

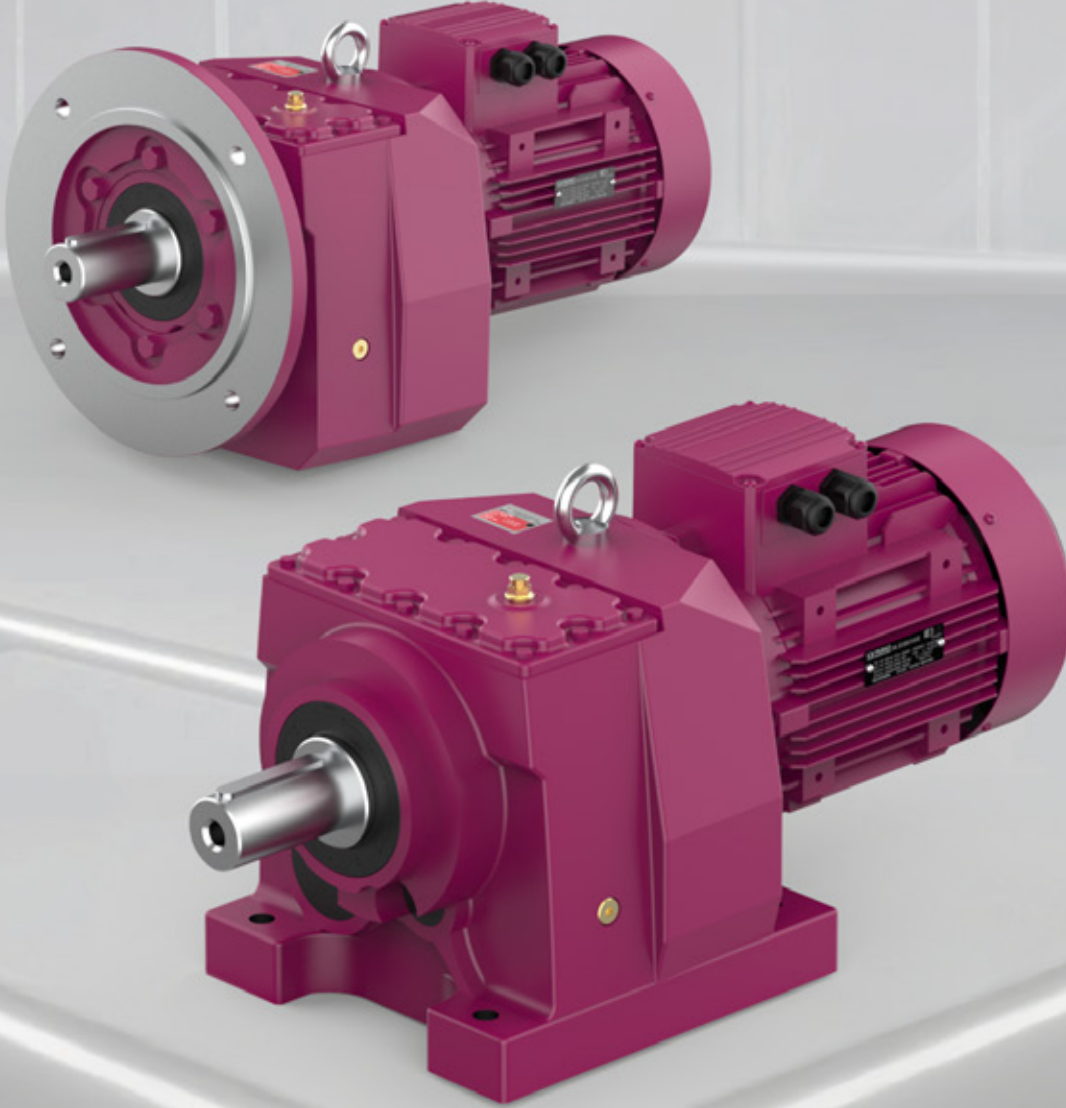
M-N

SERİSİ SERIES



**Ayak veya Flanş Bağlantılı
Helisel Dişli Redüktör Kataloğu**

**Foot or Flange Mounted
Helical Gearbox Catalogue**



M00-...-M97

13 Büyüklük / Size

0.12 - 160 kW

IE2 IE3 IE4

TR GB DE

M0700-0525

Firmamız, 1958 yılında saygın iş insanı Sn. Mesut Yılmaz tarafından kurulmuştur. 1963 yılından itibaren redüktör üretimine yoğunlaşan firmamız, sektörün ihtiyaçlarına uygun olarak seri, standart ve ekonomik çözümler sunmayı, en önemli hedefi ise kaliteyi her zaman ön planda tutarak uluslararası pazarda güçlü bir konum elde etmeyi amaçlamıştır.



Kurucumuz: Mesut YILMAZ
Our founder:

Our company was founded in 1958 by the respected businessman Mr. Mesut Yılmaz. Since 1963, the company has focused on the production of gearbox, aiming to provide serial, standard, and economical solutions that meet the industry's needs, with the primary goal of always prioritizing quality to establish a strong position in the international market.

Bugün, Beylikdüz'ndeki ana üretim tesisi ve Çerkezköy'deki ikinci redüktör fabrikası ile faaliyetlerini sürdüren firmamız, ELK Motor ve MES Döküm gibi grup şirketleriyle birlikte toplamda 200.000 m²'lik kapalı alanda üretim yapmaktadır.

Today, our company continues its operations with its main production facility in Beylikdüzü and a second gearbox factory in Çerkezköy. Together with our group companies, ELK Motor and MES Döküm, we carry out production in a total closed area of 200.000 m².

Yılmaz Grup Şirketleri / Yılmaz Group Companies



Yılmaz Redüktör Fabrikası-1 / Factory-1
40.000 m² Kapalı Alan / Closed Area
Esenyurt / İstanbul
www.yr.com.tr



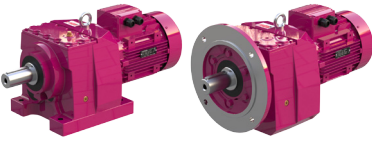
Yılmaz Redüktör Fabrikası-2 / Factory-2
70.000 m² Kapalı Alan / Closed Area
Çerkezköy / Tekirdağ



ELK Motor Fabrikası / Motor Factory
50.000 m² Kapalı Alan / Closed Area
Çerkezköy / Tekirdağ
www.elkmotor.com.tr



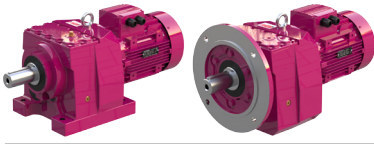
MES Döküm Fabrikası / Casting Factory
42.000 m² Kapalı Alan / Closed Area
Çerkezköy / Tekirdağ
www.mesdokum.com.tr



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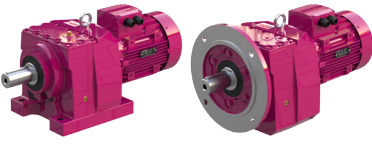
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Genel Bilgiler General Information Einführung



Sembollerin Açıklaması

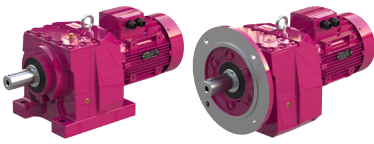
c_t:	Anahtarın devreye girme zamanı katsayısı
f_s:	Servis faktörü
F_{ama}:	Çıkış milinde müade edilen eksenel yükler [kN]
F_{ame}:	Giriş milinde müade edilen eksenel yükler [kN]
F_{qam}:	Çıkış milinde izin verilen radyal yöndeki yükler [N]
F_{qem}:	Giriş milinde izin verilen radyal yöndeki yükler [N]
F_{qa}:	Çıkış miline gelen radyal yöndeki yükler [N]
F_{qe}:	Giriş miline gelen radyal yöndeki yükler [N]
F_q:	Radyal yöndeki yükler [N]
F_a:	Eksenel yöndeki yükler [N]
i:	Tahvil oranı
J_{ext}:	Motor miline indirgenmiş toplam dış atalet momenti [kgm ²]
M_2:	Çıkış momenti [Nm]
M_a:	Anma momenti [Nm]
n_1:	Redüktör giriş mili devri [d/dak]
n_2:	Redüktör çıkış mili devri [d/dak]
P_{eq}:	Eşdeğer güç [kW]
P_e:	Nominal güç (Bak. Güç-Devir Tabloları) [kW]
P_M:	Tahrik edilecek makina için gerekli güç (Değişken yükler için eşdeğer güç alınır) [kW]
t:	Zaman [s]
T_e:	Eşdeğer moment [Nm]

Key of Symbols

c_t:	Coefficient of switch on time.
f_s:	Service factor
F_{ama}:	Permissible axial loads which can be applied to output shafts [kN]
F_{ame}:	Permissible axial loads which can be applied to input shafts [kN]
F_{qam}:	Permissible overhung loads which can be applied to output shafts [N]
F_{qem}:	Permissible overhung loads which can be applied to input shafts [N]
F_{qa}:	Overhung loads applied to the output shaft [N]
F_{qe}:	Overhung loads applied to the input shafts [N]
F_q:	Overhung loads on output shaft [N]
F_a:	Axial loads on output shaft [N]
i:	Transmission ratio
J_{ext}:	The total inertia of rotating parts at outside reduced at the motor shaft [kgm ²]
M_2:	Output torque [Nm]
M_a:	Nominal torque [Nm]
n_1:	Input speed of gearbox [rpm]
n_2:	Output speed of gearbox [rpm]
P_{eq}:	Equivalent power [kW]
P_e:	Nominal power (given on performance tables) [kW]
P_M:	Power consumption of the driven machine (for alternating power, refer to equivalent power) [kW]
t:	Time [s]
T_e:	Equivalent torque [Nm]

Erklärung der Bezeichnungen

c_t:	Koeffizient der Tätigkeitszeit von Schalter
f_s:	Betriebsfaktor
F_{ama}:	Zulässige Axialkräfte auf Abtriebswelle [kN]
F_{ame}:	Zulässige Axialkräfte auf Antriebswelle [kN]
F_{qam}:	Zulässige Querkkräfte auf Abtriebswelle [N]
F_{qem}:	Zulässige Querkkräfte auf Antriebswelle [N]
F_{qa}:	Querkkräfte auf Abtriebswelle [N]
F_{qe}:	Querkkräfte auf Antriebswelle [N]
F_q:	Querkkräfte auf Abtriebswelle [N]
F_a:	Querkkräfte auf Antriebswelle [N]
i:	Übersetzungsverhältnis
J_{ext}:	Die Gesamtträgheit der rotierende Teile von der Ausgangsseite reduziert auf Motorwelle [kgm ²]
M_2:	Ausgangsdrehmoment [Nm]
M_a:	Nenndrehmoment [Nm]
n_1:	Antriebsdrehzahl [U/min]
n_2:	Abtriebsdrehzahl [U/min]
P_{eq}:	Äquivalente Leistung [kW]
P_e:	Getriebe Nennleistung (siehe Leistung- Drehzahl Tabellen) [kW]
P_M:	Leistung benötigt an der Abtriebswelle (Zur Berechnung bei variabler Leistungen äquivalente Leistung benutzen) [kW]
t:	Zeit [s]
T_e:	Minimales Drehmoment [Nm]



Genel Bilgiler General Information Einführung



Ürün Yelpazesi

Elinizdeki katalog sadece **M serisi** ürünleri içermektedir.

- M ve N Serisi

Helisel alın dişliye sahip, giriş ve çıkış milleri aynı düzlem üzerinde ve birbirine paralel uzanan, üzerlerinde bulunan ayak veya flanş ile makina-ya sabitlenen redüktörlerdir. Dolu mil çıkışıdır.

Production Range

*This catalogue is containing **M series** of gear-boxes only.*

- M and N Series

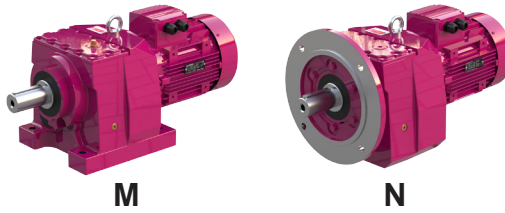
M and N series of YILMAZ REDÜKTÖR are helical geared. The input and output shafts are parallel to each other and on the same plane. The gearbox can be connected to the machine by using the foot or flange on the gearbox. Has solid output shaft.

Produktpalette

Dieses Katalog umfasst nur die **M Serie** Getriebe.

- M und N Serie

Diese Modelle sind Stirnradgetriebe mit parallelen Antriebs- und Abtriebswelle auf einer Ebene. Die Getriebe werden mit Fuß- oder Flanschverbindung an die angetriebene Maschine angekoppelt. Hat Vollwelle am Ausgang.



13 farklı büyüklükte;
Moment aralığı: 80 - 18.000 Nm
Devir aralığı: 0,1 - 800 d/dak

13 different sizes:

Torque range: 80 - 18.000 Nm

Speed range: 0,1 - 800 rpm

13 verschiedene Baugrößen:

Drehmomentbereich: 80 - 18.000 Nm

Drehzahlbereich : 0,1 - 800 U/min

- D Serisi

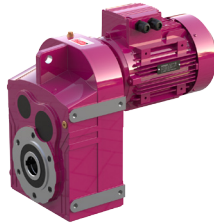
Helisel alın dişliye sahip, giriş ve çıkış milleri aynı düzlem üzerinde, birbirine paralel ve belirli bir aralıkta yerleştirilmiş, iki yan yüzde bulunan bağlantı civataları, flanş veya tork kolu ile makina-ya sabitlenen redüktörlerdir. Delik milli veya mil çıkışlı olabilir.

- D Series

D series are helical geared gearboxes with parallel input and output shafts. The shafts have a distance in between and located on the same plane. The gearbox can be assembled to the machine by using, the connection screws on the sides, flange or torque arm on the gearbox. Can have hollow or solid output shaft.

- D Serie

Diese Getriebe sind Stirnradgetriebe mit paralleler Antriebs- und Abtriebswelle, die auf einer Ebene liegen und einen Abstand zueinander haben. Diese Getriebe wird seitlich mit Gewindelöchern am Maschine oder mit einer Flansch verbindet. Kann Voll- und Hohlwelle am Ausgang haben.



11 farklı büyüklükte;
Moment aralığı: 150 - 18.000 Nm
Devir aralığı: 0,1 - 810 d/dak

11 different sizes:

Torque range: 150 - 18.000 Nm

Speed range: 0,1 - 810 rpm

11 verschiedene Baugrößen:

Drehmomentbereich: 150 - 18.000 Nm

Drehzahlbereich : 0,1 - 810 U/min

- E Serisi

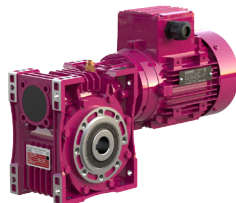
Sonsuz vida ve çark dişlili, belirli bir aralıkta ve birbirine dik konumlandırılmış giriş ve çıkış millerine sahip, çepeçevre konumlandırılmış ayak bağlantıları, flanş veya tork kolu ile makina-ya sabitlenebilen redüktörlerdir. Delik milli veya mil çıkışlı olabilir.

- E Series

E series gearboxes are with worm and worm-wheel. The input and output shafts are perpendicular to each other and have a distance in between. It can be assembled to the driven machine by the use of the foot, flange or torque arm on the gearbox. Can have hollow or solid output shaft.

-E Serie

Diese Getriebe bestehen aus Schnecke und Schneckenrad. Die Antriebs-und Abtriebswellen sind senkrecht zueinander und haben einen bestimmten Abstand. Das Getriebe wird mit Fußbefestigung, Flanschverbindung oder mit Drehmomentstütze an die angetriebene Maschine montiert. Kann Voll- und Hohlwelle am Ausgang haben.



8 farklı büyüklükte;
Moment aralığı: 5 - 1.000 Nm
Devir aralığı: 0,2 - 270 d/dak

8 different sizes:

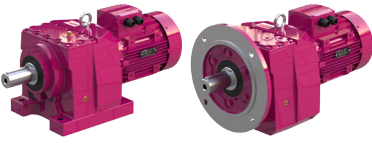
Torque range: 5 - 1.000 Nm

Speed range: 0,2 - 270 rpm

8 verschiedene Baugrößen:

Drehmomentbereich: 5 - 1.000 Nm

Drehzahlbereich : 0,2 - 270 U/min



Genel Bilgiler General Information Einführung



- K Serisi

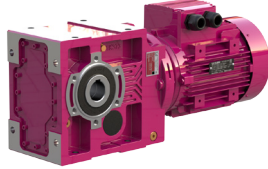
Helisel alın dişli ve konik dişlilerden oluşan, birbirine dik ve belirli bir aralıkta konumlandırılmış giriş ve çıkış miline sahip, çepeçevre sunulan ayaklar, flanş veya tork kolu ile makineye sabitlenen redüktörlerdir. E serisinden farklı olarak yüksek verime sahiptirler. Delik milli veya mil çıkışlı olabilir.

- K Series

These are gearboxes with helical and bevel gears. The input and output shafts are perpendicular to each other and have a distance in between. It can be assembled to the driven machine using the foot, flange or torque arm on the gearbox. They have high efficiency compared to E series. Can have hollow or solid output shaft.

- K Serie

Diese Getriebe bestehen aus Stirnräder und Kegelräder. Die Antrieb und Abtriebswellen sind senkrecht und haben einen Abstand zueinander. Das Getriebe wird mit Fußbefestigung, Flanschverbindung oder Drehmomentstütze an die angetriebene Maschine montiert. Der Wirkungsgrad ist wesentlich höher als E Serie. Kann Voll- und Hohlwelle am Ausgang haben.



13 farklı büyüklükte;

Moment aralığı: 80 - 20.000 Nm

Devir aralığı: 0,1 - 460 d/dak

13 different sizes:

Torque range: 80 - 20.000 Nm

Speed range: 0,1 - 460 rpm

13 verschiedene Baugrößen:

Drehmomentbereich: 80 - 20.000 Nm

Drehzahlbereich : 0,1 - 460 U/min

- T Serisi

T Serisi redüktörler helisel dişli iki kademe motorsuz delik milli redüktörlerdir. T Serisi redüktörler delik milli olması ve kompakt gövde yapısı sayesinde daha küçük hacimli alanlara montajı yapılabilmektedir.

- T Series

T Series are gear units which are helical geared, two staged, hollow shaft mounted gear units and manufactured according to monoblock principal. T Series gearboxes have hollow shaft and compact housing so that T series can be mounted on smaller places.

- T Serie

T Serien Getriebe sind zwei stufige, schrägverzahnte Hohlwellenflachgetriebe in Monoblockgehäuse. Die T Serie hat eine kompakte Gehäuse und ist serienmäßig mit Abgangshohlwelle hergestellt, so dass das Getriebe minimalen Platzbedarf hat.



9 farklı büyüklükte;

Moment aralığı: 640 - 21.000 Nm

Tahvil oranları: 5 - 13 - 20

9 different sizes:

Torque range: 640 - 21.000 Nm

Transmission ratio: 5 - 13 - 20

9 verschiedene Baugrößen:

Drehmomentber. : 640 - 21.000 Nm

Übersetzung: 5 - 13 - 20

- V Serisi

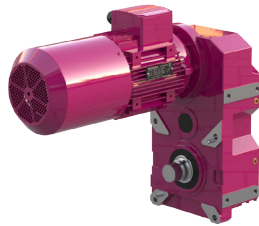
V vinç redüktörleri M1 - M8 (1Dm - 5m) vinç sınıflarına uygun olarak, çift veya sabit devirli frenli motorlarla üretilmektedir.

- V Serie

V hoist drives are produced according to M1 - M8 (1Dm - 5m) crane classes.

- V Serie

V Krane und Hebezeuge werden geeignet zur Kranklasse M1 - M8 (1Dm - 5m) hergestellt.



VR vinç redüktörleri

M1 - M8 ,(1Dm - 5m) yük sınıfı

ISO 4301 / 1 ,(FEM 1.001 / III)

VR Hoist Drive Units

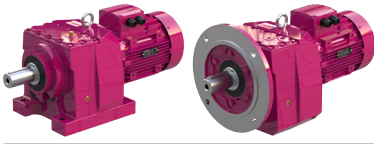
M1 - M8 ,(1Dm - 5m) load classification

ISO 4301 / 1 ,(FEM 1.001 / III)

VR Kran und Hebezeug Getriebe

M1 - M8 ,(1Dm - 5m) Belastungsart

ISO 4301 / 1 ,(FEM 1.001 / III)



Genel Bilgiler General Information Einführung



- P ve R Serisi

P ve R Serisi redüktörler planet dişli redüktörlerdir. Endüstriyel ve mobil uygulamalarda kullanılırlar. Diğer redüktör tiplerine göre daha küçük hacimde daha büyük tork iletebilirler.

- P and R Series

P and R Series gearboxes are planetary gearboxes. They are mostly used by industrial and mobile applications. Planetary gearboxes can transfer high torques in small volumes compared to other gearboxes.

- P und R Serie

P und R Serie sind Planetengetriebe, die vielseitig im Industrie und bei mobiler Anwendungen einsetzbar sind, mit Planetenzahnräder. Planetengetriebe können im Vergleich zu anderen Getrieben größere Drehmomente bei kleineren Bauvolumen übertragen.



P



R

13 farklı büyüklükte;

Moment aralığı: 1.000 - 135.000 Nm

Tahvil oranları: 3,43 - 7588 arası

13 different sizes:

Torque range: 1.000 - 135.000 Nm

Transmission ratio: 3,43 - 7588

13 verschiedene Baugrößen:

Drehmomentber. : 1.000 - 135.000 Nm

Übersetzung: 3,43 - 7588

- H ve B Serisi

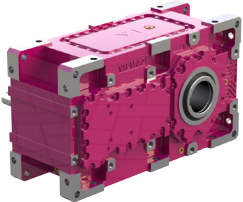
Helisel ve/veya konik dişliye sahip ağır hizmet tipi redüktörlerdir. Giriş ve çıkış milleri birbirine paralel veya dik olabilir. Her yönden bağlantı için ayak bağlantıları bulunur. Opsiyonel olarak flanş ile de bağlanabilir. Delik millî veya mil çıkışlı olabilir.

- H and B Series

These gearboxes are helical or/and bevel geared industrial gearboxes. The input and output shafts can be arranged parallel or perpendicular to each other. The gearbox can be assembled by the use of the foot connections on each side. Flange connections are optional. Can have hollow or solid output shaft.

- H und B Serie

Diese Getriebe sind geeignet für industrielle Anwendungen und haben parallelen oder senkrechten Antrieb und Abtriebswelle auf einer Ebene. Das Getriebe kann mit Füßen, die auf jede Seite der Getriebe vorhanden sind, oder optional mit Flansch an die angetriebene Maschine montiert werden. Kann Voll-und Hohlwelle am Ausgang haben.



H

20 farklı büyüklükte;

Moment aralığı: 3.000 - 470.000 Nm

Tahvil oranları: 1,54 - 420 arası

20 different sizes:

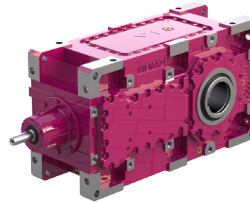
Torque range: 3.000 - 470.000 Nm

Transmission ratio: 1,54 - 420

20 verschiedene Baugrößen:

Drehmomentber. : 3.000- 470.000 Nm

Übersetzung: 1,54 - 420



B

20 farklı büyüklükte;

Moment aralığı: 3.000 - 470.000 Nm

Tahvil oranları: 3,08 - 431 arası

20 different sizes:

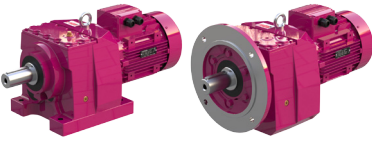
Torque range: 3.000 - 470.000 Nm

Transmission ratio: 3,08 - 431

20 verschiedene Baugrößen:

Drehmomentber. : 3.000 - 470.000 Nm

Übersetzung: 3,08 - 430



Genel Bilgiler General Information Einführung



M-N Serisi Redüktörlerin Genel Özellikleri

YILMAZ REDÜKTÖR M-N serisi redüktörlerini rijitlik, sızdırmazlık, ses ve dişli mukavemetlerinde büyük avantajlar sağlayan bir prensip olan tekil gövde (monoblok) prensibine göre geliştirmiştir. Redüktörler içinde yataklamalar herhangi bir kapak veya gövdeye birleşimi olan parça üzerinde değil, direkt olarak gövdenin kendi üzerinde kalmaktadır. Gövde eksenlerinin tek operasyonda işlenmesi, yüksek imalat hassasiyeti sağlamaktadır. Yüksek teknolojiyle dişli toleranslarında elde ettiğimiz yüksek kalitelere GG25 (M-N003-77.) ve GGG40 (M-N87.-97.) malzemelerden olan gövde cevap vermektedir. Bu prensip aynı zamanda rulman ve dişli ömürlerinde bir artış sağlamakta olup; yüksek radyal yükler taşınabilmektedir. Redüktör içinde kullanılan rulman, dişli ve mil hesaplamaları güncel standartlara dayanan profesyonel yazılımlar ile yapılmaktadır. Redüktör gövdesindeki ara perde gövde ana gövdeyle bir bütündür. Ara perde, dişlilerin her iki taraftan, dişliye en yakın noktadan yataklanmasını sağlar. Böylelikle millerin sehim ve salgılarının minimum düzeye inmesini sağlayarak sessiz redüktörlerin üretiminde rol oynamaktadır.

M-N serisi redüktörler kolay montaj ve esnek kullanım olanağına sahiptir. Redüktörlerin motor bağlantısı müşteri isteğine bağlı olarak standart akuple, IEC B5 veya B14'e uygun olabilir. Tüm modeller ayaklı veya flanşlı olarak, tek gövde içinde iki veya üç kademeli olarak sunulmaktadır. Redüktörler aynı güç ve devir değerleri için daha kompakt hale ve daha düşük eksen mil yüksekliklerine getirilmiştir. Tüm redüktörler modüler sistemde düşünülmüş olup, çiftli redüktörlerde ara bağlantılardaki değişiklikler minimum seviyeye indirilmiştir. Tüm toleranslar kalite güvence sistemi ile aktif kontrol altındadır.

Dikkat Edilecek Hususlar !

- Bu katalogta verilen resimler görsel amaçlıdır ve şekilsel detaylar bağlayıcı değildir.
- YILMAZ REDÜKTÖR, ürünler ve kataloglar üzerinde, müşterileri bilgilendirmeksizin her türlü değişikliği yapma hakkına sahiptir.
- Ürünler teslim alındıktan sonra ürünle birlikte verilen kullanım kılavuzu okunmadan sistem devreye alınmamalıdır.
- Katalogta verilen yağ miktarları referans amaçlıdır. Gerçek yağ seviyesi için redüktör üzerinde bulunan yağ seviye tapası kullanılmalıdır. Yağ vizkozitesi için, redüktör etiketine bakınız.
- Sipariş anında montaj pozisyonu bildirilmeyen M serisi redüktörler **M1**, N serisi redüktörler **M4** montaj pozisyonuna uygun sevk edilir. Etiket yazan montaj pozisyonundan farklı bağlanan redüktörler garanti kapsamından çıkar. Bu katalogta verilen redüktör ağırlıkları ortalama ağırlık değerleridir. Tahvil oranına ve üzerinde bağlı olan aksesuara göre ağırlıklar farklılık gösterebilir.

-Redüktörlerde oluşabilecek arızaları (mil kopması, dişli sıyırması vb.) dikkate alarak yaranma ve hayati risk oluşumlarını önlemek için makine üreticisi veya kullanıcısı makine üzerinde veya redüktörün kullanılacağı yerde gerekli önlemleri almakta sorumludur.

General Specifications of M-N Series Gearboxes

YILMAZ REDÜKTÖR M-N series gearboxes has been developed according to the one part housing principle (monoblock) which has advantages in rigidity, oil leakage, noise level and gear strength. All bearings are supported by one part housing itself and not by cover plates or other parts which connects some other parts. Machining axes with one operation cycle gives high precision and very tight tolerances to axes. With high manufacturing technologies achieved high gear qualities have response with housing from GG25 (M-N003-77.) and GGG40 (M-N87.-97.) materials. This design ensures high bearing and gear lifetime at the mean time; high overhung loads can be taken. Calculations of bearings, gears and shafts used in the gearbox has been made with professional software, which are implemented according to up-to-date standards. The middle bearing support plate makes it possible to have optimum support for bearings used in three stage gearboxes. So run out and deformation by running on load is minimized which makes low noise gearbox production possible.

M-N series gearboxes have the ability of easy mounting and flexible usage. Motor connection of gearboxes can be offered according to customers request suitable to direct, IEC B5 or B14 connection. All models can be delivered foot or flange mounted with two or three stages in one housing. Gearboxes have lower axis height than the old models and compact for the same power and speed. All gearboxes has been designed modular so double gearboxes can be coupled with minimum change. Each tolerances on every part used in gearbox are actively controlled by our quality assurance system.

Attention to the following points !

- Drawings are examples only and the details on the drawings or illustrations are not strictly binding.
- YILMAZ REDÜKTÖR reserve the right to make all kinds of changes in products and catalogues without any notice.
- Prior to commissioning, the operating instructions provided with the gearbox must be observed.
- Oil quantities given are guide values only. The exact quantity of oil should be checked by using the provided oil level plugs according mounting positions. For correct oil viscosity refer to the nameplate.
- If the mounting position is not informed upon ordering, the M series gear units are delivered according to **M1** and N series gear units are delivered according to **M4** mounting position. A different operation then the indicated mounting position on the name plate cancels the warranty. The weights given in this catalogue are mean values. Depending on the ratio and accessories the weights can differ.

- The machine manufacturer or user is responsible for taking the necessary precautions on the machine or at the place where the gearbox will be used, in order to prevent injury and life-threatening risks by taking into account the shaft, gear failures etc. that may occur in the gearboxes.

Allgemeine Eigenschaften von M-N Serie Getrieben

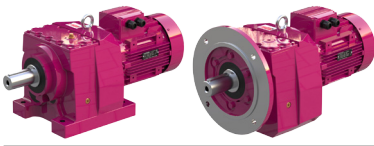
YILMAZ REDÜKTÖR M-N Serie-Getriebe wurde nach dem Prinzip Blockgehäuse, welche Vorteile beim Steifigkeit, Dichtheit, Geräusch und Zahnradfestigkeit hervorbringt, entwickelt. Alle Lagerungen sitzen auf nicht geteilte Oberfläche des Gehäuses, wo es keine Verbindung für Deckel oder ein anderes Teil gibt. Alle Achsen werden mit einer Aufspannung bearbeitet. Dieses Vorgehen erlaubt höchste Genauigkeit bei Achsentoleranzen. Mit hohen Fertigungstechnologien erreichte hohe Zahnqualitäten werden mit Gehäuse aus GG25 (M-N003-77.) und GGG40 (M-N87.-97.) ergänzt. Diese Konstruktion sorgt für hohe Lager- und Zahnlebensdauer; so können hohe Querkraften getragen werden. Berechnungen von Lagern, Getrieben und Wellen im Getriebe werden mit professioneller Software, die gemäß aktuellen Standards implementiert sind, durchgeführt. Die mittlere Trägerplatte ermöglicht eine optimale Unterstützung für Lager welches in der drei stufige Getriebe eingesetzt wird. So werden Rundlauffehler und Verformung unter Last minimiert, was Produktion von geräuscharmen Getrieben möglich macht.

M-N Serie-Getriebe sind leicht montierbar und einsetzbar. Motoranschluss von Getrieben kann nach Kundenwunsch geeignet zu direkte, IEC B5 oder B14-Verbindung angeboten werden. Alle Modelle können mit Fuß oder Flansch in zwei oder drei stufige Getriebegehäusen geliefert werden. Diese Getriebe haben niedrige Achsenhöhe als alte Modelle und sind kompakter für die gleiche Leistung und Geschwindigkeit. Alle Getriebe wurde modular konzipiert, sodass Doppel-Getriebe mit wenigem Aufwand gekoppelt werden kann. Jede Toleranzen auf jedem Teil in Getriebe werden aktiv durch Qualitätssicherungssystem überprüft.

Bitte folgende Punkte beachten !

- Die Abbildungen sind beispielhaft und nicht verbindlich.
- Alle Änderungen auf dem Katalog und an der Produkte bleiben vorbehalten und können ohne Kenntnisnahme erfolgen.
- Vor Inbetriebnahme ist die mit gelieferter Betriebsanleitung zu beachten.
- Angaben über Ölmengen sind unverbindlich. Maßgebend ist die Ölstandsschraube in der geeigneten Montageposition. Ölviskosität und Sorte muss den Angaben des Typenschildes entsprechen.
- Wenn die Bauform bei der Bestellung nicht angegeben ist, erfolgt die Lieferung in der Bauform **M1** für M Serie und **M4** für N Serie. Wenn die Getriebe anders als auf dem Namenschild benannte Bauform eingesetzt werden, verliert die Garantie ihre Gültigkeit. Die angegebenen Gewichte sind unverbindliche Mittelwerte ohne Zubehör; genauere Gewichte sind abhängig von Zubehör und Übersetzung.

- Der Maschinenhersteller oder Betreiber ist dafür verantwortlich, an der Maschine oder am Einsatzort des Getriebes die notwendigen Maßnahmen zu treffen, um Verletzungen und Lebensgefahr unter Berücksichtigung von möglichen Wellen-, Getriebeausfällen etc. in den Getrieben zu vermeiden.



Genel Bilgiler General Information Einführung



YILMAZ REDÜKTÖR olarak tasarım prensibimiz;

- Yüksek teknoloji kullanmak
- Güvenilirlik,
- Yüksek güç yoğunluğu ve verim,
- Montaj uyumluluğu,
- Esnek çözümler

Teknik Tanımlamalar

- Çıkış Momenti (M_2): [Nm]

Motorun verdiği momentin tahvil oranı ve verimle ile çarpılarak elde edilen değerdir. Redüktörün çıkışından alınabilecek moment gösterir.

- Anma Momenti (M_a): [Nm]

Redüktörün $f_s=1$ şartı için mekanik olarak taşıdığı moment değeridir.

- Nominal Güç (P_n): [kW]

Nominal güç, redüktörün $f_s=1$ şartı için mekanik olarak taşıyabileceği güç değeridir. Redüktörlerin nominal güçleri, güç devir tablolarında verilmiştir.

- Çevrim oranı (i):

Redüktörün giriş devrinin çıkış devrine oranıdır. Yılmaz Redüktör M-N serisi redüktörlerde 3,5-23500 arasında değişen çevrim oranları mevcuttur.

- Eşdeğer Güç ve Moment

P_{eq} [kW], T_e [Nm]

Sabit devir altında ancak değişken yük değerlerinde çalışan redüktörlerde, sabit yük altında çalışma şartlarına eşdeğer gelen moment ve güç değerleridir. Hesaplama yöntemi sayfa 23'de verilmiştir.

- İhtiyaç gücü (P_m): [kW]

Redüktörlerin kullanılacağı uygulamanın istenilen şekilde çalışabilmesi için ihtiyaç duyduğu güç değeridir.

- İhtiyaç moment (T): [Nm]

Redüktörün kullanılacağı uygulamanın çalışabilmesi için ihtiyaç duyduğu moment değeridir. Seçilen redüktör için her zaman çıkış momenti-ne eşit yada daha düşük olmalıdır.

- Müsade Edilen Eksenel ve Radyal Yükler F_{qem} , F_{qam} : [N]

Redüktörün giriş veya çıkış milinde müsade edilen eksenel ve radyal yüklerdir.

- Servis Faktörü (f_s):

Redüktörün çalıştığı şartlar ile uyumlu olması için gerekli olan emniyet katsayısıdır. $f_s=1$, düzgün ve sakin yüklerde, günlük 8 saat, saatte 100 dur-kalk çalışmayı karşılar. Detaylar için redüktör seçim bölümüne bakınız.

Teknik Özellikler:

- Ses seviyesi:

Redüktörlerimizin ses seviyesi VDI 2159'da verilen redüktörler için müsade edilen ses seviyelerinin altındadır.

As we are YILMAZ REDÜKTÖR, our design principals are;

- Using high technology
- Reliability
- High power density and efficiency
- Mounting compatible
- Flexible solutions

Technical Explanations

- Output Torque (M_2): [Nm]

Multiplication of motor output torque with transmission ratio and efficiency gives the result of output torque at the output shaft of the gear unit.

- Nominal Torque (M_a): [Nm]

Nominal torque is the mechanical torque which the gearbox can resist under $f_s=1$ conditions.

- Nominal Power (P_n): [kW]

The nominal power is the power which gearbox can mechanically resist under $f_s=1$ condition. The nominal powers are given on the performance tables.

- Ratio (i):

Ratio between output shaft speed and input shaft speed. Available ratios of Yılmaz Redüktör M-N series are between 3,5 to 23500.

- Equivalent Power and Torque

P_{eq} [kW], T_e [Nm]

For gearbox unit with constant speed but variable working conditions : This is the calculated power or torque which is equivalent to the values at working under constant working conditions.

- Required Power (P_m): [kW]

Required power for the applications which is able to drive the system.

- Required Torque (T): [Nm]

Required torque for applications. Required torque always must be equal or smaller than output torque for selected gearbox.

- Permissible Axial and Overhung Loads:

F_{qem} , F_{qam} [N]

Permissible axial and overhung load at the output or input shaft of gearboxes.

- Service Factor (f_s):

Service factor is a safety coefficient, which takes into account the different running conditions of the driven machine. $f_s=1$ is used for uniform loads 8 hours working per day and up to 100 cycle per hour.

Technical Specifications:

- Noise Level:

The noise level of our gearboxes is below the permitted values defined in VDI guidelines 2159 for gear units.

Als YILMAZ REDÜKTÖR unsere Entwurfsprinzipien sind;

- Verwenden von hohen Fertigungstechniken
- Hohe Betriebssicherheit
- Leistungsdichte
- Hoher Wirkungsgrad
- Universale Montagemöglichkeit
- Sonderlösungen

Technische Erläuterungen

- Ausgangsmoment (M_2): [Nm]

Multiplikation von Ausgangsmoment des Motors mit Übersetzung und Division das Ergebnis mit Wirkungsgrad ergibt den Betrag von Ausgangsmoment der Getriebe.

- Nennmoment (M_a): [Nm]

Mechanisches Belastungsmoment der Getriebe unter dem Bedingung $f_s=1$.

- Nennleistung (P_n): [kW]

Die Nennleistung ist die mechanische Grenzfestigkeitsleistung für $f_s=1$. Kann von der Leistung-Drehzahltafel abgelesen werden.

- Übersetzung (i):

Wird aus dem Verhältnis von Ausgang- zu Eingangswinkelgeschwindigkeit bestimmt. Gängige Übersetzungen von Yılmaz M-N Serie Getrieben liegt zwischen 3,5 bis 23500.

- Äquivalente Leistung und Moment

P_{eq} [kW], T_e [Nm]

Für mit konstanten Drehzahl aber unter veränderlichen Betriebsbedingungen arbeitende Getriebe berechnete Leistung und Moment äquivalent zu Werten beim Arbeiten unter konstanten Betriebsbedingungen.

- Notwendige Leistung (P_m): [kW]

Für das Getriebe notwendige Leistung, um Arbeiten von Getriebe bei der für das Getriebe gedachten Anwendung zu gewährleisten.

- Notwendige Moment (T): [Nm]

Notwendige Moment für Anwendungen. Für den ausgewählte Getriebe soll das notwendige Moment gleich dem Ausgangsmoment oder kleiner als diesem Moment sein.

- Zulässige Axial- oder Querkräfte:

F_{qem} , F_{qam} [N]

Bei der Anwendungen während der Betrieb zulässige axiale oder radiale Eingangs- oder Ausgangsbelastungen.

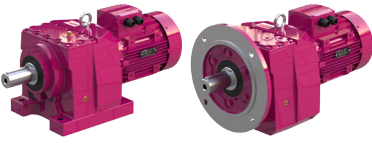
- Betriebsfaktor (f_s):

Dieser Faktor f_s ist ein Sicherheitsfaktor, damit die Getriebe unter verschiedenen Bedingungen mit genügender Sicherheit arbeitet. $f_s=1$ gilt für gleichförmig Belastung, mit 8 Betriebsstunden pro Tag und bis zum 100 Schaltungen pro Stunde.

Technische Informationen:

- Geräuschpegel:

Geräuschstärken aller Getriebe bleiben unter die zulässigen Werte, die für die Getriebe in der VDI-Richtlinie 2159 festgelegt sind.



Genel Bilgiler General Information Einführung



- Boya:

Redüktörlerin standart rengi DIN1843'e göre RAL 7031 dir. İstek üzerine farklı renklerde boyanabilir.

- Yağlama:

M-N serisi redüktörler yağlama tablolarında verilen yağlar ile doldurulmaktadır. Yağ detayları için yağlama bölümüne bakınız.

- Aksesuarlar:

M-N Serisi redüktörlerde aşağıdaki aksesuarlar kullanılabilir

- IEC B5 Motor bağlantı flanşları
- Çıkış Bağlantı Flanşları
- Sıkma bileziği
- Geri dönüş kilidi
- Özel keçe çözümleri,
- Şeffaf yağ seviye göstergesi
- Tork kolu
- Elektromanyetik frenler

Diğer özel aksesuarlar için lütfen, YILMAZ REDÜKTÖR ile temasa geçiniz.

- Yüzey Koruması

Redüktörlerimiz aksi belirtilmedikçe boyalı olarak sevk edilmektedir. DIN EN ISO 12944-2 korozyon standardında belirtilen sınıflardan aşağıdaki tabloda belirtilen 4 kategori için yüzey koruması sağlanmaktadır. Standart boya sınıfımız C2 korozyon kategorisini karşılamaktadır. Farklı bir koruma sınıfı istenirse sipariş aşamasında belirtilmelidir.

Mil, flanş bağlantı yüzeyi gibi boyanmayan yüzeylere paslanmaya karşı koruma sağlamak için korozyon önleyici yağ sürülmektedir.

- Coating:

The gearboxes are painted with RAL 7031 according to DIN1843. Different colors are available upon request.

- Lubrication:

M-N series of gearboxes filled with oils which are indicated on lubrication tables. For lubrication details please refer to the lubrication section.

- Accessories:

The following accessories can be applied to M-N series gearboxes.

- IEC B5 Motor connection flange
- Output flanges
- Shrink Discs
- Backstops
- Special sealing solutions,
- Transparent oil level indicator,
- Torque arm,
- Electromagnetic brakes.

For other accessories please contact, YILMAZ REDÜKTÖR.

- Surface Protection

Our products are all painted unless otherwise stated. 4 corrosion categories which are mentioned below can be offered according to corrosion categories of DIN EN ISO 12944-2 standard. Our standard paint meets C2 corrosion category. If different category is requested, please inform before order.

Unpainted parts such as shaft, flange connection surface are coated with anti-corrosion paint before shipment against corrosion.

- Lackierung:

Die Getriebe werden mit der Farbe RAL 7031 nach DIN1843 lackiert. Auf Wunsch sind Sonderlackierungen möglich.

- Schmierung:

M-N Serie Getriebe werden mit Ölen entsprechend der Schmierungstabellen, falls nicht anders vereinbart, geliefert. Für weitere Schmierungsangaben siehe Kapitel Schmierung.

- Zubehör:

Folgendes Zubehör kann für Getriebe der M-N Serie geliefert werden.

- IEC B5 Motor Adapter,
- Abtriebsflansch,
- Schrumpfscheiben,
- Rücklaufsperrn,
- Unterschiedliche Dichtungssysteme,
- Ölstandzeiger,
- Drehmomentstütze,
- Elektromagnetische Bremsen

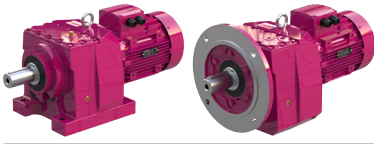
Für weiteres Zubehör kontaktieren Sie bitte mit, YILMAZ REDÜKTÖR.

- Oberflächenschutz

Getriebe von Yılmaz Redüktör werden lackiert und so geliefert falls nicht anders vereinbart ist. Die 4 untenstehenden Korrosionskategorien können nach Korrosionsschutz-Basisnorm DIN EN ISO 12944-2 angeboten werden. Unsere Standard-Lackierung erfüllt C2-Korrosionskategorie. Wenn Sie eine andere Kategorie erwünschen, informieren Sie uns bitte darüber vor der Bestellung.

Nicht lackierte Teile (z.B. Welle, Oberfläche des Anschlussflanschs) werden mit einem Schutzmittel vor dem Versand geschmiert, um vor Korrosion und Rost zu schützen.

Korozyon Kategorisi Corrosion Categories Korrosivitätskategorie	Çevre Şartları Ambient Conditions Umgebungsbedingungen	Boya Tipi Paint Type Lackierung	Boya Kalınlıkları Paint Thickness Sollschichtdicke
C2 (Standard)	İç ortam ve muhafazalı dış ortam Nem ve kirlilik oranı düşük çalışma ortamı Indoor installation and outdoor installation with protection roof Environments with low humidity and contamination Innenaufstellung und Außenaufstellung mit Überdachung oder Schutzeinrichtung Atmosphäre mit niedriger Luftfeuchtigkeit und Verunreinigung	Çift Komponent Astar Two-Component Primer Coat Zwei-Komponenten-Grundierung	60 µm
		Akrilik Sonkat Acrylic Top Coat Akryl-Decklack	40 µm
C3	İç ortam ve atmosfere açık dış ortam Orta seviyede nem ve kirlilik olan çalışma ortamı Indoor installation and outdoor installation subject to weathering Environments with mean humidity and contamination Innenaufstellung und Außenaufstellung im Freien unter Bewitterung Atmosphäre mit mäßiger Luftfeuchtigkeit und Verunreinigung	Epoksi Astar Epoxy Primer Coat Epoxy-Grundierung	80 µm
		Akrilik Sonkat Acrylic Top Coat Akryl-Decklack	40 µm
C4	İç ortam ve atmosfere açık dış ortam Genelde yüksek nem ve kimyasal madde olan çalışma ortamı Indoor installation and outdoor installation subject to weathering Environments with occasionally high humidity and chemical contamination Innenaufstellung und Außenaufstellung im Freien unter Bewitterung Atmosphäre gelegentlich mit hoher Luftfeuchtigkeit und chemischer Verunreinigung	Epoksi Astar Epoxy Primer Coat Epoxy-Grundierung	180 µm
		Akrilik Sonkat Acrylic Top Coat Akryl-Decklack	40 µm
C5-I / C5-M	İç ortam ve atmosfere açık dış ortam Sürekli yüksek nem ve kimyasal madde ile temizlik yapılan çalışma ortamı Indoor installation and outdoor installation subject to weathering Environments with permanent high humidity and chemical cleaning contamination Innenaufstellung und Außenaufstellung im Freien unter Bewitterung Atmosphäre mit ständiger hoher Luftfeuchtigkeit und chemischer Verunreinigung (Nassreinigung mit Säuren/Laugen und auch mit chemischen Reinigungsmitteln).	Çinko Yüklemeli Epoksi Astar Epoxy Zinc Primer Coat Epoxy-Zink-Grundierung	70 µm
		Epoksi Astar Miox Epoxy Miox Primer Coat Epoxy-Miox-Grundierung	150 µm
		Akrilik Sonkat Acrylic Top Coat Akryl-Decklack	40 µm



Genel Bilgiler General Information Einführung



Tip Tanımlaması / Unit Designation / Typenbezeichnungen

M R 4 7 3 - 3 E90S / 4C - L02

Fren / Brake / Bremse

L-220V Fanlı / With Fan / Mit Lüfter

P-24V Fanlı / With Fan / Mit Lüfter

S-220 V Fansız / Without Fan / Ohne Lüfter

Z-24 V Fansız / Without Fan / Ohne Lüfter

01-10 Nm 10-100 Nm

02-25 Nm 20-200 Nm

04-40 Nm 30-300 Nm

05-50 Nm 40-400 Nm

Kutup sayısı / Number of poles / Anzahl der Polen

Motor Büyüklüğü / Motor Size / Motorbaugröße

MR / NR ve MV / NV tipleri için / For MR / NR and MV / NV Types / Für die Typen

MR / NR und MV / NV

E90S / 4

Kutup Sayısı / Pole Number / Anzahl der Polen

Gövde uzunluğu / Frame Length / Gehäuselänge des Motors

Motor büyüklüğü / Motor size / Motorbaugröße

Motor tipi / Motor type / Motortyp

Motor Verim Sınıfı / Motor Efficiency Class / Motor-Effizienzklasse

MN / NN tipleri için / For MN / NN types / Für die Typen

MN / NN

A06 :63 B5 A09 : 90 B5 A13:132 B5 A25: 250 B5

B06 :63 B14 B09 : 90 B14 B13:132 B14 A28: 280 B5

A07 :71 B5 A10 :100 B5 A16:160 B5 A31: 315 B5

B07 :71 B14 B10 :100 B14 A18:180 B5

A08 :80 B5 A11 :112 B5 A20:200 B5

B08 :80 B14 B11 :112 B14 A22:225 B5

Kademe Sayısı / Stage / Anzahl der Stufen

2 Kademe / 2 Stages / 2 stufig

5 Kademe / 5 Stages / 5 stufig

3 Kademe / 3 Stages / 3 stufig

6 Kademe / 6 Stages / 6 stufig

4 Kademe / 4 Stages / 4 stufig

Revizyon Numarası / Revision Number / Änderungsnummer

Gövde Büyüklük / Housing Size / Größe der Gehäuse

0...9

Giriş Tipi / Input Type / Eingangstyp

R : Motorlu / With Motor / Mit Motor

N : Motorsuz ve IEC B5/B14 Flanş Girişli / IEC B5 / B14 Flanged without Motor / Mit IEC B5/B14 Motorflansch ohne Motor

V : Motorlu ve IEC B5/B14 Flanş Girişli / IEC B5 / B14 Flanged with Motor / Mit Motor und IEC B5/B14 Motorflansch

T : Motorsuz Giriş Millî / With Solid Input Shaft / Eingang ohne Motor

RF : Motorlu, Çıkış Flanşlı, Ayak Bağlantılı (M Tipi) / With Motor and Output Flange, Foot Mounted (M Type) / Mit Motor und Ausgangsflansch, Fussausführung (M Typ)

NF : IEC B5 / B14 Flanşlı Motorsuz, Ayak Bağlantılı (M Tipi) / IEC B5 / B14 Flanged Without Motor, Foot Mounted (M Type) / IEC B5 / B14 Flansch ohne Motor, Fussausführung (M Typ)

VF : IEC B5 / B14 Flanşlı Motorlu, Ayak Bağlantılı (M Tipi) / IEC B5 / B14 Flanged With Motor, Foot Mounted (M Type) / IEC B5 / B14 Flansch mit Motor, Fussausführung (M Typ)

TF : Motorsuz, Çıkış Flanşlı, Ayak Bağlantılı (M Tipi) / Without Motor and Output Flange, Foot Mounted (M Type) / Ohne Motor und Ausgangsflansch, Fussausführung (M Typ)

RB : Motorlu, Agitator Çıkış Boğazlı (N Tipi) / With Motor, Agitator Neck at Output (N Type) / Mit Motor, Mischerflansch am Ausgang (N Typ)

NB : IEC B5 / B14 Flanşlı Motorsuz, Agitator Çıkış Boğazlı (N Tipi) / IEC B5 / B14 Flanged Without Motor, Agitator Neck at Output (N Type) / IEC B5 / B14 Flansch ohne Motor, Mischerflansch am Ausgang (N Typ)

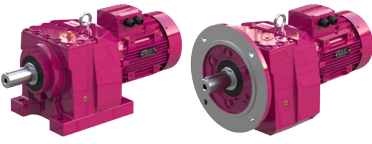
VB : IEC B5 / B14 Flanşlı Motorlu, Agitator Çıkış Boğazlı (N Tipi) / IEC B5 / B14 Flanged With Motor, Agitator Neck at Output (N Type) / IEC B5 / B14 Flansch mit Motor, Mischerflansch am Ausgang (N Typ)

TB : Motorsuz, Agitator Çıkış Boğazlı (N Tipi) / Without Motor, Agitator Neck at Output (N Type) / Ohne Motor, Mischerflansch am Ausgang (N Typ)

Redüktör Tipi / Gearbox Type / Getriebe

M Serisi / M Serie / M Serie

N Serisi / N Serie / N Serie

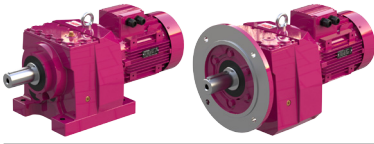


Genel Bilgiler General Information Einführung



Tip Tanımlaması / Unit Designation / Typenbezeichnungen

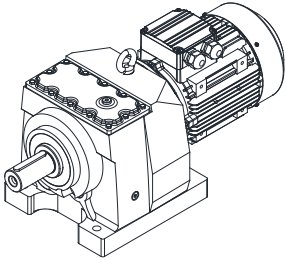
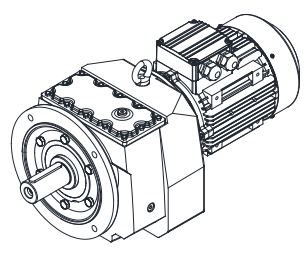
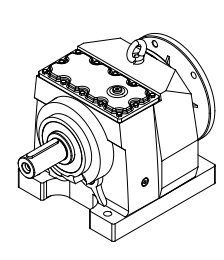
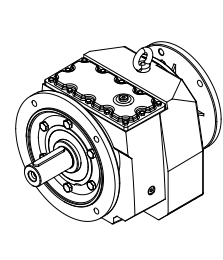
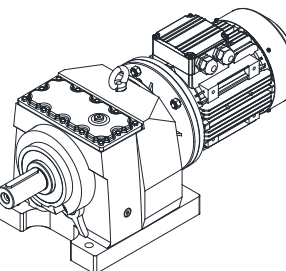
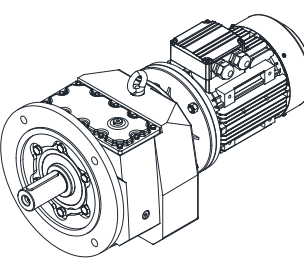
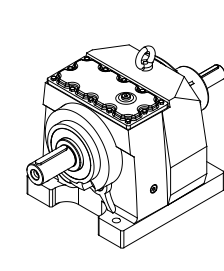
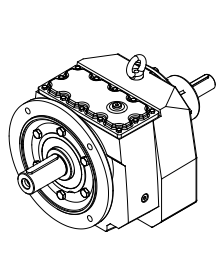
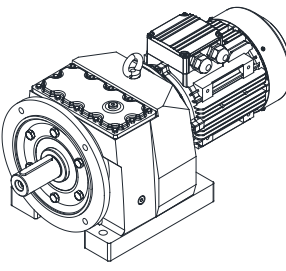
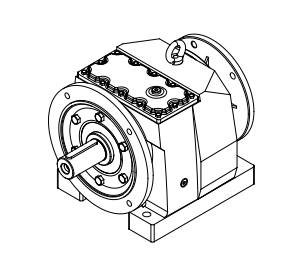
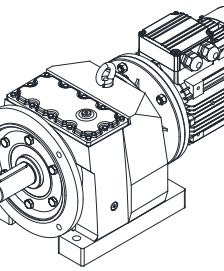
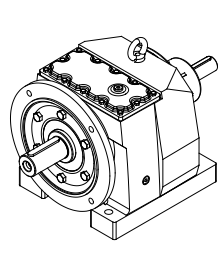
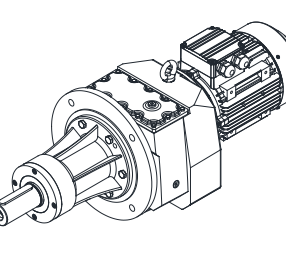
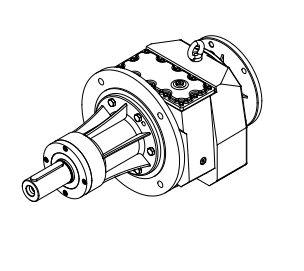
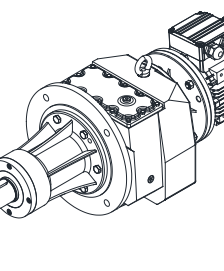
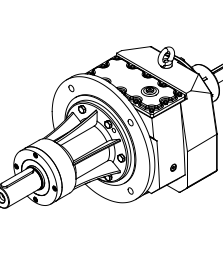
MR...	Monoblok tip, helisel redüktörler, motorlu, ayaklı / Monoblock type helical geared motors, foot mounted / Stirnradtriebemotoren mit Blockgehäuse, Ausführung mit Fuss
NR...	Monoblok tip, helisel redüktörler, motorlu, flanşlı / Monoblock type helical geared motors, flange mounted / Stirnradtriebemotoren mit Blockgehäuse, Ausführung mit Flansch
MN...	Monoblok tip, helisel redüktörler, motorsuz, IEC B5/B14 flanşlı, ayaklı / Monoblock type helical geared units with IEC B5/B14 motor flange, foot mounted / Stirnradgetriebe mit Blockgehäuse und IEC B5/B14 Motorflansch, Ausführung mit Fuss
NN...	Monoblok tip, helisel redüktörler, motorsuz, IEC B5/B14 flanşlı, çıkış flanşlı / Monoblock type helical geared units with IEC B5/B14 motor flange, flange mounted / Stirnradgetriebe mit Blockgehäuse und IEC B5/B14-Flansch, Ausführung mit Flansch
MV...	Monoblok tip, helisel redüktörler, IEC B5/B14 flanşlı, motorlu, ayaklı / Monoblock type helical geared motors with IEC B5/B14 motor flange, foot mounted / Stirnradtriebemotoren mit Blockgehäuse und IEC B5/B14-Flansch, Ausführung mit Fuss
NV...	Monoblok tip, helisel redüktörler, IEC B5/B14 flanşlı, motorlu, flanşlı / Monoblock type helical geared motors with IEC B5/B14 motor flange, flange mounted / Stirnradtriebemotoren mit Blockgehäuse und IEC B5/B14, Ausführung mit Flansch
MT...	Monoblok tip, helisel redüktörler, motorsuz, mil girişli, ayaklı / Monoblock type helical geared units with solid input shaft, foot mounted / Stirnradgetriebe mit Blockgehäuse und Eingangsvollwelle, Ausführung mit Fuss
NT...	Monoblok tip, helisel redüktörler, motorsuz, mil girişli, flanşlı / Monoblock type helical geared units with solid input shaft, flange mounted / Stirnradgetriebe mit Blockgehäuse und Eingangsvollwelle, Ausführung mit Flansch
MRF...	Monoblok tip, helisel redüktörler, ayaklı, çıkış flanşlı, motorlu / Monoblock type helical geared motors, foot mounted, with output flange / Stirnradtriebemotoren mit Ausgangsflansch, Ausführung mit Fuss
MNF...	Monoblok tip, helisel redüktörler, ayaklı, çıkış flanşlı, motorsuz, IEC B5/B14 flanşlı / Monoblock type helical geared units, foot mounted, with IEC B5/B14 flange, with output flange / Stirnradtriebemotoren mit Ausgangsflansch und IEC B5/B14-Flansch, Ausführung mit Fuss
MVF...	Monoblok tip, helisel redüktörler, ayaklı, çıkış flanşlı, motorlu, IEC B5/B14 flanşlı / Monoblock type helical geared motors, foot mounted, with IEC B5/B14 flange, with output flange / Stirnradtriebemotoren mit Ausgangsflansch und IEC B5/B14-Flansch, Ausführung mit Fuss
MTF...	Monoblok tip, helisel redüktörler, ayaklı, çıkış flanşlı, motorsuz, giriş milli / Monoblock type helical geared units, foot mounted, with solid input shaft, with output flange / Stirnradgetriebe mit Ausgangsflansch und Eingangsvollwelle, Ausführung mit Fuss
NRB...	Monoblok tip, helisel redüktörler, agitator boğazlı, motorlu / Monoblock type helical geared motors, with agitator output flange / Stirnradtriebemotoren mit Blockgehäuse und Mischerflansch
NNB...	Monoblok tip, helisel redüktörler, agitator boğazlı, motorsuz, IEC B5/B14 flanşlı / Monoblock type helical geared units, with agitator output flange with IEC B5/B14 flange / Stirnradgetriebe mit Blockgehäuse, IEC B5/B14- und Mischerflansch
NVB...	Monoblok tip, helisel redüktörler, agitator boğazlı, motorlu, IEC B5/B14 flanşlı / Monoblock type helical geared motors, with agitator output flange with IEC B5/B14 flange / Stirnradtriebemotoren mit Blockgehäuse, IEC B5/B14- und Mischerflansch
NTB...	Monoblok tip, helisel redüktörler, agitator boğazlı, motorsuz, mil girişli / Monoblock type helical geared units, with agitator output flange, with solid input shaft / Stirnradgetriebe mit Blockgehäuse, Eingangsvollwelle und Mischerflansch

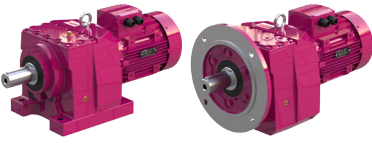


Genel Bilgiler
General Information
Einführung



Tip Tanımlaması / Unit Designation / Typenbezeichnungen

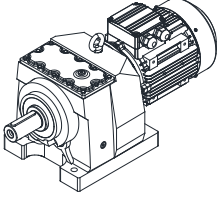
			
MR...	NR...	MN...	NN...
			
MV...	NV...	MT...	NT...
			
MRF...	MNF...	MVF...	MTF...
			
NRB...	NNB...	NVB...	NTB...



Genel Bilgiler General Information Einführung

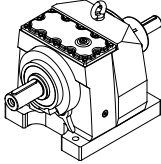


Örnek Tip Tanımlamaları MR172 - 3E90S/4C - L05



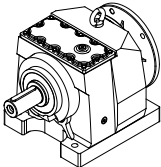
M.....: M serisi redüktör
R.....: Motor bağlantılı
1.....: Gövde büyüklük
7.....: Revizyon numarası
2.....: Kademe sayısı
3.....: Verim sınıfı
E.....: Motor tipi
90S.....: Motor büyüklüğü
4C.....: Motor kutup sayısı
L05.....: Fren Tipi

MT373



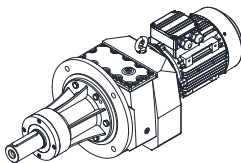
M.....: M serisi redüktör
T.....: Motorsuz giriş millî
3.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı

MN473 - A11



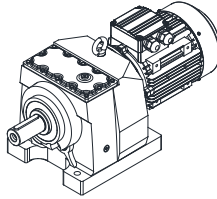
M.....: M serisi redüktör
N.....: Motorsuz ve IEC B5 giriş flanşlı
4.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı
A11.....: 112 tip motor, B5 bağlantı flanş

NRB473 - 3E100L/4C



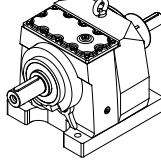
N.....: N serisi redüktör
R.....: Motorlu
B.....: Agitator boğazlı
4.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı
3.....: Verim sınıfı
E.....: Motor tipi
100L.....: Motor büyüklüğü
4C.....: Motor kutup sayısı

Sample Designations MR172 - 3E90S/4C - L05



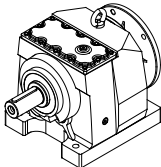
M.....: M series gearbox
R.....: With motor connection
1.....: Gear unit size
7.....: Revision number
2.....: Stage number
3.....: Efficiency class
E.....: Motor type
90S.....: Motor frame size
4C.....: Number of poles
L05.....: Brake type

MT373



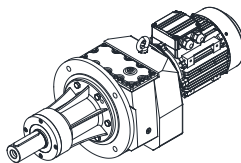
M.....: M series gearbox
T.....: Solid input shaft
3.....: Gear unit size
7.....: Revision number
3.....: Stage number

MN473 - A11



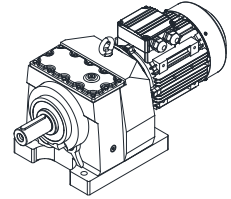
M.....: M series gearbox
N.....: IEC B5 flange without motor input
4.....: Gear unit size
7.....: Revision number
3.....: Stage number
A11.....: Motor type 112, B5 flange

NRB473 - 3E100L/4C



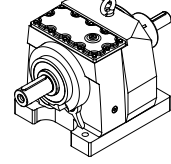
N.....: N series gearbox
R.....: With motor
B.....: Agitator flange
4.....: Gear unit size
7.....: Revision number
3.....: Stage number
3.....: Efficiency class
E.....: Motor type
100L.....: Motor size
4C.....: Number of poles

Beispiele für Typenbezeichnung MR172 - 3E90S/4C - L05



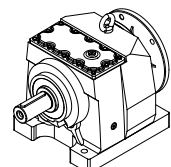
M.....: M Serie Getriebe
R.....: Motorverbindung
1.....: Größe der Gehäuse
7.....: Änderungsnummer
2.....: Stufenanzahl
3.....: Effizienzklasse
E.....: Motortyp
90S.....: Motorbaugröße
4C.....: Anzahl der Polen
L05.....: Bremse

MT373



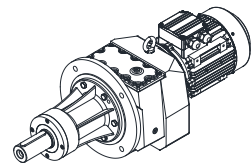
M.....: M Serie Getriebe
T.....: Vollwelleneingang ohne Motor
3.....: Größe der Gehäuse
7.....: Änderungsnummer
3.....: Stufenanzahl

MN473 - A11

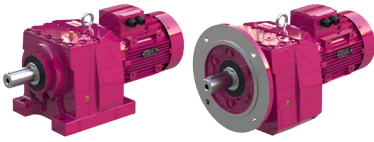


M.....: M Serie Getriebe
N.....: IEC B5 Flansch ohne Motor
4.....: Größe der Gehäuse
7.....: Änderungsnummer
3.....: Stufenanzahl
A11.....: Motortyp 112, B5 Motorflansch

NRB473 - 3E100L/4C



N.....: N Serie Getriebe
R.....: Mit Motor
B.....: Mischerhals
4.....: Größe der Gehäuse
7.....: Änderungsnummer
3.....: Stufenanzahl
3.....: Effizienzklasse
E.....: Motortyp
100L.....: Motorbaugröße
4C.....: Anzahl der Pole



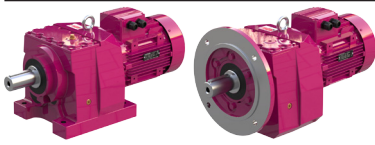
Genel Bilgiler General Information Einführung



Motor Büyüklüğüne Göre Geometrik Mümkün Çevrim Oranları Geometrically Possible Combinations of Ratios According to Motor Size Geometrisch mögliche Kombinationen von Übersetzungen nach Motorbaugröße

Motor Büyüklüğü / Motor Size / Motorbaugröße

Tip Type Typ	Kademe Stages Stufen	63	71	80	90	100	112	132
MR002	2	3,62 - 11,14	3,62 - 11,14	3,62 - 11,14	3,62 - 11,14	-	-	-
MR003	3	13,61 - 45,18	13,61 - 45,18	13,61 - 32,02	13,61 - 32,02	-	-	-
MR102	2	3,94 - 15,95	3,94 - 15,95	3,94 - 15,95	3,94 - 15,95	-	-	-
MR103	3	17,33 - 50,51	17,33 - 50,51	17,33 - 50,51	17,33 - 50,51	-	-	-
MR172	2	3,38 - 20,92	3,38 - 20,92	3,38 - 20,92	3,38 - 20,92	3,38 - 18,28	3,38 - 6,60 11,08 - 12,66	-
MR173	3	26,10 - 99,21	26,10 - 99,21	26,10 - 99,21	26,10 - 99,21	26,10 - 87,60	26,10 - 30,26 49,81 - 57,76	-
MR202	2	3,50 - 23,01	3,50 - 23,01	3,50 - 23,01	3,50 - 23,01	3,50 - 20,10	3,50 - 13,92	-
MR203	3	23,23 - 68,03	23,23 - 68,03	23,23 - 68,03	23,23 - 68,03	23,23 - 24,77 36,02 - 59,43	36,02 - 41,16	-
MR272	2	3,16 - 25,89	3,16 - 25,89	3,16 - 25,89	3,16 - 25,89	3,16 - 21,43	3,16 - 16,07	3,16 - 11,95
MR273	3	19,00 - 138,55	19,00 - 138,55	19,00 - 138,55	19,00 - 138,55	19,00 - 121,03	19,00 - 83,83	19,00 - 60,66
MR275	5	149,02 - 1194,61	149,02 - 1194,61	149,02 - 1194,61	149,02 - 1194,61	-	-	-
MR276	6	1463,49 - 2920,17	1463,49 - 2920,17	1463,49 - 2920,17	1463,49 - 2920,17	-	-	-
MR282	2	-	4,20 - 6,25 9,61 - 30,37	4,20 - 6,25 9,61 - 30,37	4,20 - 6,25 8,33 - 30,37	3,15 - 25,23	3,15 - 19,06	3,15 - 14,31
MR283	3	-	18,33 - 27,80 41,96 - 137,91	18,33 - 27,80 41,96 - 137,91	18,33 - 27,80 35,98 - 137,91	18,33 - 114,14	18,33 - 85,60	18,33 - 27,80 41,96 - 63,65
MR284	4	158,52 - 431,18	158,52 - 431,18	158,52 - 431,18	158,52 - 431,18	-	-	-
MR285	5	376,94 - 1365,28	376,94 - 1365,28	376,94 - 1365,28	376,94 - 1365,28	-	-	-
MR286	6	1817,07 - 3214,82	1817,07 - 3214,82	1817,07 - 3214,82	1817,07 - 3214,82	-	-	-
MR372	2	-	13,53 - 23,33	13,53 - 23,33	3,74 - 4,29 ; 5,97 - 6,84 9,41 - 10,80 ; 13,53 - 23,33	3,28 - 23,33	3,28 - 20,62	3,28 - 16,20
MR373	3	-	18,68 - 20,64 29,47 ; 48,00 - 157,76	18,68 - 20,64 29,47 ; 48,00 - 157,76	18,68 - 20,64 ; 25,27 - 29,47 ; 41,16 - 157,76	18,68 - 138,72	18,68 - 97,92	18,68 - 72,81
MR374	4	181,34 - 524,07	181,34 - 524,07	181,34 - 524,07	181,34 - 524,07	-	-	-
MR375	5	488,82 - 1561,78	488,82 - 1561,78	488,82 - 1561,78	488,82 - 1561,78	-	-	-
MR376	6	1217,14 - 4945,64	1217,14 - 4945,64	1217,14 - 4945,64	1217,14 - 4945,64	-	-	-
MR472	2	-	-	18,72 - 22,15	9,53 - 10,79 ; 13,56 - 15,35 18,72 - 22,15	4,89 ; 8,47 - 22,15	4,89 ; 8,47 - 22,15	3,27 - 22,15
MR473	3	-	-	86,52 - 219,00	42,75 - 49,05 ; 63,70 - 73,09 86,52 - 219,00	21,74 ; 30,93 - 157,90	18,04 - 139,54	18,04 - 109,64
MR474	4	-	229,46 - 674,46	229,46 - 674,46	229,46 - 674,46	229,46 - 295,98	229,46 - 259,55	-
MR475	5	726,85 - 2522,85	726,85 - 2522,85	726,85 - 2522,85	726,85 - 2522,85	726,85 - 1631,08	726,85 - 1386,75	-
MR476	6	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 5141,34	2148,94 - 4822,33	-
MR572	2	-	-	-	-	17,07 - 27,00	17,07 - 27,00	4,95 - 27,00
MR573	3	-	-	-	-	26,54 - 167,32	22,64 - 134,45	22,64 - 118,95
MR574	4	-	144,37 - 574,90	144,37 - 574,90	144,37 - 574,90	144,37 - 402,12	144,37 - 194,15 301,59	144,37
MR575	5	620,62 - 2736,94	620,62 - 2736,94	620,62 - 2736,94	620,62 - 2736,94	-	-	-
MR576	6	2850,22 - 8091,82	2850,22 - 8091,82	2850,22 - 8091,82	2850,22 - 8091,82	-	-	-
MR672	2	-	-	-	-	-	20,74 - 23,18	5,08 - 5,73 10,62 - 23,18
MR673	3	-	-	-	-	-	110,55 - 196,61	30,20 - 174,89
MR674	4	-	-	-	215,97 - 500,39	215,97 - 500,39	215,97 - 442,20	-
MR675	5	-	730,46 - 2578,93	730,46 - 2578,93	730,46 - 2578,93	583,04 - 2578,93	583,04 - 1113,08	583,04 - 995,91
MR676	6	-	2863,86 - 17441,07	2863,86 - 17441,07	2863,86 - 17441,07	2863,86 - 7490,08	2863,86 - 5287,12	2863,86 - 3931,45
MR772	2	-	-	-	-	-	-	7,26 12,98 - 21,40
MR773	3	-	-	-	-	-	-	17,53 - 19,76 ; 34,89 - 39,33 68,15 - 208,82
MR774	4	-	-	-	190,96 - 594,92	190,96 - 594,92	190,96 - 594,92	190,96 - 467,43
MR775	5	-	641,40 - 4812,09	641,40 - 4812,09	641,40 - 4812,09	641,40 - 3103,85	641,40 822,02 - 1252,60	822,02 - 984,18
MR776	6	-	2916,59 - 23464,25	2916,59 - 23464,25	2916,59 - 23464,25	2916,59 - 8428,93	2916,59 - 5949,83	2916,59 - 4424,24
MR872	2	-	-	-	-	-	-	-
MR873	3	-	-	-	-	-	-	56,54 - 110,17
MR874	4	-	-	-	-	188,08 - 446,42	188,08 - 390,74	107,60 - 345,67
MR875	5	-	537,75 - 1924,32	537,75 - 1924,32	537,75 - 1924,32	495,97 - 1924,32	495,97 - 1700,56	495,97 - 1336,15
MR876	6	-	2108,33 - 17501,59	2108,33 - 13014,00	2108,33 - 13014,00	2108,33 - 11443,34	2108,33 - 3892,30	2108,33 - 2894,28
MR972	2	-	-	-	-	-	-	-
MR973	3	-	-	-	-	-	-	-
MR974	4	-	-	-	-	172,08 - 510,11	172,08 - 510,11	172,08 - 510,11
MR975	5	-	-	914,74 - 2027,97	914,74 - 2027,97	588,87 - 2027,97	588,87 - 2027,97	462,18 - 2027,97
MR976	6	-	-	2836,64 - 20051,59	2836,64 - 20051,59	2836,64 - 11064,86	2836,64 - 8620,11	2836,64 - 5357,43

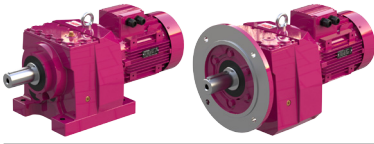


Genel Bilgiler
General Information
Einführung



Motor Büyüklüğüne Göre Geometrik Mümkün Çevrim Oranları
Geometrically Possible Combinations of Ratios According to Motor Size
Geometrisch mögliche Kombinationen von Übersetzungen nach Motorbaugröße

Motor Büyüklüğü / Motor Size / Motorbaugröße								
Tip Type Typ	Kademe Stages Stufen	160	180	200	225	250	280	315
MR002	2	-	-	-	-	-	-	-
MR003	3	-	-	-	-	-	-	-
MR102	2	-	-	-	-	-	-	-
MR103	3	-	-	-	-	-	-	-
MR172	2	-	-	-	-	-	-	-
MR173	3	-	-	-	-	-	-	-
MR202	2	-	-	-	-	-	-	-
MR203	3	-	-	-	-	-	-	-
MR272	2	-	-	-	-	-	-	-
MR273	3	-	-	-	-	-	-	-
MR275	5	-	-	-	-	-	-	-
MR276	6	-	-	-	-	-	-	-
MR282	2	3,15 - 3,64 7,21 - 8,33	-	-	-	-	-	-
MR283	3	30,82 - 35,98	-	-	-	-	-	-
MR284	4	-	-	-	-	-	-	-
MR285	5	-	-	-	-	-	-	-
MR286	6	-	-	-	-	-	-	-
MR372	2	3,28 - 13,53	-	-	-	-	-	-
MR373	3	21,65 - 25,27 35,25 - 41,16	-	-	-	-	-	-
MR374	4	-	-	-	-	-	-	-
MR375	5	-	-	-	-	-	-	-
MR376	6	-	-	-	-	-	-	-
MR472	2	3,27 - 18,72	3,27 - 15,35	-	-	-	-	-
MR473	3	18,04 - 84,46 ; 91,58	18,04 - 73,09	-	-	-	-	-
MR474	4	-	-	-	-	-	-	-
MR475	5	-	-	-	-	-	-	-
MR476	6	-	-	-	-	-	-	-
MR572	2	4,37 - 23,02	4,37 - 19,15	4,37 - 14,54	-	-	-	-
MR573	3	22,64 - 100,53	22,64 - 39,98 54,74 - 82,45	-	-	-	-	-
MR574	4	-	-	-	-	-	-	-
MR575	5	-	-	-	-	-	-	-
MR576	6	-	-	-	-	-	-	-
MR672	2	3,29 - 23,18	3,29 - 23,18	3,29 - 17,93	3,29 - 11,97	-	-	-
MR673	3	26,66 - 149,11	26,66 - 124,07	26,66 - 94,17	26,66 - 34,36 53,99 - 61,42	-	-	-
MR674	4	-	-	-	-	-	-	-
MR675	5	583,04 - 673,70	-	-	-	-	-	-
MR676	6	-	-	-	-	-	-	-
MR772	2	4,73 - 21,40	4,73 - 21,40	4,73 - 21,40	4,73 - 14,54	4,73 - 14,54	-	-
MR773	3	15,63 - 178,78	15,63 - 148,73	15,63 - 115,06	15,63 - 76,81	15,63 - 76,81	-	-
MR774	4	-	-	-	-	-	-	-
MR775	5	-	-	-	-	-	-	-
MR776	6	-	-	-	-	-	-	-
MR872	2	4,95 ; 5,99 - 10,09	4,95 ; 5,99 - 10,09	4,32 - 10,09	4,32 - 10,09	4,32 - 10,09	4,32 - 10,09	-
MR873	3	13,30 ; 16,09 - 20,28 27,39 - 110,17	13,30 ; 16,09 - 20,28 27,39 - 110,17	11,59 - 86,51	11,59 - 52,86	11,59 - 52,86	11,59 - 46,12	-
MR874	4	107,60 - 292,15	107,60 - 239,61	107,60 - 174,68	-	-	-	-
MR875	5	495,97 - 537,75	-	-	-	-	-	-
MR876	6	-	-	-	-	-	-	-
MR972	2	7,92 - 9,99 ; 12,86 - 16,23	7,92 - 9,99 ; 12,86 - 16,23	7,11 - 16,23	7,11 - 16,23	7,11 - 16,23	7,11 - 16,23	7,11 - 16,23
MR973	3	20,36 - 26,03 ; 33,08 - 42,30 54,80 - 186,95	20,36 - 26,03 ; 33,08 - 42,30 54,80 - 166,73	18,15 - 132,83	18,15 - 91,56	18,15 - 91,56	18,15 - 70,07	18,15 - 70,07
MR974	4	172,08 - 216,03	172,08 - 193,13	-	-	-	-	-
MR975	5	462,18 - 842,80	462,18 - 750,24	-	-	-	-	-
MR976	6	-	-	-	-	-	-	-



Genel Bilgiler General Information Einführung



Servis Faktörü

Servis faktörü (fs) redüktörün çalıştığı şartlar ile uyumlu olması için gerekli olan emniyet katsayısıdır. "fs =1" Düzgün ve sakin yüklerde, günlük 8 saat ve saatte 100 start çalışmayı karşılar.

Aşağıdaki etkenlere bağlıdır:

- Günlük çalışma süresi
- Yük sınıfı
- Bir saatteki start sayısı
- Redüktör tahrik tipi
- Diğer gözlemler

Bu etkenleri göz önüne aldığımızda, gerekli servis faktörünü belirlemek için:

1. Makinanın günlük çalışma süresini tespit ediniz.
2. Makinanın ne türde yükler verdiğini tespit ediniz (Sayfa 17-18).

- U - Düzgün ve sabit yükler
- M - Orta darbeli yükler
- H - Ağır darbeli yükler

Yük sınıfının daha teknik seçimi için rotora indirgenmiş toplam atalet momenti formülünden faydalanabilirsiniz (Sayfa 18).

3. Saatteki start sayısını tespit ediniz.
4. İlk üç maddeye bağlı servis faktörünü aşağıdaki tablodan seçiniz.
5. fs Redüktörümüzün tahrik tipine bağlı olarak "k" katsayısı ile çarpılarak artırılır.

- k=1 :Elektrik motoru veya hidromotor
k=1.25 :İçten yanmalı çok silindirli motor
k=1.5 :İçten yanmalı tek silindirli motor

Service Factor

Service Factor (fs) is a safety coefficient, which takes into account the different running conditions of the driven machine. "fs=1" is used for uniform loads 8 hours working per day and up to 100 starts per hour.

Service factor depends on:

- Running time
- Nature of load
- Frequency of starting
- Driver type
- Other considerations

For the right selection of the needed service factor for your machine;

1. Determine the running time of driven machine.
2. Select the nature of load of driven machine (Page 17-18).

- U - Uniform loads
- M - Moderate loads
- H - Heavy shock loads

For a better selection, the nature of load can be calculated from the formulas given (page 18).

3. Determine frequency of starting
4. After determining the above mentioned factors, the service factor can be easily selected from the table given below.
5. The selected service factor must be multiplied with the factor "k" according to the driver type;

- k=1 :Electric motor or Hydrolicmotor
k=1.25 :Multicylinder internal combustion engine
k=1.5 :Single cylinder internal combustion engine

Betriebsfaktor

Der Betriebsfaktor (fs) ist ein Sicherheitsfaktor für die Getriebe, damit sie unter den Betriebsbedingungen sicher arbeiten. "fs =1" steht für gleichförmige Belastung, 8 Stunden pro Tag und bis zu 100 Schaltungen pro Stunde.

Betriebsfaktor ist abhängig von:

- Betriebsdauer
- Belastungsart
- Schalzhäufigkeit
- Antriebsart
- Andere Faktoren

Um die richtigen Betriebsfaktor festzulegen;

1. Betriebsdauer der angetriebenen Maschine bestimmen.
2. Belastungsart der angetriebenen Maschine auswählen.

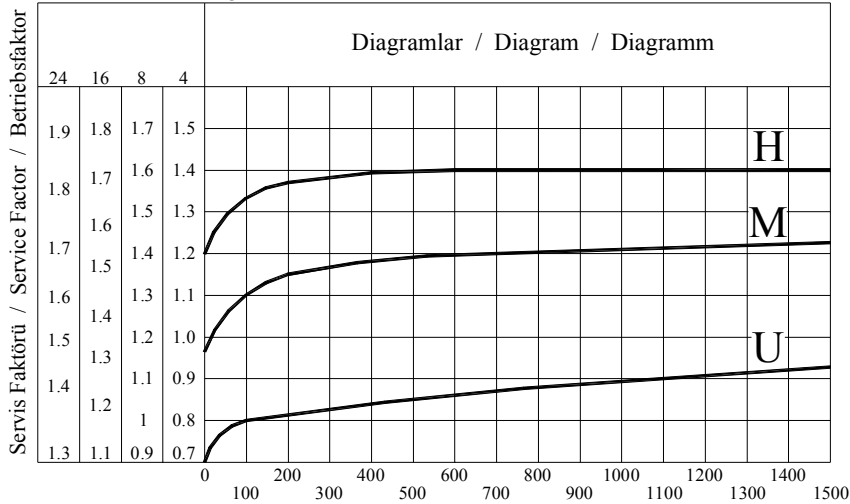
- U - Gleichförmig Belastung
- M - Ungleichförmig Belastung
- H - Stark Ungleichförmig Belastung

Um eine bessere Auswahl zu treffen, können die Belastungsarten mit den angegebenen Formeln (Seite 18) errechnet werden.

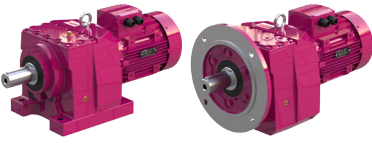
3. Schalzhäufigkeit bestimmen.
4. Nach Bestimmen der oben angegebenen Werte, können die Betriebsfaktoren von der unten stehenden Tabelle entnommen werden.
5. Der ausgewählte Betriebsfaktor muß mit dem Faktor "k" abhängig von der Antriebsart multipliziert werden

- k=1 :Elektromotor oder Hydraulikmotor
k=1.25 :Vielzylindermotor
k=1.5 :Einzylindermotor

Günlük Çalışma Süresi
Operating Time hour / Day
Laufzeit Std. / Tag



Start sayısı / Saat
Cycle / Hour
Schaltungen / Std.



Genel Bilgiler General Information Einführung



Yük Sınıflandırması

Krenler:

- U - Kaldırma Dişlileri
- Palanga Dişlileri
- M - Bomlu Vinç Dişlileri
- Yana Döndürme Dişlileri
- H - Yürütme Dişlileri

Pompalar:

- U - Santrifuj Pompalar (ince sıvı)
- M - Santrifuj Pompalar (yarı sıvı)
- H - Basınçlı Pompalar
- Dalgıç Pompalar

Taş ve Kil İşleme Makinaları:

- H - Çekiçli Değirmenler
- Döner Fırınlr
- Dövücü Değirmenler
- Kırıcılar
- Kürel Değirmenler
- Tuğla Presi
- Tüp Değirmenler

Tekstil Makinaları:

- M - Basma ve Boyama Makinaları
- Dokuma Tezgahları
- Hallac Makinaları
- Harman Makinaları
- Taneleme (Debegat)Tekneleri

Yağ Sanayi:

- M - Besleme Pompaları
- Döner Delme Teçhizatları

Yiyecek Sanayi:

- M - Kutu Bıçaklar
- Kutu Kaplama
- Mayalama Tekneleri
- H - Kenar Açma

Çamaşır Yıkama Makinaları:

- M - Döner Kurutucular
- Yıkama Makinaları

Hadde Makinaları:

- M - Hız Ayarlı Silindirler
- Sabit Silindirler
- Sarma Makaraları
- Tel Çekme
- H - Çubuk Kesme Makinaları
- Döner Tablalar (büyük)
- Kabuk Sıyırma Makinaları
- Plaka Haddeme
- Silindir Haddeme
- Soğuk Haddeme

Load Classification

Cranes:

- U - Hoist Gears
- Lifting Gears
- M - Defrocking jib Gears
- Slowing Gears
- H - Travelling Gears

Pumps:

- U - Centrifugal Pumps (light liquids)
- M - Centrifugal Pumps (semi liquid)
- H - Pressure Pumps
- Plunger Pumps

Stone and Clay Working Machines:

- H - Hammer Mills
- Rotary Kilns
- Beater Mills
- Breakers
- Ball Mills
- Brick Presses
- Tup Mills

Textile Machines:

- M - Printing and Dyeing Machines
- Looms
- Willow
- Batchers
- Tanning Vats

Oil Industry:

- M - Pipeline Pumps
- Rotary Drilling Equipment

Food Industry:

- M - Cane Knives
- Cane Crushers
- Mach Tubs
- H - Cane Mills

Laundries:

- M - Tumblers
- Washing Machines

Metal Rolling Mills:

- M - Roller Adjustment Drives
- Roller Straightened
- Winding Machines
- Wire Drawing Benches
- H - Billet Shears
- Rotary Tables (heavy)
- Descaling Machines,
- Sheet Mills
- Manipulators
- Cold Rolling Mills

Belastungsart

Krananlagen:

- U - Einziehwerke
- Hubwerke
- M - Schwenkwerke
- Wippwerke
- H - Fahrwerke

Pumpen:

- U - Kreiselpumpen (leichte Flüssigkeit)
- M - Kreiselpumpen (zahe Flüssigkeit)
- H - Prebpumpen
- Plungerpumpen

Steine und ErdenBearbeitendeMasch.

- H - Hammermühler
- Drehofen
- Schlagmühlen
- Brecher
- Kugelmühlen
- Ziegelpresen
- Rohrmühlen

Textilmaschinen:

- M - Drukerei und Farbereimachinen
- Aufwickler
- Webstuhle
- Gerbfasser
- Reibwolfe

Erdölgewinnung:

- M - Pipeline Pumpen
- Rotative Bohranlagen

Nahrungsmittelmachinen:

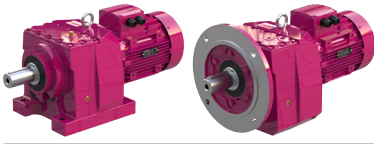
- M - Rohrschneiden
- Knetmaschinen
- Maichen
- H - Rohrmühlen

Waschereimaschinen:

- M - Trommeltrockner
- Waschmaschinen

Wälzwerke:

- M - Rollenrichtmaschinen
- Walzenantriebe
- Drahtzuge
- Haspeln
- H - Blechscheren
- Rollgänge (schwer)
- Knüppelscheren
- Schöpfscheren
- Stranggubanlagen
- Kaltwälzwerke



Genel Bilgiler General Information Einführung



İnşaat Makinaları:

- M - Beton Mikserleri
- Ağır Yük Asansörleri

Kağıt Makinaları:

- H - Islak Presler
- Kağıt Hamur Makinaları
- Kurutma Silindirleri
- Perdahlama Silindirleri

Kauçuk Makinaları:

- M - Kalenderler
- Mikserler
H - Extruderler
- Hamur Karma
- Silindirler

Kimya Sanayi:

- M - Ağdatörler (yarı sıvı)
- Kurutma Merdaneleri
- Mikserler ve Silindirleri

Konveyörler:

- M - Bant Cepli Konveyörler
- Çelik Bantlı Konveyörler
- Dökme Yüklü Kayışlı Konv.
H - Yük Asansörleri
- Parça Yüklü Kayışlı Konv.

Building Machines:

- M - Concrete Mixers
- Hoist

Paper Machines:

- H - Wet Presses
- Pulpers
- Drying Cylinders
- Glazing Cylinders

Rubber Machinery:

- M - Calenders
- Mixers
H - Extruders
- Pug Mills
- Rolling Mills

Chemical Industry:

- M - Aggidators (semi- liquid)
- Drying Drums.
- Mixers and Rolling Mills

Conveyors:

- M - Band Pocket Conveyors
- Steel Belt Conveyors
- Belt Conveyors
H - Hoists
- Bulk Belt Conveyors

Baumaschinen:

- M - Betonmischermaschinen
- Bauaufzüge

Papiermaschinen:

- H - Naßpressen
- Gautschen
- Trockenzylinder
- Glattzylinder

Kunststoffmaschinen:

- M - Kalender
- Mischer
H - Extruder
- Knetwerke
- Wälzwerke

Chemische Industrie:

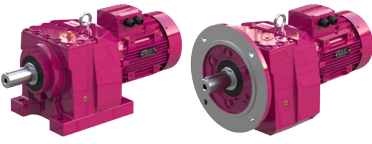
- M - Rührwerke (leichte Flüssig.)
- Trockentrommeln
- Mischer und Wälzwerke

Förderanlagen:

- M - Gurtaschenbecherwerke
- Stahlbandförderer
- Gurtbandförderer (Schüttgut)
H - Schrägaufzüge
- Gurtbandförderer (Stückgut)

J_{ext}: Motor miline indirgenmiş toplam dış atalet momenti External moments of inertia reduced to the motor shaft Externe Massenträgheitsmomente reduziert auf Motorwelle	$J'_{ext} = \frac{J_{ext}}{i^2}$
i: Tahvil oranı Transmission ratio Übersetzung	
J_{rotor}: Motorun atalet momenti Torque of inertia of the motor Massenträgheitsmoment des Antriebsmotors	$F_i = \frac{J'_{ext}}{J_{rotor}}$

U	Uniform Yük Uniform Loads Gleichförmige Last	$F_i < 0,25$
M	Orta Darbeli Yük Moderate Loads Ungleichförmige Last	$F_i < 3$
H	Darbeli Yük Heavy Shock Loads Stark Ungleichförmige Last	$F_i < 10$



Genel Bilgiler General Information Einführung



Redüktör Dönüş Yönleri

M-N Serisi ürünlerimiz için kullanılan yön tanımlaması aşağıdaki gibidir. Aşağıdaki tanımlama kilitli redüktörler için de geçerlidir.

Direction of Rotation

M-N Series direction of rotation of Yilmaz products are defined as follows. The definitions are also valid for gear units with backstop.

Getriebedrehrichtungen

Die Drehrichtungen für M-N Serie Getriebe sind wie folgt definiert. Die Definition ist auch bei Getrieben mit Rücklaufsperre gültig.

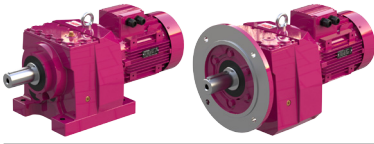
	2-4-6 Kademe / 2-4-6 Stages / 2-4-6 stufig	3-5 Kademe / 3-5 Stages / 3-5 stufig
Saat Yönünde Clockwise im Uhrzeigersinn CW		
Saat Tersi Yönünde Counter Clockwise gegen Uhrzeigersinn CCW		

Giriş mili dönüş yönüne göre çıkış mili dönüş yönleri aşağıdaki gibidir.

Output shaft rotation directions according to the input shaft rotation directions are as follows.

Drehrichtungen der Abtriebswelle im Abhängigkeit von der Antriebswellen sind wie folgt;

2-4-6 Kademe / 2-4-6 Stages / 2-4-6 stufig	3-5 kademe / 3-5 Stages / 3-5 stufig



Genel Bilgiler General Information Einführung



Radyal Yükler

Çıkış miline gelebilecek radyal ve eksenel yükler yatak ömrüne göre belirlenmiş ve tablolar halinde verilmiştir. Bu tablolarda verilen F_{qam} güvenilir radyal yükü emniyet katsayısı 1 için ve yükün mil ortasını yüklediği durum için verilmiştir. Darbeli yüklerin olması durumunda izin verilen radyal yük değerleri servis faktörü kadar azaltılmalıdır. Verilen radyal ve eksenel yükler kuvvetin en kötü açı şartında etkidiği durum için verilmiştir. Mil ucuna gelen kuvvetin açısına göre daha yüksek radyal yükler mümkündür (Firmamıza danışınız). Bağlantı şekline göre oluşan radyal yük F_q sayfa 21 de verilen formüller yardımı ile hesaplanır.

Redüktör seçiminde ;

$$\begin{aligned} F_{qa} &\leq F_{qam} \\ F_{qe} &\leq F_{qem} \end{aligned}$$

şartı göz önünde tutulmalı. Eğer etkiyen radyal kuvvet milin orta noktasında değil ise verilen güvenilir değer in aşağıda verilen formül ile düzeltilmesi gerekir.

$$\begin{aligned} F_{qam}' &= F_{qam} \times \frac{t}{y+u} \\ F_{qem}' &= F_{qem} \times \frac{t}{y+u} \end{aligned}$$

"t", "y" Değerleri aşağıda verilmiştir. "u" Değeri görüldüğü gibi kuvvetin uygulama noktasıdır.

Overhung Loads

The permissible overhung loads are calculated by considering working life and is listed on the tables. The given permissible overhung loads F_{qam} are based on safety factor 1 and are valid for forces which are applied to the midpoint of the shaft.

For shock loading permissible radial loads must be divided with service factor. The listed permissible overhung loads are based on the worst loading direction. Higher overhung loads can be applied for different loading directions (Please ask if requested). The effective overhung load at the gearbox shaft F_q will be determined with the given formulas on page 21.

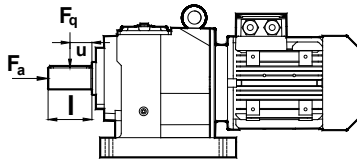
In Selection ;

$$\begin{aligned} F_{qa} &\leq F_{qam} \\ F_{qe} &\leq F_{qem} \end{aligned}$$

these formulas must be taken into consideration. If the load is not applied at the midpoint of the shaft; the given permissible load must be corrected with the following formulas.

$$\begin{aligned} F_{qam}' &= F_{qam} \times \frac{t}{y+u} \\ F_{qem}' &= F_{qem} \times \frac{t}{y+u} \end{aligned}$$

The values "t", "y" can be taken from the below table. The value "u" is the length of the application point as shown below.



Querkräfte

Die in den nachfolgenden Tabellen angegebenen zulässigen Radialbelastungen F_{qam} gelten bei Kraftangriff auf die Mitte Wellenendes. Den Angaben liegt der Sicherheitsfaktor gleich 1 zu Grunde. Bei stoßartigen Belastungsfällen ist auch hier der entsprechende Betriebsfaktor zu berücksichtigen. Zulässige Axialkräfte F_{ama} oder F_{ame} wurden für den Fall mit schlechter Belastungsrichtung angegeben. Bei der Ermittlung der zulässige Querkräfte sind höhere Werte möglich (Bitte Rückfragen). Die auftretende Querkraft F_q ab der Getriebewelle wird wie in der nachfolgenden Formel bestimmt.

Bei dieser Auswahl;

$$\begin{aligned} F_{qa} &\leq F_{qam} \\ F_{qe} &\leq F_{qem} \end{aligned}$$

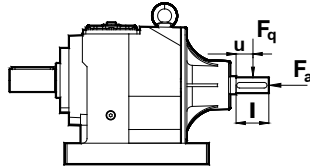
müssen die oben angegebenen Bedingungen berücksichtigt werden. Ist der Kraftangriff nicht auf Wellenmitte, so kann die zulässige Querkraft mit Hilfe der unten stehenden Formel auf jede beliebige Stelle umgerechnet werden.

$$\begin{aligned} F_{qam}' &= F_{qam} \times \frac{t}{y+u} \\ F_{qem}' &= F_{qem} \times \frac{t}{y+u} \end{aligned}$$

Die Werte "t" und "y" sind in den nachfolgenden Tabellen angegeben. Der Wert "u" ist die Stelle des Kraftangriffs wie auf der nächsten Seite angegeben.

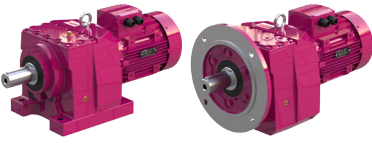
Çıkış Milinde Radyal Kuvvet Hesabı Düzeltme Katsayıları
Overhung Load Correcting Values on Output Shaft
Querkraft auf Ausgangswelle Korrigierungszahlen

Tip Type Typ	MR002-003 NR002-003	MR102-103 NR102-103	MR172-173 NR172-173	MR202-203 NR202-203	MR272-273 NR272-273	MR282-283 NR282-283	MR372-373 NR372-373	MR472-473 NR472-473	MR572-573 NR572-573	MR672-673 NR672-673	MR772-773 NR772-773	MR872-873 NR872-873	MR972-973 NR972-973
t	90	108	109	140	141	158	170	214	256	291	335	404	440
y	70	83	84	110	106	123	130	164	196	226	250	299	334
l	40	50	50	60	70	70	80	100	120	130	170	210	210

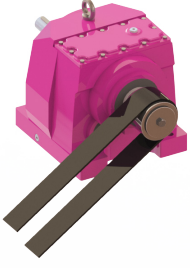


Giriş Milinde Radyal Kuvvet Hesabı Düzeltme Katsayıları
Overhung Load Correcting Values on Input Shaft
Querkraft auf Eingangs-welle Korrigierungszahlen

Tip Type Typ	MT002-003 NT002-003	MT102-103 NT102-103	MT172-173 NT172-173	MT202-203 NT202-203	MT272-273 NT272-273	MT282-283 NT282-283	MT372-373 NT372-373	MT472-473 NT472-473	MT572-573 NT572-573	MT672-673 NT672-673	MT772-773 NT772-773	MT872-873 NT872-873	MT972-973 NT972-973
t	78	108	108	111	111	126	126	137	158	180	207	220	261
y	58	83	83	86	86	96	96	102	113	130	147	165	207
l	40	50	50	50	50	60	60	70	90	100	120	110	110



Genel Bilgiler General Information Einführung



Radyal Yüklerin Hesabı

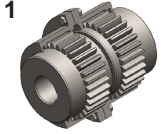
Radyal Yük $F_q(N)$ 'nin hesaplanması, gerekli tahrik momenti M (Nm), kasnak veya dişli çapı D (mm) olmak üzere aşağıdaki formüller kullanılır.

Calc. Of Overhung Loads

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

Berechnung der Querkräfte

Der Fall der radialen Belastung $F_q(N)$ kann mit den angegebenen Gleichungen berechnet werden. Antriebsmoment M (Nm) und Zahnrad- oder Riemenscheiben Durchmesser D (mm).



1. Elastik Kaplin

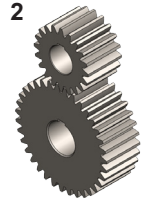
Çalışma sırasında oluşan sapmalar kaplinin güvenlik sınırları içinde ise kuvvetler ihmal edilebilir.

1. Elastic Coupling

If Elastic Coupling is working in its reliable working area, the overhung loads can be neglected.

1. Elastische Kupplung

Wenn die elastische Kupplung in ihren zulässige Arbeitstoleranz arbeitet, können die radialen Belastungen vernachlässigt werden.



2. Düz Dişli (20° kavrama açılı)

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

2. For Spur Gear (Pressure angle 20°)

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

2. Stirnradgetriebe (Angriffswinkel 20°)

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



3. Küçük Hızlarda Zincir Dişli (z>17)

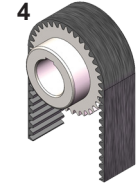
$$F_q = \frac{2100 \times M_2}{D}$$

3. For Chain Drive With Low Speed (z>17)

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

3. Kettenantrieb mit niedriger Geschwindigkeit (z>17)

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



4. Triger Kayış

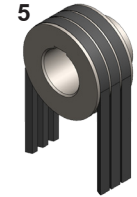
$$F_q = \frac{2500 \times M_2}{D}$$

4. For Trigger Belt

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

4. Zahnriemenantrieb

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



5. V Kayış

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

5. For V Belt

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

5. Keilriemenantrieb

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



6. Gerdirme Makaralı Kayış

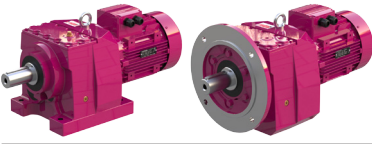
$$F_q = \frac{5000 \times M_2}{D}$$

6. Flat Belt With Spanning Pulley

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

6. Flachriemenantrieb mit Spannungstrommel

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



Genel Bilgiler General Information Einführung



Eşdeğer Güç Hesabı

Sabit devirde, ancak değişken momentlerde (güçlerde) çalışan redüktörler için eşdeğer tork altındaki, eşdeğer güç hesaplanabilir. Bu eşdeğer güç kullanılarak bilinen sabit güçteki redüktör seçim yöntemi kullanılarak seçim yapılabilir. Burada ağırlıklı torka göre eşdeğer anma torku belirlenmektedir. Hesaplanan bu güçte çalışan redüktör, teorik olarak, değişken yüklerde çalışan redüktör ile aynı emniyet değerine ve ömre sahiptir.

Bir çevrim boyunca oluşan değişken torklar, en yüksek torktan, en düşüğe doğru yatay zaman eksenini boyunca sıralanır (bakınız alttaki şekil). Bu şekile göre eşdeğer tork şu formül ile hesaplanır;

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_n \times T_n^{6.6}}{t} \right)^{\frac{1}{6.6}}$$

Eğer T_n değerleri (en düşük tork), T_e 'nin 0,5 katının altında ise, bu tork dilimi yok sayılarak, işlem tekrarlanır;

Eğer $T_n < T_e \times 0.5$ ise

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_{n-1} \times T_{n-1}^{6.6}}{t - \Delta t_n} \right)^{\frac{1}{6.6}}$$

Tüm T_n değerleri T_e 'nin 0,5 katının üzerinde ise, eşdeğer güç aşağıdaki gibi hesaplanır;

$$P_{eq} = P_N = \frac{T_e \times n}{9550}$$

Eşdeğer gücün bulunmasından sonra eşdeğer güç değeri kullanılarak, bu katalogta verilen redüktör seçimi bölümünde anlatılan adımlar uygulanarak redüktör seçimi tamamlanır.

Equivalent Power Rating Calculation

The equivalent power by an equivalent constant torque can be calculated for gearboxes working in constant speed but variable torques (or powers). Using this equivalent power it is possible to make a gearbox selection according to the usual gearbox selection method with constant torques. The equivalent torque will be determined according to the mean of dominating torques. The gearbox working in constant equivalent torque will theoretically have the same lifetime and safety compared to the variable torque one.

To calculate the equivalent torques, the variable torques in a cycle must be sorted from the maximal to the minimal on a horizontal time line (Check the graphic below). According to the graphic below the equivalent torque can be calculated with the following formula;

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_n \times T_n^{6.6}}{t} \right)^{\frac{1}{6.6}}$$

If T_n (the lowest torque) is lower than 50 % of T_e , this torque part must be taken out of the torque graph and the calculation must be repeated;

If $T_n < T_e \times 0.5$ then

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_{n-1} \times T_{n-1}^{6.6}}{t - \Delta t_n} \right)^{\frac{1}{6.6}}$$

If all T_n values are higher then 50% of T_e then the equivalent power can be calculated by the following formula;

$$P_{eq} = P_N = \frac{T_e \times n}{9550}$$

After the equivalent power is determined the selection of gearbox is made according to the selection procedures given on the gearbox selection part in this catalogue.

Berechnung Äquivalenter Leistung

Die äquivalente Leistung bei äquivalenten Drehmoment kann für Getrieben mit konstanten Drehzahl und variablen Momente berechnet werden. Mit dieser Leistung kann das Getriebe ausgelegt werden, wie bei konstanten Leistung. Man bestimmt hiermit also die maßgebende Belastung. Das ausgelegte Getriebe erreicht theoretisch dem gleichen Lebensdauer und hat die gleiche Sicherheit.

Für die Berechnung der äquivalenten Drehmoment müssen die einzelnen Drehmomentanteile auf eine Zeitachse von größten bis zu kleinsten angeordnet werden (siehe unteres Bild). Das äquivalente Drehmoment wird nach folgender Formel berechnet;

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_n \times T_n^{6.6}}{t} \right)^{\frac{1}{6.6}}$$

Wenn T_n (niedrigstes Drehmoment) kleiner als 50% von T_e ist, muss dieser Anteil vernachlässigt werden und die Berechnung soll neu durchgeführt werden;

Wenn $T_n < T_e \times 0.5$ dann

$$T_e = \left(\frac{\Delta t_1 \times T_1^{6.6} + \dots + \Delta t_{n-1} \times T_{n-1}^{6.6}}{t - \Delta t_n} \right)^{\frac{1}{6.6}}$$

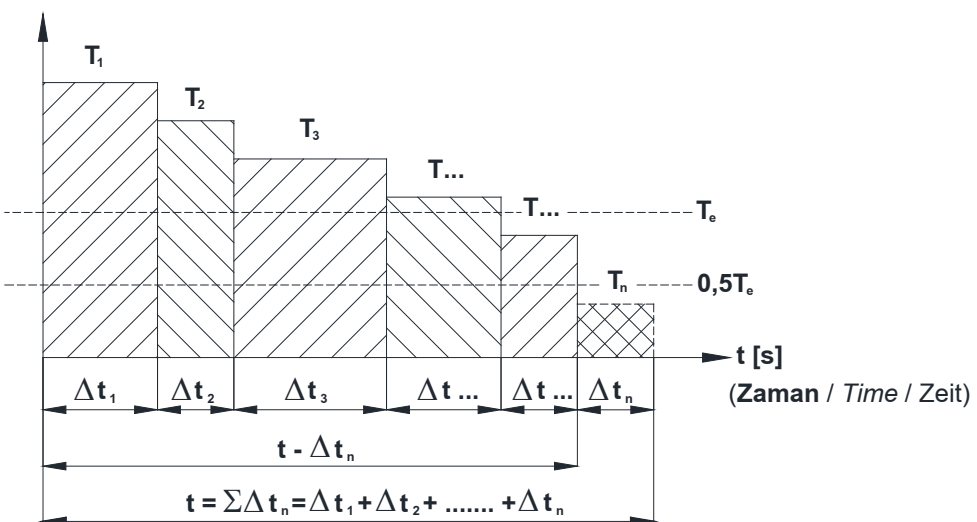
Wenn alle T_n Werte höher als 50% von T_e sind, dann wird die äquivalente Leistung nach folgender Formel berechnet;

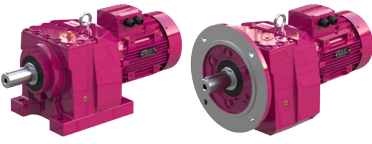
$$P_{eq} = P_N = \frac{T_e \times n}{9550}$$

Nach Bestimmung der äquivalenter Leistung, erfolgt die Getriebeauslegung wie bei konstanter Leistung. Die Auswahlverfahren für konstante Leistung ist in diesem Katalog angegeben.

(Moment / Torque / Moment)

T [Nm]





Genel Bilgiler General Information Einführung



Eşdeğer Güç Hesabı Örneği

Çift yönlü çalışan ham demir haddesi için aşağıdaki çalışma koşulları belirlenmiş;

Veriler:

Toplam bir iş çevrimi: 2 dak.

1. Yük kademesi: 48 kNm, 30 s

2. Yük Kademesi: 32 kNm, 22 s

3. Yük Kademesi: 28 kNm, 15 s

4. Yük Kademesi: 16 kNm, 10 s

5. Yük Kademesi: 5 kNm, 43 s

Makina sabit devri: 50 d/dak

Redüktör seçimine esas olacak eşdeğer yük aranmaktadır.

Çözüm:

Bir çevrimin toplam zamanı;

$$t = t_1 + t_2 + t_3 + t_4 + t_5 = 120 \text{ sn}$$

Eşdeğer Tork;

$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 43 \times 5^{6.6}}{120} \right)^{\frac{1}{6.6}}$$

$$= 39,2 \text{ kNm}$$

%50 eşdeğer tork;

$$0.5 \times T_e = 19.6 \text{ kNm}$$

Her bir tork dilimi bu değerin üzerinde olmalı

$$T_4, T_5 < 0.5 \times T_e$$

%50 torkun altındakileri çıkararak hesabı tekrarlayalım;

$$t' = t - t_4 - t_5 = 120 - 43 - 10 = 67 \text{ s}$$

$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 15 \times 28^{6.6}}{67} \right)^{\frac{1}{6.6}}$$

$$= 42,9 \text{ kNm}$$

Moment ve devir değerlerini kullanarak eşdeğer gücümüzü hesaplayalım ;

$$P_{eq} = \frac{T_e \times n}{9550} = \frac{42,9 \times 1000 \times 50}{9550} \cong 225 \text{ kW}$$

Yukarıdaki güç ve devir değeri kullanılarak bu katalogta anlatılan seçim presüdüğü ile redüktör seçimi yapılabilir.

Equivalent Power Rating Sample

The following data is given for a reversing blooming mill;

Torque steps:

Total one cycle time: 2 min.

1st torque part: 48 kNm, 30 s

2nd torque part: 32 kNm, 22 s

3th torque part: 28 kNm, 15 s

4th torque part: 16 kNm, 10 s

5th torque part: 5 kNm, 43 s

Machine constant speed: 50 rpm

The equivalent power, which is required for gear unit selection, is to determine.

Solution:

Total time in a cycle;

$$t = t_1 + t_2 + t_3 + t_4 + t_5 = 120 \text{ sn}$$

Equivalent Torque;

$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 43 \times 5^{6.6}}{120} \right)^{\frac{1}{6.6}}$$

$$= 39,2 \text{ kNm}$$

50% of Equivalent torque;

$$0.5 \times T_e = 19.6 \text{ kNm}$$

Every torque part must be lower then this value;

$$T_4, T_5 < 0.5 \times T_e$$

We are repeating the calculation by taking out the torque parts, which are below 50%;

$$t' = t - t_4 - t_5 = 120 - 43 - 10 = 67 \text{ s}$$

$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 15 \times 28^{6.6}}{67} \right)^{\frac{1}{6.6}}$$

$$= 42,9 \text{ kNm}$$

By using the equivalent torque and constant speed we calculate the equivalent power ;

$$P_{eq} = \frac{T_e \times n}{9550} = \frac{42,9 \times 1000 \times 50}{9550} \cong 225 \text{ kW}$$

Now by using the above calculated equivalent power and constant speed we can make the gearbox selection with the procedures described in this catalogue.

Beispiel für Äquivalente Leistung

Die nachfolgenden Angaben sind für eine Blechreversierwalze;

Drehmoment stufen:

Gesamte Zeit für einem Arbeitszyklus: 2 min.

Drehmomentanteil 1: 48 kNm 30 s

Drehmomentanteil 2: 32 kNm 22 s

Drehmomentanteil 3: 28 kNm 15 s

Drehmomentanteil 4: 16 kNm 10 s

Drehmomentanteil 5: 5 kNm 43 s

Maschine hat konstante Drehzahl: 50 U/min

Gesucht ist die äquivalente Leistung, die für die Getriebeauslegung nötig ist.

Lösung:

Gesamte Zeit für einem Arbeitszyklus;

$$t = t_1 + t_2 + t_3 + t_4 + t_5 = 120 \text{ sn}$$

Äquivalentes Drehmoment;

$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 43 \times 5^{6.6}}{120} \right)^{\frac{1}{6.6}}$$

$$= 39,2 \text{ kNm}$$

50% von äquivalenten Drehmoment;

$$0.5 \times T_e = 19.6 \text{ kNm}$$

Drehmomentanteile müssen größer als dieser Wert sein;

$$T_4, T_5 < 0.5 \times T_e$$

Wir wiederholen die Berechnung nochmals ohne die kleine Drehmomentanteile;

$$t' = t - t_4 - t_5 = 120 - 43 - 10 = 67 \text{ s}$$

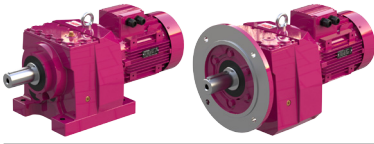
$$T_e = \left(\frac{30 \times 48^{6.6} + \dots + 15 \times 28^{6.6}}{67} \right)^{\frac{1}{6.6}}$$

$$= 42,9 \text{ kNm}$$

Mit Hilfe von äquivalenten Drehmoment und konstanter Drehzahl berechnet man die äquivalente Leistung ;

$$P_{eq} = \frac{T_e \times n}{9550} = \frac{42,9 \times 1000 \times 50}{9550} \cong 225 \text{ kW}$$

Nach Bestimmung der äquivalente Leistung und konstanter Drehzahl, erfolgt die Getriebeauslegung dann wie die Getriebeauswahl gemäß dem in diesem Katalog beschriebenen Verfahren für konstante Leistung.



Genel Bilgiler General Information Einführung



Redüktör Seçimi

Bir redüktör seçiminde aşağıdaki yol izlenmelidir.

1. Çalışma şartlarına bağlı olarak servis faktörünü (f_s) belirleyiniz. (Servis Faktörü Sayfa 16).
2. Makinanız için gerekli olan momenti belirleyiniz M_2 (redüktör gerekli çıkış momenti).
3. Makinanızın devrini belirleyiniz n_2 (redüktör gerekli çıkış devri).
4. Makinanızın güç ihtiyacını (Redüktör çıkış gücünü) " P_2 " hesaplayınız.

$$P_2 = \frac{M_2 \times n_2}{9550}$$

5. Redüktör ile makina arasında kullanılan bağlantı elemanına göre radyal yükü hesaplayınız. (Sayfa 20). Yukarıdaki verilere uygun olarak çıkış devri, değerlerine uyan servis faktörü ve radyal yükü bulduğunuzdan daha yüksek veya eşit olan redüktörü, güç-devir seçim tablolarından seçiniz. Helisel tip redüktörlerde verim yüksek olduğundan çıkış gücü verilmemiştir. Hesapladığınız güç değerini giriş gücü olarak kabul edip seçiminizi yapınız. Tablolarda verilen M_2 çıkış momentinin hesapladığınız M_2 den büyük olmasına dikkat ediniz. Eğer seçilen redüktörünki daha ufak ise bir üst motor gücüne geçiniz.

Örnek

1. Makina Cinsi:

Lastik bantlı konveyör , dökme yük taşıyor.

2. Makina için gerekli moment:

Makina için hesaplanan moment
 $M_2 = 470 \text{ Nm}$

3. Makina gerekli çıkış devri:

$n_2 = 50 \text{ dev/dak}$

4. Günlük çalışma süresi:

16 saat

5. Saatte start sayısı:

Saatte 1 start

6. Makina ile bağlantı şekli:

Zincir dişli (Çap-180 mm)

- Yük sınıflandırma tablosundan yük sınıfı M olarak seçilir (sayfa 17-18)

- Günlük çalışma süresi 16 saat Saatte start sayısı 1 ve yük sınıfı M'ye tekabül eden servis faktörü tablosundan, servis faktörü için $f_s = 1.3$ değeri bulunur.(sayfa 16)

- Makinanızın güç ihtiyacı (Redüktör Çıkış Gücü) :

$$P_2 = \frac{M_2 \times n_2}{9550} = \frac{470 \times 50}{9550} = 2,46 \text{ kW}$$

Gearbox Selection

For the correct selection of the appropriate gear units follow this steps.

1. Determine service factor (f_s) on the basis of running conditions (Page 16).
2. Determine the required Torque M_2 (required output torque of gearbox) for the driven machine.
3. Determine required speed (output speed of gearbox) for the driven machine.
4. Calculate the required power for your machine (Calculate power " P_2 " required at output side of gear reducer using the formula);

$$P_2 = \frac{M_2 \times n_2}{9550}$$

5. Calculate overhung load required at output shaft according to type of connection between gear unit and machine (Refer to directions and values given on page 20). After determining the above mentioned values, the gear reducer which corresponds to our requirements can be selected from the performance tables (the service factor and the permissible overhung load should be less than or equal to our requirements). For Helical gears the output power is not given on the performance tables because they have high efficiency and the output power can be taken as input power. The output torque should be checked if it meets to our requirements. If the output torque is low, search for a higher input power gearbox.

Example:

1. Machine Type:

Belt Conveyor (Bulk Load)

2. Required Torque:

Required Torque calculated for the driven machine is $M_2 = 470 \text{ Nm}$

3. Required speed:

$n_2 = 50 \text{ rpm}$

4. Running time:

16 hours per day

5. Frequency of starting:

1 start per hour

6. Connection type between gear reducer

Chain drive (Output dimension-180 mm)

- From the load classification table (on page 17-18), the load class M can be selected for the known application.

- The service factor can be selected as $f_s = 1.3$ from the service factor table (page 16) by taking into consideration 16 hours running time, one start per hour, and load class M.

- Required power for your machine (Power at output side of gear reducer) :

$$P_2 = \frac{M_2 \times n_2}{9550} = \frac{470 \times 50}{9550} = 2,46 \text{ kW}$$

Getriebeauswahl

Für die korrekte Auswahl des Antriebes:

1. Den Betriebsfaktor(f_s) in Abhängigkeit von den Betriebsbedingungen bestimmen.(Bezug auf Seite 16).
2. Die erforderte Drehmoment M_2 für die angetriebene Maschine (Abtriebsdrehmoment für die Getriebe) bestimmen.
3. Erforderte Drehzahl bestimmen (Abtriebsdrehzahl für die Getriebe).
4. Berechnen der erforderte Leistung der angetriebene Maschine (Die an der Abtriebswelle erforderte Leistung " P_2 ") mit der unten angegebenen Formel.

$$P_2 = \frac{M_2 \times n_2}{9550}$$

5. Die an der Getriebeabtriebswelle erforderte Querkraft in Abhängigkeit von Antriebsselement bestimmen (Bezug auf Seite 20). Nach Bestimmen der oben angegebenen Werte, die passende Getriebe kann von den angegebenen Leistungstabellen entnommen werden. Dabei soll darauf geachtet werden, dass der Betriebsfaktor und Querkraft stets unterhalb von angegebenen Werten liegt. Weil Stirnradgetrieben einen hohen Wirkungsgrad haben, sind die Abtriebsleistungen für Stirnradgetrieben nicht angegeben. Bei dieser Getriebe die erforderte Leistung kann als Antriebsleistung benutzt werden. Achten sie darauf, dass der Abtriebsmoment größer als die erforderte Drehmoment ist.

Beispiel:

1. Maschinentyp:

Gurtbandförderer (Schüttgut)

2. Erforderte Drehmoment:

Für die Maschine berechnete Drehmoment
 $M_2 = 470 \text{ Nm}$

3. Erforderte Drehzahl:

$n_2 = 50 \text{ upm}$

4. Betriebsdauer:

16 stunden pro Tag

5. Schaltheufigkeit:

1 Start pro Stunde

6. Antriebselement für verbindung

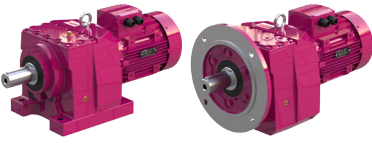
Getriebe-Machine:Kettentrieb (Durchmesser-180 mm)

- Von den Belastungsart Tabellen(Seite 17-18) nimmt man Belastungsart M

- Für den Schaltungszahl 1 und die Laufzeit 16 und für den passenden Belastungsart erhält man Betriebsfaktor $f_s = 1.3$ von Tabelle auf Seite 16.

- Erforderte Leistung der angetriebe Maschine (Die an der Getriebeabtriebswelle erforderte Leistung)

$$P_2 = \frac{M_2 \times n_2}{9550} = \frac{470 \times 50}{9550} = 2,46 \text{ kW}$$



Genel Bilgiler General Information Einführung



- Zincir dişli uygulaması için (Sayfa 21) F_q değeri;

$$F_q = \frac{2100 \times M_2}{D} = \frac{2100 \times 470}{180} = 5484 \text{ N}$$

- Ortaya çıkan redüktör ihtiyacı

$$\begin{aligned} P_2 &\geq 2,46 \text{ kW} \\ M_2 &\geq 470 \text{ Nm} \\ fs &\geq 1.3 \\ n_2 &= 50 \text{ d/dak} \\ F_q &\geq 5484 \text{ N} \end{aligned}$$

Güç ve devir sayılarından,

MR373-3E100L/4D seçilir. (Sayfa 79)

$$\begin{aligned} P_2 &= 3 \text{ kW} > 2,46 \text{ kW} \\ M_2 &= 554 \text{ Nm} > 470 \text{ Nm} \\ fs &= 1,4 \\ n_2 &= 49 \text{ d/dak} \\ F_{qam} &= 6587 \text{ N} > 5484 \text{ N} \end{aligned}$$

- *For chain drive application the requested overload can be calculated from (page 21).*

$$F_q = \frac{2100 \times M_2}{D} = \frac{2100 \times 470}{180} = 5484 \text{ N}$$

- *The required gearbox is as follows:*

$$\begin{aligned} P_2 &\geq 2,46 \text{ kW} \\ M_2 &\geq 470 \text{ Nm} \\ fs &\geq 1.3 \\ n_2 &= 50 \text{ rpm} \\ F_q &\geq 5484 \text{ N} \end{aligned}$$

From the performance table,

MR373-3E100L/4D selected. (Page 79)

$$\begin{aligned} P_2 &= 3 \text{ kW} > 2,46 \text{ kW} \\ M_2 &= 554 \text{ Nm} > 470 \text{ Nm} \\ fs &= 1,4 \\ n_2 &= 49 \text{ rpm} \\ F_{qam} &= 6587 \text{ N} > 5484 \text{ N} \end{aligned}$$

- Für Kettentrieb die erforderte Querkraft (seite 21).

$$F_q = \frac{2100 \times M_2}{D} = \frac{2100 \times 470}{180} = 5484 \text{ N}$$

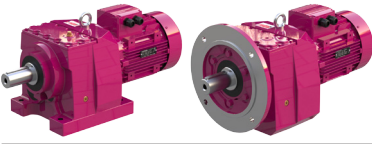
- Von den oben angegebenen Berechnungen die erforderte Getriebe ist wie folgt;

$$\begin{aligned} P_2 &\geq 2,46 \text{ kW} \\ M_2 &\geq 470 \text{ Nm} \\ fs &\geq 1.3 \\ n_2 &= 50 \text{ U/min} \\ F_q &\geq 5484 \text{ N} \end{aligned}$$

Von der Leistung- DrehzahlTabelle ,

wurde **MR373-3E100L/4D** gewählt. (Seite 79)

$$\begin{aligned} P_2 &= 3 \text{ kW} > 2,46 \text{ kW} \\ M_2 &= 554 \text{ Nm} > 470 \text{ Nm} \\ fs &= 1,4 \\ n_2 &= 49 \text{ U/min} \\ F_{qam} &= 6587 \text{ N} > 5484 \text{ N} \end{aligned}$$



Genel Bilgiler General Information Einführung



Redüktör Seçim Formu

Kullanıldığı Sektör.....
Kullanıldığı Yer.....
Gerekli Ortalama Devir.....d/dak

Makina ihtiyaç gücü:

-Normal..... kW
-En çok..... kW
-En az..... kW

Tahrik Şekli:

AC Motor []
AC Motor + Invertör []
DC Motor []
Hidromotor []
1-3 silindirli içten yanmalı []
2-4 silindirli içten yanmalı []

Motor Bağlantı Şekli (Elektrik Motorları):

IEC B5 Flanşlı []
NEMA Flanşlı []
B3 Ayaklı []

IEC veya NEMA flanş kodu.

Motor Gücü:

-Nominal..... kW

Motor Devri:

-Normal..... d/dak
-En çok..... d/dak
-En az..... d/dak

Motor Torku:

-Normal..... Nm
-En çok..... Nm
-En az..... Nm

Dönüş şekli:

saat yönü [] saat yönüne ters [] değişken []

Günlük çalışma süresi:

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

Saatteki start sayısı:

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

Motor Redüktör Arası Tahvil Oranı.....

Kalkış için gerekli moment.....Nm

Saatteki pik moment adedi:

1-5 [] 6-30 [] 31-100 [] >100 []

Bir çevrimde aktif çalışma oranı (ED):

%100 [] %80 [] %60 [] 40% [] %20 []

Deniz seviyesinden yükseklik:

<1000 [] <2000 [] <3000 []
<4000 [] <5000 []

Montaj yeri:

Küçük kapalı oda (w<1m/sn) []
Kapalı oda (w<3m/sn) []
Büyük oda ve holler (w>=3m/sn) []
Tamamen açık ortam []

Çevre Şartları:

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

Çevre Sıcaklığı:

Ortalama..... °C
En Yüksek..... °C
En Düşük..... °C

Kilit İhtiyacı:

Var [] Yok []

Redüktör Giriş Opsiyonu:

R.. [] V.. [] N.. [] T.. []

Montaj Pozisyonu:

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

Giriş mili bağlantı şekli:

Elastik kaplin []
Fıçı tipi kaplin []
Rijit kaplin []
Hidrolik Kaplin []
Kayış kasnak []
Zincir dişli []
Pinyon dişli []
Bağlantı elemanı çapı.....mm
Radyal yükü.....N
Radyal yük "u" mesafesi.....mm
Aksiyal yükü (mile doğru +).....N

Çıkış mili bağlantı şekli:

Elastik kaplin []
Fıçı tipi kaplin []
Rijit kaplin []
Kayış kasnak []
Zincir dişli []
Pinyon dişli []
Bağlantı elemanı çapı.....mm
Radyal yükü.....N
Radyal yük "u" mesafesi.....mm
Aksiyal yükü (mile doğru +).....N

Çıkış Mili Özelliği:

Dolu Mil Kamalı []
Dolu Mil Kamasız []
Özel Mil []

Giriş Mili Özelliği:

Kamalı []
Kamasız düz mil []
Özel Mil []

Elektrik Gerilimi:

AC-Monofaze [] AC-Trifaze [] DC []
Voltaj.....Volt
Frekans.....Hz

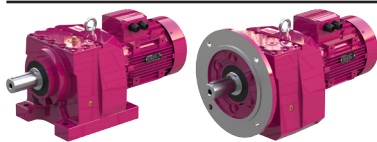
Koruma Sınıfı:

IP55 [] IP65 [] Exproof []
Diğer IP.....

Ekler:

Yük diyagramı []
Proje []
İstenen ana boyutlar []
Teknik veriler []

Diğer Notlar:



Genel Bilgiler General Information Einführung



Gearbox Selection Form

Field of Industry.....
Application.....
Required Average Speed..... rpm

Required Power on Driven Machine:

-Normal..... kW
-Maximum..... kW
-Minimum..... kW

Driving Machine:

AC Motor []
AC Motor + Inverter []
DC Motor []
Hydraulic Motor []
Piston Engine with 1-3 cylinder []
Piston Engine with 4-24 cylinder []

Motor Connection Type (Electric Motors):

IEC B5 Flange []
NEMA Flange []
B3 Foot Mounted []

IEC or NEMA Flange Code.....

Motor Power:

-Nominal..... kW

Motor Speed:

-Normal..... rpm
-Maximum..... rpm
-Minimum..... rpm

Motor Torque:

-Normal..... Nm
-Maximum..... Nm
-Minimum..... Nm

Direction of Rotation:

cw [] ccw [] variable []

Working hours per day:

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

Startings per cycle:

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

Transmission ratio between motor and gear unit.....

Required Starting Torque..... Nm

Peak torques per hour:

1-5 [] 6-30 [] 31-100 [] >100 []

Effective working time in a cycle (ED):

%100 [] %80 [] %60 [] 40% []
20% []

Altitude:

<1000 [] <2000 [] <3000 []
<4000 [] <5000 []

Mounting Place:

Small closed room (w<1m/sn) []
Closed room (w<3m/sn) []
Big rooms and halls (w>=3m/sn) []
Outdoor []

Ambient Conditions:

Normal [] Dusty [] Humid []
Corrosive [] Dry []

Ambient Temperature:

Average..... °C
Maximum..... °C
Minimum..... °C

Backstop Required:

Yes [] No []

Gearbox input options:

R.. [] V.. [] N.. [] T.. []

Mounting Position:

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

Input Shaft Connection Type:

Elastic Coupling []
Barrel Type Coupling []
Hydraulic Coupling []
Rigid Flange Coupling []
Pulley []
Chain Sprocket []
Pinion []
Diameter of Connection element..... mm
Radial Load..... N
"u" Distance of Radial Load..... mm
Axial Load (Towards Shaft) N

Output Shaft Connection Type:

Elastic Coupling []
Barrel Type Coupling []
Rigid Flange Coupling []
Pulley []
Chain Sprocket []
Pinion []
Diameter of Connection Element..... mm
Radial Load..... N
"u" Distance of Radial Load..... mm
Axial Load (Towards Shaft) N

Output Shaft Specification:

Solid Shaft with Keyway []
Solid Shaft without Keyway []
Special Shaft []

Input Shaft Specification:

Solid Shaft with Keyway []
Solid Shaft without Keyway []
Special Shaft []

Electrical Supply:

AC-1 Phase [] AC-3 Phase [] DC []
Voltage..... Volt
Frequency..... Hz

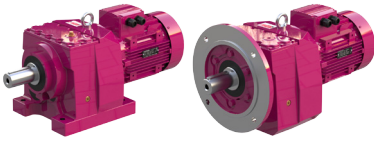
Protection Class:

IP55 [] IP65 [] Exproof []
Other IP.....

Attachments:

Load Diagram []
Project []
Required Dimensions []
Technical Specifications []

Notes:



Genel Bilgiler General Information Einführung



Formular für Getriebeauswahl

Industriebereich.....
Anwendung.....
Erforderliche Drehzahl.....U/min

Erforderliche Leistung für die Maschine:

-Normal.....kW
-Minimal.....kW
-Maximal.....kW

Antriebsmaschine:

AC Motor []
AC Motor mit Frequenzumrichter []
DC Motor []
Hydromotor []
Kolbenmaschinen mit 1-3 Zylinder []
Kolbenmaschinen mit 2-4 Zylinder []

Motorverbindungsart (Elektromotoren):

IEC B5 Flansch []
NEMA Flansch []
B3 Fussausführung []

IEC oder NEMA Flanschcode.....

Motorleistung:

-Nominal.....kW

Motordrehzahl:

-Normal.....U/min
-Maximal.....U/min
-Minimal.....U/min

Motordrehmoment:

-Normal.....Nm
-Maximal.....Nm
-Minimal.....Nm

Drehrichtung:

in Uhrzeigersinn [] gegen Uhrzeigersinn []
veränderlich []

Betriebsdauer in Stunden pro Tag:

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

Anzahl der Anläufe pro Stunde:

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

Übersetzung zwischen Motor und Antriebs-
welle.....

Erforderliches Anlaufmoment.....Nm

Häufigkeit von Lastspitzen pro Stunde:

1-5 [] 6-30 [] 31-100 [] >100 []

Einschaltdauer je Stunde (ED):

%100 [] %80 [] %60 [] 40% [] %20 []

Höhenlage über Meeresspiegel (m):

<1000 [] <2000 [] <3000 []
<4000 [] <5000 []

Betriebsort:

Kleine geschlossene Räume ($w < 1 \text{ m/sn}$) []
Geschlossene Räume ($w < 3 \text{ m/sn}$) []
Große Räume und Hallen ($w \geq 3 \text{ m/sn}$) []
im Freien []

Umgebungsbedingungen:

Normal [] Staubig [] Feucht []
Korroderend [] Trocken [] Verklebend []

Umgebungstemperatur:

Mittelwert.....°C
Maximal.....°C
Minimal.....°C

Rücklaufsperre erforderlich:

Ja [] Nein []

Getriebeeingangsvarianten:

R.. [] V.. [] N.. [] T.. []

Montageposition:

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

Antriebswellenanschluss:

Elastische Kupplung []
Trommelkupplung []
Hydrokupplung []
Starre Flanschkupplung []
Keilriementrieb []
Kettenrad []
Ritzel []
Durchmesser von Anschlusselement.....mm
Querkraft.....N
"u" Abstand von der Wellenschulter.....mm
Axialkraft (in Richtung der Welle +)N

Abtriebswellenanschluss:

Elastische Kupplung []
Trommelkupplung []
Starre Flanschkupplung []
Keilriementrieb []
Kettenrad []
Ritzel []
Durchmesser von Anschlusselement.....mm
Querkraft.....N
"u" Abstand von der Wellenschulter.....mm
Axialkraft (in Richtung der Welle +)N

Eigenschaften der Abtriebswelle:

Vollwelle mit Passfeder []
Vollwelle ohne Passfeder []
Sonderwelle []

Eigenschaften der Antriebswelle:

Vollwelle mit Paßfeder []
Vollwelle ohne Paßfeder []
Sonderwelle []

Spannungsversorgung:

AC-1 phasig [] AC-3 phasig [] DC []
Spannung.....Volt
Frequenz.....Hz

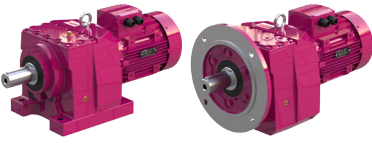
Schutzart:

IP55 [] IP65 [] Exproof []
Andere IP.....

Anhang:

Lastdiagramm []
Projekt []
Erforderliche Abmessungen []
Technische Spezifikationen []

Andere Merkmale:



Genel Bilgiler General Information Einführung



Yağlama

Redüktörlerin uzun ömürlü olması ve iyi performansla çalışabilmesi için, kullanılan yağın seçimi doğru olmalı ve belirtilen zamanlarda değişimleri yapılmalıdır.

Yağın seçiminde devir, çevre sıcaklığı, redüktör yağ sıcaklığı, çalışma koşulları ve yağ ömrü önem taşımaktadır. Redüktörler yağı doldurulmuş olarak sevkedilmektedir. Redüktörler uzun süre depolanacakları zaman veya çalışmaya başlanacağı zaman çalışma konumuna göre üstte kalan tapa sökülmesi ve redüktörün beraberinde verilen havalandırma tapası kullanılmalıdır. Bu redüktörün iç basıncından dolayı oluşacak yağ sızmalarını önleyecektir.

Redüktörlerde standart olarak kullanılan yağlar 31. sayfadaki tabloda verilmiştir. Miktarlar ve yağ tipi burada verilen değerlerden farklılık gösterebilir. Redüktörünüzde kullanılan yağın tipi ve miktarı için lütfen etiketine bakınız. Siparişte belirtilmez ise M serisi redüktörler **M1** ve N serisi redüktörler **M4** pozisyonuna göre yağ miktarları ile doldurulur. Bu pozisyonlar dışındaki çalışma durumlarında tablolarda verilen yağ miktarlarına göre ilave veya eksiltme yapılmalıdır. Özel çalışma koşullarında firmamıza danışmanız tavsiye edilir.

Mineral yağlar her 10.000 çalışma saatinde, sentetik yağlar ise her 25.000 çalışma saatinde değiştirilmelidir. Ağır çevre koşullarında (ani ısı değişiklikleri, yüksek nemlilik v.b) yağ değiştirme periyotlarının kısaltılması tavsiye edilir. Mineral yağlar ile sentetik yağlar birbirine kesinlikle karıştırılmamalıdır. Değiştirme işlemi bir çalışma periyodunun hemen peşinden ve yağ sıcakken yapılmalıdır. Bu şekilde bir değiştirme, redüktör içindeki partiküllerin yağa karışmış olarak bulunmasından dolayı iyi bir temizleme ve yağın rahat boşalması neticesini verecektir.

Lubrication

To work in perfect condition and to have long life for the gear box the lubricant must be chosen correctly and changed in time.

In selection of oil it is important to consider speed, ambient temperature, gear box oil temperature, working conditions and the life required from the lubricant. All units are filled with lubricant before shipping. Before the gearbox is stored for a long time or before starting up, the top plug (according to the working position) must be removed and the extra given vent plug must be replaced. This prevents excessive pressure which causes oil leakages.

*The lubricants for standard gear units are given on the table on p. 31. Please look at your gear units label for filled oil type and quantity. If it is not written on the gearbox selection form, the M type gearboxes are filled for mounting position of **M1** and N type gearboxes are filled for mounting position **M4**. For other mounting positions please refer to the table given on the next pages. For special working conditions please contact us.*

The mineral lubricant should be changed after every 10.000 service hours and the synthetic lubricant should be changed after every 25.000 working hours. If the operation conditions are very heavy (e.g. high temperature differences, high humidity) shorter intervals between changes are recommended. Mineral and synthetic oils must not be mixed up. By changing the lubricant complete cleaning is advised. The oil change should be done after a working period. Because oil is hot in this condition and impurities are mixed with it the changing of oil will be done in best result and the oil will drain easily.

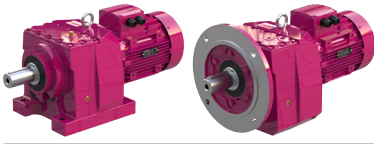
Schmierung

Um eine lange Lebensdauer zu gewährleisten muss der Schmierstoff richtig ausgewählt werden.

Für die richtige Ölauswahl müssen Drehzahl, Umgebungs-temperatur, Belastungsart und Lebensdauer des Öls berücksichtigt werden. Die mitgelieferte Entlüftungsschraube ist vor Inbetriebnahme oder längeren Lagern gegen die Einfüllschraube auszutauschen, um einen Überdruck im Getriebe und damit eine Undichtigkeit des Getriebes zu vermeiden. Getriebe und Getriebemotoren sind bei Auslieferung betriebsfertig gefüllt.

Ohne besondere Bestellangaben werden die Getriebe grundsätzlich mit den auf der Seite 31 in der grau unterlegten Spalte angegebenen Schmierstoffen gefüllt. Bitte im Getriebe verwendetes Öl und menge von dem Namensschild ablesen. Die fußbefestigten Getriebe (M Serie) sind gefüllt für Bauform **M1** und die flanschbefestigten Getriebe (N Serie) für Bauform **M4**, wenn bei der Bestellung keine Angaben vorgegeben sind. Für andere Bauformen sind die auf der nächsten Seite angegebenen Füllmengen zu beachten.

Ein Schmierstoffwechsel sollte alle 10.000 Betriebsstunden durchgeführt werden. Für synthetische Produkte beträgt diese Frist 25.000 Stunden. Bei extremen Betriebsbedingungen, z.B. hohe Luftfeuchtigkeit, aggressiver Umgebung und hohen Temperaturschwankungen sind kürzere Schmierstoffintervalle vorteilhaft. Es ist empfehlenswert, dem Schmierstoffwechsel mit einer gründlichen Reinigung des Getriebes zu verbinden. Synthetische und mineralische Schmierstoffe dürfen nicht miteinander vermischt werden. Das Ablassen des Öls soll unmittelbar nach dem Abschalten erfolgen, solange das Öl noch warm ist. In dieser Zustand ist das Öl mit den Schmutzpartikeln vermischt, so dass eine Entfernung des Altsöls eine gute Reinigung benötigt.



Genel Bilgiler General Information Einführung



M4 Montaj Pozisyonu için Genleşme Tankı / Expansion Tank for M4 Mounting Position / Ölausgleichsbehälter für M4 Bauform

Aşağıdaki teknik resimde gösterildiği gibi montaj pozisyonları **M4** (montaj pozisyonları syf:32) olan redüktörlerde düzgün bir yağlama sağlanabilmesi için yağ seviyesinin redüktörün üst dişlilerinin yağlanabileceği seviyede olması gerekmektedir. Bu da düşük çevrim oranlı redüktörlerde köpürme ve genleşme nedeniyle havalandırma tapasından yağ atılmasına neden olabilmektedir.

Yılmaz redüktör ; bunun önlenmesi için çevrim oranı (i) < 20 ve M47'den daha büyük olan bütün gövdelerde **M4** montaj pozisyonunda genleşme tankı kullanılmasını kesinlikle önermektedir. Önerilen genleşme tankı ölçüleri aşağıdaki tabloda gösterilmiştir.

Çevrim oranı (i) < 20 olup giriş motor devri 1800 d/d dan büyük olan bütün redüktörlerde **M4** montaj pozisyonunda genleşme tankı kullanılması redüktör büyüklüğüne bakılmaksızın önerilmektedir.

*As you can see at the technical drawing below, for gear units with **M4** (mounting positions p. 32) mounting position, oil level is very high for proper lubrication of upper pinion gear and this leads to oil leakage from venting plug, because of foaming and expansion of oil at geared motors with ratios below 20.*

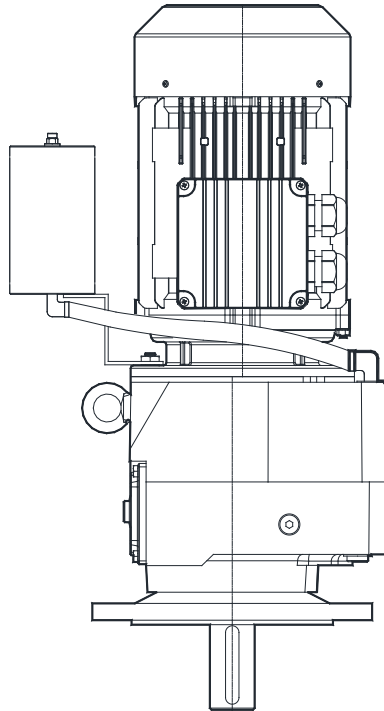
*We ; Yılmaz Redüktör, strongly recommend using expansion tank for **M4** mounting position for gear units M57, M67, M77, M87 and M97 with total ratios (i) below 20, to prevent this. You can find the recommended dimensions of expansion tanks below.*

*If your gear units total ratio (i) is below 20 and input speed is higher than 1800 rpm we recommend using of expansion tank for all gear unit sizes for **M4** mounting position.*

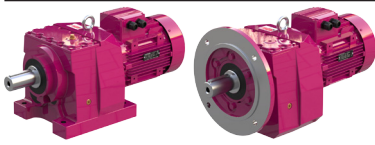
Wie in der folgenden technischen Zeichnung dargestellt ist, sollte der Ölstand auf der gleichen Höhe der ersten Getriebestufe sein, um eine ausreichende Schmierung des oberen Zahnrads bei der **M4** Bauform (s. Seite 32) sicher zu stellen. Aufgrund dieses hohen Ölstands bildet sich Ölschaum aus, welcher aus der Entlüftungsschraube austritt.

Um das verhindern zu müssen, empfiehlt Yılmaz Redüktör bei allen M-Serie Getrieben ab Getriebegröße M57 mit niedrigen Übersetzungen (i<20) einen Ölausgleichsbehälter bei der **M4** Bauform einzusetzen. Die empfohlenen Dimensionen des Ölausgleichsbehälters sind in der unteren Tabelle angegeben.

Bei Getrieben mit Übersetzungen (i<20) und bei Motor-Eingangsdrehzahlen >1800 min⁻¹ empfiehlt Yılmaz Redüktör einen Ölausgleichsbehälter unabhängig von der Getriebegröße einzusetzen.



Gövde Büyüklüğü Housing Size Gehäusegröße	Genleşme Tankı Expansion Tank Ölausgleichsbehälter	Genleşme Tankı Kapasitesi [lt] Expansion Tank Capacity [lt] Ölausgleichbehältervolumen [l]	Kodu Code Code
M/N57..	GT006	0,6	GT006
M/N67..	GT020	2,0	GT020
M/N77..			
M/N87..	GT050	5,0	GT050
M/N97..			



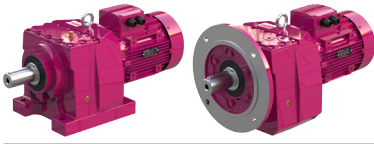
Genel Bilgiler General Information Einführung



Yağ Tipleri / Oil Types / Schmierstoffe

Yağ Cinsi Lubricant Art des Schmier- stoffes	DIN 51517-3	Çevre Sıcaklığı [°C] Ambient Temp. [°C] Umgebungstemp. [°C]	ISO VG	Aral	Beyond Petroleum	Castrol	Klüber Lubrication	Mobil	Shell	Total
		Daldırma Yağlama Dip Lubrication Tauchschmierung								
Mineral Yağlar Mineral Oil Mineralöl	CLP	0 ... +50	680	Degol BG 680	Energol GR-XP 680	Alpha SP 680	Klüberoil GEM 1-680 N	Mobilgear XMP 680	Omala S2 GX 680	Carter EP 680
		-5 ... +45	460	Degol BG 460	Energol GR-XP 460	Alpha SP 460	Klüberoil GEM 1-460 N	Mobilgear XMP 460	Omala S2 GX 460	Carter EP 460
		-10 ... +40	320	Degol BG 320	Energol GR-XP 320	Alpha SP 320	Klüberoil GEM 1-320 N	Mobilgear XMP 320	Omala S2 GX 320	Carter EP 320
		-15 ... +30	220	Degol BG 220	Energol GR-XP 220	Alpha SP 220	Klüberoil GEM 1-220 N	Mobilgear XMP 220	Omala S2 GX 220	Carter EP 220
		-20 ... +20	150	Degol BG 150	Energol GR-XP 150	Alpha SP 150	Klüberoil GEM 1-150 N	Mobilgear XMP 150	Omala S2 GX 150	Carter EP 150
		-25 ... +10	100	Degol BG 100	Energol GR-XP 100	Alpha SP 100	Klüberoil GEM 1-100 N	Mobilgear XMP 100	Omala S2 GX 100	Carter EP 100
Sentetik Yağlar Synthetic Oil Synthetisches Öl	CLP PG	-10 ... +60	680	Degol GS 680	Energysyn SG-XP 680	—	Klübersynth GH 6 -680	Mobil Glygoyle 680	Omala S4 WE 680	Carter SY 680
		-20 ... +50	460	Degol GS 460	Energysyn SG-XP 460	Alphasyn PG 460	Klübersynth GH 6 -460	Mobil Glygoyle 460	Omala S4 WE 460	Carter SY 460
		-25 ... +40	320	Degol GS 320	Energysyn SG-XP 320	Alphasyn PG 320	Klübersynth GH 6 -320	Mobil Glygoyle 320	Omala S4 WE 320	Carter SY 320
		-30 ... +30	220	Degol GS 220	Energysyn SG-XP 220	Alphasyn PG 220	Klübersynth GH 6 -220	Mobil Glygoyle 30	Omala S4 WE 220	Carter SY 220
		-35 ... +20	150	Degol GS 150	Energysyn SG-XP 150	Alphasyn PG 150	Klübersynth GH 6 -150	Mobil Glygoyle 22	Omala S4 WE 150	Carter SY 150
		-40 ... +10	100	—	—	—	Klübersynth GH 6 -100	Mobil Glygoyle 100	—	—
	CLP HC	-10 ... +60	680	—	—	—	Klübersynth GEM 4-680 N	Mobil SHC Gear 680	Omala S4 GXV 680	Carter SH 680
		-20 ... +50	460	Degol PAS 460	Energysyn EP-XF 460	Alphasyn T 460	Klübersynth GEM 4-460 N	Mobil SHC Gear 460	Omala S4 GXV 460	Carter SH 460
		-30 ... +40	320	Degol PAS 320	Energysyn EP-XF 320	Alphasyn T 320	Klübersynth GEM 4-320 N	Mobil SHC Gear 320	Omala S4 GXV 320	Carter SH 320
		-40 ... +40	220	Degol PAS 220	Energysyn EP-XF 220	Alphasyn T 220	Klübersynth GEM 4-220 N	Mobil SHC Gear 220	Omala S4 GXV 220	Carter SH 220
		-40 ... +40	150	Degol PAS 150	Energysyn EP-XF 150	Alphasyn T 150	Klübersynth GEM 4-150 N	—	Omala S4 GXV 150	Carter SH 150
		-40 ... +40	100	—	—	—	Klübersynth GEM 4-100 N	—	—	—
Gıda Uyumlu Yağ Food Grade Oil Lebensmittelföl	CLP NSF H1	-30 ... +25	220	—	—	Optileb GT 220	Klüberoil 4 UH1-220 N	Mobil SHC Cibus 220	—	Nevastane SL 220
Çevre Dostu Yağ Biodegradable Oil Biologisch abbaubares Öl	CLP E	-25 ... +40	320	—	—	Tribol BioTop 1418-320	Klübersynth GEM 2-320	—	—	Carter Bio 320

	Ürün Kodu Product Code Produktcode	Çalışma Sıcaklığı [°C] Working Temp. [°C] Betriebstemperatur [°C]	NLGI Sınıfı NLGI Grade NLGI-Klasse	Baz Yağı Base Oil Basis Öl	Renk Colour Farbe
Mineral Gresler Mineral Grease Mineral-Fett	Mobil XHP 223	-20 ... +140	NLGI 3	ISO VG220	Mavi Blue Blau
Sentetik Gresler Synthetic Grease Synthetisches Fett	Mobil SHC Grease 460 WT	-30 ... +150	NLGI 1.5	ISO VG460	Kırmızı Red Rot
	Mobilith SHC 100	-40 ... +150	NLGI 2	ISO VG100	
	Mobilith SHC 007	-50 ... +150	NLGI 00	ISO VG460	
Gıda Uyumlu Gresler NSF H1 Food Grade Grease NSF H1 Lebensmittelfett NSF H1	Mobil SHC Polyrex 222	-30 ... +170	NLGI 2	ISO VG220	Beyaz White Weiß
	Klüberlub NH1 222	-15 ... +100	NLGI 2	ISO VG220	Sarı Yellow Gelb
Sıvı Gresler (Mineral) Liquid Grease (Mineral) Flüssiges Fett (Mineral)	Shell Gadus S2 V 220 00	-20 ... +100	NLGI 00	ISO VG220	Kahverengi Brown Braun

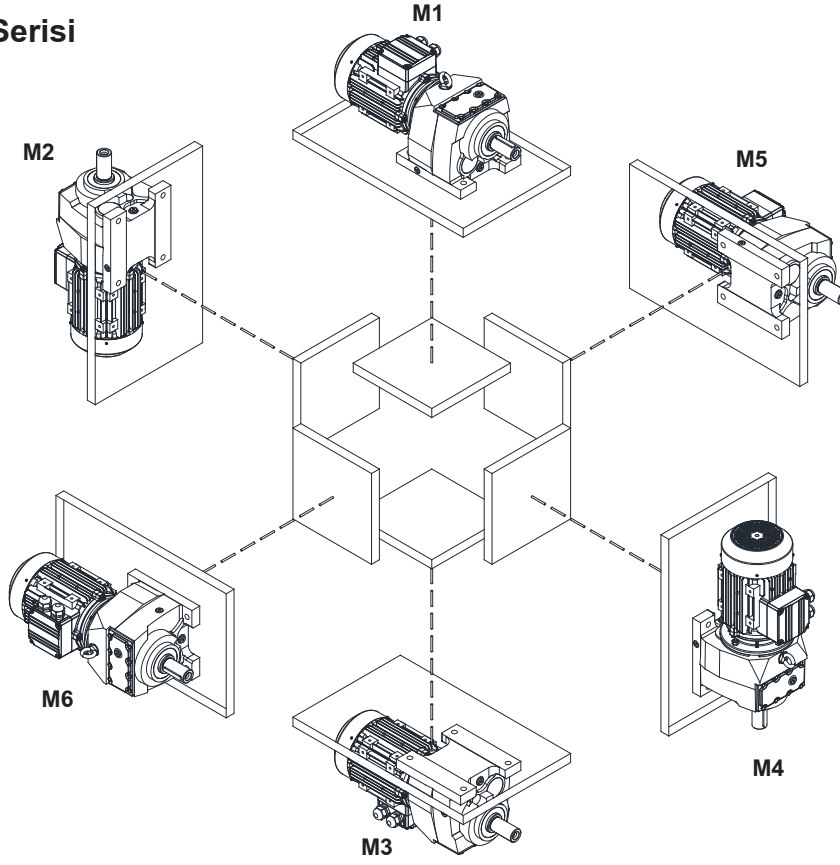


Genel Bilgiler General Information Einführung



Montaj Pozisyonları / Mounting Positions / Bauformen

M Serisi

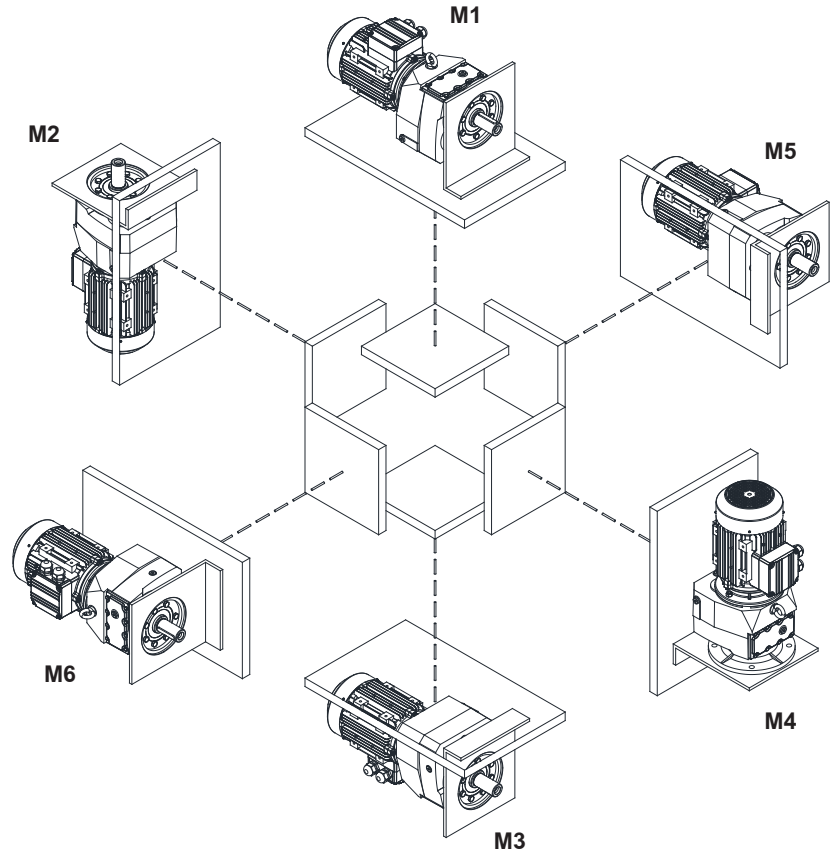


M1....M6 'ya kadar belirtilen montaj pozisyonları redüktörün duruş yönü referans alınarak belirlenmiştir. Montaj yüzeyleri bağlayıcı değildir.

Figured mounting positions of M1 to M6 are determined as reference of directional position of the gearbox. Mounting surfaces are not binding.

Dargestellte Montagepositionen M1 bis M6 wurden nach der Stehrichtung von Getriebe bestimmt. Montageoberflächen sind unverbindlich.

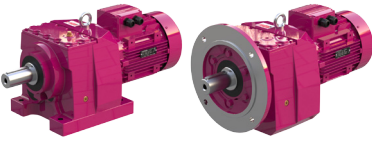
N Serisi



M1....M6 'ya kadar belirtilen montaj pozisyonları redüktörün duruş yönü referans alınarak belirlenmiştir. Montaj yüzeyleri bağlayıcı değildir.

Figured mounting positions of M1 to M6 are determined as reference of directional position of the gearbox. Mounting surfaces are not binding.

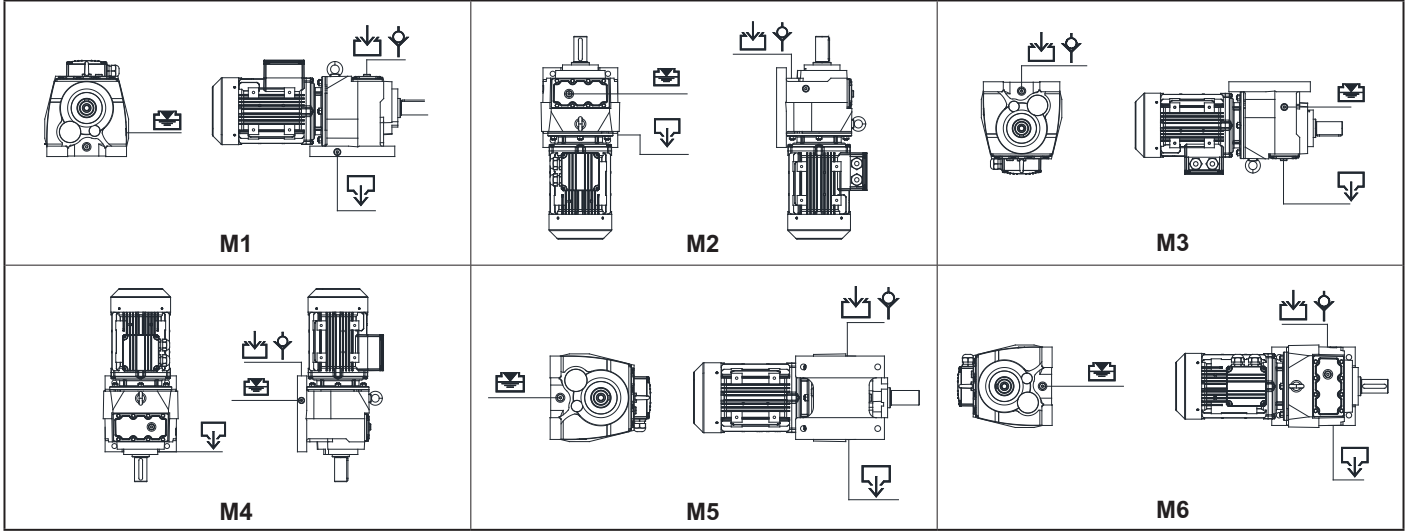
Dargestellte Montagepositionen M1 bis M6 wurden nach der Stehrichtung von Getriebe bestimmt. Montageoberflächen sind unverbindlich.



Genel Bilgiler General Information Einführung



M Serisi İki Üç Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları M Series Two -Three Stage Helical Gearboxes Oil Level Plugs M Serie Zwei-Dreistufig Stirnradgetriebe Ölverschlußschrauben



Yağ Miktarları (lt) / Oil Quantities (lt) / Ölmengen (lt)

Tip Type Typ	M Serisi 2-3 Kademe Yağ Miktarları M Series 2-3 Stages Oil Quantities Ölmengen von M Serie mit 2-3 Stufen					
	M1	M2	M3	M4	M5	M6
M002 / 003	0.40 / 0.35	0.60 / 0.55	0.50 / 0.50	0.60 / 0.55	0.50 / 0.40	0.50 / 0.40
M102 / 103	0.65 / 0.60	0.95 / 0.80	0.70 / 0.70	0.95 / 0.80	0.70 / 0.65	0.70 / 0.65
M172 / 173	0.70 / 0.65	0.95 / 0.90	0.80 / 0.80	0.95 / 0.90	0.80 / 0.70	0.80 / 0.70
M202 / 203	1.2 / 1.1	2.1 / 2.0	2.0 / 1.9	2.1 / 2.0	1.4 / 1.3	1.4 / 1.3
M272 / 273	1.1 / 1.0	2.0 / 1.7	1.9 / 1.5	2.0 / 1.7	1.3 / 1.2	1.3 / 1.2
M282 / 283	1.7 / 1.6	3.0 / 2.85	2.8 / 2.5	3.0 / 2.85	2.6 / 2.4	2.6 / 2.4
M372 / 373	2.0 / 1.9	3.4 / 3.3	3.1 / 3.0	3.4 / 3.3	2.8 / 2.6	2.8 / 2.6
M472 / 473	4.5 / 4.0	7.5 / 7.0	7.5 / 7.0	7.5 / 7.0	5.5 / 5.0	5.5 / 5.0
M572 / 573	7.0 / 6.0	12.0 / 11.0	11.5 / 10.5	12.0 / 11.0	8.0 / 7.5	8.0 / 7.5
M672 / 673	10 / 8.5	22.5 / 20	20 / 18	22.5 / 20	11 / 10.5	11 / 10.5
M772 / 773	15 / 13	32 / 30	30 / 28	32 / 30	22 / 20	22 / 20
M872 / 873	28 / 20	53 / 45	45 / 39	53 / 45	30 / 28	30 / 28
M972 / 973	53 / 50	90 / 90	82 / 80	90 / 85	70 / 65	70 / 65

Semboller :
Symbols :
Symbole :



:Yağ doldurma
:Oil filling
:Ölfüllung



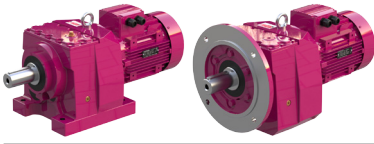
:Yağ boşaltma
:Drain plug
:Ölauslass



:Yağ seviyesi
:Oil level
:Ölstand



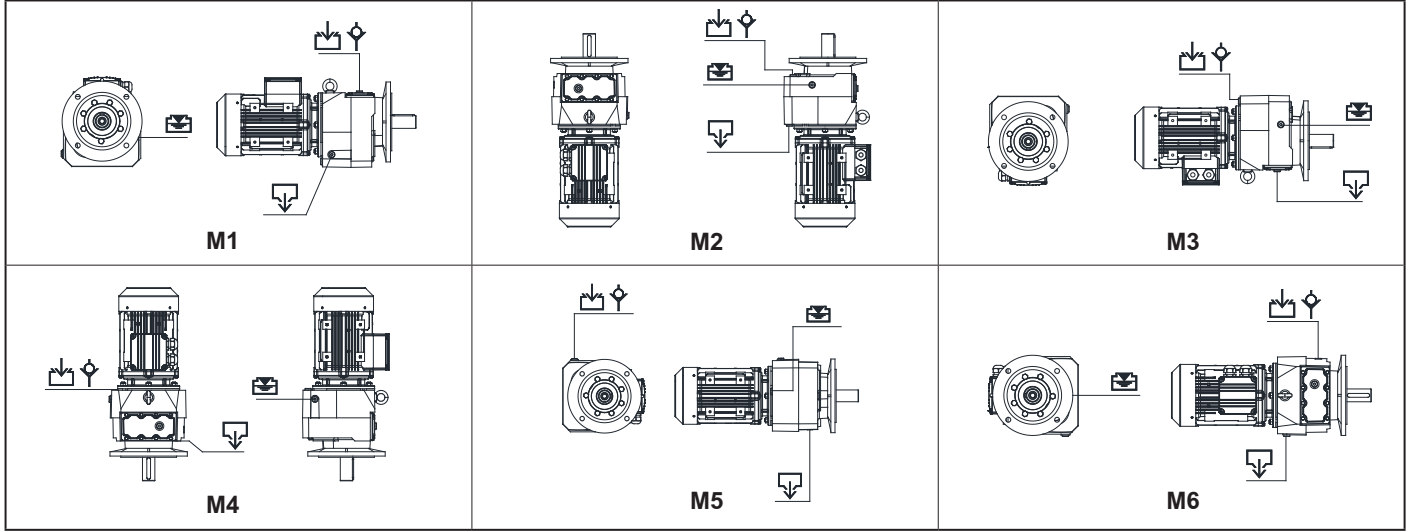
:Havalandırma
:Vent Plug
:Entlüftungsschraube



Genel Bilgiler General Information Einführung



N Serisi İki Üç Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları N Series Two -Three Stage Helical Gearboxes Oil Level Plugs N Serie Zwei-Dreistufig Stirnradgetriebe Ölverschlußschrauben



Yağ Miktarları (lt) / Oil Quantities (lt) / Ölmengen (lt)

Tip Type Typ	N Serisi 2-3 Kademe Yağ Miktarları N Series 2-3 Stages Oil Quantities Ölmengen von N Serie mit 2-3 Stufen					
	M1	M2	M3	M4	M5	M6
N002 / 003	0.40 / 0.35	0.60 / 0.55	0.50 / 0.50	0.60 / 0.55	0.50 / 0.40	0.50 / 0.40
N102 / 103	0.65 / 0.60	0.95 / 0.80	0.70 / 0.70	0.95 / 0.80	0.70 / 0.65	0.70 / 0.65
N172 / 173	0.70 / 0.65	0.95 / 0.90	0.80 / 0.80	0.95 / 0.90	0.80 / 0.70	0.80 / 0.70
N202 / 203	1.2 / 1.1	2.1 / 2.0	2.0 / 1.9	2.1 / 2.0	1.4 / 1.3	1.4 / 1.3
N272 / 273	1.1 / 1.0	2.0 / 1.7	1.9 / 1.5	2.0 / 1.7	1.3 / 1.2	1.3 / 1.2
N282 / 283	1.7 / 1.6	3.0 / 2.85	2.8 / 2.5	3.0 / 2.85	2.6 / 2.4	2.6 / 2.4
N372 / 373	2.0 / 1.9	3.4 / 3.3	3.1 / 3.0	3.4 / 3.3	2.8 / 2.6	2.8 / 2.6
N472 / 473	4.5 / 4.0	7.5 / 7.0	7.5 / 7.0	7.5 / 7.0	5.5 / 5.0	5.5 / 5.0
N572 / 573	7.0 / 6.0	12.0 / 11.0	11.5 / 10.5	12.0 / 11.0	8.0 / 7.5	8.0 / 7.5
N672 / 673	10 / 8.5	22.5 / 20	20 / 18	22.5 / 20	11 / 10.5	11 / 10.5
N772 / 773	15 / 13	32 / 30	30 / 28	32 / 30	22 / 20	22 / 20
N872 / 873	28 / 20	53 / 45	45 / 39	53 / 45	30 / 28	30 / 28
N972 / 973	53 / 50	90 / 90	82 / 80	90 / 85	70 / 65	70 / 65

Semboller :
Symbols :
Symbole :



:Yağ doldurma
:Oil filling
:Ölfüllung



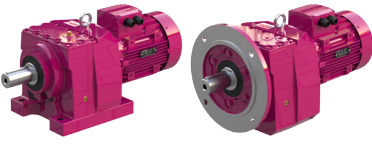
:Yağ boşaltma
:Drain plug
:Öläusslass



:Yağ seviyesi
:Oil level
:Ölstand



:Havalandırma
:Vent Plug
:Entlüftungsschraube



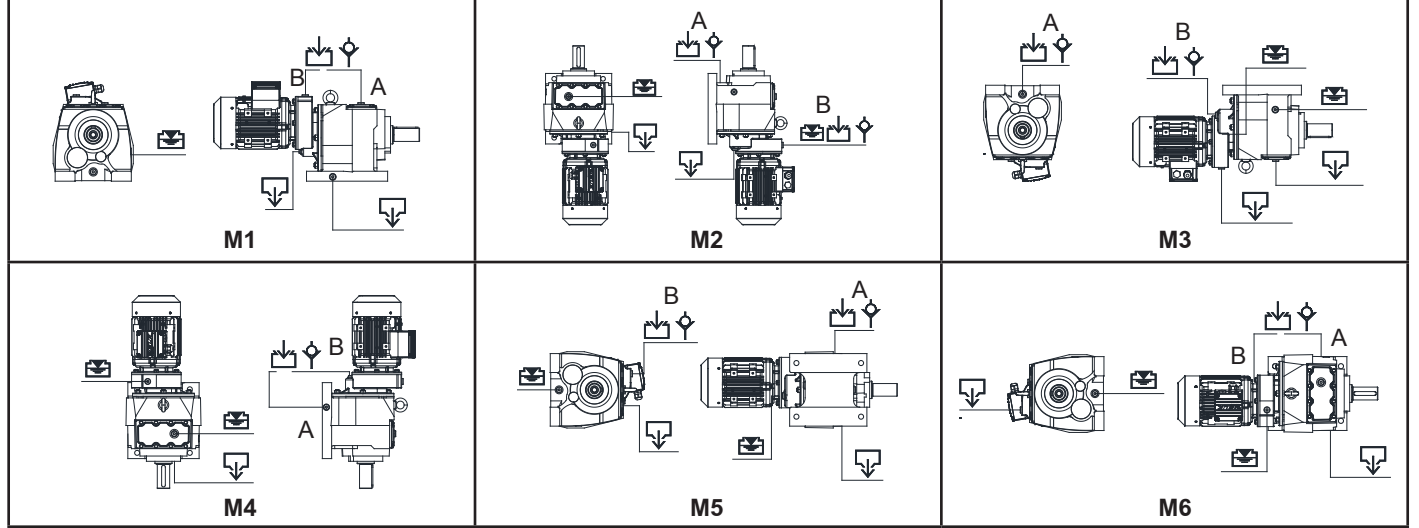
Genel Bilgiler General Information Einführung



M Serisi Dört Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları

M Series Four Stage Helical Gearboxes Oil Level Plugs

M Serie Vierstufig Stirnradgetriebe mit Ölverschlußschrauben



Yağ Miktarları (lt) / Oil Quantities (lt) / Ölmengen (lt)

Tip Type Typ	M Serisi 4 Kademe Yağ Miktarları M Series 4 Stages Oil Quantities Ölmengen von M Serie mit 4 Stufen					
	M1 A / B	M2 A / B	M3 A / B	M4 A / B	M5 A / B	M6 A / B
M284	1.6 / 0.25	2.85 / 0.25	2.5 / 0.25	2.85 / 0.25	2.4 / 0.25	2.4 / 0.25
M374	1.9 / 0.25	3.3 / 0.25	3.0 / 0.25	3.3 / 0.25	2.6 / 0.25	2.6 / 0.25
M474	4.0 / 0.40	7.0 / 0.40	7.0 / 0.40	7.0 / 0.40	5.0 / 0.40	5.0 / 0.40
M574	6.0 / 0.50	11 / 0.50	10.5 / 0.50	11 / 0.50	7.5 / 0.50	7.5 / 0.50
M674	8.5 / 0.90	20 / 0.90	18 / 0.90	20 / 0.90	10.5 / 0.90	10.5 / 0.90
M774	13 / 1.0	30 / 1.0	28 / 1.0	30 / 1.0	20 / 1.0	20 / 1.0
M874	20 / 2.15	45 / 2.15	39 / 2.15	45 / 2.15	28 / 2.15	28 / 2.15
M974	50 / 7.0	90 / 7.0	80 / 7.0	85 / 7.0	65 / 7.0	65 / 7.0

Semboller :
Symbols :
Symbole :



:Yağ doldurma
:Oil filling
:Ölfüllung



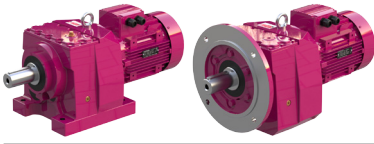
:Yağ boşaltma
:Drain plug
:Ölauslass



:Yağ seviyesi
:Oil level
:Ölstand



:Havalandırma
:Vent Plug
:Entlüftungsschraube



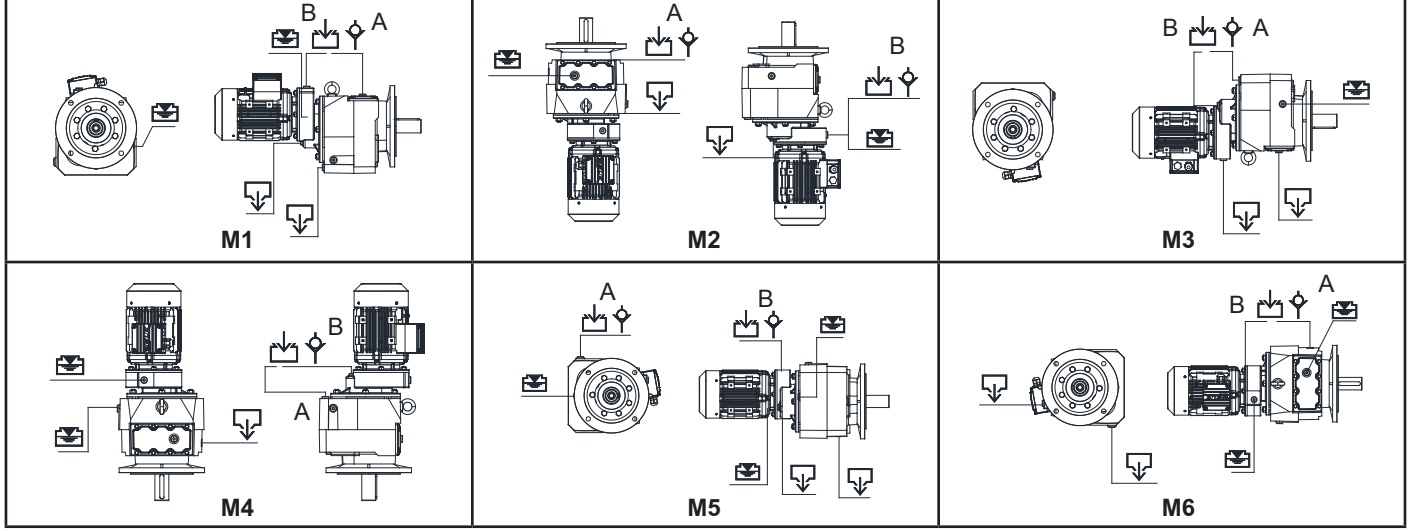
Genel Bilgiler General Information Einführung



N Serisi Dört Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları

N Series Four Stage Helical Gearboxes Oil Level Plugs

N Serie Vierstufig Stirnradgetriebe mit Ölverschlußschrauben



Yağ Miktarları (lt) / Oil Quantities (lt) / Ölmengen (lt)

Tip Type Typ	N Serisi 4 Kademe Yağ Miktarları N Series 4 Stages Oil Quantities Ölmengen von N Serie mit 4 Stufen					
	M1 A / B	M2 A / B	M3 A / B	M4 A / B	M5 A / B	M6 A / B
N284	1.6 / 0.25	2.85 / 0.25	2.5 / 0.25	2.85 / 0.25	2.4 / 0.25	2.4 / 0.25
N374	1.9 / 0.25	3.3 / 0.25	3 / 0.25	3.3 / 0.25	2.6 / 0.25	2.6 / 0.25
N474	4.0 / 0.40	7.0 / 0.40	7.0 / 0.40	7.0 / 0.40	5.0 / 0.40	5.0 / 0.40
N574	6.0 / 0.50	11 / 0.50	10.5 / 0.50	11 / 0.50	7.5 / 0.50	7.5 / 0.50
N674	8.5 / 0.90	20 / 0.90	18 / 0.90	20 / 0.90	10.5 / 0.90	10.5 / 0.90
N774	13 / 1.0	30 / 1.0	28 / 1.0	30 / 1.0	20 / 1.0	20 / 1.0
N874	20 / 2.15	45 / 2.15	39 / 2.15	45 / 2.15	28 / 2.15	28 / 2.15
N974	50 / 7.0	90 / 7.0	80 / 7.0	85 / 7.0	65 / 7.0	65 / 7.0

Semboller :

Symbols :

Symbole :



:Yağ doldurma

:Oil filling

:Ölfüllung



:Yağ boşaltma

:Drain plug

:Öläusslass



:Yağ seviyesi

:Oil level

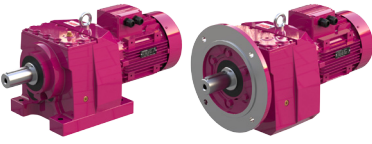
:Ölstand



:Havalandırma

:Vent Plug

:Entlüftungsschraube



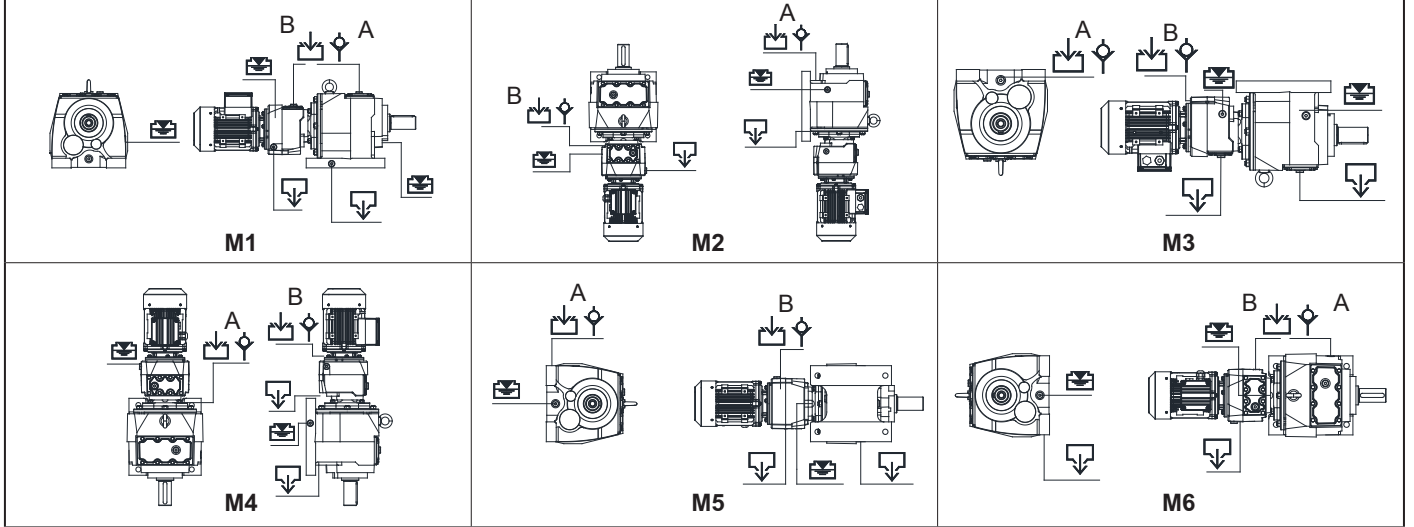
Genel Bilgiler General Information Einführung



M Serisi Beş-Altı Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları

M Series Five-Six Stage Helical Gearboxes Oil Level Plugs

M Serie Fünf-Sechsstufig Stirnradgetriebe Ölverschlußschrauben



Yağ Miktarları (lt.) / Oil Quantities. (lt) / Ölmengen (lt.)

Tip Type Typ	M Serisi 5-6 Kademe Yağ Miktarları M Series 5-6 Stages Oil Quantities Ölmengen von M Serie mit 5-6 Stufen					
	M1 A / B	M2 A / B	M3 A / B	M4 A / B	M5 A / B	M6 A / B
M275	1.0 / 0.4	1.7 / 0.6	1.5 / 0.5	1.7 / 0.6	1.2 / 0.5	1.2 / 0.5
M285	1.6 / 0.65	2.85 / 0.95	2.5 / 0.70	2.85 / 0.95	2.4 / 0.70	2.4 / 0.70
M375	1.9 / 0.65	3.3 / 0.95	3.0 / 0.70	3.3 / 0.95	2.6 / 0.70	2.6 / 0.70
M475	4.0 / 1.2	7.0 / 2.1	7.0 / 2.0	7.0 / 2.1	5.0 / 1.4	5.0 / 1.4
M575	6.0 / 1.2	11 / 2.1	10.5 / 2.0	11 / 2.1	7.5 / 1.4	7.5 / 1.4
M675	8.5 / 2.0	20 / 3.4	18 / 3.1	20 / 3.4	10.5 / 2.8	10.5 / 2.8
M775	13 / 2.0	30 / 3.4	28 / 3.1	30 / 3.4	20 / 2.8	20 / 2.8
M875	20 / 2.0	45 / 3.4	39 / 3.1	45 / 3.4	28 / 2.8	28 / 2.8
M975	50 / 4.5	90 / 7.5	80 / 7.5	85 / 7.5	65 / 5.5	65 / 5.5
M276	1.0 / 0.35	1.7 / 0.55	1.5 / 0.50	1.7 / 0.55	1.2 / 0.40	1.2 / 0.40
M286	1.6 / 0.60	2.85 / 0.80	2.5 / 0.70	2.85 / 0.80	2.4 / 0.65	2.4 / 0.65
M376	1.9 / 0.60	3.3 / 0.80	3.0 / 0.70	3.3 / 0.80	2.6 / 0.65	2.6 / 0.65
M476	4.0 / 1.1	7.0 / 2.0	7.0 / 1.9	7.0 / 2.0	5.0 / 1.3	5.0 / 1.3
M576	6.0 / 1.1	11 / 2.0	10.5 / 1.9	11 / 2.0	7.5 / 1.3	7.5 / 1.3
M676	8.5 / 1.9	20 / 3.3	18 / 3.0	20 / 3.3	10.5 / 2.6	10.5 / 2.6
M776	13 / 1.9	30 / 3.3	28 / 3.0	30 / 3.3	20 / 2.6	20 / 2.6
M876	20 / 1.9	45 / 3.3	39 / 3.0	45 / 3.3	28 / 2.6	28 / 2.6
M976	50 / 4.0	90 / 7.0	80 / 7.0	85 / 7.0	65 / 5.0	65 / 5.0

Semboller :
Symbols :
Symbole :



:Yağ doldurma
:Oil filling
:Ölfüllung



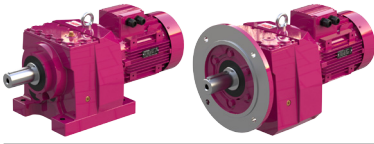
:Yağ boşaltma
:Drain plug
:Ölauslass



:Yağ seviyesi
:Oil level
:Ölstand



:Havalandırma
:Vent Plug
:Entlüftungsschraube



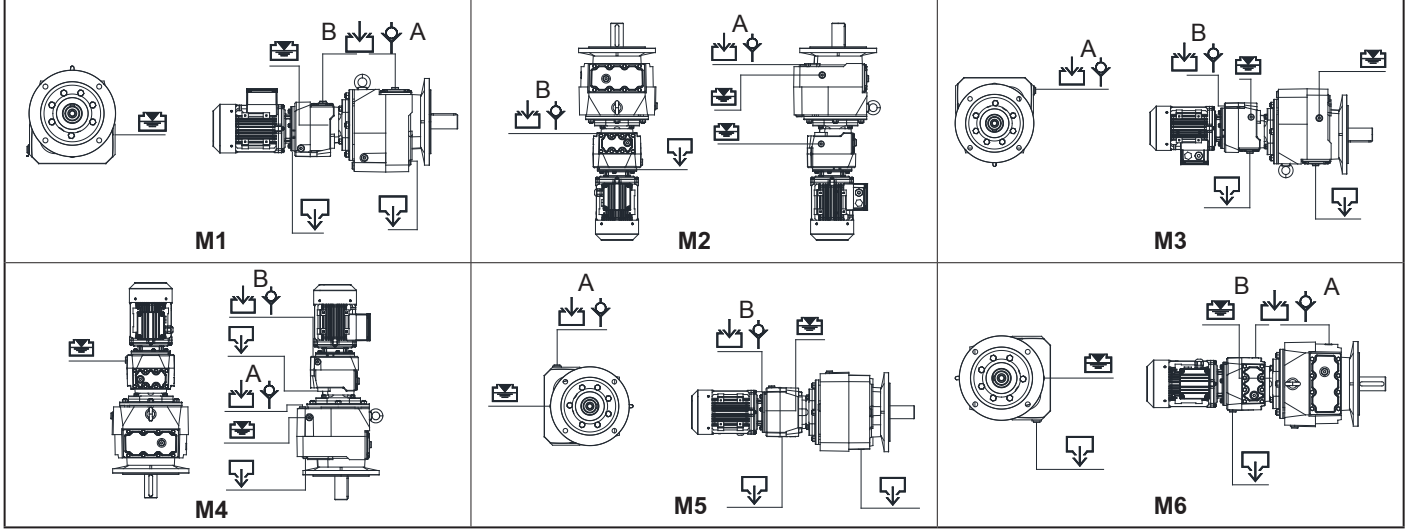
Genel Bilgiler General Information Einführung



N Serisi Beş-Altı Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları

N Series Five-Six Stage Helical Gearboxes Oil Level Plugs

N Serie Fünf-Sechsstufige Stirnradgetriebe Ölverschlußschrauben



Yağ Miktarları (lt.) / Oil Quantities. (lt) / Ölmengen (lt.)

Tip Type Typ	N Serisi 5-6 Kademe Yağ Miktarları N Series 5-6 Stages Oil Quantities Ölmengen von N Serie mit 5-6 Stufen					
	M1 A / B	M2 A / B	M3 A / B	M4 A / B	M5 A / B	M6 A / B
N275	1.0 / 0.4	1.7 / 0.6	1.5 / 0.5	1.7 / 0.6	1.2 / 0.5	1.2 / 0.5
N285	1.6 / 0.65	2.85 / 0.95	2.5 / 0.70	2.85 / 0.95	2.4 / 0.70	2.4 / 0.70
N375	1.9 / 0.65	3.3 / 0.95	3.0 / 0.70	3.3 / 0.95	2.6 / 0.70	2.6 / 0.70
N475	4.0 / 1.2	7.0 / 2.1	7.0 / 2.0	7.0 / 2.1	5.0 / 1.4	5.0 / 1.4
N575	6.0 / 1.2	11 / 2.1	10.5 / 2.0	11 / 2.1	7.5 / 1.4	7.5 / 1.4
N675	8.5 / 2.0	20 / 3.4	18 / 3.1	20 / 3.4	10.5 / 2.8	10.5 / 2.8
N775	13 / 2.0	30 / 3.4	28 / 3.1	30 / 3.4	20 / 2.8	20 / 2.8
N875	20 / 2.0	45 / 3.4	39 / 3.1	45 / 3.4	28 / 2.8	28 / 2.8
N975	50 / 4.5	90 / 7.5	80 / 7.5	85 / 7.5	65 / 5.5	65 / 5.5
N276	1.0 / 0.35	1.7 / 0.55	1.5 / 0.50	1.7 / 0.55	1.2 / 0.40	1.2 / 0.40
N286	1.6 / 0.60	2.85 / 0.80	2.5 / 0.70	2.85 / 0.80	2.4 / 0.65	2.4 / 0.65
N376	1.9 / 0.60	3.3 / 0.80	3.0 / 0.70	3.3 / 0.80	2.6 / 0.65	2.6 / 0.65
N476	4.0 / 1.1	7.0 / 2.0	7.0 / 1.9	7.0 / 2.0	5.0 / 1.3	5.0 / 1.3
N576	6.0 / 1.1	11 / 2.0	10.5 / 1.9	11 / 2.0	7.5 / 1.3	7.5 / 1.3
N676	8.5 / 1.9	20 / 3.3	18 / 3.0	20 / 3.3	10.5 / 2.6	10.5 / 2.6
N776	13 / 1.9	30 / 3.3	28 / 3.0	30 / 3.3	20 / 2.6	20 / 2.6
N876	20 / 1.9	45 / 3.3	39 / 3.0	45 / 3.3	28 / 2.6	28 / 2.6
N976	50 / 4.0	90 / 7.0	80 / 7.0	85 / 7.0	65 / 5.0	65 / 5.0

Semboller :

Symbols :

Symbole :



:Yağ doldurma

:Oil filling

:Ölfüllung



:Yağ boşaltma

:Drain plug

:Ölauslass



:Yağ seviyesi

:Oil level

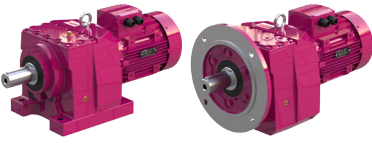
:Ölstand



:Havalandırma

:Vent Plug

:Entlüftungsschraube



Genel Bilgiler General Information Einführung

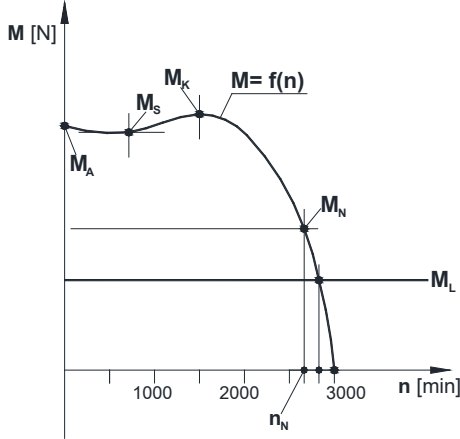


MOTORLAR

AC Motorlar

a- Genel Özellikler:

Basit konstrüksiyonlu, bakım gerektirmez, güvenilirliği yüksek ve uygun fiyatlı olmaları nedeni ile trifaze asenkron motorlar en çok kullanılan motor cinsidir. Bu motorların çalışma karakteristikleri moment-hız eğrisi ile belirlenir. Aşağıda bu karakteristik eğrisine bir örnek verilmiştir.



Motorun her start yapılmasında bu eğriye uygun hareket eder ve yük momenti M_L ile bu eğrinin kesiştiği nokta, motorun çalışma anındaki moment ve devirini verir.

Statorun manyetik alanı senkron hızla n_s döner. Kutuplar arasındaki faz kayması 3 fazlı motorlarda 120° 'dir.

$$n_s = 120 \times \frac{f}{p_s}$$

f: şebeke frekansı [Hz]
 p_s: statorun kutup sayısı

Rotorun değişken manyetik alanı rotorun statorun manyetik alanının dönüşü yönünde dönmeye başlamasını sağlar. Rotor bu hareketinde statorun manyetik alanını takip eder ama hiçbir zaman yakalayamaz. Rotor statorun manyetik alanının hızından yavaş döner. Rotorun bu hızına baz hız n_N denir. Yükün azalması rotorun hızının artmasını sağlar, aynı zamanda sapma azalmış olur. Sapma aşağıdaki gibi belirlenmiştir:

$$s = \frac{n_s - n_N}{n_s} \times 100$$

Sapmanın miktarına göre motorun nominal değerlerinde şu farklılıklar olabilir:

Sapma s : $\pm 20\%$
Kalkış Akımı.....: $\pm 20\%$
Kalkış Momenti.....: $-15/+25\%$
Kütle Atalet Momenti.....: $\pm 10\%$
Verim (37 kW'a kadar).....: $-0,15 (1-\eta)$

MOTORS

AC Motors

a- General Specifications:

On account of its simple and maintenance free construction, good reliability and price, the three phase squirrel cage motor is one of the most frequently employed electric motors. The run up behavior of a three phase squirrel cage motor is described by the torque-speed characteristic curve. An example is shown below.

M_A : Start momenti / Starting torque / Anlaufmoment

M_S : Demeraj momenti / Pull-up torque / Anziehungsmoment

M_K : Frenleme momenti / Pull-out torque / Bremsungsmoment

M_N : Motorun ilettiği moment / Motor rated torque / Treibmoment

M_L : Yük momenti / Load torque / Lastmoment

The motor follows this torque characteristics up to its stable operating point every time, when it is switched on. Operating point is that point, where the moment speed curve intersects with load torque M_L line.

The magnetic field in the stator rotates at a synchronous speed n_s . Phase shift of each pole is 120° at 3 phase motors.

$$n_s = 120 \times \frac{f}{p_s}$$

f: supply frequency [Hz]
 p_s: number of stator poles

Because of the alternating magnetic field in the rotor, the rotor starts running in the same direction of the stator flux and tries to catch up with the rotating flux. The rotor never catches up the stator field. The rotor runs slower than the speed of the stator field. This speed is called the base speed n_N .

A decrease in load will cause the rotor to speed up or decrease slip. The slip is defined as follows:

$$s = \frac{n_s - n_N}{n_s} \times 100$$

According to the slip, the nominal values of the electric motor can alter as follows:

Slip s : $\pm 20\%$
Starting current: $\pm 20\%$
Starting torque: $-15/+25\%$
Moment of inertia.....: $\pm 10\%$
Efficiency (up to 37 kW).....: $-0,15 (1-\eta)$

MOTOREN

Drehstrommotoren:

a- Allgemeine Eigenschaften

Wegen die wartungsarme und leichte Konstruktion, hohe Sicherheit bei Nutzung und günstige Preise werden die asynchrone Drehstrommotoren am meisten benutzt. Motoranlaufverhalten wird mit Moment-Drehzahl-Kurve charakterisiert. Ein Beispiel ist unten angegeben.

Der Drehstrommotor läuft diese Kurve bei jeder Anlauf, bis dem stabilen Betriebspunkt erreicht wird. Betriebspunkt ist der Zustand, bei dem die Moment-Drehzahl-Kurve sich mit der Linie von erforderlichen Moment M_L schneidet.

Magnetisches Feld von Stator dreht sich mit synchroner Geschwindigkeit n_s . Phasenverschiebung von den Polen ist 120° bei 3 phasigen Drehstrommotoren.

$$n_s = 120 \times \frac{f}{p_s}$$

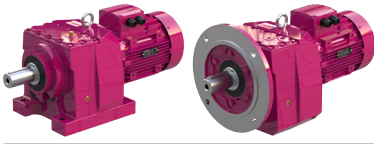
f: Frequenz der Spannung [Hz]
 p_s: Anzahl der Polen von Stator

Durch das magnetische Wechselfeld in den Rotor, beginnt der Rotor sich in der gleichen Richtung des Statorflusses zu drehen und versucht diese Bewegung aufzuholen. Der Rotor kann den Statorfeld nie aufholen. Die Rotorgeschwindigkeit nennt man Basisgeschwindigkeit n_N . Eine Abnahme der Belastung bewirkt, dass der Rotor sich beschleunigt und der Schlupf sich verringert. Der Schlupf wird wie folgt definiert:

$$s = \frac{n_s - n_N}{n_s} \times 100$$

Für die nominale Werte der Drehstrommotoren sind folgende Abweichungen zulässig:

Schlupf s : $\pm 20\%$
Anzugsstrom: $\pm 20\%$
Anzugsmoment: $-15/+25\%$
Massentägheitsmoment: $\pm 10\%$
Wirkungsgrad (bis 37 kW).....: $-0,15 (1-\eta)$



Genel Bilgiler General Information Einführung



b- Çalışma Türleri

Katalogta verilen tüm redüktörlerin motorları S1 çalışma türüne uygun verilmektedir. Diğer çalışma türleri aşağıdaki tabloda gösterilmiştir.

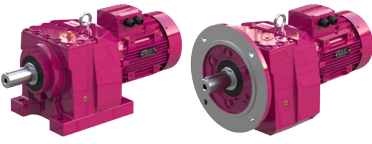
b-Modes of Operation

All motors of the catalogue have been laid out for duty S1 (continuous operation). Other duty types are given on the following table.

b-Betriebsarten

Die im Katalog angeführten Motoren sind für Betriebsart S1 (Dauerbetrieb) ausgelegt. Andere Betriebsarten sind unten angegeben.

Çalışma Türü Operation Betriebsarten	Açıklama Explanation Erläuterung	Yük Grafiği Load Graphic Lastverläufe
S1	Sabit yükte sürekli çalışma Continuous operation under constant load Dauerbetrieb mit konstanter Belastung	
S2	Sabit yükte kısa süreli çalışma Short-time duty under constant load Kurzbetrieb mit konstanter Belastung	
S3	Yolvermede sıcaklık artımı olmadan periyodik çalışma Periodic duty without influence of start-up on temperature Aussetzbetrieb ohne Einfluß des Anlaufens auf die Temperatur	
S4	Yolvermede sıcaklık artımı olan periyodik çalışma Periodic duty with influence of start up on temperature Aussetzbetrieb mit Einfluß des Anlaufes auf die Temperatur	
S5	Yolvermede ve frenlemede sıcaklık artımlı periyodik çalışma Periodic duty with influence of startup and braking on temp. Aussetzbetrieb mit Einfluß des Anlaufes / Bremsung auf die Temp.	
S6	Sürekli orta darbeli çalışma Continuous operation with intermittent loading Durchlaufbetrieb mit Aussetzungsbelastung	
S7	Elektriksel frenlemeli sürekli orta darbeli çalışma Continuous operation with intermittent loading and braking Ununterbrochener Betrieb mit Anlauf und Bremsung	
S8	Devir ve yük değişimli sürekli çalışma Continuous operation duty type with related load-speed changes Ununterbrochener periodischer Betrieb mit Drehzahländerung	



Genel Bilgiler General Information Einführung



c- Koruma Sınıfı:

Yılmaz Redüktörde standart olarak IP55 (IEC 34-5) koruma sınıfı motorlar kullanılmaktadır. Diğer koruma sınıfları istendiğinde firmamıza danışınız.

d- İzolasyon Sınıfı:

Yılmaz Redüktörde kullanılan standart izolasyon sınıfı F (IEC 317-8) dir. İstek üzerine H sınıfı yapılabilmektedir.

e- Verim Sınıfları:

Üç fazlı az gerilim asenkron motorların verim sınıfı ölçümü IEC 60034-2-1:2007 normu ile belirlenmiştir. Yeni IE verim sınıfı 0,75 kW'tan 375 kW'a kadar güç aralığında çalışan AC motorlar için geçerlidir. EFF verim sınıfından farklı olarak IE verim sınıfı 6 kutup sayılı motorlar içinde kullanılabilir. Aşağıda verim sınıfları sıralanmıştır. Bölgeler dışında verim sınıfı zorunlulukları ülkelere göre de farklılık gösterebilir. Lütfen firmamıza danışınız. Başka ürünlere entegre olmuş ve bu nedenle motorun veriminin bağımsız belirlenemediği sistemlerde (redüktör pompa gibi) verim sınıflandırması geçerli değildir.

c- Protection Class:

Yilmaz Reduktör uses IP55 (IEC 34-5) protection class electric motors for standard products. If different kind of protection class is requested please contact us.

d- Insulation Class:

Yilmaz Reduktör uses F (IEC 317-8) insulation class electric motors for standard products. H insulation class is available upon request.

e- Efficiency Classes:

The method for measuring the efficiency of low voltage three-phase asynchronous motors was revised with the new IEC 60034-2-1:2007 standard. The new IE classes is valid for AC Motors in power range from 0,75 to 375 kW. Unlike the EFF classes IE classes can be used for 6-pole AC motors. Below is the table of efficiency classes. The instructions for efficiency classes can differ from country to country. Please contact with us for more information. For the motors, which are fully integrated into a product (for example gear, pump) so their energy efficiency can not be recognized independently, the requirements of efficiency are not valid in Europe.

c- Schutzarten:

Yilmaz Reduktör Getriebemotoren werden serienmäßig mit Schutzart IP55 (IEC34-5) ausgeführt. Für andere Schutzarten bitte rückfragen.

d- Isolationsklasse:

Yilmaz Reduktör Getriebemotoren werden serienmäßig in Wärmeklasse F (IEC317-8) ausgeführt. H Wärmeklasse ist möglich auf Kundenwunsch.

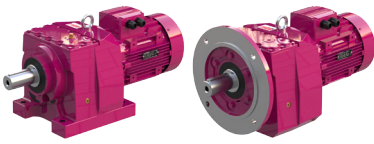
e- Energieeffizienzklassen:

Die Methode für Messung die Effizienz von dreiphasigen gering Spannung Asynchronmotoren hat neu mit IEC 60034-2-1:2007 Norm festgestellt. Die neue IE-Klassen gelten für alle Drehstrommotoren im Leistungsbereich von 0,75 bis 375 kW. Anders als EFF-Klassen die IE-Klassen können auch für 6-polige Drehstrommotoren verwendet werden. Unten steht die Tabelle der Effizienzklassen. Die Richtlinien für Effizienzklassen können sich je nach dem Land unterscheiden. Bitte mit unserem Firma Kontakt aufnehmen. Für die Motoren, die vollständig in ein Produkt (zum Beispiel Getriebe, Pumpe) eingebaut sind und deren Energieeffizienz nicht unabhängig von diesem Produkt erfasst werden kann, gelten in Europa die Anforderungen der Effizienzklassen nicht.

Verim Sınıfları Efficiency Classes Energieeffizienzklassen			4 Kutuplu Motor Verim Değeri Hesabı Calculating Efficiency Values of Motors with 4 Poles Berechnung der Wirkungsgrade von Elektromotoren mit 4 Polen	
IE1	EFF 2	Standart Verim Standart Efficiency Standarte Energieeffizienz	A=0,5234 B=-5,0499 C=17,4180 D=74,3171	$\eta_{Mn} = A \times [\log_{10}(P_L)] + B \times [\log_{10}(P_L)]^2 + C \times \log_{10}(P_L) + D$ P_L :Anma Yüğü [kW] / Nominal Load [kW] / Nennlast [kW] η_{Mn} :Nominal verim / Nominal Efficiency [kW] / Sollwirkungsgrad
IE2	EFF 1	Yüksek Verim High Efficiency Hohe Energieeffizienz	A=0,0278 B=-1,9247 C=10,4395 D=80,9761	
IE3	-	Premium Verim Premium Efficiency Premium Energieeffizienz	A=0,0773 B=-1,8951 C=9,2984 D=83,7025	
IE4	-	Süper Premium Verim Super Premium Efficiency Super Premium Energieeffizienz	A=0,2412 B=-2,3608 C=8,446 D=86,8321	

4 Kutuplu Motor Verim Değerleri Efficiency Values of Motor with 4 poles Sollwirkungsgrad des Motors mit 4 Polen	Anma Yüğü [kW] Nominal Load [kW] Nennlast [kW]	Verim Sınıfı / Efficiency Class / Energieeffizienzklassen			Anma Yüğü [kW] Nominal Load [kW] Nennlast [kW]	Verim Sınıfı / Efficiency Class / Energieeffizienzklassen	
		IE2	IE3	IE4		IE3	IE4
	0,12	%59,1	%64,8	%69,8	11	%91,4	%93,3
	0,18	%64,7	%69,9	%74,7	15	%92,1	%93,9
	0,25	%68,5	%73,5	%77,9	18,5	%92,6	%94,2
	0,37	%72,7	%77,3	%81,1	22	%93,0	%94,5
	0,55	%77,1	%80,8	%83,9	30	%93,6	%94,9
	0,75	%79,6	%82,5	%85,7	37	%93,9	%95,2
	1,1	%81,4	%84,1	%87,2	45	%94,2	%95,4
	1,5	%82,8	%85,3	%88,2	55	%94,6	%95,7
	2,2	%84,3	%86,7	%89,5	75	%95,0	%96,0
	3,0	%85,5	%87,7	%90,4	90	%95,2	%96,1
	4,0	%86,6	%88,6	%91,1	110	%95,4	%96,3
	5,5	%87,7	%89,6	%91,9	132	%95,6	%96,4
	7,5	%88,7	%90,4	%92,6	160	%95,8	%96,6

Motorlu redüktörlerimizde kullanılan motorların verimleri tabloda gri olarak belirtilmiştir. / The efficiencies of the motors used in our geared motors have been indicated in gray in the table. / Die Effizienz der Motoren, die in unseren Getriebemotoren verwendet werden, wurde in der Tabelle in Grau angegeben.

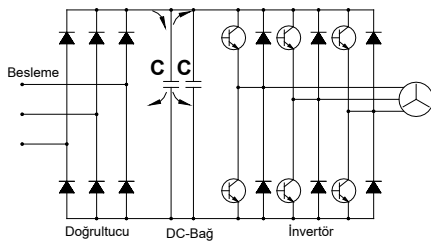


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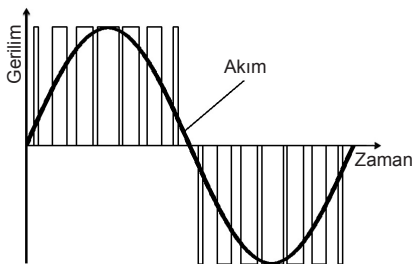


f- AC Frekans İnvertörler

Doğru Akımı (DC), alternatif akıma (AC) çeviren elektronik çeviricilere invertör denilmektedir. AC motorlar için elektronik hız kontrol cihazları genellikle AC giriş akımını doğrultucu diyotlarla DC akıma çevirir ve daha sonra çevirici diyotlar vasıtasıyla bu akımı tekrar AC akıma çevirir. Doğrultucu diyotlar ile çevirici diyotlar arasındaki bağlantı DC-bağ olarak tanımlanmaktadır. DC kontrol cihazının (genellikle invertör olarak isimlendirilir) elektriksel blok şeması aşağıda verilmiştir.

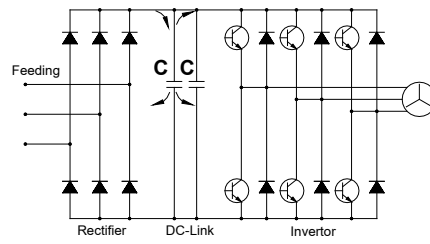


Tam dalga doğrultucuları besleyen üç faz besleme akımı DC-bağ kapasitörlerine iletilir. Kapasitörler voltajdaki dalgalanmaları azaltır ve kısa süreli ağıdaki akım kesintilerinde enerji sağlar. Kapasitörlerdeki voltaj kontrolsüzdür ve gelen AC akımın pik akım değerlerine bağlıdır. DC akım tekrar AC akıma, Puls genişliği modülasyonu (PWM) kullanılarak çevrilir. İstenen dalga formu, sabit bir frekansta (Puls frekansında), çıkış transistörlerinin (İzole edilmiş geçit Bipolar transistörleri; IGBT'ler) açılıp kapatılması ile oluşturulur. IGBT'lerin açma kapama zamanlarının değişimi ile istenen akım oluşturulabilir. Çıkış voltajı bir seri kare dalga pulslardır ve motor sargılarının indüktansı ile sinusoidal bir motor akımı oluşur. Puls genişliği modülasyonu aşağıda gösterilmiştir.

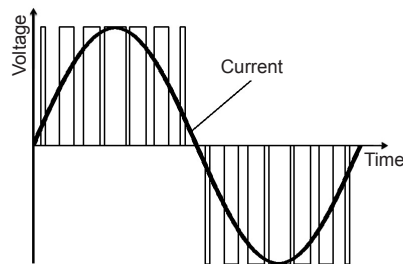


f- AC Frequency Inverters

An electronic converter is a device which converts Direct Current (DC) to Alternating Current (AC) is known as an inverter. Electronic speed controllers for AC motors usually convert the AC supply to DC using a rectifier, and then convert it back to a variable frequency, variable voltage AC supply using an inverter bridge. The connection between the rectifier and inverter is called the DC link. The block diagram of a speed controller (often called an inverter) is shown below.

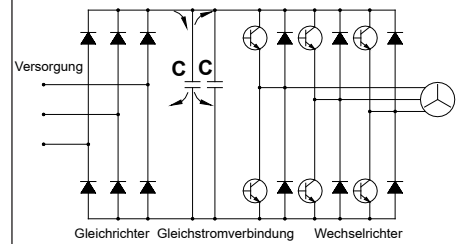


The three phase supply is fed into a full wave rectifier which supplies the DC link capacitors. The capacitors reduce the voltage ripple (especially on single supplies) and supply energy for short mains breaks. The voltage on the capacitors is uncontrolled and depends on the peak AC supply voltage. The DC voltage is converted back to AC using Pulse Width Modulation (PWM). The desired waveform is built up by switching the output transistors (Insulated Gate Bipolar Transistors; IGBTs) on and off at a fixed frequency (the switching frequency). By varying the on and off time of the IGBTs the desired current can be generated. The output voltage is still a series of square wave pulses and the inductance of the motor windings results in a sinusoidal motor current. Pulse Width Modulation is shown in the figure below.

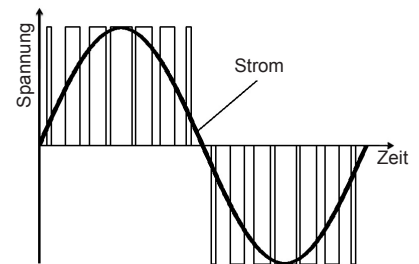


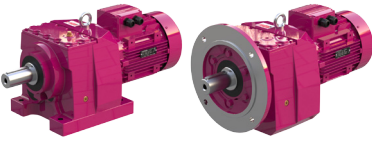
f- AC Frequenz Umrichter

Ein elektronischer Wandler, der den Gleichstrom (DC) in Wechselstrom (AC) umwandelt, wird als Umrichter bezeichnet. Ein Frequenzumrichter benutzt einen ungesteuerten Eingangsgleichrichter, um die Netzspannung in Gleichspannung umzuwandeln. Diese wird dann in den Zwischenkreiskondensatoren gespeichert. An diesem Gleichspannungszwischenkreis ist ein Wechselrichter angeschlossen. Dieser Wechselrichter erzeugt am Ausgang eine variable Frequenz und eine variable Spannung. Der Anschluss zwischen dem Gleichrichter und dem Wechselrichter nennt man Gleichstromverbindung. Das Blockschaltbild von diesem System wurde unten dargestellt:



Auch bei dreiphasiger Versorgung wird die gleichrichtete Netzspannung den Zwischenkreiskondensatoren zugeführt. Die Kondensatoren reduzieren die Oberwelligkeit der Spannung (was besonders bei einphasiger Versorgung entscheidend ist) und liefern Energie, die kurze Unterbrechungen der Netzstromversorgung ermöglicht. Die Spannung der Kondensatoren ist vom Spitzenwert der Wechselspannung abhängig. Die Gleichspannung wird im Wechselrichter durch Pulsweitenmodulation (PWM) in Wechselspannung umgewandelt. Die gewünschte Wellenform wird durch Ein- und Ausschalten der Ausgangstransistoren (IGBT's Isolierte Gate Bipolar Transistoren) mit einer festen Frequenz (der Pulsfrequenz) erzeugt. Der gewünschte Strom kann durch die Variation der Ein- und Ausschaltzeit der Ausgangstransistoren generiert werden. Die Ausgangsspannung ist dadurch eine Reihe von Spannungsimpulsen, die in Verbindung mit der Induktivität der Motorspulen zu einem sinusförmigen Motorstrom führt. Die Pulsweitenmodulation wird wie folgt dargestellt





Genel Bilgiler General Information Einführung



DC MOTORLAR

a- Genel Özellikler

DC motorlar, elektronik parçalardaki gelişmeler nedeni ile yeni uygulama alanları bulmuştur. Daha önce çok pahalı olan ve ekonomik olmayan kontrol sistemlerinin yerini ucuz ve kompakt güç kontrol üniteleri almıştır. Yol vermenin kontrol altına alınabildiği, tork ve akım izlenebilirliği, aşırı yüklenmeye karşı elektronik koruma sağlanabilmesi ve daha birçok pahalı olmayan uygulamalar DC motorlarını cazip kılmaya başlamıştır.

b- DC Motorların Çalışma İlkeleri

DC motorlar için DC çıkış veren bir doğrultucuya ihtiyaç vardır. Motor armatür sargıları, alan sargıları, komutasyon sargıları ve kompanse sargılar olmak üzere rotorda ve statorda bulunan sargılardan oluşur. Rotora voltaj ve akım karbon fırçalar ve komutator sargılarla ulaştırılır. Bu karbon fırçalar aşındığından DC motorlar belirli periyotlarla bakıma alınmalıdır. İyi kontrol edilebilme özelliklerinden dolayı DC motorlar otomasyon teknolojisinde sıkça kullanılmaktadır.

c- DC Motor Çeşitleri

Temel olarak Şönt (Shunt) ve seri sargılı DC motorlar bulunmaktadır. Bu sargıların çeşidine göre moment eğrisi değişmektedir.

d- DC Motorlarda Hız Kontrolü

Bu motorlarda devir değişimi DC voltajın değiştirilmesi ile yapılır. Şönt sarımlı DC motorların sıfır yük ile maximum yük arasındaki davranışı AC motorlara benzer. Devir artan yükte beraber düşer. Bu devir farkı ufak güçlü motorlarda büyük, büyük güçlü motorlarda ise ufaktır. Fakat bu hız farkı DC doğrultucu cihazda armatür voltajı ($I \times R$) ile oynanarak kompanse edilebilir. Hassas hız kontrol gereksinimi olduğunda, tako jeneratörler kullanılabilir. DC motorların gücü aşağıdaki formülden hesaplanır;

$$P_g = U \times I = \frac{P_c}{\eta}$$

P_g : Giriş gücü W
 P_c : Çıkış gücü W
 U : Armatür gerilimi V
 I : Armatür akımı A
 η : Motor verimi

DC MOTORS

a- General Specifications of DC Motors

DC drive systems have found new possible applications with the development of the electronic components sector. What was previously extremely expensive and in some cases not economically feasible is nowadays realized by miniaturized power converter technology. Additional functions such as guided startup after a predetermined time, torque and current monitoring with electronic protection against overloading, and many inexpensive special applications have made DC drive systems more attractive.

b- Operating principles of the DC Motors

The DC motor requires, a converter with DC output. The motor includes windings, such as armature, field, commutation and compensation windings, which are arranged in the stator as well as on rotor. Voltage and current are supplied to the rotor via the carbon brushes and the commutator. The carbon brushes are wearing parts therefore a DC motor requires maintenance at service intervals. While its good control properties, the DC motor is an essential item in automation technology.

c- Types of DC Motors

Depending on the wiring of the exciting winding or field winding, two basically different variants are regards torque speed characteristics may be distinguished.

d- Speed Control of DC motors

In DC motors the speed is adjusted by altering the DC voltage. DC shunt wounded motors behave similar to three phase induction motors between no load operation and maximum load. The speed drops with increasing loading of the motor. This difference is greater in small motors and smaller in larger motors. The speed difference can be compensated in the DC converter device by adjusting ($I \times R$). If great control accuracy is required, a speed control with measurement of the actual values by a tachogenerator can be used. The power of DC motor;

$$P_g = U \times I = \frac{P_c}{\eta}$$

P_g : Input Power W
 P_c : Output Power W
 U : Armature Voltage V
 I : Armature Current A
 η : Motor efficiency

DC MOTOREN

a- Eigenschaften von DC Motoren

Mit den Entwicklungen bei elektronischen Komponenten haben DC Motoren neue Anwendungsbereiche gefunden. Regelungssysteme, die früher sehr teuer und in manchen Anwendungsfällen ungünstig waren, sind jetzt kompakt und günstig. Bei den DC Motoren ist kontrolliertes Anlauf, Moment- und Stromüberwachung mit Überlastschutz möglich. Es gibt viele günstige Sonderanwendungen für diese Motoren. Wegen oben genannten Eigenschaften werden die DC Motoren immer mehr bei unterschiedlichen Anwendungen benutzt.

b- Funktionsprinzip der DC Motoren

Bei DC Motoren ist eine Kommutatorwicklung im Rotor angeordnet, während der magnetische Fluss vom Stator erzeugt wird. Dies kann wiederum mittels einer Erregerwicklung oder durch Permanentmagnete geschehen. Wie bei der Synchronmaschine wird durch das Erregerfeld in der Ankerwicklung eine Wechsellspannung, die bei der Gleichstrommaschine jedoch durch den mechanischen Kommutator und die darauf gleitenden Bürsten in eine Gleichspannung umgeformt wird, induziert.

c- Arten von DC Motoren

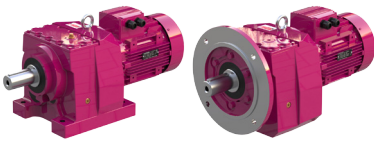
Es gibt zwei verschiedene Wicklungen, nämlich Shunt- und Serial-Wicklung. Das Drehmoment-Drehzahl-Verhältnis ist für beide Wicklungen unterschiedlich.

d- Drehzahl Kontrolle für DC Motoren

Drehzahl von DC Motoren kann man mit Steuerung der DC Spannung ändern. DC Motoren mit Shunt Wicklungen ist ähnlich zu drei phasen AC Motoren zwischen maximalen Last und ohne Last. Drehzahl wird mit der Last reduziert. Mit kleineren Motoren wird dieser Differenz höher mit größeren Motoren kleiner. Der Drehzahlunterschied kann geregelt werden mit ($I \times R$) Veränderung. Wenn eine genaue Kontrolle gebraucht, soll ein Tachogenerator benutzt werden. Leistung des DC Motors;

$$P_g = U \times I = \frac{P_c}{\eta}$$

P_g : Eingangsleistung W
 P_c : Ausgangsleistung W
 U : Ankerspannung V
 I : Ankerstrom A
 η : Wirkungsgrad des Motors



Genel Bilgiler General Information Einführung



Elektromanyetik Frenler

Bu tip frenlerin iki sürtünme yüzeyi vardır. Fren torku, voltaj uygulanmadığı zaman yayların kuvveti ile oluşturulur. Fren elektromanyetik alanın oluşumu ile serbest kalır. Bobinin beslenmesi ile mıknatıslanan balata baskı pulu, elektromıknatısa doğru çekilir. Bu hareket yayları baskı altına alır ve rotor mili üzerine takılan çoklu kama üzerinde aksiyal yönde serbest hareket edebilen balata serbest kalır. Akım kesildiğinde yayların baskısıyla, balata baskı pulu fren balatasına doğru itilir ve bu hareket rotoru frenler.

30kW ve daha büyük motorlarda fren aşınmasından dolayı oluşacak riskleri önlemek için proximity switch standart olarak kullanılmalıdır. Genel olarak kullanılacak kompakt motorlarda fren seçimi motor gövde büyüklüğüne göre değil, motor gücüne göre yapılmalıdır.

Fren Çeşitleri

a) Soğutmasız tip frenler

Motor fanı çıkarılıp motor kapağı arkasına akupile edilerek kullanılan frenler; genellikle sıkça açılıp kapanmayan ve kısa zaman aralıklarında çalışan sistemlerde tercih edilir.

b) Soğutmalı tip frenler

Motor fanı çıkarılıp motor kapağı arkasına akupile edilen ve motorun mili uzatılarak fren ve motorun arkasına alınan fan sayesinde daimi bir hava sirkülasyonu sağlanarak kullanılan frenlerdir. Genellikle uzun süreli çalışan ve kapalı mekanlarda kullanılan sistemlerde tercih edilir.

c) Manuel kol sistemli frenler çalışma sistemi olarak her iki fren tipinde de kullanılabilir (soğutmalı veya soğutmasız). Özel durumlarda (elektrik kesilmesi; mekanik problemler) üzerinde bulunan bir kol vasıtası ile sistemi yay baskısından kurtararak serbest kalmasını sağlayan frenlerdir. Genellikle manuel olarak sistemin açılması gereken yerlerde (otomatik giriş kapıları, dış cepe boyama asansörleri v.b.) tercih edilir.

Fren çalışma voltajları

Elektromanyetik frenler 230V AC veya 400V AC beslemeli olarak sipariş edilebilir. Frenler DC fren olmaları nedeni ile besleme ile fren bobini arasında fren tipine bağlı olarak, yarım dalga, tam dalga doğrultucular veya trafolar kullanılır. Özel olarak belirtilmedikçe 230V beslemeli ve yarım dalga doğrultuculu frenler kullanılmaktadır. Özel durumlar için YILMAZ Redüktöre danışınız.

a) 230V AC ile beslenen frenler

Motor klemens kutusundan alınan 230V'luk AC besleme fren tipine bağlı olarak yarım dalga veya tam dalga doğrultucu ile fren bobininin voltajına düşürülür. Fren bobin DC voltajı etiketi üzerinde belirtilmiştir.

b) 400V AC ile beslenen DC frenler

Motor klemens kutusundan alınan 400V'luk AC besleme, yarım dalga doğrultucu ile fren bobininin voltajına düşürülür. Fren bobininin DC voltajı etiket üzerinde belirtilmiştir.

Electromagnetic Brakes

This type of brakes has two friction surfaces. Brake torque is generated by springs when no voltage is applied. The brake is electromagnetically released. On exciting the electromagnet means of the current, the armature plate is pulled towards the electromagnet itself, thrust loading the pressure spring and enabling the friction disc which is axially movable on the key, to turn freely. When current fails, the pressured springs drive the armature plate towards the disc, thus braking the motor shaft.

A proximity switch must be used as standard to prevent risks caused by brake wear for motors with 30 kW and above. Generally, for compact motors, brake selection should be based on motor power rather than motor frame size.

Brake Types

a) Brakes without cooling

This type of brakes are assembled on the back cover of the electric motor. There is no fan on the backside. This brake type is mostly preferred in short working times and short working cycles.

b) Fan cooled brakes

This type of brakes are assembled on the back cover of electric motor by removing the electric motor fan. A fan is coupled to the backside of the brake by extending the rotor shaft of the electric motor. Fan cooled brakes are preferred in long working times and closed places without airflow.

c) Brakes with hand release

This brakes can be released by help of an arm. It can be applied to both of the above mentioned brakes and used in special cases (fail of electric current, mechanical problems etc.) These brakes are mostly preferred if operation (releasing) without a current is needed (automatic controlled doors, gates, building wall painting elevators etc.).

Working Voltages

Electromagnetic brakes can be ordered with 230V AC or 400V AC supply voltage. The coil of brakes needs DC voltage and therefore depending on brake type a half wave, a full wave rectifier or transformer should be used between supply and coil voltage. As standard the brakes will be delivered with 230V supply voltage and half wave rectifier, if there is no special request. For special cases please contact YILMAZ Redüktör.

a) Brakes with 230V supply voltage

230V AC supply voltage from the motor terminal box will be reduced to the coil voltage depending on the brake type with half-wave or full-wave rectifier. DC brake coil voltage is indicated on the label.

b) Brakes with 400V supply voltage

400V AC supply voltage from the motor terminal box will be reduced to the coil voltage with half-wave rectifier. DC brake coil voltage indicated on the label.

Elektromagnetische Bremsen

Die Bremse hat zwei Reibflächen und arbeitet nach dem Ruhestromprinzip. Im stromlosen Zustand wird das Bremsmoment durch den Druck der Feder erzeugt, während die Bremse beim Betrieb elektromagnetisch losgelassen wird. Durch die Erregung der Elektromagneten wird die Ankerscheibe zu den Elektromagneten gezogen und die Feder zusammengedrückt. Dadurch kann sich die Bremscheibe, die axial beweglich auf dem Mitnehmer angeordnet ist, frei drehen. Wird der Strom unterbrochen, drücken die Feder die Ankerscheibe gegen die Bremscheibe und halten die Motorwelle an.

Für Motoren mit einer Leistung von 30 kW und mehr sollte standardmäßig ein PRX-Sensor verwendet werden, um Risiken durch Bremsenverschleiß zu vermeiden. Allgemein sollte die Bremsenauswahl bei kompakten Motoren auf der Motorleistung und nicht auf der Baugröße des Motors basieren.

Bremsearten:

a) Bremsen ohne Kühlung

Diese Bremsen sind für Kurzlaufzeiten geeignet. Die Lüfterhaube und Lüfter des Motors ist ausgebaut und die Bremse ist an dem Ende der Motorwelle befestigt.

b) Bremsen mit Kühlung

Diese Bremsen sind für lange Laufzeiten und kleine, abgedeckte Räume geeignet. Durch die Verlängerung der Motorwelle wurde Lüfter hinter dem Bremse und dem Motor verbunden. Somit wurde eine konstante Lüftung ermöglicht.

c) Bremsen mit Hebelarm

Diese Bremsenart kann mit oder ohne Kühlung verwendet werden. Diese Bremsen sind bei der speziellen Fälle, wie keine Spannung an der Leitung, mechanische Probleme usw., anwendbar. Die Bremse wird mit einem Hebelarm manuell betätigt. Diese Bremsen werden am meisten an den Stellen, wo die Lüftung ohne Spannung erfolgen soll, benutzt (automatische Türe, Wandaufzüge).

Betriebsspannungen

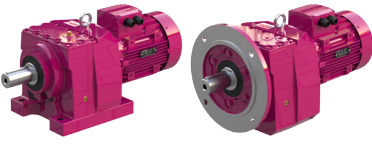
Elektromagnetische Bremsen können mit 230V AC oder 400V AC Versorgungsspannung bestellt werden. Die Wicklungen der Bremsen brauchen Gleichspannung und deswegen abhängig von Bremsenart zwischen Versorgungsspannung und Wicklungsspannung soll Halbwellen-, Vollweggleichrichter oder Transformator verwendet werden. Als Standard die Bremsen werden mit 230V Versorgungsspannung und Halbwellengleichrichter geliefert.

a) Bremsen mit 230V Versorgungsspannung

230V AC Versorgungsspannung von Klemmenkasten wird auf die Wicklungsspannung abhängig von der Bremsentyp mit Halbwellen- oder Vollweggleichrichter reduziert. Wicklungsspannung ist auf dem Etikett angegeben.

b) Bremsen mit 400V Versorgungsspannung

400V AC Versorgungsspannung von Klemmenkasten wird auf die Wicklungsspannung mit Halbwellengleichrichter reduziert. Wicklungsspannung ist auf dem Etikett angegeben.



Genel Bilgiler General Information Einführung



c) 24V DC Frenler

Kullanılan fren momentinin büyüklüğüne göre besleme transformatörü seçilir. Şebekeden veya motorun klemens kutusundan alınan besleme voltajı transformatörde 29 V'a çevrilen gerilim tam dalga doğrultuculardan geçerek 24V DC'ye çevrilir ve fren bobini beslenir.

d) Şok ikazlı trafolar

Büyük güçteki ve momentteki frenlerin man-yetik doyuma ulaşmaları uzun zaman alır. Şok ikazlı trafolar frenin yay baskısını yenmede gecikmesini engellemek için kullanılır ve zaman rölesi yardımı ile çok kısa bir süre normal besleme voltajının iki katı ile (48V DC) beslenip sistemin ani açılmasını sağlar. Bu sayede gecikmeli açılımda ortaya çıkacak sürtünmeyi engellemeye yarayan bir trafo şeklindedir.

Fren bağlantı şekli

a) Gecikmeli frenleme

Genellikle sistemin yavaş ve kaydırılarak durması gereken yerlerde tercih edilen bağlantı şeklindedir. Vinç yürütme motorlarındaki sarsıntıyı önlemek için gecikmeli bağlantı şekli kullanılır. Frenler fabrika çıkışında gecikmeli bağlantıya uygun ayarlanır.

b) Ani frenleme

Genellikle sistemin enerjisi kesildiği anda ani olarak durdurulması gereken sistemlerde kullanılan bağlantı şeklindedir. Vinç kaldırma sistemleri, asansör motorlarında kullanılan bağlantı şeklindedir.

c) 24V DC Brakes

The transformer's size is selected according to value of brake torque. The current is taken from the electric motor terminal box or from the electric panel and is transformed to 29V DC current. This current is transferred to 24V DC current with full-wave rectifier and supplies brake coil.

d) Shock voltage supply transformer

Brakes which consist of high power and torques take long time to get in electromagnetic field. Shock voltage supply transformers with time relay are aiming to overcome spring pressure delaying for brakes. Also this transformers provide to open system suddenly by feeding double(48V DC) voltage in a short time and preventing to frictional losses occurring in delayed opening.

Connection Types

a) Delayed Braking

Generally this type of connection uses in slow and sliding brake intended systems. Delayed connection type using to prevent shock loadings in crane driving systems. Brakes are setting up to delayed connection if any other types are not specified by customer

b) Sudden Braking

This type of connections are mostly used in systems when short braking times are needed. The braking torque will be produced as soon as the current fails. These brakes are mostly used in hoisting of lifting units and elevators.

c) 24 V DC Bremsen

Die Spannung wird von den Klemmkasten des Motors oder Elektrischrank entnommen. Diese Spannung wird zuerst mittels Transformator zu 24 V reduziert. Danach wird diese Spannung mit Hilfe von Gleichrichter zu Gleichstromspannung umgewandelt. Die Größe des Transformators ist abhängig von der Größe des Bremsmoments.

d) Trafos mit Schock-Spannung

Diese Transformatoren werden bei großen Bremsen mit hohen Momenten verwendet. Da die große Bremsen eine lange Zeit braucht, um die erforderliche magnetische Feld zu erzeugen, wird an der Bremse kurz 48V Gleichstromspannung angelegt, um die Zeit zur Bildung von magnetischem Feld zu kürzen. Dies ermöglicht kürzere Reibungszeiten beim Start.

Schaltungsarten:

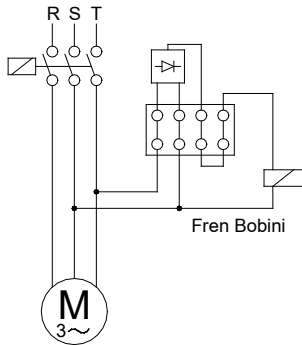
a) Verspätetes Bremsen

Diese Schaltung wird benutzt, wenn ein langsames und gleitendes Bremsen erforderlich ist. Am meisten wird es bei Fahrtriebselektromotoren von Aufzügen verwendet. Wenn keine Angabe bei der Bestellung gegeben wird, werden die Bremsen mit verspäteter Schaltung geliefert.

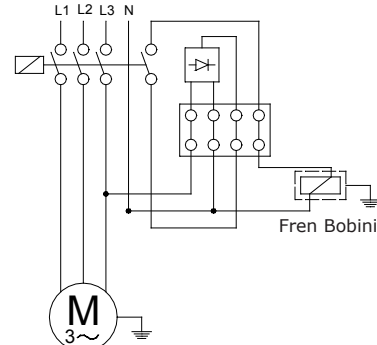
b) Schnelles Bremsen:

Allgemein verwendet man diese Schaltung bei Bedarf an plötzlichen Bremsen in dem Augenblick, in dem das System keine Energie mehr erhält. Diese Schaltungsart wird meist bei Kräne und Motoren von Aufzügen verwendet.

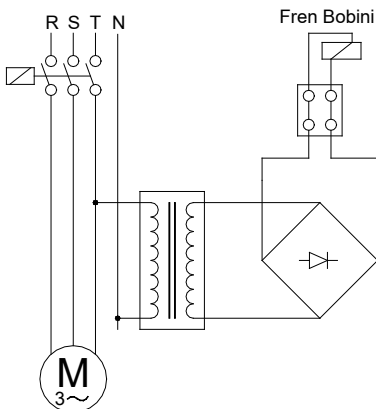
Gecikmeli Frenleme / Delayed Running Brake / Verspätete Bremsung
(230 V)



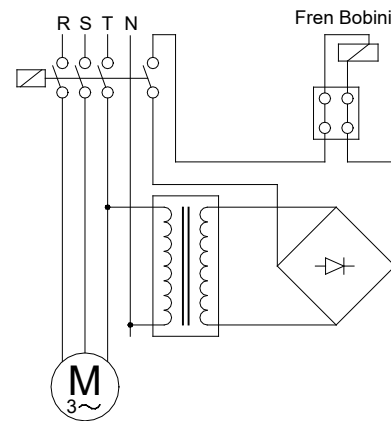
Ani Frenleme / Sudden Brake / Plötzliche Bremsung
(230 V)

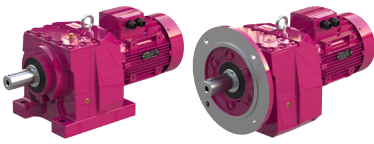


Gecikmeli Frenleme / Delayed Running Brake / Verspätete Bremsung
(24 V)



Ani Frenleme / Sudden Brake / Plötzliche Bremsung
(24 V)





Genel Bilgiler General Information Einführung



Fren Seçimi:

Doğru bir fren seçimi için aşağıdaki parametreler bilinmelidir.

- $I_{tot} [kg \cdot m^2]$: Motor miline indirgenmiş toplam atalet momenti
- $n_0 [d/dak]$: Maksimum motor devir sayısı
- $t_f [s]$: İstenilen en uzun frenleme zamanı
- c_t : Anahtarın devreye girme zamanı katsayısı (ortalama 0,995).
- $M_L [Nm]$: Sistemin statik tork ihtiyacı.
- C_s : Emniyet katsayısı ($C_s \geq 2$ olmalı)

Gerekli fren momenti aşağıdaki şekilde hesaplanır:

a) M_L Statik yük torku, motor dönüş yönünde (motorun dönüşüne yardımcı olarak, yükün indirilmesi veya hızlandırıcı sabit yük momenti hali):

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} + M_L$$

b) M_L Statik yük torku, motor aksi dönüş yönünde (motorun dönüşüne engel olarak, yükün yukarı kaldırılması veya frenleyici sabit yük/direnç momenti hali):

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} - M_L$$

Yukarıda bulunan sonuç C_s katsayısı ile çarpılarak ($C_s \geq 2$), fren momenti seçilir;

$$M_f = M_{fc} \times C_s$$

Yaklaşım Yolu ile Fren Seçimi:

Eğer yalnızca motorun gücü ve en yüksek devri biliniyor ise :

W [Watt]: Motorun nominal gücü

$$M_f = \frac{W}{\left(\frac{2\pi \times n_0}{60}\right)} \times C_s \quad (C_s \geq 2)$$

Brake Selection:

To select a brake correctly the following data are necessary;

- $I_{tot} [kg \cdot m^2]$: The total inertia of rotating parts reduced at the motor shaft
- $n_0 [rpm]$: Maximum motor speed.
- $t_f [s]$: The maximum admitted time of the braking.
- c_t : Coefficient of switch on time (average 0,995).
- $M_L [Nm]$: Required static torque of system.
- C_s : Safety coefficient ($C_s \geq 2$)

The necessary braking torque calculates below;

a) The static load torque M_L , same direction of motor rotation (Descent of a load or steady resisting torque which favours the rotation of the motor)

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} + M_L$$

b) The static load torque M_L , opposes the rotation of the motor (Lifting of a load or steady resisting torque which opposes the rotation of the motor)

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} - M_L$$

The necessary braking torque will result from the following equation using C_s ($C_s \geq 2$);

$$M_f = M_{fc} \times C_s$$

Approximated Brake Selection

Its only the motor power and its maximum speed are known:

W [Watt]: Motor Nominal Power

$$M_f = \frac{W}{\left(\frac{2\pi \times n_0}{60}\right)} \times C_s \quad (C_s \geq 2)$$

Bremswahl:

Um die richtige Bremse auszuwählen, braucht man unten aufgelistete Variablen;

- $I_{tot} [kg \cdot m^2]$: Die Gesamtträgheit der rotierenden Teile (siehe Anwendungsbeispiele)
- $n_0 [U/min]$: Die höchste Drehzahl des Motors
- $t_f [s]$: Die längste zulässige Bremszeit
- c_t : Reduktionskoeffizient der Tätigkeitszeit (gemittelt 0,995).
- $M_L [Nm]$: Vom system benötigtes, statisches Drehmoment.
- C_s : Sicherheitskoeffizient ($C_s \geq 2$)

Die benötigte Bremskraft wird wie folgt berechnet:

a) konstantes Belastungsmoment M_L , das die Motordrehung fördert (konstante Erhöhung der Motorgeschwindigkeit oder Herunterlassen der Last)

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} + M_L$$

b) konstantes Belastungsmoment M_L , das sich entgegen der Motordrehung widersetzt (konstante Verminderung der Motorgeschwindigkeit oder Aufheben der Last)

$$M_{fc} = \frac{(2 \pi \times n_0 \div 60) \times I_{tot}}{t_f \times c_t} - M_L$$

Wenn die Bremskraft mit dem Sicherheitskoeffizient C_s ($C_s \geq 2$) multipliziert wird, erhält man die erforderliche Bremskraft;

$$M_f = M_{fc} \times C_s$$

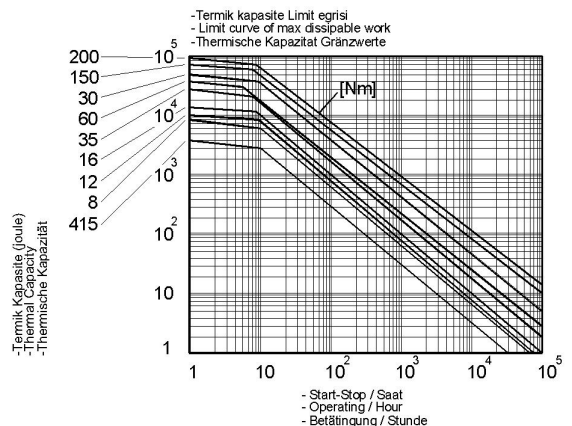
Abschätzung zur Bremswahl

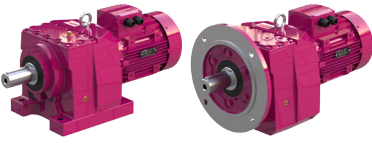
Wenn man nur die Motorleistung und die höchste Drehzahl kennt, kann die Bremskraft mit der folgenden Formel annähernd berechnet werden:

$$M_f = \frac{W}{\left(\frac{2\pi \times n_0}{60}\right)} \times C_s \quad (C_s \geq 2)$$

Standart Frenler / Standard Brakes / Standart Bremsen

Fren statik momenti [Nm] Brake Static Torque [Nm] Statische Bremskraft [Nm]	4,5	8	12	16	35	60	80	150	200
Fren Dinamik Momenti [Nm] Brake Dynamic Torque [Nm] Dynamische Bremskraft [Nm]	3,6	6,4	9,6	12,8	28	48	64	120	160
Maksimum Motor Hızı [d/dak] Maximum Motor Speed [rpm] Maximale Motordrehzahl [U/min]	3000	3000	3000	3000	3000	3000	3000	1500	1500
Giriş Gücü [W] Input Power [W] Antriebsleistung [W]	15	20	25	30	45	50	55	60	65





Genel Bilgiler General Information Einführung



Frenin Termik Kapasitesi

Yukarıdaki seçime ek olarak frenin termik kapasitesinin kontrol edilmesi gerekir. L (joule) olarak gerekli soğutma işi aşağıdaki formüller ile hesaplanır ve "Termik kapasite limit eğrisi" kullanılarak eğrinin altında kalıp kalmadığı kontrol edilir.

a) M_L Statik yük torku motor dönüş yönünde (motorun dönüşüne yardımcı olarak, yükün indirilmesi hali)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \left(\frac{M_f}{M_f - M_L} \right)$$

b) M_L Statik yük torku motor aksi dönüş yönünde (motorun dönüşüne engel olarak, yükün kaldırılması hali)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \frac{M_f}{M_f + M_L}$$

c) M_L Statik yük torku sabit, motor yönünde veya aksi yönde (kaldırma ve indirme harici hızlandırıcı veya frenleyici sabit bir yük momenti hali).

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2}$$

Fren Hava Boşluğunun Ayarı:

Frenden sürekli aynı performansın alınabilmesi için, fren balatasının aşınmasına bağlı olarak, fren hava boşluğu belirli zaman aralıklarında yeniden ayarlanmalıdır. Fren hava boşluğu ayar zaman aralığı ve ayarın yapılması için firmamıza danışınız.

Fren Seçim Örneği:

İstenilen en uzun frenleme zamanı: 0,5 sn.
Motor devri: 1400 d/dak
Motora indirgenmiş toplam atalet momenti: 0,08 kgm²

Gerekli çalışma momenti: 50 Nm

Yük Durumu: Yük motor dönüş yönü ile aynı
(Vinçten yük indirilmesi: Saatte dur-kalk sayısı:30)

$$M_{fc} = \frac{(2 \pi \times 1400 \div 60)}{0,5 \times 0,995} + 50 = 73,6 \text{ Nm}$$

$$M_f = 73,6 \times 2 = 147,2 \text{ Nm}$$

Standart frenler tablosundan 150 Nm lik fren seçilebilir.

Gerekli termik kapasite;

$$L = \frac{0,08 \times (2 \pi \times 1400 \div 60)^2}{2} \times \left(\frac{147,2}{147,2 - 50} \right)$$

=1302,0 < 18000 Joule (150 Nm eğrisinden)
150 Nm lik fren uygun görülüyor.

The Thermal Capacity of Brake

The thermal capacity of the brake must also be checked after the above mentioned calculations heat dissipation energy L (joule) can be calculated from the following equation and must be checked if the result is under the limit curve shown on "Limit curve of may dissipated work".

a) The static load torque M_L , favours the rotation of the motor (Descent of a load which favours the rotation of the motor)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \left(\frac{M_f}{M_f - M_L} \right)$$

b) The static load torque M_L , opposes the rotation of the motor (Lifting of a load which opposes the rotation of the motor)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \frac{M_f}{M_f + M_L}$$

c) The static load torque M_L , is constant and opposes or favours the rotation of the motor (except lifting of a load)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2}$$

Adjustment of the air-gap:

In order to obtain the same performance from the brake during its lifetime, the air-gap of the brake must be re-adjusted after a limited time of operation. For the air-gap and the time interval of the adjustment please contact us.

Selection Example:

The maximum admitted time for braking 0,5 s
Motor speed: 1400 rpm
Total inertia reduced at motor shaft: 0,08 kgm²

Required operating torque: 50 Nm

Nature of load: Load direction is same as motor direction (Unloading process: Start-stop time per hour :30)

$$M_{fc} = \frac{(2 \pi \times 1400 \div 60)}{0,5 \times 0,995} + 50 = 73,6 \text{ Nm}$$

$$M_f = 73,6 \times 2 = 147,2 \text{ Nm}$$

From the brake selection table a standard brake of 150 Nm is selected.

Necessary thermal capacity

$$L = \frac{0,08 \times (2 \pi \times 1400 \div 60)^2}{2} \times \left(\frac{147,2}{147,2 - 50} \right)$$

=1302,0 < 18000 Joule (from 150 Nm curve)
The selected brake with 150 Nm is suitable.

Thermische Kapazität der Bremsen

Nach den oben genannten Berechnungen muss die thermische Kapazität überprüft werden. Die Wärme, d.h. die gebrauchte Energie L, werden mit den folgenden Formeln berechnet. Die gerechnete Werte von Kapazitäten sollen unter dem Grenzkurve "Thermische Kapazität Grenzwerte" der gewählten Bremse liegen.

a) Konstantes Belastungsmoment M_L , das die Motordrehung fördert (Herunterlassen der Last)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \left(\frac{M_f}{M_f - M_L} \right)$$

b) Konstantes Belastungsmoment M_L , das sich entgegen der Motordrehung widersetzt (Aufheben der Last)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2} \times \frac{M_f}{M_f + M_L}$$

c) Konstantes Belastungsmoment M_L , das sich gegen der Motorbewegung widersetzt oder die Motorrotation fördert (Konstante Verminderung oder Erhöhung der Motorgeschwindigkeit, kein Herunterlassen oder Aufheben der Last)

$$L = \frac{I_{tot} \times (2 \pi \times n_0 \div 60)^2}{2}$$

Einstellung des Luftspaltes:

Um eine immer konstant bleibende Bremsfähigkeit zu erhalten, muss das Luftspalt nach einer bestimmten Arbeitszeit neu eingestellt werden. Für die Bestimmung des Luftspaltes und die Einstellzeiten bitten wir Sie um Rückfrage.

Beispiel für eine Auswahl:

Die höchste zulässige Bremszeit: 0,5 s
Motordrehzahl: 1400 U/min
Gesamträgheit der rotierenden Teile: 0,08 kgm²
Das auf das System wirkende Drehmoment: 50 Nm
Belastungsart: Drehmoment, das die Motorrotation fördert (Herunterlassen der Last)
Betätigungen pro Stunde:30

$$M_{fc} = \frac{(2 \pi \times 1400 \div 60)}{0,5 \times 0,995} + 50 = 73,6 \text{ Nm}$$

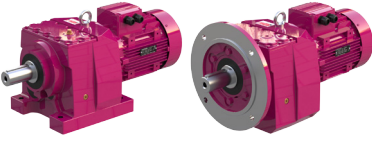
$$M_f = 73,6 \times 2 = 147,2 \text{ Nm}$$

Eine Bremse von 150 Nm kann man auswählen.

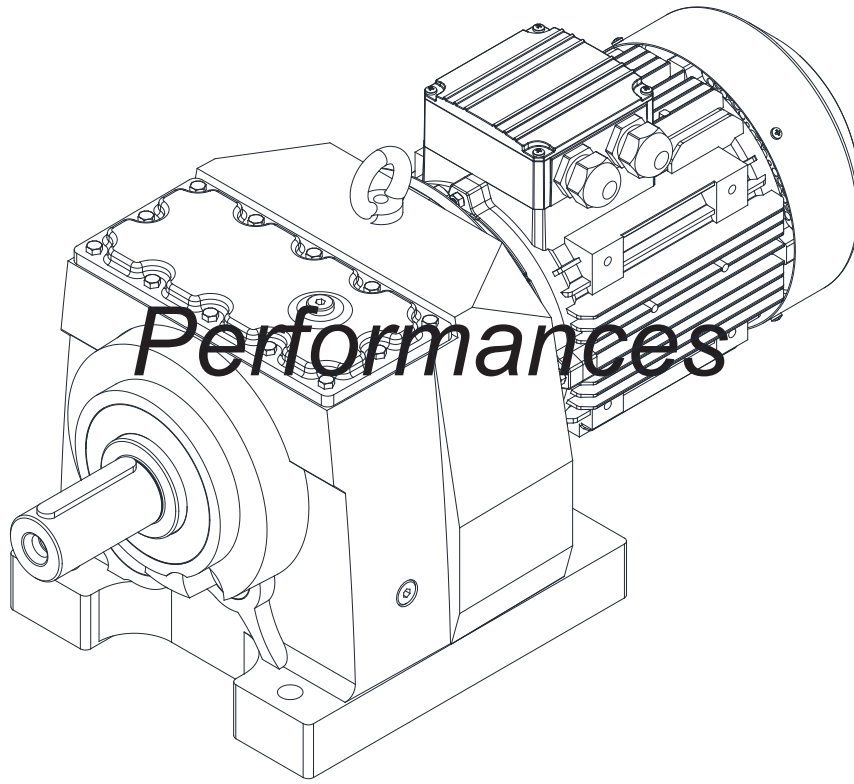
Die thermische Kapazität;

$$L = \frac{0,08 \times (2 \pi \times 1400 \div 60)^2}{2} \times \left(\frac{147,2}{147,2 - 50} \right)$$

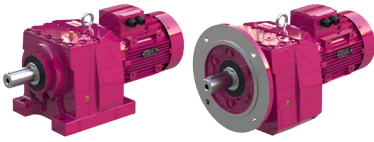
=1302,0 < 18000 Joule (von 150 Nm Kurve) Die ausgewählte 150 Nm Bremse ist ausreichend.



Güç ve Devir Tabloları



Leistungs- und Drehzahlübersicht



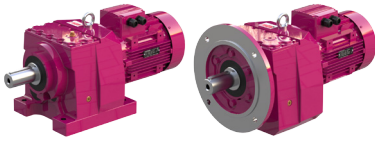
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,12 0,16	0,28	3161	4953,44	18152	0,9	MR576-2E63M/4B	0,42	157	119	IE2
	0,32	2811	4402,68	20503	1,1	NR576-2E63M/4B		151		
	0,42	2157	3372,36	24025	1,4					
	0,49	1825	2850,22	25448	1,6					
	0,51	1786	2736,94	25606	1,7	MR575-2E63M/4B	0,42	155	119	IE2
	0,61	1511	2313,18	26663	2,0	NR575-2E63M/4B		149		
	0,74	1239	1897,20	27612	2,4					
	0,84	1095	1675,43	28077	2,7					
	0,94	973	1489,14	28449	3,1					
	1,1	824	1259,61	28915	3,6					
	1,2	748	1140,65	29101	4,0					
	0,55	1648	2522,85	13294	0,9	MR475-2E63M/4B	0,42	100	116	IE2
	0,66	1378	2107,15	17344	1,1	NR475-2E63M/4B		103		
	0,70	1302	1990,76	18266	1,2					
	0,81	1139	1738,98	20032	1,4					
	0,86	1070	1631,08	20714	1,4					
	1,0	910	1386,75	22094	1,7					
	1,1	845	1285,79	22653	1,8					
	1,2	792	1204,49	23070	2,0					
	1,3	694	1053,93	23786	2,2					
	1,5	617	934,94	24312	2,5					
	0,90	1019	1561,78	6910	0,8	MR375-2E63M/4B	0,42	76	113	IE2
	1,0	902	1380,71	9830	0,9	NR375-2E63M/4B		78		
	1,2	759	1161,33	12320	1,1					
	1,4	646	987,33	13863	1,3					
	1,7	554	845,97	14931	1,5					
	1,8	501	765,58	15470	1,6					
	2,1	443	676,02	16025	1,8					
	2,2	414	631,45	16286	2,0					
	2,6	351	533,70	16828	2,3					
	2,7	352	524,07	16815	2,3	MR374-2E63M/4B	0,42	55	112	IE2
	3,3	284	421,85	17348	2,9	NR374-2E63M/4B		58		
	3,8	249	369,93	17599	3,3					
	1,2	789	1206,98	2333	0,8	MR285-2E63M/4B	0,42	74	110	IE2
	1,4	664	1015,21	7487	0,9	NR285-2E63M/4B		75		
	1,6	565	863,11	9637	1,1					
	1,9	484	739,53	10983	1,2					
	2,1	439	669,25	11641	1,4					
	2,4	375	573,81	12445	1,6					
	2,8	322	491,50	13057	1,9					
	3,2	290	431,18	13388	2,1	MR284-3E63M/4B	0,42	74	109	IE2
	3,8	248	368,77	13798	2,4	NR284-3E63M/4B		75		
	4,3	218	323,39	14073	2,8					
	1,7	541	827,44	5855	0,8	MR275-2E63M/4B	0,42	41	107	IE2
	1,9	474	724,01	6465	0,9	NR275-2E63M/4B		43		
	2,3	392	598,70	7080	1,1					
	2,8	328	499,32	7505	1,4					
	3,3	275	418,57	7806	1,6					
	3,9	236	358,33	8008	1,9					
	4,2	219	332,52	8090	2,1					
	5,6	166	252,20	8331	2,7					
	6,5	142	215,91	8429	3,2					
	6,8	135	205,95	8457	3,3					



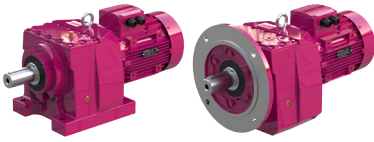
Motorlu Güç Devir Sayfaları

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0,12 0,16	7,8 9,4	119 98	180,21 149,02	8523 8760	3,8 4,0	MR275-2E63M/4B NR275-2E63M/4B	0,42	41 43	107	IE2
	10 12 12	105 92 86	138,55 121,03 113,52	8650 8864 8944	4,0 4,0 4,0	MR273-2E63M/4B NR273-2E63M/4B	0,42	30 32	106	IE2
	14 16 17 20 24 28	75 66 62 52 44 38	99,21 87,60 81,82 69,16 57,76 49,81	5764 5565 5457 5197 4928 4715	2,7 3,0 3,2 3,8 4,0 4,0	MR173-2E63M/4B NR173-2E63M/4B	0,42	30 32	104	IE2
	31 35 44 49 58 66 68 73 77 83 95 103	34 30 24 21 18 16 16 15 14 13 11 10	45,18 40,04 32,02 28,38 24,13 21,26 20,66 19,17 18,20 16,89 14,67 13,61	2835 2857 2894 2906 2797 2679 2649 2581 2537 2472 2357 2297	2,4 2,7 3,4 3,8 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0	MR003-2E63M/4B NR003-2E63M/4B	0,42	12 13	102	IE2
	126 142 161 166 179 188 203 233 251 307 359 387	8,5 7,6 6,7 6,5 6,0 5,7 5,3 4,6 4,3 3,5 3,0 2,8	11,14 9,87 8,70 8,45 7,84 7,45 6,91 6,00 5,57 4,56 3,90 3,62	2156 2068 1980 1959 1909 1876 1828 1743 1698 1588 1506 1467	4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0	MR002-2E63M/4B NR002-2E63M/4B	0,42	11 12	102	IE2
0,18 0,25	0,11 0,13 0,15 0,17 0,19 0,21 0,24 0,27 0,32 0,37	12817 11087 9686 8551 7612 6822 5992 5305 4471 3809	8345,18 7233,00 6313,78 5569,66 4954,95 4438,59 3892,30 3441,02 2894,28 2460,65	74316 83155 89283 93713 96997 99684 102261 104265 106552 108262	1,0 1,2 1,3 1,5 1,7 1,9 2,2 2,5 2,9 3,4	MR876-2E71M/6B NR876-2E71M/6B	0,60	606 621	128	IE2
	0,15 0,17 0,21 0,24 0,29	9130 8083 6813 5803 4981	5949,83 5260,00 4424,24 3761,39 3222,83	44490 48911 53209 56377 58684	0,9 1,0 1,2 1,4 1,6	MR776-2E71M/6B NR776-2E71M/6B	0,60	259 321	125	IE2
	0,30 0,34 0,40	4895 4225 3662	3103,85 2684,10 2324,10	59051 60717 62017	1,6 1,9 2,2	MR775-2E71M/6B NR775-2E71M/6B	0,60	256 316	125	IE2



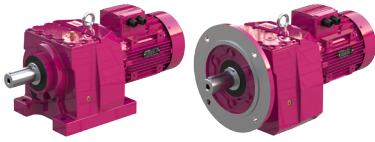
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0,18 0,25	0,45	3206	2032,66	62935	2,5	MR775-2E71M/6B	0,60	256	125	IE2
	0,51	2828	1791,91	63725	2,8	NR775-2E71M/6B		316		
	0,58	2511	1589,68	64362	3,2					
	0,65	2240	1417,41	64885	3,6					
	0,73	1983	1252,60	65684	4,0					
	0,32	4425	2863,86	25882	1,0	MR676-2E71M/6B	0,60	239	122	IE2
						NR676-2E71M/6B		248		
	0,36	4069	2578,93	27987	1,1	MR675-2E71M/6B	0,60	229	122	IE2
	0,42	3460	2196,86	30945	1,2	NR675-2E71M/6B		243		
	0,49	2977	1888,53	32984	1,4					
	0,56	2586	1638,93	34461	1,7					
	0,64	2262	1432,74	35578	1,9					
	0,73	1990	1259,54	36451	2,2					
	0,83	1762	1113,08	37141	2,4					
	0,92	1577	995,91	37624	2,7					
	1,1	1387	874,56	38151	3,1					
	1,3	1161	730,46	38748	3,7					
	0,49	2889	2850,22	19665	1,0	MR576-2E63M/4C	0,56	160	119	IE2
						NR576-2E63M/4C		153		
	0,51	2828	2736,94	20068	1,1	MR575-2E63M/4C	0,56	152	119	IE2
	0,61	2392	2313,18	22617	1,3	NR575-2E63M/4C		148		
	0,74	1961	1897,20	24715	1,5					
	0,84	1733	1675,43	25689	1,7					
	0,94	1541	1489,14	26424	1,9					
	1,1	1305	1259,61	27307	2,3					
	1,2	1184	1140,65	27718	2,5					
	1,6	933	574,90	28639	3,2	MR574-2E71M/6B	0,60	136	118	IE2
	1,9	790	485,89	29040	3,8	NR574-2E71M/6B		134		
	2,3	655	402,12	30397	4,0					
	0,81	1804	1738,98	9150	0,9	MR475-2E63M/4C	0,56	111	116	IE2
	0,86	1693	1631,08	11836	0,9	NR475-2E63M/4C		115		
	1,0	1441	1386,75	16156	1,1					
	1,1	1339	1285,79	17525	1,2					
	1,2	1253	1204,49	18560	1,2					
	1,4	1095	674,46	20840	1,4	MR474-2E71M/6B	0,60	95	115	IE2
	1,5	979	603,46	21841	1,6	NR474-2E71M/6B		99		
	1,7	861	529,93	22771	1,8					
	2,1	720	442,61	23780	2,2					
	2,2	681	418,16	24045	2,3					
	2,7	565	346,07	24743	2,7					
	3,1	483	295,98	25231	3,2					
	1,4	1022	987,33	6178	0,8	MR375-3E63M/4C	0,56	76	113	IE2
	1,7	877	845,97	10009	0,9	NR375-3E63M/4C		81		
	1,8	848	524,07	11377	1,0	MR374-2E71M/6B	0,60	59	112	IE2
	2,2	683	421,85	13699	1,2	NR374-2E71M/6B		62		
	2,5	600	369,93	14655	1,4					



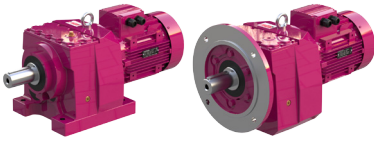
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n_2 [r.p.m]	M_2 [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
0,18 0,25	2,7	558	524,07	14771	1,5	MR374-3E63M/4C	0,56	55	112	IE2
	3,3	449	421,85	15919	1,8	NR374-3E63M/4C		58		
	3,8	394	369,93	16379	2,1					
	5,8	274	157,76	16454	3,0	MR373-2E71M/6B	0,60	55	111	IE2
	6,6	241	138,72	15843	3,4	NR373-2E71M/6B		58		
	2,1	699	431,18	7218	0,9	MR284-2E71M/6B	0,60	63	109	IE2
	2,5	598	368,77	9393	1,0	NR284-2E71M/6B		66		
	2,8	525	323,39	10665	1,1					
	3,2	459	431,18	11227	1,3	MR284-2E63M/4C	0,56	60	109	IE2
	3,8	393	368,77	12144	1,5	NR284-2E63M/4C		63		
	4,3	345	323,39	12730	1,7					
	4,9	305	285,89	13180	2,0					
	5,8	257	240,47	13658	2,3					
	6,7	238	137,91	13106	2,5	MR283-2E71M/6B	0,60	41	108	IE2
	8,1	198	114,14	12414	3,0	NR283-2E71M/6B		43		
	2,8	519	499,32	5982	0,9	MR275-2E63M/4C	0,56	41	107	IE2
	3,3	435	418,57	6713	1,0	NR275-2E63M/4C		43		
	3,9	373	358,33	7169	1,2					
	4,2	347	332,52	7346	1,3					
	5,6	263	252,20	7844	1,7					
	6,6	241	138,55	8024	1,9	MR273-2E71M/6B	0,60	31	106	IE2
	7,6	211	121,03	8154	2,1	NR273-2E71M/6B		33		
	8,1	198	113,52	8212	2,3					
	9,5	168	96,52	8339	2,7					
	10	157	138,55	8352	2,8	MR273-2E63M/4C	0,56	28	106	IE2
	12	138	121,03	8436	3,3	NR273-2E63M/4C		30		
	12	129	113,52	8470	3,5					
	14	119	68,03	8475	2,4	MR203-2E71M/6B	0,60	29	105	IE2
	15	104	59,43	8504	2,7	NR203-2E71M/6B		31		
	17	97	55,74	8346	2,9					
	21	78	68,03	7944	3,6	MR203-2E63M/4C	0,56	27	105	IE2
						NR203-2E63M/4C		29		
	9,3	172	99,21	5822	1,2	MR173-2E71M/6B	0,60	17	104	IE2
	11	152	87,60	5895	1,3	NR173-2E71M/6B		19		
	11	142	81,82	5801	1,4					
	13	120	69,16	5568	1,7					
	14	113	99,21	5561	1,8	MR173-2E63M/4C	0,56	13	104	IE2
	16	100	87,60	5389	2,0	NR173-2E63M/4C		15		
	17	93	81,82	5294	2,1					
	20	79	69,16	5063	2,5					
	24	66	57,76	4820	3,0					
	28	57	49,81	4624	3,5					



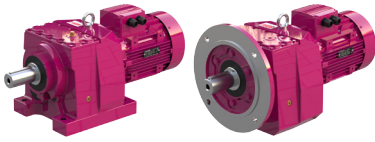
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,18 0,25	18	88	50,51	3512	1,6	MR103-2E71M/6B	0,60	16	103	IE2
	21	78	44,60	3411	1,8	NR103-2E71M/6B		18		
	22	73	41,66	3355	1,9					
	28	58	50,51	3213	2,4	MR103-2E63M/4C	0,56	16	103	IE2
	31	51	44,60	3112	2,7	NR103-2E63M/4C		18		
	34	48	41,66	3056	2,9					
	40	40	35,21	2921	3,5					
	20	78	45,18	2530	1,0	MR003-2E71M/6B	0,60	15	102	IE2
	23	70	40,04	2603	1,2	NR003-2E71M/6B		16		
	29	56	32,02	2707	1,5					
	31	51	45,18	2717	1,6	MR003-3E63M/4C	0,56	13	102	IE2
	35	46	40,04	2757	1,8	NR003-3E63M/4C		14		
	44	36	32,02	2818	2,2					
	49	32	28,38	2840	2,5					
	58	28	24,13	2733	3,0					
	66	24	21,26	2664	3,4					
	68	24	20,66	2672	3,5					
	73	22	19,17	2628	3,7					
	77	21	18,20	2584	3,9					
	83	19	16,89	2516	4,0					
	95	17	14,67	2398	4,0					
	103	16	13,61	2336	4,0					
	126	13	11,14	2197	4,0	MR002-2E63M/4C	0,56	12	102	IE2
	142	11	9,87	2105	4,0	NR002-2E63M/4C		13		
	161	10	8,70	2014	4,0					
	166	9,8	8,45	1992	4,0					
	179	9,1	7,84	1940	4,0					
	188	8,6	7,45	1907	4,0					
	203	8,0	6,91	1857	4,0					
	233	7,0	6,00	1770	4,0					
	251	6,5	5,57	1724	4,0					
	307	5,3	4,56	1612	4,0					
	359	4,5	3,90	1527	4,0					
	387	4,2	3,62	1488	4,0					
	405	4,0	6,91	1433	4,0	MR002-2E63M/2A	0,50	12	102	IE2
	467	3,4	6,00	1366	4,0	NR002-2E63M/2A		13		
	503	3,2	5,57	1332	4,0					
	615	2,6	4,56	1245	4,0					
	718	2,2	3,90	1181	4,0					
	774	2,1	3,62	1151	4,0					
0,25 0,34	0,12	16065	11443,34	50996	0,8	MR876-2E71M/4B	0,71	611	128	IE2
	0,17	11735	8345,18	79805	1,1	NR876-2E71M/4B		626		
	0,20	10151	7233,00	87174	1,3					
	0,23	8869	6313,78	92433	1,5					
	0,26	7829	5569,66	96350	1,7					
	0,29	6969	4954,95	99123	1,9					
	0,32	6246	4438,59	101418	2,1					
	0,37	5486	3892,30	103687	2,4					
	0,41	4857	3441,02	105462	2,7					
	0,49	4094	2894,28	107497	3,2					
	0,58	3487	2460,65	109026	3,7					
	0,68	2993	2108,33	112703	4,0					



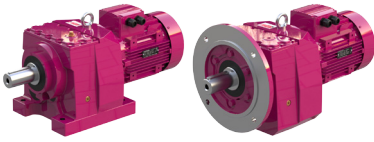
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n_2 [r.p.m]	M_2 [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
0,25 0,34	0,24	8359	5949,83	47686	1,0	MR776-2E71M/4B	0,71	259	125	IE2
	0,27	7401	5260,00	51346	1,1	NR776-2E71M/4B		321		
	0,32	6237	4424,24	55067	1,3					
	0,38	5313	3761,39	57782	1,5					
	0,44	4560	3222,83	59738	1,8					
	0,46	4482	3103,85	59975	1,8	MR775-2E71M/4B	0,71	258	125	IE2
	0,53	3869	2684,10	61455	2,1	NR775-2E71M/4B		317		
	0,61	3353	2324,10	62616	2,4					
	0,70	2935	2032,66	63505	2,7					
	0,80	2589	1791,91	64207	3,1					
	0,90	2299	1589,68	64804	3,5					
	1,0	2051	1417,41	65267	3,9					
	1,1	1816	1252,60	67039	4,0					
	0,43	4720	3342,43	23925	0,9	MR676-2E71M/4B	0,71	231	122	IE2
	0,50	4052	2863,86	27958	1,1	NR676-2E71M/4B		243		
	0,55	3725	2578,93	29635	1,2	MR675-2E71M/4B	0,71	229	122	IE2
	0,65	3167	2196,86	32126	1,4	NR675-2E71M/4B		244		
	0,75	2726	1888,53	33910	1,6					
	0,87	2367	1638,93	35136	1,8					
	1,0	2071	1432,74	36125	2,1					
	1,1	1822	1259,54	36903	2,4					
	1,3	1613	1113,08	37520	2,7					
	1,4	1444	995,91	37997	3,0					
	1,6	1270	874,56	38465	3,4					
	2,0	1063	730,46	39205	4,0					
	0,75	2732	1897,20	21484	1,1	MR575-2E71M/4B	0,71	152	119	IE2
	0,85	2415	1675,43	23125	1,2	NR575-2E71M/4B		148		
	0,96	2147	1489,14	24354	1,4					
	1,1	1818	1259,61	25710	1,7					
	1,2	1650	1140,65	26299	1,8					
	1,6	1323	574,90	27486	2,3	MR574-2E71M/6C	0,78	138	118	IE2
	1,9	1120	485,89	28085	2,7	NR574-2E71M/6C		134		
	2,3	929	402,12	28650	3,2					
	2,5	854	574,90	28862	3,5	MR574-2E71M/4C	0,71	134	118	IE2
	2,9	723	485,89	29566	4,0	NR574-2E71M/4C		130		
	1,1	1865	1285,79	9956	0,8	MR475-2E71M/4B	0,71	101	116	IE2
	1,2	1746	1204,49	12492	0,9	NR475-2E71M/4B		106		
	1,4	1553	674,46	15720	1,0	MR474-2E71M/6C	0,78	96	115	IE2
	1,5	1388	603,46	17825	1,1	NR474-2E71M/6C		101		
	1,7	1221	529,93	19641	1,3					
	2,1	1021	442,61	21487	1,5					
	2,1	1003	674,46	21612	1,5	MR474-2E71M/4B	0,71	96	115	IE2
	2,4	896	603,46	22474	1,7	NR474-2E71M/4B		101		
	2,7	788	529,93	23243	2,0					
	3,2	659	442,61	24138	2,4					
	3,4	623	418,16	24374	2,5					
	4,1	517	346,07	25032	3,0					



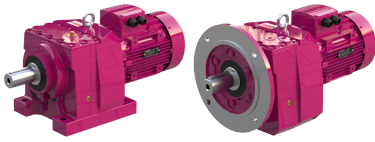
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,25 0,34	2,2	969	421,85	9124	0,8	MR374-2E71M/6C	0,78	59	112	IE2
	2,5	850	369,93	11344	1,0	NR374-2E71M/6C		64		
	2,7	777	524,07	12424	1,1	MR374-2E71M/4B	0,71	59	112	IE2
	3,4	625	421,85	14316	1,3	NR374-2E71M/4B		64		
	3,9	549	369,93	15160	1,5					
	4,4	486	327,04	15771	1,7					
	5,2	409	275,08	16422	2,0					
	5,8	382	157,76	16059	2,1	MR373-2E71M/6C	0,78	59	111	IE2
	6,6	336	138,72	15496	2,4	NR373-2E71M/6C		64		
	8,2	270	111,67	14570	3,0					
	9,0	246	157,76	14203	3,4	MR373-2E71M/4B	0,71	53	111	IE2
						NR373-2E71M/4B		58		
	2,5	848	368,77	-	0,7	MR284-2E71M/6C	0,78	63	109	IE2
	2,8	744	323,39	5902	0,8	NR284-2E71M/6C		65		
	3,3	640	431,18	8530	0,9	MR284-2E71M/4B	0,71	63	109	IE2
	3,9	547	368,77	10258	1,1	NR284-2E71M/4B		65		
	4,4	480	323,39	11268	1,2					
	5,0	425	285,89	11998	1,4					
	5,9	358	240,47	12782	1,7					
	6,7	330	137,91	12726	1,8	MR283-2E71M/6C	0,78	31	108	IE2
	8,1	275	114,14	12099	2,2	NR283-2E71M/6C		33		
	9,4	235	97,62	11590	2,6					
	10	213	137,91	11308	2,8	MR283-2E71M/4B	0,71	31	108	IE2
	12	177	114,14	10715	3,4	NR283-2E71M/4B		33		
	4,0	520	358,33	6211	0,9	MR275-2E71M/4B	0,71	46	107	IE2
	4,3	483	332,52	6518	0,9	NR275-2E71M/4B		48		
	5,7	366	252,20	7338	1,2					
	6,6	335	138,55	7529	1,3	MR273-2E71M/6C	0,78	31	106	IE2
	7,6	293	121,03	7762	1,5	NR273-2E71M/6C		33		
	8,1	275	113,52	7855	1,6					
	9,5	234	96,52	8057	1,9					
	10	216	138,55	8128	2,1	MR273-2E71M/4B	0,71	31	106	IE2
	12	189	121,03	8249	2,4	NR273-2E71M/4B		33		
	13	178	113,52	8299	2,5					
	15	151	96,52	8413	3,0					
	17	131	83,83	8486	3,4					
	14	165	68,03	8313	1,7	MR203-2E71M/6C	0,78	29	105	IE2
	15	144	59,43	8306	1,9	NR203-2E71M/6C		31		
	17	136	55,74	8159	2,1					
	21	107	68,03	7635	2,6	MR203-2E71M/4B	0,71	29	105	IE2
	24	93	59,43	7342	3,0	NR203-2E71M/4B		31		
	26	87	55,74	7206	3,2					
	30	74	47,39	6868	3,8					



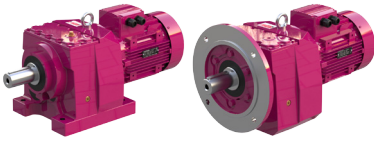
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,25 0,34	9,3 11	240 212	99,21 87,60	5448 5550	0,8 0,9	MR173-2E71M/6C NR173-2E71M/6C	0,78	18 20	104	IE2
	14 16 17 21 25 29 31 33 39	155 137 128 108 90 78 72 67 57	99,21 87,60 81,82 69,16 57,76 49,81 45,90 42,87 36,24	5213 5070 4991 4794 4582 4408 4313 4234 4043	1,3 1,5 1,6 1,8 2,2 2,6 2,8 3,0 3,5	MR173-2E71M/4B NR173-2E71M/4B	0,71	19 20	104	IE2
	18 21 22	123 108 101	50,51 44,60 41,66	3300 3224 3180	1,1 1,3 1,4	MR103-2E71M/6C NR103-2E71M/6C	0,78	18 20	103	IE2
	28 32 34 40 44 48 57	79 70 65 55 51 46 39	50,51 44,60 41,66 35,21 32,25 29,40 24,86	3020 2935 2888 2771 2710 2646 2508	1,8 2,0 2,1 2,5 2,8 3,0 3,3	MR103-2E71M/4B NR103-2E71M/4B	0,71	17 18	103	IE2
	20 23 29	109 97 77	45,18 40,04 32,02	1892 2009 2248	0,8 0,8 1,1	MR003-2E71M/6C NR003-2E71M/6C	0,78	14 15	102	IE2
	32 36 45 50 59 67 69 74 78 84 97 105	70 63 50 44 38 33 32 30 29 27 23 21	45,18 40,04 32,02 28,38 24,13 21,26 20,66 19,17 18,20 16,89 14,67 13,61	2304 2337 2418 2410 2406 2364 2385 2370 2335 2317 2248 2226	1,2 1,3 1,6 1,8 2,2 2,5 2,5 2,7 2,9 3,1 3,6 3,7	MR003-2E71M/4B NR003-2E71M/4B	0,71	13 14	102	IE2
	128 144 164 169 182 191 206 238 256 313 365 394	18 16 14 13 13 12 11 9,6 8,9 7,3 6,2 5,8	11,14 9,87 8,70 8,45 7,84 7,45 6,91 6,00 5,57 4,56 3,90 3,62	2172 2080 1990 1967 1915 1881 1832 1745 1699 1588 1503 1464	3,7 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0	MR002-2E71M/4B NR002-2E71M/4B	0,71	13 14	102	IE2
	405 467 503 615	5,6 4,8 4,5 3,7	6,91 6,00 5,57 4,56	1439 1372 1337 1250	4,0 4,0 4,0 4,0	MR002-2E63M/2B NR002-2E63M/2B	0,67	13 14	102	IE2



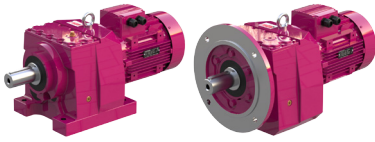
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,25 0,34	718 774	3,1 2,9	3,90 3,62	1184 1154	4,0 4,0	MR002-2E63M/2B NR002-2E63M/2B	0,67	13 14	102	IE2
0,37 0,50	0,20	15488	7233,00	56000	0,8	MR876-2E71M/4C	1,00	599	128	IE2
	0,23	13531	6313,78	69831	1,0	NR876-2E71M/4C		611		
	0,26	11945	5569,66	78738	1,1					
	0,29	10633	4954,95	85048	1,2					
	0,32	9530	4438,59	89697	1,4					
	0,37	8371	3892,30	94366	1,6					
	0,41	7411	3441,02	97651	1,8					
	0,49	6246	2894,28	101417	2,1					
	0,58	5320	2460,65	104164	2,4					
	0,68	4567	2108,33	106252	2,8					
	0,74	4252	1924,32	107085	3,1	MR875-2E71M/4C	1,00	596	128	IE2
	0,84	3764	1700,56	108338	3,5	NR875-2E71M/4C		606		
	0,94	3368	1521,55	109316	3,9					
	0,38	8106	3761,39	48515	1,0	MR776-2E71M/4C	1,00	269	125	IE2
	0,44	6958	3222,83	52775	1,1	NR776-2E71M/4C		327		
	0,46	6838	3103,85	53223	1,2	MR775-2E71M/4C	1,00	264	125	IE2
	0,53	5903	2684,10	56209	1,4	NR775-2E71M/4C		322		
	0,61	5116	2324,10	58419	1,6					
	0,70	4478	2032,66	59983	1,8					
	0,80	3951	1791,91	61263	2,0					
	0,90	3507	1589,68	62276	2,3					
	1,0	3129	1417,41	63098	2,6					
	1,1	2770	1252,60	63844	2,9					
	1,3	2479	1120,74	64424	3,2					
	1,4	2181	984,18	65025	3,7					
	1,6	2083	594,92	65180	3,8	MR774-2E80M/6A	1,08	244	124	IE2
	1,7	1865	532,29	66612	4,0	NR774-2E80M/6A		301		
	0,75	4159	1888,53	27370	1,0	MR675-2E71M/4C	1,00	228	122	IE2
	0,87	3612	1638,93	30178	1,2	NR675-2E71M/4C		244		
	1,0	3160	1432,74	32158	1,4					
	1,1	2780	1259,54	33706	1,5					
	1,3	2461	1113,08	34869	1,7					
	1,4	2203	995,91	35696	2,0					
	1,6	1938	874,56	36548	2,2					
	1,8	1752	500,39	37113	2,5	MR674-2E80M/6A	1,08	218	121	IE2
	2,1	1551	442,20	37697	2,8	NR674-2E80M/6A		234		
	2,5	1319	376,69	38334	3,3					
	2,9	1136	323,82	38814	3,8					
	3,3	987	281,02	40076	4,0					
	1,1	2774	1259,61	21254	1,1	MR575-2E71M/4C	1,00	152	119	IE2
	1,2	2518	1140,65	22616	1,2	NR575-2E71M/4C		149		
	1,5	2130	964,05	24428	1,4					
	1,6	2008	574,90	24897	1,5	MR574-2E80M/6A	1,08	138	118	IE2
	1,9	1699	485,89	26116	1,8	NR574-2E80M/6A		134		
	2,3	1410	402,12	27150	2,1					



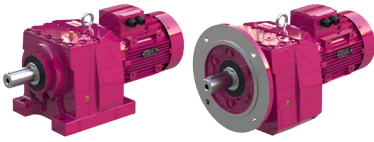
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,37 0,50	2,5	1303	574,90	27504	2,3	MR574-2E71M/4C	1,00	133	118	IE2
	2,9	1103	485,89	28136	2,7	NR574-2E71M/4C		129		
	3,5	915	402,12	28679	3,3					
	4,1	783	343,91	29072	3,8					
	4,7	688	301,59	29992	4,0					
	4,9	664	291,25	30274	4,0					
	1,7	1853	529,93	10176	0,8	MR474-2E80M/6A	1,08	136	115	IE2
	2,1	1550	442,61	15686	1,0	NR474-2E80M/6A		141		
	2,1	1530	674,46	15971	1,0	MR474-2E71M/4C	1,00	131	115	IE2
	2,4	1368	603,46	18007	1,1	NR474-2E71M/4C		136		
	2,7	1203	529,93	19777	1,3					
	3,2	1006	442,61	21584	1,5					
	3,4	951	418,16	22042	1,6					
	4,1	789	346,07	23240	2,0					
	4,2	780	219,00	23300	2,0	MR473-2E80M/6A	1,08	86	114	IE2
	4,8	691	194,05	23923	2,2	NR473-2E80M/6A		89		
	5,9	564	157,90	24750	2,8					
	6,6	499	139,54	25142	3,1					
	7,4	446	124,85	25445	3,5					
	3,4	954	421,85	9355	0,9	MR374-2E71M/4C	1,00	59	112	IE2
	3,9	838	369,93	11517	1,0	NR374-2E71M/4C		64		
	4,4	741	327,04	12918	1,1					
	5,2	624	275,08	14359	1,3					
	5,9	561	157,76	15027	1,5	MR373-2E80M/6A	1,08	64	111	IE2
	6,7	494	138,72	14902	1,7	NR373-2E80M/6A		69		
	8,3	398	111,67	14092	2,1					
	9,0	365	157,76	13765	2,2	MR373-2E71M/4C	1,00	53	111	IE2
	10	322	138,72	13294	2,5	NR373-2E71M/4C		58		
	13	259	111,67	12515	3,2					
	15	227	97,92	12056	3,6					
	5,0	649	285,89	8353	0,9	MR284-2E71M/4C	1,00	63	109	IE2
						NR284-2E71M/4C		65		
	6,7	488	137,91	11107	1,2	MR283-2E80M/6A	1,08	43	108	IE2
	8,1	405	114,14	11559	1,5	NR283-2E80M/6A		45		
	9,5	346	97,62	11129	1,7					
	10	316	137,91	10885	1,9	MR283-2E71M/4C	1,00	39	108	IE2
	12	262	114,14	10365	2,3	NR283-2E71M/4C		42		
	15	225	97,62	9940	2,7					
	17	198	85,60	9588	3,0					
	6,7	493	138,55	6429	0,9	MR273-2E80M/6A	1,08	32	106	IE2
	7,6	431	121,03	6901	1,0	NR273-2E80M/6A		35		
	8,1	405	113,52	7085	1,1					
	9,6	344	96,52	7456	1,3					
	10	321	138,55	7603	1,4	MR273-2E71M/4C	1,00	29	106	IE2
	12	281	121,03	7811	1,6	NR273-2E71M/4C		32		
	13	264	113,52	7900	1,7					



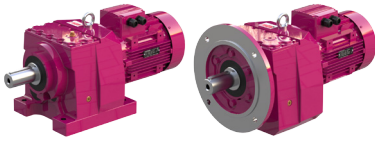
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,37 0,50	15	224	96,52	8092	2,0	MR273-2E71M/4C	1,00	29	106	IE2
	17	195	83,83	8224	2,3	NR273-2E71M/4C		32		
	19	171	73,35	8328	2,7					
	23	141	60,66	7788	3,2					
	14	243	68,03	8002	1,2	MR203-2E80M/6A	1,08	36	105	IE2
	16	212	59,43	7965	1,3	NR203-2E80M/6A		38		
	17	199	55,74	7840	1,4					
	21	158	68,03	7382	1,8	MR203-2E71M/4C	1,00	34	105	IE2
	24	138	59,43	7121	2,0	NR203-2E71M/4C		37		
	26	130	55,74	6998	2,2					
	30	110	47,39	6692	2,5					
	32	103	43,94	6552	2,7					
	35	96	41,16	6432	2,9					
	40	84	36,02	6190	3,3					
	14	230	99,21	4779	0,9	MR173-2E71M/4C	1,00	19	104	IE2
	16	203	87,60	4687	1,0	NR173-2E71M/4C		20		
	17	190	81,82	4633	1,1					
	21	161	69,16	4491	1,2					
	25	134	57,76	4329	1,5					
	29	116	49,81	4190	1,7					
	31	107	45,90	4112	1,9					
	33	100	42,87	4047	2,0					
	39	84	36,24	3884	2,4					
	47	71	30,26	3710	2,8					
	55	61	26,10	3568	3,3					
	18	180	50,51	2938	0,8	MR103-2E80M/6A	1,08	21	103	IE2
	21	159	44,60	2904	0,9	NR103-2E80M/6A		23		
	22	149	41,66	2881	0,9					
	28	117	50,51	2785	1,2	MR103-2E71M/4C	1,00	18	103	IE2
	32	104	44,60	2727	1,3	NR103-2E71M/4C		19		
	34	97	41,66	2694	1,4					
	40	82	35,21	2607	1,7					
	44	75	32,25	2560	1,9					
	48	69	29,40	2509	2,0					
	57	58	24,86	2374	2,2					
	65	51	21,96	2308	2,3					
	69	48	20,51	2272	2,5					
	82	40	17,33	2181	2,7					
	89	38	15,95	2161	3,0	MR102-2E71M/4C	1,00	18	103	IE2
	101	33	14,08	2091	3,3	NR102-2E71M/4C		19		
	108	31	13,15	2053	3,4					
	32	104	45,18	1350	0,8	MR003-2E71M/4C	1,00	14	102	IE2
	36	93	40,04	1480	0,9	NR003-2E71M/4C		15		
	45	74	32,02	1741	1,1					
	50	66	28,38	1803	1,2					
	59	56	24,13	1890	1,5					
	67	49	21,26	1896	1,7					
	69	48	20,66	1943	1,7					
	74	45	19,17	1960	1,8					
	78	42	18,20	1935	1,9					
	84	39	16,89	1946	2,1					
	97	34	14,67	1911	2,4					
	105	32	13,61	1913	2,5					



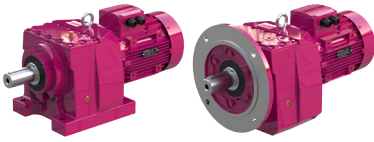
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



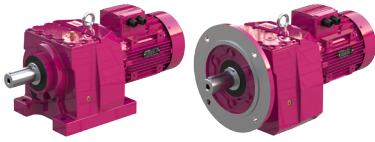
Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,37 0,50	128	26	11,14	2084	2,5	MR002-2E71M/4C NR002-2E71M/4C	1,00	14	102	IE2
	144	23	9,87	2038	3,3			15		
	164	21	8,70	1981	3,6					
	169	20	8,45	1987	3,7					
	182	19	7,84	1950	3,9					
	191	18	7,45	1916	4,0					
	206	16	6,91	1864	4,0					
	238	14	6,00	1774	4,0					
	256	13	5,57	1726	4,0					
	313	11	4,56	1614	4,0					
	365	9,2	3,90	1525	4,0					
	394	8,6	3,62	1484	4,0					
	404	8,3	6,91	1458	4,0	MR002-2E71M/2A NR002-2E71M/2A	0,90	14	102	IE2
	465	7,2	6,00	1388	4,0			15		
	501	6,7	5,57	1352	4,0					
	612	5,5	4,56	1264	4,0					
	715	4,7	3,90	1197	4,0					
	771	4,4	3,62	1166	4,0					
0,55 0,75	0,21	21695	6842,29	68090	0,8	MR976-2E80M/4B NR976-2E80M/4B	1,45	1102	131	IE2
	0,27	17023	5357,43	101458	1,1			1152		
	0,32	14250	4474,67	115408	1,3					
	0,34	13472	4227,50	118840	1,3					
	0,40	11471	3594,81	126893	1,6					
	0,51	9081	2836,64	135261	2,0					
	0,71	6622	2027,97	142495	2,7	MR975-2E80M/4B NR975-2E80M/4B	1,45	1100	131	IE2
	0,79	5949	1820,78	144369	3,0			1150		
	0,93	5068	1552,10	146710	3,6					
	0,29	15642	4954,95	54775	0,8	MR876-2E80M/4B NR876-2E80M/4B	1,45	602	128	IE2
	0,32	14019	4438,59	66738	0,9			612		
	0,37	12313	3892,30	76803	1,1					
	0,42	10902	3441,02	83816	1,2					
	0,50	9188	2894,28	91140	1,4					
	0,59	7826	2460,65	96066	1,7					
	0,68	6717	2108,33	99936	1,9					
	0,75	6255	1924,32	101388	2,1	MR875-2E80M/4B NR875-2E80M/4B	1,45	598	128	IE2
	0,85	5537	1700,56	103540	2,3			608		
	0,95	4955	1521,55	105192	2,6					
	1,1	4358	1336,15	106805	3,0					
	1,2	3952	1210,51	107862	3,3					
	1,4	3419	1049,18	109192	3,8					
	0,62	7526	2324,10	50893	1,1	MR775-2E80M/4B NR775-2E80M/4B	1,45	339	125	IE2
	0,71	6588	2032,66	54099	1,2			414		
	0,80	5812	1791,91	56474	1,4					
	0,91	5159	1589,68	58302	1,6					
	1,0	4603	1417,41	59749	1,7					
	1,1	4075	1252,60	61036	2,0					
	1,3	3647	1120,74	61934	2,2					
	1,5	3209	984,18	62905	2,5					
	1,6	3074	594,92	63237	2,6	MR774-2E80M/6B NR774-2E80M/6B	1,50	318	124	IE2
	1,8	2751	532,29	63901	2,9			393		
	2,0	2420	467,43	64555	3,3					
	2,2	2167	418,17	65036	3,7					



Motorlu Güç Devir Sayfaları Geared Motors Performance Tables Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,55 0,75	2,4	1989	594,92	65557	4,0	MR774-2E80M/4B	1,45	314	124	IE2
	2,7	1780	532,29	67316	4,0	NR774-2E80M/4B		390		
	1,0	4649	1432,74	24312	0,9	MR675-2E80M/4B	1,45	244	122	IE2
	1,1	4089	1259,54	27791	1,1	NR675-2E80M/4B		254		
	1,3	3620	1113,08	30140	1,2					
	1,4	3240	995,91	31852	1,3					
	1,6	2850	874,56	33435	1,5					
	1,9	2585	500,39	34368	1,7	MR674-2E80M/6B	1,50	223	121	IE2
	2,1	2288	442,20	35434	1,9	NR674-2E80M/6B		233		
	2,5	1946	376,69	36540	2,2					
	2,9	1673	500,39	37329	2,6	MR674-2E80M/4B	1,45	219	121	IE2
	3,3	1481	442,20	37879	2,9	NR674-2E80M/4B		230		
	3,8	1260	376,69	38481	3,4					
	4,4	1085	323,82	38934	4,0					
	5,1	942	281,02	40572	4,0					
	1,6	2962	574,90	20079	1,0	MR574-2E80M/6B	1,50	153	118	IE2
	1,9	2507	485,89	22620	1,2	NR574-2E80M/6B		149		
	2,3	2080	402,12	24611	1,4					
	2,5	1917	574,90	25317	1,6	MR574-2E80M/4B	1,45	150	118	IE2
	3,0	1623	485,89	26441	1,8	NR574-2E80M/4B		145		
	3,6	1346	402,12	27394	2,2					
	4,2	1152	343,91	27973	2,6					
	4,8	1012	301,59	28399	3,0					
	4,9	976	291,25	28504	3,1					
	5,6	868	258,87	28839	3,5					
	6,5	743	221,40	29303	4,0					
	7,4	653	194,15	30390	4,0					
	2,7	1769	529,93	12048	0,9	MR474-2E80M/4B	1,45	132	115	IE2
	3,3	1480	442,61	16591	1,0	NR474-2E80M/4B		136		
	3,4	1399	418,16	17641	1,1					
	4,2	1160	346,07	20191	1,3					
	4,3	1154	219,00	20209	1,3	MR473-2E80M/6B	1,50	111	114	IE2
	4,8	1022	194,05	21411	1,5	NR473-2E80M/6B		114		
	5,9	833	157,90	22920	1,9					
	6,6	748	219,00	23568	2,1	MR473-2E80M/4B	1,45	110	114	IE2
	7,4	663	194,05	24146	2,3	NR473-2E80M/4B		113		
	9,1	540	157,90	24420	2,9					
	10	478	139,54	23561	3,2					
	12	428	124,85	22805	3,6					
	5,2	918	275,08	10080	0,9	MR374-2E80M/4B	1,45	65	112	IE2
						NR374-2E80M/4B		69		
	5,9	830	157,76	11575	1,0	MR373-2E80M/6B	1,50	58	111	IE2
	6,7	730	138,72	13026	1,1	NR373-2E80M/6B		61		
	8,3	588	111,67	13358	1,4					



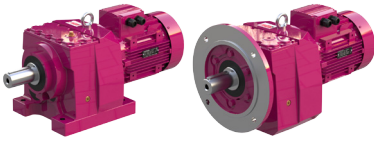
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,55 0,75	9,1	538	157,76	13077	1,5	MR373-2E80M/4B	1,45	65	111	IE2
	10	474	138,72	12684	1,7	NR373-2E80M/4B		69		
	13	381	111,67	12018	2,1					
	15	335	97,92	11616	2,4					
	17	296	86,57	11242	2,8					
	20	250	72,81	10724	3,3					
	23	212	61,91	10249	3,9					
	6,8	717	137,91	6313	0,8	MR283-2E80M/6B	1,50	46	108	IE2
	8,2	596	114,14	9261	1,0	NR283-2E80M/6B		49		
	9,5	511	97,62	10425	1,2					
	10	464	137,91	10229	1,3	MR283-2E80M/4B	1,45	47	108	IE2
	13	386	114,14	9817	1,6	NR283-2E80M/4B		50		
	15	331	97,62	9468	1,8					
	17	291	85,60	9171	2,1					
	19	258	75,68	8892	2,3					
	23	217	63,65	8502	2,8					
	27	185	54,12	8140	3,2					
	9,7	509	96,52	6289	0,9	MR273-2E80M/6B	1,50	31	106	IE2
						NR273-2E80M/6B		34		
	10	473	138,55	6598	1,0	MR273-2E80M/4B	1,45	32	106	IE2
	12	414	121,03	7030	1,1	NR273-2E80M/4B		35		
	13	388	113,52	7199	1,2					
	15	330	96,52	7553	1,4					
	17	287	83,83	7789	1,6					
	20	251	73,35	7970	1,8					
	24	208	60,66	7896	2,2					
	28	174	50,59	7388	2,6					
	34	146	42,41	6930	3,1					
	39	126	36,55	6568	3,6					
	14	359	68,03	7417	0,8	MR203-2E80M/6B	1,50	34	105	IE2
	16	314	59,43	7446	0,9	NR203-2E80M/6B		35		
	17	295	55,74	7352	0,9					
	21	233	68,03	6986	1,2	MR203-2E80M/4B	1,45	33	105	IE2
	24	204	59,43	6773	1,4	NR203-2E80M/4B		35		
	26	191	55,74	6671	1,5					
	30	163	47,39	6411	1,7					
	33	151	43,94	6290	1,9					
	35	141	41,16	6185	2,0					
	40	124	36,02	5973	2,3					
	51	97	28,35	6418	2,9					
	58	85	24,77	6107	3,2					
	62	80	23,23	5966	3,4					
	21	236	69,16	4033	0,8	MR173-2E80M/4B	1,45	22	104	IE2
	25	198	57,76	3944	1,0	NR173-2E80M/4B		24		
	29	171	49,81	3857	1,2					
	31	157	45,90	3804	1,3					
	34	147	42,87	3758	1,4					
	40	124	36,24	3639	1,6					
	48	104	30,26	3503	1,9					
	55	90	26,10	3388	2,2					



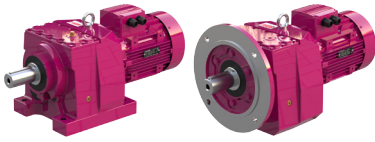
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,55 0,75	69	73	20,92	3816	2,7	MR172-2E80M/4B	1,45	21	104	IE2
	79	64	18,28	3633	3,1	NR172-2E80M/4B		23		
	29	173	50,51	2432	0,8	MR103-2E80M/4B	1,45	22	103	IE2
	32	153	44,60	2414	0,9	NR103-2E80M/4B		23		
	35	143	41,66	2401	1,0					
	41	121	35,21	2358	1,2					
	45	111	32,25	2331	1,3					
	49	101	29,40	2300	1,4					
	58	85	24,86	2178	1,5					
	66	75	21,96	2134	1,6					
	70	70	20,51	2108	1,7					
	83	60	17,33	2042	1,8					
	90	56	15,95	2045	2,1	MR102-2E80M/4B	1,45	21	103	IE2
	102	49	14,08	1988	2,2	NR102-2E80M/4B		22		
	109	46	13,15	1956	2,3					
	130	39	11,12	1877	2,6					
	141	36	10,18	1836	2,8					
	155	32	9,29	1793	2,9					
	180	28	8,01	1724	3,2					
	208	24	6,93	1641	3,7					
	45	109	32,02	746	0,8	MR003-2E80M/4B	1,45	18	102	IE2
	51	97	28,38	908	0,8	NR003-2E80M/4B		19		
	60	83	24,13	1128	1,0					
	68	73	21,26	1206	1,1					
	70	71	20,66	1290	1,2					
	75	66	19,17	1353	1,2					
	79	62	18,20	1343	1,3					
	85	58	16,89	1396	1,4					
	98	50	14,67	1412	1,6					
	106	47	13,61	1450	1,7					
	129	39	11,14	1789	1,7	MR002-2E80M/4B	1,45	16	102	IE2
	146	34	9,87	1772	2,3	NR002-2E80M/4B		17		
	166	30	8,70	1738	2,4					
	170	29	8,45	1758	2,5					
	184	27	7,84	1747	2,6					
	193	26	7,45	1719	2,7					
	208	24	6,91	1706	2,9					
	240	21	6,00	1651	3,1					
	259	19	5,57	1636	3,3					
	316	16	4,56	1528	3,6					
	369	14	3,90	1494	4,0					
	398	13	3,62	1476	4,0					
	404	12	6,91	1482	4,0	MR002-2E71M/2B	1,25	14	102	IE2
	465	11	6,00	1410	4,0	NR002-2E71M/2B		15		
	501	10	5,57	1373	4,0					
	612	8,2	4,56	1283	4,0					
	715	7,0	3,90	1213	4,0					
	771	6,5	3,62	1181	4,0					
0,75 1,0	0,27	23053	5357,43	51426	0,8	MR976-3E80M/4D	1,77	1093	131	IE3
	0,32	19298	4474,67	86315	0,9	NR976-3E80M/4D		1143		
	0,34	18245	4227,50	93574	1,0					
	0,40	15535	3594,81	108770	1,2					
	0,51	12298	2836,64	123352	1,5					



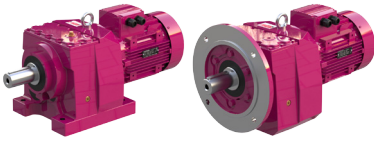
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Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,75 1,0	0,71	8968	2027,97	135224	2,0	MR975-3E80M/4D NR975-3E80M/4D	1,77	1091 1141	131	IE3
	0,80	8057	1820,78	138145	2,2					
	0,93	6863	1552,10	141735	2,6					
	1,1	6056	1368,27	144020	3,0					
	1,2	5376	1213,85	145857	3,3					
	0,42	14764	3441,02	60861	0,9	MR876-3E80M/4D NR876-3E80M/4D	1,77	608 613	128	IE3
	0,50	12443	2894,28	75635	1,0					
	0,59	10599	2460,65	84867	1,2					
	0,69	9097	2108,33	91252	1,4					
	0,75	8471	1924,32	93667	1,5	MR875-3E80M/4D NR875-3E80M/4D	1,77	605 610	128	IE3
	0,85	7498	1700,56	97048	1,7					
	0,95	6710	1521,55	99810	1,9					
	1,1	5902	1336,15	102338	2,2					
	1,2	5351	1210,51	103968	2,4					
	1,4	4630	1049,18	105993	2,8					
	1,6	4046	915,85	107547	3,2					
	1,8	3573	807,91	108753	3,6					
	0,81	7871	1791,91	49401	1,0	MR775-3E80M/4D NR775-3E80M/4D	1,77	260 318	125	IE3
	0,91	6987	1589,68	52618	1,1					
	1,0	6234	1417,41	55079	1,3					
	1,2	5518	1252,60	57207	1,4					
	1,3	4939	1120,74	58706	1,6					
	1,5	4345	984,18	60240	1,8					
	1,6	4134	594,92	60775	1,9	MR774-3E90S/6B NR774-3E90S/6B	1,96	241 299	124	IE3
	1,8	3700	532,29	61799	2,2					
	2,0	3255	467,43	62793	2,5					
	2,3	2915	418,17	63516	2,7					
	2,4	2694	594,92	63960	3,0	MR774-3E80M/4D NR774-3E80M/4D	1,77	230 283	124	IE3
	2,7	2411	532,29	64524	3,3					
	3,1	2121	467,43	65082	3,8					
	3,5	1900	418,17	66231	4,0					
	1,5	4388	995,91	25927	1,0	MR675-3E80M/4D NR675-3E80M/4D	1,77	241 252	122	IE3
	1,7	3860	874,56	28823	1,1					
	1,9	3476	500,39	30699	1,2	MR674-3E90S/6B NR674-3E90S/6B	1,96	229 239	121	IE3
	2,1	3077	442,20	32446	1,4					
	2,5	2618	376,69	34190	1,6					
	2,9	2265	500,39	35432	1,9	MR674-3E80M/4D NR674-3E80M/4D	1,77	226 236	121	IE3
	3,3	2005	442,20	36291	2,1					
	3,8	1706	376,69	37214	2,5					
	4,5	1469	323,82	37899	2,9					
	5,2	1276	281,02	38425	3,4					
	5,9	1117	245,67	38842	3,8					
	6,7	983	215,97	40060	4,0					
	2,4	2797	402,12	21008	1,1	MR574-3E90S/6B NR574-3E90S/6B	1,96	145 141	118	IE3



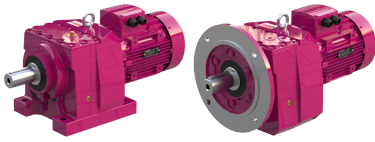
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,75 1,0	2,5	2596	574,90	22116	1,2	MR574-3E80M/4D	1,77	138	118	IE3
	3,0	2197	485,89	24064	1,4	NR574-3E80M/4D		135		
	3,6	1823	402,12	25640	1,6					
	4,2	1560	343,91	26587	1,9					
	4,8	1371	301,59	27250	2,2					
	5,0	1322	291,25	27413	2,3					
	5,6	1176	258,87	27885	2,6					
	6,5	1007	221,40	28404	3,0					
	7,5	884	194,15	28760	3,4					
	8,4	783	171,64	29042	3,8					
	10	660	144,37	30258	4,0					
	3,5	1894	418,16	8853	0,8	MR474-3E80M/4D	1,77	138	115	IE3
	4,2	1571	346,07	15203	1,0	NR474-3E80M/4D		142		
	4,3	1551	219,00	15551	1,0	MR473-3E90S/6B	1,96	99	114	IE3
	4,9	1374	194,05	17820	1,1	NR473-3E90S/6B		101		
	6,0	1120	157,90	20498	1,4					
	6,6	1014	219,00	21451	1,5	MR473-3E80M/4D	1,77	95	114	IE3
	7,5	899	194,05	22407	1,7	NR473-3E80M/4D		98		
	9,2	733	157,90	23603	2,1					
	10	648	139,54	23025	2,4					
	12	580	124,85	22325	2,7					
	13	510	109,64	21522	3,0					
	16	427	91,58	20436	3,6					
	6,8	982	138,72	8562	0,8	MR373-3E90S/6B	1,96	59	111	IE3
	8,5	791	111,67	12140	1,0	NR373-3E90S/6B		61		
	9,2	729	157,76	12354	1,1	MR373-3E80M/4D	1,77	54	111	IE3
	10	642	138,72	12049	1,3	NR373-3E80M/4D		56		
	13	517	111,67	11507	1,6					
	15	454	97,92	11168	1,8					
	17	402	86,57	10846	2,0					
	20	339	72,81	10391	2,4					
	23	288	61,91	9965	2,8					
	27	247	53,04	9564	3,3					
	30	224	48,00	9307	3,7					
	9,7	692	97,62	7187	0,9	MR283-3E90S/6B	1,96	46	108	IE3
						NR283-3E90S/6B		48		
	11	638	137,91	8472	0,9	MR283-3E80M/4D	1,77	44	108	IE3
	13	529	114,14	9240	1,1	NR283-3E80M/4D		49		
	15	453	97,62	8974	1,3					
	17	397	85,60	8738	1,5					
	19	352	75,68	8509	1,7					
	23	296	63,65	8180	2,0					
	27	252	54,12	7866	2,4					
	31	216	46,37	7567	2,6					
	35	196	41,96	7374	2,8					
	12	561	121,03	5581	0,8	MR273-3E80M/4D	1,77	35	106	IE3
	13	526	113,52	5868	0,9	NR273-3E80M/4D		37		
	15	448	96,52	6462	1,0					
	17	389	83,83	6842	1,2					
	20	341	73,35	7104	1,3					
	24	282	60,66	7338	1,6					



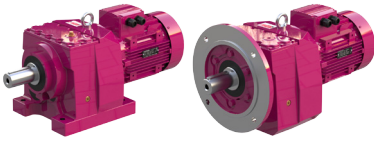
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Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
0,75 1,0	29	236	50,59	7441	1,9	MR273-3E80M/4D	1,77	35	106	IE3
	34	198	42,41	7036	2,3	NR273-3E80M/4D		37		
	40	171	36,55	6660	2,6					
	48	142	30,48	6232	3,2					
	21	316	68,03	6569	0,9	MR203-3E80M/4D	1,77	33	105	IE3
	24	276	59,43	6409	1,0	NR203-3E80M/4D		35		
	26	259	55,74	6329	1,1					
	31	221	47,39	6121	1,3					
	33	205	43,94	6021	1,4					
	35	192	41,16	5933	1,5					
	40	168	36,02	5752	1,7					
	51	132	28,35	6540	2,1					
	59	115	24,77	6214	2,4					
	62	108	23,23	6067	2,5					
	63	109	23,01	5957	2,6	MR202-3E80M/4D	1,77	33	105	IE3
	72	95	20,10	5671	2,7	NR202-3E80M/4D		34		
	77	89	18,85	5541	2,9					
	90	76	16,03	5227	3,2					
	29	231	49,81	3498	0,9	MR173-3E80M/4D	1,77	23	104	IE3
	32	213	45,90	3473	0,9	NR173-3E80M/4D		24		
	34	199	42,87	3449	1,0					
	40	169	36,24	3377	1,2					
	48	141	30,26	3285	1,4					
	56	122	26,10	3200	1,6					
	69	99	20,92	3487	2,0	MR172-3E80M/4D	1,77	23	104	IE3
	79	87	18,28	3476	2,3	NR172-3E80M/4D		25		
	85	81	17,14	3464	2,5					
	99	69	14,57	3394	2,8					
	115	60	12,66	3224	3,2					
	131	53	11,08	3071	3,4					
	41	164	35,21	2088	0,9	MR103-3E80M/4D	1,77	22	103	IE3
	45	150	32,25	2084	0,9	NR103-3E80M/4D		25		
	49	137	29,40	2074	1,0					
	58	116	24,86	1965	1,1					
	66	102	21,96	1946	1,2					
	71	96	20,51	1933	1,3					
	84	81	17,33	1894	1,4					
	91	75	15,95	1923	1,5	MR102-3E80M/4D	1,77	22	103	IE3
	103	67	14,08	1880	1,7	NR102-3E80M/4D		23		
	110	62	13,15	1855	1,7					
	130	53	11,12	1792	1,9					
	142	48	10,18	1758	2,1					
	156	44	9,29	1722	2,2					
	181	38	8,01	1663	2,4					
	209	33	6,93	1582	2,7					
	224	31	6,48	1556	2,8					
	265	26	5,47	1492	3,1					
	289	24	5,01	1459	3,4					
	317	22	4,57	1424	3,5					
	60	112	24,13	276	0,7	MR003-3E80M/4D	1,77	19	102	IE3
	68	99	21,26	434	0,8	NR003-3E80M/4D		20		
	70	96	20,66	560	0,9					
	76	89	19,17	676	0,9					



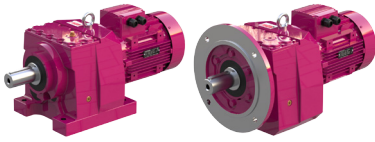
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
0,75 1,0	80	85	18,20	683	1,0	MR003-3E80M/4D	1,77	19	102	IE3
	86	79	16,89	783	1,0	NR003-3E80M/4D		20		
	99	68	14,67	857	1,2					
	107	63	13,61	934	1,3					
	130	53	11,14	1465	1,2	MR002-3E80M/4D	1,77	19	102	IE3
	147	47	9,87	1480	1,7	NR002-3E80M/4D		20		
	167	41	8,70	1472	1,8					
	172	40	8,45	1508	1,8					
	185	37	7,84	1515	1,9					
	195	35	7,45	1491	2,0					
	210	33	6,91	1495	2,1					
	242	28	6,00	1458	2,3					
	260	26	5,57	1457	2,4					
	318	22	4,56	1360	2,7					
	372	19	3,90	1350	3,0					
	401	17	3,62	1343	3,1					
	417	16	6,91	1421	3,3	MR002-3E80M/2B	1,59	19	102	IE3
	480	14	6,00	1371	3,6	NR002-3E80M/2B		20		
	517	13	5,57	1355	3,9					
	632	11	4,56	1266	4,0					
	738	9,3	3,90	1223	4,0					
	796	8,6	3,62	1190	4,0					
1,1 1,5	0,40	22784	3594,81	54822	0,8	MR976-3E90S/4C	2,46	1097	131	IE3
	0,51	18037	2836,64	94915	1,0	NR976-3E90S/4C		1147		
	0,71	13153	2027,97	119815	1,4	MR975-3E90S/4C	2,46	1095	131	IE3
	0,80	11817	1820,78	125260	1,5	NR975-3E90S/4C		1145		
	0,93	10066	1552,10	131719	1,8					
	1,1	8881	1368,27	135508	2,0					
	1,2	7885	1213,85	138679	2,3					
	1,3	7035	1082,31	141234	2,6					
	1,6	5960	914,74	144282	3,0					
	1,7	5488	842,80	145559	3,3					
	0,75	12424	1924,32	75738	1,0	MR875-3E90S/4C	2,46	600	128	IE3
	0,85	10997	1700,56	83016	1,2	NR875-3E90S/4C		605		
	0,95	9841	1521,55	88196	1,3					
	1,1	8657	1336,15	92964	1,5					
	1,2	7849	1210,51	95787	1,7					
	1,4	6791	1049,18	99548	1,9					
	1,6	5934	915,85	102241	2,2					
	1,8	5240	807,91	104289	2,5					
	2,0	4665	718,74	105897	2,8					
	2,3	4182	643,84	107191	3,1					
	2,7	3502	537,75	108929	3,7					
	1,2	8093	1252,60	48526	1,0	MR775-3E90S/4C	2,46	338	125	IE3
	1,3	7244	1120,74	51722	1,1	NR775-3E90S/4C		408		
	1,5	6373	984,18	54641	1,3					
	1,6	6095	594,92	55503	1,3	MR774-3E90L/6C	2,75	310	124	IE3
	1,8	5455	532,29	57384	1,5	NR774-3E90L/6C		376		
	2,0	4799	467,43	59184	1,7					
	2,2	4297	418,17	60431	1,9					



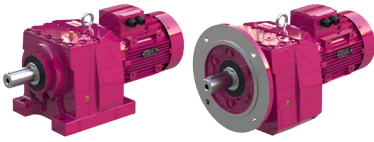
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n_2 [r.p.m]	M_2 [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
1,1 1,5	2,4	3951	594,92	61197	2,0	MR774-3E90S/4C	2,46	305	124	IE3
	2,7	3536	532,29	62157	2,3	NR774-3E90S/4C		371		
	3,1	3111	467,43	63092	2,6					
	3,5	2786	418,17	63773	2,9					
	4,0	2406	361,62	64534	3,3					
	4,6	2087	313,11	65147	3,8					
	5,3	1828	273,85	66837	4,0					
	2,1	4537	442,20	24922	0,9	MR674-3E90L/6C	2,75	234	121	IE3
	2,5	3860	376,69	28823	1,1	NR674-3E90L/6C		244		
	2,9	3322	500,39	31393	1,3	MR674-3E90S/4C	2,46	230	121	IE3
	3,3	2941	442,20	33000	1,5	NR674-3E90S/4C		240		
	3,8	2502	376,69	34662	1,7					
	4,5	2154	323,82	35806	2,0					
	5,2	1872	281,02	36711	2,3					
	5,9	1638	245,67	37414	2,6					
	6,7	1442	215,97	37974	3,0					
	3,6	2674	402,12	21701	1,1	MR574-3E90S/4C	2,46	151	118	IE3
	4,2	2288	343,91	23647	1,3	NR574-3E90S/4C		147		
	4,8	2010	301,59	24880	1,5					
	5,0	1939	291,25	25139	1,5					
	5,6	1725	258,87	26019	1,7					
	6,5	1477	221,40	26885	2,0					
	7,5	1297	194,15	27495	2,3					
	8,4	1149	171,64	27971	2,6					
	10	969	144,37	28517	3,1					
	6,0	1654	157,90	13930	0,9	MR473-3E90L/6C	2,75	98	114	IE3
						NR473-3E90L/6C		100		
	6,6	1489	219,00	16399	1,0	MR473-3E90S/4C	2,46	97	114	IE3
	7,5	1319	194,05	18456	1,2	NR473-3E90S/4C		99		
	9,2	1075	157,90	20912	1,4					
	10	951	139,54	21983	1,6					
	12	851	124,85	21485	1,8					
	13	748	109,64	20784	2,1					
	16	626	91,58	19820	2,5					
	17	592	86,52	19519	2,6					
	10	942	138,72	9428	0,9	MR373-3E90S/4C	2,46	58	111	IE3
	13	759	111,67	10612	1,1	NR373-3E90S/4C		61		
	15	666	97,92	10383	1,2					
	17	590	86,57	10152	1,4					
	20	497	72,81	9807	1,7					
	23	423	61,91	9469	1,9					
	27	363	53,04	9139	2,3					
	30	329	48,00	8923	2,5					
	40	249	23,33	9617	3,3	MR372-3E90L/6C	2,75	60	111	IE3
	46	221	20,62	9198	3,7	NR372-3E90L/6C		64		
	15	664	97,62	7865	0,9	MR283-3E90S/4C	2,46	50	108	IE3
	17	583	85,60	7981	1,0	NR283-3E90S/4C		54		
	19	516	75,68	7840	1,2					
	23	435	63,65	7617	1,4					
	27	370	54,12	7388	1,6					



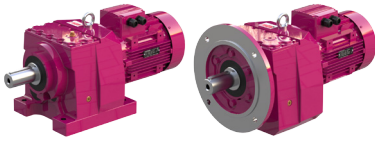
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
1,1 1,5	31	317	46,37	7157	1,8	MR283-3E90S/4C	2,46	50	108	IE3
	35	288	41,96	7003	1,9	NR283-3E90S/4C		54		
	37	269	25,23	8462	2,2	MR282-3E90L/6C	2,75	48	108	IE3
	43	231	21,66	7998	2,5	NR282-3E90L/6C		52		
	48	210	30,37	7724	2,7	MR282-3E90S/4C	2,46	50	108	IE3
	57	175	25,23	7220	3,0	NR282-3E90S/4C		53		
	67	150	21,66	6832	3,3					
	17	571	83,83	3638	0,8	MR273-3E90S/4C	2,46	40	106	IE3
	20	500	73,35	4300	0,9	NR273-3E90S/4C		41		
	24	414	60,66	5020	1,1					
	29	346	50,59	5507	1,3					
	34	290	42,41	5828	1,5					
	40	250	36,55	6004	1,8					
	48	209	30,48	6122	2,2					
	56	180	25,89	5979	2,5	MR272-3E90S/4C	2,46	41	106	IE3
	68	149	21,43	5575	3,0	NR272-3E90S/4C		43		
	79	127	18,33	5265	3,5					
	31	324	47,39	5612	0,9	MR203-3E90S/4C	2,46	39	105	IE3
	33	301	43,94	5549	0,9	NR203-3E90S/4C		42		
	35	281	41,16	5492	1,0					
	40	247	36,02	5366	1,1					
	51	193	28,35	5583	1,4					
	59	169	24,77	5753	1,6					
	62	159	23,23	5811	1,7					
	63	159	23,01	6089	1,8	MR202-3E90S/4C	2,46	41	105	IE3
	72	139	20,10	5787	1,9	NR202-3E90S/4C		43		
	77	131	18,85	5650	2,0					
	90	111	16,03	5319	2,2					
	98	103	14,86	5173	2,3					
	104	97	13,92	5050	2,4					
	119	85	12,18	4810	2,7					
	134	75	10,81	4605	2,9					
	144	70	10,07	4490	3,0					
	173	59	8,40	4207	3,4					
	40	247	36,24	2920	0,8	MR173-3E90S/4C	2,46	30	104	IE3
	48	207	30,26	2903	1,0	NR173-3E90S/4C		32		
	56	179	26,10	2870	1,1					
	69	145	20,92	2679	1,4	MR172-3E90S/4C	2,46	29	104	IE3
	79	127	18,28	2770	1,6	NR172-3E90S/4C		30		
	85	119	17,14	2803	1,7					
	99	101	14,57	2857	1,9					
	115	88	12,66	2877	2,2					
	131	77	11,08	2877	2,3					
	152	66	9,53	2710	2,6					
	162	62	8,94	2706	2,6					
	191	53	7,60	2683	3,0					
	205	49	7,08	2667	3,2					
	220	46	6,60	2618	3,1					
	251	40	5,78	2492	3,3					



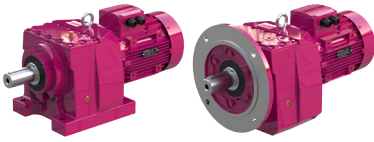
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



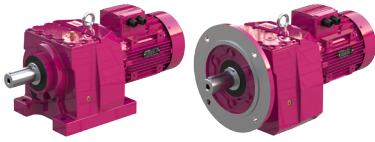
Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
1,1 1,5	58	170	24,86	1593	0,8	MR103-3E90S/4C	2,46	29	103	IE3
	66	150	21,96	1618	0,8	NR103-3E90S/4C		31		
	71	140	20,51	1626	0,9					
	84	119	17,33	1634	0,9					
	91	111	15,95	1708	1,0	MR102-3E90S/4C	2,46	30	103	IE3
	103	98	14,08	1691	1,1	NR102-3E90S/4C		31		
	110	91	13,15	1678	1,1					
	130	77	11,12	1643	1,3					
	142	71	10,18	1621	1,4					
	156	65	9,29	1597	1,5					
	181	56	8,01	1555	1,6					
	209	48	6,93	1479	1,9					
	224	45	6,48	1460	1,9					
	265	38	5,47	1410	2,1					
	289	35	5,01	1384	2,3					
	317	32	4,57	1356	2,4					
	368	28	3,94	1310	2,5					
	415	24	6,93	1271	2,9	MR102-3E80M/2C	2,26	25	103	IE3
	445	23	6,48	1250	3,1	NR102-3E80M/2C		26		
	526	19	5,47	1197	3,4					
	99	100	14,67	-	0,8	MR003-3E90S/4C	2,46	24	102	IE3
	107	93	13,61	33	0,9	NR003-3E90S/4C		25		
	130	77	11,14	896	0,8	MR002-3E90S/4C	2,46	24	102	IE3
	147	69	9,87	969	1,1	NR002-3E90S/4C		25		
	167	60	8,70	1007	1,2					
	172	59	8,45	1070	1,3					
	185	55	7,84	1109	1,3					
	195	52	7,45	1093	1,4					
	210	48	6,91	1125	1,4					
	242	42	6,00	1121	1,6					
	260	39	5,57	1144	1,7					
	318	32	4,56	1066	1,8					
	372	27	3,90	1098	2,0					
	401	25	3,62	1109	2,1					
	417	24	6,91	1234	2,2	MR002-3E80M/2C	2,26	18	102	IE3
	480	21	6,00	1202	2,5	NR002-3E80M/2C		20		
	517	20	5,57	1197	2,6					
	632	16	4,56	1118	2,9					
	738	14	3,90	1105	3,2					
	796	13	3,62	1097	3,3					
1,5 2,0	0,71	17997	2027,97	95566	1,0	MR975-3E90L/4D	3,30	1031	131	IE3
	0,79	16169	1820,78	105780	1,1	NR975-3E90L/4D		1081		
	0,93	13774	1552,10	117320	1,3					
	1,1	12153	1368,27	124101	1,5					
	1,2	10789	1213,85	129104	1,7					
	1,3	9627	1082,31	133120	1,9					
	1,6	8156	914,74	137923	2,2					
	1,7	7510	842,80	139900	2,4					
	1,9	6698	750,24	142278	2,7					
	2,2	5926	662,54	144432	3,0					
	2,5	5277	588,87	146168	3,4					



Motorlu Güç Devir Sayfaları Geared Motors Performance Tables Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
1,5 2,0	0,85	15048	1700,56	59105	0,9	MR875-3E90L/4D	3,30	595	128	IE3
	0,95	13466	1521,55	69941	1,0	NR875-3E90L/4D		600		
	1,1	11846	1336,15	79031	1,1					
	1,2	10740	1210,51	84391	1,2					
	1,4	9292	1049,18	90598	1,4					
	1,6	8120	915,85	95067	1,6					
	1,8	7170	807,91	98483	1,8					
	2,1	6145	446,42	101594	2,1	MR874-3E100L/6B	3,50	587	127	IE3
	2,4	5389	390,74	103902	2,4	NR874-3E100L/6B		592		
	2,8	4775	345,67	105596	2,7					
	3,3	4044	292,15	107551	3,2					
	4,0	3320	239,61	109333	3,9					
	1,6	8181	594,92	48173	1,0	MR774-3E100L/6B	3,50	323	124	IE3
	1,8	7322	532,29	51444	1,1	NR774-3E100L/6B		394		
	2,0	6441	467,43	54425	1,2					
	2,3	5768	418,17	56392	1,4					
	2,4	5407	594,92	57573	1,5	MR774-3E90L/4D	3,30	318	124	IE3
	2,7	4839	532,29	59016	1,7	NR774-3E90L/4D		385		
	3,1	4257	467,43	60495	1,9					
	3,5	3812	418,17	61555	2,1					
	4,0	3293	361,62	62723	2,4					
	4,6	2855	313,11	63650	2,8					
	5,3	2501	273,85	64365	3,2					
	6,0	2207	241,42	64933	3,6					
	6,7	1960	214,17	65755	4,0					
	2,9	4546	500,39	25002	0,9	MR674-3E90L/4D	3,30	237	121	IE3
	3,3	4024	442,20	28028	1,1	NR674-3E90L/4D		248		
	3,8	3424	376,69	30992	1,3					
	4,5	2948	323,82	33014	1,5					
	5,1	2561	281,02	34480	1,7					
	5,9	2242	245,67	35538	1,9					
	6,7	1973	215,97	36416	2,2					
	4,2	3131	343,91	19040	1,0	MR574-3E90L/4D	3,30	153	118	IE3
	4,8	2751	301,59	21328	1,1	NR574-3E90L/4D		137		
	5,0	2653	291,25	19040	1,1					
	5,6	2360	258,87	21328	1,3					
	5,7	2351	167,32	23351	1,3	MR573-3E100L/6B	3,50	140	117	IE3
	6,2	2158	153,61	24242	1,4	NR573-3E100L/6B		136		
	7,1	1891	134,45	25329	1,6					
	8,0	1675	118,95	26174	1,8					
	9,5	1418	100,53	27098	2,1					
	12	1163	82,45	27932	2,6					
	13	1028	72,81	28345	2,9					
	15	915	64,72	28677	3,3					
	17	775	54,74	29069	3,9					
	20	691	48,74	29444	4,0					
	7,4	1806	194,05	11156	0,9	MR473-3E90L/4D	3,30	100	114	IE3
	9,2	1473	157,90	16686	1,1	NR473-3E90L/4D		102		
	10	1303	139,54	18683	1,2					
	12	1166	124,85	20098	1,3					
	13	1025	109,64	19941	1,5					
	16	857	91,58	19117	1,8					
	17	810	86,52	18854	1,9					



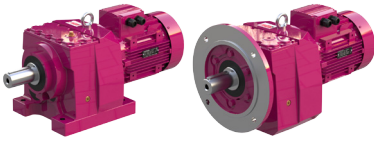
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
1,5 2,0	18	733	157,90	18431	2,1	MR473-3E90S/2B	2,97	98	114	IE3
	21	648	139,54	17860	2,4	NR473-3E90S/2B		100		
	23	580	124,85	17348	2,7					
	26	510	109,64	16756	3,0					
	15	910	97,92	9486	0,9	MR373-3E90L/4D	3,30	61	111	IE3
	17	805	86,57	9359	1,0	NR373-3E90L/4D		64		
	20	678	72,81	9140	1,2					
	23	577	61,91	8902	1,4					
	27	495	53,04	8653	1,7					
	30	448	48,00	8483	1,8					
	41	335	23,33	9704	2,4	MR372-3E100L/6B	3,50	62	111	IE3
	46	296	20,62	9272	2,8	NR372-3E100L/6B		64		
	52	265	18,45	8902	3,1					
	59	233	16,20	8491	3,5					
	62	221	23,33	8331	3,6	MR372-3E90L/4D	3,30	60	111	IE3
	70	196	20,62	7967	3,9	NR372-3E90L/4D		62		
	79	175	18,45	7656	4,0					
	19	707	75,68	6867	0,8	MR283-3E90L/4D	3,30	52	108	IE3
	23	595	63,65	6973	1,0	NR283-3E90L/4D		54		
	27	507	54,12	6841	1,2					
	31	435	46,37	6688	1,3					
	34	394	41,96	6579	1,4					
	38	362	25,23	8572	1,7	MR282-3E100L/6B	3,50	55	108	IE3
	44	310	21,66	8096	1,9	NR282-3E100L/6B		57		
	48	288	30,37	7858	1,9	MR282-3E90L/4D	3,30	51	108	IE3
	57	240	25,23	7332	2,2	NR282-3E90L/4D		53		
	67	206	21,66	6930	2,4					
	76	181	19,06	6612	2,6					
	85	161	16,91	6330	2,9					
	101	136	14,31	5959	3,2					
	24	567	60,66	2371	0,8	MR273-3E90L/4D	3,30	43	106	IE3
	29	474	50,59	3298	0,9	NR273-3E90L/4D		45		
	34	398	42,41	3976	1,1					
	40	343	36,55	4408	1,3					
	47	286	30,48	4791	1,6					
	56	246	25,89	5025	1,8	MR272-3E90L/4D	3,30	42	106	IE3
	67	204	21,43	5190	2,2	NR272-3E90L/4D		44		
	79	175	18,33	5256	2,5					
	90	153	16,07	5098	2,8					
	102	136	14,21	4871	3,0					
	121	114	11,95	4571	3,4					
	40	338	36,02	4924	0,8	MR203-3E90L/4D	3,30	43	105	IE3
	51	265	28,35	3749	1,1	NR203-3E90L/4D		44		
	58	232	24,77	4150	1,2					
	62	218	23,23	4309	1,2					



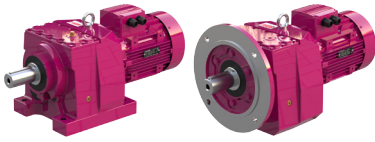
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
1,5 2,0	63	218	23,01	5238	1,3	MR202-3E90L/4D	3,30	41	105	IE3
	72	191	20,10	5393	1,4	NR202-3E90L/4D		43		
	77	179	18,85	5446	1,5					
	90	152	16,03	5423	1,6					
	97	142	14,86	5270	1,7					
	104	133	13,92	5141	1,8					
	119	116	12,18	4890	1,9					
	134	103	10,81	4676	2,1					
	143	96	10,07	4556	2,2					
	172	80	8,40	4262	2,5					
	205	67	7,04	3997	2,7					
	249	55	5,80	3772	3,2					
	69	199	20,92	1757	1,0	MR172-3E90L/4D	3,30	31	104	IE3
	79	174	18,28	1964	1,1	NR172-3E90L/4D		33		
	84	163	17,14	2047	1,2					
	99	139	14,57	2214	1,4					
	114	121	12,66	2319	1,6					
	130	106	11,08	2388	1,7					
	152	91	9,53	2236	1,9					
	162	85	8,94	2262	1,9					
	190	73	7,60	2304	2,2					
	204	68	7,08	2315	2,4					
	219	63	6,60	2320	2,3					
	250	55	5,78	2319	2,4					
	302	46	4,78	2297	2,8					
	354	39	4,09	2195	3,1					
	428	32	3,38	2095	3,4					
	439	31	6,60	2062	4,0	MR172-3E90S/2B	2,97	30	104	IE3
	502	27	5,78	1964	4,0	NR172-3E90S/2B		32		
	607	23	4,78	1834	4,0					
	710	19	4,09	1744	4,0					
	103	134	14,08	1474	0,8	MR102-3E90L/4D	3,30	30	103	IE3
	110	125	13,15	1476	0,8	NR102-3E90L/4D		31		
	130	106	11,12	1472	0,9					
	142	97	10,18	1465	1,0					
	156	89	9,29	1454	1,1					
	180	76	8,01	1432	1,2					
	208	66	6,93	1360	1,4					
	223	62	6,48	1349	1,4					
	264	52	5,47	1317	1,5					
	288	48	5,01	1298	1,7					
	316	44	4,57	1278	1,7					
	367	38	3,94	1242	1,9					
	418	33	6,93	1210	2,1	MR102-3E90S/2B	2,97	28	103	IE3
	448	31	6,48	1192	2,3	NR102-3E90S/2B		30		
	530	26	5,47	1148	2,5					
	578	24	5,01	1125	2,5					
	634	22	4,57	1100	2,8					
	736	19	3,94	1060	2,9					
	146	94	9,87	384	0,8	MR002-3E90L/4D	3,30	27	102	IE3
	166	83	8,70	475	0,9	NR002-3E90L/4D		28		
	171	80	8,45	569	0,9					
	184	75	7,84	644	1,0					
	194	71	7,45	637	1,0					
	209	66	6,91	703	1,0					
	241	57	6,00	735	1,2					
	260	53	5,57	786	1,2					



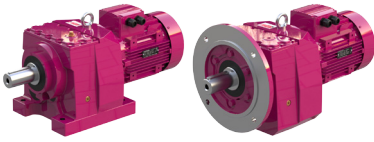
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
1,5 2,0	317 371 399	43 37 35	4,56 3,90 3,62	730 811 842	1,3 1,5 1,5	MR002-3E90L/4D NR002-3E90L/4D	3,30	27 28	102	IE3
	420 483 521 637 744	33 28 26 22 19	6,91 6,00 5,57 4,56 3,90	1023 1008 1018 949 960	1,7 1,8 1,9 2,1 2,4	MR002-3E90S/2B NR002-3E90S/2B	2,97	25 27	102	IE3
2,2 3,0	0,93 1,1 1,2 1,3 1,6 1,7 1,9 2,2 2,5 2,7	20133 17763 15770 14070 11921 10977 9790 8662 7713 7151	1552,10 1368,27 1213,85 1082,31 914,74 842,80 750,24 662,54 588,87 546,94	80517 96442 107571 115554 124687 128448 132559 136320 139289 140965	0,9 1,0 1,1 1,3 1,5 1,6 1,8 2,1 2,3 2,5	MR975-3E100L/4C NR975-3E100L/4C	4,65	1117 1167	131	IE3
	2,8 3,2 3,7	6816 6126 5221	510,11 457,99 390,41	141940 143886 146314	2,6 2,9 3,4	MR974-3E100L/4C NR974-3E100L/4C	4,65	1132 1182	130	IE3
	1,2 1,4 1,6 1,8 2,0	15697 13582 11869 10480 9331	1210,51 1049,18 915,85 807,91 718,74	53401 68923 78704 85242 90183	0,8 1,0 1,1 1,2 1,4	MR875-3E100L/4C NR875-3E100L/4C	4,65	622 627	128	IE3
	2,5 2,8	7862 6967	390,74 345,67	95889 98966	1,7 1,9	MR874-3E112M/6B NR874-3E112M/6B	4,95	606 611	127	IE3
	3,2 3,7 4,2 5,0 6,1	5936 5205 4612 3907 3208	446,42 390,74 345,67 292,15 239,61	102173 104336 105998 107872 109927	2,2 2,5 2,8 3,3 4,0	MR874-3E100L/4C NR874-3E100L/4C	4,65	607 612	127	IE3
	2,4 2,7 3,1 3,5 4,0 4,6 5,3 6,0 6,8 7,6	7903 7073 6222 5572 4812 4173 3655 3226 2865 2557	594,92 532,29 467,43 418,17 361,62 313,11 273,85 241,42 214,17 190,96	49168 52235 55047 57040 59086 60698 61916 62867 63629 64253	1,0 1,1 1,3 1,4 1,7 1,9 2,2 2,5 2,8 3,1	MR774-3E100L/4C NR774-3E100L/4C	4,65	331 404	124	IE3
	4,9 5,5 6,4 7,7 8,7	4033 3591 3066 2552 2276	196,61 174,89 149,11 124,07 110,55	28019 30245 32556 34480 35446	1,1 1,2 1,4 1,7 1,9	MR673-3E112M/6B NR673-3E112M/6B	4,95	196 197	120	IE3



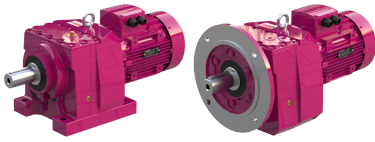
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
2,2 3,0	5,0	3878	291,25	12487	0,8	MR574-3E100L/4C	4,65	150	118	IE3
	5,6	3450	258,87	16573	0,9	NR574-3E100L/4C		156		
	6,5	2953	221,40	20078	1,0					
	7,1	2763	134,45	21288	1,1	MR573-3E112M/6B	4,95	144	117	IE3
	8,1	2447	118,95	22947	1,2	NR573-3E112M/6B		150		
	8,7	2280	167,32	23646	1,3	MR573-3E100L/4C	4,65	140	117	IE3
	9,4	2093	153,61	24525	1,4	NR573-3E100L/4C		146		
	11	1835	134,45	25569	1,6					
	12	1625	118,95	26371	1,8					
	14	1376	100,53	24667	2,2					
	18	1129	82,45	28045	2,7					
	20	998	72,81	28440	3,0					
	22	888	64,72	27611	3,4					
	26	752	54,74	26326	4,0					
	30	671	48,74	25458	4,0					
	10	1905	139,54	8420	0,8	MR473-3E100L/4C	4,65	108	114	IE3
	12	1705	124,85	13075	0,9	NR473-3E100L/4C		111		
	13	1499	109,64	16237	1,0					
	16	1254	91,58	17885	1,2					
	17	1185	86,52	17690	1,3					
	20	1002	73,09	17091	1,5					
	23	874	63,70	16584	1,8					
	26	767	55,82	16087	2,0					
	30	674	49,05	15595	2,3					
	34	588	42,75	15070	2,6					
	39	516	37,45	14566	3,0					
	47	427	30,93	13844	3,6					
	20	995	72,81	7973	0,8	MR373-3E100L/4C	4,65	67	111	IE3
	23	847	61,91	7909	1,0	NR373-3E100L/4C		68		
	27	727	53,04	7802	1,1					
	30	658	48,00	7713	1,2					
	35	564	41,16	7552	1,5					
	41	484	35,25	7365	1,6					
	49	406	29,47	7127	1,8					
	57	348	25,27	6908	2,0					
	62	325	23,33	8493	2,5	MR372-3E100L/4C	4,65	66	111	IE3
	70	287	20,62	8112	2,7	NR372-3E100L/4C		69		
	79	257	18,45	7786	2,9					
	90	226	16,20	7423	3,1					
	107	189	13,53	6953	3,5					
	116	174	12,48	6753	3,7					
	27	741	54,12	5713	0,8	MR283-3E100L/4C	4,65	60	108	IE3
	31	636	46,37	5867	0,9	NR283-3E100L/4C		62		
	35	576	41,96	5836	1,0					
	40	493	35,98	5760	1,0					
	47	423	30,82	5657	1,1					
	57	351	25,23	6888	1,5					
	67	301	21,66	7074	1,7					
	76	265	19,06	6759	1,8					
	86	236	16,91	6461	2,0					
	101	200	14,31	6071	2,2					
	118	171	12,24	5731	2,5					
	137	148	10,57	5430	2,8					
	151	135	9,61	5246	3,0					
	174	116	8,33	4981	3,3					



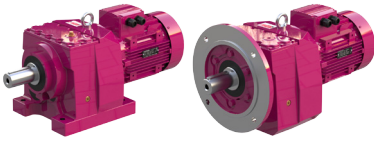
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
2,2 3,0	40	501	36,55	1614	0,9	MR273-3E100L/4C	4,65	50	106	IE3
	48	419	30,48	2461	1,1	NR273-3E100L/4C		52		
	57	352	25,55	3087	1,2					
	68	299	21,43	3552	1,5	MR272-3E100L/4C	4,65	48	106	IE3
	79	255	18,33	3855	1,7	NR272-3E100L/4C		50		
	90	224	16,07	4043	1,9					
	102	198	14,21	4173	2,1					
	121	167	11,95	4290	2,3					
	143	142	10,16	4343	2,6					
	167	122	8,71	4150	3,0					
	233	87	6,21	3709	3,8					
	274	74	5,28	3493	3,6					
	59	339	24,77	1346	0,8	MR203-3E100L/4C	4,65	48	105	IE3
	62	318	23,23	1678	0,8	NR203-3E100L/4C		50		
	72	279	20,10	3486	0,9	MR202-3E100L/4C	4,65	48	105	IE3
	77	262	18,85	3657	1,0	NR202-3E100L/4C		50		
	90	223	16,03	4011	1,1					
	98	207	14,86	4140	1,2					
	104	194	13,92	4236	1,2					
	119	170	12,18	4389	1,3					
	134	151	10,81	4485	1,4					
	144	141	10,07	4525	1,5					
	173	117	8,40	4358	1,7					
	206	99	7,04	4078	1,9					
	250	81	5,80	3859	2,2					
	286	71	5,08	3669	2,3					
	322	63	4,50	3507	2,4					
	345	59	4,20	3417	2,5					
	414	49	3,50	3195	2,5					
	79	254	18,28	554	0,8	MR172-3E100L/4C	4,65	38	104	IE3
	85	239	17,14	724	0,8	NR172-3E100L/4C		40		
	99	203	14,57	1089	1,0					
	115	177	12,66	1342	1,1					
	131	155	11,08	1534	1,2					
	152	133	9,53	1406	1,3					
	162	125	8,94	1483	1,3					
	191	106	7,60	1643	1,5					
	205	99	7,08	1699	1,6					
	220	92	6,60	1745	1,6					
	251	81	5,78	1816	1,7					
	303	67	4,78	1882	1,9					
	355	57	4,09	1807	2,1					
	429	47	3,38	1833	2,3					
3,0 4,0	439	46	6,60	1916	2,7	MR172-3E90L/2C	4,25	31	104	IE3
	502	40	5,78	1906	3,0	NR172-3E90L/2C		33		
	607	33	4,78	1867	3,3					
	710	29	4,09	1777	3,5					
	1,2	21504	1213,85	68484	0,8	MR975-3E100L/4D	6,26	1131	131	IE3
	1,3	19187	1082,31	87173	0,9	NR975-3E100L/4D		1181		
	1,6	16256	914,74	105024	1,1					
	1,7	14968	842,80	111316	1,2					
	1,9	13350	750,24	118765	1,3					
	2,2	11812	662,54	125117	1,5					



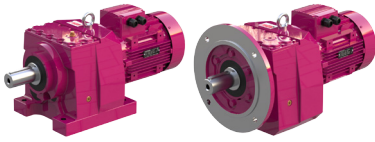
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
3,0 4,0	2,5	10517	588,87	129906	1,7	MR975-3E100L/4D	6,26	1131	131	IE3
	2,7	9752	546,94	132691	1,8	NR975-3E100L/4D		1181		
	2,8	9295	510,11	134243	1,9	MR974-3E100L/4D	6,26	1145	130	IE3
	3,2	8353	457,99	137305	2,2	NR974-3E100L/4D		1195		
	3,7	7119	390,41	141059	2,5					
	4,2	6284	344,17	143447	2,9					
	4,7	5581	305,33	145364	3,2					
	2,8	9402	345,67	90007	1,4	MR874-3E132S/6B NR874-3E132S/6B	6,55	619 624	127	IE3
	3,2	8095	446,42	95060	1,6	MR874-3E100L/4D	6,26	604	127	IE3
	3,7	7098	390,74	98451	1,8	NR874-3E100L/4D		609		
	4,2	6290	345,67	101078	2,1					
	5,0	5327	292,15	103984	2,4					
	6,1	4374	239,61	106644	3,0					
	6,9	3869	211,60	107969	3,4					
	7,7	3444	188,08	109043	3,8					
	8,3	3193	174,68	110099	4,0					
	9,8	2705	147,61	115458	4,0					
	12	2308	125,70	118854	4,0					
	13	1980	107,60	121258	4,0					
	3,5	7598	418,17	50336	1,1	MR774-3E100L/4D	6,26	320	124	IE3
	4,0	6562	361,62	53959	1,2	NR774-3E100L/4D		391		
	4,6	5781	208,82	56440	1,4	MR773-3E132S/6B NR773-3E132S/6B	6,55	317	123	IE3
	5,4	4956	178,78	58748	1,6			383		
	6,5	4124	148,73	60850	1,9					
	7,3	3693	133,05	61793	2,2					
	8,4	3191	115,06	63024	2,5					
	9,7	2767	99,63	63850	2,9					
	11	2423	87,13	64534	3,3					
	13	2139	76,81	65077	3,7					
	14	1899	68,15	66229	4,0					
	6,5	4135	149,11	27341	1,0	MR673-3E132S/6B NR673-3E132S/6B	6,55	226	120	IE3
	7,8	3441	124,07	30850	1,2			228		
	8,8	3070	110,55	32471	1,4					
	10	2613	94,17	34257	1,6					
	12	2249	80,96	35537	1,9					
	14	1955	70,26	36494	2,2					
	16	1711	61,42	37234	2,5					
	18	1506	53,99	36465	2,9					
	18	1468	52,68	36219	2,9					
	21	1264	45,29	34729	3,4					
	25	1099	39,30	33361	3,9					
	28	962	34,36	32093	4,0					
	7,5	3538	194,15	15818	0,8	MR574-3E100L/4D NR574-3E100L/4D	6,26	154 148	118	IE3
	8,7	3111	167,32	19059	1,0	MR573-3E100L/4D NR573-3E100L/4D	6,26	144	117	IE3
	9,4	2856	153,61	20666	1,1			138		
	11	2503	134,45	22555	1,2					
	12	2217	118,95	23939	1,4					
	14	1877	100,53	25413	1,6					
	18	1540	82,45	26678	1,9					



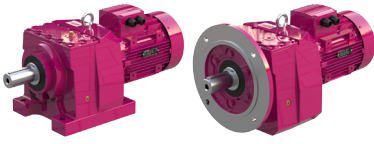
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
3,0 4,0	20	1362	72,81	27295	2,2	MR573-3E100L/4D	6,26	144	117	IE3
	22	1212	64,72	26831	2,5	NR573-3E100L/4D		138		
	26	1027	54,74	25667	2,9					
	30	916	48,74	24870	3,3					
	36	751	39,98	23535	3,8					
	41	664	35,31	22718	4,0					
	46	591	31,38	21958	4,0					
	16	1711	91,58	12963	0,9	MR473-3E100L/4D	6,26	109	114	IE3
	17	1617	86,52	14572	1,0	NR473-3E100L/4D		112		
	20	1367	73,09	15967	1,1					
	23	1192	63,70	15605	1,3					
	26	1046	55,82	15229	1,5					
	30	920	49,05	14841	1,7					
	34	803	42,75	14412	1,9					
	39	704	37,45	13990	2,2					
	44	628	22,15	13591	2,5	MR472-3E132S/6B	6,55	119	114	IE3
	52	531	18,72	13041	2,9	NR472-3E132S/6B		122		
	56	489	17,25	12773	3,0					
	63	436	15,35	12394	3,3					
	27	991	53,04	6831	0,8	MR373-3E100L/4D	6,26	69	111	IE3
	30	898	48,00	6834	0,9	NR373-3E100L/4D		72		
	35	769	41,16	6798	1,1					
	41	660	35,25	6719	1,2					
	49	554	29,47	6587	1,4					
	57	475	25,27	6445	1,5					
	62	443	23,33	8279	1,8	MR372-3E100L/4D	6,26	67	111	IE3
	70	392	20,62	8271	2,0	NR372-3E100L/4D		69		
	79	351	18,45	7929	2,1					
	90	308	16,20	7551	2,3					
	107	258	13,53	7061	2,6					
	116	238	12,48	6852	2,7					
	134	206	10,80	6498	3,0					
	154	180	9,41	6179	3,3					
	176	158	8,25	5890	3,6					
	47	578	30,82	5034	0,8	MR283-3E100L/4D	6,26	61	108	IE3
						NR283-3E100L/4D		63		
	57	479	25,23	4803	1,1	MR282-3E100L/4D	6,26	59	108	IE3
	67	411	21,66	5284	1,2	NR282-3E100L/4D		61		
	76	362	19,06	5589	1,3					
	86	322	16,91	5806	1,5					
	101	272	14,31	6014	1,6					
	118	233	12,24	5838	1,8					
	137	202	10,57	5523	2,0					
	151	184	9,61	5331	2,2					
	174	159	8,33	5055	2,5					
	201	138	7,21	4794	2,7					
	232	119	6,25	4614	3,0					
	271	102	5,35	4355	3,1					
	314	88	4,62	4125	3,2					
	345	80	4,20	3985	3,2					
	398	70	3,64	3783	3,5					
	57	480	25,55	855	0,9	MR273-3E100L/4D	6,26	51	106	IE3
						NR273-3E100L/4D		53		



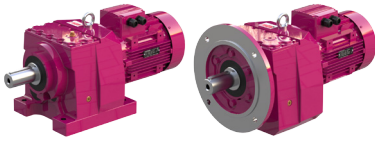
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
3,0 4,0	68	407	21,43	1680	1,1	MR272-3E100L/4D	6,26	50	106	IE3
	79	348	18,33	2254	1,3	NR272-3E100L/4D		52		
	90	306	16,07	2639	1,4					
	102	271	14,21	2932	1,5					
	121	228	11,95	3246	1,7					
	143	194	10,16	3455	1,9					
	167	166	8,71	3591	2,2					
	233	119	6,21	3454	2,8					
	274	101	5,28	3496	2,6					
	320	87	4,53	3357	2,7					
	90	304	16,03	2273	0,8	MR202-3E100L/4D	6,26	50	105	IE3
	98	283	14,86	2529	0,8	NR202-3E100L/4D		52		
	104	265	13,92	2726	0,9					
	119	232	12,18	3069	1,0					
	134	206	10,81	3314	1,0					
	144	192	10,07	3434	1,1					
	173	160	8,40	3671	1,2					
	206	134	7,04	3819	1,4					
	250	111	5,80	3447	1,6					
	286	97	5,08	3527	1,7					
	322	86	4,50	3570	1,7					
	345	80	4,20	3489	1,8					
	414	67	3,50	3255	1,9					
	502	55	5,80	3026	2,5	MR202-3E100L/2C	5,58	48	105	IE3
	573	48	5,08	2879	2,6	NR202-3E100L/2C		50		
	646	43	4,50	2755	2,8					
	693	40	4,20	2684	2,9					
	115	241	12,66	225	0,8	MR172-3E100L/4D	6,26	40	104	IE3
	131	211	11,08	556	0,9	NR172-3E100L/4D		41		
	152	182	9,53	458	0,9					
	162	170	8,94	594	1,0					
	191	145	7,60	887	1,1					
	205	135	7,08	995	1,2					
	220	126	6,60	1088	1,2					
	251	110	5,78	1242	1,2					
	303	91	4,78	1406	1,4					
	355	78	4,09	1364	1,5					
	429	65	3,38	1466	1,7					
	441	63	6,60	1589	2,0	MR172-3E100L/2C	5,58	40	104	IE3
	504	55	5,78	1619	2,2	NR172-3E100L/2C		41		
	609	46	4,78	1640	2,4					
	712	39	4,09	1571	2,6					
4,0 5,5	1,7	19821	842,80	82433	0,9	MR975-3E112M/4D	8,05	1137	131	IE3
	1,9	17678	750,24	97186	1,0	NR975-3E112M/4D		1187		
	2,2	15641	662,54	108230	1,2					
	2,5	13927	588,87	116428	1,3					
	2,7	12913	546,94	120825	1,4					
	2,9	12308	510,11	123313	1,5	MR974-3E112M/4D	8,05	1187	130	IE3
	3,2	11061	457,99	128136	1,6	NR974-3E112M/4D		1237		
	3,7	9428	390,41	133687	1,9					
	4,2	8321	344,17	137316	2,2					
	4,8	7390	305,33	140184	2,4					
	5,4	6596	272,24	142505	2,7					
	6,8	5244	216,03	146207	3,4					



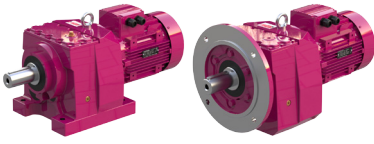
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Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
4,0 5,5	2,8	12536	345,67	75126	1,0	MR874-3E132M/6C	8,52	627	127	IE3
	3,3	10618	292,15	84759	1,2	NR874-3E132M/6C		632		
	3,7	9399	390,74	90037	1,4	MR874-3E112M/4D	8,05	623	127	IE3
	4,2	8329	345,67	94199	1,6	NR874-3E112M/4D		628		
	5,0	7055	292,15	98633	1,8					
	6,1	5792	239,61	102551	2,2					
	7,8	4561	188,08	106097	2,9					
	8,4	4228	174,68	106993	3,1					
	8,8	4078	110,17	107463	3,2	MR873-3E132M/6C	8,52	592	126	IE3
	9,7	3695	99,81	108446	3,5	NR873-3E132M/6C		597		
	4,6	7714	208,82	49983	1,0	MR773-3E132M/6C	8,52	329	123	IE3
	5,4	6614	178,78	53856	1,2	NR773-3E132M/6C		397		
	6,5	5504	148,73	57240	1,5					
	7,3	4929	133,05	58820	1,6					
	8,4	4259	115,06	60524	1,9					
	9,7	3693	99,63	61795	2,2					
	11	3234	87,13	62923	2,5					
	13	2854	76,81	63672	2,8					
	14	2535	68,15	64315	3,2					
	8,3	4310	174,89	26324	1,0	MR673-3E112M/4D	8,05	224	120	IE3
	9,8	3680	149,11	29726	1,2	NR673-3E112M/4D		233		
	12	3064	124,07	32500	1,4					
	13	2733	110,55	33811	1,6					
	16	2283	61,42	35422	1,9	MR673-3E132M/6C	8,52	224	120	IE3
	18	2009	53,99	35379	2,1	NR673-3E132M/6C		232		
	18	1960	52,68	35160	2,2					
	21	1687	45,29	33818	2,5					
	25	1466	39,30	32570	2,9					
	28	1284	34,36	31402	3,3					
	32	1130	30,20	30300	3,7					
	12	2937	118,95	20176	1,0	MR573-3E112M/4D	8,05	149	117	IE3
	15	2486	100,53	22685	1,2	NR573-3E112M/4D		143		
	18	2040	82,45	24752	1,5					
	20	1804	72,81	25715	1,7					
	23	1605	64,72	25814	1,9					
	27	1360	54,74	24800	2,2					
	30	1213	48,74	24094	2,5					
	37	995	39,98	22891	2,9					
	41	880	35,31	22145	3,1					
	47	783	31,38	21445	3,4					
	54	681	27,00	20567	4,0	MR572-3E112M/4D	8,05	142	117	IE3
	63	581	23,02	19657	4,0	NR572-3E112M/4D		136		
	20	1810	73,09	10931	0,9	MR473-3E112M/4D	8,05	122	114	IE3
	23	1580	63,70	14370	1,0	NR473-3E112M/4D		130		
	26	1386	55,82	14143	1,1					
	30	1219	49,05	13884	1,3					
	34	1064	42,75	13575	1,5					
	39	933	37,45	13253	1,7					
	47	772	30,93	12756	2,0					
	57	642	25,67	12247	2,4					



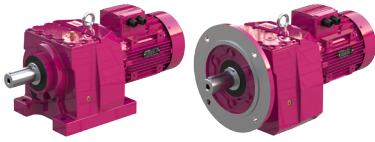
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Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
4,0 5,5	66	559	22,15	11834	2,6	MR472-3E112M/4D	8,05	115	114	IE3
	78	473	18,72	11358	3,1	NR472-3E112M/4D		123		
	85	435	17,25	11126	3,0					
	95	388	15,35	10797	3,2					
	41	874	35,25	5913	0,9	MR373-3E112M/4D	8,05	76	111	IE3
	50	734	29,47	5910	1,0	NR373-3E112M/4D		78		
	58	629	25,27	5863	1,1					
	67	539	21,65	5782	1,2					
	71	520	20,62	6457	1,5	MR372-3E112M/4D	8,05	76	111	IE3
	79	465	18,45	6779	1,6	NR372-3E112M/4D		79		
	90	409	16,20	7066	1,7					
	108	342	13,53	7172	2,0					
	117	315	12,48	6955	2,1					
	135	273	10,80	6586	2,3					
	155	238	9,41	6257	2,5					
	177	209	8,25	5957	2,7					
	213	173	6,84	5605	3,2					
	77	480	19,06	3648	1,0	MR282-3E112M/4D	8,05	69	108	IE3
	86	426	16,91	4081	1,1	NR282-3E112M/4D		71		
	102	361	14,31	4552	1,2					
	119	309	12,24	4872	1,4					
	138	267	10,57	5086	1,5					
	152	243	9,61	5184	1,6					
	175	211	8,33	5133	1,9					
	202	183	7,21	4861	2,0					
	234	158	6,25	4693	2,3					
	273	135	5,35	4422	2,4					
	316	117	4,62	4182	2,4					
	348	107	4,20	4037	2,4					
	401	92	3,64	3827	2,6					
	463	80	3,15	3629	2,8					
	545	68	5,35	3420	3,8	MR282-3E112M/2C NR282-3E112M/2C	7,28	69 70	108	IE3
	77	472	19,00	-	0,9	MR273-3E112M/4D NR273-3E112M/4D	8,05	59 61	106	IE3
	91	405	16,07	914	1,0	MR272-3E112M/4D NR272-3E112M/4D	8,05	59 61	106	IE3
	103	359	14,21	1405	1,1					
	122	302	11,95	1960	1,3					
	144	257	10,16	2361	1,5					
	168	221	8,71	2652	1,6					
	235	157	6,21	2693	2,1					
	276	134	5,28	2848	2,0					
	323	115	4,53	2946	2,0					
	469	79	6,21	2962	3,6	MR272-3E112M/2C NR272-3E112M/2C	7,28	58 60	106	IE3
	552	67	5,28	2788	2,9					
	644	58	4,53	2633	3,1					
	135	273	10,81	1872	0,8	MR202-3E112M/4D NR202-3E112M/4D	8,05	59 61	105	IE3
	145	254	10,07	2088	0,8					
	174	212	8,40	2548	0,9					
	207	178	7,04	2875	1,0					
	252	146	5,80	2520	1,2					



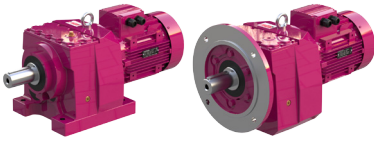
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
4,0 5,5	288	128	5,08	2714	1,2	MR202-3E112M/4D NR202-3E112M/4D	8,05	59	105	IE3
	324	114	4,50	2849	1,3			61		
	348	106	4,20	2912	1,4					
	417	89	3,50	3030	1,4					
	502	73	5,80	3088	1,8	MR202-3E112M/2C NR202-3E112M/2C	7,28	56	105	IE3
	574	64	5,08	2934	1,9			58		
	647	57	4,50	2803	2,1					
	694	53	4,20	2729	2,2					
	221	167	6,60	282	0,9	MR172-3E112M/4D NR172-3E112M/4D	8,05	49	104	IE3
	253	146	5,78	535	0,9			51		
	306	121	4,78	821	1,1					
	357	104	4,09	817	1,2					
	432	86	3,38	1013	1,3					
	441	84	6,60	1180	1,5	MR172-3E112M/2C NR172-3E112M/2C	7,28	47	104	IE3
	505	73	5,78	1262	1,6			49		
	610	61	4,78	1344	1,8					
	713	52	4,09	1295	1,9					
5,5 7,5	2,2	21433	662,54	68481	0,8	MR975-3E132S/4C NR975-3E132S/4C	10,65	1167	131	IE3
	2,5	19084	588,87	87436	0,9			1217		
	2,7	17695	546,94	96484	1,0					
	2,9	16866	510,11	101358	1,1	MR974-3E132S/4C NR974-3E132S/4C	10,65	1217	130	IE3
	3,2	15157	457,99	110131	1,2			1267		
	3,8	12919	390,41	120425	1,4					
	4,3	11402	344,17	126552	1,6					
	4,8	10127	305,33	131221	1,8					
	5,4	9039	272,24	135142	2,0					
	6,8	7186	216,03	140792	2,5					
	7,6	6436	193,13	142959	2,8					
	8,5	5745	172,08	144871	3,1					
	4,2	11413	345,67	80614	1,1	MR874-3E132S/4C NR874-3E132S/4C	10,65	632	127	IE3
	5,0	9667	292,15	88651	1,3			637		
	6,1	7937	239,61	95432	1,6					
	6,9	7020	211,60	98670	1,9					
	7,8	6249	188,08	101138	2,1					
	8,4	5794	174,68	102544	2,2					
	9,9	4908	147,61	105133	2,6					
	12	4188	125,70	107100	3,1					
	6,5	7613	148,73	50526	1,1	MR773-3E132M/6D NR773-3E132M/6D	11,55	329	123	IE3
								397		
	7,0	7051	208,82	52227	1,1	MR773-3E132S/4C NR773-3E132S/4C	10,65	337	123	IE3
	8,2	6045	178,78	55529	1,3			405		
	9,9	5031	148,73	58498	1,6					
	11	4506	133,05	59836	1,8					
	13	3894	115,06	61334	2,1					
	15	3377	99,63	62514	2,4					
	17	2957	87,13	63418	2,7					
	19	2610	76,81	64130	3,1					
	21	2318	68,15	64706	3,5					



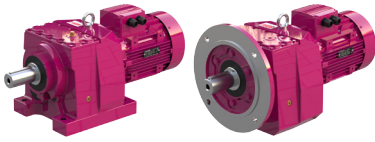
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
5,5 7,5	12	4199	124,07	26896	1,0	MR673-3E132S/4C NR673-3E132S/4C	10,65	248	120	IE3
	13	3745	110,55	29275	1,1			258		
	16	3188	94,17	31883	1,3					
	18	2745	80,96	33692	1,6					
	21	2386	70,26	32677	1,8					
	24	2088	61,42	31668	2,1					
	27	1838	53,99	30693	2,3					
	28	1792	52,68	30506	2,4					
	32	1544	45,29	29360	2,7					
	37	1342	39,30	28291	3,0					
	43	1174	34,36	27288	3,3	MR573-3E132S/4C NR573-3E132S/4C	10,65		117	IE3
	49	1034	30,20	26340	3,6					
	18	2796	82,45	20959	1,1			176		
	20	2472	72,81	22669	1,2			170		
	23	2200	64,72	23984	1,4					
	27	1864	54,74	23571	1,6					
	30	1663	48,74	23000	1,8					
	37	1364	39,98	21994	2,1					
	41	1206	35,31	21352	2,3					
	47	1073	31,38	20741	2,5					
	54	933	27,00	19961	2,9	MR572-3E132S/4C NR572-3E132S/4C	10,65	167	117	IE3
	64	797	23,02	19140	3,3			160		
	54	933	27,00	19961	2,9					
	64	797	23,02	19140	3,3					
	76	663	19,15	18208	3,8					
	86	592	17,07	17634	4,0					
	26	1899	55,82	8412	0,8	MR473-3E132S/4C NR473-3E132S/4C	10,65	143	114	IE3
	30	1670	49,05	12479	0,9			145		
	34	1458	42,75	12351	1,1					
	39	1279	37,45	12181	1,2					
	47	1058	30,93	11870	1,5					
	57	879	25,67	11512	1,8					
	66	766	22,15	11200	1,9	MR472-3E132S/4C NR472-3E132S/4C	10,65	138	114	IE3
	78	648	18,72	10822	2,2			141		
	85	597	17,25	10632	2,2					
	95	532	15,35	10358	2,4					
	108	470	13,56	10060	2,6					
	122	418	12,05	9776	2,8					
	136	374	10,79	9455	2,9					
	154	331	9,53	9162	3,2					
	58	865	25,27	5001	0,8	MR373-3E132S/4C NR373-3E132S/4C	10,65	97	111	IE3
	67	742	21,65	5044	0,9			99		
	71	707	20,64	4882	0,9					
	78	641	18,68	4894	1,0					
	90	562	16,20	4684	1,3	MR372-3E132S/4C NR372-3E132S/4C	10,65	97	111	IE3
	108	470	13,53	5341	1,4			99		
	117	433	12,48	5572	1,5					
	135	375	10,80	5899	1,7					
	155	328	9,41	6122	1,8					
	177	287	8,25	6076	1,9					
	213	238	6,84	5720	2,3					
	245	208	5,97	5429	2,5					
	279	182	5,23	5165	2,8					
	295	173	4,96	5131	2,7					



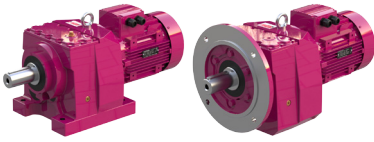
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
5,5 7,5	340	150	4,29	4857	3,0	MR372-3E132S/4C	10,65	97	111	IE3
	390	131	3,74	4612	3,1	NR372-3E132S/4C		99		
	311	163	9,41	4921	2,8	MR372-3E132S/2B	9,90	90	111	IE3
	355	143	8,25	4688	3,1	NR372-3E132S/2B		92		
	428	119	6,84	4410	3,6					
	491	103	5,97	4194	4,0					
	561	91	5,23	3998	4,0					
	591	86	4,96	3956	4,0					
	683	74	4,29	3753	4,0					
	784	65	3,74	3571	4,0					
	102	495	14,31	2350	0,9	MR282-3E132S/4C	10,65	90	108	IE3
	120	424	12,24	2987	1,0	NR282-3E132S/4C		92		
	139	366	10,57	3459	1,1					
	152	333	9,61	3705	1,2					
	176	289	8,33	4003	1,4					
	203	250	7,21	4226	1,5					
	234	217	6,25	3795	1,7					
	274	186	5,35	3989	1,7					
	317	160	4,62	4111	1,7					
	349	146	4,20	4128	1,8					
	403	126	3,64	3906	1,9					
	465	110	3,15	3698	2,0					
	551	92	5,35	3466	2,8	MR282-3E132S/2B	9,90	84	108	IE3
	638	80	4,62	3281	2,9	NR282-3E132S/2B		86		
	701	72	4,20	3168	2,9					
	123	414	11,95	-	0,9	MR272-3E132S/4C	10,65	81	106	IE3
	144	352	10,16	708	1,1	NR272-3E132S/4C		83		
	168	302	8,71	1236	1,2					
	236	216	6,21	1548	1,5					
	277	184	5,28	1874	1,4					
	324	157	4,53	2112	1,5					
	397	128	3,69	2087	1,6					
	464	110	3,16	2238	1,8					
	474	107	6,21	2467	2,6	MR272-3E132S/2B	9,90	75	106	IE3
	557	91	5,28	2539	2,1	NR272-3E132S/2B		79		
	651	78	4,53	2576	2,3					
7,5 10	3,2	20669	457,99	76047	0,9	MR974-3E132M/4D	14,40	1168	131	IE3
	3,8	17616	390,41	97327	1,0	NR974-3E132M/4D		1218		
	4,3	15549	344,17	108424	1,2					
	4,8	13809	305,33	116736	1,3					
	5,2	12983	186,95	120420	1,4	MR973-3E160M/6	15,00	1115	129	IE3
	5,8	11592	166,73	126036	1,6	NR973-3E160M/6		1165		
	6,5	10442	150,02	130315	1,7					
	7,3	9237	132,83	134478	1,9					
	8,4	8091	116,17	138161	2,2					
	9,5	7161	102,69	140965	2,5					
	11	6392	91,56	142982	2,8					
	12	5745	82,20	144783	3,1					
	5,0	13182	292,15	71383	1,0	MR874-3E132M/4D	14,40	628	127	IE3
	6,1	10823	239,61	83659	1,2	NR874-3E132M/4D		633		



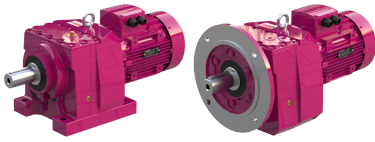
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n_2 [r.p.m]	M_2 [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
7,5 10	6,9	9573	211,60	89182	1,4	MR874-3E132M/4D	14,40	628	127	IE3
	7,8	8522	188,08	93365	1,5	NR874-3E132M/4D		633		
	8,4	7901	174,68	95659	1,6					
	8,8	7631	110,17	96658	1,7	MR873-3E160M/6	15,00	635	126	IE3
	9,7	6913	99,81	99100	1,9	NR873-3E160M/6		640		
	11	5992	86,51	102028	2,2					
	13	5230	75,51	104284	2,5					
	15	4487	64,77	106230	2,9					
	17	3916	56,54	107756	3,3					
	8,2	8246	178,78	47910	1,0	MR773-3E132M/4D	14,40	357	123	IE3
	9,9	6863	148,73	52957	1,2	NR773-3E132M/4D		443		
	11	6146	133,05	55281	1,3					
	13	5311	115,06	57788	1,5					
	15	4606	99,63	59702	1,7					
	17	4034	87,13	61034	2,0					
	19	3561	76,81	62131	2,2					
	21	3162	68,15	63005	2,5					
	16	4349	94,17	26093	1,0	MR673-3E132M/4D	14,40	246	120	IE3
	18	3744	80,96	29344	1,1	NR673-3E132M/4D		257		
	21	3254	70,26	30780	1,3					
	24	2848	61,42	30006	1,5					
	27	2507	53,99	29229	1,7					
	28	2445	52,68	29077	1,8					
	32	2106	45,29	28127	2,0					
	37	1830	39,30	27218	2,2					
	43	1602	34,36	26347	2,4					
	49	1410	30,20	25510	2,6					
	63	1094	23,18	23803	3,4	MR672-3E132M/4D	14,40	241	120	IE3
	71	980	20,74	23095	3,7	NR672-3E132M/4D		251		
	23	3001	64,72	19779	1,0	MR573-3E132M/4D	14,40	180	117	IE3
	27	2542	54,74	21922	1,2	NR573-3E132M/4D		173		
	30	2268	48,74	21529	1,3					
	37	1860	39,98	20784	1,5					
	41	1645	35,31	20281	1,7					
	47	1464	31,38	19787	1,8					
	54	1273	27,00	19138	2,2	MR572-3E132M/4D	14,40	173	117	IE3
	64	1087	23,02	18436	2,4	NR572-3E132M/4D		166		
	76	905	19,15	17620	2,8					
	86	807	17,07	17108	3,0					
	101	687	14,54	16401	3,5					
	117	591	12,50	15743	3,9					
	39	1744	37,45	10751	0,9	MR473-3E132M/4D	14,40	150	114	IE3
	47	1443	30,93	10687	1,1	NR473-3E132M/4D		153		
	57	1200	25,67	10528	1,3					
	66	1045	22,15	10350	1,4	MR472-3E132M/4D	14,40	143	114	IE3
	78	884	18,72	10102	1,6	NR472-3E132M/4D		146		
	85	814	17,25	9968	1,6					
	95	726	15,35	9766	1,7					
	108	641	13,56	9537	1,9					
	122	571	12,05	9310	2,0					
	136	510	10,79	9017	2,2					



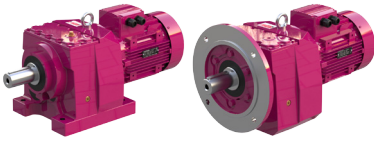
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
7,5 10	154	451	9,53	8774	2,3	MR472-3E132M/4D	14,40	143	114	IE3
	173	401	8,47	8540	2,6	NR472-3E132M/4D		146		
	186	372	7,87	8391	2,7					
	220	315	6,65	8051	3,1					
	90	764	16,20	1533	0,9	MR372-3E132M/4D	14,40	104	111	IE3
	108	639	13,53	2708	1,0	NR372-3E132M/4D		106		
	117	589	12,48	3143	1,1					
	136	510	10,80	3795	1,2					
	156	445	9,41	4287	1,3					
	178	391	8,25	4659	1,4					
	214	324	6,84	4633	1,7					
	246	283	5,97	4879	1,9					
	280	248	5,23	5050	2,1					
	313	222	9,41	5002	2,1	MR372-3E132S/2C	13,20	93	111	IE3
	357	194	8,25	4759	2,3	NR372-3E132S/2C		95		
	430	161	6,84	4479	2,7					
	494	141	5,97	4254	3,0					
	563	123	5,23	4050	3,2					
	594	117	4,96	4018	3,2					
	686	101	4,29	3806	3,5					
	788	88	3,74	3617	3,7					
	139	500	10,57	1307	0,8	MR282-3E132M/4D	14,40	96	108	IE3
	152	455	9,61	1746	0,9	NR282-3E132M/4D		98		
	176	394	8,33	2305	1,0					
	203	341	7,21	2755	1,1					
	234	296	6,25	2308	1,2					
	274	253	5,35	2715	1,3					
	317	219	4,62	3012	1,3					
	349	199	4,20	3163	1,3					
	403	172	3,64	3342	1,4					
	465	150	3,15	3469	1,5					
	551	126	5,35	3542	2,1	MR282-3E132S/2C	13,20	95	108	IE3
	638	109	4,62	3347	2,1	NR282-3E132S/2C		97		
	701	99	4,20	3229	2,1					
	144	481	10,16	-	0,8	MR272-3E132M/4D	14,40	87	106	IE3
	168	412	8,71	-	0,9	NR272-3E132M/4D		89		
	236	294	6,21	-	1,1					
	277	250	5,28	586	1,1					
	324	215	4,53	1008	1,1					
	397	175	3,69	1097	1,2					
	464	150	3,16	1389	1,3					
	474	146	6,21	1710	1,9	MR272-3E132S/2C	13,20	86	106	IE3
	557	125	5,28	1896	1,6	NR272-3E132S/2C		88		
	651	107	4,53	2025	1,7					
11 15	5,2	19053	186,95	88052	0,9	MR973-3E160L/6E	21,50	1151	129	IE3
	5,8	17012	166,73	100656	1,1	NR973-3E160L/6E		1201		
	7,3	13556	132,83	117951	1,3					
	7,8	12682	186,95	121960	1,4	MR973-3E160M/4C	21,00	1124	129	IE3
	8,8	11324	166,73	127289	1,6	NR973-3E160M/4C		1174		
	9,8	10201	150,02	131366	1,8					
	11	9025	132,83	135325	2,0					



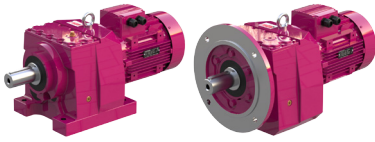
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
11 15	13	7906	116,17	138864	2,3	MR973-3E160M/4C	21,00	1124	129	IE3
	14	6998	102,69	141553	2,6	NR973-3E160M/4C		1174		
	16	6247	91,56	143669	2,9					
	18	5615	82,20	145376	3,2					
	8,8	11192	110,17	81975	1,2	MR873-3E160L/6E	21,50	670	126	IE3
	9,7	10140	99,81	86825	1,3	NR873-3E160L/6E		675		
	11	8788	86,51	92391	1,5					
	13	7426	110,17	97507	1,8	MR873-3E160M/4C	21,00	661	126	IE3
	15	6727	99,81	99712	1,9	NR873-3E160M/4C		666		
	17	5831	86,51	102735	2,2					
	19	5090	75,51	104765	2,6					
	23	4366	64,77	106745	3,0					
	26	3811	56,54	108184	3,4					
	28	3563	52,86	108779	3,6					
	11	9017	133,05	44711	0,9	MR773-3E160M/4C	21,00	429	123	IE3
	13	7792	115,06	49800	1,0	NR773-3E160M/4C		521		
	15	6757	99,63	53467	1,2					
	17	5918	87,13	56099	1,4					
	19	5223	76,81	58078	1,5					
	21	4639	68,15	59610	1,7					
	24	4141	60,76	60845	1,9					
	25	3990	58,59	61203	2,0					
	29	3461	50,75	62406	2,3					
	33	3016	44,17	63359	2,7					
	37	2692	39,33	64020	3,0					
	42	2391	34,89	64611	3,3					
	47	2135	31,11	65098	3,7					
	49	2057	30,00	65243	3,9					
	24	4179	61,42	27133	1,0	MR673-3E160M/4C	21,00	298	120	IE3
	27	3678	53,99	26699	1,2	NR673-3E160M/4C		311		
	28	3587	52,68	26608	1,2					
	32	3089	45,29	26002	1,3					
	37	2685	39,30	25370	1,5					
	43	2350	34,36	24729	1,6					
	49	2069	30,20	24085	1,8					
	55	1829	26,66	23442	1,9					
	63	1605	23,18	22704	2,3	MR672-3E160M/4C	21,00	296	120	IE3
	71	1437	20,74	22110	2,5	NR672-3E160M/4C		306		
	82	1242	17,93	21331	2,8					
	94	1077	15,53	20560	3,1					
	108	943	13,58	19847	3,4					
	122	832	11,97	19184	3,8					
	37	2729	39,98	18691	1,0	MR573-3E160M/4C	21,00	229	117	IE3
	41	2414	35,31	18431	1,1	NR573-3E160M/4C		221		
	47	2148	31,38	18140	1,2					
	55	1820	26,54	17668	1,4					
	64	1595	23,02	17224	1,7	MR572-3E160M/4C	21,00	226	117	IE3
	76	1328	19,15	16608	1,9	NR572-3E160M/4C		218		
	86	1184	17,07	16205	2,1					
	101	1008	14,54	15630	2,4					
	117	868	12,50	15078	2,7					
	135	754	10,85	14558	3,0					
	155	660	9,48	14065	3,3					



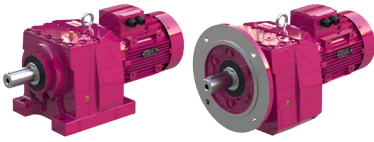
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
11 15	176	581	8,34	13596	3,7	MR572-3E160M/4C	21,00	226	117	IE3
	198	516	7,41	13081	4,0	NR572-3E160M/4C		218		
	67	1489	21,74	8663	1,0	MR473-3E160M/4C	21,00	198	114	IE3
	81	1238	18,04	8662	1,3	NR473-3E160M/4C		200		
	85	1195	17,25	8819	1,1	MR472-3E160M/4C	21,00	196	114	IE3
	95	1065	15,35	8741	1,2	NR472-3E160M/4C		198		
	108	941	13,56	8631	1,3					
	122	837	12,05	8504	1,4					
	136	749	10,79	8261	1,5					
	154	662	9,53	8105	1,6					
	173	589	8,47	7944	1,7					
	186	546	7,87	7838	1,9					
	220	462	6,65	7582	2,1					
	259	394	5,66	7327	2,3					
	300	341	4,89	6966	2,3					
	323	316	4,54	6853	2,2					
	382	267	3,83	6589	2,4					
	449	228	3,27	6404	2,6					
	136,1	746	10,80	773	0,8	MR372-3E160M/4C	21,00	139	111	IE3
	156,2	651	9,41	1707	0,9	NR372-3E160M/4C		141		
	178,3	571	8,25	2447	1,0					
	214,8	474	6,84	2670	1,2					
	246,4	414	5,97	3214	1,3					
	281,3	363	5,23	3633	1,4					
	296,5	344	4,96	3069	1,4					
	342,6	298	4,29	3490	1,5					
	393,1	260	3,74	3801	1,6					
	448,7	228	3,28	4030	1,7					
15 20	402,6	253	3,64	1865	0,9	MR282-3E160M/4C	21,00	131	108	IE3
	465,0	219	3,15	2195	1,0	NR282-3E160M/4C		133		
	7,3	18431	132,83	92255	1,0	MR973-3E180L/6E	29,00	1227	129	IE3
						NR973-3E180L/6E		1277		
	7,8	17297	186,95	99559	1,0	MR973-3E160L/4E	29,00	1160	129	IE3
	8,8	15445	166,73	109734	1,2	NR973-3E160L/4E		1210		
	9,8	13913	150,02	116899	1,3					
	11	12309	132,83	123637	1,5					
	13	10782	116,17	129424	1,7					
	14	9544	102,69	133728	1,9					
	16	8520	91,56	136978	2,1					
	18	7658	82,20	139612	2,4					
	21	6530	70,07	142944	2,8					
	24	5764	61,77	145030	3,1					
	27	5120	54,80	146712	3,5					
	8,9	15215	110,17	57310	0,9	MR873-3E180L/6E	29,00	695	126	IE3
	9,8	13784	99,81	67627	0,9	NR873-3E180L/6E		700		
	11	11947	86,51	78415	1,1					
	13	10429	75,51	85637	1,2					
	13	10126	110,17	87265	1,3	MR873-3E160L/4E	29,00	635	126	IE3
	15	9174	99,81	91189	1,4	NR873-3E160L/4E		640		
	17	7951	86,51	95767	1,6					
	19	6941	75,51	99209	1,9					



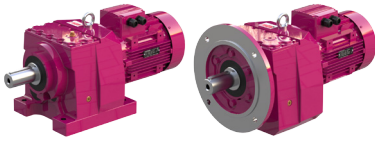
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
15 20	23	5954	64,77	102335	2,2	MR873-3E160L/4E	29,00	635	126	IE3
	26	5197	56,54	104512	2,5	NR873-3E160L/4E		640		
	28	4858	52,86	105493	2,7					
	32	4239	46,12	107118	3,1					
	36	3727	40,55	108429	3,5					
	15	9216	99,63	43792	0,9	MR773-3E160L/4E	29,00	426	123	IE3
	17	8071	87,13	48824	1,0	NR773-3E160L/4E		510		
	19	7124	76,81	52306	1,1					
	21	6327	68,15	54916	1,3					
	24	5648	60,76	56964	1,4					
	25	5441	58,59	57526	1,5					
	29	4720	50,75	59383	1,7					
	33	4113	44,17	60911	1,9					
	37	3672	39,33	61963	2,2					
	42	3262	34,89	62863	2,5					
	47	2912	31,11	63595	2,7					
	49	2805	30,00	63811	2,9					
	56	2434	25,99	64545	3,3					
	65	2121	22,62	65137	3,8					
	68	2022	21,40	65319	4,0	MR772-3E160L/4E NR772-3E160L/4E	29,00	396 480	123	IE3
	32	4213	45,29	23597	1,0	MR673-3E160L/4E	29,00	325	120	IE3
	37	3662	39,30	23284	1,1	NR673-3E160L/4E		337		
	43	3206	34,36	22905	1,2					
	49	2822	30,20	22481	1,3					
	55	2494	26,66	22027	1,4					
	63	2189	23,18	21474	1,7	MR672-3E160L/4E	29,00	320	120	IE3
	71	1961	20,74	21009	1,8	NR672-3E160L/4E		332		
	82	1694	17,93	20379	2,0					
	94	1469	15,53	19736	2,3					
	108	1286	13,58	19126	2,5					
	122	1135	11,97	18548	2,8					
	138	1008	10,62	17998	3,1					
	155	900	9,47	17473	3,4					
	160	867	9,13	17307	3,5					
	185	751	7,91	16656	3,9					
	47	2929	31,38	16274	0,9	MR573-3E160L/4E	29,00	271	117	IE3
	55	2482	26,54	16090	1,0	NR573-3E160L/4E		262		
	64	2175	23,02	15855	1,2	MR572-3E160L/4E	29,00	265	117	IE3
	76	1811	19,15	15470	1,4	NR572-3E160L/4E		257		
	86	1615	17,07	15190	1,5					
	101	1375	14,54	14765	1,7					
	117	1183	12,50	14335	2,0					
	135	1028	10,85	13913	2,2					
	155	900	9,48	13501	2,4					
	176	792	8,34	13101	2,7					
	198	704	7,41	12607	3,1					
	228	612	6,43	12178	3,4					
	260	535	5,63	11771	3,7					
	296	471	4,95	11383	4,0					
	336	416	4,37	11010	4,0					
	81	1688	18,04	7230	0,9	MR473-3E160L/4E NR473-3E160L/4E	29,00	222 225	114	IE3



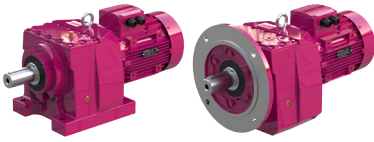
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Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P _g [kW] P _g [HP]	n ₂ [r.p.m]	M ₂ [Nm]	i	F _{qam} [N]	f _s		[A]	[kg]		
15 20	85	1629	17,25	7511	0,8	MR472-3E160L/4E NR472-3E160L/4E	29,00	220	114	IE3
	95	1452	15,35	7577	0,9			223		
	108	1284	13,56	7603	0,9					
	122	1142	12,05	7590	1,0					
	136	1021	10,79	7404	1,1					
	154	903	9,53	7349	1,2					
	173	803	8,47	7272	1,3					
	186	745	7,87	7213	1,4					
	220	630	6,65	7055	1,6					
	259	537	5,66	6877	1,7					
	300	465	4,89	6535	1,7					
	323	431	4,54	6452	1,6					
	382	365	3,83	6250	1,8					
	449	311	3,27	6047	1,9					
	246,4	564	5,97	700	0,9	MR372-3E160L/4E NR372-3E160L/4E	29,00	147	111	IE3
	281,3	495	5,23	1431	1,0			149		
	296,5	469	4,96	720	1,0					
	342,6	406	4,29	1457	1,1					
	393,1	355	3,74	2030	1,2					
	448,7	311	3,28	2478	1,2					
18,5 25	8,8	18921	166,73	89083	1,0	MR973-3E180M/4C NR973-3E180M/4C	34,50	1187	129	IE3
	9,8	17045	150,02	100675	1,1			1237		
	11	15079	132,83	111022	1,2					
	13	13209	116,17	119563	1,4					
	14	11692	102,69	125735	1,5					
	16	10437	91,56	130404	1,7					
	18	9382	82,20	134057	1,9					
	21	8000	70,07	138616	2,3					
	24	7062	61,77	141298	2,5					
	27	6272	54,80	143539	2,9					
	35	4852	42,30	147309	3,7					
	13	12836	75,51	73297	1,0	MR873-3E200L/6C NR873-3E200L/6C	36,40	725	126	IE3
	15	11010	64,77	82825	1,2			730		
	17	9740	86,51	88619	1,3	MR873-3E180M/4C NR873-3E180M/4C	34,50	687	126	IE3
	20	8502	75,51	93547	1,5			692		
	23	7293	64,77	97873	1,8					
	26	6366	56,54	100811	2,0					
	28	5951	52,86	102270	2,2					
	32	5192	46,12	104425	2,5					
	36	4565	40,55	106169	2,8					
	19	8727	76,81	45867	0,9	MR773-3E180M/4C NR773-3E180M/4C	34,50	450	123	IE3
	22	7751	68,15	49852	1,0			542		
	24	6919	60,76	52845	1,2					
	25	6666	58,59	53691	1,2					
	29	5782	50,75	56440	1,4					
	33	5039	44,17	58529	1,6					
	38	4498	39,33	59872	1,8					
	42	3996	34,89	61193	2,0					
	47	3567	31,11	62143	2,2					
	49	3437	30,00	62433	2,3					
	57	2981	25,99	63409	2,7					
	65	2598	22,62	64190	3,1					
	69	2477	21,40	64428	3,2	MR772-3E180M/4C NR772-3E180M/4C	34,50	445	123	IE3
	79	2160	18,63	65037	3,7			537		



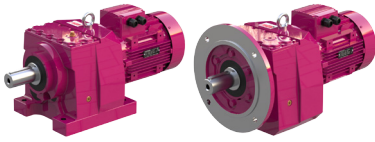
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Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
18,5 25	38	4486	39,30	21455	0,9	MR673-3E180M/4C	34,50	341	120	IE3
	43	3927	34,36	21304	1,0	NR673-3E180M/4C		355		
	49	3457	30,20	21071	1,1					
	55	3056	26,66	20779	1,2					
	64	2682	23,18	20387	1,4	MR672-3E180M/4C	34,50	338	120	IE3
	71	2402	20,74	20035	1,5	NR672-3E180M/4C		349		
	82	2075	17,93	19534	1,7					
	95	1799	15,53	19001	1,9					
	109	1576	13,58	18482	2,1					
	123	1391	11,97	17978	2,3					
	139	1235	10,62	17491	2,5					
	156	1102	9,47	17019	2,7					
	162	1062	9,13	16868	2,8					
	186	921	7,91	16274	3,2					
	214	802	6,88	15701	3,6					
	257	668	5,73	14781	4,0					
	77	2218	19,15	14469	1,1	MR572-3E180M/4C	34,50	289	117	IE3
	86	1979	17,07	14297	1,2	NR572-3E180M/4C		277		
	101	1684	14,54	14002	1,4					
	118	1450	12,50	13677	1,6					
	136	1260	10,85	13341	1,8					
	156	1103	9,48	12999	2,0					
	177	970	8,34	12658	2,2					
	199	862	7,41	12183	2,5					
	229	749	6,43	11809	2,8					
	262	656	5,63	11447	3,0					
	298	577	4,95	11096	3,3					
	338	510	4,37	10756	3,6					
	109	1573	13,56	6706	0,8	MR472-3E180M/4C	34,50	269	114	IE3
	122	1399	12,05	6792	0,8	NR472-3E180M/4C		272		
	137	1251	10,79	6656	0,9					
	155	1106	9,53	6687	0,9					
	174	984	8,47	6683	1,0					
	188	912	7,87	6666	1,1					
	222	772	6,65	6591	1,3					
	261	658	5,66	6481	1,4					
	302	570	4,89	6155	1,4					
	325	528	4,54	6098	1,3					
	385	447	3,83	5951	1,5					
	452	381	3,27	5791	1,5					
22 30	11	17994	132,83	95428	1,0	MR973-3E180L/4D	42,50	1212	129	IE3
	13	15763	116,17	107874	1,1	NR973-3E180L/4D		1262		
	14	13953	102,69	116512	1,3					
	16	12455	91,56	122880	1,4					
	18	11195	82,20	127771	1,6					
	21	9546	70,07	133612	1,9					
	24	8427	61,77	137204	2,1					
	27	7485	54,80	140128	2,4					
	35	5790	42,30	144908	3,1					
	39	5112	37,29	146689	3,5					
	13	15249	75,51	56641	0,9	MR873-3E200L/6D	43,00	740	126	IE3
	15	13080	64,77	71797	1,0	NR873-3E200L/6D		745		
	17	11622	86,51	80155	1,1	MR873-3E180L/4D	42,50	687	126	IE3
	19	10145	75,51	87034	1,3	NR873-3E180L/4D		692		
	23	8702	64,77	92898	1,5					



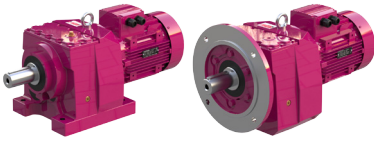
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n₂ [r.p.m]	M₂ [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
22 30	26	7596	56,54	96919	1,7	MR873-3E180L/4D	42,50	687	126	IE3
	28	7101	52,86	98601	1,8	NR873-3E180L/4D		692		
	32	6196	46,12	101504	2,1					
	36	5447	40,55	103743	2,4					
	24	8256	60,76	47975	1,0	MR773-3E180L/4D	42,50	489	123	IE3
	25	7955	58,59	49172	1,0	NR773-3E180L/4D		587		
	29	6900	50,75	52987	1,2					
	33	6013	44,17	55813	1,3					
	37	5368	39,33	57678	1,5					
	42	4768	34,89	59285	1,7					
	47	4257	31,11	60614	1,9					
	49	4101	30,00	61022	2,0					
	57	3558	25,99	62191	2,2					
	65	3101	22,62	63181	2,6					
	69	2956	21,40	63482	2,7	MR772-3E180L/4D	42,50	457	123	IE3
	79	2577	18,63	64248	3,1	NR772-3E180L/4D		557		
	90	2270	16,39	65386	3,4					
	101	2015	14,54	66349	3,7					
	49	4125	30,20	19673	0,9	MR673-3E180L/4D	42,50	370	120	IE3
	55	3647	26,66	19544	1,0	NR673-3E180L/4D		384		
	63	3201	23,18	19314	1,1	MR672-3E180L/4D	42,50	345	120	IE3
	71	2866	20,74	19075	1,2	NR672-3E180L/4D		349		
	82	2476	17,93	18704	1,4					
	95	2147	15,53	18283	1,6					
	108	1881	13,58	17853	1,7					
	123	1660	11,97	17424	1,9					
	138	1474	10,62	16999	2,1					
	155	1315	9,47	16580	2,3					
	161	1267	9,13	16446	2,4					
	186	1099	7,91	15908	2,7					
	214	957	6,88	15383	3,0					
	257	798	5,73	14484	4,0					
	289	708	5,08	14055	4,0					
	324	632	4,53	13645	4,0					
	336	609	4,37	13516	4,0					
	388	528	3,79	13008	4,0					
	77	2647	19,15	13476	1,0	MR572-3E180L/4D	42,50	311	117	IE3
	86	2361	17,07	13412	1,0	NR572-3E180L/4D		298		
	101	2010	14,54	13249	1,2					
	118	1730	12,50	13029	1,3					
	136	1503	10,85	12778	1,5					
	155	1316	9,48	12508	1,7					
	176	1158	8,34	12226	1,9					
	198	1029	7,41	11769	2,1					
	228	894	6,43	11450	2,3					
	261	783	5,63	11133	2,5					
	297	689	4,95	10820	2,8					
	337	609	4,37	10513	3,0					
	154	1320	9,53	6027	0,8	MR472-3E180L/4D	42,50	269	114	IE3
	174	1174	8,47	6096	0,9	NR472-3E180L/4D		271		
	187	1089	7,87	6121	0,9					
	221	922	6,65	6131	1,1					
	260	786	5,66	6089	1,2					
	301	680	4,89	5778	1,2					
	324	630	4,54	5749	1,1					



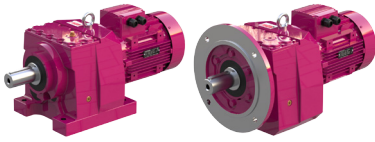
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
22 30	383 450	533 455	3,83 3,27	5655 5539	1,2 1,3	MR472-3E180L/4D NR472-3E180L/4D	42,50	269 271	114	IE3
30 40	14	18963	102,69	88796	0,9	MR973-3E200L/4D NR973-3E200L/4D	55,00	1271 1321	129	IE3
	16	16928	91,56	101334	1,1					
	18	15216	82,20	110352	1,2					
	21	12975	70,07	120559	1,4					
	24	11453	61,77	126654	1,6					
	27	10173	54,80	131340	1,8					
	30	9081	48,86	135053	2,0					
	35	7870	42,30	138982	2,3					
	40	6948	37,29	141629	2,6					
	45	6172	33,08	143817	2,9					
	50	5509	29,49	145605	3,3					
	20	13787	75,51	67641	0,9	MR873-3E200L/4D NR873-3E200L/4D	55,00	777 782	126	IE3
	23	11826	64,77	78916	1,1					
	26	10323	56,54	86098	1,3					
	28	9651	52,86	88992	1,3					
	32	8420	46,12	93855	1,5					
	36	7403	40,55	97498	1,8					
	43	6305	34,53	101037	2,1					
	49	5543	30,36	103477	2,3					
	54	5002	27,39	104965	2,6					
	62	4359	23,87	106724	3,0					
	73	3702	20,28	107951	3,5	MR773-3E200L/4D NR773-3E200L/4D	55,00	528 631	123	IE3
	83	3255	17,83	105255	4,0					
	92	2937	16,09	103054	4,0					
	105	2559	14,02	100062	4,0					
	38	7296	39,33	51530	1,1					
	42	6481	34,89	54292	1,2					
	47	5785	31,11	56432	1,4					
	49	5574	30,00	57045	1,4					
	57	4836	25,99	58976	1,7					
	65	4214	22,62	60692	1,9					
	69	4018	21,40	61103	2,0	MR772-3E200L/4D NR772-3E200L/4D	55,00	496 601	123	IE3
	79	3503	18,63	62280	2,3					
	90	3085	16,39	63789	2,5					
	101	2739	14,54	65036	2,7					
	114	2449	12,98	66035	2,9					
	127	2200	11,65	66899	3,1					
	134	2076	11,00	67301	3,3					
	153	1817	9,62	68157	3,6					
	82	3366	17,93	16806	1,0	MR672-3E200L/4D NR672-3E200L/4D	55,00	417 411	120	IE3
	95	2919	15,53	16639	1,1					
	109	2556	13,58	16416	1,3					
	123	2256	11,97	16157	1,4					
	139	2003	10,62	15875	1,5					
	156	1788	9,47	15578	1,7					
	162	1722	9,13	15479	1,7					
	186	1493	7,91	15071	2,0					
	214	1301	6,88	14654	2,2					
	257	1084	5,73	13804	2,9					
	290	963	5,08	13452	3,0					
	325	859	4,53	13107	3,1					
	338	828	4,37	12997	3,2					
	390	718	3,79	12559	3,3					
	448	625	3,29	12133	3,4					



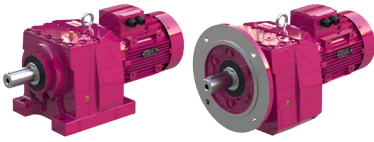
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n_2 [r.p.m]	M_2 [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
30 40	101	2731	14,54	11526	0,9	MR572-3E200L/4D	55,00	335	117	IE3
	118	2352	12,50	11548	1,0	NR572-3E200L/4D		322		
	136	2043	10,85	11493	1,1					
	156	1788	9,48	11384	1,2					
	177	1574	8,34	11238	1,4					
	199	1399	7,41	10823	1,6					
	229	1216	6,43	10629	1,7					
	262	1064	5,63	10415	1,9					
	298	936	4,95	10190	2,0					
	338	827	4,37	9956	2,2					
37 50	18	18729	82,20	90116	1,0	MR973-3E225S/4C	65,70	1295	129	IE3
	21	15970	70,07	106356	1,1	NR973-3E225S/4C		1345		
	24	14098	61,77	115513	1,3					
	27	12522	54,80	122331	1,4					
	30	11178	48,86	127606	1,6					
	35	9687	42,30	132957	1,9					
	40	8552	37,29	136744	2,1					
	45	7597	33,08	139875	2,4					
	50	6781	29,49	142067	2,7					
	57	5981	26,03	144306	3,0					
	64	5281	22,95	146178	3,4					
	32	10364	46,12	85826	1,3	MR873-3E225S/4C	65,70	855	126	IE3
	36	9112	40,55	91113	1,4	NR873-3E225S/4C		860		
	43	7760	34,53	96200	1,7					
	49	6823	30,36	99396	1,9					
	54	6156	27,39	101500	2,1					
	62	5365	23,87	104015	2,4					
	73	4556	20,28	104029	2,9					
	83	4006	17,83	101807	3,2					
	92	3615	16,09	99942	3,6					
	105	3150	14,02	97350	4,0					
	111	2989	13,30	102064	4,0					
	42	7977	34,89	48915	1,0	MR773-3E225S/4C	65,70	619	123	IE3
	48	7121	31,11	52098	1,1	NR773-3E225S/4C		730		
	49	6861	30,00	52994	1,2					
	57	5952	25,99	55899	1,3					
	65	5187	22,62	58099	1,5					
	76	4476	19,52	60422	1,7					
	85	3996	17,40	62238	1,9					
	102	3372	14,54	63785	2,2	MR772-3E225S/4C	65,70	610	123	IE3
	114	3014	12,98	65037	2,4	NR772-3E225S/4C		720		
	127	2709	11,65	66028	2,5					
	134	2555	11,00	66517	2,6					
	154	2236	9,62	67520	2,9					
	175	1968	8,46	66564	3,2					
	204	1692	7,26	63620	2,8					
	227	1520	6,52	61453	3,0					
	123	2777	11,97	15049	1,1	MR672-3E225S/4C	65,70	495	120	IE3
	139	2466	10,62	14892	1,3	NR672-3E225S/4C		511		
	156	2200	9,47	14701	1,4					
	162	2120	9,13	14634	1,4					
	187	1838	7,91	14339	1,6					
	215	1602	6,88	14017	1,8					
	258	1334	5,73	13209	2,4					
	291	1185	5,08	12924	2,5					
	326	1058	4,53	12637	2,6					
	338	1019	4,37	12543	2,6					



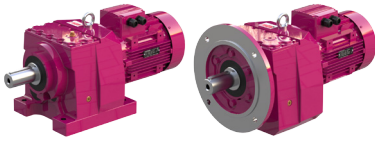
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
37 50	390 449	883 769	3,79 3,29	12166 11791	2,7 2,8	MR672-3E225S/4C NR672-3E225S/4C	65,70	495 511	120	IE3
45 60	24	17159	61,77	99890	1,0	MR973-3E225M/4D	80,00	1264	129	IE3
	27	15241	54,80	110125	1,2	NR973-3E225M/4D		1314		
	30	13605	48,86	117766	1,3					
	35	11790	42,30	125294	1,5					
	40	10409	37,29	130457	1,7					
	45	9246	33,08	134468	1,9					
	50	8254	29,49	137659	2,2					
	57	7280	26,03	140631	2,5					
	64	6427	22,95	143083	2,8					
	73	5709	20,36	144221	3,2					
	81	5097	18,15	140115	3,5					
	32	12613	46,12	74597	1,0	MR873-3E225M/4D	80,00	875	126	IE3
	36	11090	40,55	82498	1,2	NR873-3E225M/4D		879		
	43	9444	34,53	89792	1,4					
	49	8304	30,36	94247	1,6					
	54	7492	27,39	97155	1,7					
	62	6529	23,87	100203	2,0					
	73	5545	20,28	99546	2,3					
	83	4876	17,83	97866	2,7					
	92	4399	16,09	96386	3,0					
	105	3834	14,02	94251	3,4					
	111	3637	13,30	100362	3,6					
	127	3170	11,59	97147	4,0					
	146	2818	10,09	95212	4,0	MR872-3E225M/4D	80,00	871	126	IE3
	167	2477	8,87	92101	4,0	NR872-3E225M/4D		875		
	196	2110	7,55	83381	4,0					
	222	1855	6,64	81001	4,0					
	246	1674	5,99	79097	4,0					
	283	1459	5,22	76555	4,0					
	298	1384	4,95	78185	4,0					
	342	1206	4,32	75338	4,0					
	57	7245	25,99	51679	1,1	MR773-3E225M/4D	80,00	631	123	IE3
	65	6314	22,62	54798	1,3	NR773-3E225M/4D		741		
	76	5448	19,52	57912	1,4					
	85	4864	17,40	60147	1,5					
	102	4104	14,54	62270	1,8	MR772-3E225M/4D	80,00	621	123	IE3
	114	3668	12,98	63756	1,9	NR772-3E225M/4D		731		
	127	3297	11,65	64959	2,1					
	134	3110	11,00	65547	2,2					
	154	2722	9,62	66742	2,4					
	175	2395	8,46	66950	2,6					
	203	2059	7,26	64002	2,3					
	227	1850	6,52	61796	2,4					
	240	1746	6,15	60656	2,5					
	123	3379	11,97	13782	0,9	MR672-3E225M/4D	80,00	511	120	IE3
	139	3001	10,62	13768	1,0	NR672-3E225M/4D		526		
	156	2678	9,47	13699	1,1					
	162	2580	9,13	13668	1,2					
	187	2238	7,91	13502	1,3					
	215	1949	6,88	13289	1,5					
	258	1624	5,73	12529	2,0					
	291	1442	5,08	12321	2,0					
	326	1287	4,53	12099	2,1					



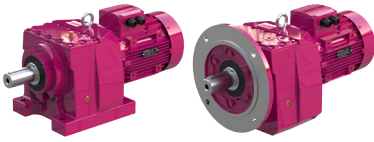
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung	Abtriebswelle Drehzahlen	Abtriebswelle Drehmomente	Übersetzung	Zul.Querkräfte (Abtrieb)	Betriebsfaktor	Typ	Nennstrom	Gewicht	Maße Seite	Motor Effizienz-klasse
P_g [kW] P_g [HP]	n₂ [r.p.m]	M₂ [Nm]	i	F_{qam} [N]	f_s		[A]	[kg]		
45 60	338 390 448	1240 1075 937	4,37 3,79 3,29	12025 11717 11400	2,2 2,2 2,3	MR672-3E225M/4D NR672-3E225M/4D	80,00	511 526	120	IE3
55 75	27 30 35 40 45 50 57 65 73 82	18565 16573 14362 12679 11263 10054 8868 7829 6955 6209	54,80 48,86 42,30 37,29 33,08 29,49 26,03 22,95 20,36 18,15	91281 103185 114338 121719 127317 131709 135710 138999 141581 137811	1,0 1,1 1,3 1,4 1,6 1,8 2,0 2,3 2,6 2,9	MR973-3E250M/4D NR973-3E250M/4D	96,00	1470 1520	129	IE3
	91 103	5596 4971	16,23 14,40	135067 131013	3,2 3,6	MR972-3E250M/4D NR972-3E250M/4D	96,00	1430 1480	129	IE3
	43 49 54 62 73 83 92 106 111 128	11504 10115 9127 7953 6755 5939 5359 4670 4430 3861	34,53 30,36 27,39 23,87 20,28 17,83 16,09 14,02 13,30 11,59	80469 86955 91078 94730 93920 92909 91905 90336 98164 95221	1,1 1,3 1,4 1,6 1,9 2,2 2,4 2,8 2,9 3,3	MR873-3E250M/4D NR873-3E250M/4D	96,00	935 940	126	IE3
	147 167 196 223 247 284 299 343	3432 3018 2570 2260 2039 1777 1686 1469	10,09 8,87 7,55 6,64 5,99 5,22 4,95 4,32	93806 90856 81238 79109 77384 75055 77325 74581	3,4 3,7 4,0 4,0 4,0 4,0 4,0 4,0	MR872-3E250M/4D NR872-3E250M/4D	96,00	930 935	126	IE3
	66 76 85	7691 6637 5925	22,62 19,52 17,40	50040 54372 57388	1,0 1,2 1,3	MR773-3E250M/4D NR773-3E250M/4D	96,00	652 780	123	IE3
	102 114 127 135 154 175 204 227 241	5000 4469 4016 3788 3316 2918 2508 2254 2126	14,54 12,98 11,65 11,00 9,62 8,46 7,26 6,52 6,15	60112 61998 63534 64258 65717 66864 64406 62155 60992	1,5 1,6 1,7 1,8 2,0 2,1 1,9 2,0 2,0	MR772-3E250M/4D NR772-3E250M/4D	96,00	622 750	123	IE3
75 100	40 45 50 57 65 73 82	17233 15308 13665 12053 10641 9453 8439	37,29 33,08 29,49 26,03 22,95 20,36 18,15	99467 109791 117497 124256 129617 133773 133347	1,0 1,2 1,3 1,5 1,7 1,9 2,1	MR973-4E280S/4D NR973-4E280S/4D	127,0	1661 1711	129	IE4



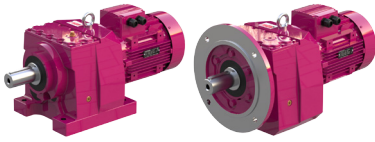
Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren



Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz- klasse
75 100	92	7606	16,23	131419	2,4	MR972-4E280S/4D	127,0	1621	129	IE4
	103	6756	14,40	127765	2,7	NR972-4E280S/4D		1661		
	116	6041	12,86	124330	3,0					
	129	5432	11,56	121086	3,3					
	149	4697	9,99	115903	2,6					
	168	4172	8,86	112471	2,7					
	188	3731	7,92	109274	2,9					
	209	3354	7,11	106276	3,0					
	54	12403	27,39	75762	1,0	MR873-4E280S/4D	127,0	1041	126	IE4
	62	10809	23,87	81614	1,2	NR873-4E280S/4D		1046		
	73	9180	20,28	82767	1,4					
	83	8071	17,83	83092	1,6					
	92	7283	16,09	83039	1,8					
	106	6347	14,02	82599	2,0					
	112	6021	13,30	93867	2,2					
	128	5247	11,59	91468	2,4					
	147	4665	10,09	91091	2,5	MR872-4E280S/4D	127,0	1036	126	IE4
	168	4101	8,87	88460	2,7	NR872-4E280S/4D		1041		
	197	3493	7,55	77035	3,0					
	224	3071	6,64	75407	3,3					
	248	2771	5,99	74037	3,6					
	285	2415	5,22	72130	4,0					
	300	2291	4,95	75684	3,9					
	344	1996	4,32	73144	4,0					
90 120	50	16388	29,49	104131	1,1	MR973-4E280M/4E	152,0	1768	129	IE4
	57	14454	26,03	113862	1,2	NR973-4E280M/4E		1818		
	65	12761	22,95	121338	1,4					
	73	11336	20,36	127007	1,6					
	82	10120	18,15	130083	1,8					
	92	9122	16,23	128770	2,0					
	103	8103	14,40	125414	2,2					
	116	7245	12,86	122231	2,5					
	129	6514	11,56	119200	2,8					
	149	5633	9,99	114107	2,2					
	168	5004	8,86	110878	2,3					
	188	4474	7,92	107851	2,4					
	209	4022	7,11	104997	2,5					
	73	11009	20,28	74419	1,2	MR873-4E280M/4E	152,0	1168	126	IE4
	83	9679	17,83	75752	1,3	NR873-4E280M/4E		1173		
	93	8734	16,09	76416	1,5					
	106	7611	14,02	76828	1,7					
	112	7221	13,30	90699	1,8					
	128	6292	11,59	88706	2,0					
	148	5594	10,09	89112	2,1	MR872-4E280M/4E	152,0	1163	126	IE4
	168	4918	8,87	86721	2,3	NR872-4E280M/4E		1168		
	197	4189	7,55	73925	2,5					
	224	3683	6,64	72672	2,8					
	248	3323	5,99	71570	3,0					
	285	2896	5,22	69980	3,3					
	300	2747	4,95	74505	3,3					
	345	2394	4,32	72116	3,6					
110 150	65	15577	22,95	108281	1,2	MR973-4E315S/4D	187,0	2013	129	IE4
	73	13837	20,36	116605	1,3	NR973-4E315S/4D		2063		
	82	12353	18,15	122950	1,5					



Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

Leistungs- und Drehzahlübersicht von Getriebemotoren

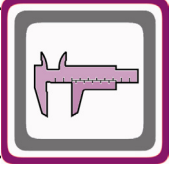
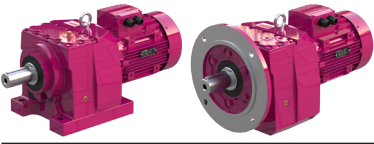


Güç	Çıkış Devri	Çıkış Momenti	Çevrim Oranı	Güv. Rad. Yük Çıkış	Servis Faktörü	Tipi	Anma Akımı	Ağırlık	Ölçü Sayfası	Motor Verim Snf.
Power	Output Speeds	Output Torque	Ratio	Per.O. Loads (Output)	Service Factors	Type	Rated Current	Weight	Dim. Page	Motor Eff. Class
Leistung P _g [kW] P _g [HP]	Abtriebswelle Drehzahlen n ₂ [r.p.m]	Abtriebswelle Drehmomente M ₂ [Nm]	Übersetzung i	Zul.Querkräfte (Abtrieb) F _{qam} [N]	Betriebsfaktor f _s	Typ	Nennstrom [A]	Gewicht ~ [kg]	Maße Seite	Motor Effizienz-klasse
110 150	92	11134	16,23	125205	1,6	MR972-4E315S/4D	187,0	1973	129	IE4
	103	9890	14,40	122246	1,8	NR972-4E315S/4D		2023		
	116	8844	12,86	119396	2,0					
	129	7951	11,56	116650	2,3					
	149	6876	9,99	111679	1,8					
	168	6108	8,86	108720	1,9					
	188	5462	7,92	105919	2,0					
	209	4910	7,11	103259	2,0					
132 180	73	16605	20,36	102822	1,1	MR973-4E315M/4E	225,0	2111	129	IE4
	82	14824	18,15	112011	1,2	NR973-4E315M/4E		2161		
	92	13362	16,23	118708	1,3	MR972-4E315M/4E	225,0	2071	129	IE4
	103	11869	14,40	118803	1,5	NR972-4E315M/4E		2121		
	116	10613	12,86	116321	1,7					
	129	9542	11,56	113887	1,9					
	149	8252	9,99	109049	1,5					
	168	7330	8,86	106386	1,6					
	188	6554	7,92	103834	1,6					
	209	5892	7,11	101386	1,7					
160 218	103	14387	14,40	114086	1,3	MR972-4E315L/4F	269,0	2274	129	IE4
	116	12865	12,86	112393	1,4	NR972-4E315L/4F		2324		
	129	11566	11,56	110358	1,6					
	149	10003	9,99	105688	1,2					
	168	8885	8,86	103402	1,3					
	188	7945	7,92	101167	1,3					
	209	7152	7,11	98988	1,4					



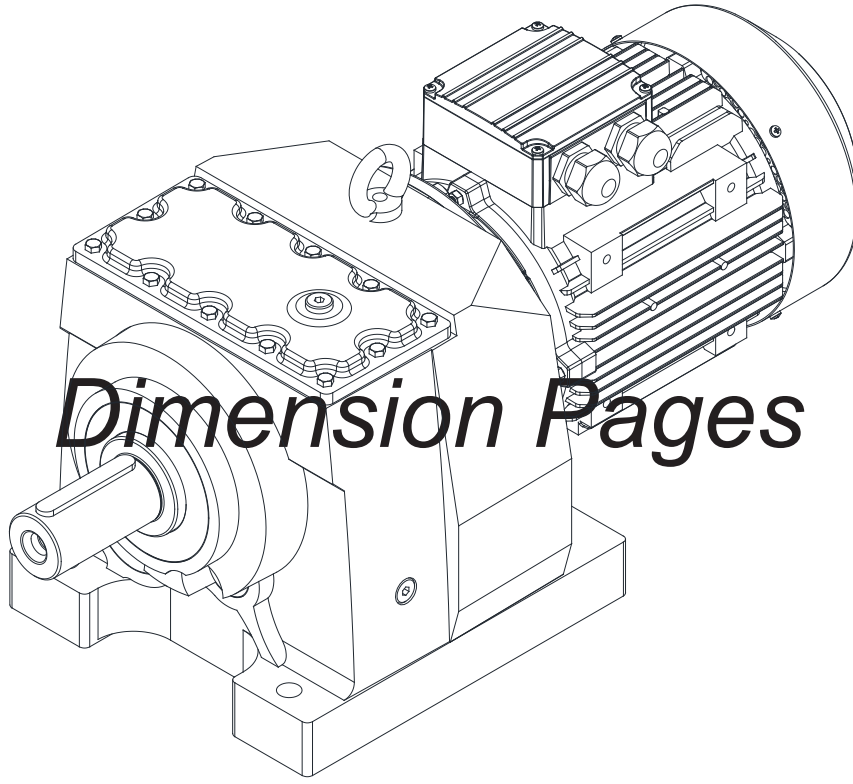
Notlar / Notes / Notizen

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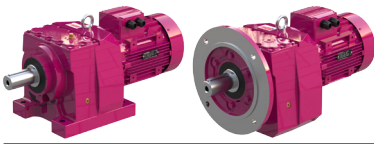
MR & NR Serisi / Serie

Ölçü Sayfaları

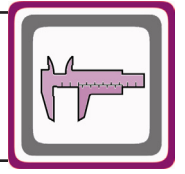


Dimension Pages

Abmessungenseiten

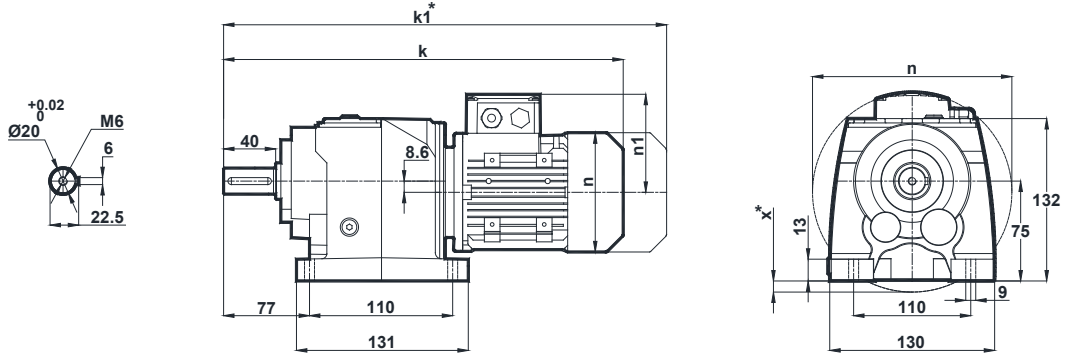


Ölçü Sayfaları Dimension Pages Abmessungsseiten

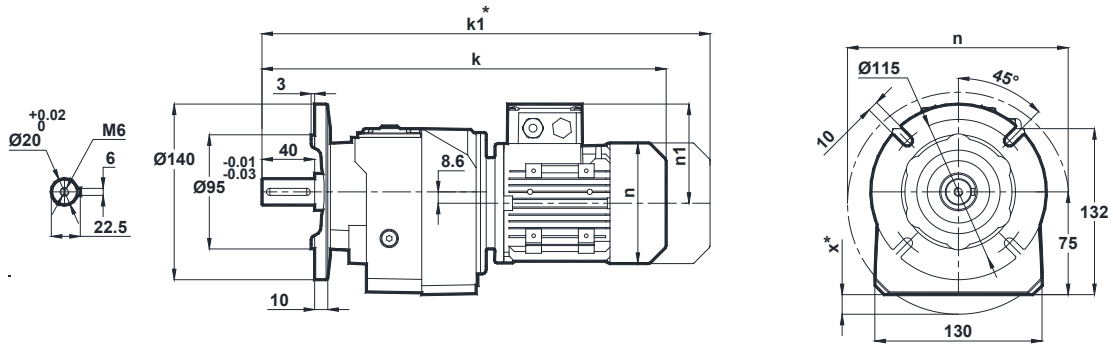


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR002 MR003

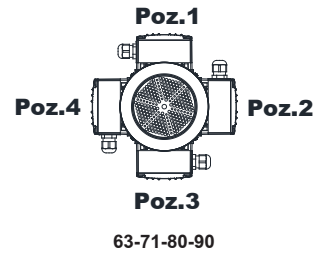


NR002 NR003

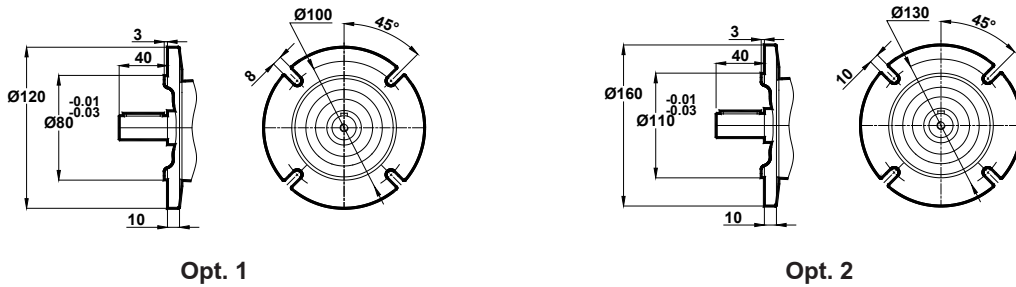


Motor Büyüklüğü / Motor Size / Motorbaugroße					
	63	71	80	90S	90L
k	369.5	397	431	470	470
k1	440.5	488	524	549	549
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	3	12	22	22

Klemens Kutusu / Terminal Box / Klemmenkasten

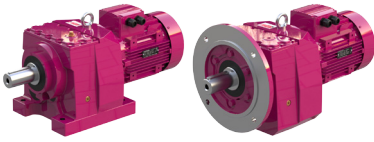


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

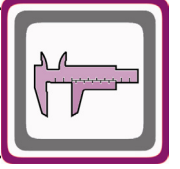


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

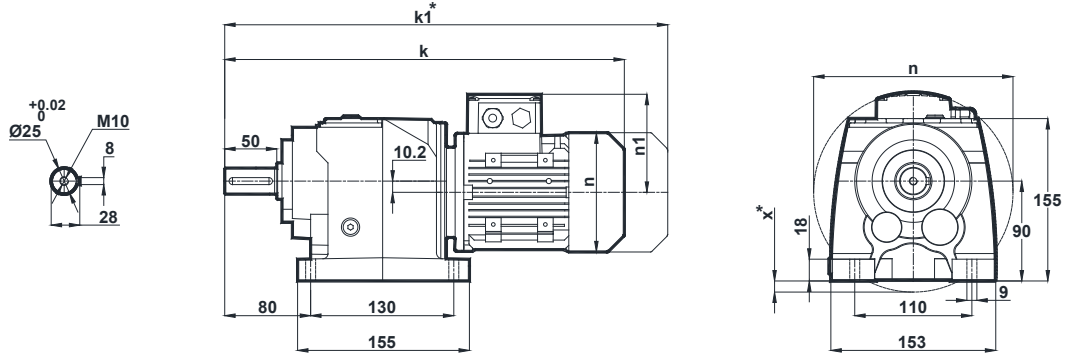


Ölçü Sayfaları Dimension Pages Abmessungenseiten

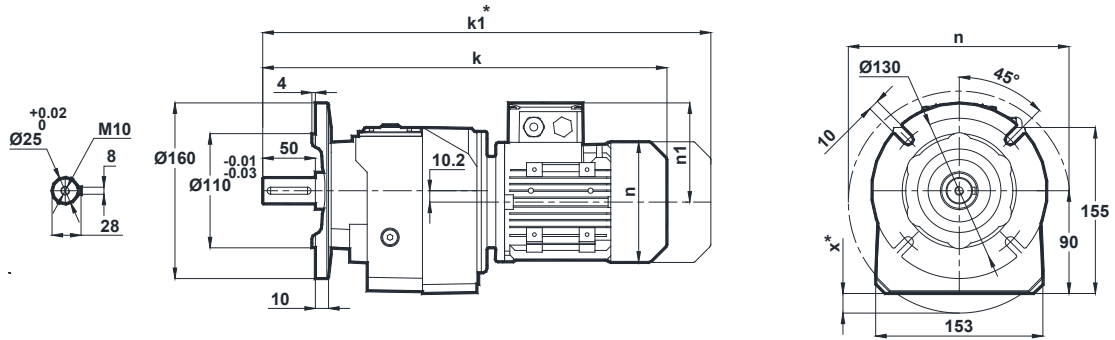


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MR102 MR103

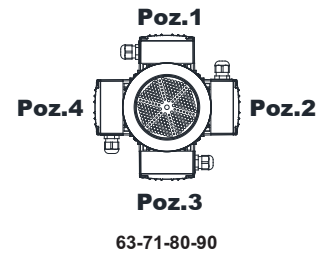


NR102 NR103

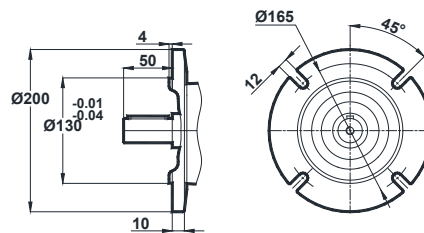


Motor Büyüklüğü / Motor Size / Motorbaugröße					
	63	71	80	90S	90L
k	399	424	458	497	497
k1	470	515	551	576	576
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	-	-	9	9

Klemens Kutusu / Terminal Box / Klemmenkasten



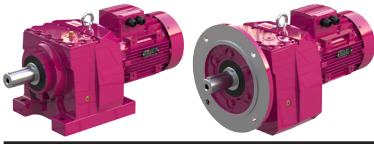
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



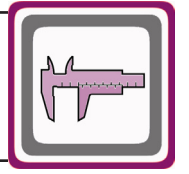
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

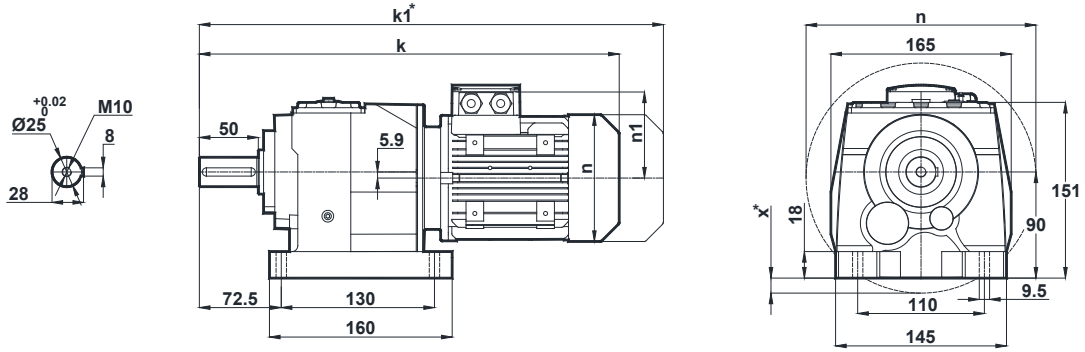


Ölçü Sayfaları Dimension Pages Abmessungsseiten

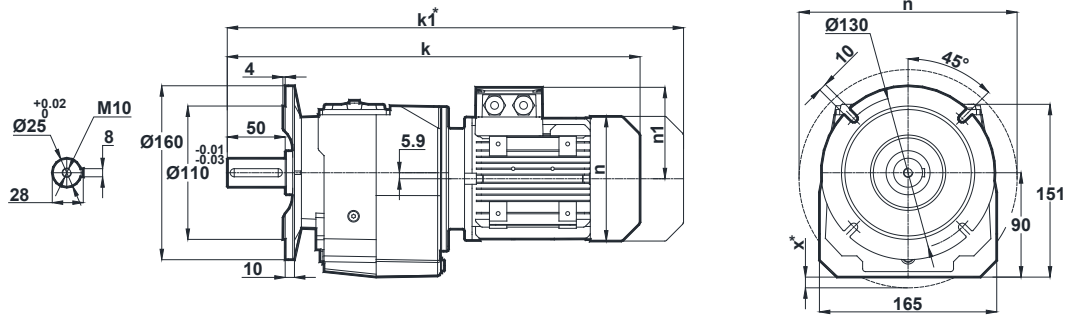


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR172 MR173

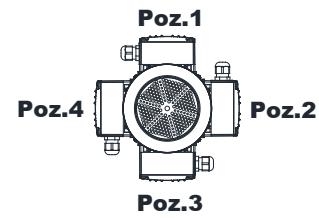


NR172 NR173



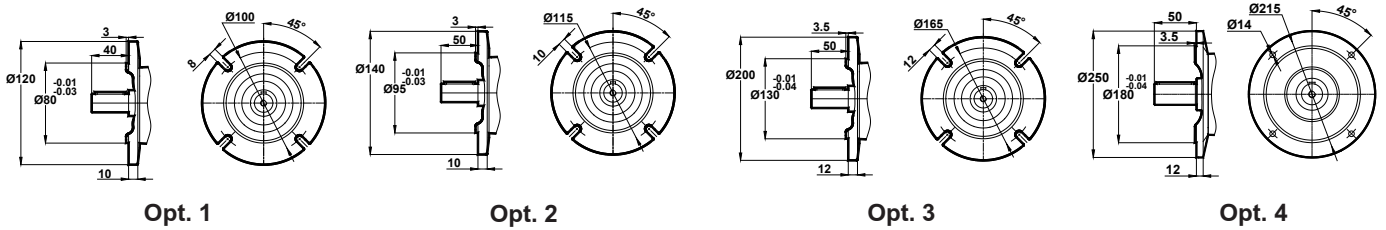
Motor Büyüklüğü / Motor Size / Motorbaugröße							
	63	71	80	90S	90L	100L	112M
k	396.5	424	458	497	497	545	569
k1	467.5	515	551	576	576	653	674
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	4	4	13	24

Klemens Kutusu / Terminal Box / Klemmenkasten



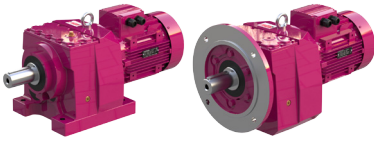
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Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

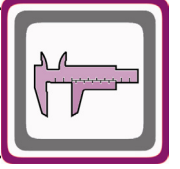


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

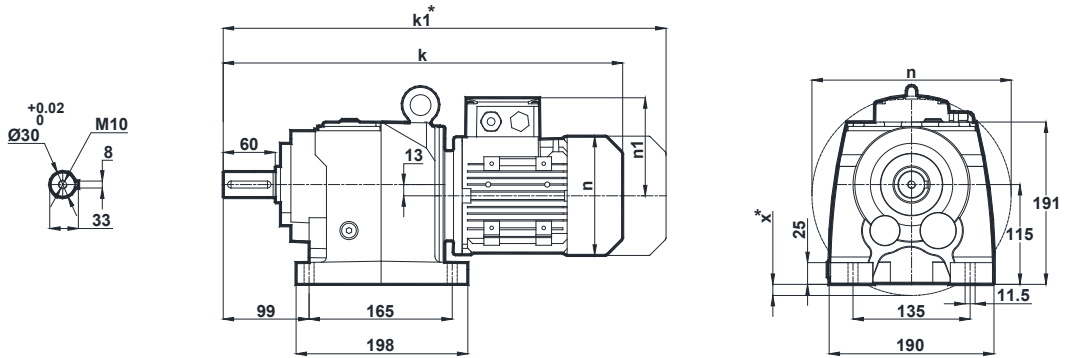


Ölçü Sayfaları Dimension Pages Abmessungsseiten

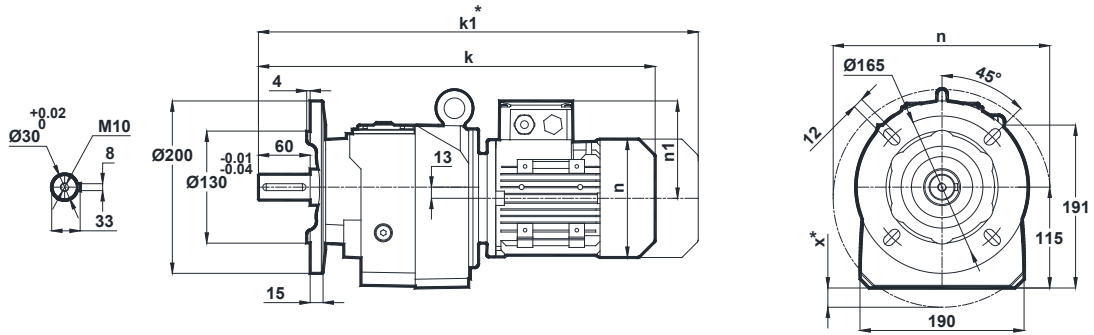


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR202 MR203

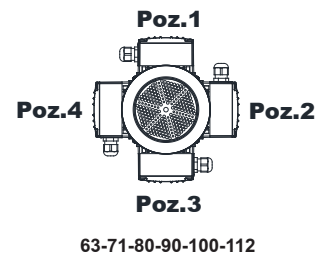


NR202 NR203

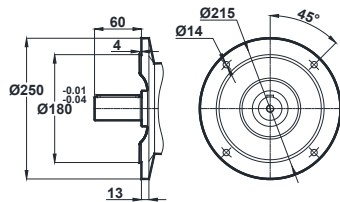


Motor Büyüklüğü / Motor Size / Motorbaugröße							
	63	71	80	90S	90L	100L	112M
k	444	470	504	543	543	591	615
k1	515	561	597	622	622	699	720
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	-	-	-	6

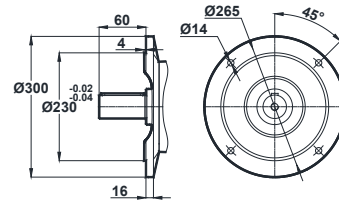
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



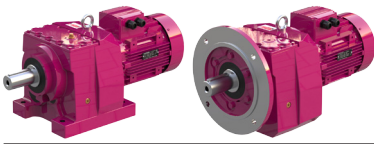
Opt. 1



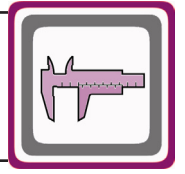
Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

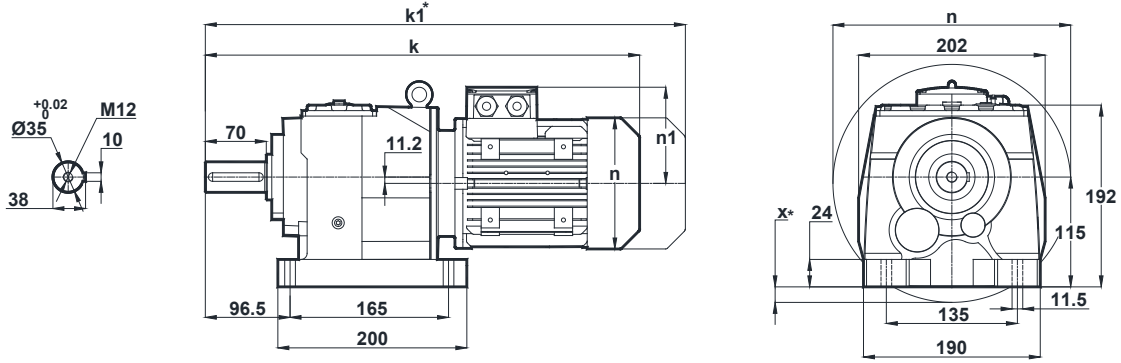


Ölçü Sayfaları Dimension Pages Abmessungsseiten

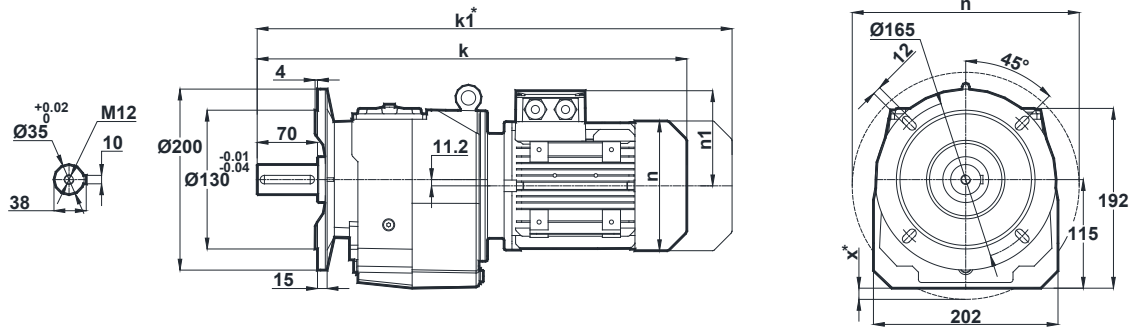


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR272 MR273

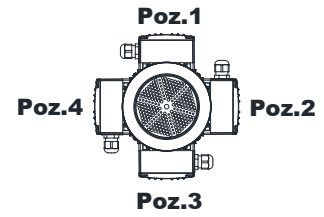


NR272 NR273



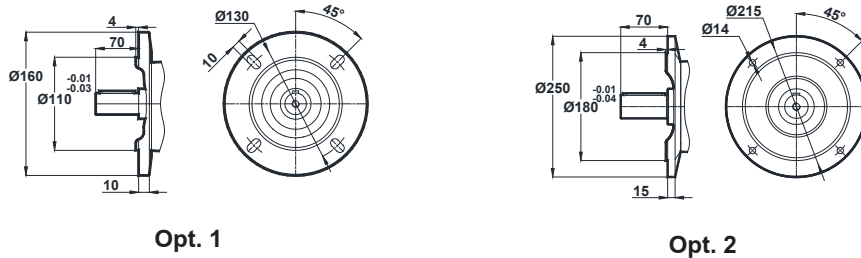
Motor Büyüklüğü / Motor Size / Motorbaugröße									
	63	71	80	90S	90L	100L	112M	132S	132M
k	445	471	505	544	544	592	616	699	699
k1	516	562	598	623	623	700	721	829	829
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

Klemens Kutusu / Terminal Box / Klemmenkasten



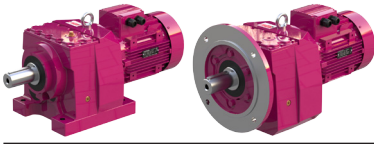
63-71-80-90-100-112-132

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

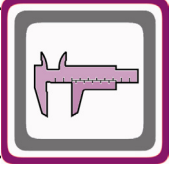


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

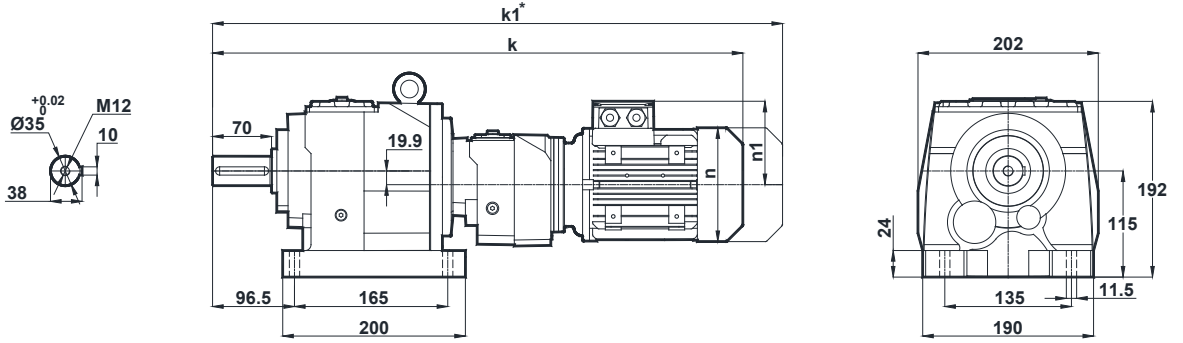


Ölçü Sayfaları Dimension Pages Abmessungenseiten

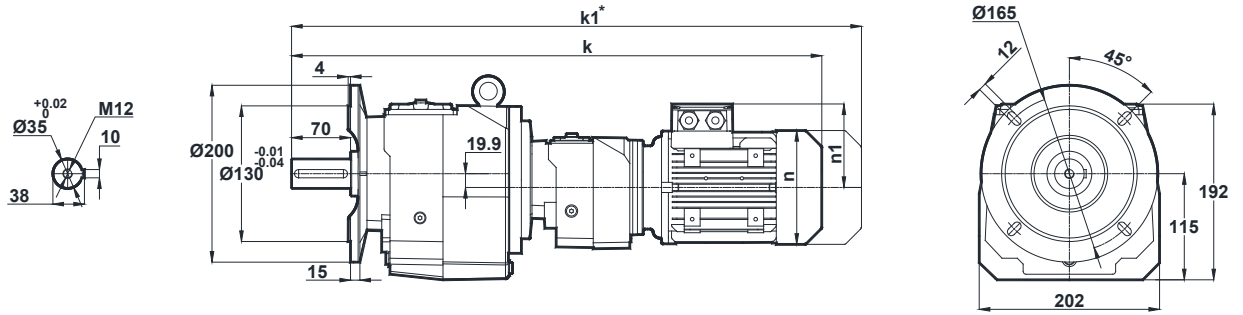


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR275 MR276

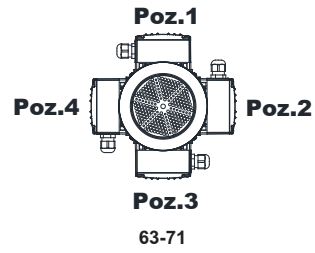


NR275 NR276

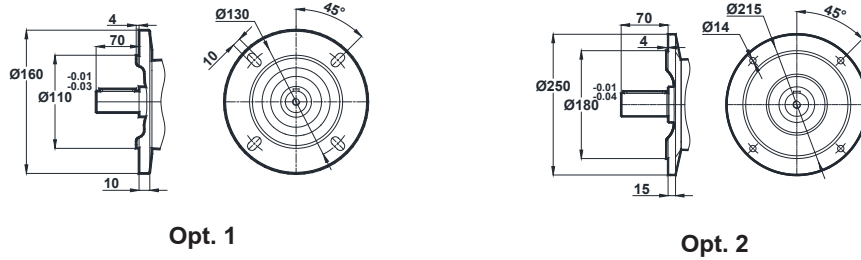


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	594.5	622
k1	665.5	713
n	119	137
n1	101	118

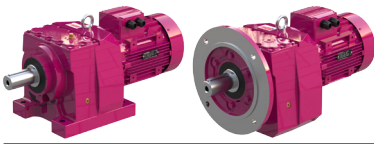
Klemens Kutusu / Terminal Box / Klemmenkasten



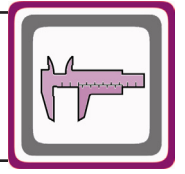
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

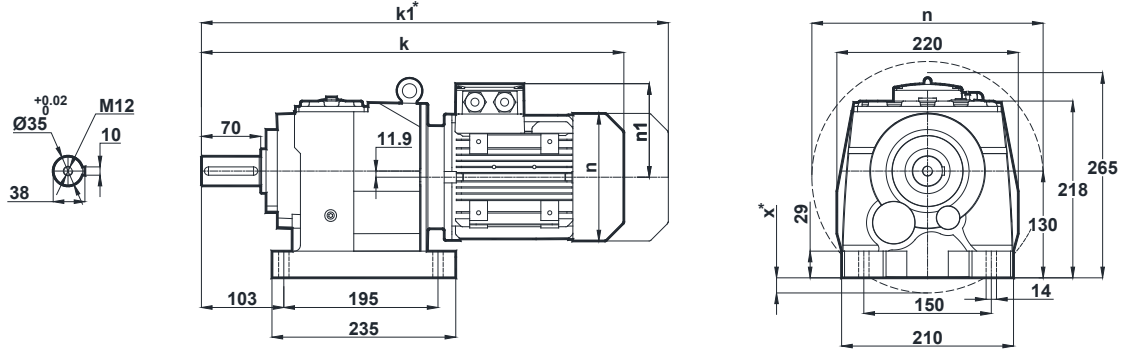


Ölçü Sayfaları Dimension Pages Abmessungsseiten

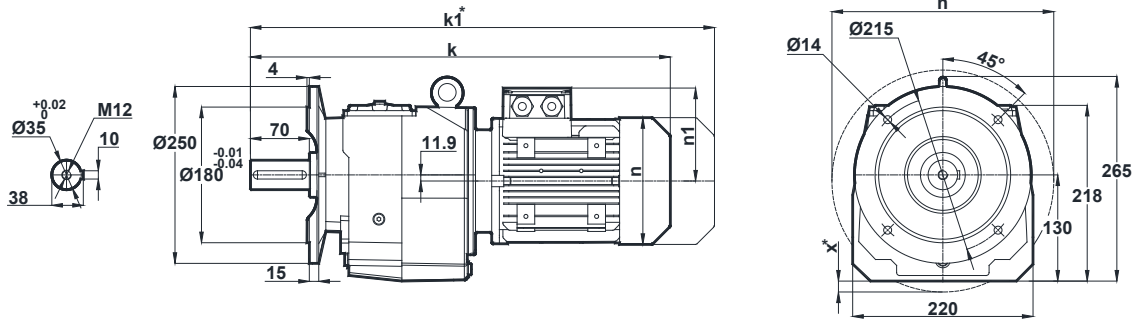


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR282 MR283

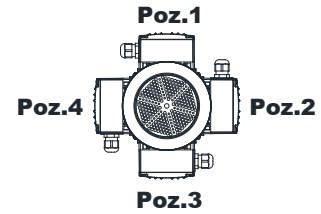


NR282 NR283



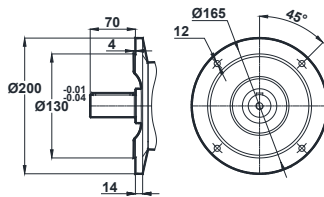
Motor Büyüklüğü / Motor Size / Motorbaugröße									
	71	80	90S	90L	100L	112M	132S	132M	160M
k	488.5	522.5	561.5	561.5	609.5	633.5	720	720	816
k1	579.5	615.5	640.5	640.5	717.5	738.5	850	850	966
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
x	-	-	-	-	-	-	11	11	40

Klemens Kutusu / Terminal Box / Klemmenkasten

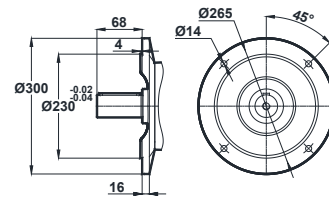


71-80-90-100-112-132-160

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



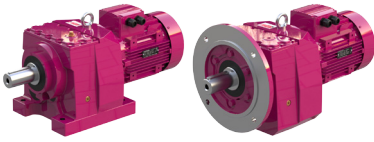
Opt. 1



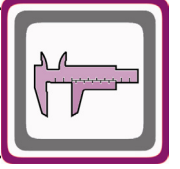
Opt. 2

* "k1" "Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

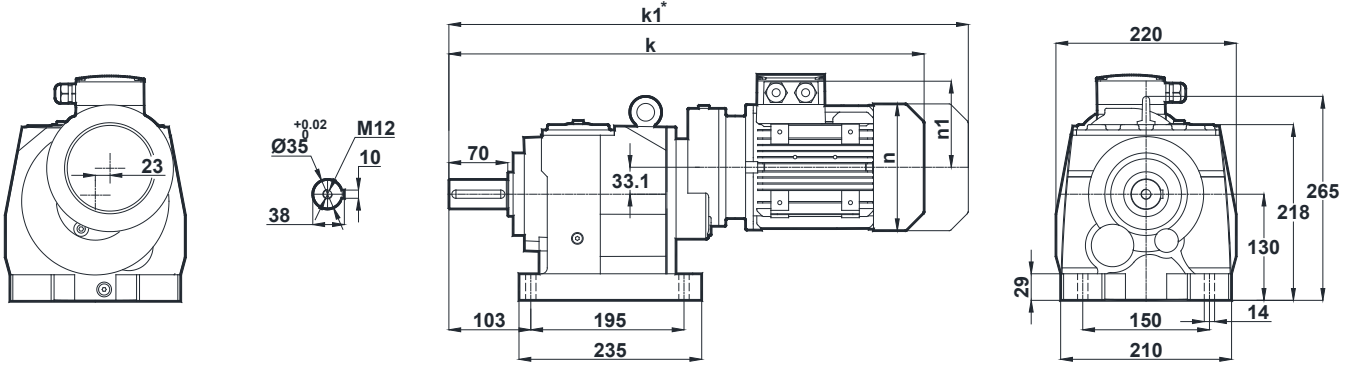


Ölçü Sayfaları Dimension Pages Abmessungsseiten

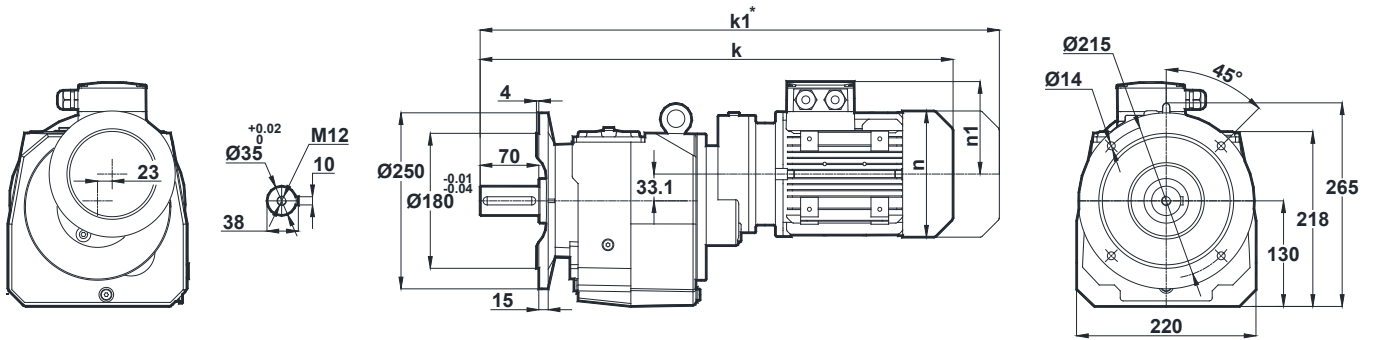


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR284

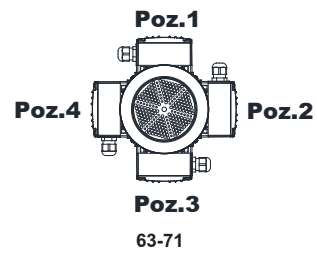


NR284

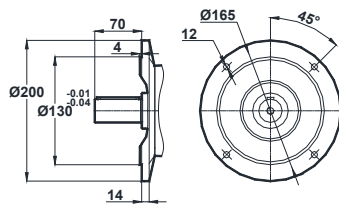


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	541.5	567.5
k1	612.5	658.5
n	119	137
n1	101	118

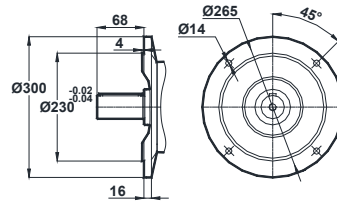
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

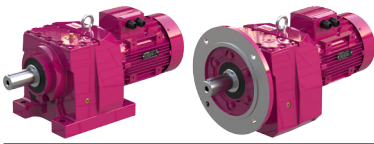


Opt. 1

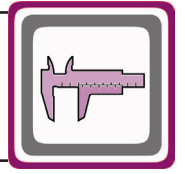


Opt. 2

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

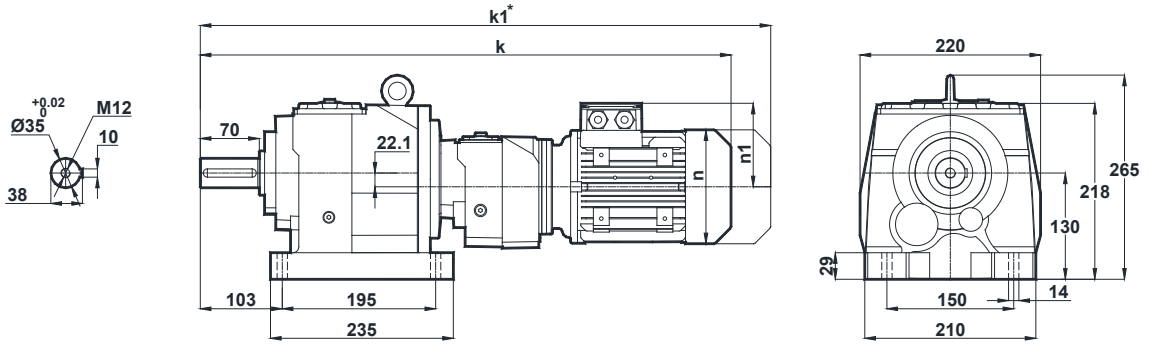


Ölçü Sayfaları Dimension Pages Abmessungenseiten

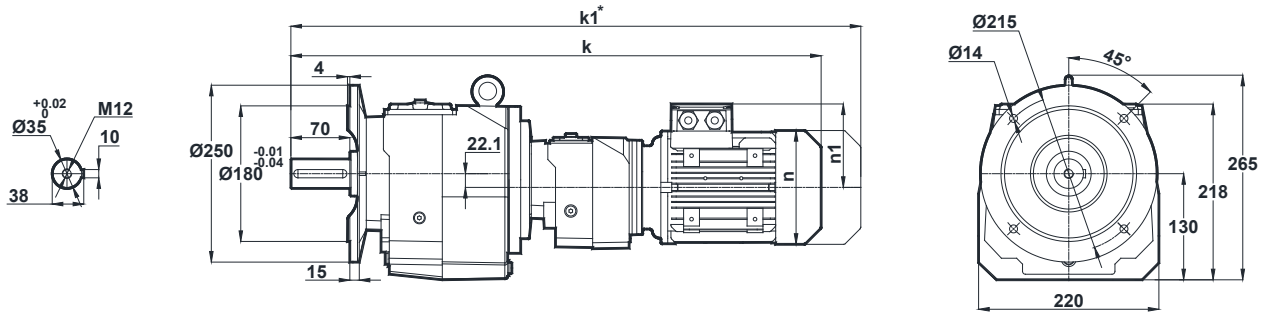


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR285 MR286

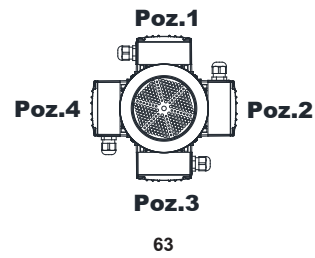


NR285 NR286

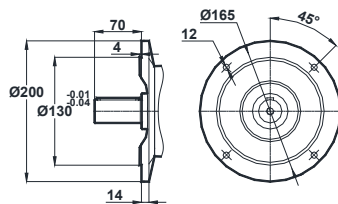


Motor Büyüklüğü / Motor Size / Motorbaugröße	
	63
k	646
k1	717
n	119
n1	101

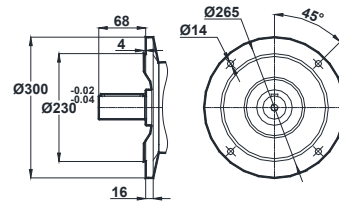
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

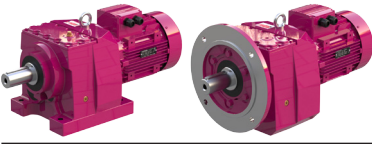


Opt. 1

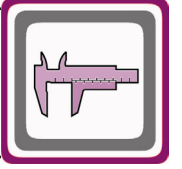


Opt. 2

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

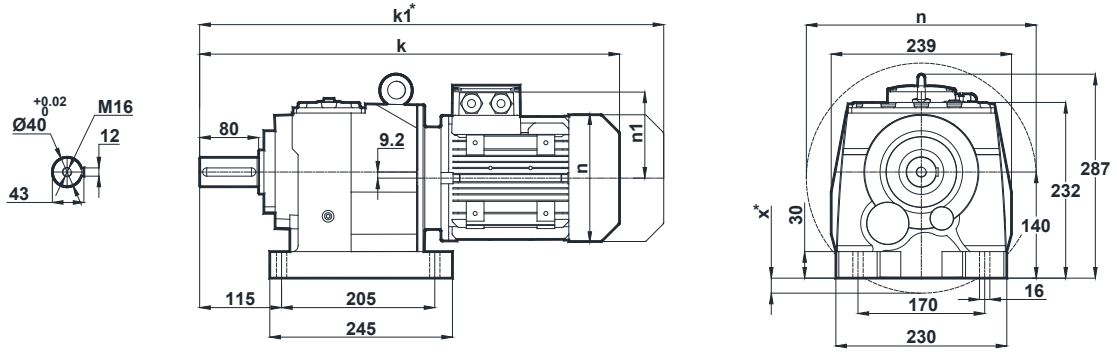


Ölçü Sayfaları Dimension Pages Abmessungenseiten

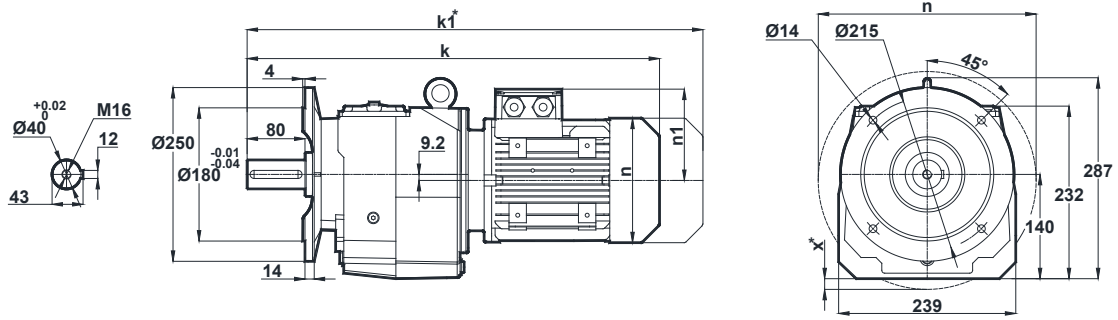


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR372 MR373

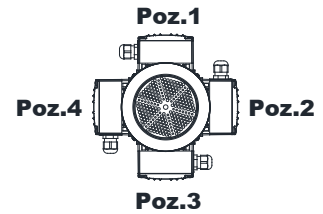


NR372 NR373



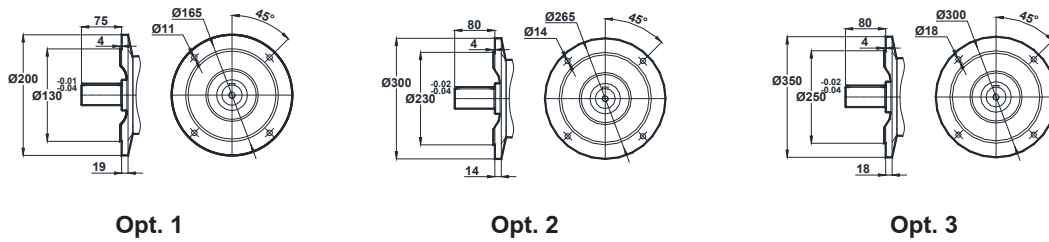
Motor Büyüklüğü / Motor Size / Motorbaugröße										
	71	80	90S	90L	100L	112M	132S	132M	160M	160L
k	509.5	543.5	582.5	582.5	630.5	645.5	741	741	837	837
k1	600.5	636.5	661.5	661.5	738.5	759.5	871	871	987	987
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten



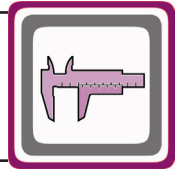
71-80-90-100-112-132-160

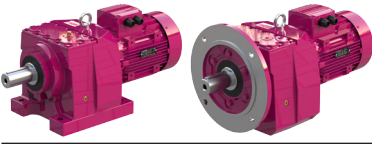
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



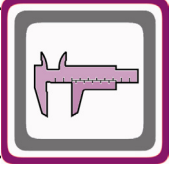
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



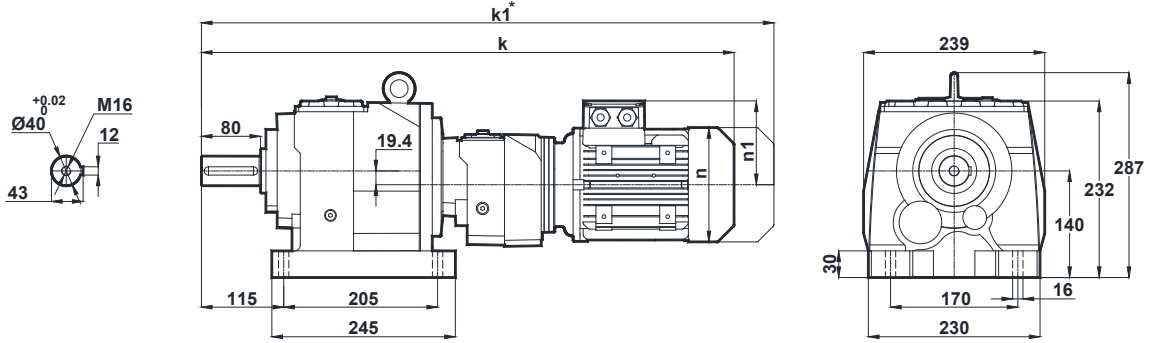


Ölçü Sayfaları Dimension Pages Abmessungenseiten

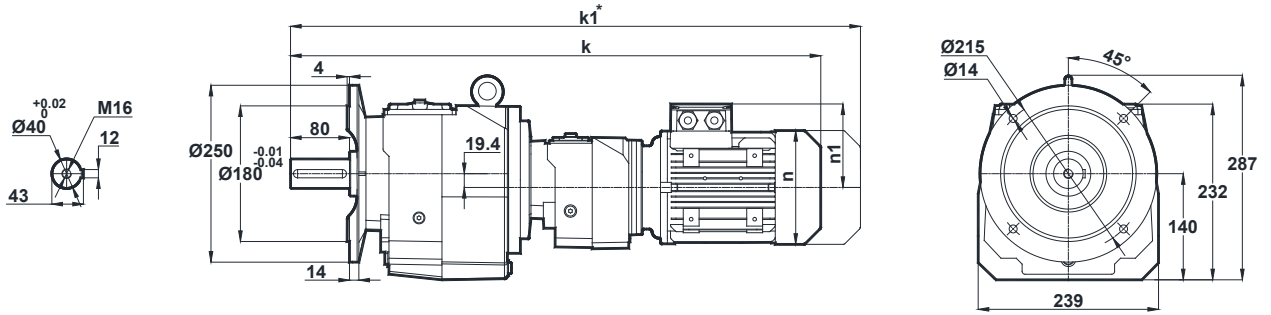


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR375 MR376

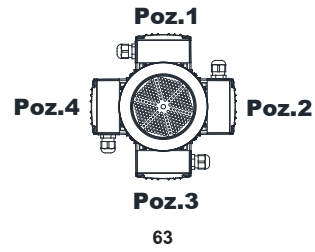


NR375 NR376

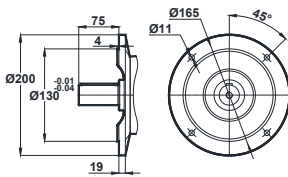


Motor Büyüklüğü / Motor Size / Motorbaugröße	
	63
k	667
k1	738
n	119
n1	101

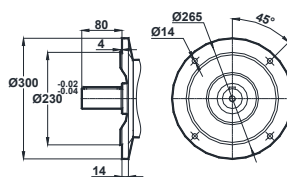
Klemens Kutusu / Terminal Box / Klemmenkasten



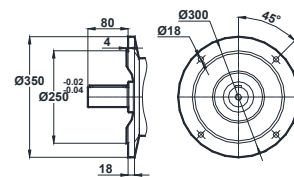
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

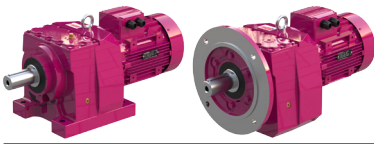


Opt. 2

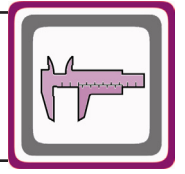


Opt. 3

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

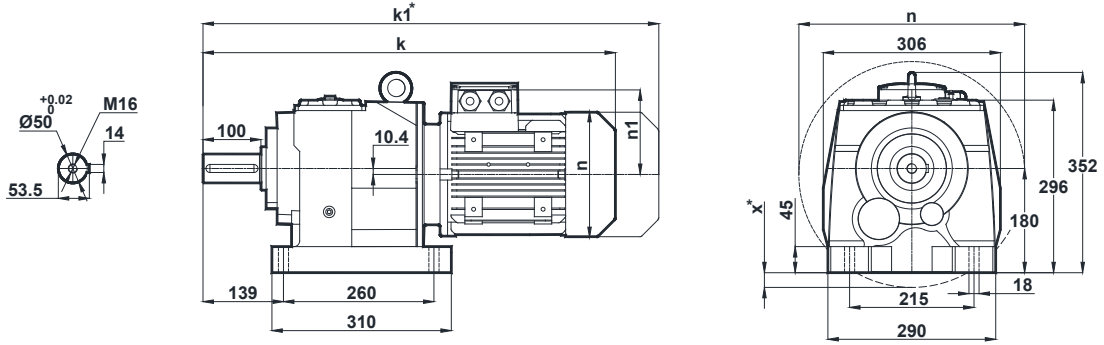


Ölçü Sayfaları Dimension Pages Abmessungsseiten

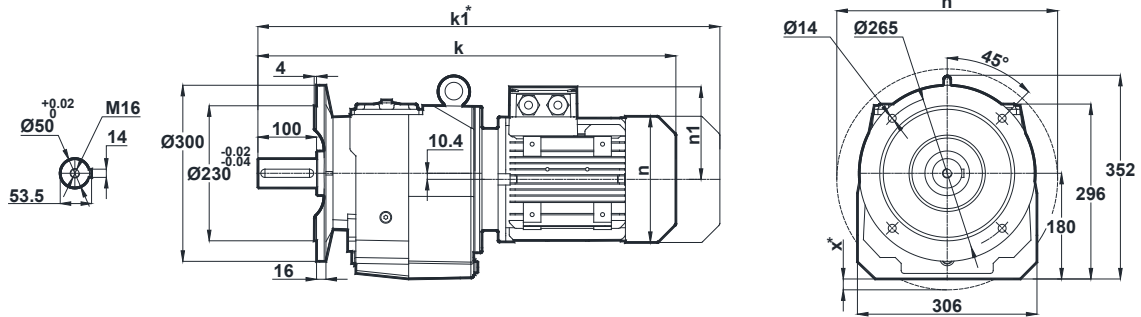


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR472 MR473

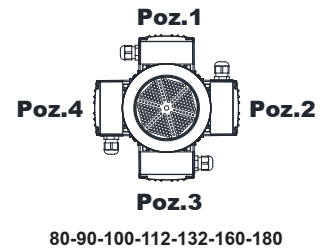


NR472 NR473

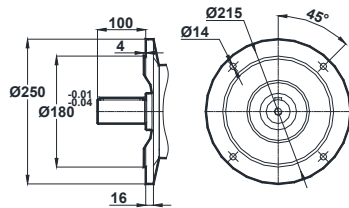


Motor Büyüklüğü / Motor Size / Motorbaugröße											
	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L
k	610.5	649.5	649.5	694.5	718.5	803.5	803.5	899.5	899.5	971.5	971.5
k1	703.5	728.5	728.5	802.5	823.5	933.5	933.5	1049.5	1049.5	1158.5	1158.5
n	155	176	176	193	215	257	257	316	316	348	348
n1	127	136	136	149	161	182	182	226	226	242	242
x	-	-	-	-	-	-	-	-	-	5	5

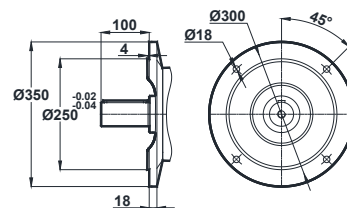
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



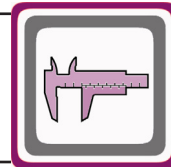
Opt. 1



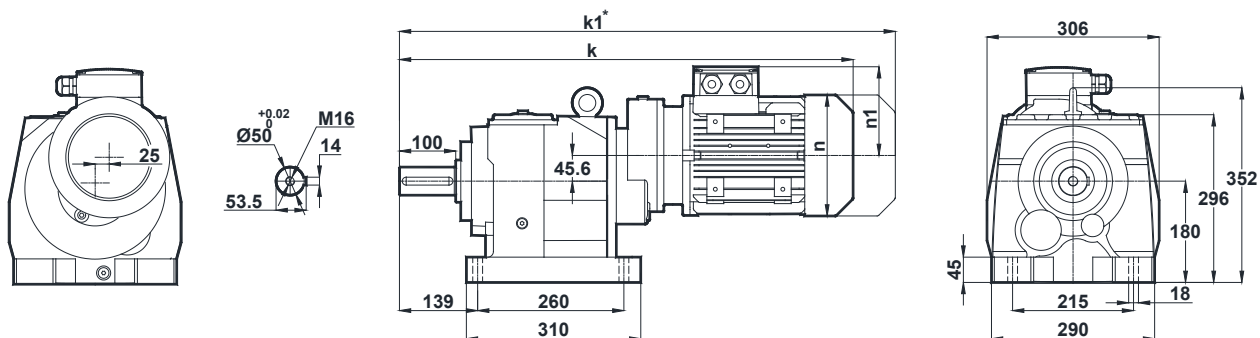
Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

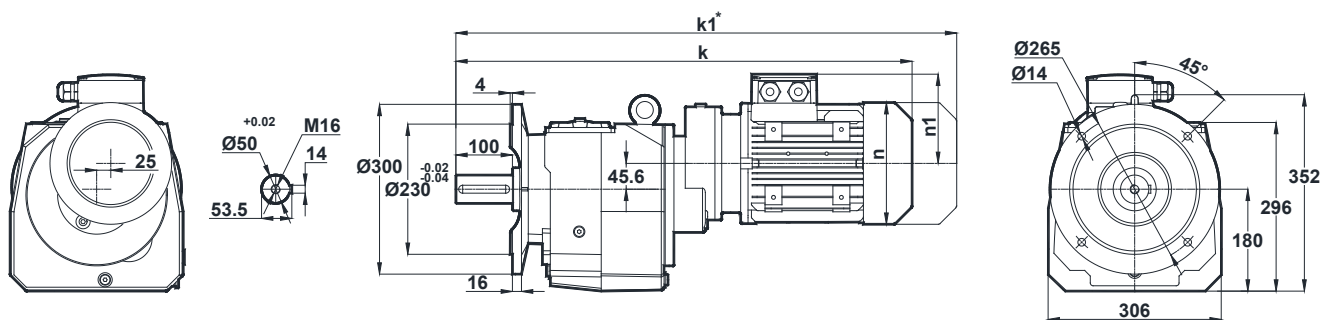
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

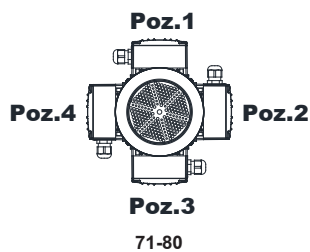
MR474

NR474

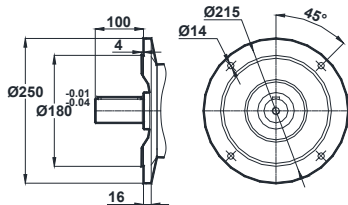


Motor Büyüklüğü / Motor Size / Motorbaugroße		
	71	80
k	670	704
k1	761	797
n	137	155
n1	118	127

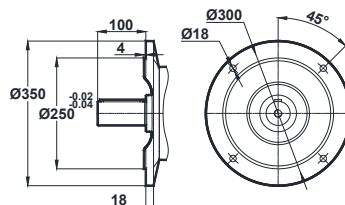
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

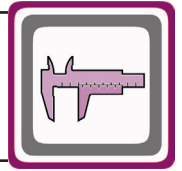


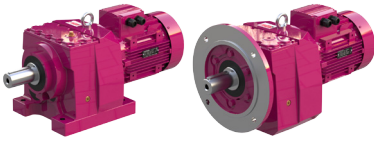
Opt. 1



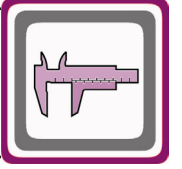
Opt. 2

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.



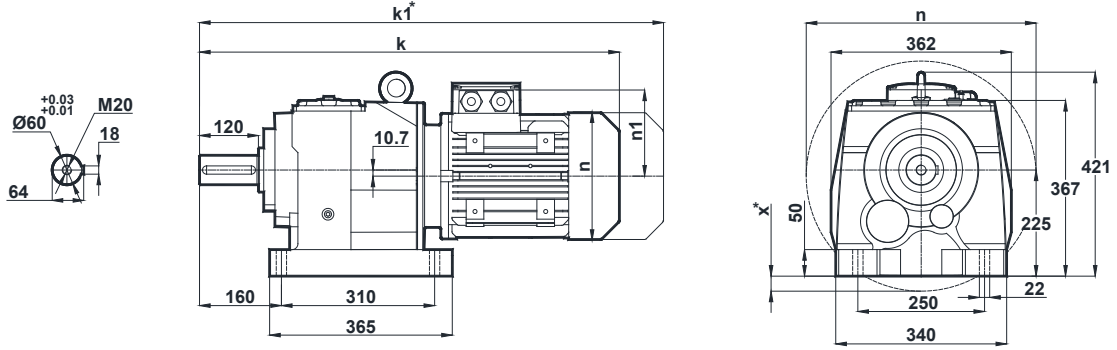


Ölçü Sayfaları Dimension Pages Abmessungenseiten

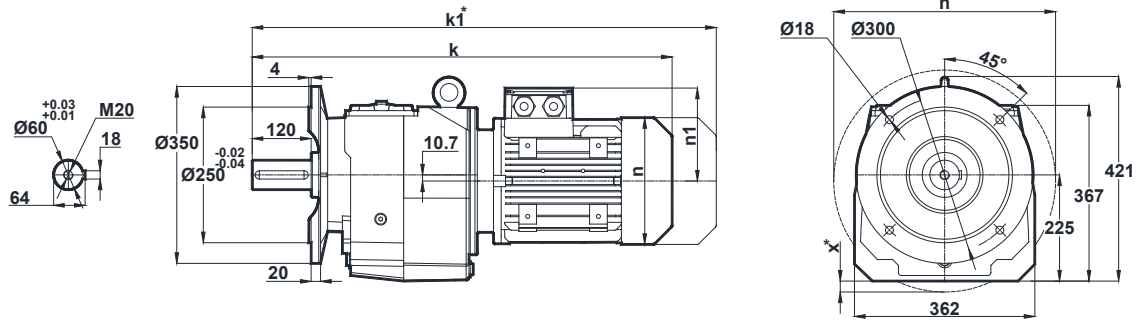


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR572 MR573

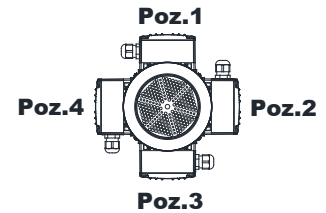


NR572 NR573



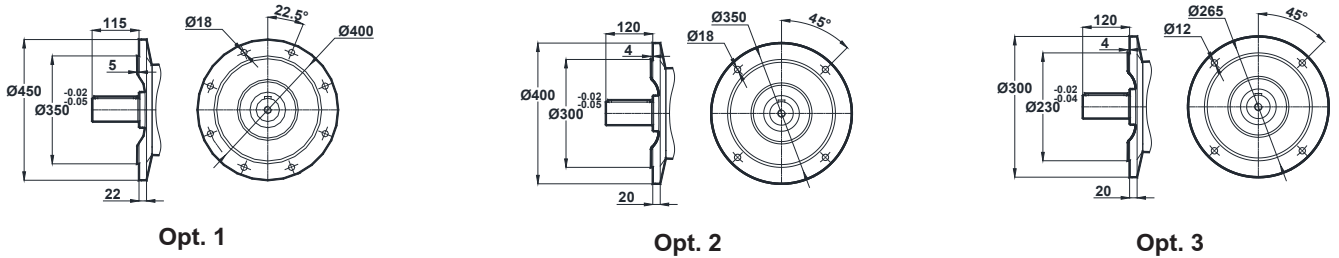
Motor Büyüklüğü / Motor Size / Motorbaugröße									
	100L	112M	132S	132M	160M	160L	180M	180L	200L
k	753	777	863.5	863.5	959.5	959.5	1031.5	1031.5	1055
k1	861	882	993.5	993.5	1109.5	1109.5	1218.5	1218.5	1247
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
x	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



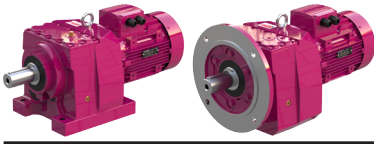
100-112-132-160-180-200

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

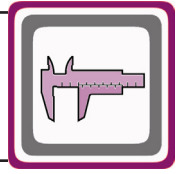


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

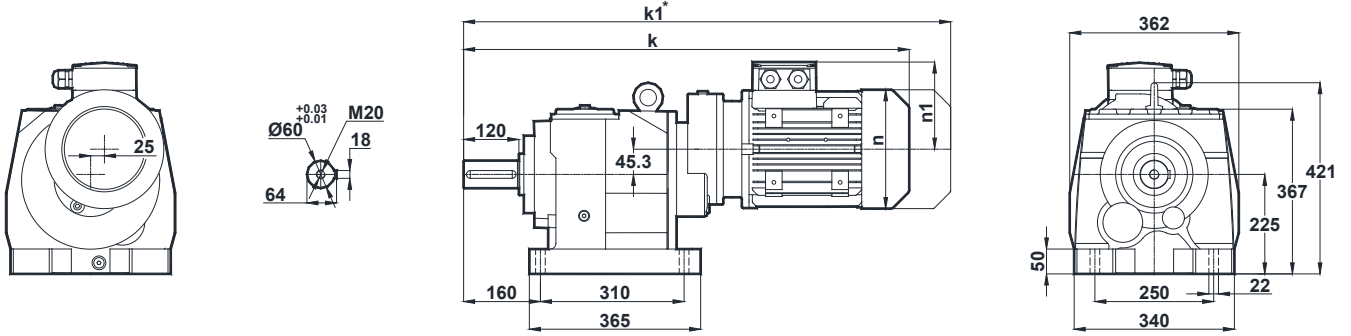


Ölçü Sayfaları Dimension Pages Abmessungsseiten

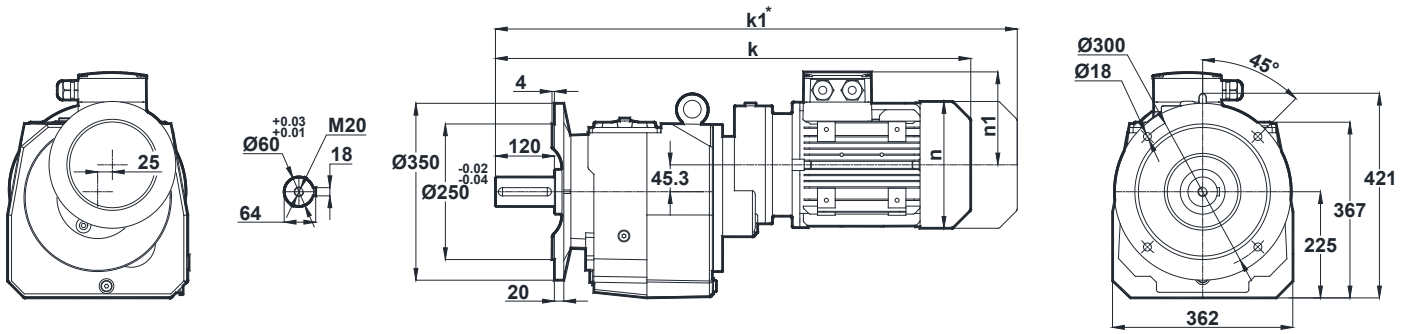


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR574

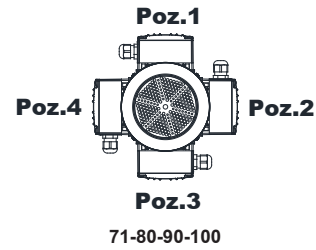


NR574

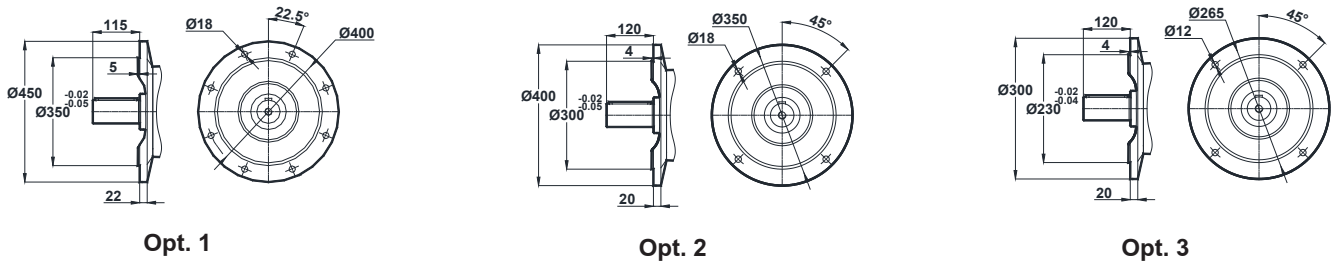


Motor Büyüklüğü / Motor Size / Motorbaugröße					
	71	80	90S	90L	100L
k	733	767	806	806	854
k1	824	860	885	885	962
n	137	155	176	176	193
n1	118	127	136	136	149

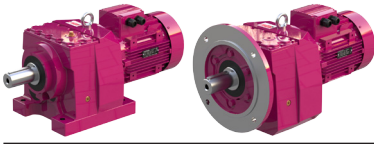
Klemens Kutusu / Terminal Box / Klemmenkasten



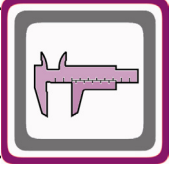
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

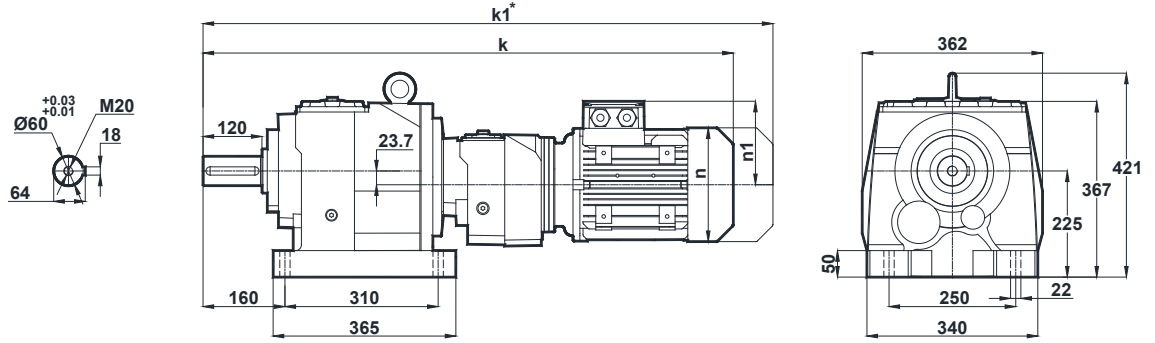


Ölçü Sayfaları Dimension Pages Abmessungenseiten

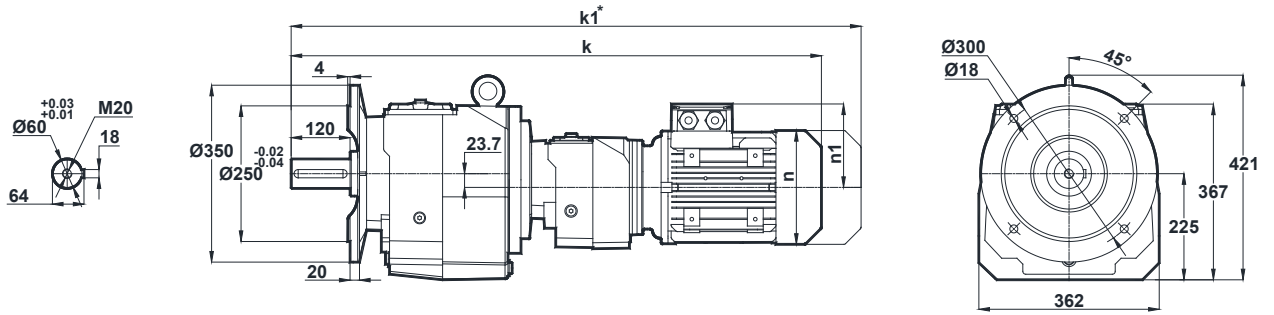


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR575 MR576

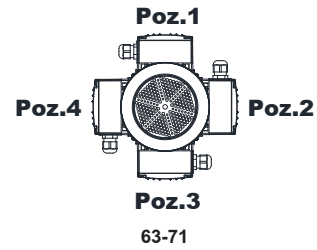


NR575 NR576

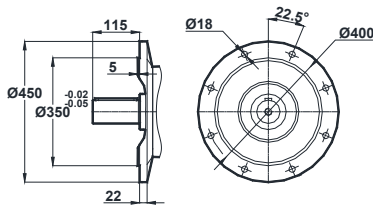


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	839	865
k1	910	956
n	119	137
n1	101	118

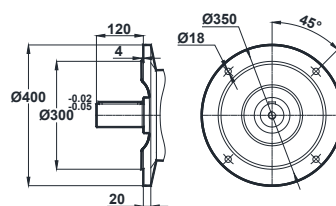
Klemens Kutusu / Terminal Box / Klemmenkasten



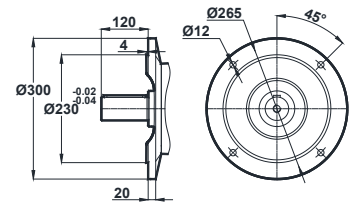
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

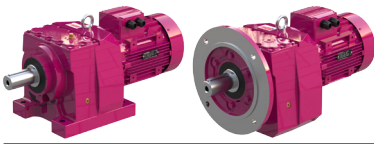


Opt. 2

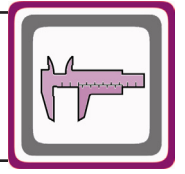


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

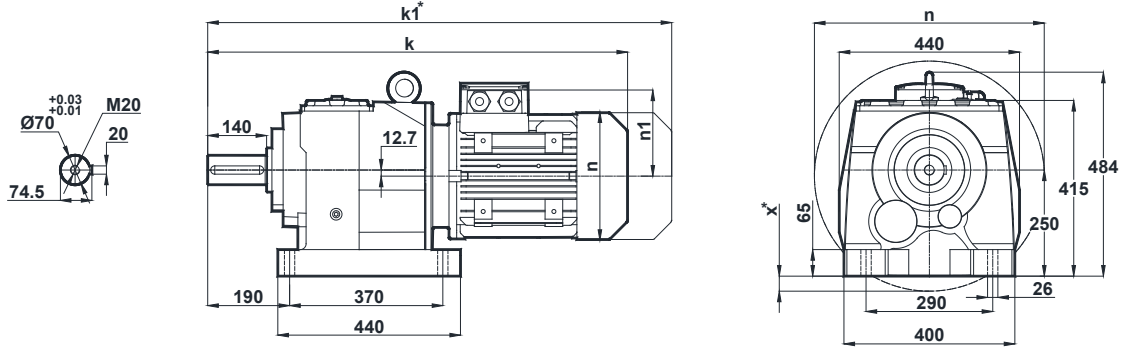


Ölçü Sayfaları Dimension Pages Abmessungsseiten

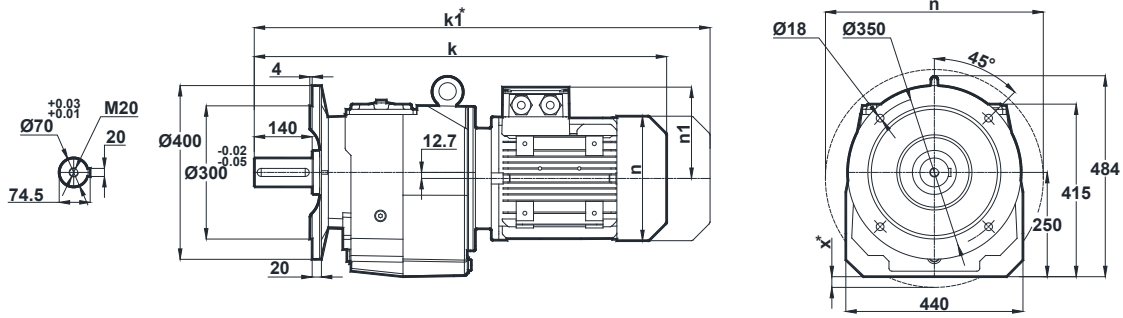


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR672 MR673

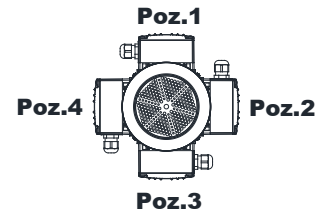


NR672 NR673



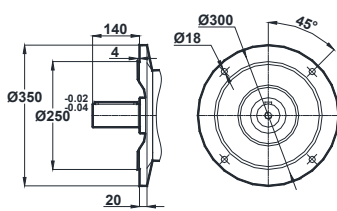
Motor Büyüklüğü / Motor Size / Motorbaugröße										
	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M
k	833	919.5	919.5	1015.5	1015.5	1087.5	1087.5	1111	1189	1189
k1	938	1049.5	1049.5	1165.5	1165.5	1274.5	1274.5	1303	1372	1372
n	215	257	257	316	316	348	348	396	438	438
n1	161	182	182	226	226	242	242	294	311,5	311,5
x	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten

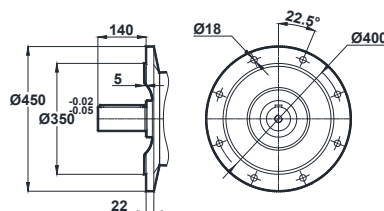


112-132-160-180-200-225

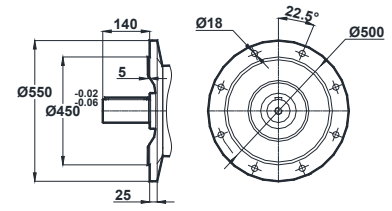
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1



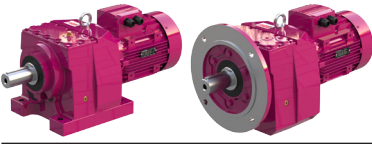
Opt. 2



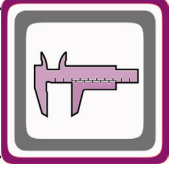
Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

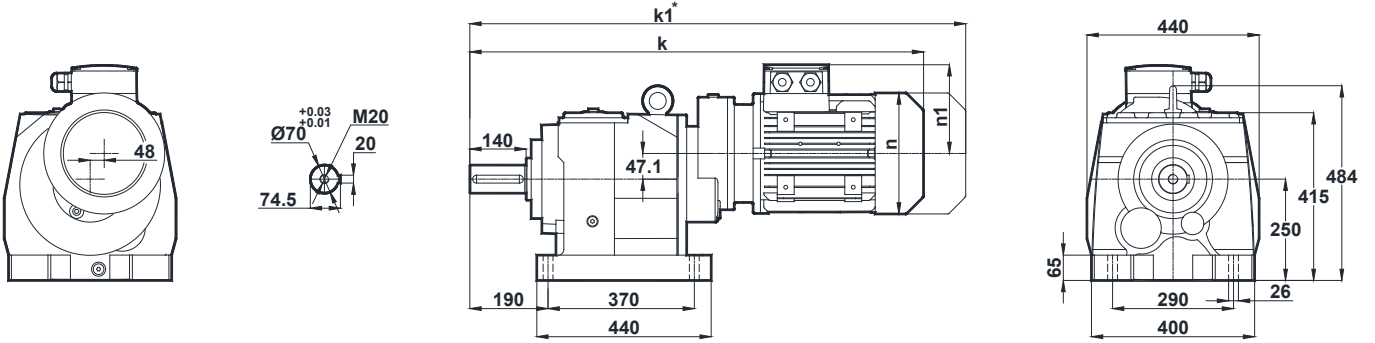


Ölçü Sayfaları Dimension Pages Abmessungenseiten

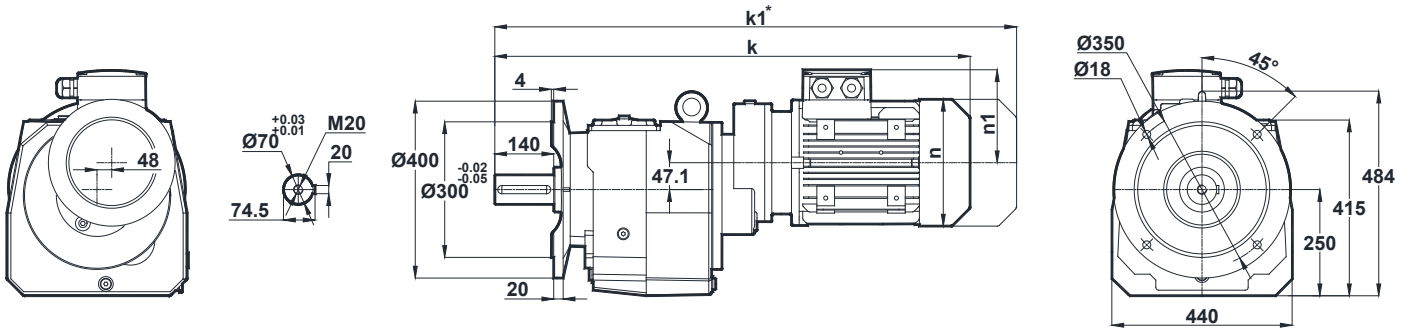


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR674

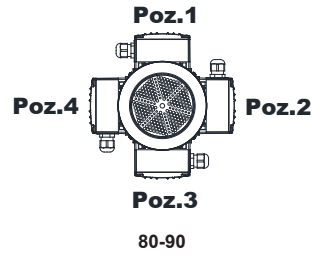


NR674

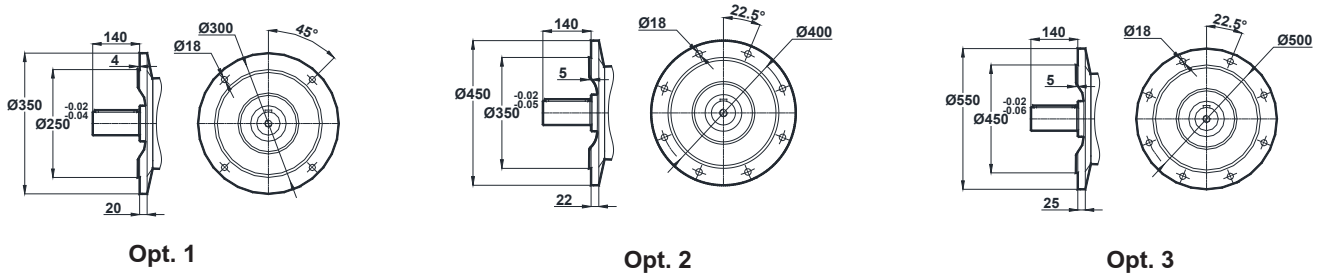


Motor Büyüklüğü / Motor Size / Motorbaugroße			
	80	90S	90L
k	841.5	880.5	880.5
k1	934.5	959.5	959.5
n	155	176	176
n1	127	136	136

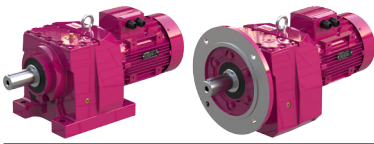
Klemens Kutusu / Terminal Box / Klemmenkasten



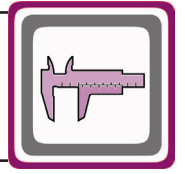
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

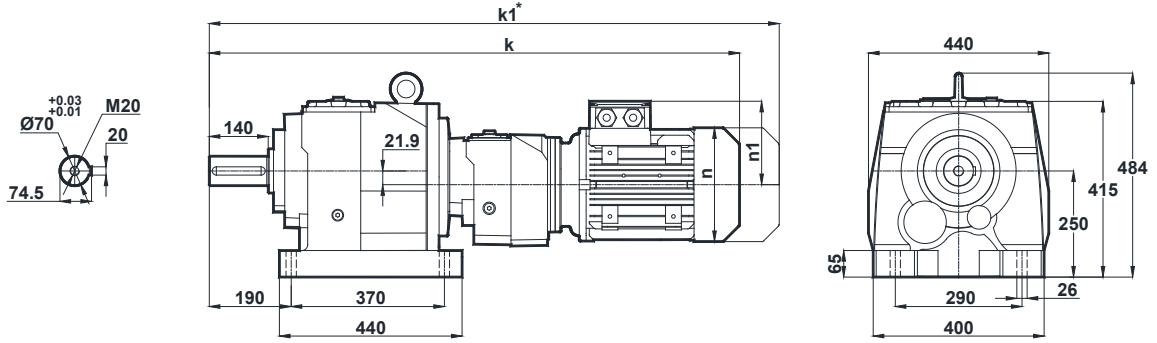


Ölçü Sayfaları Dimension Pages Abmessungsseiten

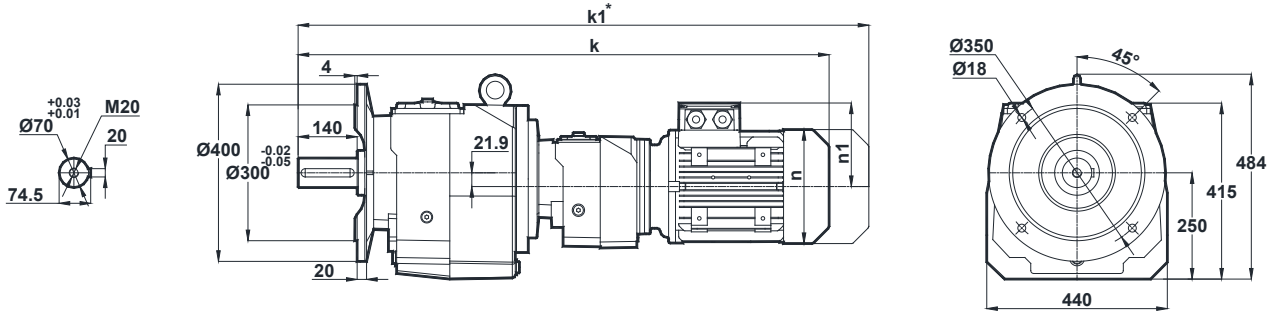


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR675 MR676

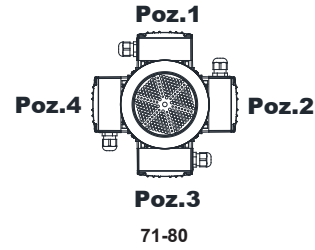


NR675 NR676

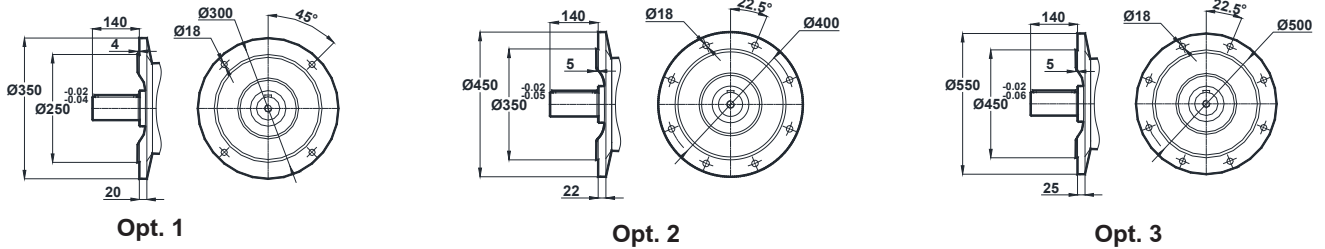


Motor Büyüklüğü / Motor Size / Motorbaugroße		
	71	80
k	953.5	987.5
k1	1044.5	1080.5
n	137	155
n1	118	127

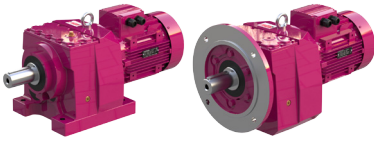
Klemens Kutusu / Terminal Box / Klemmenkasten



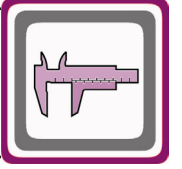
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

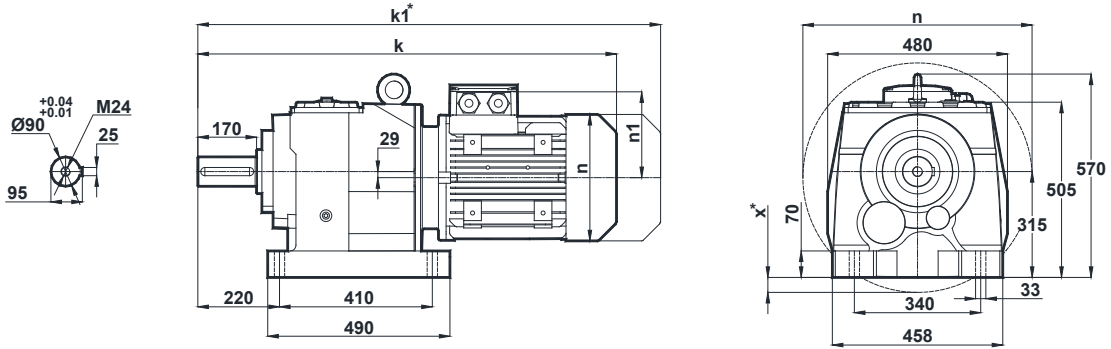


Ölçü Sayfaları Dimension Pages Abmessungenseiten

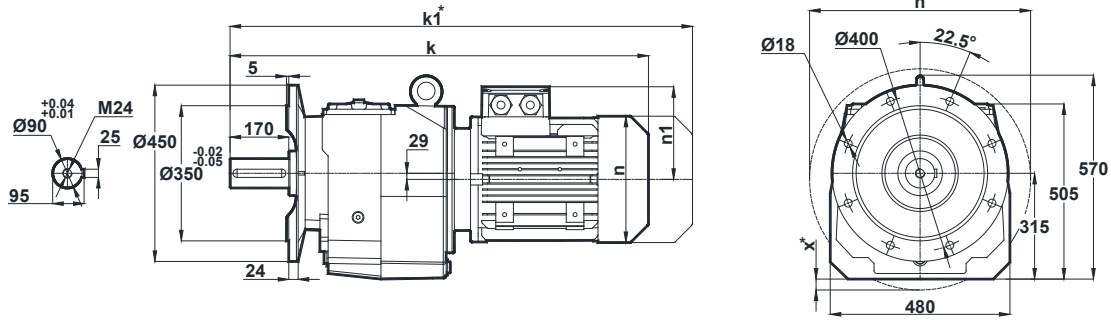


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR772 MR773

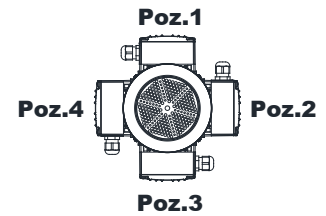


NR772 NR773



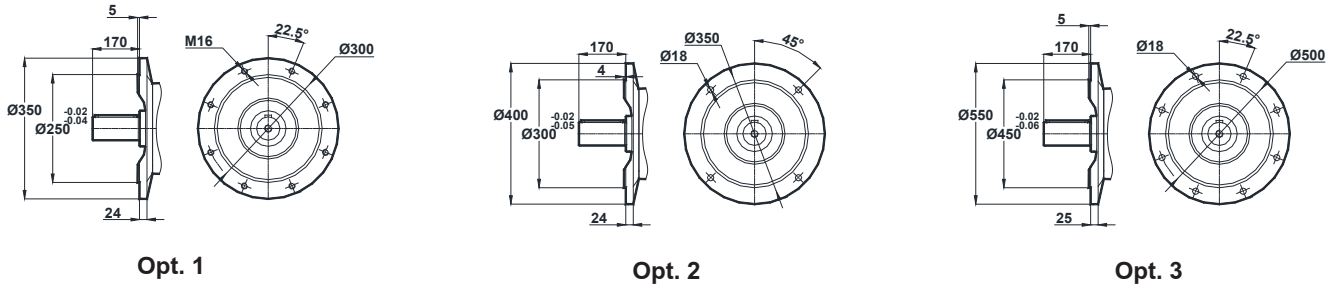
Motor Büyüklüğü / Motor Size / Motorbaugröße										
	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M
k	1000.5	1000.5	1096.5	1096.5	1168.5	1168.5	1192	1270.5	1270.5	1355
k1	1130.5	1130.5	1246.5	1246.5	1355	1355	1384	1453.5	1453.5	1512
n	257	257	316	316	348	348	396	438	438	481
n1	182	182	226	226	242	242	294	311,5	311,5	337
x	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



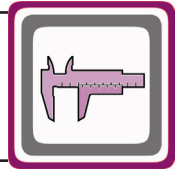
132-160-180-200-225-250

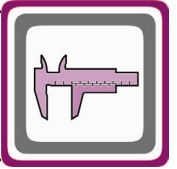
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

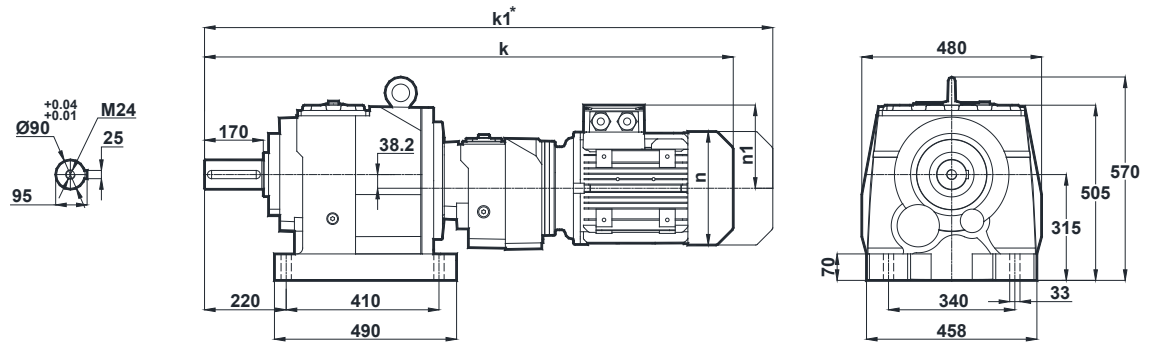
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



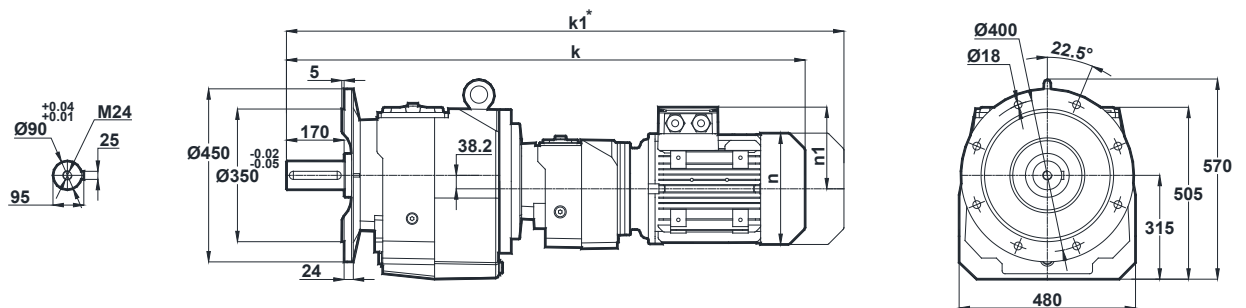


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR775
MR776

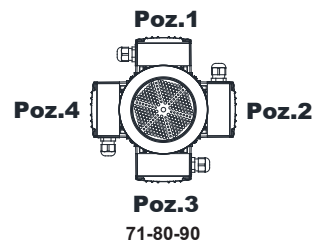


NR775
NR776

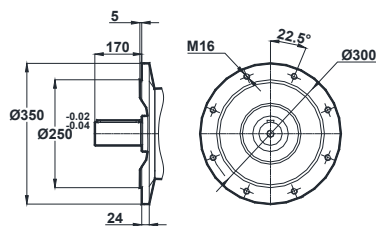


Motor Büyüklüğü / Motor Size / Motorbaugroße				
	71	80	90S	90L
k	1041.5	1075.5	1114.5	1114.5
k1	1132.5	1168.5	1193.5	1193.5
n	137	155	176	176
n1	118	127	136	136

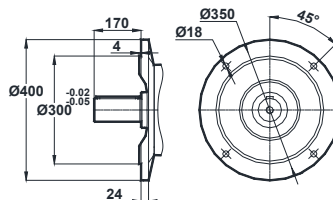
Klemens Kutusu / Terminal Box / Klemmenkasten



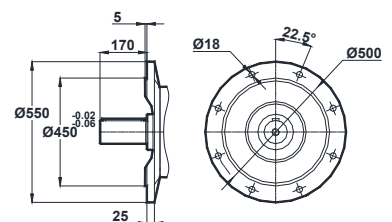
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

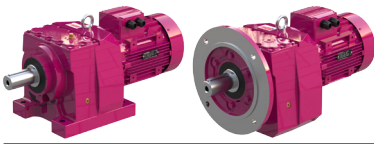


Opt. 2

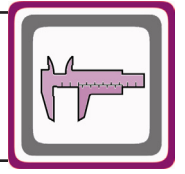


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

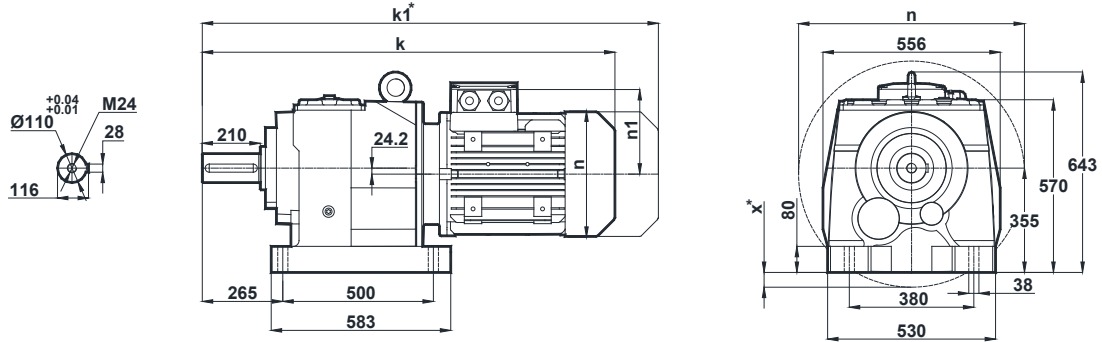


Ölçü Sayfaları Dimension Pages Abmessungsseiten

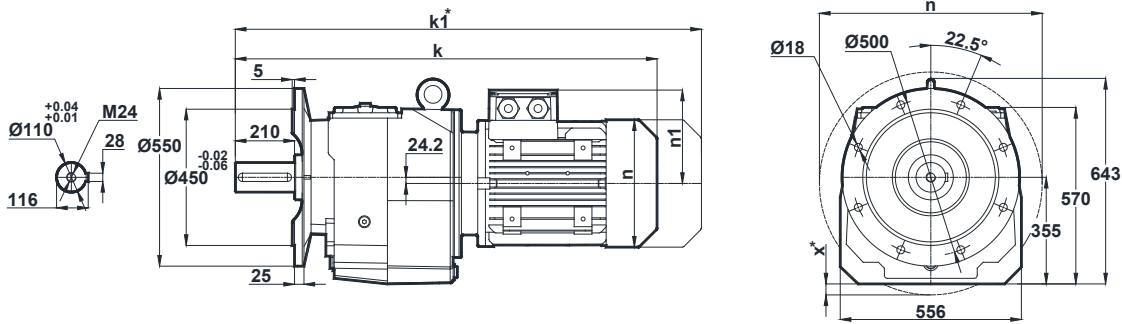


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR872 MR873

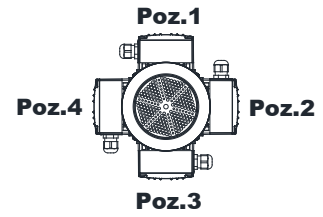


NR872 NR873



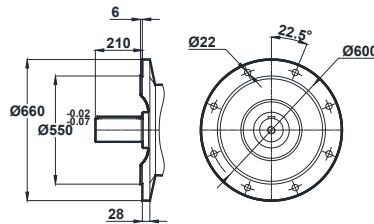
Motor Büyüklüğü / Motor Size / Motorbaugröße											
	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k	1109.5	1205.5	1205.5	1277.5	1277.5	1301	1382	1382	1465	1584	1584
k1	1239.5	1355.5	1355.5	1464.5	1464.5	1493	1565	1565	1622	1782	1782
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	226	226	242	242	294	311,5	311,5	337	402	402
x	-	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



132-160-180-200-225-250-280

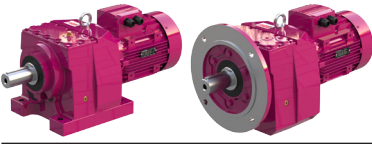
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



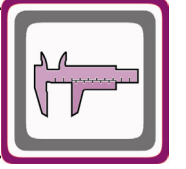
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

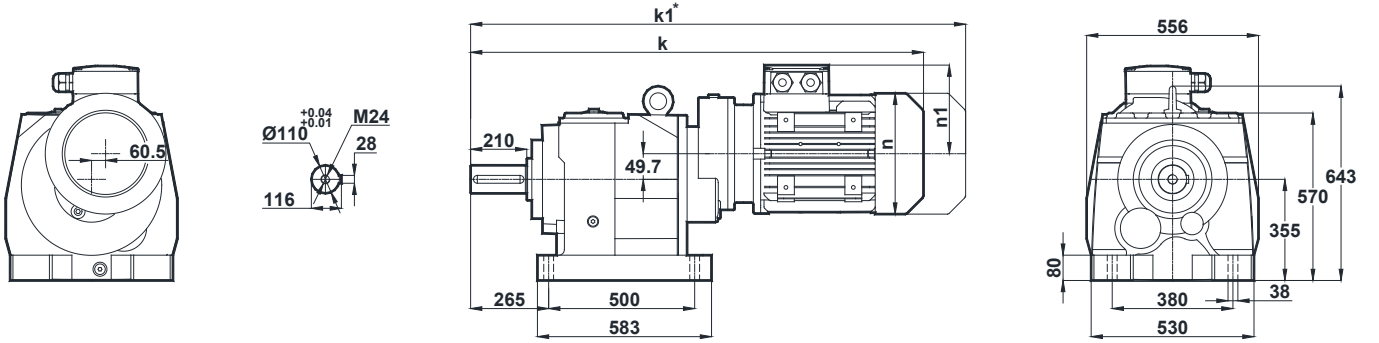


Ölçü Sayfaları Dimension Pages Abmessungsseiten

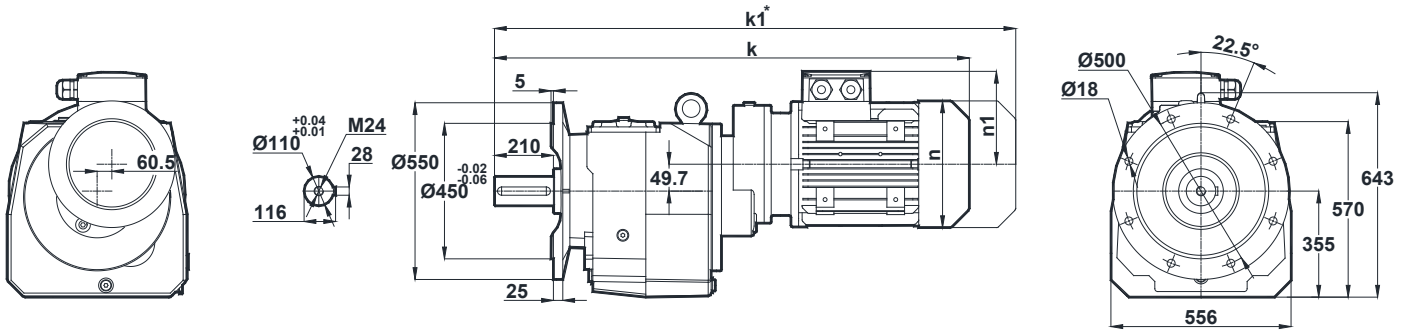


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR874

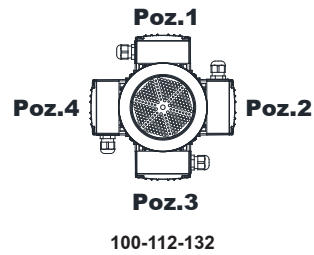


NR874

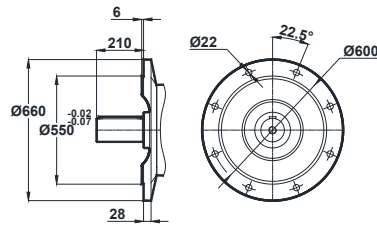


Motor Büyüklüğü / Motor Size / Motorbaugröße				
	100L	112M	132S	132M
k	1141	1165	1251.5	1251.5
k1	1249	1270	1381.5	1381.5
n	193	215	257	257
n1	149	161	182	182

Klemens Kutusu / Terminal Box / Klemmenkasten

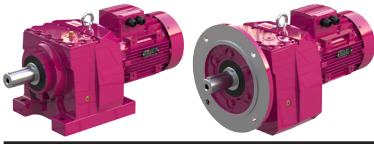


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

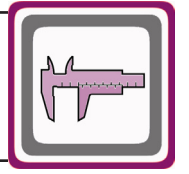


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

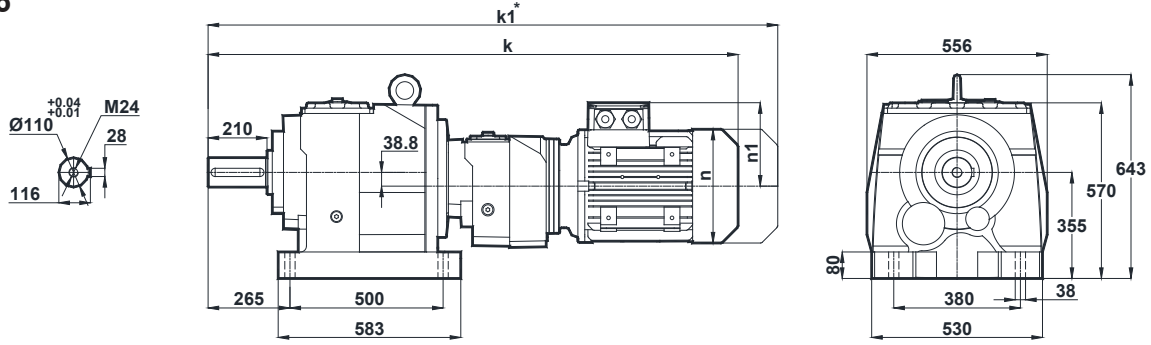


Ölçü Sayfaları Dimension Pages Abmessungsseiten

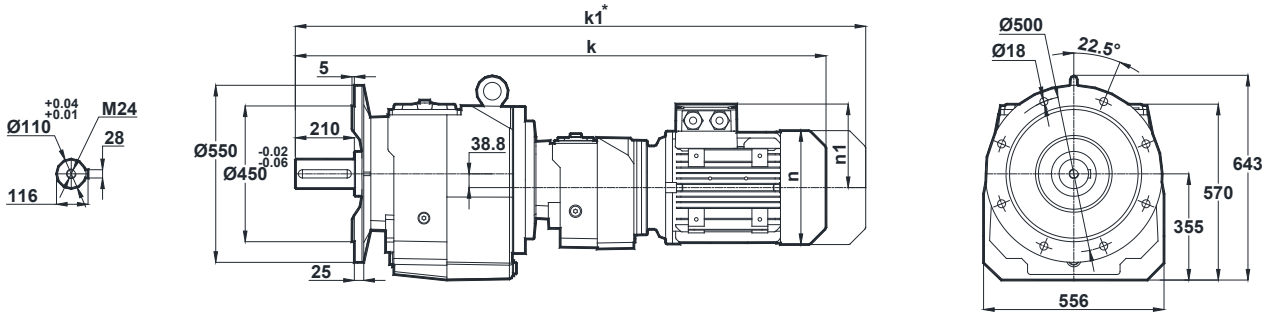


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR875 MR876

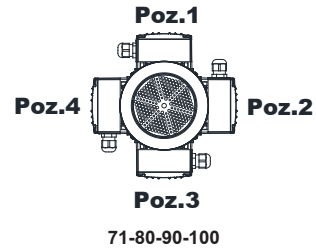


NR875 NR876

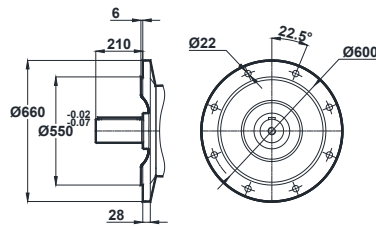


Motor Büyüklüğü / Motor Size / Motorbaugroße					
	71	80	90S	90L	100L
k	1158.5	1192.5	1231.5	1231.5	1279.5
k1	1249.5	1285.5	1310.5	1310.5	1387.5
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu / Terminal Box / Klemmenkasten

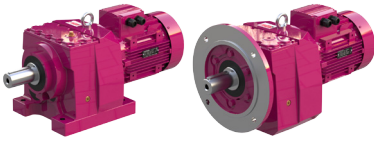


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

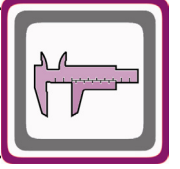


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

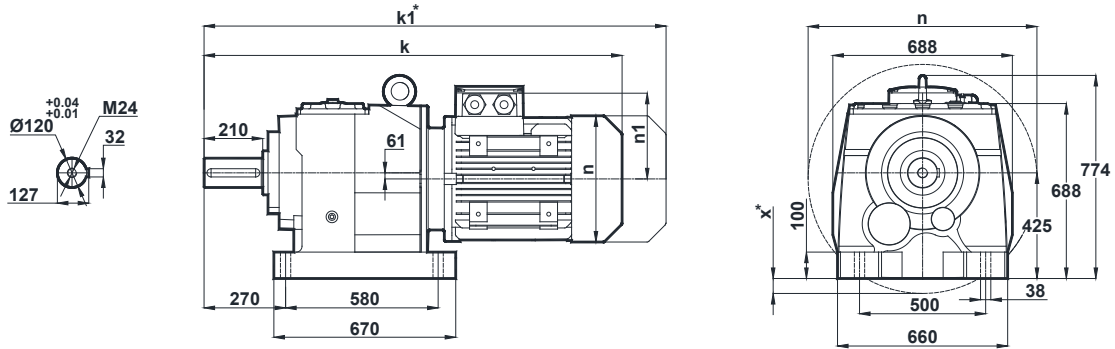


Ölçü Sayfaları Dimension Pages Abmessungenseiten

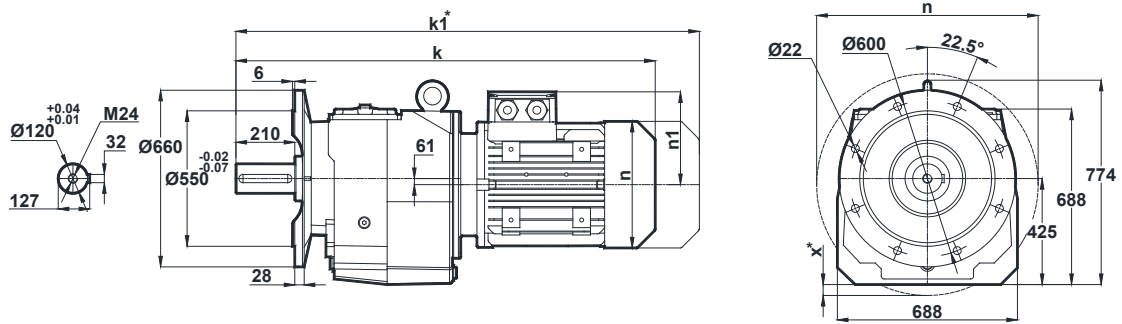


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR972 MR973

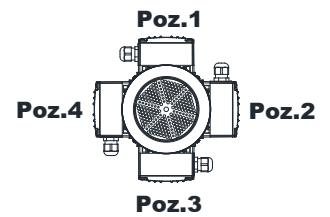


NR972 NR973



Motor Büyüklüğü / Motor Size / Motorbaugröße													
	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L
k	1271	1271	1343	1343	1366.5	1402.5	1434.5	1517.5	1636.5	1636.5	1850.5	1850.5	1850.5
k1	1421	1421	1530	1530	1558.5	1585.5	1617.5	1674.5	1834.5	1834.5	2259.5	2259.5	2259.5
n	316	316	348	348	396	438	438	481	547	547	622	622	622
n1	226	226	242	242	294	311,5	311,5	337	402	402	499	499	499
x	-	-	-	-	-	-	-	-	-	-	-	-	-

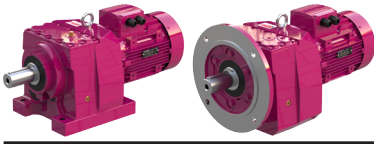
Klemens Kutusu / Terminal Box / Klemmenkasten



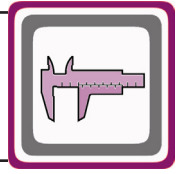
160-180-200-225-250-280-315

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

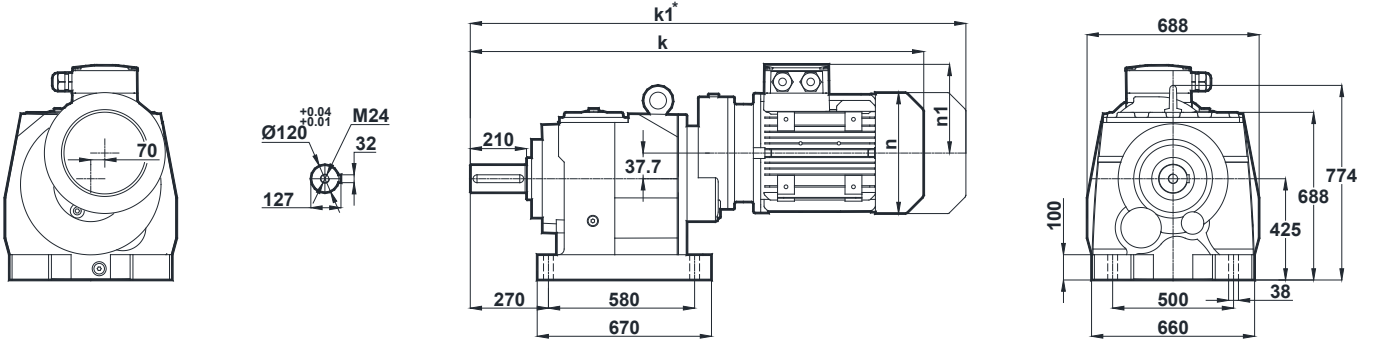


Ölçü Sayfaları Dimension Pages Abmessungsseiten

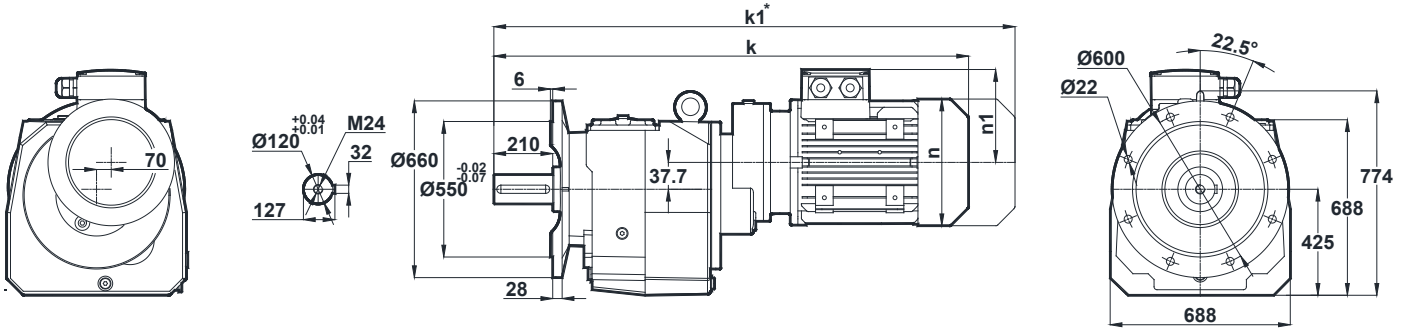


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR974

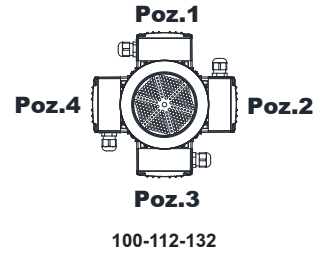


NR974

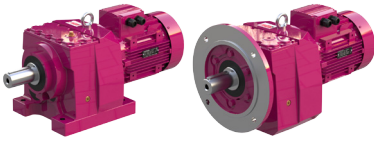


Motor Büyüklüğü / Motor Size / Motorbaugröße				
	100L	112M	132S	132M
k	1240.5	1264.5	1351	1351
k1	1348.5	1369.5	1481	1481
n	193	215	257	257
n1	149	161	182	182

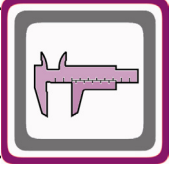
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

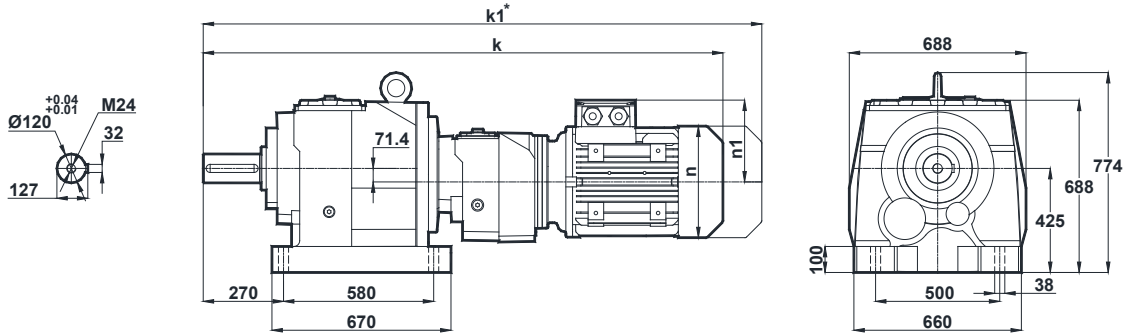


Ölçü Sayfaları Dimension Pages Abmessungsseiten

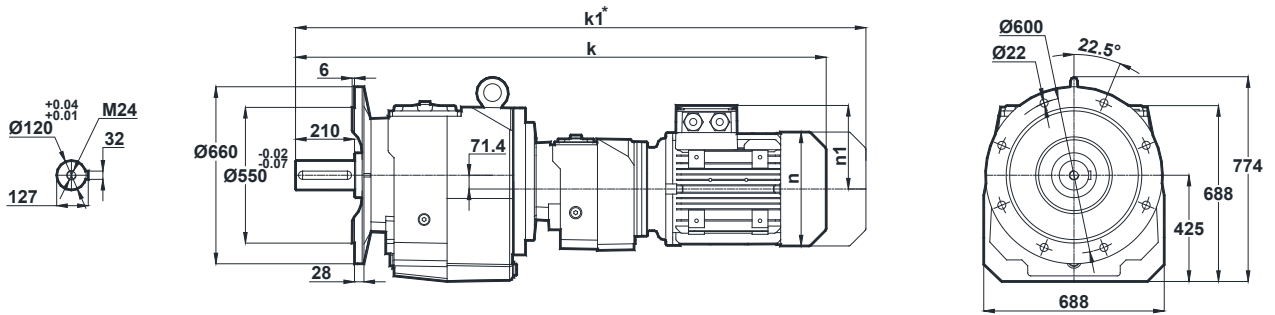


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MR975 MR976

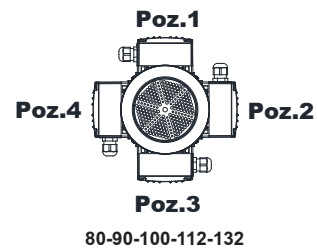


NR975 NR976

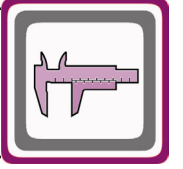
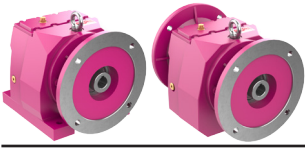


Motor Büyüklüğü / Motor Size / Motorbaugroße						
	80	90S	90L	100L	112M	132S
k	1319	1358	1358	1403	1427	1512
k1	1412	1437	1437	1511	1532	1642
n	155	176	176	193	215	257
n1	127	136	136	149	161	182

Klemens Kutusu / Terminal Box / Klemmenkasten

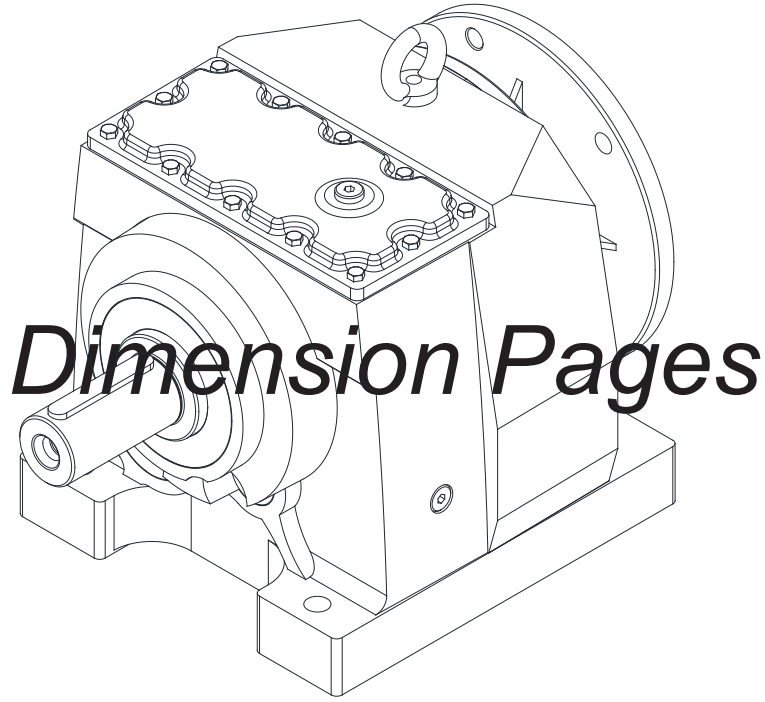


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.



MN & NN Serisi / Serie

Ölçü Sayfaları

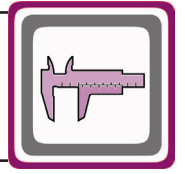


Dimension Pages

Abmessungsseiten

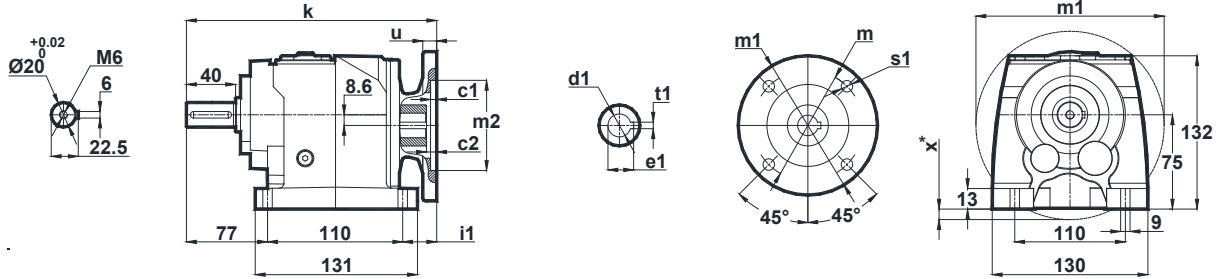


Ölçü Sayfaları Dimension Pages Abmessungsseiten

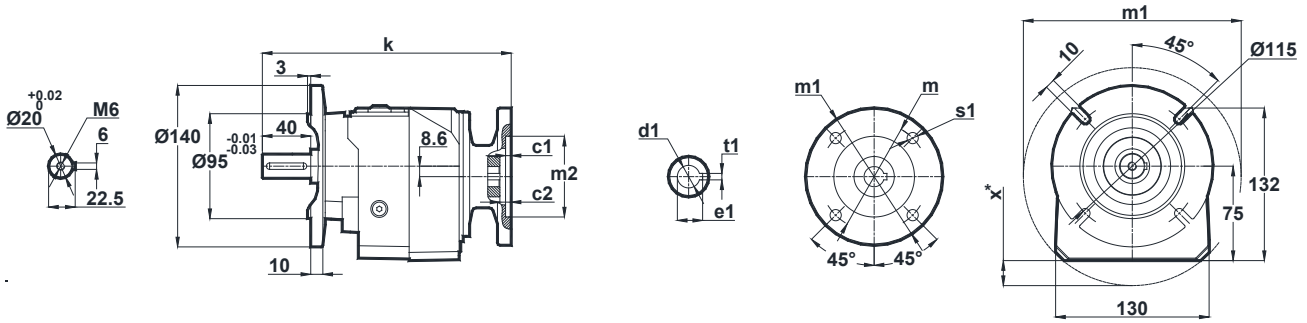


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN002-A.. MN003-A..

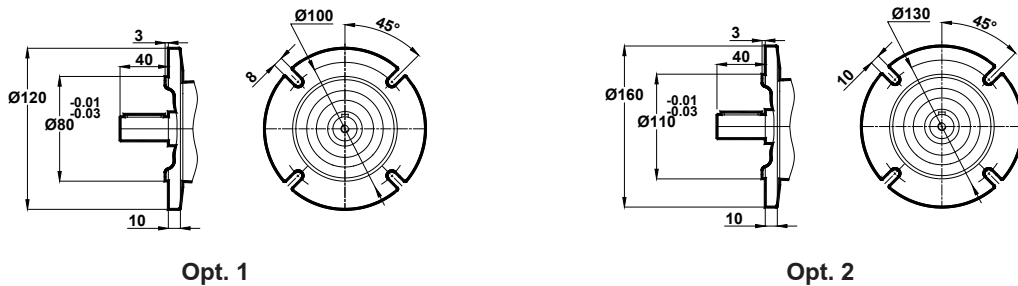


NN002-A.. NN003-A..

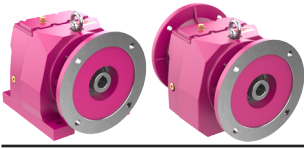


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	27	10	214	11	4	12.8	-
71/B5	4	4.5	11	130	160	110	28.5	12	215.5	14	5	16.3	3
80/B5	4	5	12	165	200	130	43.5	12	230.5	19	6	21.8	12
90/B5	4	5	12	165	200	130	43.5	12	230.5	24	8	27.3	22

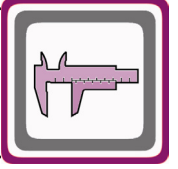
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

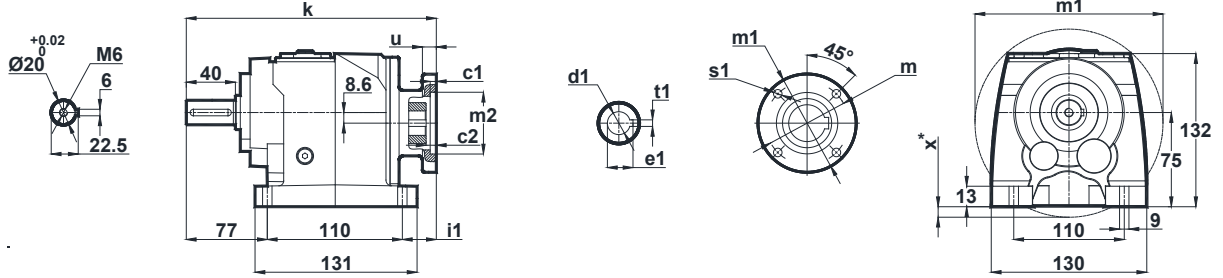


Ölçü Sayfaları Dimension Pages Abmessungsseiten

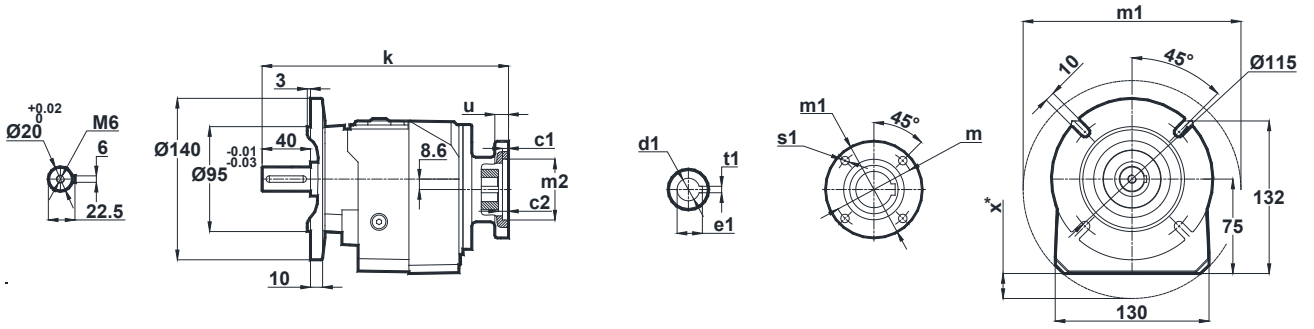


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN002-B.. MN003-B..

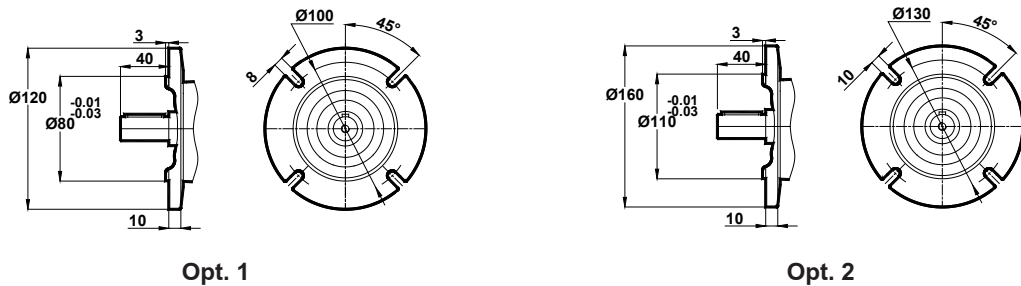


NN002-B.. NN003-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B14	2.5	5	5.5	75	90	60	27	10	214	11	4	12.8	-
71/B14	3	4.5	7	85	105	70	28.5	10	215.5	14	5	16.3	3
80/B14	4	5	7	100	120	80	43.5	12	230.5	19	6	21.8	12
90/B14	4	5	9	115	140	95	43.5	12	230.5	24	8	27.3	22

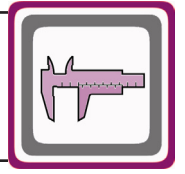
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

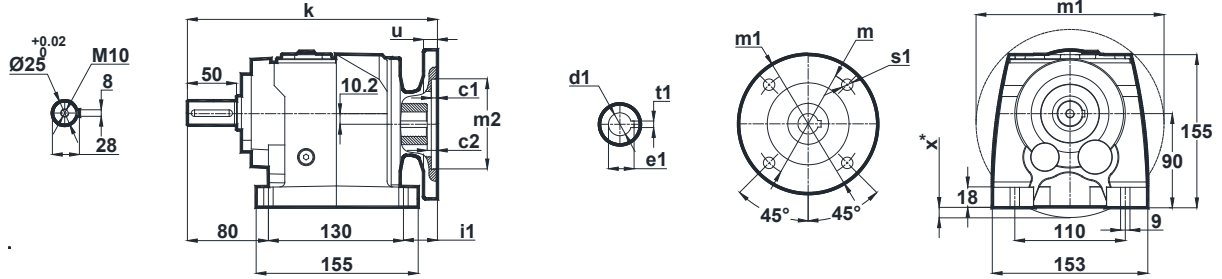


Ölçü Sayfaları Dimension Pages Abmessungsseiten

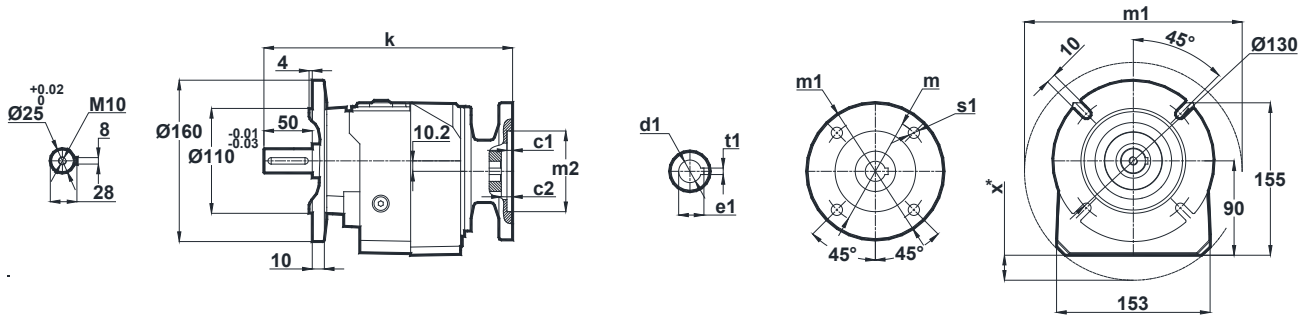


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN102-A.. MN103-A..

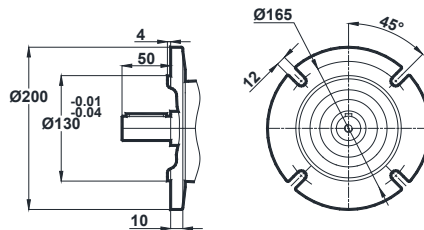


NN102-A.. NN103-A..



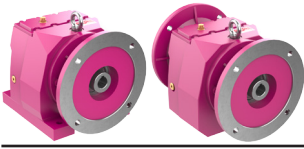
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	30	12	241	11	4	12.8	-
71/B5	4	4.5	12	130	160	110	31.5	12	242.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	46.5	12	257.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	46.5	12	257.5	24	8	27.3	9

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

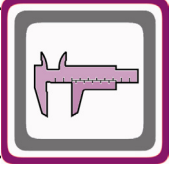


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

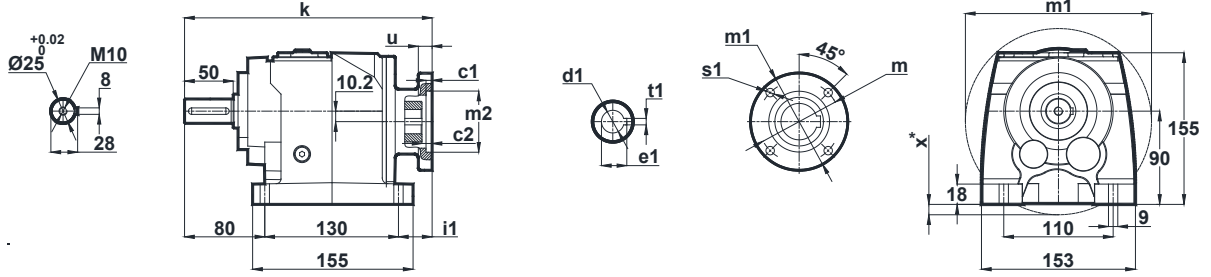


Ölçü Sayfaları Dimension Pages Abmessungenseiten

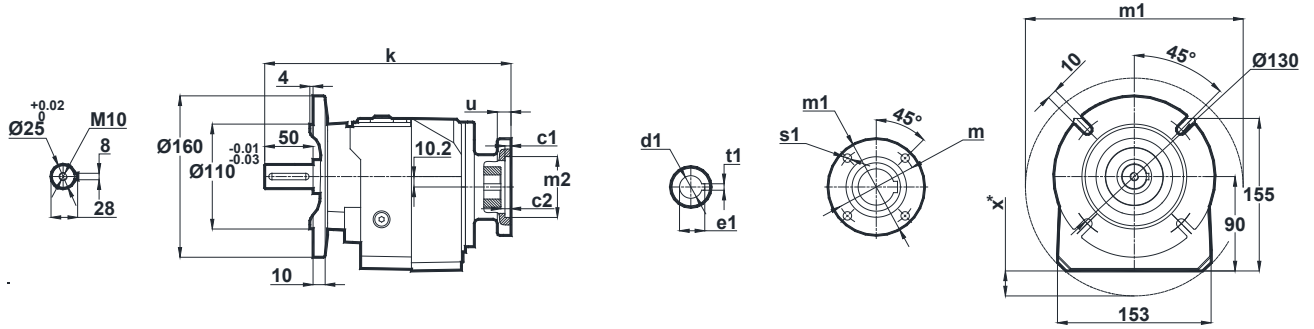


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN102-B.. MN103-B..

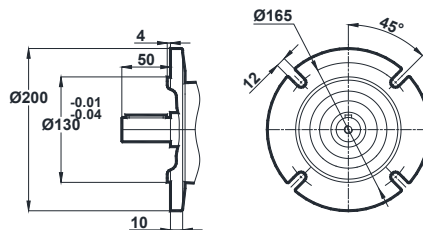


NN102-B.. NN103-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B14	2.5	5	5.5	75	90	60	30	10	241	11	4	12.8	-
71/B14	3	4.5	7	85	105	70	31.5	10	242.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	46.5	12	257.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	46.5	12	257.5	24	8	27.3	9

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

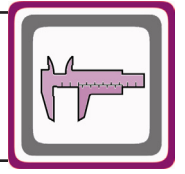


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

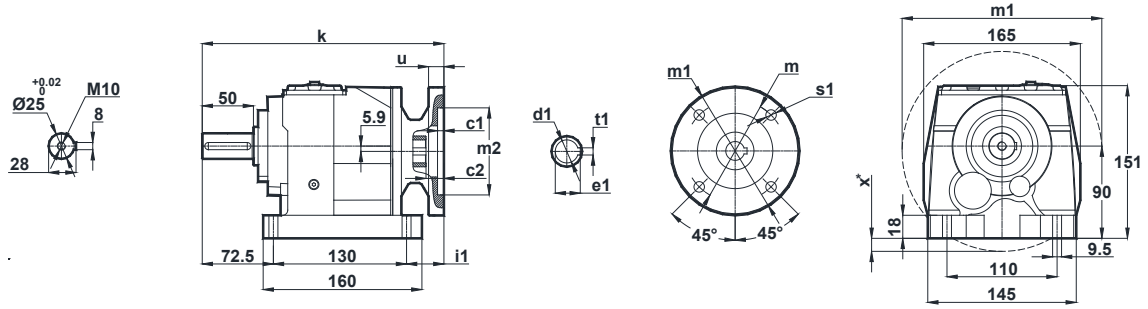


Ölçü Sayfaları Dimension Pages Abmessungsseiten

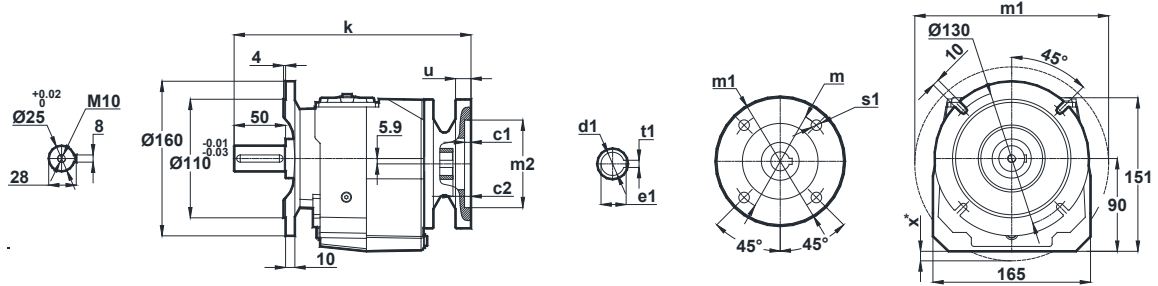


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN172-A.. MN173-A..

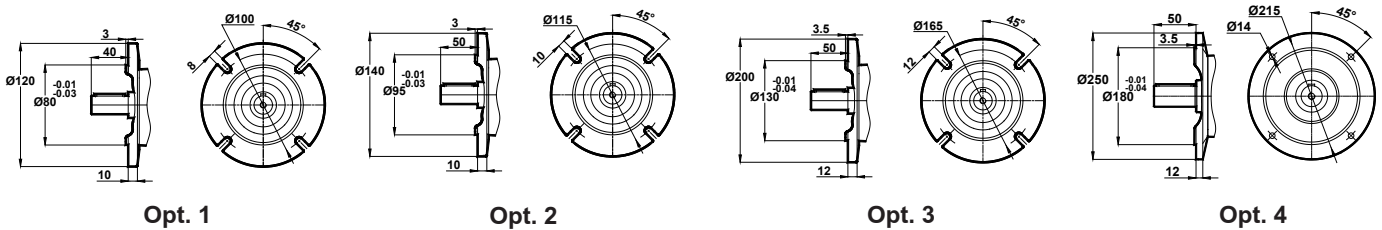


NN172-A.. NN173-A..

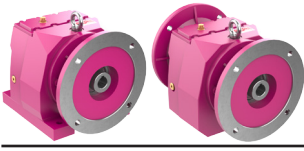


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	38.5	10	241	11	4	12.8	-
71/B5	4	4.5	11	130	160	110	40	12	242.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	55	12	257.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	55	12	257.5	24	8	27.3	4
100/B5	4.5	5	15	215	250	180	66	12	268.5	28	8	31.3	13
112/B5	4.5	5	15	215	250	180	66	12	268.5	28	8	31.3	24

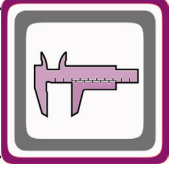
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

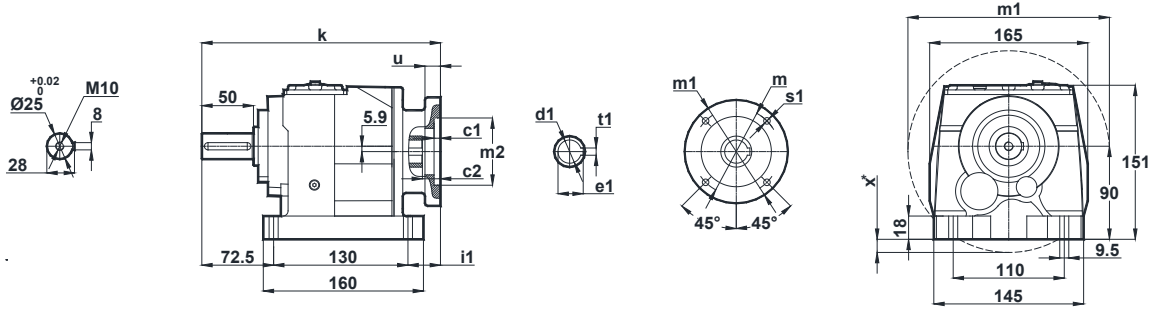


Ölçü Sayfaları Dimension Pages Abmessungenseiten

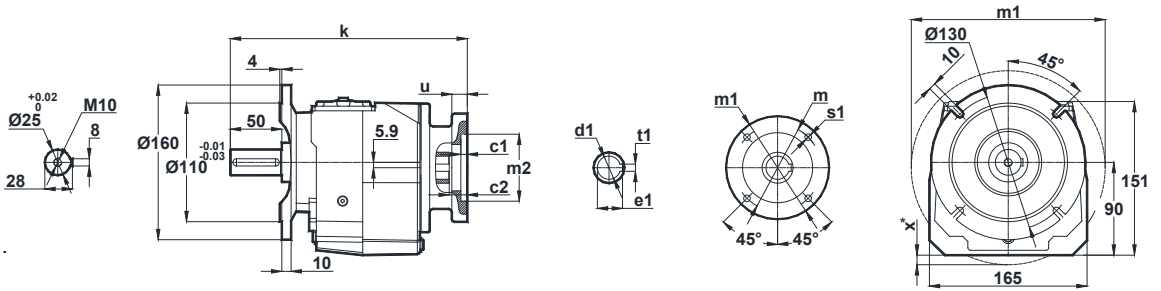


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN172-B.. MN173-B..

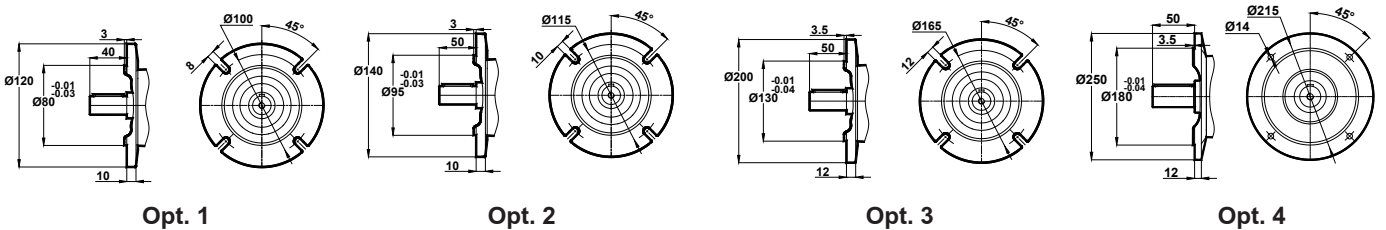


NN172-B.. NN173-B..

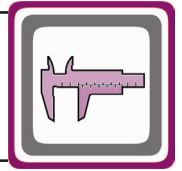


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B14	2.5	5	5.5	75	90	60	38.5	10	241	11	4	12.8	-
71/B14	3	4.5	7	85	105	70	40	10	242.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	55	12	257.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	55	12	257.5	24	8	27.3	4
100/B14	4	5.5	9	130	160	110	66	12	268.5	28	8	31.3	13
112/B14	4	5.5	9	130	160	110	66	12	268.5	28	8	31.3	24

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

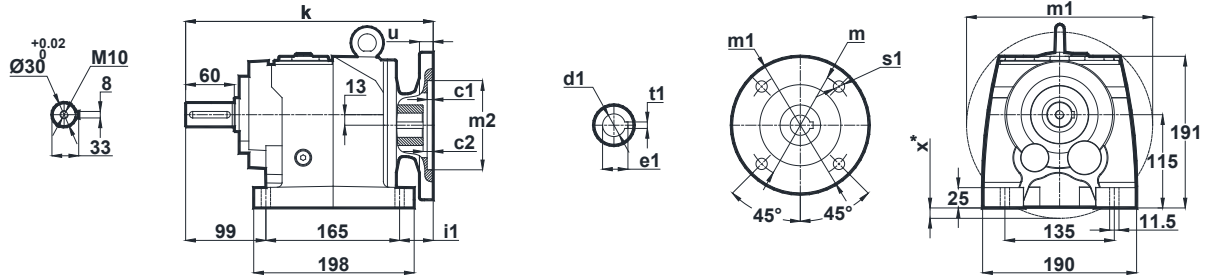


x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

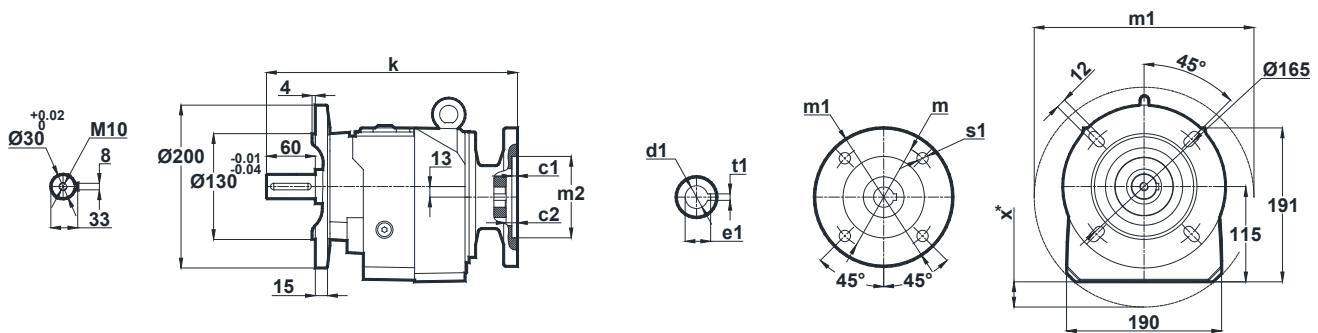


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN202-A..
MN203-A..

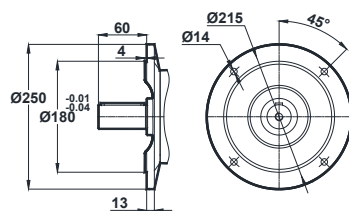


NN202-A..
NN203-A..

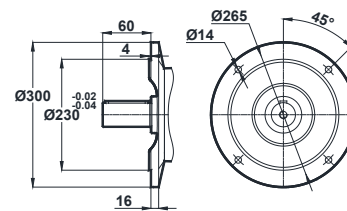


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	58.5	12	322.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	29.5	12	293.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	58.5	12	322.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	58.5	12	322.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	51.5	12	315.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	51.5	12	315.5	28	8	31.3	6

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

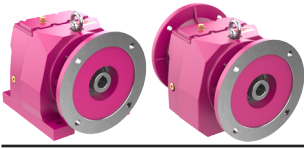


Opt. 1

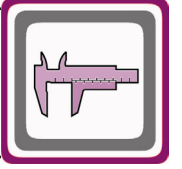


Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

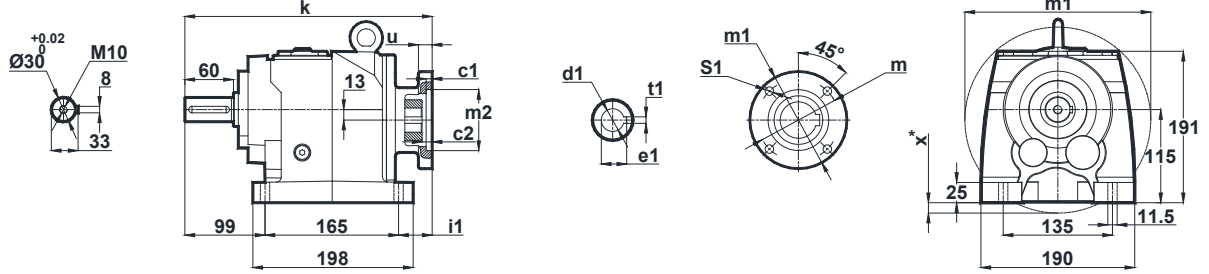


Ölçü Sayfaları Dimension Pages Abmessungenseiten

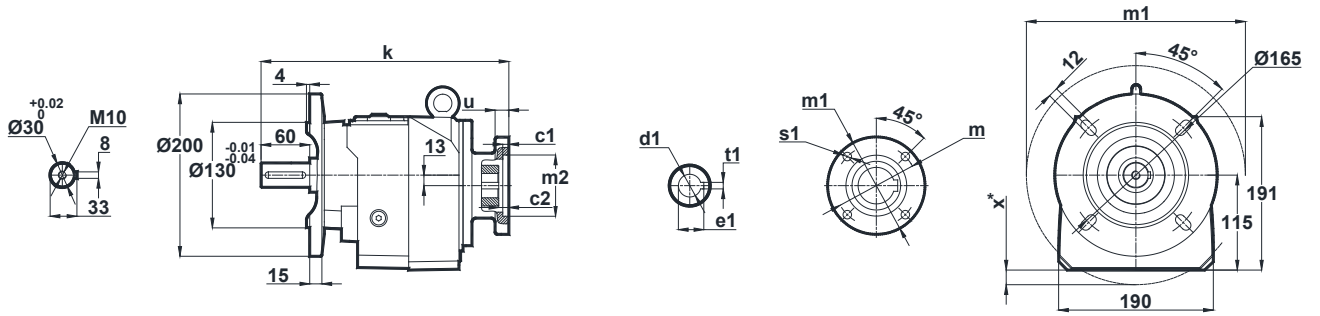


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN202-B.. MN203-B..

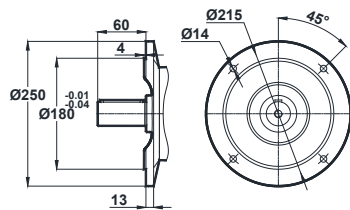


NN202-B.. NN203-B..

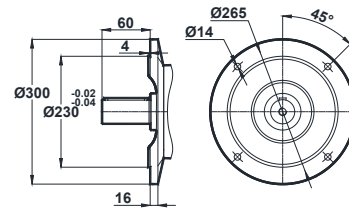


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	29.5	10	293.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	58.5	12	322.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	58.5	12	322.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	51.5	12	315.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	51.5	12	315.5	28	8	31.3	6

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

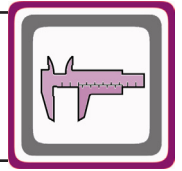


Opt. 1



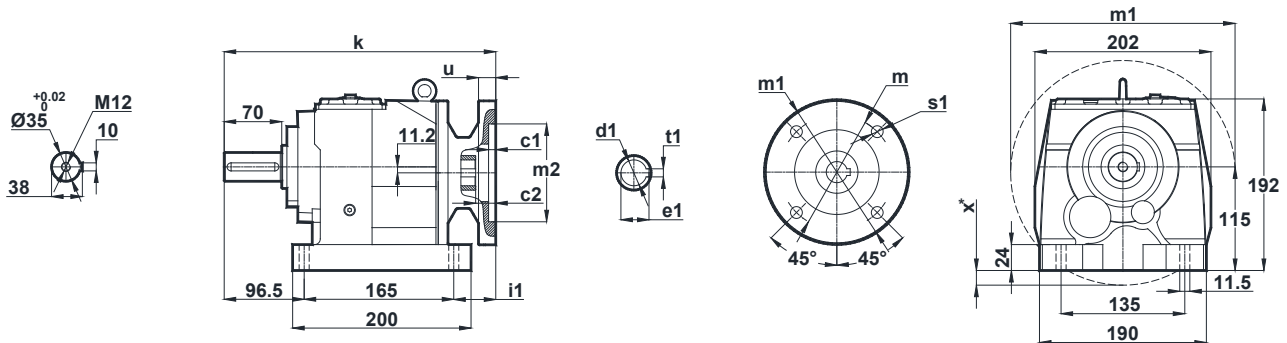
Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

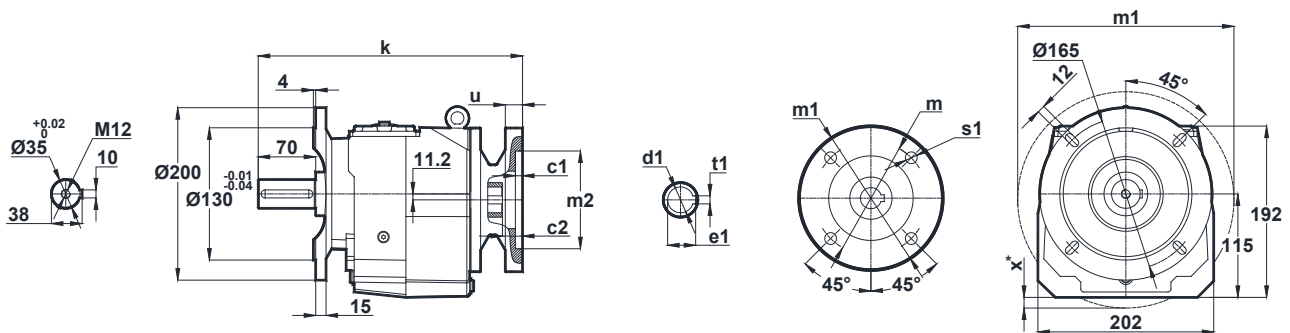


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN272-A..
MN273-A..

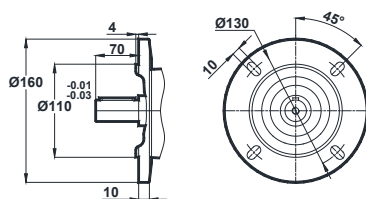


NN272-A..
NN273-A..

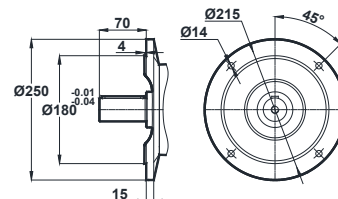


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	62	12	323.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	33	12	294.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	62	12	323.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	62	12	323.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	55	12	316.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	55	12	316.5	28	8	31.3	4
132/B5	4.5	7	15	265	300	230	102	15	363.5	38	10	41.3	25

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

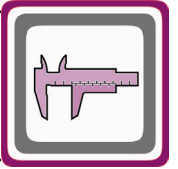


Opt. 1



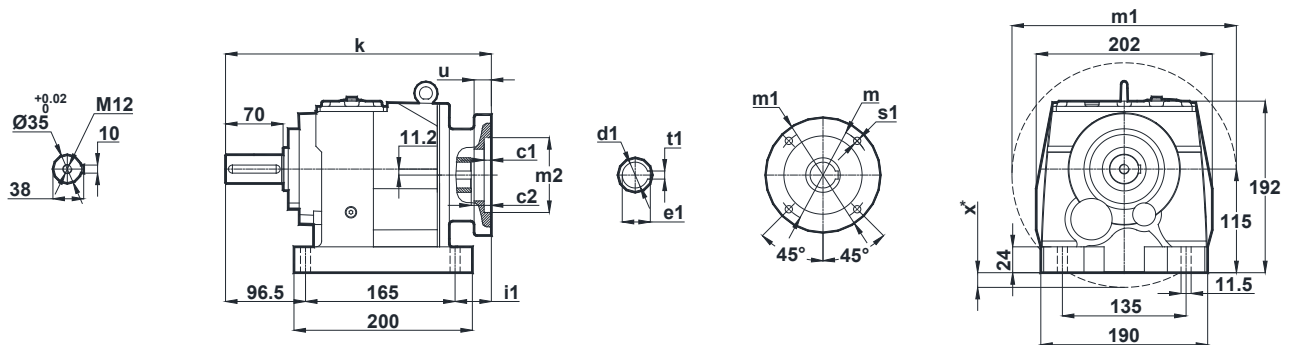
Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

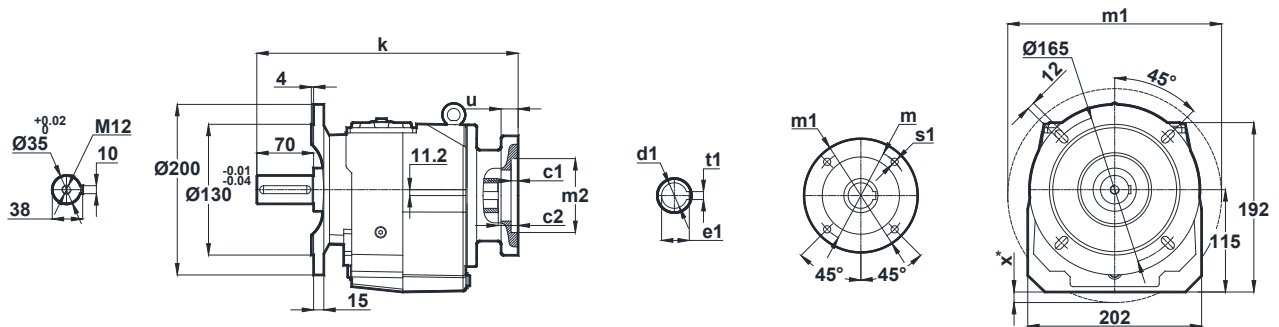


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN272-B..
MN273-B..

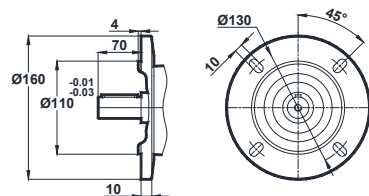


NN272-B..
NN273-B..

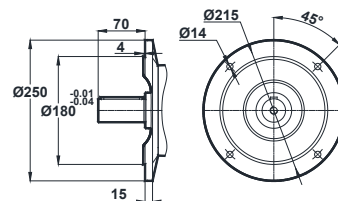


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	33	10	294.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	62	12	323.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	62	12	323.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	55	12	316.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	55	12	316.5	28	8	31.3	4
132/B14	4.5	6	11	165	200	130	102	15	363.5	38	10	41.3	25

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

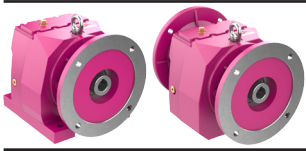


Opt. 1

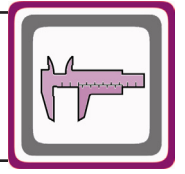


Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

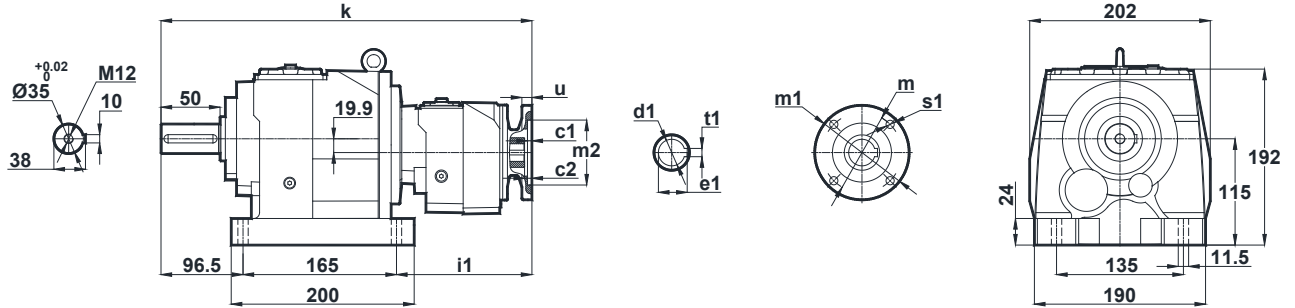


Ölçü Sayfaları Dimension Pages Abmessungsseiten

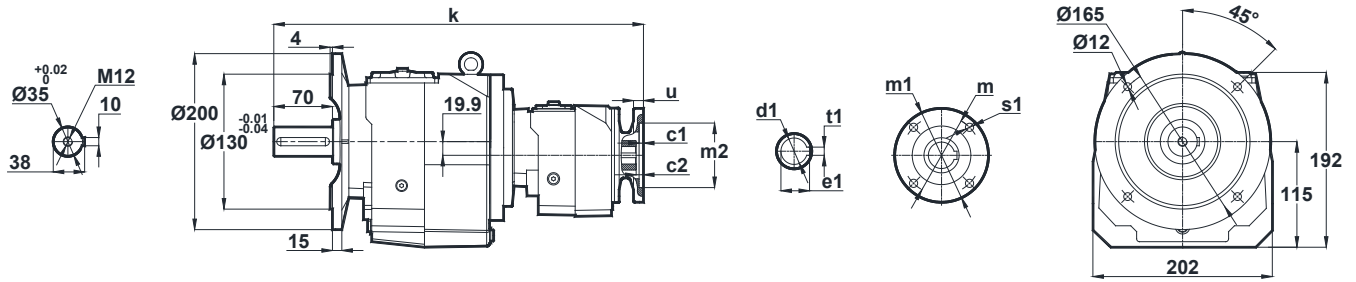


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN275-A.. MN276-A..

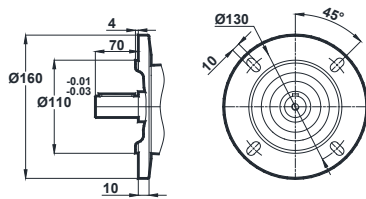


NN275-A.. NN276-A..

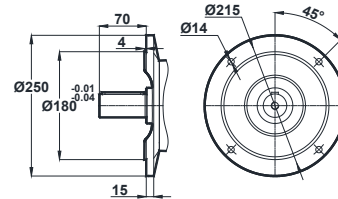


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	177.5	10	439	11	4	12.8
71/B5	4	4.5	11	130	160	110	179	12	440.5	14	5	16.3

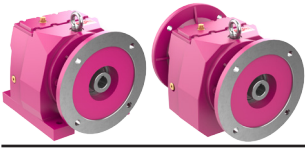
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



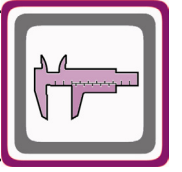
Opt. 1



Opt. 2

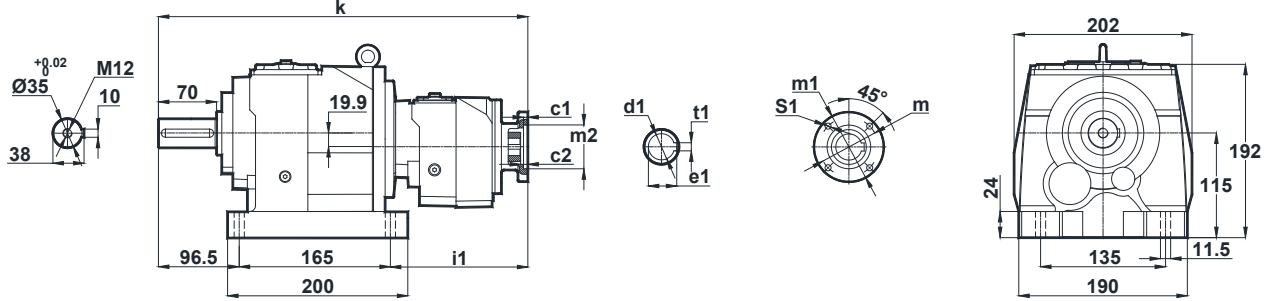


Ölçü Sayfaları Dimension Pages Abmessungsseiten

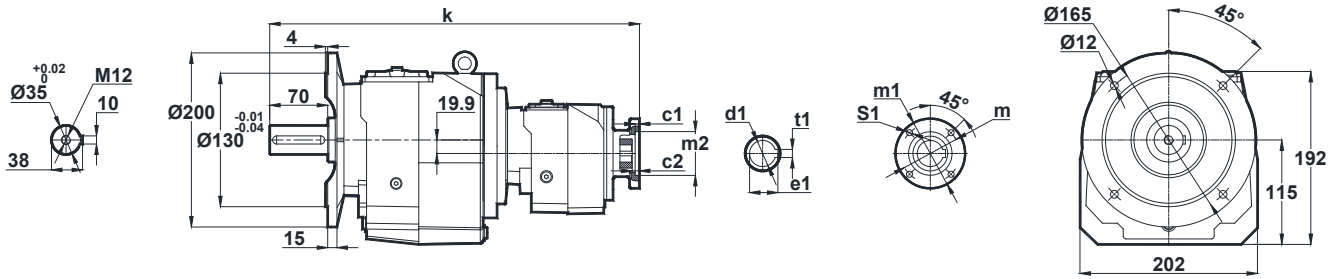


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN275-B.. MN276-B..

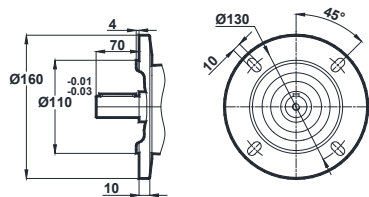


NN275-B.. NN276-B..

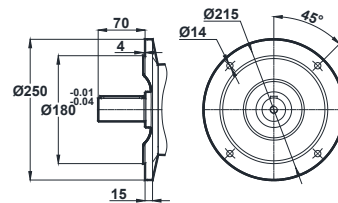


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B14	2.5	5	5.5	75	90	60	177.5	10	439	11	4	12.8
71/B14	3	4.5	7	85	105	70	179	10	440.5	14	5	16.3

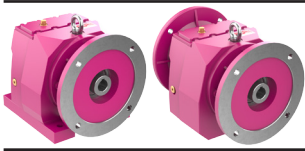
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



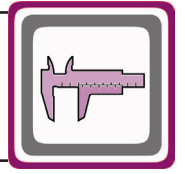
Opt. 1



Opt. 2

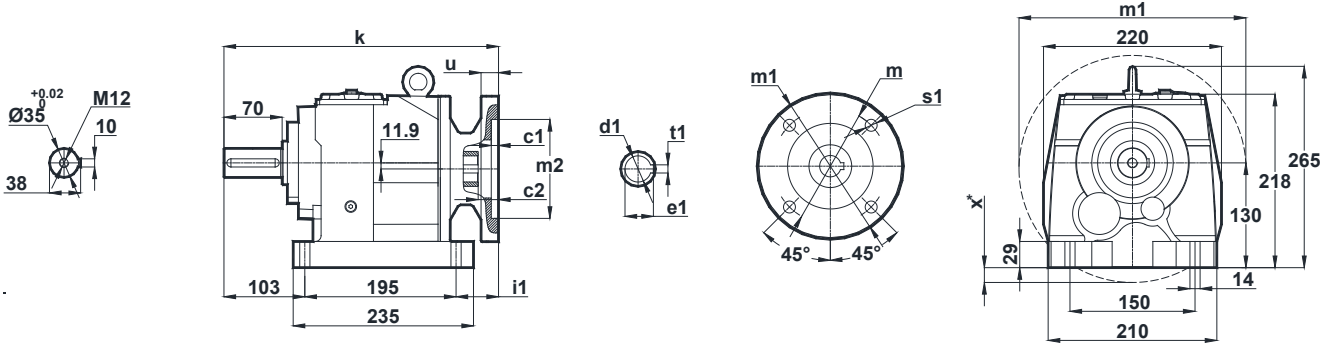


Ölçü Sayfaları Dimension Pages Abmessungsseiten

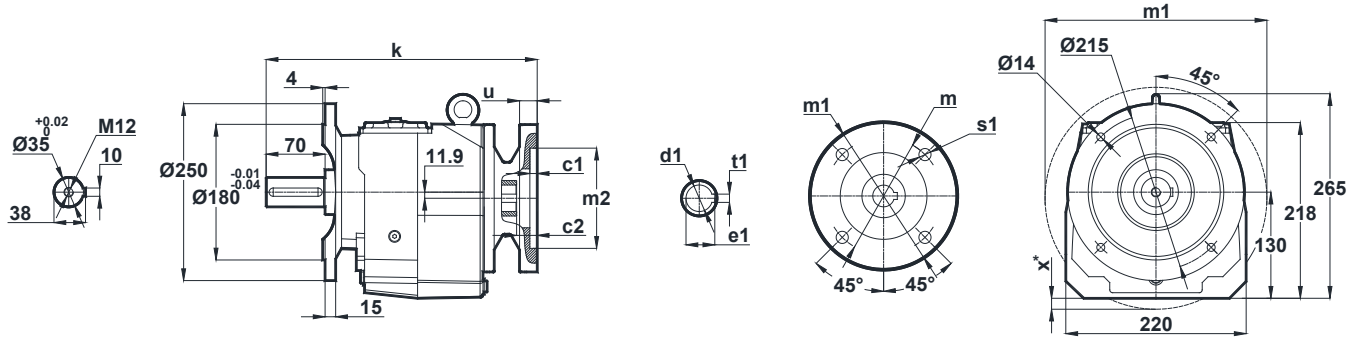


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN282-A.. MN283-A..

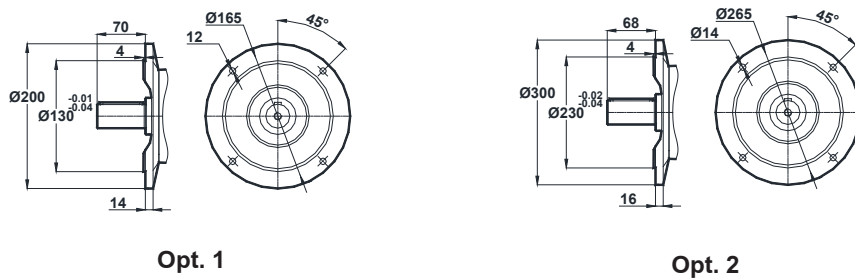


NN282-A.. NN283-A..

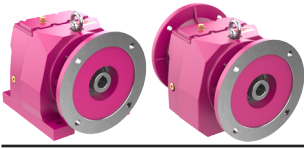


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	45	12	343	14	5	16.3	-
80/B5	4	9	12	165	200	130	45	12	343	19	6	21.8	-
90/B5	4	9	12	165	200	130	45	12	343	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	62	15	360	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	62	15	360	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	82	15	380	38	10	41.3	11
160/B5	5,5	10	19	300	350	250	161,5	20	459.5	42	12	45.3	40

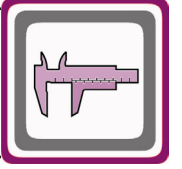
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

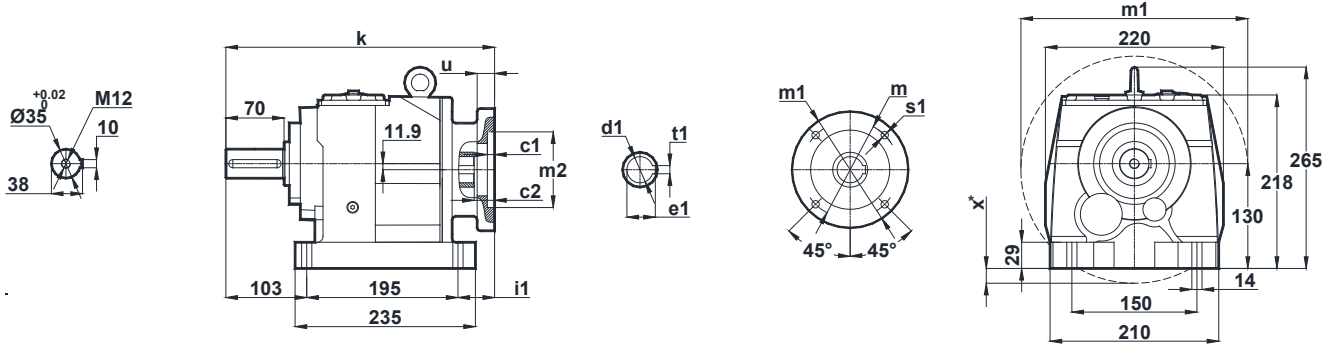


Ölçü Sayfaları Dimension Pages Abmessungenseiten

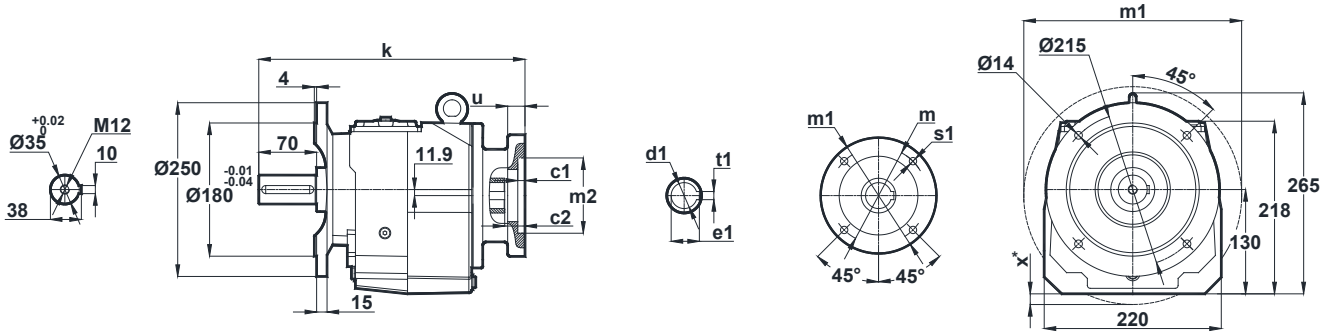


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN282-B.. MN283-B..

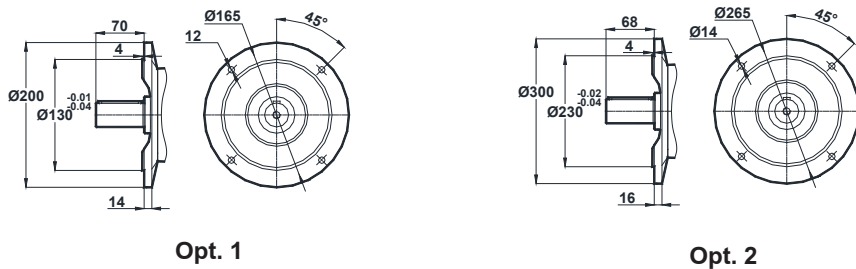


NN282-B.. NN283-B..

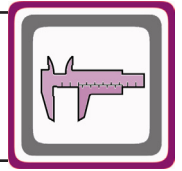


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	45	12	343	19	6	21.8	-
90/B14	4	9	9	115	140	95	45	12	343	24	8	26.3	-
100/B14	4	9	9	130	160	110	62	15	360	28	8	31.3	-
112/B14	4	9	9	130	160	110	62	15	360	28	8	31.3	-
132/B14	4.5	7	11	165	200	130	82	15	380	38	10	41.3	11

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

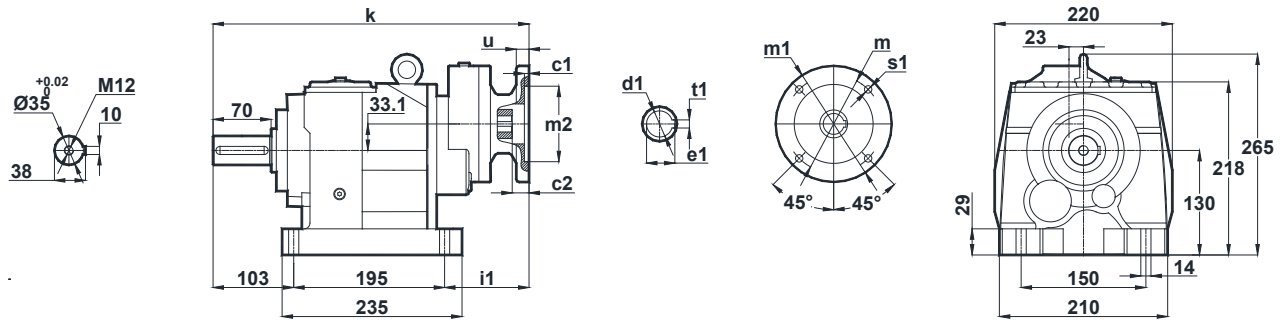


x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

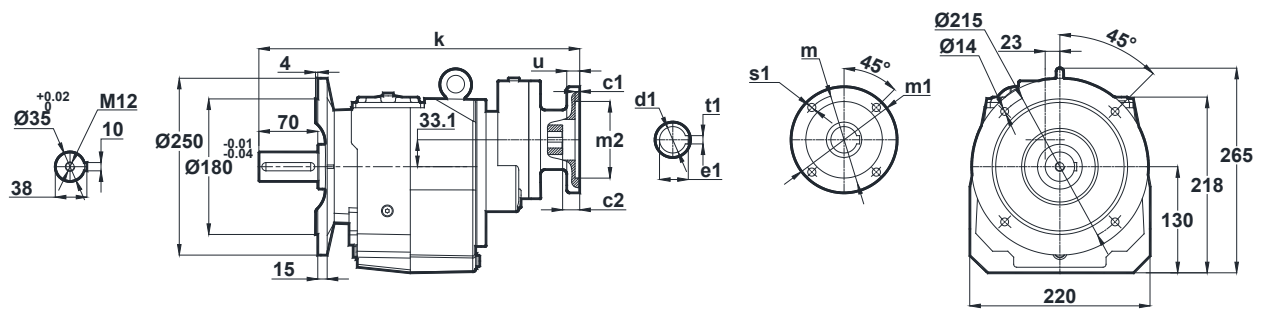


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN284-A..
MN284-B..

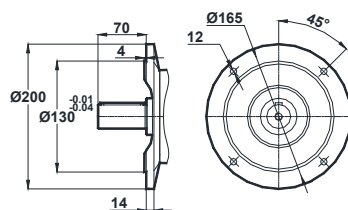


NN284-A..
NN284-B..

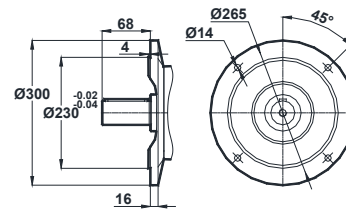


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	122	10	420	11	4	12.8
71/B5	4	4.5	11	130	160	110	93	12	391	14	5	16.3
71/B14	3	4.5	7	85	105	70	93	10	391	14	5	16.3

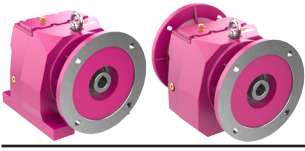
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



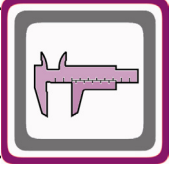
Opt. 1



Opt. 2

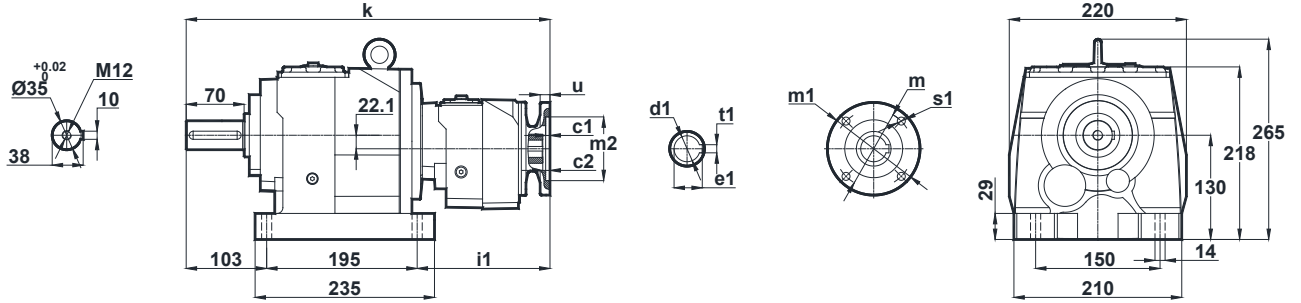


Ölçü Sayfaları Dimension Pages Abmessungenseiten

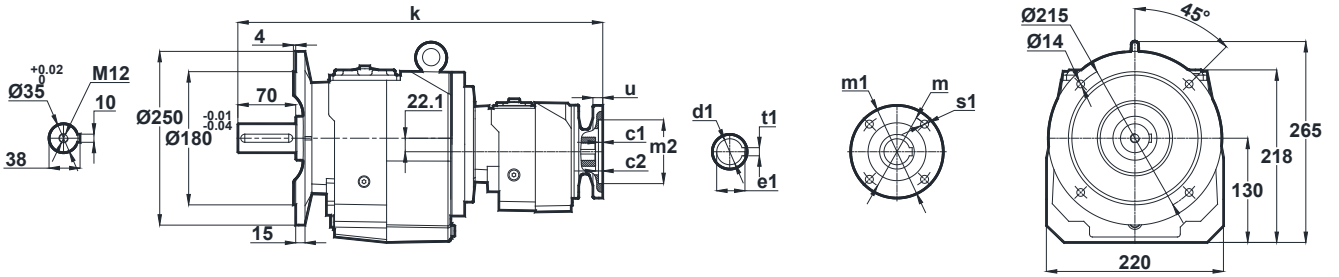


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN285-A.. / B.. MN286-A.. / B..

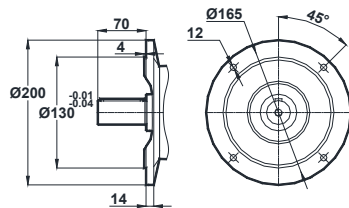


NN285-A.. / B.. NN286-A.. / B..

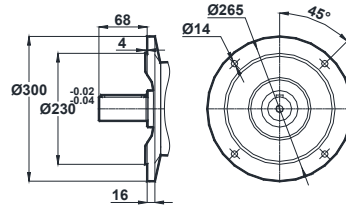


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	186.5	12	488	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	186.5	10	488	11	4	12.8

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



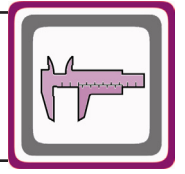
Opt. 1



Opt. 2

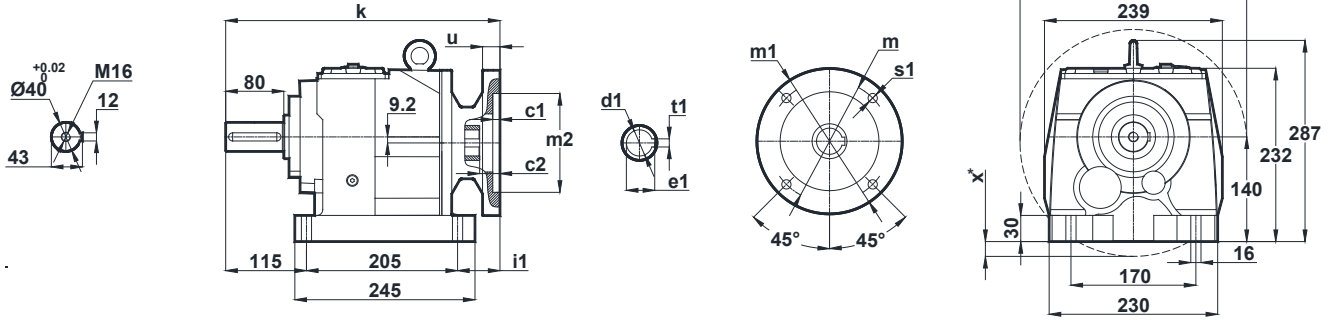


Ölçü Sayfaları Dimension Pages Abmessungsseiten

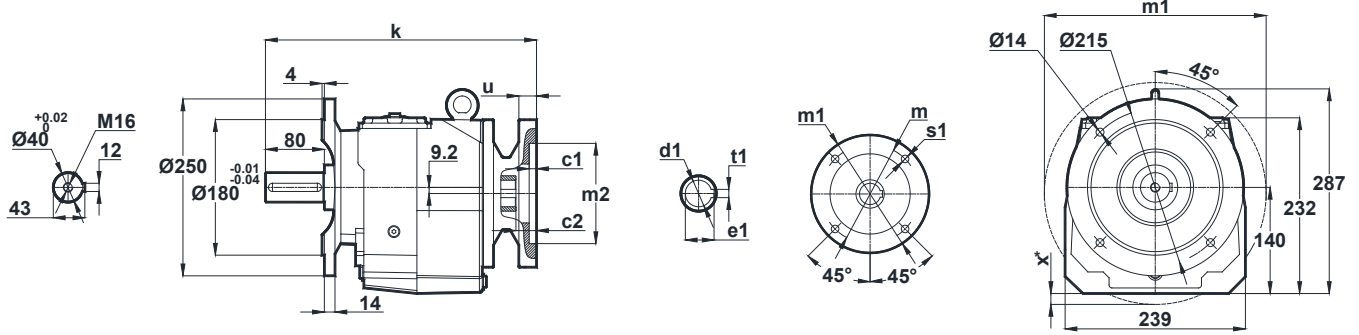


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN372-A.. MN373-A..

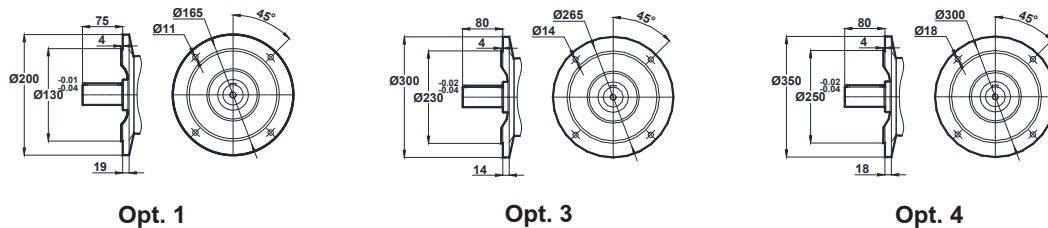


NN372-A.. NN373-A..

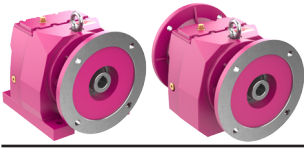


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	43.5	12	364	14	5	16.3	-
80/B5	4	9	12	165	200	130	43.5	12	364	19	6	21.8	-
90/B5	4	9	12	165	200	130	43.5	12	364	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	60.5	15	381	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	60.5	15	381	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	80.5	15	401	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	160	20	480.5	42	12	45.3	28

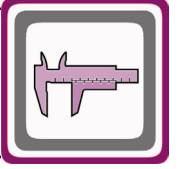
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

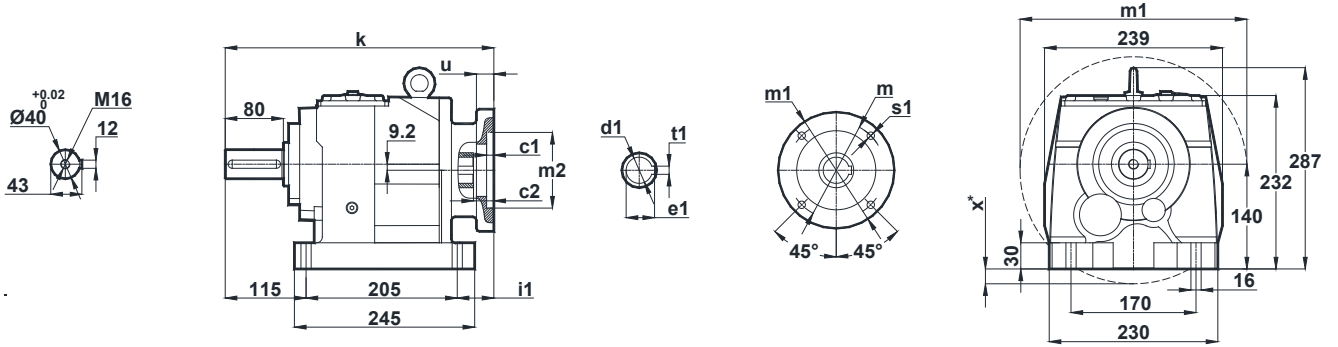


Ölçü Sayfaları Dimension Pages Abmessungsseiten

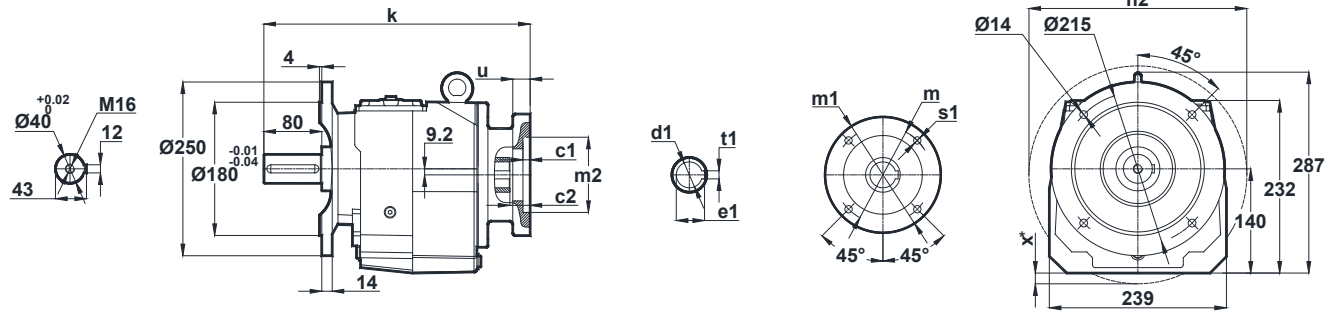


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN372-B.. MN373-B..

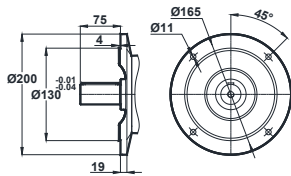


NN372-B.. NN373-B..

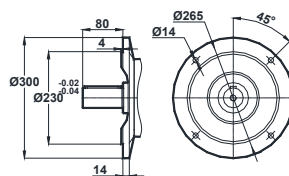


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	43.5	12	364	19	6	21.8	-
90/B14	4	9	9	115	140	95	43.5	12	364	24	8	27.3	-
100/B14	4	9	9	130	160	110	60.5	15	381	28	8	31.3	-
112/B14	4	9	9	130	160	110	60.5	15	381	28	8	31.3	-
132/B14	4.5	9	11	165	200	130	80.5	15	401	38	10	41.3	-

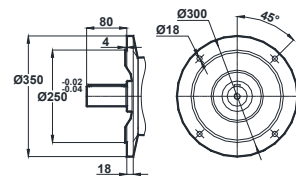
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

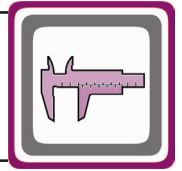


Opt. 2



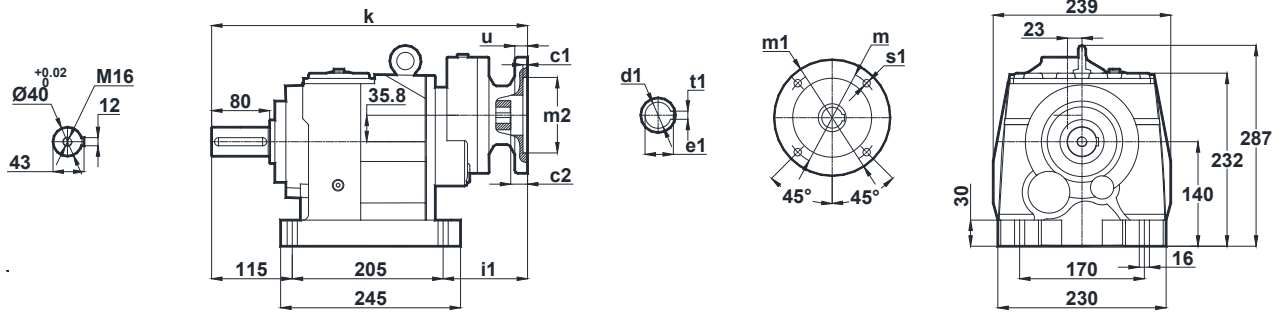
Opt. 3

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

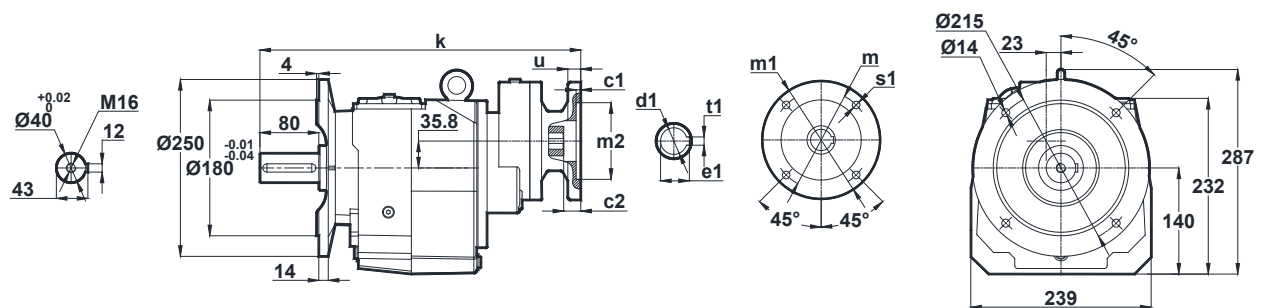


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN374-A..
MN374-B..

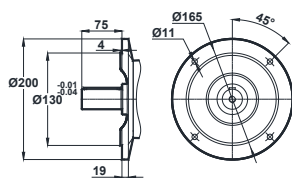


NN374-A..
NN374-B..

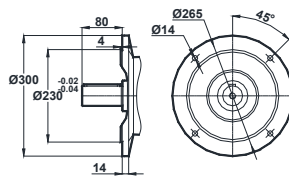


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	120.5	12	441	11	4	12.8
71/B5	4	8.5	11	130	160	110	91.5	12	412	14	5	16.3
80/B5	4	5	12	165	200	130	120.5	12	441	19	6	21.8
71/B14	3	8.5	7	85	105	70	91.5	10	412	14	5	16.3
80/B14	4	5	7	100	120	80	120.5	12	441	19	6	21.8

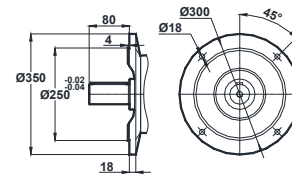
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



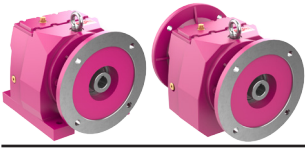
Opt. 1



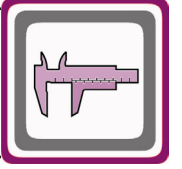
Opt. 2



Opt. 3

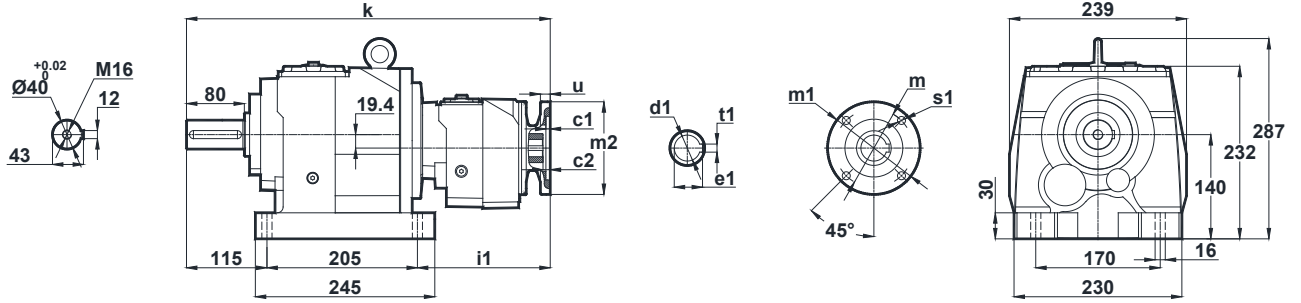


Ölçü Sayfaları Dimension Pages Abmessungsseiten

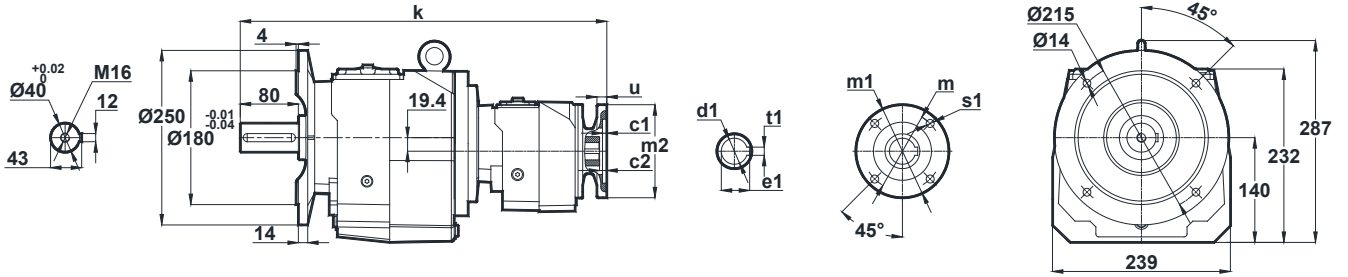


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN375-A.. / B.. MN376-A.. / B..

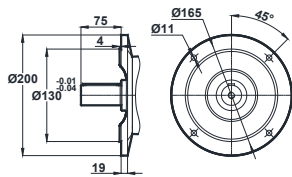


NN375-A.. / B.. NN376-A.. / B..

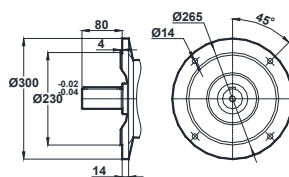


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	185	10	509	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	185	10	509	11	4	12.8

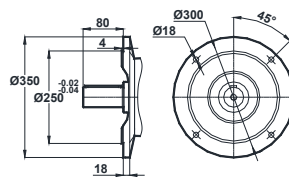
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



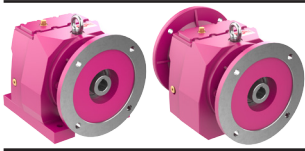
Opt. 1



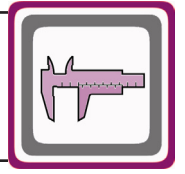
Opt. 2



Opt. 3

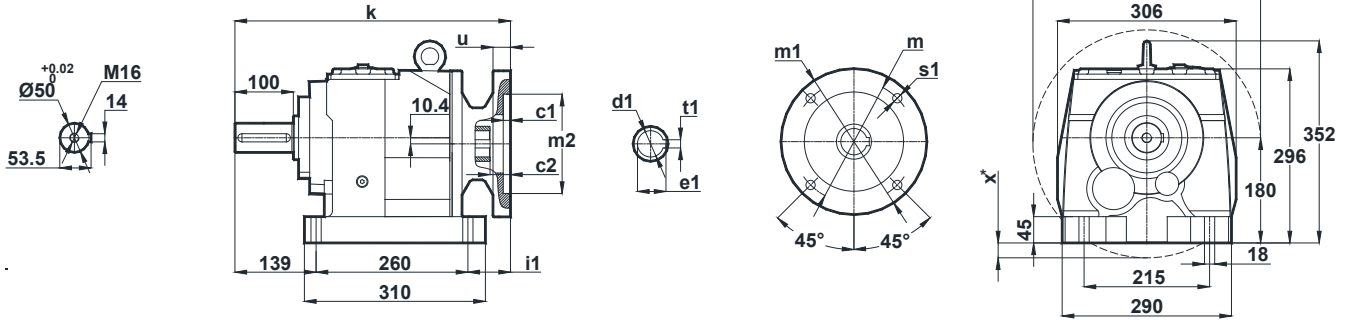


Ölçü Sayfaları Dimension Pages Abmessungsseiten

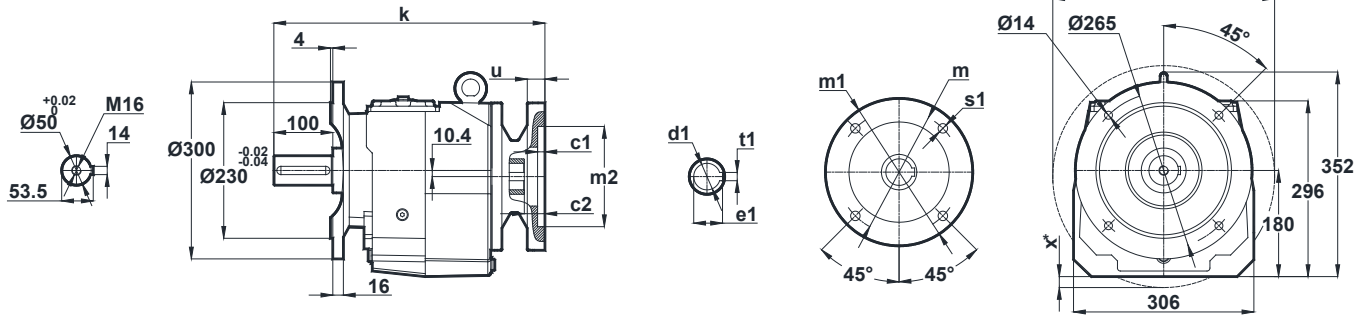


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN472-A.. MN473-A..

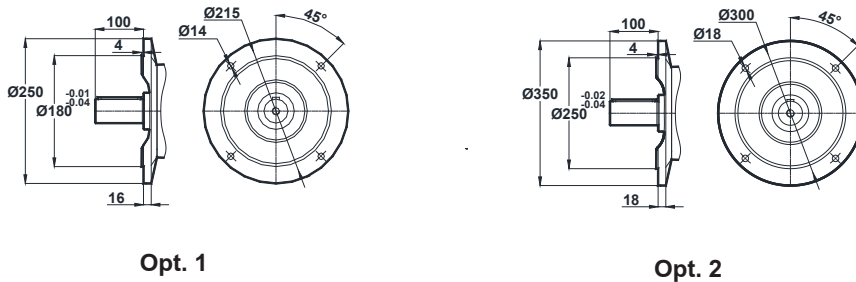


NN472-A.. NN473-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B5	4	5	12	165	200	130	27.5	12	426.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	27.5	12	426.5	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	46	15	445	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	46	15	445	28	8	31.3	-
132/B5	4.5	6	15	265	300	230	64.5	15	463.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	144	20	543	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	144	20	543	48	14	51.8	5

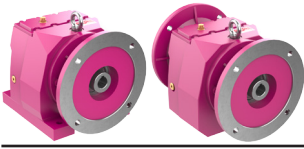
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



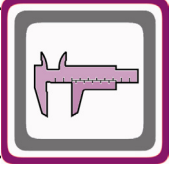
Opt. 1

Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

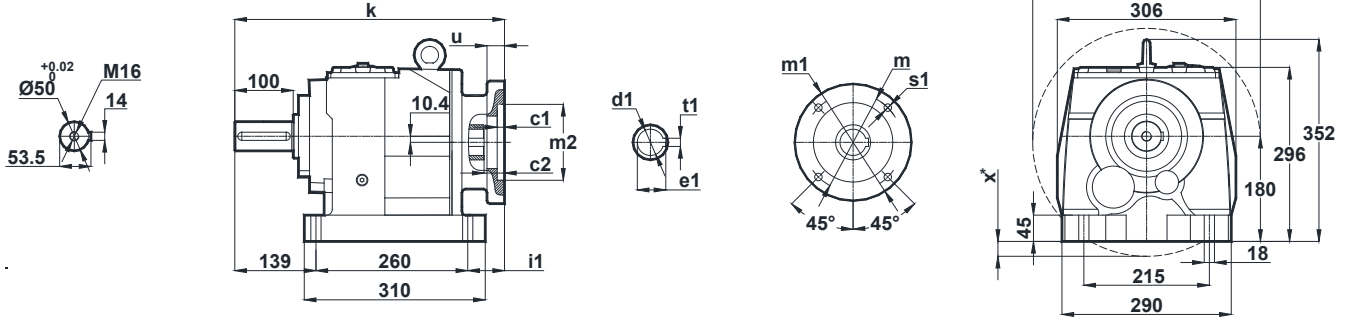


Ölçü Sayfaları Dimension Pages Abmessungenseiten

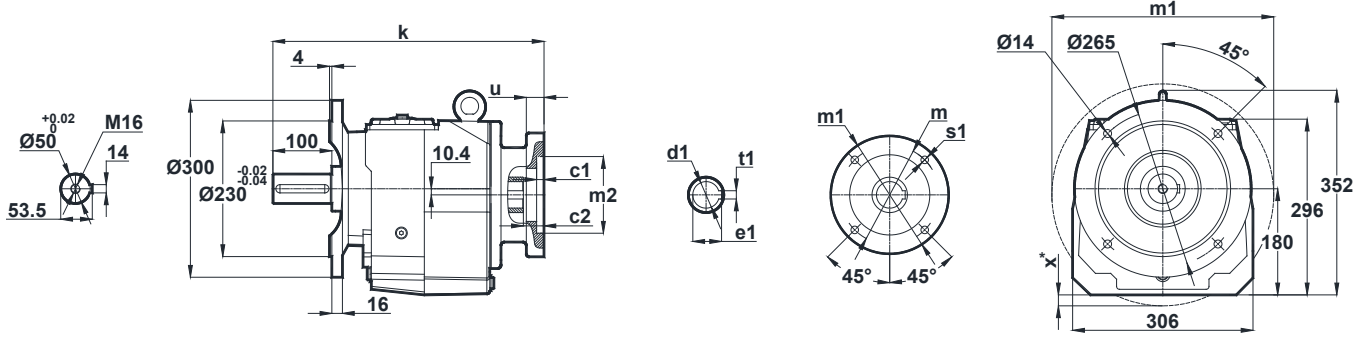


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN472-B.. MN473-B..

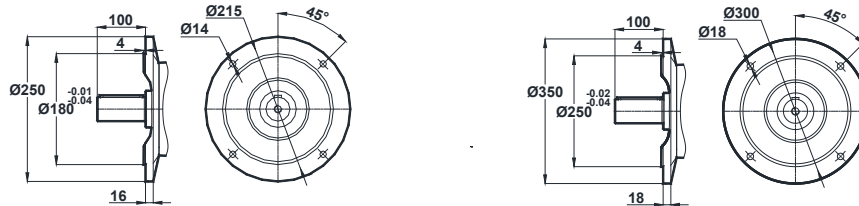


NN472-B.. NN473-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
90/B14	4	5	9	115	140	95	27.5	12	426.5	24	8	27.3	-
100/B14	4	9	9	130	160	110	46	15	445	28	8	31.3	-
112/B14	4	9	9	130	160	110	46	15	445	28	8	31.3	-
132/B14	4.5	6	11	165	200	130	64.5	15	463.5	38	10	41.3	-

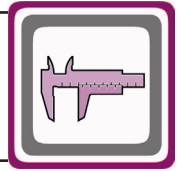
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

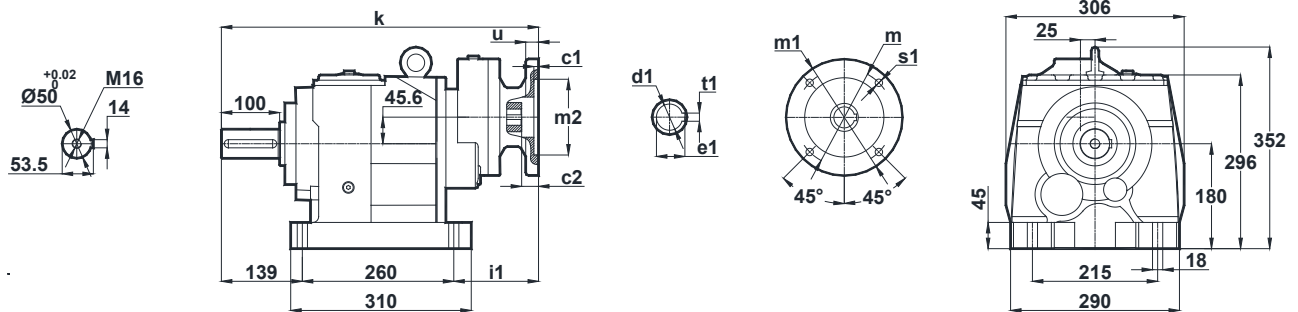
Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

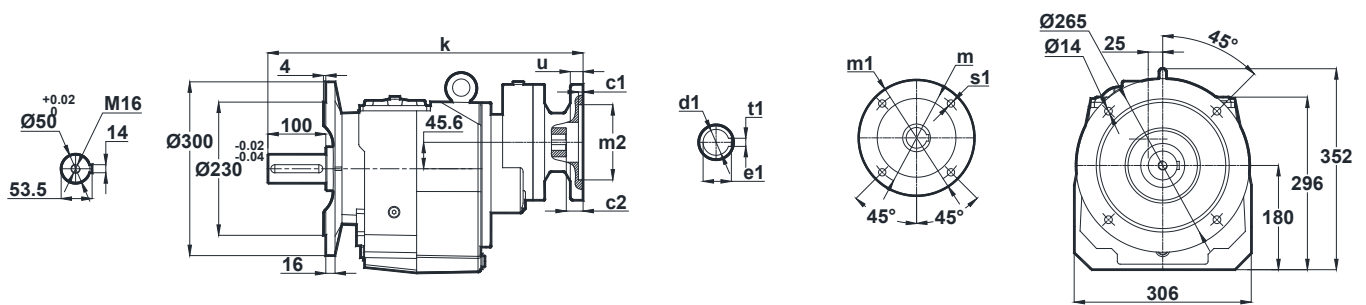


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN474-A..
MN474-B..

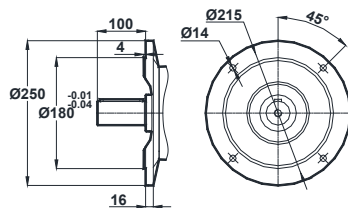


NN474-A..
NN474-B..

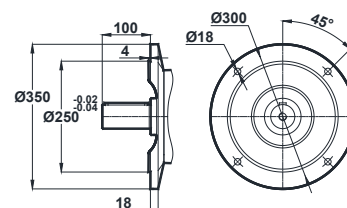


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	125.5	12	524.5	14	5	16.3
80/B5	4	9	12	165	200	130	125.5	12	524.5	19	6	21.8
80/B14	4	9	7	100	120	80	125.5	12	524.5	19	6	21.8

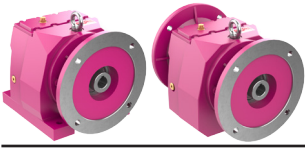
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



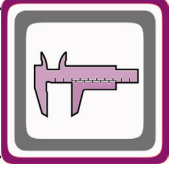
Opt. 1



Opt. 2

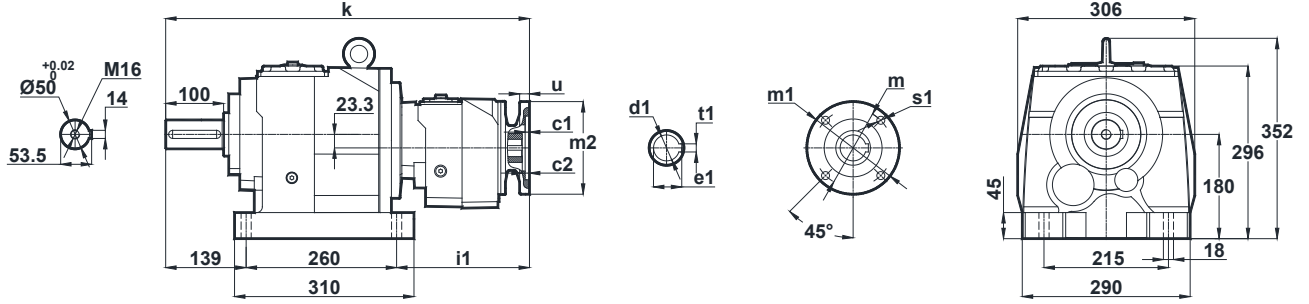


Ölçü Sayfaları Dimension Pages Abmessungenseiten

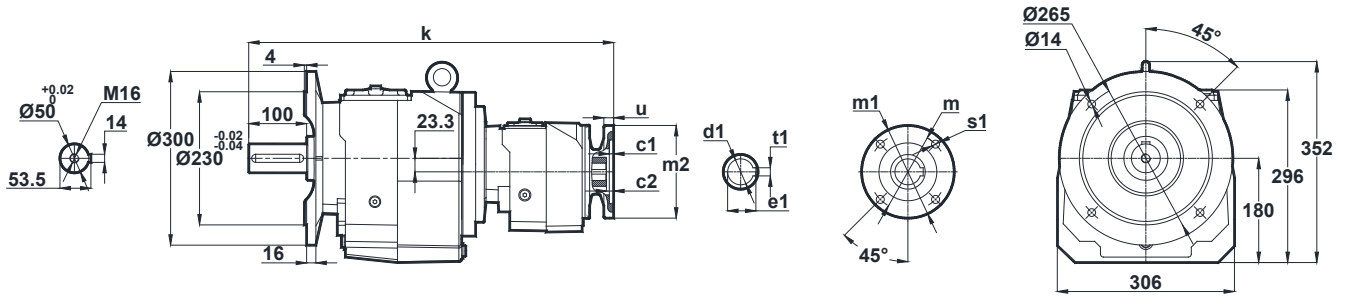


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN475-A.. / B.. MN476-A.. / B..

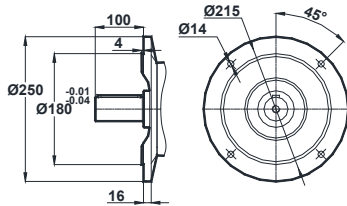


NN475-A.. / B.. NN476-A.. / B..

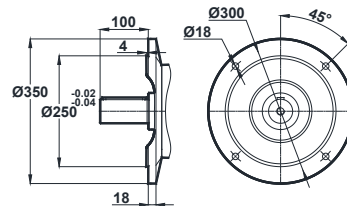


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	253.5	12	652.5	11	4	12.8
71/B5	4	8.5	11	130	160	110	224.5	12	623.5	14	5	16.3
71/B14	3	8.5	7	85	105	70	224.5	10	623.5	14	5	16.3

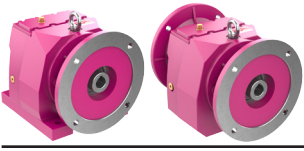
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



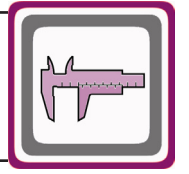
Opt. 1



Opt. 2

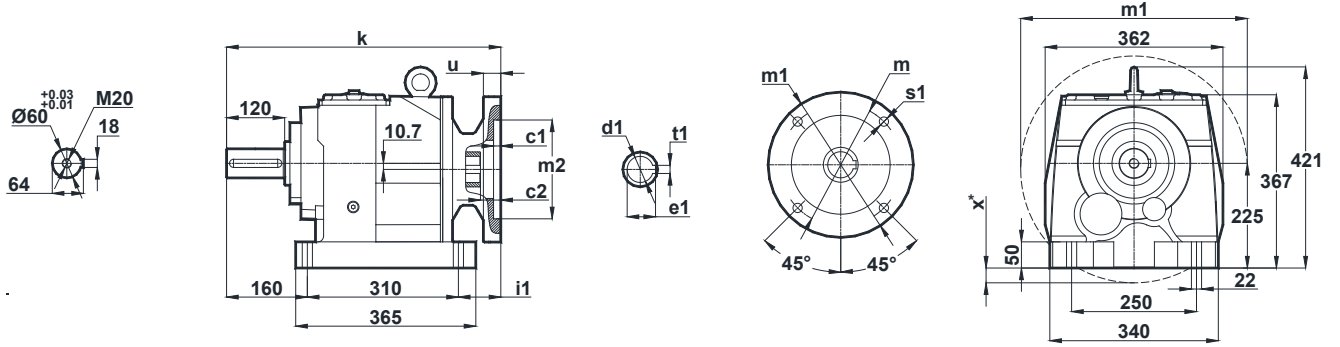


Ölçü Sayfaları Dimension Pages Abmessungsseiten

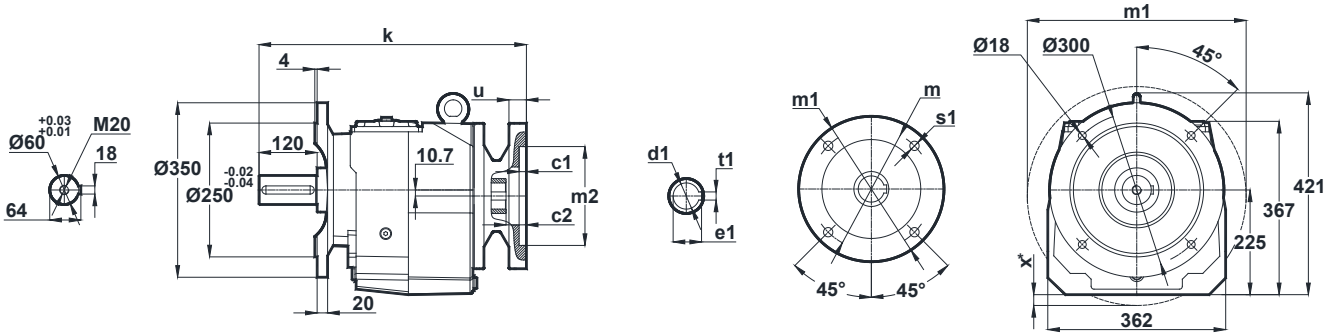


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN572-A.. / B.. MN573-A.. / B..

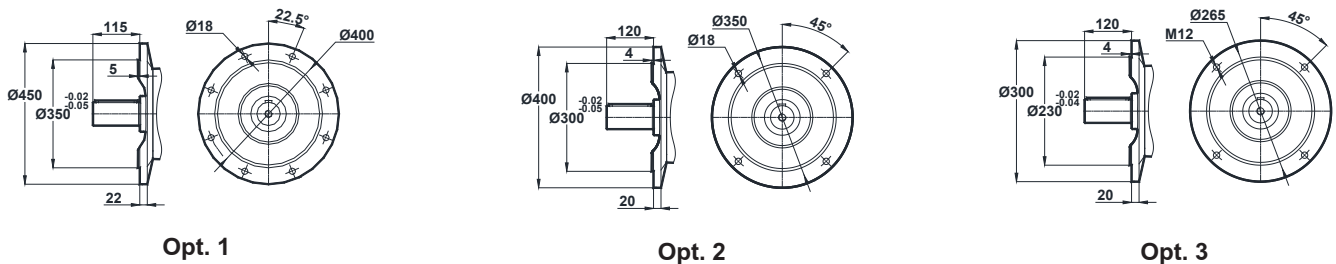


NN572-A.. / B.. NN573-A.. / B..

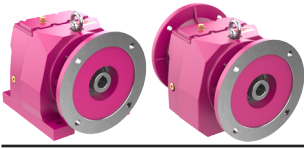


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
100/B5	4.5	9	15	215	250	180	36.5	15	507.5	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	36.5	15	507.5	28	8	31.3	-
132/B5	4.5	9	15	265	300	230	57.5	15	528.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	133	18	604	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	133	18	604	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	153	22	624	55	16	59.3	-
132/B14	4.5	9	11	165	200	130	57.5	15	528.5	38	10	41.3	-

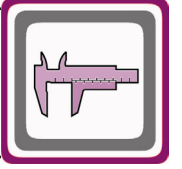
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

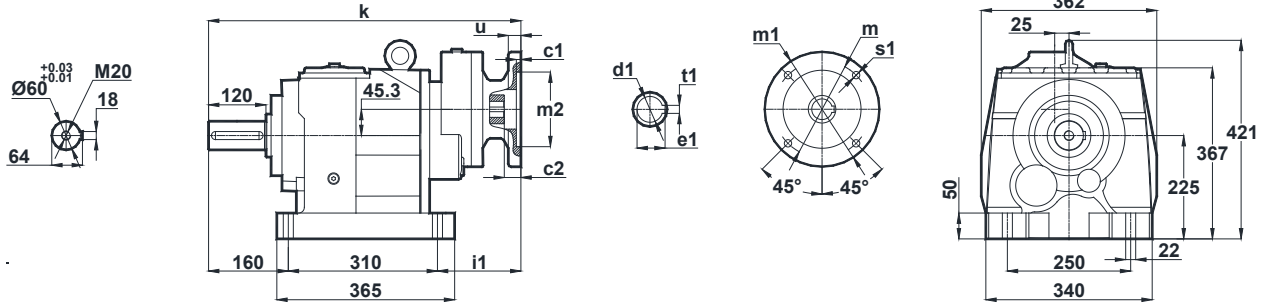


Ölçü Sayfaları Dimension Pages Abmessungenseiten

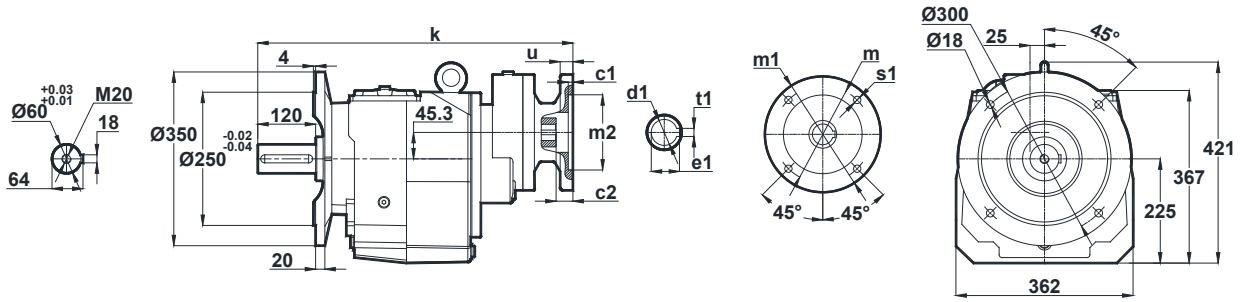


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN574-A.. MN574-B..

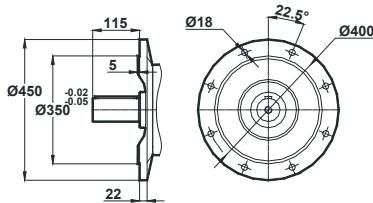


NN574-A.. NN574-B..

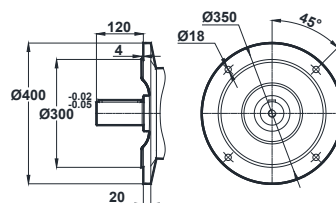


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	116.5	12	587.5	14	5	16.3
80/B5	4	9	12	165	200	130	116.5	12	587.5	14	6	21.8
90/B5	4	9	12	165	200	130	116.5	12	587.5	19	8	27.3
100/B5	4.5	9	15	215	250	180	133.5	15	604.5	28	8	31.3
80/B14	4	9	7	100	120	80	116.5	12	587.5	19	6	21.8
90/B14	4	9	9	115	140	95	116.5	12	587.5	24	8	26.3
100/B14	4	9	9	130	160	110	133.5	15	604.5	28	8	31.3

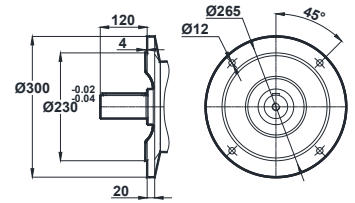
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



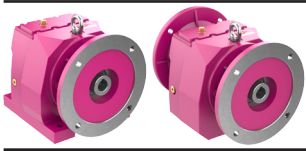
Opt. 1



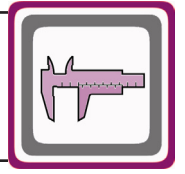
Opt. 2



Opt. 3

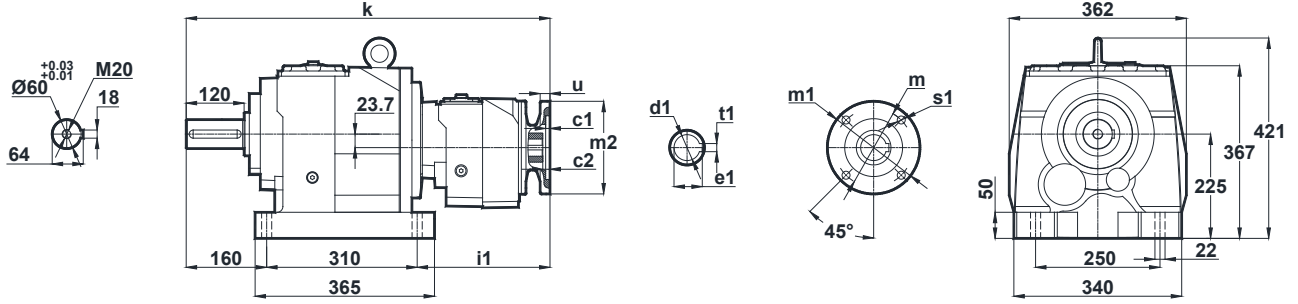


Ölçü Sayfaları Dimension Pages Abmessungsseiten

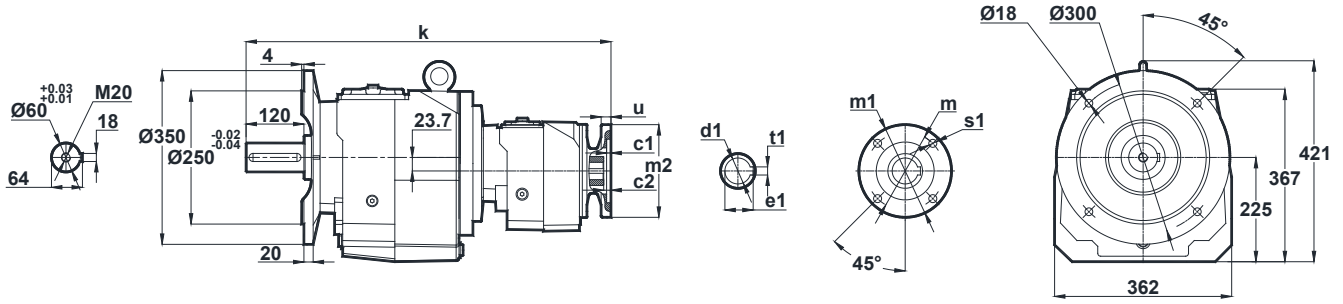


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN575-A.. / B.. MN576-A.. / B..

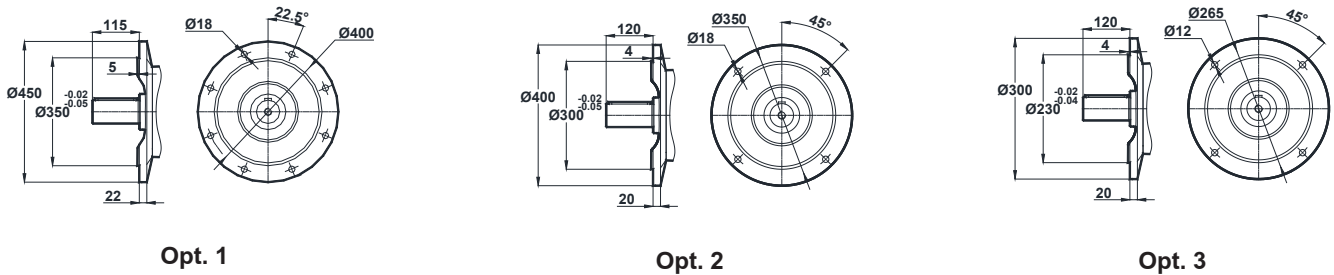


NN575-A.. / B.. NN576-A.. / B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	246.5	12	717.5	11	4	12.8
71/B5	4	8.5	11	130	160	110	217.5	12	688.5	14	5	16.3
71/B14	3	8.5	7	85	105	70	217.5	10	688.5	14	5	16.3

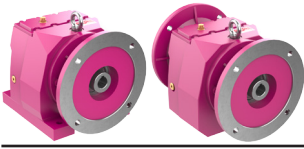
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



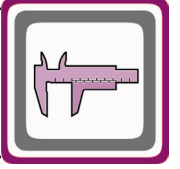
Opt. 1

Opt. 2

Opt. 3

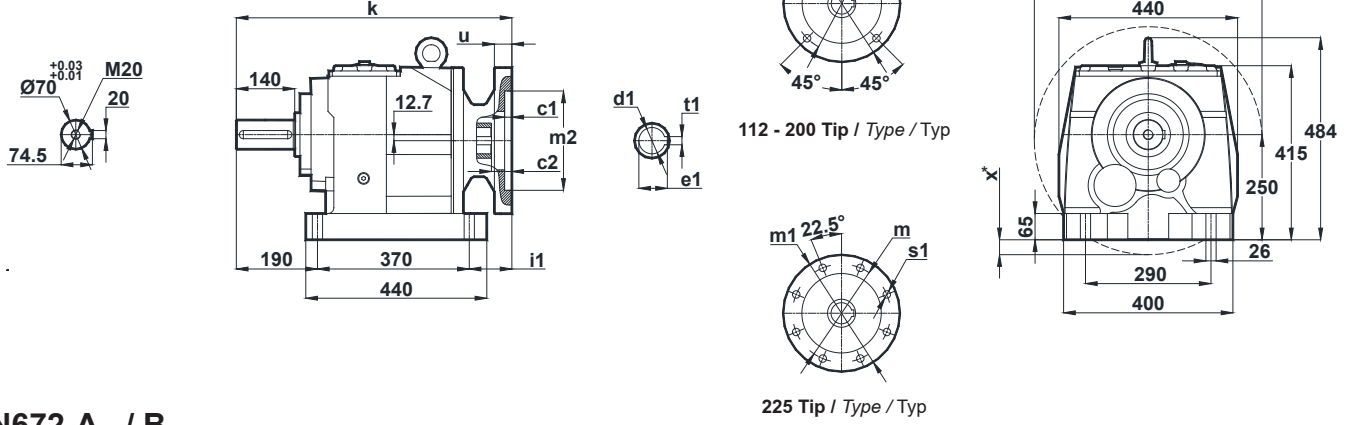


Ölçü Sayfaları Dimension Pages Abmessungenseiten

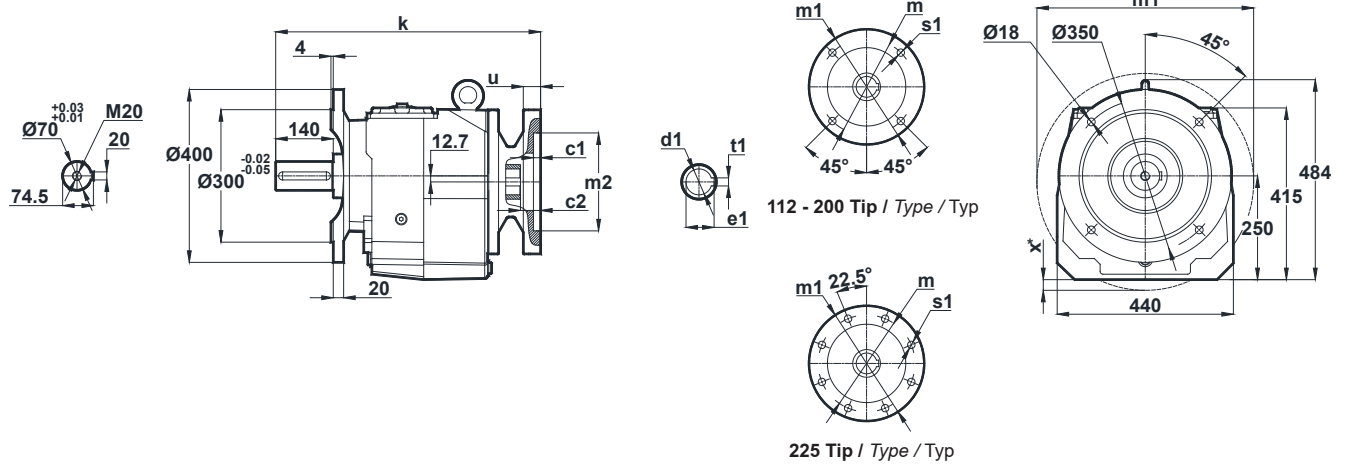


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN672-A.. / B.. MN673-A.. / B..

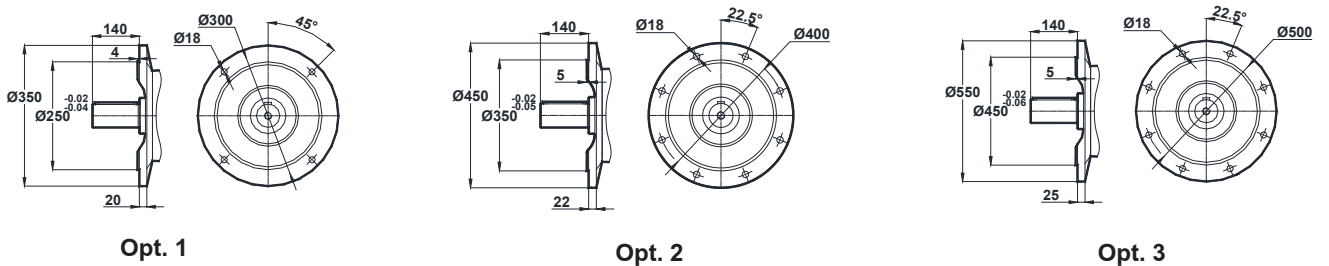


NN672-A.. / B.. NN673-A.. / B..

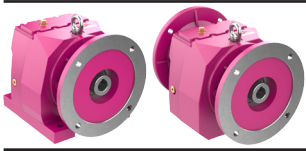


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
112/B5	4.5	14.5	15	215	250	180	88	15	567.5	28	8	31.3	-
132/B5	4.5	9	15	265	300	230	23	15	582.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	98	20	657.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	98	20	657.5	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	118,5	22	678	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	171,5	24	731	60	18	64.4	-
132/B14	4.5	9	15	165	200	130	23	15	582.5	38	10	41.3	-

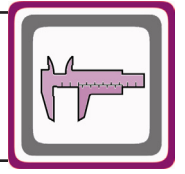
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

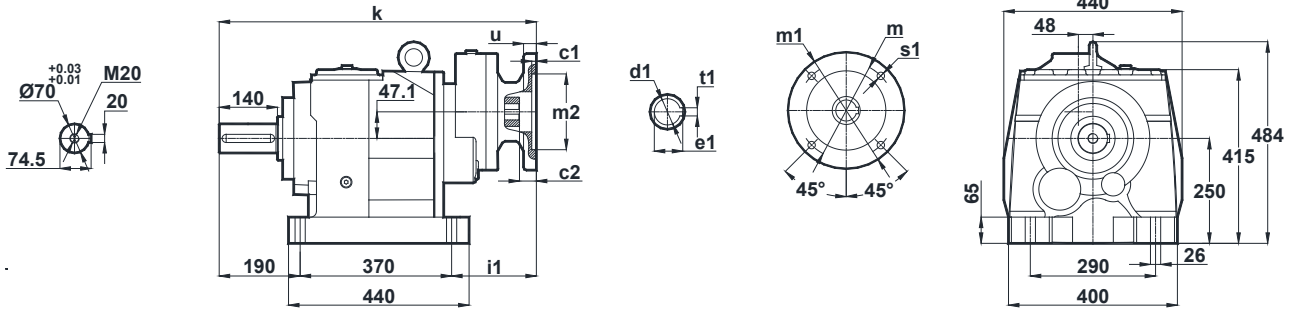


Ölçü Sayfaları Dimension Pages Abmessungsseiten

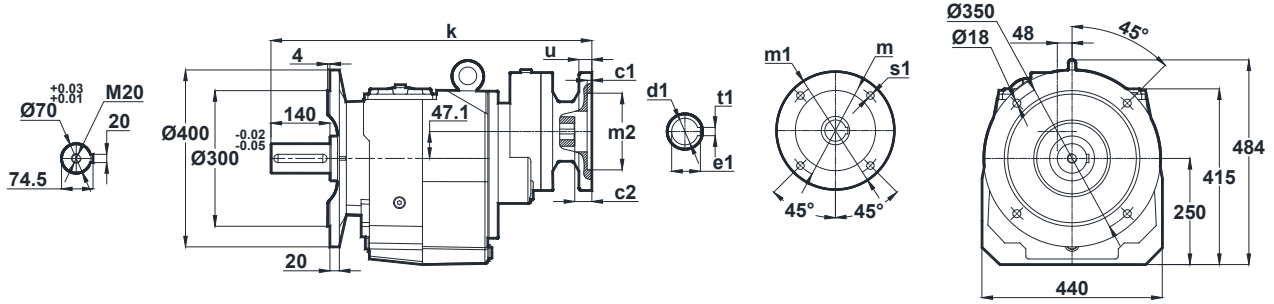


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN674-A.. MN674-B..

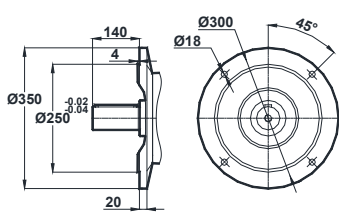


NN674-A.. NN674-B..

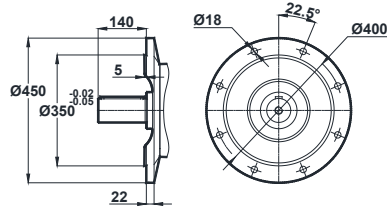


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	98	12	657.5	19	6	21.8
90/B5	4	5	12	165	200	130	98	12	657.5	24	8	27.3
90/B14	4	5	9	115	140	95	98	12	657.5	24	8	27.3

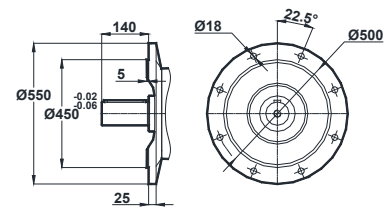
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



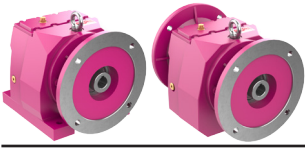
Opt. 1



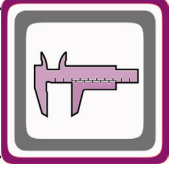
Opt. 2



Opt. 3

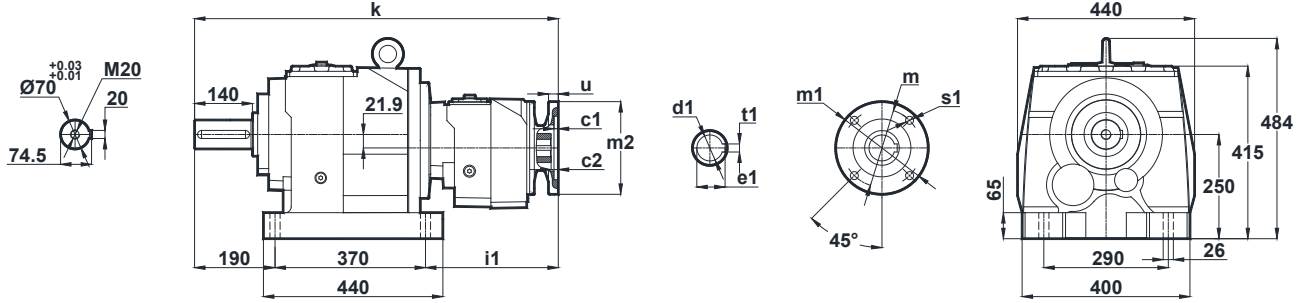


Ölçü Sayfaları Dimension Pages Abmessungsseiten

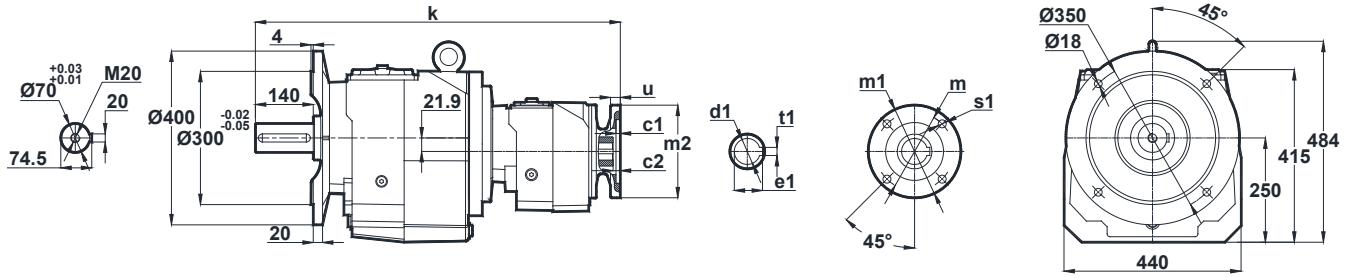


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN675-A.. / B.. MN676-A.. / B..

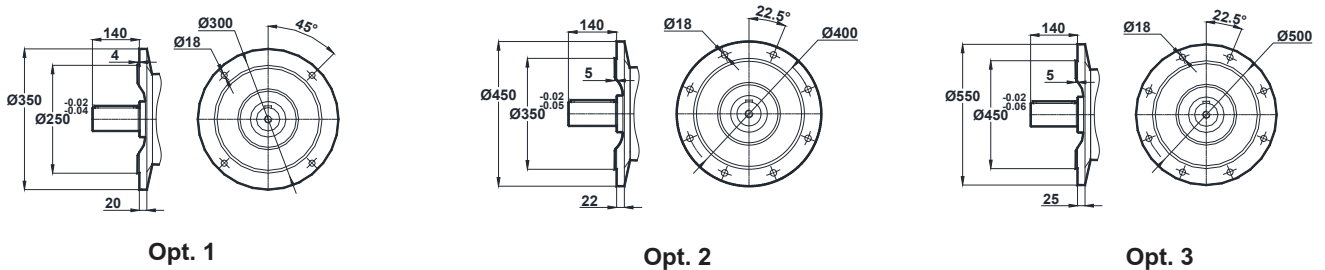


NN675-A.. / B.. NN676-A.. / B..



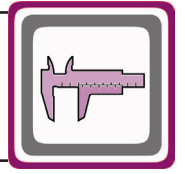
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	248.5	12	808	14	5	16.3
80/B5	4	9	12	165	200	130	248.5	12	808	19	6	21.8
80/B14	4	9	7	100	120	80	248.5	12	808	19	6	21.8

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



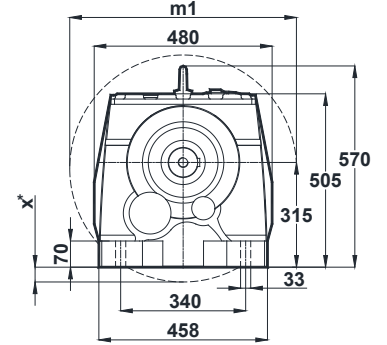
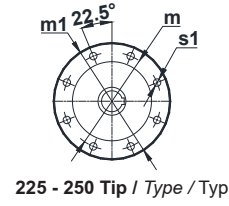
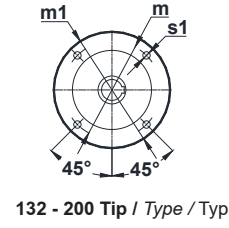
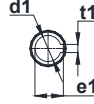
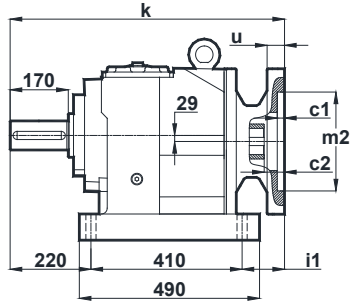
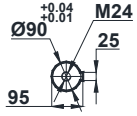


Ölçü Sayfaları Dimension Pages Abmessungsseiten

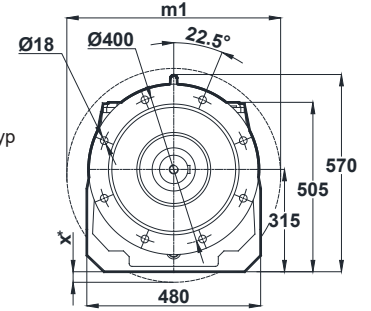
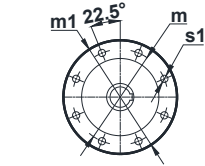
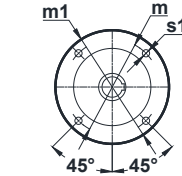
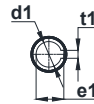
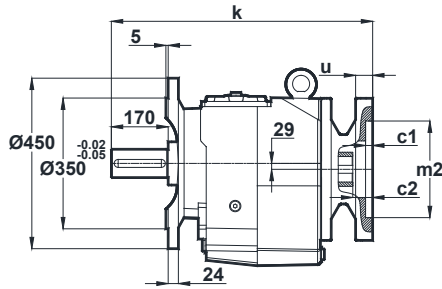
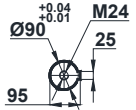


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN772-A.. MN773-A..

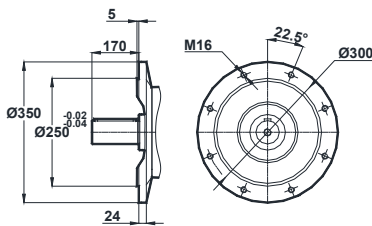


NN772-A.. NN773-A..

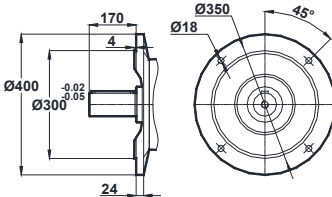


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
132/B5	4.5	15	15	265	300	230	37.5	15	667.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	107	20	737	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	107	20	737	43	14	51.8	-
200/B5	5.5	10	19	350	400	300	129	20	759	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	182	24	812	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	182	24	812	65	18	69.4	-

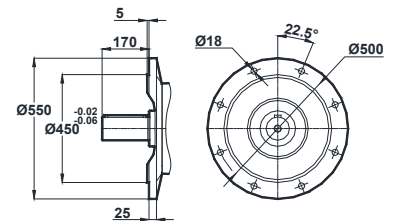
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

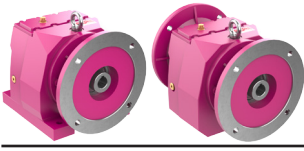


Opt. 2

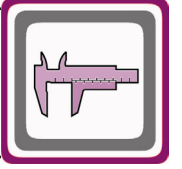


Opt. 3

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

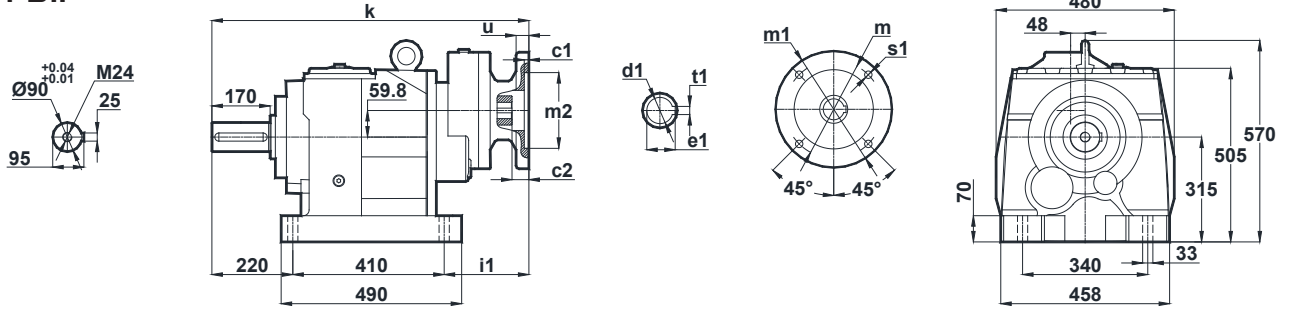


Ölçü Sayfaları Dimension Pages Abmessungenseiten

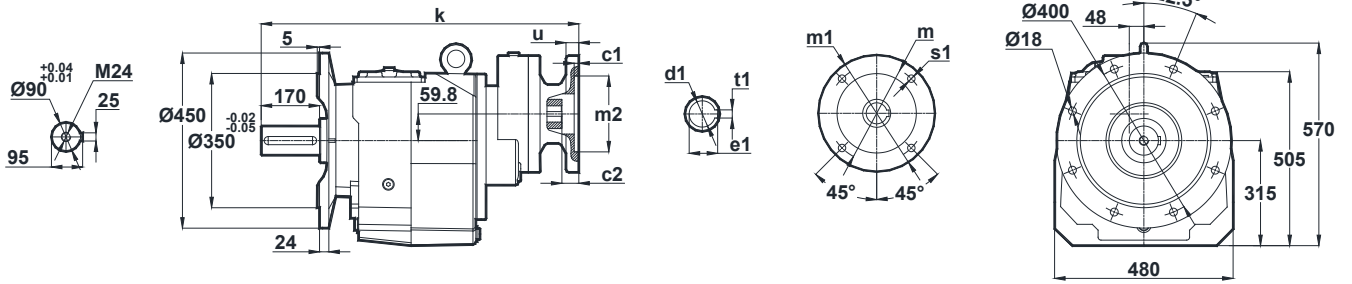


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN774-A.. MN774-B..

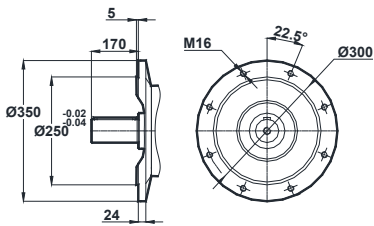


NN774-A.. NN774-B..

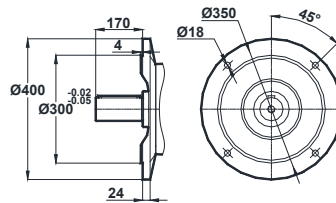


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	112.5	12	742.5	19	6	21.8
90/B5	4	5	12	165	200	130	112.5	12	742.5	24	8	27.3
100/B5	4.5	9	15	215	250	180	131	15	761	28	8	31.3
90/B14	4	5	9	115	140	95	112.5	12	742.5	24	8	27.3
100/B14	4	9	9	130	160	110	131	15	761	28	8	31.3

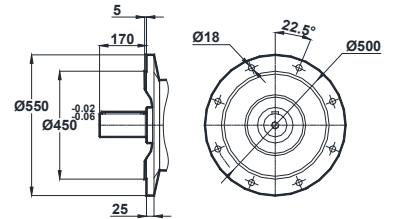
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



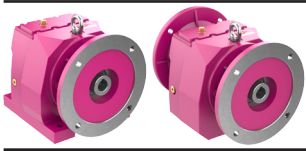
Opt. 1



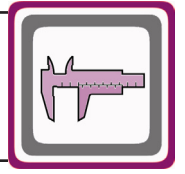
Opt. 2



Opt. 3

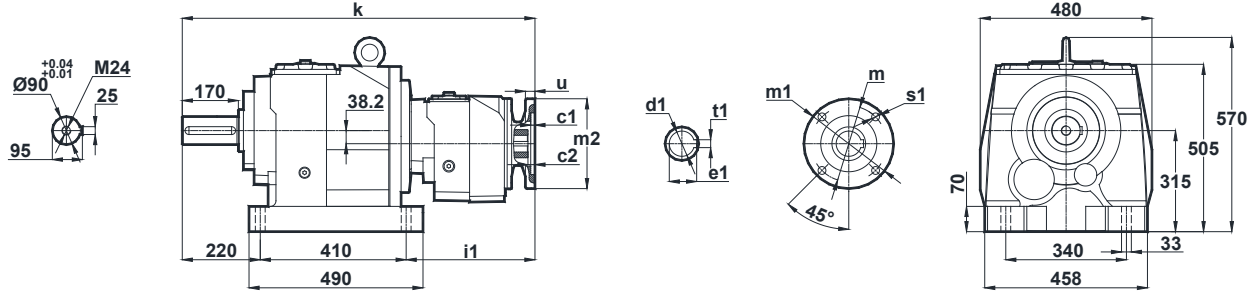


Ölçü Sayfaları Dimension Pages Abmessungsseiten

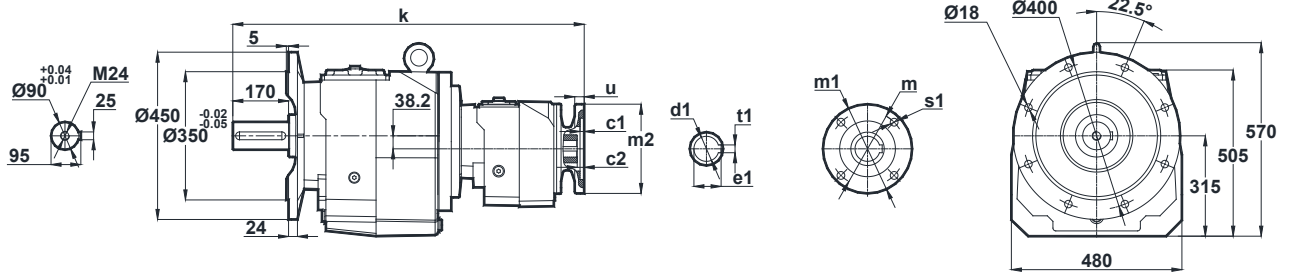


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN775-A.. / B.. MN776-A.. / B..

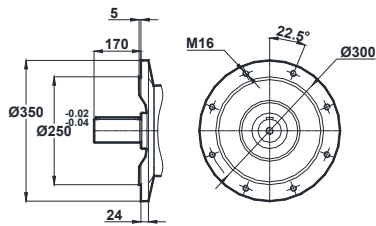


NN775-A.. / B.. NN776-A.. / B..

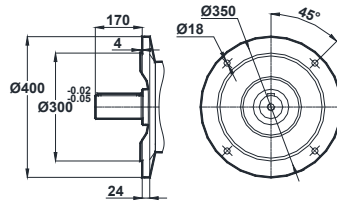


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	266	12	896	14	5	16.3
80/B5	4	9	12	165	200	130	266	12	869	19	6	21.8
90/B5	4	9	12	165	200	130	266	12	896	24	8	27.3
80/B14	4	9	7	100	120	80	266	12	896	19	6	21.8
90/B14	4	9	9	115	140	95	266	12	896	24	8	26.3

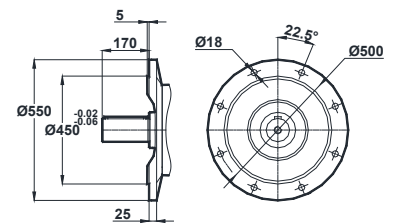
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



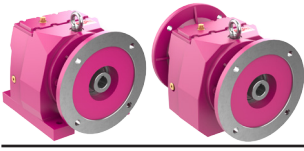
Opt. 1



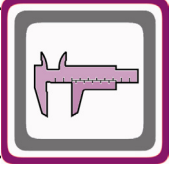
Opt. 2



Opt. 3

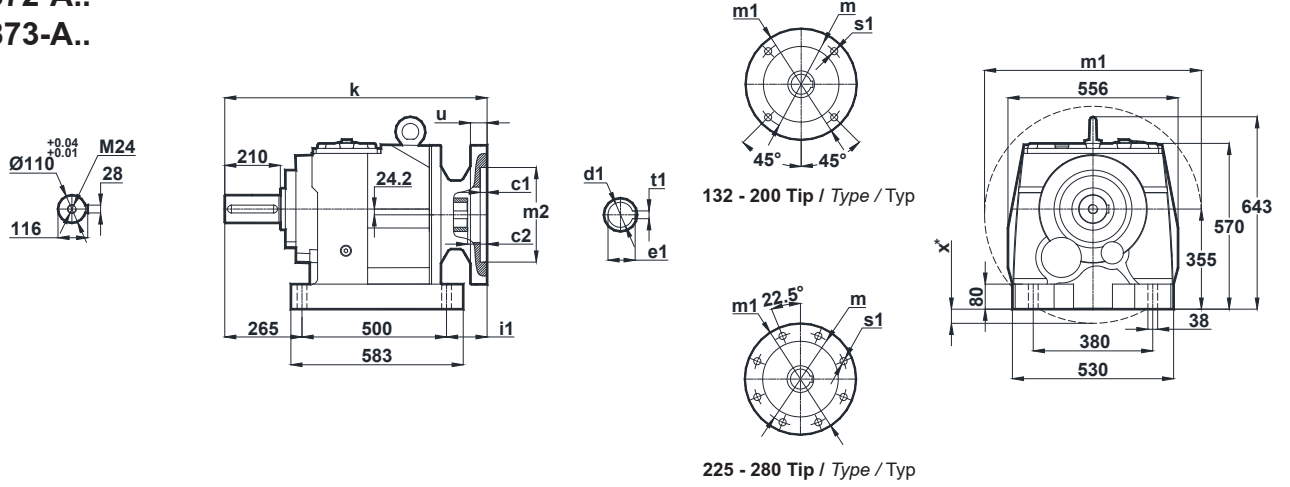


Ölçü Sayfaları Dimension Pages Abmessungenseiten

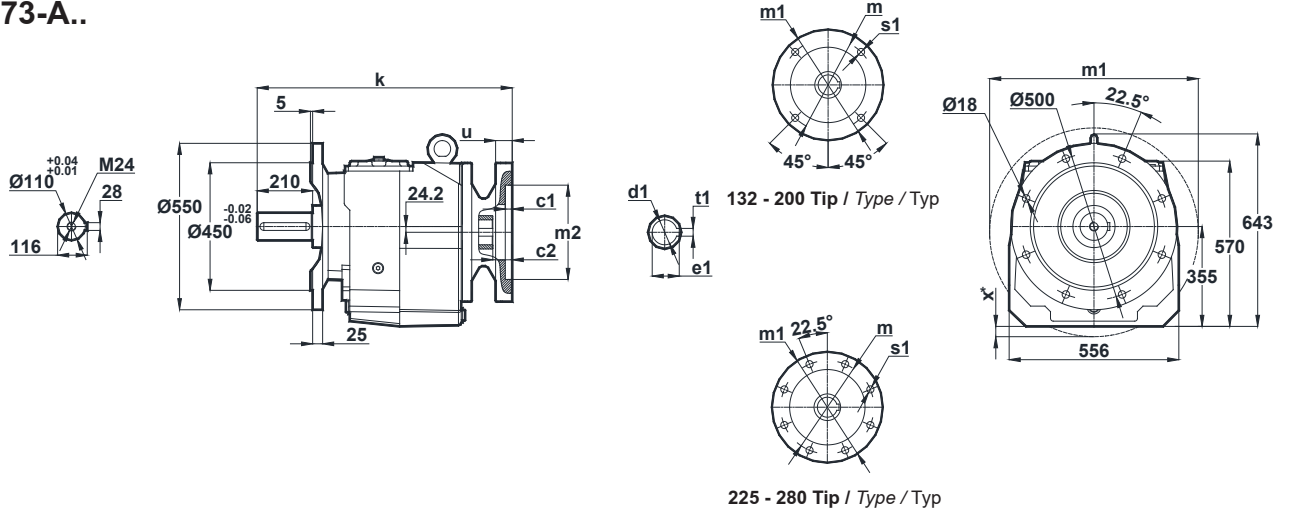


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN872-A.. MN873-A..

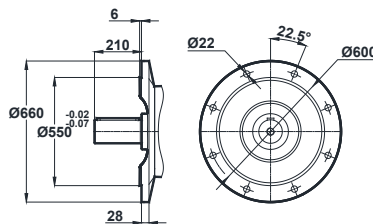


NN872-A.. NN873-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
132/B5	4.5	14	15	265	300	230	10.5	15	775.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	158	20	923	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	158	20	923	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	158	22	923	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	158	24	923	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	158	24	923	65	18	69.4	-
280/B5	5.5	10	19	500	550	450	158	24	923	75	20	79.9	-

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

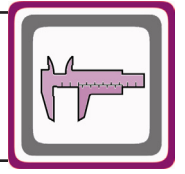


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

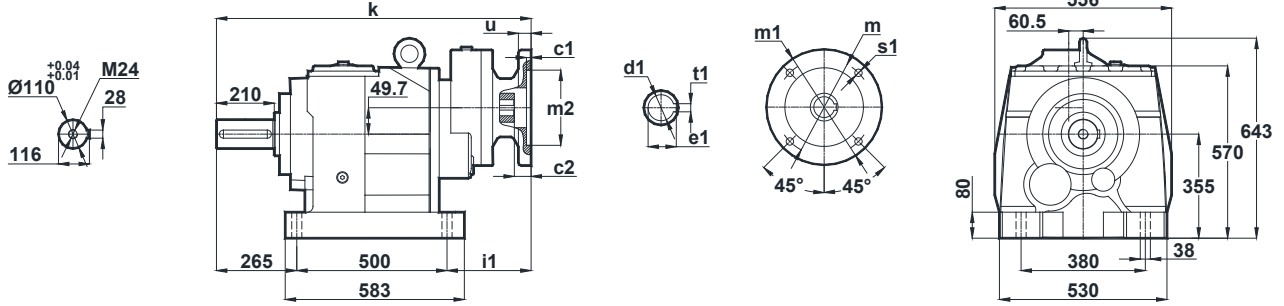


Ölçü Sayfaları Dimension Pages Abmessungsseiten

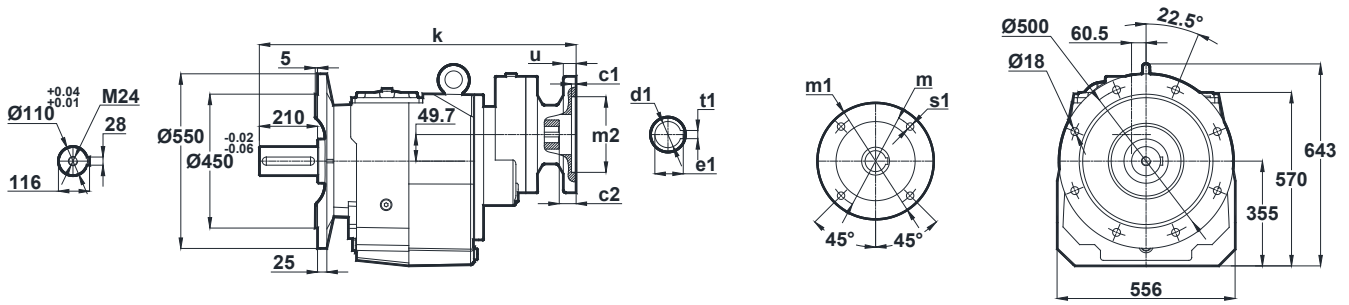


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN874-A.. MN874-B..

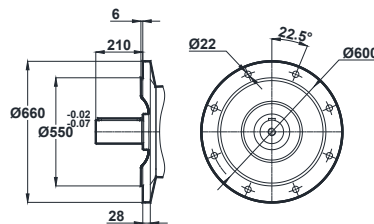


NN874-A.. NN874-B..

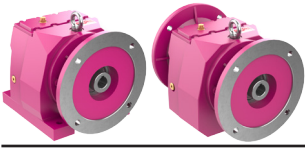


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
100/B5	4.5	9	15	215	250	180	130.5	15	895.5	28	8	31.3
112/B5	4.5	9	15	215	250	180	130.5	15	895.5	28	8	31.3
132/B5	4.5	9	15	265	300	230	151.5	15	916.5	38	10	41.3
132/B14	4.5	9	11	165	200	130	151.5	15	916.5	38	10	41.3

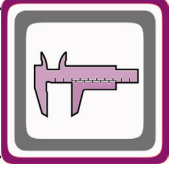
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

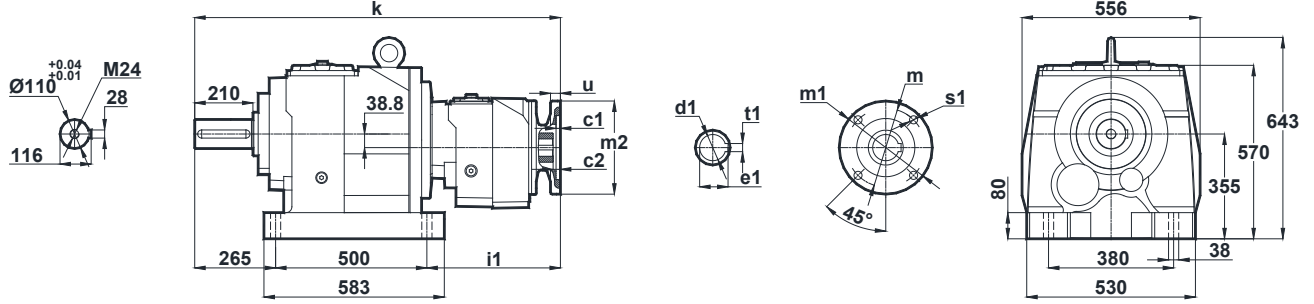


Ölçü Sayfaları Dimension Pages Abmessungenseiten

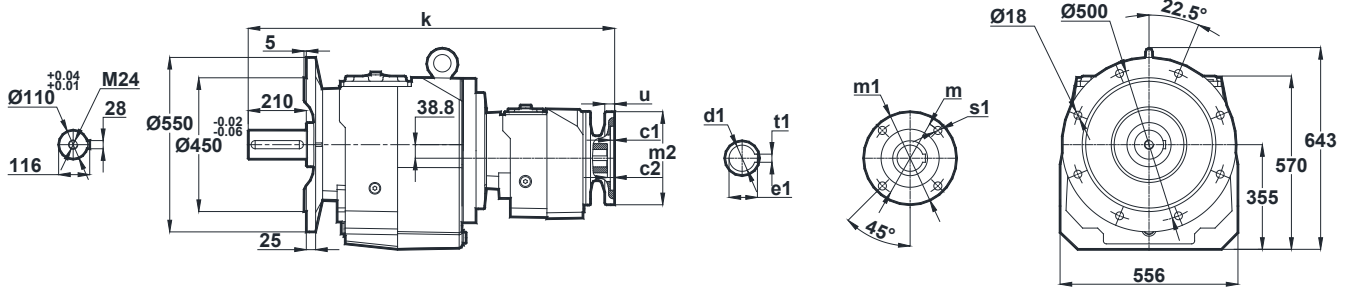


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN875-A.. / B.. MN876-A.. / B..

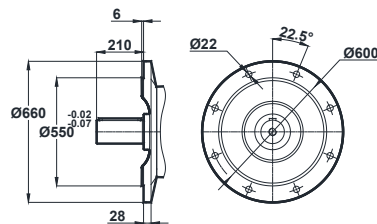


NN875-A.. / B.. NN876-A.. / B..

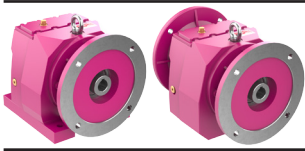


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	248	12	1013	14	5	16.3
80/B5	4	9	12	165	200	130	248	12	1013	19	6	21.8
90/B5	4	9	12	165	200	130	248	12	1013	24	8	27.3
100/B5	4.5	9	15	215	250	180	265	15	1030	28	8	31.3
80/B14	4	9	7	100	120	80	248	12	1013	19	8	21.8
90/B14	4	9	9	115	140	95	248	12	1013	24	8	26.3
100/B14	4	9	9	130	160	110	265	15	1030	28	8	31.3

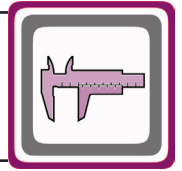
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

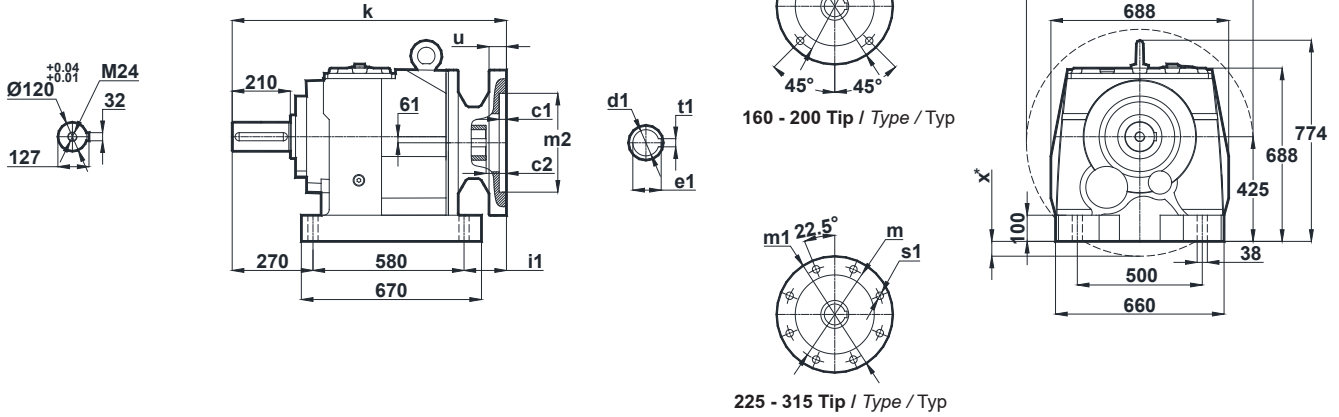


Ölçü Sayfaları Dimension Pages Abmessungsseiten

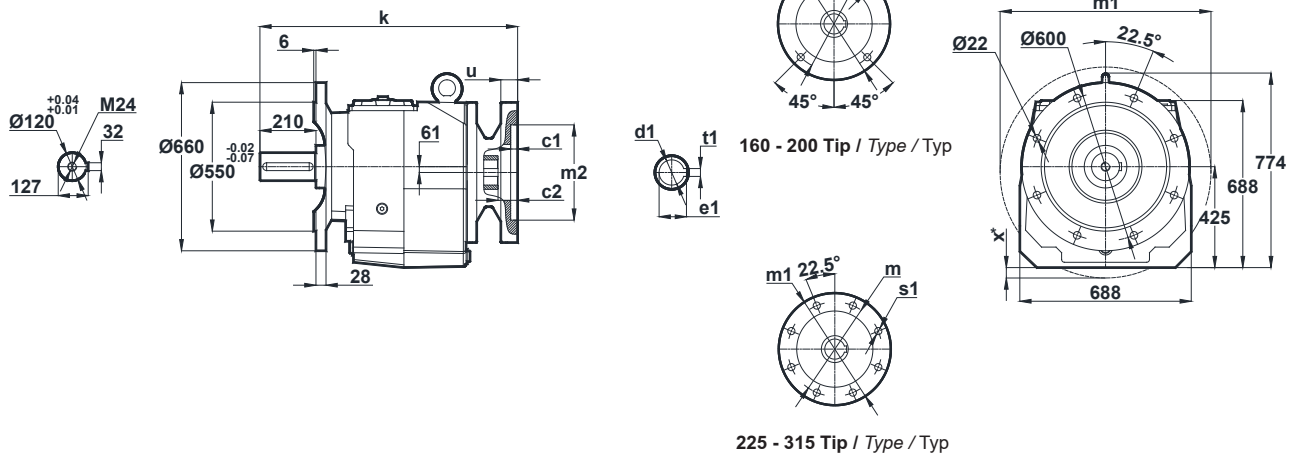


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN972-A.. MN973-A..

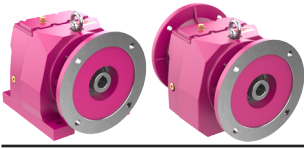


NN972-A.. NN973-A..

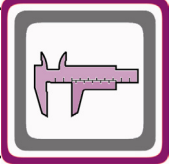


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
160/B5	5.5	10	19	300	350	250	60	20	910.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	60	20	910.5	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	84	22	934.5	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	126	24	976.5	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	148	24	998.5	65	18	69.4	-
280/B5	5.5	10	19	500	550	450	148	24	998.5	75	20	79.9	-
315M/B5	6.5	15	24	660	600	550	228	24	1078.5	80	22	90.4	-
315N/B5	6.5	15	24	660	600	550	228	24	1078.5	85	22	90.4	-
315L/B5	6.5	15	24	660	600	550	228	24	1078.5	90	22	90.4	-

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

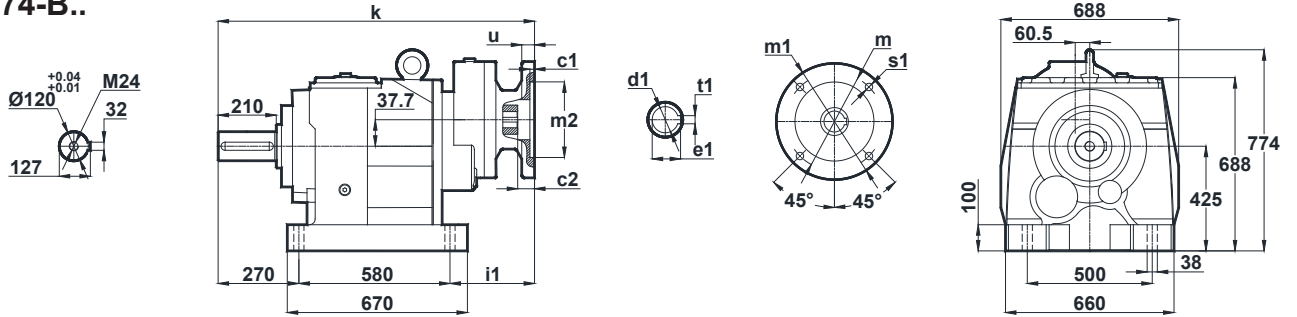


Ölçü Sayfaları Dimension Pages Abmessungenseiten

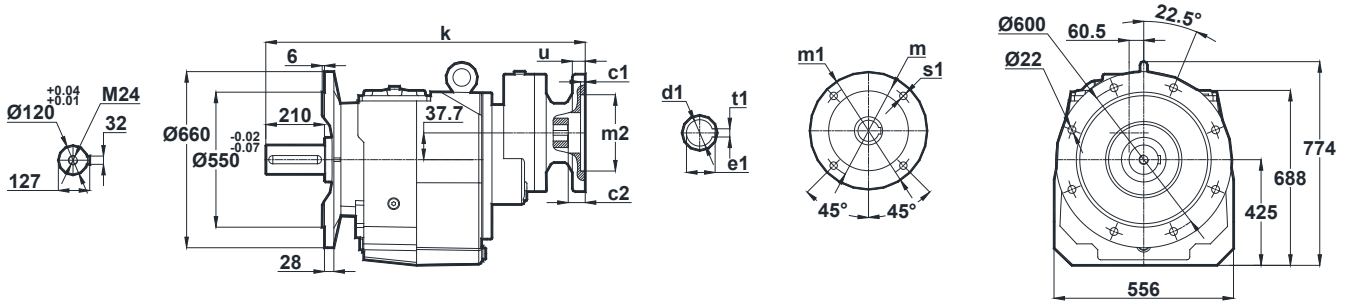


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

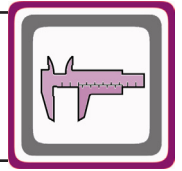
MN974-A.. MN974-B..



NN974-A.. NN974-B..



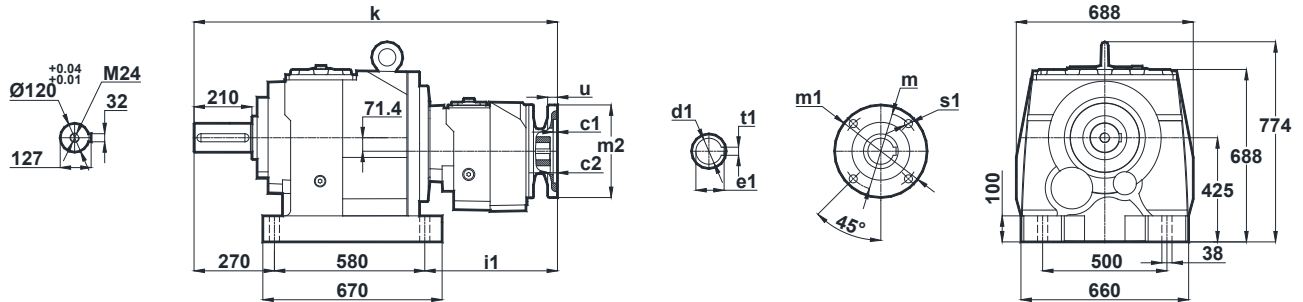
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
100/B5	4.5	14.5	15	215	250	180	149	15	999	28	8	31.3
112/B5	4.5	14.5	15	215	250	180	149	15	999	28	8	31.3
132/B5	4.5	9	15	265	300	230	164	15	1014	38	10	41.3
132/B14	4.5	9	15	165	200	130	164	15	1014	38	10	41.3



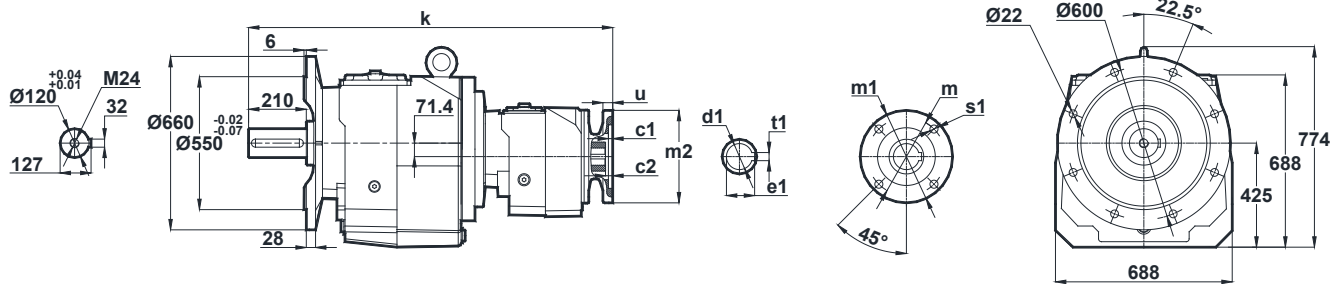
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MN975-A.. / B..

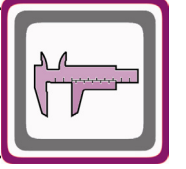
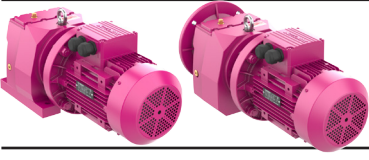
MN976-A.. / B..

**NN975-A.. / B..**

NN976-A.. / B..

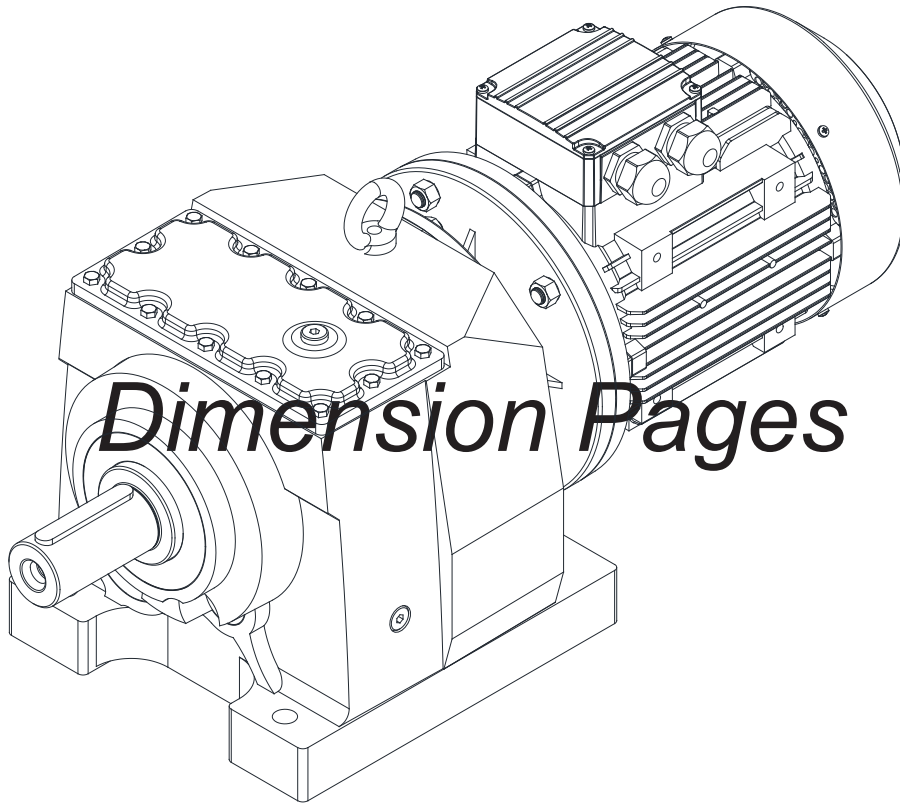


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	284.5	12	1135	19	6	12.8
90/B5	4	5	12	165	200	130	284.5	12	1135	24	8	27.3
100/B5	4.5	9	15	215	250	180	303	15	1153.5	28	8	31.3
112/B5	4.5	9	15	215	250	180	303	15	1153.5	28	8	31.3
132/B5	4.5	6	15	265	300	230	321.5	15	1172	38	10	41.3
90/B14	4	5	9	115	140	95	284.5	12	1135	24	8	27.3
100/B14	4	9	9	130	160	110	303	15	1153.5	28	8	31.3
112/B14	4	9	9	130	160	110	303	15	1153.5	28	8	31.3
132/B14	4.5	6	11	165	200	130	321.5	15	1172	38	10	41.3

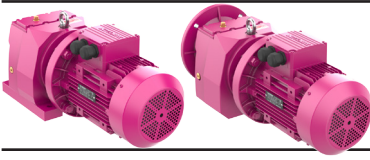


MV & NV Serisi / Serie

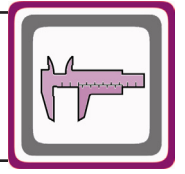
Ölçü Sayfaları



Abmessungenseiten

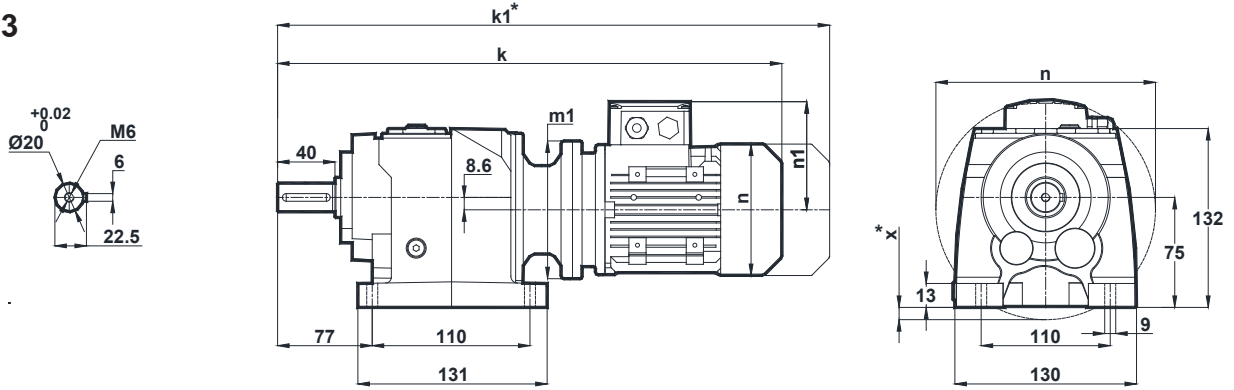


Ölçü Sayfaları Dimension Pages Abmessungsseiten

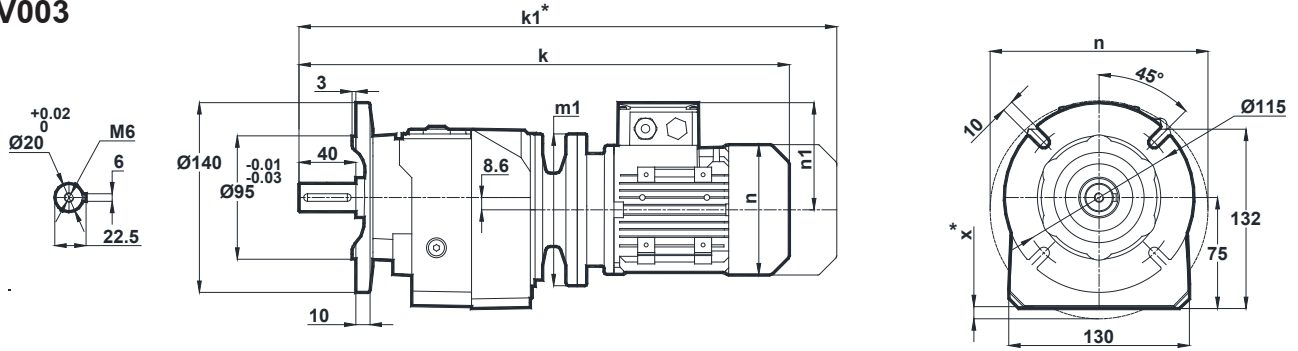


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV002 MV003

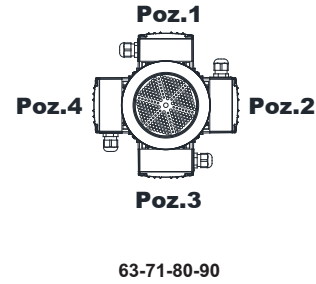


NV002 NV003

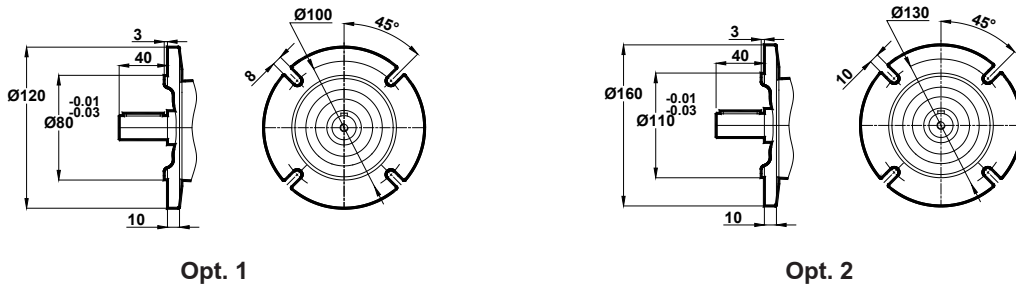


Motor Büyüklüğü / Motor Size / Motorbaugroße					
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	404	427.5	464.5	505.5	505.5
k1	475	518.5	557.5	584.5	584.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	3	12	22	22

Klemens Kutusu / Terminal Box / Klemmenkasten

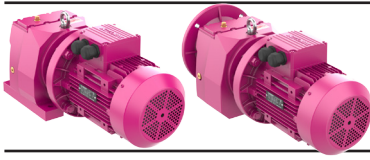


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

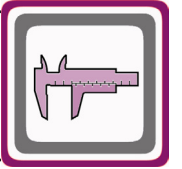


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

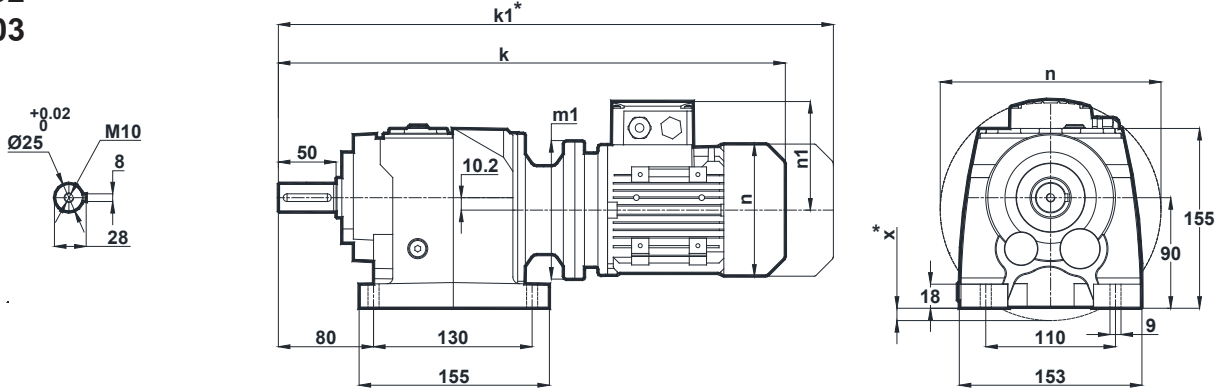


Ölçü Sayfaları Dimension Pages Abmessungsseiten

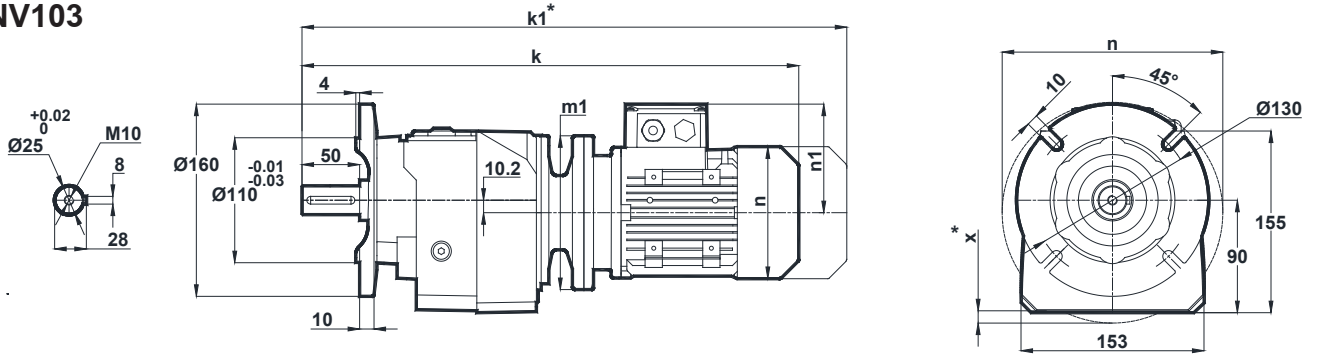


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV102 MV103

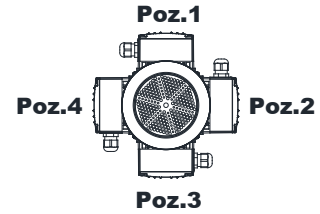


NV102 NV103



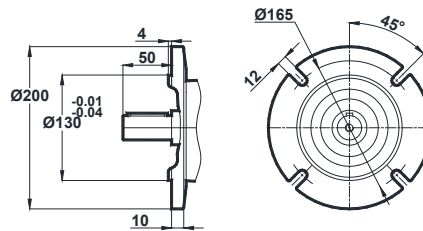
Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	428	451.5	488.5	529.5	529.5
k1	499	542.5	581.5	608.5	608.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	-	-	9	9

Klemens Kutusu / Terminal Box / Klemmenkasten



63-71-80-90

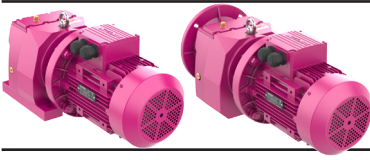
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



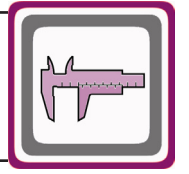
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

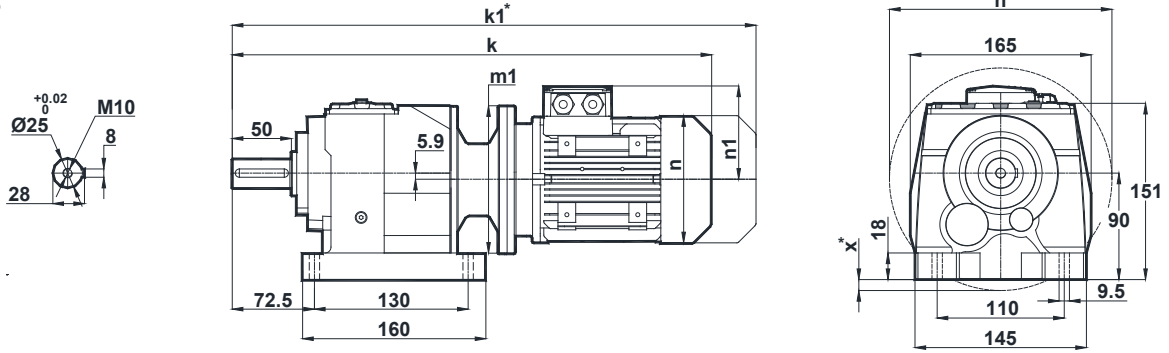


Ölçü Sayfaları Dimension Pages Abmessungsseiten

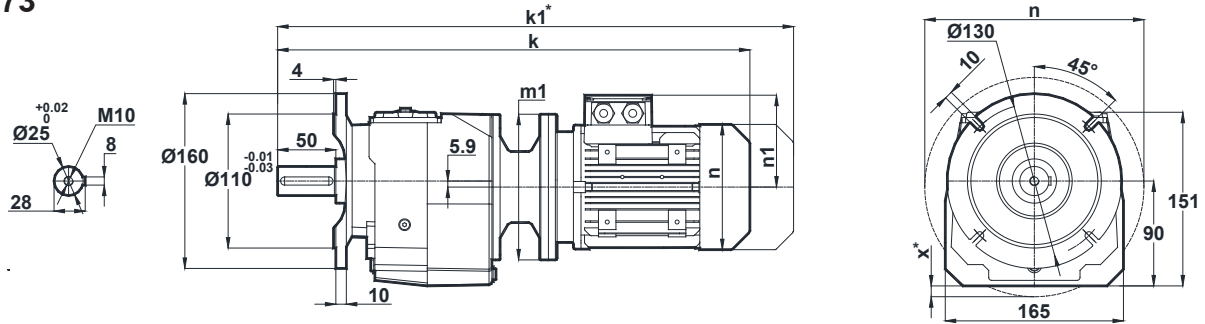


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV172 MV173

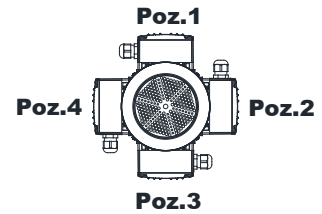


NV172 NV173



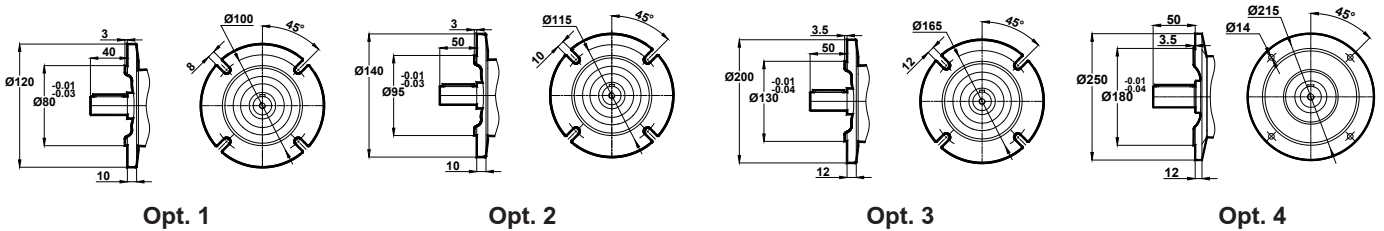
Motor Büyüklüğü / Motor Size / Motorbaugröße							
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	431	454.5	491.5	532.5	532.5	577.5	600.5
k1	502	545.5	584.5	611.5	611.5	685.5	705.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	90	105	120	140	140	160	160
x (B5)	-	-	-	4	4	13	24

Klemens Kutusu / Terminal Box / Klemmenkasten



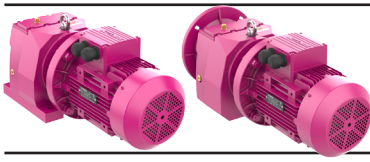
63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

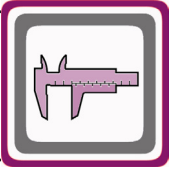


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

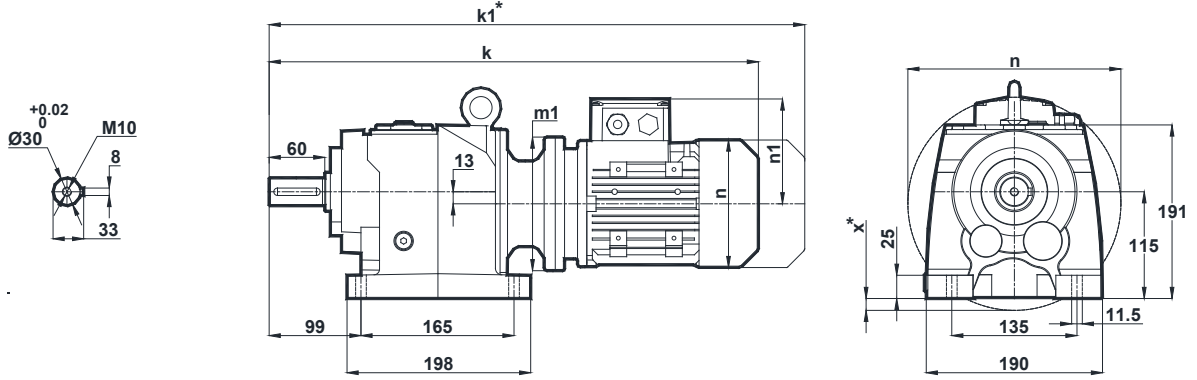


Ölçü Sayfaları Dimension Pages Abmessungsseiten

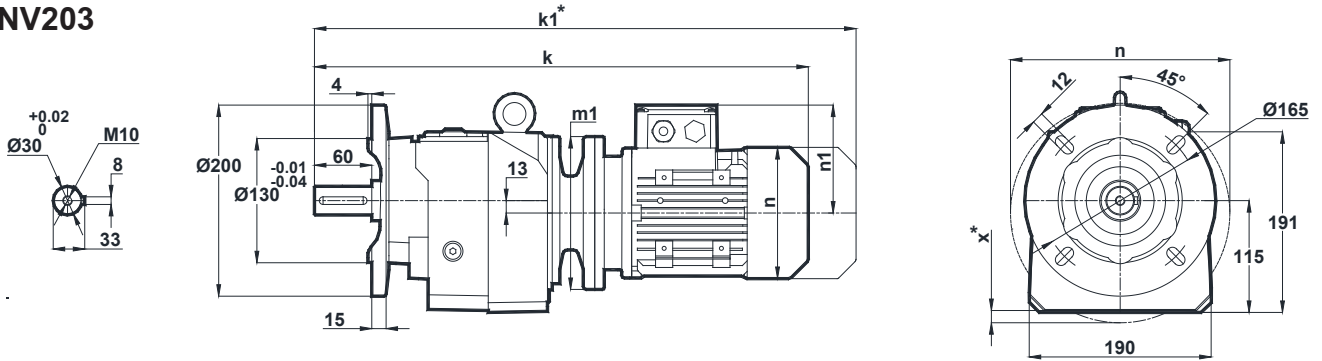


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV202 MV203

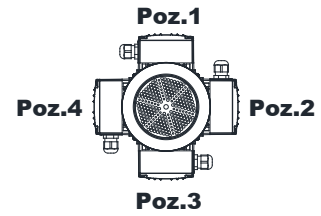


NV202 NV203



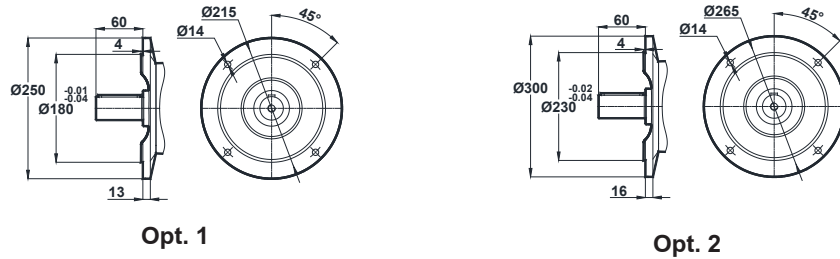
Motor Büyüklüğü / Motor Size / Motorbaugroße							
IEC	63/B5	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	512.5	505.5	556.5	597.5	597.5	624.5	647.5
k1	583.5	596.5	649.5	676.5	676.5	732.5	752.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	-	105	120	140	140	160	160
x (B5)	-	-	-	-	-	-	6

Klemens Kutusu / Terminal Box / Klemmenkasten



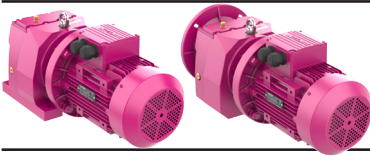
63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

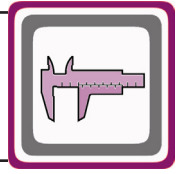


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

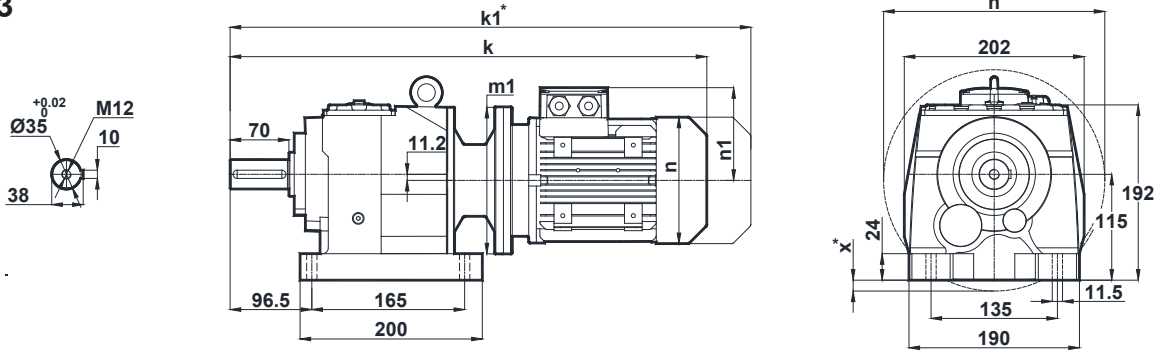


Ölçü Sayfaları Dimension Pages Abmessungsseiten

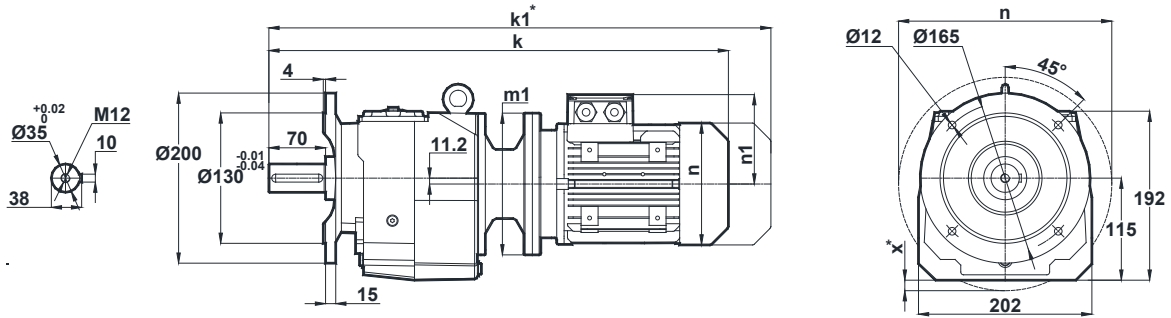


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV272 MV273

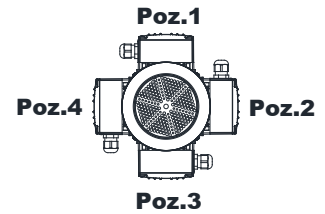


NV272 NV273



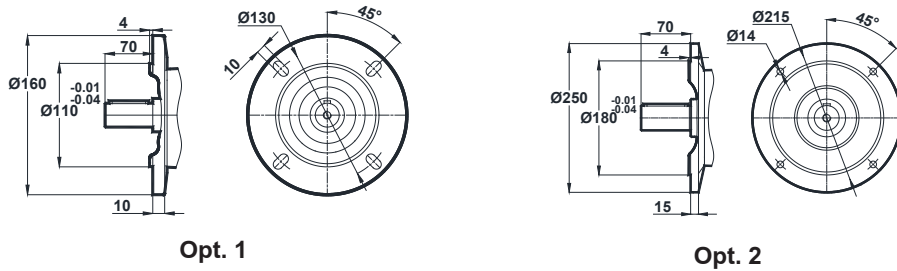
Motor Büyüklüğü / Motor Size / Motorbaugroße									
IEC	63/B5	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14
k	513.5	506.5	557.5	598.5	598.5	625.5	648.5	778.5	778.5
k1	584.5	597.5	650.5	677.5	677.5	733.5	753.5	908.5	908.5
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
m1 (B5)	140	160	200	200	200	250	250	300	300
m1 (B14)	-	105	120	140	140	160	160	200	200
x (B5)	-	-	-	-	-	-	4	25	25

Klemens Kutusu / Terminal Box / Klemmenkasten



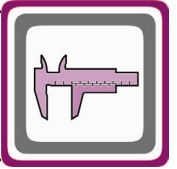
63-71-80-90-100-112-132

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



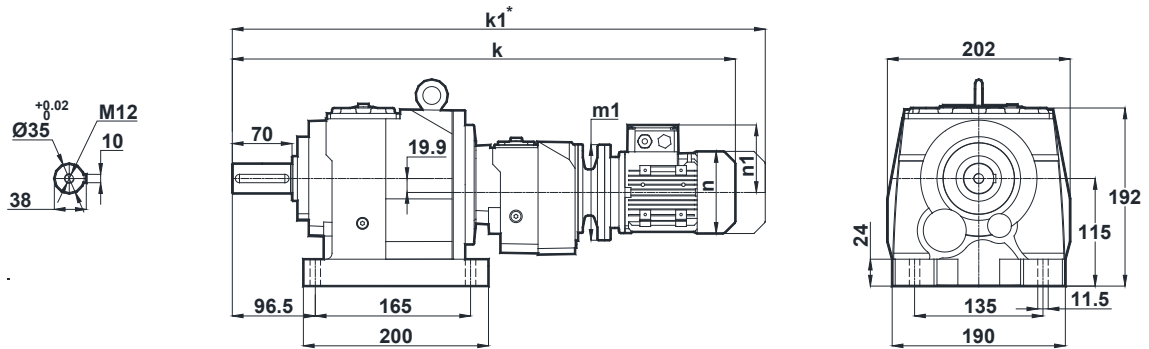
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

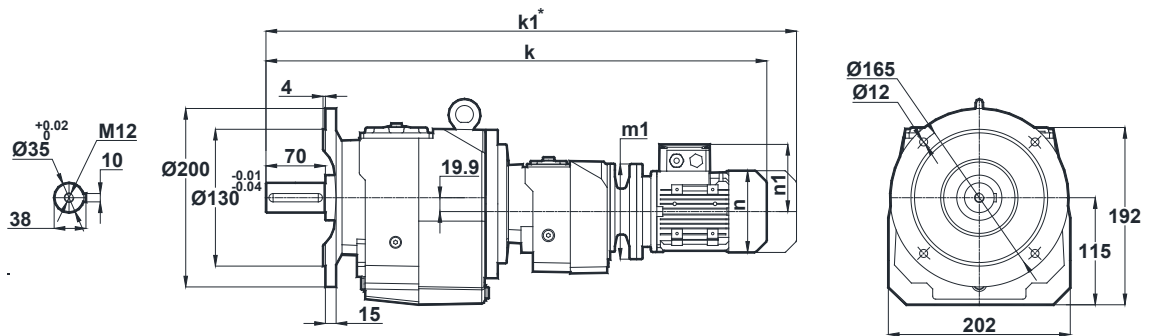


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV275
MV276

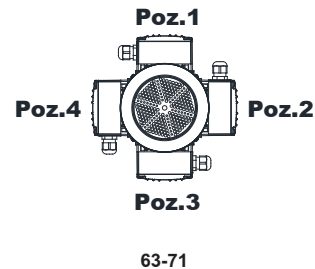


NV275
NV276

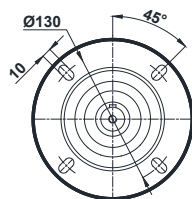
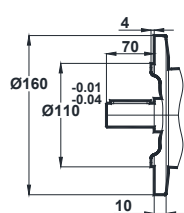


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	63/B5 63/B14	71/B5 71/B14
k	629	652.5
k1	700	743.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	90	105

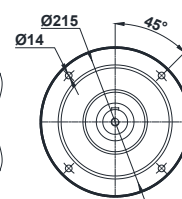
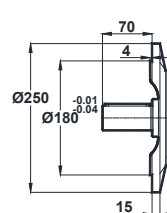
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

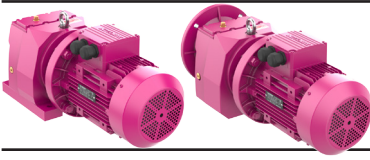


Opt. 1

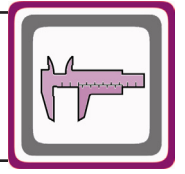


Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

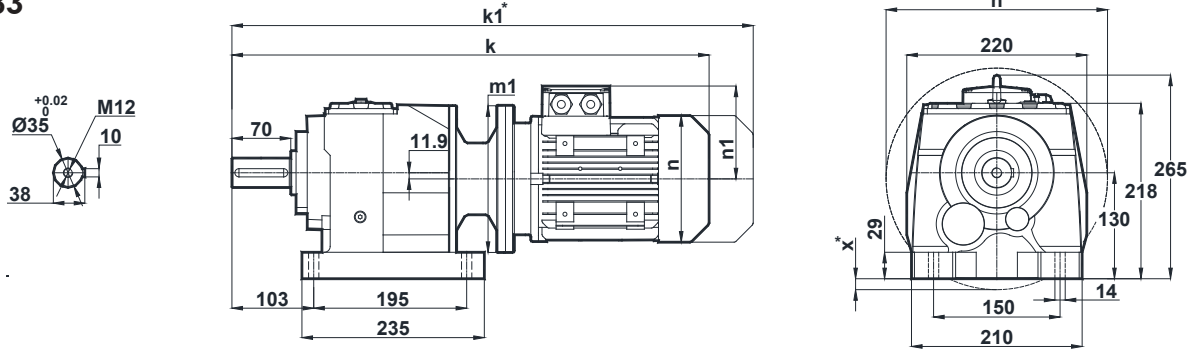


Ölçü Sayfaları Dimension Pages Abmessungenseiten

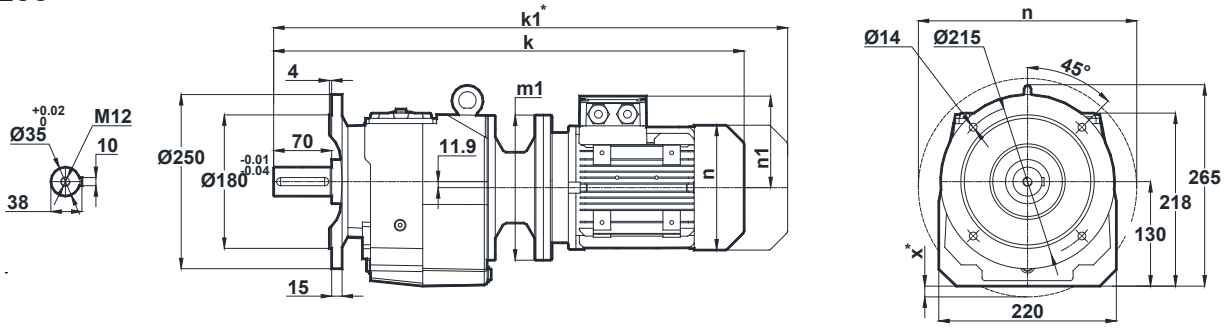


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV282 MV283

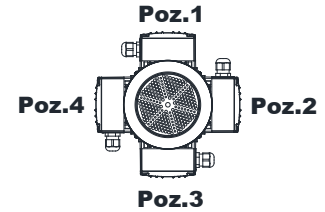


NV282 NV283



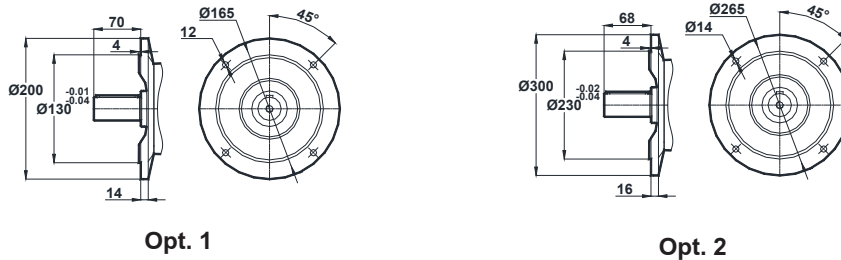
Motor Büyüklüğü / Motor Size / Motorbaugroße									
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5
k	555	577	618	618	669	692	795	795	954.5
k1	646	670	697	697	777	797	925	925	1104.5
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
m1 (B5)	160	200	200	200	250	250	300	300	350
m1 (B14)	-	120	140	140	160	160	200	200	-
x (B5)	-	-	-	-	-	-	11	11	40

Klemens Kutusu / Terminal Box / Klemmenkasten



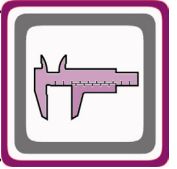
71-80-90-100-112-132-160

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



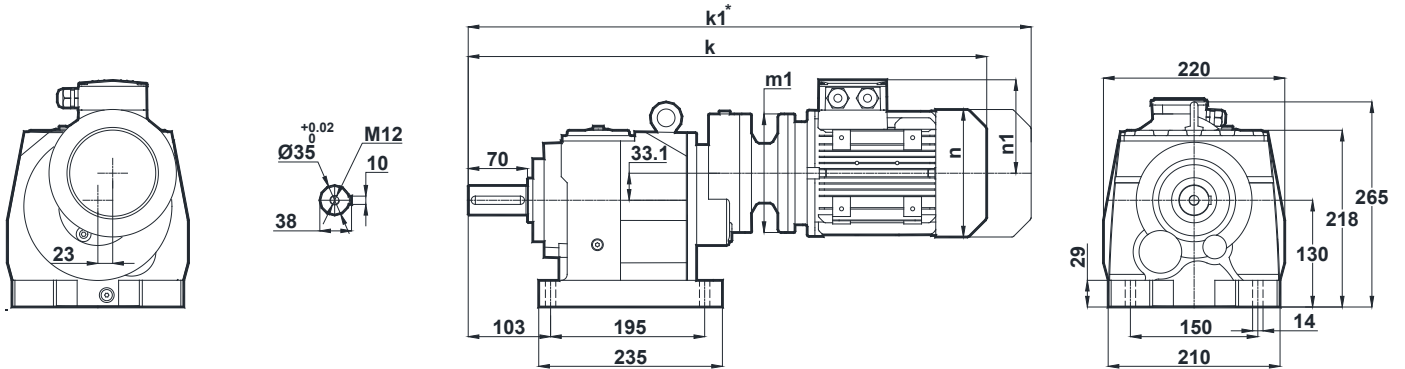
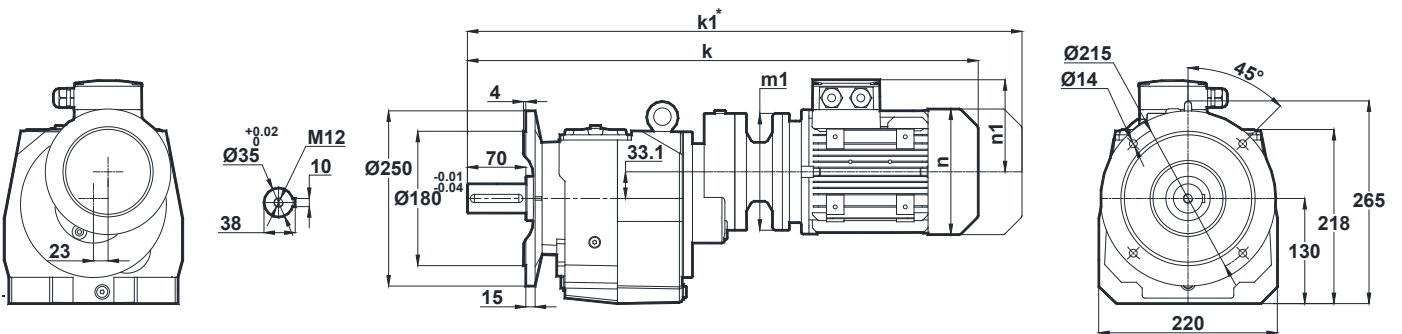
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



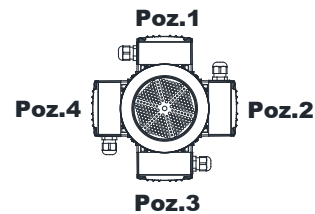
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV284

**NV284**

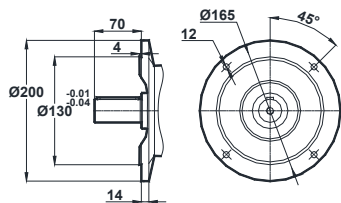
Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	63/B5	71/B5 71/B14
k	610	603
k1	681	694
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu / Terminal Box / Klemmenkasten

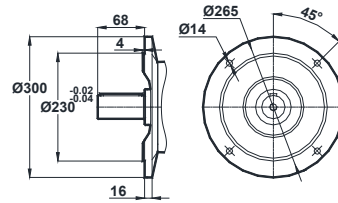


63-71

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

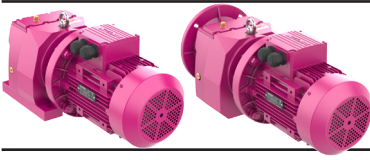


Opt. 1

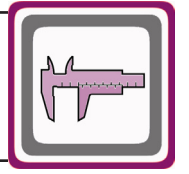


Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

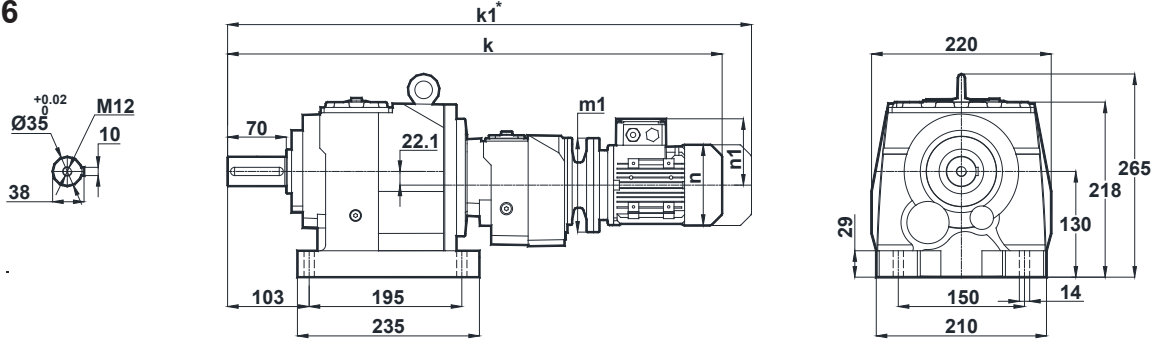


Ölçü Sayfaları Dimension Pages Abmessungsseiten

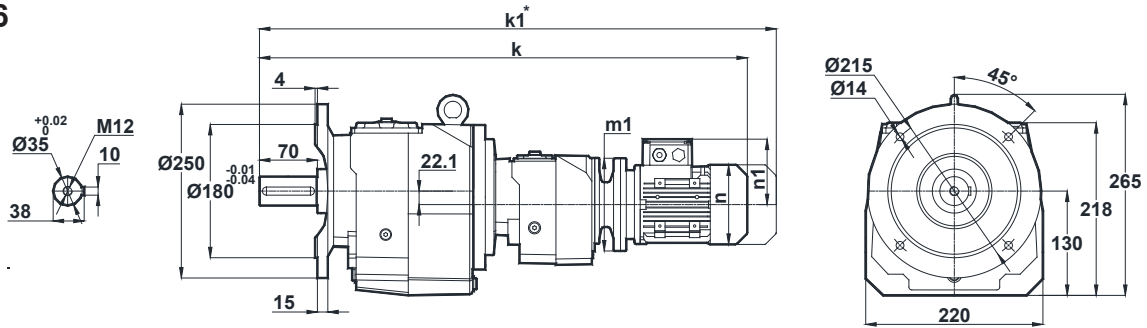


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV285 MV286

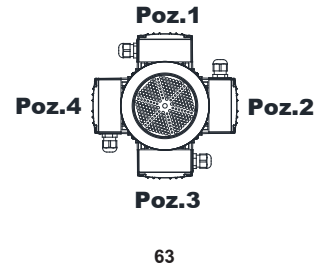


NV285 NV286

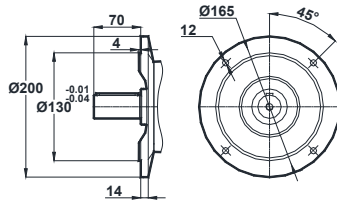


Motor Büyüklüğü / Motor Size / Motorbaugröße	
IEC	63/B5 63/B14
k	678
k1	749
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

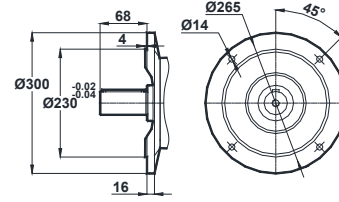
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

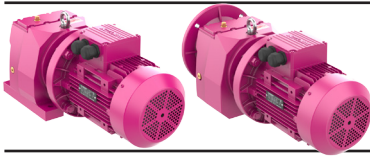


Opt. 1

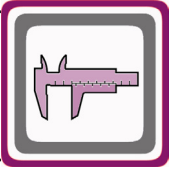


Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

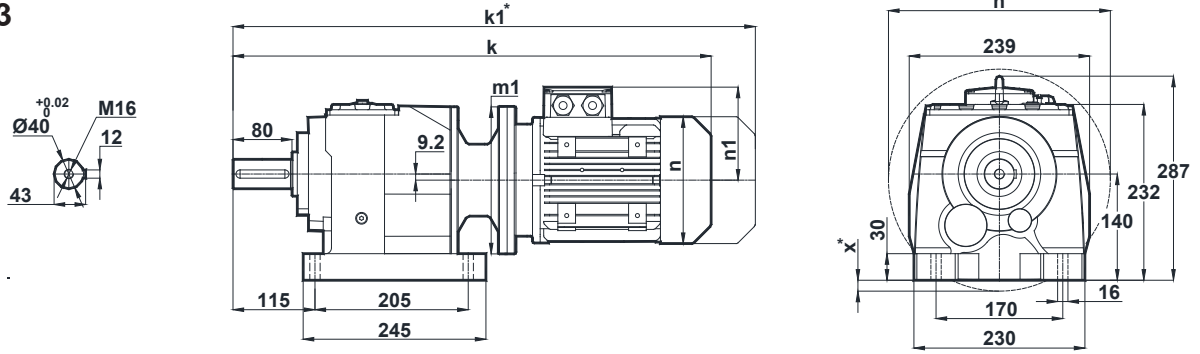


Ölçü Sayfaları Dimension Pages Abmessungenseiten

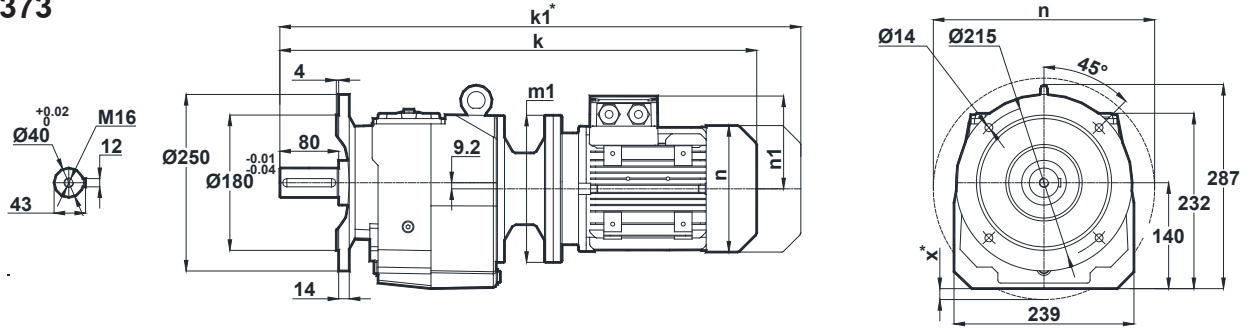


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV372 MV373

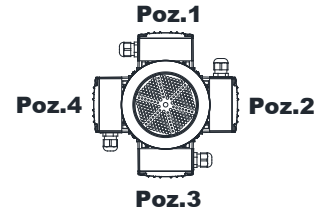


NV372 NV373



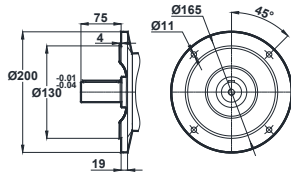
Motor Büyüklüğü / Motor Size / Motorbaugröße										
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5
k	576	598	639	639	690	713	816	816	975.5	975.5
k1	667	691	718	718	798	818	946	946	1125.5	1125.5
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
m1 (B5)	160	200	200	200	250	250	300	300	350	350
m1 (B14)	-	120	140	140	160	160	200	200	-	-
x (B5)	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten

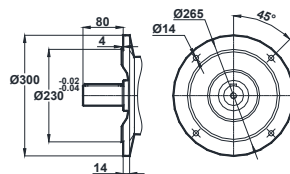


71-80-90-100-112-132-160

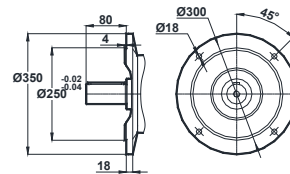
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1



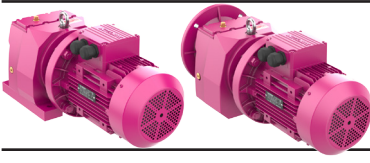
Opt. 2



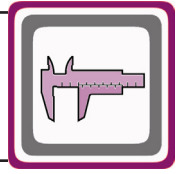
Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

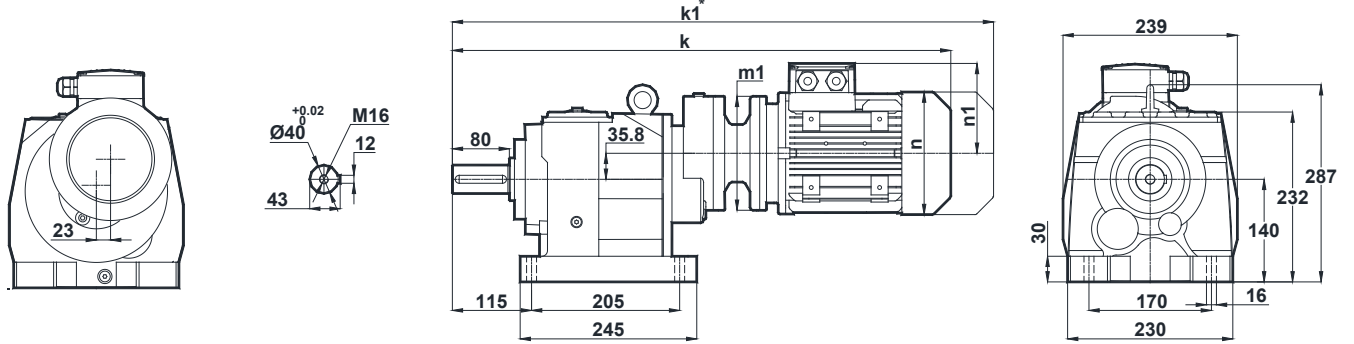


Ölçü Sayfaları Dimension Pages Abmessungsseiten

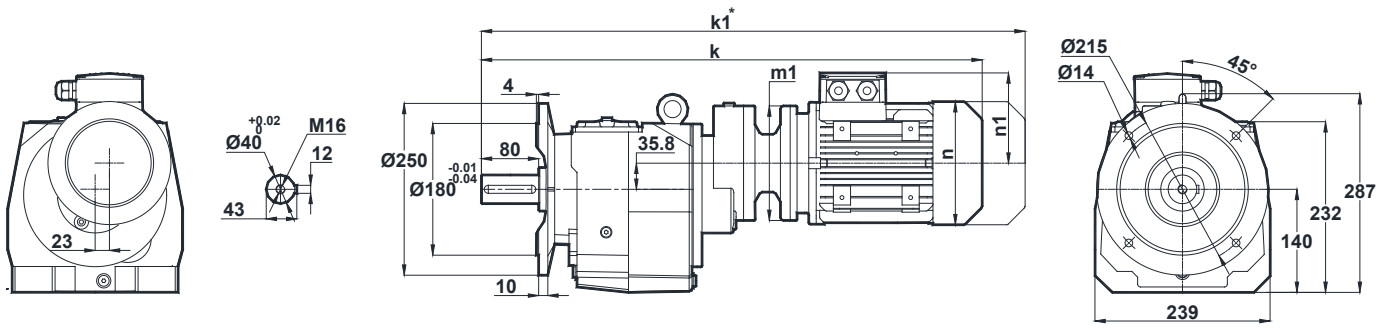


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV374

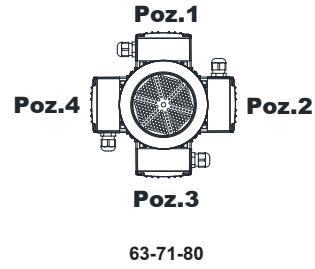


NV374

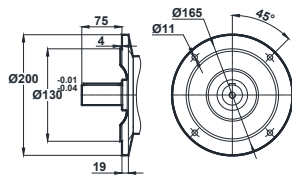


Motor Büyüklüğü / Motor Size / Motorbaugroße			
IEC	63/B5	71/B5 71/B14	80/B5 80/B14
k	631	624	675
k1	702	715	768
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

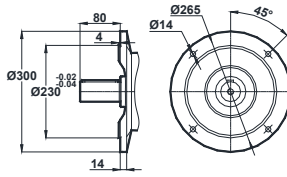
Klemens Kutusu / Terminal Box / Klemmenkasten



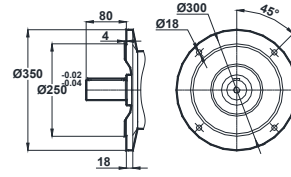
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

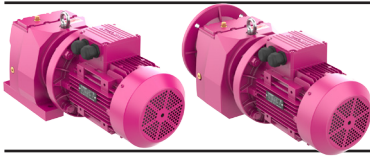


Opt. 2

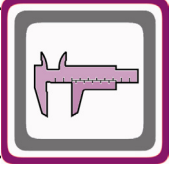


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

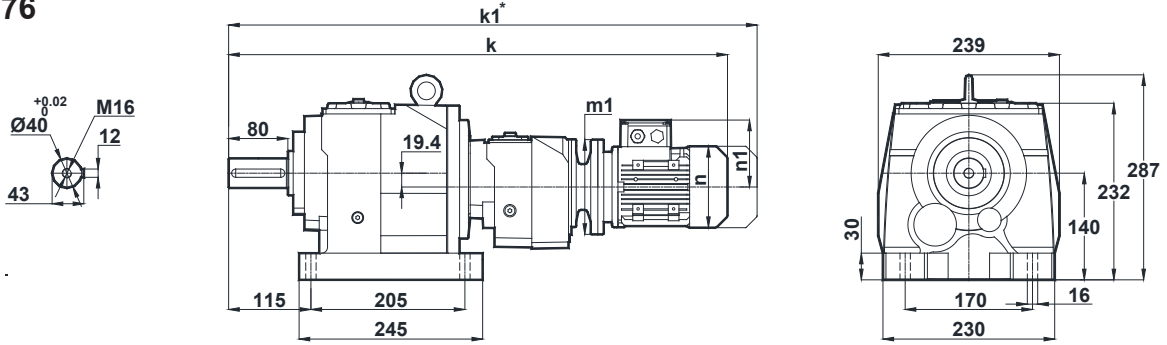


Ölçü Sayfaları Dimension Pages Abmessungenseiten

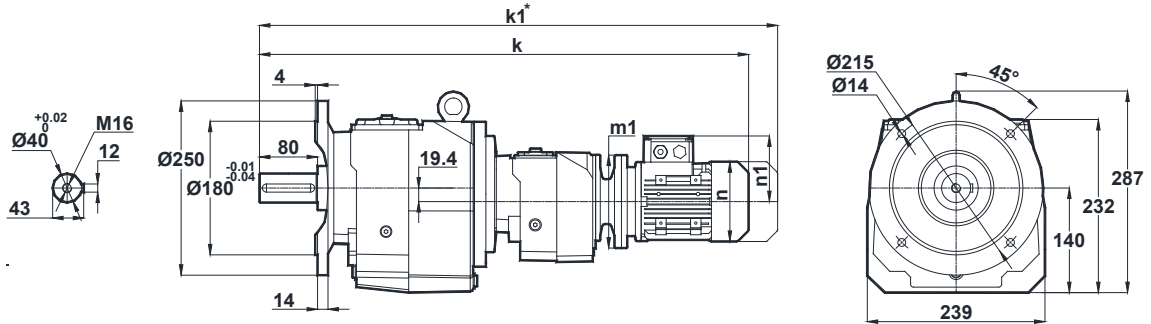


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV375 MV376

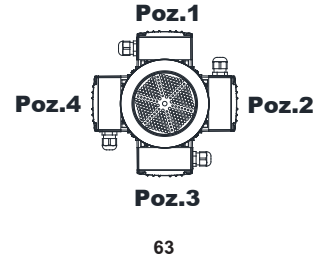


NV375 NV376

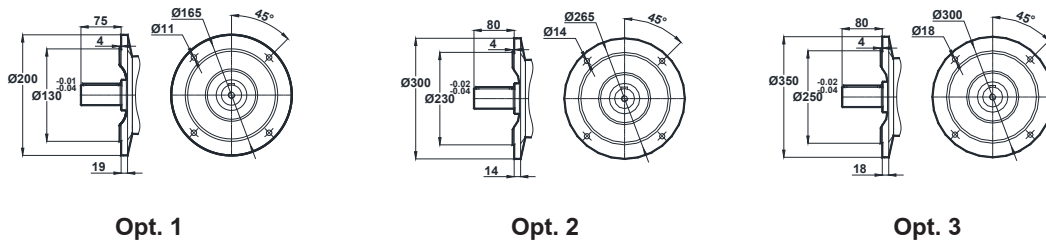


Motor Büyüklüğü / Motor Size / Motorbaugroße	
IEC	63/B5 63/B14
k	699
k1	770
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

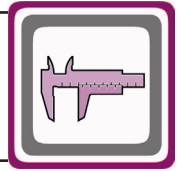
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

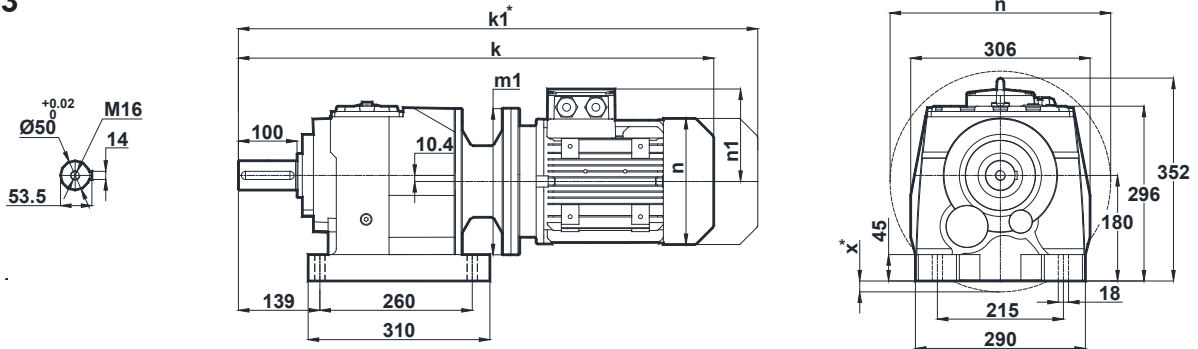


* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

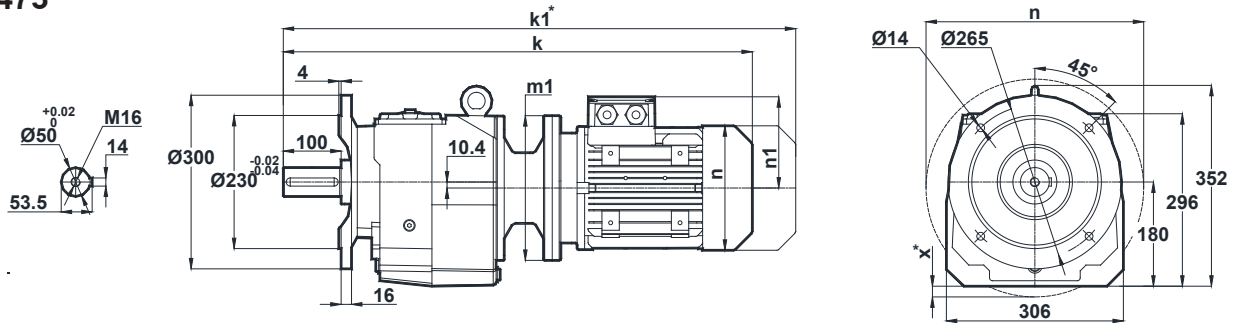


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

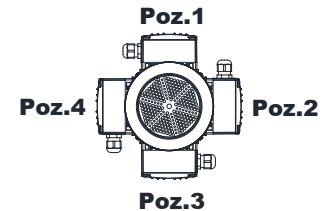
MV472
MV473



NV472
NV473

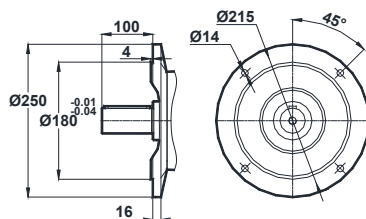
[illegible]

Klemens Kutusu / Terminal Box / Klemmenkasten

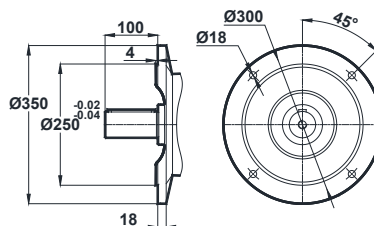


80-90-100-112-132-160-180

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



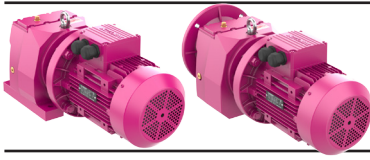
Opt. 1



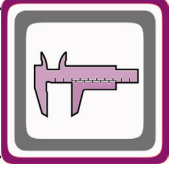
Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

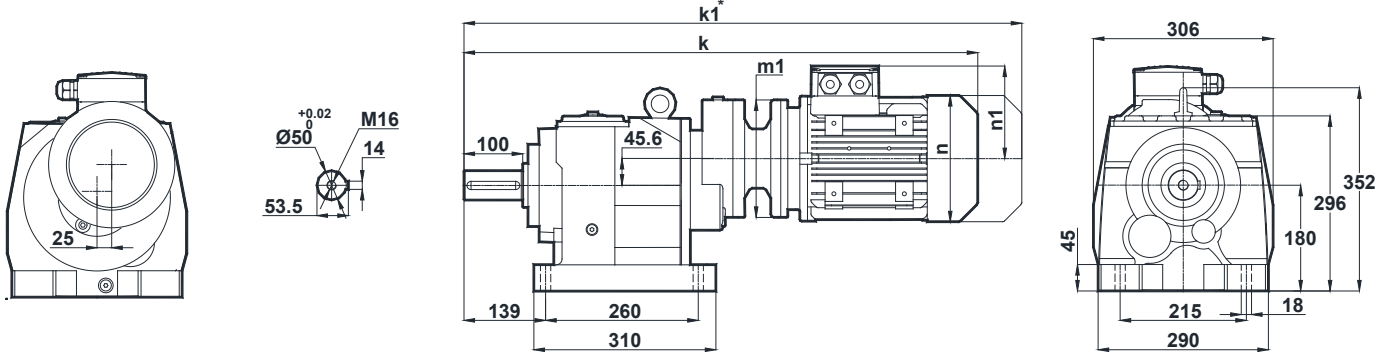


Ölçü Sayfaları Dimension Pages Abmessungenseiten

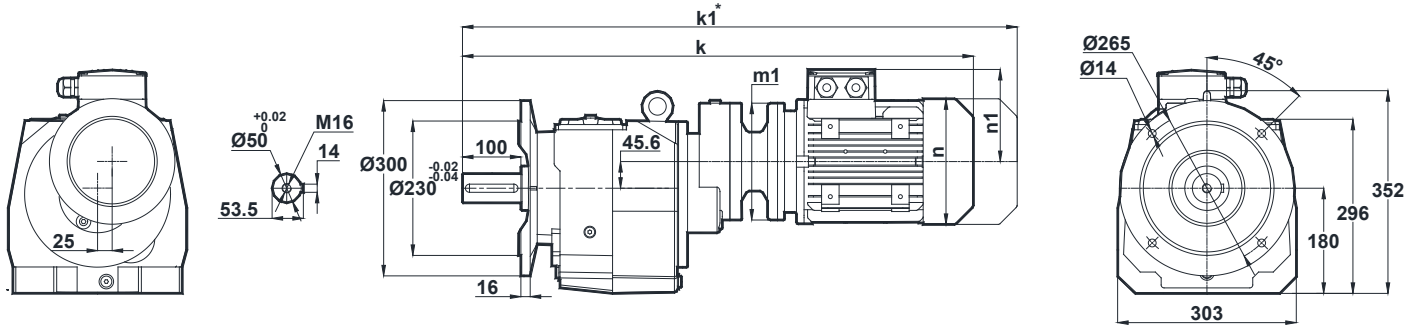


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV474

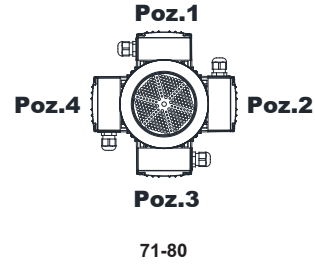


NV474

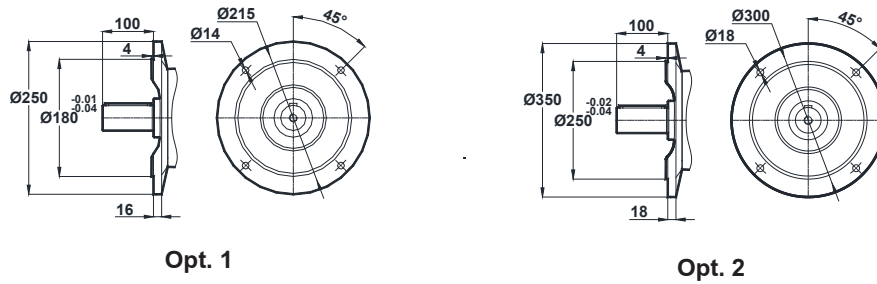


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	71/B5	80/B5 80/B14
k	736.5	758.5
k1	827.5	851.5
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

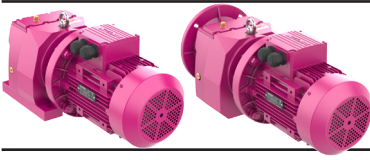
Klemens Kutusu / Terminal Box / Klemmenkasten



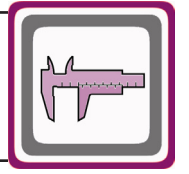
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

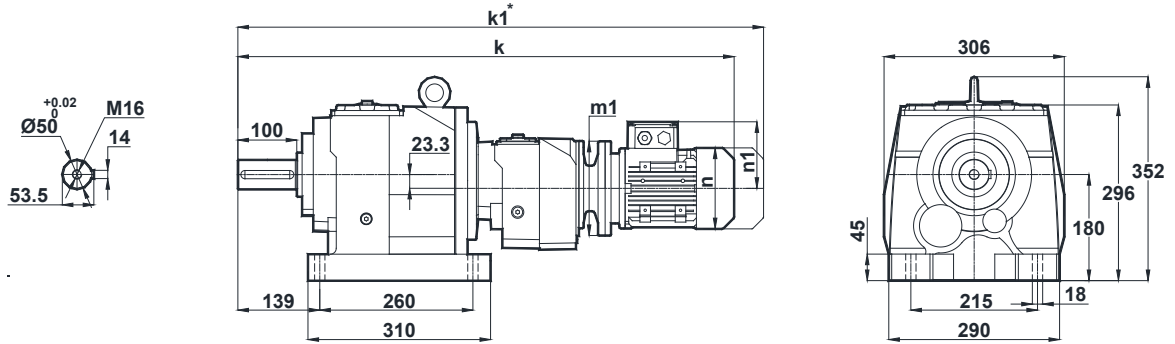


Ölçü Sayfaları Dimension Pages Abmessungsseiten

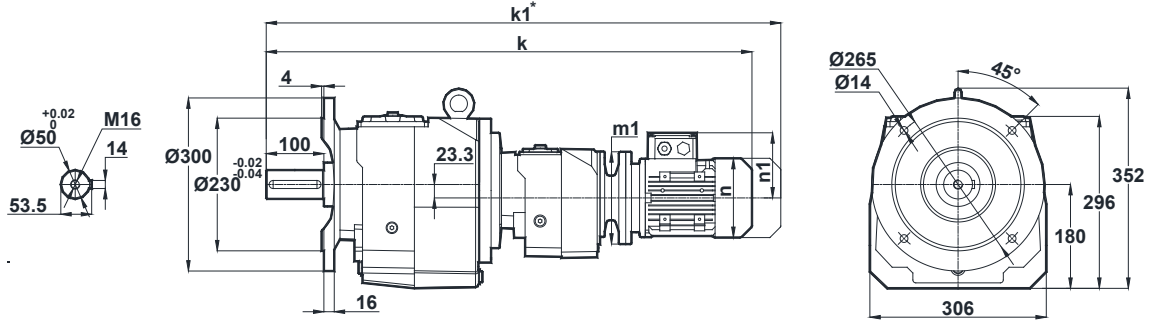


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV475 MV476

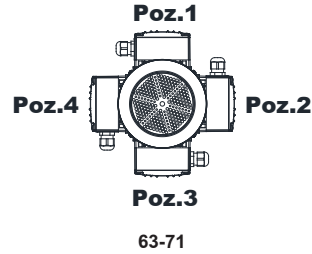


NV475 NV476

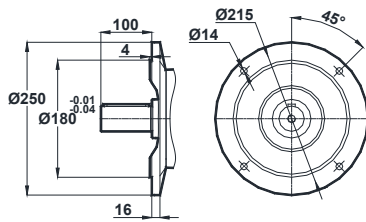


Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	63/B5	71/B5 71/B14
k	842.5	835.5
k1	913.5	926.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

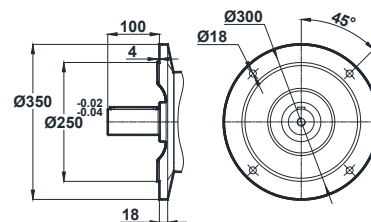
Klemens Kutusu / Terminal Box / Klemmenkasten



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

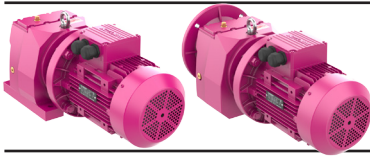


Opt. 1

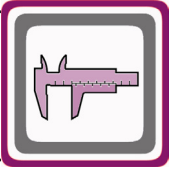


Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

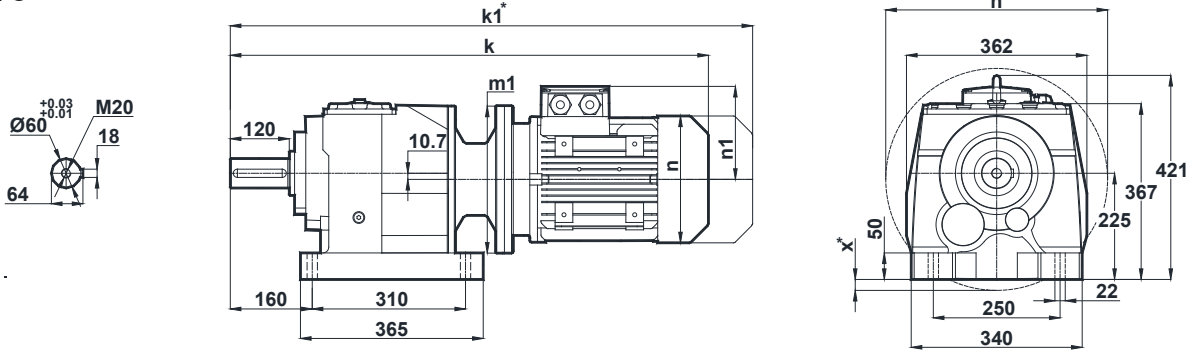


Ölçü Sayfaları Dimension Pages Abmessungenseiten

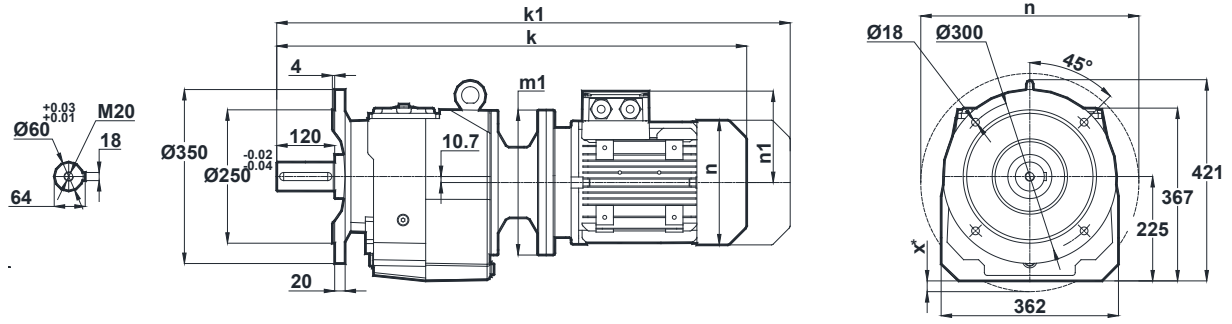


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV572 MV573

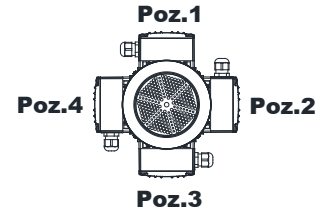


NV572 NV573



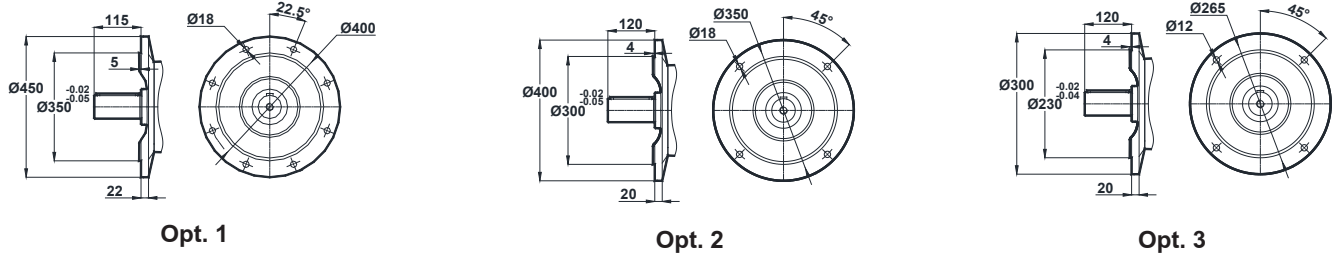
Motor Büyüklüğü / Motor Size / Motorbaugröße									
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5
k	816.5	839.5	943.5	943.5	1099	1099	1190	1190	1251
k1	924.5	944.5	1073.5	1073.5	1249	1249	1377	1377	1443
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
m1 (B5)	250	250	300	300	350	350	350	350	400
m1 (B14)	-	-	200	200	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



100-112-132-160-180-200

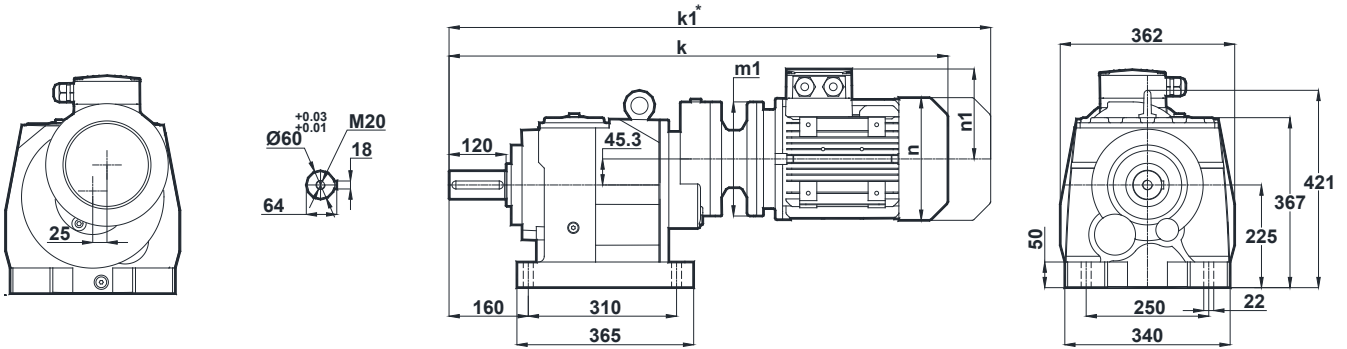
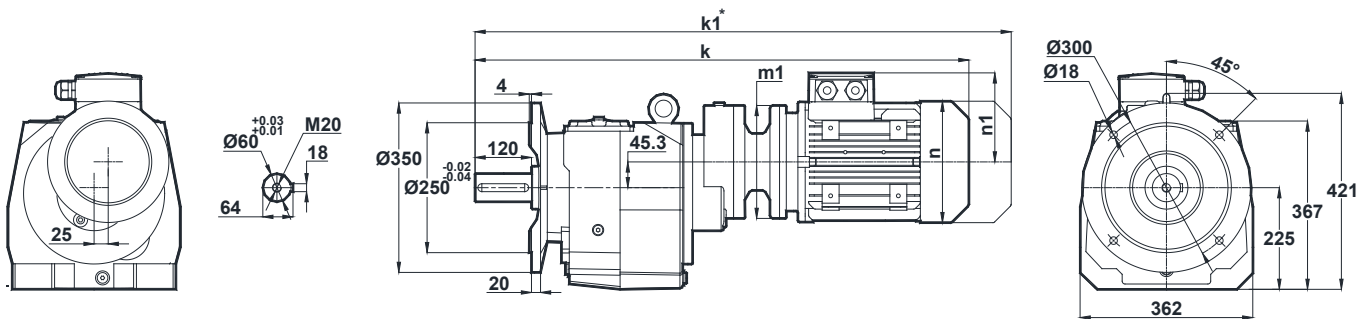
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

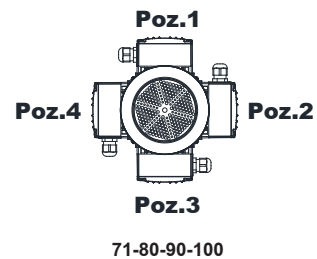
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

MV574

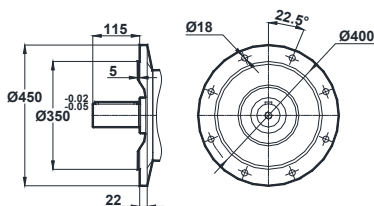
**NV574**

Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	799.5	821.5	862.5	862.5	913.5
k1	890.5	914.5	941.5	941.5	1021.5
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

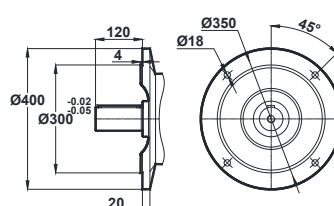
Klemens Kutusu / Terminal Box / Klemmenkasten



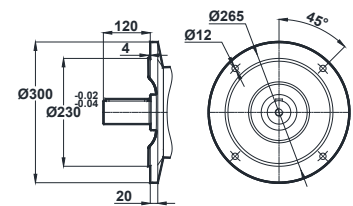
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

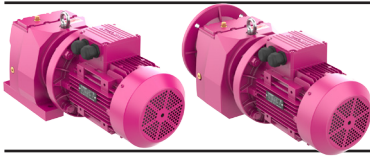


Opt. 2

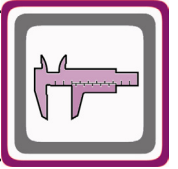


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

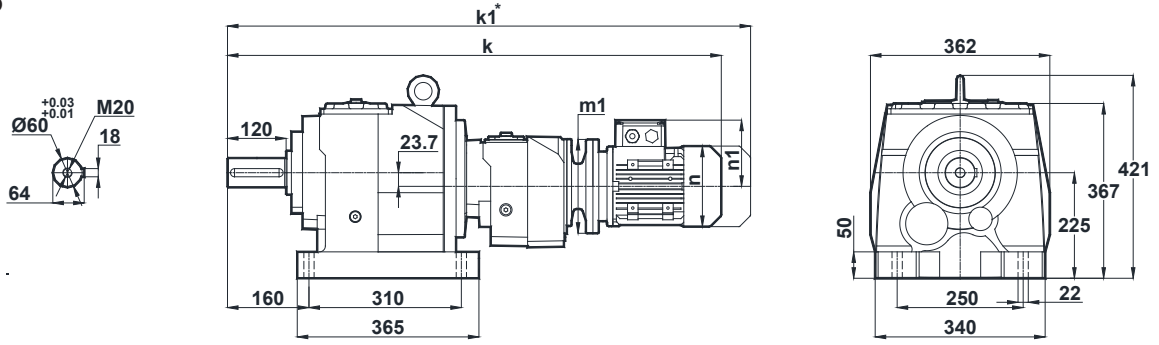


Ölçü Sayfaları Dimension Pages Abmessungenseiten

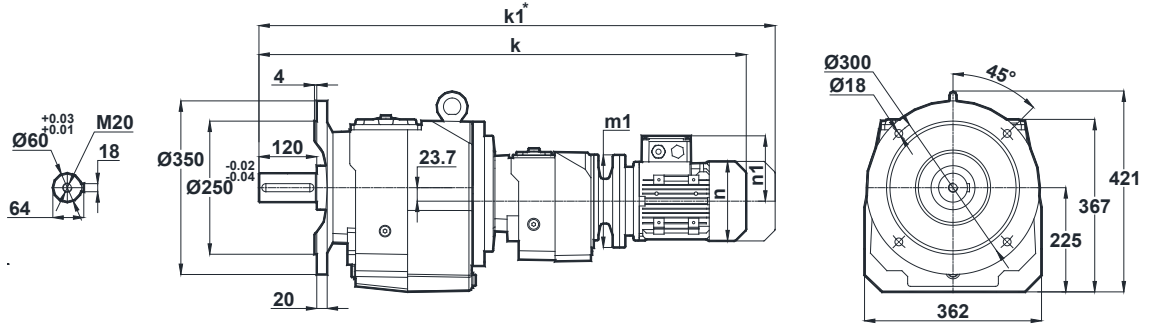


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV575 MV576

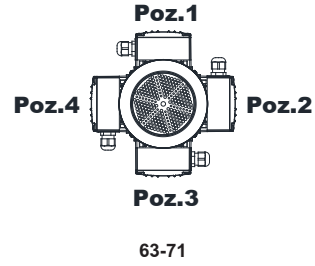


NV575 NV576

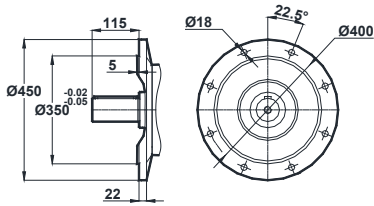


Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	63/B5	71/B5 71/B14
k	907.5	900.5
k1	978.5	991.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

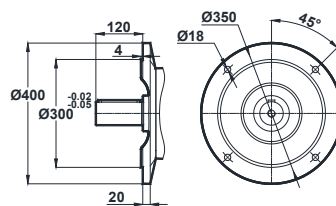
Klemens Kutusu / Terminal Box / Klemmenkasten



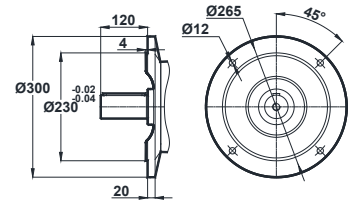
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

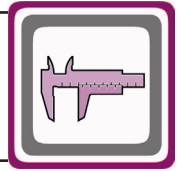


Opt. 2



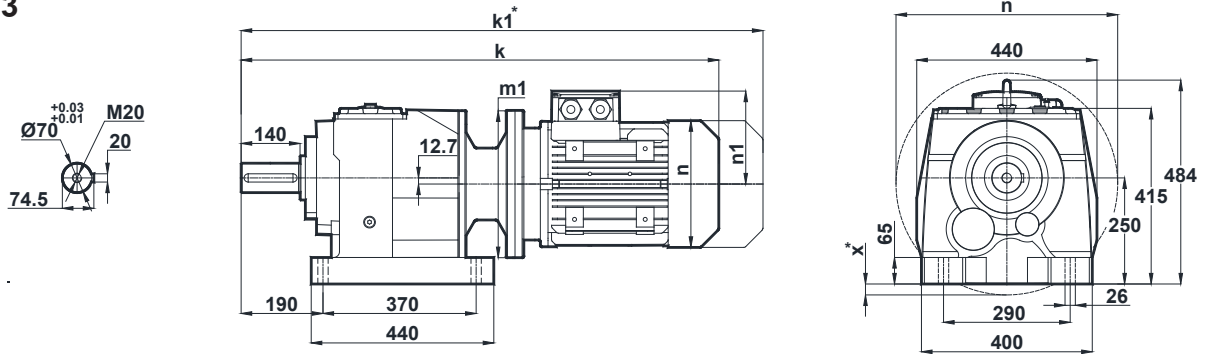
Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

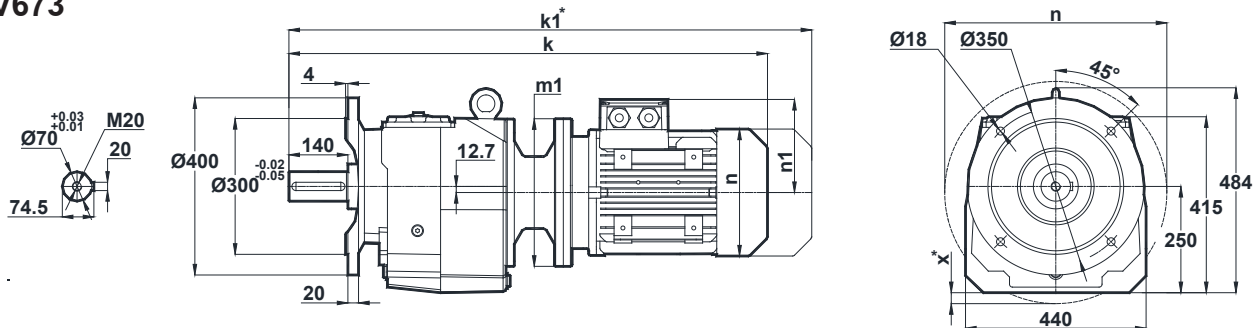


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

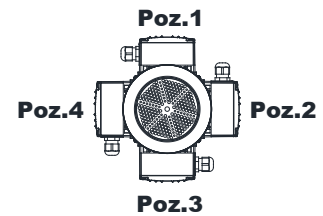
MV672
MV673



NV672
NV673

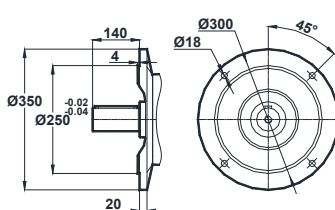
[illegible]

Klemens Kutusu / Terminal Box / Klemmenkasten

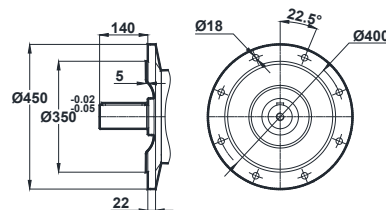


112-132-160-180-200-225

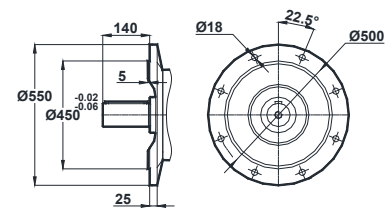
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1



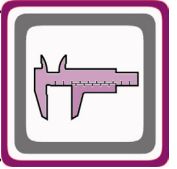
Opt. 2



Opt. 3

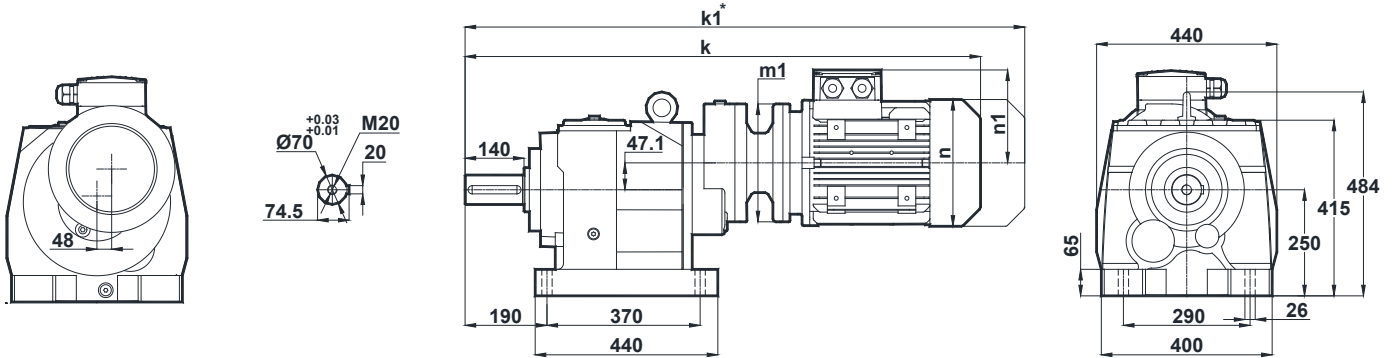
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

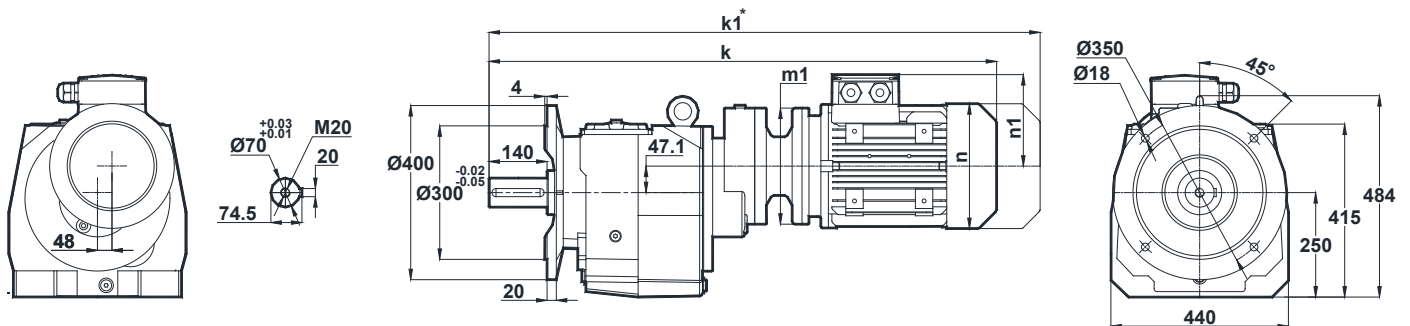


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV674

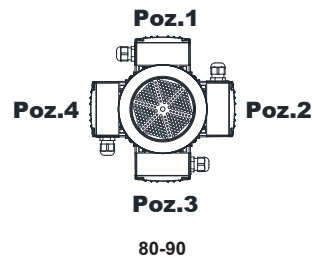


NV674

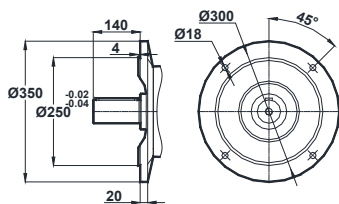


Motor Büyüklüğü / Motor Size / Motorbaugröße			
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14
k	891.5	932.5	932.5
k1	984.5	1011.5	1011.5
n	155	176	176
n1	127	136	136
m1 (B5)	200	200	200
m1 (B14)	-	140	140

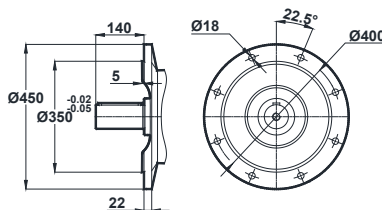
Klemens Kutusu / Terminal Box / Klemmenkasten



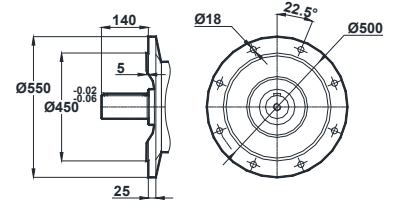
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

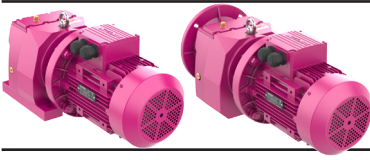


Opt. 2

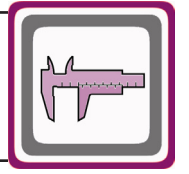


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

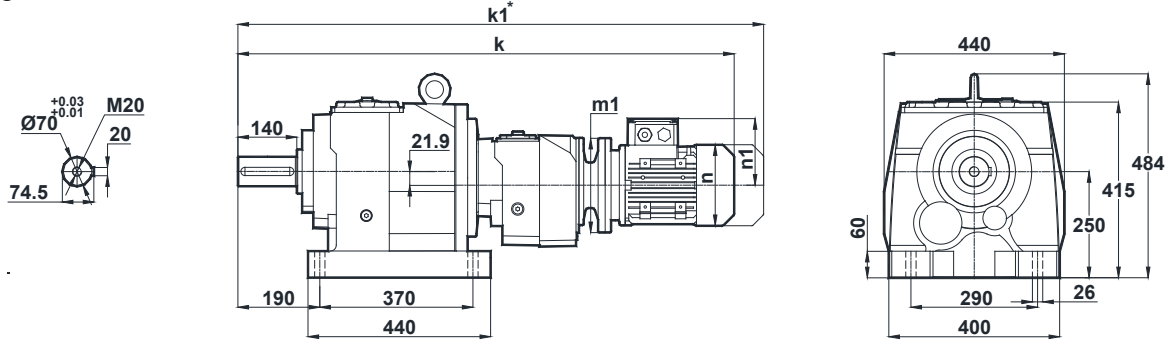


Ölçü Sayfaları Dimension Pages Abmessungsseiten

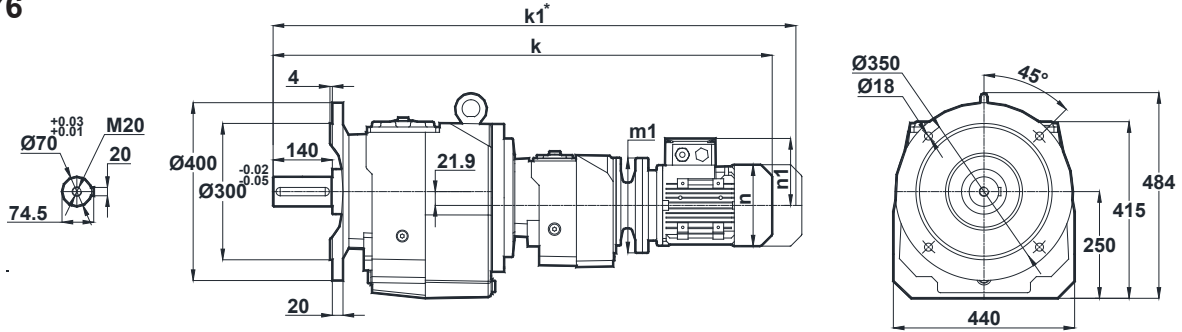


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV675 MV676

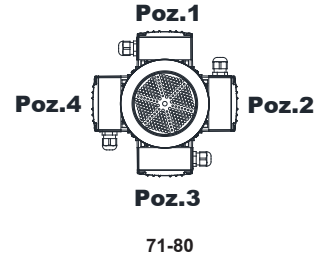


NV675 NV676

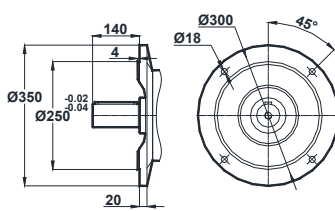


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	71/B5	80/B5 80/B14
k	1020	1042
k1	1111	1135
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

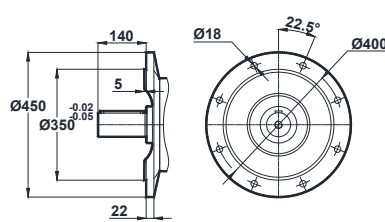
Klemens Kutusu / Terminal Box / Klemmenkasten



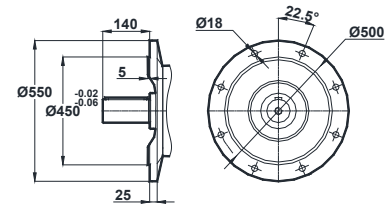
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

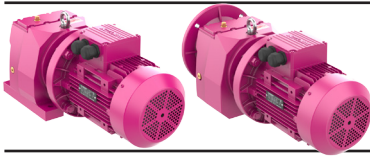


Opt. 2

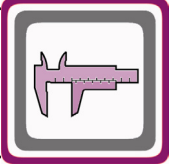


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

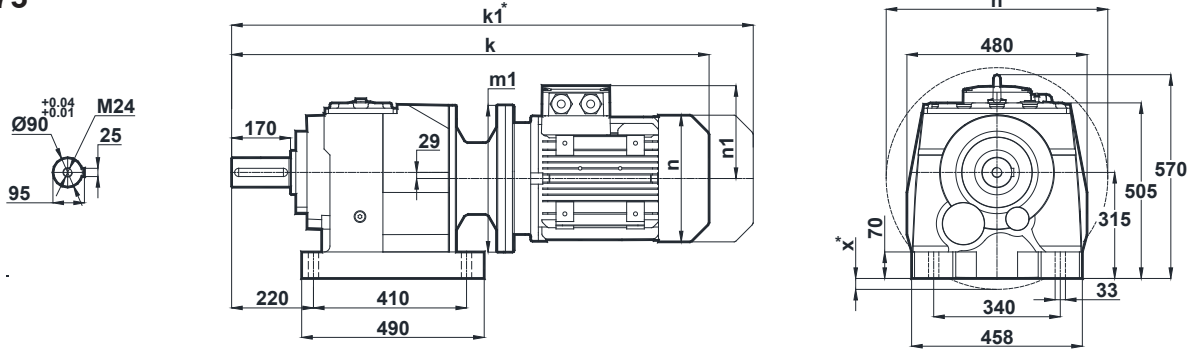


Ölçü Sayfaları Dimension Pages Abmessungenseiten

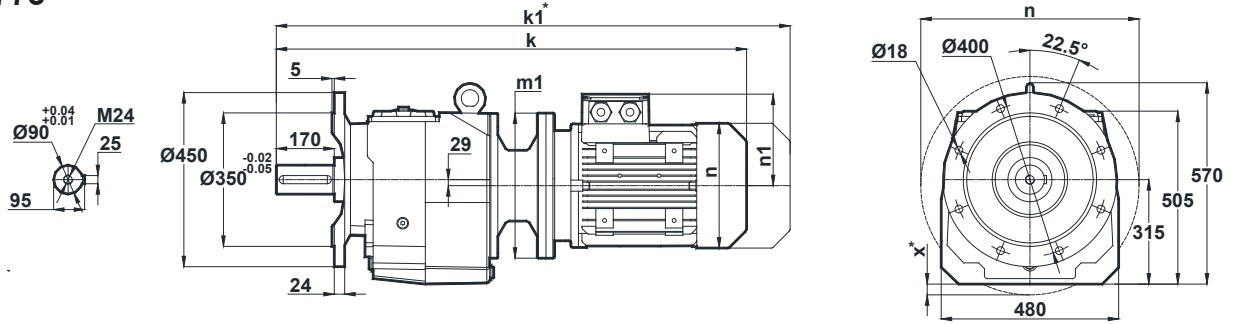


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV772 MV773

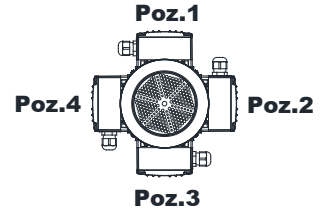


NV772 NV773



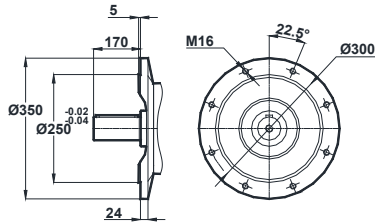
Motor Büyüklüğü / Motor Size / Motorbaugröße										
IEC	132S/B5	132M/B5	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5
k	1082.5	1082.5	1232	1232	1323	1323	1386	1502	1502	1568
k1	1212.5	1212.5	1382	1382	1510	1510	1578	1685	1685	1725
n	257	257	316	316	348	348	396	438	438	481
n1	182	182	226	226	242	242	294	311,5	311,5	337
m1 (B5)	300	300	350	350	350	350	400	450	450	550
m1 (B14)	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten

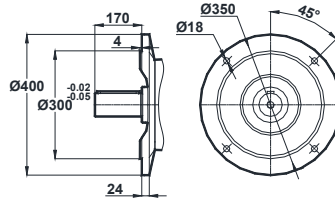


132-160-180-200-225-250

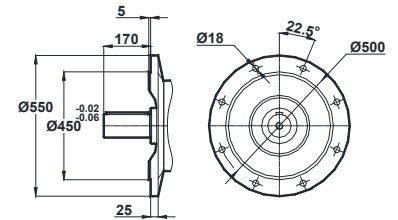
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1



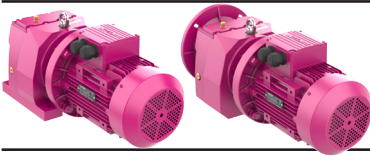
Opt. 2



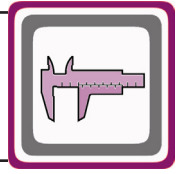
Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

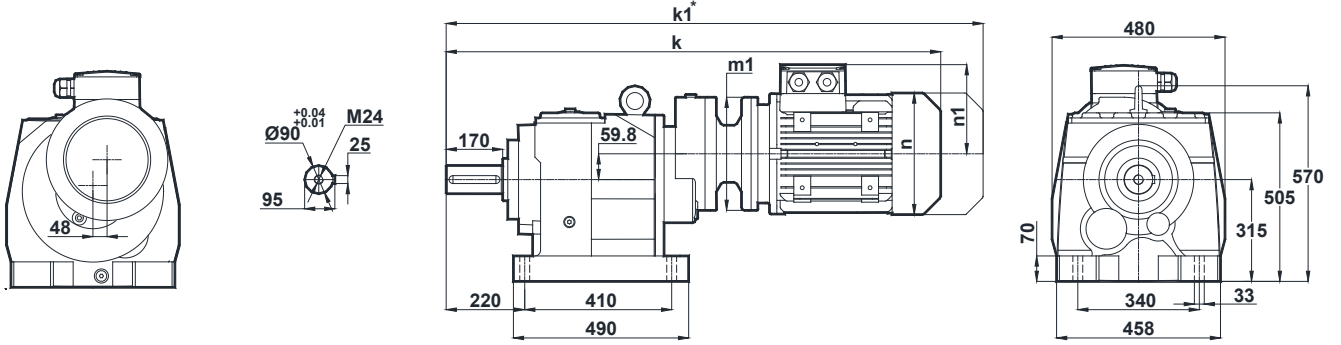


Ölçü Sayfaları Dimension Pages Abmessungsseiten

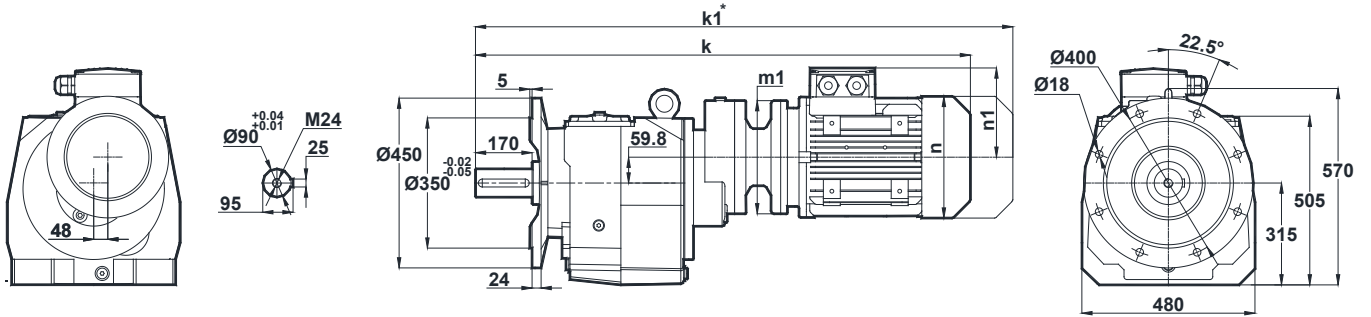


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV774

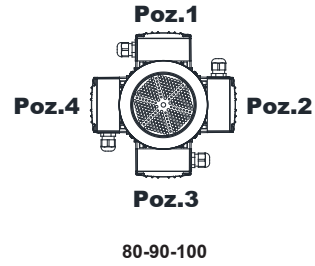


NV774

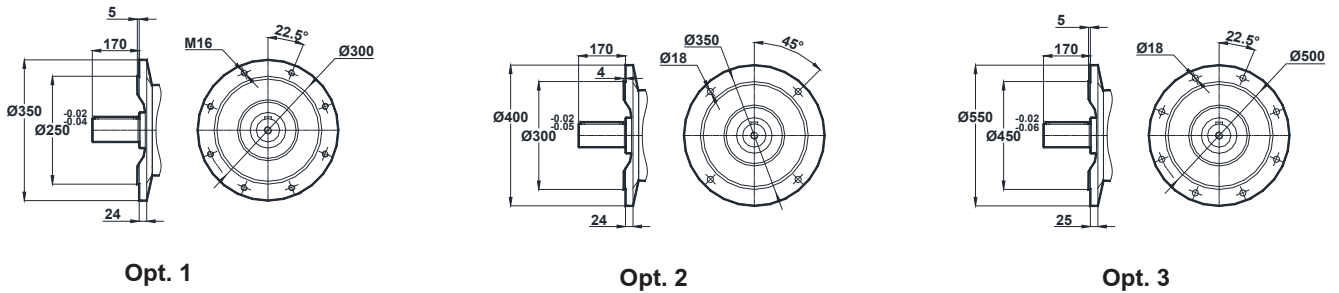


Motor Büyüklüğü / Motor Size / Motorbaugröße				
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	976.5	1017.5	1017.5	1070
k1	1069.5	1096.5	1096.5	1178
n	155	176	176	193
n1	127	136	136	149
m1 (B5)	200	200	200	250
m1 (B14)	-	140	140	160

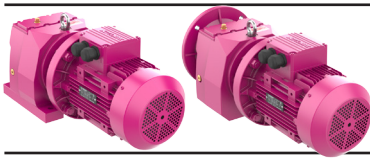
Klemens Kutusu / Terminal Box / Klemmenkasten



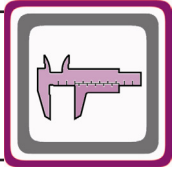
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

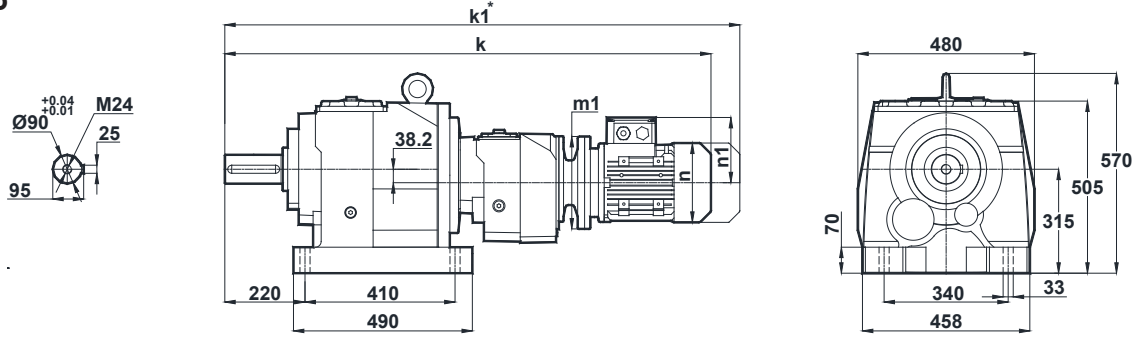


Ölçü Sayfaları Dimension Pages Abmessungenseiten

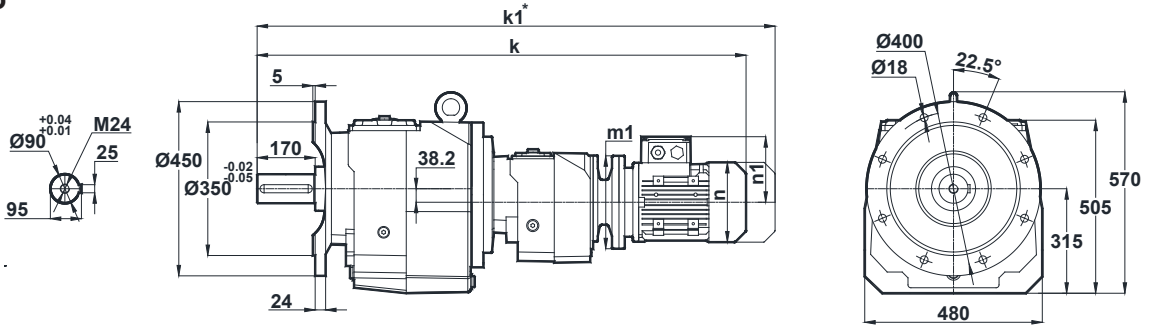


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV775 MV776

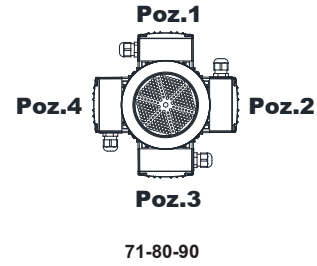


NV775 NV776

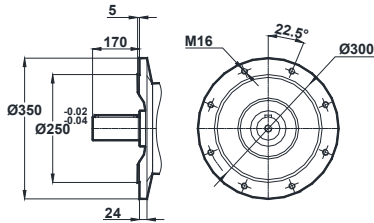


Motor Büyüklüğü / Motor Size / Motorbaugröße				
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	1108	1130	1171	1171
k1	1199	1223	1250	1250
n	137	155	176	176
n1	118	127	136	136
m1 (B5)	160	200	200	200
m1 (B14)	-	120	140	140

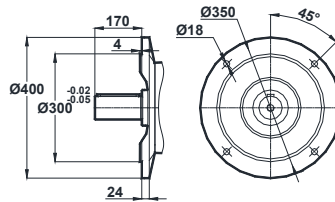
Klemens Kutusu / Terminal Box / Klemmenkasten



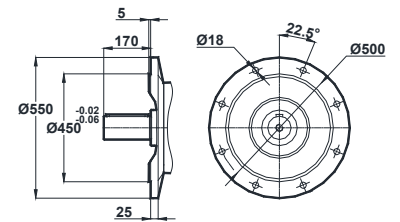
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

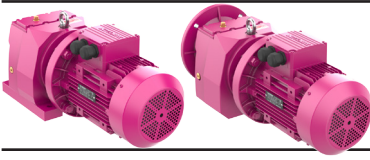


Opt. 2

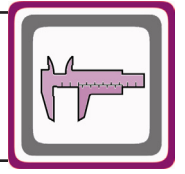


Opt. 3

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

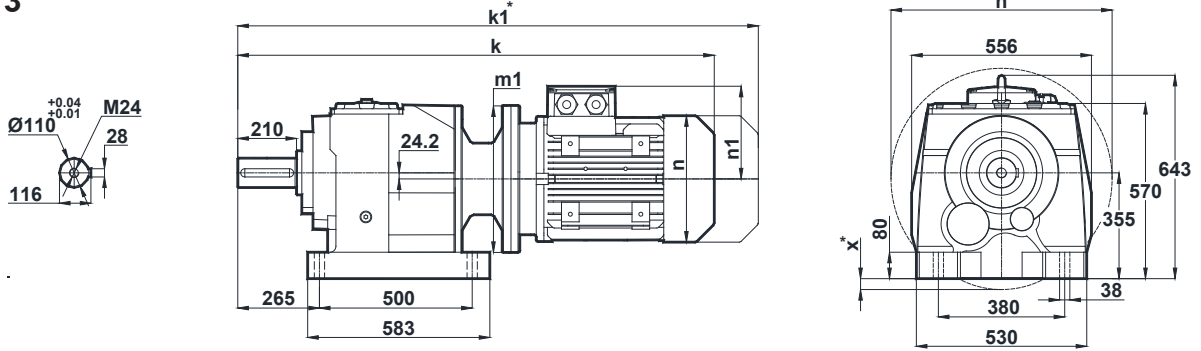


Ölçü Sayfaları Dimension Pages Abmessungenseiten

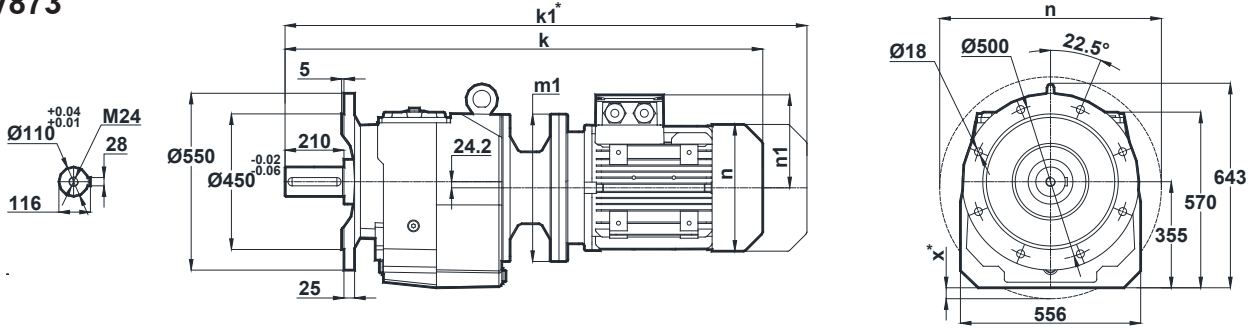


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV872 MV873

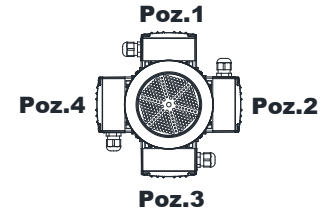


NV872 NV873



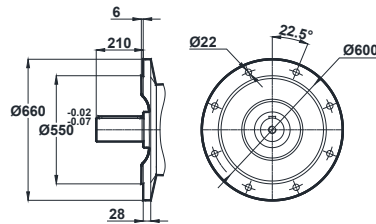
Motor Büyüklüğü / Motor Size / Motorbaugröße											
IEC	132M/B5	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5	280S/B5	280M/B5
k	1190.5	1418	1418	1509	1509	1550	1613	1613	1679	1795	1795
k1	1320.5	1568	1568	1696	1696	1742	1796	1796	1836	1993	1993
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	226	226	242	242	294	311,5	311,5	337	402	402
m1 (B5)	300	350	350	350	350	400	450	450	550	550	550
m1 (B14)	-	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



132-160-180-200-225-250-280

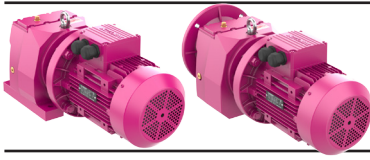
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



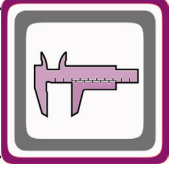
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

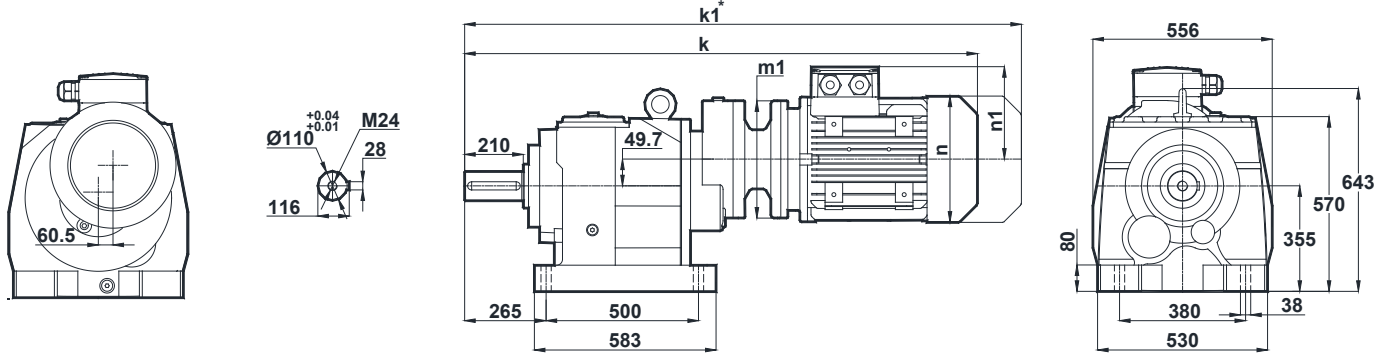


Ölçü Sayfaları Dimension Pages Abmessungenseiten

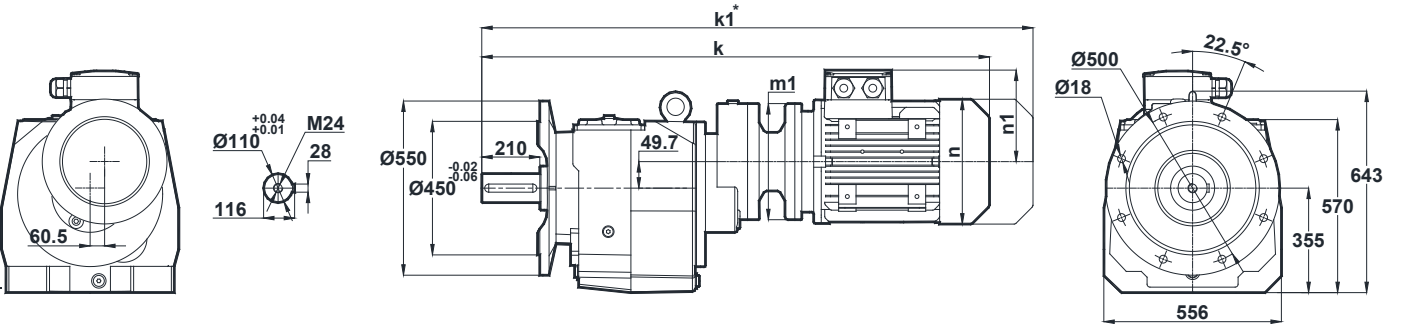


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV874

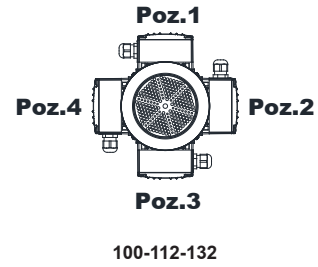


NV874

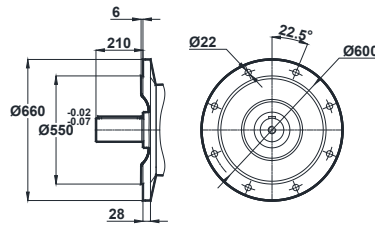


Motor Büyüklüğü / Motor Size / Motorbaugroße				
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14
k	1204.5	1227.5	1331.5	1331.5
k1	1312.5	1332.5	1461.5	1461.5
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

Klemens Kutusu / Terminal Box / Klemmenkasten

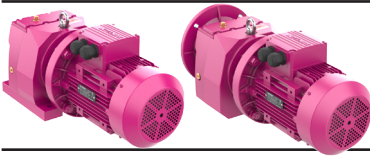


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

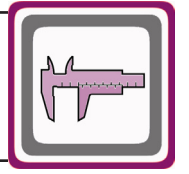


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

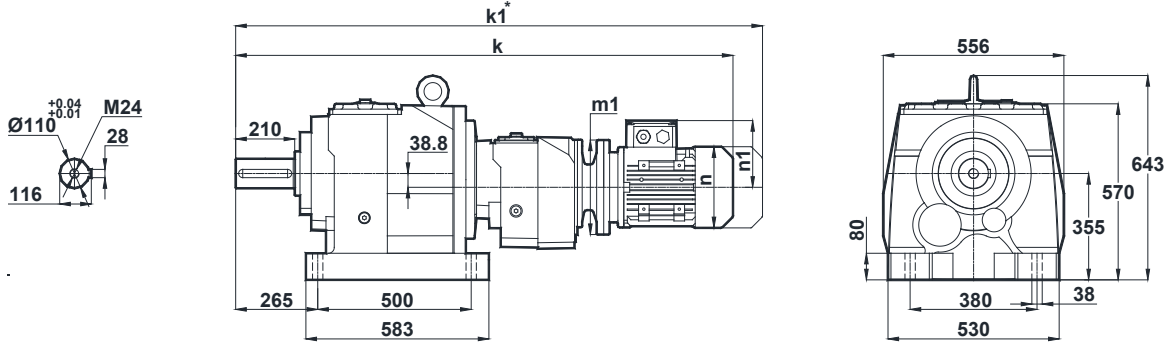


Ölçü Sayfaları Dimension Pages Abmessungsseiten

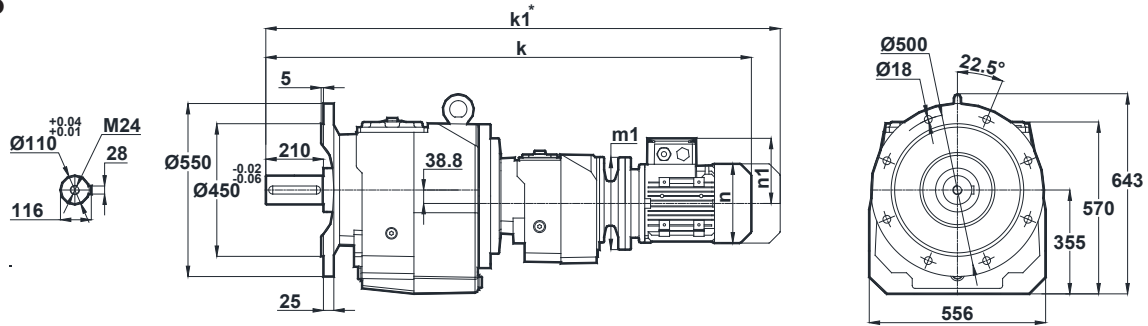


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV875 MV876

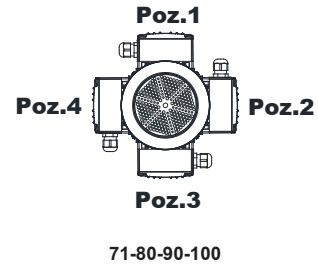


NV875 NV876

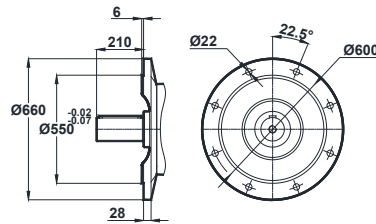


Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	1225	1247	1288	1288	1339
k1	1316	1340	1367	1367	1447
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

Klemens Kutusu / Terminal Box / Klemmenkasten

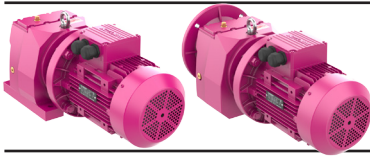


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

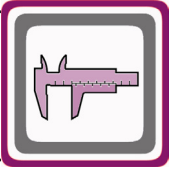


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

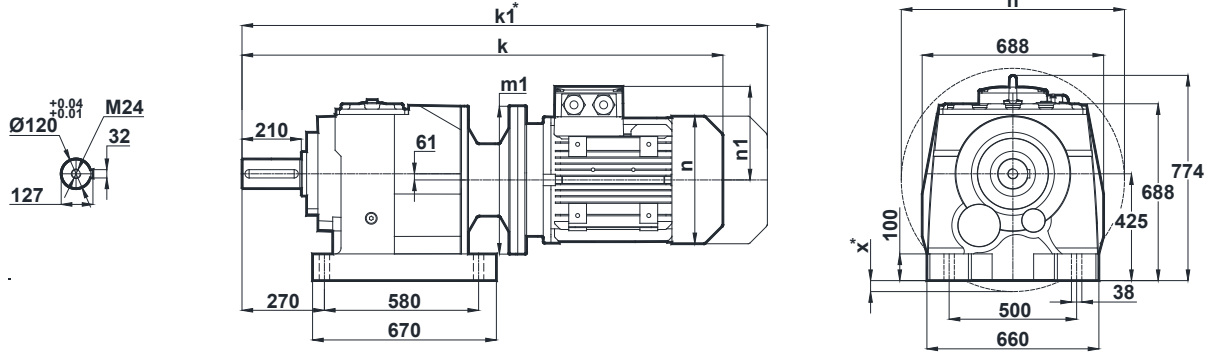


Ölçü Sayfaları Dimension Pages Abmessungsseiten

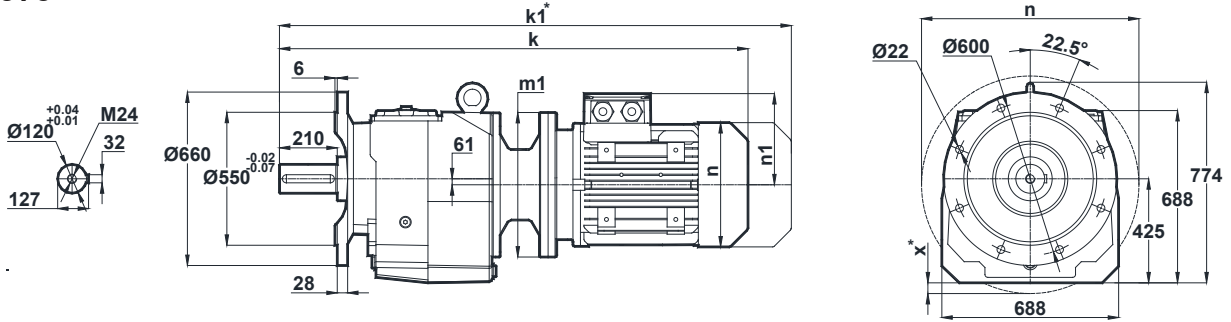


-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV972 MV973

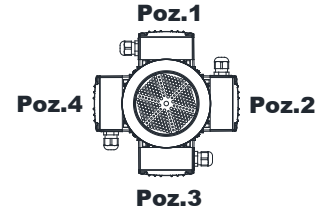


NV972 NV973



	Motor Büyüklüğü / Motor Size / Motorbaugröße												
IEC	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5	280S/B5	280M/B5	315S/B5	315M/B5	315L/B5
k	1405.5	1405.5	1496.5	1496.5	1561.5	1666.5	1666.5	1754.5	1870.5	1870.5	2058.5	2058.5	2327.5
k1	1555.5	1555.5	1683.5	1683.5	1753.5	1849.5	1849.5	1911.5	2068.5	2068.5	2589.5	2589.5	2736.5
n	316	316	348	348	396	438	438	481	547	547	622	622	622
n1	226	226	242	242	294	311,5	311,5	337	402	402	499	499	499
m1 (B5)	350	350	350	350	400	450	450	550	550	550	660	660	660
m1 (B14)	-	-	-	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-	-	-	-

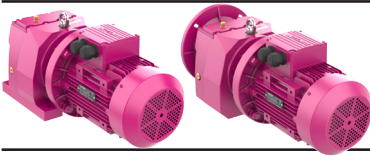
Klemens Kutusu / Terminal Box / Klemmenkasten



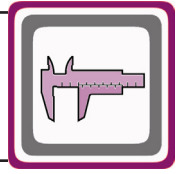
160-180-200-225-250-280-315

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

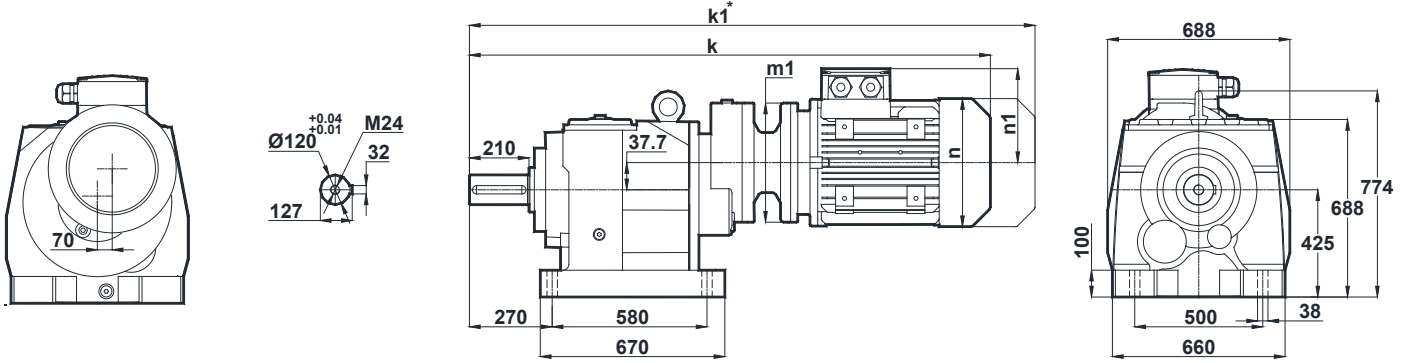


Ölçü Sayfaları Dimension Pages Abmessungsseiten

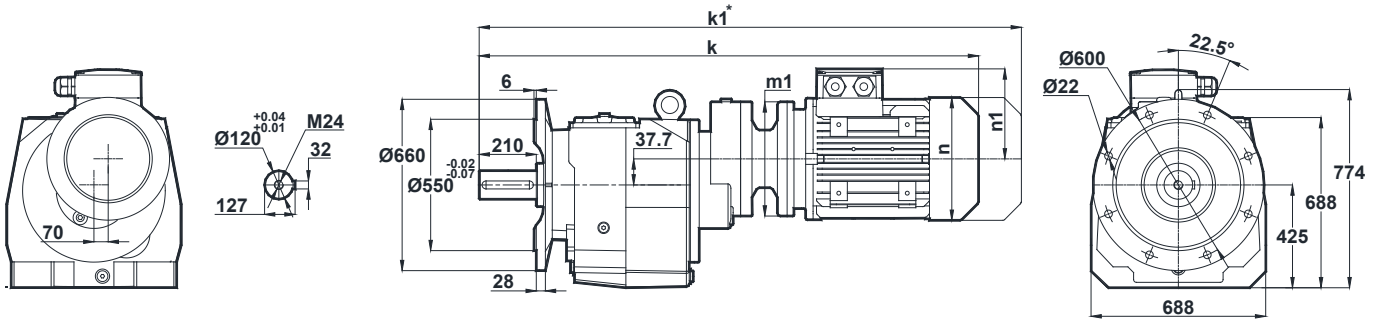


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV974

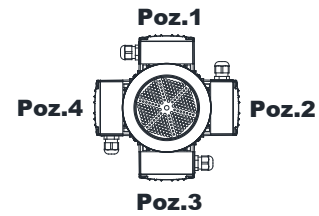


NV974



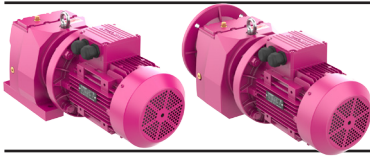
Motor Büyüklüğü / Motor Size / Motorbaugroße				
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14
k	1308	1331	1429	1429
k1	1416	1436	1559	1559
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

Klemens Kutusu / Terminal Box / Klemmenkasten

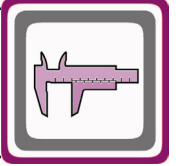


100-112-132

* "k1" "Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

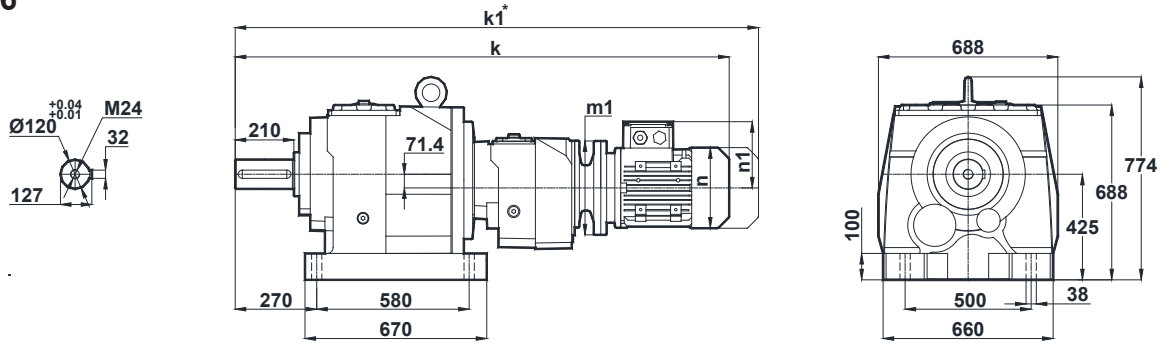


Ölçü Sayfaları Dimension Pages Abmessungenseiten

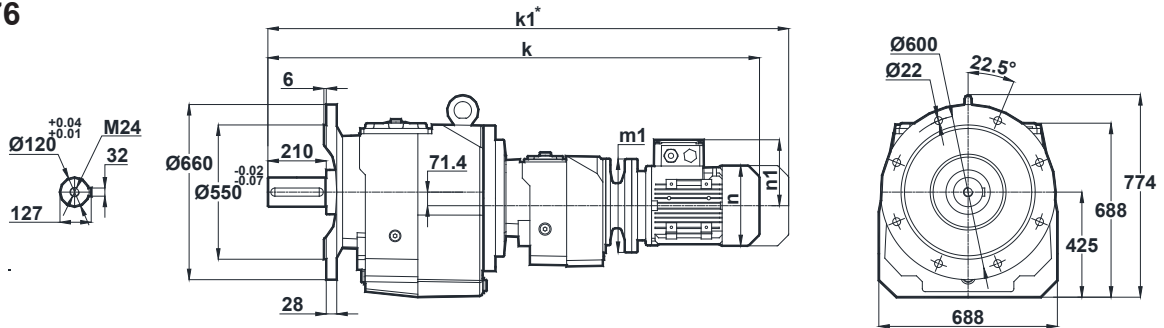


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MV975 MV976

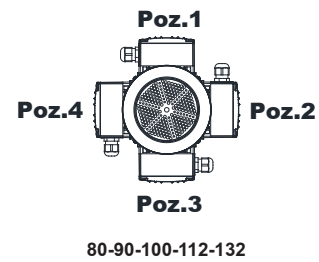


NV975 NV976

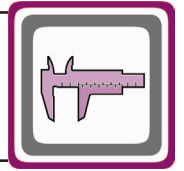


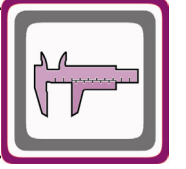
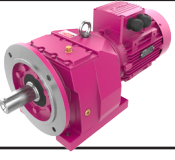
Motor Büyüklüğü / Motor Size / Motorbaugröße						
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14
k	1369	1410	1410	1462.5	1485.5	1587
k ₁	1462	1489	1489	1570.5	1590.5	1717
n	155	176	176	193	215	257
n ₁	127	136	136	149	161	182
m ₁ (B5)	200	200	200	250	250	300
m ₁ (B14)	-	140	140	160	160	200

Klemens Kutusu / Terminal Box / Klemmenkasten



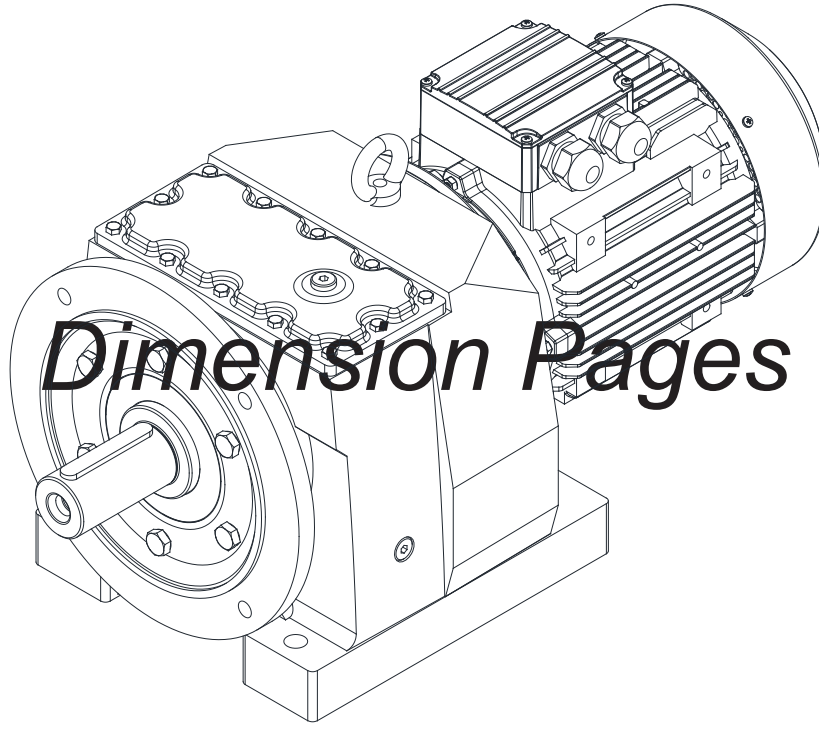
* "k₁" Ölçüsü frenli redüktörlere aittir. Dimension "k₁" is for motors with brake. Maße "k₁" ist für Bremsenmotoren.

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

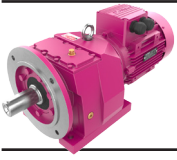


MRF Serisi / Serie

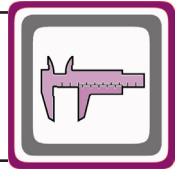
Ölçü Sayfaları



Abmessungenseiten

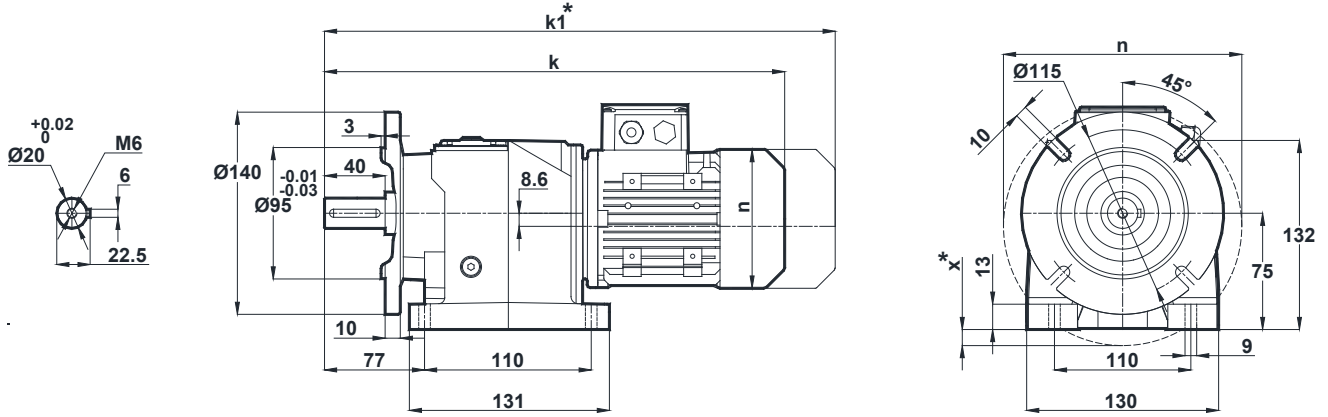


Ölçü Sayfaları Dimension Pages Abmessungsseiten



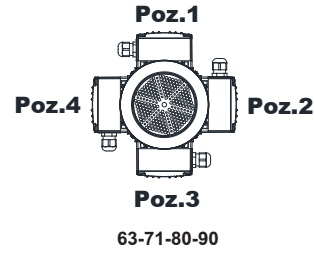
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF002 MRF003

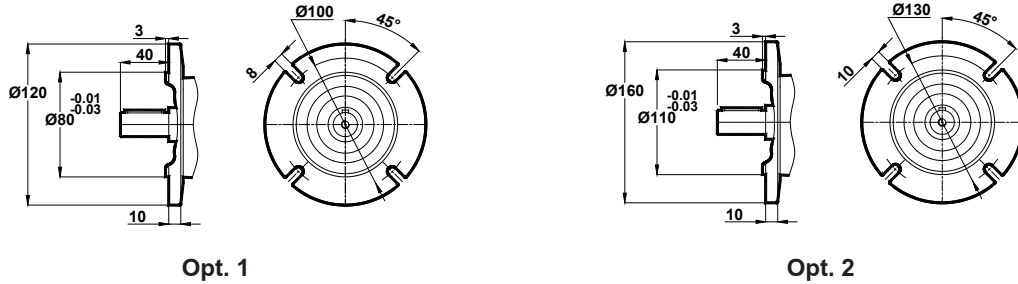


Motor Büyüklüğü / Motor Size / Motorbaugröße					
	63	71	80	90S	90L
k	369.5	397	431	470	470
k1	440.5	488	524	549	549
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	3	12	22	22

Klemens Kutusu / Terminal Box / Klemmenkasten

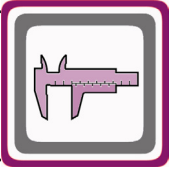


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



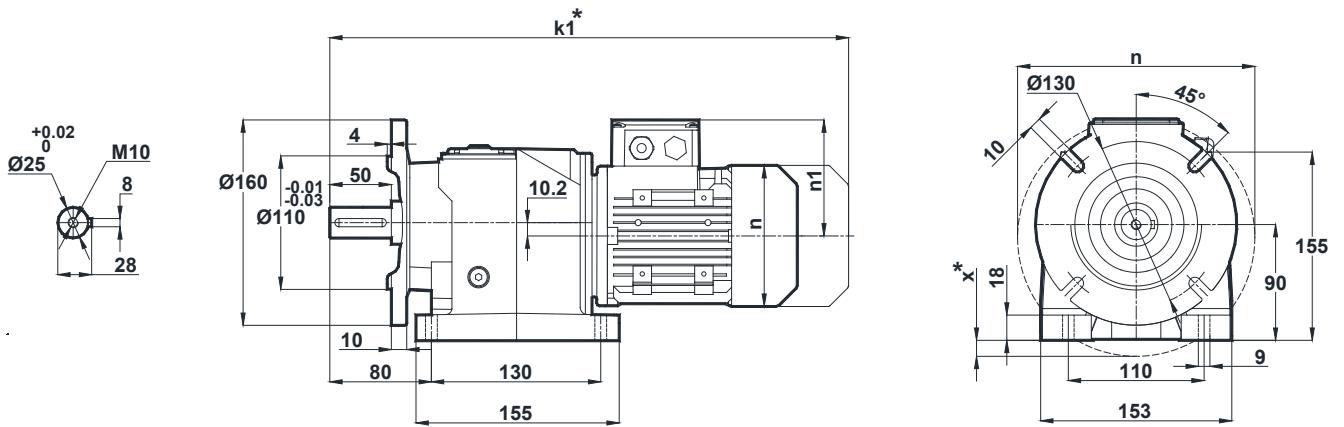
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



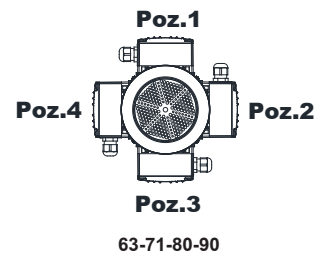
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MRF102
MRF103

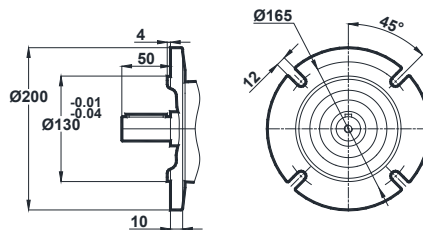


Motor Büyüklüğü / Motor Size / Motorbaugröße					
	63	71	80	90S	90L
k	399	424	458	497	497
k1	470	515	551	576	576
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	-	-	9	9

Klemens Kutusu / *Terminal Box* / Klemmenkasten



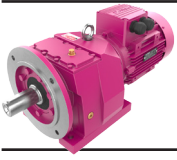
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



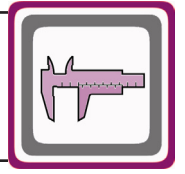
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

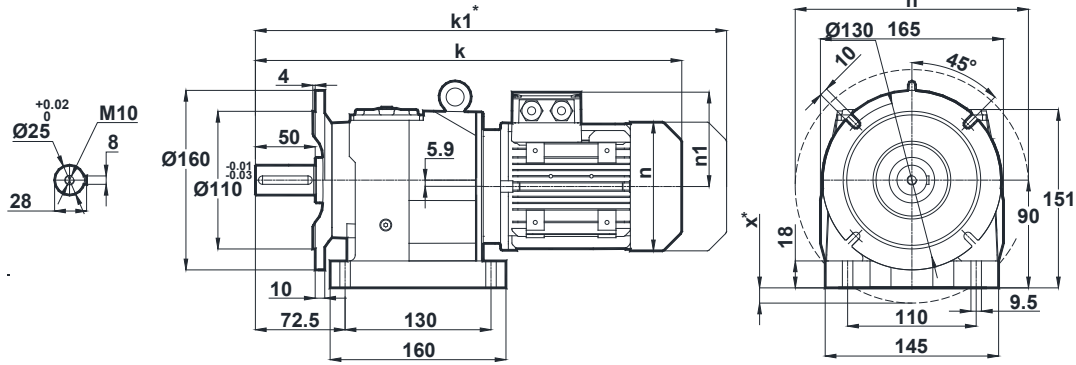


Ölçü Sayfaları Dimension Pages Abmessungsseiten



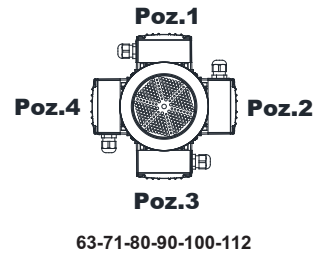
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MRF172 MRF173

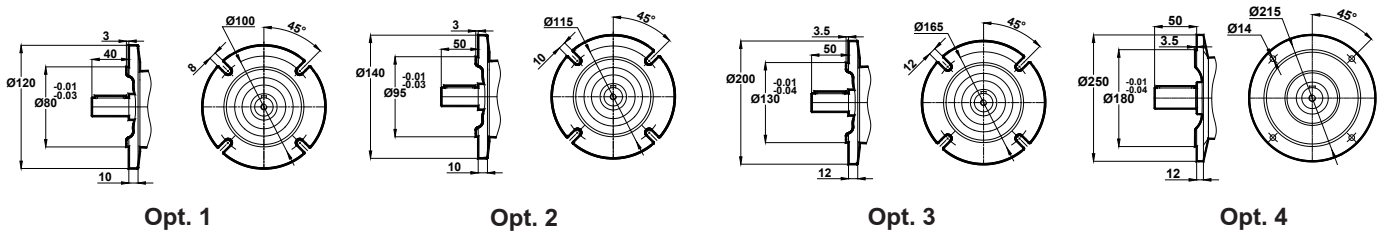


Motor Büyüklüğü / Motor Size / Motorbaugröße							
	63	71	80	90S	90L	100L	112M
k	396.5	424	458	497	497	545	569
k1	467.5	515	551	576	576	653	674
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	4	4	13	24

Klemens Kutusu / Terminal Box / Klemmenkasten

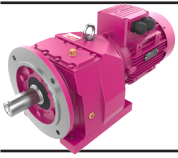


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

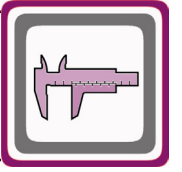


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

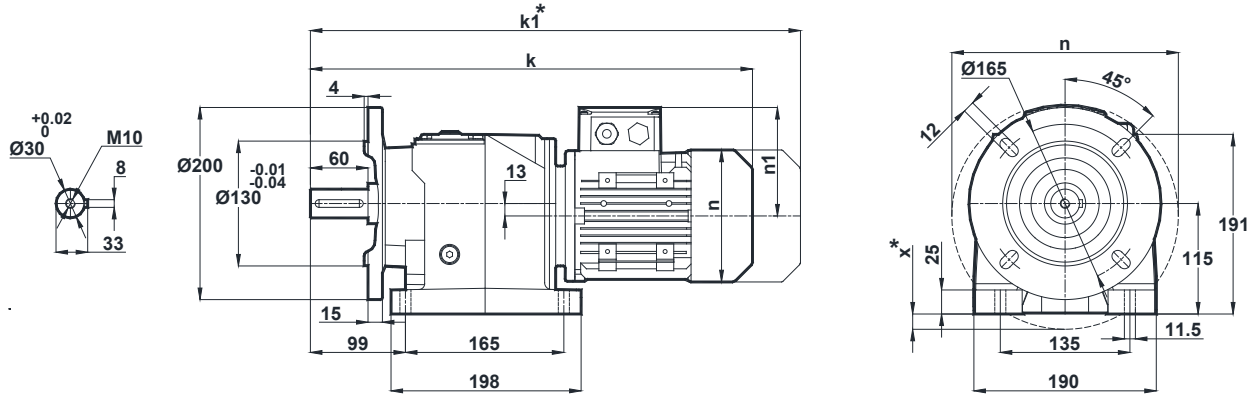


Ölçü Sayfaları Dimension Pages Abmessungenseiten



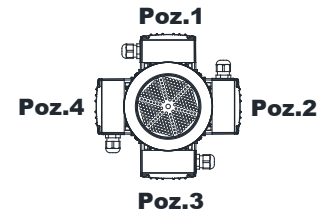
-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF202 MRF203



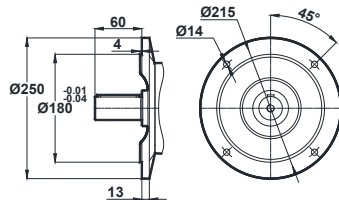
Motor Büyüklüğü / Motor Size / Motorbaugröße							
	63	71	80	90S	90L	100L	112M
k	444	470	504	543	543	591	615
k1	515	561	597	622	622	699	720
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	-	-	-	6

Klemens Kutusu / Terminal Box / Klemmenkasten

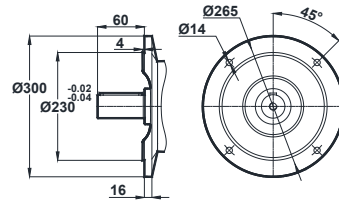


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



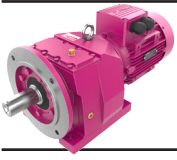
Opt. 1



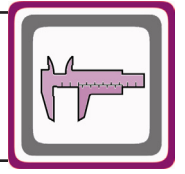
Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

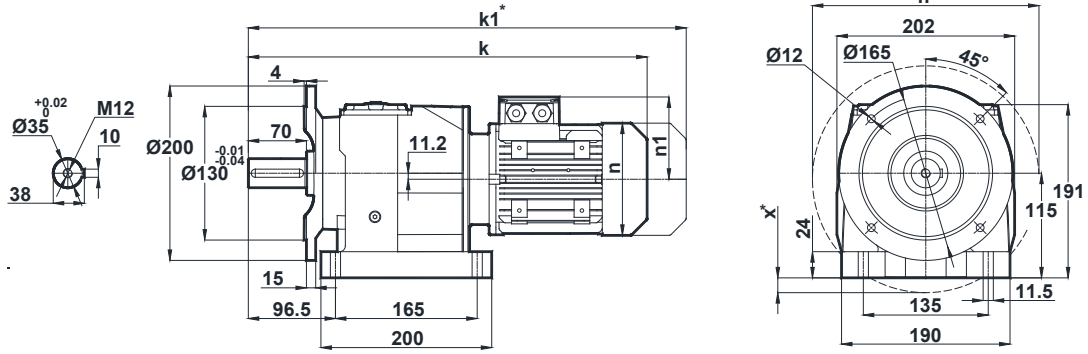


Ölçü Sayfaları Dimension Pages Abmessungsseiten



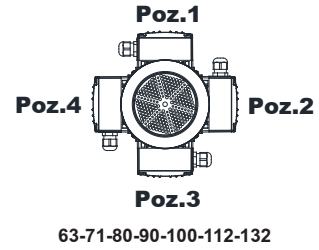
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MRF272 MRF273

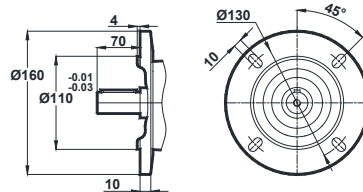


Motor Büyüklüğü / Motor Size / Motorbaugröße									
	63	71	80	90S	90L	100L	112M	132S	132M
k	445	471	505	544	544	592	616	699	699
k1	516	562	598	623	623	700	721	829	829
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

Klemens Kutusu / Terminal Box / Klemmenkasten



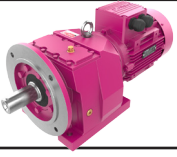
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



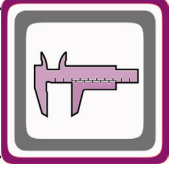
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

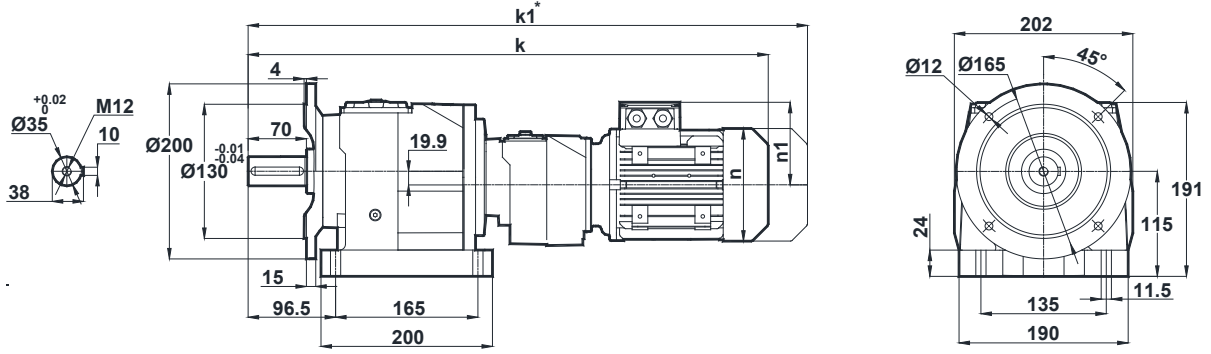


Ölçü Sayfaları Dimension Pages Abmessungenseiten



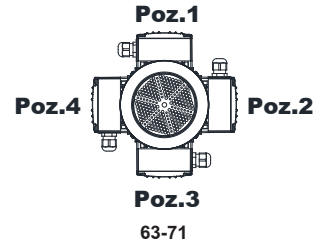
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MRF275 MRF276

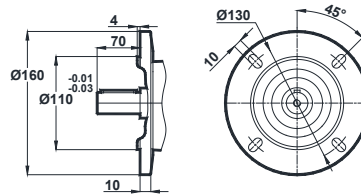


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	594.5	622
k1	665.5	713
n	119	137
n1	101	118

Klemens Kutusu / Terminal Box / Klemmenkasten

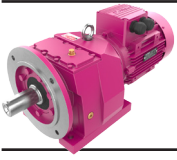


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

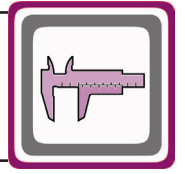


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

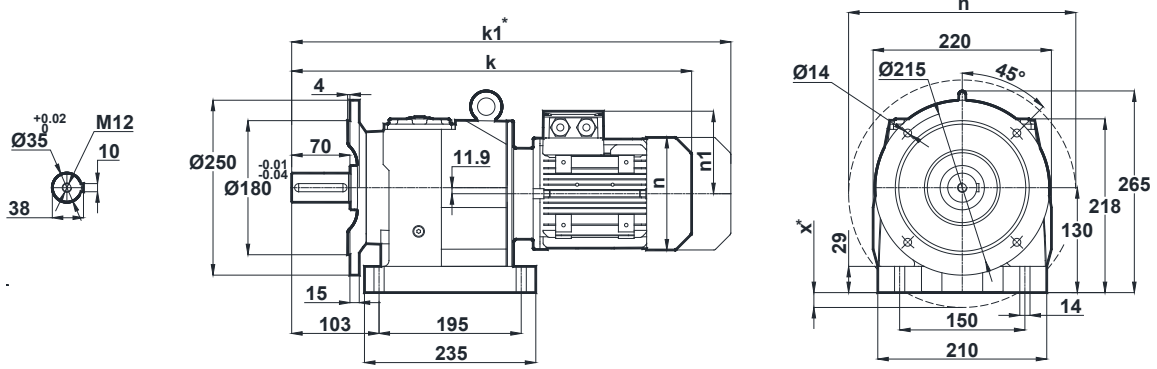


Ölçü Sayfaları Dimension Pages Abmessungsseiten



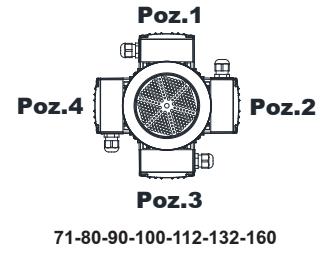
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MRF282 MRF283

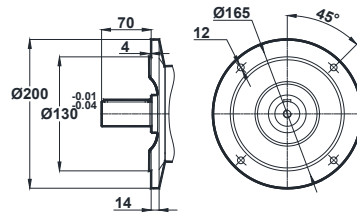


Motor Büyüklüğü / Motor Size / Motorbaugröße									
	71	80	90S	90L	100L	112M	132S	132M	160M
k	488.5	522.5	561.5	561.5	609.5	633.5	720	720	816
k1	579.5	615.5	640.5	640.5	717.5	738.5	850	850	966
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
x	-	-	-	-	-	-	11	11	40

Klemens Kutusu / Terminal Box / Klemmenkasten



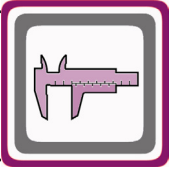
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



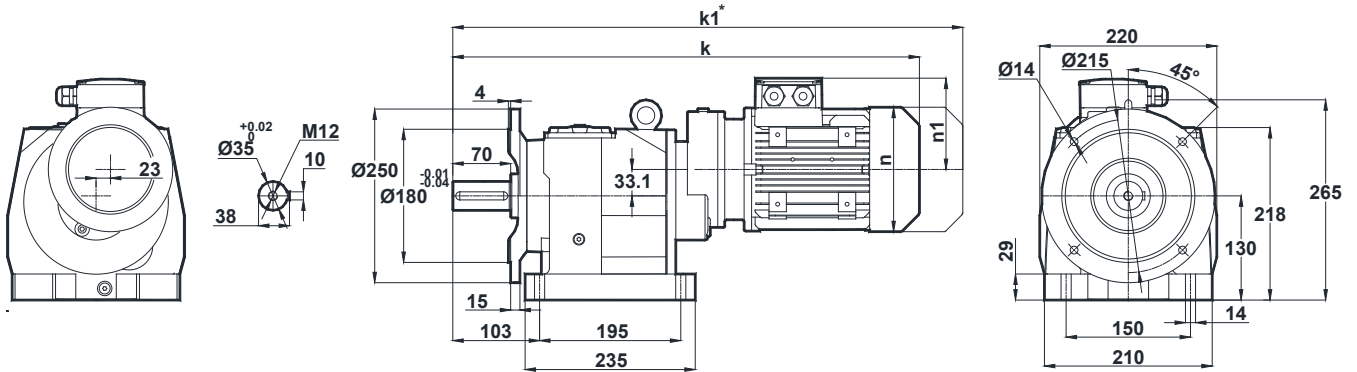
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

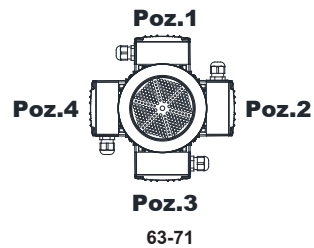


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

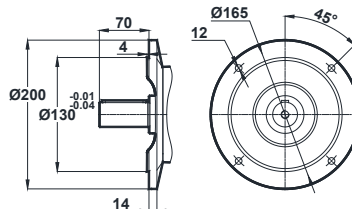
MRF284

Motor Büyüklüğü / Motor Size / Motorbaugroße		
	63	71
k	541.5	567.5
k1	612.5	658.5
n	119	137
n1	101	118

Klemens Kutusu / Terminal Box / Klemmenkasten

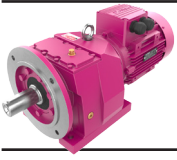


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

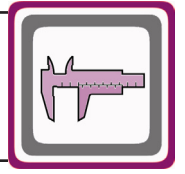


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

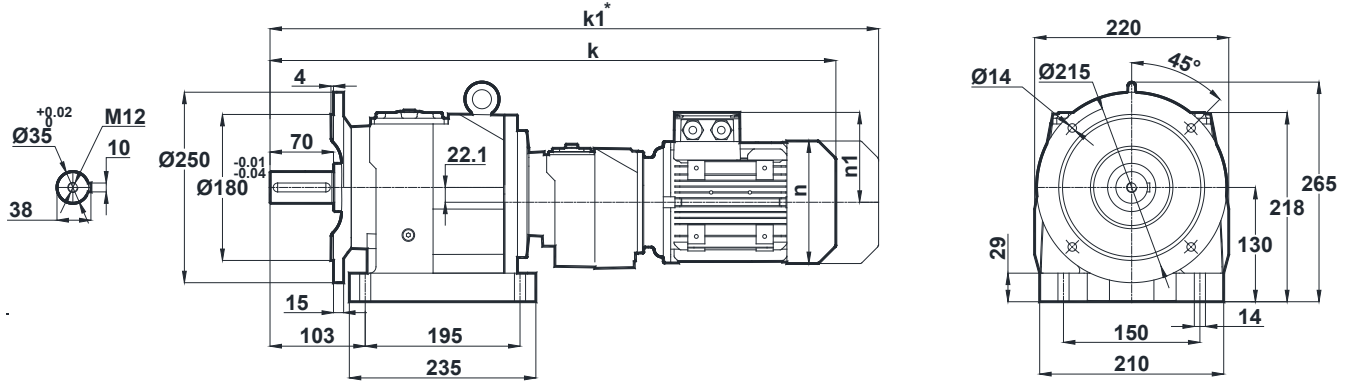


Ölçü Sayfaları Dimension Pages Abmessungsseiten



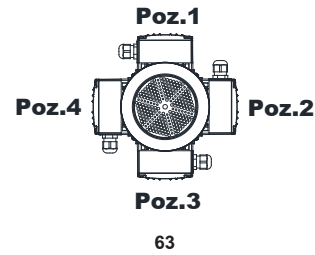
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MRF285 MRF286

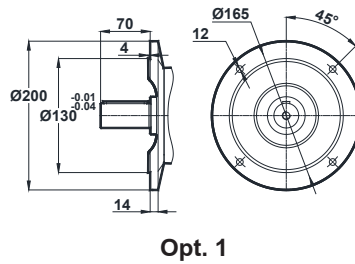


Motor Büyüklüğü / Motor Size / Motorbaugroße	
	63
k	646
k1	717
n	119
n1	101

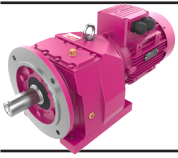
Klemens Kutusu / Terminal Box / Klemmenkasten



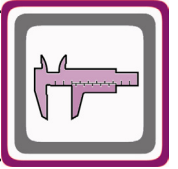
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

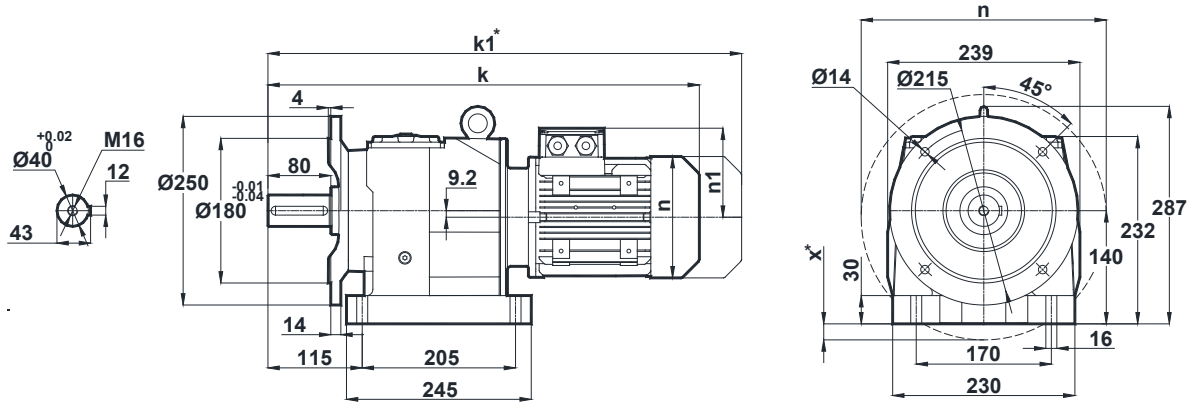


Ölçü Sayfaları Dimension Pages Abmessungenseiten



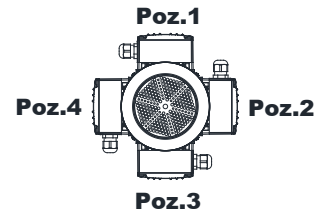
-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF372 MRF373



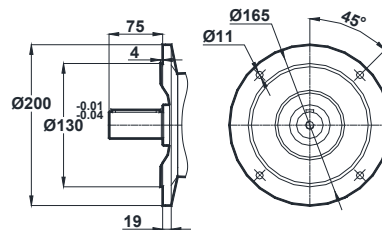
Motor Büyüklüğü / Motor Size / Motorbaugröße										
	71	80	90S	90L	100L	112M	132S	132M	160M	160L
k	509.5	543.5	582.5	582.5	630.5	645.5	741	741	837	837
k1	600.5	636.5	661.5	661.5	738.5	759.5	871	871	987	987
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten



71-80-90-100-112-132-160

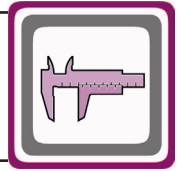
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



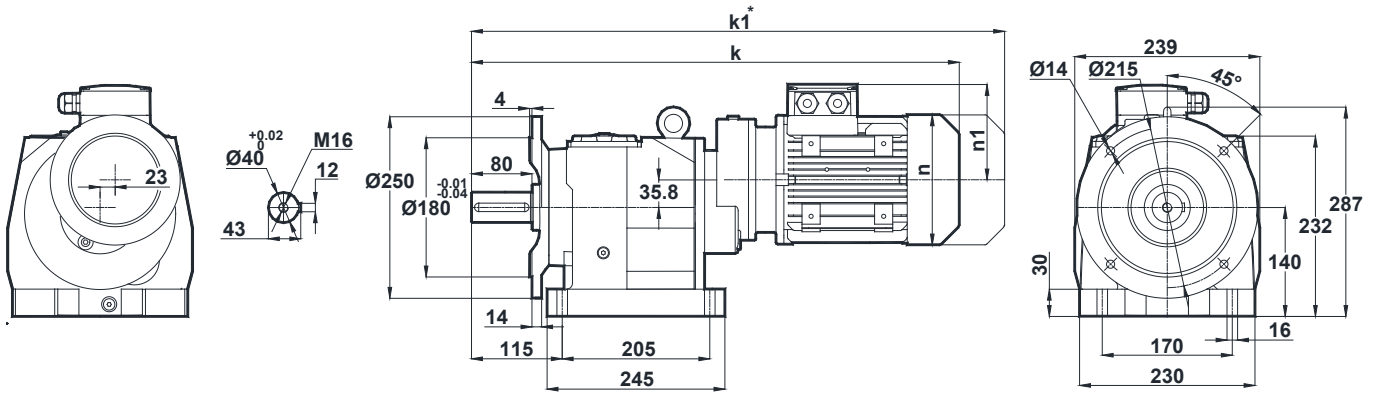
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

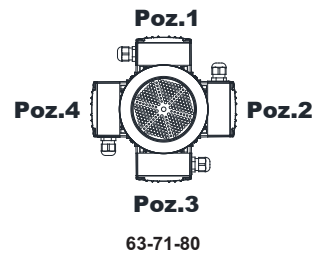


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

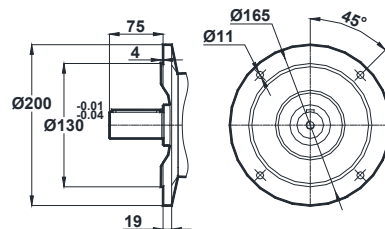
MRF374

Motor Büyüklüğü / Motor Size / Motorbaugroße			
	63	71	80
k	562.5	588.5	622.5
k1	633.5	679.5	715.5
n	119	137	155
n1	101	118	127

Klemens Kutusu / *Terminal Box* / Klemmenkasten

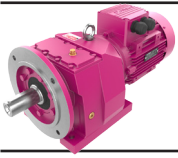


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

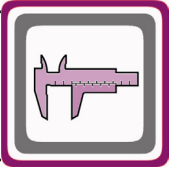


Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

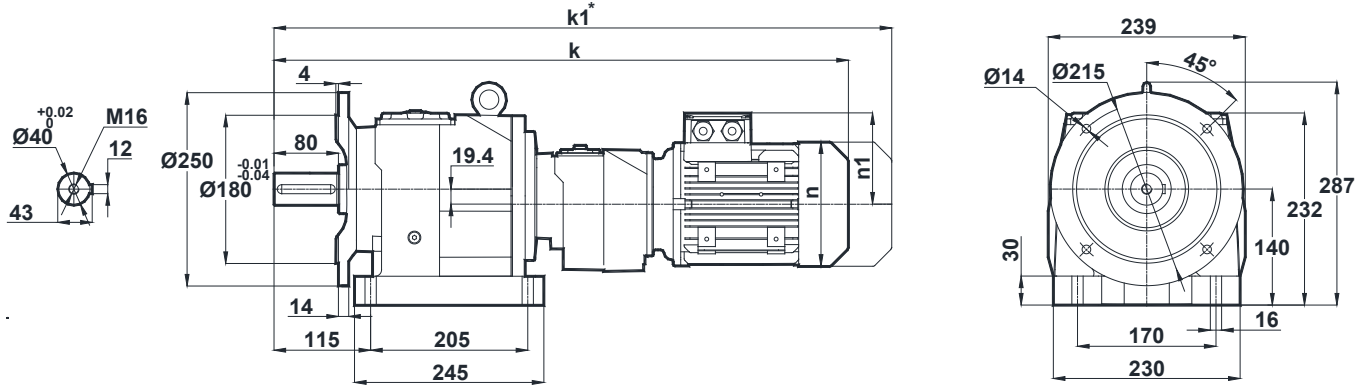


Ölçü Sayfaları Dimension Pages Abmessungenseiten



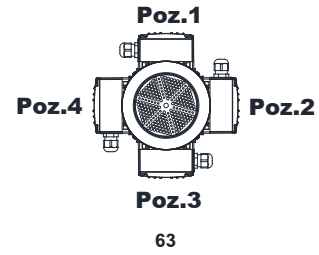
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MRF375 MRF376

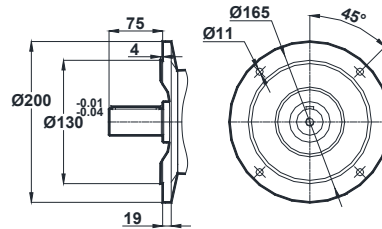


Motor Büyüklüğü / Motor Size / Motorbaugröße	
	63
k	667
k1	738
n	119
n1	101

Klemens Kutusu / Terminal Box / Klemmenkasten

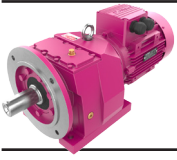


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

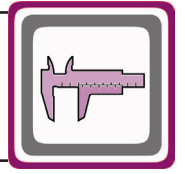


Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

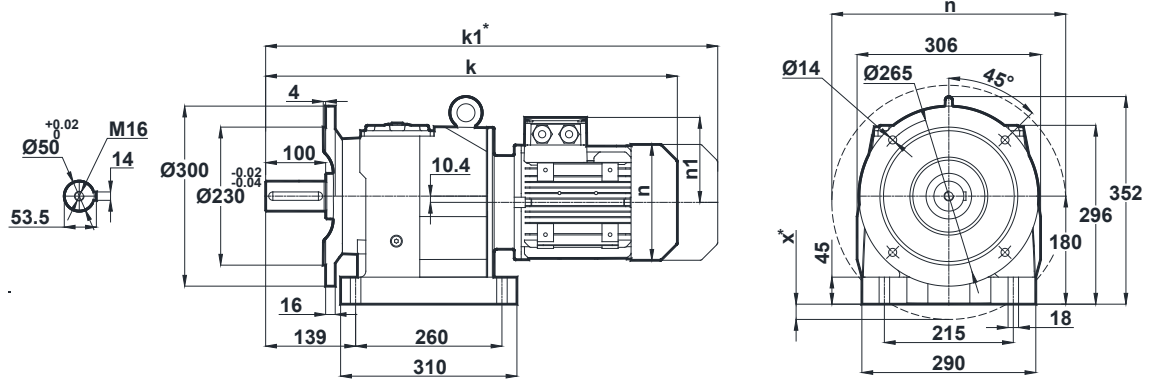


Ölçü Sayfaları Dimension Pages Abmessungsseiten



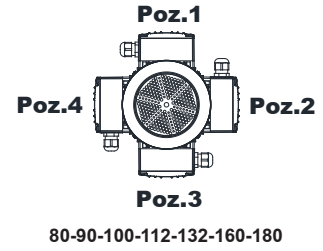
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF472 MRF473

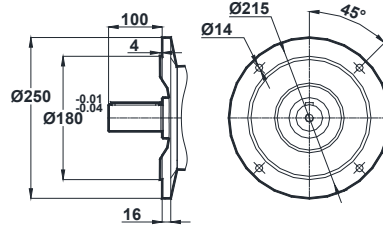


Motor Büyüklüğü / Motor Size / Motorbaugröße											
	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L
k	610.5	649.5	649.5	694.5	718.5	803.5	803.5	899.5	899.5	971.5	971.5
k1	703.5	728.5	728.5	802.5	823.5	933.5	933.5	1049.5	1049.5	1158.5	1158.5
n	155	176	176	193	215	257	257	316	316	348	348
n1	127	136	136	149	161	182	182	226	226	242	242
x	-	-	-	-	-	-	-	-	-	5	5

Klemens Kutusu / Terminal Box / Klemmenkasten



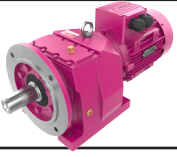
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



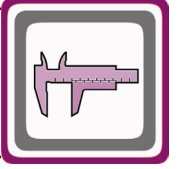
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

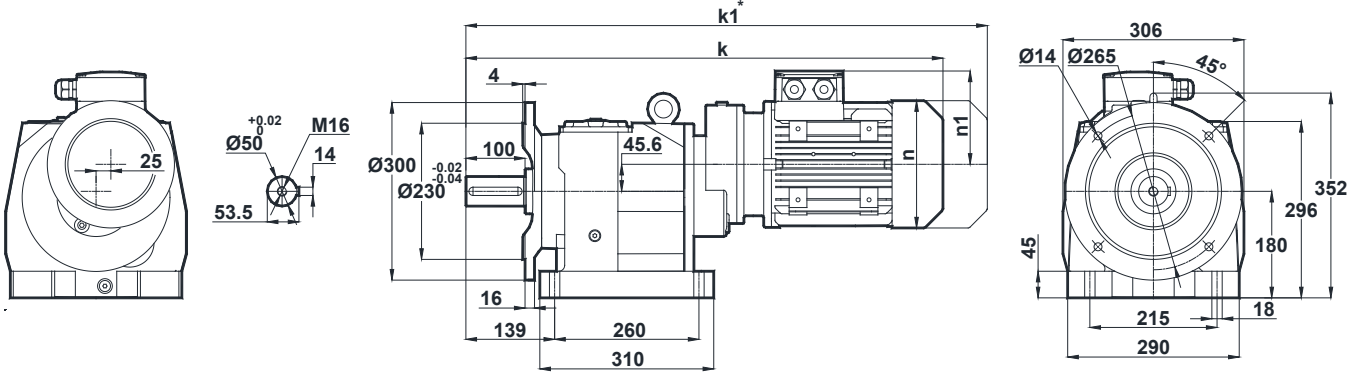


Ölçü Sayfaları Dimension Pages Abmessungenseiten



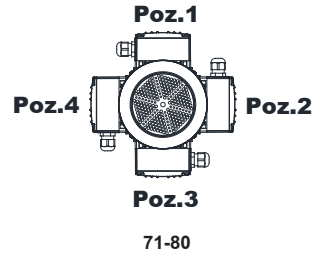
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MRF474

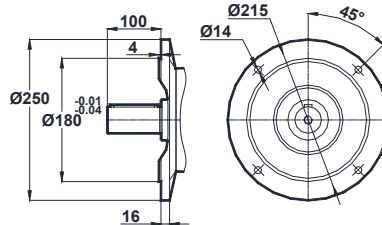


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	71	80
k	670	704
k1	761	797
n	137	155
n1	118	127

Klemens Kutusu / Terminal Box / Klemmenkasten

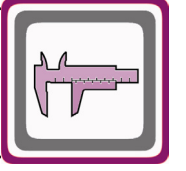
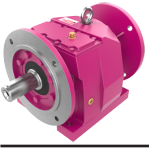


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



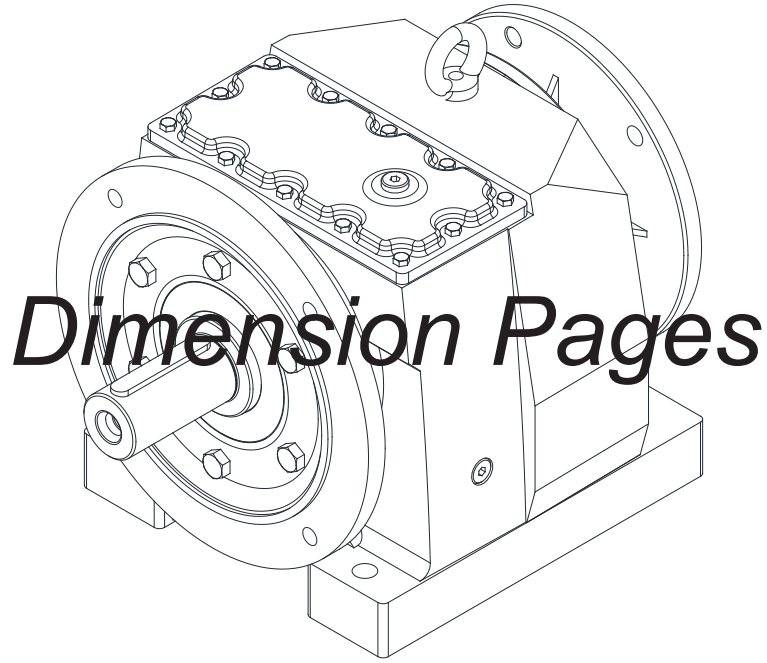
Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.



MNF Serisi / Serie

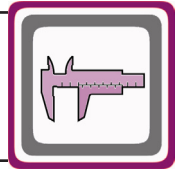
Ölçü Sayfaları



Abmessungenseiten

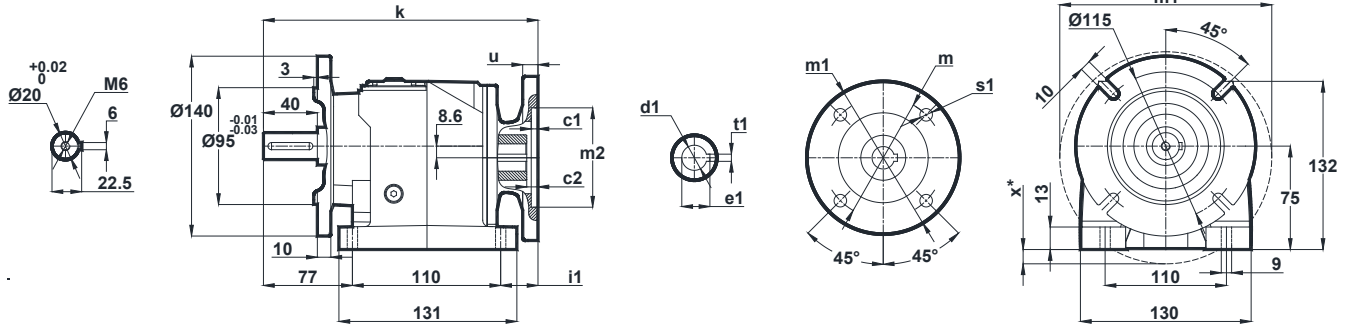


Ölçü Sayfaları Dimension Pages Abmessungsseiten



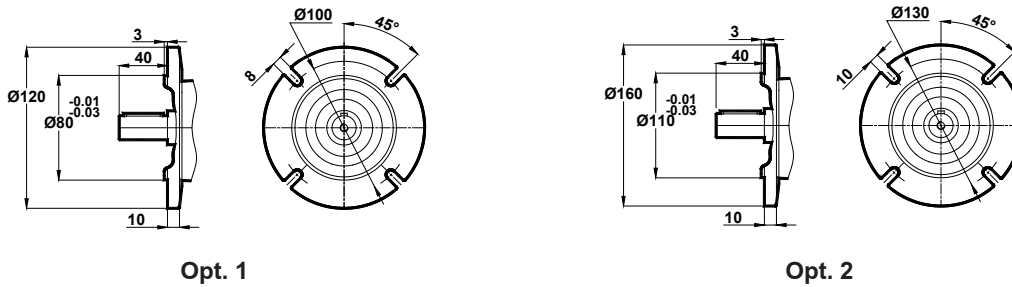
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF002-A.. MNF003-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	28	10	214	11	4	12.8	-
71/B5	4	4.5	11	130	160	110	29.5	12	215.5	14	5	16.3	3
80/B5	4	5	12	165	200	130	44.5	12	230.5	19	6	21.8	12
90/B5	4	5	12	165	200	130	44.5	12	230.5	24	8	27.3	22

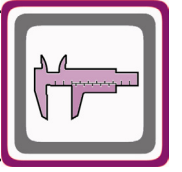
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

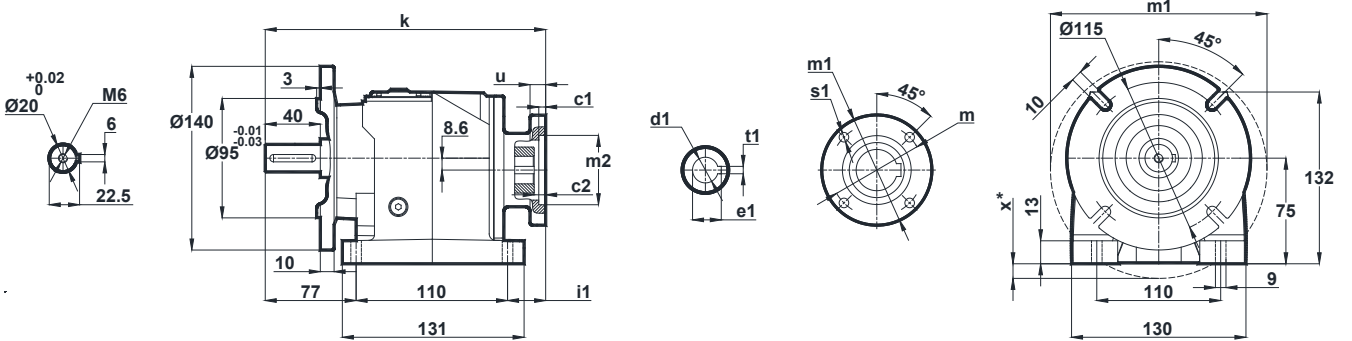


Ölçü Sayfaları Dimension Pages Abmessungenseiten



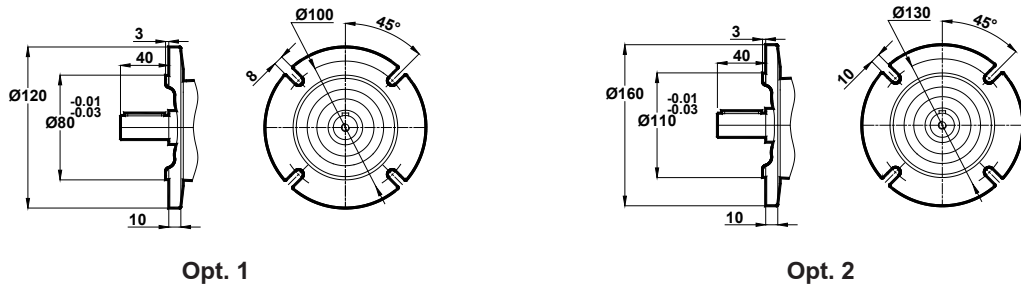
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

**MNF002-B..
MNF003-B..**

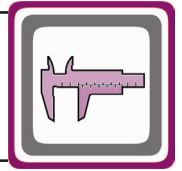


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B14	2.5	5	5.5	75	90	60	28	10	214	11	4	12.8	-
71/B14	3	4.5	7	85	105	70	29.5	10	215.5	14	5	16.3	3
80/B14	4	5	7	100	120	80	44.5	12	230.5	19	6	21.8	12
90/B14	4	5	9	115	140	95	44.5	12	230.5	24	8	27.3	22

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

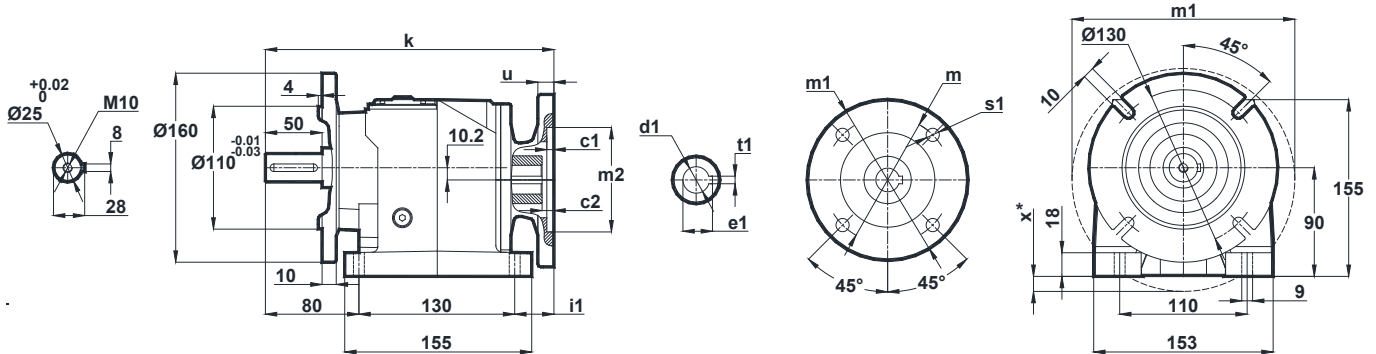


x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



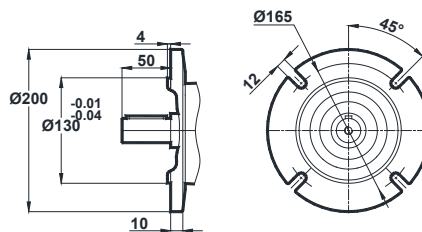
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF102-A..
MNF103-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	28.5	12	241	11	4	12.8	-
71/B5	4	4.5	12	130	160	110	28.5	12	242.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	43.5	12	257.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	43.5	12	257.5	24	8	27.3	9

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

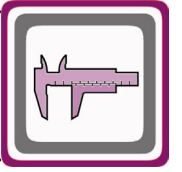


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

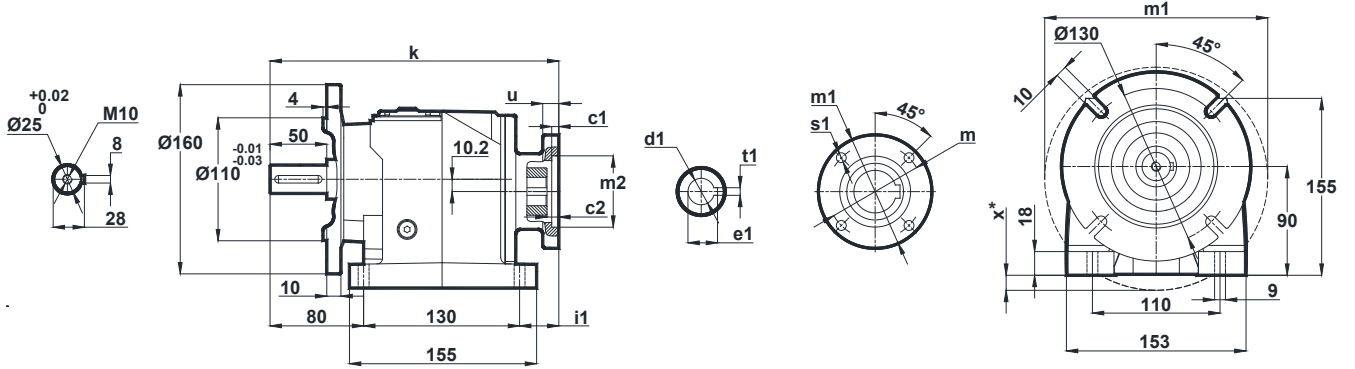


Ölçü Sayfaları Dimension Pages Abmessungenseiten



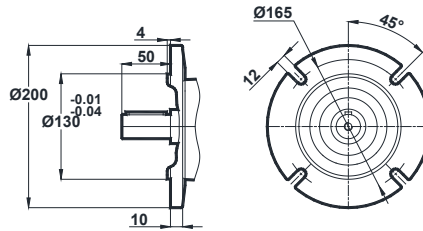
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF102-B.. MNF103-B..



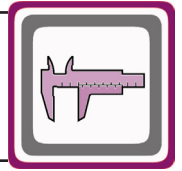
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B14	2.5	5	5.5	75	90	60	28.5	10	241	11	4	12.8	-
71/B14	3	4.5	7	85	105	70	28.5	10	242.5	14	5	16.3	-
80/B14	4	4.7	7	100	120	80	43.5	12	257.5	19	6	21.8	-
90/B14	4	4.7	9	115	140	95	43.5	12	257.5	24	8	27.3	9

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



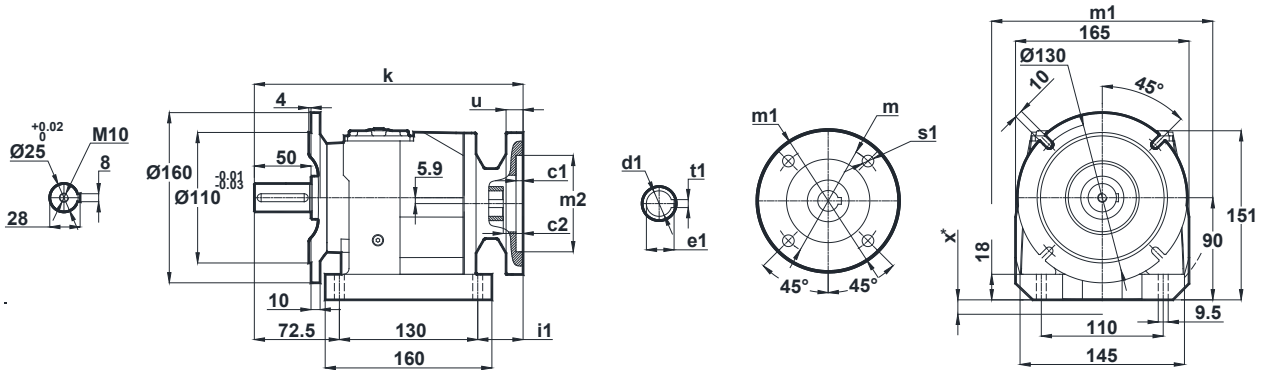
Opt. 1

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



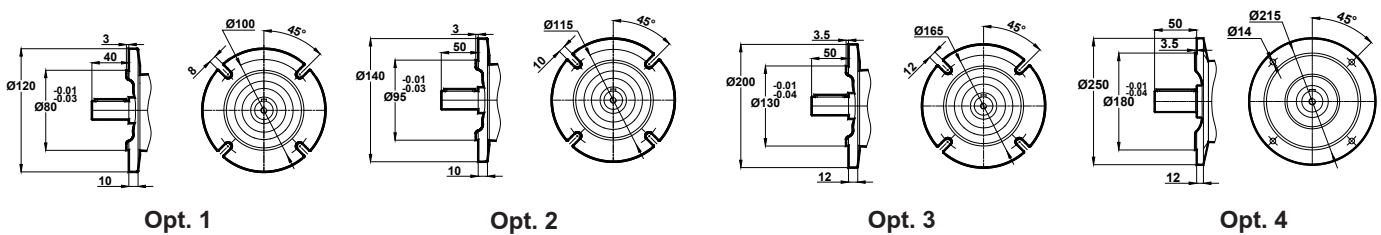
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF172-A..
MNF173-A..

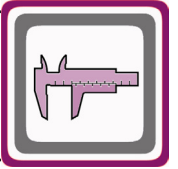


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	38.5	10	241	11	4	12.8	-
71/B5	4	4.5	11	130	160	110	40	12	242.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	55	12	257.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	55	12	257.5	24	8	27.3	4
100/B5	4.5	5	15	215	250	180	66	12	268.5	28	8	31.3	13
112/B5	4.5	5	15	215	250	180	66	12	268.5	28	8	31.3	24

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



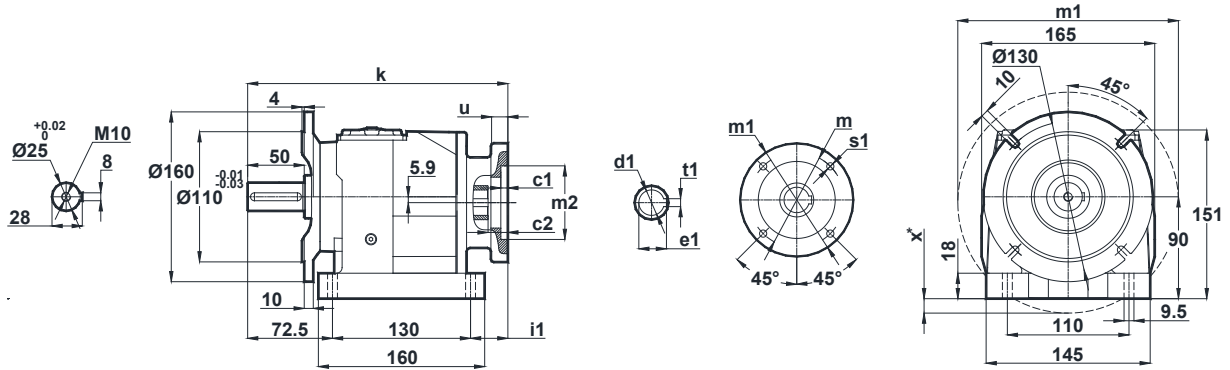
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

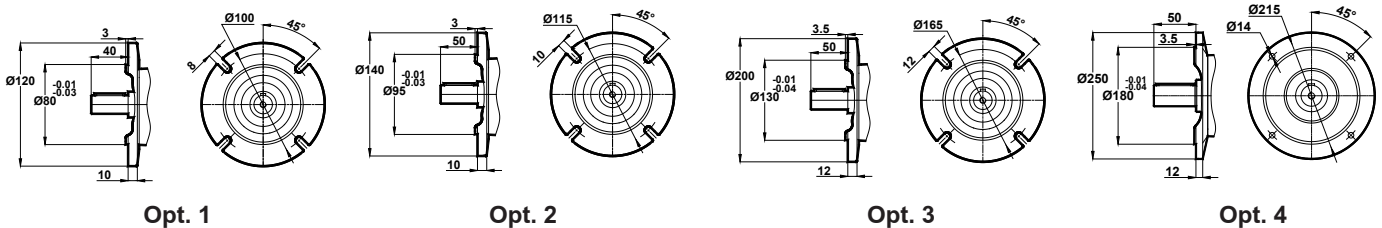
MNF172-B..

MNF173-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B14	3	4.5	7	85	105	70	40	10	242.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	55	12	257.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	55	12	257.5	24	8	27.3	4
100/B14	4	5.5	9	130	160	110	66	12	268.5	28	8	31.3	13
112/B14	4	5.5	9	130	160	110	66	12	268.5	28	8	31.3	24

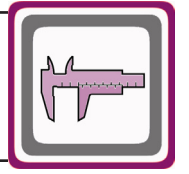
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

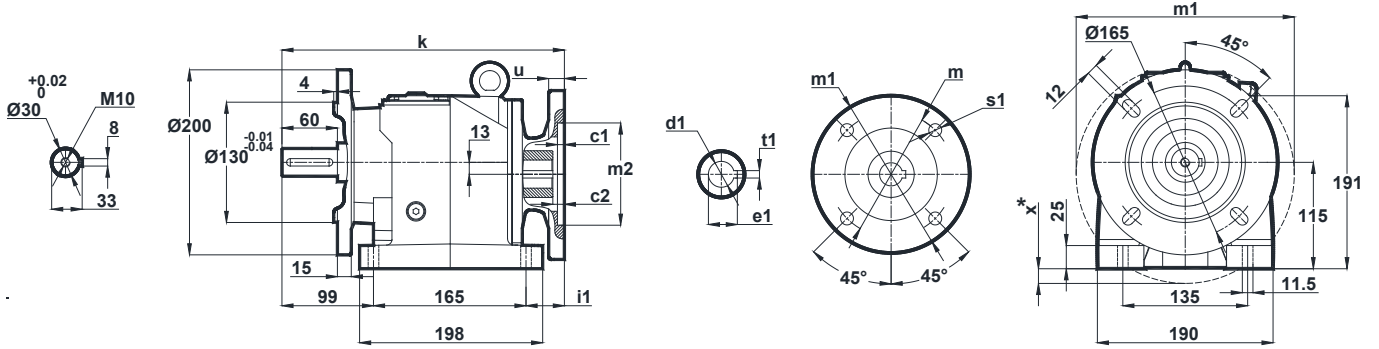


Ölçü Sayfaları Dimension Pages Abmessungsseiten



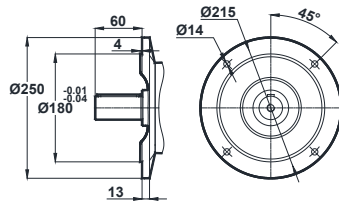
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF202-A.. MNF203-A..

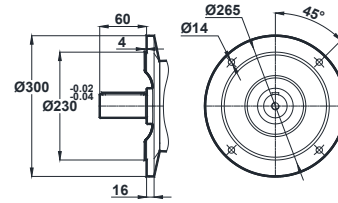


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	58.5	12	322.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	29.5	12	293.5	14	5	163	-
80/B5	4	5	12	165	200	130	58.5	12	322.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	58.5	12	322.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	51.5	12	315.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	51.5	12	315.5	28	8	31.3	6

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

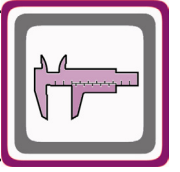


Opt. 2

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

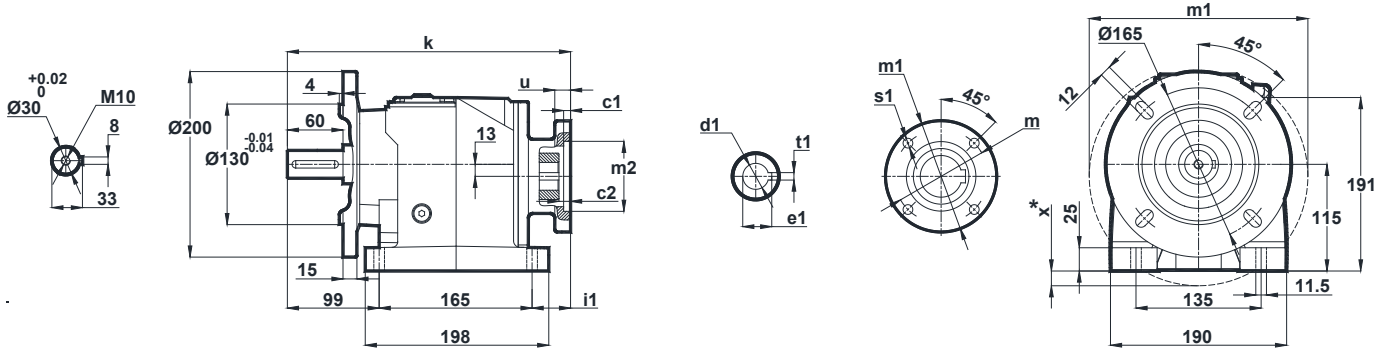


Ölçü Sayfaları Dimension Pages Abmessungenseiten



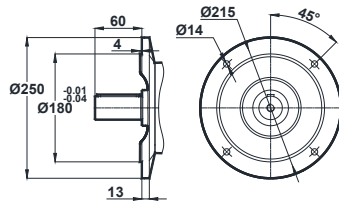
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

**MNF202-B..
MNF203-B..**

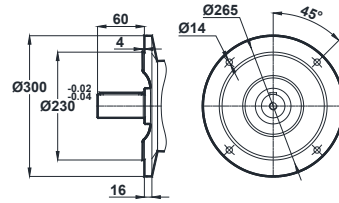


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	29.5	10	293.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	58.5	12	322.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	58.5	12	322.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	51.5	12	315.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	51.5	12	315.5	28	8	31.3	6

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

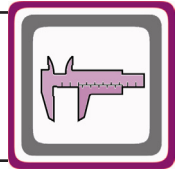


Opt. 1



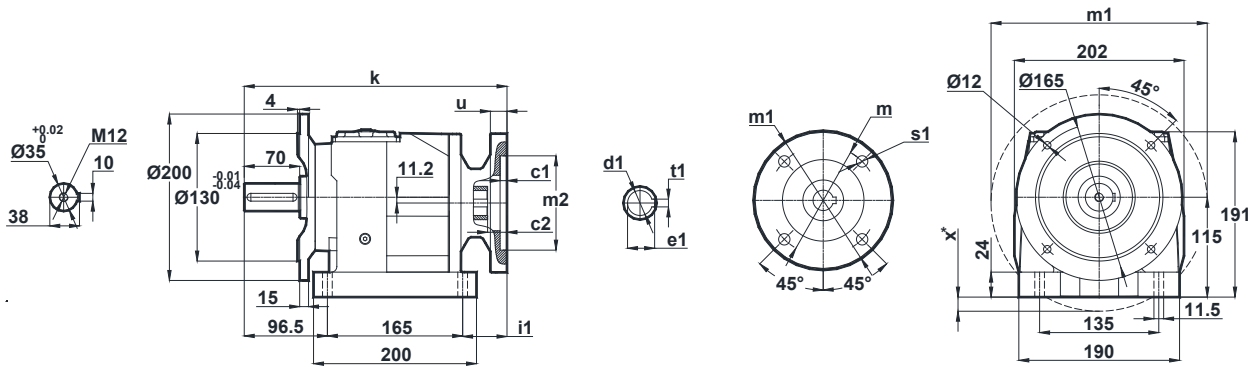
Opt. 2

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



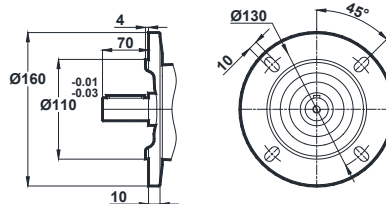
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF272-A..
MNF273-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	62	12	323.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	33	12	294.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	62	12	323.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	62	12	323.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	55	12	316.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	55	12	316.5	28	8	31.3	4
132/B5	4.5	7	15	265	300	230	92	15	363.5	38	10	41.3	25

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

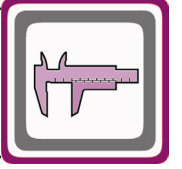


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

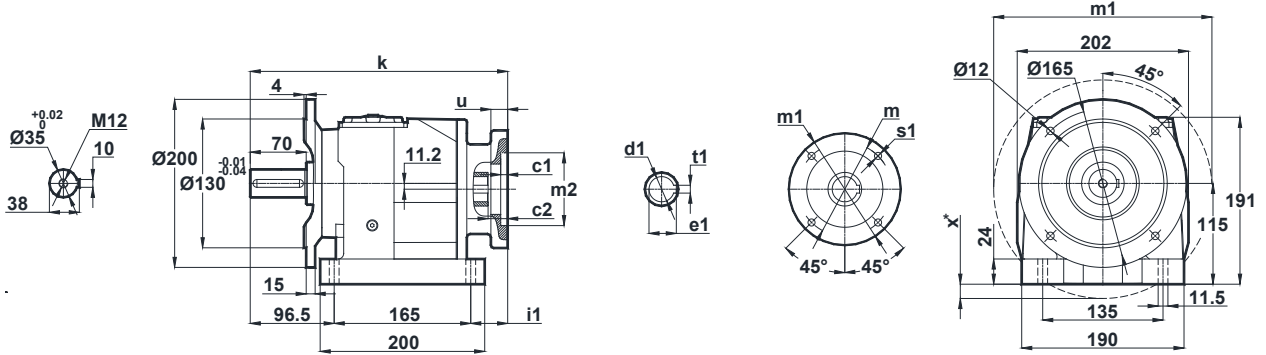


Ölçü Sayfaları Dimension Pages Abmessungsseiten



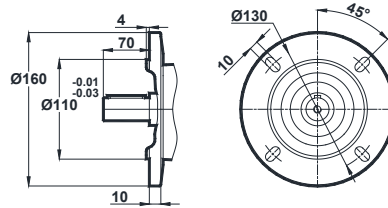
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF272-B..
MNF273-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	33	10	294.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	62	12	323.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	62	12	323.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	55	12	316.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	55	12	316.5	28	8	31.3	4
132/B14	4.5	6	11	165	200	130	92	15	363.5	35	10	41.3	25

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

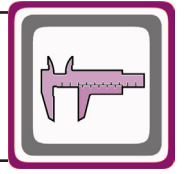


Opt. 1

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

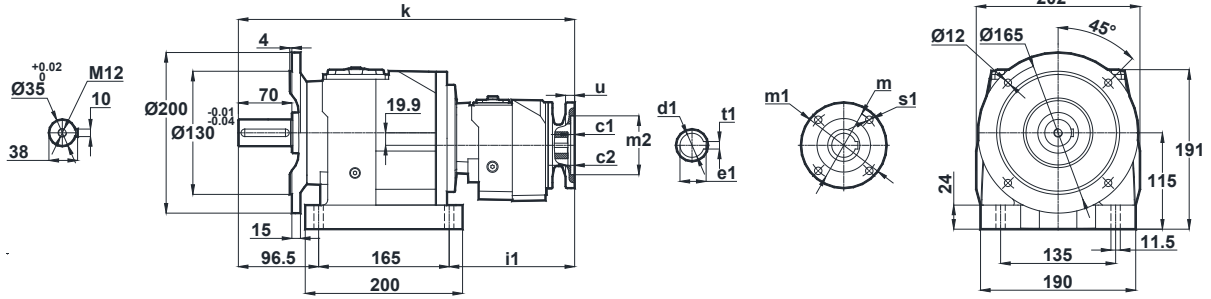


Ölçü Sayfaları Dimension Pages Abmessungsseiten



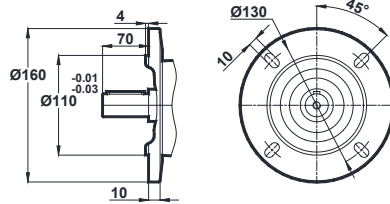
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF275-A.. MNF276-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	177.5	10	439	11	4	12.8
71/B5	4	4.5	11	130	160	110	179	12	440.5	14	5	16.3

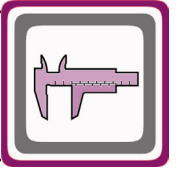
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

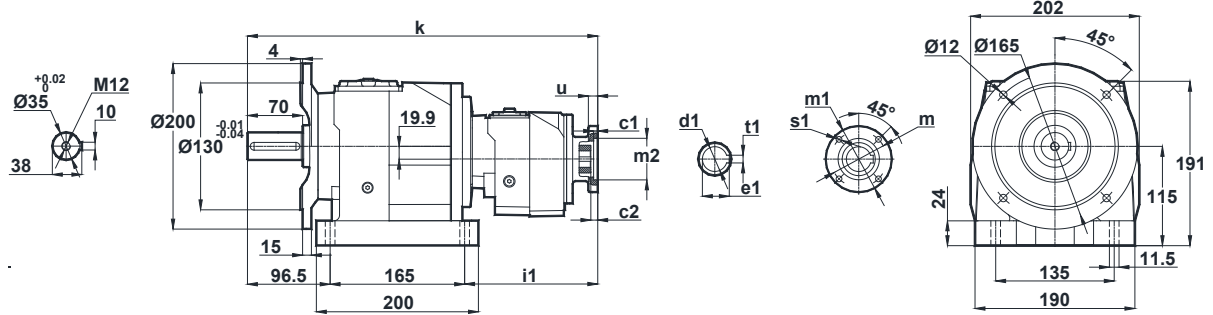


Ölçü Sayfaları Dimension Pages Abmessungsseiten



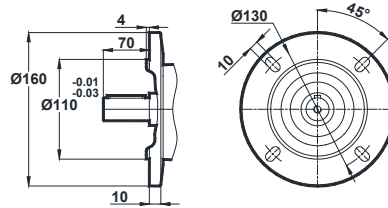
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF275-B..
MNF276-B..

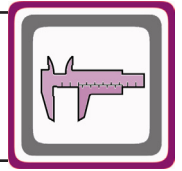


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B14	2.5	5	5.5	75	90	60	177.5	10	439	11	4	12.8
71/B14	3	4.5	7	85	105	70	179	10	440.5	14	5	16.3

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

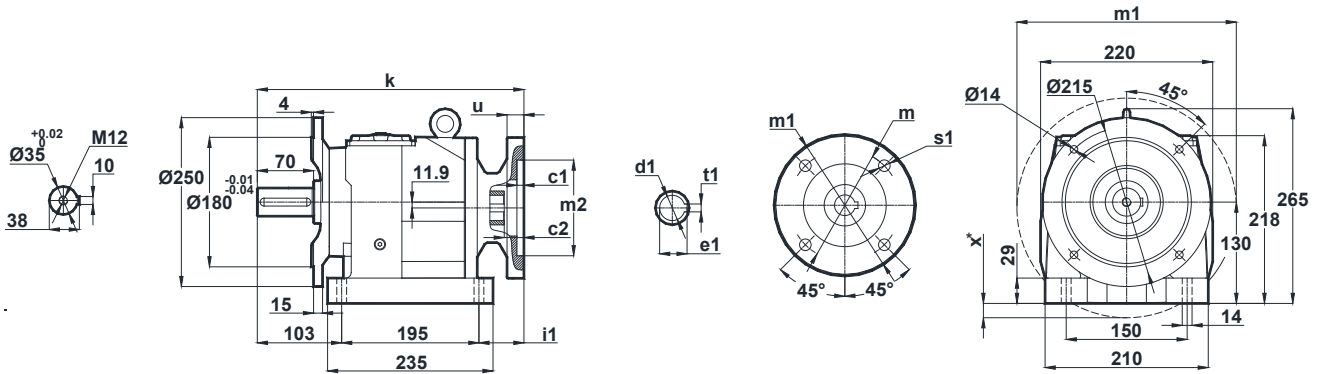


Opt. 1



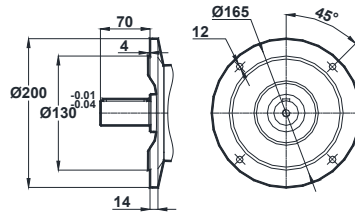
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF282-A..
MNF283-A..



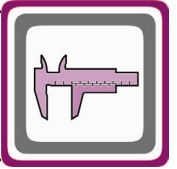
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	45	12	343	14	5	16.3	-
80/B5	4	9	12	165	200	130	45	12	343	19	6	21.8	-
90/B5	4	9	12	165	200	130	45	12	343	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	52	15	360	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	52	15	360	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	82	15	380	38	10	41.3	11
160/B5	5,5	10	19	300	350	250	161,5	20	459.5	42	12	45.3	40

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



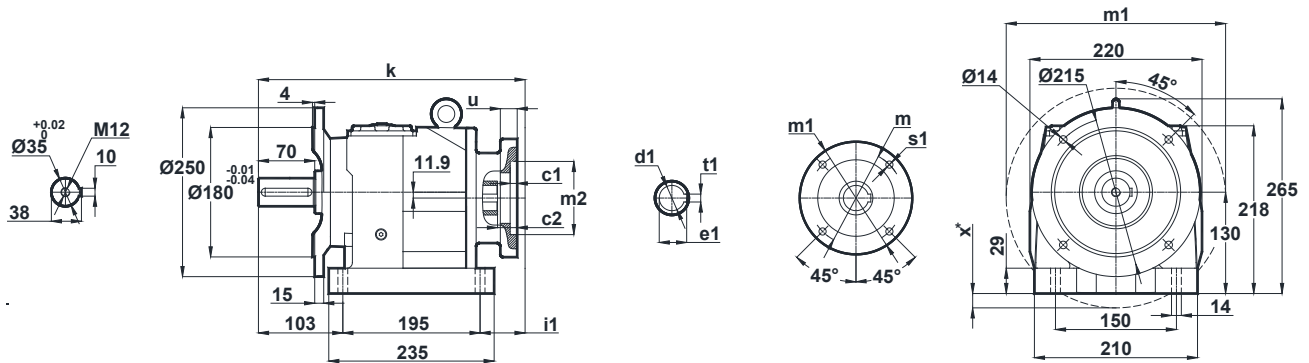
Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



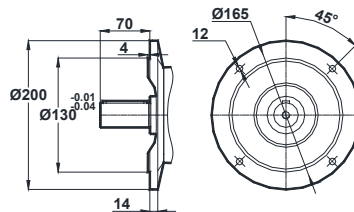
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF282-B..
MNF283-B..



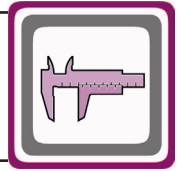
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	45	12	343	19	6	21.8	-
90/B14	4	9	9	115	140	95	45	12	343	24	8	26.3	-
100/B14	4	9	9	130	160	110	52	15	360	28	8	31.3	-
112/B14	4	9	9	130	160	110	52	15	360	28	8	31.3	-
132/B14	4.5	7	11	165	200	130	82	15	380	38	10	41.3	11

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



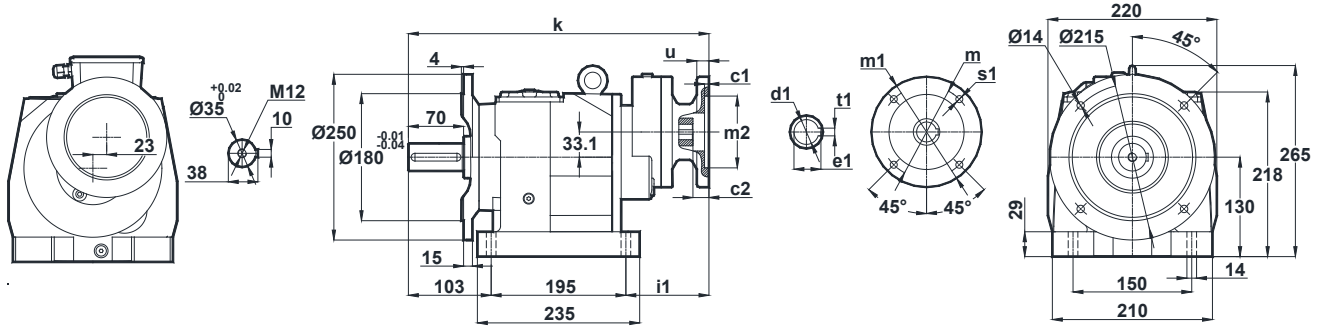
Opt. 1

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



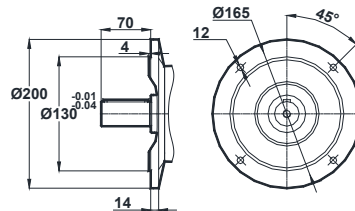
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF284-A..
MNF284-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	122	10	420	11	4	12.8
71/B5	4	4.5	11	130	160	110	93	12	391	14	5	16.3
71/B14	3	4.5	7	85	105	70	93	10	391	14	5	16.3

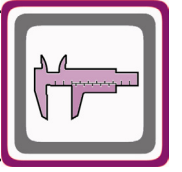
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

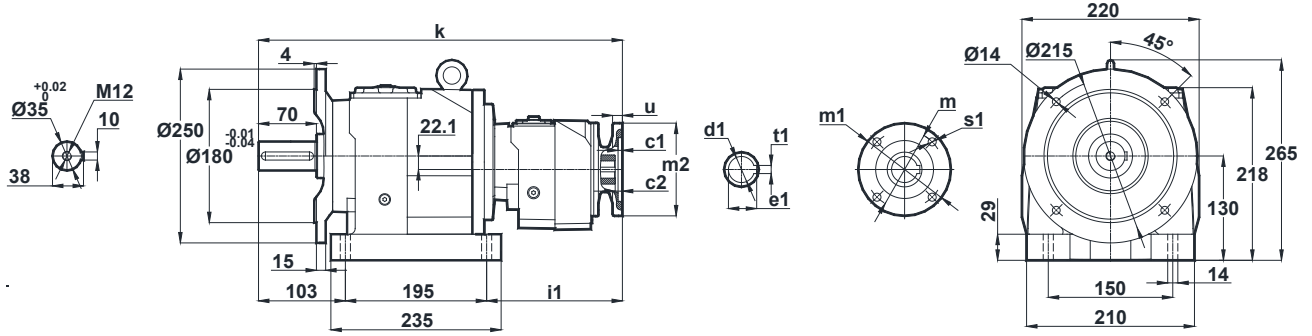


Ölçü Sayfaları Dimension Pages Abmessungenseiten



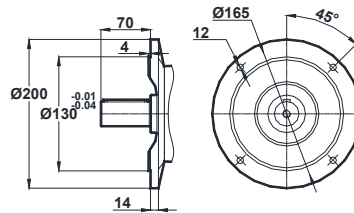
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF285-A.. / B.. MNF286-A.. / B..

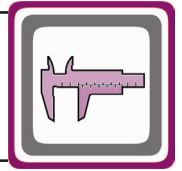


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	188	12	488	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	188	10	488	11	4	12.8

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

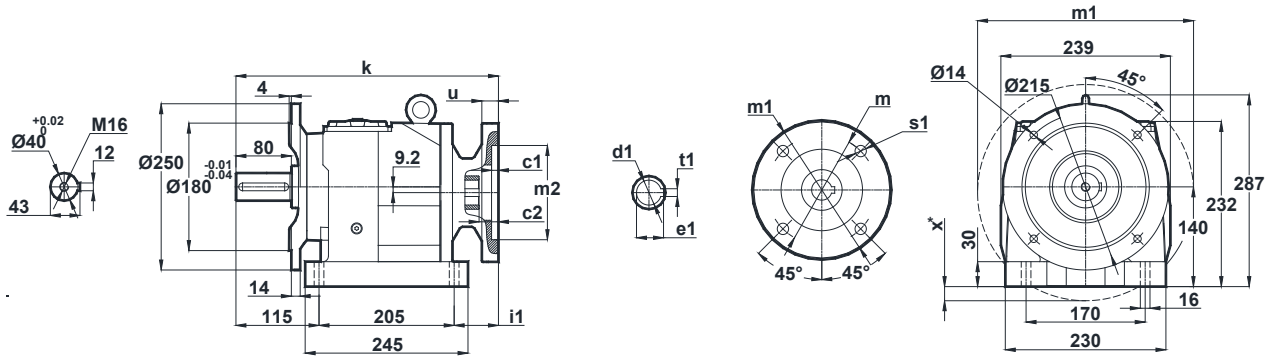


Opt. 1



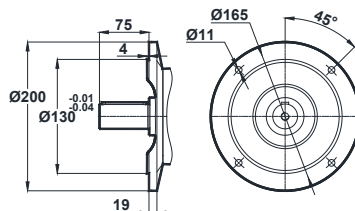
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF372-A..
MNF373-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	43.5	12	364	14	5	16.3	-
80/B5	4	9	12	165	200	130	43.5	12	364	19	6	21.8	-
90/B5	4	9	12	165	200	130	43.5	12	364	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	60.5	15	381	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	60.5	15	381	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	80.5	15	401	38	10	41.3	-
160/B5	5,5	10	19	300	350	250	160	20	480.5	42	12	45.3	28

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

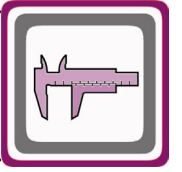


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

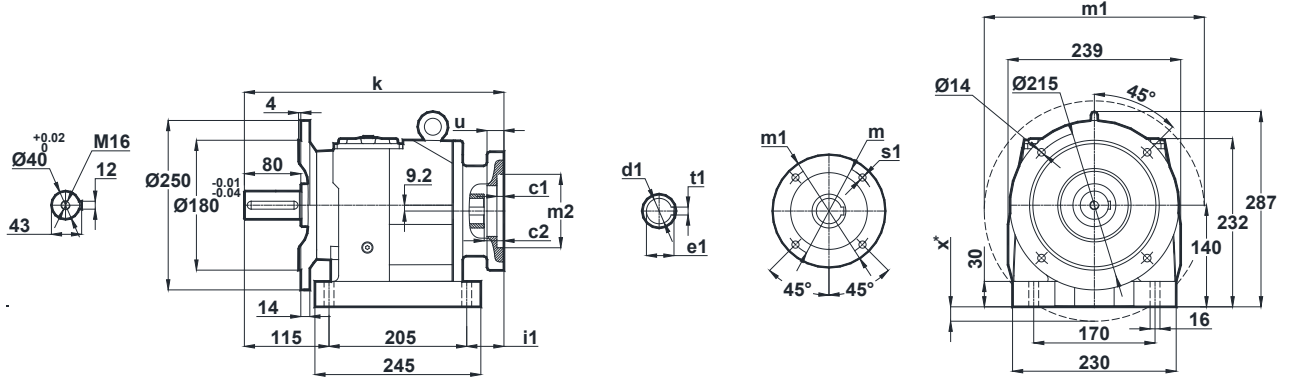


Ölçü Sayfaları Dimension Pages Abmessungsseiten



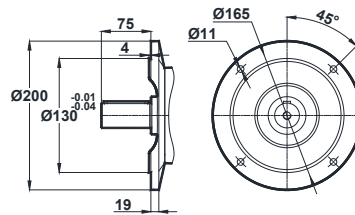
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

**MNF372-B..
MNF373-B..**



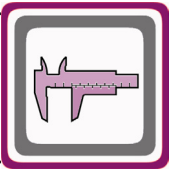
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	43.5	12	364	19	6	21.8	-
90/B14	4	9	9	115	140	95	43.5	12	364	24	8	26.3	-
100/B14	4	9	9	130	160	110	60.5	15	381	28	8	31.3	-
112/B14	4	9	9	130	160	110	60.5	15	381	28	8	31.3	-
132/B14	4.5	9	11	165	200	130	80.5	15	401	38	10	41.3	-

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



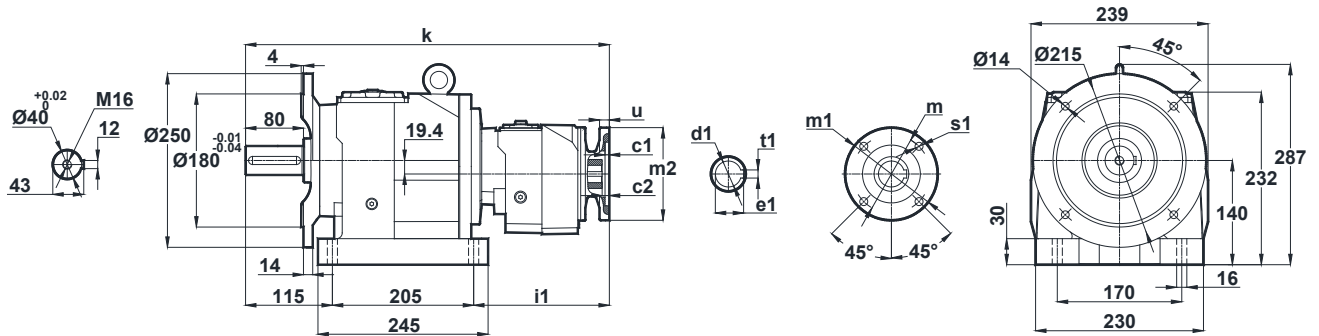
Opt. 1

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



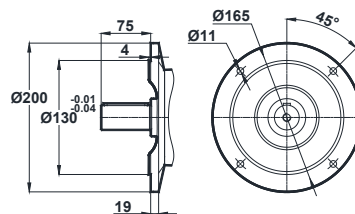
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF375-A.. / B..
MNF376-A.. / B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	186.5	10	509	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	186.5	10	509	11	4	12.8

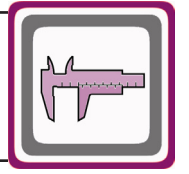
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

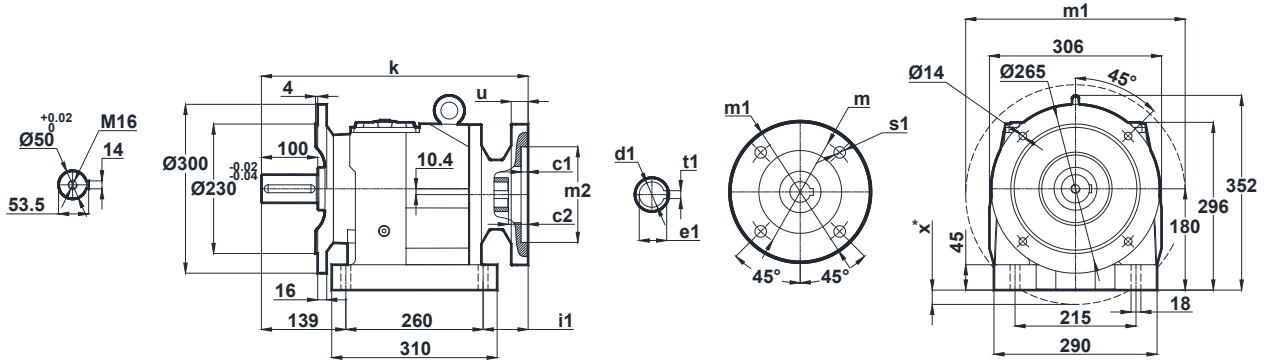


Ölçü Sayfaları Dimension Pages Abmessungsseiten



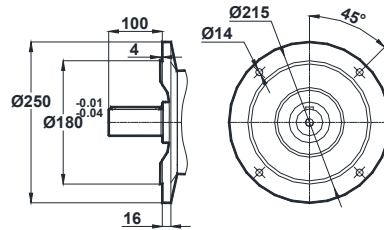
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF472-A.. MNF473-A..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
80/B5	4	5	12	165	200	130	27.5	12	426.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	27.5	12	426.5	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	46	15	445	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	46	15	445	28	8	31.3	-
132/B5	4.5	6	15	265	300	230	64.5	15	463.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	144	20	543	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	144	20	543	48	14	51.8	5

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

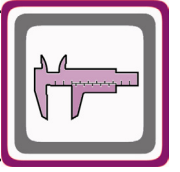


Opt. 1

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

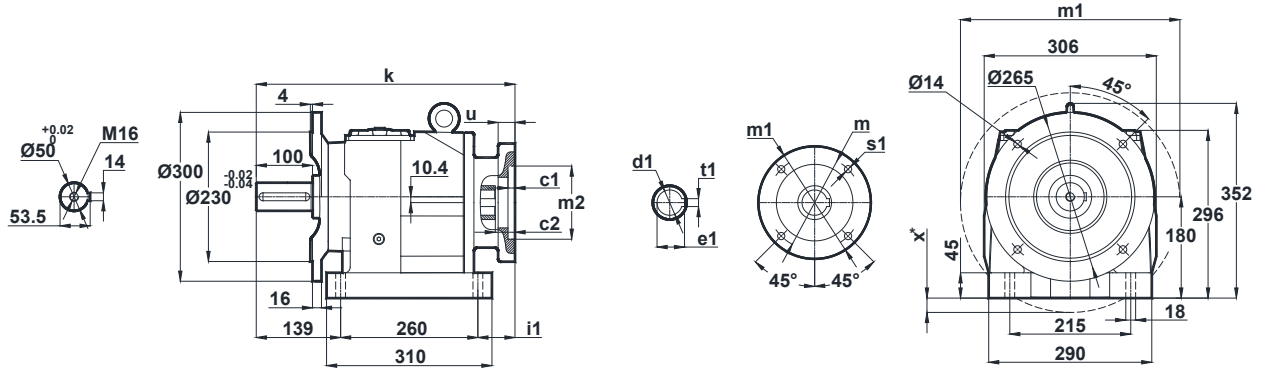


Ölçü Sayfaları Dimension Pages Abmessungenseiten



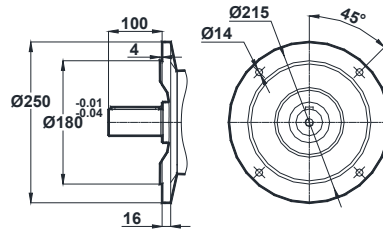
-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF472-B.. MNF473-B..



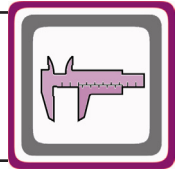
IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1	x
90/B14	4	5	9	115	140	95	27.5	12	426.5	24	8	27.3	-
100/B14	4	9	9	130	160	110	46	15	445	28	8	31.3	-
112/B14	4	9	9	130	160	110	46	15	445	28	8	31.3	-
132/B14	4.5	6	11	165	200	130	64.5	15	463.5	38	10	41.3	-

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



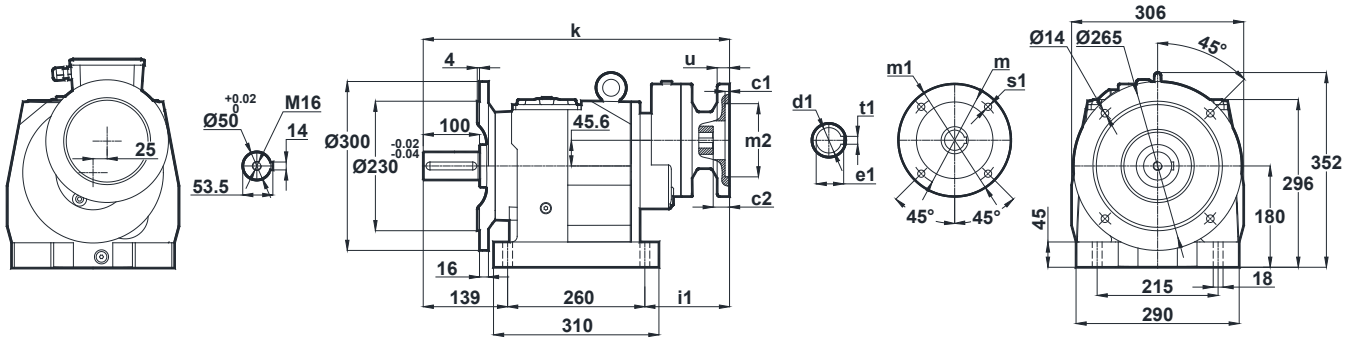
Opt. 1

x: Motor Ayak bağlantı yüzeyinin altında ise / x: If Motor is lower then foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



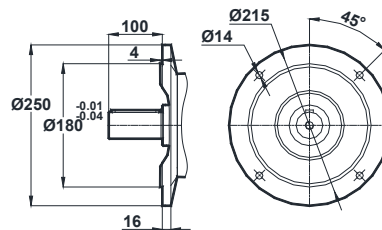
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF474-A..
MNF474-B..



IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	125.5	12	524.5	14	5	16.3
80/B5	4	9	12	165	200	130	125.5	12	524.5	19	6	21.8
80/B14	4	9	7	100	120	80	125.5	12	524.5	19	6	21.8

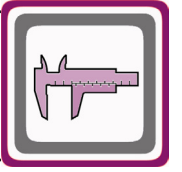
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

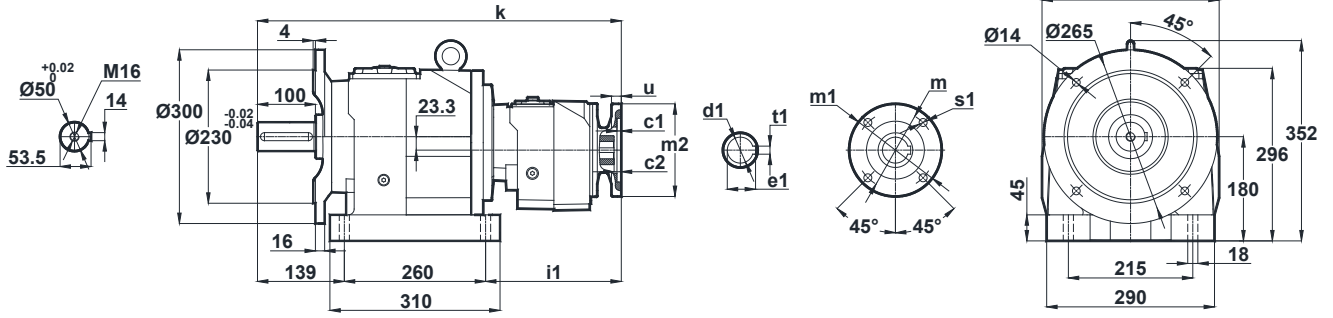


Ölçü Sayfaları Dimension Pages Abmessungenseiten



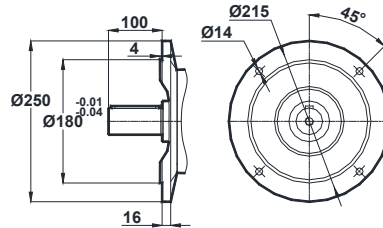
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF475-A.. / B..
MNF476-A.. / B..

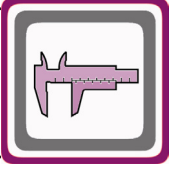
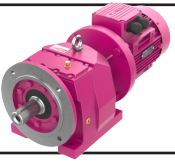


IEC	c1	c2	s1	m	m1	m2	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	253.5	12	652.5	11	4	12.8
71/B5	4	8.5	11	130	160	110	224.5	12	623.5	14	5	16.3
71/B14	3	8.5	7	85	105	70	224.5	10	623.5	14	5	16.3

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

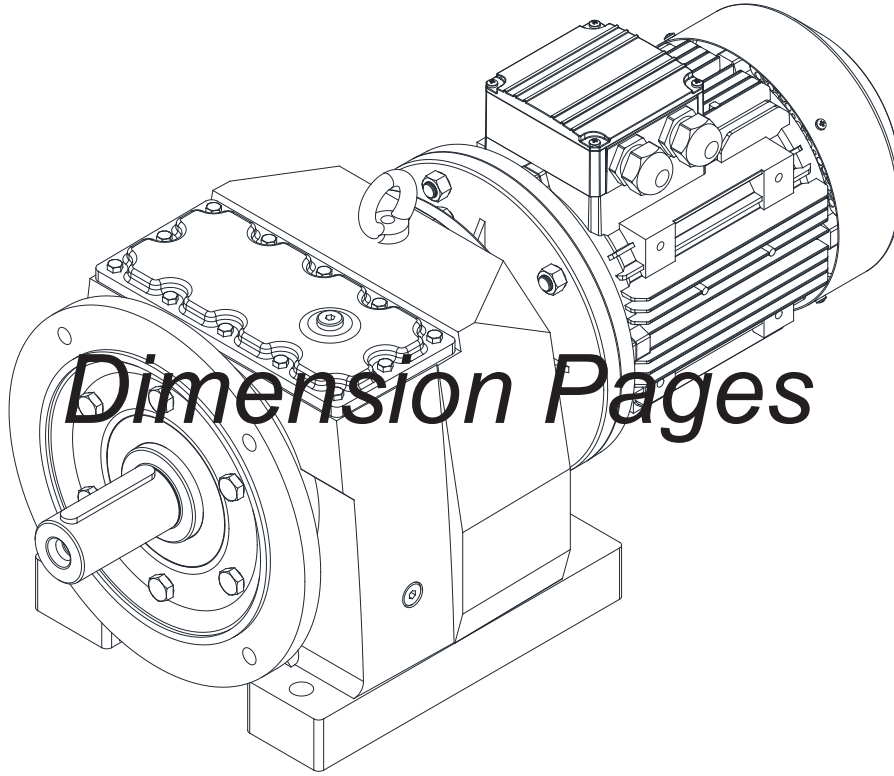


Opt. 1

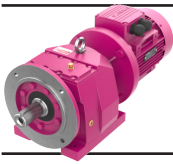


MVF Serisi / Serie

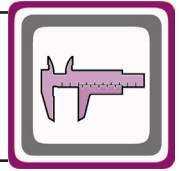
Ölçü Sayfaları



Abmessungenseiten

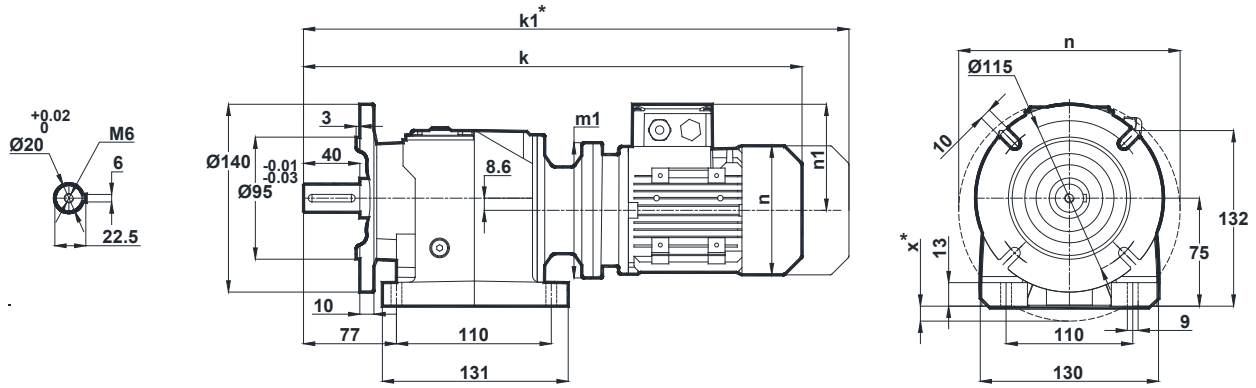


Ölçü Sayfaları Dimension Pages Abmessungsseiten



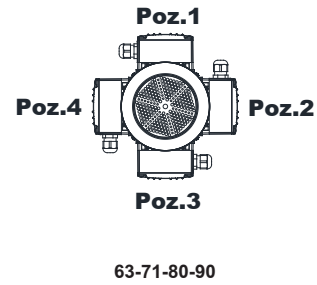
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF002 MVF003

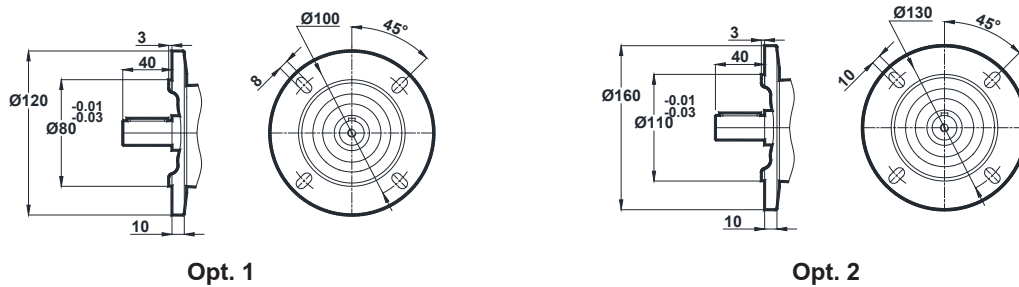


Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	404	427.5	464.5	505.5	505.5
k1	475	518.5	557.5	584.5	584.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	3	12	22	22

Klemens Kutusu / Terminal Box / Klemmenkasten

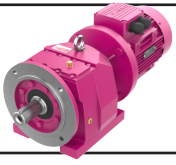


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

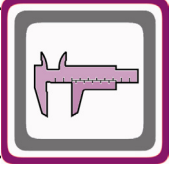


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

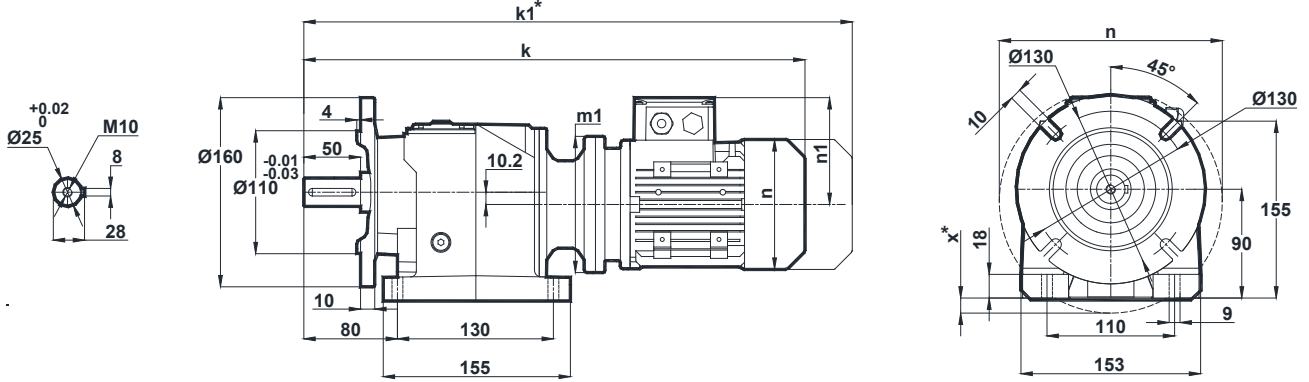


Ölçü Sayfaları Dimension Pages Abmessungenseiten



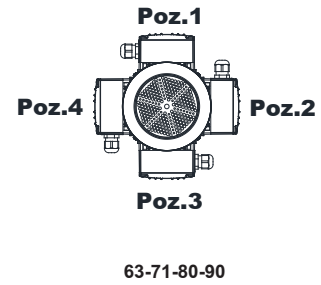
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MVF102 MVF103

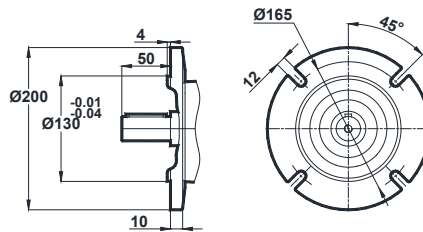


Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	428	451.5	488.5	529.5	529.5
k1	499	542.5	581.5	608.5	608.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	-	-	9	9

Klemens Kutusu / Terminal Box / Klemmenkasten



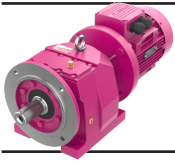
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



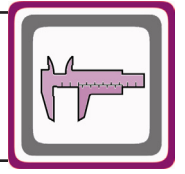
Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

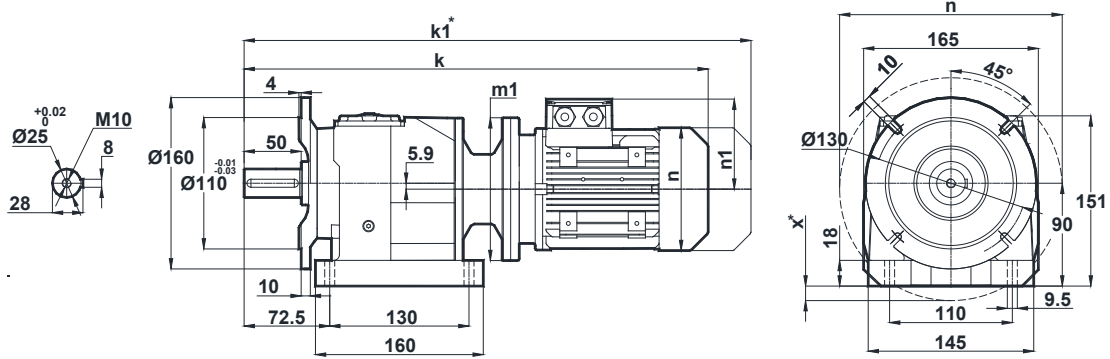


Ölçü Sayfaları Dimension Pages Abmessungsseiten



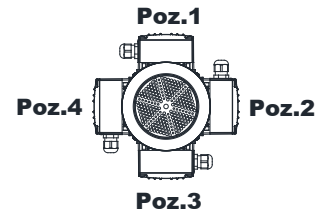
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF172 MVF173



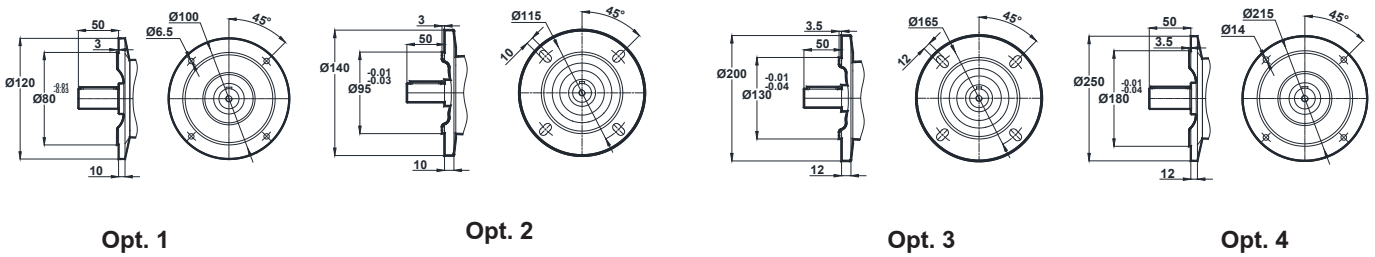
Motor Büyüklüğü / Motor Size / Motorbaugröße							
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	431	454.5	491.5	532.5	532.5	577.5	600.5
k1	502	545.5	584.5	611.5	611.5	685.5	705.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	90	105	120	140	140	160	160
x (B5)	-	-	-	4	4	13	24

Klemens Kutusu / Terminal Box / Klemmenkasten



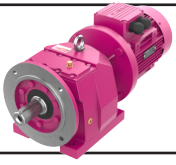
63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

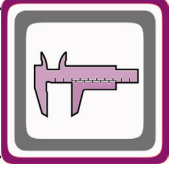


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

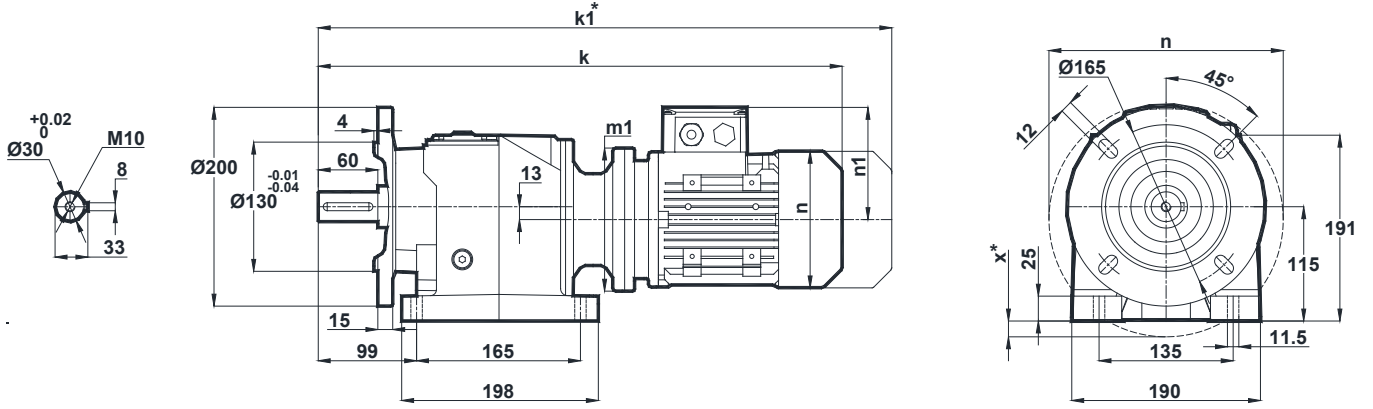


Ölçü Sayfaları Dimension Pages Abmessungenseiten



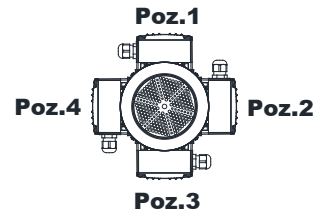
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF202 MVF203



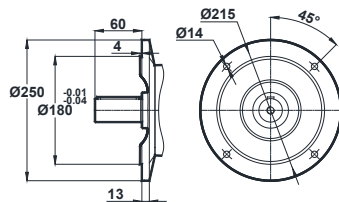
Motor Büyüklüğü / Motor Size / Motorbaugröße							
IEC	63/B5	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	512.5	505.5	556.5	597.5	597.5	624.5	647.5
k1	583.5	596.5	649.5	676.5	676.5	732.5	752.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	-	105	120	140	140	160	160
x (B5)	-	-	-	-	-	-	6

Klemens Kutusu / Terminal Box / Klemmenkasten

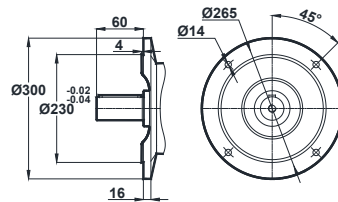


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



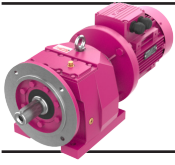
Opt. 1



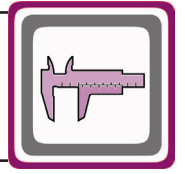
Opt. 2

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

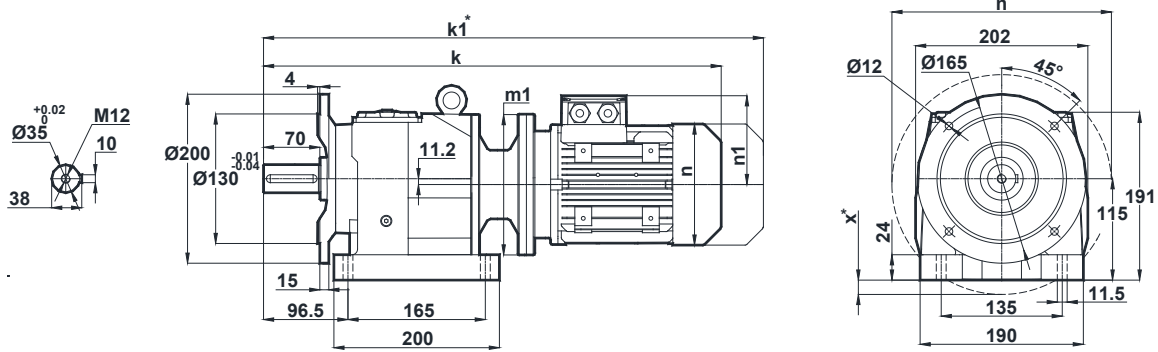


Ölçü Sayfaları Dimension Pages Abmessungsseiten



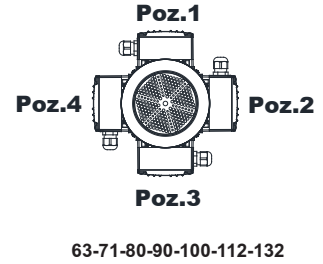
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF272 MVF273

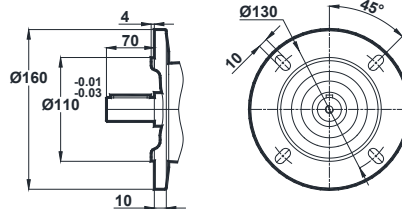


Motor Büyüklüğü / Motor Size / Motorbaugröße									
IEC	63/B5	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14
k	513.5	506.5	557.5	598.5	598.5	625.5	648.5	778.5	778.5
k1	584.5	597.5	650.5	677.5	677.5	733.5	753.5	908.5	908.5
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
m1 (B5)	140	160	200	200	200	250	250	300	300
m1 (B14)	-	105	120	140	140	160	160	200	200
x (B5)	-	-	-	-	-	-	4	25	25

Klemens Kutusu / Terminal Box / Klemmenkasten



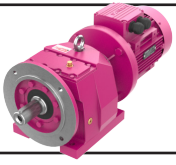
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



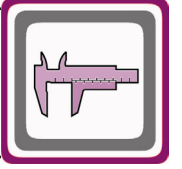
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

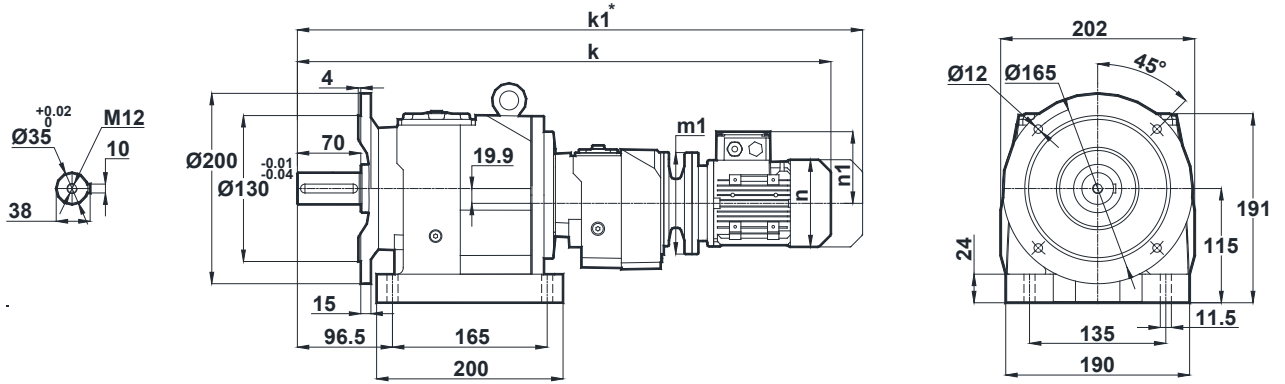


Ölçü Sayfaları Dimension Pages Abmessungenseiten



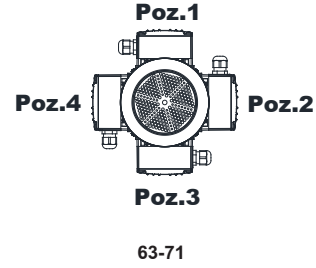
-Mil ucu çektirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF275 MVF276

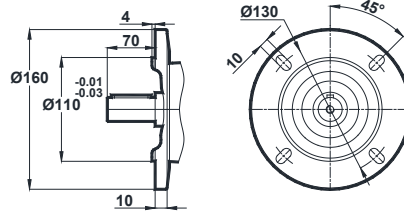


Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	63/B5 63/B14	71/B5 71/B14
k	629	652.5
k1	700	743.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	90	105

Klemens Kutusu / Terminal Box / Klemmenkasten

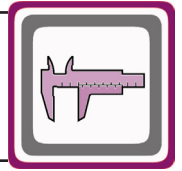


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



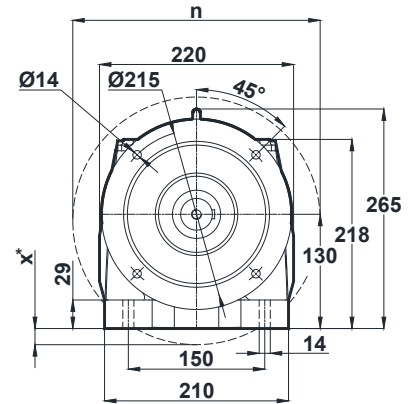
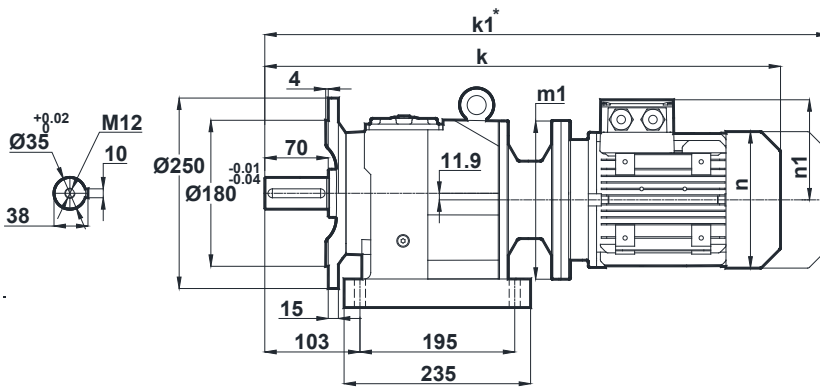
Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

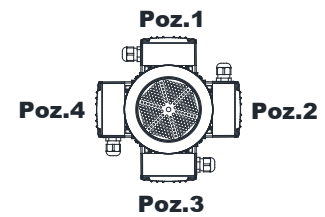


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF282
MVF283

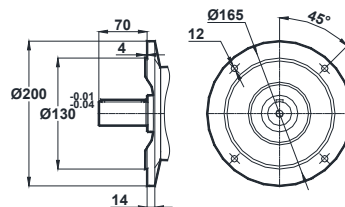
[illegible]

Klemens Kutusu / Terminal Box / Klemmenkasten



71-80-90-100-112-132-160

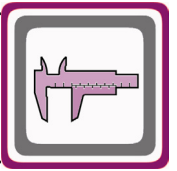
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



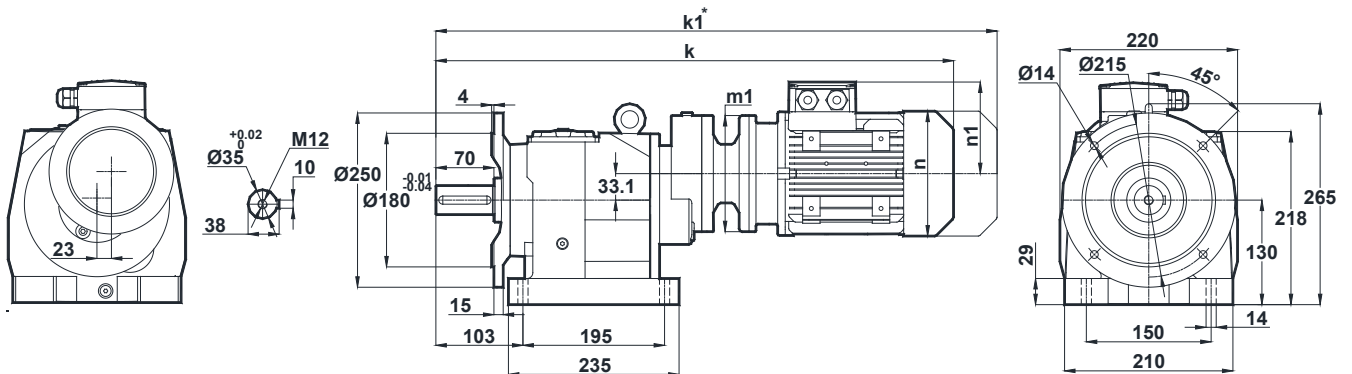
Opt. 1

* "k1 " Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1 " ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

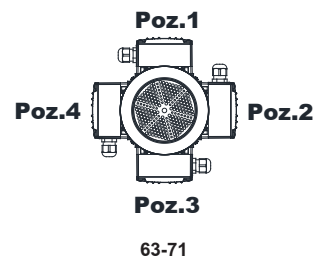


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

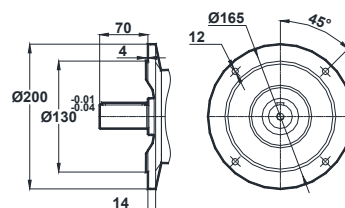
MVF284

Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	63/B5	71/B5 71/B14
k	610	603
k1	681	694
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu / Terminal Box / Klemmenkasten

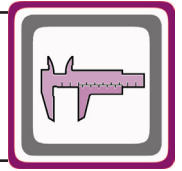


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



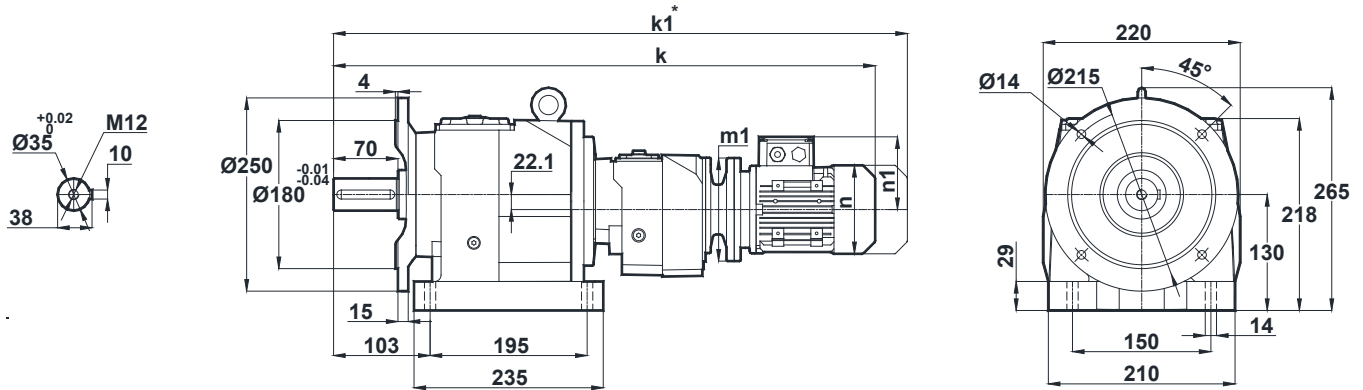
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.



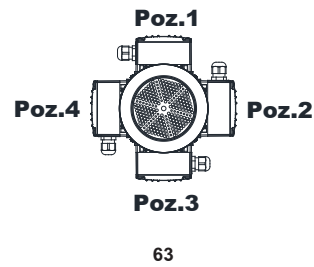
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF285
MVF286

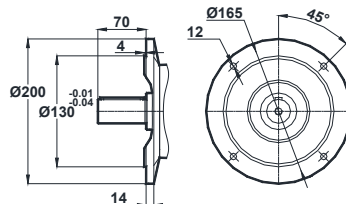


Motor Büyüklüğü / Motor Size / Motorbaugroße	
IEC	63/B5 63/B14
k	678
k1	749
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu / Terminal Box / Klemmenkasten

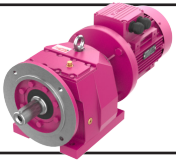


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

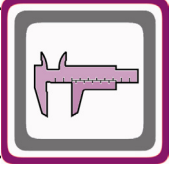


Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

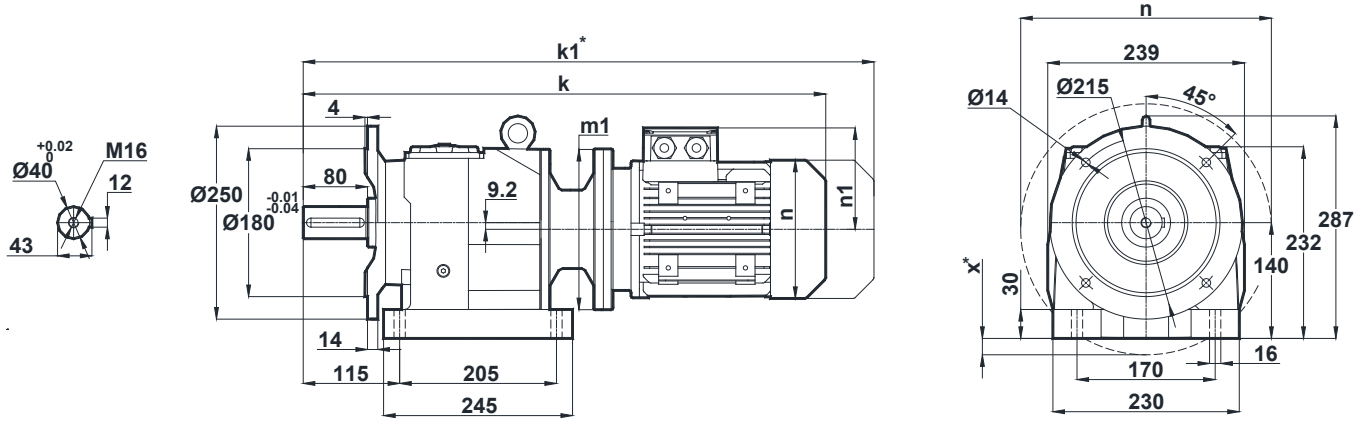


Ölçü Sayfaları Dimension Pages Abmessungenseiten



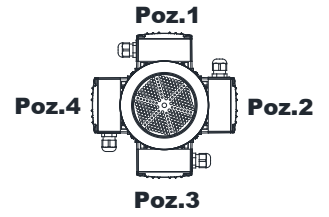
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF372 MVF373



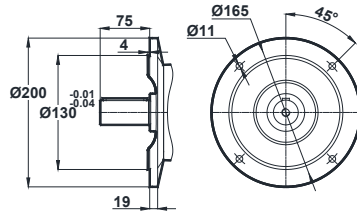
Motor Büyüklüğü / Motor Size / Motorbaugröße										
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5
k	576	598	639	639	690	713	816	816	975.5	975.5
k1	667	691	718	718	798	818	946	946	1125.5	1125.5
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
m1 (B5)	160	200	200	200	250	250	300	300	350	350
m1 (B14)	-	120	140	140	160	160	200	200	-	-
x (B5)	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten



71-80-90-100-112-132-160

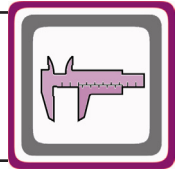
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

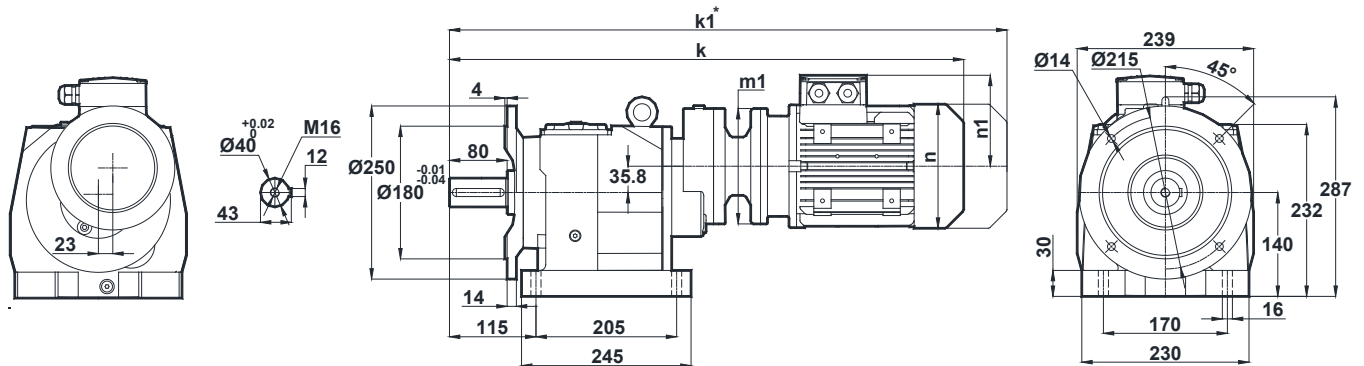
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



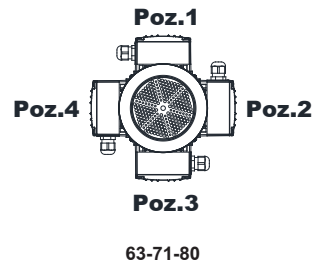
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF374

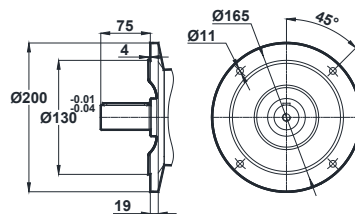


Motor Büyüklüğü / Motor Size / Motorbaugröße			
IEC	63/B5	71/B5 71/B14	80/B5 80/B14
k	631	624	675
k1	702	715	768
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

Klemens Kutusu / Terminal Box / Klemmenkasten

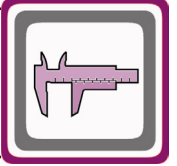


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



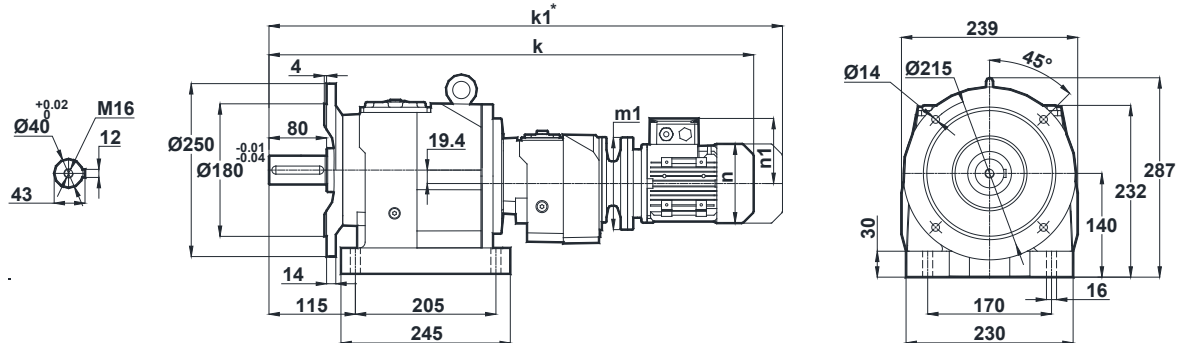
Opt. 1

* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.



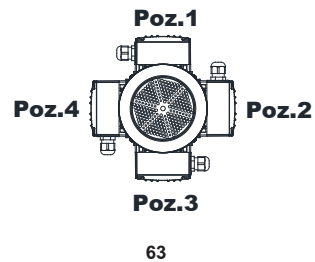
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MVF375
MVF376

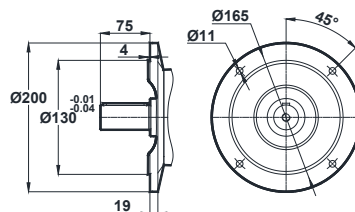


Motor Büyüklüğü / Motor Size / Motorbaugroße	
IEC	63/B5 63/B14
k	699
k1	770
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu / Terminal Box / Klemmenkasten

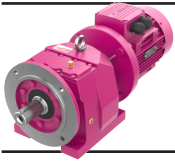


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

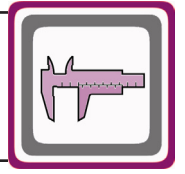


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

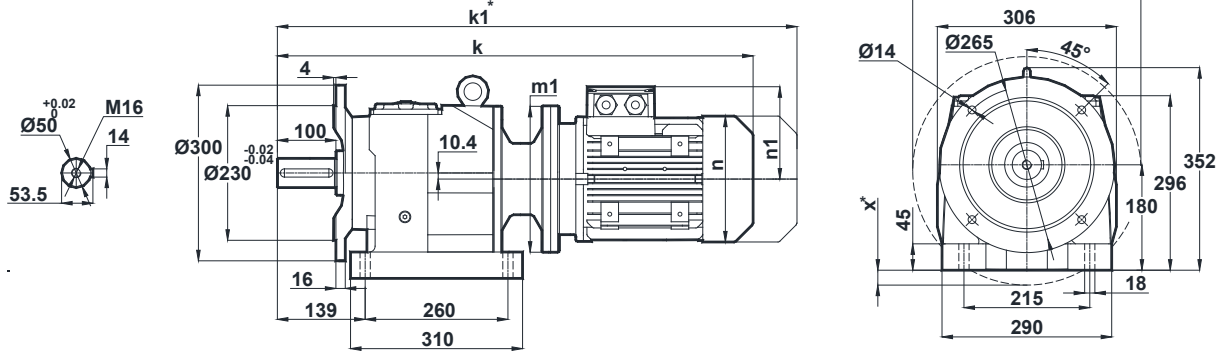


Ölçü Sayfaları Dimension Pages Abmessungsseiten



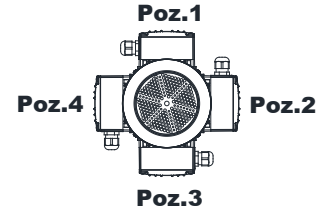
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MVF472 MVF473



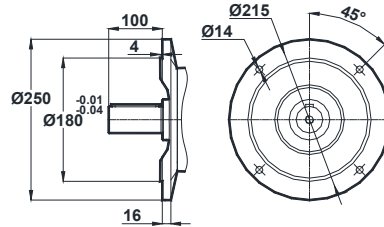
Motor Büyüklüğü / Motor Size / Motorbaugröße											
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5	180M/B5	180L/B5
k	660.5	701.5	701.5	754	777	878.5	878.5	1038	1038	1129	1129
k1	753.5	780.5	780.5	862	882	1008.5	1008.5	1188	1188	1316	1316
n	155	176	176	193	215	257	257	316	316	348	348
n1	127	136	136	149	161	182	182	226	226	242	242
m1 (B5)	200	200	200	250	250	300	300	350	350	350	350
m1 (B14)	-	140	140	160	160	200	200	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	5	5

Klemens Kutusu / Terminal Box / Klemmenkasten



80-90-100-112-132-160-180

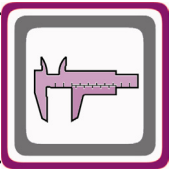
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

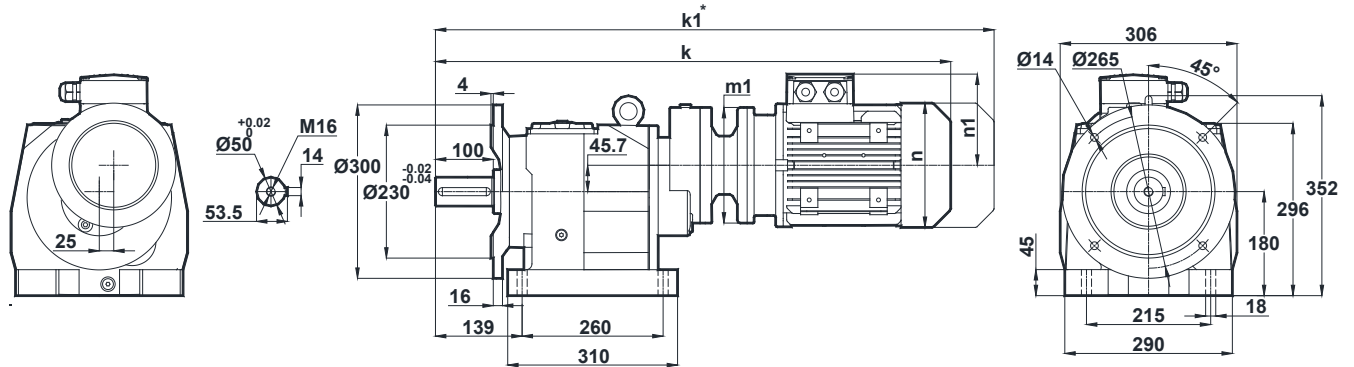
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



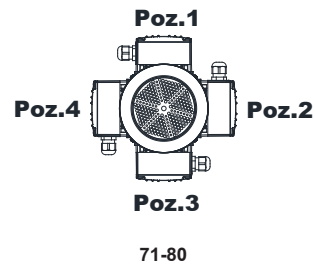
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF474

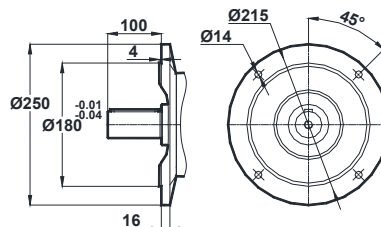


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	71/B5	80/B5 80/B14
k	736.5	758.5
k1	827.5	851.5
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

Klemens Kutusu / Terminal Box / Klemmenkasten

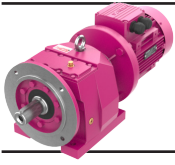


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

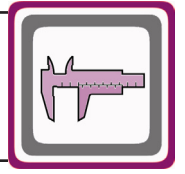


Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

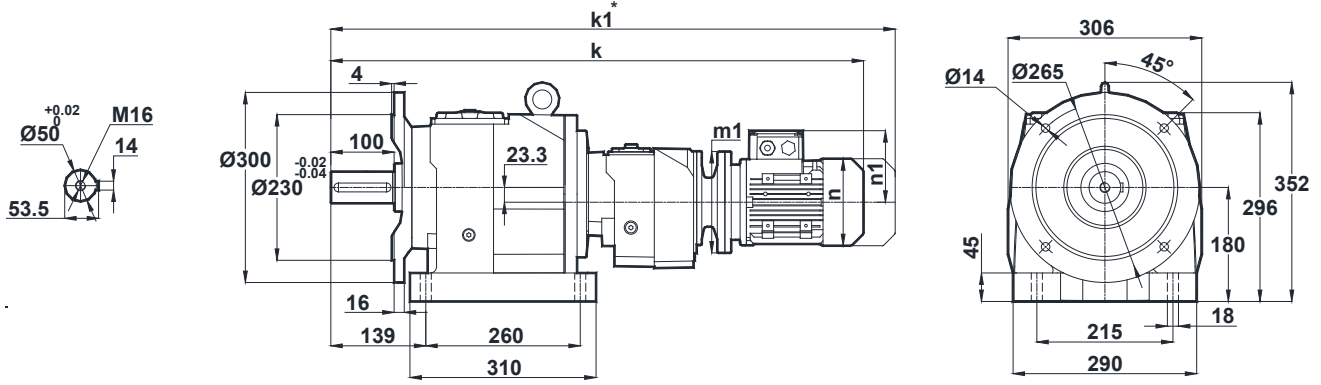


Ölçü Sayfaları Dimension Pages Abmessungsseiten



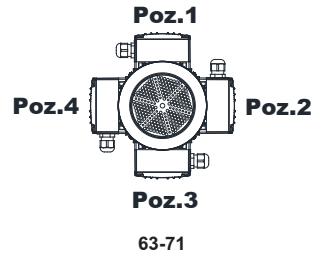
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF475 MVF476

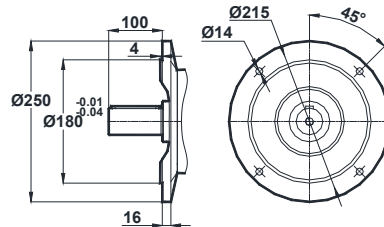


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	63/B5	71/B5 71/B14
k	842.5	835.5
k1	913.5	926.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu / Terminal Box / Klemmenkasten

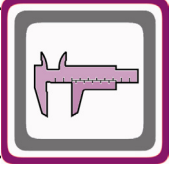
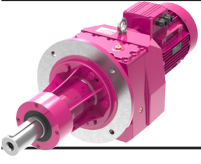


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



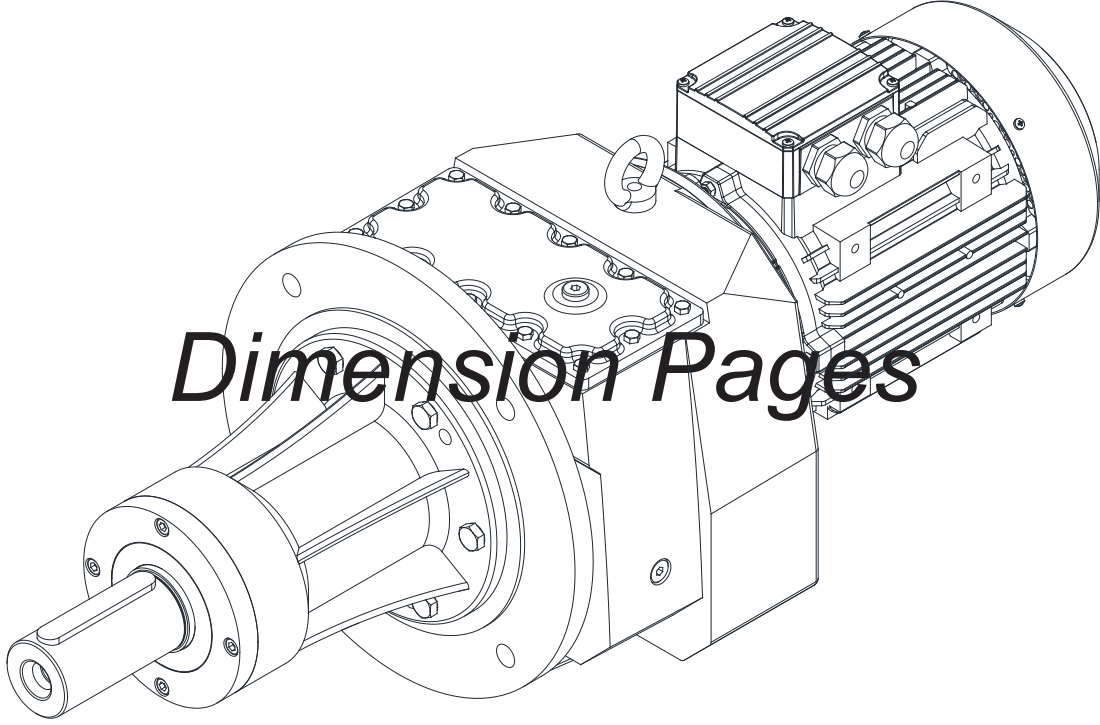
Opt. 1

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.



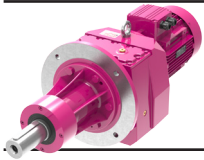
NRB Serisi / Serie

Ölçü Sayfaları

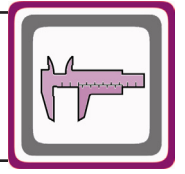


Dimension Pages

Abmessungenseiten

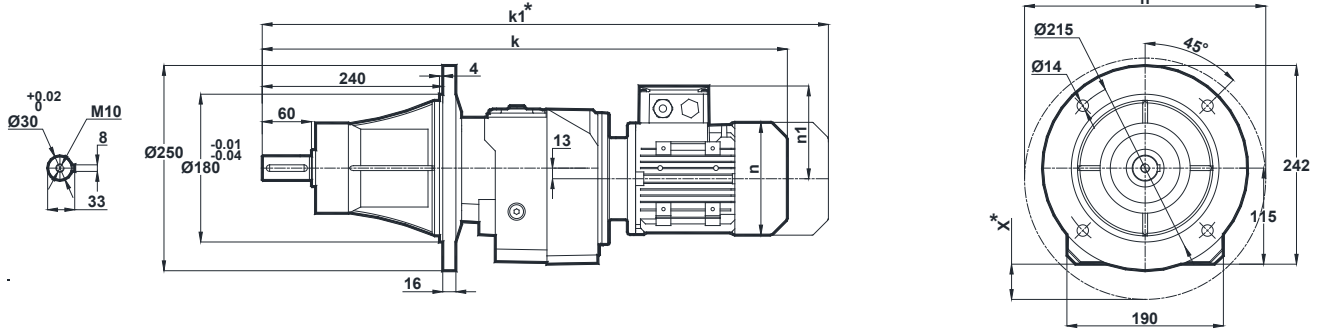


Ölçü Sayfaları Dimension Pages Abmessungsseiten



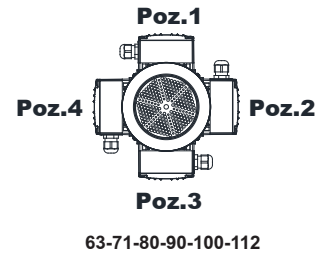
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB202 NRB203



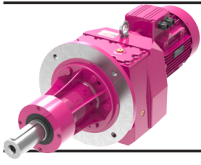
Motor Büyüklüğü / Motor Size / Motorbaugröße							
	63	71	80	90S	90L	100L	112M
k	609	635	669	708	708	756	780
k1	680	726	762	787	787	864	885
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	-	-	-	6

Klemens Kutusu / Terminal Box / Klemmenkasten

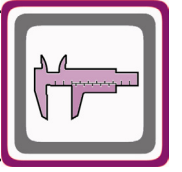


* "k1" "Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

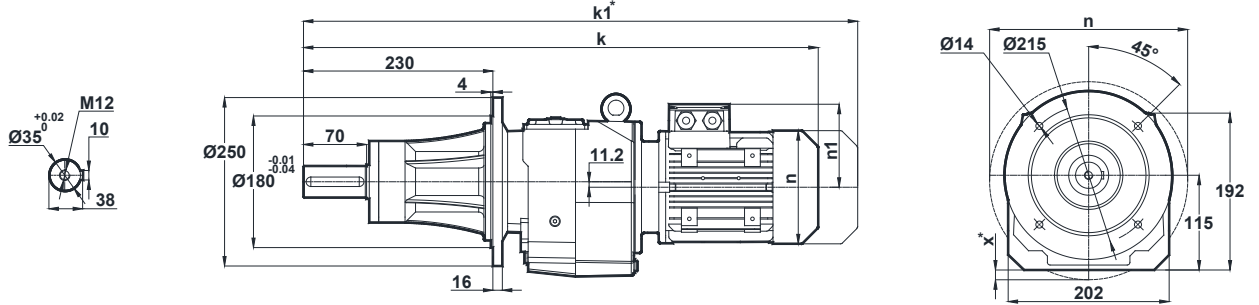


Ölçü Sayfaları Dimension Pages Abmessungenseiten



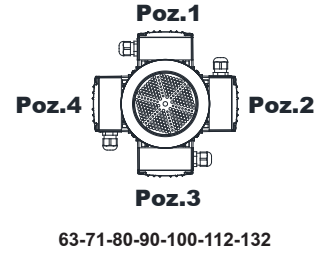
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB272 NRB273

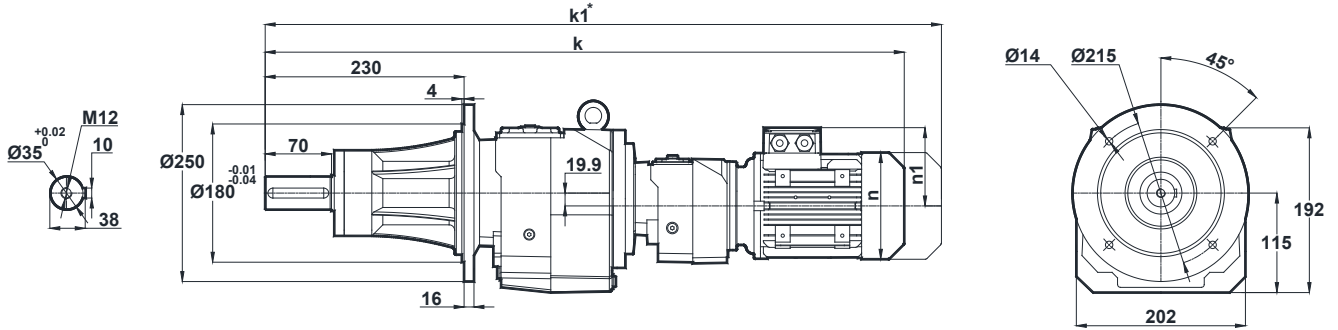


Motor Büyüklüğü / Motor Size / Motorbaugröße									
	63	71	80	90S	90L	100L	112M	132S	132M
k	607	633	667	706	706	754	778	861	861
k1	678	724	760	785	785	862	883	991	991
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

Klemens Kutusu / Terminal Box / Klemmenkasten

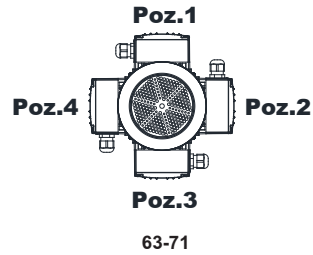


NRB275 NRB276



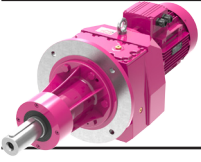
Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	756.5	784
k1	827.5	875
n	119	137
n1	101	118

Klemens Kutusu / Terminal Box / Klemmenkasten

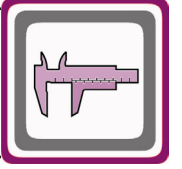


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

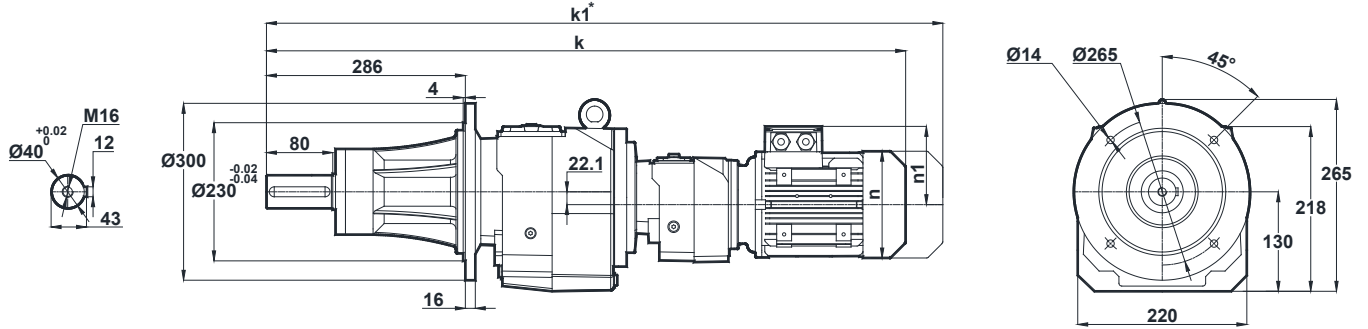


Ölçü Sayfaları Dimension Pages Abmessungenseiten



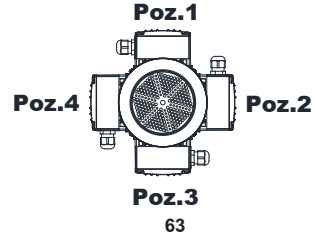
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NRB285 NRB286

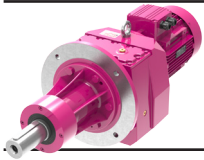


Motor Büyüklüğü / Motor Size / Motorbaugröße	
	63
k	864.5
k1	935.5
n	119
n1	101

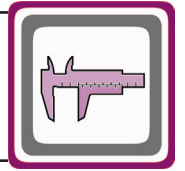
Klemens Kutusu / Terminal Box / Klemmenkasten



* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

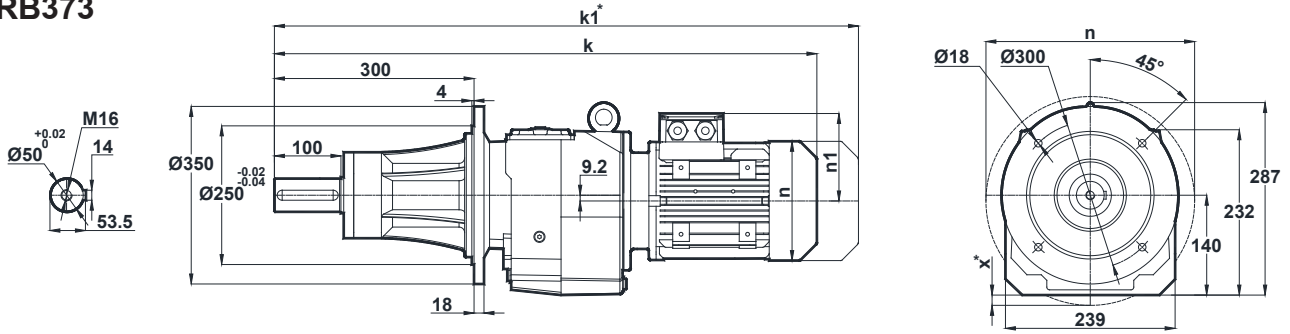


Ölçü Sayfaları Dimension Pages Abmessungsseiten



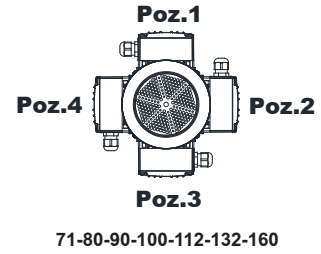
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NRB372 NRB373

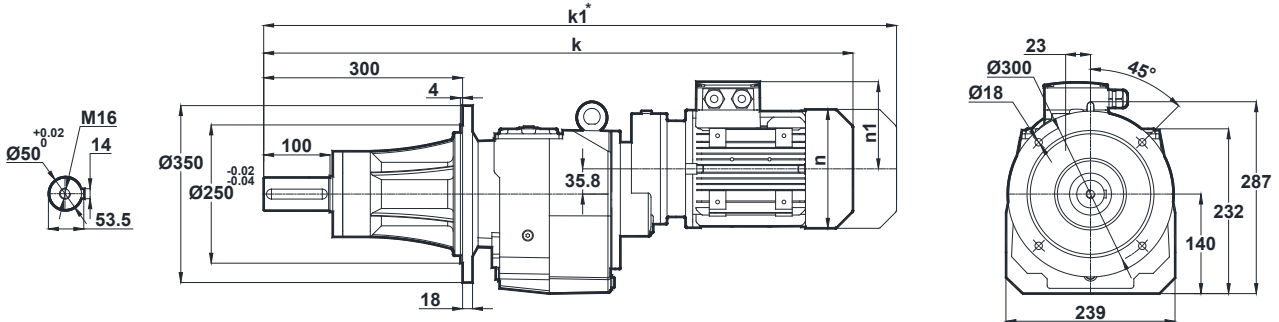


Motor Büyüklüğü / Motor Size / Motorbaugröße										
	71	80	90S	90L	100L	112M	132S	132M	160M	160L
k	729.5	763.5	802.5	802.5	850.5	874.5	961	961	1057	1057
k1	820.5	856.5	881.5	881.5	958.5	979.5	1091	1091	1207	1207
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten

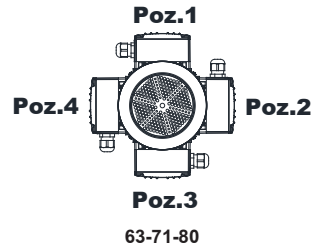


NRB374



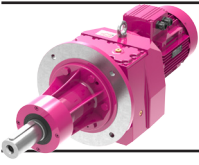
Motor Büyüklüğü / Motor Size / Motorbaugröße			
	63	71	80
k	782.5	808.5	842.5
k1	853.5	899.5	935.5
n	119	137	155
n1	101	118	127

Klemens Kutusu / Terminal Box / Klemmenkasten

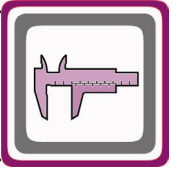


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

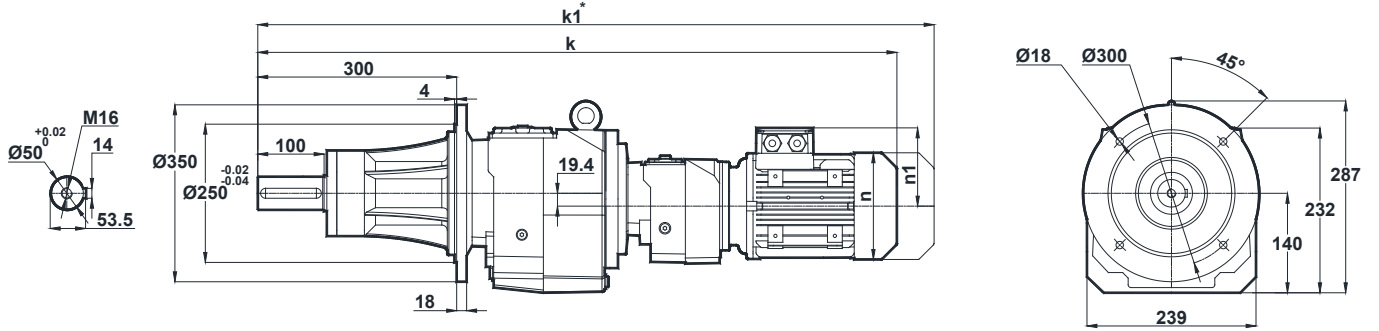


Ölçü Sayfaları Dimension Pages Abmessungsseiten



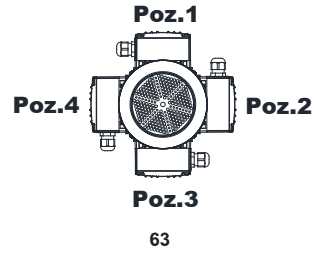
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB375 NRB376

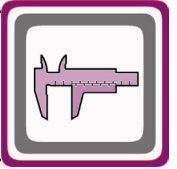


Motor Büyüklüğü / Motor Size / Motorbaugroße	
	63
k	887
k1	958
n	119
n1	101

Klemens Kutusu / Terminal Box / Klemmenkasten

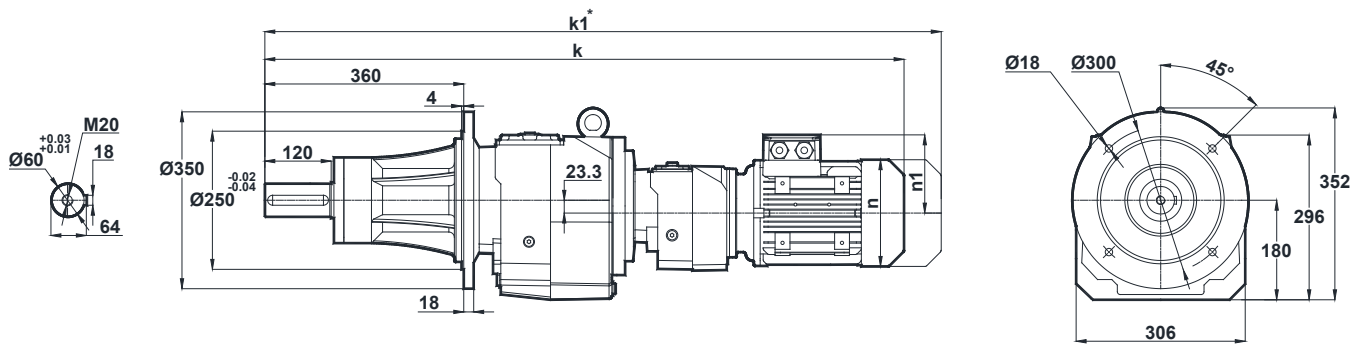


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.



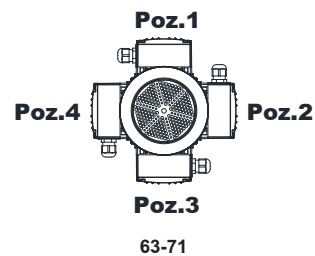
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NRB475
NRB476

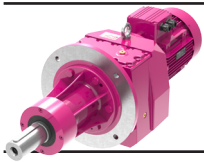


Motor Büyüklüğü / Motor Size / Motorbaugroße		
	63	71
k	1034	1060
k1	1105	1151
n	119	137
n1	101	118

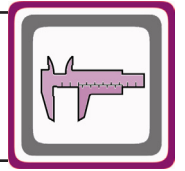
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

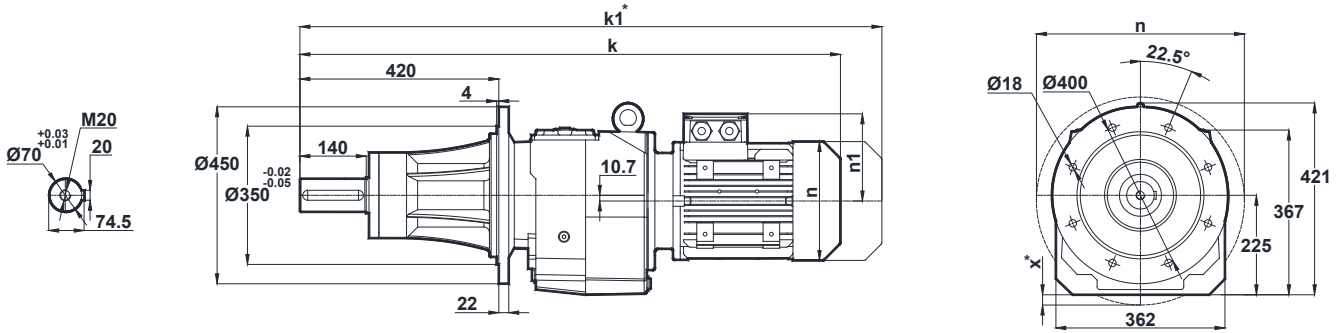


Ölçü Sayfaları Dimension Pages Abmessungsseiten



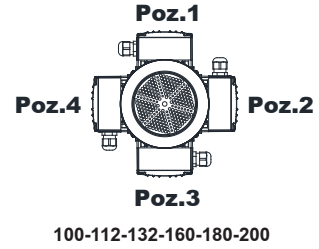
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NRB572 NRB573

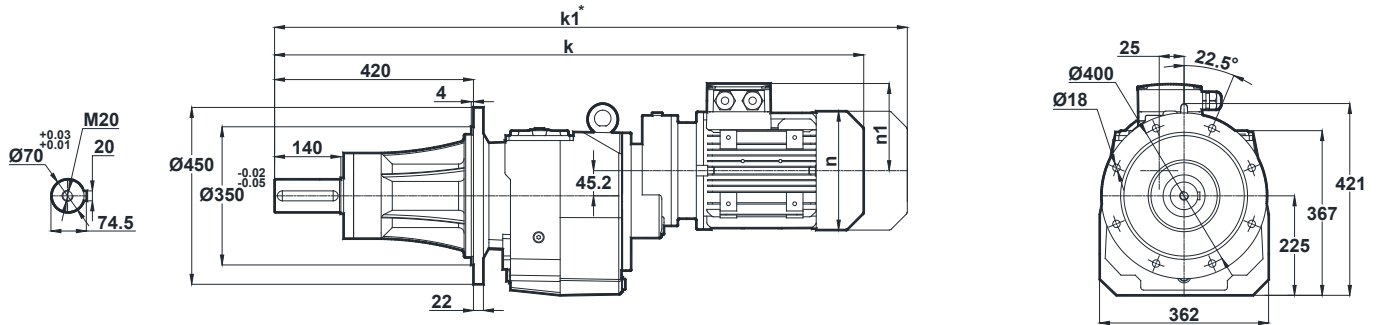


Motor Büyüklüğü / Motor Size / Motorbaugröße									
	100L	112M	132S	132M	160M	160L	180M	180L	200L
k	1057	1081	1167.5	1167.5	1263.5	1263.5	1335.5	1335.5	1359
k1	1165	1186	1297.5	1297.5	1413.5	1413.5	1522.5	1522.5	1551
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
x	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten

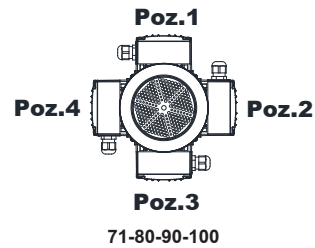


NRB574



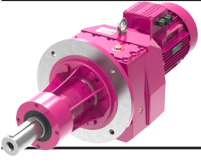
Motor Büyüklüğü / Motor Size / Motorbaugröße					
	71	80	90S	90L	100L
k	1037	1071	1110	1110	1158
k1	1128	1164	1189	1189	1266
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu / Terminal Box / Klemmenkasten

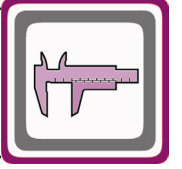


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altına ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

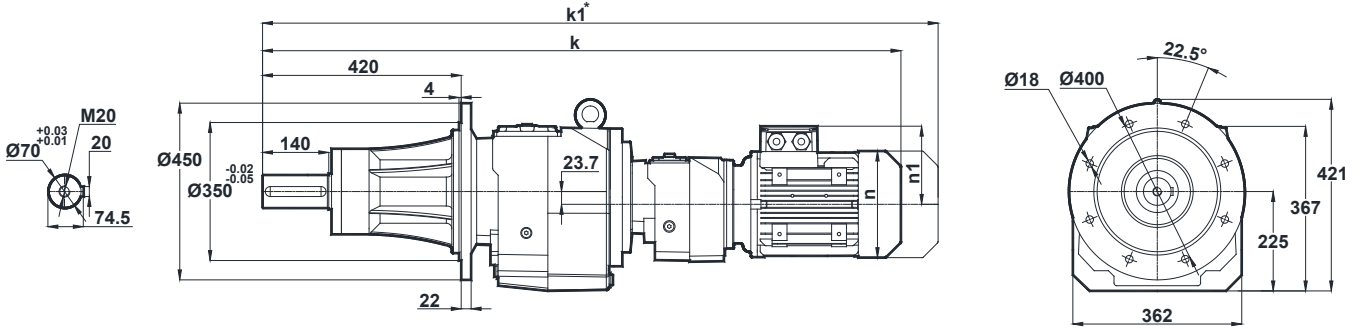


Ölçü Sayfaları Dimension Pages Abmessungenseiten



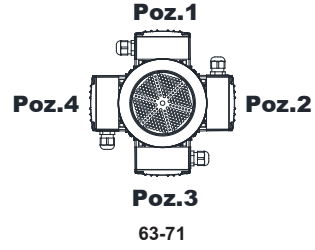
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB575 NRB576

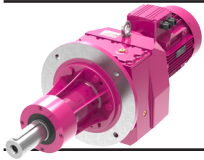


Motor Büyüklüğü / Motor Size / Motorbaugröße		
	63	71
k	1143	1169
k1	1214	1260
n	119	137
n1	101	118

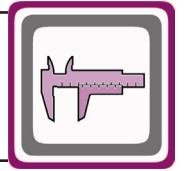
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

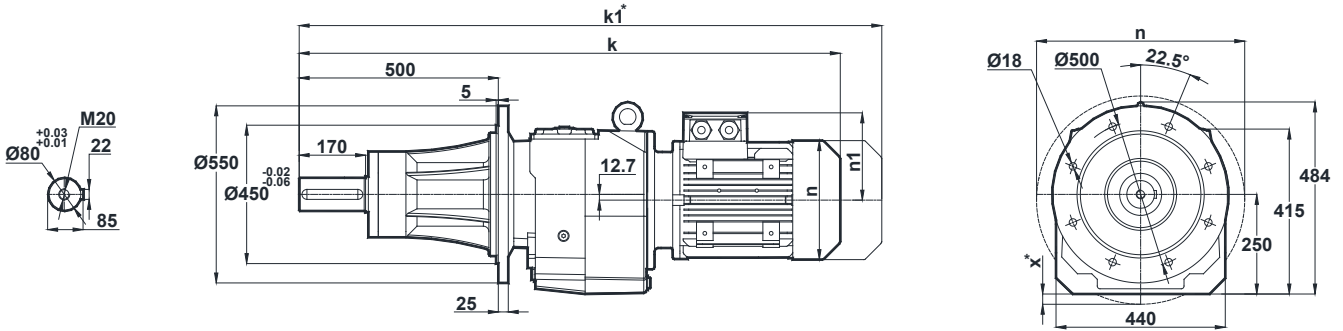


Ölçü Sayfaları Dimension Pages Abmessungsseiten



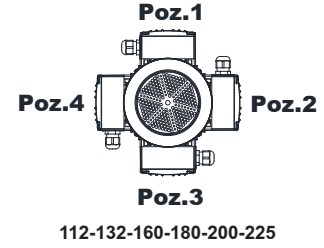
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NRB672 NRB673



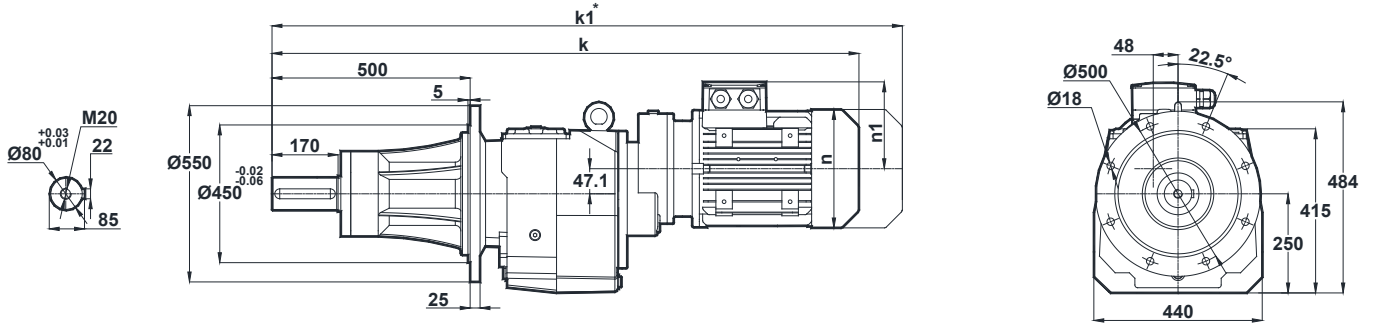
Motor Büyüklüğü / Motor Size / Motorbaugroße										
	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M
k	1198	1284.5	1284.5	1380.5	1380.5	1452.5	1452.5	1476	1554	1554
k1	1303	1414.5	1414.5	1530.5	1530.5	1639.5	1639.5	1668	1737	1737
n	215	257	257	316	316	348	348	396	438	438
n1	161	182	182	226	226	242	242	294	311,5	311,5
x	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



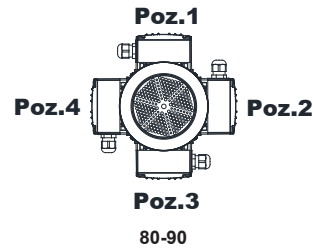
112-132-160-180-200-225

NRB674



Motor Büyüklüğü / Motor Size / Motorbaugroße			
	80	90S	90L
k	1206.5	1245.5	1245.5
k1	1299.5	1324.5	1324.5
n	155	176	176
n1	127	136	136

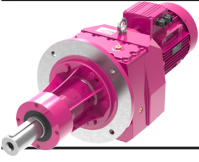
Klemens Kutusu / Terminal Box / Klemmenkasten



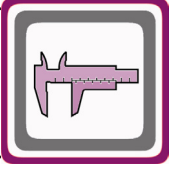
80-90

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

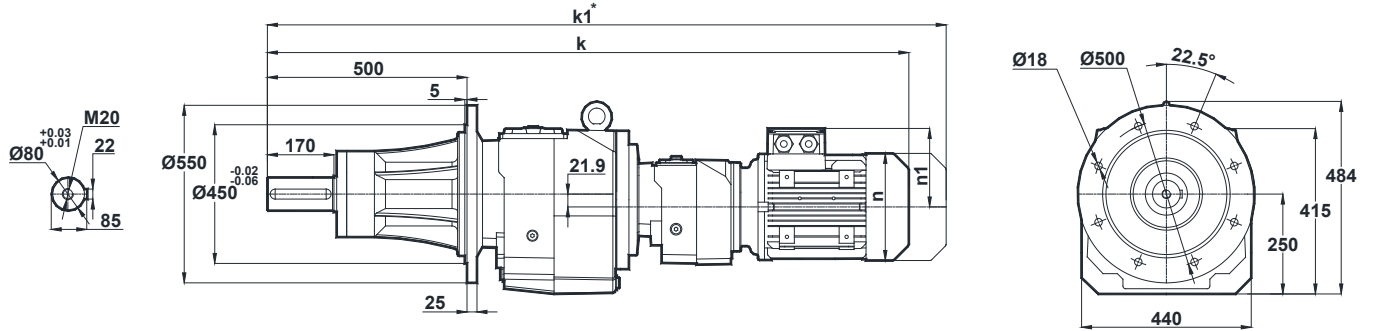


Ölçü Sayfaları Dimension Pages Abmessungenseiten



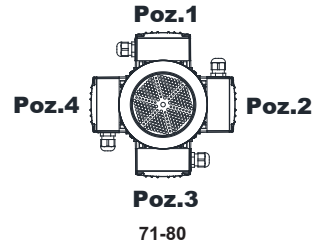
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB675 NRB676



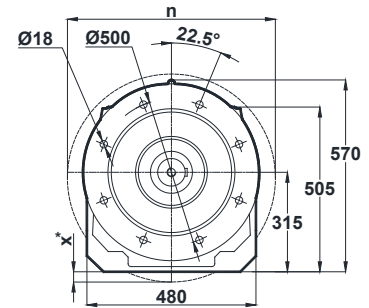
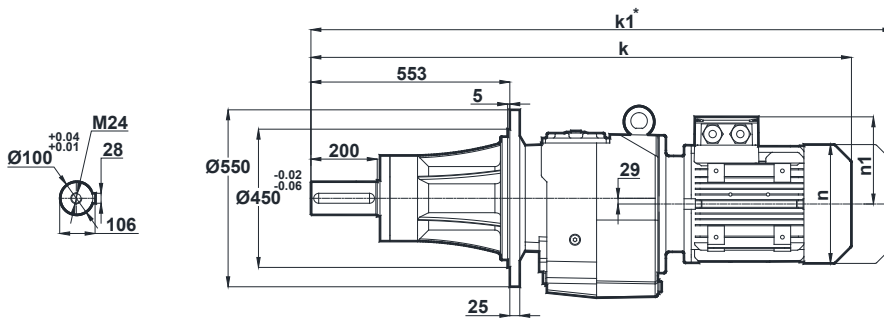
Motor Büyüklüğü / Motor Size / Motorbaugroße		
	71	80
k	1318.5	1352.5
k1	1409.5	1445.5
n	137	155
n1	118	127

Klemens Kutusu / Terminal Box / Klemmenkasten

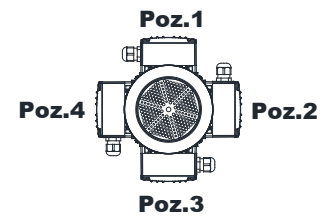


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

NRB772
NRB773

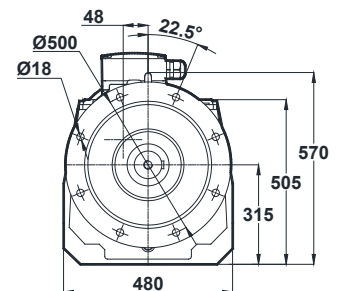
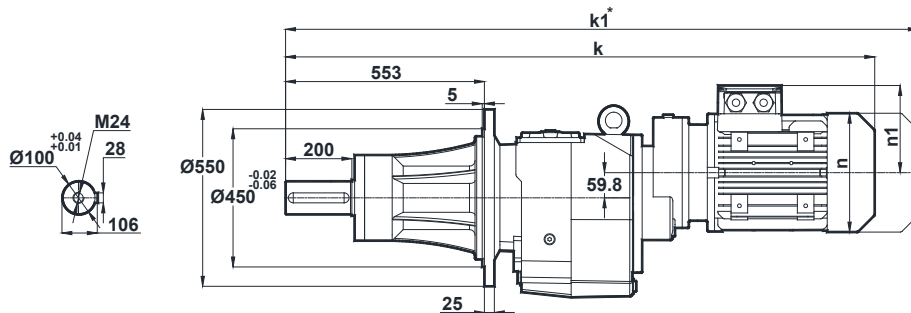
[illegible]

Klemens Kutusu / Terminal Box / Klemmenkasten



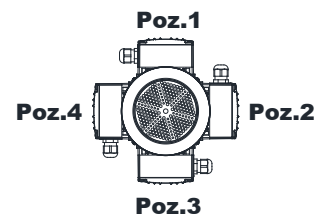
132-160-180-200-225-250

NRB774



Motor Büyüklüğü / Motor Size / Motorbaugröße				
	80	90S	90L	100L
k	1309.5	1348.5	1348.5	1393.5
k1	1402.5	1427.5	1427.5	1501.5
n	155	176	176	193
n1	127	136	136	149

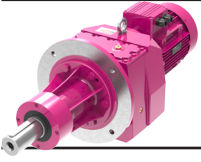
Klemens Kutusu / Terminal Box / Klemmenkasten



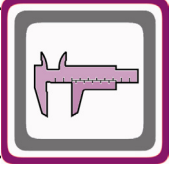
80-90-100

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / **x:** If Motor is lower than foot mounting plane / **x:** Wenn der Motor unter der Fußmontageebene ist

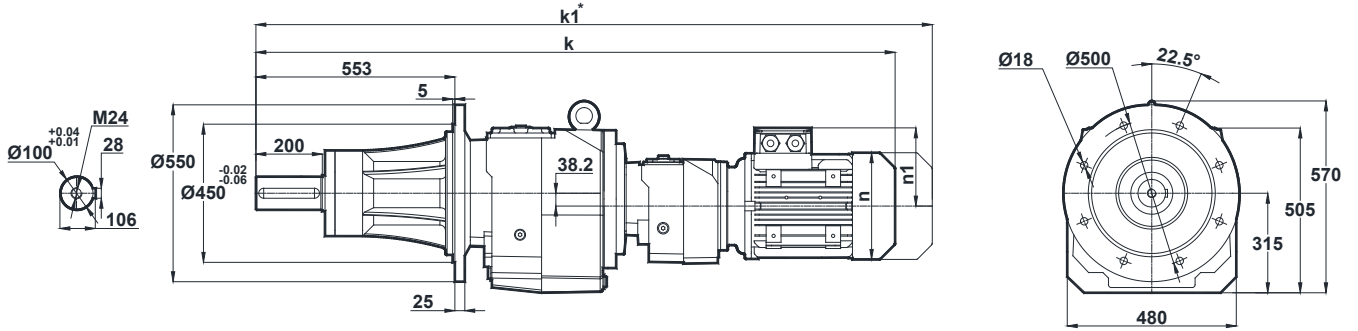


Ölçü Sayfaları Dimension Pages Abmessungenseiten



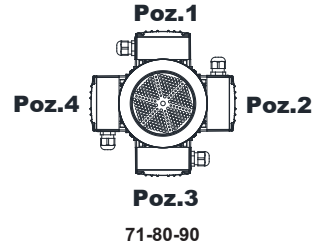
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB775 NRB776

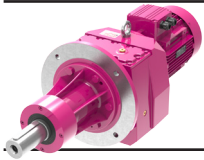


Motor Büyüklüğü / Motor Size / Motorbaugroße				
	71	80	90S	90L
k	1424.5	1458.5	1497.5	1497.5
k1	1515.5	1551.5	1576.5	1576.5
n	137	155	176	176
n1	118	127	136	136

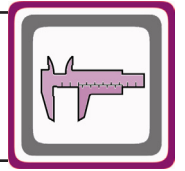
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

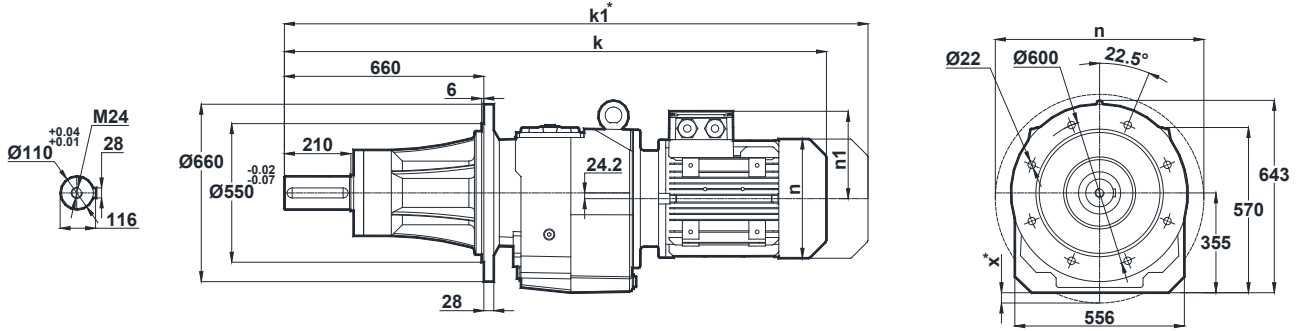


Ölçü Sayfaları Dimension Pages Abmessungsseiten



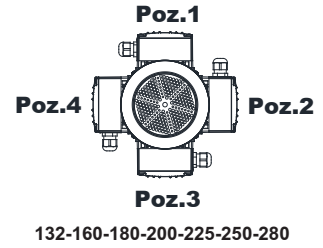
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB872 NRB873

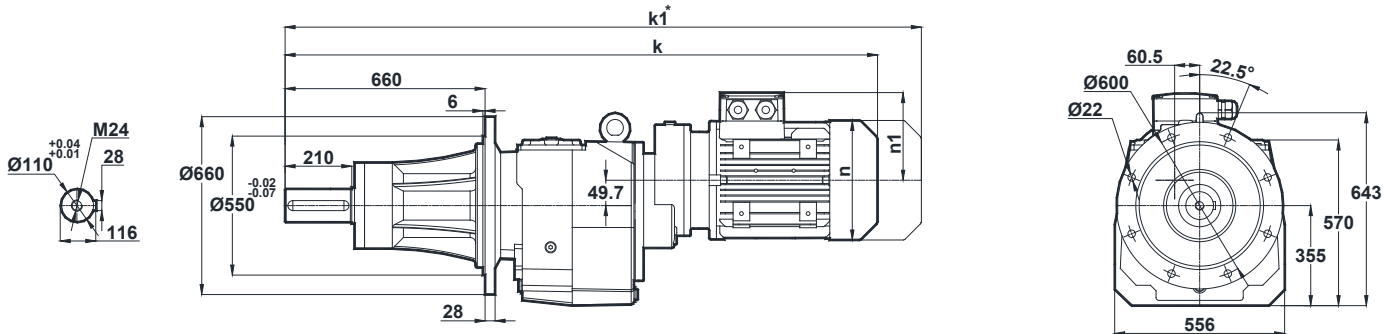


Motor Büyüklüğü / Motor Size / Motorbaugroße											
	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k	1559.5	1655.5	1655.5	1727.5	1727.5	1751	1832	1832	1915	2034	2034
k1	1689.5	1805.5	1805.5	1914.5	1914.5	1943	2015	2015	2072	2232	2232
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	226	226	242	242	294	311,5	311,5	337	402	402
x	-	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten

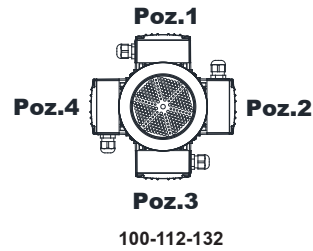


NRB874



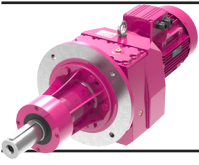
Motor Büyüklüğü / Motor Size / Motorbaugroße				
	100L	112M	132S	132M
k	1591	1615	1701.5	1701.5
k1	1699	1720	1831.5	1831.5
n	193	215	257	257
n1	149	161	182	182

Klemens Kutusu / Terminal Box / Klemmenkasten

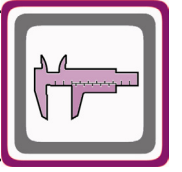


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

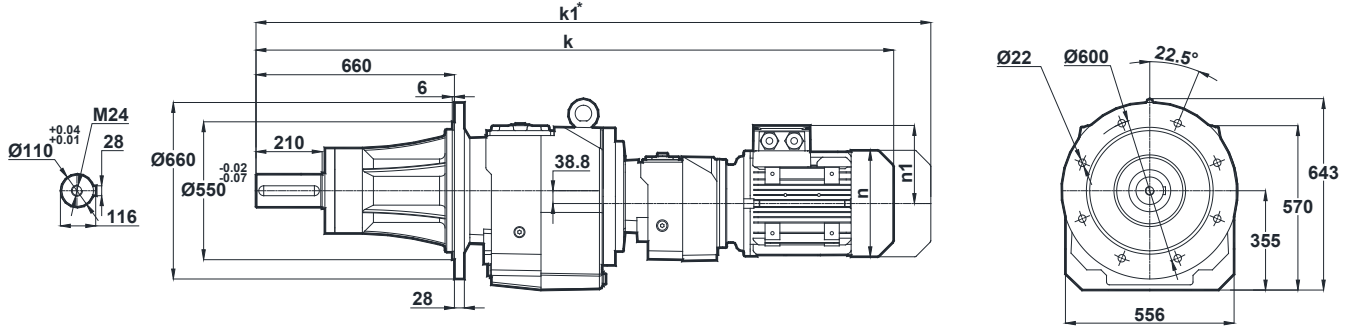


Ölçü Sayfaları Dimension Pages Abmessungenseiten



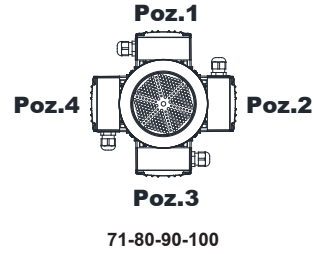
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB875 NRB876



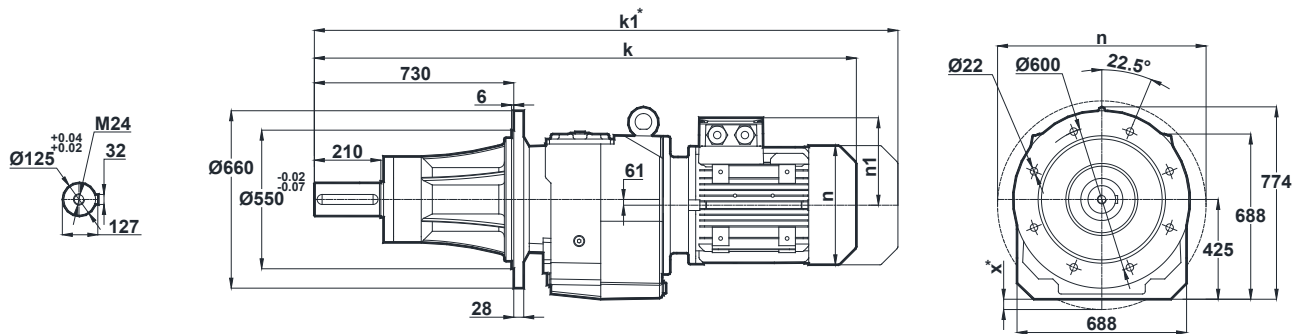
Motor Büyüklüğü / Motor Size / Motorbaugröße					
	71	80	90S	90L	100L
k	1608.5	1642.5	1681.5	1681.5	1729.5
k1	1699.5	1735.5	1760.5	1760.5	1837.5
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu / Terminal Box / Klemmenkasten

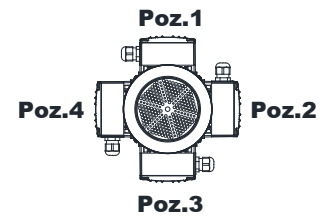


* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

NRB972
NRB973

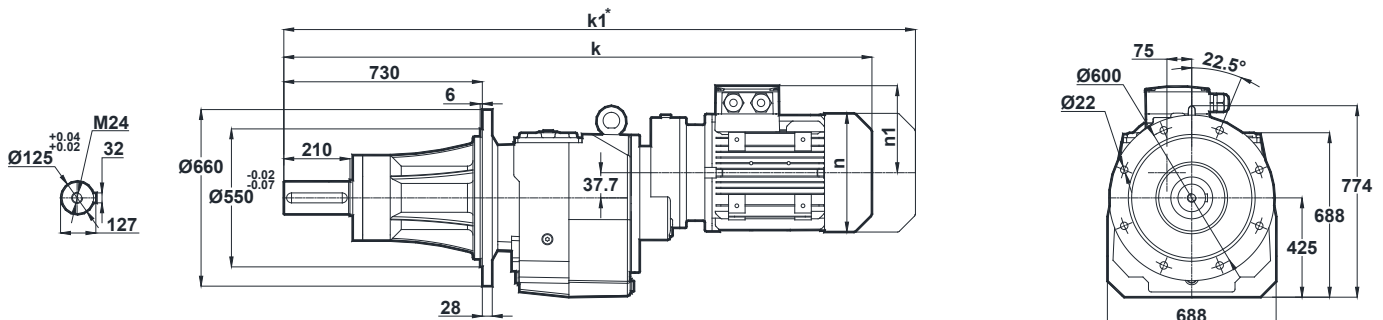
[illegible]

Klemens Kutusu / *Terminal Box* / Klemmenkasten



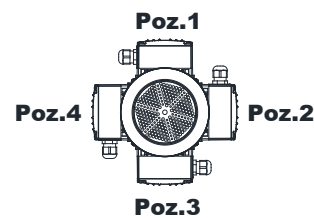
160-180-200-225-250-280-315

NRB974



Motor Büyüklüğü / Motor Size / Motorbaugröße				
	100L	112M	132S	132M
k	1760.5	1784.5	1871	1871
k1	1868.5	1889.5	2001	2001
n	193	215	257	257
n1	149	161	182	182

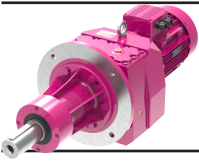
Klemens Kutusu / Terminal Box / Klemmenkasten



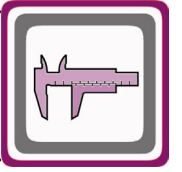
100-112-132

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / **x:** If Motor is lower than foot mounting plane / **x:** Wenn der Motor unter der Fußmontageebene ist

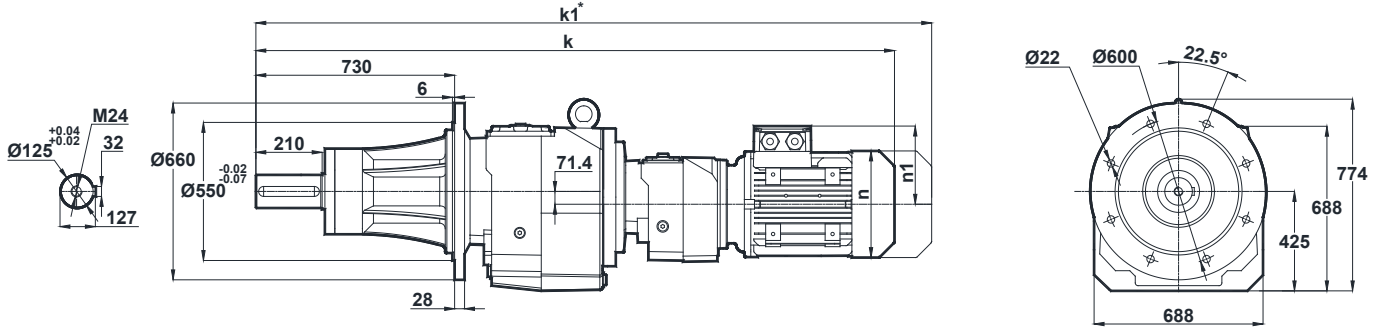


Ölçü Sayfaları Dimension Pages Abmessungenseiten



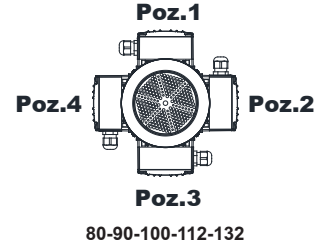
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB975 NRB976

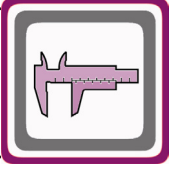
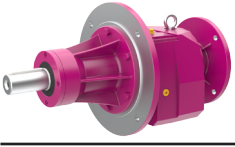


Motor Büyüklüğü / Motor Size / Motorbaugroße						
	80	90S	90L	100L	112M	132S
k	1839	1878	1878	1923	1947	2032
k1	1932	1957	1957	2031	2052	2162
n	155	176	176	193	215	257
n1	127	136	136	149	161	182

Klemens Kutusu / Terminal Box / Klemmenkasten

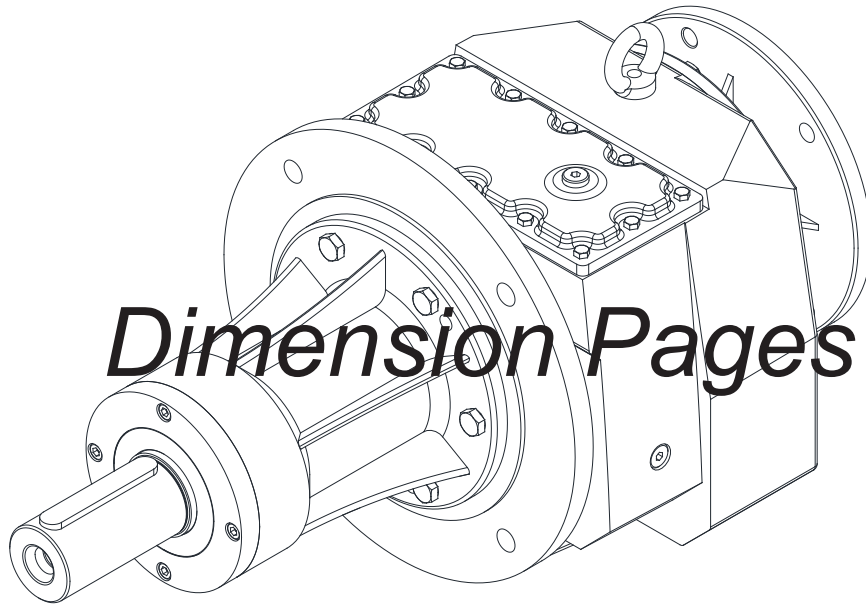


* " k1 " Ölçüsü frenli redüktörlere aittir. Dimension " k1 " is for motors with brake. Maße " k1 " ist für Bremsenmotoren.

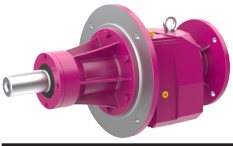


NNB Serisi / Serie

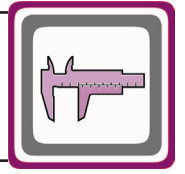
Ölçü Sayfaları



Abmessungsseiten

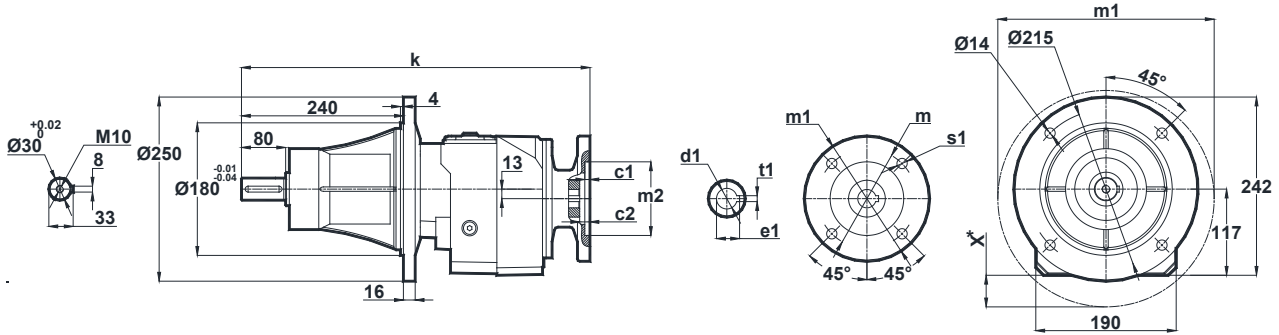


Ölçü Sayfaları Dimension Pages Abmessungsseiten



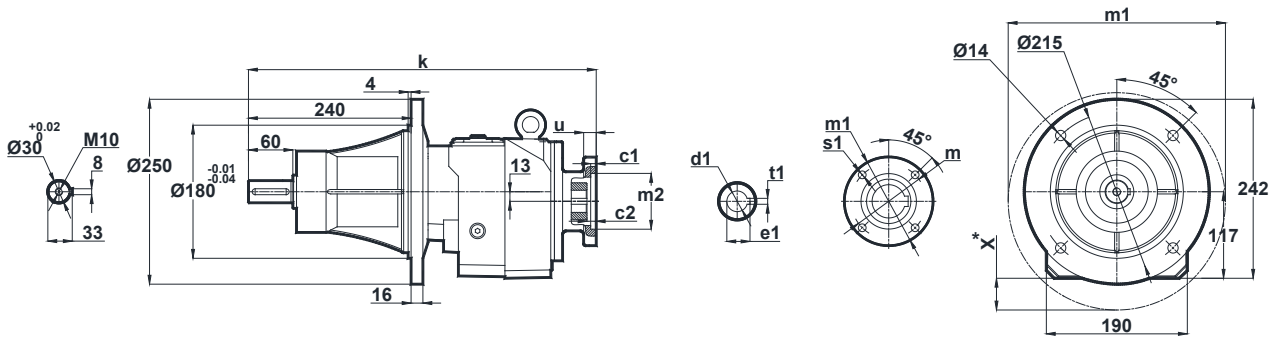
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB202-A.. NNB203-A..



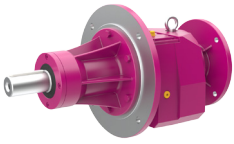
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	12	487.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	12	458.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	12	487.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	12	487.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	12	480.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	12	480.5	28	8	31.3	6

NNB202-B.. NNB203-B..

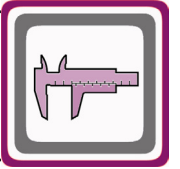


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	10	458.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	12	487.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	12	487.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	12	480.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	12	480.5	28	8	31.3	6

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

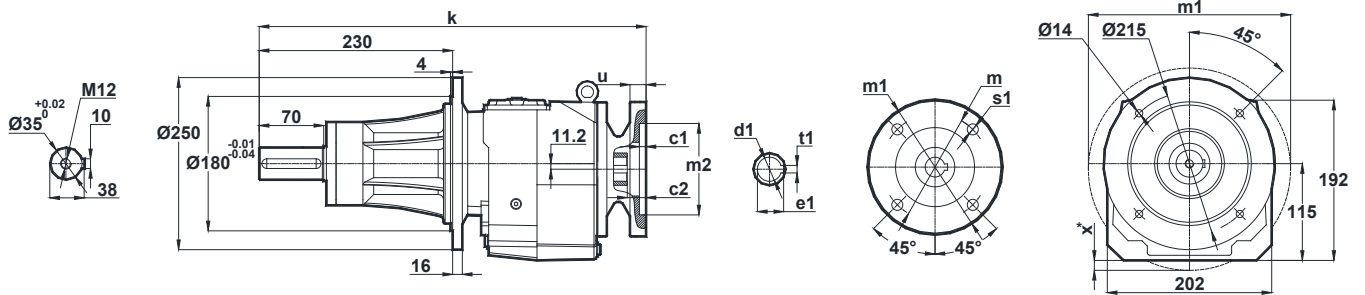


Ölçü Sayfaları Dimension Pages Abmessungenseiten



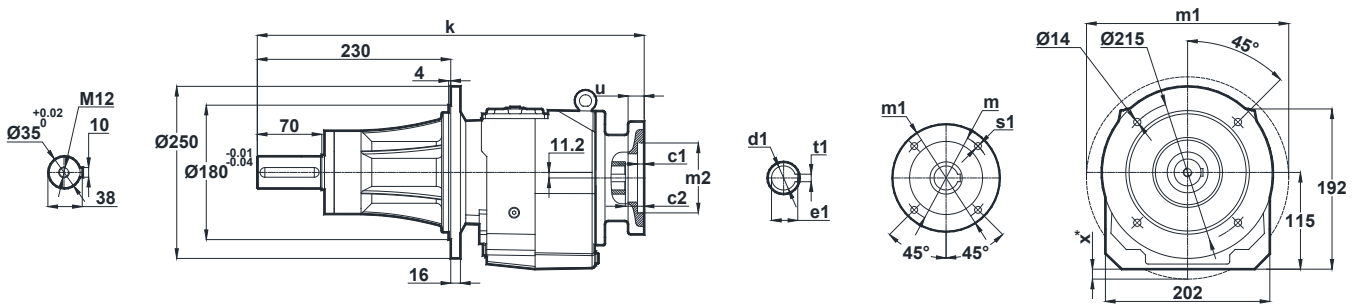
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB272-A.. NNB273-A..



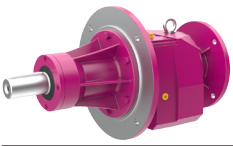
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	12	485.5	11	4	12.8	-
71/B5	4	8.5	11	130	160	110	12	456.5	14	5	16.3	-
80/B5	4	5	12	165	200	130	12	488.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	12	485.5	24	8	27.3	-
100/B5	4.5	5.5	15	215	250	180	12	478.5	28	8	31.3	-
112/B5	4.5	5.5	15	215	250	180	12	478.5	28	8	31.3	4
132/B5	4.5	7	15	265	300	230	15	515.5	38	10	41.3	25

NNB272-B.. NNB273-B..

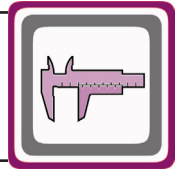


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
71/B14	3	8.5	7	85	105	70	10	456.5	14	5	16.3	-
80/B14	4	5	7	100	120	80	12	488.5	19	6	21.8	-
90/B14	4	5	9	115	140	95	12	485.5	24	8	27.3	-
100/B14	4	5.5	9	130	160	110	12	478.5	28	8	31.3	-
112/B14	4	5.5	9	130	160	110	12	478.5	28	8	31.3	4
132/B14	4.5	6	11	165	200	130	15	515.5	38	10	41.3	25

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

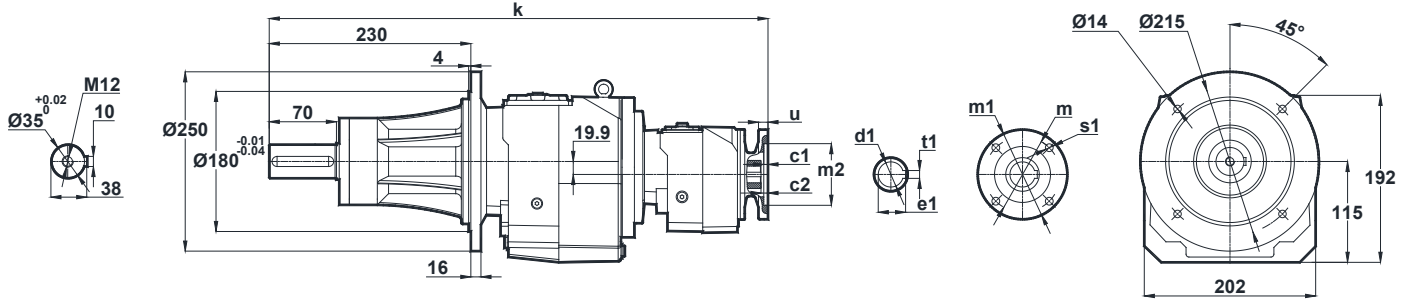


Ölçü Sayfaları Dimension Pages Abmessungsseiten



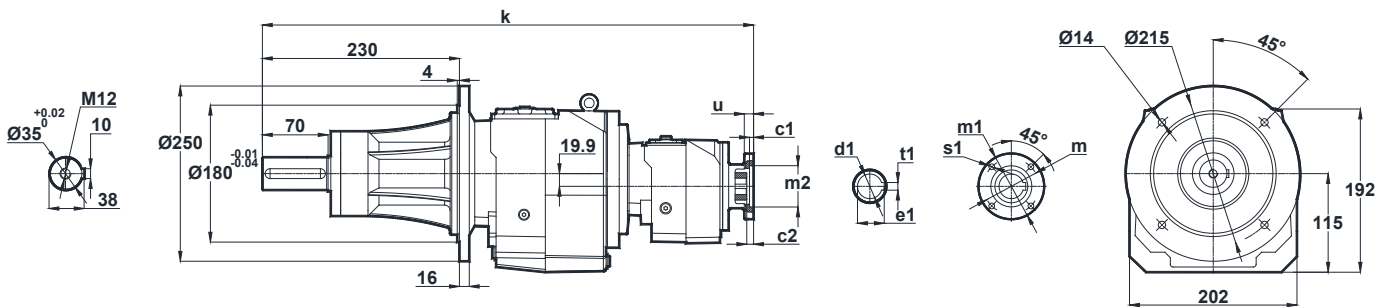
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB275-A.. NNB276-A..

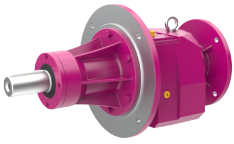


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	10	601	11	4	12.8
71/B5	4	4.5	11	130	160	110	12	602.5	14	5	16.3

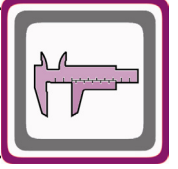
NNB275-B.. NNB276-B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B14	2.5	5	5.5	75	90	60	10	601	11	4	12.8
71/B14	3	4.5	7	85	105	70	10	602.5	14	5	16.3

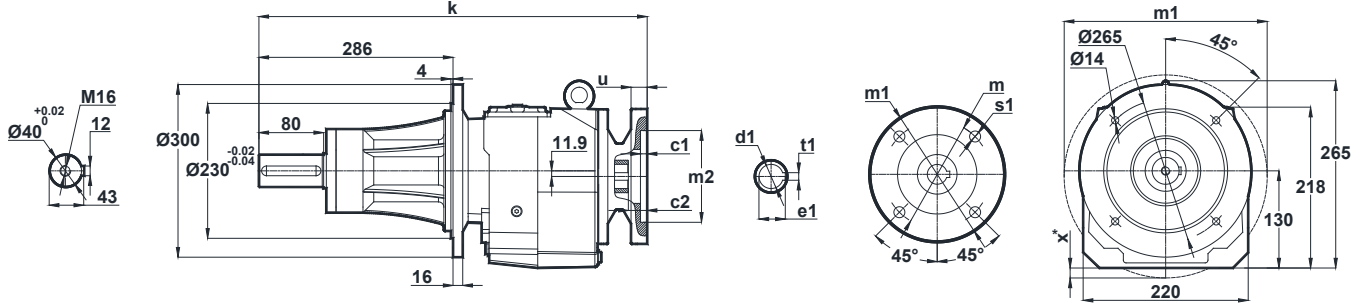


Ölçü Sayfaları Dimension Pages Abmessungenseiten



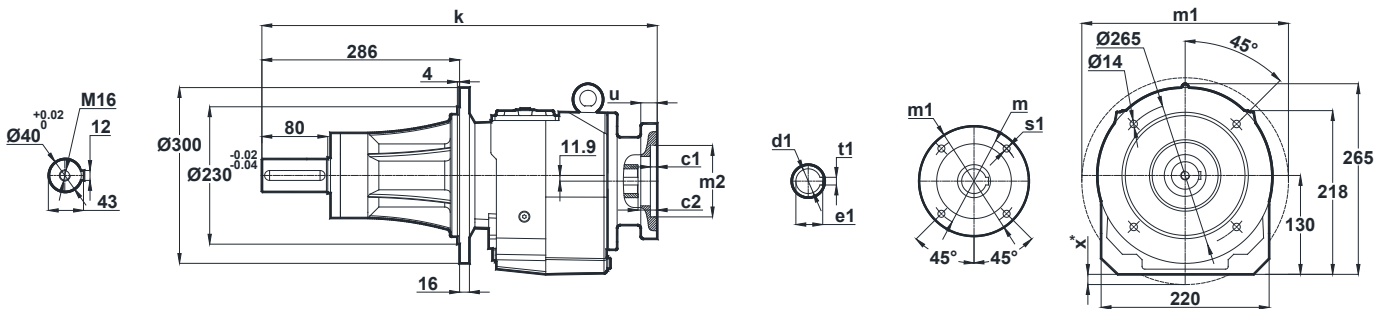
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB282-A.. NNB283-A..



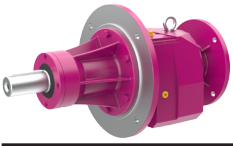
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	12	561.5	14	5	16.3	-
80/B5	4	9	12	165	200	130	12	561.5	19	6	21.8	-
90/B5	4	9	12	165	200	130	12	561.5	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	15	578.5	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	15	578.5	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	15	598.5	38	10	41.3	11
160/B5	5,5	10	19	300	350	250	161,5	678	42	12	45.3	40

NNB282-B.. NNB283-B..

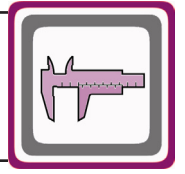


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	12	561.5	19	6	21.8	-
90/B14	4	9	9	115	140	95	12	561.5	24	8	26.3	-
100/B14	4	9	9	130	160	110	15	578.5	28	8	31.3	-
112/B14	4	9	9	130	160	110	15	578.5	28	8	31.3	-
132/B14	4.5	7	11	165	200	130	15	598.5	38	10	41.3	11

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

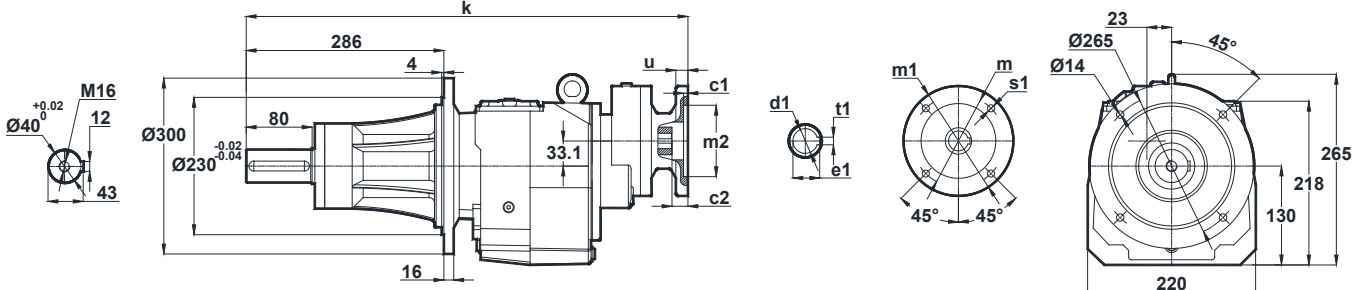


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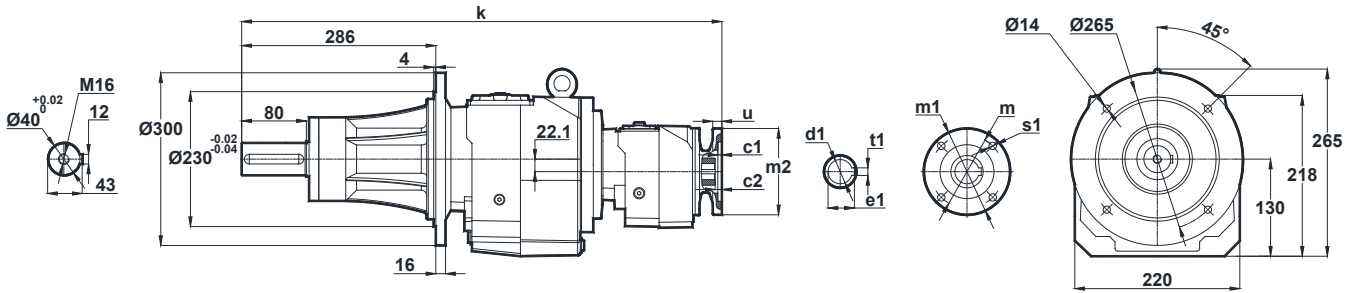
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB284-A.. NNB284-B..

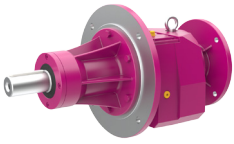


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	10	638.5	11	4	12.8
71/B5	4	4.5	11	130	160	110	12	609.5	14	5	16.3
71/B14	3	4.5	7	85	105	70	10	609.5	14	5	16.3

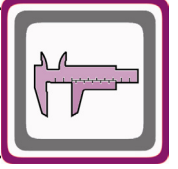
NNB285-A.. / B.. NNB286-A.. / B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	12	706.5	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	10	706.5	11	4	12.8

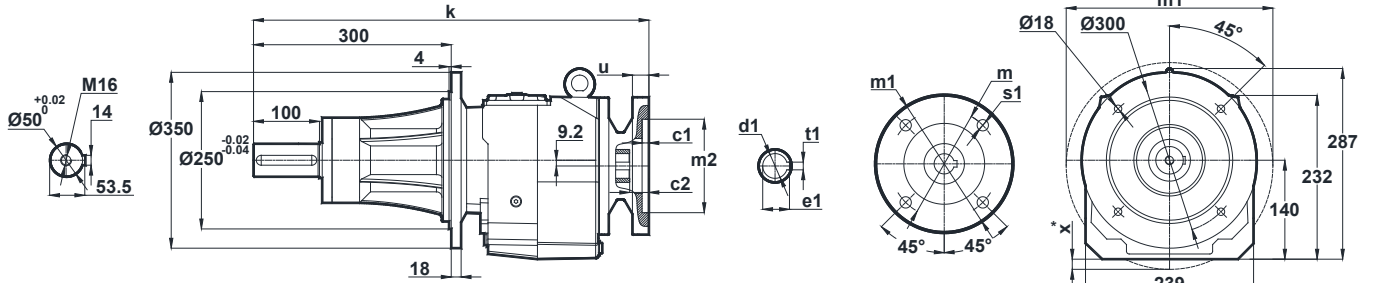


Ölçü Sayfaları Dimension Pages Abmessungenseiten



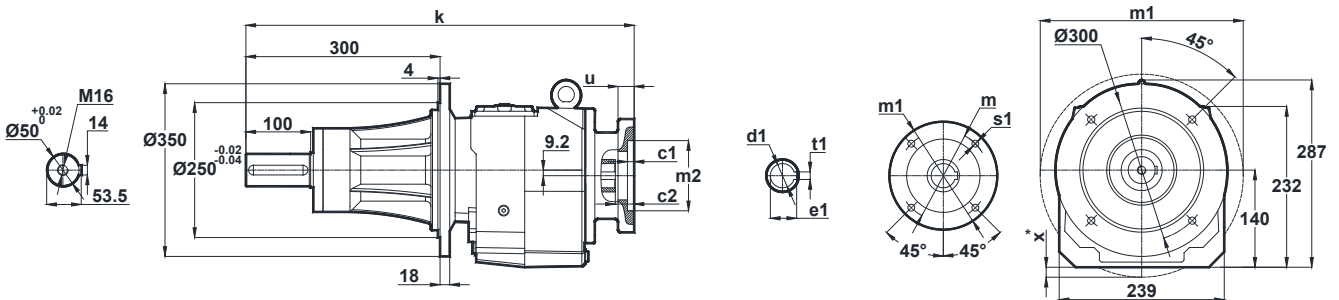
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB372-A.. NNB373-A..



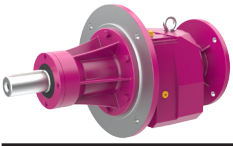
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	12	584	14	5	16.3	-
80/B5	4	9	12	165	200	130	12	584	19	6	21.8	-
90/B5	4	9	12	165	200	130	12	584	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	15	601	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	15	601	28	8	31.3	-
132/B5	4.5	7	15	265	300	230	15	621	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	700.5	42	12	45.3	28

NNB372-B.. NNB373-B..

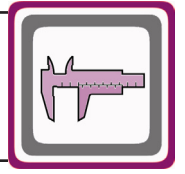


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
80/B14	4	9	7	100	120	80	12	584	19	6	21.8	-
90/B14	4	9	9	115	140	95	12	584	24	8	26.3	-
100/B14	4	9	9	130	160	110	15	601	28	8	31.3	-
112/B14	4	9	9	130	160	110	15	601	28	8	31.3	-
132/B14	4.5	9	11	165	200	130	15	621	38	10	41.3	-

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

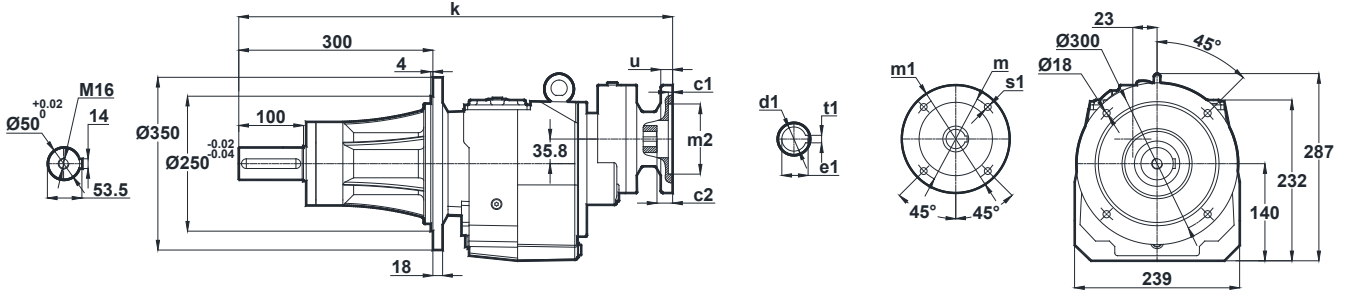


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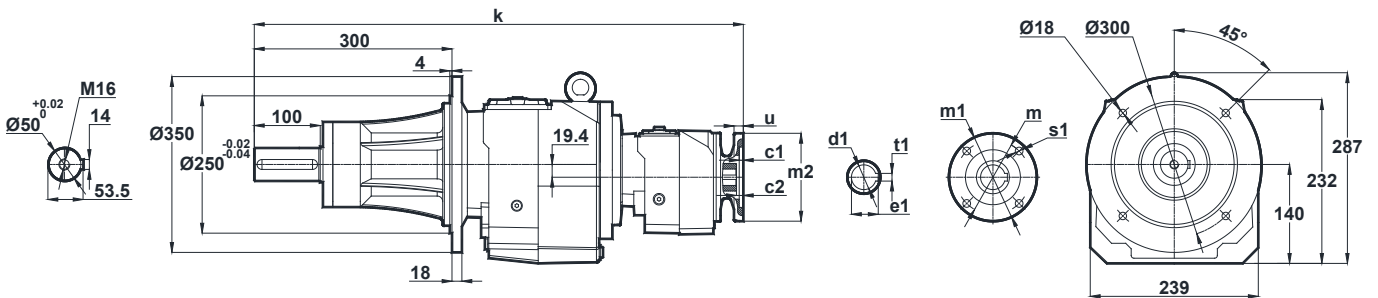
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB374-A.. NNB374-B..

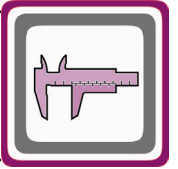


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	661	11	4	12.8
71/B5	4	8.5	11	130	160	110	12	632	14	5	16.3
80/B5	4	5	12	165	200	130	12	661	19	6	21.8
71/B14	3	8.5	7	85	105	70	10	632	14	5	16.3
80/B14	4	5	7	100	120	80	12	661	19	6	21.8

NNB375-A.. / B.. NNB376-A.. / B..

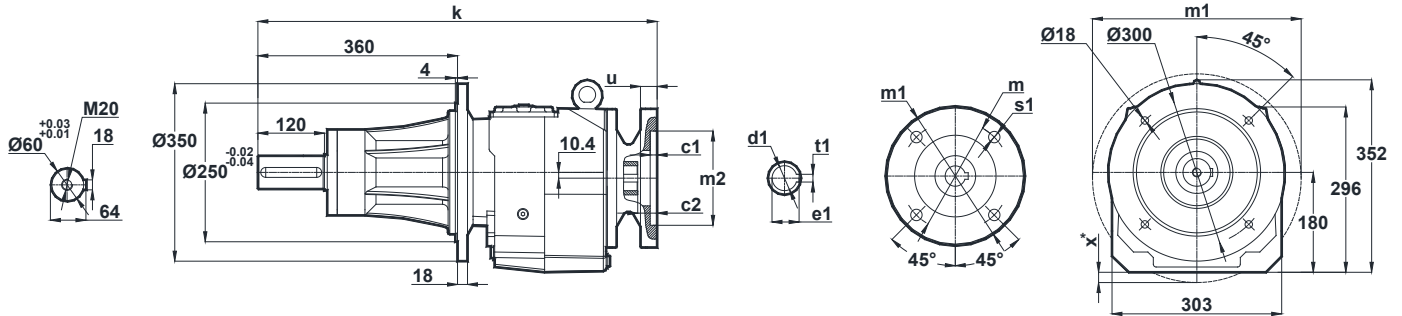


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	10	729	11	4	12.8
63/B14	2.5	5	5.5	75	90	60	10	729	11	4	12.8



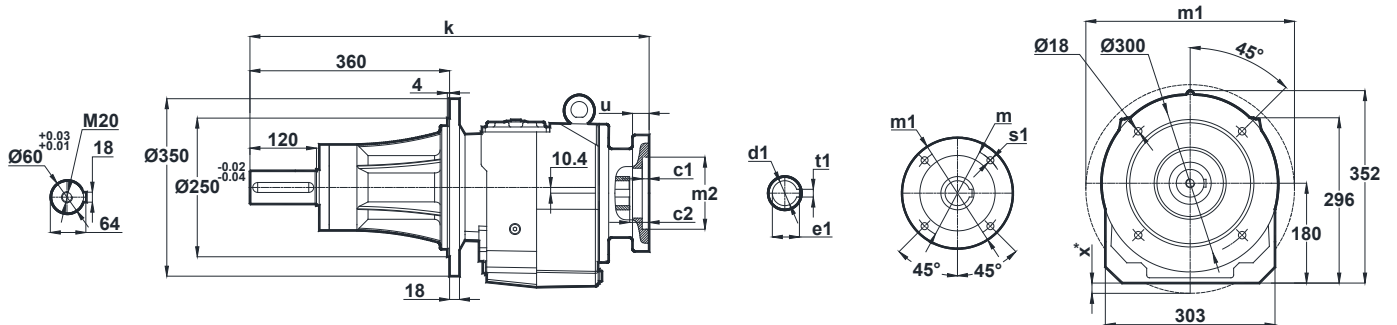
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB472-A..
NNB473-A..



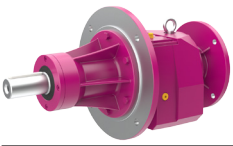
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
80/B5	4	5	12	165	200	130	12	686.5	19	6	21.8	-
90/B5	4	5	12	165	200	130	12	686.5	24	8	27.3	-
100/B5	4.5	9	15	215	250	180	15	705	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	15	705	28	8	31.3	-
132/B5	4.5	6	15	265	300	230	15	723.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	803	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	803	48	14	51.8	5

NNB472-B..
NNB473-B..

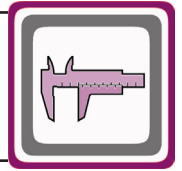


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
90/B14	4	5	9	115	140	95	12	686.5	24	8	27.3	-
100/B14	4	9	9	130	160	110	15	705	28	8	31.3	-
112/B14	4	9	9	130	160	110	15	705	28	8	31.3	-
132/B14	4.5	6	11	165	200	130	15	723.5	38	10	41.3	-

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

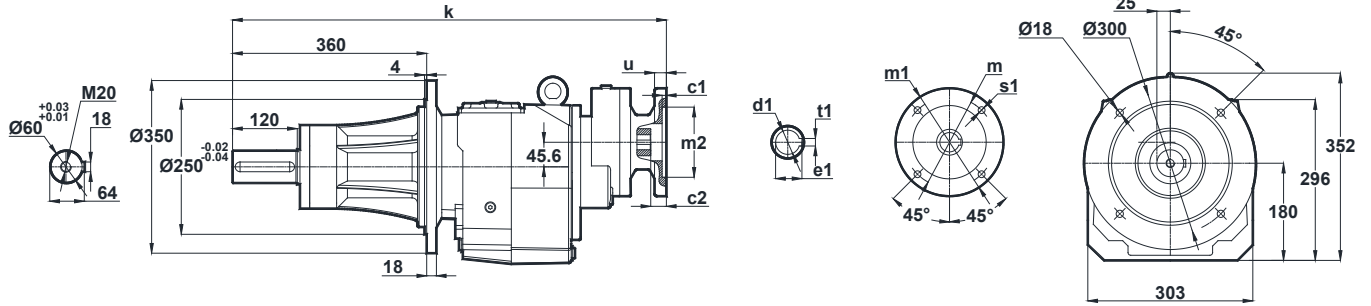


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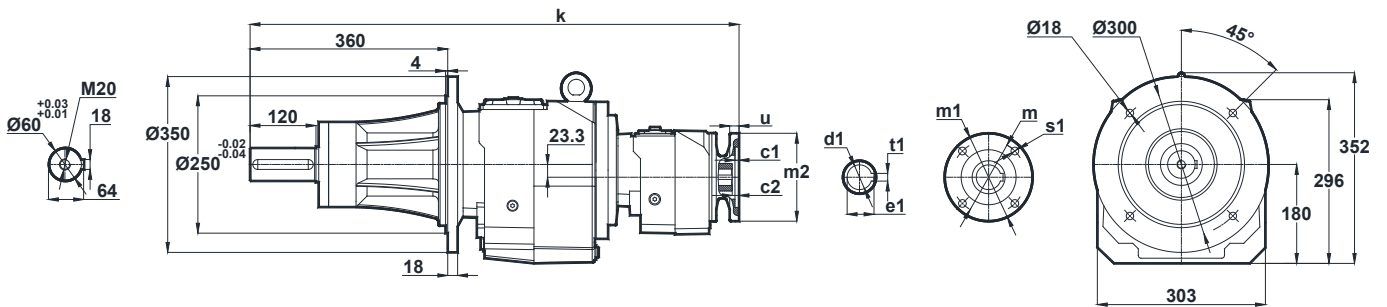
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB474-A.. NNB474-B..

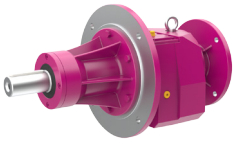


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	784.5	14	5	16.3
80/B5	4	9	12	165	200	130	12	784.5	19	6	21.8
80/B14	4	9	7	100	120	80	12	784.5	19	6	21.8

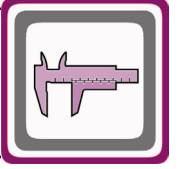
NNB475-A.. / B.. NNB476-A.. / B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	912.5	11	4	12.8
71/B5	4	8.5	11	130	160	110	12	883.5	14	5	16.3
71/B14	3	8.5	7	85	105	70	10	883.5	14	5	16.3

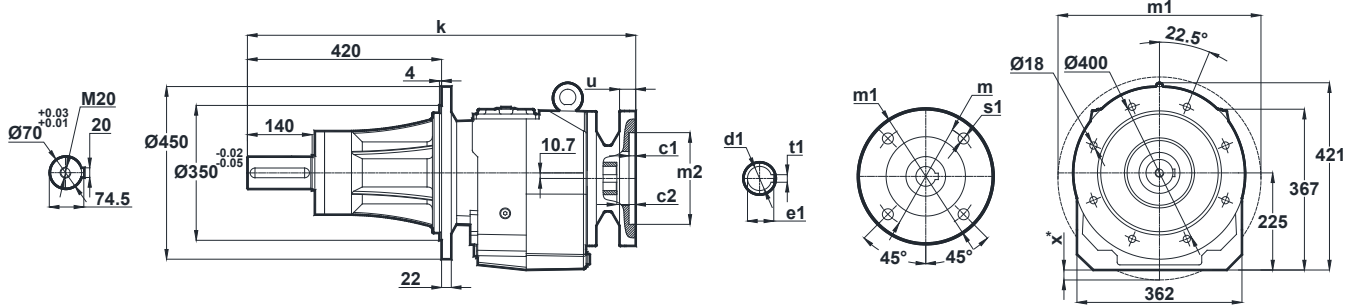


Ölçü Sayfaları Dimension Pages Abmessungenseiten



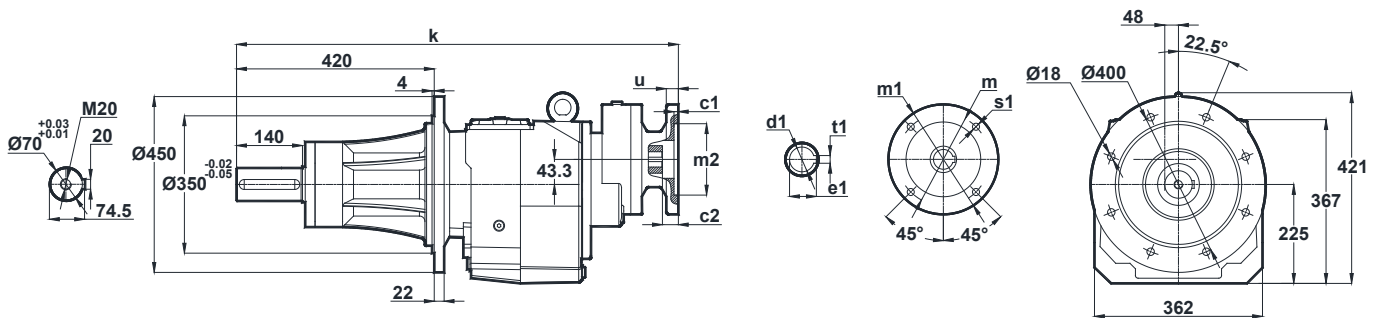
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB572-A.. / B.. NNB573-A.. / B..



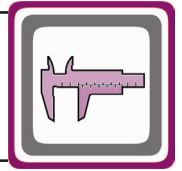
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
100/B5	4.5	9	15	215	250	180	15	811.5	28	8	31.3	-
112/B5	4.5	9	15	215	250	180	15	811.5	28	8	31.3	-
132/B5	4.5	9	15	265	300	230	15	832.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	18	908	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	18	908	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	22	928	55	16	59.3	-
132/B14	4.5	9	11	165	200	130	15	832.5	38	10	41.3	-

NNB574-A.. NNB574-B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	891.5	14	5	16.3
80/B5	4	9	12	165	200	130	12	891.5	14	6	21.8
90/B5	4	9	12	165	200	130	12	891.5	19	8	27.3
100/B5	4.5	9	15	215	250	180	15	908.5	28	8	31.3
80/B14	4	9	7	100	120	80	12	891.5	19	6	21.8
90/B14	4	9	9	115	140	95	12	891.5	24	8	26.3
100/B14	4	9	9	130	160	110	15	908.5	28	8	31.3

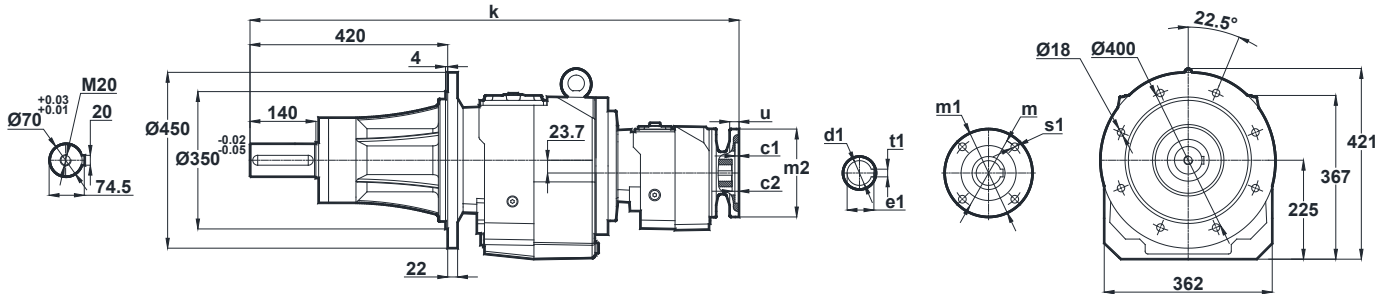
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



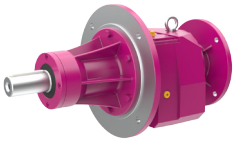
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB575-A.. / B..

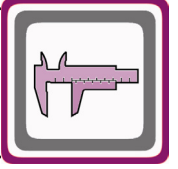
NNB576-B.. / B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	1021.5	11	4	12.8
71/B5	4	8.5	11	130	160	110	12	992.5	14	5	16.3
71/B14	3	8.5	7	85	105	70	10	992.5	14	5	16.3

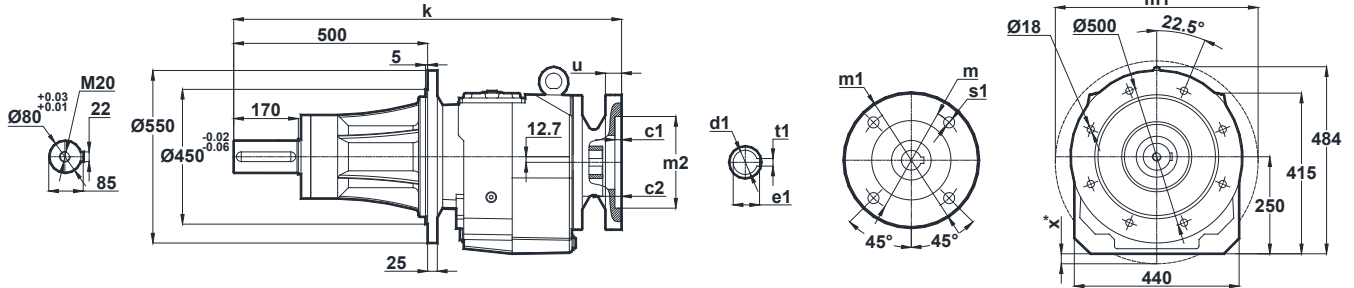


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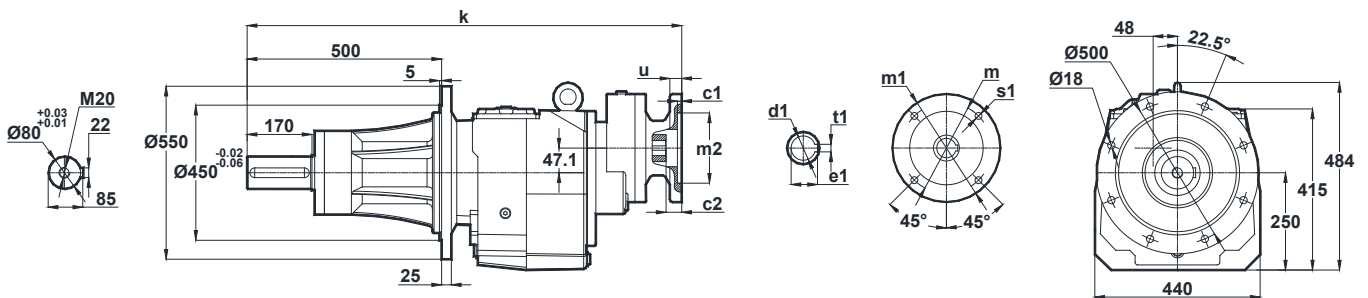
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB672-A.. / B.. NNB673-A.. / B..



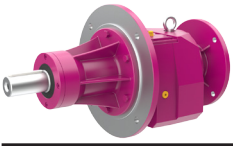
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
112/B5	4.5	14.5	15	215	250	180	15	932.5	28	8	31.3	-
132/B5	4.5	9	15	265	300	230	15	947.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	1022.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	1022.5	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	22	1043	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	24	1096	60	18	64.4	-
132/B14	4.5	9	15	165	200	130	15	947.5	38	10	41.3	-

NNB674-A.. NNB674-B..

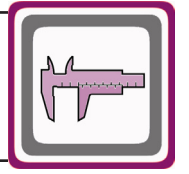


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1022.5	19	6	21.8
90/B5	4	5	12	165	200	130	12	1022.5	24	8	27.3
90/B14	4	5	9	115	140	95	12	1022.5	24	8	27.3

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

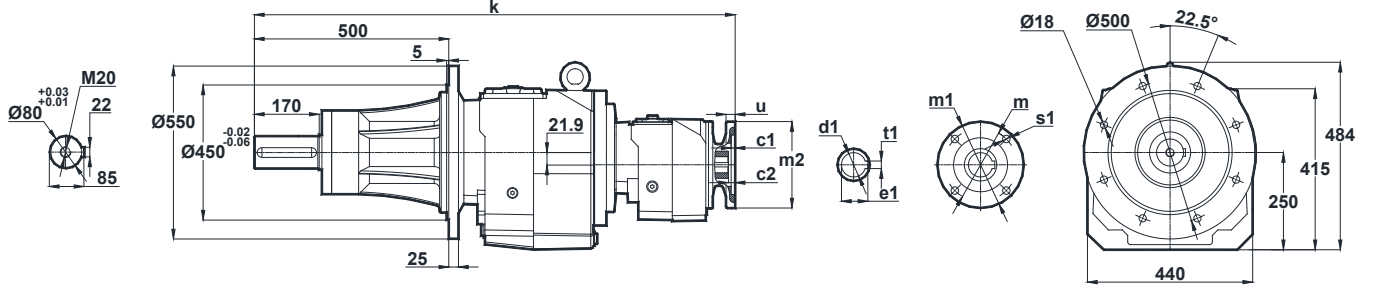


Ölçü Sayfaları Dimension Pages Abmessungsseiten

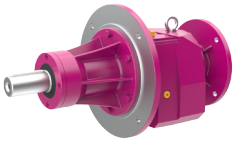


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

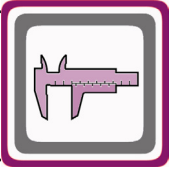
**NNB675-A.. / B..
NNB676-B.. / B..**



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	1173	14	5	16.3
80/B5	4	9	12	165	200	130	12	1173	19	6	21.8
80/B14	4	9	7	100	120	80	12	1173	19	6	21.8

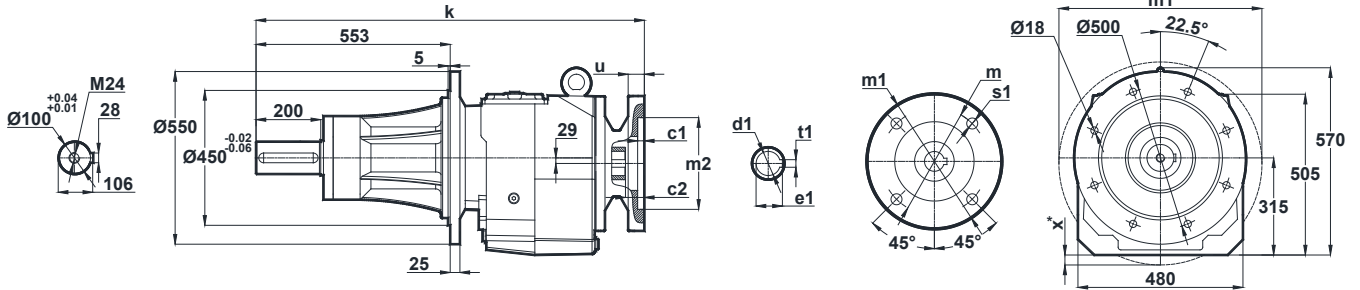


Ölçü Sayfaları Dimension Pages Abmessungenseiten



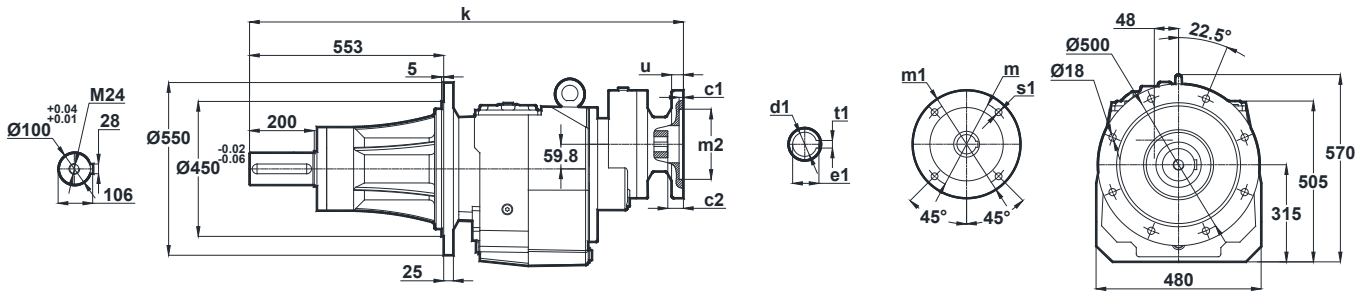
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB772-A.. NNB773-A..



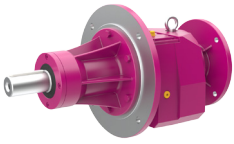
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
132/B5	4.5	15	15	265	300	230	15	1050.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	1120	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	1120	43	14	51.8	-
200/B5	5.5	10	19	350	400	300	20	1142	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	24	1195	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	24	1195	65	18	69.4	-

NNB774-A.. NNB774-B..

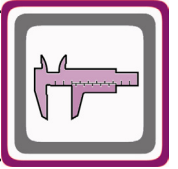


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1125.5	19	6	21.8
90/B5	4	5	12	165	200	130	12	1125.5	24	8	27.3
100/B5	4.5	9	15	215	250	180	15	1144	28	8	31.3
90/B14	4	5	9	115	140	95	12	1125.5	24	8	27.3
100/B14	4	9	9	130	160	110	15	1144	28	8	31.3

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

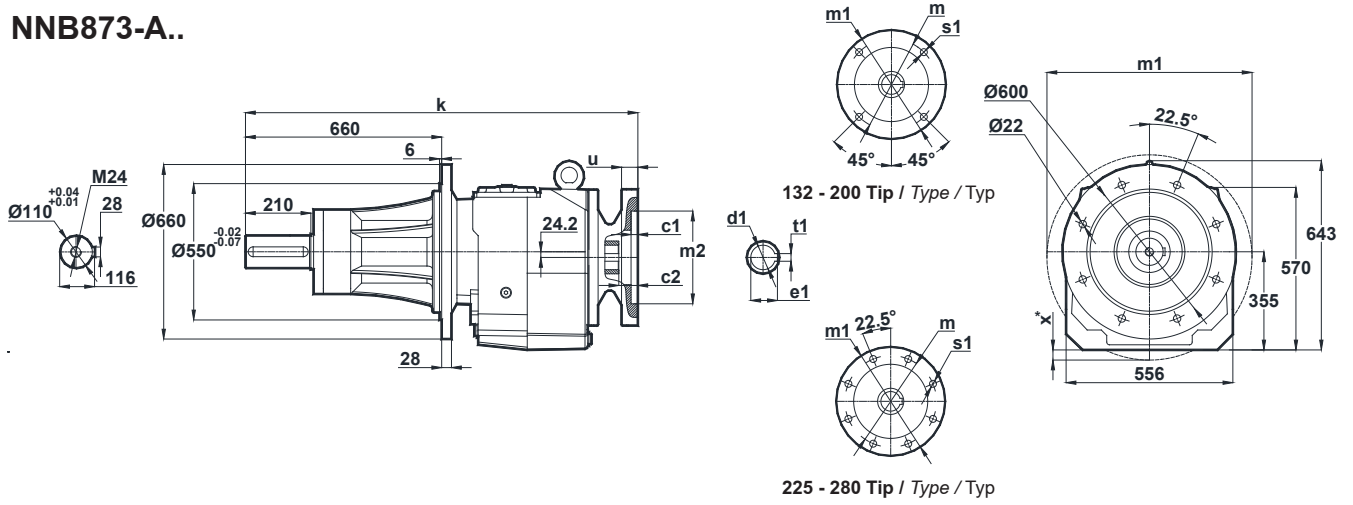


Ölçü Sayfaları Dimension Pages Abmessungenseiten



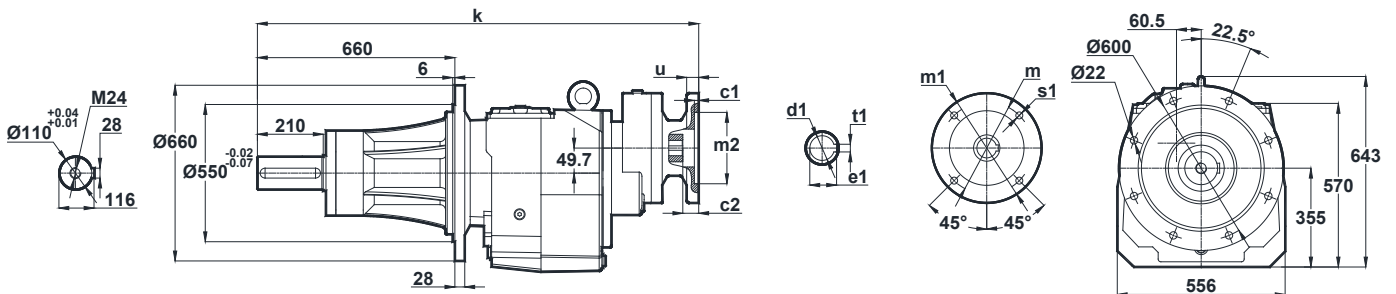
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB872-A.. NNB873-A..



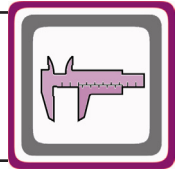
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
132/B5	4.5	14	15	265	300	230	15	1225.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	1373	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	1373	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	22	1373	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	24	1373	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	24	1373	65	18	69.4	-
280/B5	5.5	10	19	500	550	450	24	1373	75	20	79.9	-

NNB874-A.. NNB874-B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
100/B5	4.5	9	15	215	250	180	15	1345.5	28	8	31.3
112/B5	4.5	9	15	215	250	180	15	1345.5	28	8	31.3
132/B5	4.5	9	15	265	300	230	15	1366.5	38	10	41.3
132/B14	4.5	9	11	165	200	130	15	1366.5	38	10	41.3

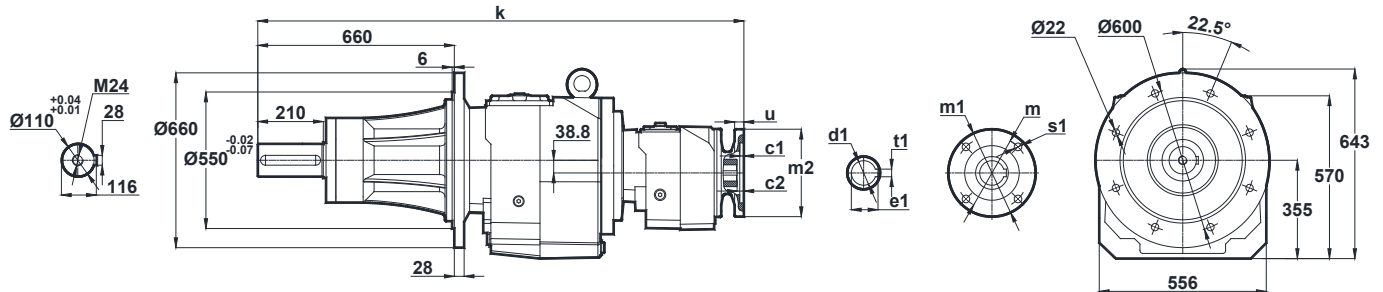
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



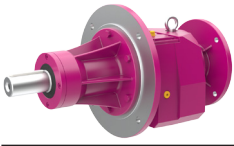
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NNB875-A.. / B..

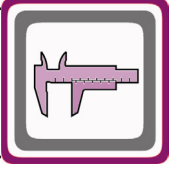
NNB876-B.. / B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	1463	14	5	16.3
80/B5	4	9	12	165	200	130	12	1463	19	6	21.8
90/B5	4	9	12	165	200	130	12	1463	24	8	27.3
100/B5	4.5	9	15	215	250	180	15	1480	28	8	31.3
80/B14	4	9	7	100	120	80	12	1463	19	8	21.8
90/B14	4	9	9	115	140	95	12	1463	24	8	26.3
100/B14	4	9	9	130	160	110	15	1480	28	8	31.3

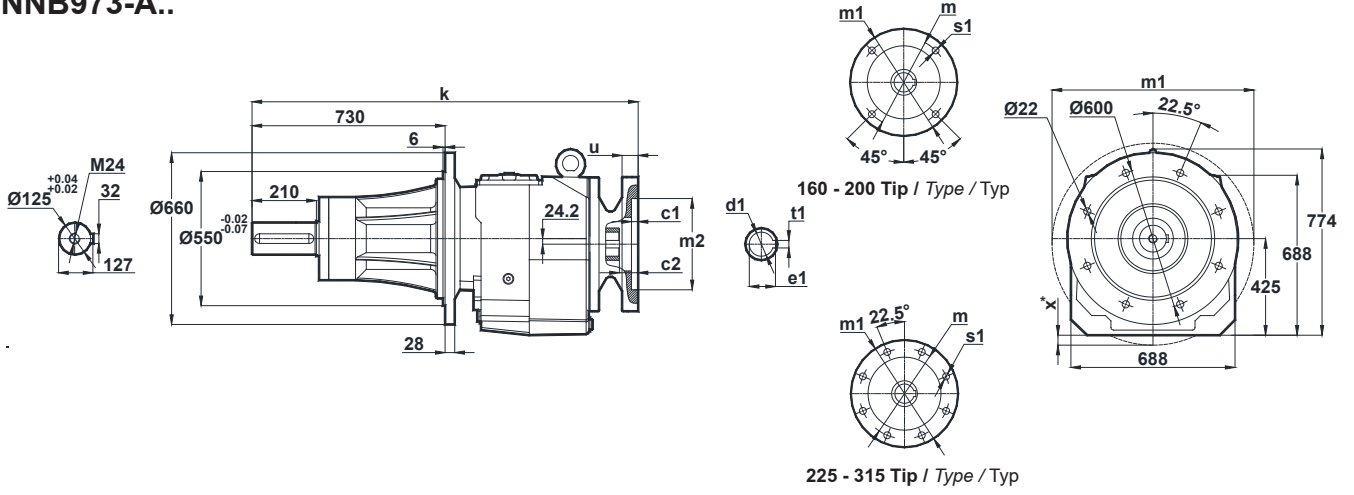


Ölçü Sayfaları Dimension Pages Abmessungenseiten



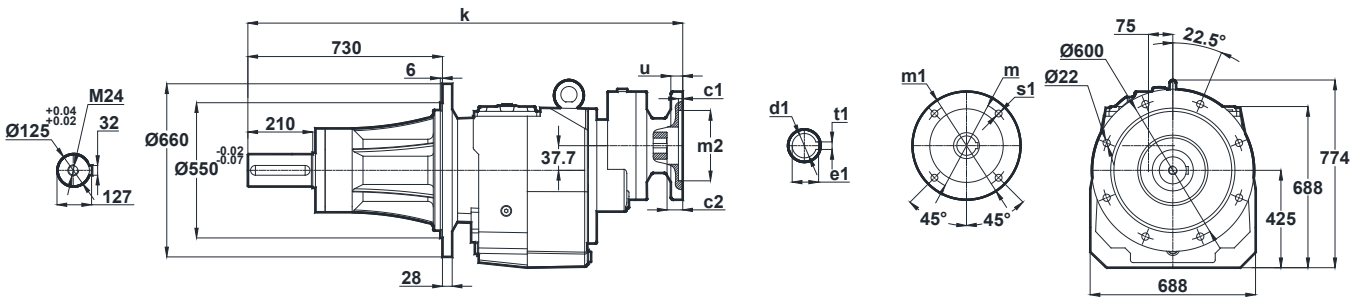
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB972-A.. NNB973-A..



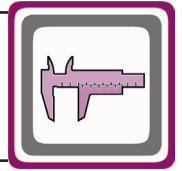
IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1	x
160/B5	5.5	10	19	300	350	250	20	1430.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	1430.5	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	22	1454.5	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	24	1496.5	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	24	1518.5	65	18	69.4	-
280/B5	5.5	10	19	500	550	450	24	1518.5	75	20	79.9	-
315M/B5	6.5	15	24	660	600	550	24	1598.5	80	22	90.4	-
315N/B5	6.5	15	24	660	600	550	24	1598.5	85	22	90.4	-
315L/B5	6.5	15	24	660	600	550	24	1598.5	90	22	90.4	-

NNB974-A.. NNB974-B..



IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
100/B5	4.5	14.5	15	215	250	180	15	1519	28	8	31.3
112/B5	4.5	14.5	15	215	250	180	15	1519	28	8	31.3
132/B5	4.5	9	15	265	300	230	15	1534	38	10	41.3
132/B14	4.5	9	15	165	200	130	15	1534	38	10	41.3

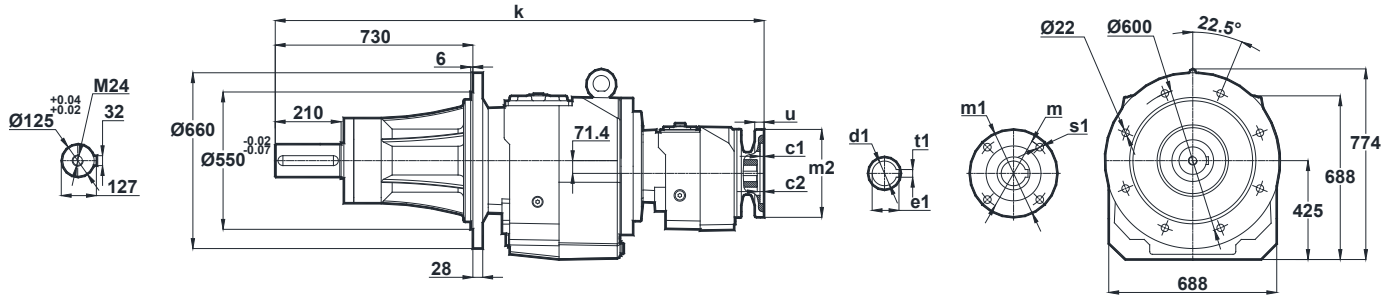
x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



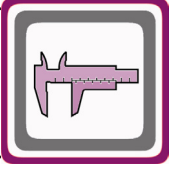
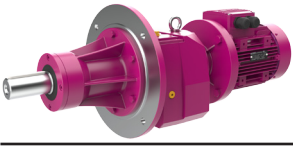
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB975-A.. / B..

NNB976-B.. / B..

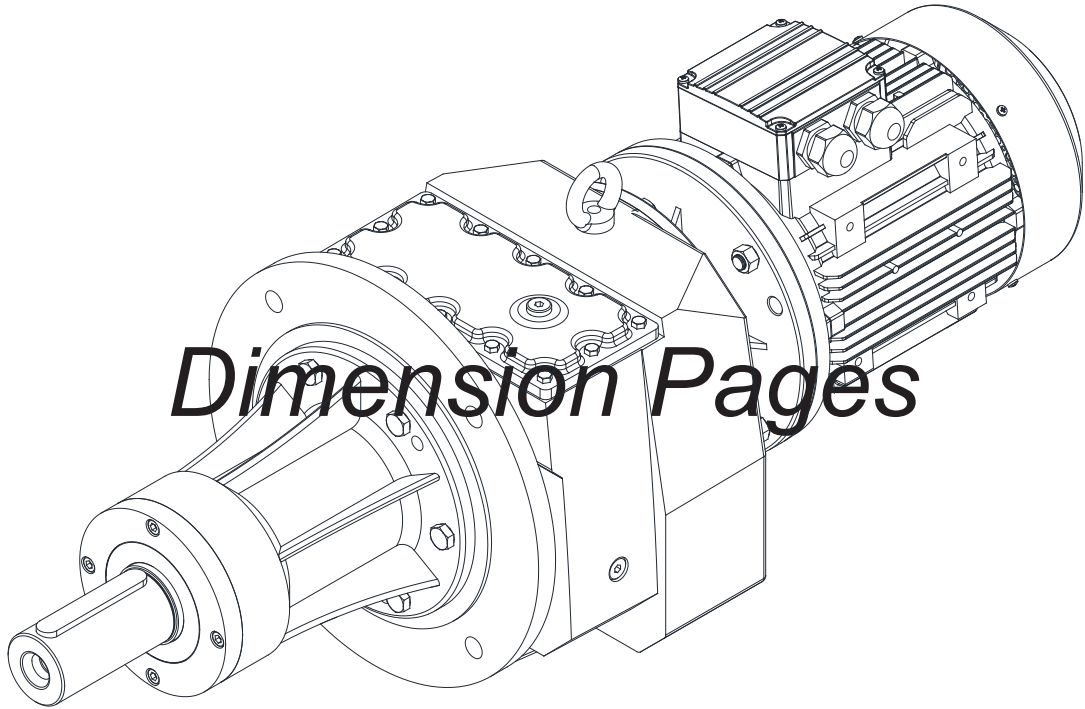


IEC	c1	c2	s1	m	m1	m2	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1655	19	6	12.8
90/B5	4	5	12	165	200	130	12	1655	24	8	27.3
100/B5	4.5	9	15	215	250	180	15	1673.5	28	8	31.3
112/B5	4.5	9	15	215	250	180	15	1673.5	28	8	31.3
132/B5	4.5	6	15	265	300	230	15	1692	38	10	41.3
90/B14	4	5	9	115	140	95	12	1655	24	8	27.3
100/B14	4	9	9	130	160	110	15	1673.5	28	8	31.3
112/B14	4	9	9	130	160	110	15	1673.5	28	8	31.3
132/B14	4.5	6	11	165	200	130	15	1692	38	10	41.3

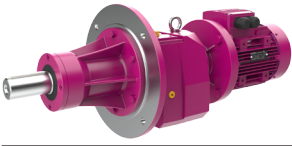


NVB Serisi / Serie

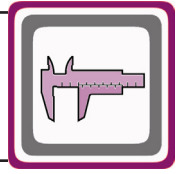
Ölçü Sayfaları



Abmessungenseiten

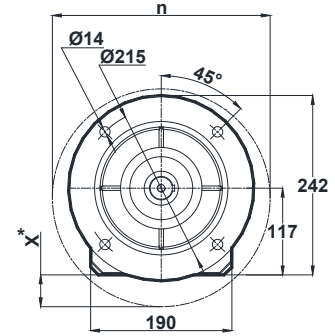
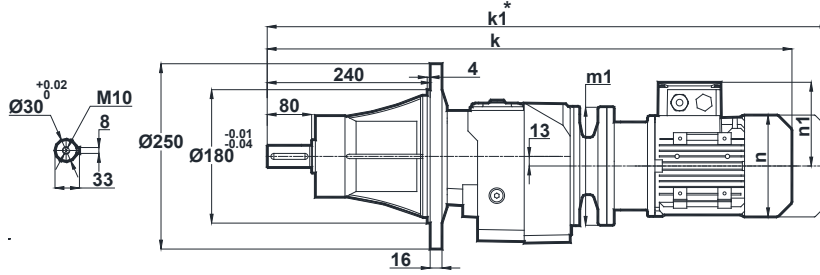


Ölçü Sayfaları Dimension Pages Abmessungsseiten



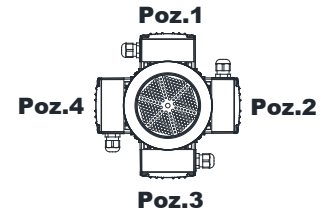
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB202 NVB203



Motor Büyüklüğü / Motor Size / Motorbaugroße							
IEC	63/B5	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	677.5	670.5	721.5	762.5	762.5	789.5	812.5
k1	748.5	761.5	814.5	841.5	841.5	897.5	917.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	-	105	120	140	140	160	160
x (B5)	-	-	-	-	-	-	6

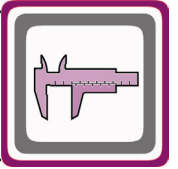
Klemens Kutusu / Terminal Box / Klemmenkasten

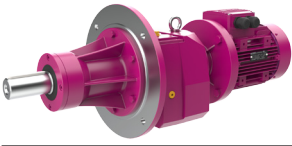


63-71-80-90-100-112

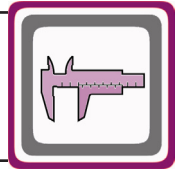
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



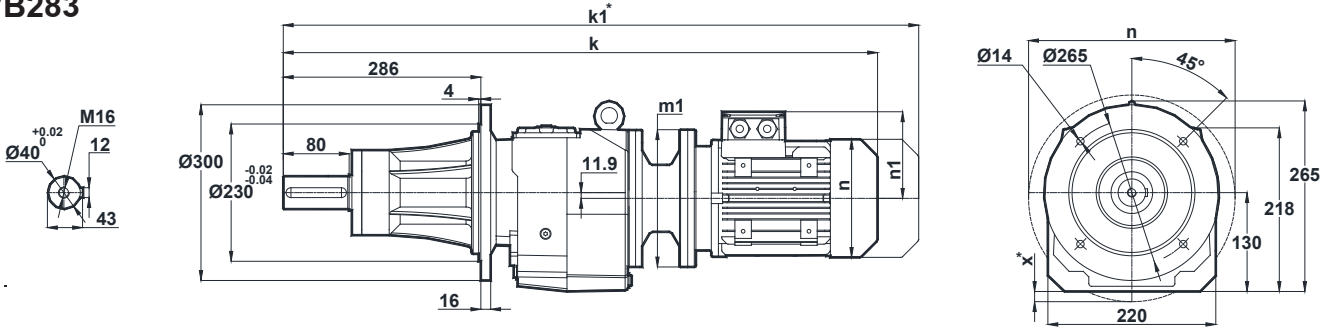


Ölçü Sayfaları Dimension Pages Abmessungsseiten



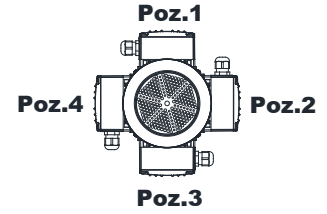
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB282 NVB283



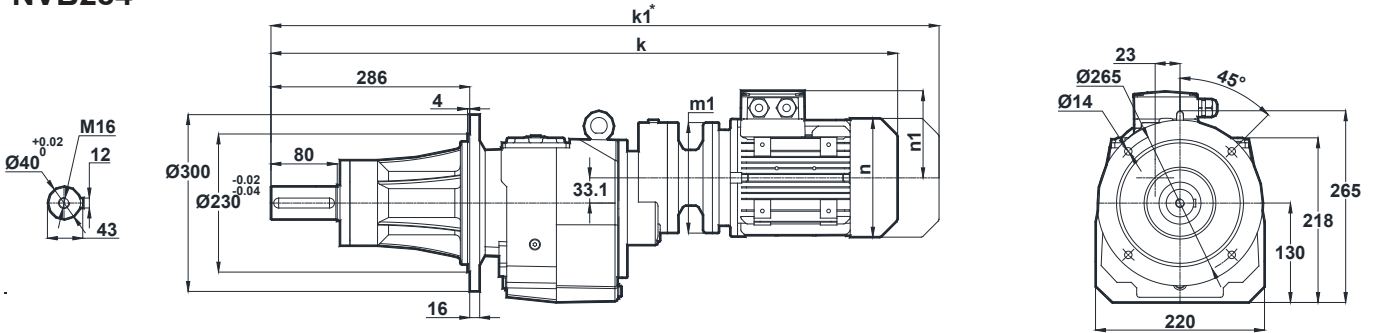
Motor Büyüklüğü / Motor Size / Motorbaugroße									
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5
k	773.5	795.5	836.5	836.5	887.5	910.5	1013.5	1013.5	1173
k1	864.5	888.5	915.5	915.5	995.5	1015.5	1143.5	1143.5	1323
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
m1 (B5)	160	200	200	200	250	250	300	300	350
m1 (B14)	-	120	140	140	160	160	200	200	-
x (B5)	-	-	-	-	-	-	11	11	40

Klemens Kutusu / Terminal Box / Klemmenkasten



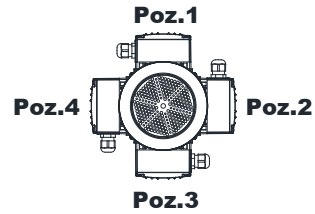
71-80-90-100-112-132-160

NVB284



Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	63/B5	71/B5 71/B14
k	828.5	821.5
k1	899.5	912.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

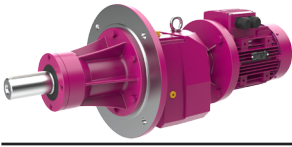
Klemens Kutusu / Terminal Box / Klemmenkasten



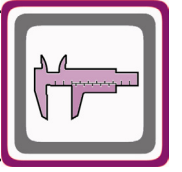
63-71

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist

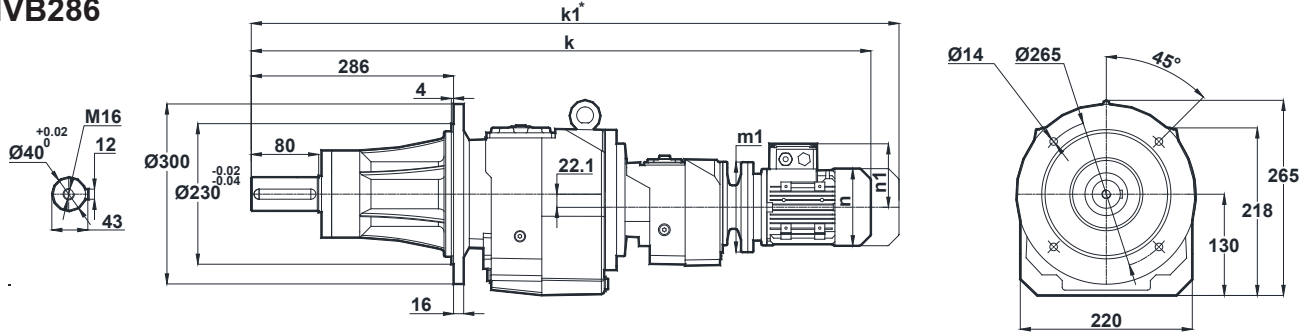


Ölçü Sayfaları Dimension Pages Abmessungenseiten



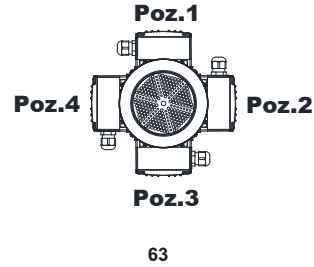
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NVB285 NVB286

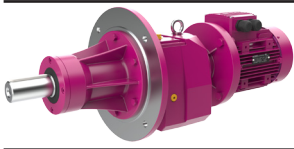


Motor Büyüklüğü / Motor Size / Motorbaugroße	
IEC	63/B5 63/B14
k	896.5
k1	967.5
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

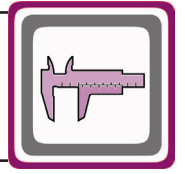
Klemens Kutusu / Terminal Box / Klemmenkasten



* “ k1 “ Ölçüsü frenli redüktörlere aittir. Dimension “ k1 ” is for motors with brake. Maße “ k1 ” ist für Bremsenmotoren.

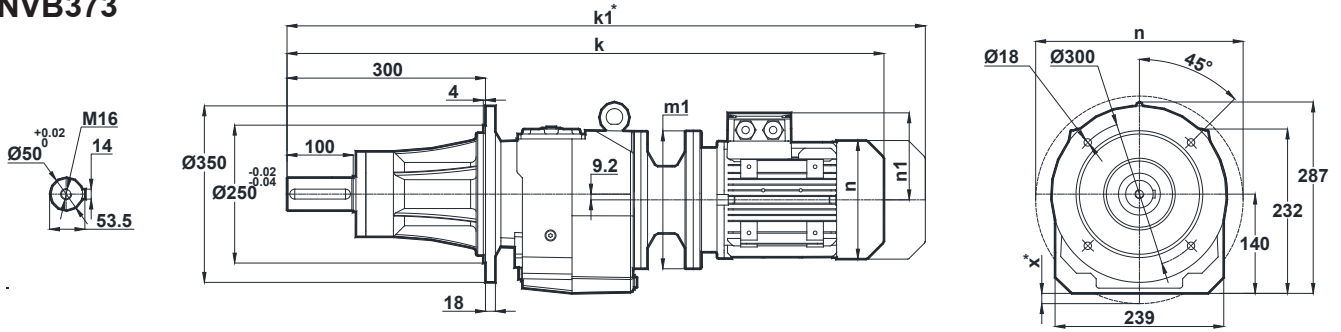


Ölçü Sayfaları Dimension Pages Abmessungsseiten



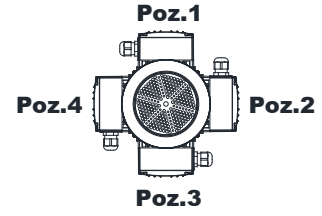
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB372 NVB373



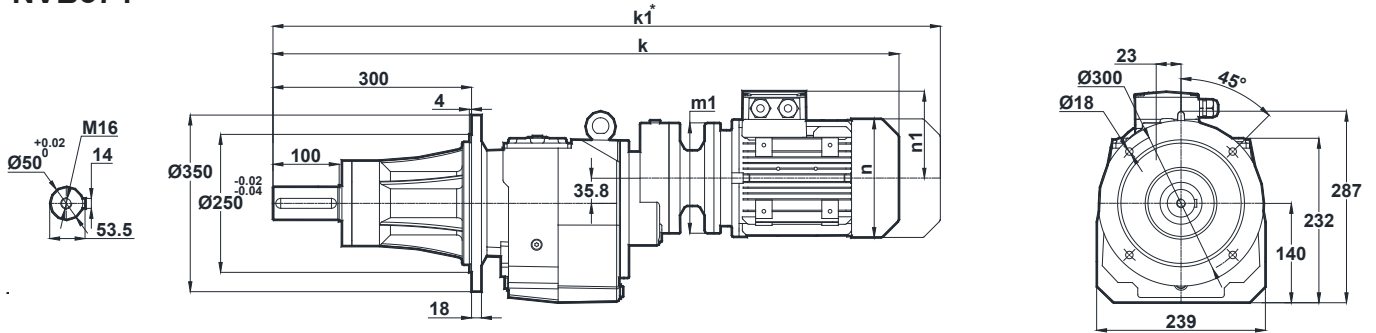
Motor Büyüklüğü / Motor Size / Motorbaugröße										
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160M/B5
k	796	818	859	859	910	933	1036	1036	1195.5	1195.5
k1	887	911	938	938	1018	1038	1166	1166	1345.5	1345.5
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
m1 (B5)	160	200	200	200	250	250	300	300	350	350
m1 (B14)	-	120	140	140	160	160	200	200	-	-
x (B5)	-	-	-	-	-	-	-	-	28	28

Klemens Kutusu / Terminal Box / Klemmenkasten



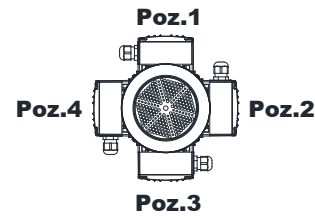
71-80-90-100-112-132-160

NVB374



Motor Büyüklüğü / Motor Size / Motorbaugröße			
IEC	63/B5	71/B5 71/B14	80/B5 80/B14
k	851	844	895
k1	922	935	988
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

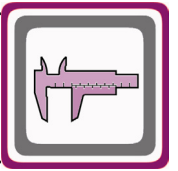
Klemens Kutusu / Terminal Box / Klemmenkasten



63-71-80

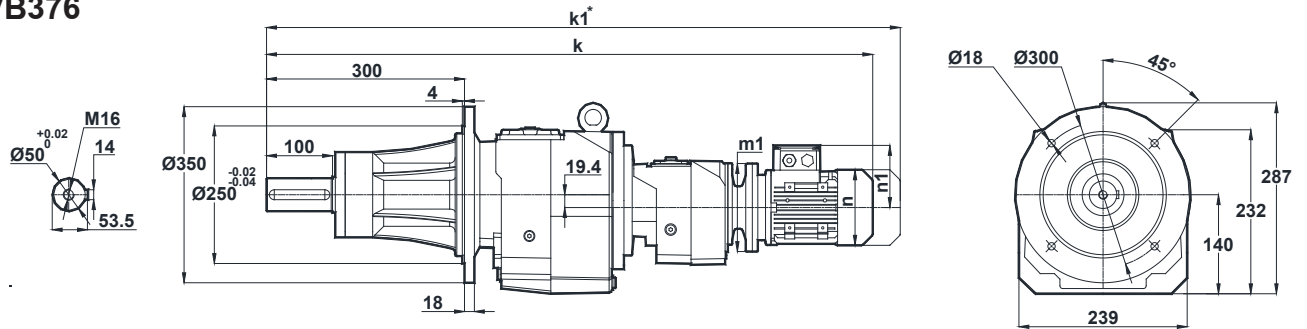
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



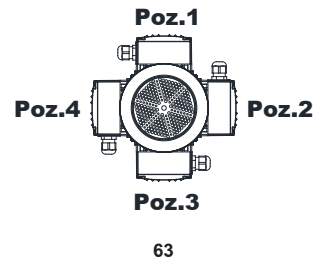
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB375
NVB376



Motor Büyüklüğü / Motor Size / Motorbaugroße	
IEC	63/B5 63/B14
k	919
k1	990
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

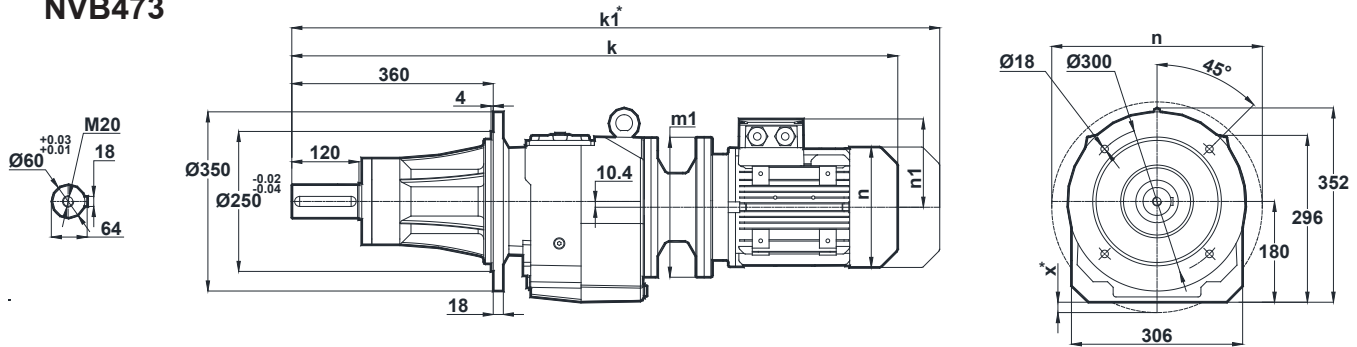
Klemens Kutusu / Terminal Box / Klemmenkasten



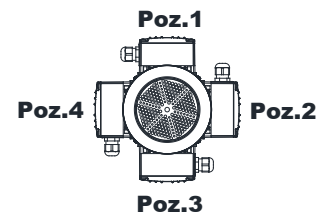
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB472
NVB473

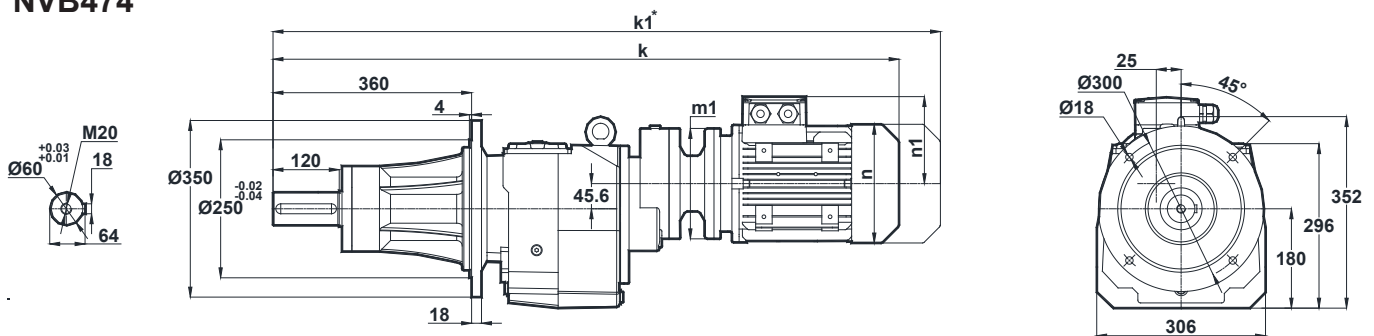
[illegible]

Klemens Kutusu / Terminal Box / Klemmenkasten



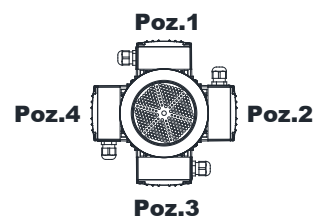
80-90-100-112-132-160-180

NVB474



Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	71/B5	80/B5 80/B14
k	996.5	1018.5
k1	1087.5	1111.5
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

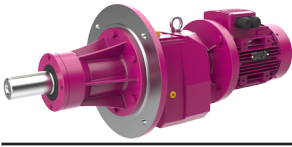
Klemens Kutusu / *Terminal Box* / Klemmenkasten



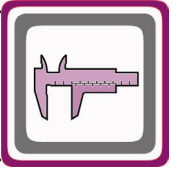
71-80

* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / **x:** If Motor is lower than foot mounting plane / **x:** Wenn der Motor unter der Fußmontageebene ist

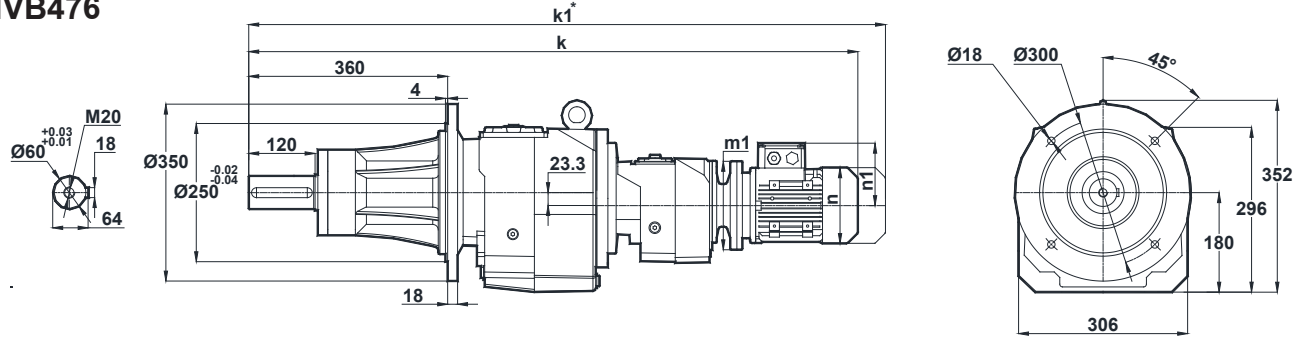


Ölçü Sayfaları Dimension Pages Abmessungenseiten



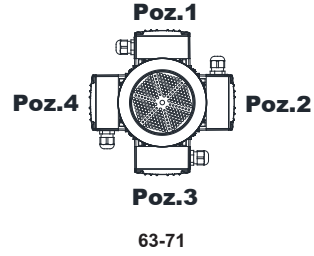
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NVB475 NVB476

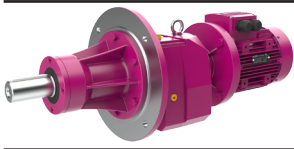


Motor Büyüklüğü / Motor Size / Motorbaugröße		
IEC	63/B5	71/B5 71/B14
k	1102.5	1095.5
k1	1173.5	1186.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

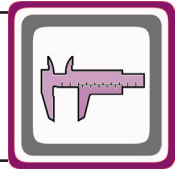
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

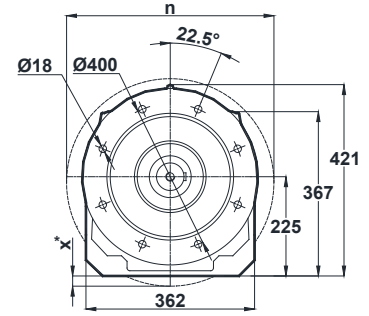
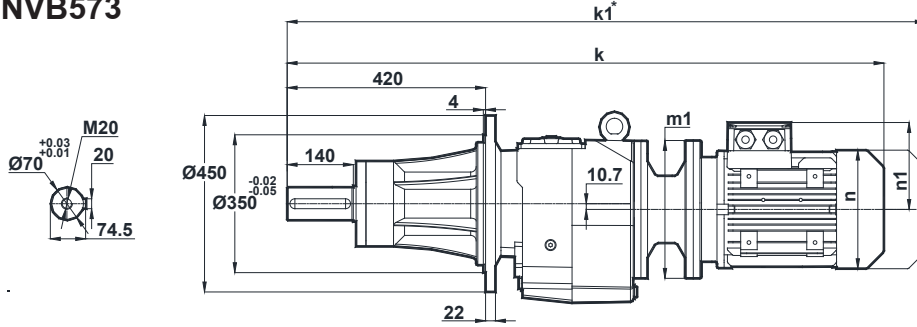


Ölçü Sayfaları Dimension Pages Abmessungsseiten



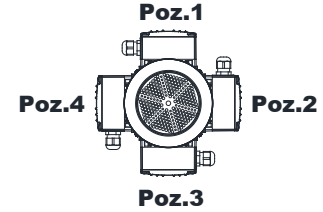
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NVB572 NVB573



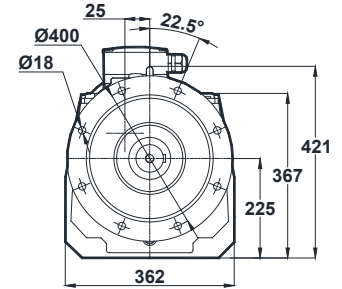
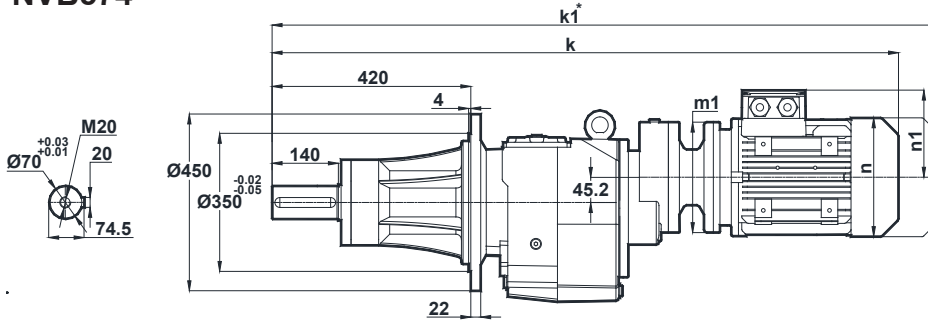
Motor Büyüklüğü / Motor Size / Motorbaugröße									
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5
k	1120.5	1143.5	1247.5	1247.5	1403	1403	1494	1494	1555
k1	1228.5	1248.5	1377.5	1377.5	1553	1553	1681	1681	1747
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
m1 (B5)	250	250	300	300	350	350	350	350	400
m1 (B14)	-	-	200	200	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



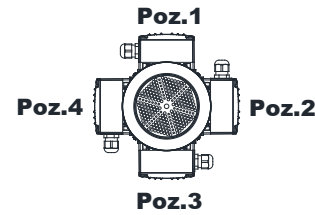
100-112-132-160-180-200

NVB574



Motor Büyüklüğü / Motor Size / Motorbaugröße					
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	1103.5	1125.5	1166.5	1166.5	1217.5
k1	1194.5	1218.5	1245.5	1245.5	1325.5
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

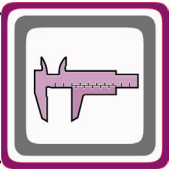
Klemens Kutusu / Terminal Box / Klemmenkasten



71-80-90-100

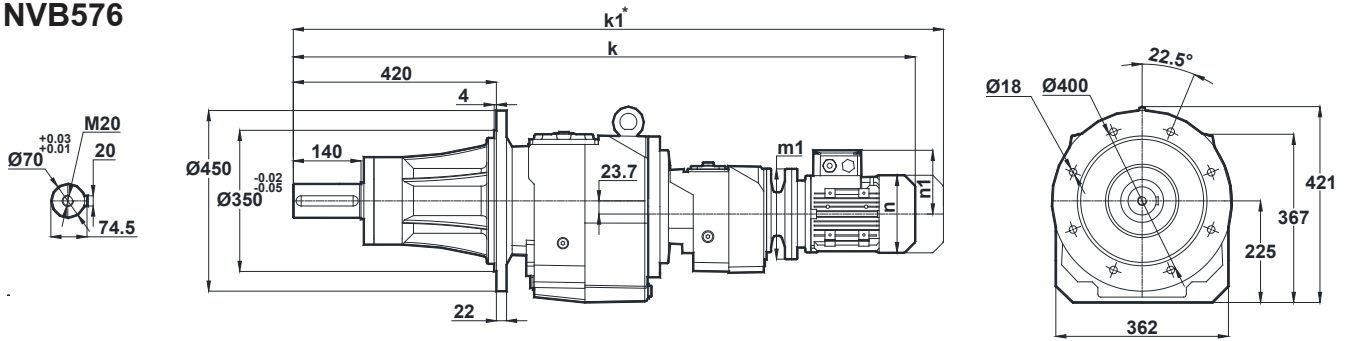
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



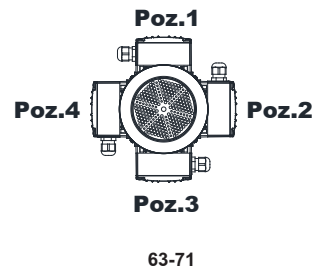
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NVB575
NVB576

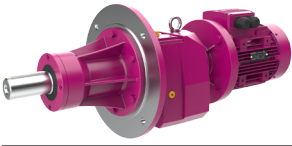


Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	63/B5	71/B5 71/B14
k	1211.5	1204.5
k1	1282.5	1295.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

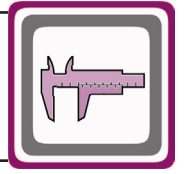
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

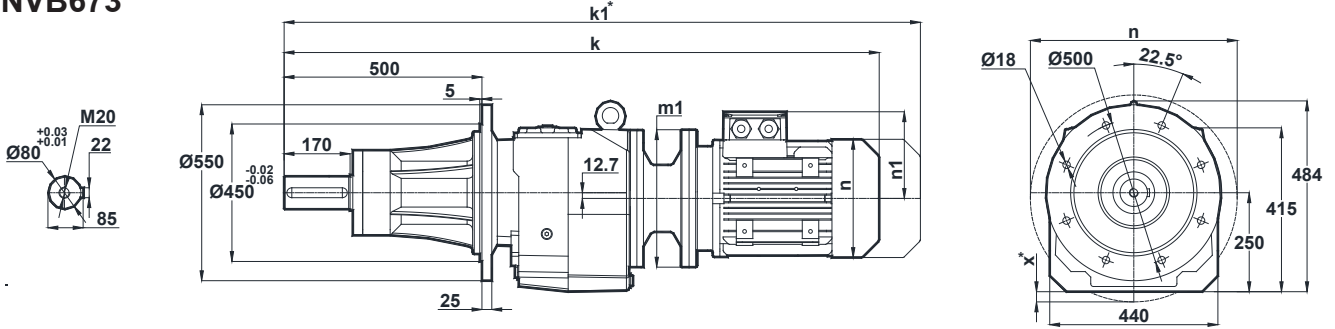


Ölçü Sayfaları Dimension Pages Abmessungsseiten



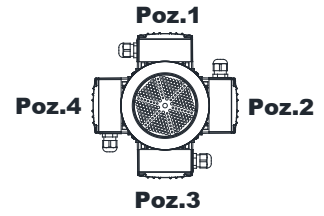
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NVB672 NVB673



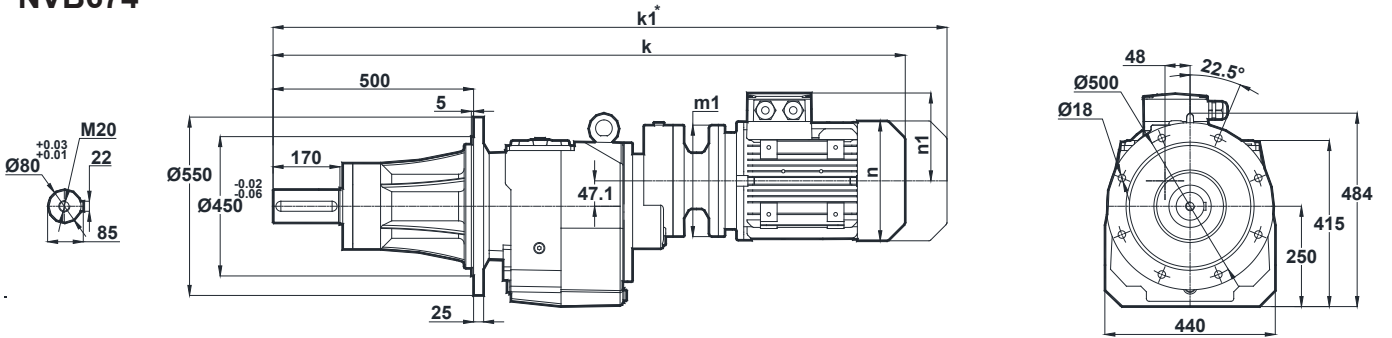
Motor Büyüklüğü / Motor Size / Motorbaugroße										
IEC	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5
k	1264.5	1362.5	1362.5	1517.5	1517.5	1608.5	1608.5	1670	1786	1786
k1	1369.5	1492.5	1492.5	1667.5	1667.5	1795.5	1795.5	1862	1969	1969
n	215	257	257	316	316	348	348	396	438	438
n1	161	182	182	226	226	242	242	294	311,5	311,5
m1 (B5)	250	300	300	350	350	350	350	400	450	450
m1 (B14)	-	200	200	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



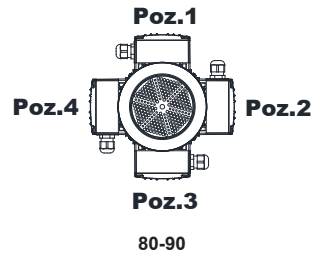
112-132-160-180-200-225

NVB674



Motor Büyüklüğü / Motor Size / Motorbaugroße			
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14
k	1256.5	1297.5	1297.5
k1	1349.5	1376.5	1376.5
n	155	176	176
n1	127	136	136
m1 (B5)	200	200	200
m1 (B14)	-	140	140

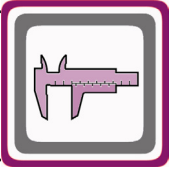
Klemens Kutusu / Terminal Box / Klemmenkasten



80-90

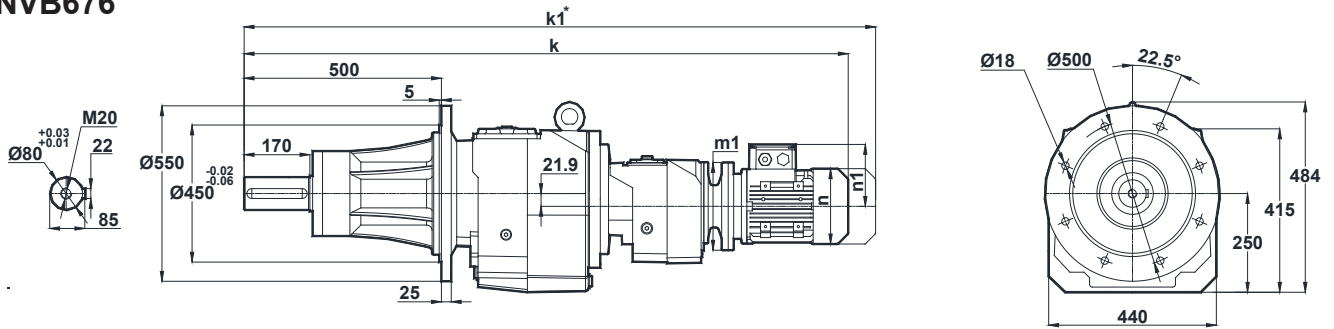
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



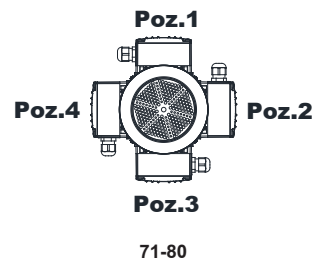
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB675
NVB676

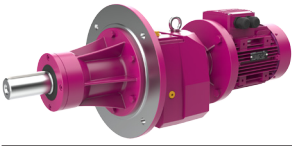


Motor Büyüklüğü / Motor Size / Motorbaugroße		
IEC	71/B5	80/B5 80/B14
k	1385	1407
k1	1476	1500
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

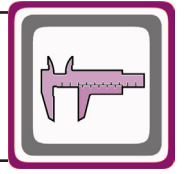
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

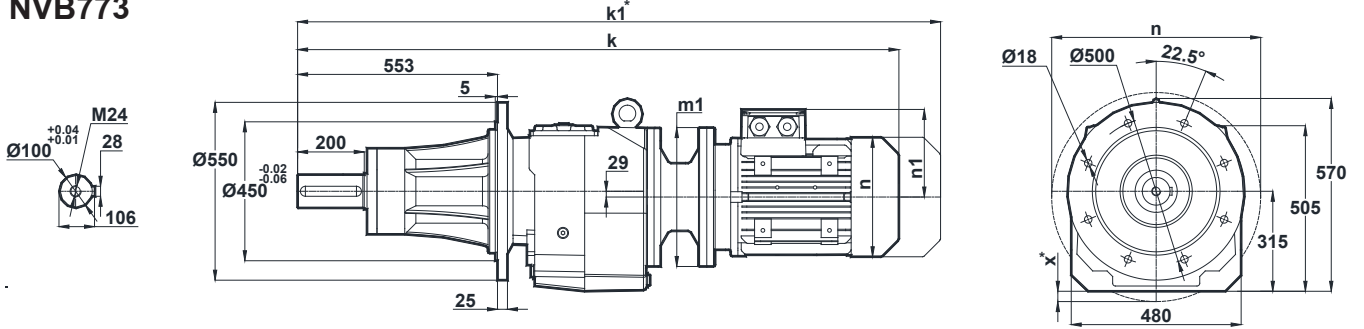


Ölçü Sayfaları Dimension Pages Abmessungsseiten



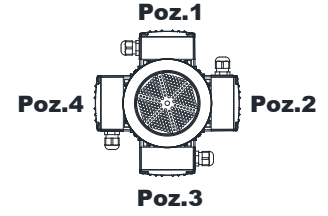
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NVB772 NVB773



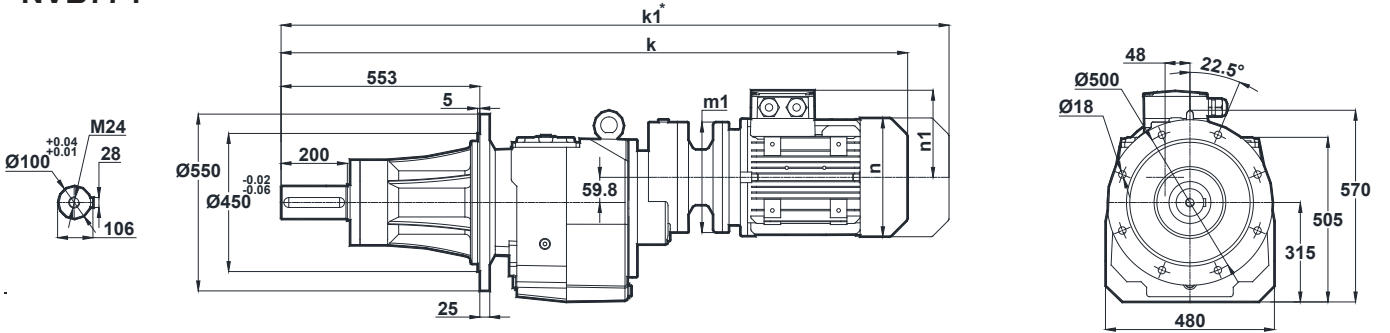
Motor Büyüklüğü / Motor Size / Motorbaugröße										
IEC	132S/B5	132M/B5	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5
k	1465.5	1465.5	1615	1615	1706	1706	1769	1885	1885	1951
k1	1595.5	1595.5	1765	1765	1893	1893	1961	2068	2068	2108
n	257	257	316	316	348	348	396	438	438	481
n1	182	182	226	226	242	242	294	311,5	311,5	337
m1 (B5)	300	300	350	350	350	350	400	450	450	550
m1 (B14)	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



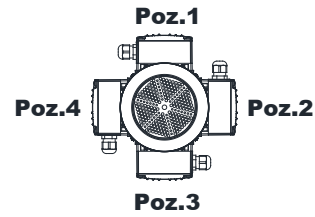
132-160-180-200-225-250

NVB774



Motor Büyüklüğü / Motor Size / Motorbaugröße				
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	1359.5	1400.5	1400.5	1453
k1	1452.5	1479.5	1479.5	1561
n	155	176	176	193
n1	127	136	136	149
m1 (B5)	200	200	200	250
m1 (B14)	-	140	140	160

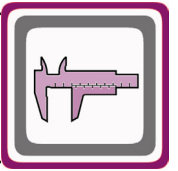
Klemens Kutusu / Terminal Box / Klemmenkasten



80-90-100

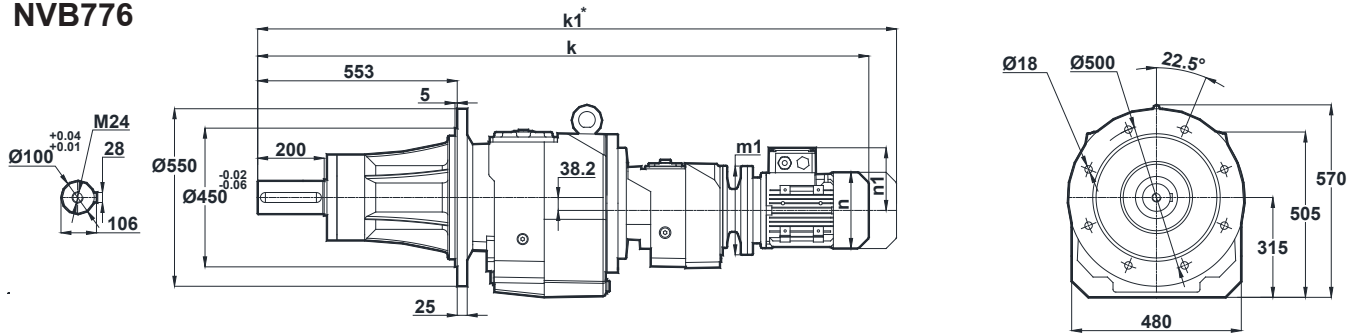
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



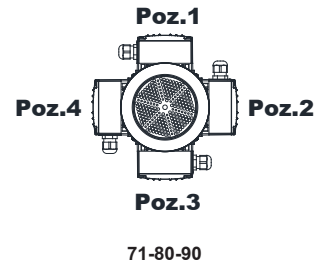
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NVB775
NVB776

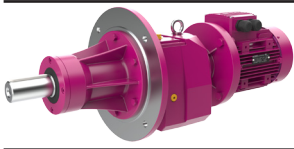


Motor Büyüklüğü / Motor Size / Motorbaugröße				
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	1491	1513	1554	1554
k1	1582	1606	1633	1633
n	137	155	176	176
n1	118	127	136	136
m1 (B5)	160	200	200	200
m1 (B14)	-	120	140	140

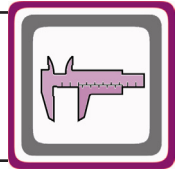
Klemens Kutusu / *Terminal Box* / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

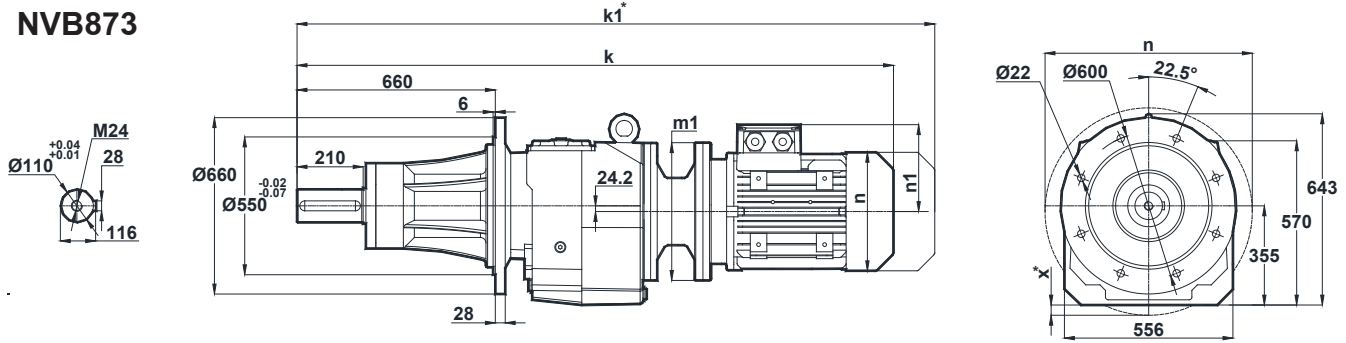


Ölçü Sayfaları Dimension Pages Abmessungsseiten



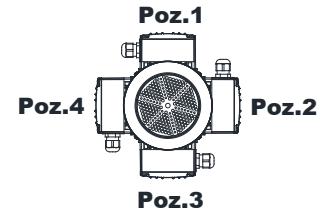
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB872 NVB873



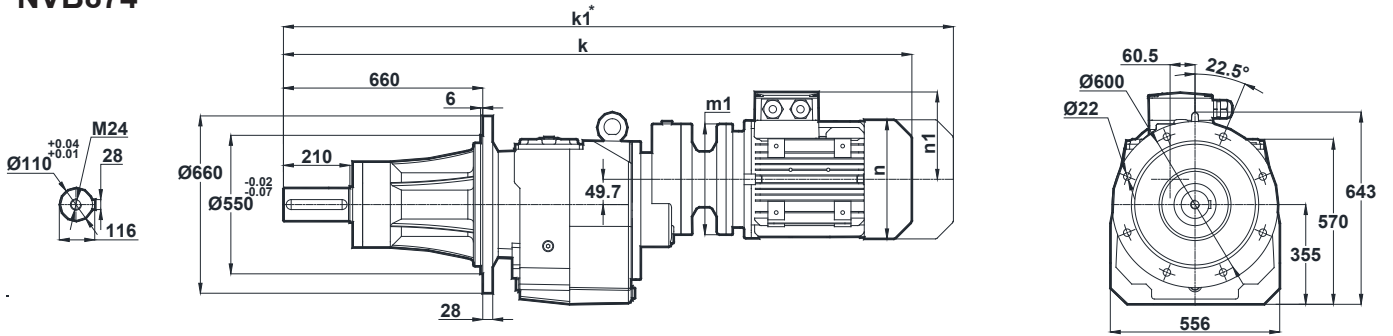
Motor Büyüklüğü / Motor Size / Motorbaugroße											
IEC	132M/B5	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5	280S/B5	280M/B5
k	1640.5	1868	1868	1959	1959	2000	2063	2063	2129	2245	2245
k1	1770.5	2018	2018	2146	2146	2192	2246	2246	2286	2443	2443
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	226	226	242	242	294	311,5	311,5	337	402	402
m1 (B5)	300	350	350	350	350	400	450	450	550	550	550
m1 (B14)	-	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



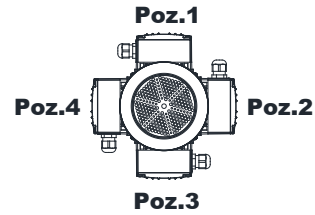
132-160-180-200-225-250-280

NVB874



Motor Büyüklüğü / Motor Size / Motorbaugroße				
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14
k	1654.5	1677.5	1781.5	1781.5
k1	1762.5	1782.5	1911.5	1911.5
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

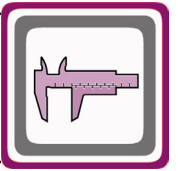
Klemens Kutusu / Terminal Box / Klemmenkasten



100-112-132

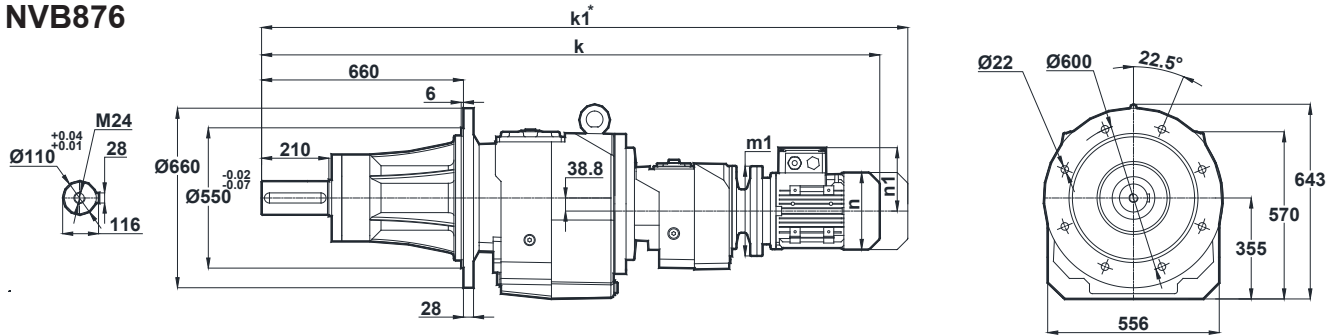
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



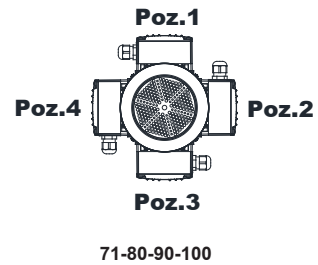
-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB875
NVB876

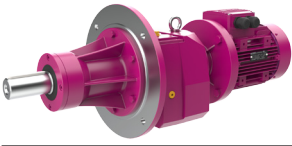


Motor Büyüklüğü / Motor Size / Motorbaugroße					
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14
k	1675	1697	1738	1738	1789
k1	1766	1790	1817	1817	1897
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

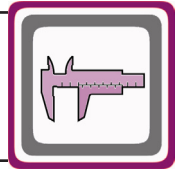
Klemens Kutusu / Terminal Box / Klemmenkasten



* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

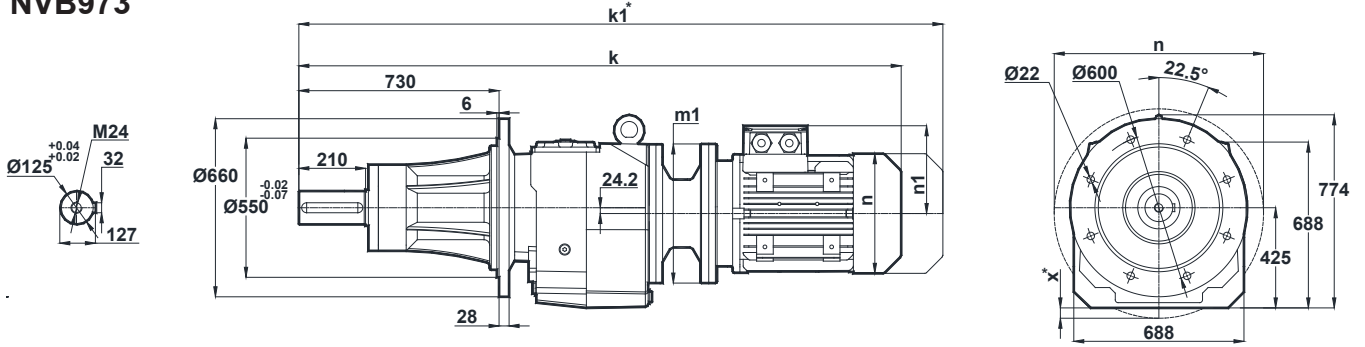


Ölçü Sayfaları Dimension Pages Abmessungsseiten



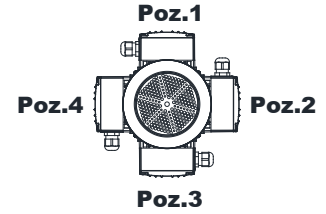
-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB972 NVB973



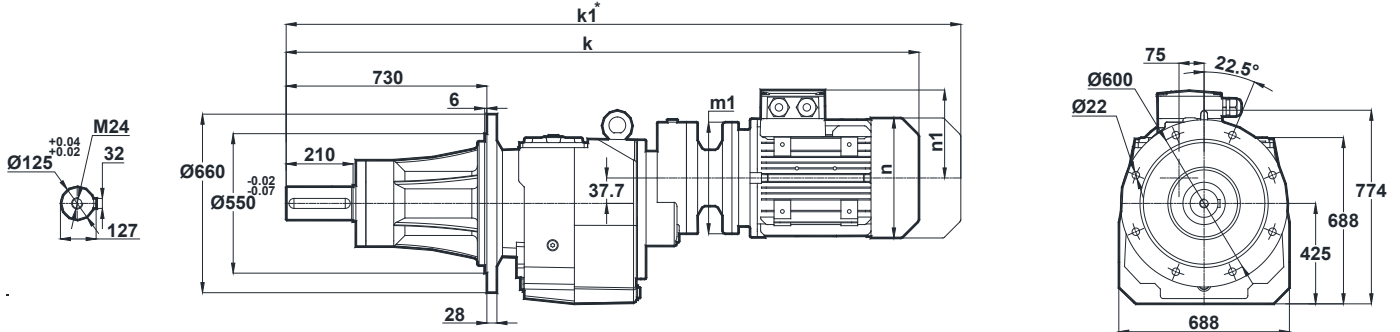
Motor Büyüklüğü / Motor Size / Motorbaugroße													
IEC	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5	280S/B5	280M/B5	315S/B5	315M/B5	315L/B5
k	1925.5	1925.5	2016.5	2016.5	2081.5	2186.5	2186.5	2274.5	2390.5	2390.5	2700.5	2700.5	2847.5
k1	2075.5	2075.5	2203.5	2203.5	2273.5	2369.5	2369.5	2431.5	2588.5	2588.5	3109.5	3109.5	3256.5
n	316	316	348	348	396	438	438	481	547	547	622	622	622
n1	226	226	242	242	294	311.5	311.5	337	402	402	499	499	499
m1 (B5)	350	350	350	350	400	450	450	550	550	550	660	660	660
m1 (B14)	-	-	-	-	-	-	-	-	-	-	-	-	-
x (B5)	-	-	-	-	-	-	-	-	-	-	-	-	-

Klemens Kutusu / Terminal Box / Klemmenkasten



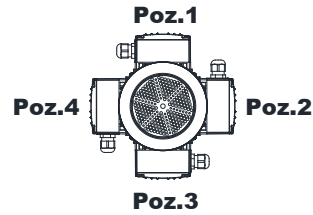
160-180-200-225-250-280-315

NVB974



Motor Büyüklüğü / Motor Size / Motorbaugroße				
IEC	100L/B5	112M/B5	132S/B5 132S/B14	132M/B5 132M/B14
k	1828	1851	1949	1949
k1	1936	1956	2079	2079
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

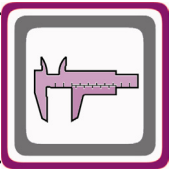
Klemens Kutusu / Terminal Box / Klemmenkasten



100-112-132

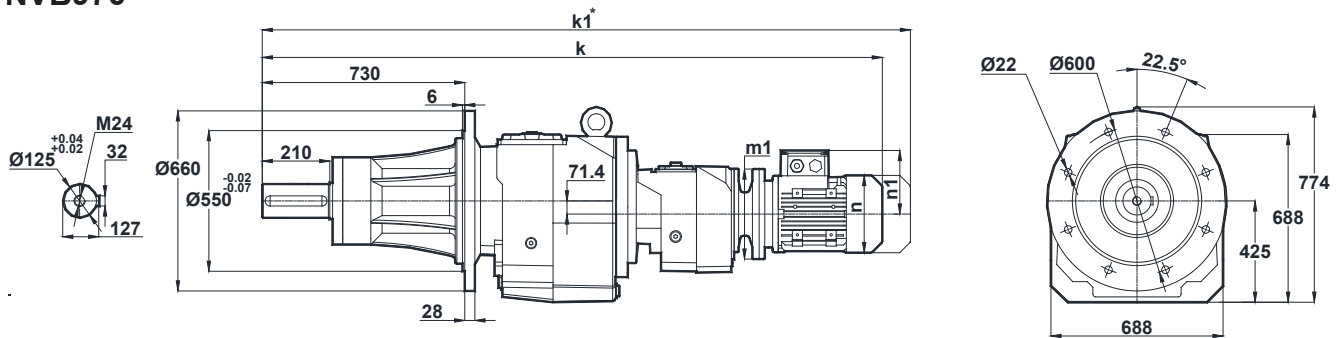
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.

x: Motor, ayak bağlantı yüzeyinin altında ise / x: If Motor is lower than foot mounting plane / x: Wenn der Motor unter der Fußmontageebene ist



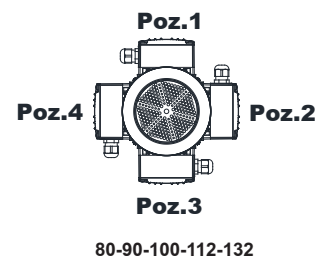
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NVB975
NVB976

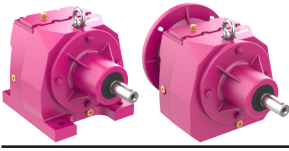


Motor Büyüklüğü / Motor Size / Motorbaugröße						
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14
k	1889	1930	1930	1982.5	2005.5	2107
k1	1982	2009	2009	2090.5	2110.5	2237
n	155	176	176	193	215	257
n1	127	136	136	149	161	182
m1 (B5)	200	200	200	250	250	300
m1 (B14)	-	140	140	160	160	200

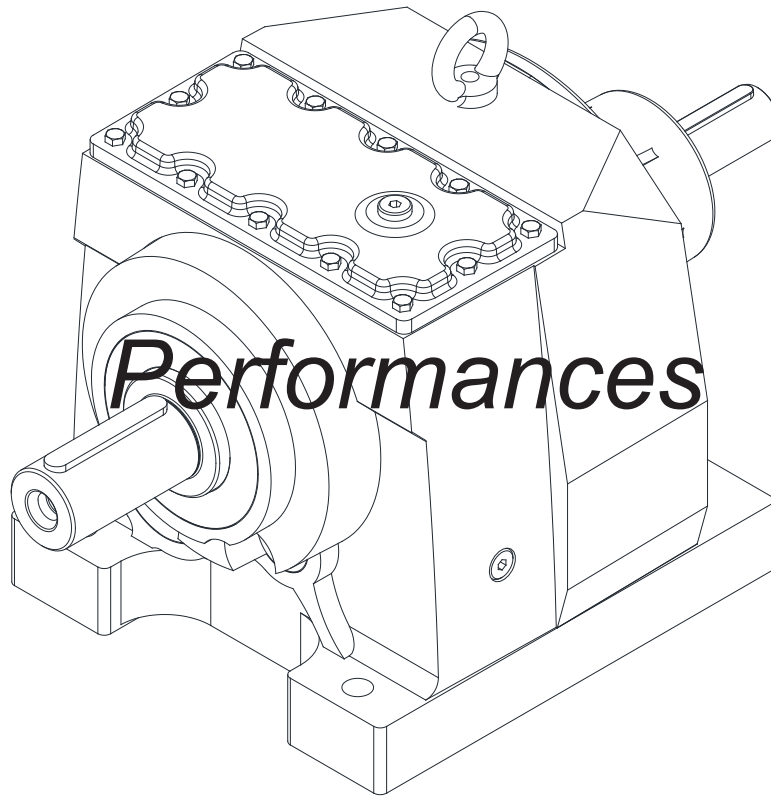
Klemens Kutusu / Terminal Box / Klemmenkasten



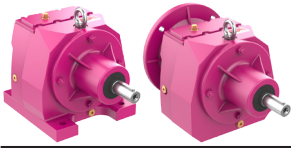
* "k1" Ölçüsü frenli redüktörlere aittir. Dimension "k1" is for motors with brake. Maße "k1" ist für Bremsenmotoren.



Güç ve Devir Tabloları



Leistungs- und Drehzahlübersicht



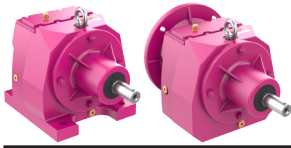
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]						Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
53	3,62	401	MT002	3,6	2,3	1,8	1,4	1,1	0,89	359	-	11	338
55	3,90	372	NT002	3,5	2,2	1,7	1,4	1,1	0,83	349	-	12	
58	4,56	318		3,2	2,0	1,5	1,3	0,94	0,71	366	-		
64	5,57	260		2,9	1,8	1,4	1,1	0,77	0,58	566	-		
66	6,00	242		2,7	1,7	1,3	1,1	0,71	0,54	571	-		
69	6,91	210		2,5	1,6	1,2	0,94	0,62	0,47	685	-		
71	7,45	195		2,4	1,5	1,2	0,88	0,58	0,44	697	-		
72	7,84	185		2,3	1,5	1,1	0,83	0,55	0,41	767	-		
74	8,45	172		2,2	1,4	1,0	0,77	0,51	0,38	783	-		
74	8,70	167		2,1	1,4	0,98	0,75	0,49	0,37	752	-		
78	9,87	147		2,0	1,3	0,87	0,66	0,43	0,33	823	-		
65	11,14	130		1,5	0,93	0,73	0,59	0,39	0,29	1244	235		
80	13,61	107	MT003	1,4	0,95	0,64	0,49	0,32	0,24	567	415	12	338
82	14,67	99	NT003	1,4	0,90	0,59	0,45	0,30	0,23	582	418	13	
82	16,89	86		1,4	0,79	0,52	0,40	0,26	0,20	823	552		
82	18,20	80		1,4	0,73	0,48	0,37	0,24	0,18	900	560		
82	19,17	76		1,3	0,69	0,46	0,35	0,23	0,17	1016	589		
82	20,66	70		1,3	0,64	0,42	0,32	0,21	0,16	1097	597		
82	21,26	68		1,2	0,63	0,41	0,32	0,21	0,16	1068	577		
82	24,13	60		1,1	0,55	0,36	0,28	0,18	0,14	1272	611		
82	28,38	51		0,94	0,47	0,31	0,24	0,16	0,12	1465	649		
82	32,02	45		0,76	0,42	0,28	0,21	0,14	0,11	1645	674		
82	40,04	36		0,67	0,34	0,22	0,17	0,11	0,08	1911	670		
82	45,18	32		0,60	0,30	0,20	0,15	0,10	0,07	2108	692		
70	3,94	368	MT102	4,4	2,8	2,1	1,7	1,3	1,1	1041	-	13	339
75	4,57	317	NT102	4,1	2,6	1,9	1,7	1,3	1,0	1084	-	14	
80	5,01	289		3,8	2,5	1,9	1,5	1,2	0,98	1101	-		
80	5,47	265		3,7	2,3	1,8	1,5	1,1	0,94	1149	-		
85	6,48	224		3,4	2,1	1,6	1,3	1,0	0,79	1213	-		
90	6,93	209		3,2	2,1	1,5	1,3	0,98	0,74	1221	-		
90	8,01	181		2,8	1,8	1,4	1,1	0,85	0,69	1369	520		
95	9,29	156		2,6	1,6	1,2	1,0	0,79	0,60	1435	531		
100	10,18	142		2,3	1,6	1,2	0,94	0,72	0,54	1468	516		
100	11,12	130		2,3	1,4	1,1	0,90	0,66	0,50	1529	600		
105	13,15	110		2,0	1,3	0,99	0,82	0,56	0,42	1622	597		
110	14,08	103		1,91	1,2	0,96	0,77	0,52	0,40	1644	535		
115	15,95	91		1,79	1,2	0,89	0,70	0,46	0,35	1712	476		
110	17,33	84	MT103	1,6	1,0	0,80	0,66	0,43	0,33	1735	816	14	339
120	20,51	71	NT103	1,4	0,95	0,73	0,56	0,36	0,28	1812	804	15	
120	21,96	66		1,4	0,89	0,68	0,52	0,34	0,26	1871	811		
130	24,86	58		1,3	0,85	0,60	0,46	0,30	0,23	1919	791		
140	29,40	49		1,2	0,77	0,51	0,39	0,26	0,19	2105	924		
140	32,25	45		1,1	0,70	0,46	0,35	0,23	0,18	2196	934		
140	35,21	41		1,1	0,65	0,43	0,33	0,21	0,16	2286	942		
140	41,66	35		0,93	0,55	0,36	0,28	0,18	0,14	2464	953		
140	44,60	33		0,91	0,51	0,34	0,26	0,17	0,13	2540	957		
140	50,51	29		0,84	0,45	0,30	0,23	0,15	0,11	2682	961		
110	3,38	429	MT172	7,8	5,1	4,1	3,3	2,6	2,1	575	-	15	340
120	4,09	343	NT172	7,4	4,4	3,6	3,2	2,3	1,9	609	-	16	
130	4,78	293		6,9	4,1	3,5	3,1	2,1	1,6	591	-		
135	5,78	242		6,3	3,5	3,2	2,8	1,7	1,3	772	-		
145	6,60	212		5,7	3,3	3,0	2,5	1,5	1,2	888	-		
155	7,08	198		5,6	3,3	2,8	2,3	1,4	1,1	856	-		
160	7,60	184		5,4	3,2	2,6	2,2	1,3	1,0	746	-		
165	8,94	157		4,7	2,8	2,2	1,8	1,1	0,86	861	-		
170	9,53	147		4,6	2,7	2,1	1,7	1,0	0,81	852	-		
180	11,08	126		4,0	2,5	1,8	1,5	0,89	0,69	1257	-		
190	12,66	111		3,6	2,3	1,6	1,3	0,78	0,61	1284	-		



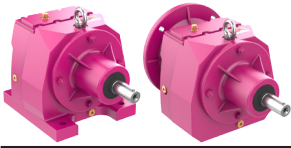
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti Nominal Torques Nenn-drehmomente Ma [Nm] (n1=1450rpm)	Çevrim Oranı Ratio Übersetzung i	Çıkış Devri Output Speeds Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	Tipi Type Typ	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için) Pe= Nominal Power [kW] (For Service Factor fs=1,0) Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Güv. Rad.Yük Çıkış Per.O.Loads (Output) Zul.Querkräfte (Abtrieb) Fqam [N] (n1=1450rpm)	Güv.Rad.Yük Giriş Per.O.Loads (Input) Zul.Querkräfte (Antrieb) Fqem [N] (n1=1450rpm)	Ağırlık Weight Gewicht [kg]	Ölçü Sayfası Dim. Page Maße Seite
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
195	14,57	99	MT172	3,4	2,1	1,4	1,1	0,72	0,54	1360	-	15	340
200	17,14	85	NT172	3,0	1,9	1,2	0,93	0,61	0,46	1534	-	16	
200	18,28	79		2,9	1,7	1,1	0,87	0,57	0,43	1639	-		
200	20,92	69		2,6	1,5	1,00	0,76	0,50	0,38	1869	-		
200	26,10	56	MT173	1,5	1,2	0,81	0,62	0,41	0,31	2811	813	16	340
200	30,26	48	NT173	1,4	1,1	0,70	0,54	0,35	0,27	3008	834	17	
200	36,24	40		1,3	0,90	0,59	0,45	0,30	0,22	3262	860		
200	42,87	34		1,2	0,76	0,50	0,38	0,25	0,19	3514	874		
200	45,90	32		1,2	0,71	0,47	0,36	0,23	0,18	3620	880		
200	49,81	29		1,1	0,65	0,43	0,33	0,22	0,16	3750	975		
200	57,76	25		1,0	0,57	0,37	0,28	0,19	0,14	3995	986		
200	69,16	21		0,94	0,47	0,31	0,24	0,16	0,12	4310	999		
200	81,82	18		0,80	0,40	0,26	0,20	0,13	0,10	4622	1007		
200	87,60	17		0,75	0,38	0,25	0,19	0,12	0,09	4753	1010		
200	99,21	15		0,66	0,33	0,22	0,17	0,11	0,08	5001	1013		
125	3,50	414	MT202	8,9	5,6	4,4	3,5	2,7	2,3	2223	-	20	341
145	4,20	345	NT202	8,6	5,4	4,1	3,3	2,6	2,2	2061	-	22	
150	4,50	322		8,3	5,2	4,0	3,2	2,5	2,1	2072	-		
160	5,08	286		7,7	5,0	3,8	3,1	2,4	2,0	2061	-		
175	5,80	250		7,3	4,8	3,6	2,9	2,3	1,9	1965	-		
185	7,04	206		6,5	4,1	3,2	2,6	2,0	1,6	2876	606		
200	8,40	173		5,8	3,8	2,8	2,3	1,7	1,3	2972	619		
210	10,07	144		5,2	3,3	2,5	2,1	1,5	1,1	3208	719		
215	10,81	134		4,9	3,1	2,4	1,9	1,4	1,0	3283	725		
225	12,18	119		4,7	2,9	2,2	1,8	1,2	0,91	3392	723		
235	13,92	104		4,2	2,7	2,1	1,6	1,1	0,80	3551	726		
240	14,86	98		4,0	2,6	2,0	1,5	0,98	0,75	3633	716		
245	16,03	90		3,8	2,4	1,8	1,4	0,91	0,69	3749	728		
260	18,85	77		3,4	2,2	1,6	1,2	0,78	0,59	3928	663		
260	20,10	72		3,3	2,1	1,5	1,1	0,73	0,55	4129	722		
280	23,01	63		3,0	1,9	1,3	0,97	0,64	0,48	4154	556		
270	23,23	62	MT203	2,9	1,9	1,3	0,98	0,64	0,49	3314	1142	21	341
275	24,77	59	NT203	2,8	1,8	1,2	0,92	0,60	0,46	3406	1141	23	
280	28,35	51		2,6	1,6	1,1	0,80	0,53	0,40	3751	1151		
280	36,02	40		2,0	1,3	0,82	0,63	0,41	0,31	5277	1482		
280	41,16	35		1,8	1,1	0,72	0,55	0,36	0,28	5576	1498		
280	43,94	33		1,8	1,0	0,68	0,52	0,34	0,26	5728	1504		
280	47,39	31		1,7	0,96	0,63	0,48	0,32	0,27	5907	1512		
280	55,74	26		1,5	0,82	0,54	0,41	0,27	0,23	6308	1525		
280	59,43	24		1,4	0,77	0,50	0,39	0,25	0,21	6472	1530		
280	68,03	21		1,3	0,67	0,44	0,34	0,25	0,19	6830	1540		
195	3,16	459	MT272	15	9,6	7,3	6,0	4,7	3,8	566	-	25	342
205	3,69	393	NT272	14	8,7	6,7	5,4	4,2	3,5	602	-	27	
230	4,53	320		12	8,0	5,9	4,9	3,8	3,1	863	-		
265	5,28	274		12	7,9	5,9	4,9	3,5	2,9	479	-		
330	6,21	233		14	8,3	6,2	5,2	3,8	2,9	-	-		
360	8,71	167		10	6,5	4,7	4,0	2,7	2,0	474	-		
375	10,16	143		9,1	5,8	4,4	3,5	2,3	1,7	566	-		
390	11,95	121		8,1	5,1	3,9	3,0	2,0	1,5	695	-		
410	14,21	102		7,2	4,6	3,3	2,5	1,7	1,3	788	-		
425	16,07	90		6,7	4,2	2,9	2,2	1,5	1,1	858	-		
445	18,33	79		6,0	3,8	2,6	2,0	1,3	0,97	880	-		
450	21,43	68		5,4	3,3	2,2	1,7	1,1	0,83	1239	-		
450	25,89	56		4,8	2,8	1,8	1,4	0,91	0,69	1805	-		
435	19,00	76	MT273	5,6	3,7	2,5	1,9	1,3	0,95	190	275	26	342
435	25,55	57	NT273	4,2	2,7	1,9	1,4	0,93	0,71	2013	1276	28	



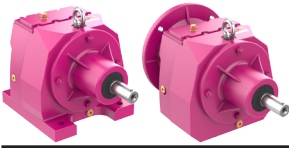
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]						Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
450	30,48	48	MT273	3,7	2,4	1,6	1,2	0,78	0,59	2323	1303	26	342
450	36,55	40	NT273	3,3	2,0	1,3	1,0	0,65	0,50	2933	1343	28	
450	42,41	34		3,0	1,7	1,1	0,86	0,56	0,43	3461	1480		
450	50,59	29		2,7	1,4	0,94	0,72	0,47	0,36	4123	1508		
450	60,66	24		2,4	1,2	0,79	0,60	0,40	0,30	4845	1532		
450	73,35	20		2,0	0,99	0,65	0,50	0,33	0,28	5650	1552		
450	83,83	17		1,7	0,87	0,57	0,44	0,29	0,24	6247	1565		
450	96,52	15		1,5	0,76	0,50	0,38	0,25	0,21	6700	1576		
450	113,52	13		1,3	0,65	0,43	0,33	0,24	0,18	6700	1586		
450	121,03	12		1,2	0,61	0,40	0,31	0,22	0,17	6700	1590		
450	138,55	10		1,1	0,53	0,35	0,27	0,20	0,15	6700	1598		
450	149,02	9,7	MT275	1,0	0,51	0,34	0,26	0,19	0,14	6700	684	39	343
450	180,21	8,0	NT275	0,85	0,42	0,28	0,24	0,15	0,12	6700	716	41	
450	205,95	7,0		0,74	0,37	0,27	0,21	0,14	0,10	6700	735		
450	215,91	6,7		0,71	0,35	0,26	0,20	0,13	0,10	6700	736		
450	252,20	5,7		0,61	0,30	0,22	0,17	0,11	0,08	6700	743		
450	332,52	4,4		0,51	0,26	0,19	0,14	0,09	0,07	6700	786		
450	358,33	4,0		0,47	0,24	0,17	0,13	0,09	0,07	6700	789		
450	418,57	3,5		0,41	0,20	0,15	0,11	0,07	0,06	6700	793		
450	499,32	2,9		0,34	0,17	0,12	0,09	0,06	0,05	6700	806		
450	598,70	2,4		0,29	0,14	0,10	0,08	0,05	0,04	6700	816		
450	724,01	2,0		0,26	0,12	0,09	0,07	0,04	0,03	6700	825		
450	827,44	1,8		0,23	0,10	0,08	0,06	0,04	0,03	6700	831		
450	952,64	1,5		0,20	0,09	0,07	0,05	0,03	0,02	6700	836		
450	1120,49	1,3		0,17	0,08	0,06	0,04	0,03	0,02	6700	841		
450	1194,61	1,2		0,16	0,07	0,05	0,04	0,03	0,02	6700	843		
450	1463,49	0,99	MT276	0,13	0,06	0,04	0,03	0,02	0,02	6700	848	40	343
450	1769,80	0,82	NT276	0,11	0,05	0,04	0,03	0,02	0,01	6700	851	42	
450	2022,63	0,72		0,10	0,04	0,03	0,02	0,02	0,01	6700	854		
450	2328,68	0,62		0,08	0,04	0,03	0,02	0,01	0,01	6700	856		
450	2738,97	0,53		0,07	0,03	0,02	0,02	0,01	0,01	6700	858		
450	2920,17	0,50		0,07	0,03	0,02	0,02	0,01	0,01	6700	859		
220	3,15	460	MT282	17	11	8,2	6,5	5,3	4,4	2212	-	37	344
240	3,64	398	NT282	16	10	7,9	6,5	4,8	4,1	2153	-	39	
260	4,20	345		16	9,7	7,8	6,2	4,8	3,9	2106	-		
280	4,62	314		16	9,5	7,8	6,1	4,6	3,8	1960	-		
320	5,35	271		15	9,4	7,7	6,1	4,6	3,8	1584	-		
360	6,25	232		15	9,1	6,9	5,7	4,4	3,7	1247	-		
370	7,21	201		13	8,1	6,2	5,0	4,0	3,2	2419	-		
390	8,33	174		11	7,4	5,6	4,6	3,5	2,8	2509	-		
400	9,61	151		10	6,5	4,9	4,0	3,1	2,5	2774	-	102	
410	10,57	137		9,49	6,1	4,6	3,7	3,0	2,2	2907	-	156	
420	12,24	118		8,71	5,4	4,1	3,4	2,6	1,9	3220	-	289	
440	14,31	101		7,69	4,9	3,8	3,1	2,2	1,7	3429	-	301	
470	16,91	86		6,89	4,4	3,3	2,7	1,9	1,4	3550	-	208	
480	19,06	76		6,29	4,0	3,1	2,5	1,6	1,3	3837	-	251	
500	21,66	67		5,83	3,7	2,8	2,2	1,5	1,1	4018	-	193	
530	25,23	57		5,26	3,3	2,5	1,9	1,2	0,94	4167	-	64	
560	30,37	48		4,59	2,9	2,1	1,6	1,0	0,78	4493	-	-	
270	18,33	79	MT283	3,6	2,4	1,9	1,6	1,2	1,1	6793	1822	38	344
290	20,25	72	NT283	3,5	2,3	1,8	1,5	1,2	0,99	7049	1811	40	
320	23,63	61		3,2	2,2	1,7	1,4	1,1	0,90	7456	1796		
340	27,80	52		2,9	2,0	1,5	1,3	1,0	0,83	5566	1795		
480	30,82	47		3,8	2,5	2,0	1,6	1,0	0,79	5446	1857		
515	35,98	40		3,5	2,3	1,8	1,4	0,89	0,67	5697	1860		
550	41,96	35		3,3	2,1	1,5	1,2	0,76	0,58	5967	1867		
570	46,37	31		3,0	2,0	1,4	1,1	0,69	0,52	6164	1869		



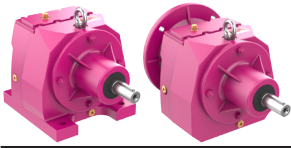
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



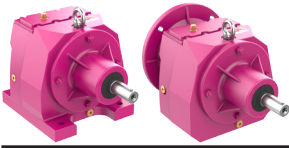
Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360	Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
600	54,12	27	MT283	2,7	1,8	1,2	0,90	0,59	0,45	6490	1874	38	344
600	63,65	23	NT283	2,5	1,5	1,0	0,77	0,50	0,38	6979	1894	40	
600	75,68	19		2,3	1,3	0,85	0,65	0,42	0,32	7530	1913		
600	85,60	17		2,1	1,1	0,75	0,57	0,38	0,29	7942	1924		
600	97,62	15		1,9	1,0	0,66	0,50	0,33	0,25	8400	1934		
600	114,14	13		1,7	0,86	0,56	0,43	0,28	0,24	8973	1945		
600	137,91	11		1,4	0,71	0,47	0,36	0,26	0,20	9150	1956		
600	158,52	9,1	MT284	1,3	0,63	0,41	0,31	0,23	0,17	9150	1581	39	345
600	175,17	8,3	NT284	1,1	0,57	0,37	0,28	0,21	0,16	9150	1603	41	
600	204,44	7,1		0,97	0,49	0,32	0,27	0,18	0,13	9150	1635		
600	240,47	6,0		0,83	0,41	0,27	0,23	0,15	0,11	9150	1663		
600	285,89	5,1		0,70	0,35	0,25	0,19	0,13	0,10	9150	1688		
600	323,39	4,5		0,62	0,31	0,22	0,17	0,11	0,09	9150	1703		
600	368,77	3,9		0,54	0,27	0,20	0,15	0,10	0,07	9150	1718		
600	431,18	3,4		0,51	0,26	0,19	0,14	0,09	0,07	9150	1778		
600	376,94	3,8	MT285	0,54	0,27	0,20	0,15	0,10	0,07	9150	1053	58	346
600	443,37	3,3	NT285	0,51	0,26	0,19	0,14	0,09	0,07	9150	1068	60	
600	491,50	3,0		0,46	0,23	0,17	0,13	0,08	0,06	9150	1077		
600	573,81	2,5		0,40	0,20	0,14	0,11	0,07	0,05	9150	1089		
600	669,25	2,2		0,34	0,17	0,12	0,09	0,06	0,05	9150	1098		
600	739,53	2,0		0,31	0,15	0,11	0,09	0,06	0,04	9150	1104		
600	863,11	1,7		0,26	0,13	0,10	0,07	0,05	0,04	9150	1111		
600	1015,21	1,4		0,25	0,11	0,08	0,06	0,04	0,03	9150	1118		
600	1206,98	1,2		0,21	0,09	0,07	0,05	0,03	0,03	9150	1124		
600	1365,28	1,1		0,19	0,08	0,06	0,05	0,03	0,02	9150	1128		
600	1817,07	0,80	MT286	0,14	0,06	0,05	0,04	0,02	0,02	9150	1135	59	346
600	2119,30	0,68	NT286	0,12	0,06	0,04	0,03	0,02	0,02	9150	1138	61	
600	2341,83	0,62		0,11	0,05	0,04	0,03	0,02	0,01	9150	1140		
600	2733,17	0,53		0,09	0,04	0,03	0,02	0,02	0,01	9150	1143		
600	3214,82	0,45		0,08	0,04	0,03	0,02	0,01	0,01	9150	1145		
385	3,28	443	MT372	29	18	14	11	8,8	7,3	882	-	45	347
410	3,74	388	NT372	27	17	13	11	8,4	6,9	782	-	48	
445	4,29	338		25	16	12	10	7,8	6,4	531	-		
475	4,96	292		24	15	12	9,3	7,3	6,0	411	-		
510	5,23	277		24	15	12	9,5	7,3	6,1	955	-		
530	5,97	243		22	14	11	8,7	6,8	5,4	1046	-		
560	6,84	212		20	13	9,8	8,0	6,2	4,7	1012	-		
560	8,25	176		17	11	8,1	6,6	5,2	3,9	2345	-		
590	9,41	154		15	9,9	7,5	6,0	4,5	3,4	2379	-		
620	10,80	134		14	9,0	6,8	5,6	3,9	3,0	2456	-		
650	12,48	116		13	8,2	6,3	5,1	3,4	2,6	2586	-		
670	13,53	107		12	7,8	5,9	4,8	3,2	2,4	2623	-		
710	16,20	90		11	6,9	5,3	4,0	2,6	2,0	2807	-		
740	18,45	79		10	6,3	4,6	3,5	2,3	1,8	2952	-		
770	20,62	70		9,3	5,9	4,1	3,2	2,1	1,6	3033	-		
805	23,33	62		8,5	5,5	3,7	2,8	1,8	1,4	3122	-		
650	18,68	78	MT373	8,6	5,5	4,2	3,4	2,3	1,8	4992	1054	47	347
650	20,64	70	NT373	7,8	5,0	3,9	3,2	2,1	1,6	5243	1219	50	
650	21,65	67		7,5	4,8	3,8	3,0	2,0	1,5	5509	1550		
710	25,27	57		6,8	4,5	3,4	2,6	1,7	1,3	5712	1545		
750	29,47	49		6,1	4,1	2,9	2,2	1,5	1,1	6004	1564		
780	35,25	41		5,4	3,5	2,5	1,9	1,2	0,94	6429	1730		
820	41,16	35		4,8	3,2	2,1	1,6	1,1	0,80	6774	1745		
820	48,00	30		4,3	2,7	1,8	1,4	0,91	0,69	7281	1784		
820	53,04	27		4,1	2,5	1,6	1,3	0,82	0,62	7623	1803		
820	61,91	23		3,5	2,1	1,4	1,1	0,71	0,54	8177	1830		



Motorsuz Güç Devir Sayfaları Gear Units Performance Tables Leistungs- und Drehzahlübersicht von Getriebe



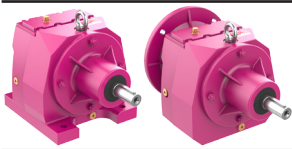
Anma Momenti <i>Nominal Torques</i> Nenn-drehmomente <i>Ma [Nm] (n1=1450rpm)</i>	Çevrim Oranı <i>Ratio</i> Übersetzung <i>i</i>	Çıkış Devri <i>Output Speeds</i> Abtriebs-drehzahlen <i>n2 [r.p.m] (n1=1450rpm)</i>	Tipi <i>Type</i> Typ	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için) <i>Pe= Nominal Power [kW] (For Service Factor fs=1,0)</i> Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Güv. Rad.Yük Çıkış <i>Per.O.Loads (Output)</i>	Güv.Rad.Yük Giriş <i>Per.O.Loads (Input)</i>	Ağırlık <i>Weight</i> Gewicht <i>[kg]</i>	Ölçü Sayfası <i>Dim. Page</i> Maße Seite
				Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]						Zul.Querkräfte (Abtrieb) <i>Fqam [N] (n1=1450rpm)</i>	Zul.Querkräfte (Antrieb) <i>Fqem [N] (n1=1450rpm)</i>		
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
820	72,81	20	MT373	3,2	1,8	1,2	0,92	0,60	0,46	8790	1854	47	347
820	86,57	17	NT373	2,8	1,5	1,0	0,77	0,51	0,39	9481	1876	50	
820	97,92	15		2,6	1,4	0,89	0,68	0,45	0,34	9999	1889		
820	111,67	13		2,4	1,2	0,79	0,60	0,40	0,30	10574	1902		
820	138,72	10		1,9	0,97	0,64	0,49	0,32	0,27	11581	1919		
820	157,76	9,2		1,7	0,85	0,56	0,43	0,28	0,24	11600	1928		
820	181,34	8,0	MT374	1,5	0,75	0,49	0,37	0,27	0,21	11600	745	57	348
820	200,38	7,2	NT374	1,4	0,68	0,44	0,34	0,25	0,19	11600	885	60	
820	233,86	6,2		1,2	0,58	0,38	0,29	0,21	0,16	11600	1598		
820	275,08	5,3		0,99	0,49	0,32	0,27	0,18	0,14	11600	1632		
820	327,04	4,4		0,83	0,42	0,27	0,23	0,15	0,11	11600	1662		
820	369,93	3,9		0,74	0,37	0,27	0,20	0,13	0,10	11600	1680		
820	421,85	3,4		0,65	0,32	0,24	0,18	0,12	0,09	11600	1698		
820	524,07	2,8		0,52	0,26	0,19	0,14	0,09	0,07	11600	1722		
820	488,82	3,0	MT375	0,57	0,28	0,21	0,16	0,10	0,08	11600	1076	63	349
820	533,70	2,7	NT375	0,52	0,26	0,19	0,15	0,10	0,07	11600	1080	66	
820	631,45	2,3		0,49	0,25	0,18	0,14	0,09	0,07	11600	1084		
820	676,02	2,1		0,46	0,23	0,17	0,13	0,08	0,06	11600	1085		
820	765,58	1,9		0,41	0,20	0,15	0,11	0,07	0,06	11600	1087		
820	845,97	1,7		0,37	0,18	0,13	0,10	0,07	0,05	11600	1094		
820	987,33	1,5		0,32	0,16	0,11	0,09	0,06	0,04	11600	1103		
820	1161,33	1,2		0,27	0,13	0,10	0,07	0,05	0,04	11600	1111		
820	1380,71	1,1		0,25	0,11	0,08	0,06	0,04	0,03	11600	1118		
820	1561,78	0,93		0,22	0,10	0,07	0,06	0,04	0,03	11600	1123		
820	1690,05	0,86	MT376	0,21	0,09	0,07	0,05	0,03	0,03	11600	1132	65	349
820	1999,59	0,73	NT376	0,18	0,08	0,06	0,04	0,03	0,02	11600	1134	68	
820	2140,73	0,68		0,17	0,07	0,05	0,04	0,03	0,02	11600	1134		
820	2424,34	0,60		0,15	0,07	0,05	0,04	0,02	0,02	11600	1135		
820	2678,89	0,54		0,13	0,06	0,04	0,03	0,02	0,02	11600	1137		
820	3126,56	0,46		0,11	0,05	0,04	0,03	0,02	0,01	11600	1140		
820	3677,53	0,39		0,10	0,04	0,03	0,02	0,02	0,01	11600	1142		
820	4372,24	0,33		0,08	0,04	0,03	0,02	0,01	0,01	11600	1145		
820	4945,64	0,29		0,07	0,03	0,02	0,02	0,01	0,01	11600	1146		
590	3,27	444	MT472	-	28	22	18	14	11	5155	-	76	350
650	3,83	378	NT472	41	26	20	16	13	11	5346	-	80	
710	4,54	320		38	24	19	15	12	9,8	5578	-		
800	4,89	297		41	26	19	16	12	9,8	5471	-		
925	5,66	256		-	26	20	16	12	9,9	5775	-		
985	6,65	218		38	23	17	14	11	8,8	6065	-		
1020	7,87	184		33	20	15	12	9,5	7,8	6482	-		
1025	8,47	171		31	19	14	12	8,8	7,2	6706	-		
1050	9,53	152		28	17	13	11	8,1	6,4	7024	-		
1100	10,79	134		26	16	12	9,7	7,4	5,7	7304	-		
1165	12,05	120		25	15	11	9,2	6,7	5,1	7668	-		
1205	13,56	107		23	14	10	8,5	5,9	4,5	7994	-		
1250	15,35	94		21	13	9,6	7,7	5,2	4,0	8350	-		
1295	17,25	84		19	12	8,9	7,1	4,7	3,5	8693	-		
1450	18,72	77		20	12	8,6	6,5	4,3	3,3	8586	-		
1455	22,15	65		18	10	7,3	5,5	3,6	2,8	9311	-		
1550	18,04	80	MT473	14	14	9,0	6,9	4,5	3,4	7923	-	78	350
1550	21,74	67	NT473	13	11	7,5	5,7	3,8	2,9	8734	-	82	
1550	25,67	56		14	9,6	6,3	4,8	3,2	2,4	9717	501		
1550	30,93	47		13	8,0	5,2	4,0	2,6	2,0	10629	932		
1550	37,45	39		11	6,6	4,3	3,3	2,2	1,7	11627	1297		
1550	42,75	34		9,7	5,8	3,8	2,9	1,9	1,5	12354	1511		



Motorsuz Güç Devir Sayfaları Gear Units Performance Tables Leistungs- und Drehzahlübersicht von Getriebe



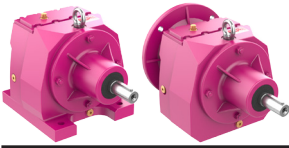
Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
				Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]									
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360	Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
1550	49,05	30	MT473	8,8	5,1	3,3	2,6	1,7	1,3	13146	1585	78	350
1550	55,82	26	NT473	8,0	4,4	2,9	2,2	1,5	1,1	13924	1819	82	
1550	63,70	23		7,3	3,9	2,6	2,0	1,3	0,98	14755	1857		
1550	73,09	20		6,8	3,4	2,2	1,7	1,1	0,86	15600	1891		
1550	86,52	17		5,7	2,9	1,9	1,5	0,95	0,72	15600	1930		
1550	91,58	16		5,4	2,7	1,8	1,4	0,90	0,68	15600	1941		
1550	109,64	13		4,5	2,3	1,5	1,2	0,76	0,57	15600	1971		
1550	124,85	12		4,0	2,0	1,3	1,0	0,66	0,50	15600	1989		
1550	139,54	10		3,6	1,8	1,2	0,91	0,60	0,45	15600	2006		
1550	157,90	9,2		3,2	1,6	1,1	0,80	0,53	0,40	15600	2020		
1550	194,05	7,5		2,6	1,3	0,86	0,66	0,43	0,33	15600	2039		
1550	219,00	6,6		2,3	1,2	0,76	0,58	0,38	0,29	15600	2047		
1550	229,46	6,3	MT474	2,2	1,1	0,73	0,56	0,36	0,28	15600	1470	72	351
1550	259,55	5,6	NT474	2,0	0,98	0,64	0,49	0,32	0,27	15600	1480	76	
1550	295,98	4,9		1,7	0,86	0,57	0,43	0,28	0,24	15600	1489		
1550	346,07	4,2		1,5	0,74	0,48	0,37	0,27	0,20	15600	1498		
1550	418,16	3,5		1,2	0,61	0,40	0,31	0,22	0,17	15600	1507		
1550	442,61	3,3		1,2	0,58	0,38	0,29	0,21	0,16	15600	1519		
1550	529,93	2,7		0,97	0,49	0,32	0,27	0,18	0,13	15600	1553		
1550	603,46	2,4		0,85	0,43	0,28	0,24	0,16	0,12	15600	1574		
1550	674,46	2,1		0,76	0,38	0,28	0,21	0,14	0,11	15600	1590		
1550	726,85	2,0	MT475	0,72	0,36	0,26	0,20	0,13	0,10	15600	1751	88	352
1550	871,52	1,7	NT475	0,60	0,30	0,22	0,17	0,11	0,08	15600	1756	92	
1550	934,94	1,6		0,56	0,28	0,20	0,16	0,10	0,08	15600	1758		
1550	1053,93	1,4		0,56	0,28	0,20	0,15	0,10	0,08	15600	1761		
1550	1204,49	1,2		0,49	0,24	0,18	0,14	0,09	0,07	15600	1764		
1550	1285,79	1,1		0,46	0,23	0,17	0,13	0,08	0,06	15600	1765		
1550	1386,75	1,0		0,42	0,21	0,15	0,12	0,08	0,06	15600	1767		
1550	1631,08	0,89		0,36	0,18	0,13	0,10	0,07	0,05	15600	1769		
1550	1738,98	0,83		0,34	0,17	0,12	0,09	0,06	0,05	15600	1770		
1550	1990,76	0,73		0,30	0,15	0,11	0,08	0,05	0,04	15600	1772		
1550	2107,15	0,69		0,28	0,14	0,10	0,08	0,05	0,04	15600	1775		
1550	2522,85	0,57		0,26	0,12	0,09	0,06	0,04	0,03	15600	1782		
1550	3115,96	0,47	MT476	0,21	0,10	0,07	0,05	0,03	0,03	15600	1801	90	352
1550	3561,10	0,41	NT476	0,19	0,08	0,06	0,05	0,03	0,02	15600	1802	94	
1550	3801,48	0,38		0,18	0,08	0,06	0,04	0,03	0,02	15600	1802		
1550	4099,95	0,35		0,16	0,07	0,05	0,04	0,03	0,02	15600	1803		
1550	4822,33	0,30		0,14	0,06	0,05	0,03	0,02	0,02	15600	1804		
1550	5141,34	0,28		0,13	0,06	0,04	0,03	0,02	0,02	15600	1804		
1550	5885,71	0,25		0,11	0,05	0,04	0,03	0,02	0,01	15600	1805		
1550	6229,83	0,23		0,11	0,05	0,04	0,03	0,02	0,01	15600	1806		
1550	7458,85	0,19		0,09	0,04	0,03	0,02	0,01	0,01	15600	1808		
1830	4,37	332	MT572	-	65	49	40	31	27	7606	-	109	353
1910	4,95	293	NT572	-	60	46	37	29	24	7923	-	119	
1980	5,63	258		-	55	42	34	26	21	8305	-		
2080	6,43	225		-	51	38	31	24	18	8663	-		
2180	7,41	196		-	46	35	28	21	16	9083	-		
2160	8,34	174		-	41	30	25	19	14	10086	-		
2200	9,48	153		-	36	27	22	16	13	10654	-		
2250	10,85	134		-	33	24	20	14	11	11258	-		
2320	12,50	116		-	29	22	18	13	9,4	11892	-		
2390	14,54	100		42	26	19	16	11	8,1	12621	-		
2460	17,07	85		37	23	17	14	9,1	6,9	13454	-		
2520	19,15	76		34	21	16	12	8,1	6,2	14065	-		
2650	23,02	63		29	18	13	10	6,8	5,1	15021	-		
2750	27,00	54		26	16	12	8,8	5,8	4,4	15943	-		



Motorsuz Güç Devir Sayfaları Gear Units Performance Tables Leistungs- und Drehzahlübersicht von Getriebe



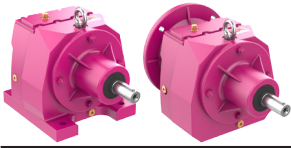
Anma Momenti <i>Nominal Torques</i> Nenn-drehmomente <i>Ma [Nm] (n1=1450rpm)</i>	Çevrim Oranı <i>Ratio</i> Übersetzung <i>i</i>	Çıkış Devri <i>Output Speeds</i> Abtriebs-drehzahlen <i>n2 [r.p.m] (n1=1450rpm)</i>	Tipi <i>Type</i> Typ	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için) <i>Pe= Nominal Power [kW] (For Service Factor fs=1,0)</i> Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Güv. Rad.Yük Çıkış <i>Per.O.Loads (Output)</i> Zul.Querkräfte (Abtrieb) <i>Fqam [N] (n1=1450rpm)</i>	Güv.Rad.Yük Giriş <i>Per.O.Loads (Input)</i> Zul.Querkräfte (Antrieb) <i>Fqem [N] (n1=1450rpm)</i>	Ağırlık <i>Weight</i> Gewicht <i>[kg]</i>	Ölçü Sayfası <i>Dim. Page</i> Maße Seite
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
2390	22,64	64	MT573	27	17	13	10	7,0	5,3	15500	470	111	353
2520	26,54	55	NT573	24	15	11	9,0	5,9	4,5	16343	538	121	
2650	31,38	46		21	13	10	7,7	5,0	3,8	17314	601		
2750	35,31	41		20	12	8,9	6,8	4,5	3,4	18022	595		
2860	39,98	36		18	11	7,9	6,0	4,0	3,0	18799	559		
3000	48,74	30		16	10	6,5	4,9	3,3	2,5	19500	2621		
3000	54,74	26		14	8,8	5,8	4,4	2,9	2,2	19500	2960		
3000	64,72	22		13	7,4	4,9	3,7	2,5	1,9	19500	3030		
3000	72,81	20		12	6,6	4,3	3,3	2,2	1,7	19500	3073		
3000	82,45	18		11	5,8	3,8	2,9	1,9	1,5	19500	3112		
3000	100,53	14		9,5	4,8	3,2	2,4	1,6	1,2	19500	3165		
3000	118,95	12		8,1	4,1	2,7	2,1	1,3	1,0	19500	3202		
3000	134,45	11		7,2	3,6	2,4	1,8	1,2	0,90	19500	3226		
3000	153,61	9,4		6,3	3,2	2,1	1,6	1,0	0,79	19500	3248		
3000	167,32	8,7		5,8	2,9	1,9	1,5	0,96	0,73	19500	3262		
3000	144,37	10	MT574	6,8	3,4	2,2	1,7	1,1	0,85	19500	1537	128	354
3000	171,64	8,4	NT574	5,7	2,9	1,9	1,4	0,94	0,71	19500	1576	138	
3000	194,15	7,5		5,1	2,5	1,7	1,3	0,83	0,63	19500	1601		
3000	221,40	6,5		4,5	2,2	1,5	1,1	0,73	0,55	19500	1623		
3000	258,87	5,6		3,8	1,9	1,3	0,96	0,63	0,47	19500	1647		
3000	291,25	5,0		3,4	1,7	1,1	0,85	0,56	0,42	19500	1712		
3000	301,59	4,8		3,3	1,6	1,1	0,82	0,54	0,41	19500	1826		
3000	343,91	4,2		2,9	1,4	0,94	0,72	0,47	0,36	19500	1840		
3000	402,12	3,6		2,5	1,2	0,81	0,62	0,40	0,31	19500	1855		
3000	485,89	3,0		2,1	1,0	0,67	0,51	0,34	0,25	19500	1871		
3000	574,90	2,5		1,7	0,87	0,57	0,43	0,28	0,24	19500	1927		
3000	620,62	2,3	MT575	1,7	0,82	0,54	0,41	0,27	0,23	19500	1514	132	355
3000	698,26	2,1	NT575	1,5	0,73	0,48	0,37	0,27	0,20	19500	1548	142	
3000	790,68	1,8		1,3	0,65	0,42	0,32	0,24	0,18	19500	1580		
3000	964,05	1,5		1,1	0,53	0,35	0,27	0,19	0,15	19500	1623		
3000	1140,65	1,3		0,90	0,45	0,29	0,25	0,16	0,12	19500	1564		
3000	1259,61	1,2		0,81	0,41	0,27	0,23	0,15	0,11	19500	1670		
3000	1489,14	0,97		0,69	0,34	0,25	0,19	0,13	0,10	19500	1693		
3000	1675,43	0,87		0,61	0,31	0,22	0,17	0,11	0,08	19500	1708		
3000	1897,20	0,76		0,54	0,27	0,20	0,15	0,10	0,07	19500	1721		
3000	2313,18	0,63		0,49	0,25	0,18	0,14	0,09	0,07	19500	1739		
3000	2736,94	0,53		0,42	0,21	0,15	0,12	0,08	0,06	19500	1752		
3000	2850,22	0,51	MT576	0,41	0,20	0,15	0,11	0,07	0,06	19500	1754	134	355
3000	3372,36	0,43	NT576	0,35	0,17	0,13	0,10	0,06	0,05	19500	1765	144	
3000	4402,68	0,33		0,27	0,13	0,10	0,07	0,05	0,04	19500	1778		
3000	4953,44	0,29		0,26	0,12	0,09	0,07	0,04	0,03	19500	1783		
3000	6838,96	0,21		0,19	0,09	0,06	0,05	0,03	0,02	19500	1794		
3000	8091,82	0,18		0,16	0,07	0,05	0,04	0,03	0,02	19500	1798		
2150	3,29	440	MT672	-	101	76	62	47	39	8750	-	171	356
2400	3,79	383	NT672	-	99	74	60	46	38	8825	-	181	
2670	4,37	332		-	95	71	58	44	36	8909	-		
2700	4,53	320		-	93	70	56	43	35	9023	-		
2920	5,08	285		-	90	67	54	42	33	9112	-		
3170	5,73	253		-	86	65	52	39	29	9182	-		
2870	6,88	211		-	65	49	40	30	24	11622	-		
2920	7,91	183		-	58	43	35	27	21	12348	-		
2990	9,13	159		-	51	39	31	24	18	13103	-		
3030	9,47	153		-	50	38	30	23	18	13256	-		
3090	10,62	137		-	46	34	28	21	16	13891	-		
3170	11,97	121		-	42	31	25	19	14	14551	-		
3250	13,58	107		-	38	28	23	16	12	15290	-		
3350	15,53	93		55	34	25	21	14	11	16087	-		
3470	17,93	81		49	30	23	18	12	9,5	16969	-		
3580	20,74	70		44	27	20	16	11	8,2	17939	-		



Motorsuz Güç Devir Sayfaları Gear Units Performance Tables Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
				Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]									
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360	Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
3680	23,18	63	MT672 NT672	40	25	19	15	9,6	7,3	18689	-	171 181	356
3530	26,66	54	MT673	-	20	16	13	8,5	6,4	20248	2575	199	356
3670	30,20	48	NT673	-	19	15	11	7,5	5,7	21127	2680	209	
3820	34,36	42		-	18	13	10	6,6	5,0	22076	2754		
3990	39,30	37		-	16	11	8,8	5,8	4,4	23099	2779		
4160	45,29	32		23	15	10	7,6	5,0	3,8	24263	2802		
4300	52,68	28		21	13	8,6	6,6	4,3	3,3	25671	2882		
4300	53,99	27		20	13	8,4	6,4	4,2	3,2	25956	3607		
4300	61,42	24		19	11	7,4	5,6	3,7	2,8	26500	3673		
4300	70,26	21		17	9,8	6,5	4,9	3,3	2,5	26500	3733		
4300	80,96	18		16	8,5	5,6	4,3	2,8	2,2	26500	3788		
4300	94,17	15		14	7,4	4,8	3,7	2,4	1,9	26500	3838		
4300	110,55	13		12	6,3	4,1	3,2	2,1	1,6	26500	3903		
4300	124,07	12		11	5,6	3,7	2,8	1,9	1,4	26500	3931		
4300	149,11	9,7		9,3	4,7	3,1	2,4	1,5	1,2	26500	3966		
4300	174,89	8,3		7,9	4,0	2,6	2,0	1,3	1,0	26500	3994		
4300	196,61	7,4		7,1	3,6	2,3	1,8	1,2	0,89	26500	4011		
4300	215,97	6,7	MT674	6,6	3,3	2,2	1,6	1,1	0,81	26500	1707	205	357
4300	245,67	5,9	NT674	5,8	2,9	1,9	1,4	0,95	0,72	26500	1815	215	
4300	281,02	5,2		5,1	2,5	1,7	1,3	0,83	0,63	26500	1913		
4300	323,82	4,5		4,4	2,2	1,4	1,1	0,72	0,55	26500	2004		
4300	376,69	3,8		3,8	1,9	1,2	0,95	0,62	0,47	26500	2088		
4300	442,20	3,3		3,2	1,6	1,1	0,80	0,53	0,40	26500	2164		
4300	500,39	2,9		2,9	1,4	0,93	0,71	0,47	0,35	26500	2176		
4300	583,04	2,5	MT675	2,5	1,3	0,82	0,62	0,41	0,31	26500	2037	214	358
4300	673,70	2,2	NT675	2,2	1,1	0,71	0,54	0,35	0,27	26500	2047	225	
4300	730,46	2,0		2,0	1,0	0,65	0,50	0,33	0,28	26500	2053		
4300	874,56	1,7		1,7	0,84	0,55	0,42	0,27	0,23	26500	2063		
4300	995,91	1,5		1,5	0,74	0,48	0,37	0,27	0,20	26500	2069		
4300	1113,08	1,3		1,3	0,66	0,43	0,33	0,24	0,18	26500	2074		
4300	1259,54	1,2		1,2	0,58	0,38	0,29	0,21	0,16	26500	2079		
4300	1432,74	1,01		1,0	0,51	0,34	0,26	0,19	0,14	26500	2097		
4300	1638,93	0,88		0,90	0,45	0,29	0,25	0,16	0,12	26500	2114		
4300	1888,53	0,77		0,78	0,39	0,26	0,22	0,14	0,11	26500	2130		
4300	2196,86	0,66		0,67	0,33	0,24	0,19	0,12	0,09	26500	2144		
4300	2578,93	0,56		0,57	0,28	0,21	0,16	0,10	0,08	26500	2157		
4300	2863,86	0,51	MT676	0,52	0,26	0,19	0,15	0,10	0,07	26500	2191	217	358
4300	3342,43	0,43	NT676	0,50	0,25	0,18	0,14	0,09	0,07	26500	2193	229	
4300	3931,45	0,37		0,43	0,21	0,15	0,12	0,08	0,06	26500	2196		
4300	4674,12	0,31		0,36	0,18	0,13	0,10	0,07	0,05	26500	2198		
4300	5287,12	0,27		0,32	0,16	0,12	0,09	0,06	0,04	26500	2199		
4300	6029,17	0,24		0,28	0,14	0,10	0,08	0,05	0,04	26500	2200		
4300	7490,08	0,19		0,25	0,11	0,08	0,06	0,04	0,03	26500	2202		
4300	8518,13	0,17		0,22	0,10	0,07	0,05	0,04	0,03	26500	2203		
4300	9689,49	0,15		0,19	0,09	0,06	0,05	0,03	0,02	26500	2206		
4300	11083,95	0,13		0,17	0,08	0,06	0,04	0,03	0,02	26500	2210		
4300	12771,99	0,11		0,15	0,07	0,05	0,04	0,02	0,02	26500	2213		
4300	14857,21	0,10		0,13	0,06	0,04	0,03	0,02	0,02	26500	2215		
4300	17441,07	0,08		0,11	0,05	0,04	0,03	0,02	0,01	26500	2218		
3680	4,73	307	MT772	-	121	91	73	56	46	46915	-	296	359
3990	5,38	269	NT772	-	115	87	70	54	44	47449	-	365	
4330	6,15	236		-	110	82	67	51	42	48003	-		
4490	6,52	222		-	107	81	65	50	41	48160	-		
4770	7,26	200		-	102	77	62	48	39	48690	-		
6200	8,46	171		-	114	87	71	49	37	46092	-		



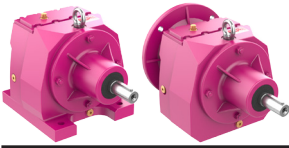
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]						Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360				
6470	9,62	151	MT772	-	105	80	65	43	33	47757	-	296	359
6770	11,00	132	NT772	-	96	73	57	38	29	49515	-	365	
6900	11,65	124		-	93	70	54	35	27	50302	-		
7140	12,98	112		-	86	63	48	32	24	51890	-		
7420	14,54	100		-	80	57	43	28	22	53475	-		
7710	16,39	88		-	74	50	38	25	19	51626	-		
7520	17,40	83	MT773	-	68	48	37	24	18	52000	-	259	359
7810	19,52	74	NT773	-	63	43	33	21	16	50500	-	320	
8000	22,62	64		-	56	37	28	19	14	48500	-		
8000	25,99	56		-	49	32	25	16	12	48500	-		
8000	30,00	48		-	42	28	21	14	11	48500	-		
8000	31,11	47		-	41	27	21	14	10	48500	-		
8000	34,89	42		-	36	24	18	12	9,2	48500	-		
8000	39,33	37		-	32	21	16	11	8,1	48500	-		
8000	44,17	33		-	29	19	15	9,5	7,3	48500	4355		
8000	50,75	29		-	25	17	13	8,3	6,3	48500	4494		
8000	58,59	25		-	22	14	11	7,2	5,5	48500	4619		
8000	60,76	24		-	21	14	11	7,0	5,3	48500	4629		
8000	68,15	21		-	19	12	9,4	6,2	4,7	48500	4714		
8000	76,81	19		-	17	11	8,4	5,5	4,2	48500	4792		
8000	87,13	17		-	15	9,7	7,4	4,9	3,7	48500	4865		
8000	99,63	15		26	13	8,5	6,5	4,3	3,2	48500	1932		
8000	115,06	13		22	11	7,4	5,6	3,7	2,8	48500	1995		
8000	133,05	11		19	9,7	6,4	4,9	3,2	2,4	48500	5070		
8000	148,73	9,7		17	8,7	5,7	4,4	2,9	2,2	48500	5106		
8000	178,78	8,1		14	7,2	4,8	3,6	2,4	1,8	48500	5159		
8000	208,82	6,9		12	6,2	4,1	3,1	2,1	1,6	48500	5195		
8000	190,96	7,6	MT774	14	6,9	4,5	3,4	2,3	1,7	48500	-	269	360
8000	214,17	6,8	NT774	12	6,1	4,0	3,1	2,0	1,5	48500	-	330	
8000	241,42	6,0		11	5,5	3,6	2,7	1,8	1,4	48500	546		
8000	273,85	5,3		9,6	4,8	3,2	2,4	1,6	1,2	48500	1188		
8000	313,11	4,6		8,4	4,2	2,8	2,1	1,4	1,1	48500	1634		
8000	361,62	4,0		7,3	3,7	2,4	1,8	1,2	0,91	48500	1764		
8000	418,17	3,5		6,3	3,2	2,1	1,6	1,0	0,78	48500	1877		
8000	467,43	3,1		5,7	2,8	1,9	1,4	0,93	0,70	48500	1953		
8000	532,29	2,7		5,0	2,5	1,6	1,2	0,82	0,62	48500	1976		
8000	594,92	2,4		4,5	2,2	1,5	1,1	0,73	0,55	48500	1997		
8000	641,40	2,3	MT775	4,2	2,1	1,4	1,1	0,69	0,52	48500	1721	328	361
8000	725,80	2,0	NT775	3,7	1,9	1,2	0,94	0,61	0,46	48500	1736	400	
8000	822,02	1,8		3,3	1,7	1,1	0,82	0,54	0,41	48500	1935		
8000	984,18	1,5		2,8	1,4	0,90	0,69	0,45	0,34	48500	1952		
8000	1120,74	1,3		2,4	1,2	0,80	0,61	0,40	0,30	48500	1962		
8000	1252,60	1,2		2,2	1,1	0,71	0,54	0,36	0,27	48500	1971		
8000	1417,41	1,0		1,9	0,96	0,63	0,48	0,32	0,27	48500	1978		
8000	1589,68	0,91		1,7	0,86	0,56	0,43	0,28	0,24	48500	2006		
8000	1791,91	0,81		1,5	0,76	0,50	0,38	0,28	0,21	48500	2031		
8000	2032,66	0,71		1,4	0,67	0,44	0,34	0,24	0,19	48500	2055		
8000	2324,10	0,62		1,2	0,59	0,39	0,29	0,21	0,16	48500	2077		
8000	2684,10	0,54		1,0	0,51	0,33	0,26	0,19	0,14	48500	2098		
8000	3103,85	0,47		0,88	0,44	0,29	0,24	0,16	0,12	48500	2116		
8000	3814,39	0,38		0,72	0,36	0,26	0,20	0,13	0,10	48500	2121		
8000	4263,81	0,34		0,64	0,32	0,23	0,18	0,12	0,09	48500	2133		
8000	4812,09	0,30		0,57	0,29	0,21	0,16	0,10	0,08	48500	2135		
8000	2916,59	0,50	MT776	0,96	0,48	0,31	0,27	0,17	0,13	48500	2160	332	361
8000	3222,83	0,45	NT776	0,87	0,43	0,28	0,24	0,16	0,12	48500	2164	405	
8000	3761,39	0,39		0,74	0,37	0,27	0,21	0,14	0,10	48500	2168		
8000	4424,24	0,33		0,63	0,32	0,23	0,18	0,12	0,09	48500	2172		
8000	5260,00	0,28		0,53	0,27	0,19	0,15	0,10	0,07	48500	2175		
8000	5949,83	0,24		0,52	0,26	0,19	0,15	0,10	0,07	48500	2177		



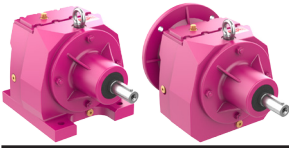
Motorsuz Güç Devir Sayfaları

Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe



Anma Momenti	Çevrim Oranı	Çıkış Devri	Tipi	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)						Güv. Rad.Yük Çıkış	Güv.Rad.Yük Giriş	Ağırlık	Ölçü Sayfası
Nominal Torques	Ratio	Output Speeds	Type	Pe= Nominal Power [kW] (For Service Factor fs=1,0)						Per.O.Loads (Output)	Per.O.Loads (Input)	Weight	Dim. Page
Nenn-drehmomente	Übersetzung	Abtriebs-drehzahlen	Typ	Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)	Gewicht	Maße Seite
Ma [Nm] (n1=1450rpm)	i	n2 [r.p.m] (n1=1450rpm)		n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360	Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)	[kg]	
8000	6784,90	0,21	MT776	0,46	0,23	0,17	0,13	0,08	0,06	48500	2179	332	361
8000	8428,93	0,17	NT776	0,37	0,19	0,14	0,10	0,07	0,05	48500	2182	405	
8000	9585,84	0,15		0,33	0,16	0,12	0,09	0,06	0,05	48500	2184		
8000	10750,89	0,13		0,29	0,15	0,11	0,08	0,05	0,04	48500	2189		
8000	12118,56	0,12		0,26	0,13	0,09	0,07	0,05	0,04	48500	2194		
8000	13746,73	0,11		0,25	0,11	0,08	0,06	0,04	0,03	48500	2198		
8000	15717,68	0,09		0,22	0,10	0,07	0,06	0,04	0,03	48500	2203		
8000	18152,38	0,08		0,19	0,09	0,06	0,05	0,03	0,02	48500	2207		
8000	20991,08	0,07		0,17	0,07	0,05	0,04	0,03	0,02	48500	2210		
8000	23464,25	0,06		0,15	0,07	0,05	0,04	0,02	0,02	48500	2212		
8700	4,32	336	MT872	-	319	238	192	146	118	57369	-	550	362
9000	4,95	293	NT872	-	287	215	173	133	103	59951	-	560	
9550	5,22	278		-	289	216	175	129	98	42712	-		
9900	5,99	242		-	261	196	158	112	85	44736	-		
10200	6,64	218		-	243	182	146	101	77	46180	-		
10600	7,55	192		-	222	166	133	89	68	48005	-		
11200	8,87	163		-	200	149	116	76	58	75086	-		
11500	10,09	144		-	180	134	102	67	51	78329	-		
12700	11,59	125	MT873	-	177	119	91	59	45	74662	-	555	362
13000	13,30	109	NT873	-	158	103	79	52	39	72000	-	565	
13000	14,02	103		-	150	98	75	49	37	56769	-		
13000	16,09	90		-	131	86	65	43	32	61500	-		
13000	17,83	81		-	118	77	59	39	29	65164	-		
13000	20,28	72		-	104	68	52	34	26	69914	-		
13000	23,87	61		-	88	58	44	29	22	72000	-		
13000	27,39	53		-	77	50	38	25	19	72000	-		
13000	30,36	48		-	69	45	35	23	17	72000	-		
13000	34,53	42		-	61	40	30	20	15	72000	-		
13000	40,55	36		-	52	34	26	17	13	72000	570		
13000	46,12	31		-	46	30	23	15	11	72000	1722		
13000	52,86	27		-	40	26	20	13	9,9	72000	2253		
13000	56,54	26	74	37	24	19	12	9,2	72000	-			
13000	64,77	22	65	32	21	16	11	8,1	72000	-			
13000	75,51	19	56	28	18	14	9,1	6,9	72000	3485			
13000	86,51	17	49	24	16	12	8,0	6,0	72000	3895			
13000	99,81	15	42	21	14	11	6,9	5,2	72000	4492			
13000	110,17	13	38	19	12	9,5	6,2	4,7	72000	4631			
13000	107,60	13	MT874	39	20	13	9,9	6,5	4,9	72000	569	590	363
13000	125,70	12	NT874	34	17	11	8,5	5,5	4,2	72000	1172	600	
13000	147,61	9,8		29	14	9,5	7,2	4,7	3,6	72000	1704		
13000	174,68	8,3		24	12	8,0	6,1	4,0	3,0	72000	2176		
13000	188,08	7,7		23	11	7,4	5,7	3,7	2,8	72000	2568		
13000	211,60	6,9		20	10	6,6	5,0	3,3	2,5	72000	2638		
13000	239,61	6,1		18	8,9	5,8	4,5	2,9	2,2	72000	2697		
13000	292,15	5,0		15	7,3	4,8	3,7	2,4	1,8	72000	2774		
13000	345,67	4,2		12	6,2	4,1	3,1	2,0	1,5	72000	2831		
13000	390,74	3,7		11	5,5	3,6	2,8	1,8	1,4	72000	2867		
13000	446,42	3,2		9,6	4,8	3,2	2,4	1,6	1,2	72000	2901		
13000	495,97	2,9	MT875	8,9	4,4	2,9	2,2	1,5	1,1	72000	1470	618	364
13000	537,75	2,7	NT875	8,2	4,1	2,7	2,0	1,3	1,0	72000	1494	628	
13000	643,84	2,3		6,8	3,4	2,2	1,7	1,1	0,85	72000	1535		
13000	718,74	2,0		6,1	3,1	2,0	1,5	1,0	0,76	72000	1607		
13000	807,91	1,8		5,5	2,7	1,8	1,4	0,89	0,68	72000	1676		
13000	915,85	1,6		4,8	2,4	1,6	1,2	0,79	0,60	72000	1742		
13000	1049,18	1,4		4,2	2,1	1,4	1,1	0,69	0,52	72000	1804		
13000	1210,51	1,2		3,6	1,8	1,2	0,91	0,60	0,45	72000	1861		
13000	1336,15	1,1		3,3	1,7	1,1	0,83	0,54	0,41	72000	1896		
13000	1521,55	0,95		2,9	1,5	0,95	0,73	0,48	0,36	72000	1908		

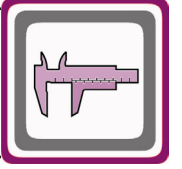
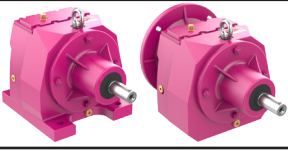


Motorsuz Güç Devir Sayfaları Gear Units Performance Tables Leistungs- und Drehzahlübersicht von Getriebe



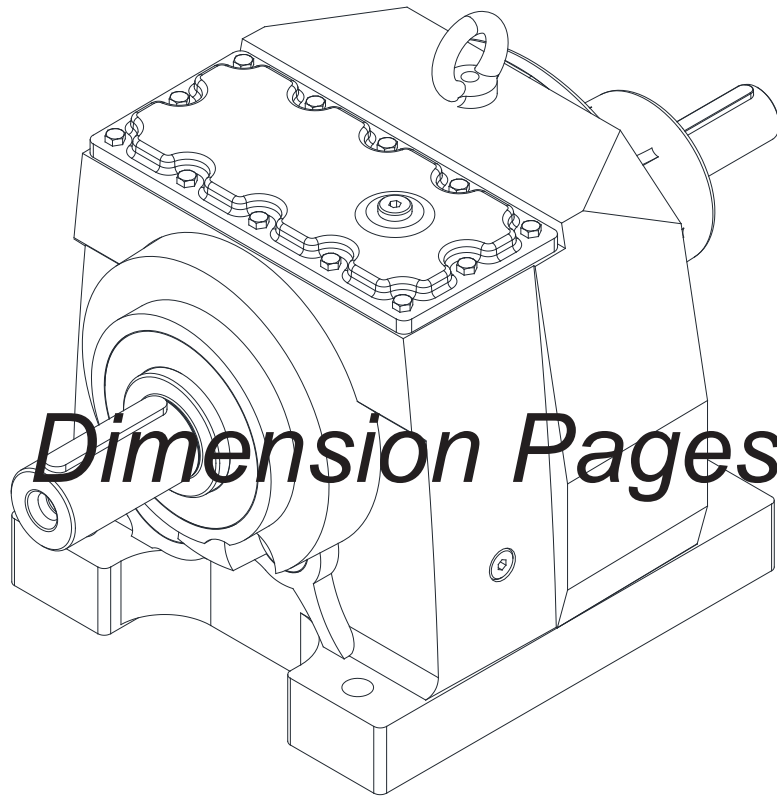
Anma Momenti <i>Nominal Torques</i> Nenn-drehmomente Ma [Nm] (n1=1450rpm)	Çevrim Oranı <i>Ratio</i> Übersetzung i	Çıkış Devri <i>Output Speeds</i> Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	Tipi <i>Type</i> Typ	Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için) <i>Pe= Nominal Power [kW] (For Service Factor fs=1,0)</i> <i>Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0)</i>						Güv. Rad.Yük Çıkış <i>Per.O.Loads (Output)</i>	Güv.Rad.Yük Giriş <i>Per.O.Loads (Input)</i>	Ağırlık <i>Weight</i> Gewicht [kg]	Ölçü Sayfası <i>Dim. Page</i> Maße Seite
				Giriş devri[d/d] / Input speed[rpm] / Antriebsdrehzahl[upm]						Zul.Querkräfte (Abtrieb)	Zul.Querkräfte (Antrieb)		
				n1=2900	n1=1450	n1=950	n1=725	n1=475	n1=360	Fqam [N] (n1=1450rpm)	Fqem [N] (n1=1450rpm)		
18000	462,18	3,1	MT975	13	6,5	4,3	3,3	2,1	1,6	94500	1743	1100	367
18000	546,94	2,7	NT975	11	5,5	3,6	2,8	1,8	1,4	94500	1801	1150	
18000	588,87	2,5		10	5,1	3,4	2,6	1,7	1,3	94500	1844		
18000	662,54	2,2		9,1	4,6	3,0	2,3	1,5	1,1	94500	1876		
18000	750,24	1,9		8,1	4,0	2,7	2,0	1,3	1,0	94500	1905		
18000	842,80	1,7		7,2	3,6	2,4	1,8	1,2	0,90	94500	1922		
18000	914,74	1,6		6,6	3,3	2,2	1,7	1,1	0,82	94500	1943		
18000	1082,31	1,3		5,6	2,8	1,8	1,4	0,92	0,70	94500	1971		
18000	1213,85	1,2		5,0	2,5	1,7	1,3	0,82	0,62	94500	2040		
18000	1368,27	1,1		4,5	2,2	1,5	1,1	0,73	0,55	94500	2103		
18000	1552,10	0,93		3,9	2,0	1,3	0,98	0,64	0,49	94500	2162		
18000	1820,78	0,80		3,4	1,7	1,1	0,84	0,55	0,42	94500	2226		
18000	2027,97	0,71		3,0	1,5	0,99	0,75	0,49	0,37	94500	2265		
18000	2836,64	0,51	MT976	2,2	1,1	0,72	0,55	0,36	0,27	94500	2396	1105	367
18000	3594,81	0,40	NT976	1,7	0,87	0,57	0,43	0,28	0,24	94500	2411	1155	
18000	4227,50	0,34		1,5	0,74	0,48	0,37	0,27	0,20	94500	2463		
18000	4474,67	0,32		1,4	0,70	0,46	0,35	0,25	0,19	94500	2466		
18000	5357,43	0,27		1,2	0,59	0,38	0,29	0,21	0,16	94500	2473		
18000	6842,29	0,21		0,92	0,46	0,30	0,26	0,17	0,13	94500	2491		
18000	8620,11	0,17		0,73	0,36	0,27	0,20	0,13	0,10	94500	2506		
18000	11064,86	0,13		0,57	0,28	0,21	0,16	0,10	0,08	94500	2520		
18000	15951,72	0,09		0,44	0,22	0,16	0,12	0,08	0,06	94500	2535		
18000	20051,59	0,07		0,35	0,18	0,13	0,10	0,06	0,05	94500	2542		

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.



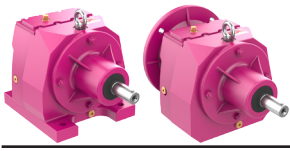
MT & NT Serisi / Serie

Ölçü Sayfaları

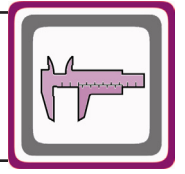


Dimension Pages

Abmessungsseiten

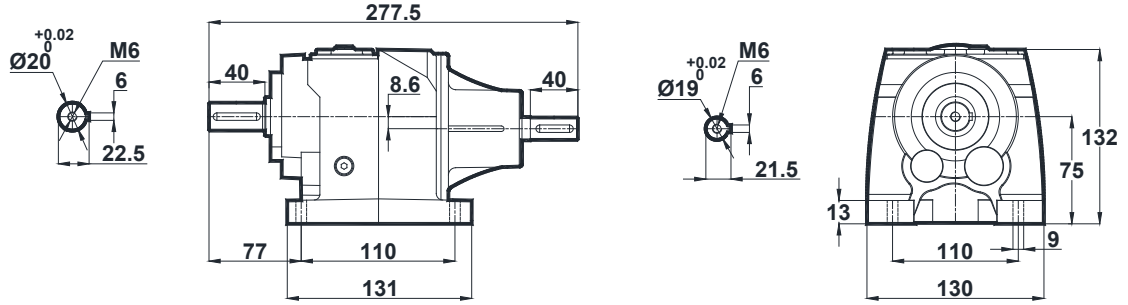


Ölçü Sayfaları Dimension Pages Abmessungsseiten

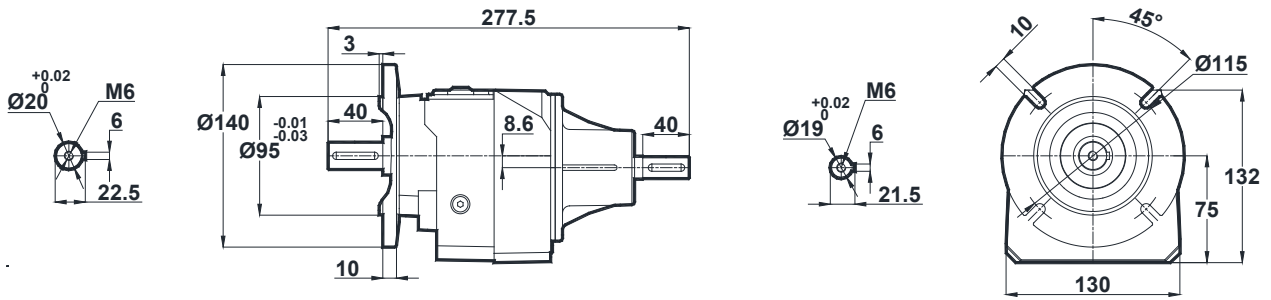


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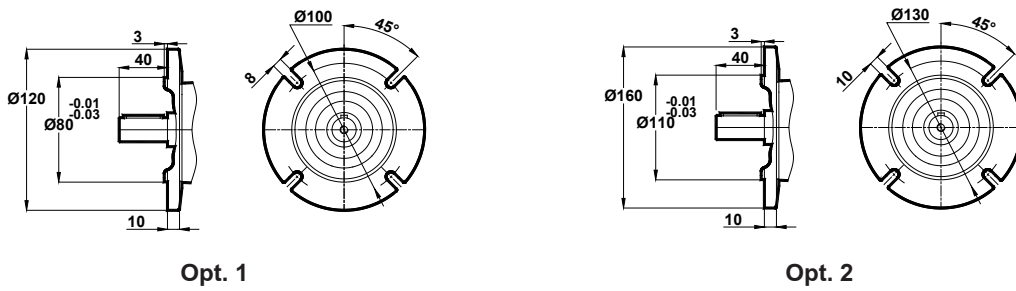
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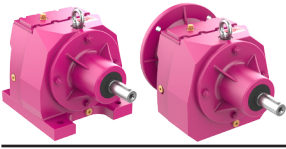


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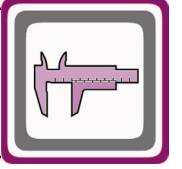


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



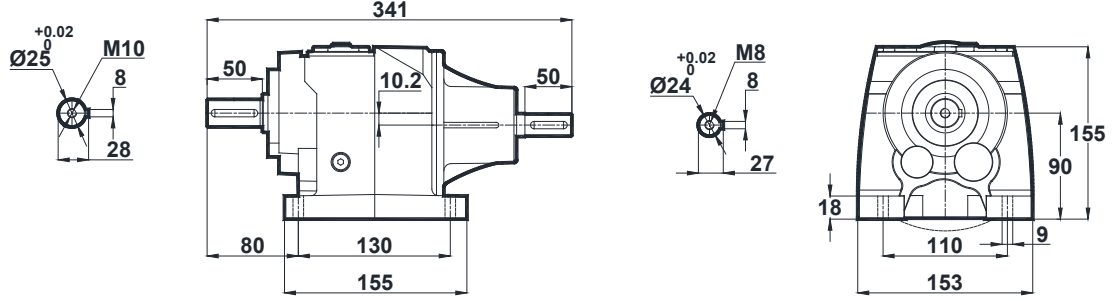


Ölçü Sayfaları Dimension Pages Abmessungenseiten

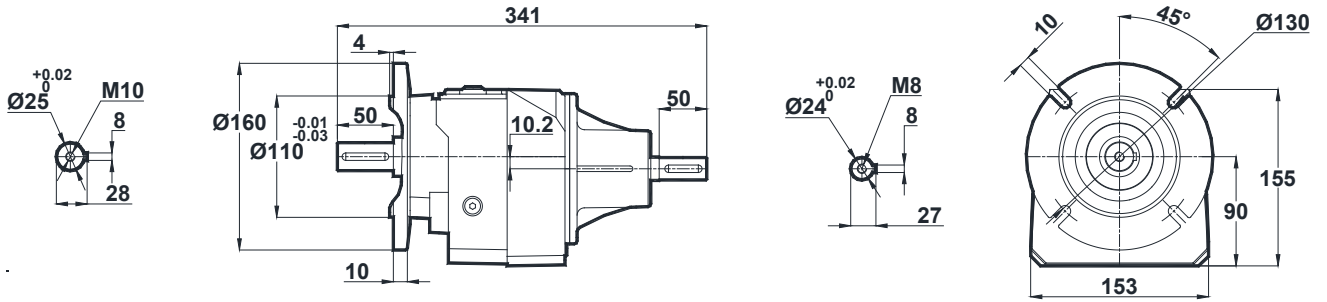


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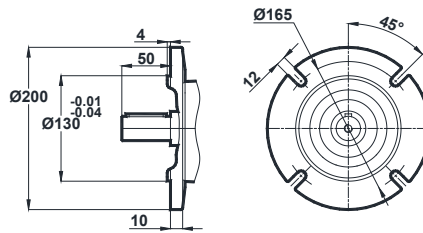
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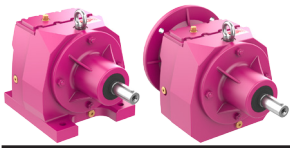
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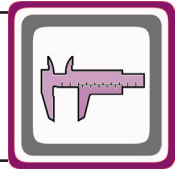
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

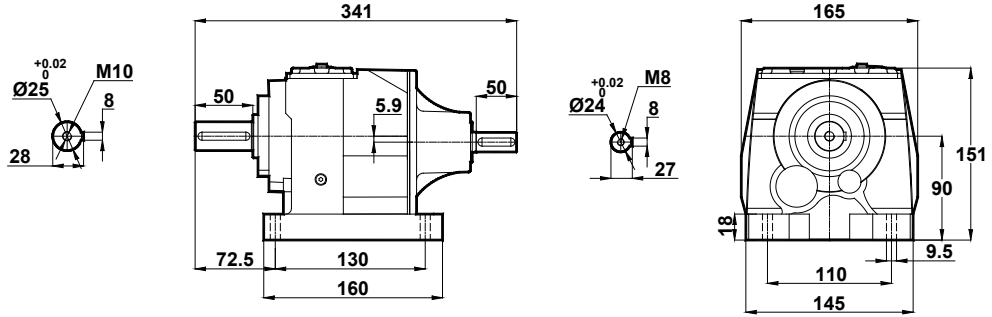


Ölçü Sayfaları Dimension Pages Abmessungsseiten

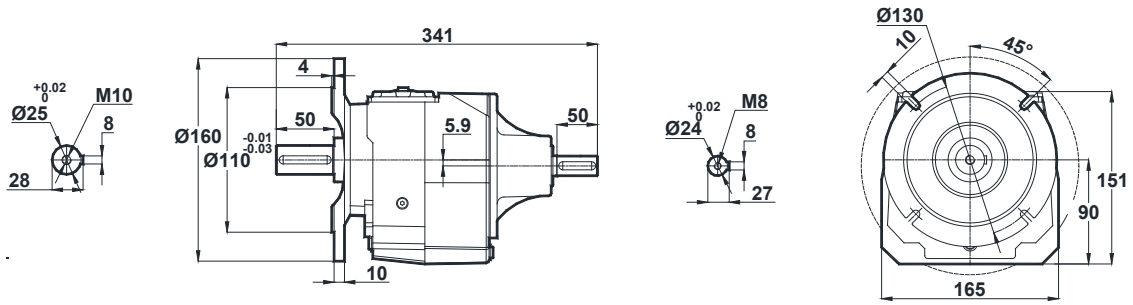


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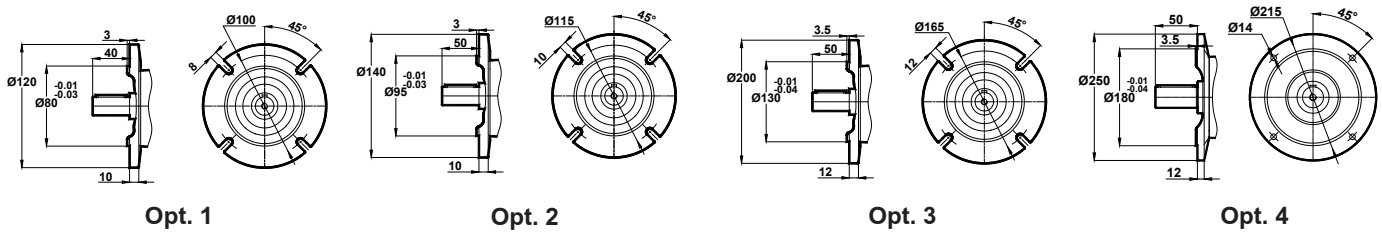
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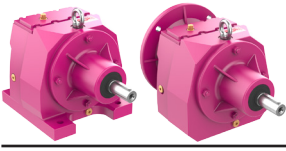


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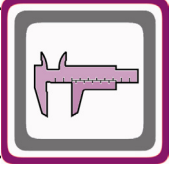


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



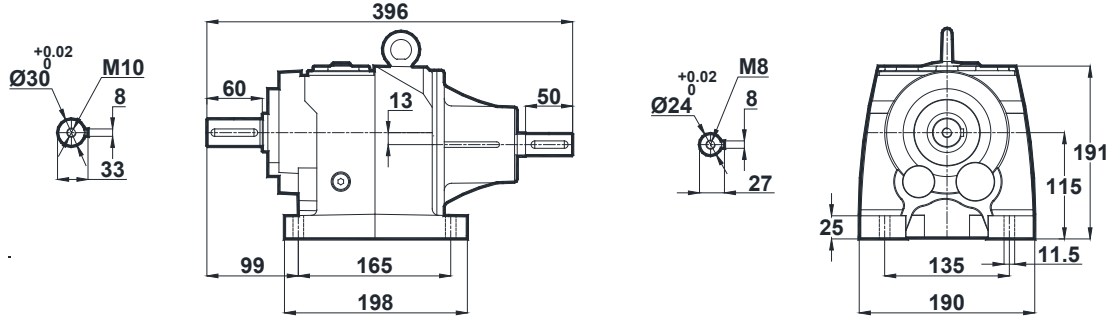


Ölçü Sayfaları Dimension Pages Abmessungen

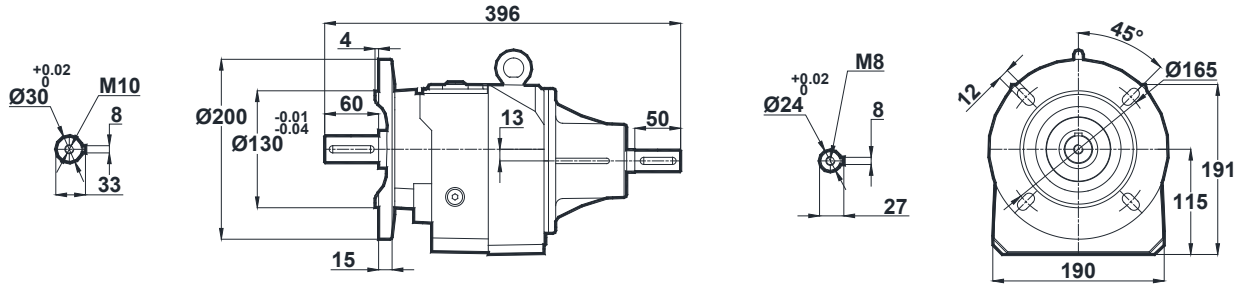


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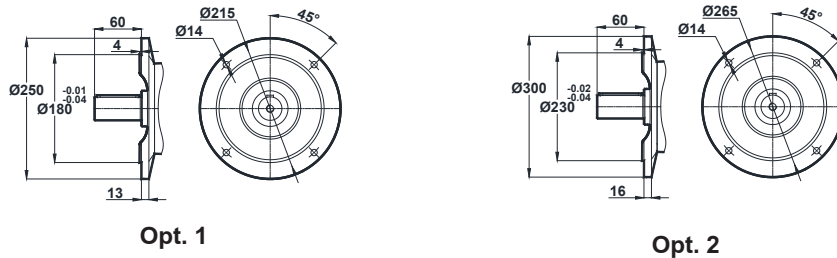
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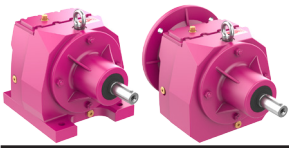


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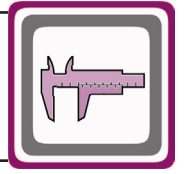


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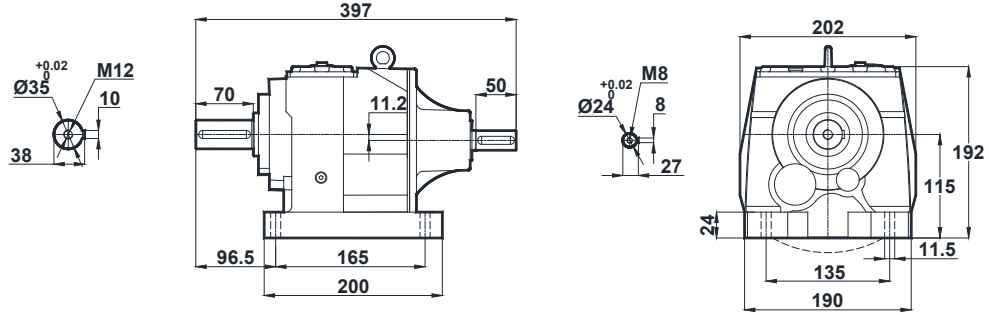


Ölçü Sayfaları Dimension Pages Abmessungen

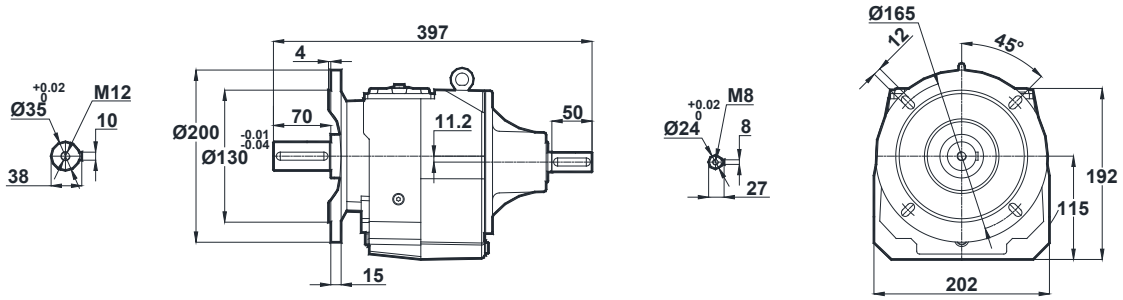


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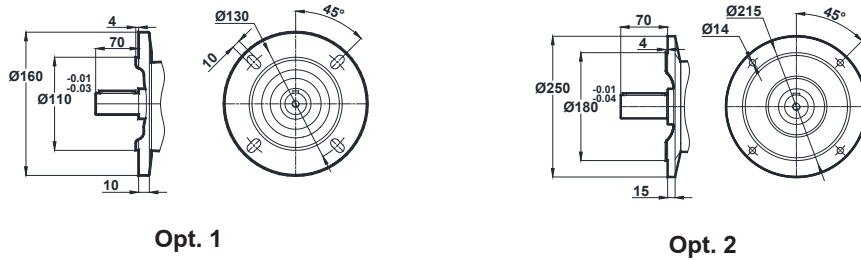
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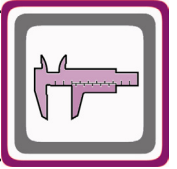


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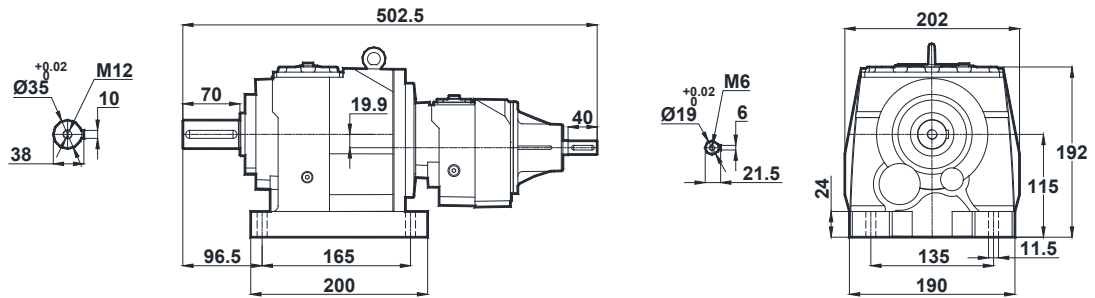
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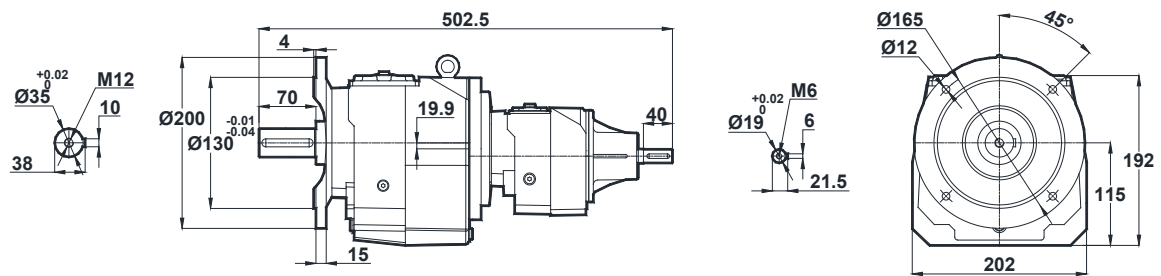


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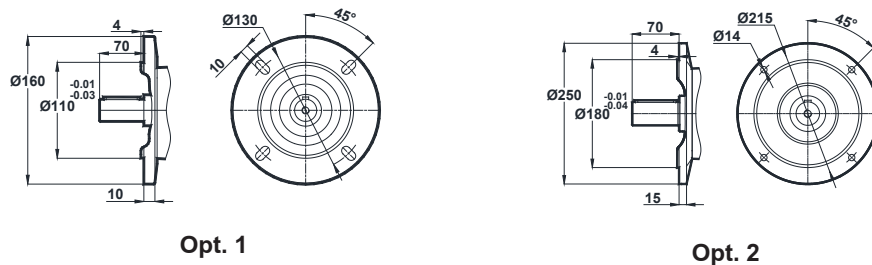
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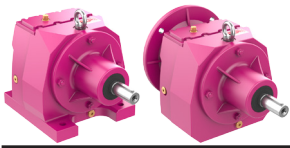


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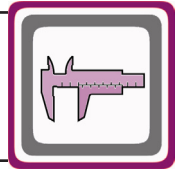


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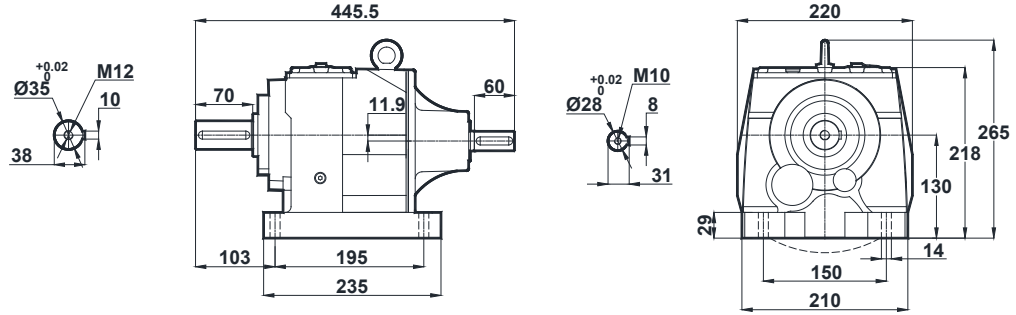


Ölçü Sayfaları Dimension Pages Abmessungsseiten

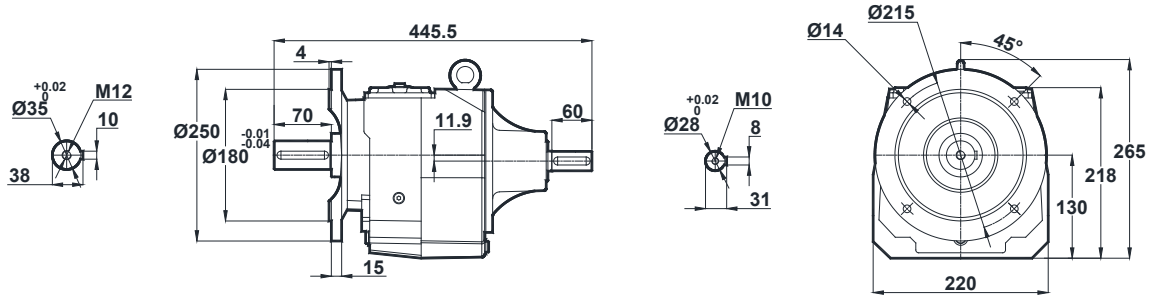


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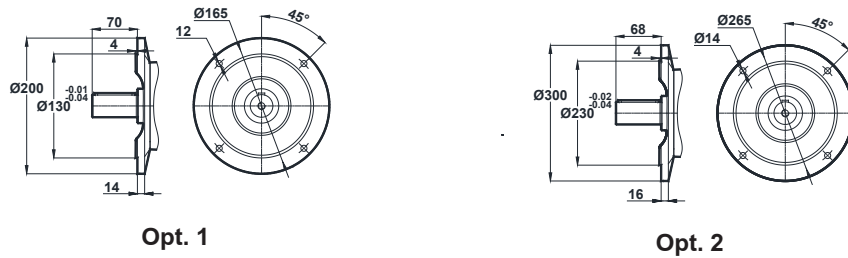
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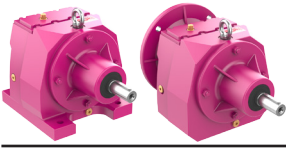


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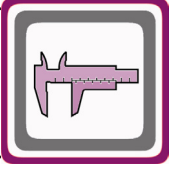


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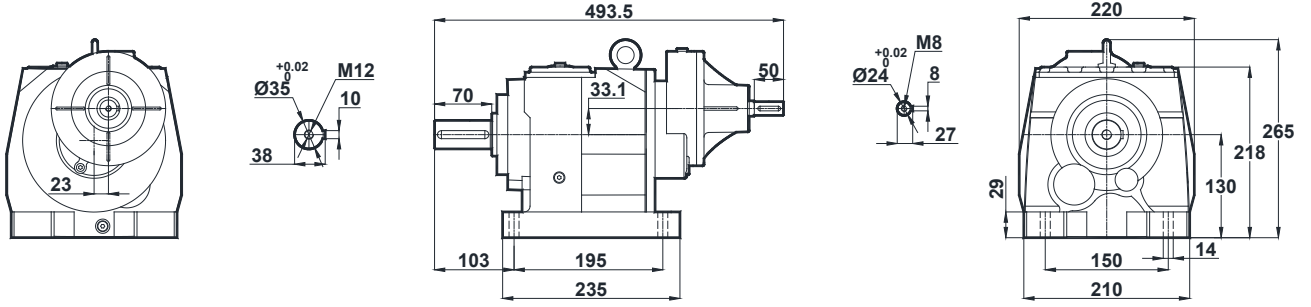


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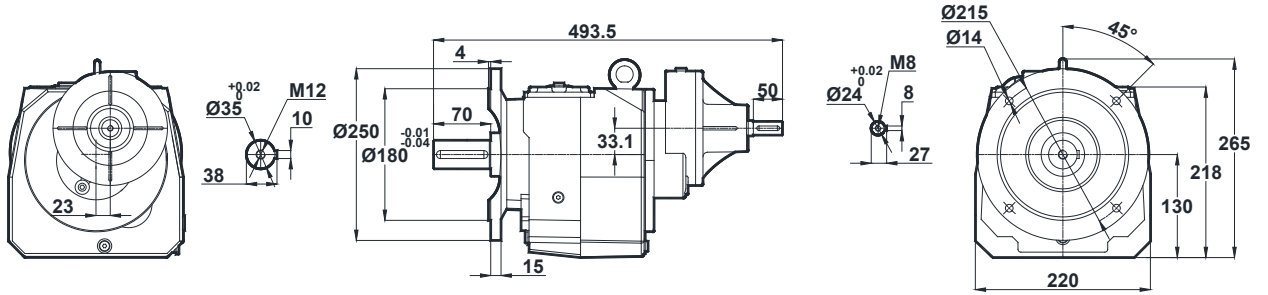


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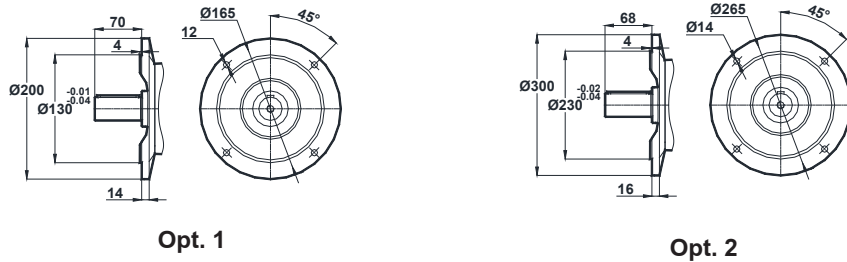
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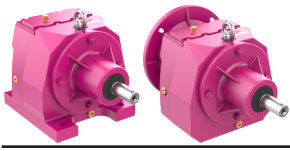


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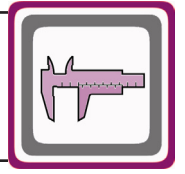


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



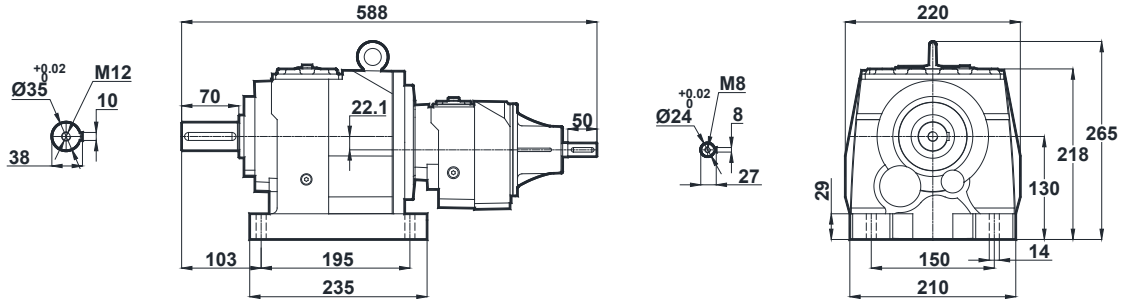


Ölçü Sayfaları Dimension Pages Abmessungsseiten

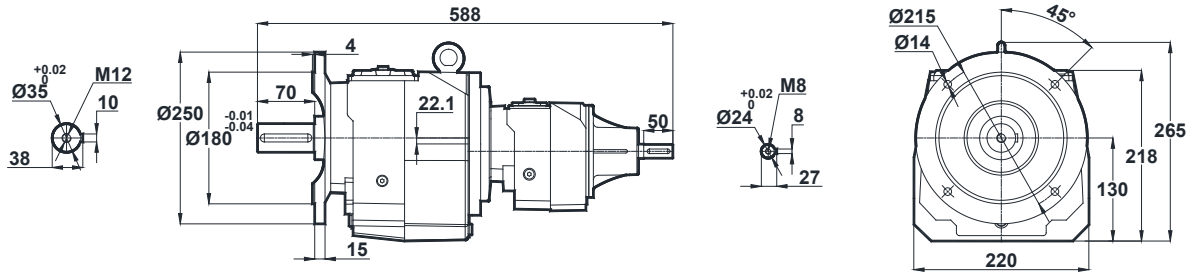


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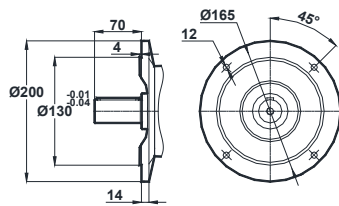
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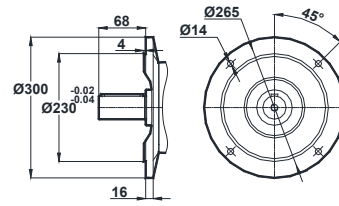
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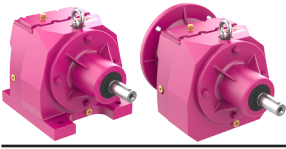
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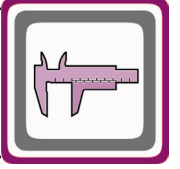
Opt. 1



Opt. 2

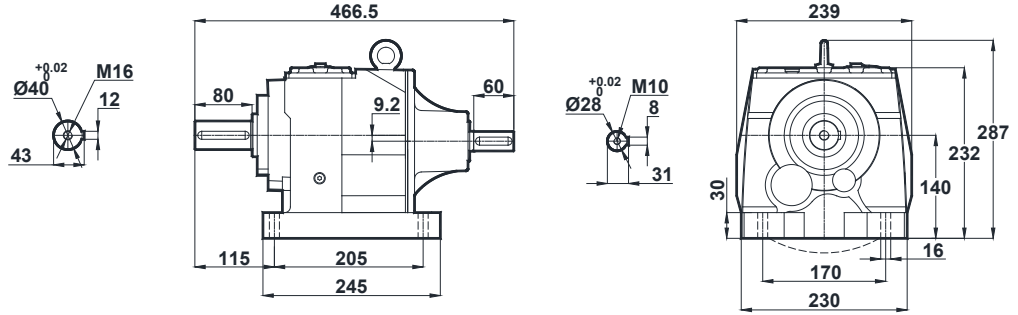


Ölçü Sayfaları Dimension Pages Abmessungenseiten

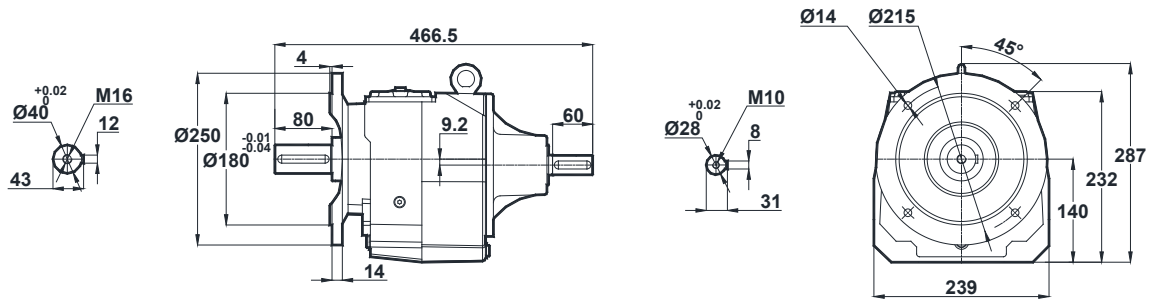


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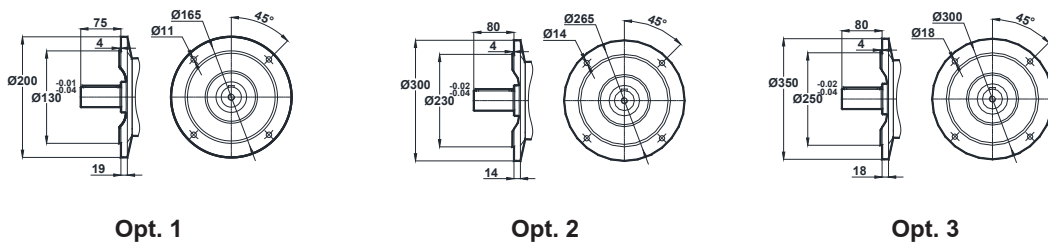
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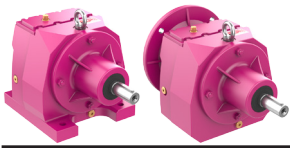


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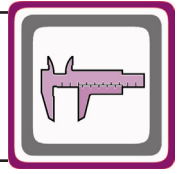


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



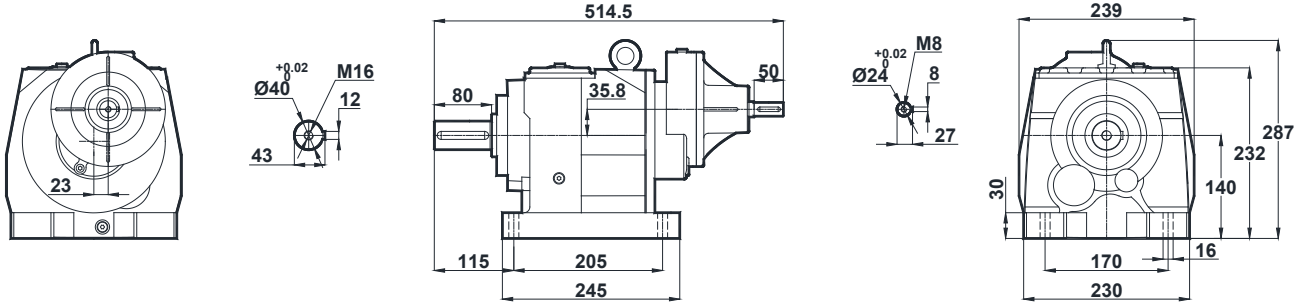


Ölçü Sayfaları Dimension Pages Abmessungsseiten

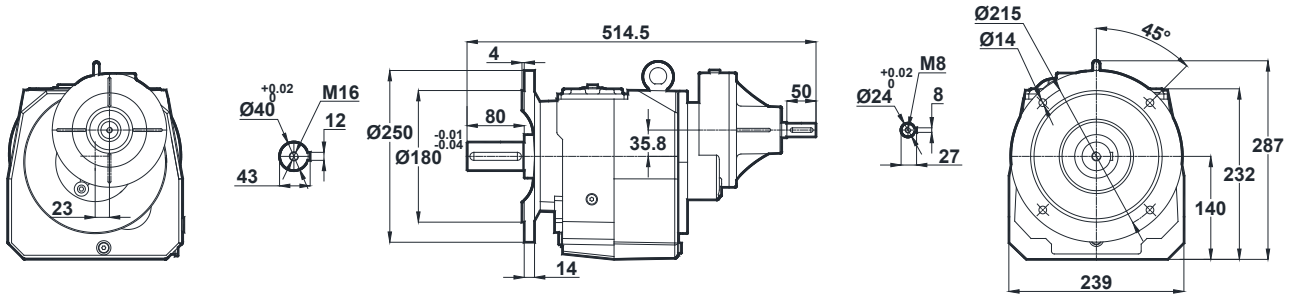


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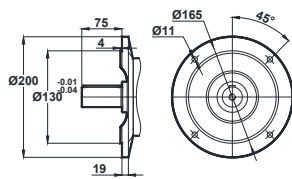
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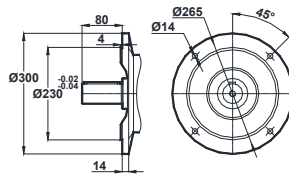
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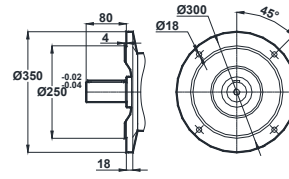
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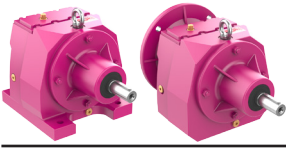
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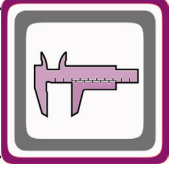
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Opt. 3

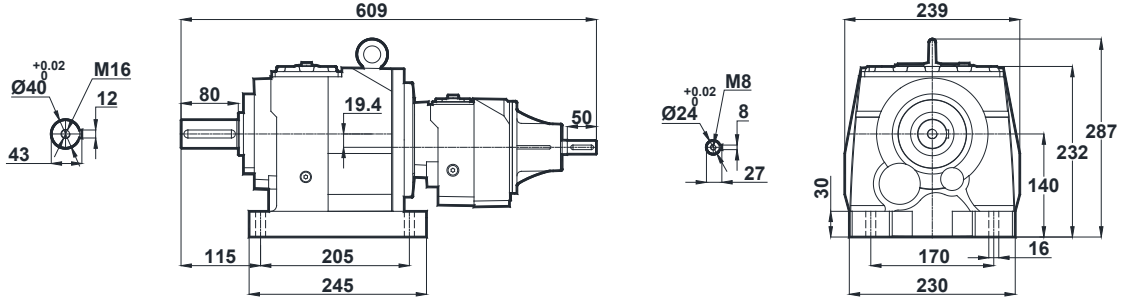


Ölçü Sayfaları Dimension Pages Abmessungsseiten

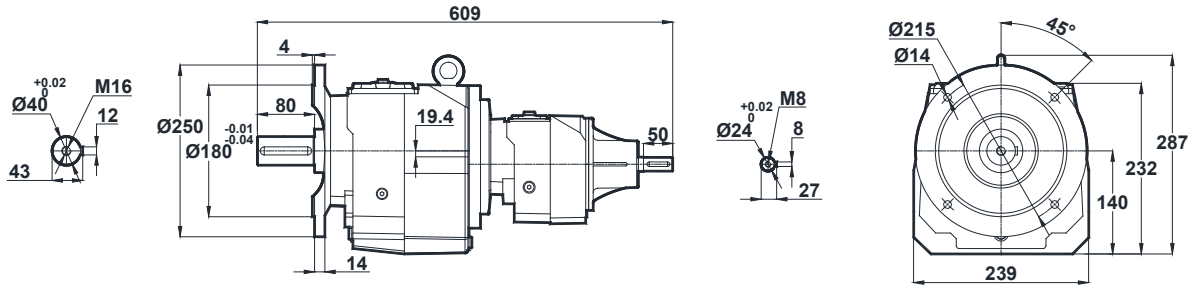


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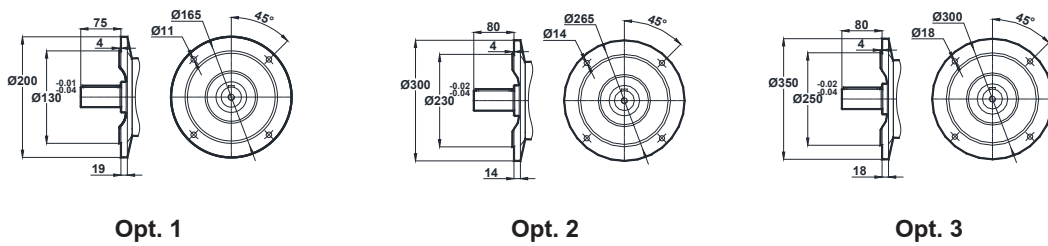
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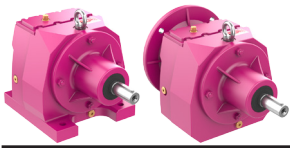


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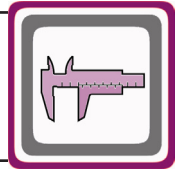


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



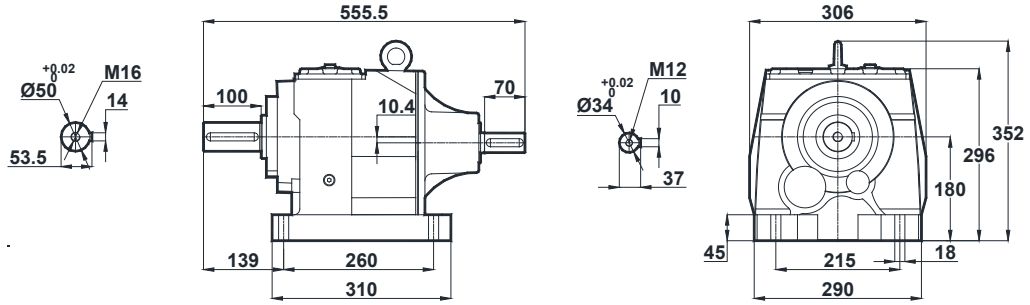


Ölçü Sayfaları Dimension Pages Abmessungsseiten

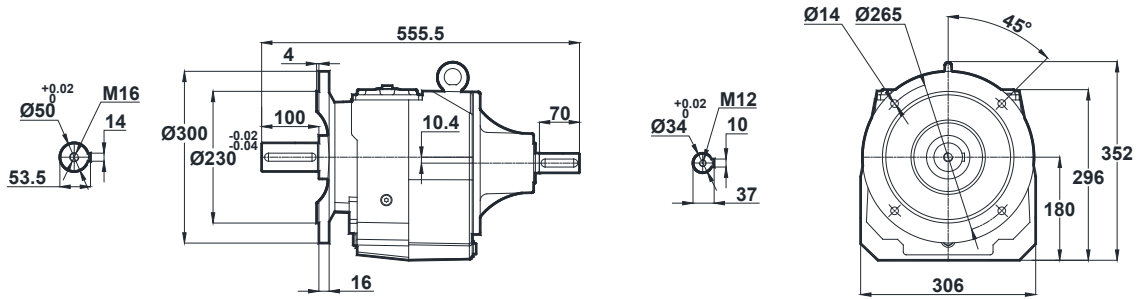


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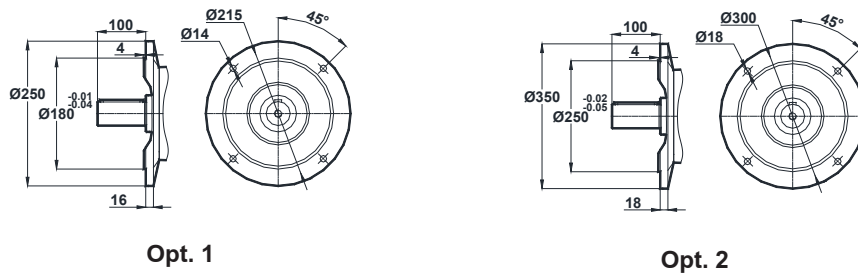
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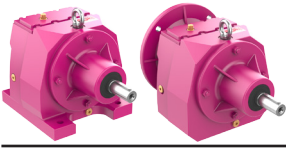


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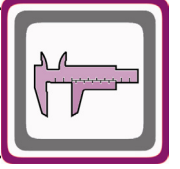


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



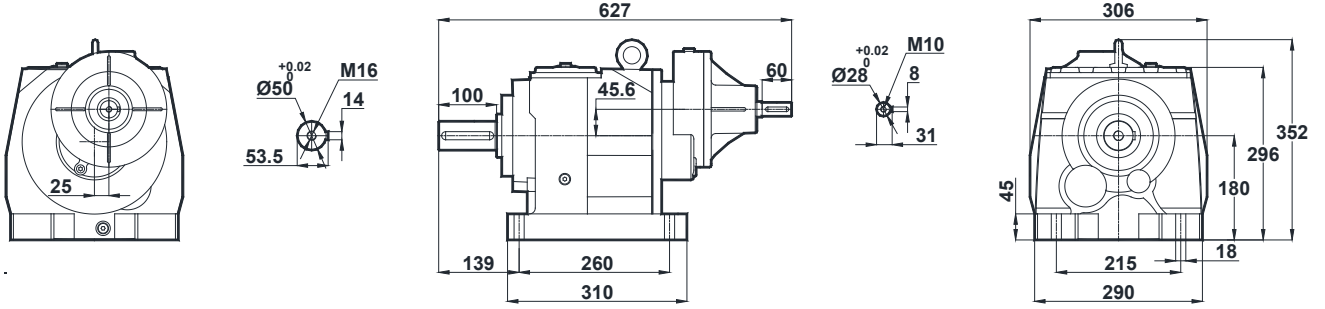


Ölçü Sayfaları Dimension Pages Abmessungenseiten

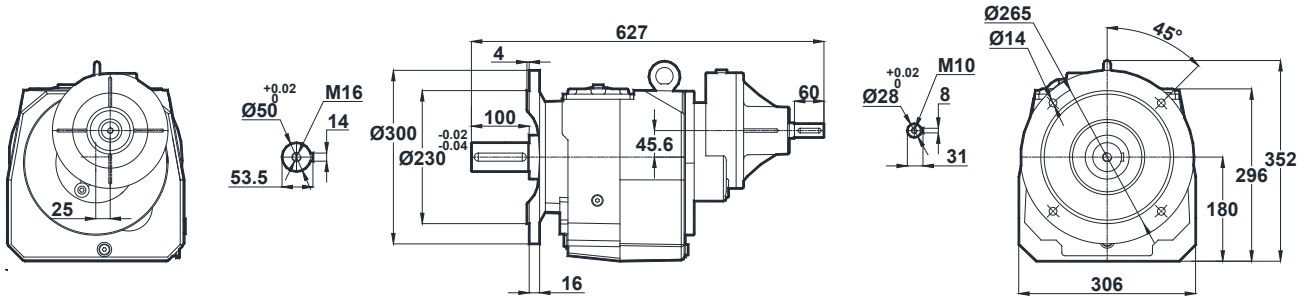


-Mil ucu çekirme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

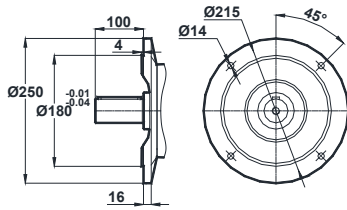
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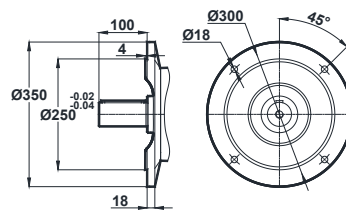
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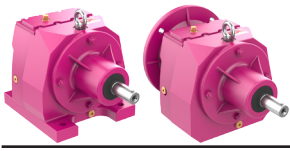
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



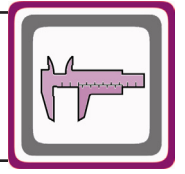
Opt. 1



Opt. 2

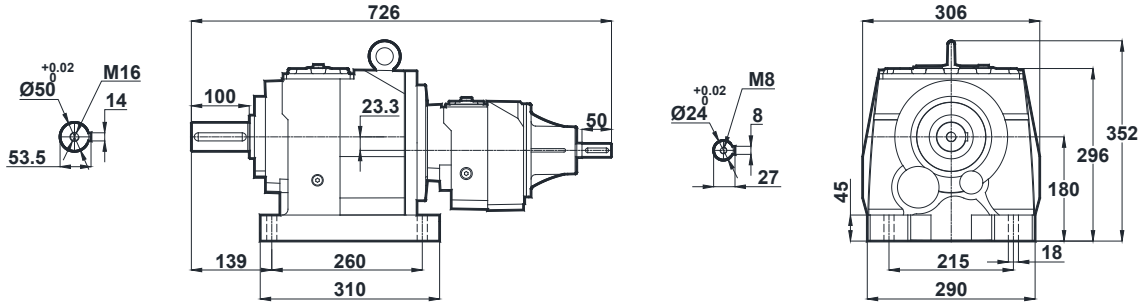


Ölçü Sayfaları Dimension Pages Abmessungsseiten

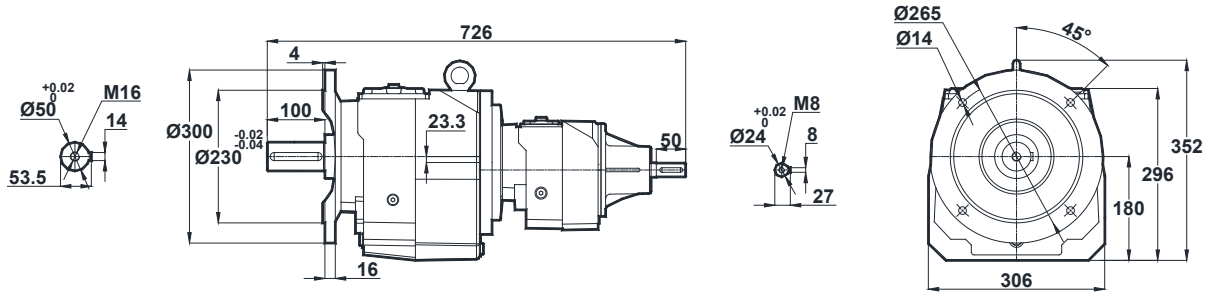


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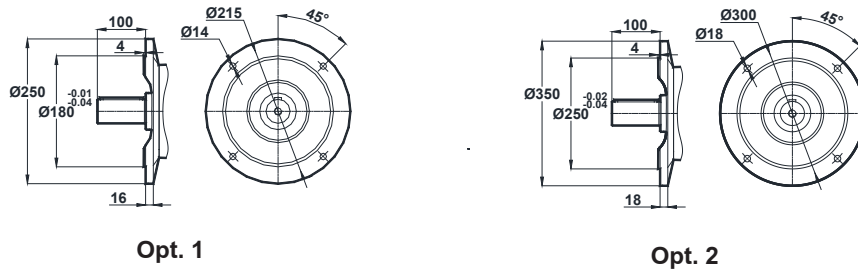
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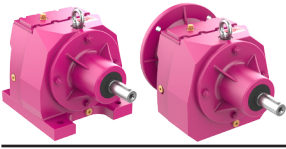


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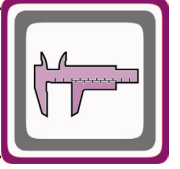


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



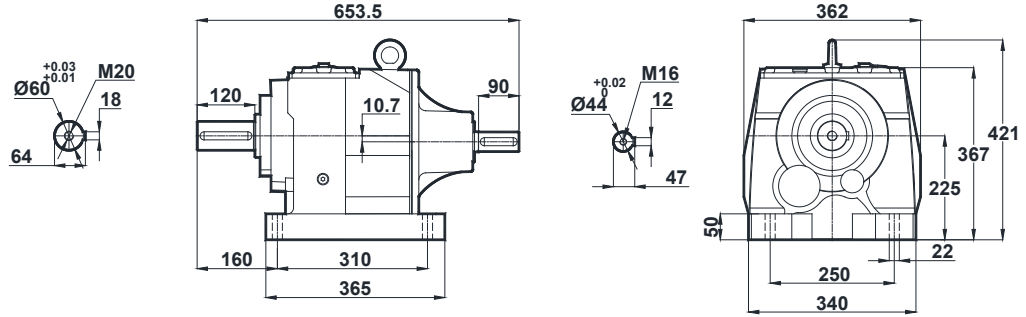


Ölçü Sayfaları Dimension Pages Abmessungenseiten

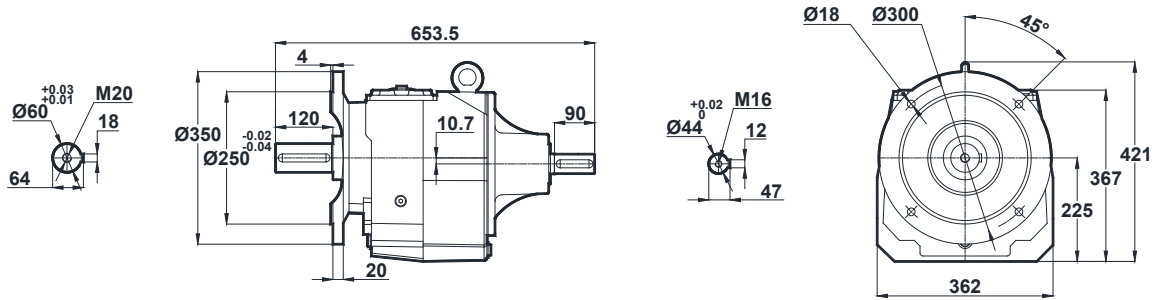


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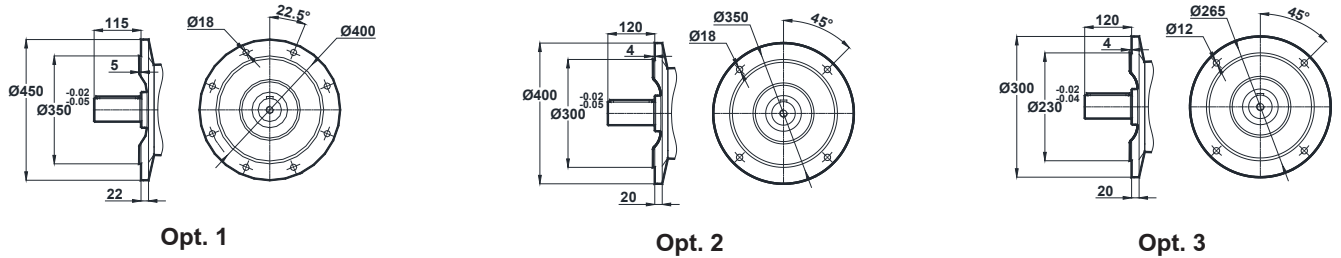
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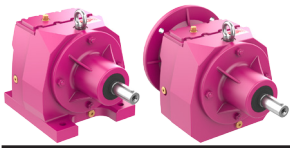


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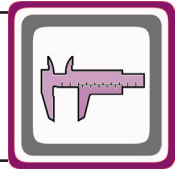


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



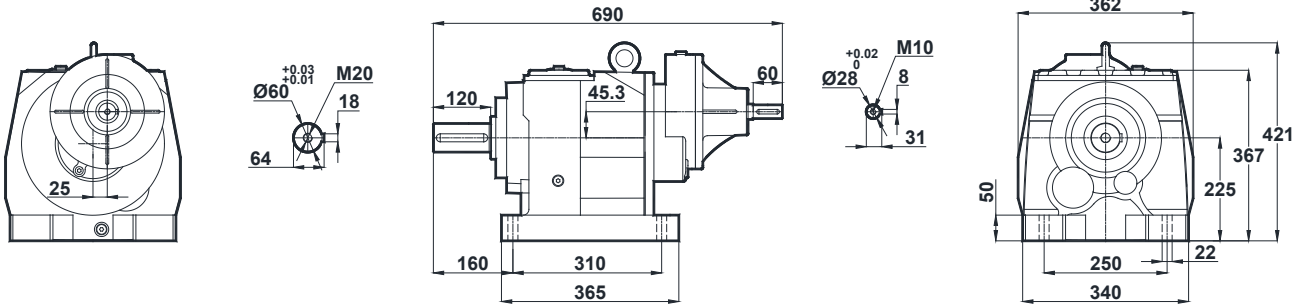


Ölçü Sayfaları Dimension Pages Abmessungenseiten

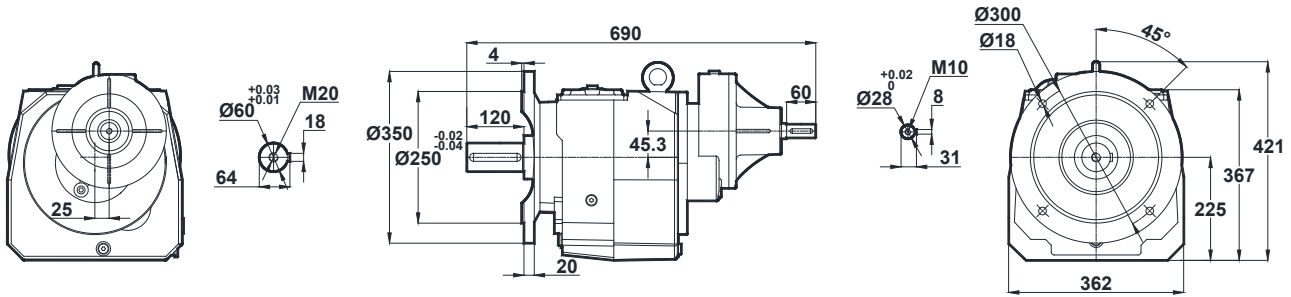


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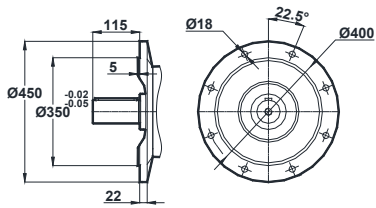
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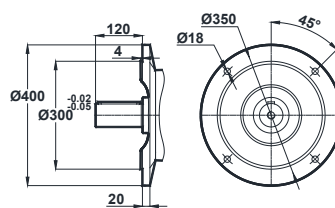
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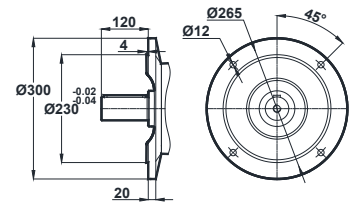
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



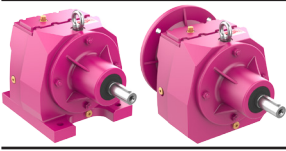
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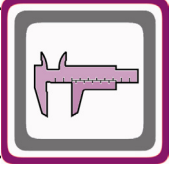
Opt. 2



Opt. 3

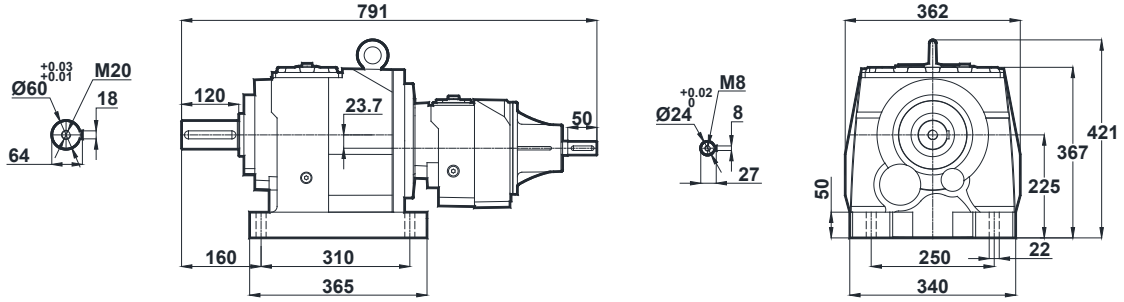


Ölçü Sayfaları Dimension Pages Abmessungenseiten

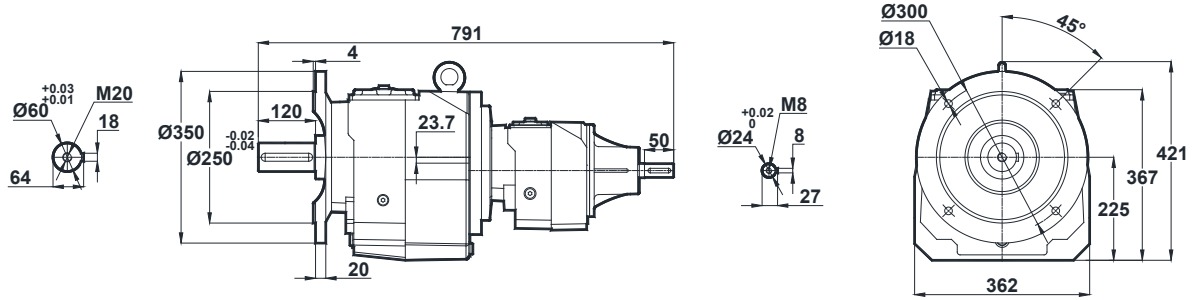


-Mil ucu çekirtme deliği DIN 332 sayfa 2 / Tapped center hole to DIN 332, sheet 2 / Zentrierung mit Gewinde DIN 332, Blatt 2

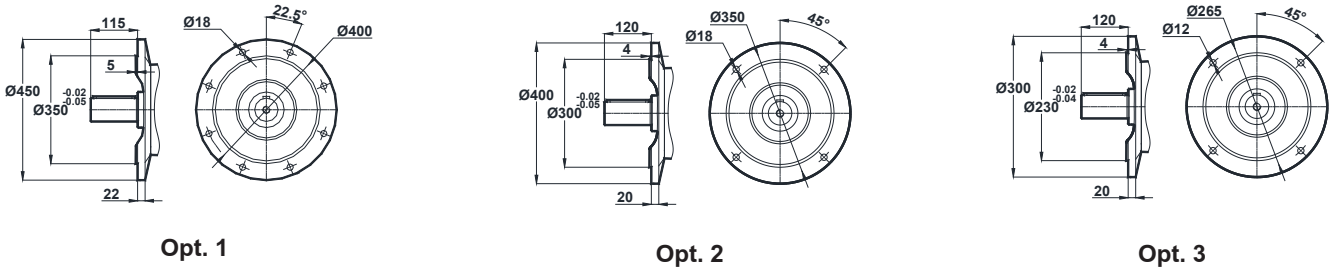
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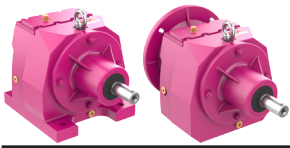


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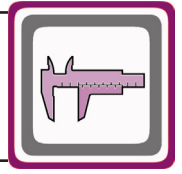


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



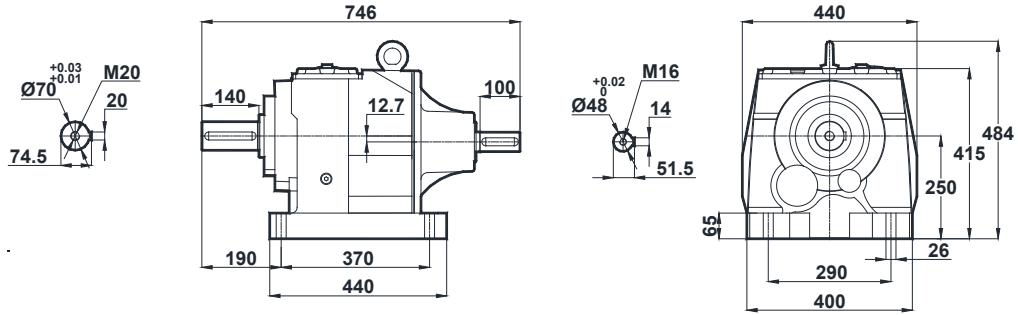


Ölçü Sayfaları Dimension Pages Abmessungsseiten

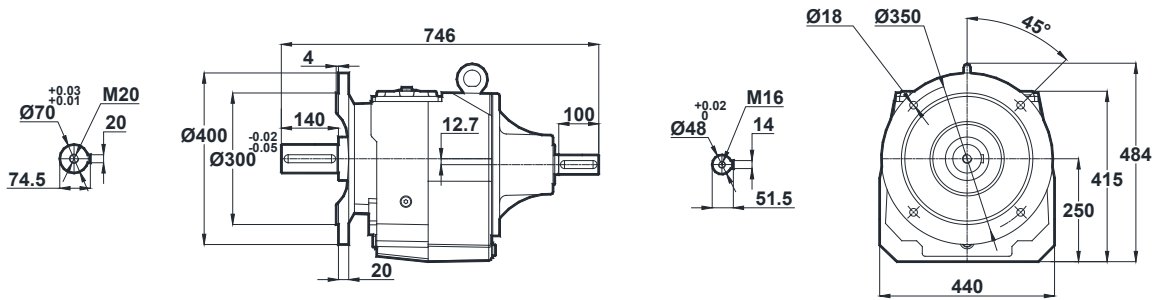


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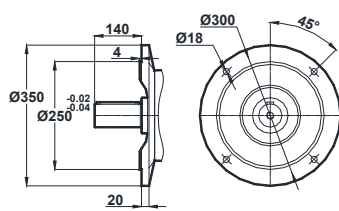
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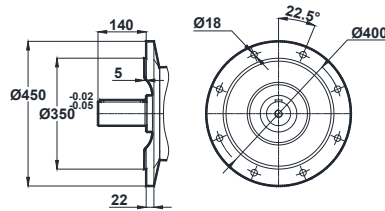
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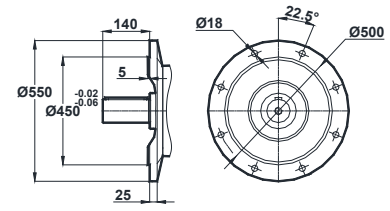
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



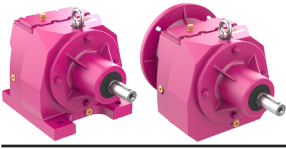
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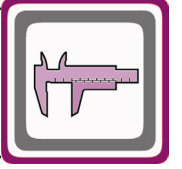
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Opt. 3

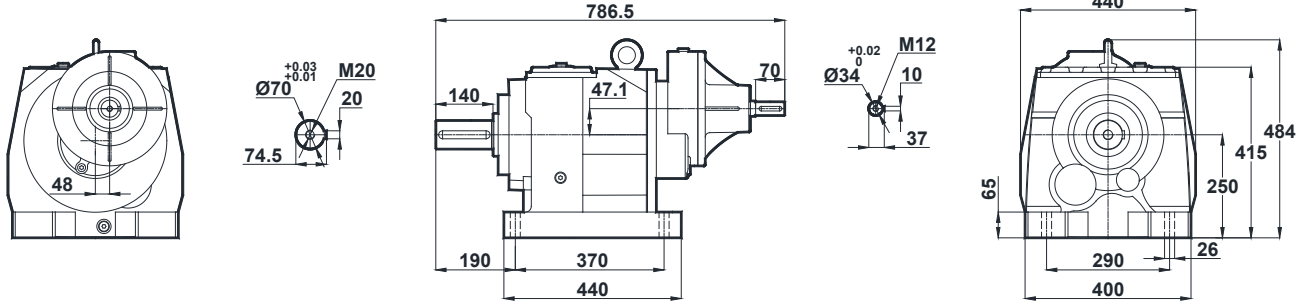


Ölçü Sayfaları Dimension Pages Abmessungsseiten

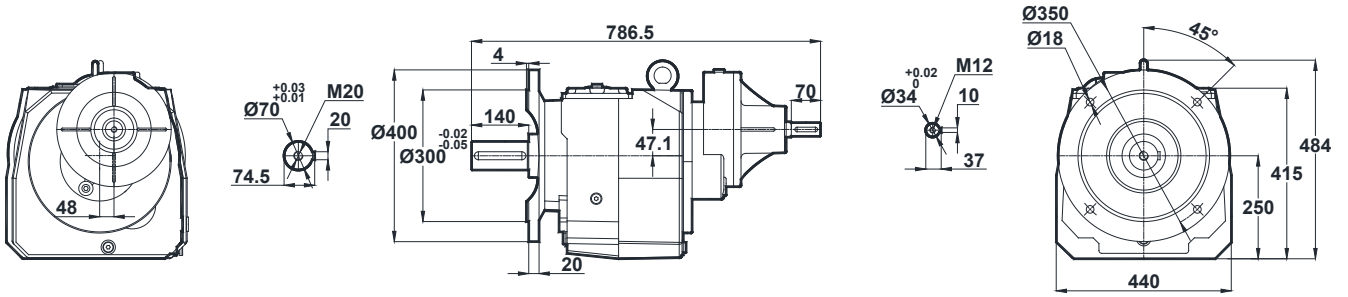


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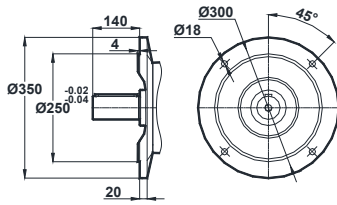
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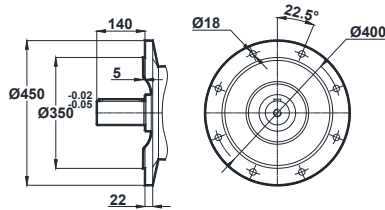
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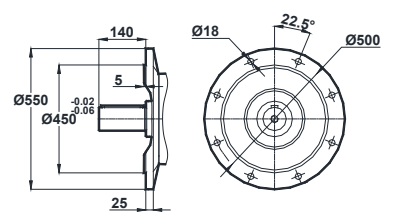
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



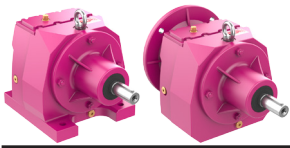
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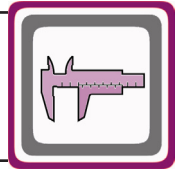
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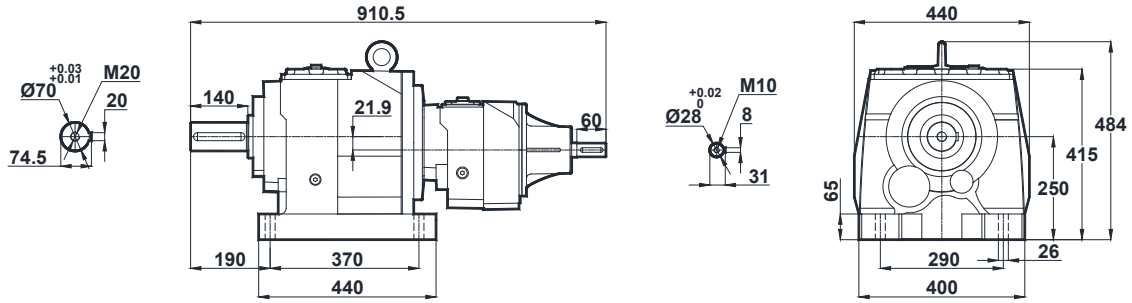


Ölçü Sayfaları Dimension Pages Abmessungsseiten

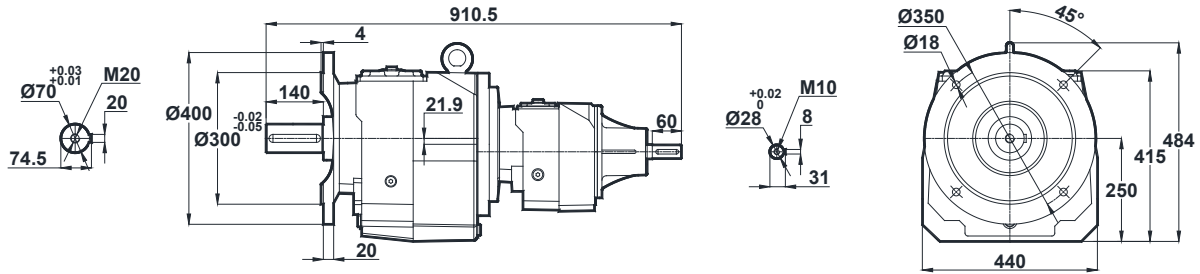


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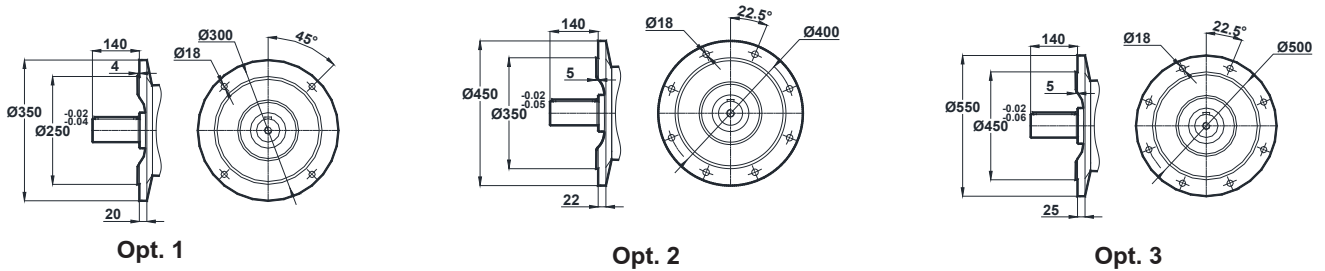
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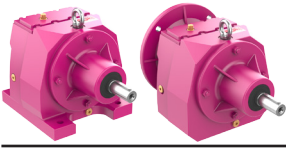


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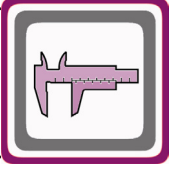


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



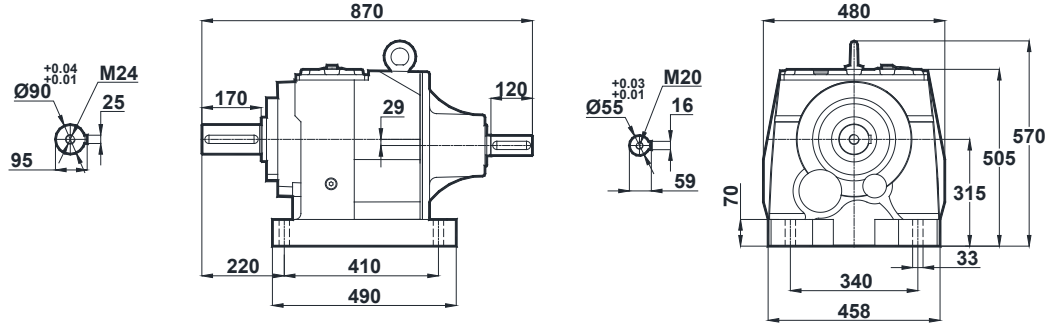


Ölçü Sayfaları Dimension Pages Abmessungenseiten

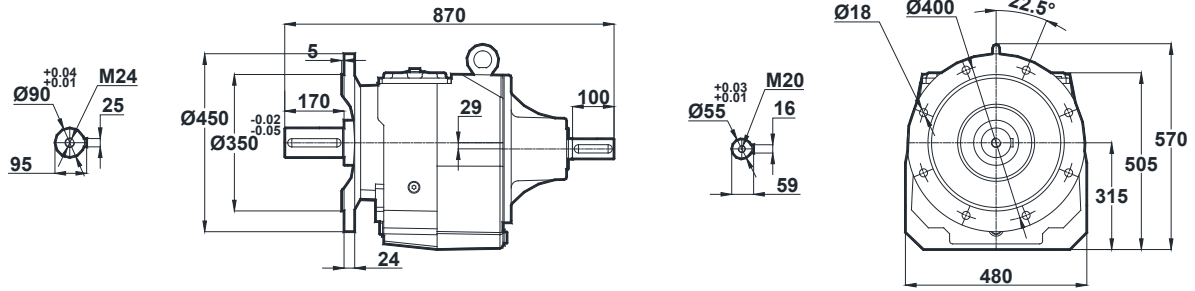


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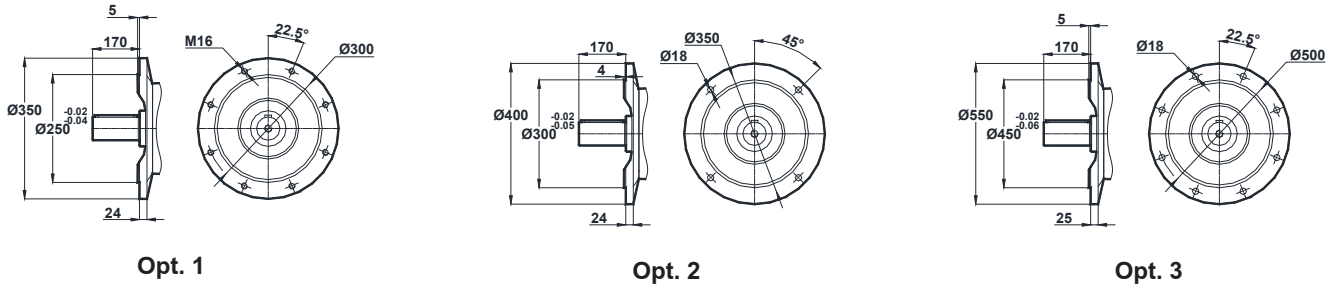
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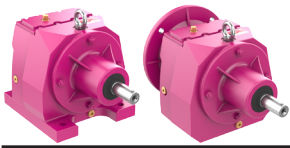


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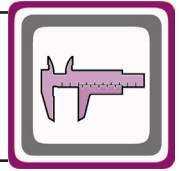


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



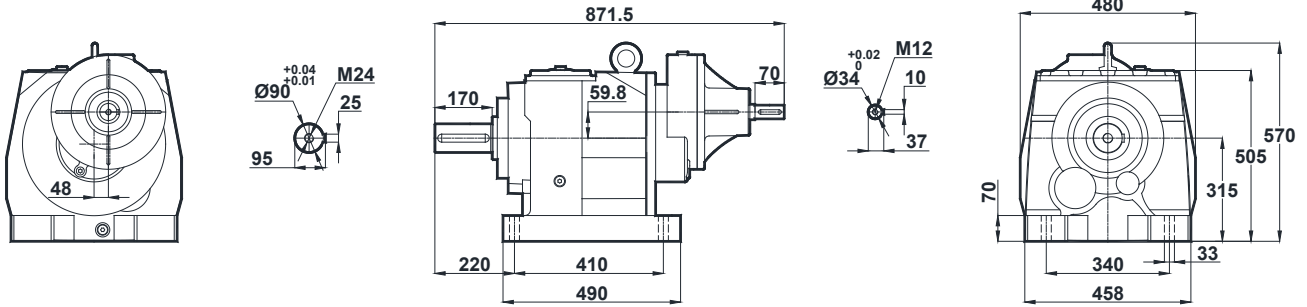


Ölçü Sayfaları Dimension Pages Abmessungsseiten

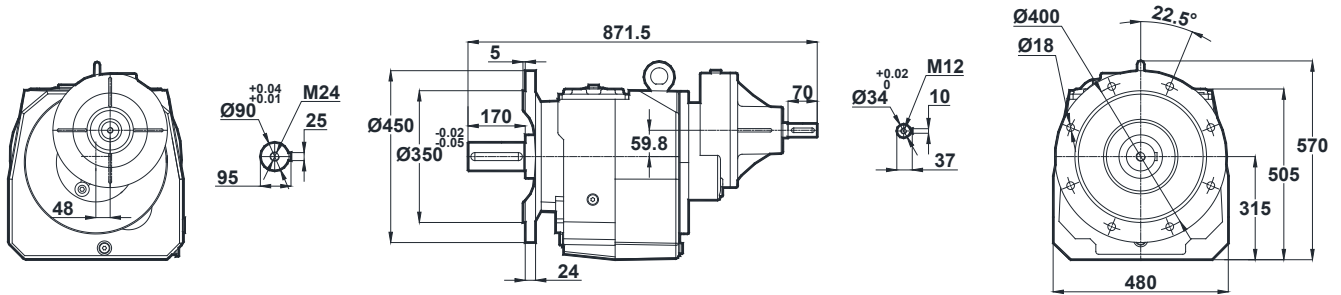


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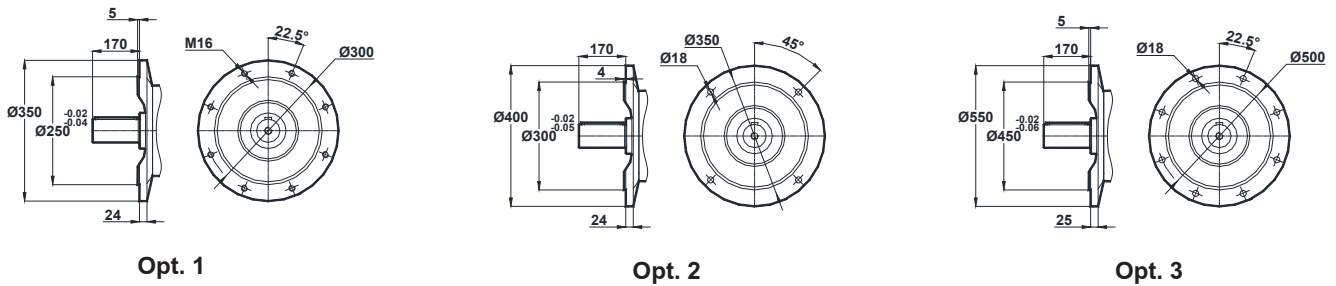
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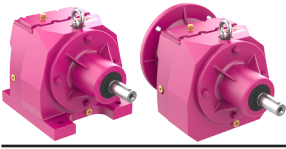


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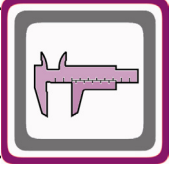


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



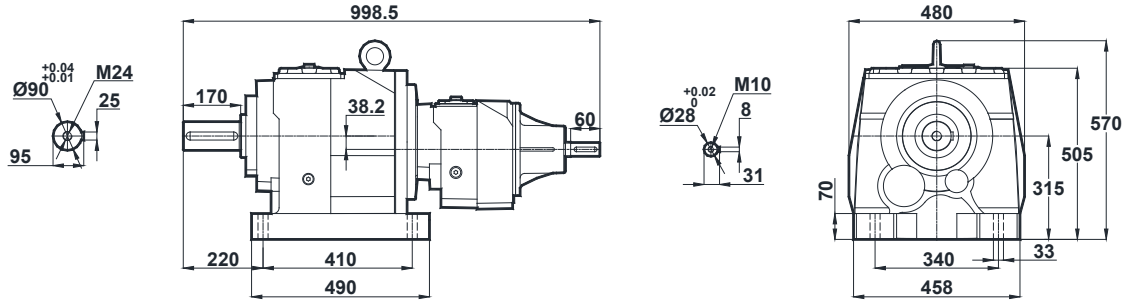


Ölçü Sayfaları Dimension Pages Abmessungenseiten

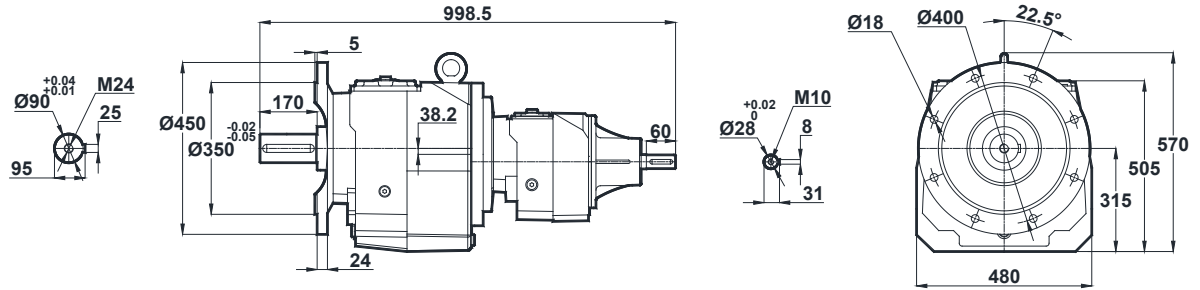


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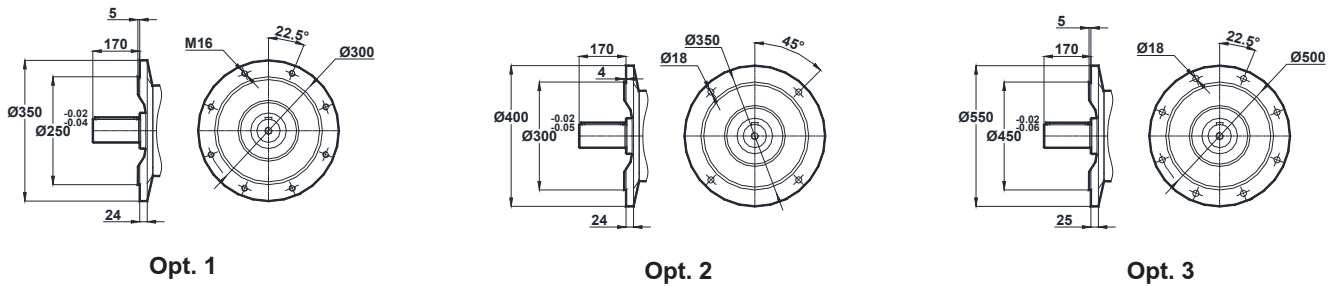
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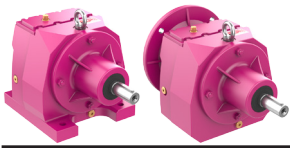


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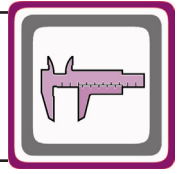


Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



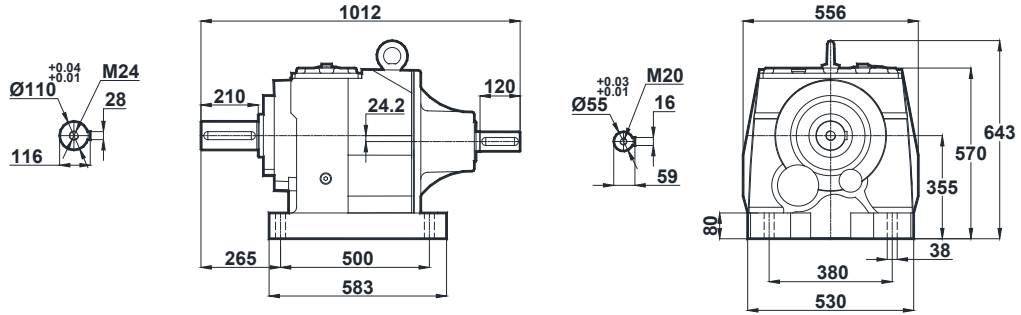


Ölçü Sayfaları Dimension Pages Abmessungsseiten

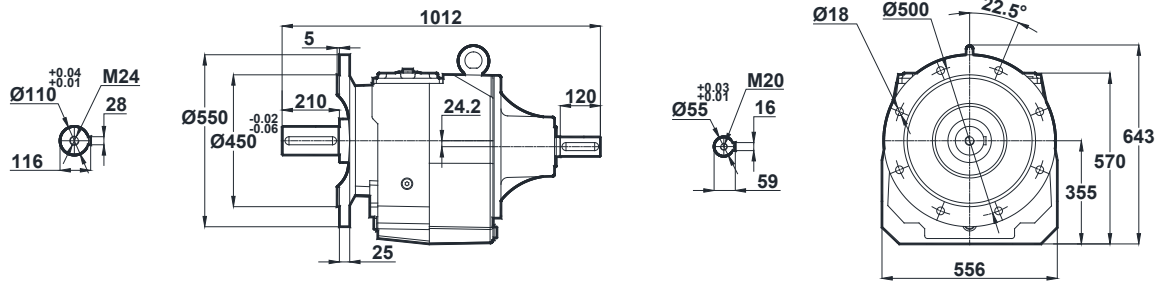


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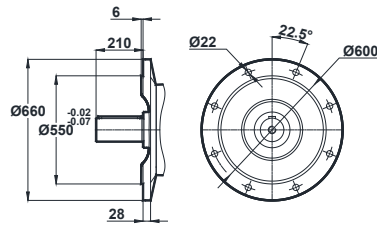
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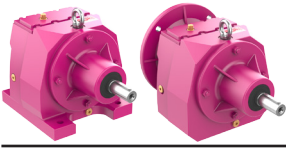
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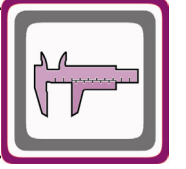
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

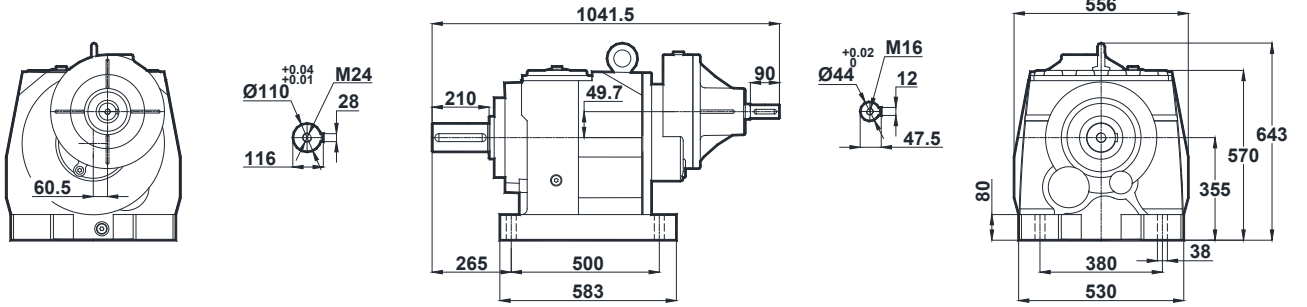


Ölçü Sayfaları Dimension Pages Abmessungenseiten

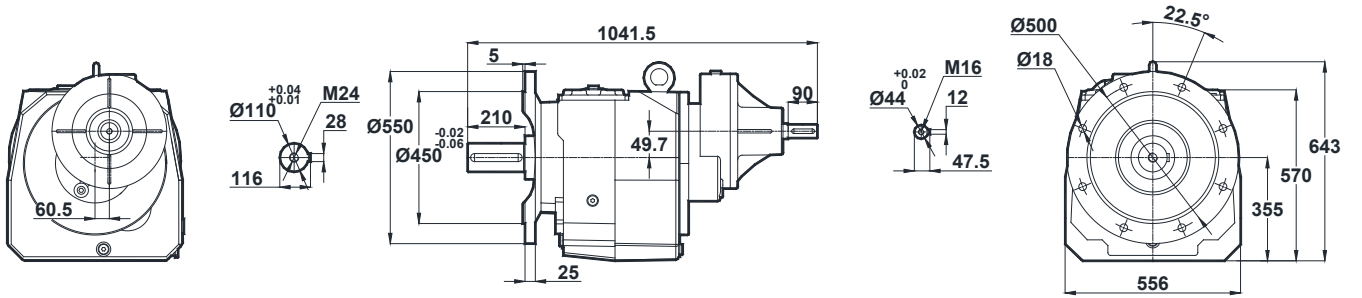


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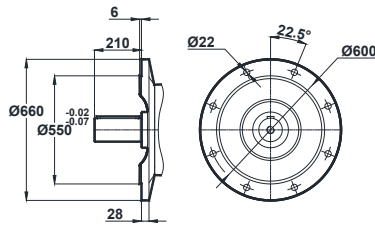
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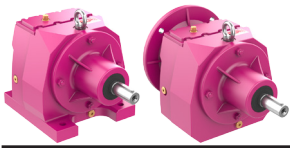
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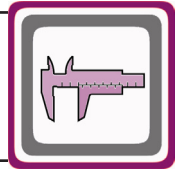
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

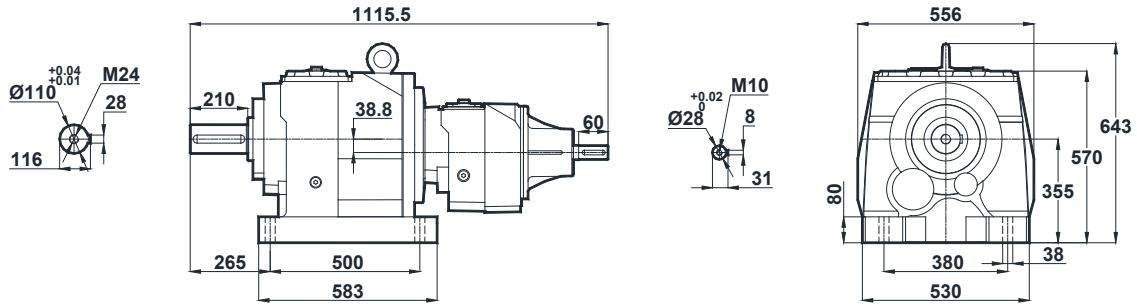


Ölçü Sayfaları Dimension Pages Abmessungsseiten

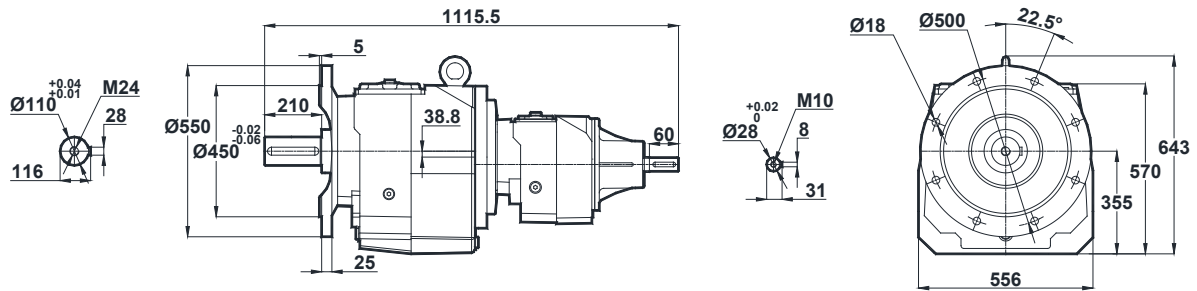


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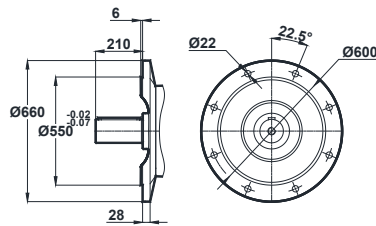
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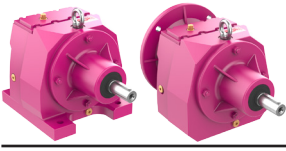
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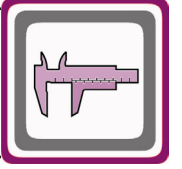
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

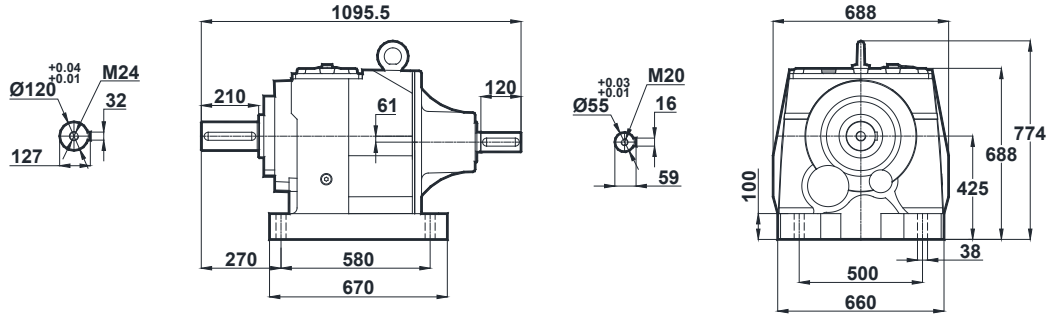


Ölçü Sayfaları Dimension Pages Abmessungenseiten

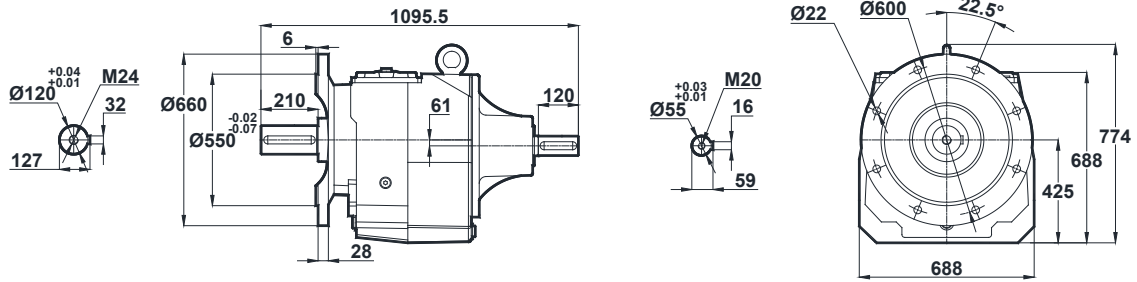


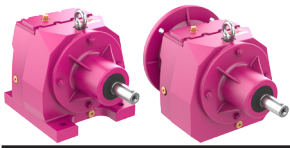
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MT972 MT973

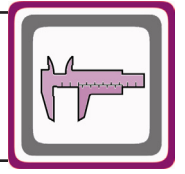


NT972 NT973



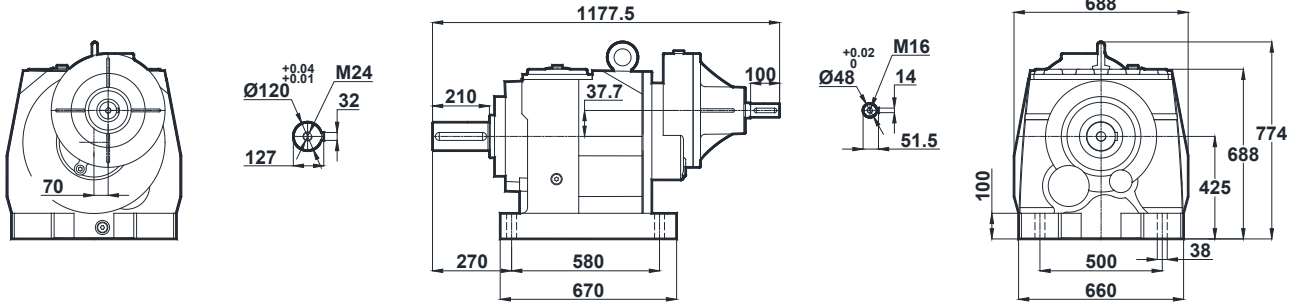


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

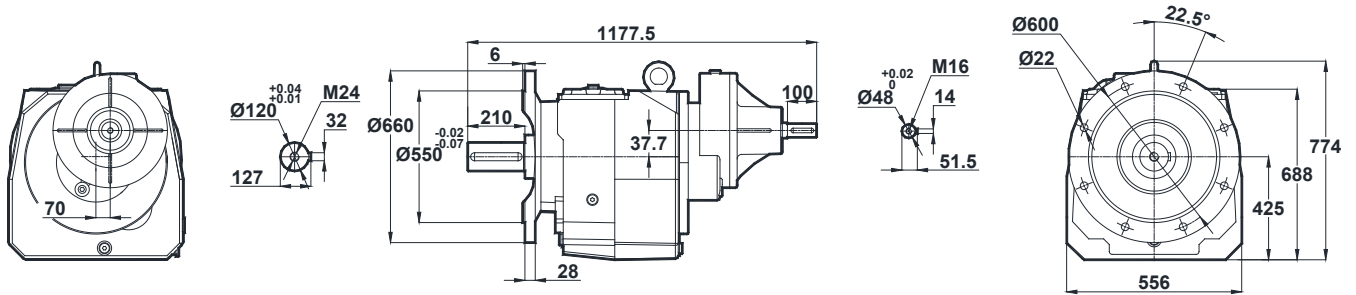


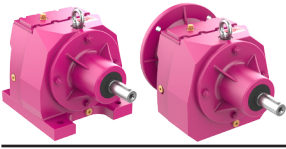
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MT974

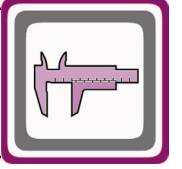


NT974



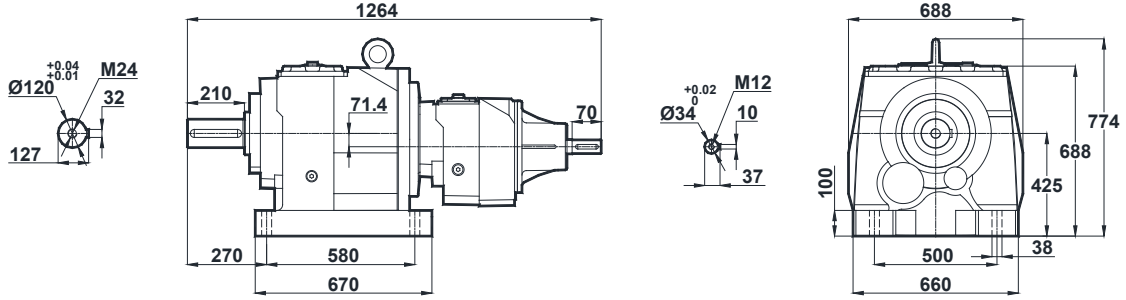


Ölçü Sayfaları
Dimension Pages
Abmessungenseiten

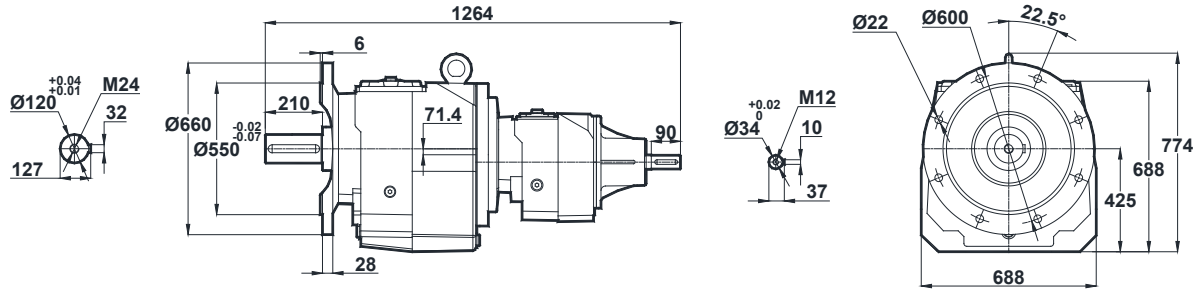


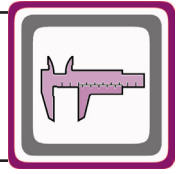
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MT975
MT976



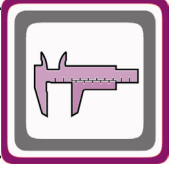
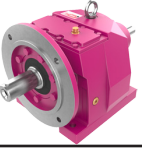
NT975
NT976





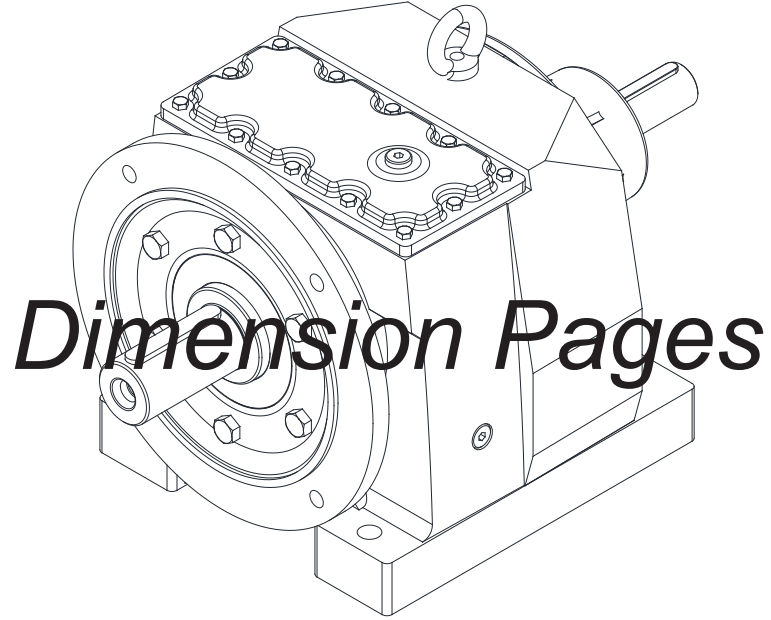
Notlar / Notes / Note

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MTF Serisi / Serie

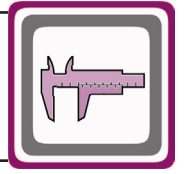
Ölçü Sayfaları



Abmessungenseiten

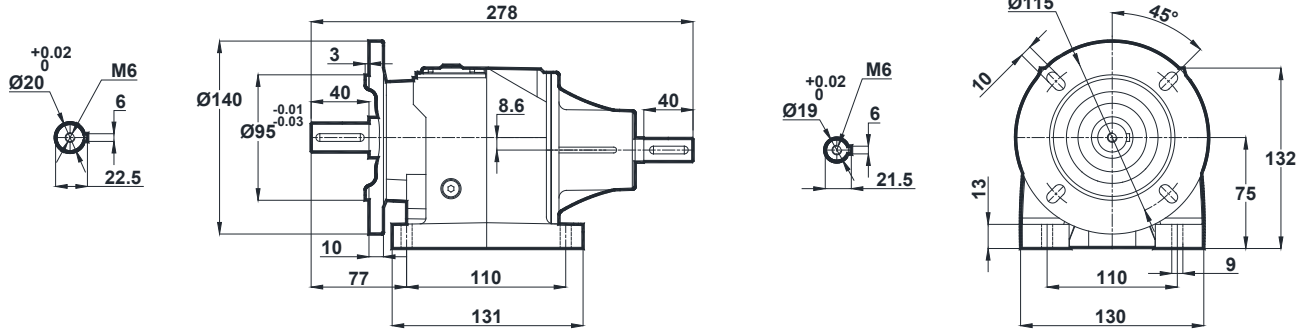


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

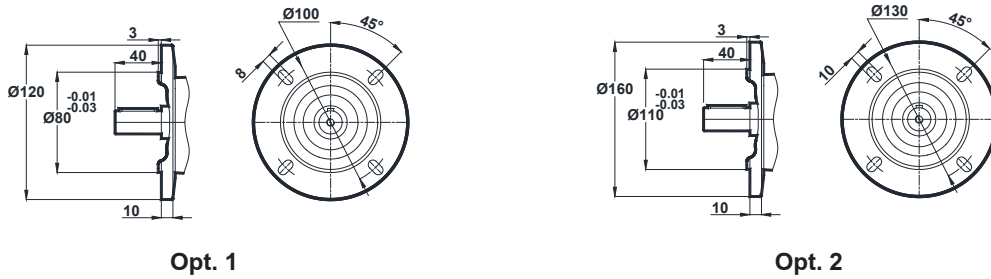


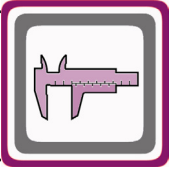
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MTF002
MTF003



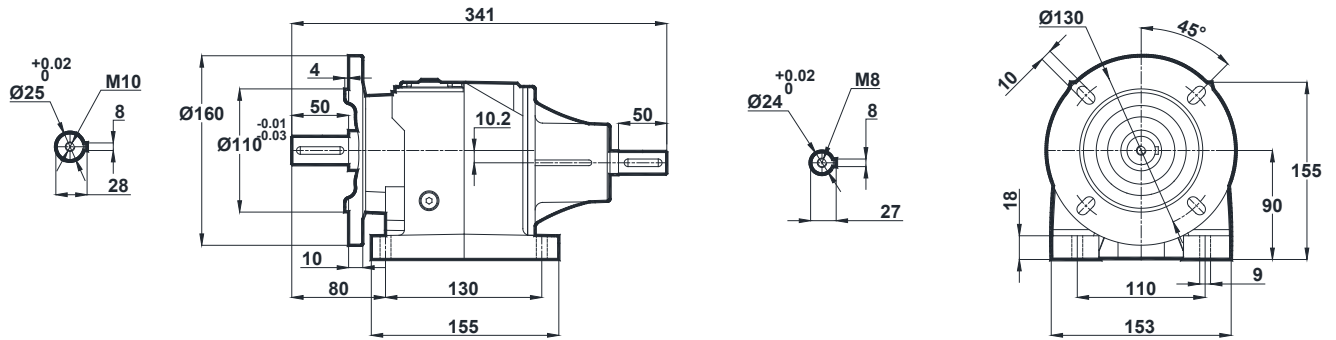
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



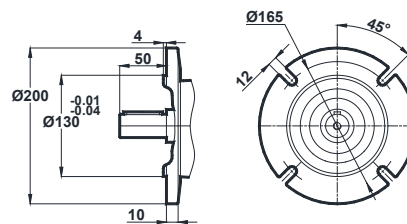


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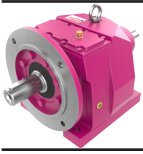
MTF102
MTF103



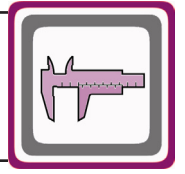
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

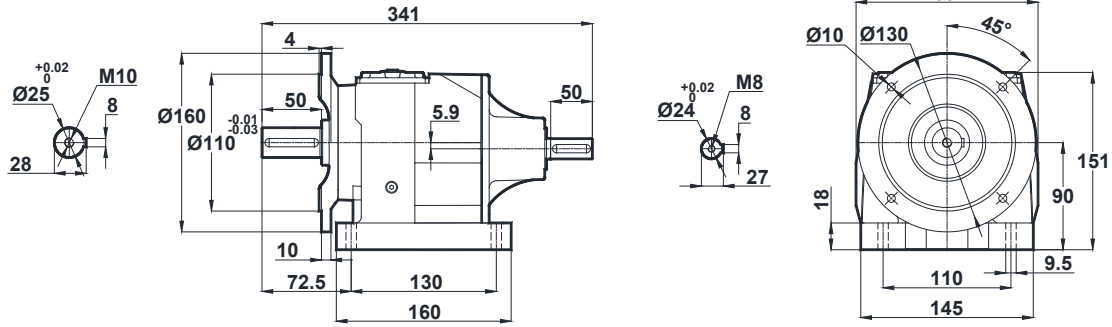


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

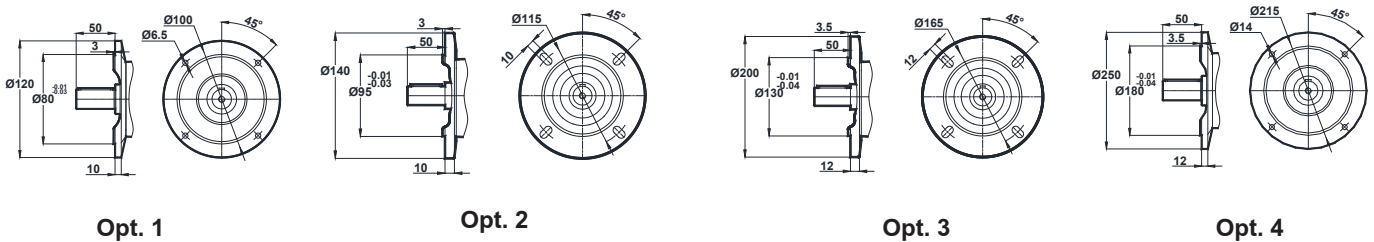


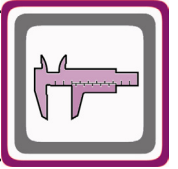
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MTF172
MTF173



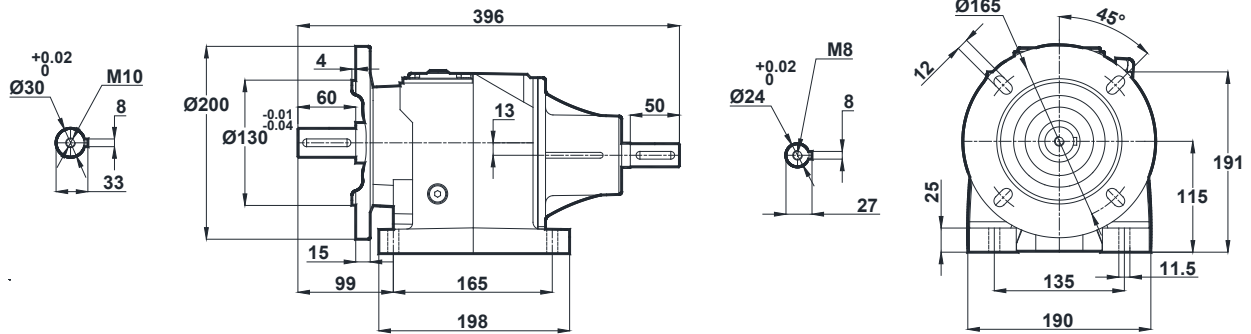
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



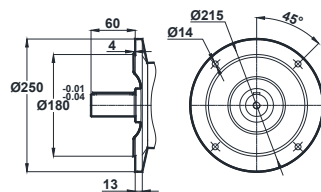


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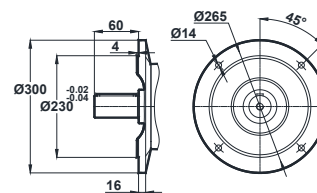
MTF202
MTF203



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



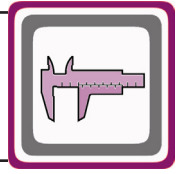
Opt. 1



Opt. 2

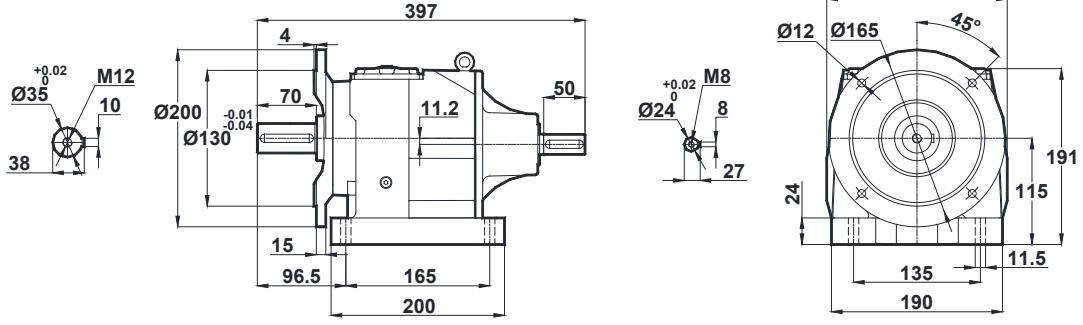


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

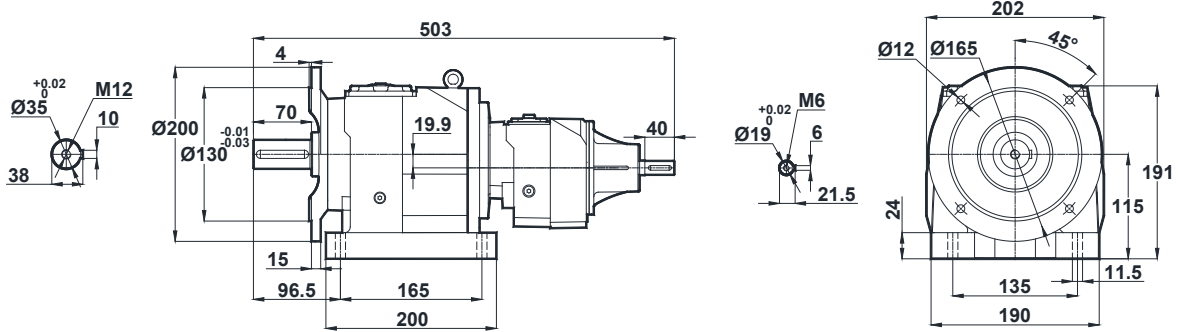


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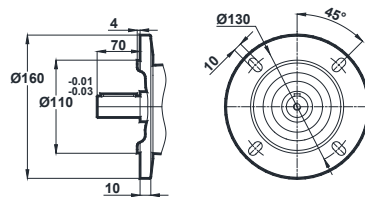
MTF272
MTF273



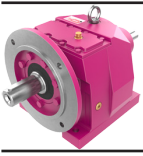
MTF275
MTF276



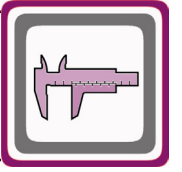
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

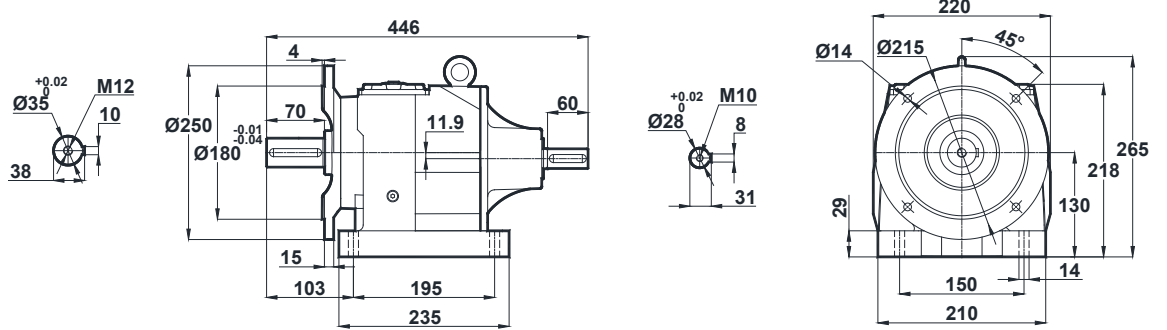


Ölçü Sayfaları Dimension Pages Abmessungsseiten

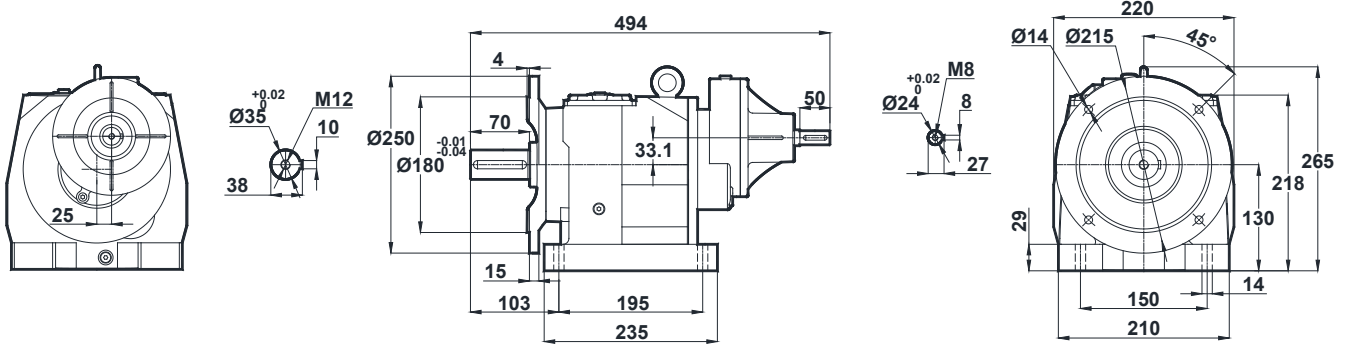


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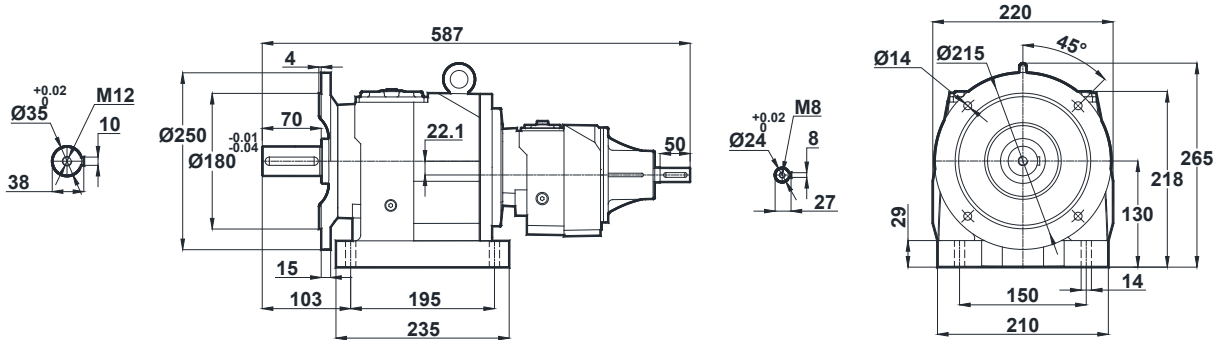
MTF282 MTF283



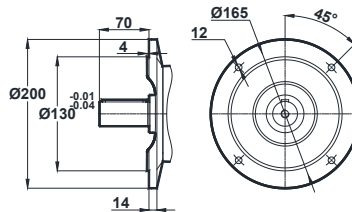
MTF284



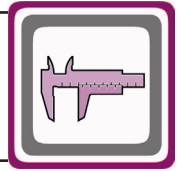
MTF285 MTF286



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

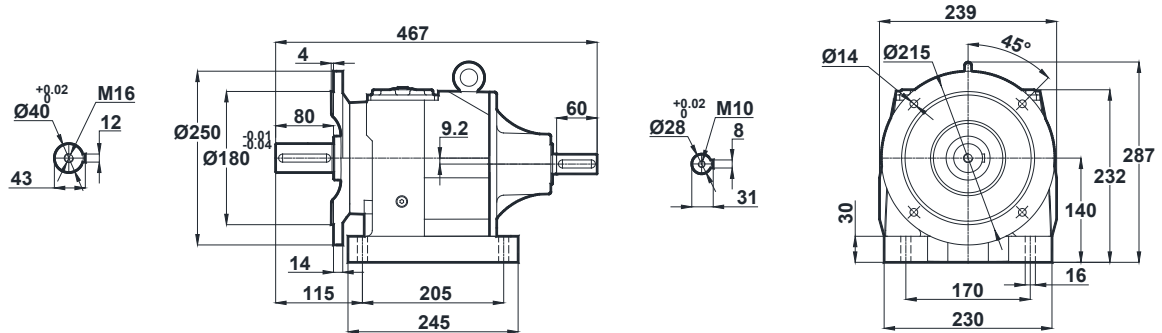
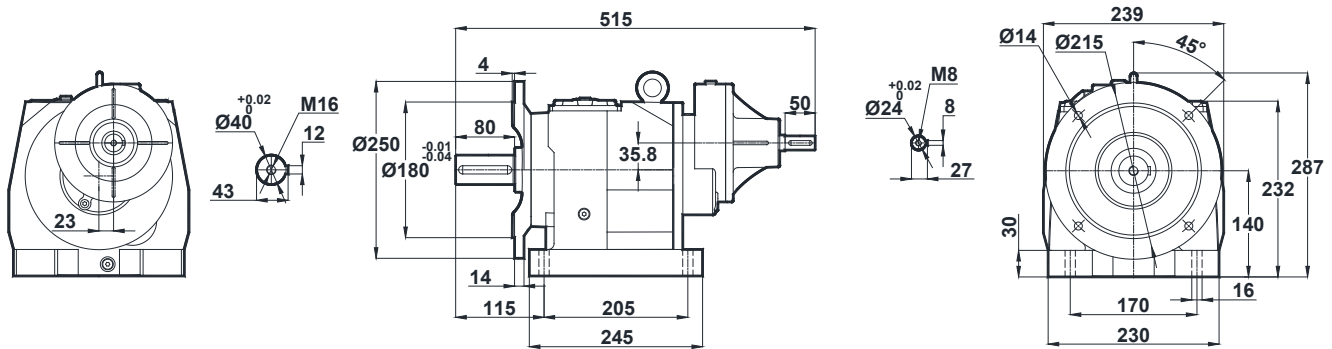


Opt. 1

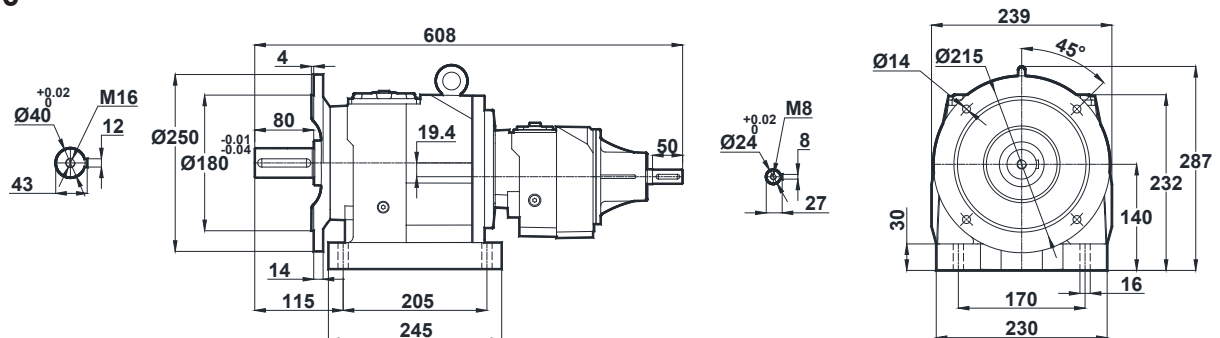


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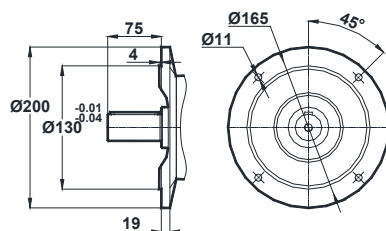
MTF372
MTF373

**MTF374**

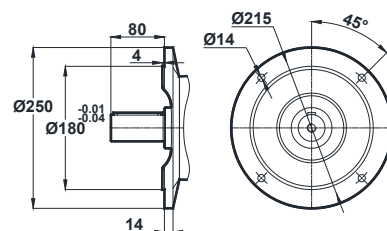
MTF375
MTF376



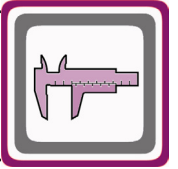
Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen



Opt. 1

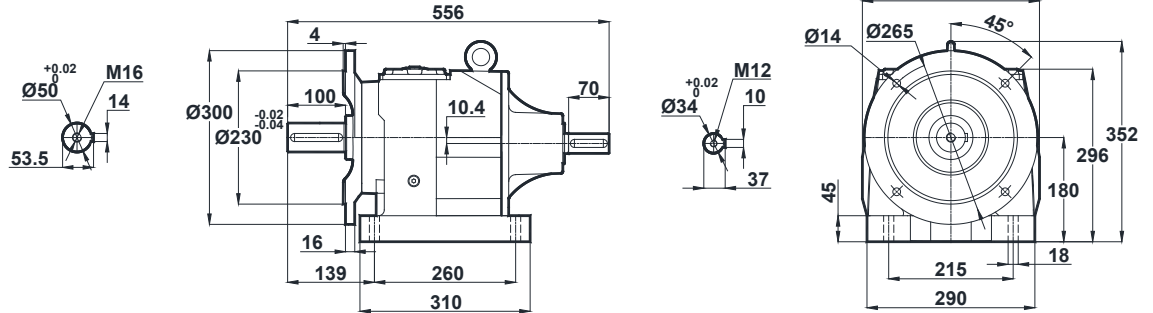


Opt. 2

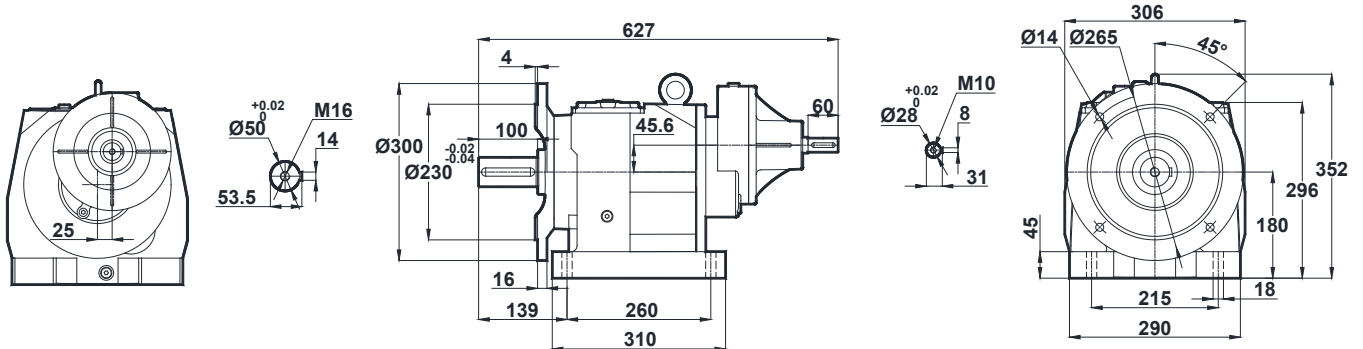


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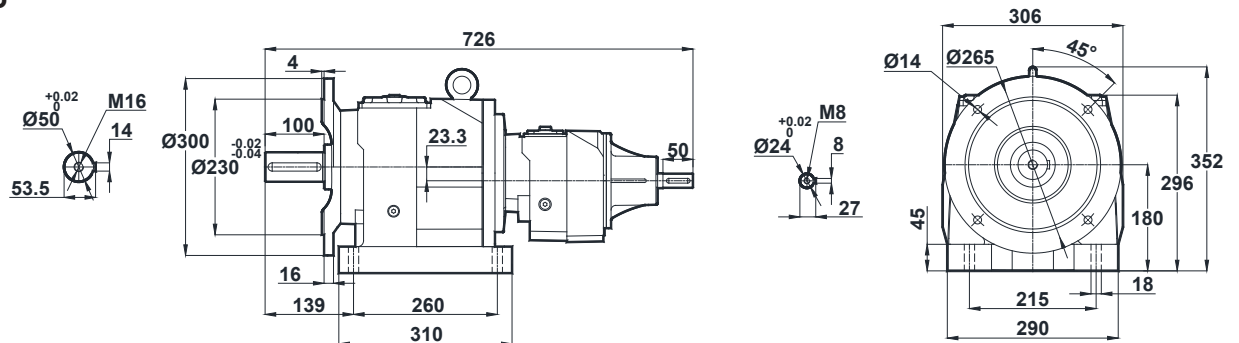
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MTF473



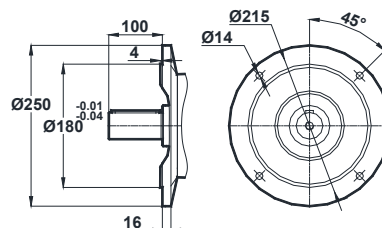
MTF474



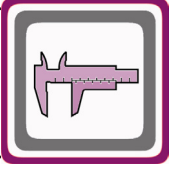
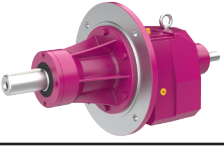
MTF475
MTF476



Opsiyonel Flanş Ölçüleri / Optional Flange Dimensions / Auswählbare Flanschabmessungen

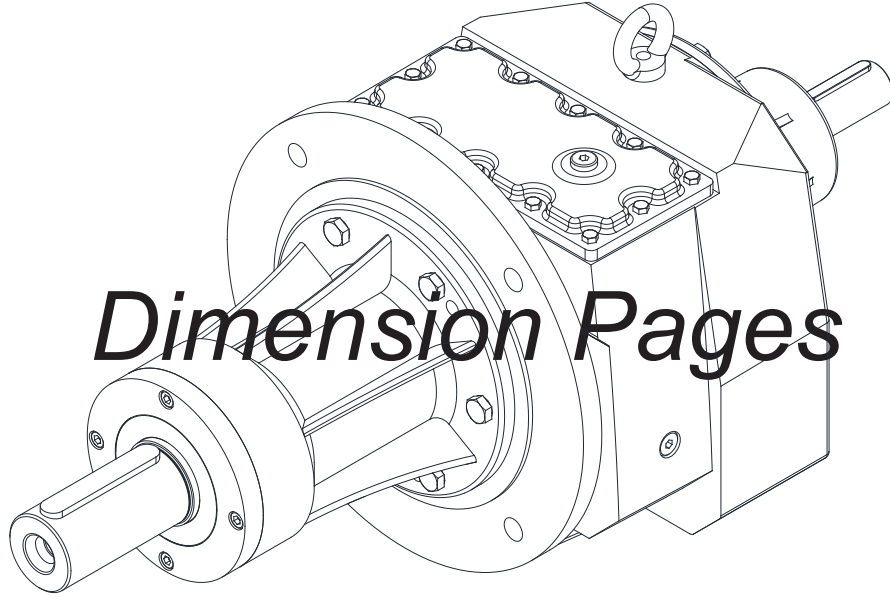


Opt. 1



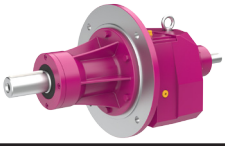
NTB Serisi / Serie

Ölçü Sayfaları

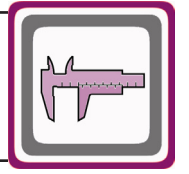


Dimension Pages

Abmessungsseiten

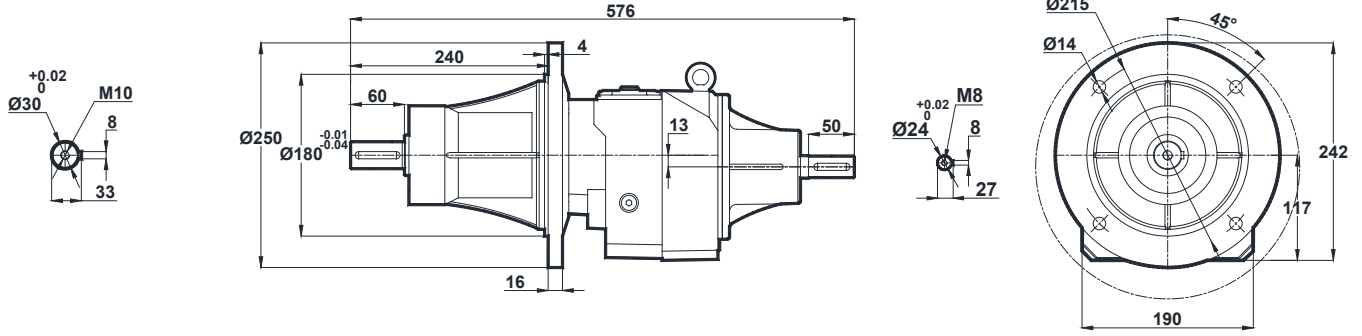


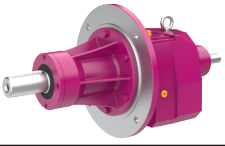
Ölçü Sayfaları
Dimension Pages
Abmessungenseiten



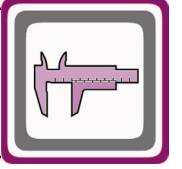
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NTB202
NTB203



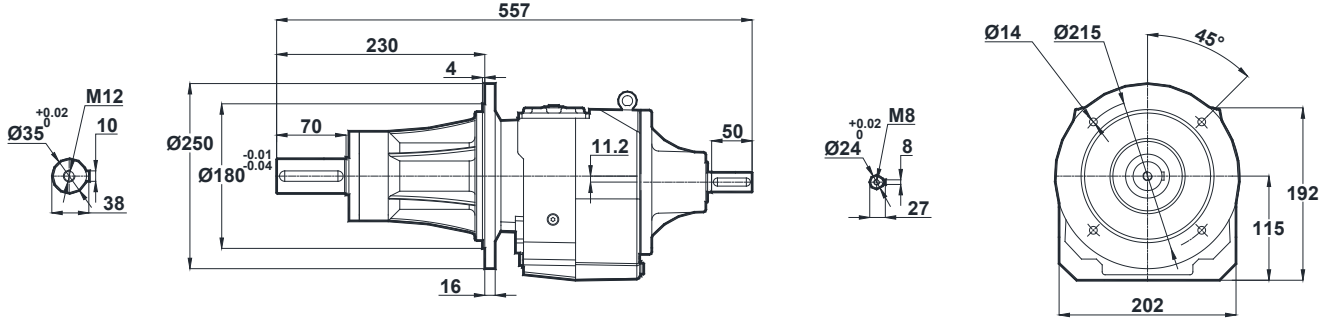


Ölçü Sayfaları Dimension Pages Abmessungenseiten

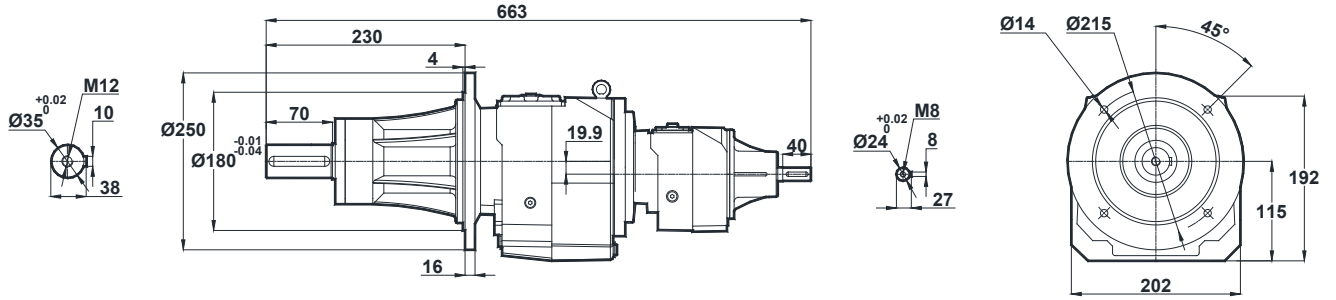


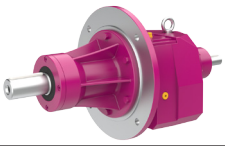
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NTB272 NTB273

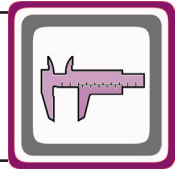


NTB275 NTB276



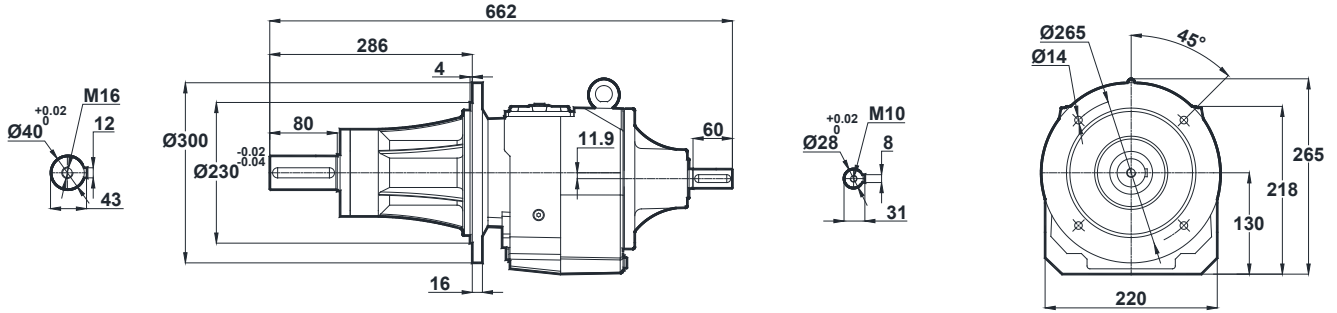


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

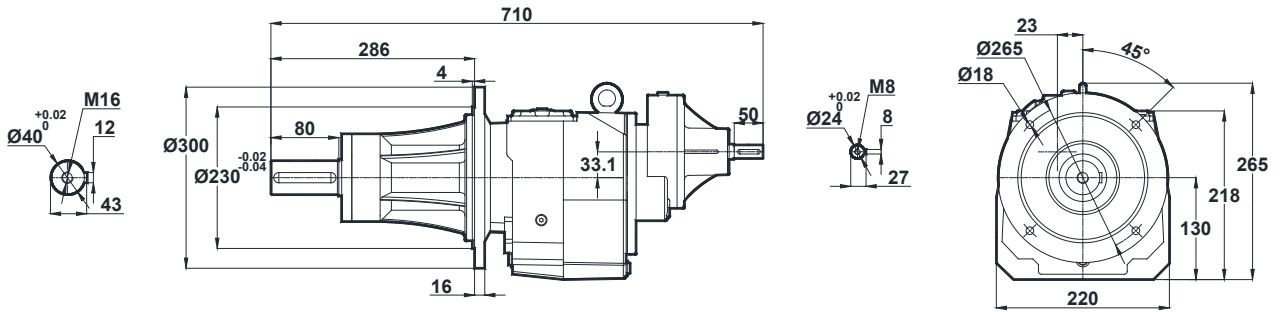


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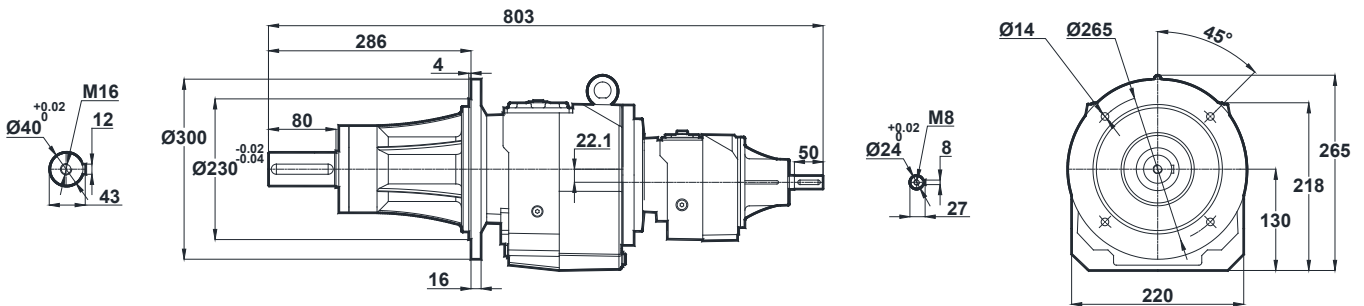
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NTB283

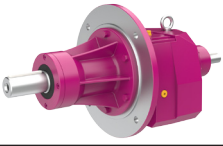


NTB284

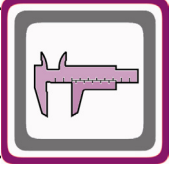


NTB285
NTB286



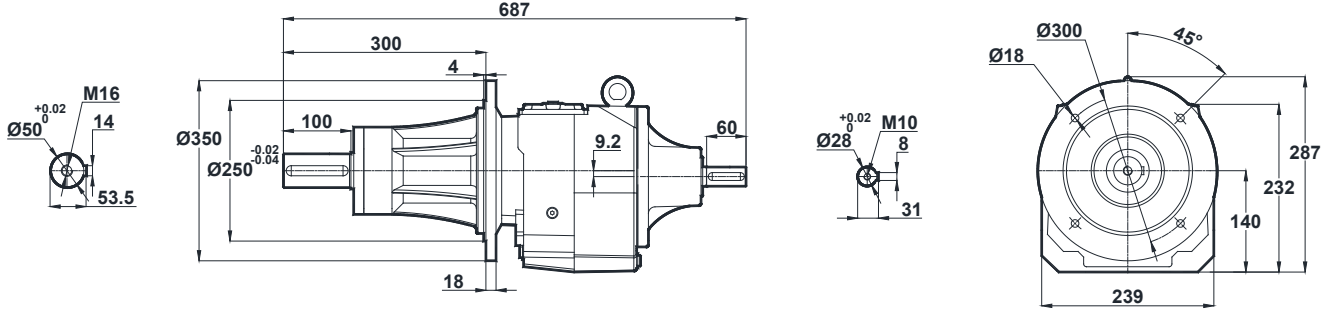


Ölçü Sayfaları
Dimension Pages
Abmessungenseiten

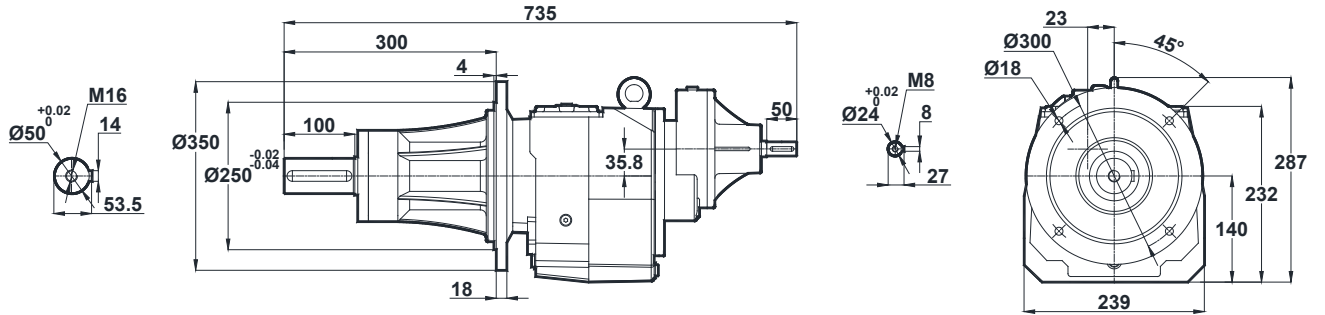


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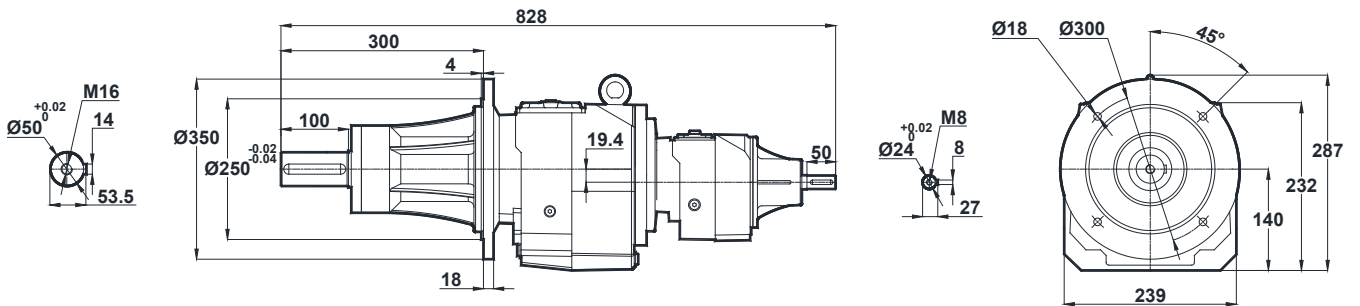
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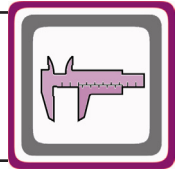


NTB374



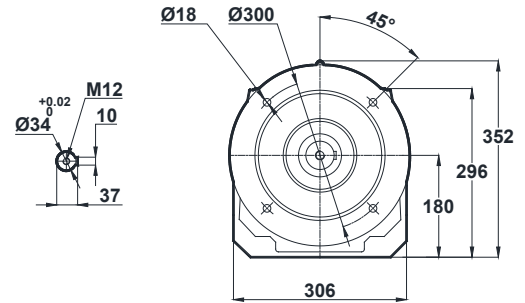
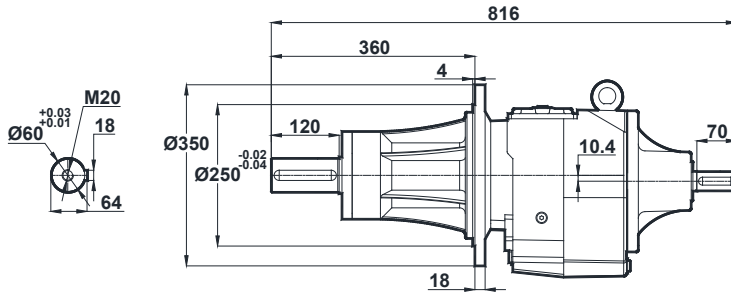
NTB375
NTB376



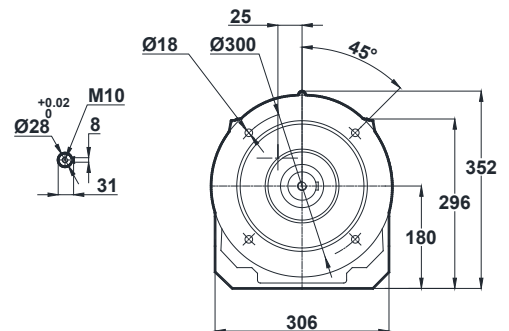
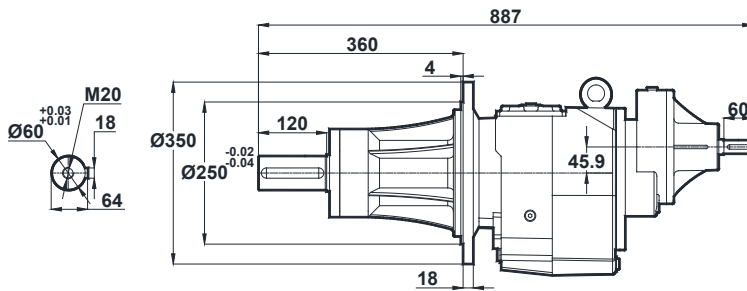


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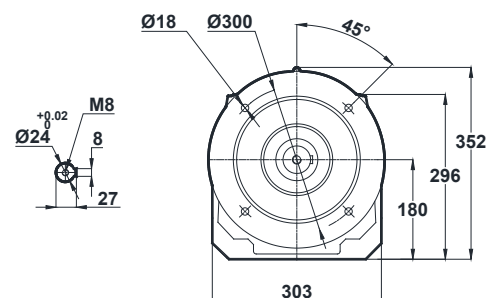
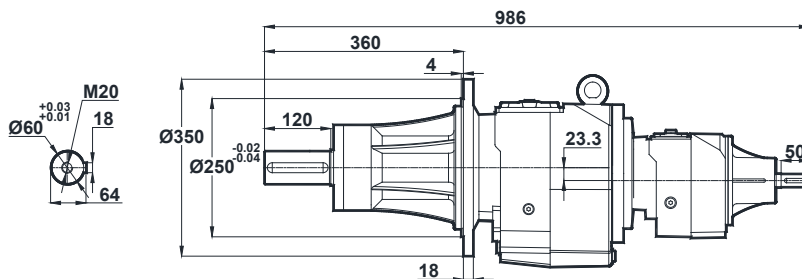
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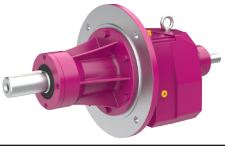


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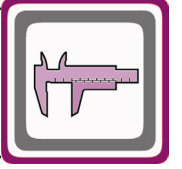


NTB475
NTB476



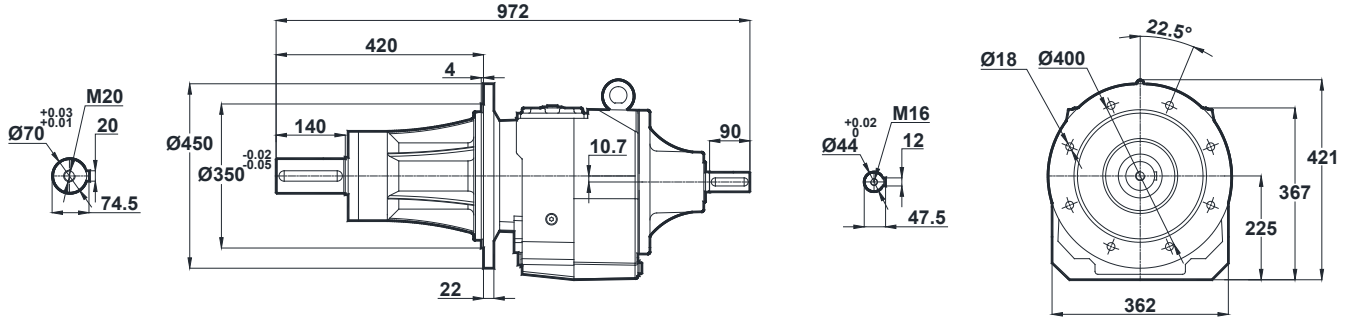


Ölçü Sayfaları
Dimension Pages
Abmessungenseiten

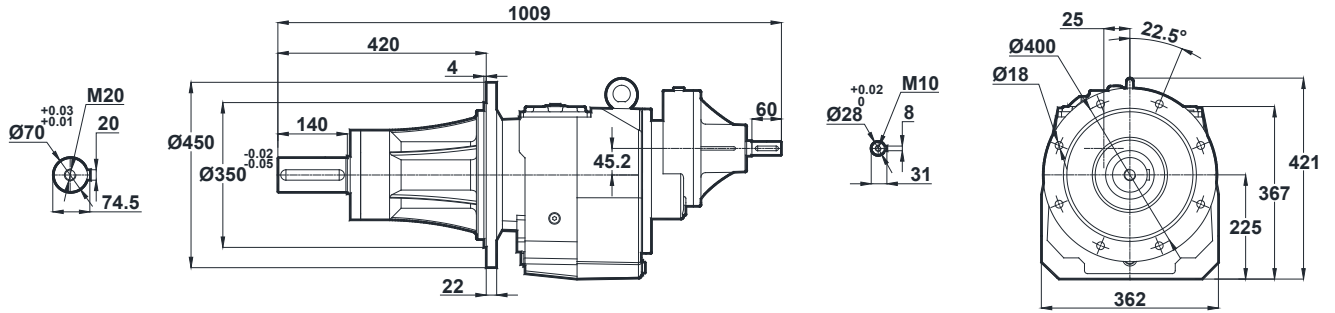


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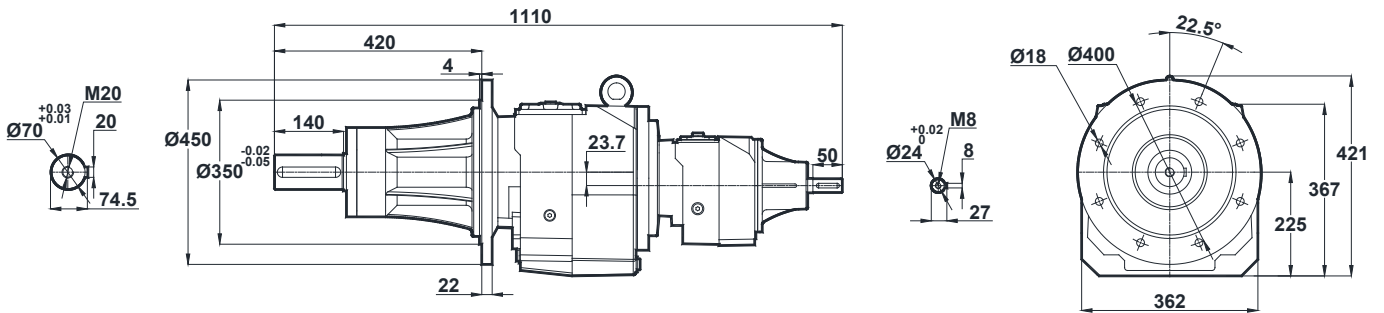
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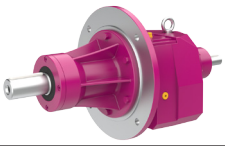


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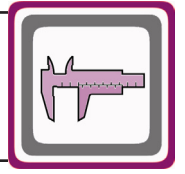


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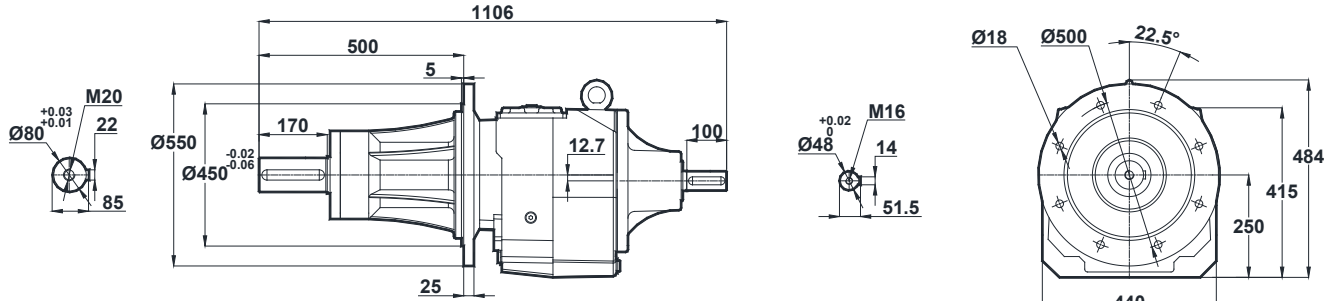


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

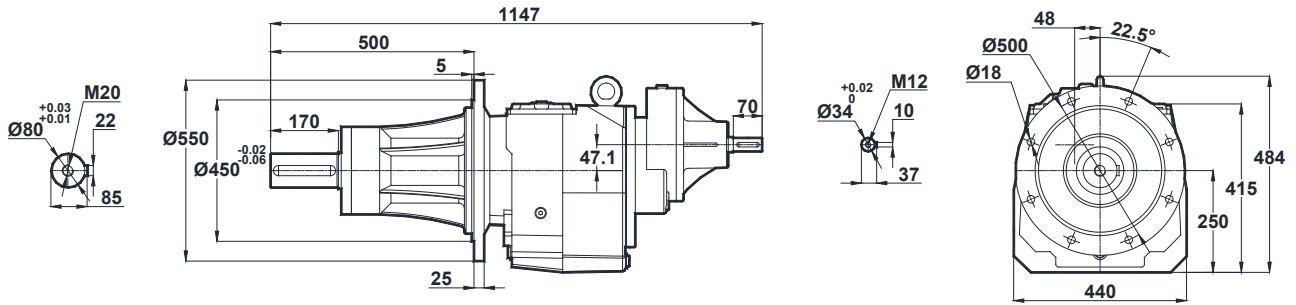


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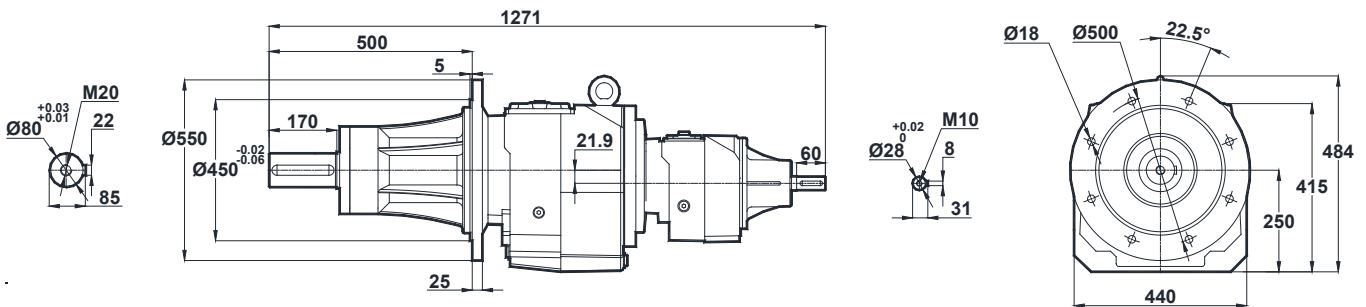
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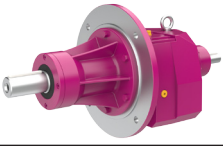


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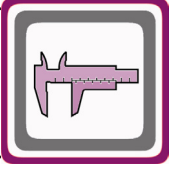


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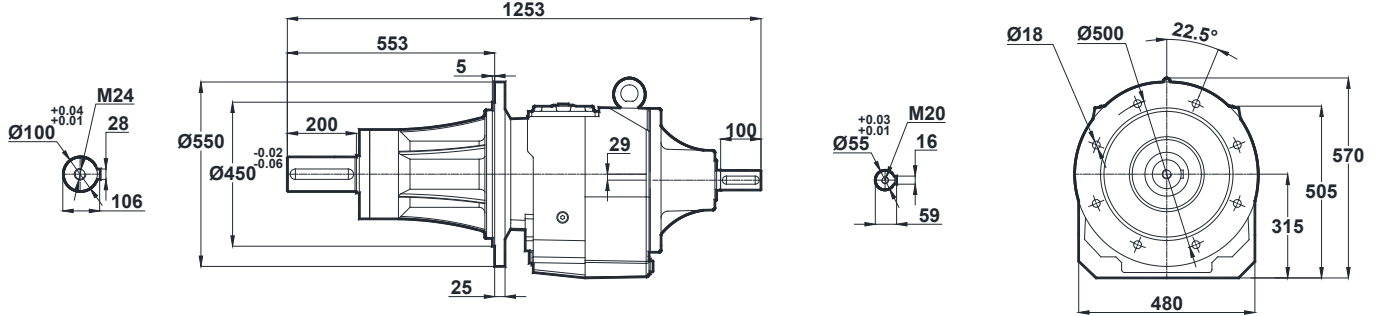


Ölçü Sayfaları
Dimension Pages
Abmessungenseiten

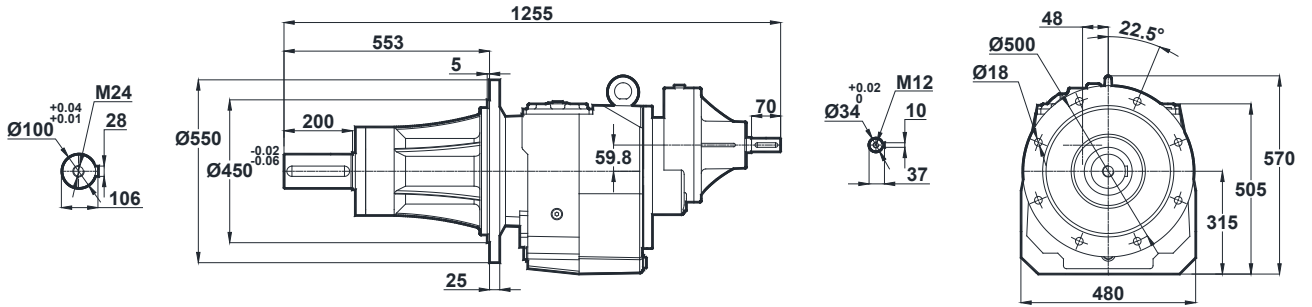


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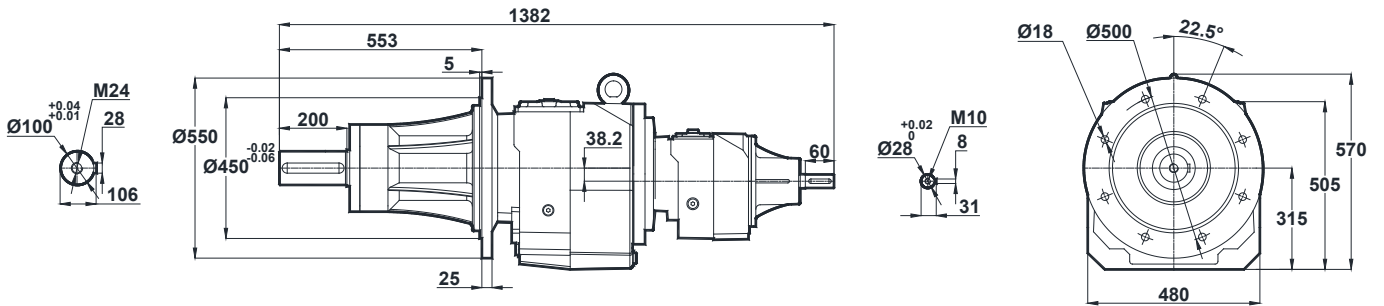
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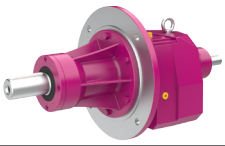


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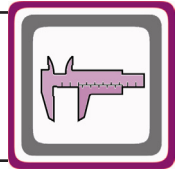


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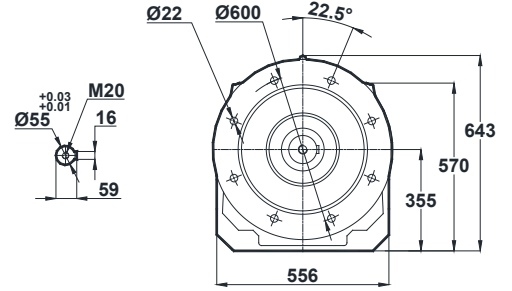
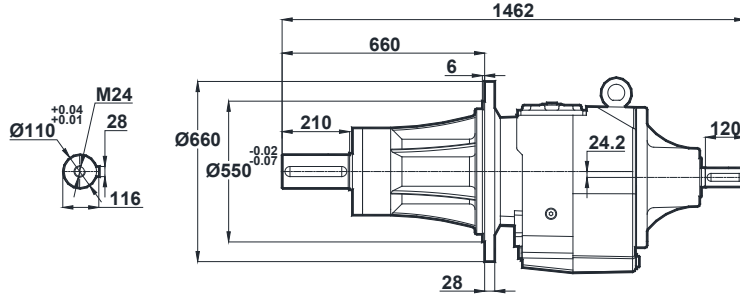


Ölçü Sayfaları
Dimension Pages
Abmessungsseiten

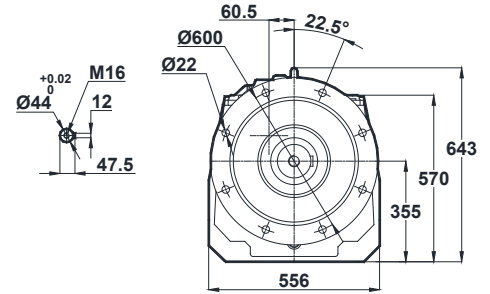
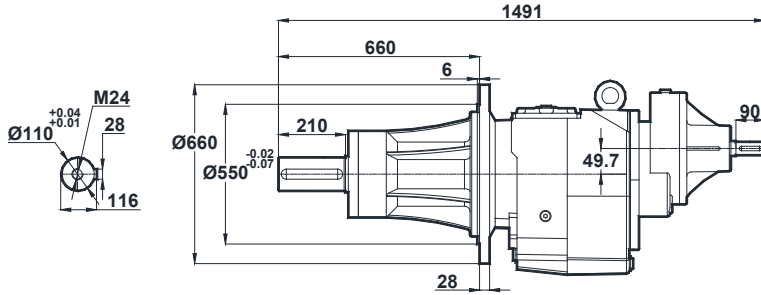


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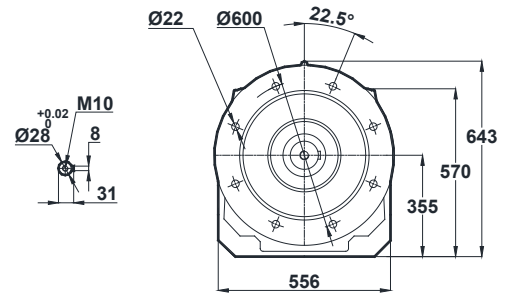
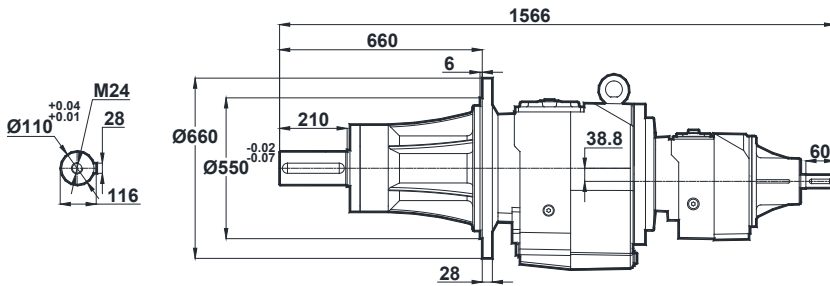
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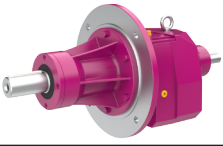


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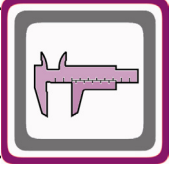


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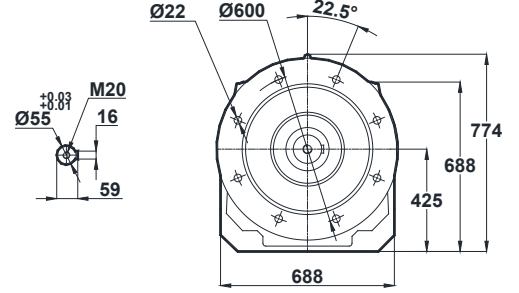
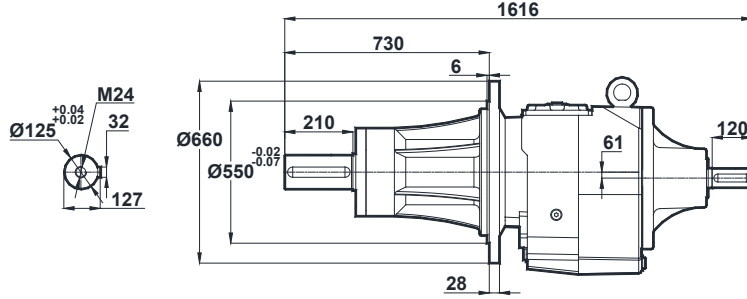


Ölçü Sayfaları Dimension Pages Abmessungenseiten

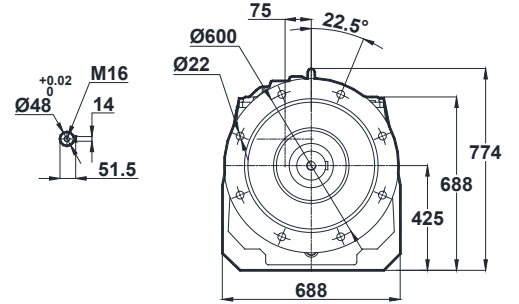
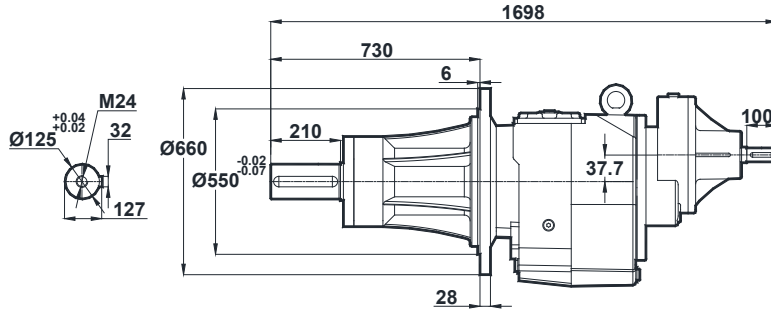


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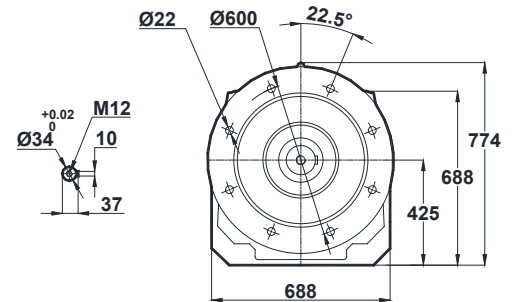
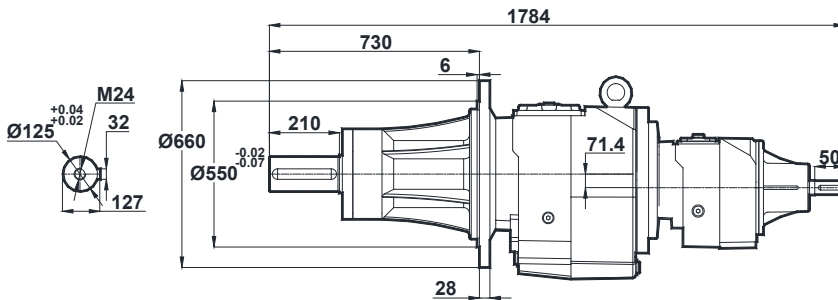
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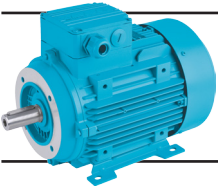


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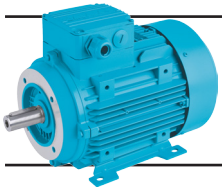
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Elektrik Motorlarının Performans Değerleri





Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

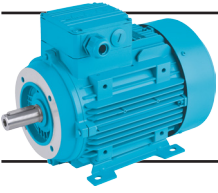
Elektromotoren Leistungsdaten



400V 50Hz 3000 d/d / 400V 50Hz 3000 rpm / 400V 50Hz 3000 UpM

IE4

Tip Type Typ	Tam Yük Değerleri Full-load Data Vollastdaten								Kalkış Değerleri Starting Data Startdaten		Devrilme Momenti Breakdown Torque	Atalet Momenti Moment of Inertia	B3 Motor Ağırlığı B3 Motor Weight	Ses Seviyesi Noise Level
	Güç Power Leistung	Devir Speed Drehzahl	Akım Current Nennstrom	Moment Torque Drehmoment	Güç Faktörü Power Factor Leistungsfaktor	Verim % η Efficiency % η Wirkungsgrad % η			Akım Current Nennstrom	Moment Torque Drehmoment	Kippmo- ment	Trägheits- moment	B3 Motor Gewicht	Geräusch- pegel
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N	M _K /M _N	kgm ²	kg	dB(A)
4E71M/2B	0,37	2825	0,83	1,25	0,82	78,1	78,3	76,5	5,7	2,8	3,2	0,00037	6,50	58
4E71M/2C	0,55	2825	1,17	1,86	0,83	81,5	81,9	79,5	6,2	2,9	3,5	0,00046	7,50	58
4E80M/2C	0,75	2875	1,56	2,49	0,83	83,5	84,0	81,0	6,8	2,9	3,5	0,00124	11,0	59
4E80M/2D	1,10	2880	2,19	3,65	0,85	85,2	85,5	84,9	7,5	2,9	3,7	0,00135	12,0	59
4E90S/2C	1,50	2900	2,95	4,94	0,85	86,5	86,9	85,7	7,8	2,9	3,7	0,00221	17,2	64
4E90L/2D	2,20	2900	4,20	7,24	0,86	88,0	88,5	87,6	8,2	3,0	3,8	0,00234	20,0	64
4E100L/2D	3,00	2910	5,50	9,85	0,88	89,1	89,5	88,5	8,5	3,0	4,0	0,00503	25,9	67
4E112M/2D	4,00	2940	7,30	13,0	0,88	90,0	90,3	89,7	8,7	3,0	4,2	0,00734	32,2	70
4E132S/2C	5,50	2945	9,60	17,8	0,91	90,9	90,9	90,0	8,9	3,2	4,2	0,02104	52,5	72
4E132S/2D	7,50	2945	13,0	24,5	0,91	91,7	92,2	91,8	8,5	3,2	4,2	0,02290	55,6	72
4E160M/2C	11,0	2950	18,9	35,6	0,91	92,6	92,7	91,2	8,5	3,3	4,3	0,03913	89,0	74
4E160M/2D	15,0	2950	25,6	48,6	0,91	93,3	93,6	92,8	8,5	3,3	4,3	0,04409	96,8	74
4E160L/2E	18,5	2955	31,4	59,8	0,91	93,7	93,8	92,9	8,7	3,2	4,3	0,05000	114	74
4E180M/2C	22,0	2960	37,2	71,1	0,91	94,0	94,4	93,5	8,9	3,0	4,0	0,07000	158	74
4E200L/2C	30,0	2970	51,0	96,5	0,90	94,5	94,7	94,0	8,3	3,2	3,7	0,17500	215	74
4E200L/2D	37,0	2970	63,3	120	0,89	94,8	95,0	94,2	8,3	3,2	4,0	0,20000	238	74
4E225M/2D	45,0	2975	76,0	145	0,90	95,0	95,2	94,9	9,0	3,4	4,2	0,29000	355	74
4E250M/2D	55,0	2975	92,6	177	0,90	95,3	95,5	94,9	8,2	3,4	3,7	0,52000	445	74
4E280S/2C	75,0	2982	126	240	0,90	95,6	95,6	95,2	7,7	2,7	3,2	0,98000	620	76
4E280M/2D	90,0	2985	151	288	0,90	95,8	95,9	95,0	7,7	2,8	3,5	1,10000	640	77
4E315S/2C	110	2985	184	352	0,90	96,0	96,0	95,7	7,8	3,1	4,0	1,60000	1110	77
4E315M/2D	132	2986	220	422	0,90	96,2	96,3	96,0	8,0	3,1	4,0	2,00000	1070	77
4E315L/2E	160	2986	267	512	0,90	96,3	96,5	96,0	8,0	3,2	4,0	2,20000	1230	78
4E315L/2F	200	2987	332	639	0,90	96,5	96,7	96,2	8,1	3,2	4,0	2,70000	1340	78



Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

Elektromotoren Leistungsdaten

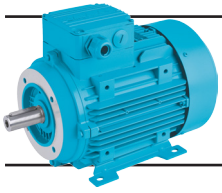


400V 50Hz 1500 d/d / 400V 50Hz 1500 rpm / 400V 50Hz 1500 UpM

IE4

Tip Type Typ	Tam Yük Değerleri								Kalkış Değerleri		Devrilme Momenti Breakdown Torque Kippmo- ment	Atalet Momenti Moment of Inertia Trägheits- moment	B3 Motor Ağırlığı B3 Motor Weight B3 Motor Gewicht	Ses Seviyesi Noise Level Geräusch- pegel
	Full-load Data								Starting Data					
	Volllastdaten								Startdaten					
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	Power	Speed	Current	Torque	Power Factor	Efficiency % η			Current	Torque				
Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment					
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N	M _K /M _N	kgm ²	kg	dB(A)
4E132S/4D	5,50	1470	11,1	35,7	0,78	91,9	91,8	90,6	7,7	3,8	3,7	0,03418	56,7	61
4E132M/4F*	7,50	1470	14,6	48,7	0,80	92,6	92,7	91,5	7,7	3,8	4,0	0,04316	72,8	62
4E160M/4E	11,0	1470	21,0	71,5	0,81	93,3	93,5	93,3	7,7	3,0	3,6	0,08600	99,5	64
4E160L/4F	15,0	1475	28,9	97,5	0,80	93,9	94,1	93,8	8,7	3,7	4,3	0,12000	112	64
4E180M/4D	18,5	1475	34,6	120	0,82	94,2	94,4	94,0	8,0	3,1	3,5	0,14700	142	64
4E180L/4E	22,0	1475	41,0	142	0,82	94,5	94,7	94,2	8,2	3,2	3,8	0,17000	168	64
4E200L/4E	30,0	1480	53,0	194	0,86	94,9	95,3	95,2	8,3	3,3	3,8	0,35000	235	64
4E225S/4D	37,0	1480	65,0	239	0,86	95,2	95,7	95,0	8,1	3,3	3,3	0,44100	350	70
4E225M/4E	45,0	1480	79,2	290	0,86	95,4	95,6	95,6	8,2	3,5	3,3	0,52000	370	70
4E250M/4E	55,0	1485	94,3	354	0,88	95,7	96,0	96,0	8,5	3,3	3,4	1,05000	490	70
4E280S/4D	75,0	1487	127	482	0,89	96,0	96,3	96,2	8,7	3,0	3,2	1,50000	670	70
4E280M/4E	90,0	1488	152	578	0,89	96,1	96,3	96,3	8,9	3,1	3,2	1,95000	720	71
4E315S/4D	110	1491	187	705	0,88	96,3	96,5	96,0	8,9	2,8	3,3	2,80000	1200	73
4E315M/4E	132	1492	225	845	0,88	96,4	96,7	96,2	8,9	2,9	3,3	3,30000	1270	73
4E315L/4F	160	1492	272	1024	0,88	96,6	96,9	96,5	8,9	3,1	3,4	4,40000	1370	76
4E315L/4G	200	1492	339	1280	0,88	96,7	97,0	96,6	8,8	3,3	3,5	5,20000	1520	76

* İşaretli motorlar simetrik gövde yapısına sahip değildir.



Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

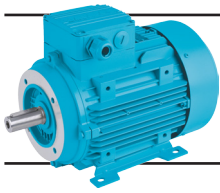
Elektromotoren Leistungsdaten



400V 50Hz 3000 d/d / 400V 50Hz 3000 rpm / 400V 50Hz 3000 UpM

IE3

Tip Type Typ	Tam Yük Değerleri Full-load Data Vollastdaten								Kalkış Değerleri Starting Data Startdaten		Devrilme Momenti Breakdown Torque	Atalet Momenti Moment of Inertia	B3 Motor Ağırlığı B3 Motor Weight	Ses Seviyesi Noise Level
	Güç Power Leistung	Devir Speed Drehzahl	Akım Current Nennstrom	Moment Torque Drehmoment	Güç Faktörü Power Factor Leistungsfaktor	Verim % η Efficiency % η Wirkungsgrad % η			Akım Current Nennstrom	Moment Torque Drehmoment	Kippmo- ment	Trägheits- moment	B3 Motor Gewicht	Geräusch- pegel
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N				
3E63M/2A	0,18	2805	0,48	0,61	0,77	70,0	68,5	62,8	4,5	3,0	3,1	0,00012	4,00	51
3E63M/2B	0,25	2805	0,65	0,85	0,79	71,0	69,7	64,2	4,6	3,0	3,1	0,00015	4,20	51
3E71M/2B	0,37	2830	0,84	1,25	0,82	76,6	77,0	75,0	6,0	2,8	3,0	0,00037	6,30	53
3E71M/2C	0,55	2830	1,19	1,86	0,84	79,4	80,2	78,8	6,1	2,9	3,3	0,00046	7,00	53
3E80M/2B	0,75	2880	1,59	2,49	0,84	80,7	82,0	81,5	6,7	3,0	3,6	0,00103	9,60	54
3E80M/2C	1,1	2880	2,26	3,64	0,85	82,7	83,0	82,4	6,8	3,1	3,8	0,00124	10,9	54
3E90S/2B	1,5	2900	2,97	4,94	0,86	84,8	85,4	84,2	7,6	3,1	3,9	0,00178	15,2	59
3E90L/2C	2,2	2900	4,25	7,24	0,87	85,9	86,8	86,1	7,2	3,0	3,8	0,00221	17,5	59
3E100L/2C	3	2910	5,58	9,85	0,89	87,1	87,6	86,9	7,9	3,0	4,1	0,00450	23,8	62
3E112M/2C	4	2915	7,28	13,1	0,90	88,1	88,8	88,2	7,5	2,6	3,9	0,00618	29,4	65
3E132S/2B	5,5	2945	9,90	17,8	0,90	89,2	89,0	88,6	8,9	2,9	3,9	0,01732	45,7	67
3E132S/2C	7,5	2945	13,2	24,3	0,91	90,1	90,5	89,7	8,4	2,6	4,0	0,02104	52,0	67
3E160M/2B	11	2950	19,7	35,6	0,88	91,2	91,0	90,5	8,5	2,6	3,9	0,03318	79,7	69
3E160M/2C	15	2950	26,5	48,6	0,89	91,9	92,1	91,6	8,9	3,1	4,2	0,03913	87,8	69
3E160L/2D	18,5	2945	31,7	60,0	0,91	92,4	92,7	92,3	8,9	3,1	4,2	0,04409	95,2	69
3E180M/2B	22	2957	38,1	71,1	0,90	92,7	92,9	92,0	8,6	3,1	3,9	0,06299	131	70
3E200L/2B	30	2965	52,0	96,6	0,89	93,6	93,8	93,6	8,6	3,2	3,5	0,16168	181	72
3E200L/2C	37	2965	63,3	119	0,90	93,7	94,1	93,8	8,6	3,2	3,4	0,17458	191	72
3E225M/2C	45	2970	76,8	145	0,90	94,0	94,4	94,2	8,6	3,3	3,1	0,25353	335	74
3E250M/2C	55	2970	93,3	177	0,90	94,4	94,8	94,5	8,6	3,3	3,4	0,38000	25	75



Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

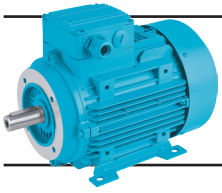
Elektromotoren Leistungsdaten



400V 50Hz 1500 d/d / 400V 50Hz 1500 rpm / 400V 50Hz 1500 UpM

IE3

Tip Type Typ	Tam Yük Değerleri Full-load Data Vollastdaten								Kalkış Değerleri Starting Data Startdaten		Devrilme Momenti Breakdown Torque Kippmo- ment	Atalet Momenti Moment of Inertia Trägheits- moment	B3 Motor Ağırlığı B3 Motor Weight B3 Motor Gewicht	Ses Seviyesi Noise Level Geräusch- pegel
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	Power	Speed	Current	Torque	Power Factor	Efficiency % η			Current	Torque				
	Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment				
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N				
3E63M/4B	0,12	1405	0,37	0,82	0,70	66,0	64,9	58,2	3,7	2,3	2,7	0,00018	4,10	42
3E63M/4C	0,18	1405	0,52	1,22	0,71	69,9	68,8	63,6	3,8	2,3	2,8	0,00022	4,50	42
3E71M/4C	0,25	1435	0,67	1,66	0,71	76,0	75,4	71,5	5,4	2,1	2,8	0,00082	7,10	45
3E71M/4D	0,37	1435	0,97	2,46	0,70	78,5	78,2	75,0	5,5	2,2	2,9	0,00093	7,80	45
3E80M/4C	0,55	1450	1,34	3,62	0,73	80,8	80,4	77,0	5,9	2,1	3,0	0,00200	10,5	50
3E80M/4D	0,75	1450	1,77	4,94	0,74	82,5	82,3	80,0	6,2	2,5	3,1	0,00227	11,6	50
3E90S/4C	1,1	1450	2,51	7,25	0,75	84,5	84,3	82,0	7,0	2,6	3,4	0,00355	16,3	51
3E90L/4D	1,5	1445	3,30	9,91	0,77	85,3	85,2	83,0	7,2	2,8	3,4	0,00411	18,0	51
3E100L/4C	2,2	1450	4,65	14,5	0,79	86,7	87,2	86,0	7,2	2,8	3,6	0,00775	24,4	53
3E100L/4D	3	1450	6,26	19,8	0,79	87,7	88,0	87,0	7,2	2,8	3,6	0,00888	27,0	53
3E112M/4D	4	1460	8,05	26,2	0,81	88,6	88,4	87,5	7,4	2,8	3,8	0,01437	32,6	58
3E132S/4C	5,5	1465	10,9	36,0	0,81	89,6	90,2	90,0	7,0	3,0	3,3	0,03059	53,4	61
3E132M/4D	7,5	1465	14,8	48,9	0,81	90,4	90,4	89,4	7,8	3,2	3,4	0,03418	56,6	61
3E160M/4C	11	1465	21,0	71,7	0,83	91,5	92,1	91,7	7,6	2,8	3,3	0,07011	89,2	63
3E160L/4E	15	1465	28,7	97,8	0,82	92,1	92,4	91,9	7,8	2,8	3,5	0,08579	97,5	63
3E180M/4C	18,5	1475	35,0	120	0,82	92,6	93,2	92,9	7,7	3,0	3,3	0,12901	128	64
3E180L/4D	22	1470	41,4	143	0,82	93,0	93,7	93,7	8,0	3,0	3,4	0,14667	141	64
3E200L/4D	30	1475	54,5	194	0,85	93,6	94,1	94,0	8,0	3,0	3,4	0,28413	193	65
3E225S/4C	37	1478	65,7	239	0,87	93,9	94,5	94,5	8,3	3,2	3,3	0,38229	320	66
3E225M/4D	45	1477	80,0	291	0,86	94,2	94,7	94,7	8,6	3,3	3,2	0,44100	350	67
3E250M/4D	55	1482	95,3	354	0,88	94,6	95,1	95,2	8,7	3,3	3,2	0,73000	460	68



Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

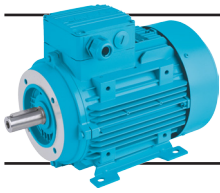
Elektromotoren Leistungsdaten



400V 50Hz 1000 d/d / 400V 50Hz 1000 rpm / 400V 50Hz 1000 UpM

IE3

Tip Type Typ	Tam Yük Değerleri								Kalkış Değerleri		Devrilme Momenti Breakdown Torque Kippmo- ment	Atalet Momenti Moment of Inertia	B3 Motor Ağırlığı B3 Motor Weight	Ses Seviyesi Noise Level
	Full-load Data								Starting Data					
	Vollastdaten								Startdaten					
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	Power	Speed	Current	Torque	Power Factor	Efficiency % η			Current	Torque				
Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment					
	kW	d/d rpm UpM	A	Nm	cos φ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N	M _K /M _N	kgm ²	kg	dB(A)
3E71M/6C	0,18	930	0,55	1,85	0,69	68,0	67,4	62,6	3,6	2,0	2,4	0,00096	6,80	41
3E71M/6D	0,25	930	0,77	2,57	0,67	70,0	69,7	66,0	3,6	2,2	2,5	0,00116	7,50	41
3E80M/6B	0,37	930	1,03	3,80	0,70	74,0	73,8	70,0	4,4	2,1	2,6	0,00202	9,90	43
3E80M/6C	0,55	935	1,47	5,62	0,70	77,2	77,3	74,4	4,3	2,2	2,7	0,00228	11,0	43
3E90S/6B	0,75	945	1,96	7,58	0,70	78,9	79,2	77,6	4,7	2,2	2,7	0,00354	16,0	46
3E90L/6C	1,1	940	2,75	11,2	0,71	81,0	80,8	79,4	5,0	2,2	2,7	0,00428	16,8	46
3E100L/6B	1,5	955	3,50	15,0	0,75	82,5	82,7	81,4	5,3	2,1	2,8	0,00821	22,5	50
3E112M/6B	2,2	960	4,95	21,9	0,76	84,3	84,5	83,5	5,5	2,2	3,0	0,01319	29,6	56
3E132S/6B	3	970	6,55	29,4	0,77	85,6	85,5	84,5	6,2	2,1	3,0	0,03051	46,7	58
3E132M/6C	4	970	8,52	39,4	0,78	86,8	87,0	85,5	6,2	2,2	2,9	0,03493	50,9	58
3E132M/6D	5,5	965	11,6	54,4	0,78	88,0	88,9	88,5	6,2	2,2	2,8	0,03934	57,3	58
3E160M/6D	7,5	972	15,6	73,7	0,78	89,1	89,4	88,4	6,3	2,6	3,0	0,07870	96,0	61
3E160L/6E	11	972	23,1	108	0,76	90,3	90,9	90,5	6,6	2,9	3,1	0,08580	104	62
3E180L/6E	15	975	30,8	147	0,77	91,2	91,6	91,0	6,7	2,9	3,1	0,15264	141	63
3E200L/6C	18,5	977	36,4	181	0,80	91,7	91,8	91,8	6,1	2,6	2,6	0,36100	164	64
3E200L/6D	22	978	42,5	215	0,81	92,2	92,9	93,0	6,2	2,6	2,6	0,39355	180	64
3E225S/6C	30	985	57,6	291	0,81	92,9	92,9	92,6	6,6	2,9	2,7	0,60000	340	65
3E250M/6C	37	988	68,8	358	0,83	93,4	93,6	93,5	7,3	2,9	2,8	0,82000	435	65
3E280S/6B	45	989	83,5	435	0,83	93,7	93,9	93,2	6,8	2,9	2,8	1,45000	590	65
3E280M/6C	55	989	102	531	0,83	94,1	94,4	93,5	6,9	2,9	2,8	1,65000	620	65



Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

Elektromotoren Leistungsdaten



IE2

400V 50Hz 3000 d/d / 400V 50Hz 3000 rpm / 400V 50Hz 3000 UpM

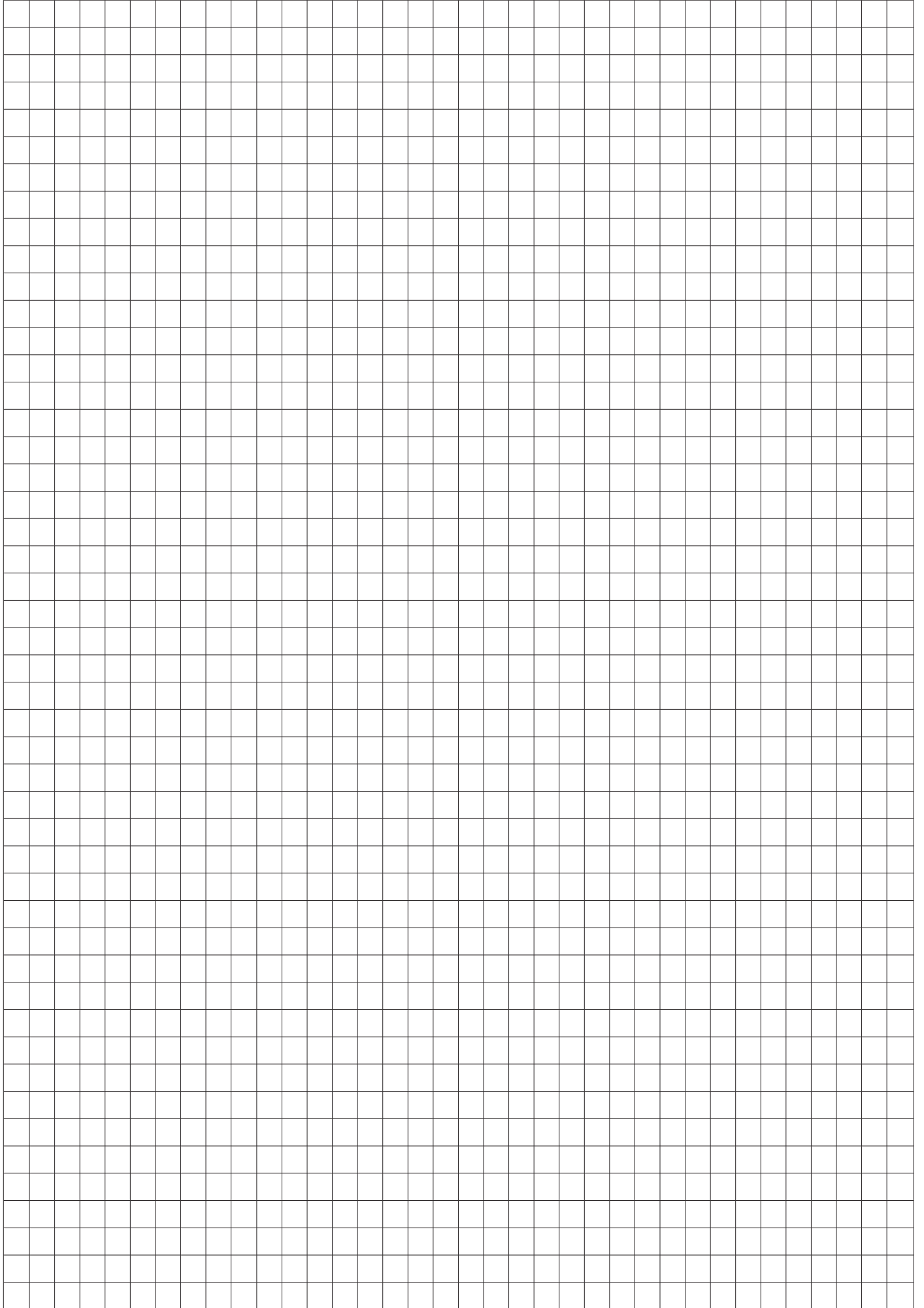
Tip Type Typ	Tam Yük Değerleri Full-load Data Vollastdaten								Kalkış Değerleri Starting Data Startdaten		Devrilme Momenti Breakdown Torque Kippmo- ment	Atalet Momenti Moment of Inertia Trägheits- moment	B3 Motor Ağırlığı B3 Motor Weight B3 Motor Gewicht	Ses Seviyesi Noise Level Geräusch- pegel
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	Power	Speed	Current	Torque	Power Factor	Efficiency % η			Current	Torque				
	Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment				
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N				
2E63M/2A	0,18	2800	0,5	0,61	0,77	67,5	66,0	62,0	4,5	2,9	3,0	0,00012	3,80	51
2E63M/2B	0,25	2800	0,67	0,85	0,78	69,0	68,0	63,5	4,5	2,9	3,0	0,00015	4,00	51
2E71M/2A	0,37	2790	0,90	1,26	0,80	74,2	74,5	72,5	5,0	2,5	2,8	0,00031	5,70	54
2E71M/2B	0,55	2790	1,27	1,88	0,82	75,8	77,0	76,0	5,0	2,8	2,9	0,00037	6,20	54

400V 50Hz 1500 d/d / 400V 50Hz 1500 rpm / 400V 50Hz 1500 UpM

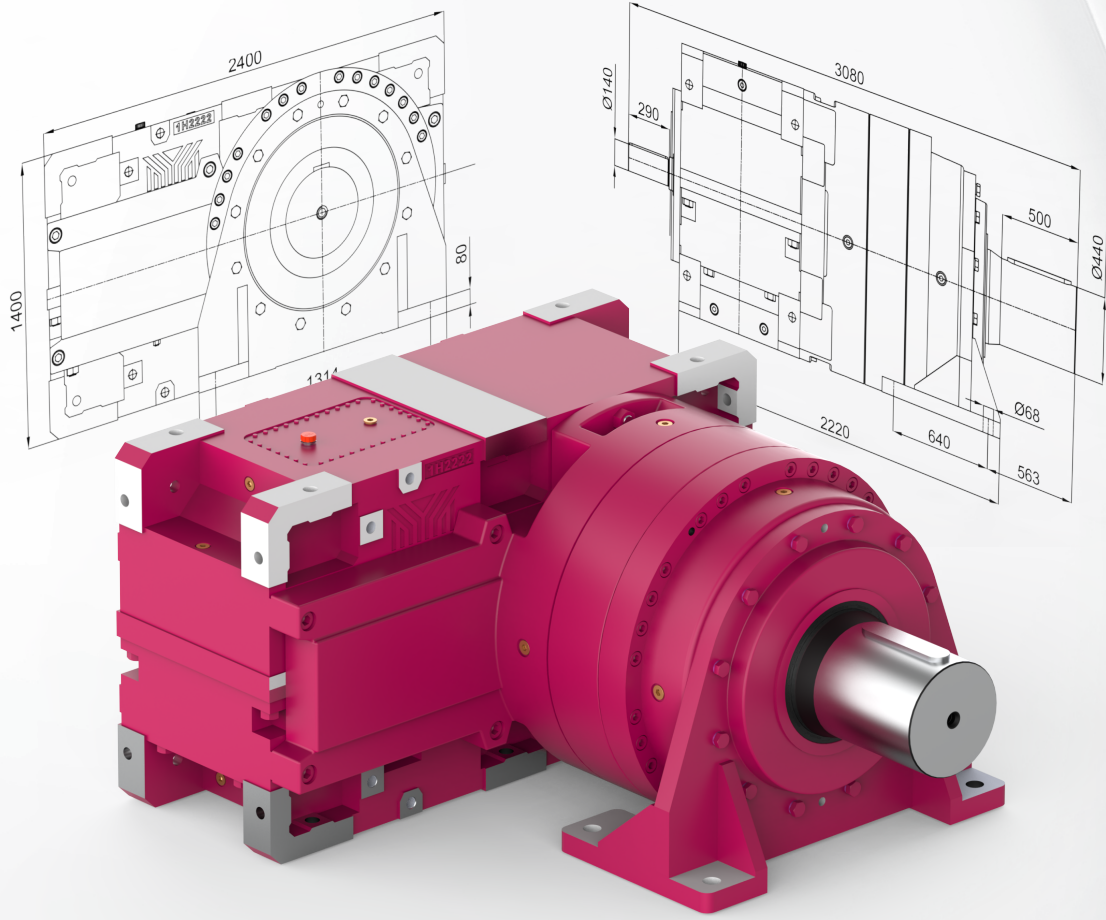
Tip Type Typ	Tam Yük Değerleri Full-load Data Vollastdaten								Kalkış Değerleri Starting Data Startdaten		Devrilme Momenti Breakdown Torque Kippmo- ment	Atalet Momenti Moment of Inertia Trägheits- moment	B3 Motor Ağırlığı B3 Motor Weight B3 Motor Gewicht	Ses Seviyesi Noise Level Geräusch- pegel
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	Power	Speed	Current	Torque	Power Factor	Efficiency % η			Current	Torque				
	Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment				
	kW	d/d rpm UpM	A	Nm	Cos ϕ	4 / 4	3 / 4	1 / 2	I _A /I _N	M _A /M _N				
2E63M/4B	0,12	1400	0,42	0,82	0,70	60,1	60,5	54,5	3,0	2,1	2,3	0,00018	4,00	42
2E63M/4C	0,18	1400	0,56	1,23	0,71	64,7	65,8	61,5	3,0	2,1	2,3	0,00022	4,40	42
2E71M/4B	0,25	1425	0,71	1,68	0,69	74,0	73,5	70,5	4,4	2,0	3,0	0,00067	6,30	46
2E71M/4C	0,37	1425	1,00	2,47	0,70	76,1	75,5	71,5	4,6	2,0	3,0	0,00082	6,70	46
2E80M/4B	0,55	1440	1,45	3,65	0,71	77,1	76,7	75,0	5,2	2,0	3,0	0,00175	9,70	50

400V 50Hz 1000 d/d / 400V 50Hz 1000 rpm / 400V 50Hz 1000 UpM

Tip Type Typ	Tam Yük Değerleri <i>Full-load Data</i> Vollastdaten								Kalkış Değerleri <i>Starting Data</i> Startdaten		Devrilme Momenti <i>Breakdown Torque</i> Kippmo- ment	Atalet Momenti <i>Moment of Inertia</i> Trägheits- moment	B3 Motor Ağırlığı <i>B3 Motor Weight</i> B3 Motor Gewicht	Ses Seviyesi <i>Noise Level</i> Geräusch- pegel
	Güç	Devir	Akım	Moment	Güç Faktörü	Verim % η			Akım	Moment				
	<i>Power</i>	<i>Speed</i>	<i>Current</i>	<i>Torque</i>	<i>Power Factor</i>	<i>Efficiency % η</i>			<i>Current</i>	<i>Torque</i>				
	Leistung	Drehzahl	Nennstrom	Drehmoment	Leistungsfaktor	Wirkungsgrad % η			Nennstrom	Drehmoment				
	kW	d/d rpm UpM	A	Nm	cos ϕ	4 / 4	3 / 4	1 / 2	I _A / I _N	M _A / M _N				
2E71M/6B	0,18	920	0,60	1,87	0,67	64,5	63,0	57,0	3,2	1,9	2,3	0,00076	6,10	42
2E71M/6C	0,25	920	0,78	2,59	0,69	66,5	66,0	61,0	3,3	1,9	2,3	0,00096	6,70	42
2E80M/6A	0,37	925	1,08	3,82	0,69	71,4	71,5	70,0	4,0	2,0	2,6	0,00176	9,10	45
2E80M/6B	0,55	932	1,50	5,64	0,72	73,5	74,0	71,0	4,2	2,1	2,6	0,00202	9,80	45



H22 + P55



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