



PA/PF SERIES

Helisel Dişlili Redüktör

Helical Gear Units

Stirnradgetriebemotoren

IE2 | IE3



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TR

KALİTE POLİTİKAMIZ

Polat Group Redüktör San. ve Tic. A.Ş., en iyiyi yakalamak için; İş Sağlığı ve Güvenliği, Çevre Güvenliği ve Kalite Yönetim Sistemi uygulamalarını, Üretim ve Hizmet sürecinin vazgeçilmez bir unsuru olarak değerlendirmekte ve uygulamaktadır.

Bu doğrultuda;

- Yayınlanmış ulusal/uluslararası yasal şartlar ve diğer şartlara uymak ve güncelliğini takip etmeyi;
- Atıkları kaynağında azaltmak ve teknolojik imkanlar ile çevre etkilerini kontrol altında tutmayı;
- Bünyemizde uygulanan yönetim sistemlerinin performansının değerlendirmek ve sürekli iyileştirmeyi;
- Eğitimlerle çalışanlarımızı çevre, iş sağlığı ve güvenliği ve Kalite yönetim sistemleri konusunda bilinçlendirmeyi;
- Çalışan sağlığının ve çevrenin korunması için çalışmalarını sürekli güncel tutmayı;
- Sektöründeki teknolojik gelişmeleri takip etmeyi, pazar payındaki istikrarını sürdürmek için müşterilerinin istek ve beklentilerine eksiksiz ve zamanında cevap vererek sürekli artan müşteri memnuniyetini sağlamayı, eğitimli çalışanlarının performansını, huzurlu bir çalışma ortamı sağlayarak artırmayı;

Şirket politikası olarak benimsemiştir.

EN

OUR QUALITY POLICY

Polat Group Redüktör San. ve Tic. A.Ş., considers and applies Occupational Health and Safety, Environmental Safety and Quality Management System as the inseparable part of Production and Service process.

In line with this, our company adopts:

- Complying with published national/international legal provisions and other conditions and following up-to-datedness thereof;
- Reducing wastes in resources and keeping environmental impacts under control with technological opportunities;
- Assessing and constantly improving performance of management systems applied within our company;
- Raising awareness of our employees about occupational health and safety and quality management systems through trainings;
- Keeping our activities up-to-dated to protect personnel health and environmental protection;
- Following technological developments in the sector, ensuring ever-increasing customer satisfaction by responding to requests and expectations of customers completely and duly to sustain stability in the market share and increasing performance of trained employees by providing a peaceful working environment;

as the company policy.

DE

UNSERE QUALITÄTSPOLITIK

Polat Group Redüktör San. ve Tic. A.Ş., um an das Beste zu gelangen; es bewertet und implementiert die Praktiken des Arbeitsschutz-, Umweltsicherheits- und Qualitätsmanagementsystems als unverzichtbares Element des Produktions- und Serviceprozesses.

In diese Richtung;

- Einhaltung und Befolgung der aktualisierten nationalen / internationalen gesetzlichen und sonstigen Anforderungen;
- Abfall an seiner Quelle zu reduzieren und technologische Möglichkeiten und Umweltauswirkungen unter Kontrolle zu halten;
- Bewertung und kontinuierliche Verbesserung der Leistung der in unserer Struktur implementierten Managementsysteme;
- Sensibilisierung unserer Mitarbeiter für Umwelt-, Arbeitsschutz- und Qualitätsmanagementsysteme durch Schulungen;
- Um unsere Arbeit zum Schutz der Gesundheit und der Umwelt der Mitarbeiter auf dem neuesten Stand zu halten;
- Verfolgung der technologischen Entwicklungen in der Branche, Gewährleistung der stetig steigenden Kundenzufriedenheit durch vollständige und pünktliche Reaktion auf die Anforderungen und Erwartungen ihrer Kunden, um ihre Marktanteilstabilität zu erhalten, Steigerung der Leistung ihrer geschulten Mitarbeiter durch Schaffung eines friedlichen Arbeitsumfelds;

hat sie als Unternehmenspolitik übernommen.

VİZYONUMUZ

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

OUR VISION

Our vision is to become a world company which meets and surpasses the customer satisfaction and which not only follows the development but also creates the development itself.

UNSERE VISION

Unsere Vision ist ein Weltunternehmen zu erschaffen, das die Kunden - und Mitarbeiterzufriedenheit ständig im höchsten Zustand hält und die Entwicklungen nicht nur verfolgt, sondern auch gestaltet.

MİSYONUMUZ

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

OUR MISSION

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

UNSER ZIEL

Unser Ziel ist unseren Kunden die Produkte, Qualitäts- und Dienstleistungen sowie Lösungen, die die Kundenerwartungen übertreffen und im besten und leistungsfähigsten Zustand mit Hilfe der neuesten Informationstechnologien zu bieten.

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.

Our reducer group carries out its work using simultaneous engineering methods in order to meet the demands of our customers by presenting several different product ranges. Design and planning 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.

Polat Group Redüktör GmbH führt sämtliche Tätigkeiten des Ingenieurwesens gleichzeitig weiter, um die Kundenerwartungen an alle unsere Produkte aus verschiedenen Produktpaletten im höchsten Zustand zu übertreffen. Unsere Entwurfstätigkeiten und Produktentwicklungsprogramme und EDV unterstützten Arbeitsprozesse zeigen eine steigende Grafik. Unsere wettbewerbsfähige und kräftige Qualitätspolitik vergrößert unseren Kundenumfang weiter.

Redüktör Seçimi

Bir redüktör seçilirken, PGR üç fazlı asenkron AC motorları ve tek fazlı AC motorları kullanıldığını öngörür. Bu aynı zamanda teknik olarak karşılaştırılabilen tüm motorlar için de geçerlidir. Herhangi başka bir motor kullanımı halinde PGR'ye danışınız. Dişli ünitesinin seçimi yapılırken aşağıda belirtilen ana esaslara bağlı kalınmaz ise ünite istenmeyen aşırı yüklenme durumları açığa çıkabilir. Bu durumda tarafımızdan verilen tüm garantiler kapsam dışına çıkar. Kullanılacak redüktörden yüksek verim alabilmenin ilk adımı size uygun olan doğru ürünü seçebilmektir.

Redüktör seçimi yapılırken aşağıdaki kritik hususlara dikkat edilmelidir. Bunlar Mekanik kontrol, termal limit kontrolü, redüktör mili üzerine gelebilecek radyal ve eksenel yük kontrolleri ve servis faktörü kontrolüdür.

Hangi redüktörün sizin makinanız için uygun olduğuna, makinanızın çalışma şartlarına göre gerekli giriş gücü, istenilen tahvil oranı ve servis faktörü değerlerinin belirlenmesinden sonra karar verilmelidir. Optimum çalışma şartları sağlanacak redüktördeki aşırı yüklenmeden kaynaklı tüm problemlerin oluşması engellenmelidir.

Seçim yapılırken dikkat edilmesi gereken önemli unsurlardan biri de kullanılan harici yedek parçalar, giriş ve çıkış aksesuarlarıdır. PGR'nin önerdiği ürünler haricinde ekipman kullanımı veya redüktörün zarar görebileceği şüpheli durumlarda PGR satış departmanı ile irtibata geçilmeli, teknik veriler ve tasarım tekrar kontrol edilmelidir.

Firmadan habersiz yapılan uygulama ve yanlış seçimler sonucunda redüktör ile ilgili yaşanan problemlerde tarafımızdan verilen tüm garantiler kapsam dışına çıkar.

Redüktör Seçim Kriterleri**1.Mekanik kontrol:**

İlk olarak makinanızın çalışma şartlarının bilinmesi gerekir. Bunlar günlük çalışma süresi, saatteki start-stop sayısı ve makineden gelecek yükün hangi yük sınıfı içerisinde olduğunun belirlenmesidir.

Yük sınıfı ise motor miline indirgenmiş toplam dış atalet momentinin, motor atalet momentine oranından elde edilen sayıya (maf) göre belirlenir. $maf \leq 0.25$ ise düzgün çalışma yük sınıfı (U), $0.25 < maf \leq 3$ ise orta darbeli yük sınıfı (M) ve $3 < maf \leq 10$ ise çalışmanın ağır darbeli yük sınıfında (H) olduğu anlamına gelir.

Günlük çalışma süresi ve saatteki start-stop sayısı makinenin çalışma şartlarından kolayca belirlenir. Sonrasında sayfa 4'deki diyagram 1 kullanılarak mekanik yönden gerekli servis faktörü değeri bulunur.

2.Termal Limit Kontrolü

Redüktörde bazı çalışma koşullarında aşırı ısınma gözlemlenebilir. Termal sınırlar kataloglardaki termal yönden müsaade edilen motor güç değerlerine bakılarak kontrol edilmelidir. Termal güç değerlerinin yeterli olmadığı durumlarda çalışma koşullarına göre verilecek ilave soğutucularla (fan, serpantin, eşanjör, radyatör vb.) termal güç değerlerini arttırmak mümkündür.

Redüktörün aşırı ısınmaması için güç transferi sürelerinin belirlenen çalışma zamanının aşılması gereklidir. Termal olarak transfer edilebilen güç süresi (3saat) sadece PA/PF62, PD/PM62, PKD 6390 ve daha büyük gövdeler için olası bir sınırı temsil eder.

Gearbox Selection

When selecting gear unit, PGR assumes that three-phase AC motor or single phase AC motor are used. This is also valid for technically comparable motors. If you intend to use a motor other than PGR, please contact with PGR. If you do not obey the main instructions which are given below, you may have some problems like overloading. In these situations, our all guarantees will be invalid. If you want get high efficiency from our products, the main step is choosing right product.

At reducer choosing step, you should be careful about following points like mechanical control, thermal limit control, the radial and axial loads control which is on reducer shaft and service factor.

After deciding input power, desired ratio number and service factor, you should decide which reducer is suitable for your machines. If you want to ensure optimal working conditions, all problems caused by overloading should be prevented.

At choosing step, external spare parts, input and output accessories has also importance. When using equipments which are not advised by PGR and under suspicious situation which can harm reducer, please consult to PGR sales office department which is responsible for giving technical information to you.

Applications which are done without information of us and wrong selections are out of guarantee.

The conditions of selecting gear unit are as the following:**1.Mechanical control:**

Firstly, you should know working conditions of your machine. These are daily working time, revolution per hours and loads which are applied from driven machine to gear unit should be known in which load classification.

Load Classification can be determined from ratio between external moment of inertia and motor moment of inertia(maf) If $maf \leq 0.25$ it is Uniform application(U) $0.25 < maf \leq 3$ it is Moderate impact application(M) $3 < maf \leq 10$ it is Heavy impact application(H)

You can easily decide to daily working time, revolution per hours from working conditions of machine. After that, you can choose service factor from diagram at page 4 on mechanical way.

2.Thermal Limit Control

Overheating may happen in gearbox under some operating conditions. Thermal limits should be checked by looking at the thermally permissible motor power values at catalogues. If thermal power values are not enough, it will be possible to increase the thermal power values with additional coolers like fan, coil, heat exchanger, radiator, etc., and they should be given according to the operating conditions.

For the gearbox does not to be overheated, the power transfer times must not exceed the specified operating time. Thermally transferable power time (3hour) shows a possible limit only for PA/PF 62, PD/PM 62, PKD 6390 and larger cases.

Getriebeauswahl

Bei der Getriebeauswahl prognostiziert PGR den Einsatz von Drehstrom-Asynchronmotoren und Einphasen-Wechselstrommotoren. Dies gilt auch für alle technisch vergleichbaren Motoren. Wenden Sie sich an PGR, wenn ein anderer Motor verwendet wird. Unerwünschte Überlastsituationen im Aggregat können auftreten, wenn bei der Auswahl des Getriebes folgende Hauptprinzipien nicht beachtet werden. In diesem Fall erlöschen alle von uns gegebenen Garantien. Der erste Schritt, um eine hohe Effizienz des zu verwendenden Reduzierstücks zu erzielen, besteht darin, das richtige Produkt auszuwählen, das zu Ihnen passt.

Bei der Auswahl des Reduzierstücks sollten die folgenden kritischen Punkte berücksichtigt werden. Dies sind mechanische Kontrolle, thermische Grenzkontrolle, quer und axiale Lastkontrolle an der Getriebewelle und Betriebsfaktorkontrolle.

Welches Getriebe für Ihre Maschine geeignet ist, sollte nach Ermittlung der erforderlichen Eingangsleistung, des gewünschten Übersetzungsverhältnisses und der Betriebsfaktorwerte entsprechend den Arbeitsbedingungen Ihrer Maschine entschieden werden. Es sollen optimale Arbeitsbedingungen geschaffen werden und alle Probleme durch Überlastung im Getriebe sollen vermieden werden.

Einer der wichtigsten Faktoren, die bei der Auswahl zu berücksichtigen sind, sind die externen Ersatzteile sowie das Eingangs- und Ausgangszubehör. Wenn andere Geräte als die von PGR empfohlenen Produkte verwendet werden oder der Verdacht auf eine Beschädigung des Getriebes besteht, sollte der PGR-Vertrieb kontaktiert und die technischen Daten und das Design erneut überprüft werden.

Alle von uns gegebenen Garantien erlöschen im Falle von Problemen im Zusammenhang mit dem Reduzierstück aufgrund der Anwendung und falscher Entscheidungen, die ohne Wissen des Unternehmens getroffen wurden.

Auswahlkriterien für Getriebe**1.Mechanische Kontrolle:**

Zunächst sollten die Arbeitsbedingungen Ihrer Maschine bekannt sein. Dies sind die tägliche Arbeitszeit, die Anzahl der Starts-Stops pro Stunde und die Ermittlung der Belastungsklasse der Maschine.

Der Stoßgrad ergibt sich aus der Gleichmäßigkeit des Betriebes und aus dem Massenbeschleunigungsfaktor (maf). Bei $maf \leq 0,25$ gleichmäßiger Betrieb (U), bei $0,25 < maf \leq 3$ ungleichmäßiger Betrieb (M) und bei $3 < maf \leq 10$ stark ungleichmäßiger Betrieb (H).

Die tägliche Arbeitszeit und die Anzahl der Starts-Stops pro Stunde lassen sich leicht aus den Arbeitsbedingungen der Maschine ermitteln. Anschließend wird anhand von Diagramm 1 auf Seite 4 der mechanisch erforderliche Betriebsfaktor-Wert ermittelt.

2. Thermische Limitkontrolle

Unter bestimmten Betriebsbedingungen kann eine Überhitzung des Getriebes beobachtet werden. Thermische Grenzen sollten anhand der thermisch zulässigen Motorleistungswerte in den Katalogen überprüft werden. In Fällen, in denen die thermischen Leistungswerte nicht ausreichen, ist es möglich, die thermischen Leistungswerte mit zusätzlichen Kühlern (Lüfter, Serpentin-Kühler, Wärmeaustauscher, Öl/Wasserkühler usw.) entsprechend den Betriebsbedingungen zu erhöhen.

Damit das Getriebe nicht überhitzt, dürfen die Kraftübertragungszeiten die angegebene Betriebszeit nicht überschreiten.

Die thermisch übertragbare Leistungszeit beträgt (3h) und stellt nur bei PA/PF62, PD/PM62, PKD 6390 und größeren Körpern eine mögliche Grenze dar.

TR

TEKNİK BİLGİLER

Aşağıdaki maddelerden iki veya daha fazlasının geçerli olması durumunda redüktörün belirli operasyonel durumu kontrol edilmelidir. PGR ile iletişime geçmenizi öneririz.

- Ortam sıcaklığı 40°C fazla ise
- Dönme hızı n1 1500 min-1 üzerinde ise
- Motor gücü P1 100 kW ve üzeri ise
- W, IEC ve PAM adaptör bağlı redüktör söz konusu ise
- Dik olarak montaj söz konusu ise (M2 – M4)
- Tahvil oranı itop < 20 (Konik dişliler için itop < 40)

Redüktörün korunup sağlıklı çalışması için, ısı radyasyonu yoğun alanda çalışma, dar alanda çalışma, kapalı alanda çalışma gibi özel çevresel montaj koşullarının olduğu durumlarda PGR'ye danışınız.

3. Giriş gücü ve servis faktörü

Her bir uygulama için gerekli olan giriş gücü, hesaplama ile belirlenir. Motor anma gücü (P1), bu giriş gücünden sonra seçilir. Motor anma gücü istenilen güç değerinden biraz daha yüksektir. Bunun sebebi çalışma koşullarının standart dışı özel olabilesidir.

Montajı yapılacak 3 fazlı bir AC motorunun anma gücünü seçerken kısa aralıklı seyrek tork tesirini hesaplamaya gerek yoktur. İlave faktörler belirli bir frekans invertöründe çalışan 3 fazlı bir AC motor için anma gücünün seçimini etkiler. Dişli ünitesinin seçimini AC motorun aksine kısa aralıklı seyrek tork tesirleri etkiler. Dişli ünitesinin yük sınıfı belirlenirken bu kısa aralıklı seyrek tork tesirleri göz önünde bulundurulmalıdır. Redüktör servis faktörü fB bunu ve redüktör üzerindeki diğer etkileri yeterli doğrulukta hesaba katar.

5. Sayfadaki diyagram 1 günlük çalışma süresi, yük sınıflandırması, saatteki start-stop sayısı ile servis faktörü arasındaki ilişkiyi göstermektedir.

EN

TECHNICAL INFORMATION

If the two or more of below items are valid, the specific operational condition of the reducer should be checked. Please kindly contact with PGR.

- If the ambient temperature is above 40°
- If the rotation speed n1 is over 1500 min-1
- If the motor power P1 is 100 kW and above
- If there is W, IEC and PAM adaptor connected gearbox
- In case of vertical mounting preferred (M2 – M4)
- The ratio itop < 20 (For bevel gears itop < 40)

Please kindly consult to PGR, in case of work in heat radiation-intensive area, work in narrow space, work in confined space to be prevented and worked healthier gearboxes.

3. Input power and service factor

For every application, the requiring input power should be calculated. Motor rated power (P1) should be selected after choosing input power. The motor rated power is slightly higher than the desired power value. The reason for this situation is working conditions are non-standard, they are special

It is not necessary to calculate the short-range rare torque effect when choosing the rated power of a 3-phase AC motor to be mounted. Additional factors affect the choice of rated power for a 3-phase AC motor operating in a particular frequency inverter. Unlike the AC motor, short-range infrequent torque effects affect the choice of gear unit. These short-range infrequent torque effects should be taken into account when determining the load class of the gear unit. The gear unit service factor fB takes this and other effects on the gear unit into account with sufficient accuracy.

Diagram 1 which is shown on page 5, presents relation between types of load, revolution per hour and minimum service factor depend on operation hours or day.

DE

TECHNISCHE INFORMATION

Wenn zwei oder mehr der folgenden Punkte zutreffen, sollte der spezifische Betriebszustand des Getriebes überprüft werden. Wir empfehlen Ihnen, sich an PGR zu wenden.

- Wenn die Umgebungstemperatur mehr als 40 °C beträgt
- Wenn die Drehzahl n1 über 1500 min-1 liegt
- Wenn die Motorleistung P1 100 kW und mehr beträgt
- Bei W-, IEC- und PAM-Adapter angeschlossenem Getriebe
- Bei vertikaler Montage (M2 – M4)
- Bindungsverhältnis itop < 20 (itop < 40 für Kegelräder)

Wenden Sie sich an PGR in Fällen, in denen besondere Umgebungsbedingungen für die Montage herrschen, wie z. B. Arbeiten in einem wärmestrahlungsintensiven Bereich, Arbeiten in einem engen Bereich, Arbeiten in einem geschlossenen Bereich, zum Schutz und zum gesunden Betrieb des Getriebes.

3. Eingangsleistung und Servicefaktor

Die für jede Anwendung benötigte Eingangsleistung wird rechnerisch ermittelt. Die Motornennleistung (P1) wird nach dieser Eingangsleistung gewählt.

Die Motornennleistung könnte etwas höher sein als der gewünschte Leistungswert. Dies liegt daran, dass die Arbeitsbedingungen vom Standard abweichen können.

Bei der Auswahl der Nennleistung eines zu installierenden 3-Phasen-Wechselstrommotors muss der kurzzeitige seltene Drehmomenteffekt nicht berechnet werden. Zusätzliche Faktoren beeinflussen die Wahl der Nennleistung für einen 3-Phasen-Wechselstrommotor, der in einem bestimmten Frequenzumrichter betrieben wird. Im Gegensatz zum Wechselstrommotor beeinflussen seltene Drehmomenteffekte im Nahbereich die Wahl des Getriebes. Diese kurzreichweitigen seltenen Drehmomenteffekte sollten bei der Bestimmung der Belastungsklasse des Getriebes berücksichtigt werden. Der Getriebefaktor fB berücksichtigt diese und weitere Auswirkungen auf das Getriebe mit ausreichender Genauigkeit

Das Diagramm auf Seite 5 zeigt den Zusammenhang zwischen 1-Tages-Betriebszeit, Lastklassifizierung, Anzahl Starts-Stops pro Stunde und Betriebsfaktor.

TR

SERVİS FAKTÖRÜ

EN

SERVICE FACTOR

DE

SERVICEFAKTOR

Diyagram 1 günlük çalışma zamanına (saat), saatteki start sayısına ve uygulanan yük tipi sınıflandırmasına "U", "M", "H" göre gerekli servis faktörünü gösterir. Çalışma düzgünlüğüne ve kütle hız faktörüne (maf) bağlı olarak, üç yük sınıflandırması belirlenmiştir. Hareket ettirilen mekanizmaya gelen dış etkiler çalışma düzgünlüğü sınıflamasını tanımlarken kütleli ivme faktörüne bağlı olarak 3 farklı yük sınıflandırması belirlenir. Diagram 1 kullanılarak belirlenen servis faktörü, motorlu seçim tablolarında verilen servis faktörüne eşit ya da küçük olmalıdır.

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

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

The diagram 1 shows the required service factor according to daily working time (hours), revolution per hours, and the applied load type "U", "M", "H". Three load classifications are determined, and they are depending on the working regularity and the mass acceleration factor(maf). While the external effects on the driven mechanism define the working smoothness classification, 3 different load classifications are determined depending on the mass acceleration factor. Service factor which is determined by using Diagram 1 must be less than or equal to the service factor given in the motor selection tables.

Note : Service factor f_B which is obtained, should be multiplied with factor "k" which depends on drive type.

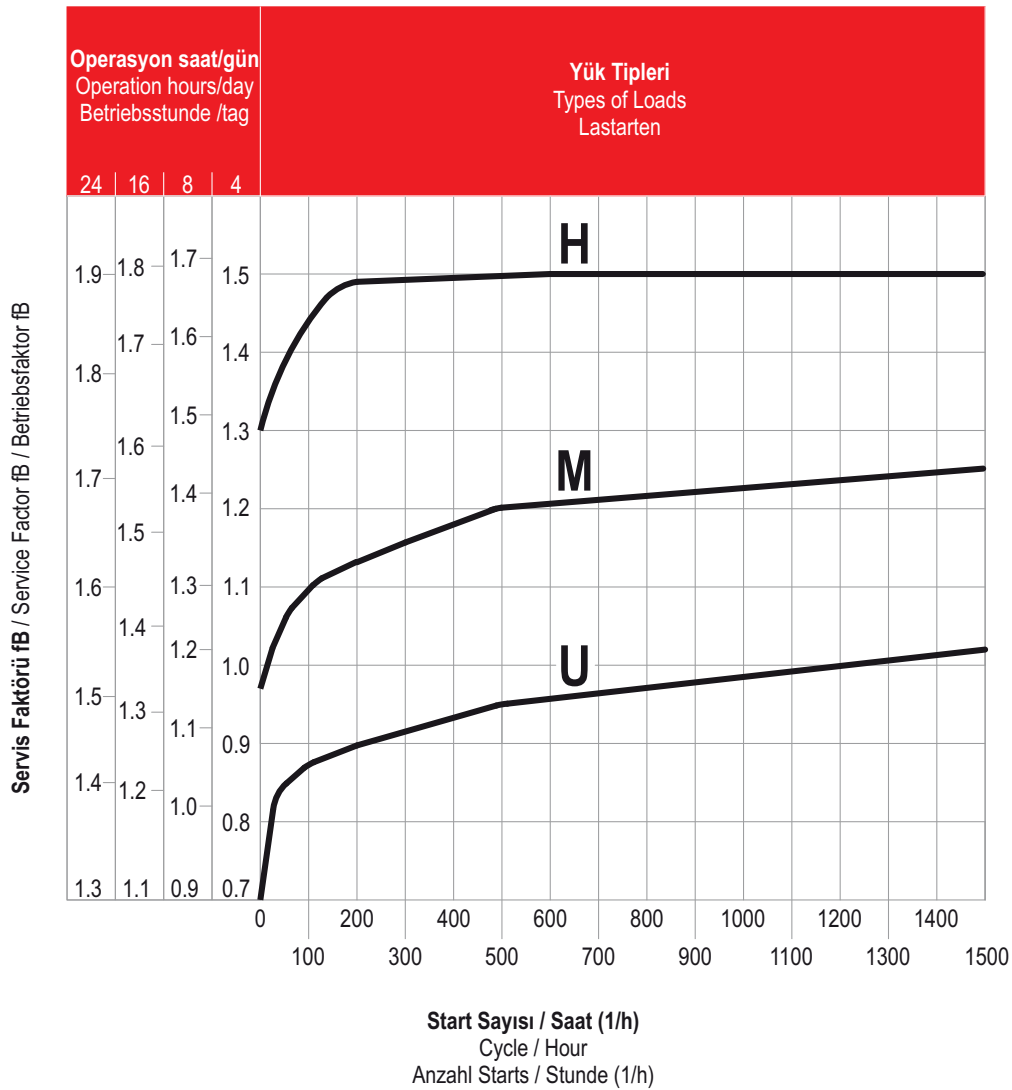
k = 1 ; hydraulic motor and electrical motor
k = 1.25 ; multi-cylinder engine
k = 1.50 ; single-cylinder engine

Das Diagramm zeigt den erforderlichen Betriebsfaktor entsprechend der 1-Tages-Betriebszeit (Stunden), der Anzahl der Starts pro Stunde und der angewendeten Lastartenklassifizierung "U", "M", "H". Auf Basis der Laufruhe und des Massengeschwindigkeitsfaktors (maf) wurden drei Belastungsklassen ermittelt. Während die äußeren Einwirkungen auf den angetriebenen Mechanismus die Laufruheklasse bestimmen, werden in Abhängigkeit vom Massenbeschleunigungsfaktor 3 verschiedene Lastklassen bestimmt. Der nach Diagramm 1 ermittelte Betriebsfaktor muss kleiner oder gleich dem in den Motorauswahltabellen angegebenen Betriebsfaktor sein.

Hinweis: Der resultierende Betriebsfaktor f_B wird mit dem Koeffizienten "k" entsprechend der verwendeten Antriebsart (Antrieb) multipliziert.

k = 1 ; Elektromotor oder Hydromotor
k = 1,25 ; Mehrzylinder-Verbrennungsmotor
k = 1,50 ; Einzylinder-Verbrennungsmotor

Diyagram / Diagram / Diagramm - 1



Yük Sınıfının Belirlenmesi:

U) Düzgün çalışma

Küçük karıştırıcılar, asansörler, konveyörler, montaj bantları, doldurma makinaları, bantlı konveyörler, temizleme makinaları, fanlar, test makinaları, santrifüj pompalar (ince sıvı pompalar).

M) Yumuşak şoklar, düzgün olmayan çalışma

Ağır yük konveyör bantları, değirmenler, ahır gübre makinaları, vinç hareket mekanizmaları, bükme makinaları, çimento karıştırıcılar, ahşap işleme makinaları için tahrik mekanizmaları, vinçler, kayar kapılar, balans makinaları, paketleme makinaları, dişli pompalar, santrifüj pompalar (yarı sıvı pompalar), vana döndürme dişlileri, dokuma tezgahları, hallaç makinaları, harman makinaları, taneleme (debegat) tekneleri, kolenderler, agitatörler, kurutma merdaneleri.

H) Ağır şoklar, aşırı düzgün olmayan çalışma

Taş kırıcılar, eksantrik presler, doğrayıcılar, presler, taşlama milleri, çekiçli kırıcılar, kağıt öğütücüler, ağır yük karıştırıcılar, delme makinaları, katlama makinaları, dönen tezgahlar, yatay karıştırıcılar, kesiciler, vibratörler, santrifüj makinaları, döner tablalar, ağır yük vinç ve asansörler, plaka-silindir-soğuk haddeleme makinaları, hız ayarlı sabit silindirler, kağıt hamur makinaları, kurutma silindirleri, perdahlama silindirleri.

Yük sınıfı (çalışma düzgünlüğü) aşağıdaki tabloya göre kütle hız faktörü (maf) den belirlenir. Eğer çalışma düzgünlüğü ile hesap ettiğimiz maf birbirleriyle uyumlu değilse (Örneğin: yumuşak geçişli düzgün olmayan çalışma koşulu ve maf:0,2 için gerekli yük sınıfımız "M" olmalıdır ya da düzgün çalışma koşulu ve maf : 0,28 için gerekli yük sınıfımız yine M olmalıdır.) daha ağır çalışma sınıfı gurubuna giren geçerlidir.

Determination of Load Class:

U) Regular operation

Small agitator, elevators, conveyors, mounting belt, filling machines, belt conveyors, cleaning machines, fans, testing machines, centrifugal pumps (fine liquid pumps).

M) Moderate shocks, non-uniform application

Heavy conveyor belts, mills, barn manure machine, crane motion mechanisms, bending machines, cement mixer, driving gear mechanisms for wood processing machines, cranes, sliding door, balancing machines, packaging machines, gear pumps, centrifugal pumps, valve turning gears, weaving looms, carding-machines, threshing machines, granulation vats, corianders, agitators, drying rollers.

H) Heavy shocks, non-uniform application

Stone crushers, eccentric press machines, choppers, press machines, grindingmills, hammer mills, shredders, heavy mixers, boring machines, folding machines, turning looms, horizontal mixers, cutters, vibrators, centrifugal machines, heavy cranes and elevators, plate-cylinder-cold extrusion machines, fixed cylinder with regulated velocity, slush machines, drying cylinders, polishing cylinders,

The load classification is determined from the mass velocity factor (maf) according to the below table. If the working regularity and the mass acceleration factor we calculated are not compatible with each other (For example: our required load class should be "M" for moderate shocks, non-uniform application and maf:0.2, or our required load class for regular application and maf: 0.28 is still M. It should be valid), the heavier running classification is valid.

Bestimmung der Belastungsklasse:

U) gleichmäßiger Betrieb

Kleinmischer, Elevatoren, Förderer, Montagebänder, Abfüllmaschinen, Bandförderer, Reinigungsmaschinen, Ventilatoren, Prüfmaschinen, Kreiselumpen (Feinflüssigkeitsumpen).

M) Weiche Stöße, ungleichmäßiger Betrieb

Schwerlastförderbänder, Mühlen, Stallmistmaschinen, Kranantriebe, Biegemaschinen, Betonmischer, Antriebe für Holzbearbeitungsmaschinen, Kräne, Schiebetüren, Auswuchtmaschinen, Verpackungsmaschinen, Zahnradpumpen, Kreiselumpen (Halbflüssigkeitsumpen), Ventildrehvorrichtungen, Webstühle, Putzereimaschinen, Dreschmaschinen, Granulier-(Debegat-) Behälter, Siebe, Rührwerke, Trockenwalzen.

H) Starke Stöße, stark ungleichmäßiger Betrieb

Steinbrecher, Exzenterpressen, Häcksler, Pressen, Mahlspeindeln, Hammerbrecher, Aktenvernichter, Hochleistungsmischer, Stanzmaschinen, Abkantmaschinen, Rundtische, Horizontalmischer, Schneidgeräte, Vibratoren, Zentrifugen, Rundtische, Schwerlastkräne und Aufzüge, Plattenzylinder - Kaltwalzmaschinen, geschwindigkeitsregulierbare Festwalzen, Auflösesmaschinen, Trockenwalzen, Kalandarwalzen.

Klassifizierung der Gleichmäßigkeit des Betriebes:
Der Stoßgrad ergibt sich aus der Gleichmäßigkeit des Betriebes und aus dem Massenbeschleunigungsfaktor 'maf' gemäß der folgenden Tabelle. Hierbei gilt jeweils der größere Stoßgrad aus Betrieb und Massenbeschleunigungsfaktor. (Beispiel: ungleichmäßiger Betrieb und maf = 0,2 ergibt Stoßgrad "M".)

Yük Sınıfı Load Classification Stoßgrad	Çalışma Operation Betrieb	Kütle hız faktörü Mass Acceleration Factor Massenbeschleunigungs-faktor
U	Düzgün çalışma / Uniform application / gleichmäßiger Betrieb	maf ≤ 0.25
M	Düzgün olmayan çalışma / Non-uniform application / ungleichmäßiger Betrieb	0.25 < maf ≤ 3
H	Aşırı düzgün olmayan çalışma / Extreme non-uniform application / stark ungleichmäßiger Betrieb	3 < maf ≤ 10

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

i_{ges} = Tahvil oranı
 $J_{ex.red}$ = Tahrik motoru üzerindeki azaltılmış dış kütle atalet momentleri toplamı
 J_{ex} = Dış kütle atalet momentleri toplamı
 J_{mot} = Motorun kütle atalet momenti toplamı

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

i_{ges} = Getriebeübersetzung
 $J_{ex.red}$ = alle externen Massenträgheitsmomente auf Antriebsmotor reduziert
 J_{ex} = alle externen Massenträgheitsmomente
 J_{mot} = Massenträgheitsmoment des Motors

Kütlesel ivme faktörü maf, çıkış tarafındaki dış kütleler ile giriş tarafındaki yüksek hızlı kütlelerin arasındaki ilişkiyi gösterir.

Kütlesel ivme faktörünün dişli ünitesinin tork tesir seviyesine önemli ölçüde sistem başlatma, frenleme ve titreşim üzerinden etkisi vardır.

Örneğin bir bantlı konveyör sistemini ele alalım. Burada dış kütle atalet momentini konveyör bant üzerinde taşınan malzemenin kütlesel yükü oluşturur. Eğer maf >10 ise transfer elemanlarında büyük deplasman (yük değişimi) var ise ya da yük sınıflandırmamızda bir belirsizlik var ise PGR'ye danışınız. Bu ve benzeri hususlarla belirli şüpheleriniz var ise PGR'ye danışınız.

The mass acceleration factor (maf) shows the relationship between the outer masses on the output side and the high speed masses on the input side.

The mass acceleration factor has an important effect on the torque effect level of the gear unit through system starting, braking and vibration

Take, for example, a belt conveyor system. Here, the mass load of the material carried on the conveyor belt creates the external mass moment of inertia. If maf is >10, there is a large displacement (load change) in the transfer elements or if there is an uncertainty in our load classification, consult PGR. If you have certain doubts about these and similar issues, consult PGR.

Der Massenbeschleunigungsfaktor maf stellt das Verhältnis von externen abtriebsseitigen und schnelllaufenden antriebsseitigen Massen dar. Der Massenbeschleunigungsfaktor hat wesentlichen Einfluss auf die Höhe der Drehmomentstöße im Getriebe bei Anlauf- und Bremsvorgängen und Schwingungen. Die externen Massenträgheitsmomente beinhalten auch die Last wie z.B. das Fördergut und Transportbändern. Bei maf >10 bei großem Spiel in Übertragungselementen, Schwingungen im System, bei Unklarheiten zum Stoßgrad oder in Zweifelsfällen bitten wir Sie um Rücksprache mit PGR.

TR

TEKNİK BİLGİLER

EN

TECHNICAL INFORMATION

DE

TECHNISCHE INFORMATION

Redüktörümüzün servis faktörü f_B 'dir. Redüktörümüz için geçerli maksimum çıkış momenti M_{max} 'dir. Motor gücü P_1 'dir. Redüktör çıkış devrimiz n_2 'dir. Redüktörümüzün operasyonel çıkış momenti M_2 'dir.

Sistemimiz mekanik bir sistem olduğu için sistem ünitemizde kayıplarımız mevcuttur. Giriş gücümüz %100 kayıpsız olarak çıkışa iletilmez. Bu sebeple yüzde cinsinden verimliliği göz önünde bulundurmakta ve bunu hesaplarımızdaki formüllere eklemekteyiz. Redüktör verimliliği: η 'dir

f_B is the service factor of our gear unit. M_{max} is maximum output moment of our gear unit. P_1 is the motor power. Gear unit output rotation is n_2 . M_2 is the operational output moment.

Since our system is a mechanical system, we have losses in our system unit. Our input power cannot be transmitted to the output as 100% lossless. For this reason, we consider the efficiency in percent and add it to the formulas in our calculations. Gear unit efficiency: η

Der Betriebsfaktor des Getriebes (f_B). Das gültige maximale Abtriebsdrehmoment für Getriebe (M_{max}). Motorleistung (P_1) Abtriebsdrehzahl (n_2) Abtriebsdrehmoment (M_2)

Da unser System ein mechanisches System ist, haben wir Verluste in unserer Systemeinheit. Unsere Eingangsleistung kann nicht 100% verlustfrei auf den Ausgang übertragen werden. Aus diesem Grund betrachten wir den Wirkungsgrad in Prozent und fügen ihn in unseren Berechnungen zu den Formeln hinzu. Getriebewirkungsgrad: η

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

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

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

Redüktörümüzün doğru seçimi, motorlu seçim tablolarımızda mevcut olan f_B Servis faktörü değerinin Diyagram 1'den bulduğumuz minimum servis faktörümüz f_{Bmin} değerlerinden büyük veya eşit olması durumunda mümkündür.

Selection of gear unit is correctly done if service factor which is taken from selection of gear motors table must be greater than or equal to minimum service factor f_{Bmin} which is taken from diagram-1

Die richtige Auswahl unseres Getriebes ist möglich, wenn der in unseren Motorauswahltabellen verfügbare Wert f_B Servicefaktor größer oder gleich unserem minimalen Servicefaktor f_{Bmin} ist, den wir aus Diagramm 1 gefunden haben.

$$f_B \geq f_{Bmin}$$

Helisel dişli redüktörler, Paralel shaft montajlı redüktörler ve Helisel konik dişli redüktörler her bir kademede çok yüksek verime sahiptir (kademe başına yaklaşık %96 - %98 veya $\eta = 0,96 - 0,98$). Bu yüzden hesaplamalarda verim $\eta = 1,0$ alınması yeterli ve doğru sonuçlara ulaşılmasına yardımcı olur. Helisel sonsuz dişli redüktörlerin verimliliği (η), her bir çıkış hızı (n_2) için oranlar W, IEC, PAM Seçim tablolarında belirtilmiştir. W kovani montajlı (serbest hareket mili) redüktörde çıkış gücü aşağıdaki formülden hesaplanır.

Helical gear reducers has higher efficiencies than Parallel shaft mounted gear units and Helical bevel gear reducers. (approx. 96% - 98% per step or $\eta = 0.96 - 0.98$). Therefore, taking efficiency $\eta = 1.0$ in calculations helps to achieve sufficient and correct results. For efficiency (η) of helical worm gear units, the ratio of each output speed (n_2) are specified in the W, IEC, PAM selection tables. Output power is calculated from the below formula for the W (free input shaft) gear unit.

Stirradgetriebe, Flachgetriebe und Kegelradgetriebe haben einen sehr hohen Wirkungsgrad (ca. 96% - 98% je Getriebestufe oder $\eta = 0,96 - 0,98$). Daher führt der vereinfachte Getriebewirkungsgrad $\eta = 1,0$ in der Regel zu hinreichend und korrekte Ergebnissen. Bei Stirnrad- und Schneckengetrieben ist der Getriebewirkungsgrad (η) der Schneckengetriebe in den Leistungs- und Übersetzungstabellen (W, IEC, PAM) für die jeweilige Abtriebsdrehzahl (n_2) aufgeführt. Bei Getrieben mit freier Antriebswelle Typ W darf die installierte Antriebsleistung P_1 höchstens betragen:

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

Redüktörümüzün güvenli ve verimli bir şekilde çalışması için maksimum tahrik gücü P_{1max} 'in aşılması gerekir.

For the safe and efficient operation of our gearbox, the maximum drive power P_{1max} must not be exceeded.

Hierbei darf die maximale Antriebsleistung P_{1max} nicht überschritten werden.

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

W, IEC, PAM bağlantılı redüktörler için W, IEC, PAM seçim tablolarında her bir çıkış devri (n_2) ve maksimum çıkış momenti (M_{max}) için P_{1max} değerleri tablo halinde listelenmiştir.

For gear units with W, IEC, PAM connection, P_{1max} values for each output speed (n_2) and maximum output torque (M_{max}) are listed in the W, IEC, PAM selection tables.

$P_1 \leq P_{1max}$ Die Leistungs- und Übersetzungstabellen (W, IEC, PAM) führen die jeweiligen Abtriebsdrehzahl n_2 das maximale Getriebeabtriebsdrehmoment M_{max} und die maximale Motorleistung P_{1max} auf.

Tahrik tarafına fren bağlanmış (Örn: frenli motorlar) redüktörlerin seçimi yapılırken fren momenti de göz önüne alınmalıdır. Dış kütle atalet momentinin yüksek olduğu ($maf > 2$) uygulamalarda (örn; çember dişlilerde, döner tablalarda, karıştırıcılarda, yüzey havalandırıcılarında veya kapı sistemlerinin tahriklerinde) fren torkunun nominal anma momentinin 1,2 katından büyük olmaması, bu değer aşılması tavsiye edilir. Belirtilen değerlerden daha yüksek fren torku kullanılacak ise bu durum redüktör seçimi yapılırken göz önünde bulundurulmalıdır. Lütfen istenmeyen durumları engellemek için PGR'ye başvurunuz.

The braking torque must also be taken into account when selecting gear units with brakes on the drive side (eg brake motors). In applications in which the external mass moment of inertia is high ($maf > 2$) (e.g. ring gears, rotary trays, mixers, surface aerators or drives of door systems), it is recommended that the braking torque should not be greater than 1.2 times the rated torque, so it can not exceed this value. If specified value is higher than braking torque, this should be taken into account while selecting the gear unit. Please contact PGR to prevent undesirable situations.

Bei angebauten antriebsseitigen Bremsen, wie z.B. bei Bremsmotoren ist bei der Getriebeauswahl auch das Bremsmoment zu beachten. Bei Anwendungen mit relativ hohen externen Massenträgheitsmomenten ($maf < 2$) wie z.B. häufig bei Fahrtriebwerken, Drehwerken, Drehtischen, Torantrieben, Rührwerken und Oberflächenbelüftern wird empfohlen, ein Bremsmoment zu wählen, dass nicht größer als das 1,2-fache Motornennmoment ist. Wenn höhere Bremsmomente zum Einsatz kommen sollen, ist dies bei der Getriebeauswahl zu berücksichtigen. Wir bitten dann um Ihre Anfrage.

Radyal ve Eksenel Kuvvetler

Motorlu seçim tablolarında, çıkış mili üzerine müsaade edilebilir radyal kuvvetler (FR) ve eksenel kuvvetler (FA) ile listelenmiştir. Opsiyonel olarak birçok redüktör tipimizde güçlendirilmiş çıkış mili yatakları mevcuttur.

Motorlu seçim tablolarında güçlendirilmiş yataklara etki eden radyal kuvvetler (FRGR) ve eksenel kuvvetler (FAGR) olarak değerleri belirtilmiştir. Tablolarda belirtilen radyal ve eksenel kuvvetler, ayak montajlı ve flanş montajlı dişli ünitelerinin dolu mil çıkışlı montajları için geçerlidir. Verilen bu eksenel ve radyal kuvvetlerin aynı anda çıkış miline etkilememesi koşuluna dayanmaktadır.

Ayrıca motorlu seçim tablolarında yer alan radyal ve eksenel kuvvet değerleri sistemin servis faktörünün ($f_B=1$) bire eşit olduğu durum için verilmiştir. Darbeli yükler, darbeli tekrarlı yükler, uzun süreli çalışmalı (>8 saat/gün) gibi uygulamalarda servis faktörünün ($f_B>1$) birden büyük olduğu duruma karşılık gelen radyal ve eksenel kuvvetler dikkate alınmalıdır. İzin verilen FA ve FR kuvvetleri buna göre azaltılır.

Motorlu seçim tablolarında verilen radyal ve eksenel kuvvet değerleri milin orta noktasına etkiyen bir kuvveti ifade eder. İzin verilen radyal ve eksenel kuvvetler belirlenirken uygulanan kuvvetin uygulama istikameti ve dönüş yönünün en elverişsiz olması durumu varsayılmıştır.

Daha yüksek radyal ve eksenel kuvvetler potansiyel olarak kuvvet yönünün uygulama doğrultusuna ve dönüş yönüne göre mümkündür. Kesin bir hesaplama için bu tip uygulamalar söz konusu ise operasyonel kuvvet yönünü, dönüş yönünü ayrıca istenilen servis süresini (gerekli olan) detaylı olarak PGR'ye iletiniz.

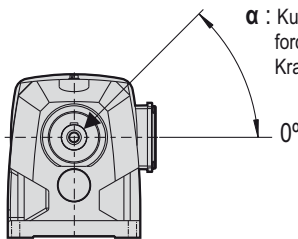
Çıkış miline ilave transfer elemanı takılırsa, mile etkiyen radyal kuvvetin belirlenmesinde aşağıdaki tablodan bulunacak olan fz faktörü de dikkate alınmalıdır.

fz için Tablo

Transfer Elemanları	Faktör fz	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 Kasnakları	1.7	ön gerilim kuvveti
Düz kayış Kasnakları	2.5	
Dişli Kayış Kasnakları	1.5	

Kuvvet uygulama noktası :

Kuvvet uygulama noktası aşağıdaki şekillere göre tanımlanır.



α : Kuvvet uygulama açısı
force application angle
Kraftangriffswinkel

Radial and Axial Forces

In the motor selection tables, allowable radial forces (FR) and axial forces (FA) for over output shaft are listed. Optionally, we have reinforced output shaft bearings in many gearbox types.

They are given as a radial forces (FRGR) and axial forces (FAGR) acting on the reinforced bearings in the motor selection tables. The radial and axial forces indicated in the tables are valid for solid shaft output mountings of foot-mounted and flange-mounted gear units. This is valid on the condition that axial and radial forces do not affect the output shaft at the same time.

In addition, the radial and axial force values in the selection tables with motor are valid for the case where the service factor of the system ($f_B=1$) is equal to one. In applications such as shock loads, pulsed repetitive loads, long-term operation (>8 hours/day), you should take into account radial and axial forces corresponding to the case where the service factor ($f_B>1$) is greater than one. The allowable FA and FR forces are reduced accordingly.

The radial and axial force values which is given in the motor selection tables represent a force acting on the midpoint of the shaft. While determining the allowable radial and axial forces, we assumed the application direction of the applied force and the most unfavorable rotation direction.

Higher radial and axial forces are potentially possible with respect to the direction of application and the direction of rotation of the force direction. For an exact calculation, if such applications are in calculation, please inform PGR in detail the operational force direction, the direction of rotation, and the required service time (required).

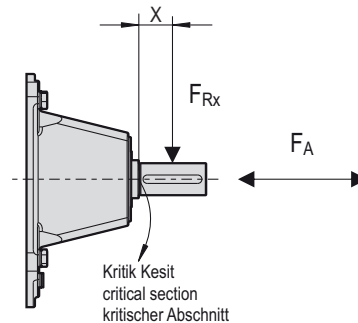
If an additional transfer element is attached to the output shaft, the fz factor from the table below should also be taken into account in determining the radial force acting on the shaft.

fz values are shown at table

Transfer Elements	Factor fz	Explanation
Gears	1.1	$z \leq 17$ teeth
Chain Sprockets	1.4	$z \leq 13$ teeth
Chain Sprockets	1.2	$z \leq 20$ teeth
Narrow V-belt pulleys	1.7	by
Flat belt pulleys	2.5	pretension force
Gear belt pulleys	1.5	

Definition of force application point:

The point of force application is defined according to the following figure.



F_{Rx} : Permitted overhung load at point [N]

F_A : Permitted axial force [N]

Quer- und Axialkräfte

In den Tabellen der Leistungs- und Drehzahlübersichten sind die zulässigen Querkkräfte (FR) und Axialkräfte (FA) die auf den äußeren Zapfen der Abtriebswelle wirken dürfen aufgeführt.

Für vielen Getriebetypen sind optional verstärkte Abtriebswellenlager lieferbar. Die Werte der auf die verstärkten Lager wirkenden Querkkräfte (FRGR) und Axialkräfte (FAGR) sind in den Motorsauswahltabellen angegeben. Die in den Tabellen angegebenen Quer- und Axialkräfte gelten für Fuß- und Flanschgetrieben mit Vollwelle. Die Kraftangaben beziehen sich auf den Fall, dass Quer- und Axialkraft nicht gleichzeitig vorliegen.

Außerdem liegt den Kraftangaben in den Tabellen der Leistungs- und Drehzahlübersicht ein Betriebsfaktor für Quer- und Axialkräfte ($f_B=1$) zugrunde. Bei stoßartigen Kräften und längeren Laufzeiten > 8 Stunden/Tag ist auch für die Quer- und Axialkräfte ein entsprechender Betriebsfaktor ($f_B>1$) zu berücksichtigen. Die zulässigen Querkkräfte FA- und FR- werden entsprechend reduziert.

Die Querkraftangaben beziehen sich auf Kraftangriff in der Mitte des Wellenendes. Bei der Ermittlung der zulässigen Quer- und Axialkräfte wurde die ungünstigste Kraftangriffsrichtung und Drehrichtung angenommen.

Höhere Quer- und Axialkräfte sind eventuell möglich. Wenn solche Anwendungen in Frage kommen, teilen Sie PGR bitte detailliert für eine genaue Berechnung, die Angaben der tatsächlichen Kraft- und Drehrichtung sowie der erforderlichen Lebensdauer mit.

Werden auf der Abtriebswelle Übertragungselemente aufgesetzt, so ist bei der Ermittlung der auftretenden Querkraft ein entsprechender Faktor (fz) zu beachten.

Querkraft-Faktor fz

Übertragungselemente	Faktor fz	Hinweise
Zahnräder	1.1	$z \leq 17$ Zähne
Kettenräder	1.4	$z \leq 13$ Zähne
Kettenräder	1.2	$z \leq 20$ Zähne
Schmalkeilriebscheiben	1.7	durch
Flachriemenscheiben	2.5	Vorspannkraft
Zahnriemenscheiben	1.5	

Definition des Kraftangriffs

Der Kraftangriff wird gemäß dem folgenden Bild definiert

F_{Rx} : "X" Uygulama noktasındaki müsaade edilen radyal kuvvet [N]

F_A : Müsaade edilen eksenel kuvvet [N]

F_{Rx} : zulässige Querkraft bei Abstand [N]

F_A : zulässige Axialkraft [N]

TR

TEKNİK BİLGİLER

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

$$F_{Rvorth} = \frac{2 \cdot M_a}{d_0} f_z \leq F_R$$

M_2 : Redüktör çıkış momenti [Nm]
 f_z : Tablodaki radyal kuvvet faktörü
 d_0 : Etkin daire çapı [mm]
 F_R : Seçim tablolarından alınan müsaade edilebilir radyal kuvvet [kN]
 F_{Rvorth} : Mil üzerindeki radyal kuvvet [kN]

EN

TECHNICAL INFORMATION

The radial force on the shaft was calculated using the formula below.

$$F_{Rvorth} = \frac{2 \cdot M_a}{d_0} f_z \leq F_R$$

M_2 : Output torque of gear unit [Nm]
 f_z : Factor which is taken from table
 d_0 : Effective circular diameter [mm]
 F_R : Permitted radial force which is taken from the speed and output moment tables. [kN]
 F_{Rvorth} : Radial force on the gear unit shaft [kN]

DE

TECHNISCHE INFORMATION

Die auftretende Querkraft an der Getriebewelle wird wie folgt bestimmt:

M_2 : (Nm) Abtriebsmoment des Getriebes
 f_z : Querkraft-Faktor aus Tabelle
 d_0 : (mm) Wirkkreisdurchmesser
 F_R : (kN) zulässige Querkraft nach Drehzahl und Leistungstabellen
 F_{Rvorth} : (kN) vorhandene Querkraft an der Getriebewelle

Eğer kuvvet mil ortasına uygulanmazsa kuvvetin etki ettiği herhangi bir "x" noktasındaki müsaade edilen radyal kuvvet değeri aşağıdaki formül 1 ve formül 2 kullanılarak hesaplanır.

Formula 1 and formula 2 is used when force is not acting on the middle of shaft, by this way you can calculate permissible radial force value at any "x" point where the force acts

Ist der Kraftangriff nicht auf Wellenmitte, so kann die zulässige Querkraft mit Hilfe der Gleichungen 1 und 2 auf jede beliebige Stelle "x" umgerechnet werden.

Formül / Formula / Gleichung - I

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

Formül / Formula / Gleichung - II

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

X : mil faturasından (kritik kesitinden) kuvvet uygulama noktasına olan uzaklık [mm]
 F_{RXW} : x noktasına etkiyen müsaade edilebilir radyal kuvvet (Mil dayanımına göre)
 F_R : Motorlu seçim tablolarından gelen milin ortasına etkiyen radyal kuvvet [kN]
 F_{RXL} : x noktasına etkiyen müsaade edilebilir radyal kuvvet (yataklama, rulman servis ömrüne göre)
 z, y, f : Radyal yük dönüşümü için dişli ünitesi sabitleri
 c : Radyal yük dönüşümü için dişli ünitesi sabiti

X : distance from the shaft collar to the point of force application [mm]
 F_{RXW} : permitted overhung force point X - shaft stability
 F_R : overhung force from the speed and output tables, force applied at the middle of the shaft [kN] point X - bearing service life
 F_{RXL} : permitted radial force acting on point X (according to bearing service life)
 z, y, f : Gear unit constants for radial load conversion
 c : Gear unit constant for radial load conversion

X : Abstand von Wellenbund bis Kraftangriff (mm)
 F_{RXW} : zul. Querkraft an Stelle x Wellenfestigkeit
 F_R : Querkraft aus Drehzahl- und Leistungstabelle, Kraftangriff auf Wellenmitte (kN)
 F_{RXL} : zul. Querkraft an Stelle x Lagerlebensdauer
 z, y, f : Faktoren siehe Tabelle
 c : Faktoren siehe Tabelle

c		[Nmm]
C_{GR}		[Nmm]
f	10-13	[mm]
y		[mm]
z		[mm]

Burada hesaplamalarda formül 1'in yatak servis ömrüyle formül 2'nin mil dayanımıyla bağlantılı olduğu unutulmamalıdır. Yatak servis ömrüyle alakalı hesaplamalarda formül 1'den gelen sonuç, mil dayanımı ile alakalı hesaplamalarda formül 2'den gelen sonuç kullanılmalıdır.

It should be noted here that in calculations, formula 1 is related to service life and formula 2 is related to shaft stability. The result from formula 1 should be used in calculations related to service life, and the result from formula 2 should be used in calculations related to shaft stability.

Hierbei ist zu beachten, dass grundsätzlich nach Gleichung 1 (Lebensdauer) und Gleichung 2 (Wellenfestigkeit) gerechnet wird, wobei der kleinere Wert als zulässig anzugeben ist.

TR

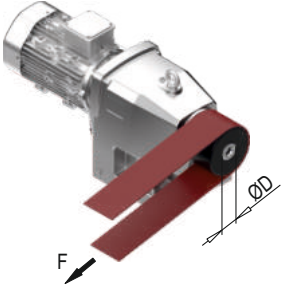
RADYAL YÜK HESABI

EN

CALCULATION OF RADIAL LOADS

DE

BERECHNUNG VON QUERKRAFT

**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 formulas where required moment M (Nm) and hoop or gear diameter D (mm) is used.

BERECHNUNG VON QUERKRAFT

Radiallast F (N) Berechnung erforderlich Antriebsmoment M (Nm), Durchmesser der Riemenscheibe oder des Gewindes D (mm) die folgenden Formeln es wird verwendet.

**1 - Elastik Kaplin**

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

1 - Elastik Coupling

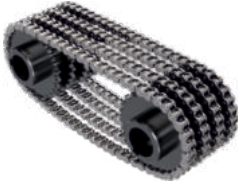
If elastic coupling is working in its reliable working area, the overhung loads can be neglected.

1 - Elastische Kupplung

Abweichungen im Betrieb gewährleisten die Sicherheit der Kupplung. Kräfte können vernachlässigt werden.

**2 - Düz Dişli (20° kavrama açılı)****2 - For Spur Gear (Pressure angle 20°)****2 - Stirnrad (20° Kupplungswinkel)**

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

**3 - Küçük Hızlarda Zincir Dişli (Z < 17)****3 - For Chain Drive With Low Speed (Z < 17)****3 - Kettenrad bei kleinen Geschwindigkeiten (Z < 17)**

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

**4 - Triger Kayış****4 - For Trigger Belt****4 - Zahnriemen**

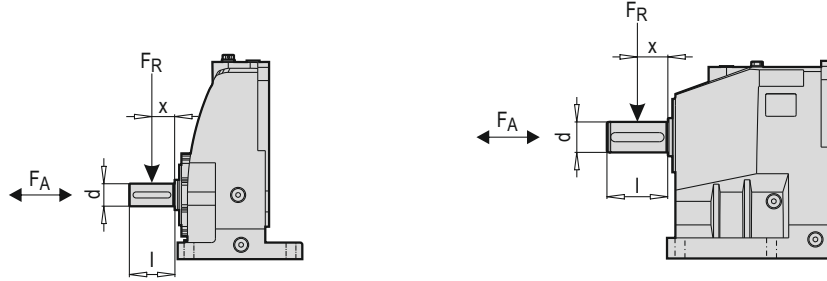
$$F_R = \frac{2500 \times M_2}{D}$$

**5 - V Kayış****5 - For V Belt****5 - Keilriemen**

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

**6 - Gerdirme Makaralı Kayış****6 - Flat Belt With Spanning Puley****6 - Spannrollenriemen**

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



ÇIKIŞ ŞAFTINDAKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER
VALUE TABLE FOR RADIAL AND AXIAL LOADS AT OUTPUT SHAFT
WERTE FÜR QUER UND AXIALKRAFT AN DER AUSGANGSWELLE

Redüktör Tipi Gearbox Type Reduzierertyp	y (mm)	z (mm)	c Normal Normal (Nmm)	CGR Güçlendirilmiş / Reinforced / Verstärkt (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.

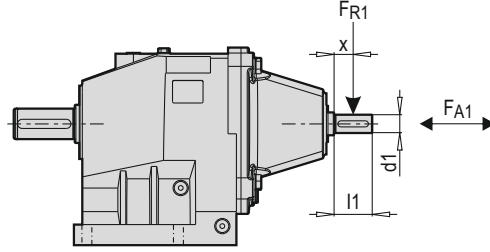
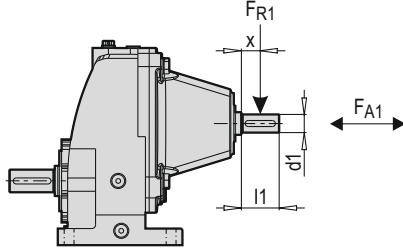
It will be calculated when you demand.

Wird auf Anfrage berechnet

y - z - c - CGR - f 9

- W ADAPTÖR

- W ADAPTER



GİRİŞ ŞAFTINDAKİ RADYAL VE EKSENEL YÜK HESAPLAMALARI İÇİN DEĞERLER

VALUE TABLE FOR RADIAL AND AXIAL LOADS AT INPUT SHAFT
WERTE FÜR QUER UND AXIALKRAFT AN DER EINGANGSWELLE

f=0

Redüktör Tipi Gearbox Type Reduzierertyp	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. / * In W-Ausführungen werden verstärkte Lager verwendet

TR

RADYAL YÜK HESABI

EN

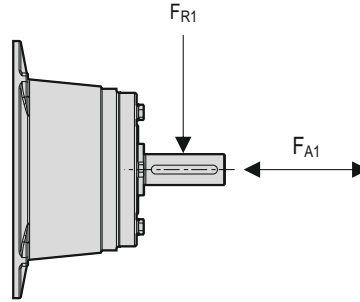
CALCULATION OF RADIAL LOADS

DE

BERECHNUNG VON QUERKRAFT

- W ADAPTÖR

- W ADAPTER



Tip Type Typ	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	
	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]
	P ₁ (kW)	F _{A1}	F _{R1}	F _{A1}	F _{R1}	F _{A1}	F _{R1}	F _{A1}	F _{R1}	F _{A1}
0.12 0.18	1.2 1.1	0.85 0.82	2.9 2.9	2.1 2.1	- -	- -	- -	- -	- -	- -
0.25 0.37	1.0 0.89	0.78 0.75	2.8 2.6	2.1 2.1	- 4.1	- 2.1	- -	- -	- -	- -
0.55 0.75	0.77 0.58	0.72 0.70	2.5 2.3	2.0 1.9	3.9 3.8	2.8 2.4	- 6.1	- 4.4	- -	- -
1.10 1.50	0.35 0.29	0.61 0.43	2.1 2.0	1.8 1.8	3.5 3.3	2.7 2.6	5.9 5.8	4.3 4.2	- -	- -
2.20 3.00	0.20 0.15	0.42 0.23	1.7 1.5	1.7 1.6	2.7 2.5	2.4 2.3	5.5 5.2	4.1 3.9	- 4.3	- 11.0
4.00 5.50	- -	- -	0.98 0.65	1.1 1.0	2.3 1.6	2.1 1.8	4.9 4.4	3.7 3.4	4.2 4.1	10.9 10.8
7.50 9.20	- -	- -	0.27 -	1.0 -	1.4 1.0	1.3 0.98	4.3 3.9	3.4 3.1	3.8 3.6	10.4 10.1
11.0 15.0	- -	- -	- -	- -	0.59 -	0.47 -	3.3 3.3	2.7 2.7	3.4 3.1	9.9 9.5
18.5 22.0	- -	- -	- -	- -	- -	- -	2.7 2.2	2.3 1.8	3.0 2.9	9.3 9.3
30.0 37.0	- -	- -	- -	- -	- -	- -	1.1 0.74	1.2 0.87	2.3 2.0	8.4 8.1
45.0 55.0	- -	- -	- -	- -	- -	- -	- -	- -	2.2 1.5	8.3 7.4
75.0 90.0	- -	- -	- -	- -	- -	- -	- -	- -	0.78 0.24	4.6 5.2

* W Adaptörlerde Güçlendirilmiş Rulman Kullanılmıştır.

* Reinforced bearing is used at W Adapters.

* In W-Ausführungen werden verstärkte Lager verwendet

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



9

TR	KISALTMALAR	EN	ABBREVIATIONS	DE	ABKÜRZUNGEN
f_B	= Servis Faktörü (Mamax / Ma)	f_B	= Service factor (Mamax / Ma)	f_B	= Betriebsfaktor (Mamax / Ma)
F_A	= Çıkış tarafındaki müsaade edilebilir eksenel yük [kN]	F_A	= Permissible axial load at the output side [kN]	F_A	= zulässige axiale Belastung auf der Abtriebsseite [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_R	= Querkraft aus Drehzahl- Leistungstabellen, Kraftangriff auf Wellenmitte [kN]
F_D	= Reaksiyon yükü [kN]	F_D	= Reaction [kN]	F_D	= Reaktionsbelastung [kN]
i_{toplam}	= Dişli ünitesindeki toplam tahvil oranı	i_{total}	= Gear units total ratio	i_{total}	= Gesamtübersetzungsverhältnis
i_{ges}	= Tahvil oranı	i_{ges}	= Reduction ratio	i_{ges}	= Übersetzungsverhältnis
M_2	= Çıkış momenti [Nm]	M_2	= Output torque [Nm]	M_2	= Abtriebsdrehmoment [Nm]
M_{amax}	= Müsaade edilebilir maksimum çıkış momenti [Nm]	M_{amax}	= Max. permissible output torque [Nm]	M_{amax}	= zul. Maximale Drehmoment [Nm]
n_2	= Çıkış devri [d/dk]	n_2	= Output speed [min ⁻¹]	n_2	= Abtriebsdrehzahl [min ⁻¹]
P_e	= Mamax referans alınarak hesaplanan güç [kW]	P_e	= Calculated power [kW] with reference to Mamax	P_e	= Mit der Referenz Mamax berechnete Leistung [kW]
P_n	= Motor güç oranı [kW]	P_n	= Rated power of motor [kW]	P_n	= Motorleistung [kW]
η	= Verim [%]	η	= Efficiency [%]	η	= Leistung [%]
kg	= Redüktörün ağırlığı	kg	= Weight of the geared motor	kg	= Gewicht des Getriebes

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

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

1) Bei vier-, fünfstufigen Getrieben gibt es aufgrund der vielen sich drehenden Teile und der relativ kleinen Antriebsleistungen relevanten Leerlaufverluste. Daher wird hier bei 4-poligen Motoren bis 0,75 kW eine Leerlaufverlustleistung von ca. 40 Watt (W) in den Tabellen berücksichtigt.

TR

PA/PF TANITIMI

HELİSEL DİŞLİLİ REDÜKTÖRLER (PA/PF)

Polat Group Redüktör ürünü olan Helisel dişlili (PA/PF) serisi 27 farklı gövde büyüklüğü ile hizmete sunulmaktadır.

Redüktörler;

- PA/PF 11...51 arası 1 kademeli,
- PA/PF 02...52 arası 2 kademeli redüktörlere indirgeyici gövde montajlanarak 3 kademeli (PA/PF 03...53),
- PA/PF 62...102 ve PA/PF 63...103 arası redüktörler aynı tip gövdede 2 veya 3 kademeli olarak sunulmaktadır.
- Yüksek tahvil oranları için 4, 5 ve 6 kademeli redüktörlerimiz de mevcuttur.

Her bir gövde büyüklüğümüz için ayakta ve flanşta montaj opsiyonumuz mevcuttur. PA/PF serisi redüktörlerimiz giriş ve çıkış yönü eş eksenli gövde yapısıyla montaj kolaylığı ve ağır çalışma şartlarına uygun tasarımı ile tercih edilmektedir. Flanş montajlı redüktörlerimizde flanş kısmımız gövdeye yekparedir. Gövde ile beraber dökümdür. Bu sebepten flanş kısmını gövde kısmına bağlamak için herhangi bir makine bağlantı elemanı mevcut değildir.

Yeni nesil PGR dişli ünitelerimiz UNICASE ilkesine göre geliştirilmiştir. Redüktörlerimiz bu prensibe göre yekpare olarak tasarlanmıştır. Yekpare gövdemiz tüm rulmanların entegre edildiği tek bir muhafazadır. Yekpare gövdemizin son ölçülerine getirilmesi güncel ve son teknoloji CNC ünitelerimizde gerçekleştirilir. Unicase konsepti en yüksek düzeyde hassasiyet, rijitlik ve dayanıklılık sağlar. Eksenel kuvvetlere ve torka maruz kalabilen redüktör gövdemizin üzerinde ayrı bağlantı elemanı yoktur. Unicase prensibi shaft eksenlerinin kademeli olmasına izin verir, bu da daha uzun bir çalışma ömrünü garanti etmek için daha büyük yataklama elemanı (rulman) kullanma olanağı sunar. Unicase prensibinin getirdiği hassas mil (shaft) hizalaması ve yüksek yükleme kapasitesi, uzun hizmet ömrü ve düşük gürültü sağlar. Dişliler, yataklar, miller DIN 3990 DIN ISO 281 uluslararası normlara göre hesaplanmıştır. Çıkış tarafı ile giriş arasında eksen kaçıklığına neden olabilecek çıkıntı veya tork yüklerine maruz kalan herhangi bir bağlantı elemanı (vida vb) yoktur. PİK / sfero veya alüminyum gövdeler için gövdeden sağlanan montaj kolaylığı ile vibrasyon salınım etkisi en aza indirilir.

Her bir dişli kademesi için ayrı olarak 0,96...0,98 arasında yüksek bir verimlilikle (her bir kademeden bağımsız olarak verimliliği bu değerler arasındadır) dişli ünitelerimiz sunulmaktadır.

Fabrikamızda bulunan son sistem CNC tezgahlarında açılan dişliler yüksek ve geniş yelpazeli imalat toleransı ile günümüz uluslararası standartlarının tamamını karşılamaktadır. Redüktör gövdelerimiz GG 25-30, GGG 50-60 ya da alüminyum yapılmıştır.

Yataklar ve dişliler tribolojinin kurallarına göre optimize edilmiş bir yağ banyosunda çalışır.

Dişli ünitelerimizin sızdırmazlığında NBR keçe kullanılır. Opsiyonel olarak viton (FKM) keçe kullanıma da mevcuttur. Dövme malzemenin yapılan dişlilerimiz gerekli ısıtma işlemi, sementasyon, honlama, gibi proseslerden geçirilerek redüktörümüzün sorunsuz çalışması sağlanır. Dişli dizaynındaki doğru oluşturulan geometri ve doğru malzeme seçimi, çalışan dişlilerimizin daha sessiz, daha hafif ve daha yüksek hızlarda daha fazla yük taşıyarak daha az ısı üretmesini mümkün kılmaktadır. Redüktörlerimiz sessiz, yüksek dayanımlı ve servis ömrü uzun çalışma sağlamaktadır. Bu da zorlu çalışma koşullarında güvenli çalışmayı beraberinde getirir. PA/PF serisi redüktörlerimiz her türlü endüstriyel uygulamada kullanılabilir.

EN

DESCRIPTION OF PA/PF

HELICAL GEAR UNITS (PA/PF)

The series of Helical Gear Units of PGR has 27 different case dimensions.

Gear Units;

- Gear units from PA/PF 11 to 51 have 1 stage
- Gear units from PA/PF 02 to 52 can be made 3 stage (From PA/PF 03 to 53) by using reductive case.,
- Gear units from PA/PF 62 to 102 and from PA/PF 63 to 103 are come out as a 2 or 3 stages in the same kind of case.
- We have 4,5 and 6 stage reducers for high ratio numbers.

We have foot mounted and case mounted options for every case dimension. PA/PF series are suitable for heavy working conditions and easy montage since they have equiaxial case design between input and output. For flange mounted gear units, the flange part can not be removed from case. They are produced as stick together. Because of this reason, we do not have machine connection apparatus to bind flange to case.

Our new generation PGR gear units have been developed according to the UNICASE principle. Our gear units are designed as a one-piece according to this principle. Our one-piece body is a single housing in which all bearings are integrated. Bringing our one-piece body to its final dimensions is carried out in our updated technology CNC units. The Unicase concept provides the highest level of precision, rigidity and durability. We do not have different connection element on our gear unit body, which can be exposed to axial forces and torque. The Unicase principle allows the shaft axes to have stages, which offers the possibility to use larger bearings (bearings) to guarantee a longer durability. The precise shaft alignment and high loading capacity which is provided by Unicase principle ensure durability and low noise. Gears, bearings, shafts are calculated according to DIN 3990 DIN ISO 281 international norms. There are no connector (screws, etc.) that are exposed to protrusion or torque loads that may cause axial misalignment between the output side and the input side. Vibration oscillation effect is minimized with the ease of mount provided from the body for ductile iron or aluminum bodies.

By our offered gear units with a high efficiency of 0.96...0.98 for each gear stage separately (the efficiency of each stage independently is between these values).

The gears produced on the cutting-edge technology system CNC machines in our factory encounter provides all today's international standards with high and wide range with manufacturing tolerances. Our gear unit bodies are made of GG 25-30, GGG 50-60 or aluminum.

Bearings and gears work in an optimized oil bath according to the rules of tribology.

NBR seal is used in the leakproofing of our gear units. We have viton seal (FKM) as optional. Our gear units, which are made of forged material, are passed through the necessary processes such as heat treatment, cementation, honing. After that, our gear units are ensured working without problem. Correctly created geometry and correct material selection in gear design make it possible for our working gears to be quiet, lighter and they can generate less heat while carrying more loads at higher velocity. Our gear units provide quiet working and durability. This situation brings safe working in hard working conditions. Our PA/PF series gear units can be used in all kinds of industrial applications.

DE

PA/PF-EINFÜHRUNG

STIRNRADGETRIEBE (PA/PF)

Die Stirnradgetriebe (PA/PF) von PGR werden in 27 verschiedenen Gehäusegrößen angeboten.

Getriebe:

- 1-stufig zwischen PA/PF 11 und PA/PF 51
- durch Montage von Reduziergehäuse an 2-stufige Getriebe zwischen PA/PF 02 und PA/PF 52, 3-stufig zwischen PA/PF 03 und 53
- Zwischen PA/PF 62 und PA/PF 102 und PA/PF 63 und PA/PF 103 bei gleichen Gehäusen 2- oder 3-stufig lieferbar.
- Für hohe Untersetzungsverhältnisse sind 4-, 5- und 6-stufige Getriebe vorhanden.

Für alle unsere Gehäusegrößen sind Optionen mit Fuß- und Flanschbefestigung vorhanden. Unsere Getriebe der PA/PF-Serie werden bevorzugt mit ihrer coaxialen Antriebs- und Abtriebswelle, ihrer einfachen Montage und ihrem Design, das für schwere Arbeitsbedingungen geeignet ist. Bei Getrieben mit Flanschbefestigung ist der Flansch zusammen mit dem Gehäuse aus einem Guss. Daher besteht kein Verbindungselement für die Verbindung von Flansch an Gehäuse.

Unsere PGR-Getriebe der neuen Generation wurden nach dem UNICASE-Prinzip entwickelt. Unsere Reduzierstücke werden nach diesem Prinzip als Einzelstück konstruiert. Unser solider Körper ist ein einziges Gehäuse, in dem alle Lager integriert sind. In unseren aktuellen und hochmodernen CNC-Anlagen wird unser Massivkörper auf Endmaß gebracht. Das Unicase-Konzept bietet ein Höchstmaß an Präzision, Festigkeit und Widerstandsfähigkeit. An unserem Reduzierkörper befindet sich kein separates Verbindungselement, das axialen Kräften und Drehmomenten ausgesetzt werden kann. Durch das Unicase-Prinzip können die Wellenachsen versetzt werden, was die Möglichkeit bietet, größere Lager zu verwenden, um eine längere Lebensdauer zu gewährleisten. Präzise Wellenausrichtung und hohe Belastbarkeit durch das Unicase-Prinzip sorgen für lange Lebensdauer und geringe Geräuschentwicklung. Zahnräder, Lager, Wellen werden nach den internationalen Normen DIN 3990 DIN ISO 281 berechnet. Es gibt keine Befestigungselemente (Schrauben usw.) zwischen der Abtriebsseite und dem Eingang, die Überstands- oder Drehmomentbelastungen ausgesetzt sind, die eine axiale Fehlausrichtung verursachen könnten. Der Schwingungseffekt wird durch die einfache Montage des Gehäuses für Guss-/Sphäroguss- oder Aluminiumkörper minimiert. Wird von unseren Getrieben mit einem hohen Wirkungsgrad zwischen 0,96...0,98 für jede Getriebestufe separat angeboten. (der Wirkungsgrad jeder Stufe liegt unabhängig zwischen diesen Werten).

Die in unserem Werk auf modernsten System - CNC-Maschinen geöffneten Verzahnungen erfüllen alle heutigen internationalen Standards mit hohen und weiten Fertigungstoleranzen. Unsere Reduzierkörper werden aus GG 25-30, GGG 50-60 oder Aluminium gefertigt.

Lager und Getriebe arbeiten in einem optimierten Ölbad nach den Regeln der Tribologie. Zur Abdichtung unserer Getriebe wird NBR-Falz verwendet. Optional ist auch Viton (FKM)-Filz erhältlich. Unsere Zahnräder aus geschmiedetem Material durchlaufen die notwendigen Prozesse wie Wärmebehandlung, Zementieren, Honen und sorgen für einen reibungslosen Betrieb unseres Getriebes. Eine richtig erstellte Geometrie und die richtige Materialauswahl in der Zahnradkonstruktion machen es möglich, dass unsere Zahnräder leiser, leichter und weniger Wärme erzeugen und gleichzeitig mehr Lasten bei höheren Geschwindigkeiten tragen. Unsere Getriebe zeichnen sich durch leiser Betrieb, hohe Festigkeit und lange Lebensdauer aus. Dies bringt sicheres Arbeiten unter schwierigen Arbeitsbedingungen mit sich. Unsere Getriebe der Baureihe PA/PF können in allen Arten von Industrieanwendungen eingesetzt werden.

TR

PA/PF TANITIMI

EN

DESCRIPTION OF PA/PF

DE

PA/PF-EINFÜHRUNG

Motorlu ya da motorsuz seçeneklerde, W kovanlı, PAM ve IEC adaptörlü giriş opsiyonları sunulmaktadır.

For motor and without motor versions, we have input options of free input shaft with PAM, IEC adaptors.

Bei Auswahlmöglichkeiten mit oder ohne Motor gibt es Antriebsoptionen mit freier Antriebswelle, PAM- und IEC-Adapter.

Helisel dişli redüktörler;
0.12 kW'dan 160 kW'ya kadar değişen güçleri ile maksimum 26000 Nm'ye kadar çıkış momenti sağlayabilmektedir.

Helical gear units;
with various power ranging between 0,12 kW and 160 kW, supplies at most 26000 Nm output moment.

Stirnradgetriebe bieten ein Abtriebsmoment von max. 26000Nm bei einer Leistung zwischen 0,12 kW und 160 kW.

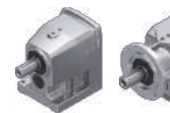
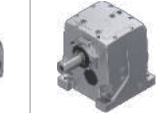
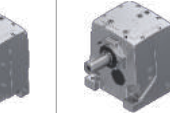
MAX. MÜSAADE EDİLEBİLİR ÇIKIŞ MOMENTİ $M_{a \max.}$

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

MAX. ZULÄSSIGE AUSGANGSMOMENTE $M_{a \max.}$

 221 - 243

Bir, İki ve Üç kademeli helisel dişli redüktör
Helical gear boxes single, double and triple reduction
Ein-, Zwei und dreistufiges Stirnradgetriebe

									
Tip / Type / Typ	Ma max. (Nm)	Tip / Type / Typ	Ma max. (Nm)	Tip / Type / Typ	Ma max. (Nm)	Tip / Type / Typ	Ma max. (Nm)	Tip / Type / Typ	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, IEC VE PAM ADAPTÖRÜ

W kovanlı (serbest giriş milli) redüktörler için geçerli maksimum tahrik gücü, uygun tahvil oranı ve çıkış devrine göre (min-1) W, IEC, PAM seçim tablolarında belirlenmiştir. IEC'li ve PAM'lı redüktörlerde her bir gövde büyüklüğü için DIN EN 50347 standardına göre standart güçler verilir. Ancak maksimum çıkış gücü, tahvil oranlarına göre tablolarda verilmiştir. Eğer W, IEC, PAM seçim tablolarındaki listelenen P1 güç değerlerinden daha fazla bir güç istenirse özel hesaplamalar gerekmektedir. Bu durumda lütfen firmamıza danışınız.

W kovanlı redüktörlerin giriş mili yatakları (rulmanları) düzenli olarak yağlanmalıdır. PA/PF 62-63, PD/PM 62-63, PKD 6390 ve üst gövdeler için her 4000 çalışma saatine göre yaklaşık 20-25 gr gres ile otomatik yağlayıcılar ya da gresörülük kullanılarak giriş şaftı yatakları düzenli olarak yağlanmalıdır. Yağlayıcı olarak Petamo GHY 133N önerilir. W kovanlı redüktörlerde yağlamanın yanı sıra redüktörün soğutulmasını iyileştirmek için harici bir fan talep üzerine yapılabilir. Lütfen böyle bir istek için tarafımıza danışınız.

Otomatik yağlayıcı ünitesini IEC adaptör girişli redüktörlerimiz için PA/PF 62-63, PD/PM 62-63, PKD 6390 ve üstü gövde büyüklüklerine bağlanabilmektedir. Otomatik yağlama ünitesi giriş mili üzerindeki rulmanlara kalıcı bir yağlama sağlamaktadır. Redüktör devreye alınmadan önce otomatik yağlayıcı aktive edilmeli ve her 12 ay periyodunda değiştirilmelidir. Bu süre ortalama günlük çalışma süresinin ≤ 8 saat olduğu durumlarda geçerlidir. Günlük çalışma süresi 8 saatin üzerindeki tüm durumlarda otomatik yağlayıcı 6 ayda bir değiştirilmelidir.

Otomatik yağlayıcı içindeki gres 0°C...40° arasındaki ortam sıcaklığında çalışmaya göre tasarlanmıştır. Eğer ortam sıcaklığı belirtilen standart pozisyonu (0°C...40°) çok uzun süre farklı kalıyorsa özel yağlayıcılar kullanılmalıdır. Bunun gibi durumlar için firmamıza danışınız.

Otomatik yağlayıcı, motor gövde büyüklüğü 160 ve üzeri IEC adaptörlü redüktörlerde, motorun dikey olarak durduğu montaj pozisyonları tarafımızca önerilmez. Bu tarz durumlarda doğrudan motor montajı tavsiye edilir.

Eğer redüktör, motor gövde büyüklüğü 160 ve üzeri IEC adaptörlü ve dikey montaj pozisyonu (M4) kullanılması gerekiyorsa, gerçek çalışma koşulları ile tarafımızca kontrol edilmeli ve onaylanmalıdır.

Montaj pozisyonu M2 olduğu dikey çalışma koşullarında, redüktör üzerindeki bazı sızdırmazlık elemanlarının ömrü azalabilir. Bu gibi durumlarda bakım aralıklarının daha kısa olması öneriyoruz. PA/PF 52, PD/PM 52 PKD 5390'a kadar olan gövde büyüklüğündeki IEC adaptörlü redüktörlerimiz, çalışma ömürleri boyunca özel sızdırmazlığa sahip yağlanmış rulmanlar içerir. Bu rulmanların yağlanması için herhangi bir ilave yağlama ünitesine gerek duyulmaz. Bu gövdeler için önerilen bakım süreleri kullanım kılavuzunda belirtilmiştir.

Motor gövde büyüklüğü 63'den 180'e kadar olan IEC adaptörlerin kaplinleri arızaya karşı emniyetli değildir. Ancak motor gövde büyüklüğü 160 ve 180 olan IEC adaptörlerinin kaplinleri otomatik yağlayıcı kullanılıyor ise arızalara karşı emniyetlidir. Motor gövde büyüklüğü 200 olan IEC adaptörlerin kaplinleri arızalara karşı emniyetli değildir. Kaldırıcılar, asansörler ve yaralanmalar vs. gibi kazalar sebep olabilecek özel durumlar için özel önlemler ve özel hesaplamalar gerekebilir. Bu durumlar için PGR'ye danışınız.

Doğrudan monte edilen akupule motorla karşılaştırıldığında IEC adaptöründe ek bir şaft kaplini ve ek rulman yatakları bulunur. Doğrudan monte edilen akupule motorla karşılaştırıldığında IEC bağlantılı redüktörlerde yük kayıpları seviyesi çok daha yüksektir. Sadece teknik avantajlar değil ayrıca fiyat avantajı da sunduğu için PGR olarak akupule motor montajı önerilmektedir.

EN

W, IEC AND PAM ADAPTER

For gear units with W cylinder(with free input shaft), the maximum drive power,proper ratio rate, and output speed (min-1) is given at W, IEC, PAM selection tables.In gear units with IEC and PAM, standard powers are given for each body size according to DIN EN 50347 standard. However, the maximum output power is given in the tables according to the reduction ratio. Special calculations are required if more power is required than the P1 power values which is listed in the W, IEC, PAM selection tables. In this case, please kindly consult our company.

Input shaft bearings of gear units with W cylinder (free input shaft) must be lubricated regularly. Input shaft bearings of PA/PF 62-63, PD/PM 62-63, PKD 6390 and upper cases should be lubricated regularly with 20-25 gr grease using automatic lubricators or a grease fitting for approximately per 4000 operation hours. Petamo GHY 133N is recommended as a lubricant. For gear units with W (free input shaft), an external fan is available on request to improve the cooling of the gear unit. Please consult us for such a request.

The automatic lubricator unit can be connected to with IEC adapter input cases of PA/PF 62-63, PD/PM 62-63, PKD 6390 and upper cases. The automatic lubrication unit provides permanent lubrication to the bearings on the input shaft. Before the gear unit is used, the automatic lubricator must be activated and changed every 12 months. This period is valid when the average daily working time is ≤ 8 hours. In all cases with a daily operating time of more than 8 hours, the automatic lubricator have to be replaced every 6 months.

The grease which is in the automatic lubricator is designed for operation at ambient temperatures between 0°C...40°. If the ambient temperature differs from the specified standard values (0°C...40°) for too long time, special lubricants have to be used. For such cases, consult our company.

We do not recommend vertical mounting positions for gear units with automatic lubricator, motor body size 160 and above with IEC adapter. In such cases, direct motor mounting is recommended.

If motor body size 160 and above, with IEC adapter and vertical mounting position (M4) must be used, it have to be checked and approved by our company with the actual operating conditions.

In vertical operating conditions where the mounting position is M2, the life of some leakproofing elements on the gear unit may be reduced. In such cases, we recommend shorter maintenance time Our cases up to PA/PF 52, PD/PM 52 and PKD 5390 with IEC adapter contain bearings which is lubricated and these bearings have special leakproofing for their working life. Additional lubrication unit is not required for the lubrication of these bearings. Recommended maintenance times for these bodies are specified in the user manual.

Couplings of IEC adapters from motor frame sizes 63 to 180 are not fail-safe, they are not safe for faults. However, couplings of IEC adapters with motor body sizes 160 and 180 are fail-safe if automatic lubricator is used. Couplings of IEC adapters with motor body size 200 are not fail-safe. For situations which can lead to accidents like lifters, lifts and injuries etc , you should make special calculations and precautions. For such cases, consult our company. Compared to a directly mounted coupled motor, the IEC adapter has an additional shaft coupling and additional bearings. Compared to a directly mounted coupled motor, the level of load losses is much higher in gear units with IEC connection. Coupled engine installation is recommended as PGR, as it offers not only technical advantages but also price advantage.

DE

W, IEC UND PAM ADAPTER

Bei Getrieben mit freier Antriebswelle, Typ W, gilt die in den Leistungs- und Übersetzungstabellen angegebene maximale Antriebsleistung. Bei Getrieben mit IEC-Anbau, gilt die Normleistung der jeweiligen Baugröße nach DIN EN 50347, maximale jedoch die in den Leistungs- und Übersetzungstabellen angegebene Antriebsleistung. Bei höheren Drehzahlen, als in den Leistungs- und Übersetzungstabellen angegeben, sind eventuell Sondermaßnahmen erforderlich, wir bitten um Anfrage.

Bei Getrieben mit freier Antriebswelle, Typ W, muss die Antriebswellenlagerung ab Größe PA/PF 62-63, PD/PM 62-63, PKD 6390 regelmäßig nachgeschmiert werden. Wir empfehlen, über den vorgesehenen Schmiermippel, das äußere Wälzlager der Antriebswelle ca. pro 4000 Betriebsstunden mit ca. 20-25 g Fett nachzuschmieren. Empfohlene Fettsorte: Petamo GHY 133N. Auf Wunsch ist auch ein Lüfter auf der Antriebswelle zu besseren Getriebekühlung lieferbar. Wir bitten um Anfrage.

Getriebe mit IEC-Adapter ab Größe PA/PF 62-63, PD/PM 62-63, PKD 6390 können standardmäßig einen automatischen Schmierstoffgeber, der das äußere Wälzlager der Antriebswelle mit Schmierstoff versorgt haben. Der Schmierstoffgeber fördert permanent Schmierstoff zum Lager. Vor Inbetriebnahme des Getriebes ist der automatische Schmierstoffgeber zu aktivieren und dann alle 12 Monate auszutauschen. Dies gilt für eine durchschnittliche Laufzeit ≤ 8 Stunden/Tag. Bei längeren Laufzeiten verkürzt sich der Wechselintervall auf 6 Monate.

Der Schmierstoffgeber ist ausgelegt für normalen Einsatz bei 0°C bis 40°C Umgebungstemperatur. Weicht die Umgebungstemperatur über längere Zeiträume von dem genannten Richtwert ab, sind Sonderschmierstoffgeber zu verwenden, wir bitten um Anfrage.

Der IEC-Adapter bei Motorgröße ≥ 160 mit dem automatischen Schmierstoffgeber ist unter bestimmten Betriebsbedingungen serienmäßig nicht geeignet für senkrechte Anordnungen, bei denen der Motor senkrecht nach oben steht. Hier ist unbedingt Direktanbau des Motors zu empfehlen!

Der senkrechte IEC-Adapter bei Motorbaugröße ≥ 160 (Einbaulage M4) muss durch PGR unter Bekanntgabe der Betriebsbedingungen geprüft und freigegeben werden. Wir bitten um Beachtung.

Bei senkrechten Anordnungen bei denen der Motor nach unten hängt (Einbaulage M2), kann sich die Lebensdauer der Abdichtung verringern. Hier empfehlen wir kürzere Wartungsintervalle. Die kleineren Getriebe mit IEC-Adapter bis PA/PF 52, PD/PM 52 PKD 5390 Getrieben haben speziell abgedichtete, lebensdauer geschmierte Lager, die keine Wartung benötigen.

Die Kupplung des IEC-Adapters für die Motorbaugrößen 63 bis 180 ist nicht durchschlagsicher. (Ausnahme: Bei den IEC Motorbaugrößen 160 und 180, wenn der automatische Schmierstoffgeber vorhanden ist. Ab IEC 200 sind die verwendeten Kupplungen durchschlagsicher). Bei Hubwerken, Aufzügen und anderen Einsatzfällen mit Personengefährdung sind Sondermaßnahmen erforderlich, hier bitten wir um Anfrage.

Der IEC-Adapter hat gegenüber dem Direktanbau des Motors eine zusätzliche Wellenkupplung und zusätzliche Lagerstellen. Hierdurch entstehen gegenüber dem Direktanbau, des Motors höhere Leerlaufverluste. Wir empfehlen den Direktanbau des Motors, da er nicht nur technische Vorteile, sondern auch zusätzlich noch Preisvorteile bietet.

TR	UYGULAMA ALANLARI	EN	APPLICATION AREAS	DE	EINSATZBEREICHE
UYGULAMALAR		APPLICATIONS		ANWENDUNGEN	
<u>KARIŞTIRICILAR</u>		<u>AGITATORS (MIXERS)</u>		<u>MISCHER</u>	
* Saf Sıvılar * Sıvılar ve Katılar * Değişken Yoğunluklu Sıvılar		* Pure Liquids * Liquids and Solids * Liquids - Variable Density		* Reine Flüssigkeiten * Flüssigkeiten und Feststoffe * Flüssigkeiten mit variabler Dichte	
<u>HAVALANDIRMA TERTİBATLARI</u>		<u>BLOWERS</u>		<u>BELÜFTUNGSVORRICHTUNGEN</u>	
* Santrifüj * Lob * Pervane		* Centrifugal * Lobe * Vane		* Zentrifuge * Lob * Propeller	
<u>MAYALAMA VE DAMITMA</u>		<u>BREWING AND DISTILLING</u>		<u>GÄREN UND DESTILLIEREN</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		* Abfüllmechanismus * Gärkessel - Ununterbrochene Arbeit * Öfen, Herde - Ununterbrochener Betrieb * Zerkleinern, Mischkesseln - Ununterbrochenes Arbeiten * Messbehälter - Häufiger Start	
<u>TOPRAK İŞLEME MAKİNELERİ</u>		<u>CLAY WORKING MACHINERY</u>		<u>BODENBEARBEITUNGSMASCHINEN</u>	
* Tuğla Presi * Briket Makinesi * Çamur Karma Makinesi		* Brick Press * Briquette Machine * Pug Mill		* Ziegelpresse * Briкетmaschine * Schlammischer	
<u>KOMPRESÖRLER</u>		<u>COMPRESSORS</u>		<u>KOMPRESSOREN</u>	
* Santrifüj * Lob * Çok Pistonlu * Tek Pistonlu		* Centrifugal * Lobe * Reciprocating, Multi-Cylinder * Reciprocating, Single-Cylinder		* Zentrifuge * Lob * Mehrkolben * Einzelkolben	
<u>KONVEYÖRLER - GENEL MAKSATLI</u>		<u>CONVEYORS - GENERAL PURPOSE</u>		<u>FÖRDERER - ALLGEMEINE ZWECKE</u>	
* Üniform Yüklü * Üniform Yüklü Olmayan * Pistonlu veya Karıştırıcı		* Uniformly Loaded or Fed * Not Uniformly fed * Reciprocating Or Shaker		* Uniform geladen * Nicht einheitlich belastet * Mit Kolben oder Mischer	
<u>VİNÇLER</u>		<u>CRANES</u>		<u>KRÄNE</u>	
* Kuru Havuz - Ana Kaldırma vinci - Yardımcı Vinç - Direkli Vinç - Döndürme İş - Çekme İş * Endüstriyel İş - Ana Kaldırma Vinci		* Dry Dock - Main Hoist - Auxiliary Hoist - Boom Hoist - Slewing Drive - Traction Drive * Industrial Duty - Main Hoist		* Trockenbecken - Haupthebkran - Hilfskran - Mastkran - Rotationsarbeit - Zieharbeit * Industrielle - Haupthebwinde	
<u>ASANSÖRLER</u>		<u>ELEVATORS</u>		<u>AUFZÜGE</u>	
* Kova * Santrifuj Boşaltma * Yürüyen Merdiven * Taşıma, Nakliye * Yerçekimi Boşaltım		* Bucket * Centrifugal Discharge * Escalators * Freight * Gravity Discharge		* Eimer * Zentrifugalentladung * Rolltreppe * Abwicklung, Versand * Schwerkraftentladung	
<u>KIRMA MAKİNELERİ</u>		<u>CRUSHER</u>		<u>ZERKLEINERUNGSMASCHINEN</u>	
* Taş ya da Maden		* Stone or Ore		* Stein oder Mine	

TR	UYGULAMA ALANLARI	EN	APPLICATION AREAS	DE	EINSATZBEREICHE
UYGULAMALAR		APPLICATIONS		ANWENDUNGEN	
<u>TARAMA MAKİNELERİ</u>		<u>DREDGES</u>		<u>SIEBMASCHINEN</u>	
* Kablo Bobinleri * Konveyörler * Pompalar * İstifleme Makineleri * Vinçler		* Cable Reels * Conveyors * Pumps * Stackers * Winches		* Kabelspulen * Förderer * Pumpen * Stapelmaschinen * Kräne	
<u>EKSTRUDERLER</u>		<u>EXTRUDERS</u>		<u>EXTRUDER</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		- Allgemeines * Kunststoffe - Antrieb mit variabler Geschwindigkeit - Antrieb mit konstanter Geschwindigkeit * Gummi, Kautschuk - Kontinuierlicher Schraubetrieb - Intermittierende Schrauboperationen	
<u>FANLAR</u>		<u>FANS</u>		<u>LÜFTER</u>	
* Santrifüj * Yüksek Emişli * İndüklenmiş Çekiş * Endüstriyel ve Maden Ocağı		* Centrifugal * Forced Draft * Induced Draft * Industrial and Mine		* Zentrifuge * Starke Saugleistung * Induzierte Traktion * Industrie und Bergbau	
<u>BESLEME ÜNİTELERİ</u>		<u>FEEDERS</u>		<u>FÜTTERUNGSMASCHINEN</u>	
* Palet * Bant * Disk * Pistonlu * Vida		* Apron * Belt * Disc * Reciprocating * Screw		* Palette * Band * Scheibe * Kolben * Schrauben	
<u>GIDA ENDÜSTRİSİ</u>		<u>FOOD INDUSTRY</u>		<u>NAHRUNGSMITTELINDUSTRIE</u>	
* Hububat Fırını * Hamur Karıştırıcı * Kıyma Makinesi * Dilimleyici		* Cereal Cooker * Dough Mixer * Meat Grinder * Slicer		* Getreideofen * Knetmaschine * Fleischwolf * Schneidemaschine	
<u>METAL İŞLEMELERİ</u>		<u>METAL MILLS</u>		<u>METALL VERARBEITUNG</u>	
* Çekme Makinesi Taşıma ve Ana Tahrir * Hammadde İtici * Makaslar * Tel Çekme * Tel Sargı Makinesi * Salgı Tezgahı - Geri Dönmesiz - Tek Tahrir - Grup Tahriki		* Draw Bench Carriage and Main Drive * Slab Pushers * Shears * Wire Drawing * Wire Winding Machine * Runout Table - Non-Reversing - Individual Drives - Group Drives		* Traktionsmaschinen-Förderung und Hauptantrieb * Rohstoffschieber * Schere * Drahtziehen * Drahtwickelmaschine * Sekretbank - Einzelantrieb ohne Rückkehr - Gruppenablage	
<u>DÖNER İŞLEMLER</u>		<u>MILLS (ROTARY TYPE)</u>		<u>DREHARBEITEN</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		* Sphärisch und Stab - Flachringgetriebe - Schrägverzahntes Hohlrad - Direkter Anschluss * Zementofen * Trockner und Kühler	

TR

UYGULAMA ALANLARI

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APPLICATION AREAS

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APPLICATIONS

ANWENDUNGEN

KERESTE ENDÜSTRİSİLUMBER INDUSTRYHOLZINDUSTRIE

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

- * 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

- * Schalenschäler
 - Zuführtrommel
 - Hauptantrieb
- * Förderer
 - Brenner
 - Hauptlast oder Schwerlast
 - Baumstumpf
 - Sägewerk und Förderband
 - Platte
 - Transport
- * Trennsägen
 - Kette
 - Schleppen
- * Entladetrommeln
- * Langes Deck
- * Kloben ziehen und abbiegen
- * Drehvorrichtungen für Baumstüpe
- * Sortiertabelle
- * Transport
 - Kette
 - Kranbahn
- * Tischlaufer

KAĞIT İŞLEMELERİPAPER MILLSPAPIERFÜHRUNG

- * 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

- * 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

- * Rührgerät
- * Mischer für reine Lösungen
- * Peeling Tromels
- * Mechanischer Schäler
- * Schlag - Mahlwerk
- * Richtmaschine
- * Kalandrieren
- * Oberflächenaufrauung
- * Kerbzuführung
- * Beschichtungswalze
- * Förderer
 - Kerbe, Schale, Chemisch
 - Stämme mit dicken Scheiben
- * Schneider
- * Zylinderformen
- * Trockner
 - Papiermaschine
 - Förderertyp
- * Geprägter Presser
- * Extruder
- * Papierrollen
- * Pressen
- * Teigmacher
- * Pumpen

FİLTRELERSCREENSFILTER

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

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

- * Luftwäsche
- * Rotierer - Stein oder Kies
- * Beweglicher Wassereinfluss

TR	UYGULAMA ALANLARI	EN	APPLICATION AREAS	DE	EINSATZBEREICHE
UYGULAMALAR		APPLICATIONS		ANWENDUNGEN	
<u>PLASTİK ENDÜSTRİSİ</u> <u>İLK İŞLEMLER</u>		<u>PLASTIC INDUSTRY</u> <u>PRIMARY PROCESSING</u>		<u>KUNSTSTOFFINDUSTRIE</u> <u>ERSTE AKTIONEN</u>	
* Yoğun İç Karıştırıcılar - Harmanlayıcı - Kesintisiz Karıştırıcı		* Intensive Internal Mixers - Batch Mixers - Continuous Mixers		* Intensive interne Mixer - Mixer - Kontinuierlicher Mischer	
<u>PLASTİK ENDÜSTRİSİ</u> <u>İKİNCİL İŞLEMLER</u>		<u>PLASTIC INDUSTRY</u> <u>SECONDARY PROCESSING</u>		<u>KUNSTSTOFFINDUSTRIE</u> <u>SEKUNDÄRE PROZESSE</u>	
* Hacim Kalıpcıları * Kaplama * Tabaka * Boru * Ön Plastikleştirme * Rot * Saç, Plaka * Borular		* Blow Molders * Coating * Film * Pipe * Pre-Plasticizers * Rods * Sheet * Tubing		* Volumenformer * Glasur * Schicht * Rohr * Vorplastifizieren * Auswuchten * Haare, Platte * Rohre	
<u>POMPALAR</u>		<u>PUMPS</u>		<u>PUMPEN</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		* Zentrifuge * Bewertung * Kolben - Einfachwirkend - 3 oder mehr Zylinder - Doppeltwirkend - 2 oder mehr Zylinder * rotierend - Übertragungsart - Lob - Propeller	
<u>KAUÇUK - LASTİK ENDÜSTRİSİ</u>		<u>RUBBER INDUSTRY</u>		<u>KAUTSCHUK - REIFENINDUSTRIE</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		* Intensive interne Mixer - Mixer - Kontinuierliche Mischer * Mischprozess 2 weiche Rollen 1 oder 2 gerillte Rollen * Stapelverarbeitung - 2 weiche Walzen * Brecher und Heizung - 2 Walzen, 1 Wellwalze * Brecher - 2 Wellwalzen * Halte-, Fütterungs-, Mischprozess - 2 Rollen * Refiner - 2 Walzen * Kalendrieren	
<u>ATIK SU BOŞALTIM EKİPMANLARI</u>		<u>SEWAGE DISPOSAL EQUIPMENT</u>		<u>AUSRÜSTUNG FÜR ABWASSERENTLEERUNG</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		* Stick Sieb * Chemikalienzufuhreinheiten * Wasserablaufsieb * Schaumschneider * Langsame oder schnelle Mixer * Sedimentsammler * Verdickungsmittel * Vakuumfilter	
<u>KOMPAKTÖRLER</u>		<u>COMPACTORS</u>		<u>VERDICHTER</u>	
<u>ÇEKTİRMELER - YAVAŞ VE KUVVETLİ</u>		<u>PULLERS - BARGE HAUL</u>		<u>AUFZIEHVORRICHTUNGEN - LANGSAM UND STARK</u>	

TR

KULLANIM ALANLARI

EN

APPLICATION AREAS

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APPLICATIONS

ANWENDUNGEN

ŞEKER ENDÜSTRİSİSUGAR INDUSTRYZUCKERINDUSTRIE

- * Pancar Dilimleme Aleti
- * Kamış Bıçakları
- * Kırma Makineleri

- * Beet Slicer
- * Cane Knives
- * Crushers

- * Rübenschneider
- * Schilfklingen
- * Zerkleinerungsmaschinen

TEKSTİL ENDÜSTRİSİTEXTILE INDUSTRYTEXTILINDUSTRIE

- * 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 Sarcısı

- * Batcher
- * Calenders
- * Cards
- * Dry Cans
- * Dyeing Machinery
- * Looms
- * Mangle
- * Napper
- * Pads
- * Sialshers
- * Soapers
- * Spinners
- * Tenter Frames
- * Washers
- * Winders

- * Dreschmesser
- * Kalendrieren
- * Vorlagen
- * Trockenkonserven
- * Färbemaschine
- * Webstühle
- * Waschmaschine - Roller
- * Glasur
- * Abfüllmaschine
- * Kalibriemaschine
- * Seilwaschmaschine
- * Spinnmaschine
- * Stretch-Trocknungsmaschinen
- * Waschmaschinen
- * Spuler

DAMPERLİ ARAÇLARCAR DUMPERSDIPPER FAHRZEUGEÇEKİCİ ARAÇLARCAR PULLERSTURMFahrzeugeARITICILARCLARIFIERSREINIGUNGSMASCHINENKONSERVE DOLUM MAKİNELERİCAN FILLING MACHINESDOSENFÜLLMASCHINEN

TR

KULLANILAN TERİMLER

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NOMENCLATURE

DE

BEGRIFFE

REDÜKTÖR TİPİ / GEAR TYPE / GETRIEBETYP

Ayak Montajlı / Foot Mounted / Fußbefestigung

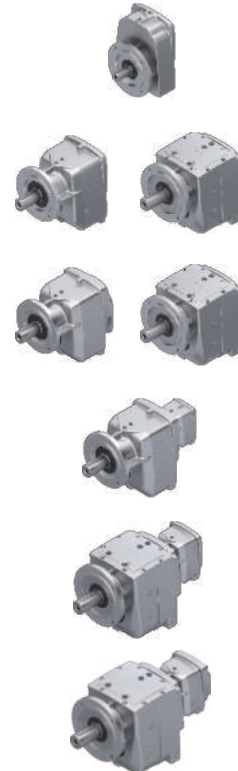
PA 11...PA 51	=	Tek kademeli, Ayak montajlı, Helisel dişlili redüktör Single reduction, Foot mounted, Helical gearboxes Einstufig, Fußbefestigung, Stirnradgetriebe
PA 02...PA 102	=	İki kademeli, Ayak montajlı, Helisel dişlili redüktör Double reduction, Foot mounted, Helical gearboxes Zweistufig, Fußbefestigung, Stirnradgetriebe
PA 03...PA 103	=	Üç kademeli, Ayak montajlı, Helisel dişlili redüktör Triple reduction, Foot mounted, Helical gearboxes Dreistufig, Fußbefestigung, Stirnradgetriebe
PA 02/12...PA 52/12	=	Dört kademeli, Ayak montajlı, Helisel dişlili redüktör Quadruple reduction, Foot mounted, Helical gearboxes Vierstufig, Fußbefestigung, Stirnradgetriebe
PA 63/22...PA 103/52	=	Beş kademeli, Ayak montajlı, Helisel dişlili redüktör Quintuple reduction, Foot mounted, Helical gearboxes fünfstufig, Fußbefestigung, Stirnradgetriebe
PA 63/23...PA 103/53	=	Altı kademeli, Ayak montajlı, Helisel dişlili redüktör Sextuple reduction, Foot mounted, Helical gearboxes Sechsstufig, Fußbefestigung, Stirnradgetriebe



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Flanş Montajlı / Flange Mounted / Flanschbefestigung

PF 11...PF 51	=	Tek kademeli, Flanş montajlı, Helisel dişlili redüktör Single reduction, Flange mounted, Helical gearboxes Einstufiges, flanschbefestigung, Stirnradgetriebe
PF 02...PF 102	=	İki kademeli, Flanş montajlı, Helisel dişlili redüktör Double reduction, Flange mounted, Helical gearboxes Zweistufiges, flanschbefestigung, Stirnradgetriebe
PF 03...PF 103	=	Üç kademeli, Flanş montajlı, Helisel dişlili redüktör Triple reduction, Flange mounted, Helical gearboxes Dreistufiges, flanschbefestigung, Stirnradgetriebe
PF 02/12...PF 52/12	=	Dört kademeli, Flanş montajlı, Helisel dişlili redüktör Quadruple reduction, Flange mounted, Helical gearboxes Vierstufiges, flanschbefestigung, Stirnradgetriebe
PF 63/22...PF 103/52	=	Beş kademeli, Flanş montajlı, Helisel dişlili redüktör Quintuple reduction, Flange mounted, Helical gearboxes Fünfstufiges, flanschbefestigung, Stirnradgetriebe
PF 63/23...PF 103/53	=	Altı kademeli, Flanş montajlı, Helisel dişlili redüktör Sextuple reduction, Flange mounted, Helical gearboxes Sechsstufig, flanschbefestigung, Stirnradgetriebe



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KULLANILAN TERİMLER

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NOMENCLATURE

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BEGRIFFE

Giriş Aksamları Input Options Eingabeoptionen	Motor Motor Motor	Kutup Numarası Number of Poles Anzahl der Pole	Motor Seçenekleri Motor Options Motoroptionen
W = Motorsuz girişli redüktörler için aksam With free input shaft Bei Getrieben mit freier Antriebswelle	Üç fazlı motor Motor boyutu 63 - 315 Three phase motor Motor size 63 - 315 Drehstrommotor Motorgröße 63 - 315	2 = 2 Kutuplu 2 Poles 2 Pole 4 = 4 Kutuplu 4 Poles 4 Pole 6 = 6 Kutuplu 6 Poles 6 Pole 4 - 2 = 1:2 oranında hız değiştirici dahlander bağlantısı Pole changing 1:2 Dahlander connection Geschwindigkeitswechsler DAHLANDER 8 - 2 = 1:4 oranında hız değiştirici ayrılmış sarmal dizilişli Pole changing 1:4 Separate windings Geschwindigkeitswechsler- getrennte spiralförmige Anordnung Diğer kutup kombinasyonları istendiğinde karşılanacaktır Other pole combinations on request Andere Polkombinationen sind auf Anfrage erhältlich	BRE = Frenli With brake Mit Bremse EF = Tek fazlı, fanlı Single phase, Separate fan Einphasig, mit Lüfter ZF = Çift fazlı, fanlı Double phase, Separate fan, Zweiphasig, mit Lüfter DF = Üç fazlı, fanlı Separate fan, three phase Dreiphasig, mit Lüfter IG = Enkoderli With encoder Mit encoder KK/FK = Debriyajlı With clutches Mit Kupplung SR = Toza karşı korumalı fren Brake dust - proof Staubgeschützte Bremse TF = Termistörlü Thermistor Mit Thermistor RG = Korozyon korumalı frenli Brake corrosion protected Mit Korrosionsschutzbremse WU = Yumuşak kalkışlı rotor Soft start rotor Sanftanlaufrotor RLS = Geri dönmeye karşı kilitli Backstop Rücklaufsperre TW = Isıya duyarlı Thermal trip Wärmeempfindliche HL = Manuel frenli motor Brake motor with hand release Motor mit Handbremse F = Extra Fan Auxiliary Fan Fremdlüfter
IEC = DIN 42677'ye göre standart motorlar için aksamlar For assembly with IEC standard motors acc. to DIN 42677 Bei Getrieben mit IEC-Anbau gilt die Normleistung der jeweiligen Baugröße nach DIN 42677,	EExell = Patlamaya karşı güvenliği artırılmış üç fazlı motor Explosion proof three phase motor increased safety Drehstrommotor mit erhöhter Explosionssicherheit		
PAM = DIN 42677'ye göre standart motorlar için aksamlar For assembly with PAM standard motors acc. to DIN 42677 Bei Getrieben mit PAM-Anbau gilt die Normleistung der jeweiligen Baugröße nach DIN 42677,			
T = Turbo kaplin Turbo coupling Turbokupplung			

TR

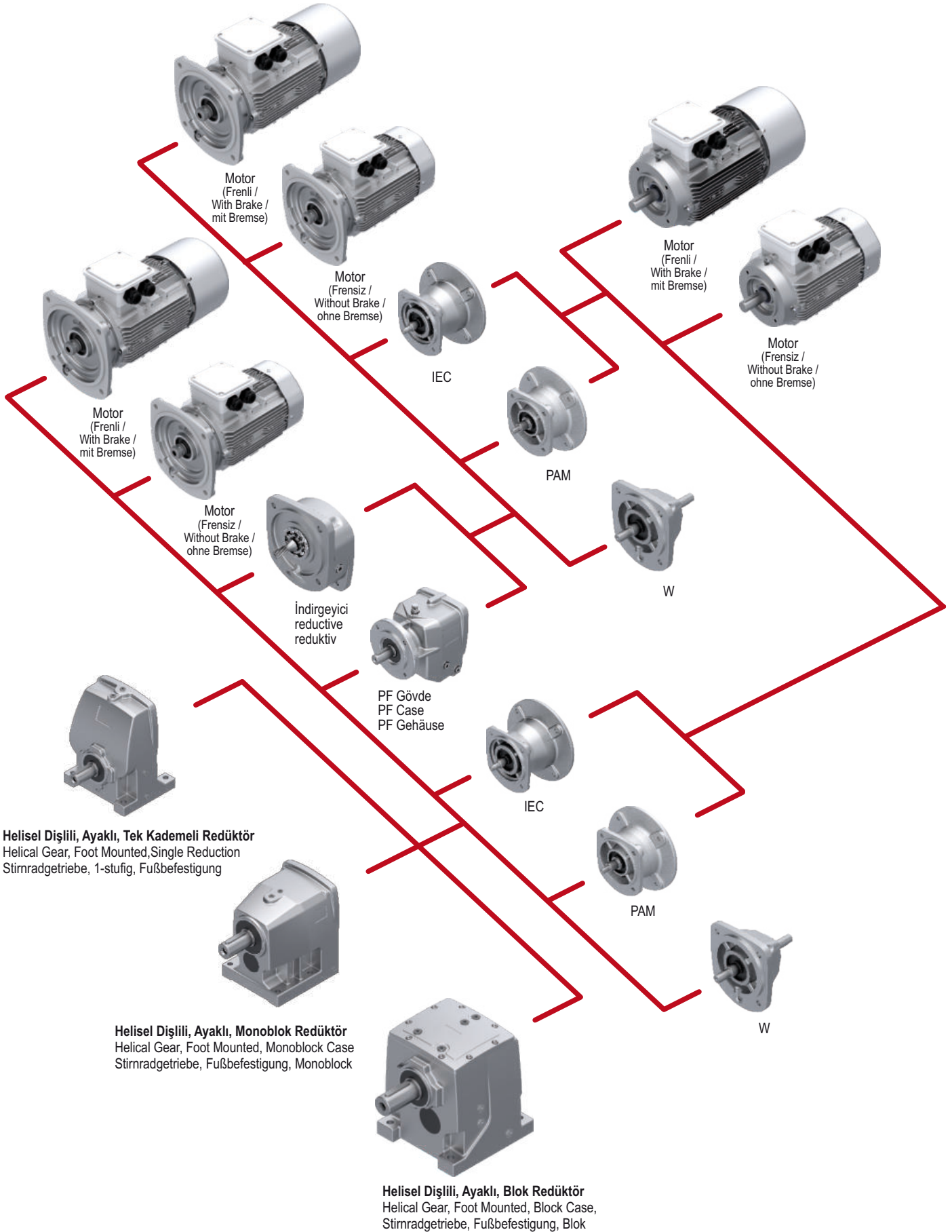
PA MODÜLER SİSTEMİ

EN

MODULAR SYSTEM OF PA

DE

PA MODULARES SYSTEM



TR

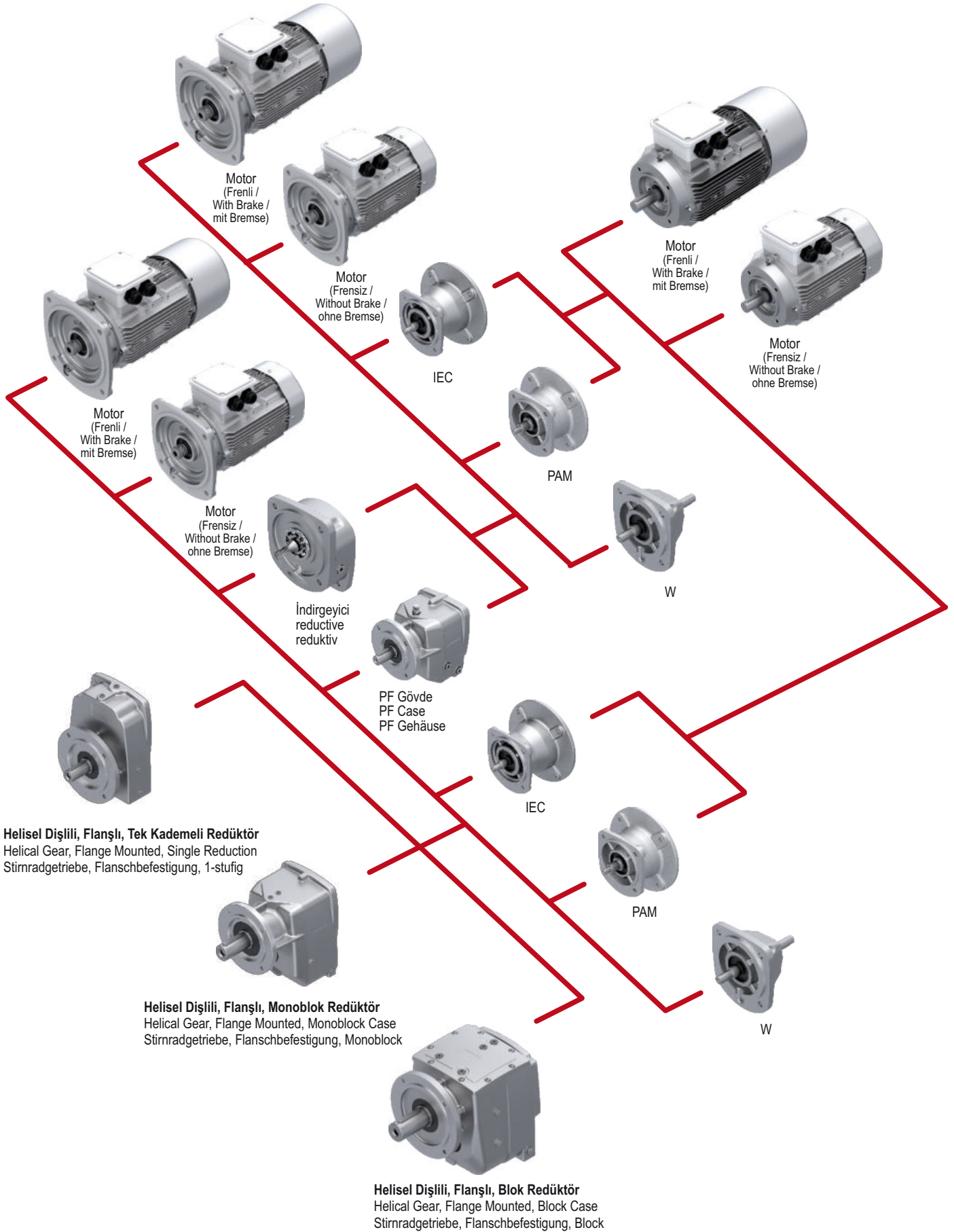
PF MODÜLER SİSTEMİ

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MODULAR SYSTEM OF PF

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PF MODULARES SYSTEM



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ÜRÜNLERİMİZ

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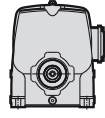
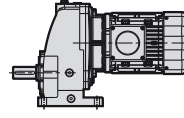
OUR PRODUCTS

DE

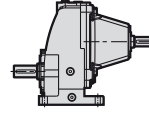
UNSERE PRODUKTE

1) PA 11...PA 51

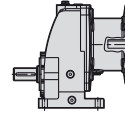
Ayak montajlı, Tek kademeli, Helisel dişlili, Motorlu redüktör
Foot mounted, Single reduction, Helical geared motor,
Fußbefestigung, einstufig, Stirnradgetriebe, Mit Motor

**PA 11...PA 51**

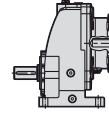
Ayak montajlı, Tek kademeli, Helisel dişlili, W kovanlı redüktör
Foot mounted, Single reduction, Helical gear unit, With W adapter
Fußbefestigung, einstufig, Stirnradgetriebe, Mit W-Adapter

**PA 11...PA 51**

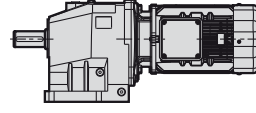
Ayak montajlı, Tek kademeli, Helisel dişlili, IEC adaptörlü redüktör
Foot mounted, Single reduction, Helical gear unit, With IEC adapter
Fußbefestigung, einstufig, Stirnradgetriebe, Mit IEC-adapter

**PA 11...PA 51**

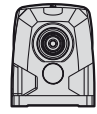
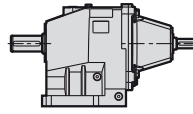
Ayak montajlı, Tek kademeli, Helisel dişlili, PAM adaptörlü redüktör
Foot mounted, Single reduction, Helical gear unit, With PAM adapter
Fußbefestigung, einstufig, Stirnradgetriebe, Mit PAM adapter

**2) PA 02...PA 52**

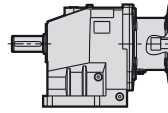
Ayak montajlı, İki kademeli, Helisel dişlili, Motorlu redüktör
Foot mounted, Double reduction, Helical geared motor,
Fußbefestigung, zweistufig, Stirnradgetriebe, Mit Motor

**PA 02...PA 52**

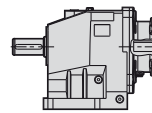
Ayak montajlı, İki kademeli, Helisel dişlili, W kovanlı redüktör
Foot mounted, Double reduction, Helical gear unit, With W adapter
Fußbefestigung, zweistufig, Stirnradgetriebe, Mit W-Adapter

**PA 02...PA 52**

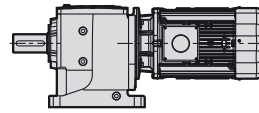
Ayak montajlı, İki kademeli, Helisel dişlili, IEC adaptörlü redüktör
Foot mounted, Double reduction, Helical gear unit, With IEC adapter
Fußbefestigung, zweistufig, Stirnradgetriebe, Mit IEC-adapter

**PA 02...PA 52**

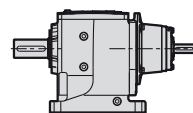
Ayak montajlı, İki kademeli, Helisel dişlili, PAM adaptörlü redüktör
Foot mounted, Double reduction, Helical gear unit, With PAM adapter
Fußbefestigung, zweistufig, Stirnradgetriebe, Mit PAM adapter

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

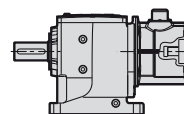
Ayak montajlı, İki kademeli - Üç kademeli, Helisel dişlili, Motorlu redüktör
Foot mounted, Double reduction - Triple reduction, Helical geared motor,
Fußbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit Motor

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

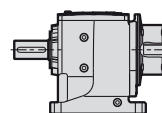
Ayak montajlı, İki kademeli - Üç kademeli, Helisel dişlili, W kovanlı redüktör
Foot mounted, Double reduction - Triple reduction, Helical gear unit, With W adapter
Fußbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit W-Adapter

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

Ayak montajlı, İki kademeli - Üç kademeli, Helisel dişlili, IEC adaptörlü redüktör
Foot mounted, Double reduction - Triple reduction, Helical gear unit, With IEC adapter
Fußbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit IEC-adapter

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

Ayak montajlı, İki kademeli - Üç kademeli, Helisel dişlili, PAM adaptörlü redüktör
Foot mounted, Double reduction - Triple reduction, Helical gear unit, With PAM adapter
Fußbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit PAM adapter



TR

ÜRÜNLERİMİZ

EN

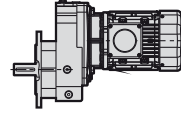
OUR PRODUCTS

DE

UNSERE PRODUKTE

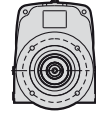
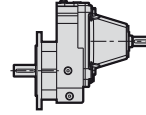
1) PF 11...PF 51

Flanş montajlı, Tek kademeli, Helisel dişlili, Motorlu redüktör
 Flange mounted, Single reduction, Helical geared motor
 Flanschbefestigung, einstufig, Stirnradgetriebe, Mit Motor



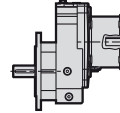
PF 11...PF 51

Flanş montajlı, Tek kademeli, Helisel dişlili, W kovanlı redüktör
 Flange mounted, Single reduction, Helical gear unit, With W adapter
 Flanschbefestigung, einstufig, Stirnradgetriebe, Mit W-Adapter



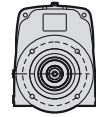
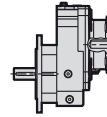
PF 11...PF 51

Flanş montajlı, Tek kademeli, Helisel dişlili, IEC adaptörlü redüktör
 Flange mounted, Single reduction, Helical gear unit, With IEC adapter
 Flanschbefestigung, einstufig, Stirnradgetriebe, Mit IEC-adapter



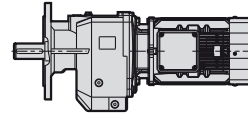
PF 11...PF 51

Flanş montajlı, Tek kademeli, Helisel dişlili, PAM adaptörlü redüktör
 Flange mounted, Single reduction, Helical gear unit, With PAM adapter
 Flanschbefestigung, einstufig, Stirnradgetriebe, Mit PAM adapter



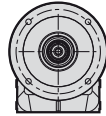
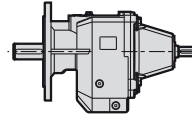
2) PF 02...PF 52

Flanş montajlı, İki kademeli, Helisel dişlili, Motorlu redüktör
 Flange mounted, Double reduction, Helical geared motor,
 Flanschbefestigung, zweistufig, Stirnradgetriebe, Mit Motor



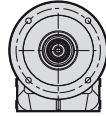
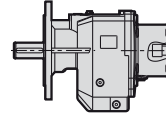
PF 02...PF 52

Flanş montajlı, İki kademeli, Helisel dişlili, W kovanlı redüktör
 Flange mounted, Double reduction, Helical gear unit, With W adapter
 Flanschbefestigung, zweistufig, Stirnradgetriebe, Mit W-Adapter



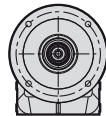
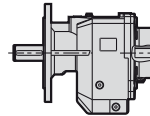
PF 02...PF 52

Flanş montajlı, İki kademeli, Helisel dişlili, IEC adaptörlü redüktör
 Flange mounted, Double reduction, Helical gear unit, With IEC adapter
 Flanschbefestigung, zweistufig, Stirnradgetriebe, Mit IEC-adapter



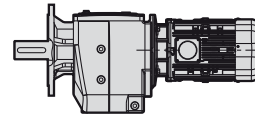
PF 02...PF 52

Flanş montajlı, İki kademeli, Helisel dişlili, PAM adaptörlü redüktör
 Flange mounted, Double reduction, Helical gear unit, With PAM adapter
 Flanschbefestigung, zweistufig, Stirnradgetriebe, Mit PAM adapter



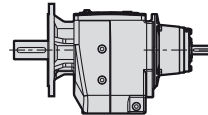
3) PF 62...102 - PA 63...103

Flanş montajlı, İki kademeli - Üç kademeli, Helisel dişlili, Motorlu redüktör
 Flange mounted, Double reduction - Triple reduction, Helical geared motor
 Flanschbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit Motor



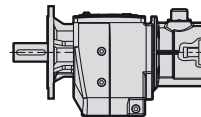
PF 62...102 - PA 63...103

Flanş montajlı, İki kademeli - Üç kademeli, Helisel dişlili, W kovanlı redüktör
 Flange mounted, Double reduction - Triple reduction, Helical gear unit, With W adapter
 Flanschbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit W-Adapter



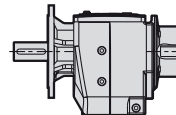
PF 62...102 - PA 63...103

Flanş montajlı, İki kademeli - Üç kademeli, Helisel dişlili, IEC adaptörlü redüktör
 Flange mounted, Double reduction - Triple reduction, Helical gear unit, With IEC adapter
 Flanschbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit IEC-adapter



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

Flanş montajlı, İki kademeli - Üç kademeli, Helisel dişlili, PAM adaptörlü redüktör
 Flange mounted, Double reduction - Triple reduction, Helical gear unit, With PAM adapter
 Flanschbefestigung, zweistufig - dreistufig, Stirnradgetriebe, Mit PAM adapter



TR REDÜKTÖR SEÇİM FORMU

1- REDÜKTÖR

Kullanılacak Sektör:

Uygulama Yeri:

Günlük Çalışma Saati:

<4 [] 4-8 [] 8-16 [] >16 []

Saatteki Dur-Kalk Sayısı:

0-50 [] 50-100 [] 100-200 [] 200-300 []
300-500 [] 500-700 [] 700-1000 [] >1000 []

Giriş Seçeneği: Motorlu [] Motorsuz []

Talep Edilen Motor Gücü:kW

Talep Edilen Motor Devri:d/dak

Talep Edilen Çıkış Devri:d/dak

2 - GİRİŞ - ÇIKIŞ

Tahrik Tipi:

AC Motor [] AC Motor + Invertör [] Servo Motor []
Hidro Motor [] Serbest Giriş Mili [] Diğer []

Motor Bağlantı Flanşı (Elektirik Motorlu ise):

Akuple [] IEC B5 [] PAM B5 []
PAM B14 [] NEMA []

Giriş Mili Özelliği (Serbest Giriş Milli ise):

Kamalı [] Diğer:

Giriş Mili Tahrik Tipi (Serbest Giriş Milli ise):

Elastik Kaplin [] Hidrolik Kaplin [] Küçük Hızlarda Zincir Dişli [] Düz Dişli []
Triger Kayış [] V Kayış [] Gergirme Makaralı Kayış []

Giriş Mili Yük Durumu (Serbest Giriş Milli ise):

Radyal yük.....N
Eksenel Yük.....N / Çeki [] Bası []

Çıkış Mili Özelliği (Serbest Giriş Milli ise):

Mil Çıkışlı [] Delik Milli [] Konik Sıkırma Şaftlı []
Diğer:

Çıkış Mili Tahrik Tipi:

Direkt [] Elastik Kaplin [] Hidrolik Kaplin [] Küçük Hızlarda Zincir Dişli []
Düz Dişli [] Triger Kayış [] V Kayış [] Gerdirm Makaralı Kayış []

Çıkış Mili Yük Durumu :

Radyal yük.....N
Eksenel Yük.....N / Çeki [] Bası []

3 - MONTAJ

Montaj Pozisyonu:

M1 [] M2 [] M3 [] M4 [] M5 [] M6 []

Kilit Durumu:

Var [] Yok []

Deniz Seviyesinden Yükseklik:

0-1000 [] 1000-2000 [] 2000-3000 [] 3000-4000 [] 4000-5000 []

Ortam Durumu:

Açık (1,25 m/sn) [] Kapalı (4 m/sn) []

Ortam Şartları:

Normal [] Tozlu [] Nemli [] Kuru []

Diğer:

Ortam Sıcaklığı:°C

4 - MOTOR

Elektiriksel Değer:

Voltaj:V

Frekans:Hz

Koruma Sınıfı:

IP55 [] IP65 [] Exproof []

Diğer IP:

Terminal Kutusu Yönü:

1 [] 2 [] 3 [] 4 []

Termistör:

Var [] Yok []

Fren Durumu:

Var [] Yok []

Atex:

2G [] 2D [] Yok []

Diğer:

Diğer Notlar:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Lütfen doğru redüktör seçimi yapabilmek için gerekli bilgileri doldurunuz!

EN GEARBOX SELECTION FORM
1- GEAR UNIT

Sector for which will be used:

Application area:

Daily working hour: :

<4 [] 4-8 [] 8-16 [] >16 []

Revolution per hours:

 0-50 [] 50-100 [] 100-200 [] 200-300 []
 300-500 [] 500-700 [] 700-1000 [] >1000 []

Input option: With motor [] Without motor []

Requested Motor Power:kW

 Requested Motor Rotation:min⁻¹

 Requested Output Rotation:min⁻¹
2 - INPUT - OUTPUT

Drive type:

 AC Motor [] AC Motor + Invertor [] Servo Motor []
 Hydromotor [] Free Input Shaft [] Other []

Motor Connection Flange (With Electric Motor):

 Direct [] IEC B5 [] PAM B5 []
 PAM B14 [] NEMA []

Property of Input Shaft (with free input shaft):

With Key [] Other:

Driving type of Input Shaft(with free input shaft):

 Elastic Coupling [] Hydraulic Coupling [] For Chain Drive With Low Speed []
 For Spur Gear [] For Trigger Belt [] For V belt [] Flat Belt With Spanning Pulley []

Input Shaft Load case (with free input shaft):

 Radial Load.....N
 Axial Load.....N / Draw [] Impression []

Property of Output Shaft (with free input shaft):

 Solid Shaft [] Hollow shaft [] Shaft for Shrink Disc []
 Other:

Output Shaft Drive type:

 Direct [] Elastic Coupling [] Hydraulic Coupling [] Chain Drive With Low Speed []
 Spur Gear [] Trigger Belt [] V Belt [] Flat Belt With Spanning Pulley []

Output Shaft Load case:

 Radial Load.....N
 Axial Load.....N / Draw [] Impression []

3 - MOUNTING

Mounting Position:

M1 [] M2 [] M3 [] M4 [] M5 [] M6 []

Backstop Situation:

Yes [] No []

Altitude above sea level:

0-1000 [] 1000-2000 [] 2000-3000 [] 3000-4000 [] 4000-5000 []

Ambient Situation:

Open (1,25 m/sn) [] Close (4 m/sn) []

Ambient Conditions:

 Normal [] Dusty [] Humid [] Dry []
 Other:

Ambient Temperature :°C

4 - MOTOR

Electrical Value:

 Voltage.....V
 Frequency.....Hz

Protection Class :

 IP55 [] IP65 [] Exproof []
 Other IP:

Terminal Box Position:

1 [] 2 [] 3 [] 4 []

Thermistor :

Yes [] No []

Brake Situation:

Yes [] No []

Atex:

 2G [] 2D [] Yok []
 Other:

Other Notes:

Please give required informations for selecting correct reducer!

DE FORMULAR FÜR GETRIEBEAUSWAHL

1- GETRIEBE

Sektor :

Anwendungsbereich:

Betriebsstunden/Tag:

<4 [] 4-8 [] 8-16 [] >16 []

Anlauf pro Stunde:

0-50 [] 50-100 [] 100-200 [] 200-300 []
300-500 [] 500-700 [] 700-1000 [] >1000 []

Antriebsoption: mit Motor [] ohne Motor []

Geforderte Motorleistung:kW

Angeforderte Motordrehzahl:min⁻¹

Angeforderter Abtriebsdrehzahl:min⁻¹

2 - ANTRIEB - ABTRIEB

Antriebstyp:

Wechselstrommotor [] Wechselstrommotor + Wechselrichter [] Servomotor []
Hydromotor [] Freie Antriebswelle [] Sonstiges []

Motoranschlussflansch (bei Elektromotor):

Gekoppelt [] IEC B5 [] PAM B5 []
PAM B14 [] NEMA []

Antriebswelleneigenschaft (bei freier Antriebswelle):

mit Passfeder [] Sonstiges:

Antriebsart der Antriebswelle (bei freier Antriebswelle):

Elastische Kupplung [] Hydraulische Kupplung [] Kettenrad bei kleinen Drehzahlen []
Stirnrad [] Zahnriemen [] Keilriemen [] Spannrollenriemen []

Belastungsart der Antriebswelle (bei freier Antriebswelle):

Radiale BelastungN
Axiale BelastungN / Zug [] Druck []

Abtriebswelleneigenschaft (bei freier Antriebswelle):

Vollwelle [] Hohlwelle [] Welle mit Schrumpfscheibe []
Sonstiges:

Antriebsart der Abtriebswelle:

Direkt [] Elastische Kupplung [] Hydraulische Kupplung [] Stirnrad [] Keilriemen []
Kettenrad bei kleinen Drehzahlen [] Zahnriemen [] Spannrollenriemen []

Belastungsart der Abtriebswelle:

Radiale BelastungN
Axiale BelastungN / Zug [] Druck []

3 - MONTAGE

Einbaulage:

M1 [] M2 [] M3 [] M4 [] M5 [] M6 []

Rücklaufsperre:

Ja [] Nein []

Höhe über dem Meeresspiegel:

0-1000 [] 1000-2000 [] 2000-3000 [] 3000-4000 [] 4000-5000 []

Umgebungsbedingungen:

Ein (1,25 m/sn) [] Aus (4 m/sn) []

Umweltbedingungen:

Normal [] staubig [] feucht [] trocken []
Sonstiges:

Umgebungstemperatur:°C

4 - MOTOR

Elektrischer Wert:

StromspannungV
FrequenzHz

Schutzklasse:

IP55 [] IP65 [] Ex-geschützt []
Andere IP:

Ausrichtung des Klemmenkastens:

1 [] 2 [] 3 [] 4 []

Thermistor:

Ja [] Nein []

Bremse:

Ja [] Nein []

Atex:

2G [] 2D [] Nein []
Sonstiges:

Andere Notizen:

.....
.....
.....
.....
.....
.....
.....
.....

Bitte geben Sie die notwendigen Informationen an, um das richtige Getriebe auswählen zu können!

TR

SİPARİŞ ÖRNEĞİ

EN

EXAMPLE FOR ORDERING

DE

BEISPIEL BESTELLBESCHREIBUNG

PA - PF

103 / 52

244.66

-

PAM 132 - B5

132M / 4 BRE



IEC

 56
63
71
80
90
100
112
132
160
180
200
225
250
280
315


PAM B5

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

157 - 220



PAM B14

 63
71
80
90
100
112
132


W

 122
172
213
288
397


AKUPLE



MOTOR

**Motor Gövde
Büyükülüğü**
 Case Width
 Kistenweite

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

Kutup Sayısı
 Number of Poles
 Anzahl der Pole

 2
4
6
2 - 4
2 - 8

**Diğer Kutup
kombinasyonları
istendiğinde
karşılancaktır.**

 Other pole
combinations
on request
Sonstige
Polkombinationen
auf Wunsch

Motor Aksesuarları
 Motor Accessories
 Motorzubehör

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

23 - 24

İges: Tahvil Oranı
 İges: Reduction Ratio
 İges: Verkleinerungsfaktor
 55 - 156

10
Gövde Büyükülüğü
 Case Width
 Kistenweite

 0
1
2
3
4
5
6
7
8
9
10

157 - 220

3
Kademe
 Reduction
 Übersetzungstufen

 1
2
3

PF GÖVDE
 PF CASE
 PF GEHÄUSE

5
Gövde Büyükülüğü
 Case Width
 Kistenweite

 0
1
2
3
4
5

157 - 220

2
Kademe
 Reduction
 Übersetzungstufen

 2
3

Tip: PA (Ayaklı Redüktör / Foot Mounted Gear Unit / Fußbefestigung)
 PF (Flanşlı Redüktör / Flange Mounted Gear Unit / Flanschbefestigung)

TR

MONTAJ POZİSYONLARI

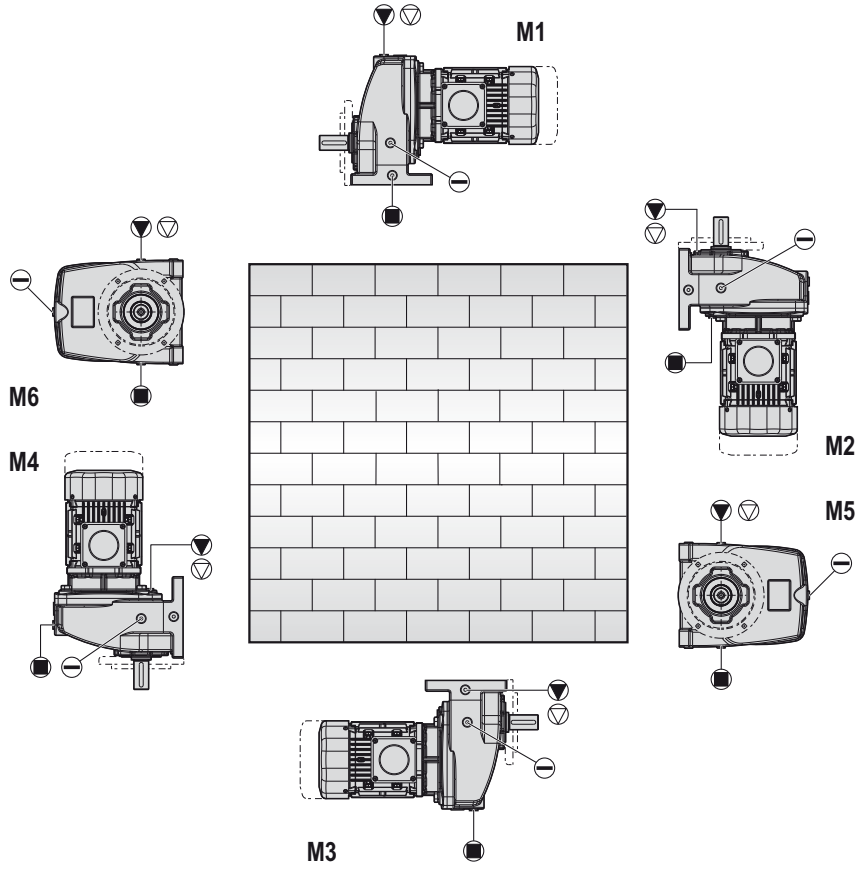
EN

MOUNTING POSITIONS

DE

MONTAGEPOSITIONEN

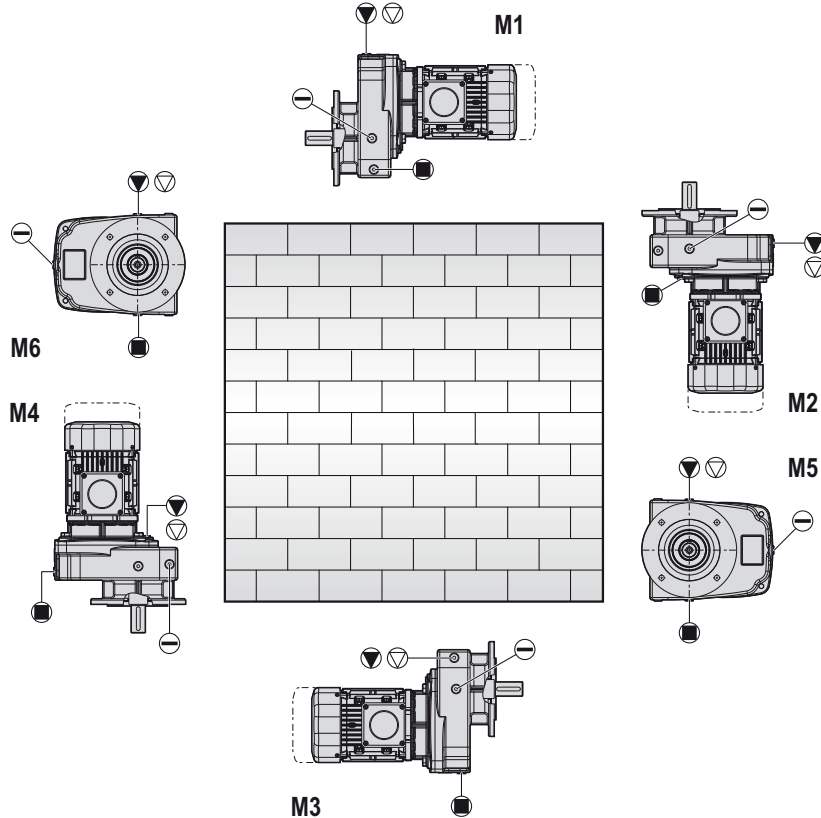
AYAK MONTAJLI
FOOT MOUNTED
FUBBEFESTIGUNG



PA

PA 11
PA 21
PA 31
PA 41
PA 51

FLANŞ MONTAJLI
FLANGE MOUNTED
FLANSCHBEFESTIGUNG



PF

PF 11
PF 21
PF 31
PF 41
PF 51



Havalandırma tapası /
Vent plug / Entlüftung



Doldurma tapası /
Filling plug / Einfüllstopfen



Yağ Seviye tapası /
Oil level / Ölstand



Boşaltma tapası /
Drain plug / Ölablass

TR

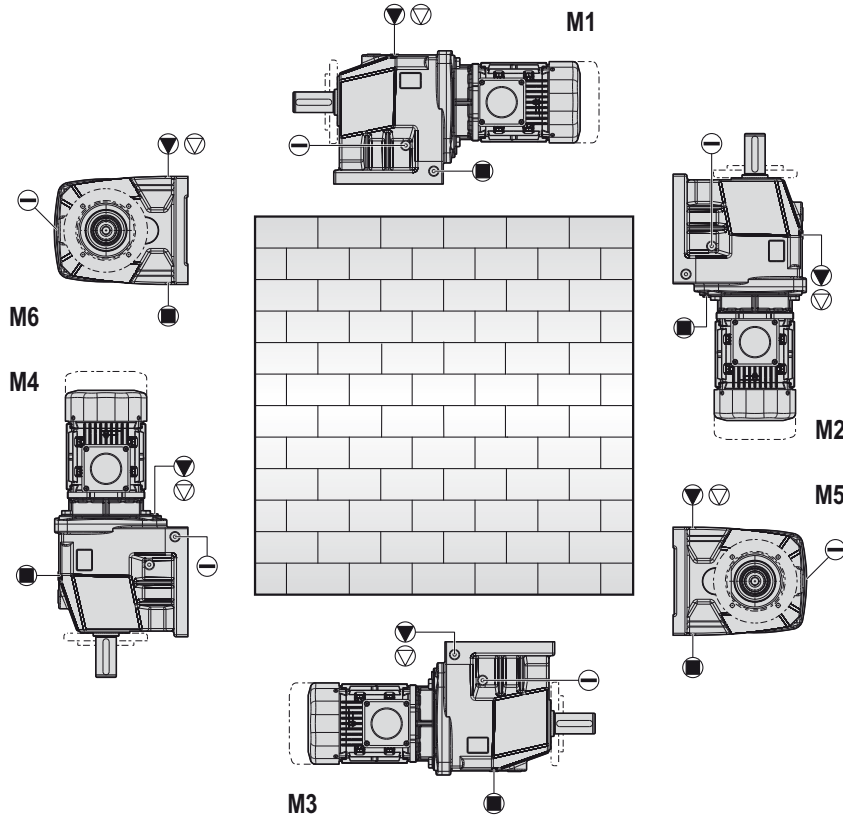
MONTAJ POZİSYONLARI

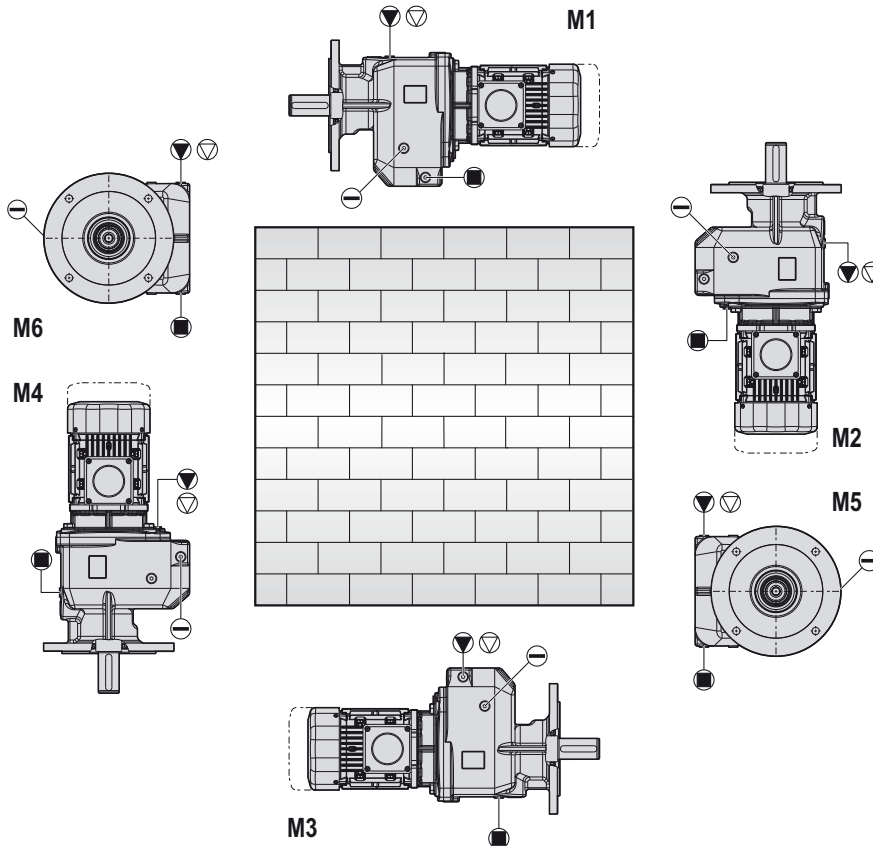
EN

MOUNTING POSITIONS

DE

MONTAGEPOSITIONEN

AYAK MONTAJLI
 FOOT MOUNTED
 FUBBEFESTIGUNG

 PA 02
 PA 12
 PA 22
 PA 32
 PA 42
 PA 52

FLANŞ MONTAJLI
 FLANGE MOUNTED
 FLANSCHBEFESTIGUNG

 PF 02
 PF 12
 PF 22
 PF 32
 PF 42
 PF 52

 ▽ Havalandırma tapası /
 Vent plug / Entlüftung

 ▽ Doldurma tapası /
 Filling plug / Einfüllstopfen

 ○ Yağ Seviye tapası /
 Oil level / Ölstand

 ● Boşaltma tapası /
 Drain plug / Ölablass

TR

MONTAJ POZİSYONLARI

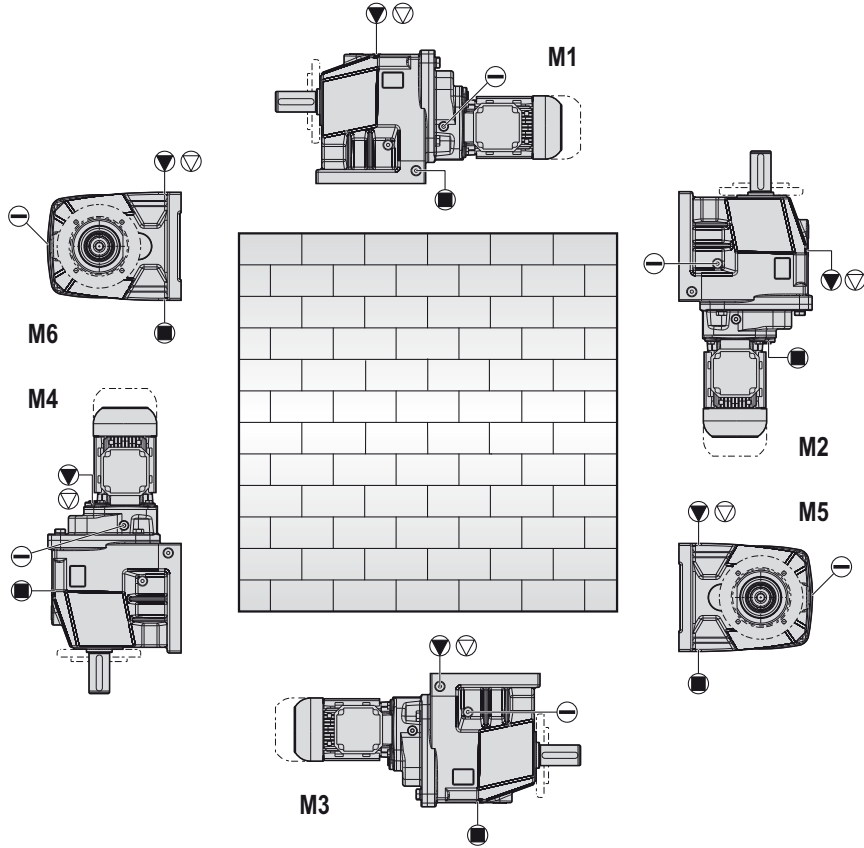
EN

MOUNTING POSITIONS

DE

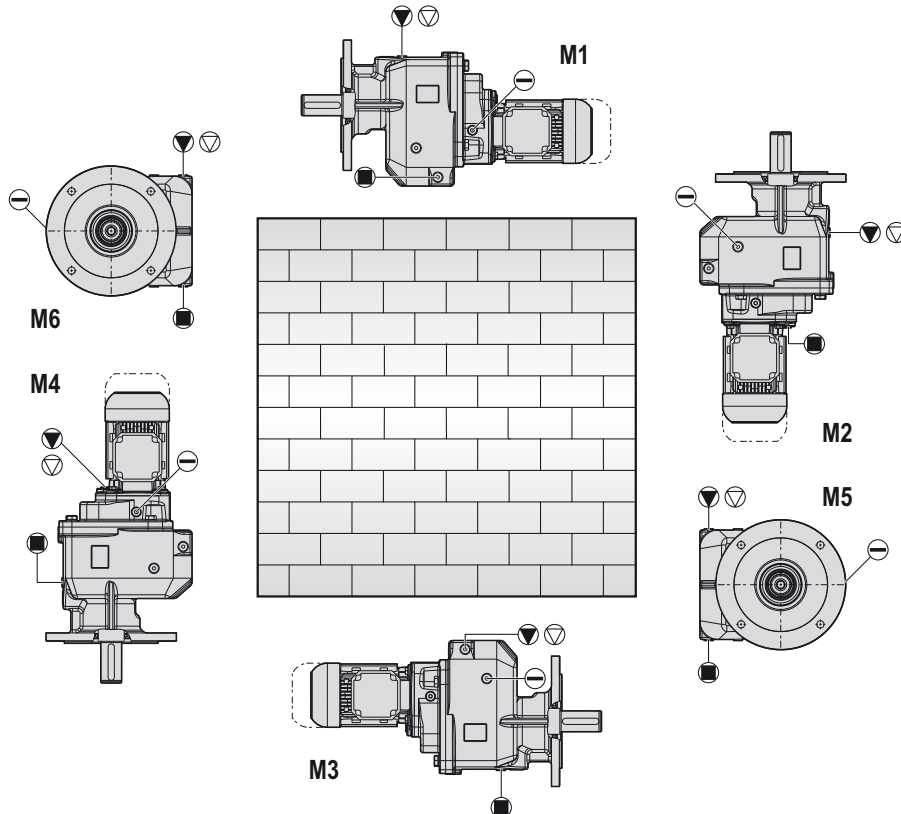
MONTAGEPOSITIONEN

AYAK MONTAJLI
FOOT MOUNTED
FUBBEFESTIGUNG



PA 03
PA 13
PA 23
PA 33
PA 43
PA 53

FLANŞ MONTAJLI
FLANGE MOUNTED
FLANSCHBEFESTIGUNG



PF 03
PF 13
PF 23
PF 33
PF 43
PF 53



Havalandırma tapası /
Vent plug / Entlüftung



Doldurma tapası /
Filling plug / Einfüllstopfen



Yağ Seviye tapası /
Oil level / Ölstand



Boşaltma tapası /
Drain plug / Ölablass

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS

DE

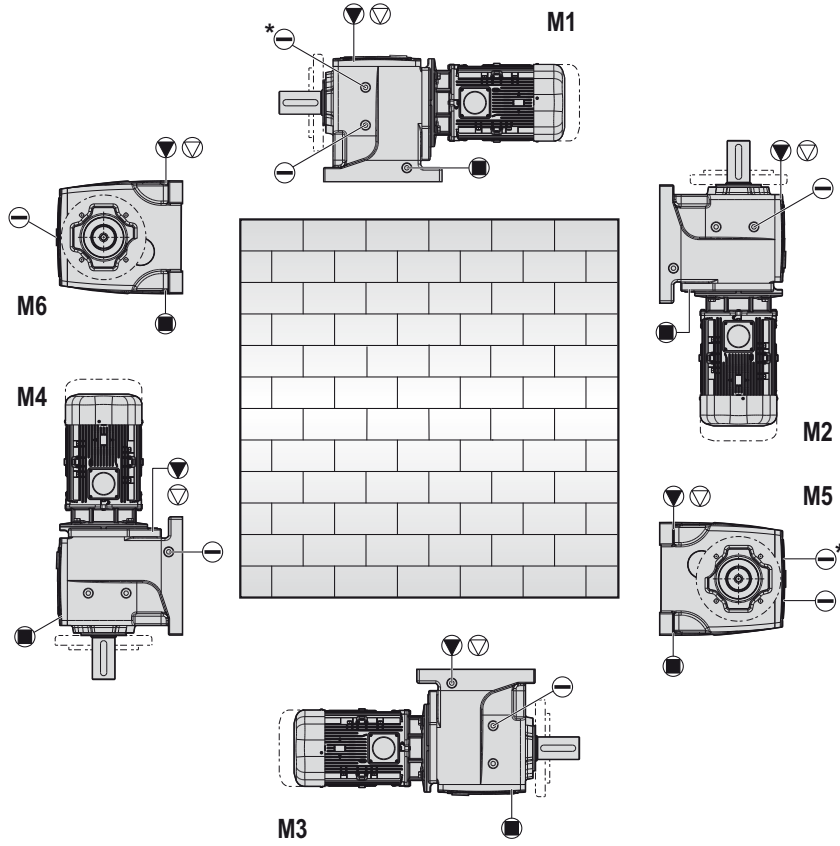
MONTAGEPOSITIONEN

AYAK MONTAJLI
FOOT MOUNTED
FUBBEFESTIGUNG

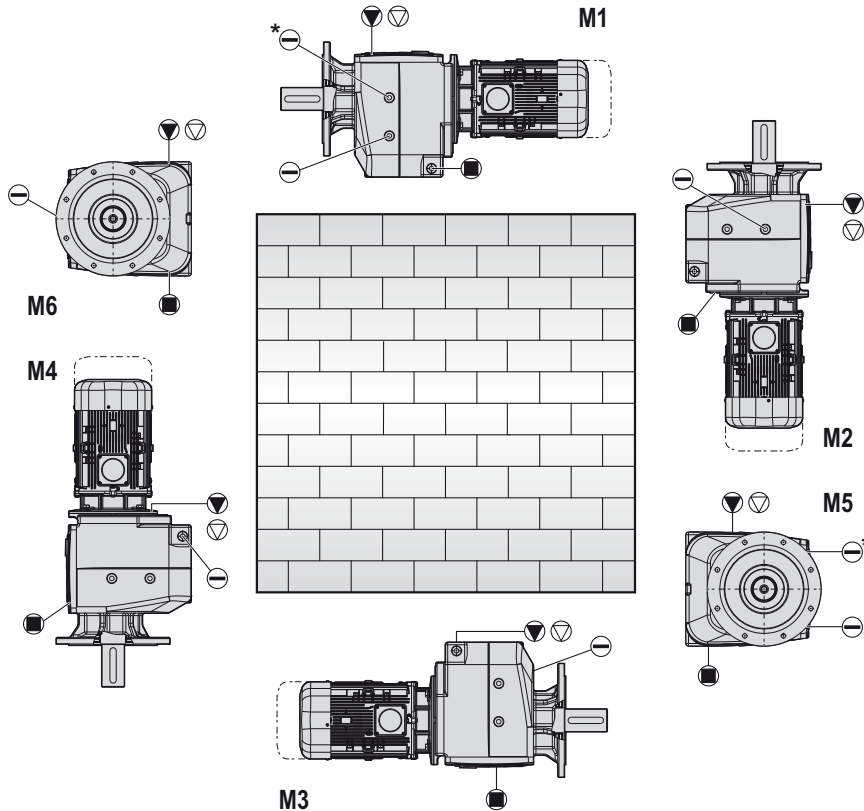
*İşareti PA / PF 63...103' e kadar olan redüktörler için yağ seviye tapası kullanım yerini gösterir.

*Sign shows that position of oil level plug for gear units which are from PA / PF 63 to PA / PF 103.

Das *- Zeichen kennzeichnet den Einsatzort der Ölstandsschraube für Getriebe zwischen PA/PF 63...103.



PA 62
 * PA 63
 PA 72
 * PA 73
 PA 82
 * PA 83
 PA 92
 * PA 93
 PA 102
 * PA 103

FLANŞ MONTAJLI
FLANGE MOUNTED
FLANSCHBEFESTIGUNG


PF 62
 * PF 63
 PF 72
 * PF 73
 PF 82
 * PF 83
 PF 92
 * PF 93
 PF 102
 * PF 103

△ Havalandırma tapası /
Vent plug / Entlüftung

● Doldurma tapası /
Filling plug / Einfüllstopfen

— Yağ Seviye tapası /
Oil level / Ölstand

⊗ Boşaltma tapası /
Drain plug / Ölablass

TR

MONTAJ POZİSYONLARI

EN

MOUNTING POSITIONS

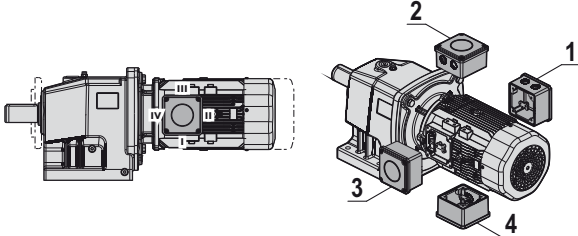
DE

MONTAGEPOSITIONEN

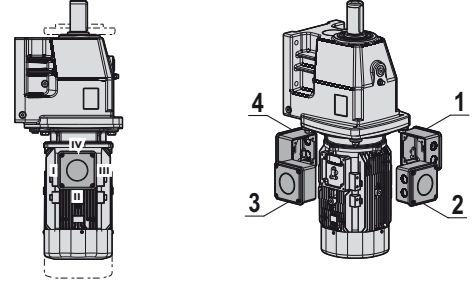
PA

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

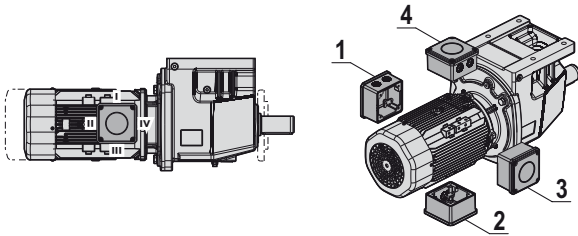
M1



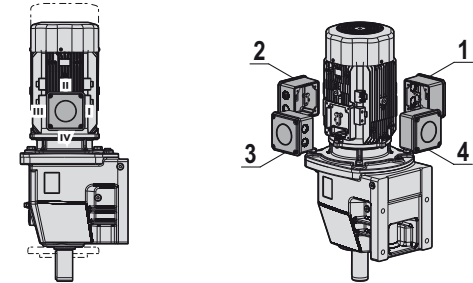
M2



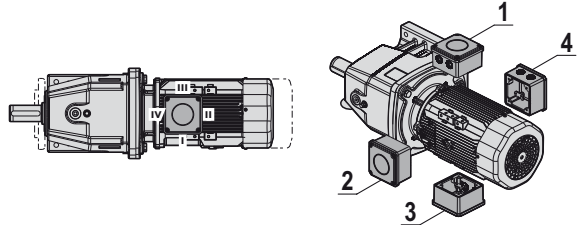
M3



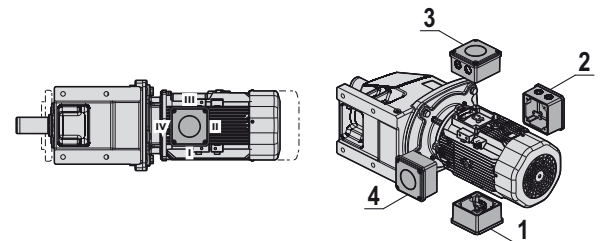
M4



M5



M6



* 1 - 2 - 3 - 4 : Terminal kutusu yönlerini gösterir.

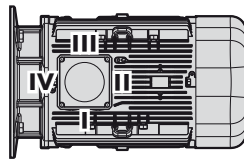
* I - II - III - IV: Kablo giriş yönlerini gösterir.

* 1 - 2 - 3 - 4 : Shows terminal box position

* I - II - III - IV: Shows cable entry position

* 1 - 2 - 3 - 4 : Zeigt die Position des Klemmkastens an

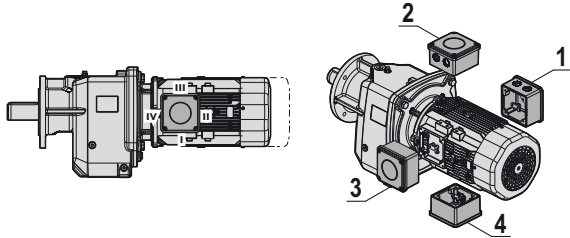
* I - II - III - IV: Zeigt die kabeleinführungsposition an



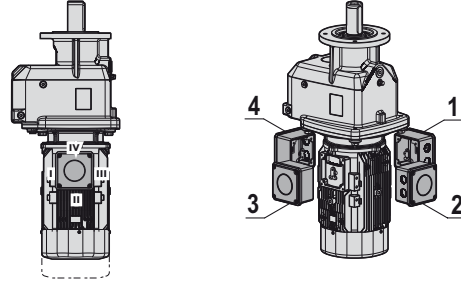
PF

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

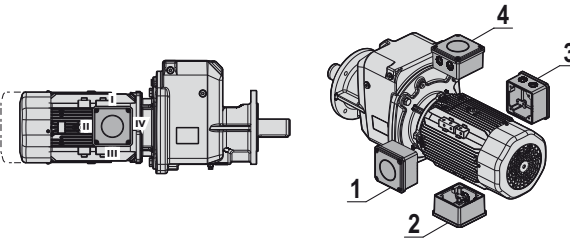
M1



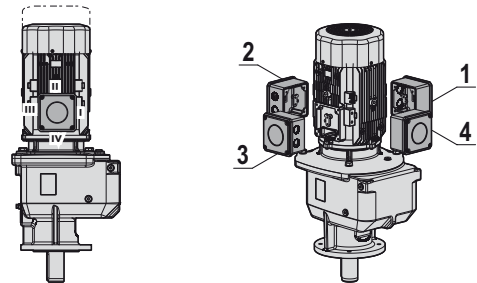
M2



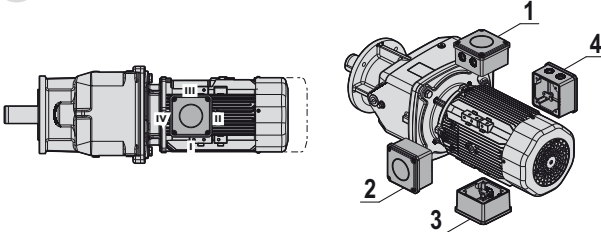
M3



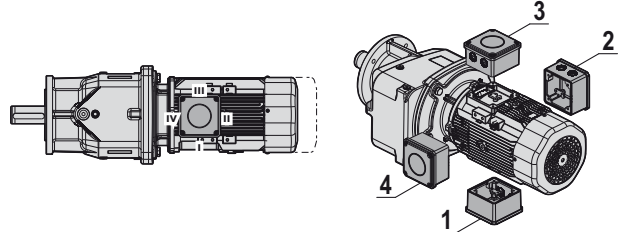
M4



M5



M6



* 1 - 2 - 3 - 4 : Terminal kutusu yönlerini gösterir.

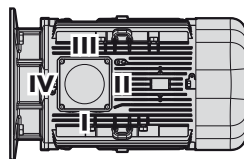
* I - II - III - IV: Kablo giriş yönlerini gösterir.

* 1 - 2 - 3 - 4 : Shows terminal box position

* I - II - III - IV: Shows cable entry position

* 1 - 2 - 3 - 4 : Zeigt die Position des Klemmkastens an

* I - II - III - IV: Zeigt die kabeleinführungsposition an



TR

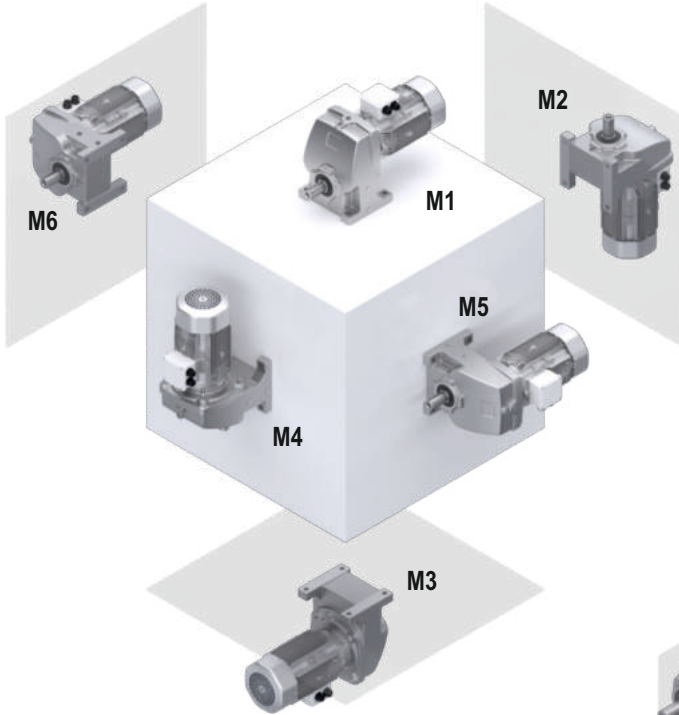
PA MONTAJ POZİSYONLARI

EN

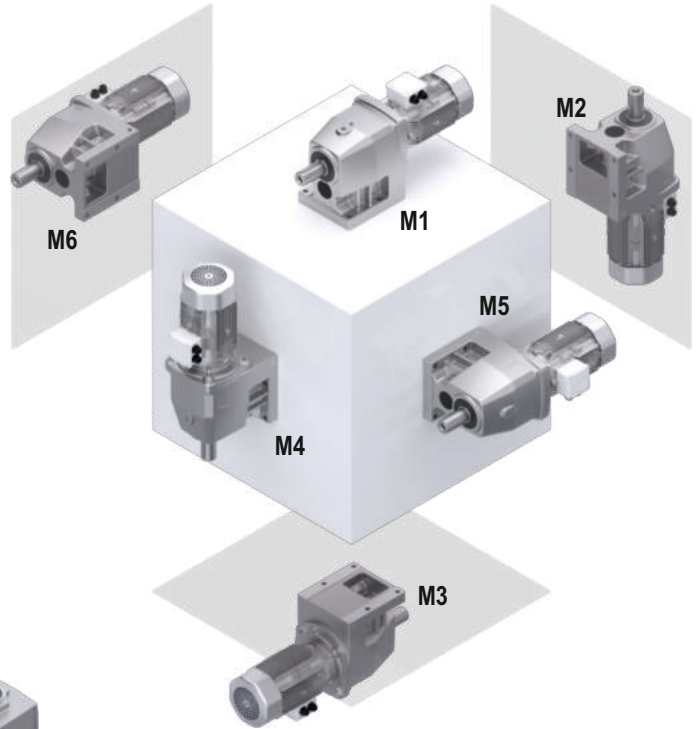
PA MOUNTING POSITIONS

DE

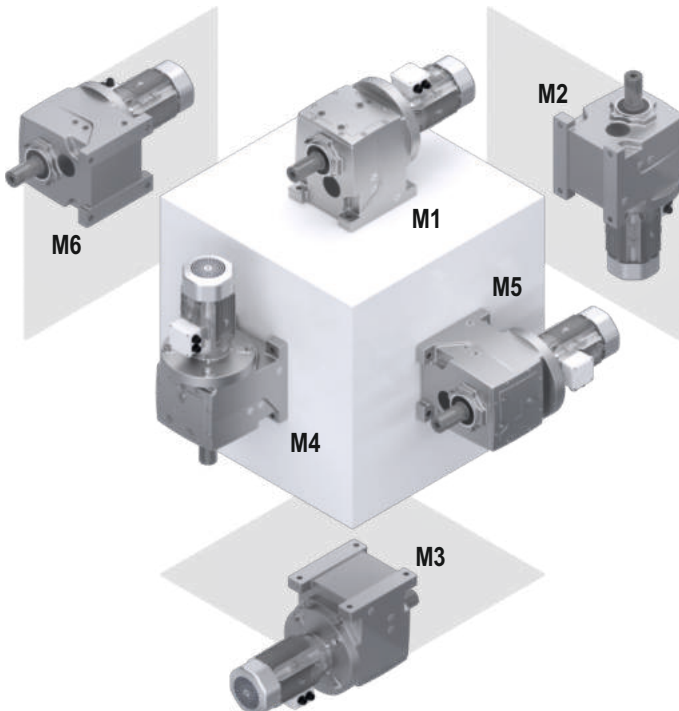
PA MONTAGEPOSITIONEN



PA TEK KADEME
PA SINGLE REDUCTION
PA 1-STUFİG



**PA İKİ VE ÜÇ KADEME
(MONOBLOK)**
PA DOUBLE AND TRIPLE
REDUCTION (MONOBLOCK)
PA 2- UND 3-STUFİG (MONOBLOCK)



**PA İKİ VE ÜÇ KADEME
(BLOK)**
PA DOUBLE AND TRIPLE
REDUCTION (BLOC)
PA 2- UND 3-STUFİG (BLOCK)

TR

PF MONTAJ POZİSYONLARI

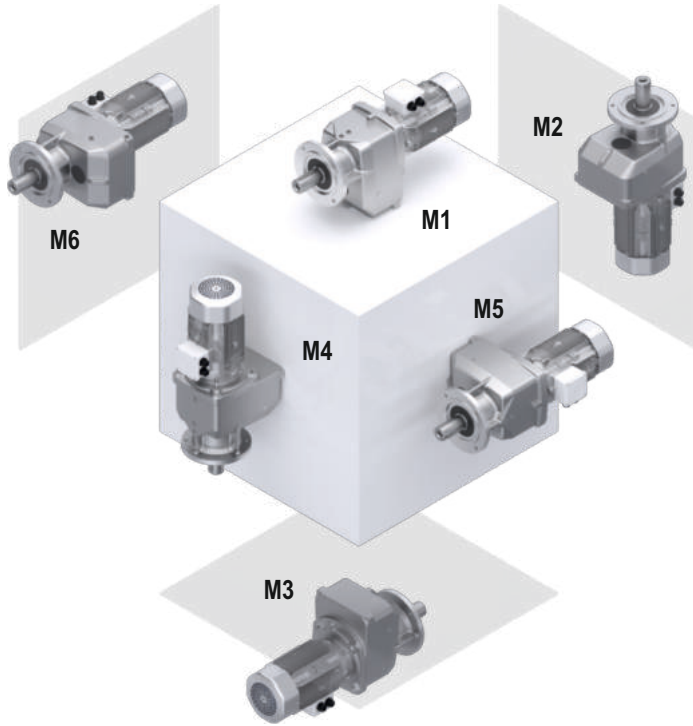
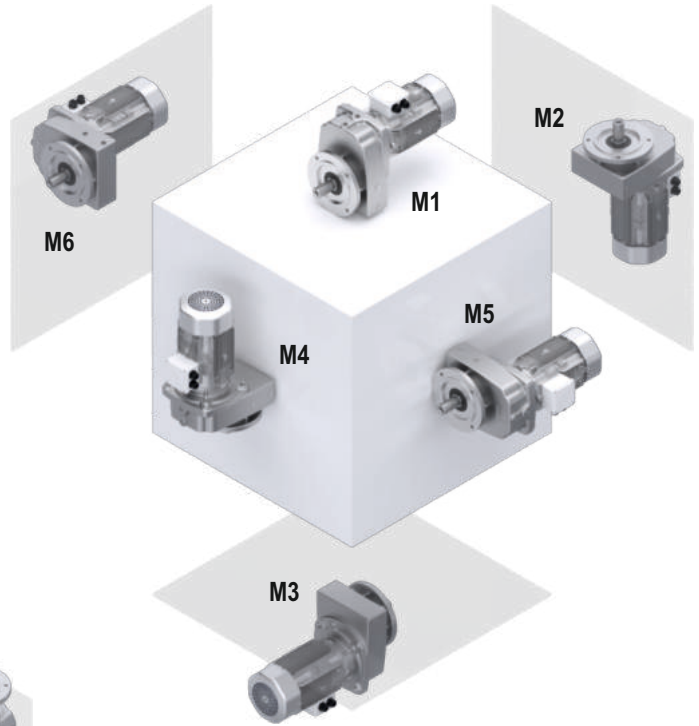
EN

PF MOUNTING POSITIONS

DE

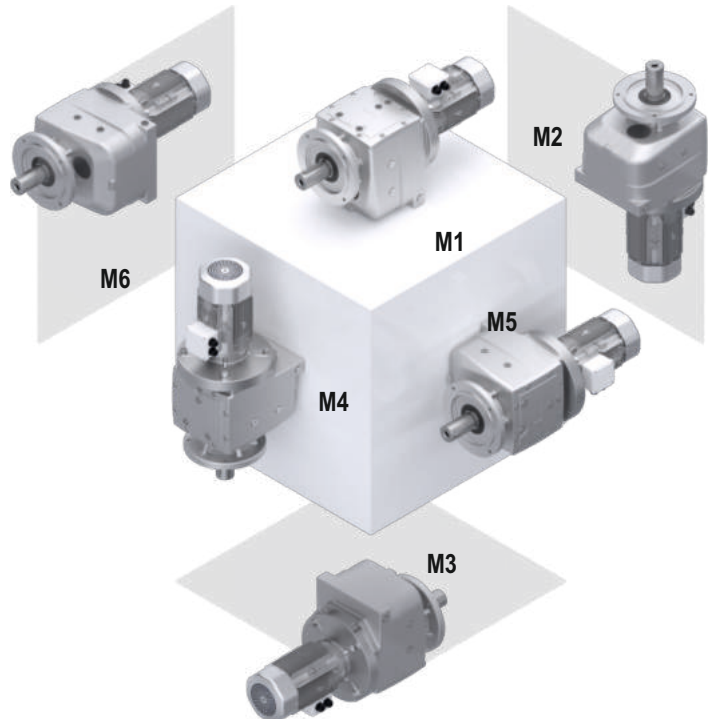
PF MONTAGEPOSITIONEN

PF TEK KADEME
PF SINGLE REDUCTION
PF 1-STUFİG



PF İKİ VE ÜÇ KADEME
(MONOBLOK)
PF DOUBLE AND TRIPLE
REDUCTION (MONOBLOCK)
PF 2- UND 3-STUFİG (MONOBLOCK)

PF İKİ VE ÜÇ KADEME
(BLOK)
PF DOUBLE AND TRIPLE
REDUCTION (BLOCK)
PF 2- UND 3-STUFİG (BLOCK)



Redüktör içerisindeki yağın basıncının artması yağ sızıntılarına neden olabilmektedir. Bunu önlemek için çalıştırılmadan ya da uzun süreli depolama yapılmadan önce havalandırma tapasının kapağı sökülmelidir.

Montaj aşamasında redüktörlerimiz en uygun mineral yağ ile yağlama prosesini en iyi yapacak şekilde doldurur ve sevkiyatta bu şekilde gönderilir. Yapılan bu ilk doldurma, aşağıdaki tablodan uygun ortam sıcaklığına karşılık gelen (normal tasarım) uygun yağlayıcı ile yapılır. Bunlar dışındaki ortam sıcaklıkları için uygun yağlayıcılar ek bir ücret karşılığında tarafımızca temin edilebilir.

Redüktöre doldurulan yağlayıcı (mineral yağ) her 10000 saat çalışma süresi ya da 2 yıl içinde değiştirilmelidir. Eğer sentetik yağlayıcı kullanılır ise bu süreler 2 katına çıkarılabilir. Yani her 20000 saat veya 4 yılda bir değişim sağlanabilir. Çalışma süresi saat cinsinden belirtilen süreye gelmiş ise yağ değişimi için çalışma yılının dolması beklenmez. Yağ değişiminin daha sık aralıklarla yapılması tavsiye edilir. Bu gibi durumlarda yağ değişiminin yanı sıra kapsamlı bir temizlik de yapılmalıdır.

Yağ değişimi sonrasında özellikle ilk dolumdan sonra ilk seviyesi gösterge tapası esnasında yağ seviyesinde azalmalar gözlemlenebilir. Bu azalma tolerans dahilinde öngörülen bir azalmadır.

Müşterinin açık talebi üzerine ek bir ücret karşılığında yağ seviyesi gösterge tapası kullanarak müşterinin yağ seviyesini gözlemlemesi ve yaklaşık olarak seviye düzeltmesini yapmasını tavsiye ederiz. İki saatlik bir operasyonel çalışmanın ardından redüktör stabil bir hale gelir ve yağ seviyesi gösterge tapasından gerekli kontrol yapılır ve gerekli yağ seviye düzeltmesi yapılabilir.

Redüktör normal olarak mineral yağ ile dolu olarak gelmektedir. Extra ücretlendirme ile sentetik yağ talep edilebilir.

-30°C nin altında ve 60°C nin üzerindeki ortam sıcaklıkları için şaft üzerinde kullanılan tüm sızdırmazlık elemanları özel kalite malzeme olmalıdır.

If the pressure of oil within reducer increases, there may be leakage. To prevent this, before working or storage for a long time, the cover of ventilation plug should be removed.

At montage step, reducers are fulling with more suitable mineral oil and this oil makes lubrication process the best. Products are sent to shipment in this way. This initial filling is done with suitable lubricant corresponding to the appropriate ambient temperature (normal design) from the table below. Lubricants which are suitable for temperatures other than these ambient temperatures can be supplied by us with an additional cost.

The lubricant (mineral oil) which is filled to the reducer should be changed every 1000 hours of operation or at most two years period. If synthetic oil is used, these times could be twice. That is, it can be replaced every 2000 hours of operation or 4 years period. If the working time has reached the specified time in hours, it is not necessary to wait finish working year. It is advised that you should change lubricant more frequently. In this case, addition to lubrication change, you should clean it comprehensively. After changing lubrication, especially for first time, you can see decrease at lubrication level. This decrease is in our tolerance.

If our customer has request from us for oil level plug, we can deliver it with additional costs. We advice to customer that they should check oil level by oil level plug, and correct oil level. After operational working 2 hours, the reducer will be stable and cool. In this time period, you can check oil level from the window of oil level plug and correct oil level.

Normally, reducer will come with mineral oil but, with extra price, you can obtain synthetic oil.

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

Vor Inbetriebnahme und längerem Lagern ist der Verschleiß der Entlüftungsschraube zu entfernen, um einen Überdruck im Getriebe und eine damit verbundene mögliche Undichtigkeit zu vermeiden.

Getriebe sind bei der Auslieferung, betriebsfertig mit geeignetem Mineralöl befüllt. Die Erstbefüllung erfolgt mit geeignetem Schmierstoff entsprechend der geeigneten Umgebungstemperatur (Normalausführung) aus der folgenden Tabelle. Für andere Umgebungstemperaturen sind die entsprechenden Schmierstoffe gegen Mehrpreis erhältlich. Bei Befüllung mit Mineralöl sollte ein Schmierstoffwechsel alle 10.000 Betriebsstunden oder nach zwei Jahren durchgeführt werden. Bei synthetischem Öl verdoppeln sich diese Laufzeiten. Ein Wechsel kann somit alle 20.000 Stunden oder 4 Jahre durchgeführt werden. Wenn die Betriebszeit die angegebene Zeit in Stunden erreicht hat, ist das Betriebsjahr für den Ölwechsel nicht abzuwarten. Kürzere Intervalle für den Ölwechsel werden empfohlen. Es ist empfehlenswert, den Schmierstoffwechsel mit gründlicher Reinigung des Getriebes zu verbinden. Nach einem Schmierstoffwechsel und insbesondere nach der Erstfüllung kann sich der Ölstand in den ersten Betriebsstunden geringfügig ändern, da sich Ölkanäle und Hohlräume erst im Betrieb langsam füllen. Der Ölstand liegt dann immer noch in der zulässigen Toleranz.

Falls auf ausdrücklichen Kundenwunsch gegen Mehrpreis ein Ölschauglas eingebaut wird, empfehlen wir kundenseitig den Ölstand zu beobachten und diesen ungefähr zu korrigieren. Nach zwei Stunden Betriebszeit stabilisiert sich das Getriebe und kühlt ab. Während dieser Zeit erfolgt die notwendige Kontrolle über das Ölschauglas und die notwendige Ölstandskorrektur kann vorgenommen werden. Die Normalbefüllung der Getriebe ist Mineralöl. Synthetisches Öl ist gegen Mehrpreis lieferbar.

Bei Umgebungstemperaturen unterhalb -30°C und oberhalb 60°C sind alle an der Welle verwendeten Dichtelemente in besonderer Werkstoffqualität einzusetzen.

Not: Sentetik ve mineral yağlayıcılar birbirine karıştırılmamalıdır.

Note: It is important that different kinds of oil (synthetic and mineral oil) should not be mixed.

Bemerkung: Synthetische und mineralische Schmierstoffe dürfen nicht gemischt werden.

Redüktör Tipi Type of gearbox Getriebetyp	Yağ Tipi Type of Lubricant Schmierstoffsorte	Ortam Sıcaklığı / Ambient Temp. °C / Umgebungstemperatur	ISO vizkozite sınıfı viscosity class Viskositätsklasse	SHELL	MOBİL	BP	ESSO	DEA	ARAL	CASTROL	TRIBOL	KLÜBER
Helisel Dişli Redüktör Helical Gearboxes Stirrad- getriebe	Mineral yağ Mineral oil Mineralöl	- 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
		-15...25	ISO VG 100	Shell omala Oel 100	Mobilgear 600 XP 150	Energol GR-XP 100	Spartan EP 100	Deagear DX SAE 80W Falcon CLP 150	Degol BG 100	Alpha SP 100 Alpha MW 100 Alpha MAX 220	Tribol 1100/100	Klüberoil GEM 1-100
		# - 50...-15	ISO VG 15	Shell Tellus Oel T 15	Mobil DTE 10 Excell 15	Bartran HV 15	Univis J 13	Alkraft Hydraulic Oil 15	Vitamol 1010	Hyspin SP 15 Hyspin ZZ 15	Tribol 770	Isoflex MT 30 rot
	Sentetik yağ Synthetic oil Synthetisches Öl	- 25...80	ISO VG 220	Shell Tivela Oel WB	Mobil Glygoyle 30	Enersyn SG-XP 220	ESSO Glycolube 220	Polydea PGLP 220	Degol GS 220	Alphasyn PG 220	Tribol 800/220	Klübersynth GH 6 - 220
	Biyojolojik Sentetik yağ Biodegradable oil Biologisches Synthetisches Öl	- 25...80	ISO VG 220					Plantogear 220 S	Bio-Degol S 220	Carelube GES 220	Tribol Bio Top1418/220	Klüber - Bio GM 2 - 220
	Gıda yağları Food - grade oil Lebensmitteloile	- 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 Fließendes synthetisches Fett	- 35...60		Shell Tivela compound A	Mobil SHC Polyrex 005	Enersyn GSF	Fliessfett S 420	Glissando 6833 EP 00	Aralub SKA 00	Alpha Gel 00	Tribol 800/1000	Klübersynth GE 46 -1200
Rulmanlar Bearings Lager	Mineral yağlı gres Mineral oil grease Mineralölfett	- 30...60 Normal # 50...110		Alvania Fett R 3 oder Alvania Fett RL 3	Mobilux 3 Mobilux 2	Energrease LS 3 Energrease LS 2	Beacon 3 Beacon 2	Glissando 30 Glissando 20 Glissando FT 3	Aralub HL 3 Aralub HL 2 Aralub BAB EP 2	Spheerol AP 3 Spheerol AP 2 LZV - EP Spheerol EPL 2	Tribol 3030/100-2 Tribol 4020/220-2 Tribol 3785	Centoplex 3 Centoplex 2
	Sentetik gres Synthetic grease synthetisches Fett	# - 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

AYAK MONTAJLI / FOOT MOUNTED / FUßBEFESTIGUNG

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PA 11	0.25	0.50	0.55	0.40	0.40	0.40
	PA 21	0.60	1.20	1.20	1.00	1.00	1.00
	PA 31	1.00	1.80	2.20	2.00	1.60	1.60
	PA 41	1.30	2.60	3.10	2.50	2.60	2.60
	PA 51	2.00	3.50	4.40	4.00	3.40	3.40

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PA 02	0.15	0.60	0.75	0.60	0.45	0.45
	PA 12	0.25	0.75	0.85	0.75	0.50	0.50
	PA 22	0.50	1.80	2.00	1.80	1.35	1.35
	PA 32	0.90	3.00	2.90	2.90	2.00	2.00
	PA 42	1.20	4.50	4.20	4.30	3.20	3.20
	PA 52	2.50	7.20	6.80	6.80	5.10	5.10

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PA 62	6.50	15.00	13.00	18.00	13.00	13.00
	PA 72	9.00	23.00	18.00	26.50	18.00	18.00
	PA 82	14.00	35.00	27.00	40.00	28.00	28.00
	PA 92	25.00	73.00	47.00	74.00	50.00	50.00
	PA 102	36.00	79.00	66.00	102.00	71.00	71.00

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PA 03	0.50	1.10	0.85	1.05	0.60	0.60
	PA 13	0.70	1.30	1.10	1.20	0.70	0.70
	PA 23	1.40	2.40	1.90	2.40	1.40	1.40
	PA 33	1.60	2.90	2.90	3.70	2.00	2.00
	PA 43	3.00	5.60	4.40	5.70	3.20	3.20
	PA 53	4.50	8.70	6.80	9.20	5.00	5.00

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PA 63	13.00	14.50	13.50	17.00	13.00	13.00
	PA 73	19.00	20.00	19.00	25.00	19.20	19.20
	PA 83	27.00	31.00	29.00	37.00	30.50	30.50
	PA 93	51.50	56.00	51.00	72.00	53.50	53.50
	PA 103	69.00	71.00	69.00	92.50	67.00	67.00

TR

YAĞ MİKTAR TABLOSU

EN

LUBRICATION LEVELS

DE

SCHMIERSTOFFTABELLE

FLANŞ MONTAJLI / FLANGE MOUNTED / FLANSCHBEFESTIGUNG

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PF 11	0.25	0.50	0.45	0.30	0.35	0.35
	PF 21	0.50	1.30	1.20	0.80	1.00	1.00
	PF 31	0.80	1.60	1.65	1.30	1.20	1.20
	PF 41	1.00	2.60	2.80	1.90	2.40	2.40
	PF 51	1.80	3.50	3.90	3.30	3.40	3.40

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PF 02	0.25	0.65	0.70	0.70	0.50	0.50
	PF 12	0.35	0.85	0.90	0.90	0.60	0.60
	PF 22	0.70	2.00	2.00	2.15	1.55	1.55
	PF 32	1.30	3.50	3.00	3.10	2.15	2.15
	PF 42	1.80	5.00	4.00	4.50	3.20	3.20
	PF 52	3.00	7.70	6.20	7.40	5.10	5.10

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PF 62	7.00	15.00	14.00	18.70	13.50	13.50
	PF 72	10.00	23.00	20.50	31.00	21.00	21.00
	PF 82	15.00	37.00	30.00	45.50	30.00	30.00
	PF 92	26.00	73.00	48.00	76.00	50.00	50.00
	PF 102	40.00	81.00	66.00	104.00	72.00	72.00

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PF 03	0.50	1.10	0.90	1.10	0.65	0.65
	PF 13	0.85	1.40	1.10	1.35	0.80	0.80
	PF 23	1.80	2.90	2.10	2.90	1.50	1.50
	PF 33	1.90	3.40	2.90	4.00	2.20	2.20
	PF 43	3.50	6.10	4.20	6.10	3.00	3.00
	PF 53	5.20	8.80	6.50	9.20	5.00	5.00

Yağ Miktarı - Litre (L) / Amount of oil - Liter (L) / Ölmenge - Liter (L)

	Tip / Type Typ	M1	M2	M3	M4	M5	M6
	PF 63	13.50	14.70	14.00	18.00	14.00	14.00
	PF 73	21.50	22.50	22.00	29.00	22.00	22.00
	PF 83	31.00	34.00	32.50	40.00	34.00	34.00
	PF 93	53.00	70.00	53.00	74.00	54.50	54.50
	PF 103	69.00	78.00	78.00	99.00	67.00	67.00

TR

KİLİT

Opsiyonel olarak redüktörlerimize kilit sistemi koymaktayız. Kilit sistemimiz yalnızca tek bir dönüş yönüne müsaade vermektedir (saat yönü ya da saatin tersi yönü). Aksi yönde dönüş, kilit sistemi tarafından engellenmektedir.

Üç fazlı motor gövde büyüklüğü 80 ve üzeri AC motorlar ve W (serbest giriş mili) kovanları yağlaması yapılmış kilit sistemi ile donatılabilir.

Kilit sistemi istenildiğinde çıkartılabilir. Kilit sistemi merkezkaç kuvveti tarafından kontrol edilir ve dönüş hızı $n1 > 900$ dev/dk ise aşınmaz çalışır.

Dikkat: Sistemi devreye almadan önce motorun ve redüktörün dönüş yönleri kontrol edilmelidir. Redüktör üzerindeki oklar size dönüş yönünü gösterecektir.

CW : Saat yönü

CCW : Saat yönü tersi

EN

BACKSTOP

Our reducers includes backstop system optionally. Backstop system permits only one direction of rotation (clockwise or counterclockwise). Opposite direction of rotation is prevented by backstop system.

Motors which are three phase and case dimensions upper than 80 and free input shafts can be used with lubricated backstop systems.

You can remove backstop system when you want. Backstop system is controlled by centrifugal force and works without corrosion if the rotation speed upper than 900 min^{-1} .

Caution: Before starting, the direction of rotation of the gear unit and motor must be checked to avoid the risk of a breakage.

CW : Clockwise

CCW : Counterclockwise

DE

RÜCKLAUFSPERRE

Optional bieten wir für unsere Getriebe Rücklaufsperran. Rücklaufsperran ermöglichen den Lauf in nur eine Drehrichtung (im Uhrzeigersinn oder gegen den Uhrzeigersinn). Drehung in die entgegengesetzte Richtung wird durch die Rücklaufsperran verhindert.

Drehstrommotoren ab Baugröße 80, Wechselstrommotoren und W-Adapter (freie Antriebswelle) können mit geschmierten Rücklaufsperran ausgestattet werden.

Die Rücklaufsperran kann auf Wunsch entfernt werden. Die Rücklaufsperran ist fliehkraftgesteuert und läuft bei einer Drehzahl $n1 > 900 \text{ U/min}$ mit Ölung verschleißfrei.

Achtung: Vor Inbetriebnahme der Anlage die Drehrichtung des Motors und des Getriebes prüfen. Pfeile auf dem Getriebe zeigen die Drehrichtung an.

CW: Im Uhrzeigersinn

CCW: Gegen den Uhrzeigersinn

PA

CCW



PF

CCW



TR

TOLERANSLAR

MOTOR VE REDÜKTÖRLERDE BOYUT - ÇİZİM BİLGİLERİ

Motor ölçüleri istenen opsiyona göre değişebilir.

DELİK MİLLİLER

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

IEC - ADAPTÖR

Flanş merkezi çap toleransı için ISO H7

GİRİŞ VE ÇIKIŞ ŞAFTLARI

Mil çapı toleransı (DIN 748) :

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

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

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



157 - 220

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

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 heavys 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



157 - 220

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

DE

TOLERANZEN

ABMESSUNGEN - ZEICHNUNGSMITTEILUNGEN MOTOR UND GETRIEBE

Die Abmessungen des Motors können je nach gewünschter Option geändert werden.

HOHLWELLEN

Toleranz der Hohlwellen-Durchmesser (DIN 748) nach ISO H7.
Toleranz der kundenseitigen Welle nach ISO h6,
bei Lastgrad "H" nach ISO k6

IEC - ADAPTER

Toleranz der Flanschzentrierung nach ISO H7

EIN- UND AUSGANGSWELLE

Toleranz der Wellen-Durchmesser (DIN 748):

Ø 14 bis Ø 50 mm= ISO k6
> Ø 50 mm= ISO m6

Gewindebohrungen nach DIN 332/2

= 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



157 - 220

Paßfedern nach DIN 6885
Achshöhe "h" nach DIN 747

FLANSCH

Toleranz der Flanschzentrierung (DIN 42948) ;
≤ Ø 230 mm nach ISO j6
> Ø 230 mm nach ISO h6

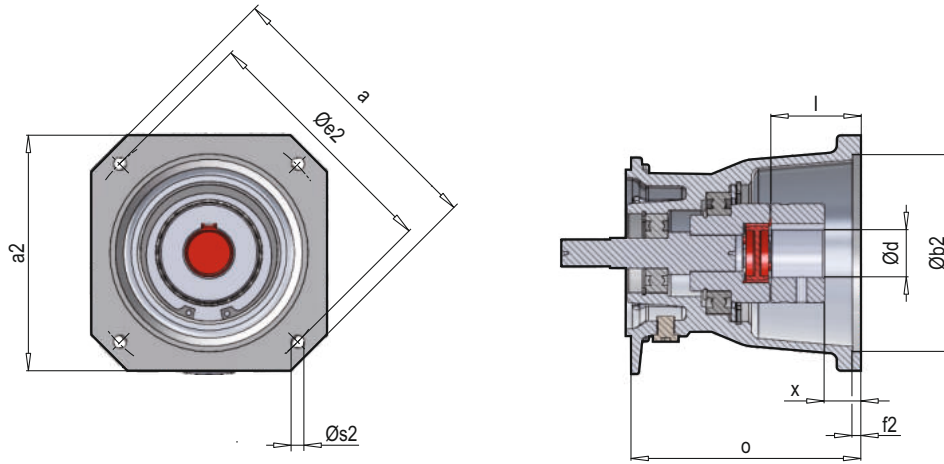
TR

SERVOMOTOR ADAPTÖRÜ

EN

SERVOMOTOR ADAPTERS

DE

 ADAPTER ZUM ANBAU VON
 SERVOMOTOREN


Redüktör Tipi Gear Unit Type Getriebetyp	Motor Büyüklüğü / Motor Size / Motorbaumaße							Saft Ebatı Shaft Size Wellenmaße		Silindir Cylinder Zylinder	M _{knom} [Nm]	Adaptör tipi Adapter type Adaptertyp
	a	a2	b2	e2	f2	s2	x	d	l	o		
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, 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.

Der Anschluss des Servomotor-Anschlussadapters Typ SEP erfolgt mit Paßfeder. Bei den SEK-Typen erfolgt der Anschluss des Servomotoradapters durch Anziehen der Anschlußstifte. Bei abweichendem Anschlußflansch des Servomotor-Anschlussadapters werden Aufträge in hoher Stückzahl in Produktion genommen.

TR

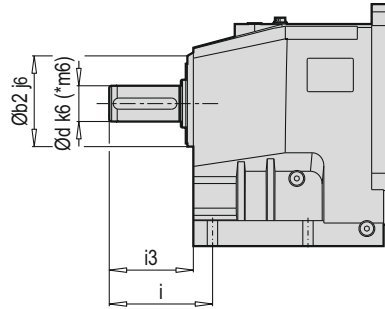
PA / B14 - B5

EN

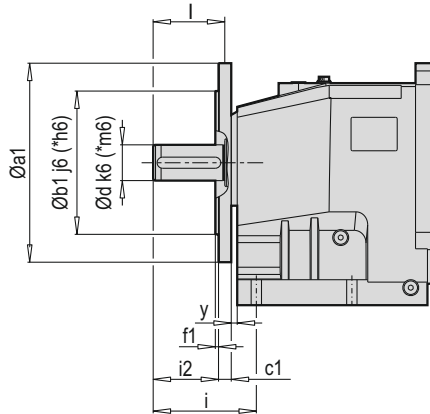
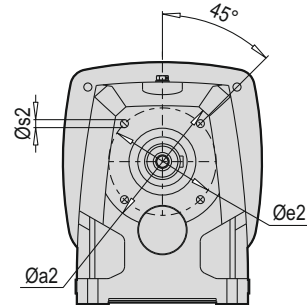
PA / B14 - B5

DE

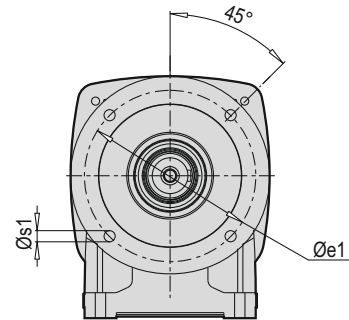
PA / B14 - B5



B 14



B5



Tip / Type / Typ	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

Motorlu ve mil girişli dikey olarak monte edilmiş redüktörlerde 1. Kademelerin yağlanması için yağ seviyesi yüksektir. Dikey montaj pozisyonu olan M4 pozisyonunda isteğe bağlı olarak ilave yağ hacim ünitesinin kullanılması, yağın köpürme yaptığı durumlarda extra bir hacim sağlayarak havalandırma tapasından yağ sızmasını önler.

PGR tahvil oranının 20'den küçük olduğu ve PA/PF 42, PD/PM 42, PKD 4390 dan büyük, gövdelerin dikey montajlarında ilave yağ hacim ünitesinin kullanımı kesinlikle önerilir. Aksi kullanım durumunda PGR ürünü garanti kapsamına almamaktadır.

PGR ayrıca tahvil oranının 20'den küçük ve motor dönüş hızının 1800 d/dk'den büyük olduğu küçük gövdeli redüktörler için de ilave yağ hacim ünitesinin kullanımı önemle tavsiye eder.

EN ADDITIONAL LUBRICANT VOLUME FOR MOUNTING POSITION M4

Reducers which are with motor, solid shaft and vertical mounting position has high oil level for lubricating first stage. The usage of additional lubricant tube at M4 mounting position upon request prevents leakage when oil is foamed by providing extra volume.

PGR strictly recommends usage of additional oil tube when the ratio number is less than 20, larger than PA/PF 42, PD/PM 42, PKD 4390 cases and vertical mounting positions. Otherwise, the reducer is at out of guarantee.

In addition to this, PGR strictly recommends usage of additional oil tube when the ratio number is less than 20, motor rotation speed is bigger than 1800 min⁻¹ and smaller cases.

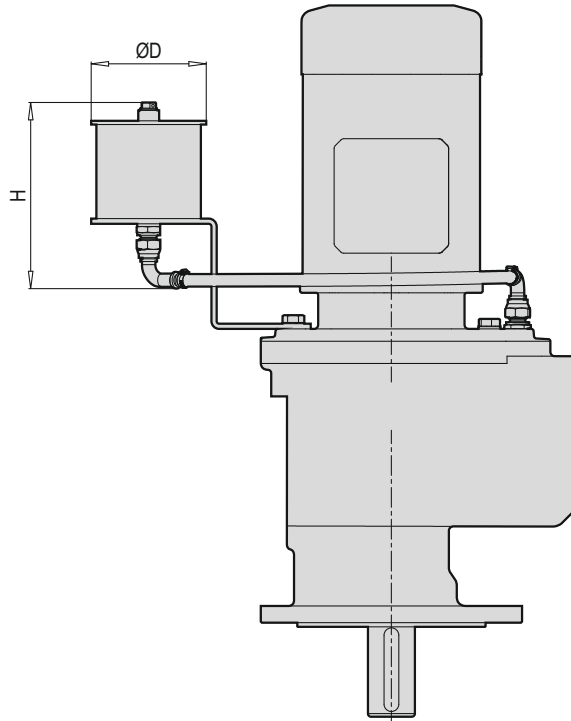
DE ZUSÄTZLICHES ÖLVOLUMEN FÜR M4 EINBAUPOSITION

Bei Getrieben mit Motor- und Wellenantrieb, die vertikal eingebaut sind, ist zur Schmierung der 1. Stufe der Ölstand höher. Der optionale Einsatz eines zusätzlichen Ölausgleichsbehälters bei der vertikalen Einbaulage M4 verhindert Ölaustritt am Entlüftungstopfen durch zusätzliches Volumen bei eventueller Ölschaumbildung. PGR empfiehlt daher dringend bei Übersetzungen $i_{ges} < 20$ und bei Gehäusen ab PA/PF 42, PD/PM 42, PKD 4390 Ölausgleichsbehälter bei der vertikalen Einbaulage einzusetzen. Andernfalls ist das Getriebe von der Garantie ausgenommen.

PGR empfiehlt außerdem dringend die Verwendung eines zusätzlichen Ölausgleichsbehälters für kleinere Getriebe mit einem Übersetzungsverhältnis von weniger als 20 und einer Motordrehzahl von mehr als 1800 U/min.

 33 - 40

 33 - 40

 33 - 40


Tip Type Typ	Boyut Size Baugröße	ØD [mm]	H [mm]	[kg]	Kapasite Capacity Kapazität [L]
PF 42 - PF 43	I	110	180	2.5	0.7
PF 52 - PF 53					
PF 63					
PF 62	II	155	300	6	3
PF 72 - PF 73					
PF 82 - PF 83					
PF 92 - PF 93	III	190	300	8	5
PF 102 - PF 103					

* Model yapılan geliştirmeye bağlı değişiklik gösterebilir. Hassas montaj alanları için iletişime geçiniz.

* The model may vary depending on the development. Please contact for sensitive assembly areas.

* Das Modell kann sich je nach Entwicklung variieren. Bitte kontaktieren Sie uns für empfindliche Montagebereiche.

TR

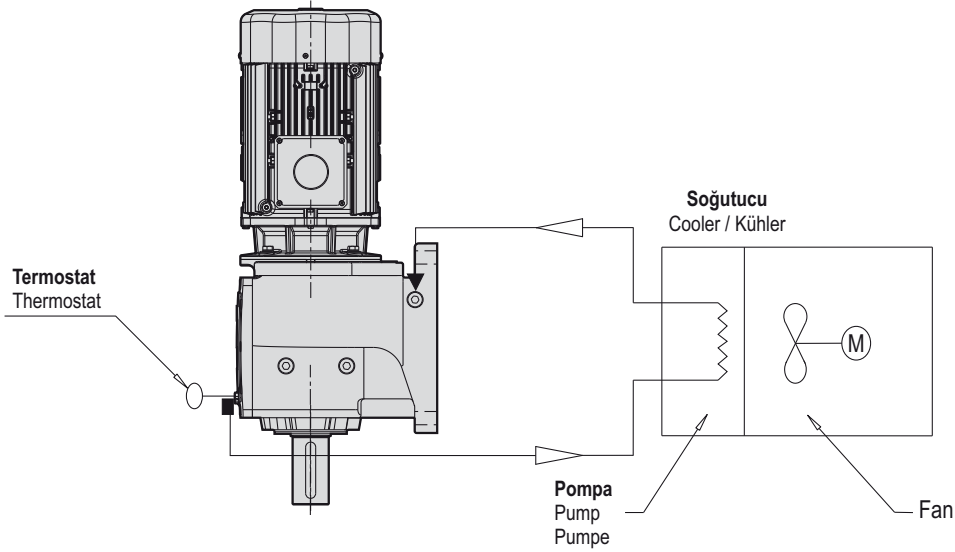
YAĞ SOĞUTMALI

EN

OIL COOLING

DE

ÖLKÜHLER



■ Çıkış = Emme hattı

■ Output = Suction line

■ Ablass = Saugleitung

▼ Yağ seviyesi = Basınç hattı

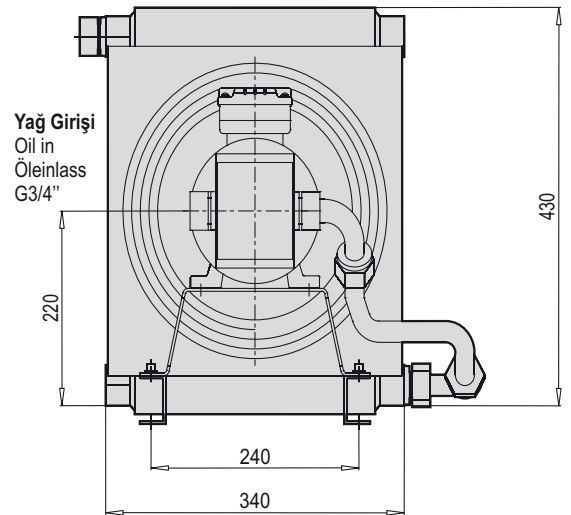
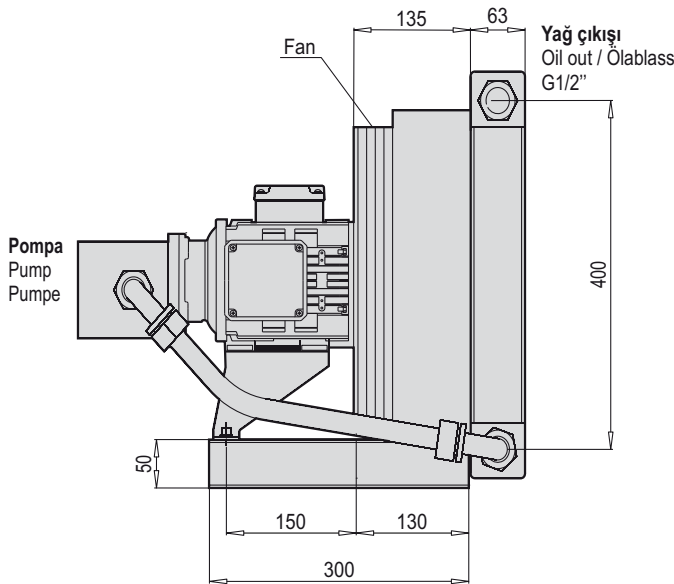
▼ Oil level = Pressure line

▼ Ölstand = Druckleitung

Redüktör içerisindeki yağ bir pompa vasıtası ile çekilir ve bu yağ bir ısı eşanjöründen geçer. Yağ, bir fan tarafından oluşturulan hava akımı ile soğutulur. Yağ ısı eşanjöründen dışarıya taşınır ve redüktöre geri gönderilir. Sıcaklık bir termostat ile kontrol edilir. PGR bu sıcaklığın izlenmesini önerir.

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 a pump. In this way, oil temperature is cooled down by a fan which is supplying air flow of oil. Then, oil flows to the house of gear unit.

Das Getriebeöl wird von einer Pumpe angesaugt und durchströmt einen Wärmetauscher. Durch einen von einem Ventilator erzeugten Luftstrom erfolgt die Ölkühlung. Aus dem Wärmetauscher wird das Öl wieder in das Gehäuse zurückgeführt. Die Temperaturregelung erfolgt über einen Thermostaten. Eine Temperaturüberwachung wird empfohlen.



* Potansiyel patlayıcı atmosferli alanlar için uygun değildir.

* Not suited for areas with potentially explosive atmospheres

* Nicht geeignet für Bereiche mit explosionsgefährdeter Atmosphäre.

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

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

Entwurf

Kühler	: TFS/A 8,5-400-F-03-11
Reduzierung	: Aus 1/2" in 3/4"
Motoren	: Spannung 3x400 V
Leistung	: 0,55 kW
Drehzahl	: 1350 rpm
Schutzklasse	: IP 55
Isolationsklasse	: F
Temperaturklasse	: B

Lieferbar mit
- Spezialspannung 60 Hz - Sondermotor
Gewicht: 32 kg

TR

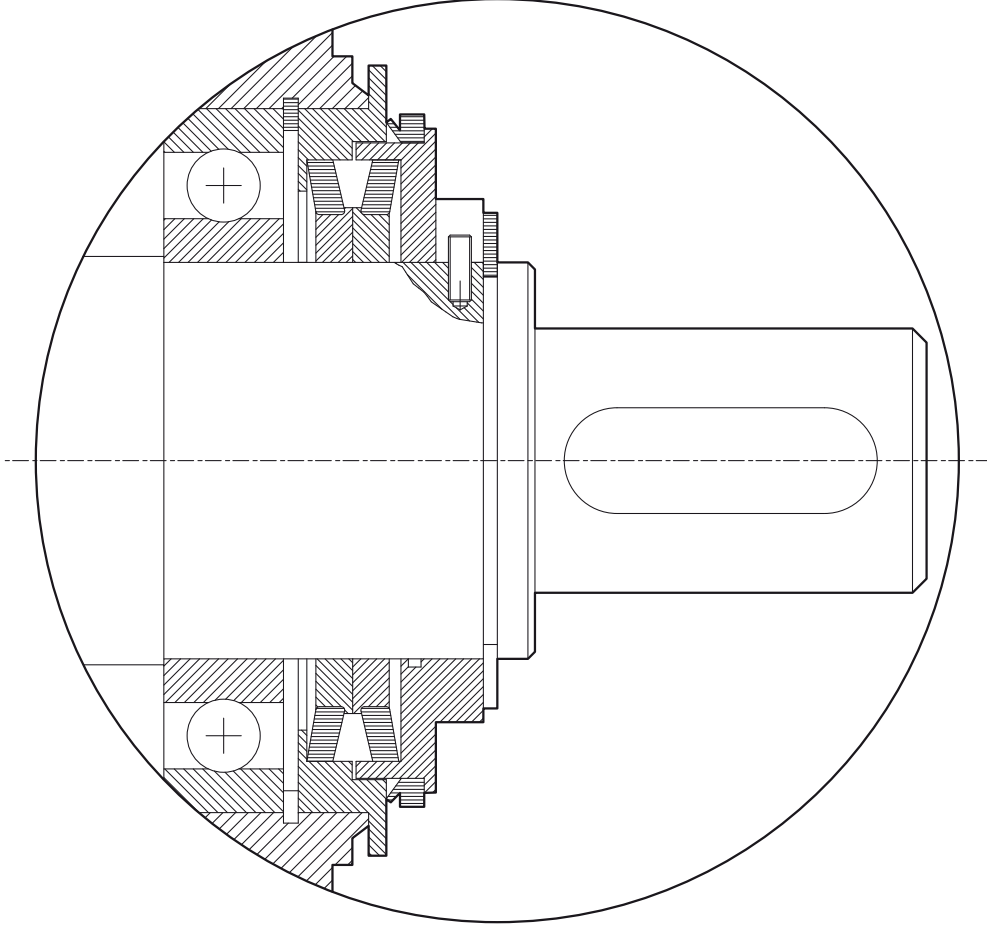
MEKANİK KEÇE

EN

MECHANICAL SEAL

DE

GLEITRINGDICHTUNG

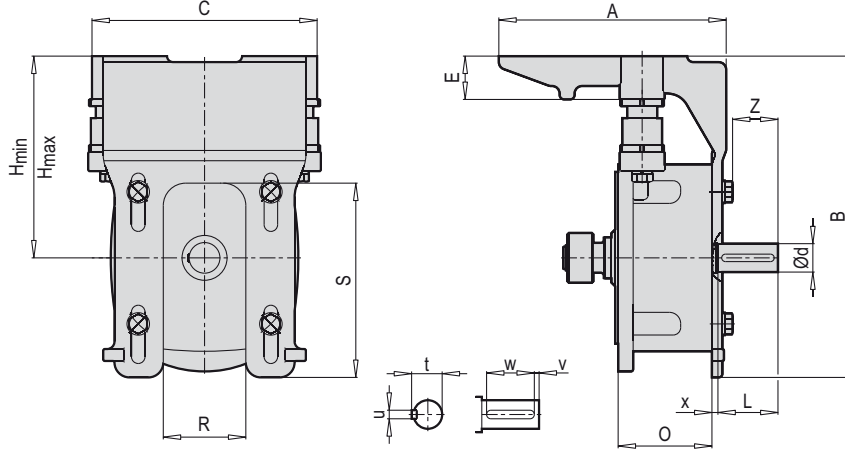


Mekanik keçe kullanımı özellikle uzun süreli maruz kalan kötü çalışma koşullarına uygundur. Sıvı yoğunluğunun çok olduğu daldırılmalı çalışma ortamlarında maximum seviye sızdırmazlık sağlar. Bu keçe tipi birçok olumsuz dış çevre koşullarından (Aşırı tozlu, sulu) yüksek seviyede koruma sağlar.

The use of mechanical seals is especially suitable for long-term poor working conditions. It provides maximum level of leakproofing for working areas which is immersion and high density of liquid. This type of seal provides a high level of protection from many unfavorable external environmental conditions (extreme dust, water).

Der Einsatz von Gleitringdichtungen eignen sich besonders bei langfristiger Belastung durch schlechte Arbeitsbedingungen. Diese bieten maximale Undurchlässigkeit in Arbeitsumgebungen unter Wasser mit hoher Feuchtigkeit. Dieser Dichtungstyp bietet einen hohen Schutz vor vielen schädlichen Umwelteinwirkungen (extremer Staub, Wasser).

Motor Platformu Ölçüleri /
Motor Platform Dimensions / Abmessungen der Motorkonsole



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

Motor Platform Montajı

Müşteri motor platformunu kullanarak farklı makina ve sistem tasarlarken çok fazla yapıcı olanaklar elde edilebilir.

Motor platform tasarımı PGR monoblok dişli ünitesi serileri için tüm montaj pozisyonlarında kullanılabilir. 5 çeşit motor platformu tüm motor-redüktör montaj kombinasyonlarını kapsar. Çok kademeli redüktör tasarımları için de yine seçim tablolarından motor platformu seçimi yapılabilir.

PGR motor platformu kullanımının müşteriye sağladığı avantajlar;

- * Hafif ve değişken titreşimleri etkileyen yapı
- * Korozyona dayanıklı sabitleme elemanları
- * Tüm montaj pozisyonlarında kullanılabilirlik
- * Optimum kayış gerginliğini yakalamak adına ayarlanabilir yükseklik ayarı
- * Birçok motor ve gövde büyüklüğü için motor platformu üzerinde bulunduğu bağlantı delikleri
- * 90° her yöne döndürülebilir yapı
- * Seçim tablolarından tahvil oranının $i=1$ 'e eşit olduğu durumlar için önerilir.

Assembling of Motor Platform

By using motor platform, you may have a lot of facility for designing different machines and systems.

Motor platform design may be used at all mounting positions for monoblock gear units. 5 types of motor platform covers all motor-reducer mounting combinations. For multi stage gear units, you can also select motor platform from selection tables.

The advantages of using motor platform to customer

- * Structure that affects light and variable vibrations
- * Fixing elements resistive for corrosion.
- * Usability at all mounting positions
- * Adjustable height adjustment to achieve optimum belt tension
- * Connection holes over motor platform for a lot of motor and motor case dimension
- * 90° rotation all direction
- * It is recommended for situations where the ratio is equal to $i=1$ from the selection tables

MOTORKONSOLE MONTAGE

Durch den Einsatz der Motorkonsole stehen dem Planer weitere konstruktive Möglichkeiten bei der Auslegung von Maschinen und Anlagen zur Verfügung. Die Motorkonsole ist so ausgelegt, dass sie in Verbindung mit allen PGR-Blokgehäusegetrieben in allen Bauformen kombiniert werden kann. Fünf Baugrößen decken alle Motor-Getriebekombinationen ab. Die jeweils möglichen Zuordnungen entnehmen Sie den Auswahl tabellen, die auch für die entsprechenden mehrstufigen Getriebeausführung Gültigkeit haben.

- Vorteile der PGR-Motorkonsole für den Anwender;

- * Leichte und variable Vibrationen dämpfende Konstruktion
- * Korrosionssichere Befestigungselemente
- * In allen Einbaupositionen einsetzbar
- * Leicht zu handhabende Höhenverstellung für optimale Riemenspannung
- * Motorkonsole mit Bohrungen für mehrere Motorbaugrößen
- * In alle Richtungen um 90° schwenkbar
- * Empfohlen für Situationen, in denen gemäß Auswahl tabelle Übersetzungen $i=1,0$ sind

Tip Type Typ	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)

** There is a limit distance for adjustment.

Motorkonsole mit Bohrungen für mehrere Motorbaugrößen

Motor platformu seçim örneği:

Öncelikle gerekli çıkış hız veya gerekli çıkış gücü ihtiyacına bağlı olarak kullanacağımız temel redüktör tipini belirlemeliyiz. Motorlu seçim tablolarında motor çıkış gücü ve tahvil oranına göre redüktör seçimi yapınız.

0.25 kW, 19.4 d/dk $i=72.60 \rightarrow$ PA 12 - 71 M

Redüktör tipinin seçilmesinin ardından motor gövde büyüklüğü ve redüktör tipine bağlı tabloyu kullanarak motor platformu tipini (MK) tespit ediniz (Sayfa 51).

71 M $\rightarrow$ PA 12 $\rightarrow$ MK1

MK1 tipi platforma göre motor gövde büyüklüğü satırını göz önüne alarak kayış tipi, ayar aralığı, kayış uzunluğu, 2 mil arası eksen mesafesi ve kayış sayısı bilgileri elde edilebilir. (Sayfa 53)

Example of motor platform selection:

First of all, we must determine the basic gearbox type we will use depending on the required output speed or the required output power requirement. In the motor selection tables, select the reducer according to the motor output power and bond ratio.

0.25 kW, 19.4 min⁻¹ $i=72.60 \rightarrow$ PA 12 - 71 M

After selecting the gearbox type, determine the motor platform type (MK) using the table depending on the motor body size and gearbox type (Page 51).

71 M $\rightarrow$ PA 12 $\rightarrow$ MK1

Belt type, adjustment range, belt length, axis distance between 2 shafts and number of belts can be obtained by considering the motor body size line according to the Mk1 type platform. (Page 53)

Beispiel für die Auswahl der Motorkonsole:

Zunächst ist je nach geforderter Abtriebsdrehzahl bzw. geforderter Abtriebsleistung der zu verwendende Getriebetyp zu bestimmen. Wählen Sie in den Auswahltabellen für Motoren das Getriebe entsprechend der Abtriebsleistung und dem Übersetzungsverhältnis.

0.25 kW, 19.4 min⁻¹ $i=72.60 \rightarrow$ PA 12 - 71 M

Nach Auswahl des Getriebetyps ermitteln Sie den Motorkonsolentyp (MK) anhand der Tabelle in Abhängigkeit von Motorbaugröße und Getriebetyp (Seite 51).

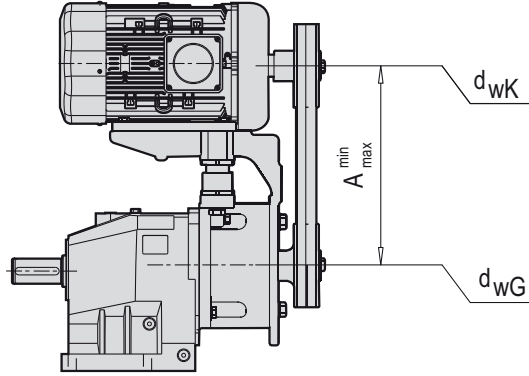
71 M $\rightarrow$ PA 12 $\rightarrow$ MK1

Informationen zu Riementyp, Verstellbereich, Riemenlänge, Achsabstand zwischen 2 Wellen und Anzahl der Riemen können unter Berücksichtigung der Zeile für die Motor-körpergröße gemäß dem MK1- Motorkonsolentyp ermittelt werden. (Seite 53)

TR V KAYIŞ VE KAYIŞ KASNAK SEÇİMİ

EN V BELT AND BELT PULLEY SELECTION

DE AUSWAHL VON V RIEMEN UND RIEMENSCHNUR



	Motor	Çıkış Output Abtrieb (kW)	Ayar aralığı Adjustment range Einstellbereich		Kayış uzunluğu Belt length Riemenlänge	Mil merkezi uzaklığı Shaft centre distance Wellenmittenabstand A	Kayış sayısı Number of belts Anzahl Riemen
			Amin	Amax			
MK I Kayış Tipi SPZ Belt type SPZ Riementyp SPZ	63 M/4A	0.12	216	236	(dwg = 80) (i = 1) Lw	223	1
	63 M/4B	0.18	216	236	697	223	1
	71 M/4A	0.25	224	244	697	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 Riementyp SPZ	80 M/4A	0.55	279	304	(dwg = 112) (i = 1) Lw	289	1
	80 M/4B	0.75	279	304	930	289	1
	90 S/4A	1.10	289	314	930	299	1
	90 L/4A	1.50	289	314	950	299	1
	100 L/4A	2.20	299	324	950	314	1
	100 L/4B	3.00	299	324	980	314	2
	112 M/4B	4.00	311	336	980	324	2
MK III Kayış Tipi SPZ Belt type SPZ Riementyp SPZ	90 S/4A	1.10	344	376	(dwg = 160) (i = 1) Lw	360	1
	90 L/4B	1.50	344	376	1222	360	1
	100 L/4A	2.20	354	386	1222	374	1
	100 L/4B	3.00	354	386	1250	374	1
	112 M/4B	4.00	366	398	1250	380	2
	132 S/4C	5.50	386	418	1262	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 Riementyp SPA	112 M/4B	4.00	427	467	(dwg = 200) (i = 1) Lw	436	1
	132 S/4C	5.50	447	487	1500	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 Riementyp SPA	200 L/4C	30.0	665	715	(dwg = 250) (i = 1) Lw	698	4
	225 S/4A	37.0	690	740	2182	710	4
	225 M/4C	45.0	690	740	2207	710	5
MK V Kayış Tipi SPB Belt type SPB Riementyp SPB	250 M/4C	55.0	715	765	(dwg = 250) (i = 1) Lw	727	4
					2240		

* Kayış kasnak aksesuarları PGR tarafından temin edilmemektedir.

*Belt pulley accessories are not provided by PGR.

*Riemenscheibenzubehör wird nicht von PGR geliefert.

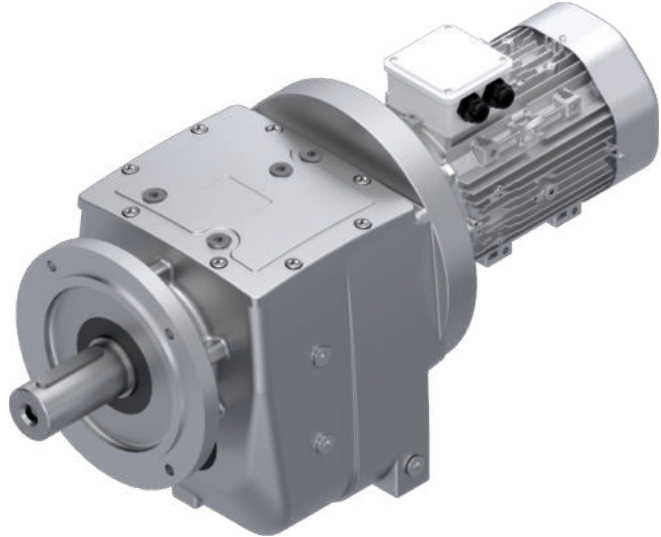
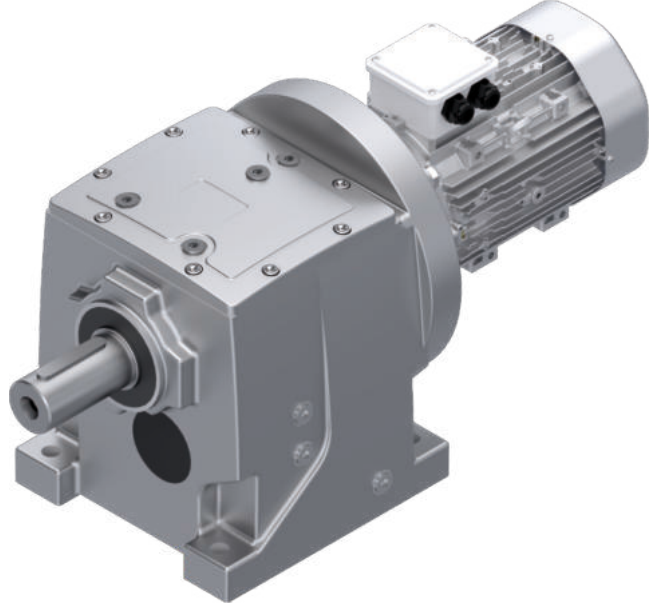


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Motorlu Seçim Tabloları

Selection Tables of
Geared motors

Auswahltabellen der
Getriebemotoren



PA / PF

0.12 kW
Redüktör motor gücü
 Gear unit motor power
 Getriebemotorleistung

Motor gücü
 Rated motor power
 Motormennleistung

Çıkış devri
 Output speed
 Leistungsgeschwindigkeit

Çıkış momenti
 Output torque
 Abtriebsdrehmoment

Servis faktörü
 Service factor
 Betriebsfaktor

Tahvil oranı
 Reduction ratio
 Übersetzungsverhältnis

Ölçü sayfaları
 Drawing pages
 Zeichnungsseite

Ağırlık
 Weight
 Gewicht

Redüktör tipi
 Gear unit motor type
 Getriebetyp

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	Kg	mm
0.12	5.1	212	0.8	275.17	3.0	4.0	5.0	15.0	PA/PF 13 63M4A	20	173
	5.7	188	0.9	244.64	3.0	4.0	5.0	14.0			
	7.2	151	1.3	195.71	3.0	4.0	5.0	14.0			

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

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

Die aufgeführten Werte für zulässige Radiallasten FR für Normallager werden mit FA = 0 (N) berechnet.

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

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

Die aufgeführten Werte für zulässige Axiallasten FA für Normallager werden mit FR = 0 (N) berechnet.

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

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

Die aufgeführten Werte für zulässige Axiallasten FA für verstärkte Lager werden mit FR = 0 (N) berechnet.

Müsaade edilebilir radyal yükler
Güçlendirilmiş rulmanlarda
FR için listelenmiş değerlerde
FA = 0 (N) olarak hesaplanmıştır

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

Die aufgeführten Werte für zulässige Radiallasten FR für verstärkte Lager werden mit FA = 0 (N) berechnet

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.12	0.1	9969	0.8	8572.29	44.0	65.0	-	-	PA/PF 83/33 63M6C / 63M6B	361	218
	0.1	8061	1.0	6931.18	44.0	65.0	-	-			
	0.2	6318	1.3	5432.52	44.0	65.0	-	-			
	0.2	5290	1.6	4548.59	44.0	65.0	-	-			
	0.1	9212	0.9	12787.88	44.0	65.0	-	-	PA/PF 83/33 63M4A	361	218
	0.1	7822	1.0	10858.81	44.0	65.0	-	-			
	0.2	6175	1.3	8572.29	44.0	65.0	-	-			
	0.2	4993	1.6	6931.18	44.0	65.0	-	-			
	0.3	3913	2.0	5432.52	44.0	65.0	-	-	PA/PF 83/33 63M2K	361	218
	0.3	3277	2.4	4548.59	44.0	65.0	-	-			
	0.2	4227	1.4	12787.88	44.0	65.0	-	-			
	0.3	3589	1.7	10858.81	44.0	65.0	-	-			
	0.3	2833	2.1	8572.29	44.0	65.0	-	-	PA/PF 73/23 63M6C / 63M6B	242	218
	0.4	2291	2.7	6931.18	44.0	65.0	-	-			
	0.2	6377	0.8	5483.87	28.0	39.0	-	-	PA/PF 73/23 63M4A	242	218
	0.2	5151	1.0	4429.50	28.0	39.0	-	-			
	0.2	5882	0.9	8164.87	28.0	39.0	-	-			
	0.2	4755	1.1	6600.95	28.0	39.0	-	-			
	0.3	3950	1.3	5483.87	28.0	39.0	-	-	PA/PF 73/23 63M2K	242	218
	0.3	3191	1.6	4429.50	28.0	39.0	-	-			
	0.2	4441	0.9	13435.41	28.0	39.0	-	-			
	0.2	3736	1.0	11303.83	28.0	39.0	-	-			
	0.3	2699	1.4	8164.87	28.0	39.0	-	-			
	0.4	2182	1.7	6600.95	28.0	39.0	-	-			
	0.5	1812	2.1	5483.87	28.0	39.0	-	-	PA/PF 63/23 63M6C / 63M6B	161	218
	0.6	1464	2.6	4429.50	28.0	39.0	-	-			
	0.3	3943	0.9	3390.53	20.0	45.0	-	-			
	0.3	3276	1.0	2816.75	20.0	45.0	-	-			
	0.4	2515	1.3	2162.48	20.0	45.0	-	-			
	0.5	1951	1.7	1677.79	10.0	45.0	-	-			
	0.6	1641	2.0	1410.80	13.0	24.0	27.0	45.0	PA/PF 63/23 63M4A	161	218
	0.8	1240	2.7	1066.44	13.0	24.0	28.0	45.0			
	0.3	3886	0.8	5394.24	20.0	45.0	-	-			
	0.3	3148	1.0	4370.02	20.0	45.0	-	-			
	0.4	2442	1.3	3390.53	20.0	45.0	-	-			
	0.5	2029	1.6	2816.75	20.0	45.0	-	-	PA/PF 63/23 63M2K	161	218
	0.6	1558	2.1	2162.48	20.0	45.0	-	-			
	0.8	1209	2.6	1677.79	20.0	45.0	-	-			
	0.3	2689	0.9	8135.65	20.0	45.0	-	-			
	0.4	2208	1.1	6681.18	20.0	45.0	-	-			
	0.5	1783	1.4	5394.24	20.0	45.0	-	-	PA/PF 52/12 63M6C / 63M6B	95	212
	0.6	1444	1.7	4370.02	20.0	45.0	-	-			
	0.8	1121	2.2	3390.53	20.0	45.0	-	-			
	1.0	931	2.6	2816.75	20.0	45.0	-	-			
	0.4	2527	0.8	2108.36	14.0	24.0	-	-			
	0.5	2056	0.9	1715.38	14.0	24.0	-	-	PA/PF 51/12 63M4A	95	212
	0.6	1711	1.1	1427.20	14.0	24.0	19.0	40.0			
	1.0	1103	1.7	920.36	14.0	24.0	19.0	40.0			
	1.3	827	2.3	690.27	14.0	24.0	20.0	40.0			
	1.7	650	3.0	542.36	14.0	24.0	20.0	40.0			
	0.5	1985	0.9	2635.45	14.0	24.0	-	-	PA/PF 52/12 63M2K	95	212
	0.7	1588	1.2	2108.36	14.0	24.0	-	-			
	0.8	1292	1.4	1715.38	14.0	24.0	-	-			
	1.0	1075	1.7	1427.20	14.0	24.0	19.0	40.0			
	1.5	693	2.6	920.36	14.0	24.0	19.0	40.0			
	1.1	935	1.5	2635.45	14.0	24.0	-	-	PA/PF 42/12 63M6C / 63M6B	66	212
	1.3	748	1.9	2108.36	14.0	24.0	-	-			
	1.6	609	2.3	1715.38	14.0	24.0	-	-			
	2.0	507	2.7	1427.20	14.0	24.0	19.0	40.0			
	0.6	1670	0.8	1393.57	8.0	12.0	11.0	30.0			
	0.8	1336	0.9	1114.85	8.0	12.0	11.0	30.0			
	1.2	899	1.4	750.00	8.0	12.0	11.0	29.0			
	1.6	660	1.9	550.63	8.0	12.0	12.0	27.0			
	2.1	519	2.4	433.11	1.0	4.0	12.0	25.0			
	2.6	416	3.0	346.69	1.0	4.0	11.0	23.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
0.12	0.9	1176	1.0	1561.18	8.0	12.0	-	-	PA/PF 42/12 63M4A	66	212
	1.0	1049	1.1	1393.57	8.0	12.0	11.0	30.0			
	1.3	840	1.4	1114.85	8.0	12.0	11.0	30.0			
	1.9	565	2.1	750.00	8.0	12.0	11.0	29.0			
	2.5	415	2.9	550.63	8.0	12.0	12.0	27.0			
	1.1	909	1.0	2560.48	8.0	12.0	-	-	PA/PF 42/12 63M2K	66	212
	1.3	767	1.2	2161.45	8.0	12.0	-	-			
	1.8	554	1.6	1561.18	8.0	12.0	-	-			
	2.0	495	1.8	1393.57	8.0	12.0	11.0	30.0			
	2.5	396	2.3	1114.85	8.0	12.0	11.0	30.0			
	1.3	839	0.8	699.71	5.0	9.0	9.0	25.0	PA/PF 32/12 63M6C / 63M6B	48	212
	1.6	665	1.0	554.87	5.0	9.0	8.0	25.0			
	2.0	535	1.2	446.08	5.0	9.0	9.0	25.0			
	2.5	435	1.5	362.93	5.0	9.0	-	-			
	3.4	320	2.0	267.35	5.0	9.0	-	-			
	4.2	258	2.5	215.28	5.0	9.0	-	-			
	1.3	814	0.8	1080.92	6.0	9.0	9.0	25.0	PA/PF 32/12 63M4A	48	212
	1.6	654	0.9	868.98	5.0	9.0	-	-			
	2.0	527	1.2	699.71	5.0	9.0	9.0	25.0			
	2.5	418	1.5	554.87	5.0	9.0	8.0	25.0			
	3.1	336	1.8	446.08	5.0	9.0	9.0	25.0			
	3.9	273	2.3	362.93	5.0	9.0	-	-			
	1.7	569	0.8	1602.89	6.0	9.0	-	-	PA/PF 32/12 63M2K	48	212
	2.1	463	1.0	1304.13	6.0	9.0	9.0	25.0			
	2.6	384	1.2	1080.92	6.0	9.0	9.0	25.0			
	3.2	308	1.5	868.98	5.0	9.0	-	-			
	4.0	248	1.9	699.71	5.0	9.0	9.0	25.0			
	5.0	197	2.4	554.87	5.0	9.0	8.0	25.0	PA/PF 33 63M6C / 63M6B	44	181
	6.3	158	3.0	446.08	6.0	9.0	9.0	25.0			
	1.5	712	0.9	585.48	6.0	9.0	9.0	25.0			
	1.7	637	1.1	523.81	6.0	9.0	9.0	25.0			
	2.1	512	1.4	421.10	7.0	9.0	9.0	25.0			
	2.7	413	1.7	339.07	7.0	9.0	9.0	25.0	PA/PF 33 63M4A	44	181
	3.6	302	2.3	248.21	7.0	9.0	9.0	24.0			
	4.3	252	2.8	206.97	7.0	9.0	9.0	23.0			
	1.9	570	1.0	740.46	6.0	9.0	9.0	25.0			
	2.1	510	1.1	662.46	6.0	9.0	9.0	25.0			
	2.4	451	1.4	585.48	6.0	9.0	9.0	25.0	PA/PF 33 63M2K	44	181
	2.7	403	1.7	523.81	6.0	9.0	9.0	25.0			
	3.3	324	2.1	421.10	7.0	9.0	9.0	25.0			
	4.1	261	2.5	339.07	7.0	9.0	9.0	25.0			
	3.8	272	1.6	740.46	6.0	9.0	9.0	25.0	PA/PF 22/02 63M6C / 63M6B	35	212
	4.2	244	1.7	662.46	6.0	9.0	9.0	25.0			
	4.8	215	2.2	585.48	6.0	9.0	9.0	25.0			
	5.3	193	2.7	523.81	6.0	9.0	9.0	25.0			
	2.6	413	0.9	344.50	4.0	6.0	7.0	18.0	PA/PF 22/02 63M4A	35	212
	3.2	341	1.0	284.14	4.0	6.0	7.0	16.0			
	3.8	286	1.2	238.88	4.0	6.0	-	-			
	5.4	200	1.8	167.14	4.0	6.0	-	-			
	6.7	162	2.2	135.06	1.0	4.0	-	-			
	7.7	141	2.5	117.62	1.0	4.0	-	-	PA/PF 22/02 63M2K	35	212
	2.5	416	0.8	552.93	4.0	6.0	-	-			
	3.2	334	1.0	444.02	4.0	6.0	6.0	19.0			
	4.1	259	1.3	344.50	4.0	6.0	7.0	18.0			
	4.9	214	1.6	284.14	4.0	6.0	7.0	16.0			
	5.9	180	1.9	238.88	4.0	6.0	-	-	PA/PF 22/02 63M6C / 63M6B	35	212
	8.4	126	2.7	167.14	4.0	6.0	-	-			
	3.2	313	0.8	881.08	4.0	6.0	6.0	20.0			
	4.1	242	1.1	682.53	4.0	6.0	-	-			
	5.1	196	1.3	552.93	4.0	6.0	-	-			
	6.3	158	1.6	444.02	4.0	6.0	6.0	19.0			
	8.1	122	2.1	344.50	4.0	6.0	7.0	18.0			
	9.9	101	2.6	284.14	4.0	6.0	7.0	16.0			
	11.7	85	3.0	238.88	4.0	6.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.12	2.8	393	0.9	323.31	5.0	6.0	7.0	19.0	PA/PF 23 63M6C / 63M6B	32	177
	3.4	319	1.1	261.93	5.0	6.0	7.0	18.0			
	4.1	265	1.3	217.60	5.0	6.0	7.0	17.0			
	5.0	219	1.5	179.61	5.0	6.0	7.0	16.0			
	6.0	184	1.7	151.11	5.0	6.0	7.0	15.0			
	7.3	151	2.4	124.10	5.0	6.0	7.0	15.0			
	9.0	122	2.9	100.53	5.0	6.0	8.0	14.0	PA/PF 23 63M4A	32	177
	3.4	321	1.1	417.44	4.0	6.0	7.0	20.0			
	4.3	249	1.4	323.31	5.0	6.0	7.0	19.0			
	5.3	202	1.7	261.93	5.0	6.0	7.0	18.0			
	6.4	167	2.0	217.60	5.0	6.0	7.0	17.0			
	7.8	138	2.3	179.61	5.0	6.0	7.0	16.0			
	9.3	116	2.5	151.11	5.0	6.0	7.0	15.0	PA/PF 23 63M2K	32	177
	5.4	190	1.1	516.35	4.0	6.0	7.0	20.0			
	6.7	154	1.7	417.44	4.0	6.0	6.0	20.0			
	8.7	119	2.2	323.31	5.0	6.0	6.0	19.0			
	10.7	96	2.7	261.93	5.0	6.0	6.0	18.0			
	5.4	199	1.0	165.75	3.0	4.0	-	-	PA/PF 12/02 63M6C / 63M6B	23	212
	6.8	160	1.1	133.10	3.0	4.0	5.0	11.0			
	8.2	132	1.3	109.78	3.0	4.0	-	-			
	9.8	111	1.6	92.29	3.0	4.0	-	-			
	5.3	199	0.9	263.85	3.0	4.0	-	-	PA/PF 12/02 63M4A	23	212
	6.6	161	1.1	213.21	3.0	4.0	5.0	13.0			
	8.4	125	1.4	165.75	3.0	4.0	-	-			
	10.5	100	1.6	133.10	3.0	4.0	5.0	11.0			
	12.8	83	2.0	109.78	3.0	4.0	-	-			
	15.2	70	2.4	92.29	3.0	4.0	-	-			
	6.5	153	0.9	430.48	3.0	4.0	-	-	PA/PF 12/02 63M2K	23	212
	8.2	121	1.1	340.07	3.0	4.0	-	-			
	10.6	94	1.5	263.85	3.0	4.0	-	-			
	13.1	76	1.8	213.21	3.0	4.0	5.0	13.0			
	16.9	59	2.3	165.75	3.0	4.0	-	-			
	21.0	47	2.6	133.10	3.0	4.0	5.0	11.0			
	4.6	238	0.9	195.71	3.0	4.0	5.0	14.0	PA/PF 13 63M6C / 63M6B	20	173
	5.7	194	0.9	159.23	3.0	4.0	5.0	13.0			
	6.8	161	1.0	132.48	4.0	4.0	5.0	12.0			
	8.3	132	1.4	108.73	4.0	4.0	5.0	12.0			
	10.5	104	1.8	85.57	4.0	4.0	-	-			
	13.1	83	2.5	68.46	4.0	4.0	-	-			
	5.1	212	0.8	275.17	3.0	4.0	5.0	15.0	PA/PF 13 63M4A	20	173
	5.7	188	0.9	244.64	3.0	4.0	5.0	14.0			
	7.2	151	1.3	195.71	3.0	4.0	5.0	14.0			
	8.8	123	1.4	159.23	3.0	4.0	5.0	13.0			
	10.6	102	1.5	132.48	4.0	4.0	5.0	12.0			
	12.9	84	2.1	108.73	4.0	4.0	5.0	12.0			
	16.4	66	2.7	85.57	4.0	4.0	-	-	PA/PF 13 63M2K	20	173
	6.7	155	0.8	420.39	3.0	4.0	5.0	15.0			
	7.6	136	1.0	369.18	3.0	4.0	5.0	15.0			
	8.9	115	1.1	313.35	3.0	4.0	5.0	15.0			
	10.2	101	1.3	275.17	3.0	4.0	5.0	15.0			
	11.4	90	1.5	244.64	3.0	4.0	5.0	14.0			
	14.3	72	2.0	195.71	3.0	4.0	5.0	14.0			
	17.6	59	2.2	159.23	3.0	4.0	5.0	13.0			
	21.1	49	2.3	132.48	4.0	4.0	5.0	12.0	PA/PF 12 63M6C / 63M6B	15	172
	12.4	90	1.6	72.60	4.0	4.0	5.0	11.0			
	14.7	76	2.1	61.31	4.0	4.0	5.0	10.0			
	16.7	67	2.8	53.84	4.0	4.0	5.0	10.0	PA/PF 12 63M4A	15	172
	19.3	56	2.5	72.60	4.0	4.0	5.0	11.0			
	8.6	128	0.8	105.24	2.0	3.0	-	-	PA/PF 03 63M6C / 63M6B	17	169
	11.0	99	1.1	81.52	2.0	3.0	3.0	6.0			
	13.7	80	1.4	65.46	2.0	3.0	3.0	6.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
0.12	8.2	131	0.8	170.56	2.0	3.0	3.0	6.0	PA/PF 03 63M4A	17	169
	9.3	116	0.9	151.24	2.0	3.0	3.0	6.0			
	11.2	96	1.1	124.74	2.0	3.0	3.0	6.0			
	13.3	81	1.2	105.24	2.0	3.0	-	-			
	17.2	63	1.7	81.52	2.0	3.0	3.0	6.0			
	21.4	50	2.2	65.46	2.0	3.0	3.0	6.0			
	13.2	78	1.0	212.39	2.0	3.0	3.0	6.0	PA/PF 03 63M2K	17	169
	16.4	63	1.3	170.56	2.0	3.0	3.0	6.0			
	18.5	56	1.5	151.24	2.0	3.0	3.0	6.0			
	22.4	46	1.8	124.74	2.0	3.0	3.0	6.0			
	26.6	39	1.9	105.24	2.0	3.0	-	-			
	34.3	30	2.7	81.52	2.0	3.0	3.0	6.0			
	12.3	90	1.0	73.03	2.0	3.0	3.0	6.0	PA/PF 02 63M6C / 63M6B	13	168
	14.7	76	1.2	61.24	2.0	3.0	3.0	6.0			
	16.8	66	1.4	53.64	2.0	3.0	3.0	6.0			
	21.7	51	2.0	41.56	2.0	3.0	3.0	6.0			
	27.0	41	2.4	33.37	2.0	3.0	3.0	6.0			
	32.7	34	2.7	27.52	2.0	3.0	3.0	6.0			
	38.9	29	2.9	23.14	2.0	3.0	3.0	6.0			
	19.2	57	1.6	73.03	2.0	3.0	3.0	6.0	PA/PF 02 63M4A	13	168
	22.9	48	1.8	61.24	2.0	3.0	3.0	6.0			
	26.1	42	2.1	53.64	2.0	3.0	3.0	6.0			
	33.7	33	3.0	41.56	2.0	3.0	3.0	6.0			
	38.3	28	2.4	73.03	2.0	3.0	3.0	6.0	PA/PF 02 63M2K	13	168
	45.7	23	2.9	61.24	2.0	3.0	3.0	6.0			
0.18	0.1	25074	0.8	14373.83	81.0	66.0	-	-	PA/PF 103/53 71M6B / 71M6A	816	218
	0.1	19701	1.1	11293.72	81.0	66.0	-	-			
	0.1	14776	1.4	8470.29	81.0	66.0	-	-			
	0.1	12482	1.7	7155.29	81.0	66.0	-	-			
	0.2	10112	2.1	5796.64	81.0	66.0	-	-			
	0.2	7368	2.9	4223.52	81.0	66.0	-	-			
	0.1	14874	0.9	8526.73	66.0	80.0	-	-	PA/PF 93/43 71M6B / 71M6A	564	218
	0.1	12122	1.1	6948.97	66.0	80.0	-	-			
	0.2	10067	1.3	5771.01	66.0	80.0	-	-			
	0.2	7502	1.7	4300.67	66.0	80.0	-	-			
	0.2	6508	2.0	3730.70	66.0	80.0	-	-			
	0.3	4736	2.7	2714.80	66.0	80.0	-	-			
	0.2	9477	0.9	5432.52	44.0	65.0	-	-	PA/PF 83/33 71M6B / 71M6A	364	218
	0.2	7935	1.1	4548.59	44.0	65.0	-	-			
	0.2	9262	0.9	8572.29	44.0	65.0	-	-	PA/PF 83/33 63M4B	361	218
	0.2	7489	1.1	6931.18	44.0	65.0	-	-			
	0.3	5870	1.4	5432.52	44.0	65.0	-	-			
	0.3	4915	1.6	4548.59	44.0	65.0	-	-			
	0.2	6340	1.0	12787.88	44.0	65.0	-	-	PA/PF 83/33 63M2A	361	218
	0.3	5383	1.1	10858.81	44.0	65.0	-	-			
	0.3	4250	1.4	8572.29	44.0	65.0	-	-			
	0.4	3436	1.8	6931.18	44.0	65.0	-	-			
	0.5	2693	2.3	5432.52	44.0	65.0	-	-			
	0.6	2255	2.7	4548.59	44.0	65.0	-	-			
	0.5	2981	2.8	1683.27	44.0	65.0	-	-	PA/PF 83/32 71M6B / 71M6A	355	214
	0.3	5925	0.8	5483.87	28.0	39.0	-	-	PA/PF 73/23 63M4B	242	218
	0.3	4786	1.0	4429.50	28.0	39.0	-	-			
	0.3	4048	0.9	8164.87	28.0	39.0	-	-	PA/PF 73/23 63M2A	242	218
	0.4	3273	1.2	6600.95	28.0	39.0	-	-			
	0.5	2719	1.4	5483.87	28.0	39.0	-	-			
	0.6	2196	1.7	4429.50	28.0	39.0	-	-			
	0.3	6081	0.9	3433.54	11.0	3.0	-	-	PA/PF 73/22 71M6B / 71M6A	237	214
	0.3	4912	1.1	2773.38	11.0	3.0	-	-			
	0.7	2218	2.4	1252.41	11.0	3.0	39.0	50.0			
	0.8	1943	2.7	1097.40	11.0	3.0	39.0	50.0			
	0.4	3772	0.9	2162.48	20.0	45.0	-	-	PA/PF 63/23 71M6B / 71M6A	164	218
	0.5	2927	1.1	1677.79	20.0	45.0	-	-			
	0.6	2461	1.4	1410.80	20.0	45.0	27.0	45.0			
	0.8	1860	1.8	1066.44	20.0	45.0	28.0	45.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.18	0.4	3664	0.9	3390.53	20.0	45.0	-	-	PA/PF 63/23 63M4B	161	218
	0.5	3044	1.1	2816.75	20.0	45.0	-	-			
	0.6	2337	1.4	2162.48	20.0	45.0	-	-			
	0.8	1813	1.8	1677.79	20.0	45.0	-	-			
	1.0	1524	2.1	1410.80	20.0	45.0	27.0	45.0			
	1.3	1152	2.8	1066.44	20.0	45.0	28.0	45.0			
	0.5	2674	0.9	5394.24	20.0	45.0	-	-	PA/PF 63/23 63M2A	161	218
	0.6	2167	1.1	4370.02	20.0	45.0	-	-			
	0.8	1681	1.4	3390.53	20.0	45.0	-	-			
	1.0	1396	1.7	2816.75	20.0	45.0	-	-			
	1.3	1072	2.3	2162.48	20.0	45.0	-	-			
	1.7	832	2.9	1677.79	20.0	45.0	-	-			
	1.1	1507	2.2	851.02	14.0	7.0	27.0	45.0	PA/PF 63/22 71M6B / 71M6A	156	214
	1.2	1289	2.6	727.77	14.0	7.0	28.0	45.0			
	0.8	2056	0.9	1143.76	14.0	24.0	-	-	PA/PF 52/12 71M6B / 71M6A	98	212
	1.0	1655	1.2	920.36	14.0	24.0	19.0	40.0			
	1.3	1241	1.5	690.27	14.0	24.0	20.0	40.0			
	1.7	975	2.0	542.36	14.0	24.0	20.0	40.0			
	1.8	884	2.2	491.74	14.0	24.0	20.0	40.0			
	2.5	637	3.0	354.34	14.0	24.0	-	-			
	0.7	2382	0.8	2108.36	13.0	24.0	-	-	PA/PF 52/12 63M4B	95	212
	0.8	1938	0.9	1715.38	13.0	24.0	-	-			
	1.0	1612	1.1	1427.20	13.0	24.0	19.0	40.0			
	1.5	1040	1.8	920.36	14.0	24.0	19.0	40.0			
	2.0	780	2.3	690.27	14.0	24.0	19.0	40.0			
	2.6	613	3.0	542.36	14.0	24.0	20.0	40.0			
	1.1	1403	1.0	2635.45	13.0	24.0	-	-	PA/PF 52/12 63M2A	95	212
	1.3	1122	1.2	2108.36	13.0	24.0	-	-			
	1.6	913	1.5	1715.38	13.0	24.0	-	-			
	2.0	760	1.8	1427.20	13.0	24.0	19.0	40.0			
	3.0	490	2.8	920.36	14.0	24.0	19.0	40.0			
	1.2	1348	0.9	750.00	8.0	12.0	11.0	27.0	PA/PF 42/12 71M6B / 71M6A	69	212
	1.3	1206	1.0	670.92	8.0	12.0	9.0	22.0			
	1.6	990	1.3	550.63	8.0	12.0	11.0	26.0			
	2.1	779	1.6	433.11	8.0	12.0	11.0	24.0			
	2.6	623	2.0	346.69	8.0	12.0	11.0	23.0			
	3.3	497	2.5	276.49	8.0	12.0	12.0	22.0			
	1.0	1574	0.8	1393.57	5.0	12.0	9.0	30.0	PA/PF 42/12 63M4B	66	212
	1.3	1259	1.0	1114.85	6.0	12.0	10.0	29.0			
	1.9	847	1.4	750.00	8.0	12.0	11.0	27.0			
	2.5	622	1.9	550.63	8.0	12.0	11.0	26.0			
	3.2	489	2.5	433.11	8.0	12.0	11.0	24.0			
	1.3	1151	0.8	2161.45	5.0	12.0	-	-	PA/PF 42/12 63M2A	66	212
	1.8	831	1.1	1561.18	5.0	12.0	-	-			
	2.0	742	1.2	1393.57	5.0	12.0	9.0	30.0			
	2.5	594	1.5	1114.85	6.0	12.0	10.0	29.0			
	3.7	399	2.3	750.00	8.0	12.0	11.0	27.0			
	1.2	1394	0.8	763.70	8.0	12.0	10.0	25.0	PA/PF 43 71M6B / 71M6A	68	185
	1.5	1129	1.0	618.49	8.0	12.0	10.0	24.0			
	1.7	964	1.1	528.04	8.0	12.0	11.0	23.0			
	2.1	769	1.6	421.21	8.0	12.0	11.0	22.0			
	2.5	656	2.1	359.61	8.0	12.0	11.0	22.0			
	3.0	545	2.2	298.65	8.0	12.0	11.0	21.0	PA/PF 32/12 71M6B / 71M6A	51	212
	3.4	482	2.8	264.02	8.0	12.0	11.0	20.0			
	2.0	802	0.8	446.08	5.0	9.0	9.0	25.0			
	2.5	653	1.0	362.93	5.0	9.0	-	-			
	3.4	481	1.4	267.35	5.0	9.0	9.0	22.0			
	4.2	387	1.7	215.28	5.0	9.0	-	-	PA/PF 32/12 63M4B	48	212
	5.4	301	2.2	167.16	6.0	9.0	-	-			
	6.1	266	2.4	148.00	6.0	9.0	-	-			
	7.1	227	2.9	126.22	6.0	9.0	-	-			
	2.0	790	0.8	699.71	6.0	9.0	9.0	25.0			
	2.5	627	1.0	554.87	5.0	9.0	8.0	25.0			
	3.1	504	1.2	446.08	5.0	9.0	9.0	25.0			
	3.9	410	1.5	362.93	5.0	9.0	-	-			
	5.2	302	2.1	267.35	5.0	9.0	9.0	22.0			
	6.5	243	2.5	215.28	5.0	9.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
0.18	2.6	575	0.8	1080.92	6.0	9.0	9.0	25.0	PA/PF 32/12 63M2A	48	212
	3.2	463	1.0	868.98	6.0	9.0	-	-			
	4.0	373	1.3	699.71	6.0	9.0	9.0	25.0			
	5.0	295	1.6	554.87	5.0	9.0	8.0	25.0			
	6.3	237	2.0	446.08	5.0	9.0	9.0	25.0			
	7.7	193	2.4	362.93	5.0	9.0	-	-			
	2.1	769	0.9	421.10	6.0	9.0	9.0	25.0	PA/PF 33 71M6B / 71M6A	47	181
	2.7	619	1.1	339.07	7.0	9.0	9.0	25.0			
	3.6	453	1.6	248.21	7.0	9.0	9.0	23.0			
	4.3	378	1.9	206.97	7.0	9.0	9.0	22.0			
	5.4	304	2.3	166.39	6.0	9.0	9.0	21.0			
	6.7	245	2.8	133.98	6.0	9.0	9.0	20.0			
	8.0	205	2.8	112.18	6.0	9.0	-	-			
	2.4	676	0.9	585.48	6.0	9.0	9.0	25.0	PA/PF 33 63M4B	44	181
	2.7	605	1.1	523.81	6.0	9.0	9.0	25.0			
	3.3	486	1.4	421.10	6.0	9.0	9.0	25.0			
	4.1	391	1.7	339.07	7.0	9.0	9.0	25.0			
	5.6	286	2.3	248.21	7.0	9.0	9.0	23.0			
	6.8	239	2.8	206.97	7.0	9.0	9.0	22.0			
	3.8	409	1.1	740.46	6.0	9.0	9.0	25.0	PA/PF 33 63M2A	44	181
	4.2	365	1.2	662.46	6.0	9.0	9.0	25.0			
	4.8	323	1.5	585.48	6.0	9.0	9.0	25.0			
	5.3	289	1.8	523.81	6.0	9.0	9.0	25.0			
	6.6	232	2.2	421.10	6.0	9.0	9.0	25.0			
	8.3	187	2.6	339.07	7.0	9.0	9.0	25.0			
	3.8	429	0.8	238.88	4.0	6.0	-	-	PA/PF 22/02 71M6B / 71M6A	38	212
	5.4	301	1.2	167.14	4.0	6.0	7.0	14.0			
	6.7	243	1.5	135.06	4.0	6.0	7.0	13.0			
	7.7	211	1.7	117.62	4.0	6.0	-	-			
	4.1	389	0.9	344.50	4.0	6.0	7.0	18.0	PA/PF 22/02 63M4B	35	212
	4.9	321	1.1	284.14	4.0	6.0	7.0	16.0			
	5.9	270	1.3	238.88	4.0	6.0	-	-			
	8.4	189	1.8	167.14	4.0	6.0	7.0	14.0			
	10.4	153	2.2	135.06	4.0	6.0	7.0	13.0			
	11.9	133	2.6	117.62	4.0	6.0	-	-			
	5.1	294	0.9	552.93	4.0	6.0	-	-	PA/PF 22/02 63M2A	35	212
	6.3	236	1.1	444.02	4.0	6.0	6.0	19.0			
	8.1	183	1.4	344.50	4.0	6.0	7.0	18.0			
	9.9	151	1.7	284.14	4.0	6.0	7.0	16.0			
	11.7	127	2.0	238.88	4.0	6.0	-	-			
	16.8	89	2.9	167.14	4.0	6.0	7.0	14.0			
	4.1	397	0.9	217.60	5.0	6.0	7.0	16.0	PA/PF 23 71M6B / 71M6A	33	177
	5.0	328	1.0	179.61	5.0	6.0	7.0	15.0			
	6.0	276	1.1	151.11	5.0	6.0	7.0	15.0			
	7.3	227	1.6	124.10	4.0	6.0	7.0	15.0			
	9.0	184	1.9	100.53	4.0	6.0	8.0	14.0			
	10.2	161	2.2	88.24	4.0	6.0	7.0	12.0			
	11.5	142	2.5	78.00	4.0	6.0	7.0	12.0			
	13.9	118	3.0	64.80	4.0	6.0	7.0	11.0			
	4.3	373	0.9	323.31	4.0	6.0	7.0	17.0	PA/PF 23 63M4B	32	177
	5.3	302	1.1	261.93	5.0	6.0	7.0	17.0			
	6.4	251	1.4	217.60	5.0	6.0	7.0	16.0			
	7.8	207	1.5	179.61	5.0	6.0	7.0	15.0			
	9.3	174	1.7	151.11	5.0	6.0	7.0	15.0			
	11.3	143	2.4	124.10	4.0	6.0	7.0	15.0			
	13.9	116	2.9	100.53	4.0	6.0	8.0	14.0			
	6.7	230	1.1	417.44	4.0	6.0	7.0	20.0	PA/PF 23 63M2A	32	177
	8.7	178	1.4	323.31	4.0	6.0	7.0	17.0			
	10.7	145	1.8	261.93	5.0	6.0	7.0	17.0			
	12.9	120	2.2	217.60	5.0	6.0	7.0	16.0			
	15.6	99	2.4	179.61	5.0	6.0	7.0	15.0			
	18.5	83	2.7	151.11	5.0	6.0	7.0	15.0			
	10.4	160	1.6	86.26	5.0	6.0	7.0	13.0	PA/PF 22 71M6B / 71M6A	27	176
	12.9	129	2.1	69.74	5.0	6.0	7.0	13.0			
	8.2	197	0.9	109.78	3.0	4.0	-	-	PA/PF 12/02 71M6B / 71M6A	23	212
	9.8	166	1.0	92.29	3.0	4.0	5.0	10.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.18	8.4	187	1.0	165.75	3.0	4.0	-	-	PA/PF 12/02 63M4B	23	212
	10.5	150	1.1	133.10	3.0	4.0	5.0	11.0			
	12.8	124	1.3	109.78	3.0	4.0	-	-			
	15.2	104	1.6	92.29	3.0	4.0	5.0	10.0			
	8.2	181	0.8	340.07	3.0	4.0	-	-	PA/PF 12/02 63M2A	23	212
	10.6	140	1.0	263.85	3.0	4.0	-	-			
	13.1	114	1.2	213.21	3.0	4.0	5.0	13.0			
	16.9	88	1.6	165.75	3.0	4.0	-	-			
	21.0	71	1.8	133.10	3.0	4.0	5.0	11.0			
	25.5	58	2.1	109.78	3.0	4.0	-	-			
	30.3	49	2.5	92.29	3.0	4.0	5.0	10.0			
	8.3	198	0.9	108.73	3.0	4.0	5.0	11.0	PA/PF 13 71M6B / 71M6A	23	173
	10.5	156	1.2	85.57	3.0	4.0	5.0	10.0			
	13.1	125	1.6	68.46	3.0	4.0	5.0	9.0			
	7.2	226	0.9	195.71	3.0	4.0	4.0	13.0	PA/PF 13 63M4B	20	173
	8.8	184	0.9	159.23	3.0	4.0	4.0	13.0			
	10.6	153	1.0	132.48	3.0	4.0	5.0	12.0			
	12.9	125	1.4	108.73	3.0	4.0	5.0	11.0			
	16.4	99	1.8	85.57	3.0	4.0	5.0	10.0			
	20.4	79	2.5	68.46	3.0	4.0	5.0	9.0			
	10.2	152	0.9	275.17	3.0	4.0	5.0	15.0	PA/PF 13 63M2A	20	173
	11.4	135	1.0	244.64	3.0	4.0	5.0	14.0			
	14.3	108	1.4	195.71	3.0	4.0	4.0	13.0			
	17.6	88	1.4	159.23	3.0	4.0	4.0	13.0			
	21.1	73	1.5	132.48	3.0	4.0	5.0	12.0			
	25.8	60	2.2	108.73	3.0	4.0	5.0	11.0			
	32.7	47	2.8	85.57	3.0	4.0	5.0	10.0			
	12.4	135	1.1	72.60	4.0	4.0	5.0	10.0	PA/PF 12 71M6B / 71M6A	18	172
	14.7	114	1.4	61.31	4.0	4.0	5.0	10.0			
	16.7	100	1.9	53.84	4.0	4.0	5.0	10.0			
	18.8	89	2.1	47.86	4.0	4.0	5.0	9.0			
	20.9	80	2.1	43.07	4.0	4.0	5.0	9.0			
	23.5	71	2.7	38.29	4.0	4.0	5.0	8.0			
	25.7	65	2.4	35.04	4.0	4.0	5.0	9.0			
	28.9	58	3.0	31.15	4.0	4.0	5.0	8.0			
	30.9	54	2.4	29.16	4.0	4.0	5.0	8.0			
	34.7	48	3.0	25.92	4.0	4.0	5.0	8.0			
	19.3	84	1.7	72.60	4.0	4.0	5.0	10.0	PA/PF 12 63M4B	15	172
	22.8	71	2.2	61.31	4.0	4.0	5.0	10.0			
	26.0	62	2.8	53.84	4.0	4.0	5.0	10.0			
	38.6	42	2.5	72.60	4.0	4.0	5.0	10.0	PA/PF 12 63M2A	15	172
	111.1	15	2.1	8.10	-	-	-	-	PA/PF 11 71M6B / 71M6A	15	158
	153.7	11	2.1	9.11	-	4.0	-	-	PA/PF 11 63M4B	11	158
	13.7	119	1.0	65.46	2.0	3.0	3.0	6.0	PA/PF 03 71M6B / 71M6A	20	169
	13.3	121	0.8	105.24	2.0	3.0	-	-	PA/PF 03 63M4B	17	169
	17.2	94	1.1	81.52	2.0	3.0	3.0	6.0			
	21.4	76	1.5	65.46	2.0	3.0	3.0	6.0			
	16.4	94	0.9	170.56	2.0	3.0	3.0	6.0	PA/PF 03 63M2A	17	169
	18.5	83	1.0	151.24	2.0	3.0	3.0	6.0			
	22.4	69	1.2	124.74	2.0	3.0	3.0	6.0			
	26.6	58	1.2	105.24	2.0	2.0	-	-			
	34.3	45	1.8	81.52	2.0	3.0	3.0	6.0			
	42.8	36	2.3	65.46	2.0	3.0	3.0	6.0			
	14.7	113	0.8	61.24	2.0	3.0	3.0	6.0	PA/PF 02 71M6B / 71M6A	17	168
	16.8	99	0.9	53.64	2.0	3.0	3.0	6.0			
	21.7	77	1.3	41.56	2.0	3.0	3.0	6.0			
	27.0	62	1.6	33.37	2.0	3.0	3.0	6.0			
	30.4	55	1.8	29.59	2.0	3.0	3.0	6.0			
	32.7	51	1.8	27.52	2.0	3.0	3.0	6.0			
	36.9	45	2.1	24.41	2.0	3.0	3.0	6.0			
	38.9	43	1.9	23.14	2.0	3.0	3.0	6.0			
	43.7	38	2.0	20.59	2.0	3.0	3.0	6.0			
	56.4	30	2.6	15.95	2.0	3.0	3.0	6.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.18	19.2	86	1.0	73.03	2.0	3.0	3.0	6.0	PA/PF 02 63M4B	13	168
	22.9	72	1.2	61.24	2.0	3.0	3.0	6.0			
	26.1	63	1.4	53.64	2.0	3.0	3.0	6.0			
	33.7	49	2.0	41.56	2.0	3.0	3.0	6.0			
	42.0	39	2.4	33.37	2.0	3.0	3.0	6.0			
	50.9	32	2.7	27.52	2.0	3.0	3.0	6.0			
	60.5	27	2.9	23.14	2.0	3.0	3.0	6.0			
	68.0	24	3.0	20.59	2.0	3.0	3.0	6.0			
	38.3	42	1.6	73.03	2.0	3.0	3.0	6.0	PA/PF 02 63M2A	13	168
	45.7	35	1.9	61.24	2.0	3.0	3.0	6.0			
	52.2	31	2.2	53.64	2.0	3.0	3.0	6.0			
0.25	0.1	27362	0.8	11293.72	101.0	120.0	-	-	PA/PF 103/53 71M6C / 71M6D	816	218
	0.1	20522	1.0	8470.29	81.0	66.0	-	-			
	0.1	17336	1.2	7155.29	81.0	66.0	-	-			
	0.2	14044	1.5	5796.64	81.0	66.0	-	-			
	0.2	10233	2.1	4223.52	81.0	66.0	-	-			
	0.3	8386	2.5	3461.37	81.0	66.0	-	-			
	0.1	21571	0.9	14373.83	101.0	120.0	-	-	PA/PF 103/53 71M4A / 71M4B	816	218
	0.1	16949	1.2	11293.72	101.0	120.0	-	-			
	0.2	12711	1.6	8470.29	101.0	120.0	-	-			
	0.2	10738	1.9	7155.29	101.0	120.0	-	-			
	0.2	8699	2.3	5796.64	101.0	120.0	-	-			
	0.3	6338	3.2	4223.52	101.0	120.0	-	-			
	0.1	16836	0.8	6948.97	66.0	80.0	-	-	PA/PF 93/43 71M6C / 71M6D	564	218
	0.2	13982	0.9	5771.01	66.0	80.0	-	-			
	0.2	10420	1.2	4300.67	66.0	80.0	-	-			
	0.2	9039	1.4	3730.70	66.0	80.0	-	-			
	0.3	6577	1.9	2714.80	66.0	80.0	-	-			
	0.4	5328	2.4	2199.04	66.0	80.0	-	-			
	0.2	12796	1.0	8526.73	66.0	80.0	-	-	PA/PF 93/43 71M4A / 71M4B	564	218
	0.2	10428	1.2	6948.97	66.0	80.0	-	-			
	0.2	8661	1.4	5771.01	66.0	80.0	-	-			
	0.3	6454	1.9	4300.67	66.0	80.0	-	-			
	0.4	5599	2.2	3730.70	66.0	80.0	-	-			
	0.5	4074	3.0	2714.80	66.0	80.0	-	-			
	0.2	11020	0.8	4548.59	44.0	65.0	-	-	PA/PF 83/33 71M6C / 71M6D	364	218
	0.2	10402	0.8	6931.18	44.0	65.0	-	-	PA/PF 83/33 71M4A / 71M4B	364	218
	0.3	8153	1.0	5432.52	44.0	65.0	-	-			
	0.3	6826	1.2	4548.59	44.0	65.0	-	-			
	0.3	7477	0.8	10858.81	44.0	65.0	-	-	PA/PF 83/33 63M2B	361	218
	0.3	5903	1.0	8572.29	44.0	65.0	-	-			
	0.4	4773	1.3	6931.18	44.0	65.0	-	-			
	0.5	3741	1.6	5432.52	44.0	65.0	-	-			
	0.6	3132	1.9	4548.59	44.0	65.0	-	-			
	0.5	4140	2.0	1683.27	44.0	65.0	-	-	PA/PF 83/32 71M6C / 71M6D	355	214
	0.8	2833	3.0	1151.94	44.0	65.0	62.0	65.0			
	0.3	6647	0.8	4429.50	28.0	39.0	-	-	PA/PF 73/23 71M4A / 71M4B	245	218
	0.4	4545	0.8	6600.95	28.0	39.0	-	-	PA/PF 73/23 63M2B	242	218
	0.5	3776	1.0	5483.87	28.0	39.0	-	-			
	0.6	3050	1.2	4429.50	28.0	39.0	-	-			
	0.3	6822	0.8	2773.38	28.0	39.0	-	-	PA/PF 73/22 71M6C / 71M6D	237	214
	0.7	3081	1.7	1252.41	28.0	39.0	39.0	50.0			
	0.8	2699	1.9	1097.40	28.0	39.0	39.0	50.0			
	1.0	2180	2.4	886.40	11.0	3.0	40.0	50.0			
	1.2	1811	2.9	736.40	11.0	3.0	40.0	50.0			
	0.4	5270	0.9	3433.54	28.0	39.0	-	-	PA/PF 73/22 71M4A / 71M4B	237	214
	0.5	4257	1.2	2773.38	28.0	39.0	-	-			
	1.1	1922	2.6	1252.41	28.0	39.0	39.0	50.0			
	1.3	1684	3.0	1097.40	28.0	39.0	39.0	50.0			
	0.5	4065	0.8	1677.79	19.0	45.0	-	-	PA/PF 63/23 71M6C / 71M6D	164	218
	0.6	3418	1.0	1410.80	19.0	45.0	27.0	45.0			
	0.8	2584	1.3	1066.44	20.0	45.0	28.0	45.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
0.25	0.5	4227	0.8	2816.75	19.0	45.0	-	-	PA/PF 63/23 71M4A / 71M4B	164	218
	0.6	3245	1.0	2162.48	19.0	45.0	-	-			
	0.8	2518	1.3	1677.79	19.0	45.0	-	-			
	1.0	2117	1.5	1410.80	19.0	45.0	27.0	45.0			
	1.3	1600	2.0	1066.44	20.0	45.0	28.0	45.0			
	0.6	3009	0.8	4370.02	19.0	45.0	-	-	PA/PF 63/23 63M2B	161	218
	0.8	2335	1.0	3390.53	19.0	45.0	-	-			
	1.0	1940	1.3	2816.75	19.0	45.0	-	-			
	1.3	1489	1.6	2162.48	19.0	45.0	-	-			
	1.7	1155	2.1	1677.79	19.0	45.0	-	-			
	2.0	971	2.5	1410.80	19.0	45.0	27.0	45.0			
	1.1	2093	1.6	851.02	20.0	41.0	27.0	45.0	PA/PF 63/22 71M6C / 71M6D	156	214
	1.2	1790	1.9	727.77	20.0	41.0	28.0	45.0			
	1.6	1363	2.5	554.24	14.0	7.0	28.0	45.0			
	1.6	1306	2.4	851.02	20.0	41.0	27.0	45.0	PA/PF 63/22 71M4A / 71M4B	156	214
	1.9	1117	2.9	727.77	20.0	41.0	28.0	45.0			
	1.0	2298	0.8	920.36	13.0	24.0	19.0	40.0	PA/PF 52/12 71M6C / 71M6D	98	212
	1.3	1724	1.1	690.27	14.0	24.0	19.0	40.0			
	1.7	1354	1.4	542.36	14.0	24.0	20.0	40.0			
	1.8	1228	1.6	491.74	14.0	24.0	20.0	40.0			
	2.5	885	2.2	354.34	13.0	24.0	-	-			
	3.2	707	2.7	283.16	13.0	24.0	-	-			
	1.0	2239	0.8	1427.20	11.0	24.0	18.0	40.0	PA/PF 52/12 71M4A / 71M4B	98	212
	1.2	1794	1.0	1143.76	13.0	24.0	-	-			
	1.5	1444	1.3	920.36	13.0	24.0	19.0	40.0			
	2.0	1083	1.7	690.27	14.0	24.0	19.0	40.0			
	2.6	851	2.2	542.36	14.0	24.0	20.0	40.0			
	2.8	772	2.4	491.74	14.0	24.0	20.0	40.0			
	1.3	1559	0.9	2108.36	11.0	24.0	-	-	PA/PF 52/12 63M2B	95	212
	1.6	1268	1.1	1715.38	11.0	24.0	-	-			
	2.0	1055	1.3	1427.20	11.0	24.0	18.0	40.0			
	3.0	681	2.0	920.36	13.0	24.0	19.0	40.0			
	4.1	510	2.7	690.27	14.0	24.0	19.0	40.0			
	1.3	1675	0.8	670.92	5.0	12.0	9.0	22.0	PA/PF 42/12 71M6C / 71M6D	69	212
	1.6	1375	0.9	550.63	5.0	12.0	11.0	26.0			
	2.1	1082	1.2	433.11	5.0	12.0	11.0	24.0			
	2.6	866	1.5	346.69	5.0	12.0	11.0	23.0			
	3.3	690	1.8	276.49	5.0	12.0	12.0	22.0			
	3.9	573	2.2	229.62	5.0	12.0	-	-	PA/PF 42/12 71M4A / 71M4B	69	212
	5.3	422	3.0	169.11	5.0	12.0	-	-			
	1.9	1177	1.0	750.00	5.0	12.0	11.0	27.0			
	2.1	1053	1.1	670.92	5.0	12.0	9.0	22.0			
	2.5	864	1.4	550.63	5.0	12.0	11.0	26.0			
	3.2	680	1.8	433.11	5.0	12.0	11.0	24.0	PA/PF 42/12 63M2B	66	212
	4.0	544	2.2	346.69	5.0	12.0	11.0	23.0			
	5.1	434	2.8	276.49	5.0	12.0	12.0	22.0			
	1.8	1154	0.8	1561.18	5.0	12.0	-	-			
	2.0	1030	0.9	1393.57	5.0	12.0	9.0	30.0			
	2.5	824	1.1	1114.85	5.0	12.0	10.0	29.0	PA/PF 43 71M6C / 71M6D	68	185
	3.7	555	1.6	750.00	5.0	12.0	11.0	27.0			
	5.1	407	2.2	550.63	5.0	12.0	11.0	26.0			
	6.5	320	2.8	433.11	5.0	12.0	11.0	24.0			
	1.7	1339	0.8	528.04	7.0	12.0	11.0	23.0			
	2.1	1068	1.2	421.21	8.0	12.0	11.0	22.0	PA/PF 43 71M4A / 71M4B	68	185
	2.5	912	1.5	359.61	8.0	12.0	11.0	22.0			
	3.0	757	1.6	298.65	8.0	12.0	11.0	21.0			
	3.4	669	2.0	264.02	8.0	12.0	11.0	20.0			
	4.1	556	2.3	219.26	8.0	12.0	11.0	19.0			
	4.9	464	2.3	182.86	8.0	12.0	12.0	19.0	PA/PF 43 71M4A / 71M4B	68	185
	1.8	1224	0.8	763.70	5.0	12.0	10.0	25.0			
	2.3	991	1.1	618.49	7.0	12.0	10.0	24.0			
	2.7	846	1.2	528.04	7.0	12.0	11.0	23.0			
	3.3	675	1.8	421.21	8.0	12.0	11.0	22.0			
	3.9	576	2.2	359.61	8.0	12.0	11.0	22.0	PA/PF 43 71M4A / 71M4B	68	185
	4.7	479	2.3	298.65	8.0	12.0	11.0	21.0			
	5.3	423	3.0	264.02	8.0	12.0	11.0	20.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.25	3.4	668	1.0	267.35	5.0	9.0	9.0	22.0	PA/PF 32/12 71M6C / 71M6D	51	212
	4.2	538	1.2	215.28	5.0	9.0	9.0	19.0			
	5.4	417	1.6	167.16	5.0	9.0	-	-			
	6.1	370	1.8	148.00	5.0	9.0	-	-			
	7.1	315	2.1	126.22	6.0	9.0	-	-			
	3.1	700	0.9	446.08	6.0	9.0	9.0	25.0	PA/PF 32/12 71M4A / 71M4B	51	212
	3.9	569	1.1	362.93	5.0	9.0	-	-			
	5.2	419	1.5	267.35	5.0	9.0	9.0	22.0			
	6.5	338	1.8	215.28	5.0	9.0	9.0	19.0			
	8.4	262	2.4	167.16	5.0	9.0	-	-			
	9.5	232	2.7	148.00	5.0	9.0	-	-			
	4.0	517	0.9	699.71	6.0	9.0	9.0	25.0	PA/PF 32/12 63M2B	48	212
	5.0	410	1.1	554.87	6.0	9.0	8.0	25.0			
	6.3	330	1.4	446.08	6.0	9.0	9.0	25.0			
	7.7	268	1.8	362.93	5.0	9.0	-	-			
	10.5	198	2.4	267.35	5.0	9.0	9.0	22.0			
	13.0	159	3.0	215.28	5.0	9.0	9.0	19.0			
	2.7	860	0.8	339.07	6.0	9.0	9.0	23.0	PA/PF 33 71M6C / 71M6D	47	181
	3.6	629	1.1	248.21	7.0	9.0	9.0	22.0			
	4.3	525	1.3	206.97	7.0	9.0	9.0	21.0			
	5.4	422	1.7	166.39	7.0	9.0	9.0	20.0			
	6.7	340	2.0	133.98	7.0	9.0	9.0	19.0			
	8.0	284	2.0	112.18	6.0	9.0	-	-	PA/PF 33 71M4A / 71M4B	47	181
	10.2	224	2.5	88.29	6.0	9.0	-	-			
	2.7	840	0.8	523.81	6.0	9.0	9.0	25.0			
	3.3	675	1.0	421.10	6.0	9.0	9.0	24.0			
	4.1	544	1.2	339.07	6.0	9.0	9.0	23.0			
	5.6	398	1.7	248.21	7.0	9.0	9.0	22.0	PA/PF 33 63M2B	44	181
	6.8	332	2.0	206.97	7.0	9.0	9.0	21.0			
	8.4	267	2.5	166.39	7.0	9.0	9.0	20.0			
	10.4	215	3.0	133.98	7.0	9.0	9.0	19.0			
	12.5	180	3.0	112.18	6.0	9.0	-	-			
	3.8	567	0.8	740.46	6.0	9.0	9.0	25.0	PA/PF 32 71M6C / 71M6D	38	180
	4.2	508	0.8	662.46	6.0	9.0	9.0	25.0			
	4.8	449	1.1	585.48	6.0	9.0	9.0	25.0			
	5.3	401	1.3	523.81	6.0	9.0	9.0	25.0			
	6.6	323	1.6	421.10	6.0	9.0	9.0	24.0			
	8.3	260	1.9	339.07	6.0	9.0	9.0	23.0	PA/PF 22/02 71M6C / 71M6D	38	212
	11.3	190	2.7	248.21	7.0	9.0	9.0	22.0			
	5.4	417	0.9	167.14	4.0	6.0	7.0	14.0			
	6.7	337	1.1	135.06	4.0	6.0	7.0	13.0			
	7.7	294	1.2	117.62	4.0	6.0	7.0	12.0			
	4.9	446	0.8	284.14	4.0	6.0	7.0	16.0	PA/PF 22/02 71M4A / 71M4B	38	212
	5.9	375	0.9	238.88	4.0	6.0	-	-			
	8.4	262	1.3	167.14	4.0	6.0	7.0	14.0			
	10.4	212	1.6	135.06	4.0	6.0	7.0	13.0			
	11.9	185	1.8	117.62	4.0	6.0	7.0	12.0			
	6.3	328	0.8	444.02	4.0	6.0	6.0	19.0	PA/PF 22/02 63M2B	35	212
	8.1	255	1.0	344.50	4.0	6.0	7.0	18.0			
	9.9	210	1.2	284.14	4.0	6.0	7.0	16.0			
	11.7	177	1.5	238.88	4.0	6.0	-	-			
	16.8	124	2.1	167.14	4.0	6.0	7.0	14.0			
	20.7	100	2.6	135.06	4.0	6.0	7.0	13.0	PA/PF 23 71M6C / 71M6D	33	177
	23.8	87	3.0	117.62	4.0	6.0	7.0	12.0			
	6.0	383	0.8	151.11	5.0	6.0	7.0	14.0			
	7.3	315	1.1	124.10	4.0	6.0	7.0	13.0			
	9.0	255	1.4	100.53	4.0	6.0	7.0	12.0			
	10.2	224	1.6	88.24	4.0	6.0	7.0	12.0			
	11.5	198	1.8	78.00	4.0	6.0	7.0	12.0			
	13.9	164	2.2	64.80	4.0	6.0	7.0	11.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.25	5.3	420	0.8	261.93	4.0	6.0	6.0	16.0	PA/PF 23 71M4A / 71M4B	33	173
	6.4	349	1.0	217.60	4.0	6.0	7.0	15.0			
	7.8	288	1.1	179.61	5.0	6.0	7.0	15.0			
	9.3	242	1.2	151.11	5.0	6.0	7.0	14.0			
	11.3	199	1.7	124.10	4.0	6.0	7.0	15.0			
	13.9	161	2.1	100.53	4.0	6.0	8.0	14.0			
	15.9	141	2.4	88.24	4.0	6.0	7.0	12.0			
	17.9	125	2.7	78.00	4.0	6.0	7.0	12.0			
	6.7	320	0.8	417.44	4.0	6.0	7.0	20.0	PA/PF 23 63M2B	32	173
	8.7	248	1.0	323.31	4.0	6.0	7.0	17.0			
	10.7	201	1.3	261.93	4.0	6.0	6.0	16.0			
	12.9	167	1.5	217.60	4.0	6.0	7.0	15.0			
	15.6	138	1.7	179.61	5.0	6.0	7.0	15.0			
	18.5	116	1.9	151.11	5.0	6.0	7.0	14.0			
	22.6	95	2.7	124.10	4.0	6.0	7.0	13.0			
	10.4	222	1.2	86.26	5.0	6.0	7.0	13.0	PA/PF 22 71M6C / 71M6D	27	172
	12.9	179	1.5	69.74	5.0	6.0	7.0	13.0			
	16.3	142	2.4	55.25	5.0	6.0	8.0	11.0			
	19.6	118	2.6	45.90	5.0	6.0	8.0	11.0			
	16.2	141	1.8	86.26	5.0	6.0	7.0	13.0	PA/PF 22 71M4A / 71M4B	27	172
	20.1	114	2.3	69.74	5.0	6.0	7.0	13.0			
	88.2	27	1.6	10.20	-	-	-	-	PA/PF 21 71M6C / 71M6D	29	160
	137.3	17	2.3	10.20	-	4.0	-	-	PA/PF 21 71M4A / 71M4B	29	160
	10.5	209	0.8	133.10	3.0	4.0	5.0	11.0	PA/PF 12/02 71M4A / 71M4B	26	212
	12.8	172	1.0	109.78	3.0	4.0	-	-			
	15.2	145	1.1	92.29	3.0	4.0	5.0	10.0			
	13.1	158	0.9	213.21	3.0	4.0	5.0	13.0	PA/PF 12/02 63M2B	23	212
	16.9	123	1.1	165.75	3.0	4.0	-	-			
	21.0	98	1.3	133.10	3.0	4.0	5.0	11.0			
	25.5	81	1.5	109.78	3.0	4.0	-	-			
	30.3	68	1.8	92.29	3.0	4.0	5.0	10.0			
	10.5	217	0.9	85.57	3.0	4.0	5.0	10.0	PA/PF 13 71M6C / 71M6D	23	173
	13.1	174	1.2	68.46	3.0	4.0	5.0	9.0			
	12.9	174	1.0	108.73	3.0	4.0	5.0	11.0	PA/PF 13 71M4A / 71M4B	23	173
	16.4	137	1.3	85.57	3.0	4.0	5.0	10.0			
	20.4	110	1.8	68.46	3.0	4.0	5.0	9.0			
	14.3	150	1.0	195.71	3.0	4.0	4.0	13.0	PA/PF 13 63M2B	20	173
	17.6	122	1.0	159.23	3.0	4.0	4.0	13.0			
	21.1	102	1.1	132.48	3.0	4.0	5.0	12.0			
	25.8	83	1.6	108.73	3.0	4.0	5.0	11.0			
	32.7	66	2.0	85.57	3.0	4.0	5.0	10.0			
	40.9	52	2.8	68.46	3.0	4.0	5.0	9.0			
	12.4	187	0.8	72.60	4.0	4.0	5.0	10.0	PA/PF 12 71M6C / 71M6D	18	172
	14.7	158	1.0	61.31	4.0	4.0	5.0	10.0			
	16.7	139	1.3	53.84	4.0	4.0	5.0	9.0			
	18.8	123	1.5	47.86	4.0	4.0	5.0	9.0			
	20.9	111	1.5	43.07	4.0	4.0	5.0	9.0			
	23.5	99	2.0	38.29	4.0	4.0	5.0	8.0			
	25.7	90	1.7	35.04	4.0	4.0	5.0	8.0			
	28.9	80	2.2	31.15	4.0	4.0	5.0	8.0			
	30.9	75	1.7	29.16	4.0	4.0	5.0	8.0			
	34.7	67	2.2	25.92	4.0	4.0	5.0	8.0			
	19.3	116	1.2	72.60	4.0	4.0	5.0	10.0	PA/PF 12 71M4A / 71M4B	18	172
	22.8	98	1.6	61.31	4.0	4.0	5.0	10.0			
	26.0	86	2.0	53.84	4.0	4.0	5.0	9.0			
	29.3	77	2.3	47.86	4.0	4.0	5.0	9.0			
	32.5	69	2.3	43.07	4.0	4.0	5.0	9.0			
	36.6	61	3.0	38.29	4.0	4.0	5.0	8.0			
	40.0	56	2.7	35.04	4.0	4.0	5.0	8.0			
	48.0	47	2.7	29.16	4.0	4.0	5.0	8.0			
	38.6	58	1.8	72.60	4.0	4.0	5.0	10.0	PA/PF 12 63M2B	15	172
	45.7	49	2.4	61.31	4.0	4.0	5.0	10.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.25	111.1	21	1.5	8.10	-	-	-	-	PA/PF 11 71M6C / 71M6D	15	158
	153.7 172.8	15 14	1.5 2.2	9.11 8.10	- -	4.0 4.0	- -	- -	PA/PF 11 71M4A / 71M4B	15	158
	307.4	7	2.3	9.11	-	-	-	-	PA/PF 11 63M2B	11	158
	17.2 21.4	131 105	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/PF 03 71M4A / 71M4B	20	169
	22.4 26.6 34.3 42.8	96 81 62 50	0.8 0.9 1.3 1.7	124.74 105.24 81.52 65.46	2.0 2.0 2.0 2.0	3.0 3.0 3.0 3.0	3.0 - 3.0 3.0	6.0 - 6.0 6.0	PA/PF 03 63M2B	17	169
	21.7 27.0 30.4 32.7 36.9 38.9 43.7 56.4 70.3 80.1 90.5 97.1	107 86 76 71 63 60 53 41 33 29 26 24	1.0 1.2 1.3 1.3 1.5 1.4 1.5 1.8 2.2 2.4 2.6 2.9	41.56 33.37 29.59 27.52 24.41 23.14 20.59 15.95 12.81 11.24 9.94 9.27	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	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0	PA/PF 02 71M6C / 71M6D	17	168
	22.9 26.1 33.7 42.0 47.3 50.9 57.4 60.5 68.0 87.8	100 88 68 55 48 45 40 38 34 26	0.9 1.0 1.5 1.8 1.9 1.9 2.2 2.1 2.2 2.8	61.24 53.64 41.56 33.37 29.59 27.52 24.41 23.14 20.59 15.95	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	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	PA/PF 02 71M4A / 71M4B	17	168
	38.3 45.7 52.2 67.4 83.9 101.7	58 49 43 33 26 22	1.2 1.4 1.6 2.3 2.8 3.0	73.03 61.24 53.64 41.56 33.37 27.52	2.0 2.0 2.0 2.0 2.0 2.0	3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0	6.0 6.0 6.0 6.0 6.0 6.0	PA/PF 02 63M2B	13	168
0.37	0.1 0.2 0.2 0.3 0.3	25657 20785 15144 12412 9752	0.8 1.0 1.4 1.7 2.2	7155.29 5796.64 4223.52 3461.37 2719.64	101.0 101.0 101.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0	- - - - -	- - - - -	PA/PF 103/53 80M6A	818	218
	0.1 0.2 0.2 0.2 0.3 0.4	25084 18813 15892 12875 9381 7688	0.8 1.1 1.3 1.6 2.1 2.6	11293.72 8470.29 7155.29 5796.64 4223.52 3461.37	101.0 101.0 101.0 101.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0 120.0	- - - - - -	- - - - - -	PA/PF 103/53 71M4B / 71M4C	816	218
	0.2 0.2 0.3 0.4 0.5	14648 11509 8632 7292 5907	1.0 1.3 1.8 2.1 2.6	14373.83 11293.72 8470.29 7155.29 5796.64	101.0 101.0 101.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0	- - - - -	- - - - -	PA/PF 103/53 71M2A	816	218
	0.2 0.2 0.3 0.4	15421 13377 9735 7885	0.8 1.0 1.3 1.6	4300.67 3730.70 2714.80 2199.04	66.0 66.0 66.0 66.0	80.0 80.0 80.0 80.0	- - - -	- - - -	PA/PF 93/43 80M6A	566	218
	0.2 0.2 0.3 0.4 0.5 0.6	15434 12818 9552 8286 6030 4884	0.8 1.0 1.3 1.5 2.0 2.5	6948.97 5771.01 4300.67 3730.70 2714.80 2199.04	66.0 66.0 66.0 66.0 66.0 66.0	80.0 80.0 80.0 80.0 80.0 80.0	- - - - - -	- - - - - -	PA/PF 93/43 71M4B / 71M4C	564	218

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.37	0.2	11491	0.8	11275.92	66.0	80.0	-	-	PA/PF 93/43 71M2A	564	218
	0.3	8689	1.1	8526.73	66.0	80.0	-	-			
	0.4	7082	1.3	6948.97	66.0	80.0	-	-			
	0.5	5881	1.6	5771.01	66.0	80.0	-	-			
	0.7	4383	2.1	4300.67	66.0	80.0	-	-			
	0.8	3802	2.4	3730.70	57.0	52.0	-	-			
	0.3	10103	0.8	4548.59	44.0	65.0	-	-	PA/PF 83/33 71M4B / 71M4C	364	218
	0.4	7063	0.9	6931.18	44.0	65.0	-	-	PA/PF 83/33 71M2A	364	218
	0.5	5536	1.1	5432.52	44.0	65.0	-	-			
	0.6	4635	1.3	4548.59	44.0	65.0	-	-			
	0.3	10413	0.8	2860.33	44.0	65.0	-	-	PA/PF 83/32 80M6A	357	214
	0.4	7423	1.1	2039.02	44.0	65.0	-	-			
	0.5	6128	1.4	1683.27	44.0	65.0	-	-			
	0.8	4193	2.0	1151.94	44.0	65.0	62.0	65.0			
	1.0	3267	2.6	897.44	44.0	65.0	62.0	65.0			
	0.8	3824	2.1	1683.27	44.0	65.0	-	-	PA/PF 83/32 71M4B / 71M4C	355	214
	0.6	4514	0.8	4429.50	28.0	39.0	-	-	PA/PF 73/23 71M2A	245	218
	0.5	6454	0.8	1772.96	27.0	46.0	-	-	PA/PF 73/22 80M6A	239	214
	0.7	4559	1.2	1252.41	27.0	46.0	39.0	50.0			
	0.8	3995	1.3	1097.40	27.0	45.0	39.0	50.0			
	1.0	3227	1.6	886.40	27.0	43.0	40.0	50.0			
	1.2	2681	2.0	736.40	28.0	41.0	40.0	50.0			
	1.6	2062	2.5	566.43	28.0	39.0	40.0	50.0			
	0.5	6300	0.8	2773.38	27.0	46.0	-	-	PA/PF 73/22 71M4B / 71M4C	237	214
	1.1	2845	1.8	1252.41	27.0	46.0	39.0	50.0			
	1.3	2493	2.0	1097.40	27.0	45.0	39.0	50.0			
	1.6	2013	2.5	886.40	27.0	43.0	40.0	50.0			
	1.9	1673	3.0	736.40	28.0	41.0	40.0	50.0			
	0.8	3626	1.0	3433.54	27.0	46.0	-	-	PA/PF 73/22 71M2A	237	214
	1.0	2929	1.3	2773.38	27.0	46.0	-	-			
	2.2	1323	2.9	1252.41	27.0	46.0	39.0	50.0			
	0.8	3824	0.9	1066.44	18.0	45.0	27.0	45.0	PA/PF 63/23 80M6A	166	218
	0.8	3726	0.9	1677.79	16.0	45.0	-	-	PA/PF 63/23 71M4B / 71M4C	164	218
	1.0	3133	1.0	1410.80	16.0	45.0	25.0	45.0			
	1.3	2369	1.4	1066.44	18.0	45.0	27.0	45.0			
	1.0	2871	0.8	2816.75	16.0	45.0	-	-	PA/PF 63/23 71M2A	164	218
	1.3	2204	1.1	2162.48	16.0	45.0	-	-			
	1.7	1710	1.4	1677.79	16.0	45.0	-	-			
	2.0	1438	1.7	1410.80	16.0	45.0	25.0	45.0			
	2.6	1087	2.2	1066.44	18.0	45.0	27.0	45.0			
	1.1	3098	1.1	851.02	19.0	45.0	27.0	45.0	PA/PF 63/22 80M6A	158	214
	1.2	2649	1.3	727.77	19.0	43.0	28.0	45.0			
	1.6	2018	1.7	554.24	20.0	41.0	28.0	45.0			
	2.1	1566	2.1	430.20	20.0	37.0	28.0	45.0			
	2.4	1339	2.5	367.90	20.0	36.0	28.0	45.0			
	1.6	1933	1.7	851.02	19.0	45.0	27.0	45.0	PA/PF 63/22 71M4B / 71M4C	156	214
	1.9	1653	1.9	727.77	19.0	43.0	28.0	45.0			
	2.5	1259	2.5	554.24	20.0	41.0	28.0	45.0			
	3.3	899	2.7	851.02	19.0	45.0	27.0	45.0	PA/PF 63/22 71M2A	156	214
	1.3	2551	0.8	690.27	11.0	24.0	20.0	40.0	PA/PF 52/12 80M6A	100	212
	1.7	2004	1.0	542.36	11.0	24.0	20.0	40.0			
	1.8	1817	1.1	491.74	11.0	24.0	20.0	40.0			
	2.5	1310	1.5	354.34	11.0	24.0	-	-			
	3.2	1047	1.8	283.16	11.0	24.0	-	-			
	4.1	813	2.4	219.87	11.0	24.0	-	-			
	4.6	719	2.7	194.67	11.0	24.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.37	1.5	2137	0.9	920.36	11.0	24.0	19.0	40.0	PA/PF 52/12 71M4B / 71M4C	98	212
	2.0	1603	1.1	690.27	11.0	24.0	19.0	40.0			
	2.6	1259	1.5	542.36	11.0	24.0	20.0	40.0			
	2.8	1142	1.6	491.74	11.0	24.0	20.0	40.0			
	4.0	823	2.2	354.34	11.0	24.0	-	-			
	4.9	658	2.8	283.16	11.0	24.0	-	-	PA/PF 52/12 71M2A	98	212
	2.0	1562	0.9	1427.20	11.0	24.0	18.0	40.0			
	2.4	1252	1.1	1143.76	11.0	24.0	-	-			
	3.0	1007	1.4	920.36	11.0	24.0	19.0	40.0			
	4.1	755	1.8	690.27	11.0	24.0	19.0	40.0			
	5.2	594	2.3	542.36	11.0	24.0	20.0	40.0	PA/PF 53 80M6A	103	189
	5.7	538	2.6	491.74	11.0	24.0	20.0	40.0			
	1.5	2277	0.9	606.94	14.0	24.0	17.0	40.0			
	1.6	2059	1.0	548.64	14.0	24.0	18.0	40.0			
	1.8	1873	1.1	499.30	14.0	24.0	18.0	40.0			
	2.3	1472	1.3	392.31	14.0	24.0	19.0	40.0			
	2.4	1405	1.4	374.48	14.0	24.0	19.0	40.0			
	3.1	1104	2.1	294.23	14.0	24.0	19.0	40.0			
	3.7	922	2.1	245.73	14.0	24.0	20.0	40.0			
	3.8	888	2.3	236.60	14.0	24.0	20.0	40.0	PA/PF 42/12 80M6A	71	212
	4.8	698	2.7	185.90	14.0	24.0	20.0	40.0			
	5.1	666	3.0	177.45	14.0	24.0	20.0	40.0			
	2.1	1601	0.8	433.11	7.0	12.0	10.0	21.0			
	2.6	1281	1.0	346.69	5.0	12.0	11.0	23.0			
	3.3	1022	1.2	276.49	5.0	12.0	12.0	22.0			
	3.9	849	1.5	229.62	5.0	12.0	-	-			
	5.3	625	2.0	169.11	5.0	12.0	-	-	PA/PF 42/12 71M4B / 71M4C	69	212
	6.4	519	2.4	140.44	5.0	12.0	-	-			
	7.7	430	2.9	116.26	5.0	12.0	-	-			
	2.1	1558	0.8	670.92	3.0	12.0	9.0	22.0			
	2.5	1279	0.9	550.63	6.0	12.0	10.0	22.0			
	3.2	1006	1.2	433.11	7.0	12.0	10.0	21.0	PA/PF 42/12 71M2A	69	212
	4.0	805	1.5	346.69	5.0	12.0	11.0	23.0			
	5.1	642	1.9	276.49	5.0	12.0	12.0	22.0			
	6.1	533	2.3	229.62	5.0	12.0	-	-			
	3.7	821	1.1	750.00	3.0	12.0	11.0	27.0	PA/PF 43 80M6A	70	185
	4.2	734	1.2	670.92	3.0	12.0	9.0	22.0			
	5.1	603	1.5	550.63	6.0	12.0	10.0	22.0			
	6.5	474	1.9	433.11	7.0	12.0	10.0	21.0			
	8.1	379	2.4	346.69	5.0	12.0	11.0	23.0			
	10.1	303	3.0	276.49	5.0	12.0	12.0	22.0			
	2.1	1580	0.8	421.21	6.0	12.0	10.0	21.0			
	2.5	1349	1.0	359.61	7.0	12.0	11.0	20.0			
	3.0	1121	1.0	298.65	8.0	12.0	11.0	19.0	PA/PF 43 71M4B / 71M4C	68	185
	3.2	1045	1.3	278.52	8.0	12.0	10.0	18.0			
	3.4	991	1.3	264.02	8.0	12.0	11.0	19.0			
	3.9	868	1.4	231.31	8.0	12.0	11.0	17.0			
	4.1	823	1.5	219.26	8.0	12.0	11.0	19.0			
	4.4	767	1.8	204.49	8.0	12.0	11.0	17.0			
	4.9	686	1.6	182.86	8.0	12.0	11.0	18.0			
	5.3	637	1.9	169.82	5.0	12.0	11.0	16.0			
	6.4	531	2.1	141.63	5.0	12.0	11.0	16.0	PA/PF 43 71M2A	68	185
	7.0	485	2.7	129.27	5.0	12.0	12.0	16.0			
	8.4	403	2.9	107.36	5.0	12.0	11.0	15.0			
	2.3	1467	0.8	618.49	6.0	12.0	10.0	24.0			
	2.7	1253	0.8	528.04	6.0	12.0	11.0	23.0			
	3.3	999	1.2	421.21	6.0	12.0	10.0	21.0			
	3.9	853	1.5	359.61	7.0	12.0	11.0	20.0			
	4.7	709	1.6	298.65	8.0	12.0	11.0	19.0	PA/PF 43 71M2A	68	185
	5.3	626	2.0	264.02	8.0	12.0	11.0	19.0			
	6.4	520	2.3	219.26	8.0	12.0	11.0	19.0			
	7.7	434	2.3	182.86	8.0	12.0	11.0	18.0			
	3.7	866	0.9	763.70	6.0	12.0	10.0	25.0			
	4.5	701	1.2	618.49	6.0	12.0	10.0	24.0			
	5.3	599	1.3	528.04	6.0	12.0	11.0	23.0			
	6.6	478	1.9	421.21	6.0	12.0	10.0	21.0			
	7.8	408	2.4	359.61	7.0	12.0	11.0	20.0			
	9.4	339	2.5	298.65	8.0	12.0	11.0	19.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.37	4.2	796	0.8	215.28	5.0	9.0	9.0	19.0	PA/PF 32/12 80M6A	53	212
	5.4	618	1.1	167.16	5.0	9.0	-	-			
	6.1	547	1.2	148.00	5.0	9.0	-	-			
	7.1	466	1.4	126.22	5.0	9.0	-	-			
	11.0	304	2.1	82.19	6.0	9.0	-	-			
	5.2	621	1.0	267.35	6.0	9.0	9.0	22.0	PA/PF 32/12 71M4B / 71M4C	51	212
	6.5	500	1.2	215.28	5.0	9.0	9.0	19.0			
	8.4	388	1.6	167.16	5.0	9.0	-	-			
	9.5	344	1.8	148.00	5.0	9.0	-	-			
	11.1	293	2.1	126.22	5.0	9.0	-	-			
	5.0	607	0.8	554.87	6.0	9.0	0.8	25.0	PA/PF 32/12 71M2A	51	212
	6.3	488	1.0	446.08	6.0	9.0	9.0	25.0			
	7.7	397	1.2	362.93	6.0	9.0	-	-			
	10.5	293	1.6	267.35	6.0	9.0	9.0	22.0			
	13.0	236	2.0	215.28	5.0	9.0	9.0	19.0			
	16.8	183	2.6	167.16	5.0	9.0	-	-			
	18.9	162	2.9	148.00	5.0	9.0	-	-			
	4.3	777	0.9	206.97	6.0	9.0	9.0	20.0	PA/PF 33 80M6A	49	181
	5.4	624	1.1	166.39	7.0	9.0	9.0	19.0			
	6.7	503	1.4	133.98	7.0	9.0	9.0	18.0			
	8.0	421	1.4	112.18	6.0	9.0	-	-			
	10.2	331	1.7	88.29	6.0	9.0	-	-			
	4.1	804	0.8	339.07	6.0	9.0	9.0	23.0	PA/PF 33 71M4B / 71M4C	47	181
	5.6	589	1.1	248.21	6.0	9.0	9.0	21.0			
	6.8	491	1.4	206.97	6.0	9.0	9.0	20.0			
	8.4	395	1.7	166.39	7.0	9.0	9.0	19.0			
	10.4	318	2.0	133.98	7.0	9.0	9.0	18.0			
	12.5	266	2.1	112.18	6.0	9.0	-	-			
	15.9	209	2.6	88.29	6.0	9.0	-	-			
	5.3	594	0.9	523.81	6.0	9.0	9.0	25.0	PA/PF 33 71M2A	47	181
	6.6	478	1.1	421.10	6.0	9.0	9.0	24.0			
	8.3	385	1.3	339.07	6.0	9.0	9.0	23.0			
	11.3	281	1.8	248.21	6.0	9.0	9.0	21.0			
	13.5	235	2.2	206.97	6.0	9.0	9.0	20.0			
	16.8	189	2.7	166.39	7.0	9.0	9.0	19.0			
	11.1	310	1.7	81.27	7.0	9.0	9.0	16.0	PA/PF 32 80M6A	40	180
	12.4	277	2.1	72.71	7.0	9.0	9.0	16.0			
	14.0	245	2.7	64.26	7.0	9.0	9.0	15.0			
	15.7	219	2.9	57.49	7.0	9.0	9.0	15.0			
	17.2	197	2.6	81.27	7.0	9.0	9.0	16.0	PA/PF 32 71M4B / 71M4C	38	180
	88.2	39	2.4	10.20	-	-	-	-	PA/PF 31 80M6A	27	162
	7.7	435	0.8	117.62	4.0	6.0	7.0	12.0	PA/PF 22/02 80M6A	40	212
	8.4	388	0.9	167.14	5.0	6.0	7.0	14.0	PA/PF 22/02 71M4B / 71M4C	38	212
	10.4	314	1.1	135.06	4.0	6.0	7.0	13.0			
	11.9	273	1.2	117.62	4.0	6.0	7.0	12.0			
	9.9	311	0.8	284.14	5.0	6.0	7.0	16.0	PA/PF 22/02 71M2A	38	212
	11.7	261	1.0	238.88	5.0	6.0	-	-			
	16.8	183	1.4	167.14	5.0	6.0	7.0	14.0			
	20.7	148	1.7	135.06	4.0	6.0	7.0	13.0			
	23.8	129	2.0	117.62	4.0	6.0	7.0	12.0			
	7.3	466	0.8	124.10	5.0	6.0	7.0	13.0	PA/PF 23 80M6A	37	177
	9.0	377	0.9	100.53	5.0	6.0	7.0	12.0			
	10.2	331	1.1	88.24	5.0	6.0	7.0	12.0			
	11.5	293	1.2	78.00	5.0	6.0	7.0	12.0			
	13.9	243	1.5	64.80	5.0	6.0	7.0	11.0			
	9.3	359	0.8	151.11	5.0	6.0	7.0	14.0	PA/PF 23 71M4B / 71M4C	33	177
	11.3	294	1.2	124.10	5.0	6.0	7.0	13.0			
	13.9	239	1.4	100.53	5.0	6.0	7.0	12.0			
	15.9	209	1.6	88.24	5.0	6.0	7.0	12.0			
	17.9	185	1.8	78.00	5.0	6.0	7.0	12.0			
	21.6	154	2.2	64.80	5.0	6.0	7.0	11.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
0.37	10.7	297	0.9	261.93	5.0	6.0	6.0	16.0	PA/PF 23 71M2A	33	177
	12.9	247	1.0	217.60	5.0	6.0	7.0	15.0			
	15.6	204	1.2	179.61	5.0	6.0	7.0	15.0			
	18.5	171	1.3	151.11	5.0	6.0	7.0	14.0			
	22.6	141	1.8	124.10	5.0	6.0	7.0	13.0			
	27.9	114	2.3	100.53	5.0	6.0	7.0	12.0			
	31.7	100	2.6	88.24	5.0	6.0	7.0	12.0			
	35.9	88	2.9	78.00	5.0	6.0	7.0	12.0			
	10.4	329	0.8	86.26	5.0	6.0	7.0	12.0	PA/PF 22 80M6A	29	176
	12.9	266	1.0	69.74	5.0	6.0	7.0	12.0			
	16.3	210	1.6	55.25	5.0	6.0	7.0	11.0			
	19.6	175	1.8	45.90	5.0	6.0	7.0	10.0			
	21.0	163	2.2	42.79	5.0	6.0	7.0	10.0			
	25.3	135	2.6	35.55	5.0	6.0	7.0	9.0			
	30.7	112	2.7	29.34	5.0	6.0	7.0	9.0			
	36.5	94	2.7	24.69	5.0	6.0	8.0	9.0			
	16.2	209	1.2	86.26	5.0	6.0	7.0	12.0	PA/PF 22 71M4B / 71M4C	27	176
	20.1	169	1.6	69.74	5.0	6.0	7.0	12.0			
	25.3	134	2.4	55.25	5.0	6.0	7.0	11.0			
	30.5	111	2.6	45.90	5.0	6.0	7.0	10.0			
	32.5	101	1.9	86.26	5.0	6.0	7.0	13.0	PA/PF 22 71M2A	27	176
	40.1	82	2.4	69.74	5.0	6.0	7.0	13.0			
	88.2	39	1.1	10.20	-	-	-	-	PA/PF 21 80M6A	31	160
	113.9	31	2.1	7.90	-	-	-	-			
	137.3	25	1.6	10.20	-	4.0	-	-	PA/PF 21 71M4B / 71M4C	29	160
	274.5	12	2.4	10.20	-	-	-	-			
	15.2	214	0.8	92.29	3.0	4.0	5.0	10.0	PA/PF 21 71M2A	29	160
	16.9	181	0.8	165.75	3.0	4.0	-	-			
	21.0	146	0.9	133.10	3.0	4.0	5.0	11.0	PA/PF 12/02 71M2A	26	212
	25.5	120	1.0	109.78	3.0	4.0	-	-			
	30.3	101	1.2	92.29	3.0	4.0	5.0	10.0			
	16.4	203	0.9	85.57	3.0	4.0	5.0	10.0			
	20.4	162	1.2	68.46	3.0	4.0	5.0	9.0	PA/PF 13 71M4B / 71M4C	23	173
	25.8	123	1.1	108.73	3.0	4.0	5.0	11.0			
	32.7	97	1.4	85.57	3.0	4.0	5.0	10.0	PA/PF 13 71M2A	23	173
	40.9	78	1.9	68.46	3.0	4.0	5.0	9.0			
	18.8	182	1.0	47.86	4.0	4.0	5.0	9.0	PA/PF 12 80M6A	20	172
	23.5	146	1.3	38.29	4.0	4.0	5.0	8.0			
	28.9	119	1.5	31.15	4.0	4.0	5.0	8.0			
	34.7	99	1.5	25.92	3.0	4.0	5.0	8.0			
	42.3	81	2.2	21.27	4.0	4.0	5.0	7.0			
	47.9	72	2.4	18.80	4.0	4.0	5.0	7.0			
	53.8	64	2.5	16.74	4.0	4.0	5.0	7.0			
	19.3	172	0.8	72.60	3.0	4.0	5.0	10.0	PA/PF 12 71M4B / 71M4C	18	172
	22.8	145	1.1	61.31	3.0	4.0	5.0	9.0			
	26.0	128	1.4	53.84	3.0	4.0	5.0	9.0			
	29.3	114	1.6	47.86	4.0	4.0	5.0	9.0			
	32.5	102	1.6	43.07	4.0	4.0	5.0	8.0			
	36.6	91	2.0	38.29	4.0	4.0	5.0	8.0			
	40.0	83	1.8	35.04	4.0	4.0	5.0	8.0			
	44.9	74	2.2	31.15	4.0	4.0	5.0	8.0			
	48.0	69	1.8	29.16	4.0	4.0	5.0	8.0			
	54.0	61	2.2	25.92	3.0	4.0	5.0	8.0			
	38.6	85	1.2	72.60	3.0	4.0	5.0	10.0	PA/PF 12 71M2A	18	172
	45.7	72	1.6	61.31	3.0	4.0	5.0	9.0			
	52.0	63	2.1	53.84	3.0	4.0	5.0	9.0			
	58.5	56	2.4	47.86	4.0	4.0	5.0	9.0			
	65.0	51	2.4	43.07	4.0	4.0	5.0	8.0			
	79.9	41	2.8	35.04	4.0	4.0	5.0	8.0			
	96.0	34	2.8	29.16	4.0	4.0	5.0	8.0			
	111.1	31	1.0	8.10	-	-	-	-	PA/PF 11 80M6A	16	158

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.37	153.7 172.8	23 20	1.0 1.5	9.11 8.10	- -	4.0 4.0	- -	- -	PA/PF 11 71M4B / 71M4C	15	158
	307.4 345.7	11 10	1.6 2.3	9.11 8.10	- -	- -	- -	- -	PA/PF 11 71M2A	15	158
	34.3 42.8	92 74	0.9 1.1	81.52 65.46	2.0 2.0	3.0 3.0	3.0 3.0	6.0 6.0	PA/PF 03 71M2A	20	169
	27.0 30.4 32.7 36.9 43.7 56.4 70.3 80.1 90.5 97.1 109.8 115.4 130.6 161.6	127 113 105 93 78 61 49 43 38 35 31 30 26 21	0.8 0.9 0.9 1.0 1.0 1.2 1.5 1.6 1.8 1.9 2.1 2.2 2.4 2.8	33.37 29.59 27.52 24.41 20.59 15.95 12.81 11.24 9.94 9.27 8.20 7.80 6.89 5.57	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	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	PA/PF 02 80M6A	18	168
	33.7 42.0 47.3 50.9 57.4 60.5 68.0 87.8 109.3 124.6 140.8 151.0	101 81 72 67 59 56 50 39 31 27 24 22	1.0 1.2 1.3 1.3 1.5 1.4 1.5 1.9 2.3 2.5 2.7 2.9	41.56 33.37 29.59 27.52 24.41 23.14 20.59 15.95 12.81 11.24 9.94 9.27	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	6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 5.0 5.0	PA/PF 02 71M4B / 71M4C	17	168
	38.3 45.7 52.2 67.4 83.9 94.6 101.7 114.7 121.0 136.0 175.5	86 72 63 49 39 35 32 29 27 24 19	0.8 0.9 1.1 1.5 1.9 2.0 2.0 2.4 2.2 2.3 2.9	73.03 61.24 53.64 41.56 33.37 29.59 27.52 24.41 23.14 20.59 15.95	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	- 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 5.0	PA/PF 02 71M2A	17	168
	0.2 0.3 0.3	22512 18450 14496	0.9 1.1 1.4	4223.52 3461.37 2719.64	101.0 101.0 101.0	120.0 120.0 120.0	- - -	- - -	PA/PF 103/53 80M6B	818	218
	0.2 0.2 0.3 0.4 0.5	23624 19138 13944 11428 8979	0.8 1.0 1.4 1.8 2.2	7155.29 5796.64 4223.52 3461.37 2719.64	101.0 101.0 101.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0	- - - - -	- - - - -	PA/PF 103/53 80M4B / 80M4C	818	218
	0.2 0.3 0.4 0.5 0.7 0.8	17108 12831 10839 8781 6398 5243	0.9 1.2 1.4 1.7 2.4 2.9	11293.72 8470.29 7155.29 5796.64 4223.52 3461.37	101.0 101.0 101.0 101.0 101.0 101.0	120.0 120.0 120.0 120.0 120.0 120.0	- - - - - -	- - - - - -	PA/PF 103/53 71M2B	816	218
	0.3 0.4	14470 11721	0.9 1.1	2714.80 2199.04	66.0 66.0	80.0 80.0	- -	- -	PA/PF 93/43 80M6B	566	218
	0.3 0.4 0.5 0.6	14199 12317 8963 7260	0.9 1.0 1.4 1.7	4300.67 3730.70 2714.80 2199.04	66.0 66.0 66.0 66.0	80.0 80.0 80.0 80.0	- - - -	- - - -	PA/PF 93/43 80M4B / 80M4C	566	218

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.55	0.4	10527	0.9	6948.97	66.0	80.0	-	-	PA/PF 93/43 71M2B	564	218
	0.5	8742	1.1	5771.01	66.0	80.0	-	-			
	0.7	6515	1.4	4300.67	66.0	80.0	-	-			
	0.8	5651	1.6	3730.70	66.0	80.0	-	-			
	1.0	4113	2.3	2714.80	66.0	80.0	-	-			
	1.3	3331	2.8	2199.04	66.0	80.0	-	-			
	0.6	6890	0.9	4548.59	44.0	65.0	-	-	PA/PF 83/33 71M2B	364	218
	0.4	11034	0.8	2039.02	44.0	65.0	-	-	PA/PF 83/32 80M6B	357	214
	0.5	9109	0.9	1683.27	44.0	65.0	-	-			
	0.8	6234	1.3	1151.94	44.0	65.0	62.0	65.0			
	1.0	4856	1.7	897.44	44.0	65.0	62.0	65.0			
	1.2	3910	2.1	722.63	44.0	65.0	62.0	65.0			
	0.5	9658	0.8	2860.33	44.0	65.0	-	-	PA/PF 83/32 80M4B / 80M4C	357	214
	0.7	6885	1.2	2039.02	44.0	65.0	-	-			
	0.8	5684	1.4	1683.27	44.0	65.0	-	-			
	1.2	3890	2.1	1151.94	44.0	65.0	62.0	65.0			
	1.6	3030	2.6	897.44	44.0	65.0	62.0	65.0			
	1.7	2642	2.3	1683.27	44.0	65.0	-	-	PA/PF 83/32 71M2B	355	214
	0.7	6777	0.8	1252.41	24.0	42.0	37.0	50.0	PA/PF 73/22 80M6B	239	214
	0.8	5938	0.9	1097.40	25.0	41.0	38.0	50.0			
	1.0	4797	1.1	886.40	26.0	40.0	40.0	50.0			
	1.2	3985	1.3	736.40	27.0	39.0	39.0	50.0			
	1.6	3065	1.7	566.43	27.0	37.0	40.0	50.0			
	2.0	2476	2.1	457.52	27.0	46.0	40.0	50.0			
	2.6	1876	2.8	346.75	27.0	46.0	40.0	50.0			
	0.8	5987	0.8	1772.96	24.0	42.0	-	-	PA/PF 73/22 80M4B / 80M4C	239	214
	1.1	4229	1.2	1252.41	24.0	42.0	37.0	50.0			
	1.3	3705	1.3	1097.40	25.0	41.0	38.0	50.0			
	1.6	2993	1.7	886.40	26.0	40.0	40.0	50.0			
	1.9	2487	2.0	736.40	27.0	39.0	39.0	50.0			
	2.5	1913	2.6	566.43	27.0	37.0	40.0	50.0			
	1.0	4354	0.9	2773.38	24.0	42.0	-	-	PA/PF 73/22 71M2B	237	214
	2.2	1966	1.9	1252.41	24.0	42.0	37.0	50.0			
	2.6	1723	2.2	1097.40	25.0	41.0	38.0	50.0			
	3.2	1391	2.7	886.40	26.0	40.0	39.0	50.0			
	1.3	3521	0.9	1066.44	14.0	43.0	24.0	45.0	PA/PF 63/23 80M4B / 80M4C	166	218
	1.7	2542	1.0	1677.79	14.0	43.0	-	-	PA/PF 63/23 71M2B	164	218
	2.0	2137	1.1	1410.80	14.0	43.0	25.0	45.0			
	2.6	1616	1.5	1066.44	14.0	43.0	24.0	45.0			
	1.2	3938	0.9	727.77	18.0	41.0	27.0	45.0	PA/PF 63/22 80M6B	158	214
	1.6	2999	1.1	554.24	19.0	39.0	28.0	45.0			
	2.1	2328	1.4	430.20	20.0	37.0	28.0	45.0			
	2.4	1991	1.7	367.90	20.0	36.0	28.0	45.0			
	3.2	1531	2.2	283.00	19.0	45.0	28.0	45.0			
	4.0	1219	2.8	225.22	19.0	45.0	28.0	45.0			
	1.6	2874	1.1	851.02	17.0	42.0	26.0	45.0	PA/PF 63/22 80M4B / 80M4C	158	214
	1.9	2457	1.3	727.77	18.0	41.0	27.0	45.0			
	2.5	1871	1.7	554.24	19.0	39.0	28.0	45.0			
	3.3	1453	2.2	430.20	20.0	37.0	28.0	45.0			
	3.8	1242	2.6	367.90	20.0	36.0	28.0	45.0			
	3.3	1336	1.8	851.02	17.0	42.0	26.0	45.0	PA/PF 63/22 71M2B	156	214
	3.8	1142	2.1	727.77	18.0	41.0	27.0	45.0			
	5.1	870	2.8	554.24	19.0	39.0	27.0	45.0			
	2.5	1947	1.0	354.34	11.0	24.0	-	-	PA/PF 52/12 80M6B	100	212
	3.2	1556	1.2	283.16	11.0	24.0	-	-			
	4.1	1208	1.6	219.87	11.0	24.0	-	-			
	4.6	1069	1.8	194.67	11.0	24.0	-	-			
	6.2	802	2.4	146.01	11.0	24.0	-	-			
	7.2	684	2.8	124.52	11.0	24.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.55	2.0	2383	0.8	690.27	10.0	24.0	17.0	40.0	PA/PF 52/12 80M4B / 80M4C	100	212
	2.6	1872	1.0	542.36	11.0	24.0	20.0	40.0			
	2.8	1697	1.1	491.74	11.0	24.0	20.0	40.0			
	4.0	1223	1.5	354.34	11.0	24.0	-	-			
	4.9	977	1.9	283.16	11.0	24.0	-	-			
	6.4	759	2.4	219.87	11.0	24.0	-	-			
	7.2	672	2.7	194.67	11.0	24.0	-	-	PA/PF 52/12 71M2B	98	212
	3.0	1497	0.9	920.36	10.0	24.0	19.0	40.0			
	4.1	1123	1.2	690.27	10.0	24.0	17.0	40.0			
	5.2	882	1.6	542.36	11.0	24.0	20.0	40.0			
	5.7	800	1.7	491.74	11.0	24.0	20.0	40.0			
	7.9	576	2.4	354.34	11.0	24.0	-	-			
	9.9	461	3.0	283.16	11.0	24.0	-	-	PA/PF 53 80M6B	103	189
	2.3	2188	0.9	392.31	13.0	24.0	19.0	40.0			
	2.4	2089	1.0	374.48	13.0	24.0	19.0	40.0			
	3.1	1641	1.4	294.23	13.0	24.0	19.0	40.0			
	3.7	1371	1.4	245.73	14.0	24.0	20.0	40.0			
	3.8	1320	1.5	236.60	14.0	24.0	20.0	40.0			
	4.8	1037	1.8	185.90	14.0	24.0	20.0	40.0			
	5.1	990	2.0	177.45	14.0	24.0	20.0	40.0			
	6.5	778	3.0	139.42	14.0	24.0	20.0	40.0	PA/PF 53 80M4B / 80M4C	103	189
	2.3	2140	0.9	606.94	10.0	24.0	17.0	40.0			
	2.6	1935	1.0	548.64	11.0	24.0	18.0	40.0			
	2.8	1761	1.1	499.30	12.0	24.0	18.0	40.0			
	3.6	1384	1.3	392.31	13.0	24.0	19.0	40.0			
	3.7	1321	1.5	374.48	13.0	24.0	19.0	40.0			
	4.8	1038	2.1	294.23	13.0	24.0	19.0	40.0			
	5.7	867	2.1	245.73	14.0	24.0	20.0	40.0			
	5.9	834	2.3	236.60	14.0	24.0	20.0	40.0	PA/PF 42/12 80M6B	71	212
	7.5	656	2.8	185.90	14.0	24.0	20.0	40.0			
	3.3	1519	0.8	276.49	3.0	12.0	-	-			
	3.9	1261	1.0	229.62	3.0	12.0	-	-			
	5.3	929	1.4	169.11	3.0	12.0	-	-			
	6.4	772	1.6	140.44	3.0	12.0	-	-	PA/PF 42/12 80M4B / 80M4C	71	212
	7.7	639	2.0	116.26	3.0	12.0	-	-			
	10.3	482	2.6	87.79	3.0	12.0	-	-			
	3.2	1495	0.8	433.11	3.0	12.0	9.0	18.0			
	4.0	1197	1.0	346.69	3.0	12.0	-	-			
	5.1	954	1.3	276.49	3.0	12.0	-	-	PA/PF 42/12 71M2B	69	212
	6.1	793	1.5	229.62	3.0	12.0	-	-			
	8.3	584	2.1	169.11	3.0	12.0	-	-			
	10.0	485	2.5	140.44	3.0	12.0	-	-			
	12.0	401	3.0	116.26	3.0	12.0	-	-			
	4.2	1091	0.8	670.92	3.0	12.0	9.0	22.0	PA/PF 43 80M6B	70	185
	5.1	896	1.0	550.63	3.0	12.0	10.0	22.0			
	6.5	705	1.3	433.11	3.0	12.0	9.0	18.0			
	8.1	564	1.6	346.69	3.0	12.0	-	-			
	10.1	450	2.0	276.49	3.0	12.0	-	-			
	12.2	374	2.4	229.62	3.0	-	-	-			
	3.2	1553	0.9	278.52	7.0	12.0	10.0	18.0			
	3.4	1473	0.9	264.02	7.0	12.0	10.0	17.0			
	3.9	1290	0.9	231.31	7.0	12.0	11.0	17.0			
	4.1	1223	1.0	219.26	7.0	12.0	11.0	17.0			
	4.4	1141	1.2	204.49	8.0	12.0	11.0	17.0			
	4.9	1020	1.0	182.86	8.0	12.0	11.0	17.0			
	5.3	947	1.3	169.82	8.0	12.0	11.0	16.0			
	6.4	790	1.4	141.63	8.0	12.0	11.0	16.0			
	7.0	721	1.8	129.27	8.0	12.0	11.0	16.0			
	8.4	599	2.0	107.36	8.0	12.0	11.0	15.0			
	9.5	529	2.5	94.91	6.0	12.0	11.0	15.0			
	11.2	446	2.9	80.01	6.0	12.0	12.0	14.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.55	3.3	1485	0.8	421.21	5.0	12.0	10.0	21.0	PA/PF 43 80M4B / 80M4C	70	185
	3.9	1268	1.0	359.61	5.0	12.0	9.0	18.0			
	4.7	1053	1.1	298.65	6.0	12.0	10.0	18.0			
	5.0	982	1.3	278.52	7.0	12.0	10.0	18.0			
	5.3	931	1.4	264.02	7.0	12.0	10.0	17.0			
	6.1	816	1.4	231.31	7.0	12.0	11.0	17.0			
	6.4	773	1.6	219.26	7.0	12.0	11.0	17.0			
	6.8	721	1.8	204.49	8.0	12.0	11.0	17.0			
	7.7	645	1.6	182.86	8.0	12.0	11.0	17.0			
	8.2	599	1.9	169.82	8.0	12.0	11.0	16.0			
	9.9	499	2.1	141.63	8.0	12.0	11.0	16.0	PA/PF 43 71M2B	68	185
	10.8	456	2.7	129.27	8.0	12.0	11.0	16.0			
	13.0	379	2.9	107.36	8.0	12.0	11.0	15.0			
	4.5	1043	0.8	618.49	5.0	12.0	10.0	24.0			
	5.3	890	0.8	528.04	5.0	12.0	11.0	23.0			
	6.6	710	1.3	421.21	5.0	12.0	10.0	21.0			
	7.8	606	1.6	359.61	5.0	12.0	9.0	18.0			
	9.4	503	1.7	298.65	6.0	12.0	10.0	18.0			
	10.6	445	2.2	264.02	7.0	12.0	10.0	17.0	PA/PF 32/12 80M6B	53	212
	12.8	370	2.5	219.26	7.0	12.0	11.0	17.0			
	15.3	308	2.5	182.86	8.0	12.0	11.0	17.0			
	6.1	813	0.8	148.00	5.0	9.0	-	-	PA/PF 32/12 80M4B / 80M4C	53	212
	7.1	693	0.9	126.22	5.0	9.0	-	-			
	11.0	452	1.4	82.19	5.0	9.0	-	-			
	6.5	743	0.8	215.28	6.0	9.0	9.0	19.0			
	8.4	577	1.1	167.16	5.0	9.0	-	-			
	9.5	511	1.2	148.00	5.0	9.0	-	-	PA/PF 32/12 71M2B	51	212
	11.1	436	1.4	126.22	5.0	9.0	-	-			
	17.0	284	2.2	82.19	5.0	9.0	-	-			
	7.7	590	0.8	362.93	6.0	9.0	-	-			
	10.5	435	1.1	267.35	6.0	9.0	9.0	22.0			
	13.0	350	1.3	215.28	6.0	9.0	9.0	19.0	PA/PF 33 80M6B	49	181
	16.8	272	1.7	167.16	5.0	9.0	-	-			
	18.9	241	2.0	148.00	5.0	9.0	-	-			
	22.2	205	2.3	126.22	5.0	9.0	-	-			
	5.4	928	0.8	166.39	6.0	9.0	9.0	18.0	PA/PF 33 80M4B / 80M4C	49	181
	6.7	747	0.9	133.98	6.0	9.0	9.0	17.0			
	8.0	626	0.9	112.18	6.0	9.0	-	-			
	10.2	492	1.1	88.29	6.0	9.0	-	-			
	6.8	730	0.9	206.97	5.0	9.0	8.0	19.0	PA/PF 33 71M2B	47	181
	8.4	587	1.1	166.39	6.0	9.0	9.0	18.0			
	10.4	473	1.4	133.98	6.0	9.0	9.0	17.0			
	12.5	396	1.4	112.18	6.0	9.0	-	-			
	15.9	311	1.7	88.29	6.0	9.0	-	-			
	8.3	572	0.9	339.07	5.0	9.0	9.0	23.0	PA/PF 32 80M6B	40	180
	11.3	418	1.2	248.21	5.0	9.0	9.0	21.0			
	13.5	349	1.5	206.97	5.0	9.0	8.0	19.0			
	16.8	280	1.8	166.39	6.0	9.0	9.0	18.0			
	20.9	226	2.2	133.98	6.0	9.0	9.0	17.0			
	25.0	189	2.2	112.18	6.0	9.0	-	-			
	31.7	149	2.7	88.29	6.0	9.0	-	-			
	11.1	460	1.2	81.27	7.0	9.0	9.0	16.0	PA/PF 32 80M4B / 80M4C	40	180
	12.4	412	1.4	72.71	7.0	9.0	9.0	15.0			
	14.0	364	1.8	64.26	7.0	9.0	9.0	15.0			
	15.7	326	2.0	57.49	7.0	9.0	9.0	15.0			
	19.4	262	2.1	46.29	7.0	9.0	9.0	14.0	PA/PF 32 71M2B	38	180
	23.2	219	2.1	38.76	7.0	9.0	9.0	13.0			
	27.3	187	2.1	33.00	7.0	9.0	9.0	12.0			
	17.2	293	1.8	81.27	7.0	9.0	9.0	16.0	PA/PF 31 80M6B	27	162
	19.3	262	2.1	72.71	7.0	9.0	9.0	15.0			
	21.8	231	2.8	64.26	7.0	9.0	9.0	15.0			
	24.4	207	3.0	57.49	7.0	9.0	9.0	15.0			
	34.5	142	2.8	81.27	7.0	9.0	9.0	17.0	PA/PF 31 80M4B	27	162
	88.2	59	1.6	10.20	-	-	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.55	137.3	38	2.4	10.20	-	3.0	-	-	PA/PF 31 80M4B / 80M4C	27	162
	11.9	406	0.8	117.62	4.0	6.0	7.0	12.0	PA/PF 22/02 80M4B / 80M4C	40	212
	16.8 20.7 23.8	272 220 191	1.0 1.2 1.4	167.14 135.06 117.62	4.0 4.0 4.0	6.0 6.0 6.0	7.0 7.0 7.0	14.0 13.0 12.0	PA/PF 22/02 71M2B	38	212
	11.5 13.9	435 361	0.8 1.0	78.00 64.80	5.0 5.0	6.0 6.0	7.0 7.0	12.0 11.0	PA/PF 23 80M6B	37	177
	11.3 13.9 15.9 17.9 21.6	438 355 311 275 229	0.8 1.0 1.1 1.2 1.5	124.10 100.53 88.24 78.00 64.80	4.0 5.0 4.0 5.0 5.0	6.0 6.0 6.0 6.0 6.0	7.0 7.0 7.0 7.0 7.0	13.0 11.0 11.0 12.0 11.0	PA/PF 23 80M4B / 80M4C	37	177
	15.6 18.5 22.6 27.9 31.7 35.9 43.2	303 255 209 169 149 131 109	0.8 0.9 1.2 1.5 1.7 2.0 2.4	179.61 151.11 124.10 100.53 88.24 78.00 64.80	4.0 4.0 4.0 5.0 4.0 5.0 5.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0	15.0 14.0 13.0 11.0 11.0 12.0 11.0	PA/PF 23 71M2B	33	177
	16.3 19.6 21.0 25.3 30.7 36.5	313 260 242 201 166 140	1.1 1.2 1.5 1.7 1.8 1.8	55.25 45.90 42.79 35.55 29.34 24.69	5.0 5.0 5.0 5.0 5.0 5.0	6.0 6.0 6.0 6.0 6.0 6.0	7.0 7.0 7.0 7.0 7.0 8.0	10.0 10.0 10.0 9.0 9.0 9.0	PA/PF 22 80M6B	29	176
	16.2 20.1 25.3 30.5 32.7 39.4 47.7 56.7	311 251 199 165 154 128 106 89	0.8 1.0 1.6 1.8 2.2 2.6 2.8 2.8	86.26 69.74 55.25 45.90 42.79 35.55 29.34 24.69	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0	11.0 11.0 10.0 10.0 10.0 9.0 9.0 9.0	PA/PF 22 80M4B / 80M4C	29	176
	32.5 40.1 50.7 61.0	151 122 97 80	1.3 1.6 2.5 2.8	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 7.0 7.0	11.0 11.0 10.0 10.0	PA/PF 22 71M2B	27	176
	113.9 195.7	45 26	1.4 2.2	7.90 4.60	- -	- -	- -	- -	PA/PF 21 80M6B	31	160
	137.3 177.2	38 29	1.1 2.1	10.20 7.90	- -	4.0 4.0	- -	- -	PA/PF 21 80M4B / 80M4C	31	160
	274.5	18	1.6	10.20	-	-	-	-	PA/PF 21 71M2B	29	160
	30.3	150	0.8	92.29	3.0	4.0	5.0	10.0	PA/PF 12/02 71M2B	26	212
	32.7 40.9	144 115	0.9 1.3	85.57 68.46	3.0 3.0	4.0 4.0	5.0 5.0	10.0 9.0	PA/PF 13 71M2B	23	173
	23.5 28.9 34.7 42.3 47.9 53.8 67.2 84.3 93.3	217 176 147 120 106 95 76 60 55	0.9 1.0 1.0 1.5 1.6 1.7 2.1 2.3 2.6	38.29 31.15 25.92 21.27 18.80 16.74 13.39 10.68 9.65	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	8.0 7.0 7.0 7.0 7.0 7.0 6.0 6.0 6.0	PA/PF 12 80M6B	20	172
	29.3 36.6 44.9 54.0 65.8 74.5 83.6	169 135 110 91 75 66 59	1.0 1.4 1.5 1.5 2.2 2.4 2.6	47.86 38.29 31.15 25.92 21.27 18.80 16.74	3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.0 4.0 4.0 4.0 4.0 4.0 4.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0	8.0 8.0 7.0 7.0 7.0 7.0 7.0	PA/PF 12 80M4B / 80M4C	20	172

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.55	38.6	127	0.8	72.60	3.0	4.0	5.0	10.0	PA/PF 12 71M2B	18	172
	45.7	107	1.1	61.31	3.0	4.0	5.0	9.0			
	52.0	94	1.4	53.84	3.0	4.0	5.0	9.0			
	58.5	84	1.6	47.86	3.0	4.0	5.0	8.0			
	65.0	75	1.6	43.07	3.0	4.0	5.0	8.0			
	73.1	67	2.1	38.29	3.0	4.0	5.0	8.0			
	79.9	61	1.9	35.04	3.0	4.0	5.0	8.0			
	89.9	54	2.3	31.15	3.0	4.0	5.0	7.0			
	96.0	51	1.9	29.16	3.0	4.0	5.0	8.0			
	108.0	45	2.3	25.92	3.0	4.0	5.0	7.0			
	250.0	21	2.4	3.60	-	-	-	-	PA/PF 11 80M6B	16	158
	283.0	18	2.3	3.18	-	-	-	-	PA/PF 11 80M4B / 80M4C	16	158
	172.8	30	1.0	8.10	-	3.0	-	-			
	307.4	16	1.1	9.11	-	-	-	-	PA/PF 11 71M2B	15	158
	345.7	15	1.6	8.10	-	-	-	-	PA/PF 03 71M2B	20	169
	42.8	110	0.8	65.46	2.0	3.0	-	-			
	56.4	90	0.8	15.95	2.0	3.0	3.0	5.0	PA/PF 02 80M6B	18	168
	70.3	73	1.0	12.81	2.0	3.0	3.0	5.0			
	80.1	64	1.1	11.24	2.0	3.0	3.0	5.0			
	90.5	56	1.2	9.94	2.0	3.0	3.0	5.0			
	97.1	52	1.3	9.27	2.0	3.0	3.0	4.0			
	109.8	46	1.4	8.20	2.0	3.0	3.0	4.0			
	115.4	44	1.5	7.80	2.0	3.0	3.0	4.0			
	130.6	39	1.6	6.89	2.0	3.0	3.0	4.0			
	161.6	32	1.9	5.57	2.0	3.0	3.0	4.0			
	186.7	27	2.2	4.82	2.0	3.0	3.0	4.0			
	230.8	22	2.5	3.90	2.0	3.0	2.0	3.0			
	265.5	19	2.8	3.39	2.0	3.0	2.0	3.0			
	303.0	17	2.9	2.97	2.0	3.0	2.0	3.0			
	42.0	120	0.8	33.37	2.0	3.0	3.0	6.0	PA/PF 02 80M4B / 80M4C	18	168
	47.3	107	0.9	29.59	2.0	3.0	3.0	6.0			
	50.9	99	0.9	27.52	2.0	3.0	3.0	6.0			
	57.4	88	1.0	24.41	2.0	3.0	3.0	5.0			
	68.0	74	1.0	20.59	2.0	3.0	3.0	5.0			
	87.8	57	1.3	15.95	2.0	3.0	3.0	5.0			
	109.3	46	1.5	12.81	2.0	3.0	3.0	5.0			
	124.6	40	1.7	11.24	2.0	3.0	3.0	5.0			
	140.8	36	1.8	9.94	2.0	3.0	3.0	5.0			
	151.0	33	1.9	9.27	2.0	3.0	3.0	4.0			
	170.7	30	2.1	8.20	2.0	3.0	3.0	4.0			
	179.5	28	2.2	7.80	2.0	3.0	3.0	4.0			
	203.2	25	2.5	6.89	2.0	3.0	3.0	4.0			
	251.3	20	2.8	5.57	2.0	3.0	3.0	4.0			
	67.4	73	1.0	41.56	2.0	3.0	3.0	6.0	PA/PF 02 71M2B	17	168
	83.9	58	1.3	33.37	2.0	3.0	3.0	6.0			
	94.6	52	1.4	29.59	2.0	3.0	3.0	6.0			
	101.7	48	1.4	27.52	2.0	3.0	3.0	6.0			
	114.7	43	1.6	24.41	2.0	3.0	3.0	5.0			
	121.0	40	1.5	23.14	2.0	3.0	3.0	6.0			
	136.0	36	1.6	20.59	2.0	3.0	3.0	5.0			
	175.5	28	2.0	15.95	2.0	3.0	3.0	5.0			
	218.6	22	2.4	12.81	2.0	3.0	3.0	5.0			
	249.1	20	2.6	11.24	2.0	3.0	3.0	5.0			
	281.7	17	2.8	9.94	2.0	3.0	3.0	5.0			
0.75	0.3	25159	0.8	3461.37	101.0	120.0	-	-	PA/PF 103/53 90S6B / 90L6C	822	218
	0.3	19767	1.1	2719.64	101.0	120.0	-	-			
	0.2	26097	0.8	5796.64	101.0	120.0	-	-	PA/PF 103/53 80M4C / 80M4D	818	218
	0.3	19015	1.1	4223.52	101.0	120.0	-	-			
	0.4	15584	1.3	3461.37	101.0	120.0	-	-			
	0.5	12244	1.6	2719.64	101.0	120.0	-	-			
	0.3	17497	0.9	8470.29	101.0	120.0	-	-	PA/PF 103/53 80M2B / 80M2C	818	218
	0.4	14781	1.0	7155.29	101.0	120.0	-	-			
	0.5	11974	1.3	5796.64	101.0	120.0	-	-			
	0.7	8725	1.7	4223.52	101.0	120.0	-	-			
	0.8	7150	2.1	3461.37	101.0	120.0	-	-			
	1.0	5618	2.7	2719.64	101.0	120.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	0.6	10432	2.0	1413.66	95.0	59.0	120.0	120.0	PA/PF 103/52 90S6B / 90L6C	803	216
	0.8	8468	2.5	1147.52	95.0	59.0	120.0	120.0			
	1.0	6966	3.0	944.01	95.0	59.0	120.0	120.0			
	0.4	15984	0.8	2199.04	66.0	80.0	-	-	PA/PF 93/43 90S6B / 90L6C	570	218
	0.5	12222	1.0	2714.80	66.0	80.0	-	-	PA/PF 93/43 80M4C / 80M4D	566	218
	0.6	9900	1.2	2199.04	66.0	80.0	-	-			
	0.5	11921	0.8	5771.01	66.0	80.0	-	-	PA/PF 93/43 80M2B / 80M2C	566	218
	0.7	8884	1.0	4300.67	66.0	80.0	-	-			
	0.8	7707	1.2	3730.70	66.0	80.0	-	-			
	1.0	5608	1.7	2714.80	66.0	80.0	-	-			
	1.3	4543	2.0	2199.04	66.0	80.0	-	-			
	0.7	9587	1.3	1299.17	65.0	80.0	90.0	80.0	PA/PF 93/42 90S6B / 90L6C	555	216
	0.8	8051	1.6	1090.99	65.0	80.0	91.0	80.0			
	1.1	5991	2.1	811.95	65.0	80.0	92.0	80.0			
	1.2	5585	2.3	756.80	65.0	80.0	92.0	80.0			
	1.7	3875	2.2	525.11	44.0	57.0	62.0	65.0	PA/PF 83/42 90S6B / 90L6C	376	216
	2.1	3232	2.6	437.93	44.0	57.0	62.0	65.0			
	2.4	2763	3.0	374.50	44.0	57.0	63.0	65.0			
	0.7	10086	0.8	1366.81	42.0	65.0	53.0	65.0	PA/PF 83/32 90S6B / 90L6C	361	214
	0.8	8500	1.0	1151.94	42.0	65.0	61.0	65.0			
	1.0	6622	1.3	897.44	43.0	65.0	62.0	65.0			
	1.2	5332	1.6	722.63	44.0	65.0	62.0	65.0			
	0.7	9389	0.9	2039.02	44.0	65.0	-	-	PA/PF 83/32 80M4C / 80M4D	357	214
	0.8	7751	1.0	1683.27	44.0	65.0	-	-			
	1.2	5304	1.5	1151.94	42.0	65.0	61.0	65.0			
	1.6	4132	1.9	897.44	43.0	65.0	62.0	65.0			
	1.9	3327	2.4	722.63	44.0	65.0	62.0	65.0			
	0.8	7604	0.8	3552.27	44.0	65.0	-	-	PA/PF 83/32 80M2B / 80M2C	357	214
	1.0	6123	1.0	2860.33	44.0	65.0	-	-			
	1.4	4365	1.4	2039.02	44.0	65.0	-	-			
	1.7	3603	1.7	1683.27	44.0	65.0	-	-			
	2.4	2466	2.5	1151.94	42.0	65.0	61.0	65.0			
	1.0	6541	0.8	886.40	23.0	38.0	37.0	50.0	PA/PF 73/22 90S6B / 90L6C	243	214
	1.2	5434	1.0	736.40	25.0	36.0	38.0	50.0			
	1.6	4180	1.3	566.43	27.0	35.0	39.0	50.0			
	2.0	3376	1.6	457.52	27.0	34.0	39.0	50.0			
	2.6	2559	2.1	346.75	24.0	42.0	40.0	50.0			
	3.2	2067	2.5	280.08	24.0	42.0	40.0	50.0			
	1.1	5767	0.9	1252.41	18.0	38.0	34.0	50.0	PA/PF 73/22 80M4C / 80M4D	239	214
	1.3	5053	1.0	1097.40	21.0	38.0	36.0	50.0			
	1.6	4081	1.2	886.40	23.0	38.0	37.0	50.0			
	1.9	3391	1.5	736.40	25.0	36.0	38.0	50.0			
	2.5	2608	1.9	566.43	27.0	35.0	39.0	50.0			
	3.1	2107	2.4	457.52	27.0	34.0	39.0	50.0			
	1.3	4699	0.8	2194.98	18.0	38.0	-	-	PA/PF 73/22 80M2B / 80M2C	239	214
	1.6	3795	1.0	1772.96	18.0	38.0	-	-			
	2.2	2681	1.4	1252.41	18.0	38.0	34.0	50.0			
	2.6	2349	1.6	1097.40	21.0	38.0	36.0	50.0			
	3.2	1897	2.0	886.40	23.0	38.0	37.0	50.0			
	3.8	1576	2.4	736.40	25.0	36.0	38.0	50.0			
	2.0	2914	0.8	1410.80	14.0	43.0	25.0	45.0	PA/PF 63/23 80M2B / 80M2C	166	218
	2.6	2203	1.1	1066.44	14.0	43.0	24.0	45.0			
	1.6	4090	0.8	554.24	18.0	37.0	26.0	45.0	PA/PF 63/22 90S6B / 90L6C	162	214
	2.1	3174	1.1	430.20	19.0	35.0	27.0	45.0			
	2.4	2715	1.2	367.90	19.0	34.0	28.0	45.0			
	3.2	2088	1.6	283.00	20.0	32.0	28.0	45.0			
	4.0	1662	2.0	225.22	17.0	42.0	28.0	45.0			
	5.2	1278	2.6	173.24	17.0	42.0	-	-			
	5.9	1133	3.0	153.52	17.0	42.0	-	-			
	1.6	3918	0.8	851.02	12.0	39.0	23.0	45.0	PA/PF 63/22 80M4C / 80M4D	158	214
	1.9	3351	1.0	727.77	15.0	38.0	25.0	45.0			
	2.5	2552	1.3	554.24	18.0	37.0	26.0	45.0			
	3.3	1981	1.6	430.20	19.0	35.0	27.0	45.0			
	3.8	1694	1.9	367.90	19.0	34.0	28.0	45.0			
	4.9	1303	2.5	283.00	20.0	32.0	28.0	45.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	3.3	1822	1.3	851.02	12.0	39.0	23.0	45.0	PA/PF 63/22 80M2B / 80M2C	158	214
	3.8	1558	1.6	727.77	15.0	38.0	25.0	45.0			
	5.1	1186	2.0	554.24	18.0	37.0	26.0	45.0			
	6.5	921	2.6	430.20	19.0	35.0	27.0	45.0			
	2.4	2835	1.2	372.70	20.0	29.0	26.0	45.0	PA/PF 63 90S6B / 90L6C	143	193
	3.0	2289	1.5	300.91	20.0	29.0	27.0	45.0			
	3.4	2020	1.9	265.56	20.0	29.0	27.0	45.0			
	4.2	1631	2.3	214.41	20.0	29.0	28.0	45.0			
	3.2	2121	0.9	283.16	10.0	24.0	-	-	PA/PF 52/12 90S6B / 90L6C	104	212
	4.1	1647	1.2	219.87	10.0	24.0	-	-			
	4.6	1458	1.3	194.67	10.0	24.0	-	-			
	6.2	1094	1.8	146.01	10.0	24.0	-	-			
	7.2	933	2.1	124.52	10.0	24.0	-	-			
	9.2	733	2.6	97.84	10.0	24.0	-	-	PA/PF 52/12 80M4C / 80M4D	100	212
	2.8	2315	0.8	491.74	10.0	24.0	-	-			
	4.0	1668	1.1	354.34	10.0	24.0	-	-			
	4.9	1333	1.4	283.16	10.0	24.0	-	-			
	6.4	1035	1.8	219.87	10.0	24.0	-	-			
	7.2	916	2.0	194.67	10.0	24.0	-	-	PA/PF 52/12 80M2B / 80M2C	100	212
	9.6	687	2.7	146.01	10.0	24.0	-	-			
	4.1	1531	0.9	690.27	10.0	24.0	17.0	40.0			
	5.2	1203	1.2	542.36	10.0	24.0	-	-			
	5.7	1091	1.3	491.74	10.0	24.0	-	-			
	7.9	786	1.8	354.34	10.0	24.0	-	-	PA/PF 53 90S6B / 90L6C	107	159
	9.9	628	2.2	283.16	10.0	24.0	-	-			
	12.7	488	2.9	219.87	10.0	24.0	-	-			
	3.1	2238	1.0	294.23	13.0	24.0	19.0	40.0			
	3.7	1869	1.0	245.73	13.0	24.0	19.0	40.0			
	3.8	1799	1.1	236.60	13.0	24.0	19.0	40.0	PA/PF 53 80M4C / 80M4D	103	189
	4.8	1414	1.4	185.90	14.0	24.0	19.0	40.0			
	5.1	1350	1.5	177.45	14.0	24.0	20.0	40.0			
	6.5	1060	2.2	139.42	10.0	24.0	20.0	40.0			
	8.5	804	2.9	105.77	10.0	24.0	-	-			
	2.8	2401	0.8	499.30	9.0	24.0	17.0	40.0	PA/PF 53 80M2B / 80M2C	103	189
	3.6	1887	1.0	392.31	11.0	24.0	18.0	40.0			
	3.7	1801	1.1	374.48	12.0	24.0	18.0	40.0			
	4.8	1415	1.6	294.23	13.0	24.0	19.0	40.0			
	5.7	1182	1.6	245.73	13.0	24.0	19.0	40.0			
	5.9	1138	1.7	236.60	13.0	24.0	19.0	40.0	PA/PF 52 90S6B / 90L6C	88	188
	7.5	894	2.0	185.90	14.0	24.0	19.0	40.0			
	7.9	853	2.2	177.45	14.0	24.0	20.0	40.0			
	4.6	1395	1.0	606.94	9.0	24.0	17.0	40.0			
	5.1	1261	1.2	548.64	9.0	24.0	18.0	40.0	PA/PF 51 90S6B / 90L6C	49	166
	5.6	1148	1.3	499.30	9.0	24.0	17.0	40.0			
	7.1	902	1.5	392.31	11.0	24.0	18.0	40.0			
	7.5	861	1.7	374.48	12.0	24.0	18.0	40.0			
	9.5	676	2.5	294.23	13.0	24.0	19.0	40.0	PA/PF 42/12 90S6B / 90L6C	86	212
	11.4	565	2.5	245.73	13.0	24.0	19.0	40.0			
	11.8	544	2.7	236.60	13.0	24.0	19.0	40.0			
	10.4	671	2.7	86.88	14.0	24.0	20.0	40.0			
	11.5	606	2.8	78.53	14.0	24.0	20.0	40.0	PA/PF 42/12 80M4C / 80M4D	71	212
	12.6	552	3.0	71.47	14.0	24.0	20.0	40.0			
	67.8	104	2.9	13.27	-	-	-	-			
	5.3	1267	1.0	169.11	3.0	12.0	-	-			
	6.4	1052	1.2	140.44	3.0	12.0	-	-	PA/PF 42/12 80M4C / 80M4D	71	212
	7.7	871	1.4	116.26	3.0	12.0	-	-			
	10.3	658	1.9	87.79	3.0	12.0	-	-			
	5.1	1301	0.9	276.49	3.0	12.0	-	-			
	6.1	1081	1.1	229.62	3.0	12.0	-	-			
	8.3	796	1.5	169.11	3.0	12.0	-	-	PA/PF 42/12 80M4C / 80M4D	71	212
	10.0	661	1.8	140.44	3.0	12.0	-	-			
	12.0	547	2.2	116.26	3.0	12.0	-	-			
	15.9	413	2.9	87.79	3.0	12.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	6.5	961	0.9	433.11	3.0	12.0	9.0	18.0	PA/PF 42/12 80M2B / 80M2C	71	212
	8.1	769	1.2	346.69	3.0	12.0	-	-			
	10.1	613	1.5	276.49	3.0	12.0	-	-			
	12.2	509	1.8	229.62	3.0	12.0	-	-			
	16.6	375	2.4	169.11	3.0	12.0	-	-			
	19.9	312	2.9	140.44	3.0	12.0	-	-	PA/PF 43 90S6B / 90L6C	74	185
	4.1	1668	0.8	219.26	6.0	12.0	10.0	15.0			
	4.4	1555	0.9	204.49	7.0	12.0	10.0	15.0			
	4.9	1391	0.8	182.86	7.0	12.0	11.0	15.0			
	5.3	1292	0.9	169.82	7.0	12.0	11.0	15.0			
	6.4	1077	1.0	141.63	8.0	12.0	11.0	15.0			
	7.0	983	1.3	129.27	8.0	12.0	11.0	15.0			
	8.4	817	1.4	107.36	8.0	12.0	11.0	14.0			
	9.5	722	1.8	94.91	8.0	12.0	11.0	14.0			
	11.2	609	2.1	80.01	5.0	12.0	11.0	14.0			
	12.8	533	2.5	70.10	5.0	12.0	11.0	13.0	PA/PF 43 80M4C / 80M4D	70	185
	15.5	443	2.8	58.22	5.0	12.0	-	-			
	18.5	369	3.0	48.55	5.0	12.0	-	-			
	4.7	1436	0.8	298.65	4.0	12.0	10.0	18.0			
	5.0	1339	1.0	278.52	4.0	12.0	9.0	16.0			
	5.3	1270	1.0	264.02	5.0	12.0	9.0	16.0			
	6.1	1112	1.0	231.31	6.0	12.0	10.0	15.0			
	6.4	1054	1.1	219.26	6.0	12.0	10.0	15.0			
	6.8	983	1.3	204.49	7.0	12.0	10.0	15.0			
	7.7	879	1.2	182.86	7.0	12.0	11.0	15.0			
	8.2	817	1.4	169.82	7.0	12.0	11.0	15.0	PA/PF 43 80M2B / 80M2C	70	185
	9.9	681	1.5	141.63	8.0	12.0	11.0	15.0			
	10.8	622	2.0	129.27	8.0	12.0	11.0	15.0			
	13.0	516	2.2	107.36	8.0	12.0	11.0	14.0			
	14.8	456	2.7	94.91	8.0	12.0	11.0	14.0			
	6.6	968	0.9	421.21	4.0	12.0	10.0	21.0			
	7.8	827	1.2	359.61	4.0	12.0	9.0	18.0			
	9.4	687	1.2	298.65	4.0	12.0	10.0	18.0			
	10.1	640	1.5	278.52	4.0	12.0	9.0	16.0			
	10.6	607	1.6	264.02	5.0	12.0	9.0	16.0			
	12.1	532	1.6	231.31	6.0	12.0	10.0	15.0			
	12.8	504	1.8	219.26	6.0	12.0	10.0	15.0			
	13.7	470	2.1	204.49	7.0	12.0	10.0	15.0			
	15.3	420	1.8	182.86	7.0	12.0	11.0	15.0			
	16.5	390	2.3	169.82	7.0	12.0	11.0	15.0	PA/PF 42 90S6B / 90L6C	59	184
	19.8	326	2.5	141.63	8.0	12.0	11.0	15.0			
	8.6	811	1.1	105.08	8.0	12.0	11.0	13.0			
	10.6	657	1.3	85.10	8.0	12.0	11.0	13.0			
	12.0	578	2.0	74.87	8.0	12.0	11.0	13.0	PA/PF 41 90S6B / 90L6C	40	164
	14.8	468	2.3	60.64	8.0	12.0	11.0	12.0			
	60.8	116	1.2	14.80	-	-	-	-	PA/PF 32/12 90S6B / 90L6C	57	212
	85.3	83	2.4	10.55	-	-	-	-			
	11.0	616	1.1	82.19	5.0	9.0	-	-	PA/PF 32/12 80M4C / 80M4D	53	212
	8.4	787	0.8	167.16	5.0	9.0	-	-			
	9.5	697	0.9	148.00	5.0	9.0	-	-			
	11.1	594	1.0	126.22	5.0	9.0	-	-			
	17.0	387	1.6	82.19	5.0	9.0	-	-	PA/PF 32/12 80M2B / 80M2C	53	212
	10.5	593	0.8	267.35	5.0	9.0	9.0	22.0			
	13.0	478	1.0	215.28	5.0	9.0	9.0	19.0			
	16.8	371	1.3	167.16	5.0	9.0	-	-			
	18.9	328	1.4	148.00	5.0	9.0	-	-			
	22.2	280	1.7	126.22	5.0	9.0	-	-	PA/PF 33 90S6B / 90L6C	53	181
	34.1	182	2.6	82.19	5.0	9.0	-	-			
	10.2	671	0.8	88.29	5.0	9.0	-	-	PA/PF 33 80M4C / 80M4D	49	181
	8.4	800	0.8	166.39	6.0	9.0	8.0	17.0			
	10.4	644	1.0	133.98	5.0	9.0	9.0	16.0			
	12.5	539	1.0	112.18	5.0	9.0	-	-			
	15.9	425	1.3	88.29	5.0	9.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	13.5	476	1.1	206.97	6.0	9.0	8.0	19.0	PA/PF 33 80M2B / 80M2C	49	181
	16.8	382	1.3	166.39	6.0	9.0	8.0	17.0			
	20.9	308	1.6	133.98	5.0	9.0	9.0	16.0			
	25.0	258	1.6	112.18	5.0	9.0	-	-			
	31.7	203	2.0	88.29	5.0	9.0	-	-			
	11.1	628	0.9	81.27	7.0	9.0	9.0	15.0	PA/PF 32 90S6B / 90L6C	44	180
	12.4	561	1.0	72.71	7.0	9.0	9.0	15.0			
	14.0	496	1.4	64.26	7.0	9.0	9.0	15.0			
	15.7	444	1.4	57.49	7.0	9.0	9.0	14.0			
	19.4	357	1.6	46.29	7.0	9.0	9.0	13.0			
	19.5	357	2.0	46.22	6.0	9.0	9.0	13.0			
	23.2	299	1.6	38.76	6.0	9.0	9.0	13.0			
	24.2	287	2.2	37.22	6.0	9.0	9.0	12.0			
	27.3	255	1.6	33.00	6.0	9.0	9.0	12.0			
	28.9	241	2.2	31.16	7.0	9.0	9.0	12.0			
	29.6	235	2.9	30.45	7.0	9.0	-	-			
	33.0	210	3.0	27.24	7.0	9.0	-	-			
	33.9	205	2.2	26.53	7.0	9.0	9.0	11.0			
	17.2	399	1.3	81.27	7.0	9.0	9.0	15.0	PA/PF 32 80M4C / 80M4D	40	180
	19.3	357	1.6	72.71	7.0	9.0	9.0	15.0			
	21.8	316	2.0	64.26	7.0	9.0	9.0	15.0			
	24.4	282	2.2	57.49	7.0	9.0	9.0	14.0			
	30.2	227	2.3	46.29	7.0	9.0	9.0	13.0			
	36.1	190	2.3	38.76	6.0	9.0	9.0	13.0			
	42.4	162	2.3	33.00	6.0	9.0	9.0	12.0			
	34.5	194	2.0	81.27	7.0	9.0	9.0	16.0	PA/PF 32 80M2B / 80M2C	40	180
	38.5	173	2.5	72.71	7.0	9.0	9.0	16.0			
	88.2	80	1.2	10.20	-	-	-	-	PA/PF 31 90S6B / 90L6C	31	162
	109.8	64	1.7	8.20	-	-	-	-			
	186.3	38	2.7	4.83	-	-	-	-			
	137.3	51	1.8	10.20	-	3.0	-	-	PA/PF 31 80M4C / 80M4D	27	162
	274.5	25	2.7	10.20	-	-	-	-	PA/PF 31 80M2B / 80M2C	27	162
	20.7	300	0.9	135.06	4.0	6.0	7.0	13.0	PA/PF 22/02 80M2B / 80M2C	40	212
	23.8	261	1.0	117.62	4.0	6.0	7.0	12.0			
	15.9	424	0.8	88.24	1.0	6.0	6.0	10.0	PA/PF 23 80M4C / 80M4D	37	177
	17.9	375	0.9	78.00	2.0	6.0	7.0	10.0			
	21.6	312	1.1	64.80	3.0	6.0	7.0	10.0			
	22.6	285	0.9	124.10	1.0	6.0	7.0	13.0	PA/PF 23 80M2B / 80M2C	37	177
	27.9	231	1.1	100.53	1.0	6.0	7.0	11.0			
	31.7	203	1.3	88.24	1.0	6.0	6.0	10.0			
	35.9	179	1.4	78.00	1.0	6.0	7.0	10.0			
	43.2	149	1.7	64.80	3.0	6.0	7.0	10.0			
	16.3	427	0.8	55.25	5.0	6.0	7.0	10.0	PA/PF 22 90S6B / 90L6C	33	176
	19.6	354	0.9	45.90	5.0	6.0	7.0	9.0			
	21.0	330	1.1	42.79	5.0	6.0	7.0	9.0			
	25.3	274	1.3	35.55	5.0	6.0	7.0	9.0			
	26.0	268	1.3	34.67	5.0	6.0	7.0	8.0			
	30.7	227	1.4	29.34	5.0	6.0	7.0	9.0			
	31.3	222	1.8	28.80	5.0	6.0	7.0	8.0			
	36.5	191	1.4	24.69	5.0	6.0	7.0	8.0			
	37.9	184	1.9	23.77	5.0	6.0	7.0	8.0			
	45.0	154	1.9	20.00	5.0	6.0	7.0	8.0			
	53.8	129	2.8	16.74	5.0	6.0	8.0	8.0			
	20.1	343	0.8	69.74	5.0	6.0	7.0	11.0	PA/PF 22 80M4C / 80M4D	29	176
	25.3	271	1.2	55.25	5.0	6.0	7.0	10.0			
	30.5	225	1.3	45.90	5.0	6.0	7.0	9.0			
	32.7	210	1.6	42.79	5.0	6.0	7.0	9.0			
	39.4	175	1.9	35.55	5.0	6.0	7.0	9.0			
	47.7	144	2.0	29.34	5.0	6.0	7.0	9.0			
	56.7	121	2.0	24.69	5.0	6.0	7.0	8.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	32.5	205	0.9	86.26	5.0	6.0	7.0	11.0	PA/PF 22 80M2B / 80M2C	29	176
	40.1	166	1.2	69.74	5.0	6.0	7.0	11.0			
	50.7	132	1.8	55.25	5.0	6.0	7.0	10.0			
	61.0	109	2.0	45.90	5.0	6.0	7.0	9.0			
	65.4	102	2.5	42.79	5.0	6.0	7.0	9.0			
	78.8	85	3.0	35.55	5.0	6.0	7.0	9.0			
	113.9	62	1.0	7.90	-	-	-	-	PA/PF 21 90S6B / 90L6C	35	160
	140.6	50	1.4	6.40	-	-	-	-			
	245.2	29	2.5	3.67	-	-	-	-			
	291.3	24	2.7	3.09	-	-	-	-			
	137.3	51	0.8	10.20	-	4.0	-	-	PA/PF 21 80M4C / 80M4D	31	160
	177.2	40	1.5	7.90	-	4.0	-	-			
	274.5	25	1.2	10.20	-	-	-	-	PA/PF 21 80M2B / 80M2C	31	160
	354.4	20	2.3	7.90	-	-	-	-			
	42.3	164	1.1	21.27	3.0	4.0	5.0	7.0	PA/PF 12 90S6B / 90L6C	24	172
	47.9	145	1.2	18.80	3.0	4.0	5.0	6.0			
	53.8	129	1.3	16.74	3.0	4.0	5.0	6.0			
	67.2	103	1.5	13.39	3.0	4.0	5.0	6.0			
	84.3	82	1.7	10.68	3.0	4.0	5.0	6.0			
	93.3	75	1.9	9.65	3.0	4.0	5.0	6.0			
	114.6	61	2.3	7.85	3.0	4.0	5.0	5.0			
	123.5	56	2.3	7.29	3.0	4.0	5.0	5.0			
	137.8	50	2.6	6.53	3.0	4.0	5.0	5.0			
	155.7	45	2.9	5.78	3.0	4.0	5.0	5.0			
	29.3	230	0.8	47.86	1.0	4.0	5.0	8.0	PA/PF 12 80M4C / 80M4D	20	172
	36.6	184	1.0	38.29	1.0	4.0	5.0	7.0			
	44.9	150	1.1	31.15	1.0	4.0	5.0	7.0			
	54.0	125	1.1	25.92	2.0	4.0	5.0	7.0			
	65.8	102	1.6	21.27	3.0	4.0	5.0	7.0			
	74.5	90	1.8	18.80	3.0	4.0	5.0	6.0			
	83.6	81	1.9	16.74	3.0	4.0	5.0	6.0			
	104.6	64	2.3	13.39	3.0	4.0	5.0	6.0			
	131.1	51	2.6	10.68	3.0	4.0	5.0	6.0			
	145.1	46	2.9	9.65	3.0	4.0	5.0	6.0			
	58.5	114	1.2	47.86	1.0	4.0	5.0	8.0	PA/PF 12 80M2B / 80M2C	20	172
	73.1	91	1.5	38.29	1.0	4.0	5.0	7.0			
	89.9	74	1.7	31.15	1.0	4.0	5.0	7.0			
	108.0	62	1.7	25.92	2.0	4.0	5.0	7.0			
	131.6	51	2.5	21.27	3.0	4.0	5.0	7.0			
	148.9	45	2.7	18.80	3.0	4.0	5.0	6.0			
	167.3	40	2.9	16.74	3.0	4.0	5.0	6.0			
	250.0	28	1.6	3.60	-	-	-	-	PA/PF 11 90S6B / 90L6C	20	158
	283.0	25	1.7	3.18	-	-	-	-			
	318.0	22	2.6	2.83	-	-	-	-			
	387.9	18	2.8	2.32	-	-	-	-			
	388.9	18	2.7	3.60	-	3.0	-	-	PA/PF 11 80M4C / 80M4D	16	158
	440.3	16	2.5	3.18	-	3.0	-	-			
	345.7	20	1.1	8.10	-	-	-	-	PA/PF 11 80M2B / 80M2C	16	158
	80.1	87	0.8	11.24	2.0	3.0	3.0	5.0	PA/PF 02 90S6B / 90L6C	22	168
	90.5	77	0.9	9.94	2.0	3.0	3.0	4.0			
	97.1	72	1.0	9.27	2.0	3.0	3.0	4.0			
	109.8	63	1.0	8.20	2.0	3.0	3.0	4.0			
	115.4	60	1.1	7.80	2.0	3.0	3.0	4.0			
	130.6	53	1.2	6.89	2.0	3.0	3.0	4.0			
	161.6	43	1.4	5.57	2.0	3.0	3.0	4.0			
	186.7	37	1.6	4.82	2.0	3.0	3.0	4.0			
	230.8	30	1.8	3.90	2.0	3.0	2.0	3.0			
	265.5	26	2.0	3.39	2.0	3.0	2.0	3.0			
	303.0	23	2.1	2.97	2.0	3.0	2.0	3.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
0.75	87.8	78	0.9	15.95	2.0	3.0	3.0	5.0	PA/PF 02 80M4C / 80M4D	18	168
	109.3	63	1.1	12.81	2.0	3.0	3.0	5.0			
	124.6	55	1.2	11.24	2.0	3.0	3.0	5.0			
	140.8	49	1.3	9.94	2.0	3.0	3.0	4.0			
	151.0	46	1.4	9.27	2.0	3.0	3.0	4.0			
	170.7	40	1.6	8.20	2.0	3.0	3.0	4.0			
	179.5	38	1.6	7.80	2.0	3.0	3.0	4.0			
	203.2	34	1.8	6.89	2.0	3.0	3.0	4.0			
	251.3	27	2.1	5.57	2.0	3.0	3.0	4.0			
	290.5	24	2.4	4.82	2.0	3.0	3.0	4.0			
	359.0	19	2.8	3.90	2.0	3.0	2.0	3.0			
	83.9	79	0.9	33.37	2.0	3.0	3.0	6.0	PA/PF 02 80M2B / 80M2C	18	168
	94.6	70	1.0	29.59	2.0	3.0	3.0	6.0			
	101.7	66	1.0	27.52	2.0	3.0	3.0	5.0			
	114.7	58	1.2	24.41	2.0	3.0	3.0	5.0			
	136.0	49	1.1	20.59	2.0	3.0	3.0	5.0			
	175.5	38	1.4	15.95	2.0	3.0	3.0	5.0			
	218.6	31	1.7	12.81	2.0	3.0	3.0	5.0			
	249.1	27	1.9	11.24	2.0	3.0	3.0	4.0			
	281.7	24	2.1	9.94	2.0	3.0	3.0	4.0			
	302.0	22	2.2	9.27	2.0	3.0	3.0	4.0			
	341.5	20	2.5	8.20	2.0	3.0	3.0	4.0			
	359.0	19	2.6	7.80	2.0	3.0	3.0	4.0			
	406.4	16	2.8	6.89	2.0	3.0	3.0	4.0			
1.10	0.4	22856	0.9	3461.37	101.0	120.0	-	-	PA/PF 103/53 90L4B / 90L4C	822	218
	0.5	17958	1.1	2719.64	101.0	120.0	-	-	PA/PF 103/53 80M2C / 80M2D	818	218
	0.5	17562	0.9	5796.64	101.0	120.0	-	-			
	0.7	12796	1.2	4223.52	101.0	120.0	-	-			
	0.8	10487	1.4	3461.37	101.0	120.0	-	-			
	1.0	8240	1.8	2719.64	101.0	120.0	-	-	PA/PF 103/52 90L6C / 90L6D	803	216
	0.6	15300	1.4	1413.66	95.0	59.0	120.0	120.0			
	0.8	12419	1.7	1147.52	95.0	59.0	120.0	120.0			
	1.0	10217	2.1	944.01	95.0	59.0	120.0	120.0			
	1.1	8851	2.4	817.82	95.0	59.0	120.0	120.0			
	1.4	6954	3.0	642.57	95.0	59.0	120.0	120.0	PA/PF 93/43 90L4B / 90L4C	570	218
	0.6	14521	0.8	2199.04	66.0	80.0	-	-			
	0.8	11303	0.8	3730.70	66.0	80.0	-	-	PA/PF 93/43 80M2C / 80M2D	566	218
	1.0	8225	1.1	2714.80	66.0	80.0	-	-			
	1.3	6662	1.4	2199.04	66.0	80.0	-	-			
	0.7	14060	0.9	1299.17	62.0	80.0	90.0	80.0	PA/PF 93/42 90L6C / 90L6D	555	216
	0.8	11807	1.1	1090.99	63.0	80.0	91.0	80.0			
	1.1	8787	1.5	811.95	65.0	80.0	92.0	80.0			
	1.2	8191	1.6	756.80	65.0	80.0	92.0	80.0			
	1.6	5930	2.2	547.88	65.0	80.0	93.0	80.0			
	2.0	4945	2.6	456.91	65.0	80.0	93.0	80.0			
	1.1	8774	1.4	1299.17	62.0	80.0	90.0	80.0	PA/PF 93/42 90L4B / 90L4C	555	216
	1.3	7368	1.7	1090.99	63.0	80.0	91.0	80.0			
	1.7	5483	2.2	811.95	65.0	80.0	92.0	80.0			
	1.8	5111	2.4	756.80	65.0	80.0	92.0	80.0			
	1.7	5683	1.5	525.11	44.0	59.0	62.0	65.0	PA/PF 83/42 90L6C / 90L6D	376	216
	2.1	4740	1.8	437.93	44.0	57.0	62.0	65.0			
	2.4	4053	2.1	374.50	44.0	57.0	63.0	65.0			
	3.3	2987	2.8	276.00	44.0	57.0	63.0	65.0			
	2.7	3546	2.3	525.11	44.0	59.0	62.0	65.0	PA/PF 83/42 90L4B / 90L4C	376	216
	3.2	2957	2.7	437.93	44.0	57.0	62.0	65.0			
	1.0	9713	0.9	897.44	39.0	65.0	59.0	65.0	PA/PF 83/32 90L6C / 90L6D	361	214
	1.2	7821	1.1	722.63	42.0	63.0	61.0	65.0			
	1.0	9230	0.9	1366.81	30.0	65.0	53.0	65.0	PA/PF 83/32 90L4B / 90L4C	361	214
	1.2	7779	1.0	1151.94	36.0	65.0	57.0	65.0			
	1.6	6061	1.3	897.44	39.0	65.0	59.0	65.0			
	1.9	4880	1.6	722.63	42.0	63.0	61.0	65.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	1.4	6402	0.9	2039.02	36.0	65.0	-	-	PA/PF 83/32 80M2C / 80M2D	357	214
	1.7	5285	1.2	1683.27	36.0	65.0	-	-			
	2.4	3617	1.7	1151.94	36.0	65.0	57.0	65.0			
	3.1	2818	2.2	897.44	39.0	65.0	59.0	65.0			
	3.9	2269	2.7	722.63	42.0	63.0	61.0	65.0			
	4.0	2450	2.1	226.38	27.0	26.0	39.0	50.0	PA/PF 73/32 90L6C / 90L6D	254	214
	5.3	1852	2.8	171.10	27.0	26.0	40.0	50.0			
	1.6	6130	0.9	566.43	24.0	31.0	37.0	50.0	PA/PF 73/22 90L6C / 90L6D	243	214
	2.0	4952	1.1	457.52	26.0	31.0	38.0	50.0			
	2.6	3753	1.4	346.75	27.0	30.0	39.0	50.0			
	3.2	3031	1.7	280.08	27.0	29.0	40.0	50.0			
	1.6	5986	0.8	886.40	16.0	32.0	33.0	50.0	PA/PF 73/22 90L4B / 90L4C	243	214
	1.9	4973	1.0	736.40	20.0	32.0	35.0	50.0			
	2.5	3825	1.3	566.43	24.0	31.0	37.0	50.0			
	3.1	3090	1.6	457.52	26.0	31.0	38.0	50.0			
	4.0	2342	2.1	346.75	27.0	30.0	39.0	50.0			
	5.0	1891	2.6	280.08	27.0	29.0	40.0	50.0			
	2.2	3932	1.0	1252.41	16.0	32.0	34.0	50.0	PA/PF 73/22 80M2C / 80M2D	239	214
	2.6	3445	1.1	1097.40	16.0	32.0	36.0	50.0			
	3.2	2783	1.4	886.40	16.0	32.0	33.0	50.0			
	3.8	2312	1.6	736.40	20.0	32.0	35.0	50.0			
	4.9	1778	2.1	566.43	24.0	31.0	37.0	50.0			
	6.1	1436	2.6	457.52	26.0	31.0	38.0	50.0			
	2.6	3231	0.8	1066.44	14.0	43.0	24.0	45.0	PA/PF 63/23 80M2C / 80M2D	166	218
	2.4	3982	0.8	367.90	12.0	39.0	28.0	45.0	PA/PF 63/22 90L6C / 90L6D	162	214
	3.2	3063	1.1	283.00	12.0	39.0	28.0	45.0			
	4.0	2437	1.4	225.22	12.0	39.0	28.0	45.0			
	5.2	1875	1.8	173.24	12.0	39.0	-	-			
	5.9	1661	2.0	153.52	12.0	39.0	-	-			
	2.5	3743	0.9	554.24	12.0	39.0	26.0	45.0	PA/PF 63/22 90L4B / 90L4C	162	214
	3.3	2905	1.1	430.20	12.0	39.0	27.0	45.0			
	3.8	2485	1.3	367.90	12.0	39.0	28.0	45.0			
	4.9	1911	1.7	283.00	12.0	39.0	28.0	45.0			
	6.2	1521	2.1	225.22	12.0	39.0	28.0	45.0			
	8.1	1170	2.7	173.24	12.0	39.0	-	-			
	3.3	2672	0.9	851.02	12.0	39.0	23.0	45.0	PA/PF 63/22 80M2C / 80M2D	158	214
	3.8	2285	1.1	727.77	12.0	39.0	25.0	45.0			
	5.1	1740	1.4	554.24	12.0	39.0	26.0	45.0			
	6.5	1351	1.8	430.20	12.0	39.0	27.0	45.0			
	7.6	1155	2.1	367.90	12.0	39.0	28.0	45.0			
	9.9	889	2.7	283.00	12.0	39.0	28.0	45.0			
	2.4	4157	0.8	372.70	17.0	31.0	26.0	45.0	PA/PF 63 90L6C / 90L6D	143	193
	3.0	3357	1.0	300.91	18.0	30.0	27.0	45.0			
	3.4	2962	1.3	265.56	19.0	30.0	27.0	45.0			
	4.2	2392	1.6	214.41	20.0	29.0	28.0	45.0			
	3.8	2629	1.2	372.70	17.0	31.0	26.0	45.0	PA/PF 63 90L4B / 90L4C	143	193
	4.7	2122	1.5	300.91	18.0	30.0	27.0	45.0			
	5.3	1873	1.9	265.56	19.0	30.0	27.0	45.0			
	6.5	1512	2.4	214.41	20.0	29.0	28.0	45.0			
	4.1	2416	0.8	219.87	10.0	24.0	-	-	PA/PF 52/12 90L6C / 90L6D	104	212
	4.6	2139	0.9	194.67	10.0	24.0	-	-			
	6.2	1604	1.2	146.01	10.0	24.0	-	-			
	7.2	1368	1.4	124.52	10.0	24.0	-	-			
	9.2	1075	1.8	97.84	10.0	24.0	-	-			
	4.9	1955	0.9	283.16	10.0	24.0	-	-	PA/PF 52/12 90L4B / 90L4C	104	212
	6.4	1518	1.2	219.87	10.0	24.0	-	-			
	7.2	1344	1.4	194.67	10.0	24.0	-	-			
	9.6	1008	1.8	146.01	10.0	24.0	-	-			
	11.2	860	2.1	124.52	10.0	24.0	-	-			
	14.3	675	2.7	97.84	10.0	24.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	5.2	1765	0.8	542.36	10.0	24.0	-	-	PA/PF 52/12 80M2C / 80M2D	100	212
	5.7	1600	0.9	491.74	10.0	24.0	-	-			
	7.9	1153	1.2	354.34	10.0	24.0	-	-			
	9.9	921	1.5	283.16	10.0	24.0	-	-			
	12.7	715	1.9	219.87	10.0	24.0	-	-			
	14.4	633	2.2	194.67	10.0	24.0	-	-			
	19.2	475	2.9	146.01	10.0	24.0	-	-			
	3.8	2639	0.8	236.60	12.0	24.0	19.0	40.0	PA/PF 53 90L6C / 90L6D	107	189
	4.8	2074	0.9	185.90	13.0	24.0	19.0	40.0			
	5.1	1979	1.0	177.45	13.0	24.0	19.0	40.0			
	6.5	1555	1.5	139.42	14.0	24.0	19.0	40.0			
	8.5	1180	2.0	105.77	9.0	24.0	19.0	40.0			
	9.4	1064	2.2	95.41	9.0	24.0	19.0	40.0			
	11.3	889	2.2	79.69	9.0	24.0	-	-			
	13.8	729	2.8	65.31	9.0	24.0	-	-			
	4.8	2075	1.1	294.23	11.0	24.0	17.0	40.0	PA/PF 53 90L4B / 90L4C	107	189
	5.7	1733	1.1	245.73	12.0	24.0	18.0	40.0			
	5.9	1669	1.2	236.60	12.0	24.0	18.0	40.0			
	7.5	1311	1.4	185.90	13.0	24.0	19.0	40.0			
	7.9	1252	1.5	177.45	13.0	24.0	19.0	40.0			
	10.0	983	2.3	139.42	14.0	24.0	19.0	40.0			
	13.2	746	3.0	105.77	9.0	24.0	19.0	40.0			
	5.1	1850	0.8	548.64	11.0	24.0	18.0	40.0	PA/PF 53 80M2C / 80M2D	103	189
	5.6	1683	0.9	499.30	11.0	24.0	17.0	40.0			
	7.1	1323	1.0	392.31	11.0	24.0	18.0	40.0			
	7.5	1263	1.2	374.48	11.0	24.0	18.0	40.0			
	9.5	992	1.7	294.23	11.0	24.0	17.0	40.0			
	11.4	828	1.7	245.73	12.0	24.0	18.0	40.0			
	11.8	798	1.8	236.60	12.0	24.0	18.0	40.0			
	15.1	627	2.2	185.90	13.0	24.0	19.0	40.0			
	15.8	598	2.4	177.45	13.0	24.0	19.0	40.0			
	10.4	984	1.8	86.88	14.0	24.0	20.0	40.0	PA/PF 52 90L6C / 90L6D	88	188
	11.5	889	1.9	78.53	14.0	24.0	20.0	40.0			
	12.6	809	2.1	71.47	14.0	24.0	20.0	40.0	PA/PF 52 90L4B / 90L4C	88	188
	16.1	626	2.7	86.88	14.0	24.0	20.0	40.0			
	17.8	566	2.8	78.53	14.0	24.0	20.0	40.0	PA/PF 51 90L6C / 90L6D	49	166
	67.8	153	2.0	13.27	-	-	-	-			
	105.5	98	3.0	13.27	-	6.0	-	-	PA/PF 51 90L4B / 90L4C	49	166
	6.4	1543	0.8	140.44	3.0	12.0	-	-			
	7.7	1277	1.0	116.26	3.0	12.0	-	-	PA/PF 42/12 90L6C / 90L6D	86	212
	10.3	965	1.3	87.79	3.0	12.0	-	-			
	6.1	1585	0.8	229.62	3.0	12.0	-	-			
	8.3	1167	1.0	169.11	3.0	12.0	-	-	PA/PF 42/12 90L4B / 90L4C	86	212
	10.0	969	1.2	140.44	3.0	12.0	-	-			
	12.0	803	1.5	116.26	3.0	12.0	-	-			
	15.9	606	2.0	87.79	3.0	12.0	-	-			
	8.1	1128	0.8	346.69	3.0	12.0	-	-			
	10.1	900	1.0	276.49	3.0	12.0	-	-	PA/PF 42/12 80M2C / 80M2D	71	212
	12.2	747	1.2	229.62	3.0	12.0	-	-			
	16.6	550	1.7	169.11	3.0	12.0	-	-			
	19.9	457	2.0	140.44	3.0	12.0	-	-			
	24.1	378	2.4	116.26	3.0	12.0	-	-			
	7.0	1442	0.9	129.27	4.0	12.0	11.0	15.0	PA/PF 43 90L6C / 90L6D	74	185
	8.4	1198	1.0	107.36	4.0	12.0	11.0	14.0			
	9.5	1059	1.2	94.91	4.0	12.0	11.0	14.0			
	11.2	892	1.4	80.01	4.0	12.0	11.0	14.0			
	12.8	782	1.7	70.10	4.0	12.0	11.0	13.0			
	15.5	649	1.9	58.22	4.0	12.0	-	-			
	18.5	542	2.0	48.55	4.0	12.0	-	-			
	22.0	456	2.4	40.91	4.0	12.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	6.4	1547	0.8	219.26	3.0	12.0	10.0	15.0	PA/PF 43 90L4B / 90L4C	74	185
	6.8	1442	0.9	204.49	3.0	12.0	9.0	13.0			
	7.7	1290	0.8	182.86	4.0	12.0	11.0	15.0			
	8.2	1198	1.0	169.82	6.0	12.0	10.0	13.0			
	9.9	999	1.1	141.63	7.0	12.0	10.0	13.0			
	10.8	912	1.4	129.27	4.0	12.0	11.0	15.0			
	13.0	757	1.5	107.36	4.0	12.0	11.0	14.0			
	14.8	669	1.9	94.91	4.0	12.0	11.0	14.0			
	17.5	564	2.2	80.01	4.0	12.0	11.0	14.0			
	20.0	494	2.5	70.10	4.0	12.0	11.0	13.0			
	24.0	411	2.8	58.22	4.0	12.0	-	-			
	7.8	1212	0.8	359.61	3.0	12.0	9.0	18.0	PA/PF 43 80M2C / 80M2D	70	185
	9.4	1007	0.8	298.65	3.0	12.0	10.0	18.0			
	10.1	939	1.0	278.52	3.0	12.0	9.0	16.0			
	10.6	890	1.1	264.02	3.0	12.0	9.0	16.0			
	12.1	780	1.1	231.31	3.0	12.0	10.0	15.0			
	12.8	739	1.2	219.26	3.0	12.0	10.0	15.0			
	13.7	689	1.4	204.49	3.0	12.0	9.0	13.0			
	15.3	617	1.3	182.86	4.0	12.0	11.0	15.0			
	16.5	573	1.5	169.82	6.0	12.0	10.0	13.0			
	19.8	478	1.7	141.63	7.0	12.0	10.0	13.0			
	21.7	436	2.2	129.27	4.0	12.0	11.0	15.0			
	26.1	362	2.3	107.36	4.0	12.0	11.0	14.0			
	29.5	320	2.9	94.91	4.0	12.0	11.0	14.0			
	8.6	1190	0.8	105.08	7.0	12.0	11.0	13.0	PA/PF 42 90L6C / 90L6D	59	184
	10.6	964	0.9	85.10	8.0	12.0	11.0	13.0			
	12.0	848	1.3	74.87	8.0	12.0	11.0	13.0			
	14.8	687	1.5	60.64	8.0	12.0	11.0	12.0			
	13.3	757	1.1	105.08	7.0	12.0	11.0	13.0	PA/PF 42 90L4B / 90L4C	59	184
	16.5	613	1.3	85.10	8.0	12.0	11.0	13.0			
	18.7	539	2.2	74.87	8.0	12.0	11.0	13.0			
	23.1	437	2.3	60.64	8.0	12.0	11.0	12.0			
	60.8	170	0.8	14.80	-	-	-	-	PA/PF 41 90L6C / 90L6D	40	164
	85.3	121	1.6	10.55	-	-	-	-			
	94.6	109	1.2	14.80	-	4.0	-	-	PA/PF 41 90L4B / 90L4C	40	164
	132.7	78	2.4	10.55	-	4.0	-	-			
	17.0	567	1.1	82.19	5.0	9.0	-	-	PA/PF 32/12 90L4B / 90L4C	57	212
	16.8	544	0.9	167.16	5.0	9.0	-	-			
	18.9	482	1.0	148.00	5.0	9.0	-	-	PA/PF 32/12 80M2C / 80M2D	53	212
	22.2	411	1.1	126.22	5.0	9.0	-	-			
	34.1	267	1.8	82.19	5.0	9.0	-	-			
	15.9	623	0.9	88.29	6.0	9.0	-	-			
	16.8	561	0.9	166.39	6.0	9.0	8.0	17.0	PA/PF 33 80M2C / 80M2D	49	181
	20.9	452	1.1	133.98	6.0	9.0	9.0	16.0			
	25.0	378	1.1	112.18	6.0	9.0	-	-			
	31.7	298	1.4	88.29	6.0	9.0	-	-			
	14.0	728	0.9	64.26	6.0	9.0	9.0	13.0	PA/PF 32 90L6C / 90L6D	44	180
	15.7	651	1.0	57.49	7.0	9.0	9.0	13.0			
	19.4	524	1.1	46.29	6.0	9.0	9.0	13.0			
	19.5	523	1.3	46.22	6.0	9.0	9.0	13.0			
	23.2	439	1.1	38.76	6.0	9.0	9.0	12.0			
	24.2	422	1.5	37.22	6.0	9.0	9.0	12.0			
	27.3	374	1.1	33.00	6.0	9.0	9.0	12.0			
	28.9	353	1.5	31.16	6.0	9.0	9.0	12.0			
	29.6	345	1.9	30.45	5.0	9.0	-	-			
	33.0	308	2.0	27.24	5.0	9.0	-	-			
	33.9	300	1.5	26.53	5.0	9.0	9.0	11.0			
	39.0	262	2.5	23.10	7.0	9.0	9.0	11.0			
	43.5	234	3.0	20.67	7.0	9.0	9.0	11.0			
	54.1	188	3.0	16.64	7.0	9.0	9.0	9.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	17.2	585	0.9	81.27	6.0	9.0	9.0	14.0	PA/PF 32 90L4B / 90L4C	44	180
	19.3	524	1.1	72.71	6.0	9.0	9.0	14.0			
	21.8	463	1.4	64.26	6.0	9.0	9.0	13.0			
	24.4	414	1.5	57.49	7.0	9.0	9.0	13.0			
	30.2	333	1.6	46.29	6.0	9.0	9.0	13.0			
	30.3	333	2.0	46.22	6.0	9.0	9.0	13.0			
	36.1	279	1.6	38.76	6.0	9.0	9.0	12.0			
	37.6	268	2.2	37.22	6.0	9.0	9.0	12.0			
	42.4	238	1.6	33.00	6.0	9.0	9.0	12.0			
	44.9	224	2.3	31.16	6.0	9.0	9.0	12.0			
	46.0	219	2.9	30.45	5.0	9.0	-	-			
	52.8	191	2.3	26.53	5.0	9.0	9.0	11.0			
	34.5	284	1.4	81.27	6.0	9.0	9.0	14.0	PA/PF 32 80M2C / 80M2D	40	180
	38.5	254	1.7	72.71	6.0	9.0	9.0	14.0			
	43.6	225	2.2	64.26	6.0	9.0	9.0	13.0			
	48.7	201	2.3	57.49	7.0	9.0	9.0	13.0			
	60.5	162	2.5	46.29	6.0	9.0	9.0	13.0			
	72.2	135	2.5	38.76	6.0	9.0	9.0	13.0			
	84.8	115	2.5	33.00	6.0	9.0	9.0	12.0			
	88.2	117	0.8	10.20	-	-	-	-	PA/PF 31 90L6C / 90L6D	31	162
	109.8	94	1.2	8.20	-	-	-	-			
	186.3	56	1.9	4.83	-	-	-	-			
	245.2	42	2.7	3.67	-	-	-	-			
	271.9	38	2.9	3.31	-	-	-	-			
	137.3	75	1.2	10.20	-	3.0	-	-	PA/PF 31 90L4B / 90L4C	31	162
	170.7	60	1.7	8.20	-	3.0	-	-			
	289.9	36	2.8	4.83	-	3.0	-	-			
	274.5	37	1.9	10.20	-	-	-	-	PA/PF 31 80M2C / 80M2D	27	162
	27.9	339	0.8	100.53	1.0	6.0	7.0	11.0	PA/PF 23 80M2C / 80M2D	37	177
	31.7	297	0.9	88.24	1.0	6.0	6.0	10.0			
	35.9	263	1.0	78.00	1.0	6.0	7.0	10.0			
	43.2	218	1.2	64.80	1.0	6.0	7.0	10.0			
	25.3	403	0.9	35.55	3.0	6.0	7.0	8.0	PA/PF 22 90L6C / 90L6D	33	176
	26.0	393	0.9	34.67	4.0	6.0	7.0	8.0			
	30.7	332	0.9	29.34	4.0	6.0	7.0	8.0			
	31.3	326	1.2	28.80	4.0	6.0	7.0	8.0			
	36.5	280	0.9	24.69	4.0	6.0	7.0	8.0			
	37.9	269	1.3	23.77	4.0	6.0	7.0	8.0			
	45.0	226	1.3	20.00	4.0	6.0	7.0	8.0			
	53.8	190	1.9	16.74	4.0	6.0	7.0	7.0			
	61.3	166	2.1	14.67	5.0	6.0	7.0	7.0			
	73.8	138	2.5	12.19	5.0	6.0	8.0	7.0			
	82.6	123	2.7	10.90	5.0	6.0	8.0	7.0			
	106.4	96	2.8	8.46	5.0	6.0	8.0	6.0			
	118.9	86	3.0	7.57	5.0	6.0	8.0	6.0			
	173.7	59	2.8	5.18	5.0	6.0	8.0	5.0			
	194.0	53	3.0	4.64	5.0	6.0	8.0	5.0			
	25.3	398	0.8	55.25	1.0	6.0	7.0	9.0	PA/PF 22 90L4B / 90L4C	33	176
	30.5	331	0.9	45.90	1.0	6.0	7.0	9.0			
	32.7	308	1.1	42.79	2.0	6.0	7.0	9.0			
	39.4	256	1.3	35.55	3.0	6.0	7.0	8.0			
	40.4	250	1.4	34.67	4.0	6.0	7.0	8.0			
	47.7	211	1.4	29.34	4.0	6.0	7.0	8.0			
	48.6	207	1.8	28.80	4.0	6.0	7.0	8.0			
	56.7	178	1.4	24.69	4.0	6.0	7.0	8.0			
	58.9	171	1.9	23.77	4.0	6.0	7.0	8.0			
	70.0	144	2.0	20.00	4.0	6.0	7.0	8.0			
	83.6	121	2.8	16.74	4.0	6.0	7.0	7.0			
	40.1	244	0.8	69.74	1.0	6.0	7.0	11.0	PA/PF 22 80M2C / 80M2D	29	176
	50.7	193	1.3	55.25	1.0	6.0	7.0	9.0			
	61.0	160	1.4	45.90	1.0	6.0	7.0	9.0			
	65.4	149	1.7	42.79	2.0	6.0	7.0	9.0			
	78.8	124	2.0	35.55	3.0	6.0	7.0	8.0			
	95.4	103	2.2	29.34	4.0	6.0	7.0	8.0			
	113.4	86	2.2	24.69	4.0	6.0	7.0	8.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	140.6	74	0.9	6.40	-	-	-	-	PA/PF 21 90L6C / 90L6D	35	160
	245.2	42	1.7	3.67	-	-	-	-			
	291.3	36	1.8	3.09	-	-	-	-			
	332.1	31	2.6	2.71	-	-	-	-			
	371.9	28	2.8	2.42	-	-	-	-			
	432.7	24	3.0	2.08	-	-	-	-			
	177.2	58	1.0	7.90	-	4.0	-	-	PA/PF 21 90L4B / 90L4C	35	160
	218.8	47	1.4	6.40	-	4.0	-	-			
	381.5	27	2.5	3.67	-	4.0	-	-			
	453.1	23	2.7	3.09	-	4.0	-	-			
	274.5	37	0.8	10.20	-	-	-	-	PA/PF 21 80M2C / 80M2D	31	160
	354.4	29	1.6	7.90	-	-	-	-			
	608.7	17	2.6	4.60	-	-	-	-			
	47.9	213	0.8	18.80	1.0	4.0	5.0	6.0	PA/PF 12 90L6C / 90L6D	24	172
	53.8	190	0.9	16.74	2.0	4.0	5.0	6.0			
	67.2	152	1.0	13.39	2.0	4.0	5.0	6.0			
	84.3	121	1.2	10.68	2.0	4.0	5.0	5.0			
	93.3	109	1.3	9.65	2.0	4.0	5.0	5.0			
	114.6	89	1.5	7.85	2.0	4.0	5.0	5.0			
	123.5	83	1.6	7.29	2.0	4.0	5.0	5.0			
	137.8	74	1.8	6.53	2.0	4.0	5.0	5.0			
	155.7	65	2.0	5.78	2.0	4.0	5.0	5.0			
	182.6	56	2.2	4.93	1.0	4.0	5.0	5.0			
	200.4	51	2.4	4.49	1.0	4.0	5.0	4.0			
	208.8	49	2.4	4.31	1.0	4.0	5.0	4.0			
	226.1	45	2.7	3.98	1.0	4.0	5.0	4.0			
	265.5	38	3.0	3.39	1.0	4.0	5.0	4.0			
	65.8	150	1.1	21.27	1.0	4.0	5.0	6.0	PA/PF 12 90L4B / 90L4C	24	172
	74.5	133	1.2	18.80	1.0	4.0	5.0	6.0			
	83.6	118	1.3	16.74	2.0	4.0	5.0	6.0			
	104.6	94	1.6	13.39	2.0	4.0	5.0	6.0			
	131.1	75	1.8	10.68	2.0	4.0	5.0	5.0			
	145.1	68	2.0	9.65	2.0	4.0	5.0	5.0			
	178.3	55	2.4	7.85	2.0	4.0	5.0	5.0			
	192.0	51	2.4	7.29	2.0	4.0	5.0	5.0			
	214.4	46	2.7	6.53	2.0	4.0	5.0	5.0			
	242.2	41	3.0	5.78	2.0	4.0	5.0	5.0			
	58.5	167	0.8	47.86	1.0	4.0	5.0	8.0	PA/PF 12 80M2C / 80M2D	20	172
	73.1	134	1.0	38.29	1.0	4.0	5.0	7.0			
	89.9	109	1.2	31.15	1.0	4.0	5.0	7.0			
	108.0	91	1.1	25.92	1.0	4.0	5.0	7.0			
	131.6	74	1.7	21.27	1.0	4.0	5.0	6.0			
	148.9	66	1.9	18.80	1.0	4.0	5.0	6.0			
	167.3	58	2.0	16.74	2.0	4.0	5.0	6.0			
	209.1	47	2.4	13.39	2.0	4.0	5.0	6.0			
	262.2	37	2.7	10.68	2.0	4.0	5.0	5.0			
	290.2	34	3.0	9.65	2.0	4.0	5.0	5.0			
	250.0	41	1.1	3.60	-	-	-	-	PA/PF 11 90L6C / 90L6D	20	158
	283.0	37	1.1	3.18	-	-	-	-			
	318.0	33	1.7	2.83	-	-	-	-			
	387.9	27	1.9	2.32	-	-	-	-			
	441.2	23	2.6	2.04	-	-	-	-			
	497.2	21	2.8	1.81	-	-	-	-			
	584.4	18	3.0	1.54	-	-	-	-			
	388.9	26	1.8	3.60	-	3.0	-	-	PA/PF 11 90L4B / 90L4C	20	158
	440.3	23	1.7	3.18	-	3.0	-	-			
	494.7	21	2.6	2.83	-	3.0	-	-			
	603.4	17	2.8	2.32	-	3.0	-	-			
	345.7	29	0.8	8.10	-	-	-	-	PA/PF 11 80M2C / 80M2D	16	158
	777.8	13	2.8	3.60	-	-	-	-			
	880.5	12	2.6	3.18	-	-	-	-			
	130.6	78	0.8	6.89	2.0	3.0	3.0	4.0	PA/PF 02 90L6C / 90L6D	22	168
	161.6	63	0.9	5.57	2.0	3.0	3.0	3.0			
	186.7	55	1.1	4.82	2.0	3.0	2.0	3.0			
	230.8	44	1.3	3.90	2.0	3.0	2.0	3.0			
	265.5	38	1.4	3.39	2.0	3.0	2.0	3.0			
	303.0	34	1.4	2.97	2.0	3.0	2.0	3.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.10	109.3	92	0.8	12.81	2.0	3.0	3.0	5.0	PA/PF 02 90L4B / 90L4C	22	168
	124.6	81	0.8	11.24	2.0	3.0	3.0	4.0			
	140.8	72	0.9	9.94	2.0	3.0	3.0	4.0			
	151.0	67	1.0	9.27	2.0	3.0	3.0	4.0			
	170.7	59	1.1	8.20	2.0	3.0	3.0	4.0			
	179.5	56	1.1	7.80	2.0	3.0	3.0	4.0			
	203.2	50	1.2	6.89	2.0	3.0	3.0	4.0			
	251.3	40	1.4	5.57	2.0	3.0	3.0	3.0			
	290.5	35	1.6	4.82	2.0	3.0	2.0	3.0			
	359.0	28	1.9	3.90	2.0	3.0	2.0	3.0			
	413.0	24	2.1	3.39	2.0	3.0	2.0	3.0			
	471.4	21	2.2	2.97	2.0	3.0	2.0	3.0			
	114.7	85	0.8	24.41	2.0	3.0	3.0	5.0	PA/PF 02 80M2C / 80M2D	18	168
	136.0	72	0.8	20.59	2.0	3.0	3.0	5.0			
	175.5	56	1.0	15.95	2.0	3.0	3.0	5.0			
	218.6	45	1.2	12.81	2.0	3.0	3.0	5.0			
	249.1	39	1.3	11.24	2.0	3.0	3.0	4.0			
	281.7	35	1.4	9.94	2.0	3.0	3.0	4.0			
	302.0	32	1.5	9.27	2.0	3.0	3.0	4.0			
	341.5	29	1.7	8.20	2.0	3.0	3.0	4.0			
	359.0	27	1.8	7.80	2.0	3.0	3.0	4.0			
	406.4	24	1.9	6.89	2.0	3.0	3.0	4.0			
	502.7	19	2.2	5.57	2.0	3.0	3.0	3.0			
	580.9	17	2.6	4.82	2.0	3.0	2.0	3.0			
	717.9	14	3.0	3.90	2.0	3.0	2.0	3.0			
1.50	0.5	24488	0.8	2719.64	101.0	120.0	-	-	PA/PF 103/53 90L4C / 90L4D	822	218
	0.7	17449	0.9	4223.52	101.0	120.0	-	-	PA/PF 103/53 90L2B / 90L2C	822	218
	0.8	14300	1.1	3461.37	101.0	120.0	-	-			
	1.0	11236	1.4	2719.64	101.0	120.0	-	-			
	0.5	25126	0.8	1702.50	95.0	59.0	-	-	PA/PF 103/52 100L6C / 100L6D	813	216
	0.6	20863	1.0	1413.66	95.0	59.0	120.0	120.0			
	0.8	16935	1.2	1147.52	95.0	59.0	120.0	120.0			
	1.0	13932	1.5	944.01	95.0	59.0	120.0	120.0			
	1.1	12070	1.7	817.82	95.0	59.0	120.0	120.0			
	1.4	9483	2.2	642.57	95.0	59.0	120.0	120.0			
	1.9	6910	3.0	468.19	95.0	59.0	120.0	120.0			
	2.0	6052	2.5	1413.66	60.0	29.0	120.0	120.0	PA/PF 103/52 90L2B / 90L2C	803	216
	1.0	11216	0.8	2714.80	66.0	80.0	-	-	PA/PF 93/43 90L2B / 90L2C	570	218
	1.3	9085	1.0	2199.04	66.0	80.0	-	-			
	0.8	16101	0.8	1090.99	60.0	80.0	89.0	80.0	PA/PF 93/42 100L6C / 100L6D	565	216
	1.1	11983	1.1	811.95	63.0	80.0	91.0	80.0			
	1.2	11169	1.1	756.80	63.0	80.0	91.0	80.0			
	1.6	8086	1.6	547.88	65.0	80.0	92.0	80.0			
	2.0	6743	1.9	456.91	66.0	80.0	93.0	80.0			
	2.7	4913	2.6	332.89	62.0	80.0	93.0	80.0			
	3.1	4250	3.0	287.97	62.0	80.0	93.0	80.0			
	1.1	11964	1.0	1299.17	57.0	80.0	87.0	80.0	PA/PF 93/42 90L4C / 90L4D	555	216
	1.3	10047	1.2	1090.99	60.0	80.0	89.0	80.0			
	1.7	7477	1.6	811.95	63.0	80.0	91.0	80.0			
	1.8	6969	1.8	756.80	63.0	80.0	91.0	80.0			
	2.6	5045	2.4	547.88	65.0	80.0	92.0	80.0			
	3.1	4208	2.9	456.91	66.0	80.0	93.0	80.0			
	2.2	5562	1.7	1299.17	57.0	80.0	87.0	80.0	PA/PF 93/42 90L2B / 90L2C	555	216
	2.6	4671	2.0	1090.99	60.0	80.0	89.0	80.0			
	3.4	3476	2.7	811.95	63.0	80.0	91.0	80.0			
	3.7	3240	2.9	756.80	63.0	80.0	91.0	80.0			
	1.7	7750	1.1	525.11	42.0	56.0	61.0	65.0	PA/PF 83/42 100L6C / 100L6D	386	216
	2.1	6463	1.3	437.93	43.0	54.0	62.0	65.0			
	2.4	5527	1.5	374.50	44.0	53.0	62.0	65.0			
	3.3	4073	2.1	276.00	45.0	59.0	63.0	65.0			
	3.8	3483	2.4	236.03	45.0	59.0	63.0	65.0			
	4.5	2968	2.8	201.09	44.0	59.0	63.0	65.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
1.50	2.7	4836	1.7	525.11	42.0	56.0	61.0	65.0	PA/PF 83/42 90L4C / 90L4D	376	216
	3.2	4033	2.0	437.93	43.0	54.0	62.0	65.0			
	3.7	3449	2.3	374.50	44.0	53.0	62.0	65.0			
	5.3	2248	2.7	525.11	42.0	56.0	61.0	65.0	PA/PF 83/42 90L2B / 90L2C	376	216
	1.2	10665	0.8	722.63	38.0	58.0	58.0	65.0	PA/PF 83/32 100L6C / 100L6D	371	214
	1.2	10608	0.8	1151.94	33.0	60.0	57.0	65.0	PA/PF 83/32		
	1.6	8264	1.0	897.44	33.0	60.0	55.0	65.0	90L4C / 90L4D	361	214
	1.9	6655	1.2	722.63	38.0	58.0	58.0	65.0			
	1.7	7207	0.8	1683.27	33.0	60.0	-	-	PA/PF 83/32		
	2.0	5852	1.0	1366.81	33.0	60.0	53.0	65.0	90L2B / 90L2C	361	214
	2.4	4932	1.2	1151.94	33.0	60.0	57.0	65.0			
	3.1	3842	1.6	897.44	33.0	60.0	55.0	65.0			
	3.9	3094	2.0	722.63	38.0	58.0	58.0	65.0			
	4.2	3293	2.8	216.49	44.0	44.0	62.0	65.0	PA/PF 83 100L6C / 100L6D	341	201
	4.0	3341	1.6	226.38	27.0	26.0	39.0	50.0	PA/PF 73/32		
	5.3	2525	2.1	171.10	27.0	26.0	40.0	50.0	100L6C / 100L6D	264	214
	6.4	2083	2.5	141.16	27.0	26.0	40.0	50.0			
	7.2	1840	2.9	124.66	27.0	26.0	40.0	50.0			
	6.2	2085	2.4	226.38	27.0	26.0	39.0	50.0	PA/PF 73/32 90L4C / 90L4D	254	214
	2.0	6752	0.8	457.52	23.0	28.0	36.0	50.0	PA/PF 73/22		
	2.6	5117	1.0	346.75	25.0	27.0	38.0	50.0	100L6C / 100L6D	253	214
	3.2	4133	1.3	280.08	27.0	27.0	39.0	50.0			
	2.5	5216	1.0	566.43	20.0	28.0	37.0	50.0	PA/PF 73/22		
	3.1	4213	1.2	457.52	23.0	28.0	38.0	50.0	90L4C / 90L4D	243	214
	4.0	3193	1.6	346.75	25.0	27.0	39.0	50.0			
	5.0	2579	1.9	280.08	27.0	27.0	40.0	50.0			
	2.6	4698	0.8	1097.40	20.0	28.0	36.0	50.0	PA/PF 73/22		
	3.2	3795	1.0	886.40	20.0	28.0	33.0	50.0	90L2B / 90L2C	243	214
	3.8	3153	1.2	736.40	20.0	28.0	35.0	50.0			
	4.9	2425	1.6	566.43	20.0	28.0	35.0	50.0			
	6.1	1959	1.9	457.52	23.0	28.0	36.0	50.0			
	8.1	1485	2.6	346.75	25.0	27.0	38.0	50.0			
	4.4	3127	1.8	205.59	21.0	7.0	39.0	50.0	PA/PF 73		
	5.4	2526	2.3	166.07	21.0	7.0	39.0	50.0	100L6C / 100L6D	234	197
	7.2	1892	2.8	124.38	21.0	7.0	40.0	50.0			
	9.0	1528	2.7	100.47	21.0	7.0	40.0	50.0			
	3.2	4177	0.8	283.00	12.0	39.0	28.0	45.0	PA/PF 63/22		
	4.0	3324	1.0	225.22	12.0	39.0	28.0	45.0	100L6C / 100L6D	172	214
	5.2	2557	1.3	173.24	12.0	39.0	-	-			
	5.9	2266	1.5	153.52	12.0	39.0	-	-			
	3.3	3962	0.8	430.20	12.0	39.0	27.0	45.0	PA/PF 63/22		
	3.8	3388	0.9	367.90	12.0	39.0	28.0	45.0	90L4C / 90L4D	162	214
	4.9	2606	1.2	283.00	12.0	39.0	28.0	45.0			
	6.2	2074	1.5	225.22	12.0	39.0	28.0	45.0			
	8.1	1595	2.0	173.24	12.0	39.0	-	-			
	9.1	1414	2.3	153.52	12.0	39.0	-	-			
	3.8	3116	0.8	727.77	12.0	39.0	25.0	45.0	PA/PF 63/22		
	5.1	2373	1.0	554.24	12.0	39.0	26.0	45.0	90L2B / 90L2C	162	214
	6.5	1842	1.3	430.20	12.0	39.0	27.0	45.0			
	7.6	1575	1.5	367.90	12.0	39.0	28.0	45.0			
	9.9	1212	2.0	283.00	12.0	39.0	28.0	45.0			
	12.4	964	2.5	225.22	12.0	39.0	28.0	45.0			
	3.4	4039	0.9	265.56	18.0	28.0	26.0	45.0	PA/PF 63		
	4.2	3261	1.2	214.41	19.0	27.0	27.0	45.0	100L6C / 100L6D	153	193
	5.0	2751	1.4	180.86	17.0	31.0	27.0	45.0			
	6.2	2221	1.7	146.02	17.0	31.0	27.0	45.0			
	8.3	1644	2.3	108.08	17.0	31.0	28.0	45.0			
	10.3	1327	2.5	87.26	17.0	31.0	28.0	45.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.50	3.8	3585	0.9	372.70	14.0	28.0	24.0	45.0	PA/PF 63 90L4C / 90L4D	143	193
	4.7	2894	1.1	300.91	17.0	28.0	26.0	45.0			
	5.3	2554	1.4	265.56	18.0	28.0	26.0	45.0			
	6.5	2062	1.8	214.41	19.0	27.0	27.0	45.0			
	7.5	1713	1.4	372.70	14.0	28.0	24.0	45.0	PA/PF 63 90L2B / 90L2C	143	193
	9.3	1383	1.8	300.91	17.0	28.0	26.0	45.0			
	10.5	1221	2.3	265.56	18.0	28.0	26.0	45.0			
	13.1	986	2.8	214.41	19.0	27.0	27.0	45.0			
	6.2	2188	0.9	146.01	10.0	24.0	-	-	PA/PF 52/12 100L6C / 100L6D	114	212
	7.2	1866	1.0	124.52	10.0	24.0	-	-			
	9.2	1466	1.3	97.84	10.0	24.0	-	-			
	6.4	2070	0.9	219.87	10.0	24.0	-	-	PA/PF 52/12 90L4C / 90L4D	104	212
	7.2	1833	1.0	194.67	10.0	24.0	-	-			
	9.6	1374	1.3	146.01	10.0	24.0	-	-			
	11.2	1172	1.6	124.52	10.0	24.0	-	-			
	14.3	921	2.0	97.84	10.0	24.0	-	-			
	7.9	1572	0.9	354.34	10.0	24.0	-	-	PA/PF 52/12 90L2B / 90L2C	104	212
	9.9	1256	1.1	283.16	10.0	24.0	-	-			
	12.7	975	1.4	219.87	10.0	24.0	-	-			
	14.4	864	1.6	194.67	10.0	24.0	-	-			
	19.2	648	2.1	146.01	10.0	24.0	-	-			
	22.5	552	2.5	124.52	10.0	24.0	-	-			
	6.5	2121	1.1	139.42	13.0	24.0	19.0	40.0	PA/PF 53 100L6C / 100L6D	117	189
	8.5	1609	1.5	105.77	11.0	24.0	19.0	40.0			
	9.4	1451	1.6	95.41	11.0	24.0	19.0	40.0			
	11.3	1212	1.6	79.69	11.0	24.0	-	-			
	13.8	993	2.0	65.31	11.0	24.0	-	-			
	15.3	896	2.2	58.91	11.0	24.0	-	-	PA/PF 53 90L4C / 90L4D	107	189
	4.8	2830	0.8	294.23	10.0	24.0	19.0	40.0			
	5.7	2363	0.8	245.73	10.0	24.0	19.0	40.0			
	5.9	2276	0.8	236.60	10.0	24.0	17.0	40.0			
	7.5	1788	1.0	185.90	12.0	24.0	18.0	40.0			
	7.9	1707	1.1	177.45	12.0	24.0	18.0	40.0			
	10.0	1341	1.7	139.42	13.0	24.0	19.0	40.0			
	13.2	1017	2.2	105.77	11.0	24.0	19.0	40.0			
	14.7	918	2.4	95.41	11.0	24.0	19.0	40.0			
	17.6	766	2.4	79.69	11.0	24.0	-	-	PA/PF 53 90L2B / 90L2C	107	189
	7.1	1804	0.8	392.31	10.0	24.0	18.0	40.0			
	7.5	1722	0.8	374.48	10.0	24.0	18.0	40.0			
	9.5	1353	1.3	294.23	10.0	24.0	17.0	40.0			
	11.4	1130	1.3	245.73	10.0	24.0	18.0	40.0			
	11.8	1088	1.3	236.60	10.0	24.0	17.0	40.0			
	15.1	855	1.6	185.90	12.0	24.0	18.0	40.0			
	15.8	816	1.8	177.45	12.0	24.0	18.0	40.0			
	20.1	641	2.6	139.42	13.0	24.0	19.0	40.0	PA/PF 52 100L6C / 100L6D	98	188
	10.4	1342	1.3	86.88	14.0	24.0	20.0	40.0			
	11.5	1213	1.4	78.53	14.0	24.0	20.0	40.0			
	12.6	1104	1.5	71.47	14.0	24.0	20.0	40.0			
	15.1	919	2.2	59.50	14.0	24.0	20.0	40.0			
	16.7	831	2.4	53.79	14.0	24.0	20.0	40.0			
	18.4	756	2.7	48.95	14.0	24.0	20.0	40.0			
	23.4	594	2.9	38.46	14.0	24.0	20.0	40.0			
	25.0	556	2.6	36.00	14.0	24.0	20.0	40.0			
	27.7	503	2.6	32.54	14.0	24.0	20.0	40.0			
	28.0	496	2.9	32.12	14.0	24.0	20.0	39.0	PA/PF 52 90L4C / 90L4D	88	188
	16.1	853	2.0	86.88	14.0	24.0	20.0	40.0			
	17.8	771	2.1	78.53	14.0	24.0	20.0	40.0			
	19.6	702	2.3	71.47	14.0	24.0	20.0	40.0	PA/PF 51 100L6C / 100L6D	59	166
	67.8	208	1.5	13.27	-	-	-	-			
	99.0	143	2.4	9.09	-	-	-	-			
	163.6	86	2.7	5.50	-	-	-	-	PA/PF 51 90L4C / 90L4D	49	166
	105.5	133	2.2	13.27	-	6.0	-	-			
	10.3	1315	1.0	87.79	3.0	12.0	-	-	PA/PF 42/12 100L6C / 100L6D	96	212

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.50	8.3	1592	0.8	169.11	3.0	12.0	-	-	PA/PF 42/12 90L4C / 90L4D	86	212
	10.0	1322	0.9	140.44	3.0	12.0	-	-			
	12.0	1094	1.1	116.26	3.0	12.0	-	-			
	15.9	826	1.5	87.79	3.0	12.0	-	-			
	12.2	1019	0.9	229.62	3.0	12.0	-	-	PA/PF 42/12 90L2B / 90L2C	86	212
	16.6	750	1.2	169.11	3.0	12.0	-	-			
	19.9	623	1.5	140.44	3.0	12.0	-	-			
	24.1	516	1.8	116.26	3.0	12.0	-	-			
	31.9	389	2.3	87.79	3.0	12.0	-	-			
	9.5	1444	0.9	94.91	3.0	12.0	11.0	14.0	PA/PF 43 100L6C / 100L6D	84	185
	11.2	1217	1.1	80.01	3.0	12.0	11.0	14.0			
	12.8	1066	1.2	70.10	3.0	12.0	11.0	13.0			
	15.5	886	1.4	58.22	3.0	12.0	-	-			
	18.5	738	1.5	48.55	3.0	12.0	-	-	PA/PF 43 90L4C / 90L4D	74	185
	22.0	622	1.8	40.91	3.0	12.0	-	-			
	9.9	1362	0.8	141.63	3.0	12.0	11.0	15.0			
	10.8	1243	1.0	129.27	3.0	12.0	10.0	11.0			
	13.0	1033	1.1	107.36	3.0	12.0	11.0	14.0	PA/PF 43 90L2B / 90L2C	74	185
	14.8	913	1.4	94.91	3.0	12.0	11.0	14.0			
	17.5	770	1.6	80.01	3.0	12.0	11.0	14.0			
	20.0	674	1.9	70.10	3.0	12.0	11.0	13.0			
	24.0	560	2.1	58.22	3.0	12.0	-	-	PA/PF 43 100L6C / 100L6D	74	185
	28.8	467	2.2	48.55	3.0	12.0	-	-			
	34.2	393	2.6	40.91	3.0	12.0	-	-			
	10.1	1280	0.8	278.52	3.0	12.0	9.0	16.0			
	10.6	1214	0.8	264.02	3.0	12.0	9.0	16.0	PA/PF 42 90L4C / 90L4D	69	184
	12.1	1063	0.8	231.31	3.0	12.0	10.0	15.0			
	12.8	1008	0.9	219.26	3.0	12.0	10.0	15.0			
	13.7	940	1.0	204.49	3.0	12.0	9.0	13.0			
	15.3	841	0.9	182.86	3.0	12.0	11.0	15.0	PA/PF 42 90L2B / 90L2C	59	184
	16.5	781	1.1	169.82	3.0	12.0	10.0	13.0			
	19.8	651	1.2	141.63	3.0	12.0	10.0	13.0			
	21.7	594	1.6	129.27	3.0	12.0	10.0	11.0			
	26.1	494	1.7	107.36	3.0	12.0	11.0	14.0	PA/PF 42 100L6C / 100L6D	59	184
	29.5	436	2.2	94.91	3.0	12.0	11.0	14.0			
	35.0	368	2.5	80.01	3.0	12.0	11.0	14.0			
	39.9	322	3.0	70.10	3.0	12.0	11.0	13.0			
	12.0	1156	1.0	74.87	8.0	12.0	11.0	12.0	PA/PF 41 100L6C / 100L6D	50	164
	14.8	936	1.1	60.64	8.0	12.0	11.0	11.0			
	17.7	787	1.5	50.99	7.0	12.0	11.0	10.0			
	21.8	638	2.0	41.30	7.0	12.0	11.0	10.0			
	25.5	545	2.4	35.26	7.0	12.0	11.0	10.0	PA/PF 41 90L4C / 90L4D	40	164
	29.5	471	2.4	30.47	7.0	12.0	12.0	10.0			
	30.7	452	2.4	29.28	7.0	12.0	11.0	9.0			
	36.5	381	2.5	24.68	7.0	12.0	12.0	10.0			
	36.9	377	2.4	24.42	7.0	12.0	11.0	9.0	PA/PF 41 90L2B / 90L2C	40	164
	13.3	1032	0.8	105.08	6.0	12.0	10.0	12.0			
	16.5	836	1.0	85.10	7.0	12.0	11.0	12.0			
	18.7	735	1.6	74.87	8.0	12.0	11.0	12.0			
	23.1	596	1.7	60.64	8.0	12.0	11.0	11.0			
	26.6	501	1.3	105.08	6.0	12.0	10.0	12.0	PA/PF 32/12 90L4C / 90L4D	57	212
	32.9	405	1.5	85.10	7.0	12.0	11.0	12.0			
	37.4	357	2.5	74.87	8.0	12.0	11.0	12.0			
	46.2	289	2.6	60.64	8.0	12.0	11.0	11.0			
	85.3	165	1.2	10.55	-	-	-	-	PA/PF 32/12 90L2B / 90L2C	40	164
	125.3	113	1.8	7.18	-	-	-	-			
	209.8	67	2.4	4.29	-	-	-	-			
	232.0	61	2.5	3.88	-	-	-	-			
	263.2	54	2.7	3.42	-	-	-	-	PA/PF 32/12 90L4C / 90L4D	57	212
	94.6	148	0.9	14.80	-	4.0	-	-			
	132.7	106	1.8	10.55	-	4.0	-	-			
	189.2	73	1.4	14.80	-	-	-	-			
	265.4	52	2.8	10.55	-	-	-	-			
	17.0	774	0.8	82.19	5.0	9.0	-	-	PA/PF 32/12 90L4C / 90L4D	57	212

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P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	Kg	mm
1.50	31.3	445	0.9	28.80	1.0	6.0	7.0	8.0	PA/PF 22 100L6C / 100L6D	43	176
	37.9	367	0.9	23.77	2.0	6.0	7.0	7.0			
	45.0	309	1.0	20.00	3.0	6.0	7.0	7.0			
	53.8	259	1.4	16.74	4.0	6.0	7.0	7.0			
	61.3	227	1.6	14.67	4.0	6.0	7.0	7.0			
	73.8	188	1.8	12.19	4.0	6.0	7.0	7.0			
	82.6	168	2.0	10.90	4.0	6.0	7.0	7.0			
	106.4	131	2.1	8.46	1.0	6.0	8.0	6.0			
	118.9	117	2.2	7.57	1.0	6.0	8.0	6.0			
	131.2	106	2.5	6.86	1.0	6.0	8.0	6.0			
	138.2	101	2.4	6.51	1.0	6.0	8.0	6.0			
	156.0	89	2.5	5.77	1.0	6.0	8.0	5.0			
	173.7	80	2.1	5.18	1.0	6.0	8.0	5.0			
	194.0	72	2.2	4.64	1.0	6.0	8.0	5.0			
	225.6	62	2.4	3.99	1.0	6.0	8.0	5.0			
	255.0	55	2.5	3.53	1.0	6.0	8.0	5.0			
	321.4	43	2.8	2.80	1.0	6.0	7.0	4.0			
	32.7	420	0.8	42.79	1.0	6.0	6.0	8.0	PA/PF 22 90L4C / 90L4D	33	176
	39.4	349	0.9	35.55	1.0	6.0	7.0	8.0			
	40.4	341	1.0	34.67	1.0	6.0	7.0	8.0			
	47.7	288	1.0	29.34	1.0	6.0	7.0	7.0			
	48.6	283	1.3	28.80	1.0	6.0	7.0	8.0			
	56.7	243	1.0	24.69	1.0	6.0	7.0	7.0			
	58.9	233	1.4	23.77	2.0	6.0	7.0	7.0			
	70.0	196	1.5	20.00	3.0	6.0	7.0	7.0			
	83.6	164	2.1	16.74	4.0	6.0	7.0	7.0			
	95.4	144	2.3	14.67	4.0	6.0	7.0	7.0			
	114.8	120	2.7	12.19	4.0	6.0	7.0	7.0			
	128.4	107	3.0	10.90	4.0	6.0	7.0	7.0			
	50.7	263	0.9	55.25	1.0	6.0	7.0	9.0	PA/PF 22 90L2B / 90L2C	33	176
	61.0	219	1.0	45.90	1.0	6.0	7.0	9.0			
	65.4	204	1.3	42.79	1.0	6.0	6.0	8.0			
	78.8	169	1.5	35.55	1.0	6.0	7.0	8.0			
	80.8	165	1.6	34.67	1.0	6.0	7.0	8.0			
	95.4	140	1.6	29.34	1.0	6.0	7.0	7.0			
	97.2	137	2.1	28.80	1.0	6.0	7.0	8.0			
	113.4	118	1.6	24.69	1.0	6.0	7.0	7.0			
	117.8	113	2.2	23.77	2.0	6.0	7.0	7.0			
	140.0	95	2.3	20.00	3.0	6.0	7.0	7.0			
	245.2	58	1.2	3.67	-	-	-	-	PA/PF 21 100L6C / 100L6D	45	160
	291.3	48	1.3	3.09	-	-	-	-			
	332.1	42	1.9	2.71	-	-	-	-			
	371.9	38	2.0	2.42	-	-	-	-			
	432.7	33	2.2	2.08	-	-	-	-			
	486.5	29	2.3	1.85	-	-	-	-			
	616.4	23	2.8	1.46	-	-	-	-	PA/PF 21 90L4C / 90L4D	35	160
	177.2	79	0.8	7.90	-	4.0	-	-			
	218.8	64	1.0	6.40	-	4.0	-	-			
	381.5	37	1.8	3.67	-	4.0	-	-			
	453.1	31	2.0	3.09	-	4.0	-	-			
	516.6	27	2.8	2.71	-	4.0	-	-			
	578.5	24	3.0	2.42	-	4.0	-	-	PA/PF 21 90L2B / 90L2C	35	160
	354.4	39	1.2	7.90	-	-	-	-			
	437.5	32	1.6	6.40	-	-	-	-			
	762.9	18	2.9	3.67	-	-	-	-	PA/PF 12 100L6C / 100L6D	34	172
	67.2	207	0.8	13.39	1.0	4.0	5.0	5.0			
	84.3	165	0.9	10.68	2.0	4.0	5.0	5.0			
	93.3	149	1.0	9.65	2.0	4.0	5.0	5.0			
	114.6	121	1.1	7.85	2.0	4.0	5.0	5.0			
	123.5	113	1.2	7.29	2.0	4.0	5.0	5.0			
	137.8	101	1.3	6.53	2.0	3.0	5.0	5.0			
	155.7	89	1.4	5.78	2.0	3.0	5.0	5.0			
	182.6	76	1.6	4.93	2.0	3.0	5.0	4.0			
	200.4	69	1.8	4.49	2.0	3.0	5.0	4.0			
	208.8	67	1.8	4.31	2.0	3.0	5.0	4.0			
	226.1	61	1.9	3.98	2.0	3.0	5.0	4.0			
	265.5	52	2.2	3.39	1.0	4.0	5.0	4.0			
	304.1	46	2.4	2.96	1.0	4.0	5.0	4.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
1.50	65.8	205	0.8	21.27	1.0	4.0	5.0	6.0	PA/PF 12 90L4C / 90L4D	24	172
	74.5	181	0.9	18.80	1.0	4.0	5.0	6.0			
	83.6	161	1.0	16.74	1.0	4.0	5.0	5.0			
	104.6	129	1.2	13.39	1.0	4.0	5.0	5.0			
	131.1	103	1.3	10.68	2.0	4.0	5.0	5.0			
	145.1	93	1.5	9.65	2.0	4.0	5.0	5.0			
	178.3	76	1.7	7.85	2.0	4.0	5.0	5.0			
	192.0	70	1.8	7.29	2.0	4.0	5.0	5.0			
	214.4	63	2.0	6.53	2.0	3.0	5.0	5.0			
	242.2	56	2.2	5.78	2.0	3.0	5.0	5.0			
	284.0	47	2.4	4.93	2.0	3.0	5.0	4.0			
	311.8	43	2.7	4.49	2.0	3.0	5.0	4.0			
	324.8	41	2.7	4.31	2.0	3.0	5.0	4.0			
	351.8	38	3.0	3.98	2.0	3.0	5.0	4.0			
	131.6	101	1.3	21.27	1.0	4.0	-	-	PA/PF 12 90L2B / 90L2C	24	172
	148.9	90	1.4	18.80	1.0	4.0	-	-			
	167.3	80	1.5	16.74	1.0	4.0	-	-			
	209.1	64	1.8	13.39	1.0	4.0	5.0	5.0			
	262.2	51	2.0	10.68	2.0	4.0	5.0	5.0			
	290.2	46	2.2	9.65	2.0	4.0	5.0	5.0			
	356.7	37	2.7	7.85	2.0	4.0	5.0	5.0			
	384.1	35	2.7	7.29	2.0	4.0	5.0	5.0			
	318.0	44	1.3	2.83	-	-	-	-	PA/PF 11 100L6C / 100L6D	30	158
	387.9	36	1.4	2.32	-	-	-	-			
	441.2	32	1.9	2.04	-	-	-	-			
	497.2	28	2.0	1.81	-	-	-	-			
	584.4	24	2.2	1.54	-	-	-	-			
	666.7	21	2.5	1.35	-	-	-	-			
	388.9	36	1.3	3.60	-	3.0	-	-	PA/PF 11 90L4C / 90L4D	20	158
	440.3	32	1.3	3.18	-	3.0	-	-			
	494.7	28	1.9	2.83	-	3.0	-	-			
	603.4	23	2.1	2.32	-	3.0	-	-			
	686.3	20	2.8	2.04	-	3.0	-	-			
	773.5	18	3.0	1.81	-	3.0	-	-			
	777.8	18	2.1	3.60	-	-	-	-	PA/PF 11 90L2B / 90L2C	20	158
	880.5	16	1.9	3.18	-	-	-	-			
	989.4	14	2.9	2.83	-	-	-	-			
	170.7	81	0.8	8.20	1.0	3.0	3.0	4.0	PA/PF 02 90L4C / 90L4D	22	168
	179.5	77	0.8	7.80	1.0	3.0	2.0	3.0			
	203.2	68	0.9	6.89	1.0	3.0	2.0	3.0			
	251.3	55	1.0	5.57	1.0	3.0	2.0	3.0			
	290.5	47	1.2	4.82	1.0	3.0	2.0	3.0			
	359.0	38	1.4	3.90	2.0	2.0	2.0	3.0			
	413.0	33	1.5	3.39	2.0	2.0	2.0	3.0			
	471.4	29	1.6	2.97	1.0	2.0	2.0	3.0			
	218.6	61	0.9	12.81	1.0	3.0	3.0	5.0	PA/PF 02 90L2B / 90L2C	22	168
	249.1	54	1.0	11.24	1.0	3.0	3.0	4.0			
	281.7	47	1.0	9.94	1.0	3.0	3.0	4.0			
	302.0	44	1.1	9.27	1.0	3.0	3.0	4.0			
	341.5	39	1.2	8.20	1.0	3.0	3.0	4.0			
	359.0	37	1.3	7.80	1.0	3.0	2.0	3.0			
	406.4	33	1.4	6.89	1.0	3.0	2.0	3.0			
	502.7	27	1.6	5.57	1.0	3.0	2.0	3.0			
	580.9	23	1.9	4.82	1.0	3.0	2.0	3.0			
	717.9	19	2.2	3.90	2.0	2.0	2.0	3.0			
	826.0	16	2.4	3.39	2.0	2.0	2.0	3.0			
	942.8	14	2.5	2.97	1.0	2.0	2.0	3.0			
2.20	1.0	16479	0.9	2719.64	101.0	120.0	-	-	PA/PF 103/53 90L2D	822	218
	0.8	24838	0.8	1147.52	100.0	120.0	120.0	120.0	PA/PF 103/52 112M6C / 112M6D	821	216
	1.0	20433	1.0	944.01	95.0	59.0	120.0	120.0			
	1.1	17702	1.2	817.82	95.0	59.0	120.0	120.0			
	1.4	13909	1.5	642.57	95.0	59.0	120.0	120.0			
	1.9	10134	2.1	468.19	95.0	59.0	120.0	120.0			
	2.6	7383	2.8	341.11	95.0	59.0	120.0	120.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	0.8	22995	0.9	1702.50	89.0	120.0	120.0	120.0	PA/PF 103/52 100L4B / 100L4C	813	216
	1.0	19093	1.0	1413.66	89.0	120.0	120.0	120.0			
	1.2	15499	1.3	1147.52	95.0	120.0	120.0	120.0			
	1.5	12750	1.6	944.01	97.0	120.0	120.0	120.0			
	1.7	11046	1.8	817.82	99.0	120.0	120.0	120.0			
	2.2	8679	2.3	642.57	100.0	120.0	120.0	120.0			
	2.0	8877	1.7	1413.66	89.0	120.0	120.0	120.0	PA/PF 103/52 90L2D	803	216
	2.4	7206	2.1	1147.52	95.0	120.0	120.0	120.0			
	3.0	5928	2.6	944.01	97.0	120.0	120.0	120.0			
	3.4	5135	3.0	817.82	99.0	120.0	120.0	120.0			
	1.2	16381	0.8	756.80	60.0	80.0	89.0	80.0	PA/PF 93/42 112M6C / 112M6D	573	216
	1.6	11859	1.1	547.88	63.0	80.0	91.0	80.0			
	2.0	9890	1.3	456.91	64.0	80.0	92.0	80.0			
	2.7	7206	1.8	332.89	66.0	80.0	93.0	80.0			
	3.1	6233	2.1	287.97	57.0	80.0	93.0	80.0			
	3.7	5210	2.5	240.68	57.0	80.0	93.0	80.0			
	1.3	14735	0.8	1090.99	51.0	80.0	83.0	80.0	PA/PF 93/42 100L4B / 100L4C	565	216
	1.7	10967	1.1	811.95	59.0	80.0	88.0	80.0			
	1.8	10222	1.2	756.80	60.0	80.0	89.0	80.0			
	2.6	7400	1.6	547.88	63.0	80.0	91.0	80.0			
	3.1	6171	2.0	456.91	64.0	80.0	92.0	80.0			
	4.2	4496	2.7	332.89	66.0	80.0	93.0	80.0			
	2.2	8158	1.1	1299.17	51.0	80.0	87.0	80.0	PA/PF 93/42 90L2D	555	216
	2.6	6851	1.4	1090.99	51.0	80.0	89.0	80.0			
	3.4	5098	1.8	811.95	59.0	80.0	91.0	80.0			
	3.7	4752	2.0	756.80	60.0	80.0	91.0	80.0			
	5.1	3440	2.7	547.88	63.0	80.0	92.0	80.0			
	2.1	9479	0.9	437.93	41.0	50.0	60.0	65.0	PA/PF 83/42 112M6C / 112M6D	394	216
	2.4	8106	1.0	374.50	42.0	49.0	61.0	65.0			
	3.3	5974	1.4	276.00	44.0	46.0	62.0	65.0			
	3.8	5109	1.6	236.03	44.0	45.0	62.0	65.0			
	4.5	4353	1.9	201.09	44.0	44.0	63.0	65.0			
	6.0	3225	2.6	149.01	42.0	56.0	63.0	65.0			
	2.7	7092	1.1	525.11	38.0	51.0	58.0	65.0	PA/PF 83/42 100L4B / 100L4C	386	216
	3.2	5915	1.4	437.93	41.0	50.0	60.0	65.0			
	3.7	5058	1.6	374.50	42.0	49.0	61.0	65.0			
	5.1	3728	2.1	276.00	44.0	46.0	62.0	65.0			
	5.9	3188	2.5	236.03	44.0	45.0	62.0	65.0			
	7.0	2716	2.9	201.09	44.0	44.0	63.0	65.0			
	5.3	3297	1.8	525.11	38.0	51.0	61.0	65.0	PA/PF 83/42 90L2D	376	216
	6.4	2750	2.2	437.93	41.0	50.0	62.0	65.0			
	7.5	2352	2.6	374.50	42.0	49.0	62.0	65.0			
	1.9	9760	0.8	722.63	30.0	51.0	53.0	65.0	PA/PF 83/32 100L4B / 100L4C	371	214
	2.4	7233	0.8	1151.94	30.0	51.0	57.0	65.0	PA/PF 83/32 90L2D	361	214
	3.1	5635	1.1	897.44	30.0	51.0	55.0	65.0			
	3.9	4538	1.3	722.63	30.0	51.0	58.0	65.0			
	4.2	4830	1.9	216.49	44.0	44.0	62.0	65.0	PA/PF 83 112M6C / 112M6D	349	201
	6.6	3049	2.5	136.67	44.0	44.0	63.0	65.0			
	6.5	3054	2.9	216.49	44.0	44.0	62.0	65.0	PA/PF 83 100L4B / 100L4C	341	201
	4.0	4900	1.1	226.38	26.0	23.0	39.0	50.0	PA/PF 73/32 112M6C / 112M6D	272	214
	5.3	3704	1.4	171.10	27.0	26.0	40.0	50.0			
	6.4	3055	1.7	141.16	27.0	26.0	40.0	50.0			
	7.2	2698	1.9	124.66	27.0	26.0	40.0	50.0			
	6.2	3058	1.6	226.38	26.0	23.0	38.0	50.0	PA/PF 73/32 100L4B / 100L4C	264	214
	8.2	2311	2.2	171.10	27.0	26.0	40.0	50.0			
	9.9	1907	2.6	141.16	27.0	26.0	40.0	50.0			
	11.2	1684	3.0	124.66	27.0	26.0	40.0	50.0			
	12.4	1421	2.7	226.38	26.0	23.0	38.0	50.0	PA/PF 73/32 90L2D	254	214
	3.2	6062	0.9	280.08	24.0	24.0	38.0	50.0	PA/PF 73/22 112M6C / 112M6D	261	214

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	3.1	6179	0.8	457.52	22.0	24.0	36.0	50.0	PA/PF 73/22 100L4B / 100L4C	253	214
	4.0	4683	1.1	346.75	22.0	24.0	36.0	50.0			
	5.0	3783	1.3	280.08	24.0	24.0	38.0	50.0			
	3.8	4624	0.8	736.40	22.0	24.0	35.0	50.0	PA/PF 73/22 90L2D	243	214
	4.9	3557	1.1	566.43	22.0	24.0	35.0	50.0			
	6.1	2873	1.3	457.52	22.0	24.0	36.0	50.0			
	8.1	2177	1.7	346.75	22.0	24.0	36.0	50.0			
	10.0	1759	2.2	280.08	22.0	24.0	38.0	50.0			
	4.4	4587	1.2	205.59	26.0	23.0	39.0	50.0	PA/PF 73 112M6C / 112M6D	242	197
	5.4	3705	1.6	166.07	27.0	23.0	39.0	50.0			
	7.2	2775	1.9	124.38	28.0	22.0	40.0	50.0			
	9.0	2241	1.9	100.47	28.0	22.0	40.0	50.0			
	9.9	2038	2.7	91.33	21.0	7.0	40.0	50.0			
	6.8	2900	1.8	205.59	26.0	23.0	39.0	50.0	PA/PF 73 100L4B / 100L4C	234	197
	8.4	2343	2.4	166.07	27.0	23.0	39.0	50.0			
	11.3	1755	2.8	124.38	28.0	22.0	40.0	50.0			
	13.9	1417	2.8	100.47	28.0	22.0	40.0	50.0			
	5.2	3750	0.9	173.24	12.0	39.0	-	-	PA/PF 63/22 112M6C / 112M6D	180	214
	5.9	3323	1.0	153.52	12.0	39.0	-	-			
	4.9	3822	0.8	283.00	13.0	24.0	23.0	45.0	PA/PF 63/22 100L4B / 100L4C	172	214
	6.2	3042	1.1	225.22	12.0	39.0	-	-			
	8.1	2340	1.4	173.24	12.0	39.0	-	-			
	9.1	2074	1.5	153.52	12.0	39.0	-	-			
	6.5	2701	0.9	430.20	13.0	24.0	-	-	PA/PF 63/22 90L2D	162	214
	7.6	2310	1.1	367.90	13.0	24.0	-	-			
	9.9	1777	1.4	283.00	13.0	24.0	23.0	45.0			
	12.4	1414	1.7	225.22	12.0	39.0	-	-			
	16.2	1088	2.2	173.24	12.0	39.0	-	-			
	18.2	964	2.5	153.52	12.0	39.0	-	-			
	4.2	4783	0.8	214.41	16.0	24.0	26.0	45.0	PA/PF 63 112M6C / 112M6D	161	193
	5.0	4035	1.0	180.86	18.0	24.0	27.0	45.0			
	6.2	3258	1.2	146.02	19.0	23.0	27.0	45.0			
	8.3	2411	1.6	108.08	20.0	22.0	28.0	45.0			
	10.3	1947	1.7	87.26	20.0	21.0	28.0	45.0			
	11.6	1729	2.2	77.49	14.0	28.0	28.0	45.0			
	14.3	1405	2.7	62.96	14.0	28.0	28.0	43.0			
	5.3	3746	1.0	265.56	14.0	24.0	24.0	45.0	PA/PF 63 100L4B / 100L4C	153	193
	6.5	3025	1.2	214.41	16.0	24.0	26.0	45.0			
	7.7	2551	1.4	180.86	18.0	24.0	27.0	45.0			
	9.6	2060	1.8	146.02	19.0	23.0	27.0	45.0			
	13.0	1525	2.4	108.08	20.0	22.0	28.0	45.0			
	16.0	1231	2.6	87.26	20.0	21.0	28.0	45.0			
	7.5	2513	1.0	372.70	14.0	24.0	24.0	45.0	PA/PF 63 90L2D	143	193
	9.3	2029	1.2	300.91	14.0	24.0	26.0	45.0			
	10.5	1791	1.5	265.56	14.0	24.0	24.0	45.0			
	13.1	1446	1.9	214.41	16.0	24.0	26.0	45.0			
	18.5	1104	2.4	48.75	20.0	17.0	28.0	38.0	PA/PF 62 112M6C / 112M6D	163	192
	9.2	2150	0.9	97.84	10.0	24.0	-	-	PA/PF 52/12 112M6C / 112M6D	122	212
	9.6	2016	0.9	146.01	10.0	24.0	-	-	PA/PF 52/12 100L4B / 100L4C	114	212
	11.2	1719	1.1	124.52	10.0	24.0	-	-			
	14.3	1351	1.4	97.84	10.0	24.0	-	-			
	9.9	1843	0.8	283.16	10.0	24.0	-	--	PA/PF 52/12 90L2D	104	212
	12.7	1431	1.0	219.87	10.0	24.0	-	-			
	14.4	1267	1.1	194.67	10.0	24.0	-	-			
	19.2	950	1.5	146.01	10.0	24.0	-	-			
	22.5	810	1.7	124.52	10.0	24.0	-	-			
	28.6	637	2.2	97.84	10.0	24.0	-	-			
	6.5	3110	0.8	139.42	11.0	24.0	18.0	40.0	PA/PF 53 112M6C / 112M6D	125	189
	8.5	2360	1.0	105.77	13.0	24.0	19.0	40.0			
	9.4	2129	1.1	95.41	13.0	24.0	19.0	40.0			
	11.3	1778	1.1	79.69	10.0	24.0	18.0	40.0			
	13.8	1457	1.4	65.31	10.0	24.0	18.0	40.0			
	15.3	1314	1.5	58.91	10.0	24.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	7.9	2503	0.8	177.45	10.0	24.0	18.0	40.0	PA/PF 53 100L4B / 100L4C	117	189
	10.0	1967	1.1	139.42	11.0	24.0	18.0	40.0			
	13.2	1492	1.5	105.77	13.0	24.0	19.0	40.0			
	14.7	1346	1.7	95.41	13.0	24.0	19.0	40.0			
	17.6	1124	1.7	79.69	10.0	24.0	18.0	40.0			
	21.4	921	2.1	65.31	10.0	24.0	18.0	40.0			
	23.8	831	2.3	58.91	10.0	24.0	-	-	PA/PF 53 90L2D	107	189
	9.5	1984	0.9	294.23	10.0	24.0	17.0	40.0			
	11.4	1657	0.9	245.73	10.0	24.0	18.0	40.0			
	11.8	1595	0.9	236.60	10.0	24.0	17.0	40.0			
	15.1	1254	1.1	185.90	10.0	24.0	18.0	40.0			
	15.8	1197	1.2	177.45	10.0	24.0	18.0	40.0			
	20.1	940	1.8	139.42	11.0	24.0	18.0	40.0			
	26.5	713	2.4	105.77	13.0	24.0	19.0	40.0			
	29.3	643	2.6	95.41	13.0	24.0	19.0	40.0	PA/PF 52 112M6C / 112M6D	106	188
	35.1	537	2.6	79.69	10.0	24.0	18.0	40.0			
	10.4	1968	0.9	86.88	13.0	24.0	19.0	40.0			
	11.5	1779	0.9	78.53	13.0	24.0	19.0	40.0			
	12.6	1619	1.0	71.47	14.0	24.0	19.0	40.0			
	15.1	1348	1.5	59.50	14.0	24.0	20.0	40.0			
	16.7	1218	1.6	53.79	14.0	24.0	20.0	40.0			
	18.4	1109	1.8	48.95	14.0	24.0	20.0	40.0			
	23.4	871	2.0	38.46	14.0	24.0	20.0	40.0	PA/PF 52 100L4B / 100L4C	98	188
	25.0	815	1.8	36.00	14.0	24.0	20.0	40.0			
	27.7	737	1.8	32.54	14.0	24.0	20.0	40.0			
	28.0	727	2.0	32.12	14.0	24.0	20.0	39.0			
	16.1	1252	1.4	86.88	13.0	24.0	19.0	40.0			
	17.8	1131	1.4	78.53	13.0	24.0	19.0	40.0			
	19.6	1030	1.5	71.47	14.0	24.0	19.0	40.0			
	23.5	857	2.2	59.50	14.0	24.0	20.0	40.0			
	26.0	775	2.5	53.79	14.0	24.0	20.0	40.0	PA/PF 52 90L2D	88	188
	28.6	705	2.7	48.95	14.0	24.0	20.0	40.0			
	36.4	554	3.0	38.46	14.0	24.0	20.0	40.0			
	38.9	519	2.7	36.00	14.0	24.0	20.0	40.0	PA/PF 51 112M6C / 112M6D	67	166
	43.0	469	2.7	32.54	14.0	24.0	20.0	40.0			
	43.6	463	3.0	32.12	14.0	24.0	20.0	39.0			
	32.2	607	2.2	86.88	13.0	24.0	19.0	40.0	PA/PF 51 100L4B / 100L4C	59	166
	35.7	549	2.2	78.53	13.0	24.0	19.0	40.0			
	39.2	499	2.4	71.47	14.0	24.0	19.0	40.0			
	67.8	305	1.0	13.27	-	-	-	-	PA/PF 51 90L2D	49	166
	99.0	209	1.6	9.09	-	-	-	-			
	163.6	126	1.8	5.50	-	-	-	-	PA/PF 42/12 100L4B / 100L4C	96	212
	105.5	195	1.5	13.27	-	6.0	-	-			
	154.0	134	2.4	9.09	-	6.0	-	-	PA/PF 42/12 90L2D	86	212
	254.5	81	2.7	5.50	-	6.0	-	-			
	211.0	96	2.3	13.27	-	-	-	-	PA/PF 43 112M6C / 112M6D	92	185
	15.9	1212	1.0	87.79	3.0	12.0	-	-			
	16.6	1100	0.8	169.11	3.0	12.0	-	-	PA/PF 43 100L4B / 100L4C	84	185
	19.9	914	1.0	140.44	3.0	12.0	-	-			
	24.1	756	1.2	116.26	3.0	12.0	-	-			
	31.9	571	1.6	87.79	3.0	12.0	-	-	PA/PF 43 90L2D	84	185
	12.8	1564	0.8	70.10	3.0	12.0	9.0	8.0			
	15.5	1299	0.9	58.22	3.0	12.0	9.0	6.0			
	18.5	1083	1.0	48.55	3.0	12.0	-	-	PA/PF 43 90L2D	84	185
	22.0	913	1.2	40.91	3.0	12.0	-	-			
	14.8	1339	0.9	94.91	1.0	12.0	9.0	9.0			
	17.5	1129	1.1	80.01	1.0	12.0	10.0	10.0	PA/PF 43 90L2D	84	185
	20.0	989	1.3	70.10	3.0	12.0	9.0	8.0			
	24.0	821	1.4	58.22	3.0	12.0	9.0	6.0			
	28.8	685	1.5	48.55	3.0	12.0	-	-	PA/PF 43 90L2D	84	185
	34.2	577	1.8	40.91	3.0	12.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	16.5	1145	0.8	169.82	1.0	12.0	10.0	13.0	PA/PF 43 90L2D	74	185
	19.8	955	0.8	141.63	1.0	12.0	10.0	13.0			
	21.7	872	1.1	129.27	1.0	12.0	10.0	11.0			
	26.1	724	1.2	107.36	1.0	12.0	-	-			
	29.5	640	1.5	94.91	1.0	12.0	9.0	9.0			
	35.0	540	1.7	80.01	1.0	12.0	10.0	10.0			
	39.9	473	2.0	70.10	3.0	12.0	-	-			
	48.1	393	2.3	58.22	3.0	12.0	9.0	6.0			
	57.7	327	2.4	48.55	3.0	12.0	-	-			
	68.4	276	2.9	40.91	3.0	12.0	-	-			
	14.8	1373	0.8	60.64	6.0	12.0	11.0	10.0	PA/PF 42 112M6C / 112M6D	77	184
	17.7	1155	1.0	50.99	8.0	12.0	11.0	10.0			
	21.8	935	1.3	41.30	8.0	12.0	11.0	10.0			
	25.5	799	1.6	35.26	7.0	12.0	11.0	10.0			
	29.5	690	1.6	30.47	7.0	12.0	11.0	10.0			
	30.7	663	1.6	29.28	7.0	12.0	11.0	9.0			
	36.5	559	1.7	24.68	7.0	12.0	11.0	9.0			
	36.9	553	1.6	24.42	7.0	12.0	11.0	9.0			
	41.2	495	2.3	21.85	6.0	12.0	12.0	9.0			
	18.7	1079	1.1	74.87	3.0	12.0	10.0	10.0	PA/PF 42 100L4B / 100L4C	69	184
	23.1	874	1.1	60.64	6.0	12.0	11.0	10.0			
	27.5	735	1.5	50.99	8.0	12.0	11.0	10.0			
	33.9	595	2.0	41.30	8.0	12.0	11.0	10.0			
	39.7	508	2.4	35.26	7.0	12.0	11.0	10.0			
	45.9	439	2.5	30.47	7.0	12.0	11.0	10.0			
	47.8	422	2.4	29.28	7.0	12.0	11.0	9.0			
	56.7	356	2.5	24.68	7.0	12.0	11.0	9.0			
	57.3	352	2.4	24.42	7.0	12.0	11.0	9.0			
	26.6	734	0.9	105.08	3.0	12.0	10.0	12.0	PA/PF 42 90L2D	59	184
	32.9	595	1.0	85.10	3.0	12.0	11.0	12.0			
	37.4	523	1.7	74.87	3.0	12.0	10.0	10.0			
	46.2	424	1.8	60.64	6.0	12.0	11.0	10.0	PA/PF 41 112M6C / 112M6D	58	164
	85.3	243	0.8	10.55	-	-	-	-			
	125.3	165	1.2	7.18	-	-	-	-			
	209.8	99	1.6	4.29	-	-	-	-			
	232.0	89	1.7	3.88	-	-	-	-			
	263.2	79	1.9	3.42	-	-	-	-	PA/PF 41 100L4B / 100L4C	50	164
	132.7	155	1.2	10.55	-	4.0	-	-			
	195.0	106	1.8	7.18	-	4.0	-	-			
	326.3	63	2.5	4.29	-	4.0	-	-			
	360.8	57	2.5	3.88	-	4.0	-	-			
	409.4	50	2.8	3.42	-	4.0	-	-	PA/PF 41 90L2D	40	164
	189.2	107	0.9	14.80	-	-	-	-			
	265.4	76	1.9	10.55	-	-	-	-	PA/PF 32/12 90L2D	57	212
	34.1	535	0.9	82.19	5.0	9.0	-	-			
	28.9	706	0.8	31.16	5.0	9.0	9.0	10.0	PA/PF 32 112M6C / 112M6D	62	212
	29.6	690	1.0	30.45	5.0	9.0	-	-			
	33.0	617	1.0	27.24	5.0	9.0	-	-			
	33.9	601	0.8	26.53	5.0	9.0	9.0	10.0			
	39.0	523	1.3	23.10	5.0	9.0	9.0	10.0			
	43.5	468	1.5	20.67	5.0	9.0	9.0	10.0			
	48.3	422	1.6	18.64	5.0	9.0	9.0	10.0			
	54.1	377	1.5	16.64	4.0	9.0	9.0	9.0			
	55.5	368	1.8	16.23	4.0	9.0	9.0	9.0			
	60.0	340	1.6	15.01	4.0	8.0	9.0	9.0			
	62.0	329	2.1	14.52	4.0	8.0	9.0	9.0			
	76.9	265	2.8	11.70	4.0	8.0	9.0	9.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	30.3	666	1.0	46.22	3.0	9.0	9.0	11.0	PA/PF 32 100L4B / 100L4C	54	180
	37.6	536	1.1	37.22	4.0	9.0	9.0	10.0			
	44.9	449	1.1	31.16	5.0	9.0	9.0	10.0			
	46.0	439	1.5	30.45	5.0	9.0	-	-			
	51.4	392	1.5	27.24	5.0	9.0	-	-			
	52.8	382	1.1	26.53	5.0	9.0	9.0	10.0			
	60.6	333	1.9	23.10	5.0	9.0	9.0	10.0			
	67.7	298	2.2	20.67	5.0	9.0	9.0	10.0			
	75.1	269	2.3	18.64	5.0	9.0	9.0	10.0			
	84.1	240	2.2	16.64	4.0	9.0	9.0	9.0			
	86.3	234	2.7	16.23	4.0	9.0	9.0	9.0			
	93.3	216	2.3	15.01	4.0	8.0	9.0	9.0			
	38.5	508	0.8	72.71	3.0	9.0	9.0	14.0	PA/PF 32 90L2D	44	180
	43.6	449	1.1	64.26	3.0	9.0	9.0	12.0			
	48.7	402	1.2	57.49	3.0	9.0	9.0	12.0			
	60.5	323	1.3	46.29	3.0	9.0	9.0	12.0			
	60.6	323	1.6	46.22	3.0	9.0	9.0	11.0			
	72.2	271	1.3	38.76	4.0	9.0	9.0	11.0			
	75.2	260	1.7	37.22	4.0	9.0	9.0	10.0			
	84.8	231	1.3	33.00	5.0	9.0	9.0	11.0			
	89.9	218	1.8	31.16	5.0	9.0	9.0	10.0			
	92.0	213	2.3	30.45	5.0	9.0	-	-			
	102.8	190	2.4	27.24	5.0	9.0	-	-			
	105.5	185	1.8	26.53	5.0	9.0	9.0	10.0			
	121.2	161	3.0	23.10	5.0	9.0	9.0	10.0			
	186.3	111	0.9	4.83	-	-	-	-	PA/PF 31 112M6C / 112M6D	49	162
	245.2	84	1.4	3.67	-	-	-	-			
	271.9	76	1.4	3.31	-	-	-	-			
	170.7	121	0.9	8.20	-	3.0	-	-	PA/PF 31 100L4B / 100L4C	41	162
	289.9	71	1.4	4.83	-	3.0	-	-			
	381.5	54	2.0	3.67	-	3.0	-	-			
	423.0	49	2.2	3.31	-	3.0	-	-			
	274.5	74	0.9	10.20	-	-	-	-	PA/PF 31 90L2D	31	162
	341.5	59	1.3	8.20	-	-	-	-			
	579.7	35	2.1	4.83	-	-	-	-			
	53.8	379	0.9	16.74	1.0	6.0	7.0	6.0	PA/PF 22 112M6C / 112M6D	41	176
	61.3	332	1.1	14.67	2.0	6.0	7.0	6.0			
	73.8	276	1.3	12.19	2.0	6.0	7.0	6.0			
	82.6	247	1.3	10.90	3.0	5.0	7.0	6.0			
	106.4	192	1.4	8.46	3.0	5.0	7.0	6.0			
	118.9	171	1.5	7.57	3.0	5.0	7.0	6.0			
	131.2	155	1.7	6.86	3.0	5.0	8.0	6.0			
	138.2	147	1.6	6.51	3.0	5.0	8.0	5.0			
	156.0	131	1.7	5.77	3.0	5.0	8.0	5.0			
	173.7	117	1.4	5.18	3.0	4.0	8.0	5.0			
	194.0	105	1.5	4.64	3.0	4.0	8.0	5.0			
	225.6	90	1.6	3.99	3.0	4.0	8.0	5.0			
	255.0	80	1.7	3.53	3.0	4.0	8.0	5.0			
	321.4	63	1.9	2.80	3.0	4.0	7.0	4.0			
	48.6	415	0.9	28.80	1.0	6.0	7.0	6.0	PA/PF 22 100L4B / 100L4C	43	176
	58.9	342	1.0	23.77	1.0	6.0	7.0	6.0			
	70.0	288	1.0	20.00	1.0	6.0	7.0	6.0			
	83.6	241	1.4	16.74	1.0	6.0	7.0	6.0			
	95.4	211	1.6	14.67	2.0	6.0	7.0	6.0			
	114.8	176	1.9	12.19	2.0	6.0	7.0	6.0			
	128.4	157	2.0	10.90	3.0	5.0	7.0	6.0			
	165.5	122	2.1	8.46	3.0	5.0	7.0	6.0			
	184.9	109	2.3	7.57	3.0	5.0	7.0	6.0			
	204.1	99	2.6	6.86	3.0	5.0	8.0	6.0			
	215.1	94	2.4	6.51	3.0	5.0	8.0	5.0			
	242.6	83	2.6	5.77	3.0	5.0	8.0	5.0			
	270.3	75	2.1	5.18	3.0	4.0	8.0	5.0			
	301.7	67	2.2	4.64	3.0	4.0	8.0	5.0			
	350.9	57	2.4	3.99	3.0	4.0	8.0	5.0			
	396.6	51	2.6	3.53	3.0	4.0	8.0	5.0			
	500.0	40	2.9	2.80	3.0	4.0	7.0	4.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	65.4	299	0.9	42.79	1.0	6.0	6.0	8.0	PA/PF 22 90L2D	33	176
	78.8	248	1.0	35.55	1.0	6.0	7.0	8.0			
	80.8	242	1.1	34.67	1.0	6.0	7.0	8.0			
	95.4	205	1.1	29.34	1.0	6.0	7.0	7.0			
	97.2	201	1.4	28.80	1.0	6.0	7.0	6.0			
	113.4	173	1.1	24.69	1.0	6.0	7.0	7.0			
	117.8	166	1.5	23.77	1.0	6.0	7.0	6.0			
	140.0	140	1.5	20.00	1.0	6.0	7.0	6.0			
	167.3	117	2.2	16.74	1.0	6.0	7.0	6.0			
	190.9	103	2.5	14.67	2.0	6.0	7.0	6.0			
	229.7	85	2.9	12.19	2.0	6.0	7.0	6.0			
	245.2	84	0.8	3.67	-	-	-	-	PA/PF 21 112M6C / 112M6D	53	160
	291.3	71	0.9	3.09	-	-	-	-			
	332.1	62	1.3	2.71	-	-	-	-			
	371.9	56	1.4	2.42	-	-	-	-			
	432.7	48	1.5	2.08	-	-	-	-			
	486.5	43	1.6	1.85	-	-	-	-			
	616.4	34	1.9	1.46	-	-	-	-			
	381.5	54	1.3	3.67	-	4.0	-	-	PA/PF 21 100L4B / 100L4C	45	160
	453.1	45	1.4	3.09	-	4.0	-	-			
	516.6	40	1.9	2.71	-	4.0	-	-			
	578.5	36	2.1	2.42	-	4.0	-	-			
	673.1	31	2.2	2.08	-	4.0	-	-			
	756.8	27	2.4	1.85	-	4.0	-	-			
	958.9	21	2.8	1.46	-	4.0	-	-			
	354.4	57	0.8	7.90	-	-	-	-	PA/PF 21 90L2D	35	160
	437.5	46	1.1	6.40	-	-	-	-			
	762.9	27	1.9	3.67	-	-	-	-			
	906.1	22	2.1	3.09	-	-	-	-			
	1033.2	20	3.0	2.71	-	-	-	-			
	114.6	178	0.8	7.85	1.0	3.0	5.0	4.0	PA/PF 12 112M6C / 112M6D	42	172
	123.5	165	0.8	7.29	1.0	3.0	5.0	4.0			
	137.8	148	0.9	6.53	1.0	3.0	5.0	4.0			
	155.7	131	1.0	5.78	1.0	3.0	5.0	4.0			
	182.6	112	1.1	4.93	1.0	3.0	5.0	4.0			
	200.4	102	1.2	4.49	1.0	3.0	5.0	4.0			
	208.8	98	1.2	4.31	2.0	3.0	5.0	4.0			
	226.1	90	1.3	3.98	1.0	3.0	5.0	4.0			
	265.5	77	1.5	3.39	2.0	3.0	5.0	4.0			
	304.1	67	1.6	2.96	2.0	2.0	5.0	4.0			
	104.6	189	0.8	13.39	1.0	3.0	5.0	5.0	PA/PF 12 100L4B / 100L4C	34	172
	131.1	151	0.9	10.68	1.0	3.0	5.0	5.0			
	145.1	136	1.0	9.65	1.0	3.0	5.0	5.0			
	178.3	111	1.2	7.85	1.0	3.0	5.0	4.0			
	192.0	103	1.2	7.29	1.0	3.0	5.0	4.0			
	214.4	92	1.4	6.53	1.0	3.0	5.0	4.0			
	242.2	82	1.5	5.78	1.0	3.0	5.0	4.0			
	284.0	70	1.7	4.93	1.0	3.0	5.0	4.0			
	311.8	63	1.9	4.49	1.0	3.0	5.0	4.0			
	324.8	61	1.8	4.31	2.0	3.0	5.0	4.0			
	351.8	56	2.0	3.98	1.0	3.0	5.0	4.0			
	413.0	48	2.3	3.39	2.0	3.0	5.0	4.0			
	473.0	42	2.5	2.96	2.0	2.0	5.0	4.0			
	131.6	149	0.9	21.27	1.0	3.0	-	-	PA/PF 12 90L2D	24	172
	148.9	131	0.9	18.80	1.0	3.0	-	-			
	167.3	117	1.0	16.74	1.0	3.0	-	-			
	209.1	94	1.2	13.39	1.0	3.0	5.0	5.0			
	262.2	75	1.4	10.68	1.0	3.0	5.0	5.0			
	290.2	67	1.5	9.65	1.0	3.0	5.0	5.0			
	356.7	55	1.8	7.85	1.0	3.0	5.0	4.0			
	384.1	51	1.9	7.29	1.0	3.0	5.0	4.0			
	428.8	46	2.1	6.53	1.0	3.0	5.0	4.0			
	484.4	40	2.3	5.78	1.0	3.0	5.0	4.0			
	568.0	34	2.6	4.93	1.0	3.0	5.0	4.0			
	623.6	31	2.9	4.49	1.0	3.0	5.0	4.0			
	649.7	30	2.8	4.31	2.0	3.0	5.0	4.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
2.20	318.0	65	0.9	2.83	-	-	-	-	PA/PF 11 112M6C / 112M6D	38	158
	387.9	53	0.9	2.32	-	-	-	-			
	441.2	47	1.3	2.04	-	-	-	-			
	497.2	42	1.4	1.81	-	-	-	-			
	584.4	35	1.5	1.54	-	-	-	-			
	666.7	31	1.7	1.35	-	-	-	-			
	494.7	42	1.3	2.83	-	3.0	-	-	PA/PF 11 100L4B / 100L4C	30	158
	603.4	34	1.4	2.32	-	3.0	-	-			
	686.3	30	1.9	2.04	-	3.0	-	-			
	773.5	27	2.1	1.81	-	3.0	-	-			
	909.1	23	2.2	1.54	-	3.0	-	-			
	1037.0	20	2.5	1.35	-	3.0	-	-			
	777.8	26	1.4	3.60	-	-	-	-	PA/PF 11 90L2D	20	158
	880.5	23	1.3	3.18	-	-	-	-			
	989.4	20	2.0	2.83	-	-	-	-			
	1206.9	17	2.2	2.32	-	-	-	-			
	1372.5	15	3.0	2.04	-	-	-	-			
	302.0	65	0.8	9.27	1.0	3.0	3.0	4.0	PA/PF 02 90L2D	22	168
	341.5	57	0.8	8.20	1.0	3.0	3.0	4.0			
	359.0	55	0.9	7.80	1.0	3.0	2.0	3.0			
	406.4	48	1.0	6.89	1.0	3.0	2.0	3.0			
	502.7	39	1.1	5.57	1.0	3.0	2.0	3.0			
	580.9	34	1.3	4.82	1.0	3.0	2.0	3.0			
	717.9	27	1.5	3.90	1.0	3.0	2.0	3.0			
	826.0	24	1.6	3.39	1.0	3.0	2.0	3.0			
	942.8	21	1.7	2.97	1.0	3.0	2.0	3.0			
	1.0	27864	0.8	944.01	89.0	120.0	120.0	120.0	PA/PF 103/52 132S6A	843	216
	1.1	24139	0.9	817.82	89.0	120.0	120.0	120.0			
	1.4	18966	1.1	642.57	89.0	120.0	120.0	120.0			
	1.9	13819	1.5	468.19	89.0	120.0	120.0	120.0			
	2.6	10068	2.1	341.11	89.0	120.0	120.0	120.0			
	3.0	8753	2.4	296.56	89.0	120.0	120.0	120.0			
3.00	3.7	7221	2.9	244.66	89.0	120.0	120.0	120.0	PA/PF 103/52 100L4C / 100L4D	813	216
	1.0	26037	0.8	1413.66	-	-	120.0	120.0			
	1.2	21135	0.9	1147.52	85.0	120.0	120.0	120.0			
	1.5	17387	1.2	944.01	92.0	120.0	120.0	120.0			
	1.7	15062	1.3	817.82	94.0	120.0	120.0	120.0			
	2.2	11835	1.7	642.57	98.0	120.0	120.0	120.0			
	3.0	8623	2.3	468.19	100.0	120.0	120.0	120.0	PA/PF 103/52 100L2C / 100L2D	813	216
	1.4	17455	0.9	2038.56	89.0	120.0	-	-			
	1.6	14578	1.0	1702.50	89.0	120.0	-	-			
	2.0	12105	1.3	1413.66	89.0	120.0	120.0	120.0			
	2.4	9826	1.5	1147.52	89.0	120.0	120.0	120.0			
	3.0	8083	1.9	944.01	89.0	120.0	120.0	120.0			
	3.4	7003	2.2	817.82	89.0	120.0	120.0	120.0	PA/PF 93/52 132S6A	624	216
	4.4	5502	2.8	642.57	89.0	120.0	120.0	120.0			
	5.6	4748	2.7	160.87	66.0	66.0	93.0	80.0			
	1.6	16171	0.8	547.88	51.0	80.0	89.0	80.0	PA/PF 93/42 132S6A	595	216
	2.0	13486	0.9	456.91	51.0	80.0	90.0	80.0			
	2.7	9826	1.3	332.89	51.0	80.0	92.0	80.0			
	3.1	8500	1.5	287.97	51.0	80.0	92.0	80.0			
	3.7	7104	1.8	240.68	51.0	80.0	93.0	80.0			
	4.9	5372	2.4	182.00	51.0	80.0	93.0	80.0			
	1.7	14954	0.8	811.95	-	-	88.0	80.0	PA/PF 93/42 100L4C / 100L4D	565	216
	1.8	13939	0.9	756.80	53.0	80.0	84.0	80.0			
	2.6	10091	1.2	547.88	60.0	80.0	89.0	80.0			
	3.1	8415	1.4	456.91	62.0	80.0	90.0	80.0			
	4.2	6131	2.0	332.89	64.0	80.0	92.0	80.0			
	4.9	5304	2.3	287.97	65.0	77.0	92.0	80.0			
	5.8	4433	2.8	240.68	66.0	74.0	93.0	80.0	PA/PF 93/42 100L2C / 100L2D	565	216
	2.2	11124	0.8	1299.17	51.0	80.0	87.0	80.0			
	2.6	9342	1.0	1090.99	51.0	80.0	83.0	80.0			
	3.4	6952	1.3	811.95	51.0	80.0	88.0	80.0			
	3.7	6480	1.4	756.80	51.0	80.0	84.0	80.0			
	5.1	4691	2.0	547.88	51.0	80.0	89.0	80.0			
	6.1	3912	2.4	456.91	51.0	80.0	90.0	80.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
3.00	4.8	5719	2.6	187.99	66.0	58.0	92.0	80.0	PA/PF 93 132S6A	550	205
	2.4	11054	0.8	374.50	38.0	51.0	-	-	PA/PF 83/42 132S6A	416	216
	3.3	8147	1.0	276.00	38.0	51.0	61.0	65.0			
	3.8	6967	1.2	236.03	38.0	51.0	61.0	65.0			
	4.5	5935	1.4	201.09	38.0	51.0	62.0	65.0			
	6.0	4398	1.9	149.01	38.0	51.0	63.0	65.0			
	7.1	3747	2.2	126.95	38.0	51.0	63.0	65.0			
	2.7	9671	0.8	525.11	30.0	45.0	58.0	65.0	PA/PF 83/42 100L4C / 100L4D	386	216
	3.2	8066	1.0	437.93	35.0	45.0	60.0	65.0			
	3.7	6897	1.2	374.50	38.0	45.0	61.0	65.0			
	5.1	5083	1.6	276.00	42.0	44.0	62.0	65.0			
	5.9	4347	1.8	236.03	43.0	43.0	62.0	65.0			
	7.0	3704	2.2	201.09	44.0	42.0	63.0	65.0	PA/PF 83/42 100L2C / 100L2D	386	216
	9.4	2744	2.9	149.01	44.0	39.0	63.0	65.0			
	5.3	4496	1.4	525.11	38.0	51.0	53.0	65.0			
	6.4	3750	1.6	437.93	38.0	51.0	56.0	65.0			
	7.5	3207	1.9	374.50	38.0	51.0	58.0	65.0			
	10.1	2363	2.6	276.00	38.0	51.0	61.0	65.0	PA/PF 83/32 100L2C / 100L2D	371	214
	11.9	2021	3.0	236.03	38.0	51.0	61.0	65.0			
	3.1	7684	0.8	897.44	30.0	51.0	55.0	65.0	PA/PF 83 132S6A	371	201
	3.9	6188	1.0	722.63	30.0	51.0	53.0	65.0			
	4.2	6586	1.4	216.49	44.0	44.0	62.0	65.0	PA/PF 83 132S6A	341	201
	5.5	5010	1.9	164.68	44.0	44.0	60.0	65.0			
	6.6	4158	1.9	136.67	44.0	44.0	63.0	65.0			
	8.7	3163	3.0	103.97	44.0	44.0	62.0	65.0			
	6.5	4164	2.1	216.49	43.0	42.0	62.0	65.0	PA/PF 73/32 132S6A	294	214
	10.2	2629	2.8	136.67	45.0	39.0	63.0	65.0			
	4.0	6682	0.8	226.38	26.0	23.0	37.0	50.0			
	5.3	5050	1.0	171.10	26.0	23.0	40.0	50.0			
	6.4	4167	1.3	141.16	26.0	23.0	40.0	50.0	PA/PF 73/32 100L4C / 100L4D	264	214
	7.2	3680	1.4	124.66	26.0	23.0	40.0	50.0			
	6.2	4169	1.2	226.38	23.0	21.0	37.0	50.0			
	8.2	3151	1.6	171.10	-	-	40.0	50.0			
	9.9	2600	1.9	141.16	-	-	40.0	50.0	PA/PF 73/32 100L2C / 100L2D	264	214
	11.2	2296	2.2	124.66	-	-	40.0	50.0			
	12.4	1938	2.0	226.38	26.0	23.0	37.0	50.0	PA/PF 73/22 100L4C / 100L4D	253	214
	16.4	1465	2.6	171.10	26.0	23.0	40.0	50.0			
	4.0	6386	0.8	346.75	-	-	36.0	50.0	PA/PF 73 132S6A	264	197
	5.0	5158	1.0	280.08	20.0	20.0	35.0	50.0			
	4.9	4850	0.8	566.43	22.0	24.0	35.0	50.0			
	6.1	3918	1.0	457.52	22.0	24.0	36.0	50.0			
	8.1	2969	1.3	346.75	22.0	24.0	36.0	50.0	PA/PF 73 100L4C / 100L4D	234	197
	10.0	2398	1.6	280.08	22.0	24.0	35.0	50.0			
	4.4	6255	0.9	205.59	26.0	23.0	37.0	50.0			
	5.4	5052	1.2	166.07	26.0	23.0	38.0	50.0			
	7.2	3789	1.6	124.55	26.0	23.0	40.0	50.0	PA/PF 73 100L2C / 100L2D	234	197
	7.2	3784	1.4	124.38	26.0	23.0	39.0	50.0			
	9.0	3057	1.4	100.47	26.0	23.0	40.0	50.0			
	9.9	2778	2.0	91.33	26.0	23.0	40.0	50.0			
	12.0	2276	2.5	74.80	26.0	23.0	40.0	50.0	PA/PF 63/22 100L4C / 100L4D	172	214
	6.8	3955	1.3	205.59	24.0	21.0	37.0	50.0			
	8.4	3195	1.8	166.07	26.0	21.0	38.0	50.0			
	11.3	2393	2.1	124.38	27.0	20.0	39.0	50.0			
	13.9	1933	2.1	100.47	27.0	20.0	40.0	50.0	PA/PF 63/22 100L4C / 100L4D	172	214
	15.3	1757	3.0	91.33	28.0	20.0	40.0	50.0			
	13.6	1890	2.1	205.59	26.0	23.0	37.0	50.0			
	16.9	1527	2.8	166.07	26.0	23.0	38.0	50.0	PA/PF 63/22 100L4C / 100L4D	172	214
	6.2	4148	0.8	225.22	-	-	-	-			
	8.1	3191	1.0	173.24	-	-	-	-			
	9.1	2828	1.1	153.52	-	-	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
3.00	7.6	3150	0.8	367.90	13.0	24.0	-	-	PA/PF 63/22 100L2C / 100L2D	172	214
	9.9	2423	1.0	283.00	13.0	24.0	23.0	45.0			
	12.4	1928	1.3	225.22	13.0	24.0	-	-			
	16.2	1483	1.6	173.24	13.0	24.0	-	-			
	18.2	1315	1.9	153.52	13.0	24.0	-	-			
	6.2	4442	0.9	146.02	14.0	24.0	26.0	45.0	PA/PF 63 132S6A	183	193
	6.8	4039	1.0	132.78	14.0	24.0	27.0	45.0			
	8.4	3262	1.2	107.21	14.0	24.0	28.0	45.0			
	11.6	2357	1.6	77.49	14.0	24.0	28.0	44.0			
	14.3	1915	2.0	62.96	14.0	24.0	28.0	42.0			
	16.7	1638	2.4	53.84	14.0	24.0	28.0	40.0			
	17.7	1546	2.5	50.83	14.0	24.0	28.0	40.0			
	20.7	1322	2.9	43.47	14.0	24.0	28.0	38.0			
	6.5	4124	0.9	214.41	12.0	21.0	23.0	45.0	PA/PF 63 100L4C / 100L4D	153	193
	7.7	3479	1.1	180.86	15.0	21.0	25.0	45.0			
	9.6	2809	1.3	146.02	17.0	21.0	26.0	45.0			
	13.0	2079	1.8	108.08	19.0	21.0	27.0	45.0			
	16.0	1679	1.9	87.26	19.0	20.0	28.0	45.0			
	18.1	1491	2.5	77.49	20.0	20.0	28.0	44.0			
	22.2	1211	3.0	62.96	20.0	19.0	28.0	42.0			
	10.5	2442	1.1	265.56	14.0	24.0	-	-	PA/PF 63 100L2C / 100L2D	153	193
	13.1	1971	1.4	214.41	14.0	24.0	23.0	45.0			
	15.5	1663	1.7	180.86	14.0	24.0	25.0	45.0			
	19.2	1343	2.1	146.02	14.0	24.0	26.0	45.0			
	25.9	994	2.8	108.08	14.0	24.0	27.0	45.0			
	32.1	802	3.0	87.26	14.0	24.0	28.0	45.0			
	18.5	1506	1.8	48.75	20.0	17.0	28.0	38.0	PA/PF 62 132S6A	185	192
	24.3	1145	2.8	37.08	20.0	17.0	28.0	34.0	PA/PF 62 100L4C / 100L4D	155	192
	28.7	958	2.6	48.75	-	-	-	-			
	11.2	2344	0.8	124.52	-	-	-	-	PA/PF 52/12 100L4C / 100L4D	114	212
	14.3	1842	1.0	97.84	-	-	-	-	PA/PF 52/12 100L2C / 100L2D	114	212
	14.4	1727	0.8	194.67	10.0	24.0	-	-			
	19.2	1296	1.1	146.01	10.0	24.0	-	-			
	22.5	1105	1.3	124.52	10.0	24.0	-	-			
	28.6	868	1.6	97.84	10.0	24.0	-	-			
	10.0	2682	0.8	139.42	7.0	24.0	16.0	40.0	PA/PF 53 100L4C / 100L4D	117	189
	13.2	2035	1.1	105.77	11.0	24.0	17.0	40.0			
	14.7	1835	1.2	95.41	12.0	24.0	18.0	40.0			
	17.6	1533	1.2	79.69	-	-	18.0	40.0			
	21.4	1256	1.5	65.31	-	-	18.0	40.0			
	23.8	1133	1.7	58.91	-	-	-	-			
	15.1	1709	0.8	185.90	10.0	24.0	18.0	40.0	PA/PF 53 100L2C / 100L2D	117	189
	15.8	1632	0.9	177.45	10.0	24.0	18.0	40.0			
	20.1	1282	1.3	139.42	10.0	24.0	16.0	40.0			
	26.5	973	1.7	105.77	10.0	24.0	17.0	40.0			
	29.3	877	1.9	95.41	10.0	24.0	18.0	40.0			
	35.1	733	1.9	79.69	10.0	24.0	18.0	40.0			
	42.9	601	2.4	65.31	10.0	24.0	18.0	40.0			
	47.5	542	2.7	58.91	10.0	24.0	-	-			
	15.1	1838	1.1	59.50	13.0	24.0	19.0	40.0	PA/PF 52 132S6A	128	188
	16.7	1661	1.2	53.79	13.0	24.0	19.0	40.0			
	18.4	1512	1.3	48.95	13.0	24.0	19.0	40.0			
	22.3	1246	1.6	40.34	13.0	24.0	19.0	39.0			
	23.4	1188	1.5	38.46	13.0	24.0	20.0	40.0			
	24.5	1134	1.8	36.71	13.0	24.0	19.0	38.0			
	28.0	992	1.5	32.12	13.0	24.0	20.0	39.0			
	31.2	891	2.4	28.85	13.0	24.0	19.0	36.0			
	34.1	816	2.4	26.43	13.0	24.0	20.0	37.0			
	37.4	744	2.4	24.09	13.0	24.0	20.0	34.0			
	37.7	738	2.7	23.89	13.0	24.0	20.0	36.0			
	41.6	669	3.0	21.65	13.0	24.0	20.0	34.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
3.00	16.1	1707	1.0	86.88	12.0	24.0	18.0	40.0	PA/PF 52 100L4C / 100L4D	98	188
	17.8	1543	1.0	78.53	13.0	24.0	19.0	40.0			
	19.6	1404	1.1	71.47	13.0	24.0	19.0	40.0			
	23.5	1169	1.6	59.50	13.0	24.0	19.0	40.0			
	26.0	1057	1.8	53.79	13.0	24.0	19.0	40.0			
	28.6	962	2.0	48.95	14.0	24.0	19.0	40.0			
	36.4	756	2.2	38.46	14.0	24.0	20.0	40.0			
	38.9	707	2.0	36.00	14.0	24.0	20.0	40.0			
	43.0	639	2.0	32.54	14.0	24.0	20.0	39.0	PA/PF 52 100L2C / 100L2D	98	188
	43.6	631	2.2	32.12	14.0	24.0	20.0	39.0			
	32.2	828	1.6	86.88	13.0	24.0	18.0	40.0			
	35.7	748	1.6	78.53	13.0	24.0	19.0	40.0			
	39.2	681	1.8	71.47	13.0	24.0	19.0	40.0	PA/PF 51 132S6A	89	166
	47.1	567	2.5	59.50	13.0	24.0	19.0	40.0			
	52.1	513	2.8	53.79	13.0	24.0	19.0	40.0	PA/PF 51 100L4C / 100L4D	59	166
	99.0	285	1.2	9.09	-	-	-	-			
	132.0	214	2.0	6.82	-	-	-	-			
	105.5	266	1.1	13.27	-	-	-	-	PA/PF 51 100L2C / 100L2D	59	166
	154.0	182	1.8	9.09	-	-	-	-			
	254.5	110	2.0	5.50	-	-	-	-	PA/PF 51 100L4C / 100L4D	59	166
	211.0	131	1.7	13.27	-	-	-	-			
	308.0	90	2.7	9.09	-	-	-	-	PA/PF 42/12 100L2C / 100L2D	96	212
	24.1	1032	0.9	116.26	3.0	12.0	-	-			
	31.9	779	1.2	87.79	3.0	12.0	-	-	PA/PF 43 100L4C / 100L4D	84	185
	17.5	1539	0.8	80.01	0.4	0.3	9.0	7.0			
	20.0	1348	0.9	70.10	0.3	0.3	9.0	8.0			
	24.0	1120	1.0	58.22	-	-	9.0	6.0			
	28.8	934	1.1	48.55	-	-	-	-			
	34.2	787	1.3	40.91	-	-	-	-	PA/PF 43 100L2C / 100L2D	84	185
	21.7	1189	0.8	129.27	1.0	12.0	-	-			
	26.1	987	0.9	107.36	1.0	12.0	10.0	10.0			
	29.5	873	1.1	94.91	1.0	12.0	9.0	7.0			
	35.0	736	1.3	80.01	1.0	12.0	9.0	8.0			
	39.9	645	1.5	70.10	1.0	12.0	9.0	6.0			
	48.1	535	1.7	58.22	1.0	12.0	-	-			
	57.7	446	1.8	48.55	1.0	12.0	-	-	PA/PF 42 132S6A	99	184
	68.4	376	2.1	40.91	1.0	12.0	-	-			
	21.8	1276	1.0	41.30	3.0	12.0	11.0	9.0			
	25.5	1089	1.2	35.26	3.0	12.0	11.0	9.0			
	30.7	904	1.2	29.28	3.0	12.0	11.0	9.0			
	34.8	799	1.6	25.88	3.0	12.0	11.0	6.0			
	36.9	754	1.2	24.42	3.0	12.0	11.0	8.0			
	41.2	675	1.7	21.85	3.0	12.0	11.0	8.0			
	41.9	664	1.8	21.50	3.0	12.0	11.0	6.0			
	50.2	554	1.9	17.93	3.0	12.0	11.0	6.0	PA/PF 42 100L4C / 100L4D	69	184
	50.9	546	2.3	17.69	3.0	12.0	11.0	8.0			
	59.6	466	2.8	15.10	3.0	12.0	12.0	8.0			
	62.6	444	2.7	14.38	3.0	12.0	12.0	8.0			
	18.7	1471	0.8	74.87	-	-	10.0	10.0			
	23.1	1191	0.8	60.64	0.4	0.4	10.0	8.0			
	27.5	1002	1.1	50.99	1.0	12.0	10.0	9.0			
	33.9	811	1.5	41.30	3.0	12.0	11.0	9.0			
	39.7	693	1.8	35.26	5.0	12.0	11.0	9.0			
	45.9	599	1.8	30.47	7.0	12.0	11.0	9.0	PA/PF 42 100L2C / 100L2D	69	184
	47.8	575	1.8	29.28	6.0	12.0	11.0	9.0			
	56.7	485	1.8	24.68	6.0	12.0	11.0	9.0			
	57.3	480	1.8	24.42	6.0	12.0	11.0	8.0			
	64.1	429	2.6	21.85	6.0	12.0	11.0	8.0			
	37.4	713	1.2	74.87	3.0	12.0	10.0	10.0			
	46.2	578	1.3	60.64	3.0	12.0	10.0	8.0			
	54.9	486	1.7	50.99	3.0	12.0	10.0	9.0			
	67.8	394	2.3	41.30	3.0	12.0	11.0	9.0	PA/PF 42 100L4C / 100L4D	69	184
	79.4	336	2.8	35.26	3.0	12.0	11.0	9.0			
	91.9	290	2.8	30.47	3.0	12.0	11.0	9.0			
	95.6	279	2.8	29.28	3.0	12.0	11.0	9.0			
	113.5	235	2.9	24.68	3.0	12.0	11.0	9.0			
	114.7	233	2.8	24.42	3.0	12.0	11.0	9.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
3.00	125.3 170.8	225 165	0.9 1.2	7.18 5.27	- -	- -	- -	- -	PA/PF 41 132S6A	80	164
	409.4 360.8 326.3 195.0 132.7	69 78 86 144 212	2.0 1.9 1.8 1.3 0.9	3.42 3.88 4.29 7.18 10.55	- - - - -	- - - - -	- - - - -	- - - - -	PA/PF 41 100L4C / 100L4D	50	164
	265.4 390.0 652.7 721.6	104 71 42 38	1.4 2.0 2.8 2.9	10.55 7.18 4.29 3.88	- - - -	- - - -	- - - -	- - - -	PA/PF 41 100L2C / 100L2D	50	164
	55.5 62.0 76.9 91.9 114.1 163.9	501 448 361 302 244 170	1.3 1.6 2.1 2.2 2.8 2.8	16.23 14.52 11.70 9.79 7.89 5.49	3.0 3.0 3.0 3.0 3.0 3.0	9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 - 10.0	9.0 9.0 8.0 8.0 - 7.0	PA/PF 32 132S6A	84	180
	37.6 44.9 46.0 51.4 52.8 60.6 67.7 75.1 84.1 86.3 93.3 96.4	731 612 598 535 521 454 406 366 327 319 295 285	0.8 0.8 1.1 1.1 0.8 1.4 1.6 1.7 1.6 2.0 1.7 2.4	37.22 31.16 30.45 27.24 26.53 23.10 20.67 18.64 16.64 16.23 15.01 14.52	- - - - - 4.0 4.0 4.0 4.0 4.0 4.0 4.0	- - - - - 8.0 8.0 8.0 8.0 8.0 8.0 8.0	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 9.0 9.0 9.0 9.0 9.0 9.0 9.0	PA/PF 32 100L4C / 100L4D	54	180
	60.6 75.2 89.9 92.0 102.8 105.5 121.2 135.5 150.2 168.3 186.5	440 355 297 290 260 253 220 197 178 159 143	1.2 1.3 1.3 1.7 1.8 1.3 2.2 2.5 2.7 2.5 2.7	46.22 37.22 31.16 30.45 27.24 26.53 23.10 20.67 18.64 16.64 15.01	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	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 9.0 9.0 9.0	11.0 10.0 10.0 - - 10.0 9.0 9.0 9.0 9.0 9.0	PA/PF 32 100L2C / 100L2D	54	180
	432.7 511.4	65 55	2.7 2.9	2.08 1.76	- -	- -	- -	- -	PA/PF 31 132S6A	71	162
	289.9 381.5 423.0	97 74 66	1.0 1.5 1.6	4.83 3.67 3.31	- - -	- - -	- - -	- - -	PA/PF 31 100L4C / 100L4D	41	162
	341.5 579.7 762.9 845.9	81 48 36 33	1.0 1.6 2.3 2.4	8.20 4.83 3.67 3.31	- - - -	- - - -	- - - -	- - - -	PA/PF 31 100L2C / 100L2D	41	162
	83.6 95.4 114.8 128.4 165.5 184.9 204.1 215.1 242.6 270.3 301.7 350.9 396.6 500.0	329 288 239 214 166 149 135 128 113 102 91 78 69 55	1.0 1.2 1.4 1.5 1.6 1.7 1.9 1.8 1.9 1.6 1.6 1.8 1.9 2.1	16.74 14.67 12.19 10.90 8.46 7.57 6.86 6.51 5.77 5.18 4.64 3.99 3.53 2.80	0.3 0.4 0.3 0.3 1.0 2.0 2.0 2.0 3.0 2.0 2.0 2.0 2.0 2.0	0.3 0.3 0.3 5.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0	6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 4.0	PA/PF 22 100L4C / 100L4D	43	176

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
3.00	80.8	330	0.8	34.67	1.0	6.0	7.0	8.0	PA/PF 22 100L2C / 100L2D	43	176
	97.2	274	1.0	28.80	1.0	6.0	7.0	6.0			
	117.8	226	1.1	23.77	1.0	6.0	7.0	6.0			
	140.0	191	1.1	20.00	1.0	6.0	7.0	6.0			
	167.3	160	1.6	16.74	1.0	6.0	7.0	6.0			
	190.9	140	1.8	14.67	1.0	6.0	7.0	6.0			
	229.7	116	2.2	12.19	1.0	6.0	7.0	6.0			
	256.9	104	2.3	10.90	1.0	6.0	7.0	6.0			
	331.0	81	2.4	8.46	1.0	6.0	7.0	5.0			
	369.9	72	2.6	7.57	1.0	6.0	7.0	5.0			
	408.2	65	3.0	6.86	1.0	6.0	7.0	5.0			
	430.1	62	2.8	6.51	1.0	6.0	7.0	5.0			
	485.3	55	3.0	5.77	1.0	6.0	7.0	5.0			
	540.5	49	2.4	5.18	1.0	6.0	7.0	5.0			
	603.4	44	2.6	4.64	1.0	6.0	8.0	5.0			
	701.8	38	2.8	3.99	1.0	6.0	8.0	5.0			
	793.2	34	3.0	3.53	1.0	6.0	8.0	5.0			
	381.5	74	0.9	3.67	-	-	-	-	PA/PF 21 100L4C / 100L4D	45	160
	453.1	62	1.0	3.09	-	-	-	-			
	516.6	54	1.4	2.71	-	-	-	-			
	578.5	49	1.5	2.42	-	-	-	-			
	673.1	42	1.6	2.08	-	-	-	-			
	756.8	37	1.7	1.85	-	-	-	-			
	958.9	29	2.0	1.46	-	-	-	-			
	437.5	63	0.8	6.40	-	-	-	-	PA/PF 21 100L2C / 100L2D	45	160
	762.9	36	1.4	3.67	-	-	-	-			
	906.1	31	1.5	3.09	-	-	-	-			
	1033.2	27	2.2	2.71	-	-	-	-			
	1157.0	24	2.3	2.42	-	-	-	-			
	1346.2	21	2.5	2.08	-	-	-	-			
	1513.5	18	2.7	1.85	-	-	-	-			
	178.3	151	0.9	7.85	0.2	0.2	5.0	4.0	PA/PF 12 100L4C / 100L4D	34	172
	192.0	140	0.9	7.29	0.2	0.2	5.0	4.0			
	214.4	126	1.0	6.53	0.2	0.2	5.0	4.0			
	242.2	111	1.1	5.78	0.2	0.2	5.0	4.0			
	284.0	95	1.2	4.93	0.2	0.2	5.0	4.0			
	311.8	86	1.4	4.49	0.2	0.2	5.0	4.0			
	324.8	83	1.4	4.31	0.4	2.0	5.0	4.0			
	351.8	77	1.5	3.98	0.2	2.0	5.0	4.0			
	413.0	65	1.7	3.39	1.0	2.0	5.0	4.0			
	473.0	57	1.8	2.96	1.0	2.0	5.0	4.0			
	209.1	128	0.9	13.39	1.0	3.0	5.0	5.0	PA/PF 12 100L2C / 100L2D	34	172
	262.2	102	1.0	10.68	1.0	3.0	5.0	5.0			
	290.2	92	1.1	9.65	1.0	3.0	5.0	5.0			
	356.7	75	1.3	7.85	1.0	3.0	5.0	4.0			
	384.1	69	1.4	7.29	1.0	3.0	5.0	4.0			
	428.8	62	1.5	6.53	1.0	3.0	5.0	4.0			
	484.4	55	1.7	5.78	1.0	3.0	5.0	4.0			
	568.0	47	1.9	4.93	1.0	3.0	5.0	4.0			
	623.6	43	2.1	4.49	1.0	3.0	5.0	4.0			
	649.7	41	2.1	4.31	1.0	3.0	5.0	4.0			
	703.5	38	2.3	3.98	1.0	3.0	5.0	4.0			
	826.0	32	2.6	3.39	1.0	3.0	5.0	4.0			
	945.9	28	2.8	2.96	1.0	3.0	5.0	4.0			
	494.7	57	1.0	2.83	-	-	-	-	PA/PF 11 100L4C / 100L4D	30	158
	603.4	47	1.0	2.32	-	-	-	-			
	686.3	41	1.4	2.04	-	-	-	-			
	773.5	36	1.5	1.81	-	-	-	-			
	909.1	31	1.6	1.54	-	-	-	-			
	1037.0	27	1.8	1.35	-	-	-	-			
	989.4	28	1.5	2.83	-	-	-	-	PA/PF 11 100L2C / 100L2D	30	158
	1206.9	23	1.6	2.32	-	-	-	-			
	1372.5	20	2.2	2.04	-	-	-	-			
	1547.0	18	2.3	1.81	-	-	-	-			
	1818.2	15	2.5	1.54	-	-	-	-			
	2074.1	13	2.9	1.35	-	-	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
4.00	1.4	25288	0.8	642.57	101.0	112.0	120.0	120.0	PA/PF 103/52 132M6A	843	216
	1.9	18426	1.1	468.19	89.0	120.0	120.0	120.0			
	2.6	13424	1.6	341.11	89.0	120.0	120.0	120.0			
	3.0	11671	1.8	296.56	89.0	120.0	120.0	120.0			
	3.7	9629	2.2	244.66	89.0	120.0	120.0	120.0			
	4.9	7272	2.9	184.77	89.0	120.0	120.0	120.0			
	1.5	23182	0.9	944.01	83.0	120.0	120.0	120.0	PA/PF 103/52 112M4C / 112M4D	821	216
	1.7	20083	1.0	817.82	89.0	120.0	120.0	120.0			
	2.2	15780	1.3	642.57	94.0	120.0	120.0	120.0			
	3.0	11497	1.7	468.19	98.0	120.0	120.0	120.0			
	4.1	8377	2.4	341.11	100.0	116.0	120.0	120.0			
	4.7	7283	2.7	296.56	101.0	112.0	120.0	120.0			
	1.6	19437	0.8	1702.50	83.0	120.0	-	-	PA/PF 103/52 112M2B / 112M2C	821	216
	2.0	16139	0.9	1413.66	83.0	120.0	120.0	120.0			
	2.4	13101	1.2	1147.52	83.0	120.0	120.0	120.0			
	3.0	10778	1.4	944.01	83.0	120.0	120.0	120.0			
	3.4	9337	1.6	817.82	89.0	120.0	120.0	120.0			
	4.4	7336	2.1	642.57	94.0	120.0	120.0	120.0	PA/PF 103 132M6A	769	209
	6.0	5345	2.8	468.19	98.0	120.0	120.0	120.0			
	4.3	8411	2.9	207.36	100.0	96.0	120.0	120.0			
	5.6	6331	2.0	160.87	66.0	66.0	93.0	80.0		624	216
	7.1	5012	2.6	127.35	66.0	66.0	-	-			
	2.7	13101	1.0	332.89	62.0	75.0	90.0	80.0	PA/PF 93/42 132M6A	595	216
	3.1	11333	1.1	287.97	64.0	74.0	91.0	80.0			
	3.7	9472	1.4	240.68	65.0	71.0	92.0	80.0			
	4.9	7163	1.8	182.00	66.0	67.0	93.0	80.0			
	2.6	13454	0.9	547.88	54.0	80.0	85.0	80.0	PA/PF 93/42 112M4C / 112M4D	573	216
	3.1	11220	1.1	456.91	59.0	78.0	88.0	80.0			
	4.2	8175	1.5	332.89	62.0	75.0	90.0	80.0			
	4.9	7072	1.7	287.97	64.0	74.0	91.0	80.0			
	5.8	5910	2.1	240.68	65.0	71.0	92.0	80.0			
	7.7	4469	2.7	182.00	66.0	67.0	93.0	80.0	PA/PF 93/42 112M2B / 112M2C	573	216
	3.4	9270	1.0	811.95	54.0	80.0	88.0	80.0			
	3.7	8640	1.1	756.80	54.0	80.0	84.0	80.0			
	5.1	6255	1.5	547.88	54.0	80.0	85.0	80.0			
	6.1	5216	1.8	456.91	59.0	78.0	88.0	80.0			
	8.4	3801	2.4	332.89	62.0	75.0	90.0	80.0	PA/PF 93 132M6A	550	205
	9.7	3288	2.8	287.97	64.0	74.0	91.0	80.0			
	4.8	7625	1.9	187.99	66.0	58.0	92.0	80.0	PA/PF 83/42 132M6A	416	216
	8.2	4432	2.7	109.25	66.0	58.0	93.0	80.0			
	3.3	10862	0.8	276.00	39.0	40.0	59.0	65.0			
	3.8	9289	0.9	236.03	41.0	39.0	60.0	65.0			
	4.5	7914	1.1	201.09	42.0	39.0	61.0	65.0			
	6.0	5864	1.4	149.01	44.0	37.0	62.0	65.0	PA/PF 83/42 112M4C / 112M4D	394	216
	7.1	4996	1.7	126.95	38.0	51.0	63.0	65.0			
	3.7	9197	0.9	374.50	33.0	39.0	55.0	65.0			
	5.1	6778	1.2	276.00	39.0	40.0	59.0	65.0			
	5.9	5796	1.4	236.03	41.0	39.0	60.0	65.0			
	7.0	4938	1.6	201.09	42.0	39.0	61.0	65.0	PA/PF 83/42 112M2B / 112M2C	394	216
	9.4	3659	2.2	149.01	44.0	37.0	62.0	65.0			
	11.0	3118	2.6	126.95	38.0	51.0	-	-			
	5.3	5995	1.0	525.11	33.0	39.0	53.0	65.0			
	6.4	5000	1.2	437.93	33.0	39.0	56.0	65.0			
	7.5	4276	1.4	374.50	33.0	39.0	55.0	65.0	PA/PF 83 132M6A	371	201
	10.1	3151	1.9	276.00	39.0	40.0	59.0	65.0			
	11.9	2695	2.3	236.03	41.0	39.0	60.0	65.0			
	13.9	2296	2.6	201.09	42.0	39.0	61.0	65.0			
	4.2	8781	1.1	216.49	42.0	39.0	61.0	65.0			
	5.5	6680	1.4	164.68	44.0	37.0	60.0	65.0	PA/PF 83 132M6A	371	201
	6.6	5544	1.4	136.67	44.0	37.0	62.0	65.0			
	8.7	4217	2.3	103.97	44.0	44.0	62.0	65.0			
	11.2	3271	2.9	80.63	44.0	44.0	63.0	65.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
4.00	6.5 10.2	5553 3505	1.6 2.1	216.49 136.67	42.0 44.0	39.0 37.0	61.0 62.0	65.0 65.0	PA/PF 83 112M4C / 112M4D	349	201
	12.9	2654	2.5	216.49	42.0	39.0	61.0	65.0	PA/PF 83 112M2B / 112M2C	349	201
	18.5 22.3	2008 1665	2.8 2.6	48.76 40.43	44.0 44.0	25.0 25.0	- -	- -	PA/PF 82 132M6A	363	200
	5.3 6.4 7.2	6734 5555 4906	0.8 0.9 1.1	171.10 141.16 124.66	26.0 26.0 26.0	23.0 23.0 23.0	33.0 - -	50.0 - -	PA/PF 73/32 132M6A	294	214
	6.2 8.2 9.9 11.2	5559 4202 3466 3061	0.9 1.2 1.4 1.6	226.38 171.10 141.16 124.66	19.0 26.0 26.0 26.0	17.0 23.0 23.0 23.0	61.0 33.0 - -	65.0 50.0 - -	PA/PF 73/32 112M4C / 112M4D	272	214
	12.4 16.4 19.8 22.5	2585 1953 1612 1423	1.5 1.9 2.4 2.7	226.38 171.10 141.16 124.66	19.0 26.0 26.0 26.0	17.0 23.0 23.0 23.0	34.0 33.0 - -	50.0 50.0 - -	PA/PF 73/32 112M2B / 112M2C	272	214
	8.1 10.0	3959 3198	1.0 1.2	346.75 280.08	22.0 22.0	24.0 24.0	36.0 35.0	50.0 50.0	PA/PF 73/22 112M2B / 112M2C	261	214
	5.4 7.2 7.2 9.0 9.9 12.0 14.9 17.2 19.7	6736 5052 5045 4075 3705 3034 2451 2121 1853	0.9 1.2 1.0 1.0 1.5 1.8 2.4 2.8 3.0	166.07 124.55 124.38 100.47 91.33 74.80 60.42 52.28 45.67	24.0 26.0 26.0 27.0 27.0 27.0 26.0 26.0 26.0	18.0 18.0 18.0 18.0 18.0 18.0 23.0 23.0 23.0	37.0 40.0 39.0 39.0 39.0 40.0 40.0 40.0 40.0	50.0 50.0 50.0 50.0 50.0 50.0 47.0 46.0 44.0	PA/PF 73 132M6A	264	197
	6.8 8.4 11.3 13.9 15.3 18.7	5273 4259 3190 2577 2342 1919	1.0 1.3 1.6 1.6 2.3 2.8	205.59 166.07 124.38 100.47 91.33 74.80	21.0 24.0 26.0 27.0 27.0 27.0	18.0 18.0 18.0 18.0 18.0 18.0	62.0 37.0 39.0 39.0 39.0 40.0	65.0 50.0 50.0 50.0 50.0 50.0	PA/PF 73 112M4C / 112M4D	242	197
	13.6 16.9 22.5 27.9	2521 2036 1525 1232	1.6 2.1 2.5 2.5	205.59 166.07 124.38 100.47	21.0 24.0 26.0 27.0	18.0 18.0 18.0 18.0	35.0 37.0 39.0 39.0	50.0 50.0 50.0 50.0	PA/PF 73 112M2B / 112M2C	242	197
	20.6 27.2	1800 1362	2.4 2.5	43.70 33.08	27.0 27.0	14.0 13.0	39.0 -	41.0 -	PA/PF 72 132M6A	254	196
	8.1 9.1	4254 3770	0.8 0.8	173.24 153.52	13.0 13.0	24.0 24.0	- -	- -	PA/PF 63/22 112M4C / 112M4D	180	214
	9.9 12.4 16.2 18.2	3231 2571 1978 1753	0.8 0.9 1.2 1.4	283.00 225.22 173.24 153.52	13.0 13.0 13.0 13.0	24.0 24.0 24.0 24.0	- - - -	- - - -	PA/PF 63/22 112M2B / 112M2C	180	214
	8.4 11.6 14.3 16.7 17.7 20.7 24.9 29.1	4349 3143 2554 2184 2062 1763 1466 1253	0.9 1.2 1.5 1.8 1.9 2.2 2.6 3.0	107.21 77.49 62.96 53.84 50.83 43.47 36.14 30.90	19.0 19.0 19.0 20.0 20.0 14.0 14.0 14.0	19.0 18.0 18.0 18.0 18.0 24.0 24.0 24.0	24.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0	40.0 42.0 40.0 39.0 38.0 37.0 35.0 34.0	PA/PF 63 132M6A	183	193
	7.7 9.6 13.0 16.0 18.1 22.2 26.0 27.5	4639 3745 2772 2238 1988 1615 1381 1304	0.8 1.0 1.3 1.4 1.9 2.3 2.7 2.8	180.86 146.02 108.08 87.26 77.49 62.96 53.84 50.83	9.0 14.0 17.0 19.0 19.0 19.0 20.0 20.0	18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0	21.0 24.0 26.0 27.0 27.0 28.0 28.0 28.0	45.0 45.0 44.0 42.0 42.0 40.0 39.0 38.0	PA/PF 63 112M4C / 112M4D	161	193

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
4.00	10.5	3256	0.8	265.56	9.0	18.0	24.0	45.0	PA/PF 63 112M2B / 112M2C	161	193
	13.1	2629	1.1	214.41	9.0	18.0	23.0	45.0			
	15.5	2217	1.3	180.86	9.0	18.0	21.0	45.0			
	19.2	1790	1.6	146.02	14.0	18.0	24.0	45.0			
	25.9	1325	2.1	108.08	17.0	19.0	26.0	44.0			
	32.1	1070	2.3	87.26	19.0	19.0	27.0	42.0			
	36.1	950	3.0	77.49	19.0	18.0	27.0	42.0			
	18.5	2008	1.3	48.75	20.0	17.0	28.0	38.0	PA/PF 62 132M6A	185	192
	24.3	1527	2.1	37.08	20.0	17.0	28.0	34.0			
	28.7	1277	2.0	48.75	20.0	17.0	28.0	38.0	PA/PF 62 112M4C / 112M4D	163	192
	19.2	1727	0.8	146.01	10.0	24.0	-	-	PA/PF 52/12 112M2B / 112M2C	122	212
	22.5	1473	0.9	124.52	10.0	24.0	-	-			
	28.6	1158	1.2	97.84	10.0	24.0	-	-			
	13.2	2713	0.8	105.77	8.0	24.0	16.0	40.0	PA/PF 53 112M4C / 112M4D	125	189
	14.7	2447	0.9	95.41	9.0	24.0	17.0	40.0			
	17.6	2044	0.9	79.69	11.0	24.0	18.0	40.0			
	21.4	1675	1.1	65.31	12.0	24.0	18.0	40.0			
	23.8	1511	1.3	58.91	10.0	24.0	-	-			
	20.1	1709	1.0	139.42	8.0	24.0	16.0	40.0	PA/PF 53 112M2B / 112M2C	125	189
	26.5	1297	1.3	105.77	8.0	24.0	16.0	40.0			
	29.3	1170	1.4	95.41	9.0	24.0	17.0	40.0			
	35.1	977	1.4	79.69	11.0	24.0	18.0	40.0			
	42.9	801	1.8	65.31	12.0	24.0	18.0	40.0			
	47.5	722	2.0	58.91	10.0	24.0	-	-			
	15.1	2450	0.8	59.50	13.0	24.0	19.0	40.0	PA/PF 52 132M6A	128	188
	16.7	2215	0.9	53.79	13.0	24.0	19.0	40.0			
	18.4	2016	1.0	48.95	13.0	24.0	19.0	40.0			
	22.3	1661	1.2	40.34	14.0	24.0	19.0	39.0			
	23.4	1584	1.1	38.46	14.0	24.0	19.0	39.0			
	24.5	1512	1.3	36.71	14.0	24.0	19.0	38.0			
	28.0	1323	1.1	32.12	14.0	24.0	20.0	37.0			
	31.2	1188	1.8	28.85	14.0	24.0	19.0	36.0			
	34.1	1088	1.8	26.43	14.0	24.0	20.0	36.0			
	37.4	992	1.8	24.09	13.0	24.0	20.0	34.0			
	37.7	984	2.0	23.89	13.0	24.0	20.0	35.0			
	41.6	892	2.2	21.65	13.0	24.0	20.0	34.0			
	46.0	806	2.5	19.57	13.0	24.0	20.0	33.0			
	50.5	733	2.7	17.81	13.0	24.0	20.0	32.0			
	16.1	2276	0.8	86.88	13.0	24.0	18.0	40.0	PA/PF 52 112M4C / 112M4D	106	188
	17.8	2057	0.8	78.53	13.0	24.0	19.0	40.0			
	19.6	1872	0.8	71.47	13.0	24.0	19.0	40.0			
	23.5	1559	1.2	59.50	13.0	24.0	19.0	40.0			
	26.0	1409	1.4	53.79	13.0	24.0	19.0	40.0			
	28.6	1282	1.5	48.95	13.0	24.0	19.0	40.0			
	36.4	1007	1.7	38.46	14.0	24.0	19.0	39.0			
	38.9	943	1.5	36.00	14.0	24.0	19.0	39.0			
	43.0	852	1.5	32.54	14.0	24.0	20.0	38.0			
	43.6	841	1.7	32.12	14.0	24.0	20.0	37.0			
	53.0	692	2.7	26.43	14.0	24.0	20.0	36.0			
	32.2	1104	1.2	86.88	13.0	24.0	18.0	40.0	PA/PF 52 112M2B / 112M2C	106	188
	35.7	998	1.2	78.53	13.0	24.0	19.0	40.0			
	39.2	908	1.3	71.47	13.0	24.0	19.0	40.0			
	47.1	756	1.9	59.50	13.0	24.0	19.0	40.0			
	52.1	683	2.1	53.79	13.0	24.0	19.0	40.0			
	57.2	622	2.3	48.95	13.0	24.0	19.0	40.0			
	72.8	489	2.6	38.46	14.0	24.0	19.0	39.0			
	77.8	457	2.3	36.00	14.0	24.0	19.0	39.0			
	86.0	413	2.3	32.54	14.0	24.0	20.0	38.0			
	87.2	408	2.6	32.12	14.0	24.0	20.0	37.0			
	99.0	380	0.9	9.09	-	-	-	-	PA/PF 51 132M6A	89	166
	132.0	285	1.5	6.82	-	-	-	-			
	222.8	169	2.5	4.04	-	-	-	-			
	105.5	355	0.8	13.27	-	6.0	-	-	PA/PF 51 112M4C / 112M4D	67	166
	154.0	243	1.3	9.09	-	6.0	-	-			
	254.5	147	1.5	5.50	-	6.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
4.00	211.0 308.0 509.1	175 120 72	1.3 2.0 2.3	13.27 9.09 5.50	- - -	- - -	- - -	- - -	PA/PF 51 112M2B / 112M2C	67	166
	31.9	1039	0.9	87.79	3.0	12.0	-	-	PA/PF 42/12 112M2B / 112M2C	104	184
	24.0 28.8 34.2	1493 1245 1049	0.8 0.8 1.0	58.22 48.55 40.91	1.0 1.0 1.0	12.0 12.0 12.0	9.0 - -	6.0 - -	PA/PF 43 112M4C / 112M4D	92	185
	29.5 35.0 39.9 48.1 57.7 68.4	1164 981 859 714 595 502	0.8 1.0 1.1 1.2 1.3 1.6	94.91 80.01 70.10 58.22 48.55 40.91	1.0 1.0 1.0 1.0 1.0 1.0	12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 - -	9.0 7.0 8.0 6.0 - -	PA/PF 43 112M2B / 112M2C	92	185
	25.5 30.7 34.8 36.9 41.2 41.9 50.2 50.9 59.6 62.6 73.3 88.3	1452 1206 1066 1006 900 885 738 728 622 592 505 420	0.9 0.9 1.2 0.9 1.3 1.4 1.4 1.7 2.1 2.1 2.5 2.9	35.26 29.28 25.88 24.42 21.85 21.50 17.93 17.69 15.10 14.38 12.27 10.19	2.0 2.0 4.0 3.0 5.0 6.0 6.0 6.0 3.0 3.0 3.0 3.0	11.0 10.0 11.0 10.0 11.0 10.0 10.0 10.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	7.0 7.0 6.0 7.0 8.0 6.0 6.0 8.0 7.0 7.0 7.0 6.0	PA/PF 42 132M6A	99	184
	27.5 33.9 39.7 45.9 47.8 56.7 57.3 64.1 79.1	1336 1082 924 798 767 646 640 572 463	0.8 1.1 1.3 1.4 1.3 1.4 1.3 1.9 2.6	50.99 41.30 35.26 30.47 29.28 24.68 24.42 21.85 17.69	2.0 2.0 2.0 2.0 2.0 4.0 3.0 5.0 6.0	11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0 10.0	9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	7.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 8.0	PA/PF 42 112M4C / 112M4D	77	184
	37.4 46.2 54.9 67.8 79.4 91.9 95.6 113.5 114.7 128.1	951 770 648 525 448 387 372 314 310 278	0.9 1.0 1.3 1.7 2.1 2.1 2.1 2.2 2.1 3.0	74.87 60.64 50.99 41.30 35.26 30.47 29.28 24.68 24.42 21.85	2.0 2.0 2.0 2.0 2.0 2.0 2.0 4.0 3.0 5.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0	10.0 10.0 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 8.0 7.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0	PA/PF 42 112M2B / 112M2C	77	184
	170.8 292.2 360.0 420.6	220 129 105 89	0.9 2.4 2.7 2.9	5.27 3.08 2.50 2.14	- - - -	- - - -	- - - -	- - - -	PA/PF 41 132M6A	80	164
	195.0 326.3 360.8 409.4	192 115 104 91	1.0 1.4 1.4 1.5	7.18 4.29 3.88 3.42	- - - -	5.0 5.0 5.0 5.0	- - - -	- - - -	PA/PF 41 112M4C / 112M4D	58	164
	265.4 390.0 652.7 721.6 818.7	139 95 56 51 45	1.0 1.5 2.1 2.2 2.4	10.55 7.18 4.29 3.88 3.42	- - - - -	- - - - -	- - - - -	- - - - -	PA/PF 41 112M2B / 112M2C	58	164
	55.5 62.0 76.9 91.9 114.1 133.9 158.2 163.9 203.6	668 598 482 403 325 277 234 226 182	1.0 1.2 1.5 1.7 2.1 2.3 2.7 2.1 2.7	16.23 14.52 11.70 9.79 7.89 6.72 5.69 5.49 4.42	4.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0	7.0 7.0 6.0 6.0 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	8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0 6.0	PA/PF 32 132M6A	84	180

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
4.00	46.0	798	0.8	30.45	1.0	7.0	-	-	PA/PF 32 112M4C / 112M4D	62	180
	51.4	714	0.8	27.24	1.0	7.0	-	-			
	60.6	605	1.0	23.10	1.0	7.0	9.0	8.0			
	67.7	541	1.2	20.67	2.0	7.0	9.0	8.0			
	75.1	488	1.3	18.64	2.0	7.0	9.0	8.0			
	84.1	436	1.2	16.64	3.0	7.0	9.0	8.0			
	86.3	425	1.5	16.23	4.0	7.0	9.0	8.0			
	93.3	393	1.3	15.01	3.0	7.0	9.0	8.0			
	96.4	380	1.8	14.52	4.0	7.0	9.0	8.0			
	119.7	306	2.3	11.70	4.0	6.0	9.0	8.0			
	143.0	256	2.5	9.79	3.0	6.0	9.0	8.0			
	60.6	587	0.9	46.22	1.0	7.0	9.0	11.0	PA/PF 32 112M2B / 112M2C	62	180
	75.2	473	0.9	37.22	1.0	7.0	9.0	10.0			
	89.9	396	1.0	31.16	1.0	7.0	9.0	10.0			
	92.0	387	1.3	30.45	1.0	7.0	-	-			
	102.8	346	1.3	27.24	1.0	7.0	-	-			
	105.5	337	1.0	26.53	1.0	7.0	9.0	10.0			
	121.2	293	1.6	23.10	1.0	7.0	9.0	8.0			
	135.5	263	1.9	20.67	2.0	7.0	9.0	8.0			
	150.2	237	2.0	18.64	2.0	7.0	9.0	8.0			
	168.3	211	1.9	16.64	3.0	7.0	9.0	8.0			
	172.5	206	2.4	16.23	4.0	7.0	9.0	8.0			
	186.5	191	2.0	15.01	3.0	7.0	9.0	8.0			
	192.8	184	2.8	14.52	4.0	7.0	9.0	8.0			
	432.7	87	2.0	2.08	-	-	-	-	PA/PF 31 132M6A	71	162
	511.4	74	2.1	1.76	-	-	-	-			
	647.5	58	2.6	1.39	-	-	-	-			
	289.9	129	0.8	4.83	-	3.0	-	-	PA/PF 31 112M4C / 112M4D	49	162
	381.5	98	1.1	3.67	-	3.0	-	-			
	423.0	89	1.2	3.31	-	3.0	-	-			
	542.6	69	2.7	2.58	-	3.0	-	-			
	673.1	56	3.0	2.08	-	3.0	-	-			
	579.7	64	1.2	4.83	-	-	-	-	PA/PF 31 112M2B / 112M2C	49	162
	762.9	48	1.7	3.67	-	-	-	-			
	845.9	44	1.8	3.31	-	-	-	-			
	83.6	438	0.8	16.74	1.0	4.0	6.0	5.0	PA/PF 22 112M4C / 112M4D	41	176
	95.4	384	0.9	14.67	1.0	4.0	7.0	5.0			
	114.8	319	1.0	12.19	1.0	4.0	7.0	5.0			
	128.4	286	1.1	10.90	1.0	4.0	7.0	5.0			
	165.5	222	1.2	8.46	1.0	4.0	7.0	5.0			
	184.9	198	1.2	7.57	1.0	4.0	7.0	5.0			
	204.1	180	1.4	6.86	1.0	4.0	7.0	5.0			
	215.1	171	1.3	6.51	1.0	4.0	7.0	5.0			
	242.6	151	1.4	5.77	1.0	4.0	7.0	5.0			
	270.3	136	1.2	5.18	1.0	3.0	7.0	5.0			
	301.7	122	1.2	4.64	1.0	3.0	7.0	4.0			
	350.9	105	1.3	3.99	2.0	3.0	7.0	4.0			
	396.6	92	1.4	3.53	2.0	3.0	8.0	4.0			
	500.0	73	1.6	2.80	2.0	3.0	7.0	4.0			
	97.2	366	0.8	28.80	1.0	4.0	7.0	6.0	PA/PF 22 112M2B / 112M2C	41	176
	117.8	302	0.8	23.77	1.0	4.0	7.0	6.0			
	140.0	254	0.9	20.00	1.0	4.0	7.0	6.0			
	167.3	213	1.2	16.74	1.0	4.0	6.0	5.0			
	190.9	186	1.4	14.67	1.0	4.0	7.0	5.0			
	229.7	155	1.6	12.19	1.0	4.0	7.0	5.0			
	256.9	138	1.7	10.90	1.0	4.0	7.0	5.0			
	331.0	107	1.8	8.46	1.0	4.0	7.0	5.0			
	369.9	96	1.9	7.57	1.0	4.0	7.0	5.0			
	408.2	87	2.2	6.86	1.0	4.0	7.0	5.0			
	430.1	83	2.1	6.51	1.0	4.0	7.0	5.0			
	485.3	73	2.2	5.77	1.0	4.0	7.0	5.0			
	540.5	66	1.8	5.18	1.0	3.0	7.0	5.0			
	603.4	59	1.9	4.64	1.0	3.0	7.0	4.0			
	701.8	51	2.1	3.99	2.0	3.0	7.0	4.0			
	793.2	45	2.2	3.53	2.0	3.0	8.0	4.0			
	1000.0	36	2.5	2.80	2.0	3.0	7.0	4.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	Kg	mm
4.00	453.1	83	0.8	3.09	-	3.0	-	-	PA/PF 21 112M4C / 112M4D	53	160
	516.6	72	1.1	2.71	-	3.0	-	-			
	578.5	65	1.1	2.42	-	3.0	-	-			
	673.1	56	1.2	2.08	-	3.0	-	-			
	756.8	49	1.3	1.85	-	3.0	-	-			
	958.9	39	1.5	1.46	-	3.0	-	-			
	762.9	48	1.1	3.67	-	-	-	-	PA/PF 21 112M2B / 112M2C	53	160
	906.1	41	1.2	3.09	-	-	-	-			
	1033.2	36	1.6	2.71	-	-	-	-			
	1157.0	32	1.7	2.42	-	-	-	-			
	1346.2	27	1.9	2.08	-	-	-	-			
	1513.5	24	2.0	1.85	-	-	-	-			
	1917.8	19	2.4	1.46	-	-	-	-			
	214.4	167	0.8	6.53	1.0	3.0	5.0	4.0	PA/PF 12 112M4C / 112M4D	42	172
	242.2	148	0.8	5.78	1.0	3.0	5.0	4.0			
	284.0	126	0.9	4.93	1.0	3.0	5.0	4.0			
	311.8	115	1.0	4.49	1.0	3.0	5.0	3.0			
	324.8	111	1.0	4.31	1.0	3.0	5.0	4.0			
	351.8	102	1.1	3.98	1.0	3.0	5.0	3.0			
	413.0	87	1.3	3.39	1.0	3.0	5.0	3.0			
	473.0	76	1.4	2.96	1.0	3.0	5.0	3.0			
	262.2	136	0.8	10.68	1.0	3.0	5.0	5.0	PA/PF 12 112M2B / 112M2C	42	172
	290.2	123	0.8	9.65	1.0	3.0	5.0	5.0			
	356.7	100	1.0	7.85	1.0	3.0	5.0	4.0			
	384.1	93	1.0	7.29	1.0	3.0	5.0	4.0			
	428.8	83	1.2	6.53	1.0	3.0	5.0	4.0			
	484.4	73	1.3	5.78	1.0	3.0	5.0	4.0			
	568.0	63	1.4	4.93	1.0	3.0	5.0	4.0			
	623.6	57	1.6	4.49	1.0	3.0	5.0	3.0			
	649.7	55	1.6	4.31	1.0	3.0	5.0	4.0			
	703.5	51	1.7	3.98	1.0	3.0	5.0	3.0			
	826.0	43	1.9	3.39	1.0	3.0	5.0	3.0			
	945.9	38	2.1	2.96	1.0	3.0	5.0	3.0			
	603.4	62	0.8	2.32	-	2.0	-	-	PA/PF 11 112M4C / 112M4D	38	158
	686.3	55	1.1	2.04	-	2.0	-	-			
	773.5	48	1.1	1.81	-	2.0	-	-			
	909.1	41	1.2	1.54	-	2.0	-	-			
	1037.0	36	1.4	1.35	-	2.0	-	-			
	989.4	37	1.1	2.83	-	-	-	-	PA/PF 11 112M2B / 112M2C	38	158
	1206.9	31	1.2	2.32	-	-	-	-			
	1372.5	27	1.6	2.04	-	-	-	-			
	1547.0	24	1.8	1.81	-	-	-	-			
	1818.2	20	1.9	1.54	-	-	-	-			
	2074.1	18	2.1	1.35	-	-	-	-			
5.50	1.9	25335	0.8	468.19	100.0	104.0	120.0	120.0	PA/PF 103/52 132M6B	843	216
	2.6	18459	1.1	341.11	83.0	120.0	120.0	120.0			
	3.0	16048	1.3	296.56	83.0	120.0	120.0	120.0			
	3.7	13239	1.6	244.66	83.0	120.0	120.0	120.0			
	4.9	9999	2.1	184.77	83.0	120.0	120.0	120.0			
	5.8	8376	2.5	154.79	83.0	120.0	120.0	120.0			
	2.2	21697	0.9	642.57	85.0	120.0	120.0	120.0	PA/PF 103/52 132S4A / 132S4B	843	216
	3.0	15809	1.3	468.19	94.0	116.0	120.0	120.0			
	4.1	11518	1.7	341.11	98.0	111.0	120.0	120.0			
	4.7	10014	2.0	296.56	99.0	108.0	120.0	120.0			
	5.7	8261	2.4	244.66	100.0	104.0	120.0	120.0			
	2.4	18014	0.8	1147.52	85.0	120.0	120.0	120.0	PA/PF 103/52 132S2B / 132S2C	843	216
	3.0	14819	1.0	944.01	85.0	120.0	120.0	120.0			
	3.4	12838	1.2	817.82	85.0	120.0	120.0	120.0			
	4.4	10087	1.5	642.57	85.0	120.0	120.0	120.0			
	6.0	7350	2.1	468.19	94.0	116.0	120.0	120.0			
	8.2	5355	2.8	341.11	98.0	111.0	120.0	120.0			
	4.3	11565	2.1	207.36	100.0	96.0	120.0	120.0	PA/PF 103 132M6B	769	209
	5.6	8705	1.5	160.87	66.0	66.0	93.0	80.0	PA/PF 93/52 132M6B	624	216
	7.1	6891	1.9	127.35	66.0	66.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
5.50	8.7 11.0	5432 4300	2.2 2.8	160.87 127.35	66.0 66.0	66.0 66.0	93.0 -	80.0 -	PA/PF 93/52 132S4A / 132S4B	624	216
	3.1 3.7 4.9	15583 13024 9849	0.8 1.0 1.3	287.97 240.68 182.00	61.0 63.0 54.0	69.0 67.0 80.0	89.0 91.0 93.0	80.0 80.0 80.0	PA/PF 93/42 132M6B	595	216
	3.1 4.2 4.9 5.8 7.7	15428 11240 9724 8127 6145	0.8 1.1 1.3 1.5 2.0	456.91 332.89 287.97 240.68 182.00	58.0 58.0 61.0 63.0 54.0	69.0 69.0 69.0 67.0 80.0	88.0 88.0 89.0 91.0 93.0	80.0 80.0 80.0 80.0 80.0	PA/PF 93/42 132S4A / 132S4B	595	216
	3.7 5.1 6.1 8.4 9.7 11.6	11880 8601 7173 5226 4521 3778	0.8 1.1 1.3 1.8 2.1 2.5	756.80 547.88 456.91 332.89 287.97 240.68	58.0 58.0 58.0 58.0 61.0 63.0	69.0 69.0 69.0 69.0 69.0 67.0	84.0 85.0 88.0 88.0 89.0 91.0	80.0 80.0 80.0 80.0 80.0 80.0	PA/PF 93/42 132S2B / 132S2C	595	216
	4.8 8.2 9.6	10485 6093 5211	1.4 2.0 2.8	187.99 109.25 93.43	64.0 66.0 66.0	65.0 58.0 54.0	92.0 93.0 93.0	80.0 80.0 80.0	PA/PF 93 132M6B	550	205
	7.4 12.8	6630 3853	2.1 3.0	187.99 109.25	64.0 66.0	65.0 58.0	92.0 93.0	80.0 80.0	PA/PF 93 132S4A / 132S4B	550	205
	4.5 6.0 7.1	10882 8063 6870	0.8 1.0 1.2	201.09 149.01 126.95	33.0 33.0 33.0	39.0 39.0 39.0	61.0 62.0 63.0	65.0 65.0 65.0	PA/PF 83/42 132M6B	416	216
	5.1 5.9 7.0 9.4 11.0	9319 7970 6790 5031 4287	0.9 1.0 1.2 1.6 1.9	276.00 236.03 201.09 149.01 126.95	32.0 36.0 33.0 33.0 33.0	34.0 34.0 39.0 39.0 39.0	54.0 57.0 61.0 62.0 63.0	65.0 65.0 65.0 65.0 65.0	PA/PF 83/42 132S4A / 132S4B	416	216
	6.4 7.5 10.1 11.9 13.9 18.8	6875 5879 4333 3705 3157 2339	0.9 1.0 1.4 1.6 1.9 2.6	437.93 374.50 276.00 236.03 201.09 149.01	32.0 32.0 32.0 36.0 33.0 33.0	34.0 34.0 34.0 34.0 39.0 39.0	56.0 55.0 54.0 57.0 61.0 62.0	65.0 65.0 65.0 65.0 65.0 65.0	PA/PF 83/42 132S2B / 132S2C	416	216
	4.2 5.5 6.6 8.7 11.2 12.8 14.6	12075 9185 7623 5799 4497 3915 3446	0.8 1.0 1.0 1.7 2.1 2.4 2.7	216.49 164.68 136.67 103.97 80.63 70.19 61.79	38.0 41.0 43.0 44.0 42.0 42.0 42.0	35.0 34.0 34.0 33.0 39.0 39.0 39.0	58.0 60.0 61.0 62.0 63.0 63.0 63.0	65.0 65.0 65.0 65.0 65.0 65.0 65.0	PA/PF 83 132M6B	371	201
	6.5 8.5 10.2 13.5	7635 5808 4820 3667	1.2 1.5 1.5 2.5	216.49 164.68 136.67 103.97	38.0 41.0 43.0 44.0	35.0 34.0 34.0 33.0	58.0 60.0 61.0 62.0	65.0 65.0 65.0 65.0	PA/PF 83 132S4A / 132S4B	371	201
	12.9 17.0 20.5	3649 2776 2304	1.9 2.4 2.4	216.49 164.68 136.67	38.0 41.0 43.0	35.0 34.0 34.0	58.0 60.0 61.0	65.0 65.0 65.0	PA/PF 83 132S2B / 132S2C	371	201
	18.5 22.3	2761 2289	2.0 1.9	48.76 40.43	44.0 44.0	25.0 25.0	63.0 -	65.0 -	PA/PF 82 132M6B	363	200
	28.7 34.6	1756 1456	3.0 2.8	48.76 40.43	44.0 44.0	25.0 25.0	63.0 -	65.0 -	PA/PF 82 132S4A / 132S4B	363	200
	7.2	6746	0.8	124.66	19.0	17.0	-	-	PA/PF 73/32 132M6B	294	214
	8.2 9.9 11.2	5777 4766 4209	0.9 1.0 1.2	171.10 141.16 124.66	18.0 19.0 19.0	14.0 17.0 17.0	33.0 - -	50.0 - -	PA/PF 73/32 132S4A / 132S4B	294	214
	12.4 16.4 19.8 22.5	3554 2686 2216 1957	1.1 1.4 1.7 1.9	226.38 171.10 141.16 124.66	18.0 18.0 19.0 19.0	14.0 14.0 17.0 17.0	34.0 33.0 - -	50.0 50.0 - -	PA/PF 73/32 132S2B / 132S2C	294	214

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
5.50	7.2	6947	0.8	124.55	24.0	16.0	37.0	50.0	PA/PF 73 132M6B	264	197
	7.2	6937	0.8	124.38	24.0	16.0	37.0	50.0			
	9.9	5094	1.1	91.33	26.0	16.0	38.0	49.0			
	12.0	4172	1.3	74.80	27.0	16.0	39.0	48.0			
	14.9	3370	1.8	60.42	27.0	16.0	39.0	46.0			
	17.2	2916	2.0	52.28	28.0	16.0	40.0	44.0			
	19.7	2547	2.2	45.67	21.0	18.0	40.0	44.0			
	23.9	2102	2.5	37.68	21.0	18.0	40.0	42.0			
	27.1	1856	2.8	33.27	21.0	18.0	40.0	41.0			
	8.4	5857	1.0	166.07	19.0	14.0	34.0	50.0	PA/PF 73 132S4A / 132S4B	264	197
	11.2	4392	1.3	124.55	24.0	16.0	37.0	50.0			
	11.3	4386	1.1	124.38	24.0	16.0	37.0	50.0			
	13.9	3543	1.1	100.47	25.0	16.0	38.0	50.0			
	15.3	3221	1.7	91.33	26.0	16.0	38.0	49.0			
	18.7	2638	2.0	74.80	27.0	16.0	39.0	48.0			
	23.2	2131	2.7	60.42	27.0	16.0	39.0	46.0			
	26.8	1844	3.0	52.28	28.0	16.0	40.0	44.0			
	13.6	3466	1.2	205.59	19.0	14.0	35.0	50.0	PA/PF 73 132S2B / 132S2C	264	197
	16.9	2800	1.5	166.07	19.0	14.0	34.0	50.0			
	22.5	2100	2.0	124.55	24.0	16.0	37.0	50.0			
	22.5	2097	1.8	124.38	24.0	16.0	37.0	50.0			
	27.9	1694	1.8	100.47	25.0	16.0	38.0	50.0			
	30.7	1540	2.6	91.33	26.0	16.0	38.0	49.0	PA/PF 72 132M6B	254	196
	20.6	2474	1.7	43.70	27.0	14.0	39.0	41.0			
	27.2	1873	1.8	33.08	27.0	14.0	40.0	37.0	PA/PF 72 132S4A / 132S4B	254	196
	32.0	1574	2.6	43.70	27.0	14.0	39.0	41.0			
	42.3	1191	2.7	33.08	27.0	14.0	40.0	37.0	PA/PF 63 132M6B	183	193
	11.6	4322	0.9	77.49	17.0	16.0	26.0	39.0			
	14.3	3512	1.1	62.96	18.0	16.0	27.0	38.0			
	16.7	3003	1.3	53.84	19.0	16.0	27.0	37.0			
	17.7	2835	1.4	50.83	19.0	16.0	27.0	37.0			
	20.7	2424	1.6	43.47	20.0	16.0	28.0	36.0			
	24.9	2016	1.9	36.14	20.0	16.0	28.0	34.0			
	29.1	1723	2.2	30.90	9.0	18.0	28.0	33.0			
	34.2	1469	2.3	26.33	9.0	18.0	28.0	31.0			
	41.0	1225	2.7	21.97	9.0	18.0	28.0	29.0			
	43.2	1161	2.9	20.81	9.0	18.0	28.0	29.0			
	10.5	4683	0.8	132.78	9.0	15.0	21.0	41.0	PA/PF 63 132S4A / 132S4B	183	193
	13.1	3781	1.0	107.21	14.0	16.0	24.0	40.0			
	18.1	2733	1.4	77.49	17.0	16.0	26.0	39.0			
	22.2	2220	1.7	62.96	18.0	16.0	27.0	38.0			
	26.0	1899	1.9	53.84	19.0	16.0	27.0	37.0			
	27.5	1793	2.1	50.83	19.0	16.0	27.0	37.0			
	32.2	1533	2.4	43.47	20.0	16.0	28.0	36.0			
	38.7	1275	2.9	36.14	20.0	16.0	28.0	34.0			
	15.5	3049	0.9	180.86	9.0	15.0	21.0	45.0	PA/PF 63 132S2B / 132S2C	183	193
	19.2	2462	1.1	146.02	9.0	15.0	24.0	45.0			
	21.1	2238	1.3	132.78	9.0	15.0	21.0	41.0			
	26.1	1807	1.6	107.21	14.0	16.0	24.0	40.0			
	36.1	1306	2.2	77.49	17.0	16.0	26.0	39.0			
	44.5	1061	2.6	62.96	18.0	16.0	27.0	38.0			
	18.5	2760	1.0	48.75	19.0	16.0	28.0	36.0	PA/PF 62 132M6B	185	192
	24.3	2100	1.5	37.08	20.0	16.0	28.0	34.0			
	28.7	1756	1.4	48.75	19.0	16.0	28.0	36.0	PA/PF 62 132S4A / 132S4B	185	192
	37.8	1336	2.3	37.08	20.0	16.0	28.0	34.0			
	57.4	852	2.2	48.75	19.0	16.0	28.0	36.0	PA/PF 62 132S2B / 132S2C	185	192

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
5.50	22.3	2284	0.9	40.34	13.0	24.0	19.0	39.0	PA/PF 52 132M6B	128	188
	23.4	2178	0.8	38.46	13.0	24.0	19.0	38.0			
	24.5	2079	1.0	36.71	13.0	24.0	19.0	38.0			
	28.0	1819	0.8	32.12	13.0	24.0	19.0	36.0			
	31.2	1634	1.3	28.85	14.0	24.0	19.0	36.0			
	34.1	1497	1.3	26.43	14.0	24.0	19.0	35.0			
	37.4	1364	1.3	24.09	14.0	24.0	20.0	34.0			
	37.7	1353	1.5	23.89	14.0	24.0	20.0	34.0			
	41.6	1226	1.6	21.65	14.0	24.0	20.0	33.0			
	46.0	1108	1.8	19.57	13.0	24.0	20.0	33.0			
	50.5	1008	2.0	17.81	13.0	24.0	20.0	32.0	PA/PF 52 132S4A / 132S4B	128	188
	64.3	792	2.5	13.99	13.0	24.0	20.0	29.0			
	66.9	762	2.6	13.46	13.0	24.0	20.0	29.0			
	23.5	2143	0.9	59.50	11.0	24.0	18.0	40.0			
	26.0	1937	1.0	53.79	12.0	24.0	18.0	40.0			
	28.6	1763	1.1	48.95	12.0	24.0	18.0	40.0			
	34.7	1453	1.3	40.34	13.0	24.0	19.0	39.0			
	36.4	1385	1.2	38.46	13.0	24.0	19.0	38.0			
	38.1	1322	1.5	36.71	13.0	24.0	19.0	38.0			
	43.6	1157	1.2	32.12	13.0	24.0	19.0	36.0			
	48.5	1039	1.9	28.85	14.0	24.0	19.0	36.0	PA/PF 52 132S2B / 132S2C	128	188
	53.0	952	2.0	26.43	14.0	24.0	19.0	35.0			
	58.1	868	1.9	24.09	14.0	24.0	20.0	34.0			
	58.6	860	2.2	23.89	14.0	24.0	20.0	34.0			
	64.7	780	2.4	21.65	14.0	24.0	20.0	33.0			
	71.5	705	2.7	19.57	13.0	24.0	20.0	33.0			
	78.6	641	3.0	17.81	13.0	24.0	20.0	32.0			
	47.1	1039	1.4	59.50	11.0	24.0	18.0	40.0			
	52.1	940	1.5	53.79	12.0	24.0	18.0	40.0			
	57.2	855	1.7	48.95	12.0	24.0	18.0	40.0	PA/PF 51 132M6B	89	166
	69.4	705	2.1	40.34	13.0	24.0	19.0	39.0			
	72.8	672	1.9	38.46	13.0	24.0	19.0	38.0			
	76.3	641	2.3	36.71	13.0	24.0	19.0	38.0	PA/PF 51 132S4A / 132S4B	89	166
	87.2	561	1.9	32.12	13.0	24.0	19.0	36.0			
	132.0	392	1.1	6.82	-	-	-	-			
	222.8	232	1.9	4.04	-	-	-	-			
	271.9	190	2.7	3.31	-	-	-	-	PA/PF 51 132S2B / 132S2C	89	166
	314.7	164	2.9	2.86	-	-	-	-			
	154.0	334	1.0	9.09	-	6.0	-	-			
	205.3	251	1.6	6.82	-	6.0	-	-	PA/PF 42 132M6B	99	184
	346.5	149	2.8	4.04	-	6.0	-	-			
	308.0	165	1.5	9.09	-	-	-	-			
	410.6	123	2.5	6.82	-	-	-	-			
	34.8	1465	0.9	25.88	1.0	8.0	11.0	6.0			
	41.2	1237	0.9	21.85	1.0	9.0	11.0	7.0			
	41.9	1217	1.0	21.50	1.0	8.0	11.0	6.0			
	50.2	1015	1.0	17.93	1.0	8.0	11.0	6.0			
	50.9	1002	1.2	17.69	2.0	8.0	11.0	7.0			
	59.6	855	1.5	15.10	3.0	8.0	11.0	7.0	PA/PF 42 132S4A / 132S4B	99	184
	62.6	814	1.5	14.38	4.0	8.0	11.0	7.0			
	73.3	695	1.8	12.27	5.0	8.0	11.0	7.0			
	88.3	577	2.1	10.19	2.0	11.0	11.0	6.0			
	105.9	481	2.3	8.50	2.0	11.0	12.0	6.0			
	123.8	412	2.7	7.27	2.0	11.0	11.0	6.0			
	167.9	304	2.8	5.36	2.0	11.0	11.0	5.0			
	33.9	1488	0.8	41.30	1.0	8.0	9.0	5.0			
	39.7	1270	1.0	35.26	1.0	8.0	10.0	6.0			
	47.8	1055	1.0	29.28	1.0	8.0	10.0	6.0			
	54.1	932	1.3	25.88	1.0	8.0	11.0	6.0	PA/PF 42 132S2B / 132S2C	99	184
	57.3	880	1.0	24.42	1.0	8.0	11.0	6.0			
	64.1	787	1.4	21.85	1.0	9.0	11.0	7.0			
	65.1	774	1.5	21.50	1.0	8.0	11.0	6.0			
	78.1	646	1.5	17.93	1.0	8.0	11.0	6.0			
	79.1	637	1.9	17.69	2.0	8.0	11.0	7.0			
	92.7	544	2.3	15.10	3.0	8.0	11.0	7.0			
	97.4	518	2.2	14.38	4.0	8.0	11.0	7.0			
	114.1	442	2.7	12.27	5.0	8.0	11.0	7.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
5.50	54.9	891	0.9	50.99	1.0	8.0	9.0	7.0	PA/PF 42 132S2B / 132S2C	99	184
	67.8	721	1.2	41.30	1.0	8.0	9.0	5.0			
	79.4	616	1.5	35.26	1.0	8.0	10.0	6.0			
	95.6	511	1.5	29.28	1.0	8.0	10.0	6.0			
	108.2	452	2.1	25.88	1.0	8.0	11.0	6.0			
	113.5	431	1.6	24.68	1.0	8.0	11.0	6.0			
	114.7	427	1.5	24.42	1.0	8.0	11.0	6.0			
	128.1	382	2.2	21.85	1.0	9.0	11.0	7.0			
	130.2	376	2.4	21.50	1.0	8.0	11.0	6.0			
	156.2	313	2.4	17.93	1.0	8.0	11.0	6.0			
	158.3	309	2.9	17.69	2.0	8.0	11.0	7.0			
	292.2	177	1.7	3.08	-	-	-	-	PA/PF 41 132M6B	80	164
	360.0	144	2.0	2.50	-	-	-	-			
	420.6	123	2.1	2.14	-	-	-	-			
	494.5	105	2.2	1.82	-	-	-	-			
	552.1	94	2.2	1.63	-	-	-	-			
	600.0	86	2.3	1.50	-	-	-	-			
	638.3	81	2.3	1.41	-	-	-	-			
	265.7	194	1.0	5.27	-	4.0	-	-	PA/PF 41 132S4A / 132S4B	80	164
	454.5	113	2.6	3.08	-	4.0	-	-			
	560.0	92	2.9	2.50	-	5.0	-	-			
	390.0	130	1.1	7.18	-	-	-	-	PA/PF 41 132S2B / 132S2C	80	164
	531.3	95	1.6	5.27	-	-	-	-			
	62.0	822	0.9	14.52	2.0	5.0	9.0	7.0	PA/PF 32 132M6B	84	180
	76.9	662	1.1	11.70	2.0	5.0	9.0	7.0			
	91.9	554	1.2	9.79	2.0	5.0	9.0	7.0			
	114.1	447	1.5	7.89	3.0	5.0	-	-			
	133.9	381	1.7	6.72	3.0	5.0	9.0	7.0			
	158.2	322	2.0	5.69	3.0	5.0	9.0	6.0			
	163.9	311	1.5	5.49	3.0	5.0	9.0	6.0			
	170.1	300	2.2	5.29	3.0	5.0	9.0	6.0			
	203.6	250	1.9	4.42	3.0	5.0	9.0	6.0			
	240.0	212	2.3	3.75	1.0	7.0	10.0	6.0			
	303.0	168	2.7	2.97	1.0	7.0	9.0	6.0			
	86.3	585	1.1	16.23	2.0	5.0	9.0	7.0	PA/PF 32 132S4A / 132S4B	84	180
	96.4	523	1.3	14.52	2.0	5.0	9.0	7.0			
	119.7	421	1.7	11.70	2.0	5.0	9.0	7.0			
	143.0	353	1.8	9.79	2.0	5.0	9.0	7.0			
	177.4	284	2.3	7.89	3.0	5.0	9.0	7.0			
	208.3	242	2.5	6.72	3.0	5.0	9.0	7.0			
	246.0	205	2.9	5.69	3.0	5.0	9.0	6.0			
	255.0	198	2.3	5.49	3.0	5.0	9.0	6.0			
	316.7	159	2.9	4.42	3.0	5.0	9.0	6.0			
	172.5	284	1.7	16.23	2.0	5.0	9.0	7.0	PA/PF 32 132S2B / 132S2C	84	180
	192.8	254	2.0	14.52	2.0	5.0	9.0	7.0			
	239.3	204	2.6	11.70	2.0	5.0	9.0	7.0			
	286.0	171	2.9	9.79	2.0	5.0	9.0	7.0			
	432.7	120	1.4	2.08	-	-	-	-	PA/PF 31 132M6B	71	162
	511.4	101	1.6	1.76	-	-	-	-			
	647.5	80	1.9	1.39	-	-	-	-			
	542.6	95	2.0	2.58	-	4.0	-	-	PA/PF 31 132S4A / 132S4B	71	162
	673.1	76	2.2	2.08	-	3.0	-	-			
	795.5	65	2.3	1.76	-	3.0	-	-			
	1007.2	51	2.8	1.39	-	3.0	-	-			
	1085.3	47	3.0	2.58	-	-	-	-	PA/PF 31 132S2B / 132S2C	71	162
7.50	2.6	25171	0.8	341.11	100.0	94.0	120.0	120.0	PA/PF 103/52 160M6B / 160M6C	879	216
	3.0	21883	1.0	296.56	101.0	91.0	120.0	120.0			
	3.7	18054	1.2	244.66	85.0	120.0	120.0	120.0			
	4.9	13634	1.5	184.77	85.0	120.0	120.0	120.0			
	5.8	11422	1.8	154.79	85.0	120.0	120.0	120.0			
	7.3	9058	2.3	122.75	85.0	120.0	120.0	120.0			
	8.5	7784	2.7	105.49	85.0	120.0	120.0	120.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
7.50	3.0	21558	0.9	468.19	86.0	106.0	120.0	120.0	PA/PF 103/52 132M4C / 132M4D	843	218
	4.1	15706	1.3	341.11	94.0	103.0	120.0	120.0			
	4.7	13655	1.5	296.56	96.0	101.0	120.0	120.0			
	5.7	11265	1.8	244.66	98.0	99.0	120.0	120.0			
	7.6	8508	2.4	184.77	100.0	94.0	120.0	120.0			
	9.0	7127	2.8	154.79	101.0	91.0	120.0	120.0			
	3.0	20208	0.8	944.01	86.0	106.0	120.0	120.0	PA/PF 103/52 132S2C / 132S2D	843	218
	3.4	17507	0.9	817.82	86.0	106.0	120.0	120.0			
	4.4	13755	1.1	642.57	86.0	106.0	120.0	120.0			
	6.0	10022	1.5	468.19	86.0	106.0	120.0	120.0			
	8.2	7302	2.1	341.11	94.0	103.0	120.0	120.0			
	9.4	6348	2.4	296.56	96.0	101.0	120.0	120.0	PA/PF 103 160M6B / 160M6C	805	209
	11.4	5237	2.9	244.66	98.0	99.0	120.0	120.0			
	4.3	15771	1.5	207.36	100.0	96.0	120.0	120.0	PA/PF 103 132M4C / 132M4D	769	209
	6.6	10383	2.3	136.52	100.0	96.0	120.0	120.0			
	6.8	9972	2.3	207.36	100.0	96.0	120.0	120.0	PA/PF 93/52 160M6B / 160M6C	660	216
	5.6	11871	1.1	160.87	66.0	66.0	93.0	80.0			
	7.1	9397	1.4	127.35	66.0	66.0	90.0	80.0			
	8.4	7937	1.6	107.56	66.0	66.0	91.0	80.0	PA/PF 93/52 132M4C / 132M4D	624	216
	8.7	7407	1.6	160.87	66.0	66.0	93.0	80.0			
	11.0	5864	2.1	127.35	66.0	66.0	90.0	80.0	PA/PF 93/52 132S2C / 132S2D	624	216
	17.4	3444	2.7	160.87	66.0	66.0	93.0	80.0			
	4.9	13430	1.0	182.00	58.0	69.0	93.0	80.0	PA/PF 93/42 160M6B / 160M6C	631	216
	4.2	15328	0.8	332.89	55.0	62.0	88.0	80.0			
	4.9	13259	0.9	287.97	55.0	62.0	85.0	80.0	PA/PF 93/42 132M4C / 132M4D	595	216
	5.8	11082	1.1	240.68	59.0	61.0	88.0	80.0			
	7.7	8380	1.5	182.00	58.0	69.0	93.0	80.0			
	5.1	11728	0.8	547.88	55.0	62.0	85.0	80.0	PA/PF 93/42 132S2C / 132S2D	595	216
	6.1	9781	0.9	456.91	55.0	62.0	88.0	80.0			
	8.4	7126	1.3	332.89	55.0	62.0	88.0	80.0			
	9.7	6164	1.5	287.97	55.0	62.0	85.0	80.0			
	11.6	5152	1.8	240.68	59.0	61.0	88.0	80.0			
	15.4	3896	2.4	182.00	58.0	69.0	93.0	80.0			
	4.8	14298	1.0	187.99	62.0	60.0	90.0	80.0	PA/PF 93 160M6B / 160M6C	586	205
	7.3	9353	1.6	122.97	65.0	56.0	91.0	80.0			
	8.2	8309	1.5	109.25	65.0	56.0	92.0	80.0			
	9.6	7106	2.1	93.43	64.0	65.0	93.0	80.0			
	12.4	5508	2.6	72.42	64.0	65.0	93.0	80.0			
	14.6	4690	2.8	61.66	64.0	65.0	-	-	PA/PF 93 132M4C / 132M4D	550	205
	7.4	9041	1.5	187.99	62.0	60.0	90.0	80.0			
	12.8	5254	2.2	109.25	65.0	56.0	92.0	80.0	PA/PF 93 132S2C / 132S2D	550	205
	14.9	4321	2.5	187.99	62.0	60.0	90.0	80.0			
	6.0	10996	0.8	149.01	32.0	34.0	62.0	65.0	PA/PF 83/42 160M6B / 160M6C	452	216
	7.1	9368	0.9	126.95	32.0	34.0	-	-			
	7.0	9259	0.9	201.09	32.0	29.0	54.0	65.0	PA/PF 83/42 132M4C / 132M4D	416	216
	9.4	6861	1.2	149.01	32.0	34.0	62.0	65.0			
	11.0	5845	1.4	126.95	32.0	34.0	-	-			
	7.5	8017	0.8	374.50	32.0	29.0	55.0	65.0	PA/PF 83/42 132S2C / 132S2D	416	216
	10.1	5908	1.0	276.00	32.0	29.0	54.0	65.0			
	11.9	5053	1.2	236.03	32.0	29.0	57.0	65.0			
	13.9	4305	1.4	201.09	32.0	29.0	54.0	65.0			
	18.8	3190	1.9	149.01	32.0	34.0	62.0	65.0			
	22.1	2718	2.2	126.95	32.0	34.0	-	-			
	8.7	7907	1.2	103.97	42.0	30.0	61.0	65.0	PA/PF 83 160M6B / 160M6C	407	201
	11.2	6132	1.5	80.63	44.0	30.0	62.0	65.0			
	12.8	5338	1.8	70.19	44.0	29.0	62.0	65.0			
	14.6	4699	2.0	61.79	44.0	29.0	62.0	65.0			
	17.5	3918	2.4	51.52	38.0	35.0	62.0	65.0			
	20.3	3372	2.8	44.34	38.0	35.0	62.0	62.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
7.50	6.5	10411	0.9	216.49	37.0	30.0	58.0	65.0	PA/PF 83 132M4C / 132M4D	371	201
	8.5	7920	1.1	164.68	37.0	30.0	58.0	65.0			
	10.2	6573	1.1	136.67	42.0	30.0	61.0	65.0			
	13.5	5000	1.8	103.97	42.0	30.0	61.0	65.0			
	17.4	3878	2.3	80.63	44.0	30.0	62.0	65.0			
	19.9	3376	2.7	70.19	44.0	29.0	62.0	65.0			
	22.7	2972	3.0	61.79	44.0	29.0	62.0	65.0	PA/PF 83 132S2C / 132S2D	371	201
	12.9	4977	1.4	216.49	37.0	30.0	58.0	65.0			
	17.0	3786	1.8	164.68	37.0	30.0	58.0	65.0			
	20.5	3142	1.8	136.67	42.0	30.0	61.0	65.0			
	26.9	2390	2.9	103.97	42.0	30.0	61.0	65.0	PA/PF 82 160M6B / 160M6C	399	200
	18.5	3765	1.5	48.76	44.0	25.0	63.0	65.0			
	22.3	3122	1.4	40.43	44.0	25.0	63.0	61.0			
	28.0	2479	2.8	32.10	44.0	25.0	-	-	PA/PF 82 132M4C / 132M4D	363	200
	28.7	2395	2.2	48.76	44.0	25.0	63.0	65.0			
	34.6	1986	2.1	40.43	44.0	25.0	63.0	61.0	PA/PF 73/32 132M4C / 132M4D	294	214
	9.9	6500	0.8	141.16	18.0	14.0	-	-			
	11.2	5740	0.9	124.66	18.0	14.0	-	-	PA/PF 73/32 132S2C / 132S2D	294	214
	12.4	4846	0.8	226.38	18.0	14.0	34.0	50.0			
	16.4	3663	1.0	171.10	18.0	14.0	33.0	50.0			
	19.8	3022	1.3	141.16	18.0	14.0	-	-			
	22.5	2669	1.4	124.66	18.0	14.0	-	-	PA/PF 73 160M6B / 160M6C	300	197
	12.0	5689	1.0	74.80	25.0	14.0	38.0	45.0			
	14.9	4595	1.3	60.42	26.0	14.0	39.0	43.0			
	17.2	3976	1.5	52.28	27.0	14.0	39.0	42.0			
	19.7	3473	1.6	45.67	27.0	14.0	39.0	41.0			
	23.9	2866	1.8	37.68	28.0	14.0	40.0	40.0			
	27.1	2530	2.1	33.27	19.0	14.0	40.0	41.0			
	31.7	2156	2.4	28.35	19.0	14.0	40.0	39.0			
	38.5	1779	3.0	23.39	19.0	14.0	40.0	34.0	PA/PF 73 132M4C / 132M4D	264	197
	11.2	5990	0.9	124.55	19.0	12.0	34.0	46.0			
	11.3	5982	0.8	124.38	22.0	13.0	37.0	50.0			
	13.9	4832	0.8	100.47	22.0	13.0	36.0	46.0			
	15.3	4392	1.2	91.33	24.0	13.0	37.0	45.0			
	18.7	3597	1.5	74.80	25.0	14.0	38.0	45.0			
	23.2	2906	1.9	60.42	26.0	14.0	39.0	43.0			
	26.8	2514	2.2	52.28	27.0	14.0	39.0	42.0			
	30.7	2196	2.4	45.67	27.0	14.0	39.0	41.0			
	37.2	1812	2.8	37.68	28.0	14.0	40.0	40.0	PA/PF 73 132S2C / 132S2D	264	197
	13.6	4726	0.9	205.59	19.0	12.0	35.0	50.0			
	16.9	3818	1.1	166.07	19.0	12.0	34.0	50.0			
	22.5	2863	1.5	124.55	19.0	12.0	34.0	46.0			
	22.5	2859	1.3	124.38	22.0	13.0	37.0	50.0			
	27.9	2310	1.3	100.47	22.0	13.0	36.0	46.0	PA/PF 72 160M6B / 160M6C	290	196
	30.7	2099	1.9	91.33	24.0	13.0	37.0	45.0			
	37.4	1719	2.4	74.80	25.0	14.0	38.0	45.0			
	20.6	3374	1.3	43.70	27.0	14.0	39.0	41.0			
	27.2	2554	1.3	33.08	27.0	14.0	40.0	37.0			
	31.5	2207	1.9	28.58	27.0	14.0	40.0	36.0	PA/PF 72 132M4C / 132M4D	254	196
	41.4	1677	2.5	21.72	27.0	14.0	-	-			
	41.6	1671	2.8	21.64	27.0	14.0	-	-	PA/PF 72 132S2C / 132S2D	254	196
	32.0	2146	1.9	43.70	27.0	14.0	39.0	41.0			
	42.3	1625	2.0	33.08	27.0	14.0	40.0	37.0	PA/PF 63 160M6B / 160M6C	219	193
	64.1	1041	3.0	43.70	27.0	14.0	39.0	41.0			
	14.3	4788	0.8	62.96	17.0	14.0	26.0	35.0			
	16.7	4095	0.9	53.84	18.0	14.0	26.0	35.0			
	17.7	3866	1.0	50.83	18.0	14.0	27.0	34.0			
	20.7	3306	1.2	43.47	19.0	14.0	27.0	34.0			
	24.9	2749	1.4	36.14	19.0	14.0	28.0	33.0			
	29.1	2350	1.6	30.90	20.0	14.0	28.0	32.0			
	34.2	2003	1.7	26.33	20.0	14.0	28.0	31.0			
	41.0	1671	2.0	21.97	20.0	13.0	28.0	29.0			
	43.2	1583	2.1	20.81	9.0	15.0	28.0	29.0			
	51.8	1320	2.5	17.36	9.0	15.0	28.0	27.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
7.50	18.1	3727	1.0	77.49	14.0	14.0	24.0	36.0	PA/PF 63 132M4C / 132M4D	183	193
	22.2	3028	1.2	62.96	17.0	14.0	26.0	35.0			
	26.0	2589	1.4	53.84	18.0	14.0	26.0	35.0			
	27.5	2444	1.5	50.83	18.0	14.0	27.0	34.0			
	32.2	2091	1.8	43.47	19.0	14.0	27.0	34.0			
	38.7	1738	2.1	36.14	19.0	14.0	28.0	33.0			
	45.3	1486	2.4	30.90	20.0	14.0	28.0	32.0			
	53.2	1266	2.5	26.33	20.0	14.0	28.0	31.0			
	63.7	1057	3.0	21.97	20.0	13.0	28.0	29.0			
	19.2	3357	0.8	146.02	14.0	14.0	24.0	45.0	PA/PF 63 132S2C / 132S2D	183	193
	21.1	3052	0.9	132.78	14.0	14.0	21.0	41.0			
	26.1	2464	1.1	107.21	14.0	14.0	24.0	40.0			
	36.1	1781	1.6	77.49	14.0	14.0	24.0	36.0			
	44.5	1447	1.9	62.96	17.0	14.0	26.0	35.0			
	52.0	1238	2.3	53.84	18.0	14.0	26.0	35.0			
	55.1	1168	2.4	50.83	18.0	14.0	27.0	34.0			
	64.4	999	2.8	43.47	19.0	14.0	27.0	34.0			
	24.3	2863	1.1	37.08	19.0	14.0	28.0	33.0	PA/PF 62 160M6B / 160M6C	221	192
	49.6	1402	2.3	18.16	19.0	16.0	28.0	28.0			
	57.0	1220	2.6	15.80	19.0	16.0	28.0	27.0			
	64.7	1074	3.0	13.91	19.0	16.0	28.0	26.0			
	28.7	2394	1.0	48.75	19.0	14.0	28.0	36.0	PA/PF 62 132M4C / 132M4D	185	192
	37.8	1821	1.7	37.08	19.0	14.0	28.0	33.0			
	57.4	1161	1.6	48.75	19.0	14.0	28.0	36.0	PA/PF 62 132S2C / 132S2D	185	192
	75.5	883	2.6	37.08	19.0	14.0	28.0	33.0			
	34.1	2041	1.0	26.43	13.0	24.0	19.0	33.0	PA/PF 52 160M6B / 160M6C	164	188
	37.7	1845	1.1	23.89	13.0	24.0	19.0	32.0			
	41.6	1672	1.2	21.65	13.0	24.0	19.0	32.0			
	46.0	1511	1.3	19.57	13.0	24.0	19.0	31.0			
	50.5	1375	1.5	17.81	13.0	24.0	19.0	30.0			
	64.3	1080	1.9	13.99	12.0	24.0	20.0	29.0			
	66.9	1039	1.9	13.46	12.0	23.0	20.0	28.0			
	85.1	817	2.3	10.58	11.0	24.0	20.0	27.0			
	101.9	682	2.6	8.83	11.0	24.0	20.0	26.0			
	123.5	563	2.9	7.29	11.0	24.0	-	-			
	160.7	432	2.8	5.60	11.0	24.0	-	-			
	28.6	2404	0.8	48.95	12.0	24.0	18.0	40.0	PA/PF 52 132M4C / 132M4D	128	188
	34.7	1981	1.0	40.34	11.0	24.0	18.0	37.0			
	36.4	1889	0.9	38.46	12.0	24.0	18.0	36.0			
	38.1	1803	1.1	36.71	12.0	24.0	18.0	36.0			
	43.6	1578	0.9	32.12	13.0	24.0	19.0	35.0			
	48.5	1417	1.4	28.85	13.0	24.0	19.0	34.0			
	53.0	1298	1.5	26.43	13.0	24.0	19.0	34.0			
	58.1	1183	1.4	24.09	13.0	24.0	19.0	33.0			
	58.6	1173	1.6	23.89	13.0	24.0	19.0	33.0			
	64.7	1063	1.8	21.65	13.0	24.0	19.0	32.0			
	71.5	961	2.0	19.57	13.0	24.0	19.0	32.0			
	78.6	875	2.2	17.81	13.0	24.0	20.0	31.0			
	100.1	687	2.8	13.99	12.0	24.0	20.0	29.0			
	104.0	661	2.8	13.46	12.0	23.0	20.0	29.0			
	47.1	1417	1.0	59.50	12.0	24.0	18.0	40.0	PA/PF 52 132S2C / 132S2D	128	188
	52.1	1281	1.1	53.79	12.0	24.0	18.0	40.0			
	57.2	1166	1.3	48.95	12.0	24.0	18.0	40.0			
	69.4	961	1.5	40.34	11.0	24.0	18.0	37.0			
	72.8	916	1.4	38.46	12.0	24.0	18.0	36.0			
	76.3	874	1.7	36.71	12.0	24.0	18.0	36.0			
	87.2	765	1.4	32.12	13.0	24.0	19.0	35.0			
	97.1	687	2.2	28.85	13.0	24.0	19.0	34.0			
	105.9	630	2.3	26.43	13.0	24.0	19.0	34.0			
	116.2	574	2.2	24.09	13.0	24.0	19.0	33.0			
	117.2	569	2.6	23.89	13.0	24.0	19.0	33.0			
	129.3	516	2.8	21.65	13.0	24.0	19.0	32.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
7.50	222.8	317	1.4	4.04	-	-	-	-	PA/PF 51 160M6B / 160M6C	125	166
	271.9	259	2.0	3.31	-	-	-	-			
	314.7	224	2.1	2.86	-	-	-	-			
	360.0	196	2.3	2.50	-	-	-	-			
	436.9	161	2.5	2.06	-	-	-	-			
	494.5	143	2.5	1.82	-	-	-	-			
	548.8	129	2.7	1.64	-	-	-	-			
	584.4	121	2.7	1.54	-	-	-	-			
	625.0	113	2.8	1.44	-	-	-	-	PA/PF 51 132M4C / 132M4D	89	166
	725.8	97	3.0	1.24	-	-	-	-			
	205.3	342	1.2	6.82	-	6.0	-	-	PA/PF 51 132M2C / 132M2D	89	166
	346.5	203	2.0	4.04	-	6.0	-	-			
	423.0	166	3.0	3.31	-	6.0	-	-			
	308.0	224	1.1	9.09	-	-	-	-	PA/PF 42 160M6B / 160M6C	135	184
	410.6	168	1.8	6.82	-	-	-	-			
	50.9	1366	0.9	17.69	1.0	7.0	11.0	6.0			
	59.6	1166	1.1	15.10	1.0	7.0	11.0	6.0			
	62.6	1110	1.1	14.38	1.0	7.0	11.0	6.0			
	73.3	947	1.3	12.27	1.0	7.0	11.0	6.0			
	88.3	787	1.6	10.19	2.0	7.0	11.0	6.0			
	105.9	656	1.7	8.50	3.0	7.0	11.0	6.0			
	123.8	561	2.0	7.27	4.0	6.0	11.0	6.0			
	145.4	478	2.4	6.19	1.0	8.0	12.0	6.0			
	167.9	414	2.1	5.36	1.0	8.0	11.0	5.0			
	196.5	354	2.3	4.58	1.0	8.0	11.0	5.0			
	230.8	301	2.4	3.90	1.0	8.0	11.0	5.0			
	257.1	270	2.6	3.50	1.0	8.0	10.0	5.0			
	280.4	248	2.6	3.21	1.0	8.0	10.0	5.0			
	298.0	233	2.7	3.02	1.0	8.0	10.0	5.0			
	54.1	1271	1.0	25.88	1.0	7.0	10.0	4.0	PA/PF 42 132M4C / 132M4D	99	184
	64.1	1073	1.0	21.85	1.0	7.0	10.0	5.0			
	65.1	1056	1.1	21.50	1.0	7.0	10.0	5.0			
	78.1	881	1.1	17.93	1.0	7.0	11.0	5.0			
	79.1	869	1.4	17.69	1.0	7.0	11.0	6.0			
	92.7	742	1.7	15.10	1.0	7.0	11.0	6.0			
	97.4	706	1.6	14.38	1.0	7.0	11.0	6.0			
	114.1	603	2.0	12.27	1.0	7.0	11.0	6.0			
	137.4	500	2.3	10.19	2.0	7.0	11.0	6.0			
	164.7	417	2.6	8.50	3.0	7.0	11.0	6.0			
	192.6	357	3.0	7.27	4.0	6.0	11.0	6.0			
	67.8	984	0.9	41.30	1.0	7.0	9.0	5.0	PA/PF 42 132S2C / 132S2D	99	184
	79.4	840	1.1	35.26	1.0	7.0	10.0	6.0			
	95.6	697	1.1	29.28	1.0	7.0	10.0	6.0			
	108.2	616	1.5	25.88	1.0	7.0	10.0	4.0			
	113.5	588	1.2	24.68	1.0	7.0	11.0	6.0			
	114.7	582	1.1	24.42	1.0	7.0	11.0	6.0			
	128.1	520	1.6	21.85	1.0	7.0	10.0	5.0			
	130.2	512	1.7	21.50	1.0	7.0	10.0	5.0			
	156.2	427	1.8	17.93	1.0	7.0	11.0	5.0			
	158.3	421	2.1	17.69	1.0	7.0	11.0	6.0			
	185.4	360	2.6	15.10	1.0	7.0	11.0	6.0			
	194.7	343	2.6	14.38	1.0	7.0	11.0	6.0			
	292.2	241	1.3	3.08	-	-	-	-	PA/PF 41 160M6B / 160M6C	116	164
	360.0	196	1.5	2.50	-	-	-	-			
	420.6	168	1.6	2.14	-	-	-	-			
	494.5	143	1.6	1.82	-	-	-	-			
	552.1	128	1.6	1.63	-	-	-	-			
	600.0	118	1.7	1.50	-	-	-	-			
	638.3	111	1.7	1.41	-	-	-	-			
	454.5	154	1.9	3.08	-	4.0	-	-	PA/PF 41 132M4C / 132M4D	80	164
	560.0	125	2.2	2.50	-	4.0	-	-			
	654.2	107	2.3	2.14	-	4.0	-	-			
	769.2	91	2.4	1.82	-	4.0	-	-			
	858.9	82	2.4	1.63	-	4.0	-	-			
	933.3	75	2.5	1.50	-	4.0	-	-			
	992.9	71	2.5	1.41	-	4.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
7.50	390.0	177	0.8	7.18	-	-	-	-	PA/PF 41 132S2C / 132S2D	80	164
	531.3	130	1.1	5.27	-	-	-	-			
	909.1	76	2.9	3.08	-	-	-	-			
	86.3	797	0.8	16.23	1.0	4.0	8.0	6.0	PA/PF 32 132M4C / 132M4D	84	180
	96.4	713	0.9	14.52	1.0	4.0	9.0	6.0			
	119.7	575	1.2	11.70	1.0	4.0	9.0	6.0			
	143.0	481	1.3	9.79	1.0	4.0	9.0	6.0			
	177.4	388	1.7	7.89	1.0	4.0	9.0	6.0			
	208.3	330	1.8	6.72	1.0	4.0	9.0	6.0			
	246.0	279	2.2	5.69	2.0	4.0	9.0	6.0			
	255.0	270	1.7	5.49	1.0	4.0	9.0	6.0			
	264.7	260	2.5	5.29	3.0	4.0	9.0	6.0			
	316.7	217	2.1	4.42	2.0	4.0	9.0	6.0			
	373.3	184	2.5	3.75	2.0	4.0	9.0	6.0			
	471.4	146	3.0	2.97	2.0	4.0	9.0	5.0			
	172.5	387	1.3	16.23	1.0	4.0	8.0	6.0	PA/PF 32 132S2C / 132S2D	84	180
	192.8	346	1.5	14.52	1.0	4.0	9.0	6.0			
	239.3	279	1.9	11.70	1.0	4.0	9.0	6.0			
	286.0	233	2.1	9.79	1.0	4.0	9.0	6.0			
	354.9	188	2.6	7.89	1.0	4.0	9.0	6.0			
	416.7	160	2.9	6.72	1.0	4.0	9.0	6.0			
	510.0	131	2.6	5.49	1.0	4.0	9.0	6.0			
	542.6	129	1.4	2.58	-	3.0	-	-	PA/PF 31 132M4C / 132M4D	71	162
	673.1	104	1.6	2.08	-	3.0	-	-			
	795.5	88	1.7	1.76	-	4.0	-	-			
	1007.2	70	2.1	1.39	-	4.0	-	-			
	1085.3	64	2.2	2.58	-	3.0	-	-	PA/PF 31 132S2C / 132S2D	71	162
	1346.2	51	2.4	2.08	-	3.0	-	-			
	1590.9	43	2.6	1.76	-	4.0	-	-			
9.20	3.0	26844	0.8	296.56	86.0	106.0	120.0	120.0	PA/PF 103/52 160M6	879	216
	3.7	22146	0.9	244.66	86.0	106.0	120.0	120.0			
	4.9	16725	1.3	184.77	86.0	106.0	120.0	120.0			
	5.8	14011	1.5	154.79	86.0	106.0	120.0	120.0			
	7.3	11111	1.9	122.75	86.0	106.0	120.0	120.0			
	8.5	9549	2.2	105.49	86.0	106.0	120.0	120.0			
	3.0	26444	0.8	468.19	-	-	120.0	120.0	PA/PF 103/52 132M4	843	216
	4.1	19266	1.0	341.11	90.0	97.0	120.0	120.0			
	4.7	16750	1.2	296.56	93.0	96.0	120.0	120.0			
	5.7	13819	1.4	244.66	96.0	94.0	120.0	120.0			
	7.6	10436	1.9	184.77	99.0	90.0	120.0	120.0			
	9.0	8743	2.3	154.79	100.0	88.0	120.0	120.0			
	4.4	16873	0.9	642.57	86.0	106.0	120.0	120.0	PA/PF 103/52 132M2	843	216
	6.0	12294	1.2	468.19	86.0	106.0	120.0	120.0			
	8.2	8957	1.7	341.11	86.0	106.0	120.0	120.0			
	9.4	7787	2.0	296.56	86.0	106.0	120.0	120.0			
	11.4	6424	2.4	244.66	86.0	106.0	120.0	120.0			
	4.3	19346	1.3	207.36	100.0	96.0	120.0	120.0	PA/PF 103 160M6	805	209
	6.6	12737	1.9	136.52	100.0	96.0	120.0	120.0			
	11.0	7600	2.8	81.46	100.0	96.0	120.0	120.0			
	6.8	12233	1.9	207.36	98.0	92.0	120.0	120.0	PA/PF 103 132M4	769	209
	13.5	5847	3.0	207.36	100.0	96.0	120.0	120.0	PA/PF 103 132M2	769	209
	8.7	9086	1.3	160.87	-	-	88.0	80.0	PA/PF 93/52 132M4	624	216
	11.0	7193	1.7	127.35	-	-	90.0	80.0			
	17.4	4224	2.2	160.87	66.0	66.0	88.0	80.0	PA/PF 93/52 132M2	624	216
	22.0	3344	2.8	127.35	66.0	66.0	90.0	80.0			
	4.9	16474	0.8	182.00	55.0	62.0	87.0	80.0	PA/PF 93/42 160M6	631	216
	4.9	16265	0.8	287.97	-	-	85.0	80.0	PA/PF 93/42 132M4	595	216
	5.8	13594	0.9	240.68	54.0	57.0	85.0	80.0			
	7.7	10280	1.2	182.00	-	-	87.0	80.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
9.20	6.1	11998	0.8	456.91	55.0	62.0	-	-	PA/PF 93/42 132M2	595	216
	8.4	8741	1.1	332.89	55.0	62.0	-	-			
	9.7	7562	1.2	287.97	55.0	62.0	85.0	80.0			
	11.6	6320	1.5	240.68	55.0	62.0	85.0	80.0			
	15.4	4779	1.9	182.00	55.0	62.0	87.0	80.0			
	4.8	17538	0.8	187.99	62.0	60.0	88.0	80.0	PA/PF 93 160M6	586	205
	7.3	11472	1.3	122.97	62.0	60.0	91.0	80.0			
	8.2	10192	1.2	109.25	62.0	60.0	92.0	80.0			
	9.6	8717	1.7	93.43	62.0	60.0	92.0	80.0			
	12.4	6756	2.1	72.42	62.0	60.0	93.0	80.0			
	14.6	5753	2.3	61.66	62.0	60.0	92.0	80.0			
	16.7	5015	2.6	53.75	62.0	60.0	92.0	80.0			
	19.3	4350	2.9	46.63	62.0	60.0	93.0	80.0			
	7.4	11090	1.3	187.99	59.0	56.0	88.0	80.0	PA/PF 93 132M4	550	205
	12.8	6445	1.8	109.25	64.0	53.0	92.0	80.0			
	15.0	5512	2.5	93.43	65.0	52.0	92.0	80.0			
	14.9	5301	2.0	187.99	62.0	60.0	88.0	80.0	PA/PF 93 132M2	550	205
	25.6	3081	2.9	109.25	62.0	60.0	92.0	80.0			
	25.4	3360	3.0	35.47	66.0	39.0	-	-	PA/PF 92 160M6	575	204
	9.4	8416	1.0	149.01	-	-	-	-	PA/PF 83/42 132M4	416	216
	11.0	7170	1.1	126.95	-	-	-	-			
	10.1	7247	0.8	276.00	32.0	29.0	54.0	65.0	PA/PF 83/42 132M2	416	216
	11.9	6198	1.0	236.03	32.0	29.0	57.0	65.0			
	13.9	5280	1.2	201.09	32.0	29.0	54.0	65.0			
	18.8	3913	1.6	149.01	32.0	29.0	-	-			
	22.1	3334	1.8	126.95	32.0	29.0	-	-			
	8.7	9700	1.0	103.97	37.0	30.0	58.0	65.0	PA/PF 83 160M6	407	201
	11.2	7522	1.3	80.63	37.0	30.0	60.0	65.0			
	12.8	6548	1.4	70.19	37.0	30.0	61.0	65.0			
	14.6	5765	1.6	61.79	37.0	30.0	62.0	65.0			
	17.5	4807	2.0	51.52	37.0	30.0	62.0	64.0			
	20.3	4137	2.3	44.34	37.0	30.0	62.0	62.0			
	23.1	3639	2.6	39.01	37.0	30.0	63.0	61.0			
	27.7	3035	3.0	32.53	37.0	30.0	62.0	56.0			
	8.5	9715	0.9	164.68	32.0	26.0	54.0	65.0	PA/PF 83 132M4	371	201
	10.2	8062	0.9	136.67	-	-	61.0	65.0			
	13.5	6133	1.5	103.97	41.0	28.0	60.0	65.0			
	17.4	4757	1.9	80.63	43.0	27.0	61.0	65.0			
	19.9	4141	2.2	70.19	43.0	27.0	62.0	65.0			
	22.7	3645	2.5	61.79	44.0	27.0	62.0	65.0			
	27.2	3039	2.9	51.52	44.0	27.0	62.0	65.0			
	12.9	6105	1.1	216.49	37.0	30.0	58.0	65.0	PA/PF 83 132M2	371	201
	17.0	4644	1.5	164.68	37.0	30.0	54.0	65.0			
	20.5	3854	1.5	136.67	37.0	30.0	61.0	65.0			
	26.9	2932	2.4	103.97	37.0	30.0	60.0	65.0			
	34.7	2274	3.0	80.63	37.0	30.0	61.0	65.0			
	18.5	4618	1.2	48.76	44.0	25.0	63.0	65.0	PA/PF 82 160M6	399	200
	22.3	3829	1.1	40.43	44.0	25.0	63.0	61.0			
	28.0	3040	2.3	32.10	44.0	25.0	63.0	56.0			
	33.8	2521	2.6	26.62	44.0	25.0	63.0	54.0			
	28.7	2938	1.8	48.76	44.0	26.0	63.0	65.0	PA/PF 82 132M4	363	200
	34.6	2436	1.7	40.43	-	-	63.0	61.0			
	57.4	1425	2.8	48.76	44.0	25.0	63.0	65.0	PA/PF 82 132M2	363	200
	69.3	1181	2.7	40.43	44.0	25.0	63.0	61.0			
	16.4	4493	0.8	171.10	18.0	14.0	33.0	50.0	PA/PF 73/32 132M2	294	200
	19.8	3707	1.0	141.16	18.0	14.0	-	-			
	22.5	3273	1.2	124.66	18.0	14.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
9.20	12.0	6978	0.8	74.80	19.0	12.0	37.0	42.0	PA/PF 73 160M6	300	197
	14.9	5637	1.1	60.42	19.0	12.0	38.0	41.0			
	17.2	4877	1.2	52.28	19.0	12.0	39.0	40.0			
	19.7	4261	1.3	45.67	19.0	12.0	39.0	40.0			
	23.9	3515	1.5	37.68	19.0	12.0	39.0	38.0			
	27.1	3104	1.7	33.27	19.0	12.0	40.0	38.0			
	31.7	2645	2.0	28.35	19.0	12.0	40.0	36.0			
	38.5	2182	2.4	23.39	19.0	12.0	40.0	34.0			
	43.6	1927	2.7	20.66	19.0	12.0	-	-			
	11.2	7347	0.8	124.55	11.0	9.0	31.0	42.0	PA/PF 73 132M4	264	197
	15.3	5388	1.0	91.33	21.0	11.0	35.0	42.0			
	18.7	4413	1.2	74.80	23.0	12.0	37.0	42.0			
	23.2	3564	1.6	60.42	25.0	12.0	38.0	41.0			
	26.8	3084	1.8	52.28	26.0	13.0	39.0	40.0			
	30.7	2694	2.0	45.67	27.0	13.0	39.0	40.0			
	37.2	2223	2.2	37.68	27.0	13.0	39.0	38.0			
	42.1	1963	2.5	33.27	28.0	13.0	40.0	38.0			
	49.4	1672	3.0	28.35	28.0	13.0	40.0	36.0			
	16.9	4683	0.9	166.07	19.0	12.0	34.0	50.0	PA/PF 73 132M2	264	197
	22.5	3512	1.2	124.55	19.0	12.0	34.0	46.0			
	27.9	2833	1.1	100.47	19.0	12.0	36.0	46.0			
	30.7	2575	1.6	91.33	19.0	12.0	35.0	42.0			
	37.4	2109	1.9	74.80	19.0	12.0	37.0	42.0			
	46.3	1704	2.5	60.42	19.0	12.0	38.0	41.0			
	53.6	1474	2.9	52.28	19.0	12.0	39.0	40.0			
	20.6	4139	1.0	43.70	27.0	14.0	39.0	40.0	PA/PF 72 160M6	290	196
	27.2	3133	1.1	33.08	27.0	14.0	40.0	37.0			
	31.5	2707	1.6	28.58	27.0	14.0	40.0	36.0			
	41.4	2057	2.1	21.72	27.0	14.0	39.0	32.0			
	41.6	2050	2.3	21.64	27.0	14.0	-	-			
	53.5	1594	2.7	16.83	27.0	14.0	39.0	30.0			
	32.0	2633	1.5	43.70	28.0	13.0	39.0	40.0	PA/PF 72 132M4	254	196
	42.3	1993	1.6	33.08	27.0	13.0	40.0	37.0			
	64.1	1277	2.4	43.70	27.0	14.0	39.0	40.0	PA/PF 72 132M2	254	196
	84.6	967	2.5	33.08	27.0	14.0	40.0	37.0			
	16.7	5023	0.8	53.84	14.0	14.0	25.0	33.0	PA/PF 63 160M6	219	193
	17.7	4742	0.8	50.83	14.0	14.0	26.0	32.0			
	20.7	4056	1.0	43.47	14.0	14.0	26.0	32.0			
	24.9	3372	1.1	36.14	14.0	14.0	27.0	31.0			
	29.1	2883	1.3	30.90	14.0	14.0	27.0	31.0			
	34.2	2456	1.4	26.33	14.0	14.0	28.0	30.0			
	41.0	2050	1.6	21.97	14.0	14.0	28.0	29.0			
	43.2	1941	1.7	20.81	14.0	14.0	28.0	29.0			
	51.8	1620	2.1	17.36	14.0	14.0	28.0	27.0			
	18.1	4571	0.8	77.49	10.0	11.0	22.0	33.0	PA/PF 63 132M4	183	193
	22.2	3714	1.0	62.96	14.0	12.0	24.0	33.0			
	26.0	3176	1.2	53.84	16.0	13.0	25.0	33.0			
	27.5	2999	1.2	50.83	17.0	13.0	26.0	32.0			
	32.2	2564	1.4	43.47	18.0	13.0	26.0	32.0			
	38.7	2132	1.7	36.14	19.0	13.0	27.0	31.0			
	45.3	1823	2.0	30.90	19.0	13.0	27.0	31.0			
	53.2	1553	2.1	26.33	20.0	13.0	28.0	30.0			
	63.7	1296	2.5	21.97	20.0	13.0	28.0	29.0			
	67.3	1228	2.6	20.81	20.0	13.0	28.0	29.0			
	21.1	3744	0.8	132.78	14.0	14.0	21.0	41.0	PA/PF 63 132M2	183	193
	26.1	3023	0.9	107.21	14.0	14.0	24.0	40.0			
	36.1	2185	1.3	77.49	14.0	14.0	22.0	33.0			
	44.5	1775	1.6	62.96	14.0	14.0	24.0	33.0			
	52.0	1518	1.9	53.84	14.0	14.0	25.0	33.0			
	55.1	1433	2.0	50.83	14.0	14.0	26.0	32.0			
	64.4	1226	2.3	43.47	14.0	14.0	26.0	32.0			
	77.5	1019	2.8	36.14	14.0	14.0	27.0	31.0			
	24.3	3512	0.9	37.08	19.0	14.0	27.0	31.0	PA/PF 62 160M6	221	192
	49.6	1720	1.9	18.16	19.0	14.0	28.0	28.0			
	57.0	1497	2.1	15.80	19.0	14.0	28.0	27.0			
	64.7	1317	2.5	13.91	19.0	14.0	28.0	26.0			
	77.6	1099	2.9	11.60	19.0	14.0	28.0	25.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
9.20	28.7 37.8 77.1	2937 2234 1094	0.9 1.3 2.8	48.75 37.08 18.16	- 19.0 20.0	- 13.0 13.0	28.0 27.0 28.0	36.0 31.0 28.0	PA/PF 62 132M4	185	192
	57.4 75.5	1424 1083	1.3 2.1	48.75 37.08	19.0 19.0	14.0 14.0	28.0 27.0	36.0 31.0	PA/PF 62 132M2	185	192
	34.1 37.7 41.6 46.0 50.5 64.3 66.9 85.1 101.9 123.5 139.8 160.7 194.8	2503 2263 2051 1854 1687 1325 1275 1002 836 690 610 530 438	0.8 0.9 1.0 1.1 1.2 1.5 1.5 1.8 2.1 2.4 2.6 2.3 2.9	26.43 23.89 21.65 19.57 17.81 13.99 13.46 10.58 8.83 7.29 6.44 5.60 4.62	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	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	33.0 32.0 32.0 32.0 31.0 29.0 28.0 27.0 26.0 23.0 23.0 22.0 21.0	PA/PF 52 160M6	164	188
	34.7 38.1 48.5 53.0 58.1 58.6 64.7 71.5 78.6 100.1 104.0 132.3	2430 2212 1738 1592 1451 1439 1304 1179 1073 843 811 637	0.8 0.9 1.2 1.2 1.2 1.3 1.5 1.6 1.8 2.3 2.3 2.8	40.34 36.71 28.85 26.43 24.09 23.89 21.65 19.57 17.81 13.99 13.46 10.58	4.0 6.0 9.0 13.0 11.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 21.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	35.0 35.0 33.0 33.0 32.0 32.0 32.0 31.0 30.0 29.0 28.0 27.0	PA/PF 52 132M4	128	188
	47.1 52.1 57.2 69.4 72.8 76.3 87.2 97.1 105.9 116.2 117.2 129.3 143.1 157.2	1739 1572 1430 1179 1124 1073 939 843 772 704 698 633 572 520	0.8 0.9 1.0 1.2 1.1 1.4 1.1 1.8 1.9 1.8 2.1 2.3 2.5 2.8	59.50 53.79 48.95 40.34 38.46 36.71 32.12 28.85 26.43 24.09 23.89 21.65 19.57 17.81	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 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 24.0 24.0	18.0 18.0 18.0 17.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	40.0 40.0 40.0 35.0 38.0 35.0 36.0 33.0 33.0 32.0 32.0 32.0 31.0 30.0	PA/PF 52 132M2	128	188
	222.8 271.9 314.7 360.0 436.9 494.5 548.8 584.4 625.0 725.8	388 318 275 240 198 175 158 148 138 119	1.1 1.6 1.7 1.9 2.0 2.0 2.2 2.2 2.3 2.4	4.04 3.31 2.86 2.50 2.06 1.82 1.64 1.54 1.44 1.24	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	PA/PF 51 160M6	125	166
	205.3 346.5 423.0 489.5 560.0 679.6 769.2	419 248 204 176 154 127 112	1.0 1.7 2.4 2.6 2.8 3.0 3.0	6.82 4.04 3.31 2.86 2.50 2.06 1.82	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	PA/PF 51 132M4	89	166
	308.0 410.6 693.1	275 207 122	0.9 1.5 2.5	9.09 6.82 4.04	- - -	- - -	- - -	- - -	PA/PF 51 132M2	89	166

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
9.20	59.6	1430	0.9	15.10	1.0	7.0	11.0	5.0	PA/PF 42 160M6	135	184
	62.6	1362	0.9	14.38	1.0	7.0	11.0	5.0			
	73.3	1162	1.1	12.27	1.0	7.0	11.0	5.0			
	88.3	965	1.3	10.19	1.0	7.0	11.0	5.0			
	105.9	805	1.4	8.50	1.0	7.0	11.0	5.0			
	123.8	689	1.6	7.27	1.0	7.0	11.0	5.0			
	145.4	586	1.9	6.19	1.0	7.0	11.0	5.0			
	167.9	508	1.7	5.36	1.0	7.0	11.0	5.0			
	196.5	434	1.9	4.58	1.0	7.0	11.0	5.0			
	230.8	369	2.0	3.90	1.0	7.0	10.0	5.0			
	257.1	332	2.1	3.50	1.0	7.0	10.0	5.0			
	280.4	304	2.1	3.21	1.0	7.0	10.0	5.0			
	298.0	286	2.2	3.02	1.0	7.0	10.0	5.0			
	54.1	1559	0.8	25.88	0.3	0.2	7.0	3.0	PA/PF 42 132M4	99	184
	64.1	1316	0.8	21.85	0.4	0.2	10.0	4.0			
	65.1	1295	0.9	21.50	1.0	0.2	10.0	4.0			
	78.1	1080	0.9	17.93	1.0	0.2	10.0	4.0			
	79.1	1066	1.1	17.69	1.0	0.2	10.0	4.0			
	92.7	910	1.4	15.10	1.0	0.2	11.0	5.0			
	97.4	866	1.3	14.38	1.0	0.2	11.0	5.0			
	114.1	739	1.6	12.27	1.0	0.2	11.0	5.0			
	137.4	614	1.9	10.19	1.0	0.2	11.0	5.0			
	164.7	512	2.1	8.50	1.0	6.0	11.0	5.0			
	192.6	438	2.5	7.27	2.0	6.0	11.0	5.0			
	226.2	373	2.9	6.19	3.0	6.0	11.0	5.0			
	261.2	323	2.5	5.36	2.0	5.0	11.0	5.0			
	305.7	276	2.8	4.58	3.0	5.0	11.0	5.0			
	359.0	235	3.0	3.90	3.0	5.0	10.0	5.0			
	79.4	1030	0.9	35.26	1.0	7.0	10.0	6.0	PA/PF 42 132M2	99	184
	95.6	856	0.9	29.28	1.0	7.0	10.0	6.0			
	108.2	756	1.2	25.88	1.0	7.0	7.0	3.0			
	113.5	721	0.9	24.68	1.0	7.0	11.0	6.0			
	114.7	714	0.9	24.42	1.0	7.0	11.0	7.0			
	128.1	638	1.3	21.85	1.0	7.0	10.0	4.0			
	130.2	628	1.4	21.50	1.0	7.0	10.0	4.0			
	156.2	524	1.4	17.93	1.0	7.0	10.0	4.0			
	158.3	517	1.7	17.69	1.0	7.0	10.0	4.0			
	185.4	441	2.1	15.10	1.0	7.0	11.0	5.0			
	194.7	420	2.1	14.38	1.0	7.0	11.0	5.0			
	228.2	359	2.5	12.27	1.0	7.0	11.0	5.0			
	274.8	298	3.0	10.19	1.0	7.0	11.0	5.0			
	292.2	296	1.0	3.08	-	-	-	-	PA/PF 41 160M6	116	164
	360.0	240	1.2	2.50	-	-	-	-			
	420.6	206	1.3	2.14	-	-	-	-			
	494.5	175	1.3	1.82	-	-	-	-			
	552.1	157	1.3	1.63	-	-	-	-			
	600.0	144	1.4	1.50	-	-	-	-			
	638.3	136	1.4	1.41	-	-	-	-			
	454.5	189	1.5	3.08	-	-	-	-	PA/PF 41 132M4	80	164
	560.0	154	1.8	2.50	-	-	-	-			
	654.2	132	1.9	2.14	-	-	-	-			
	769.2	112	2.0	1.82	-	-	-	-			
	858.9	100	2.0	1.63	-	-	-	-			
	933.3	92	2.1	1.50	-	-	-	-			
	992.9	87	2.1	1.41	-	-	-	-			
	531.3	160	0.9	5.27	-	-	-	-	PA/PF 41 132M2	80	164
	909.1	93	2.4	3.08	-	-	-	-			
	1120.0	76	2.7	2.50	-	-	-	-			
	1308.4	65	2.9	2.14	-	-	-	-			
	96.4	875	0.8	14.52	0.3	0.2	7.0	5.0	PA/PF 32 132M4	84	180
	119.7	705	1.0	11.70	0.4	0.2	8.0	5.0			
	143.0	590	1.1	9.79	0.4	0.2	9.0	5.0			
	177.4	475	1.4	7.89	0.4	0.2	9.0	5.0			
	208.3	405	1.5	6.72	0.4	0.2	9.0	5.0			
	246.0	343	1.8	5.69	0.3	3.0	9.0	5.0			
	255.0	331	1.4	5.49	0.4	0.3	9.0	5.0			
	264.7	319	2.0	5.29	1.0	4.0	9.0	6.0			
	316.7	266	1.7	4.42	1.0	3.0	9.0	5.0			
	373.3	226	2.0	3.75	2.0	3.0	9.0	5.0			
	471.4	179	2.4	2.97	2.0	3.0	9.0	5.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
9.20	172.5	474	1.0	26.23	1.0	4.0	8.0	6.0	PA/PF 32 132M2	84	180
	192.8	424	1.2	14.52	1.0	4.0	7.0	5.0			
	239.3	342	1.6	11.70	1.0	4.0	8.0	5.0			
	286.0	286	1.7	9.79	1.0	4.0	9.0	5.0			
	354.9	231	2.2	7.89	1.0	4.0	9.0	5.0			
	416.7	196	2.3	6.72	1.0	4.0	9.0	5.0			
	492.1	166	2.8	5.69	1.0	4.0	9.0	5.0			
	510.0	160	2.1	5.49	1.0	4.0	9.0	5.0			
	633.5	129	2.7	4.42	1.0	4.0	9.0	5.0			
	542.6	159	1.2	2.58	-	-	-	-	PA/PF 31 132M4	71	162
	673.1	128	1.3	2.08	-	-	-	-			
	795.5	108	1.4	1.76	-	-	-	-			
	1007.2	85	1.7	1.39	-	-	-	-			
	1085.3	78	1.8	2.58	-	-	-	-	PA/PF 31 132M2	71	162
	1346.2	63	2.0	2.08	-	-	-	-			
	1590.9	53	2.1	1.76	-	-	-	-			
	2014.4	42	2.6	1.39	-	-	-	-			
11.0	3.7	26479	0.8	244.66	100.0	81.0	120.0	120.0	PA/PF 103/52 160L6B / 160L6D	879	216
	4.9	19997	1.1	184.77	101.0	79.0	120.0	120.0			
	5.8	16752	1.3	154.79	86.0	106.0	120.0	120.0			
	7.3	13285	1.6	122.75	86.0	106.0	120.0	120.0			
	8.5	11417	1.8	105.49	86.0	106.0	120.0	120.0			
	4.1	23036	0.9	341.11	84.0	91.0	120.0	120.0	PA/PF 103/52 160M4C	879	216
	4.7	20027	1.0	296.56	89.0	90.0	120.0	120.0			
	5.7	16522	1.2	244.66	94.0	89.0	120.0	120.0			
	7.6	12478	1.6	184.77	97.0	87.0	120.0	120.0			
	9.0	10453	1.9	154.79	99.0	85.0	120.0	120.0			
	11.4	8290	2.4	122.75	100.0	81.0	120.0	120.0			
	13.3	7124	2.8	105.49	101.0	79.0	120.0	120.0			
	4.4	20174	0.8	642.57	84.0	91.0	-	-	PA/PF 103/52 160M2B / 160M2C	879	216
	6.0	14699	1.0	468.19	84.0	91.0	120.0	120.0			
	8.2	10709	1.4	341.11	84.0	91.0	120.0	120.0			
	9.4	9311	1.6	296.56	89.0	90.0	120.0	120.0			
	11.4	7681	2.0	244.66	94.0	89.0	120.0	120.0			
	15.2	5801	2.6	184.77	97.0	87.0	120.0	120.0			
	4.3	23131	1.1	207.36	100.0	96.0	120.0	120.0	PA/PF 103 160L6B / 160L6D	805	209
	6.6	15229	1.6	136.52	100.0	96.0	120.0	120.0			
	11.0	9087	2.4	81.46	100.0	96.0	120.0	120.0			
	12.8	7855	2.7	70.42	100.0	96.0	120.0	119.0			
	6.8	14626	1.6	207.36	96.0	88.0	120.0	120.0	PA/PF 103 160M4C	805	209
	10.3	9629	2.4	136.52	100.0	83.0	120.0	120.0			
	13.5	6991	2.5	207.36	96.0	88.0	120.0	120.0	PA/PF 103 160M2B / 160M2C	805	209
	7.1	13783	0.9	127.35	62.0	52.0	90.0	80.0	PA/PF 93/52 160L6B / 160L6D	660	216
	8.4	11641	1.1	107.56	64.0	51.0	91.0	80.0			
	8.7	10864	1.1	160.87	59.0	52.0	88.0	80.0	PA/PF 93/52 160M4C	660	216
	11.0	8600	1.4	127.35	62.0	52.0	90.0	80.0			
	13.0	7264	1.7	107.56	64.0	51.0	91.0	80.0			
	17.4	5051	1.8	160.87	59.0	52.0	88.0	80.0	PA/PF 93/52 160M2B / 160M2C	660	216
	22.0	3998	2.3	127.35	62.0	52.0	90.0	80.0			
	26.0	3377	2.7	107.56	64.0	51.0	91.0	80.0			
	5.8	16254	0.8	240.68	57.0	52.0	85.0	80.0	PA/PF 93/42 160M4C	631	216
	7.7	12291	1.0	182.00	57.0	52.0	87.0	80.0			
	8.4	10451	0.9	332.89	57.0	52.0	-	-	PA/PF 93/42 160M2B / 160M2C	631	216
	9.7	9041	1.0	287.97	57.0	52.0	85.0	80.0			
	11.6	7556	1.2	240.68	57.0	52.0	85.0	80.0			
	15.4	5714	1.6	182.00	57.0	52.0	87.0	80.0			
	7.3	13717	1.1	122.97	63.0	52.0	91.0	80.0	PA/PF 93 160L6B / 160L6D	586	205
	8.2	12187	1.0	109.25	63.0	51.0	91.0	80.0			
	9.6	10422	1.4	93.43	64.0	50.0	92.0	80.0			
	12.4	8078	1.7	72.42	65.0	48.0	92.0	80.0			
	14.6	6878	1.9	61.66	62.0	60.0	92.0	80.0			
	16.7	5996	2.1	53.75	62.0	60.0	92.0	80.0			
	19.3	5201	2.5	46.63	62.0	60.0	93.0	80.0			
	22.8	4402	2.9	39.46	62.0	60.0	93.0	80.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
11.0	7.4	13260	1.1	187.99	56.0	52.0	86.0	80.0	PA/PF 93 160M4C	586	205
	11.4	8674	1.6	122.97	63.0	52.0	91.0	80.0			
	12.8	7706	1.5	109.25	63.0	51.0	91.0	80.0			
	15.0	6590	2.1	93.43	64.0	50.0	92.0	80.0			
	19.3	5108	2.6	72.42	65.0	48.0	92.0	80.0			
	22.7	4349	2.9	61.66	62.0	60.0	92.0	80.0			
	14.9	6338	1.7	187.99	56.0	52.0	86.0	80.0	PA/PF 93 160M2B / 160M2C	586	205
	22.8	4146	2.6	122.97	63.0	52.0	91.0	80.0			
	25.6	3683	2.4	109.25	63.0	51.0	91.0	80.0			
	25.4	4017	2.5	35.47	66.0	39.0	93.0	80.0	PA/PF 92 160L6B / 160L6D	575	204
	9.4	10063	0.8	149.01	32.0	29.0	-	-	PA/PF 83/42 160M4C	452	216
	11.0	8573	0.9	126.95	32.0	29.0	-	-			
	11.9	7410	0.8	236.03	32.0	29.0	-	-	PA/PF 83/42 160M2B / 160M2C	452	216
	13.9	6313	1.0	201.09	32.0	29.0	54.0	65.0			
	18.8	4678	1.3	149.01	32.0	29.0	-	-			
	22.1	3986	1.5	126.95	32.0	29.0	-	-			
	8.7	11598	0.8	103.97	38.0	25.0	58.0	65.0	PA/PF 83 160L6B / 160L6D	407	201
	11.2	8994	1.0	80.63	41.0	26.0	60.0	65.0			
	12.8	7830	1.2	70.19	42.0	26.0	61.0	65.0			
	14.6	6893	1.4	61.79	43.0	26.0	62.0	65.0			
	17.5	5747	1.6	51.52	44.0	25.0	62.0	64.0			
	20.3	4946	1.9	44.34	44.0	25.0	62.0	62.0			
	23.1	4351	2.2	39.01	37.0	30.0	63.0	61.0			
	27.7	3629	2.5	32.53	37.0	30.0	62.0	56.0			
	32.2	3122	2.7	27.99	37.0	30.0	63.0	54.0			
	8.5	11615	0.8	164.68	25.0	22.0	50.0	65.0	PA/PF 83 160M4C	407	201
	13.5	7333	1.3	103.97	38.0	25.0	58.0	65.0			
	17.4	5687	1.6	80.63	41.0	26.0	60.0	65.0			
	19.9	4951	1.8	70.19	42.0	26.0	61.0	65.0			
	22.7	4358	2.1	61.79	43.0	26.0	62.0	65.0			
	27.2	3634	2.5	51.52	44.0	25.0	62.0	64.0			
	31.6	3127	2.8	44.34	44.0	25.0	62.0	62.0	PA/PF 83 160M2B/ 160M2C	407	201
	17.0	5552	1.2	164.68	25.0	22.0	50.0	65.0			
	26.9	3505	2.0	103.97	38.0	25.0	58.0	65.0			
	34.7	2718	2.5	80.63	41.0	26.0	60.0	65.0			
	39.9	2366	2.9	70.19	42.0	26.0	61.0	65.0	PA/PF 82 160L6B / 160L6D	399	200
	18.5	5522	1.0	48.76	44.0	25.0	62.0	63.0			
	22.3	4579	1.0	40.43	44.0	25.0	63.0	61.0			
	28.0	3635	1.9	32.10	44.0	25.0	62.0	56.0			
	33.8	3015	2.2	26.62	44.0	25.0	63.0	54.0	PA/PF 82 160M4C	399	200
	28.7	3512	1.5	48.76	44.0	25.0	62.0	63.0			
	34.6	2912	1.4	40.43	44.0	25.0	63.0	61.0			
	43.6	2312	2.9	32.10	44.0	25.0	62.0	56.0	PA/PF 82 160M2B/ 160M2C	399	200
	57.4	1704	2.4	48.76	44.0	25.0	62.0	63.0			
	69.3	1413	2.2	40.43	44.0	25.0	63.0	61.0			
	14.9	6740	0.9	60.42	24.0	11.0	37.0	39.0	PA/PF 73 160L6B / 160L6D	300	197
	17.2	5832	1.0	52.28	25.0	11.0	38.0	39.0			
	19.7	5094	1.1	45.67	26.0	12.0	38.0	38.0			
	23.9	4203	1.2	37.68	27.0	12.0	39.0	37.0			
	27.1	3711	1.4	33.27	27.0	12.0	39.0	36.0			
	31.7	3162	1.7	28.35	27.0	12.0	40.0	35.0			
	38.5	2609	2.0	23.39	28.0	12.0	40.0	34.0			
	43.6	2305	2.3	20.66	19.0	12.0	-	-			
	50.0	2009	2.6	18.01	19.0	12.0	-	-			
	18.7	5276	1.0	74.80	21.0	10.0	36.0	39.0	PA/PF 73 160M4C	300	197
	23.2	4262	1.3	60.42	24.0	11.0	37.0	39.0			
	26.8	3687	1.5	52.28	25.0	11.0	38.0	39.0			
	30.7	3221	1.7	45.67	26.0	12.0	38.0	38.0			
	37.2	2658	1.9	37.68	27.0	12.0	39.0	37.0			
	42.1	2347	2.1	33.27	27.0	12.0	39.0	36.0			
	49.4	2000	2.5	28.35	27.0	12.0	40.0	35.0			
	59.9	1650	3.0	23.39	28.0	12.0	40.0	34.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
11.0	22.5	4199	1.0	124.55	21.0	10.0	31.0	42.0	PA/PF 73 160M2B / 160M2C	300	197
	37.4	2522	1.6	74.80	21.0	10.0	36.0	39.0			
	46.3	2037	2.1	60.42	24.0	11.0	37.0	39.0			
	53.6	1763	2.4	52.28	25.0	11.0	38.0	39.0			
	61.3	1540	2.7	45.67	26.0	12.0	38.0	38.0			
	74.3	1270	3.0	37.68	27.0	12.0	39.0	37.0			
	20.6	4949	0.9	43.70	26.0	12.0	39.0	38.0	PA/PF 72 160L6B / 160L6D	290	196
	27.2	3746	0.9	33.08	27.0	12.0	39.0	36.0			
	31.5	3237	1.3	28.58	27.0	12.0	40.0	36.0			
	41.4	2460	1.7	21.72	27.0	14.0	39.0	32.0			
	41.6	2451	1.9	21.64	27.0	14.0	37.0	31.0			
	53.5	1906	2.2	16.83	27.0	14.0	39.0	31.0			
	62.8	1623	2.6	14.33	27.0	14.0	37.0	30.0	PA/PF 72 160M4C	290	196
	72.1	1414	3.0	12.49	27.0	14.0	35.0	28.0			
	32.0	3148	1.3	43.70	26.0	12.0	39.0	38.0			
	42.3	2383	1.4	33.08	27.0	12.0	39.0	36.0			
	49.0	2059	2.0	28.58	27.0	12.0	40.0	36.0	PA/PF 72 160M2B / 160M2C	290	196
	64.5	1565	2.6	21.72	27.0	14.0	39.0	32.0			
	64.7	1559	2.9	21.64	27.0	14.0	37.0	31.0			
	64.1	1527	2.0	43.70	26.0	12.0	39.0	38.0	PA/PF 63 160L6B / 160L6D	219	193
	84.6	1156	2.1	33.08	27.0	12.0	39.0	36.0			
	20.7	4849	0.8	43.47	17.0	12.0	26.0	30.0			
	24.9	4031	1.0	36.14	18.0	12.0	27.0	30.0			
	29.1	3447	1.1	30.90	19.0	12.0	27.0	29.0			
	34.2	2937	1.1	26.33	19.0	12.0	27.0	29.0	PA/PF 63 160M4C	219	193
	41.0	2451	1.4	21.97	20.0	12.0	28.0	28.0			
	43.2	2321	1.4	20.81	20.0	12.0	28.0	28.0			
	51.8	1936	1.7	17.36	14.0	14.0	28.0	27.0			
	22.2	4441	0.8	62.96	10.0	10.0	22.0	30.0			
	26.0	3798	1.0	53.84	14.0	11.0	24.0	30.0			
	27.5	3585	1.0	50.83	15.0	11.0	25.0	30.0			
	32.2	3066	1.2	43.47	17.0	12.0	26.0	30.0			
	38.7	2549	1.4	36.14	18.0	12.0	27.0	30.0			
	45.3	2179	1.6	30.90	19.0	12.0	27.0	29.0	PA/PF 63 160M2B / 160M2C	219	193
	53.2	1857	1.7	26.33	19.0	12.0	27.0	29.0			
	63.7	1550	2.1	21.97	20.0	12.0	28.0	28.0			
	67.3	1468	2.2	20.81	20.0	12.0	28.0	28.0			
	80.6	1224	2.6	17.36	14.0	14.0	28.0	27.0			
	36.1	2613	1.1	77.49	10.0	10.0	22.0	33.0			
	44.5	2123	1.3	62.96	10.0	10.0	22.0	30.0			
	52.0	1815	1.5	53.84	14.0	11.0	24.0	30.0	PA/PF 62 160L6B / 160L6D	221	192
	55.1	1714	1.6	50.83	15.0	11.0	25.0	30.0			
	64.4	1466	1.9	43.47	17.0	12.0	26.0	30.0			
	77.5	1218	2.3	36.14	18.0	12.0	27.0	30.0			
	90.6	1042	2.6	30.90	19.0	12.0	27.0	29.0			
	106.3	888	2.7	26.33	19.0	12.0	27.0	29.0			
	24.3	4199	0.8	37.08	18.0	12.0	26.0	30.0	PA/PF 62 160M4C	221	192
	49.6	2057	1.6	18.16	20.0	12.0	28.0	27.0			
	57.0	1789	1.8	15.80	20.0	12.0	28.0	26.0			
	64.7	1575	2.1	13.91	19.0	14.0	28.0	26.0			
	77.6	1314	2.5	11.60	19.0	14.0	28.0	25.0			
	85.6	1191	2.7	10.52	19.0	14.0	28.0	24.0	PA/PF 62 160M2B / 160M2C	221	192
	141.7	719	2.8	6.35	19.0	14.0	25.0	20.0			
	37.8	2671	1.1	37.08	18.0	12.0	26.0	30.0	PA/PF 62 160M4C	221	192
	77.1	1308	2.4	18.16	20.0	12.0	28.0	27.0			
	88.6	1138	2.6	15.80	20.0	12.0	28.0	26.0			
	75.5	1295	1.8	37.08	18.0	12.0	26.0	30.0	PA/PF 62 160M2B / 160M2C	221	192

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
11.0	41.6	2452	0.8	21.65	11.0	24.0	19.0	31.0	PA/PF 52 160L6B / 160L6D	164	188
	46.0	2216	0.9	19.57	12.0	24.0	19.0	30.0			
	50.5	2017	1.0	17.81	12.0	23.0	19.0	30.0			
	64.3	1584	1.3	13.99	11.0	21.0	19.0	28.0			
	66.9	1524	1.3	13.46	11.0	22.0	19.0	28.0			
	85.1	1198	1.5	10.58	10.0	20.0	20.0	26.0			
	101.9	1000	1.8	8.83	10.0	19.0	20.0	25.0			
	123.5	826	2.0	7.29	12.0	24.0	20.0	23.0			
	139.8	729	2.2	6.44	12.0	24.0	20.0	23.0			
	160.7	634	1.9	5.60	12.0	24.0	20.0	22.0			
	194.8	523	2.4	4.62	12.0	24.0	20.0	21.0			
	220.6	462	2.6	4.08	12.0	24.0	20.0	20.0			
	245.2	416	2.7	3.67	12.0	24.0	20.0	20.0			
	261.6	390	2.7	3.44	12.0	24.0	20.0	19.0			
	278.6	366	2.8	3.23	12.0	24.0	18.0	19.0			
	323.7	315	3.0	2.78	12.0	24.0	18.0	18.0			
	53.0	1904	1.0	26.43	8.0	24.0	26.0	30.0	PA/PF 52 160M4C	164	188
	58.6	1721	1.1	23.89	9.0	24.0	28.0	27.0			
	64.7	1560	1.2	21.65	11.0	24.0	28.0	26.0			
	71.5	1410	1.4	19.57	12.0	24.0	26.0	30.0			
	78.6	1283	1.5	17.81	12.0	23.0	28.0	27.0			
	100.1	1008	1.9	13.99	11.0	21.0	28.0	26.0			
	104.0	970	1.9	13.46	11.0	22.0	26.0	30.0			
	132.3	762	2.3	10.58	10.0	20.0	28.0	27.0			
	158.6	636	2.6	8.83	10.0	19.0	28.0	26.0			
	192.0	525	3.0	7.29	12.0	24.0	20.0	23.0			
	250.0	403	2.9	5.60	12.0	24.0	20.0	22.0	PA/PF 52 160M2B / 160M2C	164	188
	72.8	1344	0.9	38.46	8.0	24.0	-	-			
	105.9	923	1.6	26.43	8.0	24.0	18.0	32.0			
	117.2	835	1.7	23.89	9.0	24.0	18.0	31.0			
	129.3	756	1.9	21.65	11.0	24.0	19.0	31.0			
	143.1	684	2.1	19.57	12.0	24.0	19.0	30.0			
	157.2	622	2.3	17.81	12.0	23.0	19.0	30.0			
	200.1	489	3.0	13.99	11.0	21.0	19.0	28.0			
	208.0	470	3.0	13.46	11.0	22.0	19.0	28.0			
	222.8	464	0.9	4.04	-	-	-	-	PA/PF 51 160L6B / 160L6D	125	166
	271.9	381	1.4	3.31	-	-	-	-			
	314.7	329	1.5	2.86	-	-	-	-			
	360.0	287	1.6	2.50	-	-	-	-			
	436.9	237	1.7	2.06	-	-	-	-			
	494.5	209	1.7	1.82	-	-	-	-			
	548.8	189	1.8	1.64	-	-	-	-			
	584.4	177	1.8	1.54	-	-	-	-			
	625.0	166	1.9	1.44	-	-	-	-			
	725.8	143	2.0	1.24	-	-	-	-			
	346.5	297	1.4	4.04	-	5.0	-	-	PA/PF 51 160M4C	125	166
	423.0	243	2.0	3.31	-	5.0	-	-			
	489.5	210	2.2	2.86	-	5.0	-	-			
	560.0	184	2.3	2.50	-	5.0	-	-			
	679.6	151	2.5	2.06	-	5.0	-	-			
	769.2	134	2.5	1.82	-	6.0	-	-			
	853.7	121	2.7	1.64	-	6.0	-	-			
	909.1	113	2.7	1.54	-	6.0	-	-			
	972.2	106	2.9	1.44	-	6.0	-	-			
	1129.0	91	3.0	1.24	-	6.0	-	-			
	693.1	146	2.1	4.04	-	-	-	-	PA/PF 51 160M2B / 160M2C	125	166
	59.6	1710	0.8	15.10	1.0	5.0	10.0	4.0	PA/PF 42 160L6B / 160L6D	135	184
	73.3	1390	0.9	12.27	1.0	5.0	10.0	4.0			
	88.3	1154	1.1	10.19	1.0	5.0	11.0	5.0			
	105.9	963	1.2	8.50	1.0	5.0	11.0	5.0			
	123.8	823	1.4	7.27	1.0	5.0	11.0	5.0			
	145.4	701	1.6	6.19	1.0	5.0	11.0	5.0			
	167.9	607	1.4	5.36	1.0	5.0	10.0	5.0			
	196.5	519	1.6	4.58	2.0	5.0	10.0	5.0			
	230.8	442	1.7	3.90	2.0	5.0	10.0	5.0			
	257.1	396	1.8	3.50	3.0	5.0	10.0	5.0			
	280.4	364	1.8	3.21	3.0	5.0	10.0	5.0			
	298.0	342	1.9	3.02	3.0	5.0	10.0	5.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
11.0	79.1	1274	0.9	17.69	1.0	5.0	9.0	3.0	PA/PF 42 160M4C	135	184
	92.7	1088	1.1	15.10	1.0	5.0	10.0	4.0			
	97.4	1036	1.1	14.38	1.0	5.0	10.0	4.0			
	114.1	884	1.4	12.27	1.0	5.0	10.0	4.0			
	137.4	734	1.6	10.19	1.0	5.0	11.0	5.0			
	164.7	612	1.8	8.50	1.0	5.0	11.0	5.0			
	192.6	524	2.1	7.27	1.0	5.0	11.0	5.0			
	226.2	446	2.4	6.19	1.0	5.0	11.0	5.0			
	261.2	386	2.1	5.36	1.0	5.0	10.0	5.0			
	305.7	330	2.3	4.58	2.0	5.0	10.0	5.0			
	359.0	281	2.5	3.90	2.0	5.0	10.0	5.0			
	400.0	252	2.6	3.50	3.0	5.0	10.0	5.0			
	436.1	231	2.7	3.21	3.0	5.0	10.0	5.0			
	463.6	218	2.8	3.02	3.0	5.0	10.0	5.0			
	95.6	1023	0.8	29.28	1.0	5.0	-	-	PA/PF 42 160M2B / 160M2C	135	184
	113.5	862	0.8	24.68	1.0	5.0	-	-			
	128.1	763	1.1	21.85	1.0	5.0	10.0	4.0			
	158.3	618	1.5	17.69	1.0	5.0	9.0	3.0			
	185.4	528	1.8	15.10	1.0	5.0	10.0	4.0			
	194.7	502	1.8	14.38	1.0	5.0	10.0	4.0			
	228.2	429	2.1	12.27	1.0	5.0	10.0	4.0			
	274.8	356	2.5	10.19	1.0	5.0	11.0	5.0			
	329.4	297	2.8	8.50	1.0	5.0	11.0	5.0			
	292.2	354	0.9	3.08	-	-	-	-	PA/PF 41 160L6B / 160L6D	116	164
	360.0	287	1.0	2.50	-	-	-	-			
	420.6	246	1.1	2.14	-	-	-	-			
	494.5	209	1.1	1.82	-	-	-	-			
	552.1	187	1.1	1.63	-	-	-	-			
	600.0	172	1.2	1.50	-	-	-	-			
	638.3	162	1.2	1.41	-	-	-	-	PA/PF 41 160M4C	116	164
	454.5	226	1.3	3.08	-	3.0	-	-			
	560.0	184	1.5	2.50	-	3.0	-	-			
	654.2	157	1.6	2.14	-	3.0	-	-			
	769.2	134	1.7	1.82	-	4.0	-	-			
	858.9	120	1.7	1.63	-	4.0	-	-			
	933.3	110	1.7	1.50	-	4.0	-	-	PA/PF 41 160M2B / 160M2C	116	164
	992.9	104	1.7	1.41	-	4.0	-	-			
	909.1	112	2.0	3.08	-	-	-	-			
	1120.0	91	2.3	2.50	-	-	-	-			
	1308.4	77	2.4	2.14	-	-	-	-			
	1538.5	66	2.6	1.82	-	-	-	-			
	1717.8	59	2.6	1.63	-	-	-	-			
	1866.7	54	2.7	1.50	-	-	-	-			
	1985.8	51	2.7	1.41	-	-	-	-			
15.0	4.9	27269	0.8	184.77	100	75.0	120.0	120.0	PA/PF 103/52 180L6A / 180L6B	920	216
	5.8	22844	0.9	154.79	84	91.0	120.0	120.0			
	7.3	18116	1.2	122.75	84	91.0	120.0	120.0			
	8.5	15568	1.3	105.49	84	91.0	120.0	120.0			
	5.7	22531	0.9	244.66	85.0	79.0	120.0	120.0	PA/PF 103/52 160L4B	879	216
	7.6	17015	1.2	184.77	93.0	79.0	120.0	120.0			
	9.0	14255	1.4	154.79	96.0	78.0	120.0	120.0			
	11.4	11304	1.8	122.75	98.0	76.0	120.0	120.0			
	13.3	9714	2.1	105.49	100.0	75.0	120.0	120.0			
	6.0	20045	0.8	468.19	85.0	79.0	-	-	PA/PF 103/52 160M2C / 160M2D	879	216
	8.2	14604	1.0	341.11	85.0	79.0	120.0	120.0			
	9.4	12697	1.2	296.56	85.0	79.0	120.0	120.0			
	11.4	10475	1.5	244.66	85.0	79.0	120.0	120.0			
	15.2	7911	1.9	184.77	93.0	79.0	120.0	120.0			
	18.1	6627	2.3	154.79	96.0	78.0	120.0	120.0			
	22.8	5255	2.9	122.75	98.0	76.0	120.0	120.0			
	4.3	31542	0.8	207.36	101.0	72.0	120.0	120.0	PA/PF 103 180L6A / 180L6B	846	209
	6.6	20766	1.2	136.52	101.0	70.0	120.0	120.0			
	11.0	12391	1.7	81.46	96.0	88.0	120.0	120.0			
	12.8	10712	2.0	70.42	96.0	88.0	120.0	119.0			
	14.8	9241	2.3	60.75	96.0	88.0	120.0	113.0			
	17.0	8062	2.6	53.00	96.0	88.0	120.0	109.0			
	19.9	6895	3.0	45.33	96.0	88.0	120.0	104.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
15.0	6.8	19944	1.2	207.36	90.0	79.0	120.0	120.0	PA/PF 103 160L4B	805	209
	10.3	13131	1.8	136.52	98.0	77.0	120.0	120.0			
	17.2	7835	2.6	81.46	101.0	72.0	120.0	120.0			
	19.9	6773	3.0	70.42	101.0	70.0	120.0	119.0			
	13.5	9533	1.8	207.36	90.0	79.0	120.0	120.0	PA/PF 103 160M2C / 160M2D	805	209
	20.5	6276	2.8	136.52	98.0	77.0	120.0	120.0			
	8.4	15874	0.8	107.56	59.0	52.0	91.0	80.0	PA/PF 93/52 180L6A / 180L6B	701	216
	8.7	14814	0.8	160.87	59.0	52.0	88.0	80.0			
	11.0	11728	1.0	127.35	59.0	52.0	90.0	80.0	PA/PF 93/52 160L4B	660	216
	13.0	9905	1.2	107.56	59.0	52.0	91.0	80.0			
	17.4	6887	1.3	160.87	59.0	52.0	88.0	80.0	PA/PF 93/52 160M2C / 160M2D	660	216
	22.0	5452	1.7	127.35	59.0	52.0	90.0	80.0			
	26.0	4605	2.0	107.56	59.0	52.0	91.0	80.0			
	9.7	12329	0.8	287.97	57.0	52.0	-	-	PA/PF 93/42 160M2C / 160M2D	631	216
	11.6	10304	0.9	240.68	57.0	52.0	85.0	80.0			
	15.4	7792	1.2	182.00	57.0	52.0	87.0	80.0			
	7.3	18705	0.8	122.97	59.0	46.0	88.0	80.0	PA/PF 93 180L6A / 180L6B	527	205
	9.6	14212	1.0	93.43	62.0	46.0	90.0	80.0			
	12.4	11016	1.3	72.42	64.0	45.0	92.0	80.0			
	14.6	9379	1.4	61.66	65.0	44.0	92.0	80.0			
	16.7	8176	1.6	53.75	65.0	43.0	92.0	80.0			
	19.3	7093	1.8	46.63	66.0	42.0	93.0	80.0			
	22.8	6002	2.1	39.46	56.0	52.0	93.0	80.0			
	28.8	4752	2.7	31.24	56.0	52.0	91.0	80.0			
	7.4	18081	0.8	187.99	45.0	43.0	80.0	80.0	PA/PF 93 160L4B	586	205
	11.4	11828	1.2	122.97	59.0	46.0	88.0	80.0			
	12.8	10508	1.1	109.25	60.0	46.0	89.0	80.0			
	15.0	8986	1.6	93.43	62.0	46.0	90.0	80.0			
	19.3	6966	1.9	72.42	64.0	45.0	92.0	80.0			
	22.7	5931	2.1	61.66	65.0	44.0	92.0	80.0			
	26.0	5170	2.4	53.75	65.0	43.0	92.0	80.0	PA/PF 93 160M2C / 160M2D	586	205
	30.0	4485	2.7	46.63	66.0	42.0	93.0	80.0			
	14.9	8643	1.2	187.99	45.0	43.0	80.0	80.0			
	22.8	5654	1.9	122.97	59.0	46.0	88.0	80.0	PA/PF 93 160M2C / 160M2D	586	205
	25.6	5023	1.7	109.25	60.0	46.0	89.0	80.0			
	30.0	4295	2.5	93.43	62.0	46.0	90.0	80.0			
	25.4	5478	1.8	35.47	66.0	39.0	93.0	80.0	PA/PF 92 180L6A / 180L6B	616	204
	39.5	3484	2.8	35.47	66.0	39.0	93.0	80.0	PA/PF 92 160L4B	575	204
	18.8	6380	1.0	149.01	32.0	29.0	-	-	PA/PF 83/42 160M2C / 160M2D	452	216
	22.1	5435	1.1	126.95	32.0	29.0	-	-			
	11.2	12265	0.8	80.63	37.0	21.0	58.0	63.0	PA/PF 83 180L6A / 180L6B	448	201
	12.8	10677	0.9	70.19	40.0	22.0	59.0	62.0			
	14.6	9399	1.0	61.79	41.0	22.0	60.0	62.0			
	17.5	7837	1.2	51.52	42.0	23.0	61.0	60.0			
	20.3	6745	1.4	44.34	43.0	23.0	62.0	59.0			
	23.1	5934	1.6	39.01	44.0	22.0	62.0	58.0			
	27.7	4948	1.8	32.53	44.0	22.0	62.0	56.0			
	32.2	4258	2.0	27.99	45.0	22.0	63.0	54.0			
	36.9	3708	2.3	24.38	25.0	22.0	63.0	53.0			
	42.9	3193	2.6	20.99	25.0	22.0	62.0	50.0			
	13.5	10000	0.9	103.97	31.0	20.0	54.0	64.0	PA/PF 83 160L4B	407	201
	17.4	7755	1.2	80.63	37.0	21.0	58.0	63.0			
	19.9	6751	1.3	70.19	40.0	22.0	59.0	62.0			
	22.7	5943	1.5	61.79	41.0	22.0	60.0	62.0			
	27.2	4955	1.8	51.52	42.0	23.0	61.0	60.0			
	31.6	4265	2.1	44.34	43.0	23.0	62.0	59.0			
	35.9	3752	2.4	39.01	44.0	22.0	62.0	58.0			
	43.0	3129	2.7	32.53	44.0	22.0	62.0	56.0			
	50.0	2692	3.0	27.99	45.0	22.0	63.0	54.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
15.0	17.0	7571	0.9	164.68	31.0	22.0	50.0	65.0	PA/PF 83 160M2C / 160M2D	407	201
	26.9	4780	1.5	103.97	31.0	20.0	50.0	65.0			
	34.7	3707	1.8	80.63	37.0	21.0	58.0	63.0			
	39.9	3227	2.1	70.19	40.0	22.0	59.0	62.0			
	45.3	2841	2.4	61.79	41.0	22.0	60.0	62.0			
	54.3	2369	2.9	51.52	42.0	23.0	61.0	60.0			
	28.0	4957	1.4	32.10	44.0	22.0	62.0	56.0	PA/PF 82 180L6A / 180L6B	440	200
	33.8	4111	1.6	26.62	45.0	22.0	63.0	54.0			
	54.3	2557	2.7	16.56	44.0	25.0	58.0	46.0			
	28.7	4790	1.1	48.76	43.0	23.0	61.0	60.0	PA/PF 82 160L4B	399	200
	34.6	3971	1.0	40.43	44.0	22.0	62.0	58.0			
	43.6	3153	2.1	32.10	44.0	22.0	62.0	56.0			
	52.6	2615	2.4	26.62	45.0	22.0	63.0	54.0			
	57.4	2323	1.7	48.76	43.0	23.0	61.0	60.0	PA/PF 82 160M2C / 160M2D	399	200
	69.3	1926	1.6	40.43	44.0	22.0	62.0	58.0			
	19.7	6947	0.8	45.67	24.0	9.0	37.0	34.0	PA/PF 73 180L6A / 180L6B	341	197
	23.9	5732	0.9	37.68	25.0	10.0	38.0	34.0			
	27.1	5061	1.0	33.27	26.0	10.0	39.0	34.0			
	31.7	4312	1.2	28.35	27.0	10.0	39.0	33.0			
	38.5	3558	1.5	23.39	27.0	10.0	39.0	32.0			
	43.6	3143	1.7	20.66	16.0	6.0	-	-			
	50.0	2740	1.9	18.01	16.0	6.0	-	-			
	23.2	5811	1.0	60.42	19.0	7.0	34.0	34.0			
	26.8	5028	1.1	52.28	22.0	8.0	36.0	34.0	PA/PF 73 160L4B	300	197
	30.7	4393	1.2	45.67	24.0	9.0	37.0	34.0			
	37.2	3624	1.4	37.68	25.0	10.0	38.0	34.0			
	42.1	3200	1.6	33.27	26.0	10.0	39.0	34.0			
	49.4	2727	1.8	28.35	27.0	10.0	39.0	33.0			
	59.9	2250	2.2	23.39	27.0	10.0	39.0	32.0			
	67.8	1987	2.5	20.66	16.0	9.0	-	-			
	77.7	1732	2.9	18.01	16.0	9.0	-	-			
	37.4	3439	1.2	74.80	19.0	7.0	36.0	39.0	PA/PF 73 160M2C / 160M2D	300	197
	46.3	2778	1.5	60.42	19.0	7.0	34.0	34.0			
	53.6	2404	1.8	52.28	22.0	8.0	36.0	34.0			
	61.3	2100	1.9	45.67	24.0	9.0	37.0	34.0			
	74.3	1732	2.2	37.68	25.0	10.0	38.0	34.0			
	84.2	1530	2.5	33.27	26.0	10.0	39.0	34.0			
	98.8	1303	2.9	28.35	27.0	10.0	39.0	33.0			
	31.5	4414	1.0	28.58	27.0	10.0	39.0	33.0	PA/PF 72 180L6A / 180L6B	331	196
	41.4	3354	1.3	21.72	27.0	10.0	39.0	32.0			
	41.6	3342	1.4	21.64	27.0	10.0	37.0	31.0			
	53.5	2599	1.6	16.83	28.0	11.0	37.0	30.0			
	62.8	2213	1.9	14.33	28.0	10.0	36.0	29.0			
	72.1	1929	2.2	12.49	26.0	12.0	35.0	28.0			
	83.0	1674	2.9	10.84	26.0	12.0	33.0	26.0			
	140.2	991	2.9	6.42	26.0	12.0	-	-			
	32.0	4293	0.9	43.70	24.0	9.0	37.0	35.0	PA/PF 72 160L4B	290	196
	42.3	3249	1.0	33.08	26.0	10.0	39.0	34.0			
	49.0	2807	1.4	28.58	27.0	10.0	39.0	33.0			
	64.5	2134	1.9	21.72	27.0	10.0	39.0	32.0			
	64.7	2126	2.1	21.64	27.0	10.0	37.0	31.0			
	83.2	1653	2.5	16.83	28.0	11.0	39.0	31.0			
	97.7	1408	2.9	14.33	28.0	10.0	37.0	30.0			
	64.1	2082	1.5	43.70	24.0	9.0	37.0	35.0	PA/PF 72 160M2C / 160M2D	290	196
	84.6	1576	1.6	33.08	26.0	10.0	39.0	34.0			
	98.0	1362	2.3	28.58	27.0	10.0	39.0	33.0			
	128.9	1035	3.0	21.72	27.0	10.0	39.0	32.0			
	34.2	4005	0.8	26.33	18.0	10.0	27.0	26.0	PA/PF 63 180L6A / 180L6B	260	193
	41.0	3342	1.0	21.97	19.0	10.0	27.0	26.0			
	43.2	3165	1.1	20.81	19.0	11.0	27.0	26.0			
	51.8	2641	1.3	17.36	10.0	10.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
15.0	27.5	4889	0.8	50.83	12.0	9.0	25.0	30.0	PA/PF 63 160L4B	219	193
	32.2	4181	0.9	43.47	12.0	9.0	23.0	26.0			
	38.7	3476	1.1	36.14	15.0	9.0	25.0	27.0			
	45.3	2972	1.2	30.90	17.0	10.0	26.0	27.0			
	53.2	2532	1.3	26.33	18.0	10.0	27.0	26.0			
	63.7	2113	1.5	21.97	19.0	10.0	27.0	26.0			
	67.3	2002	1.6	20.81	19.0	11.0	27.0	26.0			
	80.6	1670	1.9	17.36	10.0	10.0	28.0	27.0			
	36.1	3563	0.8	77.49	12.0	9.0	22.0	33.0	PA/PF 63 160M2C / 160M2D	219	193
	44.5	2895	1.0	62.96	12.0	9.0	22.0	30.0			
	52.0	2475	1.1	53.84	12.0	9.0	24.0	30.0			
	55.1	2337	1.2	50.83	12.0	9.0	25.0	30.0			
	64.4	1999	1.4	43.47	12.0	9.0	23.0	26.0			
	77.5	1662	1.7	36.14	15.0	9.0	25.0	27.0			
	90.6	1421	1.9	30.90	17.0	10.0	26.0	27.0			
	106.3	1211	2.0	26.33	18.0	10.0	27.0	26.0			
	127.4	1010	2.4	21.97	19.0	10.0	27.0	26.0			
	134.6	957	2.5	20.81	19.0	11.0	27.0	26.0			
	161.3	798	3.0	17.36	10.0	10.0	28.0	27.0			
	49.6	2804	1.2	18.16	19.0	11.0	28.0	26.0	PA/PF 62 180L6A / 180L6B	262	192
	57.0	2440	1.3	15.80	20.0	11.0	28.0	25.0			
	64.7	2148	1.5	13.91	20.0	11.0	28.0	24.0			
	77.6	1791	1.8	11.60	20.0	11.0	28.0	24.0			
	85.6	1625	2.0	10.52	20.0	10.0	28.0	23.0			
	102.5	1356	2.3	8.78	18.0	12.0	28.0	22.0			
	119.2	1166	2.8	7.55	18.0	12.0	28.0	22.0			
	141.7	981	2.1	6.35	18.0	12.0	25.0	20.0			
	170.1	817	2.4	5.29	18.0	12.0	25.0	19.0			
	37.8	3642	0.8	37.08	15.0	9.0	25.0	27.0	PA/PF 62 160L4B	221	192
	77.1	1784	1.7	18.16	19.0	11.0	28.0	26.0			
	88.6	1552	1.9	15.80	20.0	11.0	28.0	25.0			
	100.6	1366	2.3	13.91	20.0	11.0	28.0	24.0			
	120.7	1139	2.7	11.60	20.0	11.0	28.0	24.0			
	133.1	1033	3.0	10.52	20.0	10.0	28.0	23.0			
	75.5	1767	1.3	37.08	15.0	9.0	25.0	27.0	PA/PF 62 160M2C / 160M2D	221	192
	154.2	865	2.7	18.16	19.0	11.0	28.0	26.0			
	177.2	753	3.0	15.80	20.0	11.0	28.0	25.0			
	66.9	2079	0.9	13.46	10.0	19.0	19.0	19.0	PA/PF 52 180L6A / 180L6B	201	188
	85.1	1634	1.1	10.58	10.0	18.0	18.0	20.0			
	101.9	1364	1.3	8.83	9.0	17.0	17.0	20.0			
	123.5	1126	1.5	7.29	9.0	16.0	16.0	20.0			
	139.8	995	1.6	6.44	9.0	16.0	16.0	20.0			
	160.7	865	1.4	5.60	8.0	15.0	15.0	20.0			
	194.8	713	1.8	4.62	8.0	14.0	14.0	20.0			
	220.6	630	1.9	4.08	8.0	14.0	14.0	20.0			
	245.2	567	2.0	3.67	8.0	13.0	13.0	20.0			
	261.6	531	2.0	3.44	7.0	13.0	13.0	20.0			
	278.6	499	2.0	3.23	8.0	24.0	12.0	18.0			
	323.7	429	2.2	2.78	8.0	24.0	12.0	18.0			
	58.6	2347	0.8	23.89	2.0	21.0	12.0	29.0	PA/PF 52 160L4B	164	188
	64.7	2127	0.9	21.65	2.0	21.0	15.0	29.0			
	71.5	1922	1.0	19.57	4.0	21.0	16.0	28.0			
	78.6	1749	1.1	17.81	5.0	20.0	17.0	28.0			
	100.1	1374	1.4	13.99	8.0	19.0	18.0	27.0			
	104.0	1322	1.4	13.46	10.0	19.0	19.0	27.0			
	132.3	1039	1.7	10.58	10.0	18.0	20.0	25.0			
	158.6	867	1.9	8.83	9.0	17.0	20.0	24.0			
	192.0	716	2.2	7.29	9.0	16.0	20.0	23.0			
	217.4	633	2.4	6.44	9.0	16.0	20.0	23.0			
	250.0	550	2.1	5.60	8.0	15.0	20.0	22.0			
	303.0	454	2.6	4.62	8.0	14.0	20.0	21.0			
	343.1	401	2.8	4.08	8.0	14.0	20.0	20.0			
	381.5	360	2.9	3.67	8.0	13.0	20.0	20.0			
	407.0	338	3.0	3.44	7.0	13.0	20.0	19.0			
	433.4	317	3.0	3.23	8.0	24.0	18.0	19.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
15.0	105.9	1259	1.1	26.43	2.0	21.0	18.0	32.0	PA/PF 52 160M2C / 160M2D	164	188
	117.2	1138	1.3	23.89	2.0	21.0	12.0	29.0			
	129.3	1031	1.4	21.65	2.0	21.0	15.0	29.0			
	143.1	932	1.6	19.57	4.0	21.0	16.0	28.0			
	157.2	849	1.7	17.81	5.0	20.0	17.0	28.0			
	200.1	667	2.2	13.99	8.0	19.0	18.0	27.0			
	208.0	641	2.2	13.46	10.0	19.0	19.0	27.0			
	264.7	504	2.7	10.58	10.0	18.0	20.0	25.0			
	317.1	421	3.0	8.83	9.0	17.0	20.0	24.0			
	360.0	392	1.1	2.50	-	-	-	-	PA/PF 51 180L6A / 180L6B	166	166
	436.9	323	1.2	2.06	-	-	-	-			
	494.5	285	1.3	1.82	-	-	-	-			
	548.8	257	1.3	1.64	-	-	-	-			
	584.4	241	1.3	1.54	-	-	-	-			
	625.0	226	1.4	1.44	-	-	-	-			
	725.8	194	1.5	1.24	-	-	-	-	PA/PF 51 160L4B	125	166
	346.5	405	1.0	4.04	-	5.0	-	-			
	423.0	332	1.5	3.31	-	5.0	-	-			
	489.5	287	1.6	2.86	-	5.0	-	-			
	560.0	251	1.7	2.50	-	5.0	-	-			
	679.6	207	1.8	2.06	-	4.0	-	-			
	769.2	183	1.9	1.82	-	5.0	-	-			
	853.7	164	2.0	1.64	-	5.0	-	-			
	909.1	154	2.0	1.54	-	5.0	-	-			
	972.2	144	2.1	1.44	-	5.0	-	-	PA/PF 51 160M2C / 160M2D	125	166
	1129.0	124	2.2	1.24	-	5.0	-	-			
	693.1	199	1.6	4.04	-	-	-	-			
	845.9	163	2.3	3.31	-	-	-	-			
	979.0	141	2.5	2.86	-	-	-	-			
	1120.0	123	2.6	2.50	-	-	-	-	PA/PF 42 160L4B	135	184
	1359.2	102	2.9	2.06	-	-	-	-			
	1538.5	90	2.9	1.82	-	-	-	-			
	92.7	1483	0.8	15.10	1.0	4.0	3.0	2.0			
	97.4	1413	0.8	14.38	1.0	4.0	5.0	2.0			
	114.1	1205	1.0	12.27	1.0	4.0	7.0	3.0			
	137.4	1001	1.2	10.19	1.0	4.0	8.0	3.0			
	164.7	835	1.3	8.50	1.0	4.0	8.0	3.0			
	192.6	714	1.5	7.27	1.0	4.0	9.0	4.0			
	226.2	608	1.8	6.19	1.0	4.0	9.0	4.0			
	261.2	527	1.6	5.36	1.0	4.0	9.0	4.0			
	305.7	450	1.7	4.58	1.0	4.0	9.0	4.0			
	359.0	383	1.8	3.90	1.0	4.0	9.0	4.0			
	400.0	344	1.9	3.50	1.0	4.0	9.0	4.0			
	436.1	315	2.0	3.21	1.0	4.0	9.0	4.0			
	463.6	297	2.0	3.02	1.0	4.0	9.0	4.0			
	128.1	1041	0.8	21.85	1.0	4.0	10.0	4.0	PA/PF 42 160M2C / 160M2D	135	184
	158.3	843	1.1	17.69	1.0	4.0	9.0	3.0			
	185.4	719	1.3	15.10	1.0	4.0	3.0	2.0			
	194.7	685	1.3	14.38	1.0	4.0	5.0	2.0			
	228.2	585	1.6	12.27	1.0	4.0	7.0	3.0			
	274.8	485	1.8	10.19	1.0	4.0	8.0	3.0			
	329.4	405	2.0	8.50	1.0	4.0	8.0	3.0			
	385.1	346	2.4	7.27	1.0	4.0	9.0	4.0			
	452.3	295	2.8	6.19	1.0	4.0	9.0	4.0			
	522.4	255	2.4	5.36	1.0	4.0	9.0	4.0			
	611.4	218	2.7	4.58	1.0	4.0	9.0	4.0			
	717.9	186	2.9	3.90	1.0	4.0	9.0	4.0			
	800.0	167	3.0	3.50	1.0	4.0	9.0	4.0			
	454.5	309	0.9	3.08	-	3.0	-	-	PA/PF 41 160L4B	116	164
	560.0	251	1.1	2.50	-	3.0	-	-			
	654.2	215	1.2	2.14	-	3.0	-	-			
	769.2	183	1.2	1.82	-	3.0	-	-			
	858.9	163	1.2	1.63	-	3.0	-	-			
	933.3	150	1.3	1.50	-	3.0	-	-			
	992.9	141	1.3	1.41	-	3.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
15.0	909.1	152	1.4	3.08	-	-	-	-	PA/PF 41 160M2C / 160M2D	116	164
	1120.0	123	1.7	2.50	-	-	-	-			
	1308.4	106	1.8	2.14	-	-	-	-			
	1538.5	90	1.9	1.82	-	-	-	-			
	1717.8	80	1.9	1.63	-	-	-	-			
	1866.7	74	1.9	1.50	-	-	-	-			
	1985.8	70	2.0	1.41	-	-	-	-			
18.5	7.6	20986	1.0	184.77	88.0	72.0	120.0	120.0	PA/PF 103/52 180M4A / 180M4B	920	218
	9.0	17581	1.1	154.79	92.0	73.0	120.0	120.0			
	11.4	13942	1.4	122.75	96.0	72.0	120.0	120.0			
	13.3	11981	1.7	105.49	98.0	71.0	120.0	120.0			
	8.2	18011	0.8	341.11	88.0	72.0	120.0	120.0	PA/PF 103/52 160M2D / 160L2C	879	218
	9.4	15659	1.0	296.56	88.0	72.0	120.0	120.0			
	11.4	12919	1.2	244.66	88.0	72.0	120.0	120.0			
	15.2	9756	1.6	184.77	88.0	72.0	120.0	120.0			
	18.1	8173	1.9	154.79	92.0	73.0	120.0	120.0			
	22.8	6481	2.3	122.75	96.0	72.0	120.0	120.0			
	26.5	5570	2.7	105.49	98.0	71.0	120.0	120.0			
	6.6	25612	0.9	136.52	101.0	67.0	120.0	120.0	PA/PF 103 200L6B / 200L6C	904	209
	8.0	21119	1.2	112.57	101.0	66.0	-	-			
	11.0	15282	1.4	81.46	90.0	79.0	120.0	119.0			
	12.8	13211	1.6	70.42	90.0	79.0	120.0	116.0			
	14.8	11397	1.8	60.75	90.0	79.0	120.0	113.0			
	17.0	9943	2.1	53.00	90.0	79.0	120.0	109.0			
	19.9	8504	2.5	45.33	90.0	79.0	120.0	104.0			
	23.7	7123	2.9	37.97	90.0	79.0	120.0	95.0			
	6.8	24598	0.9	207.36	95.0	72.0	120.0	120.0	PA/PF 103 180M4A / 180M4B	846	209
	10.3	16195	1.4	136.52	95.0	72.0	120.0	120.0			
	17.2	9663	2.1	81.46	100.0	69.0	120.0	119.0			
	19.9	8354	2.4	70.42	101.0	67.0	120.0	116.0			
	23.0	7206	2.8	60.75	101.0	66.0	120.0	113.0			
	13.5	11758	1.5	207.36	95.0	72.0	120.0	120.0	PA/PF 103 160M2D / 160L2C	805	209
	20.5	7741	2.3	136.52	95.0	72.0	120.0	120.0			
	11.0	14464	0.8	127.35	51.0	40.0	83.0	80.0	PA/PF 93/52 180M4A / 180M4B	701	216
	13.0	12216	1.0	107.56	58.0	41.0	87.0	80.0			
	17.4	8494	1.1	160.87	51.0	40.0	88.0	80.0	PA/PF 93/52 160M2D / 160L2C	660	216
	22.0	6724	1.4	127.35	51.0	40.0	83.0	80.0			
	26.0	5679	1.6	107.56	58.0	41.0	87.0	80.0			
	15.4	9610	1.0	182.00	57.0	52.0	87.0	80.0	PA/PF 93/42 160M2D / 160L2C	631	216
	12.4	13586	1.0	72.42	63.0	42.0	91.0	80.0			
	14.6	11568	1.2	61.66	64.0	41.0	91.0	80.0	PA/PF 93 200L6B / 200L6C	685	205
	16.7	10084	1.3	53.75	65.0	41.0	92.0	80.0			
	19.3	8748	1.5	46.63	65.0	40.0	92.0	80.0			
	22.8	7403	1.7	39.46	66.0	39.0	93.0	80.0			
	28.8	5861	2.2	31.24	45.0	43.0	91.0	80.0			
	33.2	5084	2.5	27.10	45.0	43.0	82.0	74.0			
	39.2	4302	3.0	22.93	45.0	43.0	81.0	72.0			
	11.4	14587	1.0	122.97	54.0	41.0	85.0	80.0	PA/PF 93 180M4A / 180M4B	527	205
	12.8	12960	0.9	109.25	60.0	42.0	89.0	80.0			
	15.0	11083	1.3	93.43	60.0	42.0	89.0	80.0			
	19.3	8591	1.6	72.42	63.0	42.0	91.0	80.0			
	22.7	7314	1.7	61.66	64.0	41.0	91.0	80.0			
	26.0	6376	1.9	53.75	65.0	41.0	92.0	80.0			
	30.0	5531	2.2	46.63	65.0	40.0	92.0	80.0			
	35.5	4681	2.6	39.46	66.0	39.0	93.0	80.0			
	14.9	10659	1.0	187.99	54.0	41.0	80.0	80.0	PA/PF 93 160M2D / 160L2C	586	205
	22.8	6973	1.5	122.97	54.0	41.0	85.0	80.0			
	25.6	6195	1.4	109.25	60.0	42.0	89.0	80.0			
	30.0	5298	2.0	93.43	60.0	42.0	89.0	80.0			
	38.7	4106	2.5	72.42	63.0	42.0	91.0	80.0			
	45.4	3496	2.8	61.66	64.0	41.0	91.0	80.0			
	25.4	6756	1.5	35.47	66.0	39.0	93.0	80.0	PA/PF 92 200L6B / 200L6C	674	204
	30.7	5580	2.0	29.30	66.0	39.0	-	-			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
18.5	39.5	4297	2.2	35.47	66.0	39.0	93.0	80.0	PA/PF 92 180M4A / 180M4B	616	204
	18.8 22.1	7868 6703	0.8 0.9	149.01 126.95	32.0 32.0	29.0 29.0	- -	- -	PA/PF 83/42 160M2D / 160L2C	452	216
	14.6 17.5 20.3 23.1 27.7 32.2 36.9 42.9	11592 9665 8318 7318 6103 5251 4574 3938	0.8 1.0 1.1 1.3 1.5 1.6 1.8 2.1	61.79 51.52 44.34 39.01 32.53 27.99 24.38 20.99	39.0 41.0 42.0 43.0 44.0 44.0 44.0 31.0	19.0 20.0 20.0 21.0 21.0 20.0 20.0 20.0	59.0 60.0 61.0 61.0 62.0 62.0 63.0 62.0	58.0 57.0 56.0 55.0 54.0 52.0 51.0 50.0	PA/PF 83 200L6B / 200L6C	506	201
	17.4 19.9 22.7 27.2 31.6 35.9 43.0 50.0 57.4	9565 8326 7330 6112 5260 4628 3859 3320 2892	0.9 1.1 1.2 1.5 1.7 1.9 2.2 2.4 2.8	80.63 70.19 61.79 51.52 44.34 39.01 32.53 27.99 24.38	32.0 36.0 39.0 41.0 42.0 43.0 44.0 44.0 44.0	17.0 19.0 19.0 20.0 20.0 21.0 21.0 20.0 20.0	55.0 57.0 59.0 60.0 61.0 61.0 62.0 62.0 63.0	58.0 58.0 58.0 57.0 56.0 55.0 54.0 52.0 51.0	PA/PF 83 180M4A / 180M4B	448	201
	26.9 34.7 39.9 45.3 54.3 63.1	5895 4572 3980 3504 2921 2514	1.2 1.5 1.7 2.0 2.3 2.7	103.97 80.63 70.19 61.79 51.52 44.34	32.0 32.0 36.0 39.0 41.0 42.0	17.0 17.0 19.0 19.0 20.0 20.0	54.0 55.0 57.0 59.0 60.0 61.0	64.0 58.0 58.0 58.0 57.0 56.0	PA/PF 83 160M2D / 160L2C	407	201
	28.0 33.8 34.0 41.0 54.3 63.0	6114 5070 5041 4181 3154 2722	1.1 1.3 1.4 1.8 2.2 2.5	32.10 26.62 26.47 21.95 16.56 14.29	44.0 44.0 43.0 43.0 43.0 43.0	21.0 20.0 23.0 23.0 23.0 23.0	62.0 62.0 - - 58.0 54.0	54.0 52.0 - - 46.0 43.0	PA/PF 82 200L6B / 200L6C	498	200
	28.7 34.6 43.6 52.6	5907 4898 3889 3225	0.9 0.8 1.7 2.0	48.76 40.43 32.10 26.62	44.0 44.0 44.0 44.0	21.0 21.0 21.0 20.0	61.0 62.0 62.0 62.0	60.0 58.0 54.0 52.0	PA/PF 82 180M4A / 180M4B	440	200
	57.4 69.3 87.2	2865 2376 1886	1.4 1.3 2.7	48.76 40.43 32.10	44.0 44.0 44.0	21.0 21.0 21.0	61.0 62.0 62.0	60.0 58.0 54.0	PA/PF 82 160M2D / 160L2C	399	200
	27.1 31.7 38.5 43.6 50.0	6242 5319 4388 3876 3379	0.8 1.0 1.2 1.4 1.6	33.27 28.35 23.39 20.66 18.01	25.0 26.0 26.0 19.0 19.0	8.0 9.0 9.0 7.0 7.0	35.0 36.0 36.0 27.0 28.0	31.0 31.0 31.0 26.0 26.0	PA/PF 73 200L6B / 200L6C	399	197
	23.2 26.8 30.7 37.2 42.1 49.4 59.9 67.8 77.7	7167 6202 5418 4470 3947 3363 2775 2451 2136	0.8 0.9 1.0 1.1 1.3 1.5 1.8 2.0 2.3	60.42 52.28 45.67 37.68 33.27 28.35 23.39 20.66 18.01	11.0 17.0 20.0 23.0 25.0 26.0 26.0 19.0 19.0	4.0 5.0 7.0 8.0 8.0 9.0 9.0 7.0 7.0	25.0 29.0 31.0 34.0 35.0 36.0 36.0 27.0 28.0	30.0 31.0 31.0 31.0 31.0 31.0 31.0 26.0 26.0	PA/PF 73 180M4A / 180M4B	341	197
	37.4 46.3 53.6 61.3 74.3 84.2 98.8 119.7	4241 3426 2964 2590 2137 1886 1608 1326	1.0 1.3 1.4 1.6 1.8 2.0 2.4 2.9	74.80 60.42 52.28 45.67 37.68 33.27 28.35 23.39	11.0 11.0 17.0 20.0 23.0 25.0 26.0 26.0	4.0 4.0 5.0 7.0 8.0 8.0 9.0 9.0	36.0 25.0 29.0 31.0 34.0 35.0 36.0 36.0	39.0 30.0 31.0 31.0 31.0 31.0 31.0 31.0	PA/PF 73 160M2D / 160L2C	300	197

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
18.5	31.5	5443	0.8	28.58	26.0	9.0	37.0	32.0	PA/PF 72 200L6B / 200L6C	389	196
	41.6	4122	1.1	21.64	27.0	9.0	37.0	31.0			
	53.5	3205	1.3	16.83	27.0	10.0	37.0	30.0			
	62.8	2729	1.6	14.33	27.0	10.0	36.0	29.0			
	72.1	2379	1.8	12.49	27.0	10.0	35.0	28.0			
	83.0	2065	2.4	10.84	24.0	9.0	33.0	26.0			
	95.1	1802	2.7	9.46	24.0	9.0	29.0	24.0			
	140.2	1223	2.4	6.42	24.0	9.0	27.0	22.0			
	160.7	1067	2.8	5.60	24.0	9.0	27.0	22.0			
	32.0	5294	0.8	43.70	26.0	9.0	37.0	35.0	PA/PF 72 180M4A / 180M4B	331	196
	42.3	4008	0.8	33.08	26.0	9.0	39.0	34.0			
	49.0	3462	1.2	28.58	26.0	9.0	37.0	32.0			
	64.5	2631	1.5	21.72	27.0	10.0	39.0	32.0			
	64.7	2622	1.7	21.64	27.0	9.0	37.0	31.0			
	83.2	2039	2.0	16.83	27.0	10.0	37.0	30.0			
	97.7	1736	2.3	14.33	27.0	10.0	36.0	29.0			
	112.1	1513	2.7	12.49	27.0	10.0	35.0	28.0			
	64.1	2568	1.2	43.70	26.0	9.0	37.0	35.0	PA/PF 72 160M2D / 160L2C	290	196
	84.6	1944	1.3	33.08	26.0	9.0	39.0	34.0			
	98.0	1679	1.8	28.58	26.0	9.0	37.0	32.0			
	128.9	1276	2.4	21.72	27.0	10.0	39.0	32.0			
	129.4	1272	2.7	21.64	27.0	9.0	37.0	31.0	PA/PF 63 180M4A / 180M4B	260	193
	53.2	3123	1.0	26.33	16.0	9.0	26.0	24.0			
	63.7	2606	1.2	21.97	18.0	9.0	26.0	24.0			
	67.3	2469	1.3	20.81	18.0	9.0	27.0	24.0			
	80.6	2059	1.6	17.36	12.0	9.0	-	-			
	44.5	3570	0.8	62.96	16.0	9.0	22.0	30.0	PA/PF 63 160M2D / 160L2C	219	193
	52.0	3053	0.9	53.84	16.0	9.0	24.0	30.0			
	55.1	2882	1.0	50.83	16.0	9.0	25.0	30.0			
	64.4	2465	1.1	43.47	16.0	9.0	23.0	26.0			
	77.5	2049	1.4	36.14	16.0	9.0	21.0	24.0			
	90.6	1752	1.6	30.90	16.0	9.0	24.0	24.0			
	106.3	1493	1.6	26.33	16.0	9.0	26.0	24.0			
	127.4	1246	2.0	21.97	18.0	9.0	26.0	24.0			
	134.6	1180	2.1	20.81	18.0	9.0	27.0	24.0			
	161.3	984	2.5	17.36	12.0	9.0	24.0	23.0			
	64.7	2649	1.2	13.91	19.0	10.0	28.0	23.0	PA/PF 62 200L6B / 200L6C	320	192
	77.6	2209	1.5	11.60	20.0	10.0	28.0	23.0			
	85.6	2004	1.6	10.52	20.0	10.0	28.0	22.0			
	102.5	1672	1.9	8.78	20.0	9.0	27.0	22.0			
	119.2	1438	2.3	7.55	20.0	9.0	27.0	21.0			
	141.7	1209	1.7	6.35	20.0	9.0	25.0	20.0			
	170.1	1008	2.0	5.29	20.0	9.0	25.0	19.0			
	197.4	869	2.5	4.56	15.0	9.0	23.0	18.0			
	221.7	773	2.6	4.06	15.0	9.0	23.0	18.0			
	230.2	745	2.8	3.91	15.0	9.0	23.0	18.0			
	241.5	709	3.0	3.72	15.0	9.0	23.0	17.0			
	77.1	2200	1.4	18.16	19.0	10.0	27.0	24.0	PA/PF 62 180M4A / 180M4B	262	192
	88.6	1914	1.6	15.80	19.0	10.0	27.0	24.0			
	100.6	1685	1.8	13.91	19.0	10.0	28.0	23.0			
	120.7	1405	2.2	11.60	20.0	10.0	28.0	23.0			
	133.1	1274	2.4	10.52	20.0	10.0	28.0	22.0			
	159.5	1064	2.8	8.78	20.0	9.0	27.0	22.0			
	220.5	769	2.5	6.35	20.0	9.0	25.0	20.0			
	264.7	641	2.9	5.29	20.0	9.0	25.0	19.0			
	75.5	2179	1.0	37.08	19.0	10.0	25.0	27.0	PA/PF 62 160M2D / 160L2C	221	192
	154.2	1067	2.2	18.16	19.0	10.0	27.0	24.0			
	177.2	928	2.5	15.80	19.0	10.0	27.0	24.0			
	201.3	817	2.9	13.91	19.0	10.0	28.0	23.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
18.5	104.0	1631	1.1	13.46	5.0	18.0	15.0	26.0	PA/PF 52 180M4A / 180M4B	201	188
	132.3	1282	1.4	10.58	7.0	17.0	16.0	24.0			
	158.6	1070	1.6	8.83	9.0	16.0	17.0	24.0			
	192.0	883	1.8	7.29	9.0	15.0	18.0	23.0			
	217.4	780	1.9	6.44	8.0	15.0	19.0	22.0			
	250.0	678	1.7	5.60	8.0	14.0	18.0	21.0			
	303.0	560	2.1	4.62	8.0	13.0	18.0	20.0			
	343.1	494	2.3	4.08	8.0	13.0	18.0	20.0			
	381.5	445	2.4	3.67	7.0	13.0	18.0	19.0			
	407.0	417	2.4	3.44	7.0	12.0	18.0	19.0			
	433.4	391	2.5	3.23	7.0	12.0	18.0	19.0	PA/PF 52 160M2D / 160L2C	164	188
	503.6	337	2.6	2.78	7.0	12.0	18.0	18.0			
	105.9	1553	0.9	26.43	5.0	18.0	18.0	32.0			
	117.2	1404	1.0	23.89	5.0	18.0	12.0	29.0			
	129.3	1272	1.1	21.65	5.0	18.0	15.0	29.0			
	143.1	1150	1.3	19.57	5.0	18.0	9.0	27.0			
	157.2	1046	1.4	17.81	5.0	18.0	11.0	27.0			
	200.1	822	1.8	13.99	5.0	18.0	13.0	25.0			
	208.0	791	1.8	13.46	5.0	18.0	15.0	26.0			
	264.7	622	2.2	10.58	7.0	17.0	16.0	24.0			
	317.1	519	2.5	8.83	9.0	16.0	17.0	24.0	PA/PF 51 180M4A / 180M4B	166	166
	384.1	428	2.8	7.29	9.0	15.0	18.0	23.0			
	434.8	378	3.0	6.44	8.0	15.0	19.0	22.0			
	500.0	329	2.7	5.60	8.0	14.0	18.0	21.0			
	560.0	309	1.4	2.50	-	4.0	-	-			
	679.6	255	1.5	2.06	-	4.0	-	-	PA/PF 51 160M2D / 160L2C	125	166
	769.2	225	1.5	1.82	-	5.0	-	-			
	853.7	203	1.6	1.64	-	5.0	-	-			
	909.1	190	1.6	1.54	-	5.0	-	-			
	972.2	178	1.7	1.44	-	5.0	-	-			
	1129.0	153	1.8	1.24	-	5.0	-	-	PA/PF 42 160M2D / 160L2C	135	184
	693.1	246	1.3	4.04	-	-	-	-			
	845.9	202	1.9	3.31	-	-	-	-			
	979.0	174	2.0	2.86	-	-	-	-			
	1120.0	152	2.1	2.50	-	-	-	-			
	1359.2	125	2.3	2.06	-	-	-	-			
	1538.5	111	2.3	1.82	-	-	-	-			
	1707.3	100	2.5	1.64	-	-	-	-			
	1818.2	94	2.5	1.54	-	-	-	-			
	1944.4	88	2.6	1.44	-	-	-	-	PA/PF 41 160M2D / 160L2C	116	164
	2258.1	76	2.8	1.24	-	-	-	-			
	158.3	1039	0.9	17.69	1.0	4.0	9.0	3.0			
	185.4	887	1.1	15.10	1.0	4.0	3.0	2.0			
	194.7	845	1.0	14.38	1.0	4.0	5.0	2.0			
	228.2	721	1.3	12.27	1.0	4.0	7.0	3.0			
	274.8	599	1.5	10.19	1.0	4.0	8.0	3.0			
	329.4	499	1.6	8.50	1.0	4.0	8.0	3.0			
	385.1	427	1.9	7.27	1.0	4.0	9.0	4.0			
	452.3	364	2.2	6.19	1.0	4.0	9.0	4.0			
	522.4	315	2.0	5.36	1.0	4.0	9.0	4.0	PA/PF 103/52 180M4B / 180L4B	920	216
	611.4	269	2.2	4.58	1.0	4.0	9.0	4.0			
	717.9	229	2.3	3.90	1.0	4.0	9.0	4.0			
	800.0	206	2.5	3.50	1.0	4.0	9.0	4.0			
	872.3	189	2.5	3.21	1.0	4.0	9.0	4.0			
	927.2	177	2.6	3.02	1.0	4.0	9.0	4.0			
	909.1	188	1.2	3.08	-	-	-	-			
	1120.0	152	1.4	2.50	-	-	-	-			
	1308.4	130	1.4	2.14	-	-	-	-			
	1538.5	111	1.5	1.82	-	-	-	-			
	1717.8	99	1.5	1.63	-	-	-	-			
	1866.7	91	1.6	1.50	-	-	-	-			
	1985.8	86	1.6	1.41	-	-	-	-			
22.0	7.6	24956	0.8	184.77	81.0	66.0	120.0	120.0	PA/PF 103/52 180M4B / 180L4B	920	216
	9.0	20907	1.0	154.79	88.0	67.0	120.0	120.0			
	11.4	16579	1.2	122.75	94.0	67.0	120.0	120.0			
	13.3	14248	1.4	105.49	96.0	67.0	120.0	120.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
22.0	9.4	18622	0.8	296.56	81.0	66.0	120.0	120.0	PA/PF 103/52 180M2A	920	216
	11.4	15363	1.0	244.66	81.0	66.0	120.0	120.0			
	15.2	11602	1.3	184.77	81.0	66.0	120.0	120.0			
	18.1	9720	1.6	154.79	88.0	67.0	120.0	120.0			
	22.8	7708	2.0	122.75	94.0	67.0	120.0	120.0			
	26.5	6624	2.3	105.49	96.0	67.0	120.0	120.0	PA/PF 103 200L6C / 200L6D	904	209
	6.6	30457	0.8	136.52	100.0	65.0	120.0	120.0			
	8.0	25114	1.0	112.57	100.0	63.0	-	-			
	11.0	18173	1.2	81.46	101.0	62.0	120.0	115.0			
	12.8	15710	1.3	70.42	95.0	72.0	120.0	113.0			
	14.8	13553	1.5	60.75	95.0	72.0	120.0	110.0			
	17.0	11824	1.8	53.00	95.0	72.0	120.0	107.0			
	19.9	10113	2.1	45.33	95.0	72.0	120.0	104.0			
	23.7	8471	2.5	37.97	95.0	72.0	120.0	95.0			
	6.8	29252	0.8	207.36	92.0	67.0	120.0	120.0	PA/PF 103 180M4B / 180L4B	846	209
	10.3	19258	1.2	136.52	92.0	67.0	120.0	120.0			
	17.2	11491	1.8	81.46	99.0	66.0	120.0	115.0			
	19.9	9934	2.0	70.42	100.0	65.0	120.0	113.0			
	23.0	8570	2.3	60.75	100.0	63.0	120.0	110.0			
	26.4	7477	2.7	53.00	101.0	62.0	120.0	107.0	PA/PF 103 180M2A	846	209
	13.5	13982	1.3	207.36	92.0	67.0	120.0	120.0			
	20.5	9205	1.9	136.52	92.0	67.0	120.0	120.0			
	34.4	5493	2.8	81.46	99.0	66.0	120.0	115.0	PA/PF 93/52 180M4B / 180L4B	701	216
	13.0	14528	0.8	107.56	51.0	40.0	87.0	80.0			
	17.4	10101	0.9	160.87	51.0	40.0	-	-	PA/PF 93/52 180M2A	701	216
	22.0	7997	1.2	127.35	51.0	40.0	83.0	80.0			
	26.0	6754	1.4	107.56	51.0	40.0	87.0	80.0			
	12.4	16157	0.9	72.42	61.0	39.0	89.0	80.0	PA/PF 93 200L6C / 200L6D	685	205
	14.6	13756	1.0	61.66	63.0	39.0	91.0	80.0			
	16.7	11991	1.1	53.75	64.0	39.0	91.0	80.0			
	19.3	10403	1.2	46.63	64.0	38.0	92.0	80.0			
	22.8	8803	1.5	39.46	65.0	38.0	92.0	80.0			
	28.8	6970	1.8	31.24	66.0	37.0	91.0	80.0			
	33.2	6046	2.1	27.10	54.0	41.0	82.0	74.0			
	39.2	5116	2.5	22.93	54.0	41.0	81.0	72.0			
	46.9	4277	3.0	19.17	54.0	41.0	75.0	67.0			
	11.4	17347	0.8	122.97	48.0	36.0	81.0	80.0	PA/PF 93 180M4B / 180L4B	527	205
	12.8	15412	0.8	109.25	57.0	38.0	89.0	80.0			
	15.0	13180	1.1	93.43	57.0	38.0	87.0	80.0			
	19.3	10216	1.3	72.42	61.0	39.0	89.0	80.0			
	22.7	8698	1.5	61.66	63.0	39.0	91.0	80.0			
	26.0	7582	1.6	53.75	64.0	39.0	91.0	80.0			
	30.0	6578	1.9	46.63	64.0	38.0	92.0	80.0			
	35.5	5567	2.2	39.46	65.0	38.0	92.0	80.0			
	44.8	4407	2.8	31.24	66.0	37.0	91.0	80.0			
	14.9	12676	0.8	187.99	48.0	36.0	80.0	80.0	PA/PF 93 180M2A	527	205
	22.8	8292	1.3	122.97	48.0	36.0	81.0	80.0			
	25.6	7367	1.2	109.25	57.0	38.0	88.0	80.0			
	30.0	6300	1.7	93.43	57.0	38.0	87.0	80.0			
	38.7	4883	2.1	72.42	61.0	39.0	89.0	80.0			
	45.4	4158	2.3	61.66	63.0	39.0	91.0	80.0			
	52.1	3624	2.6	53.75	64.0	39.0	91.0	80.0			
	60.0	3144	2.9	46.63	64.0	38.0	92.0	80.0			
	25.4	8034	1.3	35.47	66.0	39.0	93.0	80.0	PA/PF 92 200L6C / 200L6D	674	204
	30.7	6636	1.7	29.30	66.0	39.0	-	-			
	54.6	3730	3.0	16.47	66.0	39.0	74.0	66.0	PA/PF 92 180M4B / 180L4B	616	204
	39.5	5110	1.9	35.47	66.0	39.0	93.0	80.0			
	78.9	2478	3.0	35.47	66.0	39.0	93.0	80.0	PA/PF 92 180M2A	616	204

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
22.0	17.5	11494	0.8	51.52	38.0	17.0	58.0	54.0	PA/PF 83 200L6C / 200L6D	506	201
	20.3	9892	0.9	44.34	41.0	18.0	60.0	53.0			
	23.1	8703	1.1	39.01	42.0	19.0	61.0	53.0			
	27.7	7257	1.2	32.53	43.0	19.0	61.0	52.0			
	32.2	6244	1.4	27.99	44.0	19.0	62.0	51.0			
	36.9	5439	1.5	24.38	44.0	19.0	62.0	50.0			
	42.9	4683	1.8	20.99	44.0	19.0	61.0	48.0	PA/PF 83 180M4B / 180L4B	448	201
	17.4	11374	0.8	80.63	25.0	14.0	51.0	53.0			
	19.9	9902	0.9	70.19	32.0	15.0	54.0	54.0			
	22.7	8717	1.0	61.79	35.0	16.0	56.0	54.0			
	27.2	7268	1.2	51.52	38.0	17.0	58.0	54.0			
	31.6	6255	1.4	44.34	41.0	18.0	60.0	53.0			
	35.9	5503	1.6	39.01	42.0	19.0	61.0	53.0			
	43.0	4589	1.9	32.53	43.0	19.0	61.0	52.0			
	50.0	3948	2.1	27.99	44.0	19.0	62.0	51.0			
	57.4	3439	2.3	24.38	44.0	19.0	62.0	50.0			
	66.7	2961	2.7	20.99	44.0	19.0	61.0	48.0	PA/PF 83 180M2A	448	201
	26.9	7011	1.0	103.97	25.0	14.0	54.0	64.0			
	34.7	5437	1.3	80.63	25.0	14.0	51.0	53.0			
	39.9	4733	1.4	70.19	32.0	15.0	54.0	54.0			
	45.3	4166	1.6	61.79	35.0	16.0	56.0	54.0			
	54.3	3474	2.0	51.52	38.0	17.0	58.0	54.0			
	63.1	2990	2.3	44.34	41.0	18.0	60.0	53.0			
	71.8	2630	2.6	39.01	42.0	19.0	61.0	53.0			
	86.1	2193	3.0	32.53	43.0	19.0	61.0	52.0	PA/PF 82 200L6C / 200L6D	498	200
	28.0	7270	1.0	32.10	45.0	19.0	62.0	54.0			
	33.8	6029	1.1	26.62	45.0	19.0	62.0	52.0			
	34.0	5995	1.2	26.47	45.0	19.0	-	-			
	41.0	4972	1.5	21.95	45.0	19.0	-	-			
	54.3	3751	1.8	16.56	45.0	19.0	58.0	46.0			
	63.0	3237	2.1	14.29	44.0	21.0	54.0	43.0	PA/PF 82 180M4B / 180L4B	440	200
	75.9	2684	2.8	11.85	44.0	21.0	52.0	41.0			
	28.7	7025	0.8	48.76	45.0	19.0	61.0	60.0			
	43.6	4625	1.4	32.10	45.0	19.0	62.0	54.0	PA/PF 82 180M2A	440	200
	52.6	3835	1.7	26.62	45.0	19.0	62.0	52.0			
	84.5	2386	2.8	16.56	45.0	19.0	58.0	46.0			
	57.4	3407	1.2	48.76	45.0	19.0	61.0	60.0			
	69.3	2825	1.1	40.43	45.0	19.0	62.0	58.0	PA/PF 73 200L6C / 200L6D	399	197
	87.2	2243	2.2	32.10	45.0	19.0	62.0	54.0			
	105.2	1860	2.6	26.62	45.0	19.0	62.0	52.0			
	31.7	6325	0.8	28.35	22.0	7.0	32.0	29.0			
	38.5	5218	1.0	23.39	24.0	8.0	33.0	29.0	PA/PF 73 180M4B / 180L4B	341	197
	43.6	4609	1.1	20.66	11.0	4.0	27.0	26.0			
	50.0	4018	1.3	18.01	11.0	4.0	28.0	26.0			
	26.8	7375	0.8	52.28	15.0	4.0	29.0	31.0			
	30.7	6443	0.8	45.67	15.0	4.0	24.0	28.0			
	37.2	5315	0.9	37.68	19.0	6.0	28.0	29.0			
	42.1	4693	1.1	33.27	21.0	6.0	30.0	29.0			
	49.4	3999	1.3	28.35	22.0	7.0	32.0	29.0			
	59.9	3300	1.5	23.39	24.0	8.0	33.0	29.0			
	67.8	2914	1.7	20.66	11.0	4.0	27.0	26.0			
	77.7	2541	2.0	18.01	11.0	4.0	28.0	26.0	PA/PF 73 180M2A	341	197
	37.4	5044	0.8	74.80	15.0	4.0	-	-			
	46.3	4074	1.1	60.42	15.0	4.0	25.0	30.0			
	53.6	3525	1.2	52.28	15.0	4.0	29.0	31.0			
	61.3	3080	1.3	45.67	15.0	4.0	24.0	28.0			
	74.3	2541	1.5	37.68	19.0	6.0	28.0	29.0			
	84.2	2243	1.7	33.27	21.0	6.0	30.0	29.0			
	98.8	1912	2.0	28.35	22.0	7.0	32.0	29.0			
	119.7	1577	2.4	23.39	24.0	8.0	33.0	29.0			
	135.5	1393	2.7	20.66	11.0	4.0	20.0	23.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
22.0	41.6	4901	1.0	21.64	25.0	8.0	34.0	29.0	PA/PF 72 200L6C / 200L6D	389	196
	53.5	3812	1.1	16.83	25.0	9.0	34.0	28.0			
	62.8	3246	1.3	14.33	25.0	9.0	34.0	28.0			
	72.1	2829	1.5	12.49	25.0	9.0	34.0	27.0			
	83.0	2455	2.0	10.84	24.0	9.0	33.0	26.0			
	95.1	2143	2.3	9.46	26.0	9.0	29.0	24.0			
	109.6	1860	2.6	8.21	26.0	9.0	29.0	24.0			
	129.7	1572	2.9	6.94	26.0	9.0	29.0	23.0			
	140.2	1454	2.0	6.42	26.0	9.0	27.0	22.0			
	160.7	1268	2.3	5.60	26.0	9.0	27.0	22.0			
	185.2	1101	2.8	4.86	26.0	9.0	26.0	21.0			
	219.0	931	3.0	4.11	26.0	9.0	25.0	20.0			
	49.0	4117	1.0	28.58	23.0	8.0	33.0	30.0	PA/PF 72 180M4B / 180L4B	331	196
	64.5	3129	1.3	21.72	25.0	8.0	34.0	29.0			
	64.7	3118	1.4	21.64	25.0	8.0	37.0	31.0			
	83.2	2425	1.7	16.83	25.0	9.0	34.0	28.0			
	97.7	2065	2.0	14.33	25.0	9.0	34.0	28.0			
	112.1	1799	2.3	12.49	25.0	9.0	34.0	27.0			
	129.2	1562	3.0	10.84	24.0	9.0	33.0	26.0			
	218.1	925	3.0	6.42	26.0	9.0	27.0	22.0			
	64.1	3054	1.0	43.70	23.0	8.0	37.0	35.0	PA/PF 72 180M2A	331	196
	84.6	2311	1.1	33.08	23.0	8.0	39.0	34.0			
	98.0	1997	1.5	28.58	23.0	8.0	33.0	30.0			
	128.9	1518	2.0	21.72	25.0	8.0	34.0	29.0			
	129.4	1512	2.3	21.64	25.0	9.0	37.0	31.0			
	166.4	1176	2.6	16.83	25.0	9.0	34.0	28.0			
	53.2	3714	0.9	26.33	14.0	7.0	21.0	22.0	PA/PF 63 180M4B / 180L4B	260	193
	63.7	3099	1.0	21.97	16.0	7.0	22.0	22.0			
	67.3	2936	1.1	20.81	17.0	8.0	24.0	23.0			
	80.6	2449	1.3	17.36	11.0	7.0	-	-			
	106.3	1775	1.4	26.33	14.0	7.0	21.0	22.0	PA/PF 63 180M2A	260	193
	127.4	1481	1.6	21.97	16.0	7.0	22.0	22.0			
	134.6	1403	1.7	20.81	17.0	8.0	24.0	23.0			
	161.3	1171	2.1	17.36	11.0	7.0	-	-			
	64.7	3151	1.0	13.91	20.0	9.0	26.0	22.0	PA/PF 62 200L6C / 200L6D	320	192
	77.6	2627	1.2	11.60	20.0	9.0	26.0	22.0			
	85.6	2383	1.4	10.52	20.0	9.0	26.0	21.0			
	102.5	1989	1.6	8.78	20.0	9.0	26.0	21.0			
	119.2	1710	1.9	7.55	20.0	9.0	25.0	20.0			
	141.7	1438	1.4	6.35	20.0	8.0	24.0	19.0			
	170.1	1198	1.6	5.29	20.0	8.0	24.0	19.0			
	197.4	1033	2.1	4.56	19.0	10.0	23.0	18.0			
	221.7	920	2.2	4.06	19.0	10.0	23.0	18.0			
	230.2	886	2.4	3.91	19.0	10.0	23.0	18.0			
	241.9	843	2.5	3.72	19.0	10.0	23.0	17.0			
	271.1	752	2.8	3.32	19.0	10.0	21.0	16.0			
	77.1	2616	1.2	18.16	18.0	8.0	25.0	23.0	PA/PF 62 180M4B / 180L4B	262	192
	88.6	2276	1.3	15.80	18.0	9.0	26.0	23.0			
	100.6	2004	1.5	13.91	19.0	9.0	26.0	22.0			
	120.7	1671	1.8	11.60	19.0	9.0	26.0	22.0			
	133.1	1516	2.0	10.52	20.0	9.0	26.0	21.0			
	159.5	1265	2.4	8.78	20.0	9.0	26.0	21.0			
	185.4	1088	2.9	7.55	20.0	9.0	25.0	20.0			
	220.5	915	2.1	6.35	20.0	8.0	24.0	19.0			
	264.7	762	2.5	5.29	20.0	8.0	24.0	19.0			
	75.5	2591	0.9	37.08	18.0	8.0	25.0	27.0	PA/PF 62 180M2A	262	192
	154.2	1269	1.8	18.16	18.0	8.0	25.0	23.0			
	177.2	1104	2.1	15.80	18.0	9.0	26.0	23.0			
	201.3	972	2.4	13.91	19.0	9.0	26.0	22.0			
	241.4	811	2.9	11.60	19.0	9.0	26.0	22.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
22.0	104.0	1939	1.0	13.46	2.0	15.0	10.0	25.0	PA/PF 52 180M4B / 180L4B	201	188
	132.3	1524	1.2	10.58	2.0	15.0	13.0	24.0			
	158.6	1272	1.3	8.83	5.0	15.0	14.0	23.0			
	192.0	1050	1.5	7.29	7.0	14.0	16.0	22.0			
	217.4	928	1.6	6.44	8.0	14.0	16.0	22.0			
	250.0	807	1.5	5.60	8.0	13.0	15.0	21.0			
	303.0	666	1.8	4.62	7.0	13.0	16.0	20.0			
	343.1	588	1.9	4.08	7.0	12.0	17.0	19.0			
	381.5	529	2.0	3.67	7.0	12.0	17.0	19.0			
	407.0	496	2.0	3.44	7.0	12.0	17.0	19.0			
	433.4	465	2.1	3.23	7.0	12.0	17.0	18.0	PA/PF 52 180M2A	201	188
	503.6	401	2.2	2.78	7.0	11.0	17.0	18.0			
	208.0	941	1.5	13.46	2.0	15.0	10.0	25.0			
	264.7	739	1.8	10.58	2.0	15.0	13.0	24.0			
	317.1	617	2.1	8.83	5.0	15.0	14.0	23.0			
	384.1	509	2.3	7.29	7.0	14.0	16.0	22.0			
	434.8	450	2.5	6.44	8.0	14.0	16.0	22.0			
	500.0	391	2.3	5.60	8.0	13.0	15.0	21.0			
	606.1	323	2.8	4.62	7.0	13.0	16.0	20.0			
	686.3	285	3.0	4.08	7.0	12.0	17.0	19.0			
	560.0	368	1.2	2.50	-	3.0	-	-	PA/PF 51 180M4B / 180L4B	166	166
	679.6	303	1.3	2.06	-	3.0	-	-			
	769.2	268	1.3	1.82	-	5.0	-	-			
	853.7	241	1.3	1.64	-	5.0	-	-			
	909.1	226	1.4	1.54	-	5.0	-	-			
	972.2	212	1.4	1.44	-	5.0	-	-	PA/PF 51 180M2A	166	166
	1129.0	182	1.5	1.24	-	5.0	-	-			
	1120.0	181	1.8	2.50	-	-	-	-			
	1359.2	149	1.9	2.06	-	-	-	-			
	1538.5	132	2.0	1.82	-	-	-	-			
	1707.3	119	2.1	1.64	-	-	-	-			
	1818.2	112	2.1	1.54	-	-	-	-			
	1944.4	104	2.2	1.44	-	-	-	-			
	2258.1	90	2.3	1.24	-	-	-	-	PA/PF 103 225M6B / 225M6C	977	209
30.0	11.0	24782	0.9	81.46	100.0	58.0	120.0	107.0			
	12.8	21423	1.0	70.42	100.0	57.0	120.0	105.0			
	14.8	18481	1.1	60.75	101.0	55.0	120.0	104.0			
	17.0	16124	1.3	53.00	92.0	67.0	120.0	101.0			
	19.9	13790	1.5	45.33	92.0	67.0	120.0	99.0			
	23.7	11551	1.8	37.97	92.0	67.0	120.0	95.0			
	30.4	9011	2.3	29.62	92.0	67.0	111.0	88.0			
	35.5	7706	2.7	25.33	92.0	67.0	107.0	86.0			
	10.3	26262	0.9	136.52	95.0	59.0	120.0	120.0	PA/PF 103 200L4C / 200L4D	904	209
	12.4	21654	1.1	112.57	95.0	59.0	-	-			
	17.2	15670	1.3	81.46	95.0	59.0	120.0	107.0			
	19.9	13546	1.5	70.42	97.0	59.0	120.0	105.0			
	23.0	11686	1.7	60.75	98.0	58.0	120.0	104.0			
	26.4	10195	2.0	53.00	100.0	58.0	120.0	101.0			
	30.9	8720	2.3	45.33	100.0	57.0	120.0	99.0			
	36.9	7304	2.7	37.97	101.0	55.0	120.0	95.0	PA/PF 103 200L2B / 200L2C	904	209
	20.5	12553	1.4	136.52	95.0	59.0	120.0	120.0			
	24.9	10351	1.7	112.57	95.0	59.0	-	-			
	34.4	7490	2.1	81.46	95.0	59.0	120.0	107.0			
	39.8	6475	2.3	70.42	97.0	59.0	120.0	105.0			
	46.1	5586	2.7	60.75	98.0	58.0	120.0	104.0	PA/PF 93 225M6B / 225M6C	758	205
	16.7	16352	0.8	53.75	61.0	34.0	84.0	80.0			
	19.3	14186	0.9	46.63	62.0	34.0	84.0	80.0			
	22.8	12005	1.1	39.46	64.0	34.0	84.0	79.0			
	28.8	9504	1.3	31.24	65.0	34.0	83.0	76.0			
	33.2	8244	1.6	27.10	65.0	33.0	82.0	74.0			
	39.2	6976	1.8	22.93	66.0	33.0	81.0	72.0			
	46.9	5832	2.2	19.17	48.0	36.0	75.0	67.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
30.0	19.3	13931	1.0	72.42	55.0	32.0	80.0	80.0	PA/PF 93 200L4C / 200L4D	685	205
	22.7	11861	1.1	61.66	59.0	33.0	83.0	80.0			
	26.0	10340	1.2	53.75	61.0	34.0	84.0	80.0			
	30.0	8970	1.4	46.63	62.0	34.0	84.0	80.0			
	35.5	7591	1.6	39.46	64.0	34.0	84.0	79.0			
	44.8	6009	2.0	31.24	65.0	34.0	83.0	76.0			
	51.7	5213	2.3	27.10	65.0	33.0	82.0	74.0			
	61.1	4411	2.8	22.93	66.0	33.0	81.0	72.0			
	22.8	11307	0.9	122.97	55.0	32.0	81.0	80.0	PA/PF 93 200L2B / 200L2C	685	205
	38.7	6659	1.5	72.42	55.0	32.0	80.0	80.0			
	45.4	5670	1.7	61.66	59.0	33.0	83.0	80.0			
	52.1	4942	1.9	53.75	61.0	34.0	84.0	80.0			
	60.0	4288	2.2	46.63	62.0	34.0	84.0	80.0			
	71.0	3628	2.6	39.46	64.0	34.0	84.0	79.0			
	30.7	9049	1.3	29.30	66.0	39.0	-	-	PA/PF 92 225M6B / 225M6C	747	204
	54.6	5087	2.2	16.47	66.0	39.0	74.0	66.0			
	62.7	4435	2.6	14.36	66.0	39.0	72.0	64.0			
	72.6	3827	2.9	12.39	66.0	39.0	70.0	61.0			
	115.7	2403	2.7	7.78	66.0	39.0	-	-			
	39.5	6968	1.4	35.47	66.0	39.0	93.0	80.0	PA/PF 92 200L4C / 200L4D	674	204
	47.8	5756	1.9	29.30	66.0	39.0	-	-			
	78.9	3380	2.2	35.47	66.0	39.0	80.0	92.0	PA/PF 92 200L2B / 200L2C	674	204
	95.6	2792	2.9	29.30	66.0	39.0	-	-			
	23.1	11868	0.8	39.01	38.0	14.0	52.0	47.0	PA/PF 83 225M6B / 225M6C	579	201
	27.7	9896	0.9	32.53	41.0	15.0	-	-			
	32.2	8515	1.0	27.99	42.0	16.0	55.0	47.0			
	36.9	7417	1.1	24.38	43.0	16.0	55.0	46.0			
	42.9	6386	1.3	20.99	43.0	17.0	55.0	45.0			
	22.7	11886	0.8	61.79	24.0	10.0	41.0	45.0	PA/PF 83 200L4C / 200L4D	506	201
	27.2	9911	0.9	51.52	31.0	12.0	46.0	47.0			
	31.6	8529	1.0	44.34	36.0	13.0	50.0	47.0			
	35.9	7504	1.2	39.01	38.0	14.0	52.0	47.0			
	43.0	6258	1.4	32.53	41.0	15.0	54.0	47.0			
	50.0	5384	1.5	27.99	42.0	16.0	55.0	47.0			
	57.4	4690	1.7	24.38	43.0	16.0	55.0	46.0			
	66.7	4038	2.0	20.99	43.0	17.0	55.0	45.0			
	45.3	5682	1.2	61.79	24.0	10.0	41.0	45.0	PA/PF 83 200L2B / 200L2C	506	201
	54.3	4737	1.4	51.52	31.0	12.0	46.0	47.0			
	63.1	4077	1.7	44.34	36.0	13.0	50.0	47.0			
	71.8	3587	1.9	39.01	38.0	14.0	52.0	47.0			
	86.1	2991	2.2	32.53	41.0	15.0	54.0	47.0			
	100.0	2574	2.4	27.99	42.0	16.0	55.0	47.0			
	114.8	2242	2.7	24.38	43.0	16.0	55.0	46.0			
	34.0	8175	0.8	26.47	43.0	17.0	-	-	PA/PF 82 225M6B / 225M6C	571	200
	41.0	6779	1.1	21.95	43.0	17.0	-	-			
	54.3	5115	1.4	16.56	43.0	17.0	55.0	44.0			
	63.0	4414	1.6	14.29	43.0	17.0	54.0	43.0			
	75.9	3660	2.0	11.85	45.0	19.0	52.0	41.0			
	87.1	3190	2.3	10.33	45.0	19.0	-	-			
	101.8	2730	2.5	8.84	45.0	19.0	-	-			
	121.6	2286	2.9	7.40	45.0	19.0	46.0	36.0			
	144.9	1918	2.4	6.21	45.0	19.0	43.0	35.0			
	43.6	6306	1.0	32.10	43.0	17.0	-	-	PA/PF 82 200L4C / 200L4D	498	200
	52.6	5230	1.2	26.62	43.0	17.0	-	-			
	52.9	5200	1.3	26.47	43.0	17.0	-	-			
	63.8	4312	1.7	21.95	43.0	17.0	-	-			
	84.5	3253	2.0	16.56	43.0	17.0	55.0	44.0			
	98.0	2807	2.3	14.29	43.0	17.0	54.0	43.0			
	87.2	3059	1.6	32.10	43.0	17.0	62.0	54.0	PA/PF 82 200L2B / 200L2C	498	200
	105.2	2536	1.9	26.62	43.0	17.0	62.0	52.0			
	105.8	2522	2.0	26.47	43.0	17.0	-	-			
	127.6	2091	2.6	21.95	43.0	17.0	-	-			
	43.6	6285	0.8	20.66	18.0	6.0	27.0	26.0	PA/PF 73 225M6B / 225M6C	472	200
	50.0	5479	1.0	18.01	20.0	6.0	28.0	26.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
30.0	42.1	6400	0.8	33.27	11.0	3.0	18.0	24.0	PA/PF 73 200L4C / 200L4D	399	197
	49.4	5454	0.9	28.35	14.0	4.0	22.0	25.0			
	59.9	4499	1.1	23.39	17.0	5.0	25.0	25.0			
	67.8	3974	1.3	20.66	18.0	6.0	27.0	26.0			
	77.7	3464	1.4	18.01	20.0	6.0	28.0	26.0			
	61.3	4199	1.0	45.67	11.0	3.0	24.0	28.0	PA/PF 73 200L2B / 200L2C	399	197
	74.3	3465	1.1	37.68	11.0	3.0	28.0	29.0			
	84.2	3059	1.2	33.27	11.0	3.0	18.0	24.0			
	98.8	2607	1.5	28.35	14.0	4.0	22.0	25.0			
	119.7	2151	1.8	23.39	17.0	5.0	25.0	25.0			
	135.5	1900	2.0	20.66	18.0	6.0	27.0	26.0			
	155.5	1656	2.3	18.01	20.0	6.0	28.0	26.0			
	53.5	5198	0.8	16.83	21.0	7.0	29.0	26.0	PA/PF 72 225M6B / 225M6C	462	196
	62.8	4426	1.0	14.33	21.0	7.0	30.0	26.0			
	72.1	3858	1.1	12.49	22.0	8.0	30.0	25.0			
	83.0	3348	1.5	10.84	21.0	8.0	29.0	25.0			
	95.1	2922	1.7	9.46	22.0	8.0	29.0	24.0			
	109.6	2536	1.9	8.21	21.0	8.0	29.0	24.0			
	129.7	2143	2.1	6.94	20.0	7.0	29.0	23.0			
	140.2	1983	1.5	6.42	20.0	7.0	27.0	22.0			
	160.7	1730	1.7	5.60	20.0	7.0	27.0	22.0			
	185.2	1501	2.0	4.86	20.0	7.0	26.0	21.0			
	219.0	1269	2.2	4.11	23.0	8.0	25.0	20.0			
	233.2	1192	2.3	3.86	23.0	8.0	23.0	19.0			
	261.6	1062	2.4	3.44	23.0	8.0	23.0	18.0			
	276.1	1007	2.4	3.26	23.0	8.0	-	-			
	326.1	852	2.6	2.76	23.0	8.0	-	-			
	64.7	4251	1.1	21.64	21.0	7.0	37.0	31.0	PA/PF 72 200L4C / 200L4D	389	196
	83.2	3306	1.2	16.83	21.0	7.0	29.0	26.0			
	97.7	2815	1.4	14.33	21.0	7.0	30.0	26.0			
	112.1	2454	1.7	12.49	22.0	8.0	30.0	25.0			
	129.2	2130	2.2	10.84	21.0	8.0	29.0	25.0			
	148.0	1858	2.5	9.46	22.0	8.0	29.0	24.0			
	170.5	1613	2.9	8.21	21.0	8.0	29.0	24.0			
	218.1	1261	2.2	6.42	20.0	7.0	27.0	22.0			
	250.0	1100	2.6	5.60	20.0	7.0	27.0	22.0			
	288.1	955	3.0	4.86	20.0	7.0	26.0	21.0			
	98.0	2723	1.1	28.58	21.0	7.0	33.0	30.0	PA/PF 72 200L2B / 200L2C	389	196
	129.4	2062	1.7	21.64	21.0	7.0	34.0	29.0			
	166.4	1604	1.9	16.83	21.0	7.0	29.0	26.0			
	195.4	1365	2.3	14.33	21.0	7.0	30.0	26.0			
	224.2	1190	2.6	12.49	27.0	8.0	-	-			
	64.7	4296	0.8	13.91	18.0	7.0	21.0	20.0	PA/PF 62 225M6B / 225M6C	393	192
	77.6	3583	0.9	11.60	18.0	7.0	22.0	20.0			
	85.6	3249	1.0	10.52	18.0	7.0	21.0	19.0			
	102.5	2712	1.2	8.78	19.0	8.0	22.0	19.0			
	119.2	2332	1.4	7.55	19.0	8.0	22.0	19.0			
	141.7	1961	1.0	6.35	18.0	7.0	21.0	18.0			
	170.1	1634	1.2	5.29	18.0	7.0	21.0	18.0			
	197.4	1408	1.6	4.56	18.0	7.0	21.0	17.0			
	221.7	1254	1.6	4.06	18.0	7.0	21.0	17.0			
	230.2	1208	1.7	3.91	18.0	7.0	21.0	17.0			
	241.9	1149	1.9	3.72	17.0	7.0	21.0	17.0			
	271.1	1025	2.0	3.32	17.0	7.0	21.0	16.0			
	303.0	917	2.2	2.97	18.0	8.0	20.0	16.0			
	100.6	2733	1.1	13.91	18.0	7.0	21.0	20.0	PA/PF 62 200L4C / 200L4D	320	192
	120.7	2279	1.4	11.60	18.0	7.0	22.0	20.0			
	133.1	2067	1.5	10.52	18.0	7.0	21.0	19.0			
	159.5	1725	1.7	8.78	19.0	8.0	22.0	19.0			
	185.4	1483	2.1	7.55	19.0	8.0	22.0	19.0			
	220.5	1248	1.5	6.35	18.0	7.0	21.0	18.0			
	264.7	1039	1.8	5.29	18.0	7.0	21.0	18.0			
	307.0	896	2.3	4.56	18.0	7.0	21.0	17.0			
	344.8	798	2.4	4.06	18.0	7.0	21.0	17.0			
	358.1	768	2.6	3.91	18.0	7.0	21.0	17.0			
	376.3	731	2.8	3.72	17.0	7.0	21.0	17.0			
	421.7	652	3.0	3.32	17.0	7.0	21.0	16.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
30.0	201.3 241.4 266.2 318.9 440.9 529.3	1325 1105 1002 837 605 504	1.8 2.1 2.3 2.7 2.4 2.8	13.91 11.60 10.52 8.78 6.35 5.29	18.0 18.0 18.0 19.0 18.0 18.0	7.0 7.0 7.0 8.0 7.0 7.0	16.0 18.0 18.0 19.0 19.0 19.0	18.0 18.0 18.0 18.0 17.0 17.0	PA/PF 62 200L2B / 200L2C	320	192
	343.1	802	1.4	4.08	2.0	15.0	17.0	19.0	PA/PF 52 200L4C / 200L4D		
37.0	12.4 17.2 19.9 23.0 26.4 30.9 36.9 47.3	26707 19326 16707 14413 12574 10755 9008 7027	0.9 1.1 1.2 1.4 1.6 1.9 2.2 2.8	112.57 81.46 70.42 60.75 53.00 45.33 37.97 29.62	91.0 91.0 94.0 96.0 98.0 99.0 100.0 101.0	53.0 53.0 54.0 54.0 54.0 53.0 52.0 51.0	- 120.0 120.0 120.0 120.0 119.0 115.0 111.0	- 100.0 99.0 98.0 96.0 95.0 92.0 88.0	PA/PF 103 225M4A / 225M4B	977	209
	20.5 24.9 34.4 39.8 46.1 52.8 61.8	15482 12766 9238 7986 6889 6010 5141	1.1 1.4 1.7 1.9 2.2 2.5 3.0	136.52 112.57 81.46 70.42 60.75 53.00 45.33	91.0 91.0 91.0 94.0 96.0 98.0 99.0	53.0 53.0 53.0 54.0 54.0 54.0 53.0	120.0 - 120.0 120.0 120.0 120.0 119.0	120.0 - 100.0 99.0 98.0 96.0 95.0	PA/PF 103 200L2C / 200L2D	904	209
37.0	19.3 22.7 26.0 30.0 35.5 44.8 51.7 61.1 73.0	17182 14629 12752 11063 9362 7412 6429 5440 4548	0.8 0.9 1.0 1.1 1.3 1.6 1.9 2.2 2.7	72.42 61.66 53.75 46.63 39.46 31.24 27.10 22.93 19.17	47.0 54.0 57.0 60.0 62.0 64.0 65.0 65.0 66.0	26.0 28.0 29.0 30.0 31.0 31.0 31.0 31.0 30.0	64.0 70.0 72.0 75.0 77.0 77.0 77.0 76.0 75.0	76.0 77.0 76.0 76.0 75.0 73.0 71.0 69.0 67.0	PA/PF 93 225M4A / 225M4B	758	205
	22.8 38.7 45.4 52.1 60.0 71.0 89.6 103.0	13945 8213 6993 6095 5288 4475 3543 3073	0.8 1.2 1.4 1.5 1.8 2.1 2.6 3.0	122.97 72.42 61.66 53.75 46.63 39.46 31.24 27.10	47.0 47.0 54.0 57.0 60.0 62.0 64.0 65.0	26.0 26.0 28.0 29.0 30.0 31.0 31.0 31.0	81.0 64.0 70.0 72.0 75.0 77.0 77.0 77.0	80.0 76.0 77.0 76.0 76.0 75.0 73.0 71.0	PA/PF 93 200L2C / 200L2D	685	205
37.0	47.8 85.0	7099 3991	1.5 2.7	29.30 16.47	66.0 66.0	30.0 30.0	- 74.0	- 66.0	PA/PF 92 225M4A / 225M4B	747	204
	78.9 95.6	4168 3443	1.8 2.4	35.47 29.30	66.0 66.0	30.0 30.0	93.0 -	80.0 -	PA/PF 92 200L2C / 200L2D	674	204
37.0	31.6 35.9 43.0 50.0 57.4 66.7	10520 9255 7718 6641 5784 4980	0.8 1.0 1.1 1.2 1.4 1.6	44.34 39.01 32.53 27.99 24.38 20.99	28.0 32.0 35.0 37.0 38.0 39.0	9.0 11.0 12.0 13.0 14.0 15.0	39.0 42.0 46.0 48.0 49.0 50.0	42.0 43.0 43.0 43.0 43.0 43.0	PA/PF 83 225M4A / 225M4B	579	201
	45.3 54.3 63.1 71.8 86.1 100.0 114.8 133.4	7007 5843 5028 4424 3689 3174 2765 2380	1.0 1.2 1.3 1.5 1.8 1.9 2.2 2.6	61.79 51.52 44.34 39.01 32.53 27.99 24.38 20.99	28.0 28.0 28.0 32.0 35.0 37.0 38.0 39.0	9.0 9.0 9.0 11.0 12.0 13.0 14.0 15.0	41.0 46.0 39.0 42.0 46.0 48.0 49.0 50.0	45.0 47.0 42.0 43.0 43.0 43.0 43.0 43.0	PA/PF 83 200L2C / 200L2D	506	201
37.0	52.9 63.8 84.5 98.0 118.1 135.5 225.4	6414 5318 4012 3462 2871 2503 1505	1.0 1.4 1.6 1.9 2.5 2.7 2.9	26.47 21.95 16.56 14.29 11.85 10.33 6.21	40.0 40.0 40.0 40.0 39.0 39.0 35.0	15.0 15.0 15.0 15.0 15.0 15.0 14.0	- - 51.0 50.0 49.0 49.0 43.0	- - 42.0 41.0 40.0 39.0 35.0	PA/PF 82 225M4A / 225M4B	571	200

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
37.0	87.2	3772	1.3	32.10	40.0	15.0	-	-	PA/PF 82 200L2C / 200L2D	498	200
	105.2	3128	1.5	26.62	40.0	15.0	-	-			
	105.8	3111	1.6	26.47	40.0	15.0	-	-			
	127.6	2580	2.1	21.95	40.0	15.0	-	-			
	169.1	1946	2.6	16.56	40.0	15.0	51.0	42.0			
	195.9	1679	3.0	14.29	40.0	15.0	50.0	41.0			
	59.9	5549	0.9	23.39	11.0	3.0	18.0	22.0	PA/PF 73 225M4A / 225M4B	472	197
	67.8	4902	1.0	20.66	13.0	4.0	20.0	23.0			
	77.7	4273	1.2	18.01	15.0	5.0	23.0	23.0			
	61.3	5179	0.8	45.67	11.0	3.0	24.0	28.0	PA/PF 73 200L2C / 200L2D	399	197
	74.3	4273	0.9	37.68	11.0	3.0	24.0	28.0			
	84.2	3773	1.0	33.27	11.0	3.0	18.0	24.0			
	98.8	3215	1.2	28.35	11.0	3.0	22.0	25.0			
	119.7	2653	1.4	23.39	11.0	3.0	18.0	22.0			
	135.5	2343	1.6	20.66	13.0	4.0	20.0	23.0			
	155.5	2042	1.9	18.01	15.0	5.0	23.0	23.0			
	83.2	4078	1.0	16.83	17.0	5.0	24.0	24.0	PA/PF 72 225M4A / 225M4B	462	196
	97.7	3472	1.2	14.33	18.0	6.0	26.0	24.0			
	112.1	3026	1.3	12.49	19.0	6.0	27.0	24.0			
	129.2	2627	1.8	10.84	19.0	6.0	26.0	23.0			
	148.0	2292	2.1	9.46	19.0	7.0	27.0	23.0			
	170.5	1989	2.3	8.21	20.0	7.0	27.0	22.0			
	201.7	1682	2.6	6.94	20.0	7.0	27.0	22.0			
	218.1	1556	1.8	6.42	18.0	6.0	25.0	21.0			
	250.0	1357	2.1	5.60	19.0	7.0	25.0	21.0			
	288.1	1178	2.5	4.86	18.0	7.0	25.0	20.0			
	340.6	996	2.7	4.11	18.0	7.0	25.0	20.0			
	362.7	935	2.8	3.86	21.0	7.0	23.0	19.0			
	407.0	834	2.9	3.44	21.0	7.0	23.0	18.0			
	429.4	790	3.0	3.26	21.0	7.0	-	-			
	98.0	3359	0.9	28.58	17.0	5.0	33.0	30.0	PA/PF 72 200L2C / 200L2D	389	196
	129.4	2543	1.3	21.64	17.0	5.0	34.0	29.0			
	166.4	1978	1.6	16.83	17.0	5.0	24.0	24.0			
	195.4	1684	1.8	14.33	18.0	6.0	26.0	24.0			
	224.2	1468	2.1	12.49	19.0	6.0	27.0	24.0			
	258.3	1274	2.8	10.84	19.0	6.0	26.0	23.0			
	436.1	754	2.8	6.42	18.0	6.0	25.0	21.0			
	100.6	3370	0.9	13.91	14.0	5.0	16.0	18.0	PA/PF 62 225M4A / 225M4B	393	196
	120.7	2811	1.1	11.60	16.0	6.0	18.0	18.0			
	133.1	2549	1.2	10.52	15.0	6.0	18.0	18.0			
	159.5	2127	1.4	8.78	16.0	6.0	19.0	18.0			
	185.4	1829	1.7	7.55	17.0	7.0	20.0	18.0			
	220.5	1539	1.3	6.35	16.0	6.0	19.0	17.0			
	264.7	1282	1.5	5.29	16.0	7.0	19.0	17.0			
	307.0	1105	1.9	4.56	16.0	7.0	20.0	16.0			
	344.8	984	1.9	4.06	16.0	7.0	20.0	16.0			
	358.1	947	2.1	3.91	16.0	7.0	20.0	16.0			
	376.3	901	2.3	3.72	16.0	7.0	20.0	16.0			
	421.7	804	2.5	3.32	16.0	7.0	19.0	16.0			
	471.4	720	2.7	2.97	16.0	7.0	19.0	15.0			
	201.3	1635	1.4	13.91	14.0	5.0	16.0	18.0	PA/PF 62 200L2C / 200L2D	320	196
	241.4	1363	1.7	11.60	16.0	6.0	18.0	18.0			
	266.2	1236	1.9	10.52	15.0	6.0	18.0	18.0			
	318.9	1032	2.2	8.78	16.0	6.0	19.0	18.0			
	370.9	887	2.7	7.55	17.0	7.0	20.0	18.0			
	440.9	746	2.0	6.35	16.0	6.0	19.0	17.0			
	529.3	622	2.3	5.29	16.0	7.0	19.0	17.0			
	614.0	536	3.0	4.56	16.0	7.0	20.0	16.0			
	689.7	477	3.0	4.06	16.0	7.0	20.0	16.0			
45.0	17.2	23505	0.9	81.46	90.0	48.0	120.0	100.0	PA/PF 103 225M4B / 225M4C	977	209
	19.9	20319	1.0	70.42	90.0	48.0	108.0	91.0			
	23.0	17529	1.1	60.75	93.0	49.0	110.0	91.0			
	26.4	15293	1.3	53.00	96.0	49.0	112.0	91.0			
	30.9	13080	1.5	45.33	97.0	50.0	113.0	90.0			
	36.9	10956	1.8	37.97	99.0	49.0	111.0	88.0			
	47.3	8547	2.3	29.62	100.0	48.0	107.0	85.0			
	55.3	7309	2.7	25.33	101.0	48.0	104.0	83.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
45.0	24.9	15526	1.1	112.57	90.0	48.0	-	-	PA/PF 103 225M2B	977	209
	34.4	11235	1.4	81.46	90.0	48.0	120.0	100.0			
	39.8	9713	1.6	70.42	90.0	48.0	108.0	91.0			
	46.1	8379	1.8	60.75	93.0	49.0	110.0	91.0			
	52.8	7310	2.1	53.00	96.0	49.0	112.0	91.0			
	61.8	6252	2.4	45.33	97.0	50.0	113.0	90.0			
	73.7	5237	2.9	37.97	99.0	49.0	111.0	88.0			
	26.0	15509	0.8	53.75	52.0	24.0	60.0	70.0	PA/PF 93 225M4B / 225M4C	758	205
	30.0	13455	0.9	46.63	56.0	26.0	64.0	70.0			
	35.5	11386	1.1	39.46	59.0	27.0	67.0	70.0			
	44.8	9014	1.4	31.24	62.0	28.0	70.0	69.0			
	51.7	7820	1.6	27.10	63.0	28.0	71.0	68.0			
	61.1	6616	1.8	22.93	64.0	29.0	71.0	67.0			
	73.0	5531	2.2	19.17	65.0	28.0	71.0	65.0			
	38.7	9988	1.0	72.42	52.0	24.0	64.0	76.0	PA/PF 93 225M2B	758	205
	45.4	8504	1.1	61.66	52.0	24.0	70.0	77.0			
	52.1	7413	1.3	53.75	52.0	24.0	72.0	76.0			
	60.0	6431	1.4	46.63	56.0	26.0	75.0	76.0			
	71.0	5442	1.7	39.46	59.0	27.0	77.0	75.0			
	89.6	4309	2.2	31.24	62.0	28.0	77.0	73.0			
	103.3	3738	2.5	27.10	63.0	28.0	77.0	71.0			
	122.1	3163	2.9	22.93	64.0	29.0	76.0	69.0			
	47.8	8634	1.2	29.30	65.0	28.0	-	-	PA/PF 92 225M4B / 225M4C	747	204
	85.0	4853	2.2	16.47	65.0	28.0	70.0	64.0			
	97.5	4232	2.5	14.36	63.0	28.0	69.0	62.0			
	113.0	3651	2.9	12.39	62.0	27.0	68.0	60.0			
	179.9	2293	2.7	7.78	66.0	30.0	54.0	49.0			
	95.6	4188	2.0	29.30	65.0	28.0	-	-	PA/PF 92 225M2B	747	204
	35.9	11256	0.8	39.01	27.0	9.0	42.0	43.0	PA/PF 83 225M4B / 225M4C	579	201
	43.0	9386	0.9	32.53	27.0	9.0	36.0	39.0			
	50.0	8076	1.0	27.99	30.0	10.0	40.0	39.0			
	57.4	7035	1.1	24.38	32.0	11.0	42.0	40.0			
	66.7	6057	1.3	20.99	34.0	12.0	44.0	40.0			
	45.3	8522	0.8	61.79	27.0	9.0	41.0	45.0	PA/PF 83 225M2B	579	201
	54.3	7106	1.0	51.52	27.0	9.0	46.0	47.0			
	63.1	6116	1.1	44.34	27.0	9.0	50.0	47.0			
	71.8	5380	1.3	39.01	27.0	9.0	39.0	42.0			
	86.1	4487	1.4	32.53	27.0	9.0	36.0	39.0			
	100.0	3860	1.6	27.99	30.0	10.0	40.0	39.0			
	114.8	3363	1.8	24.38	32.0	11.0	42.0	40.0			
	133.4	2895	2.1	20.99	34.0	12.0	44.0	40.0			
	52.9	7800	0.8	26.47	36.0	14.0	-	-	PA/PF 82 225M4B / 225M4C	571	200
	63.8	6468	1.1	21.95	36.0	14.0	-	-			
	84.5	4880	1.3	16.56	36.0	14.0	46.0	40.0			
	98.0	4211	1.6	14.29	37.0	14.0	47.0	39.0			
	118.1	3492	2.0	11.85	36.0	14.0	46.0	38.0			
	135.5	3044	2.3	10.33	36.0	14.0	46.0	37.0			
	158.4	2605	2.5	8.84	36.0	14.0	45.0	36.0			
	189.2	2181	2.9	7.40	35.0	14.0	44.0	35.0			
	225.4	1830	2.4	6.21	33.0	13.0	42.0	34.0			
	105.8	3783	1.3	26.47	36.0	14.0	-	-	PA/PF 82 225M2B	571	200
	127.6	3137	1.8	21.95	36.0	14.0	-	-			
	169.1	2367	2.1	16.56	36.0	14.0	46.0	40.0			
	195.9	2042	2.4	14.29	37.0	14.0	47.0	39.0			
	67.8	5961	0.8	20.66	6.0	1.0	13.0	19.0	PA/PF 73 225M4B / 225M4C	472	197
	77.7	5197	1.0	18.01	10.0	2.0	16.0	20.0			
	84.2	4589	0.8	33.27	6.0	1.0	18.0	24.0	PA/PF 73 225M2B	472	197
	98.8	3910	1.0	28.35	6.0	1.0	22.0	25.0			
	119.7	3226	1.2	23.39	6.0	1.0	18.0	22.0			
	135.5	2850	1.3	20.66	6.0	1.0	13.0	19.0			
	155.5	2484	1.5	18.01	10.0	2.0	16.0	20.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
45.0	83.2	4960	0.8	16.83	14.0	4.0	24.0	24.0	PA/PF 72 225M4B / 225M4C	462	196
	97.7	4223	1.0	14.33	14.0	4.0	21.0	22.0			
	112.1	3681	1.1	12.49	16.0	5.0	22.0	22.0			
	129.2	3194	1.5	10.84	16.0	5.0	23.0	21.0			
	148.0	2788	1.7	9.46	17.0	5.0	24.0	21.0			
	170.5	2419	1.9	8.21	17.0	6.0	24.0	21.0			
	201.7	2045	2.1	6.94	18.0	6.0	25.0	21.0			
	218.1	1892	1.5	6.42	16.0	6.0	23.0	20.0			
	250.0	1650	1.7	5.60	17.0	6.0	23.0	20.0			
	288.1	1432	2.0	4.86	17.0	6.0	23.0	19.0			
	340.6	1211	2.2	4.11	17.0	6.0	23.0	19.0			
	362.7	1137	2.3	3.86	17.0	6.0	23.0	19.0			
	407.0	1014	2.4	3.44	17.0	6.0	23.0	18.0			
	429.4	961	2.4	3.26	17.0	5.0	-	-			
	507.2	813	2.6	2.76	17.0	5.0	-	-			
	166.4	2405	1.3	16.83	14.0	4.0	24.0	24.0	PA/PF 72 225M2B	462	196
	195.4	2048	1.5	14.33	14.0	4.0	21.0	22.0			
	224.2	1785	1.7	12.49	16.0	5.0	22.0	22.0			
	258.3	1549	2.3	10.84	16.0	5.0	23.0	21.0			
	296.0	1352	2.6	9.46	17.0	5.0	24.0	21.0			
	341.0	1173	3.0	8.21	17.0	6.0	24.0	21.0			
	436.1	918	2.3	6.42	16.0	6.0	23.0	20.0			
	500.0	800	2.7	5.60	17.0	6.0	23.0	20.0			
	100.6	4099	0.8	13.91	14.0	6.0	16.0	18.0	PA/PF 62 225M4B / 225M4C	393	192
	120.7	3418	0.9	11.60	12.0	4.0	13.0	16.0			
	133.1	3100	1.0	10.52	14.0	6.0	18.0	18.0			
	159.5	2587	1.2	8.78	14.0	5.0	15.0	16.0			
	185.4	2225	1.4	7.55	14.0	6.0	17.0	16.0			
	220.5	1871	1.0	6.35	14.0	6.0	19.0	17.0			
	264.7	1559	1.2	5.29	14.0	6.0	17.0	16.0			
	307.0	1344	1.5	4.56	15.0	6.0	17.0	15.0			
	344.8	1196	1.6	4.06	15.0	6.0	18.0	15.0			
	358.1	1152	1.7	3.91	15.0	6.0	18.0	15.0			
	376.3	1096	1.9	3.72	15.0	6.0	18.0	15.0			
	421.7	978	2.0	3.32	15.0	6.0	18.0	15.0			
	471.4	875	2.2	2.97	15.0	6.0	18.0	15.0			
	201.3	1988	1.2	13.91	14.0	6.0	16.0	18.0	PA/PF 62 225M2B	393	192
	241.4	1658	1.4	11.60	12.0	4.0	13.0	16.0			
	266.2	1504	1.6	10.52	14.0	6.0	18.0	18.0			
	318.9	1255	1.8	8.78	14.0	5.0	15.0	16.0			
	370.9	1079	2.2	7.55	14.0	6.0	17.0	16.0			
	440.9	908	1.6	6.35	14.0	6.0	19.0	17.0			
	529.3	756	1.9	5.29	14.0	6.0	17.0	16.0			
	614.0	652	2.4	4.56	15.0	6.0	17.0	15.0			
	689.7	580	2.5	4.06	15.0	6.0	18.0	15.0			
	716.1	559	2.7	3.91	15.0	6.0	18.0	15.0			
	752.7	532	2.9	3.72	15.0	6.0	18.0	15.0			
55.0	19.9	24835	0.8	70.42	83.0	41.0	89.0	82.0	PA/PF 103 250M4A / 250M4B	1150	209
	23.0	21425	0.9	60.75	88.0	43.0	94.0	83.0			
	26.4	18691	1.1	53.00	92.0	44.0	99.0	84.0			
	30.9	15986	1.3	45.33	95.0	45.0	102.0	84.0			
	36.9	13391	1.5	37.97	97.0	45.0	103.0	83.0			
	47.3	10446	1.9	29.62	99.0	45.0	102.0	81.0			
	55.3	8933	2.2	25.33	100.0	45.0	100.0	80.0			
	66.0	7484	2.7	21.22	97.0	44.0	97.0	77.0			
	39.8	11871	1.3	70.42	83.0	41.0	89.0	82.0	PA/PF 103 250M2A	1150	209
	46.1	10241	1.5	60.75	88.0	43.0	94.0	83.0			
	52.8	8934	1.7	53.00	92.0	44.0	99.0	84.0			
	61.8	7641	2.0	45.33	95.0	45.0	102.0	84.0			
	73.7	6401	2.4	37.97	97.0	45.0	103.0	83.0			
	94.5	4993	3.0	29.62	99.0	45.0	102.0	81.0			
	72.4	6969	2.4	19.35	76.0	35.0	96.0	77.0	PA/PF 102 250M4A / 250M4B	1150	208
	84.3	5982	2.9	16.61	76.0	35.0	94.0	75.0			
	72.2	6773	1.8	38.77	51.0	40.0	-	-	PA/PF 102 250M2A	1150	208

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
55.0	35.5	13916	0.9	39.46	55.0	22.0	55.0	64.0	PA/PF 93 250M4A / 250M4B	931	205
	44.8	11017	1.1	31.24	59.0	25.0	61.0	64.0			
	51.7	9557	1.3	27.10	60.0	25.0	63.0	64.0			
	61.1	8087	1.5	22.93	61.0	26.0	65.0	63.0			
	73.0	6761	1.8	19.17	61.0	26.0	65.0	62.0			
	45.4	10394	0.9	61.66	55.0	22.0	70.0	77.0	PA/PF 93 250M2A	931	205
	52.1	9061	1.0	53.75	55.0	22.0	60.0	70.0			
	60.0	7861	1.2	46.63	55.0	22.0	64.0	70.0			
	71.0	6652	1.4	39.46	55.0	22.0	55.0	64.0			
	89.6	5266	1.8	31.24	59.0	25.0	61.0	64.0			
	103.3	4568	2.0	27.10	60.0	25.0	63.0	64.0			
	122.1	3865	2.4	22.93	61.0	26.0	65.0	63.0			
	146.1	3232	2.9	19.17	61.0	26.0	65.0	62.0			
	85.0	5932	1.8	16.47	61.0	26.0	66.0	61.0	PA/PF 92 250M4A / 250M4B	920	204
	97.5	5172	2.1	14.36	60.0	26.0	65.0	60.0			
	113.0	4463	2.4	12.39	59.0	26.0	64.0	58.0			
	133.3	3782	2.7	10.50	58.0	26.0	63.0	56.0			
	179.9	2802	2.2	7.78	65.0	28.0	54.0	49.0			
	208.6	2417	2.9	6.71	65.0	28.0	53.0	48.0	PA/PF 92 250M2A	920	204
	170.0	2877	2.8	16.47	61.0	26.0	66.0	61.0			
	84.5	5964	1.1	16.56	31.0	11.0	41.0	37.0	PA/PF 82 250M4A / 250M4B	744	200
	98.0	5147	1.3	14.29	32.0	12.0	42.0	37.0			
	118.1	4268	1.7	11.85	33.0	12.0	42.0	36.0			
	135.5	3721	1.8	10.33	33.0	13.0	42.0	36.0			
	158.4	3184	2.1	8.84	33.0	13.0	43.0	35.0			
	189.2	2665	2.3	7.40	33.0	13.0	42.0	34.0			
	225.4	2237	1.9	6.21	31.0	12.0	40.0	32.0			
	263.7	1913	2.5	5.31	31.0	12.0	39.0	32.0			
	314.6	1603	2.7	4.45	30.0	12.0	38.0	30.0			
	384.6	1311	3.0	3.64	30.0	12.0	37.0	29.0			
	482.8	1044	3.0	2.90	29.0	11.0	35.0	28.0			
	169.1	2893	1.7	16.56	31.0	11.0	41.0	37.0	PA/PF 82 250M2A	744	200
	195.9	2496	2.0	14.29	32.0	12.0	42.0	37.0			
	236.3	2070	2.6	11.85	33.0	12.0	42.0	36.0			
	271.1	1805	2.9	10.33	33.0	13.0	42.0	36.0			
	450.9	1085	3.0	6.21	31.0	12.0	40.0	32.0			
75.0	26.4	25488	0.8	53.00	69.0	33.0	71.0	70.0	PA/PF 103 280M4B / 280M4C	1350	209
	30.9	21800	0.9	45.33	78.0	36.0	78.0	72.0			
	36.9	18260	1.1	37.97	84.0	38.0	84.0	73.0			
	47.3	14245	1.4	29.62	89.0	39.0	89.0	73.0			
	55.3	12181	1.6	25.33	89.0	40.0	90.0	73.0			
	66.0	10205	2.0	21.22	89.0	40.0	90.0	72.0			
	46.1	13965	1.1	60.75	69.0	33.0	94.0	83.0	PA/PF 103 280M2B / 280M2C	1350	209
	52.8	12183	1.2	53.00	69.0	33.0	71.0	70.0			
	61.8	10420	1.5	45.33	78.0	36.0	78.0	72.0			
	73.7	8728	1.7	37.97	84.0	38.0	84.0	73.0			
	94.5	6809	2.2	29.62	89.0	39.0	89.0	73.0			
	110.5	5823	2.6	25.33	89.0	40.0	90.0	73.0			
	72.4	9504	1.8	19.35	90.0	40.0	90.0	72.0	PA/PF 102 280M4B / 280M4C	1350	208
	84.3	8158	2.1	16.61	88.0	40.0	89.0	71.0			
	98.0	7018	2.4	14.29	86.0	39.0	86.0	69.0			
	118.1	5820	2.7	11.85	84.0	38.0	84.0	67.0			
	72.2	9235	1.3	38.77	90.0	40.0	-	-	PA/PF 102 280M2B / 280M2C	1350	208
	144.7	4609	2.8	19.35	90.0	40.0	90.0	72.0			
	44.8	15024	0.8	31.24	45.0	18.0	43.0	55.0	PA/PF 93 280M4B / 280M4C	1131	205
	51.7	13033	0.9	27.10	48.0	19.0	47.0	56.0			
	61.1	11027	1.1	22.93	51.0	21.0	51.0	57.0			
	73.0	9219	1.3	19.17	52.0	22.0	54.0	56.0			
	52.1	12356	0.8	53.75	45.0	18.0	60.0	70.0	PA/PF 93 280M2B / 280M2C	1131	205
	60.0	10719	0.9	46.63	45.0	18.0	64.0	70.0			
	71.0	9071	1.0	39.46	45.0	18.0	55.0	64.0			
	89.6	7181	1.3	31.24	45.0	18.0	43.0	55.0			
	103.3	6230	1.5	27.10	48.0	19.0	47.0	56.0			
	122.1	5271	1.8	22.93	51.0	21.0	51.0	57.0			
	146.1	4407	2.1	19.17	52.0	22.0	54.0	56.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
75.0	85.0	8089	1.3	16.47	54.0	23.0	57.0	56.0	PA/PF 92 280M4B / 280M4C	1120	204
	97.5	7053	1.5	14.36	54.0	23.0	57.0	56.0			
	113.0	6085	1.7	12.39	54.0	23.0	58.0	55.0			
	133.3	5157	2.0	10.50	53.0	23.0	57.0	53.0			
	179.9	3821	1.6	7.78	50.0	22.0	54.0	49.0			
	208.6	3296	2.1	6.71	49.0	21.0	53.0	48.0			
	246.5	2790	2.6	5.68	48.0	21.0	52.0	47.0			
	170.0	3923	2.1	16.47	54.0	23.0	57.0	56.0	PA/PF 92 280M2B / 280M2C	1120	204
	195.0	3421	2.4	14.36	54.0	23.0	57.0	56.0			
	226.0	2951	2.7	12.39	54.0	23.0	57.0	53.0			
	359.9	1853	2.5	7.78	50.0	22.0	54.0	49.0			
	98.0	7018	0.9	14.29	24.0	8.0	32.0	32.0	PA/PF 82 280M4B / 280M4C	944	200
	118.1	5820	1.2	11.85	26.0	9.0	34.0	32.0			
	135.5	5074	1.4	10.33	27.0	10.0	35.0	32.0			
	158.4	4342	1.5	8.84	28.0	10.0	36.0	32.0			
	189.2	3634	1.7	7.40	29.0	11.0	37.0	32.0			
	225.4	3050	1.4	6.21	27.0	10.0	35.0	30.0			
	263.7	2608	1.8	5.31	28.0	11.0	35.0	29.0			
	314.6	2186	2.0	4.45	28.0	11.0	35.0	29.0			
	384.6	1788	2.2	3.64	27.0	11.0	35.0	28.0			
	482.8	1424	2.2	2.90	27.0	11.0	34.0	27.0			
	195.9	3404	1.5	14.29	24.0	8.0	32.0	32.0	PA/PF 82 280M2B / 280M2C	944	200
	236.3	2823	1.9	11.85	26.0	9.0	34.0	32.0			
	271.1	2461	2.1	10.33	27.0	10.0	35.0	32.0			
	316.7	2106	2.4	8.84	28.0	10.0	36.0	32.0			
	378.4	1763	2.7	7.40	29.0	11.0	37.0	32.0			
	450.9	1479	2.2	6.21	27.0	10.0	35.0	30.0			
	527.3	1265	2.9	5.31	28.0	11.0	35.0	29.0			
90.0	30.9	26160	0.8	45.33	58.0	29.0	60.0	63.0	PA/PF 103 280M4C / 280M4D	1350	209
	36.9	21912	0.9	37.97	67.0	32.0	69.0	66.0			
	47.3	17093	1.2	29.62	77.0	35.0	77.0	68.0			
	55.3	14618	1.4	25.33	81.0	36.0	81.0	68.0			
	66.0	12246	1.6	21.22	83.0	37.0	83.0	68.0			
	46.1	16758	0.9	60.75	58.0	29.0	-	-	PA/PF 103 280M2C / 280M2D	1350	209
	52.8	14620	1.0	53.00	58.0	29.0	71.0	70.0			
	61.8	12504	1.2	45.33	58.0	29.0	60.0	63.0			
	73.7	10474	1.5	37.97	67.0	32.0	69.0	66.0			
	94.5	8171	1.9	29.62	77.0	35.0	77.0	68.0			
	110.5	6987	2.2	25.33	81.0	36.0	81.0	68.0			
	132.0	5853	2.6	21.22	83.0	37.0	83.0	68.0			
	72.4	11404	1.5	19.35	84.0	37.0	85.0	68.0	PA/PF 102 280M4C / 280M4D	1350	208
	84.3	9789	1.8	16.61	83.0	37.0	85.0	67.0			
	98.0	8422	2.0	14.29	82.0	37.0	83.0	66.0			
	118.1	6984	2.3	11.85	81.0	37.0	81.0	64.0			
	140.8	5858	2.6	9.94	79.0	36.0	79.0	63.0			
	186.4	4426	2.5	7.51	73.0	33.0	73.0	58.0			
	72.2	11083	1.1	38.77	84.0	37.0	-	-	PA/PF 102 280M2C / 280M2D	1350	208
	144.7	5531	2.3	19.35	84.0	37.0	85.0	68.0			
	168.6	4748	2.8	16.61	83.0	37.0	85.0	67.0			
	51.7	15639	0.8	27.10	45.0	18.0	47.0	56.0	PA/PF 93 280M4C / 280M4D	1131	205
	61.1	13233	0.9	22.93	45.0	18.0	51.0	57.0			
	73.0	11063	1.1	19.17	45.0	18.0	54.0	56.0			
	71.0	10885	0.9	39.46	45.0	18.0	-	-	PA/PF 93 280M2C / 280M2D	1131	205
	89.6	8617	1.1	31.24	45.0	18.0	43.0	55.0			
	103.3	7475	1.2	27.10	45.0	18.0	47.0	56.0			
	122.1	6325	1.5	22.93	45.0	18.0	51.0	57.0			
	146.1	5288	1.8	19.17	45.0	18.0	54.0	56.0			
	85.0	9707	1.1	16.47	48.0	20.0	50.0	53.0	PA/PF 92 280M4C / 280M4D	1120	204
	97.5	8463	1.3	14.36	49.0	21.0	51.0	52.0			
	113.0	7302	1.5	12.39	50.0	21.0	52.0	52.0			
	133.3	6188	1.6	10.50	50.0	21.0	53.0	51.0			
	179.9	4585	1.3	7.78	47.0	20.0	50.0	47.0			
	208.6	3955	1.8	6.71	46.0	20.0	50.0	46.0			
	246.5	3348	2.2	5.68	46.0	20.0	49.0	45.0			
	398.9	2069	2.7	3.51	43.0	19.0	47.0	41.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3		
90.0	170.0	4708	1.7	16.47	48.0	20.0	50.0	53.0	PA/PF 92 280M2C / 280M2D	1120	204
	195.0	4105	2.0	14.36	49.0	21.0	51.0	53.0			
	226.0	3542	2.3	12.39	50.0	21.0	52.0	53.0			
	266.7	3001	2.6	10.50	50.0	21.0	53.0	51.0			
	359.9	2224	2.1	7.78	47.0	20.0	50.0	47.0			
	417.3	1918	2.8	6.71	46.0	20.0	50.0	46.0			
	98.0	8422	0.8	14.29	21.0	7.0	32.0	32.0	PA/PF 82 280M4C / 280M4D	944	200
	118.1	6984	1.0	11.85	21.0	7.0	34.0	32.0			
	135.5	6088	1.1	10.33	21.0	7.0	35.0	32.0			
	158.4	5210	1.3	8.84	21.0	7.0	36.0	32.0			
	189.2	4361	1.4	7.40	21.0	7.0	37.0	32.0			
	225.4	3660	1.2	6.21	21.0	7.0	35.0	30.0			
	263.7	3130	1.5	5.31	21.0	7.0	35.0	29.0			
	314.6	2623	1.7	4.45	21.0	7.0	35.0	29.0			
	384.6	2145	1.8	3.64	21.0	7.0	35.0	28.0			
	482.8	1709	1.8	2.90	21.0	7.0	34.0	27.0			
	195.9	4085	1.2	14.29	21.0	7.0	32.0	31.0	PA/PF 82 280M2C / 280M2D	944	200
	236.3	3387	1.6	11.85	21.0	7.0	34.0	32.0			
	271.1	2953	1.8	10.33	21.0	7.0	35.0	32.0			
	316.7	2527	2.0	8.84	21.0	7.0	36.0	32.0			
	378.4	2115	2.2	7.40	21.0	7.0	37.0	32.0			
	450.9	1775	1.8	6.21	21.0	7.0	35.0	30.0			
	527.3	1518	2.4	5.31	21.0	7.0	35.0	29.0			
	629.2	1272	2.6	4.45	21.0	7.0	35.0	29.0			
	769.2	1041	2.9	3.64	21.0	7.0	35.0	28.0			
	965.5	829	2.9	2.90	21.0	7.0	34.0	27.0			
110	47.3	20892	1.0	29.62	60.0	29.0	62.0	60.0	PA/PF 103 315S4C	1715	209
	55.3	17866	1.1	25.33	67.0	31.0	68.0	61.0			
	66.0	14967	1.3	21.22	72.0	32.0	72.0	62.0			
	52.8	17869	0.9	53.00	60.0	29.0	71.0	70.0	PA/PF 103 315S2C	1715	209
	61.8	15283	1.0	45.33	60.0	29.0	60.0	63.0			
	73.7	12801	1.2	37.97	60.0	29.0	69.0	66.0			
	94.5	9986	1.5	29.62	60.0	29.0	62.0	60.0			
	110.5	8540	1.8	25.33	67.0	31.0	68.0	61.0			
	132.0	7154	2.1	21.22	72.0	32.0	72.0	62.0			
	72.4	13939	1.2	19.35	76.0	34.0	76.0	63.0	PA/PF 102 315S4C	1715	208
	84.3	11965	1.5	16.61	77.0	34.0	77.0	63.0			
	98.0	10294	1.6	14.29	77.0	34.0	78.0	63.0			
	118.1	8536	1.8	11.85	76.0	34.0	77.0	61.0			
	140.8	7160	2.1	9.94	75.0	34.0	75.0	60.0			
	186.4	5410	2.1	7.51	70.0	32.0	70.0	56.0			
	224.7	4488	2.6	6.23	68.0	31.0	68.0	54.0			
	267.7	3767	2.8	5.23	66.0	30.0	66.0	53.0			
	327.1	3083	3.0	4.28	84.0	37.0	62.0	49.0			
	72.2	13545	0.9	38.77	76.0	34.0	-	-	PA/PF 102 315S2C	1715	208
	144.7	6760	1.9	19.35	76.0	34.0	76.0	63.0			
	168.6	5803	2.3	16.61	77.0	34.0	77.0	63.0			
	195.9	4993	2.5	14.29	77.0	34.0	78.0	63.0			
	236.3	4140	1.8	11.85	76.0	34.0	77.0	61.0	PA/PF 92 315S4C	1485	204
	113.0	8925	1.2	12.39	44.0	18.0	45.0	48.0			
	133.3	7564	1.3	10.50	45.0	19.0	47.0	48.0			
	208.6	4834	1.5	6.71	43.0	18.0	46.0	44.0			
	246.5	4092	1.8	5.68	43.0	18.0	46.0	43.0			
	398.9	2528	2.2	3.51	41.0	18.0	45.0	40.0	PA/PF 92 315S2C	1485	204
	226.0	4329	1.9	12.39	44.0	18.0	45.0	48.0			
	266.7	3668	2.1	10.50	45.0	19.0	47.0	48.0			
	417.3	2344	2.3	6.71	43.0	18.0	46.0	44.0			
	493.0	1984	2.8	5.68	43.0	18.0	46.0	43.0	PA/PF 103 315M4C / 315M4B	1715	209
132	47.3	25070	0.8	29.62	60.0	29.0	62.0	60.0			
	55.3	21439	0.9	25.33	60.0	29.0	68.0	61.0			
	66.0	17961	1.1	21.22	60.0	29.0	72.0	62.0			
	61.8	18339	0.8	45.33	60.0	29.0	60.0	63.0	PA/PF 103 315M2C / 315M2B	1715	209
	73.7	15362	1.0	37.97	60.0	29.0	69.0	66.0			
	94.5	11984	1.3	29.62	60.0	29.0	62.0	60.0			
	110.5	10248	1.5	25.33	60.0	29.0	68.0	61.0			
	132.0	8585	1.8	21.22	60.0	29.0	72.0	62.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
132	72.4	16726	1.0	19.35	69.0	31.0	76.0	63.0	PA/PF 102 315M4C / 315M4B	1715	208
	84.3	14358	1.2	16.61	69.0	31.0	68.0	58.0			
	98.0	12352	1.3	14.29	71.0	31.0	71.0	59.0			
	118.1	10243	1.5	11.85	71.0	32.0	72.0	58.0			
	140.8	8592	1.7	9.94	71.0	32.0	72.0	57.0			
	186.4	6492	1.7	7.51	66.0	30.0	67.0	53.0			
	224.7	5385	2.1	6.23	65.0	29.0	66.0	52.0			
	267.7	4521	2.3	5.23	64.0	29.0	64.0	51.0			
	327.1	3700	2.5	4.28	62.0	28.0	62.0	49.0			
	72.2	16254	0.8	38.77	69.0	31.0	-	-	PA/PF 102 315M2C / 315M2B	1715	208
	144.7	8113	1.6	19.35	69.0	31.0	76.0	63.0			
	168.6	6964	1.9	16.61	69.0	31.0	68.0	58.0			
	195.9	5991	2.1	14.29	71.0	31.0	71.0	59.0			
	236.3	4968	2.4	11.85	71.0	32.0	72.0	58.0			
	281.7	4167	2.7	9.94	71.0	32.0	72.0	57.0			
	372.8	3149	2.7	7.51	66.0	30.0	67.0	53.0			
	113.0	10710	1.0	12.39	38.0	15.0	37.0	45.0	PA/PF 92 315M4C / 315M4B	1485	204
	133.3	9076	1.1	10.50	40.0	16.0	41.0	45.0			
	208.6	5800	1.2	6.71	39.0	16.0	41.0	42.0			
	246.5	4910	1.5	5.68	40.0	17.0	42.0	41.0			
	398.9	3034	1.8	3.51	39.0	17.0	42.0	39.0	PA/PF 92 315M2C / 315M2B	1485	204
	226.0	5195	1.5	12.39	38.0	15.0	37.0	45.0			
	266.7	4402	1.7	10.50	40.0	16.0	41.0	45.0			
	417.3	2813	1.9	6.71	39.0	16.0	41.0	42.0			
	493.0	2381	2.3	5.68	40.0	17.0	42.0	41.0			
	797.7	1472	2.9	3.51	39.0	17.0	42.0	39.0			
160	55.3	25987	0.8	25.33	60.0	29.0	68.0	61.0	PA/PF 103 315L4C / 315L4A	1715	209
	66.0	21771	0.9	21.22	60.0	29.0	72.0	62.0			
	73.7	18620	0.8	37.97	60.0	29.0	-	-	PA/PF 103 315L2C / 315L2A	1715	209
	94.5	14526	1.0	29.62	60.0	29.0	62.0	60.0			
	110.5	12422	1.2	25.33	60.0	29.0	68.0	61.0			
	132.0	10406	1.5	21.22	60.0	29.0	72.0	62.0			
	72.4	20274	0.8	19.35	56.0	26.0	76.0	63.0	PA/PF 102 315L4C / 315L4A	1715	208
	84.3	17403	1.0	16.61	56.0	26.0	56.0	53.0			
	98.0	14973	1.1	14.29	60.0	27.0	61.0	54.0			
	118.1	12416	1.3	11.85	64.0	28.0	64.0	54.0			
	140.8	10415	1.4	9.94	66.0	29.0	66.0	54.0			
	186.4	7869	1.4	7.51	62.0	27.0	62.0	51.0			
	224.7	6528	1.8	6.23	61.0	28.0	62.0	50.0			
	267.7	5480	1.9	5.23	61.0	27.0	61.0	49.0			
	327.1	4484	2.1	4.28	59.0	27.0	59.0	47.0	PA/PF 102 315L2C / 315L2A	1715	208
	144.7	9833	1.3	19.35	56.0	26.0	-	-			
	168.6	8441	1.6	16.61	56.0	26.0	56.0	53.0			
	195.9	7262	1.7	14.29	60.0	27.0	61.0	54.0			
	236.3	6022	2.0	11.85	64.0	28.0	64.0	54.0			
	281.7	5051	2.3	9.94	66.0	29.0	66.0	54.0			
	372.8	3816	2.2	7.51	62.0	27.0	62.0	51.0			
	449.4	3166	2.8	6.23	61.0	28.0	62.0	50.0			
	535.4	2658	3.0	5.23	61.0	27.0	61.0	49.0	PA/PF 92 315L4C / 315L4A	1485	204
	113.0	12982	0.8	12.39	27.0	11.0	27.0	39.0			
	133.3	11002	0.9	10.50	33.0	13.0	32.0	41.0			
	208.6	7031	1.0	6.71	34.0	14.0	35.0	39.0			
	246.5	5951	1.2	5.68	35.0	15.0	37.0	39.0	PA/PF 92 315L2C / 315L2A	1485	204
	398.9	3678	1.5	3.51	36.0	16.0	39.0	37.0			
	226.0	6296	1.3	12.39	27.0	11.0	27.0	39.0			
	266.7	5336	1.4	10.50	33.0	13.0	32.0	41.0			
	417.3	3410	1.6	6.71	34.0	14.0	35.0	39.0	PA/PF 92 315L2C / 315L2A	1485	204
	493.0	2886	1.9	5.68	35.0	15.0	37.0	39.0			
	797.7	1784	2.4	3.51	36.0	16.0	39.0	37.0			

P ₁ [kW]	n ₂ [Min ⁻¹]	M ₂ [Nm]	f _B	i _{ges}	F _R [kN]	F _A [kN]	F _{R GR} [kN]	F _{A GR} [kN]	Tip / Type / Typ IE2 / IE3	 Kg	 mm
200	94.5 110.5 132.0	18157 15527 13008	0.8 1.0 1.2	29.62 25.33 21.22	60.0 60.0 60.0	29.0 29.0 29.0	- - -	- - -	PA/PF 103 315L2D / 315L2C	1715	209
	84.3 98.0 118.1 140.8 186.4 224.7 267.7 327.1	21754 18716 15520 13019 9836 8160 6850 5606	0.8 0.9 1.0 1.2 1.1 1.4 1.5 1.7	16.61 14.29 11.85 9.94 7.51 6.23 5.23 4.28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	PA/PF 102 315L4D / 315L4C	1715	208
	144.7 168.6 195.9 236.3 281.7 372.8 449.4 535.4 654.2	12292 10551 9077 7527 6314 4771 3957 3322 2719	1.0 1.3 1.4 1.6 1.8 1.8 2.2 2.4 2.6	19.35 16.61 14.29 11.85 9.94 7.51 6.23 5.23 4.28	56.0 56.0 56.0 56.0 56.0 56.0 56.0 56.0 56.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	- 56.0 61.0 64.0 66.0 62.0 62.0 61.0 59.0	- 53.0 54.0 54.0 54.0 51.0 50.0 49.0 47.0	PA/PF 102 315L2D / 315L2C	1715	208
	398.9 246.5 208.6	4597 7439 8788	1.2 1.0 0.8	3.51 5.68 6.71	- - -	- - -	- - -	- - -	PA/PF 92 315L4D / 315L4C	1485	204
	226.0 266.7 417.3 493.0 797.7	7870 6670 4262 3608 2230	1.0 1.2 1.3 1.5 1.9	12.39 10.50 6.71 5.68 3.51	27.0 27.0 27.0 27.0 27.0	11.0 11.0 11.0 11.0 11.0	27.0 32.0 35.0 37.0 39.0	39.0 41.0 39.0 39.0 37.0	PA/PF 92 315L2D / 315L2C	1485	204

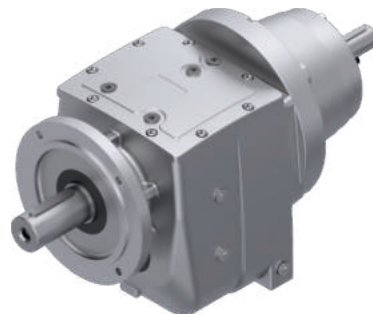
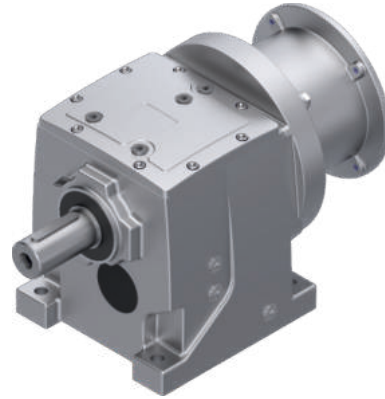
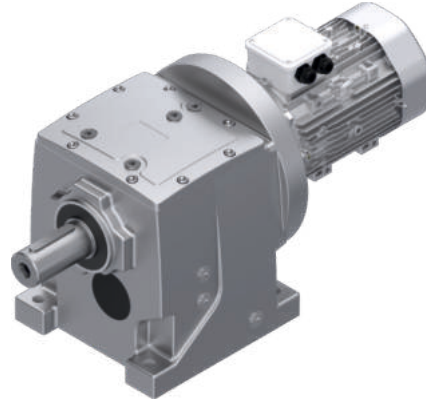


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Ölçü Tabloları

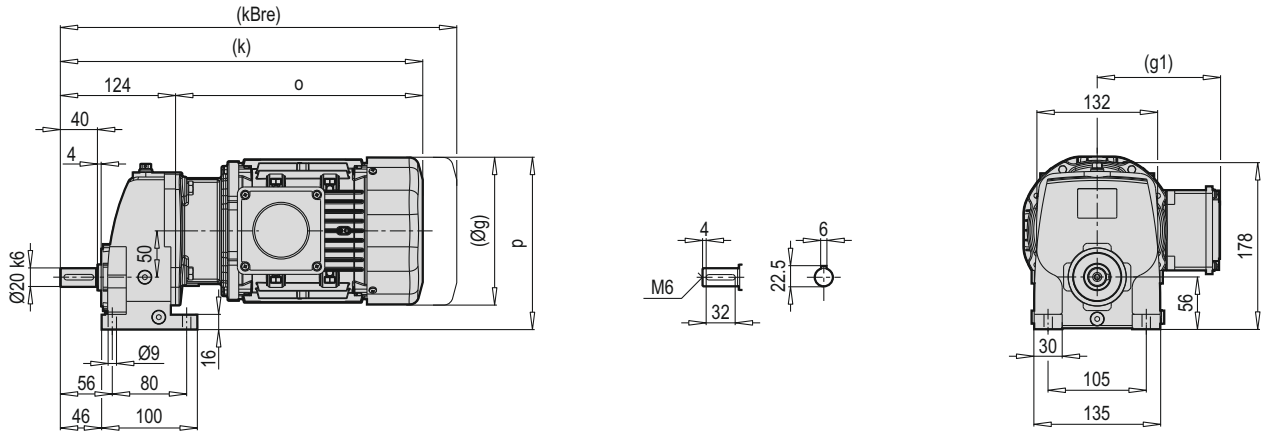
Dimension Tables

Maßtabellen

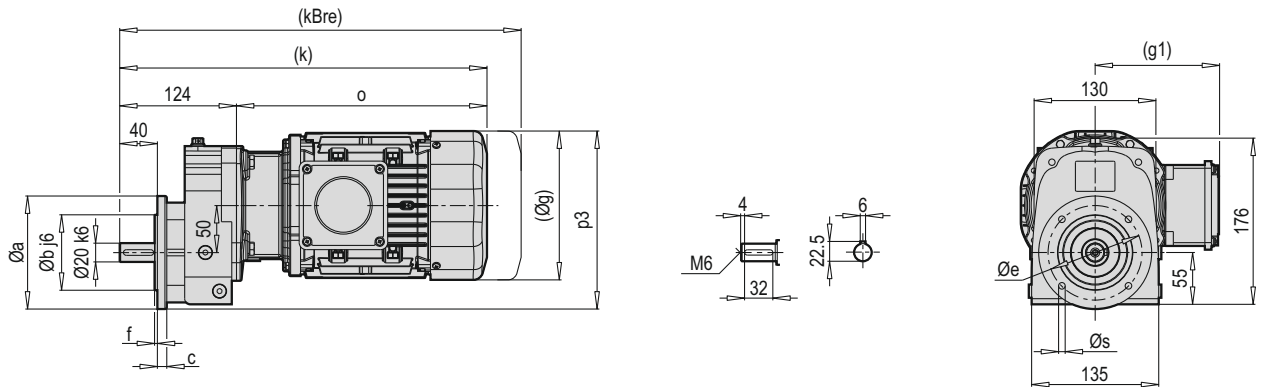


PA / PF

PA 11



PF 11



a	b	c	e	f	s
120	80	10	100	3	7
140	95	10	115	3	9

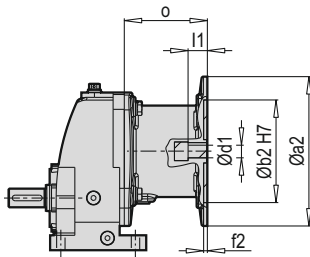
	63 M	71 M	80 M	90 S/L	100 L	112 M		
g	126	138	172	182	202	220		
g1	97	104	131	130	153	159		
k	322	364	390	456	507	502		
kBre	381	427	460	464	591	602		
o	198	240	266	332	383	378		
p	169	175	192	197	207	216		
p3	168	175	206	211	221	230		

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

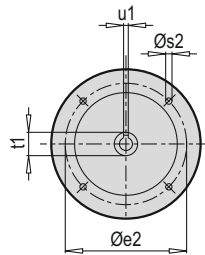
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

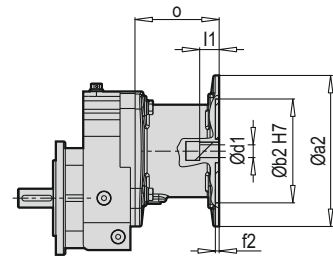
PA 11



IEC



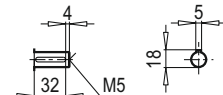
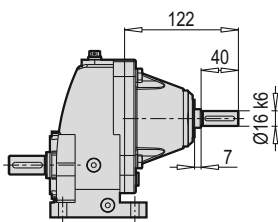
PF 11



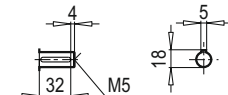
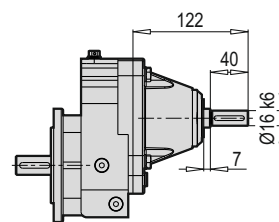
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	4	M8	11	23	12.8	4	85
	71	160	110	130	4	M8	14	35	16.3	5	89
	80	200	130	165	4	M10	19	53	21.8	6	106
	90	200	130	165	4	M10	24	53	27.3	8	106
	100	250	180	215	5	M12	28	64	31.3	8	132
	112	250	180	215	5	M12	28	64	31.3	8	132

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

PA 11



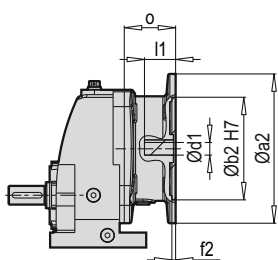
W



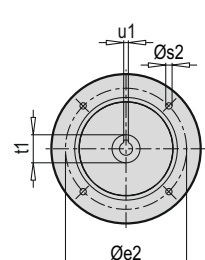
PF 11

W ~ Kg	
PA/PF 11	10

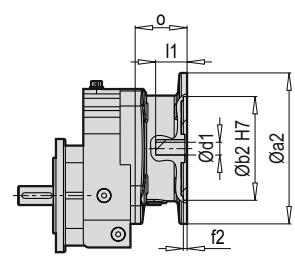
PA 11



PAM B5/B14



PF 11



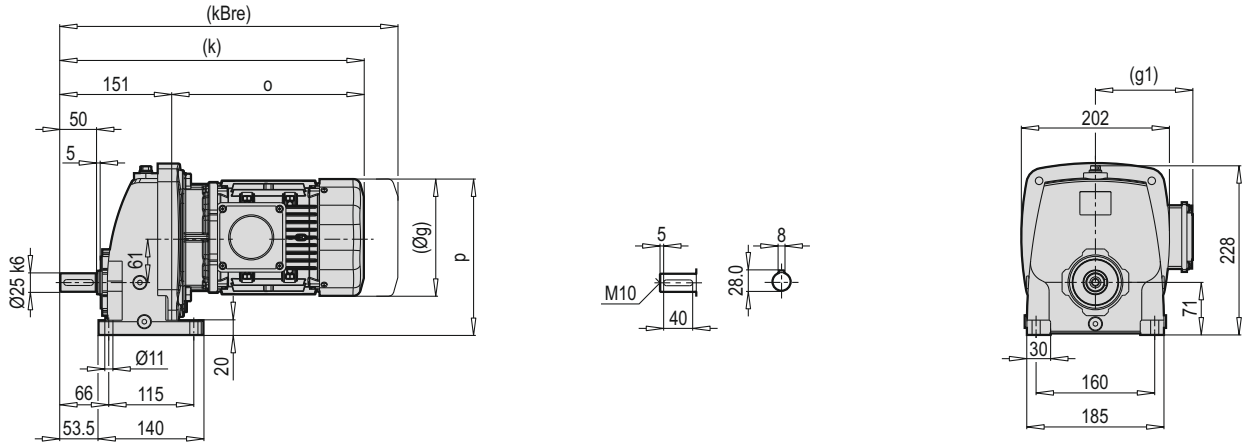
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	140	95	115	4	M8	11	23	12.8	4	85
	71	160	110	130	4	M8	14	33	16.3	5	55
	80	200	130	165	4	M10	19	45	21.8	6	74
	90	200	130	165	4	M10	24	53	27.3	8	74
	100	250	180	215	5	M12	28	63	31.3	8	132
	112	250	180	215	5	M12	28	63	31.3	8	132

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

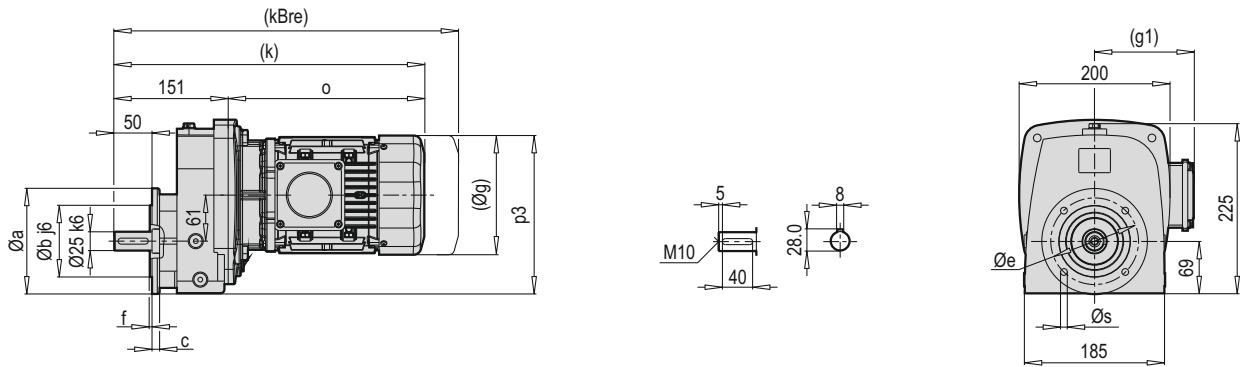
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 11	63	91	60	75	4	6	11	27	12.8	4	60
	71	106	70	85	4	6.5	14	34	16.3	5	55
	80	121	80	100	4	6.5	19	45	21.8	6	74
	90	141	95	115	4	9	24	53	27.3	8	74
	100	161	110	130	5	9	28	66	31.3	8	75
	112	161	110	130	5	9	28	66	31.3	8	75

~ 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	9
160	110	10	130	3.5	9

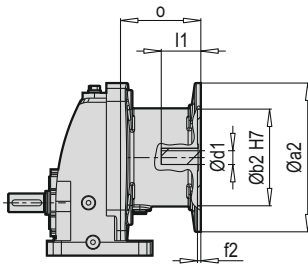
	90 S/L	100 L	112 M					
g	182	202	220					
g1	130	153	159					
k	477	528	523					
kBre	545	612	623					
o	326	377	372					
p	223	233	242					
p3	232	242	251					

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

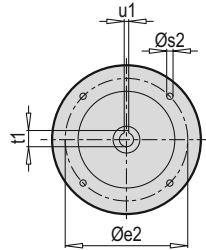
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

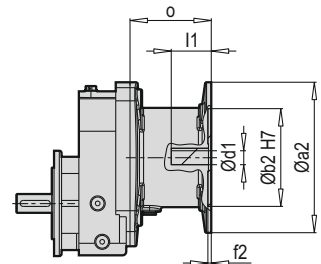
PA 21



IEC



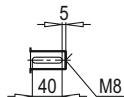
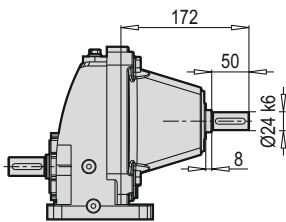
PF 21



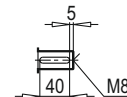
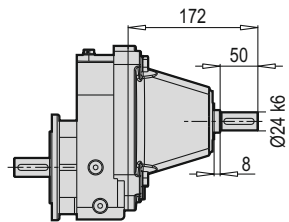
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4	M8	14	35	16.3	5	88
	80	200	130	165	4.5	M10	19	53	21.8	6	108
	90	200	130	165	4.5	M10	24	63	27.3	8	108
	100	250	180	215	5	M12	28	63	31.3	8	125
	112	250	180	215	5	M12	28	63	31.3	8	125

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

PA 21



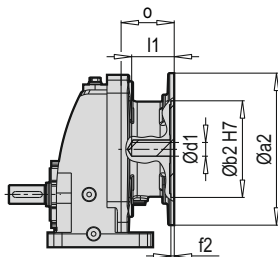
W



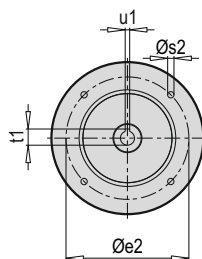
PF 21

~ Kg	
PA/PF 21	23

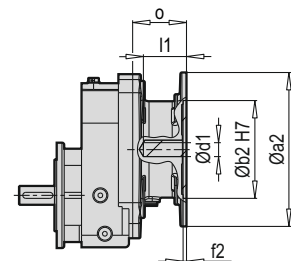
PA 21



PAM B5/B14



PF 21



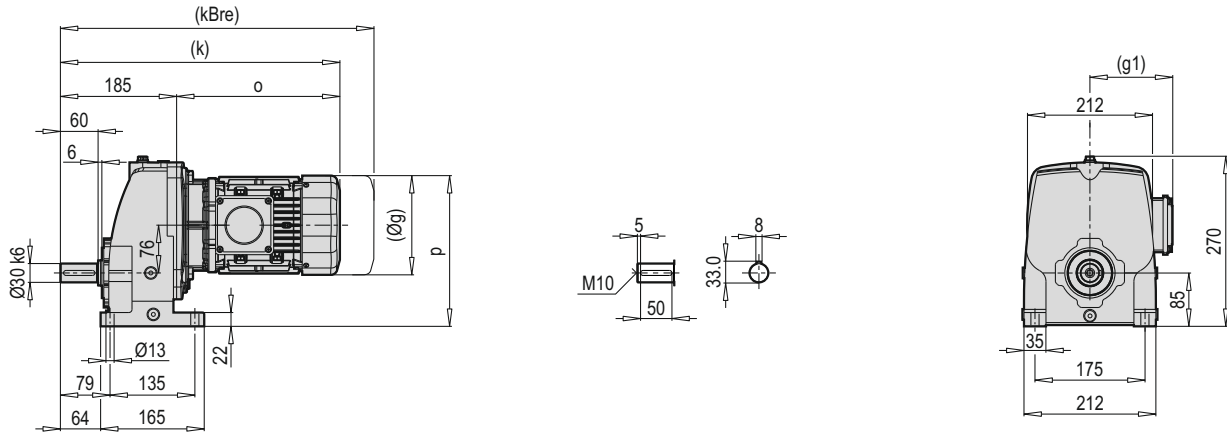
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	160	110	130	4	M8	14	34	16.3	5	88
	80	200	130	165	4.5	M10	19	53	21.8	6	108
	90	200	130	165	4.5	M10	24	53	27.3	8	108
	100	250	180	215	5	M12	28	63	31.3	8	125
	112	250	180	215	5	M12	28	63	31.3	8	125

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

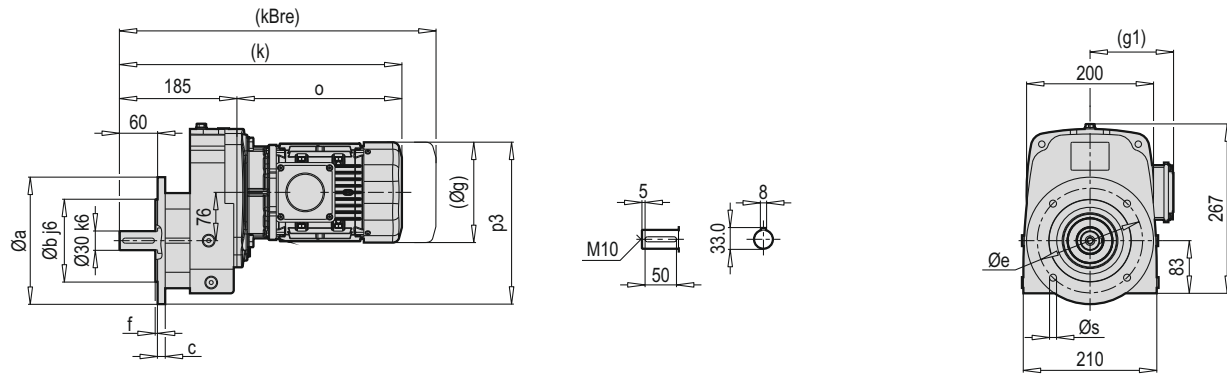
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 21	71	106	70	85	4	6.5	14	32	16.3	5	55
	80	121	80	100	4	6.5	19	50	21.8	6	72
	90	141	95	115	4	9	24	56	27.3	8	72
	100	161	110	130	5	9	28	66	31.3	8	75
	112	161	110	130	5	9	28	66	31.3	8	75

~ 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

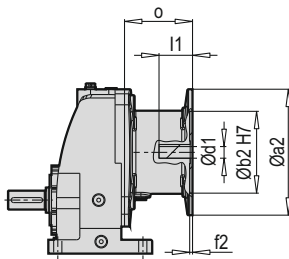
	100 L	112 M	132 S/M					
g	202	220	271					
g1	153	159	188					
k	562	557	632					
kBre	646	657	731/759					
o	377	372	447					
p	262	271	297					
p3	277	286	312					

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

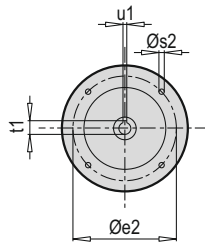
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

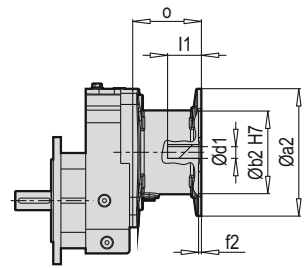
PA 31



IEC



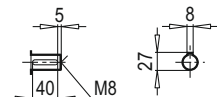
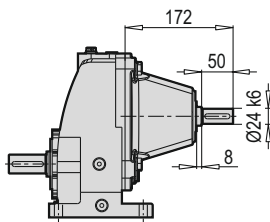
PF 31



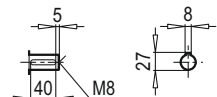
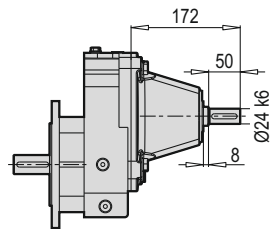
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4	M8	14	35	16.3	5	88
	80	200	130	165	4.5	M10	19	53	21.8	6	108
	90	200	130	165	4.5	M10	24	53	27.3	8	108
	100	250	180	215	5	M12	28	63	31.3	8	125
	112	250	180	215	5	M12	28	63	31.3	8	125
	132	300	230	265	5	M12	38	85	41.3	10	156

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

PA 31



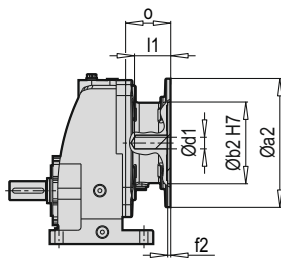
W



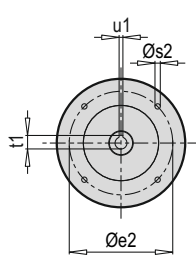
PF 31

W ~ Kg	
PA/PF 31	28

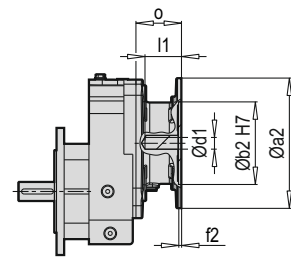
PA 31



PAM B5/B14



PF 31



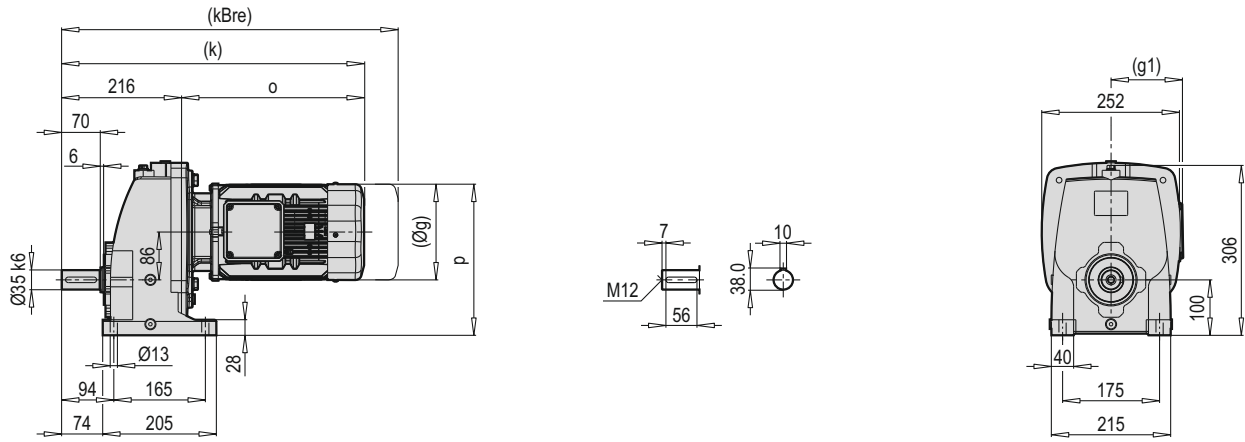
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	160	110	130	4	M8	14	34	16.3	5	88
	80	200	130	165	4.5	M10	19	53	21.8	6	108
	90	200	130	165	4.5	M10	24	53	27.3	8	108
	100	250	180	215	5	M12	28	63	31.3	8	125
	112	250	180	215	5	M12	28	63	31.3	8	125
	132	300	230	265	5	M12	38	83	41.3	10	94

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

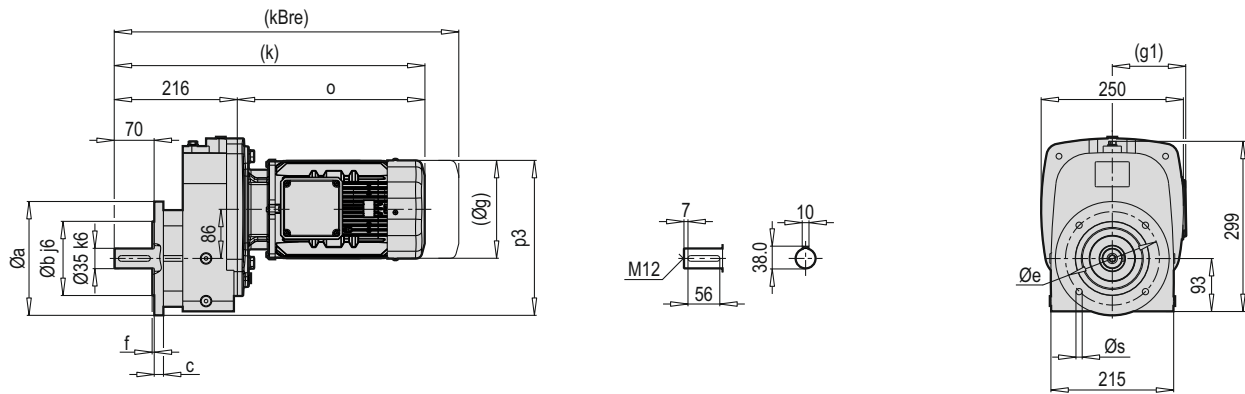
Tip / Type Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 31	71	106	70	85	4	6.5	14	32	16.3	5	55
	80	121	80	100	4	6.5	19	50	21.8	6	72
	90	141	95	115	4	9	24	56	27.3	8	72
	100	161	110	130	5	9	28	66	31.3	8	75
	112	161	110	130	5	9	28	66	31.3	8	75
	132	200	130	165	5	11	38	80	41.3	10	94

~ 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	14

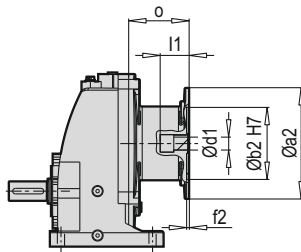
	112 M	132 S/M	160 M/L					
g	220	271	322					
g1	159	188	214					
k	596	658	746					
kBre	696	757/777	851					
o	380	442	530					
p	296	322	347					
p3	321	347	372					

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

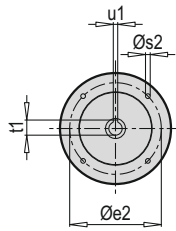
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

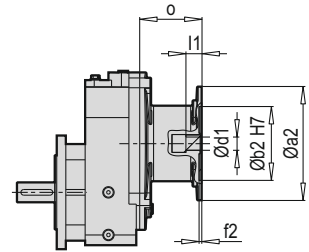
PA 41



IEC



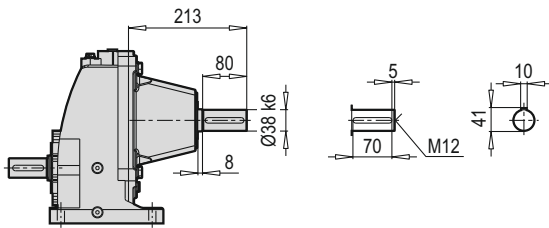
PF 41



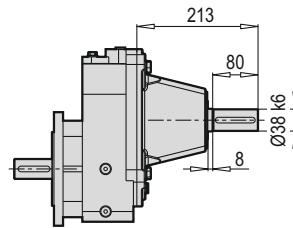
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.5	M10	24	52	27.3	8	109
	100	250	180	215	5	M12	28	63	31.3	8	134
	112	250	180	215	5	M12	28	63	31.3	8	134
	132	300	230	265	5	M12	38	85	41.3	10	190
	160	350	250	300	6	M16	42	117	45.3	12	194

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

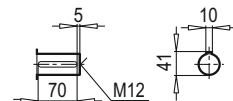
PA 41



W

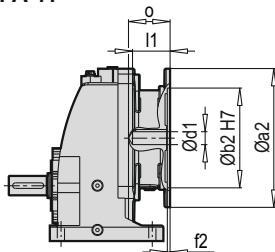


PF 41

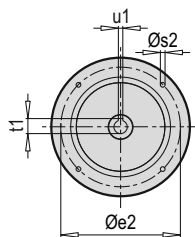


W ~ Kg	
PA/PF 41	48

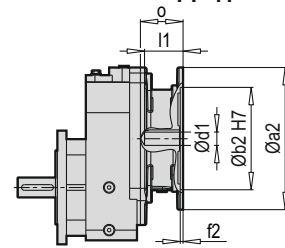
PA 41



PAM B5/B14



PF 41



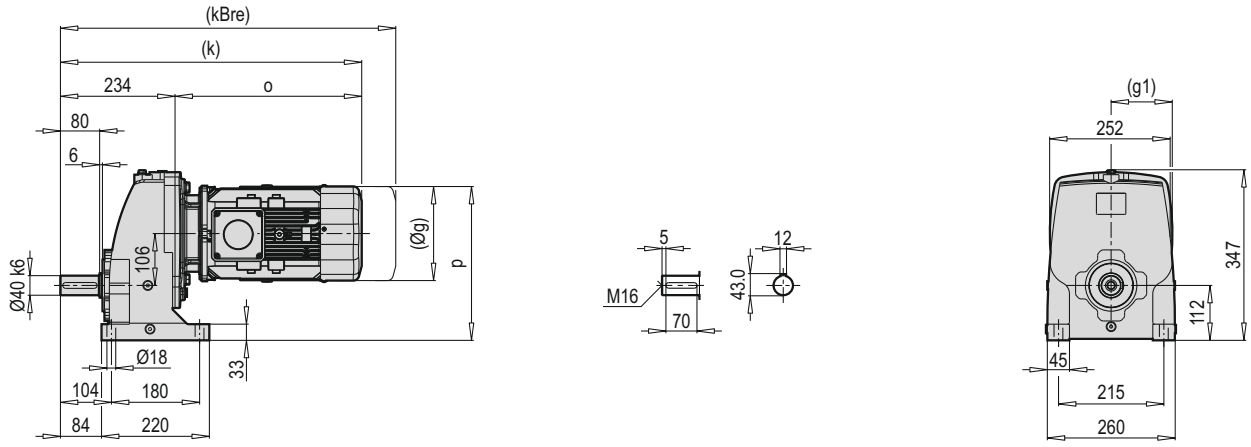
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	200	130	165	4.5	M10	24	52	27.3	8	109
	100	250	180	215	5	M12	28	63	31.3	8	134
	112	250	180	215	5	M12	28	63	31.3	8	134
	132	300	230	265	5	M12	38	85	41.3	10	190
	160	350	250	300	6	M16	42	117	45.3	12	194

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

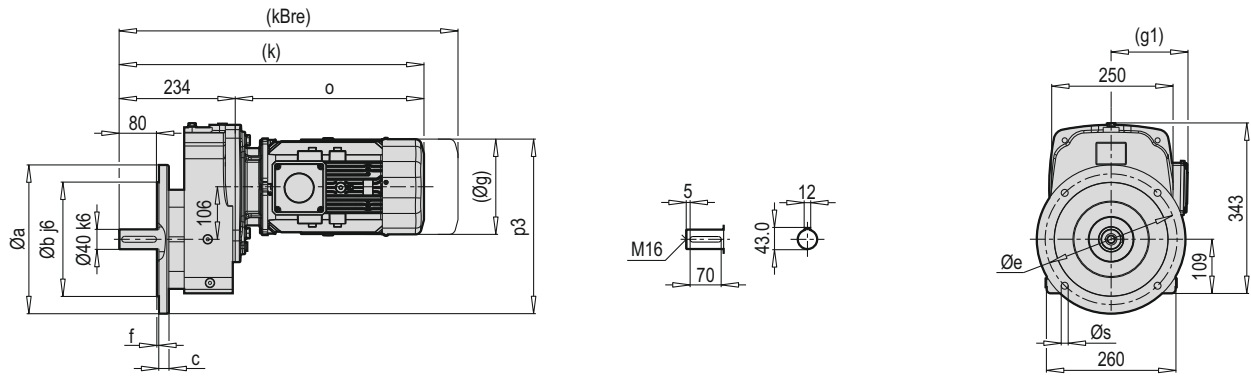
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 41	90	141	95	115	4	9	24	56	27.3	8	72
	100	161	110	130	5	9	28	66	31.3	8	75
	112	161	110	130	5	9	28	66	31.3	8	75
	132	201	130	165	5	11	38	87	41.3	10	94

~ 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	14
300	230	20	265	4	14

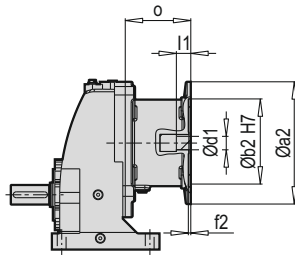
	112 M	132 S/M	160 M/L	180 M/L				
g	220	271	322	363				
g1	159	188	214	249				
k	614	676	764	858				
kBre	714	775/795	869	959				
o	380	442	530	624				
p	328	354	379	400				
p3	366	391	417	438				

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

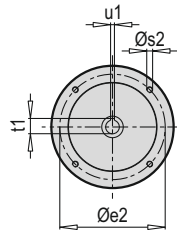
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

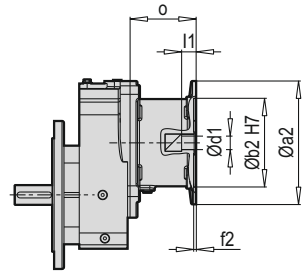
PA 51



IEC



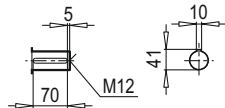
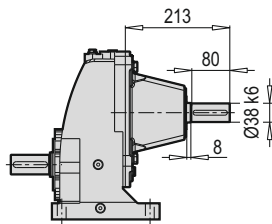
PF 51



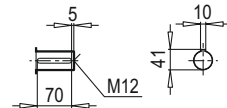
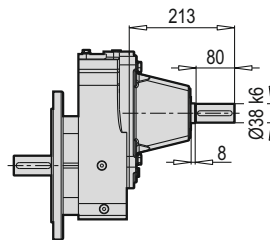
Tip / Type	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.5	M10	24	52	27.3	8	109
	100	250	180	215	5	M12	28	63	31.3	8	134
	112	250	180	215	5	M12	28	63	31.3	8	134
	132	300	230	265	5	M12	38	85	41.3	10	190
	160	350	250	300	6	M16	42	117	45.3	12	194
	180	350	250	300	6	M16	48	117	51.8	14	194

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

PA 51



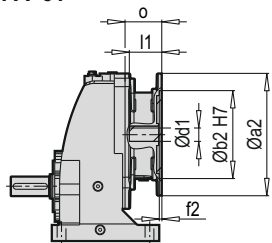
W



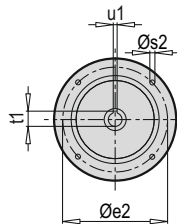
PF 51

W ~ Kg	
PA/PF 51	58

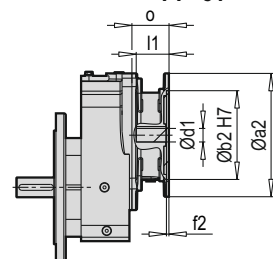
PA 51



PAM B5/B14



PF 51



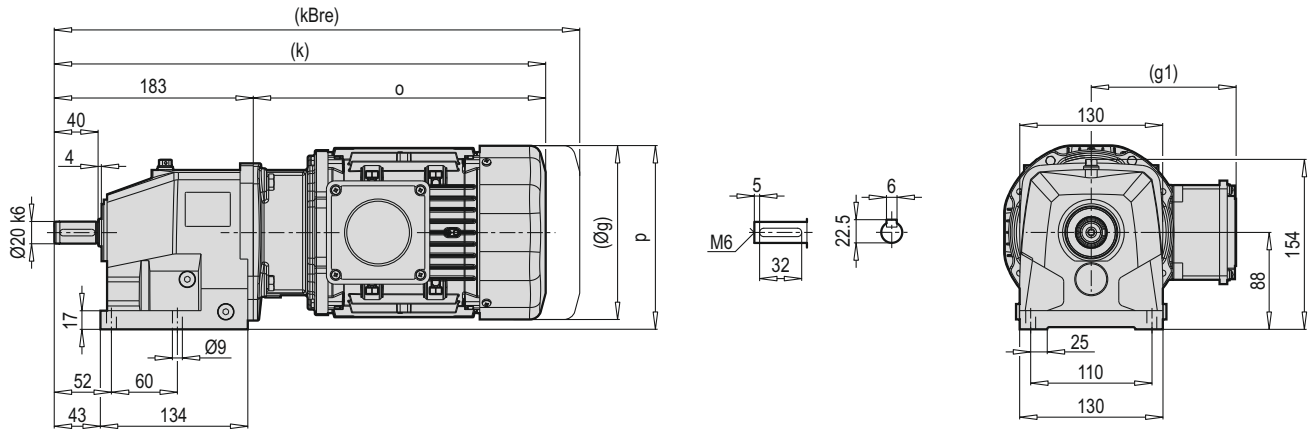
Tip / Type	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	200	130	165	4.5	M10	24	52	27.3	8	109
	100	250	180	215	5	M12	28	63	31.3	8	134
	112	250	180	215	5	M12	28	63	31.3	8	134
	132	300	230	265	5	M12	38	85	41.3	10	190
	160	350	250	300	6	M16	42	117	45.3	12	194
	180	350	250	300	6	M16	48	117	51.8	14	194

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

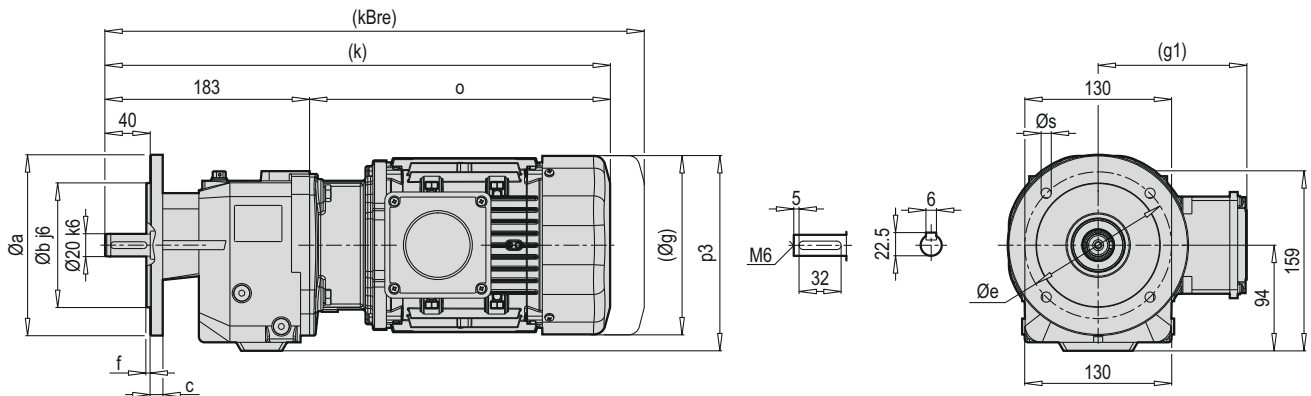
Tip / Type	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 51	90	141	95	115	4	9	24	56	27.3	8	72
	100	161	110	130	5	9	28	66	31.3	8	75
	112	161	110	130	5	9	28	66	31.3	8	75
	132	201	130	165	5	11	38	87	41.3	10	94

~ 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	7
140	95	11	115	3	9
160	110	11	130	3.5	9

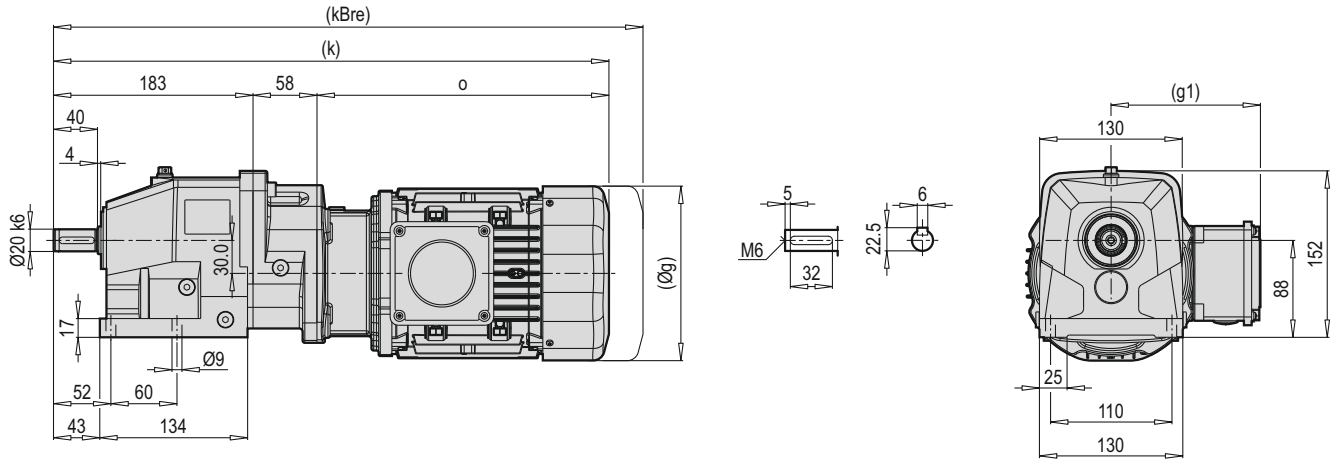
	63 M	71 M	80 M	90 S/L				
g	126	138	172	182				
g1	97	103	131	131				
k	378	420	449	515				
kBre	437	483	519	523				
o	197	239	266	332				
p	144	150	174	179				
p3	157	163	180	185				

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

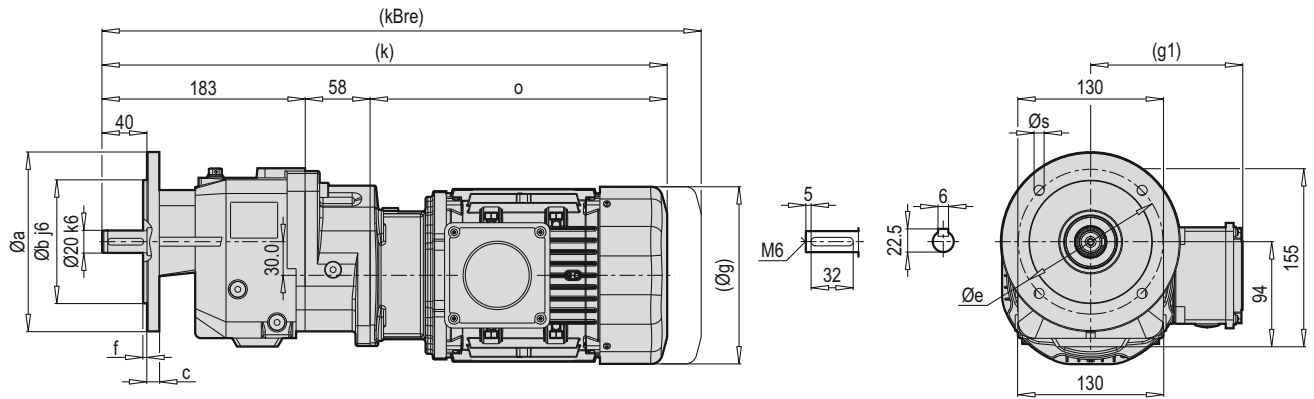
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 03



PF 03



a	b	c	e	f	s
120	80	11	100	3	7
140	95	11	115	3	9
160	110	11	130	3.5	9

	63 M	71 M						
g	126	138						
g1	97	103						
k	436	478						
kBre	495	540						
o	197	239						
p								
p3								

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

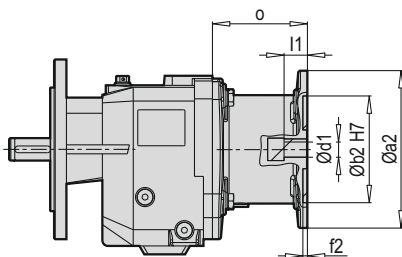
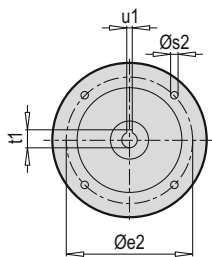
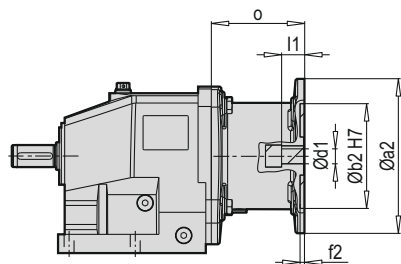
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 02
PA 03

IEC

PF 02
PF 03

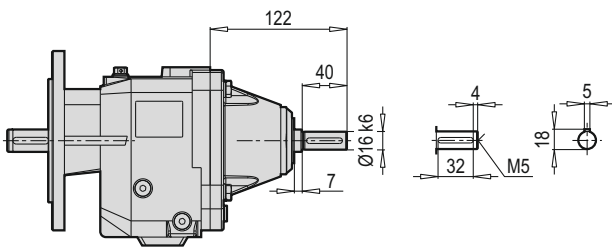
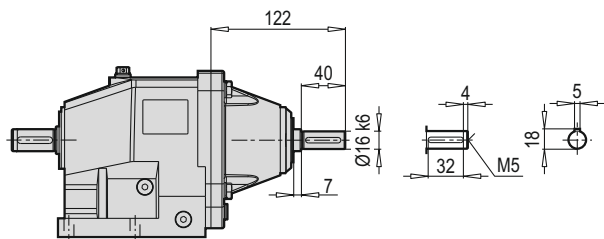


Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 02-03	63	140	95	115	4	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4	M8	14	35	16.3	5	89
PA/PF 02	80	200	130	165	4	M10	19	53	21.8	6	106
PA/PF 02	90	200	130	165	4	M10	24	64	27.3	8	106

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

PA 02
PA 03

PF 02
PF 03

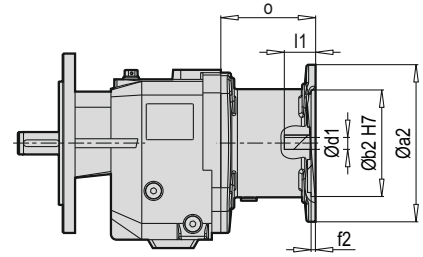
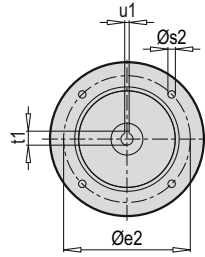
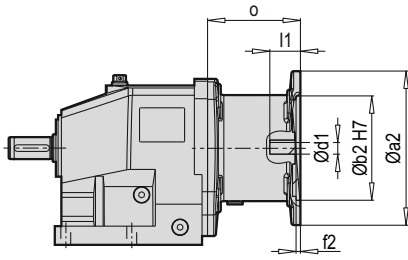


W ~ Kg	
PA/PF 02	12
PA/PF 03	17

PA 02
PA 03

PAM B5/B14

PF 02
PF 03



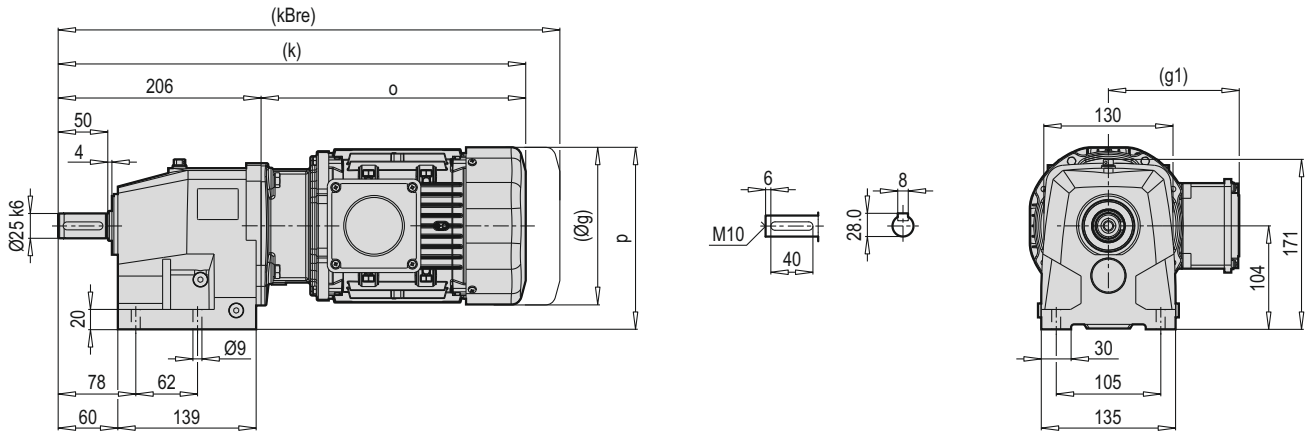
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 02 PA/PF 03 o
PA/PF 02-03	63	140	95	115	4	M8	11	23	12.8	4	85
PA/PF 02-03	71	160	110	130	4	M8	14	33	16.3	5	55
PA/PF 02	80	200	130	165	4	M10	19	45	21.8	6	74
PA/PF 02	90	200	130	165	4	M10	24	53	27.3	8	74

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

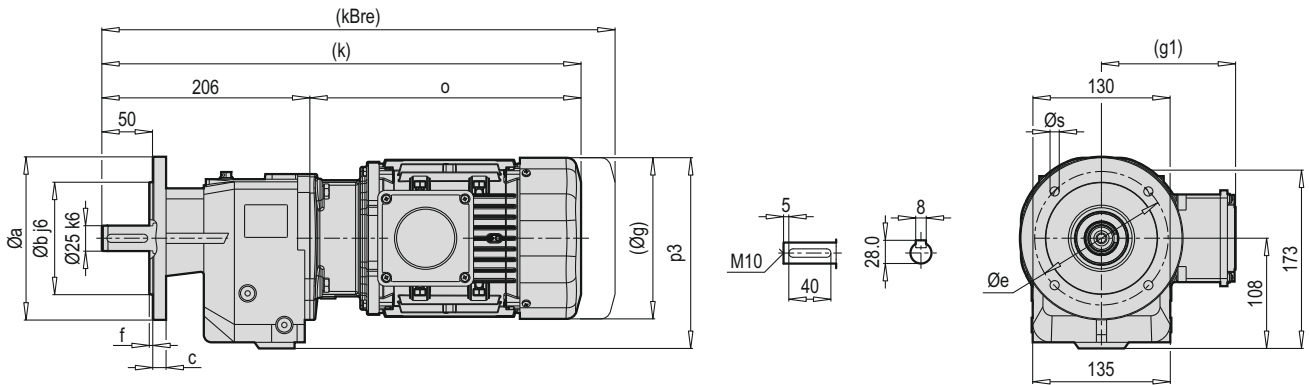
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 02 PA/PF 03 o
PA/PF 02-03	63	91	60	75	4.0	6	11	27	12.8	4	60
PA/PF 02-03	71	106	70	85	4.0	6.5	14	34	16.3	5	55
PA/PF 02	80	121	80	100	4.0	6.5	19	45	21.8	6	74
PA/PF 02	90	141	95	115	4.0	9	24	53	27.3	8	74

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

PA 12



PF 12



a	b	c	e	f	s
120	80	13	100	3	7
140	95	13	115	3	9
160	110	13	130	3.5	9

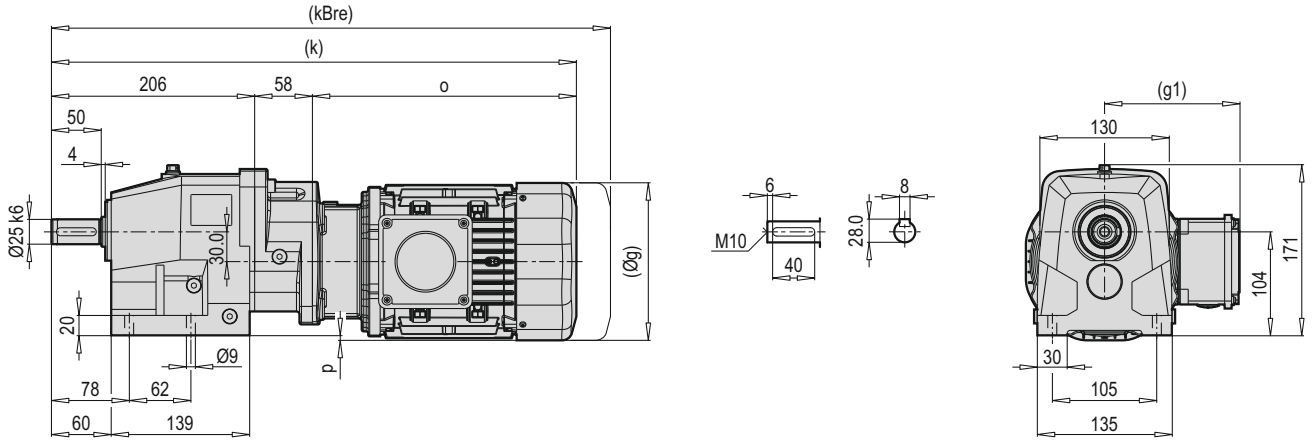
	63 M	71 M	80 M	90 S/L	100 L	112 M		
g	126	138	172	182	202	220		
g1	97	104	131	130	153	159		
k	402	444	472	538	589	584		
kBre	461	507	542	546	673	684		
o	198	240	266	332	383	378		
p	162	168	190	195	205	214		
p3	171	177	194	199	209	218		

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

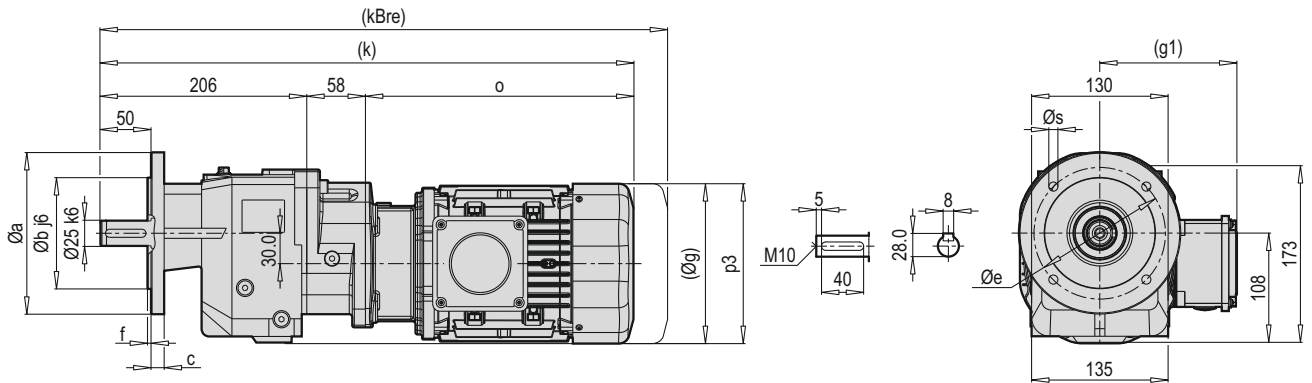
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 13



PF 13



a	b	c	e	f	s
120	80	13	100	3	7
140	95	13	115	3	9
160	110	13	130	3.5	9

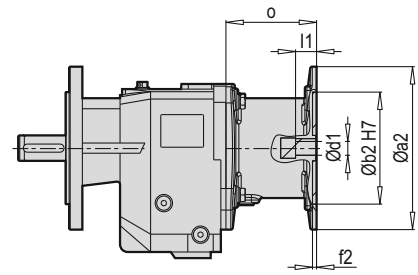
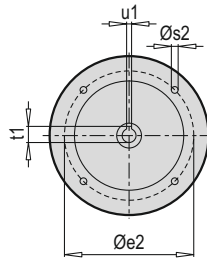
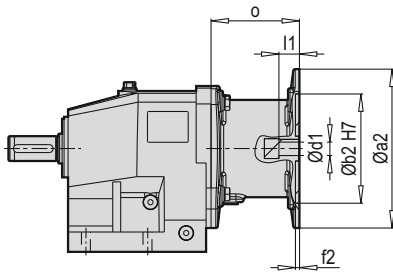
	63 M	71 M						
g	126	138						
g1	97	104						
k	402	444						
kBre	519	565						
o	198	245						
p								
p3								

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : The dimensions which have (...) sign vary depending on the motor.
Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 12
PA 13

IEC

PF 12
PF 13



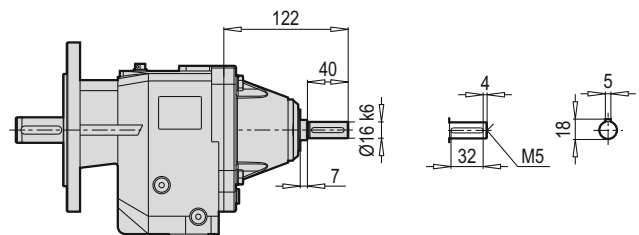
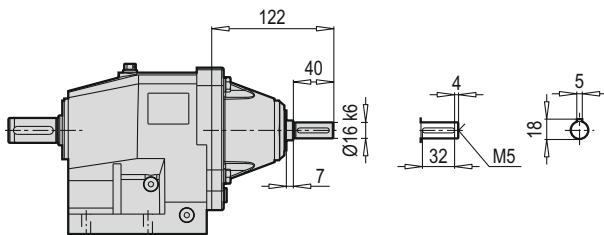
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	4	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4	M8	14	35	16.3	5	89
PA/PF 12	80	200	130	165	4	M10	19	53	21.8	6	106
PA/PF 12	90	200	130	165	4	M10	24	53	27.3	8	106
PA/PF 12	100	250	180	215	5	M12	28	64	31.3	8	132
PA/PF 12	112	250	180	215	5	M12	28	64	31.3	8	132

~ 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

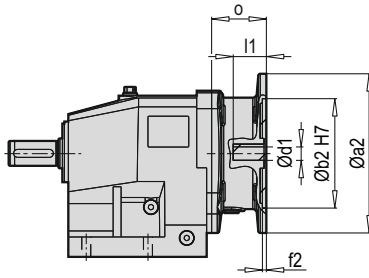
W

PF 12
PF 13

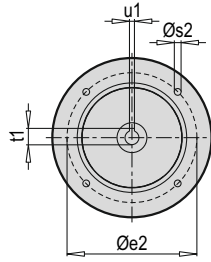


W ~ Kg	
PA/PF 12	15
PA/PF 13	20

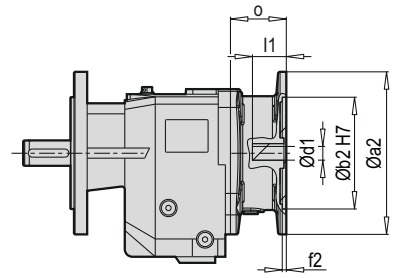
PA 12
PA 13



PAM B5/B14



PF 12
PF 13



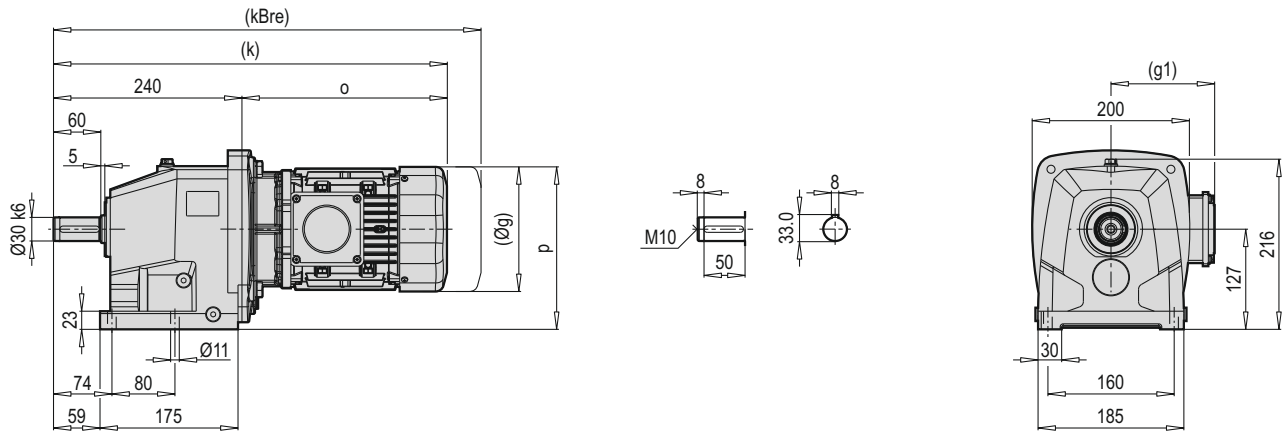
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	140	95	115	4	M8	11	23	12.8	4	85
PA/PF 12-13	71	160	110	130	4	M8	14	33	16.3	5	55
PA/PF 12	80	200	130	165	4	M10	19	45	21.8	6	74
PA/PF 12	90	200	130	165	4	M10	24	53	27.3	8	74
PA/PF 12	100	250	180	215	5	M12	28	63	31.3	8	132
PA/PF 12	112	250	180	215	5	M12	28	63	31.3	8	132

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

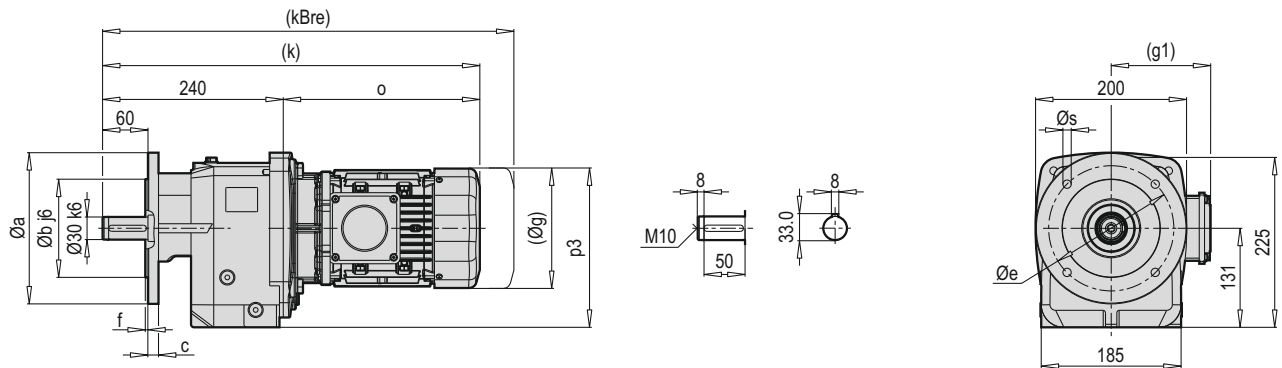
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 12-13	63	91	60	75	4	6	11	27	12.8	4	60
PA/PF 12-13	71	106	70	85	4	6.5	14	34	16.3	5	55
PA/PF 12	80	121	80	100	4	6.5	19	45	21.8	6	74
PA/PF 12	90	141	95	115	4	9	24	53	27.3	8	74
PA/PF 12	100	161	110	130	5	9	28	66	31.3	8	75
PA/PF 12	112	161	110	130	5	9	28	66	31.3	8	75

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

PA 22



PF 22



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

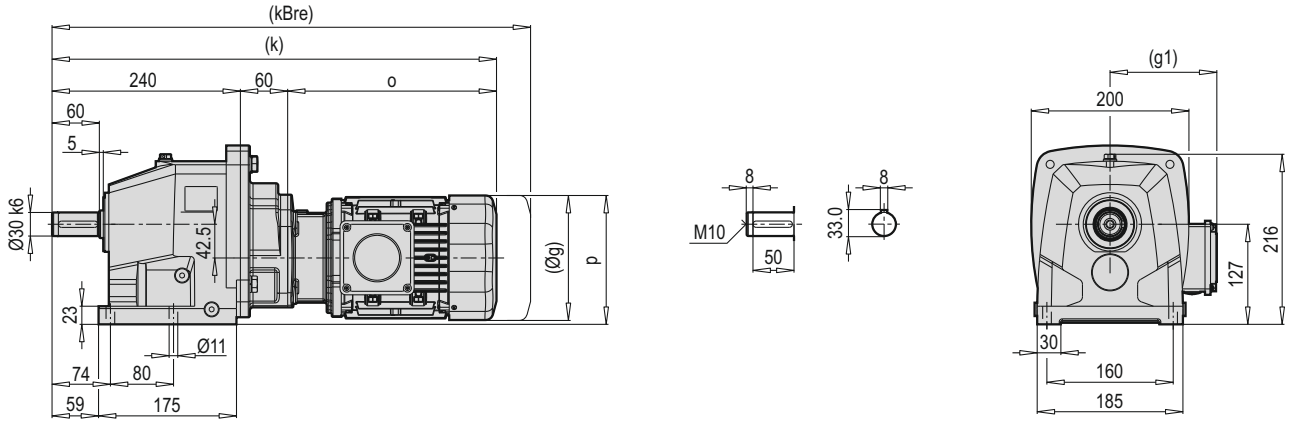
	71 M	80 M	90 S/L	100 L	112 M			
g	140	172	182	202	220			
g1	119	131	130	153	159			
k	476	500	566	617	612			
kBre	536	570	634	701	712			
o	236	260	326	377	372			
p	226	213	218	228	237			
p3	226	217	222	232	241			

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

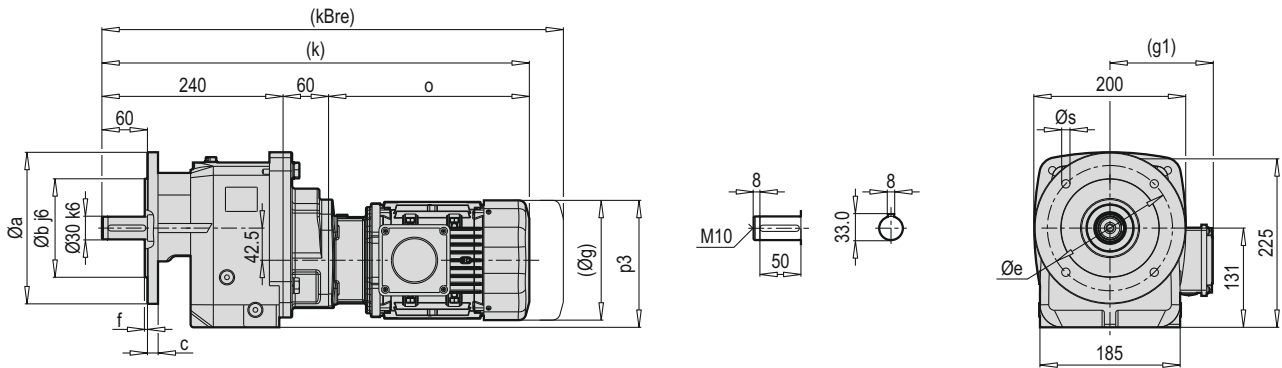
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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	172					
g1	111	119	131					
k	498	540	566					
kBre	550	600	636					
o	198	240	266					
p	150	159	171					
p3	154	163	175					

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

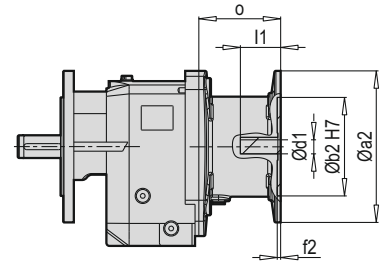
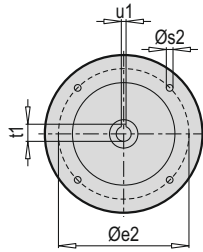
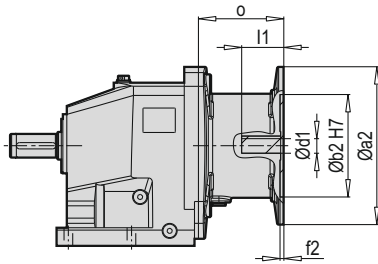
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 22
PA 23

IEC

PF 22
PF 23



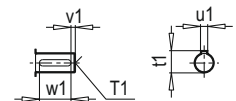
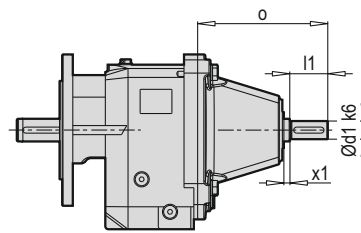
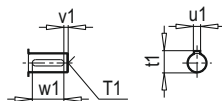
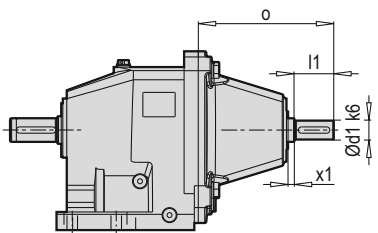
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 22	100	250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



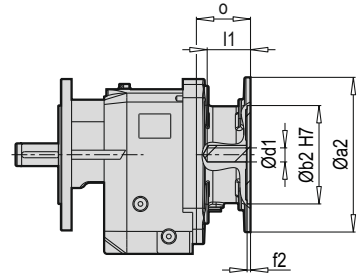
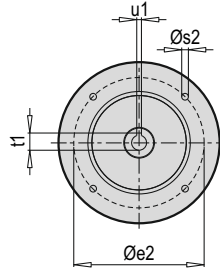
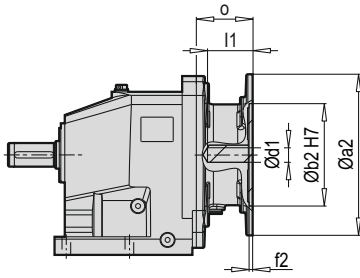
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 22	24	8	50	172	M8	27	8	5	40
PA/PF 23	16	7	40	122	M5	18	5	4	32

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

PA 22
PA 23

PAM B5/B14

PF 22
PF 23



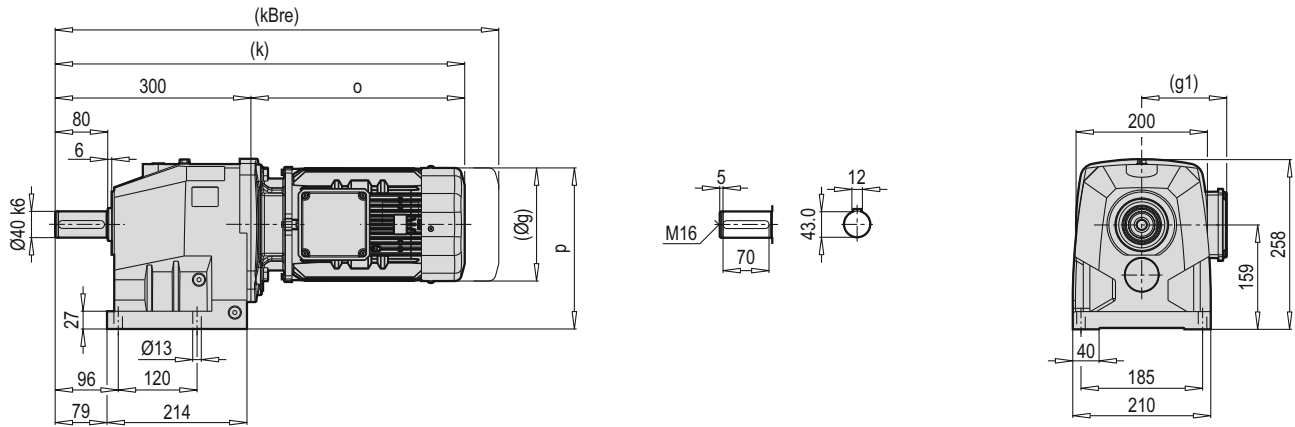
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 22-23	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 22-23	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 22-23	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 22	100	250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

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

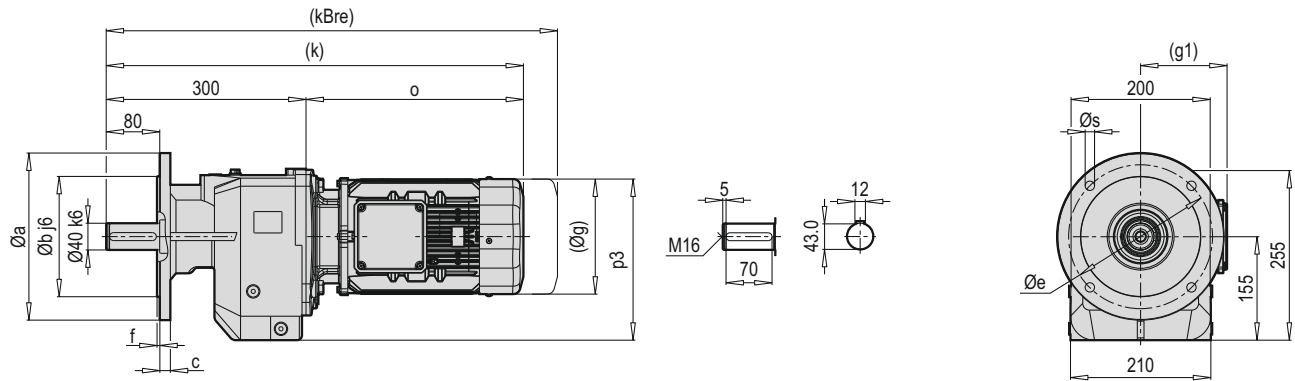
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 22 o	PA/PF 23 o
PA/PF 23	63	90	60	75	4.0	6	11	23	12.8	4	-	60
PA/PF 22-23	71	105	70	85	4.0	7	14	30	16.3	5	88	55
PA/PF 22-23	80	120	80	100	4.0	7	19	40	21.8	6	72	74
PA/PF 22-23	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 22	100	160	110	130	5.0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

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

PA 32



PF 32



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

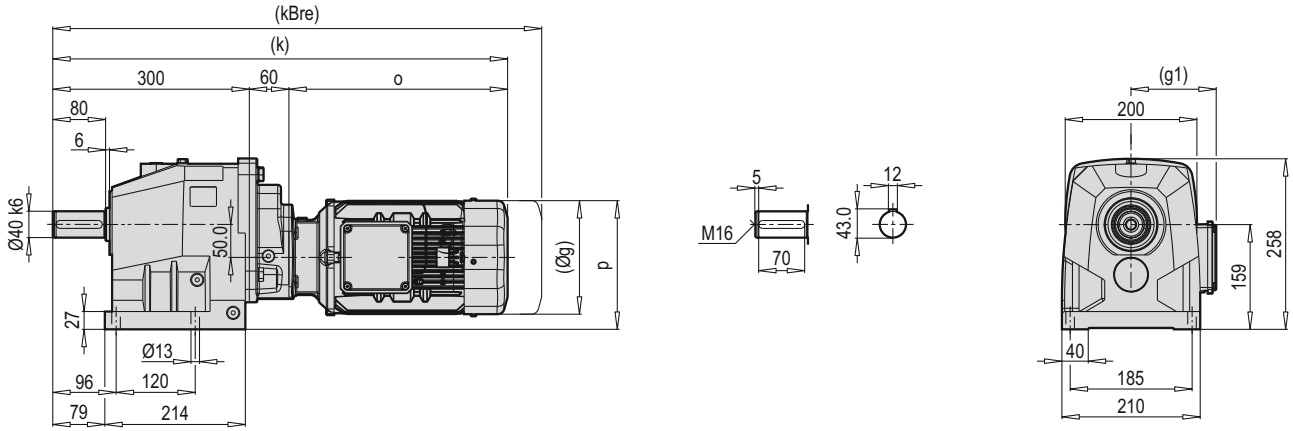
	71 M	80 M	90 S/L	100 L	112 M	132 S/M		
g	140	172	182	202	220	271		
g1	119	131	130	153	159	188		
k	536	560	626	677	672	747		
kBre	596	630	694	761	772	846/874		
o	236	260	326	377	372	447		
p	260	245	250	260	269	295		
p3	260	241	246	256	265	291		

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

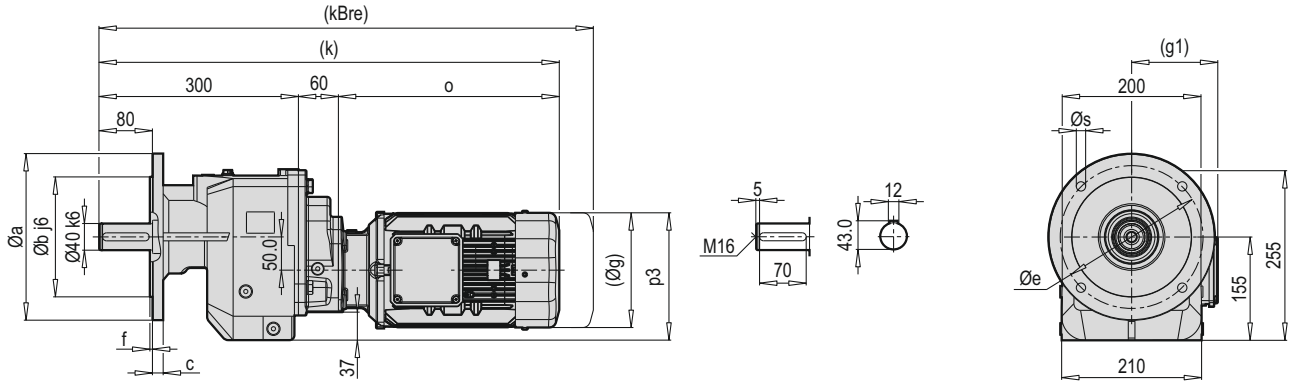
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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	172					
g1	111	119	131					
k	558	600	626					
kBre	610	660	696					
o	198	240	266					
p	169	178	195					
p3	165	174	191					

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

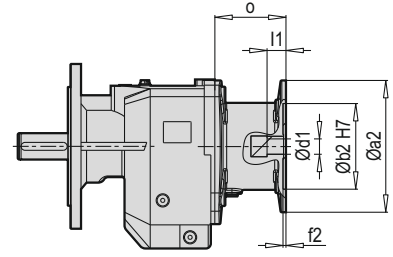
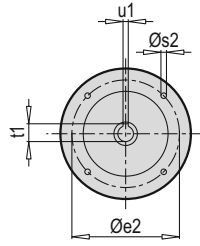
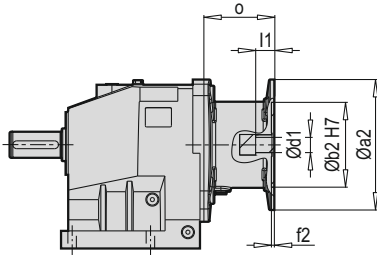
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 32
PA 33

IEC

PF 32
PF 33



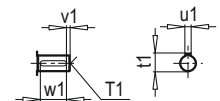
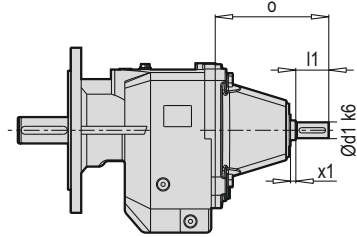
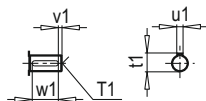
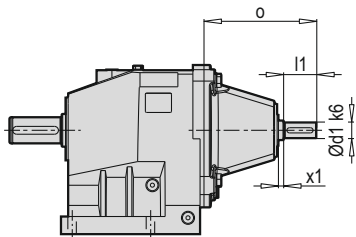
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	89
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	107	105
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	107	105
PA/PF 32-33	100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

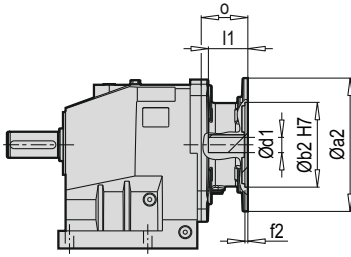
PF 32
PF 33



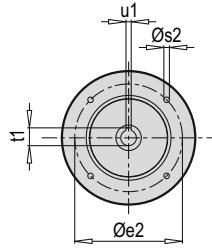
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 32	24	8	50	172	M8	27	8	5	40
PA/PF 33	16	7	40	122	M5	18	5	4	32

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

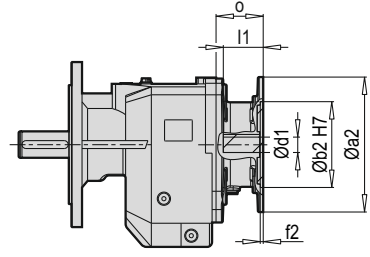
PA 32
PA 33



PAM B5/B14



PF 32
PF 33



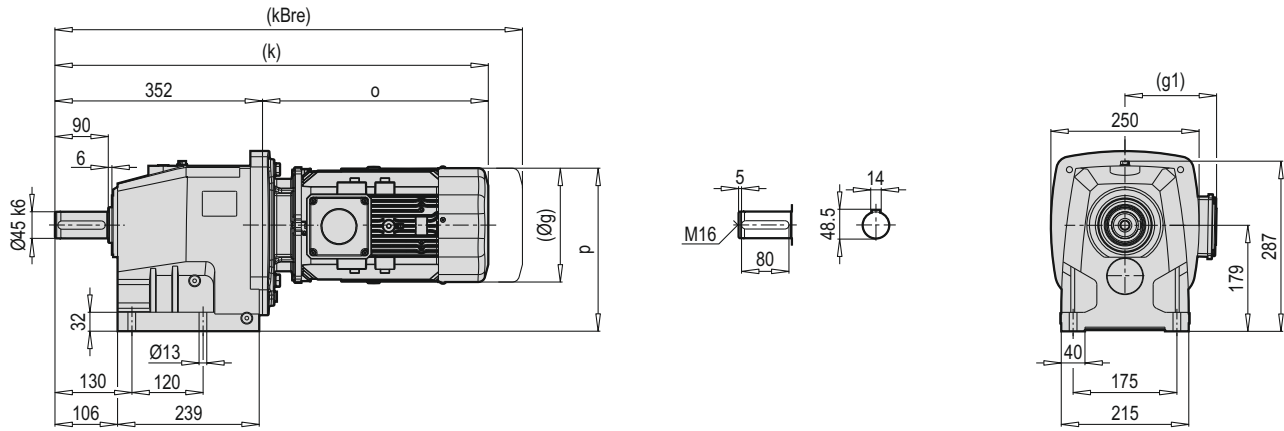
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	140	95	115	3.5	M8	11	23	12.8	4	-	85
PA/PF 32-33	71	160	110	130	4.0	M8	14	30	16.3	5	88	55
PA/PF 32-33	80	200	130	165	4.0	M10	19	40	21.8	6	72	74
PA/PF 32-33	90	200	130	165	4.0	M10	24	50	27.3	8	72	74
PA/PF 32-33	100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

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

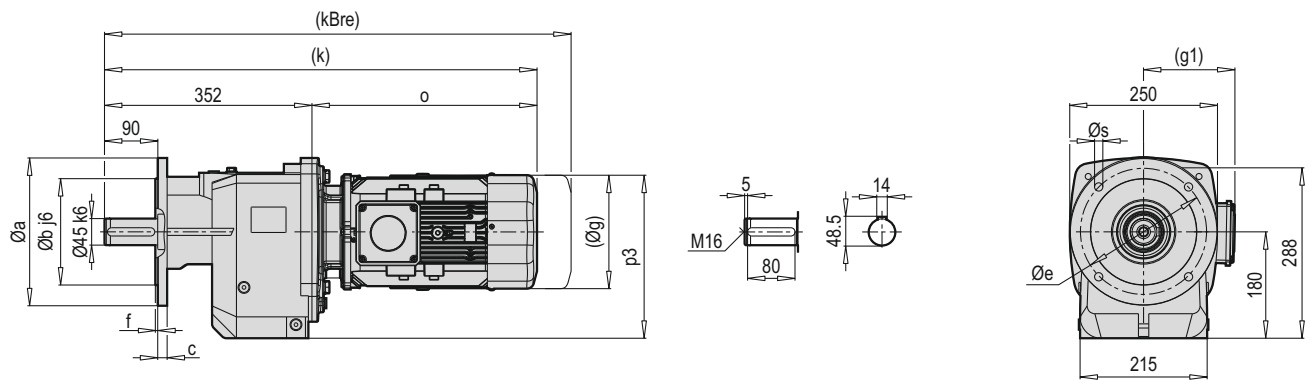
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 32 o	PA/PF 33 o
PA/PF 33	63	90	60	75	4.0	6	11	23	12.8	4	-	60
PA/PF 32-33	71	105	70	85	4.0	7	14	30	16.3	5	88	55
PA/PF 32-33	80	120	80	100	4.0	7	19	40	21.8	6	72	74
PA/PF 32-33	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 32-33	100	160	110	130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

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

PA 42



PF 42



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

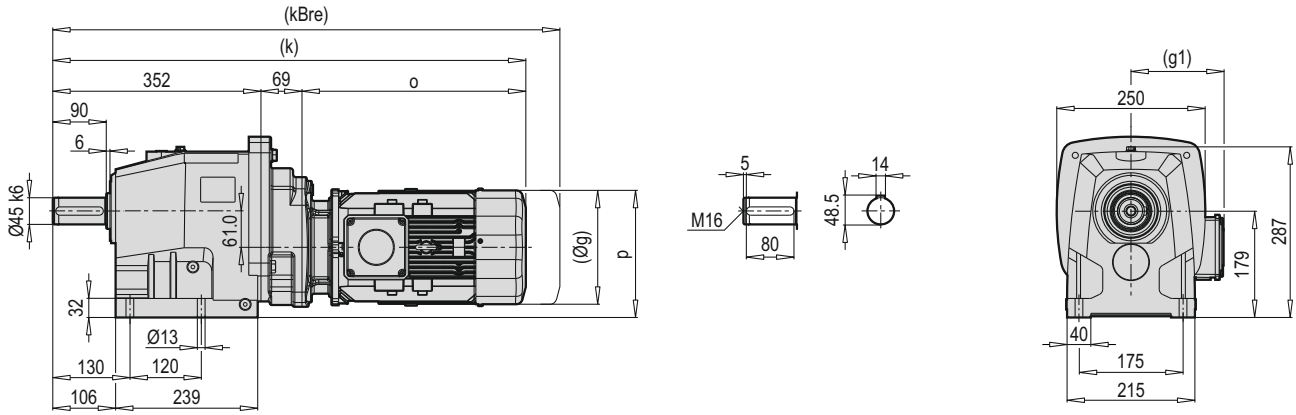
	90 S/L	100 L	112 M	132 S/M	160 M/L			
g	182	202	220	271	322			
g1	130	153	159	188	214			
k	682	733	732	794	882			
kBre	750	817	832	893/913	987			
o	330	381	380	442	530			
p	270	280	289	314	340			
p3	271	281	290	315	341			

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

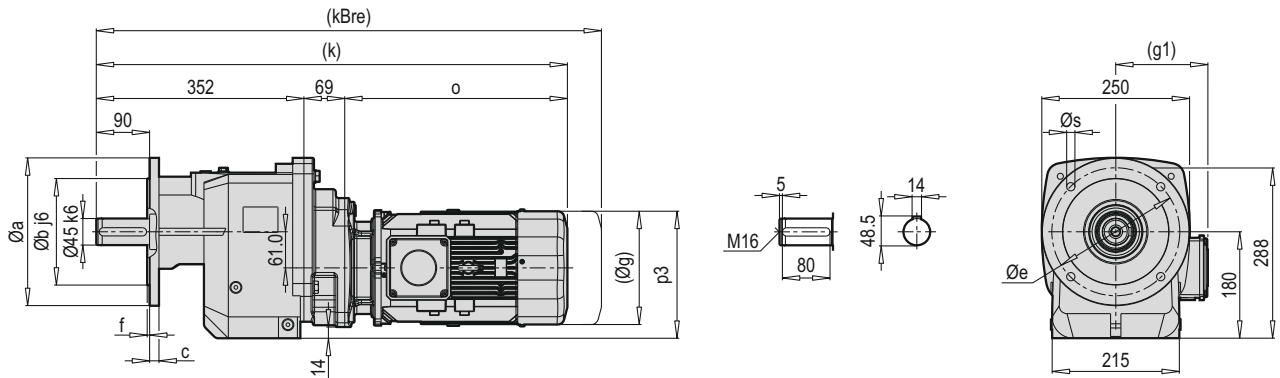
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 43



PF 43



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

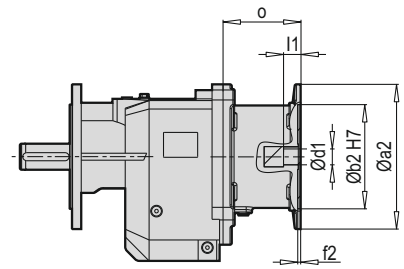
	71 M	80 M	90 S/L	100 L	112 M			
g	140	172	182	202	220			
g1	119	131	130	153	159			
k	657	681	747	798	793			
kBre	717	751	815	882	893			
o	236	260	326	377	372			
p	187	204	209	219	228			
p3	188	205	210	220	229			

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

Note : The dimensions which have (...) sign vary depending on the motor.

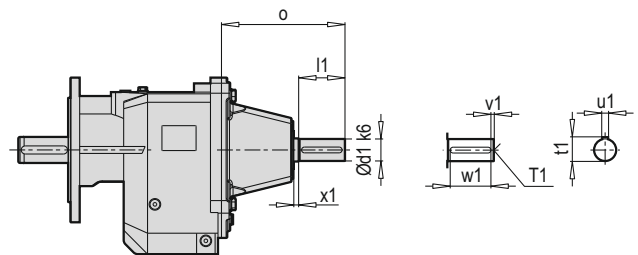
Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PF 42
PF 43



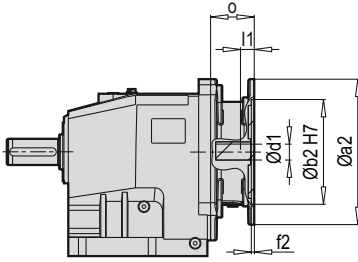
~ Kg		
IEC	PA/PF 42	PA/PF 43
71	-	71
80	-	75
90	62	75
100	70	79
112	70	79
132	84	-
160	95	-

PF 42
PF 43

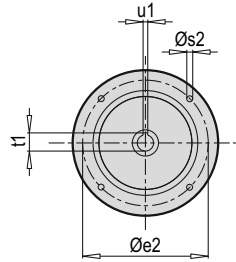


W ~ Kg	
PA/PF 42	68
PA/PF 43	73

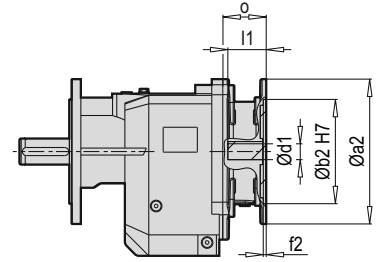
PA 42
PA 43



PAM B5/B14



PF 42
PF 43



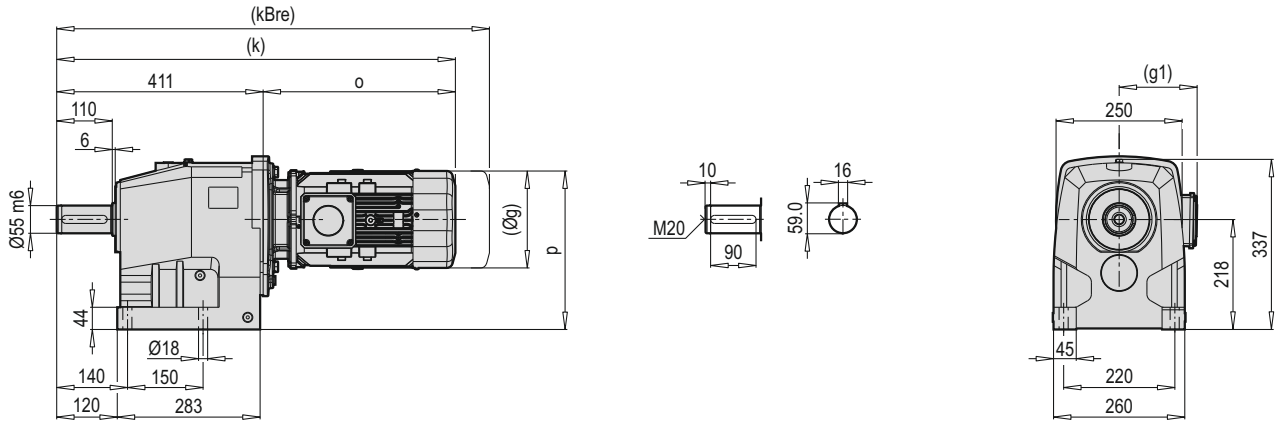
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 43	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 42-43	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 42-43	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 42-43	112	250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

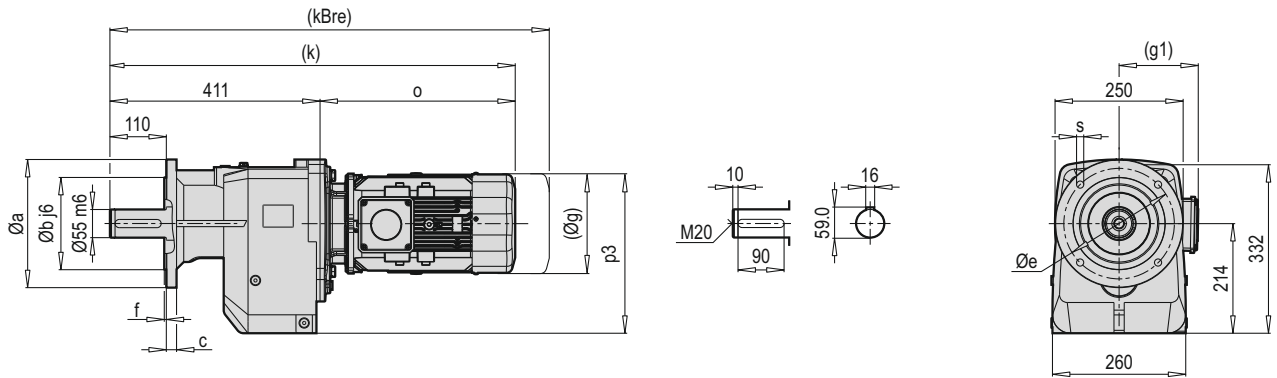
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 42 o	PA/PF 43 o
PA/PF 43	71	105	70	85	4.0	7	14	30	16.3	5	-	55
PA/PF 43	80	120	80	100	4.0	7	19	40	21.8	6	-	74
PA/PF 42-43	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 42-43	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 42-43	112	160	110	130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

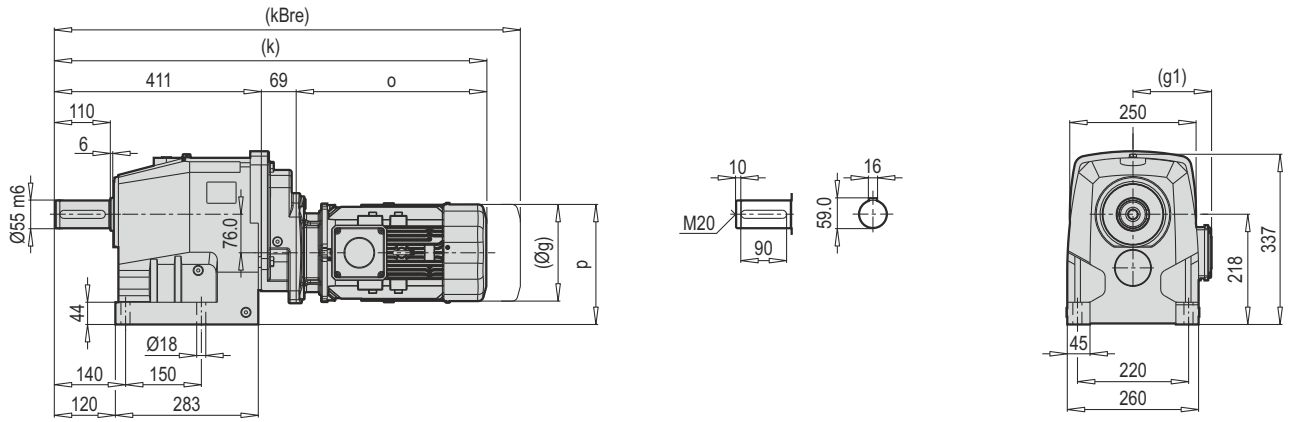
	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	182	202	220	271	322	363		
g1	130	153	159	188	214	249		
k	741	792	791	853	941	1035		
kBre	809	876	891	952/972	1046	1035		
o	330	381	380	442	530	624		
p	309	319	328	353	379	400		
p3	304	314	323	348	374	395		

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

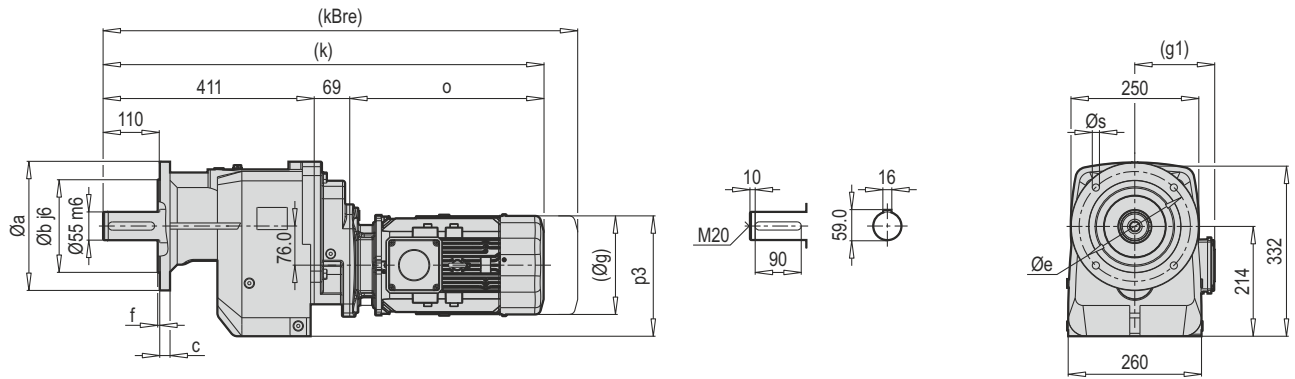
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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	172	182	202	220			
g1	119	131	130	153	159			
k	716	740	806	857	852			
kBre	776	810	874	941	952			
o	236	260	326	377	372			
p	211	228	233	243	252			
p3	207	224	229	239	248			

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

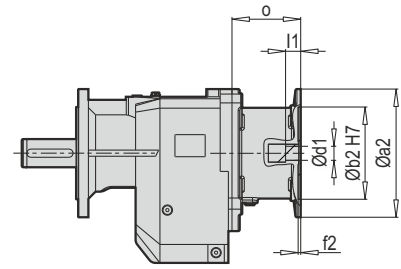
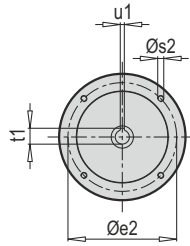
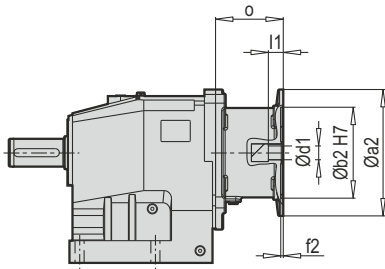
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 52
PA 53

IEC

PF 52
PF 53



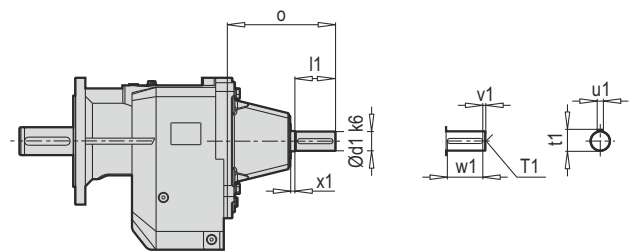
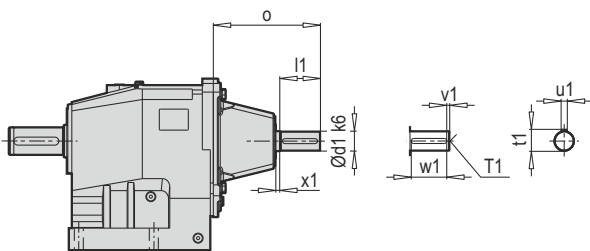
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	107
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	109	107
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	133	124
PA/PF 52-53	112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

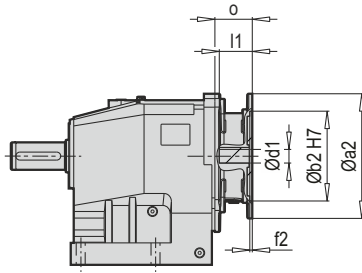
PF 52
PF 53



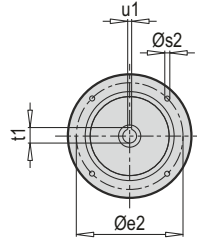
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 52	38	8	80	213	M12	41	10	5	70
PA/PF 53	24	8	50	172	M8	27	8	5	40

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

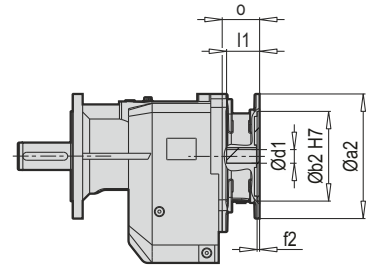
PA 52
PA 53



PAM B5/B14



PF 52
PF 53



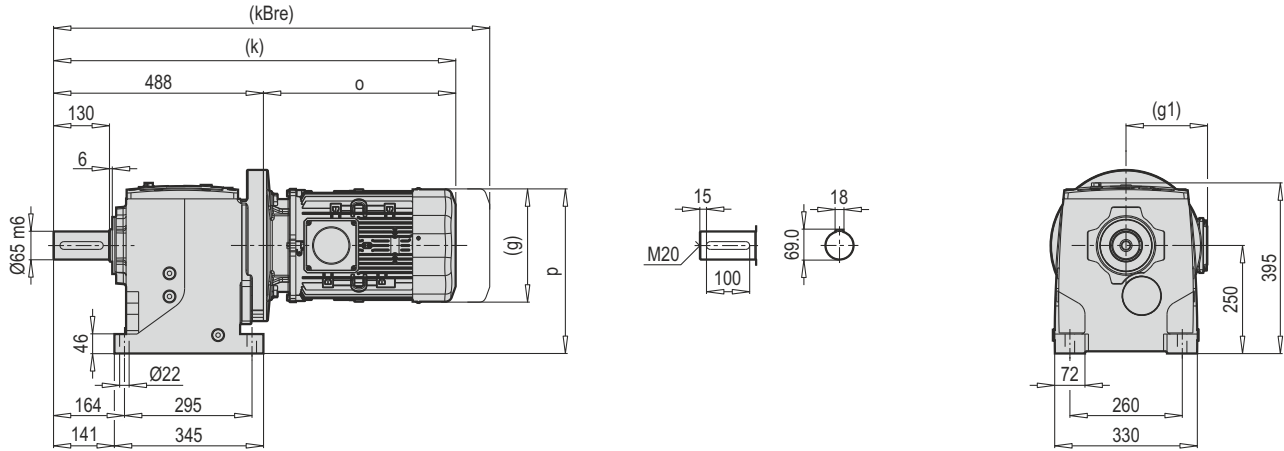
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	160	110	130	4.0	M8	14	30	16.3	5	-	88
PA/PF 53	80	200	130	165	4.0	M10	19	40	21.8	6	-	72
PA/PF 52-53	90	200	130	165	4.0	M10	24	50	27.3	8	72	72
PA/PF 52-53	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 52-53	112	250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

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

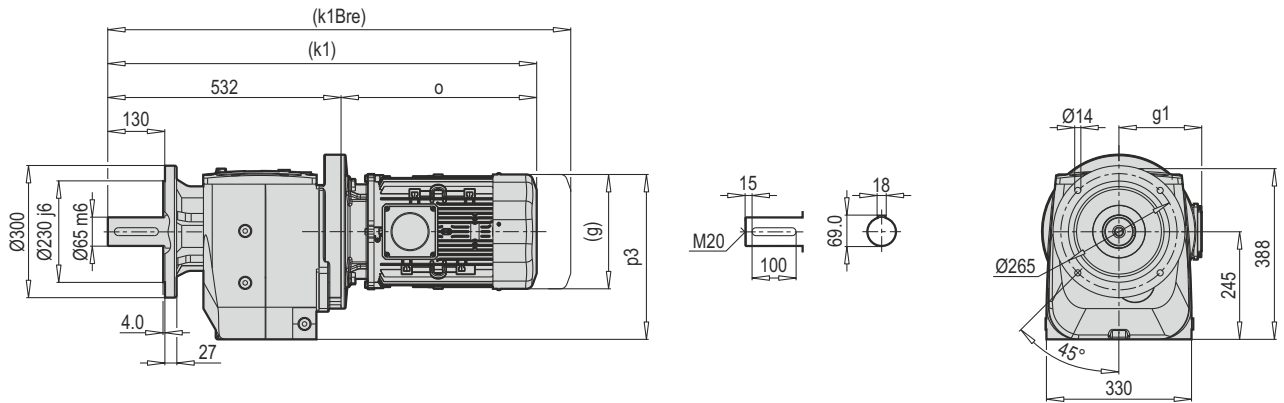
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 52 o	PA/PF 53 o
PA/PF 53	71	105	70	85	4.0	7	14	30	16.3	5	-	55
PA/PF 53	80	120	80	100	4.0	7	19	40	21.8	6	-	74
PA/PF 52-53	90	140	95	115	4.0	9	24	50	27.3	8	72	74
PA/PF 52-53	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 52-53	112	160	110	130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

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

PA 62



PF 62



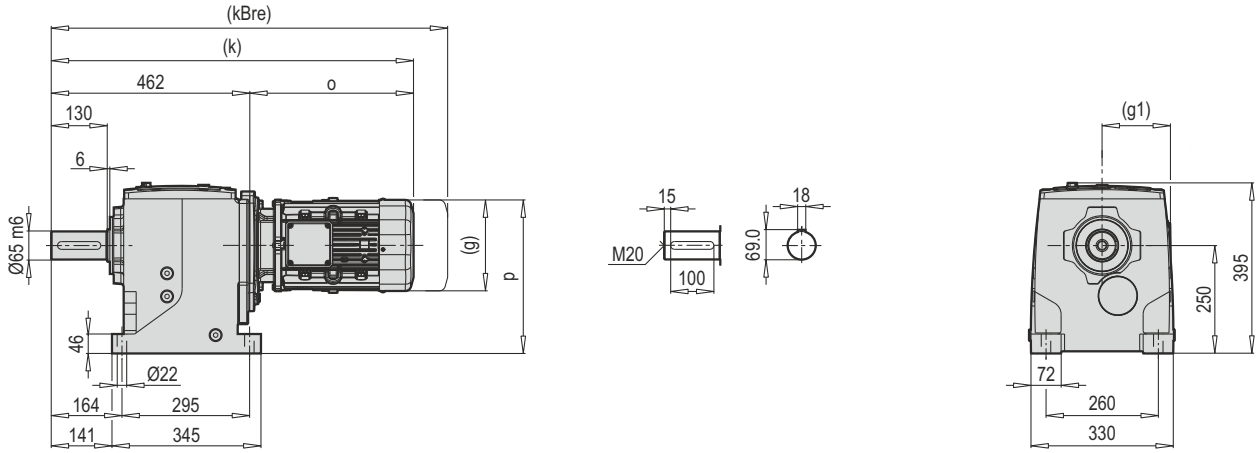
	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M	
g	220	271	271	322	363	363	456	
g1	159	188	188	214	249	249	260	
k	867	933	933	1018	1112	1121	1188	
kBre	967	1033	1053	1123	1231	1239	1360	
k1	911	977	977	1062	1156	1165	1232	
k1Bre	1011	1077	1097	1167	1275	1283	1404	
o	379	445	445	530	624	633	700	
p	360	386	386	411	432	432	485	
p3	355	381	381	406	427	427	485	

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

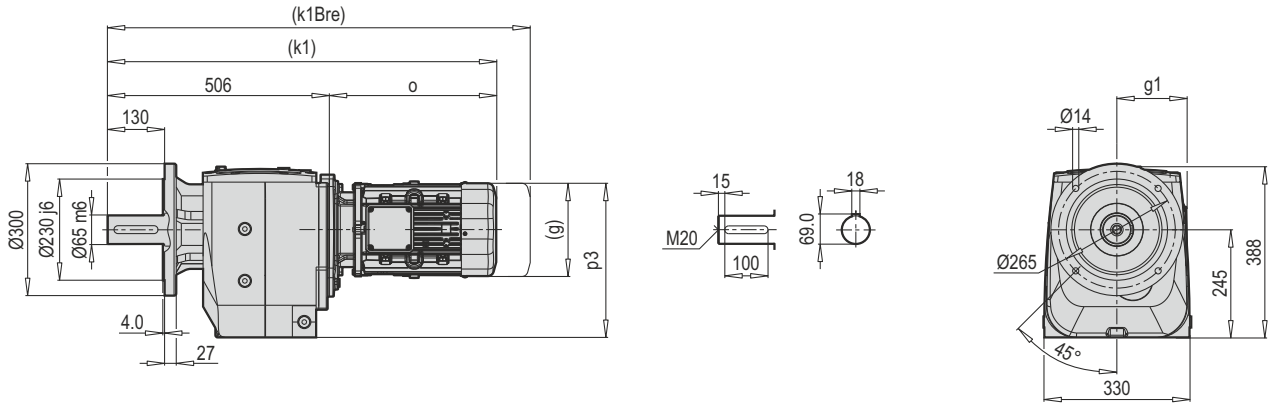
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 63



PF 63



	90 S/L	100 L	112 M	132 S/M	160 M/L	180 M/L		
g	182	202	220	271	322	363		
g1	130	153	159	188	214	249		
k	792	843	842	904	992	1062		
kBre	860	927	942	1003/1023	1097	1187		
k1	836	887	886	948	1036	1130		
k1Bre	904	971	986	1047/1127	1141	1231		
o	330	381	380	442	530	624		
p	341	351	360	385	410	431		
p3	336	346	355	380	405	426		

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

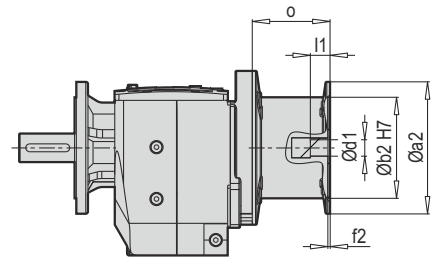
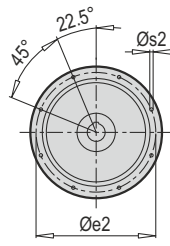
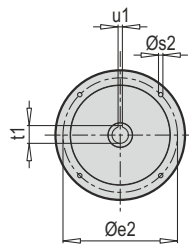
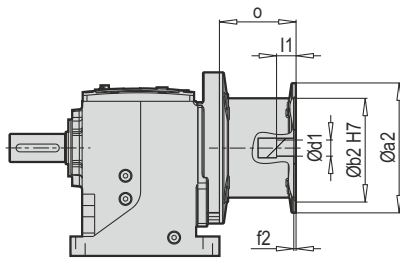
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 62
PA 63

IEC

PF 62
PF 63



IEC 90...200

IEC 225

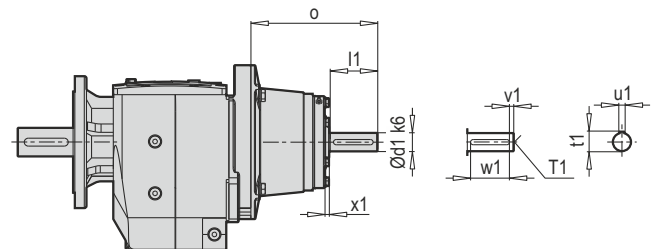
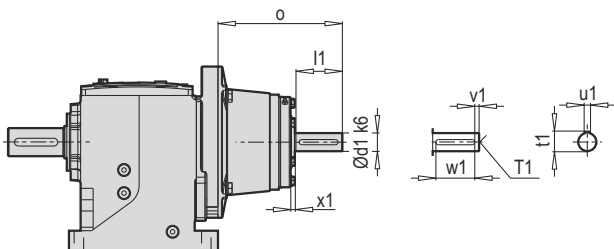
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	109
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	127	133
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	177	190
PA/PF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



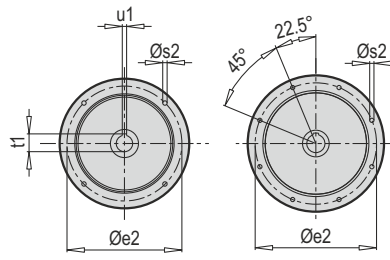
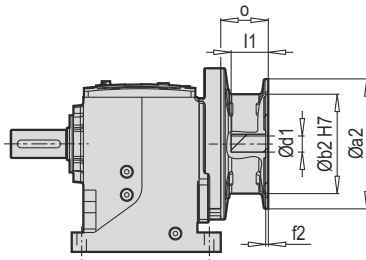
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 62	42	8	110	288	M16	45	12	10	90
PA/PF 63	38	8	80	213	M12	41	10	5	70

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

PA 62
PA 63

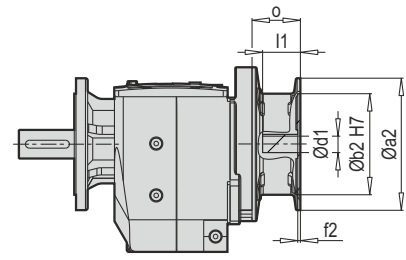
PAM B5/B14

PF 62
PF 63



PAM 90...200

PAM 225



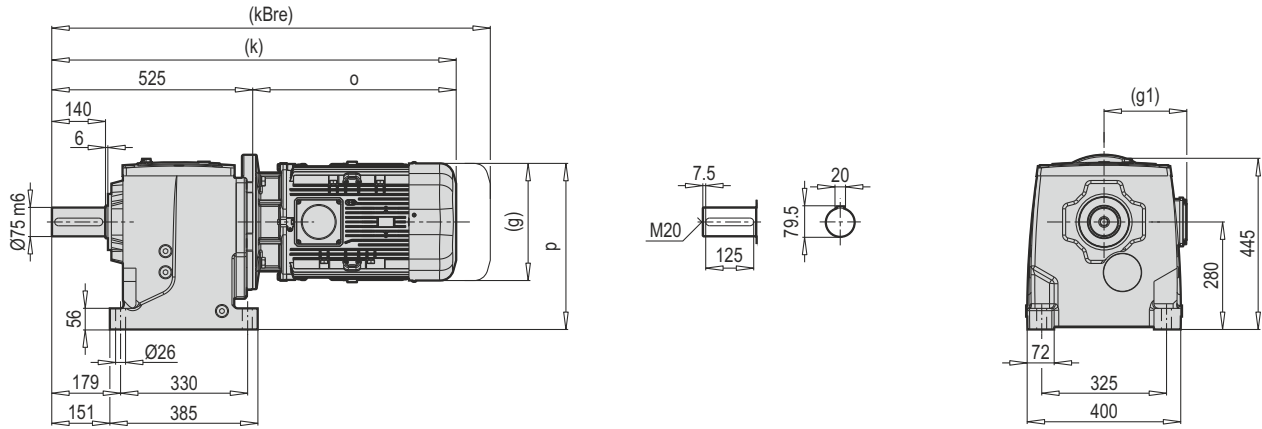
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	200	130	165	4.0	M10	24	50	27.3	8	-	72
PA/PF 62-63	100	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	112	250	180	215	5.0	M12	28	60	31.3	8	75	75
PA/PF 62-63	132	300	230	265	5.0	M12	38	80	41.3	10	110	94
PA/PF 62-63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

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

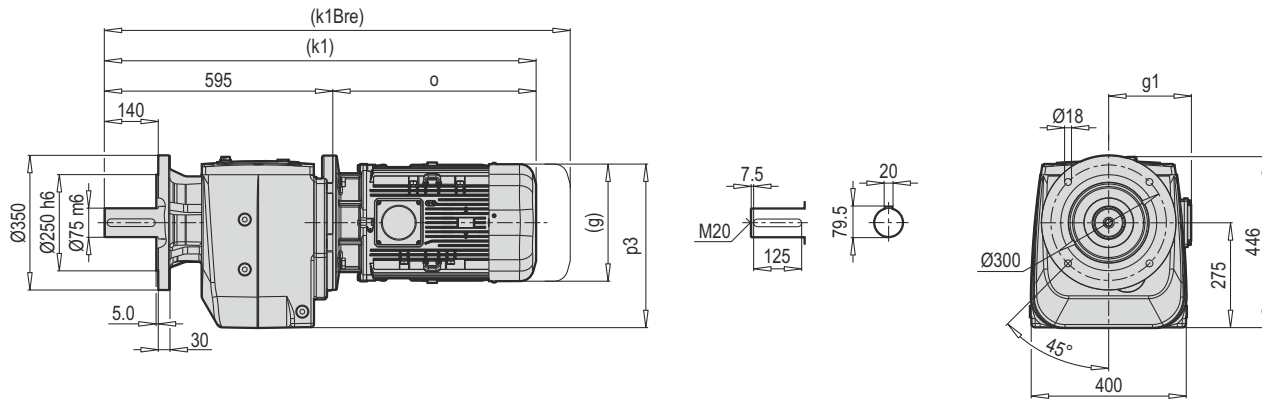
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 62 o	PA/PF 63 o
PA/PF 63	90	140	95	115	4.0	9	24	50	27.3	8	-	72
PA/PF 62-63	100	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 62-63	112	160	110	130	5.0	9	28	60	31.3	8	75	75
PA/PF 62-63	132	200	130	165	5.0	11	38	80	41.3	10	110	94

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

PA 72



PF 72



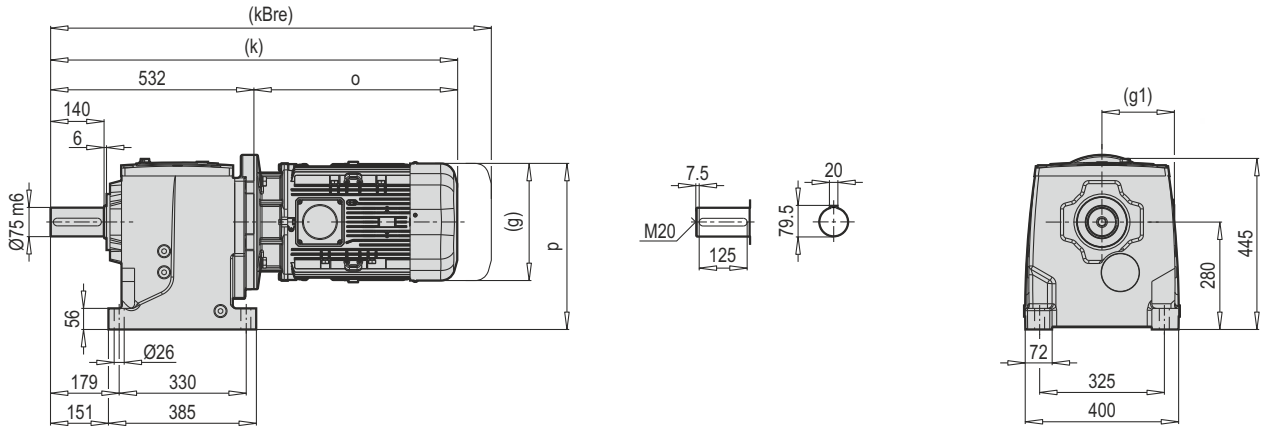
	132 M	160 M/L	180 M/L	200 L	225 S/M			
g	271	322	363	363	456			
g1	188	214	249	249	260			
k	970	1055	1149	1158	1225			
kBre	1090	1160	1268	1276	1397			
k1	1050	1125	1219	1228	1290			
k1Bre	1160	1230	1338	1346	1462			
o	445	530	624	633	700			
p	416	441	462	462	479			
p3	408	433	670	670	479			

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

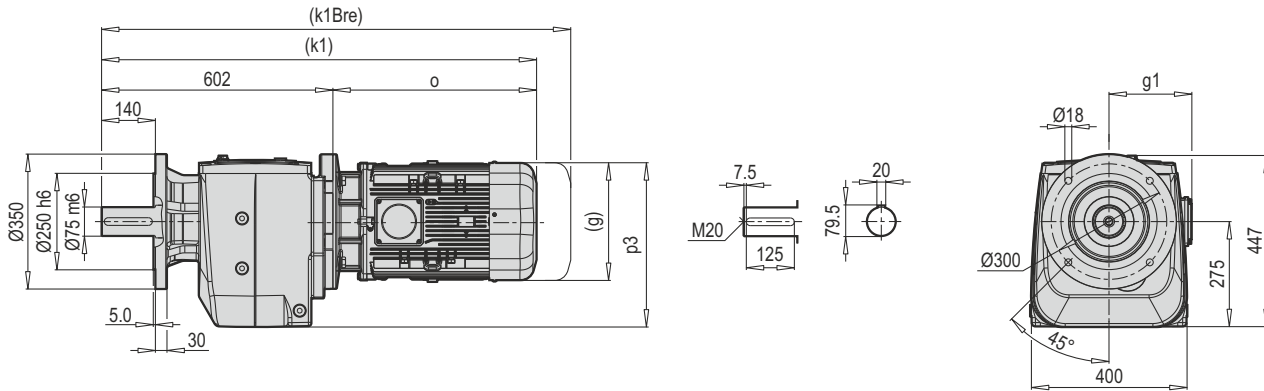
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 73



PF 73



	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	202	220	271	271	322	363	363	456
g1	153	159	188	188	214	249	249	260
k	912	911	977	977	1062	1156	1165	1232
kBre	996	1011	1077	1097	1167	1275	1275	1404
k1	982	981	1047	1047	1132	1226	1235	1297
k1Bre	1066	1081	1147	1167	1236	1345	1353	1469
o	380	379	445	445	530	624	633	700
p	381	390	415	415	441	461	461	479
p3	373	382	407	407	433	453	452	474

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

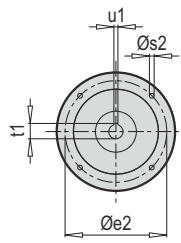
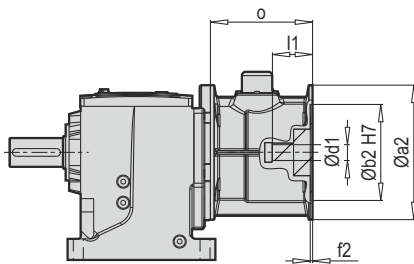
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

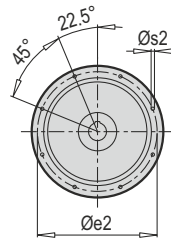
PA 72
PA 73

IEC

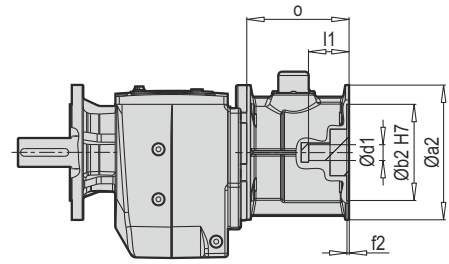
PF 72
PF 73



IEC 100...200



IEC 225



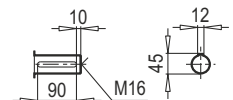
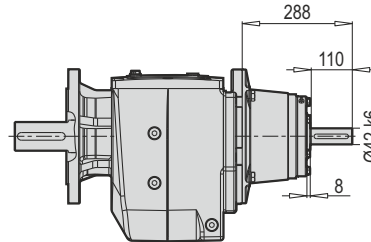
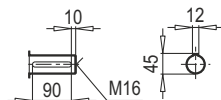
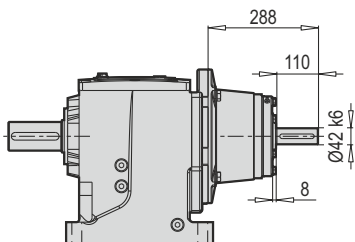
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 72-73	180	350	250	300	6.0	M16	48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

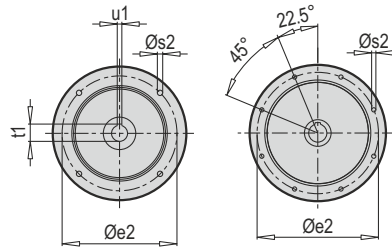
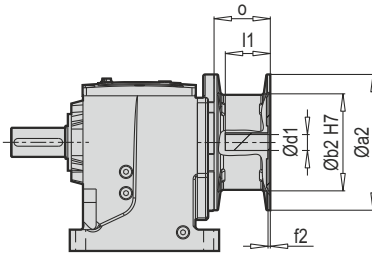


W ~ Kg	
PA/PF 72	252
PA/PF 73	263

PA 72
PA 73

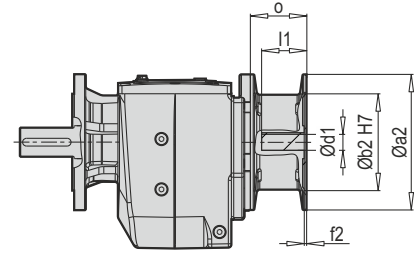
PAM B5/B14

PF 72
PF 73



PAM 100...200

PAM 225



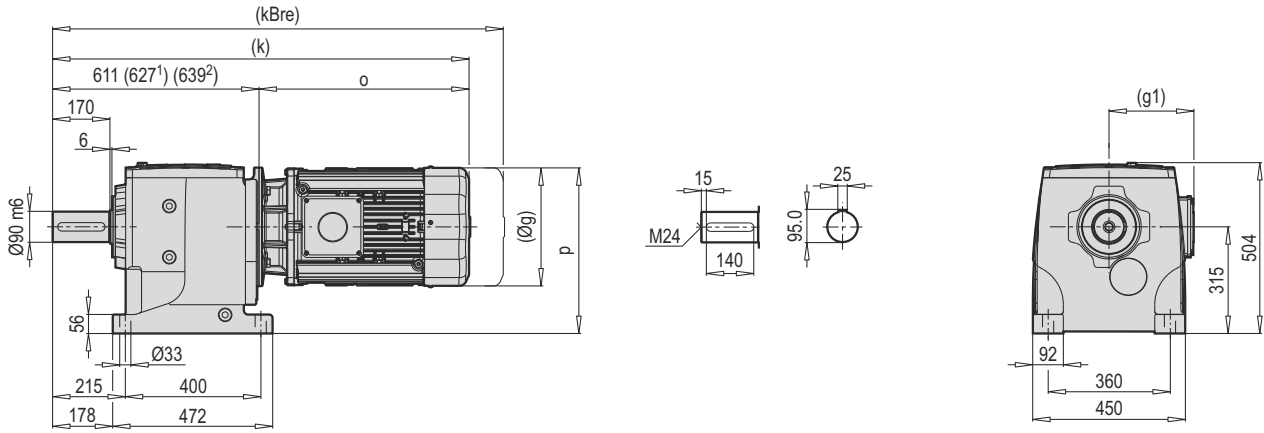
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 73	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 72-73	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 72-73	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 72-73	180	350	250	300	6.0	M16	48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

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

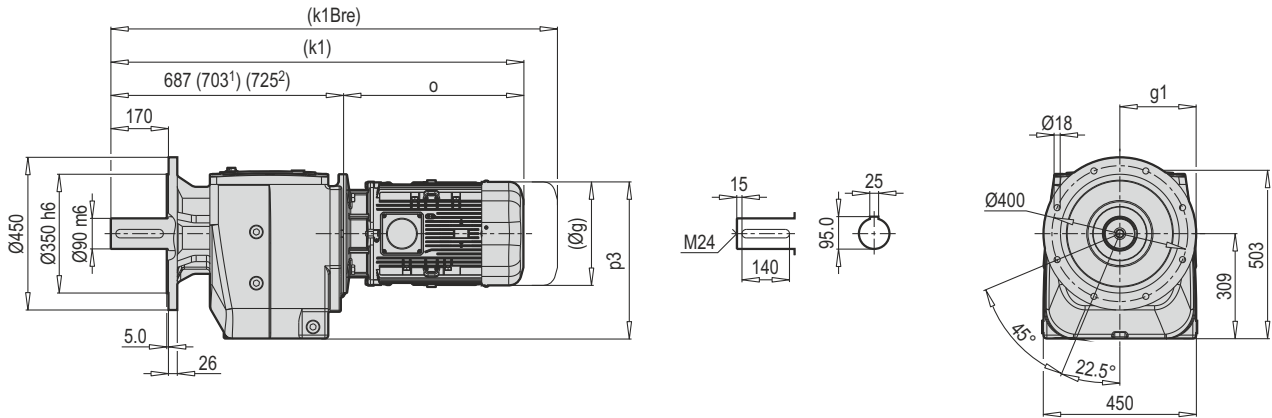
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 73	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 73	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 72-73	132	200	130	165	5.0	11	38	80	41.3	10	110

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

PA 82



PF 82



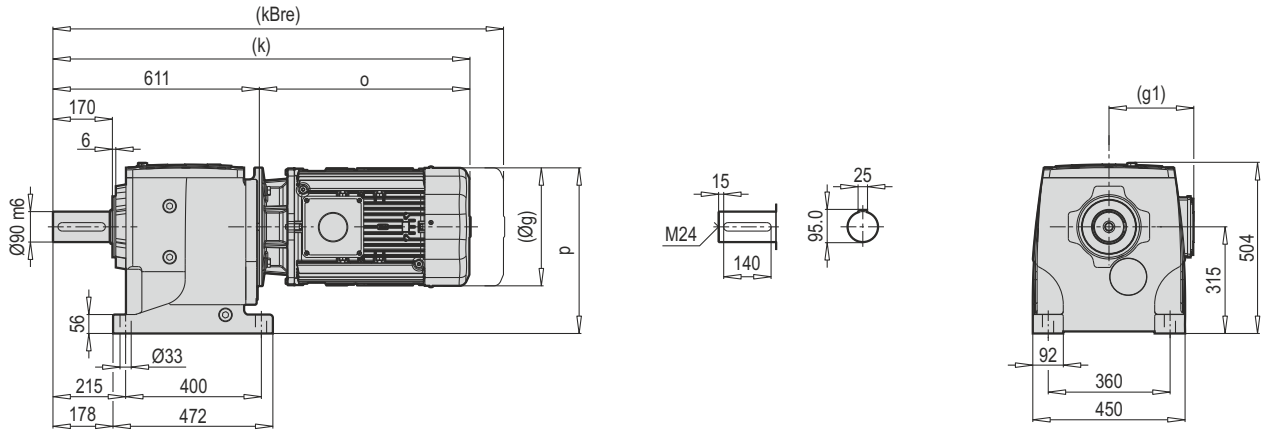
	132 M	160 M/L	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ²⁾	
g	271	322	363	363	456	495	510	
g1	188	214	249	249	260	392	372	
k	1056	1141	1235	1244	1311	1271	1527	
kBre	1176	1246	1354	1362	1483	1401	-	
k1	1132	1217	1311	1320	1387	1347	1613	
k1Bre	1252	1322	1430	1438	1559	1477	-	
o	445	530	624	633	700	644	888	
p	451	476	497	497	514	575	564	
p3	445	470	491	491	508	569	561	

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

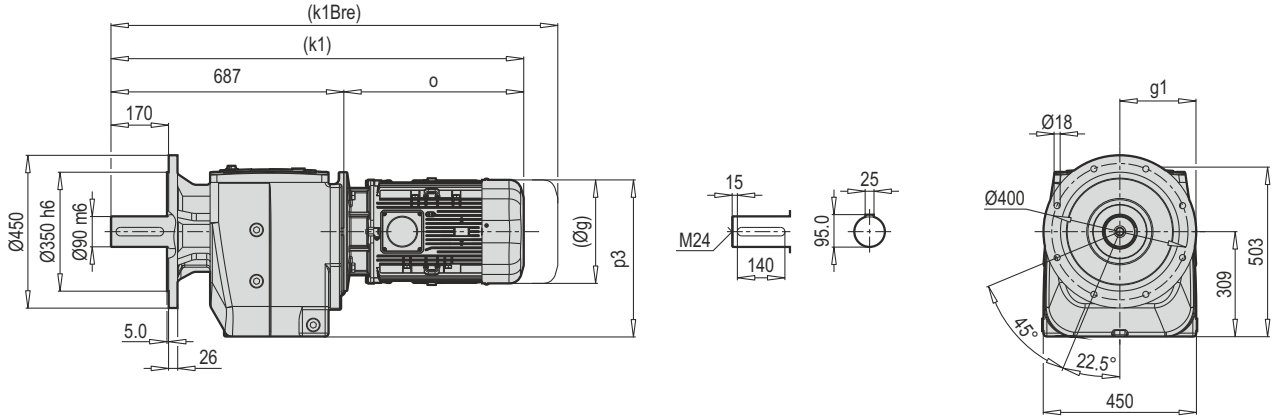
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 83



PF 83



	100 L	112 M	132 S	132 M	160 M/L	180 M/L	200 L	225 S/M
g	202	220	271	271	322	363	363	456
g1	153	159	188	188	214	249	249	260
k	991	990	1056	1056	1141	1235	1244	1311
kBre	1075	1090	1156	1176	1246	1354	1362	1483
k1	1067	1066	1132	1132	1217	1311	1320	1387
k1Bre	1151	1166	1232	1252	1322	1430	1438	1559
o	380	379	445	445	530	624	633	700
p	416	425	450	450	476	470	497	514
p3	410	419	444	444	470	491	491	508

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

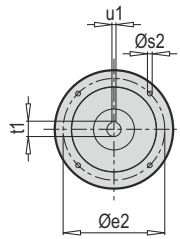
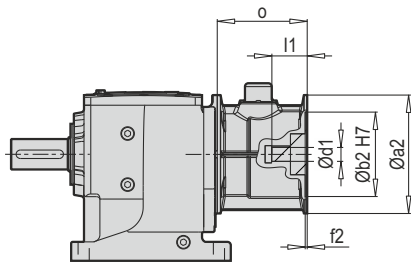
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

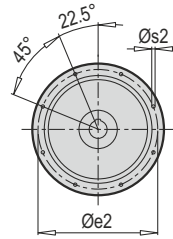
PA 82
PA 83

IEC

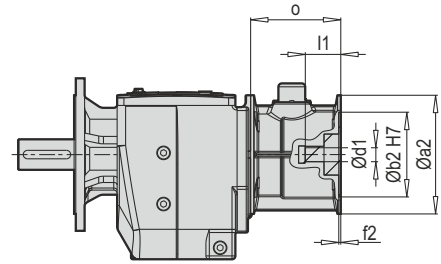
PF 82
PF 83



IEC 100...200



IEC 225...280



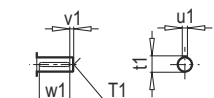
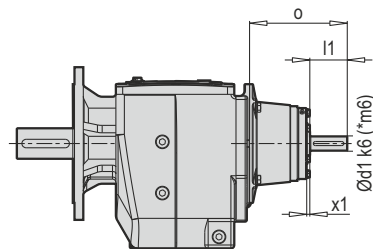
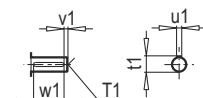
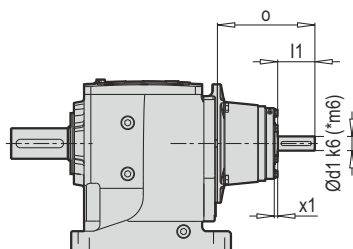
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	127
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 82-83	180	350	250	300	6.0	M16	48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



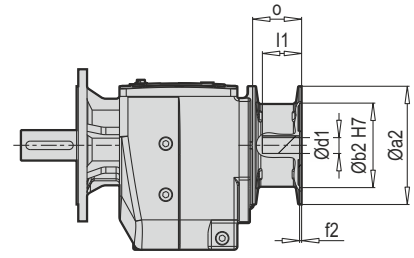
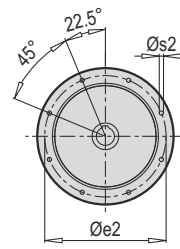
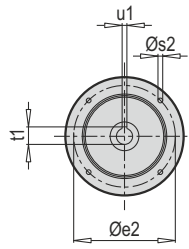
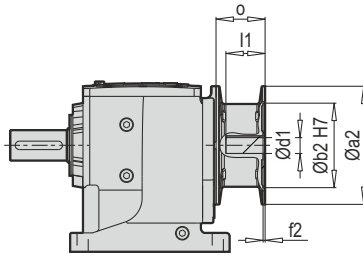
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 82	65*	12	140	397	M20	69	18	15	110
PA/PF 83	42	8	110	288	M16	45	12	10	90

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

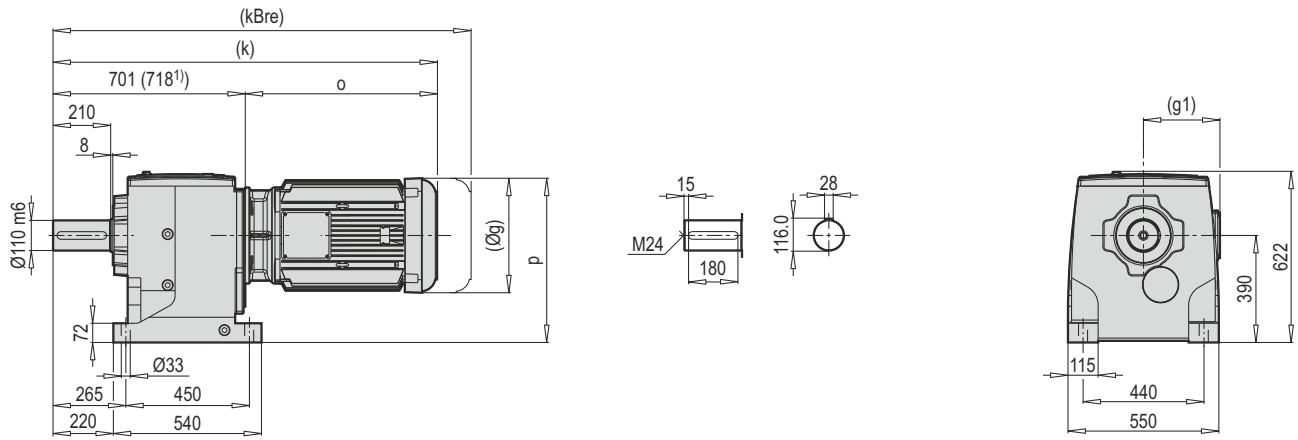
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 82-83	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 82-83	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 82-83	180	350	250	300	6.0	M16	48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

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

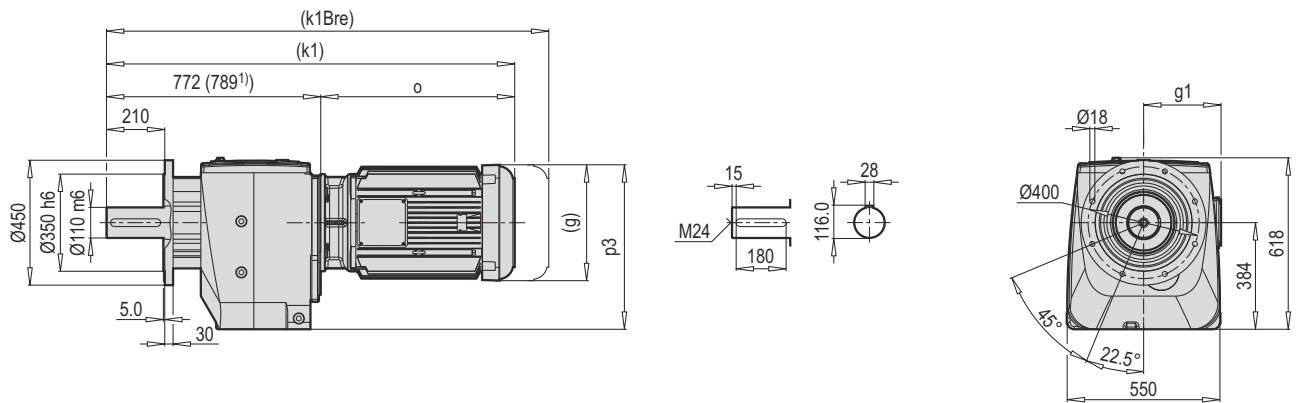
Tip / Type Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 82-83	132	200	130	165	5.0	11	38	80	41.3	10	110

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

PA 92



PF 92



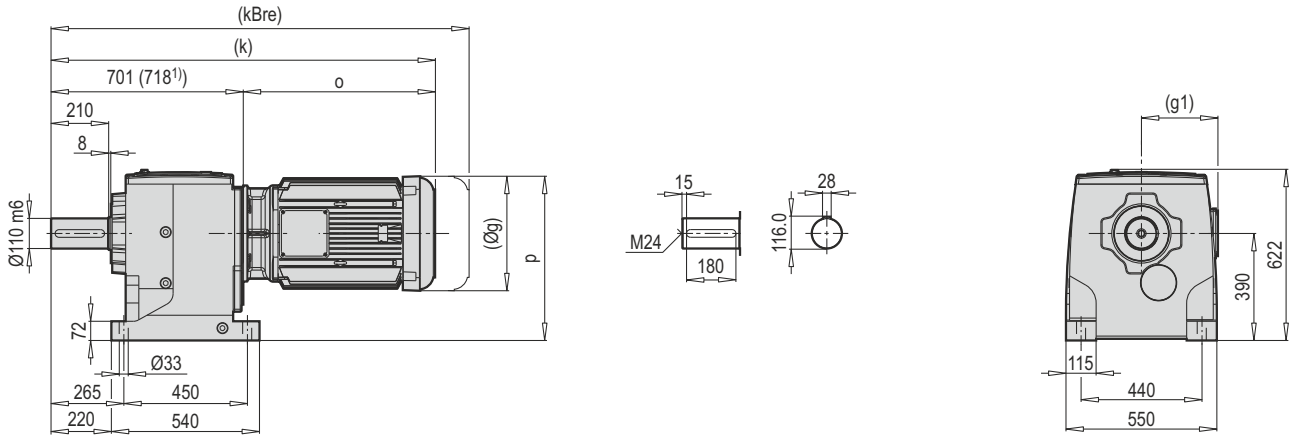
	180 M/L	200 L	225 S/M	250 M ¹⁾	280 M ¹⁾	315 S ¹⁾	315 M ¹⁾	
g	363	363	456	495	510	-	-	
g1	249	249	260	392	372	-	-	
k	1325	1334	1404	1362	1606	-	-	
kBre	1444	1452	1576	1492	-	-	-	
k1	1396	1405	1475	1433	1677	-	-	
k1Bre	1515	1523	1647	1563	-	-	-	
o	624	633	700	644	888	-	-	
p	572	572	622	650	682	-	-	
p3	566	566	616	644	676	-	-	

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

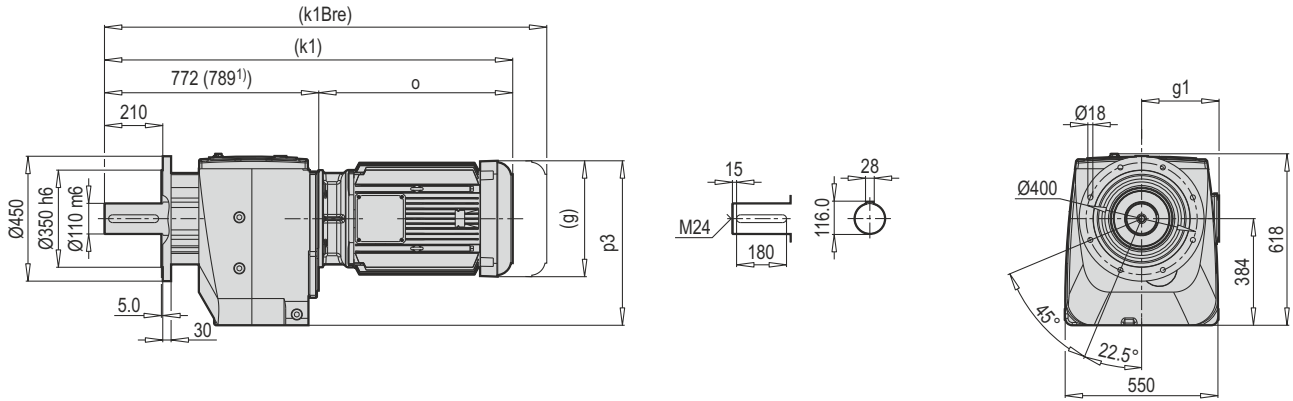
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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	271	271	322	363	363	456	495	510
g1	188	188	214	249	249	260	392	372
k	1146	1146	1231	1325	1334	1404	1362	1606
kBre	1246	1266	1336	1444	1452	1576	1492	-
k1	1217	1217	1302	1396	1405	1475	1433	1677
k1Bre	1317	1337	1407	1515	1523	1647	1563	-
o	445	445	530	624	633	700	644	888
p	526	526	551	572	572	622	650	682
p3	519	519	544	565	565	616	644	676

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

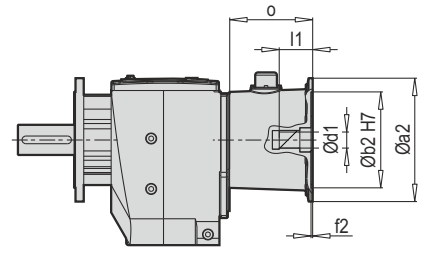
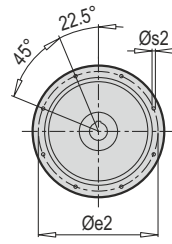
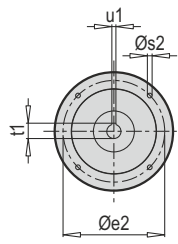
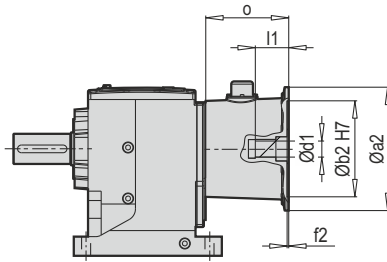
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

PA 92
PA 93

IEC

PF 92
PF 93



IEC 132...200

IEC 225...315

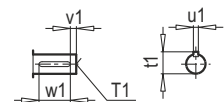
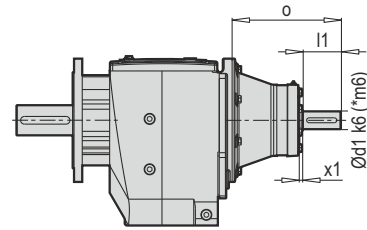
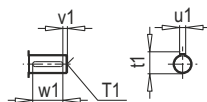
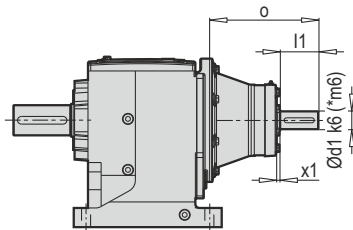
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 92-93	225	450	350	400	6.0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



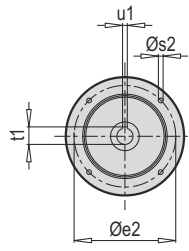
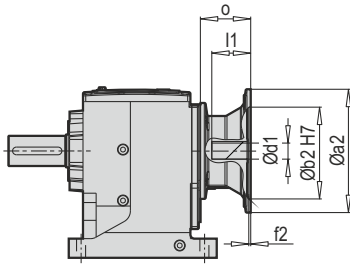
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 92	65*	12	140	397	M20	69	18	15	110
PA/PF 93	42	8	110	288	M16	45	12	10	90

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

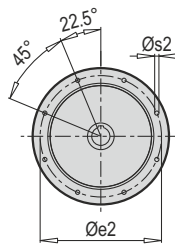
PA 92
PA 93

PAM B5/B14

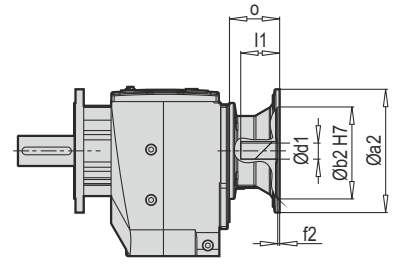
PF 92
PF 93



PAM 132...200



PAM 225...315



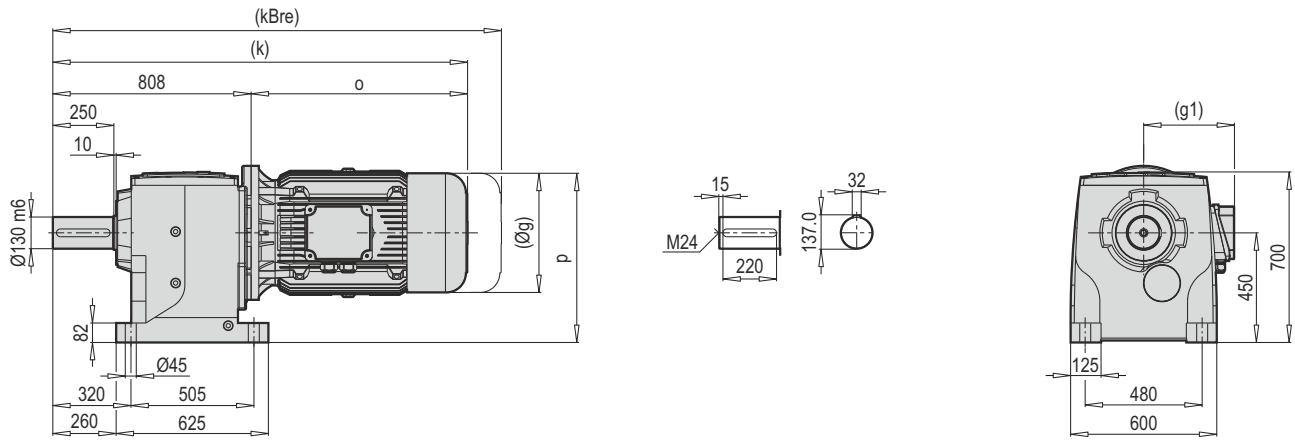
Tip / Type Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 93	132	300	230	265	5.0	M12	38	80	41.3	10	110
PA/PF 92-93	160	350	250	300	6.0	M16	42	110	45.3	12	145
PA/PF 92-93	180	350	250	300	6.0	M16	48	110	51.8	14	145
PA/PF 92-93	200	400	300	350	6.0	M16	55	110	59.3	16	157
PA/PF 92-93	225	450	350	400	6.0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

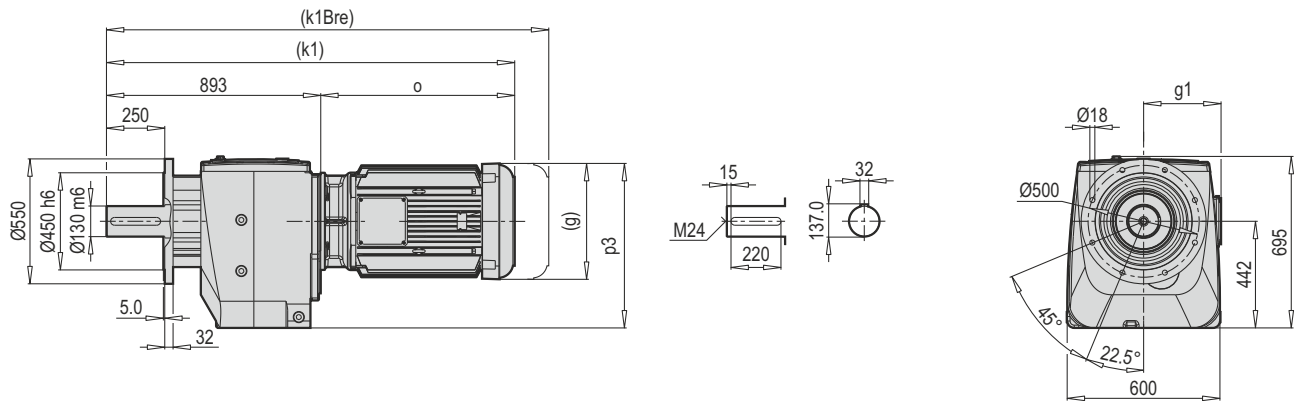
~ Kg		
PAM B5	PA/PF 92	PA/PF 93
132	-	522
160	528	539
180	528	539
200	535	546
225	545	556
250	605	616
280	605	616
315	-	-

~ Kg	
PAM B14	PA/PF 93
132	517

PA 102



PF 102



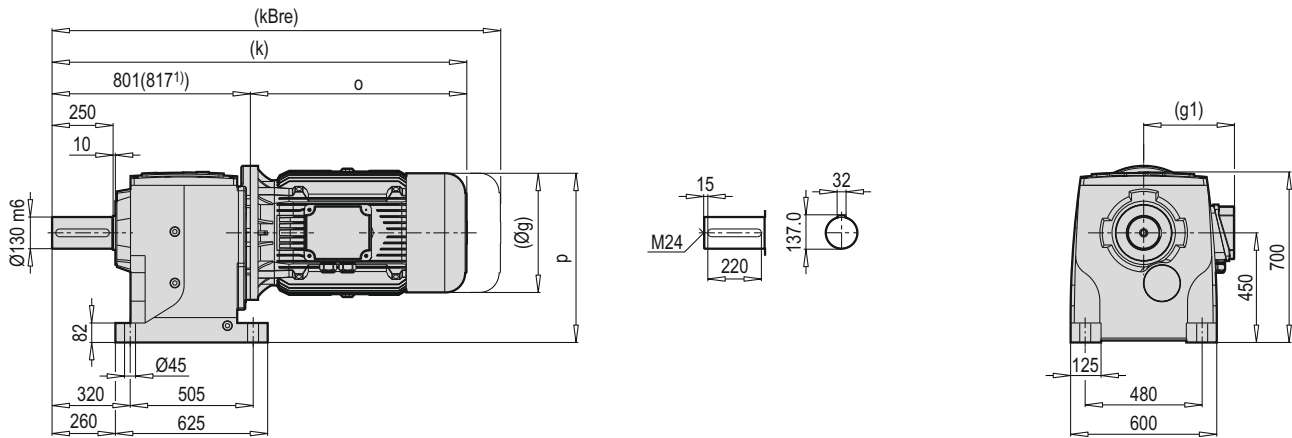
	250 M	280 M	315 S	315 M				
g	495	510	-	-				
g1	392	372	-	-				
k	1452	1696	-	-				
kBre	1582	-	-	-				
k1	1537	1781	-	-				
k1Bre	1667	-	-	-				
o	644	888	-	-				
p	702	754	-	-				
p3	706	758	-	-				

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

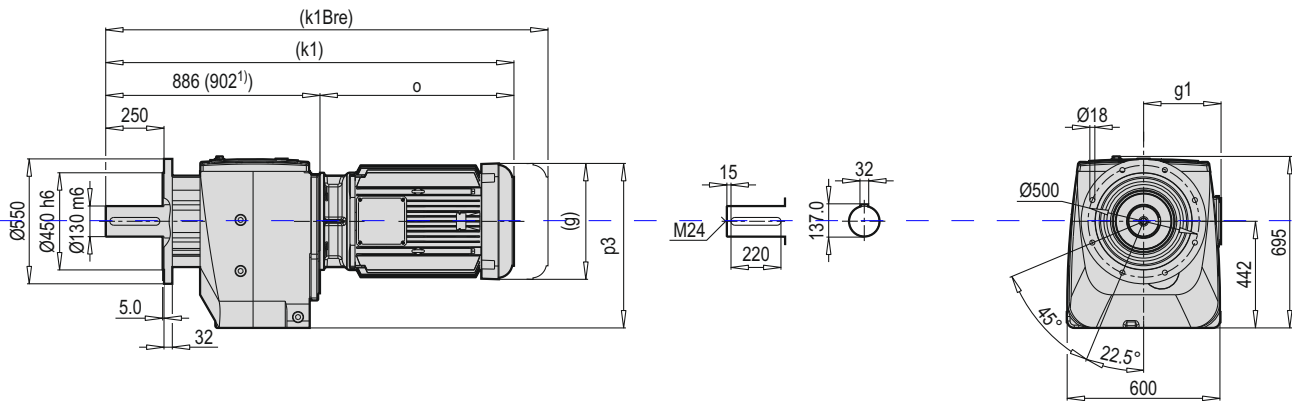
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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	271	271	322	363	363	456	495	510	-	-
g1	188	188	214	249	249	260	392	372	-	-
k	1246	1246	1331	1425	1434	1501	1461	1705	-	-
kBre	1346	1366	1436	1544	1552	1673	1591	-	-	-
k1	1317	1317	1402	1496	1505	1586	1546	1790	-	-
k1Bre	1417	1437	1507	1615	1623	1758	1676	-	-	-
o	445	445	530	624	633	700	644	888	-	-
p	585	585	611	632	632	702	710	754	-	-
p3	579	579	604	625	625	706	710	758	-	-

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

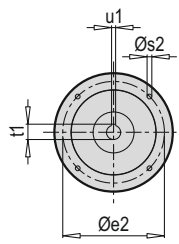
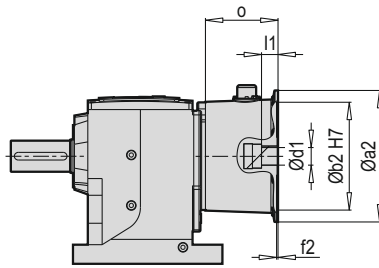
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

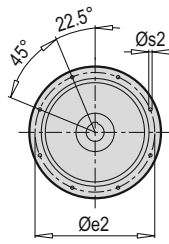
PA 102
PA 103

IEC

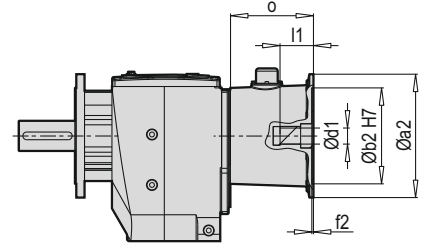
PF 102
PF 103



IEC 132...200



IEC 225...315



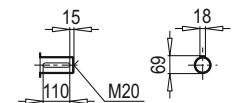
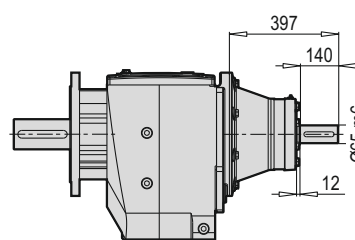
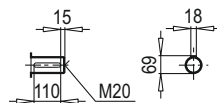
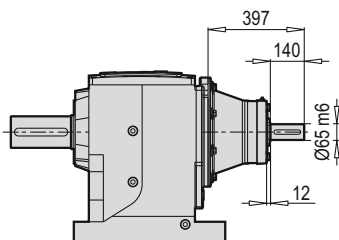
Tip / Type Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 103	132	300	230	265	5.0	M12	38	80	41.3	10	177
PA/PF 103	160	350	250	300	6.0	M16	42	110	45.3	12	266
PA/PF 103	180	350	250	300	6.0	M16	48	110	51.8	14	266
PA/PF 103	200	400	300	350	6.0	M16	55	110	59.3	16	229
PA/PF 103	225	450	350	400	6.0	M16	60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

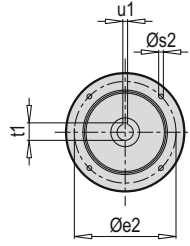
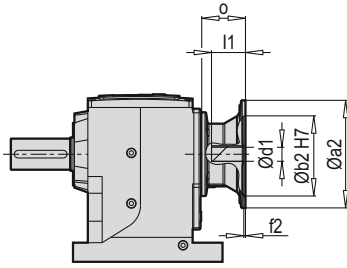


W ~ Kg	
PA/PF 102	870
PA/PF 103	880

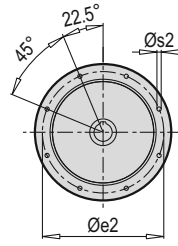
PA 102
PA 103

PAM B5/B14

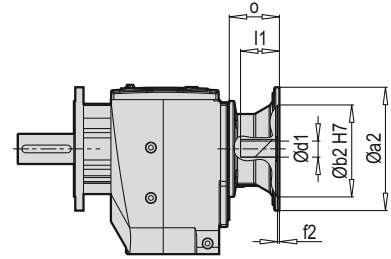
PF 102
PF 103



PAM 132...200



PAM 225...315



Tip / Type Typ	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	-

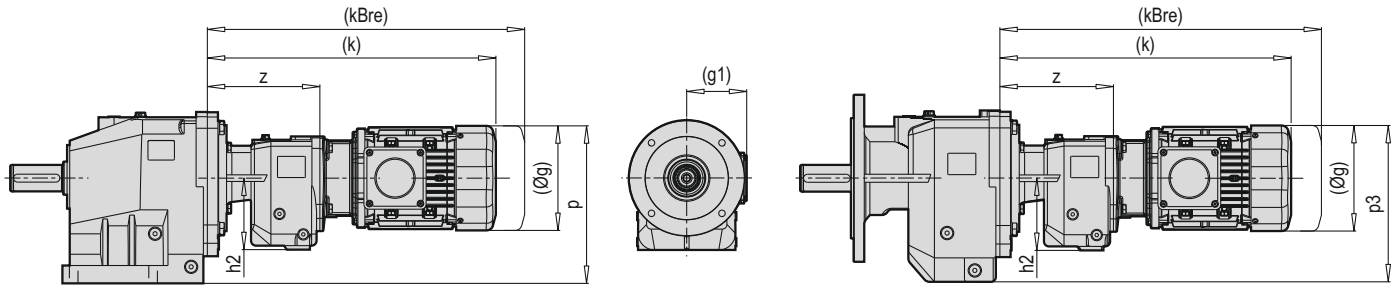
~ Kg		
PAM B5	PA/PF 102	PA/PF 103
132	-	741
160	-	758
180	-	758
200	-	765
225	-	775
250	826	835
280	826	835
315	-	-

Tip / Type Typ	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 / Typ	Motor	g	g1	h2	z	k	kBre	p	p3
PA/PF 12/02	63 M	124	111	91	143	341	393	166	170
	71 M	140	119						
PA/PF 22/02	63 M	124	111	91	159	357	409	189	193
	71 M	140	119						
	80 M	172	130.5						
PA/PF 32/12	63 M	124	111	108	172	370	422	221	217
	71 M	140	119						
	80 M	172	130.5						
PA/PF 42/12	63 M	124	111	108	176	374	426	241	242
	71 M	140	119						
	80 M	172	130.5						
PA/PF 52/12	63 M	124	111	108	176	374	426	280	276
	71 M	140	119						
	80 M	172	130.5						

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

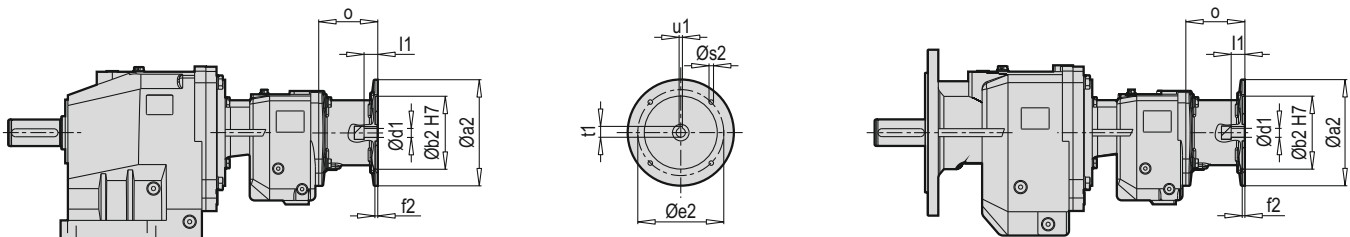
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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

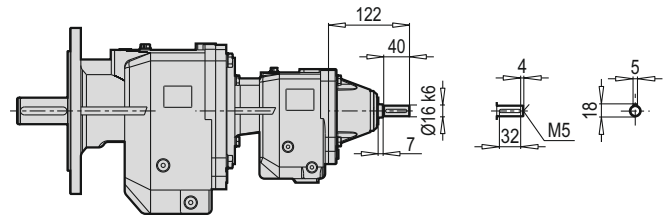
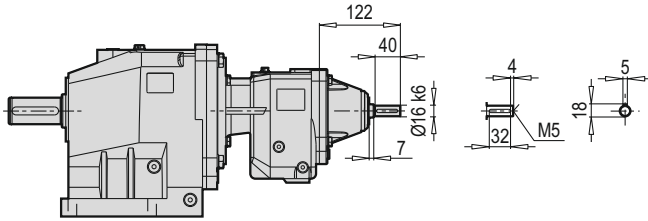


Tip / Type / Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o	~ 					
												IEC	PA/PF 12/02	PA/PF 22/02	PA/PF 32/12	PA/PF 42/12	PA/PF 52/12
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	63	140	95	115	3.5	M8	11	23	12.8	4	85	63	24	37	51	69	100
PA/PF 12/02 - 22/02 - 32/12 - 42/12 - 52/12	71	160	110	130	4.0	M8	14	30	16.3	5	89	71	25	38	52	70	101
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	80	28	42	55	73	104
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	90	28	42	55	73	104
PA/PF 32/12 - 42/12 - 52/12	100	250	180	215	5.0	M12	28	60	31.3	8	130	100	-	-	62	80	111
PA/PF 32/12 - 42/12 - 52/12	112	250	180	215	5.0	M12	28	60	31.3	8	130	112	-	-	62	80	111

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

W

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

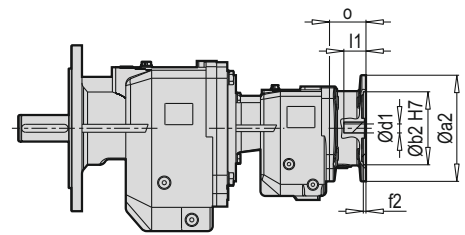
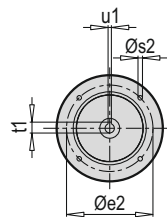
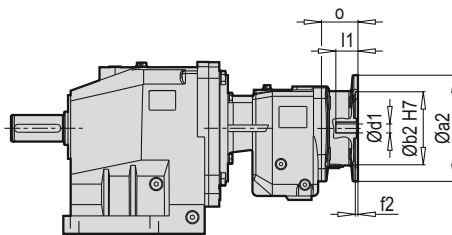


W ~ Kg	
PA/PF 12/02	23
PA/PF 22/02	36
PA/PF 32/12	50
PA/PF 42/12	68
PA/PF 52/12	99

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

PAM B5/B14

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



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

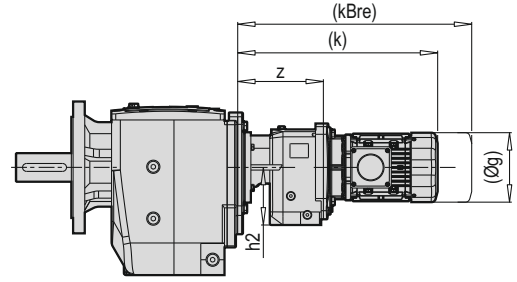
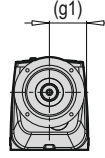
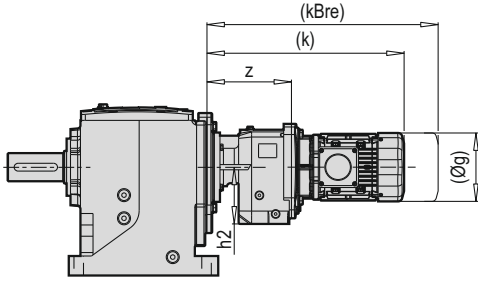
~ Kg					
PAM B5	PA/PF 12/02	PA/PF 22/02	PA/PF 32/12	PA/PF 42/12	PA/PF 52/12
63	22	34	47	65	94
71	22	34	47	65	94
80	23	35	48	66	95
90	23	35	48	66	95
100	-	-	55	73	102
112	-	-	55	73	102

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

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

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

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



Tip / Type / Typ	Motor	g	g1	h2	z	k	kBre	p	p3
PA/PF 63/22	71 M	140	119	127	196	432	492	320	315
	80 M	172	127			458	520	336	331
	90 S/L	182	151			481/501	554/574	341	336
	100 L	202	160			529	610	351	346
PA/PF 73/22	71 M	140	119	127	196	432	492	350	342
	80 M	172	127			458	520	366	358
	90 S/L	182	151			481/501	554/574	371	363
	100 L	202	160			529	610	381	373
PA/PF 73/32	80 M	172	127	159	238	500	562	366	358
	90 S/L	182	151			523/543	596/616	371	363
	100 L	202	160			571	652	381	373
	112 M	220	168			616	696	390	382
	132 S/M	270.5	182			623/658	731/799	415	407
PA/PF 83/32	80 M	172	127	159	238	500	562	401	395
	90 S/L	182	151			523/543	596/616	406	400
	100 L	202	160			571	652	416	410
	112 M	220	168			616	696	425	419
	132 S/M	270.5	182			623/658	731/799	450	444

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

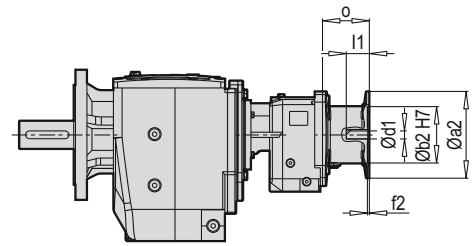
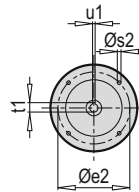
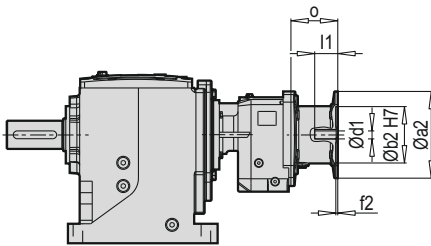
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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

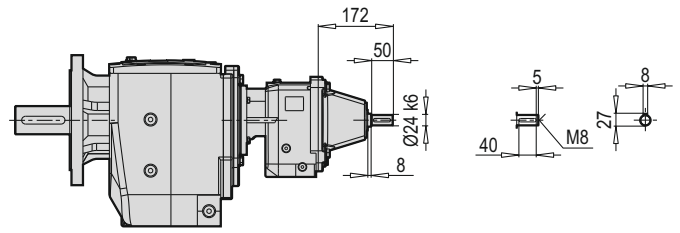
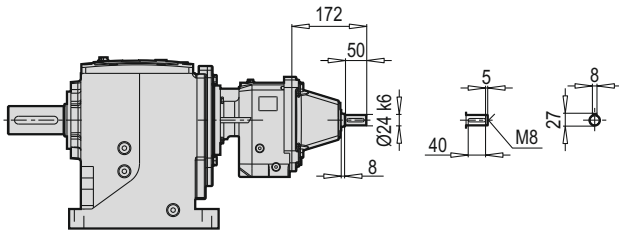


Tip / Type / Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o	~ Kg				
												IEC	PA/PF 63/22	PA/PF 73/22	PA/PF 73/32	PA/PF 83/32
PA/PF 63/22 - 73/22 - 83/32	71	160	110	130	4.0	M8	14	30	16.3	5	88	71	164	249	-	376
PA/PF 63/22 - 73/22 - 83/32	80	200	130	165	4.0	M10	19	40	21.8	6	107	80	168	253	-	381
PA/PF 63/22 - 73/22 - 73/32 - 83/32	90	200	130	165	4.0	M10	24	50	27.3	8	107	90	168	253	265	381
PA/PF 63/22 - 73/22 - 73/32 - 83/32	100	250	180	215	5.0	M12	28	60	31.3	8	124	100	172	257	269	385
PA/PF 63/22 - 73/22 - 73/32 - 83/32	112	250	180	215	5.0	M12	28	60	31.3	8	124	112	172	257	269	385
PA/PF 73/32 - 83/32	132	300	230	265	5.0	M12	38	80	41.3	10	156	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

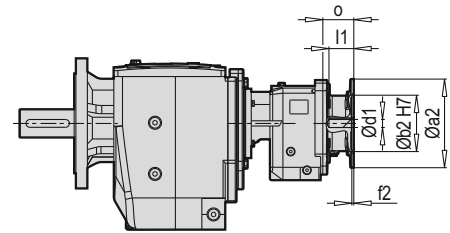
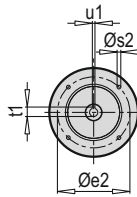
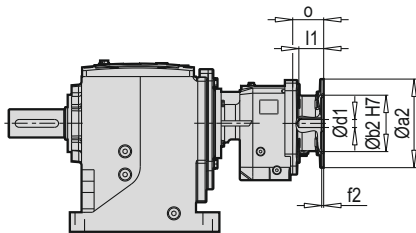


W ~ Kg	
PA/PF 63/22	166
PA/PF 73/22	251
PA/PF 73/32	263
PA/PF 83/32	378

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 / Typ	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

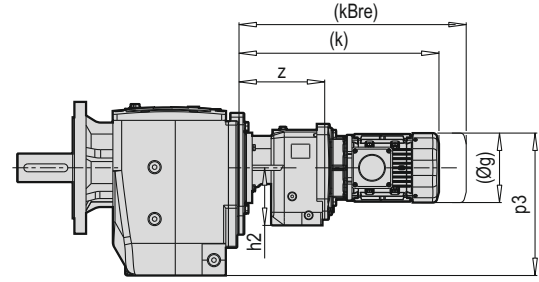
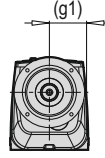
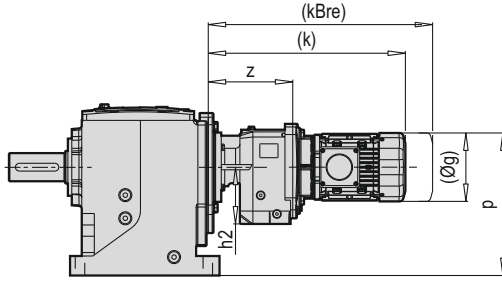
~ Kg				
PAM B5	PA/PF 63/22	PA/PF 73/22	PA/PF 73/32	PA/PF 83/32
71	155	236	-	354
80	156	237	-	355
90	156	237	248	355
100	157	238	249	356
112	157	238	249	356
132	-	-	259	366

Tip / Type / Typ	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



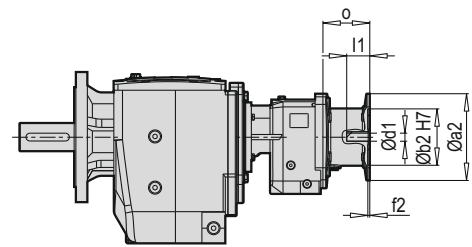
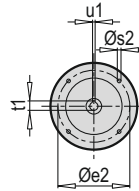
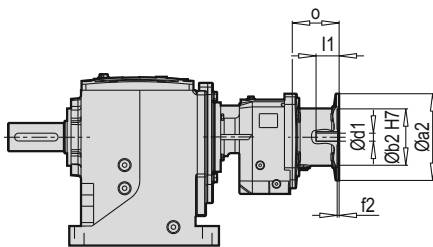
Tip / Type / Typ	Motor	g	g1	h2	z	k	kBre	p	p3
PA/PF 83/42	90 S/L	182	151	179	282	547/567	620/640	406	400
	100 L	202	160			595	676	416	410
	112 M	220	168			640	720	425	419
	132 S/M	270.5	182			647/682	755/896	450	444
PA/PF 93/42	90 S/L	182	151	179	282	547/567	620/640	481	475
	100 L	202	160			595	676	491	485
	112 M	220	168			640	720	500	494
	132 S/M	270.5	182			647/682	755/896	525	519
PA/PF 93/52	90 S/L	182	151	218	321	586/606	659/679	481	475
	100 L	202	160			634	715	491	485
	112 M	220	168			679	759	500	494
	132 S/M	270.5	182			686/721	794/862	525	519
	160 M/L	321.5	200			826	978	550.5	544.5
	180 M/L	363	248			900	1062	571	565
PA/PF 103/52	90 S/L	182	151	218	321	586/606	659/679	541	536
	100 L	202	160			634	715	551	546
	112 M	220	168			679	759	560	555
	132 S/M	270.5	182			686/721	794/862	585	580
	160 M/L	321.5	200			826	978	610	605
	180 M/L	363	248			900	1062	631	626

Not : (...) İşaretli olan ölçüler Motor markasına göre farklılık gösterir.
Note : The dimensions which have (...) sign vary depending on the motor.
Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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

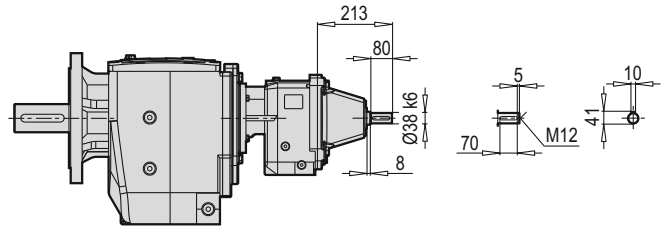
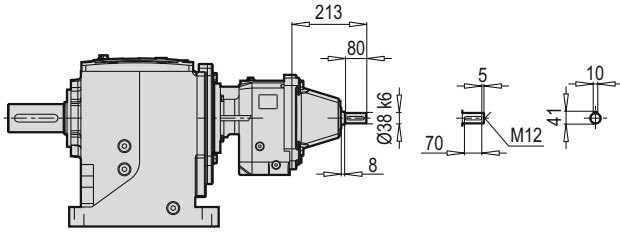


Tip / Type / Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o	~ Kg				
												IEC	PA/PF 83/42	PA/PF 93/42	PA/PF 93/52	PA/PF 103/52
PA/PF 83/42 - 93/42 - 103/52	90	200	130	165	4.0	M10	24	50	27.3	8	109	90	400	589	-	852
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	250	180	215	5.0	M12	28	60	31.3	8	133	100	407	597	628	860
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	250	180	215	5.0	M12	28	60	31.3	8	133	112	407	597	628	860
PA/PF 83/42 - 93/42 - 93/52 - 103/52	132	300	230	265	5.0	M12	38	80	41.3	10	190	132	422	612	642	875
PA/PF 83/42 - 93/42 - 93/52 - 103/52	160	350	250	300	6.0	M16	42	110	45.3	12	194	160	432	622	653	885
PA/PF 93/52 - 103/52	180	350	250	300	6.0	M16	48	110	51.8	14	194	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

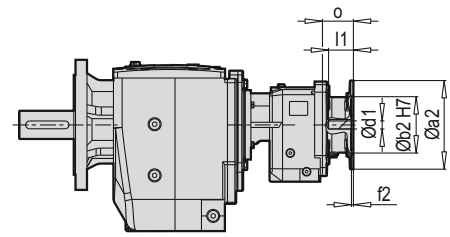
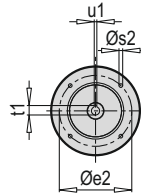
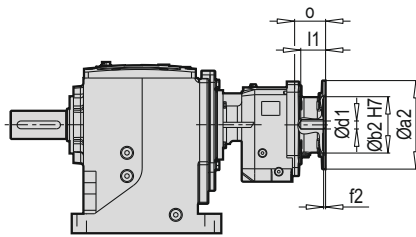


W ~ Kg	
PA/PF 83/42	405
PA/PF 93/42	595
PA/PF 93/52	625
PA/PF 103/52	858

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



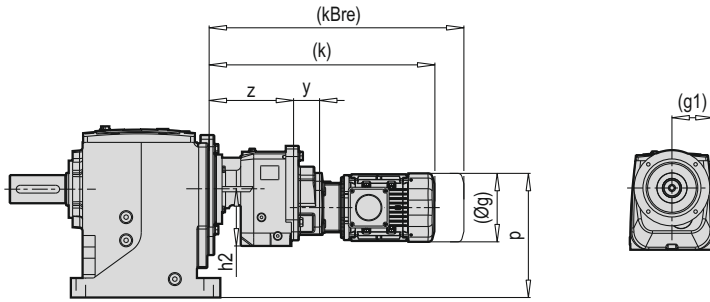
Tip / Type / Typ	PAM B5	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	200	130	165	4.0	M10	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	250	180	215	5.0	M12	28	60	31.3	8	75
PA/PF 83/42 - 93/42 -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

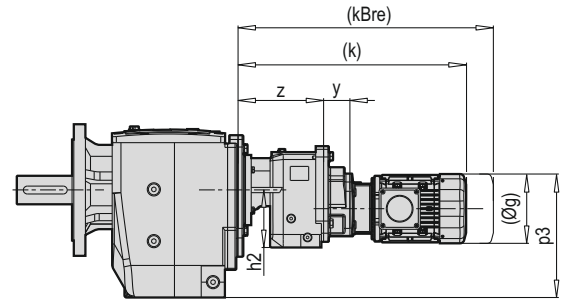
Tip / Type / Typ	PAM B14	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	o
PA/PF 83/42 - 93/42 - 103/52	90	140	95	115	4.0	9	24	50	27.3	8	72
PA/PF 83/42 - 93/42 - 93/52 - 103/52	100	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 103/52	112	160	110	130	5.0	9	28	60	31.3	8	75
PA/PF 83/42 - 93/42 - 93/52 - 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 PA 83/33 PA 93/43 PA 103/53
PA 73/23



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



Tip / Type / Typ	Motor	g	g1	h2	z	y	k	kBre	P	P3
PA/PF 63/23	63 M	124	111				423	475	270	265
	71 M	140	119	127	196	60	496	556	278	273
	80 M	172	130.5				523	585	294	289
PA/PF 73/23	63 M	124	111	131	225	60	556	616	230	292
	71 M	140	119				583	645	238	300
PA/PF 83/33	63 M	124	111	155	219	60	616	676	327	389
	71 M	140	119				646	705	335	397
PA/PF 93/43	71 M	140	119				585	654	400	394
	80 M	172	130.5	180	281	69	610	679	416	412
	90 S/L	182	130				676	745	421	417
PA/PF 103/53	71 M	140	119				624	693	444	439
	80 M	172	130.5	214	320	69	649	718	460	455
	90 S/L	182	130				715	784	465	460

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

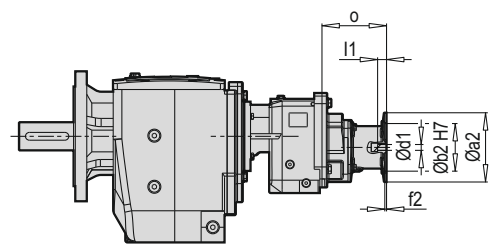
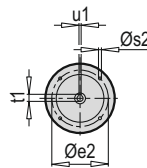
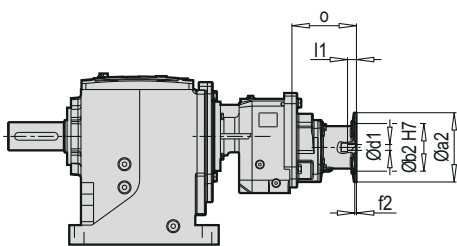
Note : The dimensions which have (...) sign vary depending on the motor.

Hinweis: (...) Die gekennzeichneten Maße unterscheiden sich je nach Motormarke.

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

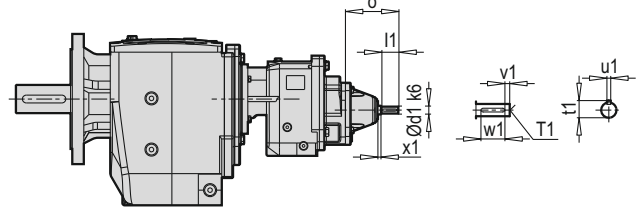
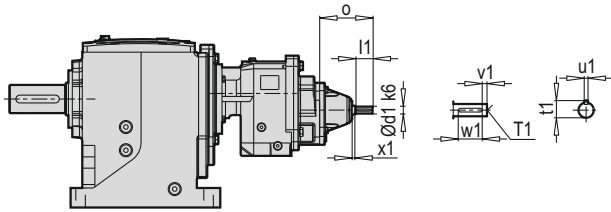


Tip / Type / Typ	IEC	Øa2	Øb2	Øe2	f2	Øs2	Ød1	l1	t1	u1	PA/PF 63/23 73/23 83/33 o	PA/PF 93/43 103/53 o	~Kg					
													IEC	PA/PF 63/23	PA/PF 73/23	PA/PF 83/33	PA/PF 93/43	PA/PF 103/53
PA/PF 63/23-73/23-83/33	63	140	95	115	3.5	M8	11	23	12.8	4	85	-	63	169	254	383	-	-
PA/PF 63/23-73/23-83/33-93/43-103/53	71	160	110	130	4.0	M8	14	30	16.3	5	89	88	71	170	255	384	598	865
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	80	173	258	387	602	869
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	90	173	258	387	602	869
PA/PF 93/43-103/53	100	250	180	215	5.0	M12	28	60	31.3	8	-	124	100	-	-	-	606	873
PA/PF 93/43-103/53	112	250	180	215	5.0	M12	28	60	31.3	8	-	124	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



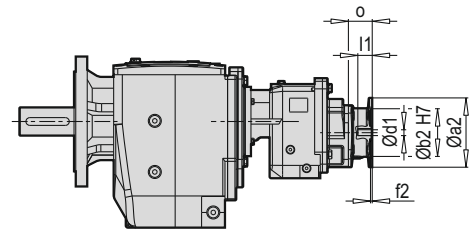
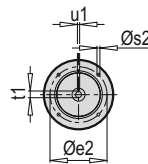
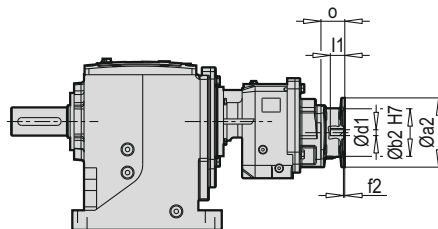
Tip / Type / Typ	Ød1	x1	l1	o	T1	t1	u1	v1	w1
PA/PF 63/23 PA/PF 73/23 PA/PF 83/33	16	7	40	122	M5	18	5	4	32
PA/PF 93/43 PA/PF 103/53	24	8	50	172	M8	27	8	5	40

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 / Typ	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 / Typ	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

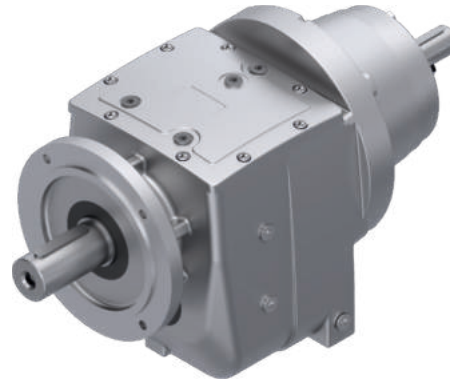
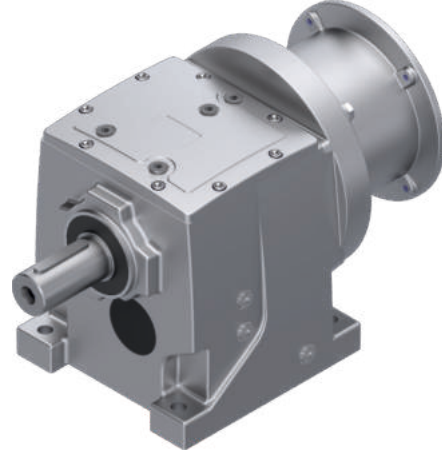


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W - IEC ve PAM Adaptörü Seçim Tabloları

Selection Of W-IEC and
PAM Adapters

Auswahltable von
W - PAM - IEC Adapters



PA / PF

TR

TEKNİK AÇIKLAMALAR

EN

TECHNICAL DESCRIPTIONS

DE

TECHNISCHE BESCHREIBUNGEN

W, IEC ve PAM adaptörü performans tabloları yapısı:Performance tables for W - IEC and PAM adapter type
Der Aufbau der Leistungstabelle für W - IEC und PAM-AdapterIEC'li yada PAM adaptörlü girişler için geçerli olan servis faktörü doğrudan motor montajlı redüktörler ile aynıdır. IEC ve PAM montajlı redüktörlerin servis faktörü f_B motorlu seçim sayfalarından bulunabilir.Service factor f_B could be checked from selection of geared motor tables. Because this value is the same for geared motor and geared motor with IEC-PAM adaptersDer Betriebsfaktor f_B für Antriebe mit IEC- oder PAM-Adapter ist der gleiche wie für Getriebe mit Motordirektanschluss. Den Betriebsfaktor f_B für Getriebe mit IEC- und PAM-Adapter finden Sie auf den Motorauswahltabellen.Max. Giriş Gücü
Max. Input Power
Max. Antriebsleistung

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	M _{amax} f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				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
9.206.07
6.07**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.Bei der Berechnung der maximalen Antriebsleistung des Typs W wurden nicht kursive Werte verwendet. P_{1max} und f_B = 1**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.Bei der Berechnung von P_{1max} wurden für kursiv gedruckte Werte f_B > 1 verwendet.**Max. çıkış momenti**
Max. output torque
Abtriebsdrehmoment**Çıkış Devri**
Output speed
Leistungsgeschwindigkeit**Redüktör Tahvili**
Reduction ratio
Verkleinerungsfaktor**Redüktör Tipi**
Gear unit type
Getriebetyp**IEC motor büyüklükleri ve IEC standart çıkışları DIN EN 50347' e göre dir.**
IEC motor sizes and IEC standart outputs as per DIN EN 50347
IEC-Motorgößen und IEC-Standard-Abtriebe entsprechen DIN EN 50347.**Yıldız işareti : Dikkat Tip W sütunundaki P_{1max} değerlerini aşmamalıdır.**Asterix indicates:
caution, don't exceed the max. driver power P_{1max} as per Type W column*: Achtung P_{1max} in Spalte W darf nicht überschritten werden.**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.

Digitale Bereiche zeigen, dass IEC Adapter für IEC Motorgöße und der Wechselkurse ist.

71	80
71	80
	80
	80
	80

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 03 PF 03 W   + IEC - PAM  	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   + IEC - PAM  	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 12/02 PF 12/02  W  212 + IEC - PAM  mm  212 - 213	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  174 + IEC - PAM  mm  174 - 175	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterix / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 12 PF 12   174 + IEC - PAM   174 - 175	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   159 + IEC - PAM   159	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 / Keine IEC - PAM-Verbindung

 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

 IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 22/02 PF 22/02  W  213 + IEC - PAM  mm  212 - 213	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  178 + IEC - PAM  mm  178 - 179	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterix / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇔ 55 - 156						
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]							
PA 22 PF 22  W  IEC - PAM	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  IEC - PAM	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i_{ges}	4-pol. 50 Hz 1400 rpm n_2 [min ⁻¹]	Mamax $f_B=1$ 4 - pol. [Nm]	W $P_{1max} - f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 32/12 PF 32/12  W  213 + IEC - PAM  mm  212 - 213	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  182 + IEC - PAM  mm  182 - 183	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*		

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☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır **P_{1max} değerleri aşılmamalıdır** - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	M _{amax} f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 32 PF 32  W  IEC - PAM 182 - 183	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  IEC - PAM 163	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		

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Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM						
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]	f _B ⇒  55 - 156						
PA 42/12 PF 42/12  213 + IEC - PAM  212 - 213	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  186 + IEC - PAM  186 - 187	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*		

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Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156						
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]							
PA 42 PF 42  IEC - PAM 	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  IEC - PAM 	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 52/12 PF 52/12  213 + IEC - PAM  212 - 213	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  190 + IEC - PAM  190 - 191	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇔ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 52 PF 52  IEC - PAM 	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  IEC - PAM 	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		

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☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	M _{amax} f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒  55 - 156					
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]						
PA 63/23 PF 63/23  W  219 + IEC - PAM  W  218 - 219	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  215 + IEC - PAM  W  214 - 215	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 / Keine IEC - PAM-Verbindung

 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 63 PF 63 W mm 194 + IEC - PAM mm 194 - 195	372.70	3.80	3200	1.26	0.84	0.63	0.42	90*							
	300.91	4.70	3200	1.56	1.04	0.78	0.52	90							
	265.56	5.30	3640	2.01	1.33	1.00	0.67	90	100*	112*					
	214.41	6.50	3640	2.49	1.65	1.24	0.83	90	100*	112*					
	180.86	7.70	3660	2.97	1.97	1.48	0.99		100*	112*	132*				
	146.02	9.60	3700	3.71	2.47	1.86	1.23		100	112*	132*				
	132.78	10.50	3700	4.09	2.71	2.04	1.36				132*				
	108.08	13.00	3650	4.95	3.29	2.48	1.64	90	100	112					
	107.21	13.10	3700	5.06	3.36	2.53	1.68				132*				
	87.26	16.00	3200	5.38	3.57	2.69	1.79	90	100	112					
	77.49	18.10	3700	7.00	4.65	3.50	2.32	90	100	112	132*	160*			
	62.96	22.20	3670	8.55	5.68	4.27	2.84	90	100	112	132*	160*			
	53.84	26.00	3700	10.07	6.69	5.04	3.35	90	100	112	132	160*			
	50.83	27.50	3700	10.67	7.09	5.34	3.54	90	100	112	132	160*			
	43.47	32.20	3680	12.40	8.24	6.21	4.12	90	100	112	132	160*			
	36.14	38.70	3690	14.97	9.94	7.48	4.97	90	100	112	132	160			
	30.90	45.30	3590	17.03	11.31	8.52	5.66	90	100	112	132	160			
	26.33	53.20	3200	17.82	11.84	8.91	5.92	90	100	112	132	160	180*		
	21.97	63.70	3200	21.35	14.18	10.68	7.09	90	100	112	132	160	180*		
	20.81	67.28	3200	22.00	14.52	11.00	7.26	90	100	112	132	160	180		
	17.36	80.60	3200	22.00	14.52	11.00	7.26	90	100	112	132	160	180		
PA 62 PF 62 W mm 194 + IEC - PAM mm 194 - 195	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 / Keine IEC - PAM-Verbindung

63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i_{ges}	4-pol. 50 Hz 1400 rpm n_2 [min ⁻¹]	Mamax $f_B=1$ 4 - pol. [Nm]	W $P_{1max} - f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 73/23	13435.41	0.10	5000	0.09	0.07	0.05	0.03	63*	71*						
PF 73/23	11303.83	0.12	5000	0.10	0.07	0.05	0.04	63*	71*						
W	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*				
 219	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*				
IEC - PAM															
															
 218 - 219															
PA 73/22	3433.54	0.41	5000	0.25	0.17	0.13	0.09	71*	80*	90*					
PF 73/22	2773.38	0.50	5000	0.30	0.21	0.15	0.10	71*	80*	90*					
W	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*					
 215	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*			
IEC - PAM	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*			
 214 - 215	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	226.38	6.20	5000	3.24	2.15	1.62	1.08	90	100	112*	132*				
PF 73/32	171.10	8.20	5000	4.28	2.85	2.14	1.42	90	100	112	132*				
W	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*				
 215															
+															
IEC - PAM															
															
 214 - 215															

- ☐ IEC - PAM bağlantısı yoktur / No IEC - PAM assembling on empty fields / Keine IEC - PAM-Verbindung
- ☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich
- ☐ 80* IEC - PAM bağlantısı yapılacaksa P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max} -Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 156							
				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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i_{ges}	4-pol. 50 Hz 1400 rpm n_2 [min ⁻¹]	Mamax $f_B=1$ 4 - pol. [Nm]	W $P_{1max} - f_B \geq 1$				IEC - PAM $f_B \Rightarrow$ 55 - 156							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 83/33	12787.88	0.11	8000	0.13	0.09	0.07	0.05	63*	71*						
PF 83/33	10858.81	0.13	8000	0.15	0.10	0.07	0.05	63*	71*	80*	90*				
W	8572.29	0.16	8000	0.18	0.12	0.09	0.06	63*	71*	80*	90*				
 219	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*				
IEC - PAM	4548.59	0.31	8000	0.30	0.20	0.15	0.10	63	71*	80*	90*				
 218 - 219															
PA 83/32	3552.27	0.39	8000	0.37	0.25	0.19	0.12		80*	90*					
PF 83/32	2860.33	0.49	8000	0.45	0.30	0.23	0.15		80*	90*					
W	2039.02	0.69	8000	0.62	0.41	0.31	0.21		80*	90*					
 215	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*			
IEC - PAM	1151.94	1.20	8000	1.02	0.68	0.51	0.34	71	80	90*	100*	112*			
 214 - 215	897.44	1.60	8000	1.31	0.87	0.65	0.43	71	80	90*	100*	112*	132*		
	722.63	1.90	8000	1.62	1.08	0.81	0.54	71	80	90	100*	112*	132*		
PA 83/42	525.11	2.70	8000	2.23	1.48	1.12	0.74	90	100*	112*	132*	160*			
PF 83/42	437.93	3.20	8000	2.68	1.78	1.34	0.89	90	100*	112*	132*	160*			
W	374.50	3.70	8000	3.13	2.08	1.57	1.04	90	100	112*	132*	160*			
 217	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*			
IEC - PAM	201.09	7.00	8000	5.83	3.87	2.92	1.94	90	100	112	132*	160*			
 216 - 217	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterix / Bei IEC - PAM-Verbindungen, sollten die P_{1max} -Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 148							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 83 PF 83  W  202 + IEC - PAM  mm  202 - 203	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  202 + IEC - PAM  mm  202 - 203	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i_{ges}	4-pol. 50 Hz 1400 rpm n_2 [min ⁻¹]	Mamax $f_B=1$ 4 - pol. [Nm]	W $P_{1max} - f_B \geq 1$				IEC - PAM $f_B \Rightarrow$  55 - 148					
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]						
PA 93/43	13926.28	0.10	12200	0.17	0.11	0.08	0.05	71*	80*	90*			
PF 93/43	11275.92	0.12	12200	0.20	0.13	0.10	0.06	71*	80*	90*			
W 	8526.73	0.16	12200	0.25	0.16	0.12	0.08	71*	80*	90*			
 219	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*	
IEC - PAM 	4300.67	0.33	12200	0.46	0.30	0.23	0.15	71	80*	90*	100*	112*	
 218 - 219	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	1644.01	0.85	12200	1.09	0.72	0.54	0.36		100*	112*	132*		
PF 93/42	1299.17	1.10	12200	1.38	0.91	0.69	0.46	90*	100*	112*			
W 	1090.99	1.30	12200	1.64	1.09	0.82	0.54	90	100*	112*	132*	160*	
 217	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*	
IEC - PAM 	547.88	2.60	12200	3.26	2.17	1.63	1.08	90	100	112*	132*	160*	
 216 - 217	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	160.87	8.70	12200	11.12	7.39	5.56	3.69	100	112	132	160*	180*	
PF 93/52	127.35	11.00	12200	14.04	9.33	7.02	4.66	100	112	132	160*	180*	
W 	107.56	13.00	12200	16.63	11.05	8.31	5.52				160	180*	
 217													
+													
IEC - PAM 													
 216 - 217													

☐ IEC - PAM bağlantısı yoktur / No IEC - PAM assembling on empty fields / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır **P_{1max} değerleri aşılmamalıdır** - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 148							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 93 PF 93 W mm 206 + IEC - PAM mm 206 - 207	187.99	7.40	13980	10.90	7.24	5.45	3.62	132	160*	180*					
	122.97	11.40	13950	16.63	11.05	8.32	5.52		160	180*	200*				
	109.25	12.80	11560	15.51	10.30	7.76	5.15	132	160	180*					
	93.43	15.00	14000	21.97	14.59	10.98	7.30	132	160	180*					
	72.42	19.30	13400	27.13	18.02	13.56	9.01	132	160	180	200*	225*			
	61.66	22.70	12700	30.19	20.06	15.10	10.03	132	160	180	200	225*	250*		
	53.75	26.00	12250	33.41	22.19	16.71	11.10	132	160	180	200	225*	250*	280*	
	46.63	30.00	12200	38.35	25.48	19.18	12.74	132	160	180	200	225*	250*	280*	
	39.46	35.50	12200	45.32	30.11	22.66	15.05	132	160	180	200	225*	250*	280*	
	31.24	44.80	12200	57.25	38.03	28.62	19.02	132	160	180	200	225	250	280*	
	27.10	51.70	12200	66.00	43.84	33.00	21.92	132	160	180	200	225	250	280*	
	22.93	61.10	12200	75.00	49.50	37.50	24.75	132	160	180	200	225	250	280*	
	19.17	73.00	12200	75.00	49.50	37.50	24.75	132	160	180	200	225	250	280*	
PA 92 PF 92 W mm 206 + IEC - PAM mm 206 - 207	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 / Keine IEC - PAM-Verbindung

63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterix / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i_{ges}	4-pol. 50 Hz 1400 rpm n_2 [min ⁻¹]	Mamax $f_B=1$ 4 - pol. [Nm]	W $P_{1max} - f_B \geq 1$				IEC - PAM $f_B \Rightarrow$  55 - 148							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 103/53 PF 103/53  219 + IEC - PAM  218 - 219	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  217 + IEC - PAM  216 - 217	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

☐ 80* IEC - PAM bağlantısı yapılacaktır **P_{1max} değerleri aşılmamalıdır** - Do not exceed the P_{1max} values indicated on fields with asterix / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

Tip Type Typ	i _{ges}	4-pol. 50 Hz 1400 rpm n ₂ [min ⁻¹]	Mamax f _B =1 4 - pol. [Nm]	W P _{1max} - f _B ≥ 1				IEC - PAM f _B ⇒ 55 - 148							
				4 - pol. 1400rpm [kW]	6 - pol. 930rpm [kW]	8 - pol. 700rpm [kW]	12 - pol. 465rpm [kW]								
PA 103 PF 103  W  210 + IEC - PAM  IEC - PAM  210 - 211	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  210 + IEC - PAM  IEC - PAM  210 - 211	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 / Keine IEC - PAM-Verbindung

☐ 63 IEC - PAM bağlantısı yapılır / IEC - PAM assembling available on numbered fields / IEC - PAM-Verbindung möglich

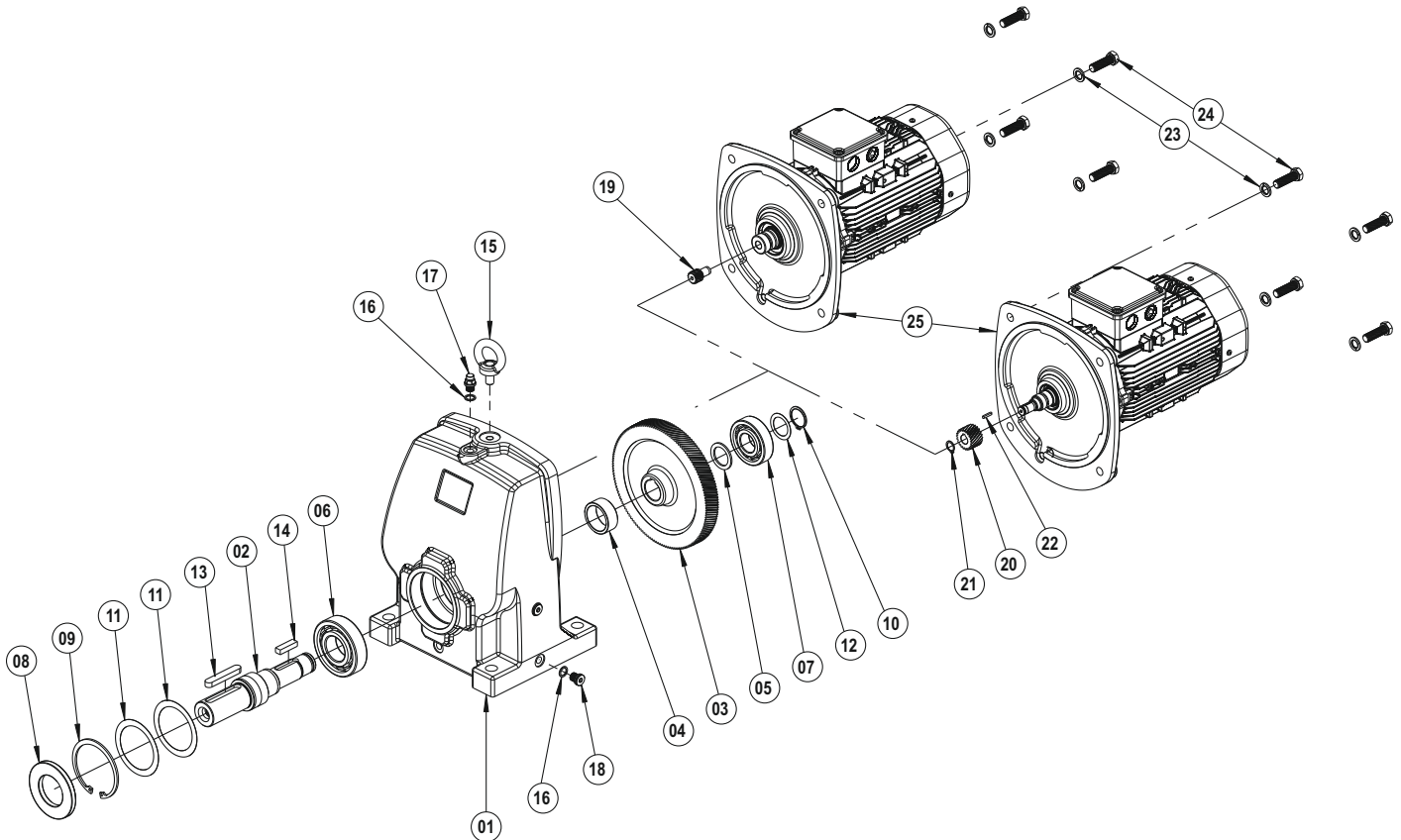
☐ 80* IEC - PAM bağlantısı yapılacaktır P_{1max} değerleri aşılmamalıdır - Do not exceed the P_{1max} values indicated on fields with asterisk / Bei IEC - PAM-Verbindungen, sollten die P_{1max}-Werte nicht überschritten werden.

PA 11 ... 51

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 Çıkış Mili
- 03 Z2 Dişlisi
- 04 Burç
- 05 Rondela
- 06 Rulman
- 07 Rulman
- 08 Yağ Keçesi
- 09 Segman (DIN 472)
- 10 Segman (DIN 471)
- 11 Layner (DIN 988)
- 12 Layner (DIN 988)
- 13 Kama (DIN 6885)
- 14 Kama (DIN 6885)
- 15 Mapa (DIN 580)
- 16 Rondela (DIN 7603)
- 17 Havalandırma Tapası
- 18 Yağ Tapası (DIN 908)
- 19 Z1 Dişlisi
- 20 Z1 Dişlisi (Kamalı)
- 21 Segman (DIN 471)
- 22 Kama (DIN 6885)
- 23 Rondela (DIN 127)
- 24 Cıvata (DIN 933)
- 25 Motor

- 01 Gear Case
- 02 Output Solid Shaft
- 03 Driving Gear
- 04 Spacer
- 05 Washer
- 06 Bearing
- 07 Bearing
- 08 Oil Seal
- 09 Circlip (DIN 472)
- 10 Circlip (DIN 471)
- 11 Shim (DIN 988)
- 12 Shim (DIN 988)
- 13 Key (DIN 6885)
- 14 Key (DIN 6885)
- 15 Eye Bolt (DIN 580)
- 16 Washer (DIN 7603)
- 17 Vent Plug
- 18 Oil Plug (DIN 908)
- 19 Driving Pinion
- 20 Driving Pinion (With Key)
- 21 Circlip (DIN 471)
- 22 Key (DIN 6885)
- 23 Washer (DIN 127)
- 24 Bolt (DIN 933)
- 25 Motor

- 01 Gehäuse
- 02 Abtriebswelle
- 03 Antriebsrad
- 04 Distanzbuchse
- 05 Distanzscheibe
- 06 Kugellager
- 07 Kugellager
- 08 Öldichtung
- 09 Sicherungsring (DIN 472)
- 10 Sicherungsring (DIN 471)
- 11 Passscheibe (DIN 988)
- 12 Passscheibe (DIN 988)
- 13 Passfeder (DIN 6885)
- 14 Passfeder (DIN 6885)
- 15 Ringschraube (DIN 580)
- 16 Distanzscheibe (DIN 7603)
- 17 Entlüftungstopfen
- 18 Ölstöpsel (DIN 908)
- 19 Antriebsritzel
- 20 Antriebsritzel (Mit Passfeder)
- 21 Sicherungsring (DIN 471)
- 22 Passfeder (DIN 6885)
- 23 Distanzscheibe (DIN 127)
- 24 Verschrauben (DIN 933)
- 25 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

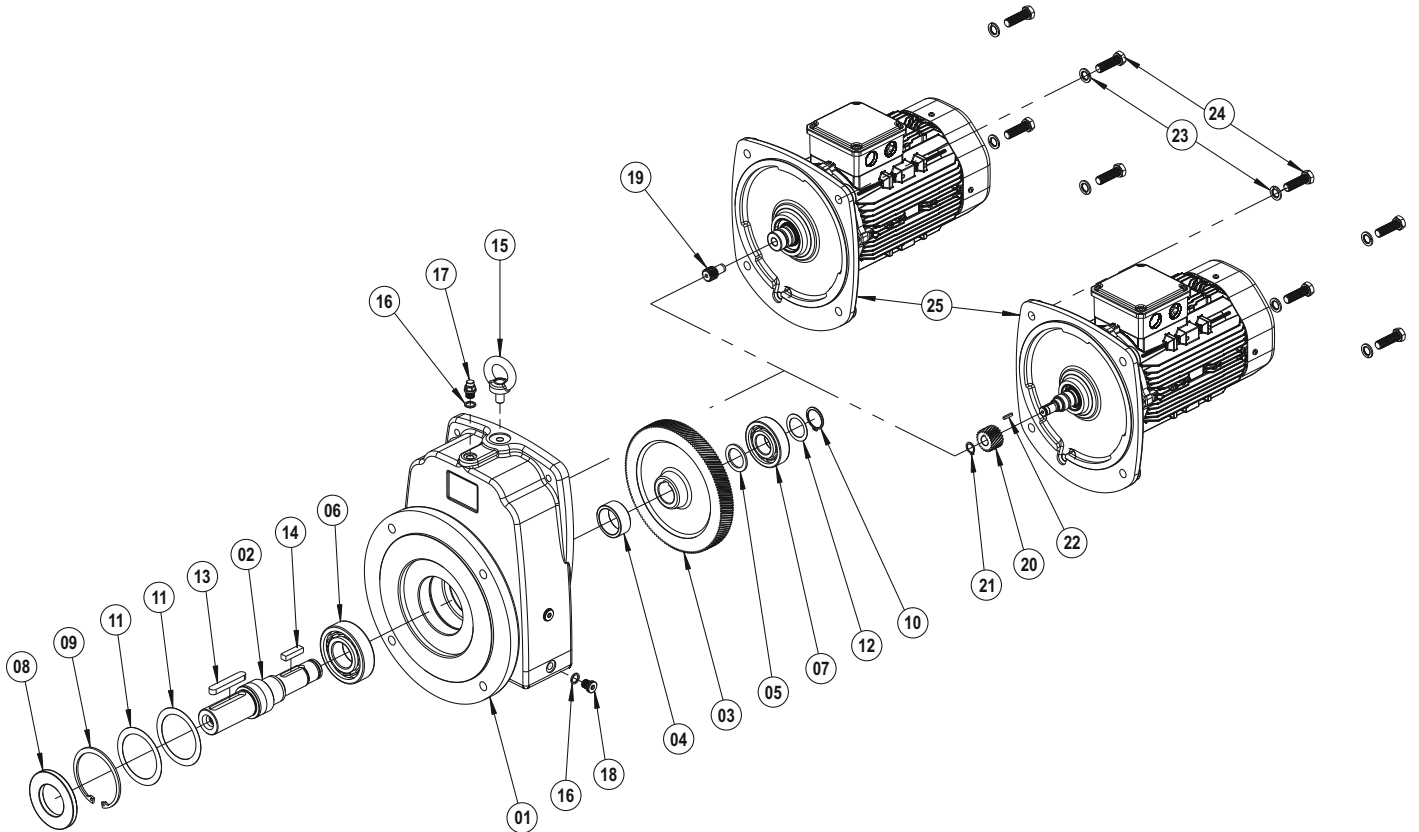
ALLGEMEINE STUCKLISTE

PF 11 ... 51

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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- 01 Gövde
- 02 Çıkış Mili
- 03 Z2 Dişlisi
- 04 Burç
- 05 Rondela
- 06 Rulman
- 07 Rulman
- 08 Yağ Keçesi
- 09 Segman (DIN 472)
- 10 Segman (DIN 471)
- 11 Layner (DIN 988)
- 12 Layner (DIN 988)
- 13 Kama (DIN 6885)
- 14 Kama (DIN 6885)
- 15 Mapa (DIN 580)
- 16 Rondela (DIN 7603)
- 17 Havalandırma Tapası
- 18 Yağ Tapası (DIN 908)
- 19 Z1 Dişlisi
- 20 Z1 Dişlisi (Kamalı)
- 21 Segman (DIN 471)
- 22 Kama (DIN 6885)
- 23 Rondela (DIN 127)
- 24 Cıvata (DIN 933)
- 25 Motor

- 01 Gear Case
- 02 Output Solid Shaft
- 03 Driving Gear
- 04 Spacer
- 05 Washer
- 06 Bearing
- 07 Bearing
- 08 Oil Seal
- 09 Circlip (DIN 472)
- 10 Circlip (DIN 471)
- 11 Shim (DIN 988)
- 12 Shim (DIN 988)
- 13 Key (DIN 6885)
- 14 Key (DIN 6885)
- 15 Eye Bolt (DIN 580)
- 16 Washer (DIN 7603)
- 17 Vent Plug
- 18 Oil Plug (DIN 908)
- 19 Driving Pinion
- 20 Driving Pinion (With Key)
- 21 Circlip (DIN 471)
- 22 Key (DIN 6885)
- 23 Washer (DIN 127)
- 24 Bolt (DIN 933)
- 25 Motor

- 01 Gehäuse
- 02 Abtriebswelle
- 03 Antriebsrad
- 04 Distanzbuchse
- 05 Distanzscheibe
- 06 Kugellager
- 07 Kugellager
- 08 Öldichtung
- 09 Sicherungsring (DIN 472)
- 10 Sicherungsring (DIN 471)
- 11 Passscheibe (DIN 988)
- 12 Passscheibe (DIN 988)
- 13 Passfeder (DIN 6885)
- 14 Passfeder (DIN 6885)
- 15 Ringschraube (DIN 580)
- 16 Distanzscheibe (DIN 7603)
- 17 Entlüftungstopfen
- 18 Ölstöpsel (DIN 908)
- 19 Antriebsritzel
- 20 Antriebsritzel (Mit Passfeder)
- 21 Sicherungsring (DIN 471)
- 22 Passfeder (DIN 6885)
- 23 Distanzscheibe (DIN 127)
- 24 Verschrauben (DIN 933)
- 25 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

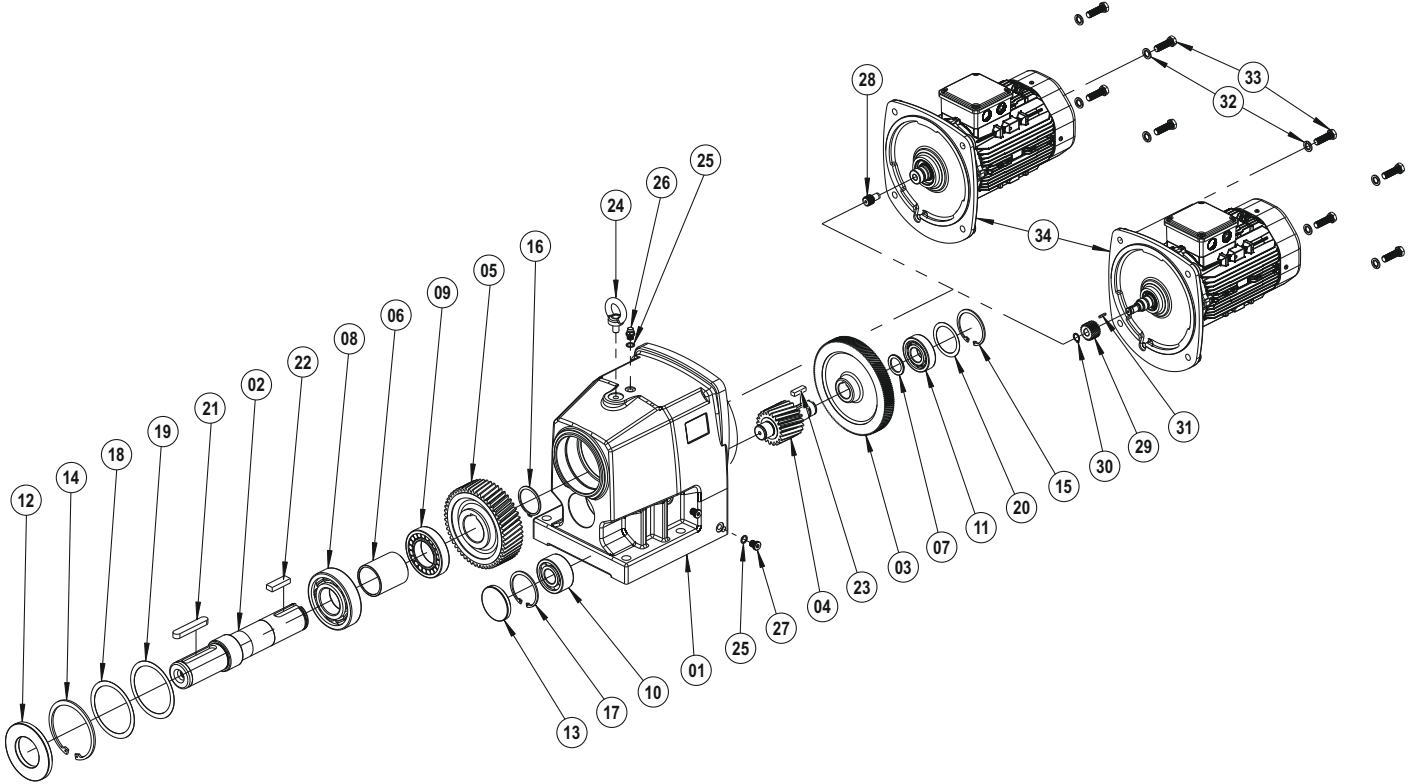
ALLGEMEINE STUCKLISTE

PA 12 ... 52

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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- 01 Gövde
- 02 Çıkış Mili
- 03 Z2 Dişlisi
- 04 Z3 Dişlisi
- 05 Z4 Dişlisi
- 06 Burç
- 07 Rondela
- 08 Rulman
- 09 Rulman
- 10 Rulman
- 11 Rulman
- 12 Yağ Keçesi
- 13 Yağ Kapağı
- 14 Segman (DIN 472)
- 15 Segman (DIN 472)
- 16 Segman (DIN 471)
- 17 Segman (DIN 472)
- 18 Layner (DIN 988)
- 19 Layner (DIN 988)
- 20 Layner (DIN 988)
- 21 Kama (DIN 6885)
- 22 Kama (DIN 6885)
- 23 Kama (DIN 6885)
- 24 Mapa (DIN 580)
- 25 Rondela (DIN 7603)
- 26 Havalandırma Tapası
- 27 Yağ Tapası (DIN 908)
- 28 Z1 Dişlisi
- 29 Z1 Dişlisi (Kamalı)
- 30 Segman (DIN 471)
- 31 Kama (DIN 6885)
- 32 Rondela (DIN 127)
- 33 Cıvata (DIN 933)
- 34 Motor

- 01 Gear Case
- 02 Output Solid Shaft
- 03 Driving Gear
- 04 Pinion Shaft
- 05 Driven Gear
- 06 Spacer
- 07 Washer
- 08 Bearing
- 09 Bearing
- 10 Bearing
- 11 Bearing
- 12 Oil Seal
- 13 Oil Cover
- 14 Circlip (DIN 472)
- 15 Circlip (DIN 472)
- 16 Circlip (DIN 471)
- 17 Circlip (DIN 472)
- 18 Shim (DIN 988)
- 19 Shim (DIN 988)
- 20 Shim (DIN 988)
- 21 Key (DIN 6885)
- 22 Key (DIN 6885)
- 23 Key (DIN 6885)
- 24 Eye Bolt (DIN 580)
- 25 Washer (DIN 7603)
- 26 Vent Plug
- 27 Oil Plug (DIN 908)
- 28 Driving Pinion
- 29 Driving Pinion (With Key)
- 30 Circlip (DIN 471)
- 31 Key (DIN 6885)
- 32 Washer (DIN 127)
- 33 Bolt (DIN 933)
- 34 Motor

- 01 Gehäuse
- 02 Abtriebswelle
- 03 Antriebsrad
- 04 Ritzelwelle
- 05 Abtriebsrad
- 06 Distanzbuchse
- 07 Distanzscheibe
- 08 Kugellager
- 09 Kugellager
- 10 Kugellager
- 11 Kugellager
- 12 Öldichtung
- 13 Ölbedeckung
- 14 Sicherungsring (DIN 472)
- 15 Sicherungsring (DIN 472)
- 16 Sicherungsring (DIN 471)
- 17 Sicherungsring (DIN 472)
- 18 Passscheibe (DIN 988)
- 19 Passscheibe (DIN 988)
- 20 Passscheibe (DIN 988)
- 21 Passfeder (DIN 6885)
- 22 Passfeder (DIN 6885)
- 23 Passfeder (DIN 6885)
- 24 Ringschraube (DIN 580)
- 25 Distanzscheibe (DIN 7603)
- 26 Entlüftungstopfen
- 27 Ölstöpsel (DIN 908)
- 28 Antriebsritzel
- 29 Antriebsritzel (Mit Passfeder)
- 30 Sicherungsring (DIN 471)
- 31 Passfeder (DIN 6885)
- 32 Distanzscheibe (DIN 127)
- 33 Verschrauben (DIN 933)
- 34 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

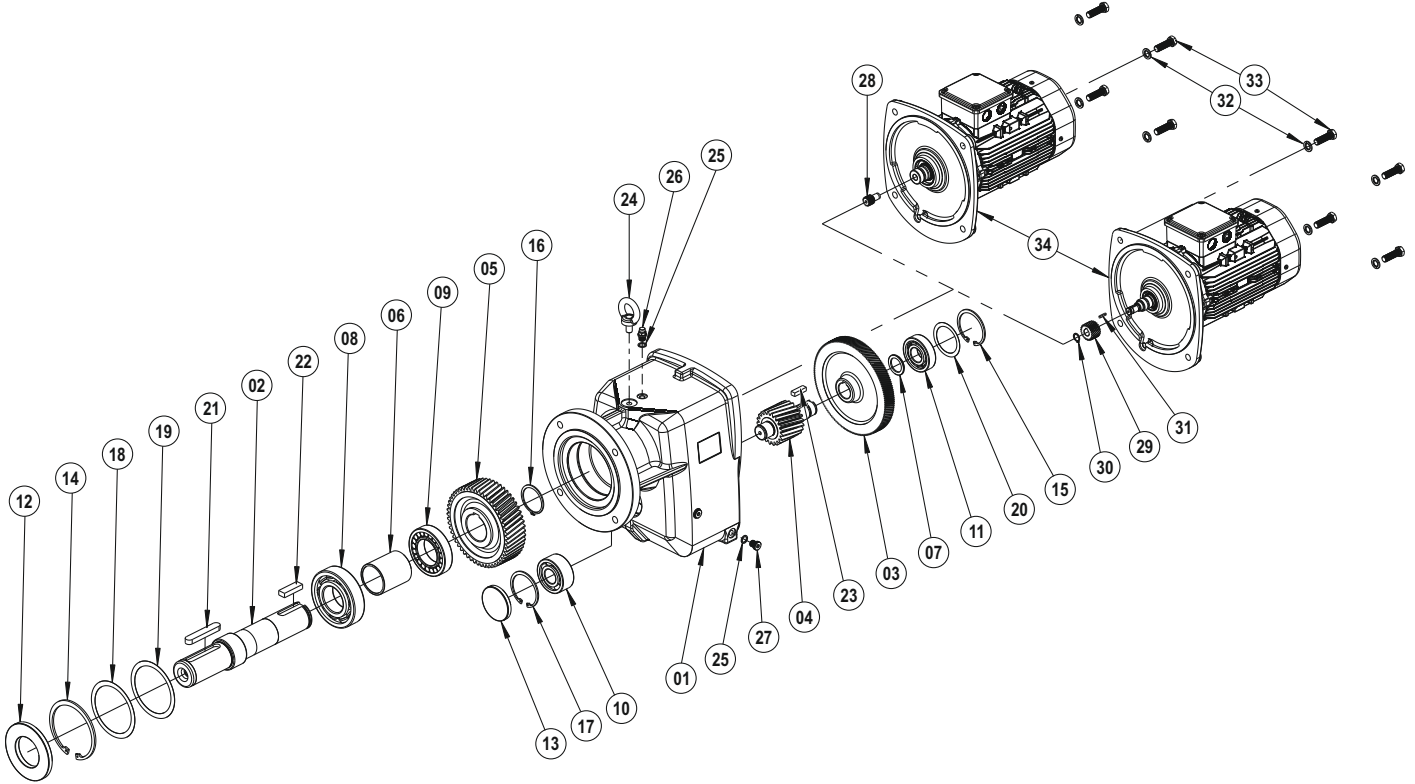
ALLGEMEINE STUCKLISTE

PF 12 ... 52

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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- 01 Gövde
- 02 Çıkış Mili
- 03 Z2 Dişlisi
- 04 Z3 Dişlisi
- 05 Z4 Dişlisi
- 06 Burç
- 07 Rondela
- 08 Rulman
- 09 Rulman
- 10 Rulman
- 11 Rulman
- 12 Yağ Keçesi
- 13 Yağ Kapağı
- 14 Segman (DIN 472)
- 15 Segman (DIN 472)
- 16 Segman (DIN 471)
- 17 Segman (DIN 472)
- 18 Layner (DIN 988)
- 19 Layner (DIN 988)
- 20 Layner (DIN 988)
- 21 Kama (DIN 6885)
- 22 Kama (DIN 6885)
- 23 Kama (DIN 6885)
- 24 Mapa (DIN 580)
- 25 Rondela (DIN 7603)
- 26 Havalandırma Tapası
- 27 Yağ Tapası (DIN 908)
- 28 Z1 Dişlisi
- 29 Z1 Dişlisi (Kamalı)
- 30 Segman (DIN 471)
- 31 Kama (DIN 6885)
- 32 Rondela (DIN 127)
- 33 Cıvata (DIN 933)
- 34 Motor

- 01 Gear Case
- 02 Output Solid Shaft
- 03 Driving Gear
- 04 Pinion Shaft
- 05 Driven Gear
- 06 Spacer
- 07 Washer
- 08 Bearing
- 09 Bearing
- 10 Bearing
- 11 Bearing
- 12 Oil Seal
- 13 Oil Cover
- 14 Circlip (DIN 472)
- 15 Circlip (DIN 472)
- 16 Circlip (DIN 471)
- 17 Circlip (DIN 472)
- 18 Shim (DIN 988)
- 19 Shim (DIN 988)
- 20 Shim (DIN 988)
- 21 Key (DIN 6885)
- 22 Key (DIN 6885)
- 23 Key (DIN 6885)
- 24 Eye Bolt (DIN 580)
- 25 Washer (DIN 7603)
- 26 Vent Plug
- 27 Oil Plug (DIN 908)
- 28 Driving Pinion
- 29 Driving Pinion (With Key)
- 30 Circlip (DIN 471)
- 31 Key (DIN 6885)
- 32 Washer (DIN 127)
- 33 Bolt (DIN 933)
- 34 Motor

- 01 Gehäuse
- 02 Abtriebswelle
- 03 Antriebsrad
- 04 Ritzelwelle
- 05 Abtriebsrad
- 06 Distanzbuchse
- 07 Distanzscheibe
- 08 Kugellager
- 09 Kugellager
- 10 Kugellager
- 11 Kugellager
- 12 Öldichtung
- 13 Ölbedeckung
- 14 Sicherungsring (DIN 472)
- 15 Sicherungsring (DIN 472)
- 16 Sicherungsring (DIN 471)
- 17 Sicherungsring (DIN 472)
- 18 Passscheibe (DIN 988)
- 19 Passscheibe (DIN 988)
- 20 Passscheibe (DIN 988)
- 21 Passfeder (DIN 6885)
- 22 Passfeder (DIN 6885)
- 23 Passfeder (DIN 6885)
- 24 Ringschraube (DIN 580)
- 25 Distanzscheibe (DIN 7603)
- 26 Entlüftungstopfen
- 27 Ölstöpsel (DIN 908)
- 28 Antriebsritzel
- 29 Antriebsritzel (Mit Passfeder)
- 30 Sicherungsring (DIN 471)
- 31 Passfeder (DIN 6885)
- 32 Distanzscheibe (DIN 127)
- 33 Verschrauben (DIN 933)
- 34 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

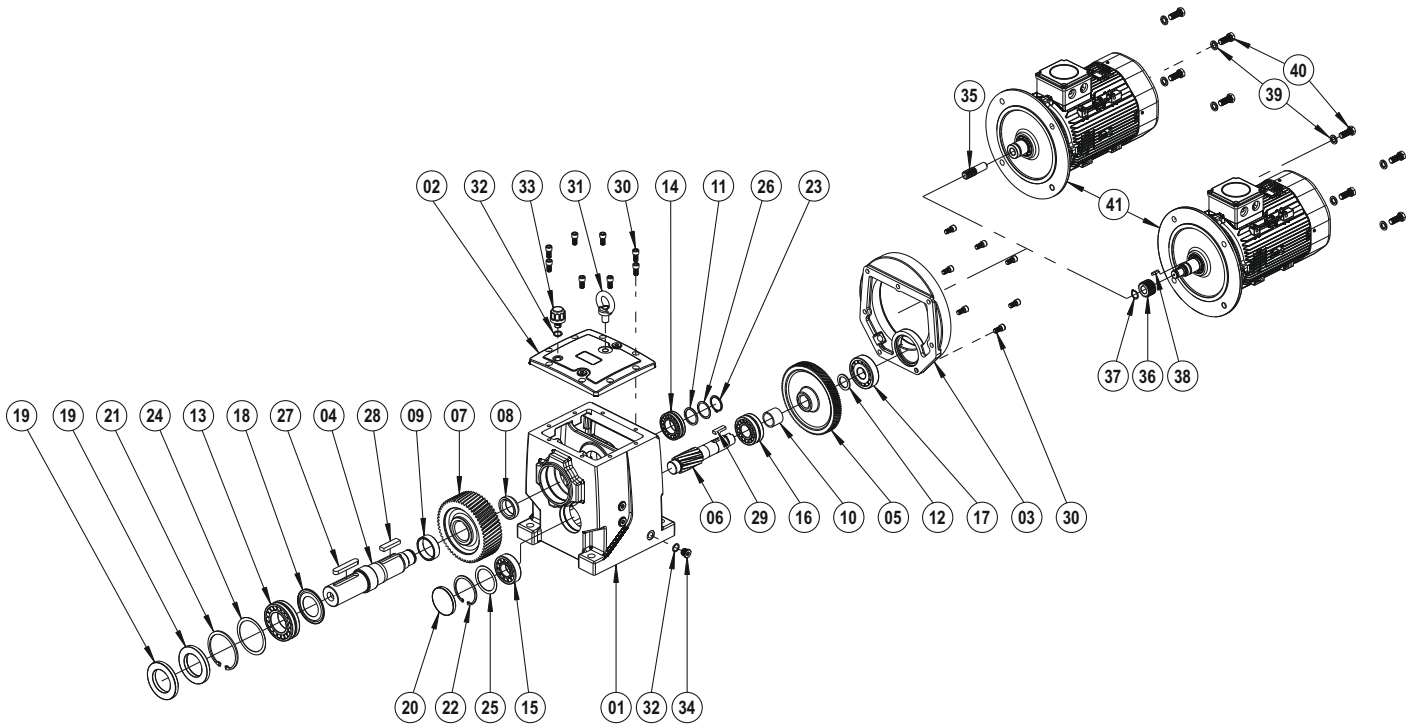
ALLGEMEINE STUCKLISTE

PA 62 ... 102

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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01	Gövde	22	Segman (DIN 472)	01	Gear Case	22	Circlip (DIN 472)	01	Gehäuse	22	Sicherungsring (DIN 472)
02	Kapak	23	Segman (DIN 471)	02	Cover	23	Circlip (DIN 471)	02	Abdeckung	23	Sicherungsring (DIN 471)
03	Ara Bağlantı Flanşı	24	Layner (DIN 988)	03	Intermediate Flange	24	Shim (DIN 988)	03	Zwischenflansch	24	Passscheibe (DIN 988)
04	Çıkış Mili	25	Layner (DIN 988)	04	Output Solid Shaft	25	Shim (DIN 988)	04	Abtriebswelle	25	Passscheibe (DIN 988)
05	Z2 Dişlisi	26	Layner (DIN 988)	05	Driving Gear	26	Shim (DIN 988)	05	Antriebsrad	26	Passscheibe (DIN 988)
06	Z3 Dişlisi	27	Kama (DIN 6885)	06	Pinion Shaft	27	Key (DIN 6885)	06	Ritzelwelle	27	Passfeder (DIN 6885)
07	Z4 Dişlisi	28	Kama (DIN 6885)	07	Driven Gear	28	Key (DIN 6885)	07	Abtriebsrad	28	Passfeder (DIN 6885)
08	Burç	29	Kama (DIN 6885)	08	Spacer	29	Key (DIN 6885)	08	Distanzbuchse	29	Passfeder (DIN 6885)
09	Burç	30	Cıvata (DIN 912)	09	Spacer	30	Bolt (DIN 912)	09	Distanzbuchse	30	Verschrauben (DIN 912)
10	Burç	31	Mapa (DIN 580)	10	Spacer	31	Eye Bolt (DIN 580)	10	Distanzbuchse	31	Ringschraube (DIN 580)
11	Rondela	32	Rondela (DIN 7603)	11	Washer	32	Washer (DIN 7603)	11	Distanzscheibe	32	Distanzscheibe (DIN 7603)
12	Rondela	33	Havalandırma Tapası	12	Washer	33	Vent Plug	12	Distanzscheibe	33	Entlüftungsstopfen
13	Rulman	34	Yağ Tapası (DIN 908)	13	Bearing	34	Oil Plug (DIN 908)	13	Kugellager	34	Ölstopfen (DIN 908)
14	Rulman	35	Z1 Dişlisi	14	Bearing	35	Driving Pinion	14	Kugellager	35	Antriebsritzel
15	Rulman	36	Z1 Dişlisi (Kamalı)	15	Bearing	36	Driving Pinion (With Key)	15	Kugellager	36	Antriebsritzel (Mit Passfeder)
16	Rulman	37	Segman (DIN 471)	16	Bearing	37	Circlip (DIN 471)	16	Kugellager	37	Sicherungsring (DIN 471)
17	Rulman	38	Kama (DIN 6885)	17	Bearing	38	Key (DIN 6885)	17	Kugellager	38	Passfeder (DIN 6885)
18	Nilos-Ring	39	Rondela (DIN 127)	18	Nilos-Ring	39	Washer (DIN 127)	18	Nilos-Ring	39	Distanzscheibe (DIN 127)
19	Yağ Keçesi	40	Cıvata (DIN 933)	19	Oil Seal	40	Bolt (DIN 933)	19	Öldichtung	40	Verschrauben (DIN 933)
20	Yağ Kapağı	41	Motor	20	Oil Cover	41	Motor	20	Ölabdeckung	41	Motor
21	Segman (DIN 472)			21	Circlip (DIN 472)			21	Sicherungsring (DIN 472)		

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GENEL PARÇA LİSTESİ

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GENERAL PART LIST

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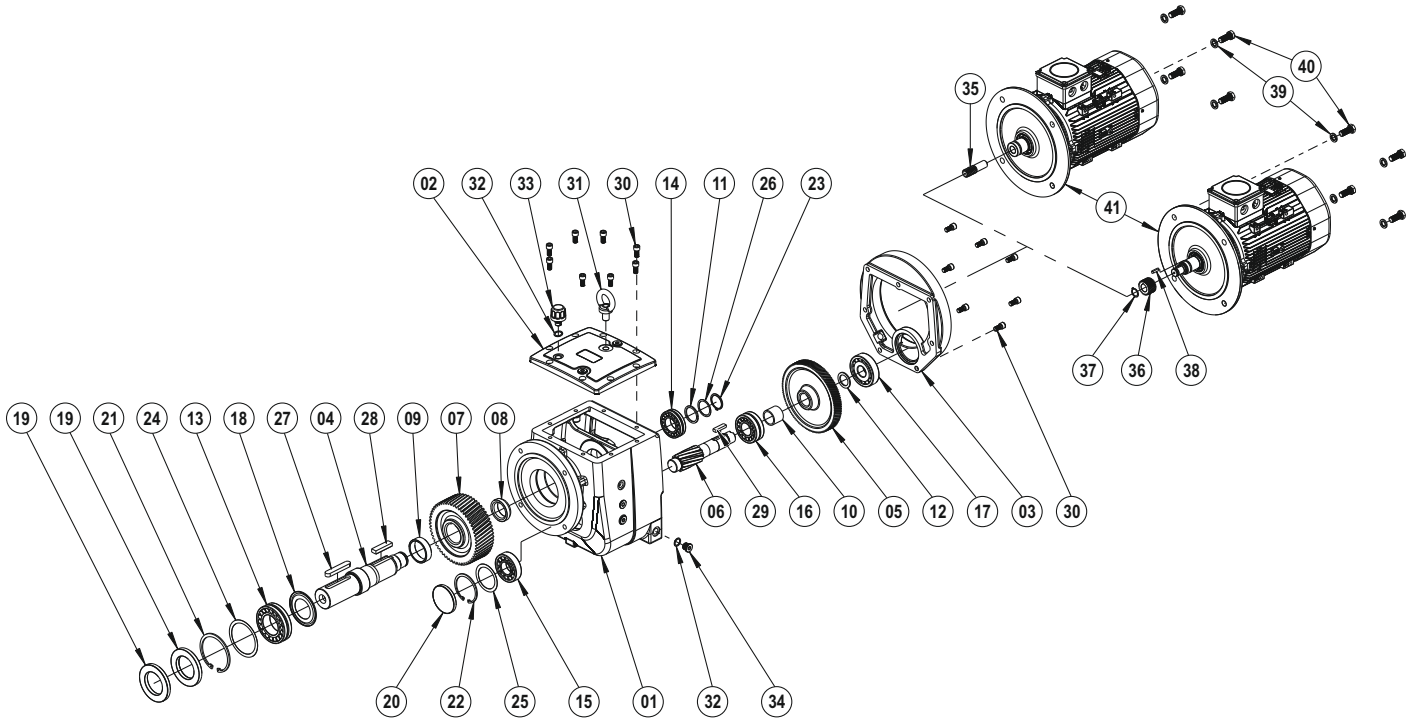
ALLGEMEINE STUCKLISTE

PF 62 ... 102

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



01	Gövde	22	Segman (DIN 472)	01	Gear Case	22	Circlip (DIN 472)	01	Gehäuse	22	Sicherungsring (DIN 472)
02	Kapak	23	Segman (DIN 471)	02	Cover	23	Circlip (DIN 471)	02	Abdeckung	23	Sicherungsring (DIN 471)
03	Ara Bağlantı Flanşı	24	Layner (DIN 988)	03	Intermediate Flange	24	Shim (DIN 988)	03	Zwischenflansch	24	Passscheibe (DIN 988)
04	Çıkış Mili	25	Layner (DIN 988)	04	Output Solid Shaft	25	Shim (DIN 988)	04	Abtriebswelle	25	Passscheibe (DIN 988)
05	Z2 Dişlisi	26	Layner (DIN 988)	05	Driving Gear	26	Shim (DIN 988)	05	Antriebsrad	26	Passscheibe (DIN 988)
06	Z3 Dişlisi	27	Kama (DIN 6885)	06	Pinion Shaft	27	Key (DIN 6885)	06	Ritzelwelle	27	Passfeder (DIN 6885)
07	Z4 Dişlisi	28	Kama (DIN 6885)	07	Driven Gear	28	Key (DIN 6885)	07	Abtriebsrad	28	Passfeder (DIN 6885)
08	Burç	29	Kama (DIN 6885)	08	Spacer	29	Key (DIN 6885)	08	Distanzbuchse	29	Passfeder (DIN 6885)
09	Burç	30	Cıvata (DIN 912)	09	Spacer	30	Bolt (DIN 912)	09	Distanzbuchse	30	Verschrauben (DIN 912)
10	Burç	31	Mapa (DIN 580)	10	Spacer	31	Eye Bolt (DIN 580)	10	Distanzbuchse	31	Ringschraube (DIN 580)
11	Rondela	32	Rondela (DIN 7603)	11	Washer	32	Washer (DIN 7603)	11	Distanzscheibe	32	Distanzscheibe (DIN 7603)
12	Rondela	33	Havalandırma Tapası	12	Washer	33	Vent Plug	12	Distanzscheibe	33	Entlüftungsstopfen
13	Rulman	34	Yağ Tapası (DIN 908)	13	Bearing	34	Oil Plug (DIN 908)	13	Kugellager	34	Ölstöpsel (DIN 908)
14	Rulman	35	Z1 Dişlisi	14	Bearing	35	Driving Pinion	14	Kugellager	35	Antriebsritzel
15	Rulman	36	Z1 Dişlisi (Kamalı)	15	Bearing	36	Driving Pinion (With Key)	15	Kugellager	36	Antriebsritzel (Mit Passfeder)
16	Rulman	37	Segman (DIN 471)	16	Bearing	37	Circlip (DIN 471)	16	Kugellager	37	Sicherungsring (DIN 471)
17	Rulman	38	Kama (DIN 6885)	17	Bearing	38	Key (DIN 6885)	17	Kugellager	38	Passfeder (DIN 6885)
18	Nilos-Ring	39	Rondela (DIN 127)	18	Nilos-Ring	39	Washer (DIN 127)	18	Nilos-Ring	39	Distanzscheibe (DIN 127)
19	Yağ Keçesi	40	Cıvata (DIN 933)	19	Oil Seal	40	Bolt (DIN 933)	19	Öldichtung	40	Verschrauben (DIN 933)
20	Yağ Kapağı	41	Motor	20	Oil Cover	41	Motor	20	Ölabdeckung	41	Motor
21	Segman (DIN 472)			21	Circlip (DIN 472)			21	Sicherungsring (DIN 472)		

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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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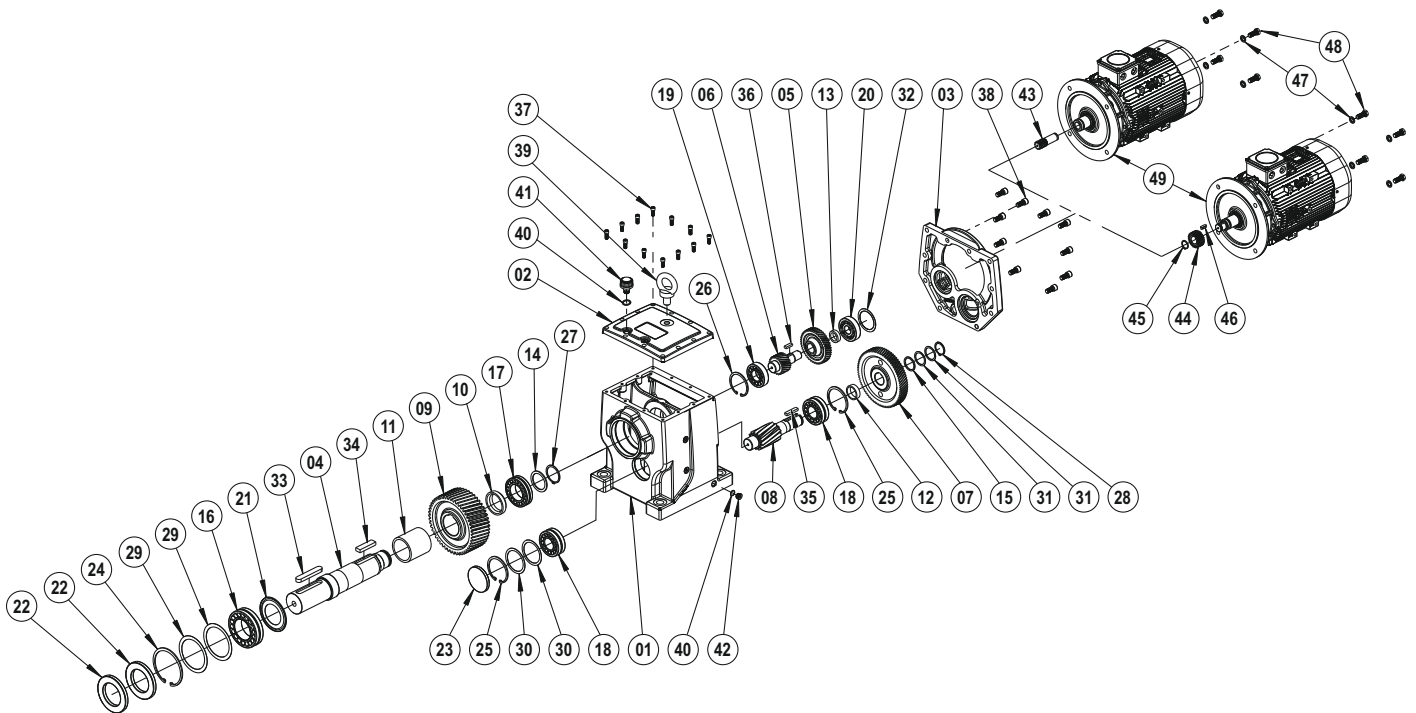
ALLGEMEINE STUCKLISTE

PA 63 ... 103

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



01	Gövde	26	Segman (DIN 472)	01	Gear Case	26	Circlip (DIN 472)	01	Gehäuse	26	Sicherungsring (DIN 472)
02	Kapak	27	Segman (DIN 471)	02	Cover	27	Circlip (DIN 471)	02	Abdeckung	27	Sicherungsring (DIN 471)
03	Ara Bağlantı Flanşı	28	Segman (DIN 471)	03	Intermediate Flange	28	Circlip (DIN 471)	03	Zwischenflansch	28	Sicherungsring (DIN 471)
04	Çıkış Mili	29	Layner (DIN 988)	04	Output Solid Shaft	29	Shim (DIN 988)	04	Abtriebswelle	29	Passscheibe (DIN 988)
05	Z2 Dişlisi	30	Layner (DIN 988)	05	Driving Gear	30	Shim (DIN 988)	05	Antriebsrad	30	Passscheibe (DIN 988)
06	Z3 Dişlisi	31	Layner (DIN 988)	06	Pinion Shaft	31	Shim (DIN 988)	06	Ritzelwelle	31	Passscheibe (DIN 988)
07	Z4 Dişlisi	32	Layner (DIN 988)	07	Driven Gear	32	Shim (DIN 988)	07	Abtriebsrad	32	Passscheibe (DIN 988)
08	Z5 Dişlisi	33	Kama (DIN 6885)	08	Pinion Shaft	33	Key (DIN 6885)	08	Ritzelwelle	33	Passfeder (DIN 6885)
09	Z6 Dişlisi	34	Kama (DIN 6885)	09	Driven Gear	34	Key (DIN 6885)	09	Antriebsrad	34	Passfeder (DIN 6885)
10	Burç	35	Kama (DIN 6885)	10	Spacer	35	Key (DIN 6885)	10	Distanzbuchse	35	Passfeder (DIN 6885)
11	Burç	36	Kama (DIN 6885)	11	Spacer	36	Key (DIN 6885)	11	Distanzbuchse	36	Passfeder (DIN 6885)
12	Burç	37	Cıvata (DIN 912)	12	Spacer	37	Bolt (DIN 912)	12	Distanzbuchse	37	Verschrauben (DIN 912)
13	Burç	38	Cıvata (DIN 912)	13	Spacer	38	Bolt (DIN 912)	13	Distanzbuchse	38	Verschrauben (DIN 912)
14	Rondela	39	Mapa (DIN 580)	14	Washer	39	Eye Bolt (DIN 580)	14	Distanzscheibe	39	Ringschraube (DIN 580)
15	Rondela	40	Rondela (DIN 7603)	15	Washer	40	Washer (DIN 7603)	15	Distanzscheibe	40	Distanzscheibe (DIN 7603)
16	Rulman	41	Havalandırma Tapası	16	Bearing	41	Vent Plug	16	Kugellager	41	Entlüftungsstopfen
17	Rulman	42	Yağ Tapası (DIN 908)	17	Bearing	42	Oil Plug (DIN 908)	17	Kugellager	42	Ölstöpsel (DIN 908)
18	Rulman	43	Z1 Dişlisi	18	Bearing	43	Driving Pinion	18	Kugellager	43	Antriebsritzel
19	Rulman	44	Z1 Dişlisi (Kamalı)	19	Bearing	44	Driving Pinion (With Key)	19	Kugellager	44	Antriebsritzel (Mit Passfeder)
20	Rulman	45	Segman (DIN 471)	20	Bearing	45	Circlip (DIN 471)	20	Kugellager	45	Sicherungsring (DIN 471)
21	Nilos-Ring	46	Kama (DIN 6885)	21	Nilos-Ring	46	Key (DIN 6885)	21	Nilos-Ring	46	Passfeder (DIN 6885)
22	Yağ Keçesi	47	Rondela (DIN 127)	22	Yağ Keçesi	47	Washer (DIN 127)	22	Öldichtung	47	Distanzscheibe (DIN 127)
23	Yağ Kapağı	48	Cıvata (DIN 933)	23	Oil Cover	48	Bolt (DIN 933)	23	Ölabdeckung	48	Verschrauben (DIN 933)
24	Segman (DIN 472)	49	Motor	24	Circlip (DIN 472)	49	Motor	24	Sicherungsring (DIN 472)	49	Motor
25	Segman (DIN 472)			25	Circlip (DIN 472)			25	Sicherungsring (DIN 472)		

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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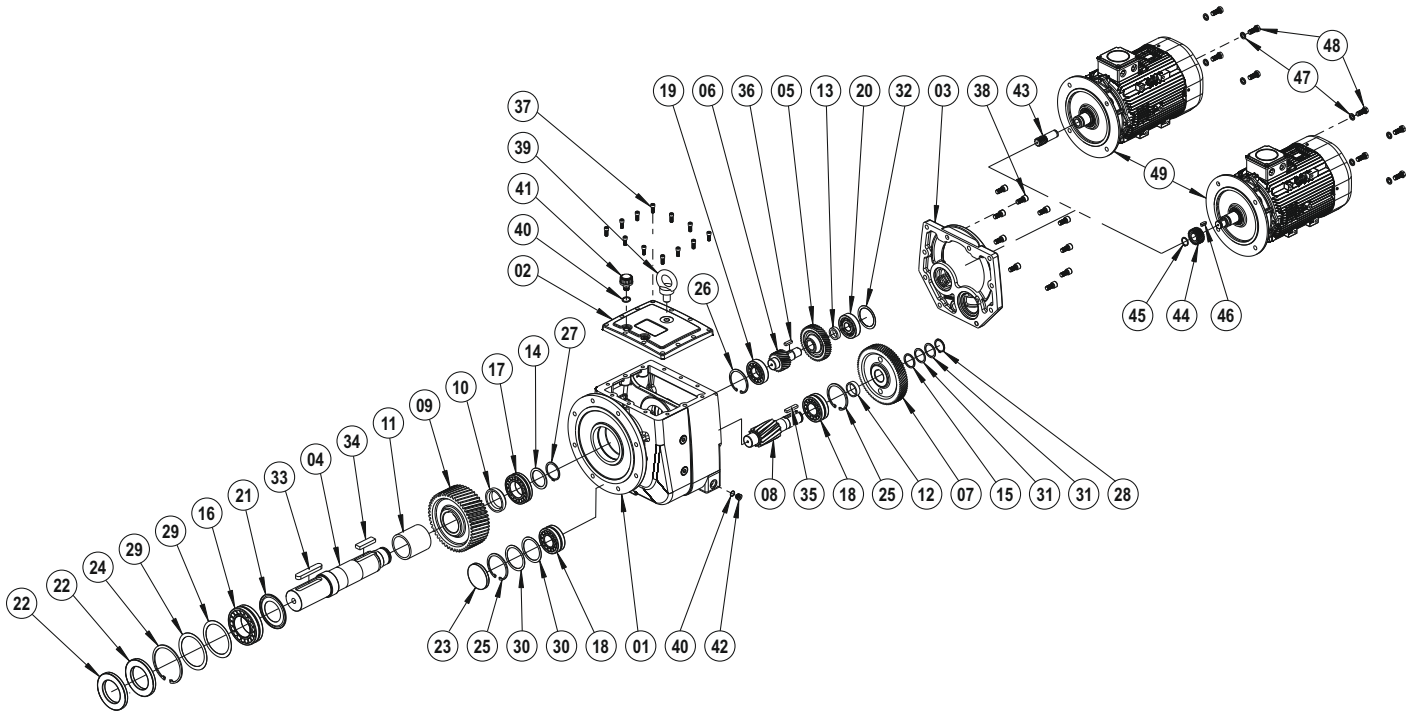
ALLGEMEINE STUCKLISTE

PF 63 ... 103

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



01	Gövde	26	Segman (DIN 472)	01	Gear Case	26	Circlip (DIN 472)	01	Gehäuse	26	Sicherungsring (DIN 472)
02	Kapak	27	Segman (DIN 471)	02	Cover	27	Circlip (DIN 471)	02	Abdeckung	27	Sicherungsring (DIN 471)
03	Ara Bağlantı Flanşı	28	Segman (DIN 471)	03	Intermediate Flange	28	Circlip (DIN 471)	03	Zwischenflansch	28	Sicherungsring (DIN 471)
04	Çıkış Mili	29	Layner (DIN 988)	04	Output Solid Shaft	29	Shim (DIN 988)	04	Abtriebswelle	29	Passscheibe (DIN 988)
05	Z2 Dişlisi	30	Layner (DIN 988)	05	Driving Gear	30	Shim (DIN 988)	05	Antriebsrad	30	Passscheibe (DIN 988)
06	Z3 Dişlisi	31	Layner (DIN 988)	06	Pinion Shaft	31	Shim (DIN 988)	06	Ritzelwelle	31	Passscheibe (DIN 988)
07	Z4 Dişlisi	32	Layner (DIN 988)	07	Driven Gear	32	Shim (DIN 988)	07	Abtriebsrad	32	Passscheibe (DIN 988)
08	Z5 Dişlisi	33	Kama (DIN 6885)	08	Pinion Shaft	33	Key (DIN 6885)	08	Ritzelwelle	33	Passfeder (DIN 6885)
09	Z6 Dişlisi	34	Kama (DIN 6885)	09	Driven Gear	34	Key (DIN 6885)	09	Abtriebsrad	34	Passfeder (DIN 6885)
10	Burç	35	Kama (DIN 6885)	10	Spacer	35	Key (DIN 6885)	10	Distanzbuchse	35	Passfeder (DIN 6885)
11	Burç	36	Kama (DIN 6885)	11	Spacer	36	Key (DIN 6885)	11	Distanzbuchse	36	Passfeder (DIN 6885)
12	Burç	37	Cıvata (DIN 912)	12	Spacer	37	Bolt (DIN 912)	12	Distanzbuchse	37	Verschrauben (DIN 912)
13	Burç	38	Cıvata (DIN 912)	13	Spacer	38	Bolt (DIN 912)	13	Distanzbuchse	38	Verschrauben (DIN 912)
14	Rondela	39	Mapa (DIN 580)	14	Washer	39	Eye Bolt (DIN 580)	14	Distanzscheibe	39	Ringschraube (DIN 580)
15	Rondela	40	Rondela (DIN 7603)	15	Washer	40	Washer (DIN 7603)	15	Distanzscheibe	40	Distanzscheibe (DIN 7603)
16	Rulman	41	Havalandırma Tapası	16	Bearing	41	Vent Plug	16	Kugellager	41	Entlüftungsstopfen
17	Rulman	42	Yağ Tapası (DIN 908)	17	Bearing	42	Oil Plug (DIN 908)	17	Kugellager	42	Ölstöpsel (DIN 908)
18	Rulman	43	Z1 Dişlisi	18	Bearing	43	Driving Pinion	18	Kugellager	43	Antriebsritzel
19	Rulman	44	Z1 Dişlisi (Kamalı)	19	Bearing	44	Driving Pinion (With Key)	19	Kugellager	44	Antriebsritzel (Mit Passfeder)
20	Rulman	45	Segman (DIN 471)	20	Bearing	45	Circlip (DIN 471)	20	Kugellager	45	Sicherungsring (DIN 471)
21	Nilos-Ring	46	Kama (DIN 6885)	21	Nilos-Ring	46	Key (DIN 6885)	21	Nilos-Ring	46	Passfeder (DIN 6885)
22	Yağ Keçesi	47	Rondela (DIN 127)	22	Oil Seal	47	Washer (DIN 127)	22	Öldichtung	47	Distanzscheibe (DIN 127)
23	Yağ Kapağı	48	Cıvata (DIN 933)	23	Oil Cover	48	Bolt (DIN 933)	23	Ölabdeckung	48	Verschrauben (DIN 933)
24	Segman (DIN 472)	49	Motor	24	Circlip (DIN 472)	49	Motor	24	Sicherungsring (DIN 472)	49	Motor
25	Segman (DIN 472)			25	Circlip (DIN 472)			25	Sicherungsring (DIN 472)		

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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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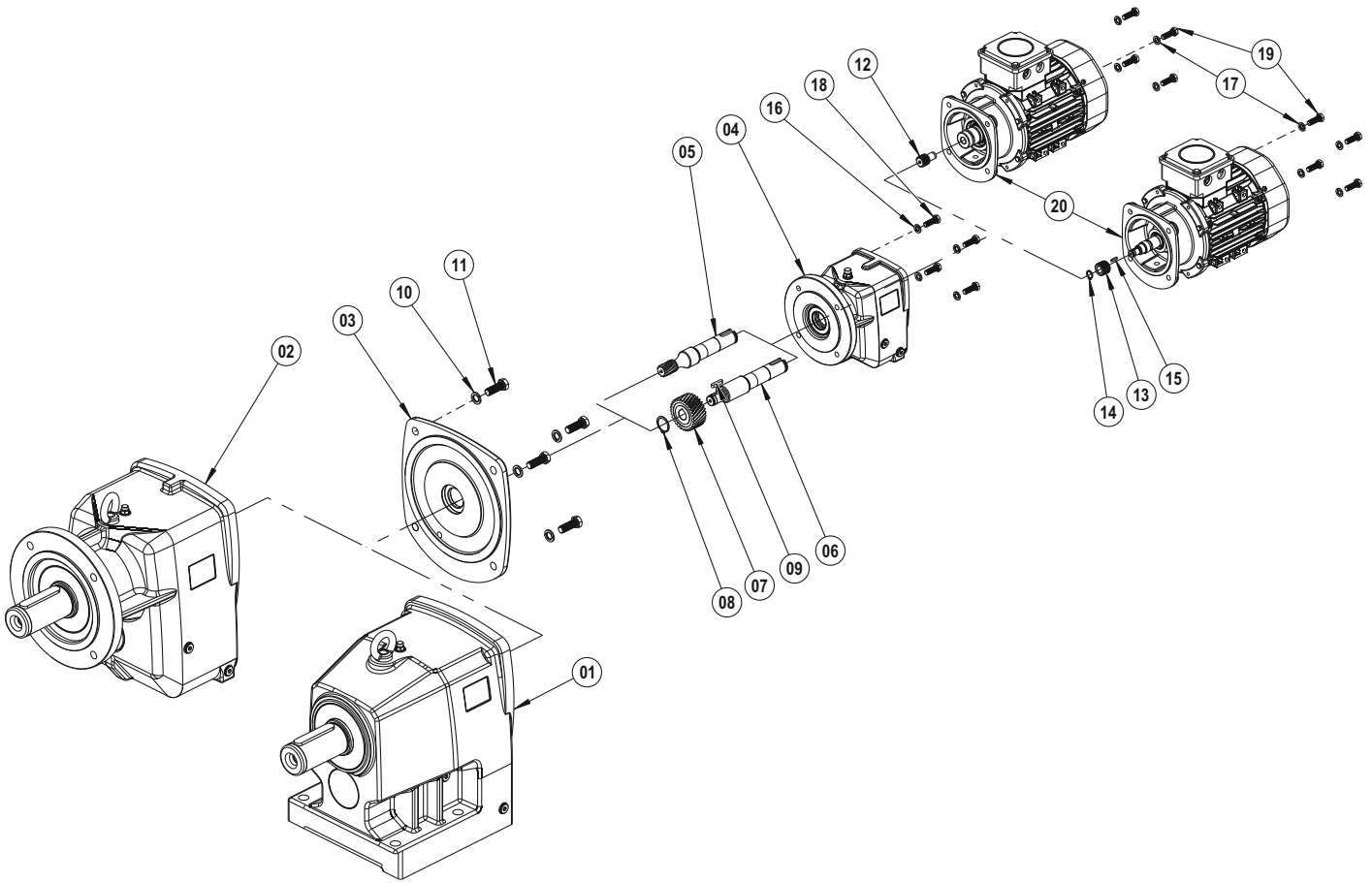
ALLGEMEINE STUCKLISTE

PA / PF 12/02 ... 52/12

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 PA Kit
- 02 PF Kit
- 03 Ara Bağlantı Flanşı
- 04 PF Kit
- 05 Ara Mil (Dişlisi)
- 06 Ara Mil (Kamalı)
- 07 Ara Dişli (Kamalı)
- 08 Segman (DIN 471)
- 09 Kama (DIN 6885)
- 10 Rondela (DIN 127)
- 11 Cıvata (DIN 933)
- 12 Z1 Dişlisi
- 13 Z1 Dişlisi (Kamalı)
- 14 Segman (DIN 471)
- 15 Kama (DIN 6885)
- 16 Rondela (DIN 127)
- 17 Rondela (DIN 127)
- 18 Cıvata (DIN 933)
- 19 Cıvata (DIN 933)
- 20 Motor

- 01 PA Kit
- 02 PF Kit
- 03 Intermediate Flange
- 04 PF Kit
- 05 Intermediate Shaft (With Gear)
- 06 Intermediate Shaft (With Key)
- 07 Intermediate Gear (With Key)
- 08 Circlip (DIN 471)
- 09 Key (DIN 6885)
- 10 Washer (DIN 127)
- 11 Bolt (DIN 933)
- 12 Driving Pinion
- 13 Driving Pinion (With Key)
- 14 Circlip (DIN 471)
- 15 Key (DIN 6885)
- 16 Washer (DIN 127)
- 17 Washer (DIN 127)
- 18 Bolt (DIN 933)
- 19 Bolt (DIN 933)
- 20 Motor

- 01 PA Bausatz
- 02 PF Bausatz
- 03 Zwischenflansch
- 04 PF Bausatz
- 05 Übertragungswelle (mit Zahnrad)
- 06 Übertragungswelle (mit Passfeder)
- 07 Zwischengetriebe (mit Passfeder)
- 08 Sicherungsring (DIN 471)
- 09 Passfeder (DIN 6885)
- 10 Distanzscheibe (DIN 127)
- 11 Verschrauben (DIN 933)
- 12 Antriebsritzel
- 13 Antriebsritzel (Mit Passfeder)
- 14 Sicherungsring (DIN 471)
- 15 Passfeder (DIN 6885)
- 16 Distanzscheibe (DIN 127)
- 17 Distanzscheibe (DIN 127)
- 18 Verschrauben (DIN 933)
- 19 Verschrauben (DIN 933)
- 20 Motor

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GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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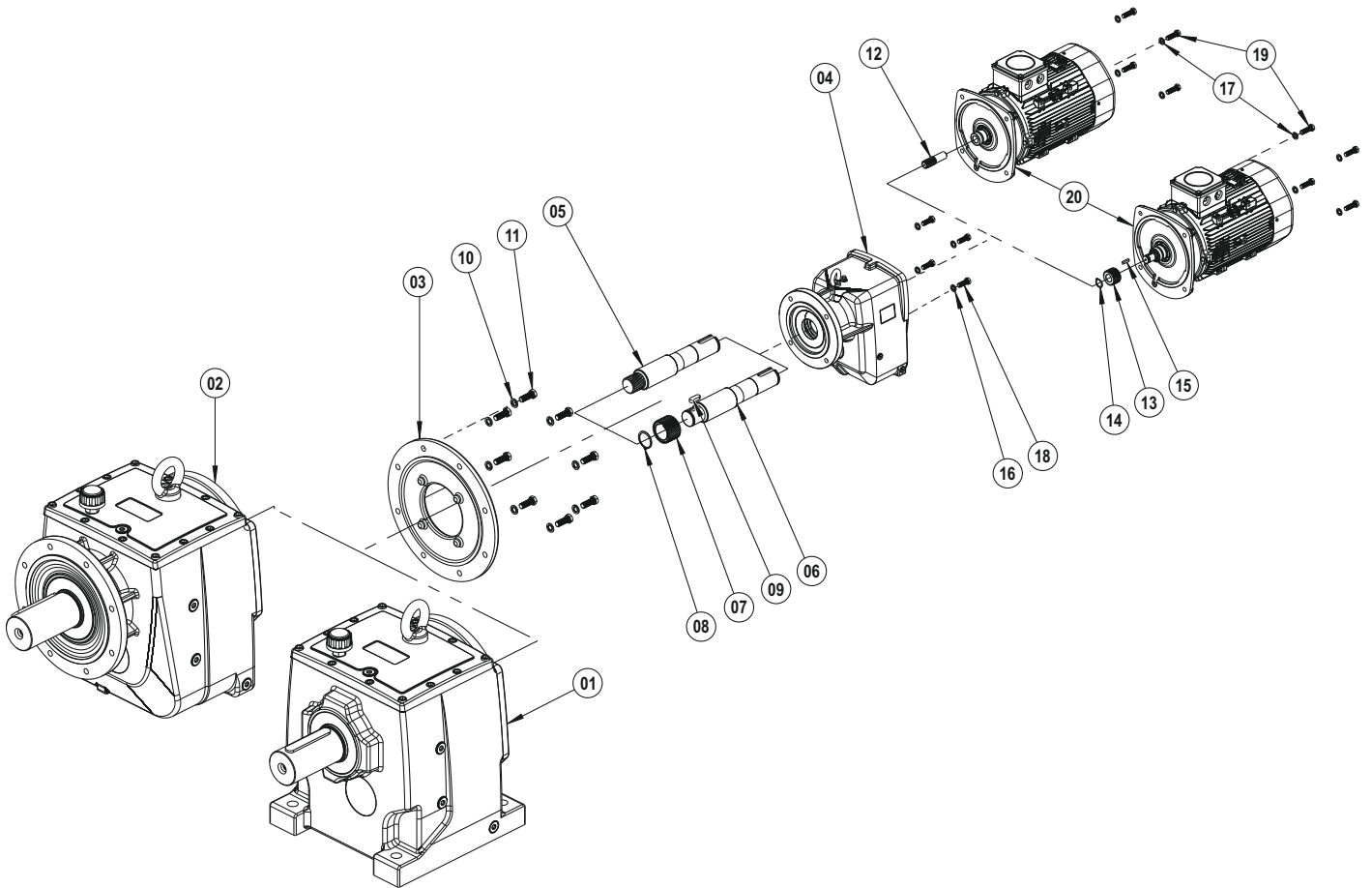
ALLGEMEINE STUCKLISTE

PA / PF 63/22 ... 103/52

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

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Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 PA Kit
- 02 PF Kit
- 03 Ara Bağlantı Flanşı
- 04 PF Kit
- 05 Ara Mil (Dişlisi)
- 06 Ara Mil (Kamalı)
- 07 Ara Dişli (Kamalı)
- 08 Segman (DIN 471)
- 09 Kama (DIN 6885)
- 10 Rondela (DIN 127)
- 11 Cıvata (DIN 933)
- 12 Z1 Dişlisi
- 13 Z1 Dişlisi (Kamalı)
- 14 Segman (DIN 471)
- 15 Kama (DIN 6885)
- 16 Rondela (DIN 127)
- 17 Rondela (DIN 127)
- 18 Cıvata (DIN 933)
- 19 Cıvata (DIN 933)
- 20 Motor

- 01 PA Kit
- 02 PF Kit
- 03 Intermediate Flange
- 04 PF Kit
- 05 Intermediate Shaft (With Gear)
- 06 Intermediate Shaft (With Key)
- 07 Intermediate Gear (With Key)
- 08 Circlip (DIN 471)
- 09 Key (DIN 6885)
- 10 Washer (DIN 127)
- 11 Bolt (DIN 933)
- 12 Driving Pinion
- 13 Driving Pinion (With Key)
- 14 Circlip (DIN 471)
- 15 Key (DIN 6885)
- 16 Washer (DIN 127)
- 17 Washer (DIN 127)
- 18 Bolt (DIN 933)
- 19 Bolt (DIN 933)
- 20 Motor

- 01 PA Bausatz
- 02 PF Bausatz
- 03 Zwischenflansch
- 04 PF Bausatz
- 05 Übertragungswelle (mit Zahnrad)
- 06 Übertragungswelle (mit Passfeder)
- 07 Zwischengetriebe (mit Passfeder)
- 08 Sicherungsring (DIN 471)
- 09 Passfeder (DIN 6885)
- 10 Distanzscheibe (DIN 127)
- 11 Verschrauben (DIN 933)
- 12 Antriebsritzel
- 13 Antriebsritzel (Mit Passfeder)
- 14 Sicherungsring (DIN 471)
- 15 Passfeder (DIN 6885)
- 16 Distanzscheibe (DIN 127)
- 17 Distanzscheibe (DIN 127)
- 18 Verschrauben (DIN 933)
- 19 Verschrauben (DIN 933)
- 20 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

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ALLGEMEINE STUCKLISTE

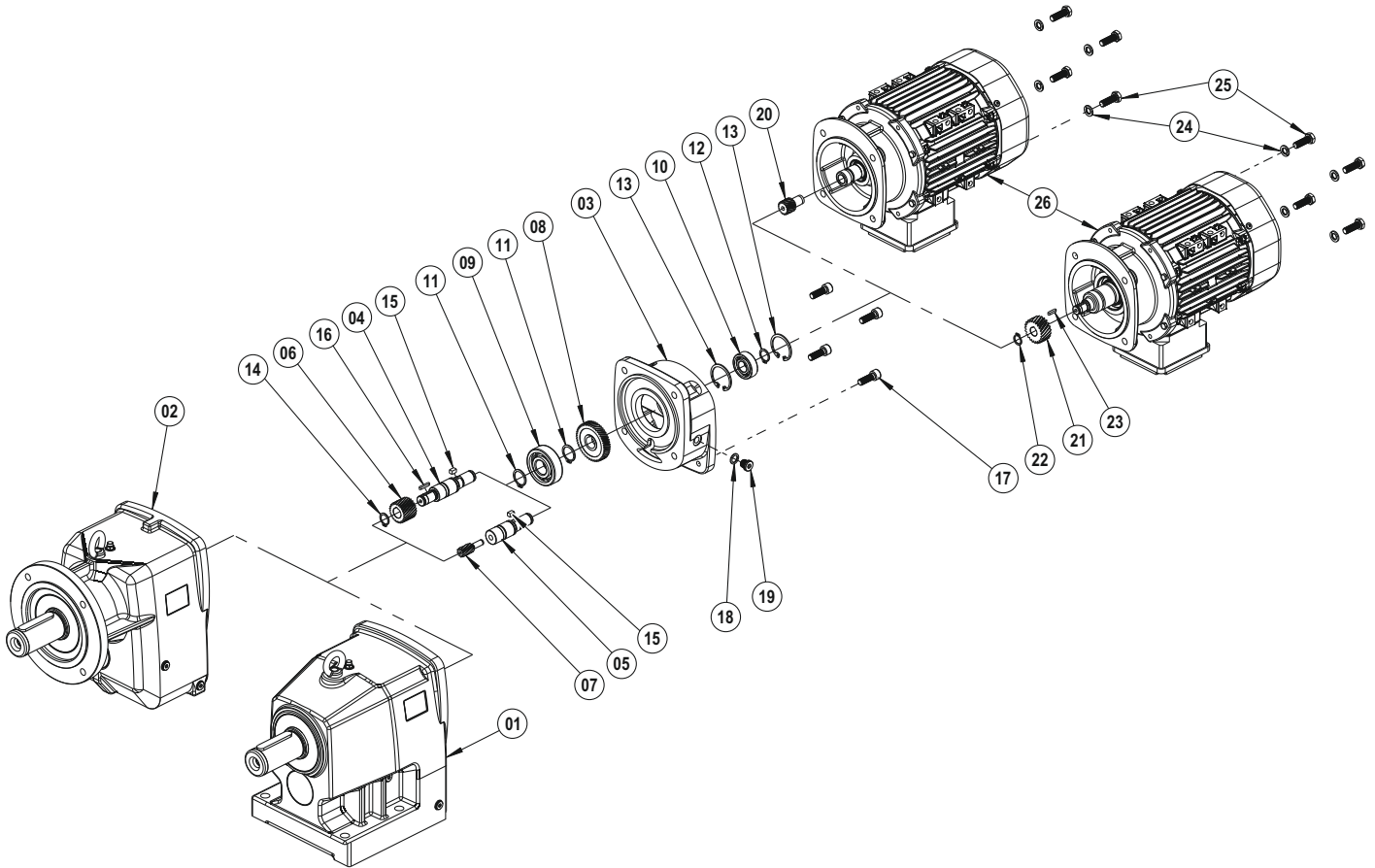
PA / PF 03 ... 53

İndirgeyici Gövde / Reduction Gear Case / Anbaugehäuse

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 PA Kit
- 02 PF Kit
- 03 İndirgeyici Gövde
- 04 Ara Mil (Kamalı)
- 05 Ara Mil
- 06 Ara Dişli (Kamalı)
- 07 Ara Dişli
- 08 Z2 Dişlisi
- 09 Rulman
- 10 Rulman
- 11 Segman (DIN 471)
- 12 Segman (DIN 471)
- 13 Segman (DIN 472)
- 14 Segman (DIN 471)
- 15 Kama (DIN 6885)
- 16 Kama (DIN 6885)
- 17 Cıvata (DIN 912)
- 18 Rondela (DIN 7603)
- 19 Yağ Tapası (DIN 908)
- 20 Z1 Dişlisi
- 21 Z1 Dişlisi (Kamalı)
- 22 Segman (DIN 471)
- 23 Kama (DIN 6885)
- 24 Rondela (DIN 127)
- 25 Cıvata (DIN 933)
- 26 Motor

- 01 PA Kit
- 02 PF Kit
- 03 Reduction Gear Case
- 04 Intermediate Shaft (With Key)
- 05 Intermediate Shaft
- 06 Intermediate Gear (With Key)
- 07 Intermediate Gear
- 08 Driving Gear
- 09 Bearing
- 10 Bearing
- 11 Circlip (DIN 471)
- 12 Circlip (DIN 471)
- 13 Circlip (DIN 472)
- 14 Circlip (DIN 471)
- 15 Key (DIN 6885)
- 16 Key (DIN 6885)
- 17 Bolt (DIN 912)
- 18 Washer (DIN 7603)
- 19 Oil Plug (DIN 908)
- 20 Driving Pinion
- 21 Driving Pinion (With Key)
- 22 Circlip (DIN 471)
- 23 Key (DIN 6885)
- 24 Washer (DIN 127)
- 25 Bolt (DIN 933)
- 26 Motor

- 01 PA Bausatz
- 02 PF Bausatz
- 03 Anbaugehäuse
- 04 Übertragungswelle (mit Zahnrad)
- 05 Übertragungswelle
- 06 Zwischengetriebe (mit Passfeder)
- 07 Zwischengetriebe
- 08 Abtriebsrad
- 09 Kugellager
- 10 Kugellager
- 11 Sicherungsring (DIN 471)
- 12 Sicherungsring (DIN 471)
- 13 Sicherungsring (DIN 472)
- 14 Sicherungsring (DIN 471)
- 15 Passfeder (DIN 6885)
- 16 Passfeder (DIN 6885)
- 17 Verschrauben (DIN 912)
- 18 Distanzscheibe (DIN 7603)
- 19 Ölstöpsel (DIN 908)
- 20 Antriebsritzel
- 21 Antriebsritzel (Mit Passfeder)
- 22 Sicherungsring (DIN 471)
- 23 Passfeder (DIN 6885)
- 24 Distanzscheibe (DIN 127)
- 25 Verschrauben (DIN 933)
- 26 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

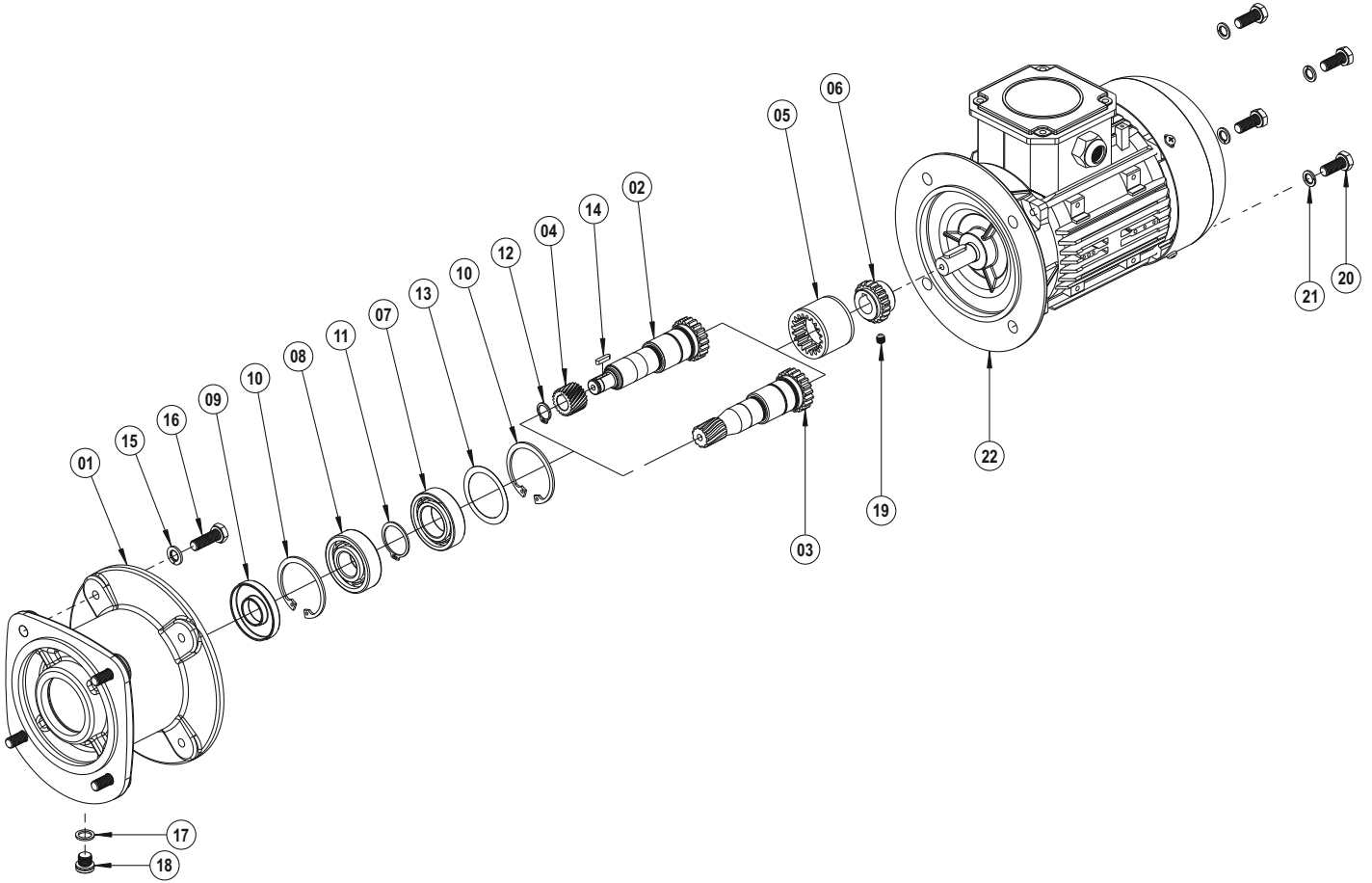
ALLGEMEINE STUCKLISTE

IEC 63 ... 112

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 IEC Mili (Kamalı)
- 03 IEC Mili (Dişlili)
- 04 Z1 Dişlisi (Kamalı)
- 05 Plastik Kaplin
- 06 Metal Kaplin
- 07 Rulman
- 08 Rulman
- 09 Yağ Keçesi
- 10 Segman (DIN 472)
- 11 Segman (DIN 471)
- 12 Segman (DIN 471)
- 13 Layner (DIN 988)
- 14 Kama (DIN 6885)
- 15 Rondela (DIN 127)
- 16 Cıvata (DIN 933)
- 17 Rondela (DIN 7603)
- 18 Yağ Tapası (DIN 908)
- 19 Cıvata (DIN 916)
- 20 Cıvata (DIN 933)
- 21 Rondela (DIN 127)
- 22 Motor

- 01 Gear Case
- 02 IEC Shaft (With Key)
- 03 IEC Shaft (With Gear)
- 04 Driving Pinion (With Key)
- 05 Plastic Coupling
- 06 Metal Coupling
- 07 Bearing
- 08 Bearing
- 09 Oil Seal
- 10 Circlip (DIN 472)
- 11 Circlip (DIN 471)
- 12 Circlip (DIN 471)
- 13 Shim (DIN 988)
- 14 Key (DIN 6885)
- 15 Washer (DIN 127)
- 16 Bolt (DIN 933)
- 17 Washer (DIN 7603)
- 18 Oil Plug (DIN 908)
- 19 Bolt (DIN 916)
- 20 Bolt (DIN 933)
- 21 Washer (DIN 127)
- 22 Motor

- 01 Gehäuse
- 02 IEC Welle (mit Passfeder)
- 03 IEC Welle (mit Zahnrad)
- 04 Antriebsritzel (Mit Passfeder)
- 05 Kupplung (Plastik)
- 06 Kupplung (Metall)
- 07 Kugellager
- 08 Kugellager
- 09 Öldichtung
- 10 Sicherungsring (DIN 472)
- 11 Sicherungsring (DIN 471)
- 12 Sicherungsring (DIN 471)
- 13 Passscheibe (DIN 988)
- 14 Passfeder (DIN 6885)
- 15 Distanzscheibe (DIN 127)
- 16 Verschrauben (DIN 933)
- 17 Distanzscheibe (DIN 7603)
- 18 Ölstöpsel (DIN 908)
- 19 Verschrauben (DIN 916)
- 20 Verschrauben (DIN 933)
- 21 Distanzscheibe (DIN 127)
- 22 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

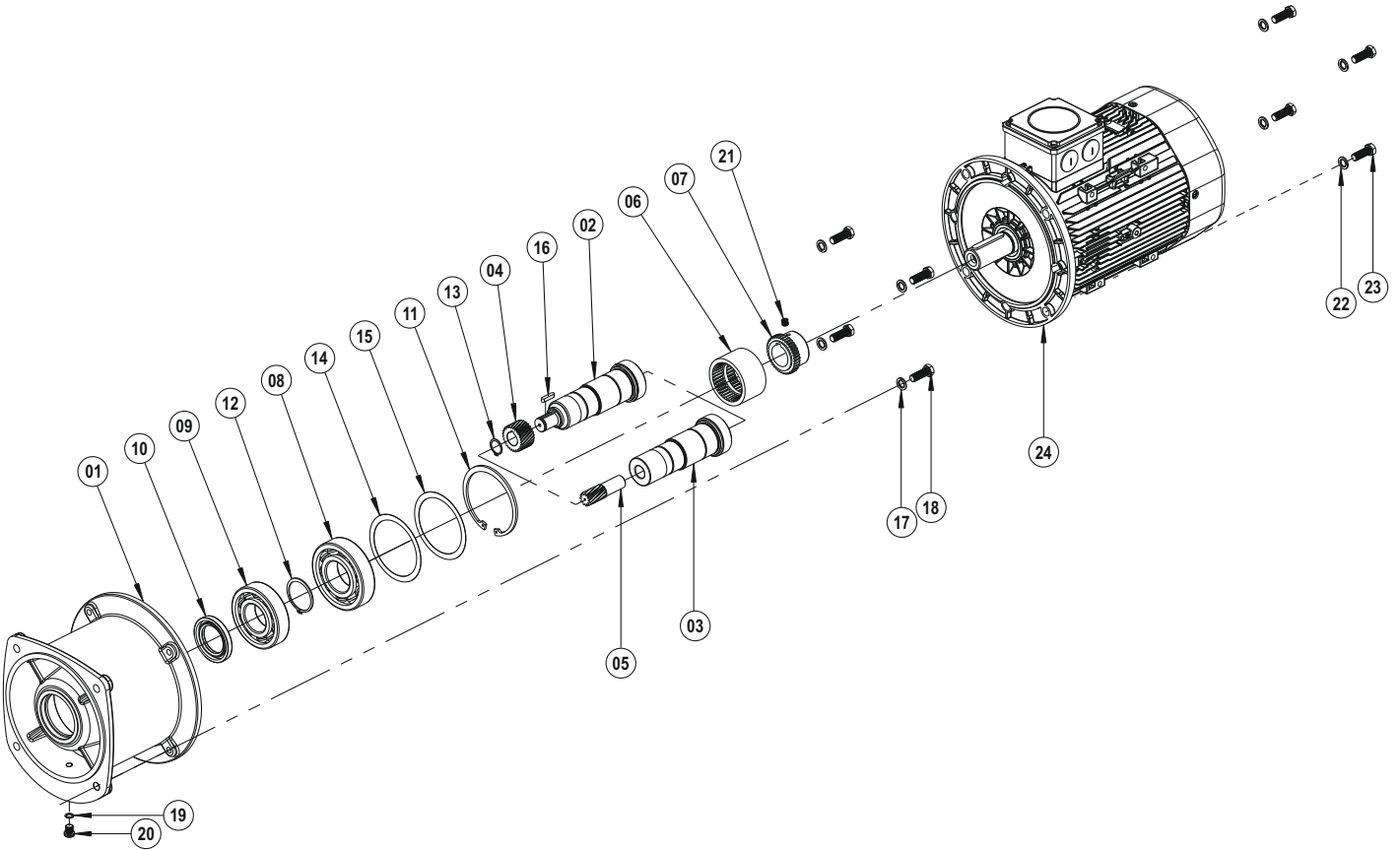
ALLGEMEINE STUCKLISTE

IEC 132 ... 180

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 IEC Mili (Kamalı)
- 03 IEC Mili
- 04 Z1 Dişlisi (Kamalı)
- 05 Z1 Dişlisi
- 06 Plastik Kaplin
- 07 Metal Kaplin
- 08 Rulman
- 09 Rulman
- 10 Yağ Keçesi
- 11 Segman (DIN 472)
- 12 Segman (DIN 471)
- 13 Segman (DIN 471)
- 14 Layner (DIN 988)
- 15 Layner (DIN 988)
- 16 Kama (DIN 6885)
- 17 Rondela (DIN 127)
- 18 Cıvata (DIN 933)
- 19 Rondela (DIN 7603)
- 20 Yağ Tapası (DIN 908)
- 21 Cıvata (DIN 916)
- 22 Rondela (DIN 127)
- 23 Cıvata (DIN 933)
- 24 Motor

- 01 Gear Case
- 02 IEC Shaft (With Key)
- 03 IEC Shaft
- 04 Driving Pinion (With Key)
- 05 Driving Pinion
- 06 Plastic Coupling
- 07 Metal Coupling
- 08 Bearing
- 09 Bearing
- 10 Oil Seal
- 11 Circlip (DIN 472)
- 12 Circlip (DIN 471)
- 13 Circlip (DIN 471)
- 14 Shim (DIN 988)
- 15 Shim (DIN 988)
- 16 Key (DIN 6885)
- 17 Washer (DIN 127)
- 18 Bolt (DIN 933)
- 19 Washer (DIN 7603)
- 20 Oil Plug (DIN 908)
- 21 Bolt (DIN 916)
- 22 Washer (DIN 127)
- 23 Bolt (DIN 933)
- 24 Motor

- 01 Gehäuse
- 02 IEC Welle (mit Passfeder)
- 03 IEC Welle
- 04 Antriebsritzel (Mit Passfeder)
- 05 Antriebsritzel
- 06 Kupplung (Plastik)
- 07 Kupplung (Metall)
- 08 Kugellager
- 09 Kugellager
- 10 Öldichtung
- 11 Sicherungsring (DIN 472)
- 12 Sicherungsring (DIN 471)
- 13 Sicherungsring (DIN 471)
- 14 Passscheibe (DIN 988)
- 15 Passscheibe (DIN 988)
- 16 Passfeder (DIN 6885)
- 17 Distanzscheibe (DIN 127)
- 18 Verschrauben (DIN 933)
- 19 Distanzscheibe (DIN 7603)
- 20 Ölstopf (DIN 908)
- 21 Verschrauben (DIN 933)
- 22 Distanzscheibe (DIN 127)
- 23 Verschrauben (DIN 933)
- 24 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

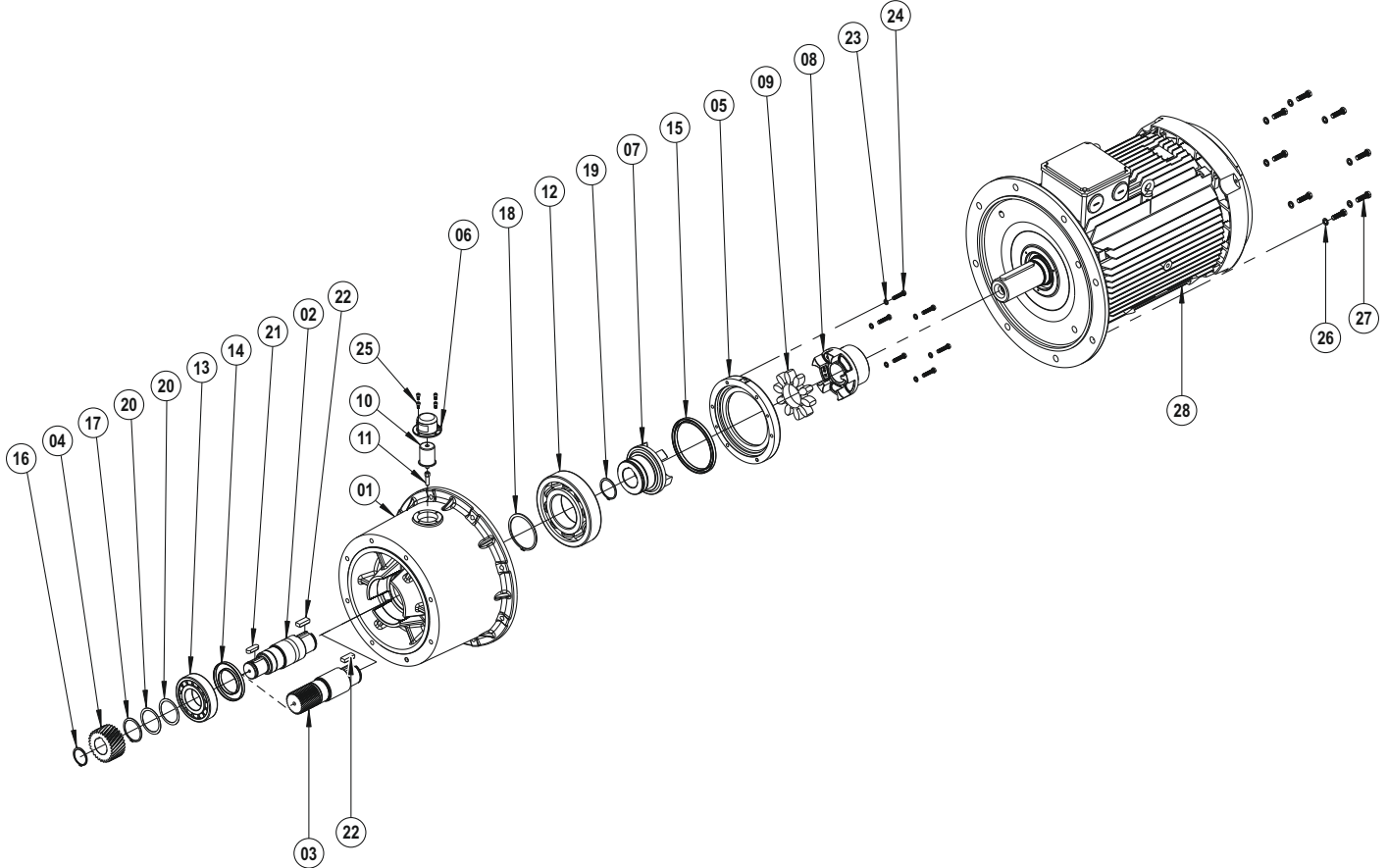
ALLGEMEINE STUCKLISTE

IEC 160 ... 315

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 IEC Mili (Kamalı)
- 03 IEC Mili (Dişlili)
- 04 Z1 Dişlisi (Kamalı)
- 05 Rulman Flanşı
- 06 Yağlama Kapağı
- 07 Kaplin (Redüktör Tarafı)
- 08 Kaplin (Motor Tarafı)
- 09 Spider
- 10 Otomatik Yağlayıcı Tüpü
- 11 Otomatik Yağlayıcı Adaptörü
- 12 Rulman
- 13 Rulman
- 14 Yağ Keçesi
- 15 Yağ Keçesi
- 16 Segman (DIN 471)
- 17 Segman (DIN 471)
- 18 Segman (DIN 471)
- 19 Segman (DIN 471)
- 20 Layner (DIN 988)
- 21 Kama (DIN 6885)
- 22 Kama (DIN 6885)
- 23 Rondela (DIN 127)
- 24 Cıvata (DIN 933)
- 25 Cıvata (DIN 912)
- 26 Rondela (DIN 127)
- 27 Cıvata (DIN 933)
- 28 Motor

- 01 Gear Case
- 02 IEC Shaft (With Key)
- 03 IEC Shaft (With Gear)
- 04 Driving Pinion (With Key)
- 05 Bearing Flange
- 06 Lubrication Cover
- 07 Coupling (Gearbox Side)
- 08 Coupling (Motor Side)
- 09 Spider
- 10 Automatic Lubricator
- 11 Automatic Lubricator Adapter
- 12 Bearing
- 13 Bearing
- 14 Oil Seal
- 15 Oil Seal
- 16 Circlip (DIN 471)
- 17 Circlip (DIN 471)
- 18 Circlip (DIN 471)
- 19 Circlip (DIN 471)
- 20 Shim (DIN 988)
- 21 Key (DIN 6885)
- 22 Key (DIN 6885)
- 23 Washer (DIN 127)
- 24 Bolt (DIN 933)
- 25 Bolt (DIN 912)
- 26 Washer (DIN 127)
- 27 Bolt (DIN 933)
- 28 Motor

- 01 Gehäuse
- 02 IEC Welle (mit Passfeder)
- 03 IEC Welle (mit Zahnrad)
- 04 Antriebsritzel (Mit Passfeder)
- 05 Kugellagerflansch
- 06 Schmierdeckel
- 07 Kupplung (Getriebeseite)
- 08 Kupplung (Motorseite)
- 09 Spider
- 10 Automatischer Schmierstoffgeber
- 11 Automatischer Schmierstoffgeber Verlängerung
- 12 Kugellager
- 13 Kugellager
- 14 Öldichtung
- 15 Öldichtung
- 16 Sicherungsring (DIN 471)
- 17 Sicherungsring (DIN 471)
- 18 Sicherungsring (DIN 471)
- 19 Sicherungsring (DIN 471)
- 20 Passscheibe (DIN 988)
- 21 Passfeder (DIN 6885)
- 22 Passfeder (DIN 6885)
- 23 Distanzscheibe (DIN 127)
- 24 Verschrauben (DIN 933)
- 25 Verschrauben (DIN 912)
- 26 Distanzscheibe (DIN 127)
- 27 Verschrauben (DIN 912)
- 28 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

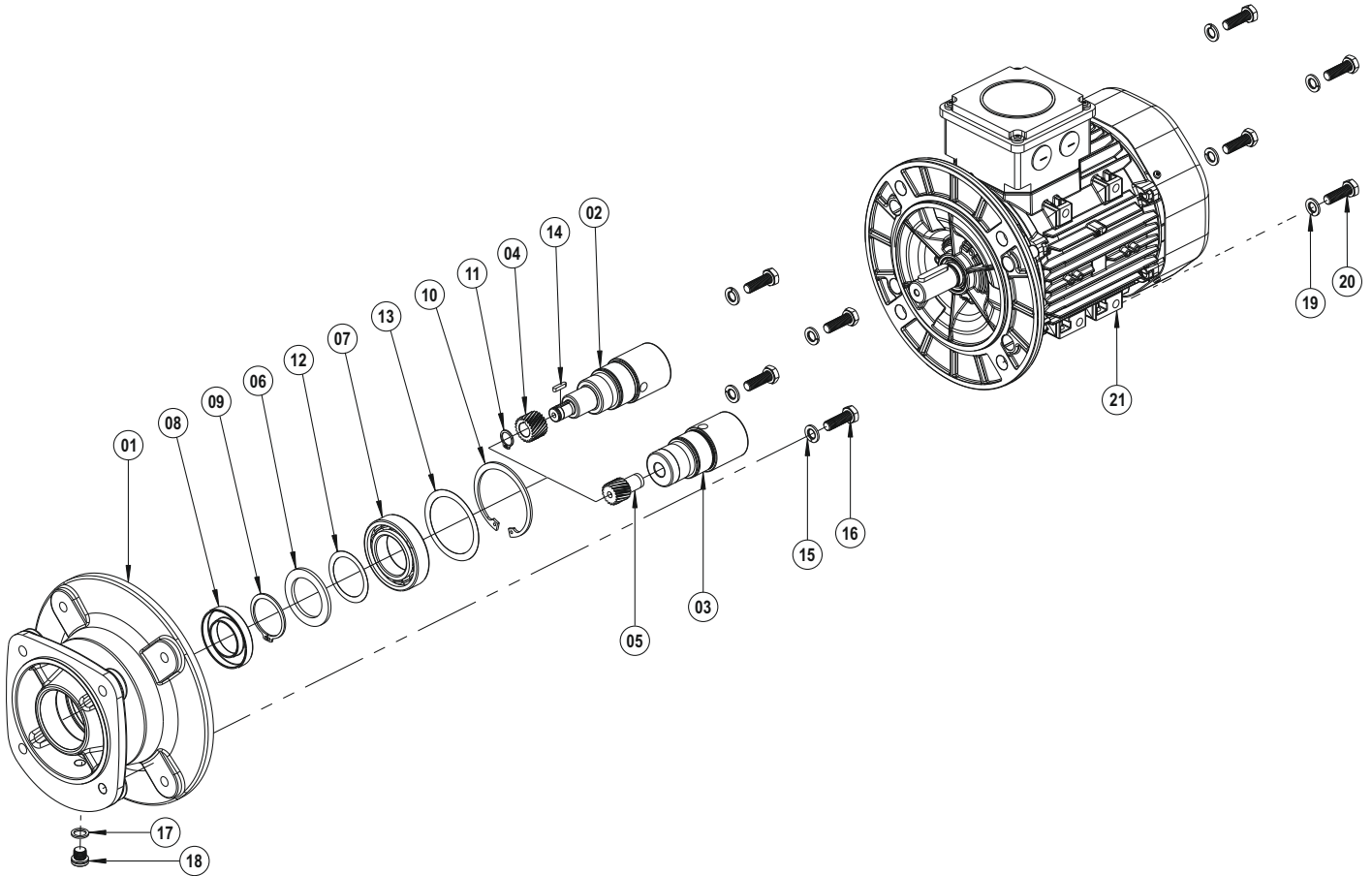
ALLGEMEINE STUCKLISTE

PAM B5 / 63 ... 315

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 PAM Mili (Kamalı)
- 03 PAM Mili
- 04 Z1 Dişlisi (Kamalı)
- 05 Z1 Dişlisi
- 06 Rondela
- 07 Rulman
- 08 Yağ Keçesi
- 09 Segman (DIN 471)
- 10 Segman (DIN 472)
- 11 Segman (DIN 471)
- 12 Layner (DIN 988)
- 13 Layner (DIN 988)
- 14 Kama (DIN 6885)
- 15 Rondela (DIN 127)
- 16 Cıvata (DIN 933)
- 17 Rondela (DIN 7603)
- 18 Yağ Tapası (DIN 908)
- 19 Rondela (DIN 127)
- 20 Cıvata (DIN 933)
- 21 Motor

- 01 Gear Case
- 02 PAM Shaft (With Key)
- 03 PAM Shaft
- 04 Driving Pinion (With Key)
- 05 Driving Pinion
- 06 Washer
- 07 Bearing
- 08 Oil Seal
- 09 Circlip (DIN 471)
- 10 Circlip (DIN 472)
- 11 Circlip (DIN 471)
- 12 Shim (DIN 988)
- 13 Shim (DIN 988)
- 14 Key (DIN 6885)
- 15 Washer (DIN 127)
- 16 Bolt (DIN 933)
- 17 Washer (DIN 7603)
- 18 Oil Plug (DIN 908)
- 19 Washer (DIN 127)
- 20 Bolt (DIN 933)
- 21 Motor

- 01 Gehäuse
- 02 PAM Welle (mit Passfeder)
- 03 PAM Welle
- 04 Antriebsritzel (Mit Passfeder)
- 05 Antriebsritzel
- 06 Distanzscheibe
- 07 Kugellager
- 08 Öldichtung
- 09 Sicherungsring (DIN 471)
- 10 Sicherungsring (DIN 472)
- 11 Sicherungsring (DIN 471)
- 12 Passscheibe (DIN 988)
- 13 Passscheibe (DIN 988)
- 14 Passfeder (DIN 6885)
- 15 Distanzscheibe (DIN 127)
- 16 Verschrauben (DIN 933)
- 17 Distanzscheibe (DIN 7603)
- 18 Ölstöpsel (DIN 908)
- 19 Distanzscheibe (DIN 127)
- 20 Verschrauben (DIN 933)
- 21 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

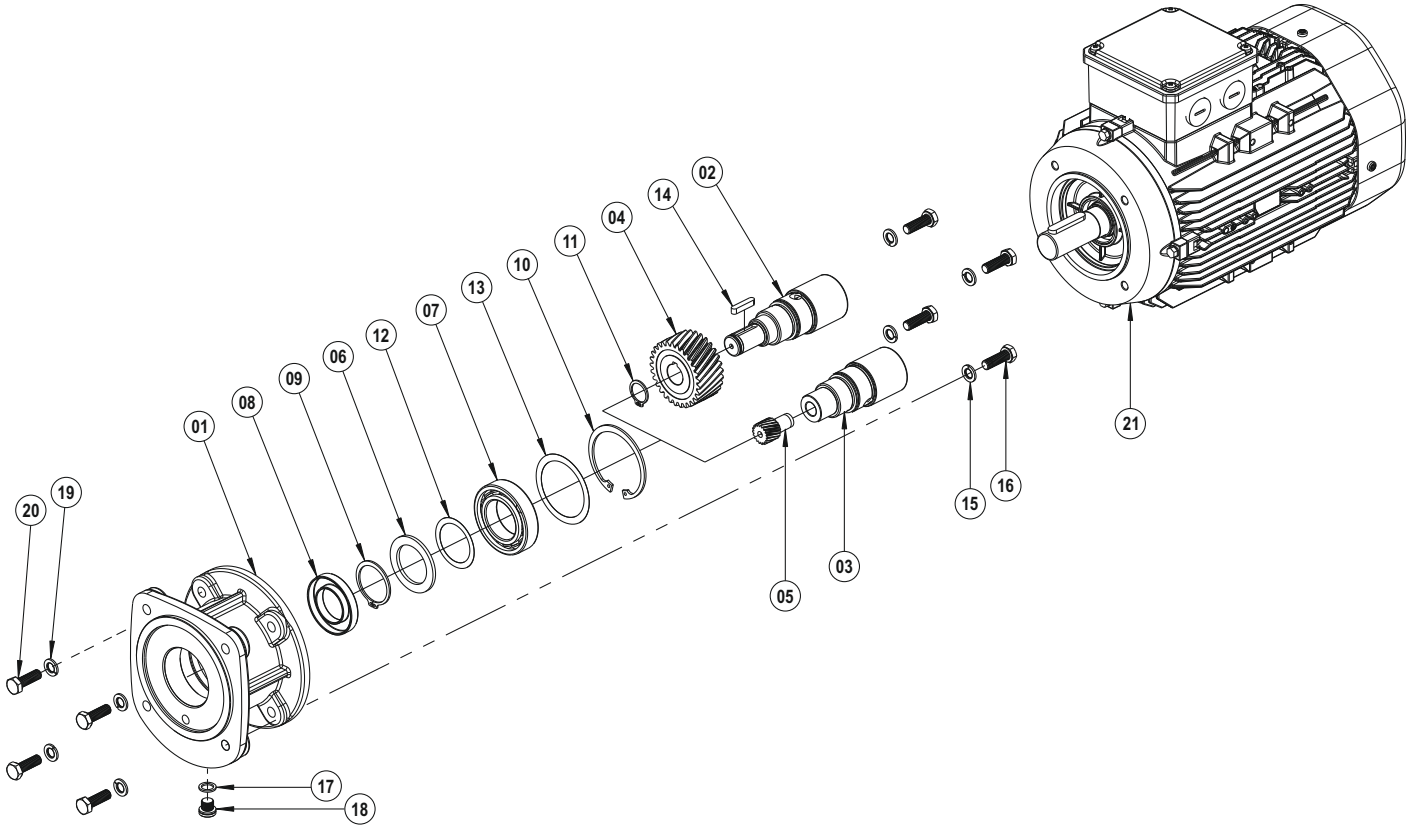
ALLGEMEINE STUCKLISTE

PAM B14 / 63 ... 132

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 PAM Mili (Kamalı)
- 03 PAM Mili
- 04 Z1 Dişlisi (Kamalı)
- 05 Z1 Dişlisi
- 06 Rondela
- 07 Rulman
- 08 Yağ Keçesi
- 09 Segman (DIN 471)
- 10 Segman (DIN 472)
- 11 Segman (DIN 471)
- 12 Layner (DIN 988)
- 13 Layner (DIN 988)
- 14 Kama (DIN 6885)
- 15 Rondela (DIN 127)
- 16 Cıvata (DIN 933)
- 17 Rondela (DIN 7603)
- 18 Yağ Tapası (DIN 908)
- 19 Rondela (DIN 127)
- 20 Cıvata (DIN 933)
- 21 Motor

- 01 Gear Case
- 02 PAM Shaft (With Key)
- 03 PAM Shaft
- 04 Driving Pinion (With Key)
- 05 Driving Pinion
- 06 Washer
- 07 Bearing
- 08 Oil Seal
- 09 Circlip (DIN 471)
- 10 Circlip (DIN 472)
- 11 Circlip (DIN 471)
- 12 Shim (DIN 988)
- 13 Shim (DIN 988)
- 14 Key (DIN 6885)
- 15 Washer (DIN 127)
- 16 Bolt (DIN 933)
- 17 Washer (DIN 7603)
- 18 Oil Plug (DIN 908)
- 19 Washer (DIN 127)
- 20 Bolt (DIN 933)
- 21 Motor

- 01 Gehäuse
- 02 PAM Welle (mit Passfeder)
- 03 PAM Welle
- 04 Antriebsritzel (Mit Passfeder)
- 05 Antriebsritzel
- 06 Distanzscheibe
- 07 Kugellager
- 08 Öldichtung
- 09 Sicherungsring (DIN 471)
- 10 Sicherungsring (DIN 472)
- 11 Sicherungsring (DIN 471)
- 12 Passscheibe (DIN 988)
- 13 Passscheibe (DIN 988)
- 14 Passfeder (DIN 6885)
- 15 Distanzscheibe (DIN 127)
- 16 Verschrauben (DIN 933)
- 17 Distanzscheibe (DIN 7603)
- 18 Ölstöpsel (DIN 908)
- 19 Distanzscheibe (DIN 127)
- 20 Verschrauben (DIN 933)
- 21 Motor

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

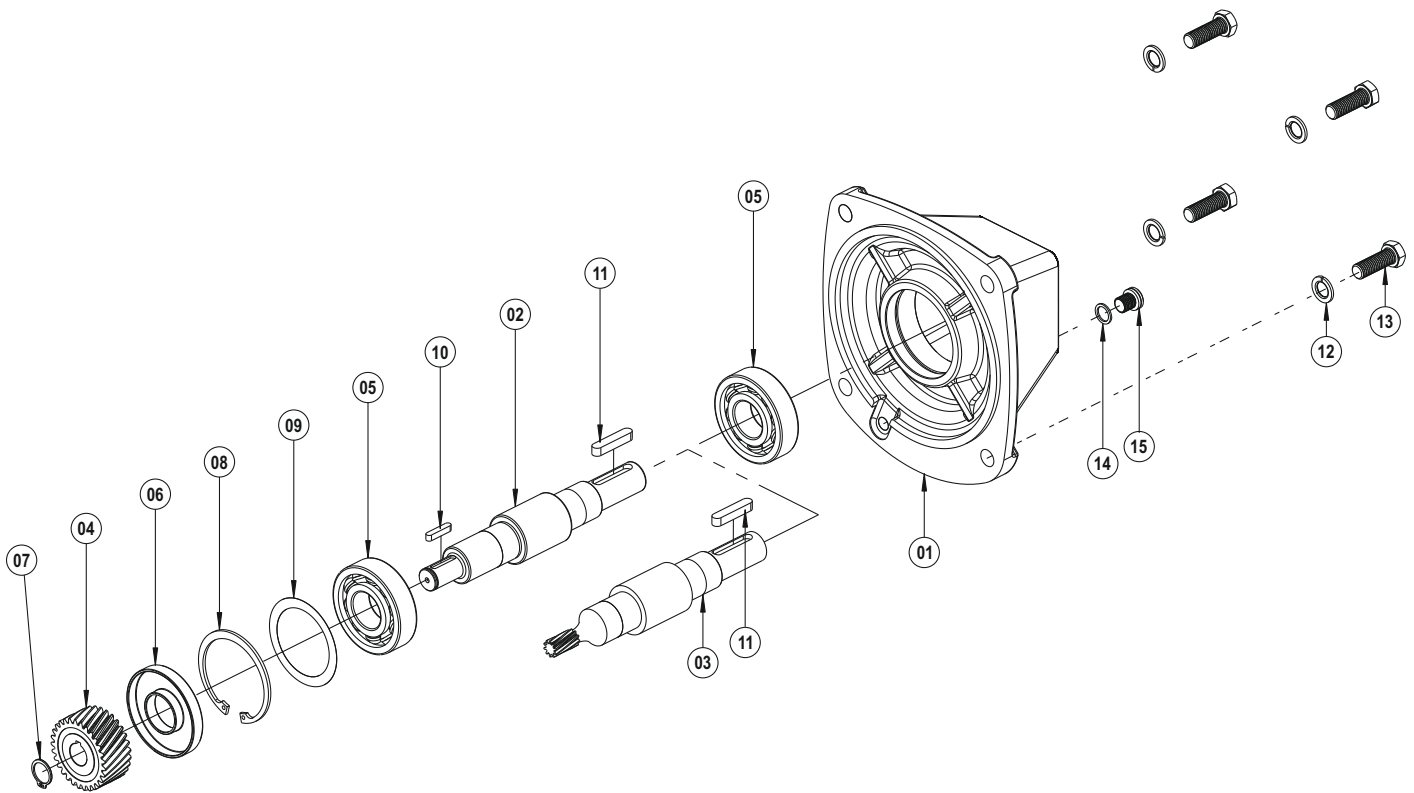
ALLGEMEINE STUCKLISTE

W 122 - 172 - 213

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 W Mili (Kamalı)
- 03 W Mili (Dişlili)
- 04 Z1 Dişlisi (Kamalı)
- 05 Rulman
- 06 Yağ Keçesi
- 07 Segman (DIN 471)
- 08 Segman (DIN 472)
- 09 Layner (DIN 988)
- 10 Kama (DIN 6885)
- 11 Kama (DIN 6885)
- 12 Rondela (DIN 127)
- 13 Cıvata (DIN 933)
- 14 Rondela (DIN 7603)
- 15 Yağ Tapası (DIN 908)

- 01 Gear Case
- 02 W Shaft (With Key)
- 03 W Shaft (With Gear)
- 04 Driving Pinion (With Key)
- 05 Bearing
- 06 Oil Seal
- 07 Circlip (DIN 471)
- 08 Circlip (DIN 472)
- 09 Shim (DIN 988)
- 10 Key (DIN 6885)
- 11 Key (DIN 6885)
- 12 Washer (DIN 127)
- 13 Bolt (DIN 933)
- 14 Washer (DIN 7603)
- 15 Oil Plug (DIN 908)

- 01 Gehäuse
- 02 W Welle (mit Passfeder)
- 03 W Welle (mit Zahnrad)
- 04 Antriebsritzel (Mit Passfeder)
- 05 Kugellager
- 06 Öldichtung
- 07 Sicherungsring (DIN 471)
- 08 Sicherungsring (DIN 472)
- 09 Passscheibe (DIN 988)
- 10 Passfeder (DIN 6885)
- 11 Passfeder (DIN 6885)
- 12 Distanzscheibe (DIN 127)
- 13 Verschrauben (DIN 933)
- 14 Distanzscheibe (DIN 7603)
- 15 Ölstöpsel (DIN 908)

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

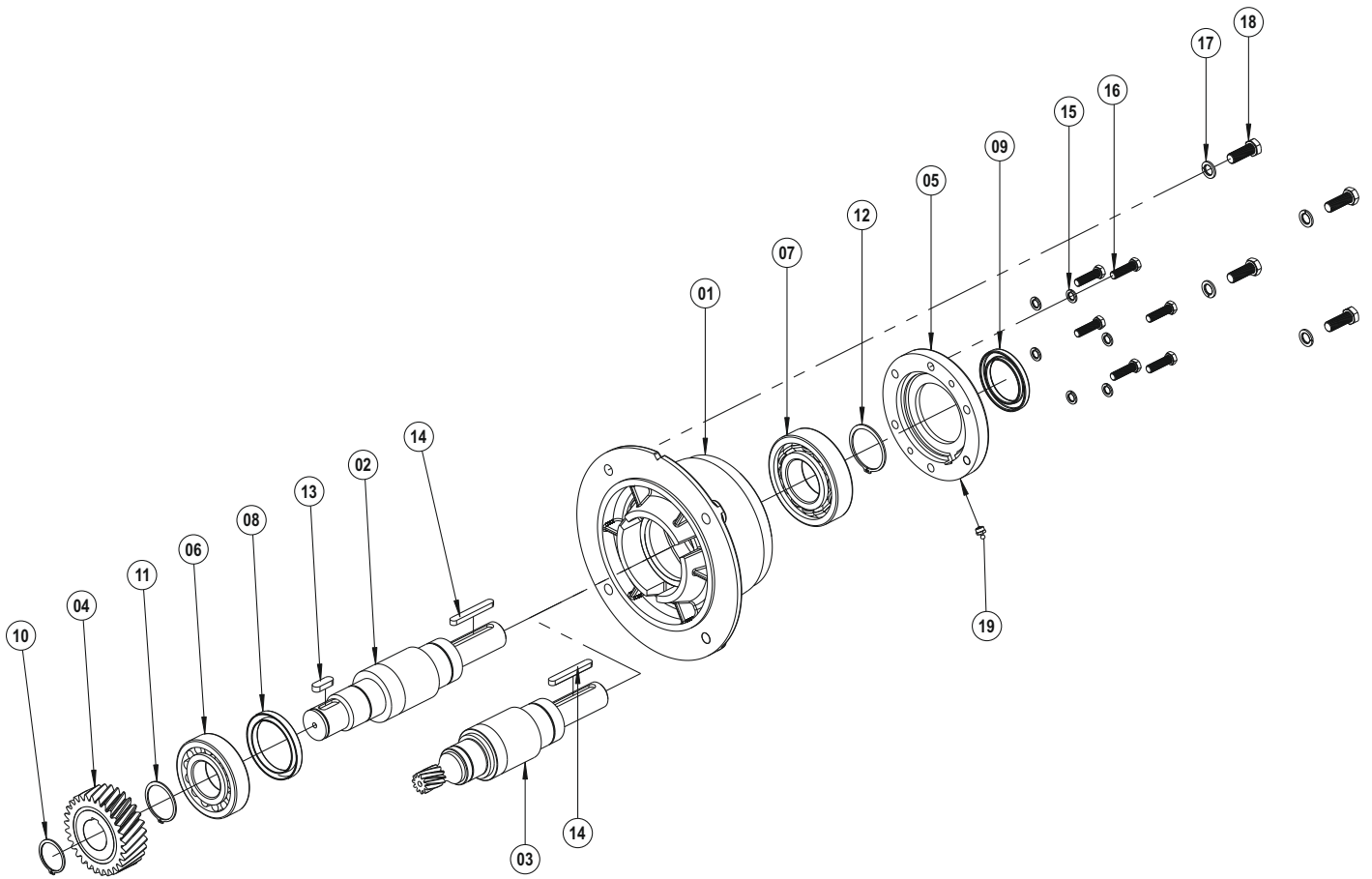
ALLGEMEINE STUCKLISTE

W 288

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



- 01 Gövde
- 02 W Mili (Kamalı)
- 03 W Mili (Dişlili)
- 04 Z1 Dişlisi (Kamalı)
- 05 Rulman Flanşı
- 06 Rulman
- 07 Rulman
- 08 Yağ Keçesi
- 09 Yağ Keçesi
- 10 Segman (DIN 471)
- 11 Segman (DIN 471)
- 12 Segman (DIN 471)
- 13 Kama (DIN 6885)
- 14 Kama (DIN 6885)
- 15 Rondela (DIN 127)
- 16 Cıvata (DIN 933)
- 17 Rondela (DIN 127)
- 18 Cıvata (DIN 933)
- 19 Gresörlük

- 01 Gear Case
- 02 W Shaft (With Key)
- 03 W Shaft (With Gear)
- 04 Driving Pinion (With Key)
- 05 Bearing Flange
- 06 Bearing
- 07 Bearing
- 08 Oil Seal
- 09 Oil Seal
- 10 Circlip (DIN 471)
- 11 Circlip (DIN 471)
- 12 Circlip (DIN 471)
- 13 Key (DIN 6885)
- 14 Key (DIN 6885)
- 15 Washer (DIN 127)
- 16 Bolt (DIN 933)
- 17 Washer (DIN 127)
- 18 Bolt (DIN 933)
- 19 Grease Nipple

- 01 Gehäuse
- 02 W Welle (mit Passfeder)
- 03 W Welle (mit Zahnrad)
- 04 Antriebsritzel (Mit Passfeder)
- 05 Kugellagerflansch
- 06 Kugellager
- 07 Kugellager
- 08 Öldichtung
- 09 Öldichtung
- 10 Sicherungsring (DIN 471)
- 11 Sicherungsring (DIN 471)
- 12 Sicherungsring (DIN 471)
- 13 Passfeder (DIN 6885)
- 14 Passfeder (DIN 6885)
- 15 Distanzscheibe (DIN 127)
- 16 Verschrauben (DIN 933)
- 17 Distanzscheibe (DIN 127)
- 18 Verschrauben (DIN 933)
- 19 Schmiernippel

TR

GENEL PARÇA LİSTESİ

EN

GENERAL PART LIST

DE

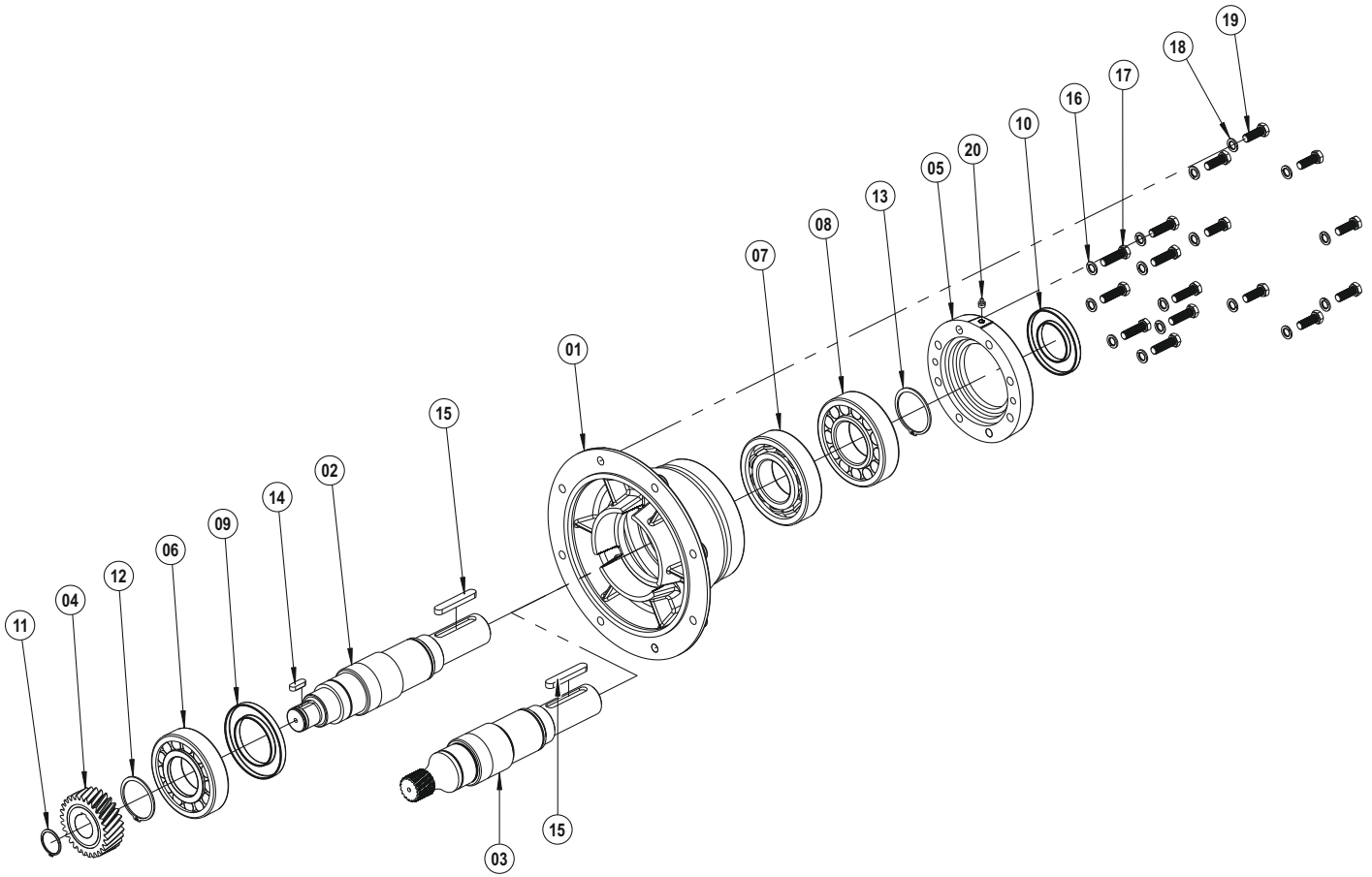
ALLGEMEINE STUCKLISTE

W 397

Patlatma resmi gövde boyutu ve motor büyüklüğüne göre değişiklik gösterebilir, ayrıntılı patlatma resmi için firmamız ile iletişime geçiniz.

The exploded image may vary depending on the body and motor size, please contact us for the detailed exploded image.

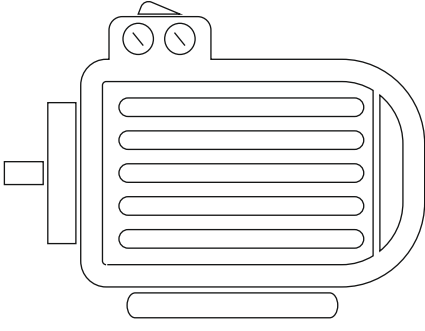
Die Explosionszeichnung kann je nach Gehäusegröße und Motorgröße variieren. Für die detaillierte Explosionszeichnung wenden Sie sich bitte an unser Unternehmen.



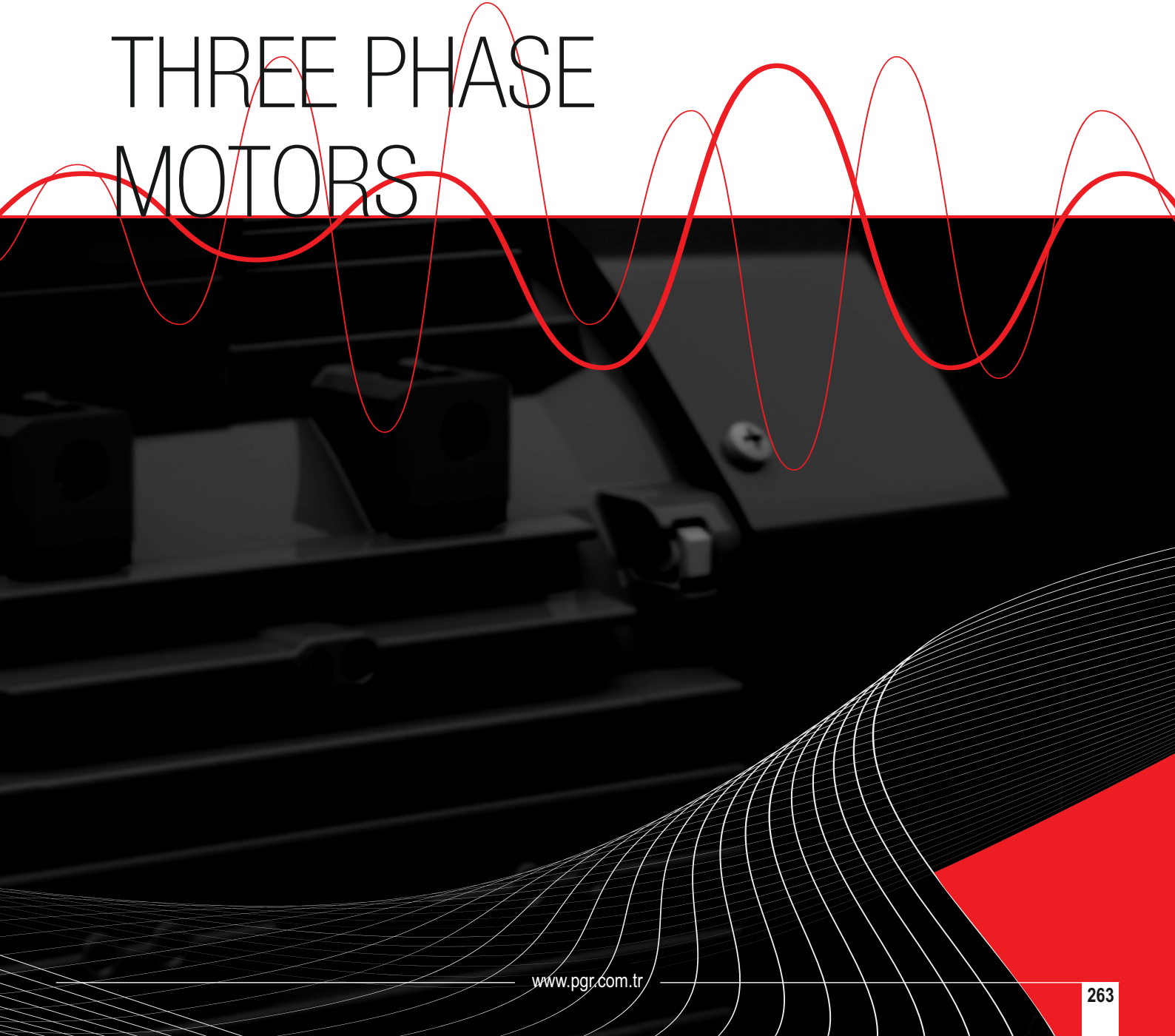
- 01 Gövde
- 02 W Mili (Kamalı)
- 03 W Mili (Dişlili)
- 04 Z1 Dişlisi (Kamalı)
- 05 Rulman Flanşı
- 06 Rulman
- 07 Rulman
- 08 Rulman
- 09 Yağ Keçesi
- 10 Yağ Keçesi
- 11 Segman (DIN 471)
- 12 Segman (DIN 471)
- 13 Segman (DIN 471)
- 14 Kama (DIN 6885)
- 15 Kama (DIN 6885)
- 16 Rondela (DIN 127)
- 17 Cıvata (DIN 933)
- 18 Rondela (DIN 127)
- 19 Cıvata (DIN 933)
- 20 Gresörlük

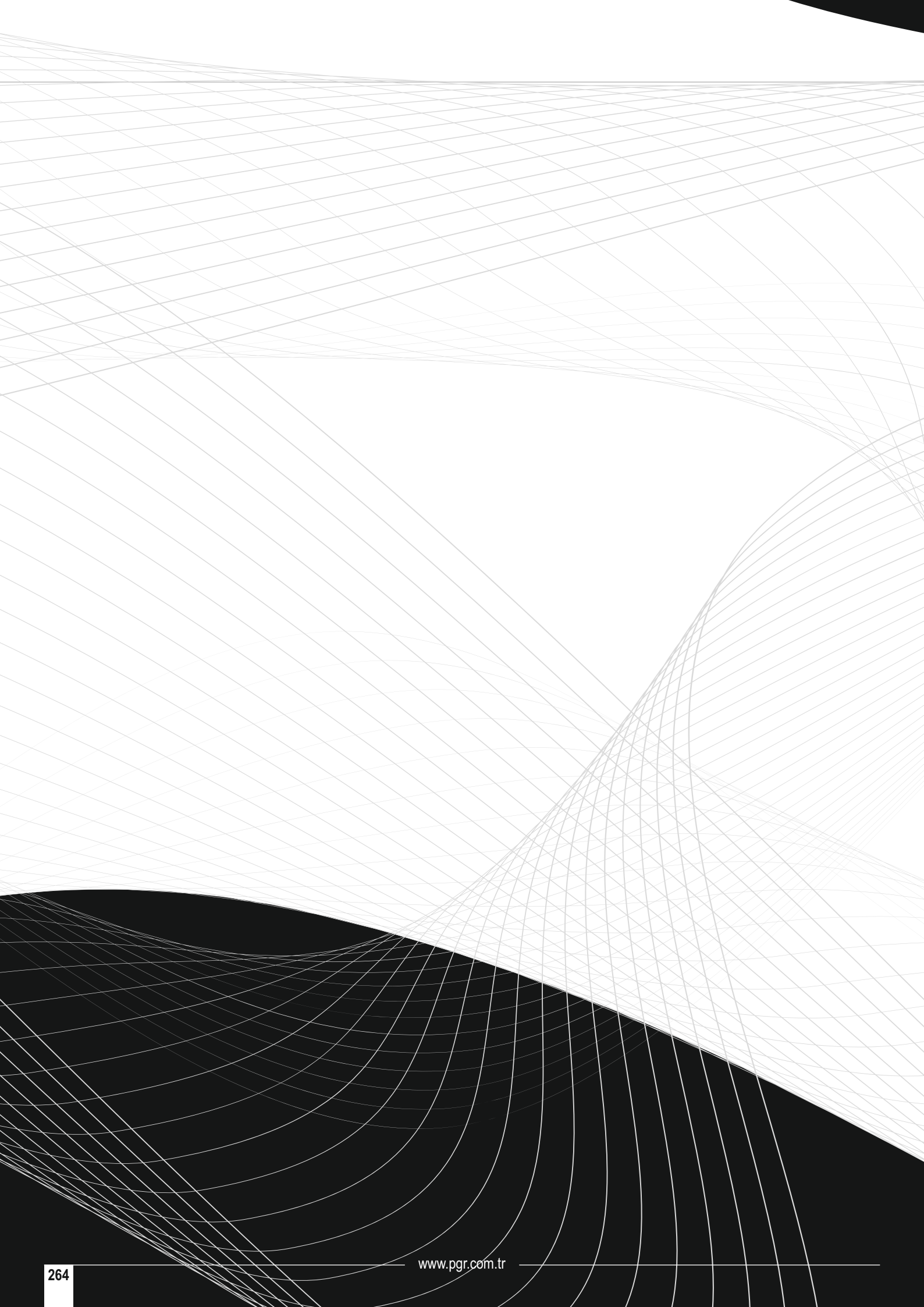
- 01 Gear Case
- 02 W Shaft (With Key)
- 03 W Shaft (With Gear)
- 04 Driving Pinion (With Key)
- 05 Bearing Flange
- 06 Bearing
- 07 Bearing
- 08 Bearing
- 09 Oil Seal
- 10 Oil Seal
- 11 Circlip (DIN 471)
- 12 Circlip (DIN 471)
- 13 Circlip (DIN 471)
- 14 Key (DIN 6885)
- 15 Key (DIN 6885)
- 16 Washer (DIN 127)
- 17 Bolt (DIN 933)
- 18 Washer (DIN 127)
- 19 Bolt (DIN 933)
- 20 Grease Nipple

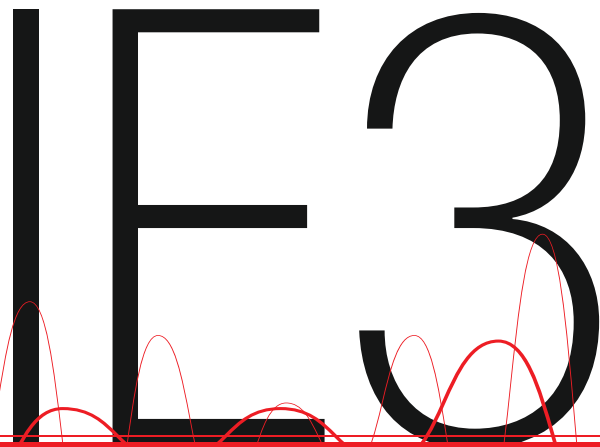
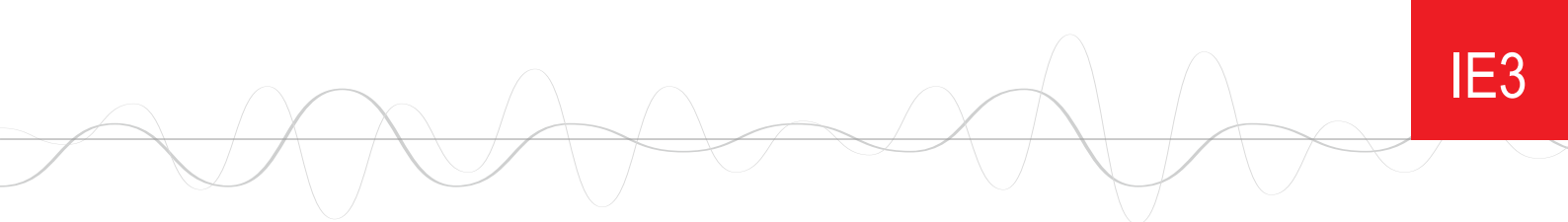
- 01 Gehäuse
- 02 W Welle (mit Passfeder)
- 03 W Welle (mit Zahnrad)
- 04 Antriebsritzel (Mit Passfeder)
- 05 Kugellagerflansch
- 06 Kugellager
- 07 Kugellager
- 08 Kugellager
- 09 Öldichtung
- 10 Öldichtung
- 11 Sicherungsring (DIN 471)
- 12 Sicherungsring (DIN 471)
- 13 Sicherungsring (DIN 471)
- 14 Passfeder (DIN 6885)
- 15 Passfeder (DIN 6885)
- 16 Distanzscheibe (DIN 127)
- 17 Verschrauben (DIN 933)
- 18 Distanzscheibe (DIN 127)
- 19 Verschrauben (DIN 933)
- 20 Schmiernippel



ÜÇ FAZLI MOTORLAR THREE PHASE MOTORS







IE3

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

	MOTOR TİPİ MOTOR TYPE	GÖVDE TIPI HOUSING TYPE	NOMINAL RATED VALUES					KALKIŞTAKİ DEĞERLER STARTING VALUES				Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3) kg	Ses Basınç Seviyesi Sound Pressure Level dBA **
			GÜÇ POWER		DEVİR SPEED rpm	AKIM CURRENT A	MOMENT TORQUE Nm	AKIM CURRENT I _A / I _N		MOMENT TORQUE M _A / M _N			η%						
			kW	HP				λ	Δ	λ	Δ		4/4	3/4	2/4				
2 kutup 3000 d/dak / 2 pole 3000 rpm																			
230/400V	Q3H80M2C	Aluminium	0,75	1,0	2890	1,6	2,5	8,3	-	3,7	-	4,2	80,7	79,8	76,1	0,85	0,0014	13	57
	Q3H80M2D	Aluminium	1,1	1,5	2890	2,3	3,6	9,1	-	3,9	-	4,3	82,7	82,2	79,3	0,85	0,0017	13	57
	Q3H90L2C	Aluminium	1,5	2,0	2910	3,3	4,9	10,9	-	5,2	-	5,4	84,2	83,3	80,5	0,80	0,0023	16	62
	Q3H90L2D	Aluminium	2,2	3,0	2917	4,3	7,2	9,2	-	3,1	-	4,9	85,9	86,4	85,2	0,87	0,0028	19	62
	Q3H100L2D	Aluminium	3,0	4,0	2890	5,9	9,9	8,1	-	3,2	-	3,5	87,1	88,1	87,7	0,85	0,0031	25	66
400/690V	Q3H112M2C	Aluminium	4,0	5,5	2936	7,5	13,0	3,6	10,9	1,6	4,8	5,7	88,1	88,1	85,8	0,85	0,0064	29	68
	Q3H132S2C	Aluminium	5,5	7,5	2918	10,5	18,0	3,6	10,7	1,2	3,7	5,1	89,2	89,0	87,2	0,86	0,0077	37	69
	Q3H132S2D	Aluminium	7,5	10,0	2918	13,9	24,5	3,6	10,8	1,4	4,3	5,4	90,1	90,3	89,1	0,88	0,0093	43	69
	Q3H160M2C	Aluminium	11,0	15,0	2925	20,7	36,0	3,5	10,5	1,3	3,9	5,2	91,2	91,4	90,6	0,85	0,0352	65	70
	Q3H160M2DE	Aluminium	15,0	20,0	2930	27,9	48,9	3,5	10,5	1,2	3,7	5,2	91,9	91,3	89,8	0,84	0,0402	79	71
	Q3H160L2C	Aluminium	18,5	25,0	2960	32,8	59,9	3,6	10,8	1,1	3,4	4,8	92,4	92,5	91,6	0,89	0,0481	96	70
	Q3H180M2A	Aluminium	22,0	30,0	2961	39,1	70,7	3,5	10,5	1,1	3,2	5,2	92,7	92,5	91,3	0,87	0,0587	114	77
	Q3H200L2C	Aluminium	30,0	40,0	2955	50,3	97,0	3,5	10,5	1,0	3,0	4,5	93,3	93,2	92,2	0,92	0,1028	153	78
	Q3H200L2D	Aluminium	37,0	50,0	2960	61,9	119,4	3,3	9,9	1,0	2,9	4,4	93,7	94,4	94,0	0,92	0,1138	166	78
	Q3E225M2B	Aluminium	45,0	60,0	2965	77,1	144,9	2,8	8,6	0,9	2,4	3,8	94,0	93,7	92,2	0,85	0,2350	249	80
	Q3E250M2A	Aluminium	55,0	75,0	2970	92,1	176,7	2,7	8	0,8	2,5	3,1	94,3	94,1	92,9	0,92	0,50903	279	81
	Q3EP250M2C	Cast Iron	55,0	75,0	2982	93,8	176,1	2,3	7,0	0,9	2,7	3,4	94,3	94,0	92,6	0,90	0,4870	488	81
	Q3EP280M2C	Cast Iron	75,0	100,0	2975	124,9	240,7	2,8	8,4	0,7	2,2	4,4	94,7	94,2	93,1	0,92	0,5400	585	82
	Q3EP280M2D	Cast Iron	90,0	125,0	2975	150,7	288,9	2,8	8,6	0,8	2,4	5,4	95,0	94,7	93,7	0,93	0,6450	596	82
	Q3EP315S2C	Cast Iron	110,0	127,0	2.983	187	358	2,4	7,2	0,6	1,7	2,6	95,2	95,2	94,0	0,89	2,19900	963	83
	Q3EP315M2B	Cast Iron	132,0	152,0	2.983	224	418	2,5	7,5	0,6	1,8	2,6	95,4	95,4	94,4	0,89	2,37790	1.007	83
	Q3EP315L2A	Cast Iron	160,0	184,0	2.983	271	513	2,5	7,5	0,6	1,8	2,6	95,6	95,6	94,4	0,89	2,62170	1.065	83
	Q3EP315L2C	Cast Iron	200,0	230,0	2.983	339	641	2,5	7,5	0,6	1,9	2,6	95,8	95,8	94,9	0,89	2,90860	1.180	83
	Q3EP355M2C	Cast Iron	250,0	280,0	2.983	419	800	2,4	7,3	0,6	1,7	2,5	95,8	95,8	94,7	0,90	3,81300	1.612	91
	Q3EP355L2B	Cast Iron	315,0	353,0	2.984	527	1.008	2,4	7,3	0,6	1,8	2,5	95,8	95,7	94,4	0,90	4,52000	1.771	91
Q3EP355L2C	Cast Iron	355,0	398,0	2.981	594	1.137	2,6	7,9	0,7	2,2	2,5	95,8	95,8	95,0	0,90	5,58000	2.002	91	
4 kutup 1500 d/dak / 4 pole 1500 rpm																			
230/400V	Q3H80M4D	Aluminium	0,75	1,0	1445	1,7	5,0	6,7	-	2,8	-	3,4	82,5	83,2	80,6	0,77	0,00261	13	52
	Q3H90L4C	Aluminium	1,1	1,5	1447	2,6	7,3	7,2	-	3,1	-	3,7	82,7	82,4	89,5	0,74	0,00328	15	54
	Q3H90L4D	Aluminium	1,5	2,0	1449	3,5	9,9	8,1	-	3,6	-	4,2	85,3	85,0	82,1	0,76	0,00526	20	53
	Q3H100L4C	Aluminium	2,2	3,0	1443	4,9	14,6	9,5	-	5,0	-	5,5	86,7	84,3	80,6	0,75	0,00690	25	55
	Q3H100L4D	Aluminium	3,0	4,0	1446	6,2	19,9	8,4	-	3,3	-	3,8	87,7	88,0	87,0	0,81	0,01059	31	56
400/690V	Q3H112M4D	Aluminium	4,0	5,5	1452	8,2	26,5	3,0	9,1	1,1	3,3	4,1	88,6	88,8	87,3	0,80	0,01383	32	54
	Q3H132S4B	Aluminium	5,5	7,5	1467	10,6	35,8	2,8	8,5	0,7	2,0	3,8	89,6	89,1	87,6	0,84	0,03560	53	60
	Q3H132M4D	Aluminium	7,5	10,0	1467	15,2	48,8	2,7	8,2	0,8	2,3	3,8	90,4	90,7	89,6	0,80	0,04030	58	60
	Q3H160M4C	Aluminium	11,0	15,0	1470	21,0	71,3	2,7	8,0	0,7	2,1	3,8	91,4	91,5	90,4	0,83	0,05940	84	63
	Q3H160L4B	Aluminium	15,0	20,0	1477	30,9	97,1	2,6	7,8	0,9	2,8	3,3	92,1	92,0	90,8	0,76	0,09005	101	62
	Q3H180M4B	Aluminium	18,5	25,0	1474	39,5	119,9	2,5	7,4	0,8	2,3	3,5	92,6	91,9	91,2	0,74	0,11398	118	67
	Q3H180L4B	Aluminium	22,0	30,0	1485	41,6	141,7	3,1	9,2	0,9	2,8	3,6	93,0	93,1	92,3	0,83	0,18660	158	68
	Q3H200L4D	Aluminium	30,0	40,0	1475	54,8	195,5	2,7	8,0	0,8	2,5	3,1	93,6	94,6	94,8	0,85	0,22166	194	68
	Q3E225M4B	Aluminium	37,0	50,0	1485	68,6	237,9	2,9	8,8	1,0	3,1	3,7	93,9	93,8	92,6	0,84	0,36400	280	71
	Q3E225M4C	Aluminium	45,0	60,0	1485	83,1	289,4	3,0	9,2	1,0	3,1	3,7	94,2	94,0	93,3	0,83	0,43500	276	71
	Q3E250M4B	Cast Iron	55,0	75,0	1487	106,9	353,2	3,0	9,2	1,0	3,1	3,7	94,6	94,4	93,5	0,79	0,90782	506	72
	Q3EP280M4C	Cast Iron	75,0	100,0	1485	138,9	482,3	2,6	7,8	1,0	3,0	3,2	95,0	94,8	94,0	0,82	1,06100	638	73
	Q3EP280M4D	Cast Iron	90,0	125,0	1485	163,5	578,7	2,6	7,9	1,0	3,0	3,2	95,2	95,0	93,9	0,86	1,14760	653	73
	Q3EP315S4C	Cast Iron	110,0	127,0	1.489	194	705	2,5	7,5	0,7	2,0	2,5	95,4	95,4	94,7	0,86	3,46500	867	70
	Q3EP315M4B	Cast Iron	132,0	152,0	1.489	232	846	2,5	7,6	0,7	2,1	2,5	95,6	95,6	95,0	0,86	3,96600	993	70
	Q3EP315L4A	Cast Iron	160,0	184,0	1.489	274	1.026	2,5	7,6	0,7	2,2	2,5	95,8	95,8	95,4	0,88	4,88320	1.165	70
	Q3EP315L4C	Cast Iron	200,0	230,0	1.489	346	1.282	2,7	8,2	0,7	2,2	2,5	96,0	96,0	95,5	0,87	5,23440	1.223	70
	Q3EP355M4C	Cast Iron	250,0	280,0	1.491	422	1.601	2,5	7,5	0,6	1,9	2,4	96,0	96,0	95,5	0,89	9,30600	1.692	82
	Q3EP355L4B	Cast Iron	315,0	353,0	1.491	532	2.017	2,5	7,5	0,6	1,9	2,4	96,0	96,0	95,5	0,89	10,06700	1.879	82
	Q3EP355L4C	Cast Iron	355,0	398,0	1.491	600	2.273	2,5	7,5	0,7	2,0	2,3	96,0	96,0	95,5	0,89	11,90000	1.953	82

* IEC 60034-2-1'e göre / According to IEC 60034-2-1

** Ses Basınç Seviyeleri motordan 1m uzaklıktan ölçülmüştür. / The sound pressure measurements are taken 1m away from the motor

*** Tolerans +3 dBA / Tolerance +3 dBA

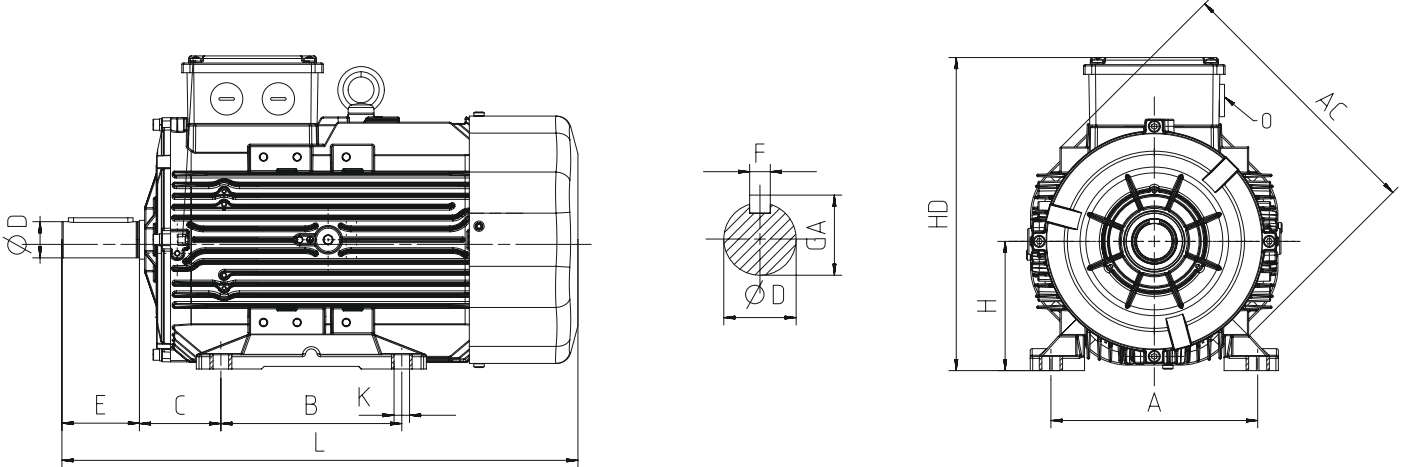
	MOTOR TİPİ MOTOR TYPE	GÖVDE TİPİ HOUSING TYPE	NOMİNAL RATED VALUES					KALKIŞTAKİ DEĞERLER STARTING VALUES				Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3) kg	Ses Basınç Seviyesi Sound Pressure Level dBA **
			GÜÇ POWER		DEVİR SPEED rpm	AKIM CURRENT A	MOMENT TORQUE Nm	AKIM CURRENT I_A / I_N		MOMENT TORQUE M_A / M_N			$\eta\%$						
			kW	HP				λ	Δ	λ	Δ		4/4	3/4	2/4				
6 kutup 1000 d/dak / 6 pole 1000 rpm																			
230/400V	Q3H90L6C	Aluminium	0,75	1,0	950	2,1	7,6	4,9	-	2,5	-	3,0	78,9	78,4	74,9	0,67	0,00460	18	53
	Q3H90L6D	Aluminium	1,1	1,5	950	3,0	11,1	4,5	-	2,6	-	2,9	81,0	80,6	78,3	0,67	0,00528	20	53
	Q3H100L6D	Aluminium	1,5	2,0	960	4,1	14,9	4,8	-	2,6	-	3,0	82,5	81,7	78,2	0,65	0,01059	26	55
	Q3H112M6D	Aluminium	2,2	3,0	957	5,2	22,0	4,9	-	2,7	-	3,0	84,3	84,6	83,7	0,71	0,01383	32	57
400/690V	Q3H132S6A	Aluminium	3,0	4,0	978	7,3	29,3	1,9	5,7	0,6	2,0	2,5	85,6	85,2	82,8	0,68	0,03560	53	61
	Q3H132M6A	Aluminium	4,0	5,5	975	9,1	39,2	2,0	6,0	0,7	2,2	2,6	86,8	85,7	82,8	0,72	0,04030	58	60
	Q3H132M6B	Aluminium	5,5	7,5	971	12,0	54,1	2,1	6,3	0,7	2,1	2,6	88,0	87,6	85,3	0,75	0,05940	82	60
	Q3H160M6C	Aluminium	7,5	10,0	976	16,5	73,4	2,0	6,0	0,7	2,2	3,0	89,1	89,0	88,0	0,73	0,07540	88	62
	Q3H160L6D	Aluminium	11,0	15,0	974	24,2	107,8	2,1	6,3	0,7	2,2	3,0	90,3	90,1	89,3	0,73	0,09000	101	62
	Q3H180L6B	Aluminium	15,0	20,0	980	32,2	146,2	2,2	6,6	0,7	2,1	2,9	91,2	90,9	88,7	0,75	0,18660	155	68
	Q3H200L6C	Aluminium	18,5	25,0	981	40,3	180,1	2,3	6,9	0,6	1,9	2,7	91,7	91,6	91,3	0,72	0,23286	194	69
	Q3H200L6D	Aluminium	22,0	30,0	982	50,5	213,9	2,9	5,0	0,6	1,9	2,2	92,2	92,2	91,6	0,69	0,22166	193	69
	Q3E225M6C	Aluminium	30,0	40,0	975	59,1	293,8	1,9	6,1	0,6	1,8	2,5	92,9	92,8	91,8	0,80	0,52900	238	71

* IEC 60034-2-1'e göre / According to IEC 60034-2-1

** Ses Basınç Seviyeleri motordan 1m uzaklıktan ölçülmüştür. / The sound pressure measurements are taken 1m away from the motor

*** Tolerans +3 dBA / Tolerance +3 dBA

BOYUTLAR - B3 / DIMENSION - B3



Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
				AC	L	O	B	A	H	HD	K	C	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
0,75	2	Q3H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
0,75	4	Q3H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
0,75	6	Q3H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
1,1	2	Q3H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
1,1	4	Q3H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
1,1	6	Q3H90L6D	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
1,5	2	Q3H90L2C	Aluminium	158	303	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
1,5	4	Q3H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
1,5	6	Q3H100L6D	Aluminium	191	400	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7
2,2	2	Q3H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
2,2	4	Q3H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
2,2	6	Q3H112M6D	Aluminium	210	396	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
3	2	Q3H100L2D	Aluminium	172	349	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
3	4	Q3H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7
3	6	Q3H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
4	2	Q3H112M2C	Aluminium	191	400	1xM25	140	190	112	254	12	70	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
4	4	Q3H112M4D	Aluminium	210	396	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
4	6	Q3H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
5,5	2	Q3H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	89	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7
5,5	4	Q3H132S4B	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
5,5	6	Q3H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
7,5	2	Q3H132S2D	Aluminium	210	448	1xM25	140-178	216	132	283	12	89	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7
7,5	4	Q3H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
7,5	6	Q3H160M6C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
11	2	Q3H160M2C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
11	4	Q3H160M4C	Aluminium	260	578	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
11	6	Q3H160L6D	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
15	2	Q3H160M2DE	Aluminium	260	580	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
15	4	Q3H160L4B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
15	6	Q3H180L6B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10

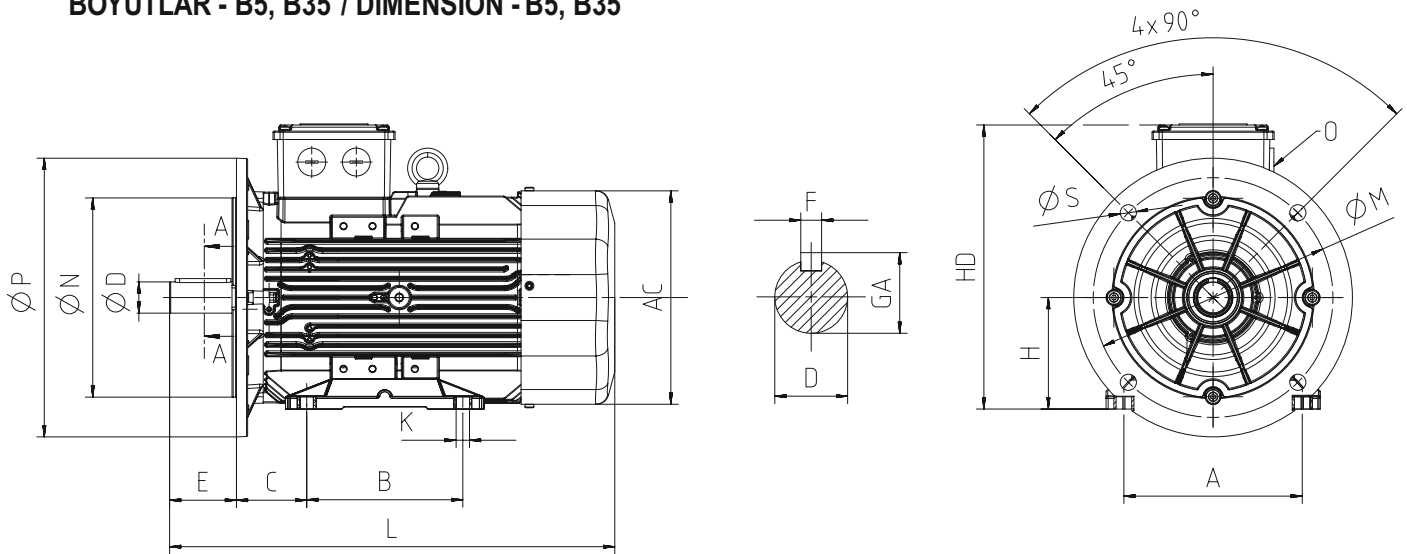
(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
				AC	L	O	B	A	H	HD	K	C	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side
18,5	2	Q3H160L2C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
18,5	4	Q3H180M4B	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	121	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10
18,5	6	Q3H200L6C	Aluminium	349	750	1xM50	305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
22	2	Q3H180M2B	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	121	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10
22	4	Q3H180L4B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
22	6	Q3H200L6D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	2	Q3H200L2C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	4	Q3H200L4D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	6	Q3E225M6C	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
37	2	Q3H200L2D	Aluminium	349	706	1xM50	305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
37	4	Q3E225M4B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
45	2	Q3E225M2B	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	149	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13
45	4	Q3E225M4C	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
55	2	Q3E250M2A	Aluminium	527	886	2xM50	349	406	250	615	24	149	60	140	64,0	18	6315-ZZ	6313-ZZ	75*112*12	65*100*13
55	2	Q3EP250M2C	Cast Iron	489	893	1xM50	349	406	250	616	24	149	60	140	69,0	18	6316	6316	80*100*10	80*100*10
55	4	Q3E250M4B	Cast Iron	489	893	1xM50	349	406	250	616	24	149	65	140	69,0	18	6316	6316	80*100*10	80*100*10
75	2	Q3EP280M2C	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	65	140	69,0	18	6316	6316	80*100*10	80*100*10
75	4	Q3EP280M4C	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	75	140	79,5	20	6316	6316	80*100*10	80*100*10
90	2	Q3EP280M2D	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	65	140	69,0	18	6316	6316	80*100*10	80*100*10
90	4	Q3EP280M4D	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	75	140	79,5	20	6316	6316	80*100*10	80*100*10
110	2	Q3EP315S2C	Cast Iron	652	1176	2xM63	406	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
110	4	Q3EP315S4C	Cast Iron	652	1206	2xM63	406	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
132	2	Q3EP315M2B	Cast Iron	652	1176	2xM63	457	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
132	4	Q3EP315M4B	Cast Iron	652	1206	2xM63	457	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
160	2	Q3EP315L2A	Cast Iron	652	1287	2xM63	508	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
160	4	Q3EP315L4A	Cast Iron	652	1317	2xM63	508	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
200	2	Q3EP315L2C	Cast Iron	652	1287	2xM63	508	508	315	833	28	216	65	140	69	18	6316	6316	80*100*5.5	80*100*5.5
200	4	Q3EP315L4C	Cast Iron	652	1317	2xM63	508	508	315	833	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
250	2	Q3EP355M2C	Cast Iron	762	1512	4xM63	560	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
250	4	Q3EP355M4C	Cast Iron	762	1542	4xM63	560	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
315	2	Q3EP355L2B	Cast Iron	762	1512	4xM63	630	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
315	4	Q3EP355L4B	Cast Iron	762	1542	4xM63	630	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
355	2	Q3EP355L2C	Cast Iron	762	1512	4xM63	630	610	355	997	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
355	4	Q3EP355L4C	Cast Iron	762	1542	4xM63	630	610	355	997	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm
(2) DIN 6885'e göre / According to DIN 6885

BOYUTLAR - B5, B35 / DIMENSION - 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 Housing 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	Q3H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12
0,75	4	Q3H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12
0,75	6	Q3H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
1,1	2	Q3H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12
1,1	4	Q3H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	200	130	165	-	12
1,1	6	Q3H90L6D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
1,5	2	Q3H90L2C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	200	130	165	-	12
1,5	4	Q3H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
1,5	6	Q3H100L6D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
2,2	2	Q3H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
2,2	4	Q3H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
2,2	6	Q3H112M6D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
3	2	Q3H100L2D	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
3	4	Q3H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
3	6	Q3H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
4	2	Q3H112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
4	4	Q3H112M4D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
4	6	Q3H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
5,5	2	Q3H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	300	230	265	-	14,5
5,5	4	Q3H132S4B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
5,5	6	Q3H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
7,5	2	Q3H132S2D	Aluminium	210	448	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	300	230	265	-	14,5
7,5	4	Q3H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
7,5	6	Q3H160M6C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
11	2	Q3H160M2C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
11	4	Q3H160M4C	Aluminium	260	580	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
11	6	Q3H160L6D	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
15	2	Q3H160M2DE	Aluminium	260	580	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
15	4	Q3H160L4B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
15	6	Q3H180L6B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

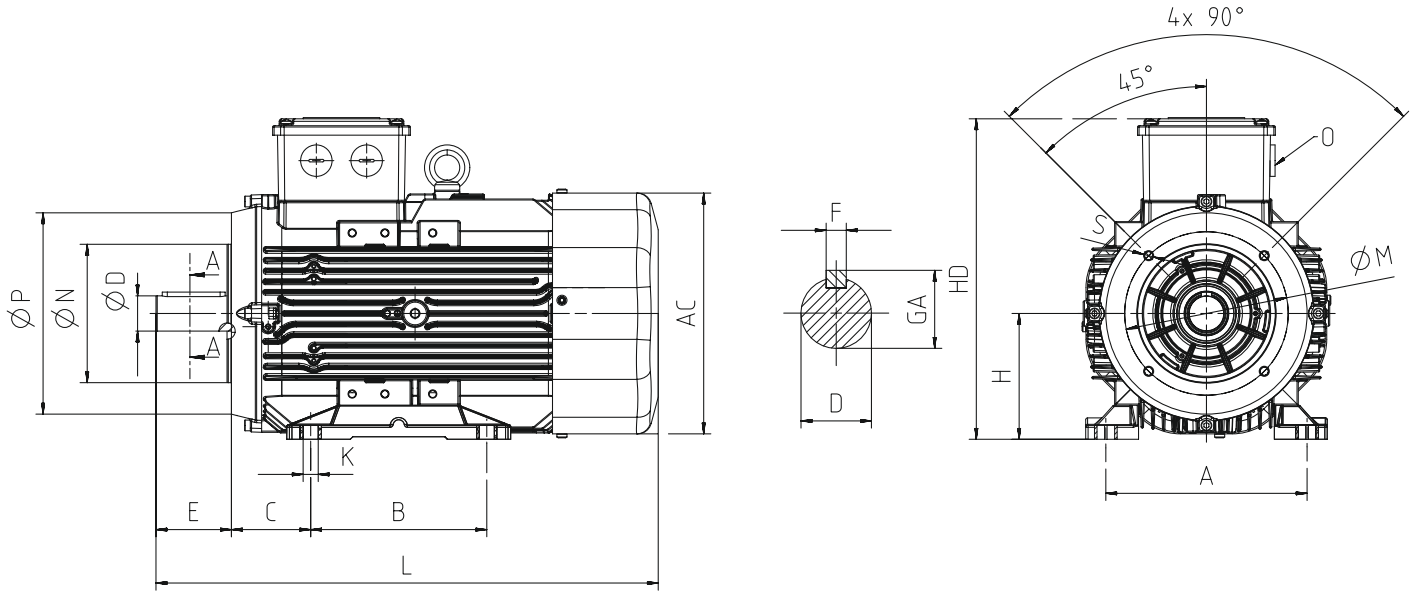
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
18,5	4	Q3H180M4B	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10	350	250	300	-	18,5
18,5	6	Q3H200L6C	Aluminium	349	750	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
22	2	Q3H180M2A	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10	350	250	300	-	18,5
22	4	Q3H180L4B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
22	6	Q3H200L6D	Aluminium	349	759	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	2	Q3H200L2C	Aluminium	349	706	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	4	Q3H200L4D	Aluminium	349	759	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	6	Q3E225M6C	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
37	2	Q3H200L2D	Aluminium	349	706	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
37	4	Q3E225M4B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
45	2	Q3E225M2B	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
45	4	Q3E225M4C	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
55	2	Q3E250M2A	Aluminium	527	886	2*M50	349	406	250	615	24	60	140	64,0	18	6315-ZZ	6313-ZZ	75*112*12	65*100*13	550	450	500	-	18,5
55	2	Q3EP250M2C	Cast Iron	489	893	1xM50	349	406	250	616	24	60	140	69,0	18	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
55	4	Q3E250M4B	Cast Iron	489	893	1xM50	349	406	250	616	24	65	140	69,0	18	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
75	2	Q3EP280M2C	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	65	140	69,0	18	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
75	4	Q3EP280M4C	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	75	140	79,5	20	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
90	2	Q3EP280M2D	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	65	140	69,0	18	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
90	4	Q3EP280M4D	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	75	140	79,5	20	6316	6316	80*100*10	80*100*10	550	450	500	-	18,5
110	2	Q3EP315S2C	Cast Iron	652	1176	2*M63	406	508	315	833	28	65	140	69	18	6316	6316	80*100*5,5	80*100*5,5	660	550	600	0	24
110	4	Q3EP315S4C	Cast Iron	652	1206	2*M63	406	508	315	833	28	80	170	85	22	6319	6319	95*115*5,5	95*115*5,5	660	550	600	0	24
132	2	Q3EP315M2B	Cast Iron	652	1176	2*M63	457	508	315	833	28	65	140	69	18	6316	6316	80*100*5,5	80*100*5,5	660	550	600	0	24
132	4	Q3EP315M4B	Cast Iron	652	1206	2*M63	457	508	315	833	28	80	170	85	22	6319	6319	95*115*5,5	95*115*5,5	660	550	600	0	24
160	2	Q3EP315L2A	Cast Iron	652	1287	2*M63	508	508	315	833	28	65	140	69	18	6316	6316	80*100*5,5	80*100*5,5	660	550	600	0	24
160	4	Q3EP315L4A	Cast Iron	652	1317	2*M63	508	508	315	833	28	80	170	85	22	6319	6319	95*115*5,5	95*115*5,5	660	550	600	0	24
200	2	Q3EP315L2C	Cast Iron	652	1287	2*M63	508	508	315	833	28	65	140	69	18	6316	6316	80*100*5,5	80*100*5,5	660	550	600	0	24
200	4	Q3EP315L4C	Cast Iron	652	1317	2*M63	508	508	315	833	28	80	170	85	22	6319	6319	95*115*5,5	95*115*5,5	660	550	600	0	24
250	2	Q3EP355M2C	Cast Iron	762	1512	4*M63	560	610	355	997	28	75	140	80	20	6317	6317	85*105*5,5	85*105*5,5	800	680	740	0	24
250	4	Q3EP355M4C	Cast Iron	762	1542	4*M63	560	610	355	997	28	95	170	100	25	6322	6322	110*130*5,5	110*130*5,5	800	680	740	0	24
315	2	Q3EP355L2B	Cast Iron	762	1512	4*M63	630	610	355	997	28	75	140	80	20	6317	6317	85*105*5,5	85*105*5,5	800	680	740	0	24
315	4	Q3EP355L4B	Cast Iron	762	1542	4*M63	630	610	355	997	28	95	170	100	25	6322	6322	110*130*5,5	110*130*5,5	800	680	740	0	24
355	2	Q3EP355L2C	Cast Iron	762	1512	4*M63	630	610	355	997	28	75	140	80	20	6317	6317	85*105*5,5	85*105*5,5	800	680	740	0	24
355	4	Q3EP355L4C	Cast Iron	762	1542	4*M63	630	610	355	997	28	95	170	100	25	6322	6322	110*130*5,5	110*130*5,5	800	680	740	0	24

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14a, B34a / DIMENSION - B14a, B34a



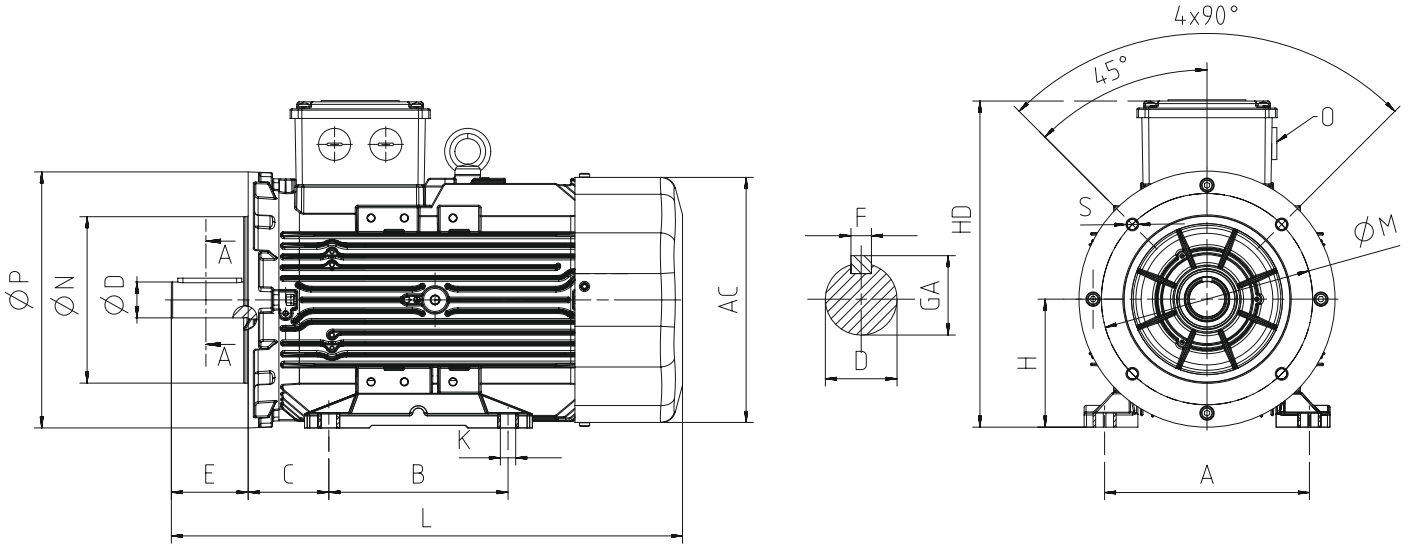
				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
0,75	2	Q3H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
0,75	4	Q3H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
0,75	6	Q3H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
1,1	2	Q3H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
1,1	4	Q3H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
1,1	6	Q3H90L6D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
1,5	2	Q3H90L2C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
1,5	4	Q3H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
1,5	6	Q3H100L6D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
2,2	2	Q3H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
2,2	4	Q3H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
2,2	6	Q3H112M6D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
3	2	Q3H100L2D	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
3	4	Q3H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
3	6	Q3H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
4	2	Q3H112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
4	4	Q3H112M4D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
4	6	Q3H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
5,5	2	Q3H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	200	130	165	-	M10
5,5	4	Q3H132S4B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
5,5	6	Q3H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
7,5	2	Q3H132S2D	Aluminium	210	448	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	200	130	165	-	M10
7,5	4	Q3H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14b, B34b / DIMENSION - B14b, B34b



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FB) (B14b) Flange (FB) (B14b)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak 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
0,75	2	Q3H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
0,75	4	Q3H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
0,75	6	Q3H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
1,1	2	Q3H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
1,1	4	Q3H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
1,1	6	Q3H90L6D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
1,5	2	Q3H90L2C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
1,5	4	Q3H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
1,5	6	Q3H100L6D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	130	-	M10
2,2	2	Q3H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	260	110	130	-	M8
2,2	4	Q3H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
2,2	6	Q3H112M6D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
3	2	Q3H100L2D	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
3	4	Q3H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	165	-	M10
3	6	Q3H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
4	2	Q3H112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
4	4	Q3H112M4D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
4	6	Q3H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
5,5	2	Q3H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	250	180	215	-	M12
5,5	4	Q3H132S4B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
5,5	6	Q3H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
7,5	2	Q3H132S2D	Aluminium	210	448	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	250	180	215	-	M12
7,5	4	Q3H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

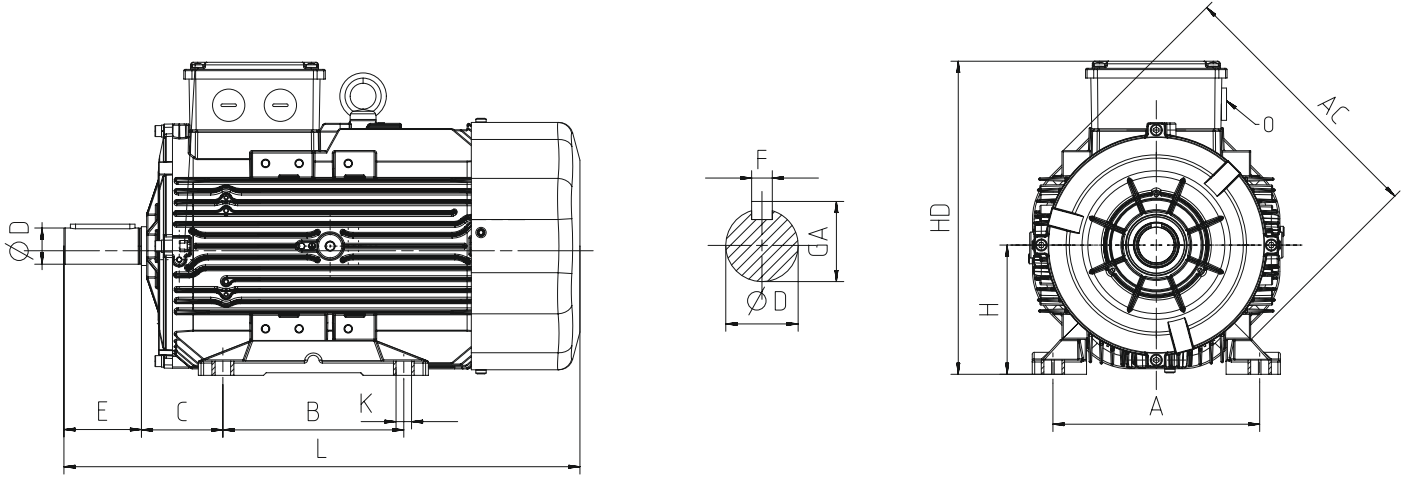
MOTOR TİPİ MOTOR TYPE	GÖVDE TİPİ HOUSING TYPE	NOMİNAL RATED VALUES						KALKIŞTAKİ DEĞERLER STARTING VALUES				Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3)	Ses Basınç Seviyesi Sound Pressure Level dBA **
		GÜÇ POWER		DEVİR SPEED	AKIM CURRENT	MOMENT TORQUE	AKIM CURRENT		MOMENT TORQUE		η%								
		kW	HP				rpm	A	Nm	I _A / I _N	λ		Δ	λ	Δ				
2 kutup 3000 d/dak / 2 pole 3000 rpm																			
230/400V	Q3H80M2DE	Aluminium	1,5	2,0	2905	3,2	4,9	10,9	-	5	-	5,4	84,2	83,3	80,5	0,80	0,00224	15	59
	Q3H90L2E	Aluminium	3,0	4,0	2890	5,8	9,9	8,1	-	3	-	3,5	87,1	88,1	87,7	0,86	0,00318	19	63
400/690V	Q3H100L2DE	Aluminium	4,0	5,5	2936	8,0	13,0	3,6	10,9	1,6	4,8	5,7	88,1	88,1	85,8	0,82	0,00611	29	66
	Q3H112M2D	Aluminium	5,5	7,5	2920	10,5	18,1	3,5	10,5	1,2	3,7	5,1	89,2	89,0	87,2	0,86	0,00741	32	68
	Q3H112M2DE	Aluminium	7,5	10,0	2918	13,6	24,5	3,6	10,7	1,4	4,3	5,4	90,1	90,3	89,1	0,88	0,00921	42	69
	Q3H132M2A	Aluminium	11,0	15,0	2925	20,7	36,0	3,5	10,5	1,3	3,9	5,2	91,2	91,4	90,6	0,85	0,03489	61	69
	Q3H132M2B	Aluminium	15,0	20,0	2935	27,6	48,8	3,5	10,4	1,2	3,7	5,2	91,9	91,3	89,8	0,86	0,00402	77	71
	Q3H160L2D	Aluminium	22,0	30,0	2961	39,1	71,0	3,5	10,6	1,2	3,6	5,1	92,7	92,4	91,3	0,87	0,05539	114	70
	Q3H180M2B	Aluminium	30,0	40,0	2957	50,1	96,9	3,2	9,6	1,0	2,9	3,9	93,3	93,2	92,6	0,93	0,10277	148	77
Q3H200L2DE	Aluminium	45,0	60,0	2964	75,2	145,0	3,6	10,7	1,0	3,0	2,7	94,0	93,3	92,8	0,92	0,14769	199	78	
4 kutup 1500 d/dak / 4 pole 1500 rpm																			
230/400V	Q3H80M4DE	Aluminium	1,1	1,5	1448	2,6	7,3	7,2	-	3,1	-	3,7	82,7	82,4	89,5	0,75	0,00306	14	48
	Q3H90L4DE	Aluminium	2,2	3,0	1453	5,4	14,4	9,5	-	5,0	-	5,5	86,7	84,3	80,6	0,68	0,00690	25	54
400/690V	Q3H100L4E	Aluminium	4,0	5,5	1445	8,8	26,4	8,6	-	3,5	-	4,2	88,6	87,1	85,6	0,75	0,01124	35	56
	Q3H112M4E	Aluminium	5,5	7,5	1443	11,25	36,4	2,8	8,3	1,0	3,1	3,8	89,6	89,2	88,3	0,80	0,01526	40	57
	Q3H132M4E	Aluminium	11,0	15,0	1470	19,2	71,3	2,7	8,0	0,7	2,1	3,8	91,4	91,5	90,4	0,90	0,05940	82	63
	Q3H160L4C	Aluminium	18,5	25,0	1474	39,5	119,9	2,5	7,4	0,8	2,3	3,5	92,6	91,9	91,2	0,74	0,10511	114	58
	Q3H180L4C	Aluminium	30,0	40,0	1475	54,8	194,2	2,5	7,6	0,8	2,3	2,8	93,6	93,2	92,3	0,85	0,22165	187	69

* IEC 60034-2-1'e göre / According to IEC 60034-2-1

** Ses Basınç Seviyeleri motordan 1m uzaklıktan ölçülmüştür. / The sound pressure measurements are taken 1m away from the motor

*** Tolerans +3 dBA / Tolerance +3 dBA

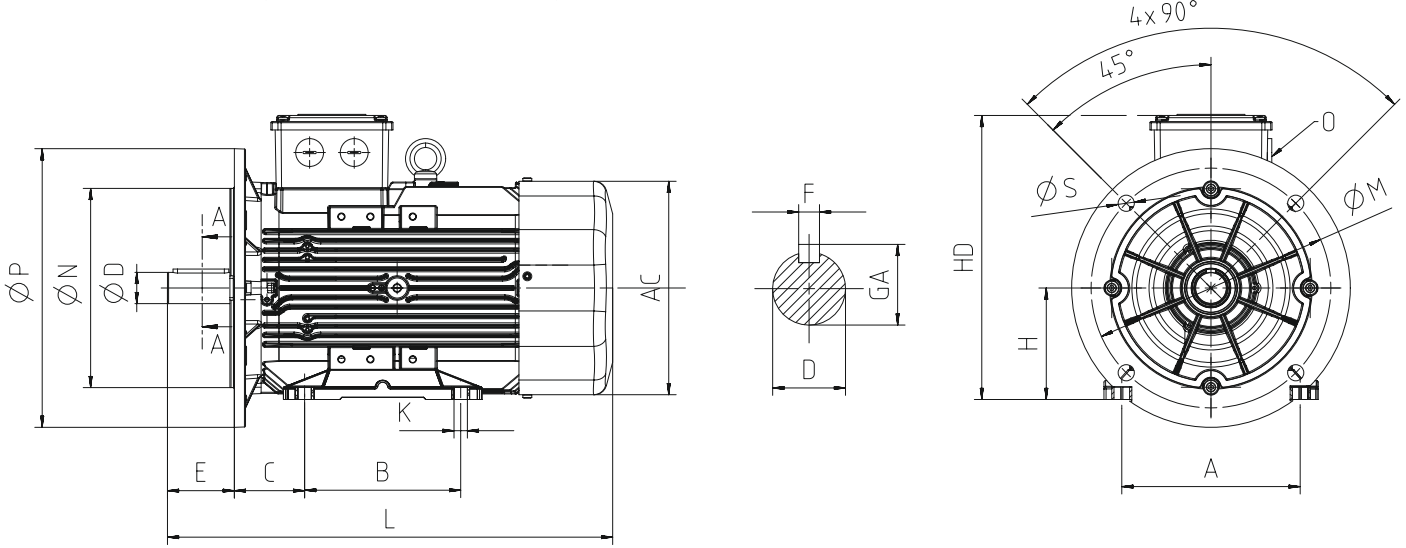
BOYUTLAR - B3 / DIMENSION - B3



Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
				AC	L	O	B	A	H	HD	K	C	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
1,1	4	Q3H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
1,5	2	Q3H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
2,2	4	Q3H90L4DE	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
3,0	2	Q3H90L2E	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
4,0	2	Q3H100L2DE	Aluminium	191	400	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7
4,0	4	Q3H100L4E	Aluminium	191	422	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7
5,5	2	Q3H112M2D	Aluminium	210	396	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
5,5	4	Q3H112M4E	Aluminium	210	421	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
7,5	2	Q3H112M2DE	Aluminium	210	421	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
11,0	2	Q3H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
11,0	4	Q3H132M4E	Aluminium	260	520	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6309-ZZ	6209-ZZ	40*62*10	40*62*10
15,0	2	Q3H132M2B	Aluminium	260	520	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
18,5	4	Q3H160L4C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
30,0	4	Q3H180L4C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
22,0	2	Q3H160L2D	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
30,0	2	Q3H180M2B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
45,0	2	Q3H200L2DE	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm
(2) DIN 6885'e göre / According to DIN 6885

BOYUTLAR - B5, B35 / DIMENSION - B5, B35



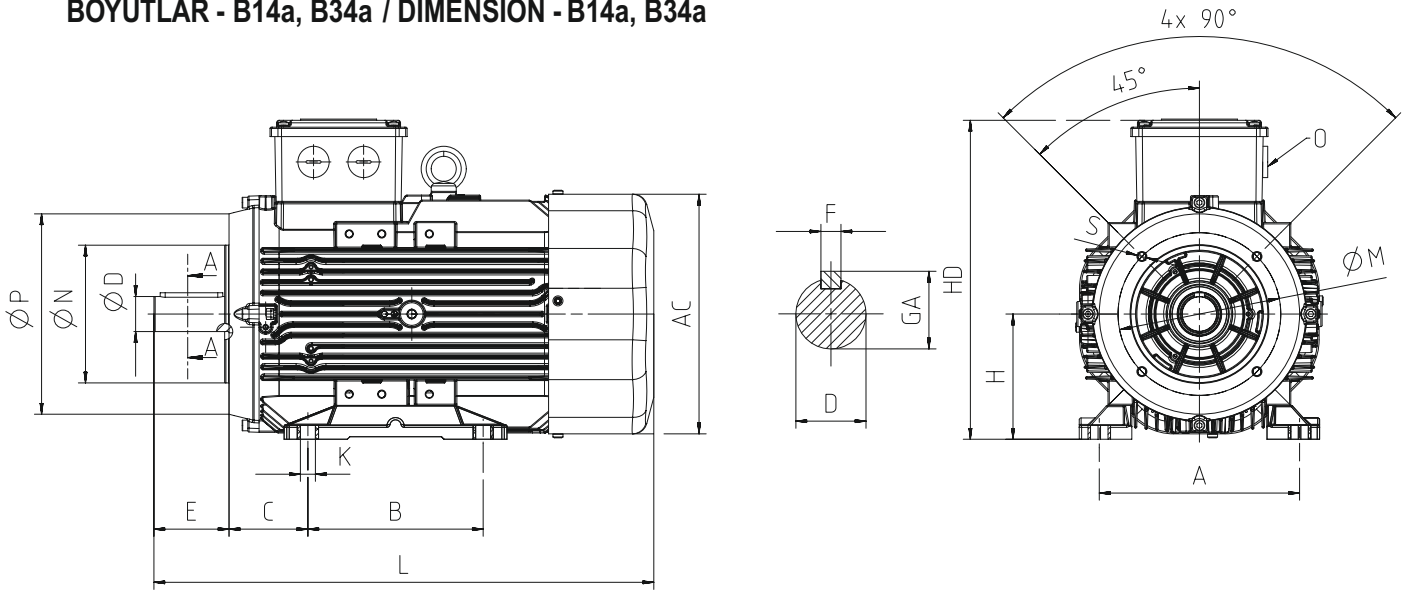
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
1,1	4	Q3H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12
1,5	2	Q3H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12
2,2	4	Q3H90L4DE	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
3	2	Q3H90L2E	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12
4	2	Q3H100L2DE	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
4	4	Q3H100L4E	Aluminium	191	422	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
5,5	2	Q3H112M2D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
5,5	4	Q3H112M4E	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
7,5	2	Q3H112M2DE	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
11	2	Q3H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
11	4	Q3H132M4E	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6309-ZZ	6209-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
15	2	Q3H132M2B	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
18,5	4	Q3H160L4C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
30	4	Q3H180L4C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
22	2	Q3H160L2D	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
30	2	Q3H180M2B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
45	2	Q3H200L2DE	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14a, B34a / DIMENSION - B14a, B34a



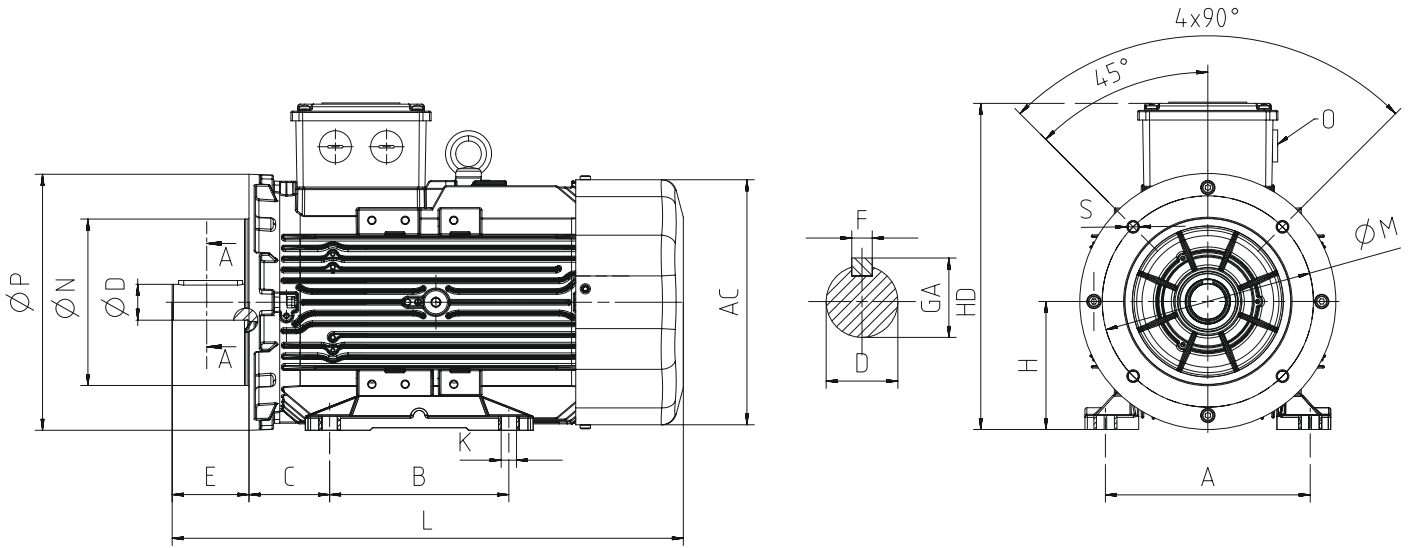
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side	P	N ⁽³⁾	M	R	S
1,1	4	Q3H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
1,5	2	Q3H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
2,2	4	Q3H90L4DE	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
3	2	Q3H90L2E	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
4	2	Q3H100L2DE	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
4	4	Q3H100L4E	Aluminium	191	422	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
5,5	2	Q3H112M2D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
5,5	4	Q3H112M4E	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
7,5	2	Q3H112M2DE	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
11	2	Q3H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
11	4	Q3H132M4E	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
15	2	Q3H132M2B	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14b, B34b / DIMENSION - B14b, B34b

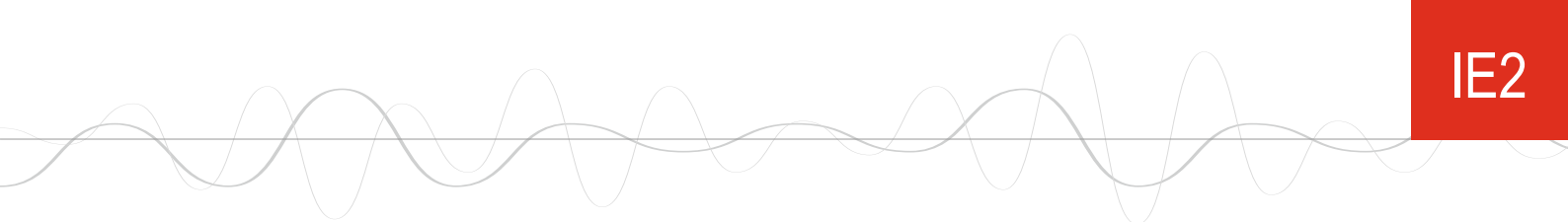


Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FB) (B14b) Flange (FB) (B14b)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
1,1	4	Q3H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
1,5	2	Q3H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
2,2	4	Q3H90L4DE	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
3	2	Q3H90L2E	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
4	2	Q3H100L2DE	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	165	-	M10
4	4	Q3H100L4E	Aluminium	191	422	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	165	-	M10
5,5	2	Q3H112M2D	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
5,5	4	Q3H112M4E	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
7,5	2	Q3H112M2DE	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
11	2	Q3H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
11	4	Q3H132M4E	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
15	2	Q3H132M2B	Aluminium	260	520	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"



IE2



ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

MOTOR TİPİ MOTOR TYPE	GÖVDE TİPİ HOUSING TYPE	NOMİNAL RATED VALUES						KALKIŞTAKİ DEĞERLER STARTING VALUES						Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3)	Ses Basınç Seviyesi Sound Pressure Level dBA **
		GÜÇ POWER		DEVİR SPEED	AKIM CURRENT	MOMENT TORQUE	AKIM CURRENT I _A / I _N		MOMENT TORQUE M _A / M _N		η%										
		kW	HP				rpm	A	Nm	Δ	Δ	Δ	Δ		4/4	3/4	2/4				
2 kutup 3000 d/dak / 2 pole 3000 rpm																					
230/400V	Q2E63M2A	Aluminium	0,18	1/4	2810	0,4	0,6	4,7	-	2,1	-	2,3	59,1	63,8	58,5	0,85	0,00022	5	52		
	Q2E63M2B	Aluminium	0,25	1/3	2820	0,6	0,8	5,6	-	2,7	-	2,7	64,7	66,2	63,5	0,84	0,00025	6	52		
	Q2E71M2A	Aluminium	0,37	1/2	2850	0,8	1,2	8,1	-	4,0	-	4,2	69,5	69,6	67,3	0,80	0,00067	8	54		
	Q2E71M2B	Aluminium	0,55	3/4	2880	1,2	1,8	8,2	-	4,1	-	4,3	74,1	74,3	74,2	0,82	0,00086	10	54		
	Q2H80M2B	Aluminium	0,75	1,0	2850	1,7	2,5	6,4	-	2,8	-	3,3	77,4	77,6	74,4	0,82	0,00111	9	58		
	Q2H80M2C	Aluminium	1,1	1,5	2860	2,5	3,7	6,7	-	2,8	-	3,3	79,6	79,8	77,0	0,81	0,00140	11	58		
	Q2H90L2B	Aluminium	1,5	2,0	2875	3,8	5,0	8,0	-	3,9	-	4,4	81,3	80,4	76,6	0,74	0,00176	13	62		
	Q2H90L2D	Aluminium	2,2	3,0	2870	4,7	7,3	9,1	-	3,9	-	4,4	83,2	82,8	81,3	0,83	0,00231	16	62		
	Q2H100L2C	Aluminium	3,0	4,0	2887	6,3	9,9	7,3	-	2,4	-	2,9	84,6	85,4	84,2	0,83	0,00266	19	66		
400/690V	Q2H112M2B	Aluminium	4,0	5,5	2900	8,0	13,2	3,1	9,3	1,1	3,2	4,0	85,8	86,1	84,5	0,85	0,00487	24	68		
	Q2H132S2B	Aluminium	5,5	7,5	2915	10,6	18,0	3,5	10,6	1,5	4,4	5,3	87,0	87,1	84,9	0,86	0,00703	34	69		
	Q2H132S2C	Aluminium	7,5	10,0	2900	14,6	24,7	3,5	10,6	1,3	3,8	4,6	88,1	88,6	87,6	0,85	0,00772	37	69		
	Q2H160M2B	Aluminium	11,0	15,0	2923	21,2	35,9	3,1	9,2	1,1	3,3	4,8	89,4	89,9	88,4	0,83	0,03517	65	70		
	Q2H160M2C	Aluminium	15,0	20,0	2915	30,0	49,2	3,2	9,6	1,3	3,9	5,1	90,3	90,6	89,6	0,80	0,04015	67	70		
	Q2H160M2D	Aluminium	18,5	25,0	2930	30,8	60,3	2,7	8,0	0,6	1,9	3,6	90,9	91,7	91,1	0,95	0,04613	79	70		
	Q2H180M2A	Aluminium	22,0	30,0	2955	40,9	71,2	3,5	10,6	1,2	3,6	5,2	91,3	92,0	90,7	0,84	0,05141	100	77		
	Q2H200L2B	Aluminium	30,0	40,0	2955	51,5	97,1	2,8	8,5	0,8	2,4	3,6	92,0	92,5	91,8	0,91	0,08644	175	78		
	Q2H200L2C	Aluminium	37,0	50,0	2965	66,2	119,6	3,4	10,1	1,0	3,1	4,5	92,5	92,5	91,2	0,87	0,10277	175	78		
	Q2E225M2B	Aluminium	45,0	60,0	2960	82,1	145,2	2,9	8,7	0,8	2,4	2,9	92,9	92,6	91,1	0,85	0,23500	235	81		
	Q2E250M2A	Cast Iron	55,0	75,0	2976	92,7	177,0	2,8	8,4	0,8	2,5	3,4	93,2	93,0	91,6	0,91	0,48700	486	82		
	Q2EP280M2B	Cast Iron	75,0	100,0	2975	127,9	240,8	3,5	10,6	0,9	2,7	5,1	93,8	93,7	92,5	0,92	0,54000	576	84		
	Q2EP280M2C	Cast Iron	90,0	125,0	2980	149,0	288,6	2,4	7,1	1,0	3,0	3,0	94,1	93,9	92,9	0,91	0,64500	585	84		
	Q2EP315S2C	Cast Iron	110,0	127	2,975	185	353	2,6	7,8	0,7	2,2	2,4	94,3	94,3	93,1	0,91	1,43600	920	87		
	Q2EP315M2C	Cast Iron	132,0	152	2,975	221	423	2,6	7,8	0,8	2,3	2,4	94,6	94,6	93,4	0,91	1,72300	970	87		
	Q2EP315L2C	Cast Iron	160,0	184	2,975	268	513	2,5	7,5	0,8	2,3	2,4	94,8	94,8	93,6	0,91	1,95300	1170	87		
	Q2EP315L2D	Cast Iron	200,0	230	2,975	334	643	2,7	8	0,8	2,4	2,6	95	95	93,8	0,91	2,52700	1200	87		
	Q2EP355M2C	Cast Iron	250,0	280	2,985	422	799	2,3	7	0,7	2	2,4	95	95	93,8	0,90	3,92000	1690	87		
	Q2EP355L2C	Cast Iron	315,0	353,0	2,985	532	1.007	2,5	7,4	0,7	2,0	2,3	95,0	95,0	93,8	0,90	4,17000	1.870	87		
	Q2EP355L2D	Cast Iron	355,0	398,0	2985	599	1.135	2,5	7,5	0,6	1,8	2,1	95,0	95,0	93,8	0,90	4,44000	1953	87		

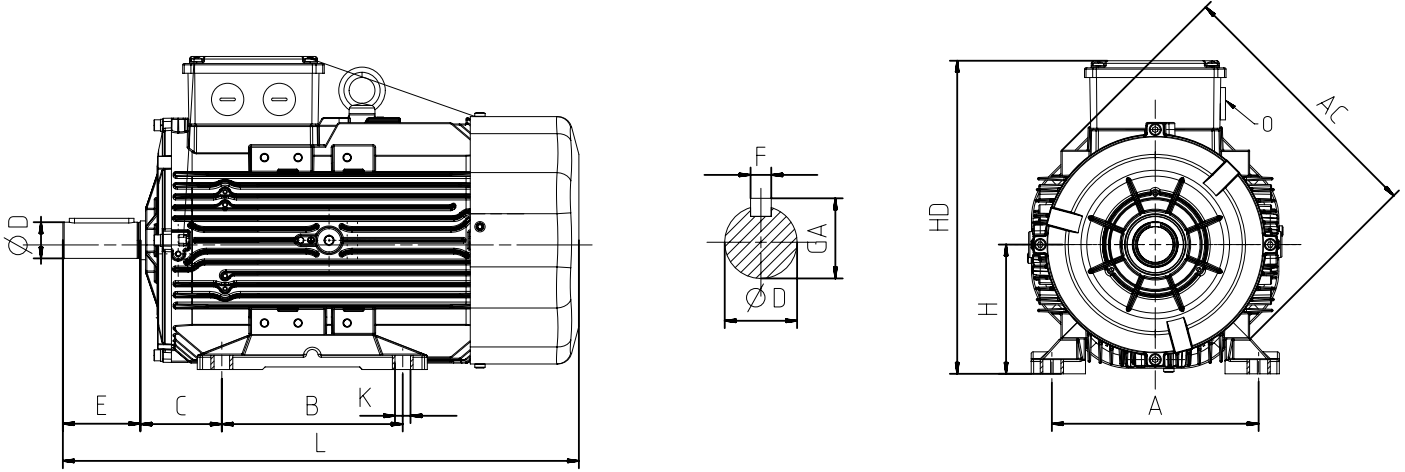
* IEC 60034-2-1'e göre / According to IEC 60034-2-1

** Ses Basınç Seviyeleri motordan 1m uzaklıktan ölçülmüştür. / The sound pressure measurements are taken 1m away from the motor

*** Tolerans +3 dBA / Tolerance +3 dBA

MOTOR TİPİ MOTOR TYPE	GÖVDE TIPI HOUSING TYPE	NOMİNAL RATED VALUES						KALKIŞTAKİ DEĞERLER STARTING VALUES				Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3)	Ses Basınç Seviyesi Sound Pressure Level
		GÜÇ POWER		DEVİR SPEED	AKIM CURRENT	MOMENT TORQUE	AKIM CURRENT I _A / I _N		MOMENT TORQUE M _A / M _N		η%								
		kW	HP				rpm	A	Nm	λ	Δ		λ	Δ	4/4				
4 kutup 1500 d/dak / 4 pole 1500 rpm																			
230/400V	Q2E63M4A	Aluminium	0,12	1/6	1420	0,5	0,9	3,4	-	2,2	-	3,2	64,0	54,1	44,9	0,56	0,00022	5	41
	Q2E63M4B	Aluminium	0,18	1/4	1400	0,6	1,2	3,7	-	2,7	-	3,0	68,0	60,0	51,3	0,66	0,00026	6	41
	Q2E71M4A	Aluminium	0,25	1/3	1415	0,6	1,7	4,6	-	2,6	-	3,8	68,5	68,8	66,9	0,70	0,00095	9	45
	Q2E71M4B	Aluminium	0,37	1/2	1425	1,1	2,5	4,6	-	2,6	-	3,8	72,7	73,1	72,0	0,71	0,00095	9	45
	Q2H80M4B	Aluminium	0,55	3/4	1435	1,3	3,6	6,4	-	2,3	-	3,2	77,1	78,8	75,4	0,76	0,00175	10	49
	Q2H80M4C	Aluminium	0,75	1,0	1440	1,8	5,0	5,5	-	2,1	-	2,6	79,6	80,0	77,7	0,76	0,00216	11	49
	Q2H90L4C	Aluminium	1,10	1,5	1430	2,5	7,4	5,7	-	2,2	-	2,6	81,4	82,4	81,6	0,80	0,00267	13	54
	Q2H90L4C	Aluminium	1,50	2,0	1427	3,3	10,0	6,4	-	2,5	-	3,1	82,8	84,2	83,7	0,79	0,00328	15	54
	Q2H100L4B	Aluminium	2,20	3,0	1437	5,3	14,6	7,6	-	3,6	-	4,2	84,3	84,1	81,5	0,72	0,00521	21	55
Q2H100L4C	Aluminium	3,00	4,0	1440	7,4	20,0	6,5	-	3,3	-	3,7	85,5	85,3	83,0	0,70	0,00694	25	55	
400/690V	Q2H112M4C	Aluminium	4,00	5,5	1440	8,7	26,6	2,7	8,0	1,1	3,2	3,8	86,6	85,7	83,5	0,78	0,01085	31	58
	Q2H132S4A	Aluminium	5,50	7,5	1445	11,5	35,5	2,7	8,0	1,0	3,0	3,8	87,7	88,3	87,3	0,79	0,01414	38	59
	Q2H132M4C	Aluminium	7,50	10,0	1460	15,0	49,1	2,4	7,1	0,5	1,5	0,6	88,7	89,4	88,7	0,82	0,03560	54	62
	Q2H160M4C	Aluminium	11,00	15,0	1468	21,6	71,5	2,6	7,9	0,7	2,1	3,6	89,8	91,1	90,3	0,81	0,05468	79	63
	Q2H160L4B	Aluminium	15,00	20,0	1462	29,8	98,0	2,6	7,8	0,6	1,8	3,4	90,6	91,4	90,9	0,80	0,05940	83	63
	Q2H180M4A	Aluminium	18,50	25,0	1470	36,0	120,2	2,3	6,8	0,7	2,2	2,9	91,2	92,0	91,6	0,81	0,10513	110	67
	Q2H180M4B	Aluminium	22,00	30,0	1462	41,8	143,8	1,8	5,5	0,6	1,9	2,8	91,6	92,9	93,3	0,84	0,11398	118	67
	Q2H200L4C	Aluminium	30,00	40,0	1475	55,3	194,6	2,7	8,2	0,9	2,7	3,5	92,0	91,9	91,4	0,85	0,18660	195	70
	Q2E225M4A	Aluminium	37,00	50,0	1480	68,3	238,8	3,0	9,1	1,2	3,6	4,0	92,7	92,6	91,3	0,84	0,36420	263	71
	Q2E225M4B	Aluminium	45,00	60,0	1480	81,5	290,5	3,1	9,4	1,2	3,7	3,0	93,1	93,0	91,9	0,85	0,43500	280	71
	Q2E250M4A	Cast Iron	55,00	75,0	1486	104,8	353,5	2,4	7,2	0,8	2,3	3,0	93,5	93,7	93,3	0,81	0,36400	506	72
	Q2EP280M4B	Cast Iron	75,00	100,0	1485	134,2	485,7	2,6	7,8	1,0	2,9	3,4	94,0	93,9	93,2	0,86	1,06100	624	73
	Q2EP280M4C	Cast Iron	90,00	125,0	1486	163,5	584,2	2,6	7,8	1,0	2,9	3,3	94,2	94,6	94,2	0,85	1,14800	638	73
	Q2EP315S4C	Cast Iron	110,0	127,0	1480	191	709	2,4	7,2	0,7	2,2	2,5	94,5	94,5	93,9	0,88	3,03500	925	70
	Q2EP315M4C	Cast Iron	132,0	152,0	1480	229	851	2,3	7,0	0,7	2,1	2,4	94,7	94,7	94,1	0,88	3,41500	1.010	70
	Q2EP315L4C	Cast Iron	160,0	184,0	1480	273	1.032	2,5	7,5	0,7	2,2	2,5	94,9	94,9	94,3	0,89	4,11900	1.080	76
	Q2EP315L4D	Cast Iron	200,0	230,0	1480	341	1.290	2,5	7,5	0,8	2,3	2,5	95,1	95,1	94,5	0,89	5,20300	1.200	76
	Q2EP355M4C	Cast Iron	250,0	280,0	1.485	426	1.607	2,6	7,9	0,8	2,3	2,5	95,1	95,1	94,5	0,89	8,79000	1.720	76
	Q2EP355L4C	Cast Iron	315,0	353,0	1485	531	2.025	2,5	7,4	0,7	2,0	2,3	95,1	95,1	94,5	0,90	10,13300	1.920	87
	Q2EP355L4D	Cast Iron	355,0	398,0	1485	603	2,283	2,9	8,8	0,6	1,8	2,0	95,1	95,1	94,5	0,89	10,67800	1.953	87
6 kutup 1000 d/dak / 6 pole 1000 rpm																			
230/400V	Q2H90S6B	Aluminium	0,75	1,0	943	1,8	7,7	4,6	-	2,1	-	2,7	75,9	75,1	71,4	0,69	0,00383	16	53
	Q2H90L6C	Aluminium	1,10	1,5	938	3,0	11,2	2,8	-	2,4	-	2,8	78,1	78,0	75,1	0,69	0,00464	18	53
	Q2H100L6C	Aluminium	1,50	2,0	955	4,0	15,2	3,3	-	2,6	-	3,2	79,8	79,3	76,3	0,67	0,00871	26	56
	Q2H112M6C	Aluminium	2,20	3,0	942	5,4	22,4	5,2	-	2,0	-	2,6	81,8	81,5	79,5	0,72	0,00936	31	58
400/690V	Q2H132S6A	Aluminium	3,00	4,0	965	14,1	29,8	1,8	5,4	1,1	3,2	3,3	83,3	82,3	79,4	0,64	0,02950	47	62
	Q2H132M6A	Aluminium	4,00	5,5	970	10,4	39,8	1,9	5,8	0,7	2,2	2,6	84,6	83,5	80,7	0,65	0,03560	53	61
	Q2H132M6B	Aluminium	5,50	7,5	960	12,8	54,7	1,7	5,2	0,9	2,6	2,9	86,1	85,7	83,9	0,72	0,06420	67	60
	Q2H160M6B	Aluminium	7,50	10,0	970	18,9	74,6	2,1	6,2	1,2	3,6	3,8	87,2	84,3	81,7	0,66	0,07540	88	63
	Q2H160L6B	Aluminium	11,00	15,0	970	25,5	109,4	1,7	5,2	1,0	3,0	3,1	88,7	88,5	86,3	0,71	0,07040	99	63
	Q2H180L6A	Aluminium	15,00	20,0	970	31,5	146,9	1,8	5,1	0,6	1,8	2,0	89,7	89,5	8730,0	0,76	0,16677	115	69
	Q2H200L6B	Aluminium	18,50	25,0	981	41,6	179,8	2,0	5,9	0,7	2,1	2,6	90,4	90,5	89,6	0,70	0,18660	160	70
	Q2H200L6C	Aluminium	22,00	30,0	982	48,8	214,5	1,8	5,6	0,8	2,3	2,4	90,9	91,0	90,3	0,72	0,20643	171	70
	Q2E225M6B	Aluminium	30,00	40,0	975	57,0	287,6	1,9	5,7	0,6	1,7	2,5	91,7	91,6	90,7	0,83	0,49334	234	66

BOYUTLAR - B3 / DIMENSION - B3



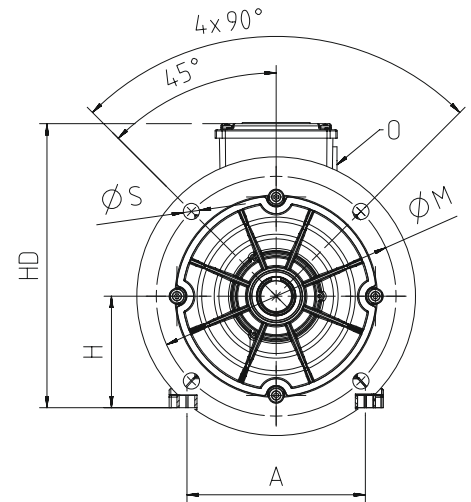
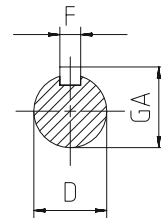
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
				AC	L	O	B	A	H	HD	K	C	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side
0,12	4	Q2E63M4A	Aluminium	123	220	1xM20	80	100	63	162	7	40	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7
0,18	2	Q2E63M2A	Aluminium	123	220	1xM20	80	100	63	162	7	40	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7
0,18	4	Q2E63M4B	Aluminium	123	220	1xM20	80	100	63	162	7	40	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7
0,25	2	Q2E63M2B	Aluminium	123	220	1xM20	80	100	63	162	7	40	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7
0,25	4	Q2E71M4A	Aluminium	138	253	1xM20	90	112	71	190	7	45	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5
0,37	2	Q2E71M2A	Aluminium	138	253	1xM20	90	112	71	190	7	45	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5
0,37	4	Q2E71M4B	Aluminium	138	253	1xM20	90	112	71	190	7	45	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5
0,55	2	Q2E71M2B	Aluminium	138	253	1xM20	90	112	71	190	7	45	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5
0,55	4	Q2H80M4B	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
0,75	2	Q2H80M2B	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
0,75	4	Q2H80M4C	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
0,75	6	Q2H90S6B	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
1,1	2	Q2H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
1,1	4	Q2H90L4C	Aluminium	158	278	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
1,1	6	Q2H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
1,5	2	Q2H90L2B	Aluminium	158	278	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
1,5	4	Q2H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
1,5	6	Q2H100L6C	Aluminium	191	400	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7
2,2	2	Q2H90L2D	Aluminium	158	303	1xM25	100-125	140	90	213	10	56	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7
2,2	4	Q2H100L4B	Aluminium	172	349	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
2,2	6	Q2H112M6C	Aluminium	210	396	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
3	2	Q2H100L2C	Aluminium	172	349	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
3	4	Q2H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
3	6	Q2H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
4	2	Q2H112M2B	Aluminium	191	399	1xM25	140	190	112	254	12	70	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
4	4	Q2H112M4C	Aluminium	191	399	1xM25	140	190	112	254	12	70	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
4	6	Q2H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
5,5	2	Q2H132S2B	Aluminium	210	422	1xM25	140-178	216	132	283	12	89	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7
5,5	4	Q2H132S4A	Aluminium	210	422	1xM25	140-178	216	132	283	12	89	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7
5,5	6	Q2H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm
(2) DIN 6885'e göre / According to DIN 6885

Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
				AC	L	O	B	A	H	HD	K	C	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
7,5	2	Q2H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	89	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7
7,5	4	Q2H132M4C	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
7,5	6	Q2H160M6B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
11	2	Q2H160M2B	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
11	4	Q2H160M4C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
11	6	Q2H160L6B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
15	2	Q2H160M2C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
15	4	Q2H160L4B	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
15	6	Q2H180L6A	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
18,5	2	Q2H160M2D	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	108	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10
18,5	4	Q2H180M4A	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	121	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10
18,5	6	Q2H200L6B	Aluminium	349	706	1xM50	305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
22	2	Q2H180M2A	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	121	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10
22	4	Q2H180M4B	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	121	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10
22	6	Q2H200L6C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	2	Q2H200L2B	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	4	Q2H200L4C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
30	6	Q2E225M6B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
37	2	Q2H200L2C	Aluminium	349	706	1xM50	305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
37	4	Q2E225M4A	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
45	2	Q2E225M2B	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	149	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13
45	4	Q2E225M4B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	149	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13
55	2	Q2E250M2A	Aluminium	527	886	2*M50	349	406	250	615	24	149	60	140	64,0	18	6315-ZZ	6313-ZZ	75*112*12	65*100*13
55	2	Q2E250M2A	Cast Iron	489	893	1xM50	349	406	250	616	24	149	60	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
55	4	Q2E250M4A	Cast Iron	489	893	1xM50	349	406	250	616	24	149	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
75	2	Q2EP280M2B	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
75	4	Q2EP280M4B	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10
90	2	Q2EP280M2C	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
90	4	Q2EP280M4C	Cast Iron	489	1025	1xM50	419	457	280	647	24	190	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10
110	2	Q2EP315S2C	Cast Iron	630	1180	2*M63	406	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
110	4	Q2EP315S4C	Cast Iron	630	1210	2*M63	406	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
132	2	Q2EP315M2C	Cast Iron	630	1290	2*M63	457	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
132	4	Q2EP315M4C	Cast Iron	630	1320	2*M63	457	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
160	2	Q2EP315L2C	Cast Iron	630	1290	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
160	4	Q2EP315L4C	Cast Iron	630	1320	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
200	2	Q2EP315L2D	Cast Iron	630	1290	2*M63	508	508	315	845	28	216	65	140	69	18	6317	6317	85*105*5.5	85*105*5.5
200	4	Q2EP315L4D	Cast Iron	630	1320	2*M63	508	508	315	845	28	216	80	170	85	22	6319	6319	95*115*5.5	95*115*5.5
250	2	Q2EP355M2C	Cast Iron	710	1486	4*M63	560	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
250	4	Q2EP355M4C	Cast Iron	710	1517	4*M63	560	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
315	2	Q2EP355L2C	Cast Iron	710	1486	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
315	4	Q2EP355L4C	Cast Iron	710	1517	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5
355	2	Q2EP355L2D	Cast Iron	710	1486	4*M63	630	610	355	956	28	254	75	140	80	20	6317	6317	85*105*5.5	85*105*5.5
355	4	Q2EP355L4D	Cast Iron	710	1517	4*M63	630	610	355	956	28	254	95	170	100	25	6322	6322	110*130*5.5	110*130*5.5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm
(2) DIN 6885'e göre / According to DIN 6885

Technical drawing of a motor showing dimensions: $\varnothing P$, $\varnothing N$, $\varnothing D$, A, E, C, B, L, K, AC.

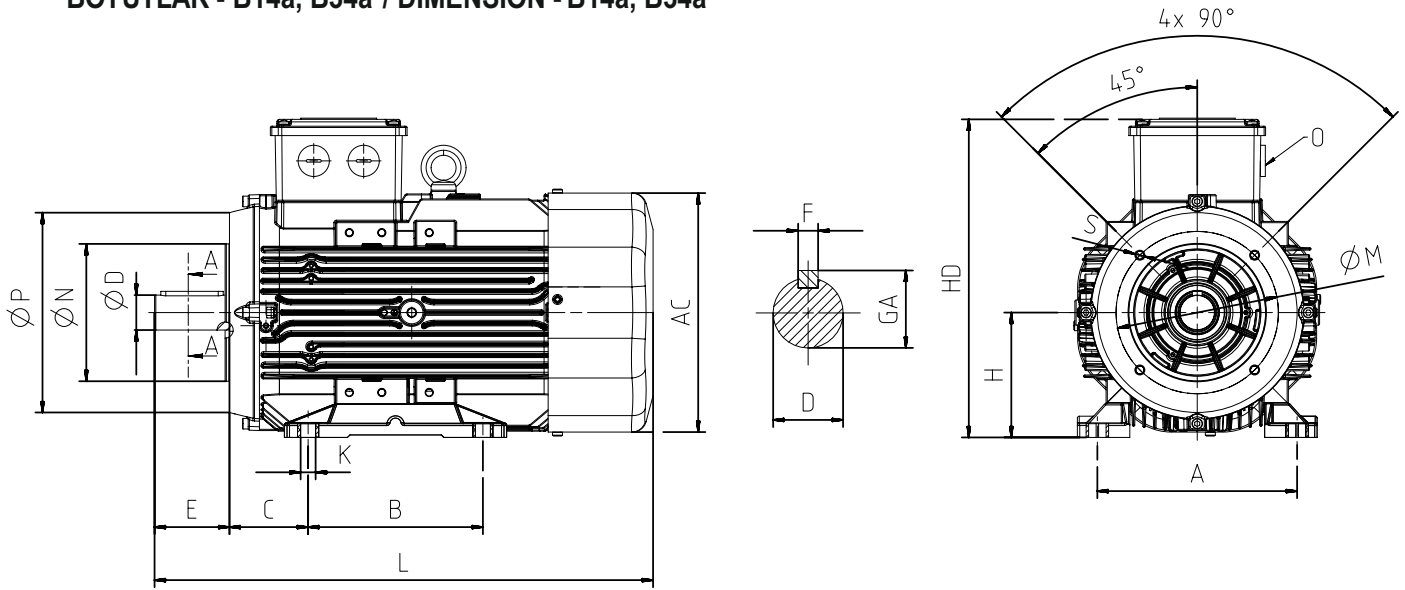


				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
0,12	4	Q2E63M4A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12°22'7	12°22'7	140	95	115	-	10
0,18	2	Q2E63M2A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12°22'7	12°22'7	140	95	115	-	10
0,18	4	Q2E63M4B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12°22'7	12°22'7	140	95	115	-	10
0,25	2	Q2E63M2B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12°22'7	12°22'7	140	95	115	-	10
0,25	4	Q2E71M4A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15°24'5	15°24'5	160	110	130	-	10
0,37	2	Q2E71M2A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15°24'5	15°24'5	160	110	130	-	10
0,37	4	Q2E71M4B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15°24'5	15°24'5	160	110	130	-	10
0,55	2	Q2E71M2B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15°24'5	15°24'5	160	110	130	-	10
0,55	4	Q2H80M4B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20°30'7	20°30'7	200	130	165	-	12
0,75	2	Q2H80M2B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20°30'7	20°30'7	200	130	165	-	12
0,75	4	Q2H80M4C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20°30'7	20°30'7	200	130	165	-	12
0,75	6	Q2H90S6B	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25°40'7	25°40'7	200	130	165	-	12
1,1	2	Q2H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20°30'7	20°30'7	200	130	165	-	12
1,1	4	Q2H90L4C	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25°40'7	20°30'7	200	130	165	-	12
1,1	6	Q2H90L6B	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25°40'7	25°40'7	200	130	165	-	12
1,5	2	Q2H90L2B	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25°40'7	20°30'7	200	130	165	-	12
1,5	4	Q2H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25°40'7	20°30'7	200	130	165	-	12
1,5	6	Q2H100L6C	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	30°47'7	250	180	215	-	14,5
2,2	2	Q2H90L2D	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25°40'7	20°30'7	200	130	165	-	12
2,2	4	Q2H100L4B	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	25°40'7	250	180	215	-	14,5
2,2	6	Q2H112M6C	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30°47'7	30°47'7	250	180	215	-	14,5
3	2	Q2H100L2C	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	25°40'7	250	180	215	-	14,5
3	4	Q2H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	25°40'7	250	180	215	-	14,5
3	6	Q2H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40°62'10	40°62'10	300	230	265	-	14,5
4	2	Q2H112M2B	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	25°40'7	250	180	215	-	14,5
4	4	Q2H112M4C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30°47'7	25°40'7	250	180	215	-	14,5
4	6	Q2H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40°62'10	40°62'10	300	230	265	-	14,5
5,5	2	Q2H132S2B	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40°62'10	30°47'7	300	230	265	-	14,5
5,5	4	Q2H132S4A	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40°62'10	30°47'7	300	230	265	-	14,5
5,5	6	Q2H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40°62'10	40°62'10	300	230	265	-	14,5

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
				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
7,5	2	Q2H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	300	230	265	-	14,5
7,5	4	Q2H132M4C	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
7,5	6	Q2H160M6B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
11	2	Q2H160M2B	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
11	4	Q2H160M4C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
11	6	Q2H160L6B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
15	2	Q2H160M2C	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
15	4	Q2H160L4B	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
15	6	Q2H180L6A	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
18,5	2	Q2H160M2D	Aluminium	260	520	1xM32	210-254	254	160	351	14,5	42	110	45,0	12	6309-ZZ	6208-ZZ	45*72*10	40*62*10	350	250	300	-	18,5
18,5	4	Q2H180M4A	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10	350	250	300	-	18,5
18,5	6	Q2H200L6B	Aluminium	349	706	1xM50	305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
22	2	Q2H180M2A	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10	350	250	300	-	18,5
22	4	Q2H180M4B	Aluminium	305	596	1xM32	241-279	279	180	398	14,5	48	110	51,5	14	6310-ZZ	6209-ZZ	50*80*10	45*72*10	350	250	300	-	18,5
22	6	Q2H200L6C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	2	Q2H200L2B	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	4	Q2H200L4C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
30	6	Q2E225M6B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
37	2	Q2H200L2C	Aluminium	349	706	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
37	4	Q2E225M4A	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
45	2	Q2E225M2B	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
45	4	Q2E225M4B	Aluminium	456	765	1xM50	286-311	356	225	485	18,5	60	140	64,0	18	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
55	2	Q2E250M2A	Aluminium	527	886	2*M50	349	406	250	615	24	60	140	18	64	6315-ZZ	6313-ZZ	75*112*12	65*100*13	550	450	500	-	18,5
55	2	Q2E250M2A	Cast Iron	489	893	1xM50	349	406	250	616	24	60	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
55	4	Q2E250M4A	Cast Iron	489	893	1xM50	349	406	250	616	24	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
75	2	Q2EP280M2B	Cast Iron	489	1025	1xM50	419	457	280	647	24	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
75	4	Q2EP280M4B	Cast Iron	489	1025	1xM50	419	457	280	647	24	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
90	2	Q2EP280M2C	Cast Iron	489	1025	1xM50	419	457	280	647	24	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
90	4	Q2EP280M4C	Cast Iron	489	1025	1xM50	419	457	280	647	24	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
110	2	Q2EP315S2C	Cast Iron	630	1180	2*M63	406	508	315	845	28	216	65	140	69	6317	6317	85*105*5.5	85*105*5.5	660	550	600	-	24
110	4	Q2EP315S4C	Cast Iron	630	1210	2*M63	406	508	315	845	28	216	80	170	85	6319	6319	95*115*5.5	95*115*5.5	660	550	600	-	24
132	2	Q2EP315M2C	Cast Iron	630	1290	2*M63	457	508	315	845	28	216	65	140	69	6317	6317	85*105*5.5	85*105*5.5	660	550	600	-	24
132	4	Q2EP315M4C	Cast Iron	630	1320	2*M63	457	508	315	845	28	216	80	170	85	6319	6319	95*115*5.5	95*115*5.5	660	550	600	-	24
160	2	Q2EP315L2C	Cast Iron	630	1290	2*M63	508	508	315	845	28	216	65	140	69	6317	6317	85*105*5.5	85*105*5.5	660	550	600	-	24
160	4	Q2EP315L4C	Cast Iron	630	1320	2*M63	508	508	315	845	28	216	80	170	85	6319	6319	95*115*5.5	95*115*5.5	660	550	600	-	24
200	2	Q2EP315L2D	Cast Iron	630	1290	2*M63	508	508	315	845	28	216	65	140	69	6317	6317	85*105*5.5	85*105*5.5	660	550	600	-	24
200	4	Q2EP315L4D	Cast Iron	630	1320	2*M63	508	508	315	845	28	216	80	170	85	6319	6319	95*115*5.5	95*115*5.5	660	550	600	-	24
250	2	Q2EP355M2C	Cast Iron	710	1486	4*M63	560	610	355	956	28	254	75	140	80	6317	6317	85*105*5.5	85*105*5.5	800	680	740	-	24
250	4	Q2EP355M4C	Cast Iron	710	1517	4*M63	560	610	355	956	28	254	95	170	100	6322	6322	110*130*5.5	110*130*5.5	800	680	740	-	24
315	2	Q2EP355L2C	Cast Iron	710	1486	4*M63	630	610	355	956	28	254	75	140	80	6317	6317	85*105*5.5	85*105*5.5	800	680	740	-	24
315	4	Q2EP355L4C	Cast Iron	710	1517	4*M63	630	610	355	956	28	254	95	170	100	6322	6322	110*130*5.5	110*130*5.5	800	680	740	-	24
355	2	Q2EP355L2D	Cast Iron	710	1486	4*M63	630	610	355	956	28	254	75	140	80	6317	6317	85*105*5.5	85*105*5.5	800	680	740	-	24
355	4	Q2EP355L4D	Cast Iron	710	1517	4*M63	630	610	355	956	28	254	95	170	100	6322	6322	110*130*5.5	110*130*5.5	800	680	740	-	24

BOYUTLAR - B14a, B34a / DIMENSION - B14a, B34a



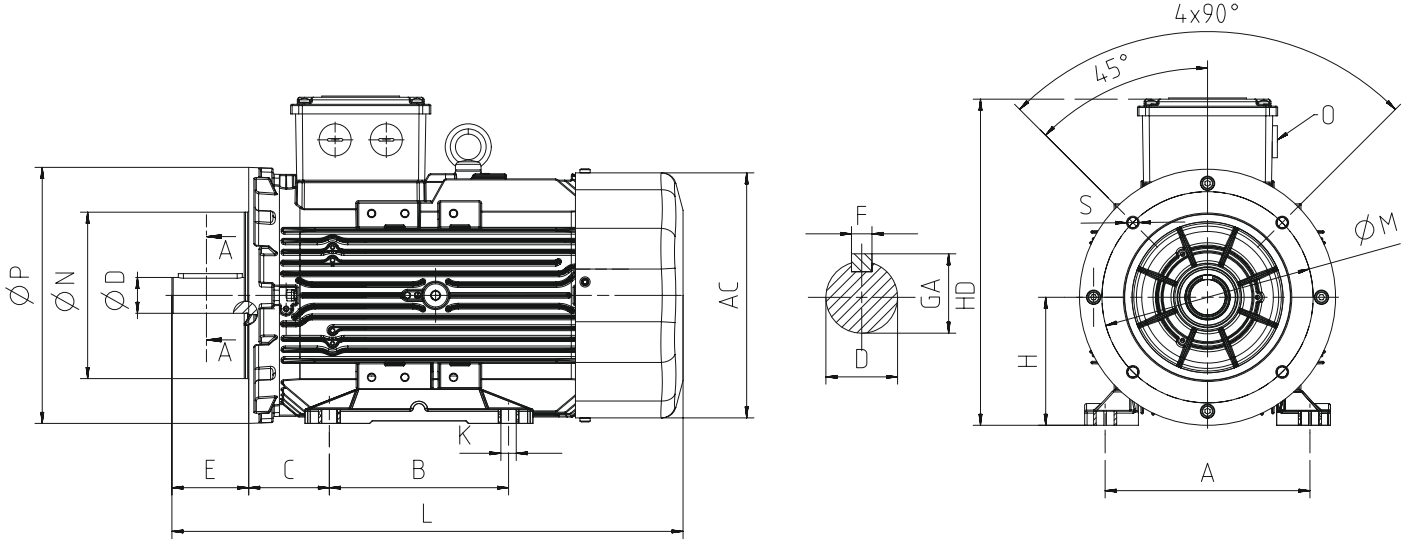
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive 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	Q2E63M4A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	90	60	75	-	M5
0,18	2	Q2E63M2A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	90	60	75	-	M5
0,18	4	Q2E63M4B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	90	60	75	-	M5
0,25	2	Q2E63M2B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	90	60	75	-	M5
0,25	4	Q2E71M4A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	105	70	85	-	M6
0,37	2	Q2E71M2A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	105	70	85	-	M6
0,37	4	Q2E71M4B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	105	70	85	-	M6
0,55	2	Q2E71M2B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	105	70	85	-	M6
0,55	4	Q2H80M4B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
0,75	2	Q2H80M2B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
0,75	4	Q2H80M4C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
0,75	6	Q2H90S6B	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
1,1	2	Q2H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
1,1	4	Q2H90L4C	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
1,1	6	Q2H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
1,5	2	Q2H90L2B	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
1,5	4	Q2H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
1,5	6	Q2H100L6C	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
2,2	2	Q2H90L2D	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	140	95	115	-	M8
2,2	4	Q2H100L4B	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
2,2	6	Q2H112M6C	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
3	2	Q2H100L2C	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
3	4	Q2H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
3	6	Q2H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
4	2	Q2H112M2B	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
4	4	Q2H112M4C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
4	6	Q2H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
5,5	2	Q2H132S2B	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	200	130	165	-	M10
5,5	4	Q2H132S4A	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	200	130	165	-	M10
5,5	6	Q2H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
7,5	2	Q2H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	200	130	165	-	M10
7,5	4	Q2H132M4C	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14b, B34b / DIMENSION - B14b, B34b



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FB) (B14b) Flange (FB) (B14b)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak 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	Q2E63M4A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	120	80	100	-	M6
0,18	2	Q2E63M2A	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	120	80	100	-	M6
0,18	4	Q2E63M4B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	120	80	100	-	M6
0,25	2	Q2E63M2B	Aluminium	123	220	1xM20	80	100	63	162	7	11	23	12,5	4	6201-ZZ	6201-ZZ	12*22*7	12*22*7	120	80	100	-	M6
0,25	4	Q2E71M4A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	140	95	115	-	M8
0,37	2	Q2E71M2A	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	140	95	115	-	M8
0,37	4	Q2E71M4B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	140	95	115	-	M8
0,55	2	Q2E71M2B	Aluminium	138	253	1xM20	90	112	71	190	7	14	30	16,0	5	6202-ZZ	6202-ZZ	15*24*5	15*24*5	140	95	115	-	M8
0,55	4	Q2H80M4B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
0,75	2	Q2H80M2B	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
0,75	4	Q2H80M4C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
0,75	6	Q2H90S6B	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
1,1	2	Q2H80M2C	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
1,1	4	Q2H90L4C	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
1,1	6	Q2H90L6C	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
1,5	2	Q2H90L2B	Aluminium	158	278	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
1,5	4	Q2H90L4C	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
1,5	6	Q2H100L6C	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	165	-	M10
2,2	2	Q2H90L2D	Aluminium	158	303	1xM25	100-125	140	90	213	10	24	50	27,0	8	6305-ZZ	6204-ZZ	25*40*7	20*30*7	160	110	130	-	M8
2,2	4	Q2H100L4B	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
2,2	6	Q2H112M6C	Aluminium	210	396	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
3	2	Q2H100L2C	Aluminium	172	349	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
3	4	Q2H100L4C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
3	6	Q2H132S6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
4	2	Q2H112M2B	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
4	4	Q2H112M4C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
4	6	Q2H132M6A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
5,5	2	Q2H132S2B	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	250	180	215	-	M12
5,5	4	Q2H132S4A	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	250	180	215	-	M12
5,5	6	Q2H132M6B	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
7,5	2	Q2H132S2C	Aluminium	210	422	1xM25	140-178	216	132	283	12	38	80	41,0	10	6208-ZZ	6206-ZZ	40*62*10	30*47*7	250	180	215	-	M12
7,5	4	Q2H132M4C	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

ELEKTRİKSEL ÖZELLİKLER - 50 Hz / ELECTRICAL CHARACTERISTICS AT 50 Hz

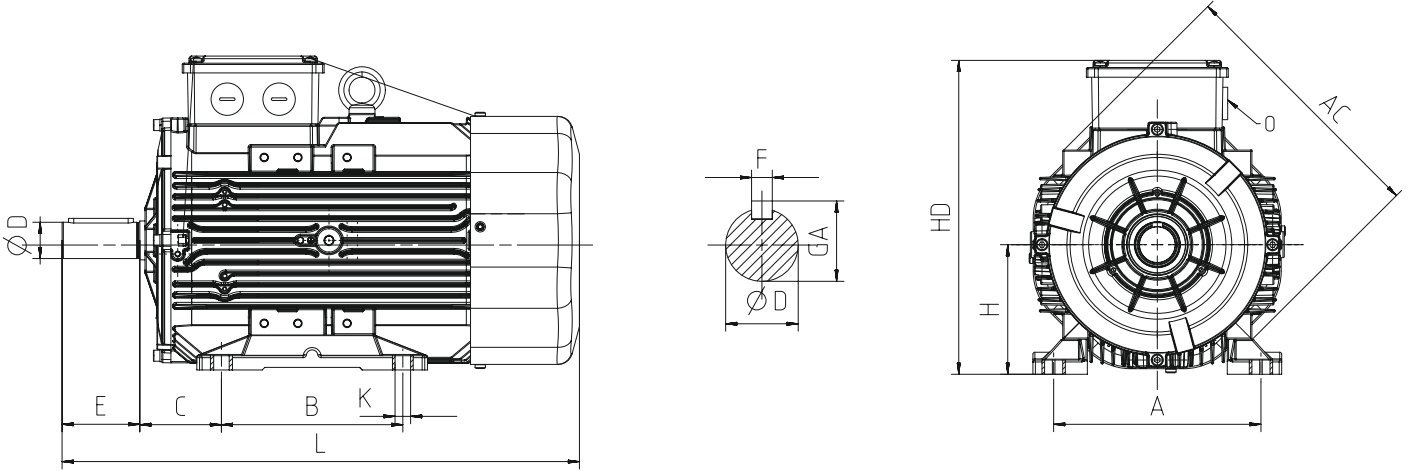
	MOTOR TİPİ MOTOR TYPE	GÖVDE TIPI HOUSING TYPE	NOMİNAL RATED VALUES					KALKIŞTAKİ DEĞERLER STARTING VALUES				Devrilme Momenti Oranı Breakdown Torque Ratio Mk/ Mn	VERİM* EFFICIENCY*			Cos φ	J	Ağırlık Weight (B3) kg	Ses Basınç Seviyesi Sound Pressure Level dBA **
			GÜÇ POWER		DEVİR SPEED rpm	AKIM CURRENT A	MOMENT TORQUE Nm	AKIM CURRENT I _A / I _N		MOMENT TORQUE M _A / M _N			η%						
			kW	HP				λ	Δ	λ	Δ		4/4	3/4	2/4				
2 kutup 3000 d/dak / 2 pole 3000 rpm																			
230/400V	Q2H80M2D	Aluminium	1,5	2,0	2875	3,8	5,0	8,0	-	3,9	-	4,4	81,3	80,4	76,6	0,74	0,00169	12	58
	Q2H80M2DE	Aluminium	2,2	3,0	2870	4,7	7,3	9,1	-	3,9	-	4,4	83,2	82,8	81,3	0,83	0,00224	16	59
	Q2H90L2D	Aluminium	3,0	4,0	2887	6,3	9,9	7,3	-	2,4	-	2,9	84,6	85,4	84,2	0,83	0,00283	19	61
400/690V	Q2HS100L2C	Aluminium	4,0	5,5	2913	8,2	13,2	3,6	10,8	1,4	4,2	4,8	85,8	87,0	86,1	0,82	0,00381	24	66
	Q2HS112M2C	Aluminium	5,5	7,5	2910	10,6	18,1	3,6	10,9	1,3	3,8	4,5	87,0	87,5	86,2	0,86	0,00637	29	68
	Q2HS112M2D	Aluminium	7,5	10,0	2895	14,1	24,8	3,4	10,3	1,3	3,9	4,6	88,1	89,0	88,7	0,88	0,00751	30	68
	Q2H132M2A	Aluminium	11,0	15,0	2923	21,3	35,9	3,1	9,2	1,1	3,3	4,8	89,4	89,9	88,4	0,83	0,03489	57	69
	Q2H132M2B	Aluminium	15,0	20,0	2915	30,0	49,2	3,2	9,6	1,3	3,9	5,1	90,3	90,6	89,6	0,80	0,03490	65	69
	Q2H132M2C	Aluminium	18,5	25,0	2930	30,8	60,3	2,7	8,0	0,6	1,9	3,6	90,9	91,7	91,1	0,95	0,04685	77	70
	Q2H160L2C	Aluminium	22,0	30,0	2955	40,9	71,2	3,5	10,4	1,2	3,6	5,2	91,3	92,0	90,7	0,84	0,04808	96	71
	Q2H180M2B	Aluminium	30,0	37,0	2955	51,5	97,1	2,8	8,5	0,8	2,4	3,6	92,0	92,5	91,8	0,91	0,08643	128	77
	Q2H180M2C	Aluminium	37,0	50,0	2965	66,2	119,6	3,4	10,1	1,0	3,1	4,5	92,5	92,5	91,2	0,87	0,10277	145	77
	Q2H200L2D	Aluminium	45,0	60,0	2960	76,0	145,1	3,3	9,8	0,9	2,8	5,3	92,9	93,4	92,7	0,92	0,11910	166	78
	Q2E225M2C	Aluminium	55,0	75,0	2970	96,6	176,9	3,5	10,6	1,0	3,0	7,1	93,2	93,7	92,4	0,88	0,29500	244	80
	Q2EP250M2C	Cast Iron	75,0	100,0	2975	127,9	240,8	3,5	10,6	0,9	2,7	6,8	93,8	93,7	92,5	0,92	0,54000	565	81
	Q2EP280M2D	Cast Iron	110,0	150,0	2980	192,0	352,4	2,6	7,7	1,0	2,9	3,4	94,1	93,9	92,9	0,88	0,70200	640	82
4 kutup 1500 d/dak / 4 pole 1500 rpm																			
230/400V	Q2H80M4D	Aluminium	1,1	1,5	1430	2,5	7,4	5,7	-	2,2	-	2,6	81,4	82,4	81,6	0,80	0,00260	12	48
	Q2H80M4DE	Aluminium	1,5	2,0	1427	3,3	10,0	6,4	-	2,5	-	3,1	82,8	84,2	83,7	0,79	0,00306	14	48
	Q2H90L4D	Aluminium	2,2	3,0	1437	5,3	14,6	7,6	-	3,6	-	4,2	84,3	84,1	81,5	0,72	0,00526	18	52
	Q2H90L4DE	Aluminium	3,0	4,0	1440	7,4	20,0	6,5	-	3,3	-	3,7	85,5	85,3	83,0	0,70	0,00690	25	53
	Q2H100L4D	Aluminium	4,0	5,5	1440	8,7	26,6	2,7	8,0	1,1	3,2	3,8	86,6	85,7	83,5	0,78	0,01058	31	57
	Q2H112M4D	Aluminium	5,5	7,5	1445	11,6	35,5	2,7	8,0	1,0	3,0	3,8	87,7	88,3	87,3	0,79	0,01382	38	58
400/690V	Q2H132M4D	Aluminium	11,0	15,0	1468	21,6	71,5	2,6	7,9	0,7	2,1	3,6	89,8	91,1	90,3	0,81	0,05440	76	61
	Q2H132M4E	Aluminium	15,0	20,0	1462	29,8	98,0	2,6	7,8	0,6	1,8	3,4	90,6	91,4	90,9	0,80	0,05940	81	63
	Q2H160L4B	Aluminium	18,5	25,0	1470	36,0	120,2	2,3	6,8	0,7	2,2	2,9	91,2	92,0	91,6	0,81	0,09005	101	57
	Q2H160L4C	Aluminium	22,0	30,0	1462	41,8	143,8	1,8	5,5	0,6	1,9	2,8	91,6	92,9	93,3	0,84	0,11068	115	58
	Q2H180L4C	Aluminium	30,0	40,0	1475	55,3	194,6	2,7	8,2	0,9	2,7	3,5	92,0	91,9	91,4	0,85	0,14694	143	70
	Q2H200L4D	Aluminium	37,0	50,0	1476	72,5	240,8	2,8	8,3	0,9	2,8	3,7	92,7	93,2	92,8	0,79	0,26440	177	71
	Q2EP250M4E	Cast Iron	75,0	100,0	1485	134,2	485,7	2,6	7,8	1,0	2,9	3,4	94,0	93,9	93,2	0,86	1,06110	610	72
	Q2EP280M4E	Cast Iron	110,0	150,0	1485	200,3	714,0	2,6	7,9	1,0	2,9	3,4	94,5	94,3	93,1	0,84	1,25200	688	73

* IEC 60034-2-1'e göre / According to IEC 60034-2-1

** Ses Basınç Seviyeleri motordan 1m uzaklıktan ölçülmüştür. / The sound pressure measurements are taken 1m away from the motor

*** Tolerans +3 dBA / Tolerance +3 dBA

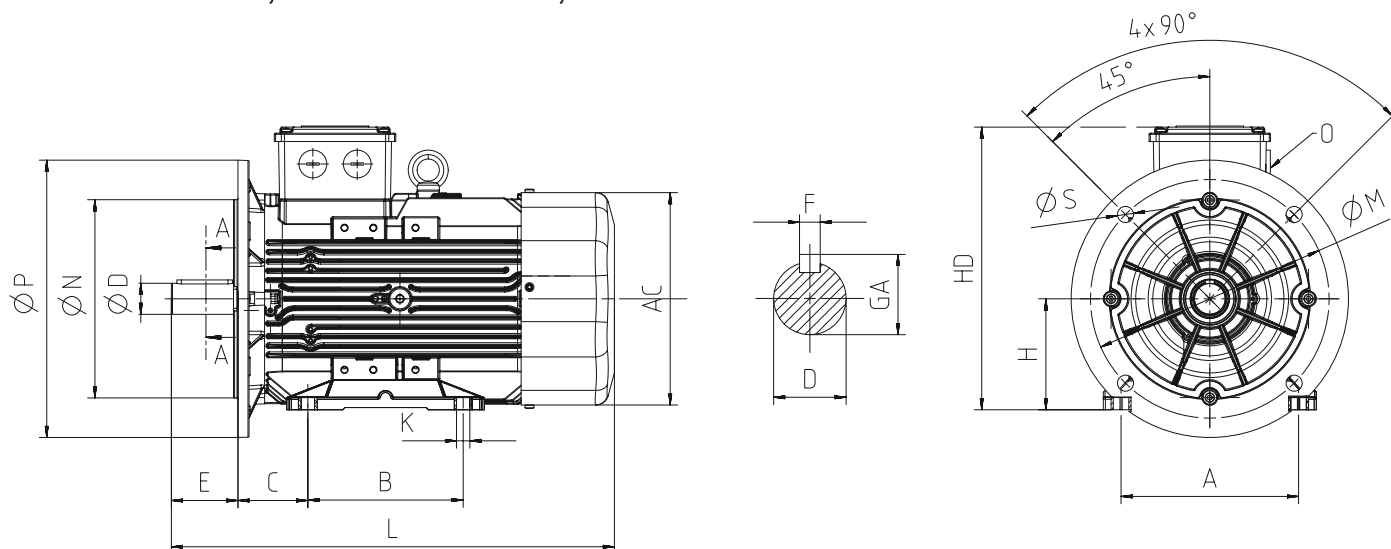
BOYUTLAR - B3 / DIMENSION - B3



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors						Mil Shaft				Rulman Bearing		Keçe Seal	
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	C	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side
1,1	4	Q2H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
1,5	2	Q2H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
1,5	4	Q2H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
2,2	2	Q2H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	50	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7
2,2	4	Q2H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
3,0	2	Q2H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
3,0	4	Q2H90L4DE	Aluminium	172	379	1xM25	100-125	140	90	223	10	56	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7
4,0	2	Q2HS100L2C	Aluminium	172	384	1xM25	140	160	100	233	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
4,0	4	Q2H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	63	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
5,5	2	Q2HS112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	70	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
5,5	4	Q2H112M4D	Aluminium	210	421	1xM25	140	190	112	265	12	70	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7
7,5	2	Q2HS112M2D	Aluminium	191	421	1xM25	140	190	112	254	12	70	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7
11,0	2	Q2H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
11,0	4	Q2H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
15,0	2	Q2H132M2B	Aluminium	260	481	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
15,0	4	Q2H132M4E	Aluminium	260	539	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
18,5	2	Q2H132M2C	Aluminium	260	539	1xM32	140-178	216	132	312	12	89	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10
18,5	4	Q2H160L4B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
22,0	2	Q2H160L2C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
22,0	4	Q2H160L4C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	108	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10
30,0	2	Q2H180M2B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
30,0	4	Q2H180L4C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
37,0	2	Q2H180M2C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	121	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10
37,0	4	Q2H200L4D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
45,0	2	Q2H200L2D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	133	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10
55,0	2	Q2E225M2C	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	149	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13
75,0	2	Q2EP250M2C	Cast Iron	489	893	1xM50	311-349	406	250	616	30	149	60	140	64,0	18	6316-Z	6316-Z	80*100*10	80*100*10
75,0	4	Q2EP250M4E	Cast Iron	489	893	1xM50	311-349	406	250	616	30	149	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
110,0	2	Q2EP280M2D	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	190	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10
110,0	4	Q2EP280M4E	Cast Iron	489	1025	1xM50	368-419	457	280	647	24	130	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm
(2) DIN 6885'e göre / According to DIN 6885

BOYUTLAR - B5, B35 / DIMENSION - B5, B35



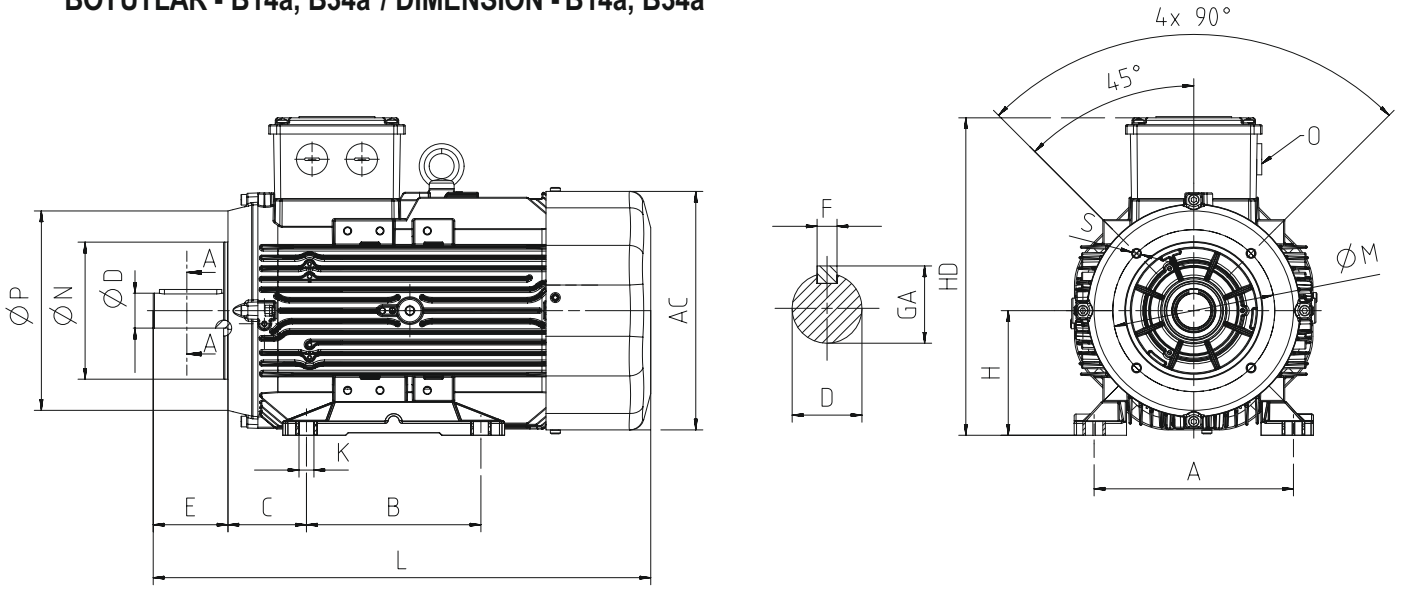
				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FA) (B5) Flange (FA) (B5)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksı Non drive Side	P	N ⁽³⁾	M	R	S
1,1	4	Q2H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10,0	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12,0
1,5	2	Q2H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10,0	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12,0
1,5	4	Q2H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10,0	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12,0
2,2	2	Q2H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10,0	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	200	130	165	-	12,0
2,2	4	Q2H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10,0	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12,0
3,0	2	Q2H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10,0	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12,0
3,0	4	Q2H90L4DE	Aluminium	172	379	1xM25	100-125	140	90	223	10,0	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	200	130	165	-	12,0
4,0	2	Q2HS100L2C	Aluminium	172	384	1xM25	140	160	100	233	12,0	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
4,0	4	Q2H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12,0	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
5,5	2	Q2HS112M2C	Aluminium	191	399	1xM25	140	190	112	254	12,0	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
5,5	4	Q2H112M4D	Aluminium	210	421	1xM25	140	190	112	265	12,0	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	250	180	215	-	14,5
7,5	2	Q2HS112M2D	Aluminium	191	421	1xM25	140	190	112	254	12,0	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	250	180	215	-	14,5
11,0	2	Q2H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12,0	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
11,0	4	Q2H132M4D	Aluminium	260	481	1xM32	140-178	216	132	312	12,0	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
15,0	2	Q2H132M2B	Aluminium	260	481	1xM32	140-178	216	132	312	12,0	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
15,0	4	Q2H132M4E	Aluminium	260	539	1xM32	140-178	216	132	312	12,0	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
18,5	2	Q2H132M2C	Aluminium	260	539	1xM32	140-178	216	132	312	12,0	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	300	230	265	-	14,5
18,5	4	Q2H160L4B	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
22,0	2	Q2H160L2C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
22,0	4	Q2H160L4C	Aluminium	305	591	1xM32	210-254	254	160	368	14,5	42	110	45,0	12	6309-ZZ	6209-ZZ	45*72*10	45*72*10	350	250	300	-	18,5
30,0	2	Q2H180M2B	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
30,0	4	Q2H180L4C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
37,0	2	Q2H180M2C	Aluminium	349	696	1xM40	241-279	279	180	437	14,5	48	110	51,5	14	6310-ZZ	6310-ZZ	50*80*10	50*80*10	350	250	300	-	18,5
37,0	4	Q2H200L4D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
45,0	2	Q2H200L2D	Aluminium	349	759	1xM50	267-305	318	200	455	18,5	55	110	59,0	16	6312-ZZ	6310-ZZ	60*90*10	60*90*10	400	300	350	-	18,5
55,0	2	Q2E225M2C	Aluminium	456	735	1xM50	286-311	356	225	485	18,5	55	110	59,0	16	6313-ZZ	6313-ZZ	65*100*13	65*100*13	450	350	400	-	18,5
75,0	2	Q2EP250M2C	Cast Iron	489	893	1xM50	349	406	250	616	24,0	60	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
75,0	4	Q2EP250M4E	Cast Iron	489	893	1xM50	349	406	250	616	24,0	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
110,0	2	Q2EP280M2D	Cast Iron	489	1025	1xM50	419	457	280	647	24,0	65	140	69,0	18	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5
110,0	4	Q2EP280M4E	Cast Iron	489	1025	1xM50	419	457	280	647	24,0	75	140	79,5	20	6316-Z	6316-Z	80*100*10	80*100*10	550	450	500	-	18,5

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14a, B34a / DIMENSION - B14a, B34a



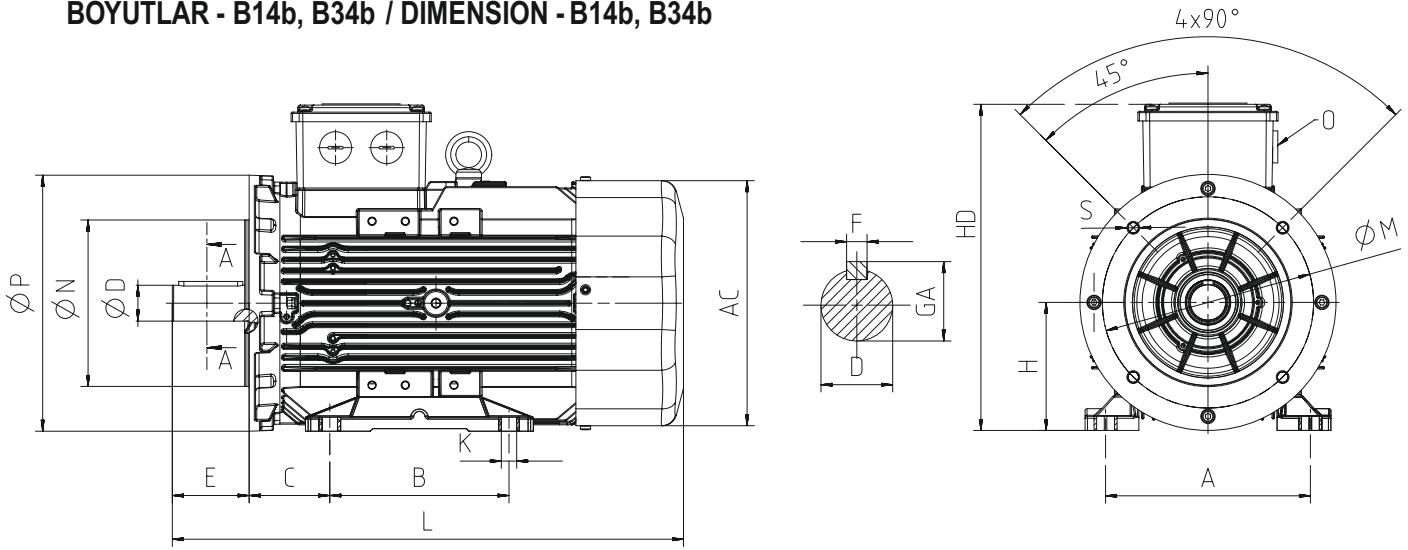
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FC) (B14a) Flange (FC) (B14a)				
				AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side	Kasnak Taraflı Drive Side	Kasnak Taraflı Aksi Non drive Side	P	N ⁽³⁾	M	R	S
1,1	4	Q2H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
1,5	2	Q2H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
1,5	4	Q2H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
2,2	2	Q2H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	120	80	100	-	M6
2,2	4	Q2H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
3,0	2	Q2H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
3,0	4	Q2H90L4DE	Aluminium	172	379	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	140	95	115	-	M8
4,0	2	Q2HS100L2C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
4,0	4	Q2H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	160	110	130	-	M8
5,5	2	Q2HS112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
5,5	4	Q2H112M4D	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	160	110	130	-	M8
7,5	2	Q2HS112M2D	Aluminium	191	421	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	160	110	130	-	M8
11,0	2	Q2H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
11,0	4	Q2H132M4D	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
15,0	2	Q2H132M2B	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
15,0	4	Q2H132M4E	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10
18,5	2	Q2H132M2C	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	200	130	165	-	M10

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"

BOYUTLAR - B14b, B34b / DIMENSION - B14b, B34b



				Ana Boyutlar Main Dimensions			Ayaklı Motorlar Foot Mounted Motors					Mil Shaft				Rulman Bearing		Keçe Seal		Flanş (FB) (B14b) Flange (FB) (B14b)				
Güç Power (kW)	Kutup sayısı Number of Poles	Motor Tipi Motor Type	Gövde Tipi Housing Type	AC	L	O	B	A	H	HD	K	D ⁽¹⁾	E	GA	F ⁽²⁾	Kasnak 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
1,1	4	Q2H80M4D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
1,5	2	Q2H80M2D	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
1,5	4	Q2H80M4DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
2,2	2	Q2H80M2DE	Aluminium	158	268	1xM20	100	125	80	216	10	19	40	21,5	6	6204-ZZ	6204-ZZ	20*30*7	20*30*7	160	110	130	-	M8
2,2	4	Q2H90L4D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
3,0	2	Q2H90L2D	Aluminium	172	344	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
3,0	4	Q2H90L4DE	Aluminium	172	379	1xM25	100-125	140	90	223	10	24	50	27,0	8	6305-ZZ	6205-ZZ	25*40*7	25*40*7	160	110	130	-	M8
4,0	2	Q2HS100L2C	Aluminium	172	384	1xM25	140	160	100	233	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
4,0	4	Q2H100L4D	Aluminium	191	400	1xM25	140	160	100	243	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	30*47*7	200	130	165	-	M10
5,5	2	Q2HS112M2C	Aluminium	191	399	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
5,5	4	Q2H112M4D	Aluminium	210	421	1xM25	140	190	112	265	12	28	60	31,0	8	6306-ZZ	6206-ZZ	30*47*7	30*47*7	200	130	165	-	M10
7,5	2	Q2HS112M2D	Aluminium	191	421	1xM25	140	190	112	254	12	28	60	31,0	8	6306-ZZ	6205-ZZ	30*47*7	25*40*7	200	130	165	-	M10
11,0	2	Q2H132M2A	Aluminium	260	481	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
11,0	4	Q2H132M4D	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
15,0	2	Q2H132M2B	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
15,0	4	Q2H132M4E	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12
18,5	2	Q2H132M2C	Aluminium	260	539	1xM32	140-178	216	132	312	12	38	80	41,0	10	6208-ZZ	6208-ZZ	40*62*10	40*62*10	250	180	215	-	M12

(1) Toleranslar 28 mm'ye kadar DIN EN 50347 "j6", 28 mm ve üzeri "k6" / Tolerance DIN EN 50347 "j6" up to 28mm, "k6" above 28mm

(2) DIN 6885'e göre / According to DIN 6885

(3) Tolerans DIN EN 50347 "j6" / Tolerance DIN EN 50347 "j6"



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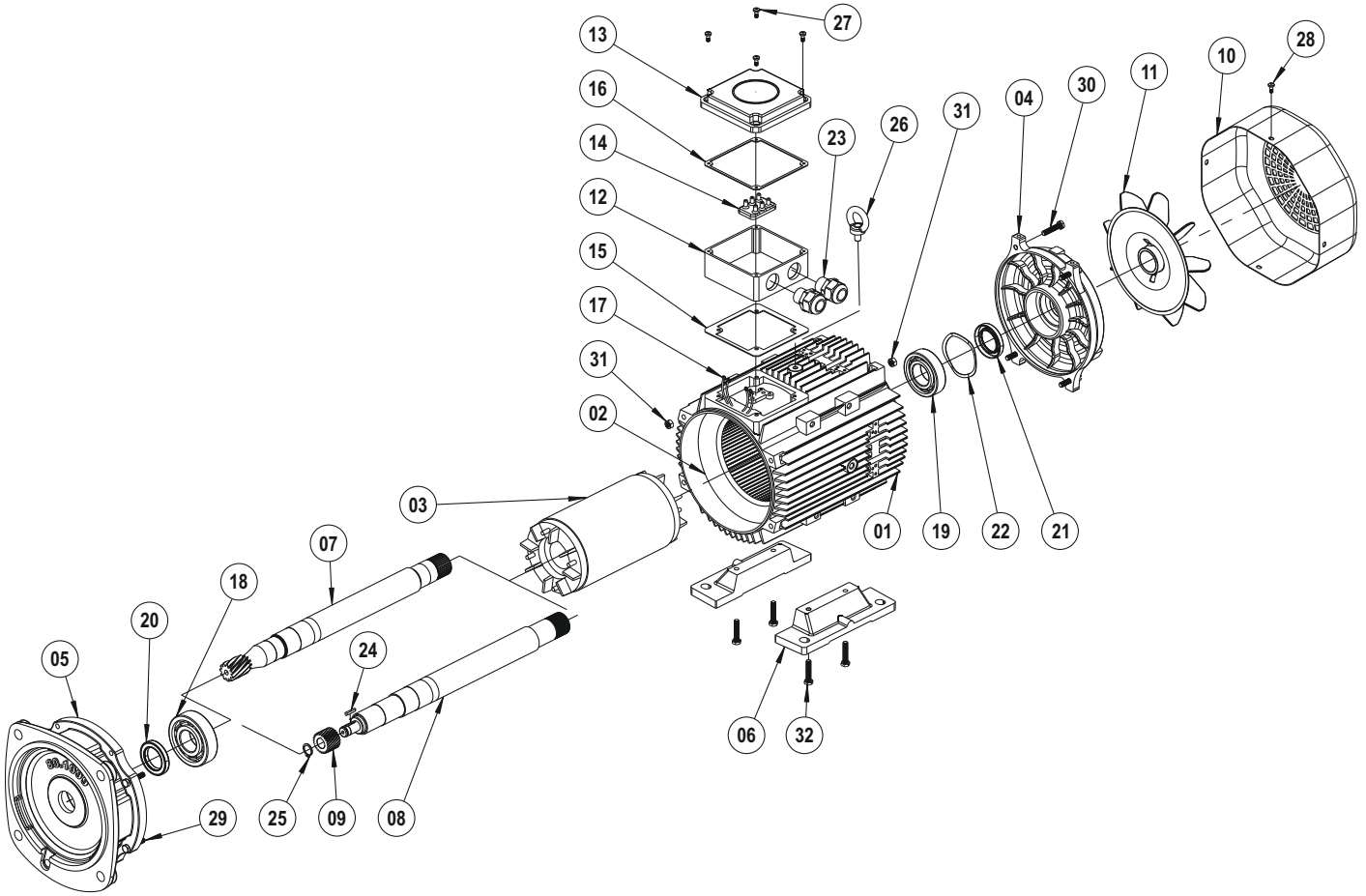
MOTOR PARÇA LİSTESİ

EN

MOTOR PART LIST

DE

ERSATZTEILLISTE FÜR MOTOR



- 01 Gövde
- 02 Sargılı Stator
- 03 Rotor
- 04 Motor Arka Kapağı
- 05 PGR Motor Bağlantı Flanşı
- 06 Ayak
- 07 Motor Mili (Yekpare)
- 08 Motor Mili (Çakma)
- 09 Z1 Dişlisi
- 10 Fan Kapağı
- 11 Fan
- 12 Terminal Kutusu
- 13 Terminal Kutu Kapağı
- 14 Klemens Plakası
- 15 Terminal Contası Alt
- 16 Terminal Contası Üst
- 17 Kablo Grubu
- 18 Ön Rulman
- 19 Arka Rulman
- 20 Keçe (Ön)
- 21 Keçe (Arka)
- 22 Rulman Gergi Yayı
- 23 Rakor
- 24 Kama
- 25 Segman
- 26 Mapa
- 27 Yıldız Başlı Civata
- 28 Yıldız Başlı Civata
- 29 Civata DIN 933
- 30 Civata DIN 933
- 31 Somun
- 32 Civata DIN 933

- 01 Housing
- 02 Wound Stator
- 03 Rotor
- 04 Nondrive - Endshield
- 05 Motor Connection Flange
- 06 Foot
- 07 Drive Shaft (Gearcut)
- 08 Drive Shaft (Plain)
- 09 Z1 Gear
- 10 Fan Cover
- 11 Fan
- 12 Terminal Box
- 13 Terminal Box Cover
- 14 Terminal Plate
- 15 Terminal Gasket Down
- 16 Terminal Gasket Up
- 17 Lead Cables
- 18 Bal Bearing (Drive-Side)
- 19 Bal Bearing (Non-Drive-Side)
- 20 Seal Ring (Front)
- 21 Seal Ring (Back)
- 22 Bearing Shim
- 23 Conduit
- 24 Key
- 25 Circilip DIN 471
- 26 Eye Bolt
- 27 Pan Head Secrews
- 28 Pan Head Secrews
- 29 Bolt
- 30 Bolt
- 31 Nut
- 32 Bolt

- 01 Gehäuse
- 02 gewickelter Stator
- 03 Rotor
- 04 B-Lagerschild
- 05 Motor-Anschlussflansch
- 06 Fuß
- 07 Antriebswelle (verzahnt)
- 08 Antriebswelle (glatt)
- 09 Antriebsritzel
- 10 Lüfterhaube
- 11 Lüfter
- 12 Klemmkasten
- 13 Klemmkastendeckel
- 14 Anschlussplatte
- 15 Klemmkastendichtung unten
- 16 Klemmkastendichtung oben
- 17 Kabelbaum
- 18 Kugellager (Antriebsseite)
- 19 Kugellager (Nicht-Antriebsseite)
- 20 Dichtungsring (Vorne)
- 21 Dichtungsring (Hinten)
- 22 Stützscheibe
- 23 Gewindemuffe
- 24 Passfeder
- 25 Sicherungsring DIN 471
- 26 Augenschraube
- 27 Kreuzschlitzschraube
- 28 Kreuzschlitzschraube
- 29 Schraube DIN 933
- 30 Schraube DIN 933
- 31 Schraubenmutter
- 32 Schraube DIN 933

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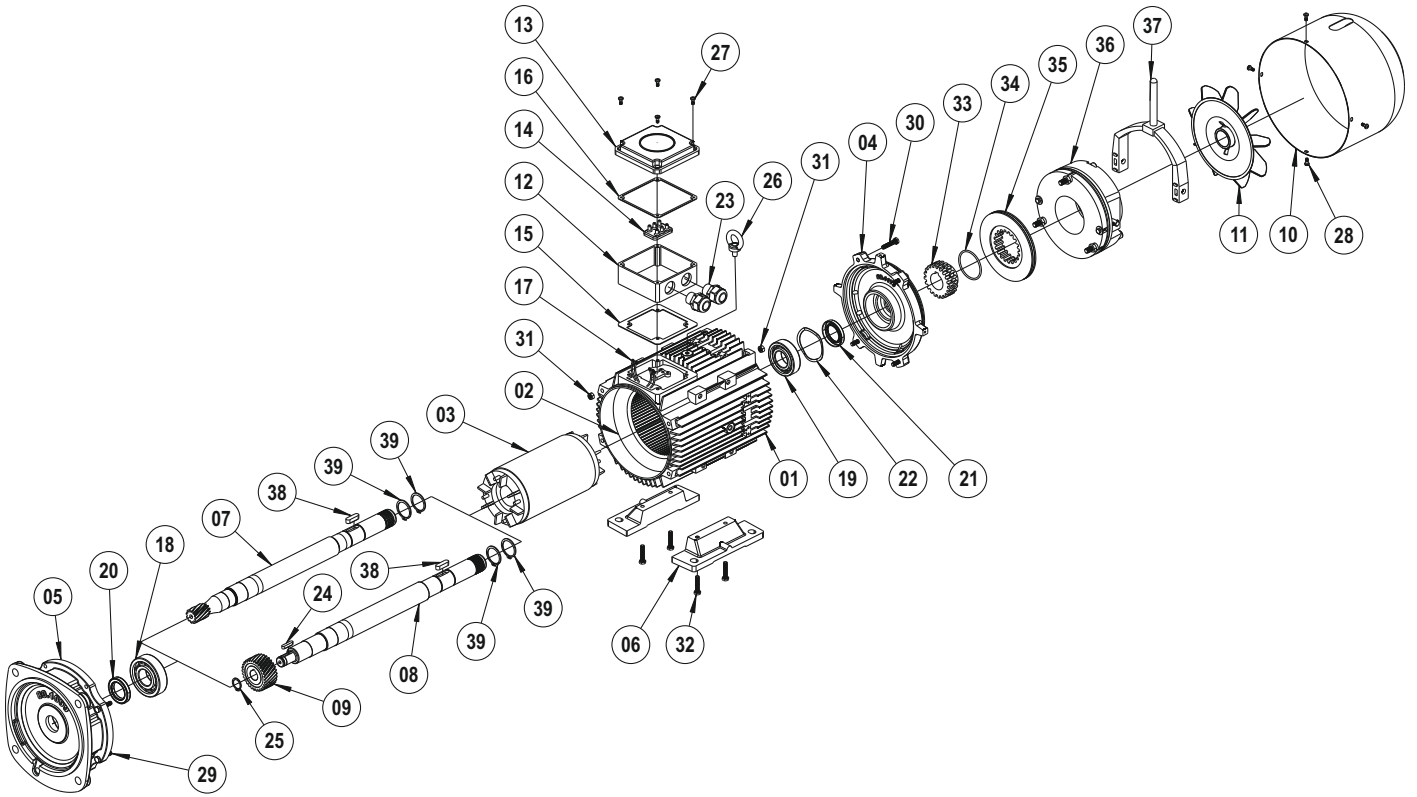
FRENLİ MOTOR PARÇA LİSTESİ

EN

BRAKE MOTOR PART LIST

DE

ERSATZTEILLISTE FÜR MOTOR
MIT BREMSE



- 01 Gövde
- 02 Sargılı Stator
- 03 Rotor
- 04 Fren Flanşı
- 05 PGR Motor Bağlantı Flanşı
- 06 Ayak
- 07 Motor Mili (Yekpare)
- 08 Motor Mili (Çakma)
- 09 Z1 Dişlisi
- 10 Fan Kapağı
- 11 Fan
- 12 Terminal Kutusu
- 13 Terminal Kutu Kapağı
- 14 Klemens Plakası
- 15 Terminal Contası Alt
- 16 Terminal Contası Üst
- 17 Kablo Grubu
- 18 Ön Rulman
- 19 Arka Rulman
- 20 Keçe (Ön)
- 21 Keçe (Arka)
- 22 Rulman Gergi Yayı
- 23 Rakor
- 24 Kama
- 25 Segman
- 26 Mapa
- 27 Yıldız Başlı Civata
- 28 Yıldız Başlı Civata
- 29 Civata DIN 933
- 30 Civata DIN 933
- 31 Somun
- 32 Civata DIN 933
- 33 Fren Kaplini
- 34 O-Ring
- 35 Fren Balatası
- 36 Fren
- 37 Manuel Kolu
- 38 Kama
- 39 Segman DIN 471

- 01 Housing
- 02 Wound Stator
- 03 Rotor
- 04 Brake Connection Flange
- 05 Motor Connection Flange
- 06 Foot
- 07 Drive Shaft (Gearcut)
- 08 Drive Shaft (Plain)
- 09 Z1 Gear
- 10 Fan Cover
- 11 Fan
- 12 Terminal Box
- 13 Terminal Box Cover
- 14 Terminal Plate
- 15 Terminal Gasket Down
- 16 Terminal Gasket Up
- 17 Lead Cables
- 18 Bal Bearing (Drive-Side)
- 19 Bal Bearing (Non-Drive-Side)
- 20 Seal Ring (Front)
- 21 Seal Ring (Back)
- 22 Bearing Shim
- 23 Conduit
- 24 Key
- 25 Circlip DIN 471
- 26 Eye Bolt
- 27 Pan Head Screws
- 28 Pan Head Screws
- 29 Bolt
- 30 Bolt
- 31 Nut
- 32 Bolt
- 33 Coupling
- 34 O-Ring
- 35 Brake Lining
- 36 Brake
- 37 Hand Release
- 38 Key
- 39 Circlip DIN 471

- 01 Gehäuse
- 02 gewickelter Stator
- 03 Rotor
- 04 Bremsflansch
- 05 Motor-Anschlussflansch
- 06 Fuß
- 07 Antriebswelle (verzahnt)
- 08 Antriebswelle (glatt)
- 09 Antriebsritzel
- 10 Lüfterhaube
- 11 Lüfter
- 12 Klemmkasten
- 13 Klemmkastendeckel
- 14 Anschlussplatte
- 15 Klemmkastendichtung unten
- 16 Klemmkastendichtung oben
- 17 Kabelbaum
- 18 Kugellager (Antriebsseite)
- 19 Kugellager (Nicht-Antriebsseite)
- 20 Dichtungsring (Vorne)
- 21 Dichtungsring (Hinten)
- 22 Stützscheibe
- 23 Gewindemuffe
- 24 Passfeder
- 25 Sicherungsring DIN 471
- 26 Augenschraube
- 27 Kreuzschlitzschraube
- 28 Kreuzschlitzschraube
- 29 Schraube DIN 933
- 30 Schraube DIN 933
- 31 Schraubenmutter
- 32 Schraube DIN 933
- 33 Kupplung
- 34 O-Ring
- 35 Bremsbelag
- 36 Bremse
- 37 Handauslöser
- 38 Passfeder
- 39 Sicherungsring DIN 471

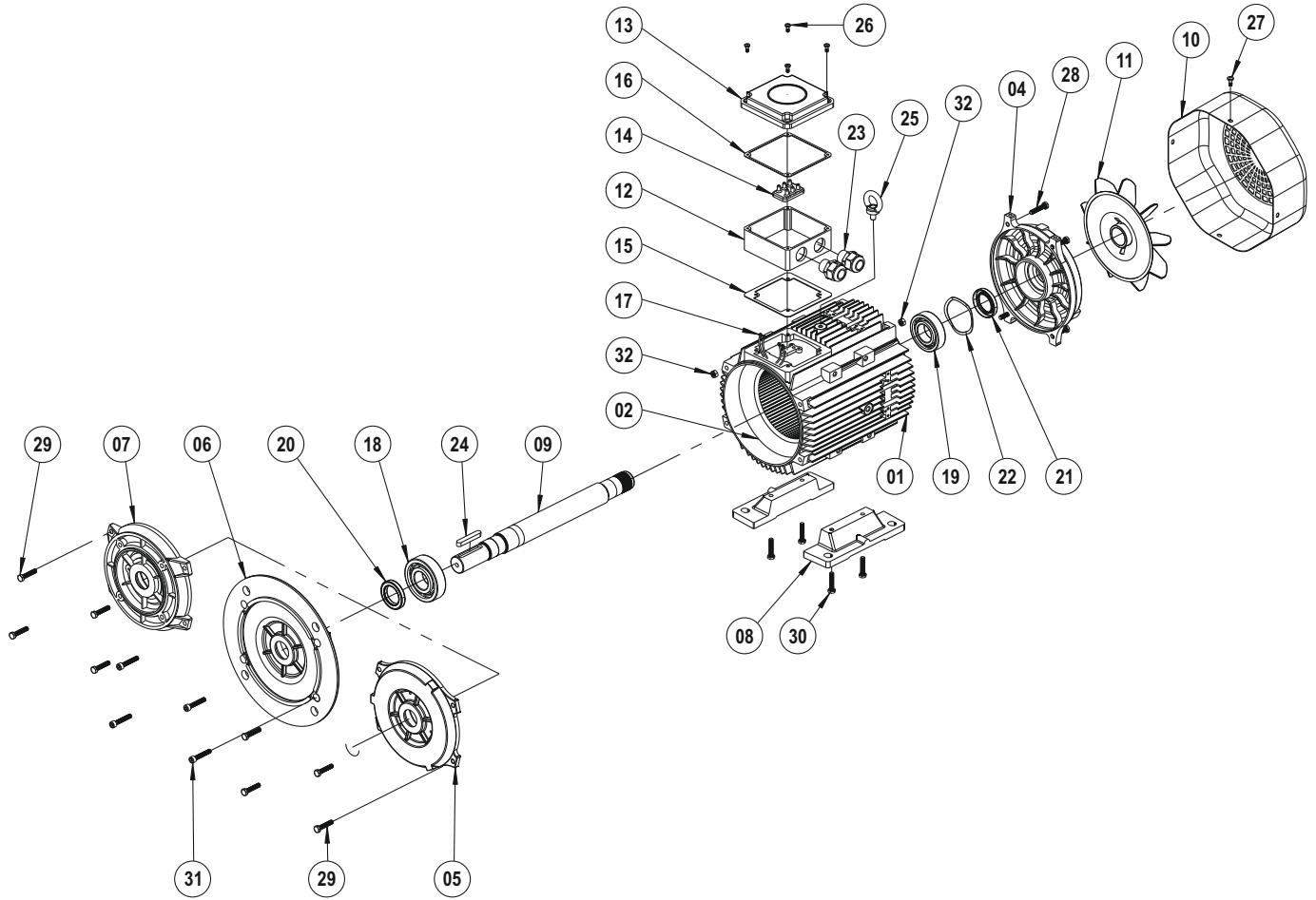
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**B3-B5-B14 FLANŞLI MOTOR
PARÇA LİSTESİ**

EN

B3-B5-B14 FLANGE MOTOR PART LIST

DE

**ERSATZTEILLISTE FÜR MOTOR
MIT B3-B5-B14-FLANSCH**


- 01 Gövde
- 02 Sargılı Stator
- 03 Rotor
- 04 Motor Arka Kapağı
- 05 B3 Motor Bağlantı Flanşı
- 06 B5 Motor Bağlantı Flanşı
- 07 B14 Motor Bağlantı Flanşı
- 08 Ayak
- 09 Motor Mili (Standart)
- 10 Fan Kapağı
- 11 Fan
- 12 Terminal Kutusu
- 13 Terminal Kutu Kapağı
- 14 Klemens Plakası
- 15 Terminal Contası Alt
- 16 Terminal Contası Üst
- 17 Kablo Grubu
- 18 Ön Rulman
- 19 Arka Rulman
- 20 Keçe (Ön)
- 21 Keçe (Arka)
- 22 Rulman Gergi Yay
- 23 Rakor
- 24 Kama
- 25 Mapa
- 26 Yıldız Başlı Civata
- 27 Yıldız Başlı Civata
- 28 Civata DIN 933
- 29 Civata DIN 933
- 30 Civata DIN 933
- 31 Civata DIN 912
- 32 Somun

- 01 Housing
- 02 Wound Stator
- 03 Rotor
- 04 Nondrive - Endshield
- 05 Flange
- 06 Flange
- 07 Flange
- 08 Foot
- 09 Drive Shaft (standard)
- 10 Fan Cover
- 11 Fan
- 12 Terminal Box
- 13 Terminal Box Cover
- 14 Terminal Plate
- 15 Terminal Gasket Down
- 16 Terminal Gasket Up
- 17 Lead Cables
- 18 Bal Bearing (Drive-Side)
- 19 Bal Bearing (Non-Drive-Side)
- 20 Seal Ring (Front)
- 21 Seal Ring (Back)
- 22 Bearing Shim
- 23 Conduit
- 24 Key
- 25 Eye Bolt
- 26 Pan Head Screws
- 27 Pan Head Screws
- 28 Bolt
- 29 Bolt
- 30 Bolt
- 31 Bolt
- 32 Nut

- 01 Gehäuse
- 02 gewickelter Stator
- 03 Rotor
- 04 B-Lagerschild
- 05 B3 Flansch
- 06 B5 Flansch
- 07 B14 Flansch
- 08 Fuß
- 09 Antriebswelle (standart)
- 10 Lüfterhaube
- 11 Lüfter
- 12 Klemmkasten
- 13 Klemmkastendeckel
- 14 Anschlussplatte
- 15 Klemmkastendichtung unten
- 16 Klemmkastendichtung oben
- 17 Kabelbaum
- 18 Kugellager (Antriebsseite)
- 19 Kugellager (Nicht-Antriebsseite)
- 20 Dichtungsring (Vorne)
- 21 Dichtungsring (Hinten)
- 22 Stützscheibe
- 23 Gewindemuffe
- 24 Passfeder
- 25 Augenschraube
- 26 Kreuzschlitzschraube
- 27 Kreuzschlitzschraube
- 28 Schraube DIN 933
- 29 Schraube DIN 933
- 30 Schraube DIN 933
- 31 Schraube DIN 912
- 32 Schraubenmutter

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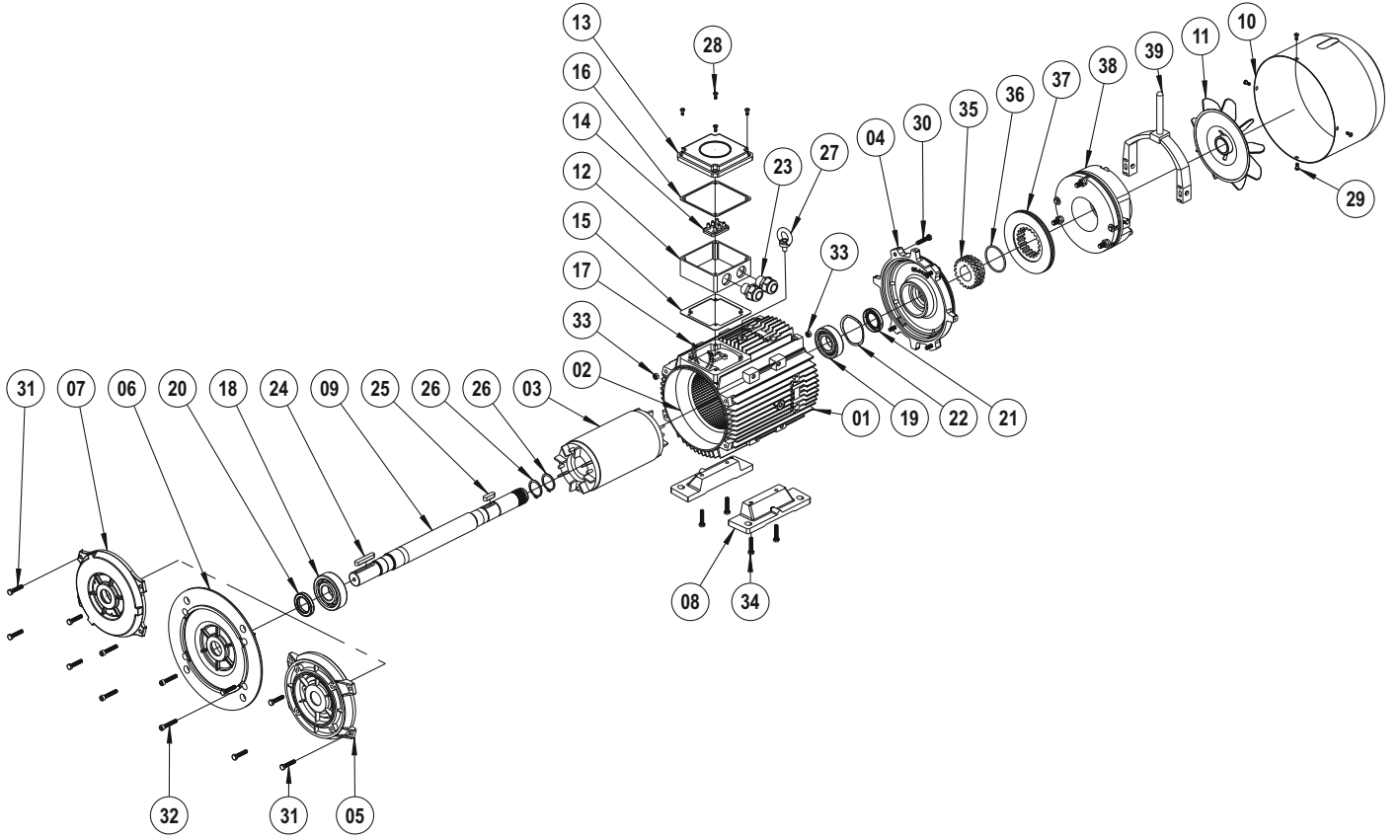
FRENLİ B3-B5-B14 FLANŞLI
MOTOR PARÇA LİSTESİ

EN

BRAKE B3-B5-B14 FLANGE
MOTOR PART LIST

DE

ERSATZTEILLISTE FÜR MOTOR MIT
BREMSE UND B3-B5-B14-FLANSCH



- 01 Gövde
- 02 Sargılı Stator
- 03 Rotor
- 04 Fren Flanşı
- 05 B3 Motor Bağlantı Flanşı
- 06 B5 Motor Bağlantı Flanşı
- 07 B14 Motor Bağlantı Flanşı
- 08 Ayak
- 09 Motor Mili (Standart)
- 10 Fan Kapağı
- 11 Fan
- 12 Terminal Kutusu
- 13 Terminal Kutu Kapağı
- 14 Klemens Plakası
- 15 Terminal Contası Alt
- 16 Terminal Contası Üst
- 17 Kablo Grubu
- 18 Ön Rulman
- 19 Arka Rulman
- 20 Keçe (Ön)
- 21 Keçe (Arka)
- 22 Rulman Gergi Yayı
- 23 Rakor
- 24 Kama
- 25 Kama
- 26 Segman
- 27 Mapa
- 28 Yıldız Başlı Civata
- 29 Yıldız Başlı Civata
- 30 Civata DIN 933
- 31 Civata DIN 933
- 32 Civata DIN 912
- 33 Somun
- 34 Civata DIN 933
- 35 Fren Kaplini
- 36 O-Ring
- 37 Fren Balatası
- 38 Fren
- 39 Manuel Kolu

- 01 Housing
- 02 Wound Stator
- 03 Rotor
- 04 Brake Connection Flange
- 05 Flange
- 06 Flange
- 07 Flange
- 08 Foot
- 09 Drive Shaft (standard)
- 10 Fan Cover
- 11 Fan
- 12 Terminal Box
- 13 Terminal Box Cover
- 14 Terminal Plate
- 15 Terminal Gasket Down
- 16 Terminal Gasket Up
- 17 Lead Cables
- 18 Bal Bearing (Drive-Side)
- 19 Bal Bearing (Non-Drive-Side)
- 20 Seal Ring (Front)
- 21 Seal Ring (Back)
- 22 Bearing Shim
- 23 Conduit
- 24 Key
- 25 Key
- 26 Circlip DIN 471
- 27 Eye Bolt
- 28 Pan Head Screws
- 29 Pan Head Screws
- 30 Bolt
- 31 Bolt
- 32 Bolt
- 33 Nut
- 34 Bolt
- 35 Brake Coupling
- 36 O-Ring
- 37 Brake Lining
- 38 Brake
- 39 Hand Release

- 01 Gehäuse
- 02 gewickelter Stator
- 03 Rotor
- 04 Bremsflansch
- 05 B3 Flansch
- 06 B5 Flansch
- 07 B14 Flansch
- 08 Fuß
- 09 Antriebswelle (standart)
- 10 Lüfterhaube
- 11 Lüfter
- 12 Klemmkasten
- 13 Klemmkastendeckel
- 14 Anschlussplatte
- 15 Klemmkastendichtung unten
- 16 Klemmkastendichtung oben
- 17 Kabelbaum
- 18 Kugellager (Antriebsseite)
- 19 Kugellager (Nicht-Antriebsseite)
- 20 Dichtungsring (Vorne)
- 21 Dichtungsring (Hinten)
- 22 Stützscheibe
- 23 Gewindemuffe
- 24 Passfeder
- 25 Passfeder
- 26 Sicherungsring DIN 471
- 27 Augenschraube
- 28 Kreuzschlitzschraube
- 29 Kreuzschlitzschraube
- 30 Schraube DIN 933
- 31 Schraube DIN 933
- 32 Schraube DIN 912
- 33 Schraubenmutter
- 34 Schraube DIN 933
- 35 Kupplung
- 36 O-Ring
- 37 Bremsbelag
- 38 Bremse
- 39 Handauslöser

TR

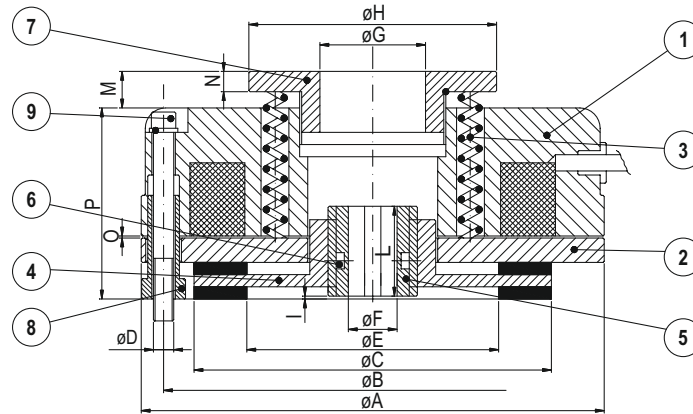
FREN PARÇA LİSTESİ

EN

BRAKE PART LIST

DE

BREMSE-TEILELISTE



- 1 Elektromagnet
 2 Endüvi plakası
 3 Tork yayı
 4 Disk
 5 Kamalı burç
 6 O-ring
 7 Ayar halkası
 8 Ayar somunu
 9 Bağlantı civataları

- 1 Electromagnet
 2 Armature plate
 3 Torque springs
 4 Disc
 5 Splined hub
 6 O-ring
 7 Adjuster rings
 8 Adjuster nuts
 9 Fixing screws

- 1 Elektromagnet
 2 Ankerplatte
 3 Bremsfeder
 4 Scheibe
 5 Nabe
 6 O-Ring
 7 Einstellring
 8 Einstellschraube
 9 Feststellschraube

Tip / Type / Typ Fren Modeli / Brake Model / Bremsmodell	K1	K2	K3	K4	K5	K6	K7	K7/D	K8	K8/D	K9	K9/D	K9/T
Statik Fren Momenti / Static Braking Torque / Statisches Bremsmoment (Nm)	5	12	16	20	40	60	90	180	200	400	300	600	900
Motorun Max. Hızı / Max Speed of the motor / Höchstgeschwindigkeit des Motors (rpm)	3000	3000	3000	3000	3000	3000	3000	3000	1500	1500	1500	1500	1500
Giriş Gücü / Input Power / Eingangsleistung (W)	15	20	25	30	45	50	55	55	60	60	65	65	65
Max. Ses / Max noisiness / Maximale lautheit (≤dB-A)	68	69	68	69	70	70	70	70	70	69	69	69	70
Ağırlık / Weight / Gewicht (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 Bohrungstoleranz bis Grösse K3 H7, andere + 0,01/-0,01	E	35	44	62	69	79	80	90	103	103	132	132	132
F	10-11 12	11-14 15	11-15	14-25	24-25 28	25-30 34	25-30 34	25 H40 34 H60	24-34	34 H60 48	44-45 48	44-45 48	44-45 48-50
G	20	26	26	42	60	60	60	60	60	60	60	60	60
H	50	61	61	79	104	104	104	104	104	104	104	104	104
I	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
L	18	20	20	20	25	30	30	60	40	60	40	60	80
M (max)	9	9	9	9,5	18	16	14	14	18	18	18	18	18
N	4	4	4	5,5	8	8	8	8	8	8	8	8	8
O	0,2	0,2	0,2	0,2	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,4	0,4+0,5
P	38,5	41,5	47	46,5	64	69,5	79	101,5	78	98	80	105	130

Not : Fren çalıştırılmadan önce statik fren momenti tabloda verilen değerlere göre $\pm$ % 20 değişiklik gösterebilir.

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

Notizen : Bevor die Bremse eingefahren ist, kann das statische Bremsmoment um etwa $\pm$ 20 % vom Tabellenwert abweichen.



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