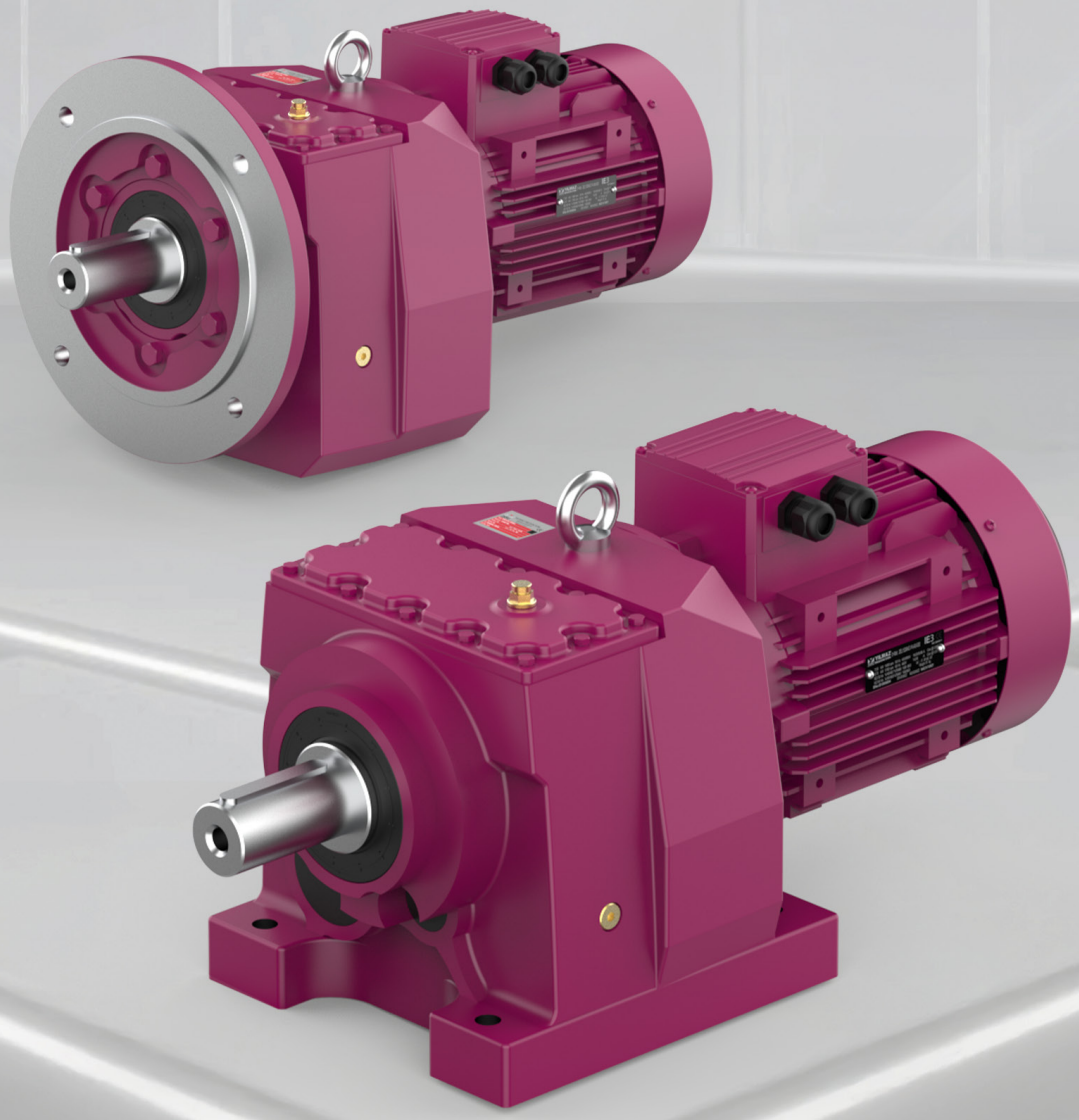
M-N SERİSİ SERIES

YILMAZ REDÜKTÖR

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 EN DE

M0801-1026

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

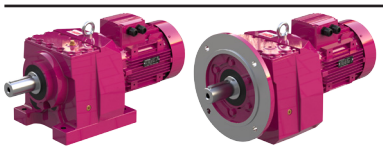


ELK Motor Fabrikası / Motor Factory
50.000 m² Kapalı Alan / Closed Area
Çerkezköy / Tekirdağ
www.elkmotor.com.tr



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

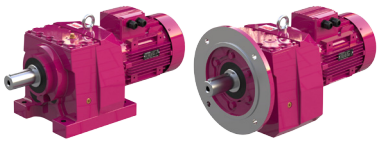
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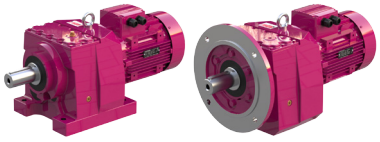
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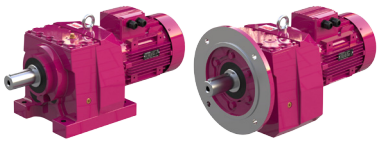


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Sembollerin Açıklaması	***Key of Symbols***	**Erklärung der Bezeichnungen**
c_t : Anahtarın devreye girme zamanı katsayısı	c_t : *Coefficient of switch on time.*	c_t : Koeffizient der Tätigkeitszeit von Schalter
f_s : Servis faktörü	f_s : *Service factor*	f_s : Betriebsfaktor
F_{ama} : Çıkış milinde müsade edilen eksenel yükler [kN]	F_{ama} : *Permissible axial loads which can be applied to output shafts [kN]*	F_{ama} : Zulässige Axialkräfte auf Abtriebswelle [kN]
F_{ame} : Giriş milinde müsade edilen eksenel yükler [kN]	F_{ame} : *Permissible axial loads which can be applied to input shafts [kN]*	F_{ame} : Zulässige Axialkräfte auf Antriebswelle [kN]
F_{qam} : Çıkış milinde izin verilen radyal yöndeki yükler [N]	F_{qam} : *Permissible overhung loads which can be applied to output shafts [N]*	F_{qam} : Zulässige Querkräfte auf Abtriebswelle [N]
F_{qem} : Giriş milinde izin verilen radyal yöndeki yükler [N]	F_{qem} : *Permissible overhung loads which can be applied to input shafts [N]*	F_{qem} : Zulässige Querkräfte auf Antriebswelle [N]
F_{qa} : Çıkış miline gelen radyal yöndeki yükler [N]	F_{qa} : *Overhung loads applied to the output shaft [N]*	F_{qa} : Querkräfte auf Abtriebswelle [N]
F_{qe} : Giriş miline gelen radyal yönde ki yükler [N]	F_{qe} : *Overhung loads applied to the input shafts [N]*	F_{qe} : Querkräfte auf Antriebswelle [N]
F_q : Radyal yükler [N]	F_q : *Overhung loads [N]*	F_q : Querkräfte [N]
F_a : Eksenel yöndeki yükler [N]	F_a : *Axial loads on output shaft [N]*	F_a : Querkräfte auf Antriebswelle [N]
i : Tahvil oranı	i : *Transmission ratio*	i : Übersetzungsverhältnis
J_{ext} : Motor miline indirgenmiş toplam dış atalet momenti [kgm^2]	J_{ext} : *The total inertia of rotating parts at outside reduced at the motor shaft [kgm^2]*	J_{ext} : Die Gesamtträgheit der rotierende Teile von der Aus gangsseite reduziert auf Motor welle [kgm^2]
M_2 : Çıkış momenti [Nm]	M_2 : *Output torque [Nm]*	M_2 : Ausgangsdrehmoment [Nm]
M_a : Anma momenti [Nm]	M_a : *Nominal torque [Nm]*	M_a : Nenndrehmoment [Nm]
n_1 : Redüktör giriş mili devri [d/dak]	n_1 : *Input speed of gearbox [rpm]*	n_1 : Antriebsdrehzahl [U/min]
n_2 : Redüktör çıkış mili devri [d/dak]	n_2 : *Output speed of gearbox [rpm]*	n_2 : Abtriebsdrehzahl [U/min]
P_{eq} : Eşdeğer güç [kW]	P_{eq} : *Equivalent power [kW]*	P_{eq} : Äquivalente Leistung [kW]
P_e : Nominal güç (Bak. Güç-Devir Tabloları) [kW]	P_e : *Nominal power (given on per formance tables) [kW]*	P_e : Getriebe Nennleistung (siehe Leistung- Drehzahltabellen [kW]
P_M : Tahrik edilecek makina için gerekli güç (Değişken yükler için eşdeğer güç alınır) [kW]	P_M : *Power consumption of the driven machine (for alternating power, refer to equivalent power) [kW]*	P_M : Leistung benötigt an der Ab triebswelle (Zur Berechnung bei variabler Leistungen äqui valente Leistung benutzen) [kW]
t : Zaman [s]	t : *Time [s]*	t : Zeit [s]
T_e : Eşdeğer moment [Nm]	T_e : *Equivalent torque [Nm]*	T_e : Minimales Drehmoment [Nm]



Ürün Yelpazesi

Elinizdeki katalog sadece **M-N 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 makinaya sabitlenen redüktörlerdir. Dolu mil çıkışlıdır.

- 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 makinaya sabitlenen redüktörlerdir. Delik milli veya mil çıkışlı olabilir.

- 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 makinaya sabitlenebilen redüktörlerdir. Delik milli veya mil çıkışlı olabilir.

- 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 makinaya sabitlenen redüktörlerdir. E serisinden farklı olarak yüksek verime sahiptirler. Delik milli veya mil çıkışlı olabilir.

- 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 milli veya mil çıkışlı olabilir.

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

- 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.

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

- PF Serisi
Çift milli beton mikserleri (Twin Şaft) için üretilen, kasnak bağlantısı için özel giriş flanşına sahip konik giriş kademeli planet redüktörlerdir.

Production Range

*This catalogue is containing **M-N series** of gearboxes only.*

- M and N Series
M and N series are helical geared gear units. 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.

- 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.

- E Series
E series gearboxes are with worm and wormwheel. 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.

- 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.

- 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. They can have hollow or solid output shaft.

- T Series
T Series are gear units which are helical geared 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.

- 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.

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

- PF Series
Planetary gearboxes with bevel stage input designed for twin shaft concrete mixer applications with special flange for pulley connection.

Produktpalette

Dieses Katalog umfasst nur die **M-N 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.

- 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.

-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.

- K Serie
Diese Getrieben 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.

- 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 Fußen, 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.

- T Serie
Die Getriebe der T-Serie sind schrägverzahnte Hohlwellen-Flachgetriebe in einem Monoblockgehäuse. Die T-Serie hat ein kompaktes Gehäuse und wird serienmäßig mit einer Abtriebshohlwelle hergestellt, sodass das Getriebe nur minimalen Platzbedarf hat.

- 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.

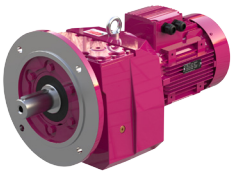
- **V Serie**
V Krane und Hebezeuge werden geeignet zur Kranklasse M1 - M8 (1Dm - 5m) hergestellt.

- PF Serie
Die Antriebsstufe der Baureihe PF besteht aus einem Kegelrad und diese Getriebe sind besonders für Doppelwellen-Betonmischer mit einem speziellen Antriebsflansch zur Verbindung einer Riemenscheibe konzipiert.



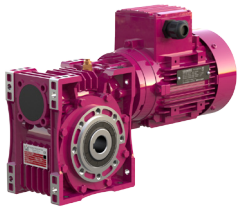
M ...

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



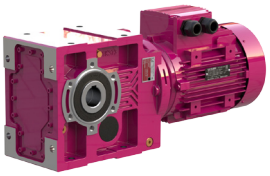
N ...

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



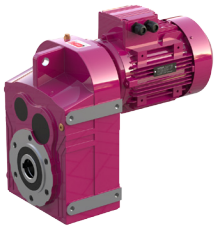
E ...

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



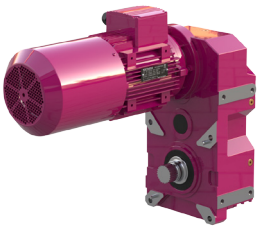
K ...

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



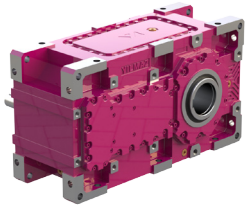
D...

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



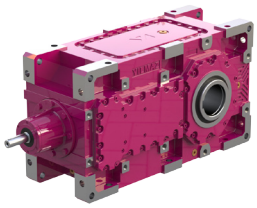
VR ...

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)



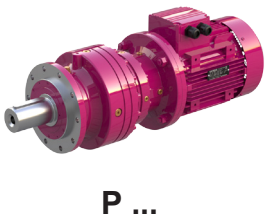
H ...

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



P ...

13 farklı büyüklükte;
Moment aralığı: 1.000 - 135.000 Nm
Tahvil oranları: 3,43 - 7588
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



R ...

13 farklı büyüklükte;
Moment aralığı: 1.000 - 135.000 Nm
Tahvil oranları: 3,43 - 7588
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



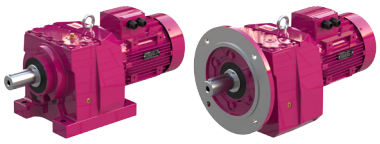
T ...

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



PF ...

4 farklı büyüklükte;
Moment aralığı: 5.500 - 35.700 Nm
Tahvil oranları: 11,93 - 28,17
4 different sizes:
Torque range: 5.500 - 35.700 Nm
Transmission ratio: 11,93 - 28,17
4 verschiedene Baugrößen:
Drehmomentber. : 5.500 - 35.700 Nm
Übersetzung: 11,93 - 28,17



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 katalogda 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.
- Katalogda 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. Etikette yazan montaj pozisyonundan farklı bağlanan redüktörler garanti kapsamından çıkar. Bu katalogda 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 yaralanma 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 cataloques 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.*

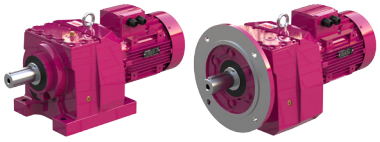
- The machine manufacturer or user is responsible for taking the necessary precautions on the machine or at the place where the gearbox will be used, in order to prevent injury and life-threatening risks by taking into account the shaft, gear failures etc. that may occur in the gearboxes.

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 Querkräfte 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 Getrieben 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 Typenschieldes 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.



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 momenti gösterir.

- Anma Momenti (M_a): [Nm]
Redüktörün f_s=1 şartı için mekanik olarak taşıdığı moment değeridir.

- Nominal Güç (P_e): [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 25'de verilmiştir.

- İhtiyaç güç (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 herzaman çıkış momentine eşit yada daha düşük olmalıdır.

- Müsade Edilen Eksenel ve Radyal Yükler Fqem, Fqam: [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_e): [kW]
The nominal power is the power which gearbox can mechanicaly 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 Yilmaz 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: Fqem, Fqam [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_e): [kW]
Die Nennleistung ist die mechanische Grenzfestigkeitsleistung für fs=1. Kann von der Leistung- Drehzahltabelle abgelesen werden.

- Übersetzung (i):
Wird aus dem Verhältnis von Ausgang- zu Eingangswinkelgeschwindigkeit bestimmt. Gängige Übersetzungen von Yilmaz 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:
Fqem, Fqam [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.

- 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
- Geri dönüş kilidi
- Özel keçe çözümleri,
- Şeffaf yağ seviye göstergesi
- 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 C3-M 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 DIN1843. Different colors are avaliable 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
- Backstops
- Special sealing solutions,
- Transparent oil level indicator,
- 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-standard. Our standard paint meets C3-M 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,
- Rücklaufsperren,
- Unterschiedliche Dichtungssysteme,
- Ölstandzeiger,
- 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 C3-M-Korrosionkategorie. 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	**Ortam** *Environment* Umfeld	**Çevre Şartları** *Ambient Conditions* Umgebungsbedingungen	**Boya Tipi** *Paint Type* Lackierung	**Boya Kalınlıkları** *Paint Thickness* Sollschichtdicke
C3-M (Standard)	**İç** **Dış** *Indoor* *Outdoor* Innen Außen	**Yüksek nem ve bir miktar hava kirliliği bulunan üretim alanları; gıda işletmeleri, çamaşırhaneler, bira fabrikaları,süt işletmeleri** **Kentsel ve endüstriyel ortamlar, orta düzeyde kükürt dioksit kirliliği; düşük tuzluluk oranına sahip kıyı bölgeleri** *Production areas with high humidity and some air pollution; food processing plants, laundries, breweries, dairies* *Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity* Produktionsräume mit hoher Luftfeuchtigkeit und gewisser Luftverschmutzung; Lebensmittelbetriebe, Wäschereien, Brauereien, Molkereien Städtische und industrielle Atmosphäre, mäßige Schwefeldioxidbelastung; Küstenbereiche mit geringer Salzbelastung	**Yüksek Yapılı Antikorozif Epoksi Astar** *High-Build Anticorrosive Epoxy Primer Coat* High-Build Antikorrosions-Epoxid-Grundierung **Alifatik Akrilik Poliüretan Sonkat** *Aliphatic Acrylic Polyurethane Top Coat* Aliphatischer Acryl-Polyurethan-Decklack	60 µm 60 µm
C4-M	**İç** **Dış** *Indoor* *Outdoor* Innen Außen	**Kimya tesisleri, yüzme havuzları, kıyı gemi ve tersaneleri** **Endüstriyel bölgeler ve orta tuzlulukta kıyı bölgeleri** *Chemical plants, swimming pools, coastal shipyards and boatyards* *Industrial areas and coastal areas with moderate salinity* Chemieanlagen, Schwimmbäder, Küstenwerften und Werften Industriegebiete und Küstenbereiche mit mäßiger Salzbelastung	**Yüksek Yapılı Antikorozif Epoksi Astar** *High-Build Anticorrosive Epoxy Primer Coat* High-Build Antikorrosions-Epoxid-Grundierung **Alifatik Akrilik Poliüretan Sonkat** *Aliphatic Acrylic Polyurethane Top Coat* Aliphatischer Acryl-Polyurethan-Decklack	120 µm 60 µm
C5-M	**İç** **Dış** *Indoor* *Outdoor* Innen Außen	**Neredeyse sürekli yoğuşma ve yüksek kirlilik bulunan alanlar** **Yüksek nemli, aşındırıcı endüstriyel bölgeler ve yüksek tuzluluk oranına sahip kıyı bölgeleri** *Areas with almost permanent condensation and high pollution* *Industrial areas with high humidity and aggressive atmosphere, coastal areas with high salinity* Bereiche mit nahezu ständiger Kondensation und hoher Verschmutzung Industriegebiete mit hoher Luftfeuchtigkeit und aggressiver Atmosphäre, Küstenbereiche mit hoher Salzbelastung	**Yüksek Yapılı Antikorozif Epoksi Astar** *High-Build Anticorrosive Epoxy Primer Coat* High-Build Antikorrosions-Epoxid-Grundierung **Alifatik Akrilik Poliüretan Sonkat** *Aliphatic Acrylic Polyurethane Top Coat* Aliphatischer Acryl-Polyurethan-Decklack	180 µm 60 µm
CX	**İç** **Dış** *Indoor* *Outdoor* Innen Außen	**Aşırı nemli ve aşındırıcı endüstriyel ortamlar** **Yüksek tuzlulukta açık deniz bölgeleri; aşırı nemli ve aşındırıcı endüstriyel, subtropikal ve tropikal ortamlar** *Extreme humidity and aggressive industrial environments* *Offshore areas with high salinity; extreme humidity and aggressive industrial, subtropical and tropical environments* Extreme Luftfeuchtigkeit und aggressive Industrieatmosphären Offshore-Bereiche mit hoher Salzbelastung; extreme Luftfeuchtigkeit und aggressive industrielle, subtropische und tropische Atmosphären	**Yüzey Toleranslı Yüksek Yapılı Epoksi Astar** *Surface-Tolerant High-Build Epoxy Primer Coat* Oberflächentolerante High-Build-Epoxid-Grundierung **Yüzey Toleranslı Yüksek Yapılı Epoksi Ara Kat** *Surface-Tolerant High-Build Epoxy Int. Coat* Oberflächentolerante High-Build-Epoxid-Zwischenbeschichtung **Alifatik Akrilik Poliüretan Sonkat** *Aliphatic Acrylic Polyurethane Top Coat* Aliphatischer Acryl-Polyurethan-Decklack	100 µm 290 µm 60 µm

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 Lenght* / Gehäuselänge des Motors
Motor büyüklüğü / *Motor size* / Motorbaugröße
Motor tipi / *Motor type* / Motortyp

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

A06 : 63 B5	**A11** : 112 B5
B06 : 63 B14	**B11** : 112 B14
A07 : 71 B5	**A13**: 132 B5
B07 : 71 B14	**B13**: 132 B14
A08 : 80 B5	**A16**: 160 B5
B08 : 80 B14	**A18**: 180 B5
A09 : 90 B5	**A20**: 200 B5
B09 : 90 B14	**A22**: 225 B5
A10 : 100 B5	**A25**: 250 B5
B10 : 100 B14	**A28**: 280 B5

315 B5 Tip Motorlarda Kodlama *Coding in 315 B5 Type Motors* Kodierung in 315-B5-Typ-Motoren	
Giriş Flanş Kodu *Input Flange Code* Antriebsflansch-Kode	**Motor Mil Çapı** *Motor Shaft Dia.* *Motorwellen Durchm.*
A31M	Ø80
A31N	Ø85
A31L	Ø90

Motor Verim Sınıfı / *Motor Efficiency Class /* Motor-Effizienzklasse

Kademe Sayısı / *Stage /* Anzahl der Stufen

2 Kademe / *2 Stages* / 2 stufig
3 Kademe / *3 Stages* / 3 stufig
4 Kademe / *4 Stages* / 4 stufig
5 Kademe / *5 Stages* / 5 stufig
6 Kademe / *6 Stages* / 6 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 Milli / *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 Ausgangsflasch, Fussausführung (M Type)
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)

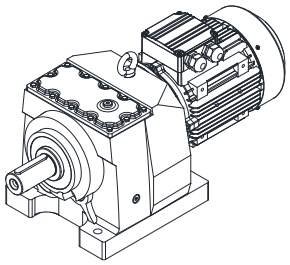
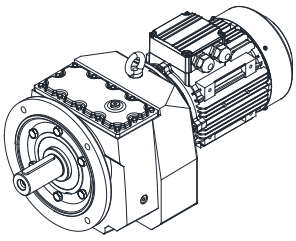
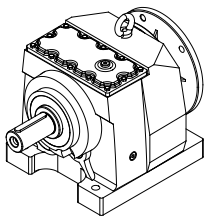
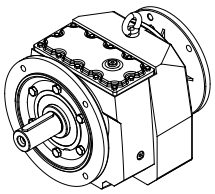
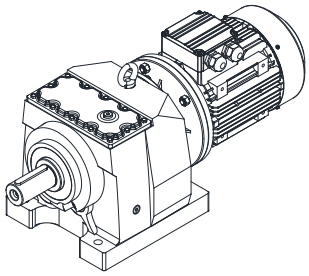
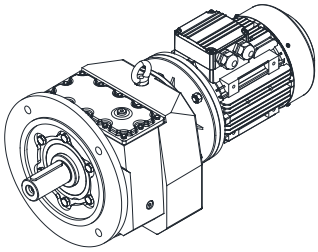
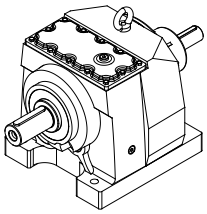
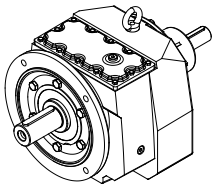
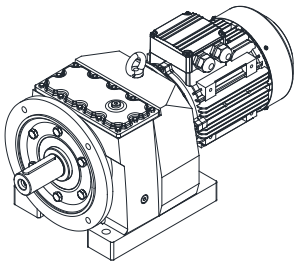
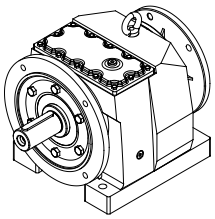
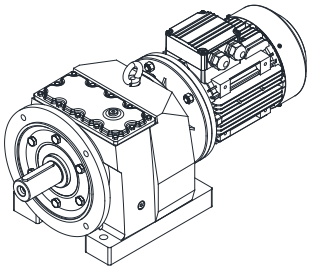
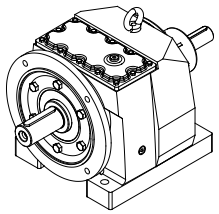
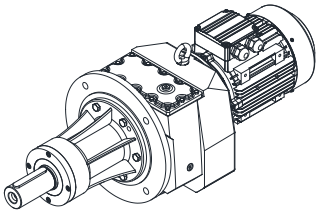
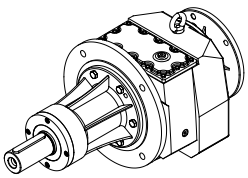
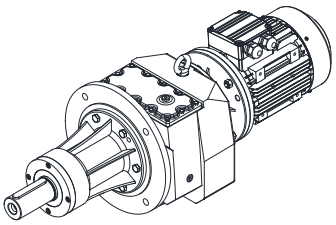
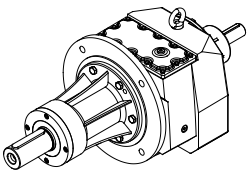
Redüktör Tipi / *Gearbox Type /* Getriebe

M Serisi / *M Serie* / M Serie
N Serisi / *N Serie* / N Serie

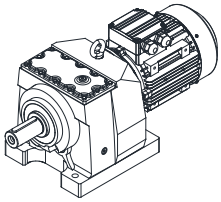
Tip Tanımlaması / *Unit Designation* **/** Typenbezeichnungen

MR...	**Monoblok tip, helisel redüktörler, motorlu, ayaklı** / *Monoblock type helical geared motors, foot mounted* / Stirnradgetriebemotoren mit Blockgehäuse, Ausführung mit Fuss
NR...	**Monoblok tip, helisel redüktörler, motorlu, flanşlı** / *Monoblock type helical geared motors, flange mounted* / Stirnradgetriebemotoren 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* / Stirnradgetriebemotoren 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* / Strinradgetriebemotoren 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* / Strinradgetriebe 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* / Stirnradgetriebemotoren 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* / Stirnradgetriebemotoren 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* / Stirnradgetriebemotoren 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* / Stirnradgetriebemotoren 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* / Stirnradgetriebemotoren 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

Tip Tanımlaması / *Unit Designation* / Typenbezeichnungen

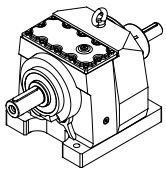
 **MR...**	 **NR...**	 **MN...**	 **NN...**
 **MV...**	 **NV...**	 **MT...**	 **NT...**
 **MRF...**	 **MNF...**	 **MVF...**	 **MTF...**
 **NRB...**	 **NNB...**	 **NVB...**	 **NTB...**

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



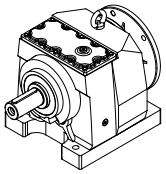
M.....: M serisi redüktör
R.....: Motor bağlantılı
1.....: Gövde büyüklük
7.....: Revizyon numarası
2.....: Kademe sayısı
3.....: Verim sınıfı
E.....: Motor tipi
90S.....: Motor büyüklüğü
4C.....: Motor kutup sayısı
L05.....: Fren Tipi

MT373



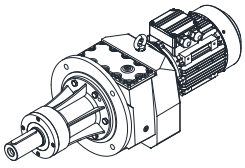
M.....: M serisi redüktör
T.....: Motorsuz giriş milli
3.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı

MN473 - A11



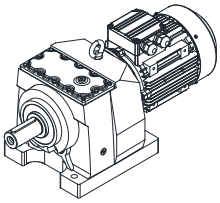
M.....: M serisi redüktör
N.....: Motorsuz ve IEC B5 giriş flanşlı
4.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı
A11.....: 112 tip motor, B5 bağlantı flanşı

NRB473 - 3E100L/4C



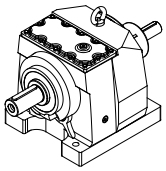
N.....: N serisi redüktör
R.....: Motorlu
B.....: Agitator boğazlı
4.....: Gövde büyüklüğü
7.....: Revizyon numarası
3.....: Kademe sayısı
3.....: Verim sınıfı
E.....: Motor tipi
100L.....: Motor büyüklüğü
4C.....: Motor kutup sayısı

Sample Designations
MR172 - 3E90S/4C - L05



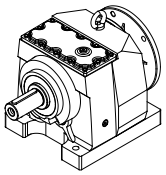
M.....: *M series gearbox*
R.....: *With motor connection*
1.....: *Gear unit size*
7.....: *Revision number*
2.....: *Stage number*
3.....: Efficiency class
E.....: Motor type
90S.....: *Motor frame size*
4C.....: *Number of poles*
L05.....: *Brake type*

MT373



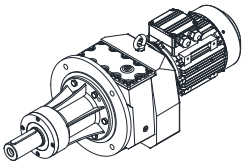
M.....: *M series gearbox*
T.....: *Solid input shaft*
3.....: *Gear unit size*
7.....: *Revision number*
3.....: *Stage number*

MN473 - A11



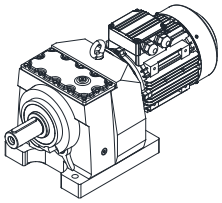
M.....: *M series gearbox*
N.....: *IEC B5 flange without motor input*
4.....: *Gear unit size.*
7.....: *Revision number*
3.....: *Stage number*
A11.....: Motor type 112, B5 flange

NRB473 - 3E100L/4C



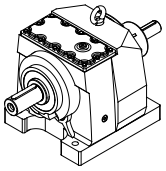
N.....: N series gearbox
R.....: With motor
B.....: Agitator flange
4.....: Gear unit size
7.....: Revision number
3.....: Stage number
3.....: Efficiency class
E.....: Motor type
100L.....: Motor size
4C.....: Number of poles

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



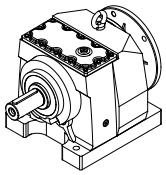
M.....: M Serie Getriebe
R.....: Motorverbindung
1.....: Größe der Gehäuse
7.....: Änderungsnummer
2.....: Stufenanzahl
3.....: Effizienzklasse
E.....: Motortyp
90S.....: Motorbaugröße
4C.....: Anzahl der Polen
L05.....: Bremse

MT373



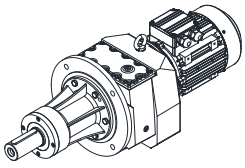
M.....: M Serie Getriebe
T.....: Vollwelleneingang ohne Motor
3.....: Größe der Gehäuse
7.....: Änderungsnummer
3.....: Stufenanzahl

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

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**
M.002	2	3,62 - 11,14	3,62 - 11,14	3,62 - 11,14	3,62 - 11,14	3,62-3,90 5,57-8,45	-	-
M.003	3	13,61 - 45,18	13,61 - 45,18	13,61 - 45,18	13,61 - 32,02	13,61 - 20,66	-	-
M.102	2	3,94 - 15,95	3,94 - 15,95	3,94 - 15,95	3,94 - 15,95	3,94 - 14,08	3,94-4,57 8,01-9,29	-
M.103	3	17,33 - 50,51	17,33 - 50,51	17,33 - 50,51	17,33 - 50,51	17,33 - 21,96 29,40-44,60	29,40	-
M.172	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	-
M.173	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	-
M.202	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	3,50-4,20 7,04-10,07
M.203	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	-
M.272	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
M.273	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
M.275	5	149,02 - 1194,61	149,02 - 1194,61	149,02 - 1194,61	149,02 - 1194,61	149,02-215,91 332,52-358,33	-	-
M.276	6	1463,49 - 2920,17	1463,49 - 2920,17	1463,49 - 2920,17	1463,49 - 2920,17	-	-	-
M.282	2	-	3,64 - 6,25 8,33 - 30,37	3,64 - 6,25 8,33 - 30,37	3,64 - 6,25 8,33 - 30,37	3,15 - 25,23	3,15 - 19,06	3,15 - 14,31
M.283	3	-	18,33 - 27,80 35,98 - 137,91	18,33 - 27,80 35,98 - 137,91	18,33 - 27,80 35,98 - 137,91	18,33 - 114,14	18,33 - 85,60	18,33 - 63,65
M.284	4	158,52 - 431,18	158,52 - 431,18	158,52 - 431,18	158,52 - 431,18	-	-	-
M.285	5	376,94 - 1365,28	376,94 - 1365,28	376,94 - 1365,28	376,94 - 1365,28	-	-	-
M.286	6	1817,07 - 3214,82	1817,07 - 3214,82	1817,07 - 3214,82	1817,07 - 3214,82	-	-	-
M.372	2	-	3,74 - 4,29 5,97 - 6,84 9,41 - 10,80 13,53 - 23,33	3,74 - 4,29 5,97 - 6,84 9,41 - 10,80 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
M.373	3	-	18,68 - 20,64 25,27 - 29,47 41,16 - 157,76	18,68 - 20,64 25,27 - 29,47 41,16 - 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
M.374	4	181,34 - 524,07	181,34 - 524,07	181,34 - 524,07	181,34 - 524,07	-	-	-
M.375	5	488,82 - 1561,78	488,82 - 1561,78	488,82 - 1561,78	488,82 - 1561,78	488,82 - 676,02	-	-
M.376	6	1217,14 - 4945,64	1217,14 - 4945,64	1217,14 - 4945,64	1217,14 - 4945,64	1217,14 - 2140,73	1217,14 - 1411,47	-
M.472	2	-	-	9,53 - 10,79 13,56 - 15,35 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
M.473	3	-	-	42,75 - 49,05 63,70 - 73,09 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
M.474	4	-	229,46 - 674,46	229,46 - 674,46	229,46 - 674,46	229,46 - 295,98	229,46 - 259,55	-
M.475	5	726,85 - 2522,85	726,85 - 2522,85	726,85 - 2522,85	726,85 - 2522,85	726,85 - 1738,98	726,85 - 1204,49	726,85 - 871,52
M.476	6	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 7458,85	2148,94 - 5141,34	2148,94 - 3561,10	2148,94 - 2576,66

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**
M.002	2	-	-	-	-	-	-	-
M.003	3	-	-	-	-	-	-	-
M.102	2	-	-	-	-	-	-	-
M.103	3	-	-	-	-	-	-	-
M.172	2	-	-	-	-	-	-	-
M.173	3	-	-	-	-	-	-	-
M.202	2	-	-	-	-	-	-	-
M.203	3	-	-	-	-	-	-	-
M.272	2	-	-	-	-	-	-	-
M.273	3	-	-	-	-	-	-	-
M.275	5	-	-	-	-	-	-	-
M.276	6	-	-	-	-	-	-	-
M.282	2	3,15 - 3,64 7,21 - 8,33	-	-	-	-	-	-
M.283	3	30,82 - 35,98	-	-	-	-	-	-
M.284	4	-	-	-	-	-	-	-
M.285	5	-	-	-	-	-	-	-
M.286	6	-	-	-	-	-	-	-
M.372	2	3,28 - 13,53	-	-	-	-	-	-
M.373	3	21,65 - 25,27 35,25 - 41,16	-	-	-	-	-	-
M.374	4	-	-	-	-	-	-	-
M.375	5	-	-	-	-	-	-	-
M.376	6	-	-	-	-	-	-	-
M.472	2	3,27 - 18,72	3,27 - 15,35	-	-	-	-	-
M.473	3	18,04 - 84,46 91,58	18,04 - 73,09	-	-	-	-	-
M.474	4	-	-	-	-	-	-	-
M.475	5	-	-	-	-	-	-	-
M.476	6	-	-	-	-	-	-	-

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

Tip Type Typ	**Kademe** *Stages* Stufen	**Motor Büyüklüğü** / *Motor Size* / Motorbaugröße						
		63	**71**	**80**	**90**	**100**	**112**	**132**
M.572	2	-	-	-	-	17,07 - 27,00	17,07 - 27,00	4,95 - 27,00
M.573	3	-	-	-	-	26,54 - 167,32	22,64 - 134,45	22,64 - 118,95
M.574	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
M.575	5	620,62 - 2736,94	620,62 - 2736,94	620,62 - 2736,94	620,62 - 2736,94	-	-	-
M.576	6	2850,22 - 8091,82	2850,22 - 8091,82	2850,22 - 8091,82	2850,22 - 8091,82	-	-	-
M.672	2	-	-	-	-	20,74 - 23,18	20,74 - 23,18	5,08 - 5,73 10,62 - 23,18
M.673	3	-	-	-	-	110,55 - 196,61	110,55 - 196,61	30,20 - 174,89
M.674	4	-	-	215,97 - 500,39	215,97 - 500,39	215,97 - 500,39	215,97 - 442,20	-
M.675	5	-	583,04 730,46 - 2578,93	583,04 730,46 - 2578,93	583,04 730,46 - 2578,93	583,04 - 2578,93	583,04 - 1113,08	583,04 - 874,56
M.676	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
M.772	2	-	-	-	-	-	-	7,26 12,98 - 21,40
M.773	3	-	-	-	-	-	-	19,52 34,89 - 39,33 68,15 - 208,82
M.774	4	-	-	190,96 - 594,92	190,96 - 594,92	190,96 - 594,92	190,96 - 594,92	190,96 - 467.43
M.775	5	-	641,40 - 3103,85	641,40 - 3103,85	641,40 - 3103,85	641,40 - 3103,85	641,40 822,02 - 1252,60	822,02 - 984,18
M.776	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
M.872	2	-	-	-	-	-	-	-
M.873	3	-	-	-	-	-	-	56,54 - 110,17
M.874	4	-	-	-	-	188,08 - 446,42	188,08 - 390,74	107,60 - 345,67
M.875	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
M.876	6	-	2108,33 - 17501,59	2108,33 - 17501,59	2108,33 - 13014,00	2108,33 - 11443,34	2108,33 - 3892,30	2108,33 - 2894,28
M.972	2	-	-	-	-	-	-	-
M.973	3	-	-	-	-	-	-	-
M.974	4	-	-	-	-	172,08 - 510,11	172,08 - 510,11	172,08 - 510,11
M.975	5	-	-	662,54 - 750,24 914,74 - 2027,97	662,54 - 750,24 914,74 - 2027,97	588,87 - 2027,97	588,87 - 2027,97	462,18 - 2027,97
M.976	6	-	-	2836,64 - 20051,59	2836,64 - 20051,59	2836,64 - 11064,86	2836,64 - 8620,11	2836,64 - 5357,43

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

Tip Type Typ	**Kademe** *Stages* Stufen	**Motor Büyüklüğü** / *Motor Size* / Motorbaugröße 160	180	200	225	250	280	315
M.572	2	4,37 - 23,02	4,37 - 19,15	4,37 - 14,54	-	-	-	-
M.573	3	22,64 - 100,53	22,64 - 39,98 54,74 - 82,45	-	-	-	-	-
M.574	4	-	-	-	-	-	-	-
M.575	5	-	-	-	-	-	-	-
M.576	6	-	-	-	-	-	-	-
M.672	2	3,29 - 23,18	3,29 - 23,18	3,29 - 17,93	3,29 - 11,97	-	-	-
M.673	3	26,66 - 149,11	26,66 - 124,07	26,66 - 94,17	26,66 - 34,36 53,99 - 61,42	-	-	-
M.674	4	-	-	-	-	-	-	-
M.675	5	583,04 - 730,46	-	-	-	-	-	-
M.676	6	-	-	-	-	-	-	-
M.772	2	4,73 - 21,40	4,73 - 21,40	4,73 - 21,40	4,73 - 14,54	4,73 - 14,54	-	-
M.773	3	17,40 - 178,78	17,40 - 148,73	17,40 - 115,06	17,40 - 76,81	17,40 - 76,81	-	-
M.774	4	-	-	-	-	-	-	-
M.775	5	822,02	-	-	-	-	-	-
M.776	6	-	-	-	-	-	-	-
M.872	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	-
M.873	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	-
M.874	4	107,60 - 292,15	107,60 - 239,61	107,60 - 174,68	-	-	-	-
M.875	5	495,97 - 537,75	-	-	-	-	-	-
M.876	6	-	-	-	-	-	-	-
M.972	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
M.973	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
M.974	4	172,08 - 216,03	172,08 - 193,13	-	-	-	-	-
M.975	5	462,18 - 914,74	462,18 - 750,24	-	-	-	-	-
M.976	6	4474,67	-	-	-	-	-	-

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 19-20).

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 20).
3. Saatteki start sayısını tespit ediniz.
4.İlk üç maddeye bağlı servis faktörünü sayfanın altında yer alan servis faktörü diyagramından seçiniz.

5. fs Redüktürümüzün tahrik tipine bağlı olarak "k" katsayısı ile çarpılarak arttırılır.

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 19-20).

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 20).

3. Determine frequency of starting
4. After determining the above mentioned factors, the service factor can be easily selected from the service factor diagram given below on this page.

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 Studen pro Tag und bis zu 100 Schaltungen pro Stunde.

Betriebsfaktor ist abhängig von:

- Betriebsdauer
- Belastungsart
- Schalthäufigkeit
- Antriebsart
- Andere Faktoren

Um die richtigen Betriebsfaktor festzulegen;

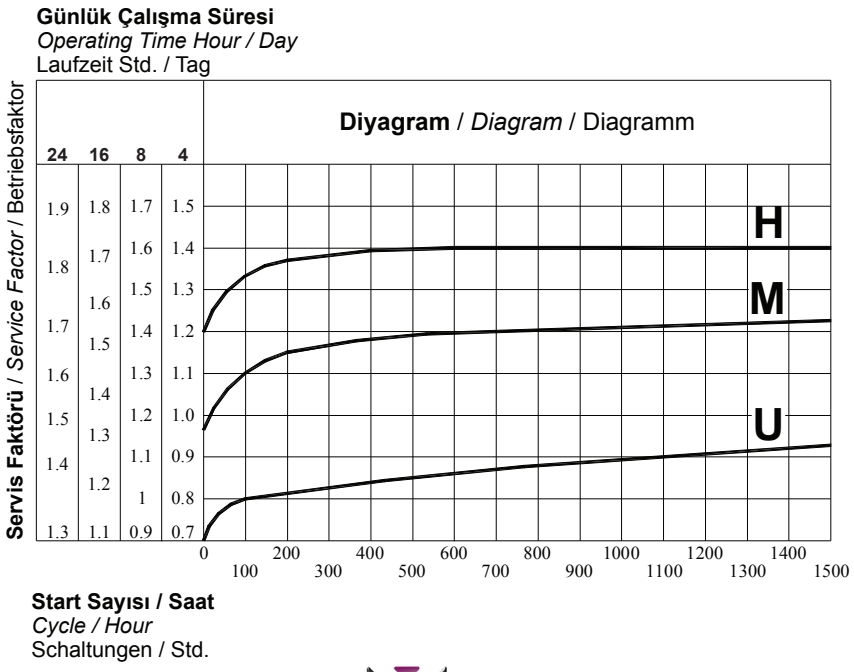
1. Betriebsdauer der angetriebenen Maschine bestimmen.
2. Belastungsart der angetriebenen Maschine auswählen.

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

Um eine bessere Auswahl zu treffen, können die Belastungsarten mit den angegebenen Formeln (Seite 20) errechnet werden.
3. Schalhäufigkeit bestimmen.
4.Nach der Bestimmung der oben angegebenen Werte können die Betriebsfaktoren aus dem Betriebsfaktor-Diagramm am unteren Rand dieser Seite ausgewählt 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

Servis Faktörü Diyagramı / *Service Factor Diagram* / Betriebsfaktor-Diagramm



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 Fırınlar
- Dövücü Değirmenler
- Kırıcılar
- Küreli 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 Haddeleme
- Silindir Haddeleme
- Soğuk Haddeleme

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 ErdenBearbeitende Masch.

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

Textilmaschinen:

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

Erdölgewinnung:

M - Pipline Pumpen
- Rotative Bohranlagen

Nahrungsmittelmachinen:

M - Rohrschneiden
- Knetmaschinen
- Maichen

H - Rohrmühlen

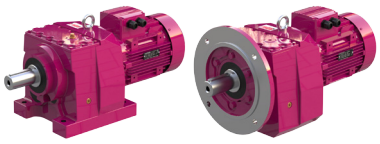
Waschereimaschinen:

M - Trommeltrockner
- Waschmaschinen

Wälzwerke:

M - Rollenrichtmaschinen
- Walzenantriebe
- Drahtzuge
- Haspeln

H - Blechscheren
- Rollgänge (schwer)
- Knüppelscheren
- Schöpfscheren
- Stranggubanlagen
- Kaltwälzwerke



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 - Agidatörler (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 - Concreate 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- liquit)
- *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 İndustrie:

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

Förderanlagen:

M - Gurttaschenbecherwerke
- 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

i.....:**Tahvil oranı**
Transmission ratio
Übersetzung

J_{rotor}.....:**Motorun atalet momenti**
Torque of inertia of the motor
Massenträgheitsmoment des Antriebsmotors

$$J'_{ext} = \frac{J_{ext}}{i^2}$$

$$F_i = \frac{J'_{ext}}{J_{rotor}}$$

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	$F_i < 10$

Redüktör Dönüş Yönleri

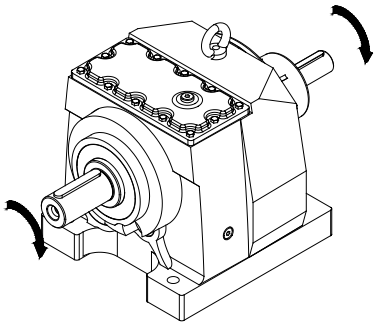
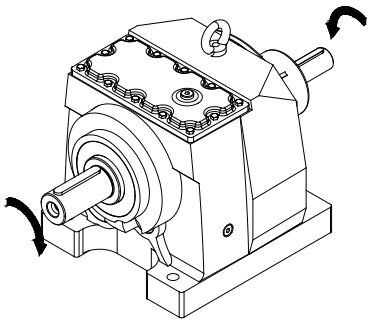
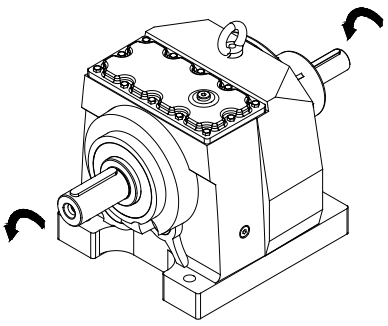
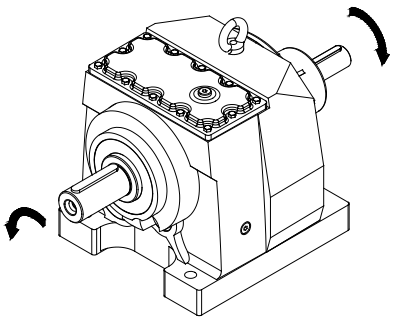
M-N Serisi ürünlerimiz için kullanılan yön tanımlaması aşağıdaki gibidir. Aşağıdaki tanımlama kilitli redüktörler için de geçerlidir.

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

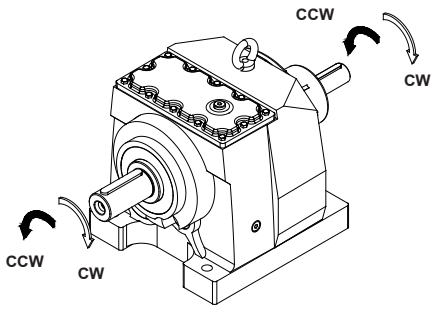
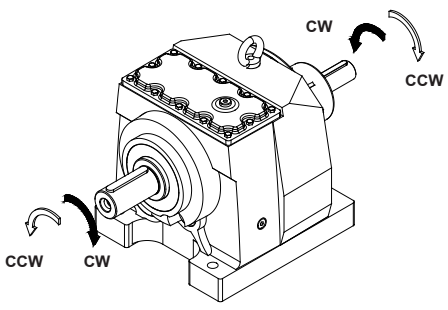
Die Drehrichtungen für M-N Serie Getriebe sind wie folgt definiert. Die Definition ist auch bei Getrieben mit Rücklaufsperre gültig.

	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
	

Radyal Yükler

Giriş ve çıkış miline gelebilecek radyal yükler yatak ömrüne göre belirlenmiş ve güç devir tablolarında verilmiştir. Bu tablolarda verilen F_{qam} güvenilir radyal çıkış yükü ve F_{qem} güvenilir radyal giriş yükü f_s=1,0 şartı ve yükün mil ortasına geldiği durum için verilmiştir. Farklı kullanım şartları için bize danışınız.
Darbeli yüklerin olması durumunda daha önce verilmiş olan servis faktörü tablosundaki değerler dikkate alınmalıdır. İzin verilen radyal yükler kuvvetin en kötü açı şartında etkidiği durum için verilmiştir. Mil ortasına gelen kuvvetin açısına göre daha yüksek radyal yükler mümkündür (Firmamıza danışınız). Bağlantı şekline göre oluşan radyal yük değeri F_q yandaki sayfada verilen formüller yardımı ile hesaplanabilir.
Redüktör seçiminde ;

$$F_{qa} \le F_{qam}$$
$$F_{qe} \le F_{qem}$$

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

$$F_{qam}' = F_{qam} \times \frac{t}{y+u}$$
$$F_{qem}' = F_{qem} \times \frac{t}{y+u}$$

"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} and F_{qem} are based on fs=1,0 and are valid for forces which are applied to the midpoint of the shaft. Please consult us for other terms of use.
For shock loading applications the service factor given on the table must take into consideration. 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 gear box shaft F_q will be determined with the given formulas on next page.

In Selection ;

$$F_{qa} \le F_{qam}$$
$$F_{qe} \le F_{qem}$$

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.

$$F_{qam}' = F_{qam} \times \frac{t}{y+u}$$
$$F_{qem}' = F_{qem} \times \frac{t}{y+u}$$

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 Leistung und Drehzahlübersicht Tabellen ange-gebenen zulässigen Radialbelastungen auf Abtriebswelle F_{qam} und Antriebswelle F_{qem} gelten bei Kraftangriff auf die Mitte Wellenendes. Den Angaben liegt der Betriebsfaktor fs=1,0 zu Grunde. Für andere Nutzungsbedingungen kontaktieren Sie uns bitte.
Bei stoßartigen Belastungsfällen ist auch hier der entsprechende Betriebsfaktor zu berücksichtigen. 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.

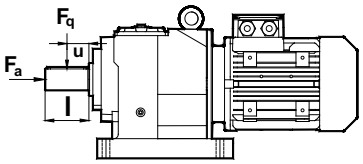
Bei dieser Auswahl;

$$F_{qa} \le F_{qam}$$
$$F_{qe} \le F_{qem}$$

müssen die oben angebenen 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.

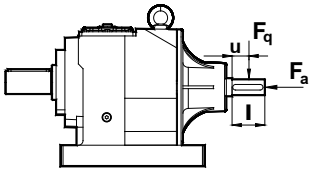
$$F_{qam}' = F_{qam} \times \frac{t}{y+u}$$
$$F_{qem}' = F_{qem} \times \frac{t}{y+u}$$

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.



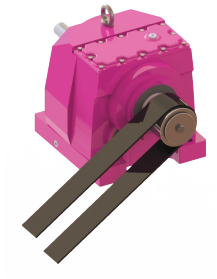
Çıkış Milinde Radyal Kuvvet Hesabı Düzeltme Katsayıları
Overhung Load Correcting Values on Output Shaft
Querkraft auf Ausgangswelle Korrigierungszahlen

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 Eingangswelle 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



Radyal Yüklerin Hesabı

Radyal Yük Fq(N)'nun hesaplanmasında, gerekli tahrik momenti M (Nm), kasnak veya dişli çapı ØD (mm) olmak üzere aşağıdaki formüller kullanılır.

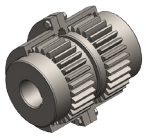
Calc. Of Overhung Loads

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

Berechnung der Querkräfte

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

1

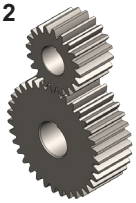


1. Elastik Kaplin
Çalışma sırasında oluşan sapmalar kaplinin güvenlik sınırları içinde ise kuvvetler ihmal edilebilir.

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



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
(Angriffwinkel 20°)

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

3



3. Küçük Hızlarda Zincir Dişli (z>17)

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

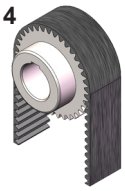
3. For Chain Drive With Low Speed (z>17)

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

3. Kettenantrieb mit niedriger Geschwindigkeit (z>17)

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

4



4. Triger Kayış

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

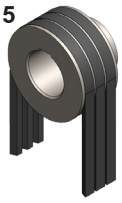
4. For Trigger Belt

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

4. Zahnriemenantrieb

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

5



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



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

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

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 ekseni boyunca sıralanır (bakınız alttaki şekil). Bu şekile göre eşdeğer tork şu formül ile hesaplanır;

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

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

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

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 katalogda 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 the usual gearbox selection method with constant torques. The equivalent torque will be determined according 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;

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

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

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

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;

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

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

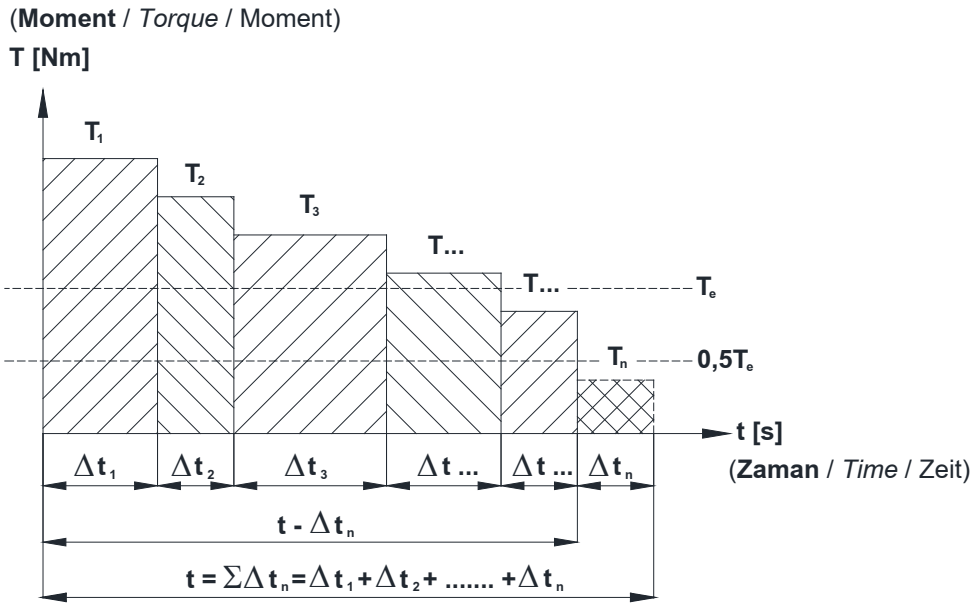
Wenn $T_n < T_e \times 0.5$ dann

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

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.



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;

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

Eşdeğer Tork;

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

$$= 39,2\ kNm$$

%50 eşdeğer tork;

$$0.5 \times T_e = 19.6\ kNm$$

Her bir tork dilimi bu değerin üzerinde olmalı

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

%50 torkun altındakileri çıkararak hesabı tekrarlayalım;

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

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

$$= 42,9\ kNm$$

Moment ve devir değerlerini kullanarak eşdeğer gücümüzü hesaplayalım ;

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

Yukarıdaki güç ve devir değeri kullanılarak bu katalogda anlatılan seçim presüdürü 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;

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

Equivalent Torque;

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

$$= 39,2\ kNm$$

50% of Equivalent torque;

$$0.5 \times T_e = 19.6\ kNm$$

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%;

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

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

$$= 42,9\ kNm$$

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

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

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;

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

Äquivalentes Drehmoment;

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

$$= 39,2\ kNm$$

50% von äquivalenten Drehmoment;

$$0.5 \times T_e = 19.6\ kNm$$

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;

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

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

$$= 42,9\ kNm$$

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

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

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.

Redüktör Seçimi

Bir redüktör seçiminde aşağıdaki yol izlenmelidir.

1. Çalışma şartlarına bağlı olarak servis faktörünü (fs) belirleyiniz. (Servis Faktörü Sayfa 18).

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 22). 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 Nm

3. Makina gerekli çıkış devri:
n_2 = 50 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 19-20)

- Günlük çalışma süresi 16 saat Saatte start sayısı 1 ve yük sınıfı M'ye tekabül eden servis faktörü tablosundan, servis faktörü için fs= 1.3 değeri bulunur.(sayfa 18)

- Makinanızın güç ihtiyacı (Redüktör Çıkış Gücü) :

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

Gearbox Selection

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

1.Determine service factor (fs) on the basis of running conditions (Page 18).

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 22). 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 requirement). 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 Nm

3. Required speed:
n_2 = 50 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 19-20), the load class M can be selected for the known application.
- The service factor can be selected as fs =1,3 from the service factor table (page 18) 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) :

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

Getriebeauswahl

Für die korrekte Auswahl des Antriebes;

1. Den Betriebsfaktor(fs) in Abhängigkeit von den Betriebsbedingungen bestimmen.(Bezug auf seite 18).

2. Die erforderte Drehmoment M_2 für die angetriebene Machine (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 Antriebselement bestimmen (Bezug auf Seite 22). 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 Getrieben 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 Machine berechnete Drehmoment
M_2 = 470 Nm

3. Erforderte Drehzahl:
n_2 = 50 upm

4. Betriebsdauer:
16 stunden pro Tag

5. Schalthäufigkeit:
1 Start pro Stunde

6. Antriebselement für verbindung
Getriebe-Machine:Kettentrieb (Durchmesser-180 mm)
- Von den Belastungsart Tabellen(Seite 19-20) nimmt man Belastungsart M

- Für den Schaltungzahl 1 und die Laufzeit16 und für den passenden Belastungsart erhält man Betriebsfaktor fs =1,3 von Tabelle auf seite 18.

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

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

- Zincir dişli uygulaması için (Sayfa 23) Fq değeri;

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

- Ortaya çıkan redüktör ihtiyacı

$P_2 \geq$ 2,46 kW
$M_2 \geq$ 470 Nm
fs ≥ 1.3
n_2 = 50 d/dak
Fq ≥ 5484 N

Güç ve devir sayfalarından,

MR373-3E100L/4D seçilir. (Sayfa 80)

P_2=3kW > 2,46 kW
M_2= 554 Nm > 470 Nm
fs=1,4
n_2=49 d/dak
F_{qam}= 6587 N > 5484 N

*- **For chain drive application the requested overhang load can be calculated from (page 23).***

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

- The required gearbox is as follows:

$P_2 \geq$ 2,46 kW
$M_2 \geq$ 470 Nm
fs ≥ 1.3
n_2 = 50 rpm
Fq ≥ 5484 N

From the performance table,

***MR373-3E100L/4D** selected. (Page 80)*

P_2=3kW > 2,46 kW
M_2= 554 Nm > 470 Nm
fs=1,4
n_2=49 rpm
F_{qam}= 6587 N > 5484 N

- Für Kettentrieb die erforderte Querkraft (seite 23).

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

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

$P_2 \geq$ 2,46 kW
$M_2 \geq$ 470 Nm
fs ≥ 1.3
n_2 = 50 U/min
Fq ≥ 5484 N

Von der Leistung- DrahzahlTabelle ,

wurde **MR373-3E100L/4D** gewählt. (Seite 80)

P_2=3kW > 2,46 kW
M_2= 554 Nm > 470 Nm
fs=1,4
n_2=49 U/min
F_{qam}=6587 N > 5484 N

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 [ ]

Saatdeki 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

Saatdeki 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..... ^{0}C
En Yüksek..... ^{0}C
En Düşük..... ^{0}C

Kilit İhtiyacı:
Var [ ] Yok [ ]

Redüktör Giriş Opsiyonu:
R..[ ] V..[ ] N..[ ] T..[ ] RB..[ ] VB..[ ] NB..[ ]
TB..[ ] RF..[ ] VF..[ ] NF..[ ] TF..[ ]

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:

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.....^{0}C
Maximum.....^{0}C
Minimum.....^{0}C

Backstop Required:
Yes [ ] No [ ]

Gearbox input options:
R..[ ] V..[ ] N..[ ] T..[ ] RB..[ ] VB..[ ] NB..[ ]
TB..[ ] RF..[ ] VF..[ ] NF..[ ] TF..[ ]

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:

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 [ ]
Kolbenmachinen mit 1-3 Zylinder [ ]
Kolbenmachinen mit 2-4 Zylinder [ ]

Motorverbindungsart (Elektromotoren):
IEC B5 Flansch [ ]
NEMA Flansch [ ]
B3 Fussausführung [ ]

IEC oder NEMA Flanschkode.....

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 Antriebswelle.....

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<1m/sn) [ ]
Geschlossene Räume (w<3m/sn) [ ]
Große Räume und Hallen (w>=3m/sn) [ ]
im Freien [ ]

Umgebungsbedingungen:
Normal [ ] Staubig [ ] Feucht [ ]
Korrodierend [ ] Trocken [ ] Verklebend [ ]

Umgebungstemperatur:
Mittelwert ..... ^{0}C
Maximal.....^{0}C
Minimal.....^{0}C

Rücklaufsperre erforderlich:
Ja [ ] Nein [ ]

Getriebeeingangsvarianten:
R..[ ] V..[ ] N..[ ] T..[ ] RB..[ ] VB..[ ] NB..[ ]
TB..[ ] RF..[ ] VF..[ ] NF..[ ] TF..[ ]

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:

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 sökülmeli ve redüktörün beraberinde verilen havalandırma tapası kullanılmalıdır. Bu redüktörün iç basıncından dolayı oluşacak yağ sızmalarını önleyecektir.

Redüktörlerde standart olarak kullanılan yağlar 33. 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. 33. 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, Umgebugstemparatur, 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 33 in der grau unterlegten Spalte angegebenen Schmierstoffen gefüllt. Bitte im Getriebe verwendetes Öl und menge von dem Namenschild 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.

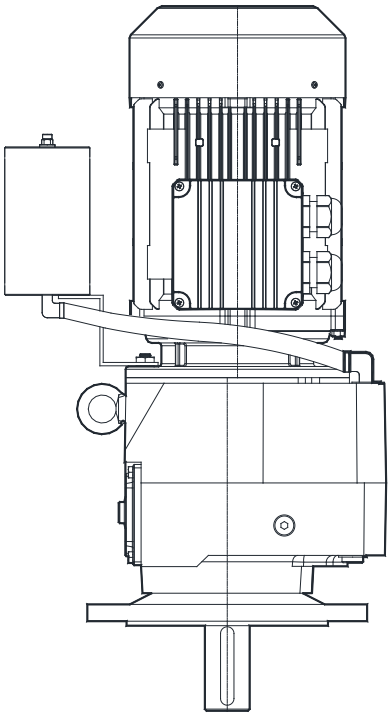
Ein Schmierstoffwechsel sollte alle 10.000 Betriebsstunden durchgeführt werden. Für synthetische Produkte beträgt diese Frist 25.000 Stunden. Bei extremen Betriebsbedingungen, z.B. hohe Luftfeuchtigkeit, aggresiver Umgebung und hohen Temparatur-schwankungen sind kürzere Schmierstoffintervalle vorteilhaft. 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 Schmutzpartickeln vermischt, so dass eine Entfernung des Altöls eine gute Reinigung benötigt.

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 önlenebilmesi 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 then 1800 rpm we recommend using of expansion tank for all gear unit sizes for **M4** mounting position.*

Wie in der folgenden technischen Zeichnung dergestellt 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 dieeses höhen Ölstands bildet sich Ölschaum aus, welcher aus der Entlüftungsschraube austritt.
Um das verhindern zu müssen, empfiehlt Yılmaz Redüktör bei allen M-Serie Getrieben ab Getriebebaugröße M57 mit niedrigen Übersetzungen (i<20) einen Ölausgleichsbehälter bei der **M4** Bauform einzusetzen. Die empfehlenen 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 Getriebebaugröße einzusetzen.



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

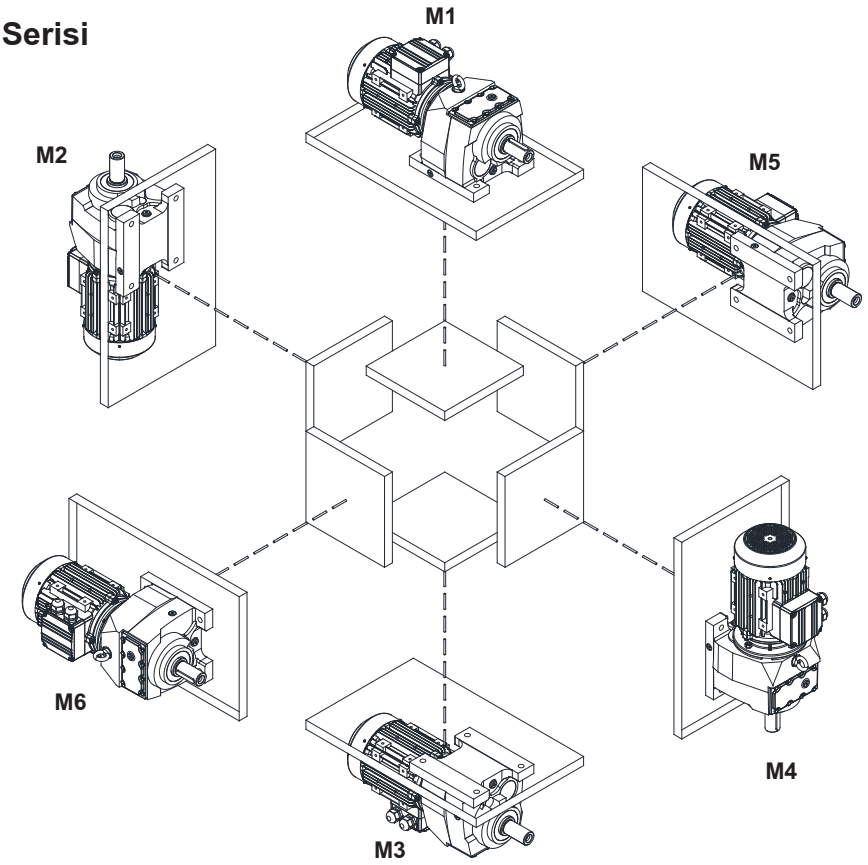
Yağ Tipleri / *Oil Types* / Schmierstoffe

Yağ Cinsi *Lubricant* Art des Schmierstoffes	**DIN 51517-3**	**Çevre Sıcaklığı [°C]** *Ambient Temp. [°C]* Umgebungstemp. [°C] / **Daldırma Yağlama** *Dip Lubrication* Tauchschmierung	**ISO VG**	**Aral**	**Beyond Petroleum**	**Castrol**	**Klüber Lubrication**	**Mobil**	**Shell**	**Total**
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	Energsyn SG-XP 680	–	Klübersynth GH 6 -680	Mobil Glygoyle 680	Omala S4 WE 680	Carter SY 680
		-20 ... +50	460	Degol GS 460	Energsyn 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	Energsyn 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	Energsyn 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	Energsyn 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	Enersyn 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	Enersyn 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	Enersyn 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	Enersyn 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* Lebensmittelöl	**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	
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 VG 1220	**Sarı** *Yellow* Gelb
Yarı Sıvı Gresler (Mineral) *Semi-Fluid Grease (Mineral)* Halbflüssig Fett (Mineral)	Shell Gadus S2 V 220 00	-20 ... +100	NLGI 00	ISO VG220	**Kahverengi** *Brown* Braun
Yarı Sıvı Gresler (Sentetik) *Semi-Fluid Grease (Synthetic)* Halbflüssig Fett (Synthetisches)	Mobilith SHC 007	-50 ... +150	NLGI 00	ISO VG460	**Kırmızı** *Red* Rot

Montaj Pozisyonları / *Mounting Positions* / Bauformen

M Serisi

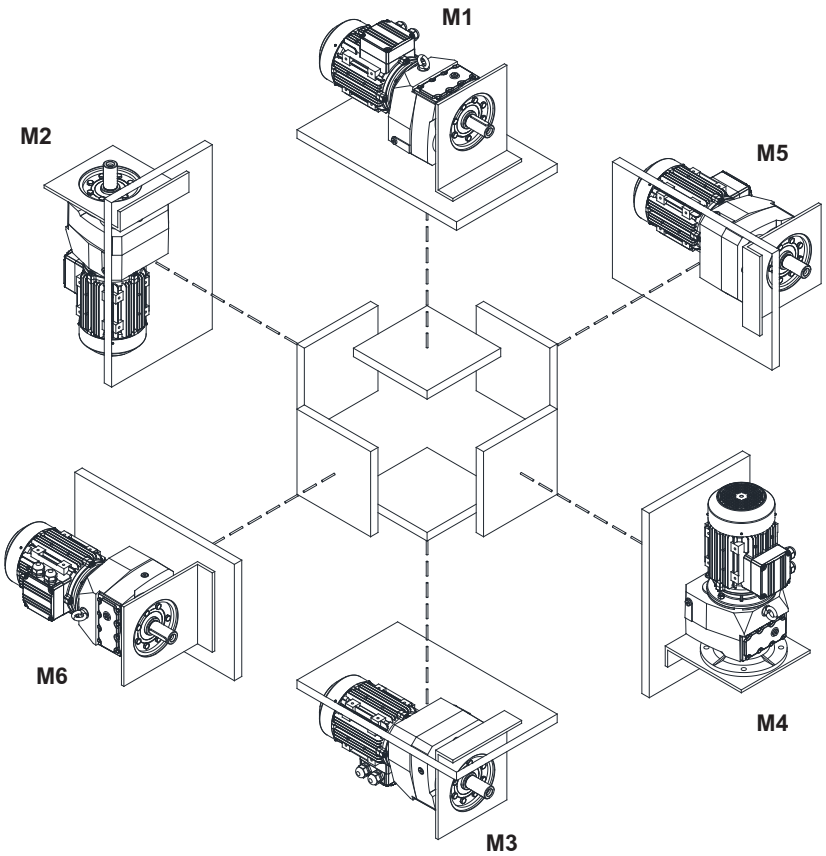


M1....M6 'ya kadar belirtilen montaj pozisyonları redüktörün duruş yönü referans alınarak belirlenmiştir. Montaj yüzeyleri bağlayıcı değildir.

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

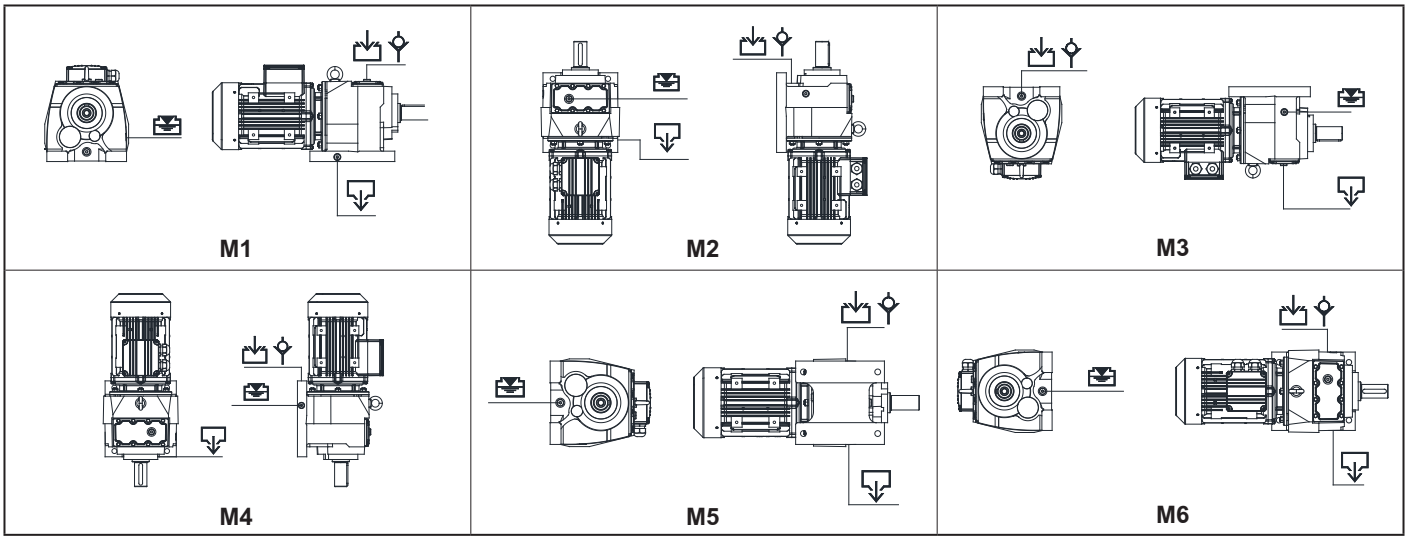


M1....M6 'ya kadar belirtilen montaj pozisyonları redüktörün duruş yönü referans alınarak belirlenmiştir. Montaj yüzeyleri bağlayıcı değildir.

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.

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 :

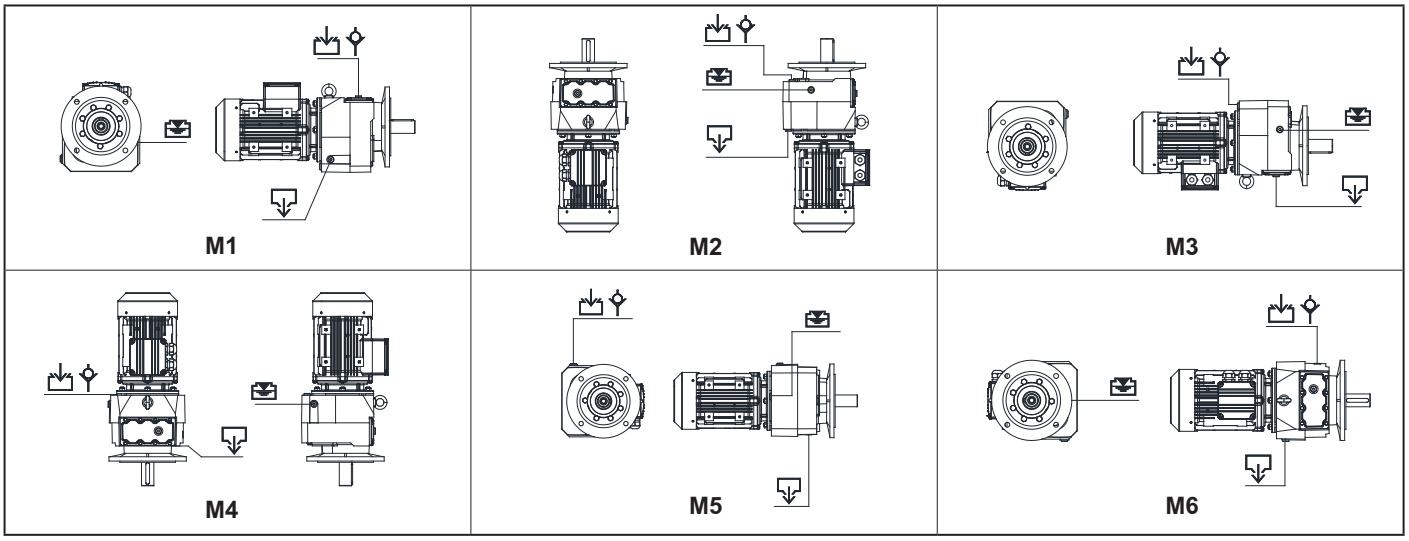
:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

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

Yukarıdaki tabloda yer alan yağ miktarları, N.B serisi için de geçerlidir. / *The oil quantities given in the table above are also valid for the N.B series.* / Die in der obigen Tabelle angegebenen Ölmengen gelten auch für die N.B-Serie.

Semboller :
Symbols :
Symbole :

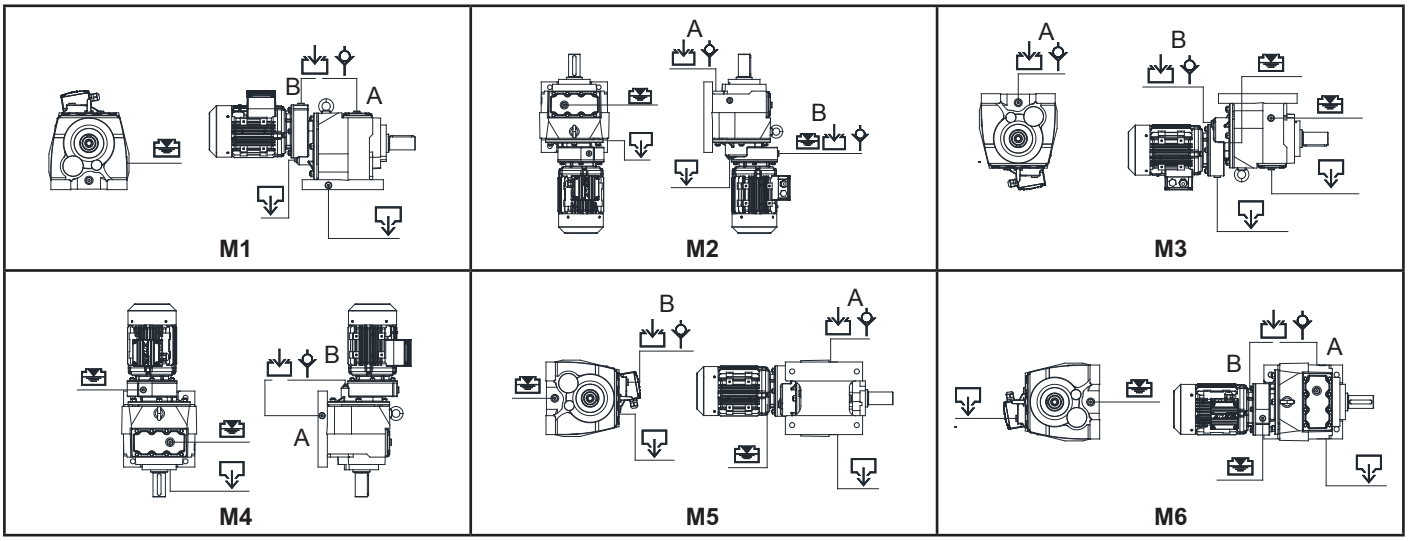
:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

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 :

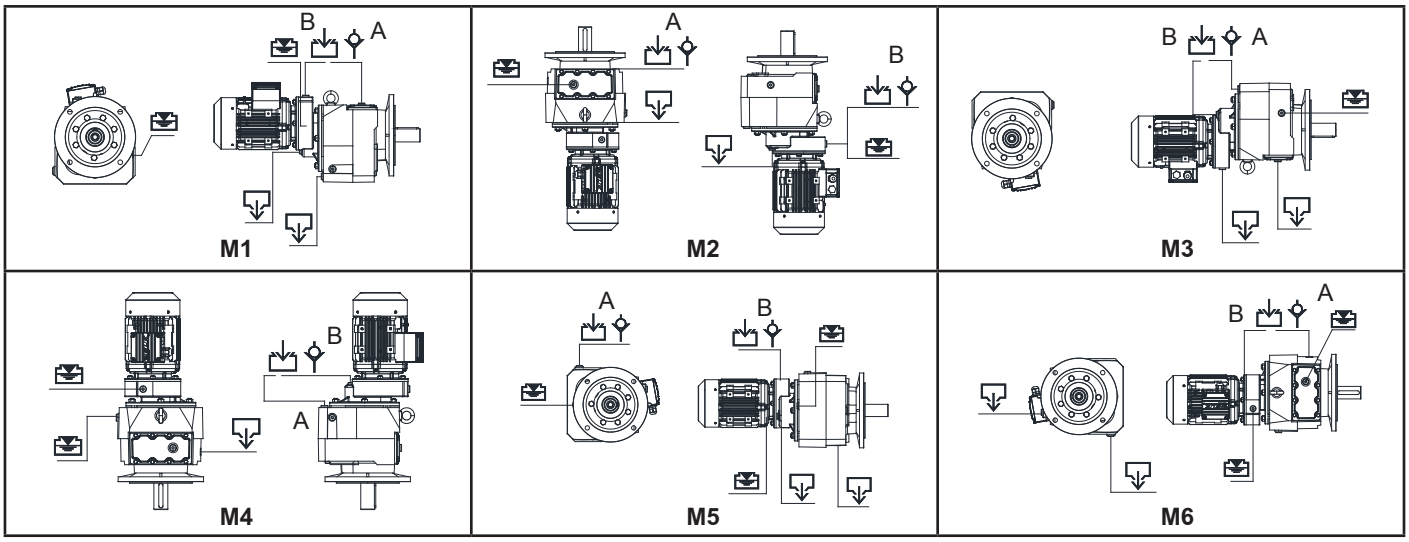
:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

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

Yukarıdaki tabloda yer alan yağ miktarları, N.B serisi için de geçerlidir. / *The oil quantities given in the table above are also valid for the N.B series.* / Die in der obigen Tabelle angegebenen Ölmengen gelten auch für die N.B-Serie.

Semboller :
Symbols :
Symbole :

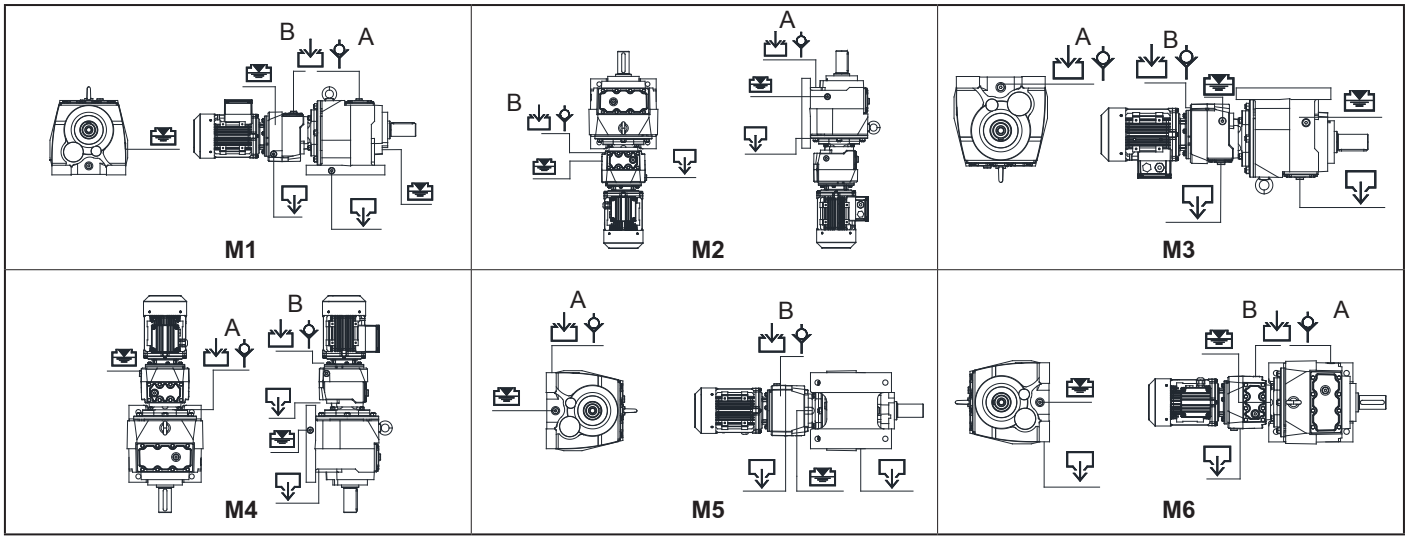
:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

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 :

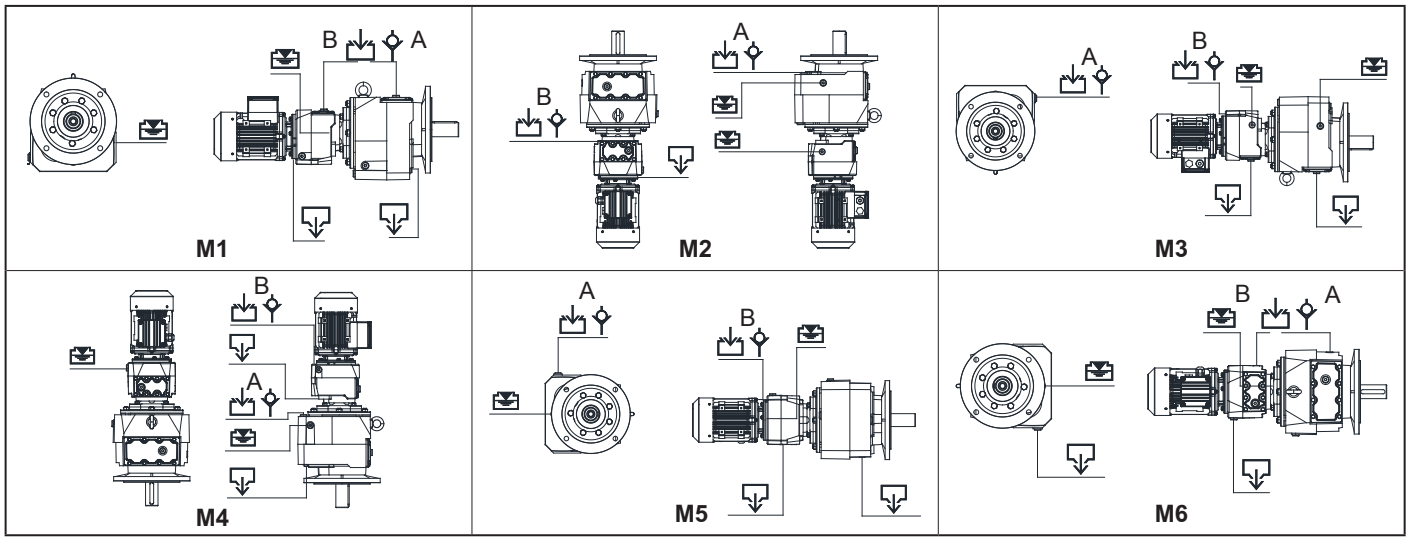
:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

N Serisi Beş-Altı Kademeli Helisel Dişli Redüktörler Yağ Seviye Tapaları
N Series Five-Six Stage Helical Gearboxes Oil Level Plugs
N Serie Fünf-Sechsstufig 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

Yukarıdaki tabloda yer alan yağ miktarları, N.B serisi için de geçerlidir. / *The oil quantities given in the table above are also valid for the N.B series.* / Die in der obigen Tabelle angegebenen Ölmengen gelten auch für die N.B-Serie.

Semboller :
Symbols :
Symbole :

:Yağ doldurma
:Oil filling
:Ölfüllung

:Yağ boşaltma
:Drain plug
:Ölauslass

:Yağ seviyesi
:Oil level
:Ölstand

:Havalandırma
:Vent Plug
:Entlüftungschraube

MOTORLAR
AC Motorlar
a- Genel Özellikler:

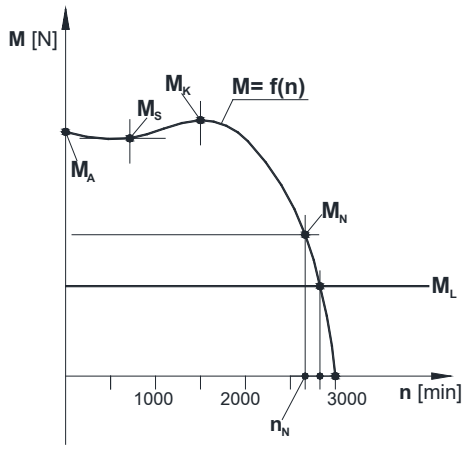
Basit konstrüksiyonlu, bakım gerektirmez, güvenirliği yüksek ve uygun fiyatlı olmaları nedeni ile trifaze asenkron motorlar en çok kullanılan motor cinsidir. Bu motorların çalışma karekteristikleri moment-hız eğrisi ile belirlenir. Aşağıda bu karekteristik eğrisine bir örnek verilmiştir.

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.

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.



M_A: Start momenti / *Starting torgue* / Anlaufmoment

M_S: Demeraj momenti / *Pull-up torgue* / Anziehungsmoment

M_K: Frenleme momenti / *Pull -out torgue* / Bremsungsmoment

M_N: Motorun ilettiği moment / *Motor rated torque* / Treibmoment

M_L: Yük momenti / *Load torque* / Lastmoment

Motorun her start yapılmasında bu eğriye uygun hareket eder ve yük momenti M_L ile bu eğrinin çakıştığı 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 .....:± 20%
Kalkış Akımı.....:± 20%
Kalkış Momenti.....:-15 /+25 %
Kütle Atalet Momenti.....:± 10%
Verim (37 kW'a kadar).....:-0,15 (1-η)

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 .....:± 20%
Starting current .....:± 20%
Starting torque .....:-15 /+25 %
Moment of inertia.....:± 10%
Efficiency (up to 37 kW).....:-0,15 (1-η)

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:
Schlumpf s .....:± 20%
Anzugsstrom .....:± 20%
Anzugsmomet .....:-15 /+25 %
Massentägheitsmoment .....:± 10%
Wirkungsgrad (bis 37 kW).....:-0,15 (1-η)

b- Çalışma Türleri

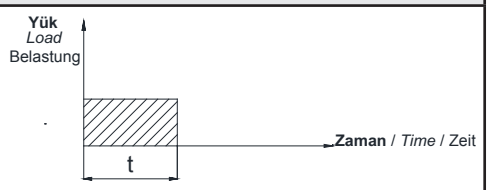
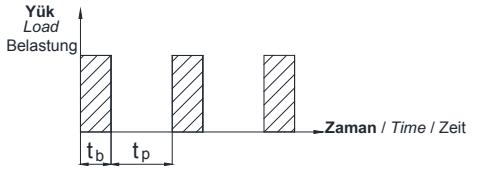
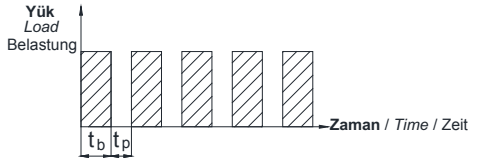
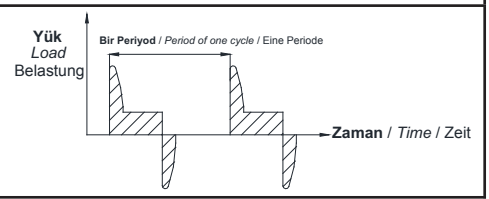
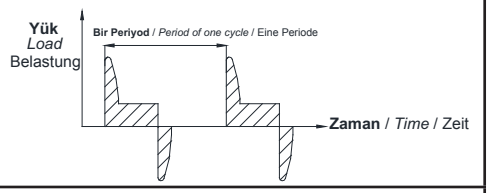
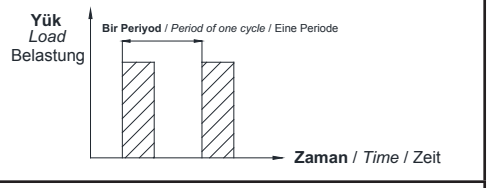
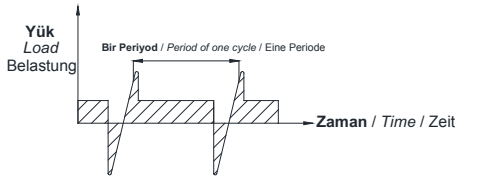
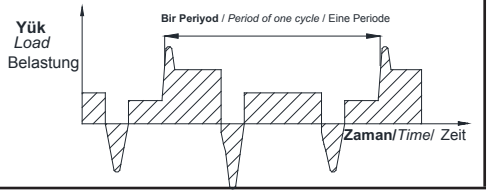
Katalogta verilen tüm redüktörlerin motorları S1 çalışma türüne uygun verilmektedir. Diğer çalışma türleri aşağıdaki tabloda gösterilmiştir.

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 Temparatur	
S4	**Yolvermede sıcaklık artımı olan periyodik çalışma** *Periodic duty with influence of start up on temperature* Aussetzbetrieb mit Einfluß des Anlaufes auf die Temparatur	
S5	**Yolvermede ve frenlemede sıcaklık artımlı periyodik çalışma** *Periodic duty with influence of startup and braking on temp.* Aussetzbetrieb mit Einfluß des Anlaufens / Bremsung auf die Temp.	
S6	**Sürekli orta darbeli çalışma** *Continuous operation with intermittent loading* Durchlaufbetrieb mit Ausetzungsbelastung	
S7	**Elektriksel frenlemeli sürekli orta darbeli çalışma** *Continuous operation with intermittent loading and breaking* 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	

c- Koruma Sınıfı:
Yılmaz Redüktörde standart olarak IP55 (IEC 34-5) koruma sınıflı 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 Reduktor 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 Reduktor uses F (IEC 317-8) insulation class electric motors for standard products. H insolation 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. Bellow 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 Reduktor Getriebemotoren werden serienmäßig mit Schutzart IP55 (IEC34-5) ausgeführt. Für andere Schutzarten bitte rückfragen.

d- Isolationsklasse:
Yilmaz Reduktor Getriebemotoren werden serienmäßig in Wärmeklasse F (IEC317-8) ausgeführt. H Wärmeklasse ist möglich auf Kundenwunsch.

e- Energieeffizienzklassen:
Die Methode für Messung die Effizienz von drei phasigen 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	
IE2	EFF 1	**Yüksek Verim** *High Efficiency* Hohe Energieeffizienz	A=0,0278 B=-1,9247 C=10,4395 D=80,9761	$\eta_{Mn} = A \times \left[\log_{10}(P_L)\right] + B \times \left[\log_{10}(P_L)\right]^2 + C \times \log_{10}(P_L) + D$
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	

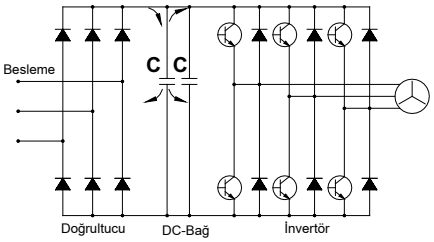
4 Kutuplu Motor Verim Değerleri
Efficiency Values of Motor with 4 poles
Sollwirkungsgrad des Motors mit 4 Polen

Anma Yükü [kW] *Nominal Load [kW]* Nennlast [kW]	**Verim Sınıfı** / *Efficiency Class* / Energieeffizienzklasse			**Anma Yükü [kW]** *Nominal Load [kW]* Nennlast [kW]	**Verim Sınıfı** / *Efficiency Class* / Energieeffizienzklasse	
	IE2	**IE3**	**IE4**		**IE3**	**IE4**
0,12	%60,1	%66,0	-	**11**	%91,5	%93,3
0,18	%64,7	%69,9	-	**15**	%92,1	%93,9
0,25	%74,0	%76,0	-	**18,5**	%92,6	%94,2
0,37	%76.1	%78,5	-	**22**	%93,0	%94,5
0,55	%77,1	%80,8	-	**30**	%93,6	%94,9
0,75	-	%82,5	-	**37**	%93,9	%95,2
1,1	-	%84,5	-	**45**	%94,2	%95,4
1,5	-	%85,3	-	**55**	%94,6	%95,7
2,2	-	%86,7	-	**75**	-	%96,0
3,0	-	%87,7	-	**90**	-	%96,1
4,0	-	%88,6	-	**110**	-	%96,3
5,5	-	%89,6	%91,9	**132**	-	%96,4
7,5	-	%90,4	%92,6	**160**	-	%96,6
9,2	-	%90,4	-	**200**	-	%96,7

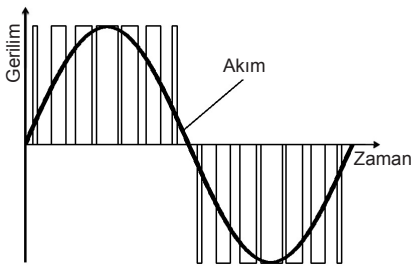
Motorlu redüktörlerimizde kullanılan motorların verimleri tabloda gri olarak belirtilmiştir. /*The efficiencies of the motors used in our geared motors have been indicated in gray in the table.* / Die Effizienz der Motoren, die in unseren Getriebemotoren verwendet werden, wurde in der Tabelle in Grau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

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 vasıtası ile 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.

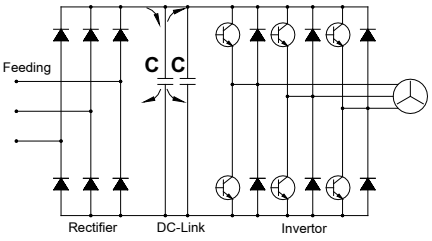


Tam dalga doğrultucuları besleyen üç faz besleme akımı DC-bağ kapasitörlerine iletilir. Kapasitörler voltajdaki dalgalanmaları azaltır ve kısa süreli ağdaki akım kesintilerinde enerji sağlar. Kapasitörlerdeki voltaj kontrolsüzdür ve gelen AC akımın pik akım değerlerine bağlıdır. DC akım tekrar AC akıma, Puls genişliği modulasyonu (PWM) kulanılarak 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 sinusodial bir motor akımı oluşur. Puls genişliği modulasyonu aşağıda gösterilmiştir.

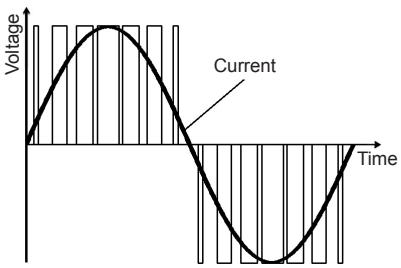


f- AC Frequency Inverters

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.

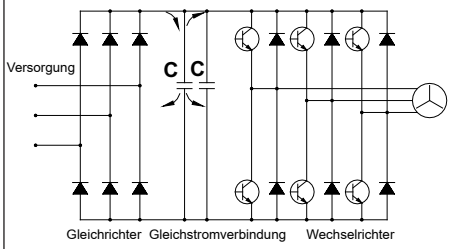


The three phase supply is fed into a full wave rectifier which supplies the DC link capacitors. The capacitors reduce the voltage ripple (especially on single supplies) and supply energy for short mains breaks. The voltage on the capacitors is uncontrolled and depends on the peak AC supply voltage. The 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.

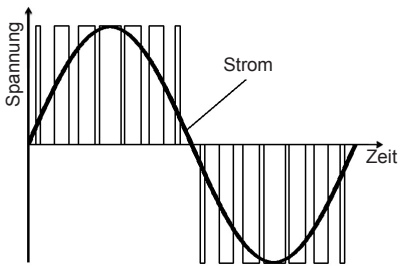


f- AC Frequenz Umrichter

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



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 yükle beraber düşer. Bu devir farkı ufak güçlü motorlarda büyük, büyük güçlü motorlarda ise ufaktır. Fakat bu hız farkı DC doğrultucu cihazda armatür voltajı (I x 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 compensated in the DC converter device by adjusting (I x 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 im 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 Wechselspannung, die bei der Gleichstrommaschine jedoch durch den mechanischen Kommutator und die darauf schleifenden Bürsten in eine Gleichspannung umgeformt wird, induziert.

c- Arten von DC Motoren

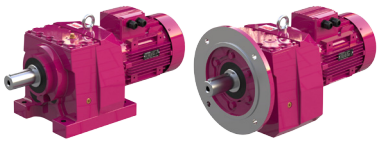
Es gibt zwei verschiedene Wicklungen, nämlich Shunt- und Serial-Wicklung. Das Drehmoment-Drehzahl-Verhältnis ist für beide Wicklungen unterschiedlich.

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 großeren Motoren kleiner. Der Drehzahlunterschied kann geregelt werden mit (IxR) 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



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 akuple 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 akuple 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 edilirler.
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 Reduktor.
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 Bremsscheibe, die axial beweglich auf dem Mitnehmer angeordnet ist, frei drehen. Wird der Strom unterbrochen, drücken die Feder die Ankerscheibe gegen die Bremsscheibe 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.

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 manyetik 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 açılmada ortaya çıkacak sürtünmeyi engellemeye yarayan bir trafo şeklidir.

Fren bağlantı şekli
a) Gecikmeli frenleme
Genellikle sistemin yavaş ve kaydırılarak durması gereken yerlerde tercih edilen bağlantı şeklidir. 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 şeklidir. Vinç kaldırma sistemleri, asansör motorlarında kullanılan bağlantı şeklidir.

c) 24V DC Brakes
The transformator'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 loses 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

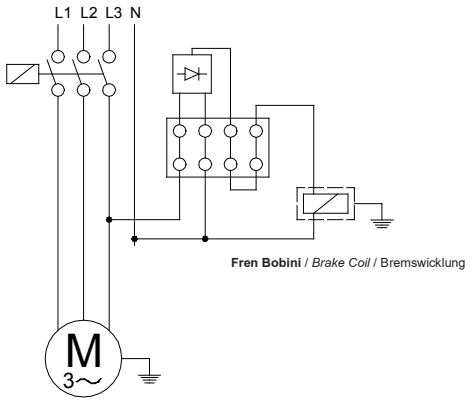
b) Sudden Braking
This type of connections are mostly used in systems when short braking times are needed. The braking torque will be produced as soon as the current fails. These brakes are mostly used in hoisting of lifting units and elevators.

c) 24 V DC Bremsen
Die Spannung wird von den Klemmkasten des Motors oder Elektrikschrank 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.

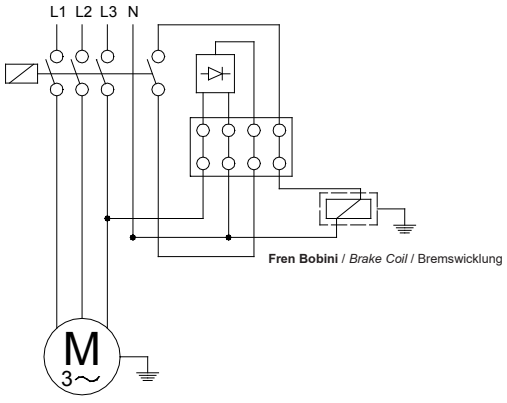
Schaltungsarten:
a)Verspätetes Bremsen
Diese Schaltung wird benutzt, wenn ein langsames und gleitendes Bremsen erforderlich ist. Am meisten wird es bei Fahrgetriebemotoren von Aufzügen verwendet. Wenn keine Angabe bei der Bestellung gegeben wird, werden die Bremsen mit verspäteter Schaltung geliefert.

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 Aufzüge verwendet.

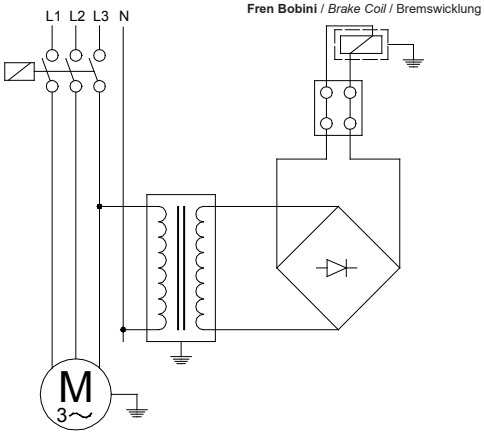
Gecikmeli Frenleme / *Delayed Running Brake* / Verspätete Bremsung
(230V AC-98V DC)



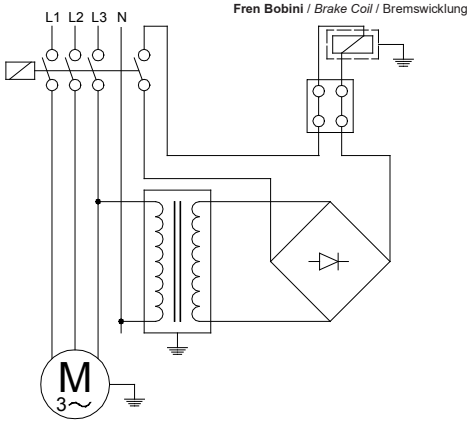
Ani Frenleme / *Sudden Brake* / Plötzliche Bremsung
(230V AC-98V DC)



Gecikmeli Frenleme / *Delayed Running Brake* / Verspätete Bremsung
(230V AC-24V DC)



Ani Frenleme / *Sudden Brake* / Plötzliche Bremsung
(230V AC-24V DC)



Fren Seçimi:

Doğru bir fren seçimi için aşağıdaki parametreler bilinmelidir.

- I_{tot} **[kg.m²]** : Motor miline indirgenmiş toplam atalet momenti
- n_0 **[d/dak]** :Maksimum motor devir sayısı
- t_f **[s]** :İstenilen en uzun frenlemezamanı
- c_t :Anahtarın devreye girme zamanı katsayısı (ortalama 0,995).
- M_L **[Nm]** : Sistemin statik tork ihtiyacı.
- C_s : Emniyet katsayısı (C_S≥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

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

Brake Selection:

To select a brake correctly the following data are necessary;

- I_{tot} ***[kg . m²]*** *: 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

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

Bremswahl:

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

- I_{tot} **[kg . m²]** :Die Gesamtträgheit der rotierenden Teile(siehe Anwendungsbeispiele)
- n_0 **[U/min]** : Die höchste Drehzahl desMotors
- 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;

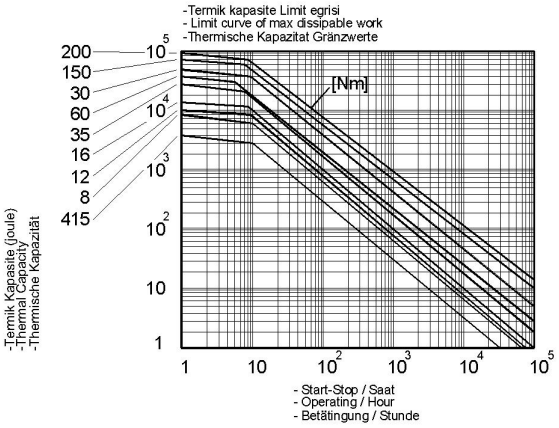
$$M_f = M_{fc} \times C_s$$

Abschätzung zur Bremswahl
Wenn man nur die Motorleistung und die höchste Drehzahl kennt, kann die Bremskraft mit der folgenden Formel annähernd berechnet werden:
W [Watt] : Nennleistung des Motors

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

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



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 kgm^2
Gerekli çalışma momenti: 50 Nm
Yük Durumu: Yük motor dönüş yönü ile aynı (Vinçten yük indirmesi: 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 torgue 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 torgue 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 torgue 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 kgm^2

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
Gesamtträgheit der rotierenden Teile: 0,08 kgm^2
Das auf das System wirkende Drehmoment: 50 Nm
Belastungsart: Drehmoment, das die Motor-rotation 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.

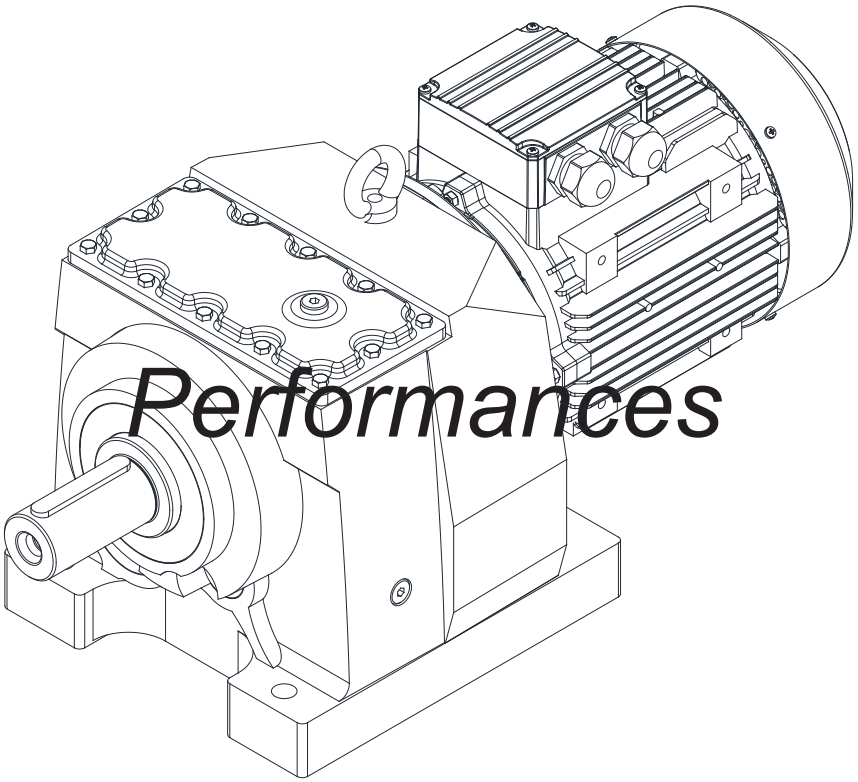
Die thermische Kapazität;

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

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

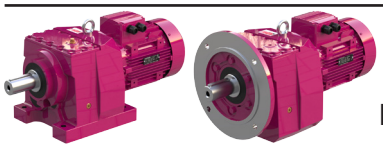
Notlar / *Notes* / Notizen

Güç ve Devir Tabloları



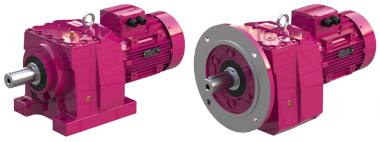
Performances

Leistungs- und Drehzahlübersicht



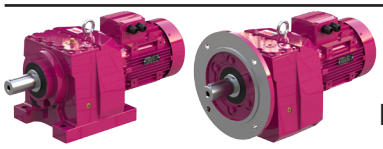
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,12 0,16	0,28 0,32 0,42 0,49	3161 2811 2157 1825	**4953,44** **4402,68** **3372,36** **2850,22**	18152 20503 24025 25448	0,9 1,1 1,4 1,6	**MR576-2E63M/4B** **NR576-2E63M/4B**	0,42	157 151	119	IE2
	0,51 0,61 0,74 0,84 0,94 1,1 1,2	1786 1511 1239 1095 973 824 748	**2736,94** **2313,18** **1897,20** **1675,43** **1489,14** **1259,61** **1140,65**	25606 26663 27612 28077 28449 28915 29101	1,7 2,0 2,4 2,7 3,1 3,6 4,0	**MR575-2E63M/4B** **NR575-2E63M/4B**	0,42	155 149	119	IE2
	0,55 0,66 0,70 0,81 0,86 1,0 1,1 1,2 1,3 1,5	1648 1378 1302 1139 1070 910 845 792 694 617	**2522,85** **2107,15** **1990,76** **1738,98** **1631,08** **1386,75** **1285,79** **1204,49** **1053,93** **934,94**	13294 17344 18266 20032 20714 22094 22653 23070 23786 24312	0,9 1,1 1,2 1,4 1,4 1,7 1,8 2,0 2,2 2,5	**MR475-2E63M/4B** **NR475-2E63M/4B**	0,42	100 103	116	IE2
	0,90 1,0 1,2 1,4 1,7 1,8 2,1 2,2 2,6	1019 902 759 646 554 501 443 414 351	**1561,78** **1380,71** **1161,33** **987,33** **845,97** **765,58** **676,02** **631,45** **533,70**	6910 9830 12320 13863 14931 15470 16025 16286 16828	0,8 0,9 1,1 1,3 1,5 1,6 1,8 2,0 2,3	**MR375-2E63M/4B** **NR375-2E63M/4B**	0,42	76 78	113	IE2
	2,7 3,3 3,8	352 284 249	**524,07** **421,85** **369,93**	16815 17348 17599	2,3 2,9 3,3	**MR374-2E63M/4B** **NR374-2E63M/4B**	0,42	55 58	112	IE2
	1,2 1,4 1,6 1,9 2,1 2,4 2,8	789 664 565 484 439 375 322	**1206,98** **1015,21** **863,11** **739,53** **669,25** **573,81** **491,50**	2333 7487 9637 10983 11641 12445 13057	0,8 0,9 1,1 1,2 1,4 1,6 1,9	**MR285-2E63M/4B** **NR285-2E63M/4B**	0,42	74 75	110	IE2
	3,2 3,8 4,3	290 248 218	**431,18** **368,77** **323,39**	13388 13798 14073	2,1 2,4 2,8	**MR284-3E63M/4B** **NR284-3E63M/4B**	0,42	74 75	109	IE2
	1,7 1,9 2,3 2,8 3,3 3,9 4,2 5,6 6,5 6,8 7,8 9,4	541 474 392 328 275 236 219 166 142 135 119 98	**827,44** **724,01** **598,70** **499,32** **418,57** **358,33** **332,52** **252,20** **215,91** **205,95** **180,21** **149,02**	5855 6465 7080 7505 7806 8008 8090 8331 8429 8457 8523 8760	0,8 0,9 1,1 1,4 1,6 1,9 2,1 2,7 3,2 3,3 3,8 4,0	**MR275-2E63M/4B** **NR275-2E63M/4B**	0,42	41 43	107	IE2



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Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,12 0,16	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 0,45 0,51 0,58 0,65 0,73	4895 4225 3662 3206 2828 2511 2240 1983	**3103,85** **2684,10** **2324,10** **2032,66** **1791,91** **1589,68** **1417,41** **1252,60**	59051 60717 62017 62935 63725 64362 64885 65684	1,6 1,9 2,2 2,5 2,8 3,2 3,6 4,0	**MR775-2E71M/6B** **NR775-2E71M/6B**	0,60	256 316	125	IE2

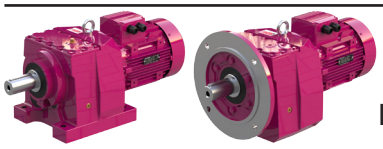


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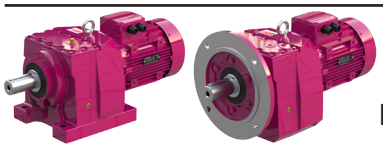
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,18 0,25	0,32	4425	**2863,86**	25882	1,0	**MR676-2E71M/6B** **NR676-2E71M/6B**	0,60	239 248	122	IE2
	0,36 0,42 0,49 0,56 0,64 0,73 0,83 0,92 1,1 1,3	4069 3460 2977 2586 2262 1990 1762 1577 1387 1161	**2578,93** **2196,86** **1888,53** **1638,93** **1432,74** **1259,54** **1113,08** **995,91** **874,56** **730,46**	27987 30945 32984 34461 35578 36451 37141 37624 38151 38748	1,1 1,2 1,4 1,7 1,9 2,2 2,4 2,7 3,1 3,7	**MR675-2E71M/6B** **NR675-2E71M/6B**	0,60	229 243	122	IE2
	0,49	2889	**2850,22**	19665	1,0	**MR576-2E63M/4C** **NR576-2E63M/4C**	0,56	160 153	119	IE2
	0,51 0,61 0,74 0,84 0,94 1,1 1,2	2828 2392 1961 1733 1541 1305 1184	**2736,94** **2313,18** **1897,20** **1675,43** **1489,14** **1259,61** **1140,65**	20068 22617 24715 25689 26424 27307 27718	1,1 1,3 1,5 1,7 1,9 2,3 2,5	**MR575-2E63M/4C** **NR575-2E63M/4C**	0,56	152 148	119	IE2
	1,6 1,9 2,3	933 790 655	**574,90** **485,89** **402,12**	28639 29040 30397	3,2 3,8 4,0	**MR574-2E71M/6B** **NR574-2E71M/6B**	0,60	136 134	118	IE2
	0,81 0,86 1,0 1,1 1,2	1804 1693 1441 1339 1253	**1738,98** **1631,08** **1386,75** **1285,79** **1204,49**	9150 11836 16156 17525 18560	0,9 0,9 1,1 1,2 1,2	**MR475-2E63M/4C** **NR475-2E63M/4C**	0,56	111 115	116	IE2
	1,4 1,5 1,7 2,1 2,2 2,7 3,1	1095 979 861 720 681 565 483	**674,46** **603,46** **529,93** **442,61** **418,16** **346,07** **295,98**	20840 21841 22771 23780 24045 24743 25231	1,4 1,6 1,8 2,2 2,3 2,7 3,2	**MR474-2E71M/6B** **NR474-2E71M/6B**	0,60	95 99	115	IE2
	1,4 1,7	1022 877	**987,33** **845,97**	6178 10009	0,8 0,9	**MR375-3E63M/4C** **NR375-3E63M/4C**	0,56	76 81	113	IE2
	1,8 2,2 2,5	848 683 600	**524,07** **421,85** **369,93**	11377 13699 14655	1,0 1,2 1,4	**MR374-2E71M/6B** **NR374-2E71M/6B**	0,60	59 62	112	IE2
	2,7 3,3 3,8	558 449 394	**524,07** **421,85** **369,93**	14771 15919 16379	1,5 1,8 2,1	**MR374-3E63M/4C** **NR374-3E63M/4C**	0,56	55 58	112	IE2
	5,8 6,6	274 241	**157,76** **138,72**	16454 15843	3,0 3,4	**MR373-2E71M/6B** **NR373-2E71M/6B**	0,60	55 58	111	IE2



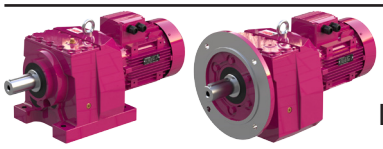
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,18 0,25	2,1 2,5 2,8	699 598 525	**431,18** **368,77** **323,39**	7218 9393 10665	0,9 1,0 1,1	**MR284-2E71M/6B** **NR284-2E71M/6B**	0,60	63 66	109	IE2
	3,2 3,8 4,3 4,9 5,8	459 393 345 305 257	**431,18** **368,77** **323,39** **285,89** **240,47**	11227 12144 12730 13180 13658	1,3 1,5 1,7 2,0 2,3	**MR284-2E63M/4C** **NR284-2E63M/4C**	0,56	60 63	109	IE2
	6,7 8,1	238 198	**137,91** **114,14**	13106 12414	2,5 3,0	**MR283-2E71M/6B** **NR283-2E71M/6B**	0,60	41 43	108	IE2
	2,8 3,3 3,9 4,2 5,6	519 435 373 347 263	**499,32** **418,57** **358,33** **332,52** **252,20**	5982 6713 7169 7346 7844	0,9 1,0 1,2 1,3 1,7	**MR275-2E63M/4C** **NR275-2E63M/4C**	0,56	41 43	107	IE2
	6,6 7,6 8,1 9,5	241 211 198 168	**138,55** **121,03** **113,52** **96,52**	8024 8154 8212 8339	1,9 2,1 2,3 2,7	**MR273-2E71M/6B** **NR273-2E71M/6B**	0,60	31 33	106	IE2
	10 12 12	157 138 129	**138,55** **121,03** **113,52**	8352 8436 8470	2,8 3,3 3,5	**MR273-2E63M/4C** **NR273-2E63M/4C**	0,56	28 30	106	IE2
	14 15 17	119 104 97	**68,03** **59,43** **55,74**	8475 8504 8346	2,4 2,7 2,9	**MR203-2E71M/6B** **NR203-2E71M/6B**	0,60	29 31	105	IE2
	21	78	**68,03**	7944	3,6	**MR203-2E63M/4C** **NR203-2E63M/4C**	0,56	27 29	105	IE2
	9,3 11 11 13	172 152 142 120	**99,21** **87,60** **81,82** **69,16**	5822 5895 5801 5568	1,2 1,3 1,4 1,7	**MR173-2E71M/6B** **NR173-2E71M/6B**	0,60	17 19	104	IE2
	14 16 17 20 24 28	113 100 93 79 66 57	**99,21** **87,60** **81,82** **69,16** **57,76** **49,81**	5561 5389 5294 5063 4820 4624	1,8 2,0 2,1 2,5 3,0 3,5	**MR173-2E63M/4C** **NR173-2E63M/4C**	0,56	13 15	104	IE2
	18 21 22	88 78 73	**50,51** **44,60** **41,66**	3512 3411 3355	1,6 1,8 1,9	**MR103-2E71M/6B** **NR103-2E71M/6B**	0,60	16 18	103	IE2
	28 31 34 40	58 51 48 40	**50,51** **44,60** **41,66** **35,21**	3213 3112 3056 2921	2,4 2,7 2,9 3,5	**MR103-2E63M/4C** **NR103-2E63M/4C**	0,56	16 18	103	IE2
	20 23 29	78 70 56	**45,18** **40,04** **32,02**	2530 2603 2707	1,0 1,2 1,5	**MR003-2E71M/6B** **NR003-2E71M/6B**	0,60	15 16	102	IE2



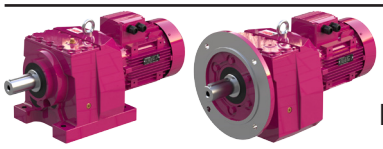
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,18 0,25	31 35 44 49 58 66 68 73 77 83 95 103	51 46 36 32 28 24 24 22 21 19 17 16	**45,18** **40,04** **32,02** **28,38** **24,13** **21,26** **20,66** **19,17** **18,20** **16,89** **14,67** **13,61**	2717 2757 2818 2840 2733 2664 2672 2628 2584 2516 2398 2336	1,6 1,8 2,2 2,5 3,0 3,4 3,5 3,7 3,9 4,0 4,0 4,0	**MR003-3E63M/4C** **NR003-3E63M/4C**	0,56	13 14	102	IE2
	126 142 161 166 179 188 203 233 251 307 359 387	13 11 10 9,8 9,1 8,6 8,0 7,0 6,5 5,3 4,5 4,2	**11,14** **9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	2197 2105 2014 1992 1940 1907 1857 1770 1724 1612 1527 1488	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/4C** **NR002-2E63M/4C**	0,56	12 13	102	IE2
	405 467 503 615 718 774	4,0 3,4 3,2 2,6 2,2 2,1	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1433 1366 1332 1245 1181 1151	4,0 4,0 4,0 4,0 4,0 4,0	**MR002-2E63M/2A** **NR002-2E63M/2A**	0,50	12 13	102	IE2
0,25 0,34	0,12 0,17 0,20 0,23 0,26 0,29 0,32 0,37 0,41 0,49 0,58 0,68	16065 11735 10151 8869 7829 6969 6246 5486 4857 4094 3487 2993	**11443,34** **8345,18** **7233,00** **6313,78** **5569,66** **4954,95** **4438,59** **3892,30** **3441,02** **2894,28** **2460,65** **2108,33**	50996 79805 87174 92433 96350 99123 101418 103687 105462 107497 109026 112703	0,8 1,1 1,3 1,5 1,7 1,9 2,1 2,4 2,7 3,2 3,7 4,0	**MR876-2E71M/4B** **NR876-2E71M/4B**	0,71	611 626	128	IE2
	0,24 0,27 0,32 0,38 0,44	8359 7401 6237 5313 4560	**5949,83** **5260,00** **4424,24** **3761,39** **3222,83**	47686 51346 55067 57782 59738	1,0 1,1 1,3 1,5 1,8	**MR776-2E71M/4B** **NR776-2E71M/4B**	0,71	259 321	125	IE2
	0,46 0,53 0,61 0,70 0,80 0,90 1,0 1,1	4482 3869 3353 2935 2589 2299 2051 1816	**3103,85** **2684,10** **2324,10** **2032,66** **1791,91** **1589,68** **1417,41** **1252,60**	59975 61455 62616 63505 64207 64804 65267 67039	1,8 2,1 2,4 2,7 3,1 3,5 3,9 4,0	**MR775-2E71M/4B** **NR775-2E71M/4B**	0,71	258 317	125	IE2
	0,43 0,50	4720 4052	**3342,43** **2863,86**	23925 27958	0,9 1,1	**MR676-2E71M/4B** **NR676-2E71M/4B**	0,71	231 243	122	IE2



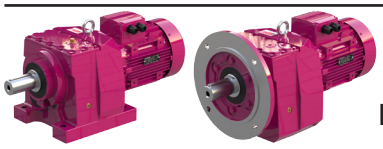
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Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,25 0,34	0,55 0,65 0,75 0,87 1,0 1,1 1,3 1,4 1,6 2,0	3725 3167 2726 2367 2071 1822 1613 1444 1270 1063	**2578,93** **2196,86** **1888,53** **1638,93** **1432,74** **1259,54** **1113,08** **995,91** **874,56** **730,46**	29635 32126 33910 35136 36125 36903 37520 37997 38465 39205	1,2 1,4 1,6 1,8 2,1 2,4 2,7 3,0 3,4 4,0	**MR675-2E71M/4B** **NR675-2E71M/4B**	0,71	229 244	122	IE2
	0,75 0,85 0,96 1,1 1,2	2732 2415 2147 1818 1650	**1897,20** **1675,43** **1489,14** **1259,61** **1140,65**	21484 23125 24354 25710 26299	1,1 1,2 1,4 1,7 1,8	**MR575-2E71M/4B** **NR575-2E71M/4B**	0,71	152 148	119	IE2
	1,6 1,9 2,3	1323 1120 929	**574,90** **485,89** **402,12**	27486 28085 28650	2,3 2,7 3,2	**MR574-2E71M/6C** **NR574-2E71M/6C**	0,78	138 134	118	IE2
	2,5 2,9	854 723	**574,90** **485,89**	28862 29566	3,5 4,0	**MR574-2E71M/4C** **NR574-2E71M/4C**	0,71	134 130	118	IE2
	1,1 1,2	1865 1746	**1285,79** **1204,49**	9956 12492	0,8 0,9	**MR475-2E71M/4B** **NR475-2E71M/4B**	0,71	101 106	116	IE2
	1,4 1,5 1,7 2,1	1553 1388 1221 1021	**674,46** **603,46** **529,93** **442,61**	15720 17825 19641 21487	1,0 1,1 1,3 1,5	**MR474-2E71M/6C** **NR474-2E71M/6C**	0,78	96 101	115	IE2
	2,1 2,4 2,7 3,2 3,4 4,1	1003 896 788 659 623 517	**674,46** **603,46** **529,93** **442,61** **418,16** **346,07**	21612 22474 23243 24138 24374 25032	1,5 1,7 2,0 2,4 2,5 3,0	**MR474-2E71M/4B** **NR474-2E71M/4B**	0,71	96 101	115	IE2
	2,2 2,5	969 850	**421,85** **369,93**	9124 11344	0,8 1,0	**MR374-2E71M/6C** **NR374-2E71M/6C**	0,78	59 64	112	IE2
	2,7 3,4 3,9 4,4 5,2	777 625 549 486 409	**524,07** **421,85** **369,93** **327,04** **275,08**	12424 14316 15160 15771 16422	1,1 1,3 1,5 1,7 2,0	**MR374-2E71M/4B** **NR374-2E71M/4B**	0,71	59 64	112	IE2
	5,8 6,6 8,2	382 336 270	**157,76** **138,72** **111,67**	16059 15496 14570	2,1 2,4 3,0	**MR373-2E71M/6C** **NR373-2E71M/6C**	0,78	59 64	111	IE2
	9,0	246	**157,76**	14203	3,4	**MR373-2E71M/4B** **NR373-2E71M/4B**	0,71	53 58	111	IE2
	2,5 2,8	848 744	**368,77** **323,39**	- 5902	0,7 0,8	**MR284-2E71M/6C** **NR284-2E71M/6C**	0,78	63 65	109	IE2



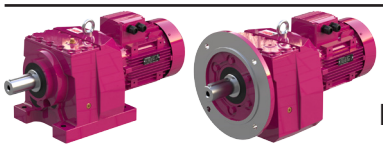
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,25 0,34	3,3 3,9 4,4 5,0 5,9	640 547 480 425 358	**431,18** **368,77** **323,39** **285,89** **240,47**	8530 10258 11268 11998 12782	0,9 1,1 1,2 1,4 1,7	**MR284-2E71M/4B** **NR284-2E71M/4B**	0,71	63 65	109	IE2
	6,7 8,1 9,4	330 275 235	**137,91** **114,14** **97,62**	12726 12099 11590	1,8 2,2 2,6	**MR283-2E71M/6C** **NR283-2E71M/6C**	0,78	31 33	108	IE2
	10 12	213 177	**137,91** **114,14**	11308 10715	2,8 3,4	**MR283-2E71M/4B** **NR283-2E71M/4B**	0,71	31 33	108	IE2
	4,0 4,3 5,7	520 483 366	**358,33** **332,52** **252,20**	6211 6518 7338	0,9 0,9 1,2	**MR275-2E71M/4B** **NR275-2E71M/4B**	0,71	46 48	107	IE2
	6,6 7,6 8,1 9,5	335 293 275 234	**138,55** **121,03** **113,52** **96,52**	7529 7762 7855 8057	1,3 1,5 1,6 1,9	**MR273-2E71M/6C** **NR273-2E71M/6C**	0,78	31 33	106	IE2
	10 12 13 15 17	216 189 178 151 131	**138,55** **121,03** **113,52** **96,52** **83,83**	8128 8249 8299 8413 8486	2,1 2,4 2,5 3,0 3,4	**MR273-2E71M/4B** **NR273-2E71M/4B**	0,71	31 33	106	IE2
	14 15 17	165 144 136	**68,03** **59,43** **55,74**	8313 8306 8159	1,7 1,9 2,1	**MR203-2E71M/6C** **NR203-2E71M/6C**	0,78	29 31	105	IE2
	21 24 26 30	107 93 87 74	**68,03** **59,43** **55,74** **47,39**	7635 7342 7206 6868	2,6 3,0 3,2 3,8	**MR203-2E71M/4B** **NR203-2E71M/4B**	0,71	29 31	105	IE2
	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	79 70 65 55	**50,51** **44,60** **41,66** **35,21**	3020 2935 2888 2771	1,8 2,0 2,1 2,5	**MR103-2E71M/4B** **NR103-2E71M/4B**	0,71	17 18	103	IE2



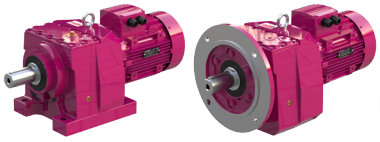
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,25 0,34	44 48 57	51 46 39	**32,25** **29,40** **24,86**	2710 2646 2508	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
	405 467 503 615 718 774	5,6 4,8 4,5 3,7 3,1 2,9	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1439 1372 1337 1250 1184 1154	4,0 4,0 4,0 4,0 4,0 4,0	**MR002-2E63M/2B** **NR002-2E63M/2B**	0,67	13 14	102	IE2
0,37 0,50	0,20 0,23 0,26 0,29 0,32 0,37 0,41 0,49 0,58 0,68	15488 13531 11945 10633 9530 8371 7411 6246 5320 4567	**7233,00** **6313,78** **5569,66** **4954,95** **4438,59** **3892,30** **3441,02** **2894,28** **2460,65** **2108,33**	56000 69831 78738 85048 89697 94366 97651 101417 104164 106252	0,8 1,0 1,1 1,2 1,4 1,6 1,8 2,1 2,4 2,8	**MR876-2E71M/4C** **NR876-2E71M/4C**	1,00	599 611	128	IE2
	0,74 0,84 0,94	4252 3764 3368	**1924,32** **1700,56** **1521,55**	107085 108338 109316	3,1 3,5 3,9	**MR875-2E71M/4C** **NR875-2E71M/4C**	1,00	596 606	128	IE2
	0,38 0,44	8106 6958	**3761,39** **3222,83**	48515 52775	1,0 1,1	**MR776-2E71M/4C** **NR776-2E71M/4C**	1,00	269 327	125	IE2
	0,46 0,53 0,61 0,70	6838 5903 5116 4478	**3103,85** **2684,10** **2324,10** **2032,66**	53223 56209 58419 59983	1,2 1,4 1,6 1,8	**MR775-2E71M/4C** **NR775-2E71M/4C**	1,00	264 322	125	IE2



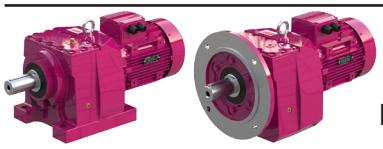
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,37 0,50	0,80 0,90 1,0 1,1 1,3 1,4	3951 3507 3129 2770 2479 2181	**1791,91** **1589,68** **1417,41** **1252,60** **1120,74** **984,18**	61263 62276 63098 63844 64424 65025	2,0 2,3 2,6 2,9 3,2 3,7	**MR775-2E71M/4C** **NR775-2E71M/4C**	1,00	264 322	125	IE2
	1,6 1,7	2083 1865	**594,92** **532,29**	65180 66612	3,8 4,0	**MR774-2E80M/6A** **NR774-2E80M/6A**	1,08	244 301	124	IE2
	0,75 0,87 1,0 1,1 1,3 1,4 1,6	4159 3612 3160 2780 2461 2203 1938	**1888,53** **1638,93** **1432,74** **1259,54** **1113,08** **995,91** **874,56**	27370 30178 32158 33706 34869 35696 36548	1,0 1,2 1,4 1,5 1,7 2,0 2,2	**MR675-2E71M/4C** **NR675-2E71M/4C**	1,00	228 244	122	IE2
	1,8 2,1 2,5 2,9 3,3	1752 1551 1319 1136 987	**500,39** **442,20** **376,69** **323,82** **281,02**	37113 37697 38334 38814 40076	2,5 2,8 3,3 3,8 4,0	**MR674-2E80M/6A** **NR674-2E80M/6A**	1,08	218 234	121	IE2
	1,1 1,2 1,5	2774 2518 2130	**1259,61** **1140,65** **964,05**	21254 22616 24428	1,1 1,2 1,4	**MR575-2E71M/4C** **NR575-2E71M/4C**	1,00	152 149	119	IE2
	1,6 1,9 2,3	2008 1699 1410	**574,90** **485,89** **402,12**	24897 26116 27150	1,5 1,8 2,1	**MR574-2E80M/6A** **NR574-2E80M/6A**	1,08	138 134	118	IE2
	2,5 2,9 3,5 4,1 4,7 4,9	1303 1103 915 783 688 664	**574,90** **485,89** **402,12** **343,91** **301,59** **291,25**	27504 28136 28679 29072 29992 30274	2,3 2,7 3,3 3,8 4,0 4,0	**MR574-2E71M/4C** **NR574-2E71M/4C**	1,00	133 129	118	IE2
	1,7 2,1	1853 1550	**529,93** **442,61**	10176 15686	0,8 1,0	**MR474-2E80M/6A** **NR474-2E80M/6A**	1,08	136 141	115	IE2
	2,1 2,4 2,7 3,2 3,4 4,1	1530 1368 1203 1006 951 789	**674,46** **603,46** **529,93** **442,61** **418,16** **346,07**	15971 18007 19777 21584 22042 23240	1,0 1,1 1,3 1,5 1,6 2,0	**MR474-2E71M/4C** **NR474-2E71M/4C**	1,00	131 136	115	IE2
	4,2 4,8 5,9 6,6 7,4	780 691 564 499 446	**219,00** **194,05** **157,90** **139,54** **124,85**	23300 23923 24750 25142 25445	2,0 2,2 2,8 3,1 3,5	**MR473-2E80M/6A** **NR473-2E80M/6A**	1,08	86 89	114	IE2
	3,4 3,9 4,4 5,2	954 838 741 624	**421,85** **369,93** **327,04** **275,08**	9355 11517 12918 14359	0,9 1,0 1,1 1,3	**MR374-2E71M/4C** **NR374-2E71M/4C**	1,00	59 64	112	IE2



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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,37 0,50	5,9 6,7 8,3	561 494 398	**157,76** **138,72** **111,67**	15027 14902 14092	1,5 1,7 2,1	**MR373-2E80M/6A** **NR373-2E80M/6A**	1,08	64 69	111	IE2
	9,0 10 13 15	365 322 259 227	**157,76** **138,72** **111,67** **97,92**	13765 13294 12515 12056	2,2 2,5 3,2 3,6	**MR373-2E71M/4C** **NR373-2E71M/4C**	1,00	53 58	111	IE2
	5,0	649	**285,89**	8353	0,9	**MR284-2E71M/4C** **NR284-2E71M/4C**	1,00	63 65	109	IE2
	6,7 8,1 9,5	488 405 346	**137,91** **114,14** **97,62**	11107 11559 11129	1,2 1,5 1,7	**MR283-2E80M/6A** **NR283-2E80M/6A**	1,08	43 45	108	IE2
	10 12 15 17	316 262 225 198	**137,91** **114,14** **97,62** **85,60**	10885 10365 9940 9588	1,9 2,3 2,7 3,0	**MR283-2E71M/4C** **NR283-2E71M/4C**	1,00	39 42	108	IE2
	6,7 7,6 8,1 9,6	493 431 405 344	**138,55** **121,03** **113,52** **96,52**	6429 6901 7085 7456	0,9 1,0 1,1 1,3	**MR273-2E80M/6A** **NR273-2E80M/6A**	1,08	32 35	106	IE2
	10 12 13 15 17 19 23	321 281 264 224 195 171 141	**138,55** **121,03** **113,52** **96,52** **83,83** **73,35** **60,66**	7603 7811 7900 8092 8224 8328 7788	1,4 1,6 1,7 2,0 2,3 2,7 3,2	**MR273-2E71M/4C** **NR273-2E71M/4C**	1,00	29 32	106	IE2
	14 16 17	243 212 199	**68,03** **59,43** **55,74**	8002 7965 7840	1,2 1,3 1,4	**MR203-2E80M/6A** **NR203-2E80M/6A**	1,08	36 38	105	IE2
	21 24 26 30 32 35 40	158 138 130 110 103 96 84	**68,03** **59,43** **55,74** **47,39** **43,94** **41,16** **36,02**	7382 7121 6998 6692 6552 6432 6190	1,8 2,0 2,2 2,5 2,7 2,9 3,3	**MR203-2E71M/4C** **NR203-2E71M/4C**	1,00	34 37	105	IE2
	14 16 17 21 25 29 31 33 39 47 55	230 203 190 161 134 116 107 100 84 71 61	**99,21** **87,60** **81,82** **69,16** **57,76** **49,81** **45,90** **42,87** **36,24** **30,26** **26,10**	4779 4687 4633 4491 4329 4190 4112 4047 3884 3710 3568	0,9 1,0 1,1 1,2 1,5 1,7 1,9 2,0 2,4 2,8 3,3	**MR173-2E71M/4C** **NR173-2E71M/4C**	1,00	19 20	104	IE2

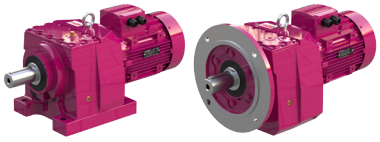


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Geared Motors Performance Tables

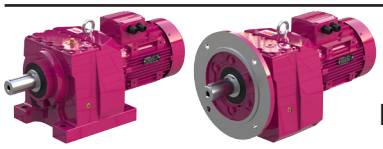
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,37 0,50	18 21 22	180 159 149	**50,51** **44,60** **41,66**	2938 2904 2881	0,8 0,9 0,9	**MR103-2E80M/6A** **NR103-2E80M/6A**	1,08	21 23	103	IE2
	28 32 34 40 44 48 57 65 69 82	117 104 97 82 75 69 58 51 48 40	**50,51** **44,60** **41,66** **35,21** **32,25** **29,40** **24,86** **21,96** **20,51** **17,33**	2785 2727 2694 2607 2560 2509 2374 2308 2272 2181	1,2 1,3 1,4 1,7 1,9 2,0 2,2 2,3 2,5 2,7	**MR103-2E71M/4C** **NR103-2E71M/4C**	1,00	18 19	103	IE2
	89 101 108	38 33 31	**15,95** **14,08** **13,15**	2161 2091 2053	3,0 3,3 3,4	**MR102-2E71M/4C** **NR102-2E71M/4C**	1,00	18 19	103	IE2
	32 36 45 50 59 67 69 74 78 84 97 105	104 93 74 66 56 49 48 45 42 39 34 32	**45,18** **40,04** **32,02** **28,38** **24,13** **21,26** **20,66** **19,17** **18,20** **16,89** **14,67** **13,61**	1350 1480 1741 1803 1890 1896 1943 1960 1935 1946 1911 1913	0,8 0,9 1,1 1,2 1,5 1,7 1,7 1,8 1,9 2,1 2,4 2,5	**MR003-2E71M/4C** **NR003-2E71M/4C**	1,00	14 15	102	IE2
	128 144 164 169 182 191 206 238 256 313 365 394	26 23 21 20 19 18 16 14 13 11 9,2 8,6	**11,14** **9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	2084 2038 1981 1987 1950 1916 1864 1774 1726 1614 1525 1484	2,5 3,3 3,6 3,7 3,9 4,0 4,0 4,0 4,0 4,0 4,0 4,0	**MR002-2E71M/4C** **NR002-2E71M/4C**	1,00	14 15	102	IE2
	404 465 501 612 715 771	8,3 7,2 6,7 5,5 4,7 4,4	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1458 1388 1352 1264 1197 1166	4,0 4,0 4,0 4,0 4,0 4,0	**MR002-2E71M/2A** **NR002-2E71M/2A**	0,90	14 15	102	IE2
0,55 0,75	0,21 0,27 0,32 0,34 0,40 0,51	21695 17023 14250 13472 11471 9081	**6842,29** **5357,43** **4474,67** **4227,50** **3594,81** **2836,64**	68090 101458 115408 118840 126893 135261	0,8 1,1 1,3 1,3 1,6 2,0	**MR976-2E80M/4B** **NR976-2E80M/4B**	1,45	1102 1152	131	IE2
	0,71 0,79 0,93	6622 5949 5068	**2027,97** **1820,78** **1552,10**	142495 144369 146710	2,7 3,0 3,6	**MR975-2E80M/4B** **NR975-2E80M/4B**	1,45	1100 1150	131	IE2



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Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,55 0,75	0,29 0,32 0,37 0,42 0,50 0,59 0,68	15642 14019 12313 10902 9188 7826 6717	**4954,95** **4438,59** **3892,30** **3441,02** **2894,28** **2460,65** **2108,33**	54775 66738 76803 83816 91140 96066 99936	0,8 0,9 1,1 1,2 1,4 1,7 1,9	**MR876-2E80M/4B** **NR876-2E80M/4B**	1,45	602 612	128	IE2
	0,75 0,85 0,95 1,1 1,2 1,4	6255 5537 4955 4358 3952 3419	**1924,32** **1700,56** **1521,55** **1336,15** **1210,51** **1049,18**	101388 103540 105192 106805 107862 109192	2,1 2,3 2,6 3,0 3,3 3,8	**MR875-2E80M/4B** **NR875-2E80M/4B**	1,45	598 608	128	IE2
	0,62 0,71 0,80 0,91 1,0 1,1 1,3 1,5	7526 6588 5812 5159 4603 4075 3647 3209	**2324,10** **2032,66** **1791,91** **1589,68** **1417,41** **1252,60** **1120,74** **984,18**	50893 54099 56474 58302 59749 61036 61934 62905	1,1 1,2 1,4 1,6 1,7 2,0 2,2 2,5	**MR775-2E80M/4B** **NR775-2E80M/4B**	1,45	339 414	125	IE2
	1,6 1,8 2,0 2,2	3074 2751 2420 2167	**594,92** **532,29** **467,43** **418,17**	63237 63901 64555 65036	2,6 2,9 3,3 3,7	**MR774-2E80M/6B** **NR774-2E80M/6B**	1,50	318 393	124	IE2
	2,4 2,7	1989 1780	**594,92** **532,29**	65557 67316	4,0 4,0	**MR774-2E80M/4B** **NR774-2E80M/4B**	1,45	314 390	124	IE2
	1,0 1,1 1,3 1,4 1,6	4649 4089 3620 3240 2850	**1432,74** **1259,54** **1113,08** **995,91** **874,56**	24312 27791 30140 31852 33435	0,9 1,1 1,2 1,3 1,5	**MR675-2E80M/4B** **NR675-2E80M/4B**	1,45	244 254	122	IE2
	1,9 2,1 2,5	2585 2288 1946	**500,39** **442,20** **376,69**	34368 35434 36540	1,7 1,9 2,2	**MR674-2E80M/6B** **NR674-2E80M/6B**	1,50	223 233	121	IE2
	2,9 3,3 3,8 4,4 5,1	1673 1481 1260 1085 942	**500,39** **442,20** **376,69** **323,82** **281,02**	37329 37879 38481 38934 40572	2,6 2,9 3,4 4,0 4,0	**MR674-2E80M/4B** **NR674-2E80M/4B**	1,45	219 230	121	IE2
	1,6 1,9 2,3	2962 2507 2080	**574,90** **485,89** **402,12**	20079 22620 24611	1,0 1,2 1,4	**MR574-2E80M/6B** **NR574-2E80M/6B**	1,50	153 149	118	IE2
	2,5 3,0 3,6 4,2 4,8 4,9 5,6 6,5 7,4	1917 1623 1346 1152 1012 976 868 743 653	**574,90** **485,89** **402,12** **343,91** **301,59** **291,25** **258,87** **221,40** **194,15**	25317 26441 27394 27973 28399 28504 28839 29303 30390	1,6 1,8 2,2 2,6 3,0 3,1 3,5 4,0 4,0	**MR574-2E80M/4B** **NR574-2E80M/4B**	1,45	150 145	118	IE2

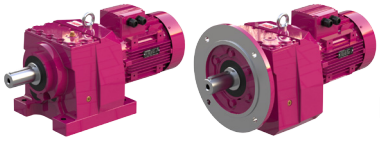


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Geared Motors Performance Tables

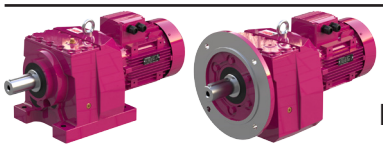
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,55 0,75	2,7 3,3 3,4 4,2	1769 1480 1399 1160	**529,93** **442,61** **418,16** **346,07**	12048 16591 17641 20191	0,9 1,0 1,1 1,3	**MR474-2E80M/4B** **NR474-2E80M/4B**	1,45	132 136	115	IE2
	4,3 4,8 5,9	1154 1022 833	**219,00** **194,05** **157,90**	20209 21411 22920	1,3 1,5 1,9	**MR473-2E80M/6B** **NR473-2E80M/6B**	1,50	111 114	114	IE2
	6,6 7,4 9,1 10 12	748 663 540 478 428	**219,00** **194,05** **157,90** **139,54** **124,85**	23568 24146 24420 23561 22805	2,1 2,3 2,9 3,2 3,6	**MR473-2E80M/4B** **NR473-2E80M/4B**	1,45	110 113	114	IE2
	5,2	918	**275,08**	10080	0,9	**MR374-2E80M/4B** **NR374-2E80M/4B**	1,45	65 69	112	IE2
	5,9 6,7 8,3	830 730 588	**157,76** **138,72** **111,67**	11575 13026 13358	1,0 1,1 1,4	**MR373-2E80M/6B** **NR373-2E80M/6B**	1,50	58 61	111	IE2
	9,1 10 13 15 17 20 23	538 474 381 335 296 250 212	**157,76** **138,72** **111,67** **97,92** **86,57** **72,81** **61,91**	13077 12684 12018 11616 11242 10724 10249	1,5 1,7 2,1 2,4 2,8 3,3 3,9	**MR373-2E80M/4B** **NR373-2E80M/4B**	1,45	65 69	111	IE2
	6,8 8,2 9,5	717 596 511	**137,91** **114,14** **97,62**	6313 9261 10425	0,8 1,0 1,2	**MR283-2E80M/6B** **NR283-2E80M/6B**	1,50	46 49	108	IE2
	10 13 15 17 19 23 27	464 386 331 291 258 217 185	**137,91** **114,14** **97,62** **85,60** **75,68** **63,65** **54,12**	10229 9817 9468 9171 8892 8502 8140	1,3 1,6 1,8 2,1 2,3 2,8 3,2	**MR283-2E80M/4B** **NR283-2E80M/4B**	1,45	47 50	108	IE2
	9,7	509	**96,52**	6289	0,9	**MR273-2E80M/6B** **NR273-2E80M/6B**	1,50	31 34	106	IE2
	10 12 13 15 17 20 24 28 34 39	473 414 388 330 287 251 208 174 146 126	**138,55** **121,03** **113,52** **96,52** **83,83** **73,35** **60,66** **50,59** **42,41** **36,55**	6598 7030 7199 7553 7789 7970 7896 7388 6930 6568	1,0 1,1 1,2 1,4 1,6 1,8 2,2 2,6 3,1 3,6	**MR273-2E80M/4B** **NR273-2E80M/4B**	1,45	32 35	106	IE2
	14 16 17	359 314 295	**68,03** **59,43** **55,74**	7417 7446 7352	0,8 0,9 0,9	**MR203-2E80M/6B** **NR203-2E80M/6B**	1,50	34 35	105	IE2



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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,55 0,75	21 24 26 30 33 35 40 51 58 62	233 204 191 163 151 141 124 97 85 80	**68,03** **59,43** **55,74** **47,39** **43,94** **41,16** **36,02** **28,35** **24,77** **23,23**	6986 6773 6671 6411 6290 6185 5973 6418 6107 5966	1,2 1,4 1,5 1,7 1,9 2,0 2,3 2,9 3,2 3,4	**MR203-2E80M/4B** **NR203-2E80M/4B**	1,45	33 35	105	IE2
	21 25 29 31 34 40 48 55	236 198 171 157 147 124 104 90	**69,16** **57,76** **49,81** **45,90** **42,87** **36,24** **30,26** **26,10**	4033 3944 3857 3804 3758 3639 3503 3388	0,8 1,0 1,2 1,3 1,4 1,6 1,9 2,2	**MR173-2E80M/4B** **NR173-2E80M/4B**	1,45	22 24	104	IE2
	69 79	73 64	**20,92** **18,28**	3816 3633	2,7 3,1	**MR172-2E80M/4B** **NR172-2E80M/4B**	1,45	21 23	104	IE2
	29 32 35 41 45 49 58 66 70 83	173 153 143 121 111 101 85 75 70 60	**50,51** **44,60** **41,66** **35,21** **32,25** **29,40** **24,86** **21,96** **20,51** **17,33**	2432 2414 2401 2358 2331 2300 2178 2134 2108 2042	0,8 0,9 1,0 1,2 1,3 1,4 1,5 1,6 1,7 1,8	**MR103-2E80M/4B** **NR103-2E80M/4B**	1,45	22 23	103	IE2
	90 102 109 130 141 155 180 208	56 49 46 39 36 32 28 24	**15,95** **14,08** **13,15** **11,12** **10,18** **9,29** **8,01** **6,93**	2045 1988 1956 1877 1836 1793 1724 1641	2,1 2,2 2,3 2,6 2,8 2,9 3,2 3,7	**MR102-2E80M/4B** **NR102-2E80M/4B**	1,45	21 22	103	IE2
	45 51 60 68 70 75 79 85 98 106	109 97 83 73 71 66 62 58 50 47	**32,02** **28,38** **24,13** **21,26** **20,66** **19,17** **18,20** **16,89** **14,67** **13,61**	746 908 1128 1206 1290 1353 1343 1396 1412 1450	0,8 0,8 1,0 1,1 1,2 1,2 1,3 1,4 1,6 1,7	**MR003-2E80M/4B** **NR003-2E80M/4B**	1,45	18 19	102	IE2
	129 146 166 170 184 193 208 240 259	39 34 30 29 27 26 24 21 19	**11,14** **9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57**	1789 1772 1738 1758 1747 1719 1706 1651 1636	1,7 2,3 2,4 2,5 2,6 2,7 2,9 3,1 3,3	**MR002-2E80M/4B** **NR002-2E80M/4B**	1,45	16 17	102	IE2

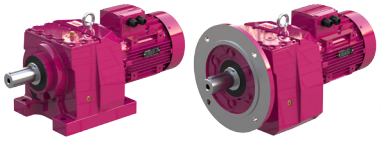


Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

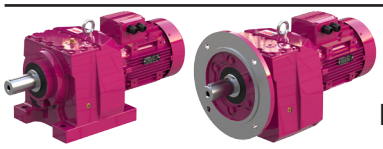
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,55 0,75	316 369 398	16 14 13	**4,56** **3,90** **3,62**	1528 1494 1476	3,6 4,0 4,0	**MR002-2E80M/4B** **NR002-2E80M/4B**	1,45	16 17	102	IE2
	404 465 501 612 715 771	12 11 10 8,2 7,0 6,5	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1482 1410 1373 1283 1213 1181	4,0 4,0 4,0 4,0 4,0 4,0	**MR002-2E71M/2B** **NR002-2E71M/2B**	1,25	14 15	102	IE2
0,75 1,0	0,27 0,32 0,34 0,40 0,51	23053 19298 18245 15535 12298	**5357,43** **4474,67** **4227,50** **3594,81** **2836,64**	51426 86315 93574 108770 123352	0,8 0,9 1,0 1,2 1,5	**MR976-3E80M/4D** **NR976-3E80M/4D**	1,77	1093 1143	131	IE3
	0,71 0,80 0,93 1,1 1,2	8968 8057 6863 6056 5376	**2027,97** **1820,78** **1552,10** **1368,27** **1213,85**	135224 138145 141735 144020 145857	2,0 2,2 2,6 3,0 3,3	**MR975-3E80M/4D** **NR975-3E80M/4D**	1,77	1091 1141	131	IE3
	0,42 0,50 0,59 0,69	14764 12443 10599 9097	**3441,02** **2894,28** **2460,65** **2108,33**	60861 75635 84867 91252	0,9 1,0 1,2 1,4	**MR876-3E80M/4D** **NR876-3E80M/4D**	1,77	608 613	128	IE3
	0,75 0,85 0,95 1,1 1,2 1,4 1,6 1,8	8471 7498 6710 5902 5351 4630 4046 3573	**1924,32** **1700,56** **1521,55** **1336,15** **1210,51** **1049,18** **915,85** **807,91**	93667 97048 99810 102338 103968 105993 107547 108753	1,5 1,7 1,9 2,2 2,4 2,8 3,2 3,6	**MR875-3E80M/4D** **NR875-3E80M/4D**	1,77	605 610	128	IE3
	0,81 0,91 1,0 1,2 1,3 1,5	7871 6987 6234 5518 4939 4345	**1791,91** **1589,68** **1417,41** **1252,60** **1120,74** **984,18**	49401 52618 55079 57207 58706 60240	1,0 1,1 1,3 1,4 1,6 1,8	**MR775-3E80M/4D** **NR775-3E80M/4D**	1,77	260 318	125	IE3
	1,6 1,8 2,0 2,3	4134 3700 3255 2915	**594,92** **532,29** **467,43** **418,17**	60775 61799 62793 63516	1,9 2,2 2,5 2,7	**MR774-3E90S/6B** **NR774-3E90S/6B**	1,96	241 299	124	IE3
	2,4 2,7 3,1 3,5	2694 2411 2121 1900	**594,92** **532,29** **467,43** **418,17**	63960 64524 65082 66231	3,0 3,3 3,8 4,0	**MR774-3E80M/4D** **NR774-3E80M/4D**	1,77	230 283	124	IE3
	1,5 1,7	4388 3860	**995,91** **874,56**	25927 28823	1,0 1,1	**MR675-3E80M/4D** **NR675-3E80M/4D**	1,77	241 252	122	IE3
	1,9 2,1 2,5	3476 3077 2618	**500,39** **442,20** **376,69**	30699 32446 34190	1,2 1,4 1,6	**MR674-3E90S/6B** **NR674-3E90S/6B**	1,96	229 239	121	IE3



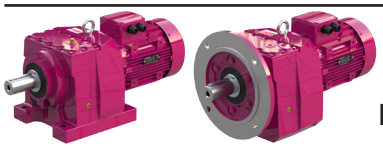
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Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
0,75 1,0	2,9 3,3 3,8 4,5 5,2 5,9 6,7	2265 2005 1706 1469 1276 1117 983	**500,39** **442,20** **376,69** **323,82** **281,02** **245,67** **215,97**	35432 36291 37214 37899 38425 38842 40060	1,9 2,1 2,5 2,9 3,4 3,8 4,0	**MR674-3E80M/4D** **NR674-3E80M/4D**	1,77	226 236	121	IE3
	2,4	2797	**402,12**	21008	1,1	**MR574-3E90S/6B** **NR574-3E90S/6B**	1,96	145 141	118	IE3
	2,5 3,0 3,6 4,2 4,8 5,0 5,6 6,5 7,5 8,4 10	2596 2197 1823 1560 1371 1322 1176 1007 884 783 660	**574,90** **485,89** **402,12** **343,91** **301,59** **291,25** **258,87** **221,40** **194,15** **171,64** **144,37**	22116 24064 25640 26587 27250 27413 27885 28404 28760 29042 30258	1,2 1,4 1,6 1,9 2,2 2,3 2,6 3,0 3,4 3,8 4,0	**MR574-3E80M/4D** **NR574-3E80M/4D**	1,77	138 135	118	IE3
	3,5 4,2	1894 1571	**418,16** **346,07**	8853 15203	0,8 1,0	**MR474-3E80M/4D** **NR474-3E80M/4D**	1,77	138 142	115	IE3
	4,3 4,9 6,0	1551 1374 1120	**219,00** **194,05** **157,90**	15551 17820 20498	1,0 1,1 1,4	**MR473-3E90S/6B** **NR473-3E90S/6B**	1,96	99 101	114	IE3
	6,6 7,5 9,2 10 12 13 16	1014 899 733 648 580 510 427	**219,00** **194,05** **157,90** **139,54** **124,85** **109,64** **91,58**	21451 22407 23603 23025 22325 21522 20436	1,5 1,7 2,1 2,4 2,7 3,0 3,6	**MR473-3E80M/4D** **NR473-3E80M/4D**	1,77	95 98	114	IE3
	6,8 8,5	982 791	**138,72** **111,67**	8562 12140	0,8 1,0	**MR373-3E90S/6B** **NR373-3E90S/6B**	1,96	59 61	111	IE3
	9,2 10 13 15 17 20 23 27 30	729 642 517 454 402 339 288 247 224	**157,76** **138,72** **111,67** **97,92** **86,57** **72,81** **61,91** **53,04** **48,00**	12354 12049 11507 11168 10846 10391 9965 9564 9307	1,1 1,3 1,6 1,8 2,0 2,4 2,8 3,3 3,7	**MR373-3E80M/4D** **NR373-3E80M/4D**	1,77	54 56	111	IE3
	9,7	692	**97,62**	7187	0,9	**MR283-3E90S/6B** **NR283-3E90S/6B**	1,96	46 48	108	IE3
	11 13 15 17 19	638 529 453 397 352	**137,91** **114,14** **97,62** **85,60** **75,68**	8472 9240 8974 8738 8509	0,9 1,1 1,3 1,5 1,7	**MR283-3E80M/4D** **NR283-3E80M/4D**	1,77	44 49	108	IE3



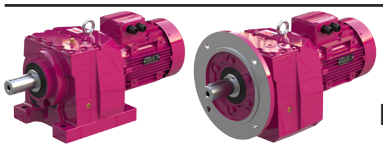
Motorlu Güç Devir Sayfaları
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,75 1,0	23 27 31 35	296 252 216 196	**63,65** **54,12** **46,37** **41,96**	8180 7866 7567 7374	2,0 2,4 2,6 2,8	**MR283-3E80M/4D** **NR283-3E80M/4D**	1,77	44 49	108	IE3
	12 13 15 17 20 24 29 34 40 48	561 526 448 389 341 282 236 198 171 142	**121,03** **113,52** **96,52** **83,83** **73,35** **60,66** **50,59** **42,41** **36,55** **30,48**	5581 5868 6462 6842 7104 7338 7441 7036 6660 6232	0,8 0,9 1,0 1,2 1,3 1,6 1,9 2,3 2,6 3,2	**MR273-3E80M/4D** **NR273-3E80M/4D**	1,77	35 37	106	IE3
	21 24 26 31 33 35 40 51 59 62	316 276 259 221 205 192 168 132 115 108	**68,03** **59,43** **55,74** **47,39** **43,94** **41,16** **36,02** **28,35** **24,77** **23,23**	6569 6409 6329 6121 6021 5933 5752 6540 6214 6067	0,9 1,0 1,1 1,3 1,4 1,5 1,7 2,1 2,4 2,5	**MR203-3E80M/4D** **NR203-3E80M/4D**	1,77	33 35	105	IE3
	63 72 77 90	109 95 89 76	**23,01** **20,10** **18,85** **16,03**	5957 5671 5541 5227	2,6 2,7 2,9 3,2	**MR202-3E80M/4D** **NR202-3E80M/4D**	1,77	33 34	105	IE3
	29 32 34 40 48 56	231 213 199 169 141 122	**49,81** **45,90** **42,87** **36,24** **30,26** **26,10**	3498 3473 3449 3377 3285 3200	0,9 0,9 1,0 1,2 1,4 1,6	**MR173-3E80M/4D** **NR173-3E80M/4D**	1,77	23 24	104	IE3
	69 79 85 99 115 131	99 87 81 69 60 53	**20,92** **18,28** **17,14** **14,57** **12,66** **11,08**	3487 3476 3464 3394 3224 3071	2,0 2,3 2,5 2,8 3,2 3,4	**MR172-3E80M/4D** **NR172-3E80M/4D**	1,77	23 25	104	IE3
	41 45 49 58 66 71 84	164 150 137 116 102 96 81	**35,21** **32,25** **29,40** **24,86** **21,96** **20,51** **17,33**	2088 2084 2074 1965 1946 1933 1894	0,9 0,9 1,0 1,1 1,2 1,3 1,4	**MR103-3E80M/4D** **NR103-3E80M/4D**	1,77	22 25	103	IE3
	91 103 110 130 142 156 181 209	75 67 62 53 48 44 38 33	**15,95** **14,08** **13,15** **11,12** **10,18** **9,29** **8,01** **6,93**	1923 1880 1855 1792 1758 1722 1663 1582	1,5 1,7 1,7 1,9 2,1 2,2 2,4 2,7	**MR102-3E80M/4D** **NR102-3E80M/4D**	1,77	22 23	103	IE3



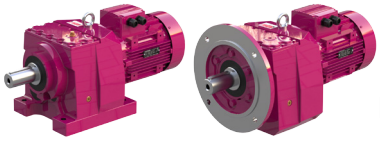
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
0,75 1,0	224 265 289 317	31 26 24 22	**6,48** **5,47** **5,01** **4,57**	1556 1492 1459 1424	2,8 3,1 3,4 3,5	**MR102-3E80M/4D** **NR102-3E80M/4D**	1,77	22 23	103	IE3
	60 68 70 76 80 86 99 107	112 99 96 89 85 79 68 63	**24,13** **21,26** **20,66** **19,17** **18,20** **16,89** **14,67** **13,61**	276 434 560 676 683 783 857 934	0,7 0,8 0,9 0,9 1,0 1,0 1,2 1,3	**MR003-3E80M/4D** **NR003-3E80M/4D**	1,77	19 20	102	IE3
	130 147 167 172 185 195 210 242 260 318 372 401	53 47 41 40 37 35 33 28 26 22 19 17	**11,14** **9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1465 1480 1472 1508 1515 1491 1495 1458 1457 1360 1350 1343	1,2 1,7 1,8 1,8 1,9 2,0 2,1 2,3 2,4 2,7 3,0 3,1	**MR002-3E80M/4D** **NR002-3E80M/4D**	1,77	19 20	102	IE3
	417 480 517 632 738 796	16 14 13 11 9,3 8,6	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1421 1371 1355 1266 1223 1190	3,3 3,6 3,9 4,0 4,0 4,0	**MR002-3E80M/2B** **NR002-3E80M/2B**	1,59	19 20	102	IE3
1,1 1,5	0,40 0,51	22784 18037	**3594,81** **2836,64**	54822 94915	0,8 1,0	**MR976-3E90S/4C** **NR976-3E90S/4C**	2,46	1097 1147	131	IE3
	0,71 0,80 0,93 1,1 1,2 1,3 1,6	13153 11817 10066 8881 7885 7035 5960	**2027,97** **1820,78** **1552,10** **1368,27** **1213,85** **1082,31** **914,74**	119815 125260 131719 135508 138679 141234 144282	1,4 1,5 1,8 2,0 2,3 2,6 3,0	**MR975-3E90S/4C** **NR975-3E90S/4C**	2,46	1095 1145	131	IE3
	0,75 0,85 0,95 1,1 1,2 1,4 1,6 1,8 2,0 2,3 2,7	12424 10997 9841 8657 7849 6791 5934 5240 4665 4182 3502	**1924,32** **1700,56** **1521,55** **1336,15** **1210,51** **1049,18** **915,85** **807,91** **718,74** **643,84** **537,75**	75738 83016 88196 92964 95787 99548 102241 104289 105897 107191 108929	1,0 1,2 1,3 1,5 1,7 1,9 2,2 2,5 2,8 3,1 3,7	**MR875-3E90S/4C** **NR875-3E90S/4C**	2,46	600 605	128	IE3
	1,2 1,3 1,5	8093 7244 6373	**1252,60** **1120,74** **984,18**	48526 51722 54641	1,0 1,1 1,3	**MR775-3E90S/4C** **NR775-3E90S/4C**	2,46	338 408	125	IE3



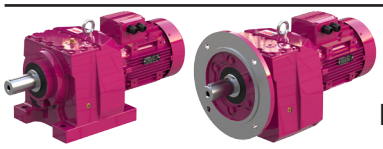
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
1,1 1,5	1,6 1,8 2,0 2,2	6095 5455 4799 4297	**594,92** **532,29** **467,43** **418,17**	55503 57384 59184 60431	1,3 1,5 1,7 1,9	**MR774-3E90L/6C** **NR774-3E90L/6C**	2,75	310 376	124	IE3
	2,4 2,7 3,1 3,5 4,0 4,6 5,3	3951 3536 3111 2786 2406 2087 1828	**594,92** **532,29** **467,43** **418,17** **361,62** **313,11** **273,85**	61197 62157 63092 63773 64534 65147 66837	2,0 2,3 2,6 2,9 3,3 3,8 4,0	**MR774-3E90S/4C** **NR774-3E90S/4C**	2,46	305 371	124	IE3
	2,1 2,5	4537 3860	**442,20** **376,69**	24922 28823	0,9 1,1	**MR674-3E90L/6C** **NR674-3E90L/6C**	2,75	234 244	121	IE3
	2,9 3,3 3,8 4,5 5,2 5,9 6,7	3322 2941 2502 2154 1872 1638 1442	**500,39** **442,20** **376,69** **323,82** **281,02** **245,67** **215,97**	31393 33000 34662 35806 36711 37414 37974	1,3 1,5 1,7 2,0 2,3 2,6 3,0	**MR674-3E90S/4C** **NR674-3E90S/4C**	2,46	230 240	121	IE3
	3,6 4,2 4,8 5,0 5,6 6,5 7,5 8,4 10	2674 2288 2010 1939 1725 1477 1297 1149 969	**402,12** **343,91** **301,59** **291,25** **258,87** **221,40** **194,15** **171,64** **144,37**	21701 23647 24880 25139 26019 26885 27495 27971 28517	1,1 1,3 1,5 1,5 1,7 2,0 2,3 2,6 3,1	**MR574-3E90S/4C** **NR574-3E90S/4C**	2,46	151 147	118	IE3
	6,0	1654	**157,90**	13930	0,9	**MR473-3E90L/6C** **NR473-3E90L/6C**	2,75	98 100	114	IE3
	6,6 7,5 9,2 10 12 13 16 17	1489 1319 1075 951 851 748 626 592	**219,00** **194,05** **157,90** **139,54** **124,85** **109,64** **91,58** **86,52**	16399 18456 20912 21983 21485 20784 19820 19519	1,0 1,2 1,4 1,6 1,8 2,1 2,5 2,6	**MR473-3E90S/4C** **NR473-3E90S/4C**	2,46	97 99	114	IE3
	10 13 15 17 20 23 27 30	942 759 666 590 497 423 363 329	**138,72** **111,67** **97,92** **86,57** **72,81** **61,91** **53,04** **48,00**	9428 10612 10383 10152 9807 9469 9139 8923	0,9 1,1 1,2 1,4 1,7 1,9 2,3 2,5	**MR373-3E90S/4C** **NR373-3E90S/4C**	2,46	58 61	111	IE3
	40 46	249 221	**23,33** **20,62**	9617 9198	3,3 3,7	**MR372-3E90L/6C** **NR372-3E90L/6C**	2,75	60 64	111	IE3
	15 17	664 583	**97,62** **85,60**	7865 7981	0,9 1,0	**MR283-3E90S/4C** **NR283-3E90S/4C**	2,46	50 54	108	IE3



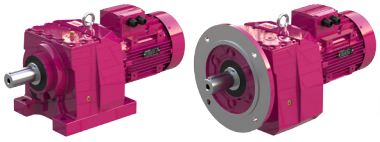
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
1,1 1,5	19 23 27 31 35	516 435 370 317 288	**75,68** **63,65** **54,12** **46,37** **41,96**	7840 7617 7388 7157 7003	1,2 1,4 1,6 1,8 1,9	**MR283-3E90S/4C** **NR283-3E90S/4C**	2,46	50 54	108	IE3
	37 43	269 231	**25,23** **21,66**	8462 7998	2,2 2,5	**MR282-3E90L/6C** **NR282-3E90L/6C**	2,75	48 52	108	IE3
	48 57 67	210 175 150	**30,37** **25,23** **21,66**	7724 7220 6832	2,7 3,0 3,3	**MR282-3E90S/4C** **NR282-3E90S/4C**	2,46	50 53	108	IE3
	17 20 24 29 34 40 48	571 500 414 346 290 250 209	**83,83** **73,35** **60,66** **50,59** **42,41** **36,55** **30,48**	3638 4300 5020 5507 5828 6004 6122	0,8 0,9 1,1 1,3 1,5 1,8 2,2	**MR273-3E90S/4C** **NR273-3E90S/4C**	2,46	40 41	106	IE3
	56 68 79	180 149 127	**25,89** **21,43** **18,33**	5979 5575 5265	2,5 3,0 3,5	**MR272-3E90S/4C** **NR272-3E90S/4C**	2,46	41 43	106	IE3
	31 33 35 40 51 59 62	324 301 281 247 193 169 159	**47,39** **43,94** **41,16** **36,02** **28,35** **24,77** **23,23**	5612 5549 5492 5366 5583 5753 5811	0,9 0,9 1,0 1,1 1,4 1,6 1,7	**MR203-3E90S/4C** **NR203-3E90S/4C**	2,46	39 42	105	IE3
	63 72 77 90 98 104 119 134 144 173	159 139 131 111 103 97 85 75 70 59	**23,01** **20,10** **18,85** **16,03** **14,86** **13,92** **12,18** **10,81** **10,07** **8,40**	6089 5787 5650 5319 5173 5050 4810 4605 4490 4207	1,8 1,9 2,0 2,2 2,3 2,4 2,7 2,9 3,0 3,4	**MR202-3E90S/4C** **NR202-3E90S/4C**	2,46	41 43	105	IE3
	40 48 56	247 207 179	**36,24** **30,26** **26,10**	2920 2903 2870	0,8 1,0 1,1	**MR173-3E90S/4C** **NR173-3E90S/4C**	2,46	30 32	104	IE3
	69 79 85 99 115 131 152 162 191 205 220 251	145 127 119 101 88 77 66 62 53 49 46 40	**20,92** **18,28** **17,14** **14,57** **12,66** **11,08** **9,53** **8,94** **7,60** **7,08** **6,60** **5,78**	2679 2770 2803 2857 2877 2877 2710 2706 2683 2667 2618 2492	1,4 1,6 1,7 1,9 2,2 2,3 2,6 2,6 3,0 3,2 3,1 3,3	**MR172-3E90S/4C** **NR172-3E90S/4C**	2,46	29 30	104	IE3



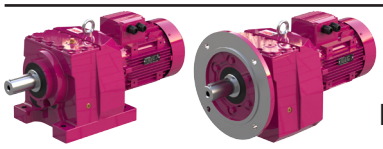
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
1,1 1,5	58 66 71 84	170 150 140 119	**24,86** **21,96** **20,51** **17,33**	1593 1618 1626 1634	0,8 0,8 0,9 0,9	**MR103-3E90S/4C** **NR103-3E90S/4C**	2,46	29 31	103	IE3
	91 103 110 130 142 156 181 209 224 265 289 317 368	111 98 91 77 71 65 56 48 45 38 35 32 28	**15,95** **14,08** **13,15** **11,12** **10,18** **9,29** **8,01** **6,93** **6,48** **5,47** **5,01** **4,57** **3,94**	1708 1691 1678 1643 1621 1597 1555 1479 1460 1410 1384 1356 1310	1,0 1,1 1,1 1,3 1,4 1,5 1,6 1,9 1,9 2,1 2,3 2,4 2,5	**MR102-3E90S/4C** **NR102-3E90S/4C**	2,46	30 31	103	IE3
	415 445 526	24 23 19	**6,93** **6,48** **5,47**	1271 1250 1197	2,9 3,1 3,4	**MR102-3E80M/2C** **NR102-3E80M/2C**	2,26	25 26	103	IE3
	99 107	100 93	**14,67** **13,61**	- 33	0,8 0,9	**MR003-3E90S/4C** **NR003-3E90S/4C**	2,46	24 25	102	IE3
	130 147 167 172 185 195 210 242 260 318 372 401	77 69 60 59 55 52 48 42 39 32 27 25	**11,14** **9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	896 969 1007 1070 1109 1093 1125 1121 1144 1066 1098 1109	0,8 1,1 1,2 1,3 1,3 1,4 1,4 1,6 1,7 1,8 2,0 2,1	**MR002-3E90S/4C** **NR002-3E90S/4C**	2,46	24 25	102	IE3
	417 480 517 632 738 796	24 21 20 16 14 13	**6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	1234 1202 1197 1118 1105 1097	2,2 2,5 2,6 2,9 3,2 3,3	**MR002-3E80M/2C** **NR002-3E80M/2C**	2,26	18 20	102	IE3
1,5 2,0	0,71 0,79 0,93 1,1 1,2 1,3 1,6 1,9 2,2	17997 16169 13774 12153 10789 9627 8156 6698 5926	**2027,97** **1820,78** **1552,10** **1368,27** **1213,85** **1082,31** **914,74** **750,24** **662,54**	95566 105780 117320 124101 129104 133120 137923 142278 144432	1,0 1,1 1,3 1,5 1,7 1,9 2,2 2,7 3,0	**MR975-3E90L/4D** **NR975-3E90L/4D**	3,30	1031 1081	131	IE3
	0,85 0,95 1,1 1,2 1,4	15048 13466 11846 10740 9292	**1700,56** **1521,55** **1336,15** **1210,51** **1049,18**	59105 69941 79031 84391 90598	0,9 1,0 1,1 1,2 1,4	**MR875-3E90L/4D** **NR875-3E90L/4D**	3,30	595 600	128	IE3



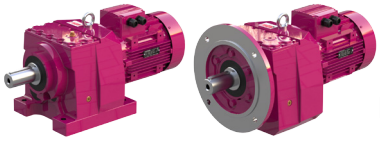
Motorlu Güç Devir Sayfaları
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
1,5 2,0	1,6 1,8	8120 7170	**915,85** **807,91**	95067 98483	1,6 1,8	**MR875-3E90L/4D** **NR875-3E90L/4D**	3,30	595 600	128	IE3
	2,1 2,4 2,8 3,3 4,0	6145 5389 4775 4044 3320	**446,42** **390,74** **345,67** **292,15** **239,61**	101594 103902 105596 107551 109333	2,1 2,4 2,7 3,2 3,9	**MR874-3E100L/6B** **NR874-3E100L/6B**	3,50	587 592	127	IE3
	1,6 1,8 2,0 2,3	8181 7322 6441 5768	**594,92** **532,29** **467,43** **418,17**	48173 51444 54425 56392	1,0 1,1 1,2 1,4	**MR774-3E100L/6B** **NR774-3E100L/6B**	3,50	323 394	124	IE3
	2,4 2,7 3,1 3,5 4,0 4,6 5,3 6,0 6,7	5407 4839 4257 3812 3293 2855 2501 2207 1960	**594,92** **532,29** **467,43** **418,17** **361,62** **313,11** **273,85** **241,42** **214,17**	57573 59016 60495 61555 62723 63650 64365 64933 65755	1,5 1,7 1,9 2,1 2,4 2,8 3,2 3,6 4,0	**MR774-3E90L/4D** **NR774-3E90L/4D**	3,30	318 385	124	IE3
	2,9 3,3 3,8 4,5 5,1 5,9 6,7	4546 4024 3424 2948 2561 2242 1973	**500,39** **442,20** **376,69** **323,82** **281,02** **245,67** **215,97**	25002 28028 30992 33014 34480 35538 36416	0,9 1,1 1,3 1,5 1,7 1,9 2,2	**MR674-3E90L/4D** **NR674-3E90L/4D**	3,30	237 248	121	IE3
	4,2 4,8 5,0 5,6	3131 2751 2653 2360	**343,91** **301,59** **291,25** **258,87**	19040 21328 19040 21328	1,0 1,1 1,1 1,3	**MR574-3E90L/4D** **NR574-3E90L/4D**	3,30	153 137	118	IE3
	5,7 6,2 7,1 8,0 9,5 12 13 15 17 20	2351 2158 1891 1675 1418 1163 1028 915 775 691	**167,32** **153,61** **134,45** **118,95** **100,53** **82,45** **72,81** **64,72** **54,74** **48,74**	23351 24242 25329 26174 27098 27932 28345 28677 29069 29444	1,3 1,4 1,6 1,8 2,1 2,6 2,9 3,3 3,9 4,0	**MR573-3E100L/6B** **NR573-3E100L/6B**	3,50	140 136	117	IE3
	7,4 9,2 10 12 13 16 17	1806 1473 1303 1166 1025 857 810	**194,05** **157,90** **139,54** **124,85** **109,64** **91,58** **86,52**	11156 16686 18683 20098 19941 19117 18854	0,9 1,1 1,2 1,3 1,5 1,8 1,9	**MR473-3E90L/4D** **NR473-3E90L/4D**	3,30	100 102	114	IE3
	18 21 23 26	733 648 580 510	**157,90** **139,54** **124,85** **109,64**	18431 17860 17348 16756	2,1 2,4 2,7 3,0	**MR473-3E90S/2B** **NR473-3E90S/2B**	2,97	98 100	114	IE3



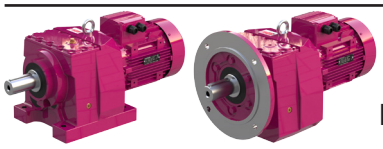
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
1,5 2,0	15 17 20 23 27 30	910 805 678 577 495 448	**97,92** **86,57** **72,81** **61,91** **53,04** **48,00**	9486 9359 9140 8902 8653 8483	0,9 1,0 1,2 1,4 1,7 1,8	**MR373-3E90L/4D** **NR373-3E90L/4D**	3,30	61 64	111	IE3
	41 46 52 59	335 296 265 233	**23,33** **20,62** **18,45** **16,20**	9704 9272 8902 8491	2,4 2,8 3,1 3,5	**MR372-3E100L/6B** **NR372-3E100L/6B**	3,50	62 64	111	IE3
	62 70 79	221 196 175	**23,33** **20,62** **18,45**	8331 7967 7656	3,6 3,9 4,0	**MR372-3E90L/4D** **NR372-3E90L/4D**	3,30	60 62	111	IE3
	19 23 27 31 34	707 595 507 435 394	**75,68** **63,65** **54,12** **46,37** **41,96**	6867 6973 6841 6688 6579	0,8 1,0 1,2 1,3 1,4	**MR283-3E90L/4D** **NR283-3E90L/4D**	3,30	52 54	108	IE3
	38 44	362 310	**25,23** **21,66**	8572 8096	1,7 1,9	**MR282-3E100L/6B** **NR282-3E100L/6B**	3,50	55 57	108	IE3
	48 57 67 76 85 101	288 240 206 181 161 136	**30,37** **25,23** **21,66** **19,06** **16,91** **14,31**	7858 7332 6930 6612 6330 5959	1,9 2,2 2,4 2,6 2,9 3,2	**MR282-3E90L/4D** **NR282-3E90L/4D**	3,30	51 53	108	IE3
	24 29 34 40 47	567 474 398 343 286	**60,66** **50,59** **42,41** **36,55** **30,48**	2371 3298 3976 4408 4791	0,8 0,9 1,1 1,3 1,6	**MR273-3E90L/4D** **NR273-3E90L/4D**	3,30	43 45	106	IE3
	56 67 79 90 102 121	246 204 175 153 136 114	**25,89** **21,43** **18,33** **16,07** **14,21** **11,95**	5025 5190 5256 5098 4871 4571	1,8 2,2 2,5 2,8 3,0 3,4	**MR272-3E90L/4D** **NR272-3E90L/4D**	3,30	42 44	106	IE3
	40 51 58 62	338 265 232 218	**36,02** **28,35** **24,77** **23,23**	4924 3749 4150 4309	0,8 1,1 1,2 1,2	**MR203-3E90L/4D** **NR203-3E90L/4D**	3,30	43 44	105	IE3
	63 72 77 90 97 104 119 134 143	218 191 179 152 142 133 116 103 96	**23,01** **20,10** **18,85** **16,03** **14,86** **13,92** **12,18** **10,81** **10,07**	5238 5393 5446 5423 5270 5141 4890 4676 4556	1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,1 2,2	**MR202-3E90L/4D** **NR202-3E90L/4D**	3,30	41 43	105	IE3



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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
1,5 2,0	172 205 249	80 67 55	**8,40** **7,04** **5,80**	4262 3997 3772	2,5 2,7 3,2	**MR202-3E90L/4D** **NR202-3E90L/4D**	3,30	41 43	105	IE3
	69 79 84 99 114 130 152 162 190 204 219 250 302 354 428	199 174 163 139 121 106 91 85 73 68 63 55 46 39 32	**20,92** **18,28** **17,14** **14,57** **12,66** **11,08** **9,53** **8,94** **7,60** **7,08** **6,60** **5,78** **4,78** **4,09** **3,38**	1757 1964 2047 2214 2319 2388 2236 2262 2304 2315 2320 2319 2297 2195 2095	1,0 1,1 1,2 1,4 1,6 1,7 1,9 1,9 2,2 2,4 2,3 2,4 2,8 3,1 3,4	**MR172-3E90L/4D** **NR172-3E90L/4D**	3,30	31 33	104	IE3
	439 502 607 710	31 27 23 19	**6,60** **5,78** **4,78** **4,09**	2062 1964 1834 1744	4,0 4,0 4,0 4,0	**MR172-3E90S/2B** **NR172-3E90S/2B**	2,97	30 32	104	IE3
	103 110 130 142 156 180 208 223 264 288 316 367	134 125 106 97 89 76 66 62 52 48 44 38	**14,08** **13,15** **11,12** **10,18** **9,29** **8,01** **6,93** **6,48** **5,47** **5,01** **4,57** **3,94**	1474 1476 1472 1465 1454 1432 1360 1349 1317 1298 1278 1242	0,8 0,8 0,9 1,0 1,1 1,2 1,4 1,4 1,5 1,7 1,7 1,9	**MR102-3E90L/4D** **NR102-3E90L/4D**	3,30	30 31	103	IE3
	418 448 530 578 634 736	33 31 26 24 22 19	**6,93** **6,48** **5,47** **5,01** **4,57** **3,94**	1210 1192 1148 1125 1100 1060	2,1 2,3 2,5 2,5 2,8 2,9	**MR102-3E90S/2B** **NR102-3E90S/2B**	2,97	28 30	103	IE3
	146 166 171 184 194 209 241 260 317 371 399	94 83 80 75 71 66 57 53 43 37 35	**9,87** **8,70** **8,45** **7,84** **7,45** **6,91** **6,00** **5,57** **4,56** **3,90** **3,62**	384 475 569 644 637 703 735 786 730 811 842	0,8 0,9 0,9 1,0 1,0 1,0 1,2 1,2 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

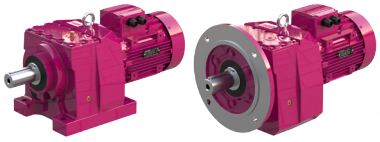


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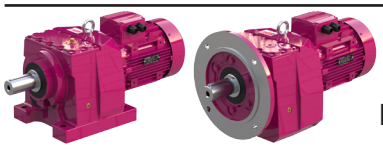
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
2,2 3,0	0,93 1,1 1,2 1,3 1,6 1,7 1,9 2,2 2,5	20133 17763 15770 14070 11921 10977 9790 8662 7713	**1552,10** **1368,27** **1213,85** **1082,31** **914,74** **842,80** **750,24** **662,54** **588,87**	80517 96442 107571 115554 124687 128448 132559 136320 139289	0,9 1,0 1,1 1,3 1,5 1,6 1,8 2,1 2,3	**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
	5,0 5,6 6,5	3878 3450 2953	**291,25** **258,87** **221,40**	12487 16573 20078	0,8 0,9 1,0	**MR574-3E100L/4C** **NR574-3E100L/4C**	4,65	150 156	118	IE3
	7,1 8,1	2763 2447	**134,45** **118,95**	21288 22947	1,1 1,2	**MR573-3E112M/6B** **NR573-3E112M/6B**	4,95	144 150	117	IE3
	8,7 9,4 11 12 14 18	2280 2093 1835 1625 1376 1129	**167,32** **153,61** **134,45** **118,95** **100,53** **82,45**	23646 24525 25569 26371 24667 28045	1,3 1,4 1,6 1,8 2,2 2,7	**MR573-3E100L/4C** **NR573-3E100L/4C**	4,65	140 146	117	IE3



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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
2,2 3,0	20 22 26 30	998 888 752 671	**72,81** **64,72** **54,74** **48,74**	28440 27611 26326 25458	3,0 3,4 4,0 4,0	**MR573-3E100L/4C** **NR573-3E100L/4C**	4,65	140 146	117	IE3
	10 12 13 16 17 20 23 26 30 34 39 47	1905 1705 1499 1254 1185 1002 874 767 674 588 516 427	**139,54** **124,85** **109,64** **91,58** **86,52** **73,09** **63,70** **55,82** **49,05** **42,75** **37,45** **30,93**	8420 13075 16237 17885 17690 17091 16584 16087 15595 15070 14566 13844	0,8 0,9 1,0 1,2 1,3 1,5 1,8 2,0 2,3 2,6 3,0 3,6	**MR473-3E100L/4C** **NR473-3E100L/4C**	4,65	108 111	114	IE3
	20 23 27 30 35 41 49 57	995 847 727 658 564 484 406 348	**72,81** **61,91** **53,04** **48,00** **41,16** **35,25** **29,47** **25,27**	7973 7909 7802 7713 7552 7365 7127 6908	0,8 1,0 1,1 1,2 1,5 1,6 1,8 2,0	**MR373-3E100L/4C** **NR373-3E100L/4C**	4,65	67 68	111	IE3
	62 70 79 90 107 116	325 287 257 226 189 174	**23,33** **20,62** **18,45** **16,20** **13,53** **12,48**	8493 8112 7786 7423 6953 6753	2,5 2,7 2,9 3,1 3,5 3,7	**MR372-3E100L/4C** **NR372-3E100L/4C**	4,65	66 69	111	IE3
	27 31 35 40 47	741 636 576 493 423	**54,12** **46,37** **41,96** **35,98** **30,82**	5713 6333 6287 6189 6064	0,8 0,9 1,0 1,0 1,1	**MR283-3E100L/4C** **NR283-3E100L/4C**	4,65	60 62	108	IE3
	57 67 76 86 101 118 137 151 174	351 301 265 236 200 171 148 135 116	**25,23** **21,66** **19,06** **16,91** **14,31** **12,24** **10,57** **9,61** **8,33**	6972 7154 7107 6795 6386 6031 5715 5522 5244	1,5 1,7 1,8 2,0 2,2 2,5 2,8 3,0 3,3	**MR282-3E100L/4C** **NR282-3E100L/4C**	4,65	59 61	108	IE3
	40 48 57	501 419 352	**36,55** **30,48** **25,55**	1614 2461 3087	0,9 1,1 1,2	**MR273-3E100L/4C** **NR273-3E100L/4C**	4,65	50 52	106	IE3
	68 79 90 102 121 143 167 233 274	299 255 224 198 167 142 122 87 74	**21,43** **18,33** **16,07** **14,21** **11,95** **10,16** **8,71** **6,21** **5,28**	3552 3855 4043 4173 4290 4343 4150 3709 3493	1,5 1,7 1,9 2,1 2,3 2,6 3,0 3,8 3,6	**MR272-3E100L/4C** **NR272-3E100L/4C**	4,65	48 50	106	IE3

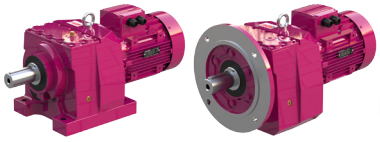


Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

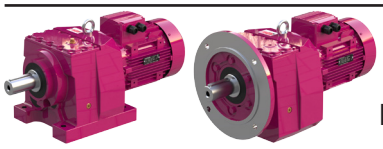
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
2,2 3,0	59 62	339 318	**24,77** **23,23**	1346 1678	0,8 0,8	**MR203-3E100L/4C** **NR203-3E100L/4C**	4,65	48 50	105	IE3
	72 77 90 98 104 119 134 144 173 206 250 286 322 345 414	279 262 223 207 194 170 151 141 117 99 81 71 63 59 49	**20,10** **18,85** **16,03** **14,86** **13,92** **12,18** **10,81** **10,07** **8,40** **7,04** **5,80** **5,08** **4,50** **4,20** **3,50**	3486 3657 4011 4140 4236 4389 4485 4525 4358 4078 3859 3669 3507 3417 3195	0,9 1,0 1,1 1,2 1,2 1,3 1,4 1,5 1,7 1,9 2,2 2,3 2,4 2,5 2,5	**MR202-3E100L/4C** **NR202-3E100L/4C**	4,65	48 50	105	IE3
	79 85 99 115 131 152 162 191 205 220 251 303 355 429	254 239 203 177 155 133 125 106 99 92 81 67 57 47	**18,28** **17,14** **14,57** **12,66** **11,08** **9,53** **8,94** **7,60** **7,08** **6,60** **5,78** **4,78** **4,09** **3,38**	554 724 1089 1342 1534 1406 1483 1643 1699 1745 1816 1882 1807 1833	0,8 0,8 1,0 1,1 1,2 1,3 1,3 1,5 1,6 1,6 1,7 1,9 2,1 2,3	**MR172-3E100L/4C** **NR172-3E100L/4C**	4,65	38 40	104	IE3
	439 502 607 710	46 40 33 29	**6,60** **5,78** **4,78** **4,09**	1916 1906 1867 1777	2,7 3,0 3,3 3,5	**MR172-3E90L/2C** **NR172-3E90L/2C**	4,25	31 33	104	IE3
3,0 4,0	1,2 1,3 1,6 1,7 1,9 2,2 2,5	21504 19187 16256 14968 13350 11812 10517	**1213,85** **1082,31** **914,74** **842,80** **750,24** **662,54** **588,87**	68484 87173 105024 111316 118765 125117 129906	0,8 0,9 1,1 1,2 1,3 1,5 1,7	**MR975-3E100L/4D** **NR975-3E100L/4D**	6,26	1131 1181	131	IE3
	2,8 3,2 3,7 4,2 4,7	9295 8353 7119 6284 5581	**510,11** **457,99** **390,41** **344,17** **305,33**	134243 137305 141059 143447 145364	1,9 2,2 2,5 2,9 3,2	**MR974-3E100L/4D** **NR974-3E100L/4D**	6,26	1145 1195	130	IE3
	2,8	9402	**345,67**	90007	1,4	**MR874-3E132S/6B** **NR874-3E132S/6B**	6,55	619 624	127	IE3
	3,2 3,7 4,2 5,0 6,1 6,9 7,7	8095 7098 6290 5327 4374 3869 3444	**446,42** **390,74** **345,67** **292,15** **239,61** **211,60** **188,08**	95060 98451 101078 103984 106644 107969 109043	1,6 1,8 2,1 2,4 3,0 3,4 3,8	**MR874-3E100L/4D** **NR874-3E100L/4D**	6,26	604 609	127	IE3



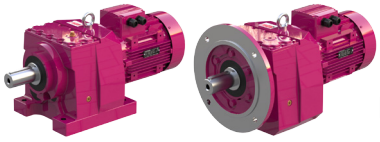
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
3,0 4,0	3,5 4,0	7598 6562	**418,17** **361,62**	50336 53959	1,1 1,2	**MR774-3E100L/4D** **NR774-3E100L/4D**	6,26	320 391	124	IE3
	4,6 5,4 6,5 7,3 8,4 9,7 11 13 14	5781 4956 4124 3693 3191 2767 2423 2139 1899	**208,82** **178,78** **148,73** **133,05** **115,06** **99,63** **87,13** **76,81** **68,15**	56440 58748 60850 61793 63024 63850 64534 65077 66229	1,4 1,6 1,9 2,2 2,5 2,9 3,3 3,7 4,0	**MR773-3E132S/6B** **NR773-3E132S/6B**	6,55	317 383	123	IE3
	6,5 7,8 8,8 10 12 14 16 18 18 21 25 28	4135 3441 3070 2613 2249 1955 1711 1506 1468 1264 1099 962	**149,11** **124,07** **110,55** **94,17** **80,96** **70,26** **61,42** **53,99** **52,68** **45,29** **39,30** **34,36**	27341 30850 32471 34257 35537 36494 37234 36465 36219 34729 33361 32093	1,0 1,2 1,4 1,6 1,9 2,2 2,5 2,9 2,9 3,4 3,9 4,0	**MR673-3E132S/6B** **NR673-3E132S/6B**	6,55	226 228	120	IE3
	7,5	3538	**194,15**	15818	0,8	**MR574-3E100L/4D** **NR574-3E100L/4D**	6,26	154 148	118	IE3
	8,7 9,4 11 12 14 18 20 22 26 30 36 41 46	3111 2856 2503 2217 1877 1540 1362 1212 1027 916 751 664 591	**167,32** **153,61** **134,45** **118,95** **100,53** **82,45** **72,81** **64,72** **54,74** **48,74** **39,98** **35,31** **31,38**	19059 20666 22555 23939 25413 26678 27295 26831 25667 24870 23535 22718 21958	1,0 1,1 1,2 1,4 1,6 1,9 2,2 2,5 2,9 3,3 3,8 4,0 4,0	**MR573-3E100L/4D** **NR573-3E100L/4D**	6,26	144 138	117	IE3
	16 17 20 23 26 30 34 39	1711 1617 1367 1192 1046 920 803 704	**91,58** **86,52** **73,09** **63,70** **55,82** **49,05** **42,75** **37,45**	12963 14572 15967 15605 15229 14841 14412 13990	0,9 1,0 1,1 1,3 1,5 1,7 1,9 2,2	**MR473-3E100L/4D** **NR473-3E100L/4D**	6,26	109 112	114	IE3
	44 52 56 63	628 531 489 436	**22,15** **18,72** **17,25** **15,35**	13591 13041 12773 12394	2,5 2,9 3,0 3,3	**MR472-3E132S/6B** **NR472-3E132S/6B**	6,55	119 122	114	IE3
	27 30 35 41	991 898 769 660	**53,04** **48,00** **41,16** **35,25**	6831 6834 6798 6719	0,8 0,9 1,1 1,2	**MR373-3E100L/4D** **NR373-3E100L/4D**	6,26	69 72	111	IE3



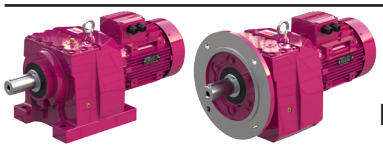
Motorlu Güç Devir Sayfaları
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
3,0 4,0	49 57	554 475	**29,47** **25,27**	6587 6445	1,4 1,5	**MR373-3E100L/4D** **NR373-3E100L/4D**	6,26	69 72	111	IE3
	62 70 79 90 107 116 134 154 176	443 392 351 308 258 238 206 180 158	**23,33** **20,62** **18,45** **16,20** **13,53** **12,48** **10,80** **9,41** **8,25**	8279 8271 7929 7551 7061 6852 6498 6179 5890	1,8 2,0 2,1 2,3 2,6 2,7 3,0 3,3 3,6	**MR372-3E100L/4D** **NR372-3E100L/4D**	6,26	67 69	111	IE3
	47	578	**30,82**	5034	0,8	**MR283-3E100L/4D** **NR283-3E100L/4D**	6,26	61 63	108	IE3
	57 67 76 86 101 118 137 151 174 201 232 271 314 345 398	479 411 362 322 272 233 202 184 159 138 119 102 88 80 70	**25,23** **21,66** **19,06** **16,91** **14,31** **12,24** **10,57** **9,61** **8,33** **7,21** **6,25** **5,35** **4,62** **4,20** **3,64**	4803 5284 5589 5806 6014 5838 5523 5331 5055 4794 4614 4355 4125 3985 3783	1,1 1,2 1,3 1,5 1,6 1,8 2,0 2,2 2,5 2,7 3,0 3,1 3,2 3,2 3,5	**MR282-3E100L/4D** **NR282-3E100L/4D**	6,26	59 61	108	IE3
	57	480	**25,55**	855	0,9	**MR273-3E100L/4D** **NR273-3E100L/4D**	6,26	51 53	106	IE3
	68 79 90 102 121 143 167 233 274 320	407 348 306 271 228 194 166 119 101 87	**21,43** **18,33** **16,07** **14,21** **11,95** **10,16** **8,71** **6,21** **5,28** **4,53**	1680 2254 2639 2932 3246 3455 3591 3454 3496 3357	1,1 1,3 1,4 1,5 1,7 1,9 2,2 2,8 2,6 2,7	**MR272-3E100L/4D** **NR272-3E100L/4D**	6,26	50 52	106	IE3
	90 98 104 119 134 144 173 206 250 286 322 345 414	304 283 265 232 206 192 160 134 111 97 86 80 67	**16,03** **14,86** **13,92** **12,18** **10,81** **10,07** **8,40** **7,04** **5,80** **5,08** **4,50** **4,20** **3,50**	2273 2529 2726 3069 3314 3434 3671 3819 3447 3527 3570 3489 3255	0,8 0,8 0,9 1,0 1,0 1,1 1,2 1,4 1,6 1,7 1,7 1,8 1,9	**MR202-3E100L/4D** **NR202-3E100L/4D**	6,26	50 52	105	IE3



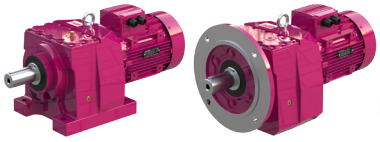
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
3,0 4,0	502 573 646 693	55 48 43 40	**5,80** **5,08** **4,50** **4,20**	3026 2879 2755 2684	2,5 2,6 2,8 2,9	**MR202-3E100L/2C** **NR202-3E100L/2C**	5,58	48 50	105	IE3
	115 131 152 162 191 205 220 251 303 355 429	241 211 182 170 145 135 126 110 91 78 65	**12,66** **11,08** **9,53** **8,94** **7,60** **7,08** **6,60** **5,78** **4,78** **4,09** **3,38**	225 556 458 594 887 995 1088 1242 1406 1364 1466	0,8 0,9 0,9 1,0 1,1 1,2 1,2 1,2 1,4 1,5 1,7	**MR172-3E100L/4D** **NR172-3E100L/4D**	6,26	40 41	104	IE3
	441 504 609 712	63 55 46 39	**6,60** **5,78** **4,78** **4,09**	1589 1619 1640 1571	2,0 2,2 2,4 2,6	**MR172-3E100L/2C** **NR172-3E100L/2C**	5,58	40 41	104	IE3
4,0 5,5	1,7 1,9 2,2 2,5	19821 17678 15641 13927	**842,80** **750,24** **662,54** **588,87**	82433 97186 108230 116428	0,9 1,0 1,2 1,3	**MR975-3E112M/4D** **NR975-3E112M/4D**	8,05	1137 1187	131	IE3
	2,9 3,2 3,7 4,2 4,8 5,4 6,8	12308 11061 9428 8321 7390 6596 5244	**510,11** **457,99** **390,41** **344,17** **305,33** **272,24** **216,03**	123313 128136 133687 137316 140184 142505 146207	1,5 1,6 1,9 2,2 2,4 2,7 3,4	**MR974-3E112M/4D** **NR974-3E112M/4D**	8,05	1187 1237	130	IE3
	2,8 3,3	12536 10618	**345,67** **292,15**	75126 84759	1,0 1,2	**MR874-3E132M/6C** **NR874-3E132M/6C**	8,52	627 632	127	IE3
	3,7 4,2 5,0 6,1 7,8	9399 8329 7055 5792 4561	**390,74** **345,67** **292,15** **239,61** **188,08**	90037 94199 98633 102551 106097	1,4 1,6 1,8 2,2 2,9	**MR874-3E112M/4D** **NR874-3E112M/4D**	8,05	623 628	127	IE3
	8,8 9,7	4078 3695	**110,17** **99,81**	107463 108446	3,2 3,5	**MR873-3E132M/6C** **NR873-3E132M/6C**	8,52	592 597	126	IE3
	4,6 5,4 6,5 7,3 8,4 9,7 11 13 14	7714 6614 5504 4929 4259 3693 3234 2854 2535	**208,82** **178,78** **148,73** **133,05** **115,06** **99,63** **87,13** **76,81** **68,15**	49983 53856 57240 58820 60524 61795 62923 63672 64315	1,0 1,2 1,5 1,6 1,9 2,2 2,5 2,8 3,2	**MR773-3E132M/6C** **NR773-3E132M/6C**	8,52	329 397	123	IE3



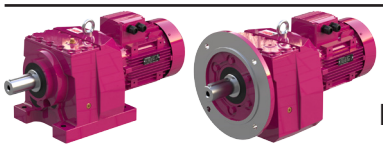
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
4,0 5,5	8,3 9,8 12 13	4310 3680 3064 2733	**174,89** **149,11** **124,07** **110,55**	26324 29726 32500 33811	1,0 1,2 1,4 1,6	**MR673-3E112M/4D** **NR673-3E112M/4D**	8,05	224 233	120	IE3
	16 18 18 21 25 28 32	2283 2009 1960 1687 1466 1284 1130	**61,42** **53,99** **52,68** **45,29** **39,30** **34,36** **30,20**	35422 35379 35160 33818 32570 31402 30300	1,9 2,1 2,2 2,5 2,9 3,3 3,7	**MR673-3E132M/6C** **NR673-3E132M/6C**	8,52	224 232	120	IE3
	12 15 18 20 23 27 30 37 41 47	2937 2486 2040 1804 1605 1360 1213 995 880 783	**118,95** **100,53** **82,45** **72,81** **64,72** **54,74** **48,74** **39,98** **35,31** **31,38**	20176 22685 24752 25715 25814 24800 24094 22891 22145 21445	1,0 1,2 1,5 1,7 1,9 2,2 2,5 2,9 3,1 3,4	**MR573-3E112M/4D** **NR573-3E112M/4D**	8,05	149 143	117	IE3
	54 63	681 581	**27,00** **23,02**	20567 19657	4,0 4,0	**MR572-3E112M/4D** **NR572-3E112M/4D**	8,05	142 136	117	IE3
	20 23 26 30 34 39 47 57	1810 1580 1386 1219 1064 933 772 642	**73,09** **63,70** **55,82** **49,05** **42,75** **37,45** **30,93** **25,67**	10931 14370 14143 13884 13575 13253 12756 12247	0,9 1,0 1,1 1,3 1,5 1,7 2,0 2,4	**MR473-3E112M/4D** **NR473-3E112M/4D**	8,05	122 130	114	IE3
	66 78 85 95	559 473 435 388	**22,15** **18,72** **17,25** **15,35**	11834 11358 11126 10797	2,6 3,1 3,0 3,2	**MR472-3E112M/4D** **NR472-3E112M/4D**	8,05	115 123	114	IE3
	41 50 58 67	874 734 629 539	**35,25** **29,47** **25,27** **21,65**	5913 5910 5863 5782	0,9 1,0 1,1 1,2	**MR373-3E112M/4D** **NR373-3E112M/4D**	8,05	76 78	111	IE3
	71 79 90 108 117 135 155 177 213	520 465 409 342 315 273 238 209 173	**20,62** **18,45** **16,20** **13,53** **12,48** **10,80** **9,41** **8,25** **6,84**	6457 6779 7066 7172 6955 6586 6257 5957 5605	1,5 1,6 1,7 2,0 2,1 2,3 2,5 2,7 3,2	**MR372-3E112M/4D** **NR372-3E112M/4D**	8,05	76 79	111	IE3
	77 86 102 119	480 426 361 309	**19,06** **16,91** **14,31** **12,24**	3648 4081 4552 4872	1,0 1,1 1,2 1,4	**MR282-3E112M/4D** **NR282-3E112M/4D**	8,05	69 71	108	IE3



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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
4,0 5,5	138 152 175 202 234 273 316 348 401 463	267 243 211 183 158 135 117 107 92 80	**10,57** **9,61** **8,33** **7,21** **6,25** **5,35** **4,62** **4,20** **3,64** **3,15**	5086 5184 5133 4861 4693 4422 4182 4037 3827 3629	1,5 1,6 1,9 2,0 2,3 2,4 2,4 2,4 2,6 2,8	**MR282-3E112M/4D** **NR282-3E112M/4D**	8,05	69 71	108	IE3
	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
	91 103 122 144 168 235 276 323	405 359 302 257 221 157 134 115	**16,07** **14,21** **11,95** **10,16** **8,71** **6,21** **5,28** **4,53**	914 1405 1960 2361 2652 2693 2848 2946	1,0 1,1 1,3 1,5 1,6 2,1 2,0 2,0	**MR272-3E112M/4D** **NR272-3E112M/4D**	8,05	59 61	106	IE3
	469 552 644	79 67 58	**6,21** **5,28** **4,53**	2962 2788 2633	3,6 2,9 3,1	**MR272-3E112M/2C** **NR272-3E112M/2C**	7,28	58 60	106	IE3
	135 145 174 207 252 288 324 348 417	273 254 212 178 146 128 114 106 89	**10,81** **10,07** **8,40** **7,04** **5,80** **5,08** **4,50** **4,20** **3,50**	1872 2088 2548 2875 2520 2714 2849 2912 3030	0,8 0,8 0,9 1,0 1,2 1,2 1,3 1,4 1,4	**MR202-3E112M/4D** **NR202-3E112M/4D**	8,05	59 61	105	IE3
	502 574 647 694	73 64 57 53	**5,80** **5,08** **4,50** **4,20**	3088 2934 2803 2729	1,8 1,9 2,1 2,2	**MR202-3E112M/2C** **NR202-3E112M/2C**	7,28	56 58	105	IE3
	221 253 306 357 432	167 146 121 104 86	**6,60** **5,78** **4,78** **4,09** **3,38**	282 535 821 817 1013	0,9 0,9 1,1 1,2 1,3	**MR172-3E112M/4D** **NR172-3E112M/4D**	8,05	49 51	104	IE3
	441 505 610 713	84 73 61 52	**6,60** **5,78** **4,78** **4,09**	1180 1262 1344 1295	1,5 1,6 1,8 1,9	**MR172-3E112M/2C** **NR172-3E112M/2C**	7,28	47 49	104	IE3

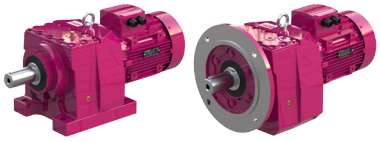


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Geared Motors Performance Tables

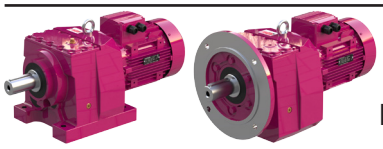
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
5,5 7,5	2,2 2,5 2,7	21433 19084 17695	**662,54** **588,87** **546,94**	68481 87436 96484	0,8 0,9 1,0	**MR975-3E132S/4C** **NR975-3E132S/4C**	10,65	1167 1217	131	IE3
	2,9 3,2 3,8 4,3 4,8 5,4 6,8 7,6 8,5	16866 15157 12919 11402 10127 9039 7186 6436 5745	**510,11** **457,99** **390,41** **344,17** **305,33** **272,24** **216,03** **193,13** **172,08**	101358 110131 120425 126552 131221 135142 140792 142959 144871	1,1 1,2 1,4 1,6 1,8 2,0 2,5 2,8 3,1	**MR974-3E132S/4C** **NR974-3E132S/4C**	10,65	1217 1267	130	IE3
	4,2 5,0 6,1 6,9 7,8 8,4 9,9 12	11413 9667 7937 7020 6249 5794 4908 4188	**345,67** **292,15** **239,61** **211,60** **188,08** **174,68** **147,61** **125,70**	80614 88651 95432 98670 101138 102544 105133 107100	1,1 1,3 1,6 1,9 2,1 2,2 2,6 3,1	**MR874-3E132S/4C** **NR874-3E132S/4C**	10,65	632 637	127	IE3
	6,5	7613	**148,73**	50526	1,1	**MR773-3E132M/6D** **NR773-3E132M/6D**	11,55	329 397	123	IE3
	7,0 8,2 9,9 11 13 15 17 19 21	7051 6045 5031 4506 3894 3377 2957 2610 2318	**208,82** **178,78** **148,73** **133,05** **115,06** **99,63** **87,13** **76,81** **68,15**	52227 55529 58498 59836 61334 62514 63418 64130 64706	1,1 1,3 1,6 1,8 2,1 2,4 2,7 3,1 3,5	**MR773-3E132S/4C** **NR773-3E132S/4C**	10,65	337 405	123	IE3
	12 13 16 18 21 24 27 28 32 37 43 49	4199 3745 3188 2745 2386 2088 1838 1792 1544 1342 1174 1034	**124,07** **110,55** **94,17** **80,96** **70,26** **61,42** **53,99** **52,68** **45,29** **39,30** **34,36** **30,20**	26896 29275 31883 33692 32677 31668 30693 30506 29360 28291 27288 26340	1,0 1,1 1,3 1,6 1,8 2,1 2,3 2,4 2,7 3,0 3,3 3,6	**MR673-3E132S/4C** **NR673-3E132S/4C**	10,65	248 258	120	IE3
	18 20 23 27 30 37 41 47	2796 2472 2200 1864 1663 1364 1206 1073	**82,45** **72,81** **64,72** **54,74** **48,74** **39,98** **35,31** **31,38**	20959 22669 23984 23571 23000 21994 21352 20741	1,1 1,2 1,4 1,6 1,8 2,1 2,3 2,5	**MR573-3E132S/4C** **NR573-3E132S/4C**	10,65	176 170	117	IE3
	54 64 76 86	933 797 663 592	**27,00** **23,02** **19,15** **17,07**	19961 19140 18208 17634	2,9 3,3 3,8 4,0	**MR572-3E132S/4C** **NR572-3E132S/4C**	10,65	167 160	117	IE3



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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
5,5 7,5	26 30 34 39 47 57	1899 1670 1458 1279 1058 879	**55,82** **49,05** **42,75** **37,45** **30,93** **25,67**	8412 12479 12351 12181 11870 11512	0,8 0,9 1,1 1,2 1,5 1,8	**MR473-3E132S/4C** **NR473-3E132S/4C**	10,65	143 145	114	IE3
	66 78 85 95 108 122 136 154	766 648 597 532 470 418 374 331	**22,15** **18,72** **17,25** **15,35** **13,56** **12,05** **10,79** **9,53**	11200 10822 10632 10358 10060 9776 9455 9162	1,9 2,2 2,2 2,4 2,6 2,8 2,9 3,2	**MR472-3E132S/4C** **NR472-3E132S/4C**	10,65	138 141	114	IE3
	58 67 71 78	865 742 707 641	**25,27** **21,65** **20,64** **18,68**	5001 5044 4882 4894	0,8 0,9 0,9 1,0	**MR373-3E132S/4C** **NR373-3E132S/4C**	10,65	97 99	111	IE3
	90 108 117 135 155 177 213 245 279 295 340 390	562 470 433 375 328 287 238 208 182 173 150 131	**16,20** **13,53** **12,48** **10,80** **9,41** **8,25** **6,84** **5,97** **5,23** **4,96** **4,29** **3,74**	4684 5341 5572 5899 6122 6076 5720 5429 5165 5131 4857 4612	1,3 1,4 1,5 1,7 1,8 1,9 2,3 2,5 2,8 2,7 3,0 3,1	**MR372-3E132S/4C** **NR372-3E132S/4C**	10,65	97 99	111	IE3
	311 355 428 491 561 591 683 784	163 143 119 103 91 86 74 65	**9,41** **8,25** **6,84** **5,97** **5,23** **4,96** **4,29** **3,74**	4921 4688 4410 4194 3998 3956 3753 3571	2,8 3,1 3,6 4,0 4,0 4,0 4,0 4,0	**MR372-3E132S/2B** **NR372-3E132S/2B**	9,90	90 92	111	IE3
	102 120 139 152 176 203 234 274 317 349 403 465	495 424 366 333 289 250 217 186 160 146 126 110	**14,31** **12,24** **10,57** **9,61** **8,33** **7,21** **6,25** **5,35** **4,62** **4,20** **3,64** **3,15**	2350 2987 3459 3705 4003 4226 3795 3989 4111 4128 3906 3698	0,9 1,0 1,1 1,2 1,4 1,5 1,7 1,7 1,7 1,8 1,9 2,0	**MR282-3E132S/4C** **NR282-3E132S/4C**	10,65	90 92	108	IE3
	551 638 701	92 80 72	**5,35** **4,62** **4,20**	3466 3281 3168	2,8 2,9 2,9	**MR282-3E132S/2B** **NR282-3E132S/2B**	9,90	84 86	108	IE3
	123 144 168	414 352 302	**11,95** **10,16** **8,71**	- 708 1236	0,9 1,1 1,2	**MR272-3E132S/4C** **NR272-3E132S/4C**	10,65	81 83	106	IE3

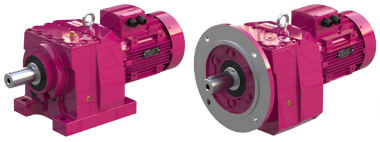


Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

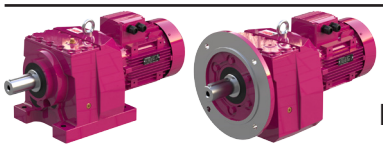
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
5,5 7,5	236 277 324 397 464	216 184 157 128 110	**6,21** **5,28** **4,53** **3,69** **3,16**	1548 1874 2112 2087 2238	1,5 1,4 1,5 1,6 1,8	**MR272-3E132S/4C** **NR272-3E132S/4C**	10,65	81 83	106	IE3
	474 557 651	107 91 78	**6,21** **5,28** **4,53**	2467 2539 2576	2,6 2,1 2,3	**MR272-3E132S/2B** **NR272-3E132S/2B**	9,90	75 79	106	IE3
7,5 10	3,2 3,8 4,3 4,8	20669 17616 15549 13809	**457,99** **390,41** **344,17** **305,33**	76047 97327 108424 116736	0,9 1,0 1,2 1,3	**MR974-3E132M/4D** **NR974-3E132M/4D**	14,40	1168 1218	131	IE3
	5,2 5,8 6,5 7,3 8,4 9,5 11 12	12983 11592 10442 9237 8091 7161 6392 5745	**186,95** **166,73** **150,02** **132,83** **116,17** **102,69** **91,56** **82,20**	120420 126036 130315 134478 138161 140965 142982 144783	1,4 1,6 1,7 1,9 2,2 2,5 2,8 3,1	**MR973-3E160M/6** **NR973-3E160M/6**	15,00	1115 1165	129	IE3
	5,0 6,1 6,9 7,8 8,4	13182 10823 9573 8522 7901	**292,15** **239,61** **211,60** **188,08** **174,68**	71383 83659 89182 93365 95659	1,0 1,2 1,4 1,5 1,6	**MR874-3E132M/4D** **NR874-3E132M/4D**	14,40	628 633	127	IE3
	8,8 9,7 11 13 15 17	7631 6913 5992 5230 4487 3916	**110,17** **99,81** **86,51** **75,51** **64,77** **56,54**	96658 99100 102028 104284 106230 107756	1,7 1,9 2,2 2,5 2,9 3,3	**MR873-3E160M/6** **NR873-3E160M/6**	15,00	635 640	126	IE3
	8,2 9,9 11 13 15 17 19 21	8246 6863 6146 5311 4606 4034 3561 3162	**178,78** **148,73** **133,05** **115,06** **99,63** **87,13** **76,81** **68,15**	47910 52957 55281 57788 59702 61034 62131 63005	1,0 1,2 1,3 1,5 1,7 2,0 2,2 2,5	**MR773-3E132M/4D** **NR773-3E132M/4D**	14,40	357 443	123	IE3
	16 18 21 24 27 28 32 37 43 49	4349 3744 3254 2848 2507 2445 2106 1830 1602 1410	**94,17** **80,96** **70,26** **61,42** **53,99** **52,68** **45,29** **39,30** **34,36** **30,20**	26093 29344 30780 30006 29229 29077 28127 27218 26347 25510	1,0 1,1 1,3 1,5 1,7 1,8 2,0 2,2 2,4 2,6	**MR673-3E132M/4D** **NR673-3E132M/4D**	14,40	246 257	120	IE3
	63 71	1094 980	**23,18** **20,74**	23803 23095	3,4 3,7	**MR672-3E132M/4D** **NR672-3E132M/4D**	14,40	241 251	120	IE3



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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
7,5 10	23 27 30 37 41 47	3001 2542 2268 1860 1645 1464	**64,72** **54,74** **48,74** **39,98** **35,31** **31,38**	19779 21922 21529 20784 20281 19787	1,0 1,2 1,3 1,5 1,7 1,8	**MR573-3E132M/4D** **NR573-3E132M/4D**	14,40	180 173	117	IE3
	54 64 76 86 101 117	1273 1087 905 807 687 591	**27,00** **23,02** **19,15** **17,07** **14,54** **12,50**	19138 18436 17620 17108 16401 15743	2,2 2,4 2,8 3,0 3,5 3,9	**MR572-3E132M/4D** **NR572-3E132M/4D**	14,40	173 166	117	IE3
	39 47 57	1744 1443 1200	**37,45** **30,93** **25,67**	10751 10687 10528	0,9 1,1 1,3	**MR473-3E132M/4D** **NR473-3E132M/4D**	14,40	150 153	114	IE3
	66 78 85 95 108 122 136 154 173 186 220	1045 884 814 726 641 571 510 451 401 372 315	**22,15** **18,72** **17,25** **15,35** **13,56** **12,05** **10,79** **9,53** **8,47** **7,87** **6,65**	10350 10102 9968 9766 9537 9310 9017 8774 8540 8391 8051	1,4 1,6 1,6 1,7 1,9 2,0 2,2 2,3 2,6 2,7 3,1	**MR472-3E132M/4D** **NR472-3E132M/4D**	14,40	143 146	114	IE3
	90 108 117 136 156 178 214 246 280	764 639 589 510 445 391 324 283 248	**16,20** **13,53** **12,48** **10,80** **9,41** **8,25** **6,84** **5,97** **5,23**	1533 2708 3143 3795 4287 4659 4633 4879 5050	0,9 1,0 1,1 1,2 1,3 1,4 1,7 1,9 2,1	**MR372-3E132M/4D** **NR372-3E132M/4D**	14,40	104 106	111	IE3
	313 357 430 494 563 594 686 788	222 194 161 141 123 117 101 88	**9,41** **8,25** **6,84** **5,97** **5,23** **4,96** **4,29** **3,74**	5002 4759 4479 4254 4050 4018 3806 3617	2,1 2,3 2,7 3,0 3,2 3,2 3,5 3,7	**MR372-3E132S/2C** **NR372-3E132S/2C**	13,20	93 95	111	IE3
	139 152 176 203 234 274 317 349 403 465	500 455 394 341 296 253 219 199 172 150	**10,57** **9,61** **8,33** **7,21** **6,25** **5,35** **4,62** **4,20** **3,64** **3,15**	1307 1746 2305 2755 2308 2715 3012 3163 3342 3469	0,8 0,9 1,0 1,1 1,2 1,3 1,3 1,3 1,4 1,5	**MR282-3E132M/4D** **NR282-3E132M/4D**	14,40	96 98	108	IE3
	551 638 701	126 109 99	**5,35** **4,62** **4,20**	3542 3347 3229	2,1 2,1 2,1	**MR282-3E132S/2C** **NR282-3E132S/2C**	13,20	95 97	108	IE3

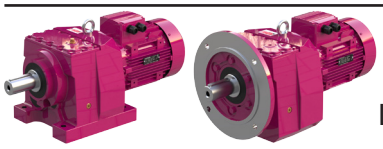


Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

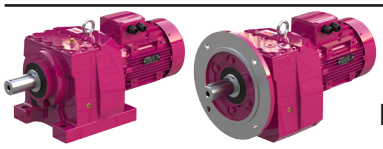
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
7,5 10	144 168 236 277 324 397 464	481 412 294 250 215 175 150	**10,16** **8,71** **6,21** **5,28** **4,53** **3,69** **3,16**	- - - 586 1008 1097 1389	0,8 0,9 1,1 1,1 1,1 1,2 1,3	**MR272-3E132M/4D** **NR272-3E132M/4D**	14,40	87 89	106	IE3
	474 557 651	146 125 107	**6,21** **5,28** **4,53**	1710 1896 2025	1,9 1,6 1,7	**MR272-3E132S/2C** **NR272-3E132S/2C**	13,20	86 88	106	IE3
9,2 12,3	3,7 4,2 4,8	21683 19138 16997	**390,41** **344,17** **305,33**	66827 87621 100922	0,8 0,9 1,1	**MR974-3EC132M/4E** **NR974-3EC132M/4E**	18,40	1174 1224	131	IE3
	5,0 6,1 6,9 7,8 8,4	16226 13321 11784 10489 9725	**292,15** **239,61** **211,60** **188,08** **174,68**	48369 70538 79140 85231 88571	0,8 1,0 1,1 1,2 1,3	**MR874-3EC132M/4E** **NR874-3EC132M/4E**	18,40	634 639	127	IE3
	8,2 9,8 11 13 15 17 19 21	10151 8449 7567 6539 5670 4966 4383 3893	**178,78** **148,73** **133,05** **115,06** **99,63** **87,13** **76,81** **68,15**	38833 47132 50460 54043 56722 58694 60199 61384	0,8 0,9 1,1 1,2 1,4 1,6 1,8 2,1	**MR773-3EC132M/4E** **NR773-3EC132M/4E**	18,40	363 449	123	IE3
	16 18 21 24 27 28 32 37 43 48	5354 4610 4006 3507 3086 3010 2592 2253 1972 1736	**94,17** **80,96** **70,26** **61,42** **53,99** **52,68** **45,29** **39,30** **34,36** **30,20**	18586 24443 28050 28447 27847 27726 26954 26189 25437 24701	0,8 0,9 1,1 1,2 1,4 1,4 1,6 1,8 1,9 2,1	**MR673-3EC132M/4E** **NR673-3EC132M/4E**	18,40	252 263	120	IE3
	63 70	1347 1206	**23,18** **20,74**	23165 22517	2,7 3,0	**MR672-3EC132M/4E** **NR672-3EC132M/4E**	18,40	247 257	120	IE3
	23 27 30 37 41 47	3694 3130 2792 2290 2025 1802	**64,72** **54,74** **48,74** **39,98** **35,31** **31,38**	14408 18936 20196 19682 19303 18913	0,8 1,0 1,1 1,2 1,4 1,5	**MR573-3EC132M/4E** **NR573-3EC132M/4E**	18,40	186 179	117	IE3
	54 63 76 86 100 117	1567 1338 1114 994 846 728	**27,00** **23,02** **19,15** **17,07** **14,54** **12,50**	18381 17784 17071 16615 15976 15373	1,8 2,0 2,3 2,5 2,8 3,2	**MR572-3EC132M/4E** **NR572-3EC132M/4E**	18,40	179 172	117	IE3
	47 57	1777 1477	**30,93** **25,67**	8980 9036	0,9 1,0	**MR473-3EC132M/4E** **NR473-3EC132M/4E**	18,40	156 159	114	IE3



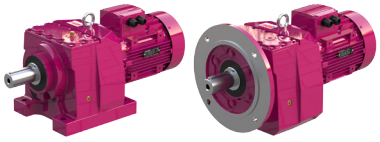
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
9,2 12,3	66 78 85 95 108 121 135 153 172 186 220	1286 1089 1002 893 790 703 628 555 494 458 388	**22,15** **18,72** **17,25** **15,35** **13,56** **12,05** **10,79** **9,53** **8,47** **7,87** **6,65**	9005 8904 8834 8715 8567 8410 8161 7981 7801 7684 7410	1,1 1,3 1,3 1,4 1,5 1,7 1,8 1,9 2,1 2,2 2,5	**MR472-3EC132M/4E** **NR472-3EC132M/4E**	18,40	149 152	114	IE3
	90 108 117 135 155 177 213 245 279	941 787 725 628 548 481 399 348 305	**16,20** **13,53** **12,48** **10,80** **9,41** **8,25** **6,84** **5,97** **5,23**	- 1130 1724 2628 3325 3867 3947 4329 4612	0,8 0,9 0,9 1,0 1,1 1,2 1,4 1,5 1,7	**MR372-3EC132M/4E** **NR372-3EC132M/4E**	18,40	110 112	111	IE3
	175 202 234 273 316 348 401 463	485 420 364 312 269 245 212 184	**8,33** **7,21** **6,25** **5,35** **4,62** **4,20** **3,64** **3,15**	898 1542 1077 1668 2113 2349 2641 2867	0,8 0,9 1,0 1,0 1,0 1,1 1,1 1,2	**MR282-3EC132M/4E** **NR282-3EC132M/4E**	18,40	102 104	108	IE3
	235 276 323 396 462	362 308 264 216 185	**6,21** **5,28** **4,53** **3,69** **3,16**	- - - 278 691	0,9 0,9 0,9 1,0 1,1	**MR272-3EC132M/4E** **NR272-3EC132M/4E**	18,40	93 95	106	IE3
11 15	5,2 5,8 7,3	19053 17012 13556	**186,95** **166,73** **132,83**	88052 100656 117951	0,9 1,1 1,3	**MR973-3E160L/6E** **NR973-3E160L/6E**	21,50	1151 1201	129	IE3
	7,8 8,8 9,8 11 13 14 16 18	12682 11324 10201 9025 7906 6998 6247 5615	**186,95** **166,73** **150,02** **132,83** **116,17** **102,69** **91,56** **82,20**	121960 127289 131366 135325 138864 141553 143669 145376	1,4 1,6 1,8 2,0 2,3 2,6 2,9 3,2	**MR973-3E160M/4C** **NR973-3E160M/4C**	21,00	1124 1174	129	IE3
	8,8 9,7 11	11192 10140 8788	**110,17** **99,81** **86,51**	81975 86825 92391	1,2 1,3 1,5	**MR873-3E160L/6E** **NR873-3E160L/6E**	21,50	670 675	126	IE3
	13 15 17 19 23 26 28	7426 6727 5831 5090 4366 3811 3563	**110,17** **99,81** **86,51** **75,51** **64,77** **56,54** **52,86**	97507 99712 102735 104765 106745 108184 108779	1,8 1,9 2,2 2,6 3,0 3,4 3,6	**MR873-3E160M/4C** **NR873-3E160M/4C**	21,00	661 666	126	IE3



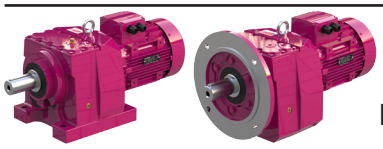
Motorlu Güç Devir Sayfaları
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	Çevrim Oranı *Ratio* Übersetzung **i**	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	Servis Faktörü *Service Factors* Betriebsfaktor **f_s**	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom **[A]**	Ağırlık *Weight* Gewicht ~ **[kg]**	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
11 15	11 13 15 17 19 21 24 25 29 33 37 42 47 49	9017 7792 6757 5918 5223 4639 4141 3990 3461 3016 2692 2391 2135 2057	**133,05** **115,06** **99,63** **87,13** **76,81** **68,15** **60,76** **58,59** **50,75** **44,17** **39,33** **34,89** **31,11** **30,00**	44711 49800 53467 56099 58078 59610 60845 61203 62406 63359 64020 64611 65098 65243	0,9 1,0 1,2 1,4 1,5 1,7 1,9 2,0 2,3 2,7 3,0 3,3 3,7 3,9	**MR773-3E160M/4C** **NR773-3E160M/4C**	21,00	429 521	123	IE3
	24 27 28 32 37 43 49 55	4179 3678 3587 3089 2685 2350 2069 1829	**61,42** **53,99** **52,68** **45,29** **39,30** **34,36** **30,20** **26,66**	27133 26699 26608 26002 25370 24729 24085 23442	1,0 1,2 1,2 1,3 1,5 1,6 1,8 1,9	**MR673-3E160M/4C** **NR673-3E160M/4C**	21,00	298 311	120	IE3
	63 71 82 94 108 122	1605 1437 1242 1077 943 832	**23,18** **20,74** **17,93** **15,53** **13,58** **11,97**	22704 22110 21331 20560 19847 19184	2,3 2,5 2,8 3,1 3,4 3,8	**MR672-3E160M/4C** **NR672-3E160M/4C**	21,00	296 306	120	IE3
	37 41 47 55	2729 2414 2148 1820	**39,98** **35,31** **31,38** **26,54**	18691 18431 18140 17668	1,0 1,1 1,2 1,4	**MR573-3E160M/4C** **NR573-3E160M/4C**	21,00	229 221	117	IE3
	64 76 86 101 117 135 155 176 198	1595 1328 1184 1008 868 754 660 581 516	**23,02** **19,15** **17,07** **14,54** **12,50** **10,85** **9,48** **8,34** **7,41**	17224 16608 16205 15630 15078 14558 14065 13596 13081	1,7 1,9 2,1 2,4 2,7 3,0 3,3 3,7 4,0	**MR572-3E160M/4C** **NR572-3E160M/4C**	21,00	226 218	117	IE3
	67 81	1489 1238	**21,74** **18,04**	8663 8662	1,0 1,3	**MR473-3E160M/4C** **NR473-3E160M/4C**	21,00	198 200	114	IE3
	85 95 108 122 136 154 173 186 220 259 300 323 382 449	1195 1065 941 837 749 662 589 546 462 394 341 316 267 228	**17,25** **15,35** **13,56** **12,05** **10,79** **9,53** **8,47** **7,87** **6,65** **5,66** **4,89** **4,54** **3,83** **3,27**	8819 8741 8631 8504 8261 8105 7944 7838 7582 7327 6966 6853 6589 6404	1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,9 2,1 2,3 2,3 2,2 2,4 2,6	**MR472-3E160M/4C** **NR472-3E160M/4C**	21,00	196 198	114	IE3



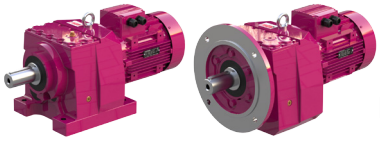
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
11 15	136 156 178 215 246 281 297 343 393 449	746 651 571 474 414 363 344 298 260 228	**10,80** **9,41** **8,25** **6,84** **5,97** **5,23** **4,96** **4,29** **3,74** **3,28**	773 1707 2447 2670 3214 3633 3069 3490 3801 4030	0,8 0,9 1,0 1,2 1,3 1,4 1,4 1,5 1,6 1,7	**MR372-3E160M/4C** **NR372-3E160M/4C**	21,00	139 141	111	IE3
	403 465	253 219	**3,64** **3,15**	1865 2195	0,9 1,0	**MR282-3E160M/4C** **NR282-3E160M/4C**	21,00	131 133	108	IE3
15 20	7,3	18431	**132,83**	92255	1,0	**MR973-3E180L/6E** **NR973-3E180L/6E**	29,00	1227 1277	129	IE3
	7,8 8,8 9,8 11 13 14 16 18 21 24 27	17297 15445 13913 12309 10782 9544 8520 7658 6530 5764 5120	**186,95** **166,73** **150,02** **132,83** **116,17** **102,69** **91,56** **82,20** **70,07** **61,77** **54,80**	99559 109734 116899 123637 129424 133728 136978 139612 142944 145030 146712	1,0 1,2 1,3 1,5 1,7 1,9 2,1 2,4 2,8 3,1 3,5	**MR973-3E160L/4E** **NR973-3E160L/4E**	29,00	1160 1210	129	IE3
	8,9 9,8 11 13	15215 13784 11947 10429	**110,17** **99,81** **86,51** **75,51**	57310 67627 78415 85637	0,9 0,9 1,1 1,2	**MR873-3E180L/6E** **NR873-3E180L/6E**	29,00	695 700	126	IE3
	13 15 17 19 23 26 28 32 36	10126 9174 7951 6941 5954 5197 4858 4239 3727	**110,17** **99,81** **86,51** **75,51** **64,77** **56,54** **52,86** **46,12** **40,55**	87265 91189 95767 99209 102335 104512 105493 107118 108429	1,3 1,4 1,6 1,9 2,2 2,5 2,7 3,1 3,5	**MR873-3E160L/4E** **NR873-3E160L/4E**	29,00	635 640	126	IE3
	15 17 19 21 24 25 29 33 37 42 47 49 56 65	9216 8071 7124 6327 5648 5441 4720 4113 3672 3262 2912 2805 2434 2121	**99,63** **87,13** **76,81** **68,15** **60,76** **58,59** **50,75** **44,17** **39,33** **34,89** **31,11** **30,00** **25,99** **22,62**	43792 48824 52306 54916 56964 57526 59383 60911 61963 62863 63595 63811 64545 65137	0,9 1,0 1,1 1,3 1,4 1,5 1,7 1,9 2,2 2,5 2,7 2,9 3,3 3,8	**MR773-3E160L/4E** **NR773-3E160L/4E**	29,00	426 510	123	IE3
	68	2022	**21,40**	65319	4,0	**MR772-3E160L/4E** **NR772-3E160L/4E**	29,00	396 480	123	IE3



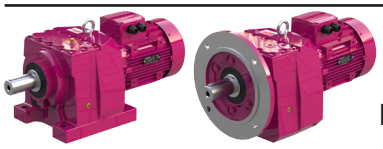
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Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
15 20	32 37 43 49 55	4213 3662 3206 2822 2494	**45,29** **39,30** **34,36** **30,20** **26,66**	23597 23284 22905 22481 22027	1,0 1,1 1,2 1,3 1,4	**MR673-3E160L/4E** **NR673-3E160L/4E**	29,00	325 337	120	IE3
	63 71 82 94 108 122 138 155 160 185	2189 1961 1694 1469 1286 1135 1008 900 867 751	**23,18** **20,74** **17,93** **15,53** **13,58** **11,97** **10,62** **9,47** **9,13** **7,91**	21474 21009 20379 19736 19126 18548 17998 17473 17307 16656	1,7 1,8 2,0 2,3 2,5 2,8 3,1 3,4 3,5 3,9	**MR672-3E160L/4E** **NR672-3E160L/4E**	29,00	320 332	120	IE3
	47 55	2929 2482	**31,38** **26,54**	16274 16090	0,9 1,0	**MR573-3E160L/4E** **NR573-3E160L/4E**	29,00	271 262	117	IE3
	64 76 86 101 117 135 155 176 198 228 260 296 336	2175 1811 1615 1375 1183 1028 900 792 704 612 535 471 416	**23,02** **19,15** **17,07** **14,54** **12,50** **10,85** **9,48** **8,34** **7,41** **6,43** **5,63** **4,95** **4,37**	15855 15470 15190 14765 14335 13913 13501 13101 12607 12178 11771 11383 11010	1,2 1,4 1,5 1,7 2,0 2,2 2,4 2,7 3,1 3,4 3,7 4,0 4,0	**MR572-3E160L/4E** **NR572-3E160L/4E**	29,00	265 257	117	IE3
	81	1688	**18,04**	7230	0,9	**MR473-3E160L/4E** **NR473-3E160L/4E**	29,00	222 225	114	IE3
	85 95 108 122 136 154 173 186 220 259 300 323 382 449	1629 1452 1284 1142 1021 903 803 745 630 537 465 431 365 311	**17,25** **15,35** **13,56** **12,05** **10,79** **9,53** **8,47** **7,87** **6,65** **5,66** **4,89** **4,54** **3,83** **3,27**	7511 7577 7603 7590 7404 7349 7272 7213 7055 6877 6535 6452 6250 6047	0,8 0,9 0,9 1,0 1,1 1,2 1,3 1,4 1,6 1,7 1,7 1,6 1,8 1,9	**MR472-3E160L/4E** **NR472-3E160L/4E**	29,00	220 223	114	IE3
	246 281 297 343 393 449	564 495 469 406 355 311	**5,97** **5,23** **4,96** **4,29** **3,74** **3,28**	700 1431 720 1457 2030 2478	0,9 1,0 1,0 1,1 1,2 1,2	**MR372-3E160L/4E** **NR372-3E160L/4E**	29,00	147 149	111	IE3
18,5 25	8,8 9,8 11	18921 17045 15079	**166,73** **150,02** **132,83**	89083 100675 111022	1,0 1,1 1,2	**MR973-3E180M/4C** **NR973-3E180M/4C**	34,50	1187 1237	129	IE3



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Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
18,5 25	13 14 16 18 21 24 27 35	13209 11692 10437 9382 8000 7062 6272 4852	**116,17** **102,69** **91,56** **82,20** **70,07** **61,77** **54,80** **42,30**	119563 125735 130404 134057 138616 141298 143539 147309	1,4 1,5 1,7 1,9 2,3 2,5 2,9 3,7	**MR973-3E180M/4C** **NR973-3E180M/4C**	34,50	1187 1237	129	IE3
	13 15	12836 11010	**75,51** **64,77**	73297 82825	1,0 1,2	**MR873-3E200L/6C** **NR873-3E200L/6C**	36,40	725 730	126	IE3
	17 20 23 26 28 32 36	9740 8502 7293 6366 5951 5192 4565	**86,51** **75,51** **64,77** **56,54** **52,86** **46,12** **40,55**	88619 93547 97873 100811 102270 104425 106169	1,3 1,5 1,8 2,0 2,2 2,5 2,8	**MR873-3E180M/4C** **NR873-3E180M/4C**	34,50	687 692	126	IE3
	19 22 24 25 29 33 38 42 47 49 57 65	8727 7751 6919 6666 5782 5039 4498 3996 3567 3437 2981 2598	**76,81** **68,15** **60,76** **58,59** **50,75** **44,17** **39,33** **34,89** **31,11** **30,00** **25,99** **22,62**	45867 49852 52845 53691 56440 58529 59872 61193 62143 62433 63409 64190	0,9 1,0 1,2 1,2 1,4 1,6 1,8 2,0 2,2 2,3 2,7 3,1	**MR773-3E180M/4C** **NR773-3E180M/4C**	34,50	450 542	123	IE3
	69 79	2477 2160	**21,40** **18,63**	64428 65037	3,2 3,7	**MR772-3E180M/4C** **NR772-3E180M/4C**	34,50	445 537	123	IE3
	38 43 49 55	4486 3927 3457 3056	**39,30** **34,36** **30,20** **26,66**	21455 21304 21071 20779	0,9 1,0 1,1 1,2	**MR673-3E180M/4C** **NR673-3E180M/4C**	34,50	341 355	120	IE3
	64 71 82 95 109 123 139 156 162 186 214 257	2682 2402 2075 1799 1576 1391 1235 1102 1062 921 802 668	**23,18** **20,74** **17,93** **15,53** **13,58** **11,97** **10,62** **9,47** **9,13** **7,91** **6,88** **5,73**	20387 20035 19534 19001 18482 17978 17491 17019 16868 16274 15701 14781	1,4 1,5 1,7 1,9 2,1 2,3 2,5 2,7 2,8 3,2 3,6 4,0	**MR672-3E180M/4C** **NR672-3E180M/4C**	34,50	338 349	120	IE3
	77 86 101 118 136 156 177	2218 1979 1684 1450 1260 1103 970	**19,15** **17,07** **14,54** **12,50** **10,85** **9,48** **8,34**	14469 14297 14002 13677 13341 12999 12658	1,1 1,2 1,4 1,6 1,8 2,0 2,2	**MR572-3E180M/4C** **NR572-3E180M/4C**	34,50	289 277	117	IE3

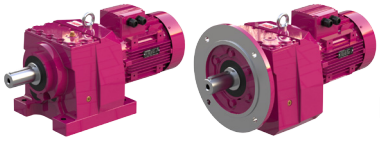


Motorlu Güç Devir Sayfaları

Geared Motors Performance Tables

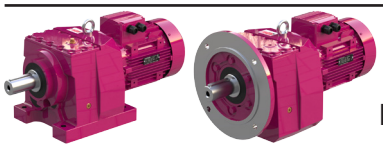
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
18,5 25	199 229 262 298 338	862 749 656 577 510	**7,41** **6,43** **5,63** **4,95** **4,37**	12183 11809 11447 11096 10756	2,5 2,8 3,0 3,3 3,6	**MR572-3E180M/4C** **NR572-3E180M/4C**	34,50	289 277	117	IE3
	109 122 137 155 174 188 222 261 302 325 385 452	1573 1399 1251 1106 984 912 772 658 570 528 447 381	**13,56** **12,05** **10,79** **9,53** **8,47** **7,87** **6,65** **5,66** **4,89** **4,54** **3,83** **3,27**	6706 6792 6656 6687 6683 6666 6591 6481 6155 6098 5951 5791	0,8 0,8 0,9 0,9 1,0 1,1 1,3 1,4 1,4 1,3 1,5 1,5	**MR472-3E180M/4C** **NR472-3E180M/4C**	34,50	269 272	114	IE3
22 30	11 13 14 16 18 21 24 27 35 39	17994 15763 13953 12455 11195 9546 8427 7485 5790 5112	**132,83** **116,17** **102,69** **91,56** **82,20** **70,07** **61,77** **54,80** **42,30** **37,29**	95428 107874 116512 122880 127771 133612 137204 140128 144908 146689	1,0 1,1 1,3 1,4 1,6 1,9 2,1 2,4 3,1 3,5	**MR973-3E180L/4D** **NR973-3E180L/4D**	42,50	1212 1262	129	IE3
	13 15	15249 13080	**75,51** **64,77**	56641 71797	0,9 1,0	**MR873-3E200L/6D** **NR873-3E200L/6D**	43,00	740 745	126	IE3
	17 19 23	11622 10145 8702	**86,51** **75,51** **64,77**	80155 87034 92898	1,1 1,3 1,5	**MR873-3E180L/4D** **NR873-3E180L/4D**	42,50	687 692	126	IE3
	26 28 32 36	7596 7101 6196 5447	**56,54** **52,86** **46,12** **40,55**	96919 98601 101504 103743	1,7 1,8 2,1 2,4	**MR873-3E180L/4D** **NR873-3E180L/4D**	42,50	687 692	126	IE3
	24 25 29 33 37 42 47 49 57 65	8256 7955 6900 6013 5368 4768 4257 4101 3558 3101	**60,76** **58,59** **50,75** **44,17** **39,33** **34,89** **31,11** **30,00** **25,99** **22,62**	47975 49172 52987 55813 57678 59285 60614 61022 62191 63181	1,0 1,0 1,2 1,3 1,5 1,7 1,9 2,0 2,2 2,6	**MR773-3E180L/4D** **NR773-3E180L/4D**	42,50	489 587	123	IE3
	69 79 90 101	2956 2577 2270 2015	**21,40** **18,63** **16,39** **14,54**	63482 64248 65386 66349	2,7 3,1 3,4 3,7	**MR772-3E180L/4D** **NR772-3E180L/4D**	42,50	457 557	123	IE3
	49 55	4125 3647	**30,20** **26,66**	19673 19544	0,9 1,0	**MR673-3E180L/4D** **NR673-3E180L/4D**	42,50	370 384	120	IE3



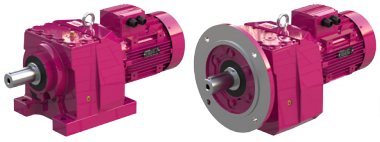
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
22 30	63 71 82 95 108 123 138 155 161 186 214 257 289 324 336 388	3201 2866 2476 2147 1881 1660 1474 1315 1267 1099 957 798 708 632 609 528	**23,18** **20,74** **17,93** **15,53** **13,58** **11,97** **10,62** **9,47** **9,13** **7,91** **6,88** **5,73** **5,08** **4,53** **4,37** **3,79**	19314 19075 18704 18283 17853 17424 16999 16580 16446 15908 15383 14484 14055 13645 13516 13008	1,1 1,2 1,4 1,6 1,7 1,9 2,1 2,3 2,4 2,7 3,0 4,0 4,0 4,0 4,0 4,0	**MR672-3E180L/4D** **NR672-3E180L/4D**	42,50	345 349	120	IE3
	77 86 101 118 136 155 176 198 228 261 297 337	2647 2361 2010 1730 1503 1316 1158 1029 894 783 689 609	**19,15** **17,07** **14,54** **12,50** **10,85** **9,48** **8,34** **7,41** **6,43** **5,63** **4,95** **4,37**	13476 13412 13249 13029 12778 12508 12226 11769 11450 11133 10820 10513	1,0 1,0 1,2 1,3 1,5 1,7 1,9 2,1 2,3 2,5 2,8 3,0	**MR572-3E180L/4D** **NR572-3E180L/4D**	42,50	311 298	117	IE3
	154 174 187 221 260 301 324 383 450	1320 1174 1089 922 786 680 630 533 455	**9,53** **8,47** **7,87** **6,65** **5,66** **4,89** **4,54** **3,83** **3,27**	6027 6096 6121 6131 6089 5778 5749 5655 5539	0,8 0,9 0,9 1,1 1,2 1,2 1,1 1,2 1,3	**MR472-3E180L/4D** **NR472-3E180L/4D**	42,50	269 271	114	IE3
30 40	14 16 18 21 24 27 30 35 40 45 50	18963 16928 15216 12975 11453 10173 9081 7870 6948 6172 5509	**102,69** **91,56** **82,20** **70,07** **61,77** **54,80** **48,86** **42,30** **37,29** **33,08** **29,49**	88796 101334 110352 120559 126654 131340 135053 138982 141629 143817 145605	0,9 1,1 1,2 1,4 1,6 1,8 2,0 2,3 2,6 2,9 3,3	**MR973-3E200L/4D** **NR973-3E200L/4D**	55,00	1271 1321	129	IE3
	20 23 26 28 32 36 43 49 54 62 73 83 92 105	13787 11826 10323 9651 8420 7403 6305 5543 5002 4359 3702 3255 2937 2559	**75,51** **64,77** **56,54** **52,86** **46,12** **40,55** **34,53** **30,36** **27,39** **23,87** **20,28** **17,83** **16,09** **14,02**	67641 78916 86098 88992 93855 97498 101037 103477 104965 106724 107951 105255 103054 100062	0,9 1,1 1,3 1,3 1,5 1,8 2,1 2,3 2,6 3,0 3,5 4,0 4,0 4,0	**MR873-3E200L/4D** **NR873-3E200L/4D**	55,00	777 782	126	IE3

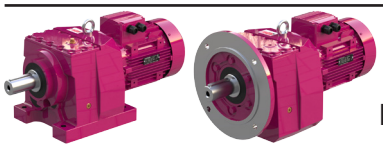


Motorlu Güç Devir Sayfaları
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Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
30 40	38 42 47 49 57 65	7296 6481 5785 5574 4836 4214	**39,33** **34,89** **31,11** **30,00** **25,99** **22,62**	51530 54292 56432 57045 58976 60692	1,1 1,2 1,4 1,4 1,7 1,9	**MR773-3E200L/4D** **NR773-3E200L/4D**	55,00	528 631	123	IE3
	69 79 90 101 114 127 134 153	4018 3503 3085 2739 2449 2200 2076 1817	**21,40** **18,63** **16,39** **14,54** **12,98** **11,65** **11,00** **9,62**	61103 62280 63789 65036 66035 66899 67301 68157	2,0 2,3 2,5 2,7 2,9 3,1 3,3 3,6	**MR772-3E200L/4D** **NR772-3E200L/4D**	55,00	496 601	123	IE3
	82 95 109 123 139 156 162 186 214 257 290 325 338 390 448	3366 2919 2556 2256 2003 1788 1722 1493 1301 1084 963 859 828 718 625	**17,93** **15,53** **13,58** **11,97** **10,62** **9,47** **9,13** **7,91** **6,88** **5,73** **5,08** **4,53** **4,37** **3,79** **3,29**	16806 16639 16416 16157 15875 15578 15479 15071 14654 13804 13452 13107 12997 12559 12133	1,0 1,1 1,3 1,4 1,5 1,7 1,7 2,0 2,2 2,9 3,0 3,1 3,2 3,3 3,4	**MR672-3E200L/4D** **NR672-3E200L/4D**	55,00	417 411	120	IE3
	101 118 136 156 177 199 229 262 298 338	2731 2352 2043 1788 1574 1399 1216 1064 936 827	**14,54** **12,50** **10,85** **9,48** **8,34** **7,41** **6,43** **5,63** **4,95** **4,37**	11526 11548 11493 11384 11238 10823 10629 10415 10190 9956	0,9 1,0 1,1 1,2 1,4 1,6 1,7 1,9 2,0 2,2	**MR572-3E200L/4D** **NR572-3E200L/4D**	55,00	335 322	117	IE3
37 50	18 21 24 27 30 35 40 45 50 57 64	18729 15970 14098 12522 11178 9687 8552 7597 6781 5981 5281	**82,20** **70,07** **61,77** **54,80** **48,86** **42,30** **37,29** **33,08** **29,49** **26,03** **22,95**	90116 106356 115513 122331 127606 132957 136744 139875 142067 144306 146178	1,0 1,1 1,3 1,4 1,6 1,9 2,1 2,4 2,7 3,0 3,4	**MR973-3E225S/4C** **NR973-3E225S/4C**	65,70	1295 1345	129	IE3
	32 36 43 49 54 62 73 83	10364 9112 7760 6823 6156 5365 4556 4006	**46,12** **40,55** **34,53** **30,36** **27,39** **23,87** **20,28** **17,83**	85826 91113 96200 99396 101500 104015 104029 101807	1,3 1,4 1,7 1,9 2,1 2,4 2,9 3,2	**MR873-3E225S/4C** **NR873-3E225S/4C**	65,70	855 860	126	IE3

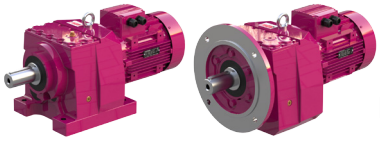


Güç *Power* Leistung P_g [kW] P_g [HP]	Çıkış Devri *Output Speeds* Abtriebswelle Drehzahlen n_2 [r.p.m]	Çıkış Momenti *Output Torque* Abtriebswelle Drehmomente M_2 [Nm]	Çevrim Oranı *Ratio* Übersetzung i	Güv. Rad. Yük Çıkış *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) F_{qam} [N]	Servis Faktörü *Service Factors* Betriebsfaktor f_s	Tipi *Type* Typ	Anma Akımı *Rated Current* Nennstrom [A]	Ağırlık *Weight* Gewicht ~ [kg]	Ölçü Sayfası *Dim. Page* Maße Seite	Motor Verim Snf. *Motor Eff. Class* Motor Effizienz-klasse
37 50	92 105 111	3615 3150 2989	**16,09** **14,02** **13,30**	99942 97350 102064	3,6 4,0 4,0	**MR873-3E225S/4C** **NR873-3E225S/4C**	65,70	855 860	126	IE3
	42 48 49 57 65 76 85	7977 7121 6861 5952 5187 4476 3996	**34,89** **31,11** **30,00** **25,99** **22,62** **19,52** **17,40**	48915 52098 52994 55899 58099 60422 62238	1,0 1,1 1,2 1,3 1,5 1,7 1,9	**MR773-3E225S/4C** **NR773-3E225S/4C**	65,70	619 730	123	IE3
	102 114 127 134 154 175 204 227	3372 3014 2709 2555 2236 1968 1692 1520	**14,54** **12,98** **11,65** **11,00** **9,62** **8,46** **7,26** **6,52**	63785 65037 66028 66517 67520 66564 63620 61453	2,2 2,4 2,5 2,6 2,9 3,2 2,8 3,0	**MR772-3E225S/4C** **NR772-3E225S/4C**	65,70	610 720	123	IE3
	123 139 156 162 187 215 258 291 326 338 390 449	2777 2466 2200 2120 1838 1602 1334 1185 1058 1019 883 769	**11,97** **10,62** **9,47** **9,13** **7,91** **6,88** **5,73** **5,08** **4,53** **4,37** **3,79** **3,29**	15049 14892 14701 14634 14339 14017 13209 12924 12637 12543 12166 11791	1,1 1,3 1,4 1,4 1,6 1,8 2,4 2,5 2,6 2,6 2,7 2,8	**MR672-3E225S/4C** **NR672-3E225S/4C**	65,70	495 511	120	IE3
45 60	24 27 30 35 40 45 50 57 64 73 81	17159 15241 13605 11790 10409 9246 8254 7280 6427 5709 5097	**61,77** **54,80** **48,86** **42,30** **37,29** **33,08** **29,49** **26,03** **22,95** **20,36** **18,15**	99890 110125 117766 125294 130457 134468 137659 140631 143083 144221 140115	1,0 1,2 1,3 1,5 1,7 1,9 2,2 2,5 2,8 3,2 3,5	**MR973-3E225M/4D** **NR973-3E225M/4D**	80,00	1264 1314	129	IE3
	32 36 43 49 54 62 73 83 92 105 111 127	12613 11090 9444 8304 7492 6529 5545 4876 4399 3834 3637 3170	**46,12** **40,55** **34,53** **30,36** **27,39** **23,87** **20,28** **17,83** **16,09** **14,02** **13,30** **11,59**	74597 82498 89792 94247 97155 100203 99546 97866 96386 94251 100362 97147	1,0 1,2 1,4 1,6 1,7 2,0 2,3 2,7 3,0 3,4 3,6 4,0	**MR873-3E225M/4D** **NR873-3E225M/4D**	80,00	875 879	126	IE3
	146 167 196	2818 2477 2110	**10,09** **8,87** **7,55**	95212 92101 83381	4,0 4,0 4,0	**MR872-3E225M/4D** **NR872-3E225M/4D**	80,00	871 875	126	IE3



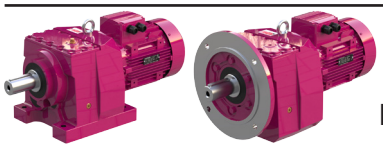
Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
45 60	222 246 283 298 342	1855 1674 1459 1384 1206	**6,64** **5,99** **5,22** **4,95** **4,32**	81001 79097 76555 78185 75338	4,0 4,0 4,0 4,0 4,0	**MR872-3E225M/4D** **NR872-3E225M/4D**	80,00	871 875	126	IE3
	57 65 76 85	7245 6314 5448 4864	**25,99** **22,62** **19,52** **17,40**	51679 54798 57912 60147	1,1 1,3 1,4 1,5	**MR773-3E225M/4D** **NR773-3E225M/4D**	80,00	631 741	123	IE3
	102 114 127 134 154 175 203 227 240	4104 3668 3297 3110 2722 2395 2059 1850 1746	**14,54** **12,98** **11,65** **11,00** **9,62** **8,46** **7,26** **6,52** **6,15**	62270 63756 64959 65547 66742 66950 64002 61796 60656	1,8 1,9 2,1 2,2 2,4 2,6 2,3 2,4 2,5	**MR772-3E225M/4D** **NR772-3E225M/4D**	80,00	621 731	123	IE3
	123 139 156 162 187 215 258 291 326 338 390 448	3379 3001 2678 2580 2238 1949 1624 1442 1287 1240 1075 937	**11,97** **10,62** **9,47** **9,13** **7,91** **6,88** **5,73** **5,08** **4,53** **4,37** **3,79** **3,29**	13782 13768 13699 13668 13502 13289 12529 12321 12099 12025 11717 11400	0,9 1,0 1,1 1,2 1,3 1,5 2,0 2,0 2,1 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	3432 3018 2570	**10,09** **8,87** **7,55**	93806 90856 81238	3,4 3,7 4,0	**MR872-3E250M/4D** **NR872-3E250M/4D**	96,00	930 935	126	IE3



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

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
55 75	223 247 284 299 343	2260 2039 1777 1686 1469	**6,64** **5,99** **5,22** **4,95** **4,32**	79109 77384 75055 77325 74581	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
	92 103 116 129 149 168 188 209	7606 6756 6041 5432 4697 4172 3731 3354	**16,23** **14,40** **12,86** **11,56** **9,99** **8,86** **7,92** **7,11**	131419 127765 124330 121086 115903 112471 109274 106276	2,4 2,7 3,0 3,3 2,6 2,7 2,9 3,0	**MR972-4E280S/4D** **NR972-4E280S/4D**	127,0	1621 1661	129	IE4
	54 62 73 83 92 106 112 128	12403 10809 9180 8071 7283 6347 6021 5247	**27,39** **23,87** **20,28** **17,83** **16,09** **14,02** **13,30** **11,59**	75762 81614 82767 83092 83039 82599 93867 91468	1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4	**MR873-4E280S/4D** **NR873-4E280S/4D**	127,0	1041 1046	126	IE4
	147 168 197 224 248 285 300 344	4665 4101 3493 3071 2771 2415 2291 1996	**10,09** **8,87** **7,55** **6,64** **5,99** **5,22** **4,95** **4,32**	91091 88460 77035 75407 74037 72130 75684 73144	2,5 2,7 3,0 3,3 3,6 4,0 3,9 4,0	**MR872-4E280S/4D** **NR872-4E280S/4D**	127,0	1036 1041	126	IE4
90 120	50 57 65 73 82	16388 14454 12761 11336 10120	**29,49** **26,03** **22,95** **20,36** **18,15**	104131 113862 121338 127007 130083	1,1 1,2 1,4 1,6 1,8	**MR973-4E280M/4E** **NR973-4E280M/4E**	152,0	1768 1818	129	IE4

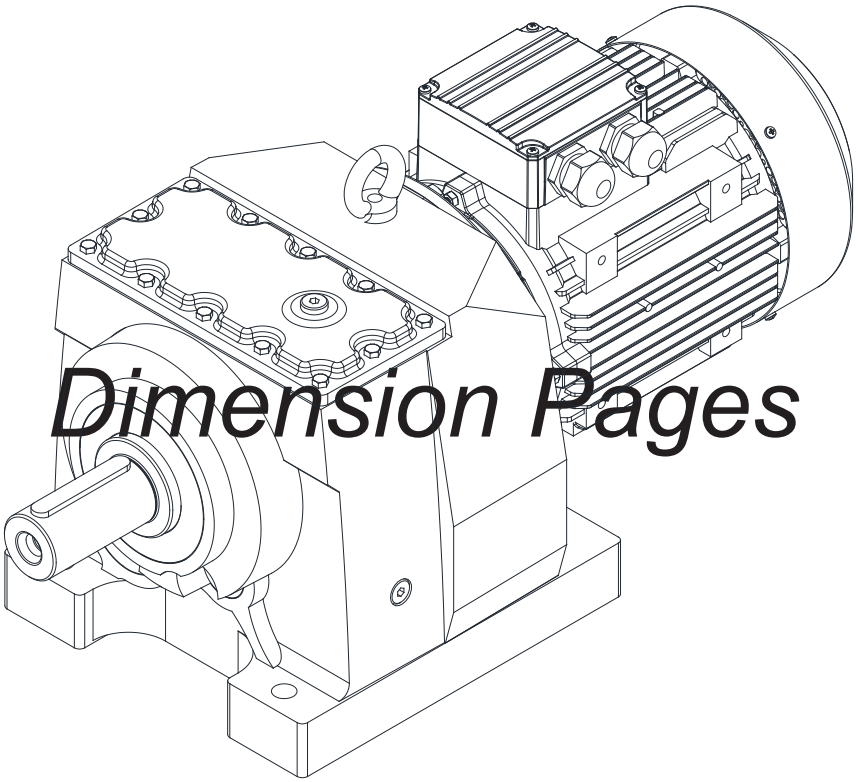


Motorlu Güç Devir Sayfaları
Geared Motors Performance Tables
Leistungs- und Drehzahlübersicht von Getriebemotoren

Güç *Power* Leistung **P_g [kW]** P_g [HP]	**Çıkış Devri** *Output Speeds* Abtriebswelle Drehzahlen **n_2 [r.p.m]**	**Çıkış Momenti** *Output Torque* Abtriebswelle Drehmomente **M_2 [Nm]**	**Çevrim Oranı** *Ratio* Übersetzung **i**	**Güv. Rad. Yük Çıkış** *Per.O. Loads (Output)* Zul.Querkräfte (Abtrieb) **F_{qam} [N]**	**Servis Faktörü** *Service Factors* Betriebsfaktor **f_s**	**Tipi** *Type* Typ	**Anma Akımı** *Rated Current* Nennstrom **[A]**	**Ağırlık** *Weight* Gewicht ~ **[kg]**	**Ölçü Sayfası** *Dim. Page* Maße Seite	**Motor Verim Snf.** *Motor Eff. Class* Motor Effizienz-klasse
90 120	92 103 116 129 149 168 188 209	9122 8103 7245 6514 5633 5004 4474 4022	**16,23** **14,40** **12,86** **11,56** **9,99** **8,86** **7,92** **7,11**	128770 125414 122231 119200 114107 110878 107851 104997	2,0 2,2 2,5 2,8 2,2 2,3 2,4 2,5	**MR972-4E280M/4E** **NR972-4E280M/4E**	152,0	1768 1818	129	IE4
	73 83 93 106 112 128	11009 9679 8734 7611 7221 6292	**20,28** **17,83** **16,09** **14,02** **13,30** **11,59**	74419 75752 76416 76828 90699 88706	1,2 1,3 1,5 1,7 1,8 2,0	**MR873-4E280M/4E** **NR873-4E280M/4E**	152,0	1168 1173	126	IE4
	148 168 197 224 248 285 300 345	5594 4918 4189 3683 3323 2896 2747 2394	**10,09** **8,87** **7,55** **6,64** **5,99** **5,22** **4,95** **4,32**	89112 86721 73925 72672 71570 69980 74505 72116	2,1 2,3 2,5 2,8 3,0 3,3 3,3 3,6	**MR872-4E280M/4E** **NR872-4E280M/4E**	152,0	1163 1168	126	IE4
110 150	65 73 82	15577 13837 12353	**22,95** **20,36** **18,15**	108281 116605 122950	1,2 1,3 1,5	**MR973-4E315S/4D** **NR973-4E315S/4D**	187,0	2013 2063	129	IE4
	92 103 116 129 149 168 188 209	11134 9890 8844 7951 6876 6108 5462 4910	**16,23** **14,40** **12,86** **11,56** **9,99** **8,86** **7,92** **7,11**	125205 122246 119396 116650 111679 108720 105919 103259	1,6 1,8 2,0 2,3 1,8 1,9 2,0 2,0	**MR972-4E315S/4D** **NR972-4E315S/4D**	187,0	1973 2023	129	IE4
132 180	73 82	16605 14824	**20,36** **18,15**	102822 112011	1,1 1,2	**MR973-4E315M/4E** **NR973-4E315M/4E**	225,0	2111 2161	129	IE4
	92 103 116 129 149 168 188 209	13362 11869 10613 9542 8252 7330 6554 5892	**16,23** **14,40** **12,86** **11,56** **9,99** **8,86** **7,92** **7,11**	118708 118803 116321 113887 109049 106386 103834 101386	1,3 1,5 1,7 1,9 1,5 1,6 1,6 1,7	**MR972-4E315M/4E** **NR972-4E315M/4E**	225,0	2071 2121	129	IE4
160 218	103 116 129 149 168 188 209	14387 12865 11566 10003 8885 7945 7152	**14,40** **12,86** **11,56** **9,99** **8,86** **7,92** **7,11**	114086 112393 110358 105688 103402 101167 98988	1,3 1,4 1,6 1,2 1,3 1,3 1,4	**MR972-4E315L/4F** **NR972-4E315L/4F**	269,0	2274 2324	129	IE4

MR & NR Serisi / *Series* / Serie

Ölçü Sayfaları

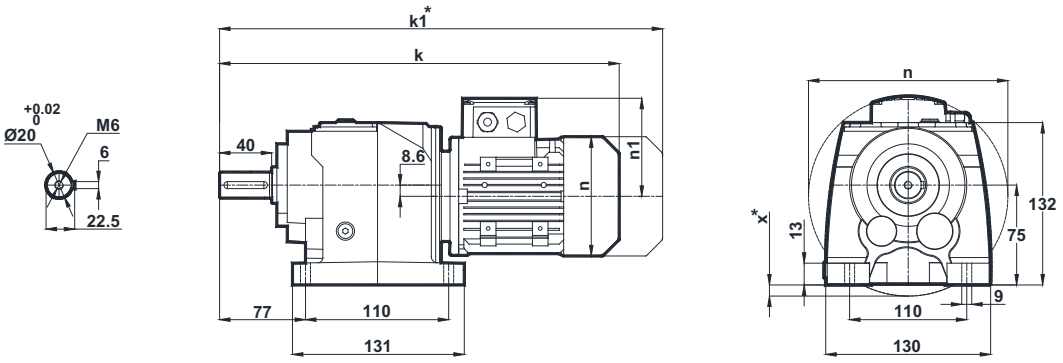


Dimension Pages

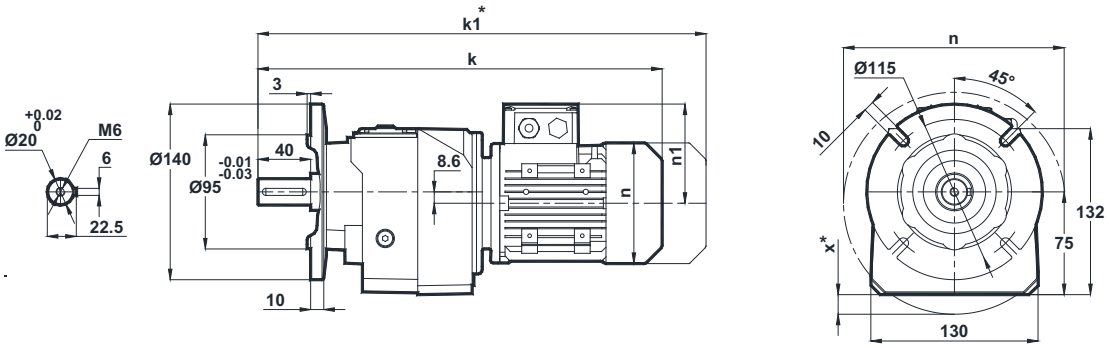
Abmessungsseiten

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

MR002
MR003

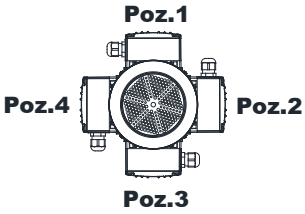


NR002
NR003



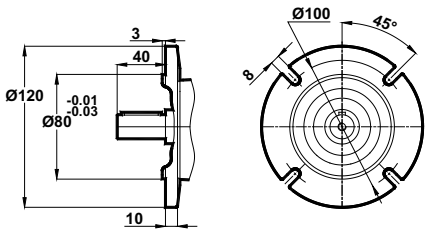
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	63	**71**	**80**	**90S**	**90L**
k	369.5	397	431	470	470
k1	440.5	488	524	549	549
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	3	12	22	22

Klemens Kutusu /*Terminal Box* / Klemmenkasten

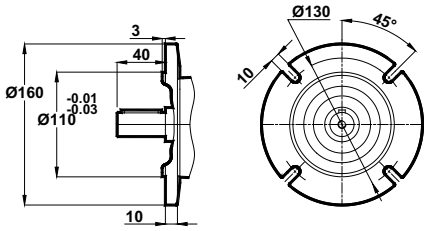


63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

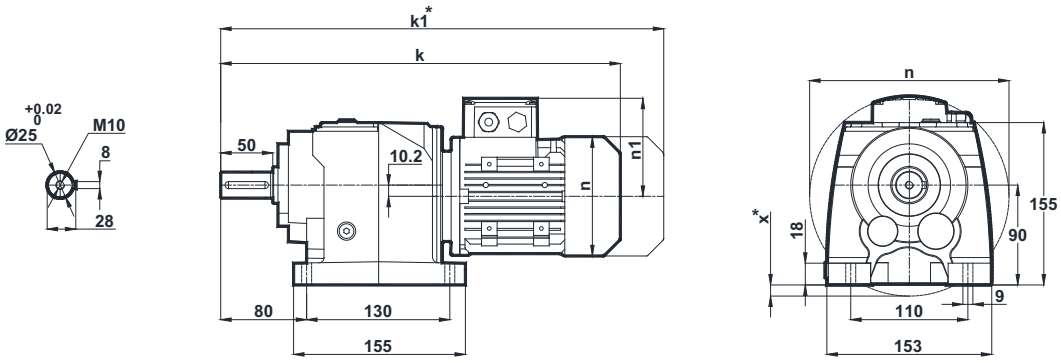


Opt. 2

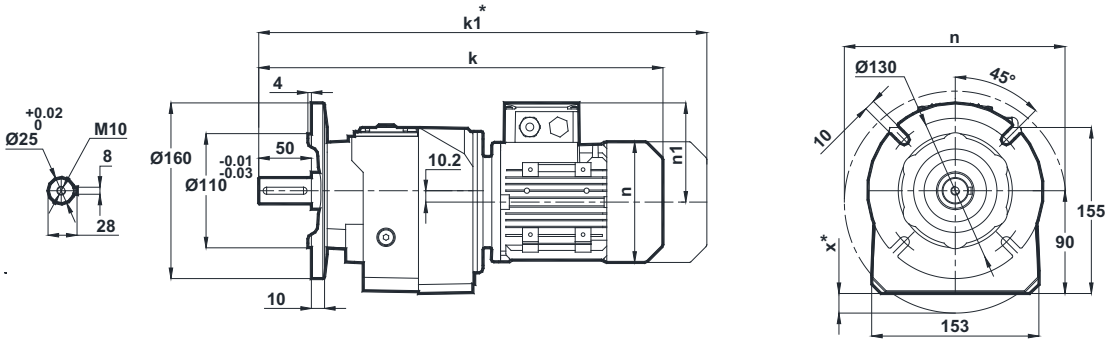
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MR102
MR103

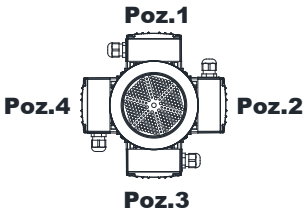


NR102
NR103



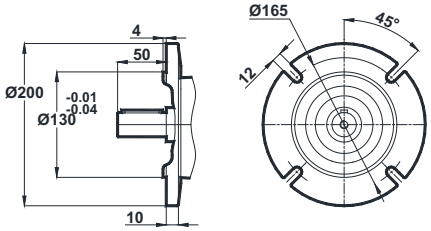
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	63	**71**	**80**	**90S**	**90L**
k	399	424	458	497	497
k1	470	515	551	576	576
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	-	-	9	9

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

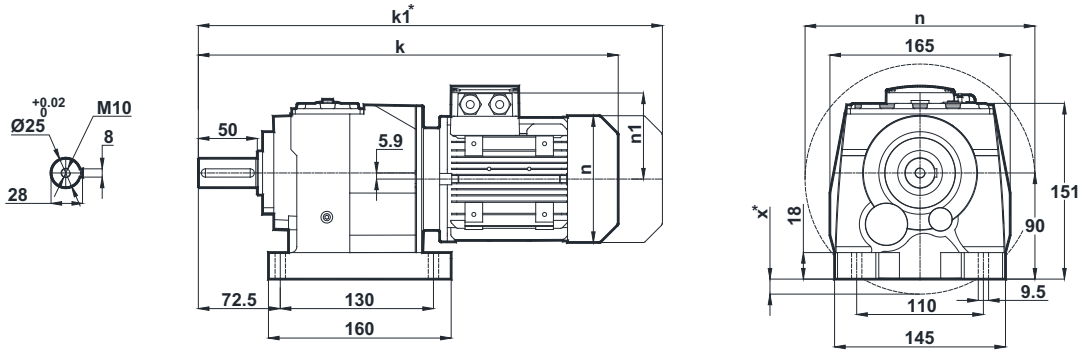


Opt. 1

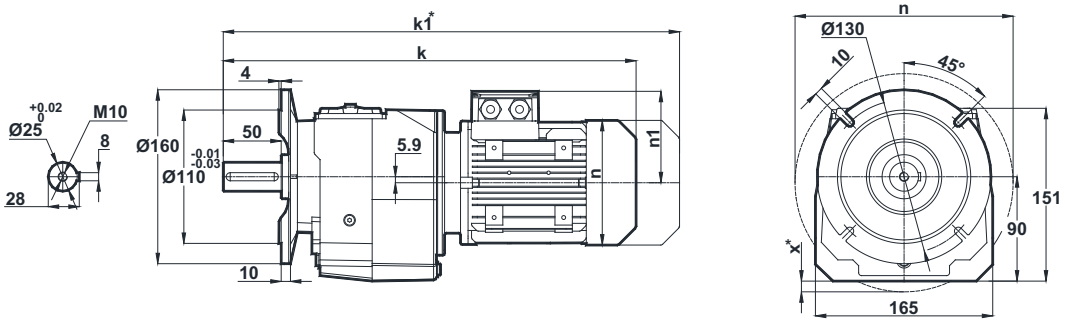
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR172
MR173

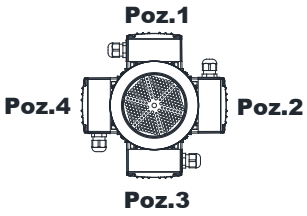


NR172
NR173



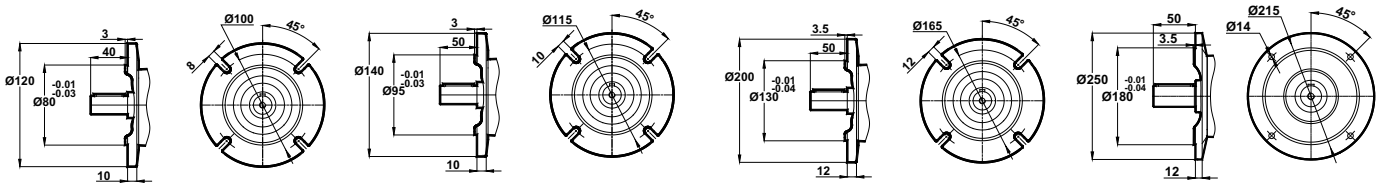
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
	63	**71**	**80**	**90S**	**90L**	**100L**	**112M**
k	396.5	424	458	497	497	545	569
k1	467.5	515	551	576	576	653	674
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	4	4	13	24

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

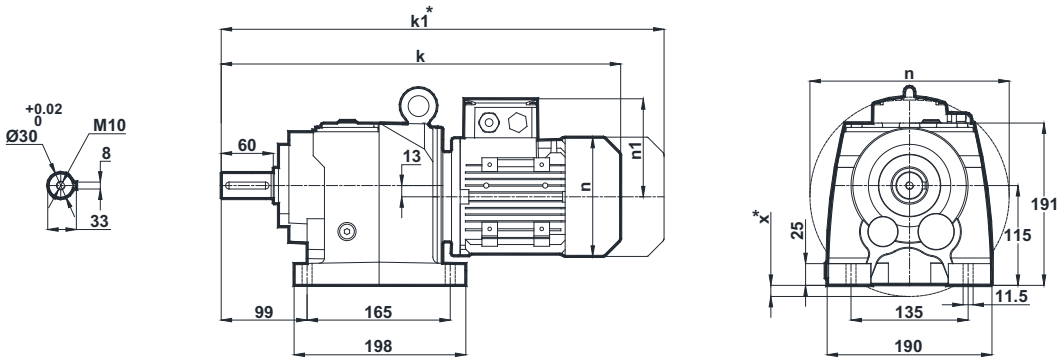


Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

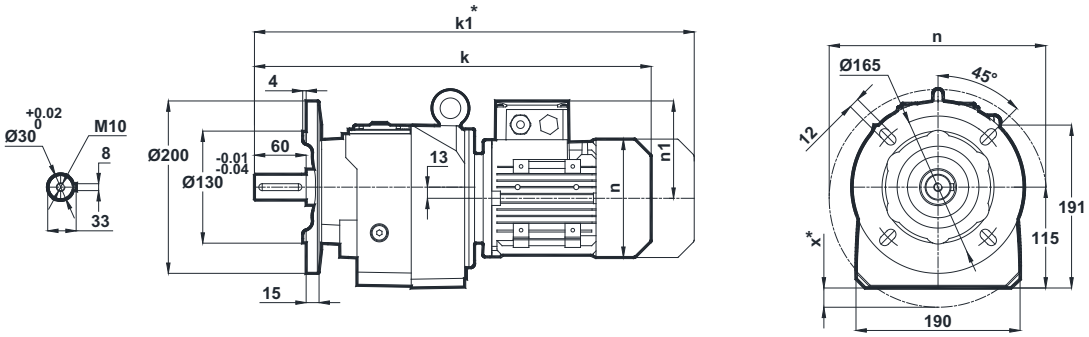
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MR202
MR203

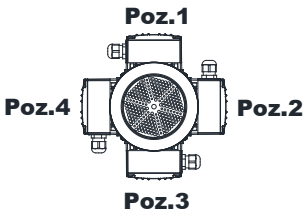


NR202
NR203



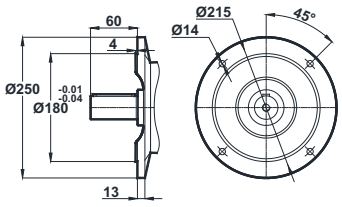
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
	63	**71**	**80**	**90S**	**90L**	**100L**	**112M**
k	444	470	504	543	543	591	615
k1	515	561	597	622	622	699	720
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	-	-	-	6

Klemens Kutusu /*Terminal Box* / Klemmenkasten

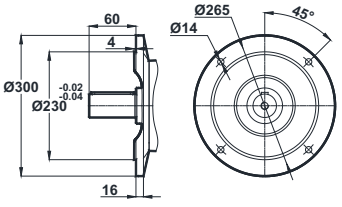


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

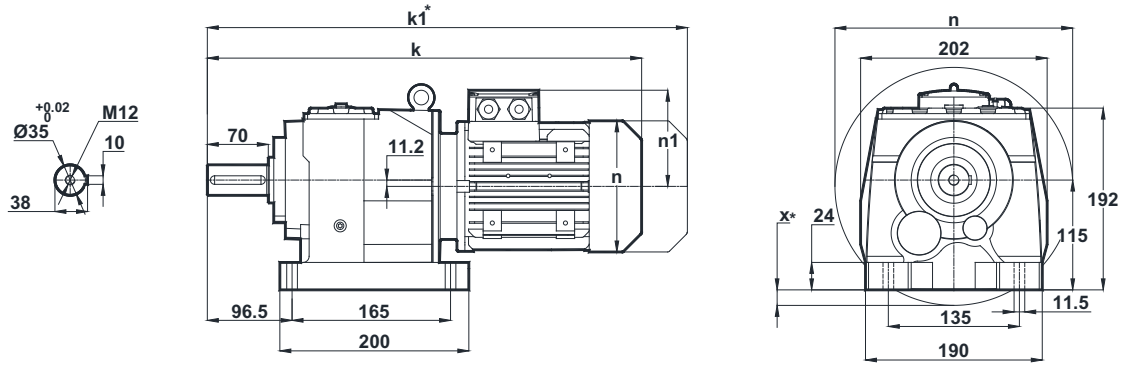


Opt. 2

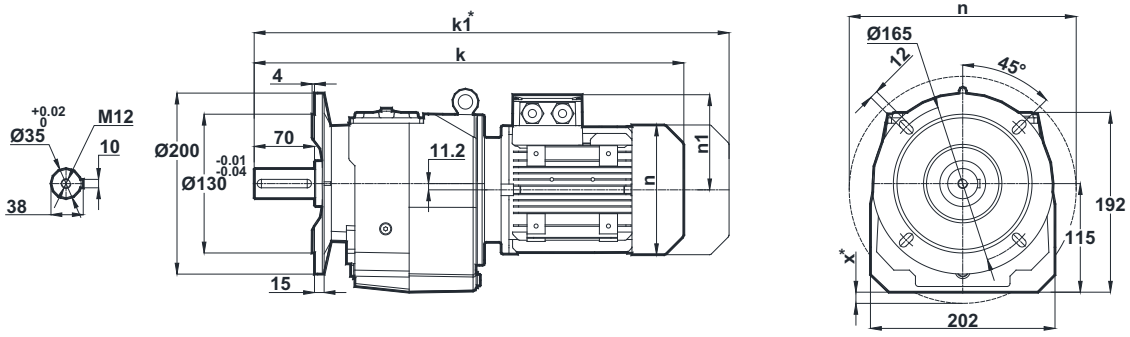
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR272
MR273

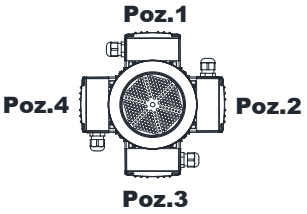


NR272
NR273



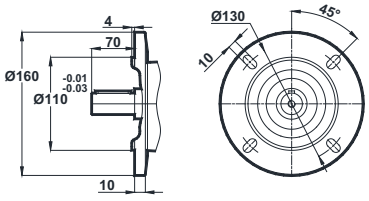
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	63	**71**	**80**	**90S**	**90L**	**100L**	**112M**	**132S**	**132M**
k	445	471	505	544	544	592	616	699	699
k1	516	562	598	623	623	700	721	829	829
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

Klemens Kutusu /*Terminal Box* / Klemmenkasten

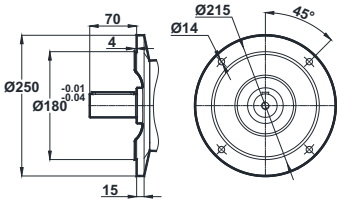


63-71-80-90-100-112-132

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

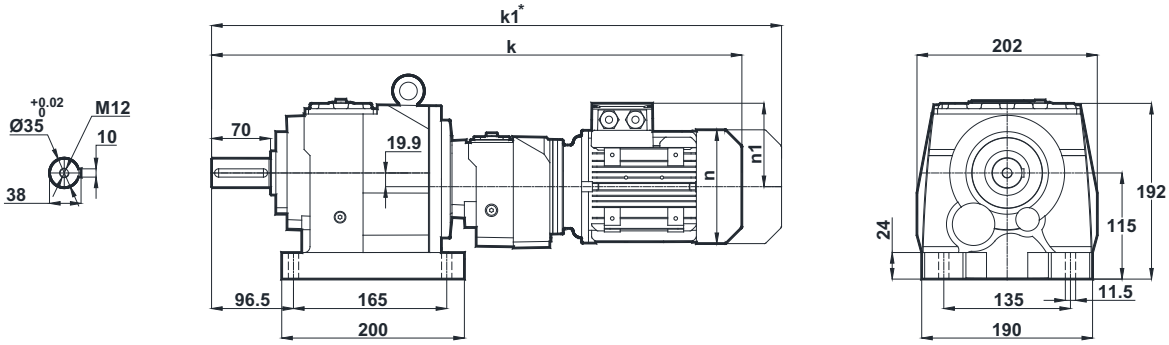


Opt. 2

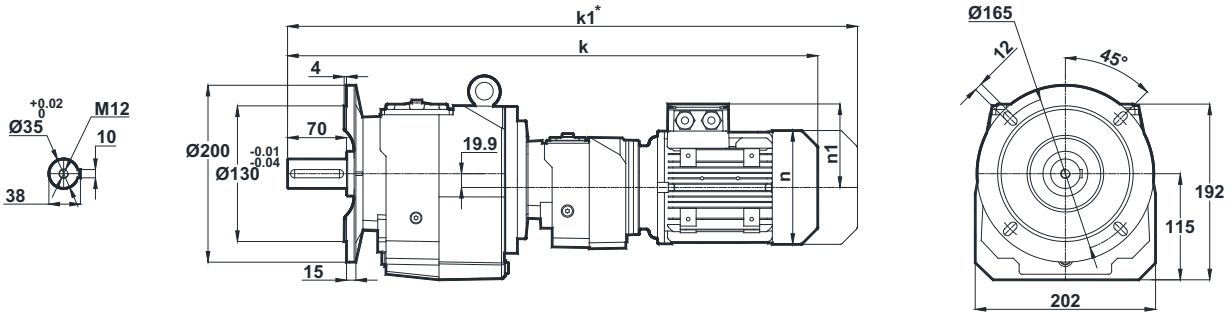
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MR275
MR276

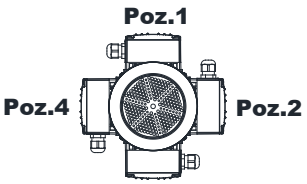


NR275
NR276



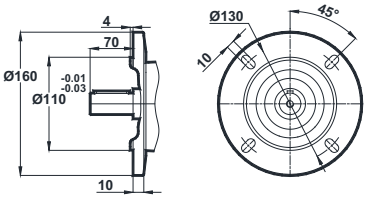
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	594.5	622
k1	665.5	713
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

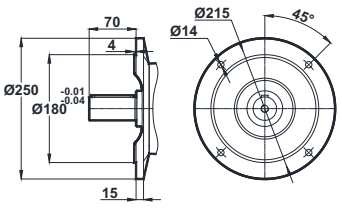


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

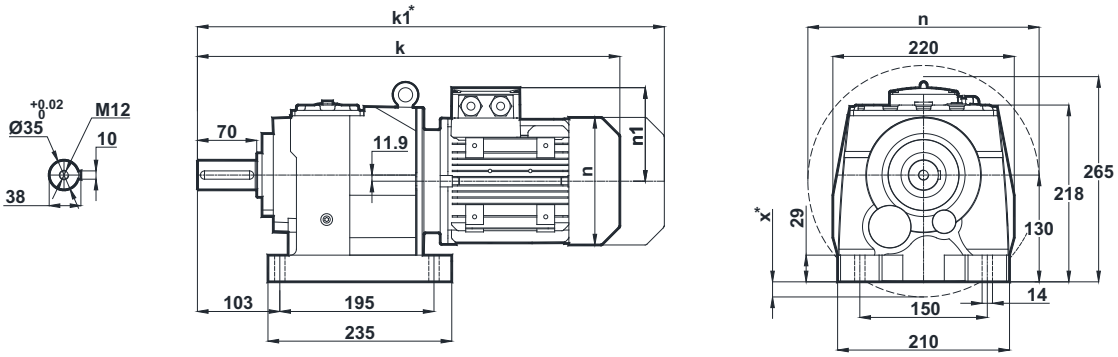


Opt. 2

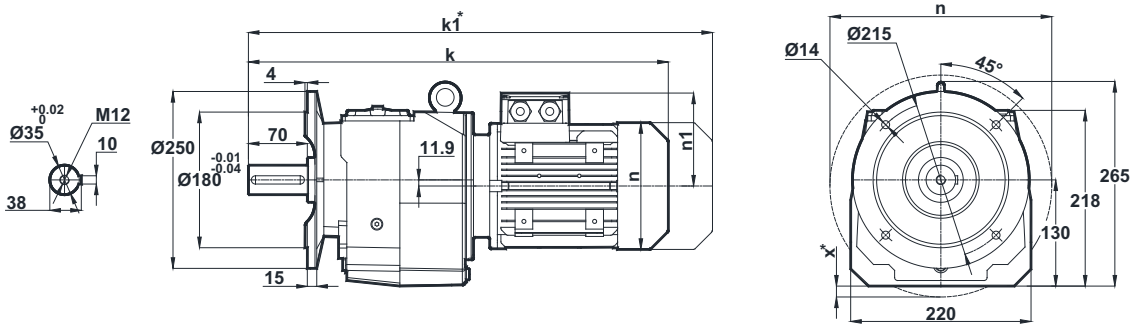
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR282
MR283

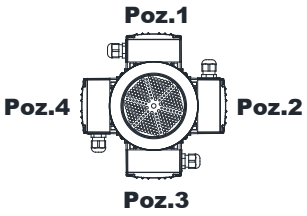


NR282
NR283



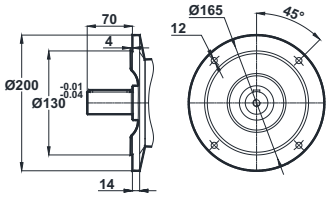
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	71	80	90S	90L	100L	112M	132S	132M	160M
k	488.5	522.5	561.5	561.5	609.5	633.5	720	720	816
k1	579.5	615.5	640.5	640.5	717.5	738.5	850	850	966
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
x	-	-	-	-	-	-	11	11	40

Klemens Kutusu /*Terminal Box* / Klemmenkasten

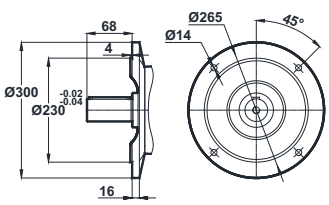


71-80-90-100-112-132-160

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

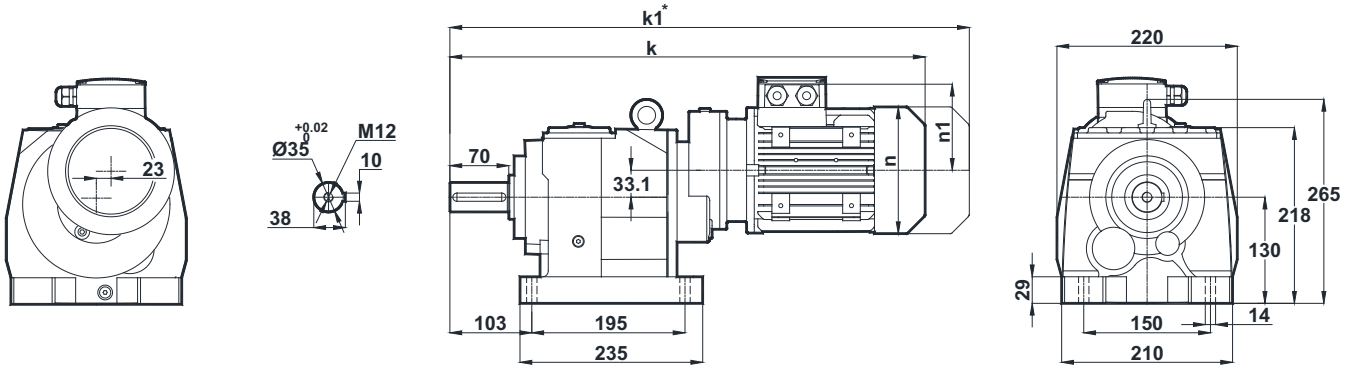


Opt. 2

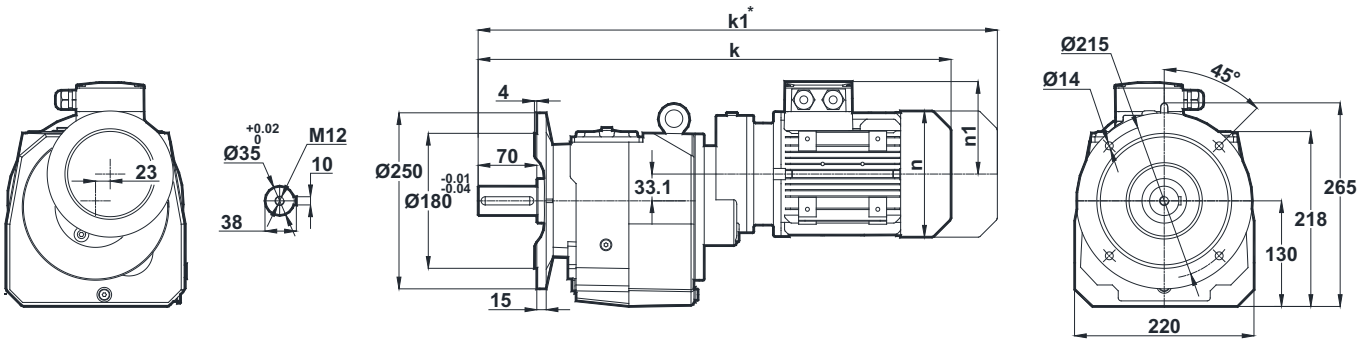
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MR284

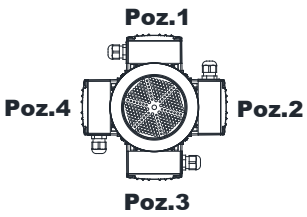


NR284



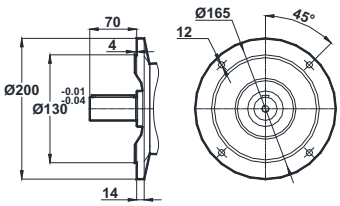
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	541.5	567.5
k1	612.5	658.5
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

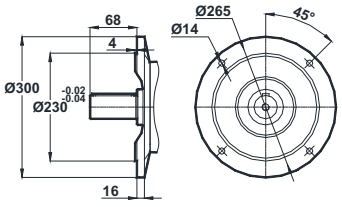


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

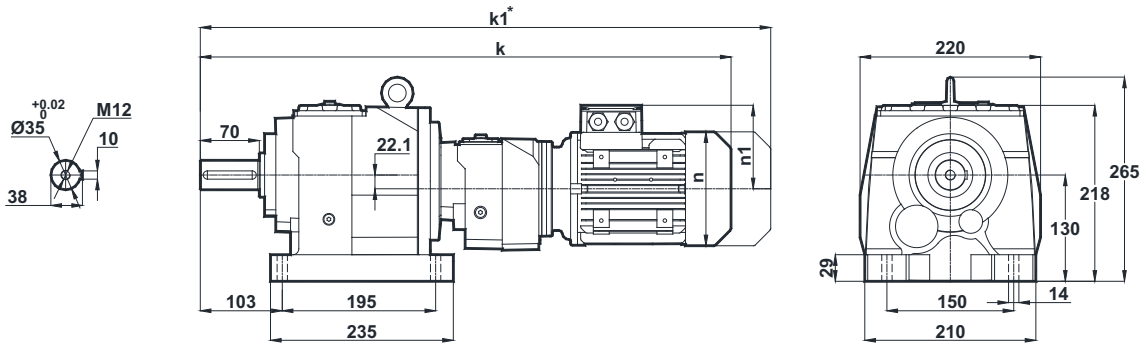


Opt. 2

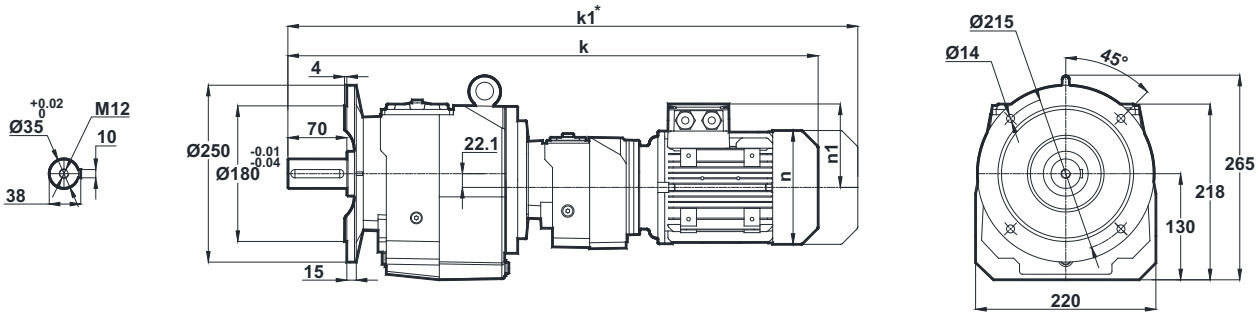
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR285
MR286

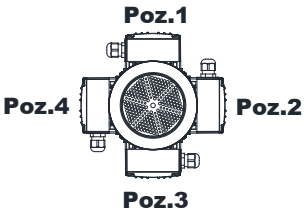


NR285
NR286



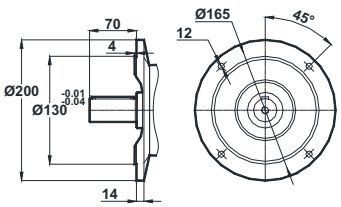
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
	63
k	646
k1	717
n	119
n1	101

Klemens Kutusu /*Terminal Box* / Klemmenkasten

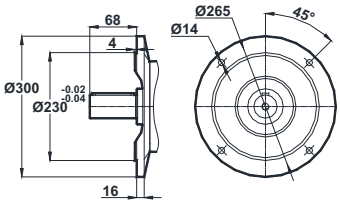


63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

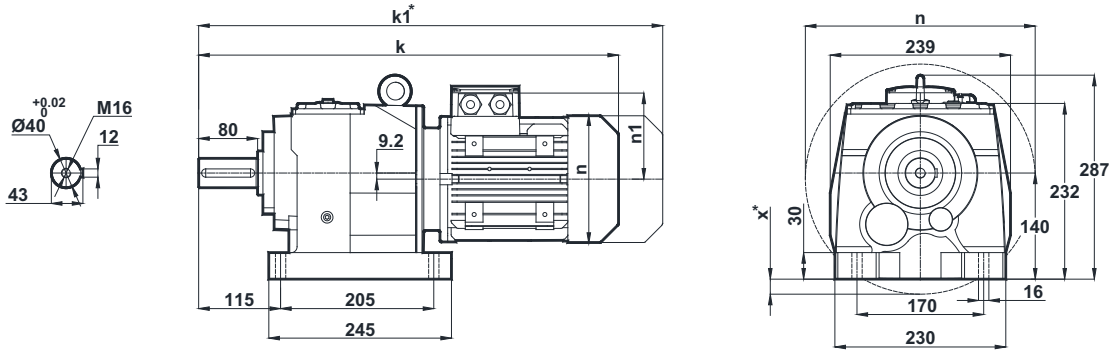


Opt. 2

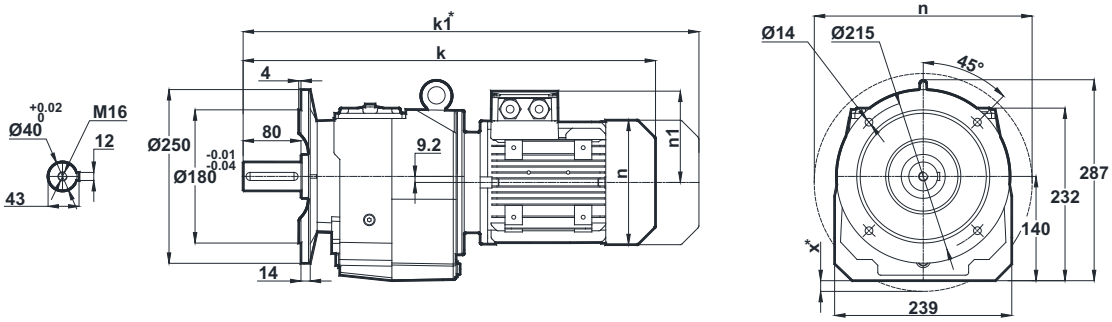
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR372
MR373

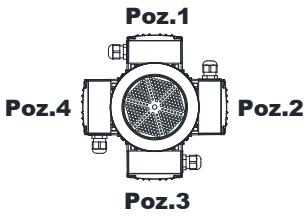


NR372
NR373



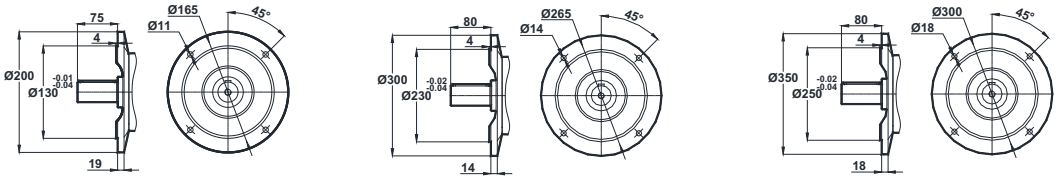
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	71	80	90S	90L	100L	112M	132S	132M	160M	160L
k	509.5	543.5	582.5	582.5	630.5	645.5	741	741	837	837
k1	600.5	636.5	661.5	661.5	738.5	759.5	871	871	987	987
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-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

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

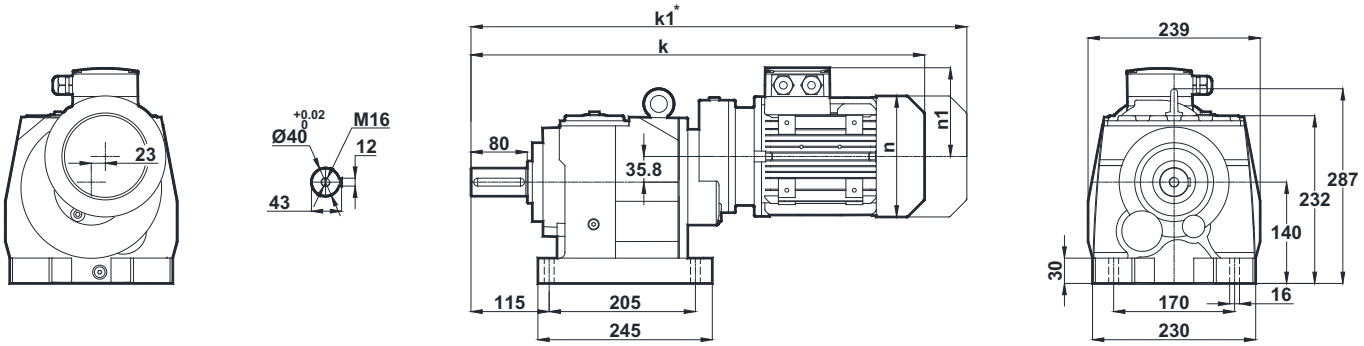


Opt. 1 **Opt. 2** **Opt. 3**

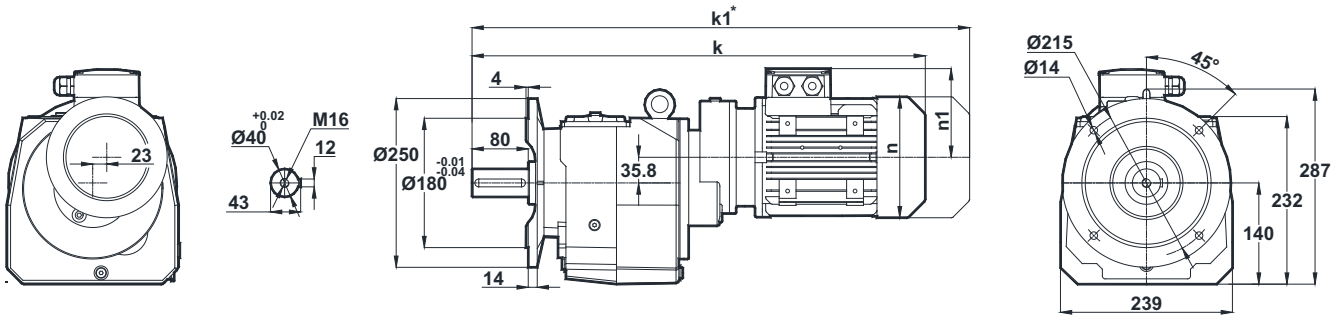
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR374

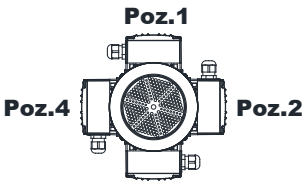


NR374



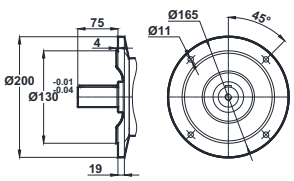
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
	63	**71**	**80**
k	562.5	588.5	622.5
k1	633.5	679.5	715.5
n	119	137	155
n1	101	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten

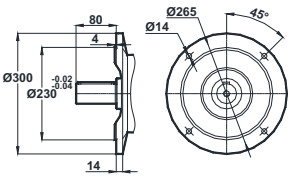


63-71-80

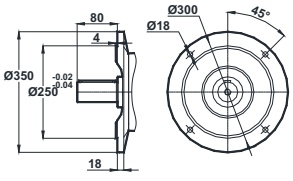
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

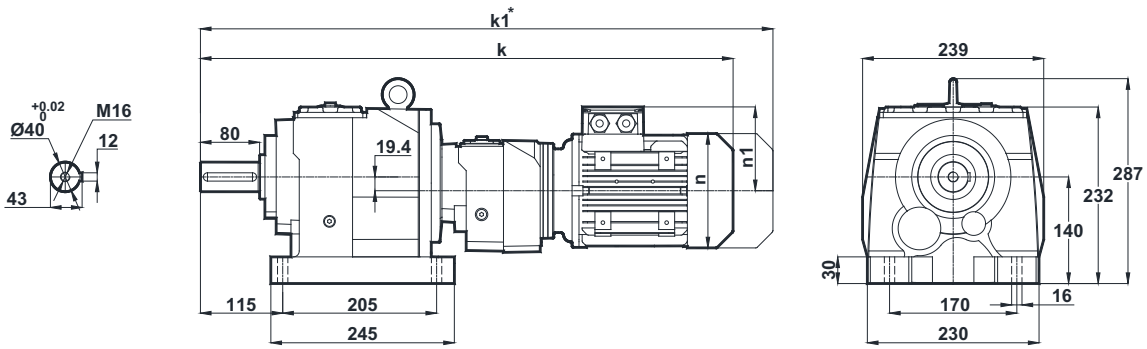


Opt. 3

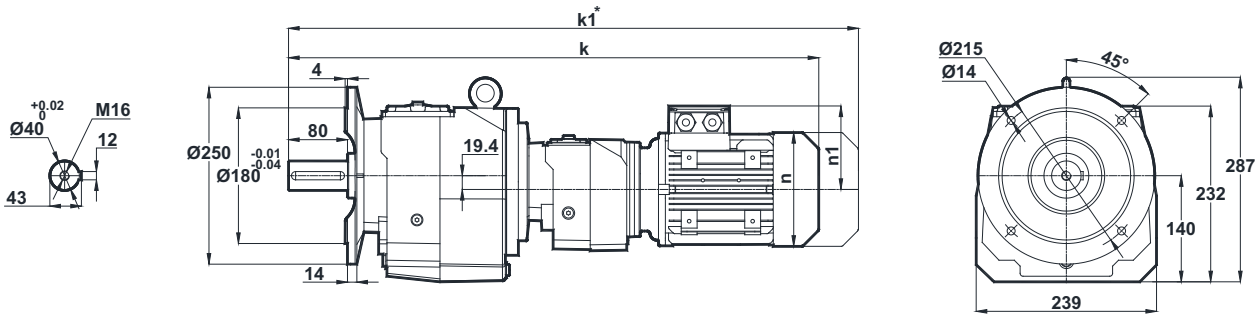
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR375
MR376

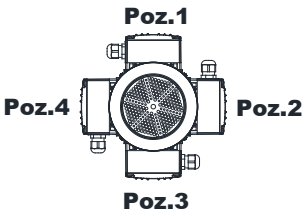


NR375
NR376



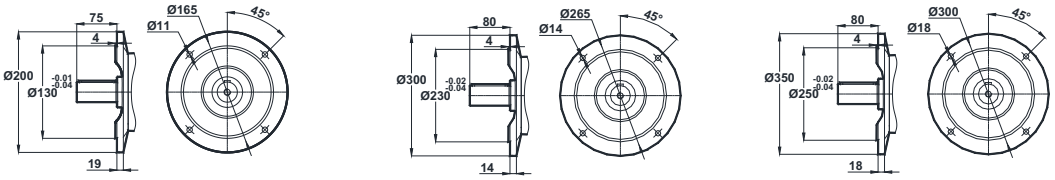
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
	63
k	667
k1	738
n	119
n1	101

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

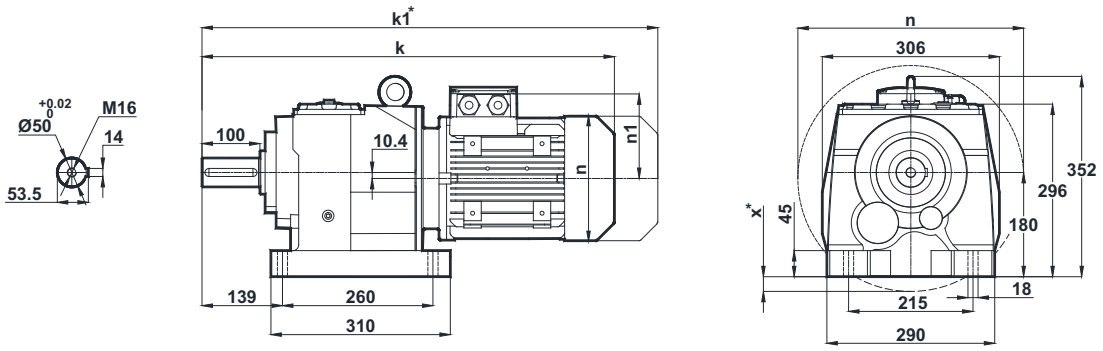


Opt. 1 **Opt. 2** **Opt. 3**

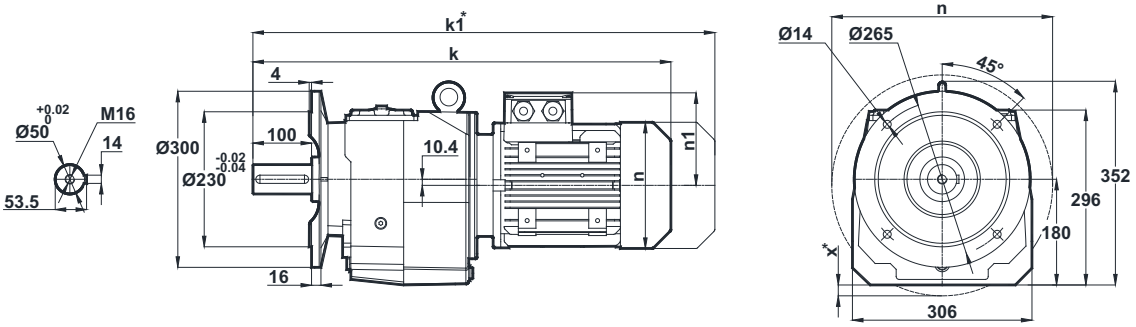
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR472
MR473

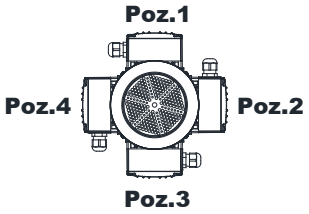


NR472
NR473



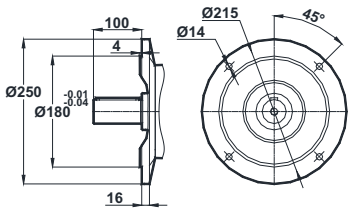
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L
k	610.5	649.5	649.5	694.5	718.5	803.5	803.5	899.5	899.5	971.5	971.5
k1	703.5	728.5	728.5	802.5	823.5	933.5	933.5	1049.5	1049.5	1158.5	1158.5
n	155	176	176	193	215	257	257	316	316	348	348
n1	127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

Klemens Kutusu /*Terminal Box* / Klemmenkasten

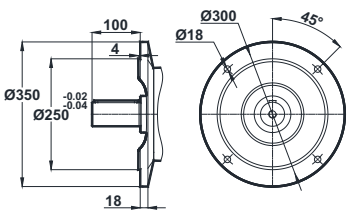


80-90-100-112-132-160-180

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

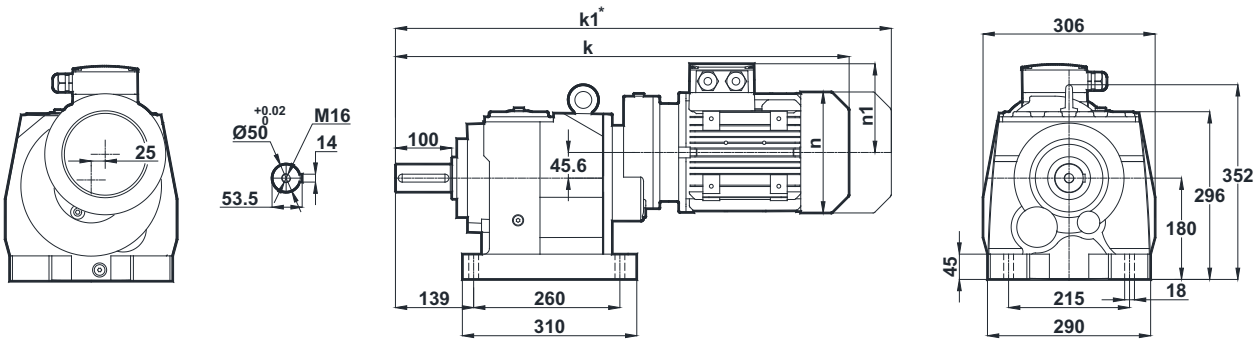


Opt. 2

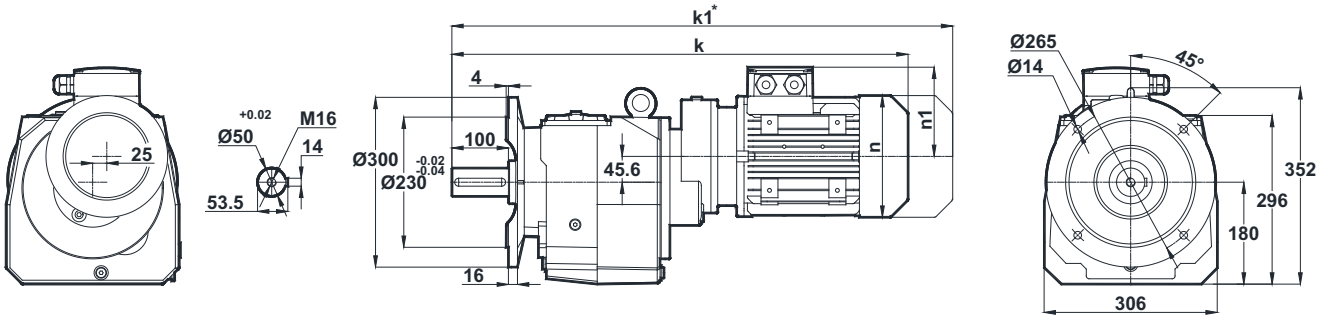
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR474

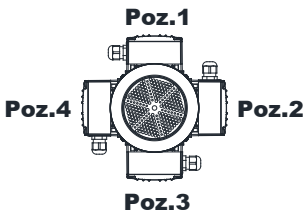


NR474



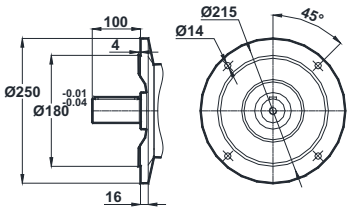
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	71	80
k	670	704
k1	761	797
n	137	155
n1	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten

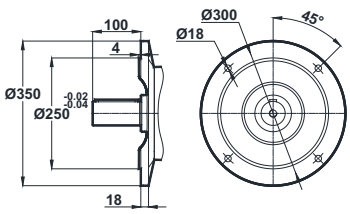


71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

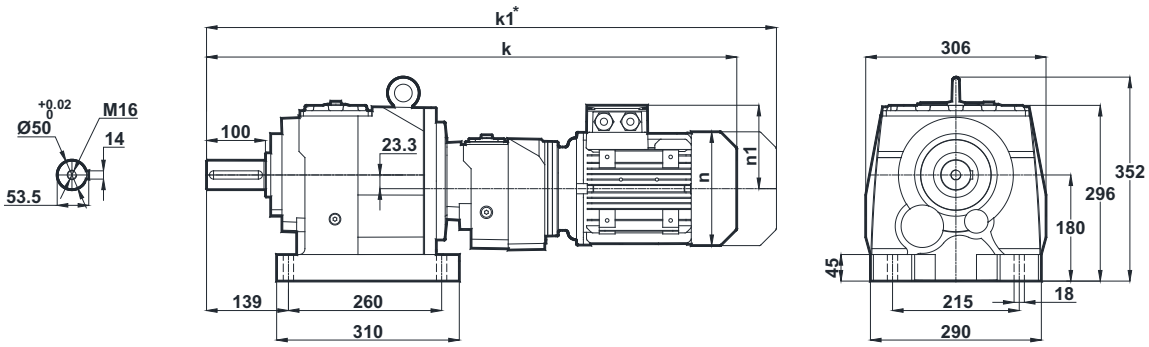


Opt. 2

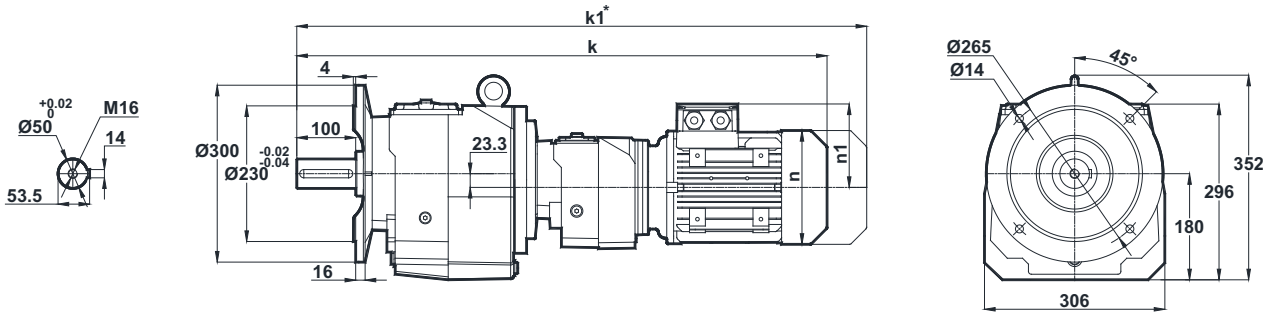
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR475
MR476

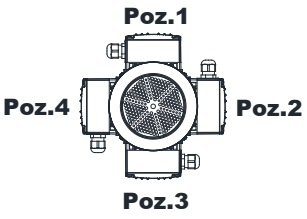


NR475
NR476



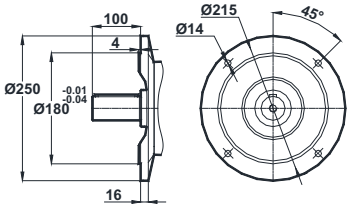
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	71
k	774	800
k1	845	891
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

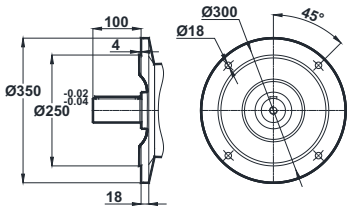


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

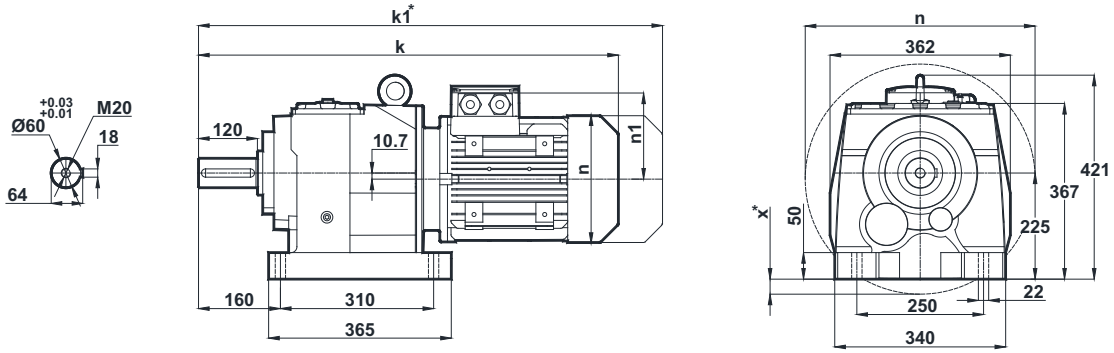


Opt. 2

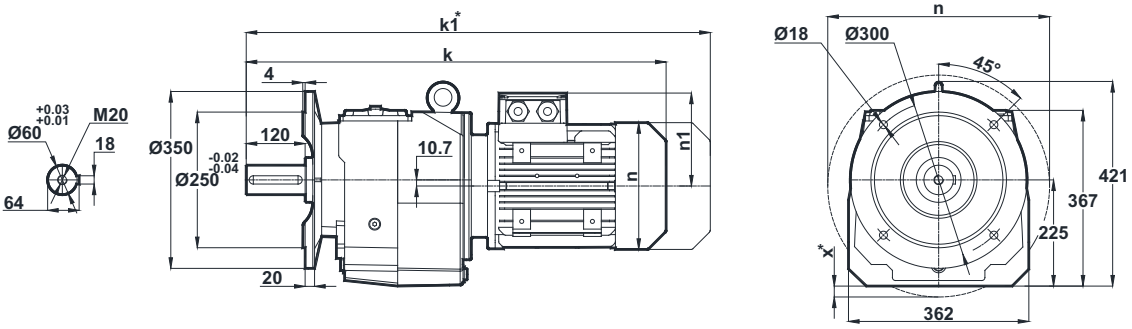
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR572
MR573

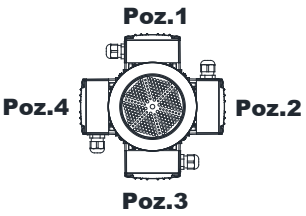


NR572
NR573



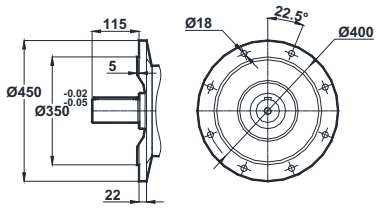
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	100L	112M	132S	132M	160M	160L	180M	180L	200L
k	753	777	863.5	863.5	959.5	959.5	1031.5	1031.5	1055
k1	861	882	993.5	993.5	1109.5	1109.5	1218.5	1218.5	1247
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
x	-	-	-	-	-	-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

Klemens Kutusu /*Terminal Box* / Klemmenkasten

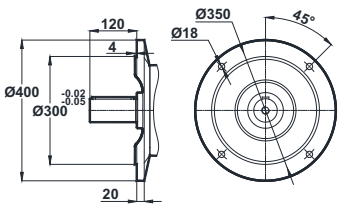


100-112-132-160-180-200

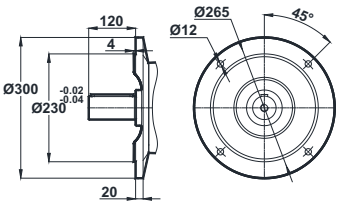
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

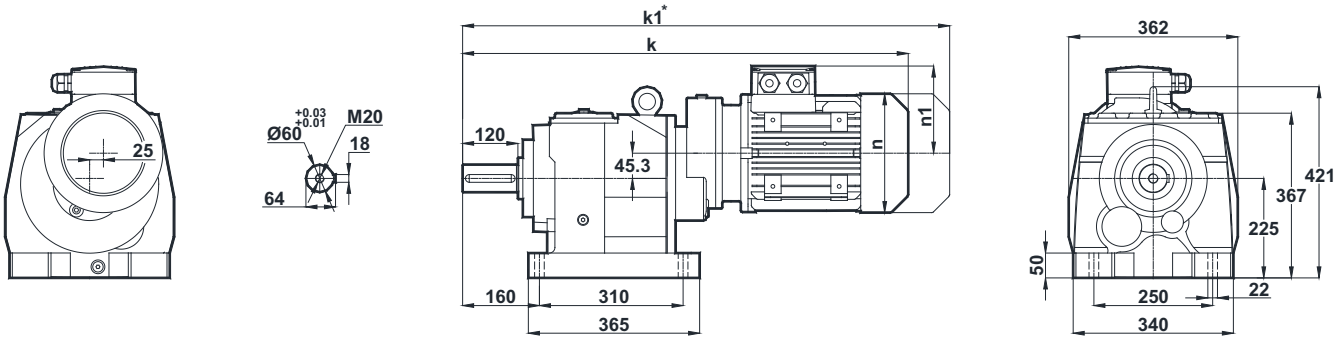


Opt. 3

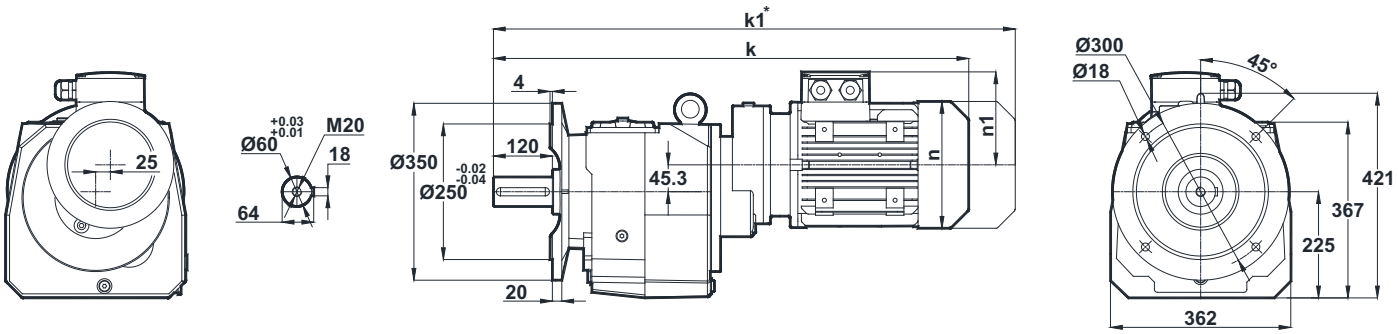
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR574

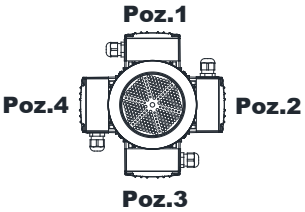


NR574



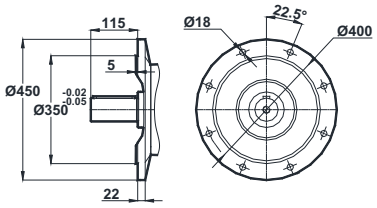
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	71	80	90S	90L	100L
k	733	767	806	806	854
k1	824	860	885	885	962
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu /*Terminal Box* / Klemmenkasten

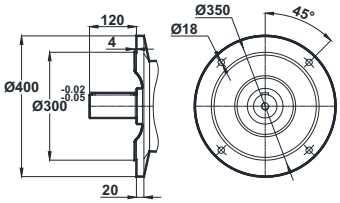


71-80-90-100

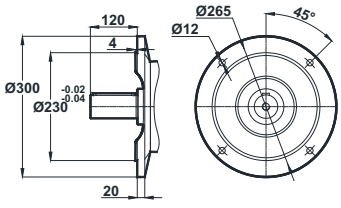
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

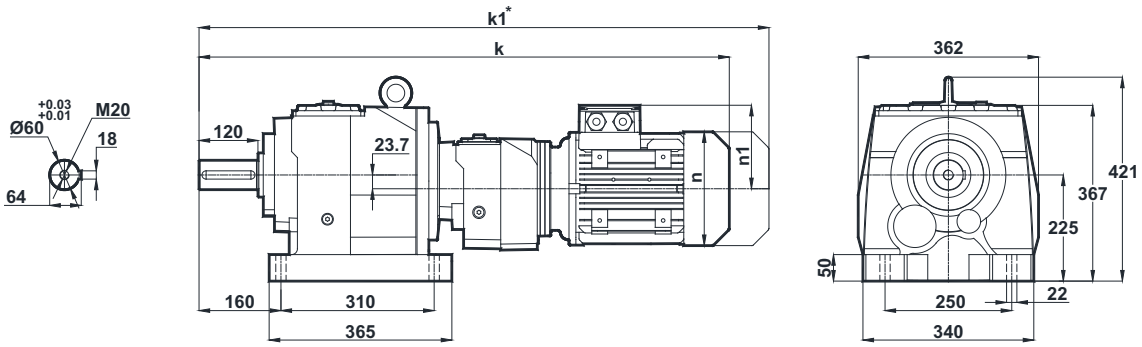


Opt. 3

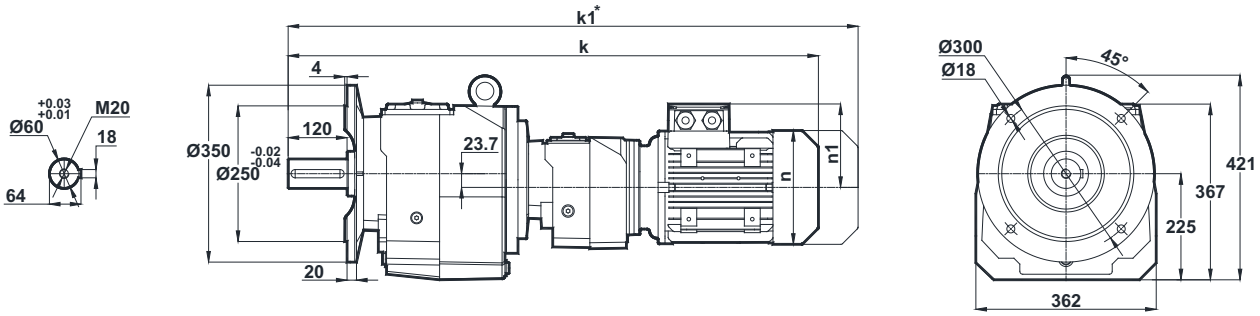
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR575
MR576

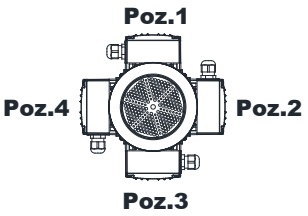


NR575
NR576



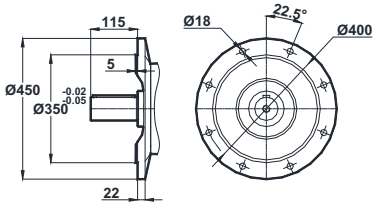
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	71
k	839	865
k1	910	956
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

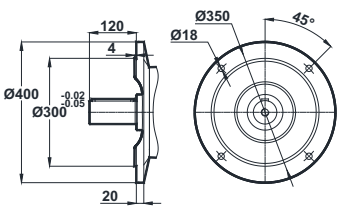


63-71

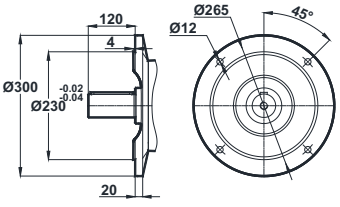
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

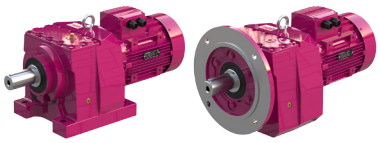


Opt. 2



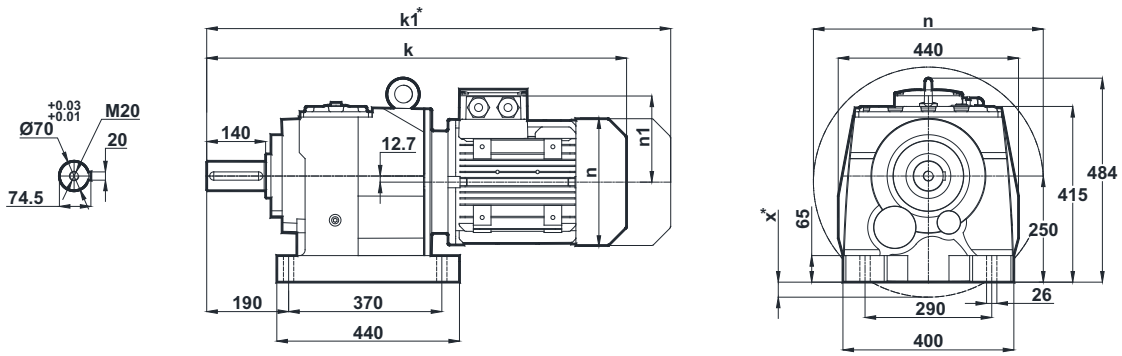
Opt. 3

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

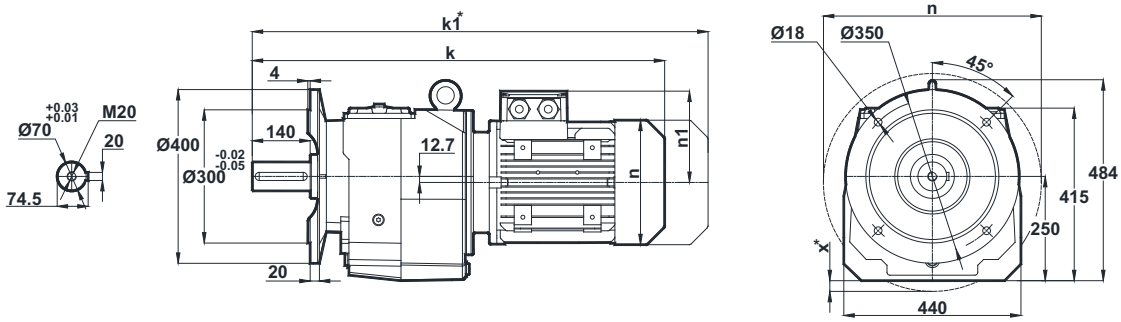


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MR672
MR673

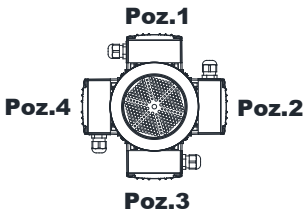


NR672
NR673



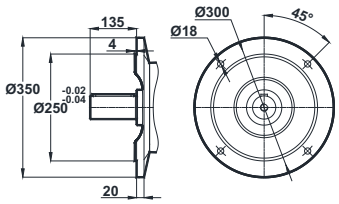
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M
k	833	919.5	919.5	1015.5	1015.5	1087.5	1087.5	1111	1189	1189
k1	938	1049.5	1049.5	1165.5	1165.5	1274.5	1274.5	1303	1372	1372
n	215	257	257	316	316	348	348	396	438	438
n1	161	182	182	226	226	242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

Klemens Kutusu /*Terminal Box* / Klemmenkasten

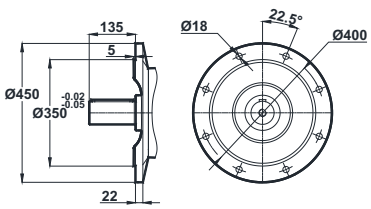


112-132-160-180-200-225

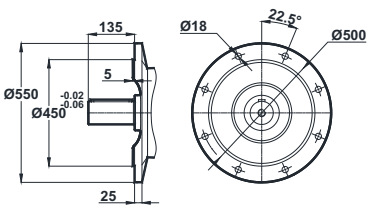
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

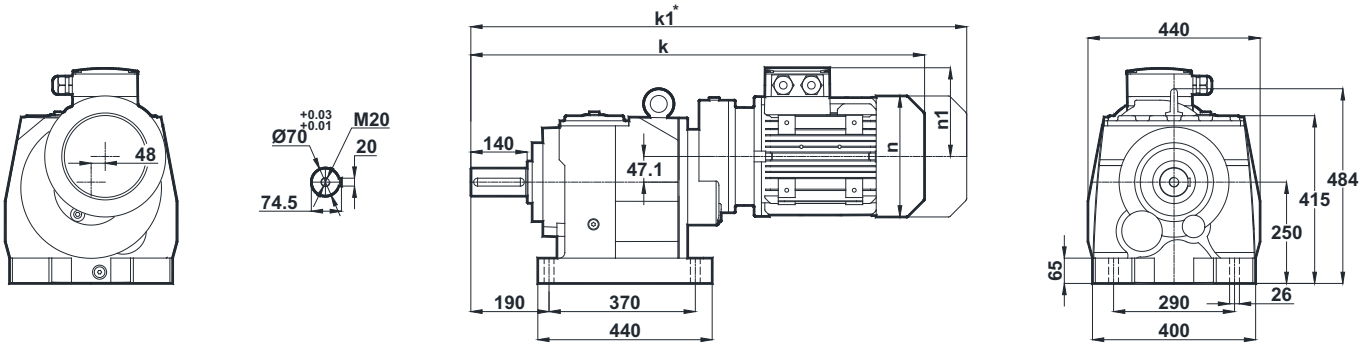


Opt. 3

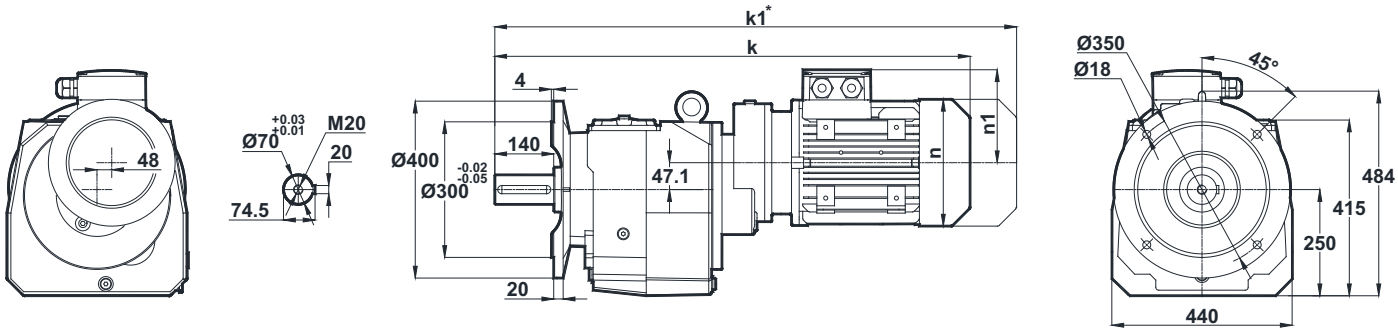
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR674

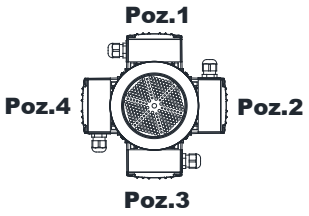


NR674



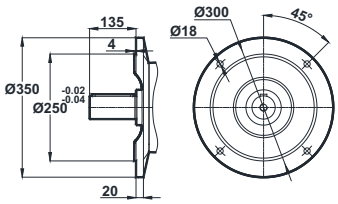
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
	80	90S	90L
k	841.5	880.5	880.5
k1	934.5	959.5	959.5
n	155	176	176
n1	127	136	136

Klemens Kutusu /*Terminal Box* / Klemmenkasten

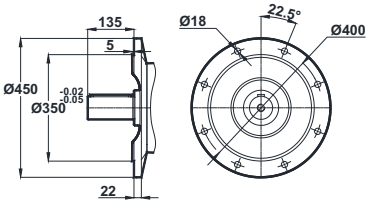


80-90

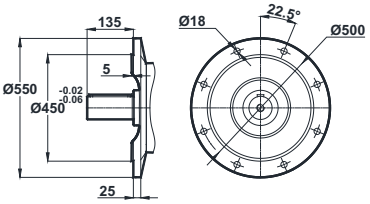
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

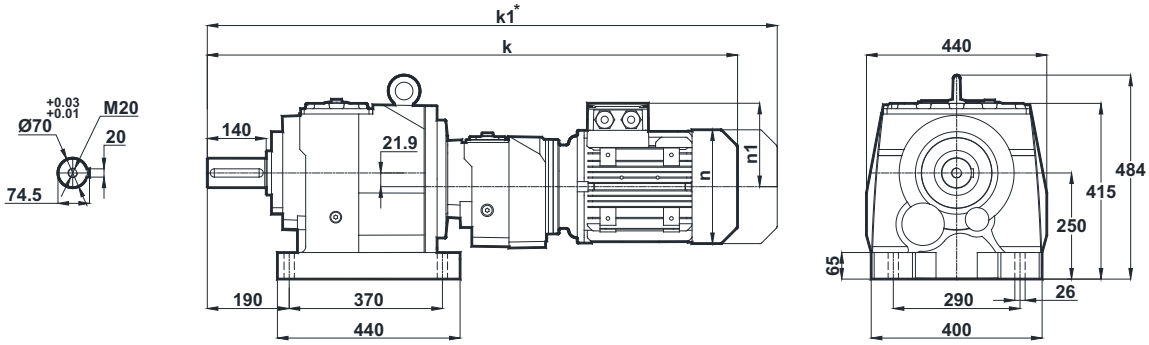


Opt. 3

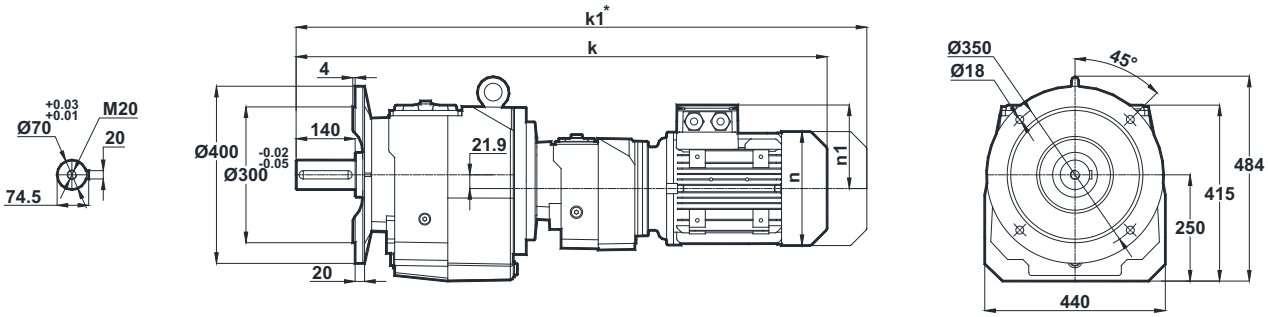
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR675
MR676

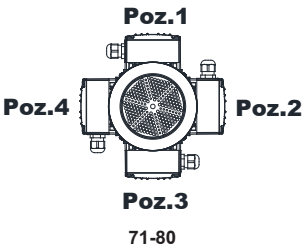


NR675
NR676



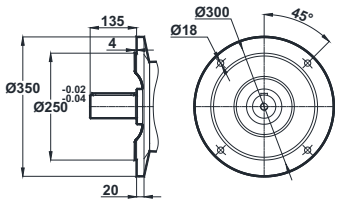
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	71	**80**
k	953.5	987.5
k1	1044.5	1080.5
n	137	155
n1	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten

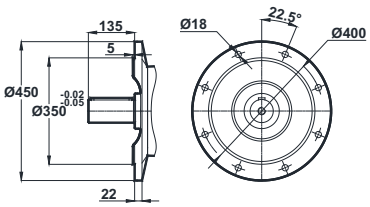


71-80

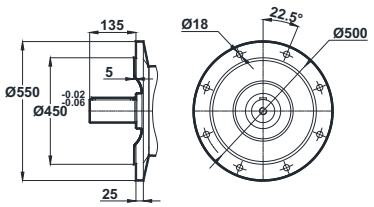
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

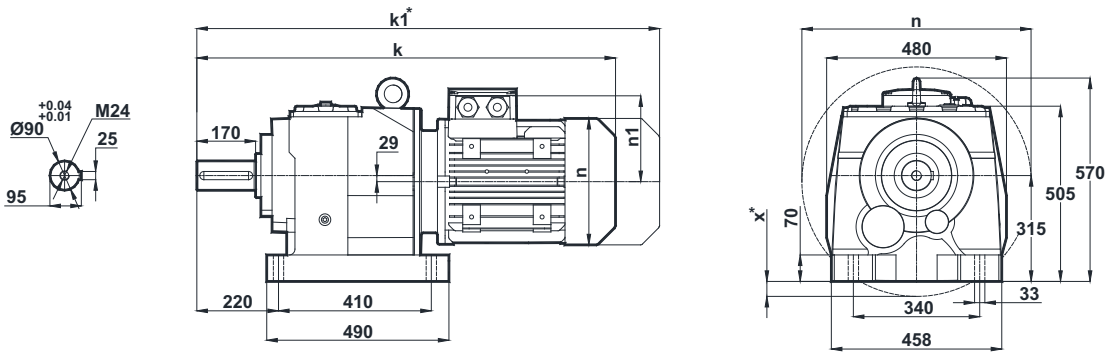


Opt. 3

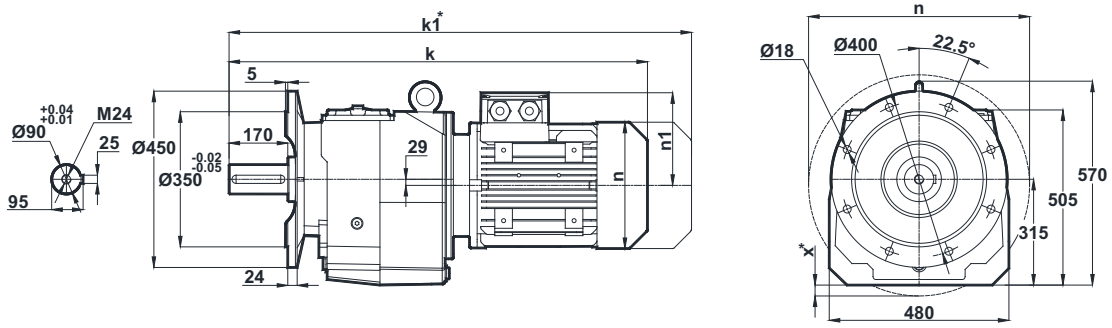
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR772
MR773

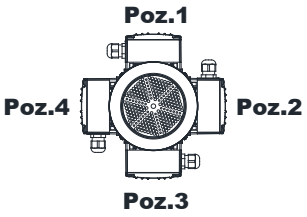


NR772
NR773



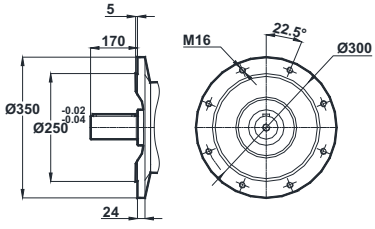
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M
k	1000.5	1000.5	1096.5	1096.5	1168.5	1168.5	1192	1270.5	1270.5	1355
k1	1130.5	1130.5	1246.5	1246.5	1355	1355	1384	1453.5	1453.5	1512
n	257	257	316	316	348	348	396	438	438	481
n1	182	182	226	226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

Klemens Kutusu /*Terminal Box* / Klemmenkasten

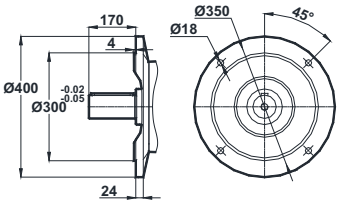


132-160-180-200-225-250

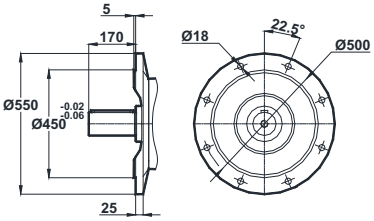
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

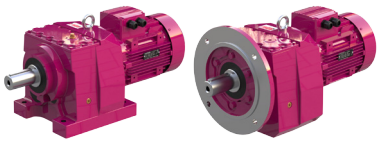


Opt. 2



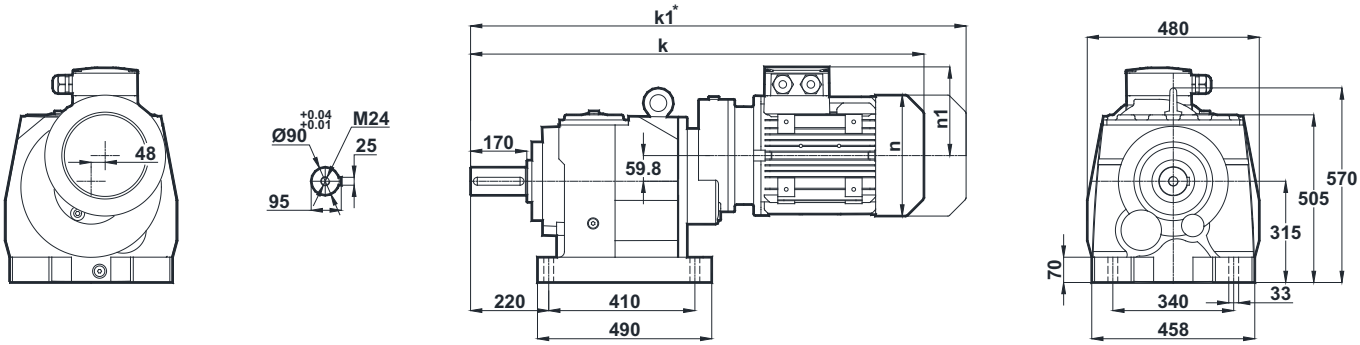
Opt. 3

*** " 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

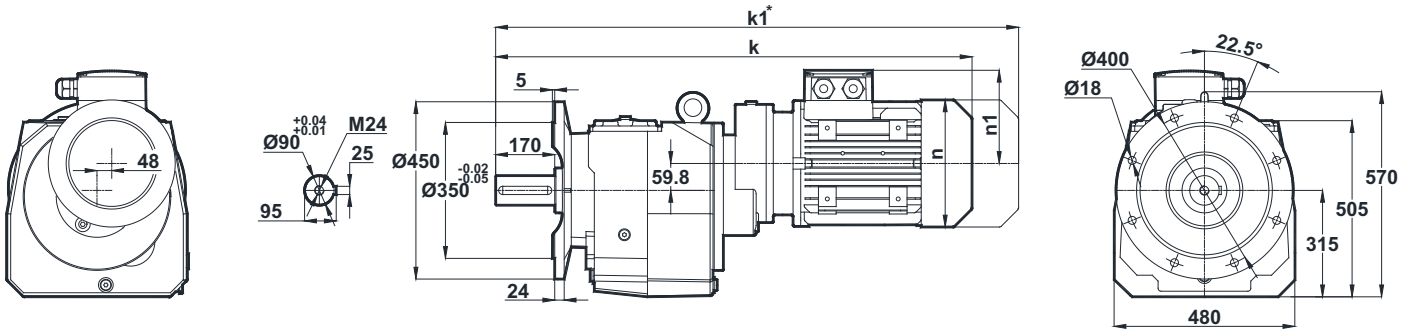


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MR774

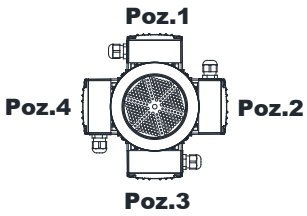


NR774



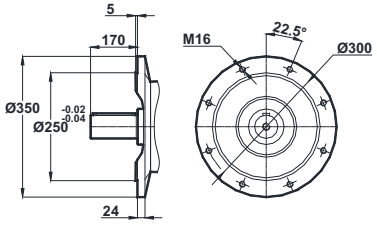
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	80	**90S**	**90L**	**100L**
k	926.5	965.5	965.5	1010.5
k1	1019.5	1044.5	1044.5	1118.5
n	155	176	176	193
n1	127	136	136	149

Klemens Kutusu /*Terminal Box* / Klemmenkasten

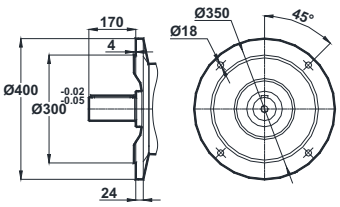


80-90-100

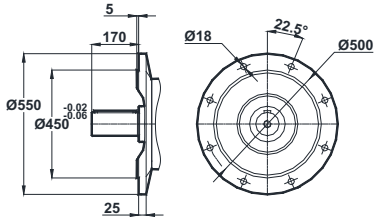
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

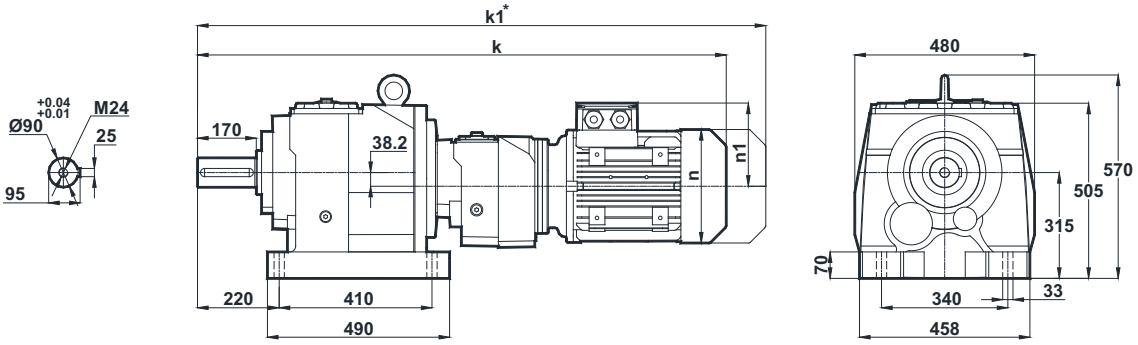


Opt. 3

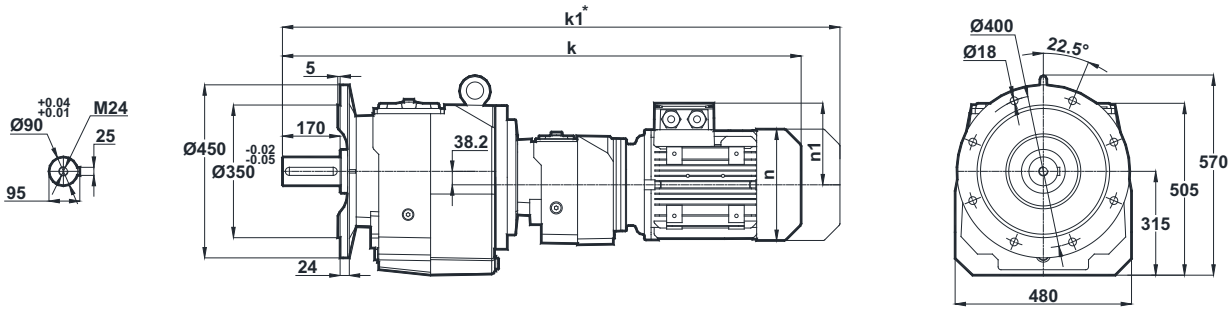
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR775
MR776

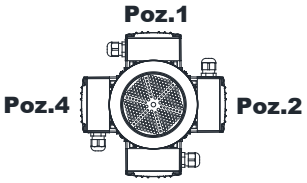


NR775
NR776



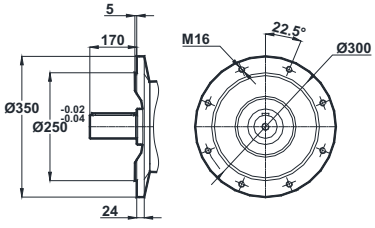
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	71	80	90S	90L
k	1041.5	1075.5	1114.5	1114.5
k1	1132.5	1168.5	1193.5	1193.5
n	137	155	176	176
n1	118	127	136	136

Klemens Kutusu /*Terminal Box* / Klemmenkasten

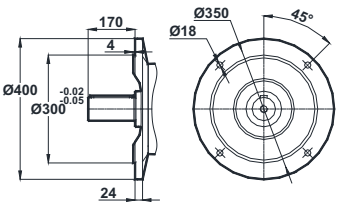


71-80-90

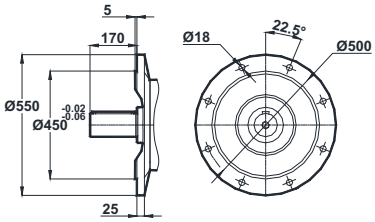
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

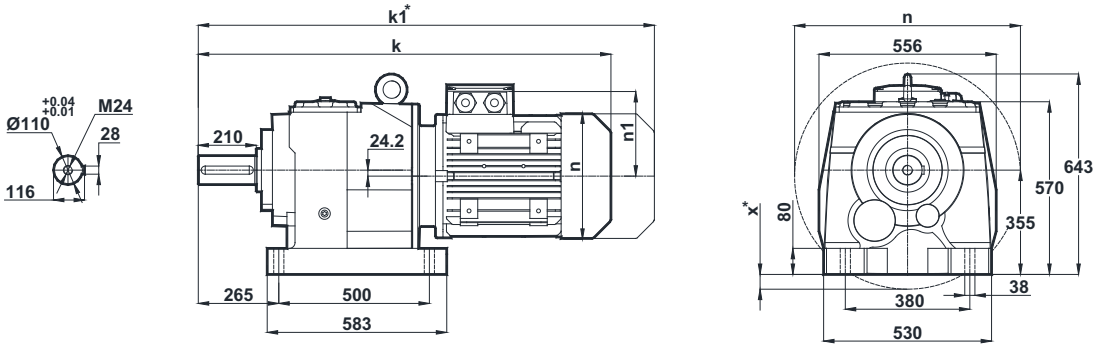


Opt. 3

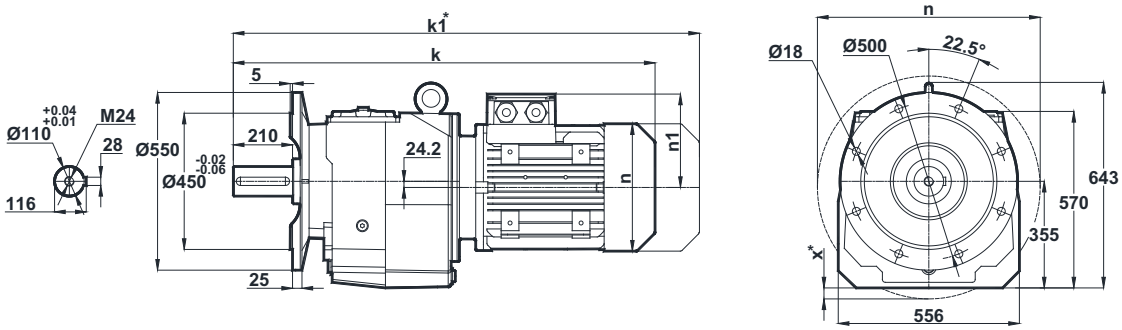
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR872
MR873

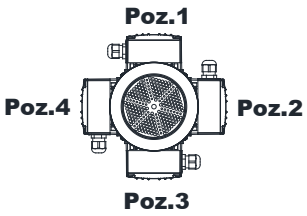


NR872
NR873



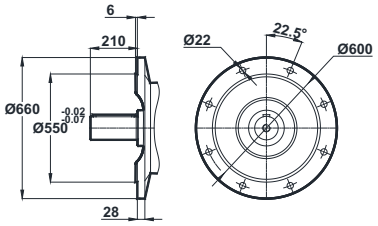
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k	1109.5	1205.5	1205.5	1277.5	1277.5	1301	1382	1382	1465	1584	1584
k1	1239.5	1355.5	1355.5	1464.5	1464.5	1493	1565	1565	1622	1782	1782
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	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

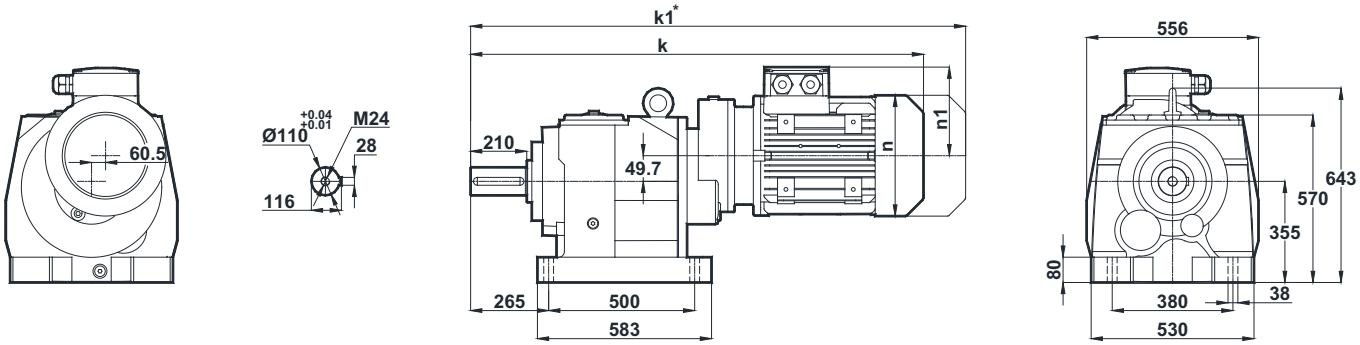


Opt. 1

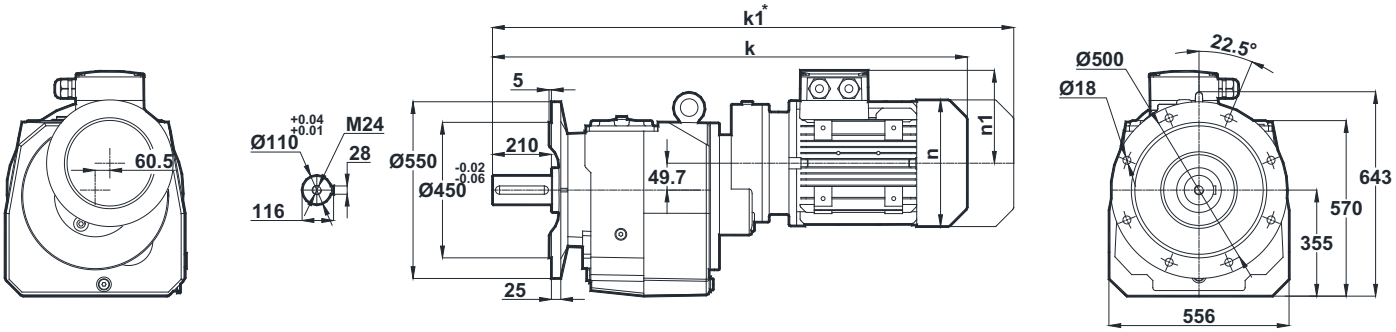
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MR874

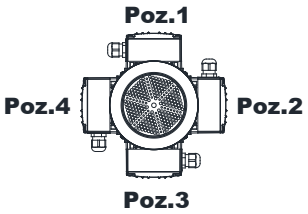


NR874



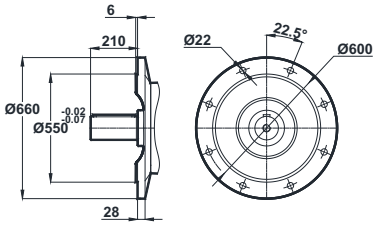
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	100L	112M	132S	132M
k	1141	1165	1251.5	1251.5
k1	1249	1270	1381.5	1381.5
n	193	215	257	257
n1	149	161	182	182

Klemens Kutusu /*Terminal Box* / Klemmenkasten



100-112-132

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

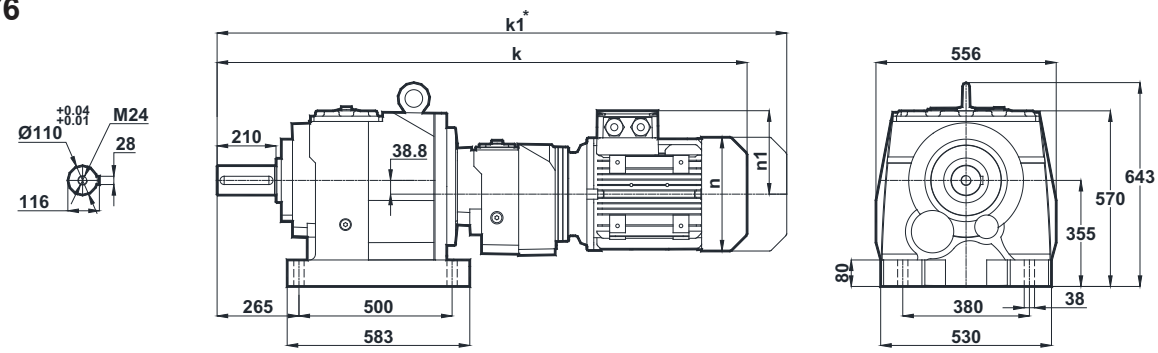


Opt. 1

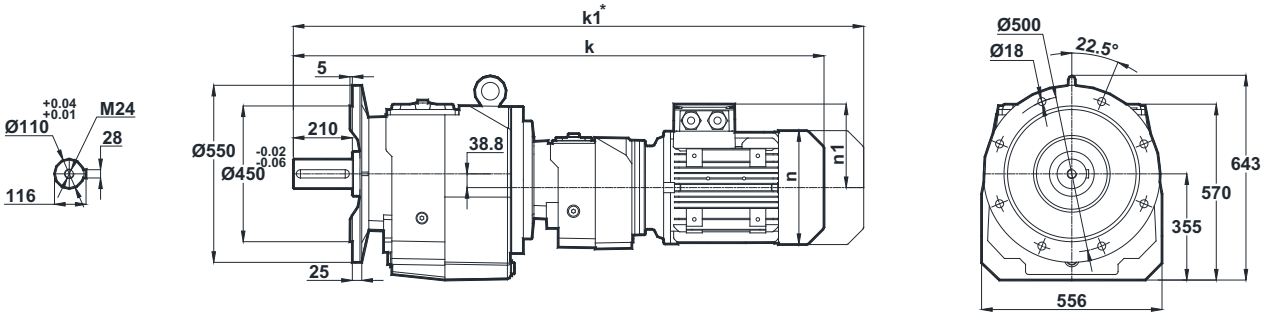
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR875
MR876

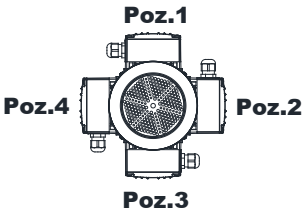


NR875
NR876



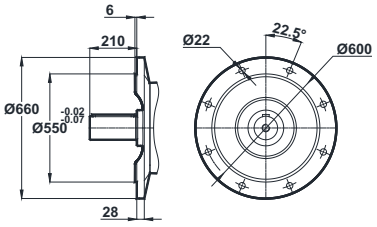
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	71	80	90S	90L	100L
k	1158.5	1192.5	1231.5	1231.5	1279.5
k1	1249.5	1285.5	1310.5	1310.5	1387.5
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu / *Terminal Box* / Klemmenkasten



71-80-90-100

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

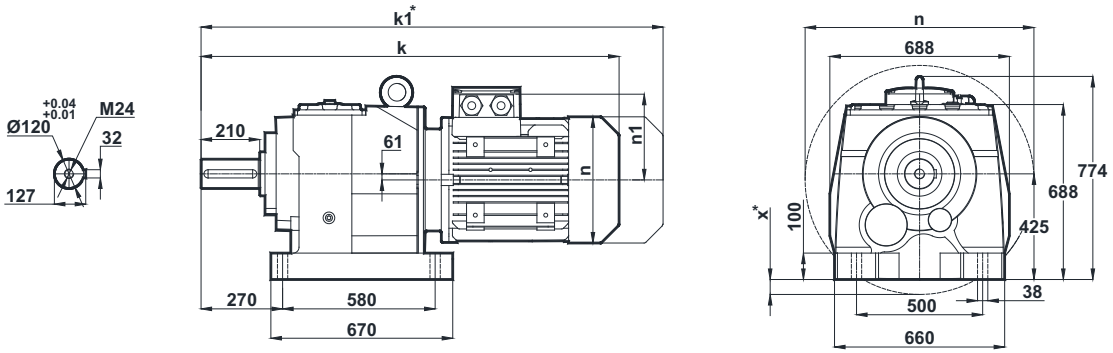


Opt. 1

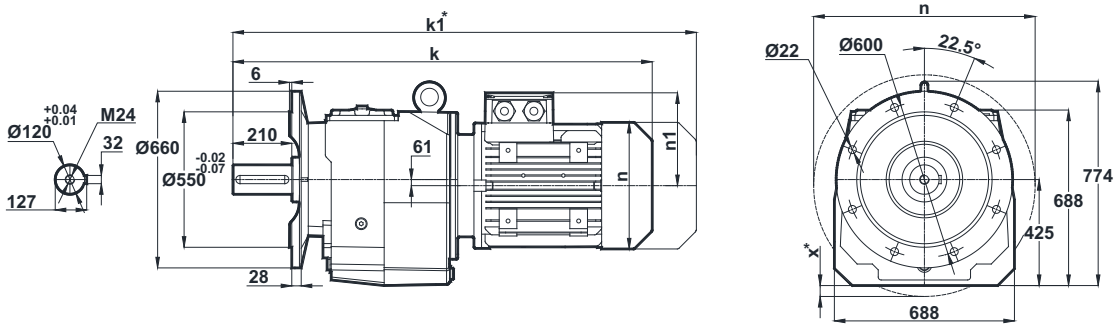
* **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR972
MR973

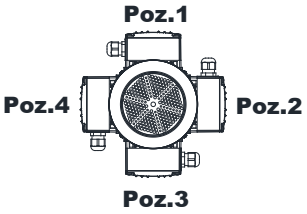


NR972
NR973



Motor Büyüklüğü / *Motor Size* / Motorbaugroße													
	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

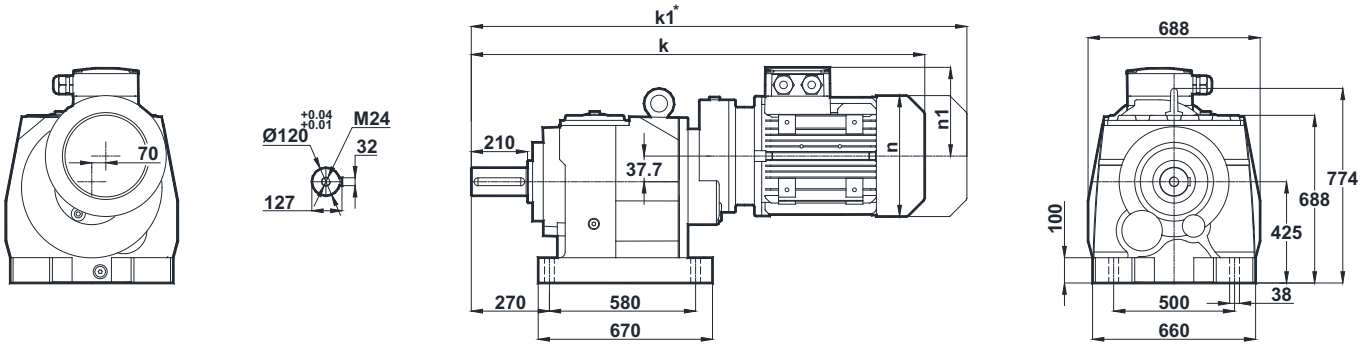


160-180-200-225-250-280-315

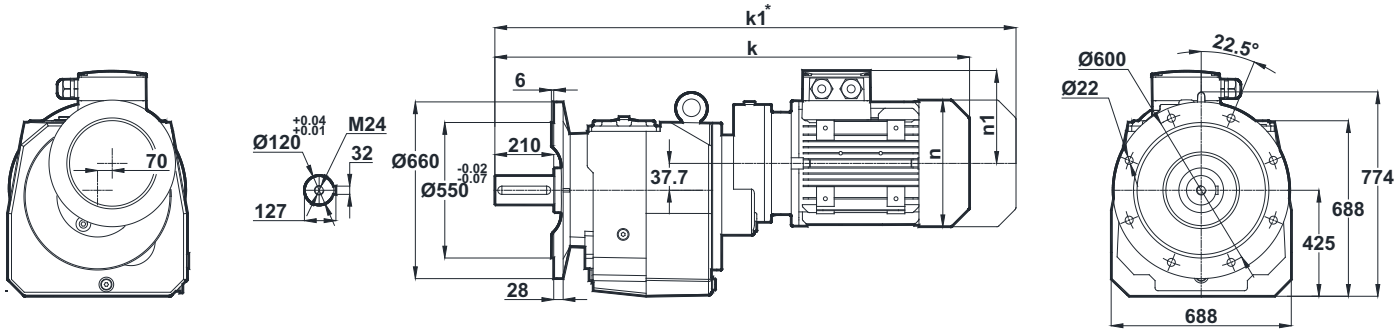
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MR974

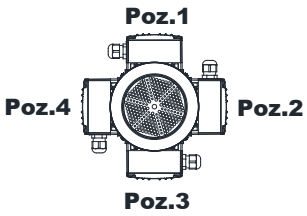


NR974



Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	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

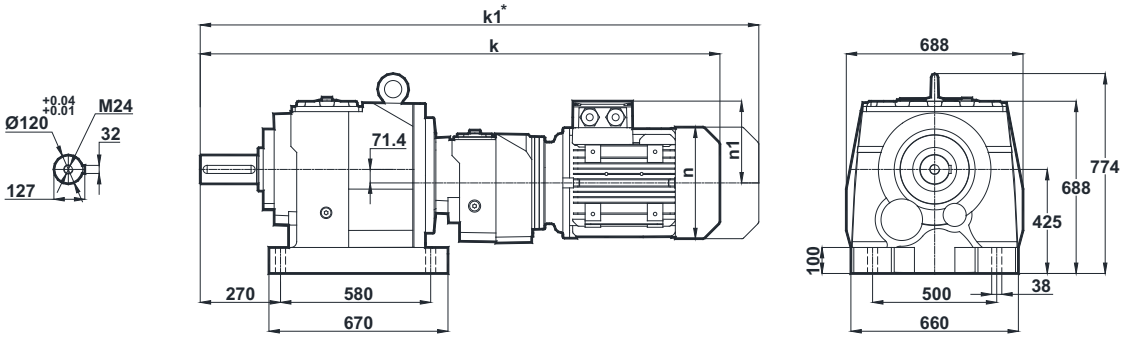


100-112-132

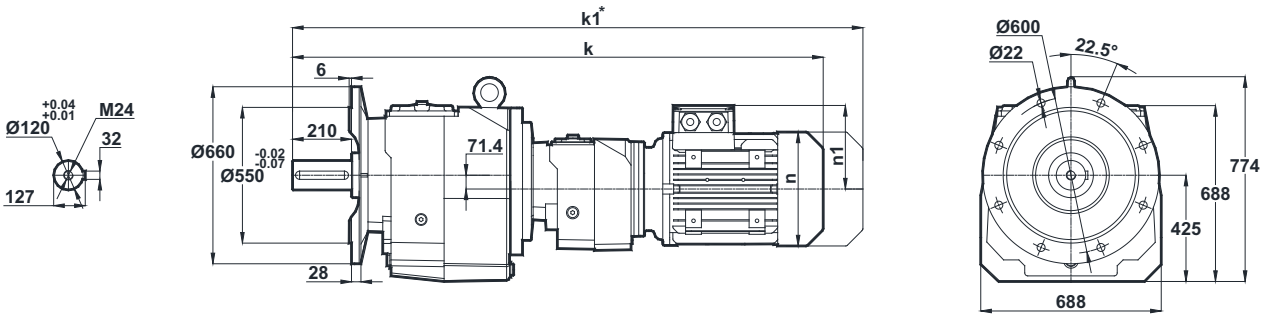
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MR975
MR976

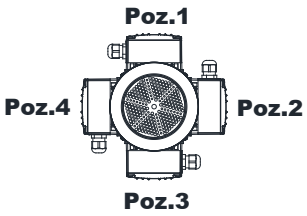


NR975
NR976



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



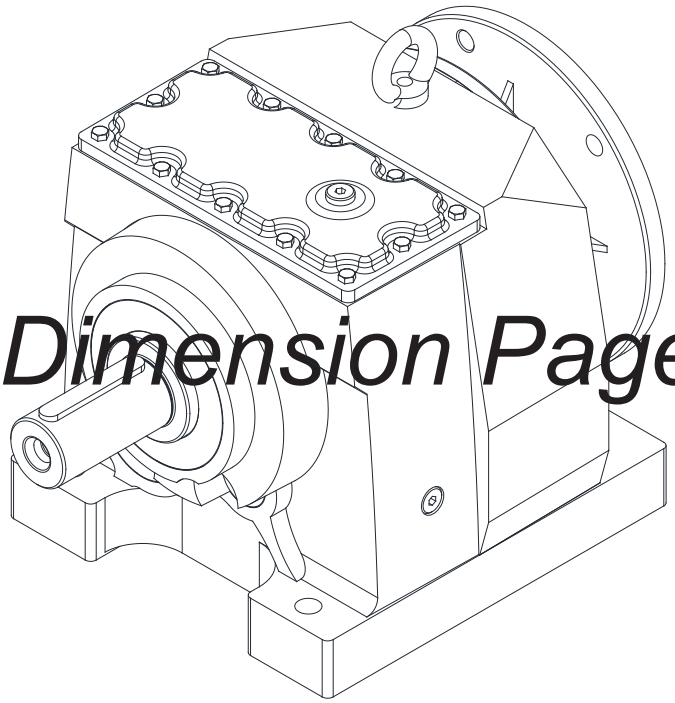
80-90-100-112-132

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

Notlar / *Notes* / Notizen

MN & NN Serisi / *Series* / Serie

Ölçü Sayfaları

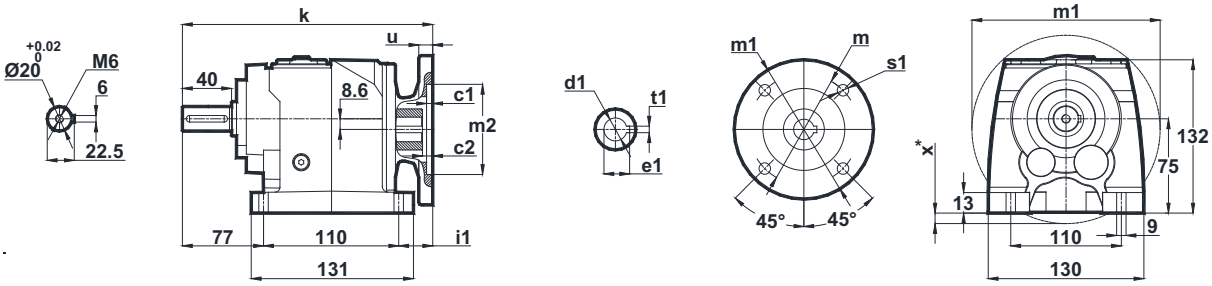


Dimension Pages

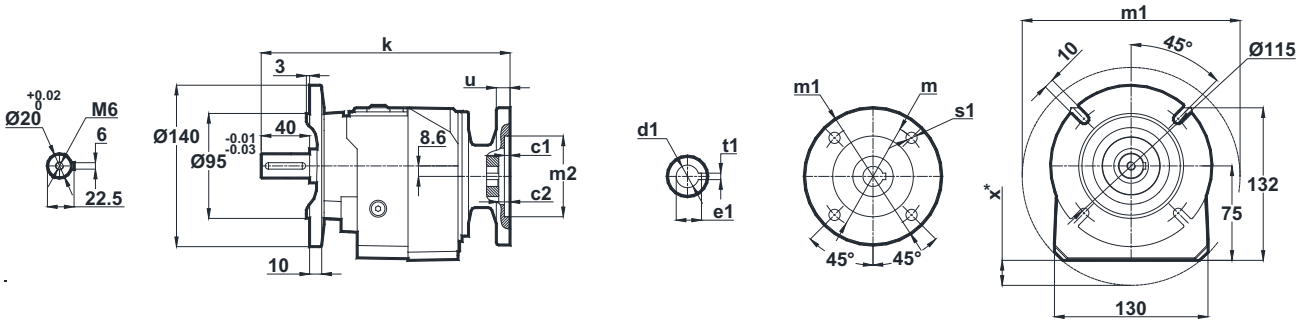
Abmessungsseiten

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

MN002-A.. / B...
MN003-A.. / B...

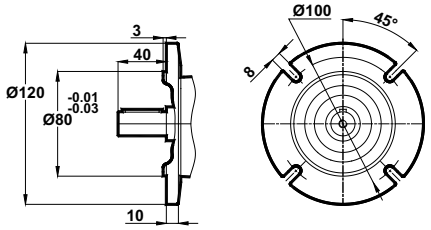


NN002-A.. / B...
NN003-A.. / B...

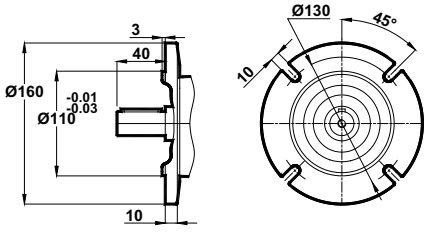


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	27	10	214	11	4	12.8	4
63/B14	2.5		5.5	75	90	60							-
71/B5	4	4.5	11	130	160	110	28.5	12	215.5	14	5	16.3	14
71/B14	3		7	85	105	70		10					-
80/B5	4	5	12	165	200	130	43.5	12	230.5	19	6	21.8	34
80/B14			7	100	120	80							-
90/B5	4	5	12	165	200	130	43.5	12	230.5	24	8	27.3	34
90/B14			9	115	140	95							4
100/B5	4.5	5.5	15	215	250	180	54.5	14	241.5	28	8	31.3	59
100/B14	4		9	130	160	110							14

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

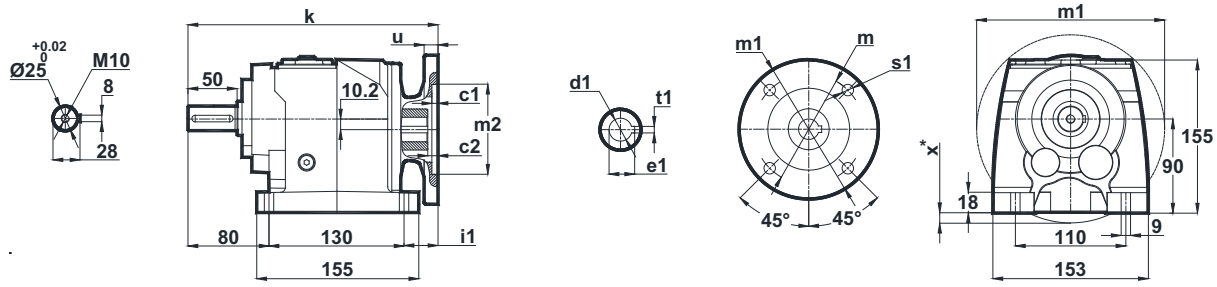


Opt. 2

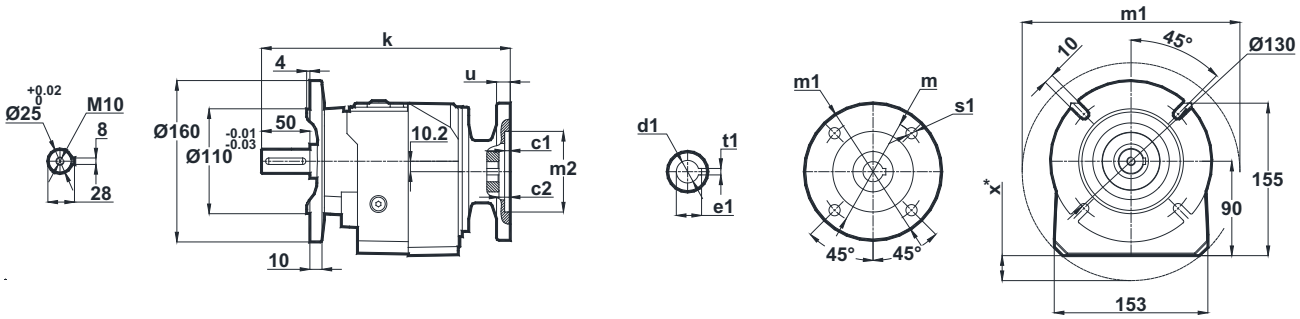
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN102-A.. / B...
MN103-A.. / B...

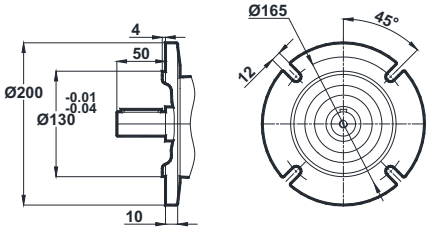


NN102-A.. / B...
NN103-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	30	10	241	11	4	12.8	-
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	31.5	12 10	242.5	14	5	16.3	1 -
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	46.5	12	257.5	19	6	21.8	21 -
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	46.5	12	257.5	24	8	27.3	21 -
100-112/B5 **100-112/B14**	4.5 4	5.5	15 9	215 130	250 160	180 110	57.5	14	268.5	28	8	31.3	46 1

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

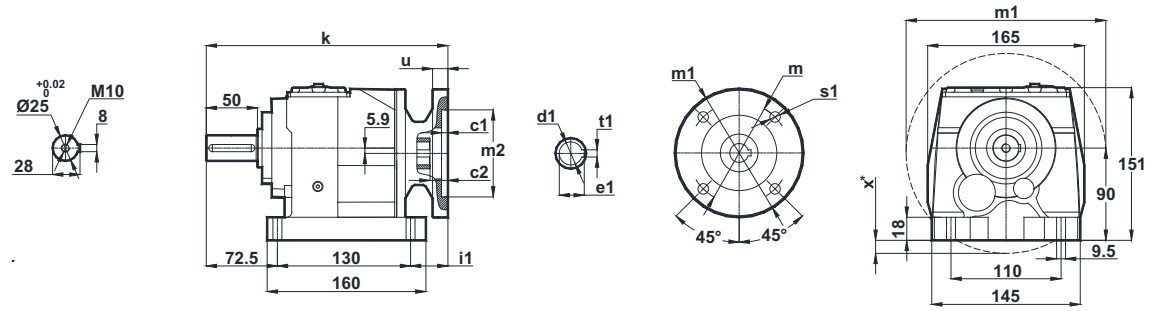


Opt. 1

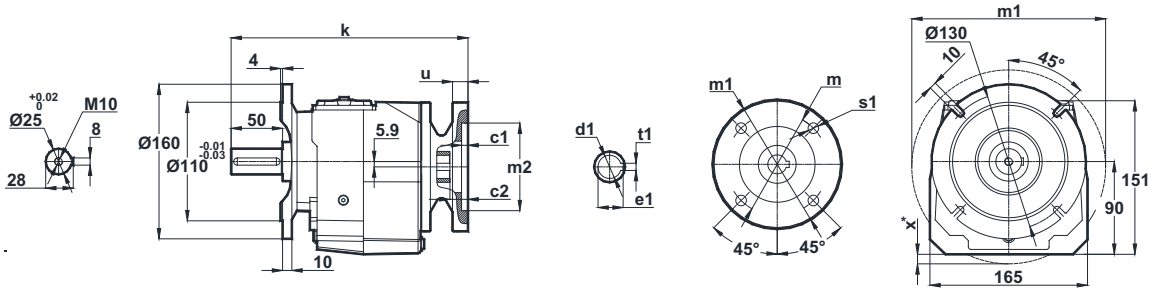
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN172-A.. / B...
MN173-A.. / B...

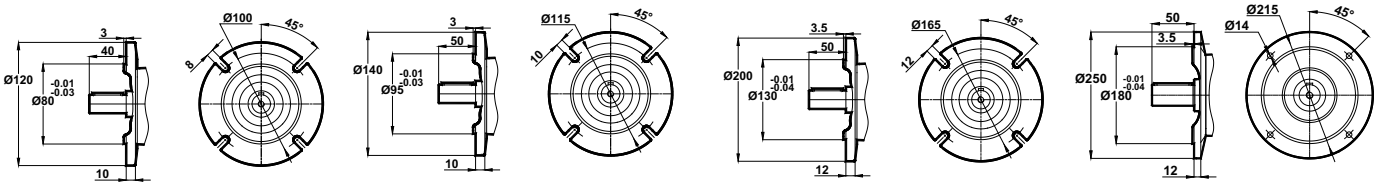


NN172-A.. / B...
NN173-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	38.5	10	241	11	4	12.8	-
63/B14	2.5		5.5	75	90	60							
71/B5	4	4.5	11	130	160	110	40	12	242.5	14	5	16.3	-
71/B14	3		7	85	105	70		10					
80/B5	4	5	12	165	200	130	55	12	257.5	19	6	21.8	16
80/B14			7	100	120	80							-
90/B5	4	5	12	165	200	130	55	12	257.5	24	8	27.3	16
90/B14			9	115	140	95							-
100-112/B5	4.5	5.5	15	215	250	180	66	14	268.5	28	8	31.3	41
100-112/B14	4		9	130	160	110							-

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

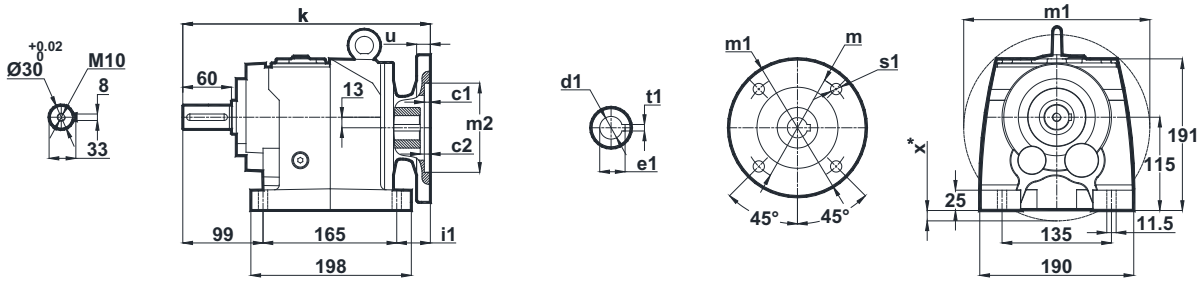


Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

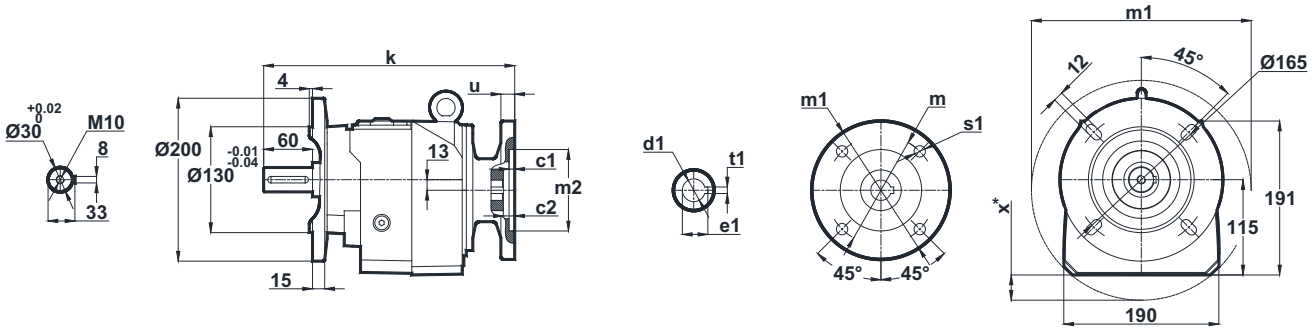
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN202-A.. / B...
MN203-A.. / B...

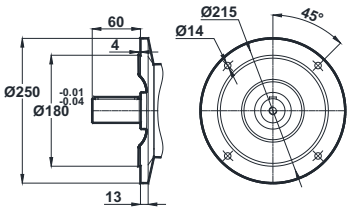


NN202-A.. / B...
NN203-A.. / B...

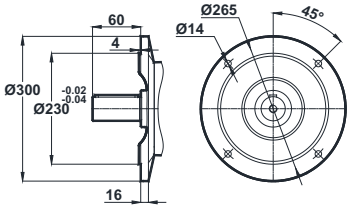


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	58.5	12	322.5	11	4	12.8	-
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	29.5	12 10	293.5	14	5	16.3	-
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	58.5	12	322.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	58.5	12	322.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	51.5	12	315.5	28	8	31.3	23 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	98.5	20	362.5	38	10	41.3	48 -

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

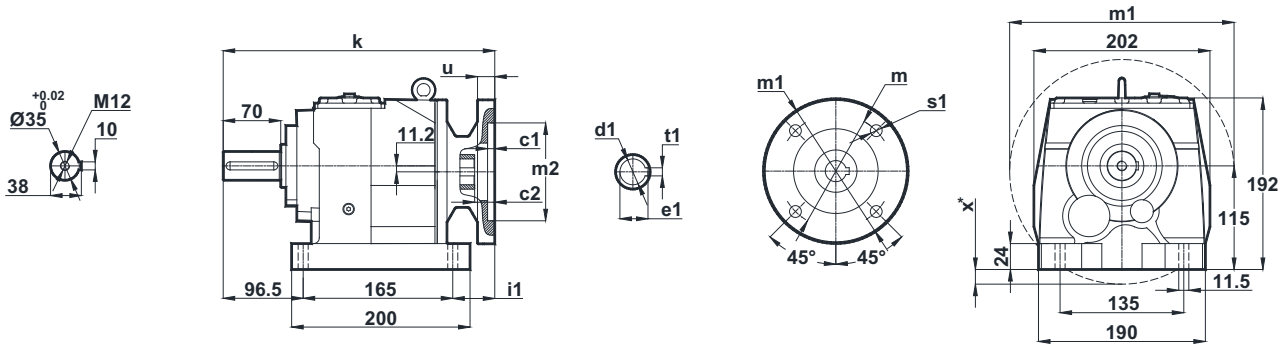


Opt. 2

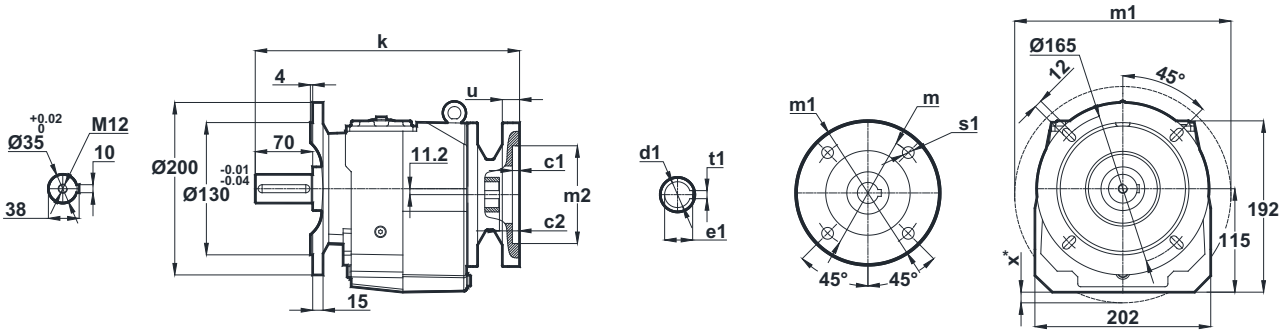
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN272-A.. / B...
MN273-A.. / B...



NN272-A.. / B...
NN273-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	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 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	33	12 10	294.5	14	5	16.3	-
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	62	12	323.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	62	12	323.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	55	12	316.5	28	8	31.3	22 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	102	20	363.5	38	10	41.3	47 -

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

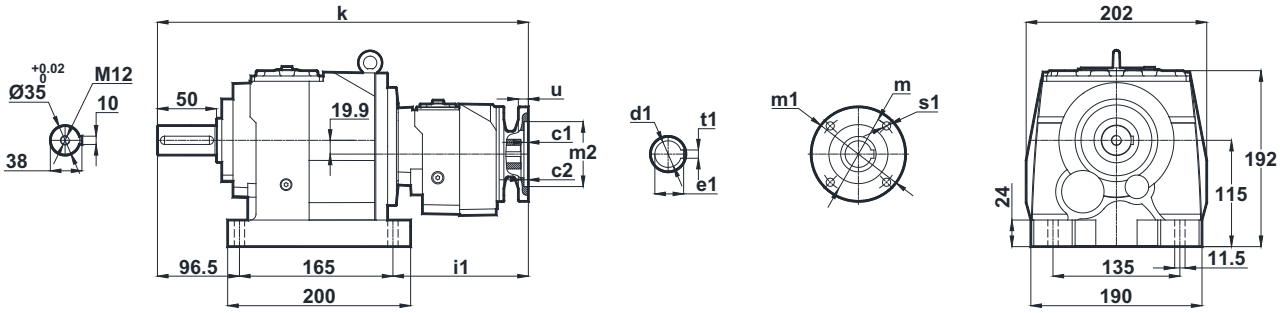


Opt. 1 **Opt. 2**

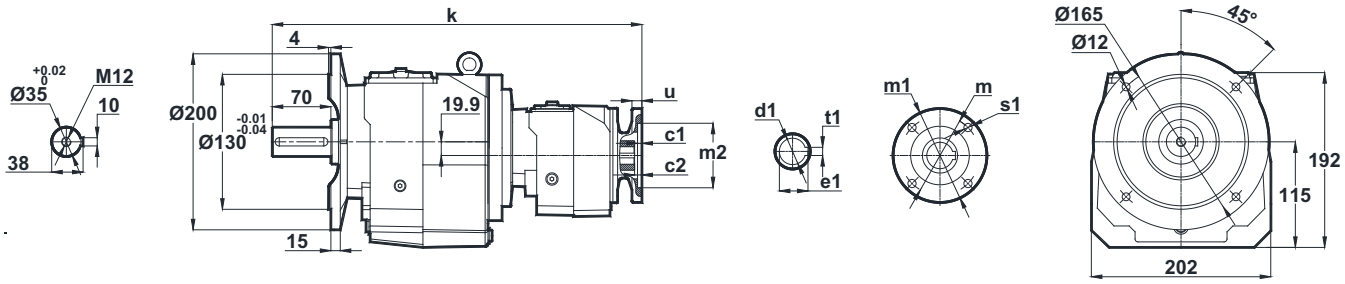
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN275-A.. / B...
MN276-A.. / B...

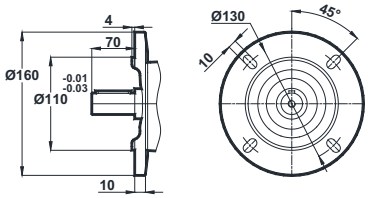


NN275-A.. / B...
NN276-A.. / B...

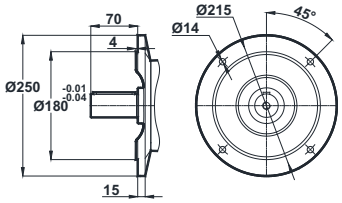


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	177.5	10	439	11	4	12.8
63/B14	2.5		5.5	75	90	60						
71/B5	4	4.5	11	130	160	110	179	12	440.5	14	5	16.3
71/B14	3		7	85	105	70		10				
80/B5	4	5	12	165	200	130	194	12	455.5	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	194	12	455.5	24	8	27.3
90/B14			9	115	140	95						
100/B5	4.5	5.5	15	215	250	180	205	14	466.5	28	8	31.3
100/B14	4		9	130	160	110						

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



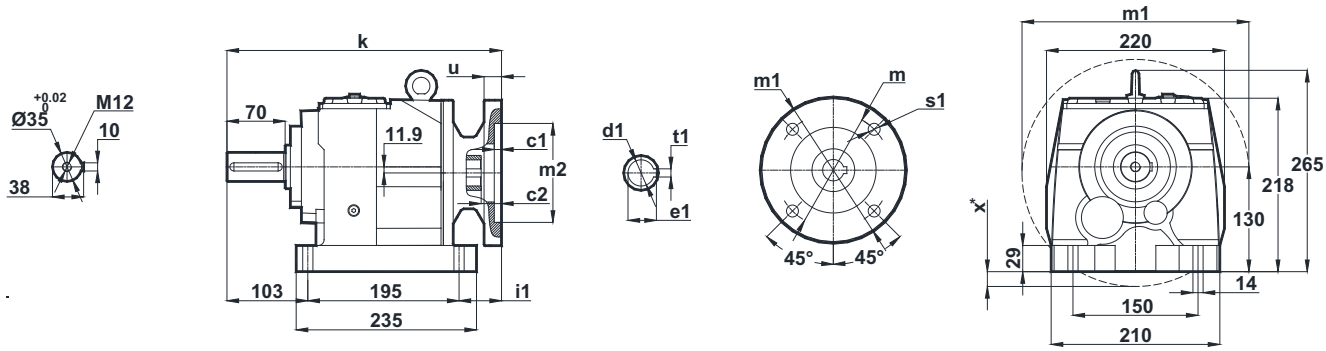
Opt. 1



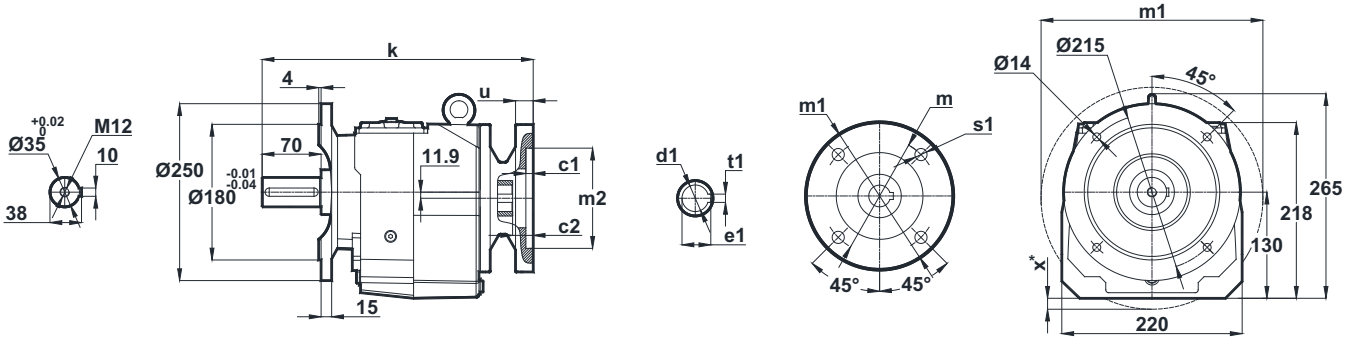
Opt. 2

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

MN282-A.. / B..
MN283-A.. / B..

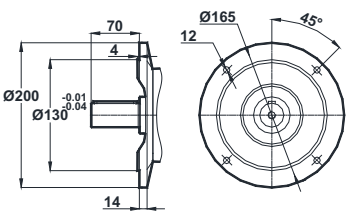


NN282-A.. / B..
NN283-A.. / B..

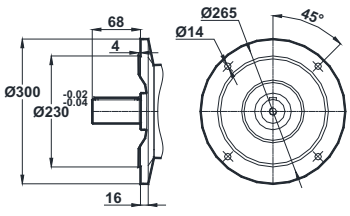


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	45	12	343	14	5	16.3	-
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	45	12	343	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	45	12	343	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	62	15	360	28	8	31.3	7 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	82	15	380	38	10	41.3	32 -
160/B5	5.5	10	19	300	350	250	161.5	20	459.5	42	12	45.3	57

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

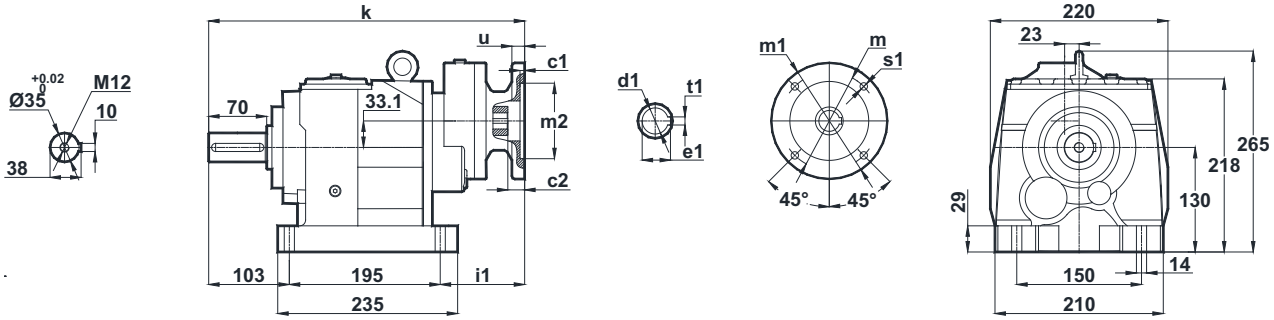


Opt. 2

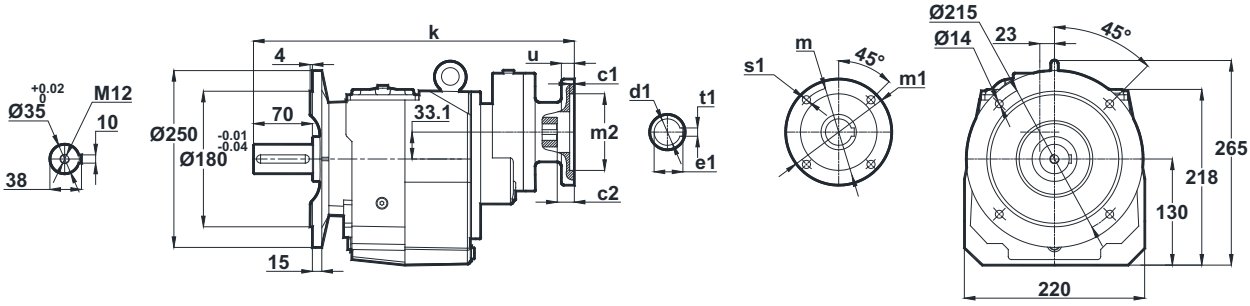
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN284-A.. / B..

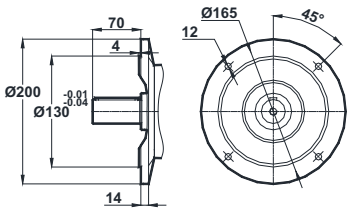


NN284-A.. / B..

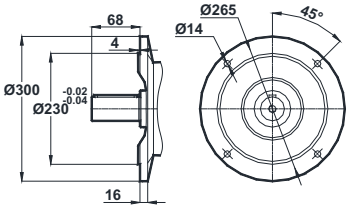


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	3.5	5	9	115	140	95	122	12	420	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	93	12 10	391	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	122	12	420	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	122	12	420	24	8	27.3

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



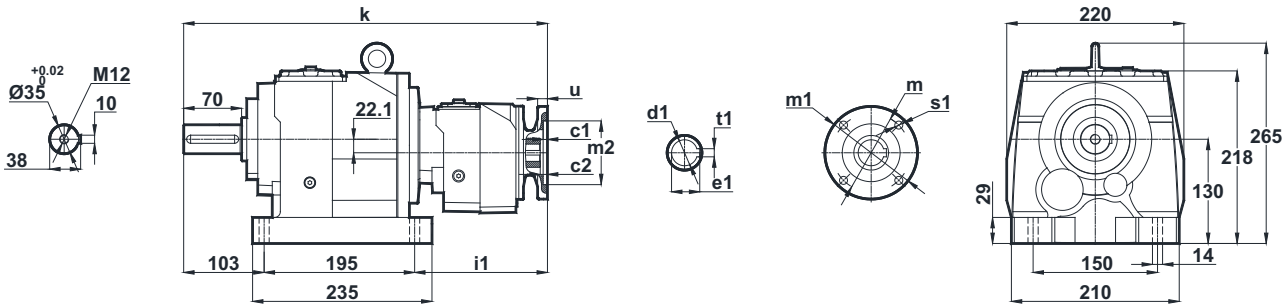
Opt. 1



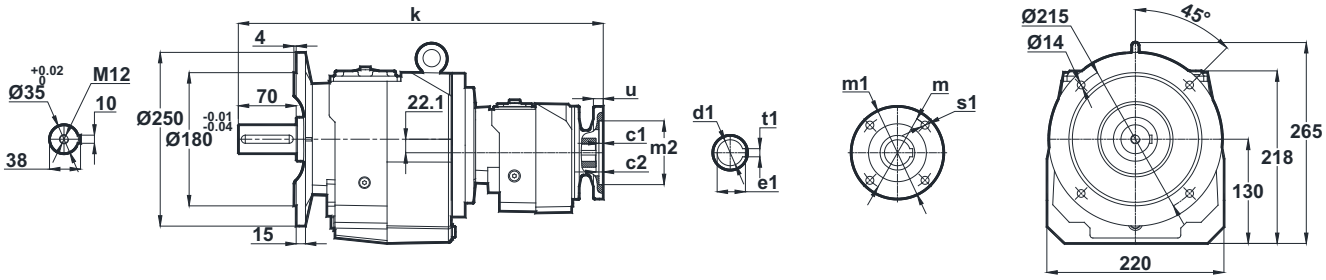
Opt. 2

-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..

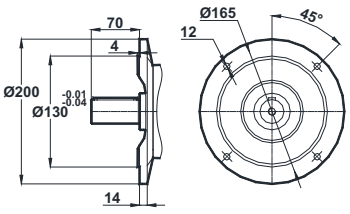


NN285-A.. / B..
NN286-A.. / B..

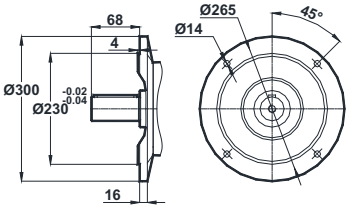


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	186.5	10	488	11	4	12.8
63/B14	2.5		5.5	75	90	60						
71/B5	4	4.5	11	130	160	110	188	12	489.5	14	5	16.3
71/B14	3		7	85	105	70		10				
80/B5	4	5	12	165	200	130	203	12	504.5	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	203	12	504.5	24	8	27.3
90/B14			9	115	140	95						
100-112/B5	4.5	5	15	215	250	180	214	14	515.5	28	8	31.3
100-112/B14	4	5.5	9	130	160	110						

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



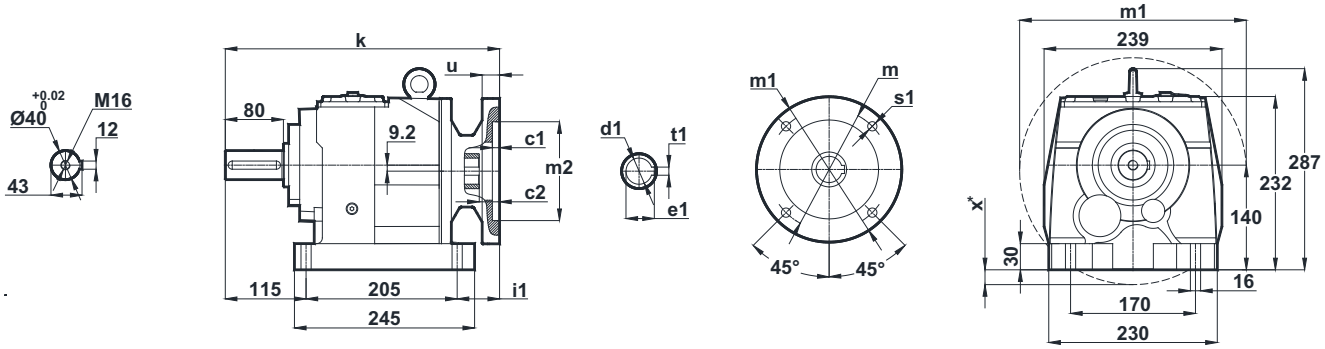
Opt. 1



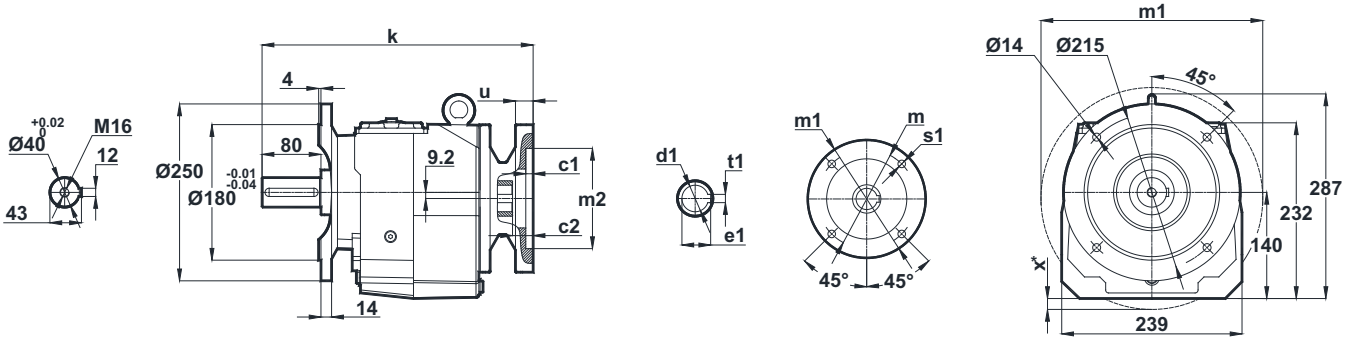
Opt. 2

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

MN372-A.. / B..
MN373-A.. / B..

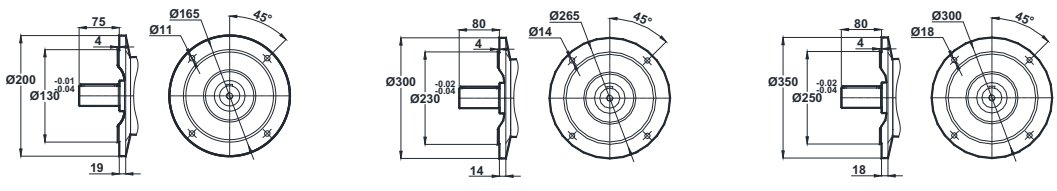


NN372-A.. / B..
NN373-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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 **80/B14**	4	9	12 7	165 100	200 120	130 80	43.5	12	364	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	43.5	12	364	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	60.5	15	381	28	8	31.3	-
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	80.5	15	401	38	10	41.3	20 -
160/B5	5.5	10	19	300	350	250	160	20	480.5	42	12	45.3	45

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

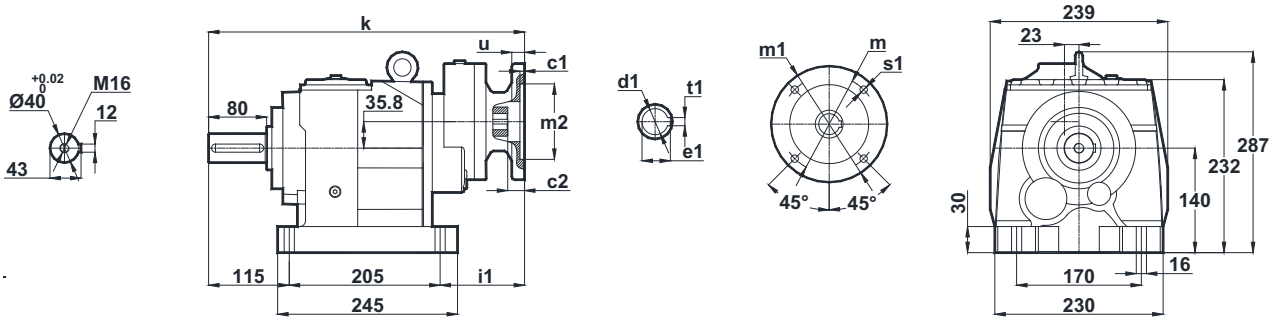


Opt. 1 **Opt. 2** **Opt. 3**

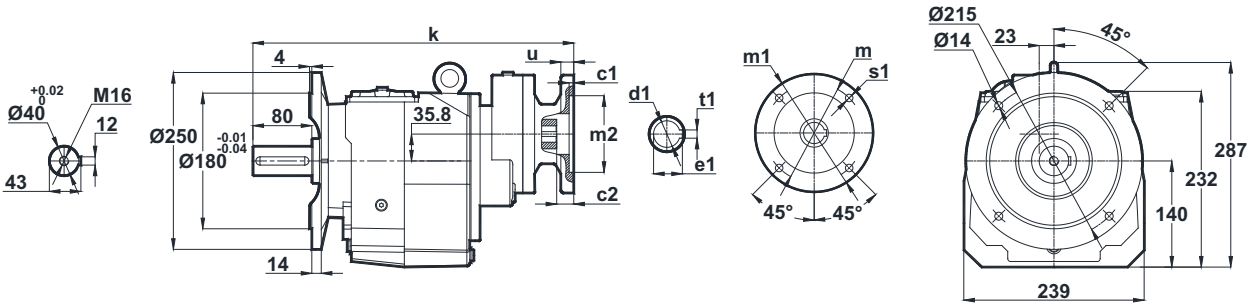
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN374-A.. / B..

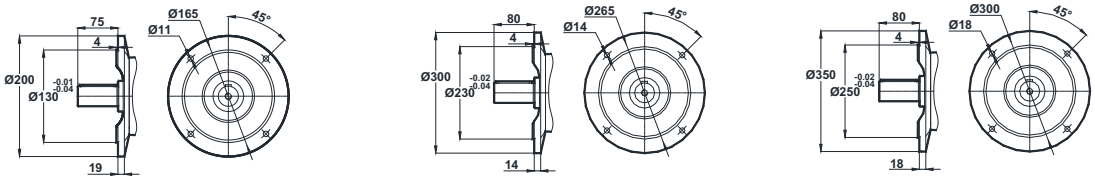


NN374-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	120.5	12	441	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	91.5	12 10	412	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	120.5	12	441	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	120.5	12	441	24	8	27.3

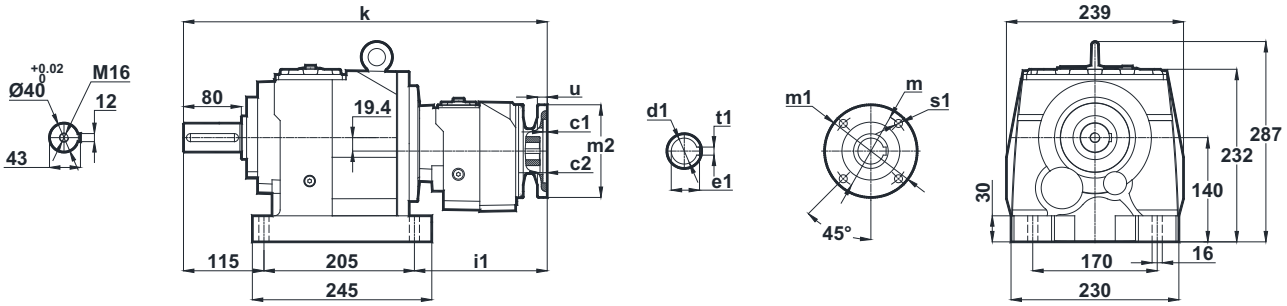
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



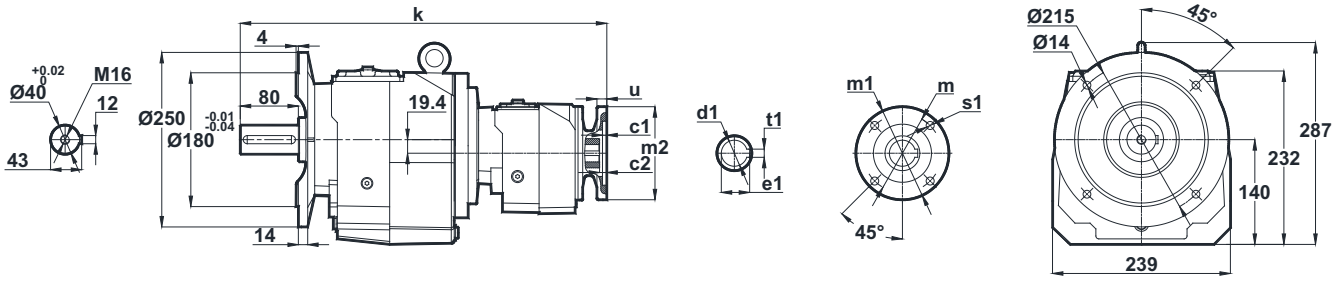
Opt. 1 **Opt. 2** **Opt. 3**

-Mil ucu çektirme 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..

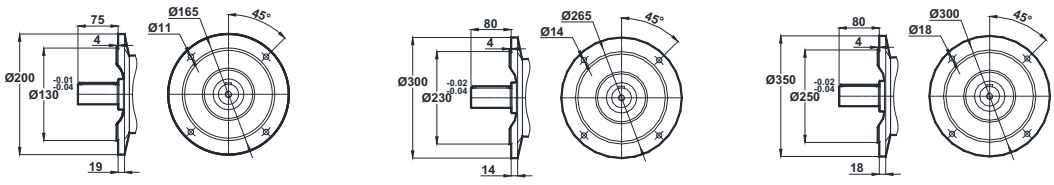


NN375-A.. / B..
NN376-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	185	10	509	11	4	12.8
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	186.5	12 10	510.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	201.5	12	525.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	201.5	12	525.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	5 5.5	15 9	215 130	250 160	180 110	212.5	14	536.5	28	8	31.3

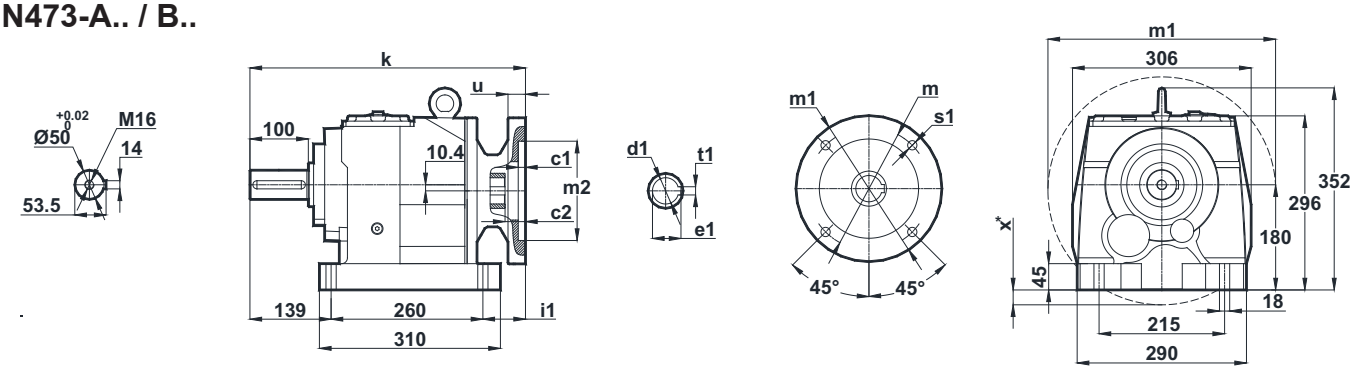
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



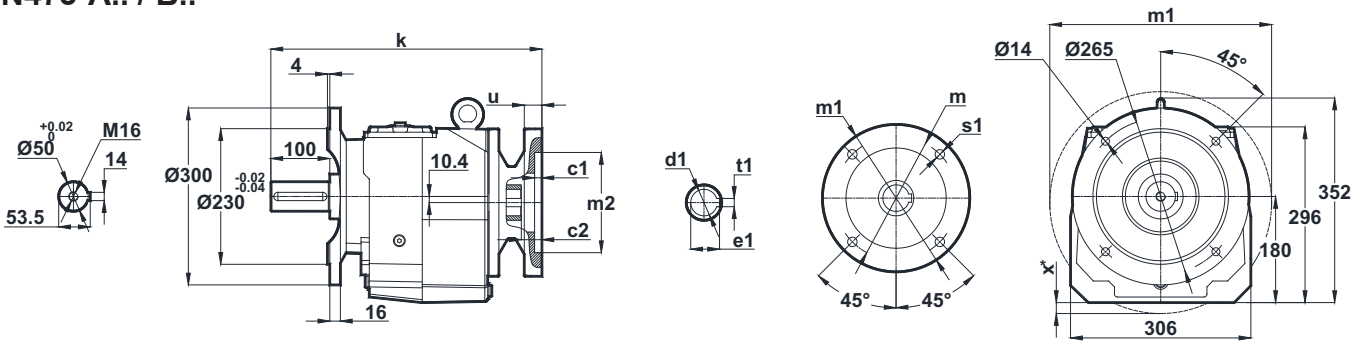
Opt. 1 **Opt. 2** **Opt. 3**

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

MN472-A.. / B..
MN473-A.. / B..

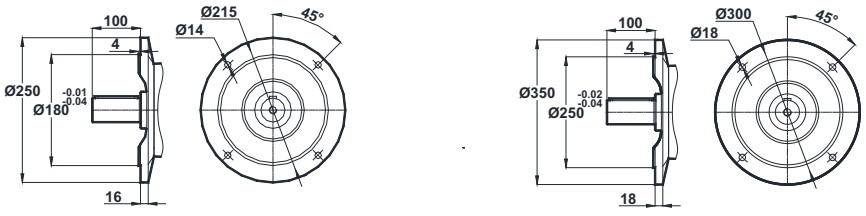


NN472-A.. / B..
NN473-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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 **90/B14**	4	5	12 9	165 115	200 140	130 95	27.5	12	426.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	46	15	445	28	8	31.3	-
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	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	6
180/B5	5.5	10	19	300	350	250	144	20	543	48	14	51.8	6

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



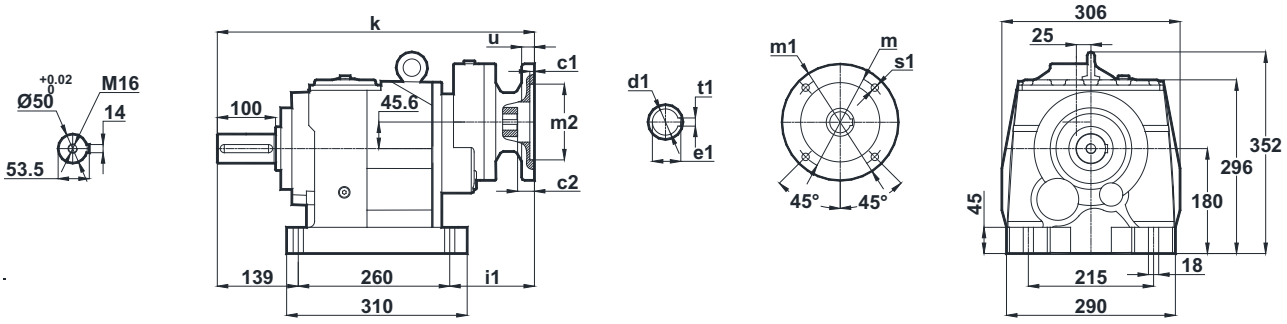
Opt. 1

Opt. 2

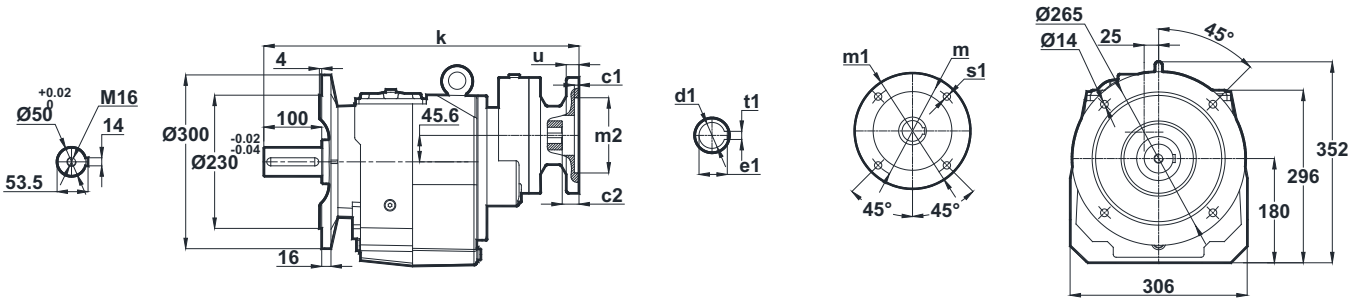
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN474-A.. / B..

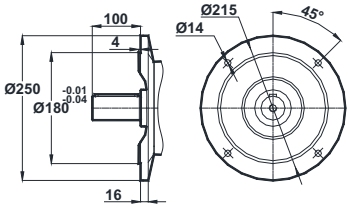


NN474-A.. / B..

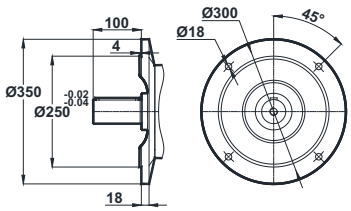


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	125.5	12	524.5	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	125.5	12	524.5	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	125.5	12	524.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	142.5	15	541.5	28	8	31.3

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



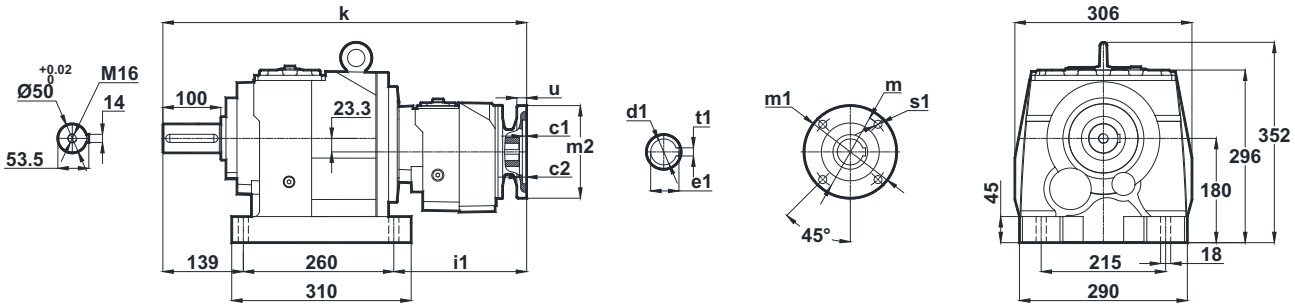
Opt. 1



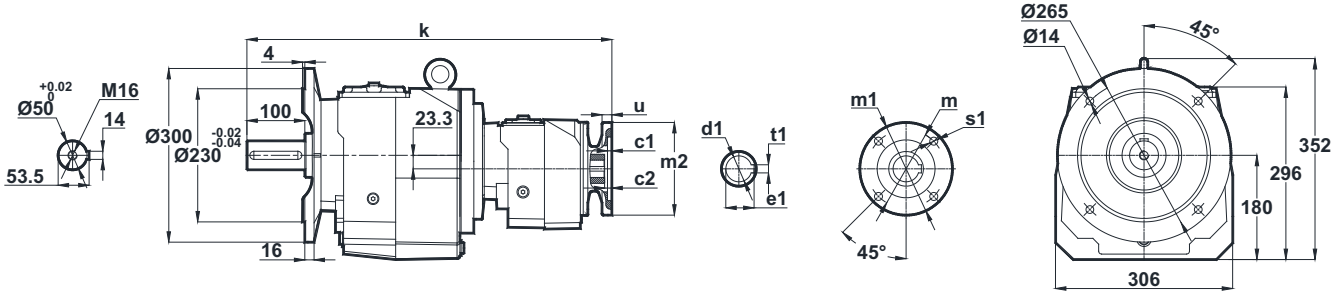
Opt. 2

-Mil ucu çektirme 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..

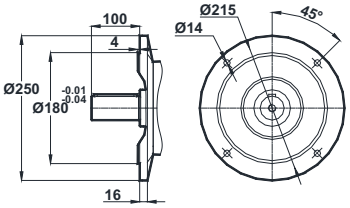


NN475-A.. / B..
NN476-A.. / B..

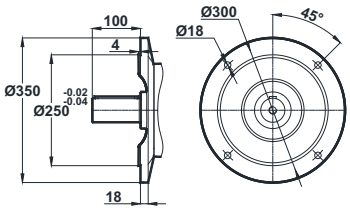


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	253.5	12	652.5	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	224.5	12 10	623.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	253.5	12	652.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	253.5	12	652.5	24	8	27.3
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	246.5	12	645.5	28	8	31.3
132/B5 **132/B14**	4.5	7	15 9	265 165	300 200	230 130	293.5	20	692.5	38	10	41.3

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



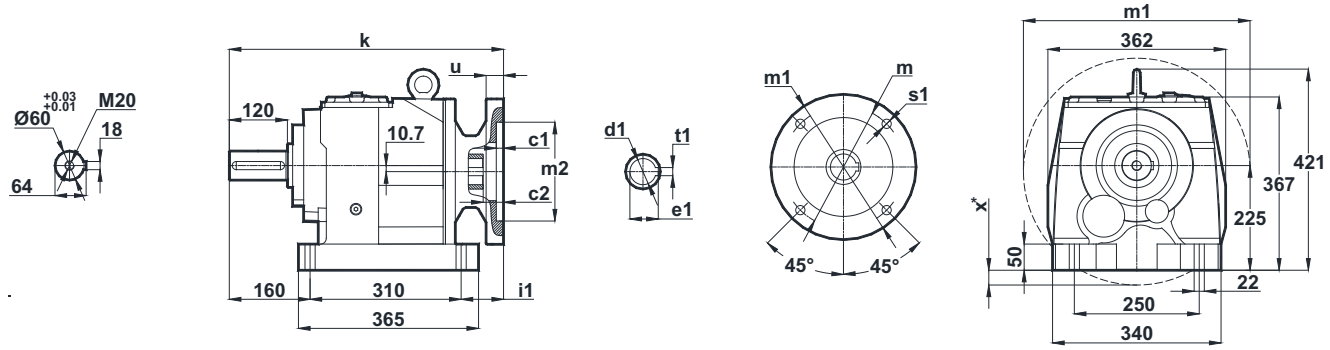
Opt. 1



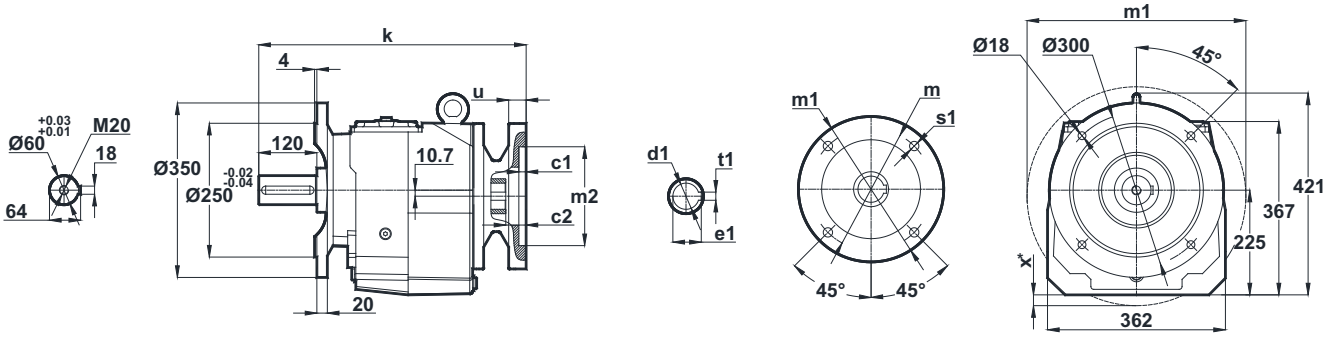
Opt. 2

-Mil ucu çektirme 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..

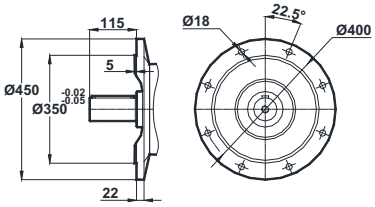


NN572-A.. / B..
NN573-A.. / B..

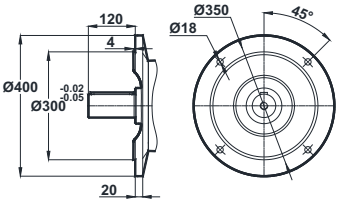


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
100-112/B5	4.5	9	15	215	250	180	36.5	15	507.5	28	8	31.3	-
132/B5 **132/B14**	4.5	9	15 11	265 165	300 200	230 130	57.5	15	528.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	133	18	604	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	133	18	604	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	153	19	624	55	16	59.3	-

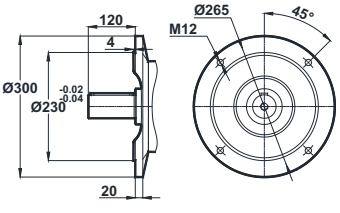
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

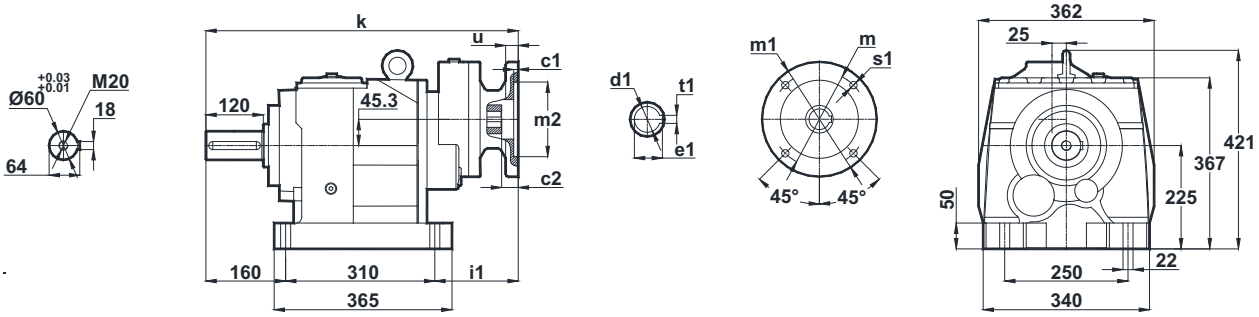


Opt. 3

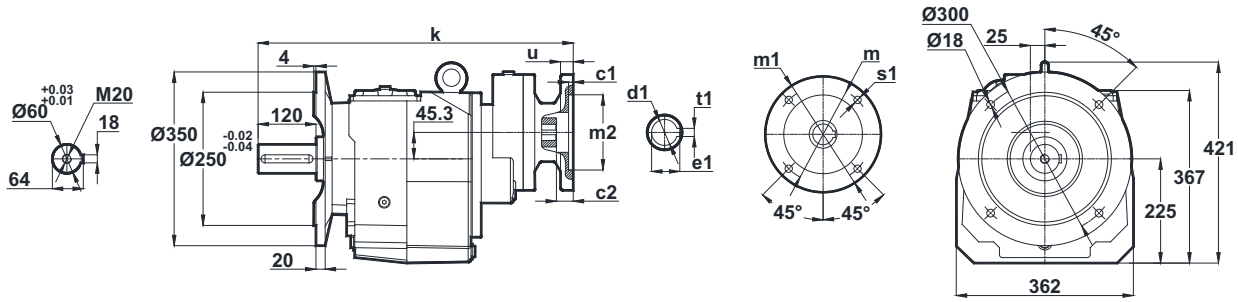
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN574-A.. / B..

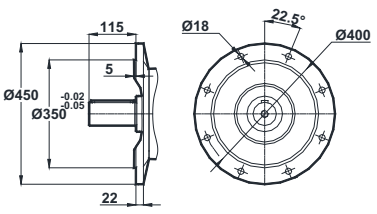


NN574-A.. / B..

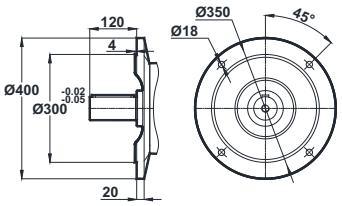


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	116.5	12	587.5	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	116.5	12	587.5	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	116.5	12	587.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	133.5	15	604.5	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	153.5	15	624.5	38	10	41.3

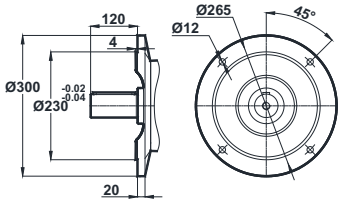
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



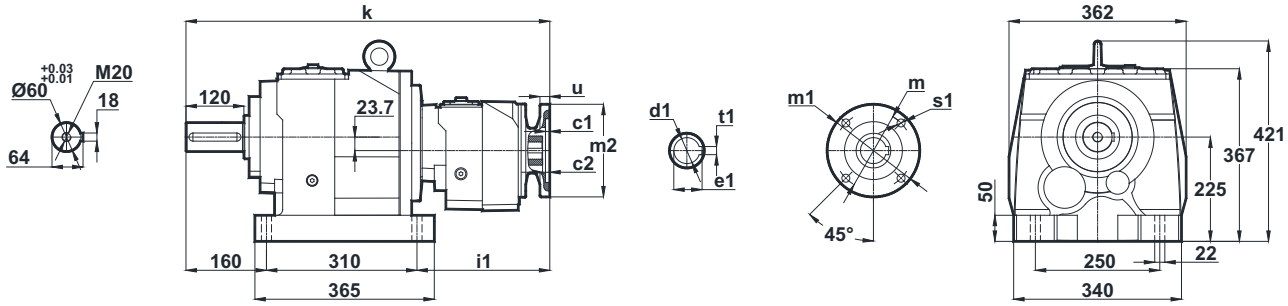
Opt. 2



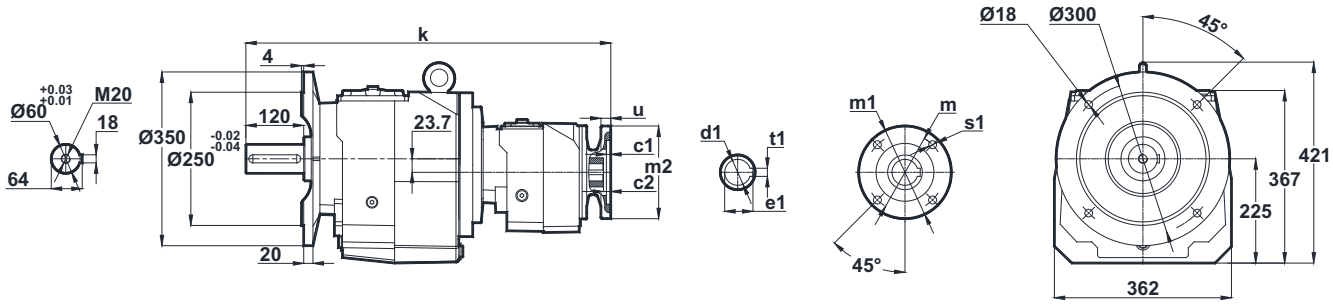
Opt. 3

-Mil ucu çektirme 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..

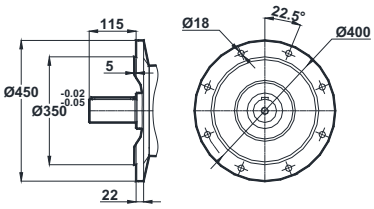


NN575-A.. / B..
NN576-A.. / B..

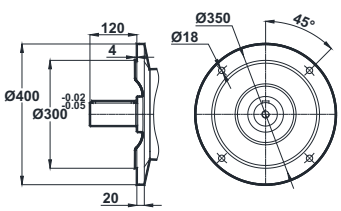


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	246.5	12	717.5	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	217.5	12 10	688.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	246.5	12	717.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	246.5	20	717.5	38	10	41.3

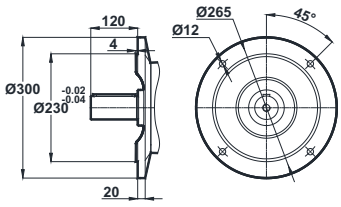
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



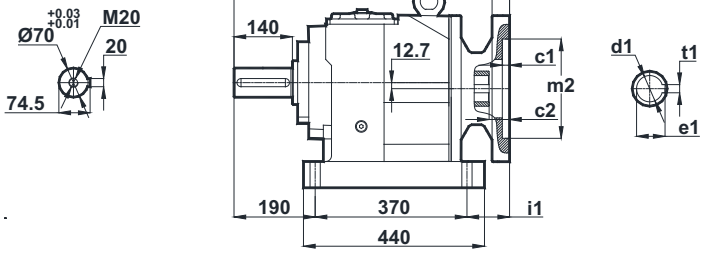
Opt. 2

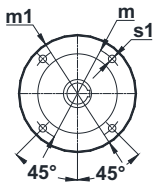


Opt. 3

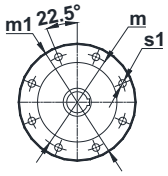
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MN672-A.. / B..
MN673-A.. / B..

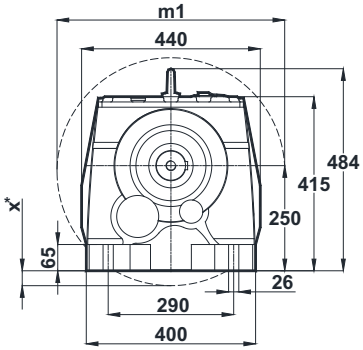




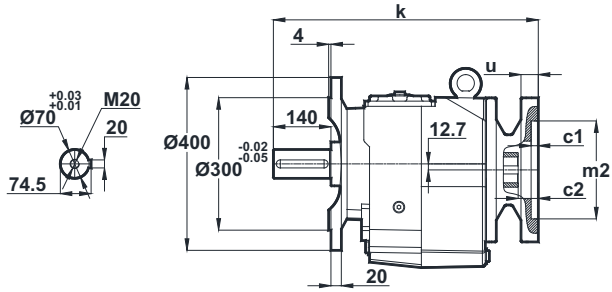
112 - 200 Tip / *Type* / Typ

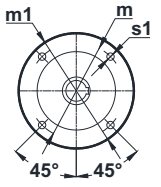


225 Tip / *Type* / Typ

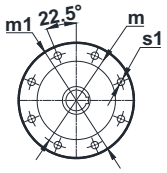


NN672-A.. / B..
NN673-A.. / B..

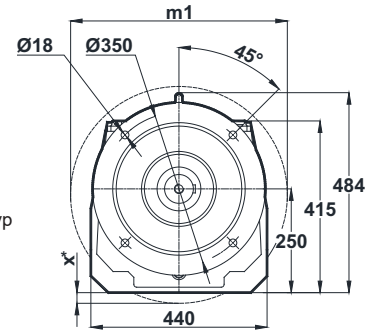




112 - 200 Tip / *Type* / Typ

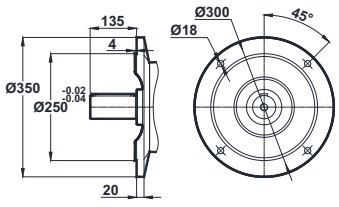


225 Tip / *Type* / Typ

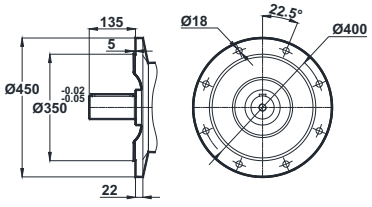


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
100-112/B5	4.5	14.5	15	215	250	180	88	15	567.5	28	8	31.3	-
132/B5 **132/B14**	4.5	9	15	265 165	300 200	230 130	23	15	582.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	98	20	657.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	98	20	657.5	48	14	51.8	-
200/B5	5.5	10	19	350	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	-

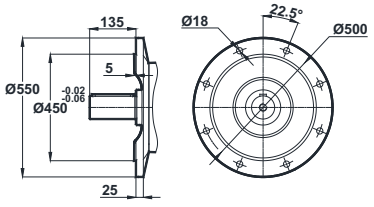
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

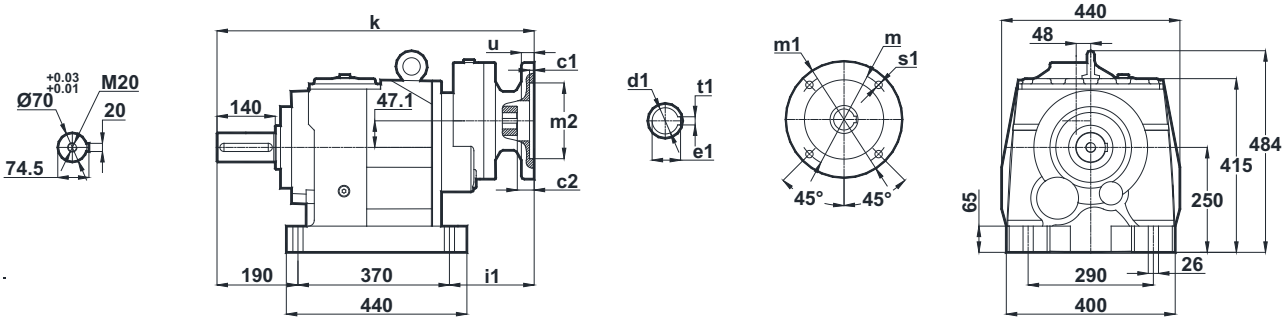


Opt. 3

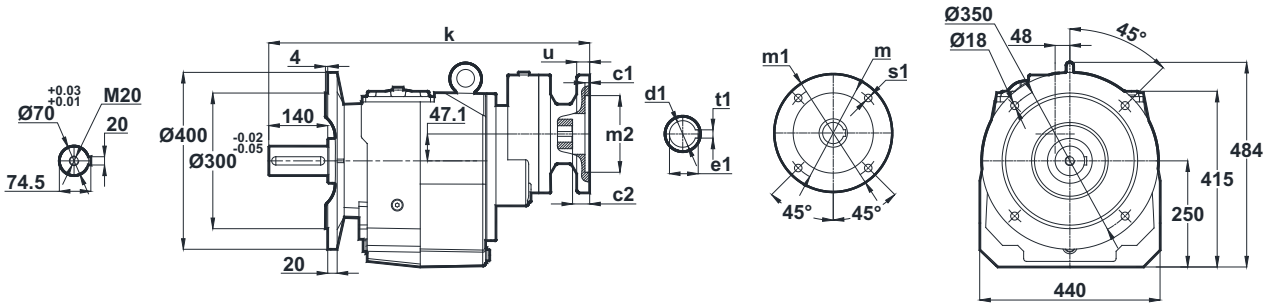
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN674-A.. / B..

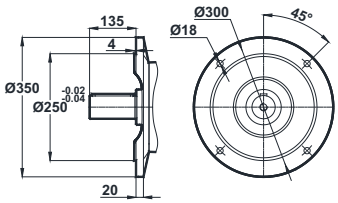


NN674-A.. / B..

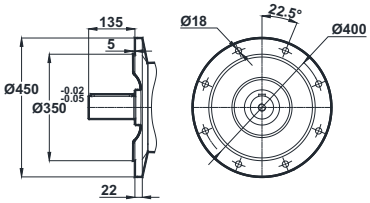


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	98	12	657.5	19	6	21.8
90/B5 **90/B14**	4	5	13 9	165 115	200 140	130 95	98	12	657.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	116.5	15	676	28	8	31.3

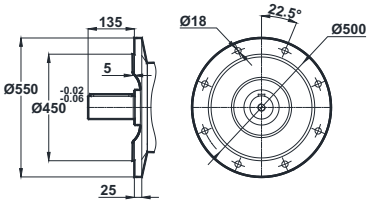
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



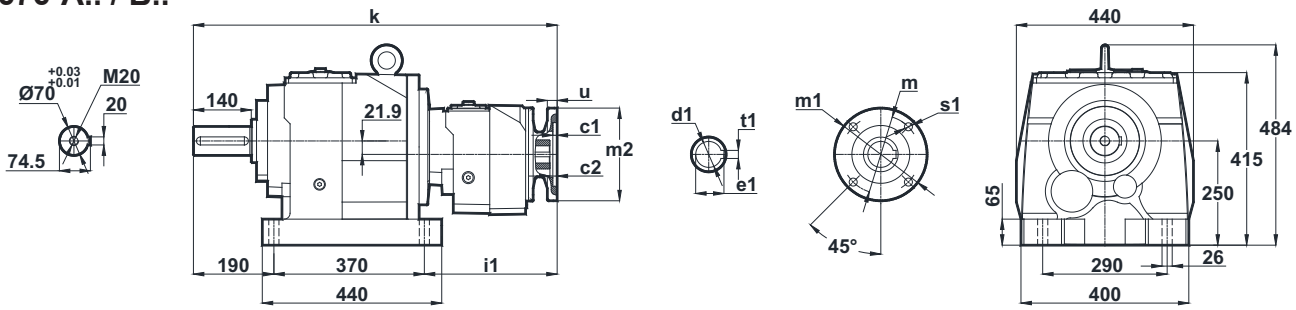
Opt. 2



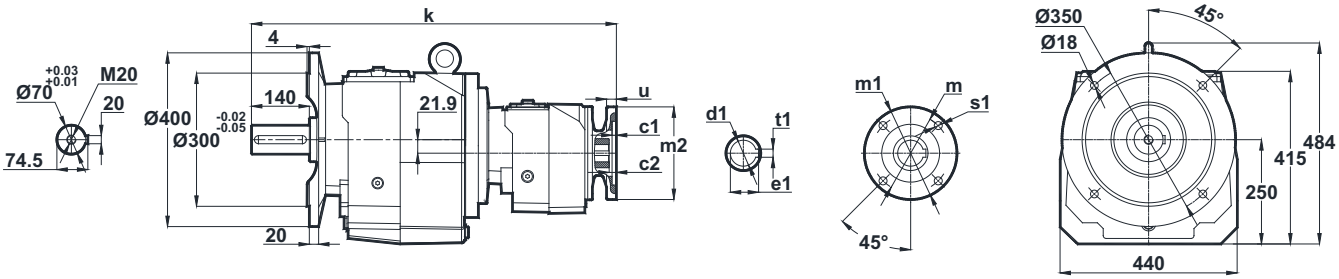
Opt. 3

-Mil ucu çektirme 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..

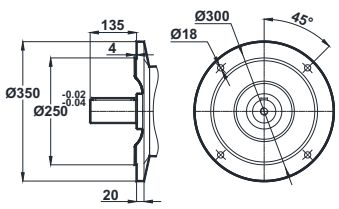


NN675-A.. / B..
NN676-A.. / B..

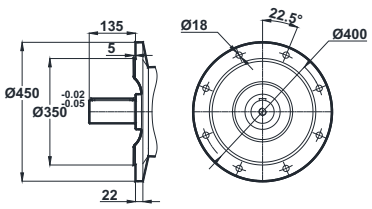


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	248.5	12	808	14	5	16.3
80/B5 **80/B14**	4	9	13 7	165 100	200 120	130 80	248.5	12	808	19	6	21.8
90/B5 **90/B14**	4	9	13 9	165 115	200 140	130 95	248.5	12	808	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	265.5	15	825	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	285.5	15	845	38	10	41.3
160/B5	5.5	10	19	300	350	250	365	20	924.5	42	12	45.3

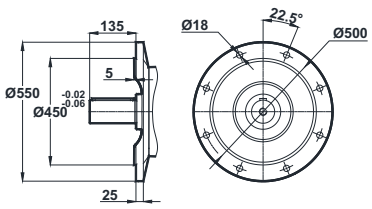
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



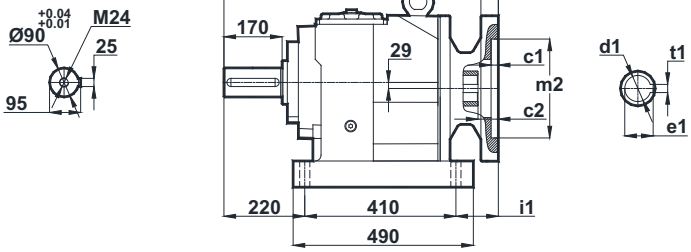
Opt. 2

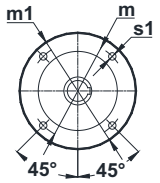


Opt. 3

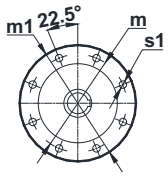
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MN772-A..
MN773-A..

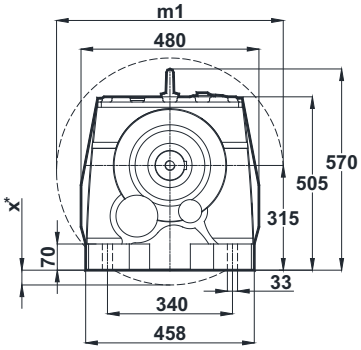




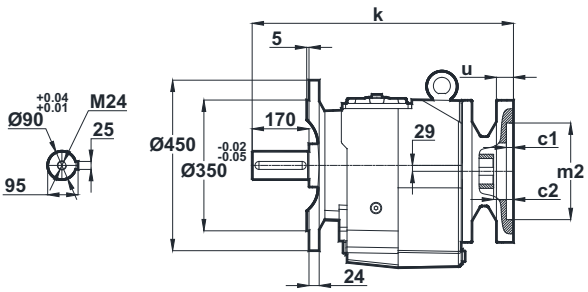
132 - 200 Tip / *Type* / Typ

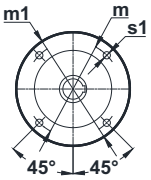


225 - 250 Tip / *Type* / Typ

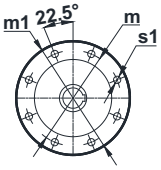


NN772-A..
NN773-A..

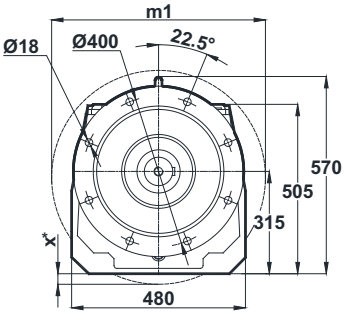




132 - 200 Tip / *Type* / Typ

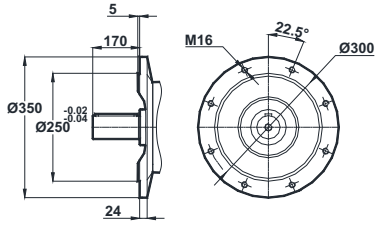


225 - 250 Tip / *Type* / Typ

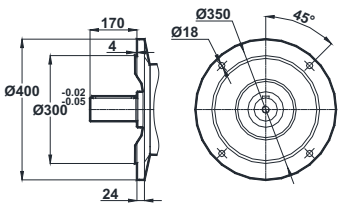


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
132/B5	4.5	15	15	265	300	230	37.5	15	667.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	107	20	737	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	107	20	737	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	129	20	759	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	182	24	812	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	182	24	812	65	18	69.4	-

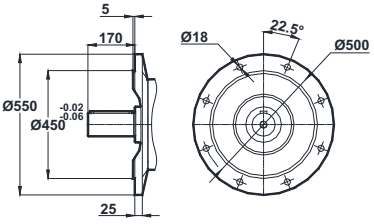
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

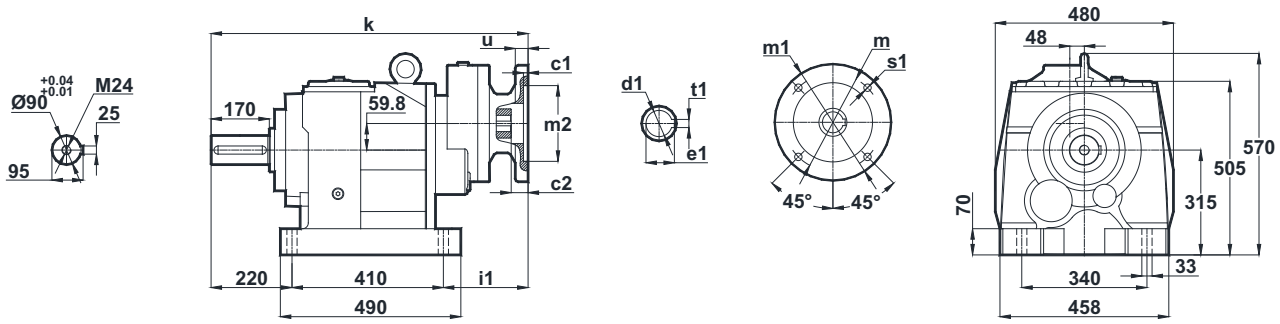


Opt. 3

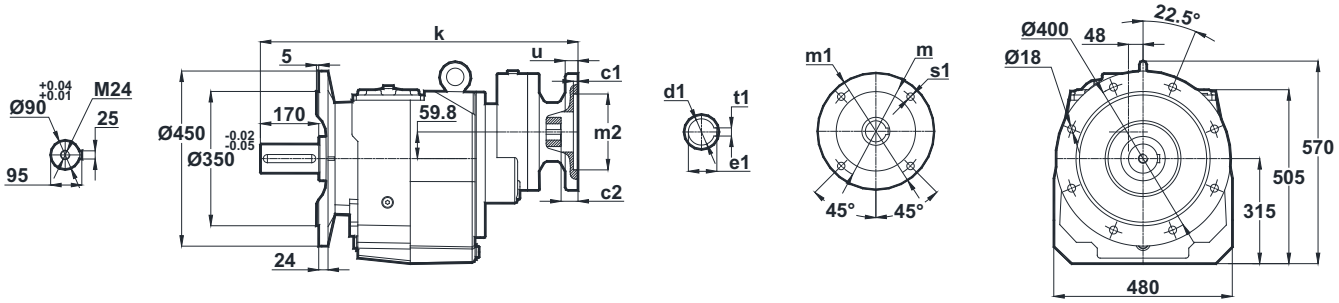
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

-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.. / B..

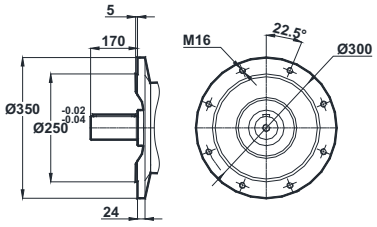


NN774-A.. / B..

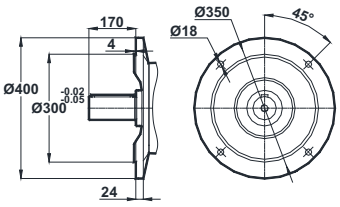


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	112.5	12	742.5	24	8	27.3
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	112.5	12	742.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	131	15	761	28	8	31.3
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	149.5	15	779.5	38	10	41.3

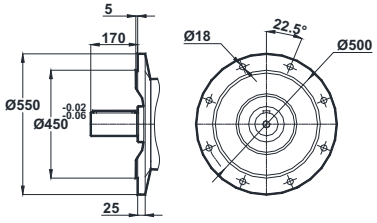
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



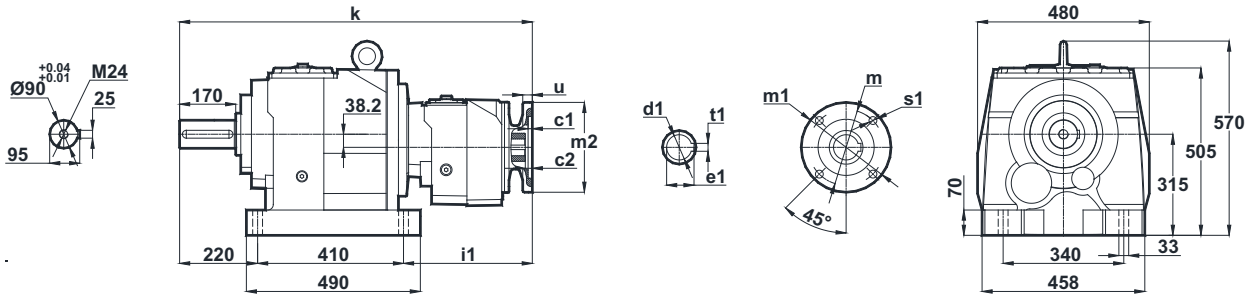
Opt. 2



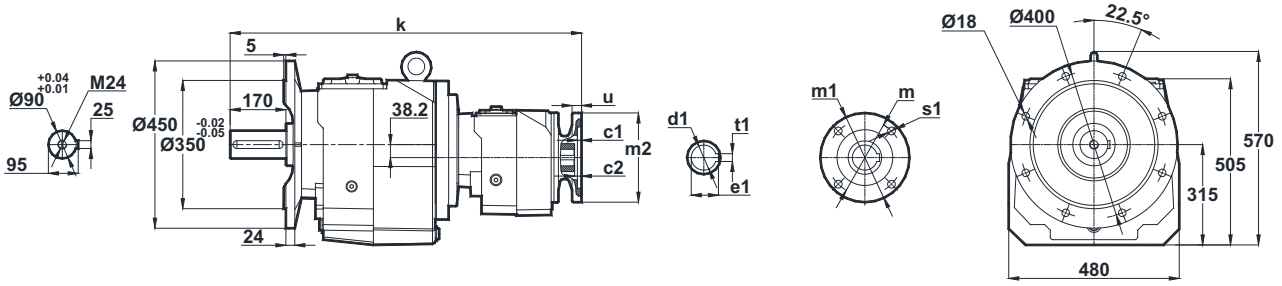
Opt. 3

-Mil ucu çektirme 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..

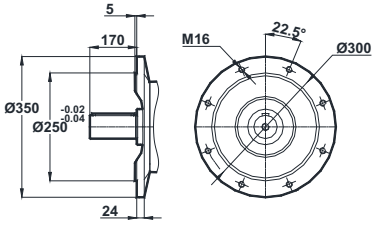


NN775-A.. / B..
NN776-A.. / B..

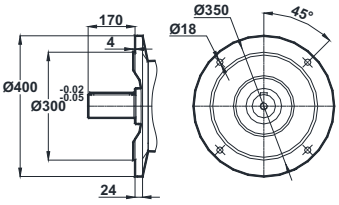


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	266	12	896	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	266	12	869	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	266	12	896	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	283	15	913	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	303	15	933	38	10	41.3
160/B5	5.5	10	19	300	350	250	382.5	20	1012.5	42	12	45.3

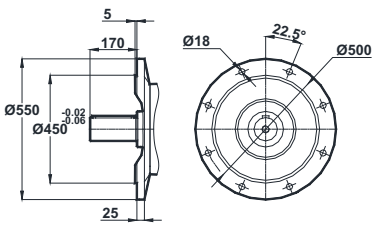
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



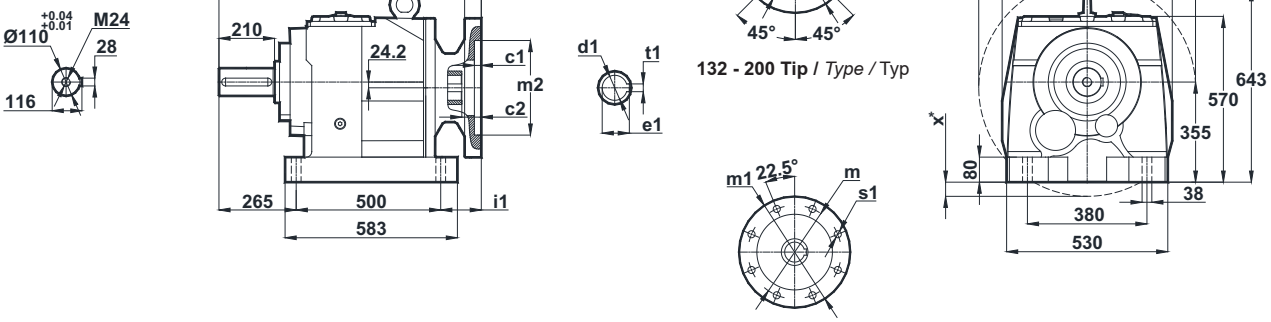
Opt. 2



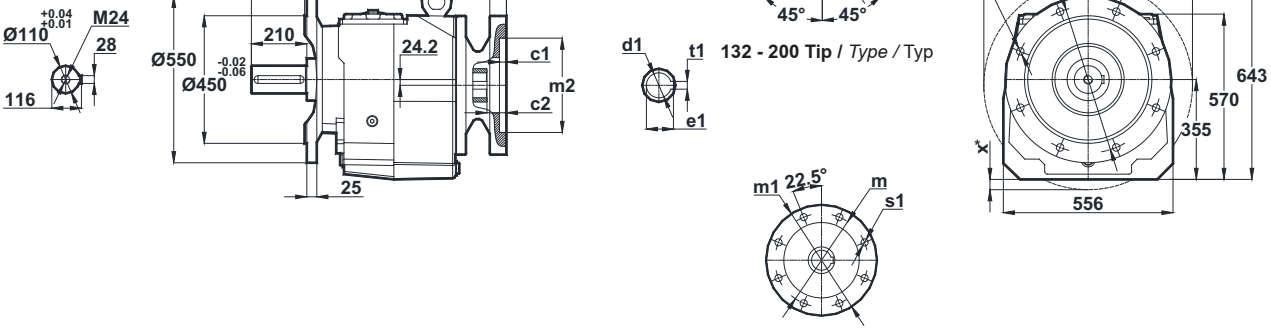
Opt. 3

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

MN872-A..
MN873-A..

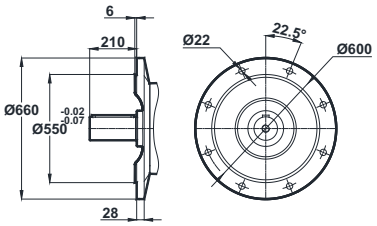


NN872-A..
NN873-A..



	c1	c2	s1	m	m1	m2(H7)	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

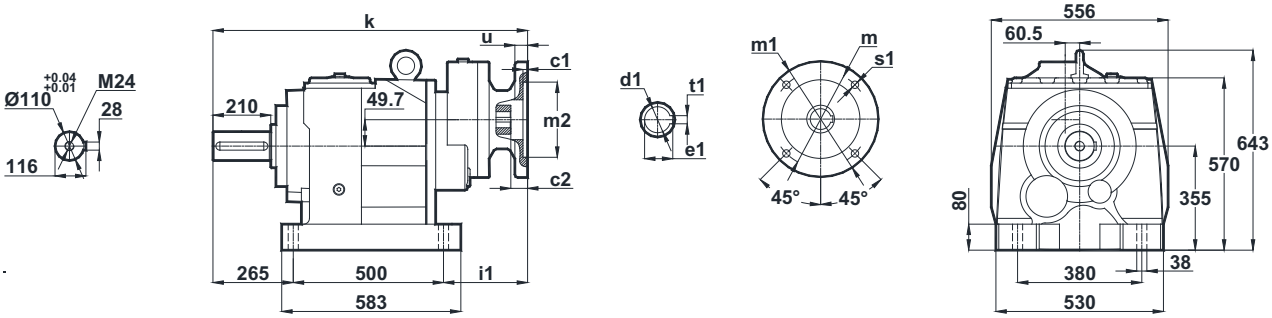


Opt. 1

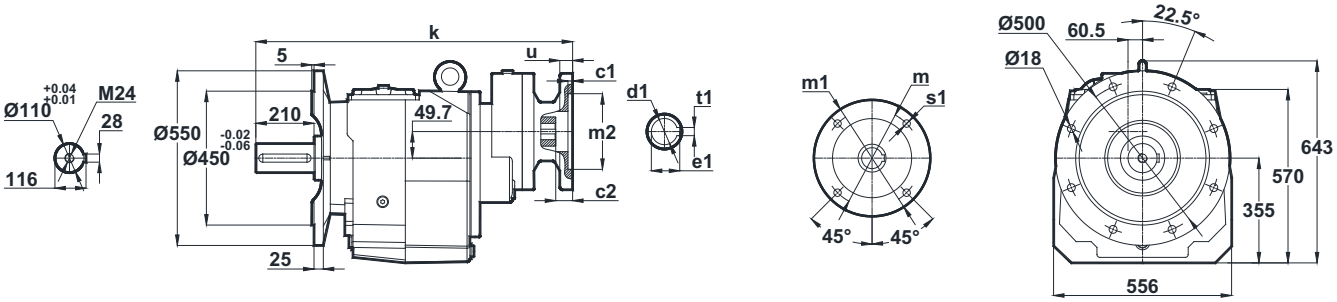
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MN874-A.. / B..

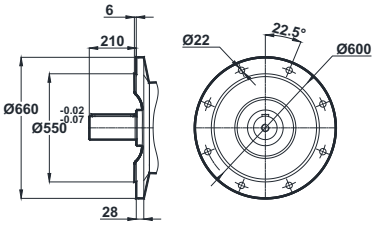


NN874-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
100-112/B5	4.5	9	15	215	250	180	130.5	15	895.5	28	8	31.3
132/B5 **132/B14**	4.5	9	15 11	265 165	300 200	230 130	151.5	15	916.5	38	10	41.3
160/B5	5.5	10	19	300	350	250	227	18	992	42	12	45.3
180/B5	5.5	10	19	300	350	250	227	18	992	48	14	51.8
200/B5	5.5	10	19	350	400	300	247	19	1012	55	16	59.3

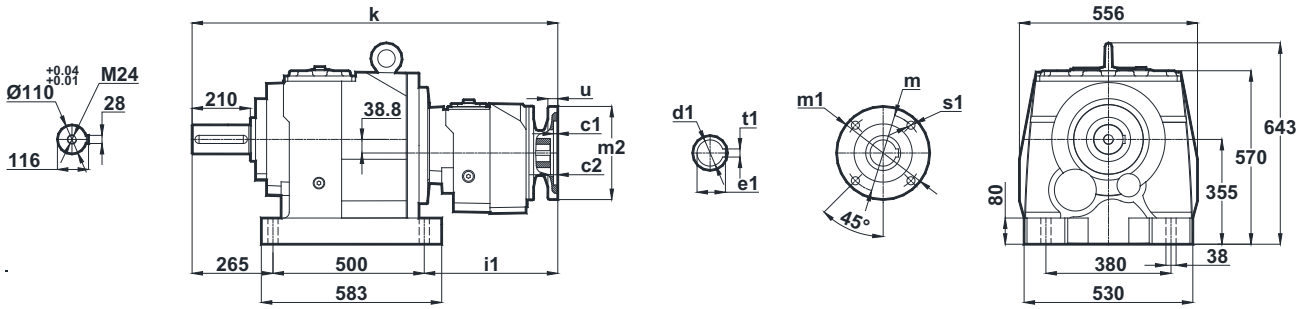
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



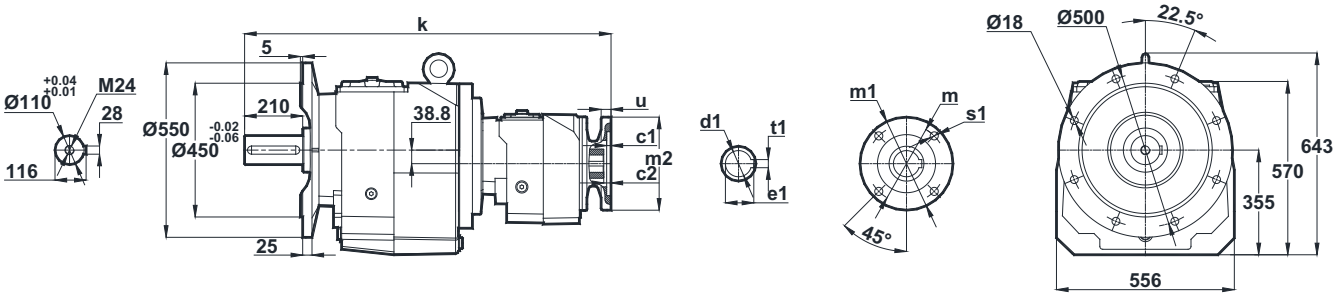
Opt. 1

-Mil ucu çektirme 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..

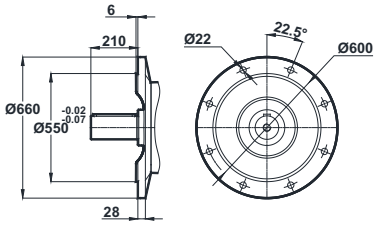


NN875-A.. / B..
NN876-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	248	12	1013	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	248	12	1013	19	6 8	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	248	12	1013	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	265	15	1030	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	285	20	1050	38	10	41.3
160/B5	5.5	10	19	300	350	250	364.5	20	1129.5	42	12	45.3

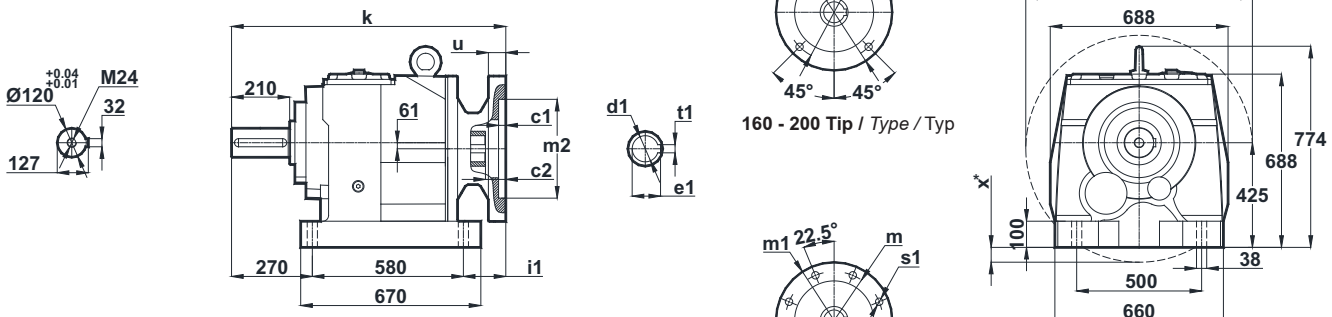
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



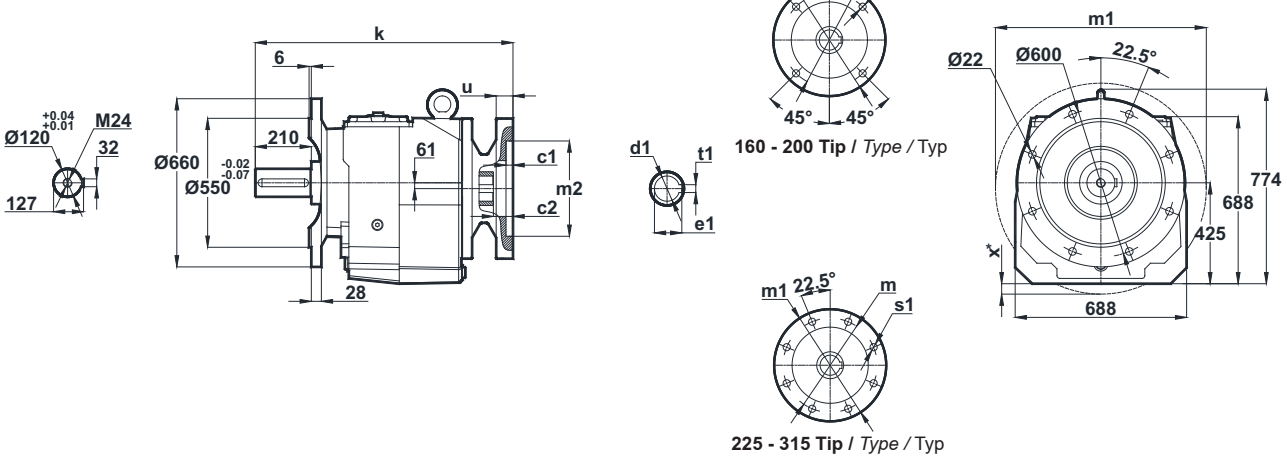
Opt. 1

-Mil ucu çektirme 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..

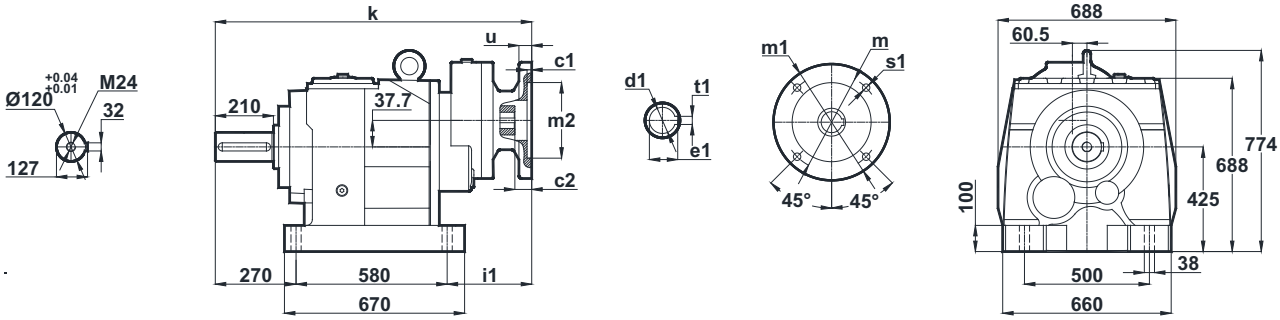


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
160/B5	5.5	10	19	300	350	250	60	20	910.5	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	60	20	910.5	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	84	22	934.5	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	126	24	976.5	60	18	64.4	-
250/B5	5.5	10	19	500	550	450	148	24	998.5	65	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	600	660	550	228	24	1078.5	80	22	85.4	-
315N/B5	6.5	15	24	600	660	550	228	24	1078.5	85	22	90.4	-
315L/B5	6.5	15	24	600	660	550	228	24	1078.5	90	25	95.4	-

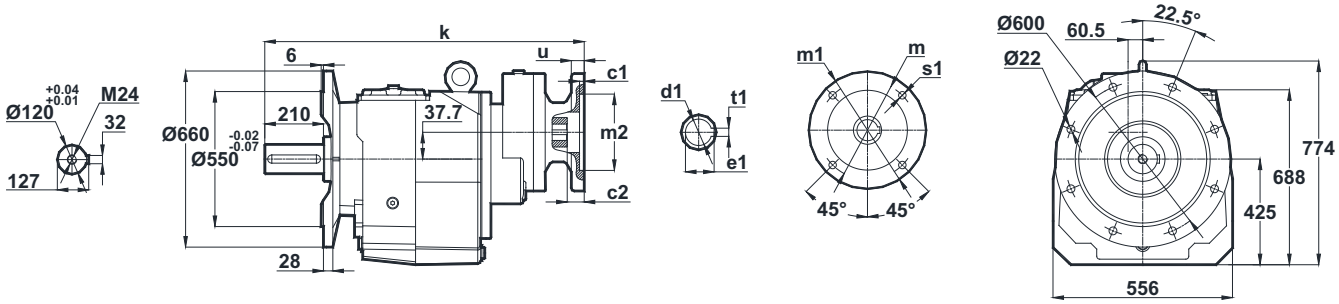
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

-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.. / B..



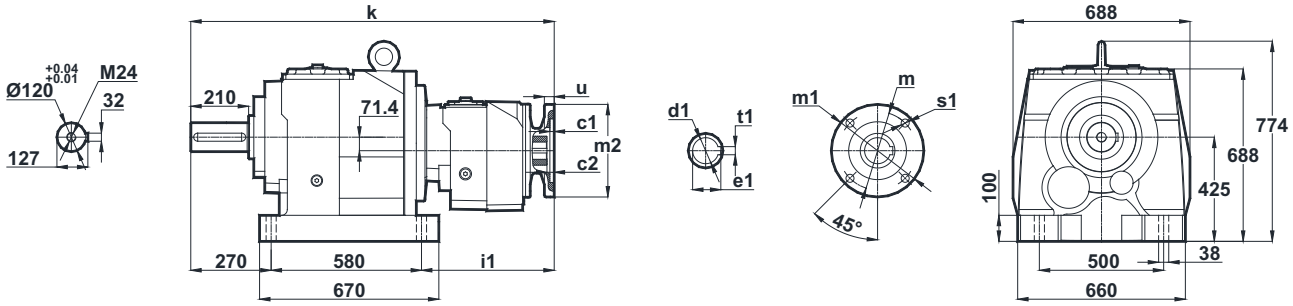
NN974-A.. / B..



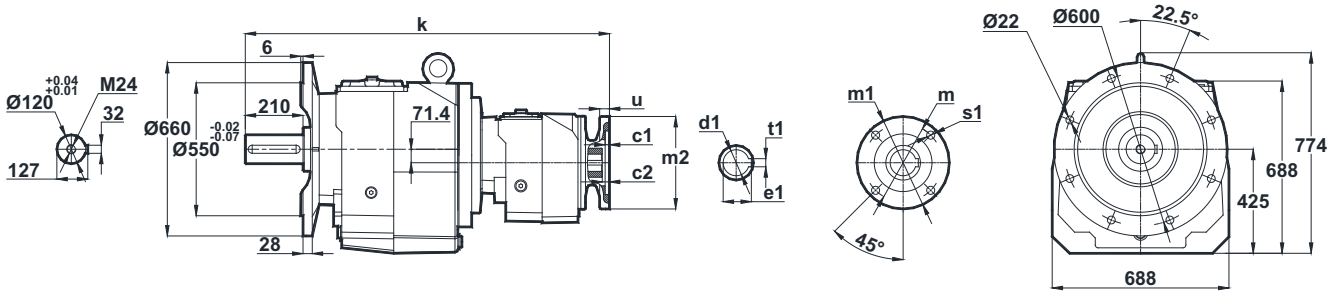
	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
100-112/B5	4.5	14.5	15	215	250	180	148.5	15	999	28	8	31.3
132/B5 **132/B14**	4.5	9	15	265 165	300 200	230 130	163.5	15	1014	38	10	41.3
160/B5	5.5	10	19	300	350	250	238.5	20	1089	42	12	45.3
180/B5	5.5	10	19	300	350	250	238.5	20	1089	48	14	51.8

-Mil ucu çektirme 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..

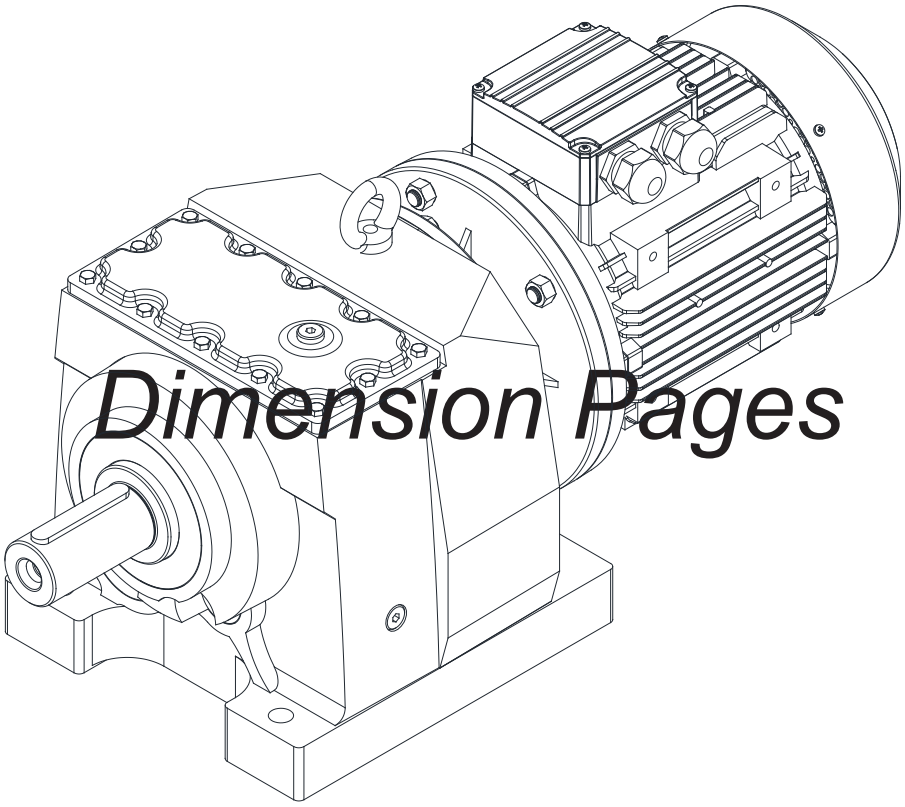


	c1	c2	s1	m	m1	m2 (H7)	i1	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	284.5	12	1135	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	284.5	12	1135	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	303	15	1153.5	28	8	31.3
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	321.5	15	1172	38	10	41.3
160/B5	5.5	10	19	300	350	250	401	20	1251.5	42	12	45.3
180/B5	5.5	10	19	300	350	250	401	20	1251.5	48	14	51.8

Notlar / *Notes* / Notizen

MV & NV Serisi / *Series* / Serie

Ölçü Sayfaları

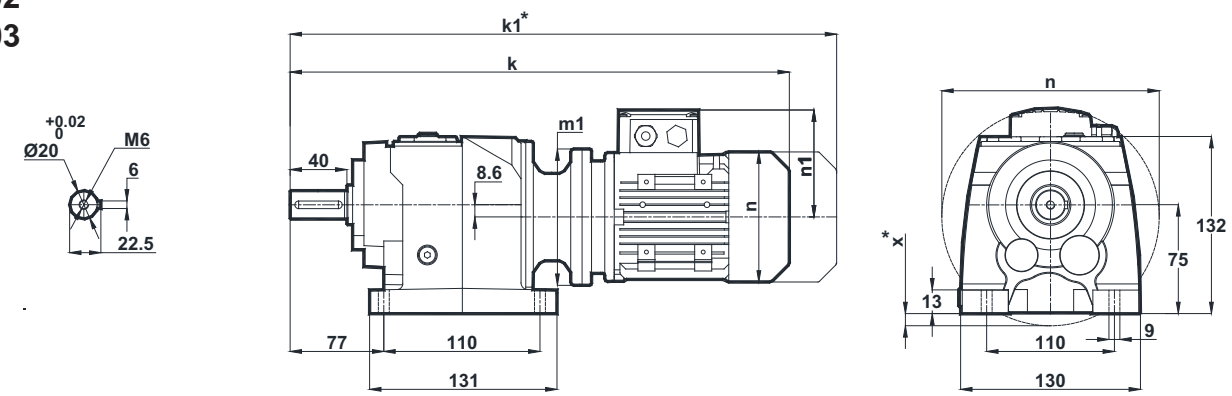


Dimension Pages

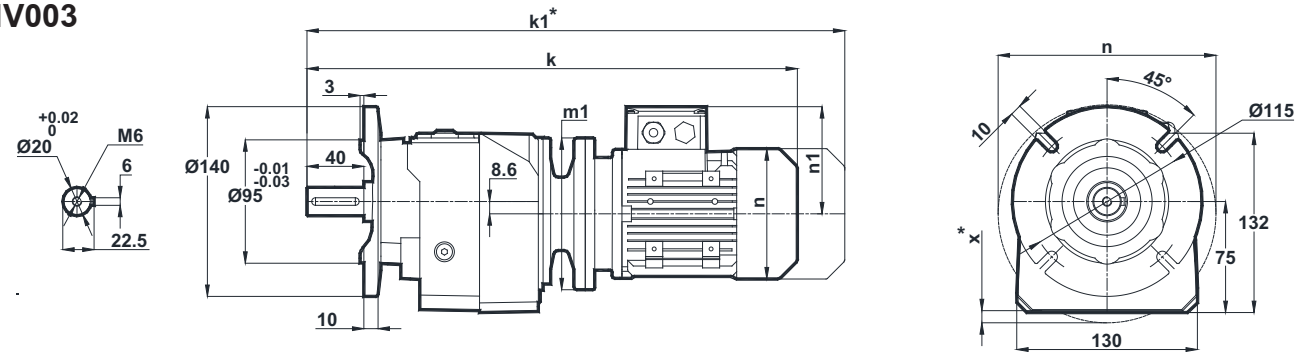
Abmessungsseiten

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

MV002
MV003

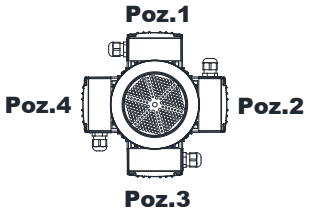


NV002
NV003



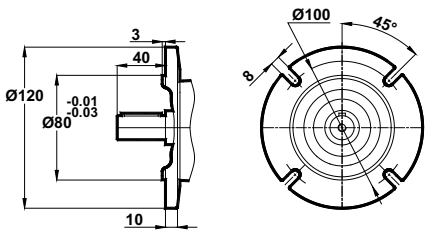
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**63/B5 63/B14**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**
k	404	427.5	464.5	505.5	505.5
k1	475	518.5	557.5	584.5	584.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	4	14	34	34	34
x (B14)	-	-	-	4	4

Klemens Kutusu /*Terminal Box* / Klemmenkasten

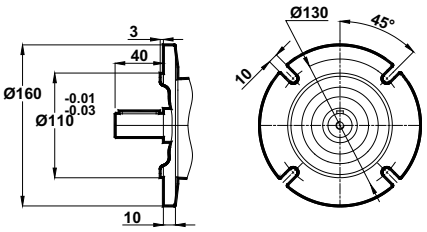


63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

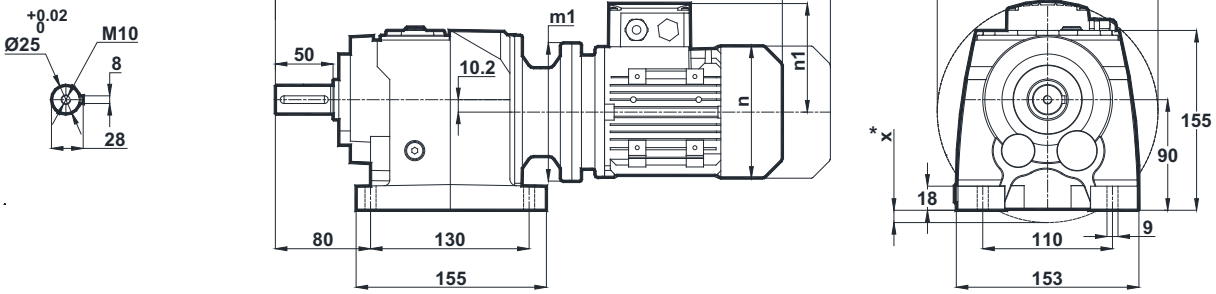


Opt. 2

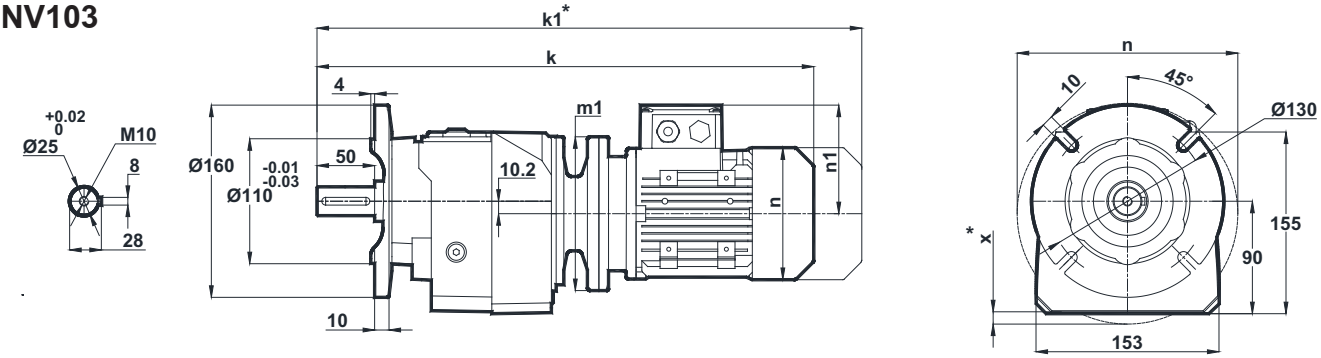
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV102
MV103

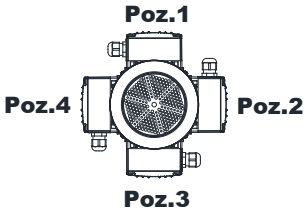


NV102
NV103



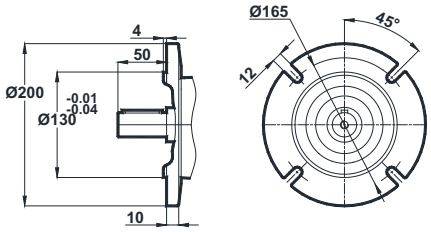
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**63/B5 63/B14**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**
k	428	451.5	488.5	529.5	529.5
k1	499	542.5	581.5	608.5	608.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	1	21	21	21

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

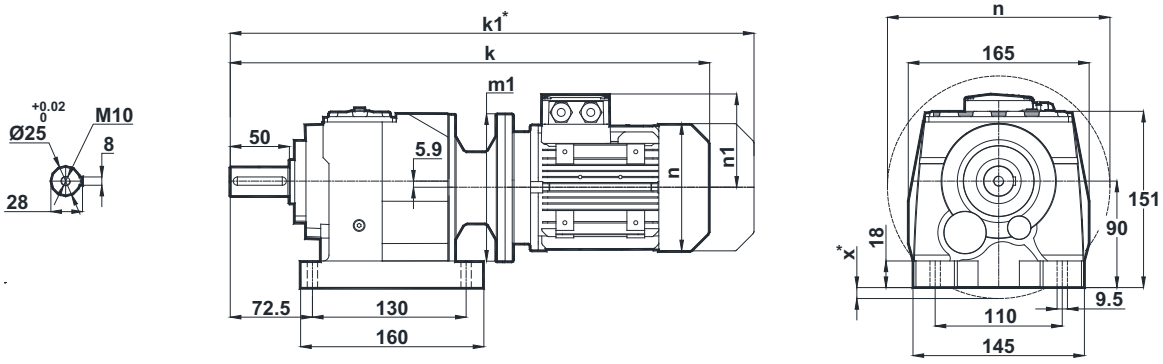


Opt. 1

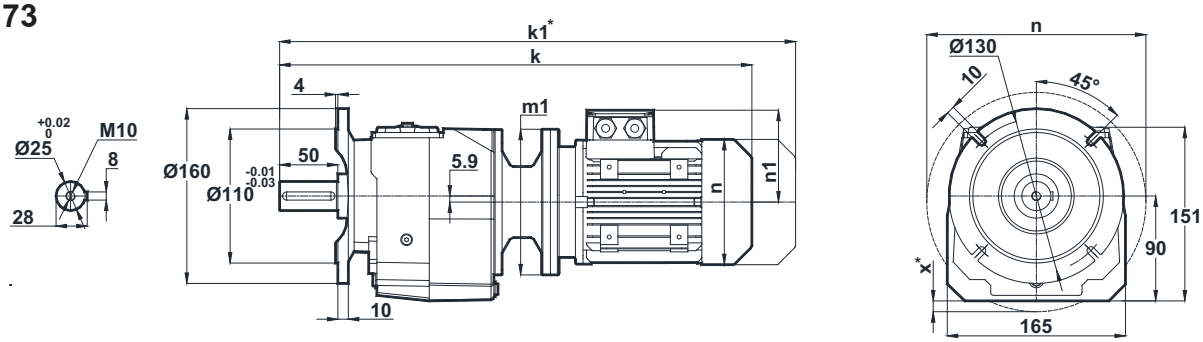
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV172
MV173

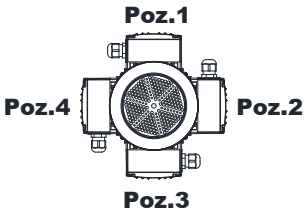


NV172
NV173



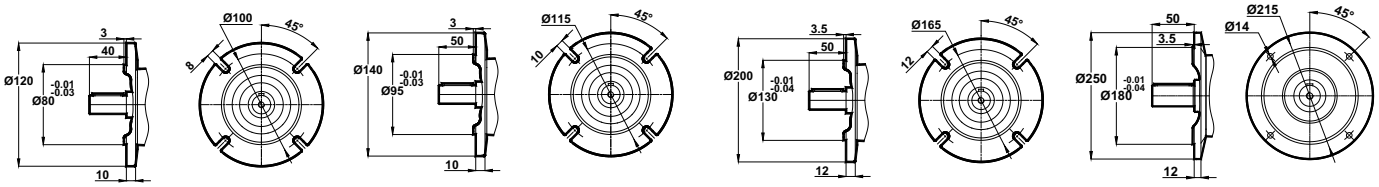
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
IEC	**63/B5 63/B14**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**
k	431	454.5	491.5	532.5	532.5	577.5	600.5
k1	502	545.5	584.5	611.5	611.5	685.5	705.5
n	119	137	155	176	176	193	215
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)	-	-	16	16	16	41	41

Klemens Kutusu /*Terminal Box* / Klemmenkasten



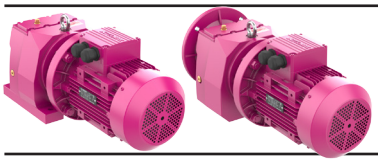
63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



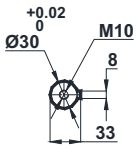
Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

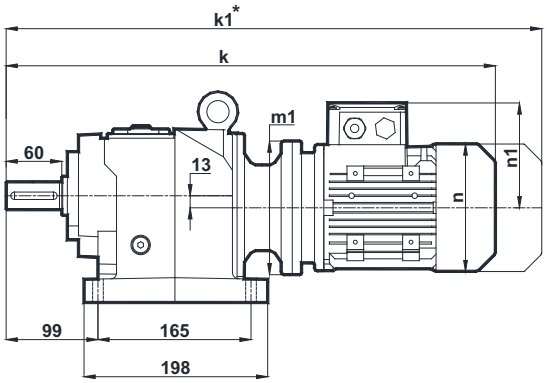
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

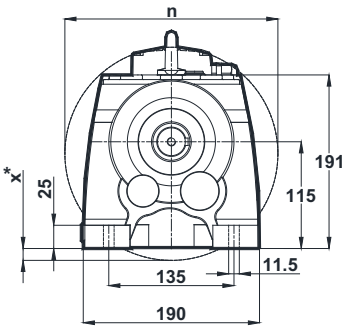


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

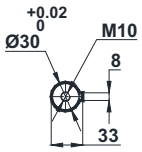
MV202
MV203

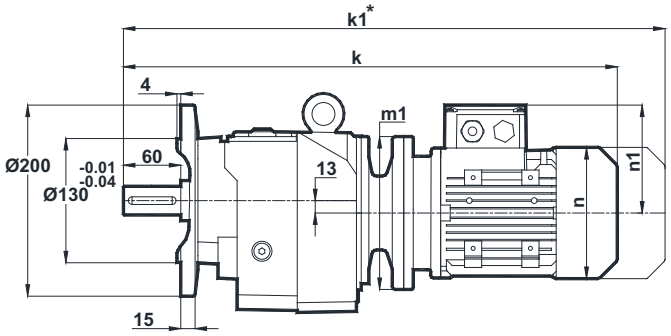


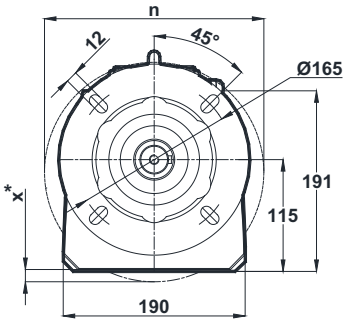




NV202
NV203

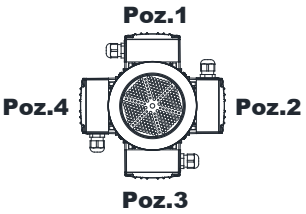






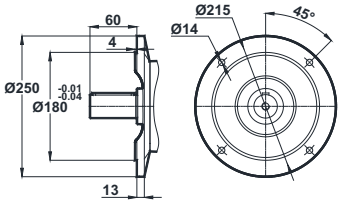
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**
k	512.5	505.5	556.5	597.5	597.5	624.5	647.5
k1	583.5	596.5	649.5	676.5	676.5	732.5	752.5
n	119	137	155	176	176	193	215
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)	-	-	-	-	-	23	23

Klemens Kutusu /*Terminal Box* / Klemmenkasten

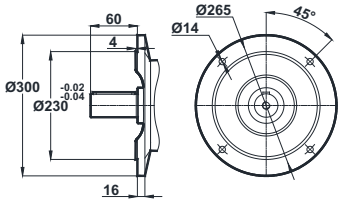


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

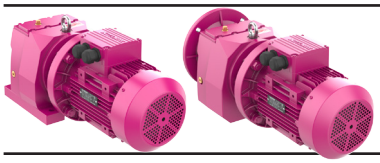


Opt. 1



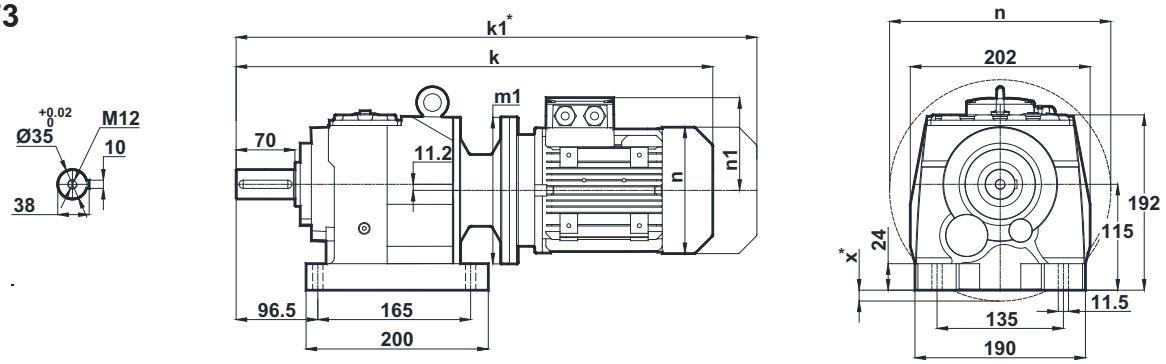
Opt. 2

*** " 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

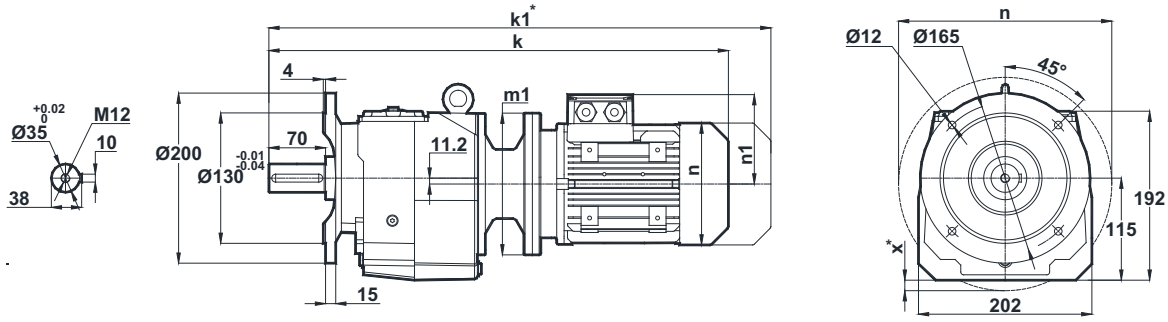


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV272
MV273

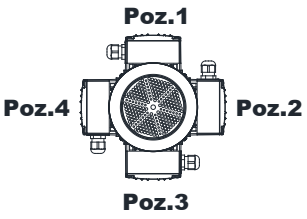


NV272
NV273



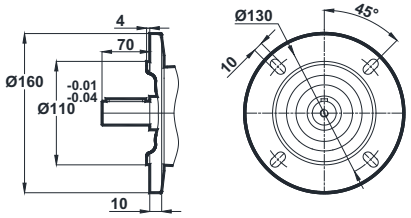
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**
k	513.5	506.5	557.5	598.5	598.5	625.5	648.5	778.5	778.5
k1	584.5	597.5	650.5	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)	-	-	-	-	-	22	22	47	47

Klemens Kutusu /*Terminal Box* / Klemmenkasten

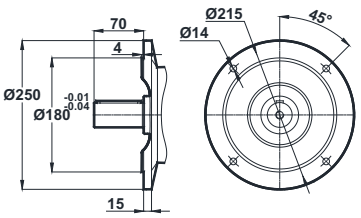


63-71-80-90-100-112-132

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

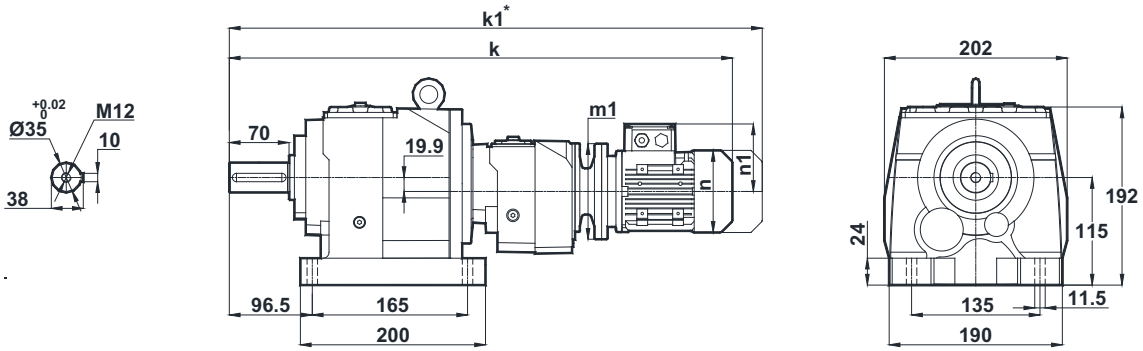


Opt. 2

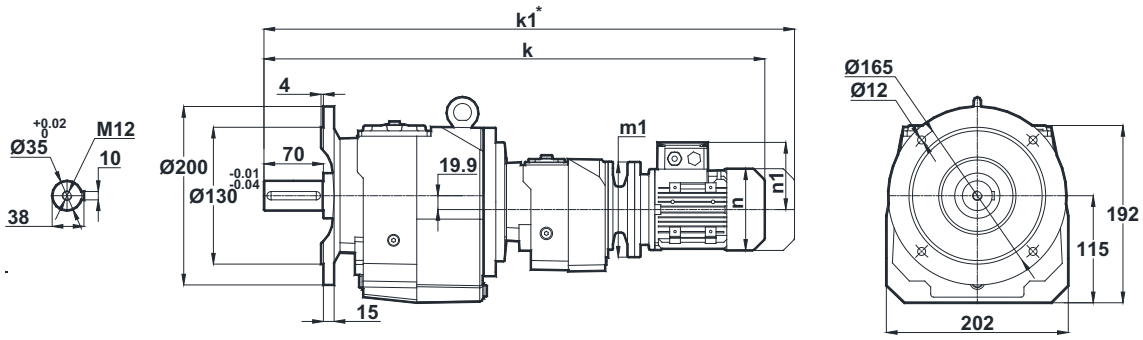
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MV275
MV276

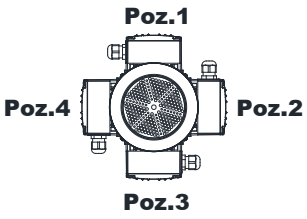


NV275
NV276



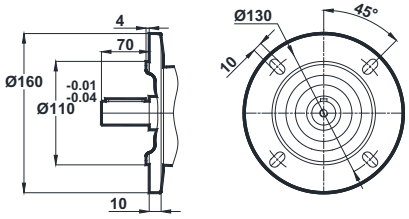
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5 63/B14**	**71/B5 71/B14**
k	629	652.5
k1	700	743.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	90	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten

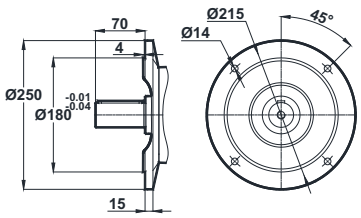


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

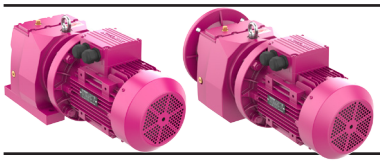


Opt. 1



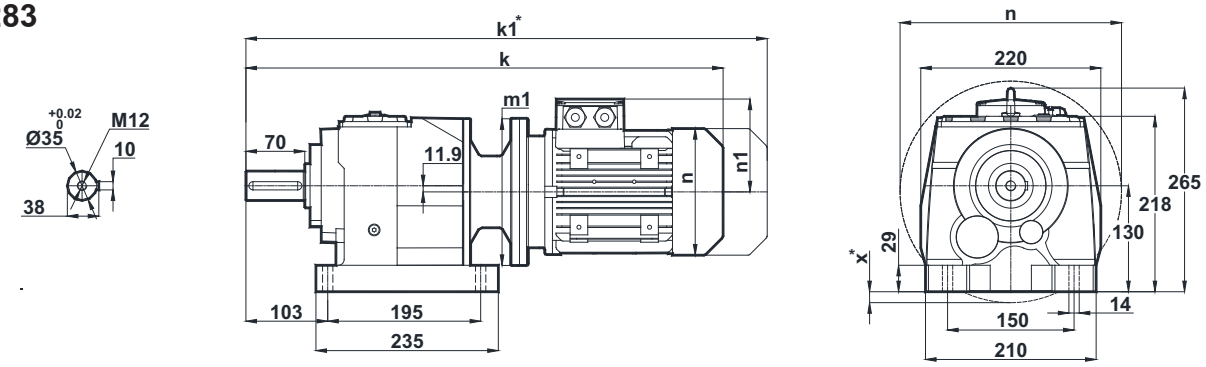
Opt. 2

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

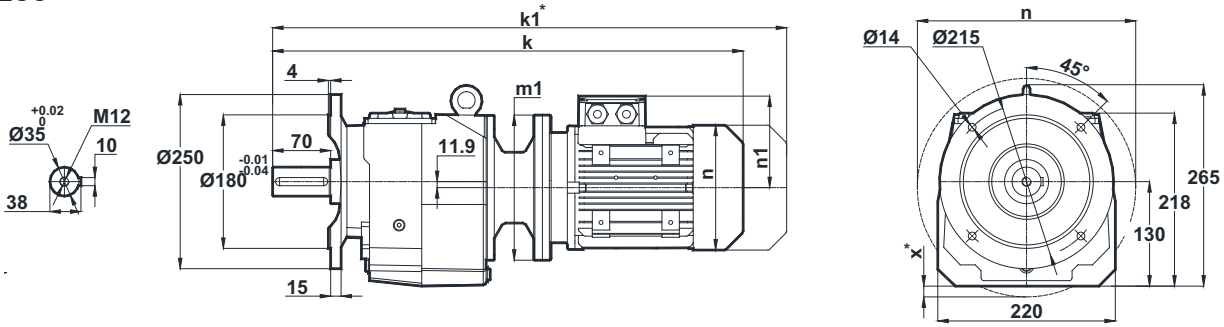


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV282
MV283

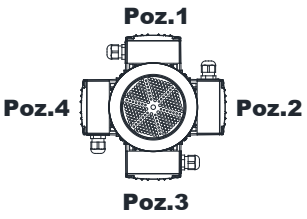


NV282
NV283



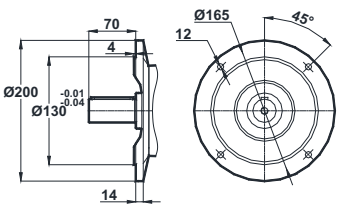
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**
k	555	577	618	618	669	692	795	795	954.5
k1	646	670	697	697	777	797	925	925	1104.5
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)	-	-	-	-	7	7	32	32	57

Klemens Kutusu /*Terminal Box* / Klemmenkasten

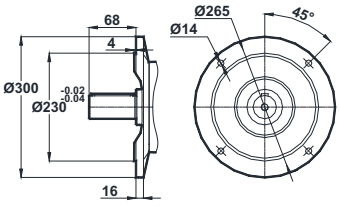


71-80-90-100-112-132-160

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

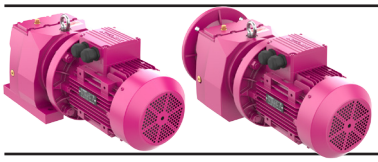


Opt. 1



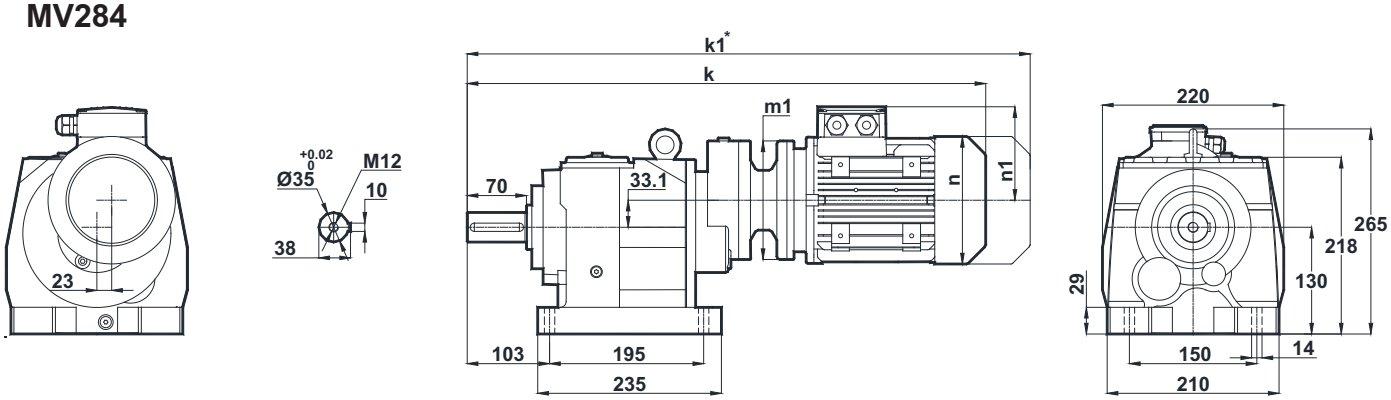
Opt. 2

*** " 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

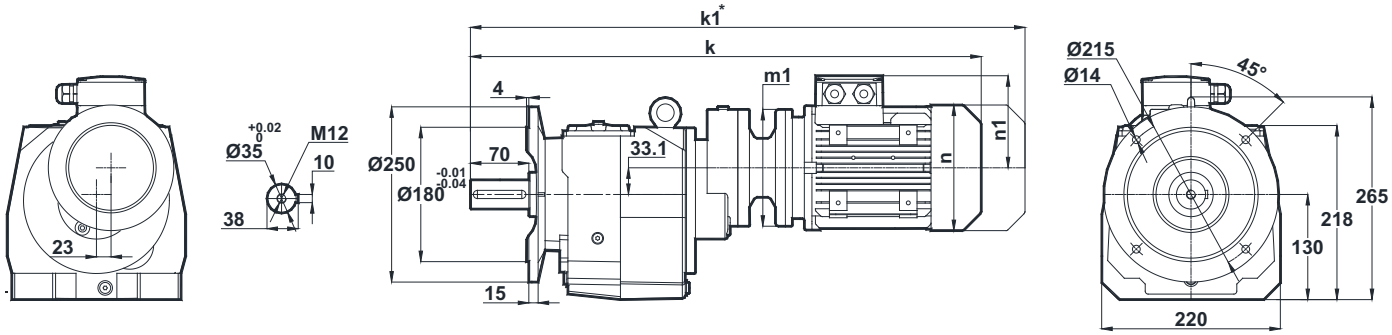


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV284

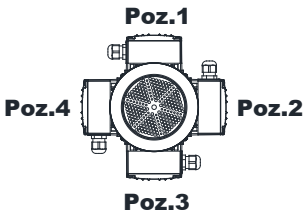


NV284



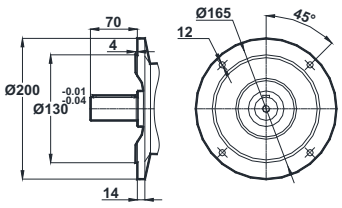
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	610	603
k1	681	694
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten

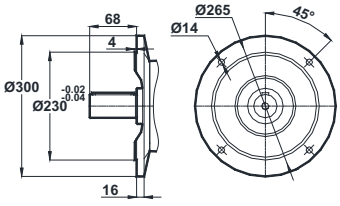


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

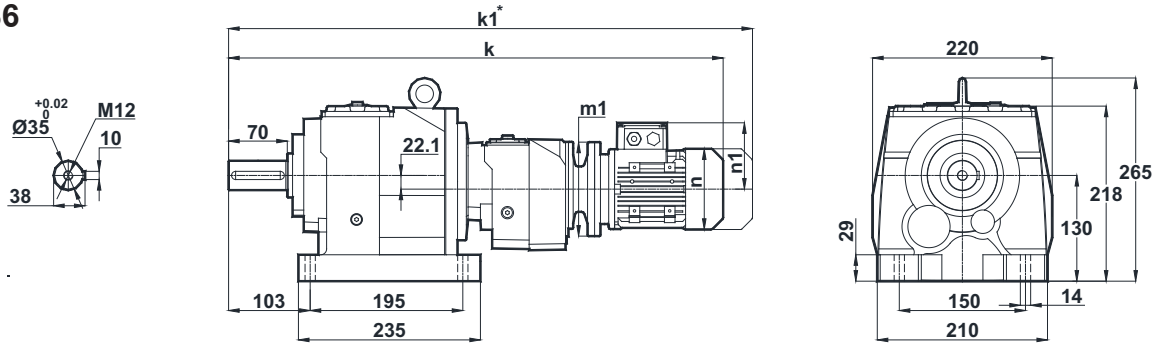


Opt. 2

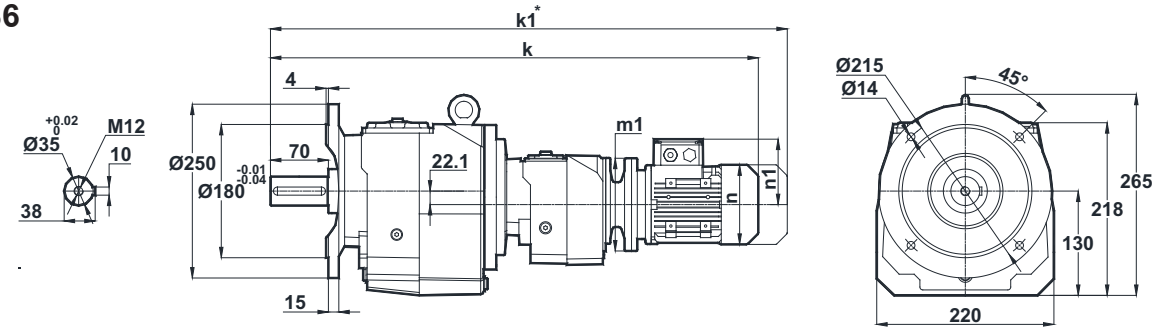
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV285
MV286

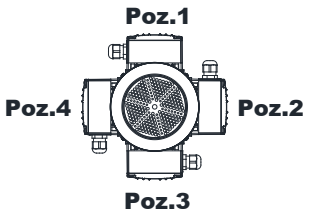


NV285
NV286



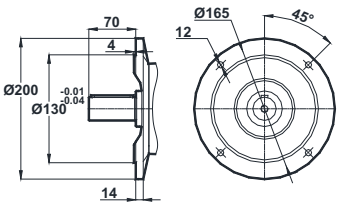
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	**63/B5 63/B14**
k	678
k1	749
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten

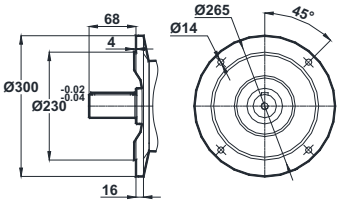


63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

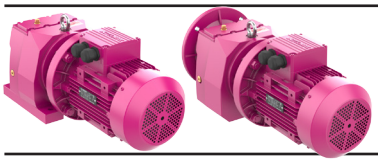


Opt. 1



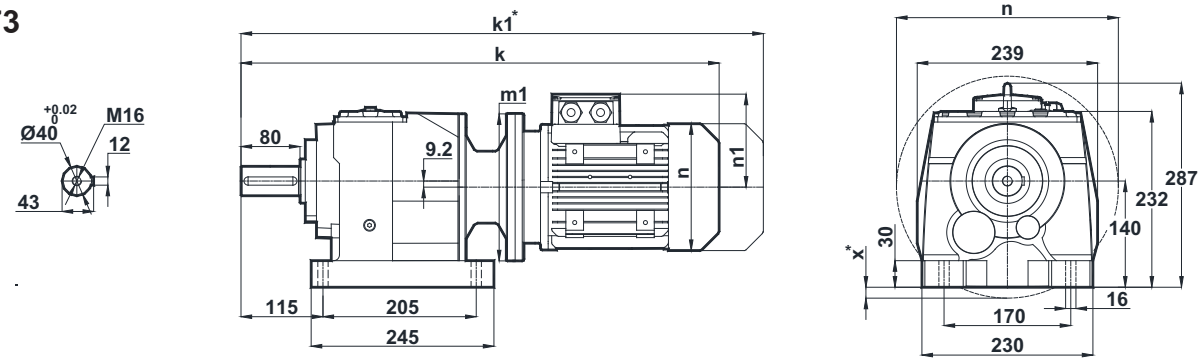
Opt. 2

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

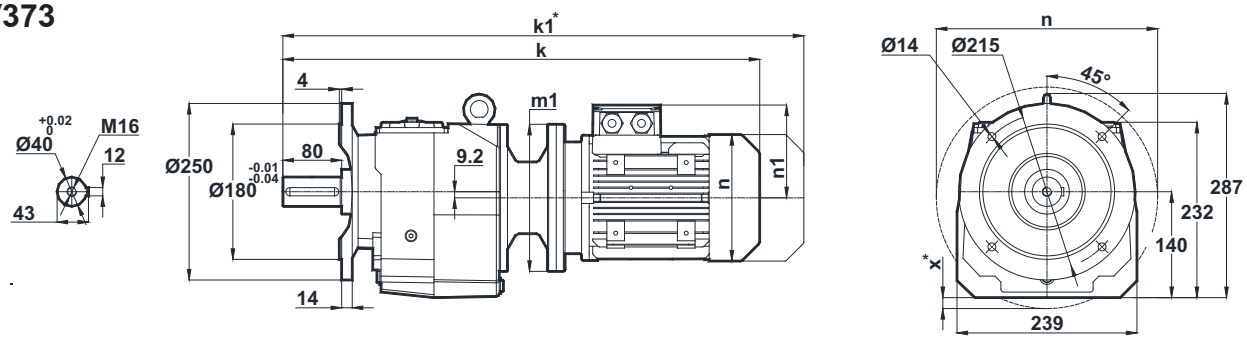


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV372
MV373

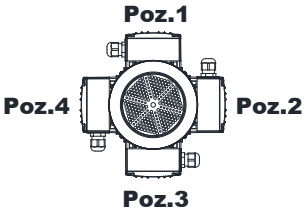


NV372
NV373



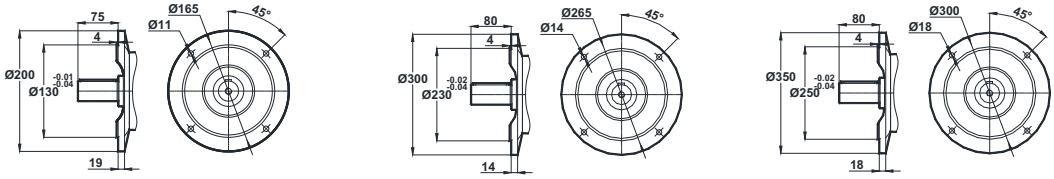
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**
k	576	598	639	639	690	713	816	816	975.5	975.5
k1	667	691	718	718	798	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)	-	-	-	-	-	-	20	20	45	45

Klemens Kutusu /*Terminal Box* / Klemmenkasten



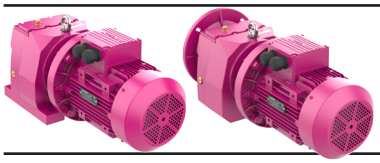
71-80-90-100-112-132-160

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



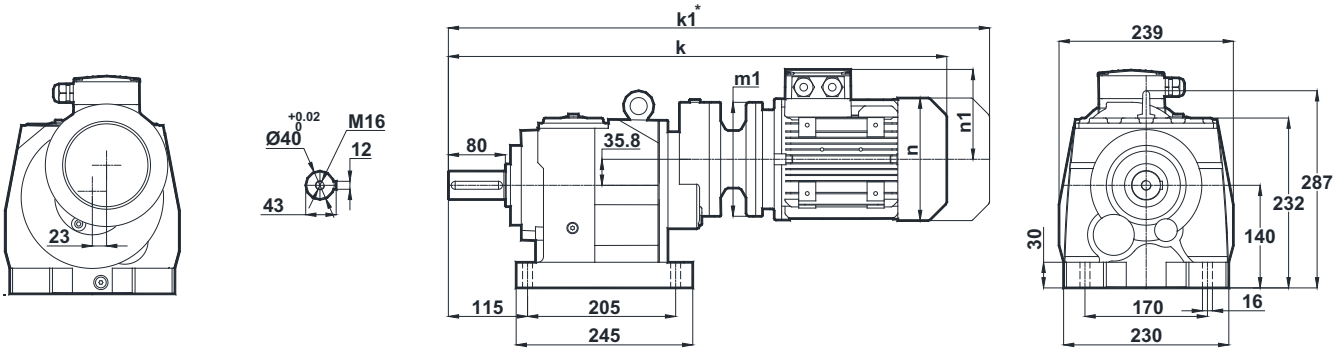
Opt. 1 **Opt. 2** **Opt. 3**

*** " 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

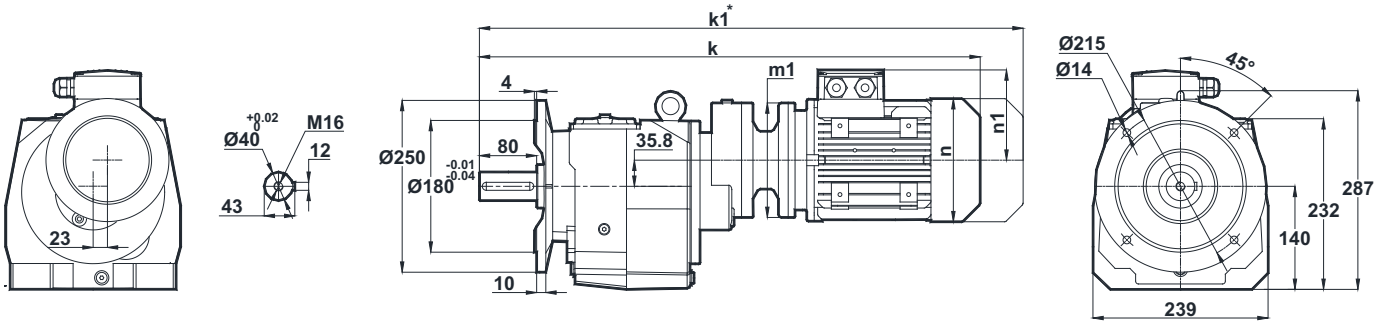


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV374

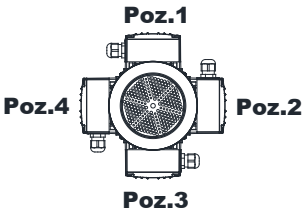


NV374



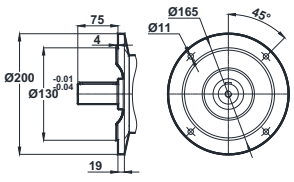
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**
k	631	624	675
k1	702	715	768
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

Klemens Kutusu /*Terminal Box* / Klemmenkasten

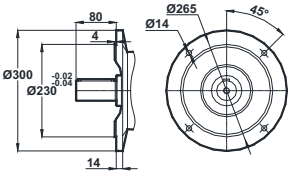


63-71-80

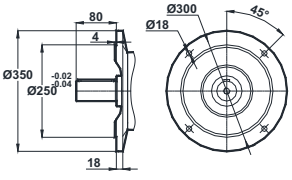
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

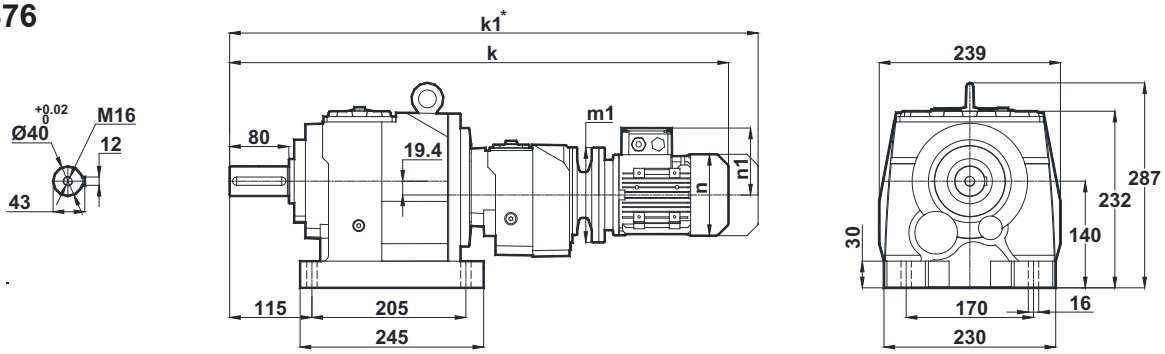


Opt. 3

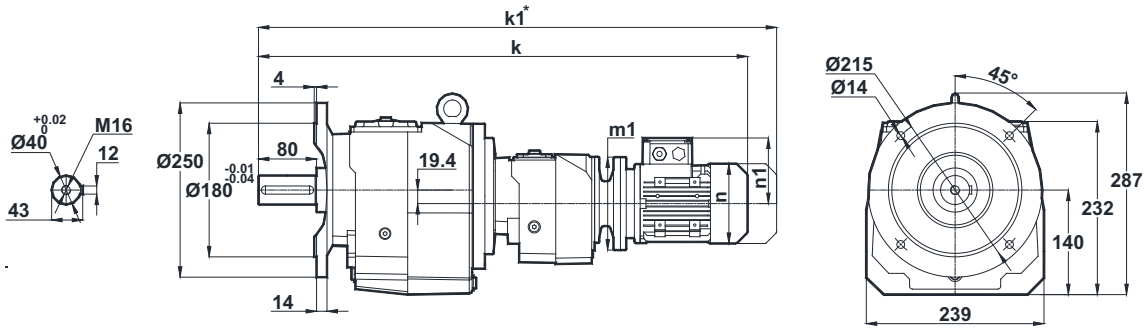
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV375
MV376

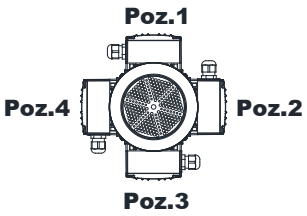


NV375
NV376



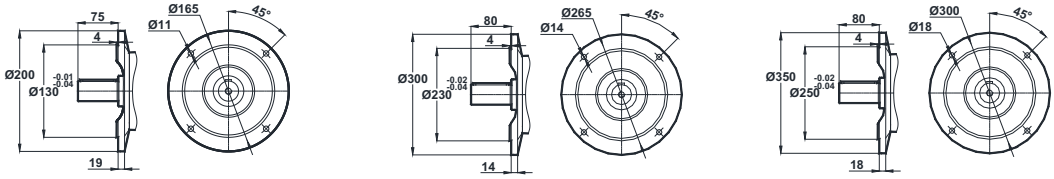
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	63/B5 63/B14
k	699
k1	770
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

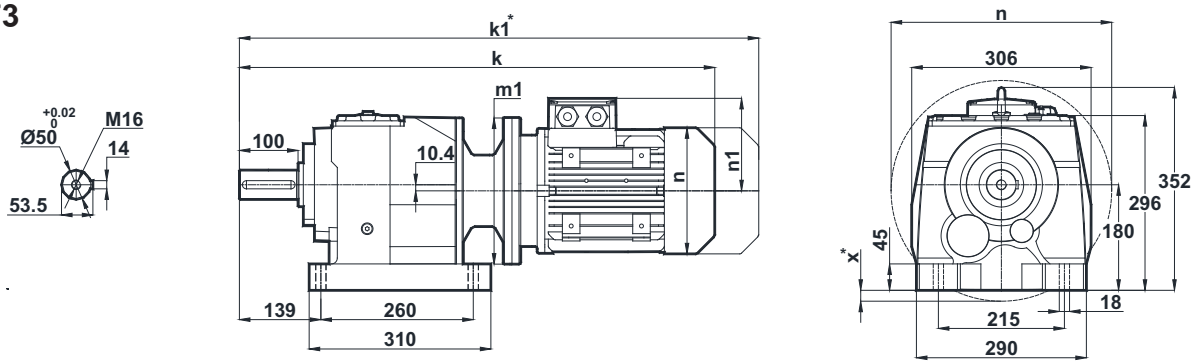


Opt. 1 **Opt. 2** **Opt. 3**

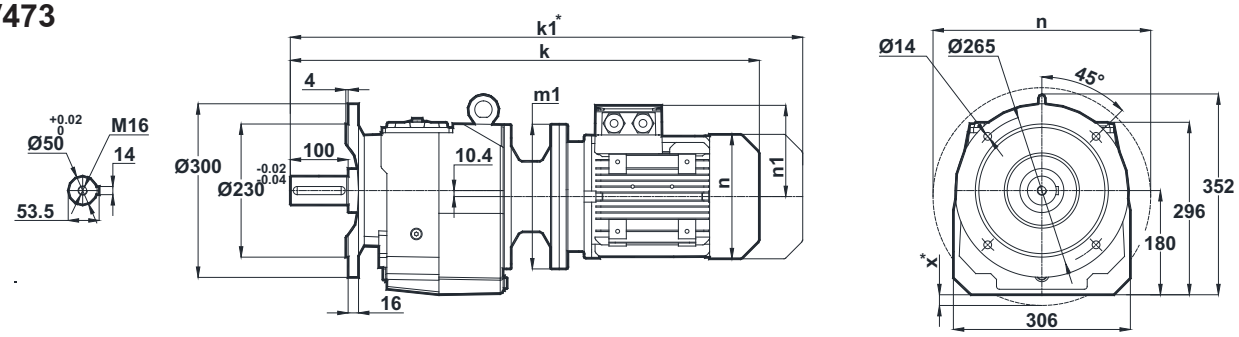
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV472
MV473

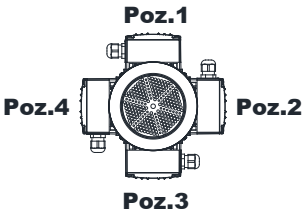


NV472
NV473



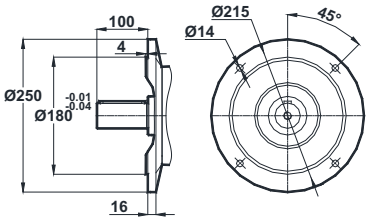
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14	132S/B5 132S/B14	132M/B5 132M/B14	160M/B5	160L/B5	180M/B5	180L/B5
k	660.5	701.5	701.5	754	777	878.5	878.5	1038	1038	1129	1129
k1	753.5	780.5	780.5	862	882	1008.5	1008.5	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)	-	-	-	-	-	-	-	6	6	6	6

Klemens Kutusu /*Terminal Box* / Klemmenkasten

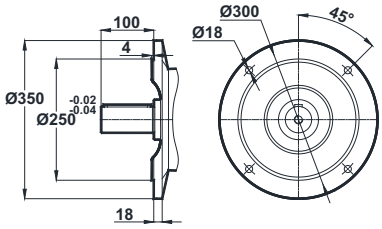


80-90-100-112-132-160-180

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

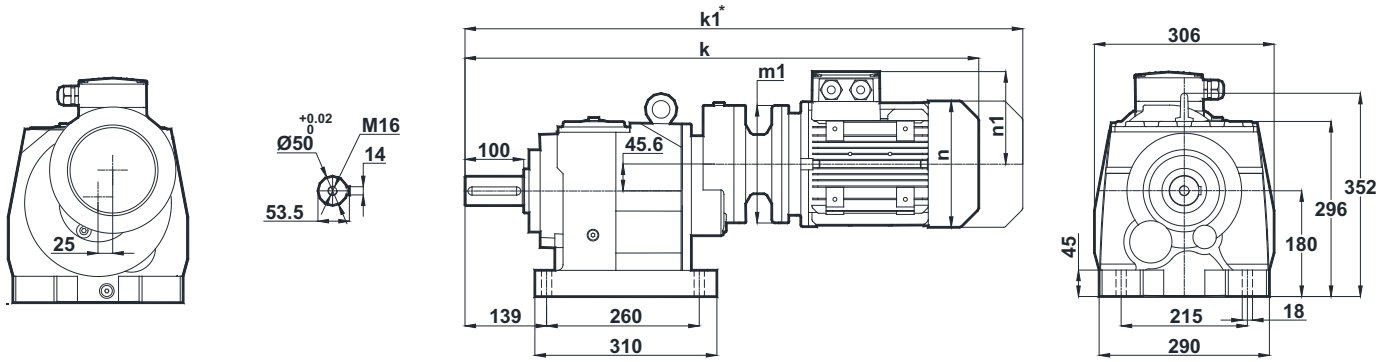


Opt. 2

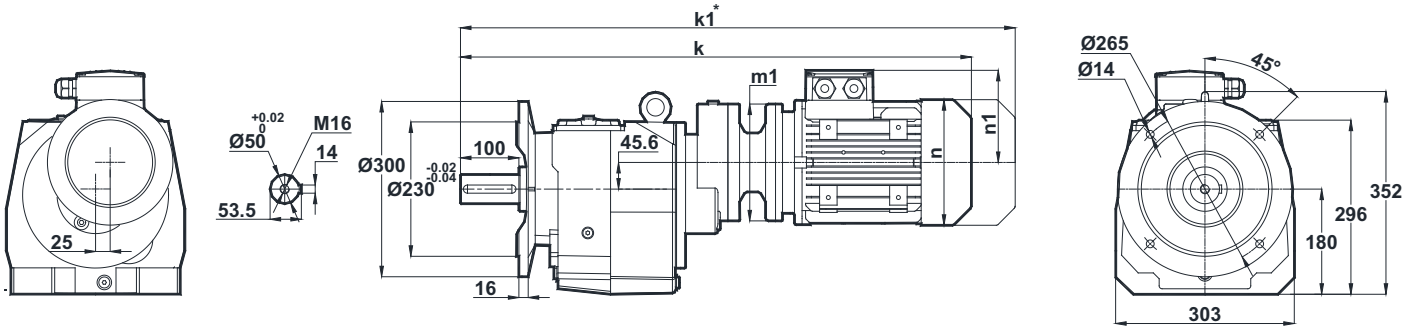
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist

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

MV474

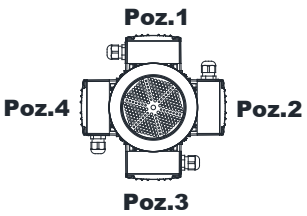


NV474



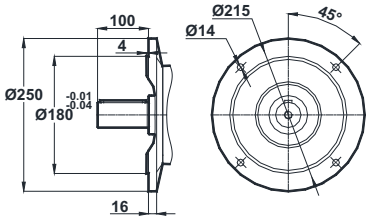
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**71/B5**	**80/B5 80/B14**
k	736.5	758.5
k1	827.5	851.5
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

Klemens Kutusu /*Terminal Box* / Klemmenkasten

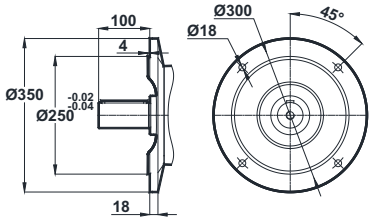


71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

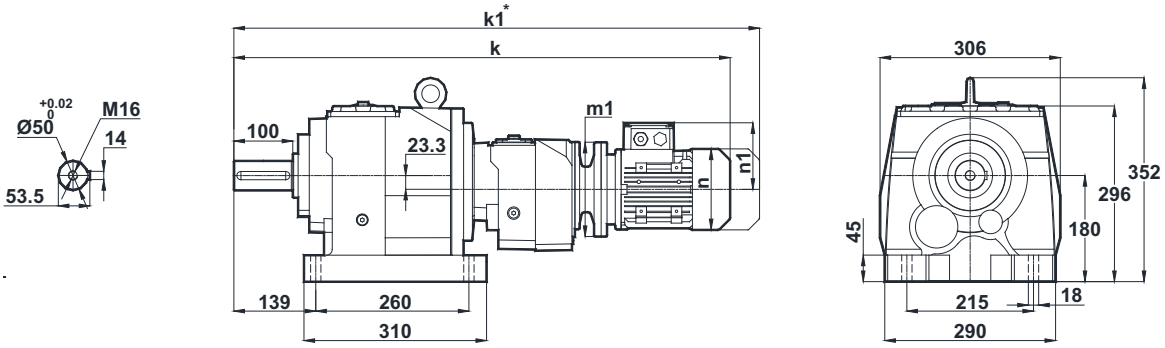


Opt. 2

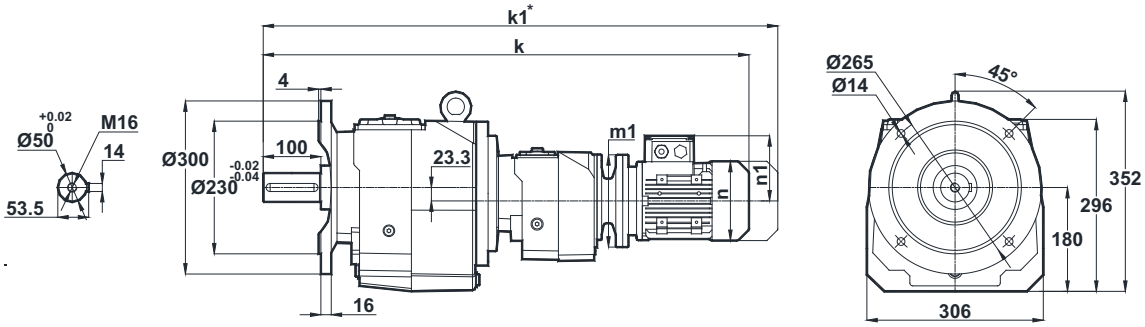
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV475
MV476

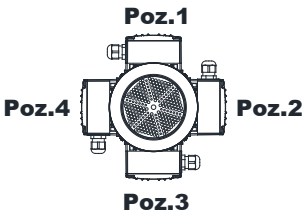


NV475
NV476



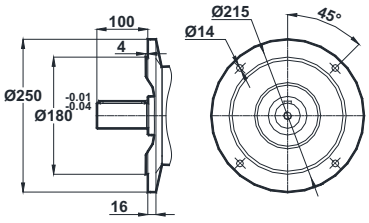
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	842.5	835.5
k1	913.5	926.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten

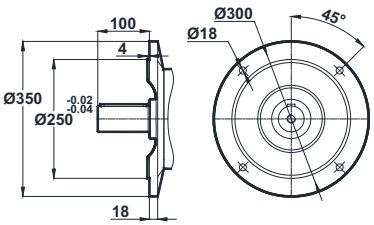


63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

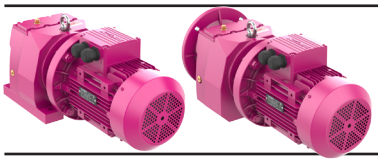


Opt. 1



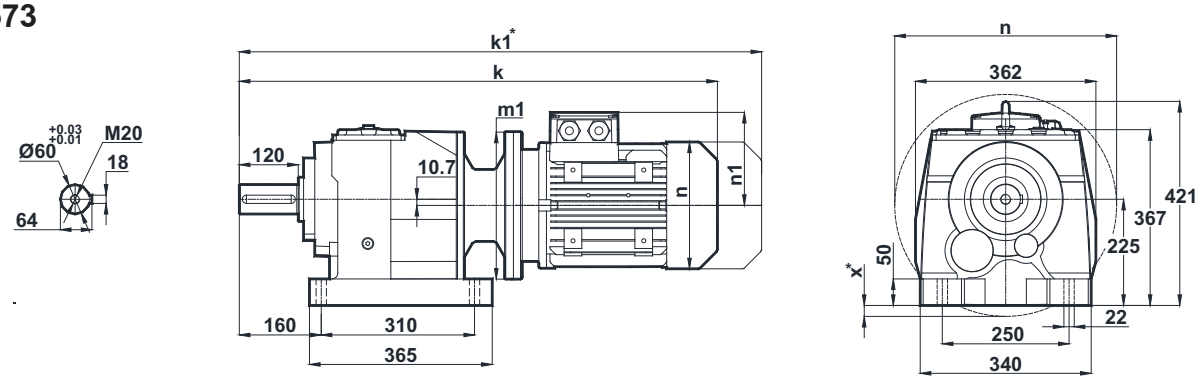
Opt. 2

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

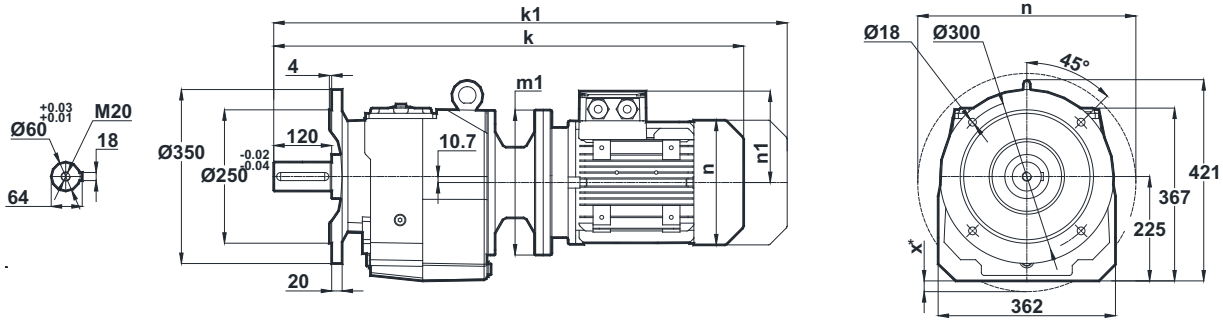


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV572
MV573

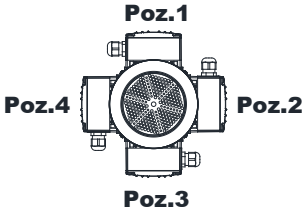


NV572
NV573



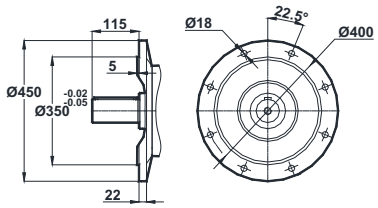
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**100L/B5**	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**
k	816.5	839.5	943.5	943.5	1099	1099	1190	1190	1251
k1	924.5	944.5	1073.5	1073.5	1249	1249	1377	1377	1443
n	193	215	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

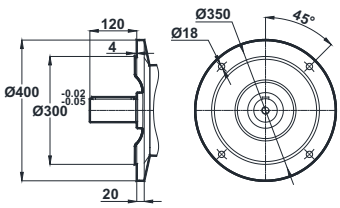


100-112-132-160-180-200

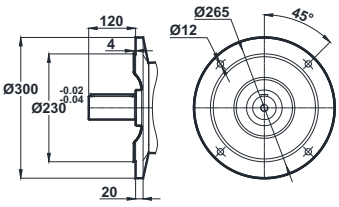
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

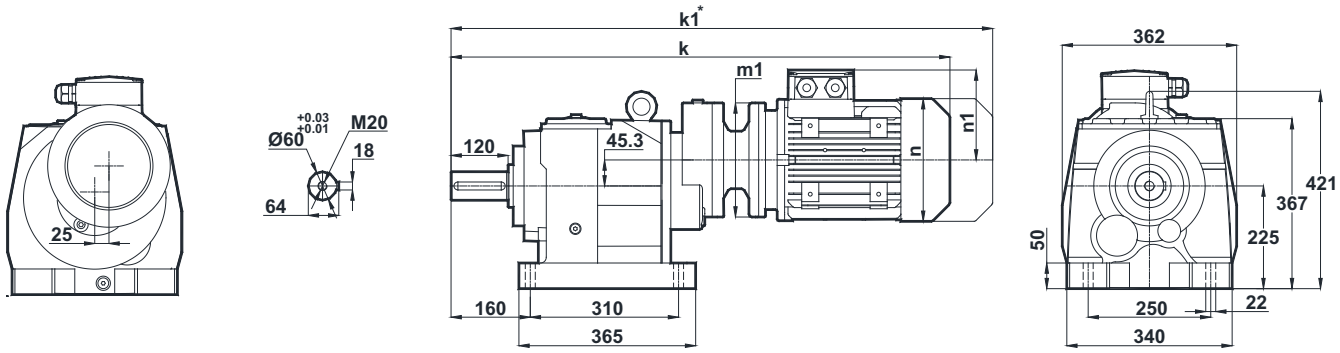


Opt. 3

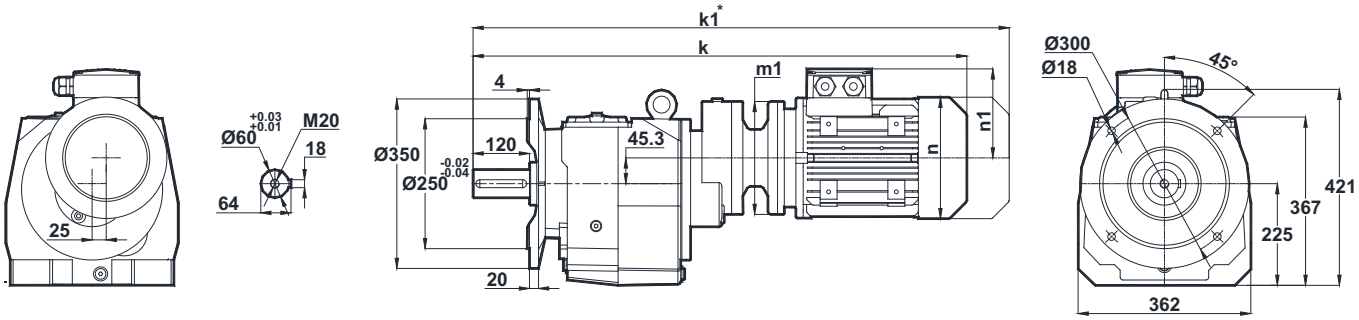
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV574

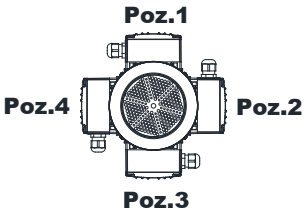


NV574



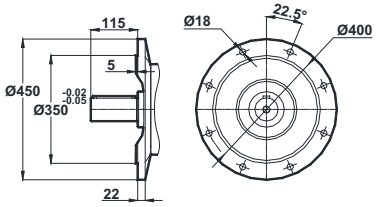
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**
k	799.5	821.5	862.5	862.5	913.5
k1	890.5	914.5	941.5	941.5	1021.5
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

Klemens Kutusu / *Terminal Box* / Klemmenkasten

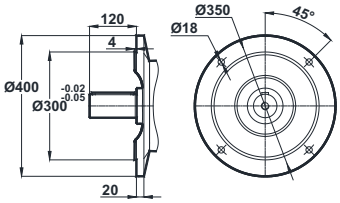


71-80-90-100

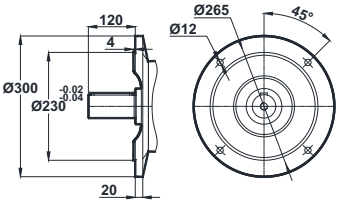
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

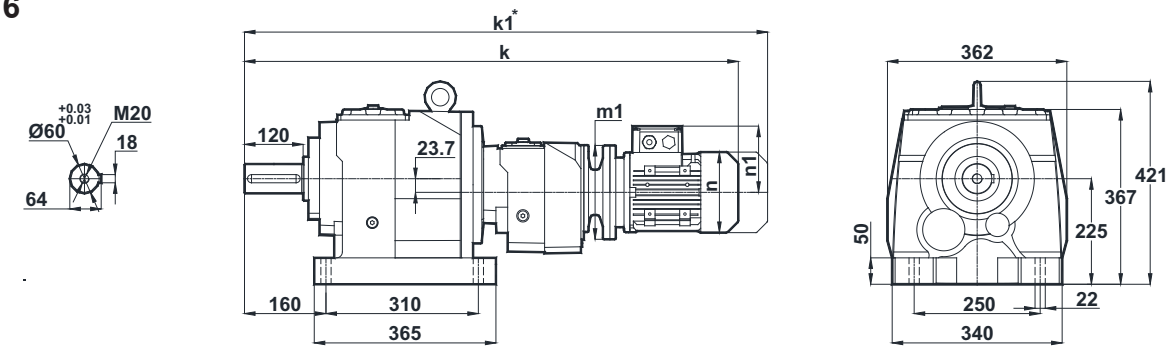


Opt. 3

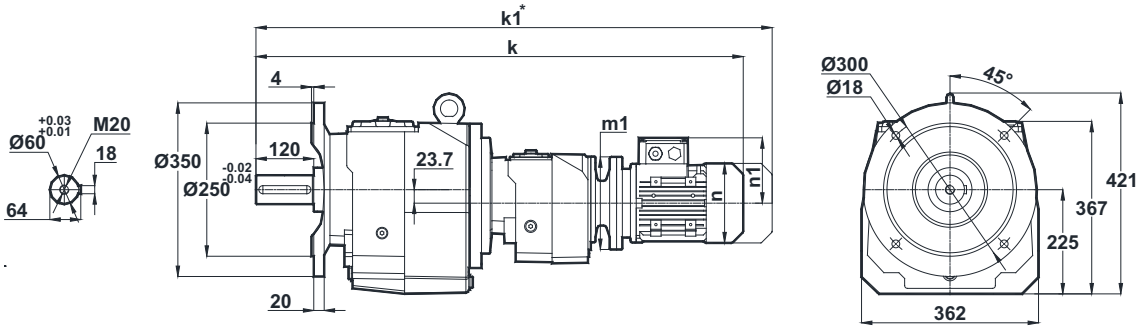
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV575
MV576

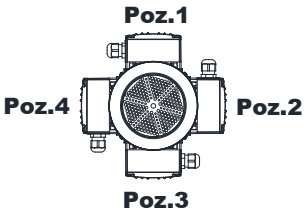


NV575
NV576



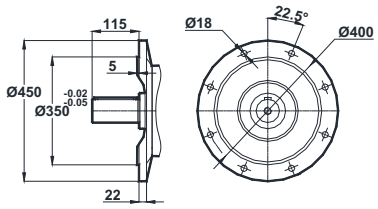
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	907.5	900.5
k1	978.5	991.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten

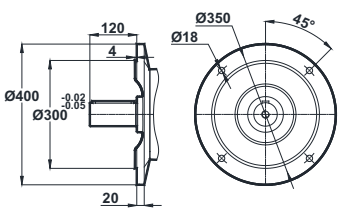


63-71

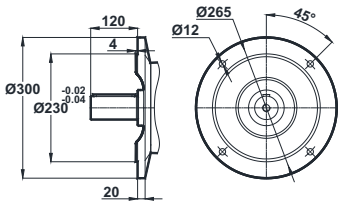
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

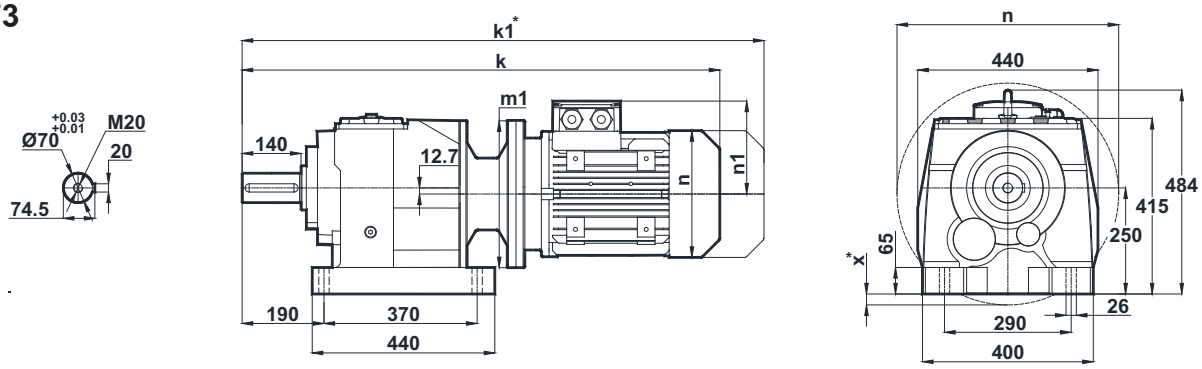


Opt. 3

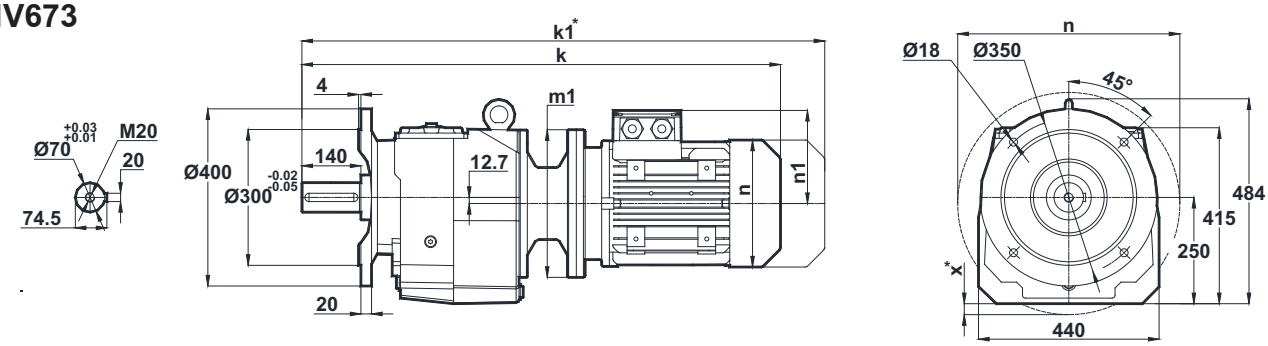
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV672
MV673

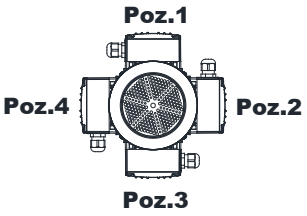


NV672
NV673



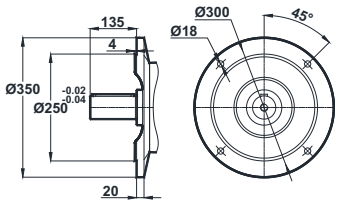
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**
k	899.5	997.5	997.5	1152.5	1152.5	1243.5	1243.5	1305	1421	1421
k1	1004.5	1127.5	1127.5	1302.5	1302.5	1430.5	1430.5	1497	1604	1604
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

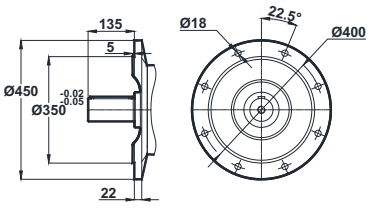


112-132-160-180-200-225

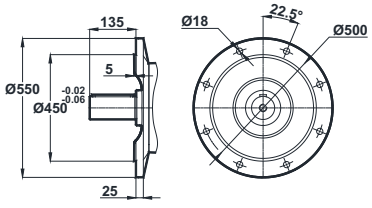
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

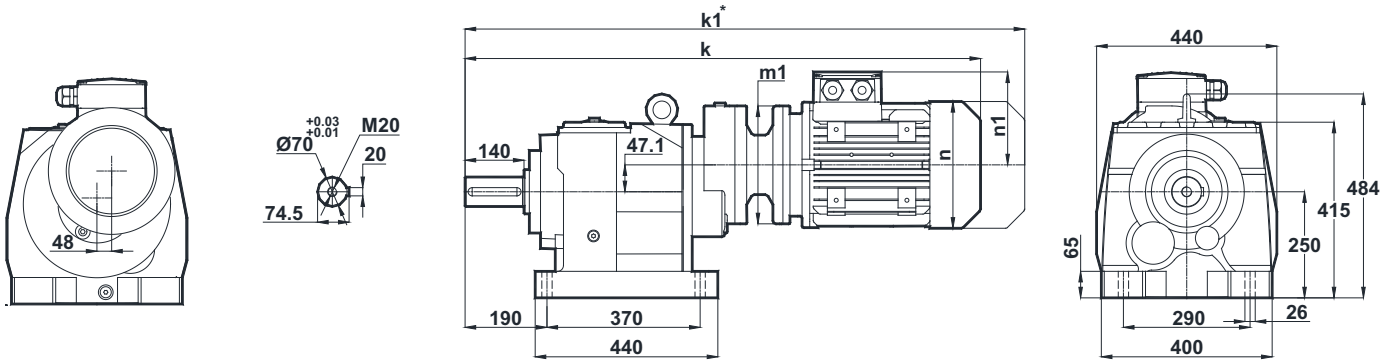


Opt. 3

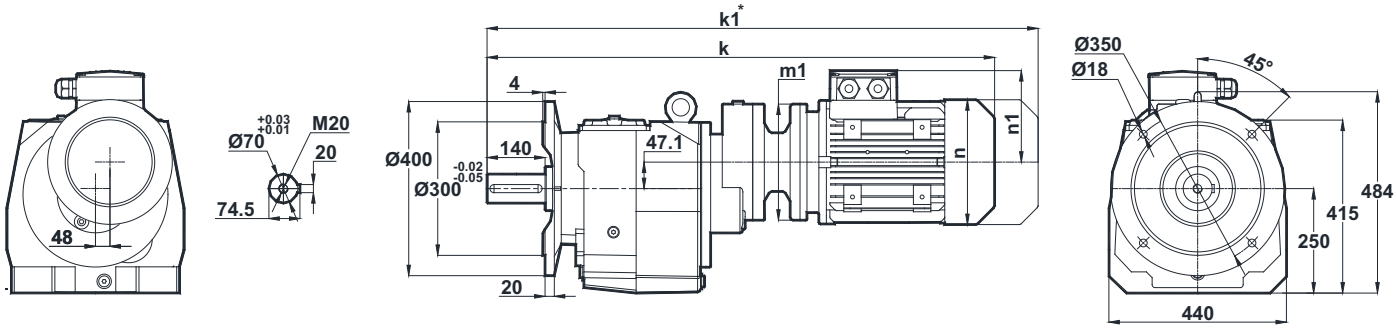
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV674

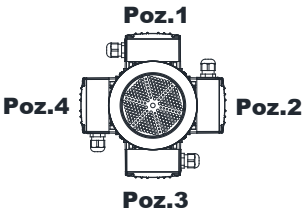


NV674



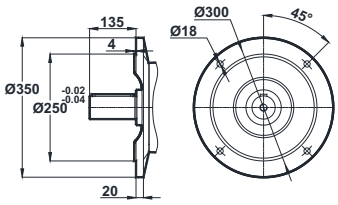
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
IEC	80/B5	90S/B5 90S/B14	90L/B5 90L/B14
k	891.5	932.5	932.5
k1	984.5	1011.5	1011.5
n	155	176	176
n1	127	136	136
m1 (B5)	200	200	200
m1 (B14)	-	140	140

Klemens Kutusu /*Terminal Box* / Klemmenkasten

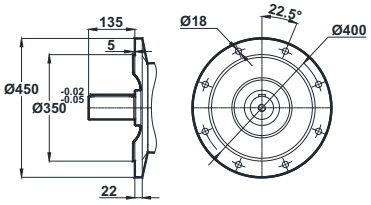


80-90

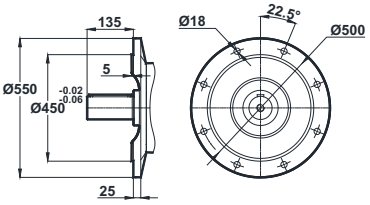
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

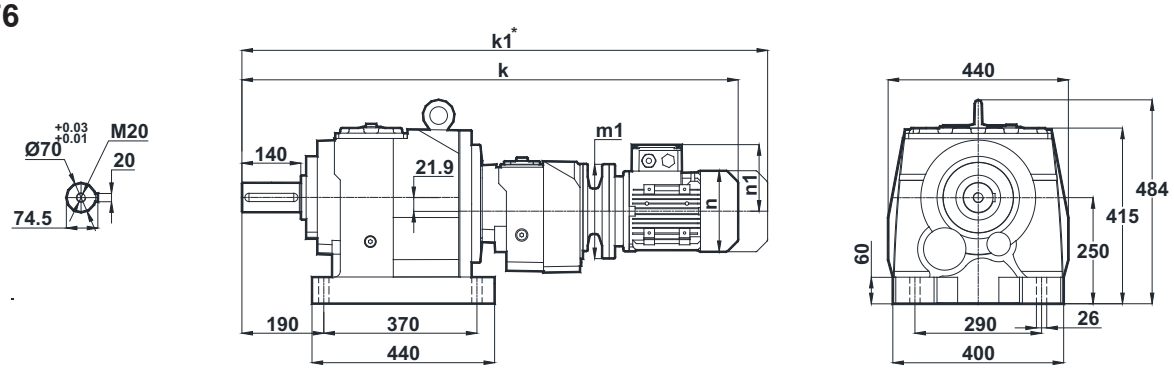


Opt. 3

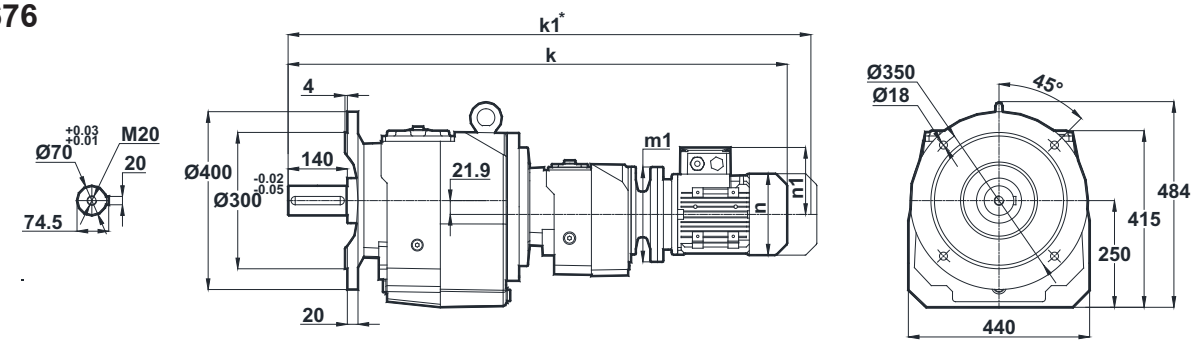
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV675
MV676

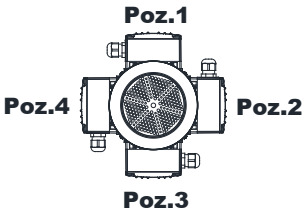


NV675
NV676



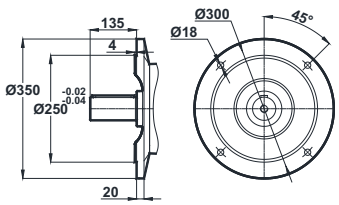
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**71/B5**	**80/B5 80/B14**
k	1020	1042
k1	1111	1135
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

Klemens Kutusu /*Terminal Box* / Klemmenkasten

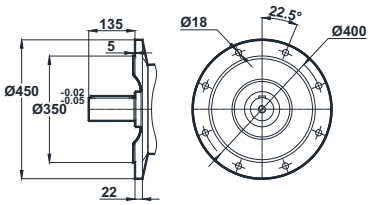


71-80

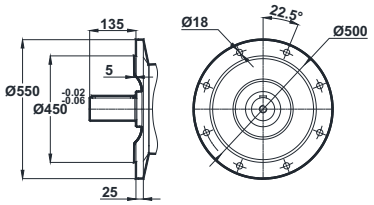
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

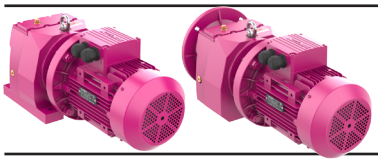


Opt. 2



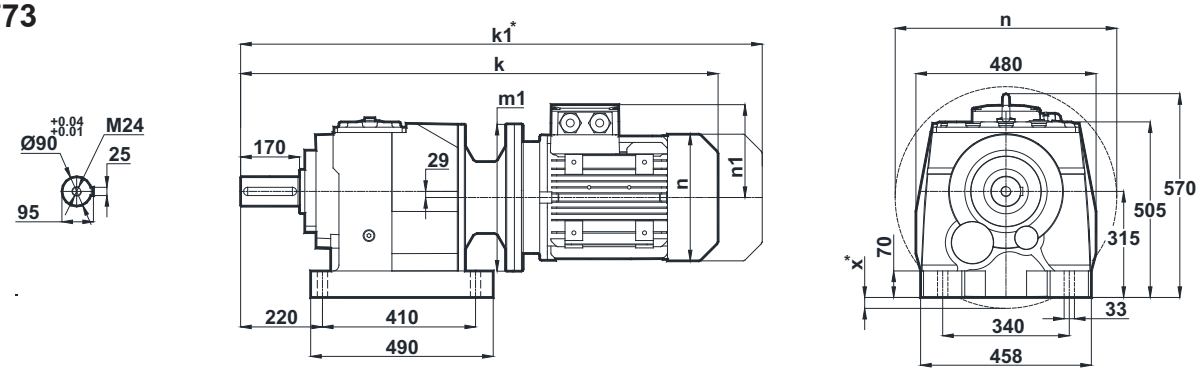
Opt. 3

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

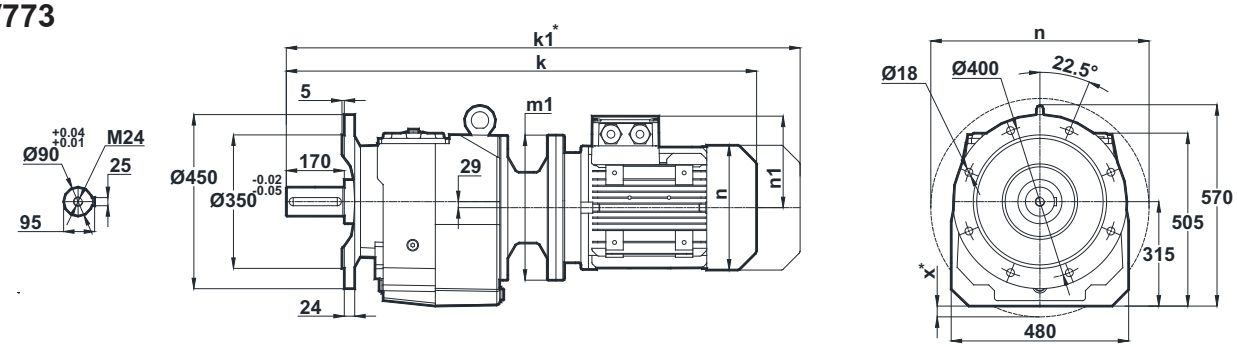


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV772
MV773

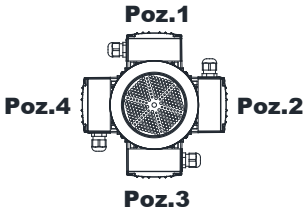


NV772
NV773



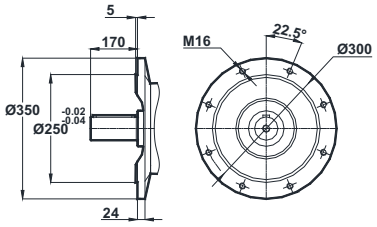
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	132S/B5	132M/B5	160M/B5	160L/B5	180M/B5	180L/B5	200L/B5	225S/B5	225M/B5	250M/B5
k	1082.5	1082.5	1232	1232	1323	1323	1386	1502	1502	1568
k1	1212.5	1212.5	1382	1382	1510	1510	1578	1685	1685	1725
n	257	257	316	316	348	348	396	438	438	481
n1	182	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

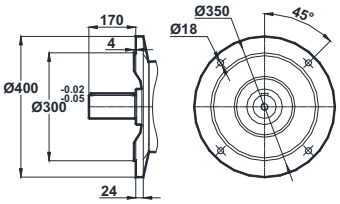


132-160-180-200-225-250

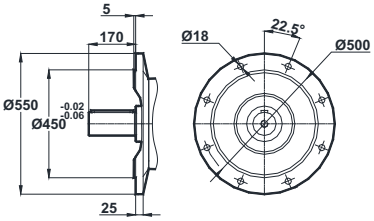
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

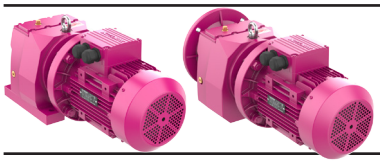


Opt. 2



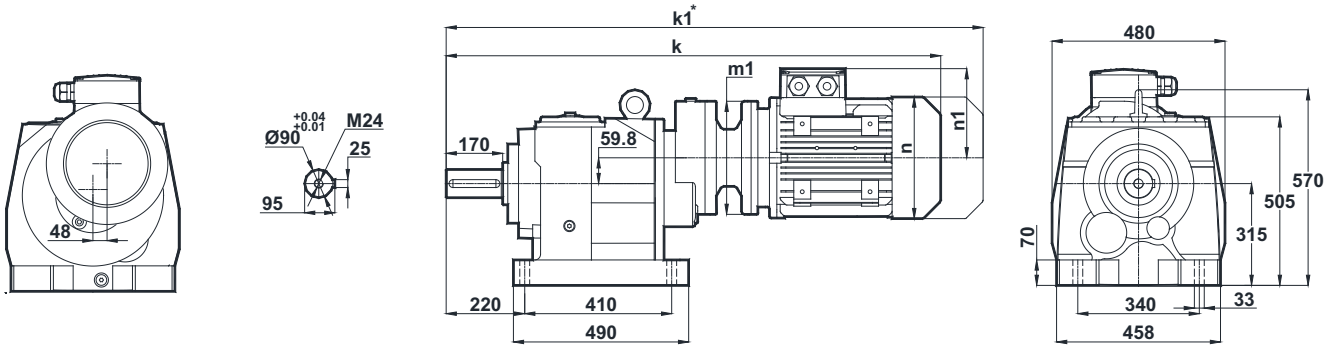
Opt. 3

*** " 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

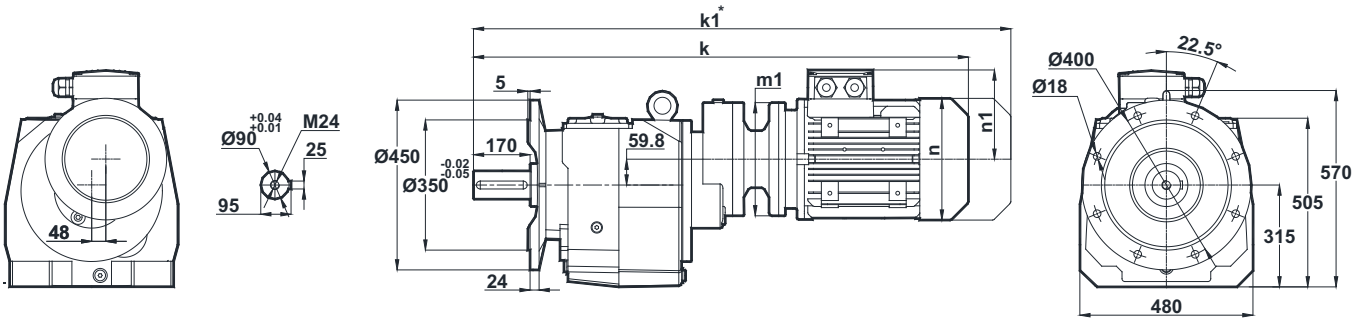


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV774

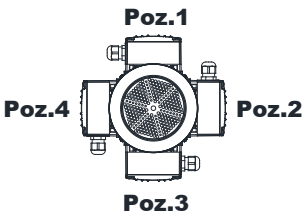


NV774



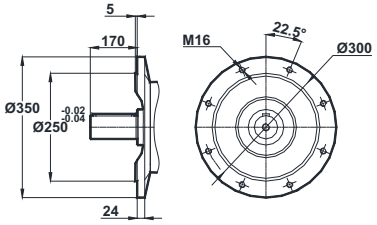
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	**80/B5**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**
k	976.5	1017.5	1017.5	1070
k1	1069.5	1096.5	1096.5	1178
n	155	176	176	193
n1	127	136	136	149
m1 (B5)	200	200	200	250
m1 (B14)	-	140	140	160

Klemens Kutusu /*Terminal Box* / Klemmenkasten

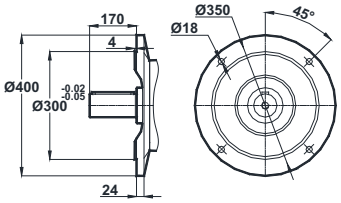


80-90-100

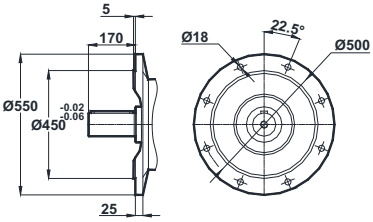
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



Opt. 2

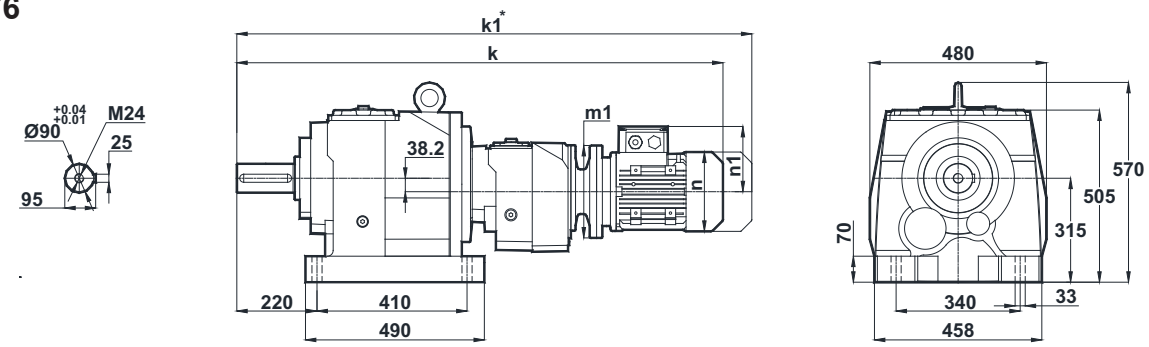


Opt. 3

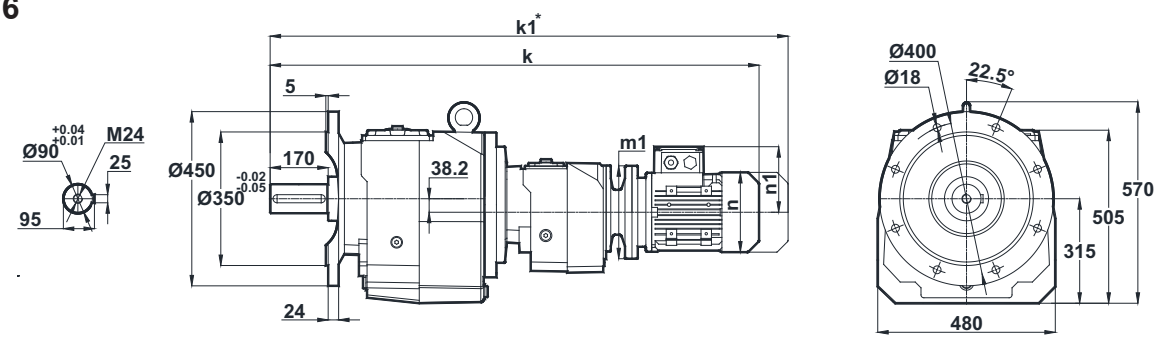
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV775
MV776

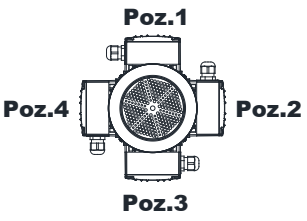


NV775
NV776



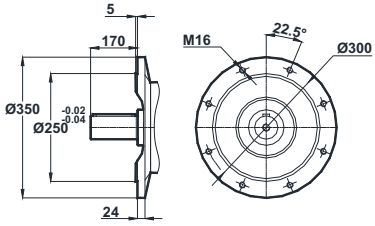
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	71/B5	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	1108	1130	1171	1171
k1	1199	1223	1250	1250
n	137	155	176	176
n1	118	127	136	136
m1 (B5)	160	200	200	200
m1 (B14)	-	120	140	140

Klemens Kutusu /*Terminal Box* / Klemmenkasten

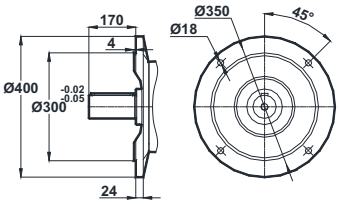


71-80-90

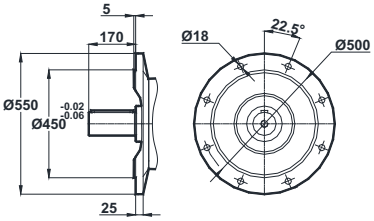
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

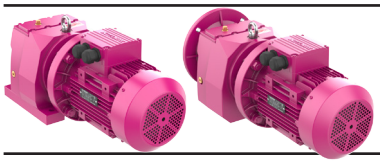


Opt. 2



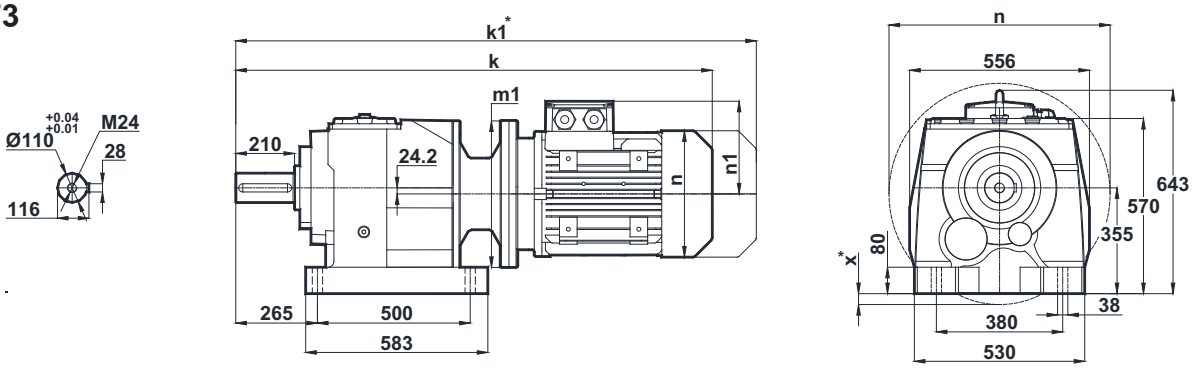
Opt. 3

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

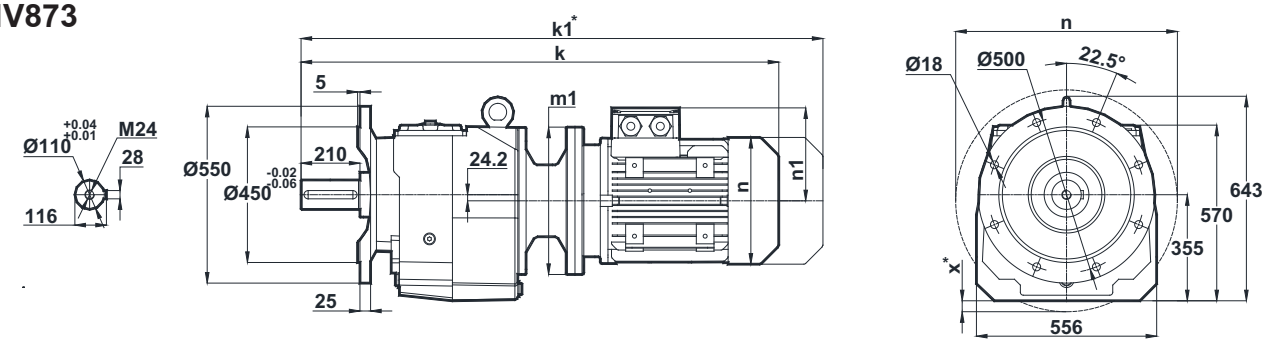


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV872
MV873

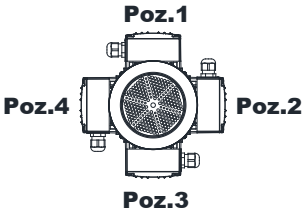


NV872
NV873



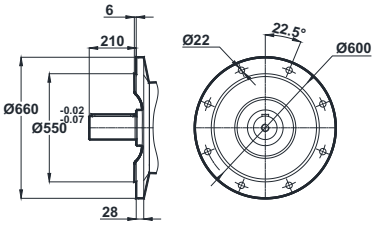
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
IEC	**132M/B5**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**	**250M/B5**	**280S/B5**	**280M/B5**
k	1190.5	1418	1418	1509	1509	1550	1613	1613	1679	1795	1795
k1	1320.5	1568	1568	1696	1696	1742	1796	1796	1836	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

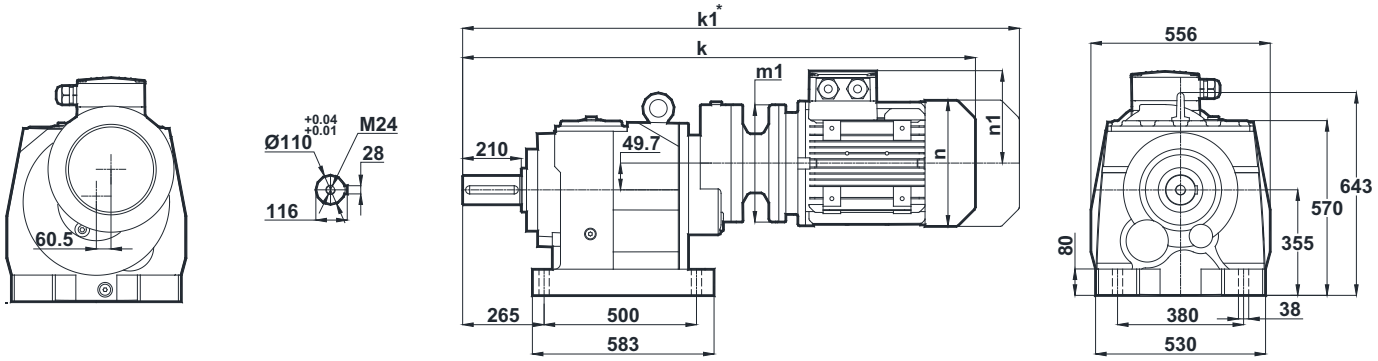


Opt. 1

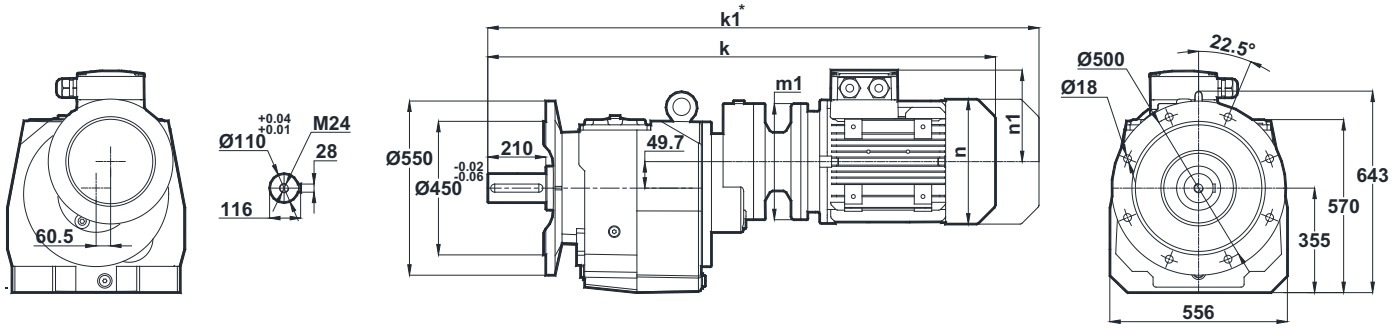
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV874

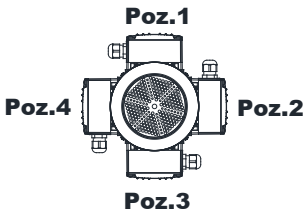


NV874



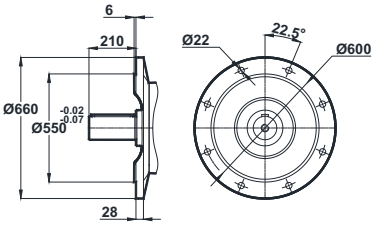
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	**100L/B5**	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**
k	1204.5	1227.5	1331.5	1331.5
k1	1312.5	1332.5	1461.5	1461.5
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

Klemens Kutusu /*Terminal Box* / Klemmenkasten



100-112-132

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

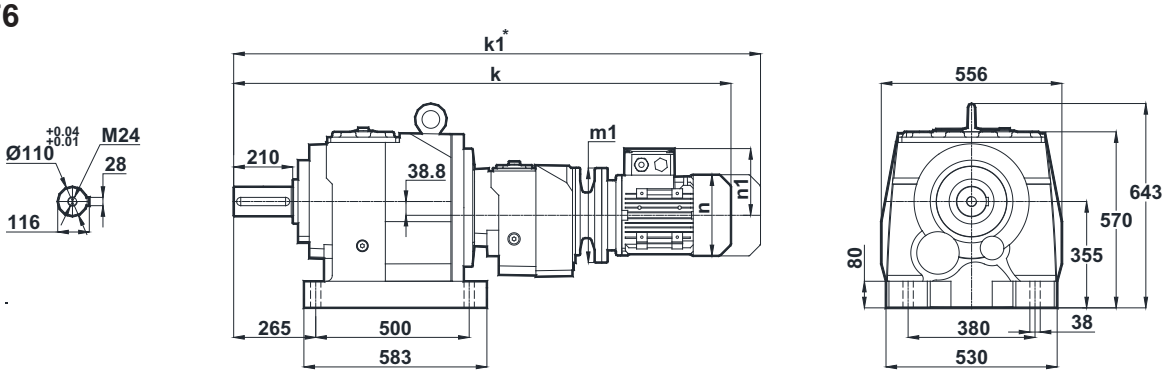


Opt. 1

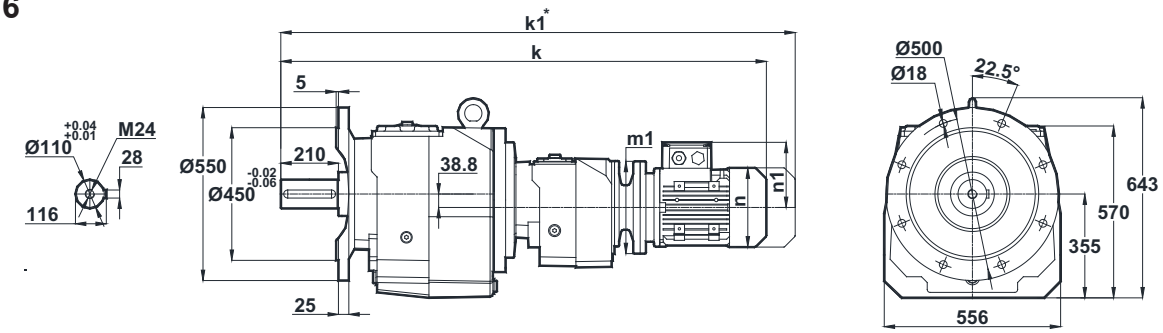
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV875
MV876

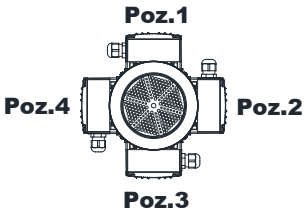


NV875
NV876



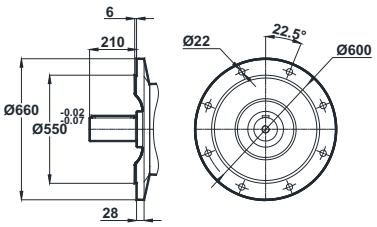
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**
k	1225	1247	1288	1288	1339
k1	1316	1340	1367	1367	1447
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

Klemens Kutusu / *Terminal Box* / Klemmenkasten



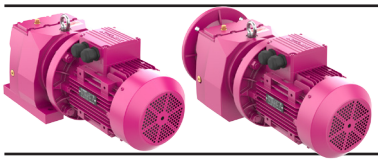
71-80-90-100

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



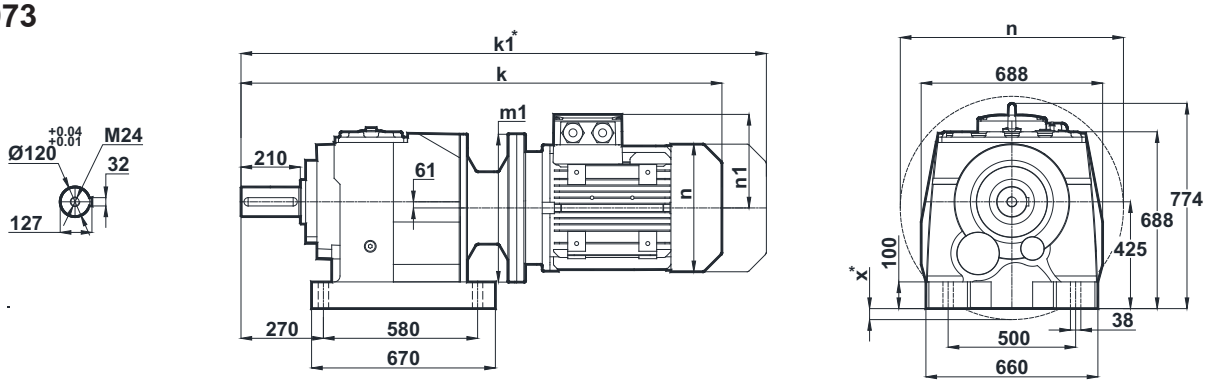
Opt. 1

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

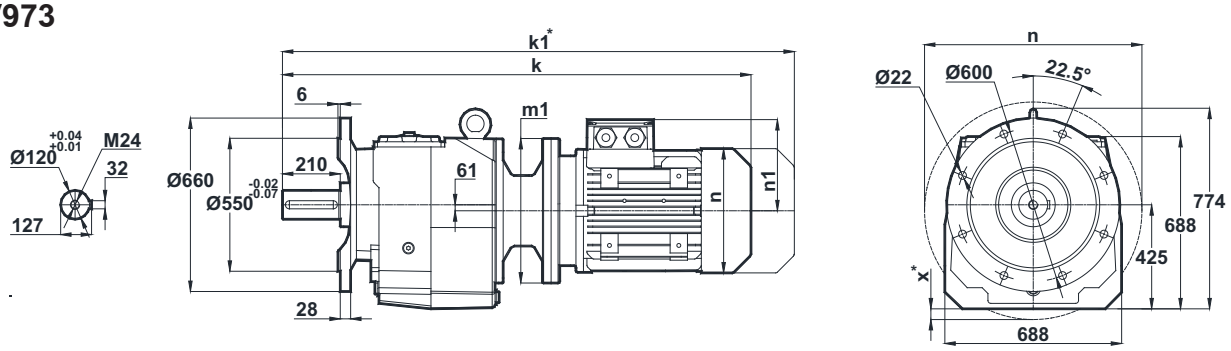


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MV972
MV973

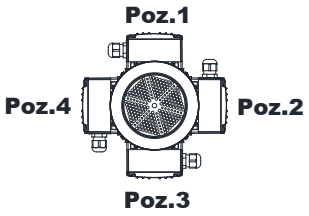


NV972
NV973



Motor Büyüklüğü / *Motor Size* / 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	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

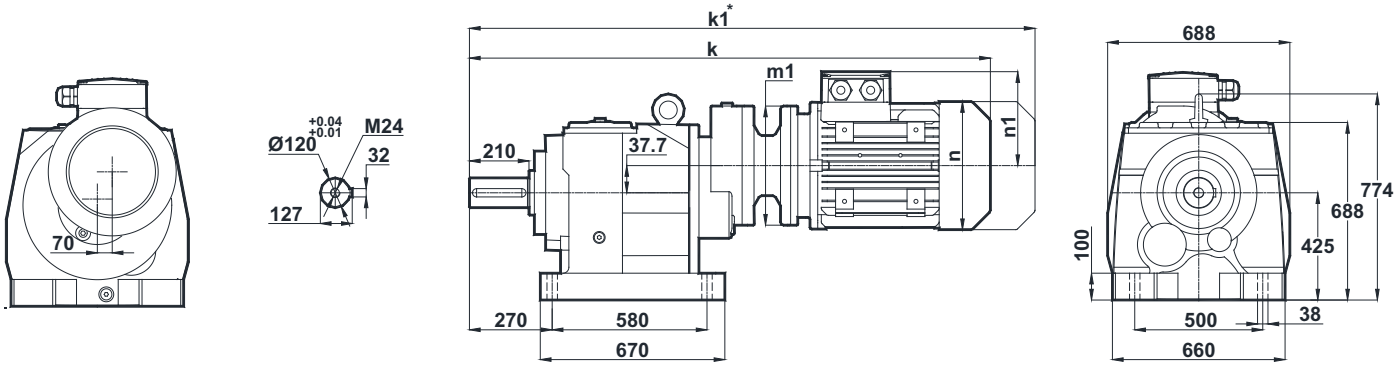


160-180-200-225-250-280-315

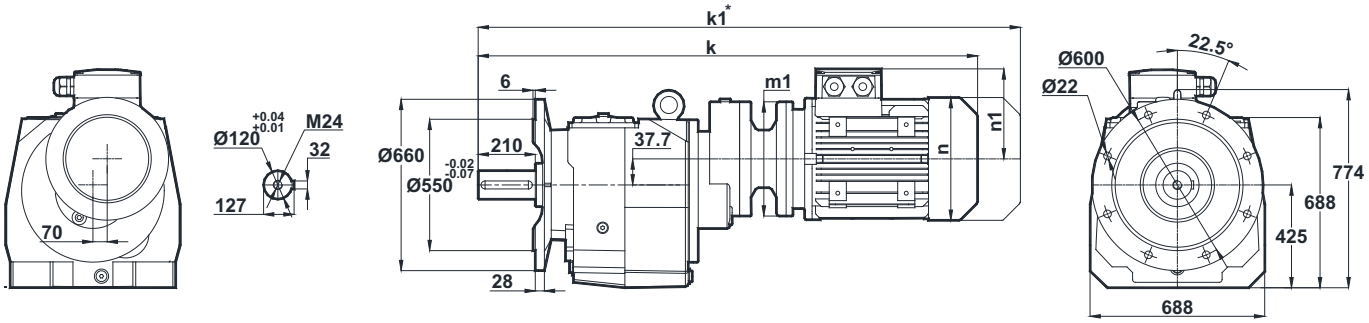
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise / *x: If Motor is lower than foot mounting plane* / x: Wenn der Motor unter der Fußmontageebene ist

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

MV974

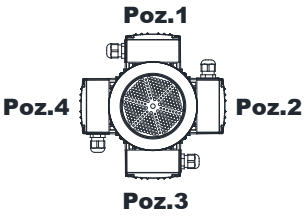


NV974



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

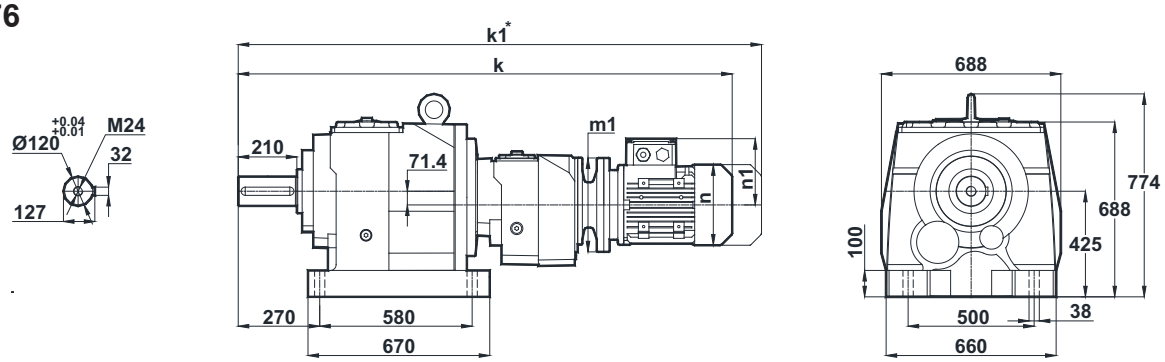


100-112-132

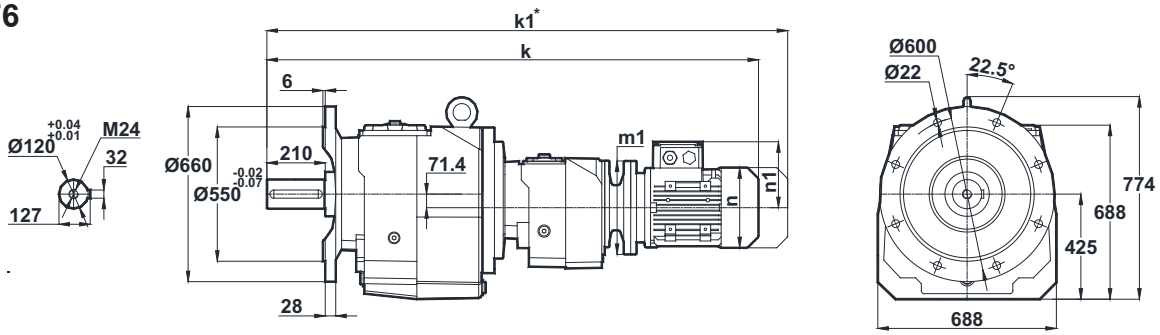
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

MV975
MV976

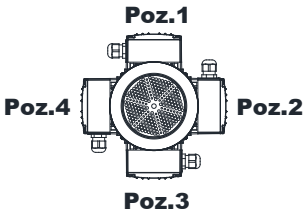


NV975
NV976



Motor Büyüklüğü / *Motor Size* / Motorbaugroße						
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
k1	1462	1489	1489	1570.5	1590.5	1717
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



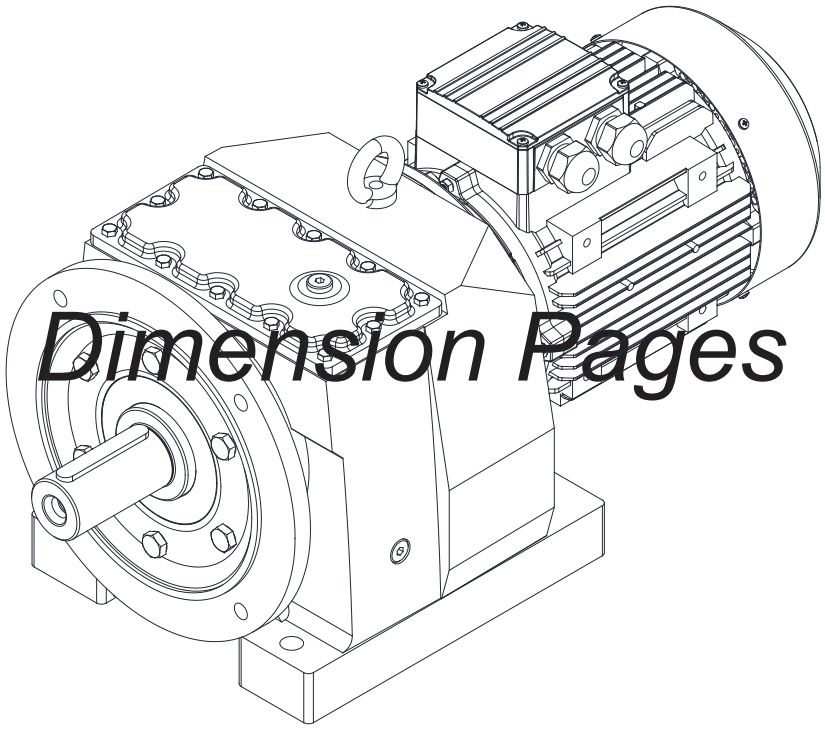
80-90-100-112-132

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

Notlar / *Notes* / Notizen

MRF Serisi / *Series* / Serie

Ölçü Sayfaları

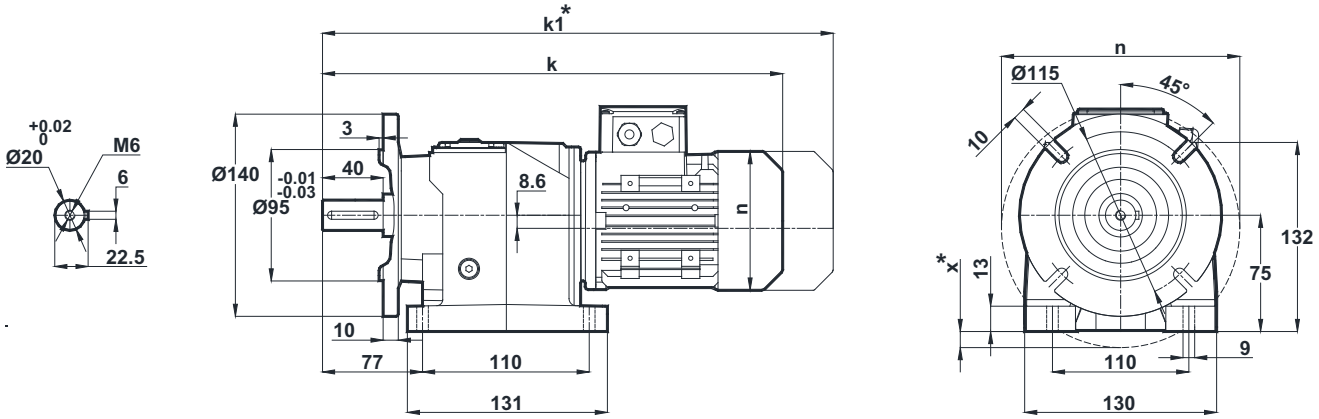


Dimension Pages

Abmessungsseiten

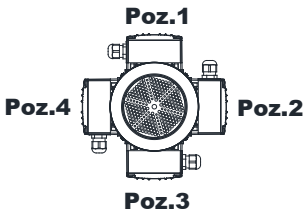
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF002
MRF003



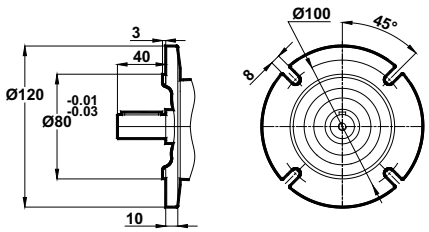
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	63	**71**	**80**	**90S**	**90L**
k	369.5	397	431	470	470
k1	440.5	488	524	549	549
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	3	12	22	22

Klemens Kutusu /*Terminal Box* / Klemmenkasten

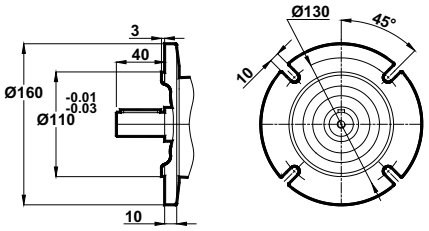


63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

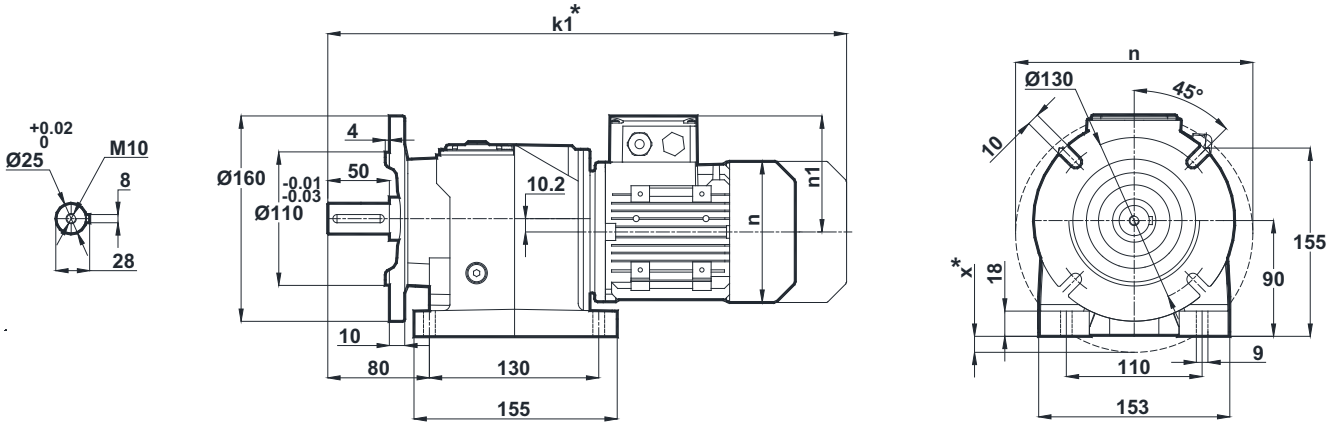


Opt. 2

*** " 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

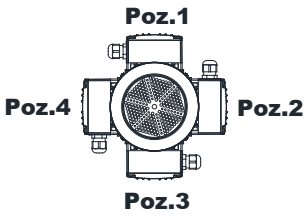
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF102
MRF103



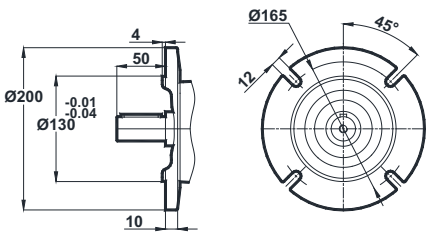
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	63	71	80	90S	90L
k	399	424	458	497	497
k1	470	515	551	576	576
n	119	137	155	176	176
n1	101	118	127	136	136
x	-	-	-	9	9

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

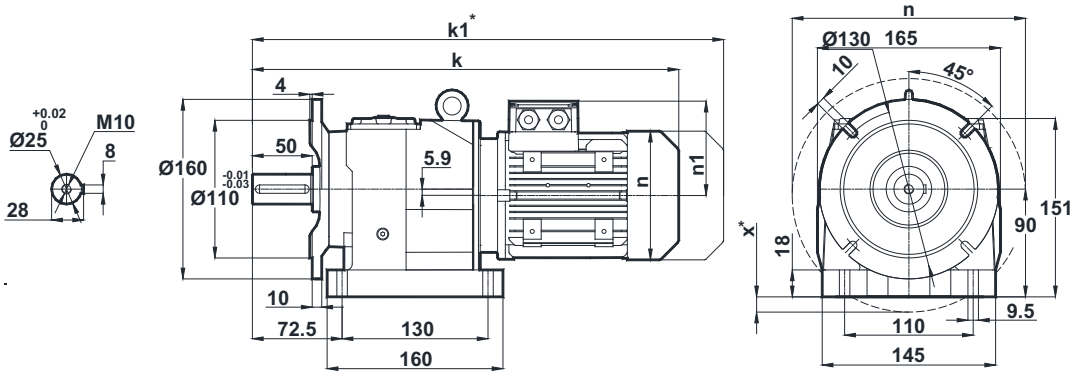


Opt. 1

*** " 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

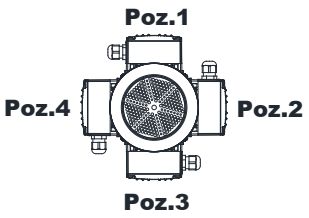
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF172
MRF173



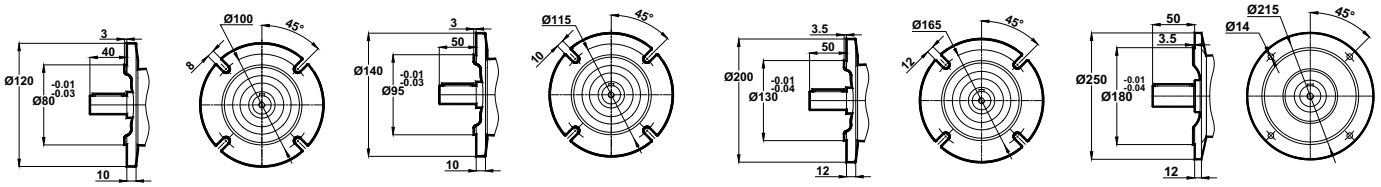
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
	63	71	80	90S	90L	100L	112M
k	396.5	424	458	497	497	545	569
k1	467.5	515	551	576	576	653	674
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	4	4	13	24

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

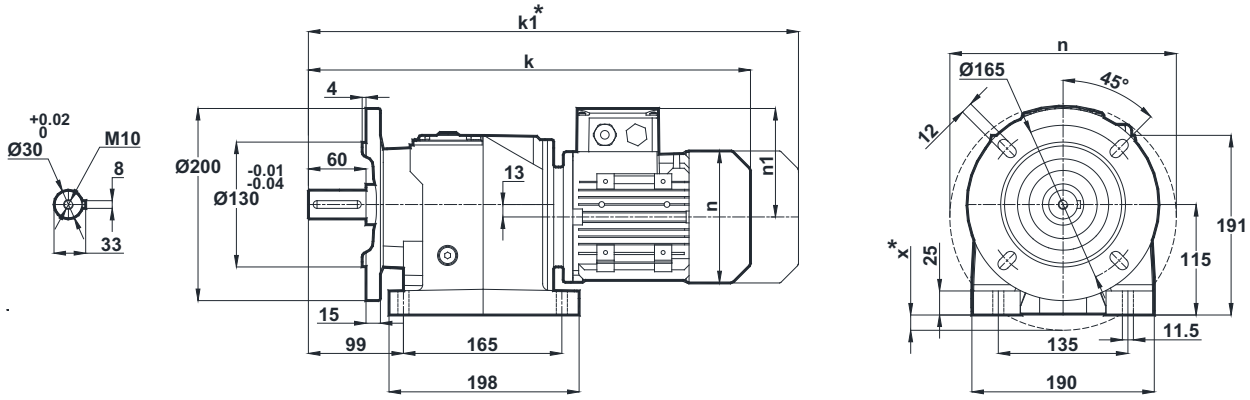


Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

***** **" 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

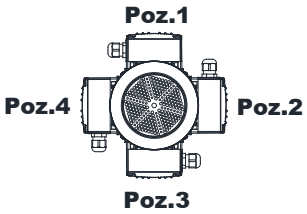
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MRF202
MRF203



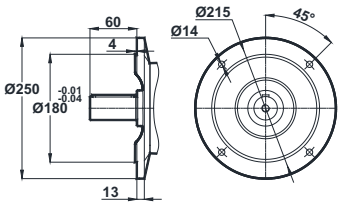
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
	63	71	80	90S	90L	100L	112M
k	444	470	504	543	543	591	615
k1	515	561	597	622	622	699	720
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
x	-	-	-	-	-	-	6

Klemens Kutusu / *Terminal Box* / Klemmenkasten

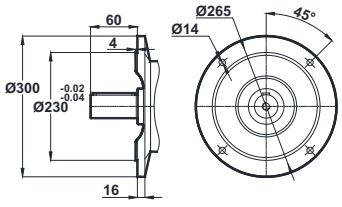


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

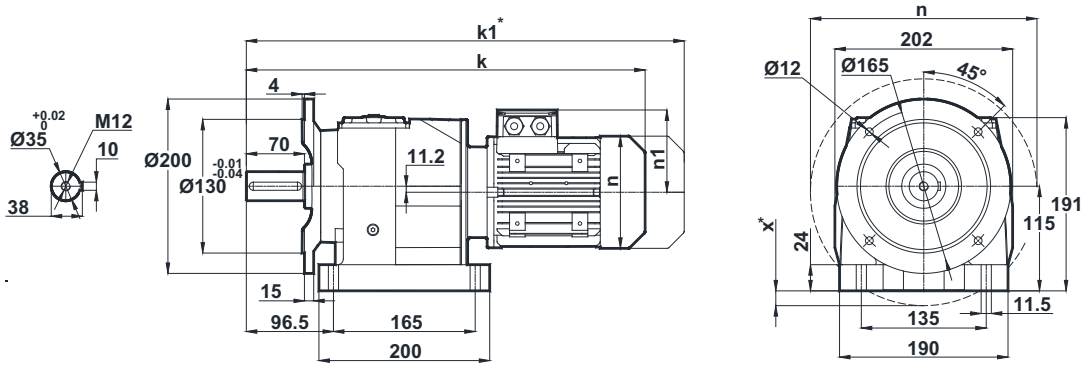


Opt. 2

*** " 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

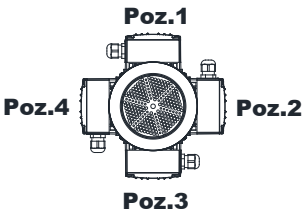
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF272
MRF273



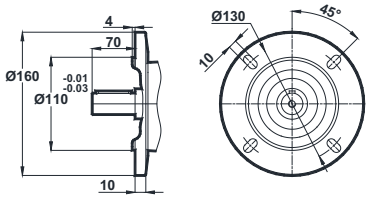
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	63	71	80	90S	90L	100L	112M	132S	132M
k	445	471	505	544	544	592	616	699	699
k1	516	562	598	623	623	700	721	829	829
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

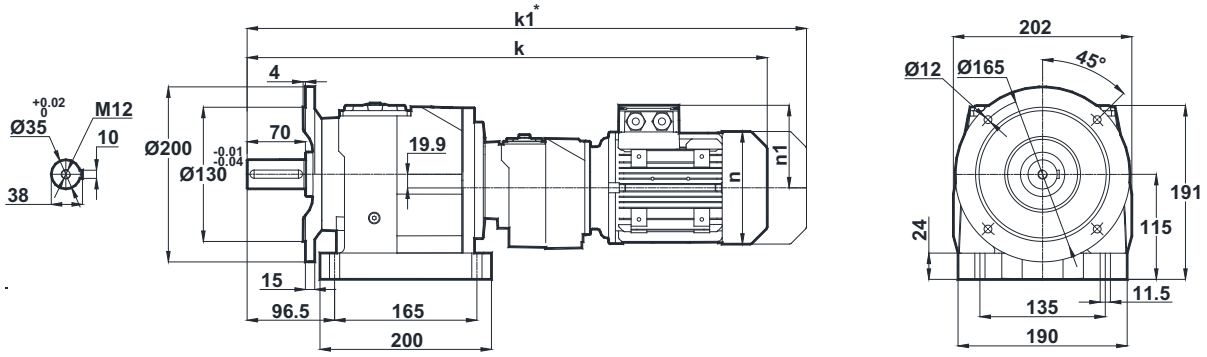


Opt. 1

***** **" 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

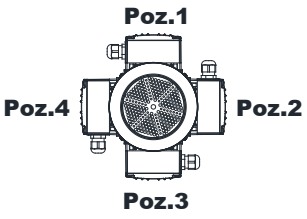
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MRF275
MRF276



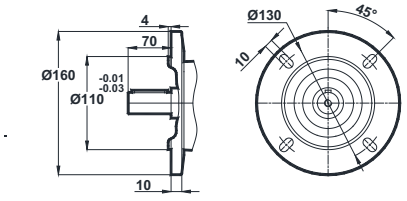
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	71
k	594.5	622
k1	665.5	713
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

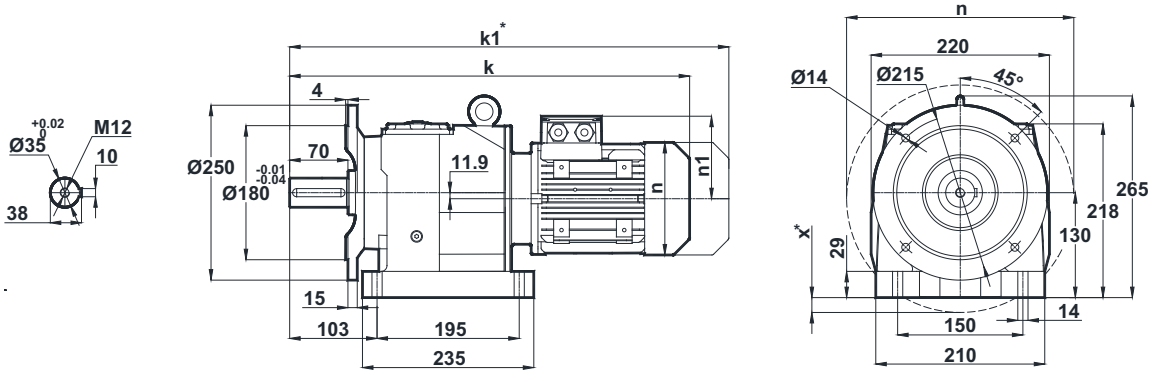


Opt. 1

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

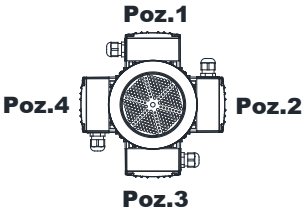
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MRF282
MRF283



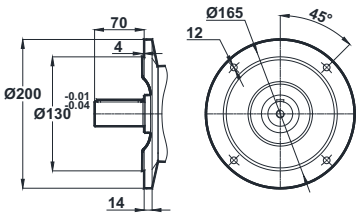
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	71	80	90S	90L	100L	112M	132S	132M	160M
k	488.5	522.5	561.5	561.5	609.5	633.5	720	720	816
k1	579.5	615.5	640.5	640.5	717.5	738.5	850	850	966
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
x	-	-	-	-	-	-	11	11	40

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

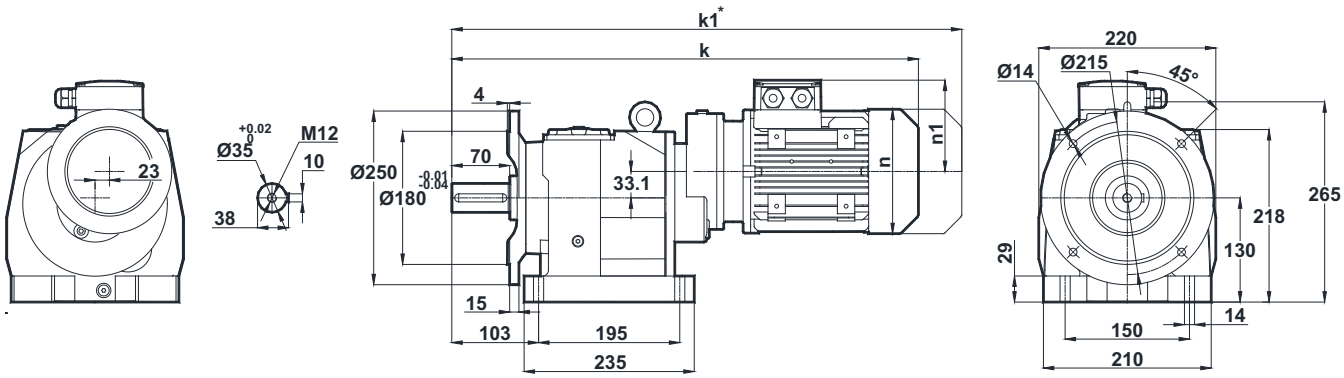


Opt. 1

***** **" 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

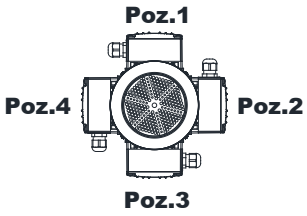
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MRF284



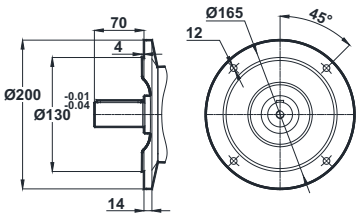
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	541.5	567.5
k1	612.5	658.5
n	119	137
n1	101	118

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

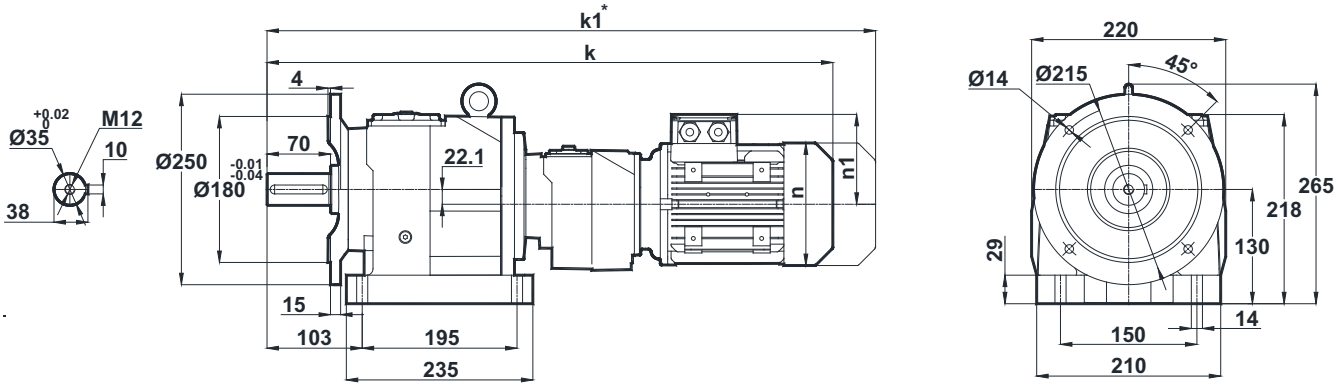


Opt. 1

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

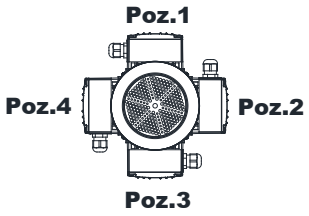
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MRF285
MRF286



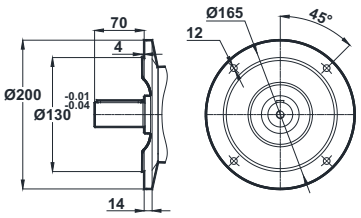
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
	63
k	646
k1	717
n	119
n1	101

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

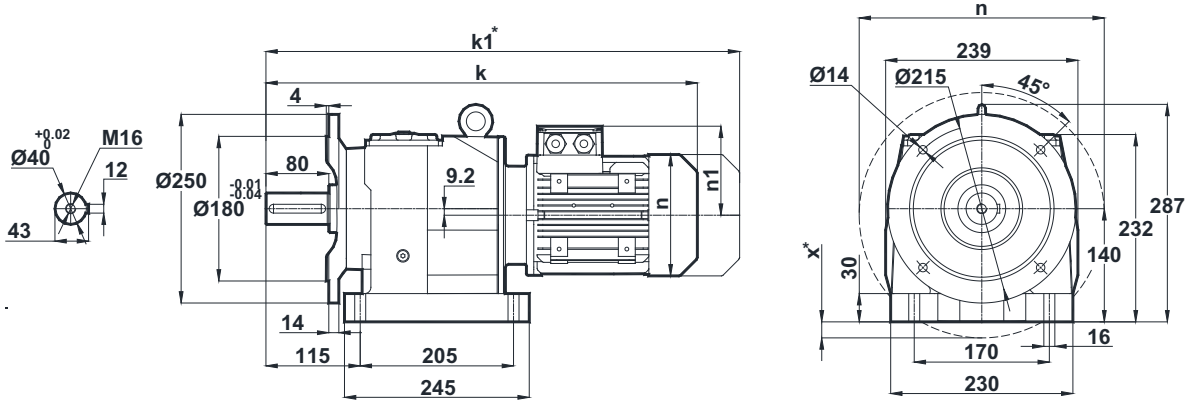


Opt. 1

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

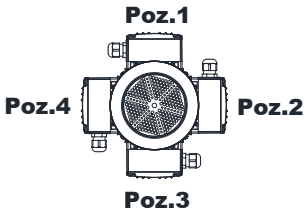
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MRF372
MRF373



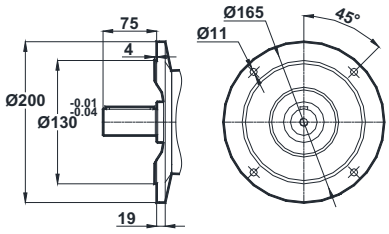
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	71	80	90S	90L	100L	112M	132S	132M	160M	160L
k	509.5	543.5	582.5	582.5	630.5	645.5	741	741	837	837
k1	600.5	636.5	661.5	661.5	738.5	759.5	871	871	987	987
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-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

Klemens Kutusu / *Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

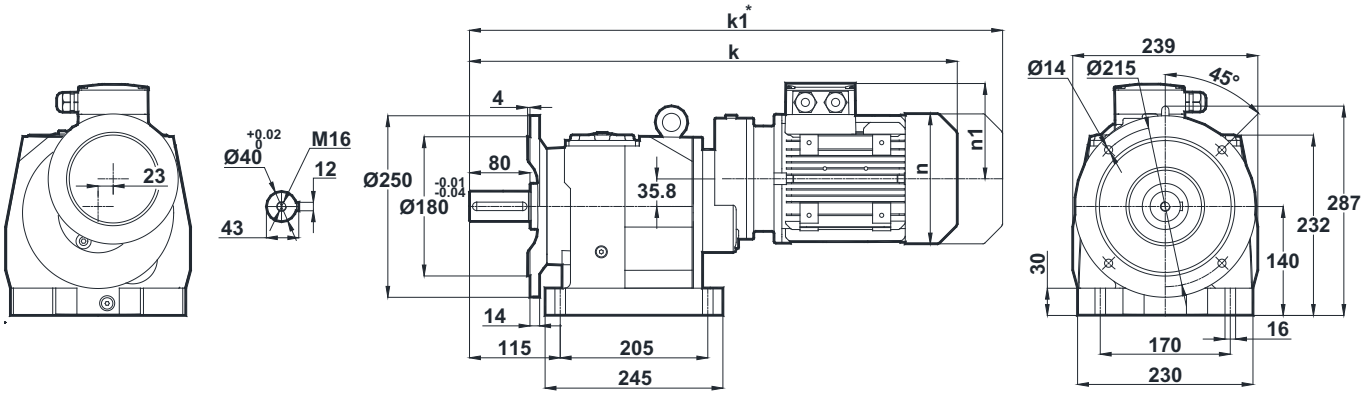


Opt. 1

***** **" 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

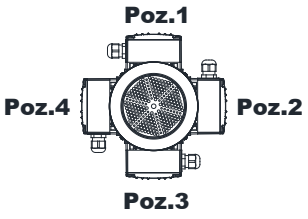
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF374



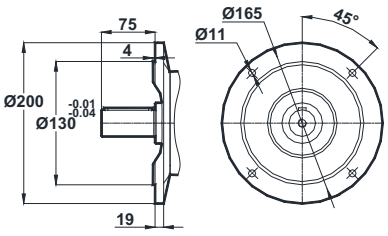
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
	63	**71**	**80**
k	562.5	588.5	622.5
k1	633.5	679.5	715.5
n	119	137	155
n1	101	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

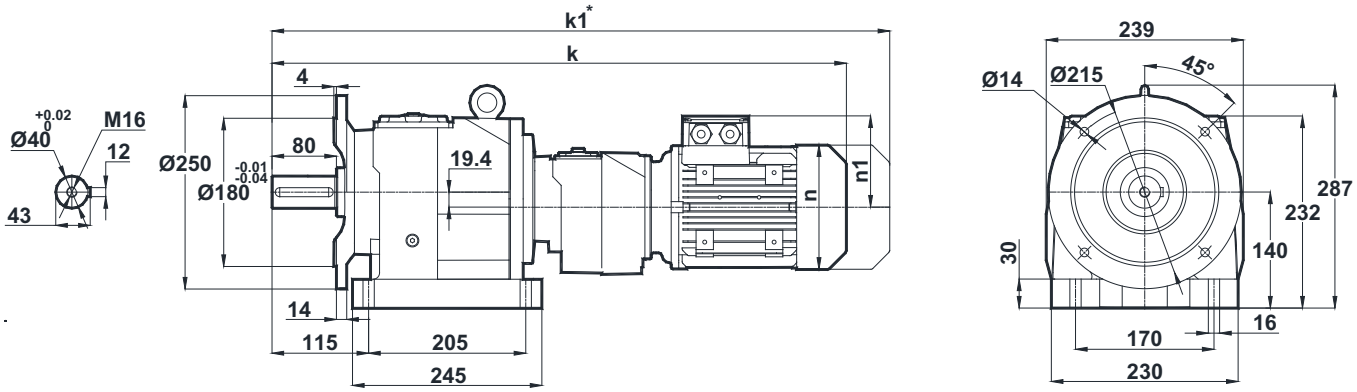


Opt. 1

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

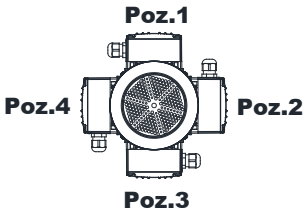
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF375
MRF376



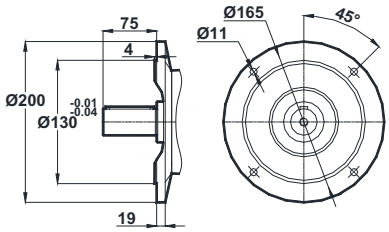
Motor Büyüklüğü / *Motor Size /* Motorbaugroße	
	63
k	667
k1	738
n	119
n1	101

Klemens Kutusu /*Terminal Box* / Klemmenkasten



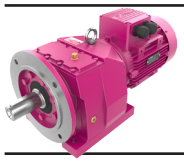
63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



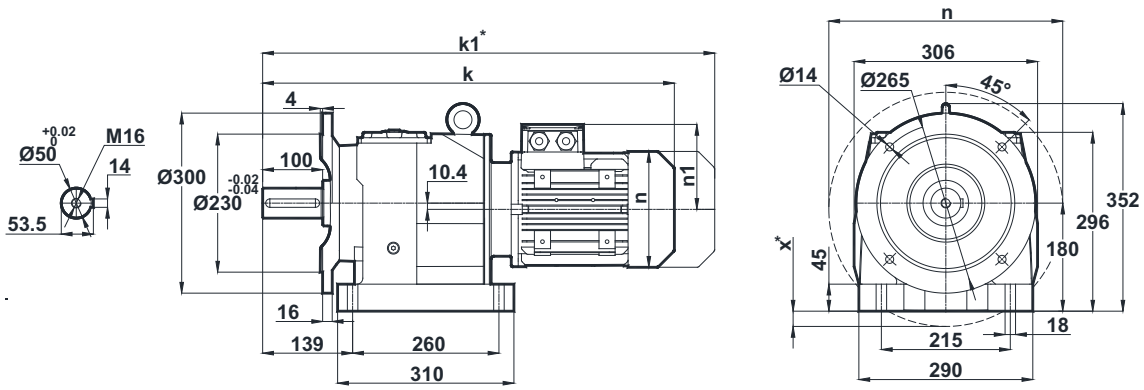
Opt. 1

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



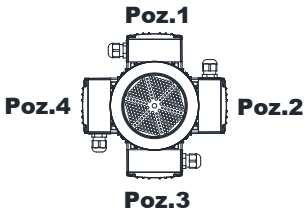
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF472
MRF473



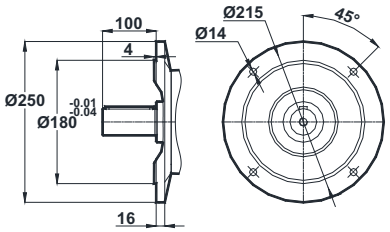
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
	80	**90S**	**90L**	**100L**	**112M**	**132S**	**132M**	**160M**	**160L**	**180M**	**180L**
k	610.5	649.5	649.5	694.5	718.5	803.5	803.5	899.5	899.5	971.5	971.5
k1	703.5	728.5	728.5	802.5	823.5	933.5	933.5	1049.5	1049.5	1158.5	1158.5
n	155	176	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



80-90-100-112-132-160-180

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

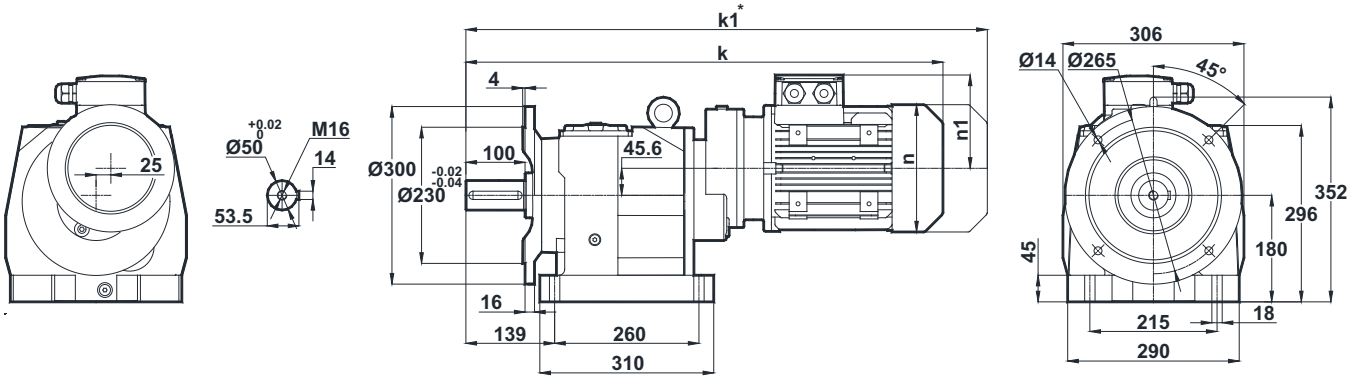


Opt. 1

***** **" 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

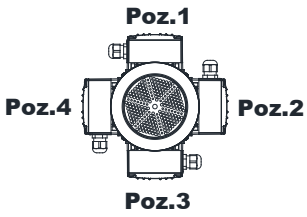
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF474



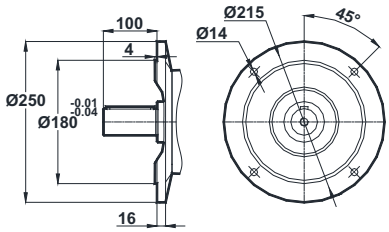
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	71	80
k	670	704
k1	761	797
n	137	155
n1	118	127

Klemens Kutusu / *Terminal Box* / Klemmenkasten



71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

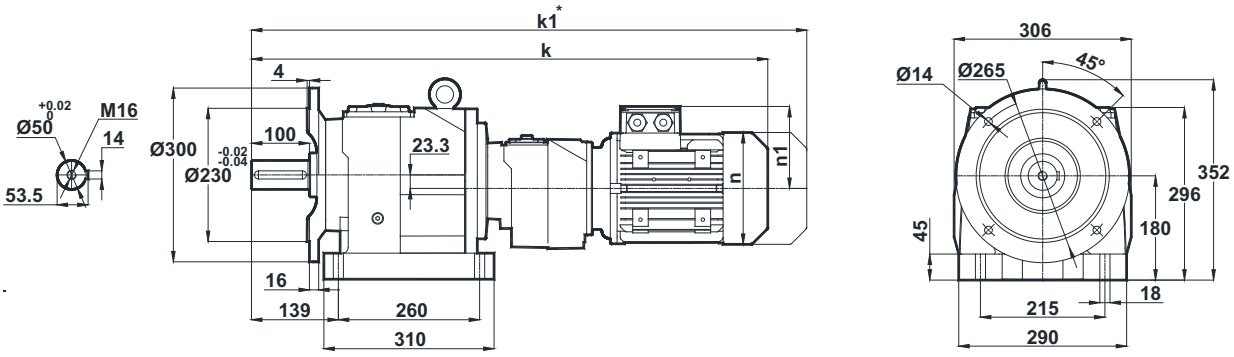


Opt. 1

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

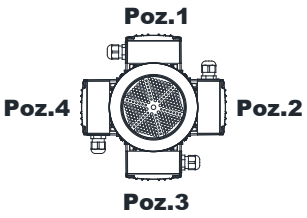
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MRF475
MRF476



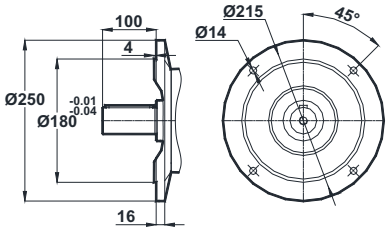
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	71
k	774	800
k1	845	891
n	119	137
n1	101	118

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

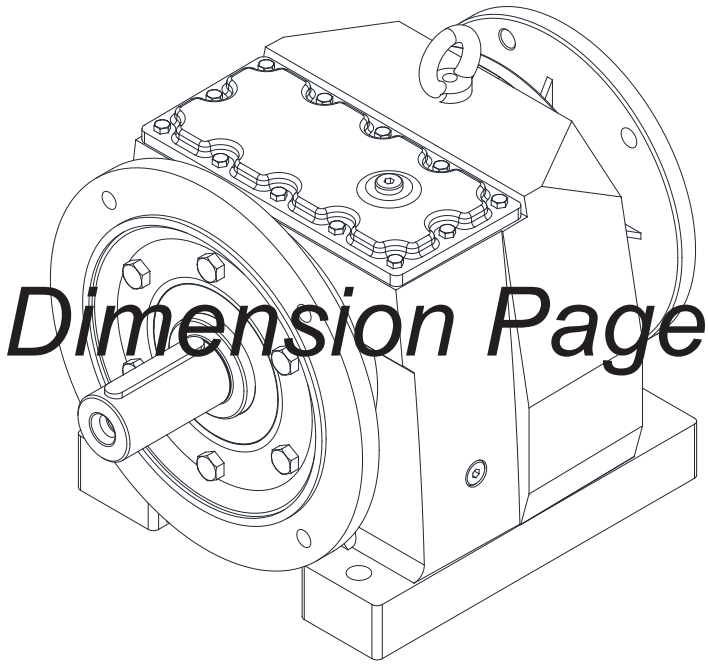


Opt. 1

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

MNF Serisi / *Series* / Serie

Ölçü Sayfaları

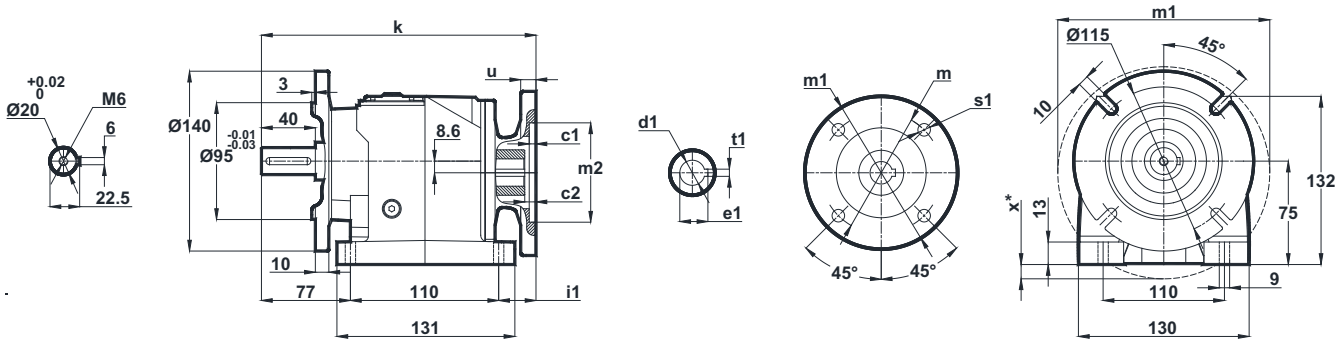


Dimension Pages

Abmessungsseiten

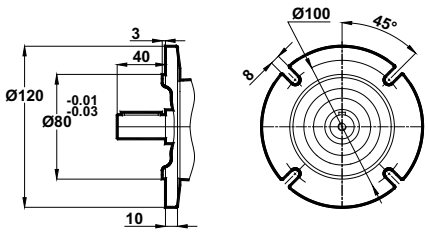
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF002-A.. / B...
MNF003-A.. / B...

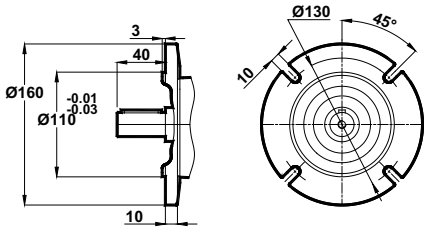


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	27	10	214	11	4	12.8	4
63/B14	2.5		5.5	75	90	60							-
71/B5	4	4.5	11	130	160	110	28.5	12	215.5	14	5	16.3	14
71/B14	3		7	85	105	70		10					-
80/B5	4	5	12	165	200	130	43.5	12	230.5	19	6	21.8	34
80/B14			7	100	120	80							-
90/B5	4	5	12	165	200	130	43.5	12	230.5	24	8	27.3	34
90/B14			9	115	140	95							4
100/B5	4.5	5.5	15	215	250	180	54.5	14	241.5	28	8	31.3	59
100/B14	4		9	130	160	110							14

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

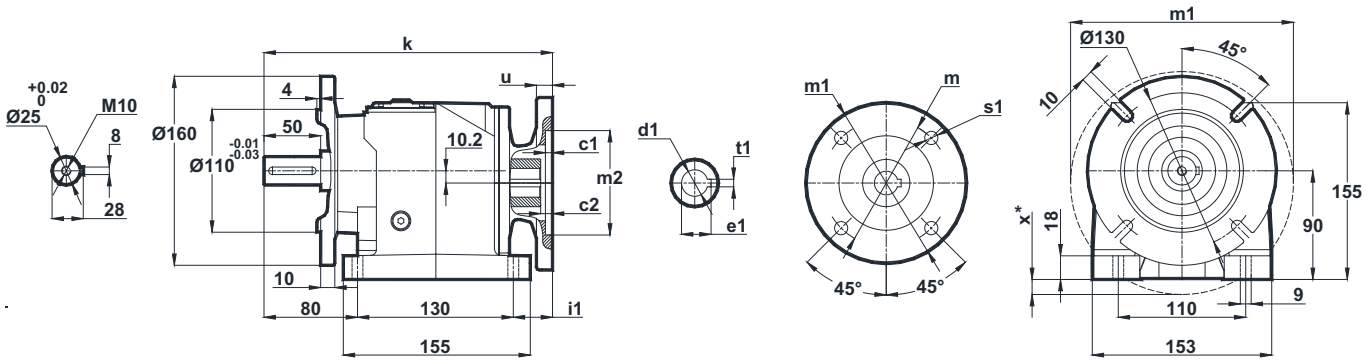


Opt. 2

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

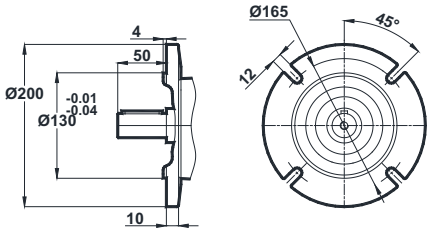
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF102-A.. / B...
MNF103-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	30	10	241	11	4	12.8	-
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	31.5	12 10	242.5	14	5	16.3	1 -
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	46.5	12	257.5	19	6	21.8	21 -
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	46.5	12	257.5	24	8	27.3	21 -
100-112/B5 **100-112/B14**	4.5 4	5.5	15 9	215 130	250 160	180 110	57,5	14	268.5	28	8	31.3	46 1

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

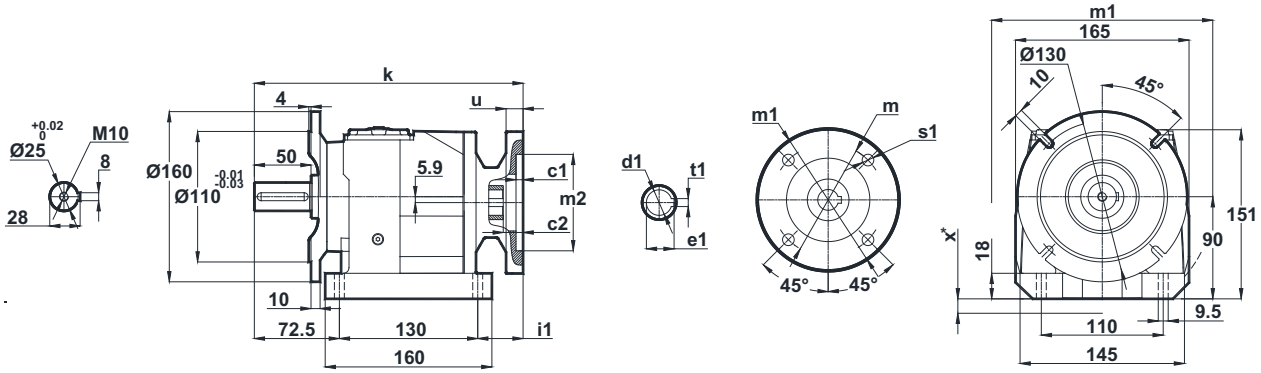


Opt. 1

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

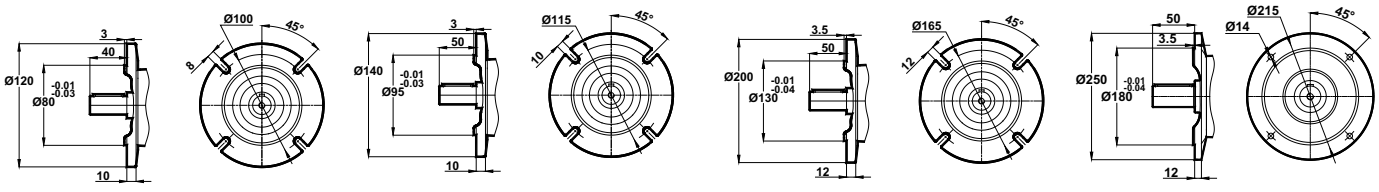
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF172-A.. / B...
MNF173-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	3.5	5	10	115	140	95	38.5	10	241	11	4	12.8	-
63/B14	2.5		5.5	75	90	60							
71/B5	4	4.5	11	130	160	110	40	12	242.5	14	5	16.3	-
71/B14	3		7	85	105	70		10					
80/B5	4	5	12	165	200	130	55	12	257.5	19	6	21.8	16
80/B14			7	100	120	80							-
90/B5	4	5	12	165	200	130	55	12	257.5	24	8	27.3	16
90/B14			9	115	140	95							-
100-112/B5	4.5	5.5	15	215	250	180	66	14	268.5	28	8	31.3	41
100-112/B14	4		9	130	160	110							-

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

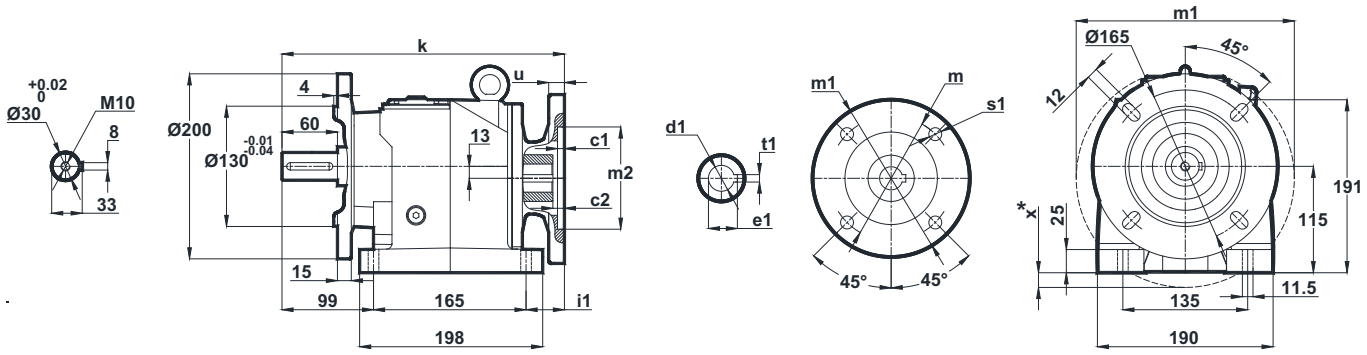


Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

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

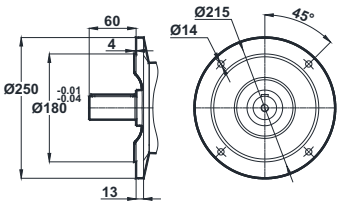
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF202-A.. / B...
MNF203-A.. / B...

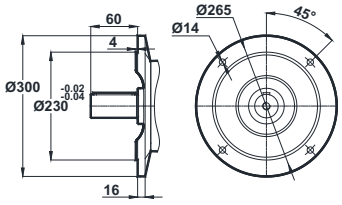


	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	58.5	12	322.5	11	4	12.8	-
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	29.5	12 10	293.5	14	5	16.3	-
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	58.5	12	322.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	58.5	12	322.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	51.5	12	315.5	28	8	31.3	23 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	98.5	20	362.5	38	10	41.3	48 -

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

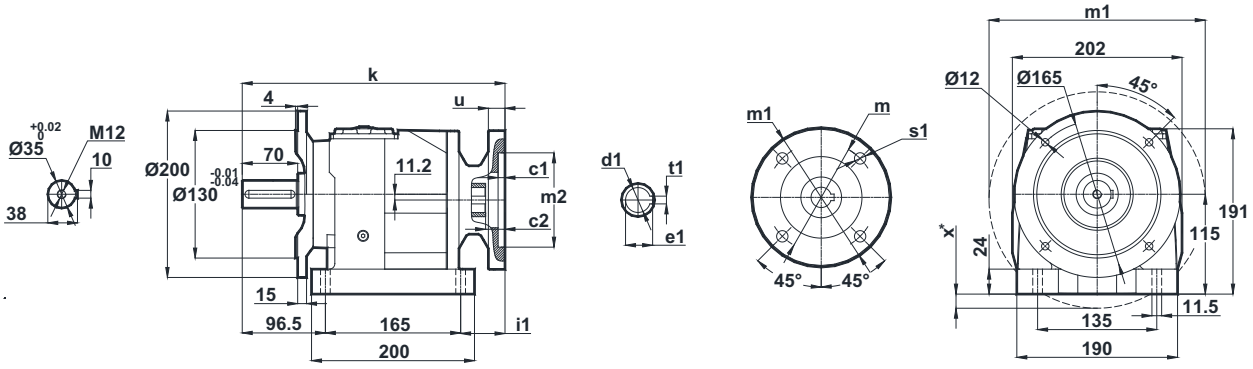


Opt. 2

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

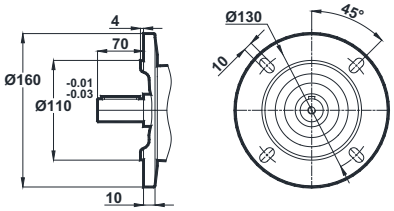
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF272-A.. / B...
MNF273-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	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	-
71/B14	3		7	85	105	70		10					
80/B5	4	5	12	165	200	130	62	12	323.5	19	6	21.8	-
80/B14			7	100	120	80							
90/B5	4	5	12	165	200	130	62	12	323.5	24	8	27.3	-
90/B14			9	115	140	95							
100-112/B5	4	5.5	15	215	250	180	55	12	316.5	28	8	31.3	22
100-112/B14	3.5		9	130	160	110							-
132/B5	4.5	7	15	265	300	230	102	20	363.5	38	10	41.3	47
132/B14			11	165	200	130							-

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

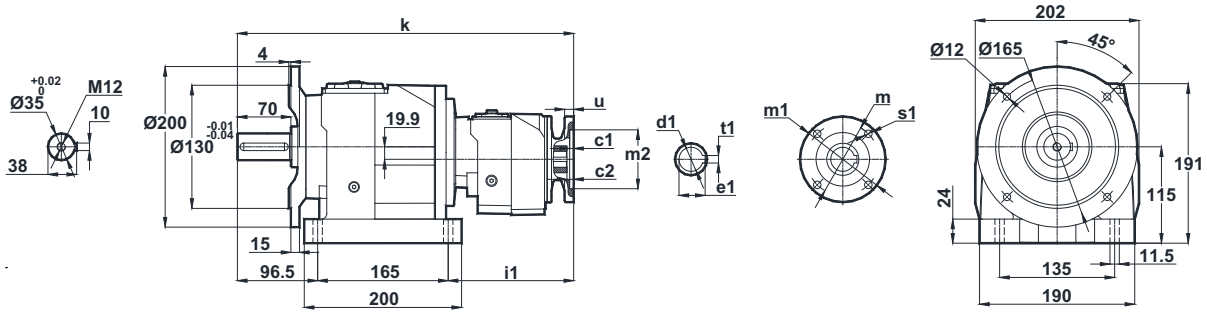


Opt. 1

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

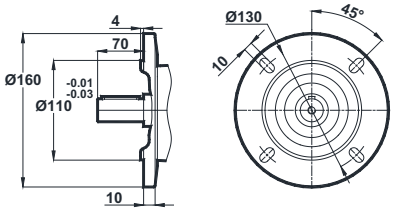
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF275-A.. / B...
MNF276-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	177.5	10	439	11	4	12.8
63/B14	2.5		5.5	75	90	60						
71/B5	4	4.5	11	130	160	110	179	12	440.5	14	5	16.3
71/B14	3		7	85	105	70		10				
80/B5	4	5	12	165	200	130	194	12	455.5	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	194	12	455.5	24	8	27.3
90/B14			9	115	140	95						
100/B5	4.5	5.5	15	215	250	180	205	14	466.5	28	8	31.3
100/B14	4		9	130	160	110						

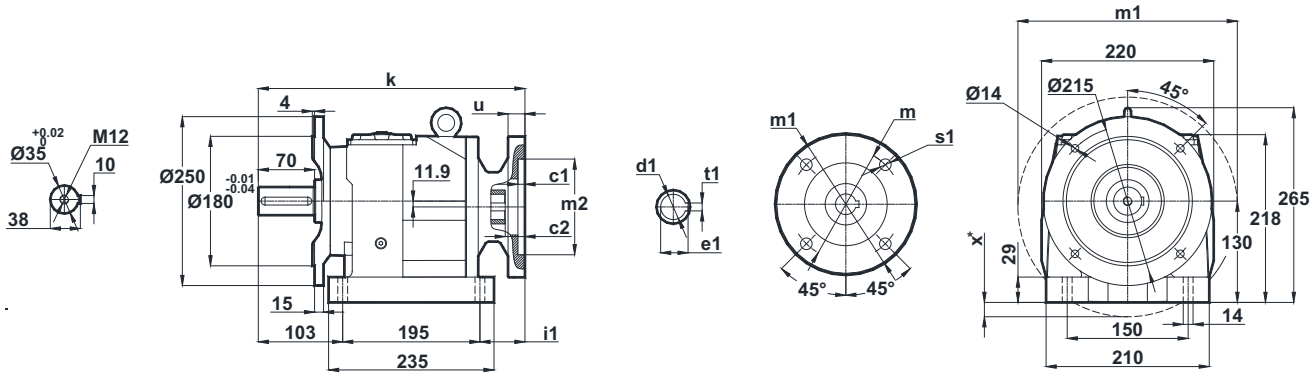
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

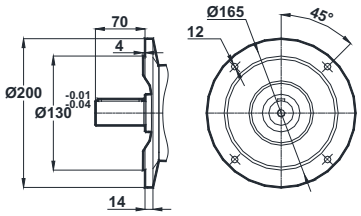
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF282-A.. / B...
MNF283-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	45	12	343	14	5	16.3	-
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	45	12	343	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	45	12	343	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	62	15	360	28	8	31.3	7 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	82	15	380	38	10	41.3	32 -
160/B5	5.5	10	19	300	350	250	161.5	20	459.5	42	12	45.3	57

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

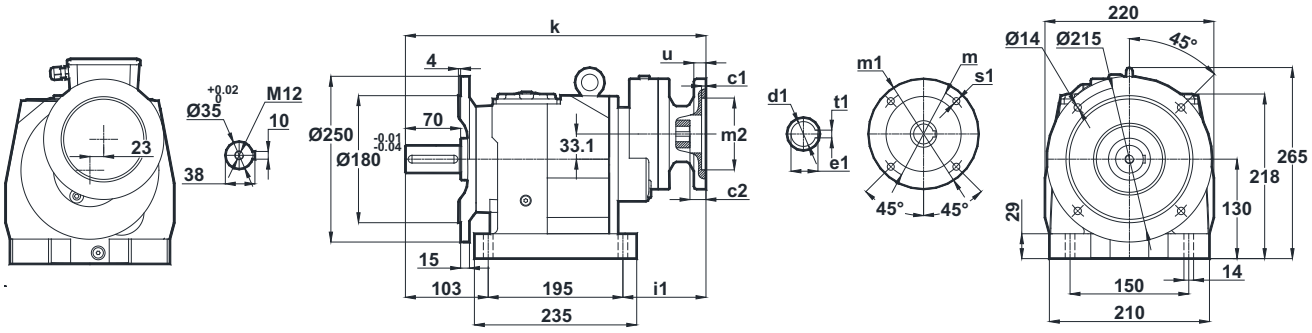


Opt. 1

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

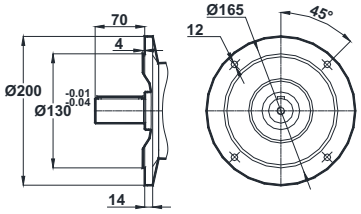
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF284-A.. / B...



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	122	12	420	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	93	12 10	391	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	122	12	420	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	122	12	420	24	8	27.3

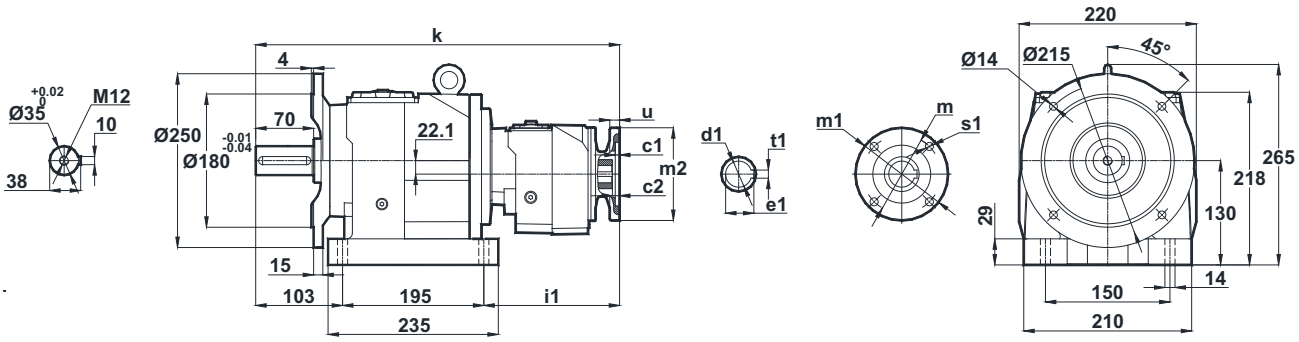
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

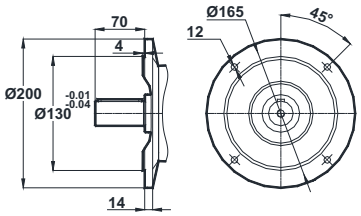
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF285-A.. / B..
MNF286-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	186.5	10	488	11	4	12.8
63/B14	2.5		5.5	75	90	60						
71/B5	4	4.5	11	130	160	110	188	12	489.5	14	5	16.3
71/B14	3		7	85	105	70		10				
80/B5	4	5	12	165	200	130	203	12	504.5	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	203	12	504.5	24	8	27.3
90/B14			9	115	140	95						
100-112/B5	4.5	5	15	215	250	180	214	14	515.5	28	8	31.3
100-112/B14	4	5.5	9	130	160	110						

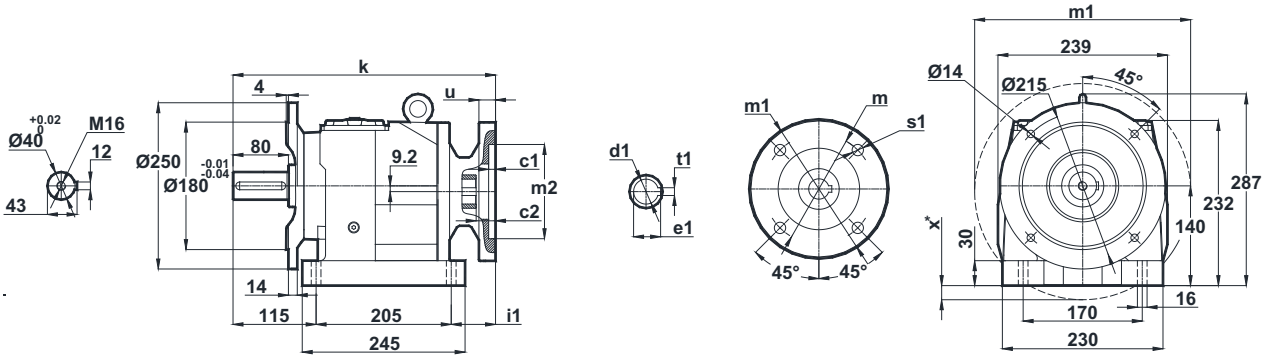
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

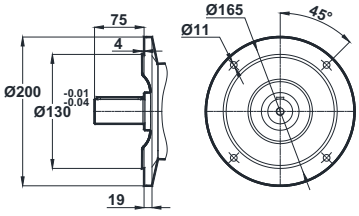
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF372-A.. / B..
MNF373-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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 **80/B14**	4	9	12 7	165 100	200 120	130 80	43.5	12	364	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	43.5	12	364	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	60.5	15	381	28	8	31.3	-
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	80.5	15	401	38	10	41.3	20 -
160/B5	5.5	10	19	300	350	250	160	20	480.5	42	12	45.3	45

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

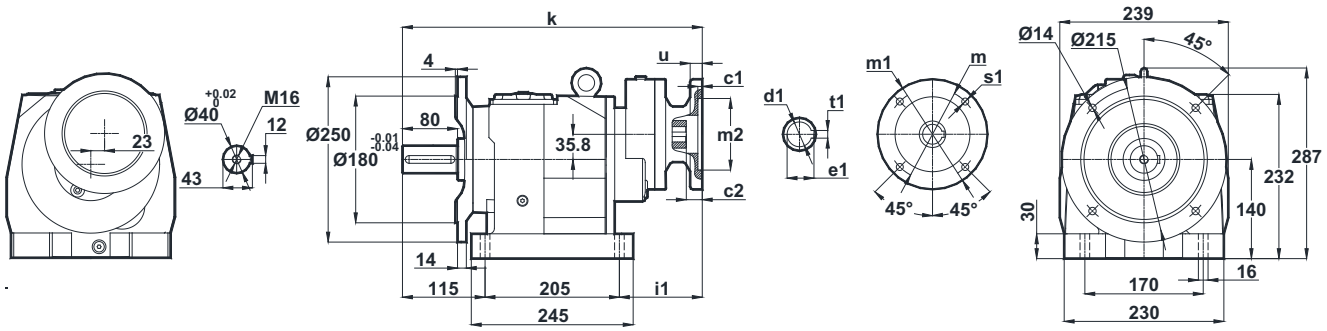


Opt. 1

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

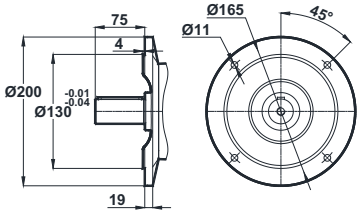
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF374-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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
71/B14	3		7	85	105	70		10				
80/B5	4	5	12	165	200	130	120.5	12	441	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	120.5	12	441	24	8	27.3
90/B14			9	115	140	95						

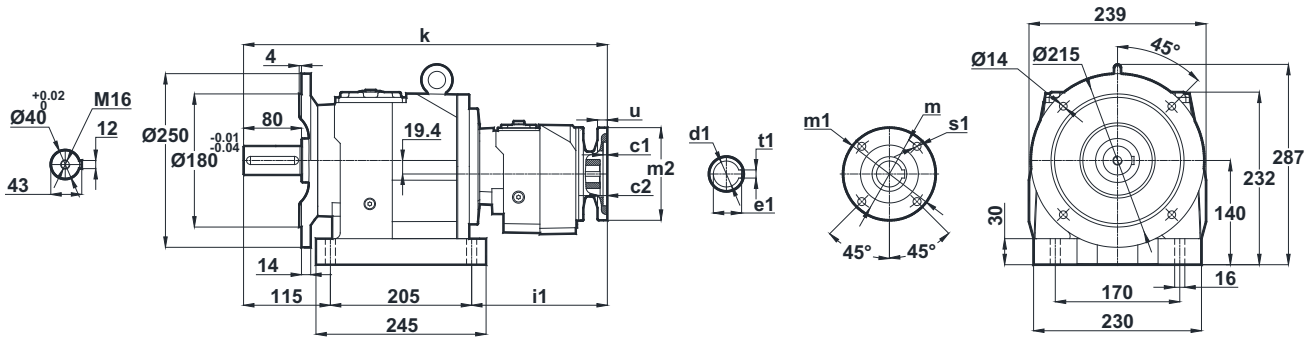
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

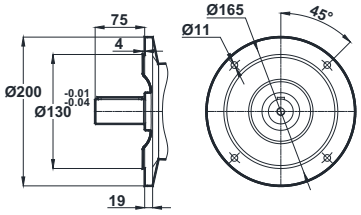
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF375-A.. / B..
MNF376-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	185	10	509	11	4	12.8
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	186.5	12 10	510.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	201.5	12	525.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	201.5	12	525.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	5 5.5	15 9	215 130	250 160	180 110	212.5	14	536.5	28	8	31.3

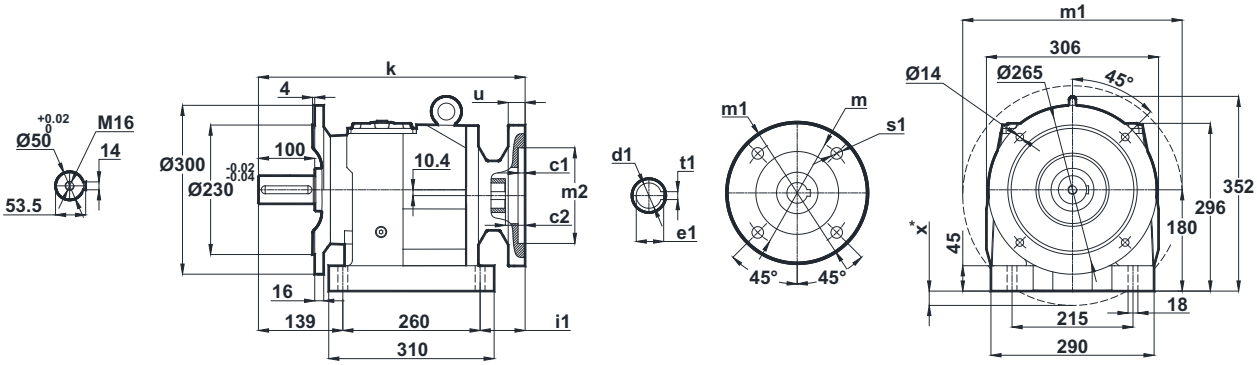
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

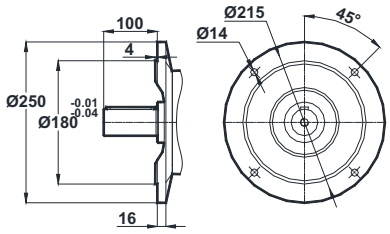
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF472-A.. / B..
MNF473-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	i1	u	k	d1	t1	e1	x
80/B5	4	5	12	165	200	130	27.5	12	6	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	27.5	12	8	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	46	15	8	28	8	31.3	-
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	64.5	15	10	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	144	20	12	42	12	45.3	6
180/B5	5.5	10	19	300	350	250	144	20	14	48	14	51.8	6

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

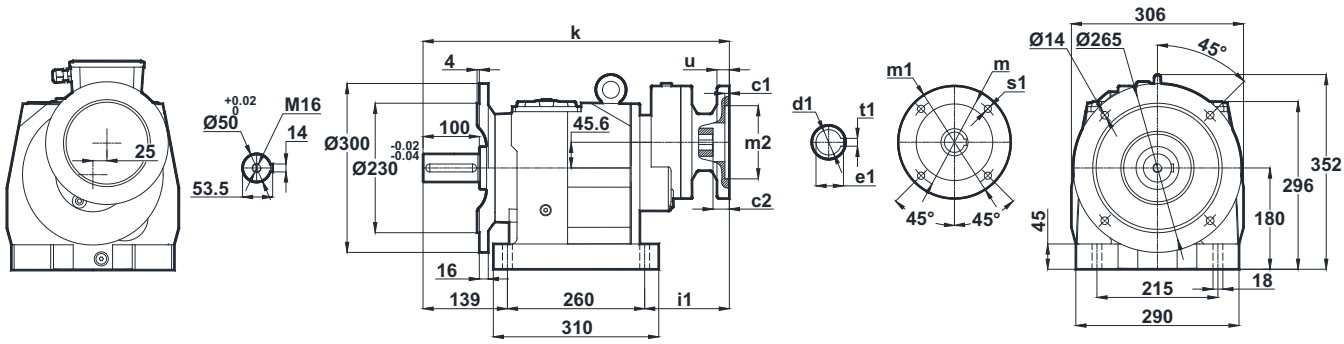


Opt. 1

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

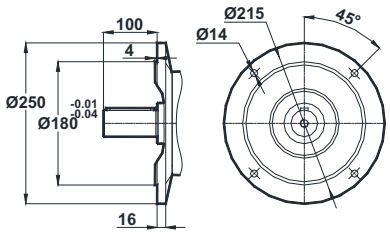
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF474-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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 **80/B14**	4	9	12 7	165 100	200 120	130 80	125.5	12	524.5	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	125.5	12	524.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	142.5	15	541.5	28	8	31.3

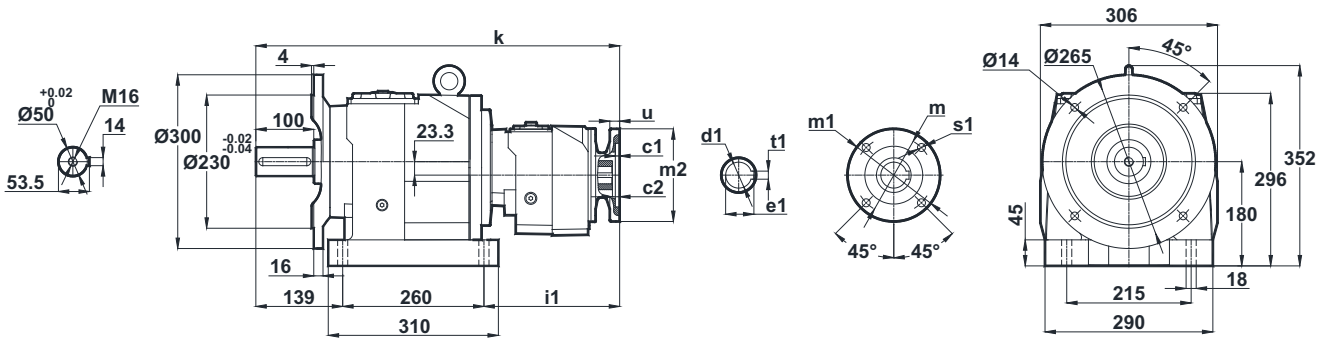
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

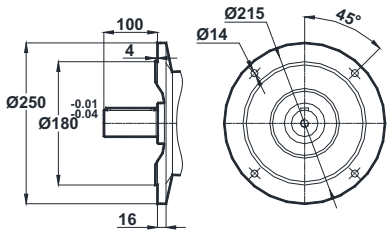
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MNF475-A.. / B..
MNF476-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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		7	85	105	70		10				
80/B5	4	5	12	165	200	130	253.5	12	652.5	19	6	21.8
80/B14			7	100	120	80						
90/B5	4	5	12	165	200	130	253.5	12	652.5	24	8	27.3
90/B14			9	115	140	95						
100-112/B5	4	5.5	15	215	250	180	246.5	12	645.5	28	8	31.3
100-112/B14	3.5		9	130	160	110						
132/B5	4.5	7	15	265	300	230	293.5	20	692.5	38	10	41.3
132/B14			9	165	200	130						

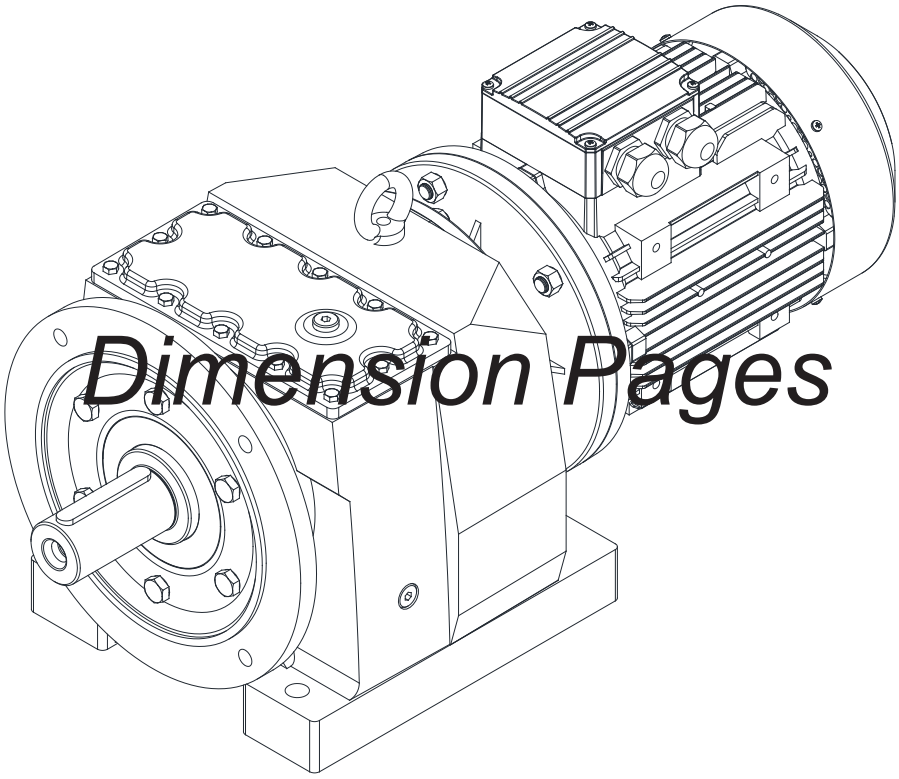
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

MVF Serisi / *Series* / Serie

Ölçü Sayfaları

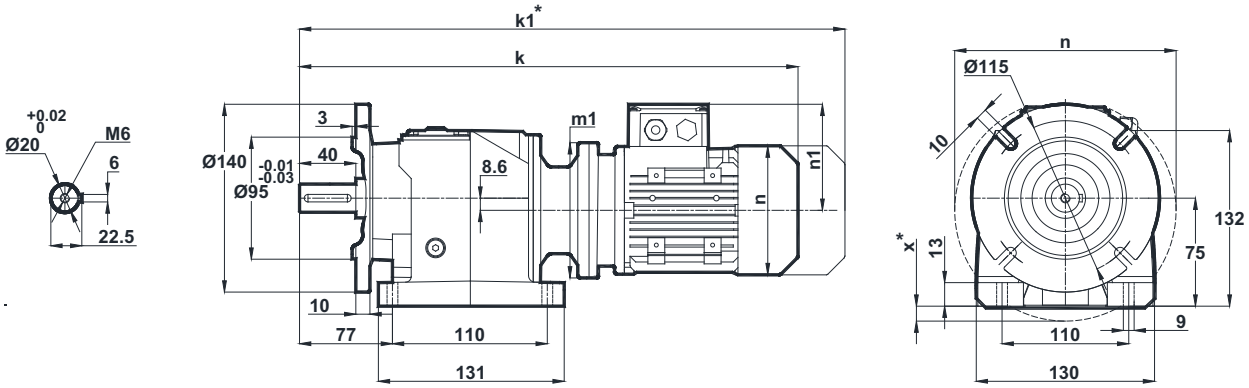


Dimension Pages

Abmessungsseiten

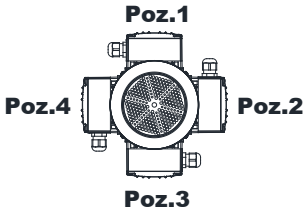
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF002
MVF003



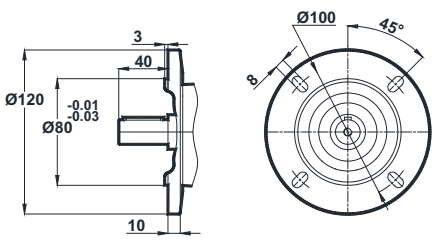
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14
k	404	427.5	464.5	505.5	505.5
k1	475	518.5	557.5	584.5	584.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	4	14	34	34	34
x (B14)	-	-	-	4	4

Klemens Kutusu /*Terminal Box* / Klemmenkasten

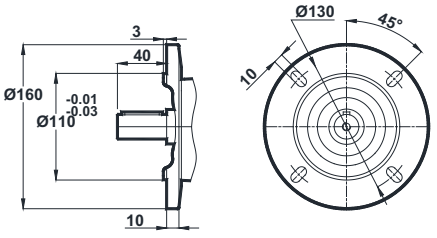


63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

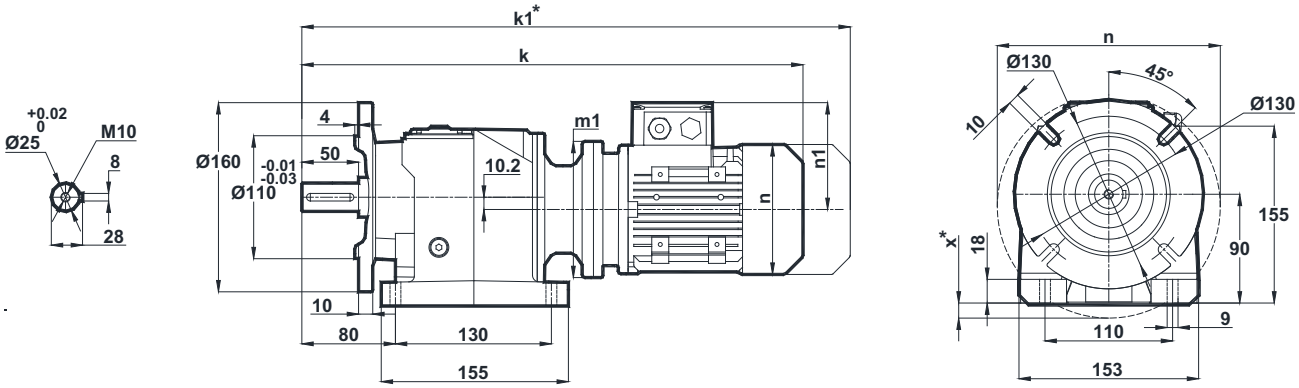


Opt. 2

***** **" 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

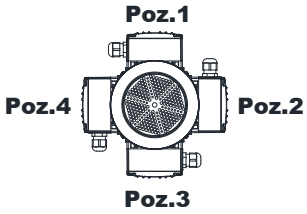
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF102
MVF103



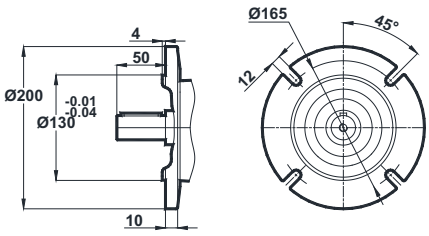
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**63/B5 63/B14**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**
k	428	451.5	488.5	529.5	529.5
k1	499	542.5	581.5	608.5	608.5
n	119	137	155	176	176
n1	101	118	127	136	136
m1 (B5)	140	160	200	200	200
m1 (B14)	90	105	120	140	140
x (B5)	-	1	21	21	21

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71-80-90

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

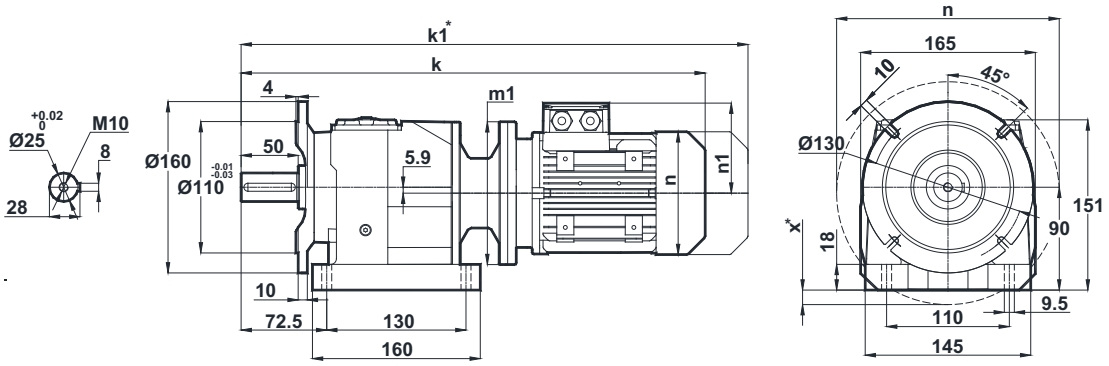


Opt. 1

***** **" 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

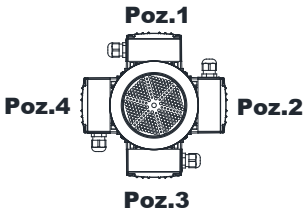
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF172
MVF173



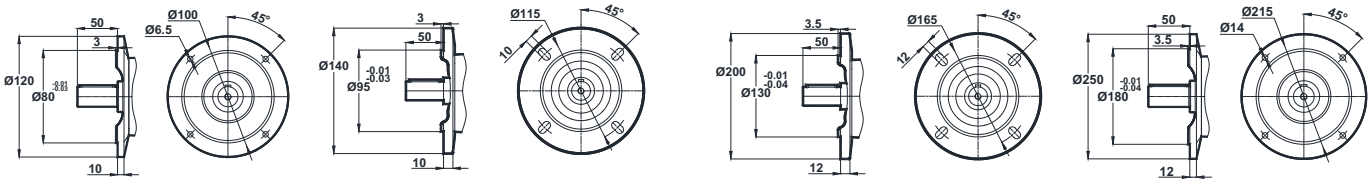
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
IEC	63/B5 63/B14	71/B5 71/B14	80/B5 80/B14	90S/B5 90S/B14	90L/B5 90L/B14	100L/B5 100L/B14	112M/B5 112M/B14
k	431	454.5	491.5	532.5	532.5	577.5	600.5
k1	502	545.5	584.5	611.5	611.5	685.5	705.5
n	119	137	155	176	176	193	215
n1	101	118	127	136	136	149	161
m1 (B5)	140	160	200	200	200	250	250
m1 (B14)	90	105	120	140	140	160	160
x (B5)	-	-	16	16	16	41	41

Klemens Kutusu / *Terminal Box* / Klemmenkasten



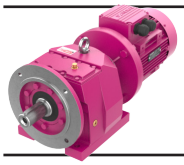
63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



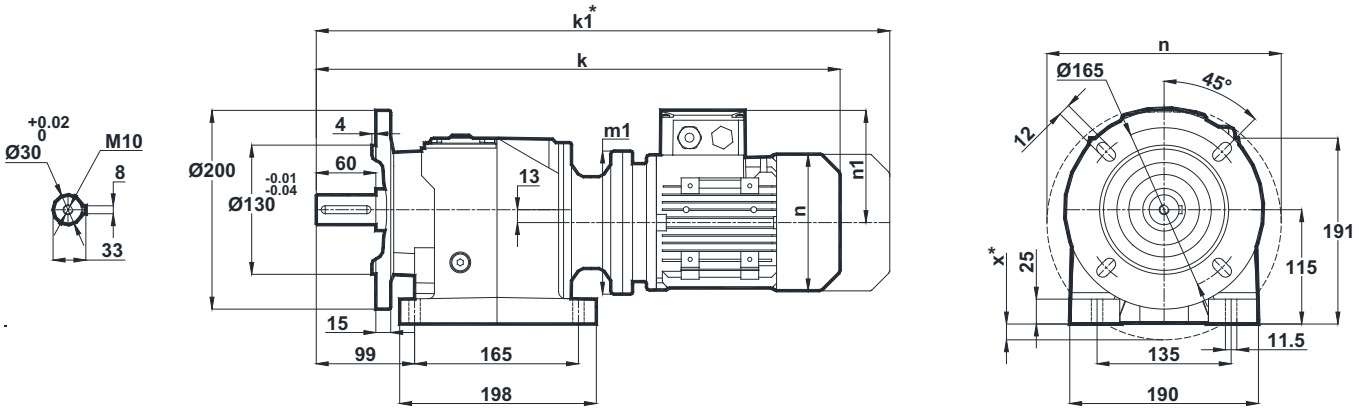
Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

***** **" 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



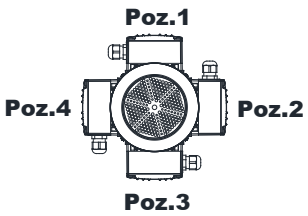
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF202
MVF203



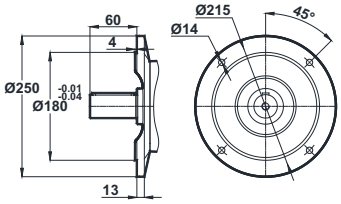
Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**
k	512.5	505.5	556.5	597.5	597.5	624.5	647.5
k1	583.5	596.5	649.5	676.5	676.5	732.5	752.5
n	119	137	155	176	176	193	215
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)	-	-	-	-	-	23	23

Klemens Kutusu / *Terminal Box* / Klemmenkasten

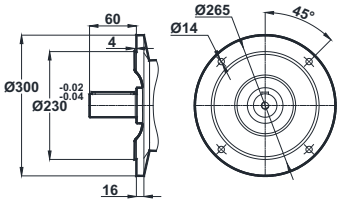


63-71-80-90-100-112

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1

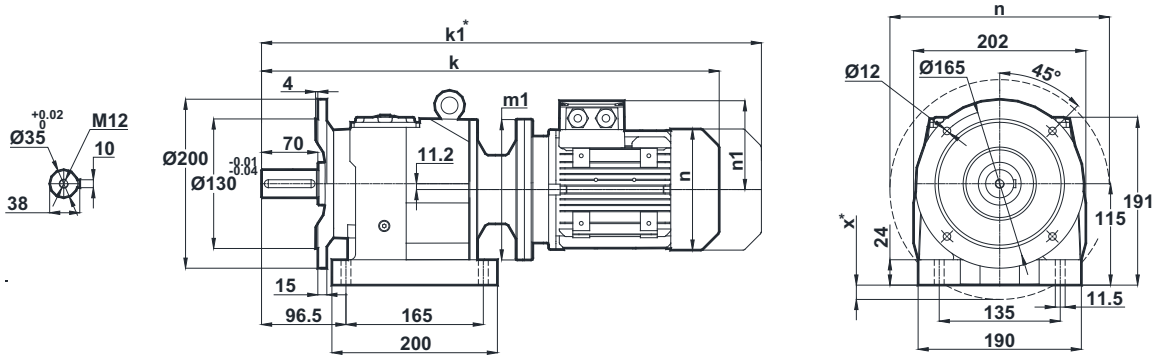


Opt. 2

*** " 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

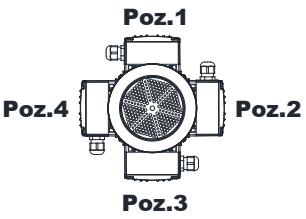
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF272
MVF273



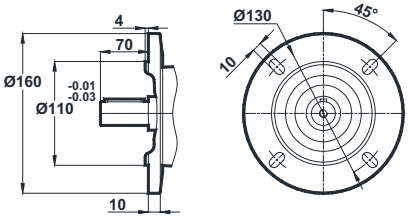
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**
k	513.5	506.5	557.5	598.5	598.5	625.5	648.5	778.5	778.5
k1	584.5	597.5	650.5	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)	-	-	-	-	-	22	22	47	47

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

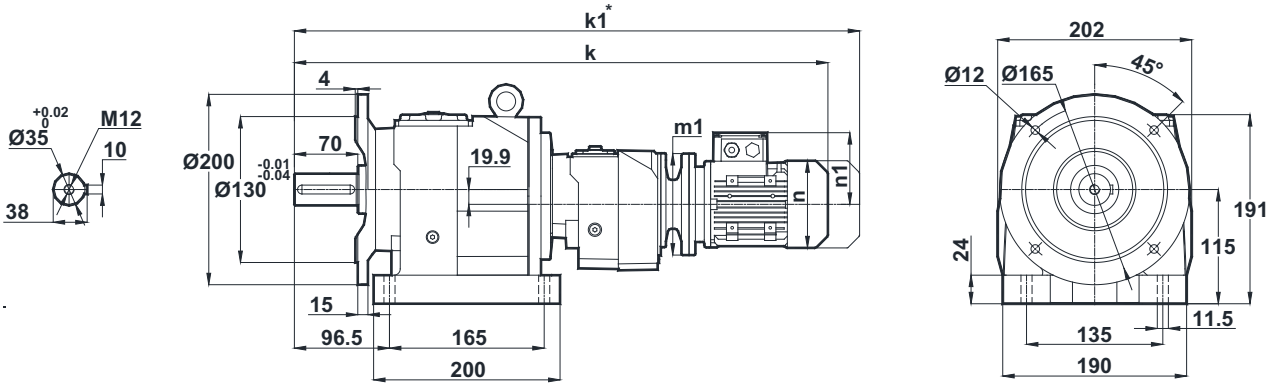


Opt. 1

***** **" 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

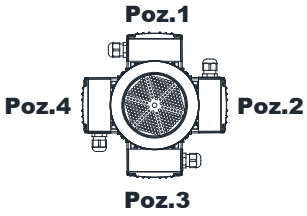
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF275
MVF276



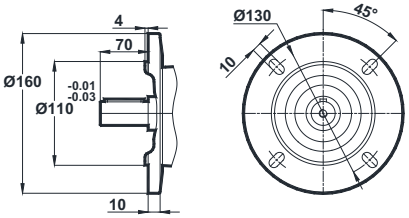
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	63/B5 63/B14	71/B5 71/B14
k	629	652.5
k1	700	743.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	90	105

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

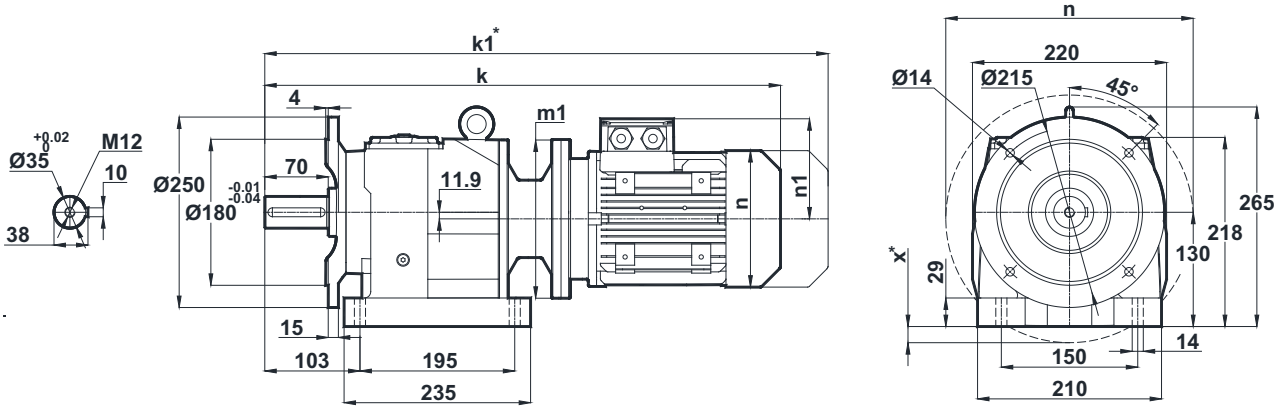


Opt. 1

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

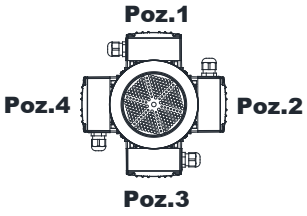
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF282
MVF283



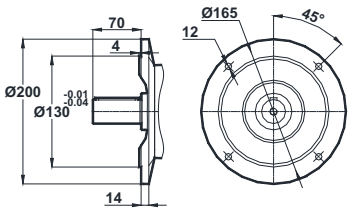
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**
k	555	577	618	618	669	692	795	795	954.5
k1	646	670	697	697	777	797	925	925	1104.5
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)	-	-	-	-	7	7	32	32	57

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

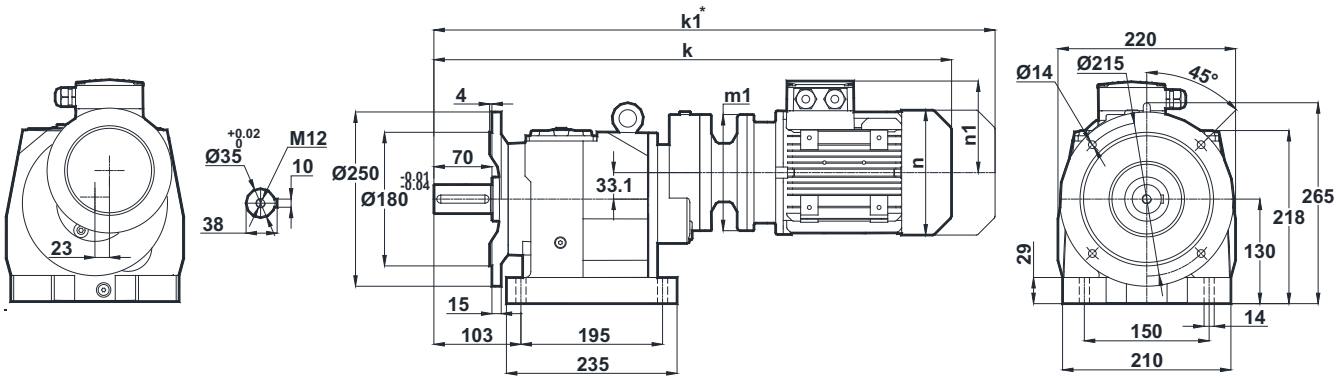


Opt. 1

***** **" 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

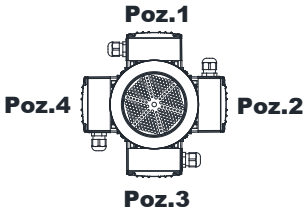
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF284



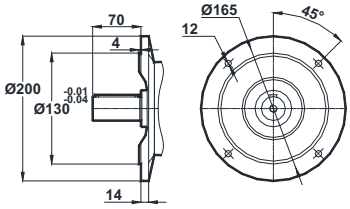
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	610	603
k1	681	694
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

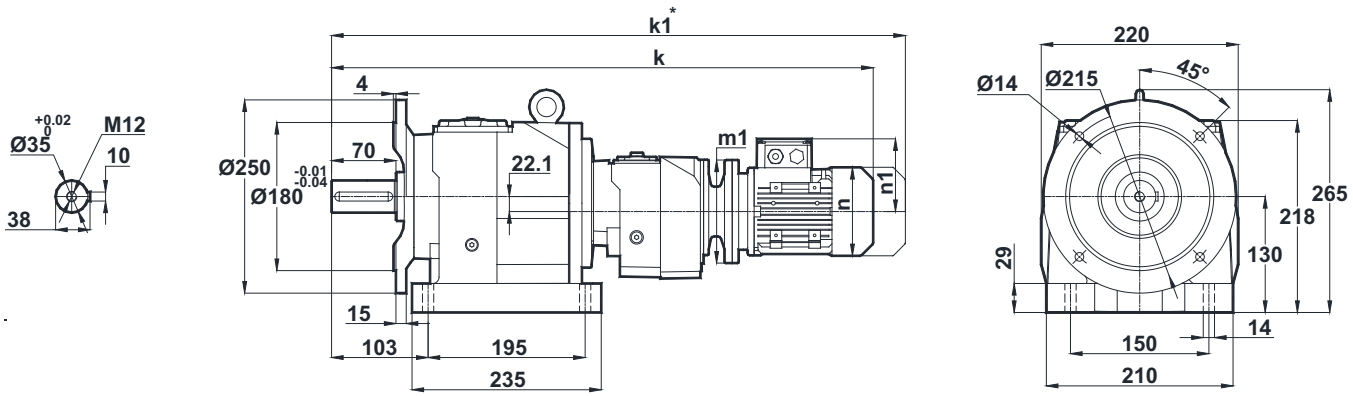


Opt. 1

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

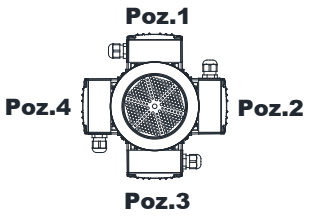
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF285
MVF286



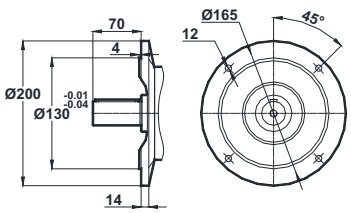
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	**63/B5 63/B14**
k	678
k1	749
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

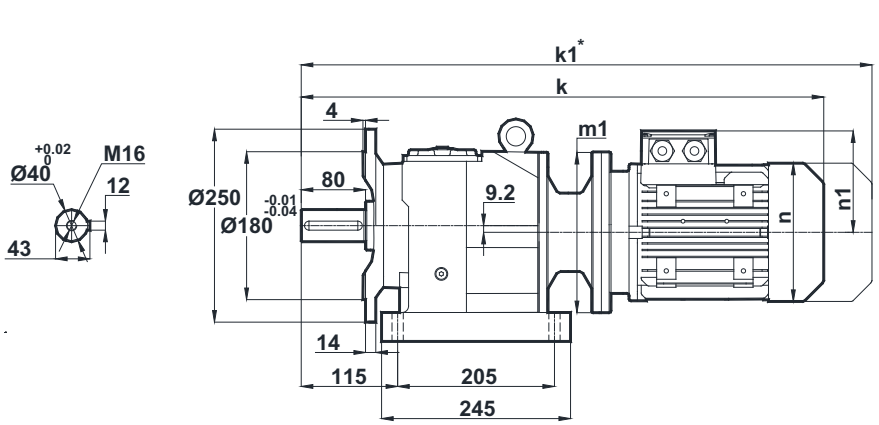


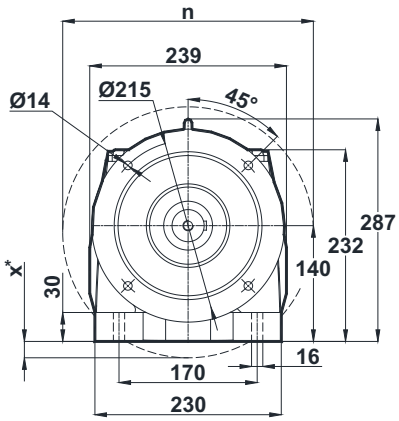
Opt. 1

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

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

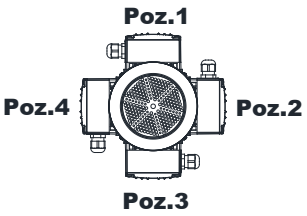
MVF372
MVF373





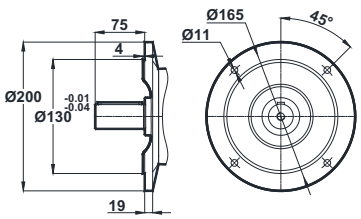
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**
k	576	598	639	639	690	713	816	816	975.5	975.5
k1	667	691	718	718	798	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)	-	-	-	-	-	-	20	20	45	45

Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

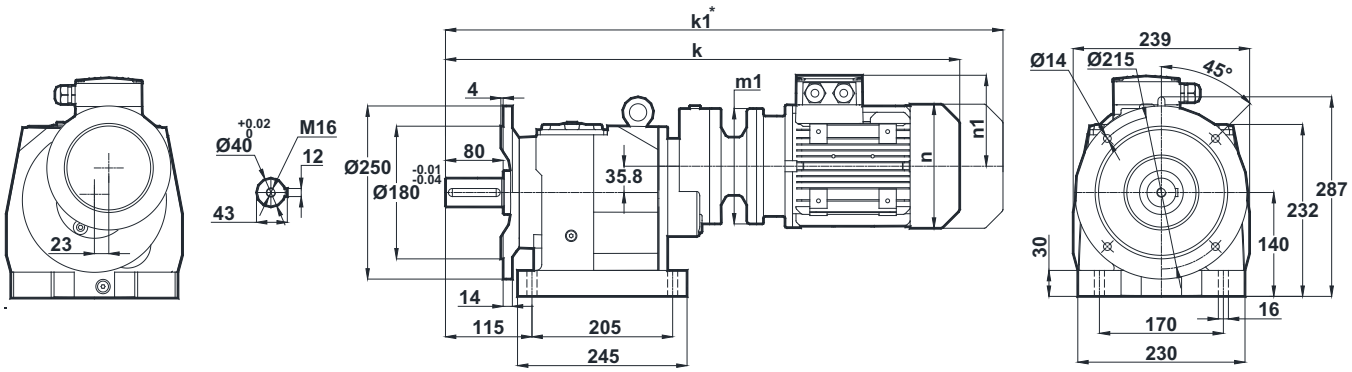


Opt. 1

***** **" 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

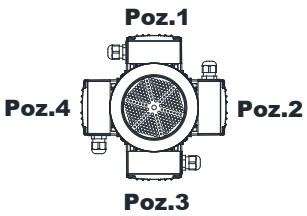
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF374



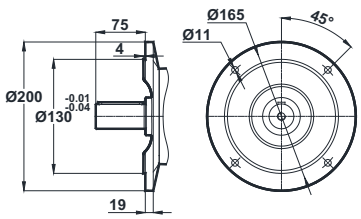
Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**
k	631	624	675
k1	702	715	768
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

Klemens Kutusu / *Terminal Box* / Klemmenkasten



63-71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

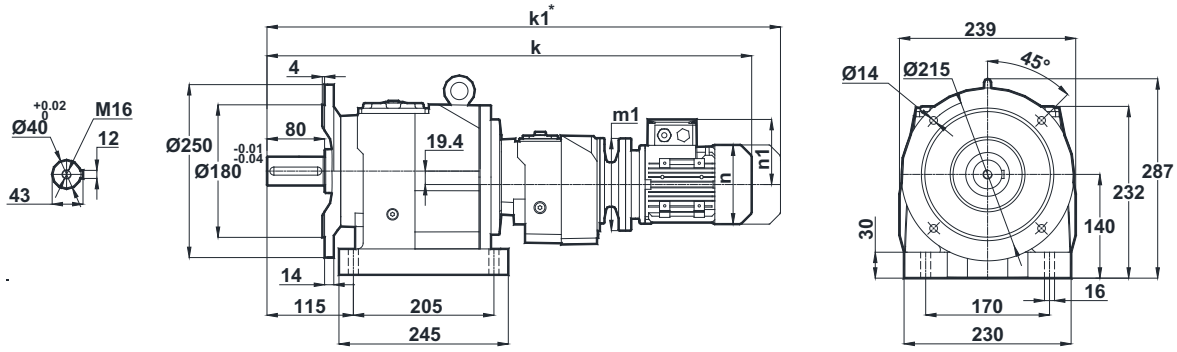


Opt. 1

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

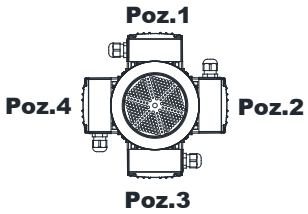
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF375
MVF376



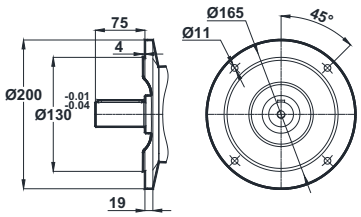
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	**63/B5 63/B14**
k	699
k1	770
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten



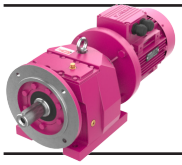
63

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



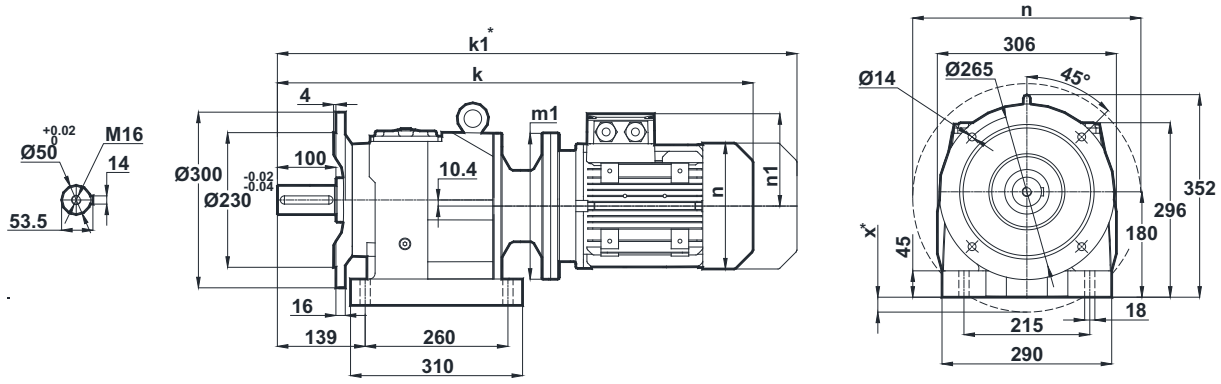
Opt. 1

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



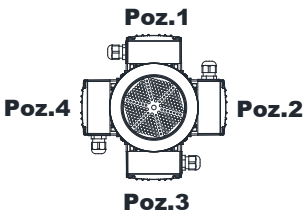
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF472
MVF473



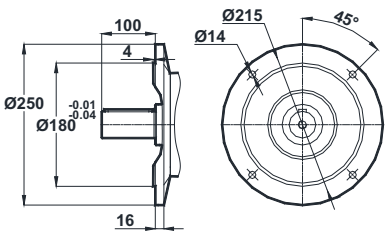
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
IEC	**80/B5**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**
k	660.5	701.5	701.5	754	777	878.5	878.5	1038	1038	1129	1129
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)	-	-	-	-	-	-	-	6	6	6	6

Klemens Kutusu /*Terminal Box* / Klemmenkasten



80-90-100-112-132-160-180

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

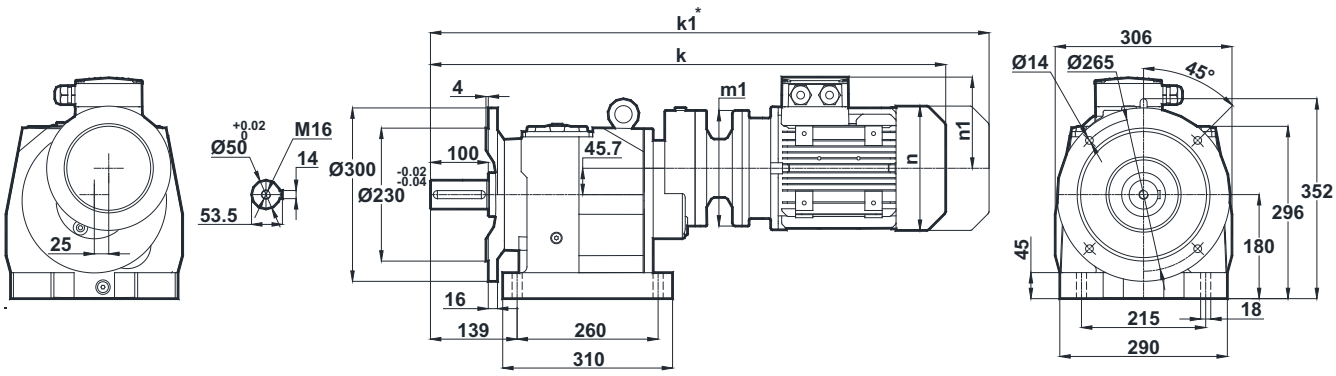


Opt. 1

***** **" 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

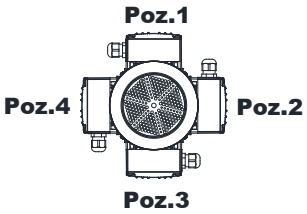
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF474



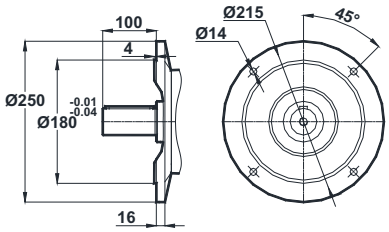
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**71/B5**	**80/B5 80/B14**
k	736.5	758.5
k1	827.5	851.5
n	137	155
n1	118	127
m1 (B5)	160	200
m1 (B14)	-	120

Klemens Kutusu / *Terminal Box* / Klemmenkasten



71-80

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

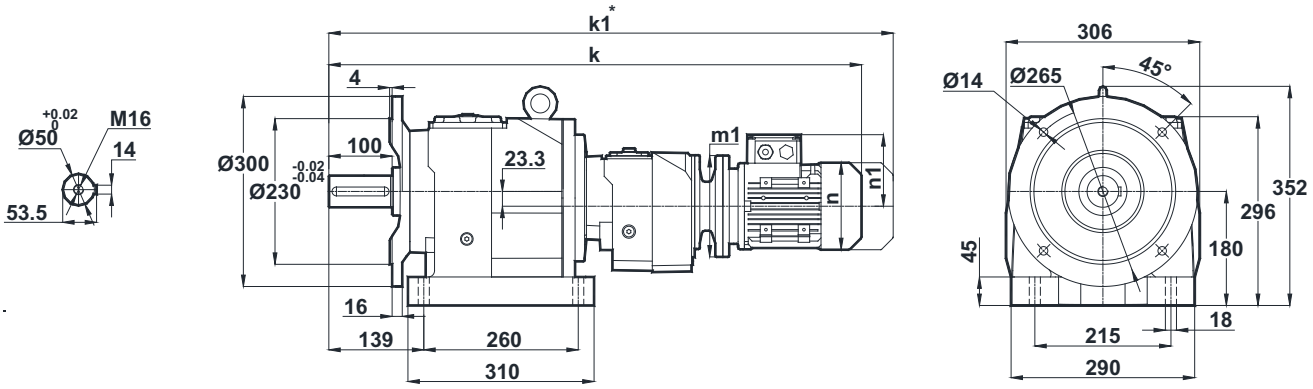


Opt. 1

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

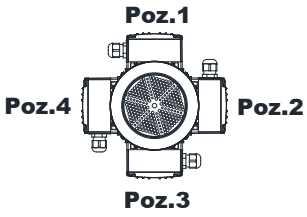
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

MVF475
MVF476



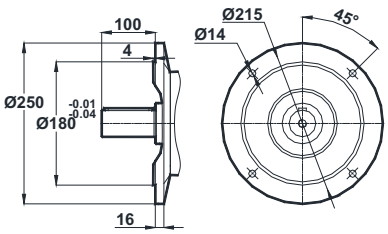
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	842.5	835.5
k1	913.5	926.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten



63-71

Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

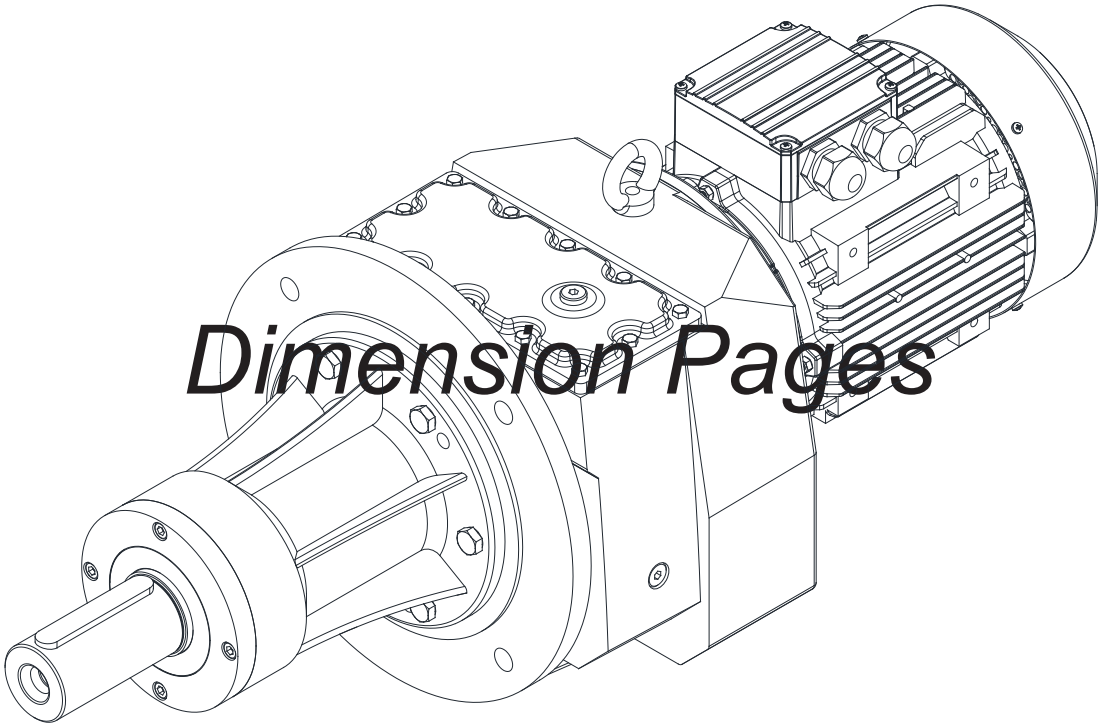


Opt. 1

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

NRB Serisi / *Series* / Serie

Ölçü Sayfaları

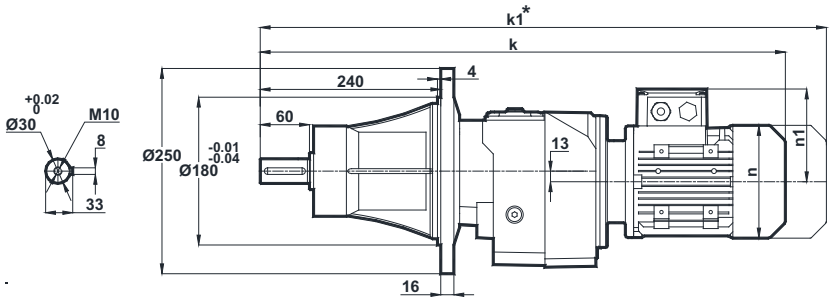


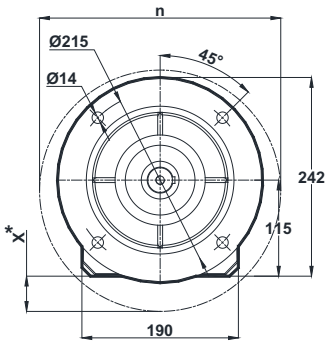
Dimension Pages

Abmessungsseiten

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

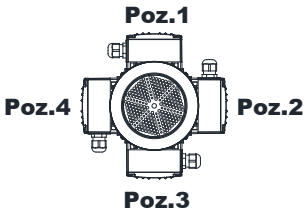
NRB202
NRB203





Motor Büyüklüğü / *Motor Size* / Motorbaugroße							
	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

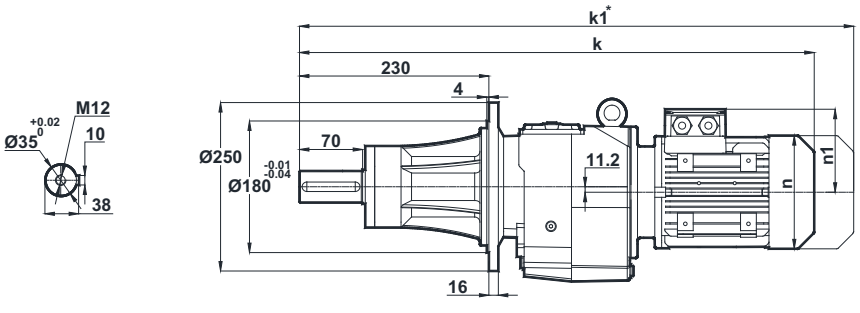


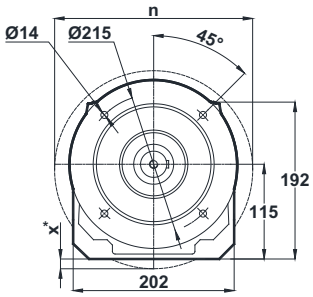
63-71-80-90-100-112

*** " 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

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

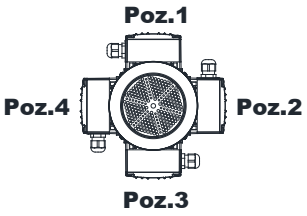
NRB272
NRB273





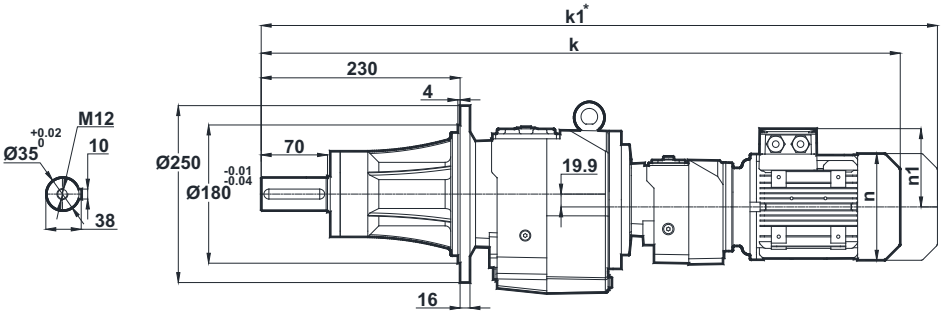
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	63	71	80	90S	90L	100L	112M	132S	132M
k	607	633	667	706	706	754	778	861	861
k1	678	724	760	785	785	862	883	991	991
n	119	137	155	176	176	193	215	257	257
n1	101	118	127	136	136	149	161	182	182
x	-	-	-	-	-	-	4	25	25

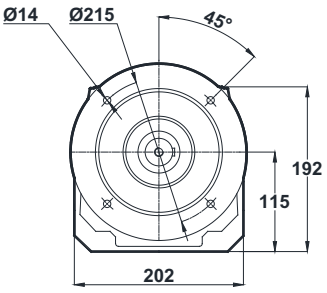
Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

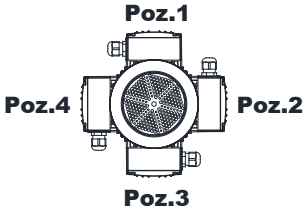
NRB275
NRB276





Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	71
k	756.5	784
k1	827.5	875
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

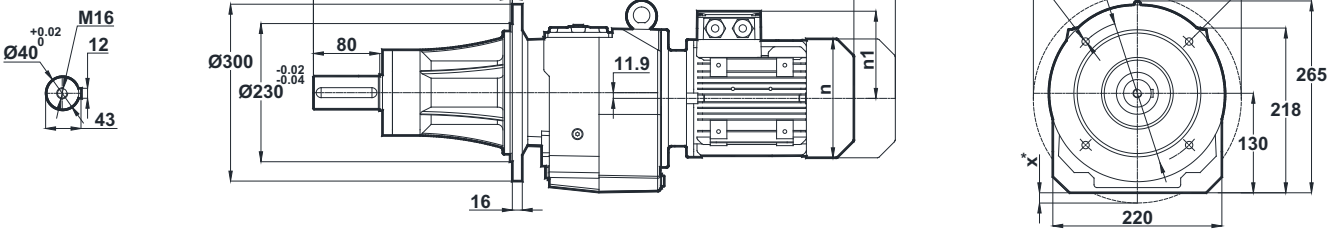


63-71

*** " 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

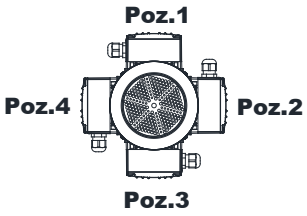
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB282
NRB283



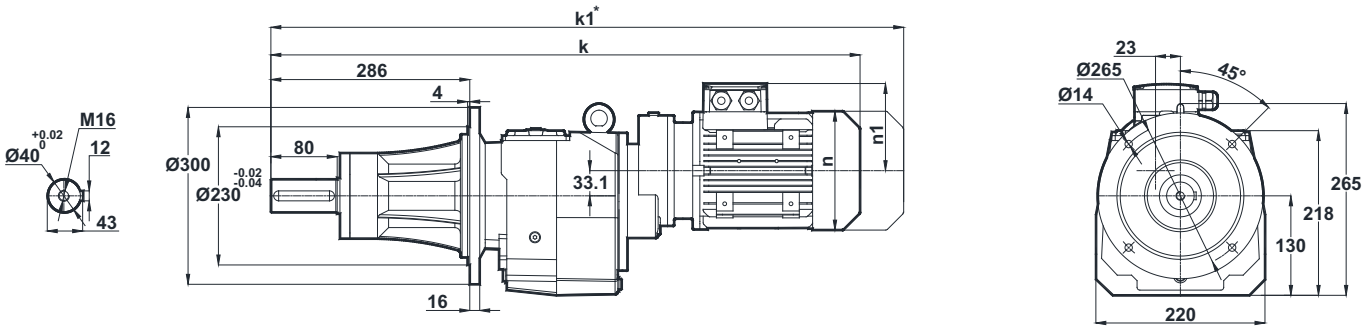
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	71	**80**	**90S**	**90L**	**100L**	**112M**	**132S**	**132M**	**160M**
k	707	741	780	780	828	852	938.5	938.5	1034.5
k1	798	834	859	859	936	957	1068.5	1068.5	1184.5
n	137	155	176	176	193	215	257	257	316
n1	118	127	136	136	149	161	182	182	226
x	-	-	-	-	-	-	11	11	40

Klemens Kutusu /*Terminal Box* / Klemmenkasten



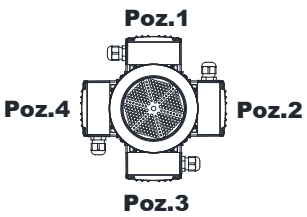
71-80-90-100-112-132-160

NRB284



Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	760	786
k1	831	877
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten

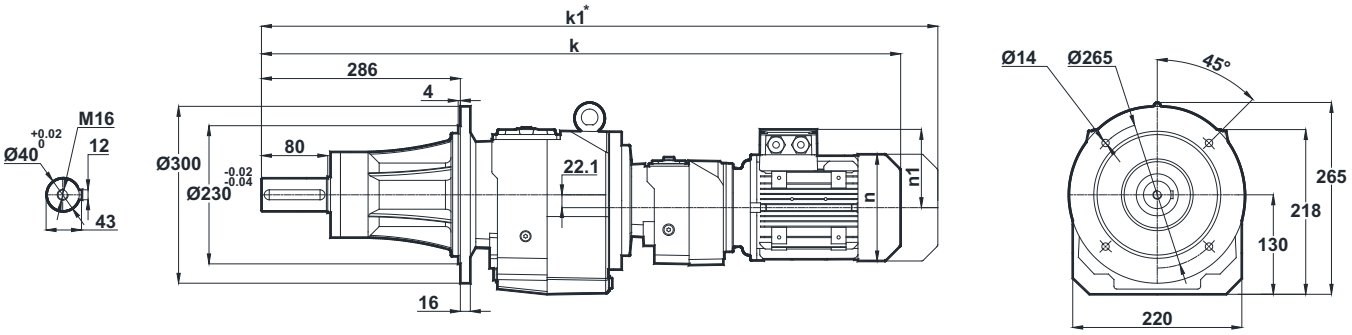


63-71

***** **" 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

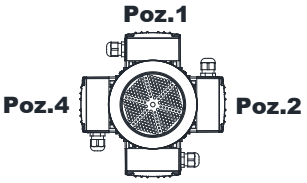
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB285
NRB286



Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
	63
k	864.5
k1	935.5
n	119
n1	101

Klemens Kutusu / *Terminal Box* / Klemmenkasten

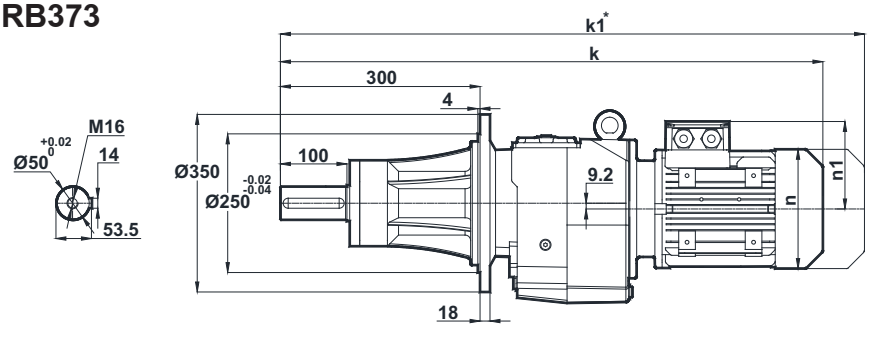


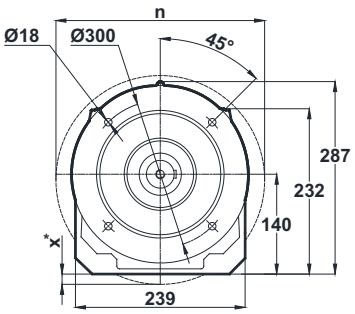
63

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

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

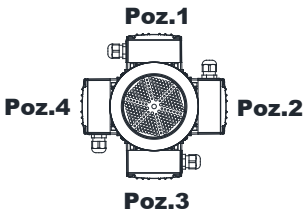
NRB372
NRB373





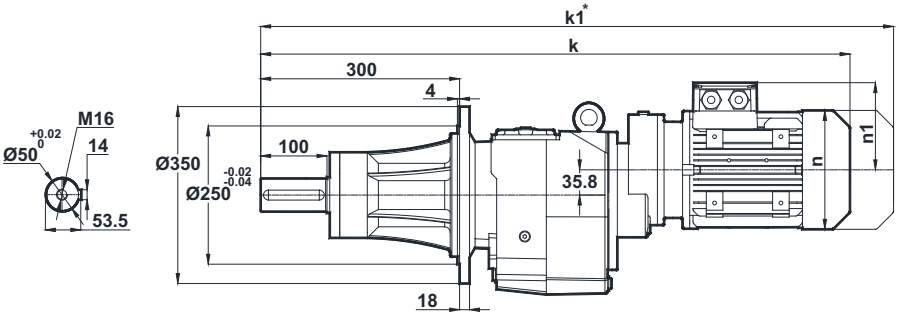
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	71	**80**	**90S**	**90L**	**100L**	**112M**	**132S**	**132M**	**160M**	**160L**
k	729.5	763.5	802.5	802.5	850.5	874.5	961	961	1057	1057
k1	820.5	856.5	881.5	881.5	958.5	979.5	1091	1091	1207	1207
n	137	155	176	176	193	215	257	257	316	316
n1	118	127	136	136	149	161	182	182	226	226
x	-	-	-	-	-	-	-	-	28	28

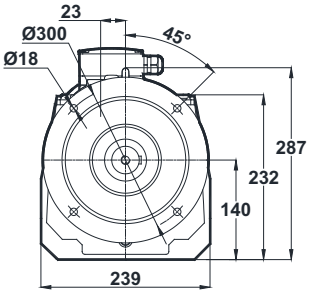
Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

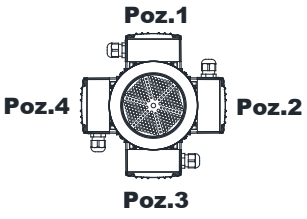
NRB374





Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
	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

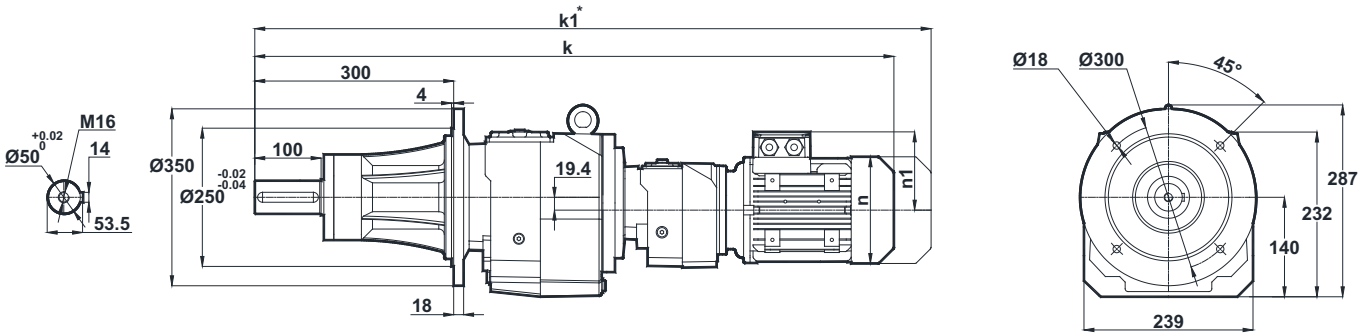


63-71-80

* **" 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

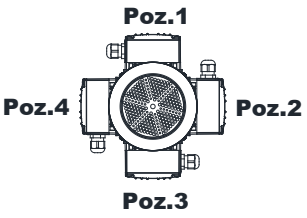
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB375
NRB376



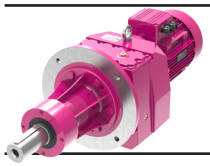
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
	63
k	887
k1	958
n	119
n1	101

Klemens Kutusu /*Terminal Box* / Klemmenkasten



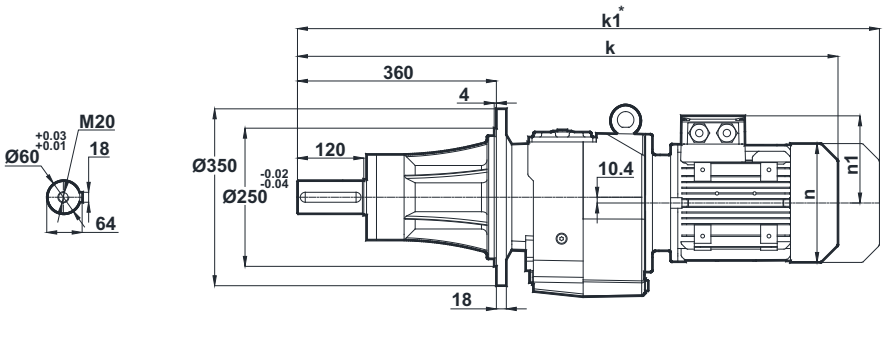
63

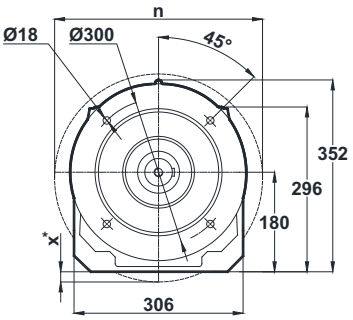
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.



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

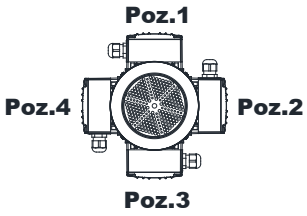
NRB472
NRB473





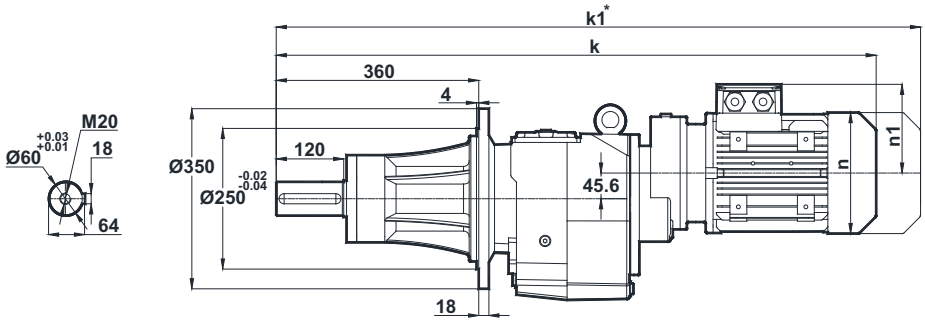
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L
k	870.5	909.5	909.5	954.5	978.5	1063.5	1063.5	1159.5	1159.5	1231.5	1231.5
k1	963.5	988.5	988.5	1062.5	1083.5	1193.5	1193.5	1309.5	1309.5	1418.5	1418.5
n	155	176	176	193	215	257	257	316	316	348	348
n1	127	136	136	149	161	182	182	226	226	242	242
x	-	-	-	-	-	-	-	-	-	5	5

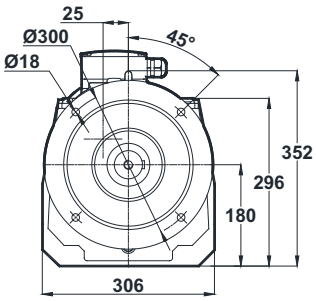
Klemens Kutusu /*Terminal Box* / Klemmenkasten



80-90-100-112-132-160-180

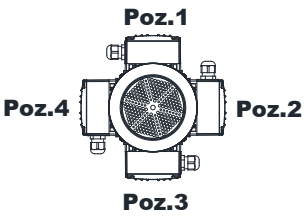
NRB474





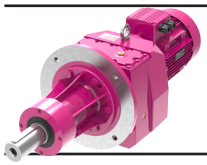
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	71	80
k	930	964
k1	1021	1057
n	137	155
n1	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten



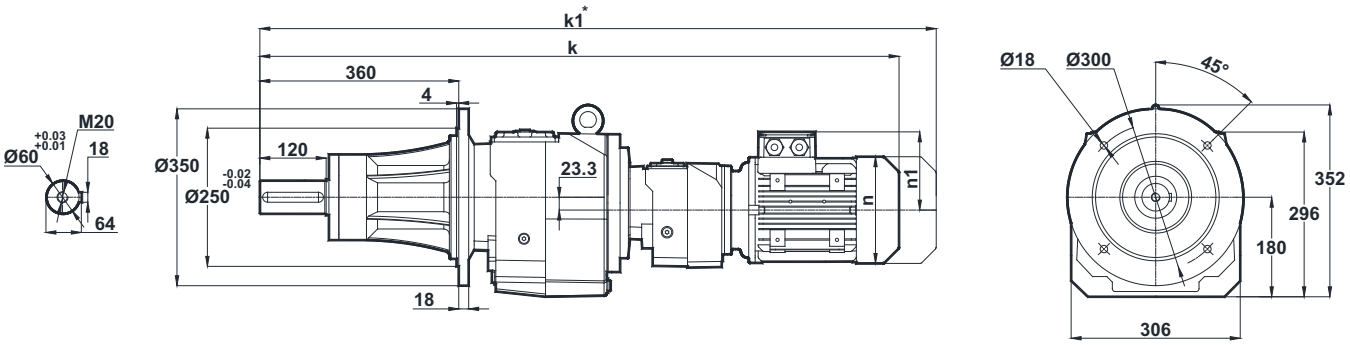
71-80

* **" 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



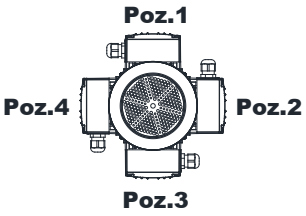
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB475
NRB476



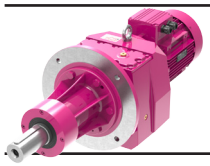
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	1034	1060
k1	1105	1151
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten



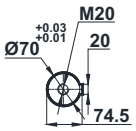
63-71

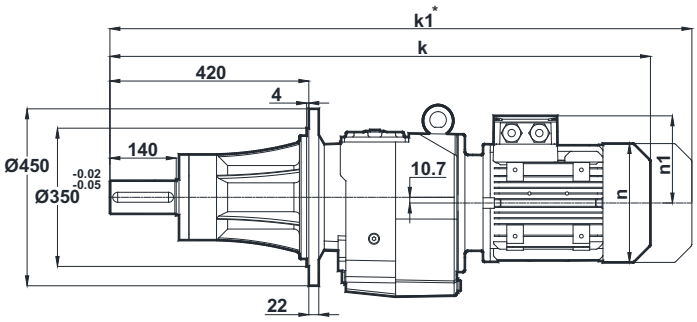
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

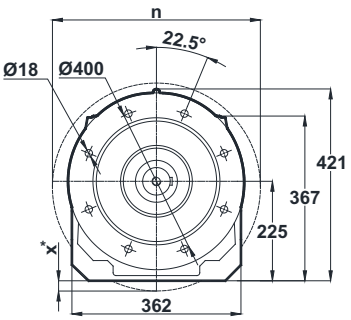


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB572
NRB573

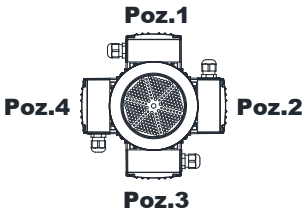






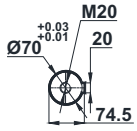
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
	100L	112M	132S	132M	160M	160L	180M	180L	200L
k	1057	1081	1167.5	1167.5	1263.5	1263.5	1335.5	1335.5	1359
k1	1165	1186	1297.5	1297.5	1413.5	1413.5	1522.5	1522.5	1551
n	193	215	257	257	316	316	348	348	396
n1	149	161	182	182	226	226	242	242	294
x	-	-	-	-	-	-	-	-	-

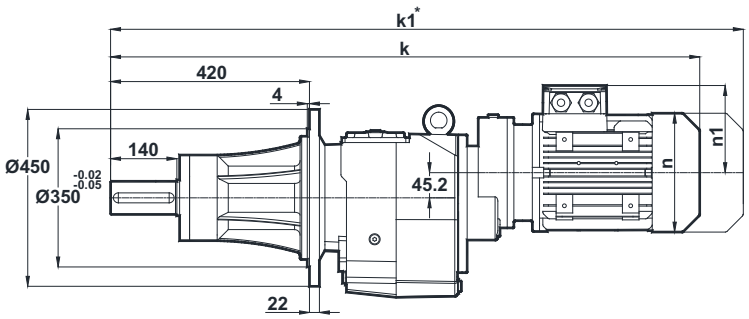
Klemens Kutusu /*Terminal Box* / Klemmenkasten

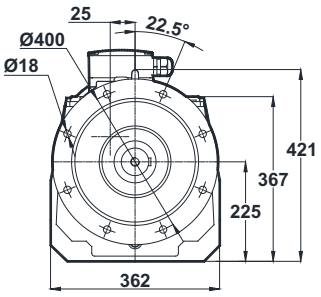


100-112-132-160-180-200

NRB574

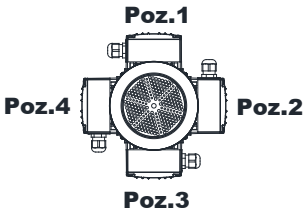






Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	71	80	90S	90L	100L
k	1037	1071	1110	1110	1158
k1	1128	1164	1189	1189	1266
n	137	155	176	176	193
n1	118	127	136	136	149

Klemens Kutusu /*Terminal Box* / Klemmenkasten

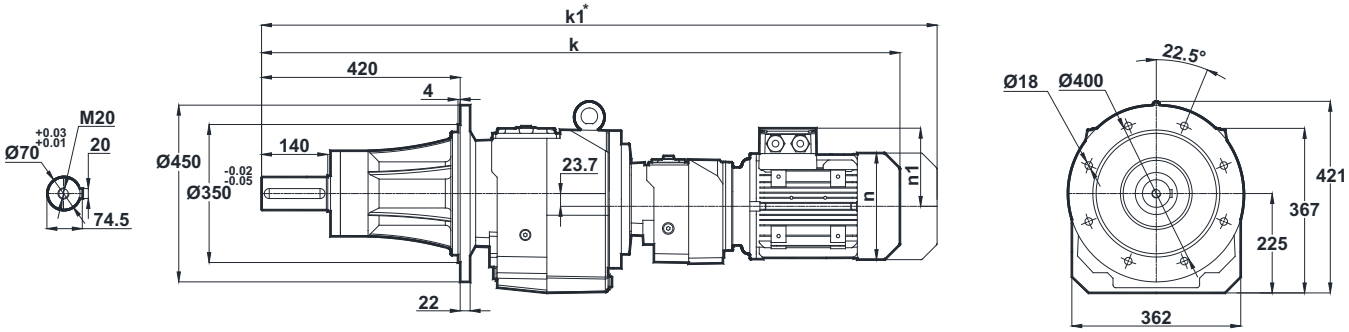


71-80-90-100

***** **" 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

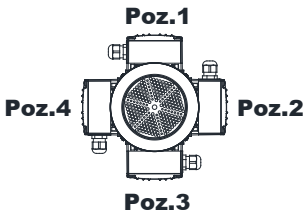
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB575
NRB576



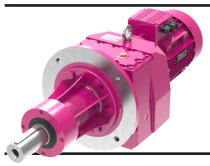
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	63	**71**
k	1143	1169
k1	1214	1260
n	119	137
n1	101	118

Klemens Kutusu /*Terminal Box* / Klemmenkasten



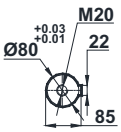
63-71

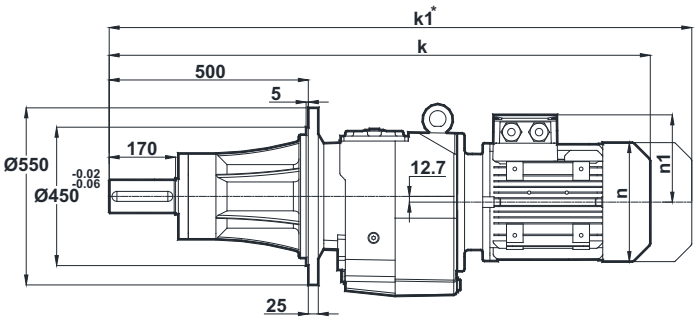
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

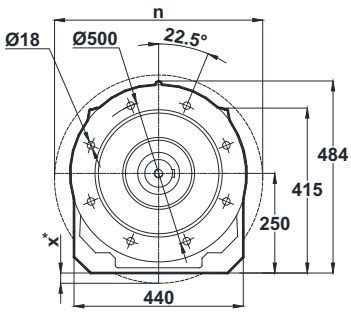


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB672
NRB673

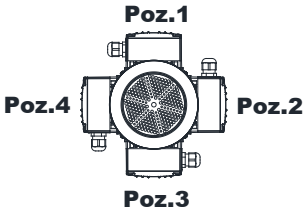






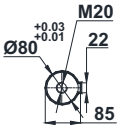
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	112M	**132S**	**132M**	**160M**	**160L**	**180M**	**180L**	**200L**	**225S**	**225M**
k	1198	1284.5	1284.5	1380.5	1380.5	1452.5	1452.5	1476	1554	1554
k1	1303	1414.5	1414.5	1530.5	1530.5	1639.5	1639.5	1668	1737	1737
n	215	257	257	316	316	348	348	396	438	438
n1	161	182	182	226	226	242	242	294	311,5	311,5
x	-	-	-	-	-	-	-	-	-	-

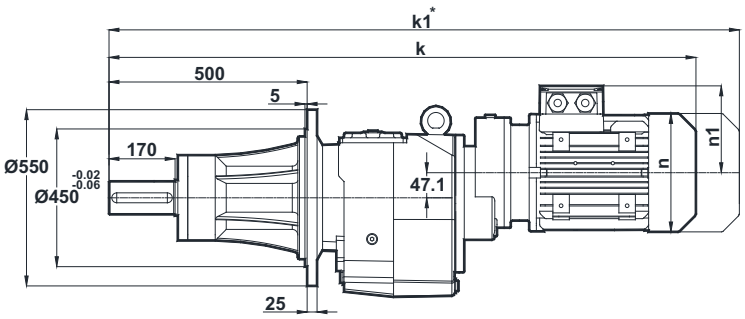
Klemens Kutusu /*Terminal Box* / Klemmenkasten

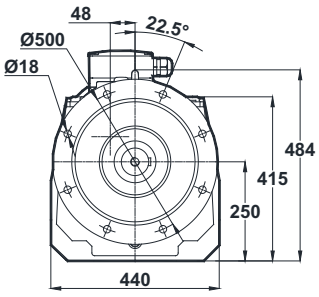


112-132-160-180-200-225

NRB674

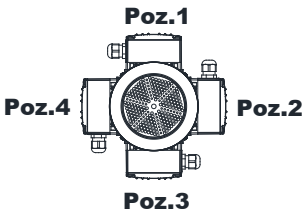






Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
	80	**90S**	**90L**
k	1206.5	1245.5	1245.5
k1	1299.5	1324.5	1324.5
n	155	176	176
n1	127	136	136

Klemens Kutusu /*Terminal Box* / Klemmenkasten

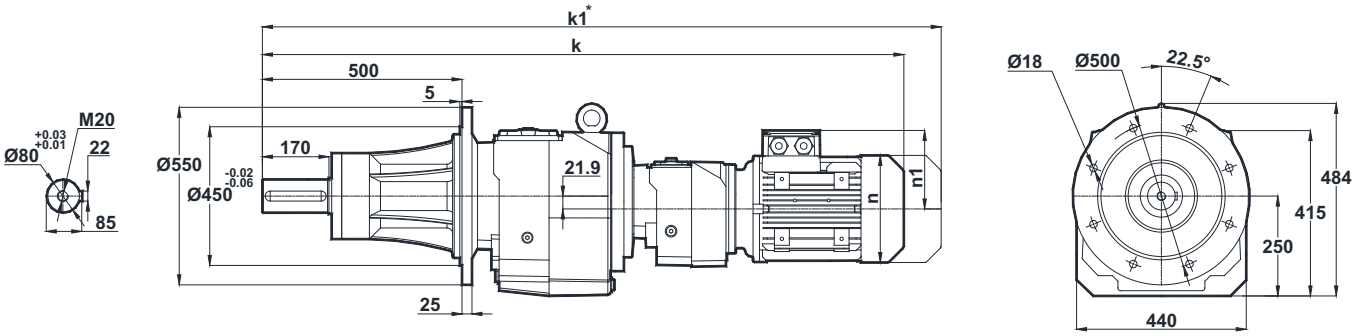


80-90

***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
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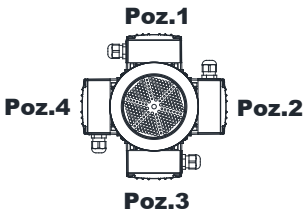
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB675
NRB676



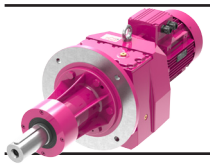
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
	71	**80**
k	1318.5	1352.5
k1	1409.5	1445.5
n	137	155
n1	118	127

Klemens Kutusu /*Terminal Box* / Klemmenkasten



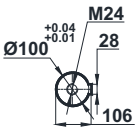
71-80

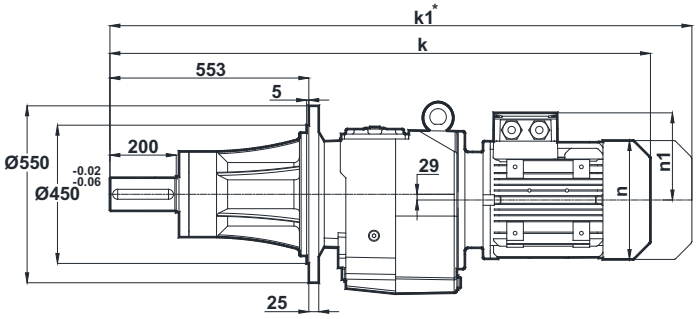
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

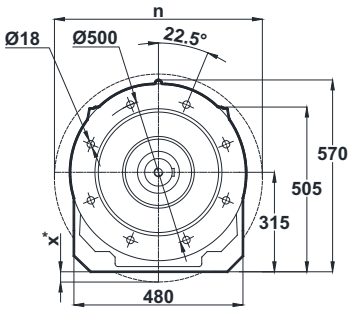


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB772
NRB773

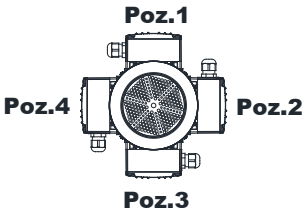






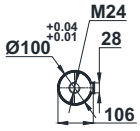
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M
k	1383.5	1383.5	1479.5	1479.5	1551.5	1551.5	1575	1653.5	1653.5	1738
k1	1513.5	1513.5	1629.5	1629.5	1738.5	1738.5	1767	1836.5	1836.5	1895
n	257	257	316	316	348	348	396	438	438	481
n1	182	182	226	226	242	242	294	311,5	311,5	337
x	-	-	-	-	-	-	-	-	-	-

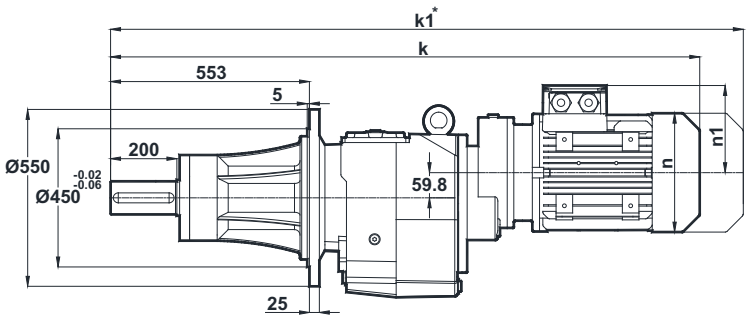
Klemens Kutusu /*Terminal Box* / Klemmenkasten

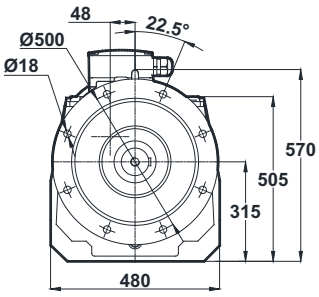


132-160-180-200-225-250

NRB774

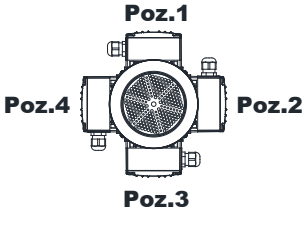






Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	80	90S	90L	100L
k	1309.5	1348.5	1348.5	1393.5
k1	1402.5	1427.5	1427.5	1501.5
n	155	176	176	193
n1	127	136	136	149

Klemens Kutusu /*Terminal Box* / Klemmenkasten

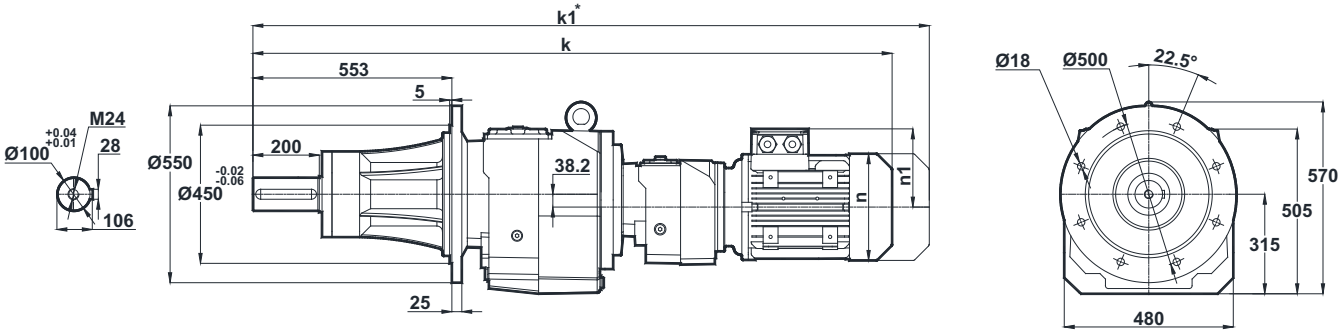


80-90-100

***** **" 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

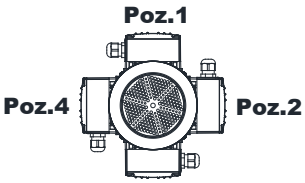
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

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

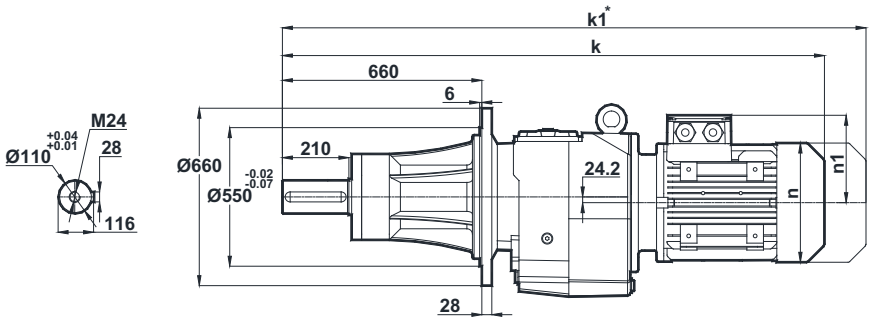


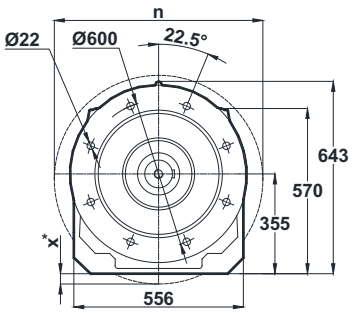
71-80-90

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

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

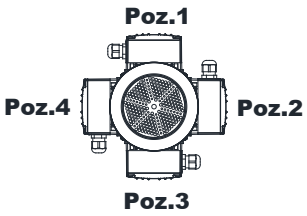
NRB872
NRB873





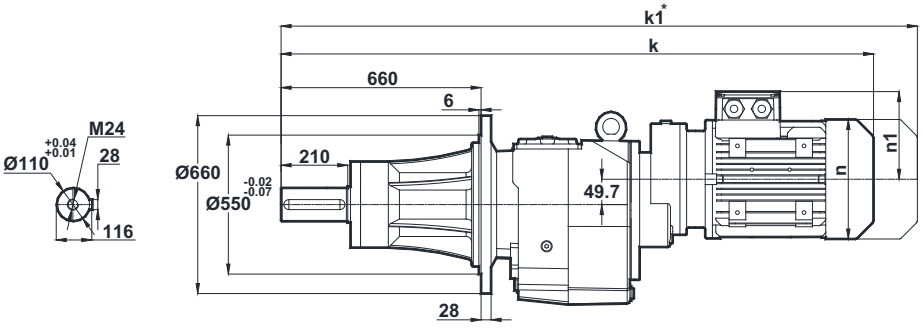
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k	1559.5	1655.5	1655.5	1727.5	1727.5	1751	1832	1832	1915	2034	2034
k1	1689.5	1805.5	1805.5	1914.5	1914.5	1943	2015	2015	2072	2232	2232
n	257	316	316	348	348	396	438	438	481	547	547
n1	182	226	226	242	242	294	311,5	311,5	337	402	402
x	-	-	-	-	-	-	-	-	-	-	-

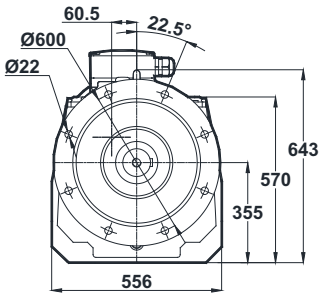
Klemens Kutusu / *Terminal Box* / Klemmenkasten



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

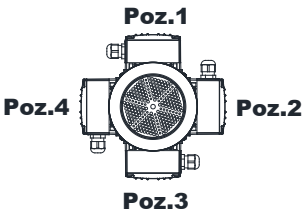
NRB874





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

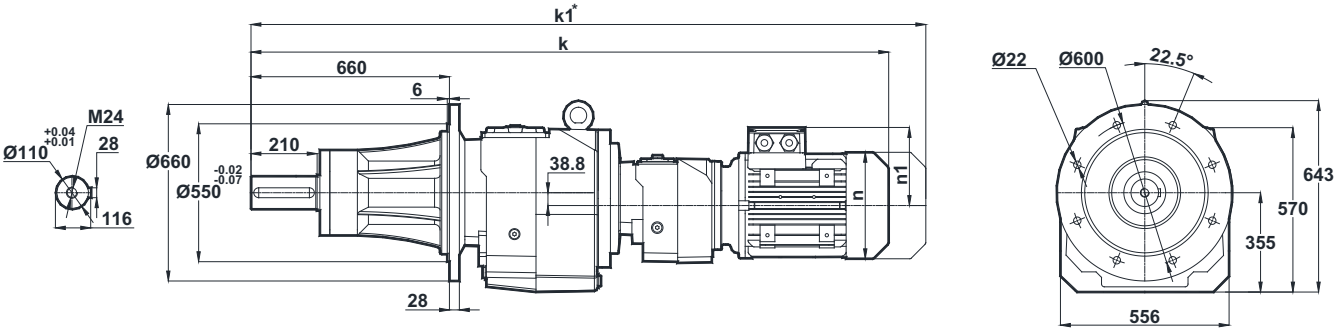


100-112-132

*** " 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

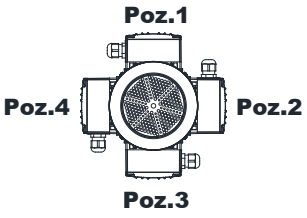
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB875
NRB876



Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
	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

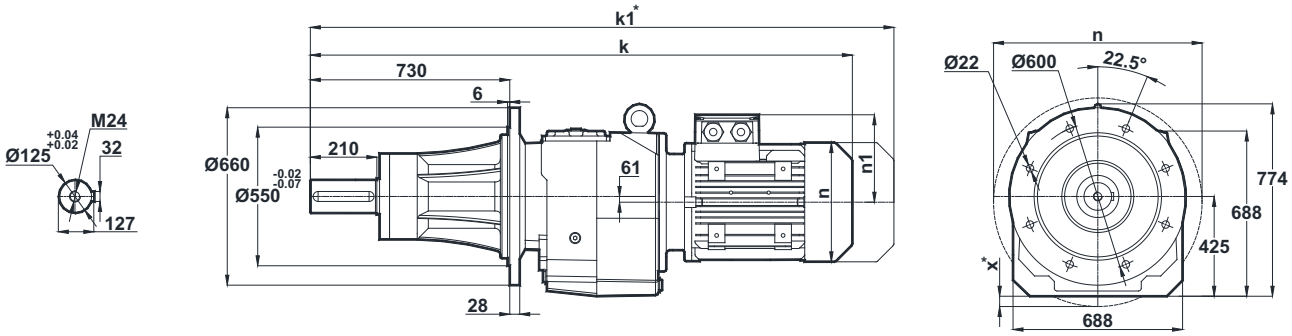


71-80-90-100

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

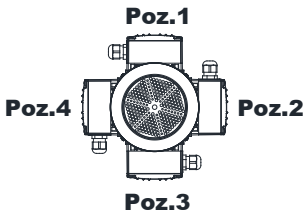
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NRB972
NRB973



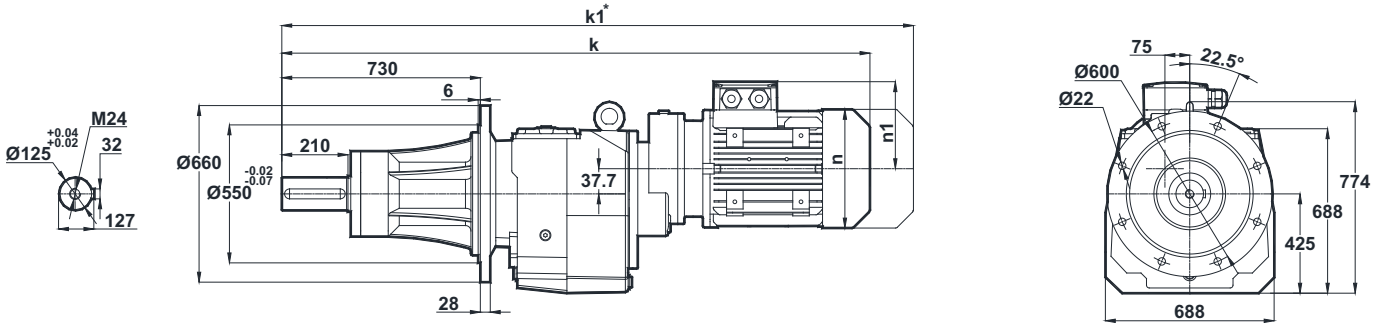
Motor Büyüklüğü / *Motor Size* / Motorbaugroße													
	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L
k	1791	1791	1863	1863	1886.5	1954.5	1954.5	2037.5	2156.5	2156.5	2370.5	2370.5	2370.5
k1	1941	1941	2050	2050	2078.5	2137.5	2137.5	2194.5	2354.5	2354.5	2779.5	2779.5	2779.5
n	316	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



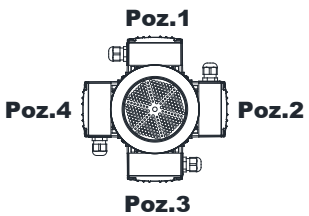
160-180-200-225-250-280-315

NRB974



Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
	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

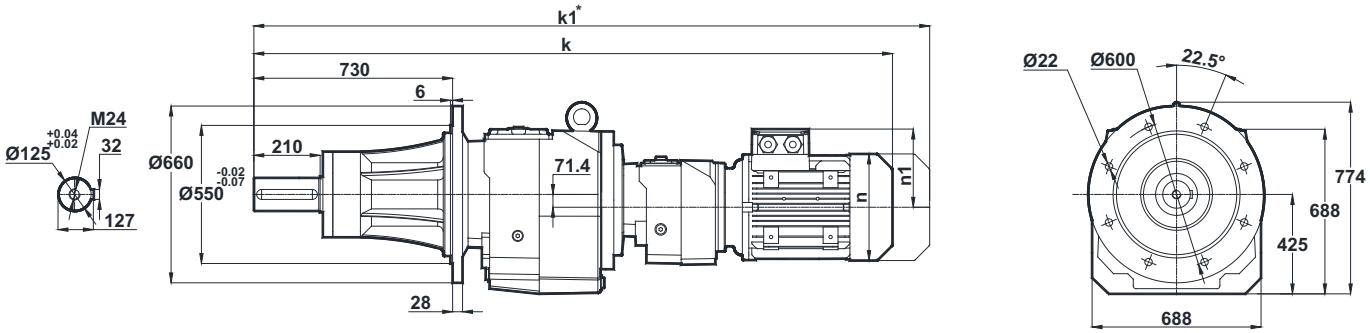


100-112-132

***** **" 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

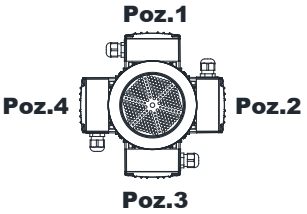
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

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



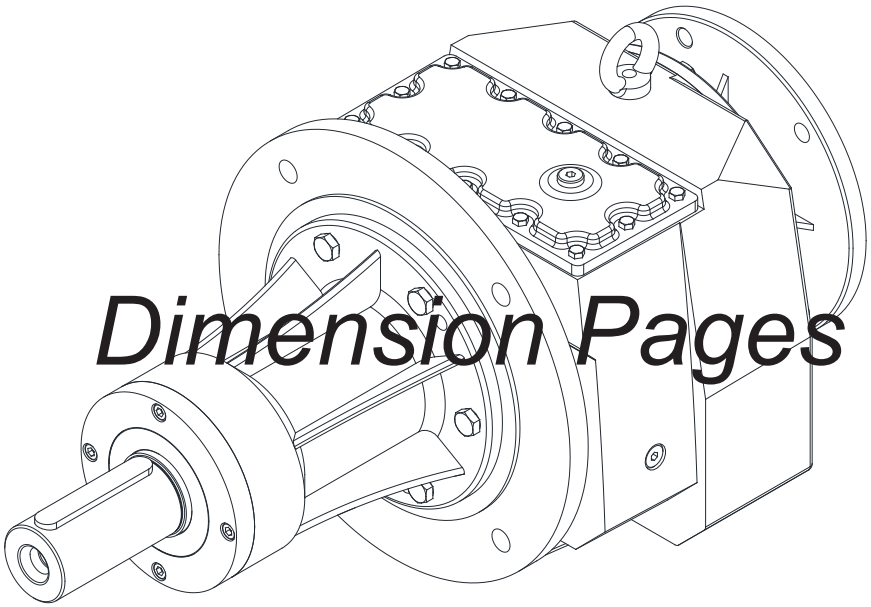
80-90-100-112-132

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

Notlar / *Notes* / Notizen

NNB Serisi / *Series* / Serie

Ölçü Sayfaları

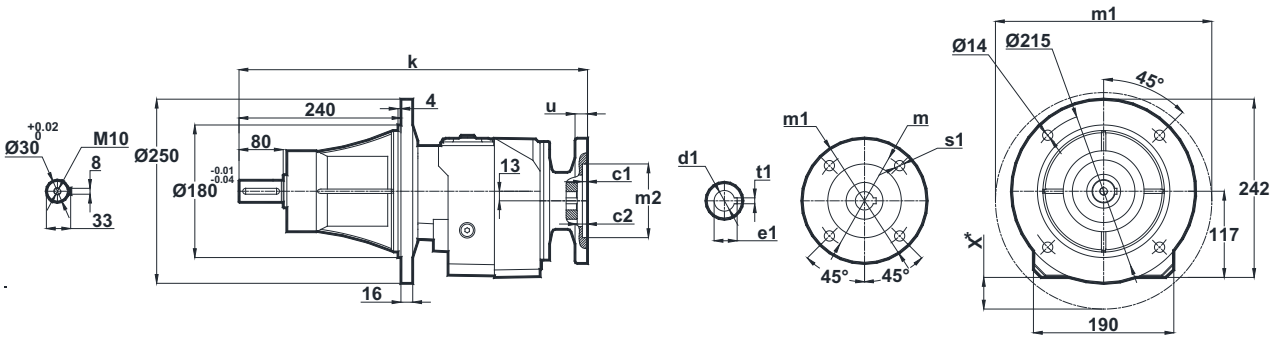


Dimension Pages

Abmessungsseiten

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

NNB202-A.. / B..
NNB203-A.. / B..

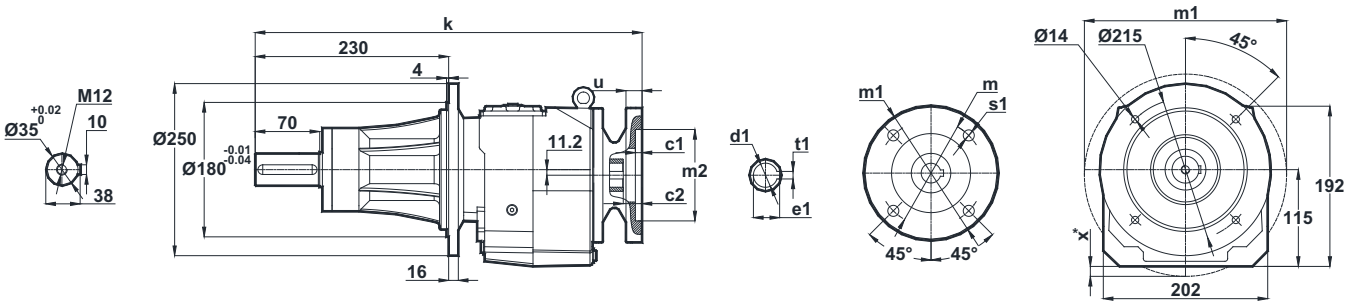


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	12	487.5	11	4	12.8	-
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	458.5	14	5	16.3	-
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	487.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	487.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	12	480.5	28	8	31.3	23 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	20	517.5	38	10	41.3	48 -

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

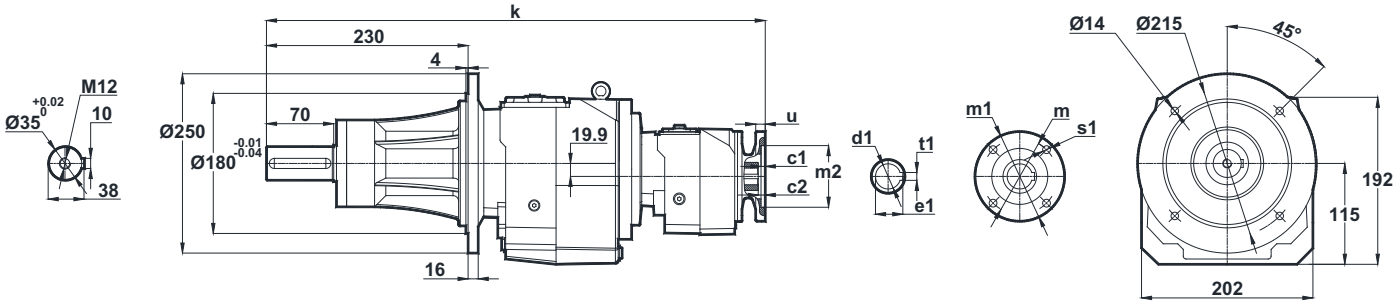
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB272-A.. / B..
NNB273-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
63/B5	4	5	9	115	140	95	12	485.5	11	4	12.8	-
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	456.5	14	5	16.3	-
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	488.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	485.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	12	478.5	28	8	31.3	22 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	20	515.5	38	10	41.3	47 -

NNB275-A.. / B..
NNB276-A.. / B..

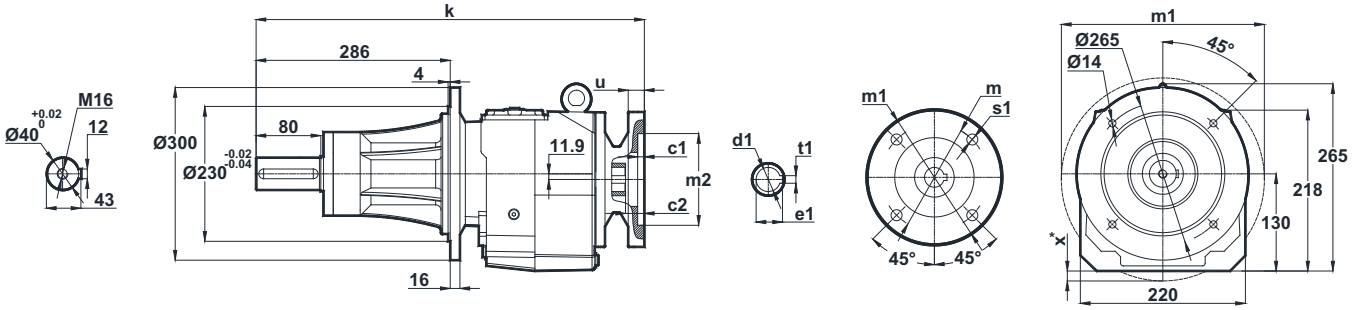


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	10	601	11	4	12.8
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	12 10	602.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	617.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	617.5	24	8	27.3
100/B5 **100/B14**	4.5 4	5.5	15 9	215 130	250 160	180 110	14	628.5	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

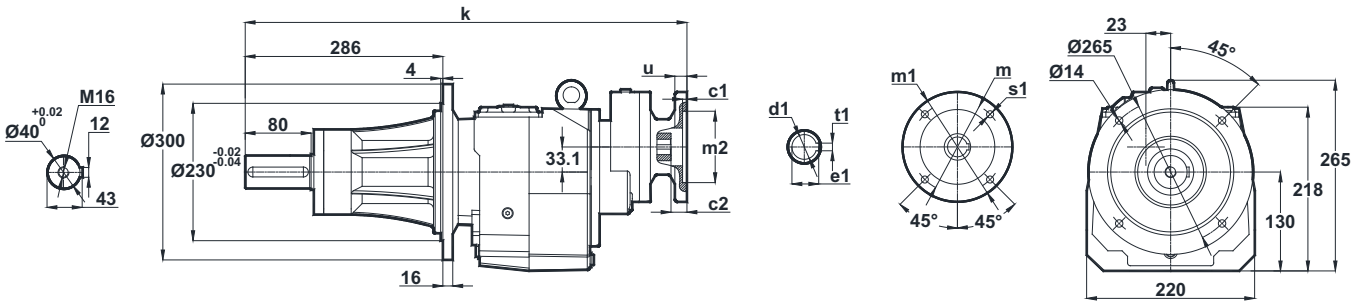
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB282-A..
NNB283-A..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	12	561.5	14	5	16.3	-
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	561.5	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	561.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	578.5	28	8	31.3	7 -
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	15	598.5	38	10	41.3	32 -
160/B5	5.5	10	19	300	350	250	20	678	42	12	45.3	57

NNB284-A.. / B..

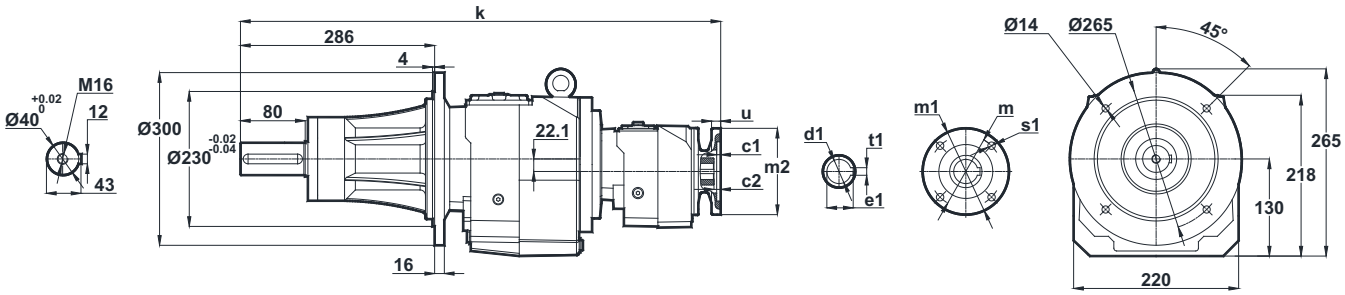


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	638.5	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	609.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	638.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	638.5	24	8	27.3

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

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

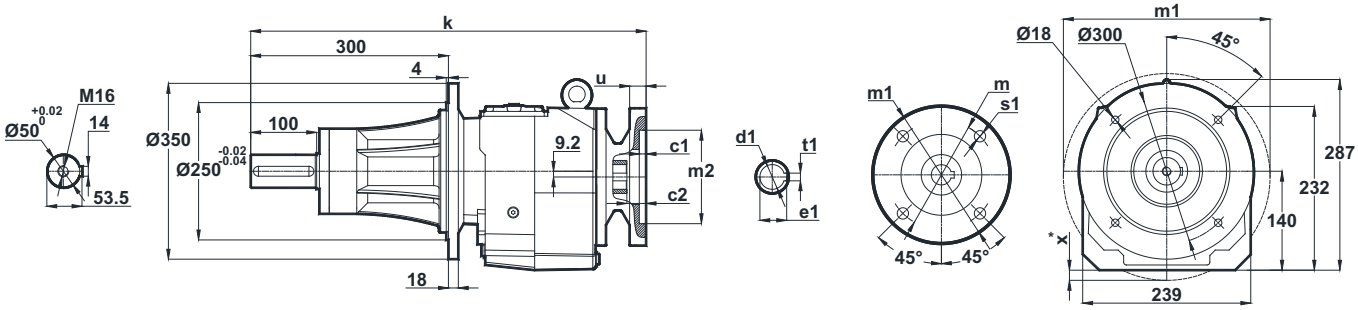
NNB285-A.. / B..
NNB286-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5	3.5	5	10	115	140	95	10	706.5	11	4	12.8
63/B14	2.5		5.5	75	90	60					
71/B5	4	4.5	11	130	160	110	12	708	14	5	16.3
71/B14	3		7	85	105	70	10				
80/B5	4	5	12	165	200	130	12	723	19	6	21.8
80/B14			7	100	120	80					
90/B5	4	5	12	165	200	130	12	723	24	8	27.3
90/B14			9	115	140	95					
100-112/B5	4.5	5	15	215	250	180	14	734	28	8	31.3
100-112/B14	4	5.5	9	130	160	110					

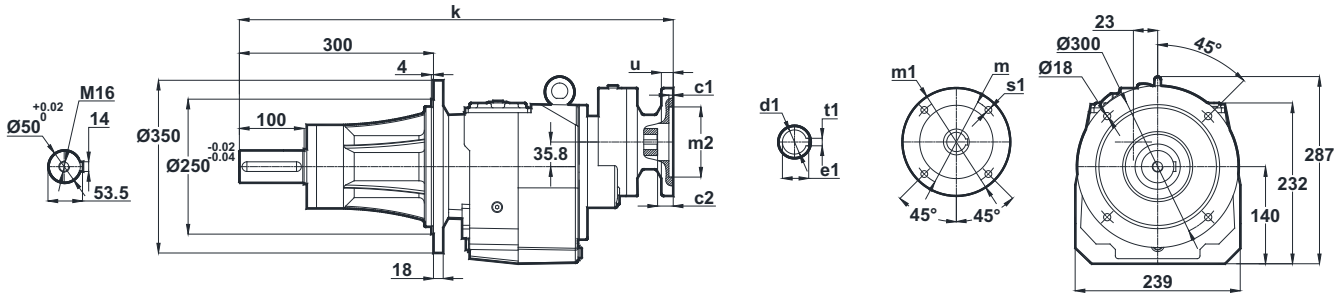
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB372-A.. / B..
NNB373-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
71/B5	4	9	11	130	160	110	12	584	14	5	16.3	-
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	584	19	6	21.8	-
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	584	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	601	28	8	31.3	-
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	15	621	38	10	41.3	20 -
160/B5	5.5	10	19	300	350	250	20	700.5	42	12	45.3	45

NNB374-A.. / B..

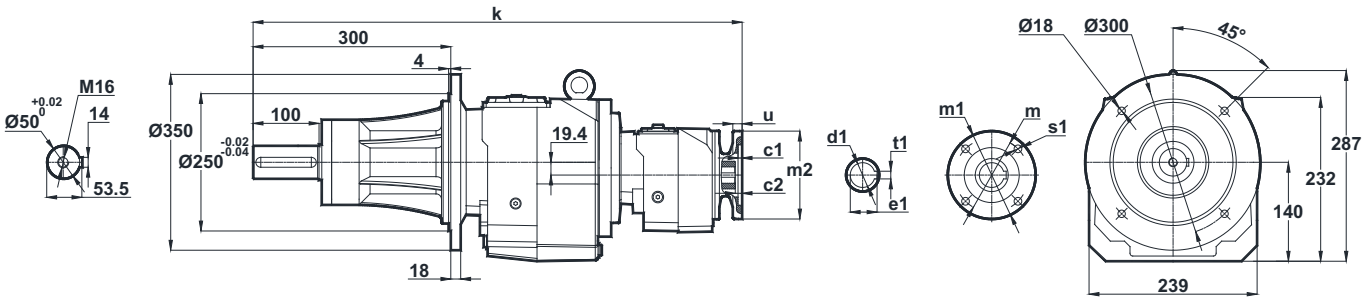


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	661	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	632	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	661	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	661	24	8	27.3

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

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

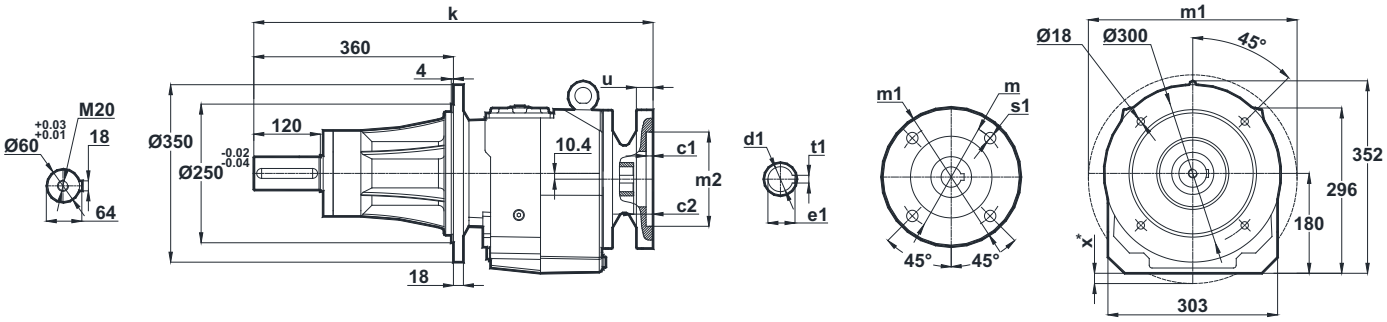
NNB375-A.. / B..
NNB376-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5 **63/B14**	3.5 2.5	5	10 5.5	115 75	140 90	95 60	10	729	11	4	12.8
71/B5 **71/B14**	4 3	4.5	11 7	130 85	160 105	110 70	12 10	730.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	745.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	745.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	5 5.5	15 9	215 130	250 160	180 110	14	756.5	28	8	31.3

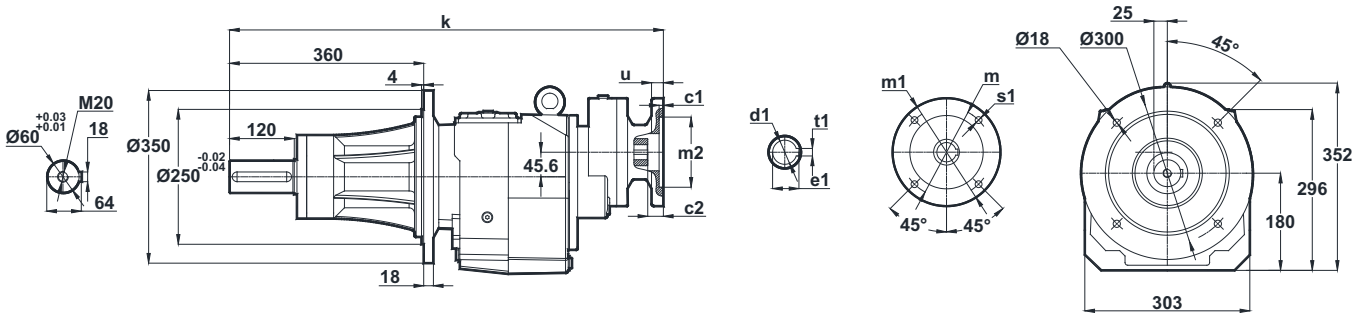
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB472-A.. / B..
NNB473-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
80/B5	4	5	12	165	200	130	12	686.5	19	6	21.8	-
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	686.5	24	8	27.3	-
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	705	28	8	31.3	-
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	15	723.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	803	42	12	45.3	6
180/B5	5.5	10	19	300	350	250	20	803	48	14	51.8	6

NNB474-A.. / B..

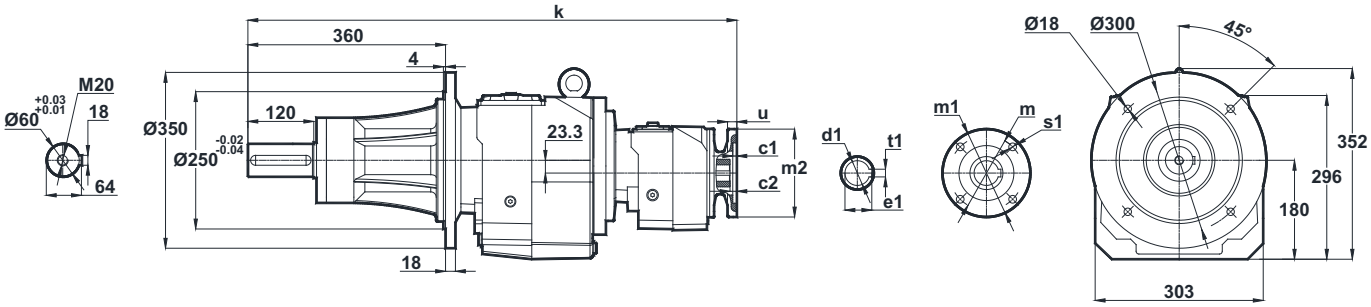


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	784.5	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	784.5	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	784.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	801.5	28	8	31.3

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 çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

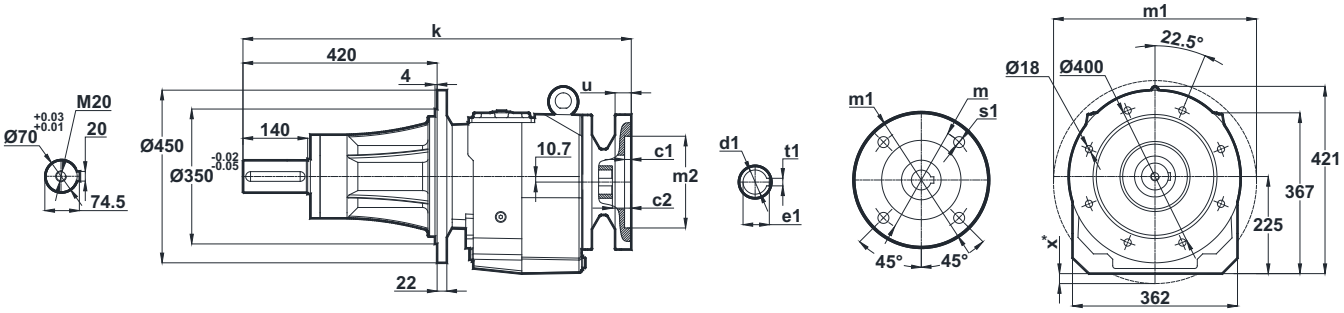
NNB475-A.. / B..
NNB476-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	912.5	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	883.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	912.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	912.5	24	8	27.3
100-112/B5 **100-112/B14**	4 3.5	5.5	15 9	215 130	250 160	180 110	12	905.5	28	8	31.3
132/B5 **132/B14**	4.5	7	15 9	265 165	300 200	230 130	20	952.5	38	10	41.3

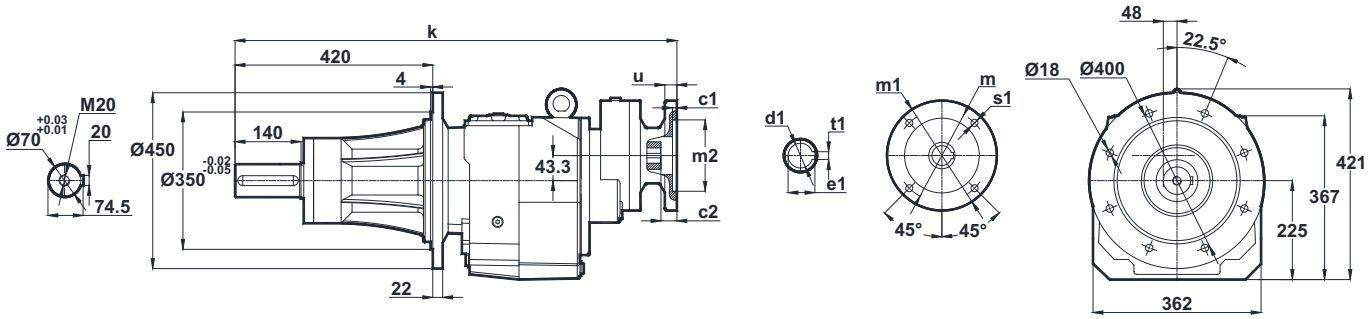
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB572-A.. / B..
NNB573-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
100-112/B5	4.5	9	15	215	250	180	15	811.5	28	8	31.3	-
132/B5 **132/B14**	4.5	9	15 11	265 165	300 200	230 130	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	19	928	55	16	59.3	-

NNB574-A.. / B..

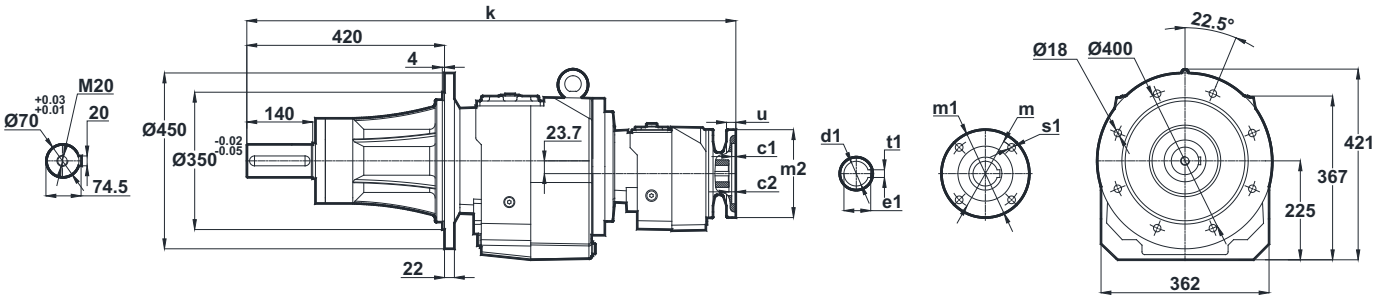


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	891.5	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	891.5	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	891.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	908.5	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	15	928.5	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

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

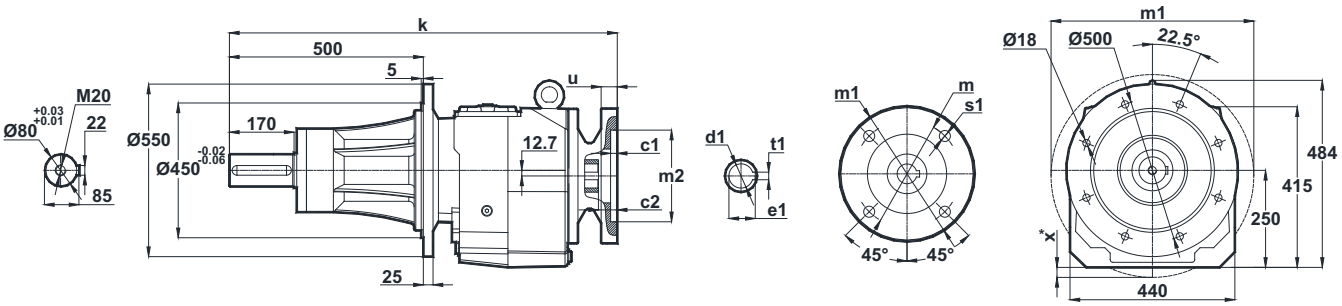
NNB575-A.. / B..
NNB576-B.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
63/B5	4	5	9	115	140	95	12	1021.5	11	4	12.8
71/B5 **71/B14**	4 3	8.5	11 7	130 85	160 105	110 70	12 10	992.5	14	5	16.3
80/B5 **80/B14**	4	5	12 7	165 100	200 120	130 80	12	1021.5	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	20	1021.5	38	10	41.3

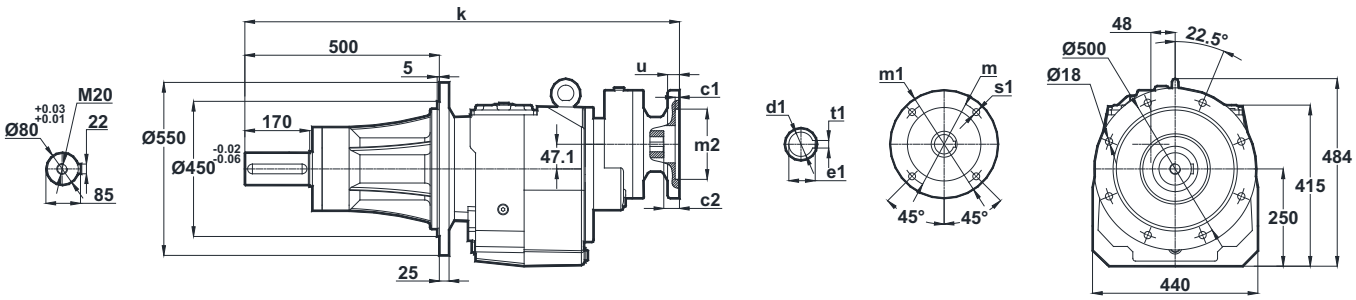
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB672-A.. / B..
NNB673-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
100-112/B5	4.5	14.5	15	215	250	180	15	932.5	28	8	31.3	-
132/B5 **132/B14**	4.5	9	15	265 165	300 200	230 130	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	-

NNB674-A.. / B..

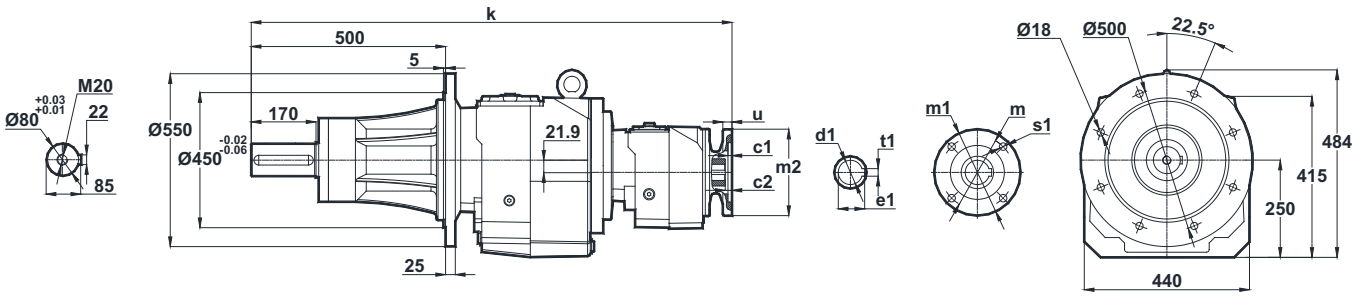


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1022.5	19	6	21.8
90/B5 **90/B14**	4	5	13 9	165 115	200 140	130 95	12	1022.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1041	28	8	31.3

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 çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

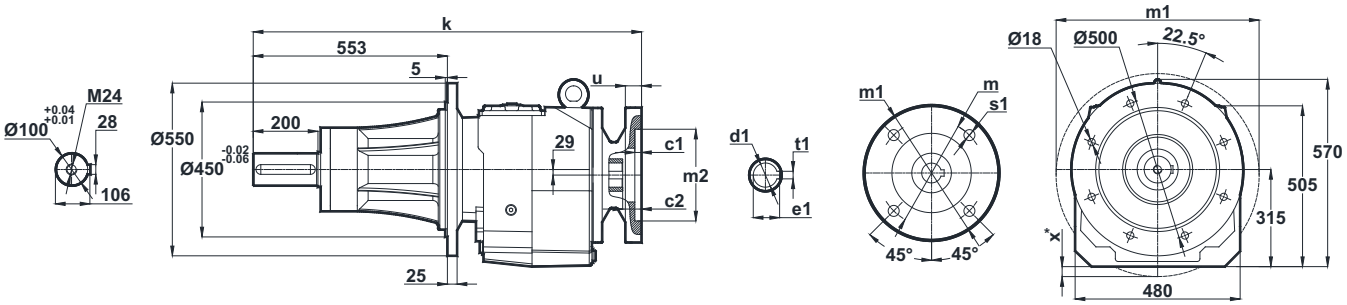
NNB675-A.. / B..
NNB676-B.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	1173	14	5	16.3
80/B5 **80/B14**	4	9	13 7	165 100	200 120	130 80	12	1173	19	6	21.8
90/B5 **90/B14**	4	9	13 9	165 115	200 140	130 95	12	1173	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1190	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	15	1210	38	10	41.3
160/B5	5.5	10	19	300	350	250	20	1289.5	42	12	45.3

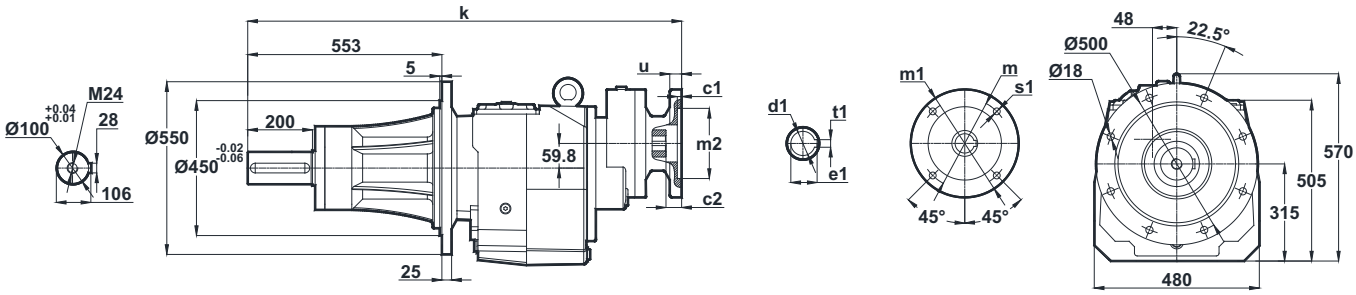
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB772-A.. / B..
NNB773-A.. / B..



	c1	c2	s1	m	m1	m2(H7)	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	48	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.. / B..

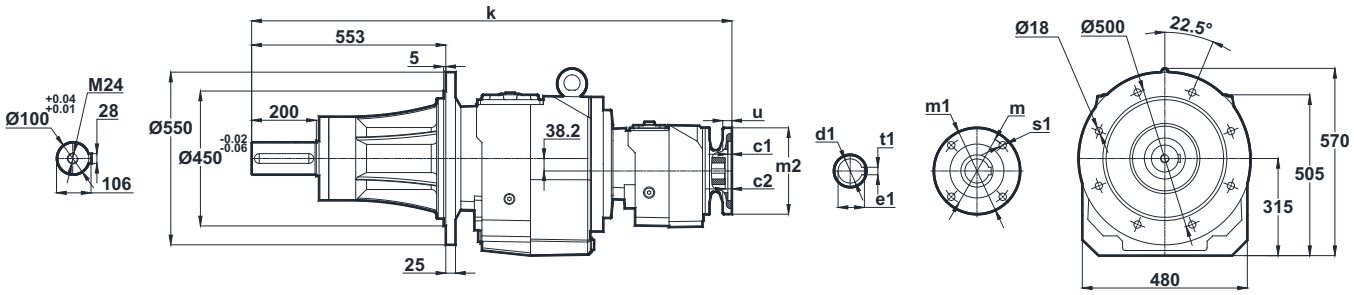


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1125.5	24	8	27.3
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	1125.5	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1144	28	8	31.3
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	15	1162.5	38	10	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

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

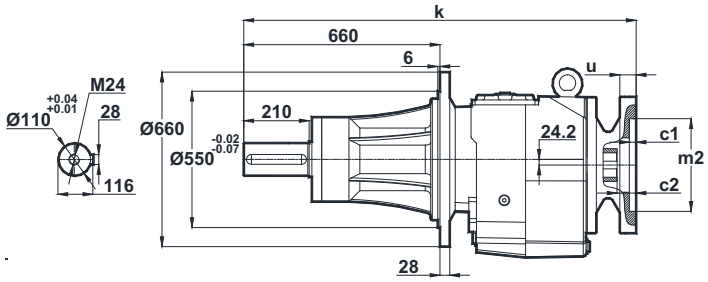
NNB775-A.. / B..
NNB776-B.. / B..

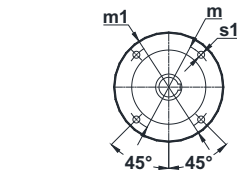


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	1279	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	1279	19	6	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	1279	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1296	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	15	1316	38	10	41.3
160/B5	5.5	10	19	300	350	250	20	1395.5	42	12	45.3

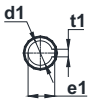
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

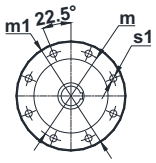
NNB872-A..
NNB873-A..



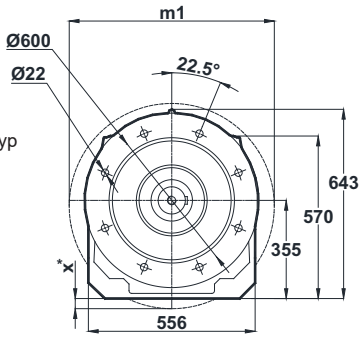


132 - 200 Tip / *Type* / Typ



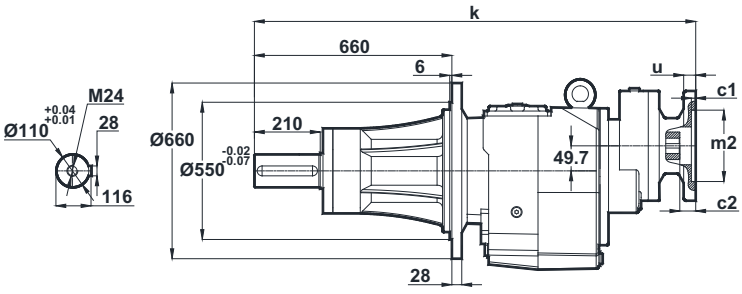


225 - 280 Tip / *Type* / Typ



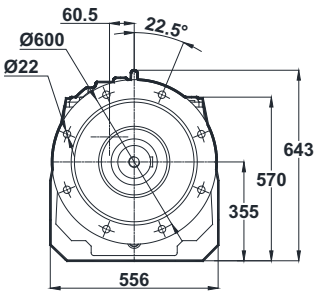
	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1	x
132/B5	4.5	14	15	265	300	230	15	1225.5	38	10	41.3	-
160/B5	5.5	10	19	300	350	250	20	1373	42	12	45.3	-
180/B5	5.5	10	19	300	350	250	20	1373	48	14	51.8	-
200/B5	5.5	10	19	350	400	300	22	1373	55	16	59.3	-
225/B5	5.5	10	19	400	450	350	24	1373	60	18	64.4	-
250/B5	5.5	10	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.. / B..







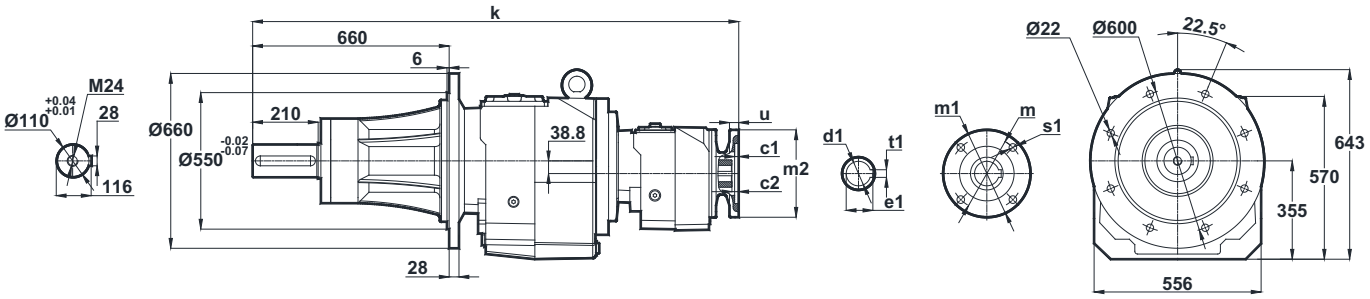


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
100-112/B5	4.5	9	15	215	250	180	15	1345.5	28	8	31.3
132/B5 **132/B14**	4.5	9	15 11	265 165	300 200	230 130	15	1366.5	38	10	41.3
160/B5	5.5	10	19	300	350	250	18	1442	42	12	45.3
180/B5	5.5	10	19	300	350	250	18	1442	48	14	51.8
200/B5	5.5	10	19	350	400	300	19	1462	55	16	59.3

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 çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

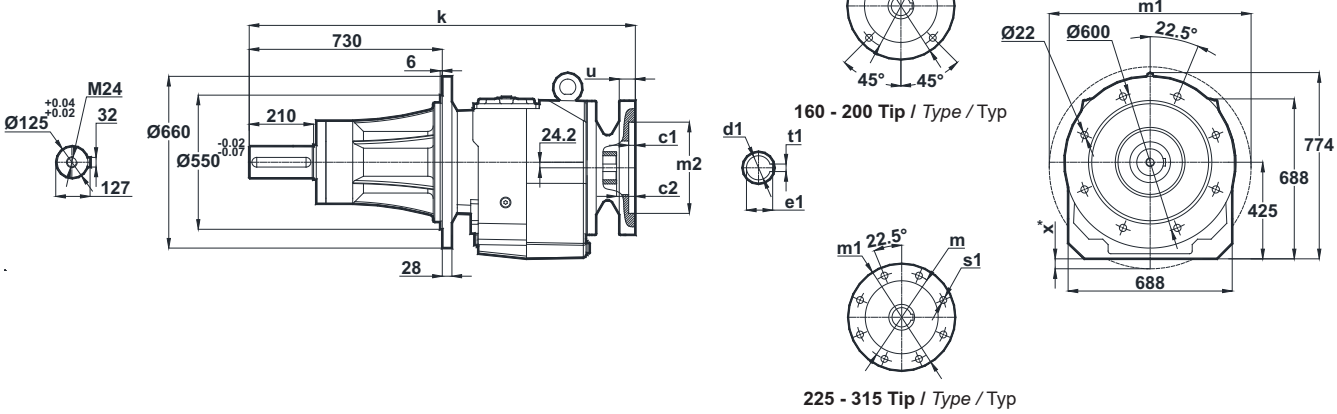
NNB875-A.. / B..
NNB876-B.. / B..



	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
71/B5	4	9	11	130	160	110	12	1463	14	5	16.3
80/B5 **80/B14**	4	9	12 7	165 100	200 120	130 80	12	1463	19	6 8	21.8
90/B5 **90/B14**	4	9	12 9	165 115	200 140	130 95	12	1463	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1480	28	8	31.3
132/B5 **132/B14**	4.5	7	15 11	265 165	300 200	230 130	20	1500	38	10	41.3
160/B5	5.5	10	19	300	350	250	20	1579.5	42	12	45.3

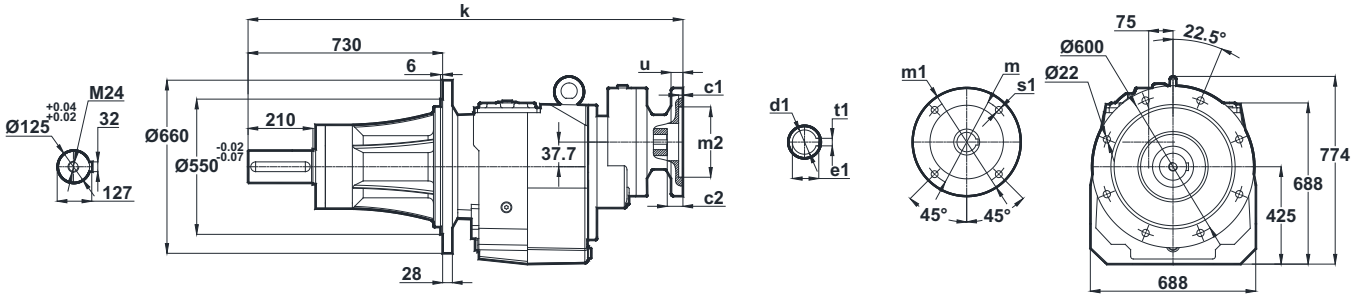
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NNB972-A..
NNB973-A..



	c1	c2	s1	m	m1	m2(H7)	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	600	660	550	24	1598.5	80	22	85.4	-
315N/B5	6.5	15	24	600	660	550	24	1598.5	85	22	90.4	-
315L/B5	6.5	15	24	600	660	550	24	1598.5	90	25	95.4	-

NNB974-A.. / B..

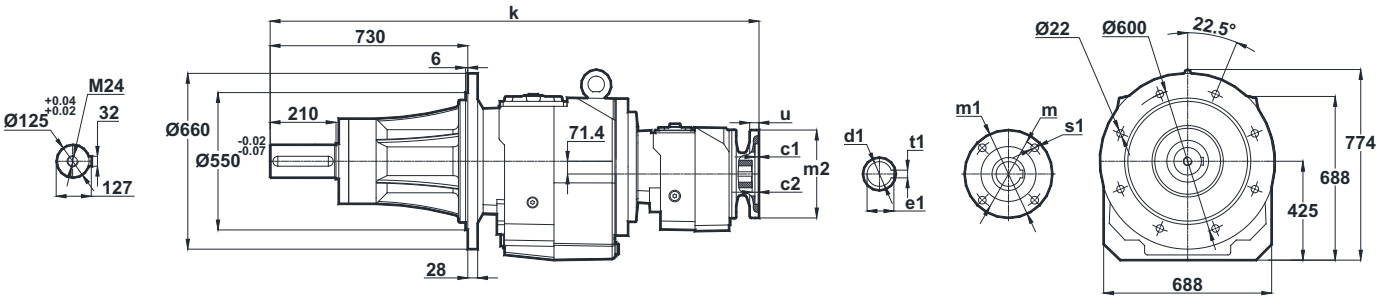


	c1	c2	s1	m	m1	m2(H7)	u	k	d1	t1	e1
100-112/B5	4.5	14.5	15	215	250	180	15	1519	28	8	31.3
132/B5 **132/B14**	4.5	9	15	265 165	300 200	230 130	15	1534	38	10	41.3
160/B5	5.5	10	19	300	350	250	20	1609	42	12	45.3
180/B5	5.5	10	19	300	350	250	20	1609	48	14	51.8

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 çektirme 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..

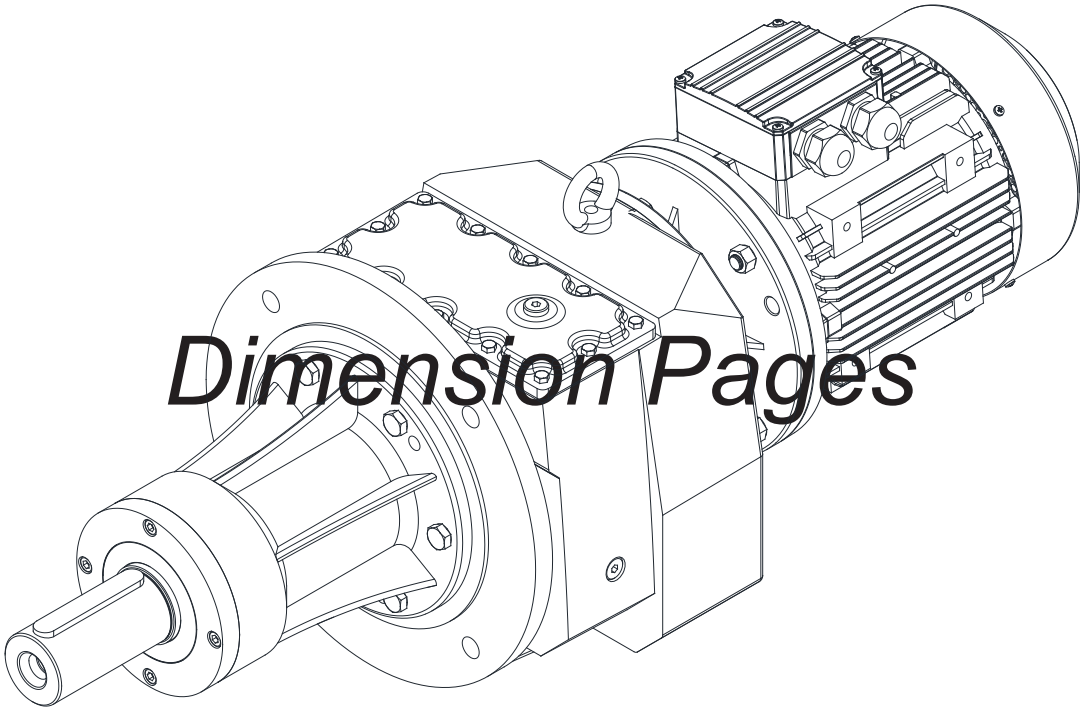


	c1	c2	s1	m	m1	m2 (H7)	u	k	d1	t1	e1
80/B5	4	5	12	165	200	130	12	1655	19	6	21.8
90/B5 **90/B14**	4	5	12 9	165 115	200 140	130 95	12	1655	24	8	27.3
100-112/B5 **100-112/B14**	4.5 4	9	15 9	215 130	250 160	180 110	15	1673.5	28	8	31.3
132/B5 **132/B14**	4.5	6	15 11	265 165	300 200	230 130	15	1692	38	10	41.3
160/B5	5.5	10	19	300	350	250	20	1771.5	42	12	45.3
180/B5	5.5	10	19	300	350	250	20	1771.5	48	14	51.8

Notlar / *Notes* / Notizen

NVB Serisi / *Series* / Serie

Ölçü Sayfaları

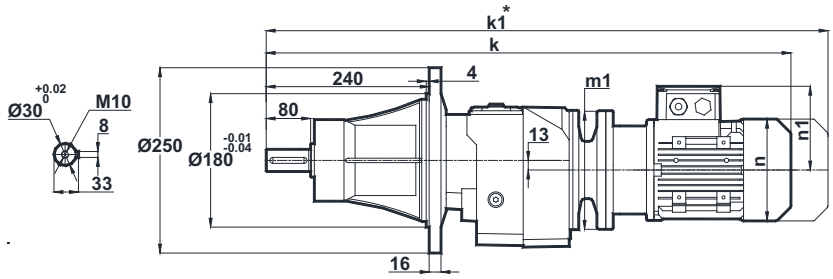


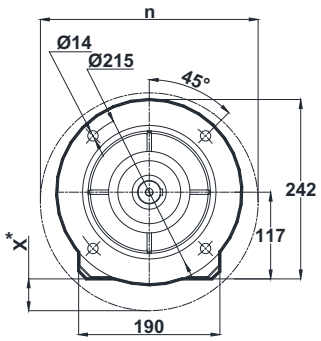
Dimension Pages

Abmessungsseiten

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

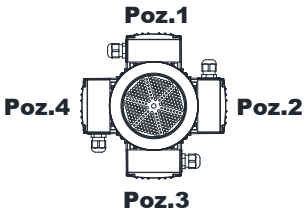
NVB202
NVB203





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)	-	-	-	-	-	23	23

Klemens Kutusu /*Terminal Box* / Klemmenkasten

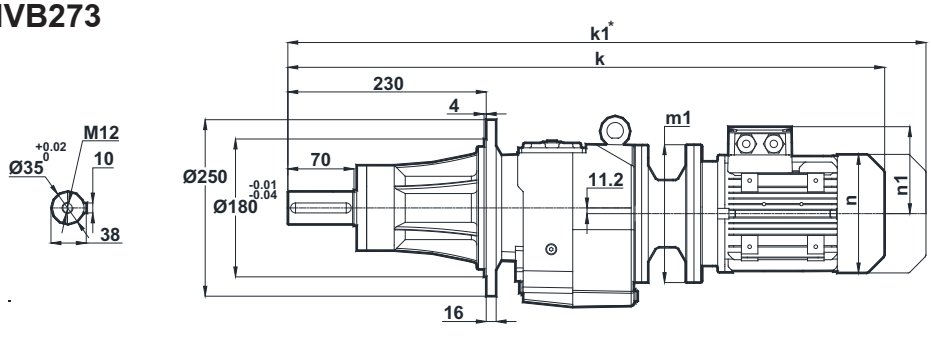


63-71-80-90-100-112

*** " 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

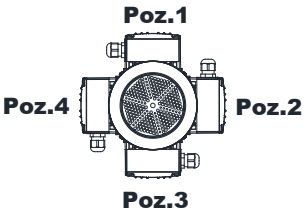
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB272
NVB273



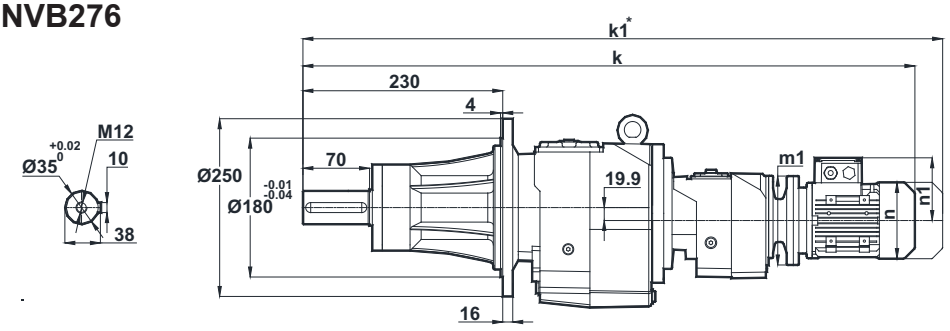
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**
k	675.5	668.5	719.5	760.5	760.5	787.5	810.5	940,5	940,5
k1	746.5	759.5	812.5	839.5	839.5	895.5	915.5	1070,5	1070,5
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)	-	-	-	-	-	22	22	47	47

Klemens Kutusu /*Terminal Box* / Klemmenkasten



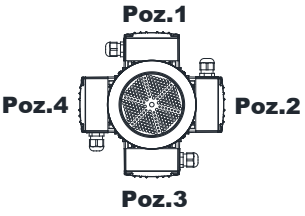
63-71-80-90

NVB275
NVB276



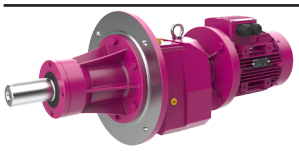
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5 63/B14**	**71/B5 71/B14**
k	791	814.5
k1	862	905.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	90	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten



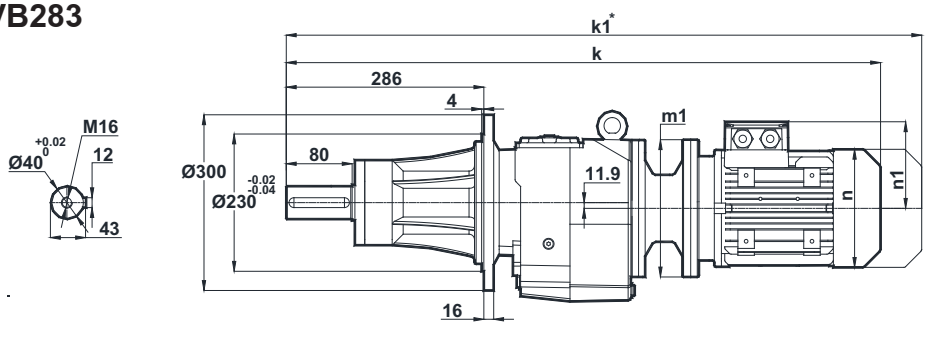
63-71

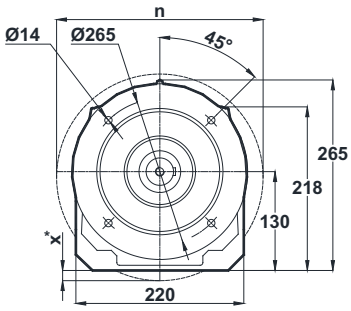
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.
x: Motor, ayak bağlantı yüzeyinin altında ise */ x: If Motor is lower than foot mounting plane /* x: Wenn der Motor unter der Fußmontageebene ist



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

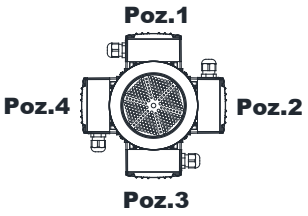
NVB282
NVB283





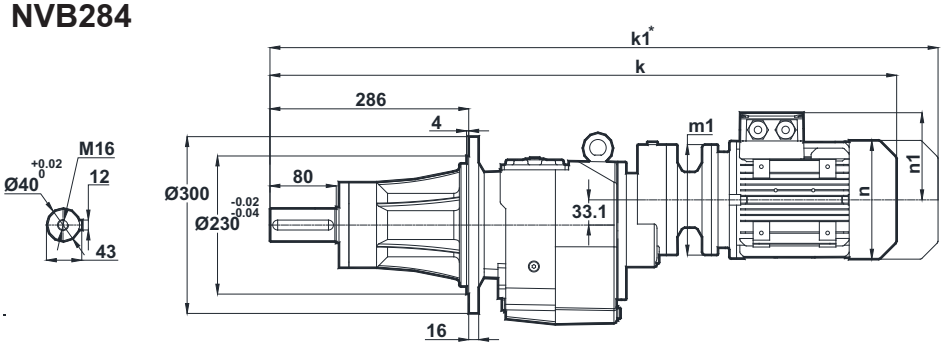
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**
k	773.5	795.5	836.5	836.5	887.5	910.5	1013.5	1013.5	1173
k1	864.5	888.5	915.5	915.5	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)	-	-	-	-	7	7	32	32	57

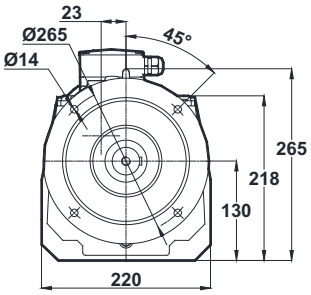
Klemens Kutusu /*Terminal Box* / Klemmenkasten



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

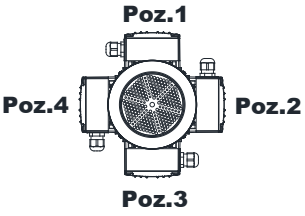
NVB284





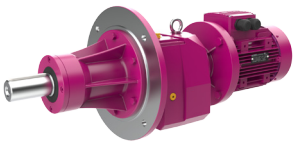
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	828.5	821.5
k1	899.5	912.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten



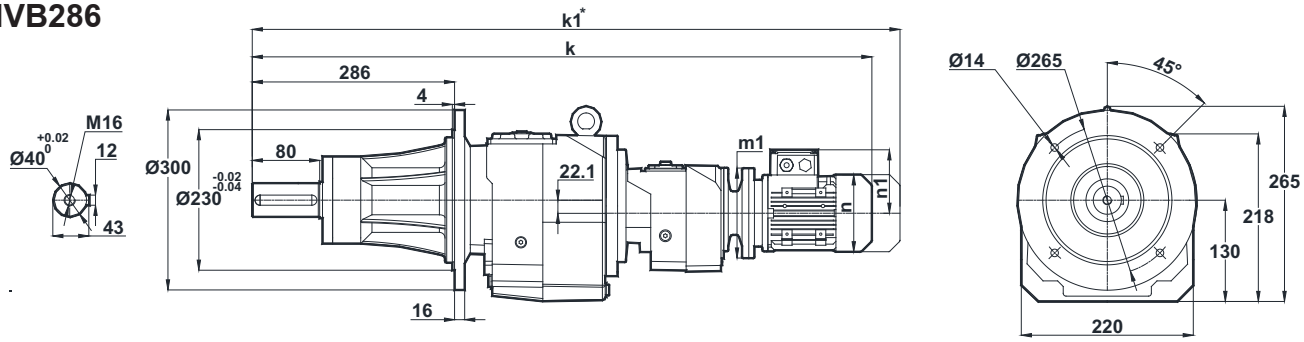
63-71

***** **" 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



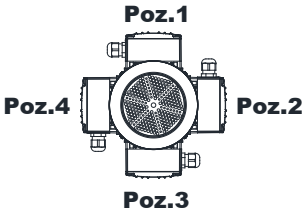
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB285
NVB286



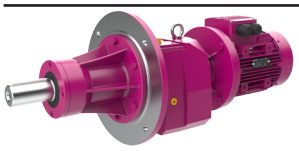
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	**63/B5 63/B14**
k	896.5
k1	967.5
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten



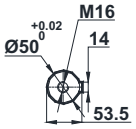
63

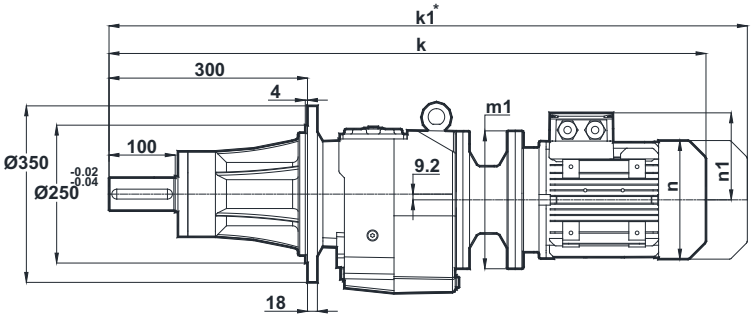
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

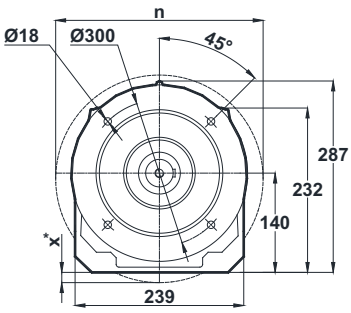


-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB372
NVB373

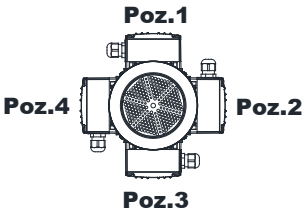






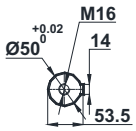
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160M/B5**
k	796	818	859	859	910	933	1036	1036	1195.5	1195.5
k1	887	911	938	938	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)	-	-	-	-	-	-	20	20	45	45

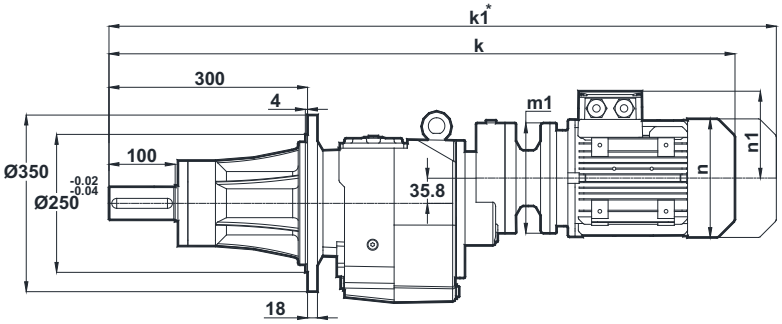
Klemens Kutusu /*Terminal Box* / Klemmenkasten

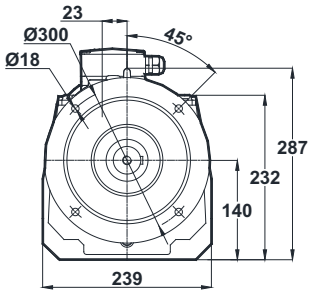


71-80-90-100-112-132-160

NVB374

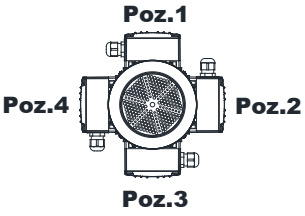






Motor Büyüklüğü / *Motor Size* / Motorbaugroße			
IEC	**63/B5**	**71/B5 71/B14**	**80/B5 80/B14**
k	851	844	895
k1	922	935	988
n	119	137	155
n1	101	118	127
m1 (B5)	140	160	200
m1 (B14)	-	105	120

Klemens Kutusu /*Terminal Box* / Klemmenkasten

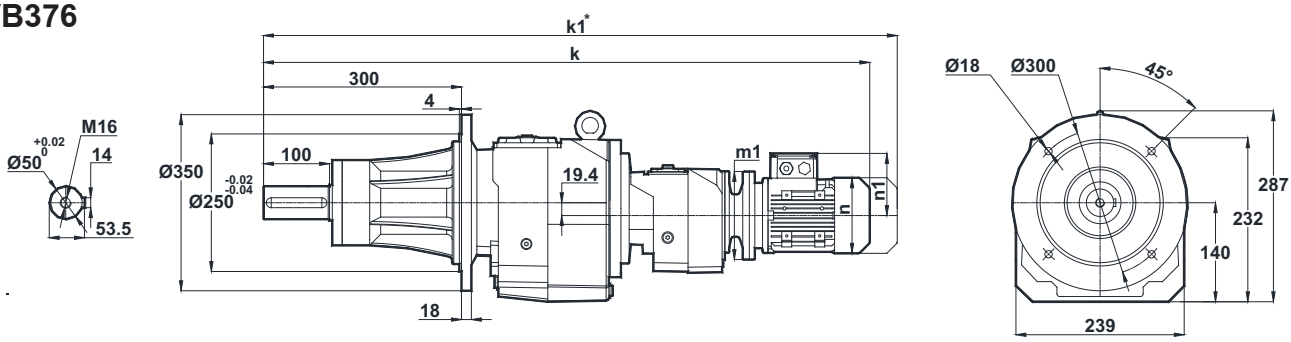


63-71-80

***** **" 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

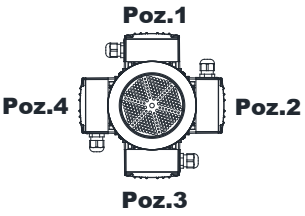
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB375
NVB376



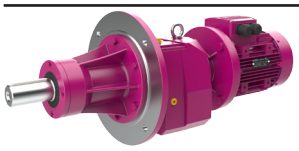
Motor Büyüklüğü / *Motor Size* / Motorbaugroße	
IEC	**63/B5 63/B14**
k	919
k1	990
n	119
n1	101
m1 (B5)	140
m1 (B14)	90

Klemens Kutusu /*Terminal Box* / Klemmenkasten



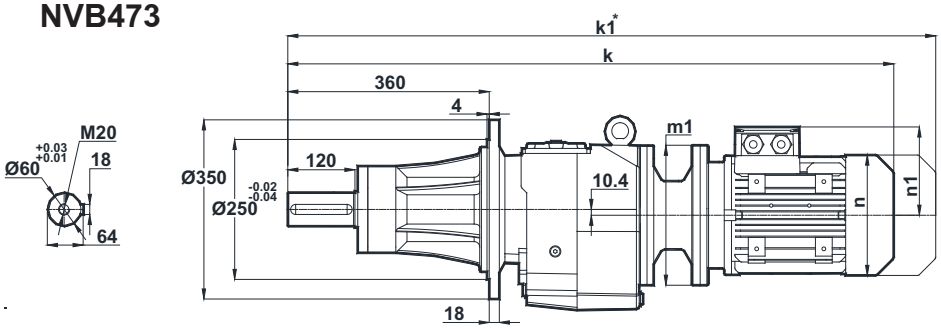
63

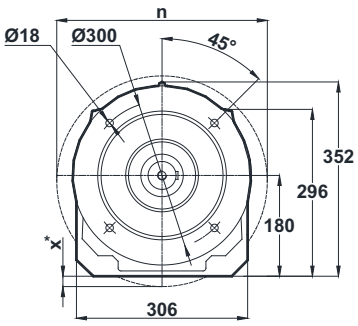
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.



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

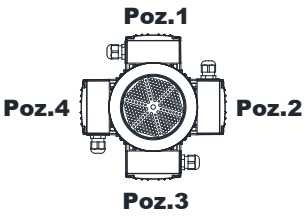
NVB472
NVB473





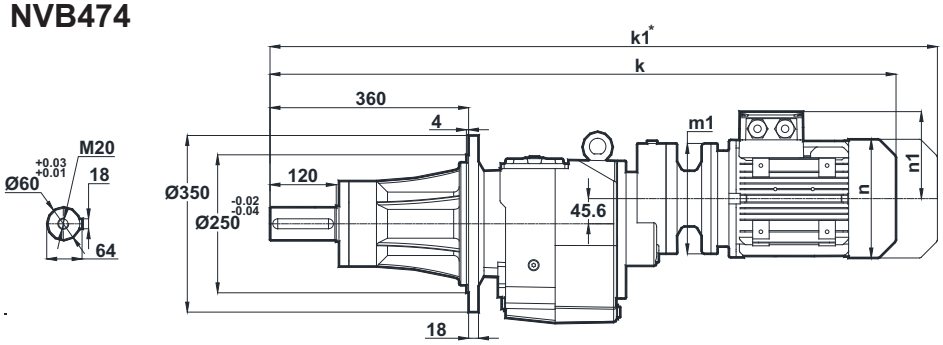
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
IEC	**80/B5**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**	**112M/B5 112M/B14**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**
k	920.5	961.5	961.5	1014	1037	1138.5	1138.5	1298	1298	1389	1389
k1	1013.5	1040.5	1040.5	1122	1142	1268.5	1268.5	1448	1448	1576	1576
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)	-	-	-	-	-	-	-	6	6	6	6

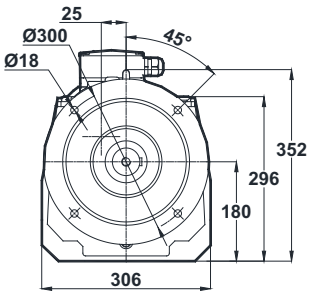
Klemens Kutusu /*Terminal Box* / Klemmenkasten



80-90-100-112-132-160-180

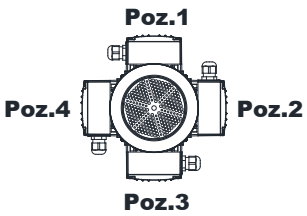
NVB474





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

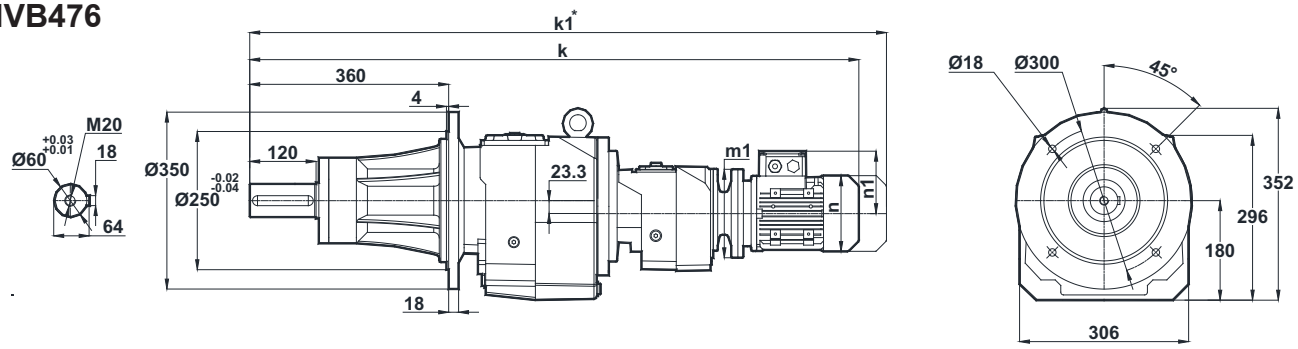


71-80

***** **" 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

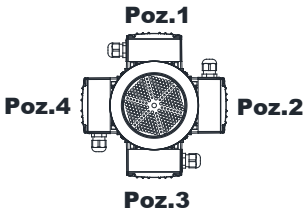
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB475
NVB476



Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
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

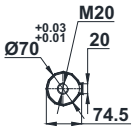


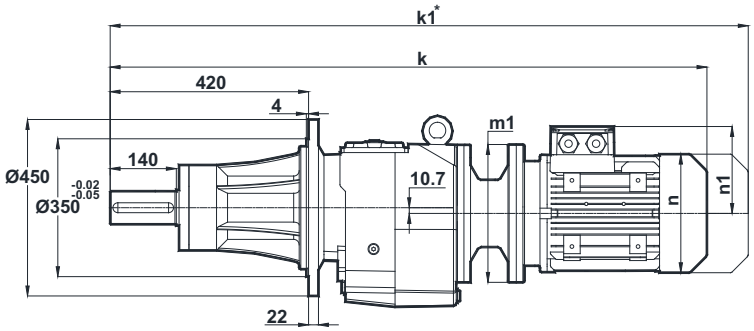
63-71

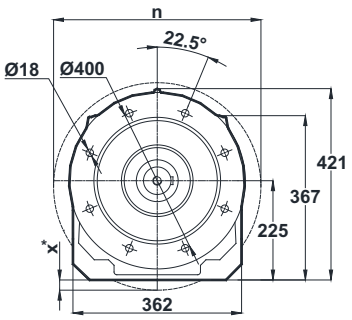
*** " k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

NVB572
NVB573

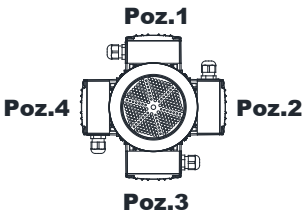






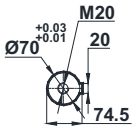
Motor Büyüklüğü / *Motor Size* / Motorbaugroße									
IEC	**100L/B5**	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**
k	1120.5	1143.5	1247.5	1247.5	1403	1403	1494	1494	1555
k1	1228.5	1248.5	1377.5	1377.5	1553	1553	1681	1681	1747
n	193	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)	-	-	-	-	-	-	-	-	-

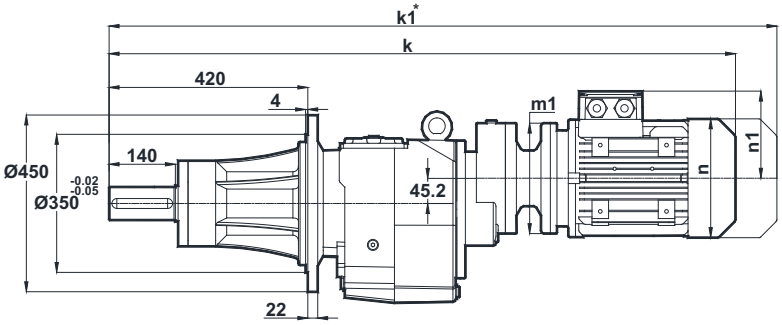
Klemens Kutusu / *Terminal Box* / Klemmenkasten

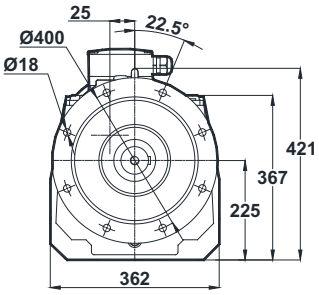


100-112-132-160-180-200

NVB574

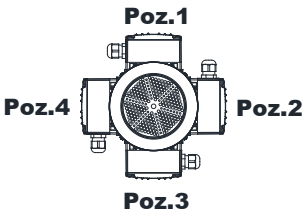






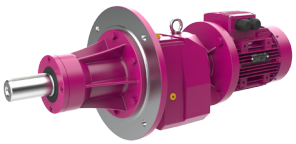
Motor Büyüklüğü / *Motor Size* / Motorbaugroße					
IEC	**71/B5**	**80/B5 80/B14**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**
k	1103.5	1125.5	1166.5	1166.5	1217.5
k1	1194.5	1218.5	1245.5	1245.5	1325.5
n	137	155	176	176	193
n1	118	127	136	136	149
m1 (B5)	160	200	200	200	250
m1 (B14)	-	120	140	140	160

Klemens Kutusu / *Terminal Box* / Klemmenkasten



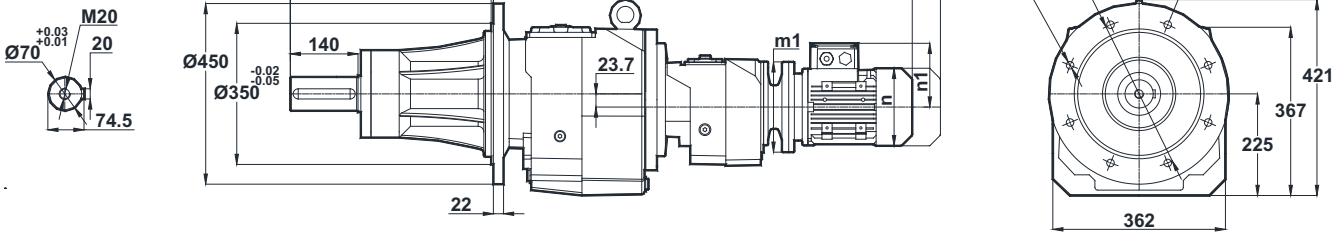
71-80-90-100

***** **" 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



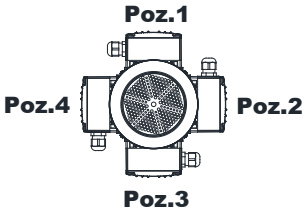
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB575
NVB576



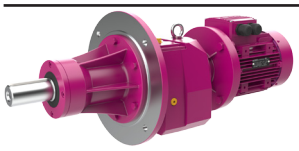
Motor Büyüklüğü / *Motor Size* / Motorbaugroße		
IEC	**63/B5**	**71/B5 71/B14**
k	1211.5	1204.5
k1	1282.5	1295.5
n	119	137
n1	101	118
m1 (B5)	140	160
m1 (B14)	-	105

Klemens Kutusu /*Terminal Box* / Klemmenkasten



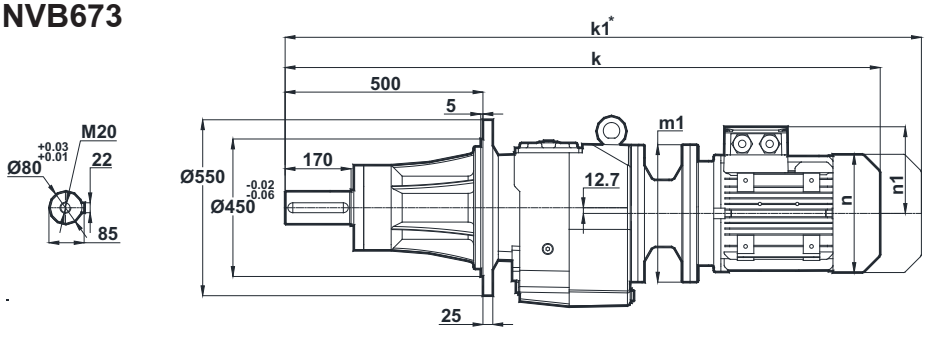
63-71

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



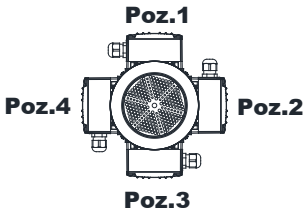
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB672
NVB673



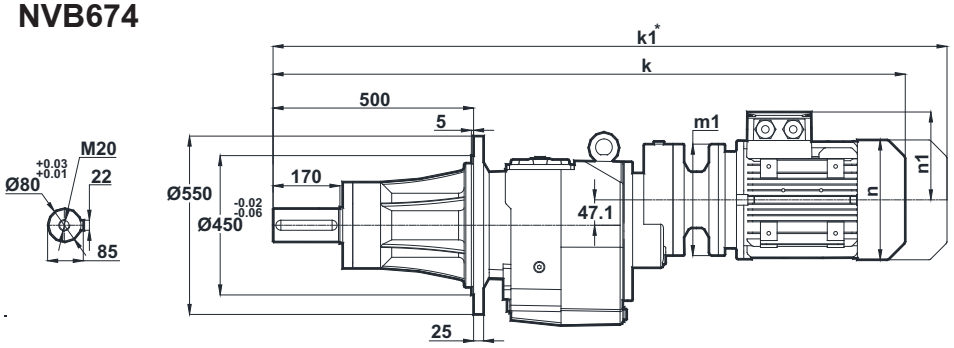
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**
k	1264.5	1362.5	1362.5	1517.5	1517.5	1608.5	1608.5	1670	1786	1786
k1	1369.5	1492.5	1492.5	1667.5	1667.5	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



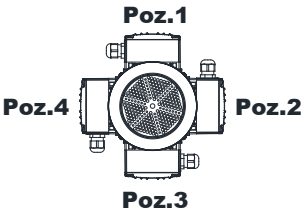
112-132-160-180-200-225

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

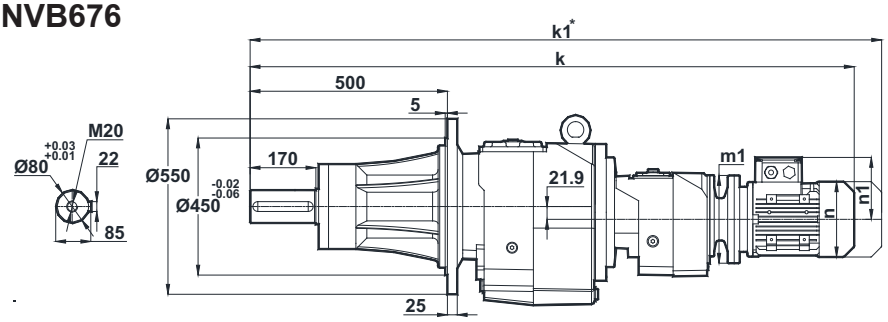


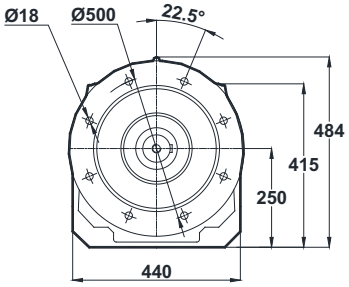
80-90

*** " 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 çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

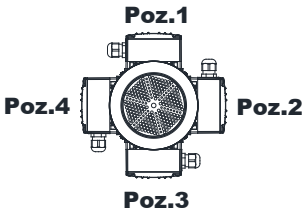
NVB675
NVB676





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

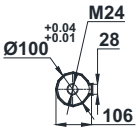


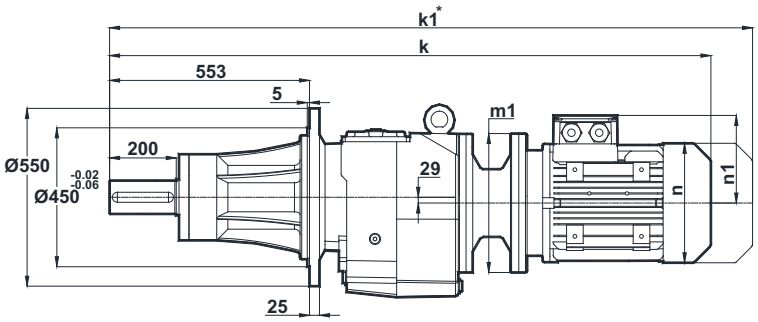
71-80

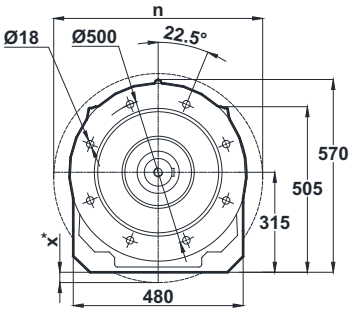
* **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

NVB772
NVB773

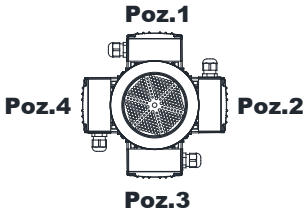






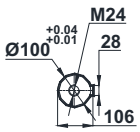
Motor Büyüklüğü / *Motor Size* / Motorbaugroße										
IEC	**132S/B5**	**132M/B5**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**	**250M/B5**
k	1465.5	1465.5	1615	1615	1706	1706	1769	1885	1885	1951
k1	1595.5	1595.5	1765	1765	1893	1893	1961	2068	2068	2108
n	257	257	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)	-	-	-	-	-	-	-	-	-	-

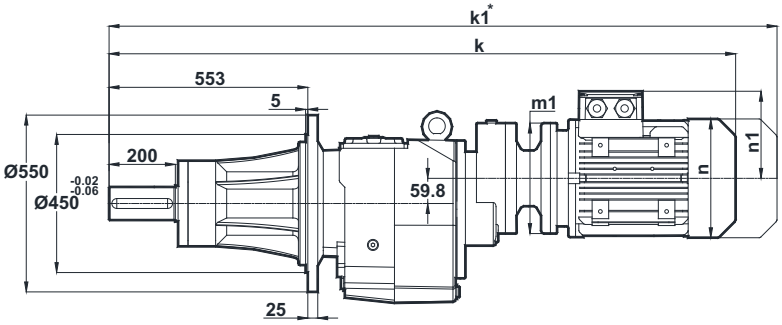
Klemens Kutusu /*Terminal Box* / Klemmenkasten

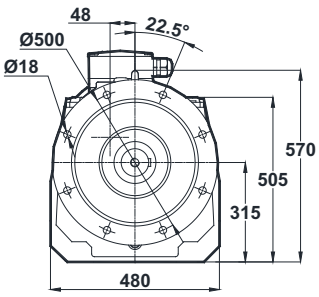


132-160-180-200-225-250

NVB774

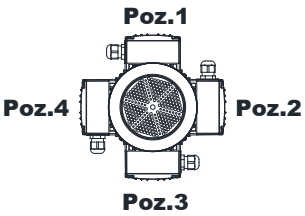






Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	**80/B5**	**90S/B5 90S/B14**	**90L/B5 90L/B14**	**100L/B5 100L/B14**
k	1359.5	1400.5	1400.5	1453
k1	1452.5	1479.5	1479.5	1561
n	155	176	176	193
n1	127	136	136	149
m1 (B5)	200	200	200	250
m1 (B14)	-	140	140	160

Klemens Kutusu /*Terminal Box* / Klemmenkasten

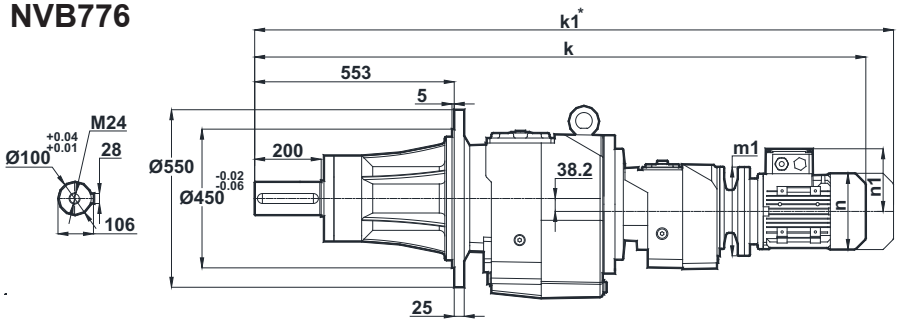


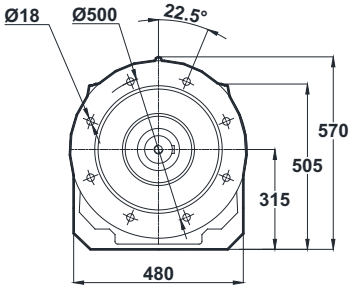
80-90-100

***** **" 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

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

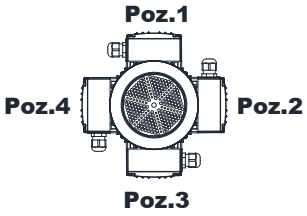
NVB775
NVB776





Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
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

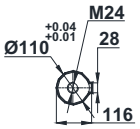


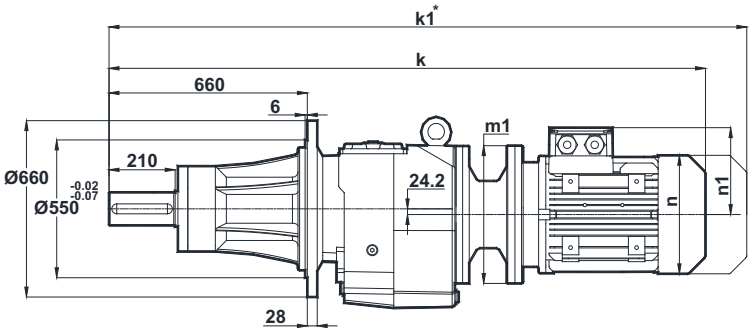
71-80-90

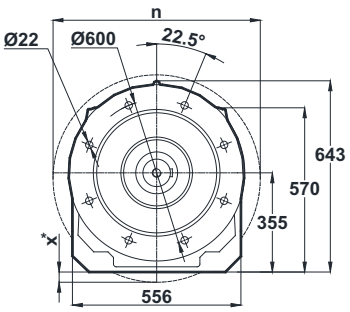
* **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

NVB872
NVB873

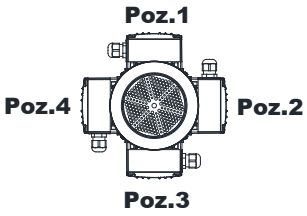






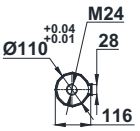
Motor Büyüklüğü / *Motor Size* / Motorbaugroße											
IEC	**132M/B5**	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**	**250M/B5**	**280S/B5**	**280M/B5**
k	1640.5	1868	1868	1959	1959	2000	2063	2063	2129	2245	2245
k1	1770.5	2018	2018	2146	2146	2192	2246	2246	2286	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)	-	-	-	-	-	-	-	-	-	-	-

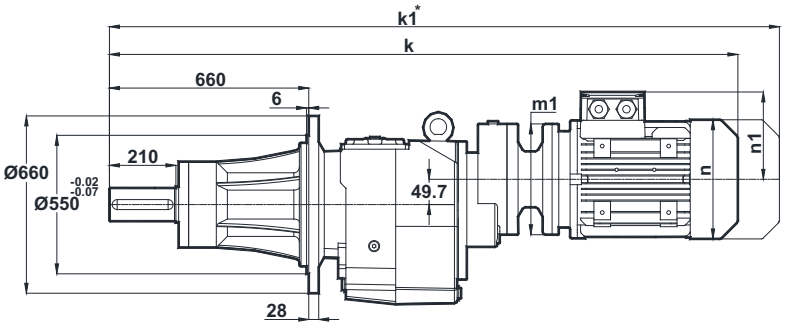
Klemens Kutusu /*Terminal Box* / Klemmenkasten

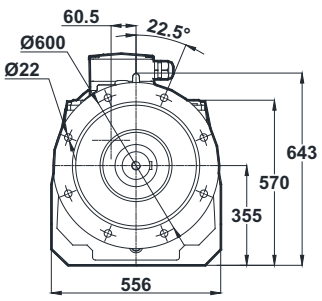


132-160-180-200-225-250-280

NVB874

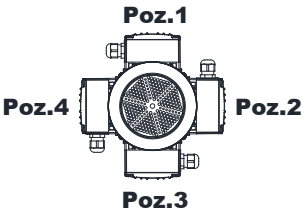






Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	**100L/B5**	**112M/B5**	**132S/B5 132S/B14**	**132M/B5 132M/B14**
k	1654.5	1677.5	1781.5	1781.5
k1	1762.5	1782.5	1911.5	1911.5
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

Klemens Kutusu /*Terminal Box* / Klemmenkasten

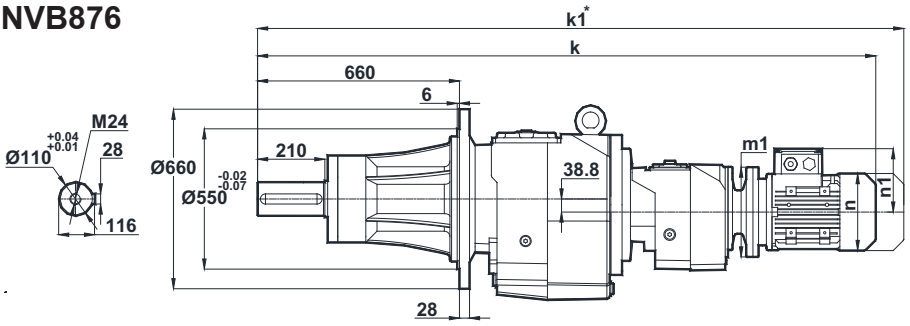


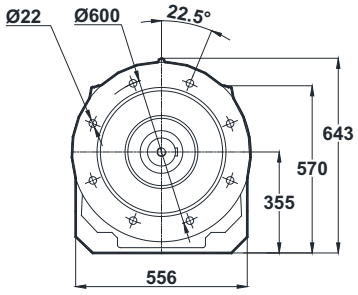
100-112-132

***** **" 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 çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

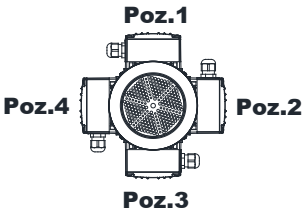
NVB875
NVB876





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

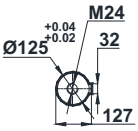


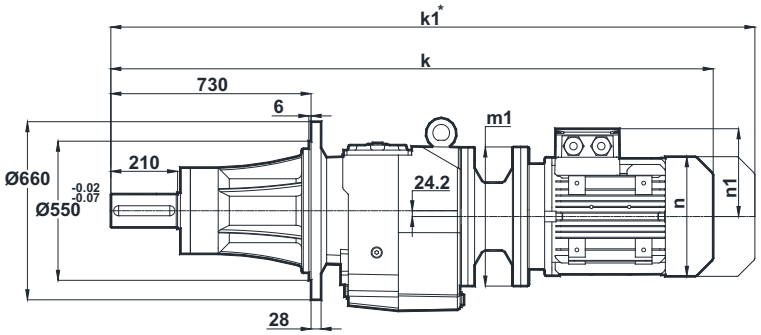
71-80-90-100

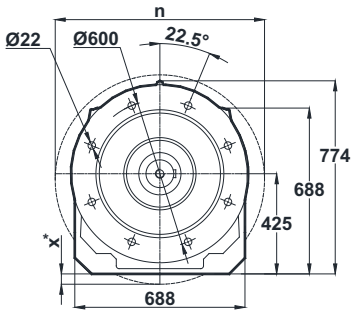
***** **" k1 " Ölçüsü frenli redüktörlere aittir.** *Dimension " k1" is for motors with brake.* Maße " k1 " ist für Bremsenmotoren.

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

NVB972
NVB973

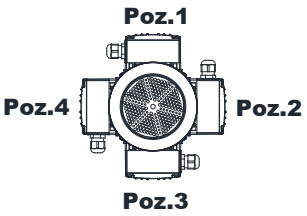






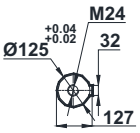
Motor Büyüklüğü / *Motor Size* / Motorbaugroße													
IEC	**160M/B5**	**160L/B5**	**180M/B5**	**180L/B5**	**200L/B5**	**225S/B5**	**225M/B5**	**250M/B5**	**280S/B5**	**280M/B5**	**315S/B5**	**315M/B5**	**315L/B5**
k	1925.5	1925.5	2016.5	2016.5	2081.5	2186.5	2186.5	2274.5	2390.5	2390.5	2700.5	2700.5	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)	-	-	-	-	-	-	-	-	-	-	-	-	-

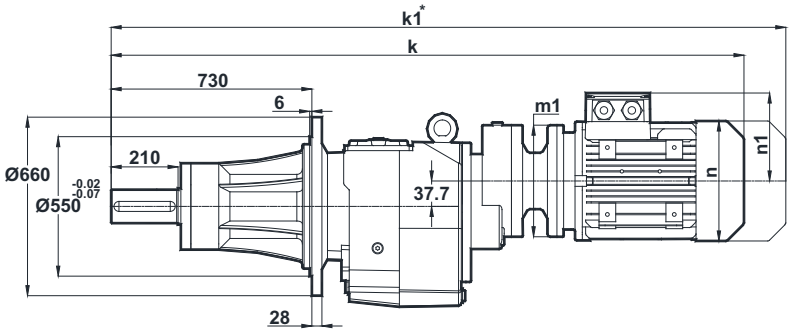
Klemens Kutusu /*Terminal Box* / Klemmenkasten

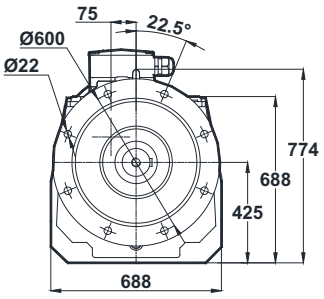


160-180-200-225-250-280-315

NVB974

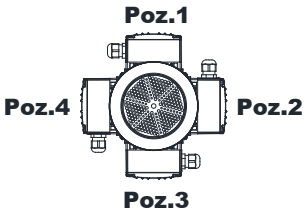






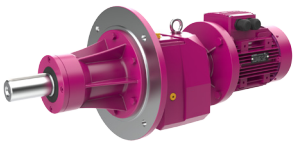
Motor Büyüklüğü / *Motor Size* / Motorbaugroße				
IEC	**100L/B5**	**112M/B5**	**132S/B5** **132S/B14**	**132M/B5** **132M/B14**
k	1828	1851	1949	1949
k1	1936	1956	2079	2079
n	193	215	257	257
n1	149	161	182	182
m1 (B5)	250	250	300	300
m1 (B14)	-	-	200	200

Klemens Kutusu /*Terminal Box* / Klemmenkasten



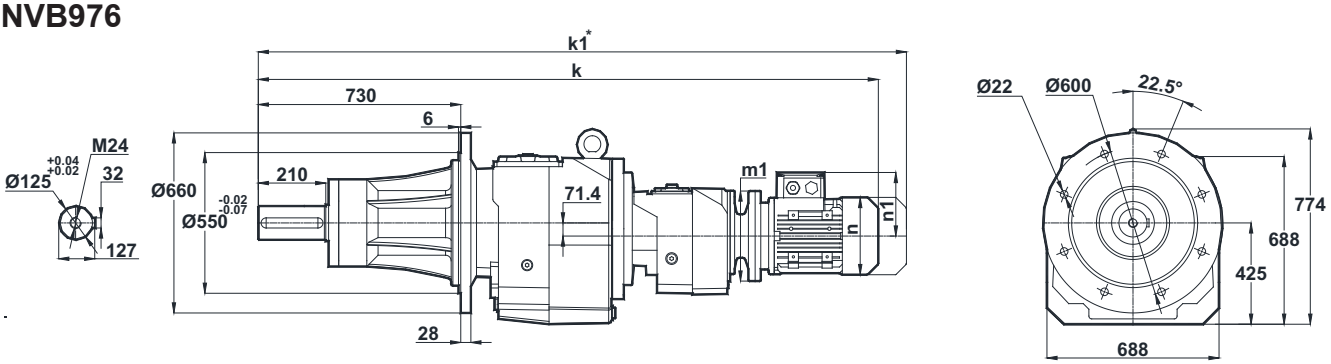
100-112-132

***** **" 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



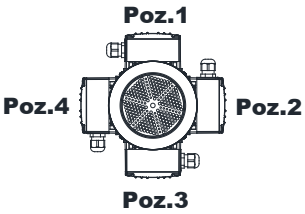
-Mil ucu çektirme deliği DIN 332 sayfa 2 / *Tapped center hole to DIN 332, sheet 2* / Zentrierung mit Gewinde DIN 332, Blatt 2

NVB975
NVB976



Motor Büyüklüğü / *Motor Size* / Motorbaugroße						
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

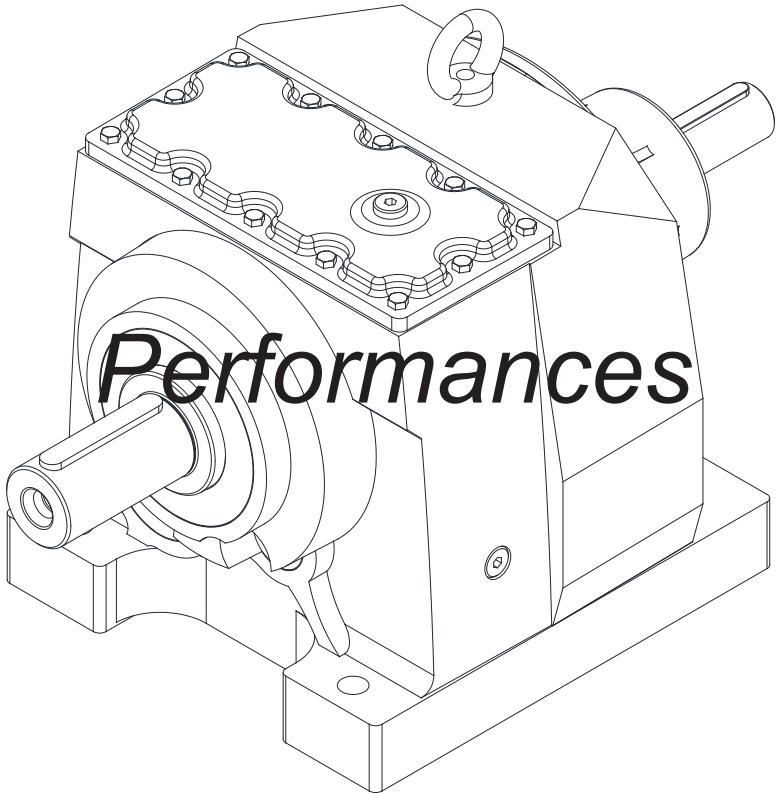


80-90-100-112-132

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

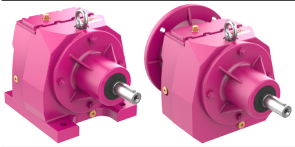
Notlar / *Notes* / Notizen

Güç ve Devir Tabloları



Performances

Leistungs- und Drehzahlübersicht

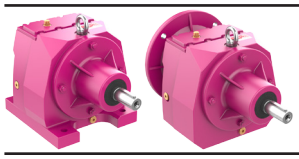


Motorsuz Güç Devir Sayfaları

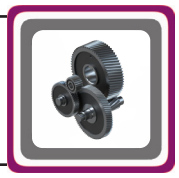
Gear Units Performance Tables

Leistungs- und Drehzahlübersicht von Getriebe

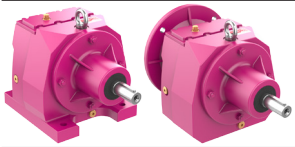
Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
53	3,62	401	**MT002**	3,6	**2,3**	1,8	1,4	1,1	0,89	359	-	11	320
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	320
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	321
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	321
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	322
120	4,09	355	**NT172**	7,4	**4,4**	3,6	3,2	2,3	1,9	609	-	16	
130	4,78	303		6,9	**4,1**	3,5	3,1	2,1	1,6	591	-		
135	5,78	251		6,3	**3,5**	3,2	2,8	1,7	1,3	772	-		
145	6,60	220		5,7	**3,3**	3,0	2,5	1,5	1,2	888	-		
155	7,08	205		5,6	**3,3**	2,8	2,3	1,4	1,1	856	-		
160	7,60	191		5,4	**3,2**	2,6	2,2	1,3	1,0	746	-		
165	8,94	162		4,7	**2,8**	2,2	1,8	1,1	0,86	861	-		
170	9,53	152		4,6	**2,7**	2,1	1,7	1,0	0,81	852	-		
180	11,08	131		4,0	**2,5**	1,8	1,5	0,89	0,69	1257	-		
190	12,66	115		3,6	**2,3**	1,6	1,3	0,78	0,61	1284	-		



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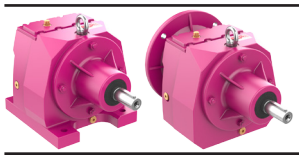


Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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	322
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	322
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	323
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	323
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	324
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	324
435	25,55	57	**NT273**	4,2	**2,7**	1,9	1,4	0,93	0,71	2013	1276	28	



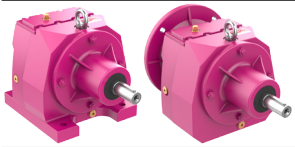
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Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
450	30,48	48	**MT273**	3,7	**2,4**	1,6	1,2	0,78	0,59	2323	1303	26	324
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	325
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	325
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	326
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	326
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		



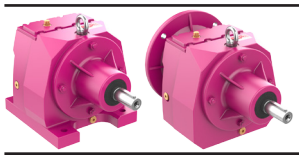
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Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
600	54,12	27	**MT283**	2,7	**1,8**	1,2	0,90	0,59	0,45	6490	1874	38	326
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	327
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	328
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	328
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	329
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	329
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		



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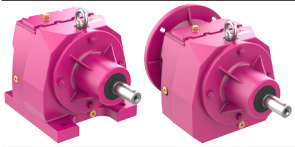
Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
820	72,81	20	**MT373**	3,2	**1,8**	1,2	0,92	0,60	0,46	8790	1854	47	329
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	330
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	331
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	331
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**	45	**28**	22	18	14	11	5155	-	76	332
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		40	**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	332
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		



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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) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
1550	49,05	30	**MT473**	8,8	**5,1**	3,3	2,6	1,7	1,3	13146	1585	78	332
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	333
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	334
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	334
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**	104	**65**	49	40	31	27	7606	-	109	335
1910	4,95	293	**NT572**	95	**60**	46	37	29	24	7923	-	119	
1980	5,63	258		87	**55**	42	34	26	21	8305	-		
2080	6,43	225		80	**51**	38	31	24	18	8663	-		
2180	7,41	196		73	**46**	35	28	21	16	9083	-		
2160	8,34	174		65	**41**	30	25	19	14	10086	-		
2200	9,48	153		59	**36**	27	22	16	13	10654	-		
2250	10,85	134		53	**33**	24	20	14	11	11258	-		
2320	12,50	116		47	**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	-		

Sentetik yağ kullanılmalıdır. / *Synthetic oil must be used.* / Synthetisches Öl muss verwendet werden

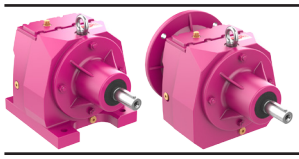


Motorsuz Güç Devir Sayfaları
Gear Units Performance Tables
Leistungs- und Drehzahlübersicht von Getriebe



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) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
2390	22,64	64	**MT573**	27	**17**	13	10	7,0	5,3	15500	470	111	335
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	336
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	337
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	337
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	338
2400	3,79	383	**NT672**	-	**99**	74	60	46	38	8825	-	181	
2670	4,37	332		153	**95**	71	58	44	36	8909	-		
2700	4,53	320		149	**93**	70	56	43	35	9023	-		
2920	5,08	285		145	**90**	67	54	42	33	9112	-		
3170	5,73	253		139	**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		83	**51**	39	31	24	18	13103	-		
3030	9,47	153		81	**50**	38	30	23	18	13256	-		
3090	10,62	137		73	**46**	34	28	21	16	13891	-		
3170	11,97	121		67	**42**	31	25	19	14	14551	-		
3250	13,58	107		61	**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	-		

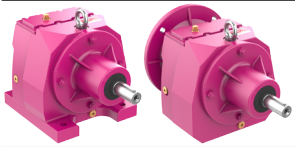
Sentetik yağ kullanılmalıdır. / *Synthetic oil must be used.* / Synthetisches Öl muss verwendet werden



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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) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
3680	23,18	63	**MT672 NT672**	40	**25**	19	15	9,6	7,3	18689	-	171 181	338
3530	26,66	54	**MT673**	34	**20**	16	13	8,5	6,4	20248	2575	199	338
3670	30,20	48	**NT673**	31	**19**	15	11	7,5	5,7	21127	2680	209	
3820	34,36	42		28	**18**	13	10	6,6	5,0	22076	2754		
3990	39,30	37		26	**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	339
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	340
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	340
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	341
3990	5,38	269	**NT772**	-	**115**	87	70	54	44	47449	-	365	
4330	6,15	236		177	**110**	82	67	51	42	48003	-		
4490	6,52	222		173	**107**	81	65	50	41	48160	-		
4770	7,26	200		165	**102**	77	62	48	39	48690	-		
6200	8,46	171		-	**114**	87	71	49	37	46092	-		

Sentetik yağ kullanılmalıdır. / *Synthetic oil must be used.* / Synthetisches Öl muss verwendet werden

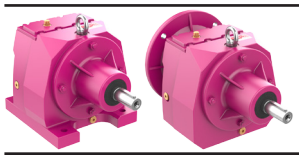


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Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
6470	9,62	151	**MT772**	-	**105**	80	65	43	33	47757	-	296	341
6770	11,00	132	**NT772**	152	**96**	73	57	38	29	49515	-	365	
6900	11,65	124		146	**93**	70	54	35	27	50302	-		
7140	12,98	112		136	**86**	63	48	32	24	51890	-		
7420	14,54	100		127	**80**	57	43	28	22	53475	-		
7710	16,39	88		117	**74**	50	38	25	19	51626	-		
7520	17,40	83	**MT773**	109	**68**	48	37	24	18	52000	-	259	341
7810	19,52	74	**NT773**	101	**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		74	**42**	28	21	14	11	48500	-		
8000	31,11	47		72	**41**	27	21	14	10	48500	-		
8000	34,89	42		67	**36**	24	18	12	9,2	48500	-		
8000	39,33	37		62	**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		43	**22**	14	11	7,2	5,5	48500	4619		
8000	60,76	24		42	**21**	14	11	7,0	5,3	48500	4629		
8000	68,15	21		37	**19**	12	9,4	6,2	4,7	48500	4714		
8000	76,81	19		33	**17**	11	8,4	5,5	4,2	48500	4792		
8000	87,13	17		29	**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	342
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	343
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	2916,59	0,50	**MT776**	0,96	**0,48**	0,31	0,27	0,17	0,13	48500	2160	332	343
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		
8000	6784,90	0,21		0,46	**0,23**	0,17	0,13	0,08	0,06	48500	2179		
8000	8428,93	0,17		0,37	**0,19**	0,14	0,10	0,07	0,05	48500	2182		
8000	9585,84	0,15		0,33	**0,16**	0,12	0,09	0,06	0,05	48500	2184		

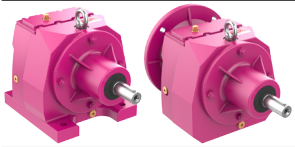
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Leistungs- und Drehzahlübersicht von Getriebe

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) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
8000	10750,89	0,13	**MT776**	0,29	**0,15**	0,11	0,08	0,05	0,04	48500	2189	332	343
8000	12118,56	0,12	**NT776**	0,26	**0,13**	0,09	0,07	0,05	0,04	48500	2194	405	
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	344
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		360	**222**	166	133	89	68	48005	-		
11200	8,87	163		-	**200**	149	116	76	58	75086	-		
11500	10,09	144		292	**180**	134	102	67	51	78329	-		
12700	11,59	125	**MT873**	-	**177**	119	91	59	45	74662	-	555	344
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		207	**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		122	**61**	40	30	20	15	72000	-		
13000	40,55	36		-	**52**	34	26	17	13	72000	570		
13000	46,12	31		91	**46**	30	23	15	11	72000	1722		
13000	52,86	27		79	**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	345
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	346
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		
13000	1700,56	0,85	**MT875**	2,6	**1,3**	0,85	0,65	0,43	0,32	72000	1919		
13000	1924,32	0,75	**NT875**	2,3	**1,2**	0,75	0,58	0,38	0,29	72000	1928		

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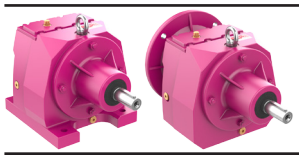


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Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
13000	2108,33	0,69	**MT876**	2,1	**1,1**	0,70	0,54	0,35	0,27	72000	2061	620	346
13000	2460,65	0,59	**NT876**	1,8	**0,92**	0,60	0,46	0,30	0,25	72000	2072	630	
13000	2894,28	0,50		1,6	**0,78**	0,51	0,39	0,26	0,22	72000	2082		
13000	3441,02	0,42		1,3	**0,66**	0,43	0,33	0,24	0,18	72000	2090		
13000	3892,30	0,37		1,2	**0,58**	0,38	0,29	0,21	0,16	72000	2096		
13000	4438,59	0,33		1,0	**0,51**	0,34	0,26	0,19	0,14	72000	2101		
13000	4954,95	0,29		0,92	**0,46**	0,30	0,26	0,17	0,13	72000	2114		
13000	5569,66	0,26		0,82	**0,41**	0,27	0,23	0,15	0,11	72000	2127		
13000	6313,78	0,23		0,72	**0,36**	0,26	0,20	0,13	0,10	72000	2140		
13000	7233,00	0,20		0,63	**0,32**	0,23	0,18	0,12	0,09	72000	2152		
13000	8345,18	0,17		0,55	**0,27**	0,20	0,15	0,10	0,08	72000	2162		
13000	11443,34	0,13		0,44	**0,22**	0,16	0,12	0,08	0,06	72000	2172		
13000	13014,00	0,11		0,39	**0,20**	0,14	0,11	0,07	0,05	72000	2174		
13000	14977,32	0,10		0,34	**0,17**	0,12	0,09	0,06	0,05	72000	2176		
13000	17501,59	0,08		0,29	**0,15**	0,11	0,08	0,05	0,04	72000	2177		
9950	7,11	204	**MT972**	-	**217**	163	131	101	83	94943	23900	960	347
10700	7,92	183	**NT972**	-	**210**	157	127	97	80	97294	20793	1010	
11450	8,86	164		-	**201**	151	122	94	77	99973	15969		
12350	9,99	145		180	**192**	144	116	89	70	102771	9691		
18000	11,56	125		-	**243**	159	122	80	61	94500	11034		
18000	12,86	113		-	**218**	143	110	72	55	94500	15627		
18000	14,40	101		-	**195**	128	98	64	49	94500	19933		
18000	16,23	89		157	**173**	114	87	57	43	94500	23900		
18000	18,15	80	**MT973**	-	**156**	102	78	52	39	94500	23900	1000	347
18000	20,36	71	**NT973**	-	**139**	91	70	46	35	94500	23900	1050	
18000	22,95	63		-	**123**	81	62	41	31	94500	23900		
18000	26,03	56		217	**109**	72	55	36	27	94500	23900		
18000	29,49	49		-	**96**	63	48	32	24	94500	23900		
18000	33,08	44		-	**86**	57	43	28	22	94500	23900		
18000	37,29	39		-	**76**	50	38	25	19	94500	23900		
18000	42,30	34		134	**67**	44	34	22	17	94500	23900		
18000	48,86	30		-	**58**	38	29	19	15	94500	23900		
18000	54,80	26		-	**52**	34	26	17	13	94500	23900		
18000	61,77	23		-	**46**	30	23	15	12	94500	23900		
18000	70,07	21		81	**41**	27	21	14	10	94500	23900		
18000	82,20	18		69	**35**	23	18	12	8,8	94500	23900		
18000	91,56	16		62	**31**	21	16	10	7,9	94500	23900		
18000	102,69	14		56	**28**	18	14	9,3	7,1	94500	23900		
18000	116,17	12		49	**25**	16	13	8,2	6,2	94500	23900		
18000	132,83	11		43	**22**	14	11	7,2	5,5	94500	23900		
18000	150,02	9,7		38	**19**	13	9,7	6,4	4,8	94500	23900		
18000	166,73	8,7		35	**17**	11	8,7	5,8	4,4	94500	23900		
18000	186,95	7,8		31	**16**	10	7,8	5,1	3,9	94500	23900		
18000	172,08	8,4	**MT974**	34	**17**	11	8,5	5,6	4,2	94500	-	1050	348
18000	193,13	7,5	**NT974**	30	**15**	10	7,6	5,0	3,8	94500	333	1100	
18000	216,03	6,7		27	**14**	8,9	6,8	4,5	3,4	94500	496		
18000	272,24	5,3		22	**11**	7,1	5,4	3,6	2,7	94500	1009		
18000	305,33	4,7		19	**9,7**	6,3	4,8	3,2	2,4	94500	2129		
18000	344,17	4,2		17	**8,6**	5,6	4,3	2,8	2,1	94500	3134		
18000	390,41	3,7		15	**7,6**	5,0	3,8	2,5	1,9	94500	3339		
18000	457,99	3,2		13	**6,5**	4,2	3,2	2,1	1,6	94500	3565		
18000	510,11	2,8		11	**5,6**	3,6	3,0	1,8	1,4	94500	3755		

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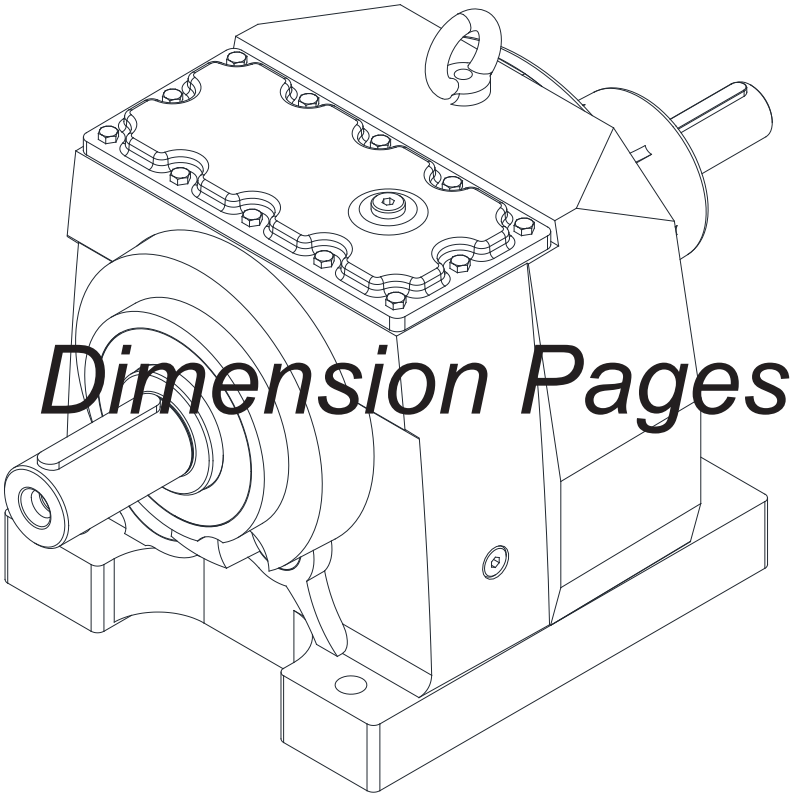


Anma Momenti *Nominal Torques* Nenn-drehmomente Ma [Nm] (n1=1450rpm)	**Çevrim Oranı** *Ratio* Übersetzung i	**Çıkış Devri** *Output Speeds* Abtriebs-drehzahlen n2 [r.p.m] (n1=1450rpm)	**Tipi** *Type* Typ	**Pe= Nominal Güç [kW] (Servis Faktörü fs=1,0 için)** *Pe= Nominal Power [kW] (For Service Factor fs=1,0)* Pe= NennLeistung [kW] (Bei Betriebsfaktor fs=1,0) **Giriş devri[d/d]** / *Input speed[rpm]* / Antriebsdrehzahl[upm]						**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				
18000	462,18	3,1	**MT975**	13	**6,5**	4,3	3,3	2,1	1,6	94500	1743	1100	349
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	349
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		

Notlar / *Notes* / Notizen

MT & NT Serisi / *Series* / *Serie*

Ölçü Sayfaları

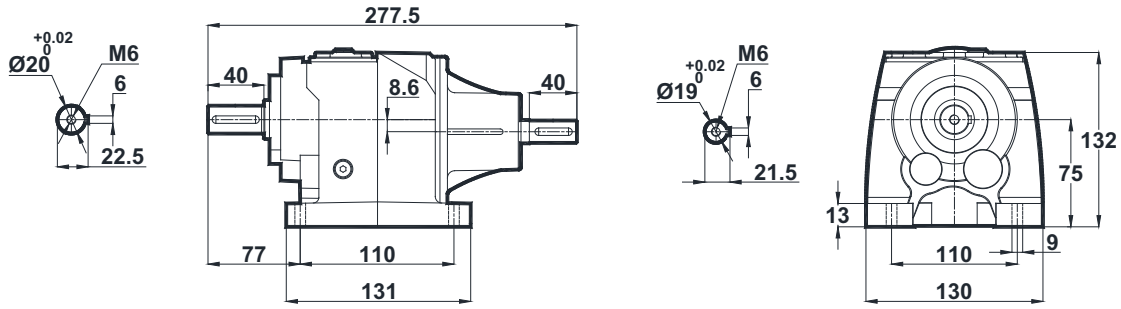


Dimension Pages

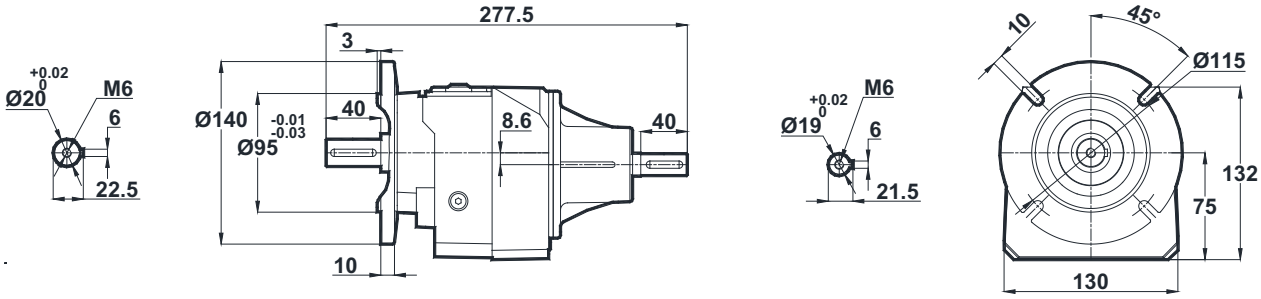
Abmessungsseiten

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

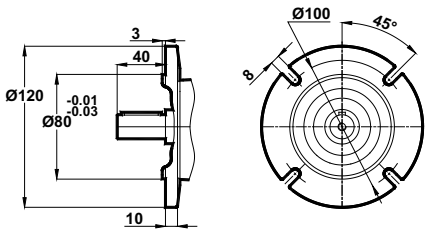
MT002
MT003



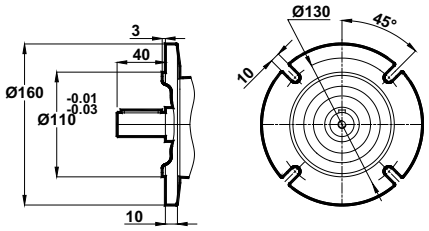
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NT003



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



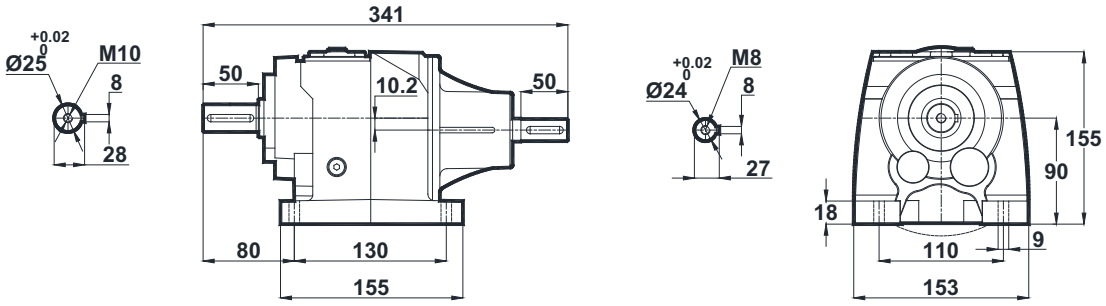
Opt. 1



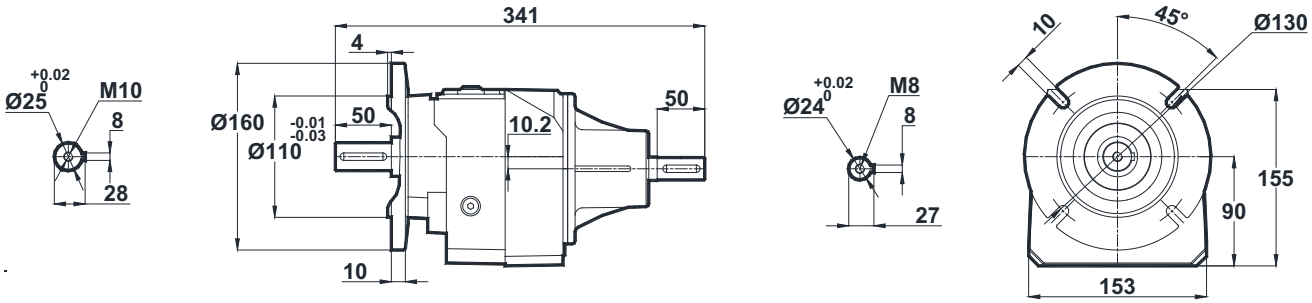
Opt. 2

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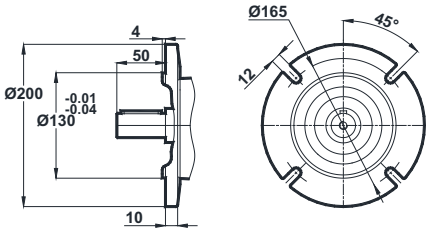
MT102
MT103



NT102
NT103



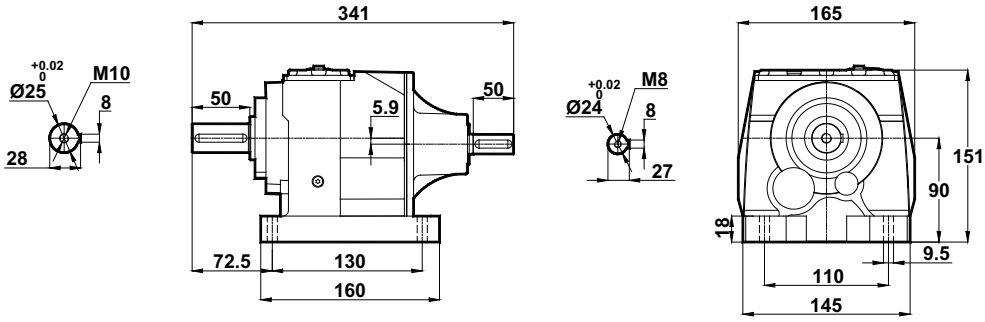
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



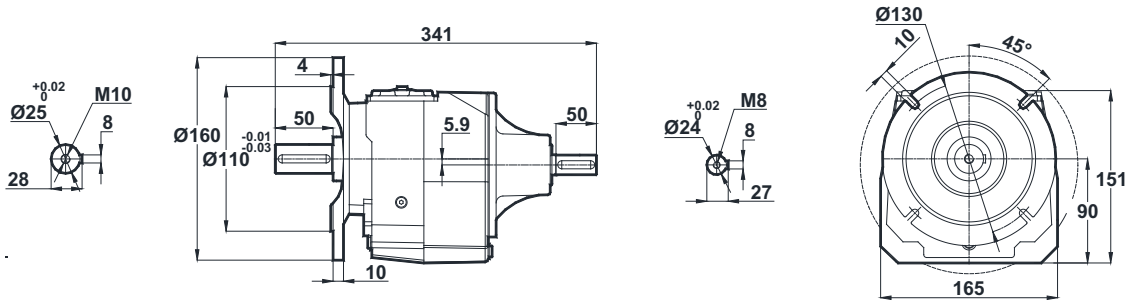
Opt. 1

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

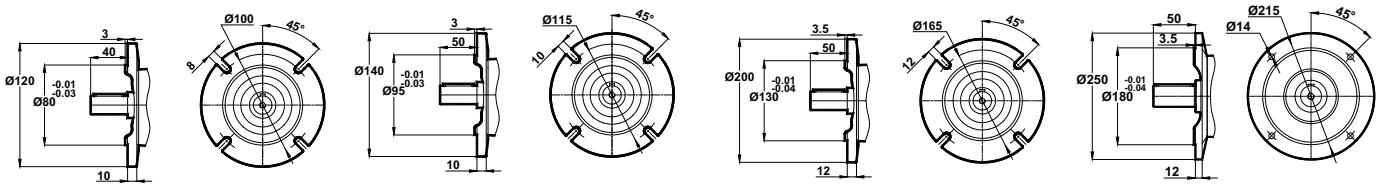
MT172
MT173



NT172
NT173



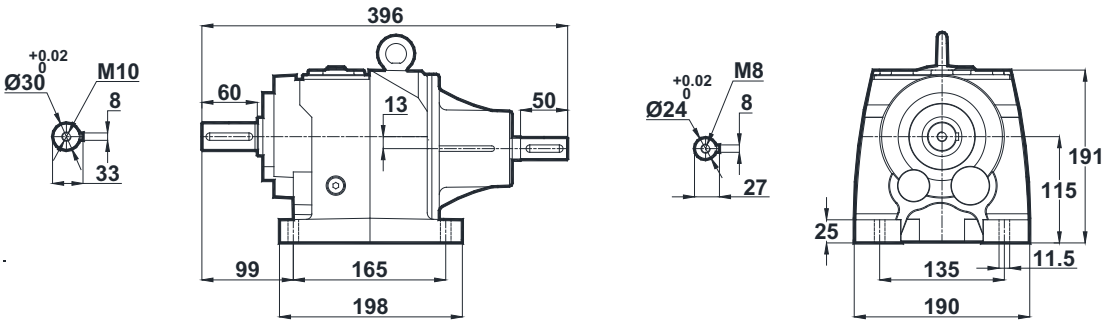
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



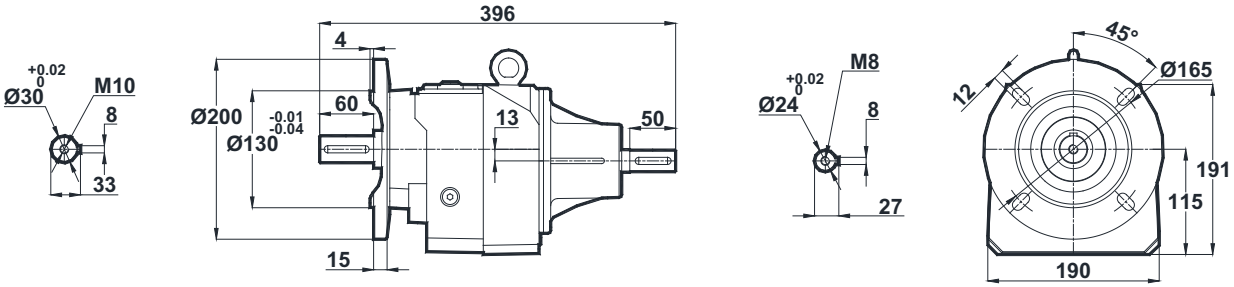
Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

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

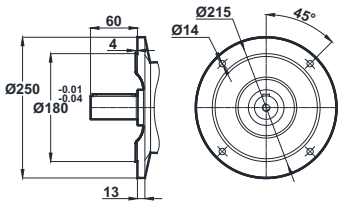
MT202
MT203



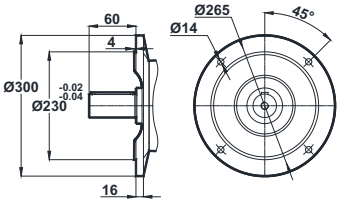
NT202
NT203



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



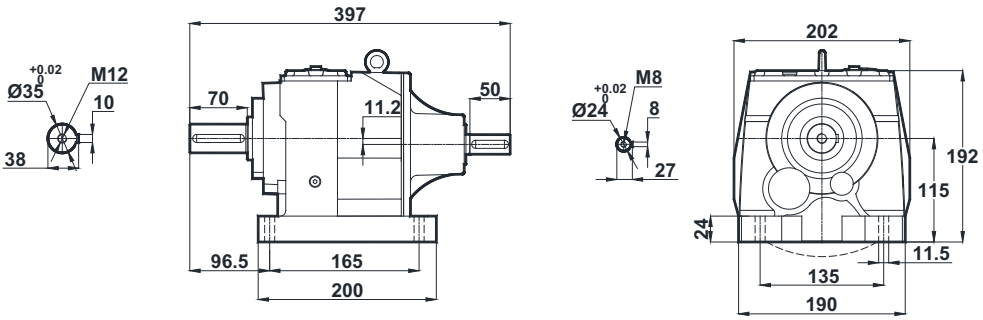
Opt. 1



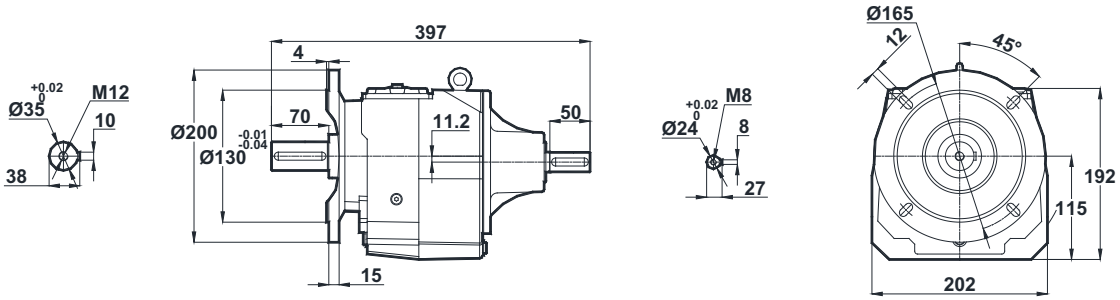
Opt. 2

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

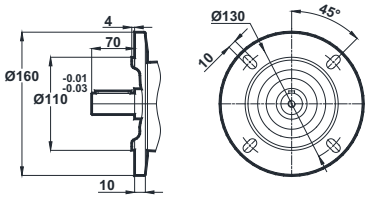
MT272
MT273



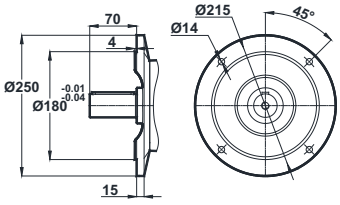
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Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



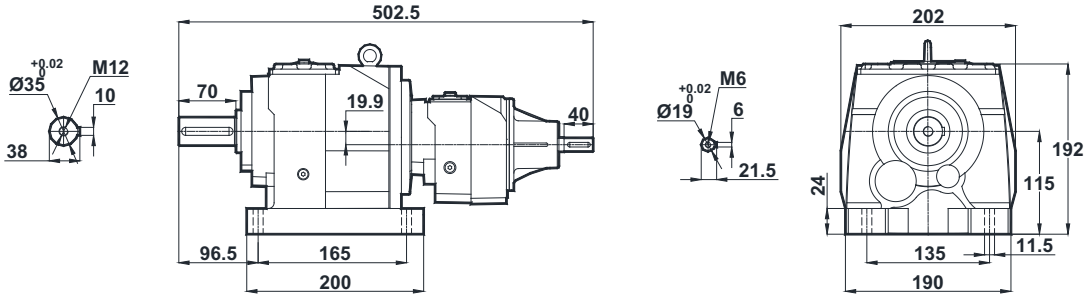
Opt. 1



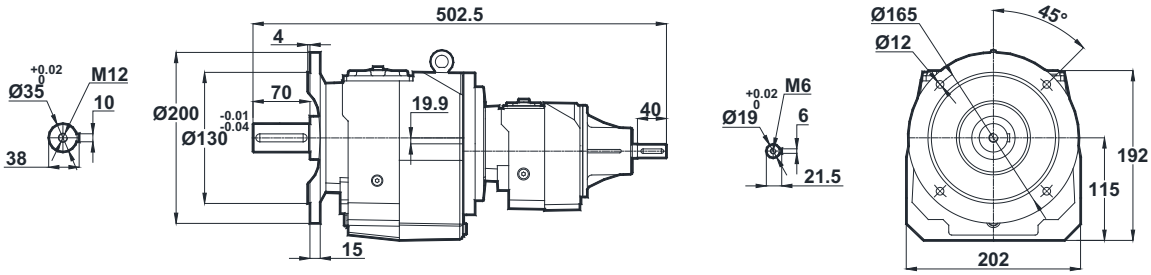
Opt. 2

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

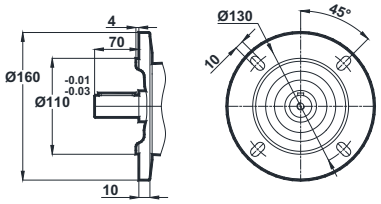
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MT276



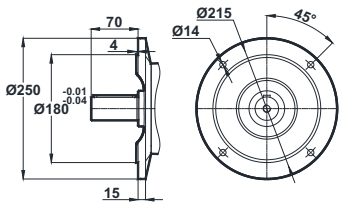
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NT276



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



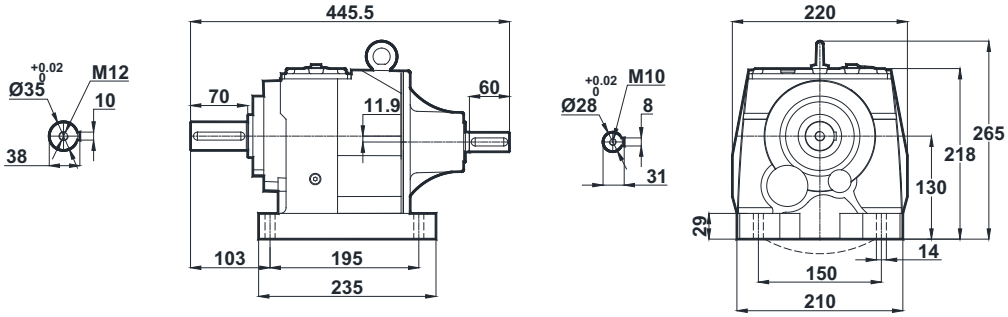
Opt. 1



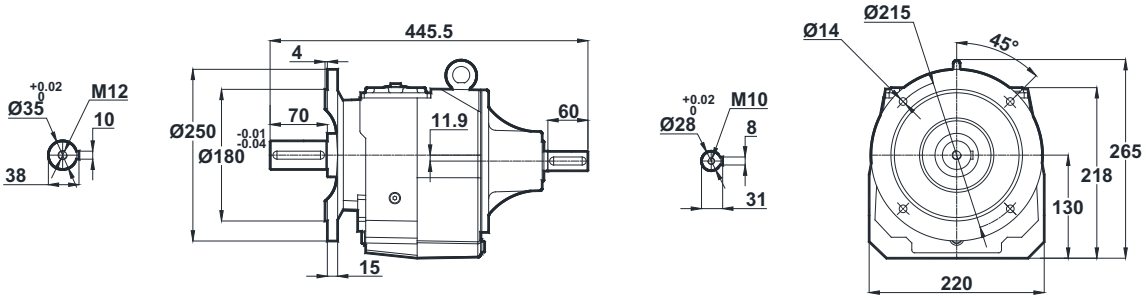
Opt. 2

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

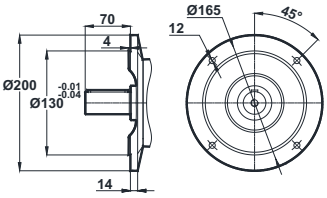
MT282
MT283



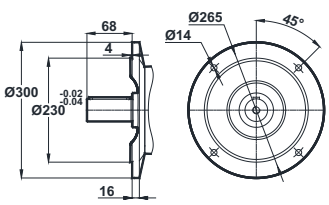
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NT283



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



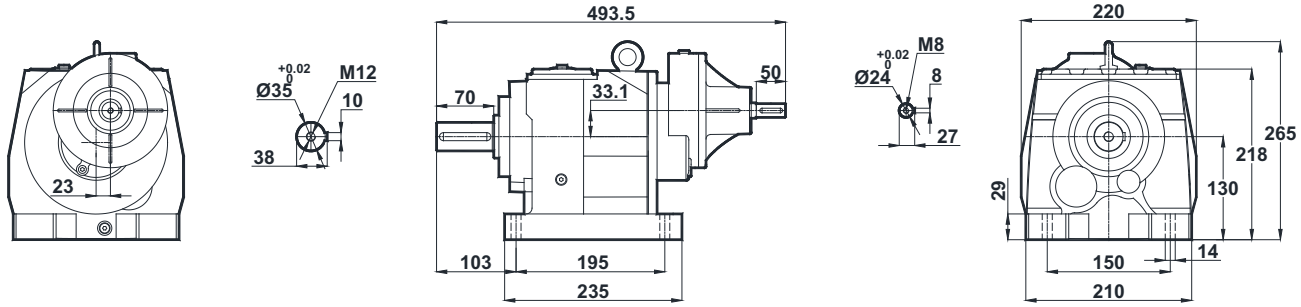
Opt. 1



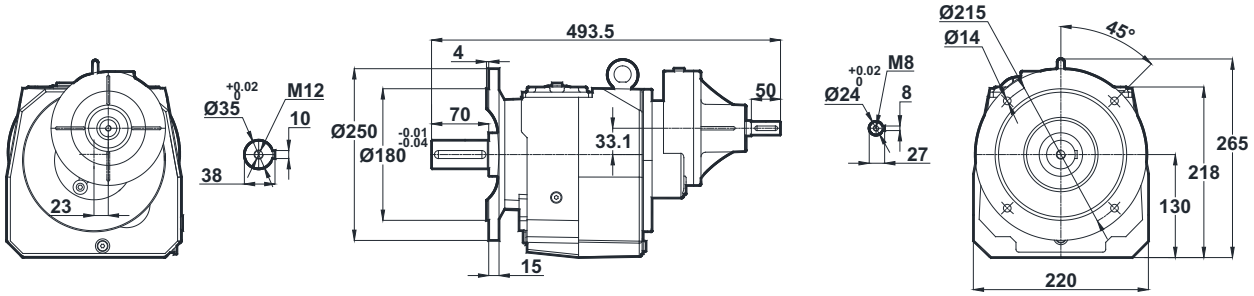
Opt. 2

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

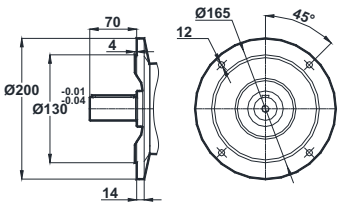
MT284



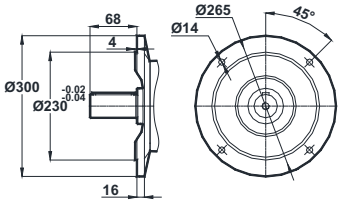
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Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



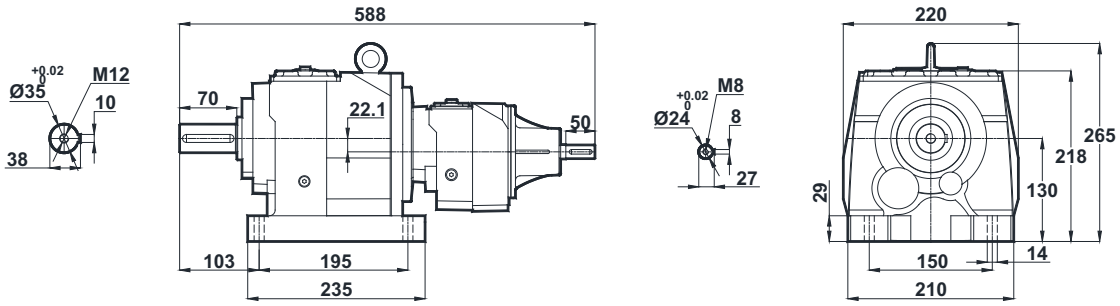
Opt. 1



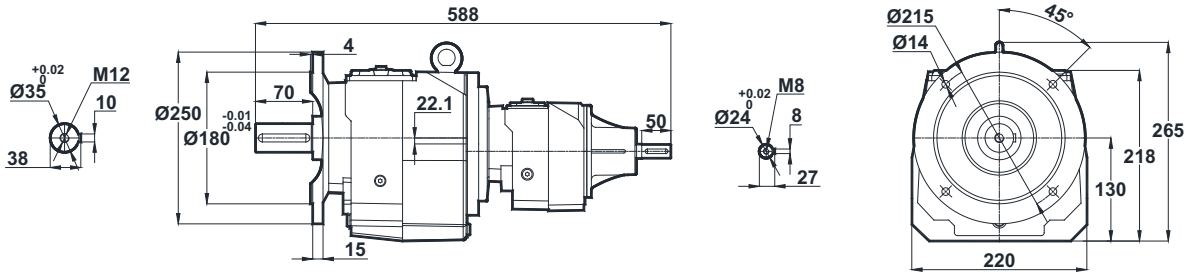
Opt. 2

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

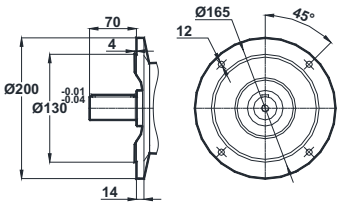
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MT286



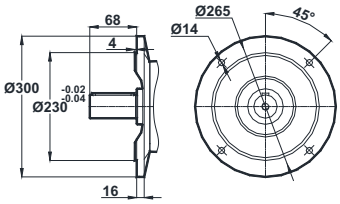
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NT286



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



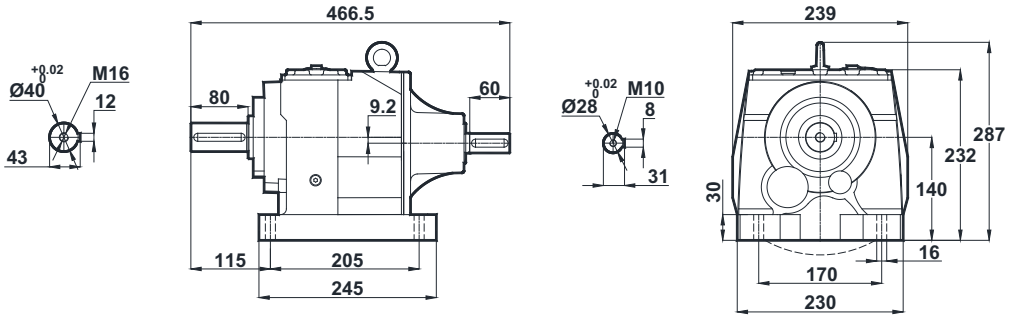
Opt. 1



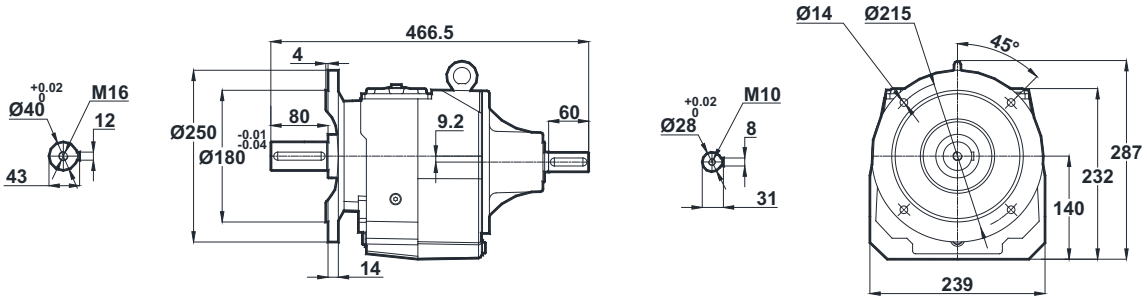
Opt. 2

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

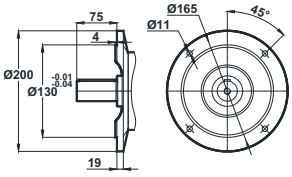
MT372
MT373



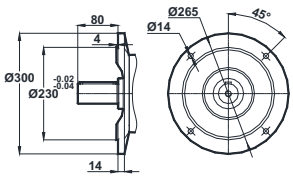
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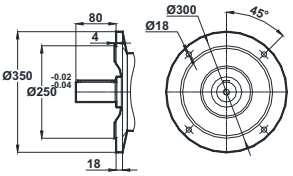
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



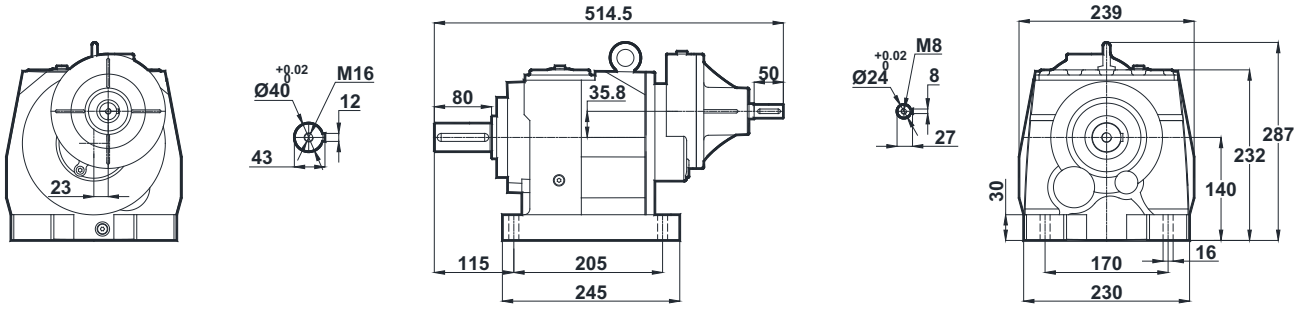
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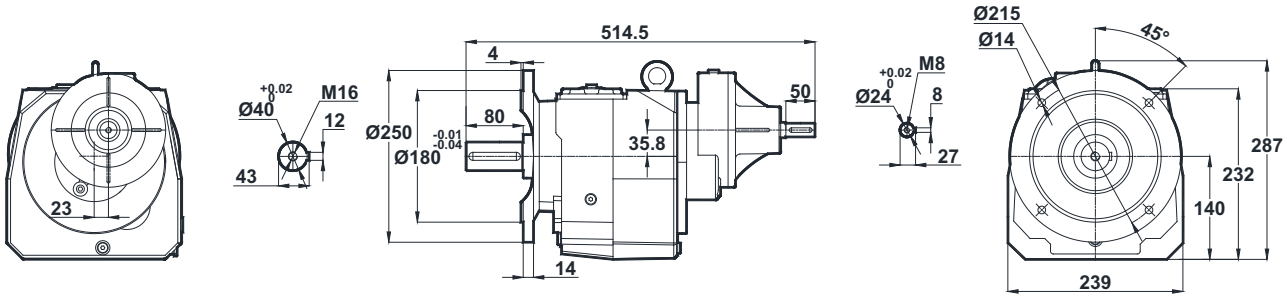
Opt. 3

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

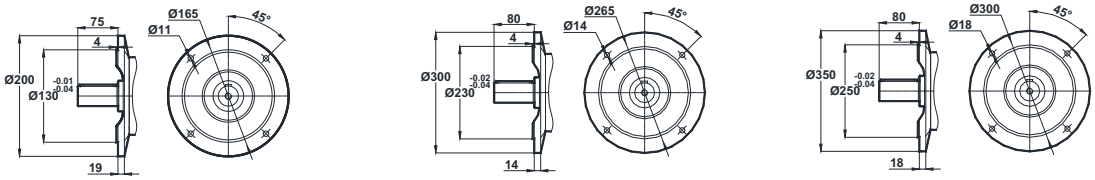
MT374



NT374



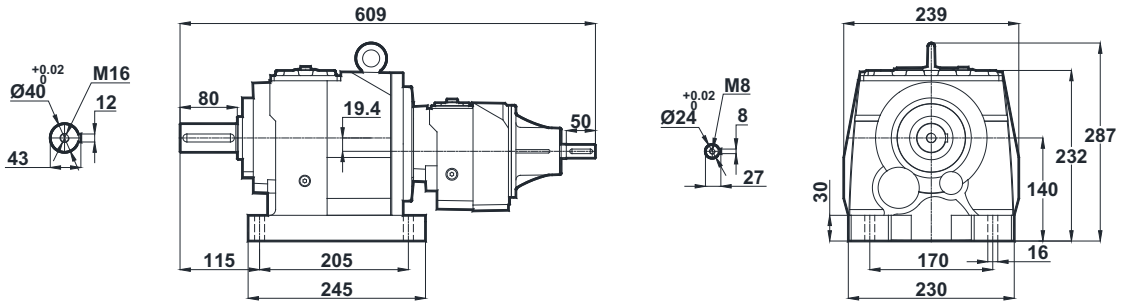
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



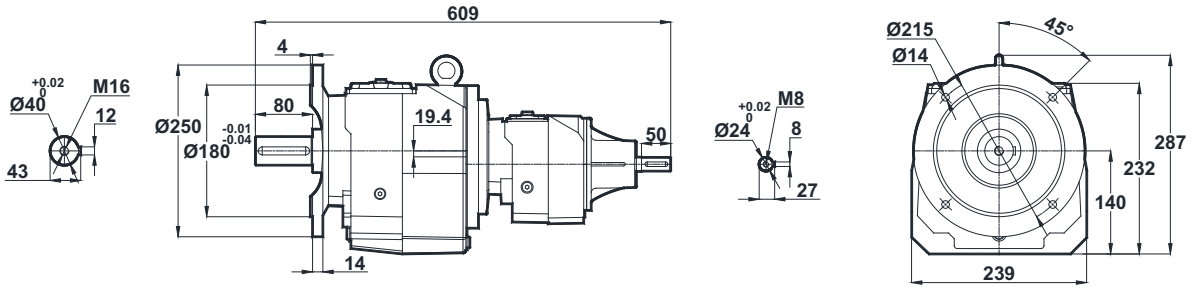
Opt. 1 **Opt. 2** **Opt. 3**

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

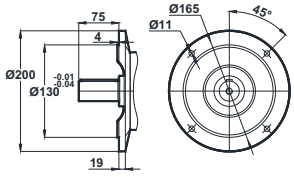
MT375
MT376



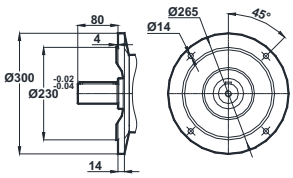
NT375
NT376



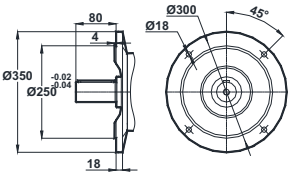
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



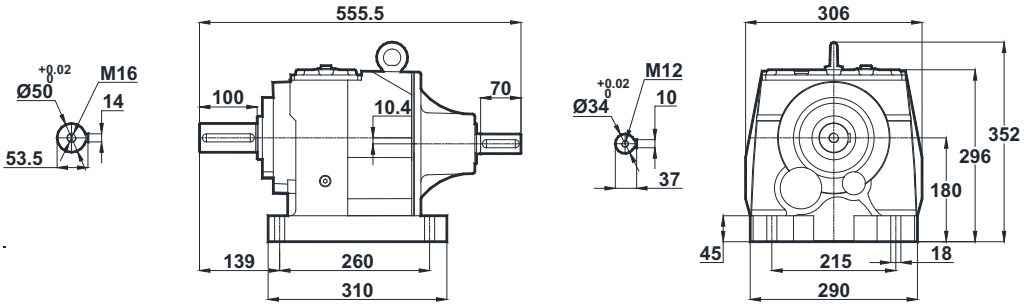
Opt. 2



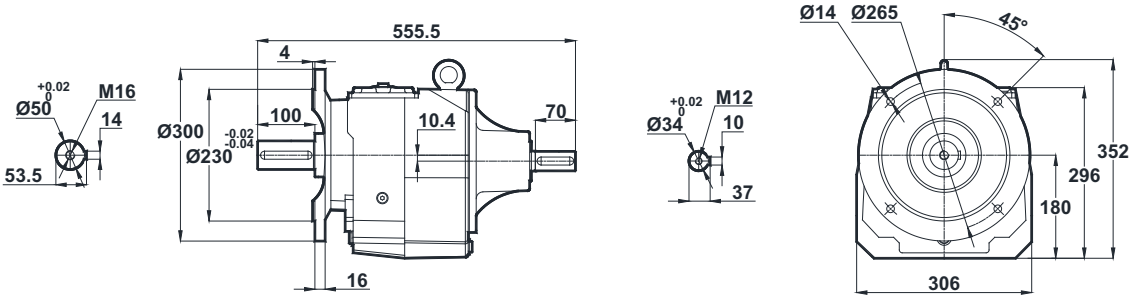
Opt. 3

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

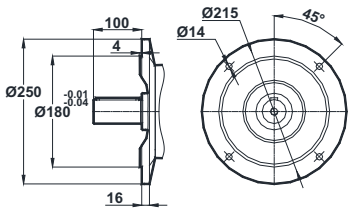
MT472
MT473



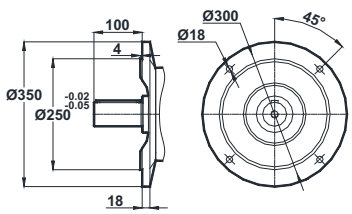
NT472
NT473



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



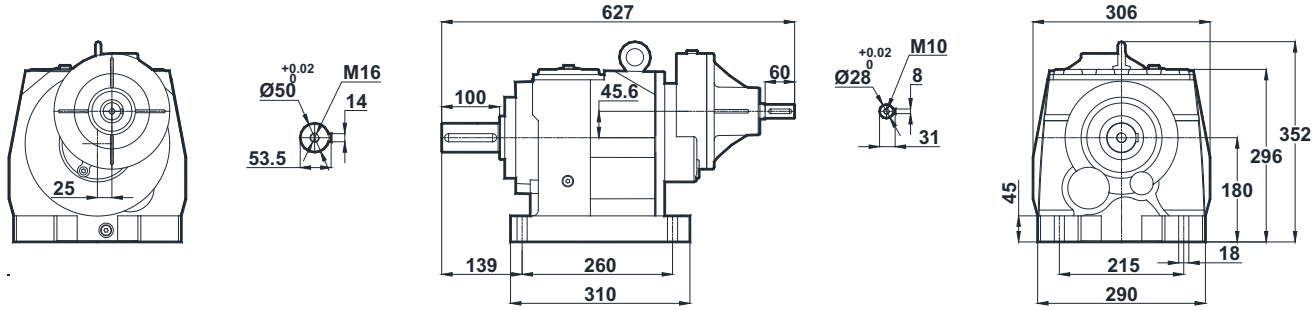
Opt. 1



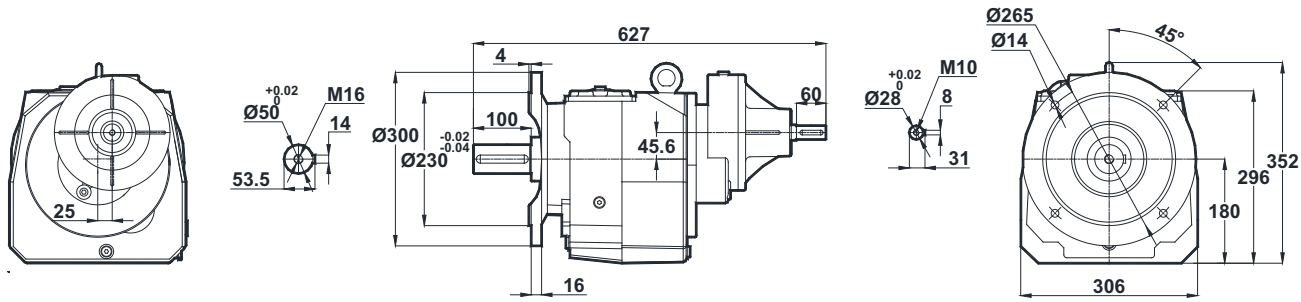
Opt. 2

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

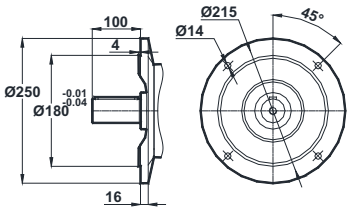
MT474



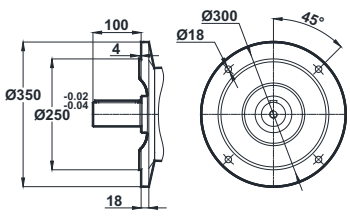
NT474



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



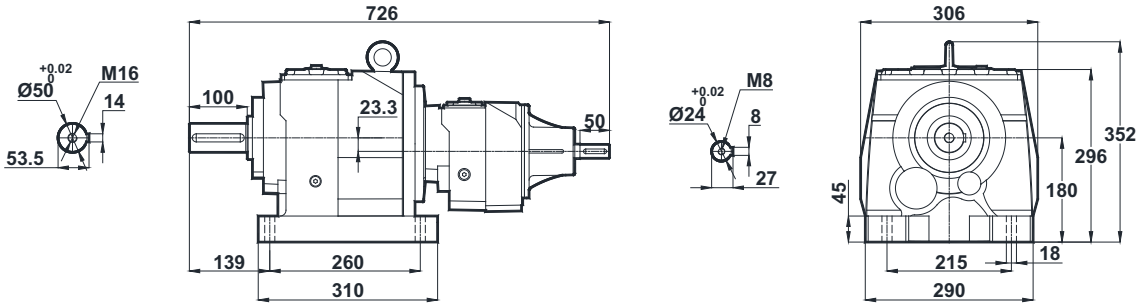
Opt. 1



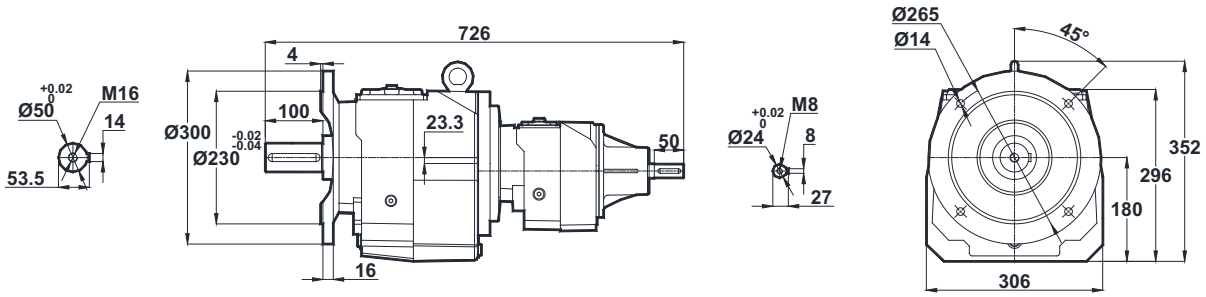
Opt. 2

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

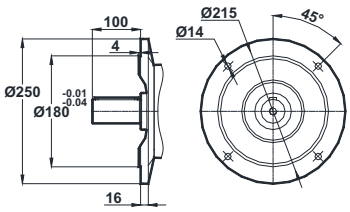
MT475
MT476



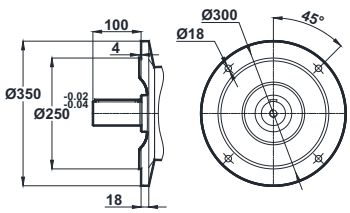
NT475
NT476



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



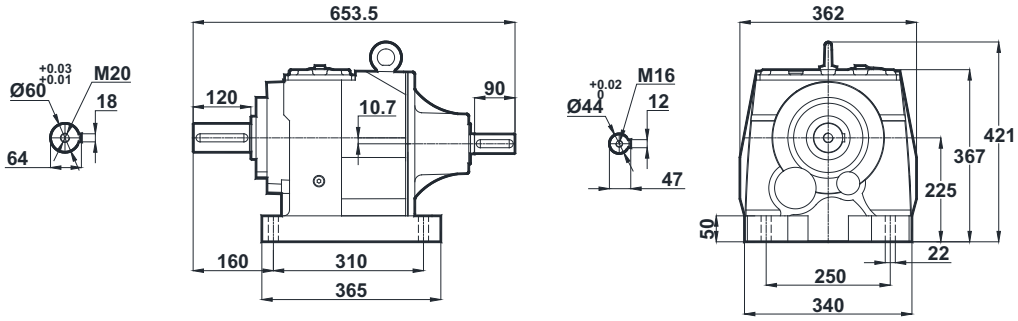
Opt. 1



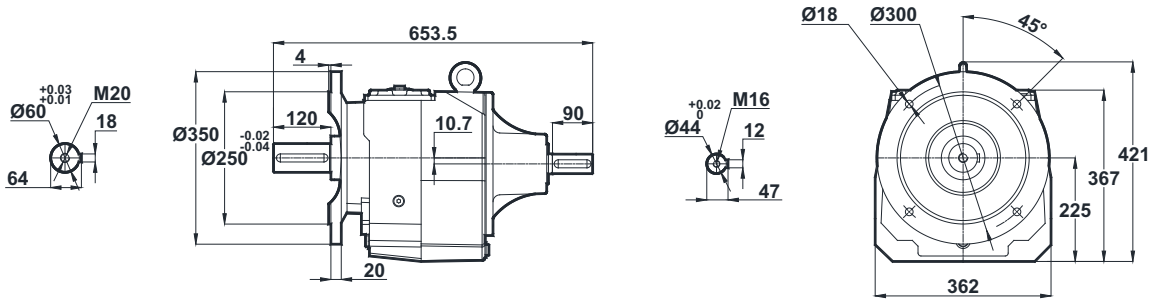
Opt. 2

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

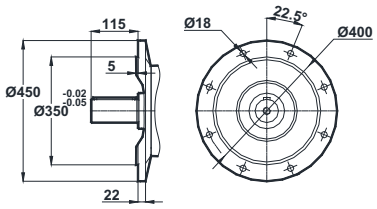
MT572
MT573



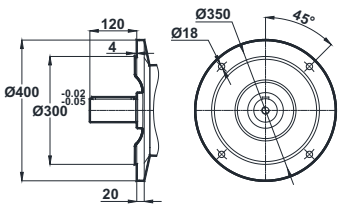
NT572
NT573



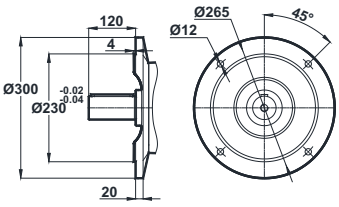
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



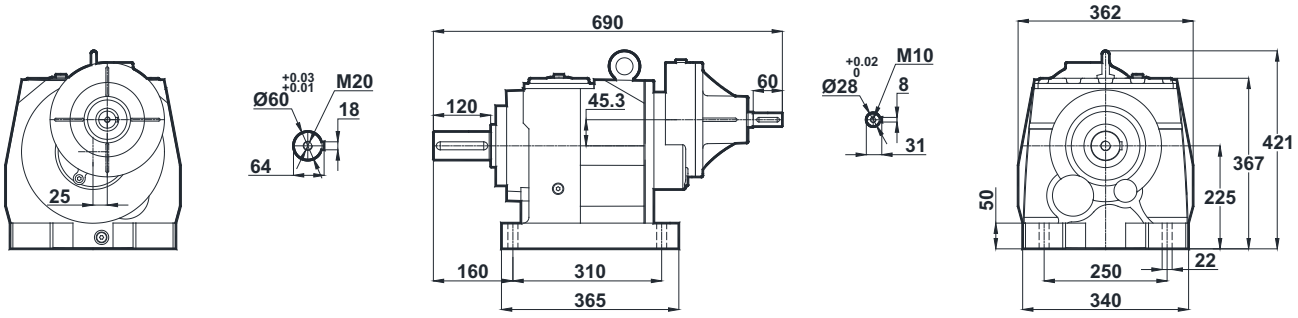
Opt. 2



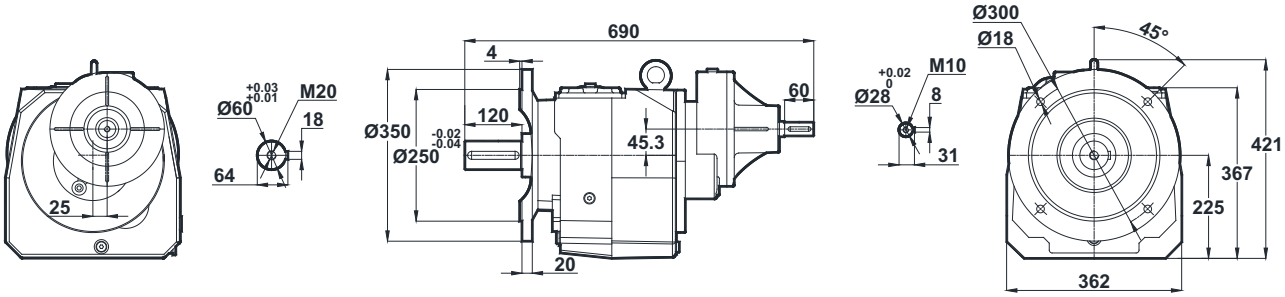
Opt. 3

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

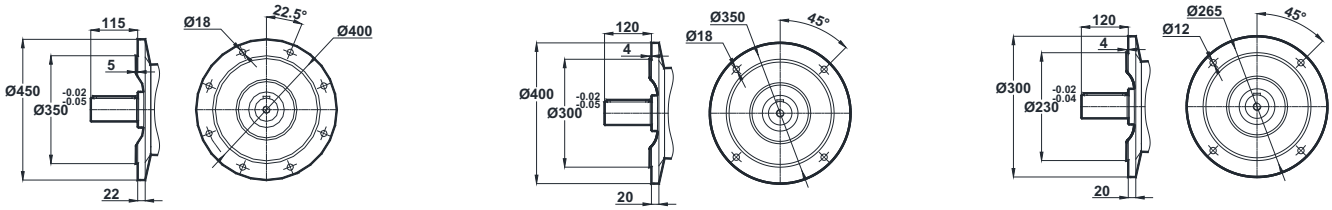
MT574



NT574



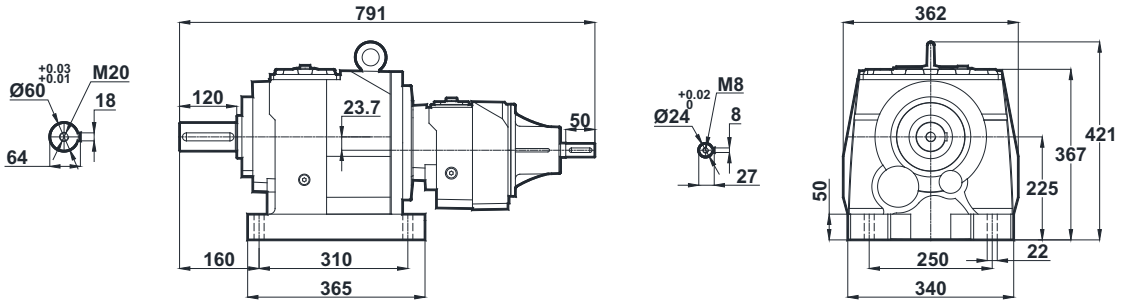
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



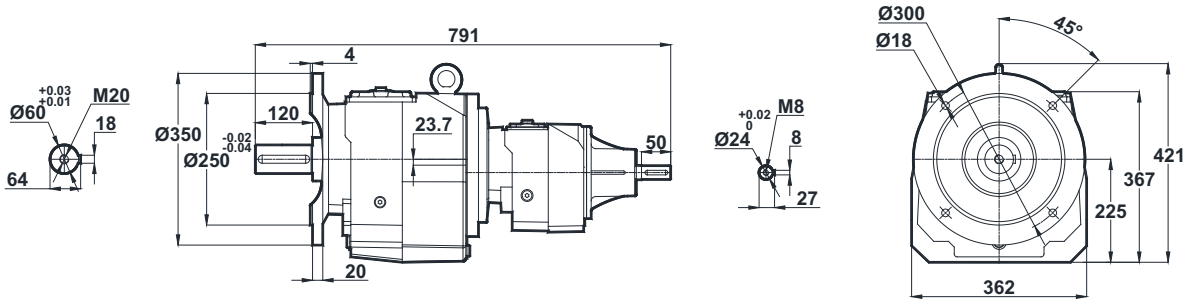
Opt. 1 **Opt. 2** **Opt. 3**

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

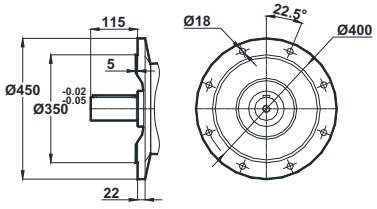
MT575
MT576



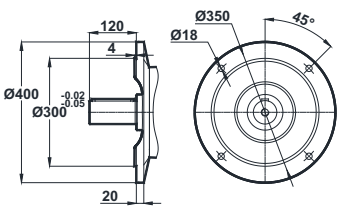
NT575
NT576



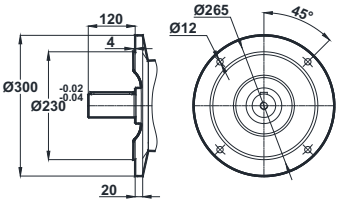
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



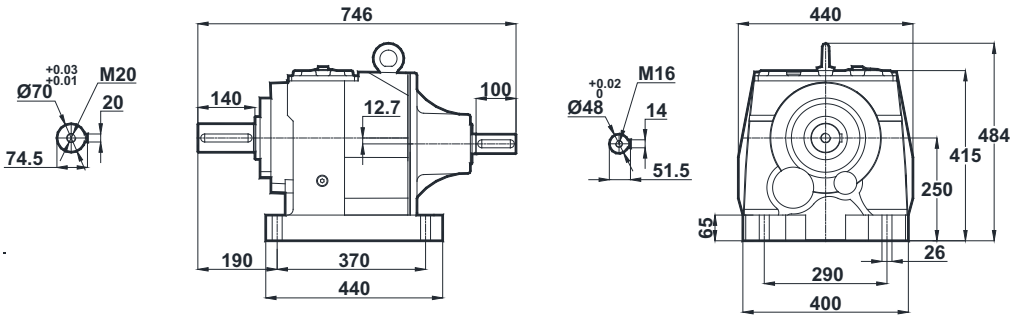
Opt. 2



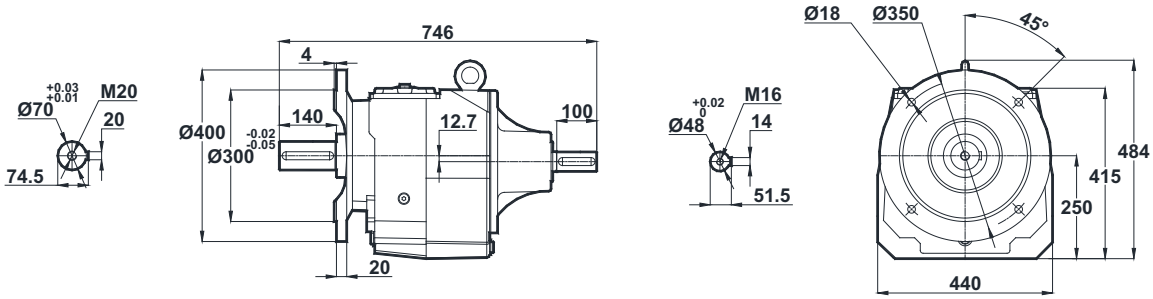
Opt. 3

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

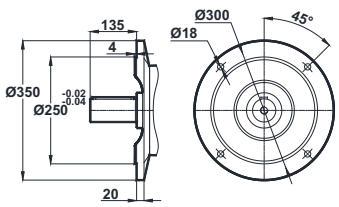
MT672
MT673



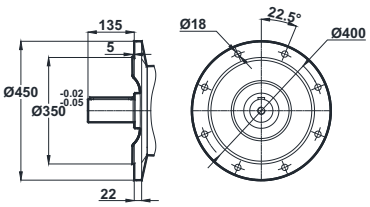
NT672
NT673



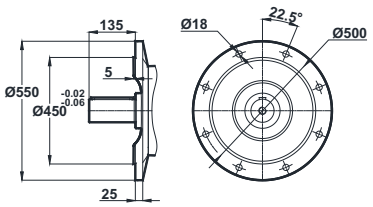
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



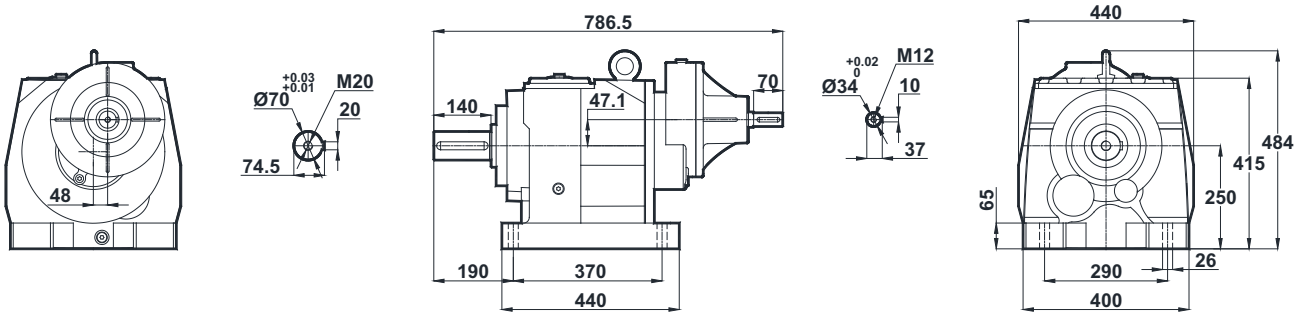
Opt. 2



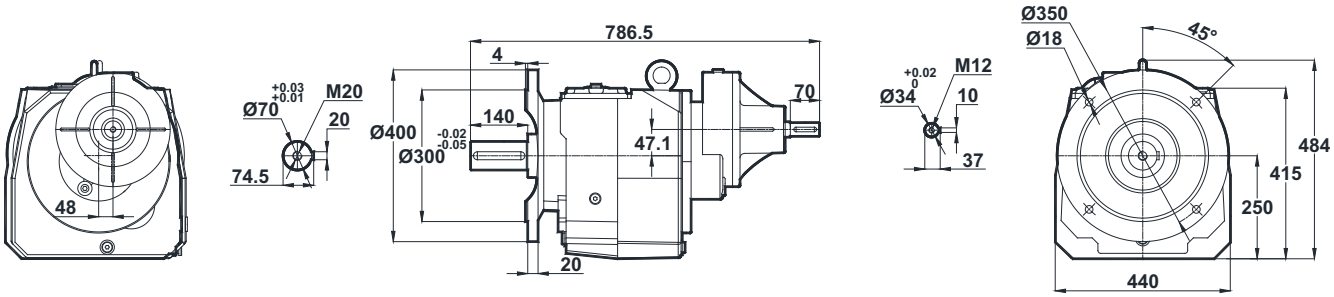
Opt. 3

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

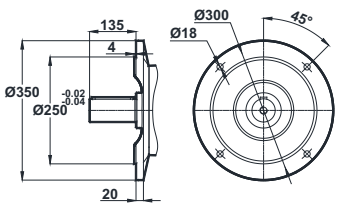
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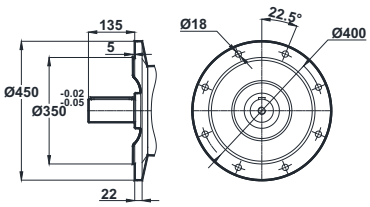
NT674



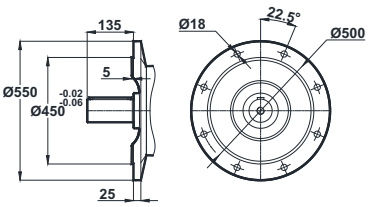
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



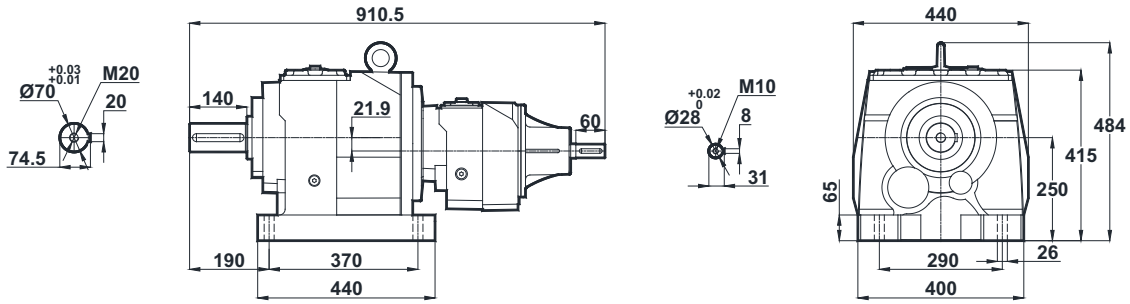
Opt. 2



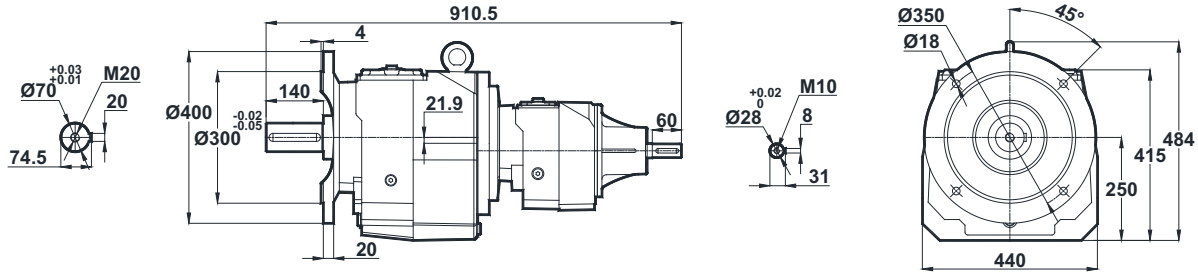
Opt. 3

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

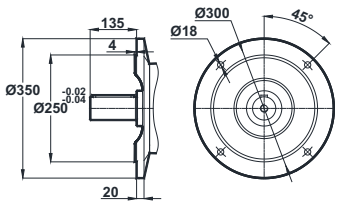
MT675
MT676



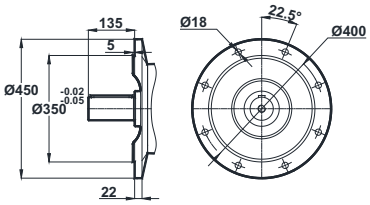
NT675
NT676



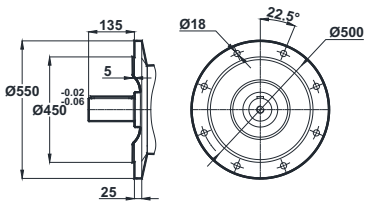
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



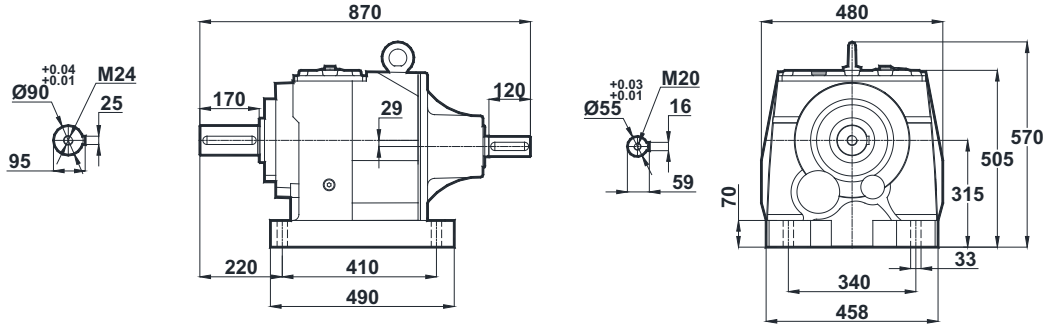
Opt. 2



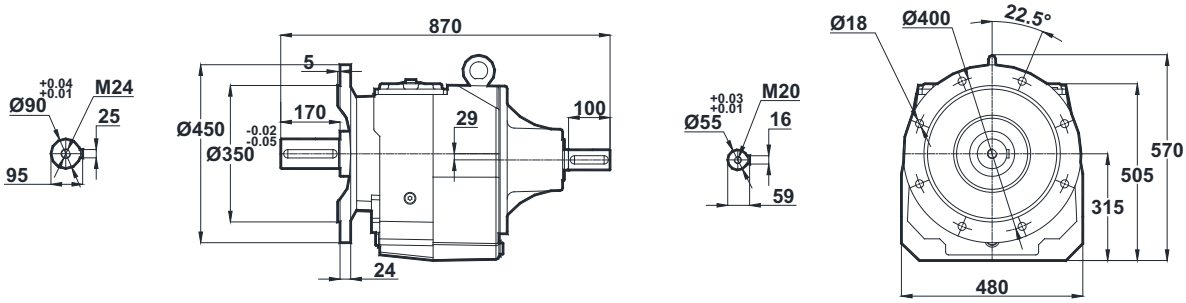
Opt. 3

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

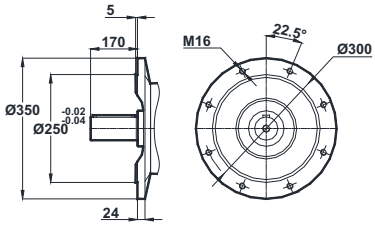
MT772
MT773



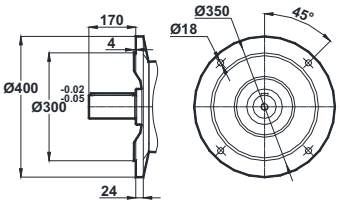
NT772
NT773



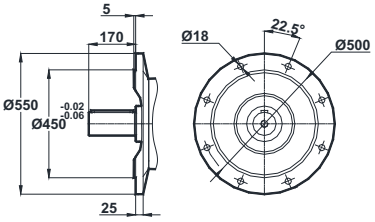
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



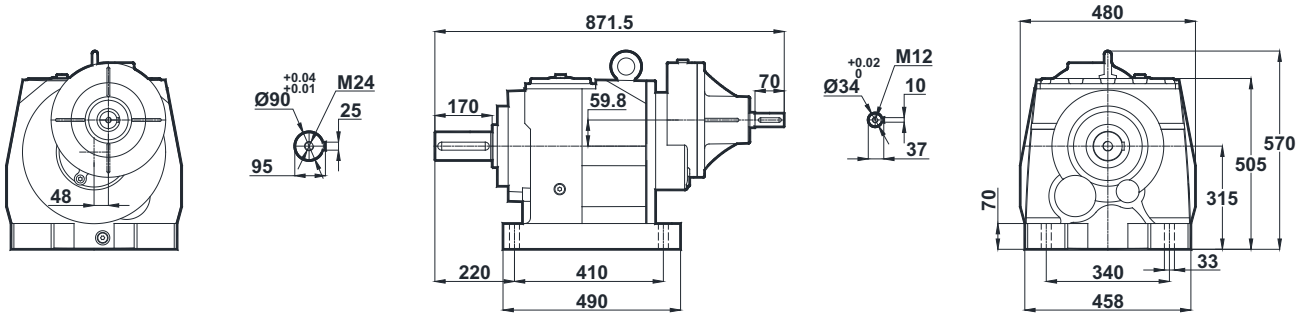
Opt. 2



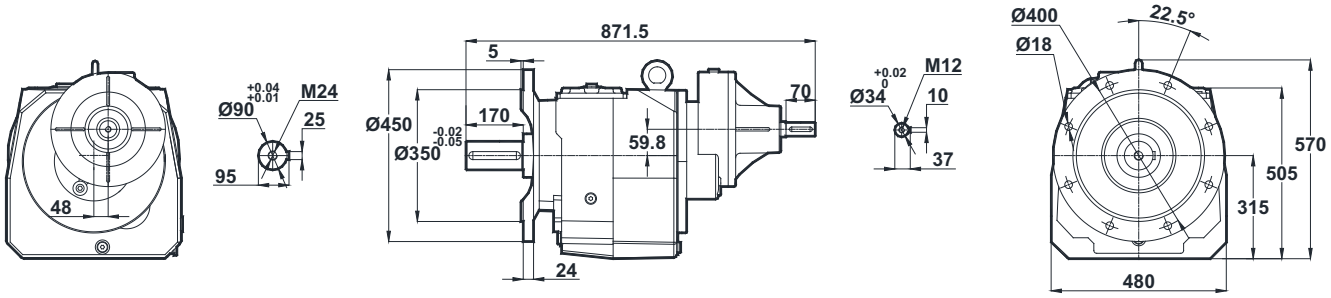
Opt. 3

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

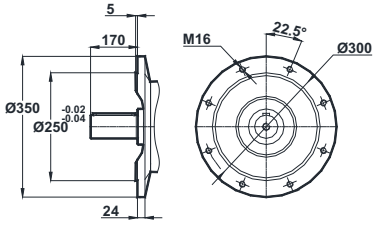
MT774



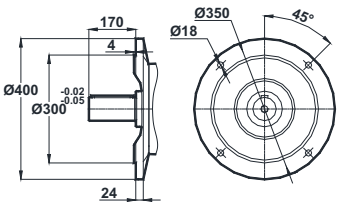
NT774



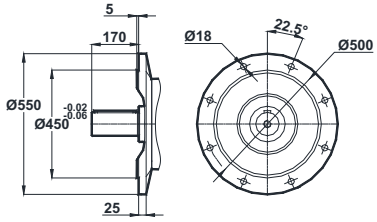
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



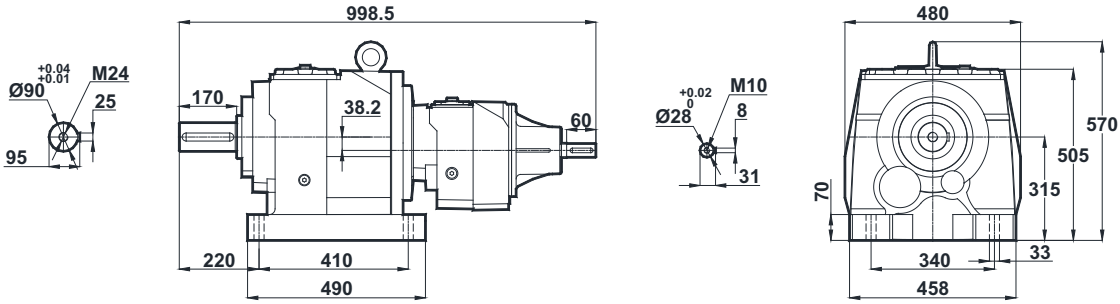
Opt. 2



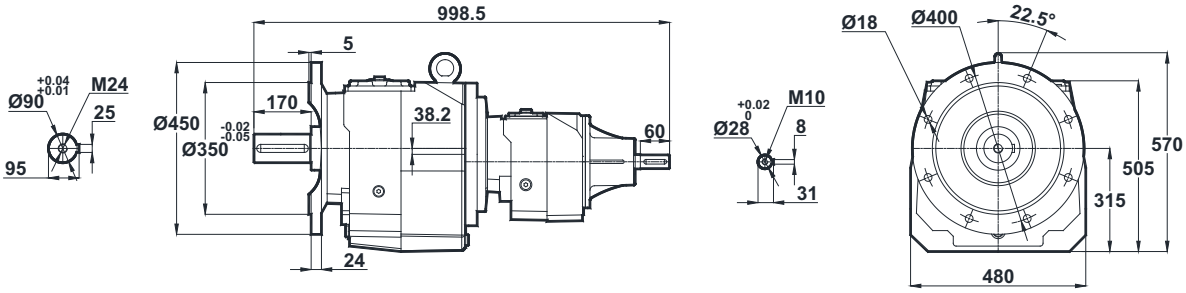
Opt. 3

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

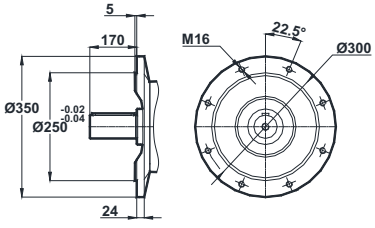
MT775
MT776



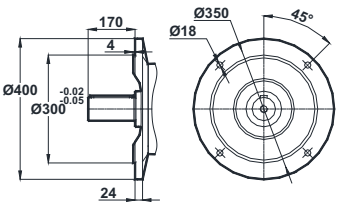
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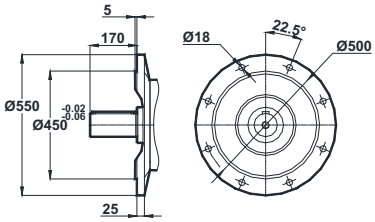
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



Opt. 1



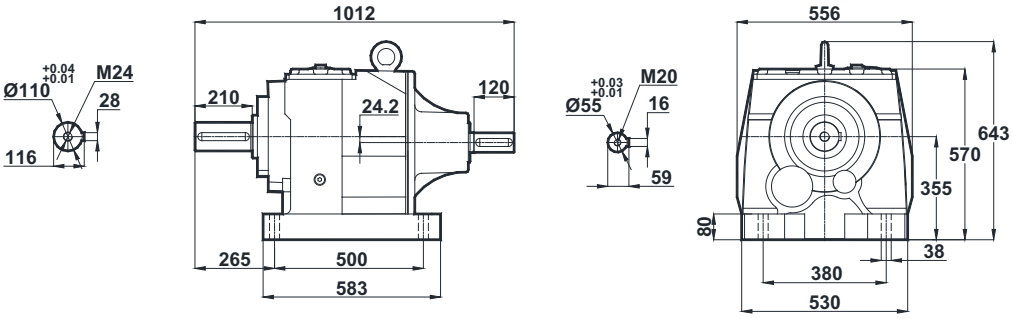
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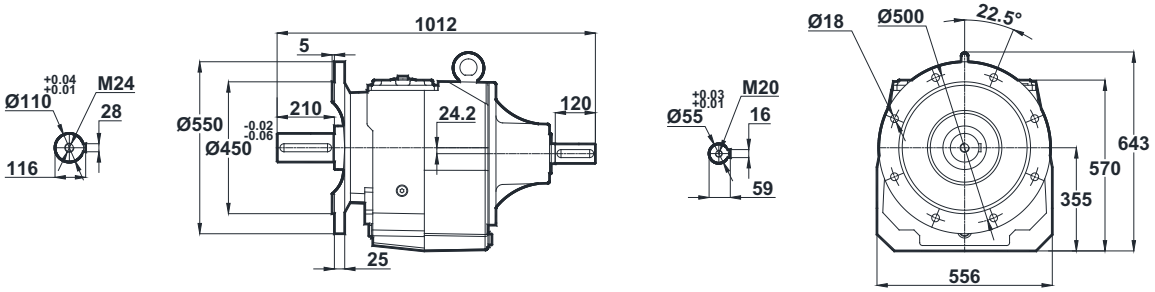
Opt. 3

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

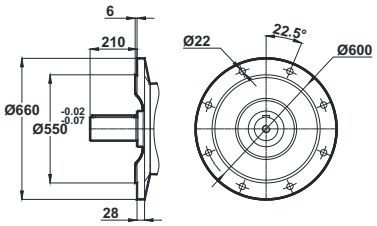
MT872
MT873



NT872
NT873



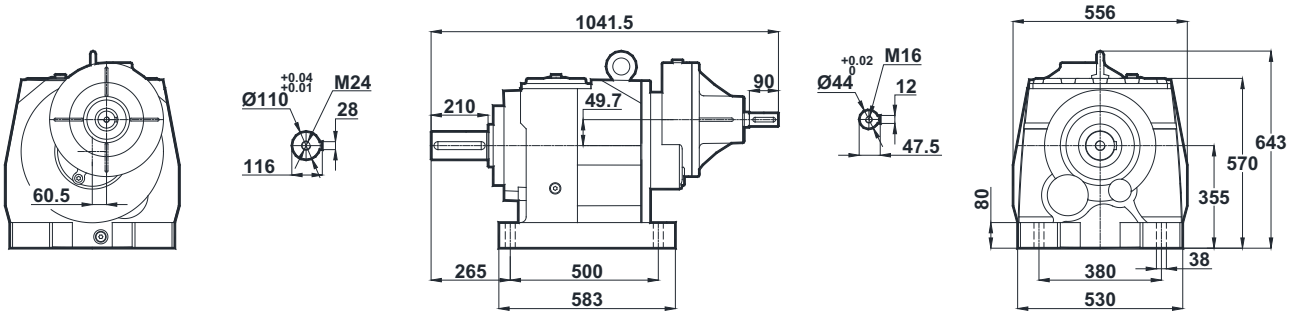
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



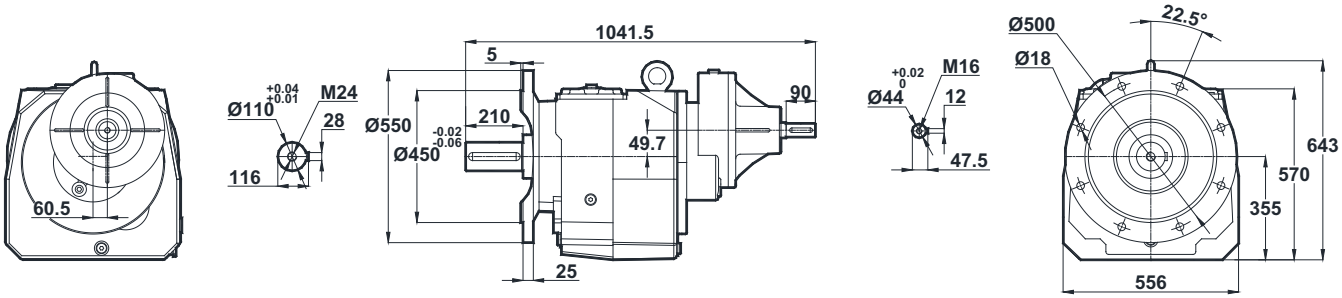
Opt. 1

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

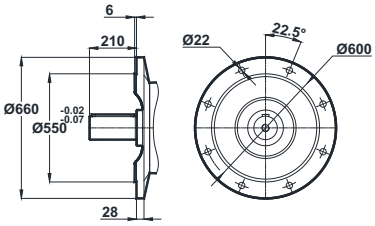
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NT874



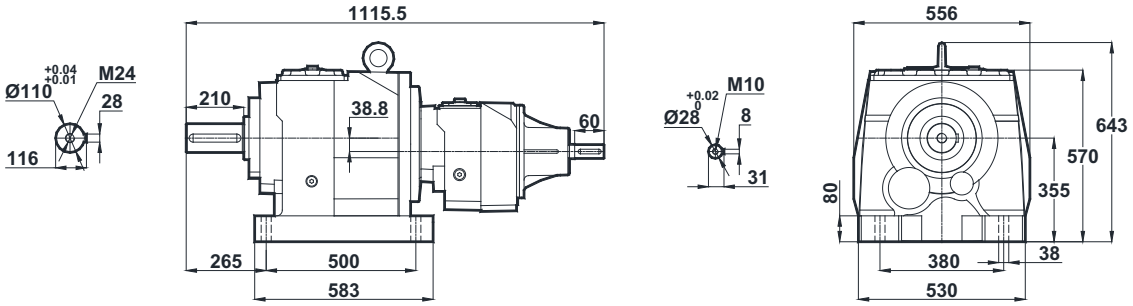
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



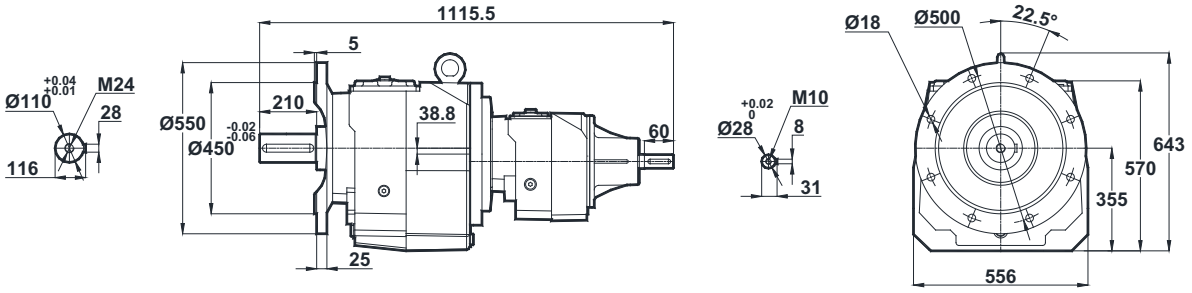
Opt. 1

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

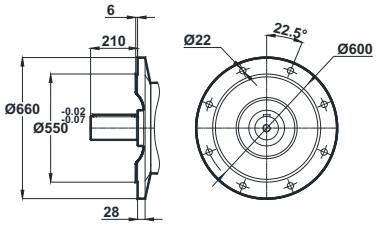
MT875
MT876



NT875
NT876



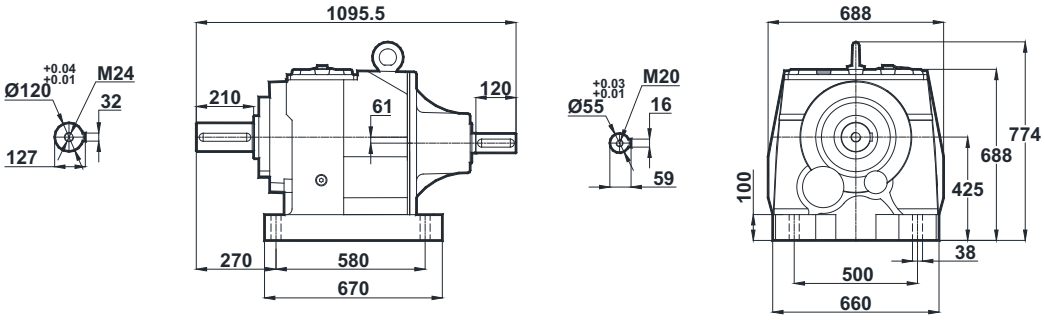
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



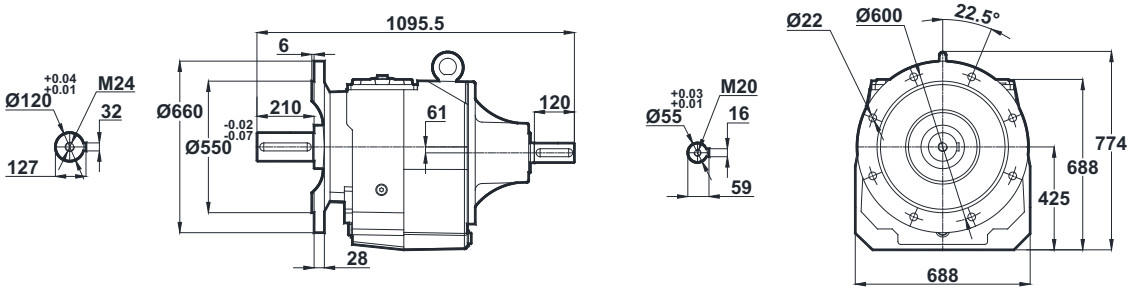
Opt. 1

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

MT972
MT973

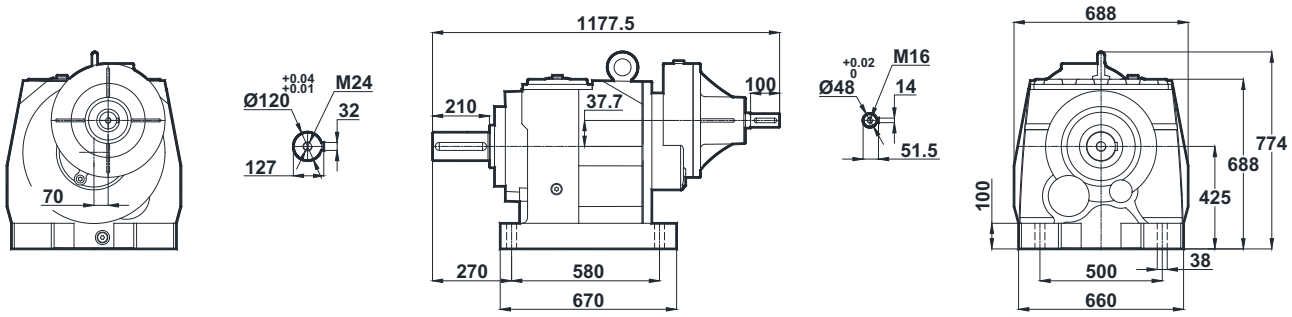


NT972
NT973

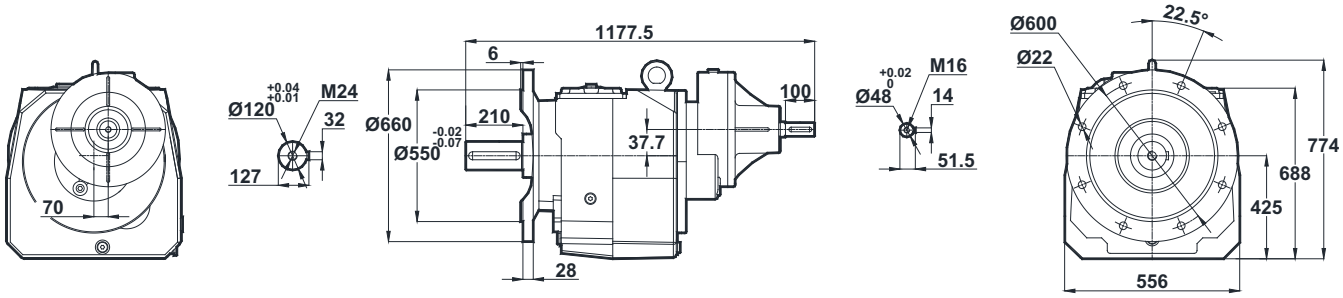


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MT974

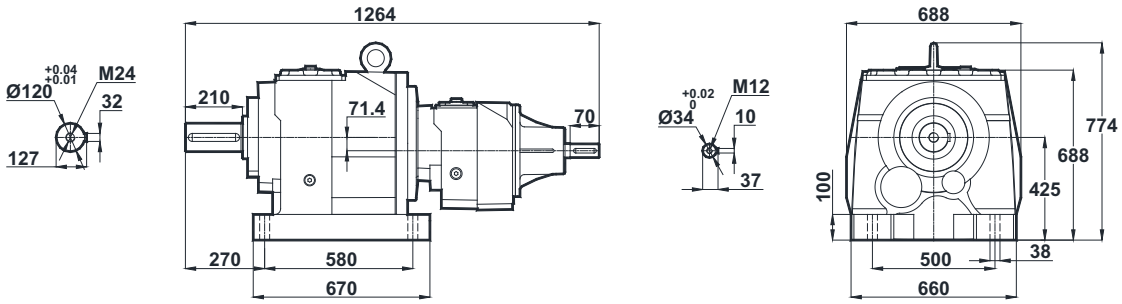


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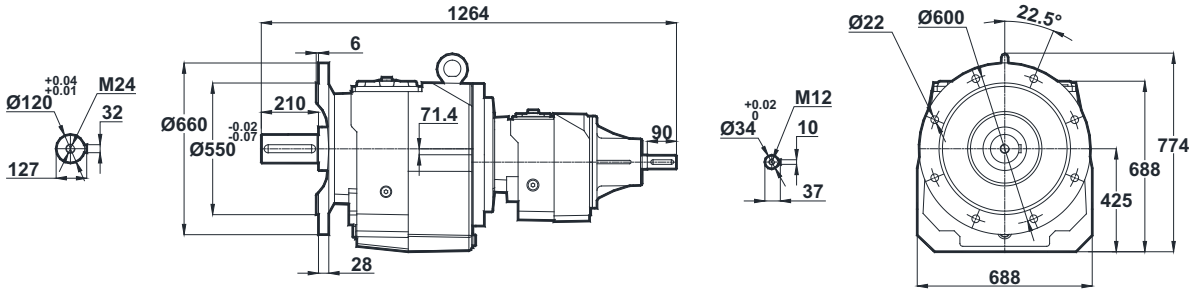


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MT975
MT976



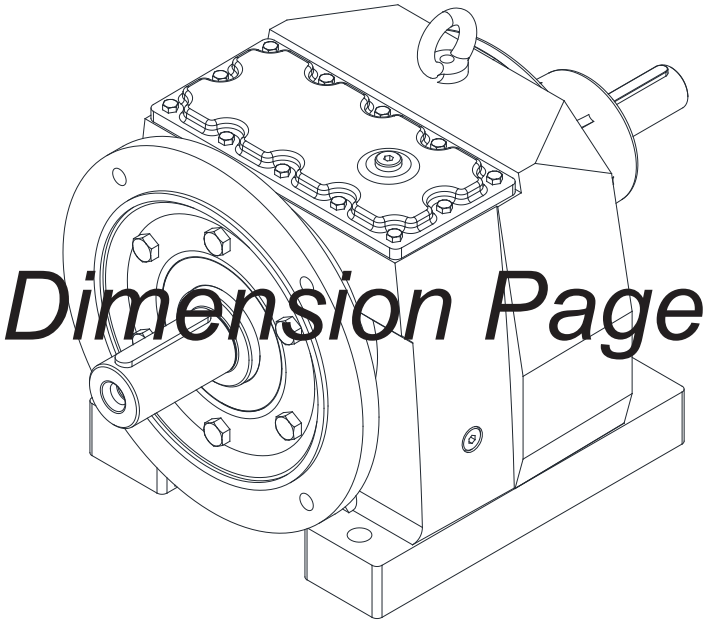
NT975
NT976



Notlar / *Notes* / Notizen

MTF Serisi / *Series* / Serie

Ölçü Sayfaları

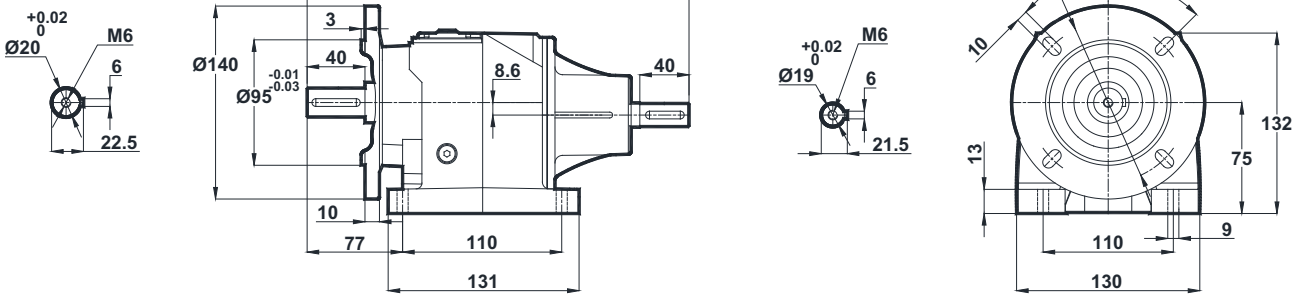


Dimension Pages

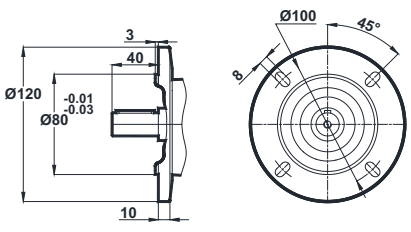
Abmessungsseiten

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

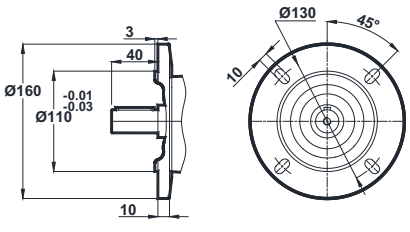
MTF002
MTF003



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



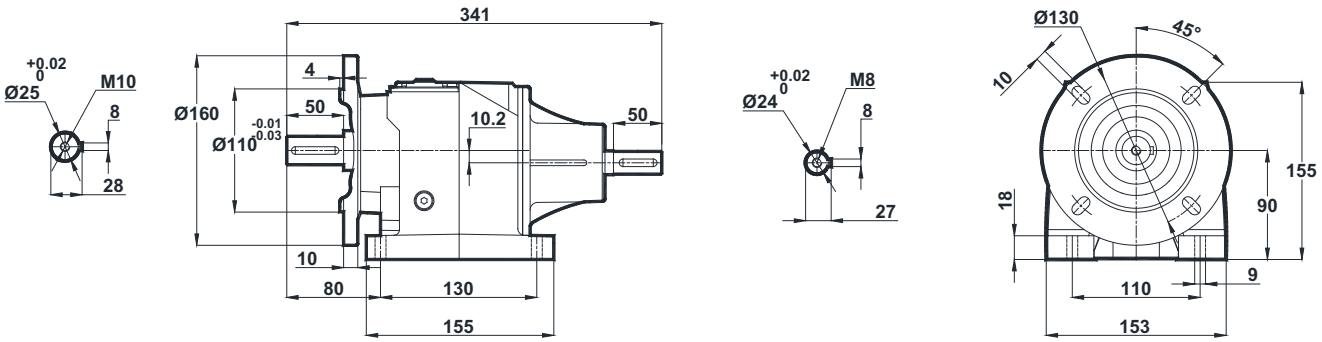
Opt. 1



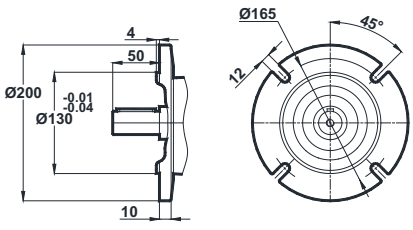
Opt. 2

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

MTF102
MTF103



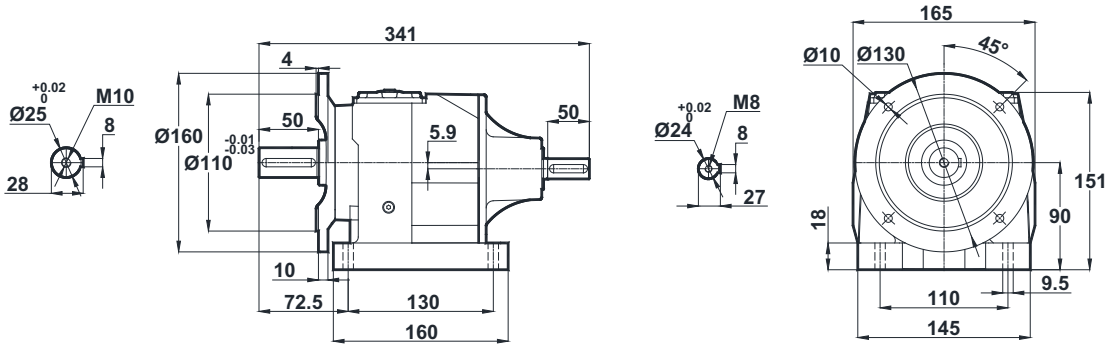
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



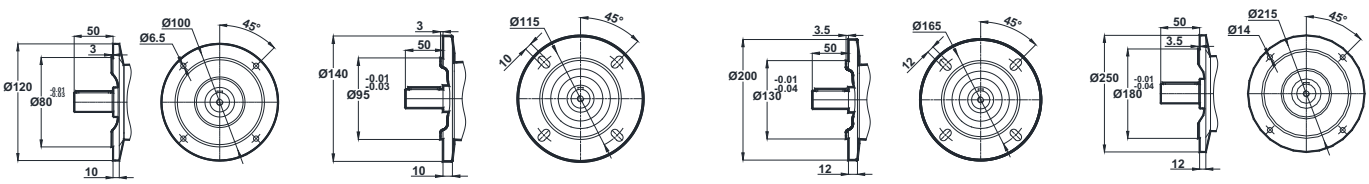
Opt. 1

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MTF172
MTF173



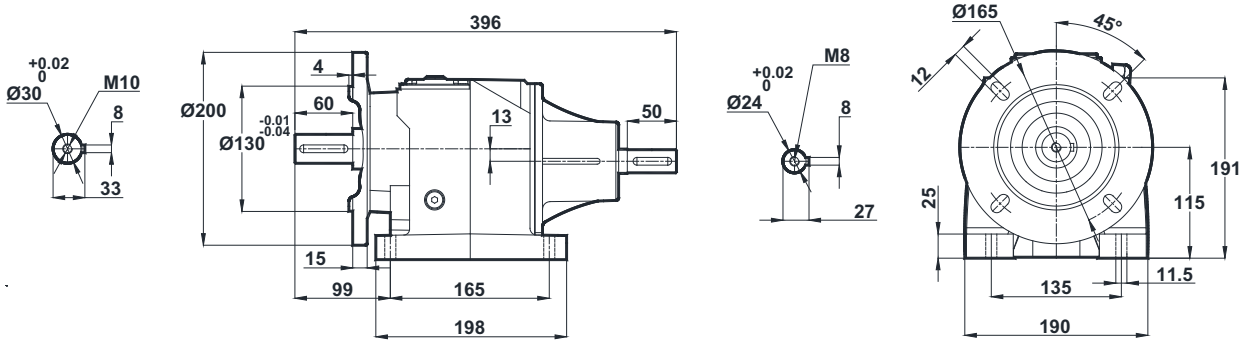
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



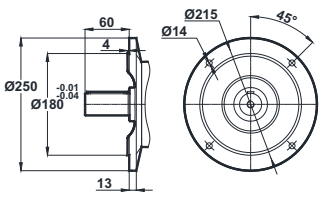
Opt. 1 **Opt. 2** **Opt. 3** **Opt. 4**

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

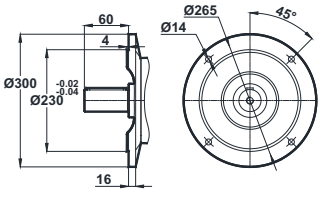
MTF202
MTF203



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



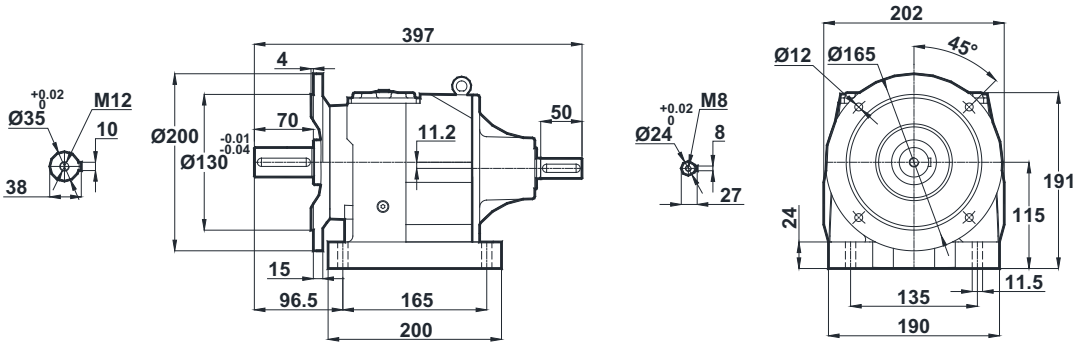
Opt. 1



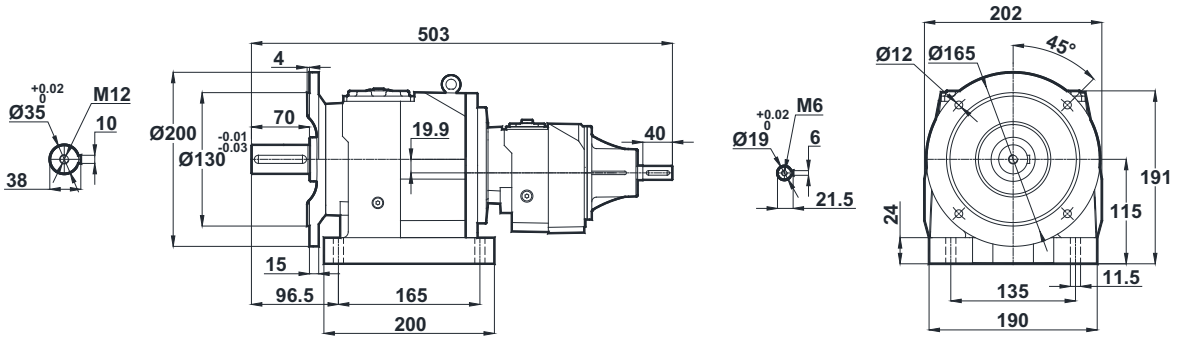
Opt. 2

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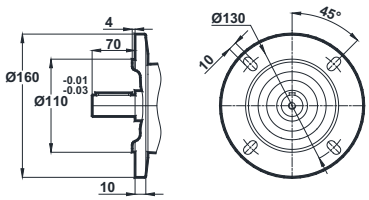
MTF272
MTF273



MTF275
MTF276



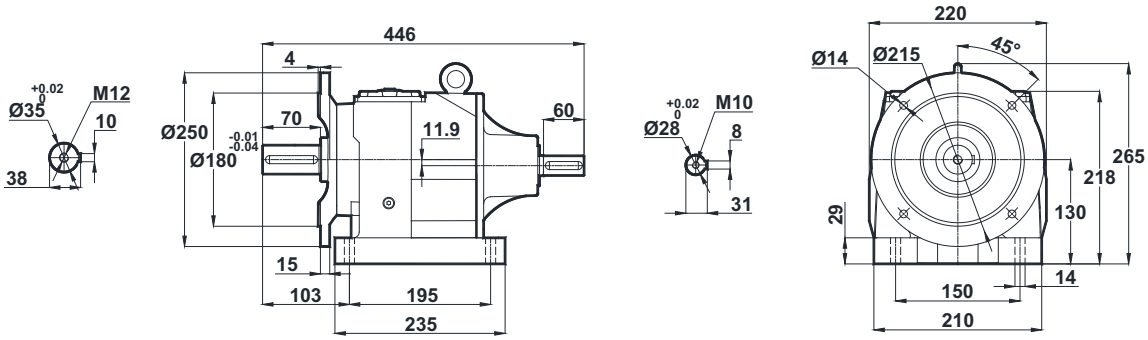
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



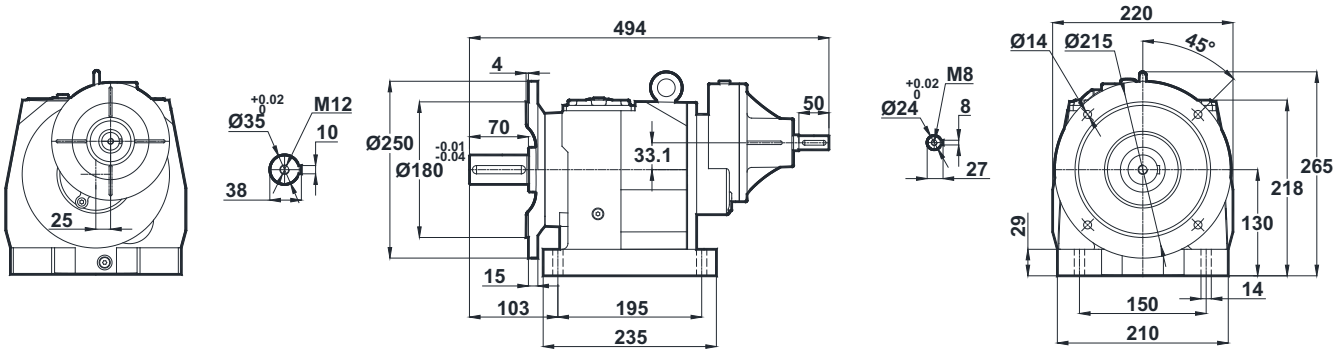
Opt. 1

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

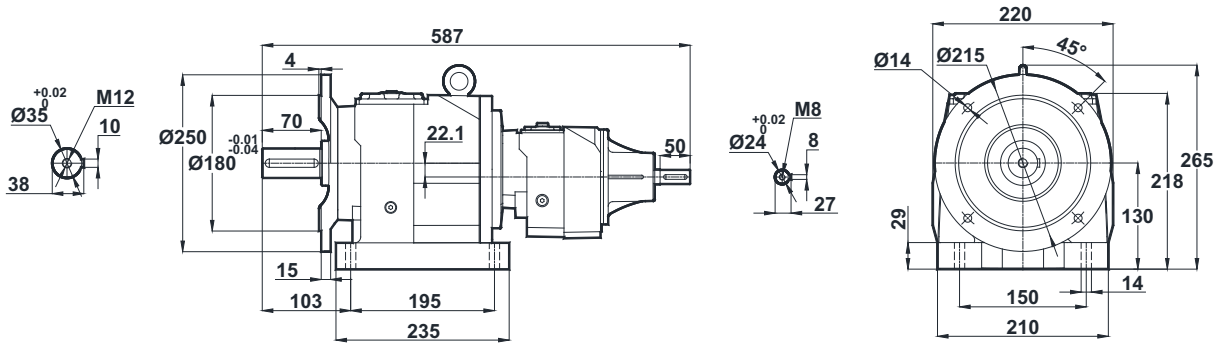
MTF282
MTF283



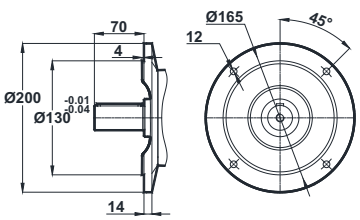
MTF284



MTF285
MTF286



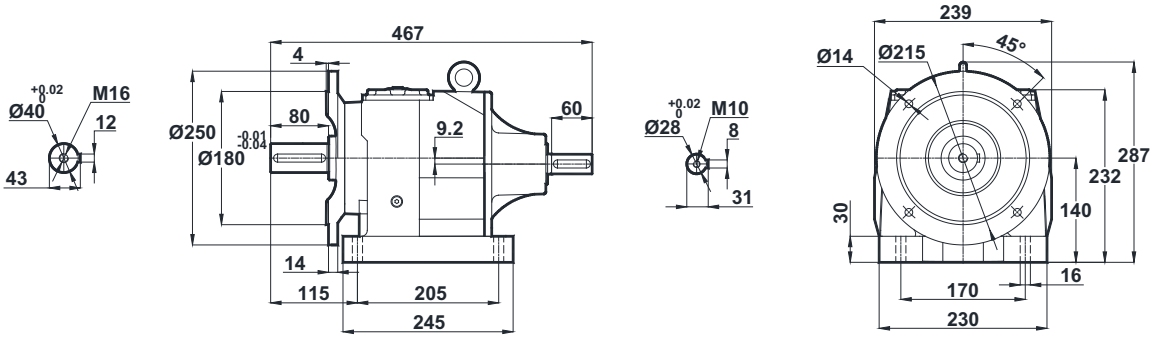
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



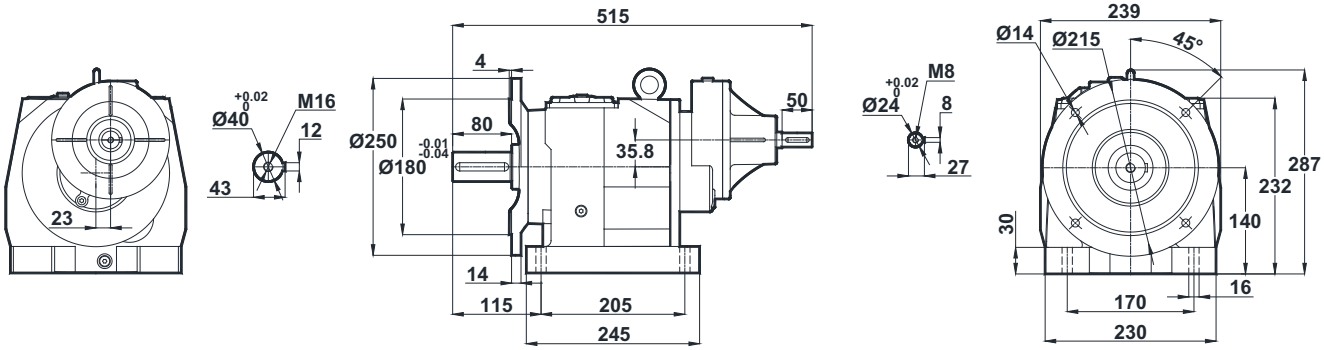
Opt. 1

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

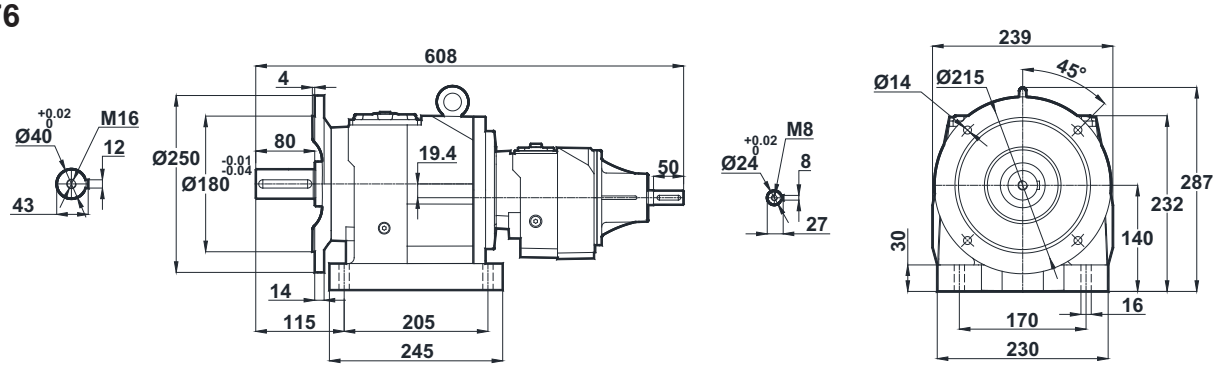
MTF372
MTF373



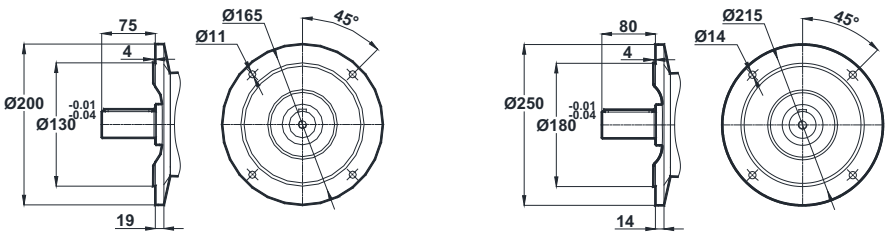
MTF374



MTF375
MTF376



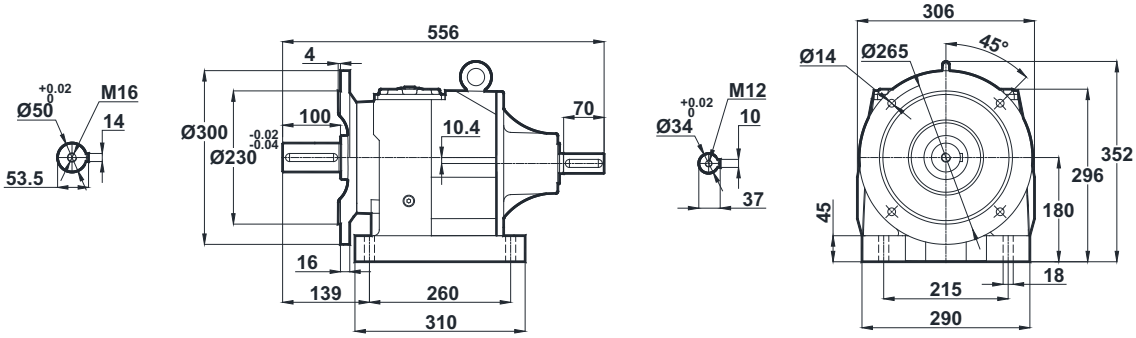
Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen



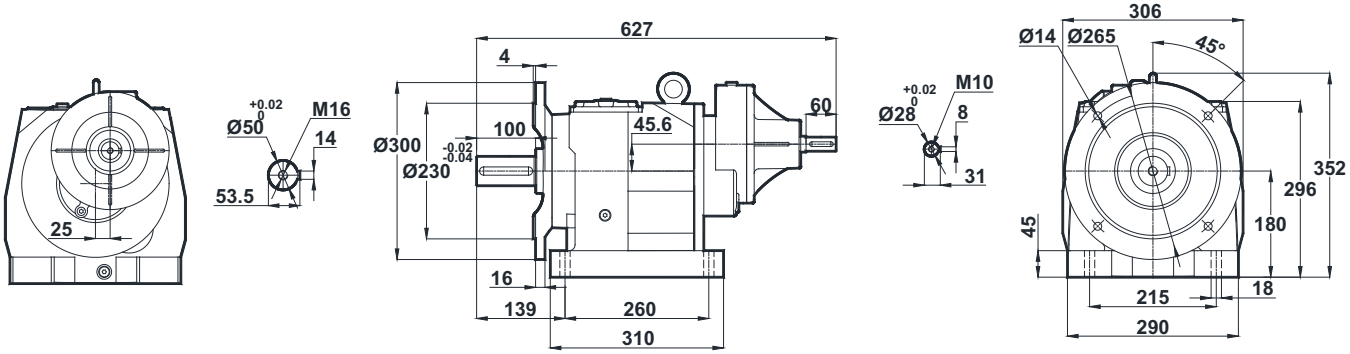
Opt. 1 **Opt. 2**

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

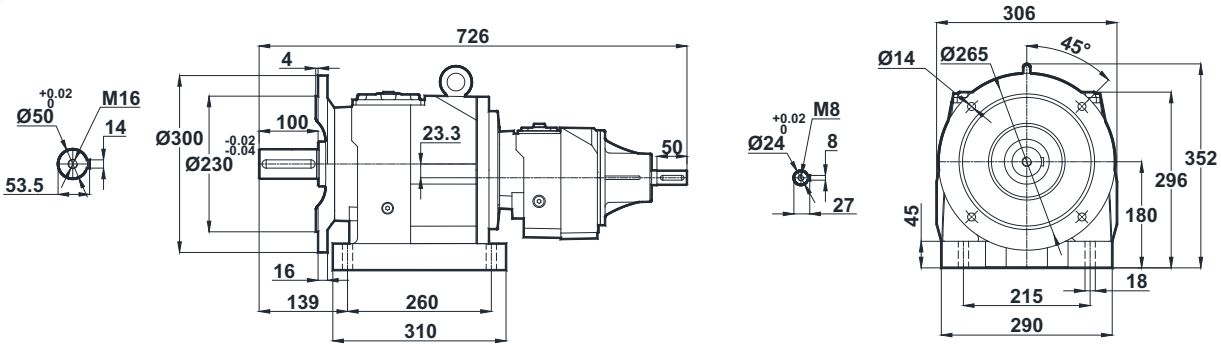
MTF472
MTF473



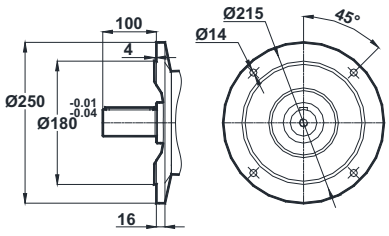
MTF474



MTF475
MTF476



Opsiyonel Flanş Ölçüleri / *Optional Flange Dimensions* / Auswählbare Flanschabmessungen

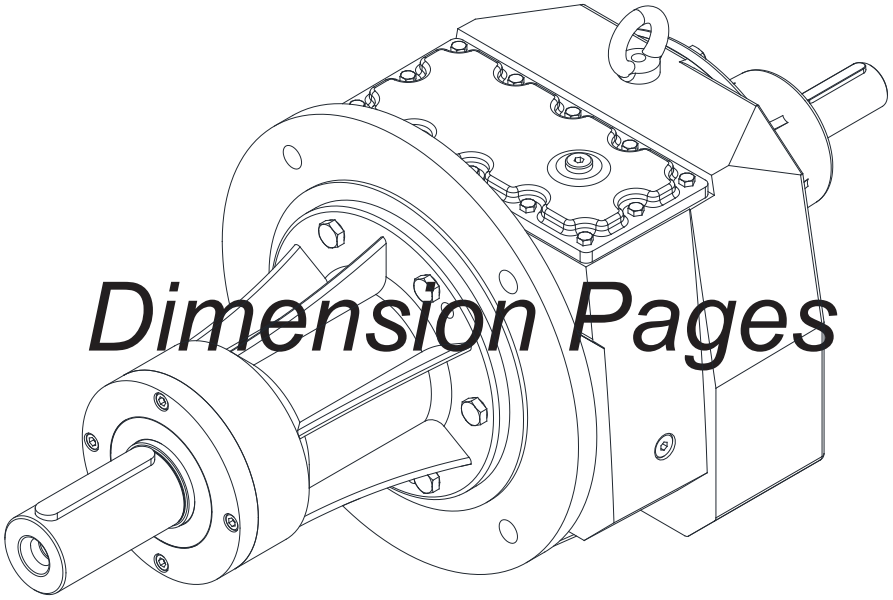


Opt. 1

Notlar / *Notes* / Notizen

NTB Serisi / *Series* / Serie

Ölçü Sayfaları

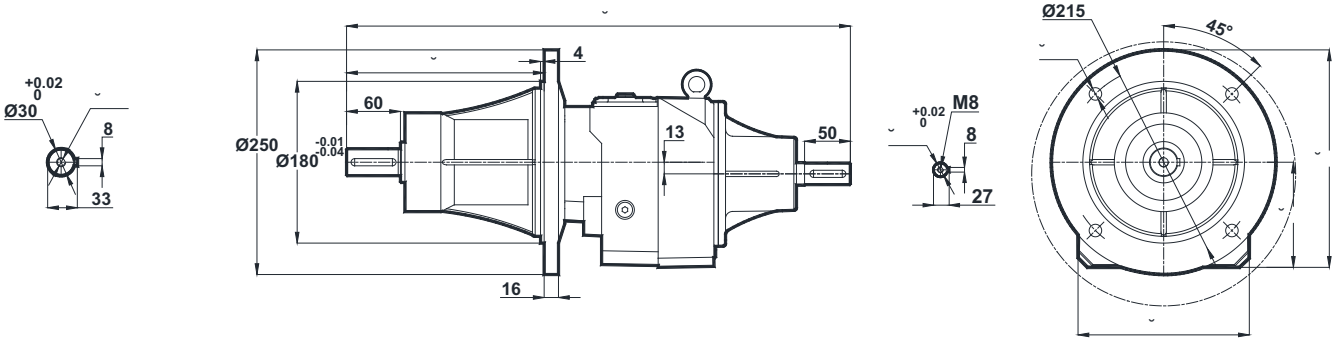


Dimension Pages

Abmessungsseiten

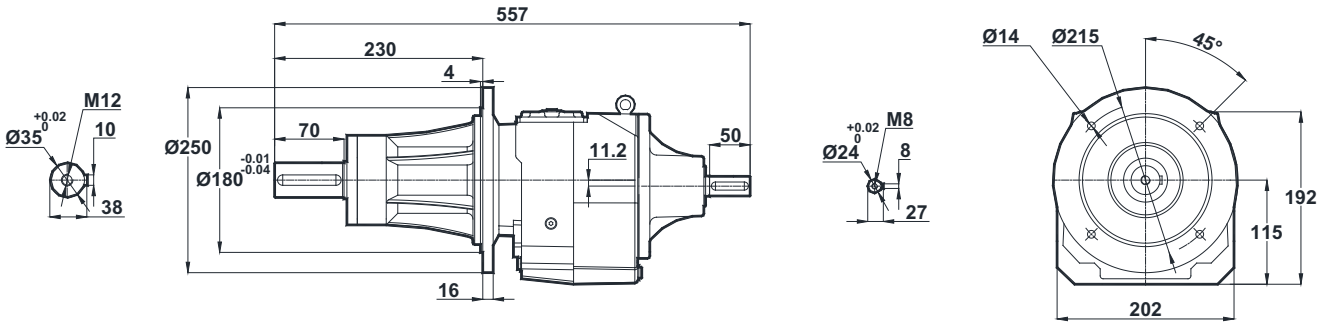
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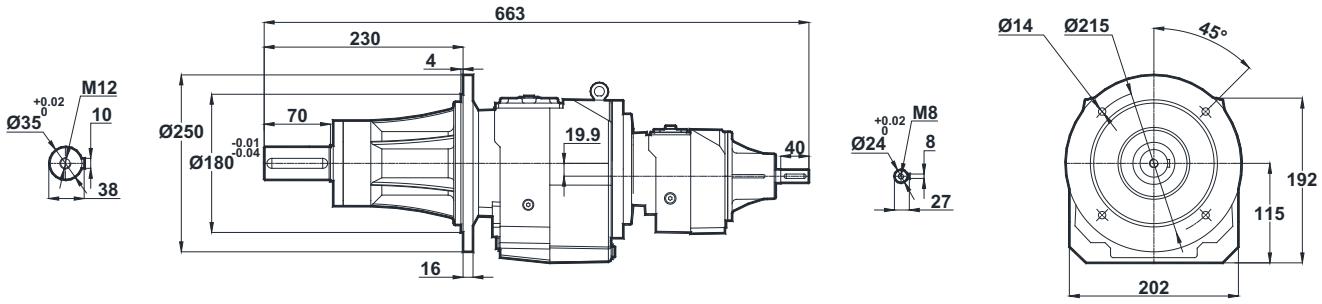


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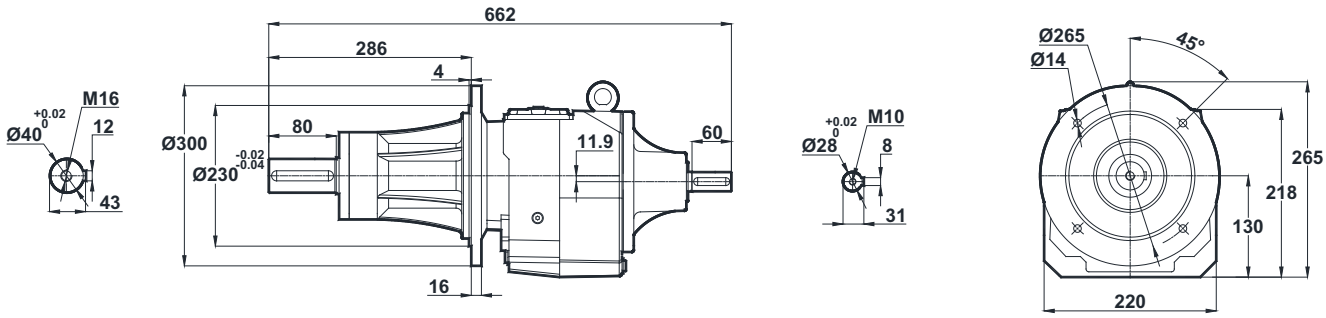


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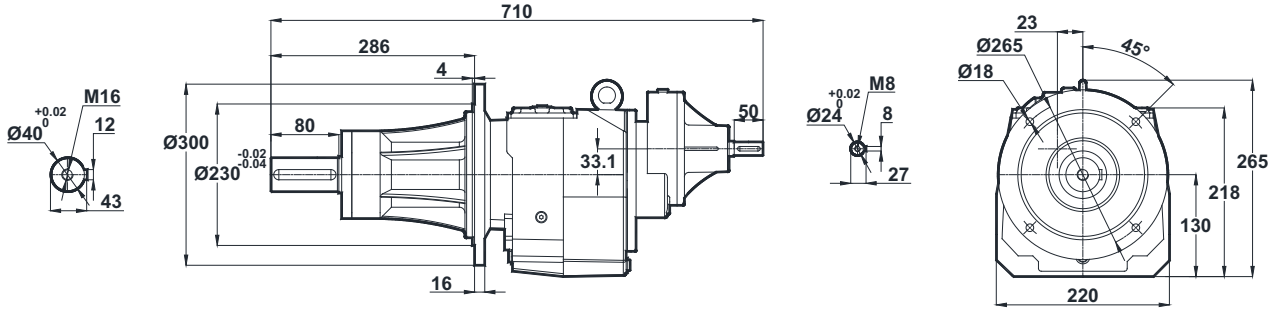


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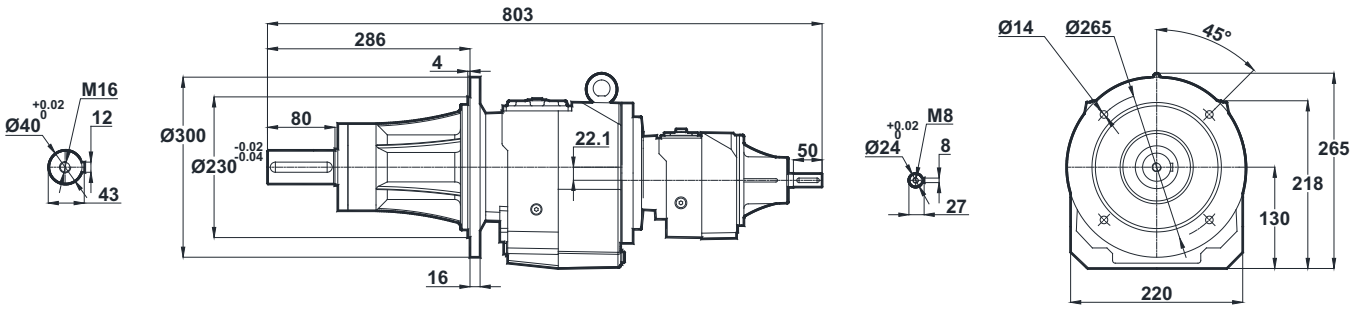
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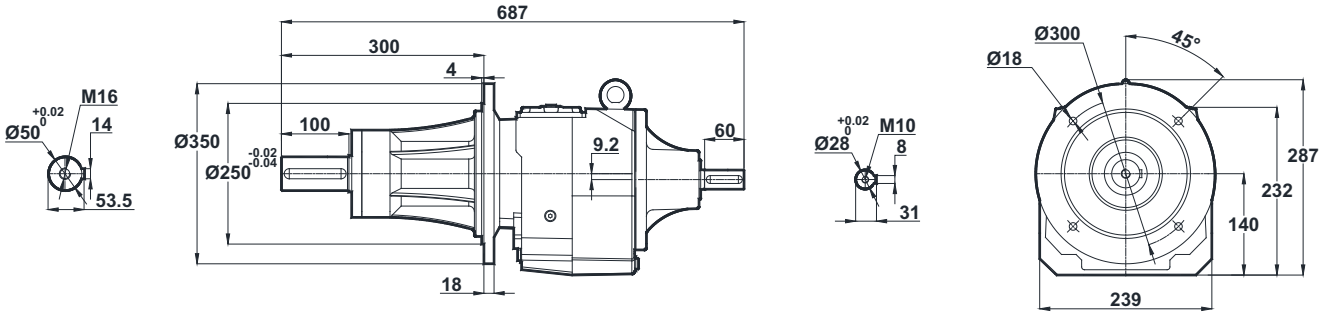


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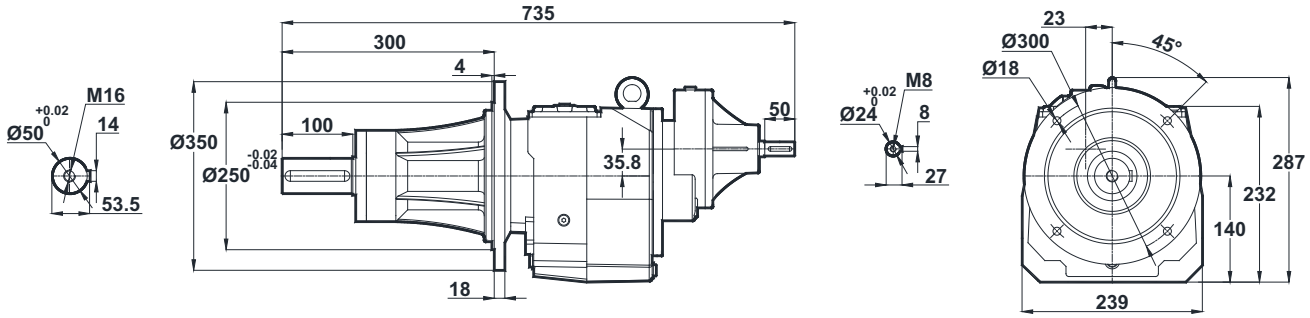


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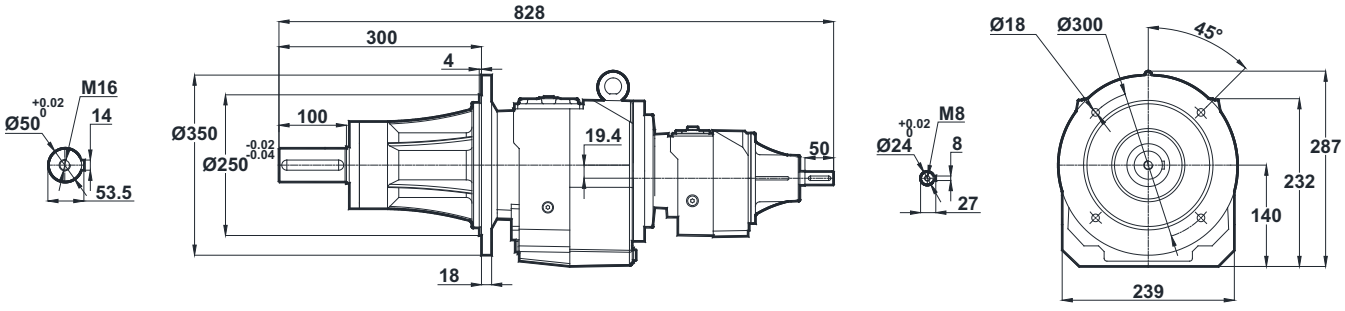
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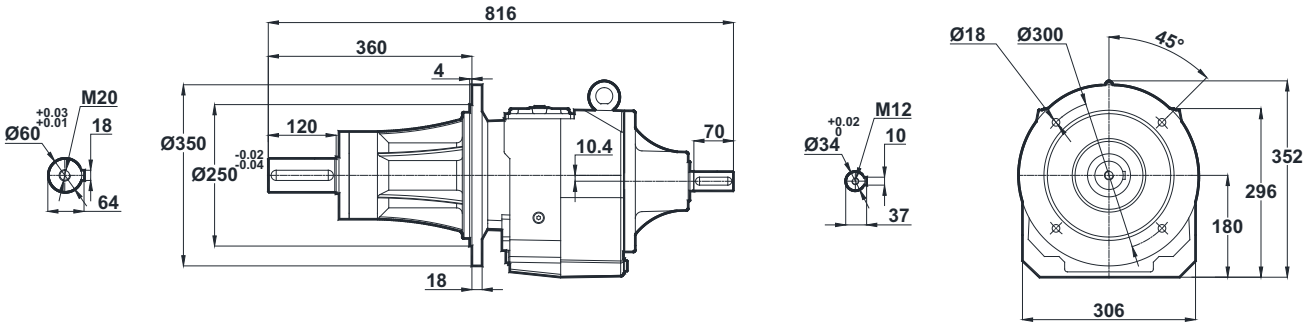


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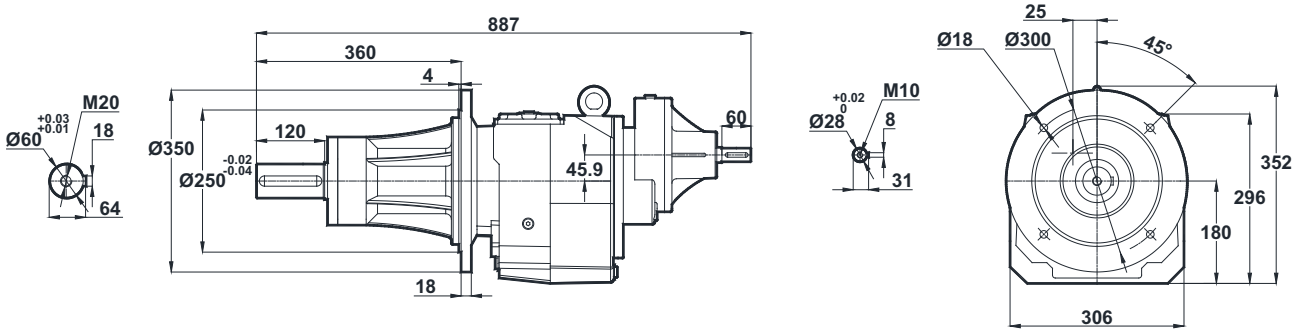


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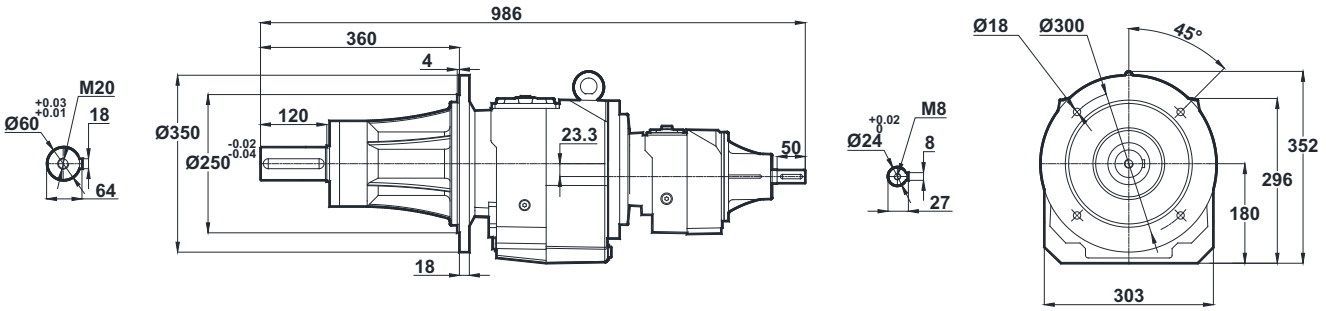
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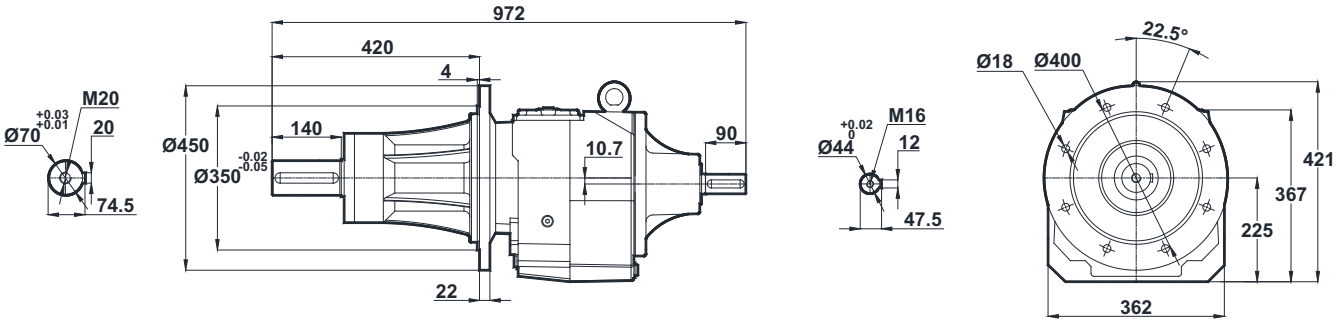


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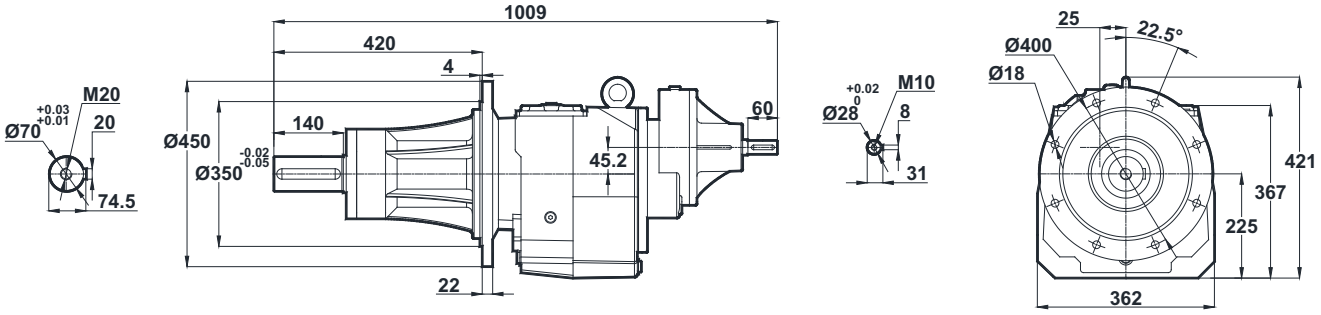


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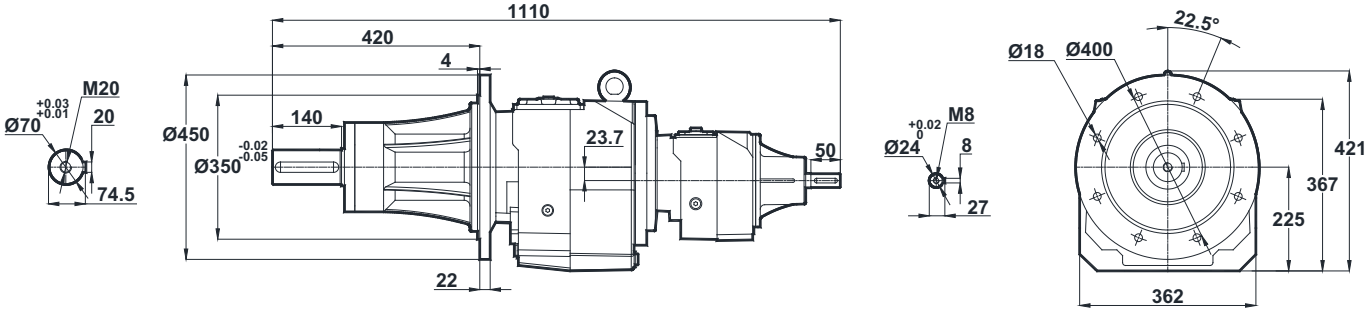
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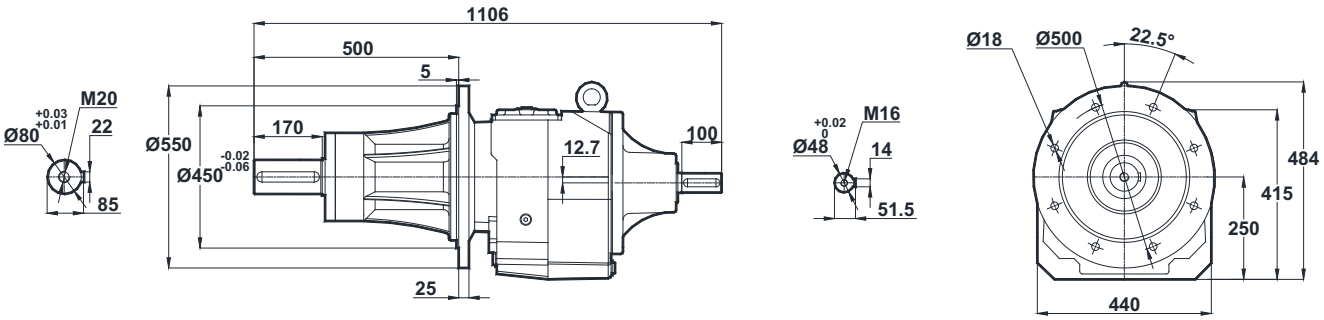


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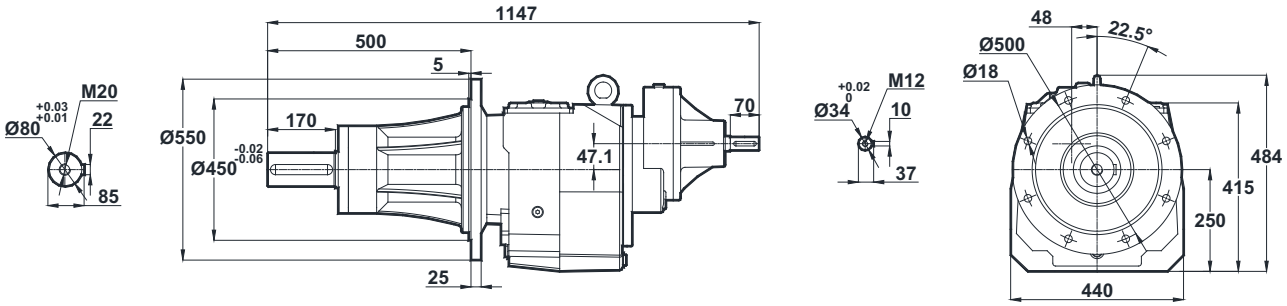


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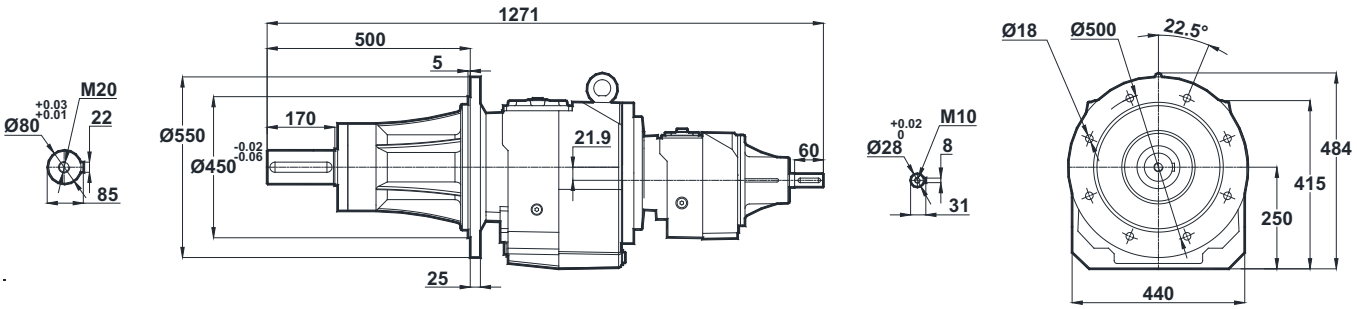
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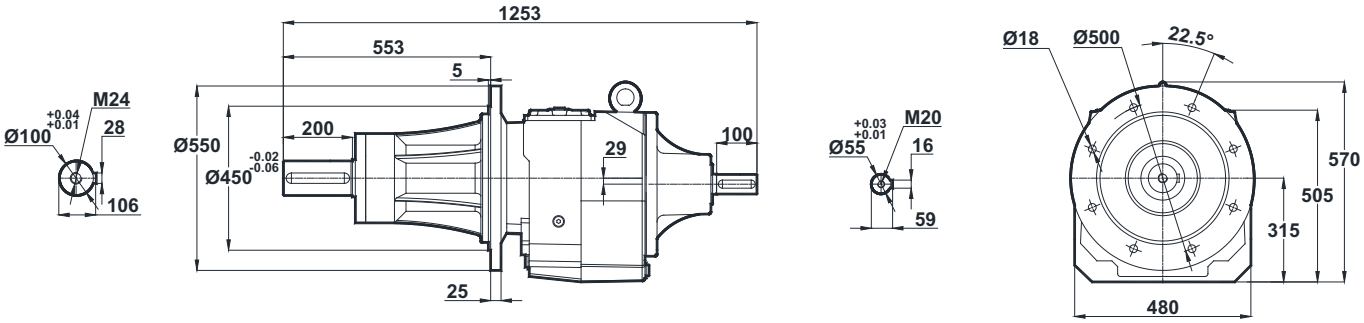


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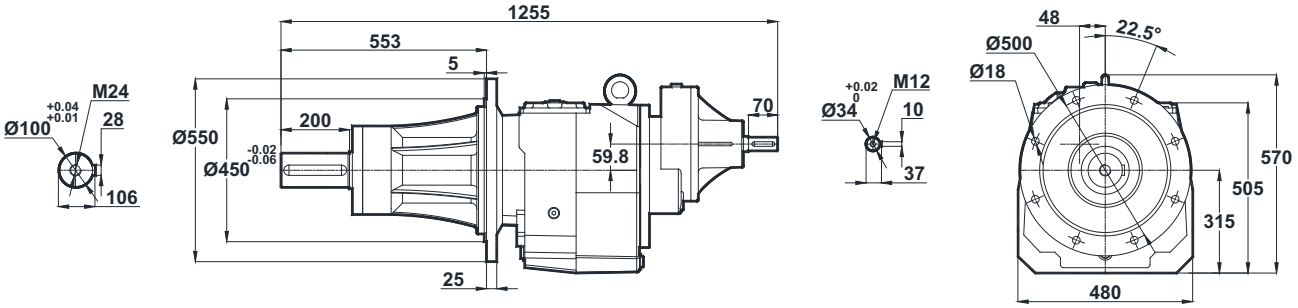


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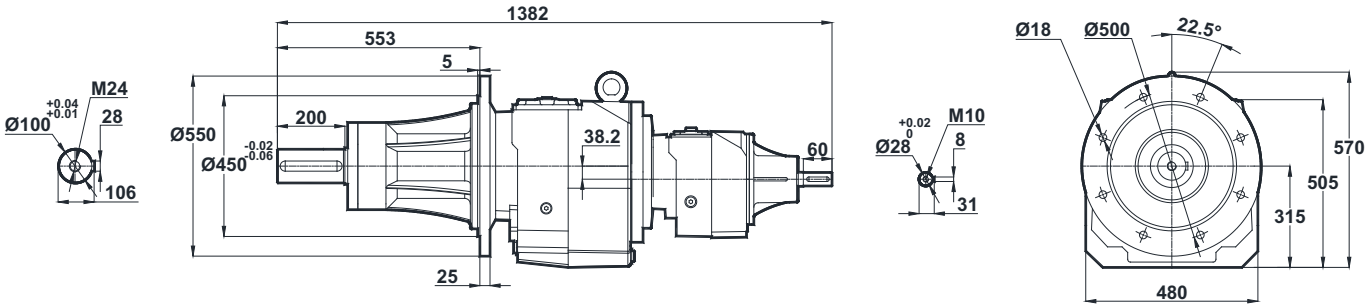
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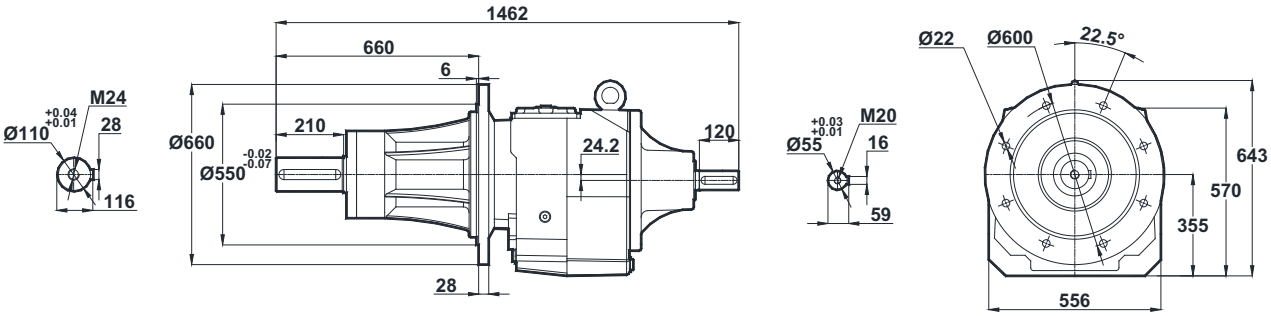


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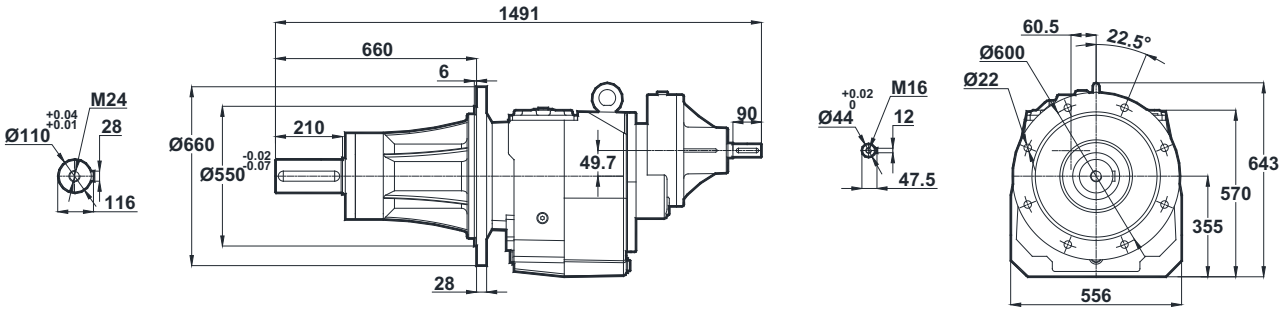


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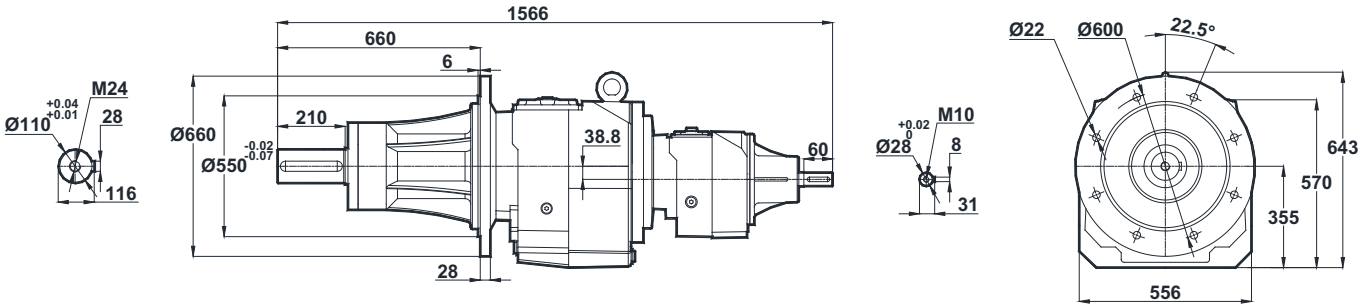
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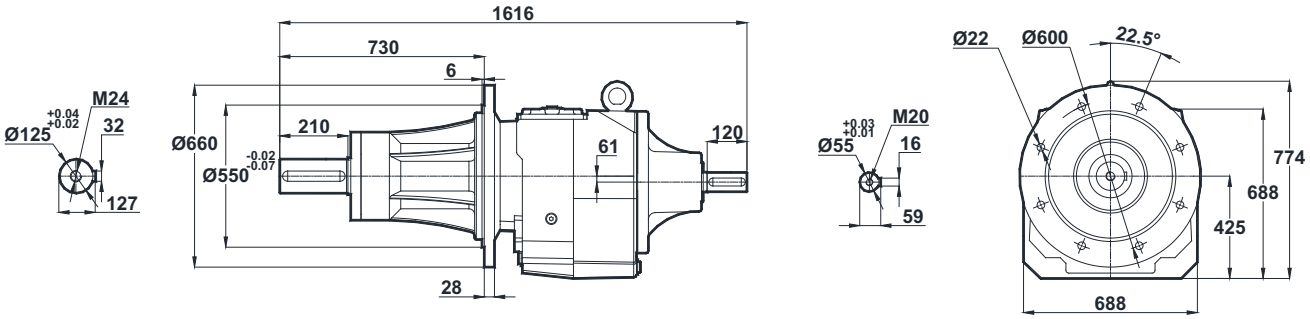


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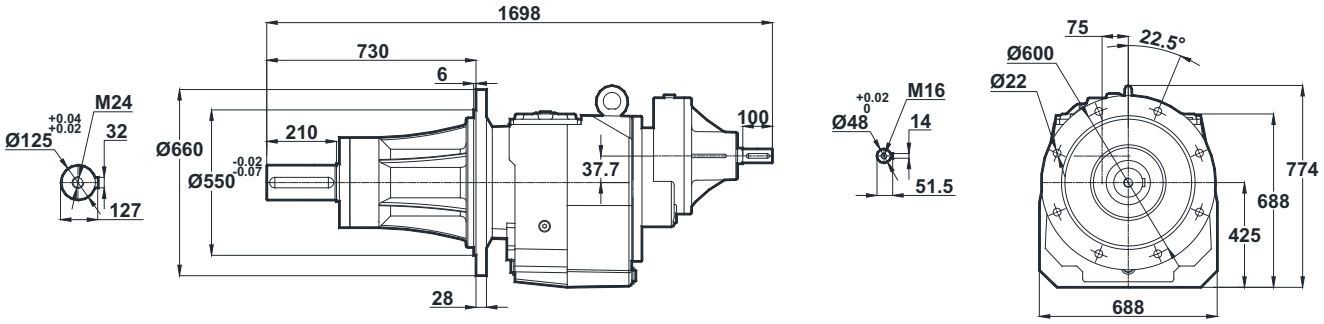


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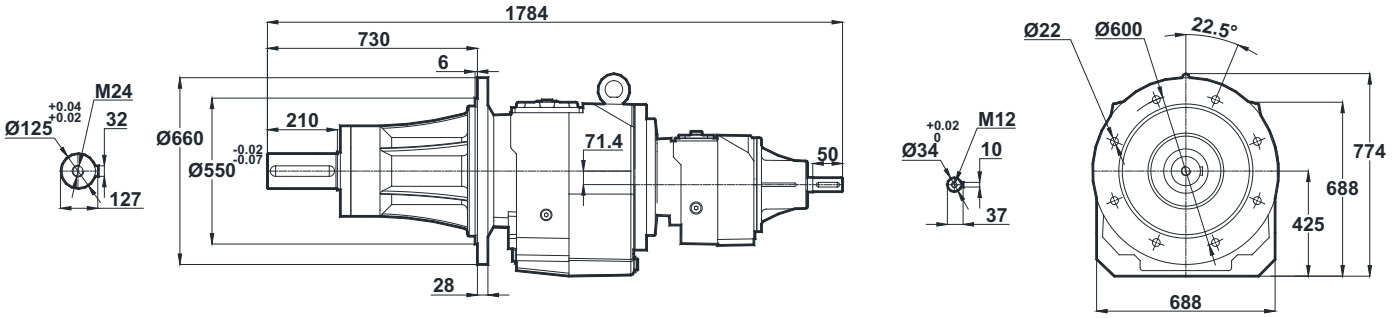
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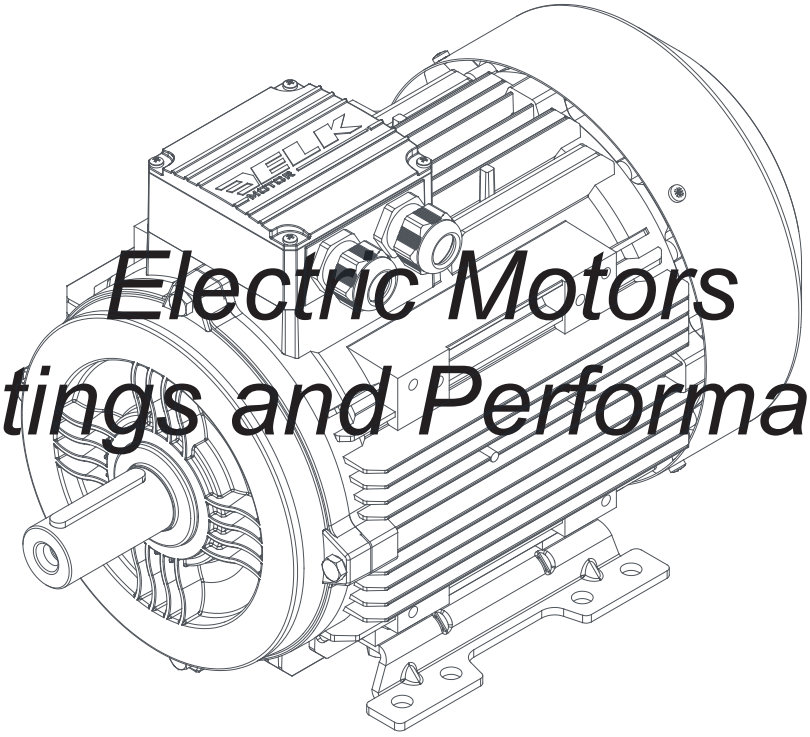


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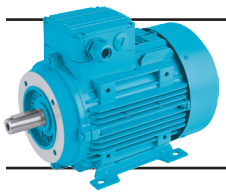
Notlar / *Notes* / Notizen

Elektrik Motorlarının Performans Değerleri



Electric Motors Ratings and Performance

Elektromotoren Leistungsdaten

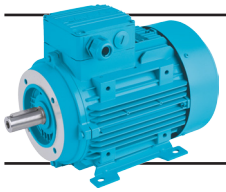


Elektrik Motorlarının Performans Değerleri
Electric Motors Ratings and Performance
Elektromotoren Leistungsdaten

400V 50Hz 3000 d/d / *400V 50Hz 3000 rpm* / 400V 50Hz 3000 UpM

IE4

Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								Kalkış Değerleri *Starting Data* Startdaten		Devrilme Momenti *Breakdown Torque* Kippmoment	Atalet Momenti *Moment of Inertia* Trägheitsmoment	B3 Motor Ağırlığı *B3 Motor Weight* B3 Motor Gewicht	Ses Seviyesi *Noise Level* Geräuschpegel
	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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	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	1,1	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	1,5	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	2,2	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	3,0	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	4,0	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	5,5	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	7,5	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	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	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	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	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	2970	63,3	120	0,89	94,8	95,0	94,2	8,3	3,2	4,0	0,20000	235	74
4E225M/2D	45	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	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	2982	126	240	0,90	95,6	95,6	95,2	7,7	2,7	3,2	0,98000	620	76
4E280M/2D	90	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	96,3	8,1	3,2	4,0	2,70000	1340	78



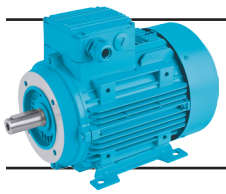
Elektrik Motorlarının Performans Değerleri
Electric Motors Ratings and Performance
Elektromotoren Leistungsdaten

400V 50Hz 1500 d/d / *400V 50Hz 1500 rpm* / 400V 50Hz 1500 UpM

IE4

Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								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 *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				
	kW	**d/d** *rpm* UpM	**A**	**Nm**	**Cosφ**	**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	5,5	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*	7,5	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	1470	21,0	71,5	0,81	93,3	93,5	93,3	7,7	3,0	3,6	0,08600	100	64
4E160L/4F*	15	1475	29,5	97,5	0,79	93,9	94,1	93,4	8,0	3,7	3,9	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	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	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	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	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	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	1487	127	482	0,89	96,0	96,3	96,2	8,7	3,0	3,2	1,50000	670	70
4E280M/4E	90	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.

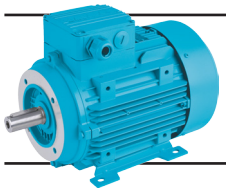


Elektrik Motorlarının Performans Değerleri
Electric Motors Ratings and Performance
Elektromotoren Leistungsdaten

400V 50Hz 3000 d/d / *400V 50Hz 3000 rpm* / 400V 50Hz 3000 UpM

IE3

Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								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 *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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	4 / 4	3 / 4	1 / 2	I_A/I_N	M_A/M_N	M_K/M_N	kgm^2	kg	dB(A)
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	3,0	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	4,0	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	425	75

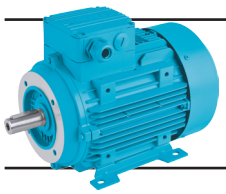


Elektrik Motorlarının Performans Değerleri
Electric Motors Ratings and Performance
Elektromotoren Leistungsdaten

400V 50Hz 1500 d/d / *400V 50Hz 1500 rpm* / 400V 50Hz 1500 UpM

IE3

Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								Kalkış Değerleri *Starting Data* Startdaten		Devrilme Momenti *Breakdown Torque* Kippmoment	Atalet Momenti *Moment of Inertia* Trägheitsmoment	B3 Motor Ağırlığı *B3 Motor Weight* B3 Motor Gewicht	Ses Seviyesi *Noise Level* Geräuschpegel
	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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	4 / 4	3 / 4	1 / 2	I_A/I_N	M_A/M_N	M_K/M_N	kgm^2	kg	dB(A)
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	3,0	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	4,0	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	91,0	90,5	7,8	3,2	3,4	0,03418	56,6	61
3E132M/4E	9,2	1460	18,4	60,2	0,80	90,4	91,6	91,2	7,4	3,1	3,4	0.03600	62,0	64
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

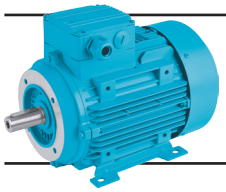


Elektrik Motorlarının Performans Değerleri
Electric Motors Ratings and Performance
Elektromotoren Leistungsdaten

400V 50Hz 1000 d/d / *400V 50Hz 1000 rpm* / 400V 50Hz 1000 UpM

IE3

Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								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 *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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	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	3,0	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	4,0	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

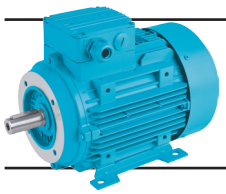
Tip *Type* Typ	Tam Yük Değerleri *Full-load Data* Volllastdaten								Kalkış Değerleri *Starting Data* Startdaten		Devrilme Momenti *Breakdown Torque* Kippmoment	Atalet Momenti *Moment of Inertia* Trägheitsmoment	B3 Motor Ağırlığı *B3 Motor Weight* B3 Motor Gewicht	Ses Seviyesi *Noise Level* Geräuschpegel
	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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	4 / 4	3 / 4	1 / 2	I_A/I_N	M_A/M_N	M_K/M_N	kgm^2	kg	dB(A)
2E63M/2A	0,18	2800	0,50	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* Volllastdaten								Kalkış Değerleri *Starting Data* Startdaten		Devrilme Momenti *Breakdown Torque* Kippmoment	Atalet Momenti *Moment of Inertia* Trägheitsmoment	B3 Motor Ağırlığı *B3 Motor Weight* B3 Motor Gewicht	Ses Seviyesi *Noise Level* Geräuschpegel
	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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	4 / 4	3 / 4	1 / 2	I_A/I_N	M_A/M_N	M_K/M_N	kgm^2	kg	dB(A)
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	7,00	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 *Full-load Data* Volllastdaten								Kalkış Değerleri *Starting Data* Startdaten		Devrilme Momenti *Breakdown Torque* Kippmoment	Atalet Momenti *Moment of Inertia* Trägheitsmoment	B3 Motor Ağırlığı *B3 Motor Weight* B3 Motor Gewicht	Ses Seviyesi *Noise Level* Geräuschpegel
	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				
	kW	d/d *rpm* UpM	A	Nm	Cosφ	4 / 4	3 / 4	1 / 2	I_A/I_N	M_A/M_N	M_K/M_N	kgm^2	kg	dB(A)
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



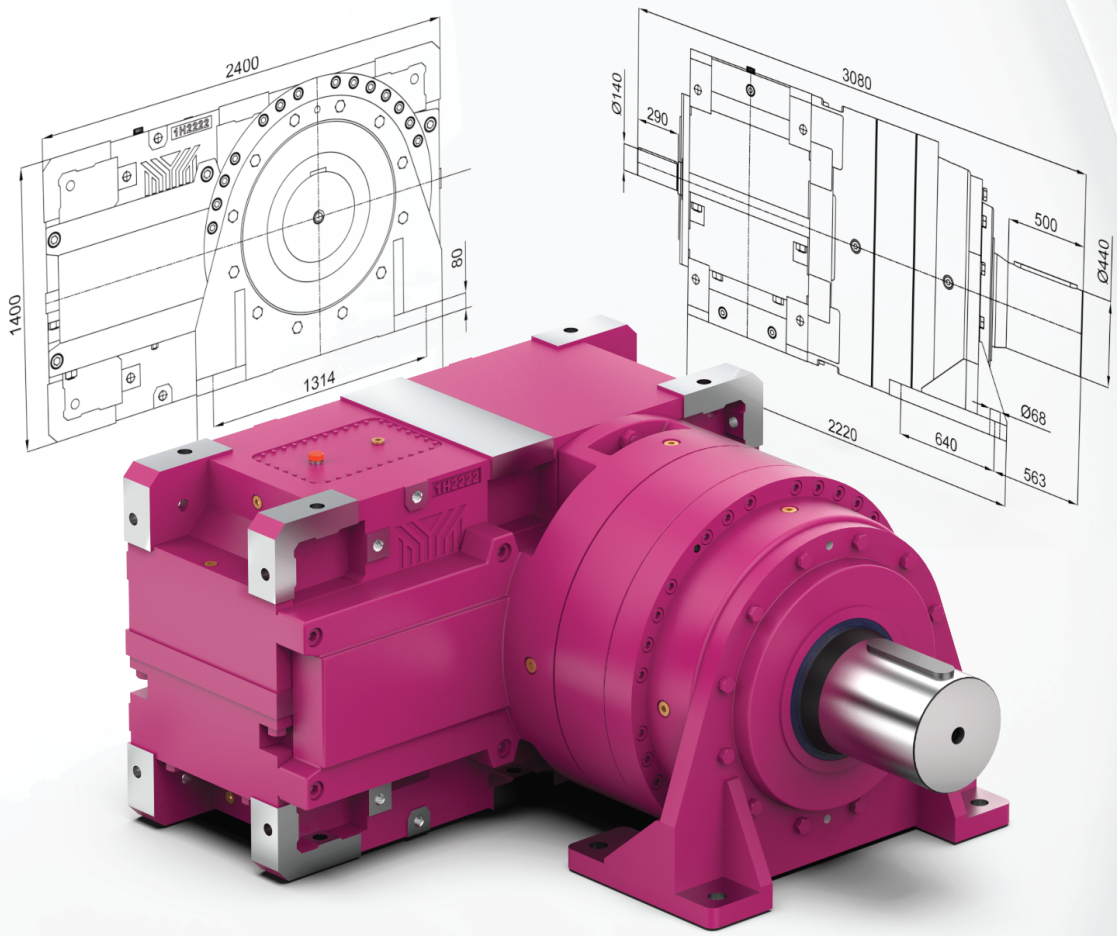
Elektrik Motorlarının Performans Değerleri

Electric Motors Ratings and Performance

Elektromotoren Leistungsdaten

Notlar / *Notes* / Notizen

H22 + R55



1.500.000 Nm

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Ağır Hizmet Tipi Redüktör

Helical + Planetary
Heavy Industrial Type Gear Unit

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