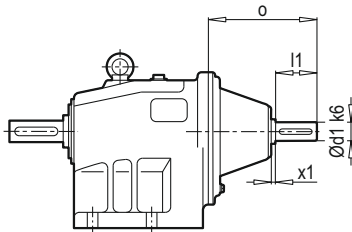
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 32-33	100	250	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



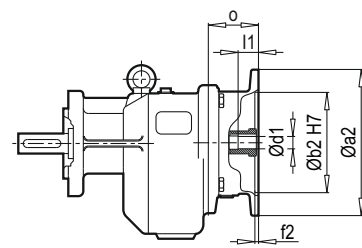
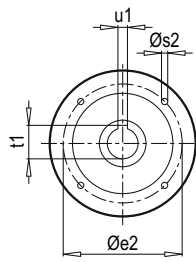
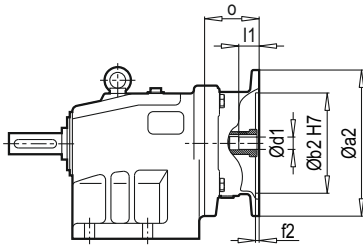
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 32	24	8	50	172	M8	27	8	5	40
PA/PF 33	16	7	40	122	M5	18	5	4	32

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

PA 32
PA 33

PAM B5/B14

PF 32
PF 33



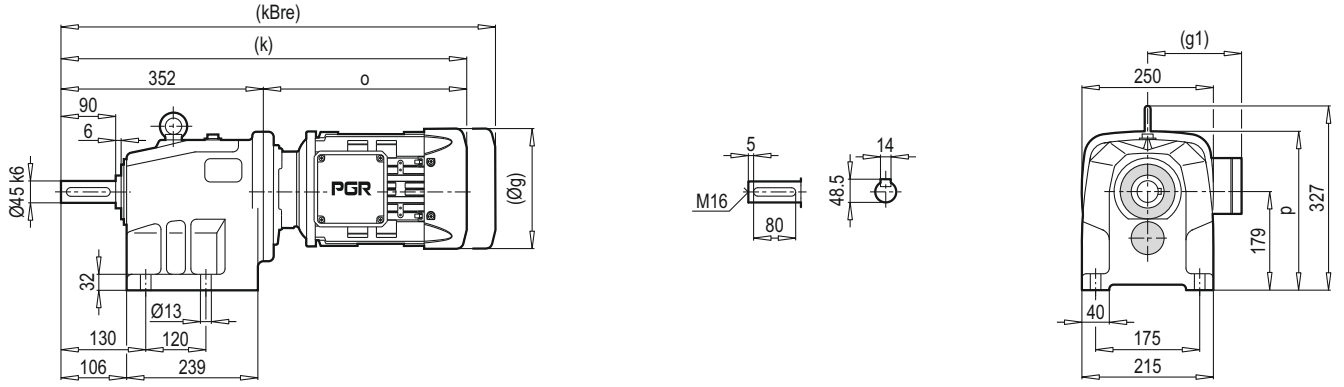
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 32-33	100	250	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	-

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	-

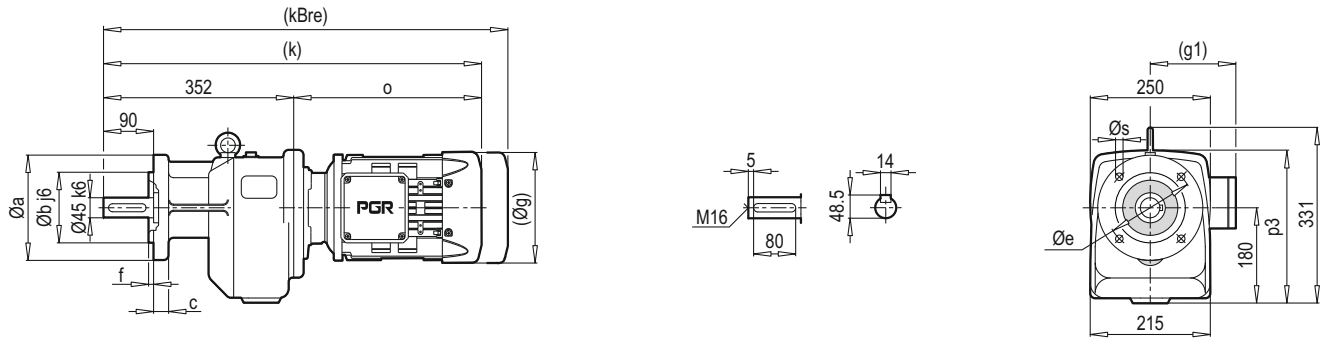
~ Kg		
PAM B5	PA/PF 32	PA/PF 33
63	-	43
71	37	43
80	38	44
90	38	44
100	39	51
112	39	51
132	49	-

~ 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

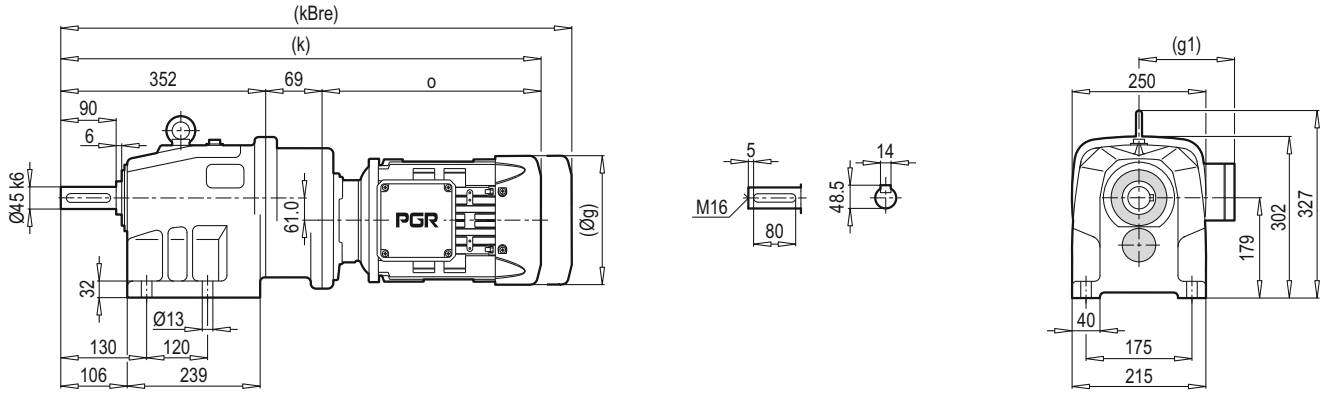


a	b	c	e	f	s
200	130	16	165	3.5	11
250	180	16	215	4.0	14

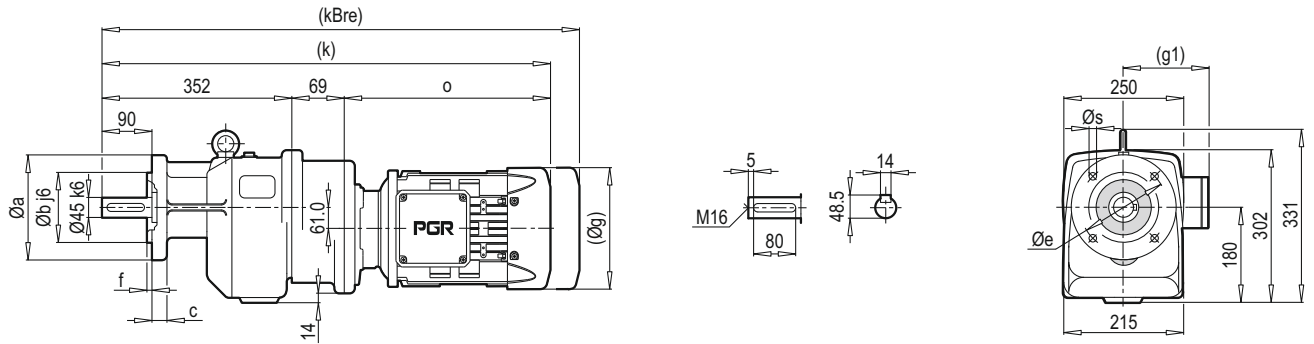
	90 S/L	100 L	112 M	132 S/M	160 M/L			
g	193	217	232	279	323			
g1	151	160	168	182	200			
k	617/637	665	710	717/752	857			
kBre	690/710	746	790	825/893	1009			
o	265/285	313	358	365/400	505			
p	302	302	302	310	337			
p3	302	302	302	310	337			

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

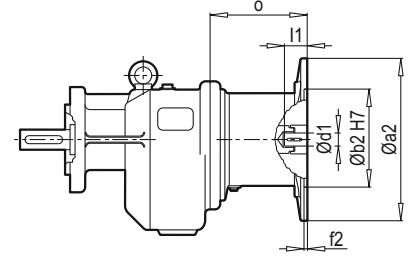
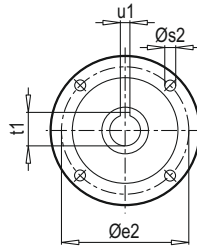
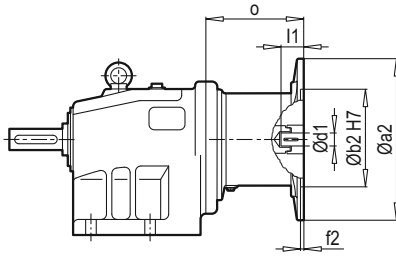
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	657	683	706/726	754	799			
kBre	717	745	779/799	835	879			
o	236	262	285/305	333	378			

Not : (...) İşaretili 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



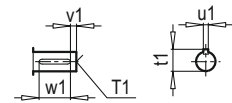
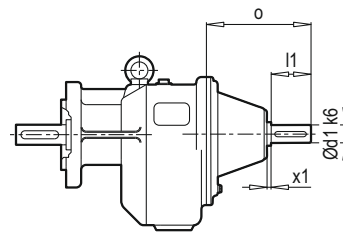
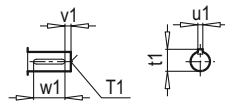
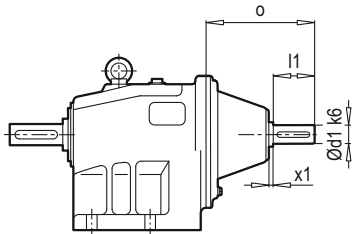
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 43	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PA/PF 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PA/PF 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 42-43	112	250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



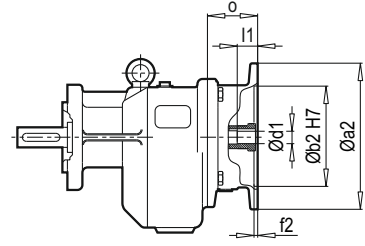
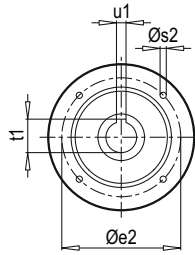
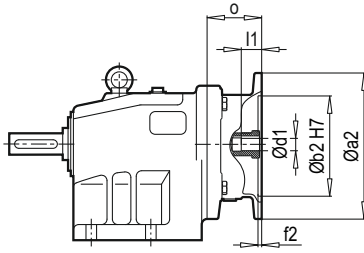
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 42	38	8	80	213	M12	41	10	5	70
PA/PF 43	24	8	50	172	M8	27	8	5	40

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

PA 42
PA 43

PAM B5/B14

PF 42
PF 43



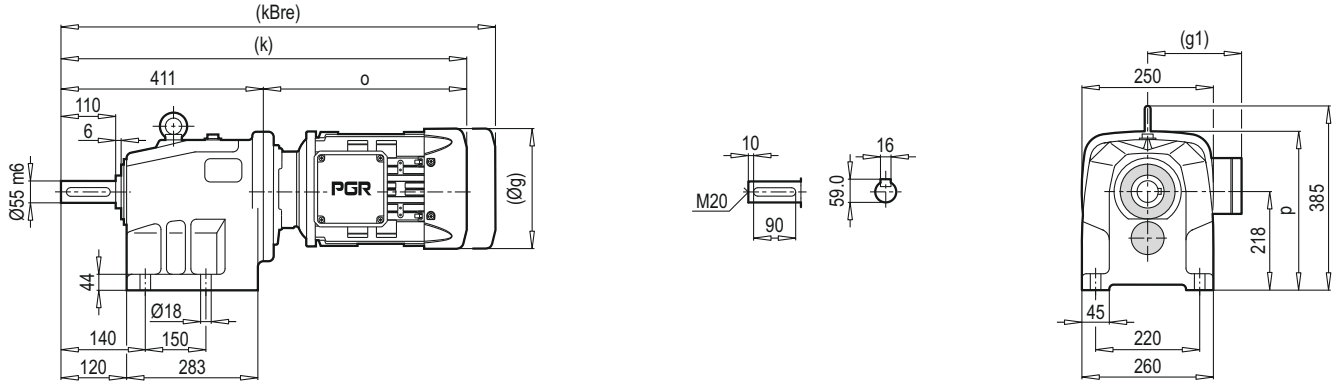
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 43	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 42-43	112	250	180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

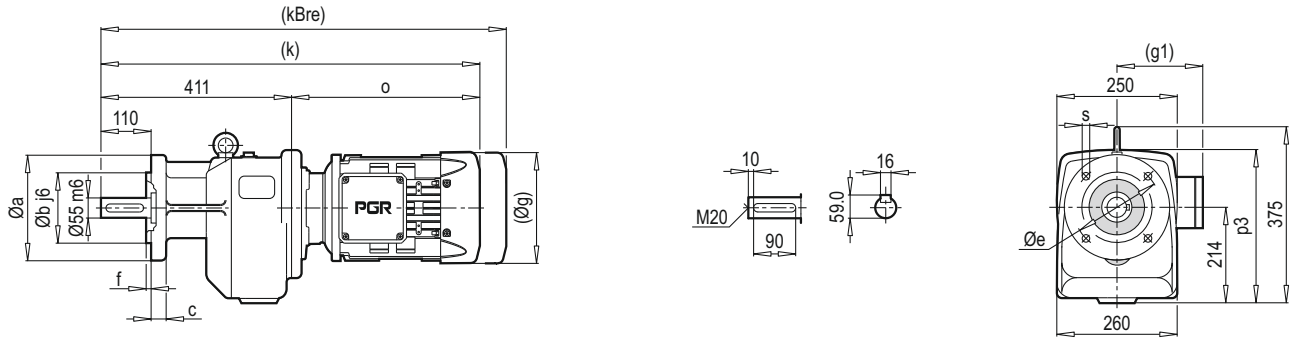
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	105	70	85	4.0	7	14	30	16.3	5	-	55
PA/PF 43	80	120	80	100	4.0	7	19	40	21.8	6	-	74
PA/PF 42-43	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 42-43	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 42-43	112	160	110	130	5.0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

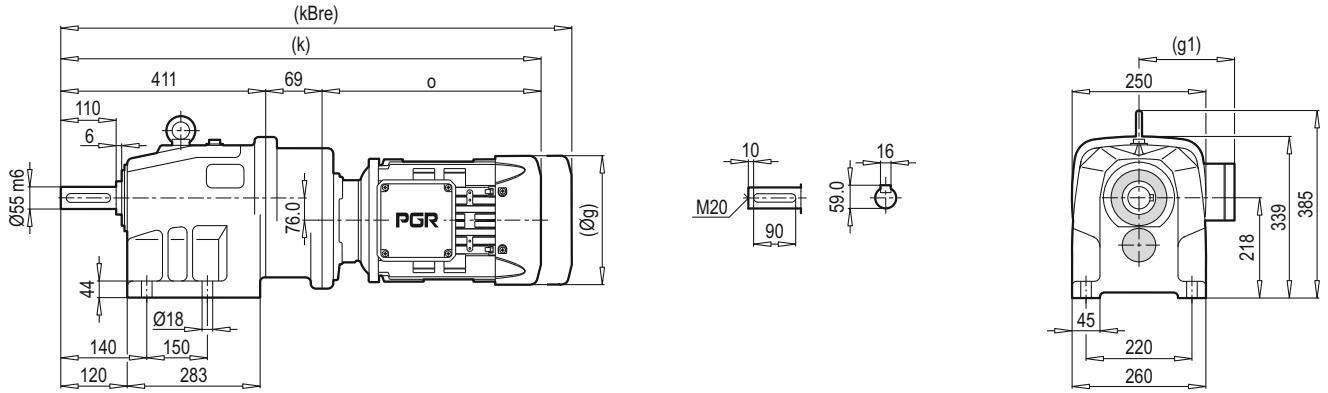


a	b	c	e	f	s
250	180	20	215	4.0	14
300	230	20	265	4.0	14

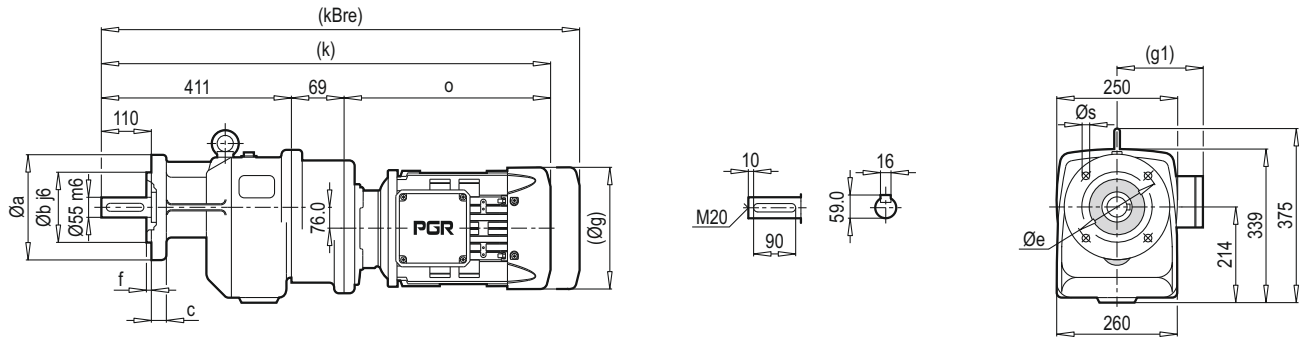
	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	193	217	232	279	323	370		
g1	151	160	168	182	200	248		
k	676/696	724	769	776/811	916	990		
kBre	749/769	805	849	884/952	1068	1152		
o	265/285	313	358	365/400	505	579		
p	339	339	339	347	374	374		
p3	339	339	339	347	374	374		

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

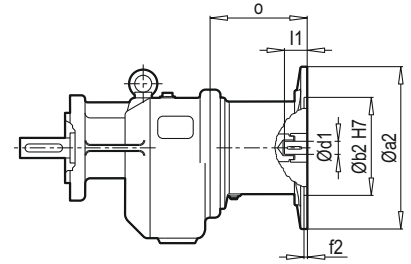
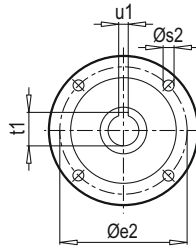
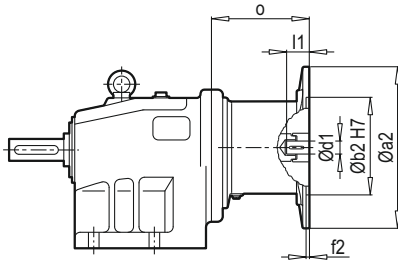
	71 M	80 M	90 S/L	100 L	112 M			
g	140	159	193	217	232			
g1	119	127	151	160	168			
k	716	742	765/785	813	858			
kBre	776	804	838/858	894	938			
o	236	262	285/305	333	378			

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



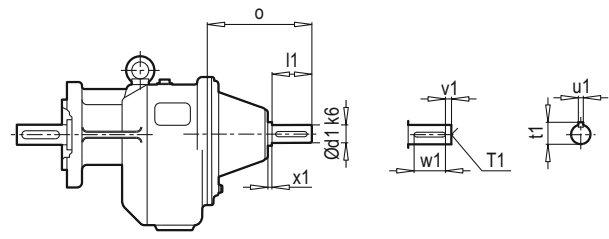
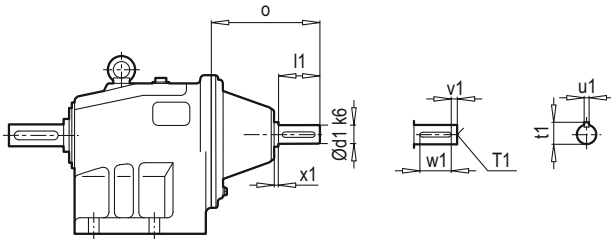
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 52-53	112	250	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



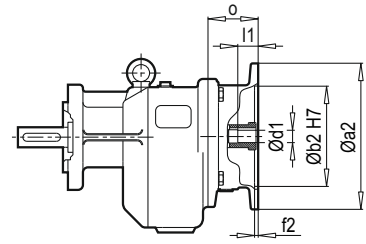
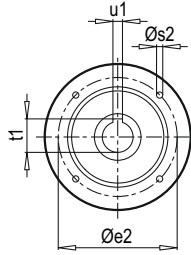
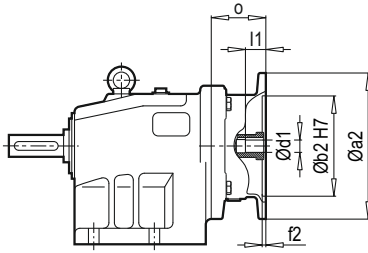
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 52	38	8	80	213	M12	41	10	5	70
PA/PF 53	24	8	50	172	M8	27	8	5	40

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

PA 52
PA 53

PAM B5/B14

PF 52
PF 53



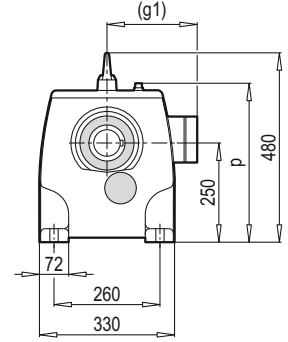
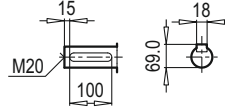
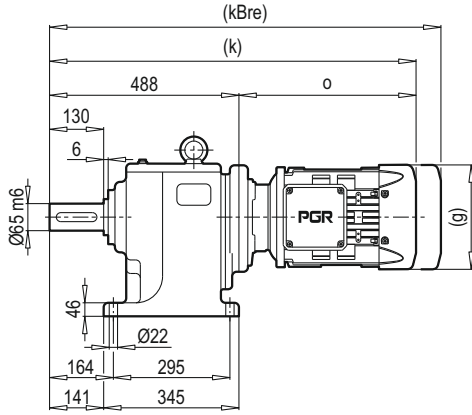
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 52-53	112	250	180	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	-

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	-

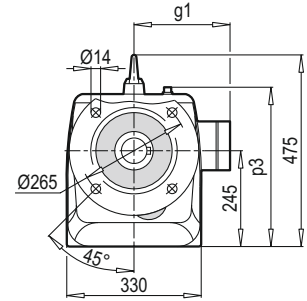
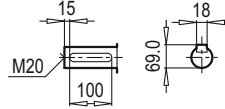
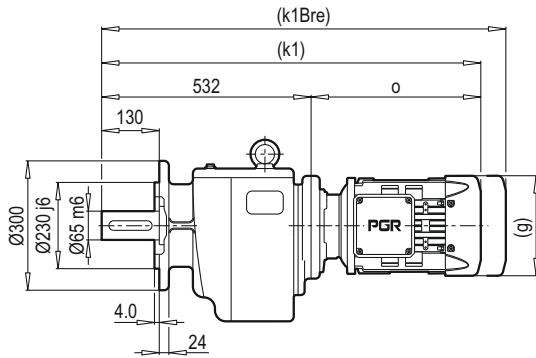
~ Kg		
PAM B5	PA/PF 52	PA/PF 53
71	-	100
80	-	101
90	85	101
100	86	102
112	86	102
132	95	-
160	103	-
180	103	-

~ 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

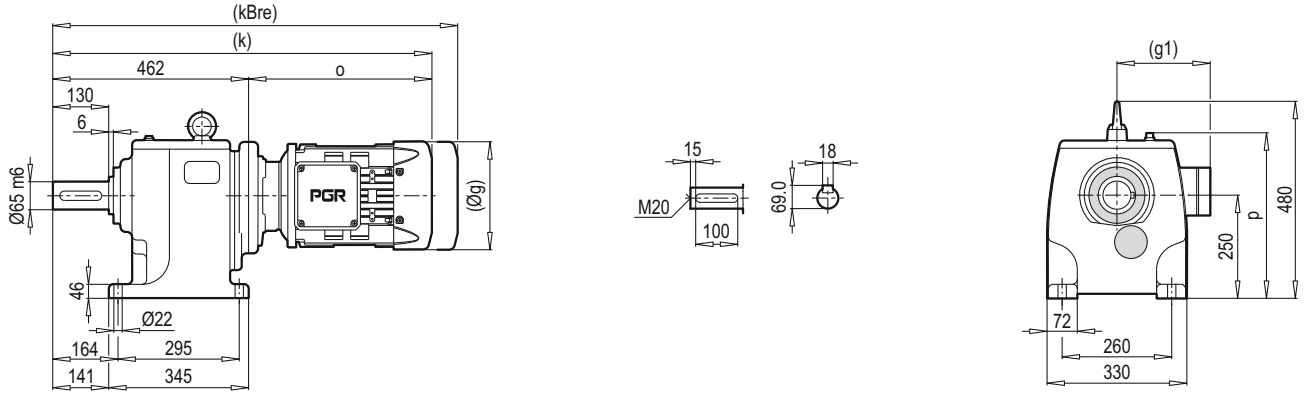


	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	
g	232	279	279	323	370	415	456	
g1	168	182	182	200	248	260	260	
k	848	851	886	952	1011	1106	1188	
kBre	928	959	1027	1104	1173	1253	1360	
k1	892	895	930	996	1055	1150	1232	
k1Bre	972	1003	1071	1148	1217	1297	1404	
o	360	363	398	464	523	618	700	
p	400	400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

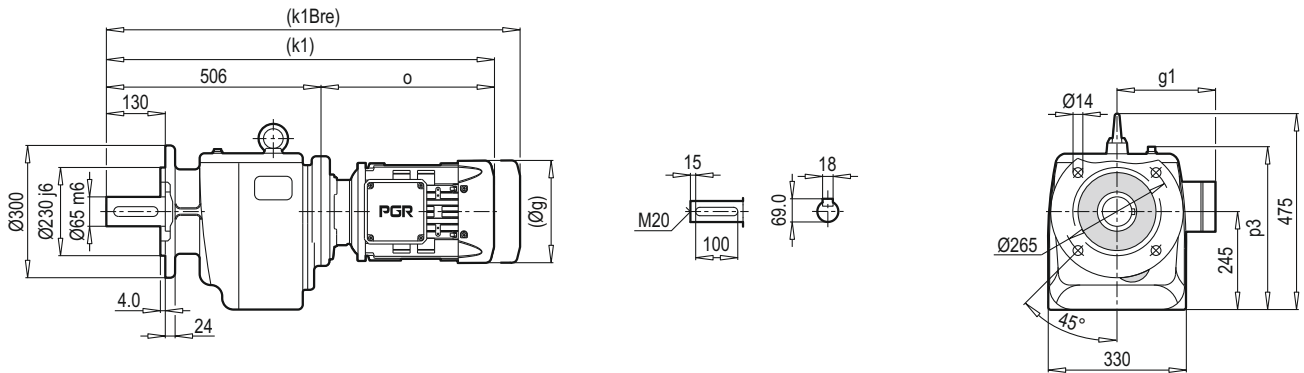
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.

Note : Dimension which is designated by (...) depends on marks of motor.

PA 63



PF 63



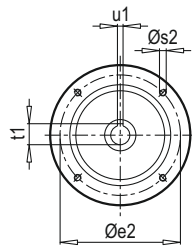
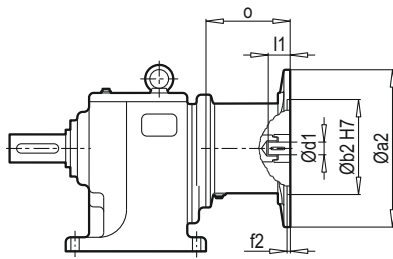
	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	193	217	232	279	323	370		
g1	151	160	168	182	200	248		
k	727/747	775	820	827/862	967	1041		
kBre	800/820	856	900	935/1003	1119	1203		
k1	771/791	819	864	871/906	1011	1085		
k1Bre	844/864	900	944	979/1047	1163	1247		
o	265/285	313	358	365/400	505	579		
p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

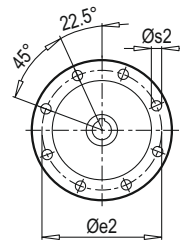
PA 62
PA 63

IEC

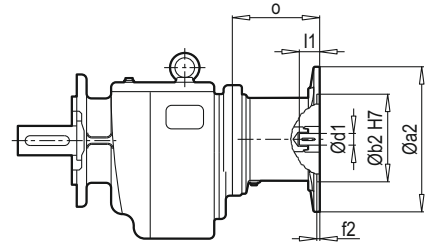
PF 62
PF 63



IEC 90...200



IEC 225



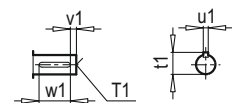
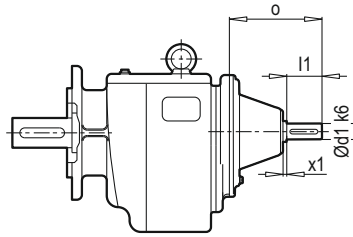
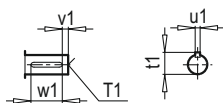
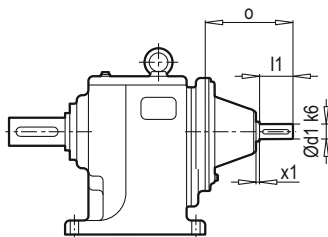
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	109
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	177	190
PA/PF 62-63	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



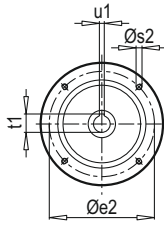
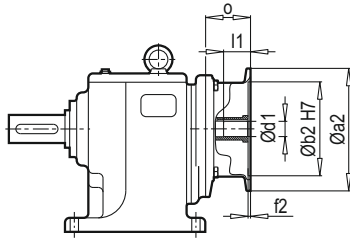
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 62	42	8	110	288	M16	45	12	10	90
PA/PF 63	38	8	80	213	M12	41	10	5	70

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

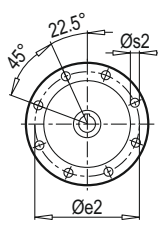
PA 62
PA 63

PAM B5/B14

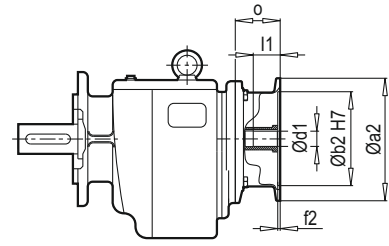
PF 62
PF 63



PAM 90...200



PAM 225



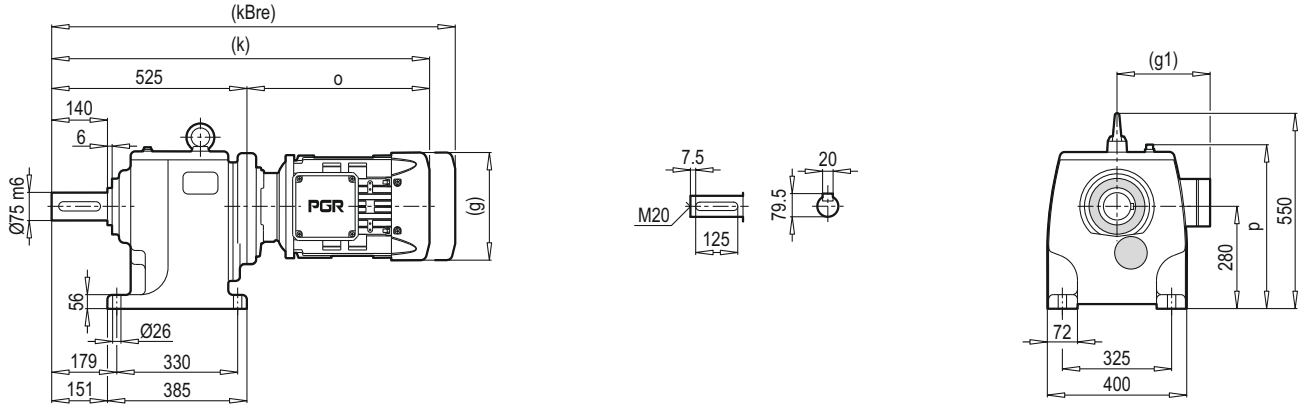
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	72
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	110	94
PA/PF 62-63	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	-

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

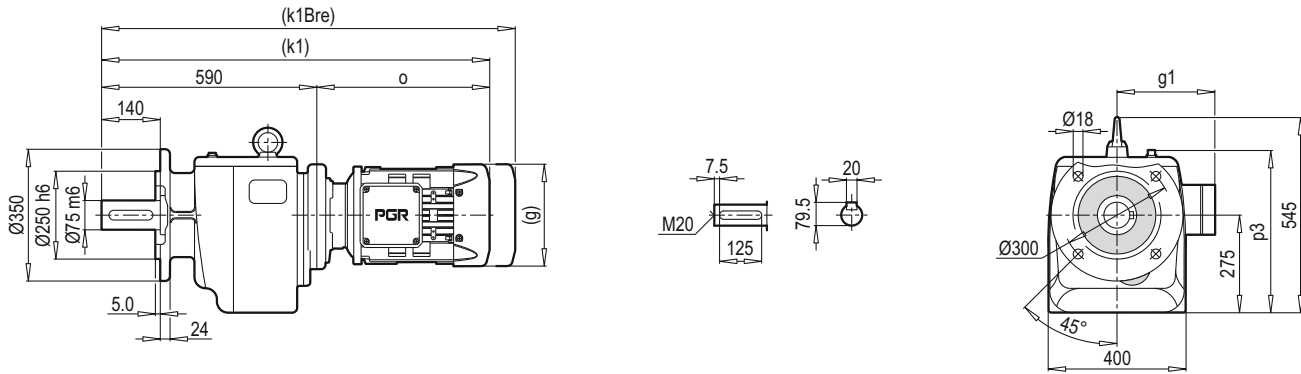
~ Kg		
PAM B5	PA/PF 62	PA/PF 63
90	-	140
100	146	141
112	146	141
132	157	150
160	174	158
180	174	158
200	181	-
225	191	-

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

PA 72



PF 72

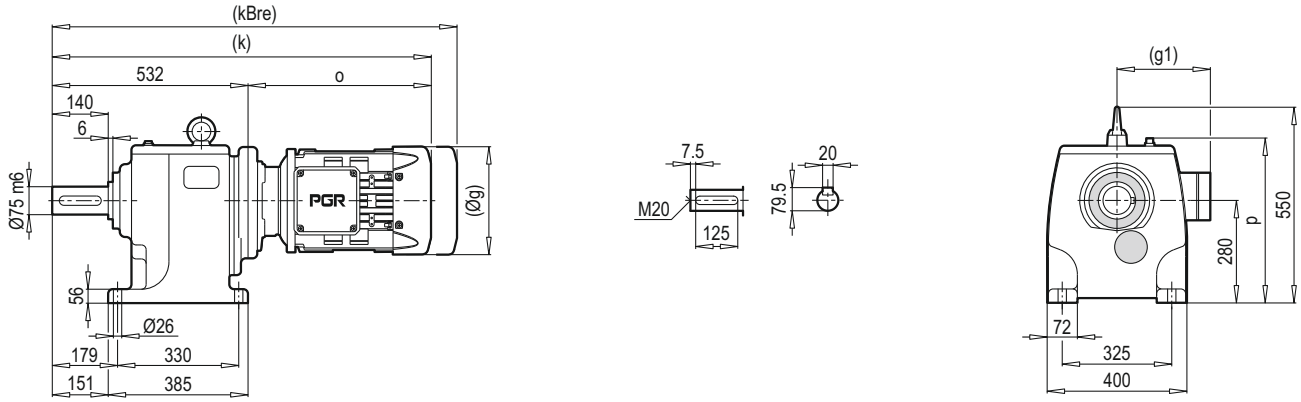


	132 M	160 M/L	180 M/L	200 L	225 S/M			
g	279	323	370	415	456			
g1	182	200	248	260	260			
k	923	989	1048	1143	1225			
kBre	1064	1141	1210	1290	1397			
k1	988	1054	1113	1208	1290			
k1Bre	1129	1206	1275	1355	1462			
o	398	464	523	618	700			
p	447	455	459	479	479			
p3	442	450	450	479	479			

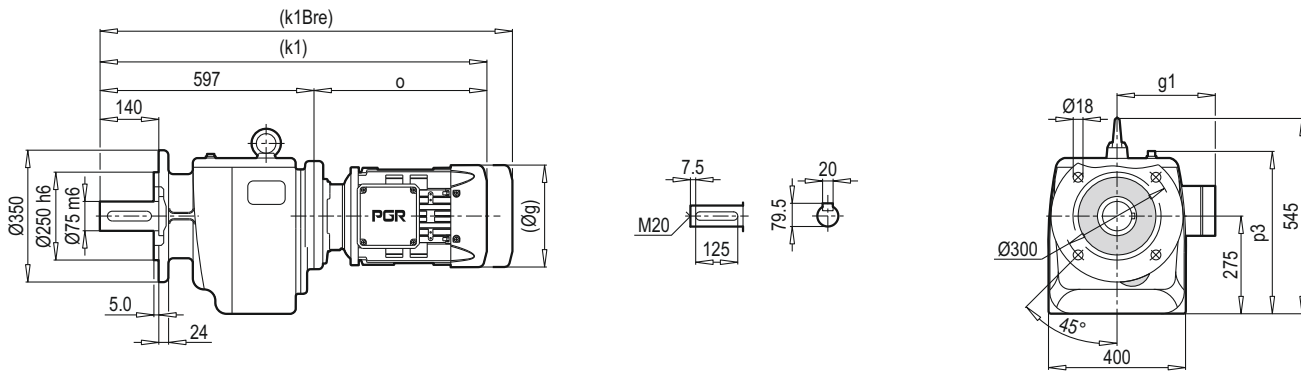
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.

Note : Dimension which is designated by (...) depends on marks of motor.

PA 73



PF 73



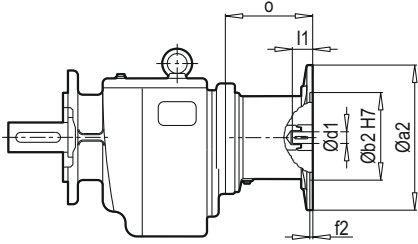
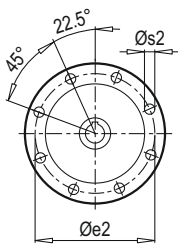
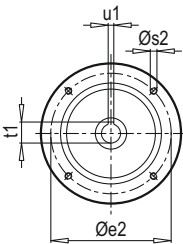
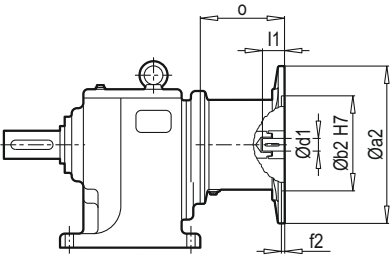
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k	844	892	895	930	996	1055	1150	1232
kBre	925	972	1003	1071	1148	1217	1297	1404
k1	909	957	960	995	1061	1120	1215	1297
k1Bre	990	1037	1068	1136	1213	1282	1362	1469
o	312	360	363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



IEC 100...200

IEC 225

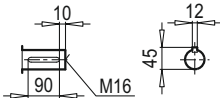
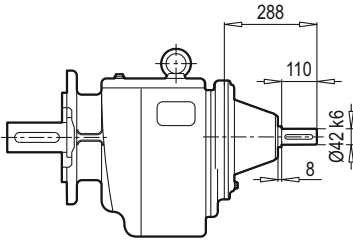
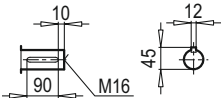
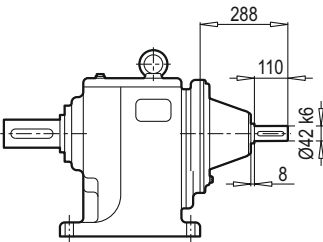
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 72-73	180	350	250	300	6.0	M16	48	110	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

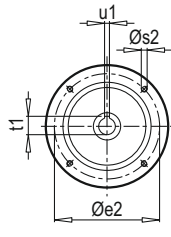
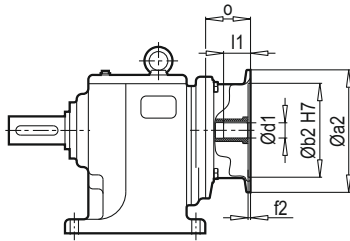


W ~ Kg	
PA/PF 72	252
PA/PF 73	263

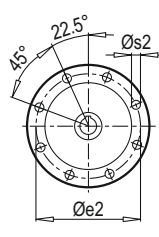
PA 72
PA 73

PAM B5/B14

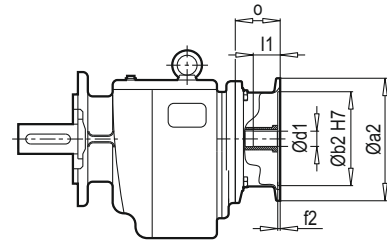
PF 72
PF 73



PAM 100...200



PAM 225



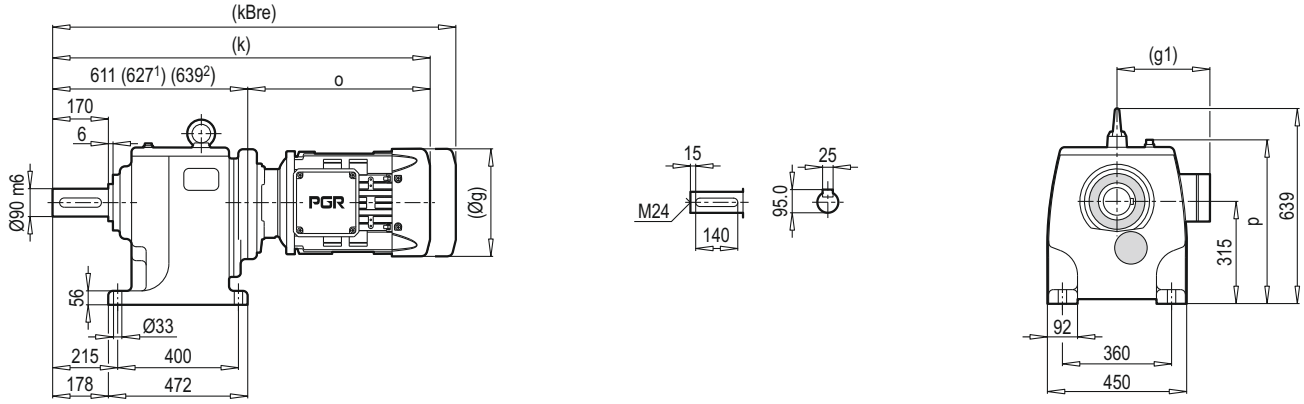
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 72-73	180	350	250	300	6.0	M16	48	110	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

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

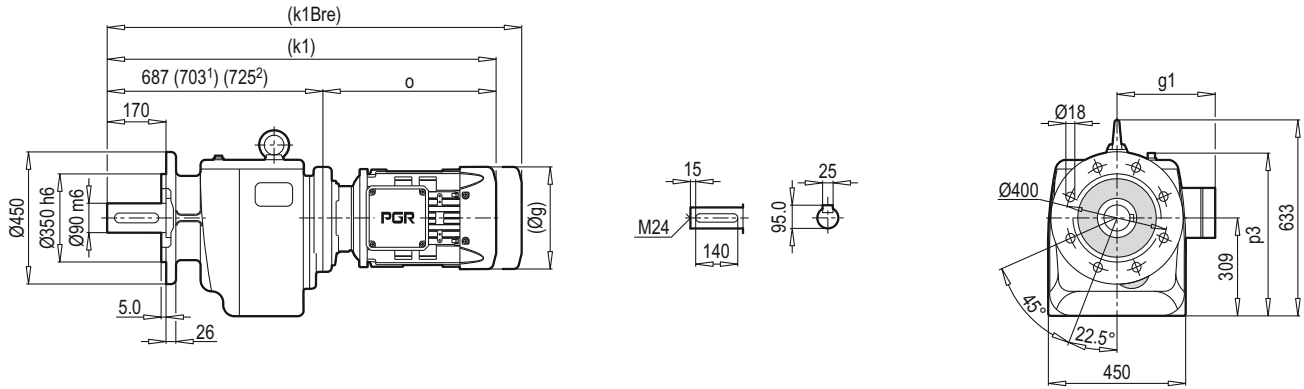
~ Kg		
PAM B5	PA/PF 72	PA/PF 73
100	-	225
112	-	225
132	226	236
160	243	253
180	243	253
200	250	260
225	260	270

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

PA 82



PF 82

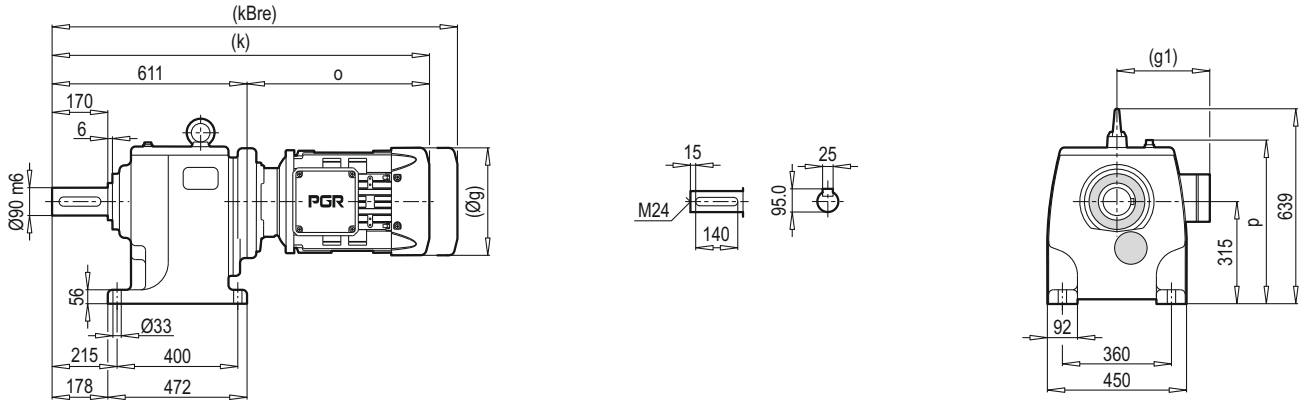


	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ²⁾	
g	279	323	370	415	456	495	510	
g1	182	200	248	260	260	392	372	
k	1009	1075	1134	1229	1311	1271	1527	
kBre	1150	1227	1296	1376	1483	1401	-	
k1	1085	1151	1210	1305	1387	1347	1613	
k1Bre	1226	1303	1372	1452	1559	1477	-	
o	398	464	523	618	700	644	888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

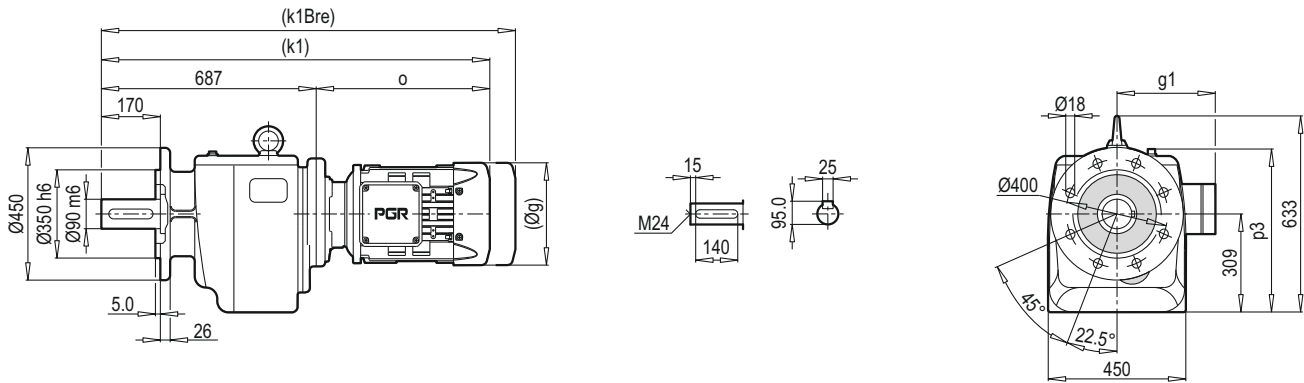
Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.

Note : Dimension which is designated by (...) depends on marks of motor.

PA 83



PF 83



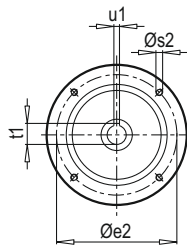
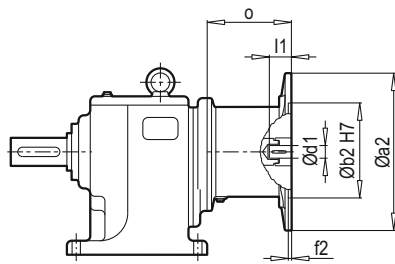
	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	217	232	279	279	323	370	415	456
g1	160	168	182	182	200	248	260	260
k	923	971	974	1009	1075	1134	1229	1311
kBre	1004	1051	1082	1150	1227	1296	1376	1483
k1	999	1047	1050	1085	1151	1210	1305	1387
k1Bre	1080	1127	1158	1226	1303	1372	1452	1559
o	312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

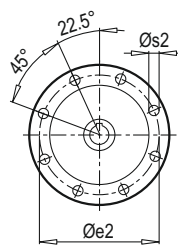
PA 82
PA 83

IEC

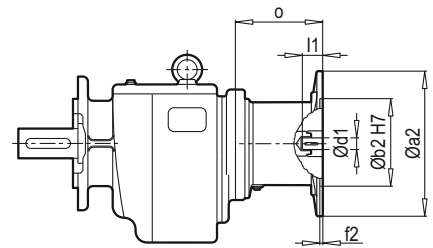
PF 82
PF 83



IEC 100...200



IEC 225...280



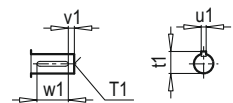
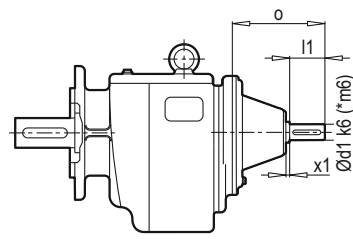
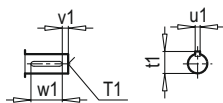
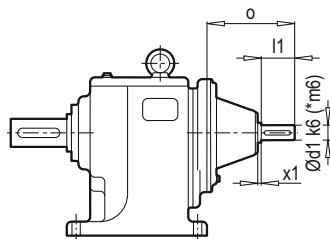
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 82-83	180	350	250	300	6.0	M16	48	110	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



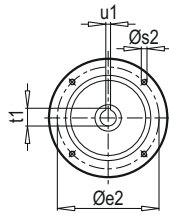
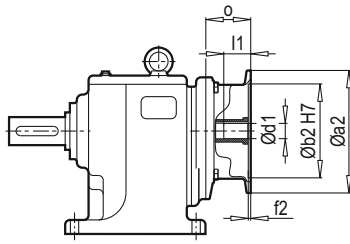
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 82	65*	12	140	397	M20	69	18	15	110
PA/PF 83	42	8	110	288	M16	45	12	10	90

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

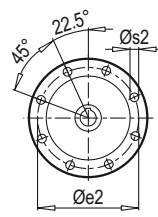
PA 82
PA 83

PAM B5/B14

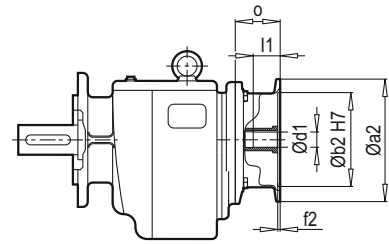
PF 82
PF 83



PAM 100...200



PAM 225...280



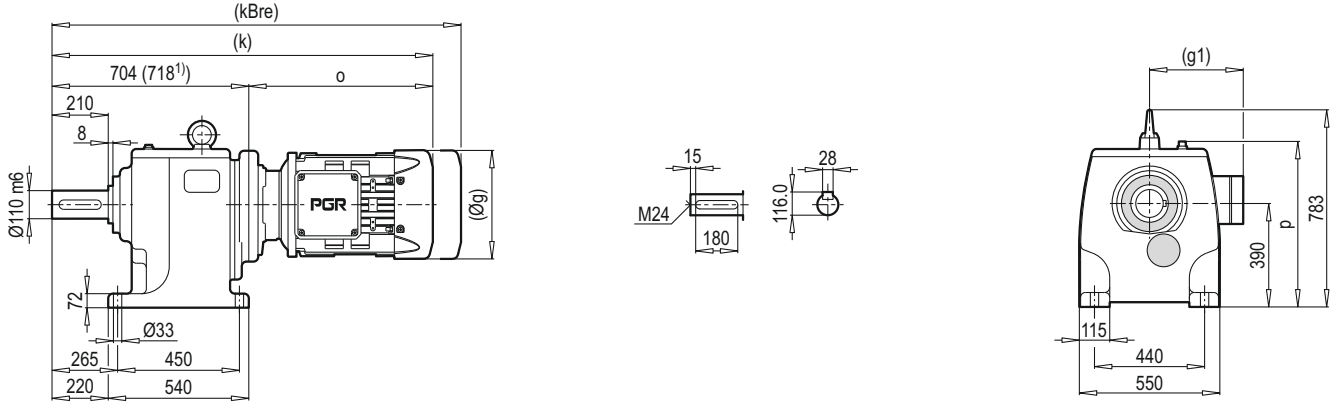
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 82-83	180	350	250	300	6.0	M16	48	110	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

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

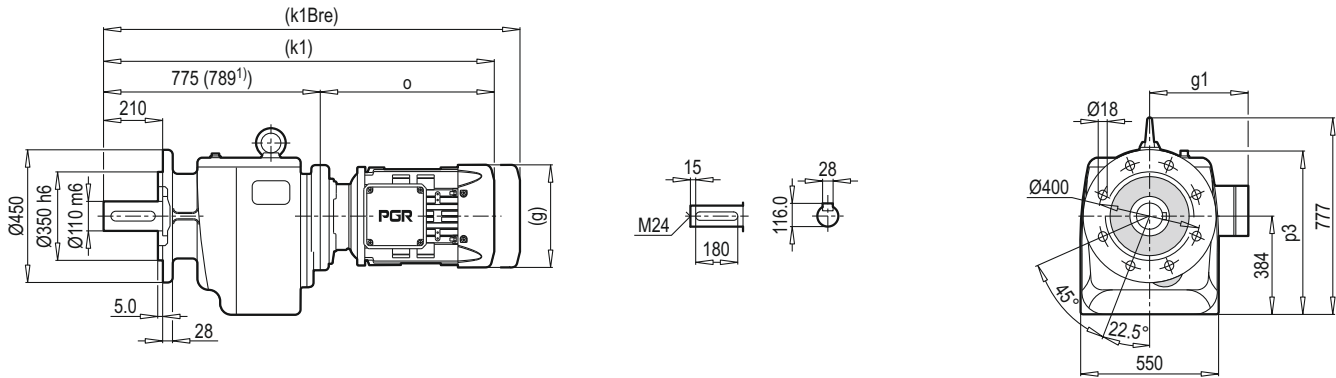
~Kg		
PAM B5	PA/PF 82	PA/PF 83
100	-	332
112	-	332
132	335	343
160	352	360
180	352	360
200	359	367
225	369	377
250	429	-
280	429	-

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

PA 92



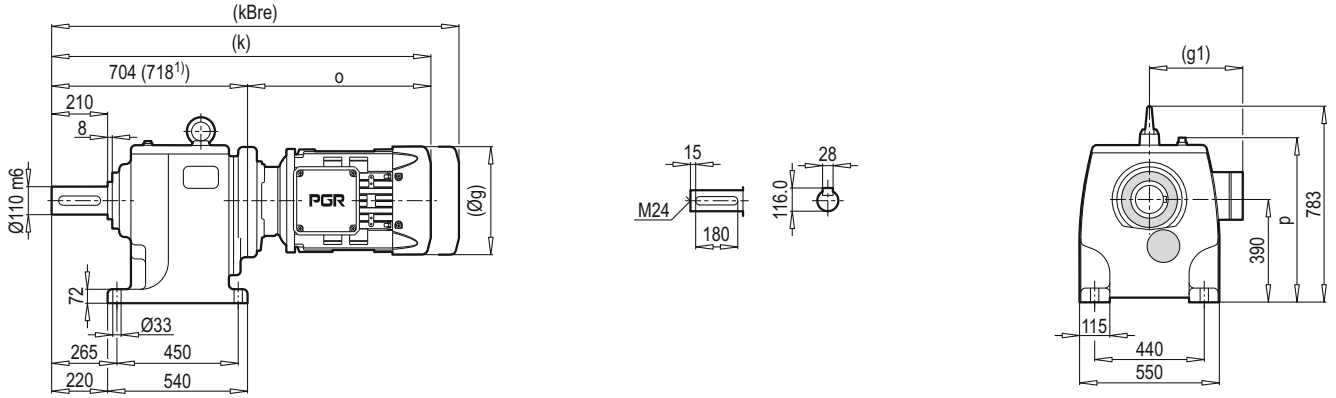
PF 92



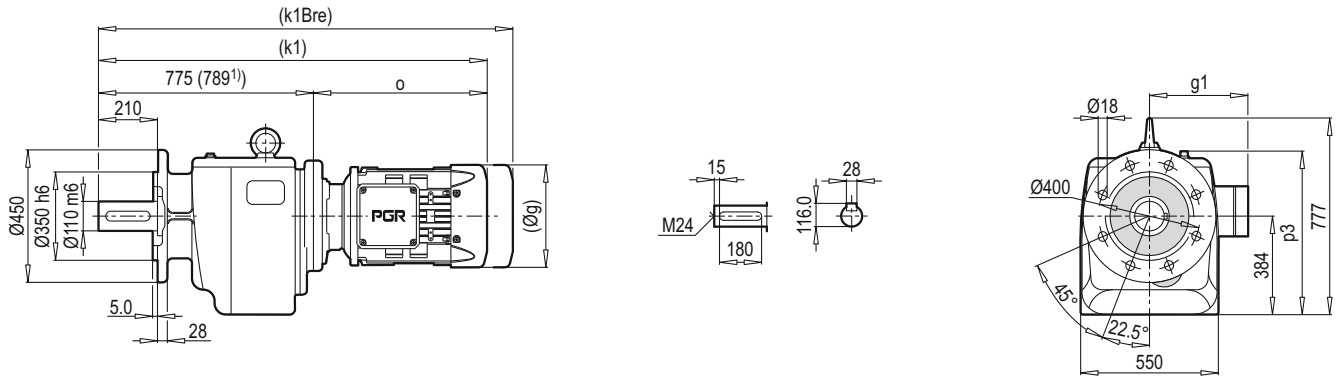
	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ¹⁾	315 S ¹⁾	315 M ¹⁾	
g	370	415	456	495	510	-	-	
g1	248	260	260	392	372	-	-	
k	1227	1322	1404	1362	1606	-	-	
kBre	1389	1469	1576	1492	-	-	-	
k1	1298	1393	1475	1433	1677	-	-	
k1Bre	1460	1540	1647	1563	-	-	-	
o	523	618	700	644	888	-	-	
p	622	622	622	650	682	-	-	
p3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

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

PA 93



PF 93



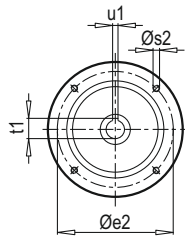
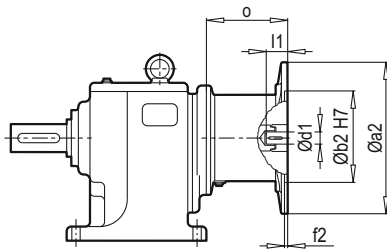
	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ¹⁾
g	279	279	323	370	415	456	495	510
g1	182	182	200	248	260	260	392	372
k	1067	1102	1168	1227	1322	1404	1362	1606
kBre	1175	1243	1320	1389	1469	1576	1492	-
k1	1138	1173	1239	1298	1393	1475	1433	1677
k1Bre	1246	1303	1391	1460	1540	1647	1563	-
o	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 : (...) İşareti olan ölçüler Motor markasına göre farklılık gösterir.
Note : Dimension which is designated by (...) depends on marks of motor.

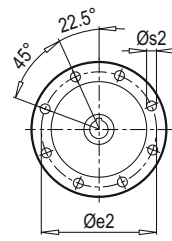
PA 92
PA 93

IEC

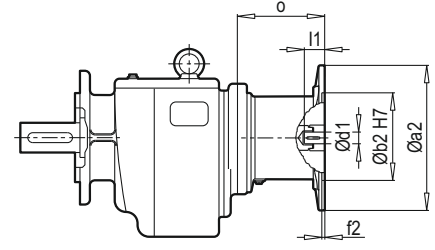
PF 92
PF 93



IEC 132...200



IEC 225...315



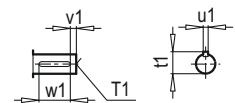
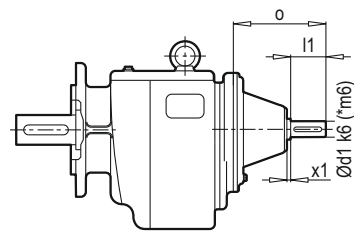
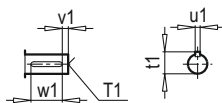
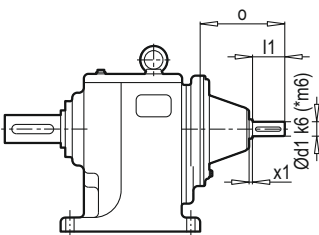
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 92-93	225	450	350	400	6.0	M16	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



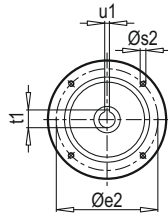
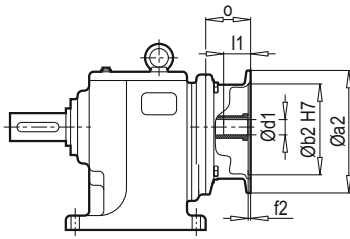
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 92	65*	12	140	397	M20	69	18	15	110
PA/PF 93	42	8	110	288	M16	45	12	10	90

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

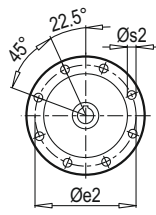
PA 92
PA 93

PAM B5/B14

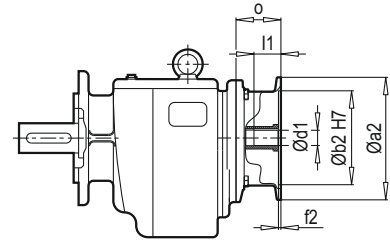
PF 92
PF 93



PAM 132...200



PAM 225...315



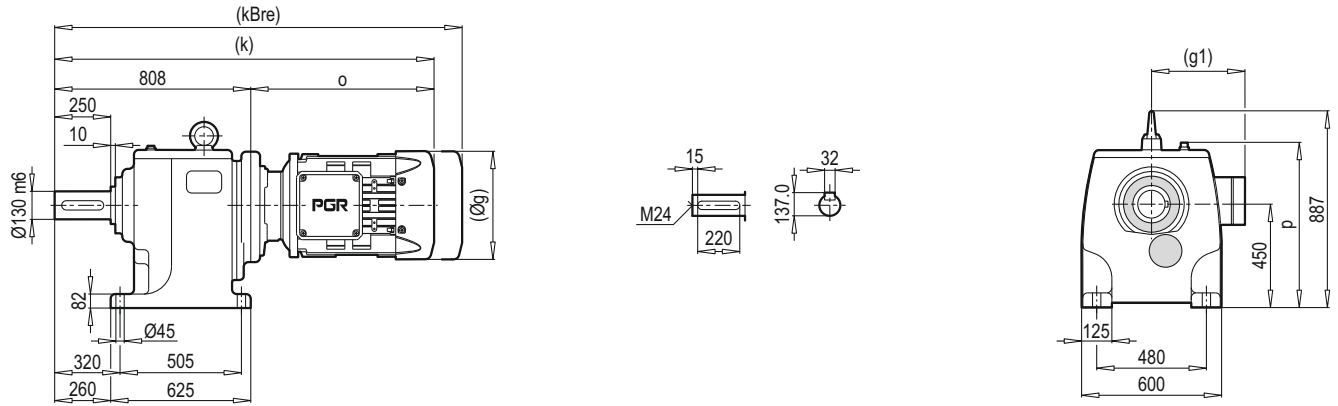
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	145
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	157
PA/PF 92-93	225	450	350	400	6.0	M16	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	-

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

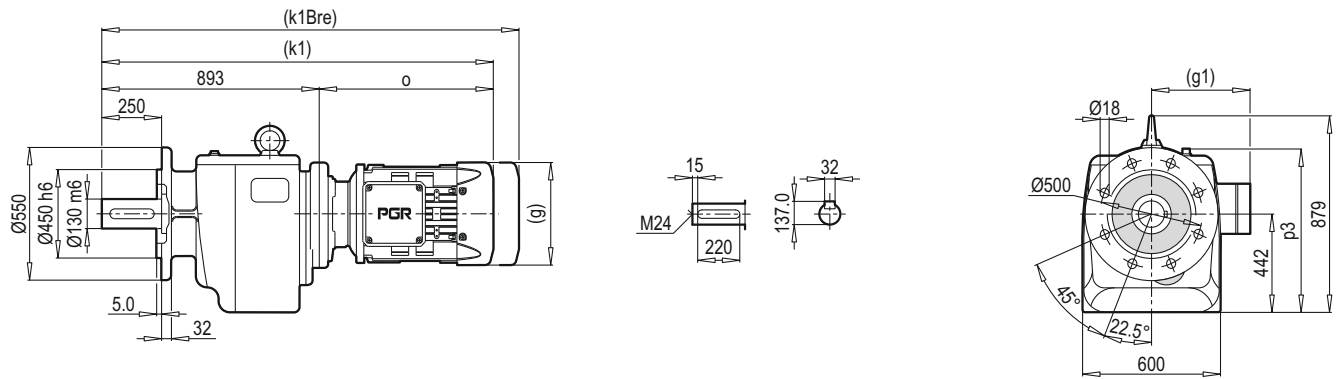
~ Kg		
PAM B5	PA/PF 92	PA/PF 93
132	-	522
160	528	539
180	528	539
200	535	546
225	545	556
250	605	616
280	605	616
315	-	-

~ Kg	
PAM B14	PA/PF 93
132	517

PA 102



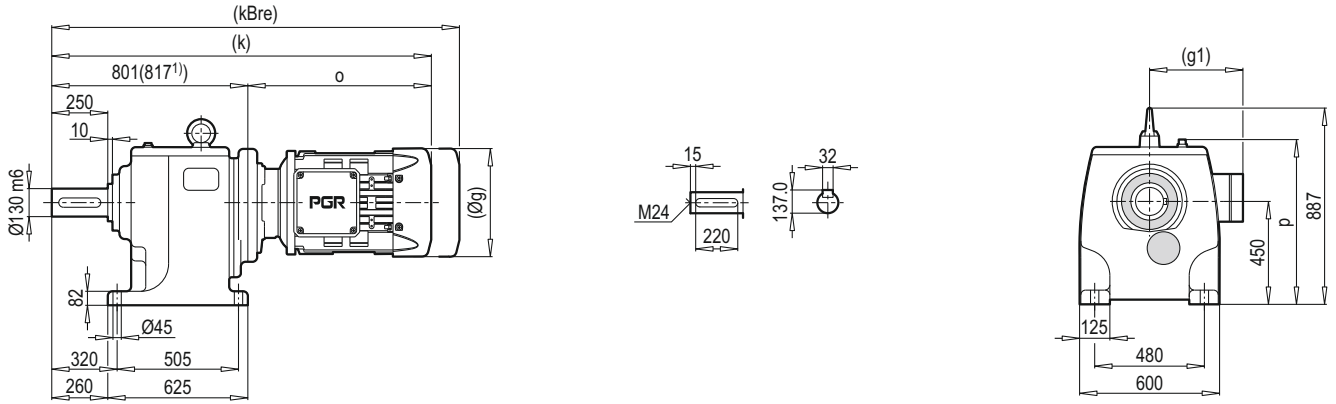
PF 102



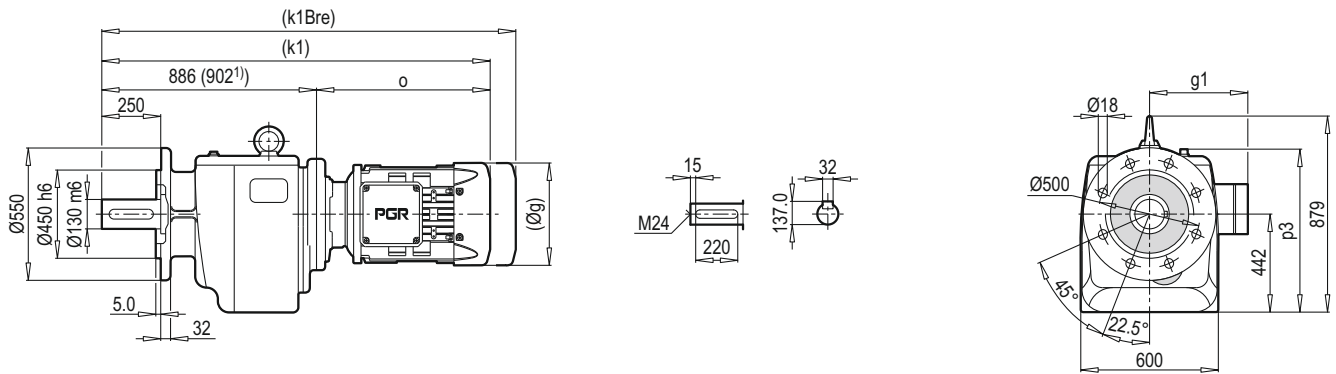
	250 M	280 M	315 S	315 M				
g	495	510	-	-				
g1	392	372	-	-				
k	1452	1696	-	-				
kBre	1582	-	-	-				
k1	1537	1781	-	-				
k1Bre	1667	-	-	-				
o	644	888	-	-				
p	702	754	-	-				
p3	706	758	-	-				

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

PA 103



PF 103



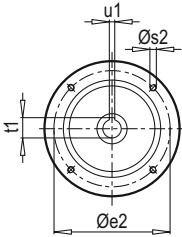
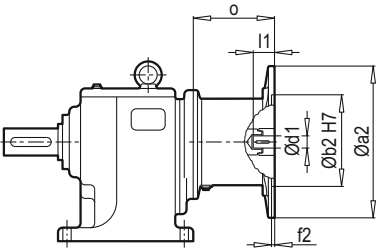
	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ¹⁾	315 S ¹⁾	315 M ¹⁾
g	279	279	323	370	415	456	495	510	-	-
g1	182	182	200	248	260	260	392	372	-	-
k	1164	1199	1265	1324	1419	1501	1461	1705	-	-
kBre	1272	1340	1417	1486	1566	1673	1591	-	-	-
k1	1249	1284	1350	1409	1504	1586	1546	1790	-	-
k1Bre	1357	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.

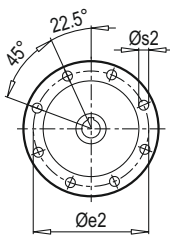
PA 102
PA 103

IEC

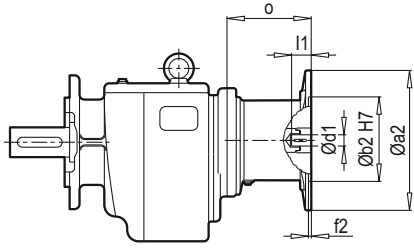
PF 102
PF 103



IEC 132...200



IEC 225...315



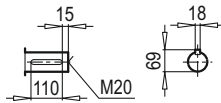
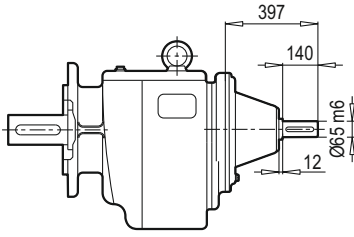
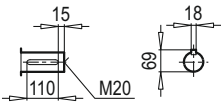
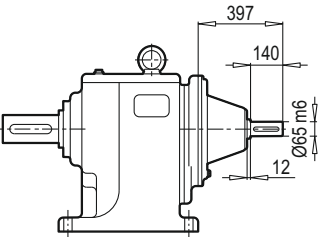
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 103	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 103	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 103	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 103	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 103	225	450	350	400	6.0	M16	60	140	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

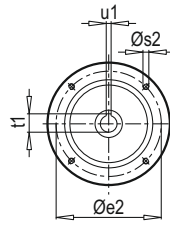
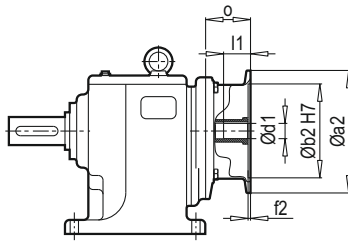


W ~ Kg	
PA/PF 102	870
PA/PF 103	880

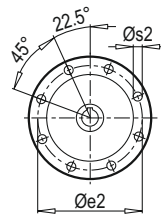
PA 102
PA 103

PAM B5/B14

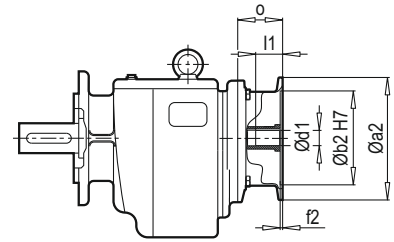
PF 102
PF 103



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	-

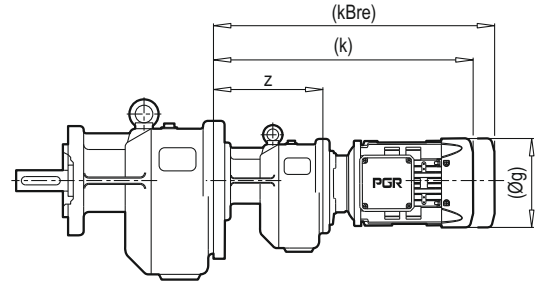
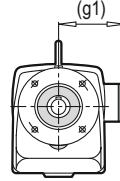
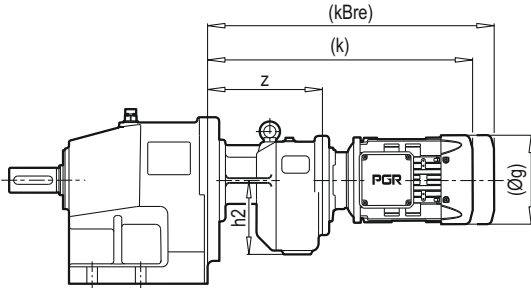
~ Kg		
PAM B5	PA/PF 102	PA/PF 103
132	-	741
160	-	758
180	-	758
200	-	765
225	-	775
250	826	835
280	826	835
315	-	-

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



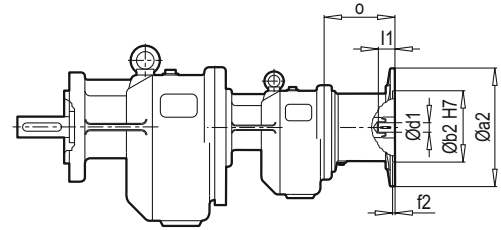
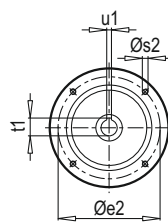
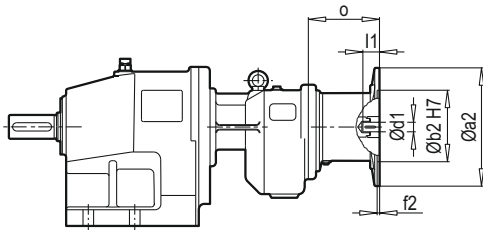
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 12/02	63 M	124	111	91	143	341	393
	71 M	140	119			383	443
PA/PF 22/02	63 M	124	111	91	159	357	409
	71 M	140	119			399	459
	80 M	159	127			426	488
PA/PF 32/12	63 M	124	111	108	172	370	422
	71 M	140	119			412	472
	80 M	159	127			439	501
PA/PF 42/12 PA/PF 52/12	63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



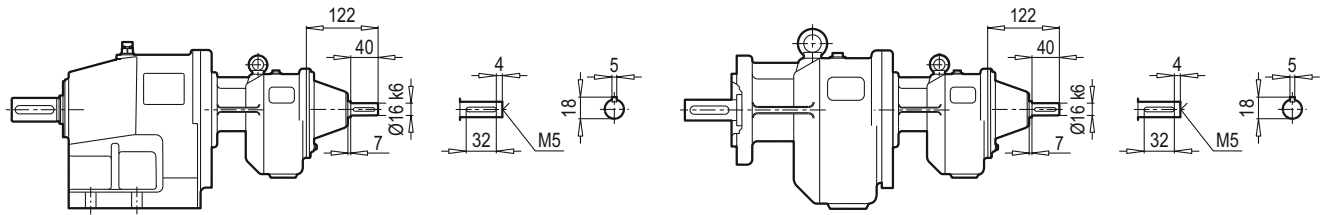
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	63	140	95	115	3.5	M8	11	23	12.8	4	85
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	71	160	110	130	4.0	M8	14	30	16.3	5	89
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	80	200	130	165	4.0	M10	19	40	21.8	6	105
PA/PF 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

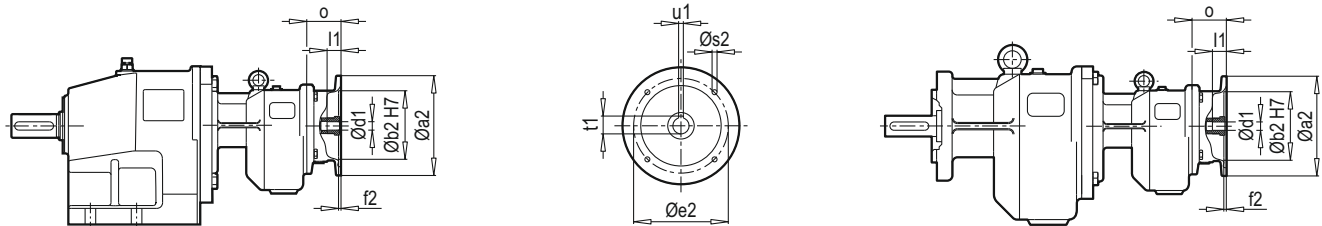


W ~ $\bar{K}_g$	
PA/PF 12/02	23
PA/PF 22/02	36
PA/PF 32/12	50
PA/PF 42/12	68
PA/PF 52/12	99

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

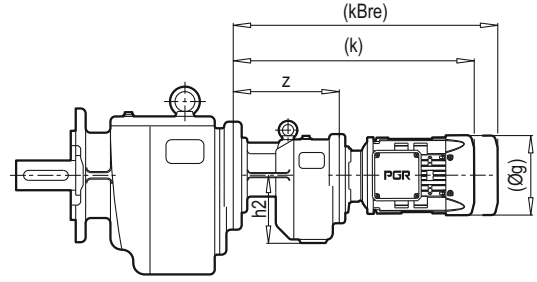
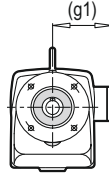
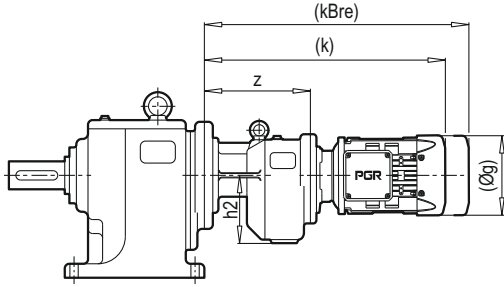
~ $\bar{K}_g$						
PAM B5	PA/PF 12/02	PA/PF 22/02	PA/PF 32/12	PA/PF 42/12	PA/PF 52/12	
63	22	34	47	65	94	
71	22	34	47	65	94	
80	23	35	48	66	95	
90	23	35	48	66	95	
100	-	-	55	73	102	
112	-	-	55	73	102	

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

~ $\bar{K}_g$						
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



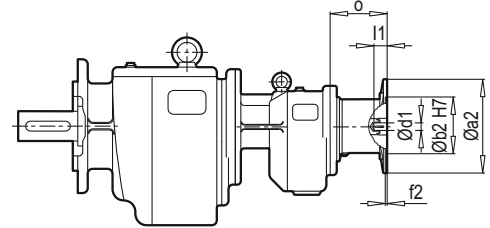
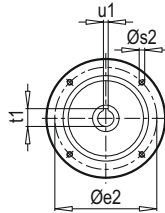
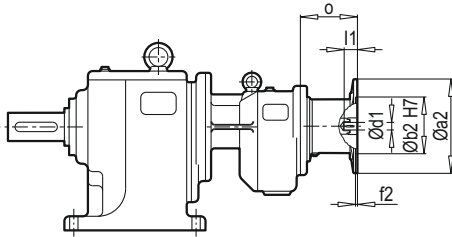
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 63/22 PA/PF 73/22	71 M	140	119	127	196	432	492
	80 M	159	127			458	520
	90 S/L	193	151			481/501	554/574
	100 L	217	160			529	610
PA/PF 73/32 PA/PF 83/32	80 M	159	127	159	238	500	562
	90 S/L	193	151			523/543	596/616
	100 L	217	160			571	652
	112 M	232	168			616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

Not : (...) İşareti 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



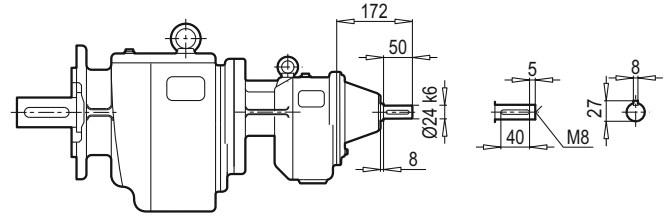
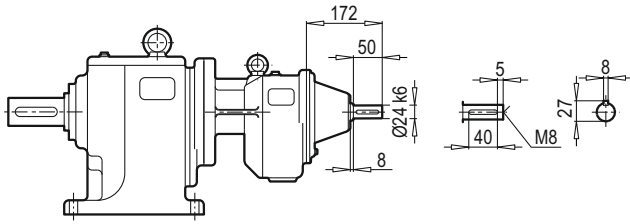
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	107
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	107
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	250	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

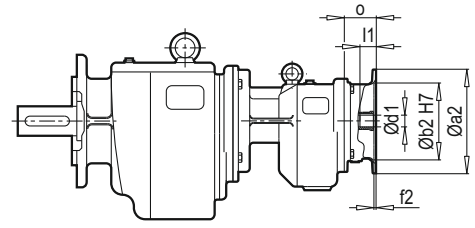
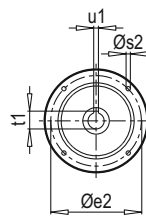
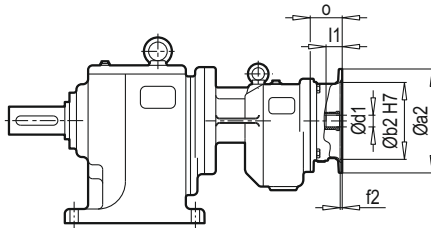


W ~ Kg	
PA/PF 63/22	166
PA/PF 73/22	251
PA/PF 73/32	263
PA/PF 83/32	378

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



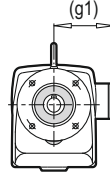
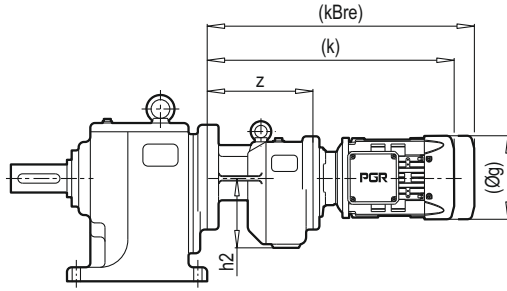
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	250	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

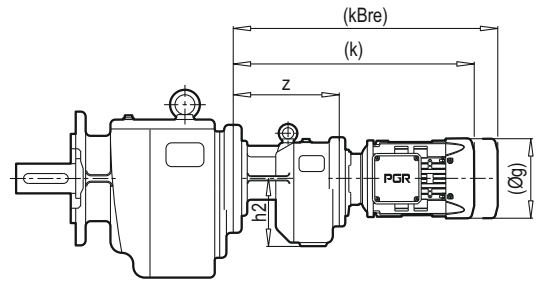
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 63/22 - 73/22 - 83/32	71	105	70	85	4.0	7	14	30	16.3	5	88
PA/PF 63/22 - 73/22 - 83/32	80	120	80	100	4.0	7	19	40	21.8	6	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	140	95	115	4.0	9	24	50	27.3	8	72
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	160	110	130	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



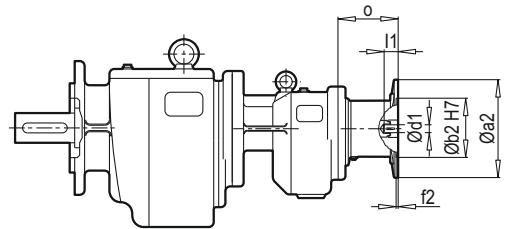
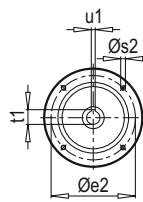
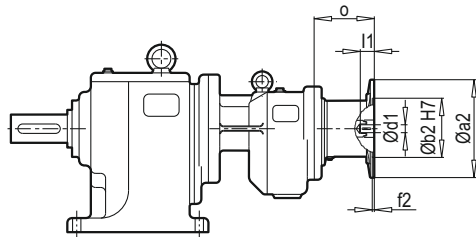
Tip / Type	Motor	g	g1	h2	z	k	kBre
PA/PF 83/42 PA/PF 93/42	90 S/L	193	151	179	282	547/567	620/640
	100 L	217	160			595	676
	112 M	232	168			640	720
	132 S/M	279	182			647/682	755/896
PA/PF 93/52 PA/PF 103/52	90 S/L	193	151	218	321	586/606	659/679
	100 L	217	160			634	715
	112 M	232	168			679	759
	132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

Not : (...) İşareti 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



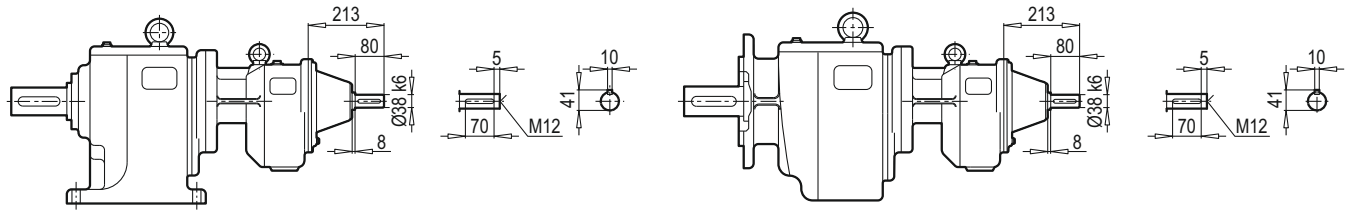
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	200	130	165	4.0	M10	24	50	27.3	8	109
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	250	180	215	5.0	M12	28	60	31.3	8	133
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	250	180	215	5.0	M12	28	60	31.3	8	133
PA/PF 83/42 - 93/42 - 93/52 - 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

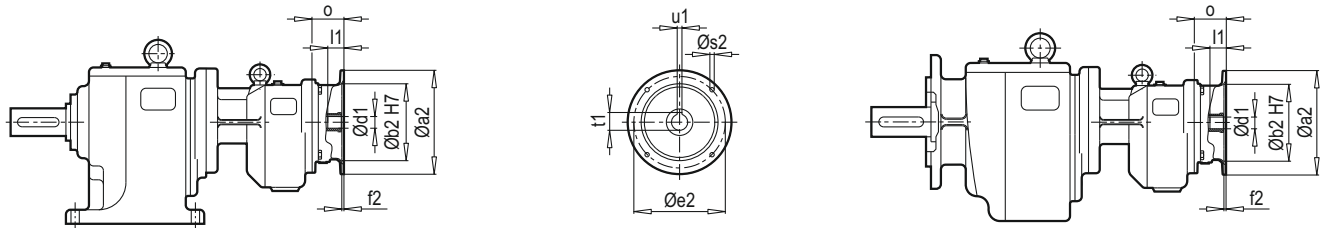


W ~ Kg	
PA/PF 83/42	405
PA/PF 93/42	595
PA/PF 93/52	625
PA/PF 103/52	858

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



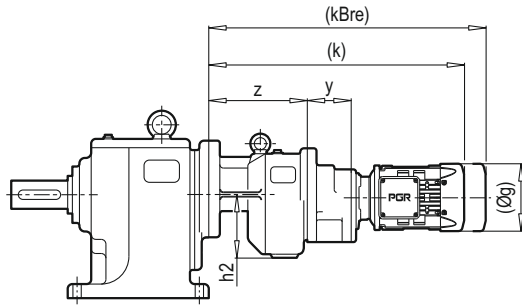
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	200	130	165	4.0	M10	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 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

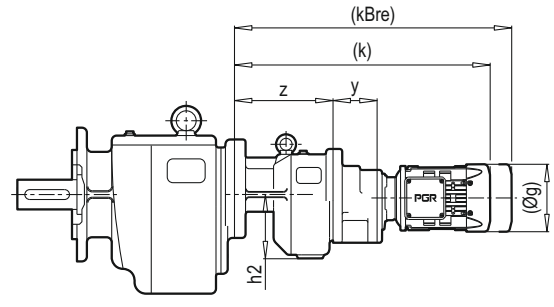
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	140	95	115	4.0	9	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52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



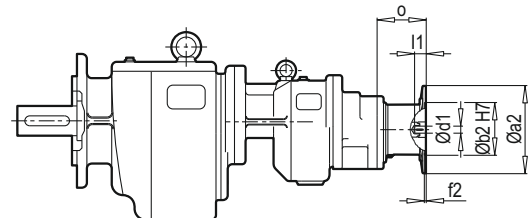
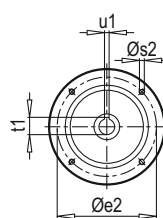
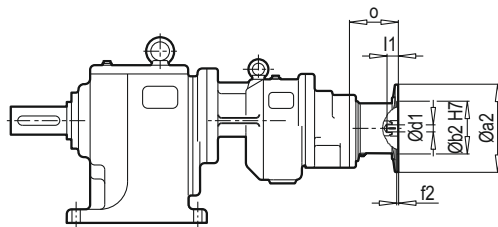
Tip / Type	Motor	g	g1	h2	z	y	k	kBre
PA/PF 63/23	71 M	140	119	127	196	60	496	556
	80 M	159	127	127	196	60	523	585

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



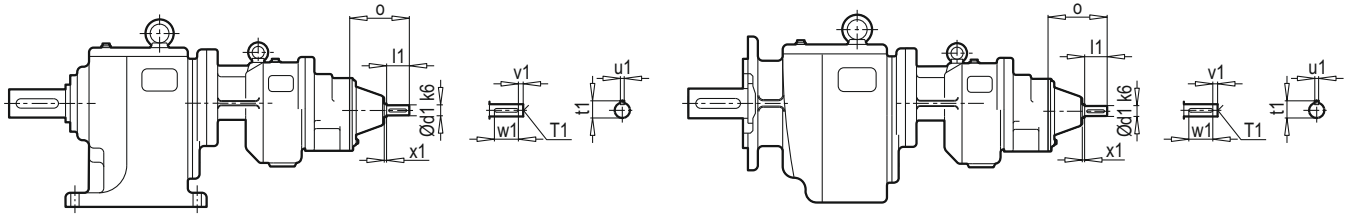
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 63/23 73/23 83/33 o	PA/PF 93/43 103/53 o
PA/PF 63/23-73/23-83/33	63	140	95	115	3.5	M8	11	23	12.8	4	85	-
PA/PF 63/23-73/23-83/33-93/43-103/53	71	160	110	130	4.0	M8	14	30	16.3	5	89	88
PA/PF 63/23-73/23-83/33-93/43-103/53	80	200	130	165	4.0	M10	19	40	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



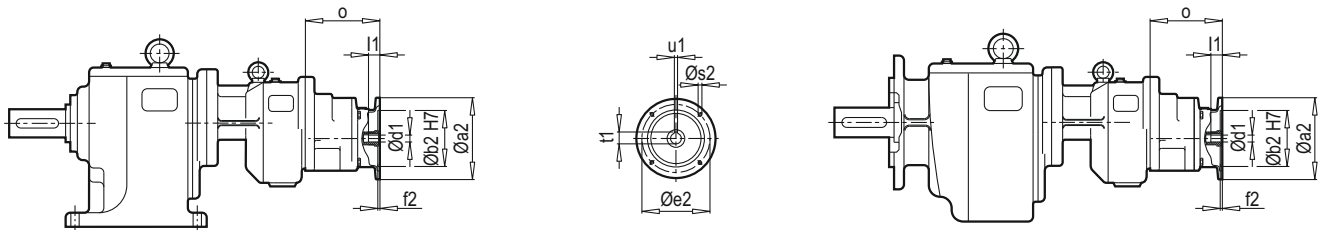
Tip / Type	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 63/23 PA/PF 73/23 PA/PF 83/33	16	7	40	122	M5	18	5	4	32
PA/PF 93/43 PA/PF 103/53	24	8	50	172	M8	27	8	5	40

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



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W - IEC ve PAM Adaptörü Seçim Tabloları

Selection Of W-IEC and
PAM Adapters

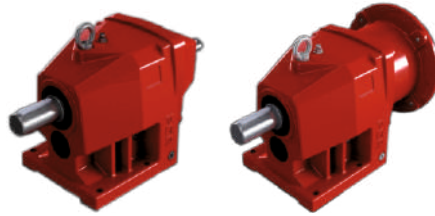
PA
TEK KADEME
SINGLE REDUCTION



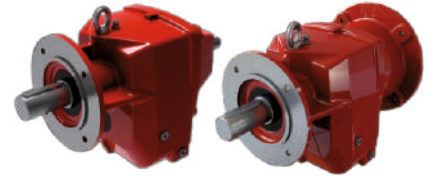
PF
TEK KADEME
SINGLE REDUCTION



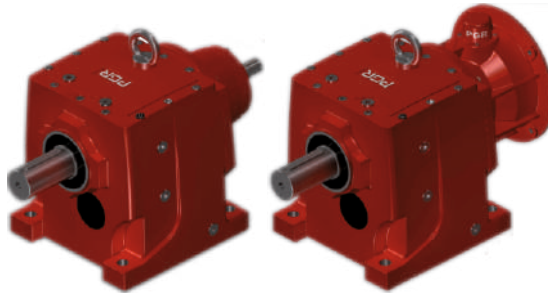
PA
İKİ KADEME
DOUBLE REDUCTION



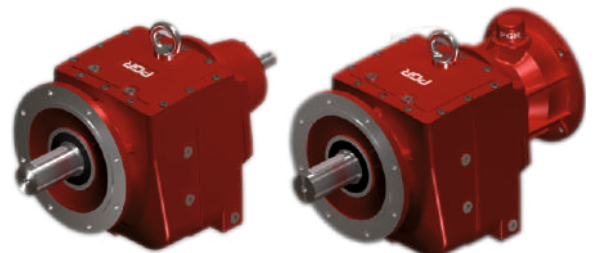
PF
İKİ KADEME
DOUBLE REDUCTION



PA
ÜÇ KADEME
TRIPLE REDUCTION



PF
ÜÇ KADEME
TRIPLE 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 göre dir.

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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82	DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]					
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.

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.

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

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.

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

W - IEC - PAM

Tip Type	Tahvil Reduction i_{ges}	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n_2 [min ⁻¹]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	$f_B \Rightarrow$ 49 - 82				According to DIN 42677 IEC motor power depend on pole number of motor.			
PA 03 PF 03 W   96 + IEC - PAM   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   96 + IEC - PAM   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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM				DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	$f_B \Rightarrow$							
PA 12/02 PF 12/02 W   + IEC - PAM  	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   + IEC - PAM  	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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu		
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	$f_B \Rightarrow$ 49 - 82							According to DIN 42677 IEC motor power depend on pole number of motor.		
PA 12 PF 12 W   100 + IEC - PAM   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   85 + IEC - PAM   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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 22/02 PF 22/02 W $\leftarrow \rightarrow$ mm  139 + IEC - PAM $\leftarrow \rightarrow$ 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 $\leftarrow \rightarrow$ mm  104 + IEC - PAM $\leftarrow \rightarrow$ 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82						DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]										
PA 22 PF 22 W  104 + IEC - PAM  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  87 + IEC - PAM  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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 32/12 PF 32/12 W $\frac{mm}{mm}$ 139 + IEC - PAM $\frac{mm}{mm}$ 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 $\frac{mm}{mm}$ 108 + IEC - PAM $\frac{mm}{mm}$ 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

☐ 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	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n2 [min ⁻¹]	Mamax fB =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power				IEC - PAM							DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu			
	P1max			W	fB ≥1	fB ⇔  49 - 82					According to DIN 42677 IEC motor power depend on pole number of motor.							
							4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 32 PF 32 W  108 + IEC - PAM  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  89 + IEC - PAM  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 P1max değerleri aşılmamalıdır - Do not exceed the P1max values indicated on fields with asterisk																		

W - IEC - PAM

Tip Type	Tahvil Reduction İges	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n2 [min ⁻¹]	Mamax f _B = 1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W f _B ≥ 1				IEC - PAM DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	f _B ⇒ 49 - 82							
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 P1max değerleri aşılmamalıdır - Do not exceed the P1max 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 42 PF 42  112 + IEC - PAM  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  91 + IEC - PAM  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]	Mamax f _B = 1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P _{1max} W f _B ≥ 1				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.			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]												
PA 52/12 PF 52/12 W   139 + IEC - PAM   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   116 + IEC - PAM   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	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P _{1max} W f _B ≥ 1				IEC - PAM			DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu					
	i _{ges}			4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	f _B ⇔  49 - 82	According to DIN 42677 IEC motor power depend on pole number of motor.							
PA 52 PF 52 W   116 + IEC - PAM   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   93 + IEC - PAM   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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 63/23 PF 63/23 W   145 + IEC - PAM   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   141 + IEC - PAM   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 İges	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n2 [min ⁻¹]	Mamax fB =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W fB ≥ 1				IEC - PAM fB ⇔  49 - 82		DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.					
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 63 PF 63 W   120 + IEC - PAM   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   120 + IEC - PAM   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 P1max değerleri aşılmamalıdır - Do not exceed the P1max 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 73/23 PF 73/23 W $\frac{mm}{mm}$ 145 + IEC - PAM $\frac{mm}{mm}$ 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 $\frac{mm}{mm}$ 141 + IEC - PAM $\frac{mm}{mm}$ 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 $\frac{mm}{mm}$ 141 + IEC - PAM $\frac{mm}{mm}$ 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 73 PF 73   + IEC - PAM 	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   + IEC - PAM 	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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 83/33 PF 83/33 W $\frac{mm}{mm}$ 145 + IEC - PAM $\frac{mm}{mm}$ 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 $\frac{mm}{mm}$ 141 + IEC - PAM $\frac{mm}{mm}$ 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*		
PA 83/42 PF 83/42 W $\frac{mm}{mm}$ 143 + IEC - PAM $\frac{mm}{mm}$ 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 83 PF 83 W  128 + IEC - PAM  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  128 + IEC - PAM  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 İges	Çıkış Hızı Output speed 4-pol. 50 Hz 1400rpm n2 [min-1]	Mamax fB =1 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P1max W fB ≥ 1				IEC - PAM					DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu				
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	fB ⇒ 	49	82							
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										
	1299.17	1.10	12200	1.38	0.91	0.69	0.46			100*	112*	132*					
	1090.99	1.30	12200	1.64	1.09	0.82	0.54	90*	100*	112*							
	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

63IEC - PAM bağlantısı yapılır - IEC - PAM assembling available on numbered fields

80*IEC - PAM bağlantısı yapılacaksa P1max değerleri aşılmamalıdır - Do not exceed the P1max 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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 93 PF 93 W   132 + IEC - PAM   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   132 + IEC - PAM   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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82						DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.			
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]										
PA 103/53 PF 103/53 W  145 + IEC - PAM  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  143 + IEC - PAM  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]	Mamax $f_B = 1$ 4 - pol. [Nm]	Max. Giriş Gücü Max. Input Power P_{1max} W $f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 49 - 82 DIN 42677' ye göre IEC Adaptöre Bağlanacak Motor Boyutu According to DIN 42677 IEC motor power depend on pole number of motor.							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 103 PF 103 W  136 + IEC - PAM  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  136 + IEC - PAM  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

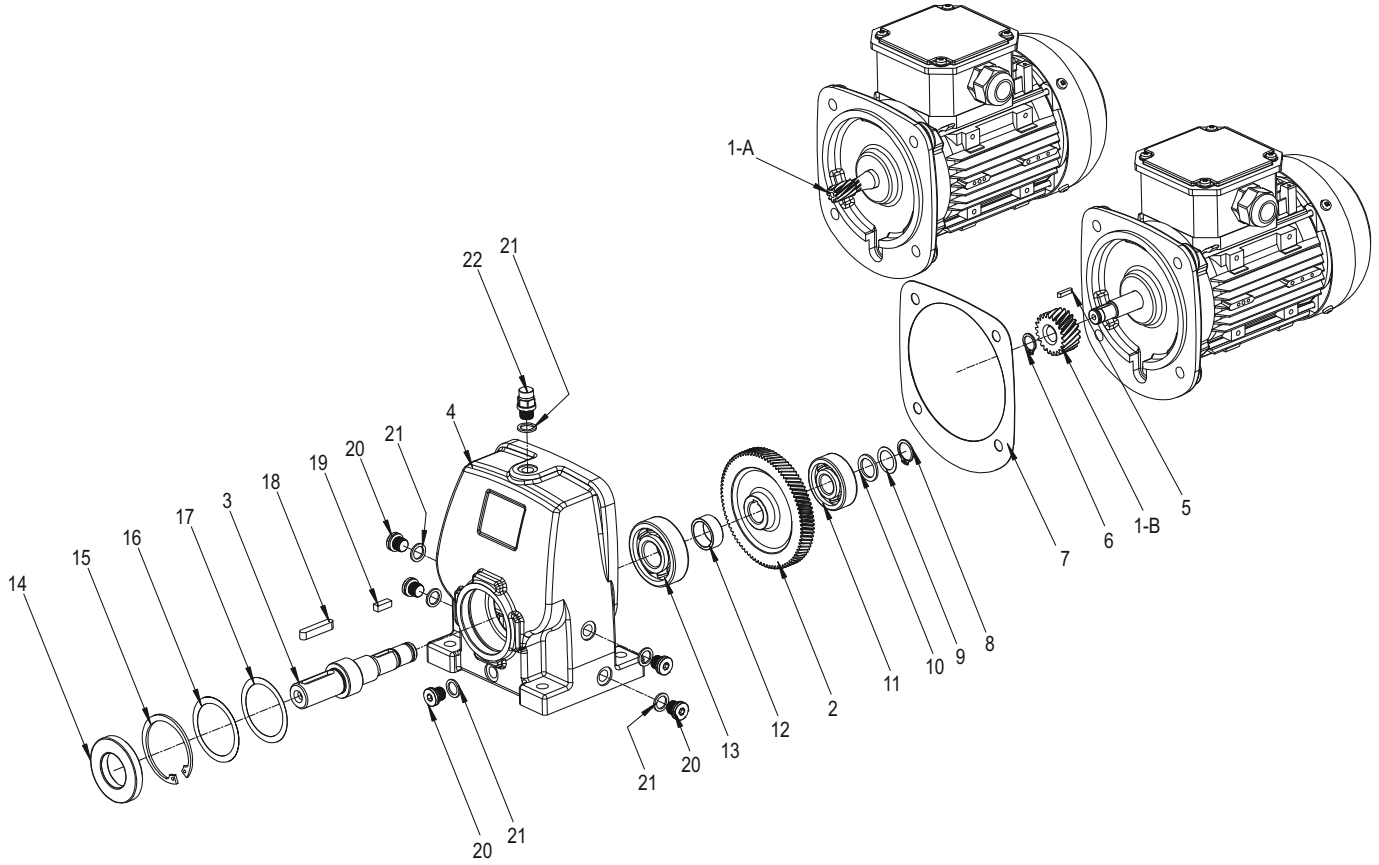
TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PA 11 ... 51



- 1-A Z1 Dişlisi (Yekpare)
 1-B Z1 Dişlisi (Çakma)
 2 Z2 Dişlisi
 3 Çıkış mili
 4 Gövde
 5 Kama
 6 Segman
 7 Conta
 8 Segman
 9 Layner
 10 Rondela
 11 Rulman
 12 Ara Burcu
 13 Rulman
 14 Yağ keçesi
 15 Segman
 16 Layner
 17 Layner
 18 Kama
 19 Kama
 20 Yağ tapası
 21 Tapa Rondelası
 22 Havalandırma Tapası

- 1-A Pinion, gearcut
 1-B Pinion, planin
 2 Driving Gear
 3 Solid Shaft
 4 Gear Case
 5 Key
 6 Circlip
 7 Gasket
 8 Circlip
 9 Shim
 10 Washer
 11 Bearing
 12 Supporting Disc
 13 Bearing
 14 Oil seal
 15 Circlip
 16 Shim
 17 Shim
 18 Key
 19 Key
 20 Oil plug
 21 Washer
 22 Vent plug

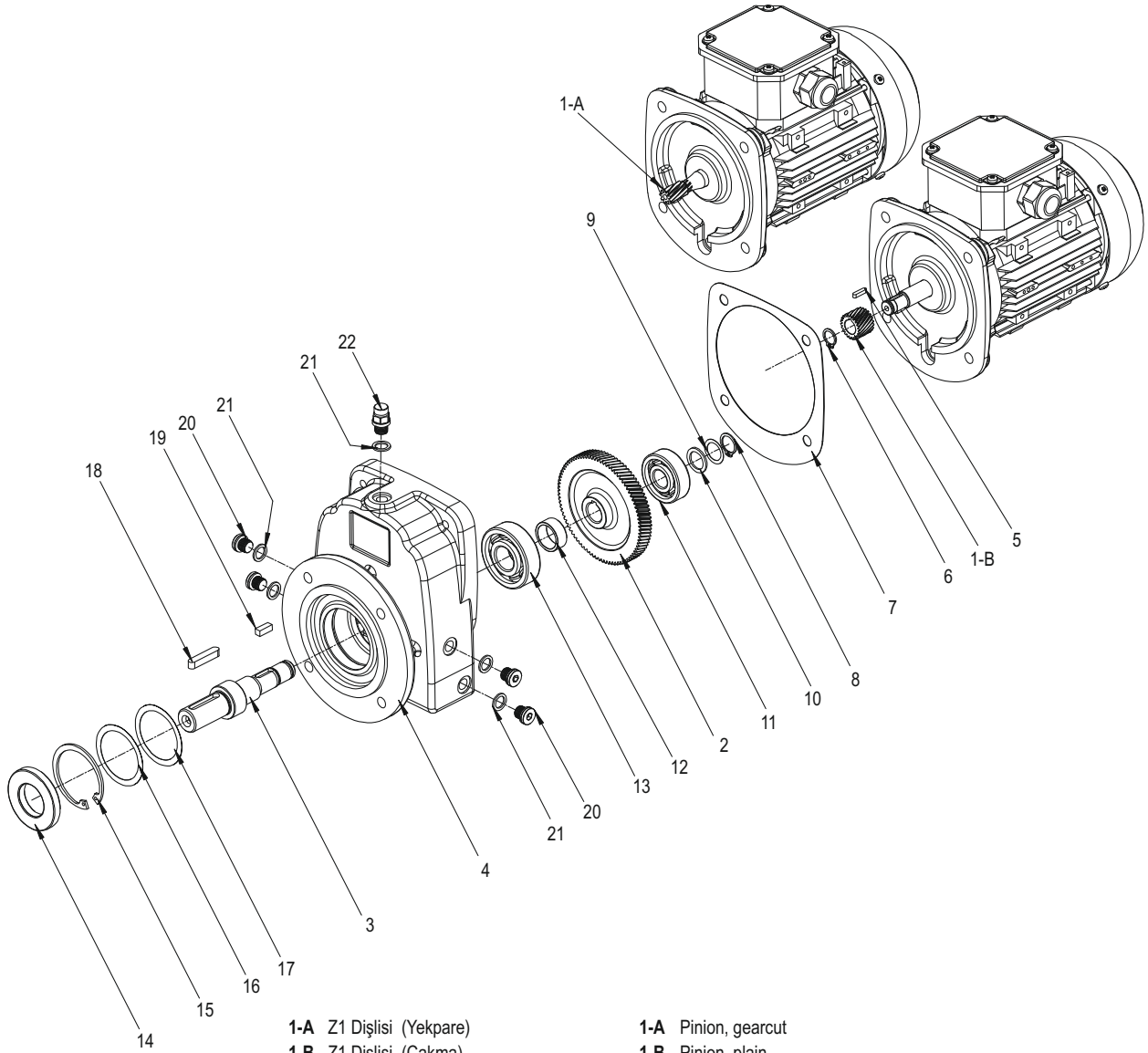
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PF 11 ... 51



- 1-A Z1 Dişlisi (Yekpare)
- 1-B Z1 Dişlisi (Çakma)
- 2 Z2 Dişlisi
- 3 Çıkış Mili
- 4 Gövde
- 5 Kama
- 6 Segman
- 7 Conta
- 8 Segman
- 9 Layner
- 10 Rondela
- 11 Rulman
- 12 Ara Burcu
- 13 Rulman
- 14 Yağ keçesi
- 15 Segman
- 16 Layner
- 17 Layner
- 18 Kama
- 19 Kama
- 20 Yağ Tapası
- 21 Tapa Rondelası
- 22 Havalandırma Tapası

- 1-A Pinion, gearcut
- 1-B Pinion, plain
- 2 Driving Gear
- 3 Solid Shaft
- 4 Gear Case
- 5 Key
- 6 Circlip
- 7 Gasket
- 8 Circlip
- 9 Shim
- 10 Washer
- 11 Bearing
- 12 Supporting Disc
- 13 Bearing
- 14 Oil seal
- 15 Circlip
- 16 Shim
- 17 Shim
- 18 Key
- 19 Key
- 20 Oil plug
- 21 Washer
- 22 Vent plug

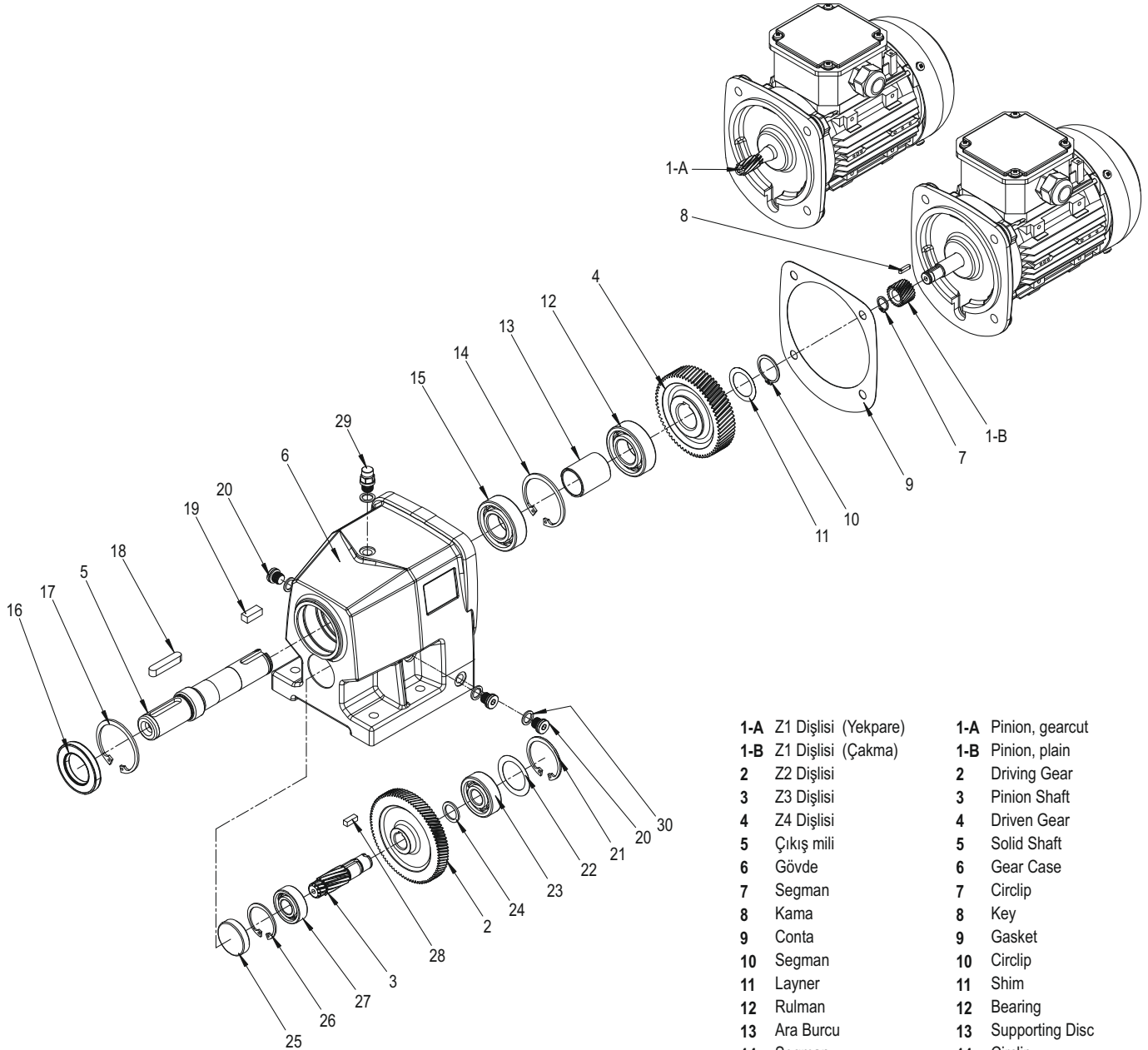
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PA 12 ... 52



1-A Z1 Dişlisi (Yekpare)

1-B Z1 Dişlisi (Çakma)

2 Z2 Dişlisi

3 Z3 Dişlisi

4 Z4 Dişlisi

5 Çıkış mili

6 Gövde

7 Segman

8 Kama

9 Conta

10 Segman

11 Layner

12 Rulman

13 Ara Burcu

14 Segman

15 Rulman

16 Yağ keçesi

17 Segman

18 Kama

19 Kama

20 Tapa

21 Segman

22 Layner

23 Rulman

24 Z3 Ayar Rondelası

25 Yağ kapağı

26 Segman

27 Rulman

28 Kama

29 Havalandırma Tapası

30 Tapa Rondelası

1-A Pinion, gearcut

1-B Pinion, plain

2 Driving Gear

3 Pinion Shaft

4 Driven Gear

5 Solid Shaft

6 Gear Case

7 Circlip

8 Key

9 Gasket

10 Circlip

11 Shim

12 Bearing

13 Supporting Disc

14 Circlip

15 Bearing

16 Oil seal

17 Circlip

18 Key

19 Key

20 Oil plug

21 Circlip

22 Shim

23 Bearing

24 Z3 Washer

25 Oil Filler Cup

26 Circlip

27 Bearing

28 Key

29 Vent plug

30 Washer

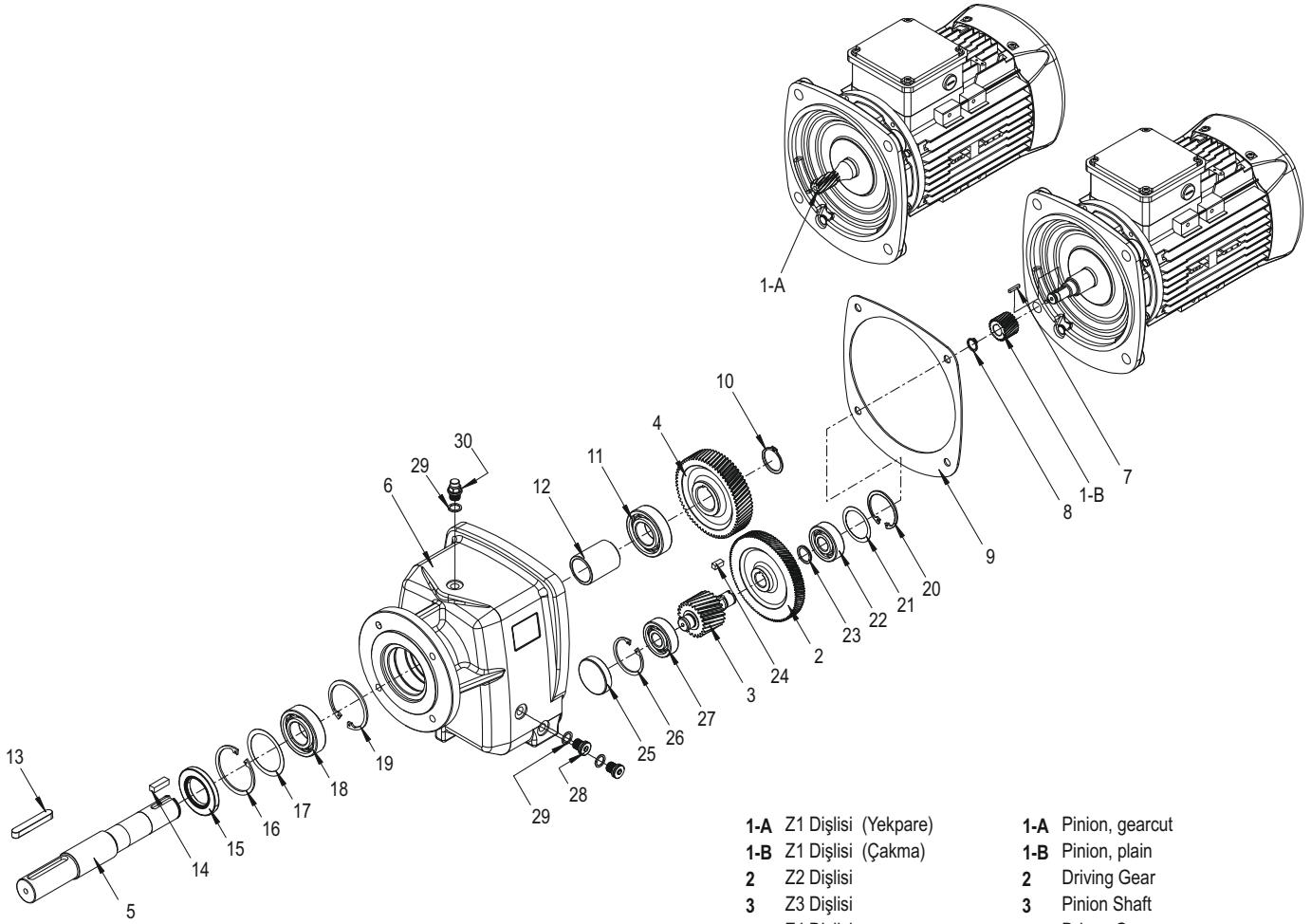
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PF 12 ... 52



1-A Z1 Dişlisi (Yekpare)

1-B Z1 Dişlisi (Çakma)

2 Z2 Dişlisi

3 Z3 Dişlisi

4 Z4 Dişlisi

5 Çıkış Mili

6 Gövde

7 Kama

8 Segman

9 Conta

10 Segman

11 Rulman

12 Ara Burcu

13 Kama

14 Kama

15 Yağ keçesi

16 Segman

17 Layner

18 Rulman

19 Segman

20 Segman

21 Layner

22 Rulman

23 Rondela

24 Kama

25 Yağ kapağı

26 Segman

27 Rulman

28 Tapa

29 Tapa Rondelası

30 Havalandırma Tapası

1-A Pinion, gearcut

1-B Pinion, plain

2 Driving Gear

3 Pinion Shaft

4 Driven Gear

5 Solid Shaft

6 Gear Case

7 Key

8 Circlip

9 Gasket

10 Circlip

11 Bearing

12 Supporting Disc

13 Key

14 Key

15 Oil seal

16 Circlip

17 Shim

18 Bearing

19 Circlip

20 Circlip

21 Shim

22 Bearing

23 Rondela

24 Key

25 Oil Filler Cup

26 Circlip

27 Bearing

28 Oil plug

29 Washer

30 Vent plug

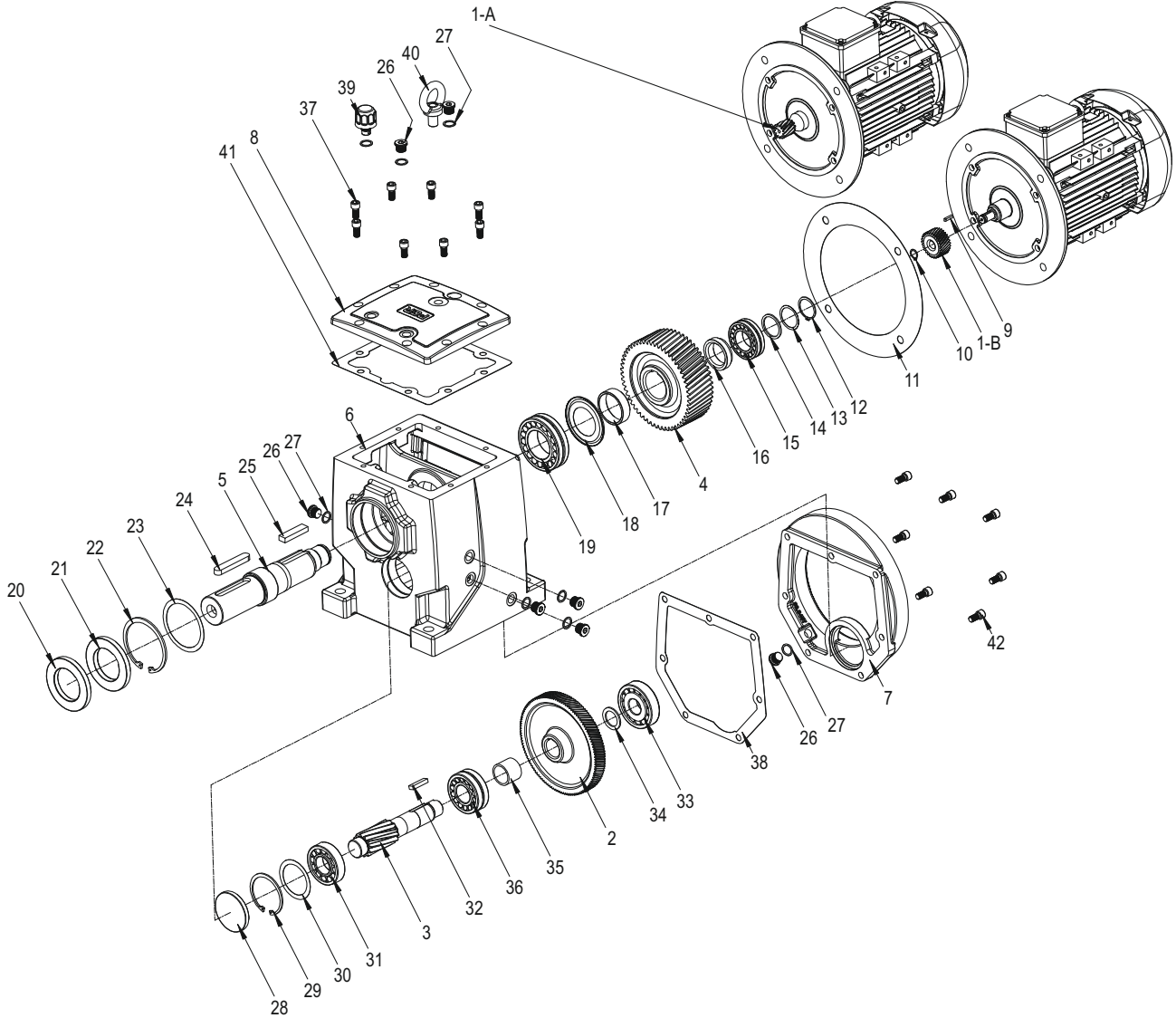
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PA 62 ... 102



1-A Z1 Dişlisi (Yekpare)

1-B Z1 Dişlisi (Çakma)

2 Z2 Dişlisi

3 Z3 Dişlisi

4 Z4 Dişlisi

5 Çıkış mili

6 Gövde

7 Ara Bağlantı Flanşı

8 Gövde Kapağı

9 Kama

10 Segman

11 Conta

12 Segman

13 Layner

14 Rondela

15 Rulman

16 Çıkış Mili Konik Burcu

17 Çıkış Mili Ara Burcu

18 Nilosring

19 Rulman

20 Yağ keçesi

21 Yağ keçesi

22 Segman

23 Layner

24 Kama

25 Kama

26 Tapa

27 Tapa Rondelası

28 Yağ kapağı

29 Segman

30 Layner

31 Rulman

32 Kama

33 Rulman

34 Rondela

35 Burç

36 Rulman

37 Alyan Başlı Civata

38 Conta

39 Havalandırma Tapası

40 Halkalı Civata

41 Conta

42 Alyan Başlı Civata

1-A Pinion, gearcut

1-B Pinion, plain

2 Driving Gear

3 Pinion Shaft

4 Driven Gear

5 Solid Shaft

6 Gear Case

7 Intermediate Flange

8 Gear Case Cover

9 Key

10 Circlip

11 Gasket

12 Circlip

13 Shim

14 Washer

15 Bearing

16 Spacer

17 Spacer

18 Nilosring

19 Bearing

20 Oil seal

21 Oil seal

22 Circlip

23 Shim

24 Key

25 Key

26 Oil plug

27 Washer

28 Oil Filler Cup

29 Circlip

30 Shim

31 Bearing

32 Key

33 Bearing

34 Washer

35 Spacer

36 Bearing

37 Socket head screw

38 Gasket

39 Vent plug

40 Eyebolt

41 Gasket

42 Socket head screw

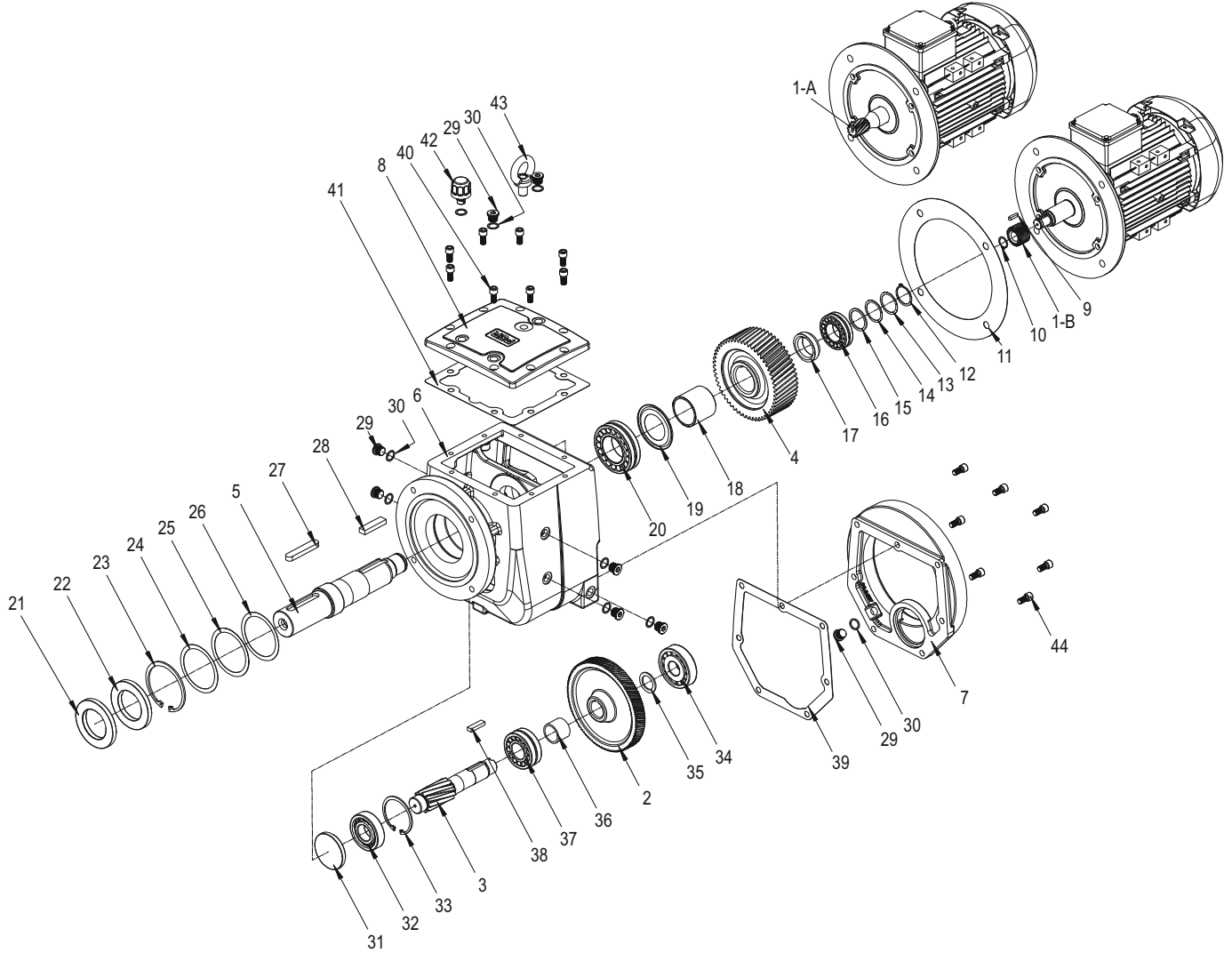
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

PF 62 ... 102



- 1-A Z1 Dişlisi (Yekpare)
1-B Z1 Dişlisi (Çakma)
2 Z2 Dişlisi
3 Z3 Dişlisi
4 Z4 Dişlisi
5 Çıkış mili
6 Gövde
7 Ara Bağlantı Flanşı
8 Gövde Kapağı
9 Kama
10 Segman
11 Conta
12 Segman
13 Layner
14 Layner
15 Z6 Rondela
16 Rulman
17 Çıkış Mili Konik Burcu
18 Çıkış Mili Ara Burcu
19 Nilosring
20 Rulman
21 Yağ keçesi
22 Yağ keçesi

- 23 Segman
24 Layner
25 Layner
26 Layner
27 Kama
28 Kama
29 Tapa
30 Tapa Rondelası
31 Yağ kapağı
32 Rulman
33 Segman
34 Rulman
35 Rondela
36 Burç
37 Rulman
38 Kama
39 Conta
40 Aylan Başlı Civata
41 Conta
42 Havalandırma Tapası
43 Halkalı Civata
44 Aylan Başlı Civata

- 1-A Pinion, gearcut
1-B Pinion, plain
2 Driving Gear
3 Pinion Shaft
4 Driven Gear
5 Solid Shaft
6 Gear Case
7 Intermediate Flange
8 Gear Case Cover
9 Key
10 Circlip
11 Gasket
12 Circlip
13 Shim
14 Shim
15 Washer
16 Bearing
17 Spacer
18 Spacer
19 Nilosring
20 Bearing
21 Oil seal
22 Oil seal

- 23 Circlip
24 Shim
25 Shim
26 Shim
27 Key
28 Key
29 Oil plug
30 Washer
31 Oil Filler Cup
32 Bearing
33 Circlip
34 Bearing
35 Washer
36 Spacer
37 Bearing
38 Key
39 Gasket
40 Socket head screw
41 Gasket
42 Vent plug
43 Eyebolt
44 Socket head screw

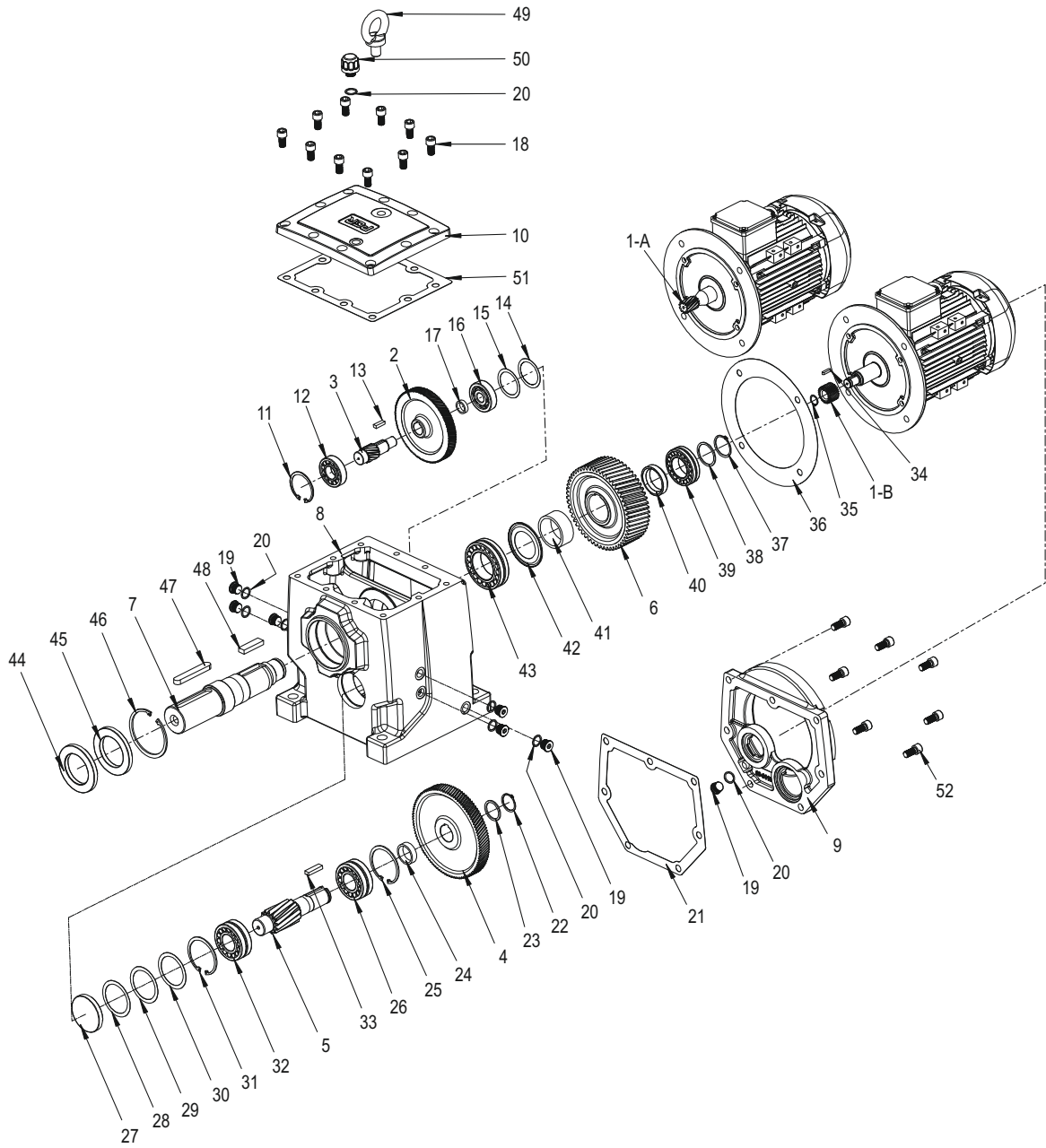
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GENEL PARÇA LİSTESİ

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	

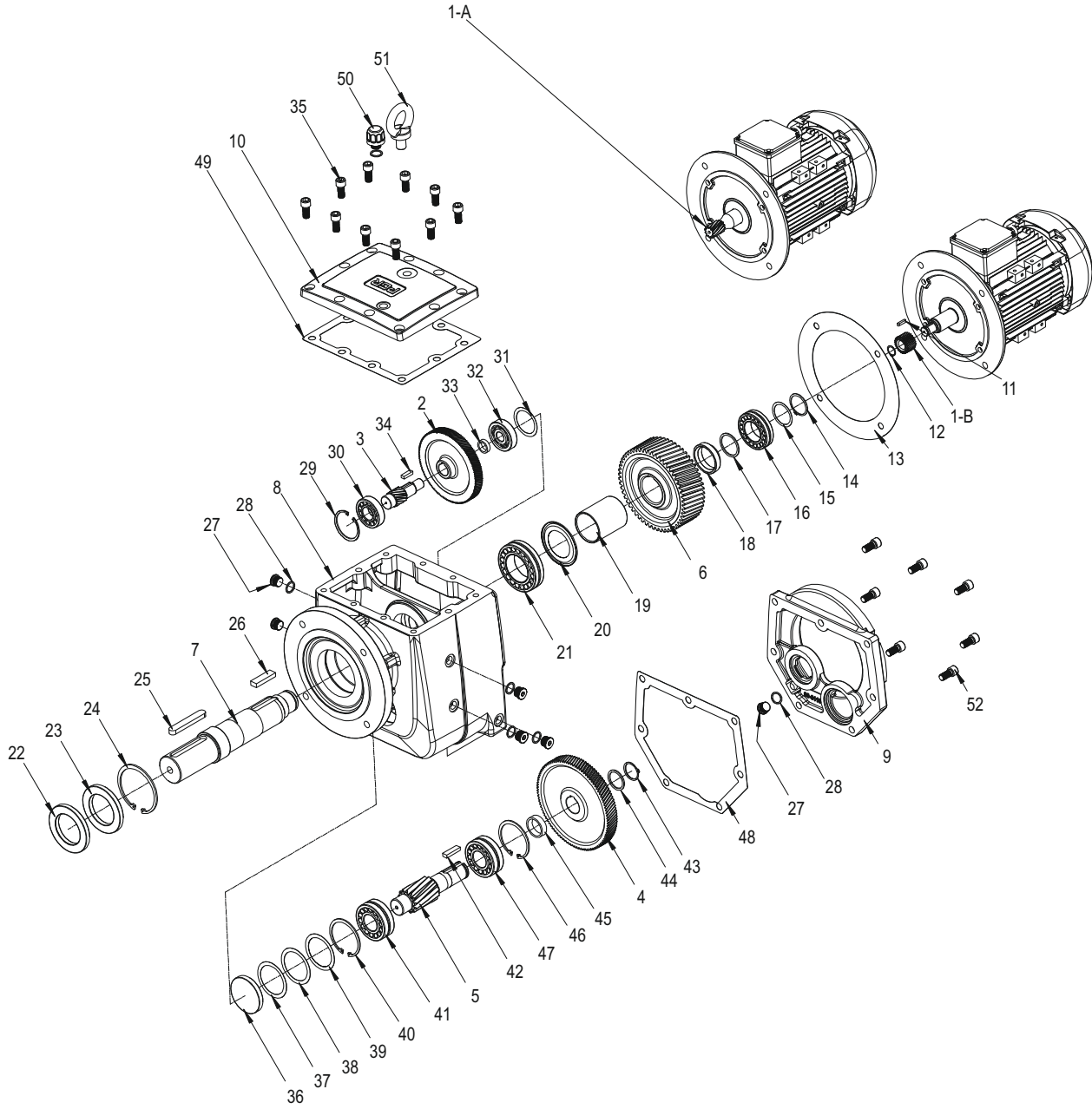
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GENEL PARÇA LİSTESİ

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	

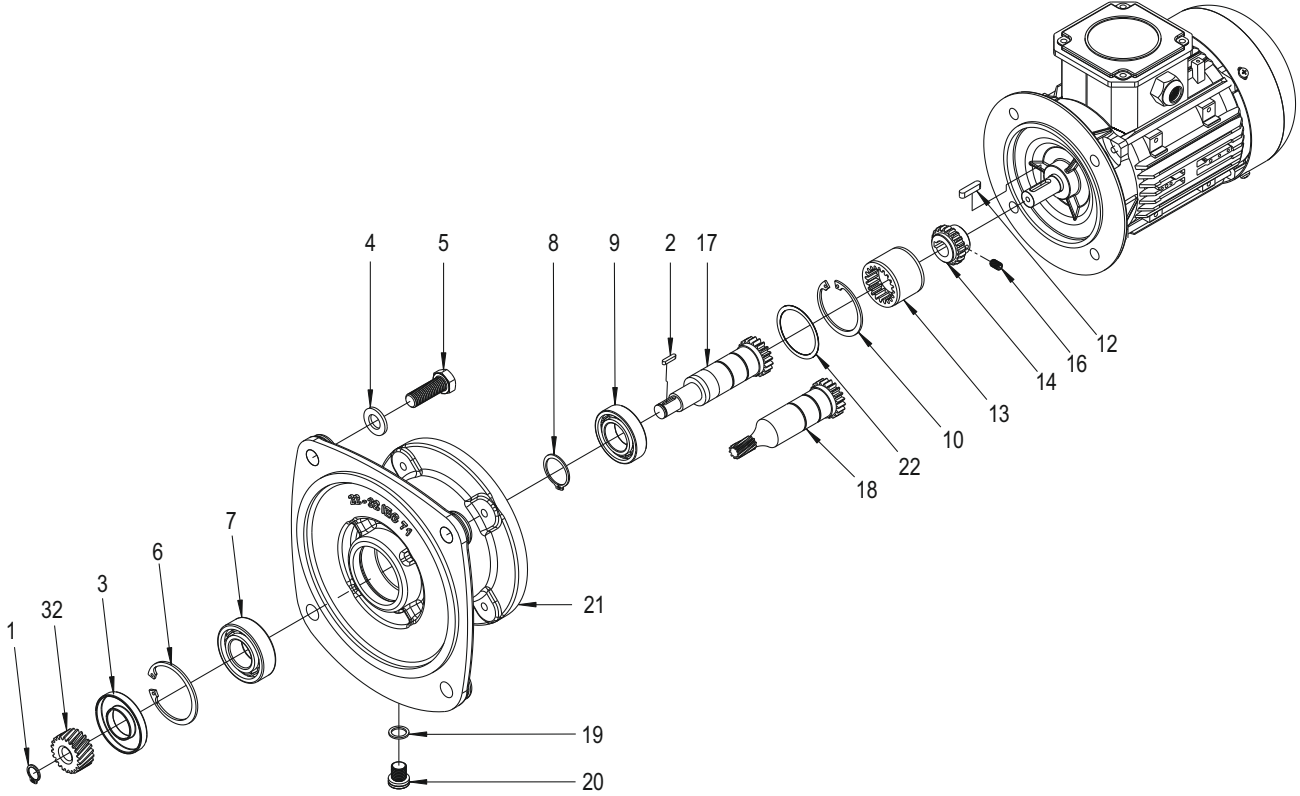
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GENEL PARÇA LİSTESİ

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

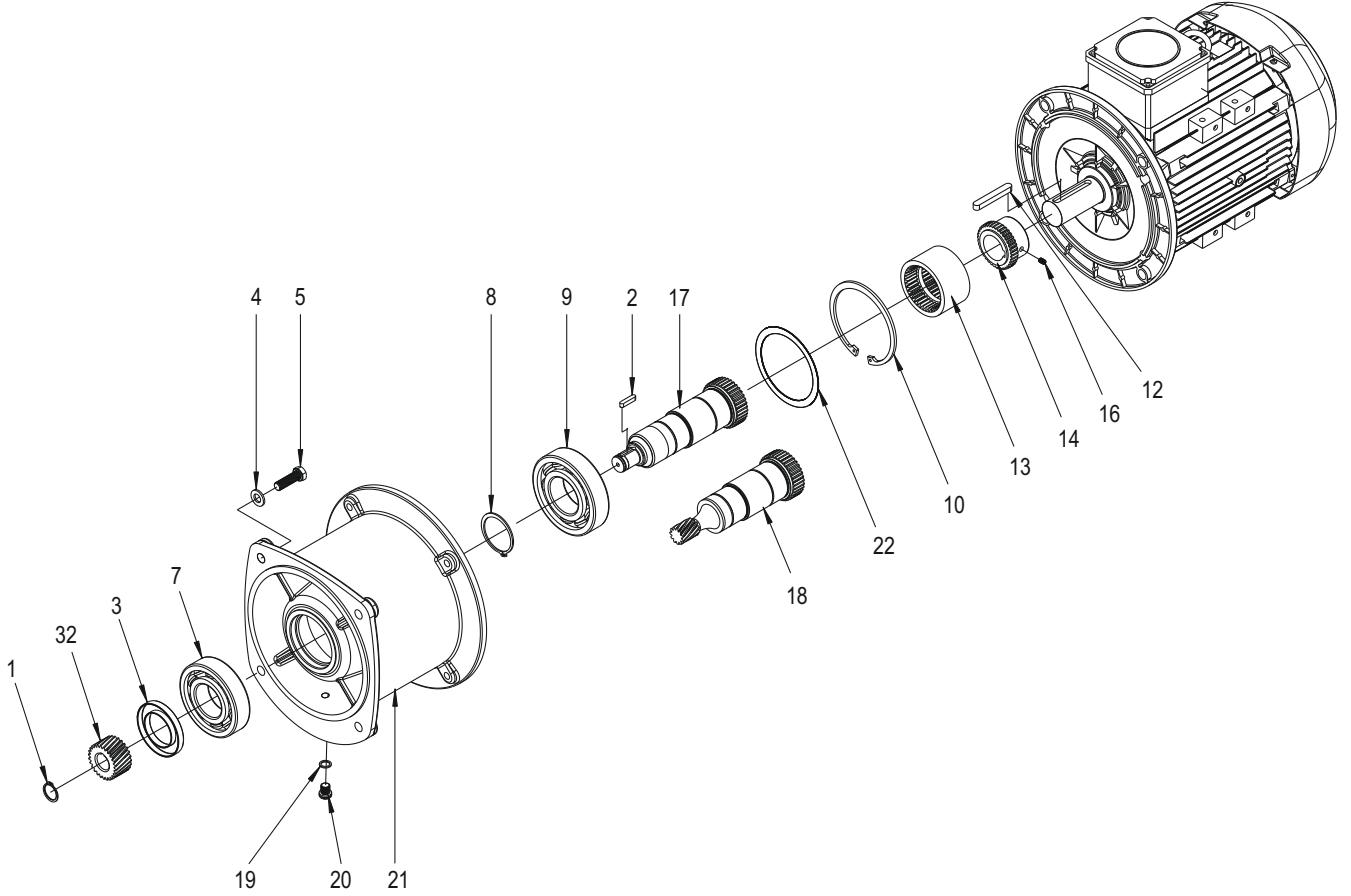
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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

IEC 132...180



1. Segman
2. Kama
3. Şaft Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
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. Shaft Seal
4. Spring Washer
5. Bolt
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

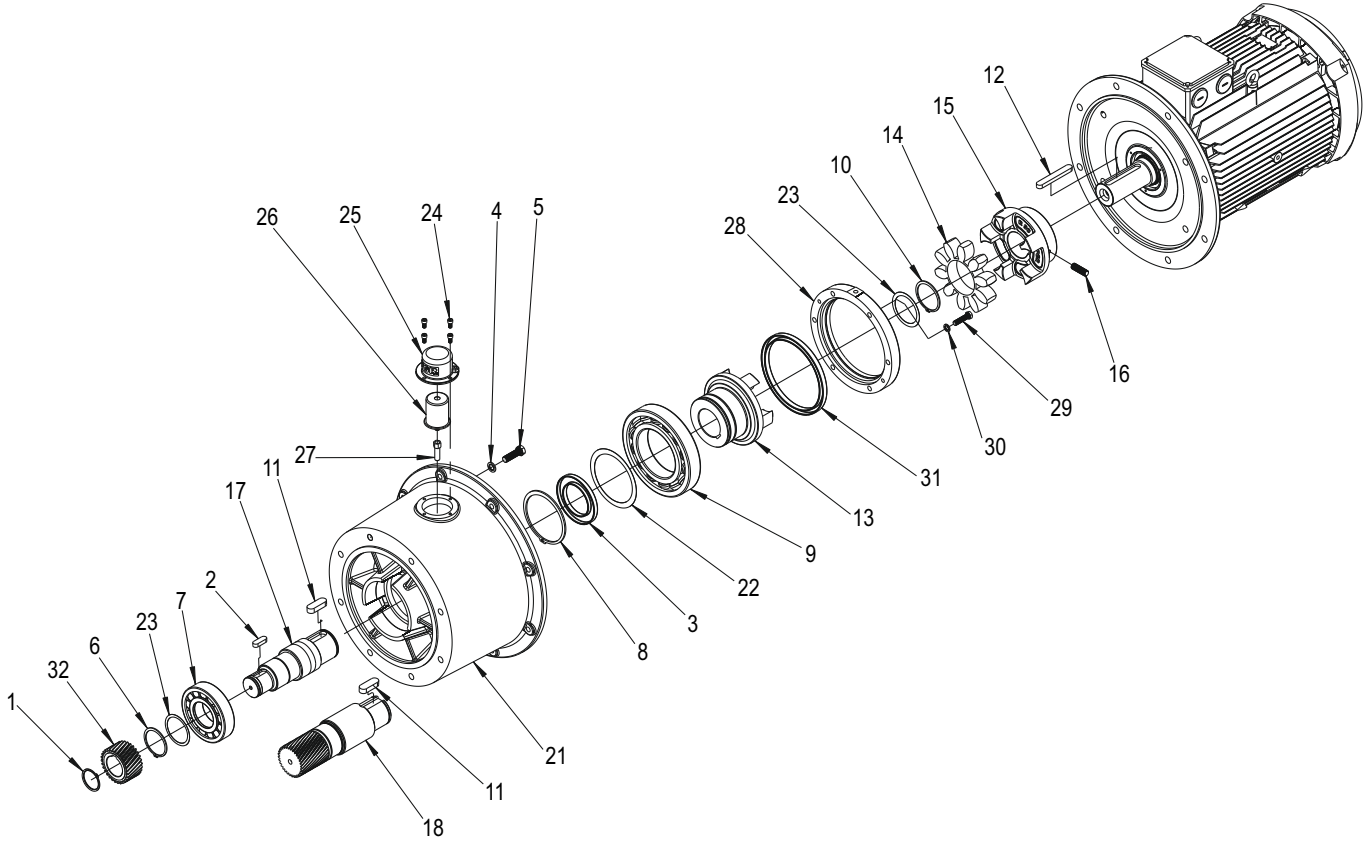
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GENEL PARÇA LİSTESİ

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

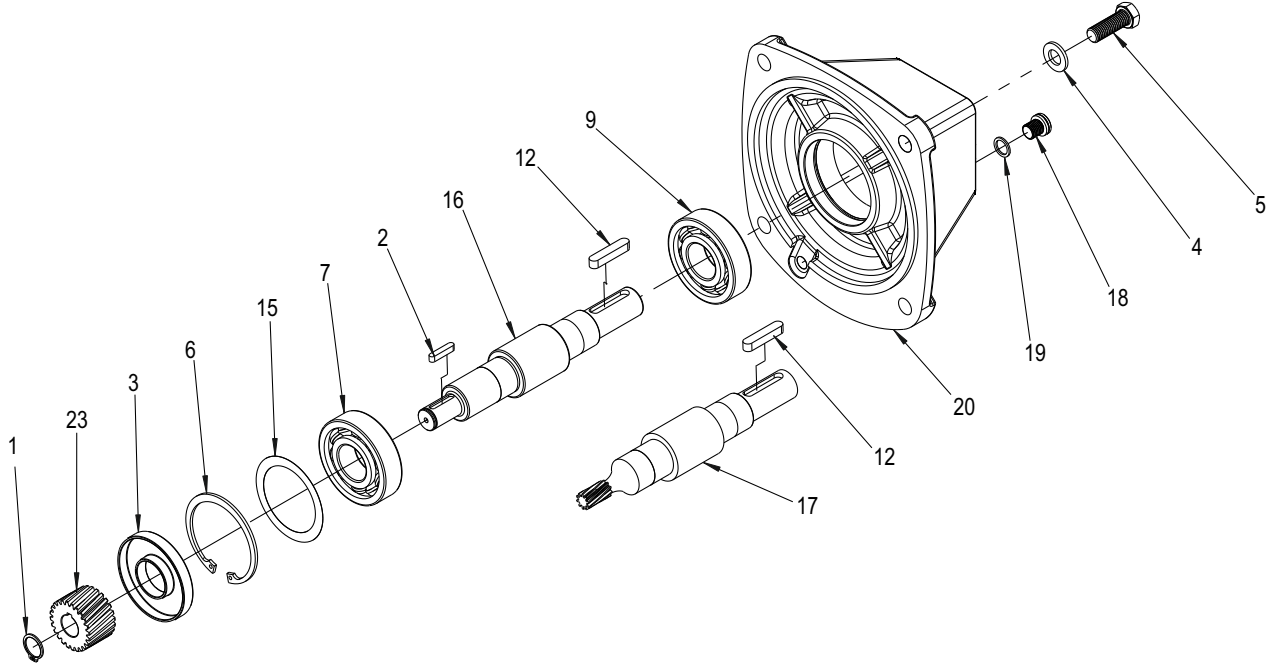
GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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

W 122 - 172 - 213



- 1. Segman
- 2. Kama
- 3. Yağ Keçesi
- 4. Yaylı Rondela
- 5. Altıköşe Başlı Civata
- 6. Segman
- 7. Rulman
- 9. Rulman
- 12. Kama
- 15. Layner
- 16. W Mili Çakma
- 17. W Mili Yekpare
- 18. Yağ Tapası
- 19. Rondela
- 20. W Gövdesi
- 23. Z1 Dişlisi

- 1. Circlip
- 2. Key
- 3. Oil Seal
- 4. Spring Seal
- 5. Bolt
- 6. Circlip
- 7. Bearing
- 9. Bearing
- 12. Key
- 15. Shim
- 16. Input Shaft, Plain
- 17. Input Shaft, Gearcut
- 18. Oil Plug
- 19. Washer
- 20. W Input Housing
- 23. Pinion

TR

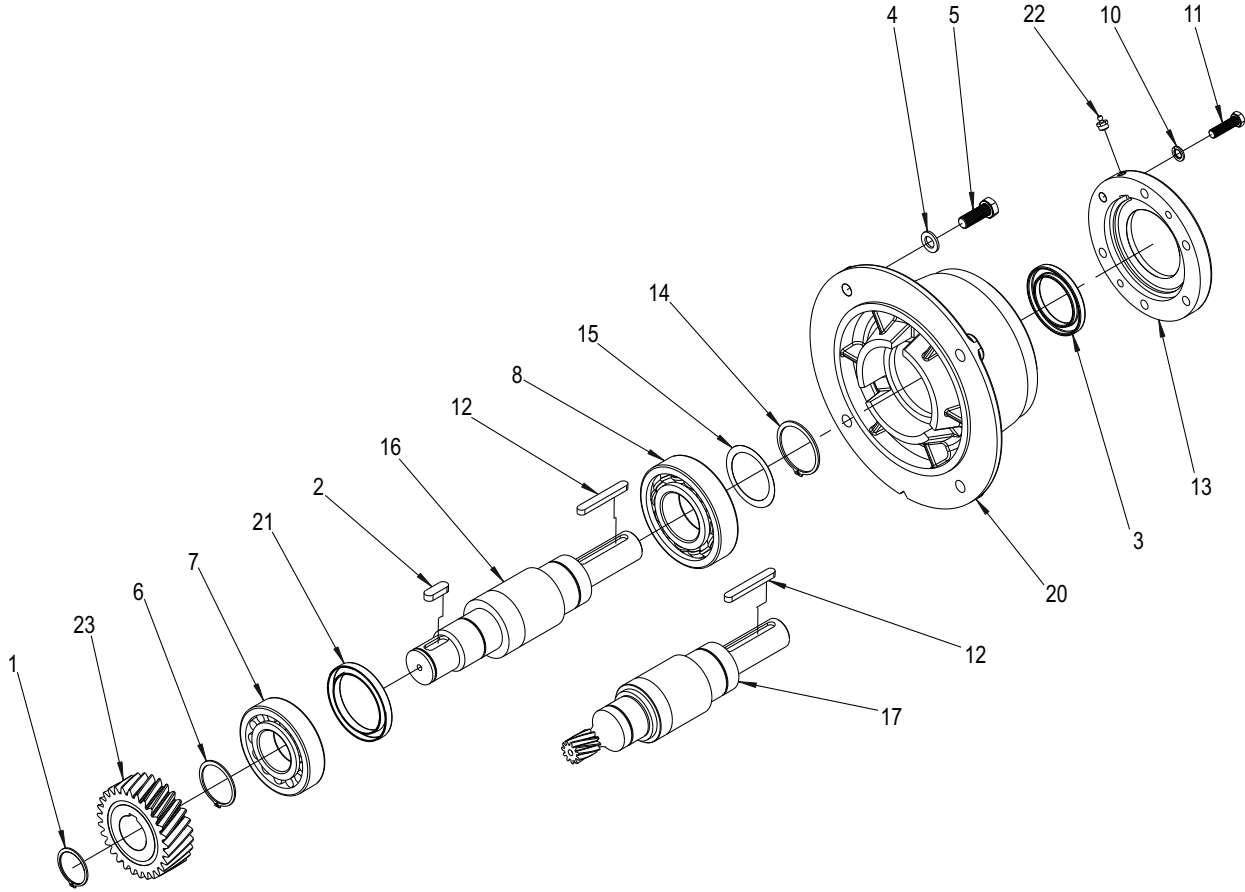
GENEL PARÇA LİSTESİ

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

EN

GENERAL PART LIST

W 288



1. Segman
2. Kama
3. Yağ Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
6. Segman
7. Rulman
8. Rulman
10. Yaylı Rondela
11. Altıköşe Başlı Civata
12. Kama
13. Rulman Kapağı
14. Segman
15. Layner
16. W Mili Çakma
17. W Mili Yekpare
20. W Gövdesi
21. Yağ Keçesi
22. Gresörlük
23. Z1 Dişlisi

1. Circlip
2. Key
3. Oil Seal
4. Spring Washer
5. Bolt
6. Circlip
7. Bearing
8. Bearing
10. Spring Washer
11. Bolt
12. Key
13. Bearing Cover
14. Circlip
15. Shim
16. Input Shaft, Plain
17. Input Shaft, Gearcut
20. W Input Housing
21. Oil Seal
22. Grease Nipple
23. Pinion

TR

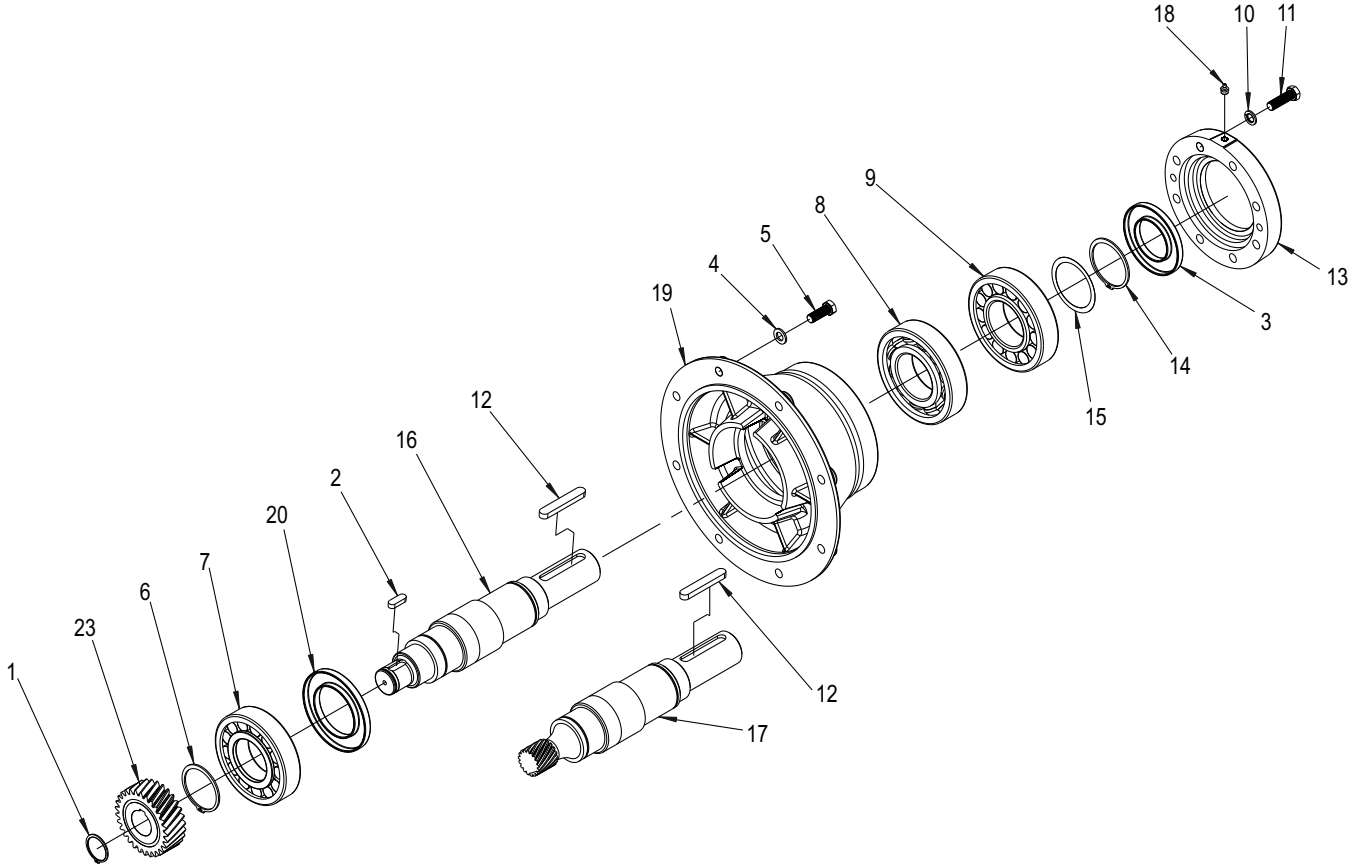
GENEL PARÇA LİSTESİ

PA/PF 82...92

EN

GENERAL PART LIST

W 397



1. Segman
2. Kama
3. Yağ Keçesi
4. Yaylı Rondela
5. Altıköşe Başlı Civata
6. Segman
7. Rulman
8. Rulman
9. Rulman
10. Yaylı Rondela
11. Altıköşe Başlı Civata
12. Kama
13. Rulman Kapağı
14. Segman
15. Layner
16. W Mili Çakma
17. W Mili Yekpare
18. Gresörlük
19. W Gövdesi
20. Yağ Keçesi
23. Z1 Dişlisi

1. Circlip
2. Key
3. Oil Seal
4. Spring Washer
5. Bolt
6. Circlip
7. Bearing
8. Bearing
9. Bearing
10. Spring Washer
11. Bolt
12. Key
13. Bearing Cover
14. Circlip
15. Shim
16. Input Shaft, Plain
17. Input Shaft, Gearcut
18. Grease Nipple
19. W input housing
20. Oil Seal
23. Pinion



GENEL PARÇA LİSTESİ

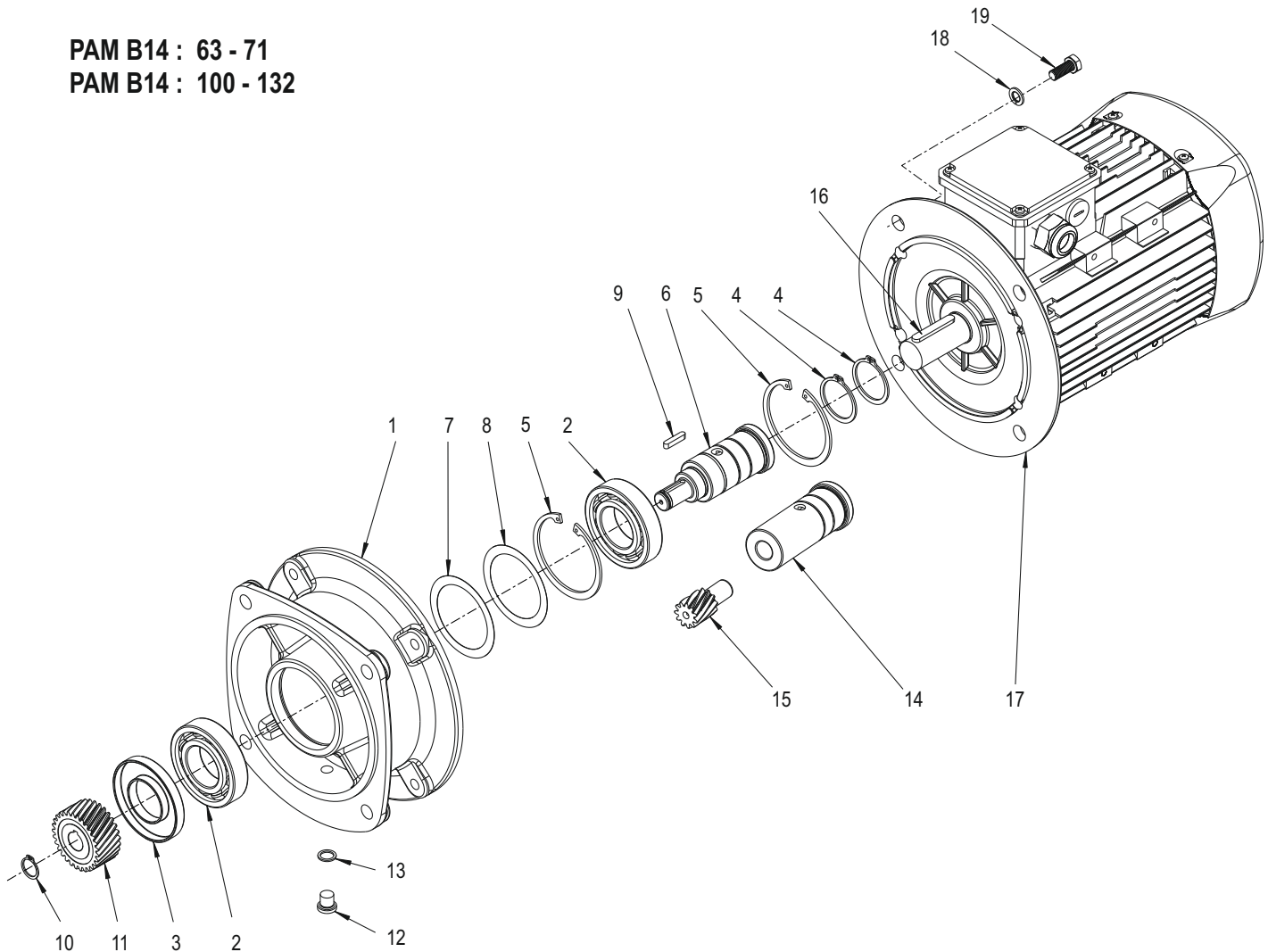
PAM B5 : 63 - 71
PAM B5 : 100...315

PAM B14 : 63 - 71
PAM B14 : 100 - 132

EN

GENERAL PART LIST

PAM (B5/B14)



1. Pam Gövde (B5/B14)
2. Rulman
3. Yağ Keçesi
4. Segman
5. Segman
6. Pam mili çakma
7. Layner
8. Layner
9. Kama
10. Segman
11. Z1 Dişlisi
12. Yağ Tapası
13. Rondela
14. Pam mili yekpare çakma
15. Z1 Dişlisi
16. Motor mili Kaması
17. Motor
18. Rondela
19. Altı köşe başlı civata

1. Pam Adapter (B5/B14)
2. Bearing
3. Oil Seal
4. Circlip
5. Circlip
6. Input Shaft, Plain
7. Shim
8. Shim
9. Key
10. Circlip
11. Pinion
12. Oil plug
13. Washer
14. Input Shaft, Gearcut
15. Pinion
16. Key
17. Motor
18. Washer
19. Bolt

TR

GENEL PARÇA LİSTESİ

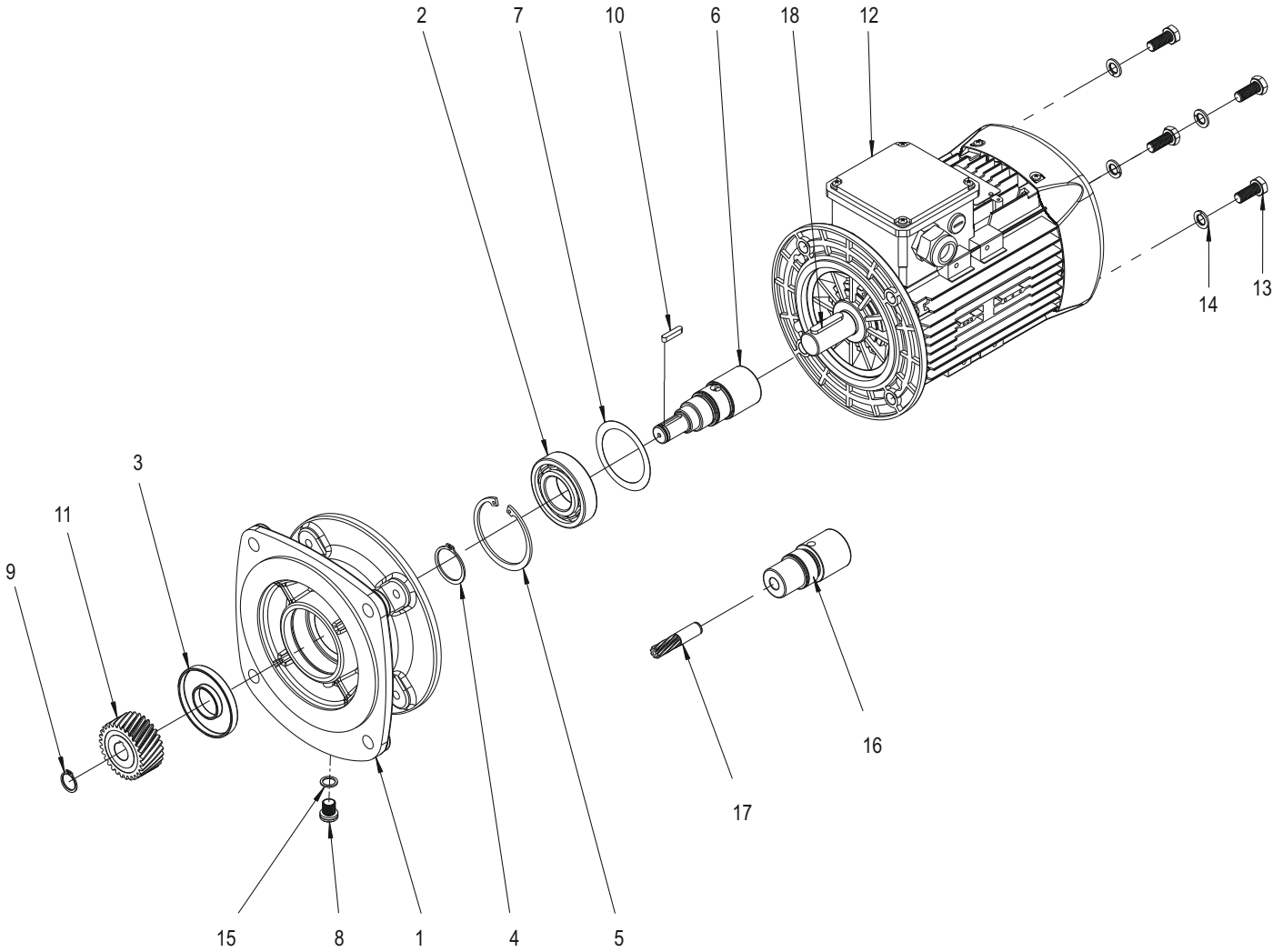
PAM B5 : 80 - 90

PAM B14 : 80 - 90

EN

GENERAL PART LIST

PAM (B5/B14)



1. Pam Gövde (B5/B14)
2. Rulman
3. Yağ Keçesi
4. Segman
5. Segman
6. Pam mili çakma
7. Layner
8. Yağ Tapası
9. Segman
10. Kama
11. Z1 Dişlisi
12. Motor
13. Cıvata
14. Yaylı Rondela
15. Rondela
16. Pam mili yekpare çakma
17. Z1 Dişlisi
18. Motor Kaması

1. Pam Adapter (B5/B14)
2. Bearing
3. Oil Seal
4. Circlip
5. Circlip
6. Input Shaft, Plain
7. Shim
8. Oil plug
9. Circlip
10. Key
11. Pinion
12. Motor
13. Bolt
14. Spring Washer
15. Washer
16. Input Shaft, Gearcut
17. Pinion
18. Key

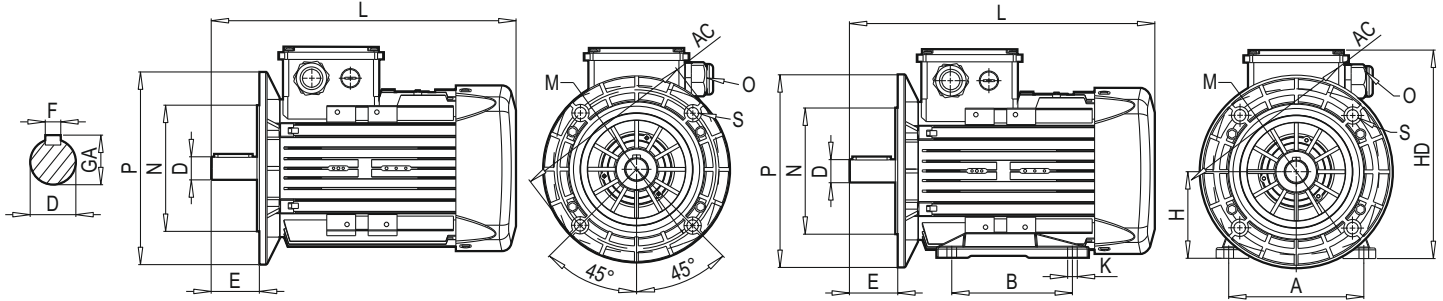
TR

ÜÇ FAZLI MOTORLAR IE1

EN

THREE PHASE MOTORS IE1

BOYUTLAR / DIMENSIONS - B5, B35



B5 - V1 - V3

B35 - V15 - V35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	P	N ⁽³⁾	M	R	S
0.12	4	Q1E 63M4A	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	140	95	115	0	10
0.18	2	Q1E 63M2A	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	140	95	115	0	10
	4	Q1E 63M4B	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	140	95	115	0	10
	6	Q1E 71M6A	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
	8	Q1E 80M8A	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
0.25	2	Q1E 63M2B	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	140	95	115	0	10
	4	Q1E 71M4A	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
	6	Q1E 71M6B	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
	8	Q1E 80M8B	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
0.37	2	Q1E 63M2C	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	140	95	115	0	10
	2	Q1E 71M2A	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	Q1E 71M4B	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
	6	Q1E 80M6A	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
0.55	8	Q1E 90S8A	Alüminyum	193	296.5	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
	2	Q1E 71M2B	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	Q1E 71M4C	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	Q1E 80M4A	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	6	Q1E 80M6B	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
	8	Q1E 90L8A	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	Q1E 71M2C	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
	2	Q1E 80M2A	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	Q1E 80M4B	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	Q1E 90S6A	Alüminyum	193	296.5	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
	8	Q1E 90L6B	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
	8	Q1E 100L8B	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
1.5	2	Q1E 80M2C	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	Q1E 80M4D	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	Q1E 90S2A	Alüminyum	193	296.5	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	Q1E 90L4A	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	6	Q1E 100L6A	Alüminyum	217	352	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
	8	Q1E 112M8A	Alüminyum	232	396	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	Q1E 80M2D	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	Q1E 90L2A	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
3	4	Q1E 90L4C	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	Q1E 100L4A	Alüminyum	217	352	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	Q1E 112M6A	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
	8	Q1E 132S8B	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
3	2	Q1E 90L2C	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	Q1E 90L4D	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	Q1E 100L2A	Alüminyum	217	352	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	Q1E 100L4B	Alüminyum	217	352	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	6	Q1E 132S6B	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
	8	Q1E 132M8A	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

TR

ÜÇ FAZLI MOTORLAR IE1

EN

THREE PHASE MOTORS IE1

BOYUTLAR / DIMENSIONS - B5, B35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	P	N ⁽³⁾	M	R	S
4	2	Q1E 100L2C	Alüminyum	217	352	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	Q1E 100L4C	Alüminyum	217	352	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	Q1E 112M2A	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	Q1E 112M4B	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	Q1E 132M6A	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
5.5	8	Q1E 160M8A	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	Q1E 112M2C	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	Q1E 112M4C	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	Q1E 132S2A	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	Q1E 132S4C	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
7.5	6	Q1E 132M6B	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
	8	Q1E 160M8B	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	Q1E 112M2D	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	Q1E 132S2C	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	Q1E 132S4C	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
11	6	Q1E 160M6B	Alüminyum	302	576	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
	8	Q1E 160L8A	Alüminyum	302	576	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	Q1E 132M2A	Alüminyum	279	476	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
	4	Q1E 132M4C	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	Q1E 160M2A	Alüminyum	302	576	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	4	Q1E 160M4B	Alüminyum	302	576	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	Q1E 160L6B	Alüminyum	302	576	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
	8	Q1E 180L8B	Alüminyum	370	629	2*M40	279	279	180	428	15	48	110	52	14	6310-2Z	6310-2Z	50*80*10	50*80*10	350	250	300	0	19
	2	Q1E 160M2B	Alüminyum	302	576	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
	4	Q1E 160L4A	Alüminyum	302	576	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	6	Q1E 180L6A	Alüminyum	370	629	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
	8	Q1E 200L8C	Alüminyum	415	665	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	Q1E 160L2A	Alüminyum	302	576	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	Q1E 160L4B	Alüminyum	302	576	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	Q1E 180M4B	Alüminyum	370	629	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	6	Q1E 200L6B	Alüminyum	415	665	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
	8	Q1E 225S8A	Alüminyum	456	765	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	Q1E 160L2C	Alüminyum	302	576	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	Q1E 180M2A	Alüminyum	370	629	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	Q1E 180L4B	Alüminyum	370	629	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
30	6	Q1E 200L6C	Alüminyum	415	665	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
	8	Q1E 225M8C	Alüminyum	456	765	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	Q1E 180M2AE	Alüminyum	370	629	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
	2	Q1E 200L2A	Alüminyum	415	665	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
	4	Q1E 200L4C	Alüminyum	415	665	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	6	Q1E 225M6B	Alüminyum	456	765	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	Q1E 200L2B	Alüminyum	415	665	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
	4	Q1E 225S4A	Alüminyum	456	765	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	Q1E 225M2A	Alüminyum	456	735	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	Q1E 225M4C	Alüminyum	456	765	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	2	Q1E 225M2C	Alüminyum	456	735	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
	2	Q1E 250M2A	Alüminyum	456	784	2*M50	349	406	250	529	24	60	140	64	18	6315	6315	75*112*12	65*100*13	550	450	500	0	19
	2	Q1E 250M2A	Pik	527	886	2*M50	349	406	250	529	24	60	140	64	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q1E 225M4D	Alüminyum	456	765	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
	4	Q1E 250M4C	Alüminyum	456	784	2*M50	349	406	250	529	24	65	140	69	18	6315	6315	75*112*12	65*100*13	550	450	500	0	19
75	4	Q1E 250M4C	Pik	527	886	2*M50	349	406	250	529	24	65	140	69	18	6316	6316	80*100*10	80*100*10	550				

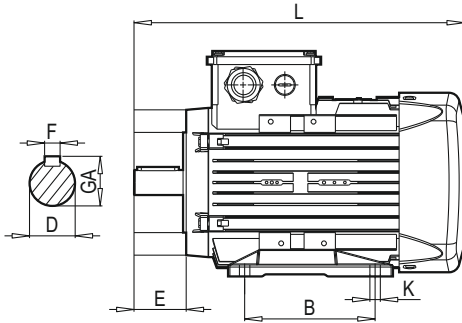
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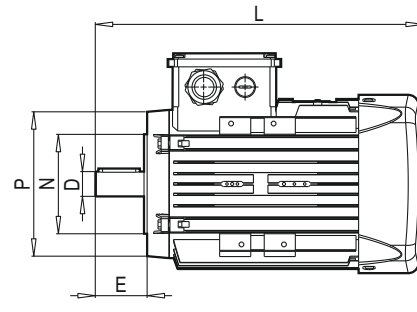
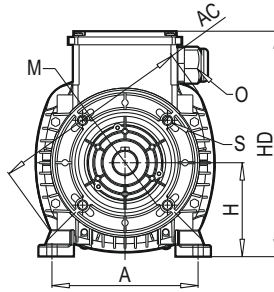
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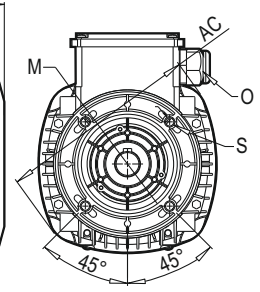
BOYUTLAR / DIMENSIONS - B14a, B34a



B34 - V17 - V37



B14 - V18 - V19



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	P	N ⁽³⁾	M	R	S
0.12	4	Q1E 63M4A	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	90	60	75	0	M5
0.18	2	Q1E 63M2A	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	90	60	75	0	M5
	4	Q1E 63M4B	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	90	60	75	0	M5
	6	Q1E 71M6A	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
	8	Q1E 80M8A	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
0.25	2	Q1E 63M2B	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	90	60	75	0	M5
	4	Q1E 71M4A	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
	6	Q1E 71M6B	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
	8	Q1E 80M8B	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
0.37	2	Q1E 63M2C	Alüminyum	123	219.5	1*M20	80	100	63	174	7	11	23	12.5	4	6201-2Z	6201-2Z	12*22*7	12*22*7	90	60	75	0	M5
	2	Q1E 71M2A	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	Q1E 71M4B	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
	6	Q1E 80M6A	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
	8	Q1E 90S8A	Alüminyum	193	296.5	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
0.55	2	Q1E 71M2B	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	Q1E 71M4C	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	Q1E 80M4A	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	Q1E 80M6B	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
	8	Q1E 90L8A	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
0.75	2	Q1E 71M2C	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
	2	Q1E 80M2A	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	Q1E 80M4B	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	Q1E 90S6A	Alüminyum	193	296.5	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
	8	Q1E 100L8A	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
1.1	2	Q1E 71M2D	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
	2	Q1E 80M2B	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	Q1E 80M4C	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	Q1E 90S4A	Alüminyum	193	296.5	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	Q1E 90L6B	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
	8	Q1E 100L8B	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
1.5	2	Q1E 80M2C	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	Q1E 80M4D	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	Q1E 90S2A	Alüminyum	193	296.5	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	Q1E 90L4A	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	Q1E 100L6A	Alüminyum	217	352	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
	8	Q1E 112M8A	Alüminyum	232	396	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
2.2	2	Q1E 80M2D	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	Q1E 90L2A	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	Q1E 90L4C	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	Q1E 100L4A	Alüminyum	217	352	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	Q1E 112M6A	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
	8	Q1E 132S8B	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

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BOYUTLAR / DIMENSIONS - B14a, B34a

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli Non Drive Side	P	N ⁽³⁾	M	R	S
3	2	Q1E 90L2C	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	Q1E 90L4D	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
	2	Q1E 100L2A	Alüminyum	217	352	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	Q1E 100L4B	Alüminyum	217	352	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	Q1E 132S6B	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	2	Q1E 132M8A	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
	2	Q1E 100L2C	Alüminyum	217	352	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	Q1E 100L4C	Alüminyum	217	352	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	Q1E 112M2A	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	Q1E 112M4B	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
5.5	6	Q1E 132M6A	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
	2	Q1E 112M2C	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	Q1E 132S2A	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	Q1E 112M4C	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	Q1E 132S4C	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
7.5	6	Q1E 132M6B	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
	2	Q1E 112M2D	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	Q1E 132S2C	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	Q1E 132M4B	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
	2	Q1E 132M2A	Alüminyum	279	476	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	4	Q1E 132M4C	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 28mm, "k6" above 28mm
(2) According to DIN 6885
(3) Tolerance DIN EN 50347 "j6"

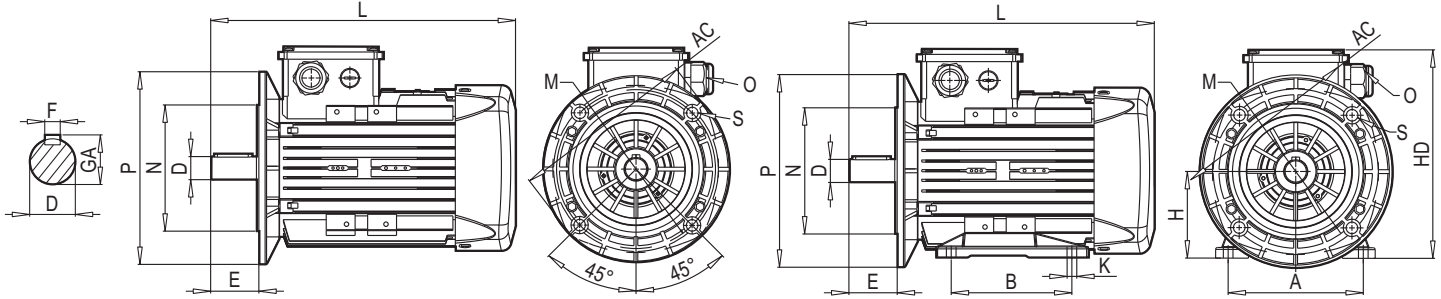
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ÜÇ FAZLI MOTORLAR IE2

EN

THREE PHASE MOTORS IE2

BOYUTLAR / DIMENSIONS - B5, B35



B5 - V1 - V3

B35 - V15 - V35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	P	N ⁽³⁾	M	R	S
0.25	4	Q2E 71M4B	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
	2	Q2E 71M2C	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	4	Q2E 71M4B	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
	2	Q2E 71M2D	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	4	Q2E 80M4B	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	Q2E 71M2D	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
0.75	2	Q2E 80M2B	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	Q2E 80M4D	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	Q2E 90L6C	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
	2	Q2E 80M2D	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	Q2E 80M4DE	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	Q2E 90L4C	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	Q2E 90L6D	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	Q2E 80M2DE	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	Q2E 90L2C	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	Q2E 90L4D	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	Q2E 100L6D	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	Q2E 90L2D	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	Q2E 90L4DE	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	Q2E 100L4C	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	Q2E 112M6C	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	2	Q2E 90L2DE	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	Q2E 100L2C	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	Q2E 100L4D	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	Q2E 132M6A	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
4	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	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
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	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
	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
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	300	230	265	0	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	300	230	265	0	15
	6	Q2E160M6B	Alüminyum	302	576	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	2	Q2E132M42AE	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	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
	4	Q2E160M4B	Alüminyum	302	576	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	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
15	2	Q2E160L2A	Alüminyum	302	576	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
	4	Q2E160L4A	Alüminyum	302	576	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	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
18.5	2	Q2E160L2C	Alüminyum	302	576	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	Q2E180M4B	Alüminyum	370	629	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	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	1

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ÜÇ FAZLI MOTORLAR IE2

EN

THREE PHASE MOTORS IE2

BOYUTLAR / DIMENSIONS - B5, B35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aks Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aks Non Drive Side	P	N ⁽³⁾	M	R	S
22	2	Q2E 160L2D	Alüminyum	302	576	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	Q2E 180M2A	Alüminyum	370	629	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	Q2E 180L4B	Alüminyum	370	629	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	Q2E 200L6C	Alüminyum	415	665	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	2	Q2E 200L2B	Alüminyum	415	665	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
	4	Q2E 200L4D	Alüminyum	415	665	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	Q2E 225M6B	Alüminyum	456	765	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
37	2	Q2E 200L2C	Alüminyum	415	665	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
	4	Q2E 225M4C	Alüminyum	456	765	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	2	Q2E 225M2B	Alüminyum	456	735	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	Q2E 225M4D	Alüminyum	456	765	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	2	Q2E 250M2B	Pik	527	886	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	Q2E 250M4D	Pik	527	886	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	2	Q2E 250M2C	Pik	527	886	2*M50	349	406	250	615	24	60	140	64	18	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	2	Q2EP 280M2B	Pik	527	1025	2*M50	419	457	280	647	24	70	140	74	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP 250M4E	Pik	527	886	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	Q2EP 280M4B	Pik	527	1025	2*M50	419	457	280	647	24	75	140	79	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
90	4	Q1E 280M2B	Pik	527	1025	2*M50	419	457	280	647	24	70	140	74	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q1E 280M4B	Pik	527	1025	2*M50	419	457	280	647	24	75	140	79	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
110	4	Q2EP 280M2D	Pik	527	1025	2*M50	419	457	280	647	24	70	140	74	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q2EP 280M4D	Pik	527	1025	2*M50	419	457	280	647	24	75	140	79	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19

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

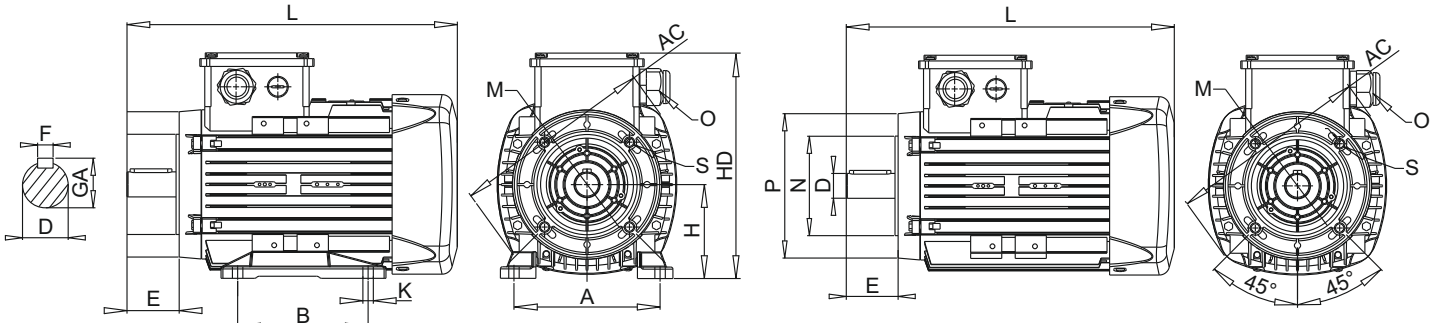
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ÜÇ FAZLI MOTORLAR IE2

EN

THREE PHASE MOTORS IE2

BOYUTLAR / DIMENSIONS - B14a, B34a



B34 - V17 - V37

B14 - V18 - V19

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft			Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)					
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksı Non Drive Side	P	N ⁽³⁾	M	R	S
0.25	4	Q2E 71M4B	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
	2	Q2E 71M2C	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	4	Q2E 71M4B	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
	2	Q2E 71M2D	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	4	Q2E 80M4B	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	Q2E 71M2DE	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
0.75	2	Q2E 80M2B	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	Q2E 80M4D	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	Q2E 90L6C	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
	2	Q2E 80M2D	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	Q2E 80M4DE	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	Q2E 90L4C	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	Q2E 90L6D	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
	2	Q2E 80M2DE	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
1.5	2	Q2E 90L2C	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	Q2E 90L4D	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	Q2E 100L6D	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	Q2E 90L2D	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	Q2E 90L4DE	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	Q2E 100L4C	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	Q2E 112M6C	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	Q2E 90L2DE	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
3	2	Q2E 100L2C	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	Q2E 100L4D	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	Q2E 132M6A	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
	2	Q2E 100L2DE	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	2	Q2E 112M2C	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	Q2E 112M4C	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	Q2E 132M6B	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
	2	Q2E 112M2CE	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
5.5	4	Q2E 112M4D	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	Q2E 132S2C	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	Q2E 132M4B	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	Q2E 132M6C	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	Q2E 132M2A	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	Q2E 132M4C	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	2	Q2E 132M2AE	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 EN 50347 "j6", up to 28mm, "k6" above 28mm

(2) According to DIN 6885

(3) Tolerance DIN EN 50347 "j6"

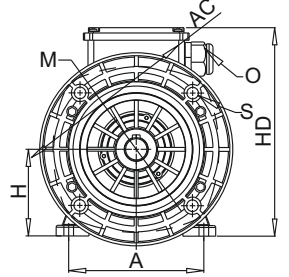
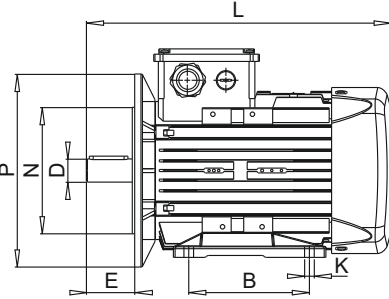
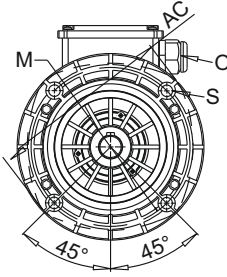
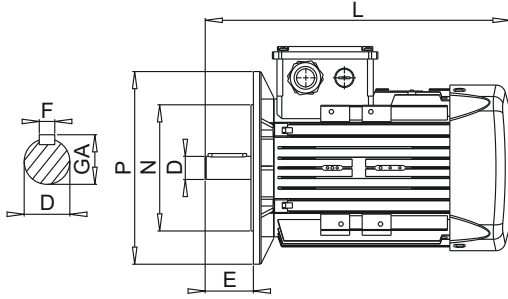
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ÜÇ FAZLI MOTORLAR IE3

EN

THREE PHASE MOTORS IE3

BOYUTLAR / DIMENSIONS - B5, B36



B5 - V1 - V3

B35 - V15 - V35

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli 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	200	130	165	0	12
	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
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	200	130	165	0	12
	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
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	200	130	165	0	12
	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
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	200	130	165	0	12
	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
3	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
	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
4	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	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
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	300	230	265	0	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	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	300	230	265	0	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	300	230	265	0	15
11	2	Q3E160L2A	Alüminyum	302	576	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	Q3E160L4A	Alüminyum	302	576	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
15	2	Q3E160L2C	Alüminyum	302	576	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	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	2	Q3E160L2D	Alüminyum	302	576	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	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	2	Q3E180M2A	Alüminyum	370	629	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	Q2E180L4B	Alüminyum	370	629	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
30	2	Q3E200L2C	Alüminyum	415	665	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
	4	Q3E200L4D	Alüminyum	415	665	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	2	Q3E200L2D	Alüminyum	415	665	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
	4	Q3E225M4D	Alüminyum	456	765	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	2	Q3E225M2C	Alüminyum	456	735	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	Q3E225M4DE	Alüminyum	456	765	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	2	Q3EP250M2C	Pik	527	886	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	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	2	Q3EP280M2C	Pik	527	1025	2*M50	419	457	280	647	24	70	140	74	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q3EP280M4C	Pik	527	1025	2*M50	419	457	280	647	24	75	140	79	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
90	4	Q3EP280M2D	Pik	527	1025	2*M50	419	457	280	647	24	70	140	74	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19
	4	Q3EP280M4D	Pik	527	1025	2*M50	419	457	280	647	24	75	140	79	20	6316	6316	80*100*10	80*100*10	550	450	500	0	19

(1) Tolerance DIN EN 50347 "j6", up to 28mm, "k6" above 28mm

(2) According to DIN 6885

(3) Tolerance DIN EN 50347 "j6"

(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"

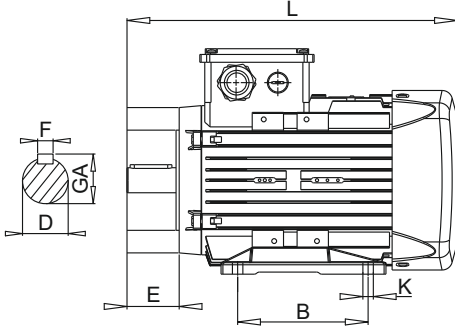
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ÜÇ FAZLI MOTORLAR IE3

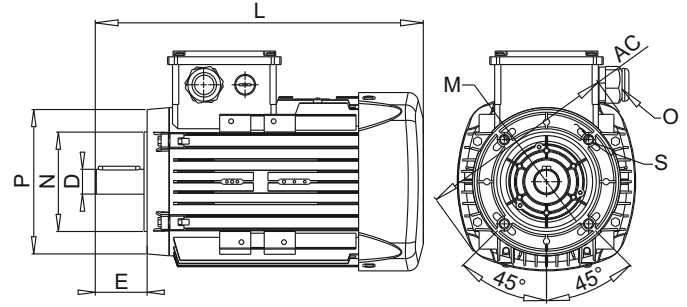
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THREE PHASE MOTORS IE3

BOYUTLAR / DIMENSIONS - B14a, B34a



B34 - V17 - V37



B14 - V18 - V19

				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot mounted motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup Sayısı Number of poles	Motor Tipi Motor Type	Gövde Tipi Case Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli Non Drive Side	Kasnak Taraflı Drive side	Kasnak Taraflı Aksli 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	120	80	100	0	M6
1.1	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
	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
1.5	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
	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
2.2	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
	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
3	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
	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
4	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
	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
5.5	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
	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
7.5	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
	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
11	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
11	2	Q3E132M2AE	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 EN 50347 "j6", up to 28mm, "k6" above 28mm

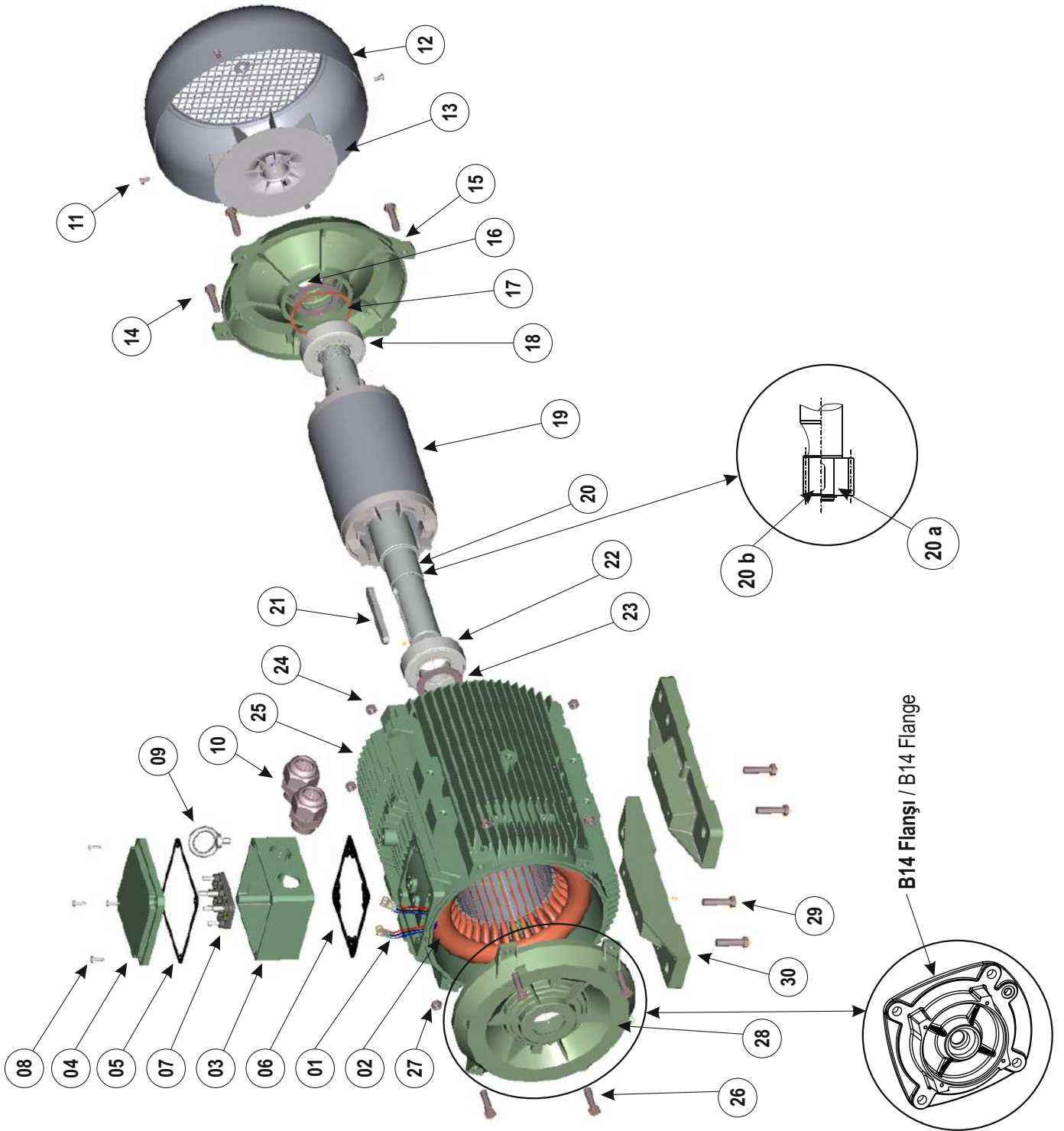
(2) According to DIN 6885

(3) Tolerance DIN EN 50347 "j6"

MOTOR PARÇA LİSTESİ

MOTOR PART LIST

01. Kamçı grubu / Lead cables
02. Sargılı stator / Wound stator
03. Terminal kutusu / Terminal box
04. Terminal kutu kapağı / Terminal box cover
05. Terminal contası alt / Terminal gasket down
06. Terminal contası üst / Terminal gasket up
07. Klemens plakası / Terminal plate
08. Terminal kutu vidaları / Terminal box screws
09. Kaldırma halkası / Eyebolt
10. Rakor / Conduit
11. Fan kapağı vidaları / Fan cover screws
12. Fan kapağı / Fan cover
13. Fan / Fan
14. Arka kapak vidaları / Endshield screws
15. Motor arka kapağı / Nondrive- endshield
16. Keçe (arka) / Seal ring (back)
17. Rulman gergi yayı / Bearing shim
18. Arka rulman / Bal bearing (non-drive-side)
19. Rotor / Rotor
20. Mil / Shaft
 - a. Çakma / Drive Shaft (plain)
 - b. Yekpare / Drive Shaft (gearcut)
21. Kama / Key
22. Ön rulman / Ballbearing (drive-side)
23. Keçe (ön) / Seal ring (front)
24. Arka kapak bağlantı somun / Bolt nut (endshield)
25. Gövde / Housing
26. Ön kapak vidaları / Endshield screws (drive-side)
27. Ön kapak bağlantı somunu / Bolt nut (drive endshield)
28. Ön kapak / Drive endshield
29. Ayak bağlantı vidası / Foot screws
30. Ayak / Foot



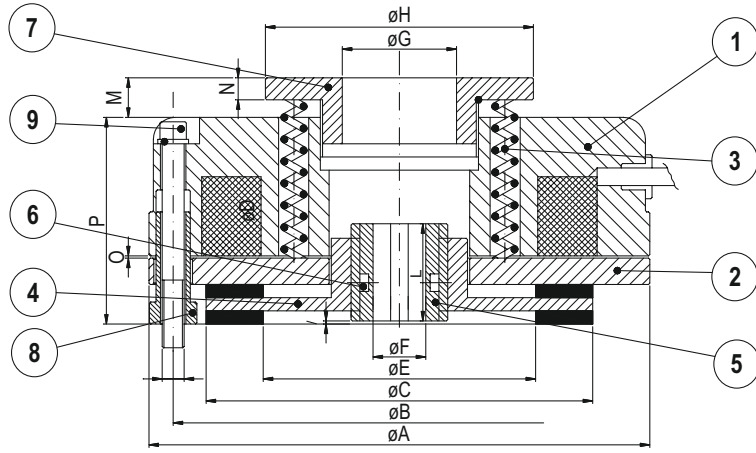
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FREN PARÇA LİSTESİ VE ÖZELLİKLERİ

EN

BRAKE PART LIST AND PROPERTIES

- | | |
|-----------------------|------------------|
| 1 Elektromıknatıs | 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 civataları | 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 Tolerance 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 momentini tabloda verilen değerlere göre $\pm$ % 20 değişiklik gösterebilir.

Note : The brake before running in, the static braking torque value could change by +20% from the reported value.

