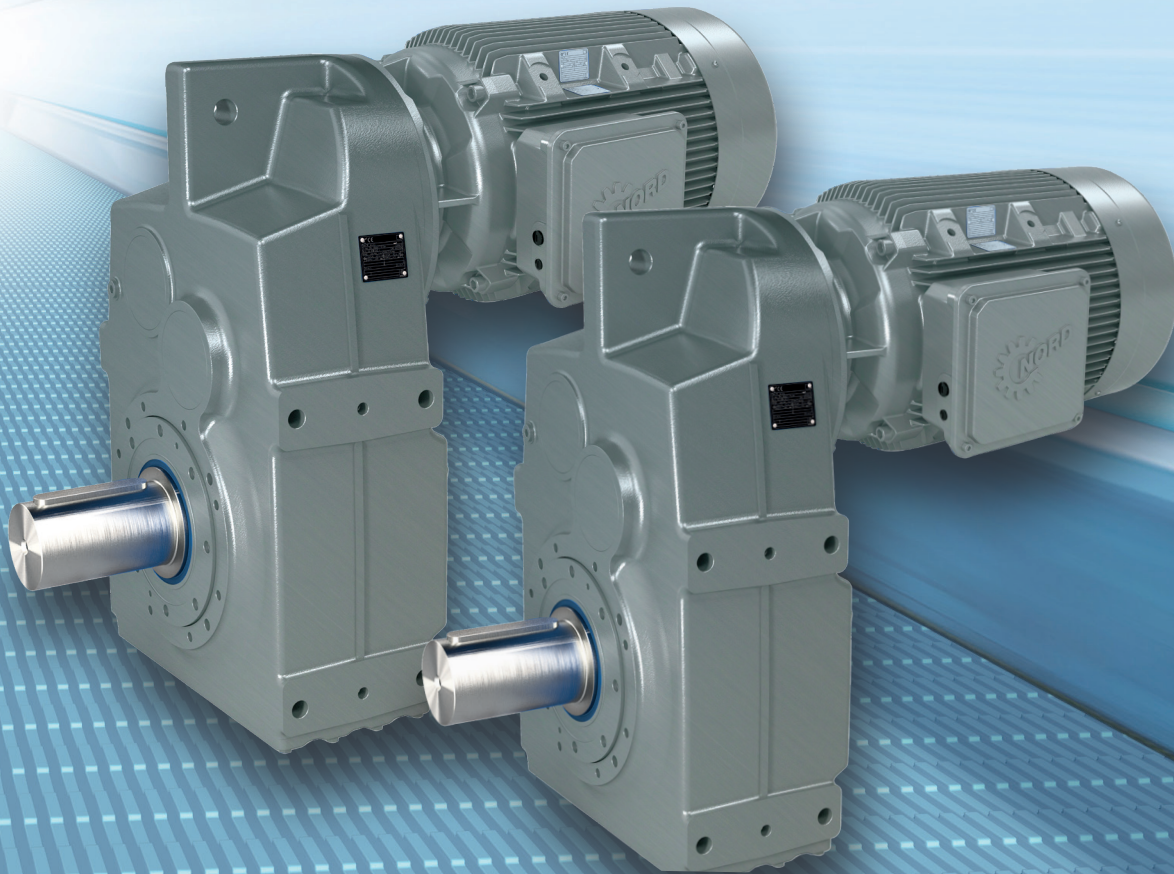


Intelligent Drivesystems, Worldwide Services



CLINCHER™

Parallel Shaft Gear Units
& Speed Reducers

Robust, High Performance, Modular Design
SK 0182.1NB - SK 11382.1 Parallel Helical Gear Units

PRODUCT OVERVIEW
G1020 - 60 Hz



Spanning the globe To serve you

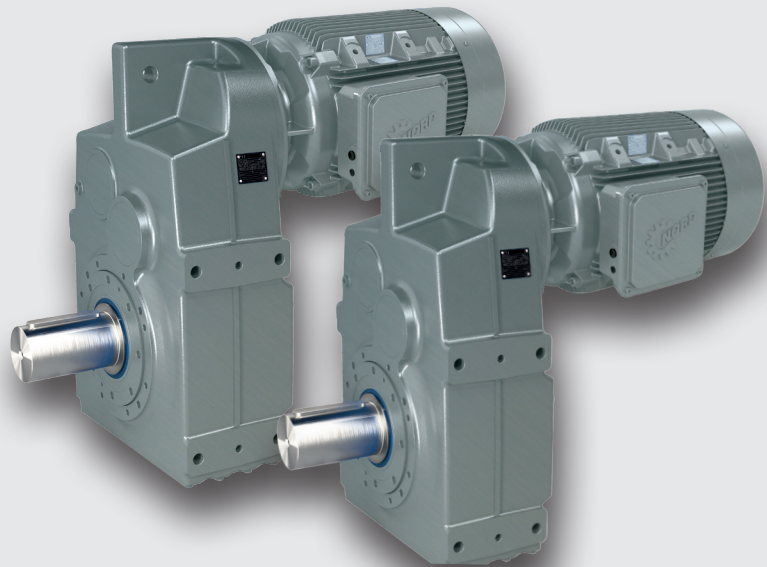
Since 1965, NORD has become well established in the power transmission industry and grown to global proportions on the strength of product performance, superior customer service, and intelligent drive solutions. NORD is constantly improving and expanding its products to meet a never-ending variety of industrial challenges.

NORD designs and manufactures drive systems engineered for adaptability. NORD's innovative drive solutions are specified and utilized for a range of applications in nearly every industry throughout the world.

NORD Drivesystems' product portfolio is extensive and continuously evolving in order to meet the needs of today's fast-changing markets. NORD's range of drive equipment includes: helical in-line, helical shaft-mount, helical-bevel, helical-worm and worm gear units with torques from 90 lb-in to 2,200,000 lb-in, readily available AC motors and from 1/6 HP to 250 HP, variable frequency drives up to 250 HP, and mechanical variable speed drives.

But NORD does far more than manufacture the world's finest drive components. We provide our customers with optimum drive configurations for their specific purposes, providing each and every one with truly complete and efficient systems at a price/quality ratio unmatched in today's competitive markets.

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. By providing all of our customers with prompt delivery, and expert support services, we are firmly committed to exceeding customer expectations and being responsive to the ideas and specifications of every customer, anywhere in the world.



CLINCHER™ Parallel Shaft Gear Units

The CLINCHER™ Parallel Shaft gear units have an offset between the input and output shaft resulting in a shorter or flatter design in comparison with other gear units. The CLINCHER™ Parallel Shaft reducers and gearmotors feature a torsionally rigid UNICASE® housing. The CLINCHER™ gear units are available as foot, shaft or flange-mounted products. Modular design allows many input options including an integral motor, NEMA or IEC adapter, or a solid input shaft.

The CLINCHER™ Parallel Shaft gear units are also offered in a spread bearing/flange-mount (B5) design and are commonly specified on agitators, mixers, overhead conveyors and shredders. The lower bearing is an oversized, double row, re-greaseable spherical bearing designed to absorb high load conditions and provide longer service life. Clincher units include options for an oil-safe dry cavity or drywell design. The oil safe dry cavity contains any unlikely seal leaks from the reducer sump and is fitted with a site tube indicator or optional oil proximity switch to warn you if a leak occurs. The drywell design prevents oil leakage through the output flange by providing a physical barrier to separate the oil sump from the rotating equipment.

Features and Benefits

- Robust UNICASE® housing
- Case-hardened, high-quality gearing
- Oil-safe QUADRALIP™ seal system
- AUTOVENT™ regulates internal pressure and keeps contaminants out
- High performance inverter/vector duty motors & brakemotors
- Modular design for adaptability
- Spread-bearing / flange mount designs ideal for agitator, mixers, & overhead conveyor applications
- Optional screw conveyor package utilizing CEMA standards (G1129)
- Stainless steel (316) protective paint coating – USDA/H1 compliant
- Protective features and options for severe duty & washdown environments



DRIVESYSTEMS

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Company Overview

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NORD does far more than manufacture the world's finest drive components. We provide our customers with optimum drive configurations for their specific purposes, providing each and every one with truly complete and efficient systems at a price/quality ratio unmatched in today's competitive markets.

Short, On-Time Delivery

As a NORD customer, you can rest assured that your order will be delivered on time. Because NORD has both decentralized assembly and manufacturing operations and a linked global network, we offer our customers:

- Fast, reliable delivery
- Greater product versatility
- Shorter lead times
- Timely shipping
- Global Availability



Global Availability

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. Providing all customers with prompt delivery, and expert support services, we are firmly committed to exceeding customer expectations and being totally responsive to the ideas and specifications of every customer, anywhere in the world.

Increased North American Presence

NORD covers North America with over 30 district offices and over 500 distributor branches. NORD operates a manufacturing and assembly facility in Waunakee, WI, Charlotte, NC, Corona, CA, Brampton, ON, and Monterrey, Mexico, resulting in an ever-increasing capacity in the United States and Canada and giving our customers the shortest lead times in the industry.



Manufacturing

NORD Gear continually invests in the latest research, manufacturing and automation technology. This ensures our ability to provide you with the utmost quality at an affordable price. Not only do we invest in our North American facilities, we invest in our factories throughout the world. We continually try to improve our practices to provide our customers with the most superior product available.

Quality

Quality is assured at NORD assembly and manufacturing facilities, based on ISO 9000 standards — from careful inspection of incoming materials to closely monitored machining operations including gear cutting, turning, hardening & grinding as well as finishing and assembly.

Worldwide Standards

NORD products are designed and manufactured based on the latest North American and global standards.

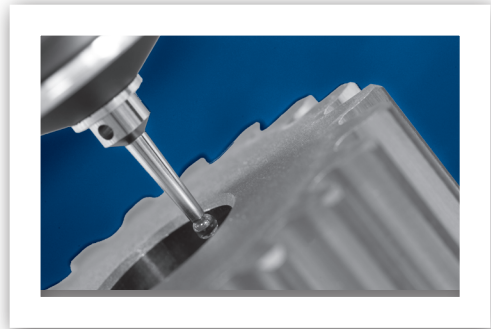


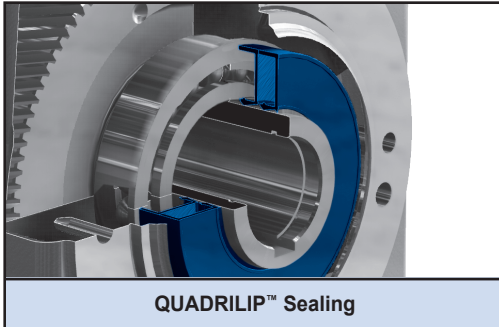
Energy Efficiency

Lowering your operating costs is one of our greatest goals! NORD research and development focuses on energy efficiency, with gearboxes, motors, and frequency inverters designed for lower energy consumption. Our fully diverse line of in-line or right-angle units and motors has been developed to suit your needs.

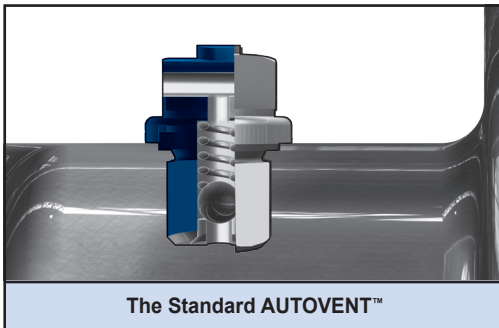
NORD 911

Trouble? Just call 715-NORD-911 (in Canada, 905-796-3606). Emergency service is available 24 hours a day, 7 days a week. We'll answer your call, ship the parts, or build a unit and have it shipped directly to you to provide what you need, when you need it.





QUADRILIP™ Sealing



The Standard AUTOVENT™

CLINCHER Key Features and Product Range

The CLINCHER™ Parallel Shaft gearmotors and gear reducers feature a torsionally rigid UNICASE® housing that integrates internally ribbed construction features with bearing seats and mounting faces that are precisely machined in one set-up. The high-strength UNICASE® housings combined with high-capacity bearings and quality gearing provides precise shaft and gear alignment, quieter operation, and a longer operating life. NORD's CLINCHER™ gear units also feature the QUADRILIP™ seal system on the output shaft.

The QUADRILIP™ seal system includes an outer double lip seal with trash guard, single lip inboard seal and grease pack barrier between the seals to offer superior protection against oil leaks and outside contaminants. The standard Autovent™ breather helps to prevent oil contamination as well as bearing and gear damage by acting like a check valve. The breather blocks out foreign materials, allows a safe release of pressure when it is needed, and closes tightly when the pressure reaches a safe operating level.

CLINCHER™ modular designs are engineered to provide application adaptability. The available mounting options include: shaft-mount, flange-mount & foot-mounted products. Input options include: integral motor, NEMA or IEC adapter, servo motor adapter, solid input shaft, motor mount platforms and scoop mount platforms. The CLINCHER™ spread-bearing/flange-mount designs are ideal for agitator, mixer, as well as overhead conveyor applications; these units feature an oversized, double row, re-greaseable spherical bearing designed to absorb high load conditions and provide longer service life. CLINCHER™ screw conveyor packages additionally provide CEMA standard shaft and flange mounting capabilities.

Product Range:

Sizes:	14
Power Range:	0.16 - 250 Hp
Efficiency:	97% (2-stage) / 95.5 % (3-stage)
Torque Range:	575 – 680,180 lb-in
Ratio Range:	4.03:1 – 6,616.79:1

Features:

- Robust UNICASE® housing
- Case-hardened, high-quality gearing (Rockwell 60 C typical / up to AGMA Class 13)
- Oil-safe QUADRILIP™ seal system
- AUTOVENT™ breather regulates internal pressure and keeps contaminants out
- High performance inverter/vector duty motors and brakemotors
- Modular design for application adaptability
- Spread-bearing / flange mount designs ideal for agitator, mixers, and overhead conveyor applications
- Optional screw conveyor package utilizing CEMA standards (Catalog G1129)
- Stainless steel (316) protective paint coating – USDA/H1 compliant
- Protective features and options for severe duty and washdown environments



DRIVESYSTEMS

Engineering

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SK	1	2	3	-	4	
	Gear Unit		Shaft/Mounting	Reducer Options	Motor/Input	Motor Options
					see page 85	see page 300

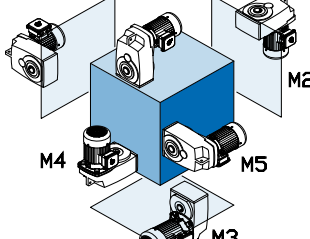
1 Gear Unit			
0182NB	2382	1282/02	6382/22
0282NB	3382	2282/02	6382/32
1282	4382	3282/12	7382/22
1382NB	5382	4282/12	7382/32
2282	6382	5282/12	8382/22
3282	7382		8382/32
4282	8382		9382/42
5282	9382		9382/52
6282	10382.1		
7282	11382.1		
8282			
9282			

2 Shaft/Mounting		
VZ - Solid Shaft/B14 Flange	VX - Solid Shaft/Foot	AZ - Hollow Shaft/B14 Flange
VF - Solid Shaft/B5 Flange	LX - Double Solid Shaft/Foot	AF - Hollow Shaft/B5 Flange
SCP - Screw Conveyor Package		AX - Hollow Shaft/Foot

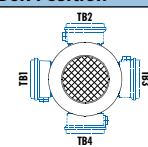
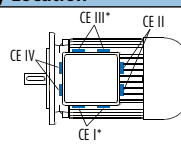
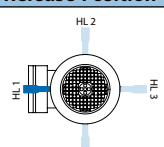
3 Reducer Options		
<input type="checkbox"/> B - Fixing Kit	<input type="checkbox"/> LL - Long Term Storage	<input type="checkbox"/> Cross Drilled Shaft
<input type="checkbox"/> G - Rubber Buffers	<input type="checkbox"/> VL - Heavy Duty Output Bearings	<input type="checkbox"/> FKM - Fluoro-rubber Seals
<input type="checkbox"/> VG - Heavy Duty Rubber Buffers	<input type="checkbox"/> VL2 - Spread Bearing Design	<input type="checkbox"/> OSG - Oil Sight Glass
<input type="checkbox"/> H - Hollow Shaft Cover	<input type="checkbox"/> VL3 - Oil Safe Spread Bearing Design	<input type="checkbox"/> OA - Oil Expansion Chamber
<input type="checkbox"/> H66 - IP66 Hollow Shaft Cover	<input type="checkbox"/> VL4 - Drywell Drop Bearing Design	<input type="checkbox"/> OC - Oil Cooler
<input type="checkbox"/> SH - Shrink Disc & Cover	<input type="checkbox"/> LX - Double Solid Shaft	<input type="checkbox"/> WC - Water Cooling Cover
<input type="checkbox"/> VSH - Heavy Duty Shrink Disc & Cover	<input type="checkbox"/> SM5 - Stainless Steel Output Shaft	<input type="checkbox"/> OT - Oil Reservoir Tank
<input type="checkbox"/> M - GRIPMAXX™	<input type="checkbox"/> SWA - Special Hollow Shaft	<input type="checkbox"/> MDP - Magnetic Drain Plug
<input type="checkbox"/> PR - Flange Pilot Removal	<input type="checkbox"/> SWV - Special Solid Shaft	<input type="checkbox"/> ADP - Additional Drain Plug

4 Input Shaft	NEMA Adapter	IEC	Integral 60 Min. Duty Motors		Integral Premium Efficient Motors			Scoop	Motor Platform	Servo Adapter (Keyed)
W	N56C	IEC 63	63S/4 - 0.16hp	100LA/4 - 5hp	80LP/4 - 1hp	225RP/4 - 40hp	S56	MKN056	SEP 100	
	N140TC	IEC 71	63L/4 - 0.25hp	112M/4 - 5.4hp	90SP/4 - 1.5hp	225SP/4 - 50hp	S140T	MKN140	SEP 130	
	N180TC	IEC 80	71S/4 - 0.33hp	132S/4 - 7.5hp	90LP/4 - 2hp	225MP/4 - 60hp	S180T	MKN180	SEP 165	
	N210TC	IEC 90	71L/4 - 0.50hp	132M/4 - 10hp	100LP/4 - 3hp	250WP/4 - 75hp	S210T	MKN210	SEP 215	
	N250TC	IEC 100	80S/4 - 0.75hp	160M/4 - 15hp	112MP/4 - 5hp	280SP/4 - 100hp	S250T	MKN250	SEP 300	
	N280TC	IEC 112	80L/4 - 1hp	160L/4 - 20hp	132SP/4 - 7.5hp	280MP/4 - 125hp	S280T	MKN280	Servo Adapter (Clamp)	
	N320TC	IEC 132	90S/4 - 1.5hp	180MX/4 - 25hp	132MP/4 - 10hp	315SP/4 - 150hp	S320T	MKN320		
	N360TC	IEC 160	90L/4 - 2hp	180LX/4 - 30hp	160MP/4 - 15hp	315MP/4 - 175hp	S360T	MKN360	SEK 100	
		IEC 180	100L/4 - 3hp	200LX/4 - 40hp	160LP/4 - 20hp	315RP/4 - 200hp			SEK 130	
		IEC 200			180MP/4 - 25hp	315LP/4 - 250hp			SEK 165	
		IEC 225			180LP/4 - 30hp				SEK 215	
		IEC 250							SEK 300	
		IEC 280								
		IEC 315								

Product Specifications

<p>Ratio</p> <input type="text"/> : 1 see pages 101 - 149 — OR — <p>Output Speed</p> <input type="text"/> rpm see pages 101 - 149	<p>Mounting Position</p> <input type="radio"/> M1 <input type="radio"/> M2 <input type="radio"/> M3 <input type="radio"/> M4 <input type="radio"/> M5 <input type="radio"/> M6 <input type="radio"/> Special _____		<p>Paint</p> <input type="radio"/> Standard Stainless Steel Paint <input type="radio"/> NSD+ (gray) <input type="radio"/> NSD+W (white) <input type="radio"/> NSD-X3 (gray) <input type="radio"/> NSD-X3W (white) <input type="radio"/> Casting Primed <input type="radio"/> Special _____	<p>Lubricant</p> <input type="radio"/> Standard <input type="radio"/> Synthetic <input type="radio"/> Food Grade <input type="radio"/> Other _____
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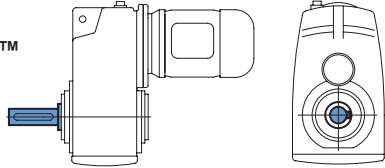
<p>Shaft Diameter (If required)</p> <input type="text"/> see pages 278 - 285	<p>B5 Flange Diameter (If required)</p> <input type="text"/>	<p>SCP Drive Shaft Diameter (If required)</p> <input type="text"/> see page 83
--	---	--

Voltage & Frequency		Terminal Box Position	Conduit Entry Location	Hand Release Position
Single Speed Motors	Two Speed Motors	<input type="radio"/> TB1 <input type="radio"/> TB2 <input type="radio"/> TB3 <input type="radio"/> TB4 	<input type="radio"/> CE I * <input type="radio"/> CE II <input type="radio"/> CE III * <input type="radio"/> CE IV  *Brakemotor	<input type="radio"/> HL1 <input type="radio"/> HL2 <input type="radio"/> HL3 <input type="radio"/> HL4 

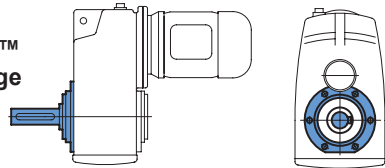


Examples of Clincher Shaft Mount™ with Solid Shaft Design

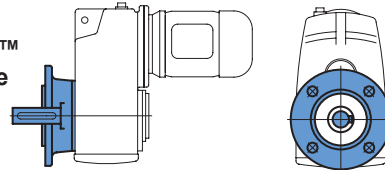
SK 1282V - 90 L/4
Clincher Shaft Mount™
Solid Shaft
Two Stage



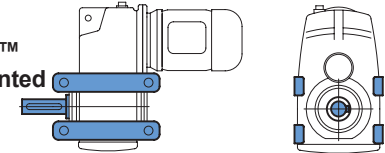
SK 1282 VZ - 90 L/4
Clincher Shaft Mount™
Solid Shaft, B14 Flange
Two Stage



SK 1282 VF - 90 L/4
Clincher Shaft Mount™
Solid Shaft, B5 Flange
Two Stage

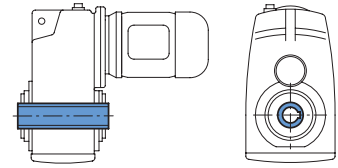


SK 1282 VX - 90 L/4
Clincher Shaft Mount™
Solid Shaft, Foot Mounted
Housing, Two Stage

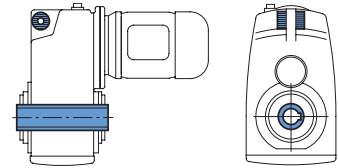


Examples of Clincher Shaft Mount™ with Hollow Shaft Design

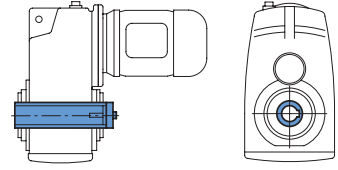
SK 1282A - 90 L/4
Clincher Shaft Mount™
Hollow Shaft
Two Stage



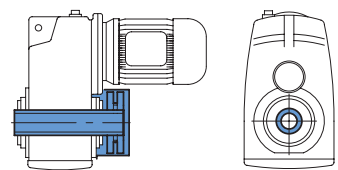
SK 1282AG - 90 L/4
Clincher Shaft Mount™
Hollow Shaft,
Rubber Buffers
Two Stage



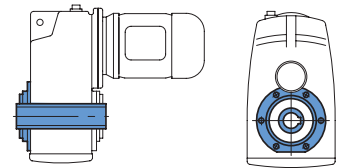
SK 1282AB - 71 S/4
Clincher Shaft Mount™
Hollow Shaft,
Fixing Element Kit
Two Stage



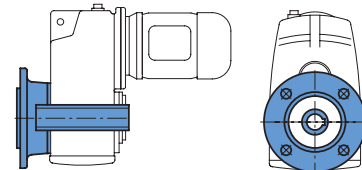
SK 1282ASH - 90 L/4
Clincher Shaft Mount™
Hollow Shaft, Shrink Disc,
Shrink Disc Cover
Two Stage



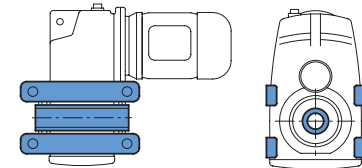
SK 1282AZ - 90 L/4
Clincher Shaft Mount™
Hollow Shaft, B14 Flange
Two Stage



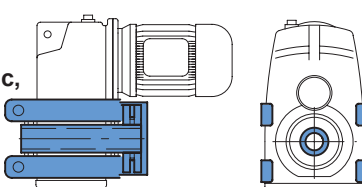
SK 1282AF - 90 L/4
Clincher Shaft Mount™
Hollow Shaft, B5 Flange
Two Stage



SK 1282AX - 90 L/4
Clincher Shaft Mount™
Hollow Shaft,
Foot Mounted Housing
Two Stage



SK 1282AXSH - 80 L/4
Clincher Shaft Mount™
Hollow Shaft, Shrink Disc,
Shrink Disc Cover,
Foot Mounted Housing
Two Stage





Gearbox Selection

A number of factors are considered when selecting a gear unit, including gearbox rating, service factor, speed and speed variation, horsepower, thermal capacity, ratio, physical size, ambient conditions and cost. Below are some guideline steps to help aid in the gear unit selection.

Selection steps

1. Determine the speed and/or gear ratio
2. Determine the required power or torque
3. Determine Service Factor
4. Select the basic gearbox type and input
5. Determine the required mounting position
6. Select options
7. Checks – overhung load, thrust load, NEMA motor weight, thermal considerations, and other application considerations

1. Determine the speed and/or gear ratio

The first step in selecting a gear unit is determining the final output speed or speeds you need. This speed is normally described in revolutions per minute (rpm). This output speed or speeds is determined by the input speed to the gear unit divided by its gear ratio. Their relationship is described by the following formulas.

$$i \text{ (gear ratio)} = \frac{\text{Input speed [rpm]}}{\text{Output speed [rpm]}}$$

$$\text{Output speed [rpm]} = \frac{\text{Input speed [rpm]}}{i \text{ (gear ratio)}}$$

To specify a gear unit, you can identify either gear ratio needed or the output speed (rpm) if the input speed is known.

2. Power and Torque

The second step for selecting a gear unit is the required power or torque needed to power the load. Torque in this catalog is normally expressed in pound-inches [lb-in].

$$\text{Power [hp]} = \frac{\text{Torque [lb-in]} \times \text{speed [rpm]}}{63025}$$

$$\text{Torque [lb-in]} = \frac{\text{Power [hp]} \times 63025}{\text{speed [rpm]}}$$

For a proper selection, please ensure that the motor or other prime mover can produce enough torque or power and that the gear unit has adequate torque or power capacity. You must also consider if the power or torque is specified at the input or output of the gear unit. The Helical-worm gear units have lower efficiency than in-line or bevel gear units, therefore helical-worm products efficiency may need to be considered in the selection.

To specify a gear unit you can identify your selection with either torque or power.



3. Service Factor or Service Class

In addition to power or torque, service factor must also be considered. A service factor is essentially the ratio of extra capacity in a gear unit compared to the power or torque that is needed to run that application. The goal of selecting a gear unit with extra capacity (service factor) is to provide adequate service life in operation.

One reason to apply a larger service factor is if a unit operates more hours per day. If a unit runs 24 hours per day it should normally have a higher service factor than a unit that runs 8 hours per day if you expect the same calendar life.

A second reason for applying a larger service factor is to cope with a more difficult application. Even if it takes the same power and speed to operate a rock crusher as it does a fan, the rock crusher needs a stronger gearbox (higher service factor) to give the same operating life as the gear unit powering the fan.

The following are four possible methods of service factor specification.

a. Customer or User Specification

Many customers will have their own service factor guidelines or specifications.

b. AGMA Service Factoring

American Gear Manufacturers Association (AGMA) publishes lists of recommended service factors for different applications. These service factor recommendations have been determined from the experience of many gear manufactures and are in AGMA standard 6010. See page 46 for additional detail.

c. AGMA Service Classes

American Gear Manufactures Association (AGMA) has another method for selecting gear units service factors. AGMA standard 6009 lists many applications by a service class (I, II, III) with class I being the simplest applications and class III being the hardest. These application service classes are associated with a range of service factors by the following table.

AGMA Service Class	Service Factor
I	1.00 to 1.39
II	1.40 to 1.99
III	2.00 and above

In the gearmotors selection table each unit is also classified by an AGMA service class. See page 42 for additional detail.

d. NORD Mass Acceleration Service Factoring

NORD often uses a calculation based system to properly assign a service factor. This system considers hours of operation per day, the severity of the application and the number of times the equipment is cycled. See page 40 for additional detail.

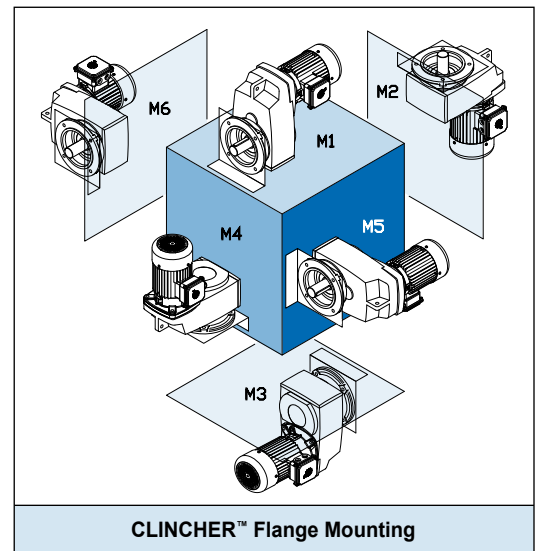
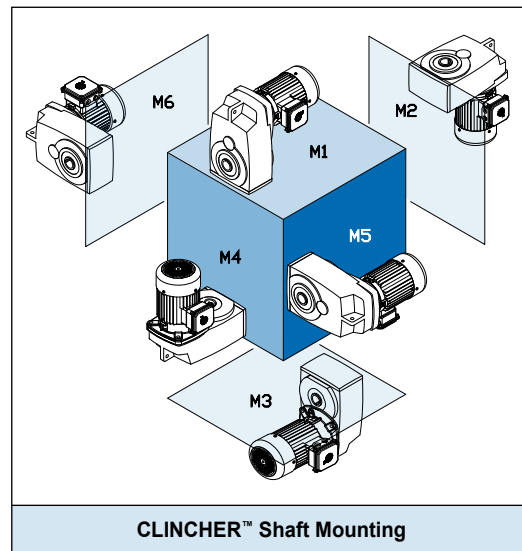
4. Gearbox Input

NORD's modular design allows for a number of different inputs to be added to our reducers including:

- Integral motor
- NEMA-C and IEC motor adapter
- Solid input shaft
- Servo motor adapter
- Scoop mount
- Motor mount platform

5. Mounting Position

The gearbox mounting position is an important and often overlooked specification. The mounting position determines how much oil the gear reducer requires, in addition to determining the position of the oil drain, oil fill and vent on the gear drive. NORD offers six basic mounting positions. If your application requires a variation from the six basic mounting positions, please contact NORD.



6. Options

NORD offers a number of mechanical, protective, and paint & lubrication options for our gear reducers & motors. Please see page 70 for gear unit options & refer to page 300 for motor options.



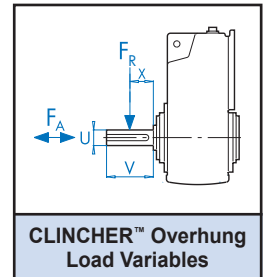
7. Checks

a. Overhung Load

An overhung or radial load exists when a force is applied at right-angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and where it is located on the shaft.

Overhung load [FR] can be found in the gearmotor rating tables and input shaft overhung load ratings [FR1] can be found on pages 31 - 38. Overhung load capacities should not exceed the values in the table to ensure long bearing life. Overhung load capacities are to be applied at the midpoint of the shaft extension and without thrust loads.

To calculate overhung load see page 31.



b. Thrust Loads (Axial)

Loads that are directed towards or away from the gearbox along the axis of the shaft are called thrust or axial loads. Output shaft thrust capacity [FA] can be found in the gearmotor rating tables. Input shaft capacity [FA1] can be found on pages 34. Thrust load capacities should not exceed the values listed in the tables to ensure long bearing life. Thrust load capacities are listed for pure axial loads with no overhung load. Contact NORD for combination loads or a more exact examination of the application.

c. C-face Motor Weight Limits

When mounting a motor to a NORD motor adapter it is important to consider the motor's weight. The following are tables that includes the maximum motor weight the NEMA or IEC adapters can support. If the motor exceeds the listed weight it must be externally supported. When a C-face mounted motor is externally supported care must be taken to ensure that the support system does not impose additional pre-loads on the motor adapter.

NEMA Motor Weight Limit

Motor FRAME	56C	143TC	145TC	182TC	184TC	210TC	250TC	280TC	324TC	326TC	365TC
Max Motor Weight [lb]	66	88	110	130	175	220	440	550	770	1100	1540

IEC Motor Weight Limit

Motor FRAME	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Max Motor Weight [lb]	55	66	88	110	130	175	220	440	550	770	1100	1540	2200	3300



General Warnings & Cautions

Applications with risk of personal injury should be reviewed together with NORD. Examples include hoists, lifts or other applications where people may be at risk.

Vertical Reducer Mounting Positions

Gear units and gear motors may be mounted in positions with vertical shafts. For these mounting positions, the gear units are filled with increased amounts of lubricant. In some instances they may also be equipped with specially sealed, grease lubricated bearings. Gear units with vertical shafts have increased oil-splashing-losses resulting in a higher temperature rise during operation.

Consult NORD for determination of the thermal power capacity if the gear reducer is mounted as follows:

- In the reducer in upright or standing mounting position (M2 or M4).
- Right-angle reducer with vertical-down or vertical-up output-shaft mounting position (M5 or M6).

Page 18 displays the mounting positions.

Vertical Motor or Vertical Input Shaft

Gear reducers mounted in M4 position or with the motor or input shaft vertical-up are designed with a higher oil level in order to assure the lubrication of the first stage gearing. These operating conditions result in increased oil churning or splashing losses and additional heating inside the gear unit.

For these applications it is critical to consider whether or not an Oil Expansion Chamber (OA) or Oil Reservoir Tank (OT) is required. Please consult pages 55-30.

Ventilation

Gear units (except for SK0182NB, SK0282NB and SK 1382NB) typically include a vent to compensate for the difference in air pressure between the interior of the gear unit and its environment. The standard open vent and optional pressure vent are sealed for delivery with a transportation plug that must be removed prior to the reducer's activation.

Multi-stage Gear Units

With 4-, 5-, 6-stage multi-stage gear units, there are additional no-load loss due to the added rotating parts and the relatively small drive input power. Thus, a no-load loss of approximately 40 watts for 4-pole motors up to 1 HP (0.75 kW) is accounted for in the performance tables.



NEMA and IEC Adapters

NEMA/IEC adapters have an additional shaft coupling and additional bearing seats compared to integral motors. This means that there are higher no-load losses with NEMA or IEC adapters. We recommend mounting the motor directly, since it offers technical and cost advantages.

NEMA and IEC adapters used in hoist, lifts and other applications with danger of personal injury should be reviewed together with NORD.

NEMA C-Face Adapter Capacity

The NEMA adapters are designed to handle the torques produced by the standard NEMA power assignment at 4 pole (1800 rpm) motor speeds. If a larger motor power is used than the power below NORD should be consulted. Also if a NEMA adapter is being used for other than an AC induction motor NORD should be consulted.

Adapter	Max Power [hp]	Adapter	Max Power [hp]
56C	1	250TC	20
140TC	2	280TC	30
180TC	5	320TC	50
210TC	10	360TC	75

Overload Conditions

Loads that exceed the gearbox ratings are considered overloads. An overload may either be momentary or periodic in duration, as well as quasi-steady or vibratory in nature. The load magnitude and the number of stress cycles need to be considered and analysis is required to prevent low-cycle fatigue or yield stress failure.

Refer the following load conditions to the factory:

- The peak momentary or starting load exceeds 200% percent of gear unit's rated capacity.
- Frequent load reversals occur and develop high peak torques during the changes in load direction.
- Heavy repetitive shock loads may occur.
- When high-energy loads must be absorbed and high peak torques develop, such as when stalling conditions occur.



Oversized Prime Movers

High torque motors or oversized prime movers are sometimes needed to overcome high energy loads. Recommended operating service factors do not cover instances where oversized prime movers are required. These applications should be reviewed by the factory.

Variable Speed or Multi-Speed Applications

Gear reducer ratings in this catalog are based upon single speed operation of the gear unit. When selecting gear drives for multi-speed or variable speed applications, determine the speed at which the greatest torque is developed and make the initial selection of the gear drive on that basis.

The following information is essential in order for NORD to verify adequate oil distribution, thermal capacity and whether or not there is any need for an oil distribution system or special cooling options:

- Indicate the operating speed requirements and gear ratio.
- Provide the minimum and maximum speeds along with the speed duration cycles.

NORD Gear specifies different oil levels for various gear reducer sizes, speeds, ratios and mounting positions; If one intends to operate an existing gear drive at a different speed from those shown on the nameplate, the full application and nameplate information must be reviewed by the factory.

Brake Equipped Applications

When a brake is either supplied between the motor and the prime mover or included with a motor, the gear drive must be selected by either the brake's rating or the highest equivalent input power, whichever is greater. If the brake rating is higher than 200% of the rated gear unit capacity or if the brake is located on the output shaft of the gear drive, the application should be reviewed by the factory.



Protection against Moisture

Wet or Damp Outdoor Installation

Special seals and anti-corrosion measures are required for installation outdoors, in wet or damp environments or in tropical climates.

Exposure to Solar Heating

If a drive is exposed to radiant or solar heating, while operating in the sun at ambient temperatures of 104°F (40°C) or higher, then special protection measures are recommended. This protection can consist of a canopy over the gear drive or reflective paint on the gear drive. If neither is possible, a heat exchanger or other cooling device may be required.



Protection against Solar Heating



Special Conditions

Consideration must be taken during unit selection when special environmental or extraordinary conditions are present during transportation, storage or operation. Please consult NORD for assistance. Special conditions may include (but are not limited to):

- Exposure to aggressive corrosive materials (contaminated air, gasses, acids, bases, salts, etc.).
- Exposure to very high relative humidity (installed outside, in damp rooms, or used in tropical environments).
- Direct contact between the motor and liquid.
- Material build-up on the gear unit or motor (dirt, dust, sand, etc.).
- High atmospheric pressure.
- Radiation exposure.
- Extreme high or low temperatures or large temperature fluctuations.
- High vibration, rapid accelerations or decelerations, shock or impact.
- Other abnormal conditions



Special Applications

Severe operating conditions typically apply for gear drive applications such as agitators, mixers, ventilators, fans, and cooling towers.

Often these applications may involve one or more of the following operating conditions:

- 24-hour continuous operation at or near full-load motor power or full-load torque.
- A large inertia or moving mass at the reducer output with a small gear ratio generating very high load conditions at the reducer's input.
- Vibrations may be common, such as those found when an external drive chain or belt is used.
- A direct gear drive connection to a mixer or fan shaft that produces high oscillating and bending movements as well as high load forces to the reducers drive shaft and internal bearings.
- Vertical reducer configuration is needed & special reducer options are often necessary.
- Outdoor installation (i.e. humidity and aggressive media, as well as sudden changes in temperature with the possibility of condensation).
- A high degree of environmental protection is required (special sealing, biodegradable oil, special maintenance and servicing needs, low noise, etc.).

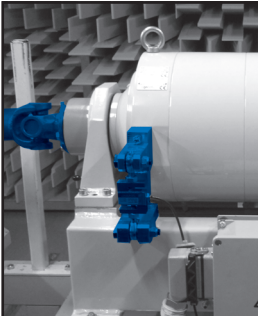
NORD has experience with many unique applications and has developed a package of design options in order to meet these requirements. Please consult NORD when selecting a gear unit for special applications.

Storage Before Installation

The gear units and motors should be stored in a dry area before they are to be installed. Special measures are required for longer storage. Please request long term storage instructions from NORD Gear or from the NORD web site.



Gear Reducer Ratings



A torque dynamometer set up for operation in our test facility

The permissible continuous power limit of gear reducers is limited by both the mechanical rating and the thermal rating. The mechanical rating depends upon the material strength of the gear reducer's gears, bearings, housing, shafts, etc. The mechanical input power limit to the reducer is also a function of the mechanical power rating divided by the relevant reducer service factor.

The thermal rating or thermal limit depends upon the amount heat generated within the reducer and is influenced by a variety of factors including:

- Churning or splashing losses in the lubricant which depend upon reducer type, ratio, input style, mounting position or oil fill-level, and the circumferential travel velocities of the gear wheels.
- The actual speed and load conditions. These factors determine load-dependent losses in the gears and frictional losses in the gears, bearings and seal areas.
- Ambient Conditions:
 - Ambient Temperature.
 - Amount of free air circulation around the drive.
 - Possible near-by heat sources.
 - Heat dissipation or the ability of the reducer to transfer heat through the housing, shafts, and the mating sub-structure or mounting surface.

Observing the Reducer's Thermal Limit

When to Contact NORD

Through computer program analysis NORD can evaluate application conditions and the impact they have on a reducer's thermal capacity.

When applying helical in-line, Clincher™ shaft mount, & helical-bevel gear units of case sizes 6 & larger (SK62, SK6282 and SK9072.1 and larger), consult NORD if any two or more of the following conditions apply:

- Gear ratio, $i_{total} \leq 24:1$ or $\leq 48:1$ for helical-bevel units
- Input power, $P_1 \geq 60$ hp (45 kw)
- Input speed, $n_1 > 1800$
- Vertical positioning (mounting position M2 or M4)
- Input configuration: NEMA C-face, IEC, servo adapter or solid-shaft input (Type-W)
- Elevated ambient temperature $\geq 86^\circ$ F (30° C)

Advise NORD of any special application considerations:

- Confined space or limited air circulation
- Exposure to other near-by radiant heat sources
- Dirty or dusty environments
- High altitude operation $> 3,280$ ft (1000 m) a.s.l.



Special considerations may be taken for operation in extreme thermal environments



Dangers of Reducer Overheating

The following problems may result when a reducer’s thermal capacity or maximum oil sump temperatures are exceeded:

- Lubrication oxidation, breakdown & deterioration.
- A decrease in lubrication viscosity & film thickness.
- Loss of critical bearing and gear clearances required for proper lubrication.
- Increased contact pressures & increased operating temps. in the critical load zones of the gearing and bearings.
- An increased possibility for metal-to-metal contact and premature component wear.
- A significant reduction in the lubricant’s ability to prevent scuffing, pitting, and in extreme cases galling or welding.

Maximum Oil Sump Temperature Limit

To prevent reducer overheating, the reducer’s maximum oil sump temperature limit must not be exceeded for prolonged periods of operation (up to 3 hours continuous operation, depending upon reducer size).

Oil Type	Maximum Oil Temperature Limit	
	NORD	AGMA 9005-D94
Mineral	80-85 °C (176-185 °F)	95 °C (203 °F)
Synthetic	105 °C (220 ° F)	107 ° C (225 ° F)

Measures to Expand the Application Range

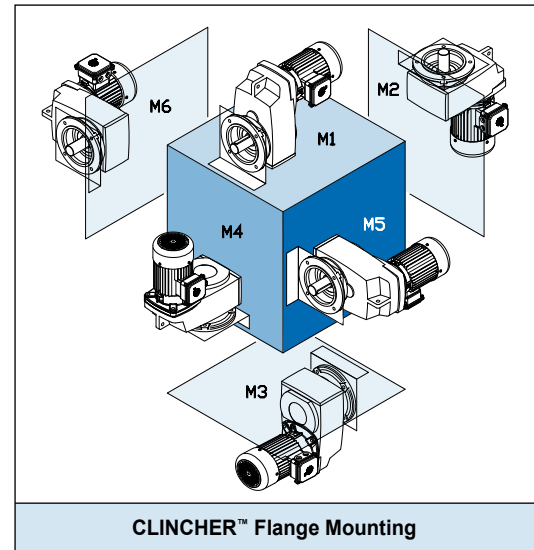
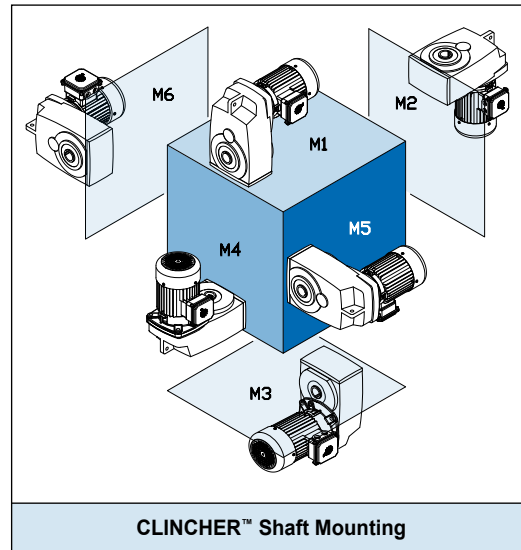
There are a variety of measures that may be taken in order to protect against thermal overload and expand the application range of the gear reducer. Common examples include the following:

- Recommending a change in lubrication viscosity and/or a specific synthetic lubricant type.
- Applying high-temperature seals.
- Increasing air flow around the gear unit.
- Protecting the reducer from high heat sources.
- Considering an integral motor instead of the bolt-on input assembly covers. In many cases the motor fan will substantially increase air-flow around the gear unit.
- Add an Oil Expansion/Overflow Chamber (Option “OA”) or an Oil Reservoir (Option “OT”).
- Oil Cooler (Option “OC”).
- Water Cooling Cover (Option “WC”)



Mounting Positions

The reducer mounting position determines the approximate oil fill level and the appropriate vent location. In some cases mounting position may dictate possible variation in final reducer assembly. If considering any mounting positions that are not shown as catalog-standard options, it is critical that the customer consult with NORD prior to ordering.



Mounting Configuration

NORD provides gearmotors, speed reducers and motors that can be configured very flexibly to suit customer needs. When ordering it is beneficial that the drive be specified exactly the way you want it delivered.

Mounting Positions

Basic mounting					
<input type="radio"/> M1	<input type="radio"/> M2	<input type="radio"/> M3	<input type="radio"/> M4	<input type="radio"/> M5	<input type="radio"/> M6

Terminal box location	
<input type="radio"/> Terminal Box Pos. 1	<input type="radio"/> Terminal Box Pos. 3
<input type="radio"/> Terminal Box Pos. 2	<input type="radio"/> Terminal Box Pos. 4

Conduit entry location	
<input type="radio"/> Conduit Entry - I*	<input type="radio"/> Conduit Entry - III*
<input type="radio"/> Conduit Entry - II	<input type="radio"/> Conduit Entry - IV



ATEX Definitions

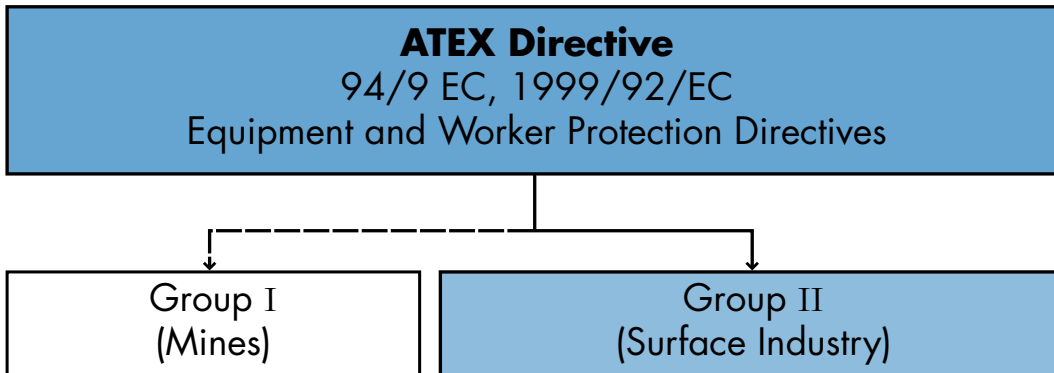
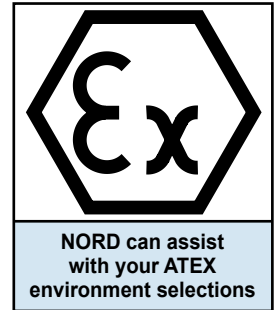
Group

The ATEX directive distinguishes between two equipments groups. Group I applies to equipment intended for use in mines and Group II applies to all other areas or the surface industry. NORD offers drives for Group II.

Category

The equipment category distinguishes the level of equipment protection needed and if the protection is for gas-air or dust-air mixtures. ATEX distinguishes three category levels; 1, 2 and 3 based upon the duration of exposure to a potentially explosive atmosphere with category 1 being the most dangerous.

Following the category number is a letter G for gas or D for dust. If dust-air hazards are present, the dust must be classified as electrically conductive or electrically non-conductive. NORD offers drives for categories 2G, 2D, 3G and 3D for both conductive and non-conductive dust areas.



Zones

ATEX guideline 1999/92/EC requires plant operators and approved authorities to classify places at the workplace where explosive atmospheres may occur into hazardous or non-hazardous areas. Hazardous areas are further divided into zones. Atmospheres with gas-air mixtures are divided into zones 0, 1, and 2 with zone 0 being the most hazardous. Atmospheres with dust-air mixtures are divided into zones 20, 21, and 22 with zone 20 being the most hazardous.

The relationship between workplace Zones and equipment Categories is defined in the table below.

Zone (workplace)	Category (equipment)	Atmospheric Hazard	Definition	Exposure (hrs/year)	Does NORD offer drives?
0	1G	Gas	Explosive atmosphere is present continuously or frequently due to malfunctions.	> 1000	No
20	1D	Dust			
1	2G	Gas	Explosive atmosphere is present occasionally or due to anticipated malfunctions.	10 - 1000	Yes
21	2D	Dust			
2	3G	Gas	Explosive atmosphere is unlikely to occur in normal operation & if it occurs, it will be for a short period of time.	< 10	Yes
22	3D	Dust			



Production Type

Following the equipment category in the explosion protection declaration is the lower case letters that indicate the exact protection type of the equipment. Depending on the zone and equipment category different solutions are possible.

Motors:	
Flameproof enclosure	d
Increased safety	e
Non-sparking	n

Gear Units:	
Constructional safety	c
Liquid immersion	k

Flameproof Enclosure “EEx d”

Flameproof motors are designed with stronger walls and specific ignition gaps to prevent internal explosions from transmitting to the surrounding atmosphere. Flameproof motors are frequently used for inverter operations, brakes, encoders and when a very high degree of safety is required. Specifically flameproof motors:

- Have housings that can withstand internal explosion pressures
- Have ignition gaps designed to dissipate the pressure arising from an internal explosion
- Are designed so that generated hot gases are significantly cooled by the time they escape the motor body so they do not potentially ignite the potentially explosive environment

Increased Safety “EEx e”

Increased safety motors are designed with higher quality insulation and larger clearances between rotating parts. This prevents sparking as well as high surface and internal temperatures even during motor malfunction. Increased safety motors are less expensive than flameproof motors, but use special windings that generally result in lower performance than flameproof motors.

Non-Sparking “EEx n”

Non-sparking motors resemble increased safety “e” motors, but do not achieve the same protection level. They do however have the same power output of flameproof motors and can be used in conjunction with approved inverters.

Constructional Safety “EEx c”

Construction safety for gear units takes into account measures including ignition protection from hot surface temperatures, sparks, moving parts and adiabatic compression even under expected gear unit failures. NORD provides gear units with constructional safety protection.

Liquid Immersion “EEx k”

Liquid immersion protection type “k” ensures partial or complete submersion in a protective fluid or constant wetting of a potentially combustible surface.



ATEX Temperature Specification

In a dust-air mixture surface temperature is a critical thermal factor, therefore the maximum surface temperature is declared based upon the dust type that is present. The goal is to keep surface temperatures below the smoldering and ignition temperature of a dust-air mixture. NORD displays a maximum surface temperature on the reducer nameplate, typically 125°C.

Gas-air mixtures are grouped into temperature classes. The following table shows the maximum surface temperature and temperature ignition ranges and the for each temperature class.

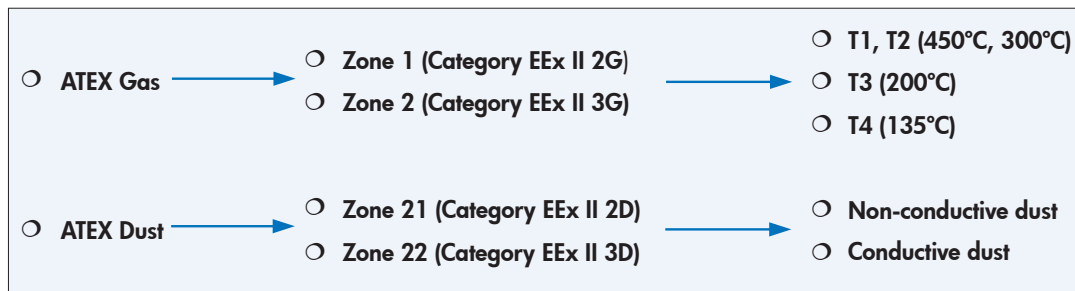
Temperature Class	Maximum Surface Temp. °C	Ignition Temperature °C
T1	450	> 450
T2	300	300 ... 450
T3	200	200 ... 300
T4	135	135 ... 200
T5*	100	100 ... 135
T6*	85	85 ... 100

* Not satisfied with AC gear drives

ATEX unit Selection

Since the selection of gear units for hazardous locations requiring ATEX certification can be somewhat confusing, NORD has simplified the process.

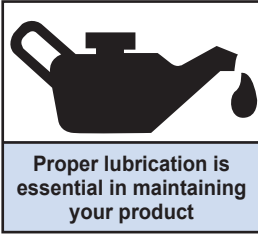
1. Select a gear unit based upon power, speed and service factor
2. Contact NORD to request the ATEX inquiry form. The form is also available at nord.com.
3. Fill in the ATEX inquiry form
 - Select the hazard, Gas or Dust
 - Select the zone
 - Select the temperature class (for gas) or select electrically conductive or non-conductive for dust hazards



4. Return the completed ATEX inquiry form found online at
5. NORD engineers will review your selection to ensure it conforms to ATEX guidelines
6. If you selection is approved, customer service will quote the unit. If not, NORD engineers will make additional recommendations.

ATEX Documentation

ATEX applications require more documentation than gear drive equipment used in non-hazardous locations. Each ATEX certified NORD gear drive undergoes verification to ensure it will safely operate within the limits of the ATEX specification. NORD stores and supply this document to the customer upon request. In addition, ATEX specific operation & maintenance instructions are included with each equipment delivery in the language of the equipment builder and end user.



Proper lubrication is essential in maintaining your product

The Importance of Proper Lubrication

Proper gearbox lubrication is essential in order to reduce friction and component wear, and protect against corrosion and rust. Gear lubricants reduce heat and wear by inserting a load-sharing “protective fluid film” between mating parts and preventing direct metal to metal contact. Properly selected lubricants will operate under various film conditions, improve heat transfer, optimize reducer efficiency, absorb shock loads, reduce noise, inhibit foaming, and separate water readily.

Design Considerations

Along with many other factors, the gear designer must consider the type of gearing (helical, bevel, worm, etc.), the gear load and speed conditions, and the expected operating oil temperatures. These factors help determine a generally suitable oil category, a desired additive package, preferred base-oil type, and oil viscosity.

It is important that the consumer be aware of these many design factors before making any changes in the critical areas (oil category, base-oil type, viscosity, etc.) One should consult their preferred lubrication supplier or NORD Gear when questions arise.

Gear Oil Types, Categorized by Base Oil

Mineral Oil with an EP Additive (DIN 51517, Type CLP)

High performance mineral gear oils are carefully engineered and manufactured to improve aging characteristics, minimize friction, offer good wear protection, provide corrosion and oxidation resistance, minimize foam, and separate water. Mineral gear oils are classified as API Group I or II oils, depending upon viscosity.

The standard NORD mineral gear oil has an extreme pressure (EP) additive ISO Viscosity Grade EP220 (AGMA 5 EP) and is generally acceptable for helical and helical-bevel gear units. Good quality mineral oil should have the ability to operate at moderate sump temperatures (up to 80-85 °C) without losing viscosity or thickness. A minimum viscosity index (VI) of 93 or higher is suggested. The oil must also have good film strength to handle shock loads, high torque, and start-up conditions. A minimum FZG Scuffing Load Stage 12 is desirable.

Advantages:

- Most economical of all the gear oil types.
- Offers good compatibility with shaft seals, gaskets, paint finishes, etc.
- Offers good corrosion and oxidation protection.
- Effectively reduces internal friction and wear.



Synthetic Oils

Synthetic gear oils are suggested when mineral gear oils have reached their performance limit or when they no longer meet certain application requirements. NORD may recommend synthetic oil for any one of the following conditions:

- Severe duty applications or when gears are exposed to frequent starts and stops, high-load or shock.
- For applications in low or high temperature service.
- To extend oil service interval requirements.
- To eliminate the necessity for seasonal oil changes.
- To extend service life of factory-sealed or maintenance-free gear units.
- To take advantage of performance benefits: shear resistance, low traction coefficient, reduced internal friction, improved lubricity, reduced operating temperatures, improved gear efficiency, etc.

Advantages:

Compared to mineral oils, synthetic oils provide several performance advantages including:

- Ability to operate at higher temperatures without losing viscosity or thickness, due to a much improved viscosity index.
- Improved low-temperature stability due to a lower pour point
- Increased oil change intervals due to superior oxidative and wear resistance
- Lower tendency to form residues and increased resistance to foaming.
- Other benefits may include: very good shear resistance, low traction coefficient, reduced internal friction, improved lubricity, reduced operating temperatures, improved gear efficiency, and extended component life and wear protection.

When application conditions warrant the use of synthetic oil, NORD may suggest a particular type of synthetic oil, depending upon the gear unit type and the application.

Synthetic Hydrocarbon/Polyalphaolefin Oil (DIN 51517, Type CLP-HC)

Synthetic Hydrocarbons (SHC) or Polyalphaolefin (PAO) synthetic base oils offer good miscibility with mineral base oils and are very readily available. SHC/PAO oils are classified as API Group IV oils. They can be formulated with or without anti-wear (AW) or extreme pressure (EP) additives. They can also be formulated for acceptance in food-grade applications.

Advantages:

- Higher viscosity index and therefore greater high-temperature stability than mineral oil.
- Better low-temperature stability and lower pour point than mineral type gear oils
- High surface tension and lower tendency to foam compared to mineral oil, and water-soluble polyglycol gear oils.
- Compatible (miscible) with mineral oil.
- Better water separability demulsibility than PG oils.



Polyalkylene Glycol or Polyglycol Synthetic Oil (DIN 51517, Type CLP-PG)

Polyalkylene glycol or polyglycol (PAG or PG) synthetic gear oils are made readily available through many lubrication suppliers. PG oils are classified as API Group V gear oils. They can also be formulated for acceptance in food-grade applications.

PG gear oils possess extremely low traction coefficients and a viscosity index higher than any of the other synthetics (often greater than 220 VI), resulting in excellent heat resistant, shear stability, and natural anti-wear properties.

Typical PG gear oils are formulated with a 1:1 or higher ratio of ethylene oxide to propylene oxide (50:50 or 60:40 is common); this makes PG gear oils water soluble, providing them with very good corrosion resistance even when water is present in concentrations that are higher than what is normally allowed.

Advantages:

- PG oils offer the highest viscosity index of any other synthetic resulting in excellent heat resistant, shear stability, and superior natural anti-wear properties without requiring EP-additives.
- PG gears oils minimize internal friction and often result in improved gear efficiency.
- PG oils have significantly higher film strength than mineral and SHC/PAO oils and out perform these oils at higher operating oil temperatures (approaching 80°C or higher).



CAUTION



Polyglycol (PG) oils are not miscible with other oil types and should never be mixed with mineral oil, hydrosynthesized synthetic or PAO synthetic oils.

Food-Grade Lubricants

Food-grade lubricants should be manufactured in compliance with FDA 212 CFR 178.3570 and should either satisfy the former 1998 USDA Guidelines as an H1 lubricant or currently qualify as a NSF-H1 lubricant. Please consult with lubrication manufacture for more information or visit www.nsf.org

H1 food grade oil can only contain additives which appear on the FDA “approved list” for food safe compounds. H1 oils are generally absent of common zinc-based AW additives, and sulfur-phosphorus based, EP chemistries, commonly found in many industrial gear oils. Food manufactures control risk and liability by following detailed guidelines outlined by the HACCP (Hazard Analysis and Critical Control Point) program, which includes food-grade H1 lubricants. Food grade H1 lubricants may be formulated as highly refined mineral oils (white oils), SHC/PAO synthetic oils or PG synthetic oils.

The highly refined nature of good-quality food-grade white-oils provides good long-term oxidative stability and in most cases adequate lubrication under high-load (boundary) conditions. So long as food-grade white oils meet the minimum anti-wear requirements of the normally specified non-food grade oil, they are often acceptable. Both food-grade white oils and PAO's have an inherent “purity” and absence of polar compounds, making them better than the average mineral oil or even PG oil in terms of demulsibility (water seperability).

Advantages:

Compared to food-grade white-oils, food-grade synthetic PAO or PG oils typically provide:

- Better wear and oxidation resistance.
- Improved high-temperature characteristics.
- Better cold-temperature behavior.



The Importance of Oil Viscosity

Viscosity or the oil's resistance to shear under load, is often considered the single most important property of any gear oil.

NORD Gear Designers have selected the most appropriate ISO viscosity grade of oil, for each type or class of gear reducer. Gear oil viscosity is selected by assuming typical ambient conditions, at rated speed and load conditions.

Important Considerations:

- The correct viscosity selection helps provide proper lubrication and assures that a minimum film thick-ness is maintained between interacting surfaces.
- The degree to which viscosity changes with temperature or the viscosity index, varies from oil to oil, and depends upon the type of lubricant and additive agents used.
- Selecting too low of a viscosity can result in mixed-boundary (partial metal-to metal contact) or boundary lubrication (full metal-to-metal contact) conditions, increasing internal friction heat build-up and wear.
- Selecting too high of a viscosity results in increased churning and squeezing losses in the load zone and excessive heat (especially when peripheral gear speeds are high); Ultimately, this causes the oil temperature to rise and the viscosity to go down, decreasing the effectiveness of the lubricant.

Considering an Oil Viscosity Change

There are three primary reasons to consider a lubrication viscosity change as follows:

1. Low temperature gear oils should be selected so that the pour point is at least 9°F (5°C) lower than the expected minimum ambient temperature. In extreme cases, consider a lower ISO Viscosity rating and test the critical performance of the gear box under cold start-up.
2. High temperature applications may require an increase in the lubricants viscosity to assure proper lubrication conditions in the critical load zones of the gear unit. NORD also recommends switching to synthetic oil if oil sump temperatures exceed 176-185 °F (80-85 °C).
3. In cases of extreme load conditions, gear pairs and antifriction bearings may be more susceptible to scuffing wear. In these operating conditions, it may be beneficial to consider an increased lubrication viscosity and/or lubrication with improved antiwear additive packages.

NORD recommends that the user consult with their primary lubrication supplier when considering changes in oil viscosity.

Maximum Oil Sump Temperature Limit

To prevent reducer overheating, the reducer's maximum oil sump temperature limit must not be exceeded for prolonged periods of operation (up to 3 hours continuous operation, depending upon reducer size).

Oil Type	Maximum Oil Temperature Limit	
	NORD	AGMA 9005-D94
Mineral	80-85 °C (176-185 °F)	95 °C (203 °F)
Synthetic	105 °C (220 ° F)	107 ° C (225 ° F)



Lubrication Types

Proper gearbox lubrication is essential in order to reduce friction, heat, and component wear. Lubricants reduce heat and wear by inserting a protective “fluid boundary” between mating parts and preventing direct metal to metal contact. Lubricants also help prevent corrosion and oxidation, minimize foam, improve heat transfer, optimize reducer efficiency, absorb shock loads and reduce noise.

Mounting position not only determines the proper fill-level but may also have some effect on final reducer assembly. If considering any mounting positions that are not shown as catalog-standard options, it is critical that the customer consult with NORD prior to ordering. Unless otherwise specified, NORD supplies most all gear units (*) factory-filled with the standard lubrication type and the appropriate amount of lubricating oil.

* Gear units SK10382, and SK11382 are supplied without oil.

Standard Oil Lubricants				
ISO Viscosity	Oil Type	Ambient Temperature Range	Manufacturer Brand/Type	Notes
VG220	MIN-EP	0 to 40°C (32 to 104°F)	Mobilgear 600XP220	①
	PAO-EP	-35 to 60°C (-31 to 140°F)	Mobil SHC Gear 220	②
	FG	-5 to 40°C (23 to 104°F)	Fuchs FM220	③

Optional Oil Lubricants

ISO Viscosity	Oil Type	Ambient Temperature Range	Manufacturer Brand/Type	Notes
VG460	PAO-EP	-35 to 80°C (-31 to 176°F)	Mobil SHC Gear 460	-
	FG-PAO	-35 to 80°C (-31 to 176°F)	Mobil SHC Cibus 460	-
VG220	FG-PAO	-35 to 60°C (-31 to 140°F)	Mobil SHC Cibus 220	③
VG150	PAO-EP	-35 to 25°C (-31 to 77°F)	Mobil SHC Gear 150	-

Grease Options (applied to greased bearings and seal cavities)

NLGI Grade	Grease Thickener	Grease Base Oil	Ambient Temperature Range	Manufacturer Brand/Type	Notes
NLGI 2	Li-Complex	MIN	-30 to 60°C (-22 to 140°F)	Mobil Grease XHP222	①
	Li-Complex	PAO	-40 to 80°C (-40 to 176°F)	Mobil / Mobilith SHC 220	②
	Polyurea	FG-PAO	-30 to 80°C (-22 to 176°F)	Mobil SHC Polyrex 222	③

③ Stocked Lubricants

- ① Standard product on serviceable gear units
- ② Standard product on maintenance free gear units ordered with and on units ordered with synthetic gear oil.

Oil Formulation Codes

MIN-EP	Mineral Oil with EP Additive
PAO	Synthetic Polyalphaolefin Oil
PAO-EP	Synthetic Polyalphaolefin Oil with EP Additive
FG	Food-Grade Oil
FG-PAO	Food-Grade, Synthetic Polyalphaolefin Oil

IMPORTANT NOTES		
⚠	<ul style="list-style-type: none"> ■ Food grade lubricants must be in compliance with FDA 212 CFR 178.3570 and qualify as a NSF-H1 lubricant. Please consult with lubrication manufacture for more information. ■ When making a lubrication change, check with the lubrication supplier to assure compatibility & to obtain recommended cleaning or flushing procedures. ■ Do not mix different oils with different additive packages or different base oil formulation types. Polyglycol (PG) oils are not miscible with other oil types and should never be mixed with mineral oil, or Polyalphaolefin (PAO) oil. ■ Please Consult NORD if considering cold-temperature oils below an ISO Viscosity VG100 or lower. 	⚠



Ventilation

Most gear reducers (except for SK0182NB, SK0282NB and SK1382NB) are equipped with a vent which helps compensate for air pressure differences between the inner space of the gear unit and the atmosphere.

The spring-pressure vent (AUTOVENT™) is commonly supplied and factory-installed. Normally open vents may also be supplied as an option; normally-open vents are closed upon delivery in order to prevent oil leakage during transport. When normally open vents are supplied, the sealing plugs must be removed prior to commissioning the reducer.

Prior to reducer start-up, it is important to check the maintenance manual to verify that the vent is properly located with respect to mounting position.

Mounting Position

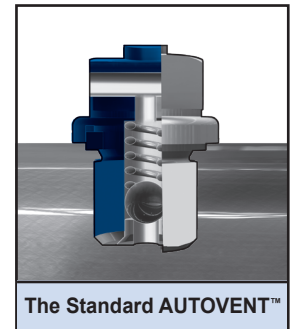
The reducer mounting position determines the approximate oil fill-level and the appropriate vent location. In some cases mounting position may dictate possible variation in final reducer assembly.

If considering any mounting positions that are not shown as catalog-standard options, it is critical that the customer consult with NORD prior to ordering.

Oil Fill Quantities

Oil fill quantities shown in the catalog or maintenance instructions are approximate amounts. The actual oil volume varies depending upon the gear ratio. Prior to commissioning the reducer, the oil-fill level should be checked using the reducer's oil-level plug. It may be necessary to drain excess oil or add additional oil.

Unless otherwise specified, NORD supplies most all gear units factory-filled with the standard lubrication type per the specified mounting position. Gear units SK10382.1, and SK11382.1, are supplied without oil.





Lubrication Replacement

If the gear unit is filled with mineral oil, the lubricant should be replaced at least after every 10,000 operating hours or after every two years. If the gear unit is filled with synthetic oil, the lubricant should be replaced at least after every 20,000 operating hours or after every four years.

Often gear reducers are exposed to extreme ambient conditions, hostile environments, wet conditions, or dirty and dusty operating areas. Especially in these situations, it is important to change the reducer lubricant more often than what is suggested as a typical guideline.

The Importance of Routine Oil Analysis

Routine oil analysis, sound lubrication practices, and good tracking of oil performance trends as related to specific equipment, will help establish proper lubrication maintenance and change-out intervals.

To maximize equipment reliability, NORD Gear generally recommends a condition-based lubrication maintenance program. One may take exceptions to this general recommendation on sealed-for-life or maintenance-free gear units or smaller and less costly gear units. In these instances, the replacement cost of the gear unit is often small compared to the costs associated with this type of oil analysis program.

NORD suggests replacing the gear oil if oil analysis indicates any of the following:

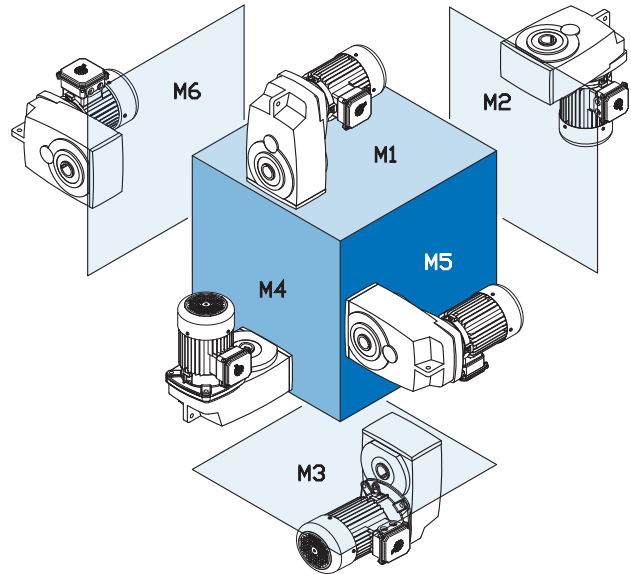
- Viscosity has changed by approximately 10% or more.
- Debris particles (silicon, dust, dirt or sand) exceed 25 ppm.
- Iron content exceeds 150-200 ppm.
- Water content is greater than 0.05% (500 ppm).
- Acid number tests indicate a significant level of oxidative break-down of the oil and a critical reduction in performance.



CLINCHER™ Mounting Positions & Oil Fill Quantities

CLINCHER™ lubrication

Unless otherwise noted below, the following NORD Gear reducers are shipped from the factory with a pre-determined oil fill level in accordance to the specified reducer size and mounting position. For additional information, please refer to the “Oil Plug & Vent Locations” documentation for your gear unit.



Engineering

STOP
HARMFUL SITUATION
STOP

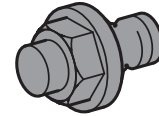
Actual oil volume can vary slightly depending upon the gear case size, mounting and ratio. Prior to commissioning the reducer, check the oil-fill level using the reducer’s oil level plug and drain or add additional oil as needed. The minimum acceptable oil level is 0.15 in (4 mm) below the oil level hole.

For mounting orientations other than shown please consult NORD Gear. Reducer modifications may be required.

Mounting Position	M1		M2		M3		M4		M5		M6	
	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters
SK0182NB	0.42	0.40	0.58	0.55	0.63	0.60	0.58	0.55	0.37	0.35	0.37	0.35
SK0282NB	0.74	0.70	1.06	1.00	0.85	0.80	1.16	1.10	0.95	0.90	0.95	0.90
SK1382NB	1.37	1.30	2.43	2.30	1.48	1.40	2.22	2.10	2.11	2.00	2.01	1.90
SK1282	0.95	0.90	1.37	1.30	0.95	0.90	1.27	1.20	1.00	0.95	1.00	0.95
SK2282	1.74	1.65	2.54	2.40	2.01	1.90	2.11	2.00	1.90	1.80	1.90	1.80
SK2382	1.80	1.70	2.75	2.60	2.01	1.90	3.28	3.10	1.59	1.50	1.59	1.50
SK3282	3.33	3.15	4.33	4.10	3.44	3.25	4.33	4.10	3.33	3.15	3.33	3.15
SK3382	4.33	4.10	5.18	4.90	3.49	3.30	5.92	5.60	3.49	3.30	3.49	3.30
SK4282	4.97	4.70	6.45	6.10	5.02	4.75	5.71	5.40	4.97	4.70	4.97	4.70
SK4382	6.24	5.90	7.19	6.80	5.18	4.90	8.77	8.30	5.18	4.90	5.18	4.90
SK5282	7.93	7.50	9.30	8.80	7.93	7.50	9.30	8.80	7.61	7.20	7.61	7.20
SK5382	13.2	12.5	12.7	12.0	7.08	6.70	14.8	14.0	8.77	8.30	8.77	8.30
SK6282	18.0	17.0	14.8	14.0	12.7	12.0	18.5	17.5	10.6	10.0	14.8	14.0
SK6382	17.4	16.5	13.7	13.0	10.1	9.60	19.0	18.0	14.8	14.0	13.2	12.5
SK7282	26.4	25.0	22.2	21.0	21.1	20.0	28.5	27.0	16.9	16.0	22.2	21.0
SK7382	23.3	22.0	21.1	20.0	16.9	16.0	26.4	25.0	24.3	23.0	20.1	19.0
SK8282	39.1	37.0	34.9	33.0	31.7	30.0	43.3	41.0	32.8	31.0	32.8	31.0
SK8382	35.9	34.0	33.8	32.0	26.4	25.0	40.2	38.0	37.0	35.0	31.7	30.0
SK9282	79.2	75.0	74.0	70.0	58.1	55.0	76.1	72.0	63.4	60.0	62.4	59.0
SK9382	78.2	74.0	74.0	70.0	47.6	45.0	79.2	75.0	68.7	65.0	63.4	60.0
SK10382.1	80.3	76.0	84.5	80.0	75.0	71.0	98.2	93.0	76.1	72.0	70.8	67.0
SK11382.1*	134.2	127.0	140.5	133.0	124.7	118.0	205.0	194.0	131.0	124.0	118.4	112.0

* These units shipped without oil

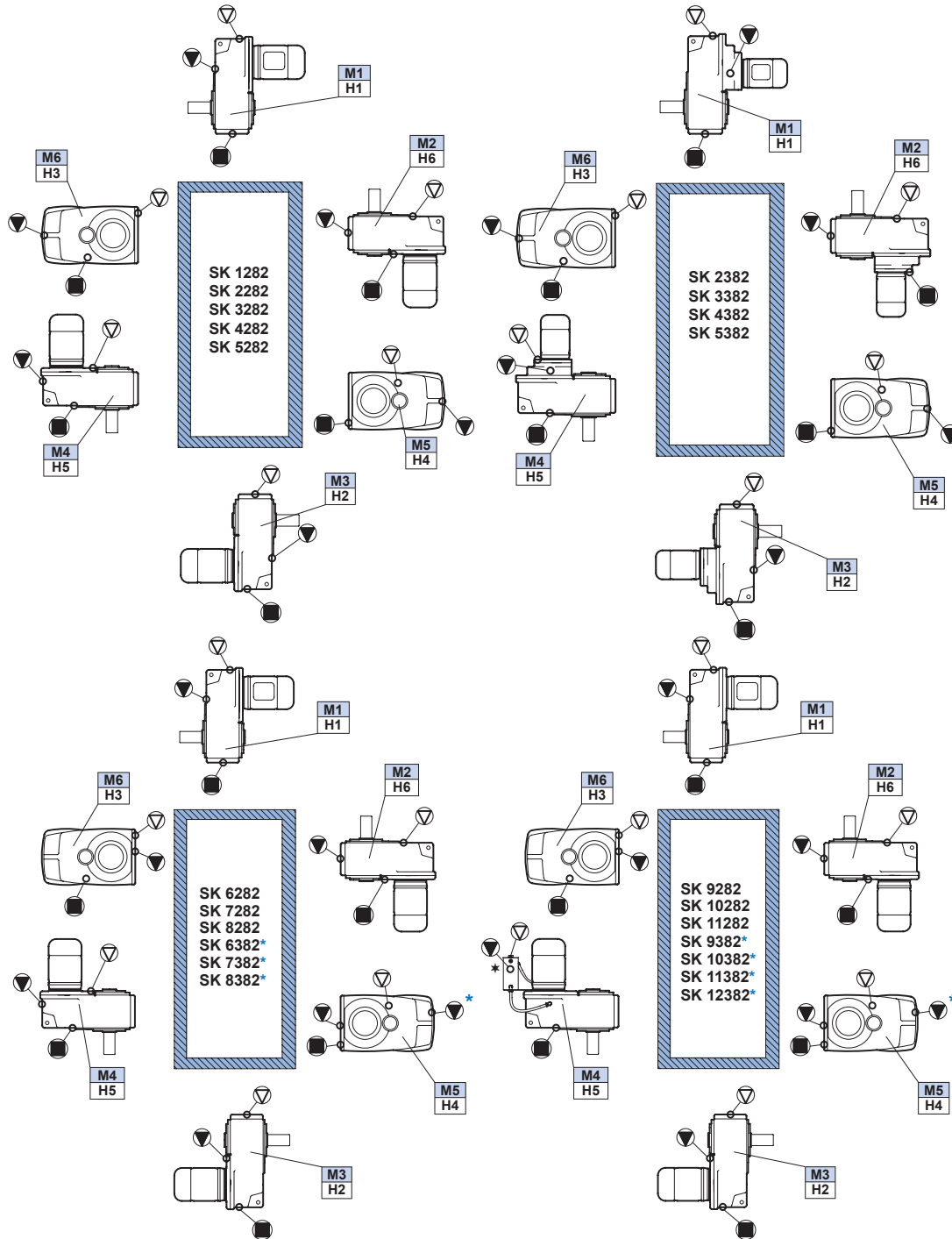
CLINCHER™ Oil Plug & Vent Locations



Oil plug connections

Prior to commissioning the reducer, check the oil-fill level using the reducer's oil-level plug and drain or add additional oil as needed. The minimum acceptable oil level is 0.15 in (4mm) below the oil level hole. **For mounting orientations other than shown please consult NORD Gear. New plug locations may be required.**

Engineering



▽ = Vent ▼ = Oil Level ■ = Oil Drain

* Oil level for 3 stage units

* Oil level should be verified using the dip stick located in the oil tank for the M4/H5 position.



Radial Overhung Load (OHL)

Any radial force or side force applied to the reducer shaft is a source of OHL and should be examined during the reducer selection process. An overhung load is radial a force that pulls (or pushes) against the reducer's output (or input) shaft.

OHL is produced by one or more of the following conditions:

- Transferring power at a right angle to the reducer's shaft, through an externally mounted power transmission device, such as a belt pulley, chain sprocket, or gear.
- By tensioning of the external belt or chain, which is required to keep belts from slipping, or to assure proper chain wrap around sprockets.
- The hanging weight of a pulley, sprocket or gear, mounted on the reducer shaft.

F_{OHL} = Applied overhung load condition at output shaft [lb]

F_{OHL1} = Applied overhung load condition at input shaft [lb]

OHL Rating – General Conditions

The catalog OHL ratings are based upon the following:

- The applied OHL is at the midpoint of the shaft.
- The worst-case direction of shaft rotation.
- There are no axial or thrust load conditions applied to the reducer shaft.

The above conditions apply whether or not one is evaluating the output shaft or input shaft OHL conditions.

Output Shaft OHL Rating

The maximum permissible output shaft OHL rating is found in the gearmotor selection tables. Output shaft OHL ratings apply to integral gearmotors, C-face reducers, and reducers with solid input shaft.

This is done by identify the power of the gear unit's driving motor or prime mover, and then using the selection tables to match the output shaft OHL rating with the selected gear unit type, power, ratio and output speed condition.

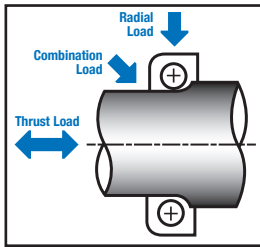
F_R = Output shaft OHL rating, at shaft center [lb]

Input Shaft OHL Rating

Input shaft (Type W) OHL ratings are given on page 34 and are represented by unit type and input power.

F_{R1} = Input shaft OHL rating, at shaft center

Radial Overhung (OHL) & Axial Thrust Loads



Axial Load or Thrust Load

Loads that are directed towards or away from the gearbox, along the axis of the shaft, are considered to be axial loads and are more commonly called thrust loads. Thrust loads can result from the following conditions:

- There is a hanging weight connected to the reducer shaft. This is common in mixer applications.
- While operating the equipment, a net axial force is directed towards or away from the reducer, along the shaft axis. This is common in many screw conveyor or mixer applications.

F_{THRUST} = Applied axial thrust load condition at output [lb]

F_{THRUST1} = Applied axial thrust load condition at input [lb]

Thrust Rating – General Conditions

The published thrust ratings are based upon the following:

- The thrust capacity shown represents the worst case, and is independent of direction.
- Application loads can not exceed the values shown in the tables.
- There is no applied overhung load on the shaft.

Output Shaft and Input Shaft Thrust Rating

The output shaft thrust capacity can be found in the gearmotor selection tables, adjacent to the OHL ratings.

F_A = Output shaft thrust rating [lb]

F_{AVL} = Output shaft thrust rating with radial (VL) bearing upgrade [lb]

The input shaft thrust capacity is given on page 34.

F_{A1} = Input shaft thrust rating [lb]



IMPORTANT NOTE



To validate the gear unit selection, assuming negligible OHL, the applied thrust condition must be less than the shaft thrust rating.

Combined OHL and Thrust Load Conditions

Published values for both overhung load and thrust capacity are based upon the presence of a single condition and assume the other condition is absent from the application. In many applications, it is feasible to have both overhung load and thrust at the same time.

Please contact NORD for more exact examination of the application, when both OHL and thrust conditions exist at the same time.

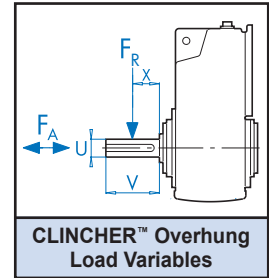


1. Calculate the applied OHL at the designated shaft

The most common radial OHL forces are created by transferring power at a right angle to the reducer's shaft, through an externally mounted power transmission device, such as a belt pulley, chain sprocket, or spur gear.

Included in the overhung load formula is an additional factor that is called the power transmission component factor (f_z). The (f_z) factor accounts for the extra radial force caused by proper tensioning of belts or chains or the additional forces created by the action of meshing gears.

The following equations are used to calculate the OHL forces generated by a belt pulley, chain sprocket, or spur gear and they also account for the extra radial force caused by proper tensioning of the transmission component. These equations treat the hanging weight of the transmission component as being negligible.



Variable definitions

- F_{OHL} = Calculated shaft overhung load at output
- F_{OHL1} = Calculated shaft overhung load at input
- T_2 or T_1 = Load Torque [lb-in]
- n_2 or n_1 = Shaft speed [rpm]
- P_1 = Load power at input
- h = Gear reducer efficiency [%] ❶
- d_{OHL} = Pitch diameter of power transmission component [in]
- f_z = Power transmission component factor

❶ Gear reducer efficiency can generally be ignored unless considering compounded gear units.

Output shaft equations

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z \text{ (common equation)}$$

$$F_{OHL} = \frac{2 \times P_1 \times 63025 \times \eta}{n_2 \times d_{OHL} \times 100} \times f_z \text{ (alternate equation)}$$

Input shaft equations

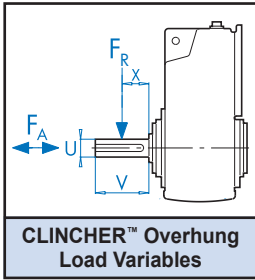
$$F_{OHL1} = \frac{2 \times P_1 \times 63025}{n_1 \times d_{OHL}} \times f_z \text{ (common equation)}$$

$$F_{OHL1} = \frac{2 \times T_1}{d_{OHL}} \times f_z \text{ (alternate equation)}$$

f_z factor table

Transmission Component	Factor f_z	Notes
Gear	1.00	17 teeth or less
Gear	1.15	18 teeth or more
Chain Sprocket	1.40	13 teeth or less
Chain Sprocket	1.20	13 to 20 teeth
Chain Sprocket	1.00	20 teeth or more
Timing Belt Pulley	1.50	-
V-Belt Pulley	1.70	-
Flat Belt Pulley	2.50	-

Radial Overhung (OHL) & Axial Thrust Loads



2. Determine the permissible shaft OHL rating

Output shaft OHL rating

Whether considering an integral gearmotor, C-face reducer, or reducer with solid input shaft, the maximum permissible output shaft OHL rating is found in the gearmotor selection tables. Establish the output shaft OHL rating as follows:

- ❶ First, identify the power of the gear unit's driving motor or prime mover.
- ❷ Then, use the gearmotor selection tables to identify the output shaft OHL rating, by selecting the appropriate gear unit type, power, ratio and output speed condition.
- ❸ Next, identify the output shaft OHL rating.

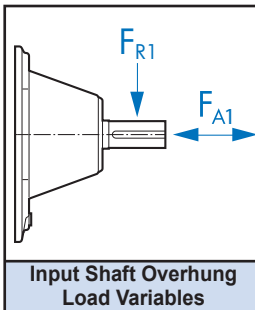
F_R = Output shaft OHL rating, at shaft center [lb]

F_{RVL} = Output shaft OHL rating with radial (VL) bearing upgrade [lb]

Input shaft OHL rating

Input shaft (W) OHL ratings are below and are represented by unit type and input power.

F_{R1} = Input shaft OHL rating at shaft center [lb]



Permissible Overhung and Axial Loads at the Input Shaft

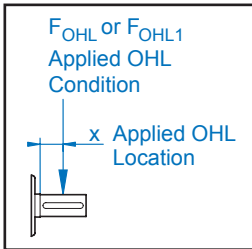
Clincher™ Gear Units	Maximum Overhung Loads F_{Q1} and Axial Loads F_{A1}											
SK 0182 NB SK 0282 NB	Power Pn [HP]											
	0.16	0.25	0.33	0.50	0.75	1.00	1.50	2.00				
	F_{R1} [Lbs] Application of load at midpoint of shaft											
	124	122	119	113	106	98	83	68				
	F_{A1} [Lbs]											
	277	252	224	200	173	131	79	65				
SK 1382NB	Power Pn [HP]											
	0.16	0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00		
	F_{R1} [Lbs] Application of load at midpoint of shaft											
	191	185	176	169	162	158	136	97	95	52		
	F_{A1} [Lbs]											
	277	252	224	200	173	131	79	65	45	34		
SK 1282 SK 2382 SK 3382	Power Pn [HP]											
	0.16	0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00		
	F_{R1} [Lbs] Application of load at midpoint of shaft											
	191	185	176	169	162	158	136	97	95	52		
	F_{A1} [Lbs]											
	277	252	224	200	173	131	79	65	45	34		
SK 2282 SK 3282 SK 4382 SK 5382	Power Pn [HP]											
	0.16	0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.0
	F_{R1} [Lbs] Application of load at midpoint of shaft											
	479	473	466	461	448	434	407	414	389	362	230	225
	F_{A1} [Lbs]											
	659	646	626	587	558	525	467	441	392	329	146	61



Permissible Overhung and Axial Loads at the Input Shaft

Clincher™ Gear Units	Maximum Overhung Loads F_{Q1} and Axial Loads F_{A1}														
SK 4282 SK 5282 SK 6382	Power Pn [HP]														
	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.0	15.0					
	F _{R1} [Lbs] Application of load at midpoint of shaft														
	470	626	538	603	585	547	518	407	281	106					
	F _{A1} [Lbs]														
	911	874	853	794	738	601	560	367	308	133					
SK 6282 SK 7282 SK 7382 SK 8382 SK 9382	Power Pn [HP]														
	1.00	1.50	2.00	3.00	5.00	7.50	10.0	15.0	20.0	25.0	30.0	40.0	50.0		
	F _{R1} [Lbs] Application of load at midpoint of shaft														
	995	965	950	911	873	774	756	617	605	524	412	275	196		
	F _{A1} [Lbs]														
	1377	1323	1296	1238	1168	997	968	743	738	610	505	252	167		
SK 8282 SK 9282	Power Pn [HP]														
	5.00	7.50	10.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0	75.0	100	125		
	F _{R1} [Lbs] Application of load at midpoint of shaft														
	2480	2421	2336	2219	2144	2102	2093	1897	1827	1868	1667	1038	1177		
	F _{A1} [Lbs]														
	972	914	848	758	698	668	659	513	459	488	335	176	54		
SK 10382.1 SK 11382.1	Power Pn [HP]														
	15.0	20.0	25.0	30.0	40.0	50.0	60.0	75.0	100	125	150	175	200	250	
	F _{R1} [Lbs] Application of load at midpoint of shaft														
	3890	3840	3800	2630	3620	3530	3420	3260	2970	2720	2410	2000	1600	810	
	F _{A1} [Lbs]														
	3010	3080	3010	2940	2810	2700	2630	2470	2200	1900	1600	1500	1100	580	

Radial Overhung (OHL) & Axial Thrust Loads



3. OHL rating correction – applied load is not at the shaft center or midpoint.

If the OHL force is not applied at the midpoint of the shaft, an overhung load rating correction must be applied to the catalog listed OHL rating. This OHL load correction is evaluated in two steps.

Formula I. Verify the bearing OHL capacity (Formula I).

Formula II. Verify the shaft OHL capacity (Formula II).

Overhung Load Variables

- F_R = Output shaft OHL Rating, at shaft center [lb]
- F_{RVL} = Output shaft OHL Rating, at shaft center with radial (VL) bearing upgrade [lb]
- F_{R1} = Input shaft OHL Rating, at shaft center [lb]
- F_{RX} = Standard Bearing Capacity Rating, with OHL applied at output shaft location “x” [lb]
- F_{RXVL} = Radial (VL) Bearing Capacity Rating, with OHL applied at the output shaft location “x” [lb]
- F_{RX1} = Input Shaft Bearing Capacity, with OHL applied at Input shaft location “x” [lb]
- F_{RXW} = Output shaft OHL Rating, at applied load location “x” with standard bearings [lb]
- F_{RXWVL} = Output shaft OHL Rating, at shaft location “x” with radial (VL) bearing upgrade [lb]
- F_{RXW1} = Input shaft OHL Rating, applied at shaft location “x” [lb]
- x = applied OHL location with respect to shaft shoulder [in]

Refer to Calculation Table Below

- z = Factor from table [lb-in]
- y = Internal Geometry Factor from table [in]
- f = Internal Geometry Factor from table [in]
- c = Internal Geometry Factor from table [lb-in]
- c_{VL} = Internal Geometry Factor from table [lb-in]

Make certain to apply the proper table values for the shaft (output or input) that is being evaluated.

Formula I – Verifying Bearing Capacity

1. Output shaft (Standard bearings)

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$

2. Output shaft (VL bearings)

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$

3. Input shaft

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$

Formula II – Calculating shaft OHL capacity

1. Output shaft (Standard bearings)

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$

2. Output shaft (VL bearings)

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$

3. Input shaft

$$F_{OHL} = \frac{2 \times T_2}{d_{OHL}} \times f_z$$



IMPORTANT NOTE



Calculations should always be made in accordance with Formula I (bearing capacity) and Formula II (shaft capacity). The corrected OHL rating (for loads not at the shaft midpoint) will always be the lower of the two limiting values based upon direct application of Formula I or Formula II.

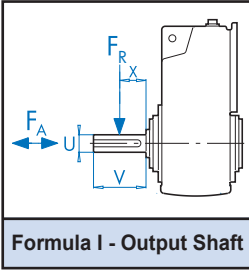

Calculation Table for OHL at Output Shaft for Clincher™ Units

Gearbox Type	y	z	c	c	f	U	V	T _{2max}
	[in]	[in]	Standard Bearings [lb-in]	VL Bearings [lb-in]	[in]	[in]	[in]	[lb-in]
SK 0182NB	3.15	4.11	1,151	1,593	0	0.750	1.50	1,027
SK 0282NB	4.41	5.43	1,062	1,505	0	1.000	2.13	1,460
SK 1382NB	5.71	6.93	1,416	2,301	0	1.250	2.75	3,275
SK 1282	3.74	4.93	1,593	–	0	1.250	2.75	2,620
SK 2282 SK 2382	4.31	5.69	2,390	3,894	0	1.375	2.75	4,983
SK 3282 SK 3382	5.34	7.11	5,399	8,319	0	1.875	3.50	8,983 9,195
SK 4282 SK 4382	6.22	8.39	7,965	13,098	0	2.250	4.00	17,700 18,381
SK 5282 SK 5382	7.07	9.63	14,426	23,010	0	2.500	5.00	28,630 28,320
SK 6282 SK 6382	9.28	12.03	16,107	30,267	0	3.000	5.50	40,152 53,100
SK 7282 SK 7382	9.96	13.31	33,719	54,782	0	3.500	6.75	57,286 73,455
SK 8282 SK 8392	11.81	15.94	73,544	113,192	0	4.250	8.50	93,969 116,820
SK 9282 SK 9382	13.92	18.84	144,432	220,542	0	5.250	9.84	158,681 224,790
SK 10382.1	15.14	21.04	-	136,700	0	6.250	11.81	414,300
SK 11382.1	16.95	22.85	-	127,300	0	7.000	11.81	680,200

Calculation Table for OHL at Input Shaft

Clincher™ Gearboxes	y [in]	z [in]	c [lb-in]	FU [in]	FV [in]
SK 0182 NB SK 0282 NB	2.30	3.09	239	0.500	1.50
SK 1382 NB	2.30	3.09	327	0.625	1.50
SK 1282 SK 2382 SK 3382	2.76	3.54	322	0.625	1.50
SK 2282 SK 3282 SK 4382 SK 5382	3.80	4.78	947	0.875	2.00
SK 4282 SK 5282 SK 6382	4.35	5.93	4,160	1.500	3.12
SK 6282 SK 7282 SK 7382 SK 8382 SK 9382	5.89	8.05	4,071	1.625	4.38
SK 8282 SK 9282	8.17	10.93	6,815	2.500	5.50
SK 10382.1	14.29	17.05	7,001	2.750	5.50

Radial Overhung (OHL) & Axial Thrust Loads



Formula I - Output Shaft

4. Compare the applied OHL to the OHL rating

To validate the unit selection (assuming negligible thrust loading), the applied OHL condition must be less than the rated OHL capacity as shown below.

Output Shaft (standard bearings)

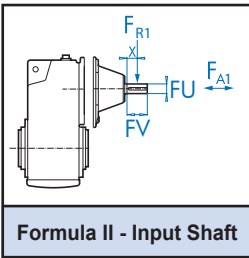
$$F_{OHL} < F_R \quad (\text{OHL at shaft center})$$

$$F_{OHL} < F_{RX} \quad (\text{OHL not at shaft center})$$

Input Shaft

$$F_{OHL} < F_{R1} \quad (\text{OHL at shaft center})$$

$$F_{OHL} < F_{RX1} \quad (\text{OHL not at shaft center})$$



Formula II - Input Shaft

Output Shaft (VL bearings)

$$F_{OHL} < F_{RVL} \quad (\text{OHL at shaft center})$$

$$F_{OHL} < F_{RXVL} \quad (\text{OHL not at shaft center})$$

Output Shaft Comparisons

$$\frac{F_{OHL}}{F_{OHL}} < \frac{F_R}{F_R} \quad \text{or} \quad \frac{F_{OHL}}{F_{OHL}} < \frac{F_{RX}}{F_{RX}} \quad (\text{From Step 3})$$

Input Shaft Comparisons

$$\frac{F_{OHL1}}{F_{OHL1}} < \frac{F_{R1}}{F_{R1}} \quad \text{or} \quad \frac{F_{OHL1}}{F_{OHL1}} < \frac{F_{RX1}}{F_{RX1}} \quad (\text{From Step 3})$$

5. Evaluating Thrust Capacity

To validate the unit selection (assuming negligible thrust loading), the applied thrust condition must be less than the rated thrust capacity as shown below.

Output Shaft

$$F_{THRUST} < F_A$$

Input Shaft

$$F_{THRUST1} < F_{A1}$$

The output shaft thrust capacity (F_A) can be found in the gearmotor selection tables, adjacent to the OHL ratings. The input shaft thrust capacity (F_{A1}) can be found in the table on pages 34.

$$\frac{F_{THRUST}}{F_{THRUST}} < \frac{F_A}{F_A}$$

(Supplied by customer) (Gearmotor Selection)

$$\frac{F_{THRUST1}}{F_{THRUST1}} < \frac{F_{A1}}{F_{A1}}$$

(Supplied by customer) (Gearmotor Selection)



IMPORTANT NOTE



Please contact NORD for a more precise examination of the application when both OHL and thrust conditions exist at the same time.



Computer Program Analysis Capabilities

Upon request, NORD can calculate the bearing service life and check the shaft durability for a specific gear unit type and ratio, if provided with the following:

- Type** = Complete gearmotor or reducer model or type
- i** = Gear ratio
- P₁** = Load power at input [Hp]
- n₂** = Operating reducer output speed [rpm]
- F_{OHL}** = Applied shaft overhung load [lb]
- F_{THRUST}** = Applied thrust load condition [lb]
- DIR** = Applied thrust direction (towards or away) from gear unit.
- x** = applied OHL location with respect to the shaft shoulder [in]
- L10h** = Desired bearing service life L10h [hours]

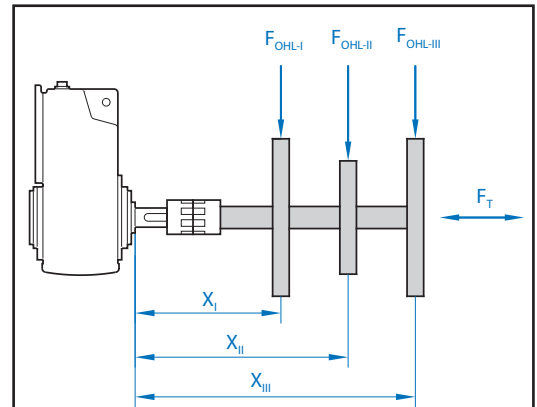
When provided the proper information NORD Engineering can provide detailed analysis using a proprietary calculation program.

Multiple Impeller Mixer

Multiple impeller mixers are good examples where a computer program analysis is encouraged.



Computer Program Analysis



Multiple Impeller Mixer Example



IMPORTANT NOTE



In agitator or mixer applications, where multiple impellers are mounted to the same mixer shaft, please provide each individual radial load force (F_{OHL}) and location distance (x).



Mass Acceleration Service Factor

The mass acceleration factor (m_{af}) uses a ratio of the load inertia to motor inertia. This method of service factor calculation can be used for both gearmotors and speed reducers and is valid for helical and helical-bevel gear units. For helical-worm units additional factors will need to be taken into account including an ambient temperature factor and duty cycle factor.

Short-term and infrequent torque impulses significantly influence the load and selection of a gear unit. The gear unit service factor, f_b , takes this and other affects on the gear unit into account.

The mass acceleration factor, m_{af} , represents the relationship between external low-speed output side and high-speed input side masses. The mass acceleration factor significantly influences the level of torque impulses in the gear unit upon start-up and braking procedures, and upon vibration. The external mass moments of inertia also include the load, such as the material transported on conveyor belts. We ask you to consult with NORD if the $m_{af} > 10$, if there is a large play in transfer elements, vibration in the system, uncertainty regarding the load classification, or you are in doubt.

For applications with relatively high external mass moments of inertia, $m_{af} > 2$ (i.e. travel drives, slewing gears, rotary tables, gear drives, agitators, and surface aerators), we recommend braking torque that does not exceed 1.2 times the rated motor torque. If a higher braking torque is to be used, this must be considered when selecting the gear unit.

1. Calculate mass acceleration factor:

$$m_{af} = \frac{J_{load}}{J_m} \times \left(\frac{1}{\text{reducer ratio}} \right)^2$$

J_{load} = External load inertia including all components of the system outside of the reducer

J_m = Motor inertia. For NORD motors see pages 315 - 334

If $m_{af} \leq 0.25$ use curve A (uniform operation)

Light conveyor screws, fans, assembly lines, light conveyor belts, small agitators, elevators, cleaning machines, filling machines, inspection machines, belt conveyors.

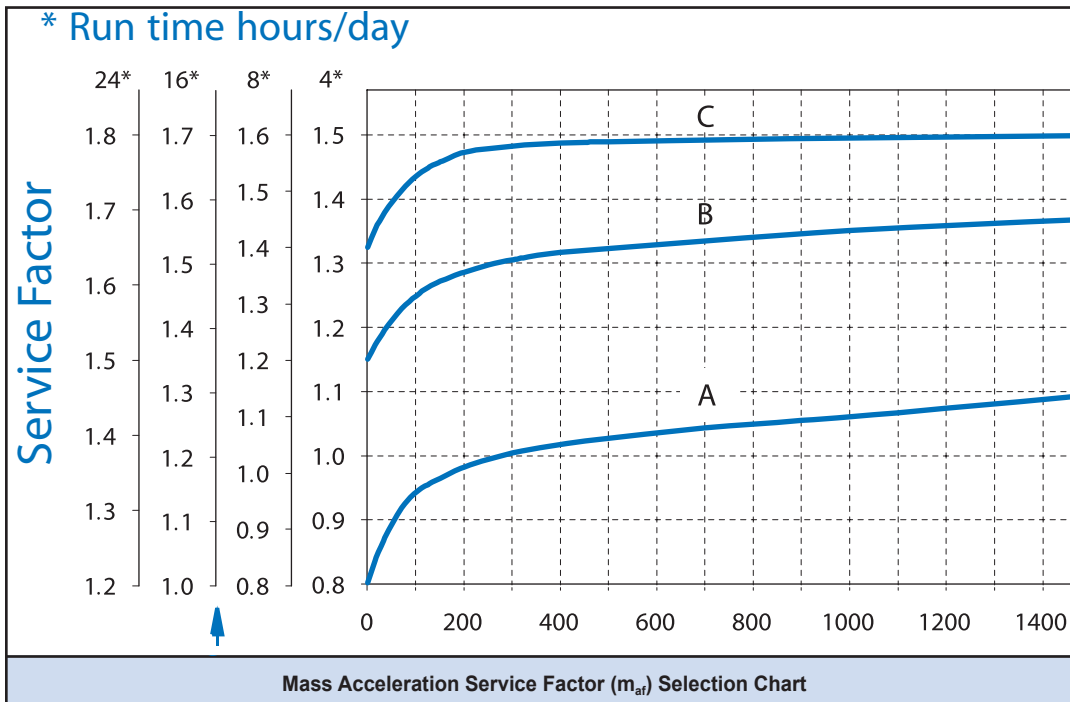
If $0.25 < m_{af} \leq 3.00$ use curve B (moderate shocks)

Coilers, feed-mechanism drivers for woodworking machines, dumbwaiters, balancing machines, thread cutting machines, medium-sized agitators and mixers, heavy conveyor belts, winches, sliding doors, manure scrapers, packing machines, concrete mixers, overhead crane traveling mechanisms, mills, bending machines, gear pumps.

If $3.01 \leq m_{af} \leq 10.00$ use curve C (heavy shocks)

Heavy mixers, shears, presses, centrifuges, rolling stands, heavy winches and lifts, grinding mills, stone crushers, bucket elevators, punching machines, hammer mills, eccentric presses, folding machines, roller tables, tumbling barrels, vibrators, shredders.

2. Determine the cycles/hour. A cycle is a start or hard stop, where a hard stop decelerates the motion of the system when a mechanical brake is activated.
3. Determine the run time in hours/day.
4. Using the chart; locate the cycles/hour on the horizontal axis and move vertically up to intersect curve A, B, or C based on the m_{af} . From the intersection point, move horizontally left to the service factor f_b based on the run time in hours/day.



Selection Example:

A smooth running conveyor operates 24 hours/day with 500 cycles/hour.

The calculated $m_{af} = 0.16$, therefore use curve A for this type of application.

From the chart, find 500 cycles/hour and follow the axis vertically up until you intersect curve A. From the intersection point, move horizontally left to find the service factor $f_B = 1.4$ based on 24 hours/day operation. Consult the selection pages of the catalog to find a gearmotor with a service factor $f_B = 1.4$ or greater.



AGMA Service Class Selection for Gearmotors and Motorized Reducers

Before a gearmotor is selected, an application class number must be determined. Since application classification represents the normal relationship between gear design power rating and the maximum potential transmitted power, it is suggested that the application class number be applied to the nameplate rating of the electric motor. The application class numbers are I, II, and III. Their relationship to service factor is:

Class Numbers	f_B
I	1.0 - 1.39
II	1.4 - 1.99
III	≥ 2.0

Application class numbers may be selected from the table. Some operational characteristics that affect an application's classification are:

- **Starting conditions:** Starting conditions where peak loads exceed 200 percent of rated load, applications with frequent starts and stops and reversing applications require special analysis. Rated load is defined as the unit rating with an application class number of I (1.0 - 1.39 service factor).
- **Overloads:** Loads in excess of the rated load are considered overloads. Overload can be of momentary duration, periodic, quasi-steady state, or vibratory in nature. The magnitude and the number of stress cycles require special analysis to prevent low cycle fatigue or yield stress failure. Applications with high torque motors, motors for intermittent operation and applications where extreme repetitive shock occurs or where high-energy loads must be absorbed as when stalling require special consideration.
- **Brake equipped applications:** When a gear drive is equipped with a brake that is used to decelerate the motion of the system, select the drive based on the brake rating or the equivalent power, whichever is greater. If the brake is located on the output shaft of the gear drive, special analysis is required.
- **Reliability and life requirement:** Applications requiring a high degree of reliability or unusually long life should be given careful consideration by the user and NORD GEAR before assigning an application class number. High reliability and life should be addressed by using an increased safety factor agreed to between NORD and the purchaser.

Synchronous motors, certain types of high torque induction motors and generator drives require special analysis. Synchronous motors have high transient torque during starting and restarting after they trip out momentarily.

Induction motors of special high slip design can produce extremely high starting torque. High torque loads are produced when the motor trips out for a very short time and then the trip re-closes.

Generators have extremely high loads when they are out of phase with the main system and when there are across the line short circuits.

Adjustments to the gear drive selection may be necessary when one or more of the following conditions exist:

- Ambient conditions. Extremes of temperature and environment.
- Lubrication. Any lubricant not in accordance with NORD's recommendations.
- Misalignment and distortions due to inadequate foundations.
- Reversing applications.
- High-risk applications involving human safety.



Service Class Tables

The service class tables provide a guide in the selection and application of gear drives designed and rated in accordance with AGMA Standard 6013-A06.

The service class tables have been developed from the experience of manufacturers and users of gear drives for use in common applications and has been found to be generally satisfactory for the listed industries when gears are applied using AGMA standards. It is recommended that the user and NORD Gear agree upon class numbers for special applications when variations from the table may be required.

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
AGITATORS (mixers)			
Pure Liquids	I	I	II
Liquids and Solids	I	II	II
Liquids – Variable Density	I	II	II
BLOWERS			
Centrifugal	I	I	II
Lobe	I	II	II
Vane	I	II	II
BREWING AND DISTILLING			
Bottling Machinery	I	I	II
Brew Kettles – Continuous Duty	II	II	II
Cookers – Continuous Duty	II	II	II
Mash Tubs – Continuous Duty	II	II	II
Scale Hopper – Frequent Starts	II	II	II
CAN FILLING MACHINES			
	I	I	II
CAR DUMPERS			
	II	III	III
CAR PULLERS			
	I	II	II
CLARIFIERS			
	I	I	II
CLASSIFIERS			
	I	II	II
CLAY WORKING MACHINERY			
Brick Press	II	III	III
Briquette Machine	II	III	III
Pug Mill	I	II	II
COMPACTORS			
	III	III	III
COMPRESSORS			
Centrifugal	I	I	II
Lobe	I	II	II
Reciprocating, Multi-Cylinder	II	II	III
Reciprocating, Single-Cylinder	III	III	III
CONVEYORS – GENERAL PURPOSE			
Includes Apron, Assemble, Belt, Bucket, Chain, Flight, Oven & Screw - Uniformly loaded or Fed	I	I	II
Heavy Duty – Not Uniformly Fed	I	II	II
Severe Duty – Reciprocating or Shaker	II	III	III
CRANES¹⁾			
Main Hoist			
Medium Duty	II	II	II
Heavy Duty	III	III	III
Reversing	II	II	II
Skip Hoist	II	II	II
Trolley Drive	II	II	II
Bridge Drive	II	II	II
CRUSHER			
Stone or Ore	III	III	III

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
DREDGES			
Cable Reels	II	II	II
Conveyors	II	II	II
Cutter Head Dives	III	III	III
Pumps	III	III	III
Screen Drives	III	III	III
Stackers	II	II	II
Winches	II	II	II
ELEVATORS			
Bucket	I	II	II
Centrifugal Discharge	I	I	II
Escalators	I	I	II
Freight	I	II	II
Gravity Discharge	I	I	II
EXTRUDERS			
General	II	II	II
Plastics			
Variable Speed Drive	III	III	III
Fixed Speed Drive	III	III	III
Rubber			
Continuous Screw Operation	III	III	III
Intermittent Screw Operation	III	III	III
FANS			
Centrifugal	I	I	II
Cooling Towers	III	III	III
Forced Draft	II	II	II
Induced Draft	II	II	II
Industrial & Mine	II	II	II
FEEDERS			
Apron	I	II	II
Belt	I	II	II
Disc	I	I	II
Reciprocating	II	III	III
Screw	I	II	II
FOOD INDUSTRY			
Cereal Cooker	I	I	II
Dough Mixer	II	II	II
Meat Grinders	II	II	II
Slicers	I	II	II
GENERATORS AND EXCITERS			
	II	II	II
HAMMER MILLS			
	III	III	III
HOISTS			
Heavy Duty	III	III	III
Medium Duty	II	II	II
Skip Hoist	II	II	II



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
LAUNDRY TUMBLERS	II	II	II
LAUNDRY WASHERS	II	II	III
LUMBER INDUSTRY			
Barkers			
Spindle Feed	II	II	II
Main Drive	III	III	III
Conveyors			
Burner	II	II	II
Main or Heavy Duty	II	II	II
Main log	III	III	III
Re-saw, Merry-Go-Round	II	II	II
Slab	III	III	III
Transfer	II	II	II
Chains			
Floor	II	II	II
Green	II	II	III
Cut-Off Saws			
Chain	II	II	III
Drag	II	II	III
Debarking Drums	III	III	III
Feeds			
Edger	II	II	II
Gang	II	III	III
Trimmer	II	II	II
Long Deck	III	III	III
Log Hauls – Incline – Well Type	III	III	III
Log Turning Devices	III	III	III
Planer Feed	II	II	II
Planer Tilting Hoists	II	II	II
Rolls – live-off brg. – Roll Cases	III	III	III
Sorting Table	II	II	II
Tipple Hoist	II	II	II
Transfers			
Chain	II	II	III
Craneway	II	II	III
Tray Drives	II	II	II
Veneer Lathe Drives	II	II	II
METAL MILLS			
Draw Bench Carriage and Main Drive	II	II	II
Runout Table			
Non-reversing	II	II	II
Group Drives	II	II	II
Individual Drives	III	III	III
Reversing	III	III	III
Slab Pushers	II	II	II
Shears	III	III	III
Wire drawing	II	II	II
Wire Winding Machine	II	II	II
METAL STRIP PROCESSING MACHINERY			
Bridles	II	II	II
Coilers & Uncoilers	I	I	II
Edge Trimmers	I	II	II
Flatteners	II	II	II
Loopers (Accumulators)	I	I	I
Pinch Rolls	II	II	I
Scrap Choppers	II	II	II
Shears	III	III	III
Slitters	I	II	II

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	III	III	III
Helical Ring Gear	II	II	II
Direct Connected	III	III	III
Cement Kilns	II	II	II
Dryers & Coolers	II	II	II
PAPER MILLS²⁾			
Agitator (Mixer)	II	II	II
Agitator for Pure liquors	II	II	II
Barking Drums	III	III	III
Barkers – Mechanical	III	III	III
Beater	II	II	II
Breaker Stack	II	II	II
Calendar³⁾	II	II	II
Chipper	III	III	III
Chip Feeder	II	II	II
Coating Rolls	II	II	II
Conveyors			
Chip, Bark, Chemical	II	II	II
log (including Slab)	III	III	III
Couch Rolls	II	II	II
Cutter	III	III	III
Cylinder Molds	II	II	II
Dryers³⁾			
Paper Machine	II	II	II
Conveyor Type	II	II	II
Embossor	II	II	II
Extruder	II	II	II
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	II	II	II
Jordan	II	II	II
Kiln Drive	II	II	II
Mt. Hope Roll	II	II	II
Paper Rolls	II	II	II
Platter	II	II	II
Presses – Felt & Suction	II	II	II
Pulper	III	III	III
Pumps – Vacuum	II	II	II
Reel (Surface Type)	II	II	II
Screens			
Chip	II	II	II
Rotary	II	II	II
Vibrating	III	III	III
Size Press	II	II	II
Supercalendar⁴⁾	II	II	II
Thickener (AC Motor)	II	II	II
Thickener (DC Motor)	II	II	II
Washer (AC Motor)	II	II	II
Washer (DC Motor)	II	II	II
Wind and Unwind Stand	I	I	I
Winders (Surface Type)	II	II	II
Yankee Dryers³⁾	II	II	II



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
PLASTICS INDUSTRY – PRIMARY PROCESSING			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Batch Drop Mill – 2 smooth rolls	II	II	II
Continuous Feed, Holding & Blend Mill Calendars	II	II	II
PLASTICS INDUSTRY – SECONDARY PROCESSING			
Blow Molders	II	II	II
Coating	II	II	II
Film	II	II	II
Pipe	II	II	II
Pre-Plasticizers	II	II	II
Rods	II	II	II
Sheet	II	II	II
Tubing	II	II	II
PULLERS – BARGE HAUL	II	II	II
PUMPS			
Centrifugal	I	I	II
Proportioning	II	II	II
Reciprocating			
Single Acting, 3 or more cylinders	II	II	II
Double Acting, 2 or more cylinders	II	II	II
Rotary			
Gear Type	I	I	II
Lobe	I	I	II
Vane	I	I	II
RUBBER INDUSTRY			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Mixing Mill			
2 smooth rolls	II	II	II
1 or 2 corrugated rolls	III	III	III
Batch Drop Mill – 2 smooth rolls	II	II	II
Cracker Warmer – 2 roll, 1 corrugated roll	III	III	III
Cracker – 2 corrugated rolls	III	III	III
Holding, Feed & Blend Mill – 2 rolls	II	II	II
Refiner – 2 rolls	II	II	II
Calendars	II	II	II
SAND MULLER	II	II	II
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	II	II	II
Chemical Feeders	II	II	II
Dewatering Screens	II	II	II
Scum Breakers	II	II	II
Slow or Rapid Mixers	II	II	II
Sludge Collectors	II	II	II
Thickener	II	II	II
Vacuum Filters	II	II	II

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
SCREENS			
Air Washing	I	I	II
Rotary – Stone or Gravel	II	II	II
Traveling Water Intake I	I	I	I
SCREW CONVEYORS			
Uniformly loaded or Fed	I	I	II
Heavy Duty	I	II	II
SUGAR INDUSTRY			
Beet Slicer	III	III	III
Cane Knives	II	II	II
Crushers	II	II	II
Mills (low speed end)	III	III	III
TEXTILE INDUSTRY			
Batchers	II	II	II
Calendars	II	II	II
Cards	II	II	II
Dry Cans	II	II	II
Dyeing Machinery	II	II	II
Looms	II	II	II
Mangles	II	II	II
Nappers	II	II	II
Pads	II	II	II
Siashers	II	II	II
Soapers	II	II	II
Spinners	II	II	II
Tenter Frames	II	II	II
Washers	II	II	II
Winders	II	II	II

Notes to GEARMOTOR SERVICE FACTOR table:

- 1) Crane drives are to be selected based upon the gear tooth bending strength using the numeric service factors shown in the table or by analysis such as Miners' Rule. In all cases, the pitting resistance service factor shall be a minimum of 1.0. Contact NORD Gear for selection assistance.
- 2) Service factors for paper mill applications are applied to the nameplate rating of the electric drive motor at the motor rated based speed.
- 3) Anti-friction bearings only.
- 4) A Class Number of I may be applied at base speed of a supercalendar operating over a speed range of part-range constant horsepower and part-range constant torque where the constant horsepower speed range is greater than 1.5 to 1. A Class Number of II is applicable to supercalendars operating over the entire speed range at constant torque or where the constant horse-power speed range is less than 1.5 to 1.



AGMA Service Factor Selection for Speed Reducers

Before an enclosed speed reducer or increaser can be selected for any application, an equivalent unit power rating (service factor = 1.0) must be determined. This is done by multiplying the specified power by the service factor. Since the service factor represents the normal relationship between the gear unit rating and the required application power, it is suggested that the service factor be applied to the nameplate rating of the prime mover or driven machine rating, as applicable.

NORD Gear and the user must agree upon which power, prime mover rating or driven machine requirements, should dictate the selection of the gear drive. It is necessary that the gear drive selected have a rated unit capacity equal to or in excess of this "equivalent unit power rating".

All service factors listed are 1.0 or greater. Service factors less than 1.0 can be used in some applications when specified by the user and agreed to by NORD Gear.

The service factor tables should be used with caution, since much higher values have occurred in some applications. Values as high as ten have been used. On some applications up to six times nominal torque can occur, such as: Turbine/Generator drives, Heavy Plate and Billet rolling mills.

It has been developed from the experience of manufacturers and users of gear drives for use in common applications. It is suggested that service factors for special applications be agreed upon by the user and NORD GEAR when variations of the values in the table may be required.

Service factors shown are for reducers driven by motors (electric or hydraulic) and turbines (steam or gas) according to AGMA 6013-A06. When the driver is a single cylinder or multi-cylinder engine, the service factors from the table must be modified for the appropriate type of prime mover.

As an example, if the application is a centrifugal blower, the service factor from the reducer service factor table is 1.25 for a motor or turbine. The service factor conversion table changes this value to 1.75 for a single cylinder engine and 1.50 for a multi-cylinder engine.

⚠	CAUTION	⚠
Any user of enclosed gear drives should make sure that the latest available information affecting the selection of a gear drive is used. When better load intensity data is available on the driving or driven equipment, this should be considered when a service factor is selected.		

Service Factor Conversion Table for Engine Driven Applications

Electric Motor, Steam & Gas Turbines, Hydraulics	Single-Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.0	1.75
1.75	2.25	2.00
2.00	2.50	2.25
2.25	2.75	2.50
2.50	3.00	2.75
2.75	3.25	3.00
3.00	3.50	3.25



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
AGITATORS (mixers)			
Pure Liquids	1.00	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids – Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	1.50
Lobe	1.00	1.25	1.50
Vane	1.00	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	1.00	1.00	1.25
Brew Kettles – Continuous Duty	1.00	1.00	1.25
Cookers – Continuous Duty	1.00	1.00	1.25
Mash Tubs – Continuous Duty	1.00	1.00	1.25
Scale Hopper – Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES			
	1.00	1.00	1.25
CAR DUMPERS			
	1.25	1.50	1.75
CAR PULLERS			
	1.00	1.25	1.50
CLARIFIERS			
	1.00	1.00	1.25
CLASSIFIERS			
	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS			
	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	1.00	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS – GENERAL PURPOSE			
Uniformly loaded or fed	1.00	1.00	1.25
Not uniformly fed	1.00	1.25	1.50
Reciprocating or shaker	1.25	1.50	1.75
CRANES¹⁾			
Dry dock			
Main hoist	1.25	1.50	1.75
Auxilliary hoist	1.25	1.50	1.75
Boom hoist	1.25	1.50	1.75
Slewing drive	1.25	1.50	1.75
Traction drive	1.50	1.50	1.50
Industrial Duty			
Main hoist	1.00	1.25	1.50
CRUSHER			
Stone or ore	1.50	1.75	2.00

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
DREDGES			
Cable reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Dives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	1.00	1.00	1.25
Gravity Discharge	1.00	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
Variable Speed Drive	1.50	1.50	1.50
Fixed Speed Drive	1.75	1.75	1.75
Rubber			
Continuous Screw Operation	1.50	1.50	1.50
Intermittent Screw Operation	1.75	1.75	1.75
FANS			
Centrifugal	1.00	1.00	1.25
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	1.00	1.25	1.50
Belt	1.00	1.25	1.50
Disc	1.00	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	1.00	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS			
	1.00	1.00	1.25
HAMMER MILLS			
	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS			
	1.00	1.25	1.50
LAUNDRY WASHERS			
	1.25	1.25	1.50



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
LUMBER INDUSTRY			
Barkers	1.25	1.25	1.50
Spindle Feed	1.50	1.50	1.50
Main Drive	1.25	1.25	1.50
Conveyors			
Burner	1.25	1.25	1.50
Main or Heavy Duty	1.50	1.50	1.50
Main log	1.50	1.50	1.75
Re-saw, Merry-Go-Round	1.25	1.25	1.50
Slab	1.50	1.50	1.75
Transfer	1.25	1.25	1.50
Chains			
Floor	1.50	1.50	1.50
Green	1.50	1.50	1.50
Cut-Off Saws			
Chain	1.50	1.50	1.50
Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
Edger	1.25	1.25	1.50
Gang	1.50	1.50	1.50
Trimmer	1.25	1.25	1.50
Long Deck	1.50	1.50	1.50
Log Hauls – Incline – Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls – live-off brg. – Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.50	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
Chain	1.50	1.50	1.50
Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
METAL MILLS			
Draw Bench Carriage/Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers and uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (accumulators)	1.00	1.00	1.00
Pinch rolls	1.00	1.25	1.50
Scrap choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS CONCRETE			
	1.00	1.25	1.50
PAPER MILLS²⁾			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure liquors	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers – Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
Calender ³⁾	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
log (including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
Dryers³⁾			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes lump Breaker, Dandy Roll, Wire Turning and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
PAPER MILLS²⁾ (cont)			
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Presses – Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps – Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Supercalendar ³⁾	1.25	1.25	1.25
Thickener (AC Motor)	1.50	1.50	1.50
Thickener (DC Motor)	1.25	1.25	1.25
Washer (AC Motor)	1.50	1.50	1.50
Washer (DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
Yankee Dryers ²⁾	1.25	1.25	1.25
PLASTICS INDUSTRY – PRIMARY PROCESSING			
Intensive Internal Mixers			
Batch Mixers	1.75	1.75	1.75
Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill – 2 smooth rolls			
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Calendars	1.50	1.50	1.50
PLASTICS INDUSTRY – SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS – BARGE HAUL	1.00	1.50	1.75

Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
PUMPS			
Centrifugal	1.00	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
Gear Type	1.00	1.00	1.50
Lobe	1.00	1.00	1.25
Vane	1.00	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
Batch Mixers	1.50	1.75	1.75
Continuous Mixers	1.25	1.50	1.50
Mixing Mill			
2 smooth rolls	1.50	1.50	1.50
1 or 2 corrugated rolls	1.75	1.75	1.75
Batch Drop Mill – 2 smooth rolls	1.50	1.50	1.50
Cracker Warmer – 2 roll, 1 corrugated roll	1.75	1.75	1.75
Cracker – 2 corrugated rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill – 2 rolls	1.25	1.25	1.25
Refiner – 2 rolls	1.50	1.50	1.50
Calendars	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	1.00	1.00	1.25
Chemical Feeders	N/A	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	1.00	1.00	1.25
Rotary – Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake I	1.00	1.00	1.25



Application	Load Duration		
	Up to 3 hrs per day	3-10 hrs per day	Over 10 hrs per day
SCREW CONVEYORS			
Uniformly loaded or Fed	1.00	1.00	1.25
Heavy Duty	1.00	1.25	1.50
Severe Duty Reciprocating	1.50	1.75	2.00
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (low speed end)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calendars	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Siashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

Notes to REDUCER SERVICE FACTOR table:

- 1) Crane drives are to be selected based upon the gear tooth bending strength using the numeric service factors shown in the table or by analysis such as Miners' Rule. In all cases, the pitting resistance service factor shall be a minimum of 1.0. Contact NORD Gear for selection assistance.
- 2) Service factors for paper mill applications are applied to the nameplate rating of the electric drive motor at the motor rated based speed.
- 3) Anti-friction bearings only.
- 4) A Class Number of I may be applied at base speed of a supercalendar operating over a speed range of part-range constant horsepower and part-range constant torque where the constant horsepower speed range is greater than 1.5 to 1. A Class Number of II is applicable to supercalendars operating over the entire speed range at constant torque or where the constant horse-power speed range is less than 1.5 to 1.



Metric → Inch

Multiply	By	To Obtain
Gram [g]	x 0.0353	= oz
Kilogram [kg]	x 2.205	= lb
Newton [N]	x 0.2248	= lb
Newton meter [Nm]	x 8.851	= lb-in
Newton meter [Nm]	x 0.7375	= lb-ft
Inertia [kgm ²]	x 23.75	= lb-ft ²
Kilowatt [kW]	x 1.341	= hp
Meter [m]	x 39.4	= in
Meter [m]	x 3.281	= ft
Meter [m]	x 1.094	= yd
Millimeter [mm]	x 0.0391	= in
Centimeter [cm]	x 0.394	= in
Cubic Centimeter [cm ³]	x 0.061	= in ³
Liter [l]	x 61.023	= in ³
Liter [l]	x 1.057	= qt
Liter [l]	x 0.2642	= gal

Inch → Metric

Multiply	By	To Obtain
Ounce [oz]	x 28.35	= g
Pound [lb]	x 0.454	= kg
Ounce [oz]	x 0.028	= kg
Pound [lb]	x 4.448	= N
Pound-Inch [lb-in]	x 0.113	= Nm
Pound Feet [lb-ft]	x 1.3558	= Nm
Pound Feet Squared [lb-ft ²]	x 0.0421	= kgm ²
Horsepower [hp]	x 0.746	= kW
Feet [ft]	x 0.3048	= kW
Yard [yd]	x 0.9144	= m
Inch [in]	x 25.4	= mm
Inch [in]	x 2.54	= cm
Inch [in]	x 0.0254	= m
Cubic Inch [in ³]	x 16.39	= cm ³
Cubic Inch [in ³]	x 0.016	= liters
Gallon [gal]	x 3.785	= liters

Temperature

°F	=	1.8 °C + 32
°C	=	0.5555 x (°F - 32)
°C	=	°K - 273.16

Linear Velocity

Miles per Hour [mph]	x 88	= ft/min [fpm]
Miles per Hour [mph]	x 1.4677	= ft/sec [fps]
Feet per Minute [fpm]	x 0.3048	= m/min
Feet per Minute [fpm]	x 0.00508	= m/sec
Meter per Minute [m/min]	x 3.2808	= ft/min [fpm]
Meter per Second [m/sec]	x 196.85	= ft/min [fpm]

Power

$$\text{hp} = \frac{\text{Torque (lb-in)} \times \text{rpm}}{63025}$$

$$\text{hp} = \frac{\text{Torque (lb-ft)} \times \text{rpm}}{5252}$$

$$\text{hp}_{(\text{Lift})} = \frac{\text{Wgt (lb)} \times \text{fpm}}{33000 \times \text{Efficiency}}$$

$$\text{hp}_{(\text{Slide})} = \frac{\text{Wgt (lb)} \times \mu \times \text{fpm}}{33000 \times \text{Efficiency}}$$

Torque

$$T_{(\text{lb-in})} = \frac{\text{hp} \times 63025}{\text{rpm}}$$

$$T_{(\text{lb-ft})} = \frac{\text{hp} \times 5252}{\text{rpm}}$$

Electric Motor 3-phase

$$\text{hp}_{(\text{3ph-motor})} = \frac{1.732 \times V \times I \times \text{PF} \times \text{Efficiency}}{746}$$

Linear & Rotational Speed

$$\text{fpm} = 0.2618 \times \text{Dia}_{(\text{in})} \times \text{rpm}$$

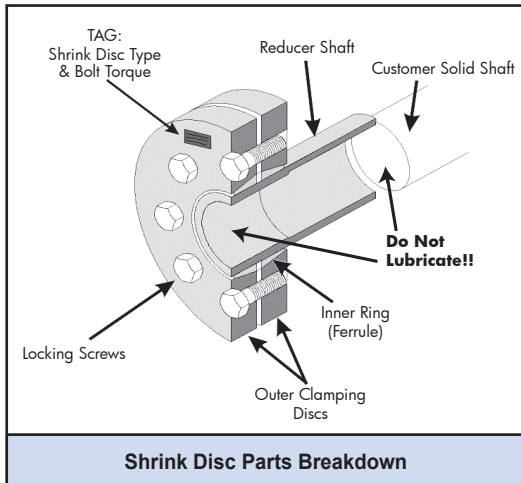
$$\text{rpm} = \frac{\text{fpm} \times 3.820}{\text{Dia}_{(\text{in})}}$$

Metric M Threads

For metric "M" threads, it is customary to omit the thread pitch for coarse threads. For example, if a thread is called out as an M8 with no pitch shown, it is automatically a coarse pitch thread.

Coarse threads and pitch
M6 x 1
M8 x 1.25
M10 x 1.5
M12 x 1.75
M16 x 2
M20 x 2.5
M24 x 3

Keyless Shaft Connections Shrink Discs



Shrink Discs (S & VS)

Shrink discs can be utilized to provide a keyless frictional connection between a gear reducer's hollow-bore and the driven machine shaft. NORD hollow bore gear reducers (Type AZ) can be offered with a Shrink Disc (S) and a Heavy Duty Shrink Disc (VS) and are available in a wide variety of inch and metric bore sizes.. The Heavy Duty Shrink Discs (VS) offer increased clamping force and a higher degree of safety against slippage for severe applications. Standard shrink disc bore sizes are optimized to take full advantage of each gear reducer's maximum rated torque capability and range offered gear ratios. Consult NORD if alternate bore sizes are required.

NORD Shrink Discs offer a number of advantages

- The resultant high capacity interference fit provides all the positive benefits of traditional interference fits, without the typical assembly and disassembly problems.
- Generous assembly clearances ensure ease of mounting
- Proper assembly tolerances assure connections can be released even after long periods of operation.
- Eliminating the need for keys or keyways results in a stronger solid shaft and eliminates key crushing or pounding failures.
- Shrink disc connections are backlash free, extremely concentric, well-balanced, and ideal for positioning applications, reversing applications, and higher speed applications.
- Shrink discs help eliminate shaft fretting corrosion, by nature of the interference fit achieved upon final assembly.
- Shrink discs provide for easy alignment and simple axial and angular timing of mounted or driven shaft components.

Shrink Disc Working Principal

By tightening the high-strength locking screws, the outer clamping discs are pulled together and the double-tapered inner ring provides a high-ratio conversion of the clamping loads into radial contact pressure. As the slotted inner ring is contracted, the assembly clearance between the customer solid shaft and the reducer hollow bore is absorbed. The result is a high capacity mechanical interference fit. The working pressures and the frictional bond between the components allow the shrink disc connection to transmit torque and combined loading conditions. Proper design of the mating components assures that the contact pressures are well within the elastic limits of the shrink disc, hollow bore and solid shaft components; therefore, simply loosening the locking screws releases the interference fit and restores the original assembly clearance.



Shrink Disc Torque Capacity

The shrink disc torque capacity (T_{SH}) is displayed in the shrink disc ratings tables on page 57. The transmissible torque capacity of the shrink disc is independent of any axial load or thrust force ($F_{aSH} = 0$). The shrink disc torque capacities are based upon proper mating shaft design. The Shrink Disc Torque Capacity (T_{SH}) is calculated without using a safety factor and should be considered the point where a connection could slip if a higher torque is applied. Overload conditions or excessive high torque can cause the shrink disc connection to slip.

Shrink Disc Axial Force (Thrust) Capacity

Loads directed away from or towards the gearbox along the center axis of the driven shaft are called axial loads or thrust loads. The shrink disc thrust capacity (F_{aSH}) is also displayed in the shrink disc ratings tables on pages 57. The presence of a thrust load condition will decrease the torque capacity of the shrink disc. When combined torque and thrust load conditions are present in the driven system, calculations must be completed in order to determine the resultant torque and safety factor against slipping.

Bending Moment or Radial Load

Bending moments occur when a radial load force acts outside the shrink disc connection. Radial or overhung load forces act in a direction perpendicular to the center rotating axis of the driven solid shaft. Radial load forces that may induce bending moment include: the weight of mounted components, a chain or belt pull, shaft deflections of the driven shaft, etc. Generally the bending moments described change from a positive to a negative value during each shaft rotation and are designated as rotating or reversing bending moments. When there are bending moments acting upon the shrink disc, in addition to the torque and/or axial force, the rated torque and rated axial force of the shrink disc decrease compared to the values listed in the tables. Please contact NORD with application details.

Shrink Disc Design Considerations

To ensure proper assembly & disassembly there are important shrink disc design considerations.

- The customer's solid shaft end must engage the full length of the reducer hollow shaft.
- The contact areas of the reducer hollow shaft and the mating solid shaft must be lubrication-free.
- The solid shaft and hollow-bore tolerances must be to specification in order to avoid damage or deformation to the shrink disc parts and/or reducer hollow bore.
- Proper solid shaft fit helps assure proper clamping conditions, adequate design safety against slippage, and proper shaft release during disassembly.
- The yield-strength of the driven solid shaft must be at least 52,260 lb/in² (360 N/mm²), so that the resultant compression forces needed to create adequate friction do not cause permanent shaft deformation.
- The recommend surface finish of the shaft components should be between 32-125 micro-inches (0.8-3.2 micro-meters) in order to ensure adequate friction and clamping forces. Avoid using turned, ground and polished shaft material which can result in a failure of the connection.
- All fastening screws must be of the proper grade and tightened to the specified bolt torque in a circular fashion.
- The seats between the inner ring and outer clamping discs are too be lightly lubricated with molybdenum disulfide (MoS_2) grease. The screw threads and head contact area need to be lightly coated with multipurpose grease.

Keyless Shaft Connections Shrink Discs



Shaft Tolerances and Assembly clearance

To assure proper clamping forces are maintained and to prevent permanent distortion of the shrink disc components or mating shaft components, the shrink disc assembly tolerances require more precision than keyed shafts or shafts connected with bushing kits. The recommend fit between the hollow shaft and solid shaft and the maximum assembly clearance is tabulated below.

Above Ø (mm)	To & Including Ø (mm)	Solid Shaft Tolerance (ISO 286-2, h6) Ø (mm)	Reducer Bore Tolerance (ISO 286-2, H7) Ø (mm)	Minimum Assembly Clearance (mm)	Maximum Assembly Clearance (mm)
18	30	+0.000/-0.013	+0.021/-0.000	0.00	0.034
30	50	+0.000/-0.016	+0.025/-0.000	0.00	0.041
50	80	+0.000/-0.019	+0.030/-0.000	0.00	0.049
80	120	+0.000/-0.022	+0.035/-0.000	0.00	0.057
120	180	+0.000/-0.025	+0.040/-0.000	0.00	0.065
180	190	+0.000/-0.029	+0.046/-0.000	0.00	0.075

Above Ø (inch)	To & Including Ø (inch)	Solid Shaft Tolerance (ISO 286-2, h6) Ø (inch)	Reducer Bore Tolerance (ISO 286-2, H7) Ø (inch)	Minimum Assembly Clearance (mm)	Maximum Assembly Clearance (in)
0.7500	1.1250	+0.0000/-0.0005	+0.0008/-0.0000	0.0000	0.0013
1.1250	1.9375	+0.0000/-0.0006	+0.0009/-0.0000	0.0000	0.0015
2.0000	3.1250	+0.0000/-0.0007	+0.0011/-0.0000	0.0000	0.0018
3.1875	4.6875	+0.0000/-0.0008	+0.0013/-0.0000	0.0000	0.0021
4.7500	7.0625	+0.0000/-0.0009	+0.0015/-0.0000	0.0000	0.0024
7.1250	7.5000	+0.0000/-0.0011	+0.0018/-0.0000	0.0000	0.0029



CAUTION



Avoid over-tightening the shrink disc to compensate for excessive assembly clearance, which can result in permanent deformation of the shrink disc clamping components and the reducer's hollow bore.



Shrink Disc Selection Method

Along with the shrink disc ratings tables on page 57, the following procedures are to be used to verifying that a given gear reducer with shrink disc is sized such that the specified shrink disc has adequate capacity to handle the application loads.

1. Select the Gear Unit and Shrink Disc

Record the selected gear unit type. Using the table on pages 57 indicate the shrink disc size or type, and the torque rating. Consult NORD if alternate bore sizes are required.

Gear Unit Type	=	<input type="text"/>
Shrink Disc Type	=	<input type="text"/>
F _T (Thrust Load)	=	<input type="text"/>
T _{SH} (Shrink Disc Torque Rating)	=	<input type="text"/>

2. Determine the Application Torque

The application torque at the shrink disc can be calculated as follows:

$$T_2 = \frac{P \times 63025}{n_2}$$

T_2 = Application Torque [lb-in]
 P = Power [HP]
 n_2 = Reducer output shaft speed [rpm]

3. Thrust Load

If there is a thrust load (F_T) present in the system record the value below.

Thrust Load (F_T) =

4. Determine the Resultant Torque

Applications involving simultaneous transmission of torque and additional thrust or bending moment loads require a resultant application torque to be calculated as follows:

$$T_{2R} = \sqrt{(T_2)^2 + \left(F_T \times \frac{UH}{2}\right)^2}$$

T_{2R} = Resultant torque at reducer output [lb-in]
 T_2 = Application Torque [lb-in]
 F_T = Thrust load [lb]
 UH = Driven shaft diameter / Reducer bore size [in]

Keyless Shaft Connections Shrink Discs



5. Check the Safety Factor of the Shrink Disc Connection

Calculate the shrink disc safety (f_{SD}) with the formula shown and compare to the specified shrink disc safety factor in the application load classification table.

$$f_{SD} = \frac{T_{SH}}{T_{2R}}$$

f_{SD} = Resultant shrink disc design safety factor

T_{SH} = Shrink disc torque rating from page 57 [lb-in]

T_{SR} = Resultant torque at reducer output from Step 4 [lb-in]

Application Load Classification	Recommended Shrink Disc Design Safety Factor
Uniform Load / No Shock Load	$1.8 \leq f_{SD} < 2.0$
Light to Moderate Shock Load	$2.0 \leq f_{SD} < 2.5$
Heavy Shock Load	$3.0 \leq f_{SD}$

Shrink Disc Selection Example

1. Select the Gear Unit and Shrink Disc Bore Size

Gear Unit Type	=	SK4282 AFSH-N180TC	Reducer Bore Size (UH)	=	2.000 [in]
Ratio	=	45.05:1	Torque Rating (T _{SH})	=	40,000 [lb-in]
Power (P)	=	5.0 [HP]	Thrust Load (F _T)	=	3,260 [lb]
Output Speed (n ₂)	=	39 [rpm]	Axial Force Rating (F _{aSH})	=	40,660 [lb]

2. Determine the Application Torque

$$T_2 = \frac{P \times 63025}{n_2} = \frac{(5\text{HP}) \times 63025}{(39 \text{ rpm})} = 8,080$$

3. Thrust Load / Axial Force

$$F_T = 3,260 \text{ [lb]}$$

4. Calculate the Safety Factor Against Slipping from the Applied Thrust Load

$$T_{2R} = \sqrt{(T_2)^2 + \left(F_T \times \frac{UH}{2}\right)^2} = \sqrt{(8080)^2 + \left(3260 \times \frac{2.000}{2}\right)^2}$$

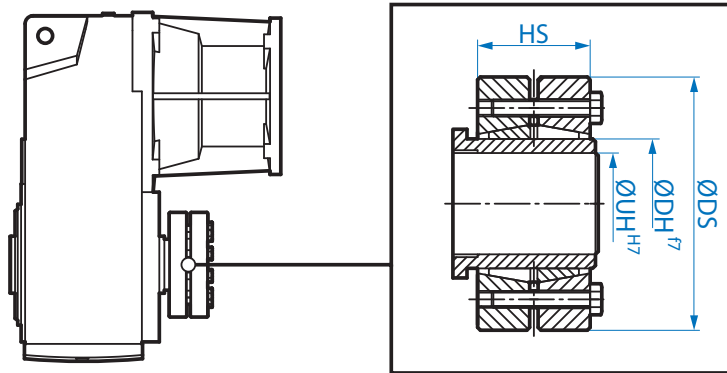
$$T_{2R} = 8713 \text{ [lb-in]}$$

5. Check the Safety Factor of the Shrink Disc Connection

$$f_{SD} = \frac{40000 \text{ lb}}{8713} = 4.59$$



Keyless Shaft Connections Shrink Discs

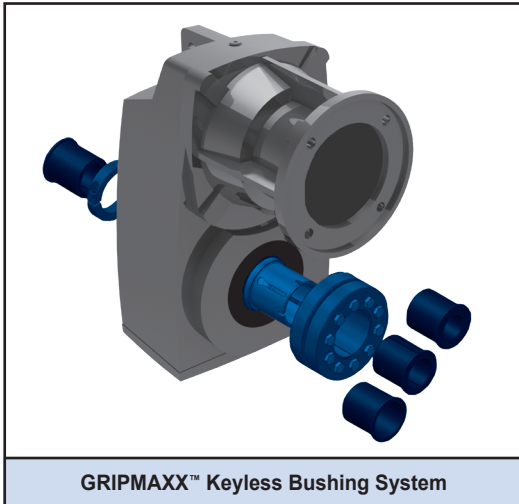


CLINCHER™ Gear Units with Shrink Disk

Gear Unit Type	Shaft Size [UH]	Shrink Disc Ratings			Dimensions			ISO Grade 10.9 Hex Head Screw			
		Type	Torque T _{SH} [lb-in]	Thrust F _{aSH} [lb]	DS [In]	HS [In]	DH [In]	Size	Spec.	Qty.	Torque [lb-ft]
SK0282NB AZSH	25 mm	SN25/35V	4,510	9,170	2.68	1.26	1.38	M5 x 25	DIN931	8	5.2
SK0282NB AZSH	30 mm	SN30/40V	8,670	14,680	3.15	1.42	1.57	M6 x 35	DIN933	8	8.9
SK0282NB AZSH	1.1875 in	SN30/40V	8,770	14,840	3.15	1.42	1.57	M6 x 35	DIN933	8	8.9
SK1382NB AZSH	35 mm	SN35/46V	12,700	18,370	3.54	1.57	1.81	M6 x 35	DIN933	10	8.9
SK1382NB AZSH	1.500 in	SN35/46V	15,000	21,760	3.54	1.57	1.81	M6 x 35	DIN933	10	8.9
SK1282 AZSH	30 mm	SN30/40V	8,670	14,680	3.15	1.42	1.57	M6 x 35	DIN933	8	8.9
SK1282 AZSH	1.250 in	SN30/40V	9,720	16,440	3.15	1.42	1.57	M6 x 35	DIN933	8	8.9
SK2282 AZSH	35 mm	SN35/46V	12,700	18,370	3.54	1.57	1.81	M6 x 35	DIN933	10	8.9
SK2282 AZSH	1.500 in	SN35/46V	15,000	21,760	3.54	1.57	1.81	M6 x 35	DIN933	10	8.9
SK3282 / SK3382 AZSH	40 mm	SN40/55V	21,200	26,210	4.41	1.73	2.17	M8 x 40	DIN931	8	22
SK3282 / SK3382 AZSH	1.625 in	SN40/55V	22,600	27,910	4.41	1.73	2.17	M8 x 40	DIN931	8	22
SK4282 AZSH	50 mm	SN50/62V	38,800	39,390	4.92	1.81	2.44	M8 x 40	DIN931	10	22
SK4282 AZSH	2.000 in	SN50/62V	40,000	40,660	4.92	1.81	2.44	M8 x 40	DIN931	10	22
SK5282 AZSH	60 mm	SN60/76V	71,900	60,830	6.14	2.28	2.99	M10 x 50	DIN931	10	44
SK5282 AZSH	2.500 in	SN60/76V	80,500	68,140	6.14	2.28	2.99	M10 x 50	DIN931	10	44
SK6282 / SK6382 AZSH	70 mm	SN70/90V	122,100	88,570	7.17	2.91	3.54	M12 x 70	DIN933	10	74
SK6282 / SK6382 AZSH	3.000 in	SN70/90V	144,600	105,000	7.17	2.91	3.54	M12 x 70	DIN933	10	74
SK7282 / SK7382 AZSH	80 mm	SN80/108V	159,400	101,200	8.19	3.27	4.25	M12 x 70	DIN933	14	74
SK7282 / SK7382 AZSH	3.1875 in	SN80/108V	163,300	103,700	8.19	3.27	4.25	M12 x 70	DIN933	14	74
SK8282 / SK8382 AZSH	100 mm	SN100/128V	269,100	136,700	9.45	3.62	5.04	M16 x 80	DIN933	8	184
SK8282 / SK8382 AZSH	4.000 in	SN100/128V	277,700	141,100	9.45	3.62	5.04	M16 x 80	DIN933	8	184
SK9282 / SK9382 AZSH	4.750 in	SN125/158V	481,500	195,700	11.65	3.86	6.22	M16 x 80	DIN933	12	184
SK9282 / SK9382 AZSH	125 mm	SN125/158V	516,900	210,100	11.65	3.86	6.22	M16 x 80	DIN933	12	184

CLINCHER™ Gear Units with Heavy Duty Shrink Disk

Gear Unit Type	Shaft Size [UH]	Shrink Disc Ratings			Dimensions			ISO Grade 10.9 Hex Head Screw			
		Type	Torque T _{SH} [lb-in]	Thrust F _{aSH} [lb]	DS [In]	HS [In]	DH [In]	Size	Spec.	Qty.	Torque [lb-ft]
SK7282 / SK7382 AZVSH	3.1875 in	SN85/108VS	259,000	154,800	9.29	4.33	4.25	M16 x 90	DIN931	10	184
SK7282 / SK7382 AZVSH	85 mm	SN85/108VS	285,500	170,600	9.29	4.33	4.25	M16 x 90	DIN931	10	184
SK8282 / SK8382 AZVSH	100 mm	SN100/128VS	416,800	211,700	10.47	5.35	5.04	M20 x 100	DIN931	8	361
SK8282 / SK8382 AZVSH	4.000 in	SN100/128VS	430,200	218,600	10.47	5.35	5.04	M20 x 100	DIN931	8	361
SK9282 / SK9382 AZVSH	4.750 in	SN130/158VS	754,300	294,700	12.40	6.69	6.22	M20 x 130	DIN931	12	361
SK9282 / SK9382 AZVSH	130 mm	SN130/158VS	875,800	342,200	12.40	6.69	6.22	M20 x 130	DIN931	12	361
SK10382.1 AZSH	6.250 in	SN160/210VS	1,154,000	366,500	15.20	5.12	8.27	M20 x 100	DIN931	14	361
SK10382.1 AZSH	160 mm	SN160/210VS	1,173,000	372,300	15.20	5.12	8.27	M20 x 100	DIN931	14	361
SK11382.1 AZSH	7.000 in	SN180/230VS	2,199,000	620,800	17.32	7.80	9.06	M24 x 150	DIN931	16	620
SK11382.1 AZSH	180 mm	SN180/230VS	2,254,000	636,200	17.32	7.80	9.06	M24 x 150	DIN931	16	620



GRIPMAXX™ Keyless Bushing (Option M)

The GRIPMAXX™ is an innovative keyless bushing system designed and developed using the latest in Finite Element Modeling technology (FEM). GRIPMAXX™ uses the proven NORD Shrink Disc system and a unique hollow shaft design which provides both high strength and the required elasticity needed to accommodate a large number of inch and metric bushing inserts. Like the shrink disc, GRIPMAXX™ results in a high capacity interference fit.

GRIPMAXX™ offers a number of advantages.

- Bore size flexibility – A single gear unit can be supplied with multiple bore size/bushing options.
- No special shaft tolerances – the machine builder can utilize readily available, keyless, cold finished shaft stock. The bushing absorbs the extra clearance in the system thereby eliminating the need for precise machining of the driven shaft.
- Consistent mounting location – the unique hollow bore design allows all components to utilize cylindrical active surfaces (no tapered or conical shaped bushings) allowing for a tight fit against a shouldered machine shaft. GRIPMAXX™ helps ensure a consistent mounting location and is ideal when angular timing of mounted or driven shaft components is required.
- Easy installation and removal – The loose tolerance requirements of the driven machine shaft and generous assembly clearances help ensure easy installation
- Eliminating the need for keys or keyways results in a stronger solid shaft and eliminates key crushing or pounding failures.
- High capacity/optimal fit – GRIPMAXX™ connections result in a zero-backlash interference fit ideal for positioning applications, reversing applications, and applications with frequent starts and stops. By nature of the interference fit achieved upon final assembly GRIPMAXX™ helps eliminate shaft fretting corrosion, by nature of the interference fit achieved upon final assembly.
- Corrosion Resistant - Plasma-nitrided bushings have an extremely hard, low-wear, corrosion-resistant surface. Shrink disc flanges are treated with a protective ferrous oxide finish to provide additional abrasion resistance, heat resistance and corrosion protection.

GRIPMAXX™ Working Principal

The NORD GRIPMAXX™ Bushing System uses the NORD shrink disc locking collar, an oversized gear reducer hollow bore, and a wide range of possible split-bushing inserts intended to accommodate a variety of final bore sizes. The NORD shrink disc has a larger capacity and an increased clamping force capability than your typical commodity shrink disc clamping rings. Through tightening of shrink disc “locking screws,” large radial clamping forces are exerted upon the walls of the NORD hollow shaft. The NORD hollow shaft is uniquely designed to remain elastic, while providing considerable compressive forces. These high forces are in turn transmitted through the split bushing, producing the desired clamping forces on the driven solid machine shaft.



GRIPMAXX™ Torque Capacity

The GRIPMAXX™ torque capacity (T_M) is displayed in the ratings tables on Pages 5-10. The transmissible torque capacity is gear unit size and bushing size dependent as well as independent of any axial load or thrust force ($F_{aM} = 0$). The GRIPMAXX™ torque capacity (T_M) is calculated without using a safety factor and should be considered the point where a connection will slip if a higher torque is applied.

GRIPMAXX™ Axial Force (Thrust) Capacity

Loads directed away from or towards the gearbox, along the center axis of the driven shaft are called axial loads or thrust loads. The Gripmaxx™ thrust capacity (F_{aM}) is also displayed in the GRIPMAXX™ ratings tables on Pages 5-10. The presence of a thrust load condition decreases the torque capacity of the GRIPMAXX™ connection. The transmissible axial force or thrust capacity is gear unit size and bushing size dependent as well as independent of any applied torque condition ($T_M = 0$).

Bending Moment or Radial Load

Bending moments occur when a radial load force acts outside the GRIPMAXX™ connection. Radial or overhung load forces act in a direction perpendicular to the center rotating axis of the driven solid shaft. Radial load forces that may induce bending moment include: the weight of mounted components, a chain or belt pull, shaft deflections of the driven shaft, etc. Generally the bending moments described change from a positive to a negative value during each shaft rotation and are designated as rotating or reversing bending moments.

GRIPMAXX™ is optimally designed for shaft mounted or torque-arm mounted gear reducer applications. It is possible to use GRIPMAXX™ on flange-mounted gearboxes. With special shaft designs, it may also be possible to apply GRIPMAXX™ on foot-mounted reducer applications. NORD does not recommend the use of GRIPMAXX™ when significant bending moments or radial load forces exist. These forces must be absorbed elsewhere in the system and not by the gear unit or by the GRIPMAXX™ connection.

GRIPMAXX™ Design Considerations

- Readily available, keyless, cold finished solid shaft stock may be used. Avoid using turned, ground and polished shaft material which can result in a failure of the friction connection.
- The customer's solid shaft end must engage the full length of the reducer hollow shaft.
- The yield-strength of the driven solid shaft must be at least 52,260 lb/in² (360 N/mm²), so that the resultant compression forces needed to create adequate friction do not cause permanent shaft deformation.
- The contact areas of the reducer hollow shaft, bushing insert and the mating solid shaft must be lubrication-free
- All shrink disc fastening screws must be of the proper grade and tightened to the specified bolt torque in a circular fashion.
- The seats between the inner ring and outer clamping discs of the shrink disc are to be lightly lubricated with molybdenum disulfide (MoS₂) grease. The screw threads and head contact area need to be lightly coated with multipurpose grease.

Solid Shaft Tolerance Requirements

The recommend solid shaft tolerances for the GRIPMAXX™ connection are tabulated below.

Inch Shaft Size		Tolerance [in]	Metric Shaft Size		ISO 268-2 Tolerance h11 (-) [mm]
Over [in]	Including [in]		Over [mm]	Including [mm]	
0.438	0.688	0.0043	10	18	0.110
0.750	1.063	0.0051	18	30	0.130
1.125	1.938	0.0063	30	50	0.160
2.000	3.125	0.0075	50	80	0.190



GRIPMAXX™ Selection Procedure

Along with the GRIPMAXX™ ratings tables on pages 62 - 63, the following procedures are to be used to verify that a given gear reducer with GRIPMAXX™ assembly has adequate capacity and safety factor against slipping given the application load conditions.

1. Select the Gear Unit and GRIPMAXX™ Bore Size

Record the gear unit type, ratio and output speed and using the GRIPMAXX™ rating tables on pages 62 - 63 complete the table below. If there is no axial load or thrust load present in the application the axial force rating can be left blank.

Gear Unit Type	=	<input type="text"/>	GRIPMAXX™ Bore Size	=	<input type="text"/> [in/mm]
Ratio	=	<input type="text"/>	Torque Rating (T_M)	=	<input type="text"/> [lb-in]
Power	=	<input type="text"/> [HP]	Thrust Load (F_T)	=	<input type="text"/> [lb]
Output Speed (n_2)	=	<input type="text"/> [rpm]	Axial Force Rating (F_{am})	=	<input type="text"/> [lb]

2. Determine the Application Torque

Application torque at the GRIPMAXX™ shrink disc connection can be calculated as follows:

$$T_2 = \frac{P \times 63025}{n_2}$$

T_2 = Application torque [lb-in]

P = Power [HP]

n_2 = Reducer output shaft speed [rpm]

3. Calculate the Safety Factor Against Slipping from the Applied Load Torque

Check the safety factor against slipping as follows:

$$S_1 = \frac{T_M}{T_2}$$

S_1 = Safety factor against slipping (torque only)

T_M = GRIPMAXX™ Torque Rating [lb-in]

T_2 = Applied load torque [lb-in]

If there is no axial force or thrust load present in the application go directly to Step 6.

4. Thrust Load / Axial Force

If there is an axial force or thrust load (F_T) present in the system record the value below. Otherwise leave blank or indicate as zero. Check to the gearmotor rating tables to make sure the applied thrust load is less than the thrust capacity of the gear unit. Otherwise the gear unit selection is not valid.

Thrust Load (F_T) = [lb-in]



5. Calculate the Safety Factor Against Slipping from the Applied Thrust Load

Check the safety factor against slipping as follows:

$$S_2 = \frac{F_{aM}}{F_T}$$

S_2 = Safety factor against slipping (thrust load only)

F_{aM} = GRIPMAXX™ Axial Force Rating [lb]

F_T = Applied thrust load or axial load force [lb]

6. Determine the Resultant Safety Factor and Verify the Selection

Calculate the safety factor against slippage (S_R) by applying the proper formula or condition.

Condition 1: Applied Torque Only	Condition 2: Applied Torque & Applied Axial / Thrust Load
$S_R = S_1$	$\sqrt{S_R} = \frac{(S_1)^2 \cdot (S_2)^2}{(S_1)^2 + (S_2)^2}$

Verify that the Gripmaxx™ connection has adequate safety factor against slippage.

Application Load Classification	Safety Factor
Uniform Load / No Shock Load	1.8 SR < 2.0
Light to Moderate Shock Load	2.0 SR < 2.5
Heavy Shock Load	3.0 ≤ SR

When torque & thrust load conditions exist (Cond. 2) NORD recommends that the $SR > 2.0$

Gripmaxx™ Selection Example

1. Select the Gear Unit and Gripmaxx™ Bore Size

Gear Unit Type	=	SK4282.1 AFM-N180TC	GRIPMAXX™ Bore Size	=	1-5/8 [in]
Ratio	=	45.05:1	Torque Rating (T_M)	=	22,331 [lb-in]
Power	=	5.0 [HP]	Thrust Load (F_T)	=	3,620 [lb]
Output Speed (n_2)	=	39 [rpm]	Axial Force Rating (F_{aM})	=	22,322 [lb]

2. Determine the Application Torque

$$T_2 = \frac{P \times 63025}{n_2} = \frac{(5 \text{ HP}) \times 63025}{(39 \text{ rpm})} = 8080 \text{ [lb-in]}$$

3. Calculate the Safety Factor Against Slipping from the Applied Load Torque

$$S_1 = \frac{T_M}{T_2} = \frac{22,331}{8,080} = 2.76$$

4. Thrust Load / Axial Force

$$F_T = 3,260 \text{ [lb]}$$

5. Calculate the Safety Factor Against Slipping from the Applied Thrust Load

$$S_2 = \frac{F_{aM}}{F_T} = \frac{22,322}{3,260} = 6.85$$

6. Determine the Resultant Safety Factor and Verify the Selection

$$S_R = \sqrt{\frac{(S_1)^2 \cdot (S_2)^2}{(S_1)^2 + (S_2)^2}} = \sqrt{\frac{(2.76)^2 \cdot (6.85)^2}{(2.76)^2 + (6.85)^2}} = 2.56$$

Keyless Shaft Connections GRIPMAXX™



Gear unit type	GRIPMAXX™ Ratings				Type	Shrink Disc				Clamp Ring	
	Bushing Size		Torque T _{2M}	Axial Force F _{aM}		ISO Grade 10.9 Hex Screw				Socket Head Screw	Torque
	Inside Diameter		[lb-in]”	[lb]”		Size	Spec.	Qty.	Torque [lb-ft]”		
SK1282AZM	5/8	in	2,105	5,724	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	3/4	in	3,032	6,868	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	20	mm	3,342	7,211	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	25	mm	5,222	9,014	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	1	in	5,390	9,158	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	1-1/8	in	6,822	10,303	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	30	mm	7,519	10,816	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
	1-3/16	in	7,601	10,875	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1
1-1/4	in	8,422	11,447	SN30/42V	M6 x 35	DIN 933	8	8.9	M6 x 20	8.1	
SK2282AZM/SK2382AZM	1-1/8	in	7,347	10,283	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	30	mm	8,098	10,796	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	1-3/16	in	8,186	10,855	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	1-1/4	in	9,070	11,426	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	1-3/8	in	10,975	12,569	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	35	mm	11,022	12,596	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	1-7/16	in	11,996	13,140	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
	1-1/2	in	13,061	13,711	SN35/49V	M6 x 35	DIN 933	10	8.9	M8 x 25	19.9
SK3282AZM/SK3382AZM	1-3/16	in	9,691	13,635	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	1-1/4	in	10,738	14,353	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	1-3/8	in	12,993	15,788	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	35	mm	13,049	15,822	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	1-7/16	in	14,201	16,506	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	1-1/2	in	15,463	17,224	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	40	mm	17,043	18,082	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
	1-5/8	in	18,147	18,659	SN40/55V	M8 x 40	DIN 931	8	22	M8 x 25	19.9
SK4282AZM/SK4382AZM	1-3/8	in	15,988	18,888	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	35	mm	16,057	18,929	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-7/16	in	17,475	19,747	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-1/2	in	19,028	20,605	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	40	mm	20,973	21,633	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-5/8	in	22,331	22,322	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-11/16	in	24,082	23,181	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-3/4	in	25,899	24,040	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	45	mm	26,543	24,337	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-13/16	in	27,782	24,898	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	1-15/16	in	31,746	26,615	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
	50	mm	32,770	27,041	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9
2	in	33,827	27,474	SN50/62V	M8 x 40	DIN 931	10	22	M8 x 25	19.9	



Gear unit type	GRIPMAXX™ Ratings				Type	Shrink Disc				Clamp Ring	
	Bushings Size		Torque	Axial Force		ISO Grade 10.9 Hex Screw				Socket Head Screw	Torque
	Inside Diameter		T _{2M} [lb-in]	F _{aM} [lb]		Size	Spec.	Qty.	Torque [lb-ft]		[ft-lb]
SK5282AZM/SK5382AZM	1-5/8	in	30,424	29,383	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	1-11/16	in	32,809	30,513	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	1-3/4	in	35,285	31,643	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	45	mm	36,163	32,035	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	1-13/16	in	37,850	32,773	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	1-15/16	in	43,251	35,034	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	50	mm	44,646	35,594	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	2	in	46,086	36,164	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	55	mm	54,022	39,154	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	2-3/16	in	55,132	39,554	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	2-1/4	in	58,328	40,684	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	60	mm	64,290	42,713	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	2 3/8	in	64,989	42,944	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
	2-7/16	in	68,454	44,075	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9
2-1/2	in	72,010	45,205	SN60/78V	M10 x 50	DIN 933	10	44	M8 x 25	19.9	
SK6282AZM/SK6382AZM	2-7/16	in	77,500	51,328	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	2-1/2	in	81,525	52,644	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	65	mm	85,422	53,887	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	2-5/8	in	89,881	55,276	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	2 3/4	in	98,645	57,908	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	70	mm	99,069	58,032	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	2-15/16	in	112,556	61,856	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
	75	mm	113,728	62,177	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9
3	in	117,396	63,172	SN70/94V	M12 x 70	DIN 933	10	74	M8 x 25	19.9	
SK7282AZM / SK7382AZM	75	mm	121,410	70,380	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
	2-15/16	in	117,650	69,280	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
	3	in	125,330	71,510	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
	80	mm	138,140	75,070	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
	3-3/16	in	141,480	76,000	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
	3-1/4	in	147,090	77,470	SN80/108V	M12 x 70	DIN 933	14	74.00	M10 x 30	39.0
SK8282AZM / SK8382AZM	3-7/16	in	170,790	80,840	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	90	mm	181,470	83,330	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	3-5/8	in	189,930	85,250	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	95	mm	202,190	87,960	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	100	mm	224,040	92,590	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	3-15/16	in	224,090	92,600	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
	4	in	231,260	94,070	SN100/128V	M16 x 80	DIN 933	8	180.00	M10 x 35	39.0
SK9282AZM / SK9382AZM	110	mm	331,020	124,700	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	4-7/16	in	347,550	127,800	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	4-1/2	in	357,410	129,600	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	120	mm	393,940	136,100	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	4-3/4	in	398,220	136,800	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	125	mm	427,460	141,700	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0
	4-15/16	in	430,280	142,200	SN125/158V	M16 x 80	DIN 933	12	180.00	M12 X 40	68.0

Keyless Shaft Connections Compatibility



Available CLINCHER™ gearmotors with shrink discs or GRIPMAXX™

Gear Unit	Gearmotor														
	63 S/L	71 S/L	80 S/L	90 S/L	100 L/LA	112 M	132 SM	160 M/L	180 MX/LX	200 L	225 S/M	250 M	280 S/M	315 S/M	315 MA/L
SK 0182 NB AZSH															
SK 0282 NB AZSH	✓														
SK 1282 AZSH	✓	✓	✓												
SK 1382 NB AZSH	✓														
SK 2282 AZSH		✓	✓	✓	✓										
SK 2382 AZSH															
SK 3282 AZSH		✓	✓	✓	✓										
SK 3382 AZSH			✓	✓											
SK 4282 AZSH				✓	✓	✓	✓								
SK 4382 AZSH															
SK 5282 AZSH				✓	✓	✓	✓	✓							
SK 5382 AZSH															
SK 6282 AZSH					✓	✓	✓	✓	✓						
SK 6382 AZSH				✓	✓	✓	✓	✓	✓						
SK 7282 AZSH							✓	✓	✓	✓	*				
SK 7382 AZSH					✓	✓	✓	✓	✓	✓	*				
SK 8282 AZSH							✓	✓	✓	✓	✓				
SK 8382 AZSH					✓	✓	✓	✓	✓	✓	✓				
SK 9282 AZSH										✓	✓	✓	✓		
SK 9382 AZSH							✓	✓	✓	✓	✓	✓	✓		

* Upon Request

Combination Units															
SK 1282/02 AZSH															
SK 2282/02 AZSH	✓	✓	✓	✓											
SK 3282/12 AZSH	✓	✓	✓	✓	✓	✓									
SK 4282/12 AZSH	✓	✓	✓	✓	✓	✓									
SK 5282/12 AZSH	✓	✓	✓	✓	✓	✓									
SK 6382/22 AZSH		✓	✓	✓	✓	✓									
SK 7382/32 AZSH		✓	✓	✓	✓	✓	✓								
SK 8382/32 AZSH		✓	✓	✓	✓	✓	✓								
SK 8382/42 AZSH				✓	✓	✓	✓	✓							
SK 9382/42 AZSH				✓	✓	✓	✓	✓							
SK 9382/52 AZSH				✓	✓	✓	✓	✓	✓						

Heavy Duty Shrink Disc															
SK 7282 AZVSH							✓	✓	✓						
SK 7382 AZVSH					✓	✓	✓	✓	✓						
SK 8282 AZVSH							✓	✓	✓	✓	*				
SK 8382 AZVSH					✓	✓	✓	✓	✓	✓	*				
SK 9282 AZVSH										✓	✓	✓	✓		
SK 9382 AZVSH							✓	✓	✓	✓	✓	✓	✓		
SK 10382.1 AZSH								✓	✓	✓	✓	✓	✓	✓	✓
SK 11382.1 AZSH								✓	✓	✓	✓	✓	✓	✓	✓

* Upon Request



Available CLINCHER™ gear units with NEMA adapters paired with shrink discs or GRIPMAXX™

Gear Unit	NEMA C-Face							
	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 0182 NB AZSH								
SK 0282 NB AZSH	✓	✓						
SK 1282 AZSH	✓	✓						
SK 1382 NB AZSH	✓	✓						
SK 2282 AZSH	✓	✓						
SK 2382 AZSH								
SK 3282 AZSH	✓	✓	✓	✓				
SK 3382 AZSH	✓	✓						
SK 4282 AZSH	✓	✓	✓	✓	✓			
SK 4382 AZSH								
SK 5282 AZSH	✓	✓	✓	✓	✓	✓		
SK 5382 AZSH								
SK 6282 AZSH			✓	✓	✓	✓	✓	✓
SK 6382 AZSH	✓	✓	✓	✓	✓	✓		
SK 7282 AZSH			✓	✓	✓	✓	✓	✓
SK 7382 AZSH			✓	✓	✓	✓	✓	✓
SK 8282 AZSH			✓	✓	✓	✓	✓	
SK 8382 AZSH			✓	✓	✓	✓	✓	✓
SK 9282 AZSH			✓	✓	✓	✓	✓	✓
SK 9382 AZSH			✓	✓	✓	✓	✓	✓

Combination Units								
SK 1282/02 AZSH								
SK 2282/02 AZSH	✓	✓						
SK 3282/12 AZSH	✓	✓						
SK 4282/12 AZSH	✓	✓	✓					
SK 5282/12 AZSH	✓	✓	✓					
SK 6382/22 AZSH	✓	✓	✓					
SK 7382/32 AZSH	✓	✓	✓	✓				
SK 8382/32 AZSH	✓	✓	✓	✓				
SK 8382/42 AZSH	✓	✓	✓	✓	✓	✓		
SK 9382/42 AZSH	✓	✓	✓	✓	✓	✓		
SK 9382/52 AZSH			✓	✓	✓	✓		

Heavy Duty Shrink Disc								
SK 7282 AZVSH			✓	✓	✓	✓	✓	✓
SK 7382 AZVSH			✓	✓	✓	✓	✓	✓
SK 8282 AZVSH			✓	✓	✓	✓	✓	✓
SK 8382 AZVSH			✓	✓	✓	✓	✓	✓
SK 9282 AZVSH			✓	✓	✓	✓	✓	✓
SK 9382 AZVSH			✓	✓	✓	✓	✓	✓
SK 10382.1 AZSH			✓	✓	✓	✓	✓	✓
SK 11382.1 AZSH			✓	✓	✓	✓	✓	✓

CLINCHER™ Weights - Gearmotor



Approximate Weights [lb]

Type	63S	63L	71S	71L	80S	80L	90S	90L	100L	100LA	132S	132M	160M	160L	180MX	180LX	200L	225S	225M	250M	280S	280M	315S	315M	315MA
SK 0182 NB	17	18	21	23	26	29	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 0282 NB	26	27	30	32	35	37	44	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 1282	39	40	43	45	49	51	57	62	71	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 1382 NB	52	53	56	58	62	64	71	75	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 1282/02	56	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 2282	-	-	67	69	73	75	82	86	95	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 2382	78	80	82	84	88	90	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 2282/02	81	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 3282	-	-	-	102	106	108	115	119	128	135	185	209	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 3382	114	115	118	120	123	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 3282/12	118	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 4282	-	-	-	-	-	-	148	152	161	168	218	243	282	320	-	-	-	-	-	-	-	-	-	-	-
SK 4382	-	-	166	168	172	174	181	185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 4282/12	151	153	155	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 5282	-	-	-	-	-	-	227	232	240	247	298	322	362	399	-	452	-	-	-	-	-	-	-	-	-
SK 5382	-	-	-	-	260	262	269	273	282	289	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 5282/12	-	-	235	237	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 6282	-	-	-	-	-	-	-	-	-	432	483	507	547	584	637	637	-	867	939	-	-	-	-	-	-
SK 6382	-	-	-	-	-	-	406	410	419	426	476	501	540	578	631	631	-	-	-	-	-	-	-	-	-
SK 6382/22	-	-	-	-	439	441	448	452	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 7282	-	-	-	-	-	-	-	-	-	-	622	646	686	723	776	776	933	1005	1078	-	-	-	-	-	-
SK 7382	-	-	-	-	-	-	-	-	580	587	637	662	701	739	792	792	948	1021	1094	-	-	-	-	-	-
SK 7382/22	-	-	-	-	600	602	609	613	622	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 8282	-	-	-	-	-	-	-	-	-	-	904	-	968	1005	-	1058	1215	1288	1360	1766	2152	-	-	-	-
SK 8382	-	-	-	-	-	-	-	-	856	862	913	937	977	1014	1067	1067	1224	1297	1369	-	-	-	-	-	-
SK 8382/32	-	-	-	-	900	902	908	913	922	928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 8382/42	-	-	-	-	-	-	-	946	955	961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 9282	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1951	2024	2430	2816	2926	3301	3477	3808
SK 9382	-	-	-	-	-	-	-	-	-	-	1579	1603	1643	1680	1733	1733	1890	1962	2035	2441	2827	-	-	-	-
SK 9382/42	-	-	-	-	-	-	1607	1612	1621	1627	1678	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK 9382/52	-	-	-	-	-	-	-	-	-	1691	-	-	1806	-	1896	-	-	-	-	-	-	-	-	-	-
SK 10382.1	-	-	-	-	-	-	-	-	-	-	-	2326	2365	2403	2456	2456	2612	2685	2758	3164	3549	3660	4035	4211	4542
SK 11382.1	-	-	-	-	-	-	-	-	-	-	-	-	-	3726	3779	3779	3935	4008	4081	4486	4872	4982	5357	5534	5864

Above weights are approximate. Depending upon ratio, oil quantity and optional equipment, reducer weights may be different than shown.

Exact weights can be obtained after the unit is fully assembled.



Approximate Weights [lb]

Type	W	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 0182 NB	13	22	22	-	-	-	-	-	-
SK 0282 NB	22	31	31	-	-	-	-	-	-
SK 1282	40	51	51	66	-	-	-	-	-
SK 1382 NB	49	57	57	68	-	-	-	-	-
SK 1282/02	57	68	-	-	-	-	-	-	-
SK 2282	77	82	82	90	-	-	-	-	-
SK 2382	79	90	90	-	-	-	-	-	-
SK 2282/02	82	93	-	-	-	-	-	-	-
SK 3282	110	115	115	124	143	-	-	-	-
SK 3382	115	126	126	-	-	-	-	-	-
SK 3282/12	119	130	130	-	-	-	-	-	-
SK 4282	165	154	154	170	201	223	-	-	-
SK 4382	176	181	181	190	-	-	-	-	-
SK 4282/12	152	163	163	179	-	-	-	-	-
SK 5282	245	234	234	249	280	302	322	-	-
SK 5382	265	269	269	278	278	-	-	-	-
SK 5282/12	231	243	243	258	-	-	-	-	-
SK 6282	474	-	-	448	476	531	531	562	562
SK 6382	423	412	412	428	459	481	481	-	-
SK 6382/22	443	448	448	456	-	-	-	-	-
SK 6382/32	467	472	472	481	501	-	-	-	-
SK 7282	613	-	-	587	615	670	670	701	734
SK 7382	628	-	-	602	631	686	686	717	750
SK 7382/22	604	609	609	618	-	-	-	-	-
SK 7382/32	628	633	633	642	662	-	-	-	-
SK 8282	1061	-	-	869	897	953	953	983	1138
SK 8382	904	-	-	878	906	961	961	992	1025
SK 8382/32	904	908	908	917	-	-	-	-	-
SK 8382/42	959	948	948	964	994	-	-	-	-
SK 9282	1724	-	-	-	-	-	1616	1647	1801
SK 9382	1570	-	-	1645	1572	1627	1627	1658	1813
SK 9382/42	1625	1614	1614	1629	1660	-	-	-	-
SK 9382/52	1689	-	-	1693	1724	1746	1766	-	-
SK 10382.1	2359	-	-	-	-	2350	2350	2381	2535
SK 11382.1	3682	-	-	-	-	3673	3673	3704	3858

Above weights are approximate. Depending upon ratio, oil quantity and optional equipment, reducer weights may be different than shown.

Exact weights can be obtained after the unit is fully assembled.

Reducer Tolerances



Solid Shaft Diameter Tolerance [in]		
> 0.375	≤ 1.750	+0.0000 / -0.0005
> 1.750	≤ 7.500	+0.0000 / -0.0010

All Keys and Keyways: Inch - ANSI B17

Solid Shaft Diameter Tolerance [mm]		
> 10	≤ 18	+0.012 / +0.001
> 18	≤ 30	+0.015 / +0.002
> 30	≤ 50	+0.018 / +0.002
> 50	≤ 80	+0.030 / +0.011
> 80	≤ 120	+0.035 / +0.013
> 120	≤ 180	+0.040 / +0.015
> 180	≤ 190	+0.046 / +0.017

All Keys and Keyways: Metric - DIN 6885, class m6

Solid Shaft Drill & Tap Shaft End - Threaded Holes [in]		
> ø 0.375	≤ ø 0.500	10-24 x 0.43
> ø 0.500	≤ ø 0.875	1/4-20 x 0.59
> ø 0.875	≤ ø 0.938	5/16-18 x 0.71
> ø 0.938	≤ ø 1.100	3/8-16 x 0.87
> ø 1.100	≤ ø 1.300	1/2-13 x 1.10
> ø 1.300	≤ ø 1.875	5/8-11 x 1.42
> ø 1.875	≤ ø 3.500	3/4-10 x 1.73
> ø 3.500	≤ ø 7.500	1-8 x 2.63
> ø 5.125	≤ ø 8.875	1 1/4-7 x 3.15*
> ø 6.000	≤ ø 8.875	1 3/8 - 6 x 3.46**

* Only used on the SK9096.1 Helical-Bevel Gear Unit

** Only used on the SK10382.1 & 11382.1 Clincher

Solid Shaft Drill & Tap Shaft End - Threaded Holes [mm]		
> ø 10	≤ ø 13	M4 x 10
> ø 13	≤ ø 16	M5 x 12.5
> ø 16	≤ ø 21	M6 x 16
> ø 21	≤ ø 24	M8 x 19
> ø 24	≤ ø 30	M10 x 22
> ø 30	≤ ø 38	M12 x 28
> ø 38	≤ ø 50	M16 x 36
> ø 50	≤ ø 85	M20 x 42
> ø 85	≤ ø 130	M24 x 50
> ø 130	≤ ø 190	M30 x 60
> ø 130	≤ ø 225	M36 x 74**

Keyed Hollow Bore Tolerances [in]		
> ø 0.4375	≤ ø 1.6250	+0.0010 / -0.0000
> ø 1.6250	≤ ø 3.2500	+0.0012 / -0.0000
> ø 3.2500	≤ ø 7.0000	+0.0014 / -0.0000

Keyed Hollow Bore Tolerances [mm]		
> ø 10	≤ ø 18	+0.018 / -0.000
> ø 18	≤ ø 30	+0.021 / -0.000
> ø 30	≤ ø 50	+0.025 / -0.000
> ø 50	≤ ø 80	+0.030 / -0.000
> ø 80	≤ ø 120	+0.035 / -0.000
> ø 120	≤ ø 180	+0.040 / -0.000
> ø 180	≤ ø 190	+0.035 / -0.000

Bore tolerances per ISO286-2, Class H7

Suggested Solid Shaft Tolerances for Keyed Hollow Bore [in]			
		Uniform Load	Shock Load
> ø 0.4375	≤ ø 0.8750	+0.0000 / -0.0005	+0.0000 / +0.0005
> ø 0.8750	≤ ø 4.5000	+0.0000 / -0.0010	+0.0000 / +0.0010
> ø 4.5000	≤ ø 7.0000	+0.0000 / -0.0012	+0.0000 / +0.0015

Suggested Solid Shaft Tolerances for Keyed Hollow Bore [mm]				
		Uniform Load ❶	Shock Load ❷	
> ø 10	≤ ø 18	+0.000 / -0.011	+0.012 / +0.001	
> ø 18	≤ ø 30	+0.000 / -0.013	+0.015 / +0.002	
> ø 30	≤ ø 50	+0.000 / -0.016	+0.018 / +0.002	
> ø 50	≤ ø 80	+0.000 / -0.019	+0.021 / +0.002	
> ø 80	≤ ø 120	+0.000 / -0.022	+0.025 / +0.003	
> ø 120	≤ ø 180	+0.000 / -0.025	+0.028 / +0.003	
> ø 180	≤ ø 190	+0.000 / -0.029	+0.033 / +0.004	

❶ Uniform load: Mating shaft diameter tolerance per ISO286-2, class h6

❷ Shock load: Mating shaft diameter tolerance per ISO286-2, class k6

Customer Shaft Diameter Tolerance w/ Shrink Disk [in]			
Shaft Diameter		Shaft Tolerance ❶	Bore Tolerance ❷
≥ ø 0.7500	≤ ø 1.0625	+0.0000 / -0.0005	+0.0008 / -0.0000
≥ ø 1.1250	≤ ø 1.9375	+0.0000 / -0.0006	+0.0009 / -0.0000
≥ ø 2.0000	≤ ø 3.1250	+0.0000 / -0.0007	+0.0011 / -0.0000
≥ ø 3.1875	≤ ø 4.6875	+0.0000 / -0.0008	+0.0013 / -0.0000
≥ ø 4.7500	≤ ø 7.0625	+0.0000 / -0.0009	+0.0015 / -0.0000
≥ ø 7.1250	≤ ø 7.5000	+0.0000 / -0.0011	+0.0018 / -0.0000

❶ Shaft Tolerances per ISO286-2, Class h6

❷ Bore tolerances per ISO286-2, Class H7

• Solid Shaft finish to be 125 micro inches (3.2mm) or smoother

Customer Shaft Diameter Tolerance w/ Shrink Disk [mm]			
Shaft Diameter		Shaft Tolerance ❶	Bore Tolerance ❷
> ø 18	≤ ø 30	+0.000 / -0.013	+0.021 / -0.000
> ø 30	≤ ø 50	+0.000 / -0.016	+0.025 / -0.000
> ø 50	≤ ø 80	+0.000 / -0.019	+0.030 / -0.000
> ø 80	≤ ø 120	+0.000 / -0.022	+0.035 / -0.000
> ø 120	≤ ø 180	+0.000 / -0.025	+0.040 / -0.000
> ø 180	≤ ø 190	+0.000 / -0.029	+0.046 / -0.000

❶ Shaft Tolerances per ISO286-2, Class h6

❷ Bore tolerances per ISO286-2, Class H7

• Solid Shaft finish to be 125 micro inches (3.2mm) or smoother

Customer Shaft Diameter Tolerance w/ GRIPMAXX™ [in]		
Shaft Diameter		Shaft Tolerance ❶
≥ ø 0.4375	≤ ø 0.6875	+0.0000 / -0.0004
≥ ø 0.7500	≤ ø 1.1250	+0.0000 / -0.0005
≥ ø 1.1250	≤ ø 1.9375	+0.0000 / -0.0006
≥ ø 2.0000	≤ ø 3.1250	+0.0000 / -0.0007
≥ ø 3.1875	≤ ø 4.6875	+0.0000 / -0.0008
≥ ø 4.7500	≤ ø 7.0625	+0.0000 / -0.0009

❶ Shaft Tolerances per ISO286-2, Class h6

Customer Shaft Diameter Tolerance w/ GRIPMAXX™ [mm]		
Shaft Diameter		Shaft Tolerance ❶
> ø 10	≤ ø 18	+0.000 / -0.011
> ø 18	≤ ø 30	+0.000 / -0.013
> ø 30	≤ ø 50	+0.000 / -0.016
> ø 50	≤ ø 80	+0.000 / -0.019
> ø 80	≤ ø 120	+0.000 / -0.022
> ø 120	≤ ø 180	+0.000 / -0.025

❶ Shaft Tolerances per ISO286-2, Class h6

Flange Pilot (AK or AK1) Tolerance [in]			
Flange Pilot Diameter		Pilot Tolerance	Fit Class ❶
> ø 1.969	≤ ø 3.150	+0.0005 / -0.0003	j6
> ø 3.150	≤ ø 4.724	+0.0005 / -0.0004	j6
> ø 4.724	≤ ø 7.087	+0.0006 / -0.0004	j6
> ø 7.087	≤ ø 9.055	+0.0006 / -0.0005	j6
> ø 9.055	≤ ø 9.843	+0.0000 / -0.0011	h6
> ø 9.843	≤ ø 12.402	+0.0000 / -0.0013	h6
> ø 12.402	≤ ø 15.748	+0.0000 / -0.0014	h6
> ø 15.748	≤ ø 19.685	+0.0000 / -0.0016	h6
> ø 19.685	≤ ø 21.654	+0.0000 / -0.0017	h6

❶ Pilot Tolerances per ISO286-2

Flange Pilot (AK or AK1) Tolerance [mm]			
Flange Pilot Diameter		Pilot Tolerance	Fit Class ❶
> ø 50	≤ ø 80	+0.012 / -0.007	j6
> ø 80	≤ ø 120	+0.013 / -0.009	j6
> ø 120	≤ ø 180	+0.014 / -0.011	j6
> ø 180	≤ ø 230	+0.016 / -0.013	j6
> ø 230	≤ ø 250	+0.000 / -0.029	h6
> ø 250	≤ ø 315	+0.000 / -0.032	h6
> ø 315	≤ ø 400	+0.000 / -0.036	h6
> ø 400	≤ ø 500	+0.000 / -0.040	h6
> ø 500	≤ ø 550	+0.000 / -0.044	h6

❶ Pilot Tolerances per ISO286-2

Casting Surfaces may differ slightly (approximately 0.125 inches or 3.2mm) from the specified nominal dimensions as a result of the manufacturing process



DRIVESYSTEMS

Options

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Parallel Helical CLINCHER™ Gearbox Options

Option Code	Description	Page
none	Clincher with B14 on motor side	75
A	Keyed hollow shaft	72
ADP	Additional drain plug	79
B	Fixing kit	75
DR	Autovent	79
EA	Hollow shaft with spline	73
F	B5 flange	71
FV	Filtered vent	79
G	Rubber buffers	74
H	Hollow shaft cover	75
H66	IP66 hollow shaft cover	75
L	Double solid shaft ④	72
LL	Long term storage	79
M	GRIPMAXX™ keyless bushing system	73
MDP	Magnetic drain plug	79
OA	Oil expansion chamber	76
OC	Oil cooler	78
OSG	Oil sight glass	79
OT	Oil reservoir tank ⑤	77
OV	Open vent	79
PR	B5 flange pilot removal	71
S	Shrink disc	72
SCP	Screw conveyor package ⑥	83
SH	Shrink disc and cover	75
SM	Stainless steel output shaft	73
SWA	Special hollow shaft	73
SWV	Special solid shaft	73
V	Solid shaft	72
VG	Heavy duty rubber buffers ⑦	75
FKM	Fluoro-elastomer oil seals	74
VL	Heavy duty output bearings	74
VL2	Spread bearing design	80
VL3	Spread bearing design with oil safe dry cavity	80
VL4	Drywell with heavy duty drop bearings	81
VS	Heavy duty shrink disc ⑧	73
X	Foot mounted	71
XF	Foot mount with B5 flange	72
XZ	Foot mount with B14 flange	72
Z	B14 flange	71
none	Paint coatings	82

④ Special shaft design

⑤ Available for SK 9282 and larger

⑥ Available for SK 1282SCP - SK 6382SCP

⑦ Available for SK 7282 and larger

⑧ Available for SK 7282, SK 8282, SK 9282, SK 11282



Inputs

NORD's modular design allows for many different types of inputs to be added to gear reducers. All inputs are bolt on and include machined pilots to ensure simple and accurate assembly. NORD offers the following different input types:

- Integral motor
- Solid input shaft
- NEMA C-Face motor adapter
- IEC B5 motor adapter
- Servo motor adapter
- Top mount motor platform
- Scoop mount motor platform
- Custom mounting interface

For more information, see the input section pages 85 - 97.

Mounting Options

NORD offers a number of different mounting arrangements with the CLINCHER™ gear units.

- Shaft mount (A)
- B14 flange (Z)
- B5 flange (F)
- Foot (X)

Foot Mounted (X)

Foot or base mounting is the most common method of reducer mounting. The speed reducer is secured in place with bolts or studs to a mounting base. Most often the reducer has mounting feet with through holes.

B5 Flange (F)

A B5 flange provides a simple, large diameter mounting flange with clearance holes and a centering pilot to firmly secure the speed reducer to the application. The B5 flange utilizes standard metric dimensions and is available for all NORD reducers. Many reducers offer a number of B5 flange diameters.

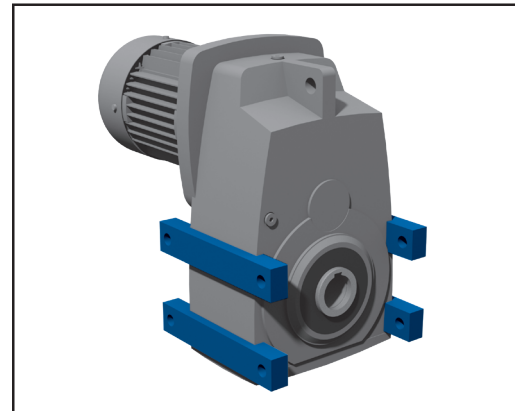
B5 Flange Pilot Removal (PR)

B5 flanges have a centering pilot machined onto the flange. In cases where there is not a matching counter bore or when the flange must sit flush to the mounting surface then the centering pilot must be removed. This pilotless flange is used to firmly secure the speed reducer to the application.

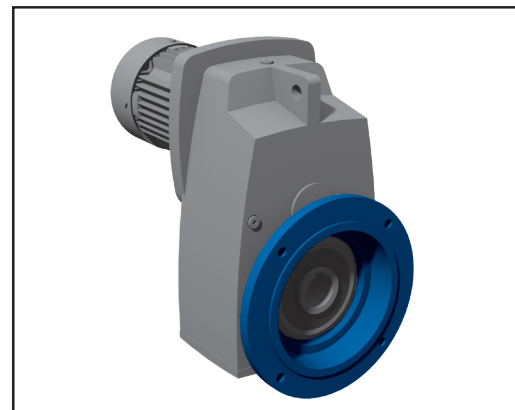
In some cases the matching surface already has a centering pilot and the use of a female pilot (counter bored flange surface) is recommended. Counter rotating drives are an example where a female pilot is frequently used.

B14 Flange (Z)

The NORD B14 flange consists of threaded holes and a centering pilot machined into the reducer housing. It is commonly used to secure the reducer to the application or machine base as well as to mount many bolt on components like a B5 flange, torque arm, or shaft cover. The B14 flange uses standard metric dimensions and allows a compact method of securing the reducer. This option is standard on all CLINCHER™ units



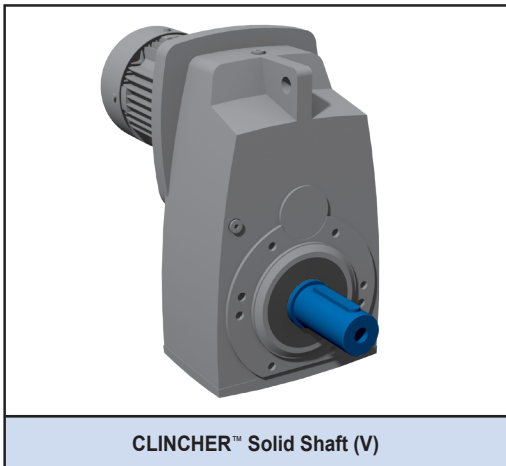
CLINCHER™ Foot Mounted Unit (X)



CLINCHER™ B5 Flange Unit (F)



CLINCHER™ B14 Flange Unit (Z)



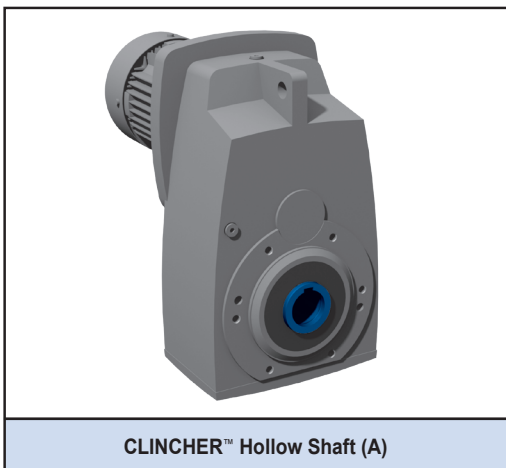
CLINCHER™ Solid Shaft (V)

Foot Mounted with B5 Flange (XF)

NORD can supply some foot mounted reducers with a B5 flange as well. These type XF reducers are designed to be foot and not flange mounted. The B5 flange is normally used to mount auxiliary equipment to the speed reducer. If the B5 flange is going to be used to mount the reducer, additional support will normally be required.

Foot mounted with B14 Face Flange (XZ)

NORD can supply some foot mounted reducers with a B14 face flange as well. These type XZ reducers are designed to be foot and not flange mounted. The B14 face flange is normally used to mount auxiliary equipment to the speed reducer. If the B14 face flange is going to be used to mount the reducer, additional support will normally be required.



CLINCHER™ Hollow Shaft (A)

Shaft Options

NORD offers a number of different types of shafts, shaft options and shaft materials including:

Solid Shaft (V)

NORD's standard keyed solid shafts include a centered threaded hole. Shafts are available as inch or metric versions. The standard shaft material is 1045 or 4140 or equivalent.

Double Solid Shaft (L)

The standard solid shaft end is projected out both sides of the speed reducer. This option is commonly used to transfer torque out of both sides of the reducer or to mount a speed-monitoring device such as an encoder on one of the shaft ends. If you need the keyways to be aligned you must specify with NORD upon ordering. This option is an engineered per order with the CLINCHER™ product line.

Keyed Hollow Shaft (A)

NORD's standard keyed hollow shafts are made from SAE 1045 high carbon steel. They feature standard keyway dimensions and are available both inch and metric designs. Many NORD reducers offer a variety of hollow shaft diameters.

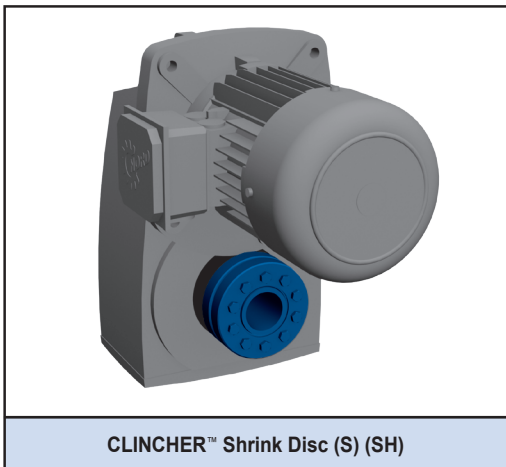
Shrink Disc (S)

The shrink disc relies on the proven wedge principle to create a keyless, mechanical interference fit by converting locking screw tension into radial contact pressure on shaft and hub in effect "shrinking" it on to the customer shaft. Shrink discs result in a zero backlash mechanical interference fit that can accommodate high torque unlike other mounting technologies and will never wear or pound out, even for high cycle fluctuating and reversing loads.

Other shrink disc advantages include:

- Elimination of fretting corrosion associated with key connections.
- Generous clearance for easy mounting & dismounting.
- Allow for larger bores sizes compared to keyed hollow shafts.

For more information see page 52



CLINCHER™ Shrink Disc (S) (SH)

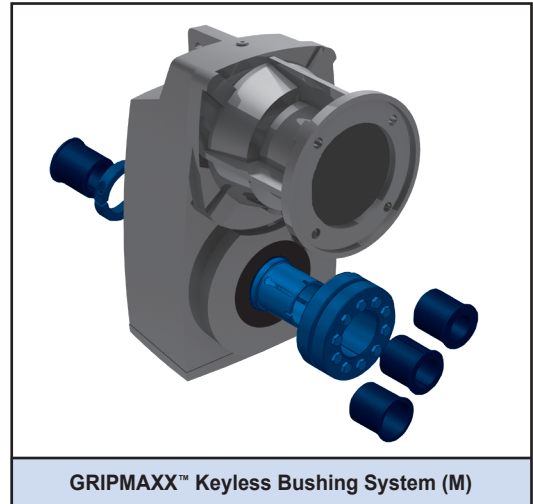


Heavy Duty Shrink Disc (VS)

NORD heavy duty shrink discs offer increased clamping force and safety factor for severe applications.

GRIPMAXX™ Keyless Bushing System (M)

The Gripmaxx™ bushing system offers keyless interchangeable bushings for mounting NORD hollow shaft reducers onto a large range of driven machine shaft sizes. Gripmaxx™ was developed by using Finite Element Modeling (FEM) technology in order to best optimize material selection, mechanical design, and performance. Gripmaxx™ provides a high-capacity, zero-backlash, interference fit to the driven machine shaft that minimizes the possibility of fretting corrosion. This option eliminates the typical assembly and disassembly challenges of using interference fits by providing generous clearances to help ensure easy installation and removal of the gearbox. Torque is transmitted via the tried and tested NORD Shrink Disc, which in turn produces high compressive forces and friction between the reducer hollow shaft, split-bushing and solid machine shaft.



Special Shafts & Shaft Materials

Stainless Steel Output Shaft (SM)

Output shafts made from stainless steel are available and are frequently used in food, pharmaceutical, and washdown applications. In some cases solid input shafts can also be provided in stainless.

Special Solid Shaft (SWV)

Special solid shaft diameters and lengths can be provided for a nominal price adder. Special features are also available including keyless shafts, cross drilled shafts or special threaded taps. Different shaft materials are also available. NORD has in-house drafting design and machining departments so we can provide special requirements in short lead times. Specify your shaft requirements and NORD will verify the design feasibility.

Special Hollow Shaft (SWA)

Special hollow bore shafts can also be provided. Special hollow bore shafts can be provided with special diameters, multiple keyways, and even special extended hollow shafts that are frequently used with counter rotating drives. Different shaft materials are also available. Specify your shaft requirements and NORD will verify the design feasibility.

Hollow Shaft with Spline (EA)

Hollow shafts with a metric involute spline profile according to DIN 5480 are available for some NORD hollow shaft reducers. These spline shafts are commonly used on crane travel drives. See page 283 for dimensions.



Nitrile Rubber & Fluoro Elastomer Seals (NBR) (FKM)

Heavy Duty Output Bearings (VL)

Replacing standard output bearings with heavy-duty versions will increase the external load carrying capacity of the speed reducer. Increased capacity in either or both overhung (radial) or thrust (axial) loading insures that premature bearing failure will not occur due to high stresses in the bearing elements. The increased bearing capacity will also keep the speed reducer as small as possible by not having to select the next larger case size in order to handle the bearing loads. If increased bearing life is desired, larger bearings will reduce the relative stress on the bearings and increased B10 bearing life.



CLINCHER with Rubber Buffers (G)

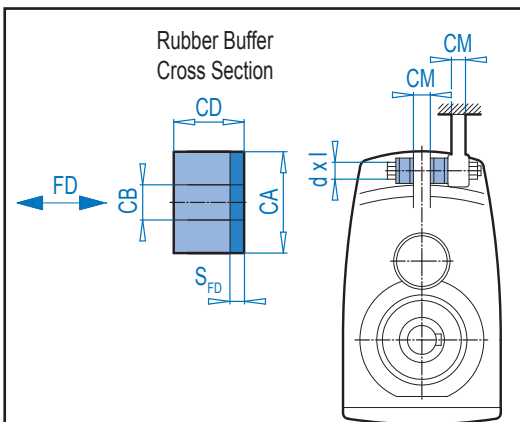
Nitrile Rubber Oil Seals (NBR)

Nitrile rubber (NBR) or Buna-N shaft seals are standard issue with NORD gear units. NBR seals offer high tensile strength and good resistance to abrasion, tear, and compression set. They are designed to withstand most oils, lubricants, fuels, and animal oils and they provide resistance to many diluted acids and bases. They perform well in cold environments and in temperatures up to 125°F (250°C). NBR seals should not be used when exposed to concentrated acids, oxidizing agents, ozone, or chlorinated hydrocarbons.

Fluoro-elastomer Oil Seals (FKM)

As a standard option, NORD offers Fluoro-elastomer (FKM) shaft seals. FKM seals also offer good resistance to abrasion, tear, and compression set. FKM seals provide very good resistance to oils, fuels and mineral acids. Compared to NBR seals, FKM seals offer superior resistance to oxidation and aging, ozone, UV exposure, weather, fungus, and mold. FKM seals are also preferred when high temperature resistance is needed as they are designed to handle temperatures up to 390°F (200°C). FKM seals should be applied with extreme caution in cold temperature environments as they may become brittle. FKM seals may also accelerate wear on softer shaft steels including 300 series austenitic stainless steel alloys.

If your gearmotor or gear reducer application requires special sealing solutions please consult NORD.



Rubber Buffers Variable Information (G)

Rubber Buffers (G)

Two rubber buffers are installed on the integral torque tab in order to dampen torsional shock loads delivered to the reducer. The use of rubber buffers can increase the reducer's service life by reducing cumulative torsional shock loads. For further dampening, several rubber buffers may be used in a row. The permissible temperature range for the use of our rubber buffers is -40° C - 80° C. Please see page 277 for dimensions.

- F_D = Force working on the rubber buffer [lb]
- $d \times l$ = Diameter x length
- cm = Width
- n = number of rubber buffers used in series
- S_{FD} = Distance buffers compress at force (F_D)
- S_{FDtot} = Total compression distance ($S_{FDtot} = n \times S_{FD}$)

CAUTION

During installation, the rubber buffer may only be tightened until the play between the contact surfaces is eliminated. Pre-tensioning of the rubber buffer is not permissible



Heavy Duty Rubber Buffers (VG)

Heavy duty rubber buffers are also available on CLINCHER™ reducer sizes SK7282 to SK11382.1. These heavy duty buffers provide the same benefits as the standard “G” buffers listed above but are usable in more severe shock applications. For dimensions see page 277.



CAUTION



During installation, the rubber buffer may only be tightened until the play between the contact surfaces is eliminated. Pre-tensioning of the rubber buffer is not permissible

Hollow Shaft Cover (H)

An optional cover can be supplied in order to guard the rotating hollow output shaft. It also protects the output shaft seals against dust and dirt particles and in some cases can be sealed against moisture and dust.

Shrink Disc Cover (SH)

The shrink disc cover is required with all shrink disc units and provides protection from the rotating shrink disc.

IP66 Hollow Shaft Cover (H66)

NORD provides hollow shaft covers with IP66 enclosure protection (protection against dust and water jets) to completely seal the rotating hollow shaft from moisture and debris.

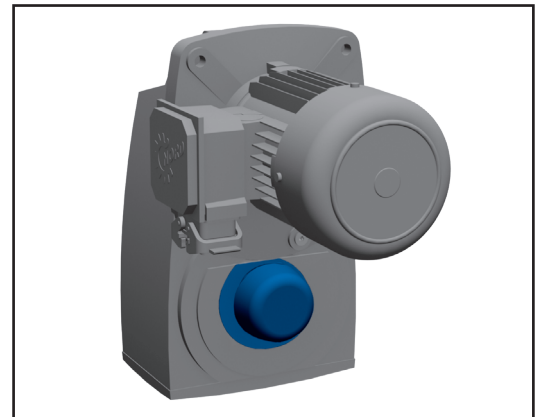
Fixing Kit (B)

Due to the slight oscillations inherent in any rotating shaft, NORD offers an optional “fixing kit”. This is a method to prevent the reducer from “walking out” of position. The kit includes all necessary parts to secure the shaft in the axial direction by using a tapped hole in the end of the mating male shaft.

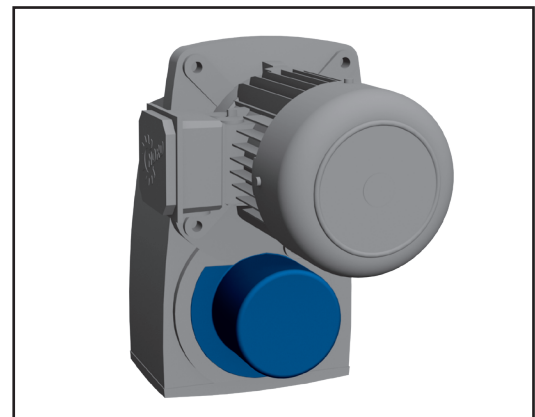
There are two methods for securing the fixing kit. The first involves pulling the customer supplied male shaft to the snap ring (type 1) and the second method the customer supplied shaft is shouldered (type 2) and pulled against the hollow shaft and not the snap ring.

Clincher with B14 on motor side

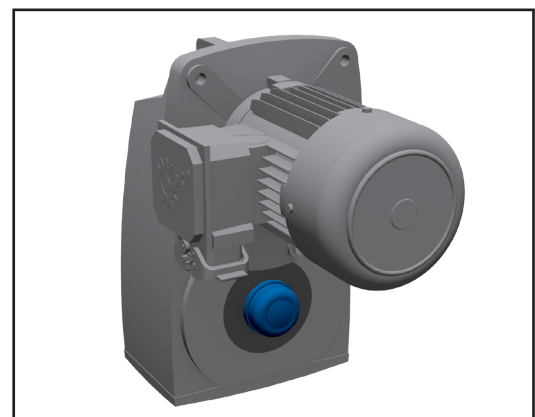
CLINCHER™ reducers may optionally be supplied with an additional B14 flange on the motor side.



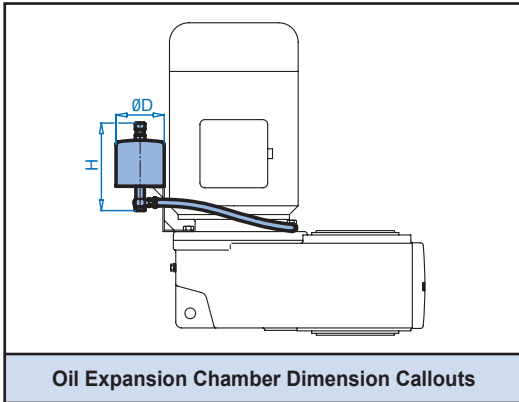
CLINCHER with Hollow Shaft Cover (H)



CLINCHER with Shrink Disc Cover (H)



CLINCHER with Fixing Kit (B)



Oil Expansion Chamber Dimension Callouts

Oil Expansion Chamber (OA)

Gear units with the motor or input shaft mounted vertically upright must be filled almost completely with oil in order to properly supply the 1st stage gearing with oil. Certain operating conditions and higher gear peripheral speeds can result in increased oil churning or splashing losses and heating of the air space located above the oil.

During operation, the oil expansion chamber provides a safe overflow area for the expanded oil-air mixture, thus eliminating excessive pressure build-up, minimizing the formation of foam, and preventing oil-loss through the breather, oil seals, gaskets, etc. As heat is released from the expanded air-oil mixture contained within the overflow chamber, gravity allows the oil to be returned to the primary gear sump supply, eliminating a critical loss in oil level. At rest, the gear unit is filled to its normal fill-level position and there should be no oil in the expansion chamber.

Clincher™ Gear Unit	Size	Part Number	D	H	[lb]
SK 4282/SK 4382 SK 5282/SK 5382 SK 6382	I	28390390	3.94	7.09	11.0
SK 6282 SK 7282/SK 7382	II	28390400	5.91	11.81	13.2
SK 8282/SK8382	III	28390410	7.09	11.81	15.4

Application Considerations

Nord strongly recommends the use of an oil expansion chamber when the motor is mounted vertical-up, when the reducer mounting position is M4 and when it meets any of the criteria listed below. Any application required to operate above 1800 rpm synchronous motor speeds should also be reviewed to be certain that the reducer thermal limits are observed.

- CLINCHER™ gear unit sizes from SK4282 - SK8282, with ratios $i_{total} \leq 24:1$ or output speeds $n_2 \geq 75$ rpm.
- CLINCHER™ gear unit sizes SK9282/SK9382 and larger require an oil reservoir (option OT) instead of an oil expansion chamber (OA).



Oil Reservoir Tank (OT)

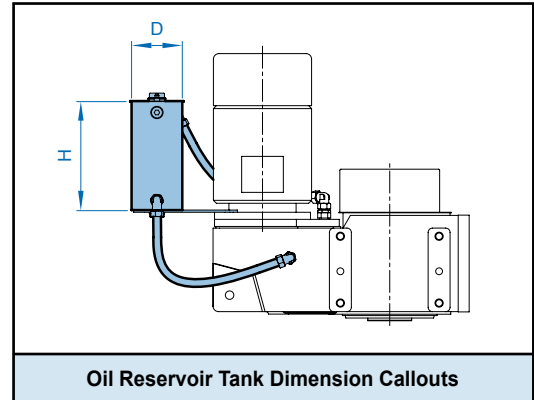
The oil reservoir tank allows the reducer housing to be completely filled with oil. The tank always contains oil and is above the reducer oil sump, which allows the reducer to be completely filled with oil.

CLINCHER™ shaft mount units SK9282 and larger, with the motor or input shaft mounted vertically upright, should be filled with oil in order to prevent excessive foaming and heat build-up.

The oil reservoir must be located above the gear unit. Even at non-operating ambient conditions, a small amount of oil should be visible in the bottom of the oil reservoir. During operation, all parts are submerged in oil, especially the high-speed gear set, thus preventing the formation of oil foam. In addition, this type of installation assures that all bearings are properly lubricated with oil.

The oil reservoir is larger than the oil expansion chamber and is vented. The oil reservoir has two flexible oil hoses connected to the gear unit to help assure proper ventilation and passive oil circulation.

As a standard, the gear unit is supplied filled to the level indicated on page 29. Upon commissioning, the oil tank must be filled to the level shown on the dipstick located inside the tank (approximations shown in below table). The user is responsible to add this additional oil, however, NORD can supply at an additional charge.

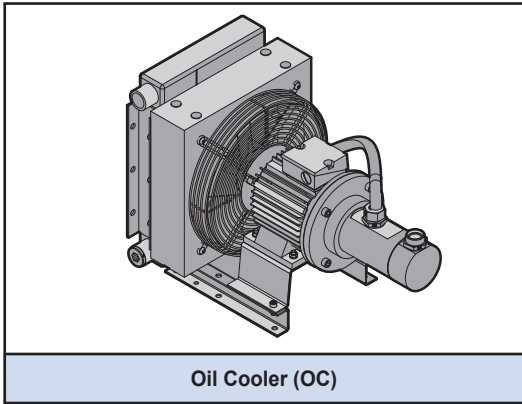


Parallel Shaft Gear Unit	Size	D	H	Additional Oil Fill (L)	Container Volume (L)
SK 9282/SK9382 SK 10382.1	I	7.87	15.75	approx. 30	10
SK 11382.1	II	12.99	15.75	approx. 40	30

Application Considerations

NORD strongly recommends the use of an oil reservoir tank on parallel shaft gear unit sizes SK9282/SK9382 and larger when the motor is mounted vertical-up or when the reducer mounting position is M4.

Options

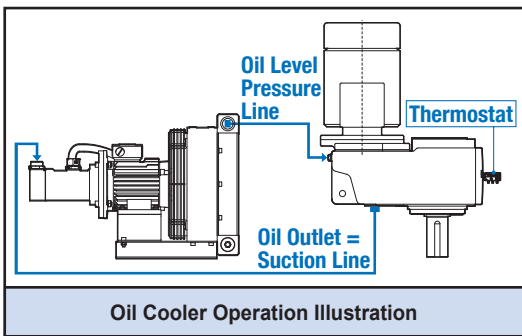


Oil Cooler (OC)

Oil Cooler (OC)

In certain applications, in order to prevent reducer overheating, NORD may recommend an oil cooler. In the event the customer wishes to supply their own device, NORD can estimate the amount of heat dissipation required, for a given set of application parameters.

NORD can also provide a compact air-over-oil cooling unit. The oil cooler (Option OC) comes complete with heat exchanger, motor, pump, circulating fan, and connection hoses. Oil is pumped from the reducer and cooled by the air stream created by the large fan. The temperature is controlled by a thermostat. Please consult NORD for additional details about the oil cooler.



Oil Cooler Operation Illustration



CAUTION



Not suited for hazardous areas or potentially explosive atmospheres.

Performance Specifications

Oil Cooler Type	TFS/A 8,5-400-F-03-11
Supplier	UNIVERSAL HYDRAULIK®
Input / Output Connection	G3/4" / G1/2"
Cooling Capacity	8.5 kW
Pump Capacity	30 l/min
Rate of Air Flow	1131 m³/h
Viscosity Range	10-300 mm³ /s
Permissible Pressure	10 bar
Motor Power	0.55 kW
Frequency	50 Hz / 60Hz
Supply Voltage	230-400 V/50 HZ – 460 V/60 Hz
Rated Current	1.7 A
Phase	3 ~
RPM	1350 / 1650
Construction Class	IP55
Insulation Class	F
Temperature Class	B



AUTOVENT™ (DR)

The AUTOVENT™ helps prevent bearing and gear damage by behaving like a check valve to block the entry of foreign material and prevent lubrication contamination from dust particles, moisture and air-borne process chemicals. The breather opens at approximately 0.3-0.9 psi during operation and closes tightly as the gearbox cools. This option is perfect for humid conditions and wash-down environments, helping to maintain proper oil cleanliness, while reducing foaming and oxidation.

Open Vent (OV)

An open vent can be optionally supplied on NORD reducers. The open vent allows for air pressure differences between the inner space of the reducer and the atmosphere. This open vent will be closed upon delivery to prevent oil leakage. Before the reducer is put in service the open vent should be activated by removing the sealing plug.

Filtered Vent (FV)

NORD offers a filtered vent, which allows gases to permeate, but does not allow dust and debris to pass through the vent.

Oil Sight Glass (OSG)

The oil sight glass provides a visible oil level indication on the reducer. The sight glass replaces the standard steel fill plug and consists of a sealed clear porthole centered in the middle of a brass plug. The sight glass allows for quick oil level and color inspection.

Magnetic Drain Plug (MDP)

Magnetic drain plugs attract and hold ferrous metal particles that may circulate inside the reducer's lubrication system. These potentially abrasive particles may cause excessive wear in the reducer if they remain circulating. An increase of collected material may be a warning sign of future problems.

Special Drain Plugs

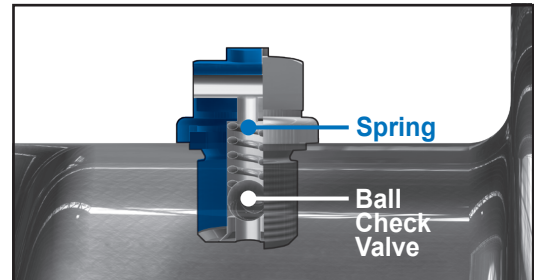
NORD can offer specialized oil drain plugs and solutions. Some of these solutions include spring loaded right-angle valves, straight valves, with or without covers as well as other fitting types.

Additional Drain Plug Hole (ADP)

NORD can add an additional drain hole to the reducer housing for a small surcharge if required for special oil plumbing needs.

Long Term Storage (LL)

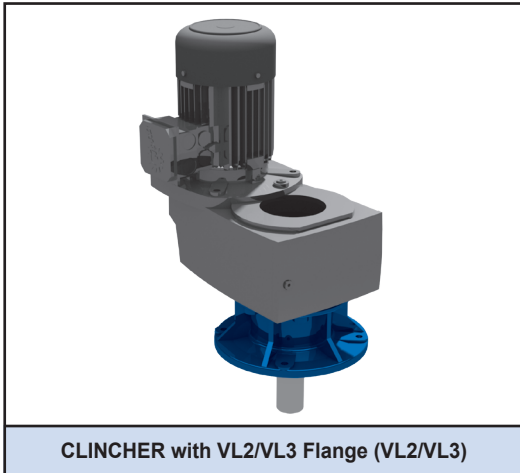
Speed reducers are frequently put in storage prior to installation for long periods of time and in some cases exposed to the elements. NORD's long term storage option protects the unit from moisture or corrosion by coating all unpainted surfaces with a dry, transparent, durable waxy film. Once installation is necessary this waxy film can be easily removed with a commercial de-greaser or petroleum solvent. If possible the store room should be vented and dry, with room temperatures between 23°F and 104 °F (-5 °C and 40 °C).



The Standard AUTOVENT™



Oil Sight Glass (OSG)



VL2 – Spread Bearing Design

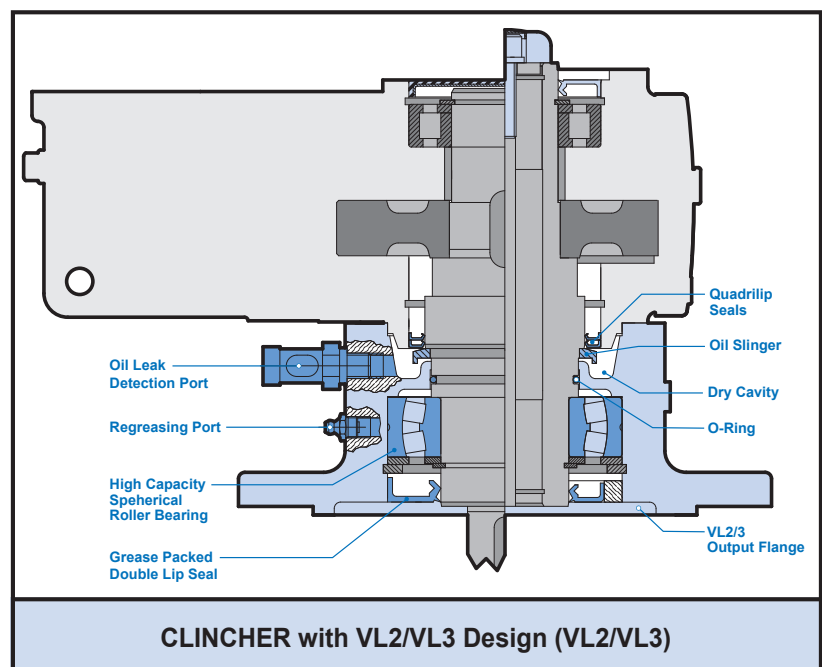
NORD offers reinforced output shaft bearings with increased bearing distance. The lower bearing is a oversized, double row spherical bearing, which absorbs high overhung and thrust loads while providing a longer bearing service life. The spherical roller bearing is especially useful in compensating for alignment errors in long agitator shafts. The VL2 spread bearing design is commonly used for shredders, mixers, overhead conveyors or applications requiring increased bearing load carrying capacities. Included with the VL2 design is a grease fitting for the lower bearing and a removable plug to allow excess grease to purge from the bearing cavity.

VL3 – Spread Bearing Design with Oil Safe Dry Cavity

The VL3 dry cavity design adds additional oil leak protective measures to the VL2 spread bearing design. NORD's Quadrilip™ sealing system prevents oil from leaking from the gearbox into the VL2 flange. If in any case oil does leak past the Quadrilip™ seals, it would flow down to the oil slinger mounted onto the shaft. As the shaft rotates, the oil will sling off into the dry cavity. A sight tube is provided for dry cavity inspection. At the bottom of the spread bearing flange is greased packed, double lip seal.

NORD can calculate the service life upon request. The following values are required for calculation:

- | | | |
|---|-------|-------|
| ■ Rated Power | P | [hp] |
| ■ Output Speed | n_2 | [rpm] |
| ■ Overhung Force | F_r | [lb] |
| ■ Axial Force (thrust) | F_a | [lb] |
| ■ Overhung force to the flange support distance | C | [in] |
| ■ Required Service Life | L_h | [h] |





VL4 – Drywell with Heavy Duty Drop Bearings

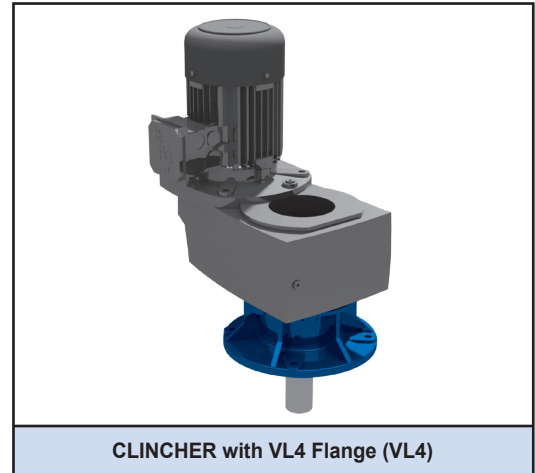
NORD offers a high capacity drop bearing drywell units in our Clincher™ offset parallel and right-angle helical-bevel. These True Drywell designs provide the high capacity bearings design of the VL2/VL3 units together with a drywell design.

Drywell Design

A drywell design isolates the low-speed output shaft from the gear unit's oil sump to prevent oil sump lubricant from leaking through the output area. A drywell design physically separates the oil sump lubrication from the rotating output shaft.

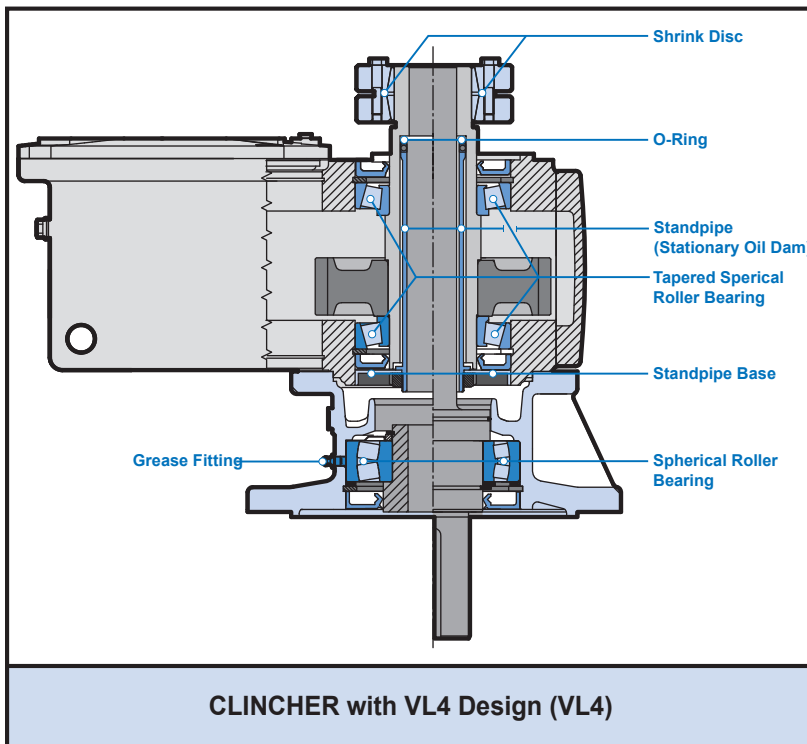
NORD's Superior Drywell

NORD's stationary oil dam tube extends vertically above the top of the gear unit housing. Most other drywell designs simply have a small oil dam tube inside the gear unit's slightly above the oil sump level. NORD's drywell design provides a much higher degree of leak safety. Additionally NORD provides a sealing o-ring at the top of the oil dam for maximum protection.



CLINCHER with VL4 Flange (VL4)

Options



CLINCHER with VL4 Design (VL4)



Nord Products on the Paint Line

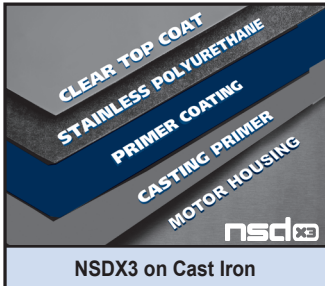
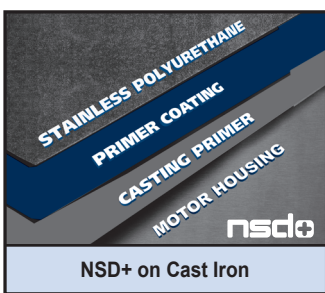
Paint Coatings and Surface Protection

NORD's standard paint coating is a two component, aliphatic polyurethane finish containing 316 stainless steel material. This gray stainless steel paint has excellent appearance and outstanding physical properties. It is suitable for both indoor and outdoor applications.

Advantages of NORD's stainless steel two component polyurethane:

- Excellent adhesion to cast iron, aluminum, steel, and plastics
- Excellent corrosion resistance
- Excellent chemical resistance
- Excellent gloss and color retention
- Suitable for indoor and outdoor exposure
- Nonporous and excellent abrasion resistance
- Suitable for use in a USDA inspected facility

Finish	Standard Colors	Coating	Use
Standard (stainless steel paint)	Stainless steel silver (Gray)	1 x Stainless steel (316) top coat (polyurethane)	Indoor or outdoor moderate environment
Alternate color	Black, Blue, Red, Orange	1 x Color top coat (polyurethane)	Indoor or outdoor protected



Paint free design Gear Units (SK0182.1NB-SK0282.1NB & SK1382.1NB)

Our NB gear unit sizes are made from corrosion resistant aluminum alloy and feature a smooth body design. The smooth aluminum alloy surfaces have natural corrosion protection; therefore paint coatings are not required. Paint coatings may optionally be applied.

Cast Iron Gear Units (SK1282 - SK11382.1)

The SK1282-SK11382.1 gear units are made from class 35 gray cast iron and are painted with NORD's stainless steel paint.

Additionally a variety of coating options are available including our severe duty coatings.



Improved corrosion protection for wet and outdoor environments starts by applying a primer undercoat over the primed cast-iron or base aluminum materials. The finish is then completed with our exceptional strength stainless steel polyurethane top coat.

NORD Severe Duty + (NSD+)	Stainless steel silver (Gray)	1 x Primer high solid alkyd system 1 x Stainless steel (316) top coat (polyurethane)	Indoor or outdoor moderate environment
NORD Severe Duty +W (NSD+W)	White	1 x Primer high solid alkyd system 1 x White top coat (polyurethane)	Indoor or outdoor moderate environment
Alternate color (NSD+)	Black, Blue, Red, Orange	1 x Primer high solid alkyd system 1 x Color top coat (polyurethane)	Indoor or outdoor moderate environment



For more demanding environments our multi-layer corrosion protection starts with a primer undercoat over the base material and then adding our stainless steel polyurethane coating and a high-gloss topcoat.

NORD Severe Duty Extreme (NSD-X3)	Stainless steel silver (Gray)	1 x Primer high solid alkyd system 1 x Stainless steel (316) (polyurethane) 1 x Clear top coat (polyurethane)	Indoor or outdoor more severe environment
NORD Severe Duty Extreme (NSD-X3W)	White	1 x Primer high solid alkyd system 1 x White (polyurethane) 1 x Clear top coat (polyurethane)	Indoor or outdoor more severe environment
Alternate color (NSD-X3)	Black, Blue, Red, Orange	1 x Primer high solid alkyd system 1 x Color (polyurethane) 1 x Clear top coat (polyurethane)	Indoor or outdoor more severe environment



Screw Conveyor Package (SCP)

The NORD screw conveyor package (SCP) provides a complete power transmission for screw conveyors. It is extremely efficient due to the elimination of costly v-belt drives and by providing integral gearmotors or direct coupled motors to a NEMA C-face reducer. Efficiency can be increased even further by applying the NORD “H” line of energy efficient motors. The SCP package also features a superior sealing system and mounting features.

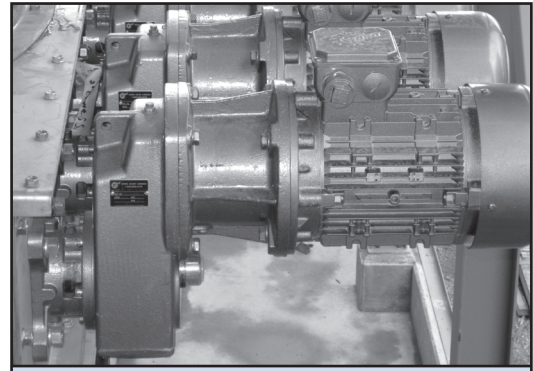
For more information please refer to catalog G1129.

Optimized Sealing System

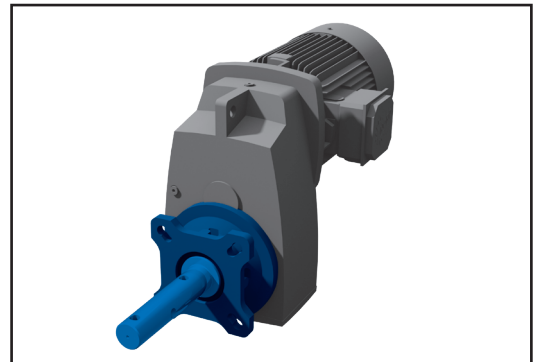
- Dual (FKM) lip seals
- Grease impregnated packing seal
- Dual gap seals (excludes particles) – 0.03” gap
- Material evacuation ports
- Shaft material ditch
- Quadrilip™ sealing

Mounting

- Standard CEMA mounting
- Versatile flange – multiple bolt patterns
- 3-Hole tapered CEMA drive shaft
 - Easy mounting & Removal
- Reduced bearing loads
 - Tapered shaft allows for screw pipe misalignment
- Quick external removal feature



SCP product in use



CLINCHER with Screw Conveyor Flange (SCP)

Model type	Max Torque [lb-in]	Ratio Range [x:1]	Speed Range [rpm]	Gear Stages	Eff. [%]	CEMA Drive Shaft Diameter				
						1-1/2"	2"	2-7/16"	3"	3-7/16"
SK1282SCP	2620	4.79 - 109.5	365 - 16	2	97	X	X	X		
SK1382SCP	2425	87.94 - 624.45	20 - 2.8	3	95	X	X	X		
SK2282SCP	4611	4.51 - 127.51	388 - 14	2	97	X	X	X		
SK2382SCP	4894	82.22 - 763.41	21 - 2.3	3	95	X	X	X		
SK3282SCP	8363	4.48 - 112.23	391 - 16	2	97	X	X	X	X	
SK3382SCP	9195	89.60 - 1022.42	20 - 1.7	3	95	X	X	X	X	
SK4282SCP	16089	4.7 - 155.4	372 - 11	2	97		X	X	X	
SK4382SCP	18381	86.83 - 1585.08	20 - 1.1	3	95		X	X	X	
SK5282SCP	28630	4.32 - 134.03	405 - 13	2	97		X	X	X	X
SK5382SCP	28320	82.72 - 1367.08	21 - 1.3	3	95		X	X	X	X
SK6282SCP	40152	4.39 - 80.33	399 - 22	2	97				X	X
SK6382SCP	53100	24.42 - 551.58	72 - 3.2	3	95				X	X

Notes



A large grid of blue lines for taking notes, consisting of 20 columns and 30 rows.

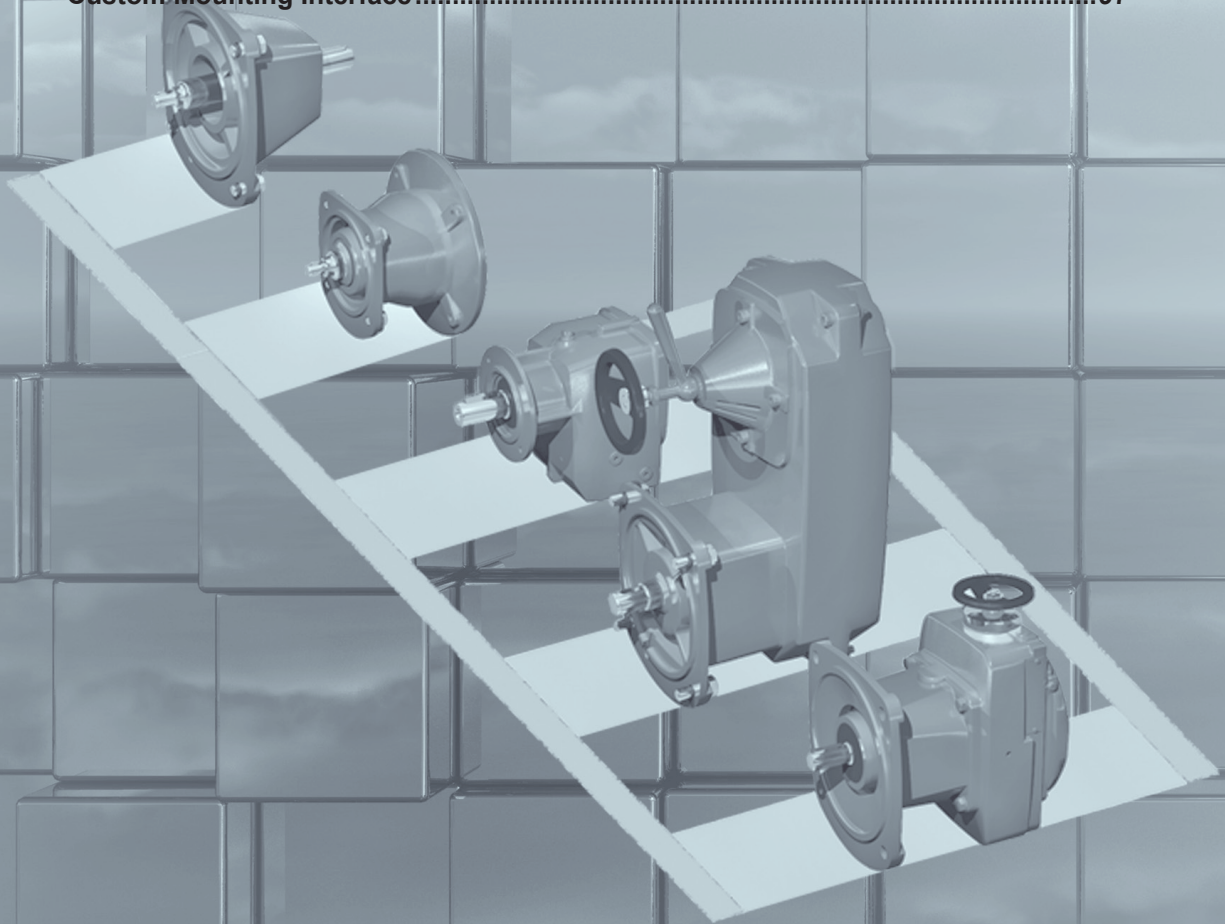
Options



DRIVESYSTEMS

Inputs

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Top Mount Motor Platform.....	91
Scoop Motor Platform.....	94
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Custom Mounting Interface.....	97



Example Nomenclature

SK3282 - W

— Solid Input Shaft
— Gear unit

Gear unit with solid input shaft.

SK3282 -140TC

— NEMA 140TC Motor Adaptor
— Gear unit

Gear unit to receive standard NEMA C-Face motor adaptor.

SK3282 - IEC80

— IEC 80 B5 Motor Adaptor
— Gear unit

Gear unit to receive standard metric IEC B5 flange mount motor adaptor.

Input

NORD's modular design allows for many different types of inputs to be added to gear reducers. All inputs are bolt on and include machined pilots to ensure simple and accurate assembly. NORD offers the following different input types:

- Integral motor
- Solid input shaft
- NEMA C-face motor adapter
- IEC B5 motor adapter
- Servo motor adapter
- Motor platform
- Scoop mount motor platform
- Custom mounting interface

Nomenclature

After the letters, 'SK' Reducer sizes are indicated followed by the dash (-), then the input device such as:

- SK3282 – 90L/4 (Integral motor)
- SK3282 – W (Solid input shaft)
- SK3282 – 140TC (NEMA C-face motor adaptor)
- SK3282 – IEC80 (IEC B5 motor adaptor)
- SK3282 – SEP130 (Servo motor adaptor)
- SK3282 – MK140T (Motor platform)
- SK3282 – S140T (Scoop mount motor platform)
- SK3282 – WII (Custom mounting interface)

Solid Input Shaft	NEMA Motor Adapter	IEC Motor Adapter	Integral Motor Standard Efficiency & 60 Minute Duty		Integral Motor Premium Efficiency		Scoop Mount Motor Platform	Motor Platform	Servo Motor Adapter Keyed
W	N56C	IEC 63	63S/4 - 0.16hp	100L/4 - 3hp	80LP/4 - 1hp	225RP/4 - 40hp	S56	MKN056	SEP 100
	N140 TC	IEC 71	63L/4 - 0.25hp	100LA/4 - 5hp	90SP/4 - 1.5hp	225SP/4 - 50hp	S140T	MKN140	SEP 130
	N180TC	IEC 80	71S/4 - 0.33hp	132S/4 - 7.5hp	90LP/4 - 2hp	225MP/4 - 60hp	S180T	MKN180	SEP 165
	N210TC	IEC 90	71L/4 - 0.50hp	132M/4 - 10hp	100LP/4 - 3hp	250WP/4 - 75hp	S210T	MKN210	SEP 215
	N250TC	IEC 100	80S/4 - 0.75hp	160M/4 - 15hp	112MP/4 - 5hp	280SP/4 - 100hp	S250T	MKN250	SEP 300
	N280TC	IEC 112	80L/4 - 1hp	160L/4 - 20hp	132SP/4 - 7.5hp	280MP/4 - 125hp	S280T	MKN280	Servo Motor Adapter Clamp
	N320TC	IEC 132	90S/4 - 1.5hp	180MX/4 - 25hp	132MP/4 - 10hp	315SP/4 - 150hp	S320T	MKN320	
	N360TC	IEC160	90L/4 - 2hp	180LX/4 - 30hp	160MP/4 - 15hp	315MP/4 - 175hp	S360T	MKN360	SEP 215
		IEC 180		200LX/4 - 40hp	160LP/4 - 20hp	315RP/4 - 200hp			SEP 300
		IEC 200			180MP/4 - 25hp	315LP/4 - 250hp			SEK 100
		IEC 225			180LP/4 - 30hp				SEK 130
		IEC 250							SEK 165
		IEC280							SEK 215
		IEC 315							SEK 300
				Other Speeds Available			Other Speeds Available		

Integral Motors

NORD provides integral motors that mount directly to the gearbox. Integral motor mounting eliminates the need for costly v-belts or sheaves and directly couples the motor to the reducer. This also results in a dimensionally compact one-piece package.

NORD high performance integral motors are available in many operational voltages, are inverter duty rated, and offer many valuable options including energy efficient motors and power off brakes. For more information on integral motors, see the motor section.

Solid Input Shaft

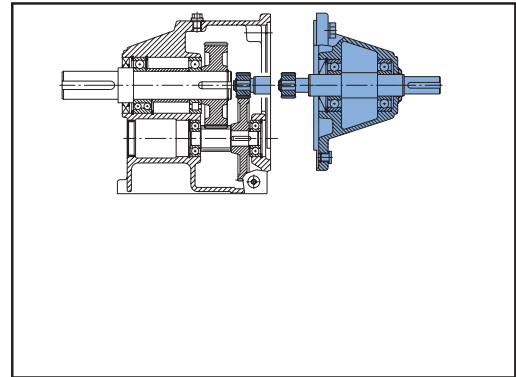
Designed to mount couplings, sheaves or sprockets, which transfer torque from the prime mover. The input shaft is made from ANSI 1045 or stronger material dimensioned with long keys according to ANSI B17 standards. Bearings are sized to handle overhung loads resulting from belt or sprocket inputs. Input shaft load ratings may be found on the table located on page 34. The maximum gearbox input power rating is indicated in the speed reducer performance tables on pages 153 - 172.

The bearings of solid input shaft type W of the larger gear units require re-lubrication at a regular interval. This is necessary for double-stage gearboxes sizes SK6282 and larger, and triple-stage gearboxes from size SK7382 and larger. For additional information please reference the appropriate user manuals located at nord.com/docs by entering your products serial number.

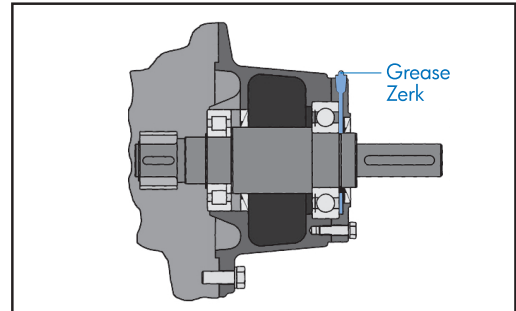
Automatic Lubricator

Our double-reduction gearboxes size SK6282 and larger and triple reduction gearboxes SK6382 and larger that are equipped with either a NEMA C-face or IEC adapter larger than 250TC/IEC160 are provided with an automatic lubricator.

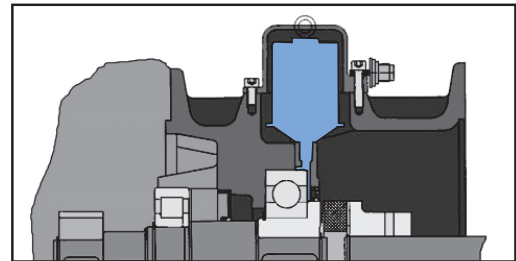
The automatic lubricator must be activated before the gearbox is put into operation. Activation is accomplished by turning the plastic eyelet into the canister until the eyelet breaks off. For additional information please reference the appropriate user manuals located at nord.com.



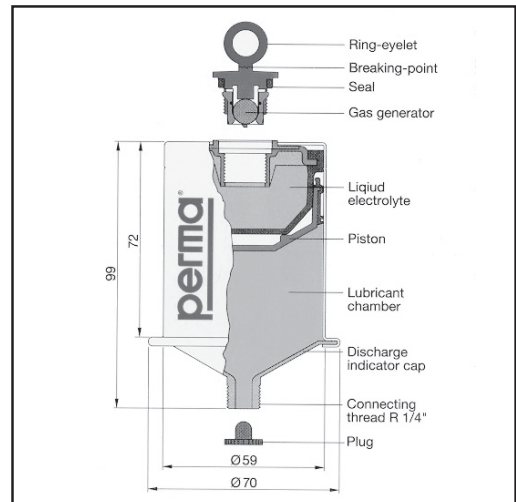
Solid Input Shaft



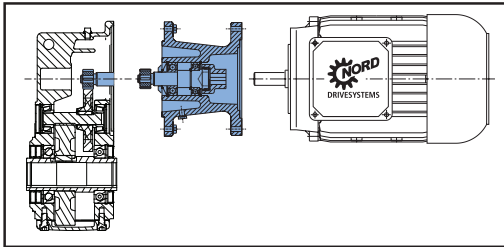
Re-Lubricating the bearing with the Grease Zerk



Automatic Lubricator



Automatic Lubricator Dimensions & Descriptions

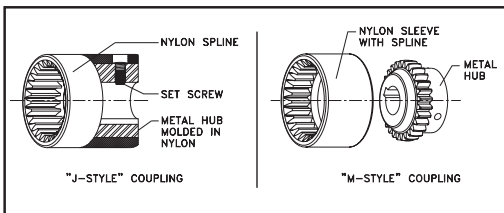


NEMA C-FACE / IEC Motor Adapter

NEMA C-Face Motor Adapter

NEMA C-face motor adapters allow for easy installation and removal of industry standard C-face motors. NEMA C-face motor adapters consist of a coupling and an adapter housing that connect the motor to the gear reducer. Gear units with NEMA C-face adapters are commonly used in applications that require specialized motors, for serviceability or quick replacement. NORD additionally offers NEMA C-face motors and brakemotors that may be installed to the motor adapter.

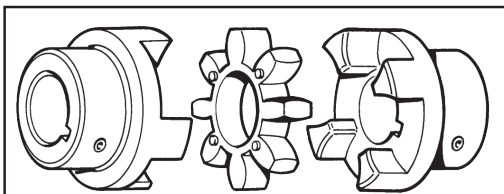
The maximum input power of a gear unit with a NEMA C-face adapter is generally limited by the power rating of the standard NEMA C-face motor size. The power limits are indicated in the reducer ratings tables. In some cases the gearbox limit (T_{2max}) will be the limiting capacity. Both the NEMA adapter limit and the gearbox torque limit must be considered. If the speeds required exceed those included in the ratings tables please contact NORD. For additional information please reference the appropriate user manuals located at nord.com.



J & M Style Coupling Illustrations

IEC Motor Adapter

IEC motor adapters allow for easy installation and removal of industry standard IEC motors according to DIN 42677. The IEC adapter is very similar to the NEMA C-face adapter in construction. The maximum input power is generally limited by the IEC motor size. For ratings and dimensions, please consult our metric catalogs.



Jaw Style Coupling Illustration

Motor Adapter Couplings

Couplings are made with tough abrasion resistant materials, which resist most chemicals and petroleum products. They are electrically isolated (prevent metal to metal contact) and require no lubrication or maintenance. Depending on the size of the C-face input, NORD will provide either a gear or jaw type coupling.

Gear Couplings

Gear couplings are used with 56C to 280TC adapters and provide a space saving design. C-face adapter input shafts have a machined male spline that connects with a molded nylon spline on the coupling. This specially designed nylon sleeve exhibits high torsional stiffness, resulting in minimum backlash and reduced internal frictional losses. The coupling design yields low inertia and uses blind assembly and slip together components for easy inspection without disassembly.

NORD incorporates two styles of gear couplings, the "J" and "M" styles. The "J" style is a one-piece coupling consisting of a nylon sleeve and metal hub that are fused together. The "M" style is a two-piece coupling consisting of a separate nylon sleeve and metal hub.

Jaw Couplings

Jaw couplings are used with 320TC and larger adapters. The cast iron jaw type couplings have a urethane "spider" that provides smooth transmission of the motor torque and has excellent shock and vibration dampening characteristics. A set screw on the coupling prohibits axial movement along the motor shaft. Jaw couplings with low-backlash hubs and spider elements are provided with NORD servo adapters.

NEMA Motor Adapter Details

NEMA C-face Motor Frame	NEMA Adapter Nomenclature	4 pole Motor HP	Max Motor Weight [lb]	Coupling Description	Coupling Bore [inches]	Continuous Torque [in-lb]	Maximum Torque [in-lb]
56 C	- 56C	≤ 1.0	66	J14	0.625	44	88
56 C	- 56C	≤ 1.5	66	J24	0.875	106	212
143 TC	- 140TC	≤ 1.5	88				
145 TC	- 140TC	≤ 2	110				
145 TC	- 140TC	3	110				
182 TC	- 180TC	3	130	J28	1.125	398	1195
184 TC	- 180TC	5	175				
182 TC	- 180TC	3	130	M38	1.125	708	2214
184 TC	- 180TC	5	175				
213 TC	- 210TC	7.5	220				
215 TC	- 210TC	10	220				
254 TC	- 250TC	15	440	M42	1.625	885	2655
256 TC	- 250TC	20	440				
284 TC	- 280TC	25	550	M48	1.875	1239	3717
286 TC	- 280TC	30	550				
324 TC	- 320TC	40	770	R65	2.125	5532	11063
326 TC	- 320TC	50	1100				
364 TC	- 360TC	60	1540	R90	2.375	21242	42484
365 TC	- 360TC	75	1540				

IEC Motor Adapter Details

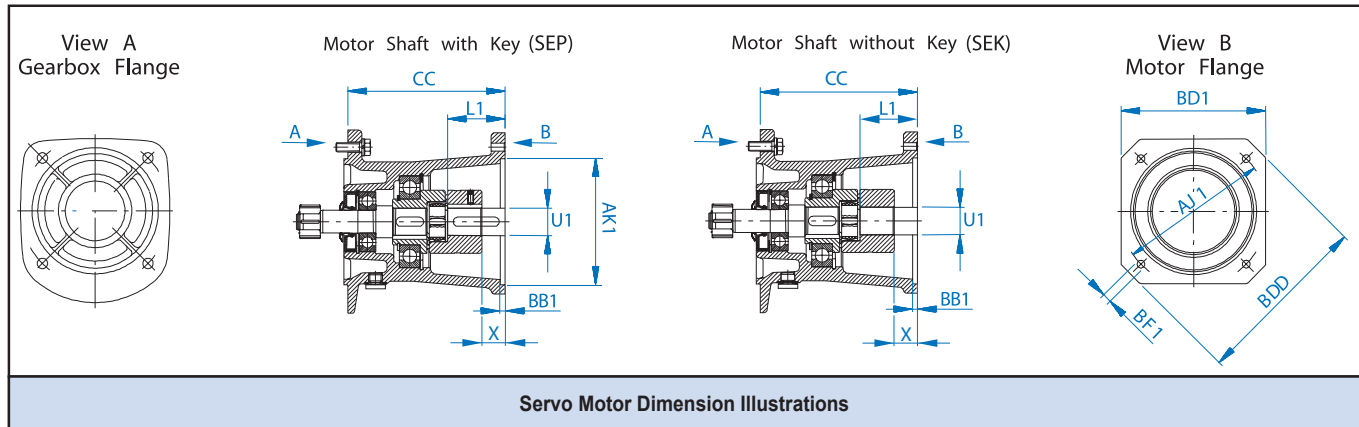
IEC Motor B5 4 pole	IEC Adapter Nomenclature	HP / kW	Max Weight Limit [lb]	Coupling Description	Coupling Bore [mm]	Continuous Torque [Nm]	Maximum Torque [Nm]
63 S/4	- IEC 63	0.16 / 0.12	55	J14	11	5	10
63 L/4	- IEC 63	0.25 / 0.18	55				
71 S/4	- IEC 71	0.33 / 0.25	66				
71 L/4	- IEC 71	0.50 / 0.37	66				
80 S/4	- IEC 80	0.75 / 0.55	88	J24	19	12	24
80 L/4	- IEC 80	1.00 / 0.75	88				
90 S/4	- IEC 90	1.5 / 1.1	110				
90 L/4	- IEC 90	2.0 / 1.5	110				
100 L/4	- IEC 100	3.0 / 2.2	130	J28	28	45	135
100 L/40	- IEC 100	5.0 / 3.7	130				
112 M/4	- IEC 112	5.3 / 4.0	175	M38	38	80	240
132 S/4	- IEC 132	7.5 / 5.5	220				
132 M/4	- IEC 132	10 / 7.5	220	M42	42	100	300
160 M/4	- IEC 160	15 / 11	440				
160 L/4	- IEC 160	20 / 15	440	M48	48	140	420
180 M/4	- IEC 180	25 / 18.5	550				
180 L/4	- IEC 180	30 / 22	550	R65	55	625	1250
200 L/4	- IEC 200	40 / 30	770				
225 S/4	- IEC 225	50 / 37.5	1100				
225 M/4	- IEC 225	60 / 45	1100				
250 M/4	- IEC 250	75 / 55	1540	R90	70	2400	4800
280 S/4	- IEC 280	100 / 75	1540				
280 M/4	- IEC 280	125 / 90	2200				
315 S/4	- IEC 315	150 / 110	3300				
315 M/4	- IEC 315	175 / 132	3300				
315 L/4	- IEC 315	250 / 200	3300				

Square Flange Servo Motor Adapters

Servo Motor Adapters

Servo motor adapters are designed to handle the highly dynamic capabilities of servo motors. NORD servo motor adapters have a square mounting flange and are available with either a keyed (SEP) or a keyless (SEK) coupling. They are suitable for speeds up to 3000 rpm and the high torques produced by servo motors. Higher input speeds can be handled for a short duration and the bearings and input shaft are designed to cope with the high torque loads.

Compatibility and dimensions are listed in the table below.



Reducer type	Servo Adapter	Reducer Input Flange Size	Units	Motor Flange						Motor Shaft		Coupling Distance X	Rotex® Coupling info			
				CC	AJ1	AK1	BD1	BDD	BF1	U1	L1		Size	Cont. Torque	Peak Torque	Units
SK 1282 SK 2382 SK 3382	-SEP 100	160S	in	4.92	3.94	3.150	3.78	4.72	M6	0.748	1.57	0.59	R19 GS	150	301	[lb-in]
	-SEK 100		mm	125	100	80	96	120		19	40			15	17	34
SK 1282 SK 2382 SK 3382	-SEP 130	160S	in	5.39	5.12	4.331	4.96	6.50	M8	0.945	1.97	0.79	R24 GS	531	1,062	[lb-in]
	-SEK 130		mm	137	130	110	126	165		24	50			20	60	120
	-SEP 165	160S	in	5.98	6.50	5.118	6.50	7.32	M10	1.260	2.28	0.91	R28 GS	1,416	2,832	[lb-in]
	-SEK 165		mm	152	165	130	165	186		32	58			23	160	320
SK 3282 SK 4382 SK 5382	-SEP 130	250S	in	5.94	5.12	4.331	4.96	6.10	M8	0.945	1.97	0.79	R24 GS	531	1,062	[lb-in]
	-SEK 130		mm	151	130	110	126	155		24	50			20	60	120
	-SEP 165	250S	in	6.57	6.50	5.118	6.10	7.32	M10	1.260	2.28	0.91	R28 GS	1,416	2,832	[lb-in]
	-SEK 165		mm	167	165	130	155	186		32	58			23	160	320
SK 4282 SK 5282 SK 6382	-SEP 215	300S	in	7.40	8.46	7.087	7.56	9.45	M12	1.496	3.15	1.77	R28 GS	1,416	2,832	[lb-in]
	-SEK 215		mm	188	215	180	192	240		38	80			45	160	320
	-SEP 300	300S	in	9.06	8.46	7.087	7.56	9.45	M12	1.496	3.15	0.94	R48 GS	4,647	9,293	[lb-in]
	-SEK 300		mm	230	215	180	192	240		38	80			24	525	1,050
SK 6282 SK 7282 SK 7382 SK 8282 SK 8382 SK 9382	-SEP 300	350	in	9.13	11.81	9.843	10.24	13.78	M16	1.890	3.23	1.02	R48 GS	4,647	9,293	[lb-in]
	-SEK 300		mm	232	300	250	260	350		48	82			26	525	1,050
	-SEP 300	350	in	9.84	11.81	9.843	10.24	13.78	M16	1.890	3.23	1.02	R48 GS	4,674	9,293	[lb-in]
	-SEK 300		mm	250	300	250	260	350		48	82			26	525	1,050

SEP adapter couplings are intended for keyed motor shafts and SEK adapters use clamping style couplings for motor shafts without keys.

Check with factory to confirm ratio availability of a particular gear unit type and servo adapter combination.

Consult NORD if trying to adapt a servo motor with dimensions other than shown.

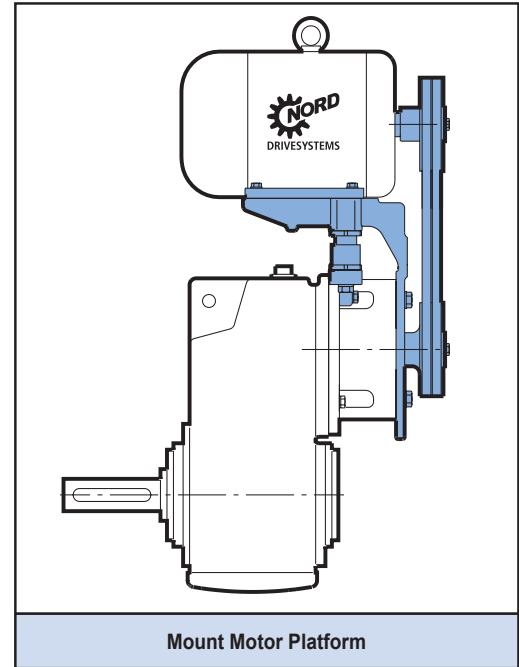
Motor Platform (MK)

Some applications require the motor to be mounted to the reducer while allowing a belt drive connection from the motor to the reducer. MK platforms offer the following advantages:

- The motor may be mounted over the top of the reducer
- Light, vibration inhibiting aluminum construction
- Corrosion resistant, easily adjustable mechanism for belt tensioning
- Corrosion resistant fasteners
- Available in all mounting positions
- The motor may be positioned 90° to the right or left
- Platform has multiple bolt patterns for various motor sizes

Motor platforms are pre drilled and tapped to bolt on a standard NEMA footed motor. Each platform has belt tension adjusters. See dimension DH on the following pages for the adjustability range. Motor, belts, sheaves and guard are supplied by the customer.

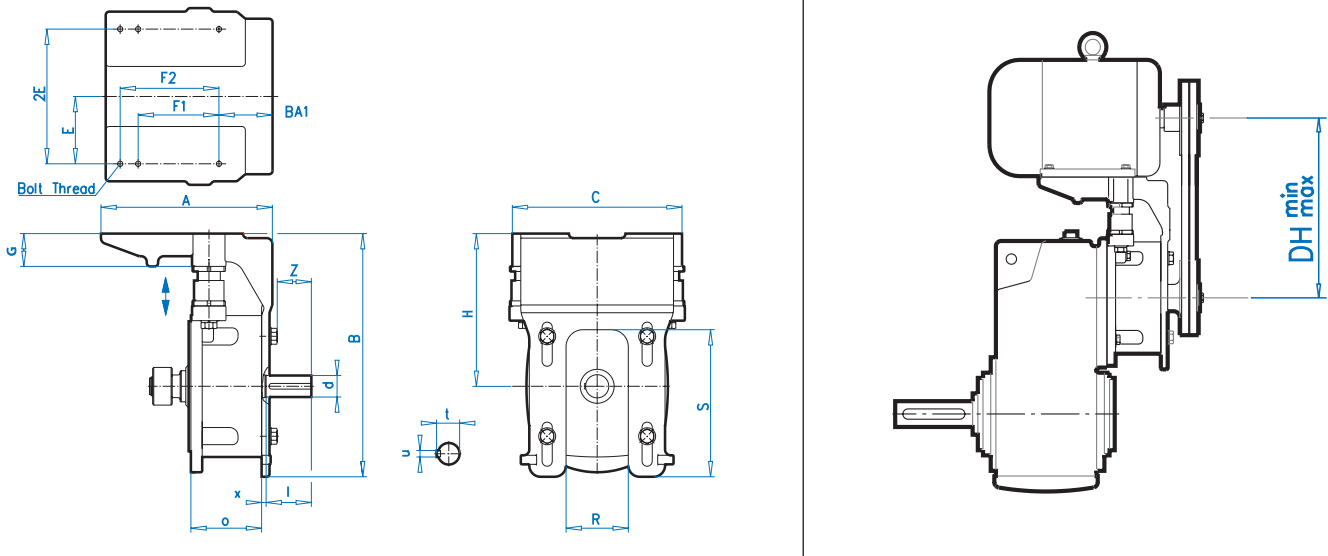
Availability and nomenclature for each type of speed reducer with top mount platform combination is shown in the chart below. Consult NORD for final selection.



Reducer Type	Motor Platform Description							
	-MKN56	-MKN140	-MKN180	-MKN210	-MKN250T	-MKN280	-MKN320	-MKN360
	NEMA Footed Motor Frame Size							
	N56	N143T N145T	N182T N184T	N213T N215T	N254T N256T	N284T N286T	N324T N326T	N364T N365T
SK 1282	X	X						
SK 2282	X	X	X					
SK 2382	X	X						
SK 3282	X	X	X	X				
SK 3382	X	X						
SK 4282		X	X	X	X			
SK 4382	X	X	X					
SK 5282		X	X	X				
SK 5382	X	X	X	X				
SK 6282			X	X	X	X	X	
SK 6382		X	X	X	X			
SK 7282			X	X	X	X	X	
SK 7382			X	X	X	X	X	
SK 8282			X	X	X	X	X	X
SK 8382			X	X	X	X	X	
SK 9282			X	X	X	X	X	X
SK 9382					X	X	X	X

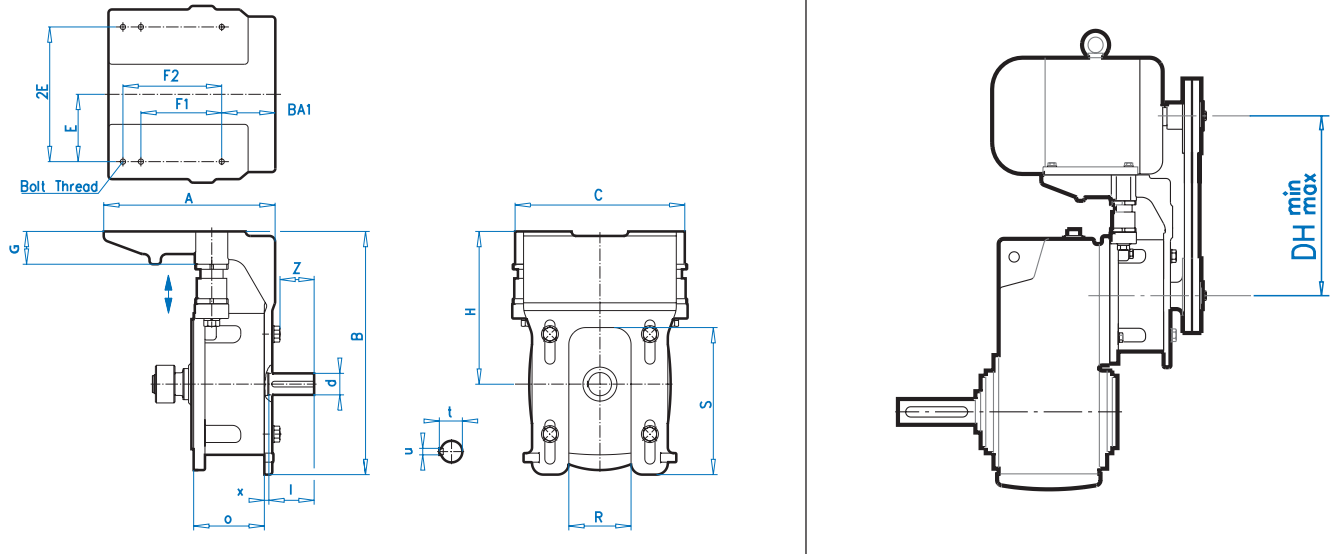
Check with factory to confirm ratio availability of a particular gear unit type and motor platform

Motor Platform (MK)

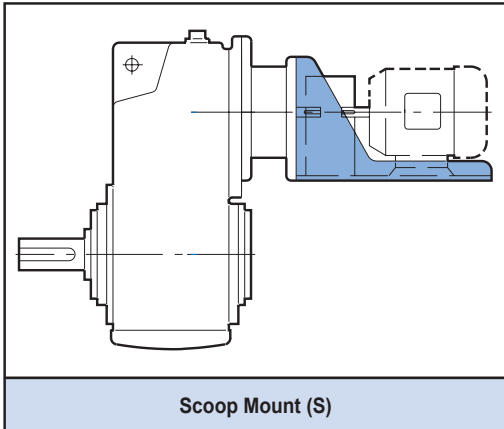


Reducer Type	MK Platform	F1	F2	BA1	Bolt Thread	E	2E	A	B	C	G	H	O	R	S	Z
SK 1282	56	3	5	2.87	5/16-18	2.44	4.88	8.74	9.96	8.03	1.77	6.02	4.70	2.36	5.51	1.61
SK 2382	140T	4	5	2.37	5/16-18	2.75	5.50									
SK 3382																
SK 2282	56	3	5.5	2.98	5/16-18	2.44	4.88	9.29	12.60	9.84	1.97	7.83	4.47	2.60	5.71	1.89
SK 3282	140T	4	5	2.48	5/16-18	2.75	5.50									
SK 4382	180T	4.5	5	2.48	3/8-16	3.75	7.50									
SK 5382	213T	5.5	–	3.38	3/8-16	4.25	8.50									
	215T	–	7	3.38	3/8-16	4.25	8.50	11.52	13.47							
SK 4282	140T	4	4.5	2.68	5/16-18	2.75	5.50	11.93	16.93	11.81	2.28	10.00	4.92	4.33	10.24	2.40
SK 5282	180T	4.5	5.5	3.18	3/8-16	3.75	7.50									
SK 6382	210T	5.5	7	3.93	3/8-16	4.25	8.50									
	250T	8.25	10	4.65	1/2-13	5	10	15.90	17.68	12.50						
	250T	8.25	10	4.65	1/2-13	5	10	15.90	17.68	12.50						
SK 6282	180T	4.5	5.5	3.26	3/8-16	3.75	7.50	18.74	20.87	15.75	2.95	12.40	9.92	5.12	12.40	4.57
SK 7282	210T	5.5	7	4.01	3/8-16	4.25	8.50									
SK 7382	250T	8.25	10	4.76	1/2-13	5	10									
SK 8282	280T	9.5	11	5.26	1/2-13	5.5	11									
SK 8382	320T	10.5	12	5.76	5/8-11	6.25	12.5									
SK 9282																
SK 9382																
SK 8282	280T	9.5	11	5.26	1/2-13	5.5	11	26.06	27.17	23.70	4.13	18.31	9.65	15.04	14.37	4.67
SK 9282	320T	10.5	12	5.76	5/8-11	6.25	12.5									

Motor Platform (MK)



Reducer Type	MK Platform	DHmin	DHmax	d [mm]	l [mm]	t [mm]	u [mm]	x [mm]
SK 1282	56	9.51	10.31	24	50	27	8	8
SK 2382	140T	9.51	10.31					
SK 3382								
SK 2282	56	11.34	12.32	28	60	31	8	9
SK 3282	140T	11.34	12.32					
SK 4382	180T	12.34	13.32					
SK 5382	213T	13.09	14.07					
	215T	13.96	14.94					
SK 4282	140T	13.5	14.76	38	80	41	10	8
SK 5282	180T	14.5	15.76					
SK 6382	210T	15.25	16.51					
	250T	17.0	18.26					
	250T	17.0	18.26					
SK 6282	180T	16.9	18.48	65	140	69	18	8
SK 7282	210T	17.65	19.23					
SK 7382	250T	18.65	20.23					
SK 8282	280T	19.4	20.98					
SK 8382	320T	20.4	21.98					
SK 9282								
SK 9382								
SK 8282	280T	25.31	27.28	65	140	69	18	12
SK 9282	320T	26.31	28.28					



Scoop Mount (S)

Used in industries where quick change of commonly stocked NEMA footed motors is standard practice. NORD Scoops are slotted to allow for motor positioning. An elastomeric coupling and bolt on coupling guard are included. Motors supplied and mounted by the customer must be properly shimmed to match the shaft height. NORD may also supply the motor fully installed.

Scoop motor platforms offer the following advantages.

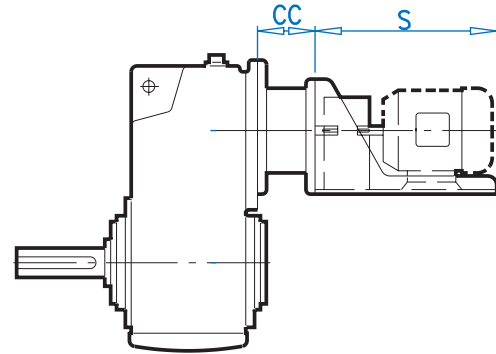
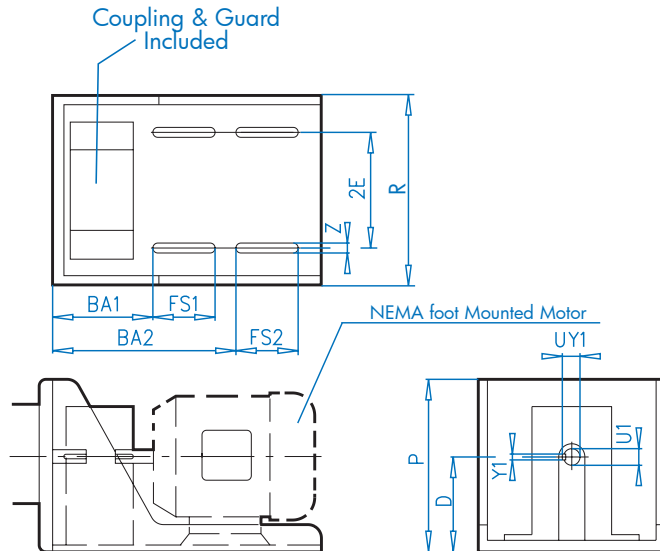
- Heavy duty fabricated steel construction
- Vibration free torsionally stiff design
- Available for mounting in all positions
- Can be swung 90° to the right or left
- Directly mount standard NEMA footed motor
- Motor coupling and safety guard are included

Each Scoop Motor Platform has slotted holes allowing a standard NEMA footed motor to be attached.

Reducer Type	Motor Platform Description							
	-S56	-S140T	-S180T	-S210T	-S250T	-S280T	-S320T	-S360T
	NEMA Footed Motor Frame Size							
	N56	N143T N145T	N182T N184T	N213T N215T	N254T N256T	N284T N286T	N324T N326T	N364T N365T
SK 1282	X	X						
SK 2282	X	X	X	X				
SK 2382	X	X						
SK 3282	X	X	X	X				
SK 3382	X	X						
SK 4282		X	X	X	X			
SK 4382	X	X	X	X				
SK 5282		X	X	X	X			
SK 5382	X	X	X	X				
SK 6282			X	X	X	X	X	
SK 6382		X	X	X	X			
SK 7282			X	X	X	X	X	
SK 7382			X	X	X	X	X	
SK 8282			X	X	X	X	X	X
SK 8382			X	X	X	X	X	
SK 9282			X	X	X	X	X	X
SK 9382					X	X	X	

Check with factory to confirm ratio availability of a particular gear unit type and scoop mount platform

Scoop Mount (S)



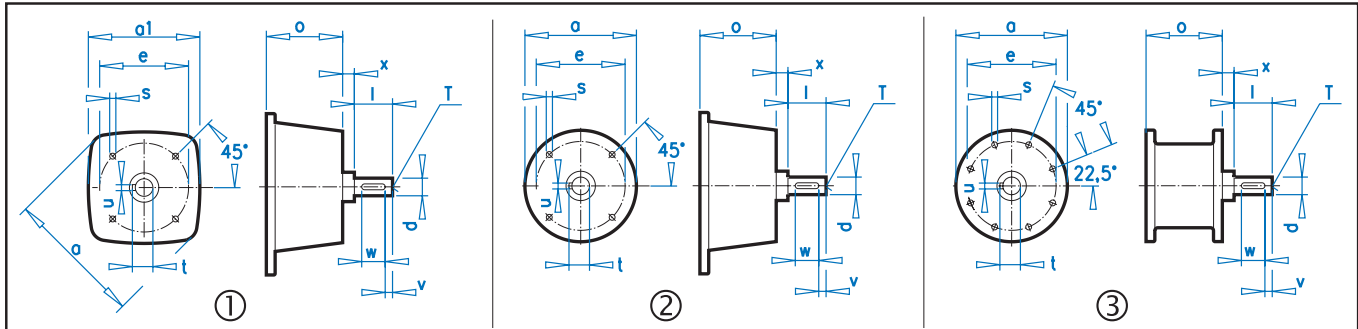
Reducer Type	Scoop	CC	S	P	D	R	2E	Z	BA1	FS1	BA2	FS2	U1	Y1Z	UY1
SK 1282	-S 56	2.91	13.0	6.8	3.5	8.4	4.9	0.44	6.0	3.0	9.5	3.0	0.625	0.188	0.71
SK 1382	-S 140 T	4.47	14.0	6.8	3.5	8.4	5.5	0.44	4.8	4.0	9.3	3.8	0.875	0.188	0.96
SK 2282															
SK 2382															
SK 3382															
SK 3282	-S 56	2.91	13.0	6.8	3.5	8.4	4.9	0.44	6.0	3.0	9.5	3.0	0.625	0.188	0.71
SK 4382	-S 140T	4.47	14.0	6.8	3.5	8.4	5.5	0.44	4.8	4.0	8.3	3.8	0.875	0.188	0.96
SK 5382	-S 180 T	4.47	19.6	8.0	4.5	10.4	7.5	0.44	7.3	2.5	12.3	2.5	1.125	0.250	1.24
	-S 210 T	4.47	20.0	8.9	5.25	12.0	8.5	0.44	8.4	3.0	14.0	4.0	1.375	0.312	1.52
SK 4282	-S 140 T	4.88	14.8	8.8	3.5	9.5	5.5	0.44	6.8	3.0	10.8	3.5	0.875	0.188	0.96
SK 5282	-S 180 T	4.92	20.0	9.8	4.5	10.4	7.5	0.44	8.5	3.8	13.3	4.5	1.125	0.250	1.24
SK 6382	-S 210 T	4.92	22.0	11.6	5.25	12.0	8.5	0.44	8.5	5.0	14.5	6.0	1.375	0.312	1.52
	-S 250 T	4.92	27.3	12.6	6.25	14.4	10.0	0.56	9.0	5.0	18.6	6.8	1.625	0.375	1.80
SK 6282	-S 180 T	6.69	20.0	9.8	4.5	10.4	7.5	0.44	8.5	3.8	13.3	4.5	1.125	0.250	1.24
SK 7282	-S 210 T	6.69	22.0	11.6	5.25	12.0	8.5	0.44	9.0	5.0	14.5	6.0	1.375	0.312	1.52
SK 7382	-S 250 T	6.69	27.3	12.6	6.25	14.4	10.0	0.56	10.3	5.0	18.6	6.8	1.625	0.375	1.80
SK 8282	-S280 T	9.29	30.0	13.3	7	16.3	11.0	0.56	12.5	5.5	22.0	7.0	1.875	0.500	2.10
SK 8382	-S320 T	9.29	33.0	14.3	8	18.3	12.5	0.69	14.0	6.0	24.0	7.5	2.125	0.500	2.35
SK 9282	-S 360 T	9.29	36.0	15.3	9	20.0	14.0	0.69	14.8	6.0	26.4	6.3	2.375	0.625	2.65
SK 9382															
SK 8282	-S 180 T	6.69	20.0	9.8	4.5	10.4	7.5	0.44	8.5	3.8	13.3	4.5	1.125	0.250	1.24
SK 9282	-S 210 T	9.29	22.0	11.6	5.25	12.0	8.5	0.44	9.0	5.0	14.5	6.0	1.375	0.312	1.52
	-S 250 T	9.29	27.3	12.6	6.25	14.4	10.0	0.56	10.3	5.0	18.6	6.8	1.625	0.375	1.80
	-S 280 T	9.29	30.0	13.3	7	16.3	11.0	0.56	12.5	5.5	22.0	7.0	1.875	0.500	2.10
	-S 320 T	9.29	33.0	14.3	8	18.3	12.5	0.69	14.0	6.0	24.0	7.5	2.125	0.500	2.35
	-S 360 T	9.29	36.0	15.3	9	20.0	14.0	0.69	14.8	6.0	26.4	6.3	2.375	0.625	2.65

Inputs

Solid Input Shaft With Flanged Housing

Solid Input Shaft With Flanged Housing (example SK3282 – W II)

Same internal components as the Solid Input Shaft (-W) but the housing has a flat machined mounting face with metric drilled and tapped holes. Standard units are available with metric shafts.



Solid Input Shaft with Flanged Housing Dimension Illustrations

Double Reduction	Triple Reduction	Compound Gear Units	RLS Opt.	III.	Outline Dimensions [mm]					Shaft Dimensions [mm]							
					a	a1	e	o	s	d	l	t	u	v	w	x	T
SK 0182NB WO SK 0282NB WO	SK 1382NB WO			⊙	120	-	75	61.5	M5 x 11	14	40	16	5	5	30	8	M5
SK 0182NB WII SK 0282NB WII	SK 1382NB WI			⊙	120	-	100	61.5	M8 x 11	16	40	18	5	4	32	8	M5
SK 1282 W0	SK 2382 W0 SK 3382 W0	SK ../02 W0 SK ../12 W0		⊙	90	-	75	70.5	M5 x 13	14	38.5	16	5	5	30	2	M5
SK 1282 WII	SK 2382 WII	SK ../02 WII SK ../12 WII	RLS	⊙	120	-	100	74	M8 x 13	16	40	18	5	4	32	8	M5
SK 2282 WIII SK 3282 WIII	SK 4382 WIII SK 5382 WIII	SK ../22 WIII SK ../32 WIII		⊙	120	-	100	113.5	M8 x 13	16	40	18	5	4	32	8	M5
SK 1282 WII	SK 2382 WIII SK 3382 WIII	SK ../02 WIII SK ../12 WIII		⊙	150	-	125	119.5	M8 x 13	24	50	27	8	5	40	8	M8
SK 2282 WI SK 3282 WI	SK 4382 WI SK 5382 WI	SK ../22 WI SK ../32 WI		⊙	180	140	125	113.5	M8 x 13	24	50	27	8	5	40	8	M8
SK 4282 WIV SK 5282 WIV	SK 6382 WIV	SK ../42 WIV SK ../52 WIV		⊙	180	140	125	124	M8 x 13	24	50	27	8	5	40	8	M8
SK 2282 WII SK 3282 WII	SK 4382 WII SK 5382 WII	SK ../22 WII SK ../32 WII	RLS	⊙	180	140	150	113.5	M10 x 18	28	60	31	8	5	50	9	M10
SK 4282 WI SK 5282 WI	SK 6382 WI	SK ../42 WI SK ../52 WI		⊙	180	140	150	124	M10 x 16	28	60	31	8	5	50	9	M10
SK 6282 W0 SK 7282 W0	SK 7382 W0 SK 8382 W0 SK 9382 W0			⊙	180	-	150	124	M10 x 18	28	60	31	8	5	50	9	M10
SK 4282 WII SK 5282 WII	SK 6382 WII	SK ../42 WII SK ../52 WII	RLS	⊙	290	250	215	125	M12 x 20	38	80	41	10	5	70	8	M12
SK 6282 WI SK 7282 WI	SK 7382 WI SK 8382 WI SK 9382 WI			⊙	290	250	215	170	M12 x 25	38	80	41	10	5	70	8	M12
SK 4282 WIII SK 5282 WIII	SK 6382 WIII	SK ../42 WIII SK ../52 WIII		⊙	290	250	250	125	M16 x 25	38	80	41	10	5	70	8	M12
SK 6282 WII SK 7282 WII SK 8282 WII	SK 7382 WII SK 8382 WII SK 9382 WII	SK 10382.1 WII SK 11382.1 WII		⊙	290	250	250	170	M16 x 25	38	80	41	10	5	70	8	M12
SK 6282 WIII SK 7282 WIII	SK 7382 WIII SK 8382 WIII SK 9382 WIII		RLS	⊙	290	250	250	170	M16 x 25	42	110	45	12	10	90	8	M16
SK 6282 WIV SK 7282 WIV SK 8282 WV	SK 7382 WIV SK 8282 WIV SK 9382 WIV SK 10382.1 WV			⊙	350	300	300	252	M20 x 30	65	140	69	18	15	110	8	M20
SK 8282 WI SK 9282 WI	SK 10382.1 WI SK 11382.1 WI			⊙	350	300	250	236	M16 x 25	42	110	45	12	10	90	8	M16
SK 8282 WIII SK 9282 WIII	SK 10382.1 WIII SK 11382.1 WIII		RLS	⊙	350	300	250	236	M20 x 30	65/ 70	140	69	18	15	110	8	M20
SK 8282 WIV SK 9282 WIV	SK 10382.1 WIV SK 11382.1 WIV			⊙	550	-	500	245	∅ 17.5	65/ 70	140	69	18	15	110	12	M20

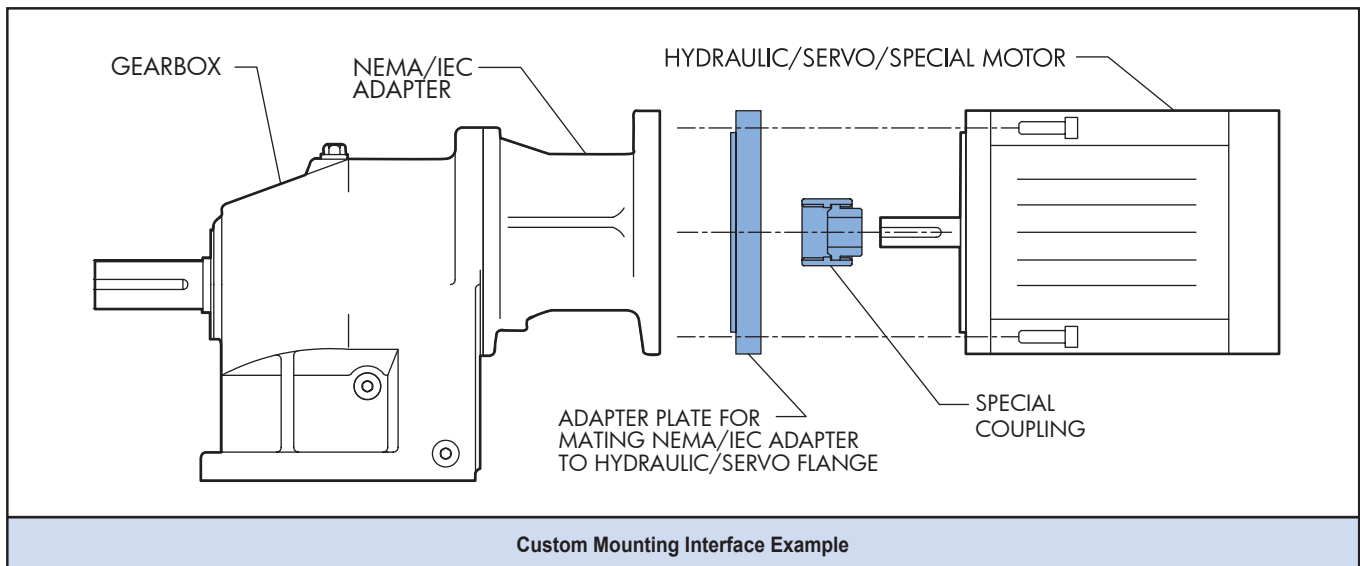
Custom Mounting Interface

NORD can provide custom input adapters typically consisting of a special adapter plate and special coupling to mount non-standard dimensioned motors or other devices.

When a custom input adapter is required, special attention needs to be given for each application to be sure the customer receives the performance that is necessary. The following information is required:

- Motor Dimensional Drawing
- Motor Weight
- Motor performance specifications, including torque, horsepower and operating speed ranges.

NORD engineers will review the performance requirements and make a unit selection based on given parameters.



Notes



Inputs

A large grid of graph paper, consisting of 20 columns and 30 rows of small squares, intended for taking notes.



DRIVESYSTEMS

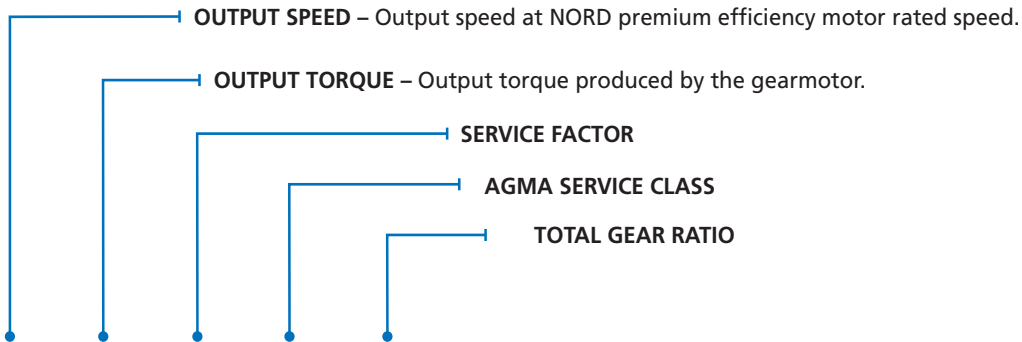
Gearmotor Ratings

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Ratings Tables Overview

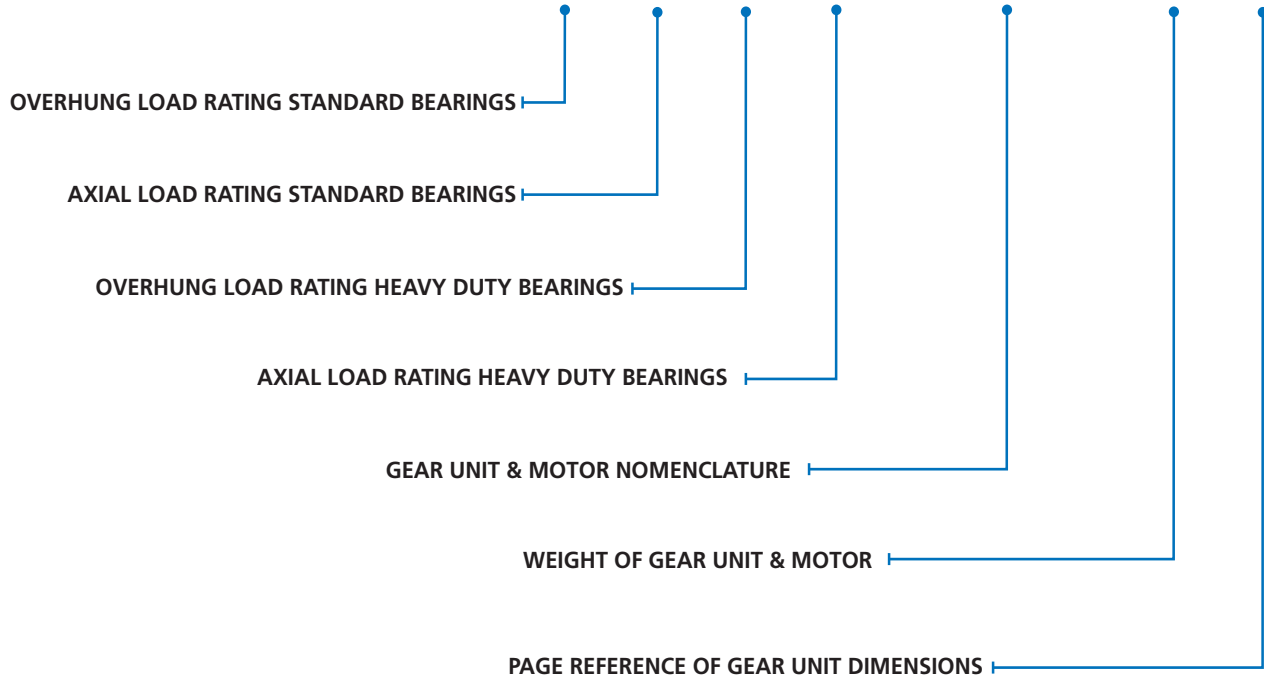


Explanation of Selection Tables




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight [lb]	Dim. Page
						F_{RN} OHL	F_{AN} Thrust	F_{RVL} OHL	F_{AVL} Thrust			
						[lb]	[lb]	[lb]	[lb]			
1.5	7.7	12270	2.9	III	225.79	9397	10454	12375	13489	SK 6382 - 90 SP/4	413	216
	6.9	13672	2.9	III	251.76	9358	10454	12358	13489			
	5.5	17258	2.9	III	317.28	9238	10454	12314	13489			
	4.4	21376	2.4	III	393.19	9062	10454	12254	13489			

Gearmotors






Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.16	401	25	25.7	III	4.24	517	894	1124	1888	SK 0182NB - 63 S/4	17	174
	319	32	25.7	III	5.34	558	977	1124	1888			
	268	38	25.9	III	6.35	590	1034	1124	1888			
	234	43	22.6	III	7.26	616	1079	1124	1888			
	197	51	19.0	III	8.64	651	1142	1124	1888			
	179	56	17.3	III	9.49	672	1147	1124	1888			
	146	69	14.1	III	11.66	717	1147	1124	1888			
	123	82	11.9	III	13.84	757	1147	1124	1888			
	114	88	7.5	III	14.92	773	1147	1124	1888			
	103	98	9.0	III	16.53	801	1147	1124	1888			
	91	111	7.6	III	18.79	831	1147	1124	1888			
	76	133	7.3	III	22.35	878	1147	1124	1888			
	69	146	7.0	III	24.55	904	1147	1124	1888			
	58	173	5.6	III	29.13	953	1147	1124	1888			
	53	189	4.5	III	31.81	978	1147	1124	1888			
	49	206	4.4	III	34.80	1006	1147	1124	1888			
	45	224	4.0	III	37.73	1030	1147	1124	1888			
	41	248	3.0	III	41.85	1061	1147	1124	1888			
	34	294	3.0	III	49.65	1116	1147	1124	1888			
	29	352	2.8	III	59.33	1124	1147	1124	1888			
21	485	1.2	I	81.71	1124	1147	1124	1888				
0.16	26	391	3.2	III	65.99	1144	1124	1582	1124	SK 0282NB - 63 S/4	26	178
	21	471	2.4	III	79.40	1139	1124	1579	1124			
	20	508	2.4	III	85.72	1137	1124	1577	1124			
	16	612	1.9	II	103.12	1129	1124	1571	1124			
	12	825	1.2	I	139.16	1106	1124	1555	1124			
0.16	356	28	40.0	III	4.79	582	1147	1780	1619	SK 1282 - 63 S/4	39	182
	311	32	46.9	III	5.47	609	1232	1853	1619			
	265	38	42.1	III	6.43	641	1305	1943	1619			
	235	43	38.5	III	7.24	667	1358	2015	1619			
	208	49	29.2	III	8.21	694	1414	2089	1619			
	207	49	34.6	III	8.24	695	1415	2092	1619			
	186	54	30.8	III	9.18	720	1466	2160	1619			
	164	61	28.3	III	10.34	749	1525	2171	1619			
	145	70	25.9	III	11.76	780	1589	2171	1619			
	121	84	22.2	III	14.11	828	1607	2171	1619			
	99	102	19.4	III	17.21	883	1607	2171	1619			
	83	122	16.3	III	20.57	935	1607	2171	1619			
	67	150	13.3	III	25.22	998	1607	2171	1619			
	60	168	11.8	III	28.33	1035	1607	2171	1619			
	53	190	10.7	III	32.08	1076	1607	2170	1619			
	37	274	6.3	III	46.19	1202	1607	2169	1619			
	31	328	6.3	III	55.39	1273	1607	2169	1619			
	26	393	6.1	III	66.23	1344	1607	2167	1619			
	21	481	5.4	III	81.17	1429	1607	2165	1619			
	18	548	3.7	III	92.48	1485	1607	2164	1619			
	16	649	2.8	III	109.50	1559	1607	2161	1619			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)


0.16 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.16	16	629	5.2	III	106.08	1525	1754	1798	2360	SK 1382NB - 63 S/4	52	186
	14	700	4.7	III	118.16	1521	1754	1798	2360			
	12	810	4.0	III	136.60	1516	1754	1798	2360			
	11	938	3.5	III	158.12	1507	1754	1798	2360			
	8.3	1208	2.7	III	203.60	1487	1754	1798	2360			
	6.6	1527	2.1	III	257.32	1455	1754	1798	2360			
	5.6	1788	1.8	II	301.82	1422	1754	1798	2360			
	4.5	2259	1.4	II	381.45	1348	1754	1798	2360			
0.16	7.4	905	2.8	III	229.08	1550	1607	2151	1619	SK 1282/02 - 63 S/4	56	262
	6.0	1120	2.3	III	283.85	1535	1607	2140	1619			
	5.2	1293	2.0	III	328.02	1520	1607	2129	1619			
	4.2	1601	1.6	II	405.75	1488	1607	2106	1619			
	3.1	2154	1.2	I	546.50	1410	1607	2052	1619			
	2.6	2611	1.0	I	663.69	1323	1607	1993	1619			
	2.1	3208	0.8	*	826.23	1172	1607	1896	1619			
	1.6	3208	0.8	*	1066.50	1172	1607	1896	1619			
	1.2	3208	0.8	*	1362.13	1172	1607	1896	1619			
	1.0	3208	0.8	*	1620.65	1172	1607	1896	1619			
0.16	9.2	1099	4.2	III	185.11	2252	2698	2989	3372	SK 2382 - 63 S/4	79	194
	7.2	1398	3.0	III	236.11	2238	2698	2981	3372			
	6.2	1639	3.0	III	276.27	2224	2698	2974	3372			
	5.1	1960	2.5	III	330.45	2202	2698	2965	3372			
	4.3	2319	2.0	III	390.93	2172	2698	2955	3372			
	3.5	2862	1.6	II	482.56	2116	2698	2936	3372			
	2.7	3695	1.2	I	623.10	2003	2698	2904	3372			
	2.2	4526	0.9	*	763.41	1848	2698	2866	3372			
0.16	3.3	2027	2.3	III	514.51	2197	2698	2964	3372	SK 2282/02 - 63 S/4	81	262
	2.6	2613	1.8	II	662.92	2143	2698	2945	3372			
	2.1	3254	1.4	II	824.77	2067	2698	2921	3372			
	1.6	4200	1.1	I	1064.71	1916	2698	2882	3372			
	1.2	5615	0.8	*	1423.06	1241	2698	2697	3372			
	1.0	5753	0.8	*	1728.15	1128	2698	2672	3372			
0.16	4.2	2423	2.9	III	408.58	2700	3260	3240	4496	SK 3382 - 63 S/4	114	202
	3.5	2864	2.7	III	482.56	2675	3260	3232	4496			
	2.9	3465	2.6	III	584.13	2639	3260	3219	4496			
	2.3	4310	1.9	II	726.61	2580	3260	3197	4496			
	2.1	4796	1.9	II	808.42	2545	3260	3183	4496			
	1.9	5451	1.3	I	919.00	2491	3260	3163	4496			
	1.7	6066	1.1	I	1022.42	2440	3260	3142	4496			
0.16	1.6	4212	1.9	II	1067.99	2587	3260	3200	4496	SK 3282/12 - 63 S/4	118	262
	1.3	5265	1.5	II	1335.98	2506	3260	3169	4496			
	1.0	6689	1.2	I	1697.29	2381	3260	3118	4496			
0.16	2.4	2759	5.8	III	698.96	4604	4946	5403	6744	SK 4282/12 - 63 S/4	151	262
	1.9	3448	4.6	III	873.31	4578	4946	5396	6744			
	1.5	4381	3.6	III	1110.82	4539	4946	5386	6744			
	1.3	5299	3.0	III	1343.53	4499	4946	5375	6744			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
0.25	397	40	16.3	III	4.24	515	891	1124	1888	SK 0182NB - 63 L/4	18	174
	315	50	16.3	III	5.34	555	973	1124	1888			
	265	60	16.4	III	6.35	587	1029	1124	1888			
	232	68	14.3	III	7.26	611	1072	1124	1888			
	195	81	12.0	III	8.64	646	1133	1124	1888			
	177	89	10.9	III	9.49	666	1147	1124	1888			
	144	109	8.9	III	11.66	710	1147	1124	1888			
	121	130	7.5	III	13.84	748	1147	1124	1888			
	113	140	4.7	III	14.92	761	1147	1124	1888			
	102	155	5.7	III	16.53	790	1147	1124	1888			
	89	176	4.8	III	18.79	817	1147	1124	1888			
	75	210	4.6	III	22.35	861	1147	1124	1888			
	68	230	4.5	III	24.55	886	1147	1124	1888			
	58	273	3.6	III	29.13	931	1147	1124	1888			
	53	298	2.8	III	31.81	953	1147	1124	1888			
	48	326	2.8	III	34.80	980	1147	1124	1888			
	45	354	2.5	III	37.73	1001	1147	1124	1888			
	40	393	1.9	II	41.85	1027	1147	1124	1888			
34	465	1.9	II	49.65	1077	1147	1124	1888				
28	556	1.8	II	59.33	1124	1147	1124	1888				
0.25	42	378	3.9	III	40.38	1013	1124	1583	1124	SK 0282NB - 63 L/4	27	178
	38	415	3.5	III	44.22	1041	1124	1581	1124			
	33	484	2.7	III	51.64	1085	1124	1578	1124			
	30	530	2.7	III	56.55	1114	1124	1576	1124			
	25	619	2.0	III	65.99	1128	1124	1570	1124			
	21	745	1.5	II	79.40	1116	1124	1562	1124			
	20	804	1.5	II	85.72	1109	1124	1557	1124			
	16	967	1.2	I	103.12	1088	1124	1542	1124			
0.25	352	45	25.3	III	4.79	581	1147	1783	1619	SK 1282 - 63 L/4	40	182
	307	51	29.7	III	5.47	607	1231	1856	1619			
	262	60	26.6	III	6.43	639	1302	1946	1619			
	232	68	24.3	III	7.24	665	1355	2018	1619			
	205	77	18.5	III	8.21	692	1411	2092	1619			
	204	77	21.9	III	8.24	692	1411	2095	1619			
	183	86	19.5	III	9.18	717	1462	2163	1619			
	162	97	17.9	III	10.34	746	1520	2171	1619			
	143	110	16.4	III	11.76	776	1583	2171	1619			
	119	132	14.1	III	14.11	823	1607	2171	1619			
	98	161	12.3	III	17.21	876	1607	2171	1619			
	82	193	10.3	III	20.57	927	1607	2170	1619			
	67	237	8.4	III	25.22	987	1607	2170	1619			
	59	266	7.5	III	28.33	1023	1607	2170	1619			
	52	301	6.8	III	32.08	1062	1607	2169	1619			
	36	433	4.0	III	46.19	1179	1607	2167	1619			
	30	519	4.0	III	55.39	1245	1607	2165	1619			
	25	621	3.8	III	66.23	1310	1607	2162	1619			
	21	761	3.4	III	81.17	1388	1607	2157	1619			
	18	867	2.4	III	92.48	1437	1607	2152	1619			
15	1027	1.8	II	109.50	1502	1607	2145	1619				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

0.25 hp Gearmotors




Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.25	14	1107	3.0	III	118.16	1495	1754	1798	2360	SK 1382NB - 63 L/4	53	186
	12	1281	2.6	III	136.60	1480	1754	1798	2360			
	11	1484	2.2	III	158.12	1459	1754	1798	2360			
	8.2	1911	1.7	II	203.60	1405	1754	1798	2360			
	6.5	2414	1.4	II	257.32	1319	1754	1798	2360			
	5.6	2827	1.2	I	301.82	1227	1754	1798	2360			
	4.4	3572	0.9	*	381.45	893	1754	1761	2360			
0.25	7.3	1691	1.5	II	229.08	1477	1607	2099	1619	SK 1282/02 - 63 L/4	58	262
	5.9	2092	1.2	I	283.85	1420	1607	2059	1619			
	5.1	2416	1.1	I	328.02	1363	1607	2020	1619			
	4.1	2990	0.9	*	405.75	1233	1607	1935	1619			
0.25	20	772	6.4	III	82.22	2264	2698	2996	3372	SK 2382 - 63 L/4	80	194
	17	923	5.4	III	98.35	2259	2698	2993	3372			
	14	1092	4.2	III	116.35	2252	2698	2989	3372			
	13	1235	3.7	III	131.86	2246	2698	2986	3372			
	11	1407	3.3	III	149.96	2238	2698	2981	3372			
	9.1	1737	2.7	III	185.11	2218	2698	2972	3372			
	7.1	2211	1.9	II	236.11	2181	2698	2956	3372			
	6.1	2592	1.9	II	276.27	2145	2698	2944	3372			
	5.1	3099	1.6	II	330.45	2087	2698	2927	3372			
	4.3	3666	1.3	I	390.93	2007	2698	2905	3372			
3.5	4525	1.0	I	482.56	1848	2698	2866	3372				
2.7	5843	0.8	*	623.10	1047	2698	2655	3372				
0.25	10	1293	3.6	III	174.78	2243	2698	2984	3372	SK 2282/02 - 63 L/4	82	262
	7.8	1596	2.9	III	215.75	2227	2698	2976	3372			
	5.8	2122	2.2	III	287.51	2189	2698	2961	3372			
	4.7	2626	1.8	II	356.28	2142	2698	2944	3372			
	4.0	3124	1.5	II	423.50	2084	2698	2926	3372			
	3.3	3787	1.2	I	514.51	1988	2698	2900	3372			
	2.5	4881	0.9	*	662.92	1687	2698	2816	3372			
0.25	8.8	1789	4.3	III	190.69	2736	3260	3252	4496	SK 3382 - 63 L/4	115	202
	7.3	2165	4.1	III	230.83	2718	3260	3246	4496			
	5.9	2692	3.1	III	287.14	2687	3260	3236	4496			
	4.1	3830	1.8	II	408.58	2609	3260	3209	4496			
	3.5	4528	1.7	II	482.56	2561	3260	3190	4496			
	2.9	5478	1.6	II	584.13	2489	3260	3162	4496			
	2.3	6814	1.2	I	726.61	2369	3260	3113	4496			
	2.1	7583	1.2	I	808.42	2294	3260	3081	4496			
1.8	8618	0.8	*	919.00	2178	3260	3033	4496				
0.25	4.7	2639	3.0	III	358.12	2691	3260	3237	4496	SK 3282/12 - 63 L/4	120	262
	3.6	3398	2.3	III	461.81	2643	3260	3221	4496			
	3.2	3838	2.1	III	520.83	2614	3260	3210	4496			
	2.5	5045	1.6	II	686.08	2524	3260	3176	4496			
	2.0	6275	1.3	I	853.43	2419	3260	3134	4496			
	1.6	7868	1.0	I	1067.99	2262	3260	3068	4496			
1.3	9835	0.8	*	1335.98	2029	3260	2969	4496				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.25	4.9	2514	6.3	III	340.87	4613	4946	5405	6744	SK 4282/12 - 63 L/4	153	262
	4.1	3017	5.3	III	409.92	4594	4946	5401	6744			
	3.0	4110	3.9	III	558.54	4551	4946	5389	6744			
	2.4	5153	3.1	III	698.96	4506	4946	5377	6744			
	1.9	6442	2.5	III	873.31	4445	4946	5359	6744			
	1.5	8185	1.9	II	1110.82	4355	4946	5330	6744			
	1.3	9899	1.6	II	1343.53	4258	4946	5296	6744			
0.33	404	52	12.5	III	4.24	509	875	1124	1888	SK 0182NB - 71 S/4	21	174
	321	65	12.6	III	5.34	548	960	1124	1888			
	269	77	12.6	III	6.35	578	1015	1124	1888			
	236	88	11.0	III	7.26	602	1057	1124	1888			
	198	105	9.3	III	8.64	636	1116	1124	1888			
	180	115	8.4	III	9.49	655	1147	1124	1888			
	146	142	6.9	III	11.66	697	1147	1124	1888			
	124	168	5.8	III	13.84	734	1147	1124	1888			
	115	181	3.7	III	14.92	745	1147	1124	1888			
	103	201	4.4	III	16.53	773	1147	1124	1888			
	91	228	3.7	III	18.79	798	1147	1124	1888			
	77	272	3.6	III	22.35	839	1147	1124	1888			
	70	299	3.4	III	24.55	862	1147	1124	1888			
	59	354	2.7	III	29.13	905	1147	1124	1888			
	54	387	2.2	III	31.81	924	1147	1124	1888			
	49	423	2.2	III	34.80	949	1147	1124	1888			
	45	459	1.9	II	37.73	968	1147	1124	1888			
41	509	1.5	II	41.85	990	1147	1124	1888				
34	603	1.5	II	49.65	1034	1147	1124	1888				
29	721	1.3	I	59.33	1079	1147	1124	1888				
0.33	42	491	3.0	III	40.38	985	1124	1578	1124	SK 0282NB - 71 S/4	30	178
	39	538	2.7	III	44.22	1010	1124	1575	1124			
	33	628	2.1	III	51.64	1051	1124	1570	1124			
	30	688	2.1	III	56.55	1076	1124	1566	1124			
	26	803	1.5	II	65.99	1109	1124	1557	1124			
	22	966	1.2	I	79.40	1088	1124	1542	1124			
	20	1042	1.2	I	85.72	1076	1124	1534	1124			
	17	1254	0.9	*	103.12	1039	1124	1508	1124			
0.33	358	58	19.5	III	4.79	575	1131	1771	1619	SK 1282 - 71 S/4	43	182
	312	67	22.9	III	5.47	601	1212	1844	1619			
	266	78	20.5	III	6.43	632	1289	1933	1619			
	236	88	18.8	III	7.24	657	1340	2003	1619			
	209	99	14.2	III	8.21	684	1395	2077	1619			
	208	100	16.9	III	8.24	684	1395	2079	1619			
	187	111	15.0	III	9.18	708	1445	2147	1619			
	165	126	13.8	III	10.34	736	1502	2171	1619			
	146	143	12.6	III	11.76	766	1563	2171	1619			
	121	171	10.8	III	14.11	811	1607	2171	1619			
	99	209	9.5	III	17.21	863	1607	2170	1619			
	83	251	7.9	III	20.57	911	1607	2170	1619			
	68	307	6.5	III	25.22	969	1607	2169	1619			
	60	345	5.8	III	28.33	1003	1607	2168	1619			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)


0.33 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.33	53	390	5.2	III	32.08	1040	1607	2167	1619	SK 1282 - 71 S/4	43	182
	42	499	3.8	III	41.07	1111	1607	2165	1619			
	37	561	3.1	III	46.19	1148	1607	2163	1619			
	35	599	3.8	III	49.25	1172	1607	2162	1619			
	31	673	3.1	III	55.39	1210	1607	2160	1619			
	29	716	3.5	III	58.89	1231	1607	2158	1619			
	26	806	3.0	III	66.23	1270	1607	2155	1619			
	24	878	3.0	III	72.17	1301	1607	2152	1619			
	21	987	2.7	III	81.17	1340	1607	2147	1619			
	19	1124	1.8	II	92.48	1384	1607	2139	1619			
16	1331	1.4	II	109.50	1440	1607	2126	1619				
0.33	19	1081	3.0	III	88.94	1497	1754	1798	2360	SK 1382NB - 71 S/4	56	186
	17	1229	2.7	III	101.14	1485	1754	1798	2360			
	16	1290	2.5	III	106.08	1479	1754	1798	2360			
	14	1436	2.3	III	118.16	1465	1754	1798	2360			
	13	1661	2.0	III	136.60	1439	1754	1798	2360			
	11	1924	1.7	II	158.12	1403	1754	1798	2360			
	8.4	2478	1.3	I	203.60	1306	1754	1798	2360			
	6.6	3130	1.0	I	257.32	1145	1754	1798	2360			
5.7	3666	0.9	*	301.82	791	1754	1740	2360				
0.33	25	848	4.6	III	69.67	2261	2698	2995	3372	SK 2282 - 71 S/4	67	190
	21	1003	4.2	III	82.42	2256	2698	2991	3372			
	17	1228	3.2	III	100.98	2246	2698	2986	3372			
	16	1266	2.8	III	104.07	2245	2698	2985	3372			
	13	1550	2.2	III	127.51	2229	2698	2978	3372			
0.33	13	1602	2.9	III	131.86	2226	2698	2976	3372	SK 2382 - 71 S/4	83	194
	11	1825	2.5	III	149.96	2212	2698	2970	3372			
	9.2	2252	2.0	III	185.11	2178	2698	2957	3372			
	7.3	2867	1.5	II	236.11	2115	2698	2934	3372			
	6.2	3361	1.5	II	276.27	2052	2698	2916	3372			
	5.2	4019	1.2	I	330.45	1949	2698	2889	3372			
	4.4	4754	1.0	I	390.93	1748	2698	2834	3372			
	3.5	5868	0.8	*	482.56	1022	2698	2650	3372			
0.33	10	1788	2.6	III	174.78	2214	2698	2971	3372	SK 2282/02 - 71 S/4	85	262
	7.9	2207	2.1	III	215.75	2182	2698	2958	3372			
	5.9	2934	1.6	II	287.51	2107	2698	2933	3372			
	4.8	3631	1.3	I	356.28	2013	2698	2906	3372			
	4.0	4319	1.1	I	423.50	1893	2698	2876	3372			
	3.3	5236	0.9	*	514.51	1495	2698	2761	3372			
0.33	11	1963	3.6	III	161.46	2726	3260	3249	4496	SK 3382 - 71 S/4	118	202
	9.0	2320	3.3	III	190.69	2707	3260	3243	4496			
	7.4	2807	3.2	III	230.83	2681	3260	3233	4496			
	6.0	3492	2.4	III	287.14	2637	3260	3218	4496			
	4.2	4968	1.4	II	408.58	2523	3260	3177	4496			
	3.5	5872	1.3	I	482.56	2451	3260	3147	4496			
	2.9	7104	1.2	I	584.13	2340	3260	3101	4496			
	2.4	8837	0.9	*	726.61	2153	3260	3022	4496			
	2.1	9834	0.9	*	808.42	2033	3260	2970	4496			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
0.33	6.3	2755	2.9	III	270.39	2684	3260	3235	4496	SK 3282/12 - 71 S/4	122	262
	4.8	3648	2.2	III	358.12	2627	3260	3214	4496			
	3.7	4699	1.7	II	461.81	2551	3260	3186	4496			
	3.3	5307	1.5	II	520.83	2503	3260	3167	4496			
	2.5	6975	1.1	I	686.08	2353	3260	3107	4496			
	2.0	8676	0.9	*	853.43	2171	3260	3030	4496			
0.33	5.2	3975	4.2	III	326.81	4555	4946	5391	6744	SK 4382 - 71 S/4	166	210
	4.4	4757	3.7	III	390.76	4523	4946	5382	6744			
	3.8	5414	2.7	III	445.23	4492	4946	5373	6744			
	3.2	6480	2.7	III	532.44	4444	4946	5358	6744			
	2.6	7950	1.4	II	654.27	4366	4946	5333	6744			
	2.2	9515	1.4	II	782.32	4281	4946	5304	6744			
0.33	3.1	5683	2.8	III	558.54	4481	4946	5370	6744	SK 4282/12 - 71 S/4	155	262
	2.4	7126	2.2	III	698.96	4411	4946	5348	6744			
	2.0	8907	1.8	II	873.31	4315	4946	5316	6744			
	1.5	11317	1.4	II	1110.82	4170	4946	5264	6744			
	1.3	13687	1.2	I	1343.53	4008	4946	5203	6744			
	0.93	18643	0.9	*	1830.65	3603	4946	5043	6744			
0.33	3.1	5597	4.7	III	550.94	7096	7194	8403	8992	SK 5282/12 - 71 S/4	235	262
	2.5	7019	3.8	III	689.45	7065	7194	8389	8992			
	2.0	8773	3.0	III	862.46	7018	7194	8369	8992			
	1.6	11147	2.4	III	1095.71	6936	7194	8337	8992			
	1.3	13583	2.0	III	1334.62	6830	7194	8298	8992			
	0.95	18363	1.4	II	1805.75	6554	7194	8204	8992			
0.50	406	78	8.3	III	4.24	500	856	1124	1888	SK 0182NB - 71 L/4	23	174
	323	98	8.3	III	5.34	538	944	1124	1888			
	271	116	8.4	III	6.35	567	996	1124	1888			
	237	133	7.3	III	7.26	589	1035	1124	1888			
	199	158	6.2	III	8.64	620	1091	1124	1888			
	181	174	5.6	III	9.49	638	1123	1124	1888			
	147	214	4.6	III	11.66	677	1147	1124	1888			
	124	253	3.8	III	13.84	710	1147	1124	1888			
	115	273	2.4	III	14.92	717	1147	1124	1888			
	104	303	2.9	III	16.53	746	1147	1124	1888			
	92	344	2.4	III	18.79	765	1147	1124	1888			
	77	409	2.4	III	22.35	801	1147	1124	1888			
	70	450	2.3	III	24.55	821	1147	1124	1888			
	59	533	1.8	II	29.13	857	1147	1124	1888			
	54	583	1.4	II	31.81	871	1147	1124	1888			
	49	638	1.4	II	34.80	893	1147	1124	1888			
	46	691	1.3	I	37.73	906	1147	1124	1888			
	41	767	1.0	I	41.85	921	1147	1124	1888			
35	909	1.0	I	49.65	954	1147	1124	1888				
29	1087	0.9	*	59.33	984	1147	1124	1888				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

0.50 hp Gearmotors



Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.50	76	415	2.7	III	22.70	812	1124	1581	1124	SK 0282NB - 71 L/4	32	178
	66	476	2.4	III	25.96	841	1124	1579	1124			
	57	551	2.1	III	30.03	874	1124	1575	1124			
	50	626	2.2	III	34.16	896	1124	1570	1124			
	43	739	2.0	III	40.38	935	1124	1562	1124			
	39	810	1.8	II	44.22	956	1124	1556	1124			
	33	945	1.4	II	51.64	987	1124	1544	1124			
	30	1036	1.4	II	56.55	1007	1124	1535	1124			
	26	1209	1.0	I	65.99	1040	1124	1514	1124			
	22	1455	0.8	*	79.40	996	1124	1479	1124			
20	1570	0.8	*	85.72	968	1124	1460	1124				
0.50	360	88	12.9	III	4.79	569	1114	1763	1619	SK 1282 - 71 L/4	45	182
	314	100	15.2	III	5.47	593	1192	1835	1619			
	268	118	13.6	III	6.43	623	1273	1922	1619			
	237	133	12.5	III	7.24	647	1322	1992	1619			
	210	150	9.4	III	8.21	674	1377	2065	1619			
	209	151	11.2	III	8.24	673	1375	2067	1619			
	188	168	10.0	III	9.18	697	1424	2134	1619			
	166	190	9.2	III	10.34	723	1478	2170	1619			
	146	215	8.4	III	11.76	751	1537	2170	1619			
	122	258	7.2	III	14.11	794	1607	2170	1619			
	100	315	6.3	III	17.21	842	1607	2169	1619			
	83	378	5.3	III	20.57	888	1607	2168	1619			
	68	462	4.3	III	25.22	941	1607	2166	1619			
	61	519	3.8	III	28.33	972	1607	2165	1619			
	54	588	3.5	III	32.08	1005	1607	2163	1619			
	42	752	2.6	III	41.07	1064	1607	2157	1619			
	37	846	2.1	III	46.19	1095	1607	2153	1619			
	35	902	2.6	III	49.25	1117	1607	2151	1619			
	31	1014	2.1	III	55.39	1148	1607	2145	1619			
	29	1079	2.3	III	58.89	1166	1607	2142	1619			
26	1214	2.0	III	66.23	1197	1607	2134	1619				
24	1322	2.0	III	72.17	1223	1607	2127	1619				
21	1487	1.8	II	81.17	1253	1607	2115	1619				
19	1693	1.2	I	92.48	1285	1607	2098	1619				
16	2005	0.9	*	109.50	1323	1607	2068	1619				
0.50	25	1251	2.6	III	68.23	1483	1754	1798	2360	SK 1382NB - 71 L/4	58	186
	22	1444	2.3	III	78.99	1464	1754	1798	2360			
	19	1629	2.0	III	88.94	1443	1754	1798	2360			
	17	1851	1.8	II	101.14	1413	1754	1798	2360			
	16	1943	1.7	II	106.08	1400	1754	1798	2360			
	15	2163	1.5	II	118.16	1365	1754	1798	2360			
	13	2502	1.3	I	136.60	1301	1754	1798	2360			
	11	2899	1.1	I	158.12	1209	1754	1798	2360			
8.4	3732	0.9	*	203.60	709	1754	1725	2360				
0.50	25	1277	3.1	III	69.67	2244	2698	2984	3372	SK 2282 - 71 L/4	69	190
	21	1511	2.8	III	82.42	2232	2698	2979	3372			
	17	1850	2.1	III	100.98	2210	2698	2969	3372			
	17	1907	1.8	II	104.07	2206	2698	2967	3372			
	13	2335	1.4	II	127.51	2170	2698	2955	3372			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight $\frac{lb}{lb}$ [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.50	15	2133	2.2	III	116.35	2188	2698	2960	3372	SK 2382 - 71 L/4	84	194
	13	2413	1.9	II	131.86	2163	2698	2952	3372			
	11	2749	1.7	II	149.96	2129	2698	2940	3372			
	9.3	3393	1.4	II	185.11	2048	2698	2916	3372			
	7.3	4319	1.0	I	236.11	1893	2698	2873	3372			
	6.2	5063	1.0	I	276.27	1594	2698	2788	3372			
	5.2	6054	0.8	*	330.45	818	2698	2614	3372			
0.50	17	1848	3.9	III	100.88	2735	3260	3251	4496	SK 3282 - 71 L/4	102	198
	15	2056	3.3	III	112.23	2724	3260	3248	4496			
	19	1639	3.4	III	89.60	2742	3260	3254	4496			
	17	1904	3.4	III	104.05	2729	3260	3250	4496			
	14	2327	2.9	III	126.93	2705	3260	3242	4496			
	11	2957	2.4	III	161.46	2667	3260	3230	4496			
	9.0	3495	2.2	III	190.69	2634	3260	3218	4496			
	7.5	4228	2.1	III	230.83	2586	3260	3199	4496			
	6.0	5260	1.6	II	287.14	2507	3260	3169	4496			
	4.2	7483	0.9	*	408.58	2291	3260	3083	4496			
	3.6	8845	0.9	*	482.56	2145	3260	3021	4496			
2.9	10702	0.8	*	584.13	1911	3260	2919	4496				
0.50	10	2939	2.7	III	179.57	2670	3260	3230	4496	SK 3282/12 - 71 L/4	124	262
	7.9	3556	2.2	III	217.37	2633	3260	3217	4496			
	6.4	4424	1.8	II	270.39	2572	3260	3194	4496			
	4.8	5858	1.4	II	358.12	2456	3260	3149	4496			
	3.7	7545	1.1	I	461.81	2296	3260	3083	4496			
	3.3	8521	0.9	*	520.83	2189	3260	3038	4496			
0.50	6.3	4992	2.8	III	272.54	4506	4946	5378	6744	SK 4382 - 71 L/4	168	210
	5.3	5988	2.8	III	326.81	4465	4946	5365	6744			
	4.4	7166	2.5	III	390.76	4409	4946	5347	6744			
	3.9	8156	1.8	II	445.23	4354	4946	5330	6744			
	3.2	9761	1.8	II	532.44	4266	4946	5299	6744			
	2.6	11976	0.9	*	654.27	4123	4946	5248	6744			
	2.2	14332	0.9	*	782.32	3961	4946	5185	6744			
0.50	5.0	5581	2.9	III	340.87	4486	4946	5371	6744	SK 4282/12 - 71 L/4	157	262
	4.2	6700	2.4	III	409.92	4432	4946	5355	6744			
	3.1	9125	1.7	II	558.54	4303	4946	5312	6744			
	2.5	11442	1.4	II	698.96	4162	4946	5261	6744			
	2.0	14303	1.1	I	873.31	3963	4946	5186	6744			
	1.5	18173	0.9	*	1110.82	3645	4946	5060	6744			
0.50	3.8	7330	3.6	III	448.15	7058	7194	8386	8992	SK 5282/12 - 71 L/4	237	262
	3.1	8988	3.0	III	550.94	7011	7194	8366	8992			
	2.5	11270	2.4	III	689.45	6931	7194	8335	8992			
	2.0	14088	1.9	II	862.46	6805	7194	8289	8992			
	1.6	17900	1.5	II	1095.71	6585	7194	8214	8992			
	1.3	21810	1.2	I	1334.62	6293	7194	8121	8992			
	1.0	29487	0.9	*	1805.75	5485	7194	7890	8992			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)


0.75 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.75	404	117	5.5	III	4.24	490	835	1124	1888	SK 0182NB - 80 S/4	27	174
	321	147	5.5	III	5.34	525	924	1124	1888			
	269	175	5.5	III	6.35	552	973	1124	1888			
	236	201	4.9	III	7.26	572	1007	1124	1888			
	198	239	4.1	III	8.64	600	1059	1124	1888			
	180	262	3.7	III	9.49	616	1088	1124	1888			
	146	323	3.0	III	11.66	650	1147	1124	1888			
	124	382	2.5	III	13.84	679	1147	1124	1888			
	115	412	1.6	II	14.92	679	1147	1124	1888			
	103	457	1.9	II	16.53	708	1147	1124	1888			
	91	519	1.6	II	18.79	719	1147	1124	1888			
	77	617	1.6	II	22.35	748	1147	1124	1888			
	70	679	1.5	II	24.55	763	1147	1124	1888			
	59	805	1.2	I	29.13	789	1147	1124	1888			
	54	880	1.0	I	31.81	795	1147	1124	1888			
49	962	0.9	*	34.80	813	1147	1124	1888				
45	1042	0.8	*	37.73	818	1147	1124	1888				
0.75	103	458	2.7	III	16.58	716	1124	1579	1124	SK 0282NB - 80 S/4	35	178
	97	487	2.3	III	17.61	728	1124	1578	1124			
	86	551	2.1	III	19.95	750	1124	1575	1124			
	79	596	2.1	III	21.57	763	1124	1572	1124			
	75	627	1.8	II	22.70	774	1124	1570	1124			
	66	718	1.6	II	25.96	798	1124	1564	1124			
	57	832	1.4	II	30.03	823	1124	1555	1124			
	50	944	1.4	II	34.16	835	1124	1544	1124			
	42	1115	1.3	I	40.38	864	1124	1526	1124			
	39	1222	1.2	I	44.22	879	1124	1512	1124			
	33	1426	0.9	*	51.64	896	1124	1483	1124			
	30	1563	0.9	*	56.55	908	1124	1461	1124			
	0.75	358	132	8.6	III	4.79	561	1098	1758			
312		151	10.1	III	5.47	585	1172	1829	1619			
266		177	9.0	III	6.43	613	1255	1915	1619			
236		200	8.3	III	7.24	636	1301	1983	1619			
209		226	6.3	III	8.21	662	1356	2057	1619			
208		227	7.4	III	8.24	660	1351	2057	1619			
187		253	6.6	III	9.18	683	1400	2123	1619			
165		286	6.1	III	10.34	707	1451	2169	1619			
146		325	5.6	III	11.76	733	1505	2169	1619			
121		389	4.8	III	14.11	773	1589	2167	1619			
99		476	4.2	III	17.21	816	1607	2166	1619			
83		570	3.5	III	20.57	857	1607	2163	1619			
68		698	2.9	III	25.22	903	1607	2159	1619			
60		784	2.5	III	28.33	929	1607	2156	1619			
53		887	2.3	III	32.08	956	1607	2152	1619			
42		1134	1.7	II	41.07	998	1607	2139	1619			
37		1276	1.4	II	46.19	1020	1607	2130	1619			
35		1361	1.7	II	49.25	1040	1607	2124	1619			
31		1531	1.4	II	55.39	1061	1607	2112	1619			
29		1628	1.5	II	58.89	1075	1607	2104	1619			
26		1832	1.3	I	66.23	1094	1607	2086	1619			
24		1995	1.3	I	72.17	1112	1607	2069	1619			
21		2244	1.2	I	81.17	1128	1607	2041	1619			
19	2555	0.8	*	92.48	1142	1607	2001	1619				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.75	66	719	3.3	III	26.01	1271	1754	1798	2360	SK 1382NB - 80 S/4	62	186
	58	821	3.0	III	29.79	1313	1754	1798	2360			
	48	987	2.7	III	35.75	1370	1754	1798	2360			
	44	1073	2.7	III	38.77	1395	1754	1798	2360			
	39	1225	2.4	III	44.40	1434	1754	1798	2360			
	32	1473	2.1	III	53.28	1461	1754	1798	2360			
	28	1661	2.0	III	60.00	1439	1754	1798	2360			
	25	1887	1.7	II	68.23	1408	1754	1798	2360			
	22	2179	1.5	II	78.99	1362	1754	1798	2360			
	19	2458	1.3	I	88.94	1310	1754	1798	2360			
	17	2792	1.2	I	101.14	1235	1754	1798	2360			
	16	2931	1.1	I	106.08	1200	1754	1798	2360			
	14	3264	1.0	I	118.16	1104	1754	1798	2360			
	13	3774	0.9	*	136.60	651	1754	1715	2360			
0.75	46	1028	4.0	III	37.18	2003	2698	2991	3372	SK 2282 - 80 S/4	73	190
	38	1248	3.2	III	45.11	2110	2698	2985	3372			
	32	1492	3.0	III	53.96	2219	2698	2979	3372			
	27	1765	2.6	III	63.83	2216	2698	2971	3372			
	25	1927	2.0	III	69.67	2204	2698	2966	3372			
	21	2279	1.9	II	82.42	2175	2698	2956	3372			
	17	2791	1.4	II	100.98	2124	2698	2939	3372			
	16	2877	1.2	I	104.07	2114	2698	2935	3372			
	13	3523	1.0	I	127.51	2029	2698	2912	3372			
0.75	21	2275	2.2	III	82.22	2176	2698	2955	3372	SK 2382 - 80 S/4	88	194
	17	2720	1.8	II	98.35	2132	2698	2941	3372			
	15	3218	1.4	II	116.35	2072	2698	2923	3372			
	13	3640	1.3	I	131.86	2011	2698	2906	3372			
	11	4147	1.1	I	149.96	1926	2698	2884	3372			
	9.2	5119	0.9	*	185.11	1563	2698	2779	3372			
0.75	24	1949	2.6	III	70.56	2675	3260	3249	4496	SK 3282 - 80 S/4	106	198
	21	2204	3.4	III	79.76	2715	3260	3245	4496			
	19	2453	3.4	III	88.74	2702	3260	3241	4496			
	17	2788	2.6	III	100.88	2682	3260	3234	4496			
	15	3102	2.2	III	112.23	2664	3260	3227	4496			
	19	2473	2.2	III	89.60	2695	3260	3239	4496			
	16	2873	2.3	III	104.05	2672	3260	3231	4496			
	13	3511	2.0	III	126.93	2631	3260	3217	4496			
	11	4461	1.6	II	161.46	2562	3260	3192	4496			
	9.0	5273	1.5	II	190.69	2502	3260	3168	4496			
	7.4	6380	1.4	II	230.83	2410	3260	3130	4496			
6.0	7936	1.0	I	287.14	2254	3260	3065	4496				
0.75	12	3630	2.2	III	141.49	2628	3260	3215	4496	SK 3282/12 - 80 S/4	128	262
	10	4612	1.7	II	179.57	2554	3260	3188	4496			
	7.9	5581	1.4	II	217.37	2480	3260	3158	4496			
	6.3	6942	1.1	I	270.39	2356	3260	3108	4496			
	4.8	9193	0.9	*	358.12	2110	3260	3004	4496			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

0.75 hp Gearmotors




Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
0.75	14	3276	5.4	III	118.38	4584	4946	5398	6744	SK 4382 - 80 S/4	172	210
	12	3887	4.6	III	140.60	4560	4946	5392	6744			
	11	4424	3.3	III	160.20	4536	4946	5385	6744			
	8.9	5294	3.3	III	191.57	4499	4946	5375	6744			
	8.1	5834	2.5	III	211.09	4467	4946	5366	6744			
	6.8	6997	2.5	III	253.12	4415	4946	5350	6744			
	6.3	7532	1.8	II	272.54	4380	4946	5340	6744			
	5.6	8374	2.2	III	302.65	4345	4946	5326	6744			
	5.2	9034	1.9	II	326.81	4305	4946	5313	6744			
	5.0	9531	1.5	II	344.84	4277	4946	5303	6744			
	4.4	10812	1.6	II	390.76	4202	4946	5276	6744			
	4.1	11406	1.5	II	412.38	4164	4946	5262	6744			
	3.8	12305	1.2	I	445.23	4101	4946	5239	6744			
	3.2	14727	1.2	I	532.44	3931	4946	5173	6744			
2.8	16748	0.8	*	605.88	3769	4946	5110	6744				
0.75	7.3	6021	2.6	III	234.38	4466	4946	5365	6744	SK 4282/12 - 80 S/4	161	262
	5.7	7755	2.1	III	302.24	4378	4946	5337	6744			
	5.0	8758	1.8	II	340.87	4324	4946	5319	6744			
	4.2	10513	1.5	II	409.92	4221	4946	5282	6744			
	3.1	14320	1.1	I	558.54	3962	4946	5185	6744			
	2.4	17955	0.9	*	698.96	3665	4946	5068	6744			
0.75	6.3	7474	3.2	III	269.99	7054	7194	8383	8992	SK 5382 - 80 S/4	260	218
	5.2	9165	3.1	III	331.48	7006	7194	8364	8992			
	4.7	9997	2.5	III	361.69	6978	7194	8351	8992			
	4.0	11830	2.4	III	427.79	6905	7194	8325	8992			
	3.3	14506	2.0	III	525.20	6784	7194	8282	8992			
	3.0	15774	1.6	II	570.18	6712	7194	8256	8992			
	2.4	19341	1.5	II	700.03	6486	7194	8182	8992			
	1.8	25889	0.9	*	936.45	5908	7194	8001	8992			
0.75	3.8	11502	2.3	III	448.15	6922	7194	8332	8992	SK 5282/12 - 80 S/4	240	262
	3.1	14104	1.9	II	550.94	6804	7194	8289	8992			
	2.5	17685	1.5	II	689.45	6599	7194	8219	8992			
	2.0	22107	1.2	I	862.46	6268	7194	8113	8992			
	1.6	28089	0.9	*	1095.71	5660	7194	7937	8992			
	1.3	34225	0.8	*	1334.62	4773	7194	7714	8992			
0.75	3.9	11150	4.3	III	435.29	9426	10454	12387	13489	SK 6382/22 - 80 S/4	439	262
	3.0	14635	3.3	III	569.11	9329	10454	12348	13489			
	2.7	16358	2.9	III	637.53	9271	10454	12326	13489			
	2.1	21074	2.3	III	818.71	9076	10454	12259	13489			
	1.5	28353	1.7	II	1104.39	8667	10454	12131	13489			
	1.4	32358	1.5	II	1259.27	8379	10454	12049	13489			
0.75	2.4	18230	3.4	III	714.31	11923	13039	14270	17985	SK 7382/22 - 80 S/4	600	262
	1.8	23927	2.6	III	933.91	11728	13039	14206	17985			
	1.6	26744	2.3	III	1046.18	11623	13039	14171	17985			
	1.3	34455	1.8	II	1343.50	11311	13039	14057	17985			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)




Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
0.75	1.9	22818	4.7	III	891.21	16558	16411	19578	22481	SK 8382/32 - 80 S/4	900	263
	1.6	27253	3.9	III	1064.91	16440	16411	19546	22481			
	1.3	34981	3.1	III	1366.83	16218	16411	19482	22481			
	1.0	43443	2.5	III	1697.85	15949	16411	19398	22481			
1.0	408	154	4.2	III	4.24	476	804	1124	1888	SK 0182NB - 80 LP/4	31	174
	324	194	4.2	III	5.34	509	897	1124	1888			
	273	231	4.2	III	6.35	534	942	1124	1888			
	239	264	3.8	III	7.26	550	972	1124	1888			
	200	314	3.2	III	8.64	576	1019	1124	1888			
	182	346	2.8	III	9.49	590	1045	1124	1888			
	148	425	2.3	III	11.66	618	1096	1124	1888			
	125	504	1.9	II	13.84	643	1143	1124	1888			
	116	543	1.2	I	14.92	638	1135	1124	1888			
	105	602	1.6	II	16.53	667	1147	1124	1888			
	92	684	1.2	I	18.79	669	1147	1124	1888			
	77	814	1.2	I	22.35	691	1147	1124	1888			
	70	895	1.1	I	24.55	702	1147	1124	1888			
	59	1060	0.9	*	29.13	720	1147	1124	1888			
1.0	158	400	3.4	III	10.98	616	1124	1582	1124	SK 0282NB - 80 LP/4	40	178
	153	411	3.0	III	11.25	623	1124	1582	1124			
	134	472	3.0	III	12.98	643	1124	1579	1124			
	122	517	2.8	III	14.21	658	1124	1577	1124			
	104	604	2.1	III	16.58	683	1124	1572	1124			
	98	642	1.8	II	17.61	694	1124	1569	1124			
	87	726	1.6	II	19.95	712	1124	1564	1124			
	80	786	1.6	II	21.57	722	1124	1559	1124			
	76	826	1.4	II	22.70	731	1124	1556	1124			
	67	946	1.2	I	25.96	750	1124	1545	1124			
	58	1096	1.0	I	30.03	768	1124	1529	1124			
	51	1244	1.1	I	34.16	771	1124	1511	1124			
	43	1470	1.0	I	40.38	790	1124	1479	1124			
	39	1611	0.9	*	44.22	799	1124	1456	1124			
1.0	362	174	6.5	III	4.79	551	1073	1745	1619	SK 1282 - 80 LP/4	53	182
	316	199	7.6	III	5.47	573	1143	1814	1619			
	270	234	6.9	III	6.43	600	1231	1898	1619			
	239	264	6.3	III	7.24	621	1275	1965	1619			
	211	298	4.8	III	8.21	647	1328	2038	1619			
	210	300	5.6	III	8.24	643	1321	2037	1619			
	189	334	5.0	III	9.18	666	1368	2102	1619			
	167	377	4.6	III	10.34	688	1416	2168	1619			
	147	428	4.2	III	11.76	712	1466	2167	1619			
	123	513	3.6	III	14.11	748	1544	2165	1619			
	100	627	3.2	III	17.21	787	1607	2161	1619			
	84	751	2.7	III	20.57	822	1607	2157	1619			
	69	920	2.2	III	25.22	862	1607	2150	1619			
	61	1033	1.9	II	28.33	883	1607	2144	1619			
	54	1168	1.7	II	32.08	904	1607	2137	1619			
	42	1495	1.3	I	41.07	928	1607	2115	1619			
	37	1682	1.0	I	46.19	943	1607	2099	1619			
	35	1793	1.3	I	49.25	959	1607	2089	1619			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)


1.0 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
1.0	31	2017	1.0	I	55.39	971	1607	2067	1619	SK 1282 - 80 LP/4	53	182
	29	2146	1.2	I	58.89	980	1607	2053	1619			
	26	2414	1.0	I	66.23	988	1607	2020	1619			
	24	2629	1.0	I	72.17	999	1607	1991	1619			
	21	2957	0.9	*	81.17	1001	1607	1940	1619			
1.0	66	948	2.5	III	26.01	1210	1754	1798	2360	SK 1382NB - 80 LP/4	67	186
	58	1082	2.3	III	29.79	1244	1754	1798	2360			
	48	1301	2.0	III	35.75	1289	1754	1798	2360			
	45	1415	2.0	III	38.77	1308	1754	1798	2360			
	39	1615	1.8	III	44.40	1336	1754	1798	2360			
	32	1941	1.6	II	53.28	1370	1754	1798	2360			
	29	2189	1.5	II	60.00	1365	1754	1798	2360			
	25	2487	1.3	I	68.23	1310	1754	1798	2360			
	22	2872	1.1	I	78.99	1224	1754	1798	2360			
	19	3239	1.0	I	88.94	1123	1754	1798	2360			
	17	3680	0.9	*	101.14	823	1754	1747	2360			
	16	3863	0.8	*	106.08	583	1754	1705	2360			
1.0	47	1355	3.0	III	37.18	1948	2698	2983	3372	SK 2282 - 80 LP/4	78	190
	38	1645	2.4	III	45.11	2042	2698	2974	3372			
	32	1967	2.3	III	53.96	2141	2698	2965	3372			
	27	2326	2.0	III	63.83	2171	2698	2954	3372			
	25	2539	1.5	II	69.67	2151	2698	2947	3372			
	21	3004	1.4	II	82.42	2099	2698	2931	3372			
17	3679	1.1	I	100.98	2005	2698	2905	3372				
1.0	21	2998	1.7	II	82.22	2100	2698	2930	3372	SK 2382 - 80 LP/4	93	194
	18	3585	1.4	II	98.35	2020	2698	2908	3372			
	15	4241	1.1	I	116.35	1908	2698	2880	3372			
	13	4797	1.0	I	131.86	1727	2698	2828	3372			
	12	5466	0.8	*	149.96	1349	2698	2723	3372			
1.0	36	1749	2.8	III	48.04	2333	3260	3252	4496	SK 3282 - 80 LP/4	111	198
	31	2031	2.8	III	55.79	2433	3260	3247	4496			
	26	2401	2.8	III	65.89	2545	3260	3241	4496			
	25	2569	1.9	II	70.56	2582	3260	3237	4496			
	22	2905	2.6	III	79.76	2674	3260	3231	4496			
	19	3233	2.6	III	88.74	2655	3260	3225	4496			
	17	3674	1.9	II	100.88	2625	3260	3214	4496			
	15	4089	1.7	II	112.23	2598	3260	3203	4496			
	19	3259	1.7	II	89.60	2645	3260	3222	4496			
	17	3786	1.7	II	104.05	2612	3260	3210	4496			
	14	4627	1.5	II	126.93	2550	3260	3187	4496			
	11	5879	1.2	I	161.46	2446	3260	3146	4496			
	9.1	6949	1.1	I	190.69	2351	3260	3107	4496			
	7.5	8408	1.1	I	230.83	2202	3260	3043	4496			
6.0	10459	0.8	*	287.14	1945	3260	2934	4496				
1.0	20	3024	2.6	III	87.73	2667	3260	3229	4496	SK 3282/12 - 80 LP/4	133	262
	15	3931	2.0	III	114.23	2607	3260	3207	4496			
	12	4876	1.6	II	141.49	2538	3260	3181	4496			
	10	6196	1.3	I	179.57	2422	3260	3136	4496			
	8.0	7496	1.1	I	217.37	2301	3260	3085	4496			
	6.4	9325	0.9	*	270.39	2094	3260	2997	4496			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
1.0	26	2432	4.4	III	66.65	3830	4946	5406	6744	SK 4382 - 80 LP/4	177	210
	20	3161	5.5	III	86.83	4126	4946	5399	6744			
	17	3784	4.7	III	103.82	4339	4946	5393	6744			
	15	4318	4.1	III	118.38	4495	4946	5387	6744			
	12	5122	3.5	III	140.60	4507	4946	5377	6744			
	11	5830	2.5	III	160.20	4473	4946	5367	6744			
	9.0	6977	2.5	III	191.57	4419	4946	5350	6744			
	8.2	7689	1.9	II	211.09	4372	4946	5337	6744			
	6.8	9222	1.9	II	253.12	4295	4946	5310	6744			
	6.3	9927	1.4	II	272.54	4244	4946	5293	6744			
	5.7	11036	1.7	II	302.65	4188	4946	5271	6744			
	5.3	11907	1.4	II	326.81	4128	4946	5249	6744			
	5.0	12561	1.2	I	344.84	4084	4946	5233	6744			
	4.4	14250	1.2	I	390.76	3967	4946	5187	6744			
	4.2	15032	1.2	I	412.38	3907	4946	5164	6744			
3.9	16218	0.9	*	445.23	3808	4946	5126	6744				
3.2	19409	0.9	*	532.44	3531	4946	5014	6744				
1.0	10	6108	2.6	III	176.96	4462	4946	5363	6744	SK 4282/12 - 80 LP/4	166	262
	7.4	8088	2.0	III	234.38	4361	4946	5331	6744			
	5.7	10417	1.5	II	302.24	4227	4946	5285	6744			
	5.1	11765	1.4	II	340.87	4141	4946	5253	6744			
	4.2	14122	1.1	I	409.92	3976	4946	5191	6744			
	3.1	19235	0.8	*	558.54	3548	4946	5021	6744			
1.0	8.5	7388	3.8	III	202.57	7056	7194	8384	8992	SK 5382 - 80 LP/4	265	218
	7.0	9059	3.1	III	248.70	7009	7194	8366	8992			
	6.4	9851	2.4	III	269.99	6983	7194	8354	8992			
	5.2	12078	2.3	III	331.48	6898	7194	8323	8992			
	4.8	13175	1.9	II	361.69	6835	7194	8302	8992			
	4.0	15591	1.8	II	427.79	6721	7194	8260	8992			
	3.3	19117	1.5	II	525.20	6502	7194	8187	8992			
	3.0	20789	1.2	I	570.18	6377	7194	8144	8992			
2.5	25490	1.1	I	700.03	5950	7194	8018	8992				
1.0	6.3	9405	2.8	III	273.15	6998	7194	8361	8992	SK 5282/12 - 80 LP/4	245	262
	5.1	11667	2.3	III	338.35	6915	7194	8329	8992			
	3.9	15451	1.7	II	448.15	6733	7194	8264	8992			
	3.1	18946	1.4	II	550.94	6514	7194	8191	8992			
	2.5	23757	1.1	I	689.45	6121	7194	8068	8992			
	2.0	29696	0.9	*	862.46	5458	7194	7883	8992			
1.0	5.8	10347	4.6	III	298.46	9444	10454	12395	13489	SK 6382/22 - 80 LP/4	444	262
	5.0	12035	4.0	III	347.33	9404	10454	12377	13489			
	4.0	14978	3.2	III	435.29	9318	10454	12344	13489			
	3.0	19659	2.4	III	569.11	9140	10454	12280	13489			
	2.7	21973	2.2	III	637.53	9033	10454	12245	13489			
	2.1	28309	1.7	II	818.71	8670	10454	12132	13489			
	1.6	38087	1.3	I	1104.39	7877	10454	11916	13489			
	1.4	43467	1.1	I	1259.27	7293	10454	11774	13489			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



1.0 hp, 1.5 Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
1.0	4.6	12971	4.8	III	376.26	12085	13039	14319	17985	SK 7382/22 - 80 LP/4	605	262
	4.0	14991	4.2	III	435.50	12025	13039	14302	17985			
	3.0	19676	3.2	III	569.97	11875	13039	14255	17985			
	2.4	24488	2.6	III	714.31	11706	13039	14200	17985			
	1.9	32141	1.9	II	933.91	11409	13039	14093	17985			
	1.7	35925	1.7	II	1046.18	11248	13039	14034	17985			
	1.3	46283	1.4	II	1343.50	10757	13039	13844	17985			
	1.0	62269	1.0	I	1812.31	9845	13039	13472	17985			
1.0	1.6	36608	2.9	III	1064.91	16169	16411	19467	22481	SK 8382/32 - 80 LP/4	904	263
	1.3	46990	2.3	III	1366.83	15829	16411	19358	22481			
	1.0	58357	1.8	II	1697.85	15412	16411	19215	22481			
1.5	431	219	4.2	III	4.03	452	783	1426	1124	SK 0282NB - 90 SP/4	51	178
	373	254	3.8	III	4.66	469	830	1485	1124			
	335	282	3.6	III	5.17	485	873	1531	1124			
	290	326	3.3	III	5.99	503	928	1585	1124			
	269	351	3.1	III	6.44	514	963	1584	1124			
	233	406	2.9	III	7.45	532	1003	1582	1124			
	197	479	2.5	III	8.80	554	1047	1578	1124			
	180	525	2.4	III	9.64	566	1071	1576	1124			
	159	596	2.3	III	10.98	578	1095	1572	1124			
	154	613	2.0	III	11.25	585	1110	1571	1124			
	134	704	2.0	III	12.98	599	1124	1565	1124			
	123	771	1.9	II	14.21	610	1124	1560	1124			
	105	900	1.4	II	16.58	627	1124	1548	1124			
	99	957	1.2	I	17.61	635	1124	1543	1124			
87	1083	1.1	I	19.95	645	1124	1529	1124				
1.5	364	260	4.4	III	4.79	534	1033	1726	1619	SK 1282 - 90 SP/4	64	182
	318	297	5.1	III	5.47	554	1096	1793	1619			
	271	349	4.6	III	6.43	577	1176	1874	1619			
	240	394	4.2	III	7.24	595	1228	1938	1619			
	213	444	3.2	III	8.21	620	1280	2010	1619			
	211	447	3.8	III	8.24	614	1269	2007	1619			
	190	498	3.4	III	9.18	635	1313	2071	1619			
	168	562	3.1	III	10.34	653	1353	2140	1619			
	148	638	2.8	III	11.76	672	1395	2161	1619			
	124	765	2.4	III	14.11	703	1463	2157	1619			
	101	935	2.1	III	17.21	731	1528	2149	1619			
	84	1120	1.8	II	20.57	756	1587	2140	1619			
	69	1371	1.5	II	25.22	783	1607	2124	1619			
	61	1540	1.3	I	28.33	795	1607	2111	1619			
	54	1743	1.2	I	32.08	805	1607	2094	1619			
	42	2230	0.9	*	41.07	794	1607	2043	1619			
	35	2674	0.9	*	49.25	804	1607	1984	1619			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
1.5	107	880	2.3	III	16.28	1018	1581	1798	2360	SK 1382NB - 90 SP/4	77	186
	93	1019	2.1	III	18.75	1047	1632	1798	2360			
	72	1313	1.9	II	24.26	1092	1713	1798	2360			
	67	1414	1.7	II	26.01	1104	1735	1798	2360			
	59	1614	1.5	II	29.79	1123	1754	1798	2360			
	49	1940	1.4	II	35.75	1143	1754	1798	2360			
	45	2110	1.4	II	38.77	1149	1754	1798	2360			
	39	2409	1.2	I	44.40	1154	1754	1798	2360			
	33	2895	1.1	I	53.28	1151	1754	1798	2360			
	29	3265	1.0	I	60.00	1103	1754	1798	2360			
25	3709	0.9	*	68.23	739	1754	1730	2360				
1.5	105	900	4.6	III	16.53	1502	2698	2940	3372	SK 2282 - 90 SP/4	88	190
	94	1006	4.3	III	18.51	1549	2698	2991	3372			
	79	1189	3.6	III	21.90	1622	2698	2987	3372			
	73	1303	3.0	III	23.96	1664	2698	2984	3372			
	70	1357	3.2	III	24.97	1678	2698	2983	3372			
	65	1457	2.7	III	26.83	1712	2698	2980	3372			
	59	1610	2.7	III	29.65	1752	2698	2976	3372			
	56	1695	2.3	III	31.23	1761	2698	2972	3372			
	48	1987	2.2	III	36.54	1832	2698	2964	3372			
	47	2020	2.0	III	37.18	1848	2698	2964	3372			
	40	2376	2.1	III	43.71	1912	2698	2952	3372			
	39	2453	1.6	II	45.11	1918	2698	2949	3372			
	34	2811	1.6	II	51.71	1984	2698	2938	3372			
	32	2933	1.5	II	53.96	1996	2698	2933	3372			
	27	3470	1.3	I	63.83	2037	2698	2913	3372			
25	3787	1.0	I	69.67	1988	2698	2899	3372				
21	4480	0.9	*	82.42	1861	2698	2869	3372				
1.5	21	4471	1.1	I	82.22	1863	2698	2867	3372	SK 2382 - 90 SP/4	104	194
	18	5346	0.9	*	98.35	1428	2698	2743	3372			
1.5	46	2053	3.6	III	37.77	2107	3260	3248	4496	SK 3282 - 90 SP/4	122	198
	45	2097	2.7	III	38.62	2102	3260	3246	4496			
	41	2285	3.6	III	42.02	2166	3260	3244	4496			
	39	2436	2.7	III	44.85	2185	3260	3240	4496			
	36	2608	1.9	II	48.04	2213	3260	3236	4496			
	33	2879	2.6	III	52.97	2278	3260	3232	4496			
	31	3030	1.9	II	55.79	2296	3260	3228	4496			
	27	3483	2.6	III	64.12	2382	3260	3219	4496			
	26	3581	1.9	II	65.89	2387	3260	3216	4496			
	25	3832	1.3	I	70.56	2410	3260	3209	4496			
	22	4333	1.7	II	79.76	2488	3260	3197	4496			
	20	4821	1.7	II	88.74	2542	3260	3183	4496			
1.5	19	4860	1.1	I	89.60	2502	3260	3179	4496	SK 3382 - 90 SP/4	139	202
	17	5646	1.2	I	104.05	2466	3260	3154	4496			
	14	6901	1.0	I	126.93	2350	3260	3108	4496			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



1.5 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
1.5	20	4595	1.7	II	87.73	2553	3260	3189	4496	SK 3282/12 - 90 SP/4	144	262
	15	5973	1.3	I	114.23	2446	3260	3145	4496			
	12	7409	1.1	I	141.49	2310	3260	3088	4496			
	10	9415	0.8	*	179.57	2076	3260	2991	4496			
1.5	19	4918	2.9	III	90.52	4009	4946	5380	6744	SK 4282 - 90 SP/4	155	206
	16	6016	2.4	III	110.78	4218	4946	5366	6744			
	11	8443	1.3	I	155.40	4351	4946	5326	6744			
1.5	26	3627	2.9	III	66.65	3694	4946	5394	6744	SK 4382 - 90 SP/4	188	210
	20	4715	3.7	III	86.83	3950	4946	5382	6744			
	17	5643	3.1	III	103.82	4131	4946	5370	6744			
	15	6440	2.7	III	118.38	4259	4946	5359	6744			
	12	7639	2.3	III	140.60	4385	4946	5339	6744			
	11	8695	1.7	II	160.20	4325	4946	5320	6744			
	9.1	10405	1.7	II	191.57	4227	4946	5285	6744			
	8.2	11467	1.3	I	211.09	4146	4946	5258	6744			
	6.9	13753	1.3	I	253.12	3999	4946	5201	6744			
	6.4	14805	0.9	*	272.54	3906	4946	5168	6744			
	5.7	16460	1.1	I	302.65	3793	4946	5119	6744			
	5.3	17757	0.9	*	326.81	3677	4946	5074	6744			
	5.0	18733	0.8	*	344.84	3589	4946	5039	6744			
4.4	21252	0.8	*	390.76	3196	4946	4940	6744				
1.5	14	6676	2.4	III	127.52	4347	4946	5355	6744	SK 4282/12 - 90 SP/4	177	262
	11	7990	2.0	III	152.47	4366	4946	5333	6744			
	10	9281	1.7	II	176.96	4294	4946	5309	6744			
	7.4	12291	1.3	I	234.38	4106	4946	5240	6744			
	5.8	15829	1.0	I	302.24	3844	4946	5140	6744			
	5.1	17878	0.9	*	340.87	3672	4946	5071	6744			
1.5	17	5441	3.6	III	100.19	5938	7194	8405	8992	SK 5282 - 90 SP/4	234	214
	13	7283	3.2	III	134.03	6412	7194	8385	8992			
1.5	15	6372	3.8	III	117.37	6176	7194	8395	8992	SK 5382 - 90 SP/4	276	218
	13	7540	3.8	III	138.82	6476	7194	8383	8992			
	11	8359	3.4	III	153.92	6654	7194	8373	8992			
	10	9311	2.7	III	171.27	6823	7194	8360	8992			
	8.6	11018	2.6	III	202.57	6941	7194	8338	8992			
	7.0	13510	2.1	III	248.70	6834	7194	8299	8992			
	6.4	14691	1.6	II	269.99	6768	7194	8277	8992			
	5.2	18013	1.6	II	331.48	6578	7194	8212	8992			
	4.8	19649	1.3	I	361.69	6463	7194	8170	8992			
	4.1	23253	1.2	I	427.79	6167	7194	8080	8992			
	3.3	28511	1.0	I	525.20	5608	7194	7923	8992			
3.0	31004	0.8	*	570.18	5279	7194	7833	8992				
1.5	10	9141	2.9	III	174.55	6593	7194	8364	8992	SK 5282/12 - 90 SP/4	256	262
	7.5	12188	2.2	III	232.66	6893	7194	8321	8992			
	6.4	14292	1.9	II	273.15	6795	7194	8286	8992			
	5.1	17729	1.5	II	338.35	6596	7194	8218	8992			
	3.9	23478	1.1	I	448.15	6147	7194	8076	8992			
	3.2	28790	0.9	*	550.94	5574	7194	7914	8992			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
1.5	7.7	12270	2.9	III	225.79	9397	10454	12375	13489	SK 6382 - 90 SP/4	413	226
	6.9	13672	2.9	III	251.76	9358	10454	12358	13489			
	5.5	17258	2.9	III	317.28	9238	10454	12314	13489			
	4.4	21376	2.4	III	393.19	9062	10454	12254	13489			
	3.9	24221	1.5	II	445.09	8916	10454	12207	13489			
	3.2	30000	1.5	II	551.58	8554	10454	12098	13489			
1.5	5.8	15723	3.0	III	298.46	9293	10454	12334	13489	SK 6382/22 - 90 SP/4	454	262
	5.0	18287	2.6	III	347.33	9198	10454	12300	13489			
	4.0	22760	2.1	III	435.29	8994	10454	12232	13489			
	3.1	29873	1.6	II	569.11	8563	10454	12101	13489			
	2.7	33390	1.4	II	637.53	8296	10454	12026	13489			
	2.1	43017	1.1	I	818.71	7346	10454	11786	13489			
1.5	4.6	19711	3.2	III	376.26	11874	13039	14255	17985	SK 7382/22 - 90 SP/4	615	262
	4.0	22780	2.8	III	435.50	11769	13039	14220	17985			
	3.0	29898	2.1	III	569.97	11500	13039	14127	17985			
	2.4	37211	1.7	II	714.31	11191	13039	14012	17985			
	1.9	48840	1.3	I	933.91	10624	13039	13791	17985			
	1.7	54590	1.1	I	1046.18	10308	13039	13663	17985			
1.5	1.3	70329	0.9	*	1343.50	9308	13039	13247	17985	SK 8382/32 - 90 SP/4	915	263
	2.4	37540	2.9	III	718.43	16140	16411	19458	22481			
	2.0	46577	2.3	III	891.21	15843	16411	19363	22481			
	1.6	55628	1.9	II	1064.91	15517	16411	19252	22481			
	1.3	71404	1.5	II	1366.83	14873	16411	19018	22481			
	1.0	88677	1.2	I	1697.85	14050	16411	18700	22481			
1.5	1.2	74271	2.9	III	1419.20	24291	22931	26977	29225	SK 9382/42 - 90 SP/4	1614	263
	1.0	91411	2.3	III	1747.42	23899	22931	26977	29225			
2.0	429	294	3.1	III	4.03	436	751	1411	1124	SK 0282NB - 90 LP/4	55	178
	371	340	2.9	III	4.66	451	791	1468	1124			
	335	378	2.7	III	5.17	465	830	1513	1124			
	289	437	2.4	III	5.99	480	876	1573	1124			
	269	471	2.3	III	6.44	490	908	1579	1124			
	232	544	2.1	III	7.45	505	957	1575	1124			
	197	643	1.9	II	8.80	523	993	1569	1124			
	179	704	1.8	II	9.64	532	1013	1565	1124			
	158	799	1.7	II	10.98	538	1027	1558	1124			
	154	822	1.5	II	11.25	546	1043	1556	1124			
	133	944	1.5	II	12.98	553	1059	1545	1124			
	122	1034	1.4	II	14.21	560	1075	1536	1124			
	104	1207	1.0	I	16.58	569	1097	1516	1124			
	98	1284	0.9	*	17.61	575	1109	1506	1124			
	87	1453	0.8	*	19.95	578	1119	1481	1124			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



2.0 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight 	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
2.0	362	348	3.3	III	4.79	518	999	1714	1619	SK 1282 - 90 LP/4	68	182
	316	399	3.8	III	5.47	536	1055	1778	1619			
	270	468	3.4	III	6.43	556	1125	1857	1619			
	239	528	3.1	III	7.24	571	1183	1918	1619			
	211	596	2.4	III	8.21	595	1236	1989	1619			
	210	600	2.8	III	8.24	587	1220	1983	1619			
	189	667	2.5	III	9.18	606	1262	2046	1619			
	167	754	2.3	III	10.34	621	1295	2111	1619			
	147	856	2.1	III	11.76	635	1329	2153	1619			
	123	1026	1.8	II	14.11	659	1386	2145	1619			
	100	1255	1.6	II	17.21	678	1433	2132	1619			
	84	1501	1.3	I	20.57	693	1474	2114	1619			
	69	1839	1.1	I	25.22	706	1516	2085	1619			
	61	2065	1.0	I	28.33	708	1530	2062	1619			
54	2337	0.9	*	32.08	707	1539	2030	1619				
2.0	106	1180	1.7	II	16.28	950	1491	1798	2360	SK 1382NB - 90 LP/4	81	186
	92	1367	1.6	II	18.75	969	1527	1798	2360			
	71	1761	1.4	II	24.26	992	1578	1798	2360			
	67	1896	1.3	I	26.01	996	1590	1798	2360			
	58	2165	1.2	I	29.79	1000	1606	1798	2360			
	48	2602	1.0	I	35.75	995	1616	1798	2360			
	45	2829	1.0	I	38.77	989	1615	1798	2360			
	39	3230	0.9	*	44.40	971	1605	1798	2360			
	32	3882	0.8	*	53.28	532	1570	1697	2360			
	2.0	146	861	3.9	III	11.81	1332	2698	2652			
131		962	3.7	III	13.23	1372	2698	2732	3372			
104		1206	3.5	III	16.53	1461	2698	2907	3372			
93		1348	3.2	III	18.51	1502	2698	2983	3372			
79		1595	2.7	III	21.90	1567	2698	2976	3372			
72		1748	2.2	III	23.96	1604	2698	2972	3372			
69		1820	2.4	III	24.97	1615	2698	2970	3372			
65		1954	2.0	III	26.83	1645	2698	2966	3372			
58		2160	2.0	III	29.65	1677	2698	2960	3372			
55		2273	1.7	II	31.23	1677	2698	2954	3372			
47		2665	1.7	II	36.54	1736	2698	2942	3372			
47		2709	1.5	II	37.18	1754	2698	2941	3372			
40		3186	1.6	II	43.71	1799	2698	2923	3372			
38		3289	1.2	I	45.11	1799	2698	2918	3372			
33		3769	1.2	I	51.71	1851	2698	2900	3372			
32		3933	1.1	I	53.96	1855	2698	2893	3372			
27		4653	1.0	I	63.83	1793	2698	2848	3372			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power	Output Speed	Output Torque	Service Factor	AGMA Class	Gear Ratio	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight	Dim. Page
P_n	n_2	T_2	f_B		i_{tot}	F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
[hp]	[rpm]	[lb-in]				OHL	Thrust	OHL	Thrust		[lb]	
						[lb]	[lb]	[lb]	[lb]			
2.0	73	1726	4.1	III	23.71	1807	3260	3253	4496	SK 3282 - 90 LP/4	125	198
	67	1884	4.0	III	25.88	1851	3260	3250	4496			
	60	2089	3.7	III	28.70	1899	3260	3247	4496			
	54	2324	3.3	III	31.93	1950	3260	3243	4496			
	46	2753	2.7	III	37.77	2023	3260	3235	4496			
	45	2812	2.0	III	38.62	2011	3260	3232	4496			
	41	3064	2.7	III	42.02	2074	3260	3228	4496			
	39	3266	2.0	III	44.85	2081	3260	3223	4496			
	36	3497	1.4	II	48.04	2099	3260	3216	4496			
	33	3861	1.9	II	52.97	2157	3260	3209	4496			
	31	4063	1.4	II	55.79	2166	3260	3203	4496			
	27	4671	1.9	II	64.12	2238	3260	3187	4496			
	26	4802	1.4	II	65.89	2236	3260	3182	4496			
22	5810	1.3	I	79.76	2307	3260	3150	4496				
19	6466	1.3	I	88.74	2342	3260	3127	4496				
2.0	20	6219	1.3	I	87.73	2353	3260	3136	4496	SK 3282/12 - 90 LP/4	147	262
	15	8084	1.0	I	114.23	2238	3260	3058	4496			
	12	10028	0.8	*	141.49	2004	3260	2959	4496			
2.0	38	3283	4.3	III	45.05	3253	4946	5399	6744	SK 4282 - 90 LP/4	158	206
	23	5588	2.5	III	76.70	3690	4946	5371	6744			
	19	6595	2.1	III	90.52	3843	4946	5357	6744			
	16	8068	1.8	II	110.78	4017	4946	5333	6744			
	11	11323	1.0	I	155.40	4183	4946	5266	6744			
2.0	26	4864	2.2	III	66.65	3568	4946	5380	6744	SK 4382 - 90 LP/4	191	210
	20	6323	2.8	III	86.83	3785	4946	5360	6744			
	17	7567	2.3	III	103.82	3935	4946	5340	6744			
	15	8636	2.0	III	118.38	4035	4946	5321	6744			
	12	10245	1.7	II	140.60	4153	4946	5289	6744			
	11	11660	1.3	I	160.20	4144	4946	5255	6744			
	9.0	13954	1.3	I	191.57	3989	4946	5196	6744			
	8.2	15377	0.9	*	211.09	3861	4946	5151	6744			
	6.8	18444	0.9	*	253.12	3615	4946	5050	6744			
	5.7	22073	0.8	*	302.65	3012	4946	4904	6744			
2.0	14	9036	1.8	II	127.52	4103	4946	5313	6744	SK 4282/12 - 90 LP/4	180	262
	11	10814	1.5	II	152.47	4202	4946	5276	6744			
	10	12561	1.3	I	176.96	4087	4946	5233	6744			
	7.4	16635	1.0	I	234.38	3778	4946	5113	6744			
2.0	21	5951	2.7	III	81.61	5470	7194	8399	8992	SK 5282 - 90 LP/4	237	214
	17	7297	2.7	III	100.19	5795	7194	8386	8992			
	13	9767	2.4	III	134.03	6209	7194	8354	8992			
2.0	15	8545	2.8	III	117.37	5996	7194	8370	8992	SK 5382 - 90 LP/4	279	218
	12	10112	2.8	III	138.82	6266	7194	8350	8992			
	11	11209	2.5	III	153.92	6421	7194	8335	8992			
	10	12486	2.0	III	171.27	6556	7194	8314	8992			
	8.5	14776	1.9	II	202.57	6764	7194	8275	8992			
	7.0	18118	1.6	II	248.70	6571	7194	8210	8992			
	6.4	19702	1.2	I	269.99	6459	7194	8171	8992			
	5.2	24157	1.2	I	331.48	6083	7194	8057	8992			
	4.8	26349	0.9	*	361.69	5858	7194	7987	8992			
	4.0	31183	0.9	*	427.79	5253	7194	7826	8992			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

2.0 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
2.0	12	10091	2.6	III	142.18	6015	7194	8351	8992	SK 5282/12 - 90 LP/4	260	262
	10	12373	2.1	III	174.55	6336	7194	8318	8992			
	7.4	16497	1.6	II	232.66	6673	7194	8244	8992			
	6.3	19343	1.4	II	273.15	6486	7194	8182	8992			
	5.1	23995	1.1	I	338.35	6098	7194	8062	8992			
	3.9	31777	0.8	*	448.15	5166	7194	7808	8992			
2.0	7.7	16455	2.2	III	225.79	9267	10454	12325	13489	SK 6382 - 90 LP/4	416	226
	6.9	18334	2.2	III	251.76	9196	10454	12298	13489			
	5.4	23144	2.2	III	317.28	8974	10454	12226	13489			
	4.4	28666	1.8	II	393.19	8646	10454	12125	13489			
	3.9	32482	1.1	I	445.09	8369	10454	12046	13489			
	3.1	40231	1.1	I	551.58	7659	10454	11861	13489			
2.0	5.8	21281	2.2	III	298.46	9067	10454	12256	13489	SK 6382/22 - 90 LP/4	458	262
	5.0	24751	1.9	II	347.33	8887	10454	12198	13489			
	4.0	30805	1.6	II	435.29	8496	10454	12082	13489			
	3.0	40432	1.2	I	569.11	7637	10454	11856	13489			
	2.7	45192	1.1	I	637.53	7078	10454	11670	13489			
	2.1	58222	0.8	*	818.71	4742	10454	10439	13489			
2.0	4.6	26678	2.3	III	376.26	11625	13039	14172	17985	SK 7382/22 - 90 LP/4	619	262
	4.0	30832	2.0	III	435.50	11462	13039	14113	17985			
	3.0	40467	1.5	II	569.97	11042	13039	13955	17985			
	2.4	50365	1.2	I	714.31	10543	13039	13758	17985			
	1.9	66103	0.9	*	933.91	9597	13039	13368	17985			
	1.7	73886	0.8	*	1046.18	9052	13039	13139	17985			
2.0	9.3	13227	8.1	III	185.94	13896	16411	19633	22481	SK 8382/42 - 90 LP/4	952	263
	7.9	15525	6.9	III	223.40	14552	16411	19621	22481			
	5.9	20952	5.1	III	294.43	15825	16411	19590	22481			
	5.0	24592	4.4	III	346.66	16511	16411	19566	22481			
	3.7	33243	3.2	III	468.52	16270	16411	19497	22481			
	3.1	39020	2.7	III	551.02	16094	16411	19444	22481			
2.0	2.8	43258	2.5	III	612.94	15955	16411	19400	22481	SK 8382/32 - 90 LP/4	919	263
	2.4	50809	2.1	III	718.43	15695	16411	19313	22481			
	1.9	63041	1.7	II	891.21	15226	16411	19148	22481			
	1.6	75292	1.4	II	1064.91	14699	16411	18951	22481			
	1.3	96643	1.1	I	1366.83	13626	16411	18532	22481			
	1.0	120022	0.9	*	1697.85	12200	16411	17955	22481			
2.0	2.0	62801	3.4	III	886.49	23385	22931	26977	29225	SK 9382/42 - 90 LP/4	1618	263
	1.5	83484	2.5	III	1178.81	24085	22931	26977	29225			
	1.2	100524	2.1	III	1419.20	23671	22931	26977	29225			
	1.0	123722	1.7	II	1747.42	23040	22931	26977	29225			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
						3.0	370 323 276 244 216 215 193 171 151 126 103 86	510 585 686 774 874 879 978 1105 1255 1505 1839 2201	2.2 2.6 2.3 2.1 1.6 1.9 1.7 1.6 1.4 1.2 1.1 0.9			
3.0	109 94 73 68 60	1731 2004 2582 2780 3174	1.2 1.1 0.9 0.9 0.8	I I * * *	16.28 18.75 24.26 26.01 29.79	816 815 794 784 758	1310 1319 1311 1303 1279	1798 1798 1798 1798 1798	2360 2360 2360 2360 2360	SK 1382NB - 100 LH/4	100	186
3.0	392 311 275 237 212 197 174 150 134 107 96 81 74 71 66 60 57 48 40 34	482 609 687 799 893 961 1085 1262 1410 1769 1977 2339 2563 2669 2864 3166 3333 3907 4672 5526	3.4 3.1 2.9 2.7 2.5 3.1 2.9 2.7 2.5 2.4 2.2 1.8 1.5 1.6 1.4 1.4 1.2 1.1 1.1 0.8	III III III III III III III III III III III II II II II II I I I *	4.51 5.72 6.43 7.48 8.37 9.03 10.15 11.81 13.23 16.53 18.51 21.90 23.96 24.97 26.83 29.65 31.23 36.54 43.71 51.71	974 1039 1073 1115 1147 1180 1216 1260 1293 1367 1398 1447 1475 1479 1502 1517 1502 1536 1566 1306	1848 2048 2165 2266 2333 2400 2476 2572 2643 2698 2698 2698 2698 2698 2698 2698 2698 2698 2698 2698	1989 2121 2191 2281 2350 2405 2482 2580 2654 2816 2893 2954 2947 2943 2937 2925 2916 2893 2846 2712	3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372 3372	SK 2282 - 100 LP/4	117	190
3.0	88 83 79 75 68 62 55 47 46 42 39 33 28	2152 2283 2395 2531 2762 3062 3408 4037 4122 4492 4789 5660 6848	3.4 2.8 3.0 2.8 2.7 2.5 2.3 1.8 1.4 1.8 1.4 1.3 1.3	III III III III III III III II II II II I I	20.18 21.38 22.45 23.71 25.88 28.70 31.93 37.77 38.62 42.02 44.85 52.97 64.12	1636 1652 1678 1688 1725 1759 1798 1843 1817 1876 1862 1905 1941	3202 3237 3260 3260 3260 3260 3260 3260 3260 3260 3260 3260 3260	3246 3243 3242 3239 3234 3228 3221 3205 3200 3192 3182 3155 3112	4496 4496 4496 4496 4496 4496 4496 4496 4496 4496 4496 4496 4496	SK 3282 - 100 LP/4	150	198

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



3.0 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
						3.0	55 49 48 43 41 39 34 29 23 23 20 16	3451 3887 3935 4357 4662 4814 5579 6585 8055 8193 9669 11828	4.2 3.1 3.1 3.2 3.0 2.9 2.9 2.4 1.7 1.7 1.5 1.2			
3.0	27 20 17 15 13 11 9.2	7131 9270 11094 12661 15020 17094 20458	1.5 1.9 1.6 1.4 1.2 0.9 0.9	II II II II I * *	66.65 86.83 103.82 118.38 140.60 160.20 191.57	3293 3433 3523 3568 3604 3593 3358	4946 4946 4946 4946 4946 4946 4946	5347 5309 5269 5231 5165 5097 4972	6744 6744 6744 6744 6744 6744 6744	SK 4382 - 100 LP/4	216	210
3.0	14 12 10	13369 16000 18585	1.2 1.0 0.9	I I *	127.52 152.47 176.96	3598 3642 3608	4946 4946 4946	5211 5134 5045	6744 6744 6744	SK 4282/12 - 100 LP/4	205	262
3.0	32 26 22 19 18 13	5976 7328 8725 9808 10698 14320	3.9 3.6 1.9 2.5 1.9 1.6	III III II III II II	55.90 68.63 81.61 91.81 100.19 134.03	4719 4990 5184 5321 5461 5758	7194 7194 7194 7194 7194 7194	8399 8386 8369 8354 8343 8282	8992 8992 8992 8992 8992 8992	SK 5282 - 100 LP/4	262	214
3.0	21 19 15 13 12 10 8.7 7.1 6.5 5.3	8819 9776 12527 14825 16434 18306 21663 26562 28884 35416	2.8 2.6 1.9 1.9 1.7 1.4 1.3 1.1 0.8 0.8	III III II II II II I I * *	82.72 91.71 117.37 138.82 153.92 171.27 202.57 248.70 269.99 331.48	5222 5350 5591 5804 5912 5982 6166 5835 5562 4558	7194 7194 7194 7194 7194 7194 7194 7194 7194 7194	8369 8356 8313 8274 8243 8202 8122 7986 7907 7665	8992 8992 8992 8992 8992 8992 8992 8992 8992 8992	SK 5382 - 100 LP/4	304	218
3.0	24 19 15 14 11 10 8.3 7.8 7.0 6.6 5.6 4.5	8044 9900 12262 13549 17104 18306 22674 24124 26880 28622 33932 42027	6.6 5.4 4.2 3.0 3.0 2.7 1.8 1.5 1.5 1.8 1.5 1.2	III III III III III III II II II II II I	75.18 92.63 114.79 126.87 159.88 171.34 212.33 225.79 251.76 267.59 317.28 393.19	7800 8249 8720 8913 9244 9197 8998 8922 8761 8649 8252 7461	10454 10454 10454 10454 10454 10454 10454 10454 10454 10454 10454 10454	12416 12399 12375 12359 12316 12298 12231 12208 12156 12126 12014 11813	13489 13489 13489 13489 13489 13489 13489 13489 13489 13489 13489 13489	SK 6382 - 100 LP/4	441	226

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power	Output Speed	Output Torque	Service Factor	AGMA Class	Gear Ratio	Standard Bearings		Heavy Duty Bearings (VL)		Model Type	Weight	Dim. Page
P_n	n_2	T_2	f_B		i_{tot}	F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
[hp]	[rpm]	[lb-in]				OHL	Thrust	OHL	Thrust		[lb]	
						[lb]	[lb]	[lb]	[lb]			
3.0	5.9	31487	1.5	II	298.46	8445	10454	12067	13489	SK 6382/22 - 100 LP/4	483	262
	5.1	36621	1.3	I	347.33	8016	10454	11952	13489			
	4.1	45579	1.0	I	435.29	7027	10454	11640	13489			
	3.1	59822	0.8	*	569.11	4063	10454	10255	13489			
3.0	8.6	21868	3.1	III	204.99	11061	13039	14231	17985	SK 7382 - 100 LP/4	602	234
	8.2	23121	3.2	III	216.43	11164	13039	14214	17985			
	6.5	29196	2.3	III	273.57	11528	13039	14137	17985			
	5.2	36146	1.8	II	338.79	11238	13039	14030	17985			
3.0	4.7	39472	1.6	II	376.26	11088	13039	13973	17985	SK 7382/22 - 100 LP/4	644	262
	4.1	45618	1.4	II	435.50	10791	13039	13857	17985			
	3.1	59874	1.0	I	569.97	9995	13039	13534	17985			
	2.5	74518	0.8	*	714.31	9006	13039	13119	17985			
3.0	5.6	33981	3.4	III	318.31	15238	16411	19491	22481	SK 8382 - 100 LP/4	877	242
	4.6	41275	2.7	III	386.68	15988	16411	19423	22481			
3.0	3.8	49185	2.2	III	468.52	15752	16411	19333	22481	SK 8382/42 - 100 LP/4	977	263
	3.2	57732	1.9	II	551.02	15437	16411	19224	22481			
3.0	2.9	64004	1.7	II	612.94	15187	16411	19134	22481	SK 8382/32 - 100 LP/4	944	263
	2.5	75175	1.4	II	718.43	14704	16411	18953	22481			
	2.0	93273	1.1	I	891.21	13809	16411	18605	22481			
	1.7	111399	1.0	I	1064.91	12760	16411	18183	22481			
3.0	2.9	64923	3.3	III	618.30	20214	22931	26977	29225	SK 9382/42 - 100 LP/4	1642	263
	2.5	75051	2.8	III	715.38	20876	22931	26977	29225			
	2.0	92918	2.3	III	886.49	21659	22931	26977	29225			
	1.5	123520	1.7	II	1178.81	22939	22931	26977	29225			
	1.2	148732	1.4	II	1419.20	22268	22931	26977	29225			
	1.0	183055	1.2	I	1747.42	21041	22931	26977	29225			
5.0	367	858	1.3	I	4.79	419	788	1615	1619	SK 1282 - 112 MP/4	109	182
	321	983	1.5	II	5.47	422	807	1666	1619			
	273	1152	1.4	II	6.43	423	824	1726	1619			
	242	1301	1.3	I	7.24	421	834	1772	1619			
	215	1469	1.0	I	8.21	440	894	1837	1619			
	213	1478	1.1	I	8.24	417	840	1818	1619			
	192	1645	1.0	I	9.18	427	880	1872	1619			
	170	1857	0.9	*	10.34	419	880	1916	1619			
	149	2109	0.9	*	11.76	406	872	1960	1619			
	5.0	389	810	2.0	III	4.51	923	1740	1948			
308		1023	1.8	II	5.72	974	1901	2068	3372			
273		1155	1.7	II	6.43	1000	1991	2132	3372			
235		1343	1.6	II	7.48	1030	2112	2212	3372			
210		1501	1.5	II	8.37	1052	2165	2271	3372			
195		1616	1.8	II	9.03	1085	2233	2326	3372			
173		1824	1.7	II	10.15	1108	2288	2393	3372			
149		2121	1.6	II	11.81	1134	2352	2476	3372			
133		2371	1.5	II	13.23	1152	2396	2537	3372			
106		2973	1.4	II	16.53	1197	2507	2673	3372			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



5.0 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
5.0	95	3323	1.3	I	18.51	1208	2541	2732	3372	SK 2282 - 112 MP/4	133	190
	80	3931	1.1	I	21.90	1223	2593	2823	3372			
	73	4307	0.9	*	23.96	1234	2629	2877	3372			
	70	4486	1.0	I	24.97	1224	2615	2868	3372			
	65	4814	0.8	*	26.83	1232	2643	2825	3372			
	59	5322	0.8	*	29.65	1213	2624	2747	3372			
	5.0	386	816	5.0	III	4.48	1049	1801	2250			
306	1030	4.8	III	5.74	1113	1961	2394	3771				
259	1216	4.4	III	6.70	1158	2085	2500	3935				
209	1509	4.0	III	8.31	1216	2259	2640	4154				
180	1755	4.2	III	9.80	1268	2422	2752	4331				
155	2039	3.6	III	11.38	1313	2579	2859	4496				
125	2529	3.0	III	14.11	1366	2697	3009	4496				
105	2990	2.5	III	16.67	1411	2795	3131	4496				
87	3618	2.0	III	20.18	1456	2901	3215	4496				
82	3838	1.7	II	21.38	1457	2911	3209	4496				
78	4026	1.8	II	22.45	1479	2957	3205	4496				
74	4254	1.7	II	23.71	1472	2951	3198	4496				
68	4643	1.6	II	25.88	1493	3002	3188	4496				
61	5147	1.5	II	28.70	1502	3035	3172	4496				
55	5728	1.4	II	31.93	1513	3074	3154	4496				
46	6785	1.1	I	37.77	1503	3085	3114	4496				
42	7550	1.1	I	42.02	1500	3103	3083	4496				
5.0	289	1090	9.7	III	6.06	1702	3016	3510	5855	SK 4282 - 112 MP/4	200	206
	246	1280	8.3	III	7.13	1780	3221	3669	6118			
	211	1496	7.5	III	8.33	1857	3439	3829	6384			
	190	1657	8.7	III	9.23	1922	3624	3947	6583			
	162	1945	7.7	III	10.85	2005	3897	4121	6744			
	139	2274	6.8	III	12.68	2087	4100	4296	6744			
	116	2728	5.8	III	15.20	2193	4315	4513	6744			
	97	3265	4.9	III	18.18	2292	4520	4729	6744			
	82	3853	3.9	III	21.45	2389	4721	4939	6744			
	78	4018	3.7	III	22.39	2401	4750	4982	6744			
	67	4713	3.0	III	26.25	2501	4946	5196	6744			
	66	4742	3.3	III	26.43	2496	4946	5197	6744			
	66	4797	3.0	III	26.72	2468	4901	5184	6744			
	55	5753	2.7	III	32.04	2569	4946	5368	6744			
	54	5801	2.5	III	32.34	2603	4946	5369	6744			
	48	6534	1.9	II	36.40	2600	4946	5356	6744			
	48	6614	1.9	II	36.81	2652	4946	5357	6744			
	46	6886	2.6	III	38.31	2651	4946	5352	6744			
	43	7324	1.9	II	40.74	2705	4946	5346	6744			
	40	7837	1.8	II	43.65	2690	4946	5335	6744			
	39	8091	1.7	II	45.05	2743	4946	5333	6744			
	34	9379	1.7	II	52.20	2753	4946	5307	6744			
	28	11069	1.4	II	61.60	2814	4946	5271	6744			
	23	13540	1.0	I	75.39	2854	4946	5210	6744			
23	13771	1.0	I	76.70	2797	4946	5201	6744				
19	16253	0.9	*	90.52	2816	4946	5128	6744				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
5.0	58	5472	4.7	III	30.50	3830	7194	7758	8992	SK 5282 - 112 MP/4	279	214
	53	5999	3.4	III	33.43	3899	7194	7920	8992			
	50	6366	3.8	III	35.46	3946	7194	8043	8992			
	43	7324	3.0	III	40.80	4087	7194	8332	8992			
	42	7534	3.8	III	41.94	4118	7194	8383	8992			
	37	8488	2.5	III	47.27	4212	7194	8371	8992			
	34	9238	3.1	III	51.49	4332	7194	8363	8992			
	32	9975	2.2	III	55.55	4369	7194	8351	8992			
	31	10045	2.3	III	55.90	4381	7194	8351	8992			
	26	12317	2.1	III	68.63	4587	7194	8319	8992			
	21	14666	1.1	I	81.61	4686	7194	8277	8992			
	19	16487	1.5	II	91.81	4756	7194	8240	8992			
	18	17983	1.1	I	100.19	4868	7194	8212	8992			
13	24071	1.0	I	134.03	4927	7194	8055	8992				
5.0	21	14823	1.7	II	82.72	4735	7194	8276	8992	SK 5382 - 112 MP/4	321	218
	19	16432	1.6	II	91.71	4809	7194	8245	8992			
	15	21057	1.2	I	117.37	4854	7194	8136	8992			
	13	24920	1.1	I	138.82	4949	7194	8032	8992			
	11	27625	1.0	I	153.92	4963	7194	7949	8992			
	10	30770	0.8	*	171.27	4899	7194	7839	8992			
8.7	36414	0.8	*	202.57	4364	7194	7619	8992				
5.0	27	11753	2.5	III	65.44	7118	10454	12380	13489	SK 6282 - 112 MP/4	464	222
	22	14411	2.5	III	80.33	7503	10454	12352	13489			
5.0	34	9160	4.9	III	51.07	6674	10454	12405	13489	SK 6382 - 112 MP/4	458	226
	29	10712	4.5	III	59.66	6938	10454	12390	13489			
	24	13183	3.7	III	73.50	7286	10454	12363	13489			
	23	13521	3.9	III	75.18	7355	10454	12361	13489			
	19	16642	3.2	III	92.63	7698	10454	12322	13489			
	15	20612	2.5	III	114.79	8033	10454	12266	13489			
	14	22775	1.8	II	126.87	8134	10454	12230	13489			
	11	28750	1.8	II	159.88	8487	10454	12123	13489			
	10	30771	1.6	II	171.34	8498	10454	12079	13489			
	8.3	38113	1.1	I	212.33	7875	10454	11911	13489			
	7.8	40551	0.9	*	225.79	7625	10454	11853	13489			
	7.0	45183	0.9	*	251.76	7079	10454	11671	13489			
	6.6	48111	1.1	I	267.59	6678	10454	11432	13489			
5.5	57036	0.9	*	317.28	5063	10454	10570	13489				
5.0	14	22107	3.0	III	123.37	9093	13039	14228	17985	SK 7382 - 112 MP/4	618	234
	12	26991	2.5	III	150.57	9467	13039	14167	17985			
	11	29110	1.9	II	162.17	9550	13039	14136	17985			
	8.6	36759	1.8	II	204.99	9981	13039	14020	17985			
	8.1	38865	1.9	II	216.43	9992	13039	13980	17985			
	6.4	49076	1.4	II	273.57	10344	13039	13786	17985			
	5.2	60758	1.1	I	338.79	9940	13039	13511	17985			
5.0	7.9	39614	1.6	II	223.20	10064	13039	13967	17985	SK 7382/32 - 112 MP/4	685	262
	5.9	52412	1.2	I	295.54	10363	13039	13708	17985			
	4.7	66832	0.9	*	376.26	9548	13039	13348	17985			
	4.0	77238	0.8	*	435.50	8800	13039	13032	17985			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



5.0, 7.5 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
5.0	8.7	36060	2.7	III	201.00	12646	16411	19472	22481	SK 8382 - 112 MP/4	894	242
	5.5	57119	2.0	III	318.31	13721	16411	19232	22481			
	4.5	69380	1.6	II	386.68	14186	16411	19055	22481			
5.0	9.4	33135	3.2	III	185.94	12478	16411	19498	22481	SK 8382/42 - 112 MP/4	993	263
	8.0	38893	2.8	III	223.40	12896	16411	19445	22481			
	5.9	52486	2.0	III	294.43	13608	16411	19292	22481			
	5.1	61607	1.7	II	346.66	13932	16411	19169	22481			
	3.7	83278	1.3	I	468.52	14321	16411	18806	22481			
	3.2	97749	1.1	I	551.02	13564	16411	18507	22481			
5.0	2.9	108368	1.0	I	612.94	12946	16411	18258	22481	SK 8382/32 - 112 MP/4	960	263
	2.4	127283	0.8	*	718.43	11696	16411	17749	22481			
5.0	6.0	52257	4.1	III	294.54	15664	22931	26977	29225	SK 9382/52 - 112 MP/4	1723	263
	4.3	72917	2.9	III	411.63	16890	22931	26977	29225			
5.0	3.9	80088	2.7	III	449.57	17188	22931	26977	29225	SK 9382/42 - 112 MP/4	1659	263
	2.8	109924	1.9	II	618.30	18077	22931	26977	29225			
	2.5	127072	1.7	II	715.38	18399	22931	26977	29225			
	2.0	157325	1.4	II	886.49	18473	22931	26977	29225			
	1.5	209138	1.0	I	1178.81	18828	22931	26977	29225			
	1.2	251827	0.8	*	1419.20	17903	22931	26977	29225			
7.5	390	1213	3.4	III	4.48	990	1689	2195	3453	SK 3282 - 132 SP/4	209	198
	309	1531	3.2	III	5.74	1038	1815	2325	3655			
	261	1809	3.0	III	6.70	1071	1908	2419	3801			
	211	2244	2.7	III	8.31	1108	2030	2541	3989			
	181	2610	2.8	III	9.80	1149	2158	2643	4150			
	156	3032	2.4	III	11.38	1178	2269	2735	4294			
	126	3762	2.0	III	14.11	1199	2402	2857	4479			
	106	4447	1.7	II	16.67	1218	2470	2956	4496			
	88	5380	1.4	II	20.18	1228	2517	3064	4496			
	83	5708	1.1	I	21.38	1211	2495	3082	4496			
	79	5987	1.2	I	22.45	1228	2534	3122	4496			
	75	6327	1.1	I	23.71	1199	2491	3128	4496			
	68	6906	1.1	I	25.88	1201	2511	3109	4496			
	62	7656	1.0	I	28.70	1179	2491	3078	4496			
	55	8519	0.9	*	31.93	1158	2475	3038	4496			
7.5	117	4057	3.9	III	15.20	2042	4057	4375	6744	SK 4282 - 132 SP/4	243	206
	97	4856	3.3	III	18.18	2115	4217	4567	6744			
	82	5731	2.6	III	21.45	2185	4374	4753	6744			
	79	5976	2.5	III	22.39	2184	4379	4785	6744			
	67	7010	2.0	III	26.25	2257	4543	4974	6744			
	67	7053	2.2	III	26.43	2247	4527	4971	6744			
	66	7134	2.0	III	26.72	2199	4441	4941	6744			
	55	8557	1.8	II	32.04	2258	4588	5143	6744			
	55	8628	1.7	II	32.34	2304	4675	5188	6744			
	49	9718	1.3	I	36.40	2236	4579	5237	6744			
	48	9838	1.3	I	36.81	2307	4712	5298	6744			
	46	10241	1.7	II	38.31	2284	4680	5289	6744			
	43	10893	1.3	I	40.74	2330	4781	5276	6744			
	41	11655	1.2	I	43.65	2269	4688	5256	6744			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
7.5	39	12034	1.2	I	45.05	2329	4808	5249	6744	SK 4282 - 132 SP/4	243	206
	34	13949	1.2	I	52.20	2255	4717	5196	6744			
	29	16462	1.0	I	61.60	2241	4749	5121	6744			
7.5	58	8138	3.2	III	30.50	3594	7092	7533	8992	SK 5282 - 132 SP/4	322	214
	53	8922	2.3	III	33.43	3631	7067	7662	8992			
	50	9468	2.5	III	35.46	3659	7194	7771	8992			
	43	10893	2.0	III	40.80	3763	7194	8020	8992			
	42	11205	2.5	III	41.94	3787	7194	8093	8992			
	37	12624	1.7	II	47.27	3831	7194	8286	8992			
	34	13739	2.1	III	51.49	3939	7194	8295	8992			
	32	14835	1.5	II	55.55	3930	7194	8273	8992			
	32	14940	1.5	II	55.90	3941	7194	8272	8992			
	26	18319	1.4	II	68.63	4068	7194	8205	8992			
19	24521	1.0	I	91.81	4037	7194	8042	8992				
7.5	21	22046	1.1	I	82.72	4112	7194	8115	8992	SK 5382 - 132 SP/4	364	218
	19	24439	1.1	I	91.71	4119	7194	8049	8992			
	15	31318	0.8	*	117.37	3925	7194	7819	8992			
	13	37063	0.8	*	138.82	3876	7194	7590	8992			
7.5	45	10534	2.7	III	39.48	5920	10318	12083	13489	SK 6282 - 132 SP/4	507	222
	36	13297	2.7	III	49.75	6257	10454	12363	13489			
	29	16304	2.5	III	61.08	6566	10454	12329	13489			
	27	17480	1.7	II	65.44	6605	10454	12311	13489			
	22	21433	1.7	II	80.33	6898	10454	12257	13489			
7.5	30	15931	3.1	III	59.66	6459	10454	12330	13489	SK 6382 - 132 SP/4	500	226
	24	19608	2.5	III	73.50	6700	10454	12279	13489			
	24	20110	2.6	III	75.18	6768	10454	12274	13489			
	19	24751	2.1	III	92.63	6979	10454	12198	13489			
	15	30656	1.7	II	114.79	7147	10454	12085	13489			
	14	33873	1.2	I	126.87	7134	10454	12012	13489			
	11	42759	1.2	I	159.88	7257	10454	11793	13489			
10	45766	1.1	I	171.34	7003	10454	11625	13489				
7.5	31	15196	3.2	III	56.91	7150	12838	14300	17985	SK 7282 - 132 SP/4	646	230
	25	18641	2.8	III	69.73	7522	13039	14269	17985			
7.5	14	32879	2.0	III	123.37	8255	13039	14082	17985	SK 7382 - 132 SP/4	661	234
	12	40143	1.7	II	150.57	8447	13039	13961	17985			
	11	43296	1.3	I	162.17	8426	13039	13898	17985			
	8.6	54671	1.2	I	204.99	8600	13039	13661	17985			
	8.2	57804	1.3	I	216.43	8501	13039	13580	17985			
	6.5	72991	0.9	*	273.57	8510	13039	13167	17985			
7.5	7.9	59130	1.1	I	223.20	8528	13039	13547	17985	SK 7382/32 - 132 SP/4	728	262
	6.0	78234	0.8	*	295.54	8339	13039	12993	17985			
7.5	30	15867	3.6	III	59.44	8951	15518	18977	22481	SK 8282 - 132 SP/4	928	238
	25	19272	3.6	III	72.21	9424	16393	19601	22481			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

7.5, 10 hp Gearmotors





Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
7.5	15	31641	3.5	III	118.47	10476	16411	19511	22481	SK 8382 - 132 SP/4	937	242
	14	33453	3.2	III	125.38	10646	16411	19497	22481			
	12	38433	2.9	III	143.91	10927	16411	19451	22481			
	12	40797	2.9	III	152.83	10972	16411	19426	22481			
	10	49554	2.3	III	185.66	11383	16411	19331	22481			
	8.8	53632	1.8	II	201.00	11415	16411	19278	22481			
	7.3	64622	1.8	II	242.02	11635	16411	19125	22481			
	6.0	78493	1.4	II	294.01	11900	16411	18899	22481			
	5.6	84953	1.4	II	318.31	11787	16411	18773	22481			
4.6	103188	1.1	I	386.68	11902	16411	18389	22481				
7.5	10	46742	4.8	III	175.05	15671	22931	26977	29225	SK 9382 - 132 SP/4	1603	250
	8.6	54655	3.6	III	204.68	16245	22931	26977	29225			
	6.1	77698	2.7	III	291.25	17342	22931	26977	29225			
	5.0	94047	2.4	III	352.36	18069	22931	26977	29225			
7.5	3.9	119544	1.8	II	449.57	15196	22931	26977	29225	SK 9382/42 - 132 SP/4	1702	263
	2.9	164080	1.3	I	618.30	15359	22931	26977	29225			
	2.5	189677	1.1	I	715.38	15263	22931	26977	29225			
	2.0	234833	0.9	*	886.49	14474	22931	26977	29225			
7.5	6.9	68993	3.2	III	258.35	31473	33721	31473	33721	SK 10382.1 - 132 SP/4	2326	254
	6.2	75833	3.2	III	283.96	31473	33721	31473	33721			
	5.7	83384	3.2	III	312.23	31473	33721	31473	33721			
	5.2	91651	3.2	III	343.19	31473	33721	31473	33721			
10	389	1622	2.5	III	4.48	933	1585	2145	3371	SK 3282 - 132 MP/4	225	198
	308	2048	2.4	III	5.74	966	1680	2262	3551			
	261	2418	2.2	III	6.70	986	1744	2345	3677			
	210	3001	2.0	III	8.31	1002	1817	2449	3834			
	181	3490	2.1	III	9.80	1033	1916	2541	3980			
	155	4054	1.8	II	11.38	1045	1983	2619	4100			
	125	5030	1.5	II	14.11	1034	2029	2712	4237			
	106	5946	1.3	I	16.67	1026	2077	2788	4352			
	88	7194	1.0	I	20.18	1001	2104	2864	4466			
	83	7632	0.8	*	21.38	965	2046	2865	4459			
	79	8006	0.9	*	22.45	977	2103	2900	4496			
	74	8460	0.8	*	23.71	926	2007	2888	4487			
	68	9234	0.8	*	25.88	909	2015	2921	4496			
10	163	3868	3.9	III	10.85	1787	3396	3926	6532	SK 4282 - 132 MP/4	258	206
	139	4523	3.4	III	12.68	1833	3577	4069	6744			
	116	5425	2.9	III	15.20	1897	3811	4249	6744			
	97	6492	2.5	III	18.18	1943	3925	4418	6744			
	82	7662	1.9	II	21.45	1987	4038	4580	6744			
	79	7991	1.9	II	22.39	1972	4019	4601	6744			
	67	9373	1.5	II	26.25	2017	4138	4765	6744			
	67	9431	1.7	II	26.43	2002	4112	4758	6744			
	66	9540	1.5	II	26.72	1934	3990	4711	6744			
	55	11442	1.4	II	32.04	1950	4065	4875	6744			
	55	11537	1.2	I	32.34	2009	4176	4930	6744			
	48	13154	0.9	*	36.81	1965	4132	5006	6744			
	46	13693	1.3	I	38.31	1919	4060	5004	6744			
	43	14565	0.9	*	40.74	1957	4149	5089	6744			
	39	16091	0.9	*	45.05	1917	4109	5134	6744			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
10	279	2261	8.3	III	6.33	2323	3991	4901	8062	SK 5282 - 132 MP/4	337	214
	246	2560	7.5	III	7.17	2402	4188	5069	8341			
	203	3103	6.7	III	8.70	2526	4517	5337	8788			
	186	3382	6.0	III	9.46	2600	4709	5476	8992			
	165	3830	5.8	III	10.71	2683	4955	5658	8992			
	136	4642	5.0	III	13.00	2811	5373	5947	8992			
	115	5494	4.2	III	15.38	2932	5753	6216	8992			
	100	6289	3.9	III	17.59	3021	5948	6428	8992			
	94	6736	3.4	III	18.88	3083	6076	6554	8992			
	87	7268	3.8	III	20.36	3112	6156	6658	8992			
	71	8912	2.9	III	25.00	3257	6482	7007	8992			
	58	10881	2.4	III	30.50	3368	6759	7331	8992			
	53	11929	1.7	II	33.43	3373	6640	7427	8992			
	50	12660	1.9	II	35.46	3380	6865	7521	8992			
	43	14565	1.5	II	40.80	3447	6834	7732	8992			
	42	14983	1.9	II	41.94	3464	7097	7803	8992			
	34	18371	1.6	II	51.49	3556	7194	8147	8992			
32	19836	1.1	I	55.55	3498	7041	8166	8992				
10	45	14085	2.0	III	39.48	5615	9922	11809	13489	SK 6282 - 132 MP/4	523	222
	35	17779	2.0	III	49.75	5881	10454	12307	13489			
	29	21800	1.8	II	61.08	6119	10454	12251	13489			
10	72	8719	4.8	III	24.42	5073	8833	10506	13489	SK 6382 - 132 MP/4	516	226
	62	10235	4.0	III	28.72	5261	9199	10936	13489			
	57	11034	3.6	III	30.91	5347	9370	11140	13489			
	49	12951	3.1	III	36.34	5526	9734	11579	13489			
	42	15145	2.7	III	42.46	5690	10082	12009	13489			
	35	18217	2.5	III	51.07	5867	10454	12299	13489			
	30	21302	2.3	III	59.66	5997	10454	12253	13489			
	24	26217	1.9	II	73.50	6129	10454	12169	13489			
	23	26890	2.0	III	75.18	6196	10454	12159	13489			
	19	33095	1.6	II	92.63	6274	10454	12033	13489			
	15	40991	1.3	I	114.79	6272	10454	11841	13489			
	14	45292	0.9	*	126.87	6144	10454	11662	13489			
11	57174	0.9	*	159.88	5032	10454	10555	13489				
10	31	20319	2.4	III	56.91	6773	12336	14248	17985	SK 7282 - 132 MP/4	661	230
	25	24925	2.1	III	69.73	7075	12971	14197	17985			
10	33	19075	3.3	III	53.38	6694	12161	14262	17985	SK 7382 - 132 MP/4	677	234
	30	21255	2.9	III	59.52	6791	12407	14236	17985			
	26	24333	2.6	III	68.10	6943	12762	14199	17985			
	22	28122	2.3	III	78.81	7087	13039	14150	17985			
	19	33228	2.0	III	93.18	7282	13039	14077	17985			
	17	38040	1.8	II	106.59	7372	13039	13998	17985			
	14	43963	1.5	II	123.37	7433	13039	13890	17985			
	12	53676	1.2	I	150.57	7443	13039	13684	17985			
	11	57891	1.0	I	162.17	7316	13039	13578	17985			
	8.6	73101	0.9	*	204.99	7229	13039	13163	17985			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

10, 15 hp Gearmotors





Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
10	19	32420	3.3	III	90.94	9363	16411	19504	22481	SK 8382 - 132 MP/4	952	242
	17	36826	2.9	III	103.21	9567	16411	19465	22481			
	15	42308	2.6	III	118.47	9767	16411	19410	22481			
	14	44731	2.4	III	125.38	9915	16411	19386	22481			
	12	51389	2.2	III	143.91	10084	16411	19309	22481			
	12	54550	2.1	III	152.83	10054	16411	19266	22481			
	10	66259	1.7	II	185.66	10294	16411	19103	22481			
	7.3	86407	1.3	I	242.02	10176	16411	18745	22481			
	6.0	104954	1.1	I	294.01	10170	16411	18347	22481			
10	10	62500	3.6	III	175.05	14917	22931	26977	29225	SK 9382 - 132 MP/4	1618	250
	8.6	73080	2.7	III	204.68	15361	22931	26977	29225			
	6.1	103891	2.0	III	291.25	16036	22931	26977	29225			
	5.0	125751	1.8	II	352.36	16537	22931	26977	29225			
10	3.9	160131	1.3	I	449.57	13228	22931	26977	29225	SK 9382/42 - 132 MP/4	1717	263
	2.9	219788	1.0	I	618.30	12652	22931	26977	29225			
	2.5	254075	0.8	*	715.38	12132	22931	26977	29225			
10	6.8	92251	2.4	III	258.35	31473	33721	31473	33721	SK 10382.1 - 132 MP/4	2341	254
	6.2	101397	2.4	III	283.96	31473	33721	31473	33721			
	5.7	111494	2.4	III	312.23	31473	33721	31473	33721			
	5.1	122547	2.4	III	343.19	31473	33721	31473	33721			
15	376	2517	3.6	III	4.70	1379	2345	3088	5136	SK 4282 - 160 MP/4	326	206
	354	2671	3.4	III	5.00	1394	2384	3132	5208			
	325	2908	3.2	III	5.43	1415	2438	3195	5312			
	292	3243	3.3	III	6.06	1440	2508	3277	5445			
	248	3806	2.8	III	7.13	1473	2608	3396	5640			
	212	4451	2.5	III	8.33	1499	2701	3511	5826			
	192	4929	2.9	III	9.23	1552	2840	3617	6008			
	163	5786	2.6	III	10.85	1572	2937	3735	6200			
	140	6765	2.3	III	12.68	1581	3020	3846	6378			
	117	8114	2.0	III	15.20	1605	3162	3991	6617			
	97	9711	1.6	II	18.18	1597	3247	4112	6744			
	82	11461	1.3	I	21.45	1589	3343	4227	6744			
	79	11952	1.3	I	22.39	1547	3268	4224	6744			
	67	14020	1.0	I	26.25	1539	3325	4340	6744			
67	14106	1.1	I	26.43	1513	3280	4324	6744				
55	17256	0.8	*	32.34	1420	3176	4408	6744				
15	136	6943	3.4	III	13.00	2604	4953	5756	8992	SK 5282 - 160 MP/4	406	214
	115	8217	2.8	III	15.38	2693	5289	5995	8992			
	100	9407	2.6	III	17.59	2747	5541	6177	8992			
	94	10075	2.3	III	18.88	2799	5654	6293	8992			
	87	10872	2.5	III	20.36	2796	5686	6368	8992			
	71	13330	1.9	II	25.00	2883	5925	6663	8992			
	58	16276	1.6	II	30.50	2911	6080	6911	8992			
	53	17843	1.1	I	33.43	2853	5776	6941	8992			
	43	21786	1.0	I	40.80	2812	5781	7140	8992			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page	
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]				
15	77	12234	3.3	III	22.95	4696	8261	10055	13489	SK 6282 - 160 MP/4	591	222	
	68	13897	2.9	III	26.05	4807	8530	10357	13489				
	59	15966	2.5	III	29.90	4918	8781	10685	13489				
	45	21067	1.3	I	39.48	4998	9109	11239	13489				
	36	26594	1.3	I	49.75	5120	9476	11779	13489				
	29	32607	1.2	I	61.08	5218	9802	12048	13489				
15	42	22653	1.8	II	42.46	5027	9209	11396	13489	SK 6382 - 160 MP/4	584	226	
	35	27248	1.7	II	51.07	5069	9431	11780	13489				
	30	31862	1.5	II	59.66	5065	9573	12056	13489				
	24	39215	1.3	I	73.50	4984	9676	11883	13489				
	24	40221	1.3	I	75.18	5048	9789	11861	13489				
	19	49502	1.1	I	92.63	4863	9773	11311	13489				
15	15	61312	0.8	*	114.79	3285	9580	10075	13489				
	15	48	19880	2.9	III	37.27	5705	10470	13376	17985	SK 7282 - 160 MP/4	730	230
		39	24068	1.6	II	45.02	5821	10810	13919	17985			
		39	24387	2.1	III	45.67	5935	10980	14052	17985			
		31	30392	1.6	II	56.91	6009	11307	14119	17985			
		25	37282	1.4	II	69.73	6170	11755	14016	17985			
15	38	24923	2.5	III	46.66	5889	10939	14063	17985	SK 7382 - 160 MP/4	745	234	
	33	28532	2.2	III	53.38	5976	11195	14147	17985				
	30	31792	2.0	III	59.52	5973	11306	14096	17985				
	26	36396	1.8	II	68.10	6008	11503	14022	17985				
	22	42063	1.6	II	78.81	6007	11672	13922	17985				
	19	49701	1.3	I	93.18	6037	11921	13772	17985				
	17	56899	1.2	I	106.59	5948	11977	13608	17985				
	14	65758	1.0	I	123.37	5788	11959	13378	17985				
	12	80286	0.8	*	150.57	5435	11774	12931	17985				
15	45	20892	4.0	III	39.11	7307	12746	16316	22481	SK 8282 - 160 MP/4	1012	238	
	37	25376	3.7	III	47.51	7630	13519	17136	22481				
	30	31733	1.8	II	59.44	7877	14114	18001	22481				
	25	38544	1.8	II	72.21	8152	14732	18838	22481				
15	31	30614	3.5	III	57.43	7833	14012	17856	22481	SK 8382 - 160 MP/4	1021	242	
	27	34801	2.9	III	65.22	7982	14371	18372	22481				
	23	40434	2.6	III	75.69	8131	14768	18970	22481				
	19	48493	2.2	III	90.94	8264	15201	19341	22481				
	17	55083	1.9	II	103.21	8319	15463	19259	22481				
	15	63282	1.7	II	118.47	8335	15700	19145	22481				
	14	66906	1.6	II	125.38	8439	15929	19093	22481				
	12	76865	1.4	II	143.91	8390	16098	18928	22481				
	12	81594	1.4	II	152.83	8210	15962	18837	22481				
	10	99108	1.1	I	185.66	8112	16188	18482	22481				
	7.3	129245	0.9	*	242.02	7261	15587	17691	22481				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

15, 20 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
15	18	53783	4.2	III	100.89	12304	22328	24874	29225	SK 9382 - 160 MP/4	1687	250
	15	61698	3.6	III	115.57	12616	22931	25667	29225			
	13	72459	3.1	III	135.90	12950	22931	26590	29225			
	12	77234	2.8	III	144.69	12943	22931	26839	29225			
	10	93485	2.4	III	175.05	13382	22931	26977	29225			
	8.6	109310	1.8	II	204.68	13568	22931	26977	29225			
	6.1	155396	1.4	II	291.25	13408	22931	26977	29225			
	5.0	188094	1.2	I	352.36	13462	22931	26977	29225			
15	8.8	106707	2.0	III	200.69	10665	20592	24201	29225	SK 9382/52 - 160 MP/4	1850	263
	7.6	124162	1.7	II	233.17	10613	20854	24749	29225			
	6.0	156567	1.4	II	294.54	10331	21018	25450	29225			
	4.3	218464	1.0	I	411.63	9704	21050	26349	29225			
15	11	83950	4.4	III	157.18	31473	33721	31473	33721	SK 10382.1 - 160 MP/4	2410	254
	10	92272	4.4	III	172.76	31473	33721	31473	33721			
	9.5	99852	3.9	III	186.95	31473	33721	31473	33721			
	8.6	109795	3.4	III	205.57	31473	33721	31473	33721			
	7.8	120680	3.4	III	225.94	31473	33721	31473	33721			
	6.9	137986	1.6	II	258.35	31473	33721	31473	33721			
	6.2	151665	1.6	II	283.96	31473	33721	31473	33721			
	5.7	166769	1.6	II	312.23	31473	33721	31473	33721			
	5.2	183302	1.6	II	343.19	31473	33721	31473	33721			
20	377	3347	2.7	III	4.70	1278	2163	2999	4980	SK 4282 - 160 LP/4	390	206
	355	3551	2.6	III	5.00	1287	2189	3037	5043			
	326	3866	2.4	III	5.43	1299	2225	3093	5132			
	292	4312	2.5	III	6.06	1311	2267	3162	5245			
	249	5061	2.1	III	7.13	1322	2320	3262	5405			
	213	5918	1.9	II	8.33	1323	2359	3355	5552			
	192	6554	2.2	III	9.23	1369	2480	3455	5726			
	164	7692	2.0	III	10.85	1357	2505	3546	5869			
	140	8995	1.7	II	12.68	1331	2505	3625	5992			
	117	10789	1.5	II	15.20	1315	2546	3733	6170			
	98	12912	1.2	I	18.18	1253	2500	3807	6283			
	83	15239	1.0	I	21.45	1193	2460	3876	6394			
	79	15891	0.9	*	22.39	1124	2331	3850	6337			
	68	18641	0.8	*	26.25	1062	2296	3917	6452			
	67	18755	0.8	*	26.43	1026	2220	3893	6403			
20	248	5091	3.8	III	7.17	2159	3773	4844	8008	SK 5282 - 160 LP/4	470	214
	204	6171	3.4	III	8.70	2232	3995	5065	8386			
	187	6726	3.0	III	9.46	2298	4161	5196	8603			
	166	7616	2.9	III	10.71	2341	4316	5343	8855			
	137	9232	2.5	III	13.00	2398	4556	5567	8992			
	115	10925	2.1	III	15.38	2455	4805	5776	8992			
	101	12508	1.9	II	17.59	2475	4972	5926	8992			
	94	13396	1.7	II	18.88	2518	5132	6033	8992			
	87	14455	1.9	II	20.36	2482	5140	6079	8992			
	71	17724	1.4	II	25.00	2511	5370	6321	8992			
	58	21640	1.2	I	30.50	2457	5404	6495	8992			
	53	23724	0.9	*	33.43	2336	4918	6459	8992			
	44	28966	0.8	*	40.80	2181	4733	6553	8992			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
20	120	10510	3.8	III	14.83	4010	6516	8783	12358	SK 6282 - 160 LP/4	655	222
	95	13266	3.0	III	18.70	4194	7069	9282	13082			
	77	16266	2.5	III	22.95	4358	7626	9740	13489			
	68	18477	2.2	III	26.05	4422	7943	10000	13489			
	59	21227	1.9	II	29.90	4477	8200	10276	13489			
	45	28010	1.0	I	39.48	4384	8300	10671	13489			
	36	35358	1.0	I	49.75	4363	8481	11080	13489			
	29	43354	0.9	*	61.08	4322	8624	11438	13489			
20	73	17341	2.4	III	24.42	4308	7627	9796	13489	SK 6382 - 160 LP/4	648	226
	62	20354	2.0	III	28.72	4364	7992	10105	13489			
	57	21944	1.8	II	30.91	4380	8097	10245	13489			
	49	25757	1.6	II	36.34	4393	8241	10531	13489			
	42	30119	1.3	I	42.46	4367	8339	10786	13489			
	35	36228	1.2	I	51.07	4276	8386	11048	13489			
	30	42363	1.1	I	59.66	4138	8353	11227	13489			
	24	52140	0.9	*	73.50	3844	8177	11070	13489			
	24	53476	1.0	I	75.18	3906	8289	10940	13489			
	19	65817	0.8	*	92.63	0	7928	9484	13489			
20	66	19096	2.7	III	26.89	5066	8758	12091	17502	SK 7282 - 160 LP/4	794	230
	51	24637	2.1	III	34.64	5236	9479	12784	17985			
	48	26432	2.2	III	37.27	5206	9554	12912	17985			
	39	32001	1.2	I	45.02	5204	9948	13347	17985			
	39	32425	1.6	II	45.67	5344	10185	13504	17985			
	31	40409	1.2	I	56.91	5250	10284	13950	17985			
	25	49569	1.0	I	69.73	5270	10544	13782	17985			
20	58	21650	2.7	III	30.42	5064	8943	12350	17910	SK 7382 - 160 LP/4	809	234
	48	26242	2.2	III	36.92	5156	9445	12851	17985			
	38	33137	1.9	II	46.66	5266	10098	13484	17985			
	33	37936	1.7	II	53.38	5263	10235	13806	17985			
	30	42270	1.5	II	59.52	5160	10210	13918	17985			
	26	48392	1.3	I	68.10	5078	10251	13796	17985			
	23	55926	1.2	I	78.81	4933	10226	13626	17985			
	19	66081	1.0	I	93.18	4799	10255	13369	17985			
	17	75651	0.9	*	106.59	4531	10071	13083	17985			
	14	87430	0.8	*	123.37	4151	9758	12679	17985			
20	45	27778	3.0	III	39.11	6833	11867	15878	22481	SK 8282 - 160 LP/4	1076	238
	37	33740	2.8	III	47.51	7069	12783	16618	22481			
	30	42192	1.4	II	59.44	7159	13173	17341	22481			
	25	51248	1.4	II	72.21	7303	13619	18058	22481			
20	58	21897	4.9	III	30.92	6566	10936	15028	21872	SK 8382 - 160 LP/4	1085	242
	50	25442	4.2	III	35.88	6739	11516	15564	22481			
	41	30903	3.0	III	43.59	6988	12404	16303	22481			
	37	33940	3.2	III	47.80	7017	12699	16588	22481			
	31	40704	2.6	III	57.43	7141	13103	17219	22481			
	27	46270	2.2	III	65.22	7196	13340	17649	22481			
	23	53761	2.0	III	75.69	7219	13572	18132	22481			
	20	64475	1.7	II	90.94	7172	13767	18674	22481			
	17	73237	1.5	II	103.21	7079	13837	18987	22481			
	15	84138	1.3	I	118.47	6911	13834	18789	22481			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



20, 25 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
20	14	88957	1.2	I	125.38	6971	14007	18699	22481	SK 8382 - 160 LP/4	1085	242
	12	102198	1.1	I	143.91	6705	13891	18412	22481			
	12	108486	1.1	I	152.83	6377	13561	18256	22481			
	10	131772	0.9	*	185.66	5942	13349	17622	22481			
20	21	59078	3.6	III	83.19	11013	20233	23009	29225	SK 9382 - 160 LP/4	1751	250
	18	71509	3.1	III	100.89	11422	21149	24058	29225			
	15	82032	2.7	III	115.57	11605	21673	24735	29225			
	13	96340	2.3	III	135.90	11764	22228	25499	29225			
	12	102688	2.1	III	144.69	11638	22194	25640	29225			
	10	124295	1.8	II	175.05	11857	22931	26616	29225			
	8.7	145337	1.3	I	204.68	11786	22931	26977	29225			
	6.1	206611	1.0	I	291.25	10794	22828	26977	29225			
	5.0	250085	0.9	*	352.36	10406	22883	26977	29225			
20	8.9	142002	1.5	II	200.69	8863	18186	22547	29150	SK 9382/52 - 160 LP/4	1914	263
	7.6	165231	1.3	I	233.17	8518	18058	22827	29225			
	6.0	208355	1.0	I	294.54	7691	17498	23031	29225			
20	11	111618	3.3	III	157.18	31473	33721	31473	33721	SK 10382.1 - 160 LP/4	2474	254
	10	122683	3.3	III	172.76	31473	33721	31473	33721			
	9.5	132761	2.9	III	186.95	31473	33721	31473	33721			
	8.6	145981	2.6	III	205.57	31473	33721	31473	33721			
	7.9	160454	2.6	III	225.94	31473	33721	31473	33721			
	6.9	183463	1.2	I	258.35	31473	33721	31473	33721			
	6.3	201651	1.2	I	283.96	31473	33721	31473	33721			
	5.7	221732	1.2	I	312.23	31473	33721	31473	33721			
	5.2	243714	1.2	I	343.19	31473	33721	31473	33721			
25	412	3820	3.6	III	4.32	1866	3102	4203	6940	SK 5282 - 180 MP/4	542	214
	354	4445	3.4	III	5.01	1922	3242	4360	7206			
	338	4665	3.3	III	5.29	1939	3287	4411	7292			
	313	5035	3.2	III	5.71	1966	3358	4491	7428			
	281	5605	3.3	III	6.33	2001	3457	4603	7620			
	248	6346	3.0	III	7.17	2038	3572	4733	7843			
	205	7693	2.7	III	8.70	2086	3746	4931	8187			
	188	8384	2.4	III	9.46	2148	3900	5058	8398			
	166	9494	2.3	III	10.71	2172	4014	5187	8623			
	137	11507	2.0	III	13.00	2193	4177	5378	8964			
	116	13618	1.7	II	15.38	2218	4351	5558	8992			
	101	15591	1.6	II	17.59	2204	4437	5677	8992			
	94	16698	1.4	II	18.88	2237	4565	5775	8992			
	87	18018	1.5	II	20.36	2169	4503	5793	8992			
71	22093	1.2	I	25.00	2140	4660	5980	8992				
25	168	9401	4.1	III	10.64	3587	5588	7952	11189	SK 6282 - 180 MP/4	728	222
	144	10923	3.6	III	12.35	3680	5841	8231	11594			
	120	13100	3.0	III	14.83	3779	6149	8567	12087			
	95	16536	2.4	III	18.70	3909	6592	9018	12749			
	78	20276	2.0	III	22.95	4021	7028	9427	13352			
	68	23032	1.7	II	26.05	4040	7239	9645	13489			
	60	26460	1.5	II	29.90	4038	7450	9869	13489			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
25	73	21615	1.9	II	24.42	3928	6951	9444	13403	SK 6382 - 180 MP/4	721	226
	62	25371	1.6	II	28.72	3919	7163	9693	13489			
	58	27353	1.5	II	30.91	3901	7249	9801	13489			
	49	32106	1.3	I	36.34	3830	7392	10011	13489			
	42	37543	1.1	I	42.46	3710	7460	10180	13489			
	35	45158	1.0	I	51.07	3488	7349	10321	13489			
	30	52806	0.9	*	59.66	3217	7141	10378	13489			
24	66658	0.8	*	75.18	0	6796	9364	13489				
25	89	17667	2.9	III	19.97	4554	7538	11033	15973	SK 7282 - 180 MP/4	866	230
	78	20267	2.5	III	22.87	4638	7831	11373	16485			
	66	23802	2.2	III	26.89	4718	8168	11766	17082			
	51	30709	1.7	II	34.64	4789	8672	12367	17985			
25	76	20784	2.8	III	23.46	4563	7738	11355	16476	SK 7382 - 180 MP/4	882	234
	66	23832	2.5	III	26.88	4617	7999	11678	16968			
	58	26986	2.2	III	30.42	4647	8224	11963	17408			
	48	32710	1.8	II	36.92	4653	8535	12383	17985			
	38	41305	1.5	II	46.66	4645	8954	12908	17985			
	33	47287	1.3	I	53.38	4554	9069	13148	17985			
	30	52689	1.2	I	59.52	4352	8929	13233	17985			
	26	60320	1.1	I	68.10	4153	8873	13397	17985			
	23	69712	0.9	*	78.81	3866	8688	13258	17985			
19	82369	0.8	*	93.18	3568	8569	12860	17985				
25	58	27295	3.9	III	30.92	6194	10319	14682	21421	SK 8382 - 180 MP/4	1157	242
	50	31714	3.4	III	35.88	6307	10772	15164	22155			
	41	38521	2.4	III	43.59	6477	11467	15831	22481			
	37	42306	2.5	III	47.80	6442	11620	16058	22481			
	31	50737	2.1	III	57.43	6453	12109	16585	22481			
	27	57675	1.7	II	65.22	6415	12314	16930	22481			
	24	67012	1.6	II	75.69	6311	12382	17298	22481			
	20	80367	1.3	I	90.94	6085	12343	17677	22481			
	17	91289	1.2	I	103.21	5846	12221	17887	22481			
	15	104877	1.1	I	118.47	5495	11979	18049	22481			
	14	110884	1.0	I	125.38	5512	12096	18202	22481			
12	127389	0.9	*	143.91	5029	11698	17753	22481				
25	27	57656	3.7	III	65.25	9976	18412	21233	27042	SK 9382 - 180 MP/4	1823	250
	25	63880	3.3	III	72.19	10108	18767	21692	27653			
	21	73640	2.9	III	83.19	10262	19229	22316	28490			
	18	89135	2.5	III	100.89	10544	19977	23248	29225			
	15	102252	2.2	III	115.57	10601	20331	23808	29225			
	13	120087	1.9	II	135.90	10587	20654	24412	29225			
	12	128000	1.7	II	144.69	10340	20460	24444	29225			
	10	154933	1.5	II	175.05	10339	20908	25220	29225			
25	8.9	177100	1.2	I	200.69	7070	15794	20901	27267	SK 9382/52 - 180 MP/4	1986	263
	7.6	206070	1.0	I	233.17	6434	15278	20916	27442			
	6.1	259851	0.8	*	294.54	5066	13997	20626	27365			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



25, 30 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
25	20	77294	4.7	III	87.32	31473	33721	31473	33721	SK 10382.1 - 180 MP/4	2546	254
	19	84957	4.6	III	95.98	31473	33721	31473	33721			
	16	99051	4.0	III	111.90	31473	33721	31473	33721			
	14	108915	3.4	III	123.04	31473	33721	31473	33721			
	13	119713	3.4	III	135.24	31473	33721	31473	33721			
	11	139130	2.7	III	157.18	31473	33721	31473	33721			
	10	152923	2.7	III	172.76	31473	33721	31473	33721			
30	412	4584	3.0	III	4.32	1794	2991	4138	6844	SK 5282 - 180 LP/4	542	214
	354	5334	2.8	III	5.01	1838	3111	4284	7095			
	338	5598	2.8	III	5.29	1852	3149	4331	7175			
	313	6042	2.6	III	5.71	1871	3208	4405	7301			
	281	6726	2.8	III	6.33	1895	3289	4507	7479			
	248	7616	2.5	III	7.17	1919	3378	4624	7683			
	205	9231	2.3	III	8.70	1941	3505	4800	7993			
	188	10061	2.0	III	9.46	2000	3648	4923	8199			
	166	11392	1.9	II	10.71	2004	3724	5033	8398			
	137	13809	1.7	II	13.00	1989	3817	5192	8690			
	116	16342	1.4	II	15.38	1982	3922	5344	8966			
	101	18709	1.3	I	17.59	1934	3937	5431	8992			
	94	20037	1.1	I	18.88	1957	4037	5519	8992			
87	21622	1.3	I	20.36	1857	3915	5508	8992				
71	26511	1.0	I	25.00	1769	3939	5642	8992				
30	190	9954	2.4	III	9.39	3279	5057	7516	10597	SK 6282 - 180 LP/4	728	222
	168	11281	3.4	III	10.64	3422	5348	7802	11000			
	144	13108	3.0	III	12.35	3489	5556	8056	11375			
	120	15720	2.5	III	14.83	3549	5797	8357	11823			
	95	19844	2.0	III	18.70	3626	6138	8759	12423			
	78	24331	1.6	II	22.95	3686	6464	9119	12966			
	68	27638	1.5	II	26.05	3659	6581	9295	13247			
	60	31752	1.3	I	29.90	3600	6673	9468	13489			
30	73	25938	1.6	II	24.42	3550	6315	9097	12968	SK 6382 - 180 LP/4	721	226
	62	30445	1.3	I	28.72	3475	6396	9286	13282			
	58	32823	1.2	I	30.91	3422	6411	9363	13416			
	49	38527	1.0	I	36.34	3268	6384	9497	13489			
	42	45052	0.9	*	42.46	3053	6259	9578	13489			
	35	54189	0.8	*	51.07	2697	5955	9597	13489			
	30	63367	0.8	*	59.66	1637	5534	9531	13489			
30	89	21201	2.4	III	19.97	4297	7141	10798	15669	SK 7282 - 180 LP/4	866	230
	78	24321	2.1	III	22.87	4344	7365	11103	16137			
	66	28563	1.8	II	26.89	4373	7606	11449	16673			
	51	36851	1.4	II	34.64	4343	7912	11957	17480			
30	76	24940	2.3	III	23.46	4244	7234	11062	16098	SK 7382 - 180 LP/4	882	234
	66	28598	2.0	III	26.88	4251	7408	11342	16535			
	58	32383	1.8	II	30.42	4233	7540	11582	16918			
	48	39253	1.5	II	36.92	4150	7681	11921	17473			
	38	49566	1.3	I	46.66	4025	7855	12339	17985			
	33	56744	1.1	I	53.38	3844	7789	12497	17985			
	30	63227	1.0	I	59.52	3542	7470	12490	17985			
	26	72384	0.9	*	68.10	3227	7192	12546	17985			
	23	83654	0.8	*	78.81	2795	6749	12535	17985			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
30	63	30115	2.9	III	28.33	5831	9613	14147	20667	SK 8282 - 180 LP/4	1149	238
	30	58 50	32754 38056	3.3 2.8	III III	30.92 35.88	5824 5877	9729 10065	14347 14774			
	41	46225	2.0	III	43.59	5969	10588	15369	22481			
	37	50767	2.1	III	47.80	5870	10614	15537	22481			
	31	60884	1.8	II	57.43	5765	10851	15960	22481			
	27	69210	1.4	II	65.22	5634	10942	16220	22481			
	24	80415	1.3	I	75.69	5404	10940	16474	22481			
	20	96441	1.1	I	90.94	4997	10733	16688	22481			
	17	109547	1.0	I	103.21	4610	10421	16763	22481			
	15	125853	0.9	*	118.47	4075	9890	16759	22481			
	14	133061	0.8	*	125.38	4047	10039	16928	22481			
30	37	51355	4.1	III	48.44	9075	16457	19480	24801	SK 9382 - 180 LP/4	1823	250
	32	58912	3.6	III	55.49	9239	17163	20050	25559			
	27	69188	3.1	III	65.25	9391	17633	20701	26434			
	25	76656	2.8	III	72.19	9461	17906	21103	26979			
	21	88368	2.4	III	83.19	9516	18237	21636	27713			
	18	106962	2.1	III	100.89	9672	18816	22451	28834			
	15	122702	1.8	II	115.57	9599	18997	22892	29225			
	13	144104	1.6	II	135.90	9410	19089	23339	29225			
	12	153600	1.4	II	144.69	9045	18734	23263	29225			
	10	185919	1.2	I	175.05	8821	18889	23835	29225			
30	25	76745	4.7	III	72.25	31473	33721	31473	33292	SK 10382.1 - 180 LP/4	2546	254
	22	84353	4.5	III	79.41	31473	33721	31473	33721			
	20	92753	3.9	III	87.32	31473	33721	31473	33721			
	19	101949	3.8	III	95.98	31473	33721	31473	33721			
	16	118861	3.4	III	111.90	31473	33721	31473	33721			
	14	130698	2.8	III	123.04	31473	33721	31473	33721			
	13	143655	2.8	III	135.24	31473	33721	31473	33721			
	11	166956	2.2	III	157.18	31473	33721	31473	33721			
	10	183508	2.2	III	172.76	31473	33721	31473	33721			
30	11	177576	3.6	III	167.17	35969	38218	35969	38218	SK 11382.1 - 180 LP/4	3869	258
40	407	6188	2.9	III	4.39	2689	3815	6130	8618	SK 6282 - 225 RP/4	1080	222
	365	6916	2.8	III	4.88	2743	3965	6292	8854			
	325	7751	2.6	III	5.50	2796	4113	6459	9097			
	309	8157	2.5	III	5.78	2817	4165	6534	9206			
	298	8463	2.5	III	5.99	2833	4202	6588	9285			
	265	9498	2.8	III	6.74	2877	4315	6755	9531			
	228	11036	2.2	III	7.82	2924	4456	6970	9849			
	190	13235	1.8	II	9.39	2962	4612	7223	10228			
	168	15000	2.5	III	10.64	3093	4876	7496	10615			
	145	17428	2.2	III	12.35	3106	4998	7702	10929			
	121	20901	1.9	II	14.83	3091	5114	7934	11291			
	96	26384	1.5	II	18.70	3062	5270	8237	11768			
	78	32351	1.2	I	22.95	3017	5403	8502	12190			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



40 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
40	207	12204	3.1	III	8.66	3400	5191	8565	12402	SK 7282 - 225 RP/4	1219	230
	189	13359	4.1	III	9.48	3519	5410	8810	12755			
	180	14000	2.7	III	9.92	3458	5353	8828	12798			
	160	15786	3.5	III	11.16	3593	5619	9139	13252			
	139	18198	2.9	III	12.89	3641	5787	9416	13672			
	110	22979	2.5	III	16.29	3722	6089	9892	14396			
	89	28189	1.8	II	19.97	3785	6369	10322	15054			
	78	32337	1.6	II	22.87	3757	6465	10558	15432			
66	37977	1.4	II	26.89	3684	6529	10810	15847				
40	76	33161	1.8	II	23.46	3607	6262	10472	15335	SK 7382 - 225 RP/4	1235	234
	66	38024	1.5	II	26.88	3521	6278	10665	15662			
	59	43057	1.4	II	30.42	3406	6247	10818	15930			
	48	52190	1.1	I	36.92	3149	6091	10997	16280			
	38	65902	1.0	I	46.66	2792	5859	11200	16694			
40	103	24584	3.5	III	17.40	4975	7746	12258	17901	SK 8282 - 225 RP/4	1501	238
	84	29861	3.1	III	21.13	5113	8152	12806	18731			
	73	34611	2.7	III	24.50	5157	8392	13182	19314			
	63	40041	2.2	III	28.33	5169	8600	13538	19874			
	40	48500	2.0	III	36.00	4700	7200	12000	16000			
40	58	43550	2.5	III	30.92	5086	8591	13669	20103	SK 8382 - 225 RP/4	1510	242
	50	50600	2.1	III	35.88	5020	8715	13987	20625			
	41	61461	1.5	II	43.59	4954	8937	14438	21359			
	37	67499	1.6	II	47.80	4728	8746	14492	21502			
	31	80952	1.3	I	57.43	4398	8569	14709	21935			
	27	92022	1.1	I	65.22	4080	8323	14799	22164			
	24	106919	1.0	I	75.69	3600	7879	14825	22333			
	20	128227	0.8	*	90.94	2834	7077	14713	22361			
40	50	50126	4.2	III	35.61	7984	13689	17585	22409	SK 9382 - 225 RP/4	2176	250
	43	59232	3.6	III	41.93	8125	14329	18187	23215			
	37	68281	3.1	III	48.44	8207	14859	18681	23885			
	32	78330	2.7	III	55.49	8244	15345	19135	24511			
	27	91992	2.3	III	65.25	8225	15862	19628	25206			
	25	101922	2.1	III	72.19	8170	16148	19915	25621			
	21	117494	1.8	II	83.19	8028	16249	20268	26151			
	18	142216	1.6	II	100.89	7932	16496	20853	27010			
	15	163145	1.4	II	115.57	7603	16339	21061	27383			
	13	191600	1.2	I	135.90	7068	15969	21190	27696			
40	32	78473	4.9	III	55.56	31473	33721	31473	30504	SK 10382.1 - 225 RP/4	2899	254
	29	86253	4.2	III	61.07	31473	33721	31473	31443			
	25	102040	3.5	III	72.25	31473	33721	31473	32465			
	22	112156	3.4	III	79.41	31473	33721	31473	33479			
	20	123325	3.0	III	87.32	31473	33721	31473	33721			
	19	135551	2.9	III	95.98	31473	33721	31473	33721			
	16	158038	2.5	III	111.90	31473	33721	31473	33721			
	15	173776	2.1	III	123.04	31473	33721	31473	33721			
	13	191003	2.1	III	135.24	31473	33721	31473	33721			
40	14	183637	3.4	III	130.02	35969	38218	35969	37527	SK 11382.1 - 225 RP/4	4222	258
	13	200183	3.1	III	141.74	35969	38218	35969	38218			
	11	236105	2.7	III	167.17	35969	38218	35969	38218			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
50	407	7735	2.3	III	4.39	2541	3597	5994	8449	SK 6282 - 225 SP/4	1113	222
	365	8644	2.2	III	4.88	2578	3713	6141	8664			
	325	9688	2.1	III	5.50	2610	3832	6290	8885			
	309	10196	2.0	III	5.78	2623	3884	6356	8983			
	298	10579	2.0	III	5.99	2631	3922	6403	9053			
	265	11873	2.2	III	6.74	2650	4013	6548	9271			
	228	13795	1.7	II	7.82	2660	4101	6730	9547			
	190	16544	1.5	II	9.39	2646	4180	6934	9866			
	168	18750	2.0	III	10.64	2765	4419	7196	10238			
	145	21785	1.8	II	12.35	2725	4460	7353	10491			
	121	26127	1.5	II	14.83	2634	4460	7515	10765			
	96	32980	1.2	I	18.70	2498	4449	7721	11120			
	78	40438	1.0	I	22.95	2348	4413	7888	11422			
	50	419	7529	4.3	III	4.26	2862	3944	7108			
337		9360	3.8	III	5.30	2973	4211	7487	10827			
281		11198	3.5	III	6.36	3052	4434	7801	11296			
238		13233	3.0	III	7.49	3111	4641	8090	11733			
207		15255	2.4	III	8.66	3148	4811	8334	12103			
189		16699	3.3	III	9.48	3262	5061	8575	12451			
180		17499	2.2	III	9.92	3169	4959	8562	12455			
160		19733	2.8	III	11.16	3290	5202	8861	12893			
139		22748	2.3	III	12.89	3291	5301	9096	13259			
110		28724	2.0	III	16.29	3291	5476	9496	13886			
89		35236	1.5	II	19.97	3274	5627	9852	14448			
78		40421	1.3	I	22.87	3171	5606	10019	14737			
66		47471	1.1	I	26.89	2996	5511	10178	15032			
50		76	41451	1.4	II	23.46	2970	5336	9887	14582	SK 7382 - 225 SP/4	1268
	66	47530	1.2	I	26.88	2790	5210	9995	14798			
	59	53821	1.1	I	30.42	2580	5033	10059	14953			
	48	65238	0.9	*	36.92	2147	4619	10078	15094			
	38	82378	0.8	*	46.66	1556	4045	10065	15230			
50	103	30730	2.8	III	17.40	4559	7168	11880	17410	SK 8282 - 225 SP/4	1534	238
	84	37326	2.5	III	21.13	4620	7452	12358	18148			
	73	43264	2.2	III	24.50	4586	7569	12662	18639			
	63	50051	1.8	II	28.33	4508	7634	12937	19094			
50	58	54437	2.0	III	30.92	4349	7509	12998	19233	SK 8382 - 225 SP/4	1543	242
	50	63249	1.7	II	35.88	4164	7444	13209	19614			
	41	76826	1.2	I	43.59	3940	7404	13517	20162			
	37	84374	1.3	I	47.80	3586	7025	13453	20155			
	31	101190	1.1	I	57.43	3028	6503	13464	20319			
	27	115028	0.9	*	65.22	2522	5984	13384	20327			
	24	133649	0.8	*	75.69	1790	5191	13180	20198			
50	66	47402	3.2	III	26.89	5901	9339	13799	17623	SK 9282 - 225 SP/4	2198	246
	58	54360	2.9	III	30.79	5947	9573	14158	18111			
	52	60666	2.4	III	34.38	5961	9740	14433	18491			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



50, 60 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN}	F_{AN}	F_{RVL}	F_{AVL}			
						OHL [lb]	Thrust [lb]	OHL [lb]	Thrust [lb]			
50	50	62657	3.4	III	35.61	7349	12663	17007	21748	SK 9382 - 225 SP/4	2209	250
	43	74040	2.9	III	41.93	7376	13075	17504	22434			
	37	85352	2.5	III	48.44	7342	13373	17892	22985			
	32	97912	2.2	III	55.49	7253	13592	18230	23479			
	27	114990	1.9	II	65.25	7061	13736	18566	23994			
	25	127403	1.7	II	72.19	6879	13747	18739	24278			
	21	146867	1.4	II	83.19	6541	13629	18913	24601			
	18	177770	1.3	I	100.89	6190	13718	19263	25197			
	15	203931	1.1	I	115.57	5606	13202	19239	25305			
	13	239501	0.9	*	135.90	4722	12267	19049	25257			
50	40	78913	4.3	III	44.70	31473	33721	31473	28407	SK 10382.1 - 225 SP/4	2932	254
	38	83645	4.0	III	47.38	31473	33721	31473	29031			
	32	98092	3.9	III	55.56	31473	33721	31473	29886			
	29	107816	3.4	III	61.07	31473	33721	31473	30822			
	25	127550	2.8	III	72.25	31473	33721	31473	31661			
	22	140195	2.7	III	79.41	31473	33721	31473	32671			
	20	154156	2.4	III	87.32	31473	33721	31473	32907			
	19	169439	2.3	III	95.98	31473	33721	31473	33721			
	16	197547	2.0	III	111.90	31473	33721	31473	33721			
	15	217220	1.7	II	123.04	31473	33721	31473	33721			
13	238754	1.7	II	135.24	31473	33721	31473	33721				
50	25	127788	4.5	III	72.38	35969	38218	35969	32090	SK 11382.1 - 225 SP/4	4255	258
	22	141139	4.4	III	79.95	35969	38218	35969	32405			
	20	154510	4.4	III	87.52	35969	38218	35969	33377			
	18	179688	3.3	III	101.78	35969	38218	35969	34485			
	16	197382	3.1	III	111.80	35969	38218	35969	35355			
	14	229547	2.7	III	130.02	35969	38218	35969	36459			
	13	250228	2.5	III	141.74	35969	38218	35969	37072			
	11	295132	2.2	III	167.17	35969	38218	35969	38204			
60	407	9282	1.9	II	4.39	2394	3384	5859	8280	SK 6282 - 225 MP/4	1191	222
	365	10373	1.8	II	4.88	2413	3469	5990	8475			
	325	11626	1.7	II	5.50	2425	3552	6121	8672			
	309	12236	1.7	II	5.78	2428	3587	6178	8759			
	298	12695	1.7	II	5.99	2429	3611	6219	8821			
	265	14247	1.9	II	6.74	2423	3679	6341	9011			
	228	16554	1.4	II	7.82	2397	3748	6489	9245			
	168	22500	1.7	II	10.64	2436	3973	6895	9861			
	145	26142	1.5	II	12.35	2344	3938	7004	10053			
60	419	9035	3.5	III	4.26	2738	3774	6993	10116	SK 7282 - 225 MP/4	1329	230
	355	10666	3.3	III	5.04	2801	3941	7262	10518			
	337	11232	3.2	III	5.30	2818	3992	7345	10644			
	300	12622	3.0	III	5.98	2852	4105	7532	10926			
	281	13438	2.9	III	6.36	2866	4164	7631	11077			
	238	15879	2.5	III	7.49	2892	4310	7890	11474			
	207	18305	2.0	III	8.66	2895	4419	8102	11805			
	189	20039	2.8	III	9.48	3006	4668	8339	12147			
	180	20999	1.8	II	9.92	2879	4505	8297	12113			
	160	23679	2.3	III	11.16	2986	4791	8583	12534			
	139	27297	1.9	II	12.89	2942	4823	8775	12845			
	110	34469	1.7	II	16.29	2859	4878	9100	13375			
	89	42283	1.2	I	19.97	2763	4909	9382	13843			
	78	48505	1.1	I	22.87	2584	4778	9480	14043			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
60	76	49741	1.2	I	23.46	2333	4446	9303	13828	SK 7382 - 225 MP/4	1345	234
	66	57036	1.0	I	26.88	2060	4189	9326	13934			
	59	64585	0.9	*	30.42	1753	3880	9300	13974			
60	185	20484	2.8	III	9.67	3976	5829	10199	14906	SK 8282 - 225 MP/4	1612	238
	164	23047	4.0	III	10.86	4116	6173	10542	15411			
	137	27512	3.3	III	12.96	4159	6374	10920	15996			
	118	32172	2.6	III	15.18	4167	6512	11239	16497			
	103	36876	2.3	III	17.40	4143	6601	11502	16918			
	84	44791	2.1	III	21.13	4127	6770	11909	17567			
	73	51917	1.8	II	24.50	4015	6770	12143	17965			
60	58	65324	1.6	II	30.92	3612	6470	12329	18363	SK 8382 - 225 MP/4	1620	242
	50	75899	1.4	II	35.88	3308	6231	12431	18604			
	41	92191	1.0	I	43.59	2926	5958	12594	18965			
	37	101249	1.1	I	47.80	2443	5411	12415	18807			
60	77	49091	3.0	III	23.15	5426	8526	13037	16672	SK 9282 - 225 MP/4	2275	246
	66	56883	2.7	III	26.89	5442	8710	13379	17145			
	58	65232	2.4	III	30.79	5420	8845	13677	17564			
	52	72799	2.0	III	34.38	5373	8919	13896	17881			
60	50	75189	2.8	III	35.61	6716	11670	16428	21087	SK 9382 - 225 MP/4	2286	250
	43	88848	2.4	III	41.93	6625	11876	16819	21653			
	37	102422	2.1	III	48.44	6478	11963	17104	22085			
	32	117495	1.8	II	55.49	6261	11949	17327	22446			
	25	152883	1.4	II	72.19	5589	11560	17562	22933			
	21	176241	1.2	I	83.19	5053	11096	17557	23052			
	18	213325	1.1	I	100.89	4448	10704	17674	23387			
	15	244717	0.9	*	115.57	3609	9780	17416	23227			
60	48	78352	4.5	III	36.98	31473	33721	31473	26718	SK 10382.1 - 225 MP/4	3009	254
	44	86120	4.1	III	40.65	31473	33721	31473	27548			
	40	94696	3.6	III	44.70	31473	33721	31473	27909			
	38	100374	3.4	III	47.38	31473	33721	31473	28549			
	32	117710	3.3	III	55.56	31473	33721	31473	29268			
	29	129380	2.8	III	61.07	31473	33721	31473	30202			
	25	153060	2.4	III	72.25	31473	33721	31473	30856			
	22	168234	2.3	III	79.41	31473	33721	31473	31864			
	20	184987	2.0	III	87.32	31473	33721	31473	31937			
	19	203326	1.9	II	95.98	31473	33721	31473	33000			
	60	27	138998	4.3	III	65.61	35969	38218	35969			
25		153346	3.7	III	72.38	35969	38218	35969	31496			
22		169366	3.7	III	79.95	35969	38218	35969	31660			
20		185412	3.7	III	87.52	35969	38218	35969	32628			
18		215626	2.8	III	101.78	35969	38218	35969	33614			
16		236858	2.6	III	111.80	35969	38218	35969	34436			
14		275456	2.3	III	130.02	35969	38218	35969	35388			
13		300274	2.1	III	141.74	35969	38218	35969	35907			
11		354158	1.8	II	167.17	35969	38218	35969	36832			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

75 hp Gearmotors





Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
75	395	11964	3.6	III	4.52	3370	4454	8403	12234	SK 8282 - 250 WP/4	1689	238
	258	18343	3.3	III	6.92	3556	4954	9240	13503			
	216	21896	2.9	III	8.26	3596	5140	9577	14022			
	185	25605	2.3	III	9.67	3605	5283	9863	14469			
	164	28809	3.2	III	10.86	3727	5575	10188	14950			
	137	34390	2.6	III	12.96	3694	5714	10496	15446			
	118	40215	2.1	III	15.18	3622	5789	10744	15855			
	103	46095	1.9	II	17.40	3519	5771	10935	16182			
	84	55989	1.7	II	21.13	3388	5775	11237	16694			
	73	64896	1.4	II	24.50	3158	5611	11364	16954			
75	333	14186	5.2	III	5.34	4019	5229	9098	11533	SK 9282 - 250 WP/4	2352	246
	309	15309	5.1	III	5.78	4081	5346	9269	11755			
	252	18769	4.8	III	7.06	4238	5663	9730	12354			
	206	22905	4.3	III	8.64	4374	5973	10181	12945			
	175	27029	3.5	III	10.18	4469	6224	10554	13436			
	148	31886	3.8	III	12.01	4660	6630	11024	14050			
	121	38911	3.3	III	14.70	4735	6934	11469	14648			
	103	45918	3.0	III	17.33	4761	7160	11821	15129			
	89	53207	2.6	III	20.13	4748	7329	12114	15538			
	77	61363	2.4	III	23.15	4832	7667	12494	16054			
	66	71103	2.1	III	26.89	4753	7778	12750	16429			
	58	81540	1.9	II	30.79	4630	7775	12956	16742			
	52	90999	1.6	II	34.38	4491	7720	13092	16963			
75	50	93986	2.3	III	35.61	5764	10237	15560	20096	SK 9382 - 250 WP/4	2363	250
	43	111060	1.9	II	41.93	5501	10159	15794	20481			
	37	128028	1.7	II	48.44	5182	9965	15922	20734			
	32	146868	1.4	II	55.49	4774	9643	15970	20896			
	25	191104	1.1	I	72.19	3654	8561	15797	20918			
	21	220301	1.0	I	83.19	2823	7666	15523	20728			
	18	266656	0.8	*	100.89	1836	6704	15292	20669			
75	146	32361	5.8	III	12.22	26083	33721	31473	20005	SK 10382.1 - 250 WP/4	3087	254
	128	37000	5.8	III	13.97	26989	33721	31473	20630			
	116	40668	5.8	III	15.36	27734	33721	31473	21252			
	102	46324	5.8	III	17.49	28637	33721	31473	21855			
	93	50917	5.8	III	19.23	29420	33721	31473	22520			
	81	58434	5.8	III	22.07	30398	33721	31473	23156			
	74	64227	5.4	III	24.25	31222	33721	31473	23868			
	63	75321	5.1	III	28.44	31473	33721	31473	24602			
	57	82788	4.2	III	31.26	31473	33721	31473	25369			
	48	97940	3.6	III	36.98	31473	33721	31473	26099			
	44	107650	3.3	III	40.65	31473	33721	31473	26927			
	40	118370	2.9	III	44.70	31473	33721	31473	27162			
	38	125468	2.7	III	47.38	31473	33721	31473	27827			
	32	147138	2.6	III	55.56	31473	33721	31473	28340			
	29	161725	2.3	III	61.07	31473	33721	31473	29271			
	25	191325	1.9	II	72.25	31473	33721	31473	29649			
	22	210292	1.8	II	79.41	31473	33721	31473	30652			
	20	231234	1.6	II	87.32	31473	33721	31473	30477			
	19	254158	1.5	II	95.98	31369	33721	31369	31537			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
						75	35 32 27 25 22 20 18 16 14 13 11	136473 149402 173748 191682 211708 231765 269532 296073 344320 375342 442697	4.5 4.5 3.4 3.0 2.9 2.9 2.2 2.1 1.8 1.7 1.4			
100	396 258 216 185 164 138 118 103 85 73	15926 24416 29146 34082 38348 45777 53530 61357 74527 86383	2.7 2.5 2.2 1.7 2.4 2.0 1.6 1.4 1.3 1.1	III III III II III III II II I I	4.52 6.92 8.26 9.67 10.86 12.96 15.18 17.40 21.13 24.50	3081 3114 3069 2989 3078 2920 2717 2482 2161 1736	4086 4361 4417 4422 4641 4576 4439 4244 3999 3566	8138 8836 9095 9300 9594 9790 9919 9989 10117 10066	11889 12977 13395 13737 14180 14527 14782 14953 15239 15268	SK 8282 - 280 SP/4	2064	238
100	334 309 252 207 175 148 122 103 89 77 67 58 52	18883 20378 24983 30488 35978 42443 51795 61122 70823 81681 94645 108538 121129	3.9 3.8 3.6 3.2 2.7 2.9 2.5 2.2 2.0 1.8 1.6 1.5 1.2	III III III III III III III III III III II II I	5.34 5.78 7.06 8.64 10.18 12.01 14.70 17.33 20.13 23.15 26.89 30.79 34.38	3761 3803 3897 3959 3979 4122 4079 3987 3852 3843 3607 3317 3027	4910 5000 5230 5432 5574 5897 6016 6053 6024 6186 6037 5805 5542	8861 9013 9417 9801 10105 10530 10867 11112 11293 11588 11701 11753 11751	11260 11460 11994 12507 12920 13485 13960 14318 14599 15021 15232 15371 15435	SK 9282 - 280 SP/4	2727	246
100	50 43 37 32 25	125105 147832 170417 195496 254378	1.7 1.4 1.2 1.1 0.8	II II I I *	35.61 41.93 48.44 55.49 72.19	4182 3633 3029 2305 442	7975 7479 6881 6124 4001	14113 14086 13953 13713 12864	18441 18529 18485 18317 17565	SK 9382 - 280 SP/4	2738	250
100	146 128 116 102 93 81 74 63 57 48	43075 49250 54133 61662 67775 77782 85493 100259 110198 130368	4.4 4.4 4.4 4.4 4.4 4.4 4.0 3.8 3.1 2.7	III III III III III III III III III III	12.22 13.97 15.36 17.49 19.23 22.07 24.25 28.44 31.26 36.98	25712 26548 27269 28088 28842 29708 30495 31473 31473 31473	33721 33721 33721 33721 33721 33721 33721 33721 33721 33721	31473 31473 31473 31473 31473 31473 31473 31473 31473 31473	19686 20232 20852 21360 22023 22533 23242 23803 24566 25063	SK 10382.1 - 280 SP/4	3461	254

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

100, 125 hp Gearmotors





Gearmotors

Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
100	44	143292	2.4	III	40.65	31473	33721	31473	25887	SK 10382.1 - 280 SP/4	3461	254
	40	157561	2.2	III	44.70	31473	33721	31473	25912			
	38	167009	2.0	III	47.38	31473	33721	31473	26615			
	32	195855	2.0	III	55.56	31473	33721	31473	26787			
	29	215271	1.7	II	61.07	31473	33721	31473	27712			
	25	254672	1.4	II	72.25	31351	33721	31351	27635			
	23	279919	1.4	II	79.41	30446	33721	30446	28629			
	20	307794	1.2	I	87.32	29310	33721	29310	28046			
	19	338309	1.2	I	95.98	27882	33721	27882	29094			
100	35	181659	3.4	III	51.54	35969	38218	35969	26861	SK 11382.1 - 280 SP/4	4784	258
	32	198868	3.4	III	56.42	35969	38218	35969	27703			
	27	231275	2.6	III	65.61	35969	38218	35969	28424			
	25	255148	2.2	III	72.38	35969	38218	35969	29109			
	22	281804	2.2	III	79.95	35969	38218	35969	28677			
	20	308501	2.2	III	87.52	35969	38218	35969	29626			
	18	358773	1.7	II	101.78	35969	38218	35969	30127			
	16	394102	1.5	II	111.80	35969	38218	35969	30757			
	14	458323	1.4	II	130.02	35969	38218	35969	31112			
	13	499617	1.3	I	141.74	35969	38218	35969	31247			
	11	589273	1.1	I	167.17	30574	38218	30574	31336			
125	334	23603	3.1	III	5.34	3504	4598	8627	10992	SK 9282 - 280 MP/4	2948	246
	309	25473	3.1	III	5.78	3526	4661	8761	11171			
	252	31229	2.9	III	7.06	3558	4807	9108	11639			
	207	38110	2.6	III	8.64	3544	4907	9423	12074			
	175	44973	2.1	III	10.18	3490	4946	9659	12410			
	148	53053	2.3	III	12.01	3585	5192	10040	12926			
	122	64743	2.0	III	14.70	3423	5142	10269	13277			
	103	76402	1.8	II	17.33	3213	5012	10406	13512			
	89	88529	1.6	II	20.13	2956	4810	10476	13665			
	77	102101	1.4	II	23.15	2854	4825	10685	13992			
	67	118307	1.3	I	26.89	2461	4460	10655	14041			
	58	135673	1.2	I	30.79	2002	4007	10553	14004			
125	146	53844	3.5	III	12.22	25353	33721	31473	19376	SK 10382.1 - 280 MP/4	3682	254
	128	61562	3.5	III	13.97	26120	33721	31473	19844			
	116	67666	3.5	III	15.36	26818	33721	31473	20463			
	102	77077	3.5	III	17.49	27552	33721	31473	20874			
	93	84718	3.5	III	19.23	28278	33721	31473	21535			
	81	97227	3.5	III	22.07	29033	33721	31473	21920			
	74	106866	3.2	III	24.25	29784	33721	31473	22627			
	63	125324	3.0	III	28.44	30621	33721	31473	23011			
	57	137748	2.5	III	31.26	31392	33721	31473	23772			
	48	162959	2.2	III	36.98	31473	33721	31473	24036			
	44	179115	2.0	III	40.65	31473	33721	31473	24855			
	40	196952	1.7	II	44.70	31473	33721	31473	24670			
	38	208762	1.6	II	47.38	31473	33721	31473	25411			
	32	244818	1.6	II	55.56	31473	33721	31473	25244			
	29	269089	1.4	II	61.07	30848	33721	30848	26162			
	25	318339	1.1	I	72.25	28840	33721	28840	25628			
	23	349899	1.1	I	79.41	27282	33721	27282	26615			
	20	384743	0.9	*	87.32	25264	33721	25264	25619			
	19	422886	0.9	*	95.98	22596	33721	22596	26659			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B ≥ 2.0 * = f_B < 1.0)





Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
125	70	112905	4.6	III	25.62	32769	38218	35969	22688	SK 11382.1 - 280 MP/4	5005	258
	63	125845	4.4	III	28.56	33697	38218	35969	23465			
	55	142517	3.9	III	32.35	34447	38218	35969	23765			
	50	156019	3.7	III	35.41	35260	38218	35969	24500			
	44	179892	3.3	III	40.83	35969	38218	35969	24772			
	40	196934	3.2	III	44.70	35969	38218	35969	25556			
	35	227073	2.7	III	51.54	35969	38218	35969	25664			
	32	248586	2.7	III	56.42	35969	38218	35969	26499			
	27	289094	2.1	III	65.61	35969	38218	35969	27024			
	25	318935	1.8	II	72.38	35969	38218	35969	27624			
	22	352255	1.8	II	79.95	35969	38218	35969	26819			
	20	385626	1.8	II	87.52	35969	38218	35969	27757			
	18	448467	1.3	I	101.78	35969	38218	35969	27953			
	16	492627	1.2	I	111.80	35969	38218	35969	28464			
	14	572904	1.1	I	130.02	31814	38218	31814	28445			
	13	624521	1.0	I	141.74	27583	38218	27583	28340			
11	736591	0.9	*	167.17	11855	38218	11855	27907				
150	334	28292	2.6	III	5.34	3248	4289	8392	10721	SK 9282 - 315 SP/4	3146	246
	310	30533	2.6	III	5.78	3249	4326	8508	10879			
	253	37433	2.4	III	7.06	3219	4391	8797	11283			
	207	45681	2.2	III	8.64	3131	4394	9045	11640			
	175	53907	1.8	II	10.18	3002	4336	9214	11898			
	149	63593	1.9	II	12.01	3049	4510	9549	12364			
	122	77605	1.7	II	14.70	2770	4305	9671	12593			
	103	91580	1.5	II	17.33	2442	4023	9701	12706			
	89	106116	1.3	I	20.13	2062	3667	9659	12732			
	77	122384	1.2	I	23.15	1868	3555	9783	12964			
	67	141809	1.1	I	26.89	1319	3004	9610	12849			
	58	162625	1.0	I	30.79	694	2359	9356	12640			
150	146	64540	2.9	III	12.22	24987	33721	31473	19062	SK 10382.1 - 315 SP/4	3880	254
	128	73792	2.9	III	13.97	25686	33721	31473	19450			
	117	81108	2.9	III	15.36	26360	33721	31473	20068			
	102	92389	2.9	III	17.49	27010	33721	31473	20383			
	93	101549	2.9	III	19.23	27706	33721	31473	21042			
	81	116542	2.9	III	22.07	28350	33721	31473	21303			
	74	128096	2.7	III	24.25	29064	33721	31473	22007			
	63	150220	2.5	III	28.44	29742	33721	31473	22218			
	57	165113	2.1	III	31.26	30467	33721	31473	22975			
	48	195333	1.8	II	36.98	31041	33721	31473	23005			
	44	214698	1.6	II	40.65	31473	33721	31473	23820			
	40	236078	1.4	II	44.70	31473	33721	31473	23426			
	38	250234	1.4	II	47.38	31473	33721	31473	24208			
	32	293454	1.3	I	55.56	29913	33721	29913	23699			
	29	322546	1.1	I	61.07	28645	33721	28645	24611			
	25	381581	0.9	*	72.25	25462	33721	25462	23622			
	23	419410	0.9	*	79.41	22863	33721	22863	24601			
	20	461176	0.8	*	87.32	19244	33721	19244	23197			
19	506896	0.8	*	95.98	13671	33721	13671	24227				

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

150, 175 hp Gearmotors



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight  [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
150	88	107675	4.5	III	20.39	30512	38218	35969	21117	SK 11382.1 - 315 SP/4	5203	258
	80	117876	4.3	III	22.32	31251	38218	35969	21759			
	70	135335	3.8	III	25.62	32031	38218	35969	22088			
	63	150846	3.6	III	28.56	32903	38218	35969	22850			
	55	170830	3.2	III	32.35	33517	38218	35969	23010			
	51	187014	3.1	III	35.41	34278	38218	35969	23740			
	44	215629	2.7	III	40.83	34892	38218	35969	23820			
	40	236057	2.7	III	44.70	35648	38218	35969	24597			
	35	272184	2.3	III	51.54	35969	38218	35969	24464			
	32	297969	2.3	III	56.42	35969	38218	35969	25291			
	27	346526	1.7	II	65.61	35969	38218	35969	25621			
	25	382294	1.5	II	72.38	35969	38218	35969	26138			
	22	422233	1.5	II	79.95	35969	38218	35969	24962			
	20	462234	1.5	II	87.52	35969	38218	35969	25888			
	18	537559	1.1	I	101.78	34231	38218	34231	25782			
	16	590492	1.0	I	111.80	30479	38218	30479	26172			
	14	686717	0.9	*	130.02	20717	38218	20717	25782			
13	748588	0.8	*	141.74	8252	38218	8252	25435				
175	334	33008	2.2	III	5.34	2991	3953	8158	10454	SK 9282 - 315 MP/4	3587	246
	310	35622	2.2	III	5.78	2972	3975	8256	10591			
	253	43672	2.1	III	7.06	2880	3983	8489	10929			
	207	53295	1.9	II	8.64	2717	3892	8668	11208			
	175	62892	1.5	II	10.18	2514	3741	8769	11387			
	149	74192	1.6	II	12.01	2512	3849	9060	11805			
	122	90539	1.4	II	14.70	2115	3498	9074	11911			
	103	106843	1.3	I	17.33	1669	3074	8996	11901			
	89	123802	1.1	I	20.13	1167	2577	8842	11799			
	77	142781	1.0	I	23.15	880	2351	8881	11936			
	67	165444	0.9	*	26.89	174	1580	8565	11659			
175	146	75297	2.5	III	12.22	24629	33721	31473	18751	SK 10382.1 - 315 MP/4	4321	254
	128	86091	2.5	III	13.97	25258	33721	31473	19063			
	117	94626	2.5	III	15.36	25910	33721	31473	19679			
	102	107788	2.5	III	17.49	26474	33721	31473	19898			
	93	118473	2.5	III	19.23	27141	33721	31473	20555			
	81	135966	2.5	III	22.07	27674	33721	31473	20691			
	74	149445	2.3	III	24.25	28352	33721	31473	21393			
	63	175257	2.2	III	28.44	28873	33721	31473	21429			
	57	192632	1.8	II	31.26	29551	33721	31473	22182			
	48	227888	1.6	II	36.98	29908	33721	31473	21979			
	44	250481	1.4	II	40.65	30569	33721	31473	22790			
	40	275424	1.2	I	44.70	30469	33721	30616	22186			
	175	109	100896	4.5	III	16.37	28568	38218	35969			
100		110454	4.3	III	17.93	29259	38218	35969	20372			
88		125621	3.8	III	20.39	29932	38218	35969	20643			
80		137522	3.7	III	22.32	30637	38218	35969	21283			
70		157891	3.3	III	25.62	31300	38218	35969	21494			
63		175987	3.1	III	28.56	32117	38218	35969	22242			
55		199302	2.8	III	32.35	32595	38218	35969	22259			
51		218183	2.7	III	35.41	33303	38218	35969	22985			

(AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)



Motor Power P_n [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in]	Service Factor f_B	AGMA Class	Gear Ratio i_{tot}	Standard Bearings		Heavy Duty Bearings (VL)		Model Type 	Weight [lb]	Dim. Page
						F_{RN} OHL [lb]	F_{AN} Thrust [lb]	F_{RVL} OHL [lb]	F_{AVL} Thrust [lb]			
175	44	251567	2.3	III	40.83	33730	38218	35969	22872	SK 11382.1 - 315 MP/4	5644	258
	40	275400	2.3	III	44.70	34421	38218	35969	23644			
	35	317547	1.9	II	51.54	34623	38218	35969	23268			
	32	347631	1.9	II	56.42	35276	38218	35969	24088			
	27	404280	1.5	II	65.61	35645	38218	35969	24222			
	25	446010	1.3	I	72.38	35969	38218	35969	24655			
200	334	37702	2.0	III	5.34	2735	3622	7924	10185	SK 9282 - 315 RP/4	3653	246
	310	40688	1.9	II	5.78	2696	3615	8003	10301			
	253	49883	1.8	II	7.06	2541	3539	8180	10574			
	207	60874	1.6	II	8.64	2304	3364	8291	10775			
	175	71836	1.3	I	10.18	2027	3121	8324	10877			
	149	84743	1.4	II	12.01	1977	3194	8571	11246			
	122	103416	1.3	I	14.70	1461	2682	8477	11229			
	103	122038	1.1	I	17.33	898	2096	8292	11096			
	89	141409	1.0	I	20.13	274	1436	8027	10867			
	77	163088	0.9	*	23.15	---	---	7980	10910			
	67	188974	0.8	*	26.89	---	---	7522	10470			
200	147	86006	2.2	III	12.22	24267	33721	31473	18439	SK 10382.1 - 315 RP/4	4387	254
	128	98335	2.2	III	13.97	24828	33721	31473	18674			
	117	108084	2.2	III	15.36	25456	33721	31473	19288			
	102	123117	2.2	III	17.49	25935	33721	31473	19410			
	93	135323	2.2	III	19.23	26574	33721	31473	20065			
	81	155303	2.2	III	22.07	26997	33721	31473	20076			
	74	170699	2.0	III	24.25	27639	33721	31473	20776			
	63	200182	1.9	II	28.44	27999	33721	31473	20639			
	57	220028	1.6	II	31.26	28630	33721	31473	21389			
	48	260298	1.4	II	36.98	28776	33721	31159	20952			
	44	286104	1.2	I	40.65	29376	33721	30207	21759			
	40	314595	1.1	I	44.70	29009	33721	29009	20945			
200	109	115245	3.9	III	16.37	28099	38218	35969	19389	SK 11382.1 - 315 RP/4	5710	258
	100	126163	3.8	III	17.93	28763	38218	35969	19988			
	88	143487	3.3	III	20.39	29348	38218	35969	20169			
	80	157080	3.2	III	22.32	30019	38218	35969	20805			
	70	180346	2.9	III	25.62	30567	38218	35969	20898			
	63	201015	2.7	III	28.56	31328	38218	35969	21631			
	55	227646	2.4	III	32.35	31672	38218	35969	21507			
	51	249212	2.3	III	35.41	32328	38218	35969	22228			
	44	287345	2.0	III	40.83	32563	38218	35969	21924			
	40	314567	2.0	III	44.70	33188	38218	35969	22690			
	35	362709	1.7	II	51.54	33155	38218	35969	22071			
	32	397071	1.7	II	56.42	33725	38218	35969	22885			
	27	461776	1.3	I	65.61	33839	38218	35969	22823			
	25	509441	1.1	I	72.38	34352	38218	35937	23172			

 (AGMA Class I = f_B 1.0 - 1.39 II = f_B 1.4 - 1.99 III = f_B \geq 2.0 * = f_B < 1.0)

Notes



A large grid of blue lines on a white background, intended for taking notes.



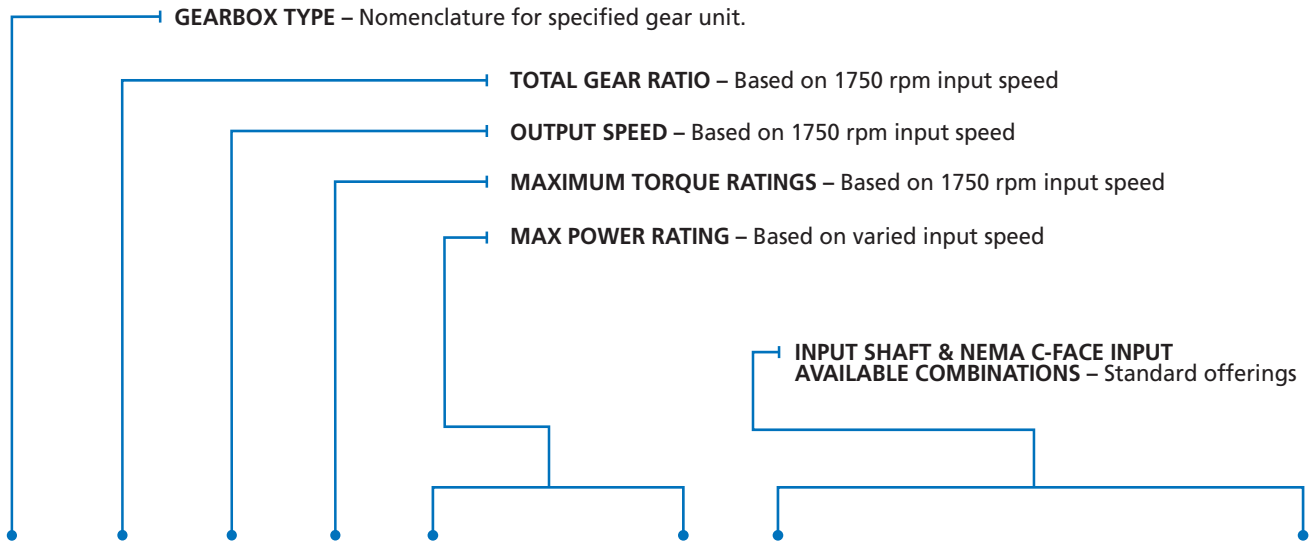
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NEMA Ratings Tables Overview



Explanation of NEMA C-Face Combination Tables



NEMA & W

Model Type	Gear Ratio i_{tot}	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations									
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	400TC	
SK 2282	4.51	388	1646	5.00	3.30	2.50	1.66	X	X	X	X*							
	5.72	306	1876	5.00	3.30	2.50	1.66	X	X	X	X	X*						
	6.43	272	2000	5.00	3.30	2.50	1.66	X	X	X	X							
	7.48	234	2151	5.00	3.30	2.50	1.66	X	X	X	X							
	Based upon 1750 rpm Input Speed			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	100 hp	
				Input Speed					C-face Adapter Maximum Input Power *									

INPUT SPEEDS = The speed in which the Max Power Rating is calculated

MAX INPUT POWER = Max input power that the C-Face adapter is able to handle

X = Available Combination



SK 0182NB - SK 0282NB NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations								
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	
SK 0182NB	4.24	413	646	1.50	1.00	0.75	0.50	X	X	X*							
	5.34	328	814	1.50	1.00	0.75	0.50	X	X	X*							
	6.35	276	974	1.50	1.00	0.75	0.50	X	X	X*							
	7.26	241	991	1.50	1.00	0.75	0.50	X	X	X*							
	8.64	203	1009	1.50	1.00	0.75	0.50	X	X	X*							
	9.49	184	974	1.50	1.00	0.75	0.50	X	X	X*							
	11.66	150	974	1.50	1.00	0.75	0.50	X	X	X*							
	13.84	126	974	1.50	1.00	0.75	0.50	X	X	X*							
	14.92	117	664	1.24	0.81	0.62	0.41	X	X	X*							
	16.53	106	885	1.49	0.98	0.74	0.49	X	X	X*							
	18.79	93	841	1.24	0.82	0.62	0.41	X	X	X*							
	22.35	78	965	1.20	0.79	0.60	0.40	X	X	X*							
	24.55	71	1027	1.16	0.76	0.58	0.38	X	X	X*							
	29.13	60	974	0.93	0.61	0.46	0.31	X	X*	X*							
	31.81	55	841	0.73	0.48	0.37	0.24	X	X*	X*							
	34.80	50	912	0.73	0.48	0.36	0.24	X	X*	X*							
	37.73	46	885	0.65	0.43	0.33	0.22	X	X*	X*							
41.85	42	752	0.50	0.33	0.25	0.17	X	X*									
49.65	35	885	0.49	0.33	0.25	0.16	X	X*									
59.33	29	974	0.46	0.30	0.23	0.15	X	X*									
81.71	21	575	0.20	0.13	0.10	0.06	X	X*									
SK 0282NB	4.03	434	912	2.00	1.50	1.00	0.75	X	X	X							
	4.66	376	974	2.00	1.50	1.00	0.75	X	X	X							
	5.17	338	1009	2.00	1.50	1.00	0.75	X	X	X							
	5.99	292	1071	2.00	1.50	1.00	0.75	X	X	X							
	6.44	272	1089	2.00	1.50	1.00	0.75	X	X	X							
	7.45	235	1159	2.00	1.50	1.00	0.75	X	X	X							
	8.80	199	1221	2.00	1.50	1.00	0.75	X	X	X							
	9.64	182	1248	2.00	1.50	1.00	0.75	X	X	X							
	10.98	159	1345	2.00	1.50	1.00	0.75	X	X	X							
	11.25	156	1239	2.00	1.50	1.00	0.75	X	X	X							
	12.98	135	1416	2.00	1.50	1.00	0.75	X	X	X							
	14.21	123	1443	2.00	1.50	1.00	0.75	X	X	X							
	16.58	106	1239	2.00	1.50	1.00	0.75	X	X	X							
	17.61	99	1142	1.80	1.18	0.90	0.60	X	X	X*							
	19.95	88	1142	1.59	1.04	0.79	0.53	X	X	X*							
	21.57	81	1239	1.59	1.05	0.80	0.53	X	X	X*							
	22.70	77	1142	1.40	0.92	0.70	0.46	X	X	X*							
	25.96	67	1142	1.22	0.80	0.61	0.40	X	X	X*							
	30.03	58	1142	1.06	0.69	0.53	0.35	X	X	X*							
	34.16	51	1354	1.10	0.72	0.55	0.36	X	X	X*							
	40.38	43	1460	1.00	0.66	0.50	0.33	X	X	X*							
	44.22	40	1451	0.91	0.60	0.46	0.30	X	X*	X*							
51.64	34	1292	0.69	0.46	0.35	0.23	X	X*	X*								
56.55	31	1416	0.70	0.46	0.35	0.23	X	X*	X*								
65.99	27	1239	0.52	0.34	0.26	0.17	X	X*	X*								
79.40	22	1142	0.40	0.26	0.20	0.13	X	X*	X*								
85.72	20	1239	0.40	0.26	0.20	0.13	X	X*									
103.12	17	1142	0.31	0.20	0.15	0.10	X	X*									
139.16	13	974	0.19	0.13	0.10	0.06	X	X*									
Based upon 1750 rpm				1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed				Input Speed					C-face Adapter Maximum Input Power *								

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight \square	W	56C	140TC
SK 0182NB	13	18	22
SK 0282NB	22	26	31

SK 1282 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 1282	4.79	365	1133	5.00	3.00	2.00	1.50	X	X	X	X						
	5.47	320	1522	5.00	3.00	2.00	1.50	X	X	X	X						
	6.43	272	1602	5.00	3.00	2.00	1.50	X	X	X	X						
	7.24	242	1655	5.00	3.00	2.00	1.50	X	X	X	X						
	8.21	213	1416	4.79	3.15	2.39	1.59	X	X	X	X*						
	8.24	212	1690	5.00	3.00	2.00	1.50	X	X	X	X						
	9.18	191	1673	5.00	3.00	2.00	1.50	X	X	X	X						
	10.34	169	1735	4.66	3.06	2.33	1.54	X	X	X	X*						
	11.76	149	1805	4.26	2.80	2.13	1.41	X	X	X	X*						
	14.11	124	1859	3.66	2.40	1.83	1.21	X	X	X	X*						
	17.21	102	1982	3.20	2.10	1.60	1.06	X	X	X	X*						
	20.57	85	1991	2.69	1.77	1.34	0.89	X	X	X	X*						
	25.22	69	1991	2.19	1.44	1.10	0.73	X	X	X	X*						
	28.33	62	1991	1.95	1.28	0.98	0.65	X	X	X*							
	32.08	55	2036	1.76	1.16	0.88	0.58	X	X	X*							
	41.07	43	1920	1.30	0.85	0.65	0.43	X	X	X*							
	46.19	38	1735	1.04	0.69	0.52	0.35	X	X								
	49.25	36	2301	1.30	0.85	0.65	0.43	X	X	X*							
	55.39	32	2080	1.04	0.69	0.52	0.35	X	X								
	58.89	30	2505	1.18	0.78	0.59	0.39	X	X	X*							
66.23	26	2390	1.00	0.66	0.50	0.33	X	X									
72.17	24	2620	1.01	0.66	0.50	0.33	X	X	X*								
81.17	22	2620	0.90	0.59	0.45	0.30	X	X*									
92.48	19	2053	0.62	0.41	0.31	0.20	X	X*									
109.50	16	1850	0.47	0.31	0.23	0.16	X	X*									
		Based upon 1750 rpm		1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
		Input Speed		Input Speed					C-face Adapter Maximum Input Power *								

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight	W	56C	140TC	180TC
SK 1282	40	42	51	66



SK 1382NB - SK 1282/03 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations								
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	
SK 1382NB	16.28	107	2044	3.49	2.29	1.74	1.16	X	X	X	X*						
	18.75	93	2151	3.19	2.09	1.59	1.06	X	X	X	X*						
	24.26	72	2451	2.81	1.84	1.40	0.93	X	X	X	X*						
	26.01	67	2398	2.56	1.68	1.28	0.85	X	X	X	X*						
	29.79	59	2496	2.33	1.53	1.16	0.77	X	X	X	X*						
	35.75	49	2655	2.06	1.36	1.03	0.68	X	X	X	X*						
	38.77	45	2867	2.05	1.35	1.03	0.68	X	X	X	X*						
	44.40	39	2982	1.86	1.23	0.93	0.62	X	X	X*	X*						
	53.28	33	3159	1.65	1.08	0.82	0.55	X	X	X*	X*						
	60.00	29	3275	1.52	1.00	0.76	0.50	X	X	X*	X*						
	68.23	26	3275	1.33	0.88	0.67	0.44	X	X	X*	X*						
	78.99	22	3275	1.15	0.76	0.58	0.38	X	X	X*	X*						
	88.94	20	3275	1.02	0.67	0.51	0.34	X	X	X*	X*						
	101.14	17	3275	0.90	0.59	0.45	0.30	X	X*	X*	X*						
	106.08	16	3275	0.86	0.56	0.43	0.28	X	X*	X*	X*						
	118.16	15	3275	0.77	0.51	0.38	0.26	X	X*	X*	X*						
	136.60	13	3275	0.67	0.44	0.33	0.22	X	X*	X*	X*						
	158.12	11	3275	0.58	0.38	0.29	0.19	X	X*	X*	X*						
203.60	8.6	3275	0.45	0.29	0.22	0.15	X	X*	X*	X*							
257.32	6.8	3275	0.35	0.23	0.18	0.12	X	X*	X*	X*							
301.82	5.8	3275	0.30	0.20	0.15	0.10	X	X*	X*	X*							
381.45	4.6	3275	0.24	0.16	0.12	0.08	X	X*	X*	X*							
SK 1282/02	229.08	7.6	2567	0.36	0.24	0.18	0.12	X	X*	X*	X*						
	283.85	6.2	2567	0.30	0.20	0.15	0.10	X	X*	X*	X*						
	328.02	5.3	2567	0.27	0.18	0.14	0.09	X	X*	X*	X*						
	405.75	4.3	2567	0.23	0.15	0.11	0.08	X	X*	X*	X*						
	546.50	3.2	2567	0.18	0.12	0.09	0.06	X	X*	X*	X*						
	663.69	2.6	2567	0.16	0.11	0.08	0.05	X	X*	X*	X*						
	826.23	2.1	2567	0.14	0.09	0.07	0.05	X	X*	X*	X*						
	1066.50	1.6	2567	0.12	0.08	0.06	0.04	X	X*	X*	X*						
	1362.13	1.3	2567	0.11	0.07	0.05	0.04	X	X*	X*	X*						
	1620.65	1.1	2567	0.10	0.06	0.05	0.03	X	X*	X*	X*						
	1968.10	0.89	2567	0.09	0.06	0.04	0.03	X	X*	X*	X*						
	2448.65	0.71	2567	0.08	0.05	0.04	0.03	X	X*	X*	X*						
	3608.19	0.49	2567	0.07	0.05	0.04	0.02	X	X*	X*	X*						
SK 1282/03	3857.30	0.45	2567	0.07	0.05	0.04	0.02	X	X*	X*	X*						
	4799.54	0.36	2567	0.07	0.05	0.03	0.02	X	X*	X*	X*						
	6961.55	0.25	2567	0.06	0.04	0.03	0.02	X	X*	X*	X*						
	8281.05	0.21	2567	0.06	0.04	0.03	0.02	X	X*	X*	X*						
	11478.84	0.15	2567	0.06	0.04	0.03	0.02	X	X*	X*	X*						
	14283.77	0.12	2567	0.06	0.04	0.03	0.02	X	X*	X*	X*						
Based upon 1750 rpm		Input Speed		1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	C-face Adapter Maximum Input Power *

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight $\frac{lb}{kg}$	W	56C	140TC	180TC
SK 1382NB	49	53	57	68
SK 1282/02	57	62	68	-

SK 2282 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations									
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC	280TC
SK 2282	4.51	388	1646	5.00	3.00	2.00	1.50	X	X	X	X	X*						
	5.72	306	1876	5.00	3.00	2.00	1.50	X	X	X	X	X*						
	6.43	272	2000	5.00	3.00	2.00	1.50	X	X	X	X							
	7.48	234	2151	5.00	3.00	2.00	1.50	X	X	X	X							
	8.37	209	2266	5.00	3.00	2.00	1.50	X	X	X	X							
	9.03	194	2965	5.00	3.00	2.00	1.50	X	X	X	X							
	10.15	172	3151	5.00	3.00	2.00	1.50	X	X	X	X							
	11.81	148	3398	5.00	3.00	2.00	1.50	X	X	X	X							
	13.23	132	3584	5.00	3.00	2.00	1.50	X	X	X	X							
	16.53	106	4168	5.00	3.00	2.00	1.50	X	X	X	X							
	18.51	95	4301	5.00	3.00	2.00	1.50	X	X	X	X							
	21.90	80	4248	5.00	3.00	2.00	1.50	X	X	X	X							
	23.96	73	3850	4.46	2.93	2.23	1.48	X	X	X	X*							
	24.97	70	4337	4.82	3.17	2.41	1.60	X	X	X	X*							
	26.83	65	3885	4.02	2.64	2.01	1.33	X	X	X	X*							
	29.65	59	4425	4.14	2.72	2.07	1.37	X	X	X	X*							
	31.23	56	3938	3.50	2.30	1.75	1.16	X	X	X	X*							
	36.54	48	4434	3.37	2.21	1.68	1.12	X	X	X	X*							
	37.18	47	4071	3.04	2.00	1.52	1.01	X	X	X								
	43.71	40	4983	3.17	2.08	1.58	1.05	X	X	X	X*							
	45.11	39	3983	2.45	1.61	1.23	0.81	X	X	X								
51.71	34	4611	2.48	1.63	1.24	0.82	X	X	X	X*								
53.96	32	4478	2.30	1.51	1.15	0.76	X	X	X									
63.83	27	4611	2.01	1.32	1.00	0.66	X	X	X									
69.67	25	3921	1.56	1.03	0.78	0.52	X	X	X*									
82.42	21	4221	1.42	0.93	0.71	0.47	X	X	X*									
100.98	17	3894	1.07	0.70	0.54	0.35	X	X	X*									
104.07	17	3513	0.94	0.62	0.47	0.31	X	X*	X*									
127.51	14	3363	0.73	0.48	0.37	0.24	X	X*	X*									
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp		
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *									

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight ^{lb}	W	56C	140TC	180TC	210TC
SK 2282	77	73	82	90	90




SK 2382 - SK 2282/03 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations							
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 2382	82.22	21	4965	1.50	1.00	0.75	0.50	X	X	X*						
	98.35	18	4983	1.41	0.92	0.70	0.47	X	X	X*						
	116.35	15	4611	1.10	0.72	0.55	0.36	X	X	X*						
	131.86	13	4611	0.97	0.64	0.49	0.32	X	X*	X*						
	149.96	12	4611	0.85	0.56	0.43	0.28	X	X*	X*						
	185.11	9.5	4611	0.69	0.45	0.35	0.23	X	X*	X*						
	236.11	7.4	4186	0.49	0.32	0.25	0.16	X	X*							
	276.27	6.3	4894	0.49	0.32	0.25	0.16	X	X*							
	330.45	5.3	4983	0.42	0.28	0.21	0.14	X	X*							
	390.93	4.5	4611	0.33	0.22	0.16	0.11	X	X*							
	482.56	3.6	4611	0.27	0.17	0.13	0.09	X	X*							
623.10	2.8	4611	0.21	0.14	0.10	0.07	X	X*								
763.41	2.3	3876	0.14	0.09	0.07	0.05	X	X*								
SK 2282/02	174.78	10	4602	0.50	0.33	0.25	0.16	X	X*	X*						
	215.75	8.1	4602	0.50	0.33	0.25	0.16	X	X*	X*						
	287.51	6.1	4602	0.50	0.33	0.25	0.16	X	X*	X*						
	356.28	4.9	4602	0.41	0.27	0.21	0.14	X	X*	X*						
	423.50	4.1	4602	0.35	0.23	0.18	0.12	X	X*	X*						
	514.51	3.4	4602	0.30	0.20	0.15	0.10	X	X*	X*						
	662.92	2.6	4602	0.25	0.16	0.12	0.08	X	X*	X*						
	824.77	2.1	4602	0.21	0.14	0.10	0.07	X	X*	X*						
	1064.71	1.6	4602	0.17	0.11	0.09	0.06	X	X*	X*						
	1423.06	1.2	4602	0.14	0.09	0.07	0.05	X	X*							
	1728.15	1.0	4602	0.13	0.08	0.06	0.04	X	X*							
	2133.20	0.82	4602	0.11	0.07	0.06	0.04	X	X*							
	2654.05	0.66	4602	0.10	0.07	0.05	0.03	X	X*							
3426.39	0.51	4602	0.09	0.06	0.05	0.03	X	X*								
SK 2282/03	4180.87	0.42	4602	0.08	0.06	0.04	0.03	X	X*							
	5202.15	0.34	4602	0.08	0.05	0.04	0.03	X	X*							
	6687.47	0.26	4602	0.07	0.05	0.04	0.02	X	X*							
	7955.13	0.22	4602	0.07	0.05	0.03	0.02	X	X*							
	10900.89	0.16	4602	0.07	0.04	0.03	0.02	X	X*							
	13565.15	0.13	4602	0.06	0.04	0.03	0.02	X	X*							
Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed			Input Speed				C-face Adapter Maximum Input Power *									

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight 	W	56C	140TC
SK 2382	49	53	57
SK 2282/02	57	62	66

SK 3282 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 3282	4.48	391	4080	10.00	7.50	5.00	3.00	X	X	X	X	X					
	5.74	305	4912	10.00	7.50	5.00	3.00	X	X	X	X	X					
	6.70	261	5372	10.00	7.50	5.00	3.00	X	X	X	X	X					
	8.31	211	5983	10.00	7.50	5.00	3.00	X	X	X	X	X					
	9.80	179	7425	10.00	7.50	5.00	3.00	X	X	X	X	X					
	11.38	154	7266	10.00	7.50	5.00	3.00	X	X	X	X	X					
	14.11	124	7584	10.00	7.50	5.00	3.00	X	X	X	X	X					
	16.67	105	7443	10.00	7.50	5.00	3.00	X	X	X	X	X					
	20.18	87	7275	10.00	7.50	5.00	3.00	X	X	X	X	X					
	21.38	82	6390	8.30	5.45	4.15	2.75	X	X	X	X	X*					
	22.45	78	7080	8.76	5.75	4.38	2.90	X	X	X	X	X*					
	23.71	74	7124	8.34	5.48	4.17	2.77	X	X	X	X	X*					
	25.88	68	7487	8.03	5.28	4.02	2.66	X	X	X	X	X*					
	28.70	61	7700	7.45	4.90	3.72	2.47	X	X	X	X	X*					
	31.93	55	7761	6.75	4.44	3.37	2.24	X	X	X	X	X*					
	37.77	46	7390	5.43	3.57	2.72	1.80	X	X	X	X						
	38.62	45	5611	4.03	2.65	2.02	1.34	X	X	X	X*						
	42.02	42	8222	5.43	3.57	2.72	1.80	X	X	X	X						
	44.85	39	6522	4.04	2.65	2.02	1.34	X	X	X	X*						
	48.04	36	4885	2.82	1.86	1.41	0.94	X	X	X							
	52.97	33	7478	3.92	2.58	1.96	1.30	X	X	X	X*						
55.79	31	5682	2.83	1.86	1.41	0.94	X	X	X								
64.12	27	8983	3.89	2.56	1.95	1.29	X	X	X	X*							
65.89	27	6708	2.83	1.86	1.41	0.94	X	X	X								
70.56	25	4991	1.96	1.29	0.98	0.65	X	X	X*								
79.76	22	7523	2.62	1.72	1.31	0.87	X	X	X								
88.74	20	8363	2.62	1.72	1.31	0.87	X	X	X								
100.88	17	7142	1.97	1.29	0.98	0.65	X	X	X*								
112.23	16	6815	1.69	1.11	0.84	0.56	X	X	X*								
Based upon 1750 rpm				1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed				Input Speed					C-face Adapter Maximum Input Power *								

[◇] The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight ^{lb}	W	56C	140TC	180TC	210TC
SK 3282	110	106	115	123	143



SK 3382 - SK 3282/13 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity $T_{2\max}$ [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations							
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 3382	89.60	20	5496	1.50	1.00	0.75	0.50	X	X	X*	X*					
	104.05	17	6505	1.50	1.00	0.75	0.50	X	X	X*	X*					
	126.93	14	6850	1.50	1.00	0.75	0.50	X	X	X*	X*					
	161.46	11	6974	1.20	0.79	0.60	0.40	X	X	X*						
	190.69	9.2	7664	1.12	0.73	0.56	0.37	X	X	X*						
	230.83	7.6	8850	1.06	0.70	0.53	0.35	X	X	X*						
	287.14	6.1	8301	0.80	0.53	0.40	0.27	X	X*	X*						
	408.58	4.3	7045	0.48	0.31	0.24	0.16	X	X*							
	482.56	3.6	7664	0.44	0.29	0.22	0.15	X	X*							
	584.13	3.0	8850	0.42	0.28	0.21	0.14	X	X*							
	726.61	2.4	8354	0.32	0.21	0.16	0.11	X	X*							
	808.42	2.2	9195	0.32	0.21	0.16	0.10	X	X*							
	919.00	1.9	7275	0.22	0.14	0.11	0.07	X	X*							
1022.42	1.7	6965	0.19	0.12	0.09	0.06	X	X*								
SK 3282/12	87.73	20	7965	2.00	1.50	1.00	0.75	X	X	X	X*					
	114.23	15	7965	1.94	1.27	0.97	0.64	X	X	X	X*					
	141.49	12	7965	1.56	1.03	0.78	0.52	X	X	X*	X*					
	179.57	9.7	7965	1.23	0.81	0.62	0.41	X	X	X*	X*					
	217.37	8.1	7965	1.02	0.67	0.51	0.34	X	X	X*	X*					
	270.39	6.5	7965	0.87	0.57	0.44	0.29	X	X*	X*	X*					
	358.12	4.9	7965	0.67	0.44	0.34	0.22	X	X*	X*	X*					
	461.81	3.8	7965	0.53	0.35	0.27	0.18	X	X*	X*	X*					
	520.83	3.4	7965	0.48	0.31	0.24	0.16	X	X*	X*	X*					
	686.08	2.6	7965	0.38	0.25	0.19	0.12	X	X*	X*	X*					
	853.43	2.1	7965	0.31	0.21	0.16	0.10	X	X*	X*	X*					
	1067.99	1.6	7965	0.26	0.17	0.13	0.09	X	X*	X*	X*					
	1335.98	1.3	7965	0.22	0.14	0.11	0.07	X	X*	X*	X*					
	1697.29	1	7965	0.18	0.12	0.09	0.06	X	X*	X*						
	2248.69	0.78	7965	0.15	0.10	0.08	0.05	X	X*							
	2797.18	0.63	7965	0.13	0.09	0.07	0.04	X	X*							
3435.26	0.51	7965	0.12	0.08	0.06	0.04	X	X*								
SK 3282/13	4387.09	0.4	7965	0.10	0.07	0.05	0.03	X	X*							
	5457.18	0.32	7965	0.09	0.06	0.05	0.03	X	X*							
	6817.09	0.26	7965	0.09	0.06	0.04	0.03	X	X*							
	8673.10	0.2	7965	0.08	0.05	0.04	0.03	X	X*							
	10566.60	0.17	7965	0.07	0.05	0.04	0.02	X	X*							
	12957.52	0.14	7965	0.07	0.05	0.04	0.02	X	X*							
	15685.03	0.11	7965	0.07	0.04	0.03	0.02	X	X*							
Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed			Input Speed				C-face Adapter Maximum Input Power *									

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight \bar{H}	W	56C	140TC	180TC
SK 3382	115	119	126	141
SK 3282/12	119	123	130	146

SK 4282 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 4282	4.70	372	9160	20.00	15.00	10.00	7.50	X				X	X	X			
	5.00	350	9160	20.00	15.00	10.00	7.50	X				X	X	X			
	5.43	322	9160	20.00	15.00	10.00	7.50	X				X	X	X			
	6.06	289	10620	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	7.13	245	10638	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	8.33	210	11257	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	9.23	190	14461	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	10.85	161	15045	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	12.68	138	15488	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	15.20	115	15930	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	18.18	96	15930	20.00	15.00	10.00	7.50	X	X	X	X	X	X				
	21.45	82	14921	19.31	12.69	9.66	6.40	X	X	X	X	X	X	X*			
	22.39	78	15036	18.65	12.25	9.32	6.18	X	X	X	X	X	X	X*			
	26.25	67	14231	15.05	9.89	7.53	4.99	X	X	X	X	X	X	X*			
	26.43	66	15815	16.61	10.92	8.31	5.51	X	X	X	X	X	X	X*			
	26.72	65	14160	14.71	9.67	7.36	4.88	X				X	X				
	32.04	55	15797	13.69	9.00	6.85	4.54	X				X	X				
	32.34	54	14337	12.31	8.09	6.15	4.08	X	X	X	X	X	X	X*			
	36.40	48	12169	9.28	6.10	4.64	3.08	X				X	X*				
	36.81	48	12390	9.35	6.14	4.67	3.10	X				X	X				
	38.31	46	17700	12.83	8.43	6.41	4.25	X	X	X	X	X	X*				
	40.74	43	13771	9.39	6.17	4.69	3.11	X	X	X	X	X	X*				
	43.65	40	14160	9.01	5.92	4.50	2.99	X				X	X*				
45.05	39	14107	8.69	5.71	4.35	2.88	X	X	X	X	X	X*					
52.20	34	16089	8.56	5.62	4.28	2.84	X				X	X*					
61.60	28	15877	7.16	4.70	3.58	2.37	X				X	X*					
75.39	23	14063	5.18	3.40	2.59	1.72	X				X	X*					
76.70	23	14063	5.09	3.35	2.55	1.69	X	X	X	X							
90.52	19	14160	4.34	2.85	2.17	1.44	X	X	X	X*							
110.78	16	14160	3.55	2.33	1.77	1.18	X	X	X	X*							
155.40	11	11284	2.02	1.32	1.01	0.67	X	X	X								
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight	W	56C	140TC	180TC	210TC	250TC
SK 4282	165	154	170	170	201	223



SK 4382 - SK 4282/13 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations								
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	
SK 4382	66.65	26	10620	4.42	2.91	2.21	1.47	X	X	X	X*						
	86.83	20	17523	5.00	3.00	2.00	1.50	X	X	X	X						
	103.82	17	17700	4.73	3.11	2.37	1.57	X	X	X	X*						
	118.38	15	17700	4.15	2.73	2.08	1.38	X	X	X	X*						
	140.60	12	17700	3.50	2.30	1.75	1.16	X	X	X	X*						
	160.20	11	14664	2.54	1.67	1.27	0.84	X	X	X	X*						
	191.57	9.1	17612	2.55	1.68	1.28	0.85	X	X	X	X*						
	211.09	8.3	14470	1.90	1.25	0.95	0.63	X	X	X	X*						
	253.12	6.9	17355	1.90	1.25	0.95	0.63	X	X	X	X*						
	272.54	6.4	13912	1.42	0.93	0.71	0.47	X	X	X	X*						
	302.65	5.8	18381	1.69	1.11	0.84	0.56	X	X	X	X*						
	326.81	5.4	16727	1.42	0.93	0.71	0.47	X	X	X	X*						
	344.84	5.1	14709	1.18	0.78	0.59	0.39	X	X	X	X*						
	390.76	4.5	17700	1.26	0.83	0.63	0.42	X	X	X	X*						
	412.38	4.2	17612	1.19	0.78	0.59	0.39	X	X	X	X*						
	445.23	3.9	14744	0.92	0.60	0.46	0.30	X	X*	X*							
	532.44	3.3	17700	0.92	0.61	0.46	0.31	X	X*	X*							
	605.88	2.9	13054	0.60	0.39	0.30	0.20	X	X*	X*							
	654.27	2.7	10912	0.46	0.30	0.23	0.15	X	X*	X*							
	782.32	2.2	13063	0.46	0.30	0.23	0.15	X	X*	X*							
1097.48	1.6	9629	0.24	0.16	0.12	0.08	X	X*	X*								
1129.91	1.5	14160	0.35	0.23	0.17	0.12	X	X*	X*								
1585.08	1.1	12567	0.22	0.14	0.11	0.07	X	X*	X*								
SK 4282/12	127.52	14	15930	3.00	2.00	1.50	1.00	X	X	X	X*						
	152.47	11	15930	2.90	1.91	1.45	0.96	X	X	X	X*						
	176.96	9.9	15930	2.00	1.64	1.25	0.83	X	X	X	X*						
	234.38	7.5	15930	1.89	1.24	0.94	0.63	X	X	X*	X*						
	302.24	5.8	15930	1.46	0.96	0.73	0.49	X	X	X*	X*						
	340.87	5.1	15930	1.30	0.85	0.65	0.43	X	X	X*	X*						
	409.92	4.3	15930	1.08	0.71	0.54	0.36	X	X	X*	X*						
	558.54	3.1	15930	0.85	0.56	0.42	0.28	X	X*	X*	X*						
	698.96	2.5	15930	0.69	0.45	0.34	0.23	X	X*	X*	X*						
	873.31	2.0	15930	0.56	0.37	0.28	0.19	X	X*	X*	X*						
	1110.82	1.6	15930	0.45	0.30	0.23	0.15	X	X*	X*							
	1343.53	1.3	15930	0.38	0.25	0.19	0.13	X	X*								
	1830.65	0.96	15930	0.30	0.19	0.15	0.10	X	X*								
2248.25	0.78	15930	0.25	0.16	0.13	0.08	X	X*									
2782.46	0.63	15930	0.21	0.14	0.11	0.07	X	X*									
SK 4282/13	3570.48	0.49	15930	0.16	0.11	0.08	0.05	X	X*								
	4461.53	0.39	15930	0.15	0.10	0.08	0.05	X	X*								
	5676.23	0.31	15930	0.13	0.09	0.07	0.04	X	X*								
	6915.46	0.25	15930	0.12	0.08	0.06	0.04	X	X*								
	8318.59	0.21	15930	0.11	0.07	0.05	0.04	X	X*								
	11833.65	0.15	15930	0.09	0.06	0.05	0.03	X	X*								
	14149.42	0.12	15930	0.08	0.06	0.04	0.03	X	X*								
Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp		
Input Speed			Input Speed				C-face Adapter Maximum Input Power *										

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

Weight $\frac{lb}{kg}$	W	56C	140TC	180TC
SK 4382	176	171	181	190
SK 4282/12	152	157	163	179

SK 5282 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 5282	4.32	405	13718	30.00	20.00	15.00	10.00	X						X	X		
	5.01	349	15045	30.00	20.00	15.00	10.00	X						X	X		
	5.29	331	15488	30.00	20.00	15.00	10.00	X						X	X		
	5.71	306	15930	30.00	20.00	15.00	10.00	X						X	X		
	6.33	276	18709	30.00	20.00	15.00	10.00	X				X	X	X	X		
	7.17	244	19125	30.00	20.00	15.00	10.00	X				X	X	X	X		
	8.70	201	20886	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	9.46	185	20355	30.00	20.00	15.00	10.00	X				X	X	X	X		
	10.71	163	22125	30.00	20.00	15.00	10.00	X				X	X	X	X		
	13.00	135	23267	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	15.38	114	23010	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	17.59	99	24338	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	18.88	93	23010	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	20.36	86	27435	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X	X		
	25.00	70	25665	28.50	18.73	14.25	9.45	X	X	X	X	X	X	X	X	X*	
	30.50	57	25665	23.36	15.35	11.68	7.74	X	X	X	X	X	X	X	X		
	33.43	52	20355	16.91	11.11	8.45	5.60	X	X	X	X	X	X	X*	X*		
	35.46	49	23895	18.71	12.30	9.36	6.20	X				X	X				
	40.80	43	22125	15.06	9.89	7.53	4.99	X	X	X	X	X	X	X*			
	41.94	42	28320	18.75	12.32	9.37	6.21	X				X	X				
	47.27	37	21240	12.48	8.20	6.24	4.14	X				X	X				
	51.49	34	28630	15.44	10.15	7.72	5.12	X				X	X				
	55.55	32	22125	11.06	7.27	5.53	3.67	X	X	X	X	X	X				
55.90	31	23010	11.43	7.51	5.71	3.79	X				X	X					
68.63	25	26285	10.63	6.99	5.32	3.52	X				X	X					
81.61	21	16178	5.50	3.62	2.75	1.82	X	X	X	X	X	X					
91.81	19	24417	7.38	4.85	3.69	2.45	X				X	X*					
100.19	17	19883	5.51	3.62	2.76	1.83	X	X	X	X	X	X					
134.03	13	23488	4.87	3.20	2.43	1.61	X	X	X	X*							
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

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Weight ^{lb}	W	56C	140TC	180TC	210TC	250TC	280TC
SK 5282	245	234	249	249	280	302	302



SK 5382 - SK 5282/12 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity $T_{2\max}$ [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations							
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 5382	82.72	21	24736	7.50	5.00	3.00	2.50	X	X	X	X	X*				
	91.71	19	25665	7.50	5.00	3.00	2.50	X	X	X	X	X*				
	117.37	15	24338	5.76	3.78	2.88	1.91	X	X	X	X	X*				
	138.82	13	28320	5.66	3.72	2.83	1.88	X	X	X	X	X*				
	153.92	11	28320	5.11	3.36	2.55	1.69	X	X	X	X	X*				
	171.27	10	24780	4.02	2.64	2.01	1.33	X	X	X	X	X*				
	202.57	8.6	28320	3.88	2.55	1.94	1.29	X	X	X	X	X*				
	248.70	7.0	28320	3.16	2.08	1.58	1.05	X	X	X	X	X*				
	269.99	6.5	23895	2.46	1.61	1.23	0.81	X	X	X	X	X*				
	331.48	5.3	28320	2.37	1.56	1.19	0.79	X	X	X	X	X*				
	361.69	4.8	24780	1.90	1.25	0.95	0.63	X	X	X	X*					
	427.79	4.1	28320	1.84	1.21	0.92	0.61	X	X	X	X*					
	525.20	3.3	28320	1.50	0.98	0.75	0.50	X	X	X	X*					
	570.18	3.1	24780	1.21	0.79	0.60	0.40	X	X	X	X*					
	700.03	2.5	28320	1.12	0.74	0.56	0.37	X	X	X	X*					
	936.45	1.9	23895	0.71	0.47	0.35	0.23	X	X*	X*						
1367.08	1.3	23895	0.49	0.32	0.24	0.16	X	X*	X*							
SK 5282/12	142.18	12	26550	5.00	3.00	2.00	1.50	X	X	X	X					
	174.55	10	26550	4.22	2.78	2.11	1.40	X	X	X	X*					
	232.66	7.5	26550	3.17	2.08	1.58	1.05	X	X	X	X*					
	273.15	6.4	26550	2.70	1.77	1.35	0.89	X	X	X	X*					
	338.35	5.2	26550	2.18	1.43	1.09	0.72	X	X	X	X*					
	448.15	3.9	26550	1.64	1.08	0.82	0.55	X	X	X*	X*					
	550.94	3.2	26550	1.34	0.88	0.67	0.44	X	X	X*	X*					
	689.45	2.5	26550	1.07	0.70	0.53	0.35	X	X	X*	X*					
	862.46	2.0	26550	0.91	0.60	0.45	0.30	X	X*	X*	X*					
	1095.71	1.6	26550	0.73	0.48	0.36	0.24	X	X*	X*						
	1334.62	1.3	26550	0.61	0.40	0.30	0.20	X	X*	X*						
	1805.75	0.97	26550	0.46	0.30	0.23	0.15	X	X*							
	2217.67	0.79	26550	0.39	0.25	0.19	0.13	X	X*							
	2772.22	0.63	26550	0.32	0.21	0.16	0.11	X	X*							
Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed			Input Speed				C-face Adapter Maximum Input Power *									

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

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NEMA & W

Weight \bar{lb}	W	56C	140TC	180TC	210TC
SK 5382	265	260	269	278	278
SK 5282/12	231	326	243	258	-

SK 6282 NEMA-C + W Ratings & Combinations



Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 6282	4.39	399	18001	60.00	40.00	30.00	20.00	X						X	X	X	X*
	4.88	359	19081	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	5.50	318	20275	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	5.78	303	20656	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	5.99	292	21169	60.00	40.00	30.00	20.00	X					X	X	X	X	X*
	6.74	260	26462	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	7.82	224	23736	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	9.39	186	24373	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	10.64	164	38179	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	12.35	142	38843	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	14.83	118	39604	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	18.70	94	39179	58.17	38.23	29.09	19.28	X			X	X	X	X	X	X	X*
	22.95	76	40135	48.56	31.91	24.28	16.09	X			X	X	X	X	X	X*	X*
	26.05	67	40117	42.76	28.10	21.38	14.17	X			X	X	X	X	X		
	29.90	59	40152	37.29	24.50	18.64	12.36	X			X	X	X	X			
	39.48	44	28320	19.92	13.09	9.96	6.60	X			X	X	X*	X*			
	49.75	35	35754	19.96	13.11	9.98	6.61	X			X	X	X*	X*			
61.08	29	40135	18.25	11.99	9.12	6.05	X			X	X	X*	X*				
65.44	27	29816	12.65	8.31	6.33	4.19	X			X	X						
80.33	22	36559	12.64	8.30	6.32	4.19	X			X	X						
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

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NEMA & W

Weight	W	180TC	210TC	250TC	280TC	320TC	360TC
SK 6282	477	448	476	531	531	562	595



SK 6382 - SK 6382/32 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity $T_{2 \max}$ [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations								
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	
SK 6382	24.42	72	41507	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X			
	28.72	61	40710	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X			
	30.91	57	40268	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X			
	36.34	48	40268	30.00	20.00	15.00	10.00	X	X	X	X	X	X	X			
	42.46	41	40268	26.33	17.30	13.17	8.73	X	X	X	X	X	X	X*			
	51.07	34	44958	24.44	16.06	12.22	8.10	X	X	X	X	X	X	X*			
	59.66	29	48675	22.65	14.89	11.33	7.51	X	X	X	X	X	X	X*			
	73.50	24	49295	18.62	12.24	9.31	6.17	X	X	X	X	X	X*				
	75.18	23	53100	19.61	12.89	9.81	6.50	X	X	X	X	X	X*	X*			
	92.63	19	53100	15.92	10.46	7.96	5.28	X	X	X	X	X	X*				
	114.79	15	52038	12.59	8.27	6.29	4.17	X	X	X	X	X	X*				
	126.87	14	40533	8.87	5.83	4.44	2.94	X	X	X	X	X*					
	159.88	11	51065	8.87	5.83	4.43	2.94	X	X	X	X	X*					
	171.34	10	49295	7.99	5.25	3.99	2.65	X			X	X*					
	212.33	8.2	41330	5.40	3.55	2.70	1.79	X			X	X*					
	225.79	7.8	35577	4.38	2.88	2.19	1.45	X	X	X	X*						
	251.76	7.0	39648	4.37	2.87	2.19	1.45	X	X	X	X*						
	267.59	6.5	52038	5.40	3.55	2.70	1.79	X			X	X*					
	317.28	5.5	49914	4.37	2.87	2.18	1.45	X	X	X	X*						
	393.19	4.5	52038	3.67	2.41	1.84	1.22	X	X	X	X*						
445.09	3.9	36905	2.30	1.51	1.15	0.76	X	X	X								
551.58	3.2	45755	2.30	1.51	1.15	0.76	X	X	X								
SK 6382/22	298.46	5.9	47790	4.42	2.91	2.21	1.47	X	X	X	X*						
	347.33	5.0	47790	3.80	2.00	1.90	1.26	X	X	X	X*						
	435.29	4.0	47790	3.05	2.01	1.53	1.01	X	X	X	X*						
	569.11	3.1	47790	2.33	1.53	1.16	0.77	X	X	X	X*						
	637.53	2.7	47790	2.08	1.37	1.04	0.69	X	X	X	X*						
	818.71	2.1	47790	1.62	1.06	0.81	0.54	X	X	X*	X*						
	1104.39	1.6	47790	1.20	0.79	0.60	0.40	X	X	X*	X*						
	1259.27	1.4	47790	1.05	0.69	0.53	0.35	X	X	X*	X*						
	1859.20	0.94	47790	0.77	0.50	0.38	0.25	X	X*	X*							
	2203.53	0.79	47790	0.65	0.43	0.33	0.22	X	X*	X*							
	2738.39	0.64	42303	0.54	0.35	0.27	0.18	X	X*	X*							
	3450.76	0.51	47790	0.44	0.29	0.22	0.15	X	X*	X*							
	4164.86	0.42	42303	0.37	0.24	0.19	0.12	X	X*	X*							
SK 6382/32	159.23	11	42303	7.39	4.86	3.70	2.45	X	X	X	X	X*					
	191.51	9.1	42303	6.15	4.04	3.07	2.04	X	X	X	X	X*					
	223.73	7.8	42303	5.26	3.45	2.63	1.74	X	X	X	X	X*					
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

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Weight	W	56C	140TC	180TC	210TC	250TC	280TC
SK 6382	423	403	412	428	459	481	481
SK 6382/22	443	439	448	456	-	-	-
SK 6382/32	467	463	472	481	500	-	-

SK 7282 NEMA-C + W Ratings & Combinations



Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 7282	4.26	411	32028	60.00	40.00	30.00	20.00	X				X	X	X	X	X	X*
	5.04	347	34772	60.00	40.00	30.00	20.00	X								X	X*
	5.30	330	35975	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	5.98	293	38250	60.00	40.00	30.00	20.00	X								X	X*
	6.36	275	39383	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	7.49	234	39887	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	8.66	202	37365	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	9.48	185	55428	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	9.92	176	37816	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	11.16	157	55056	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	12.89	136	51896	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	16.29	107	57251	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	19.97	88	51419	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	22.87	77	51348	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	26.89	65	51392	53.07	34.87	26.53	17.59	X			X	X	X	X	X	X	X*
	34.64	51	51365	53.04	34.86	26.52	17.58	X			X	X	X	X	X	X	X*
	37.27	47	57286	42.68	28.05	21.34	14.14	X					X	X			
45.02	39	38781	23.92	15.72	11.96	7.93	X				X	X	X	X*			
45.67	38	51410	31.26	20.54	15.63	10.36	X					X	X				
56.91	31	48976	23.90	15.70	11.95	7.92	X				X	X	X	X*			
69.73	25	51365	20.45	13.44	10.23	6.78	X				X	X	X	X*			
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

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NEMA & W

Weight ^{lb}	W	180TC	210TC	250TC	280TC	320TC	360TC
SK 7282	613	615	615	670	670	734	734



SK 7382 - SK 7382/32 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity $T_{2\max}$ [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations									
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC		
SK 7382	23.46	75	58499	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*	
	26.88	65	58587	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X	X*
	30.42	58	58587	53.48	35.14	26.74	17.72	X			X	X	X	X	X	X	X	X*
	36.92	47	58587	44.06	28.95	22.03	14.60	X			X	X	X	X	X	X*	X*	X*
	46.66	38	62658	37.29	24.50	18.64	12.36	X			X	X	X	X	X	X*	X*	X*
	53.38	33	62658	32.59	21.42	16.30	10.80	X			X	X	X	X	X	X	X	X*
	59.52	29	62481	29.15	19.15	14.57	9.66	X			X	X	X	X	X*	X*	X*	X*
	68.10	26	63720	25.98	17.07	12.99	8.61	X			X	X	X	X	X*	X*	X*	X*
	78.81	22	65667	23.14	15.20	11.57	7.67	X			X	X	X	X	X*	X*	X*	X*
	93.18	19	66729	19.88	13.07	9.94	6.59	X			X	X	X*	X*	X*	X*	X*	X*
	106.59	16	66729	17.38	11.42	8.69	5.76	X			X	X	X*	X*	X*	X*	X*	X*
	123.37	14	66729	15.02	9.87	7.51	4.98	X			X	X	X*	X*	X*	X*	X*	X*
	150.57	12	66729	12.31	8.09	6.15	4.08	X			X	X	X*	X*	X*	X*	X*	X*
	162.17	11	55490	9.50	6.24	4.75	3.15	X			X	X*	X*	X*	X*	X*	X*	X*
	204.99	8.5	66729	9.04	5.94	4.52	3.00	X			X	X*	X*	X*	X*	X*	X*	X*
	216.43	8.1	73455	9.42	6.19	4.71	3.12	X			X	X*	X*	X*	X*	X*	X*	X*
273.57	6.4	66729	6.77	4.45	3.39	2.24	X			X	X*	X*	X*	X*	X*	X*	X*	
338.79	5.2	66729	5.47	3.59	2.73	1.81	X			X	X*	X*	X*	X*	X*	X*	X*	
SK 7382/22	376.26	4.7	62658	4.62	3.04	2.31	1.53	X	X	X	X*	X*	X*	X*	X*	X*	X*	
	435.50	4.0	62658	3.99	2.63	2.00	1.32	X	X	X	X*	X*	X*	X*	X*	X*	X*	
	569.97	3.1	62658	3.05	2.01	1.53	1.01	X	X	X	X*	X*	X*	X*	X*	X*	X*	
	714.31	2.4	62658	2.44	1.60	1.22	0.81	X	X	X	X*	X*	X*	X*	X*	X*	X*	
	933.91	1.9	62658	1.86	1.22	0.93	0.62	X	X	X*	X*	X*	X*	X*	X*	X*	X*	
	1046.18	1.7	62658	1.66	1.09	0.83	0.55	X	X	X*	X*	X*	X*	X*	X*	X*	X*	
	1343.50	1.3	62658	1.29	0.85	0.65	0.43	X	X	X*	X*	X*	X*	X*	X*	X*	X*	
	1812.31	0.97	62658	1.01	0.67	0.51	0.34	X	X	X*	X*	X*	X*	X*	X*	X*	X*	
	2066.45	0.85	62658	0.90	0.59	0.45	0.30	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	
	2635.97	0.66	62658	0.71	0.47	0.36	0.24	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	
	3615.97	0.48	62658	0.53	0.35	0.27	0.18	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	
4892.48	0.36	62658	0.41	0.27	0.20	0.14	X	X*	X*	X*	X*	X*	X*	X*	X*	X*		
5662.68	0.31	62658	0.36	0.24	0.18	0.12	X	X*	X*	X*	X*	X*	X*	X*	X*	X*		
SK 7382/32	223.20	7.8	62481	7.50	5.00	3.00	2.00	X	X	X	X	X*	X*	X*	X*	X*	X*	
	295.54	5.9	62481	5.87	3.86	2.94	1.95	X	X	X	X	X*	X*	X*	X*	X*	X*	
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp		
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *									

\diamond The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

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Weight $\frac{lb}{kg}$	W	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 7382	628	-	-	602	631	686	686	750	750
SK 7382/22	604	600	608	617	617	-	-	-	-
SK 7382/32	628	633	642	661	661	-	-	-	-

SK 8282 NEMA-C + W Ratings & Combinations



Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2	T_{2max}	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
		[rpm]	[lb-in]	[hp]	[hp]	[hp]	[hp]	W									
SK 8282	4.52	387	43277	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	6.92	253	60056	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	8.26	212	64570	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	9.67	181	57711	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	10.86	161	91067	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	12.96	135	91102	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	15.18	115	83898	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	17.40	101	85818	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	21.13	83	93969	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	24.50	71	93837	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	28.33	62	88482	86.72	56.99	43.36	28.74	X			X	X	X	X	X	X	X
	32.24	54	91562	78.86	51.82	39.43	26.14	X								X	X
	39.11	45	82677	58.70	38.57	29.35	19.45	X						X	X		
	39.16	45	93943	66.61	43.77	33.31	22.08	X								X	X*
	47.51	37	93925	54.89	36.07	27.45	18.19	X						X	X		
	59.44	29	57375	26.80	17.61	13.40	8.88	X			X	X	X	X*			
72.21	24	69694	26.80	17.61	13.40	8.88	X			X	X	X	X*				
Based upon 1750 rpm Input Speed				1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
				Input Speed					C-face Adapter Maximum Input Power *								

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

NEMA & W

Weight ^{lb}	W	180TC	210TC	250TC	280TC	320TC	360TC
SK 8282	1060	897	952	952	983	1016	1138




SK 8382 - SK 8382/42 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations								
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC	
SK 8382	30.92	57	106997	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	35.88	49	106908	60.00	40.00	30.00	20.00	X			X	X	X	X	X	X	X*
	43.59	40	93810	59.76	39.27	29.88	19.81	X			X	X	X	X	X	X	X*
	47.80	37	107085	60.00	39.60	30.00	19.89	X			X	X	X	X	X	X	X*
	57.43	30	107085	51.77	34.02	25.89	17.16	X			X	X	X	X	X	X	X*
	65.22	27	100005	42.58	27.98	21.29	14.11	X			X	X	X	X	X	X*	X*
	75.69	23	107085	39.28	25.82	19.64	13.02	X			X	X	X	X	X	X*	X*
	90.94	19	107085	32.70	21.49	16.35	10.84	X			X	X	X	X	X	X*	X*
	103.21	17	107085	28.81	18.93	14.40	9.55	X			X	X	X	X*			
	118.47	15	110183	25.82	16.97	12.91	8.56	X			X	X	X	X*			
	125.38	14	107882	23.89	15.70	11.95	7.92	X			X	X	X	X*			
	143.91	12	110625	21.34	14.03	10.67	7.07	X			X	X	X	X*			
	152.83	11	116820	21.22	13.95	10.61	7.03	X			X	X	X	X*			
	185.66	9.4	112218	16.78	11.03	8.39	5.56	X			X	X	X*	X*			
	201.00	8.7	95580	13.20	8.68	6.60	4.38	X			X	X					
	242.02	7.2	115935	13.30	8.74	6.65	4.41	X			X	X	X*	X*			
294.01	6.0	112395	10.61	6.98	5.31	3.52	X			X	X	X*	X*				
318.31	5.5	115050	10.04	6.60	5.02	3.33	X			X	X						
386.68	4.5	112395	8.07	5.30	4.04	2.67	X			X	X*						
SK 8382/32	612.94	2.9	107085	4.85	3.19	2.43	1.61	X	X	X	X*	X*					
	718.43	2.4	107085	4.14	2.72	2.07	1.37	X	X	X	X*	X*					
	891.21	2.0	107085	3.34	2.19	1.67	1.11	X	X	X	X*	X*					
	1064.91	1.6	107085	2.79	1.83	1.40	0.93	X	X	X	X*	X*					
	1366.83	1.3	107085	2.18	1.43	1.09	0.72	X	X	X	X*	X*					
	1697.85	1.0	107085	1.75	1.15	0.88	0.58	X	X	X*	X*	X*					
	2416.28	0.72	107085	1.23	0.81	0.62	0.41	X	X	X*	X*						
	3005.57	0.58	107085	1.04	0.69	0.52	0.35	X	X	X*							
	3524.83	0.50	107085	0.90	0.59	0.45	0.30	X	X*	X*							
	4211.43	0.42	107085	0.76	0.50	0.38	0.25	X	X*	X*							
	5507.20	0.32	107085	0.59	0.39	0.30	0.20	X	X*	X*							
6616.79	0.26	107085	0.50	0.33	0.25	0.17	X	X*	X*								
SK 8382/42	185.94	9.4	107085	10.00	7.50	5.00	3.00	X	X	X	X	X	X*	X*			
	223.40	7.8	107085	10.00	7.50	5.00	3.00	X	X	X	X	X	X*	X*			
	294.43	5.9	107085	10.00	6.60	5.00	3.31	X	X	X	X	X	X*	X*			
	346.66	5.0	107085	8.58	5.64	4.29	2.84	X	X	X	X	X*	X*	X*			
	468.52	3.7	107085	6.35	4.17	3.17	2.10	X	X	X	X	X*	X*	X*			
	551.02	3.2	107085	5.40	3.55	2.70	1.79	X	X	X	X	X*	X*	X*			
Based upon 1750 rpm				1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed				Input Speed				C-face Adapter Maximum Input Power *									

NEMA & W

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Weight 	W	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 8382	904	-	-	877	906	961	961	992	1025
SK 8382/32	904	908	908	908	908	-	-	-	-
SK 8382/42	959	948	948	963	994	995	1017	-	-

SK 9282 - SK 9382/52 NEMA-C + W Ratings & Combinations



NEMA & W

Model Type	Gear Ratio	Output Speed i_{tot}	Torque Capacity n_2 [rpm]	T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations							
					[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 9282	5.34	328	73774	200.00	150.00	100.00	75.00	X									X
	5.78	303	78101	200.00	150.00	100.00	75.00	X									X
	7.06	248	89527	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	8.64	203	98766	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	10.18	172	95509	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	12.01	146	122201	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	14.70	119	130228	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	17.33	101	137104	200.00	150.00	100.00	75.00	X			X	X	X	X	X	X	X
	20.13	87	140945	194.41	127.76	97.21	64.43	X			X	X	X	X	X	X	X
	23.15	76	145370	174.36	114.58	87.18	57.79	X			X	X	X	X	X	X	X
	26.89	65	152220	157.18	103.29	78.59	52.09	X			X	X	X	X	X	X	X
	30.79	57	158681	143.10	94.04	71.55	47.43	X			X	X	X	X	X	X	X
34.38	51	143813	116.15	76.33	58.07	38.50	X			X	X	X	X	X	X	X	
SK 9382	35.61	49	212400	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	41.93	42	212400	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	48.44	36	212400	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	55.49	32	212400	100.00	75.00	50.00	30.00	X			X	X	X	X	X	X	X
	65.25	27	214701	91.36	60.04	45.68	30.28	X			X	X	X	X	X	X	X
	72.19	24	212400	81.70	53.69	40.85	27.08	X			X	X	X	X	X	X	X
	83.19	21	212400	70.89	46.59	35.45	23.50	X			X	X	X	X	X	X	X*
	100.89	17	224790	61.87	40.65	30.93	20.50	X			X	X	X	X	X	X	X*
	115.57	15	224790	54.01	35.49	27.00	17.90	X			X	X	X	X	X	X	X*
	135.90	13	224790	45.93	30.18	22.96	15.22	X			X	X	X	X	X	X*	X*
	144.69	12	212400	40.76	26.79	20.38	13.51	X			X	X	X	X	X		
	175.05	10	224790	35.66	23.43	17.83	11.82	X			X	X	X	X	X		
	204.68	8.5	194700	26.41	17.36	13.21	8.75	X			X	X	X	X*			
291.25	6.0	212400	20.25	13.31	10.12	6.71	X			X	X	X	X*				
352.36	5.0	224790	17.71	11.64	8.86	5.87	X			X	X	X*	X*				
SK 9382/42	449.57	3.9	212400	10.00	7.50	5.00	3.00	X	X	X	X	X	X*				
	618.30	2.8	212400	9.54	6.27	4.77	3.16	X	X	X	X	X*	X*				
	715.38	2.4	212400	8.24	5.42	4.12	2.73	X	X	X	X	X*	X*				
	886.49	2.0	212400	6.65	4.37	3.33	2.20	X	X	X	X	X*	X*				
	1178.81	1.5	212400	5.00	3.29	2.00	1.66	X	X	X	X	X*	X*				
	1419.20	1.2	212400	4.16	2.73	2.08	1.38	X	X	X	X*	X*	X*				
	1747.42	1.0	212400	3.38	2.22	1.69	1.12	X	X	X	X*	X*	X*				
	2203.92	0.79	212400	2.68	1.76	1.34	0.89	X	X	X	X*	X*					
	2435.06	0.72	212400	2.42	1.59	1.21	0.80	X	X	X	X*	X*					
	4165.75	0.42	212400	1.42	0.93	0.71	0.47	X			X*	X*					
SK 9382/52	200.69	8.7	212400	25.00	20.00	15.00	10.00	X					X	X*			
	233.17	7.5	212400	25.00	20.00	15.00	10.00	X					X	X*			
	294.54	5.9	212400	20.02	13.16	10.01	6.64	X			X	X	X	X*			
	411.63	4.3	212400	14.33	9.42	7.16	4.75	X			X	X	X*	X*			
Based upon 1750 rpm				1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
Input Speed				Input Speed					C-face Adapter Maximum Input Power *								

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Weight \ddagger	W	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 9282	1724	-	-	1604	1604	1618	1618	1680	1801
SK 9382	1570	-	-	1615	1615	1629	1629	1691	1812
SK 9382/42	1625	1614	1629	1629	1660	-	-	-	-
SK 9382/52	1689	-	-	1693	1724	1746	1746	-	-



SK 10382.1 NEMA-C + W Ratings & Combinations

Model Type	Gear Ratio	Output Speed n_2 [rpm]	Torque Capacity T_{2max} [lb-in]	Maximum input power \diamond				Input Shaft W	NEMA C-Face* Available Combinations							
				[hp]	[hp]	[hp]	[hp]		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
SK 10382.1	12.22	143	189000	200.00	150.00	100.00	75.00	X					X	X	X	X
	13.97	125	216000	200.00	150.00	100.00	75.00	X					X	X	X	X
	15.36	114	237500	200.00	150.00	100.00	75.00	X					X	X	X	X
	17.49	100	270600	200.00	150.00	100.00	75.00	X					X	X	X	X
	19.23	91	297400	200.00	150.00	100.00	75.00	X					X	X	X	X
	22.07	79	341300	200.00	150.00	100.00	75.00	X					X	X	X	X
	24.25	72	343900	200.00	150.00	100.00	75.00	X					X	X	X	X
	28.44	62	380600	200.00	150.00	100.00	75.00	X					X	X	X	X
	31.26	56	347000	200.00	150.00	100.00	75.00	X					X	X	X	X
	36.98	47	353400	265.36	174.38	132.68	87.95	X					X	X	X	X
	40.65	43	350700	239.53	157.40	119.76	79.39	X					X	X	X	X
	44.70	39	338800	210.46	138.30	105.23	69.75	X					X	X	X	X
	47.38	37	338700	198.50	130.44	99.25	65.79	X					X	X	X	X
	55.56	31	386400	193.12	126.91	96.56	64.01	X					X	X	X	
	61.07	29	366400	166.60	109.48	83.30	55.22	X					X	X	X	
	72.25	24	359800	138.27	90.86	69.13	45.83	X					X	X	X	
	79.41	22	381000	133.23	87.55	66.61	44.16	X					X	X		
	87.32	20	363900	115.73	76.05	57.86	38.36	X					X	X		
	95.98	18	392000	113.40	74.52	56.70	37.59	X					X	X	X	
	111.90	16	400300	99.33	65.28	49.67	32.92	X					X	X	X	
	123.04	14	368600	83.19	54.67	41.60	27.57	X					X	X	X	
	135.24	13	405200	83.19	54.67	41.60	27.57	X				X	X	X*		
	157.18	11	372400	65.79	43.24	32.90	21.81	X				X	X	X*		
172.76	10	409300	65.79	43.23	32.90	21.81	X				X	X	X*			
186.95	9.4	388300	57.67	37.90	28.83	19.11					X	X	X*			
205.57	8.5	376900	50.90	33.45	25.45	16.87						X*	X*	X*		
225.94	7.7	414300	50.92	33.46	25.46	16.87						X*	X*	X*		
258.35	6.8	222000	23.86	15.68	11.93	7.91						X*	X*			
283.96	6.2	243900	23.85	15.67	11.93	7.91						X*	X*			
312.23	5.6	268300	23.86	15.68	11.93	7.91						X*	X*			
343.19	5.1	294800	23.85	15.67	11.93	7.91						X*	X*			
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *							

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NEMA & W

Weight $\frac{lb}{kg}$	W	250TC	280TC	320TC	360TC
SK 10382.1	2359	2350	2350	2381	2535

SK 11382.1 NEMA-C + W Ratings & Combinations



Model Type	Gear Ratio	Output Speed	Torque Capacity	Maximum input power [◇]				Input Shaft	NEMA C-Face* Available Combinations								
				i_{tot}	n_2 [rpm]	T_{2max} [lb-in]	[hp]		[hp]	[hp]	[hp]	W	56C	140TC	180TC	210TC	250TC
SK 11382.1	16.37	107	450300	250.00	175.00	125.00	75.00	X						X	X	X	X
	17.93	98	476000	250.00	175.00	125.00	75.00	X						X	X	X	X
	20.39	86	479400	250.00	175.00	125.00	75.00	X						X	X	X	X
	22.32	78	510000	250.00	175.00	125.00	75.00	X						X	X	X	X
	25.62	68	515000	250.00	175.00	125.00	75.00	X						X	X	X	X
	28.56	61	547600	250.00	175.00	125.00	75.00	X						X	X	X	X
	32.35	54	548900	250.00	175.00	125.00	75.00	X						X	X	X	X
	35.41	49	583800	250.00	175.00	125.00	75.00	X						X	X	X	X
	40.83	43	588800	250.00	175.00	125.00	75.00	X						X	X	X	X
	44.70	39	626400	389.11	255.70	194.55	128.96	X						X	X	X	X
	51.54	34	613600	330.57	217.23	165.29	109.56	X						X	X	X	X
	56.42	31	671700	330.57	217.23	165.29	109.56	X						X	X	X	X
	65.61	27	593400	251.13	165.03	125.57	83.23	X						X	X	X	X
	72.38	24	569700	218.55	143.62	109.27	72.43	X						X	X	X	X
	79.95	22	621300	215.78	141.80	107.89	71.51	X*						X	X	X	X
	87.52	20	680200	215.80	141.81	107.90	71.52	X*						X	X	X	X
	101.78	17	601400	164.07	107.82	82.03	54.38	X*						X	X	X	X
111.80	16	608000	151.00	99.23	75.50	50.05	X*						X	X	X	X	
130.02	13	622000	132.83	87.29	66.42	44.02	X*						X	X	X	X	
141.74	12	630300	123.47	81.14	61.74	40.92	X*						X	X	X	X	
167.17	10	638100	105.99	69.65	52.99	35.13							X	X	X	X	
	Based upon 1750 rpm			1750 rpm	1150 rpm	875 rpm	580 rpm	-	1 hp	2 hp	5 hp	10 hp	20 hp	30 hp	50 hp	75 hp	
	Input Speed			Input Speed					C-face Adapter Maximum Input Power *								

◇ The maximum input power limit shown is the largest motor power typically combined with the gear unit. These values shown are not the mechanical limit and often may be increased through discussion with our sales or engineering department.

* The NEMA C-face power limit must also be considered when selecting a reducer. The C-face Adapter's Maximum Input Power values are displayed under the Available combinations and based on a 1750 rpm motor.

NEMA & W

Weight	W	250TC	280TC	320TC	360TC
SK 11382.1	3682	3673	3673	3704	3858



DRIVESYSTEMS

Dimensions

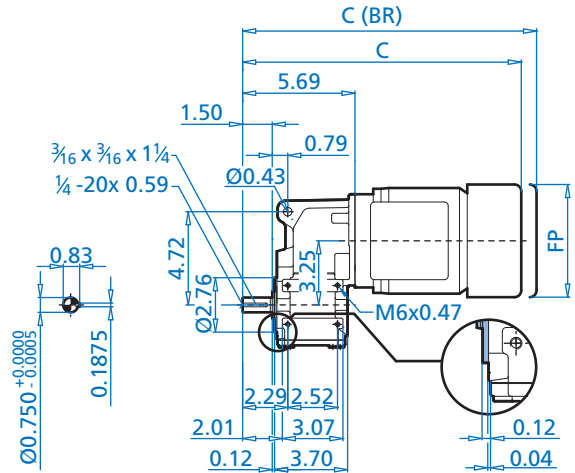
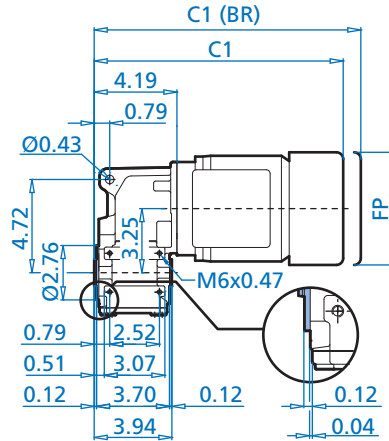
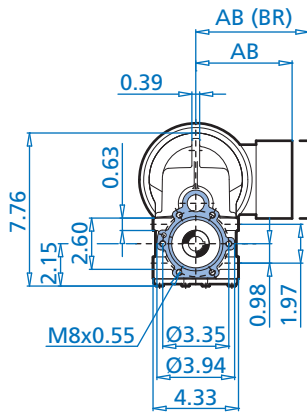
SK 0182NB Dimensions	174
SK 0282NB Dimensions	178
SK 1282 Dimensions	182
SK 1382NB Dimensions	186
SK 2282 Dimensions	190
SK 2382 Dimensions	194
SK 3282 Dimensions	198
SK 3382 Dimensions	202
SK 4282 Dimensions	206
SK 4382 Dimensions	210
SK 5282 Dimensions	214
SK 5382 Dimensions	218
SK 6282 Dimensions	222
SK 6382 Dimensions	226
SK 7282 Dimensions	230
SK 7382 Dimensions	234
SK 8282 Dimensions	238
SK 8382 Dimensions	242
SK 9282 Dimensions	246
SK 9382 Dimensions	250
SK 10382.1 Dimensions	254
SK 11382.1 Dimensions	258
Accessory Option Dimensions	262
Optional Shaft Dimensions	278

SK 0182NB + Motor



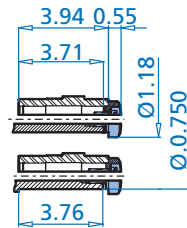
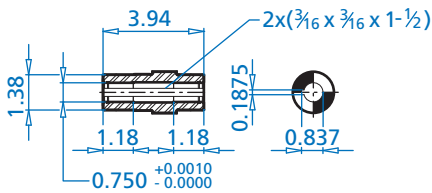
SK 0182NB/AZ

SK 0182NB/VZ



SK 0182NB/AZ

SK 0182NB/AZB



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

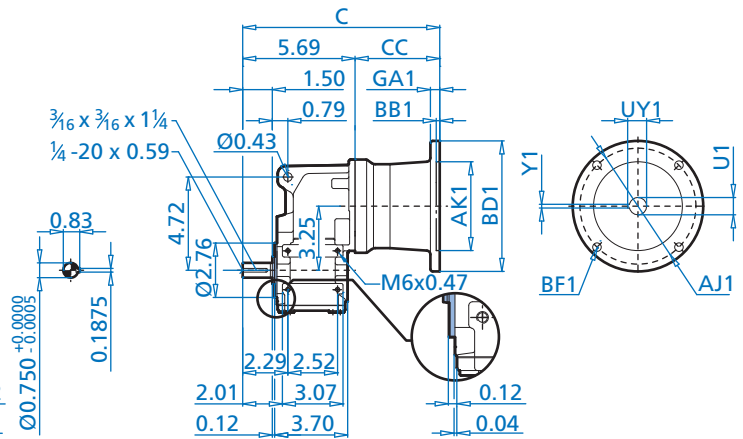
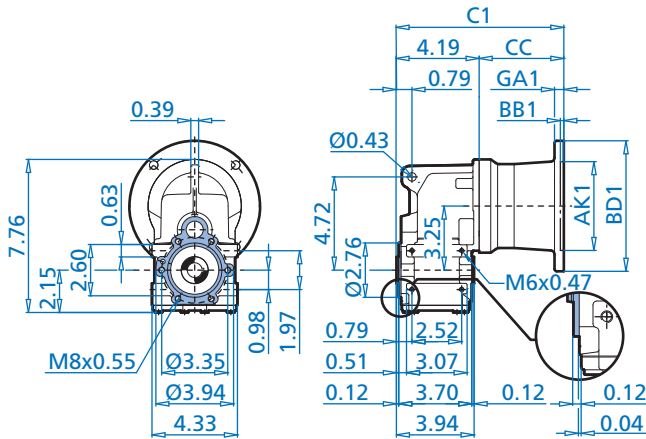
Standard efficiency	63S/L	71S/L	80S/L	For Other Connection Possibilities please see → 262
Premium efficiency			80LP	
AB	4,51	4,86	5,59	
AB (BR)	4,84	5,24	5,59	
C	13,28	14,13	15,00	
C (BR)	15,48	16,42	17,52	
C1	11,78	12,63	13,50	
C1 (BR)	13,98	14,92	16,02	
FP	5,09	5,72	6,43	

(BR) Denotes Brakemotor



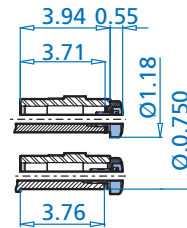
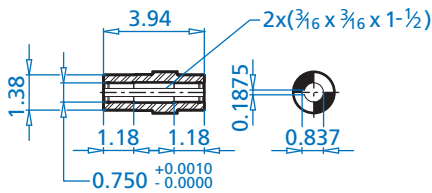
SK 0182NB/AZ

SK 0182NB/VZ



SK 0182NB/AZ

SK 0182NB/AZB



Dimensions

Alternate Shafts on Pages 276 - 285

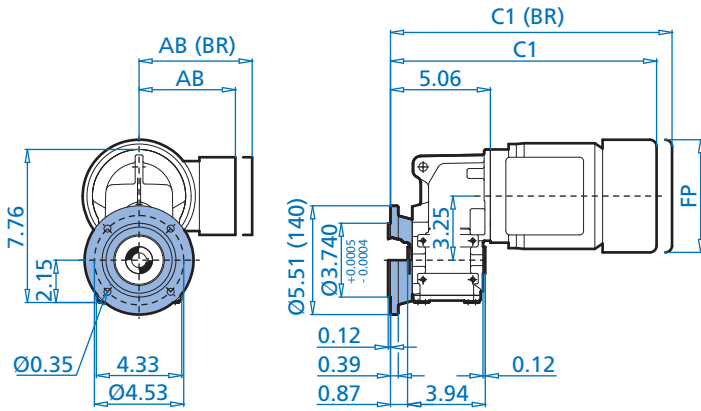
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	9,98	8,48	4,29
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	9,98	8,48	4,29

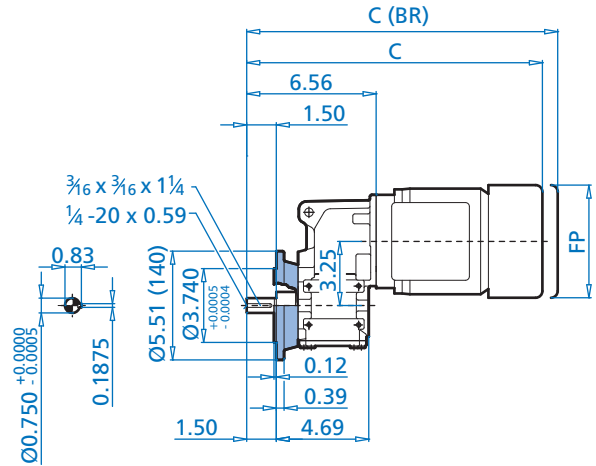
SK 0182NB + Motor



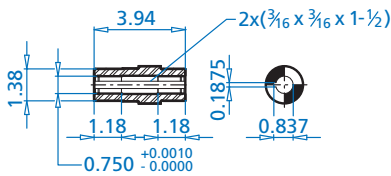
SK 0182NB/AF



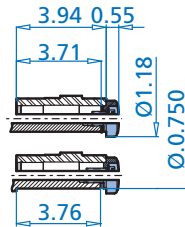
SK 0182NB/VF



SK 0182NB/AF



SK 0182NB/AFB



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

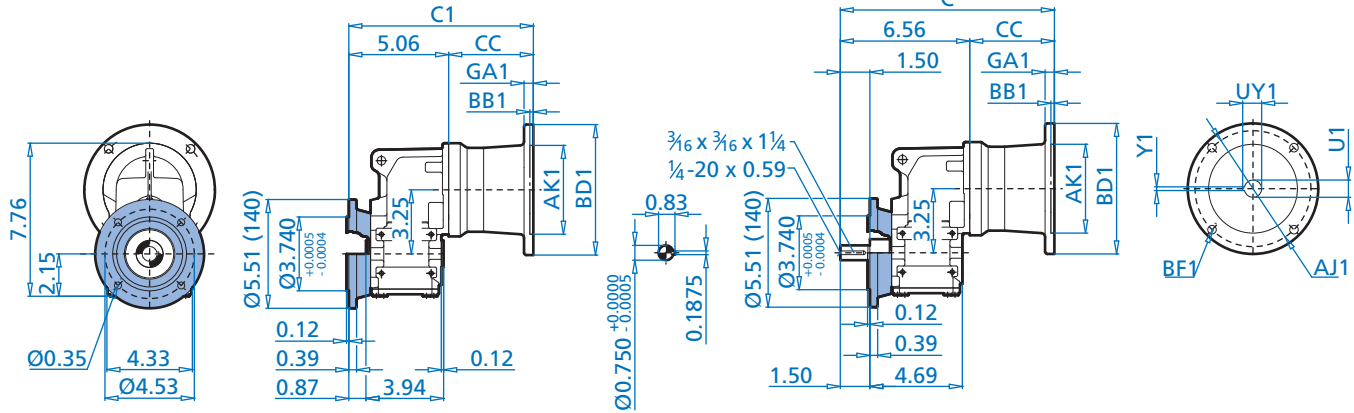
Standard efficiency	63S/L	71S/L	80S/L	For Other Connection Possibilities please see ⇒ 262
Premium efficiency			80LP	
AB	4,51	4,86	5,59	
AB (BR)	4,84	5,24	5,59	
C	14,15	15,00	15,87	
C (BR)	16,35	17,28	18,39	
C1	12,65	13,50	14,37	
C1 (BR)	14,85	15,78	16,89	
FP	5,09	5,72	6,43	

(BR) Denotes Brakemotor



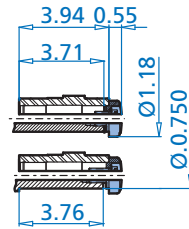
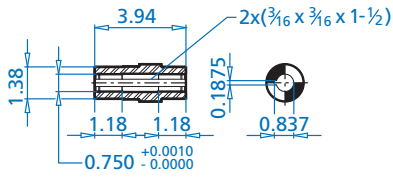
SK 0182NB/AF

SK 0182NB/VF



SK 0182NB/AF

SK 0182NB/AFB



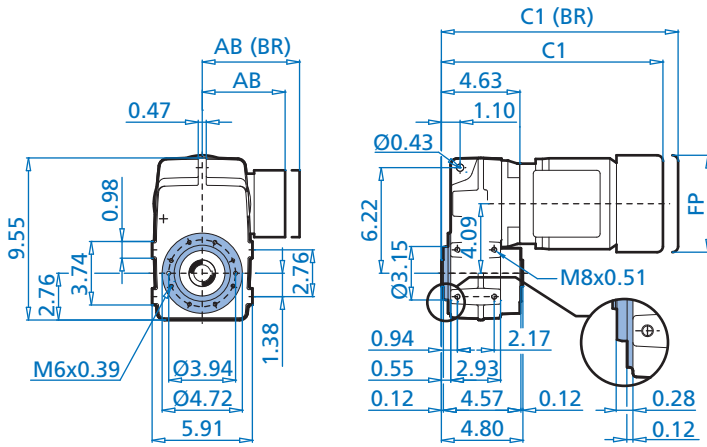
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	10,85	9,35	4,29
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	10,85	9,35	4,29

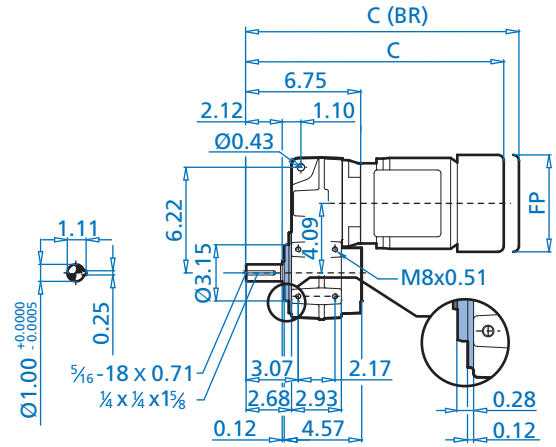
SK 0282NB + Motor



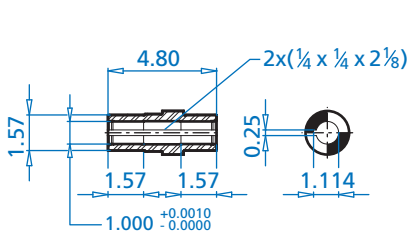
SK 0282NB/AZ



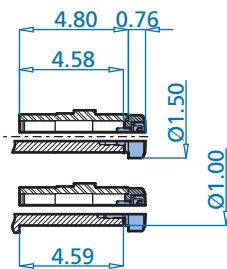
SK 0282NB/VZ



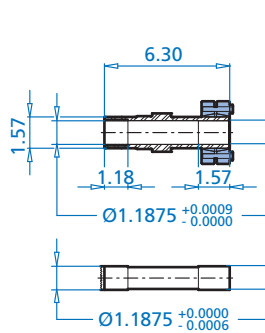
SK 0282NB/AZ



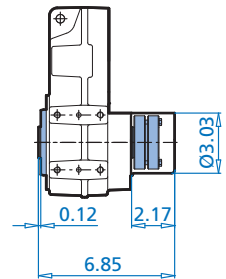
SK 0282NB/AZ



SK 0282NB/AZS



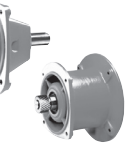
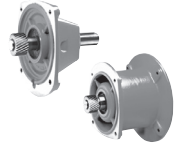
AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

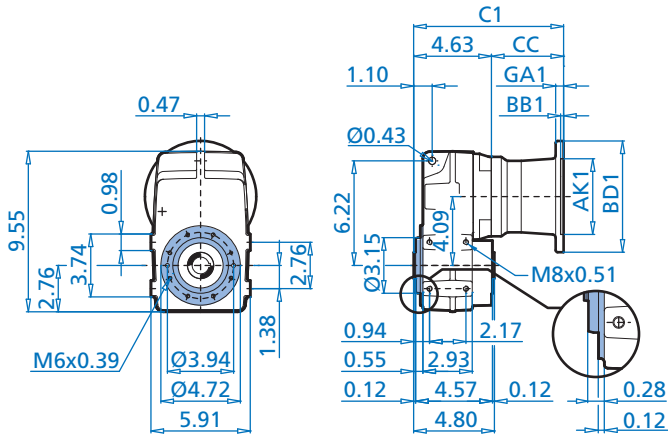
Motor Dimensions

Standard efficiency	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see  262
Premium efficiency			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	14,34	15,19	16,06	17,59	
C (BR)	16,54	17,48	18,58	20,55	
C1	12,21	13,07	13,93	15,47	
C1 (BR)	14,42	15,35	16,45	18,42	
FP	5,09	5,72	6,43	7,19	

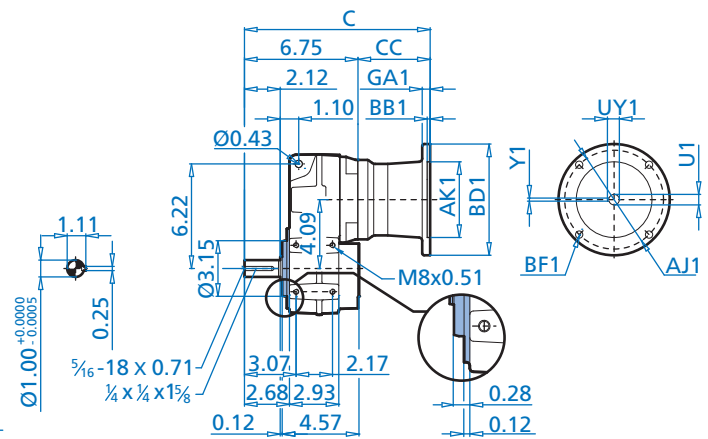
(BR) Denotes Brakemotor



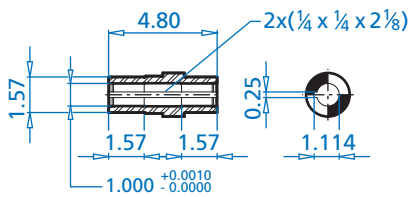
SK 0282NB/AZ



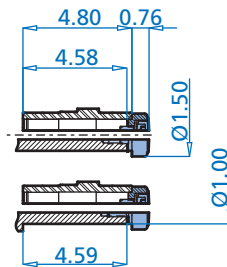
SK 0282NB/VZ



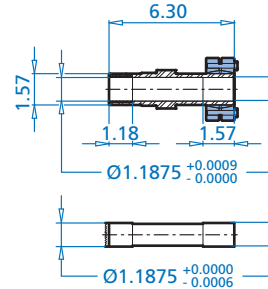
SK 0282NB/AZ



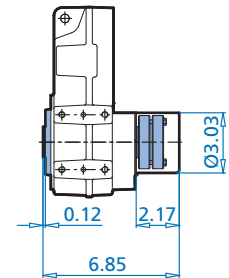
SK 0282NB/AZB



SK 0282NB/AZS



AZSH



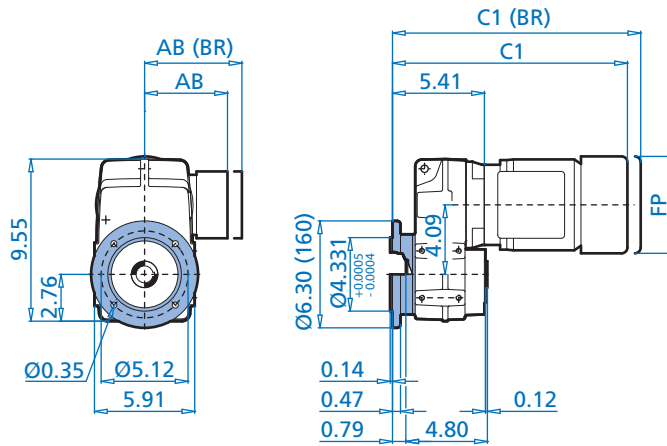
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	11,04	8,92	4,29
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	11,04	8,92	4,29

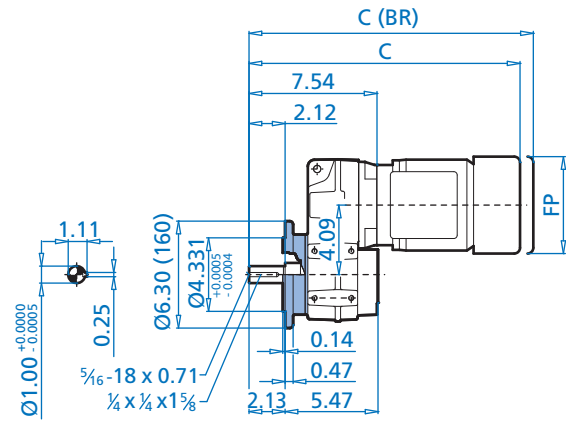
SK 0282NB + Motor



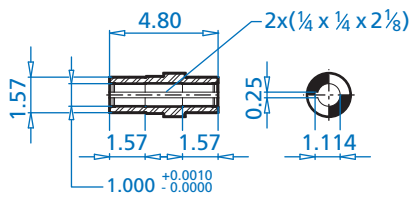
SK 0282NB/AF



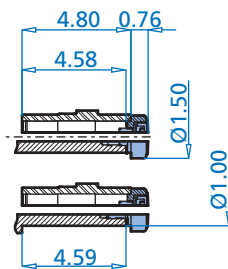
SK 0282NB/VF



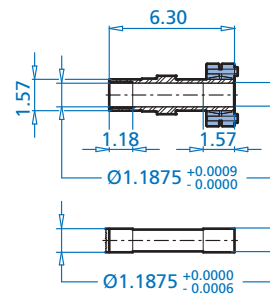
SK 0282NB/AF



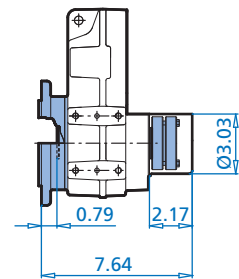
SK 0282NB/AFB



SK 0282NB/AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

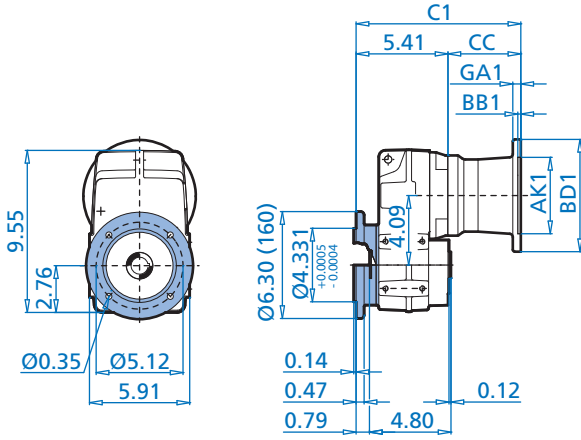
Standard efficiency	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see 262
Premium efficiency			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	15,13	15,98	16,85	18,38	
C (BR)	17,33	18,26	19,37	21,33	
C1	13,00	13,85	14,72	16,26	
C1 (BR)	15,20	16,14	17,24	19,21	
FP	5,09	5,72	6,43	7,19	

(BR) Denotes Brakemotor

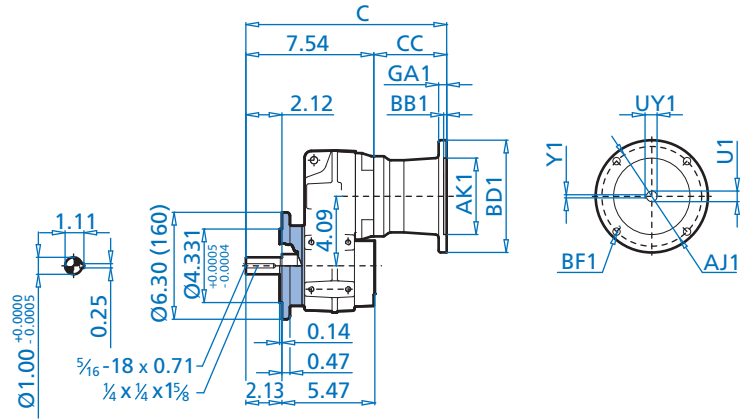


SK 0282NB + NEMA

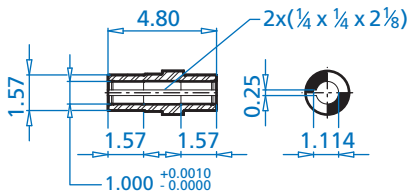
SK 0282NB/AF



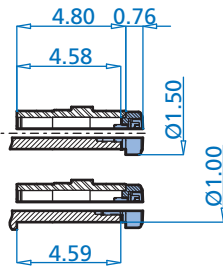
SK 0282NB/VF



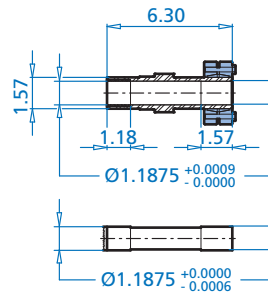
SK 0282NB/AF



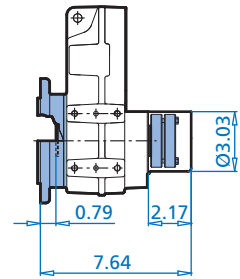
SK 0282NB/AFB



SK 0282NB/AFS



AFSH



Dimensions

Alternate Shafts on Pages 276 - 285

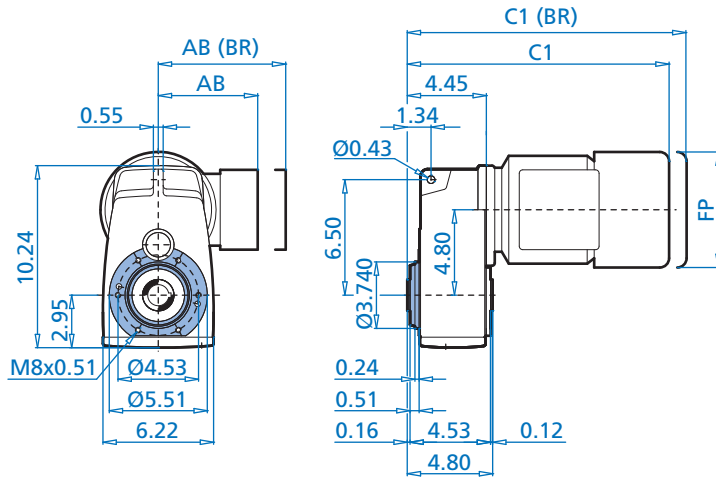
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	11,83	9,70	4,29
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	11,83	9,70	4,29

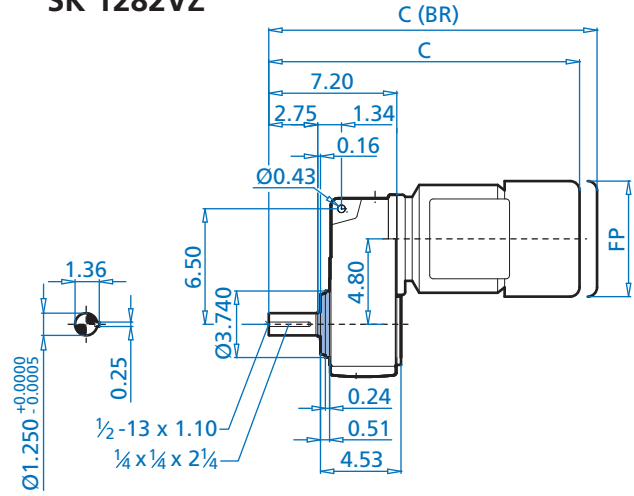
SK 1282 + Motor



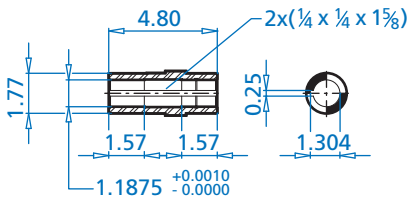
SK 1282AZ



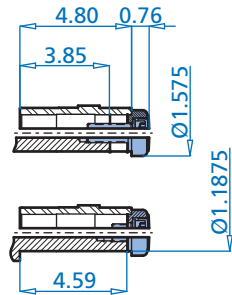
SK 1282VZ



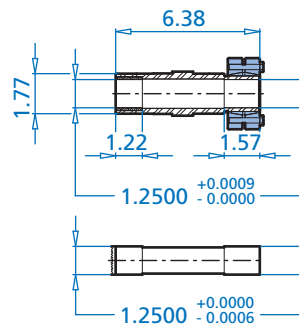
SK 1282AZ



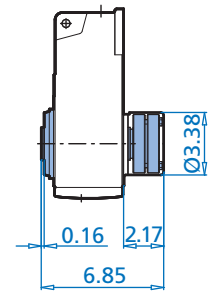
SK 1282AZB



SK 1282AZS




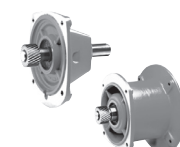
AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

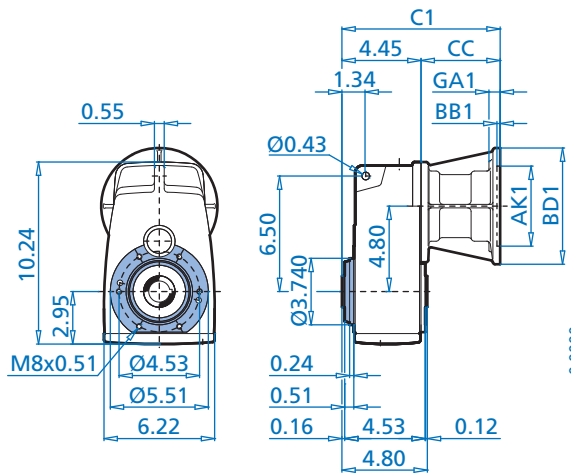
Motor Dimensions

	63S/L	71S/L	80S/L	90S/L	100L/LA	112M		For Other Connection Possibilities please see  262
Standard efficiency								
Premium efficiency			80LP	90SP/LP	100LP		112MP	
AB	4,51	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	4,84	5,24	5,59	5,79	6,77	7,17	7,17	
C	14,93	16,51	17,49	19,06	20,29	21,16	22,15	
C (BR)	17,14	18,79	20,01	22,02	23,89	24,86	25,85	
C1	12,18	13,76	14,74	16,31	17,54	18,41	19,40	
C1 (BR)	14,39	16,04	17,26	19,27	21,14	22,11	23,10	
FP	5,09	5,72	6,43	7,19	7,90	8,87	8,87	

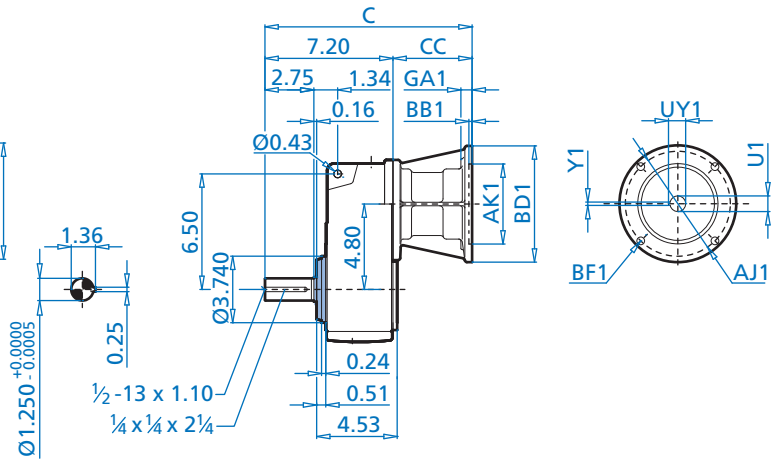
(BR) Denotes Brakemotor



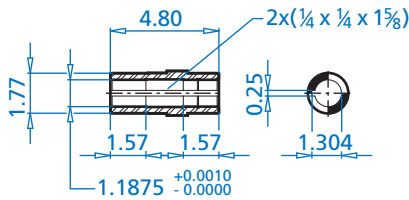
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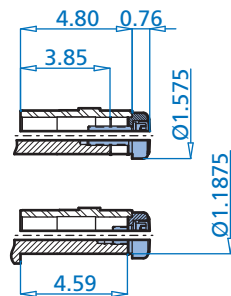
SK 1282VZ



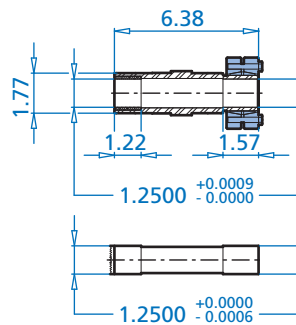
SK 1282AZ



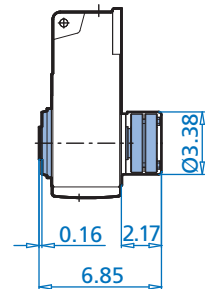
SK 1282AZB



SK 1282AZS



AZSH



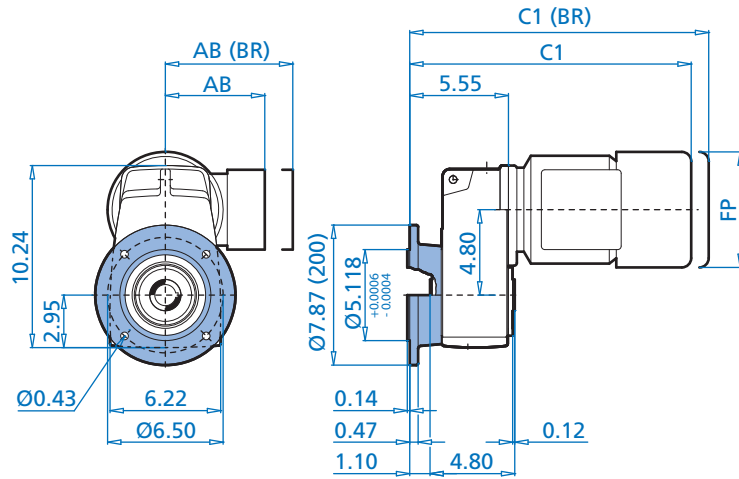
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	11,65	8,90	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	11,65	8,90	4,45
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	12,85	10,10	5,65

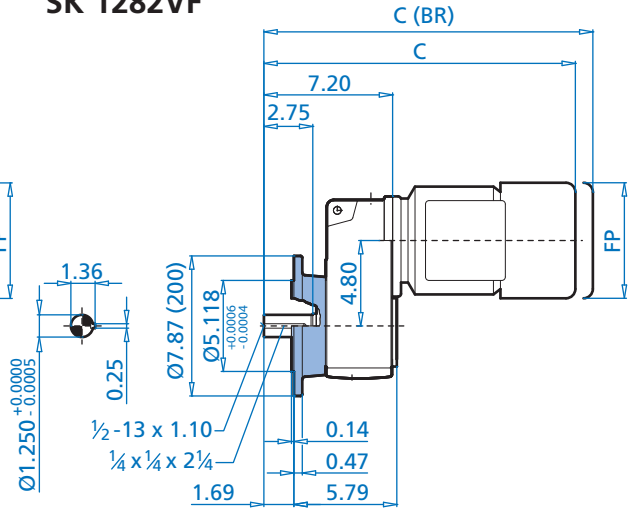
SK 1282 + Motor



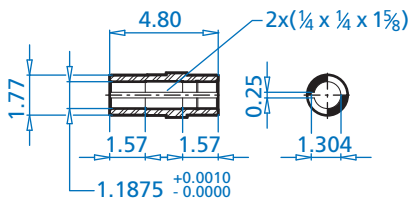
SK 1282AF



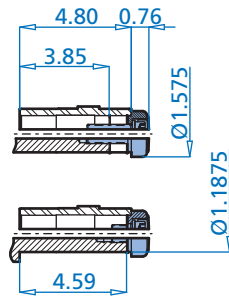
SK 1282VF



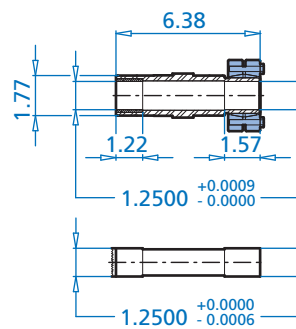
SK 1282AF



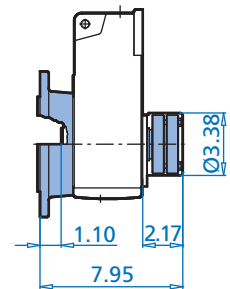
SK 1282AFB



SK 1282AFS




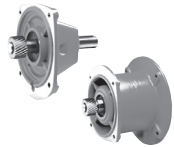
AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

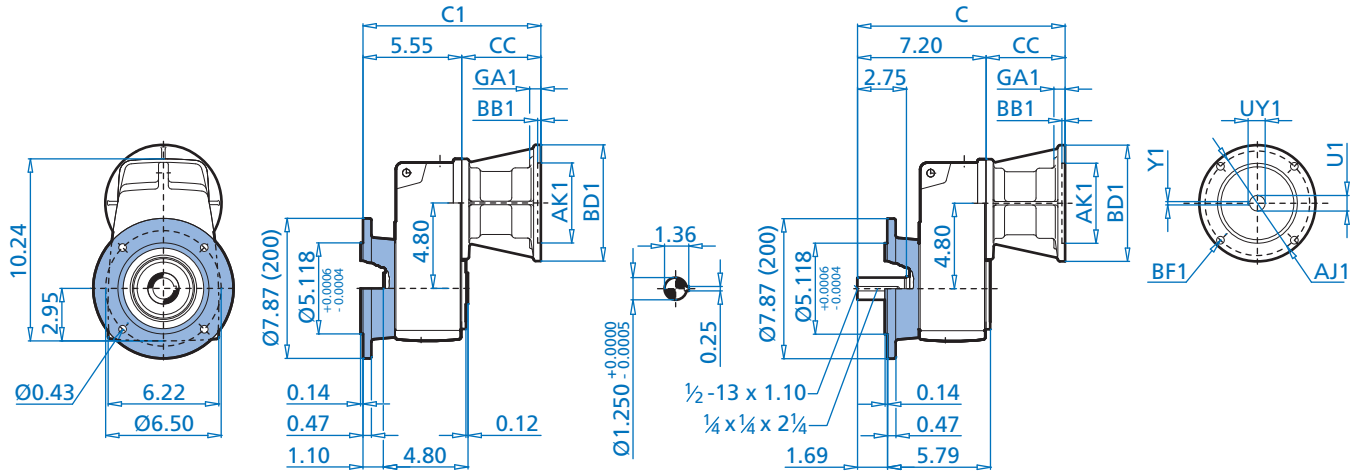
	63S/L	71S/L	80S/L	90S/L	100L/LA	112M		For Other Connection Possibilities please see  262
Standard efficiency								
Premium efficiency			80LP	90SP/LP	100LP		112MP	
AB	4,51	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	4,84	5,24	5,59	5,79	6,77	7,17	7,17	
C	14,93	16,51	17,49	19,06	20,29	21,16	22,15	
C (BR)	17,14	18,79	20,01	22,02	23,89	24,86	25,85	
C1	13,28	14,86	15,84	17,42	18,64	19,51	20,50	
C1 (BR)	15,49	17,14	18,36	20,37	22,24	23,21	24,20	
FP	5,09	5,72	6,43	7,19	7,90	8,87	8,87	

(BR) Denotes Brakemotor



SK 1282AF

SK 1282VF

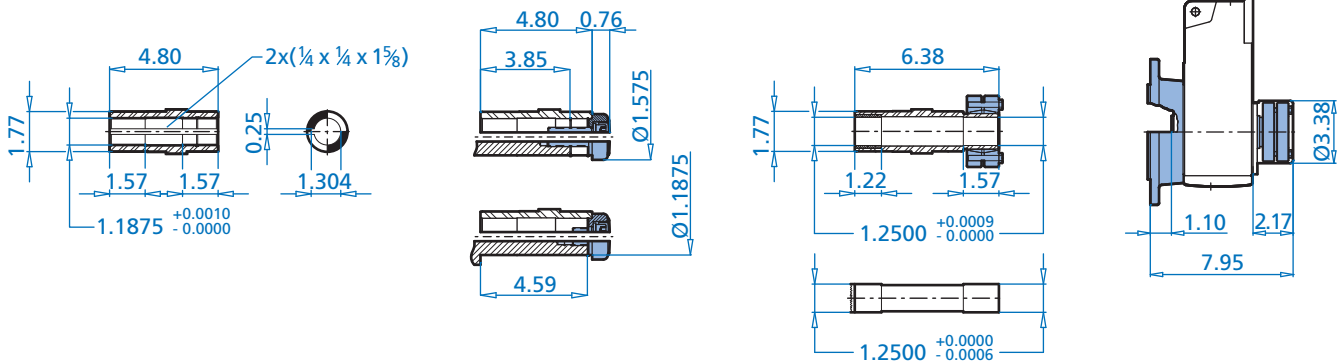


SK 1282AF

SK 1282AFB

SK 1282AFS

AFSH



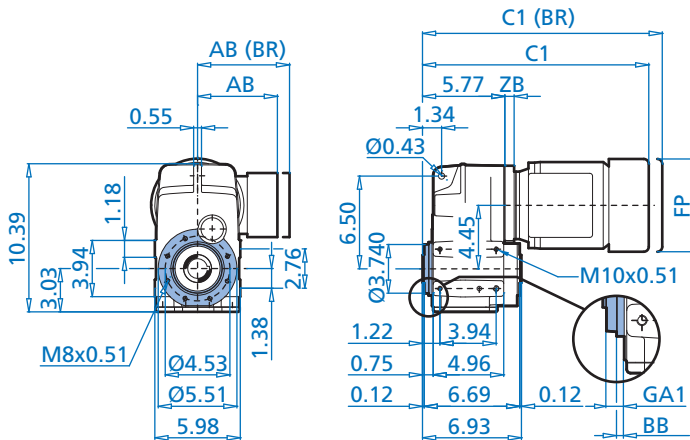
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	11,65	10,00	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	11,65	10,00	4,45
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	12,85	11,20	5,65

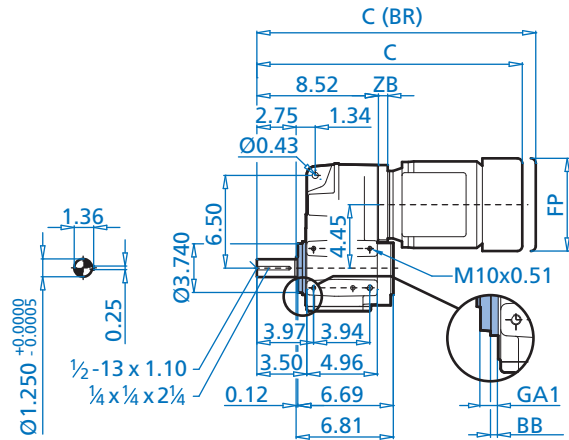
SK 1382NB + Motor



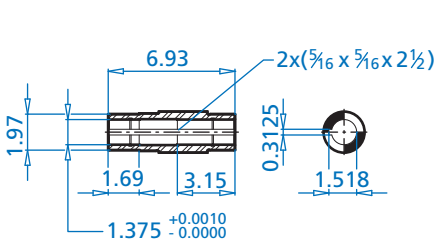
SK 1382NB/AZ



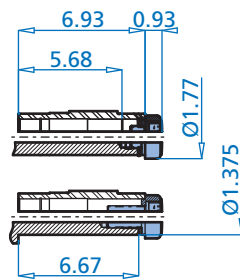
SK 1382NB/VZ



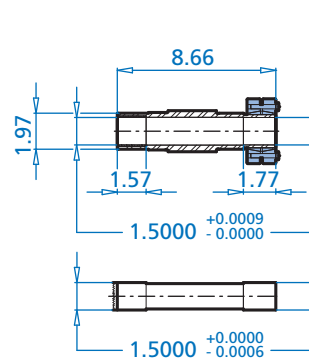
SK 1382NB/AZ



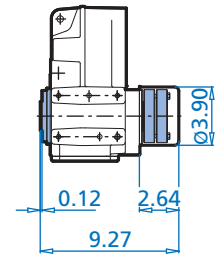
SK 1382NB/AZB



SK 1382NB/AZS



AZSH



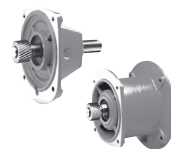
Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

	63S/L	71S/L	80S/L	90S/L	100L/LA	For Other Connection Possibilities please see → 262
Standard efficiency						
Premium efficiency			80LP	90SP/LP	100LP	
AB	4,51	4,86	5,59	5,79	6,65	
AB (BR)	4,84	5,24	5,59	5,79	6,77	
C	16,89	17,75	18,61	20,74	21,96	
C (BR)	19,10	20,03	21,13	23,69	25,56	
C1	14,14	15,00	15,86	17,99	19,21	
C1 (BR)	16,35	17,28	18,38	20,94	22,81	
FP	5,09	5,72	6,43	7,19	7,90	
ZB	0,79	0,79	0,79	1,38	1,38	

(BR) Denotes Brakemotor

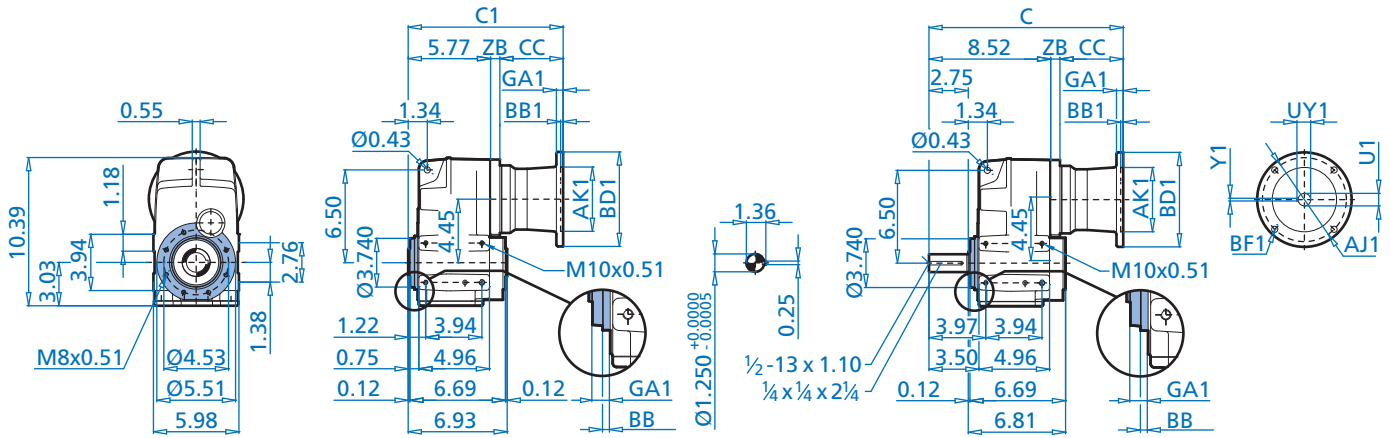




SK 1382NB + NEMA

SK 1382NB/AZ

SK 1382NB/VZ

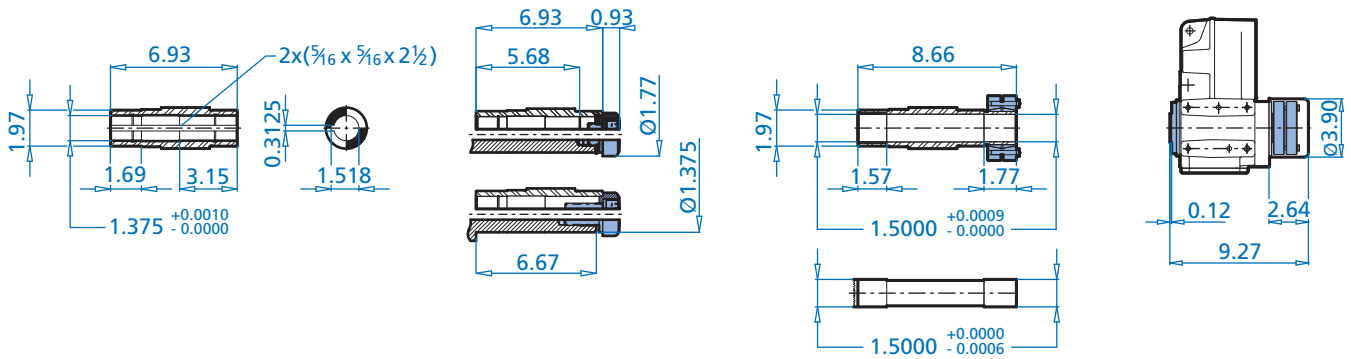


SK 1382NB/AZ

SK 1382NB/AZB

SK 1382NB/AZS

AZSH



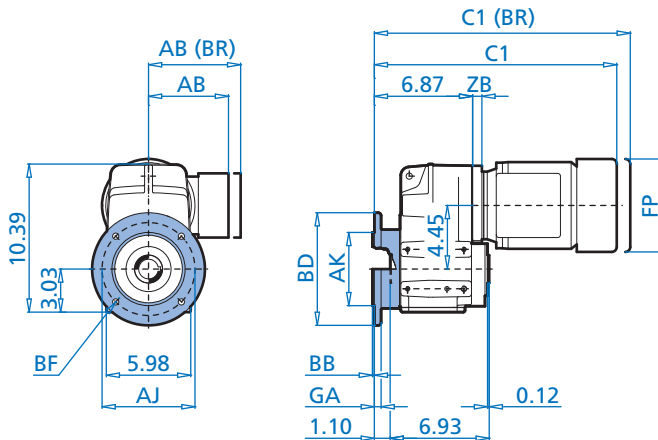
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC	ZB
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	13,60	10,85	4,29	0,79
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	13,60	10,85	4,29	0,79
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	15,41	12,66	5,51	1,38

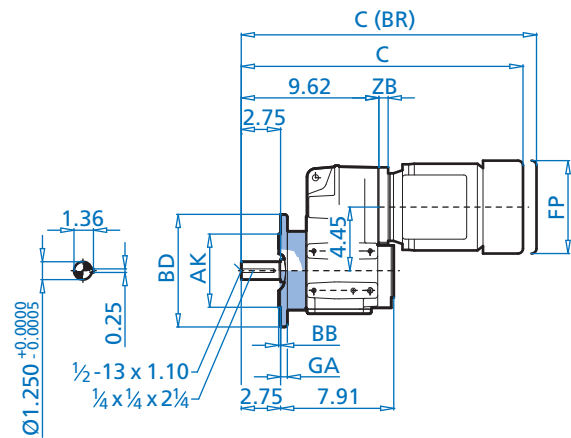
SK 1382NB + Motor



SK 1382NB/AF



SK 1382NB/VF

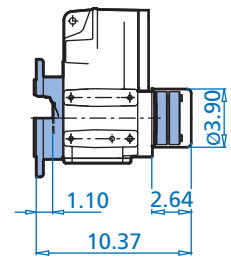
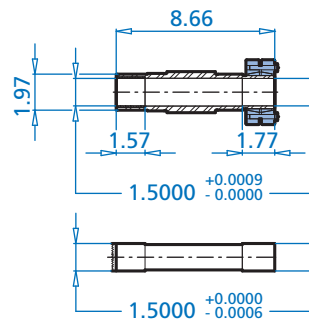
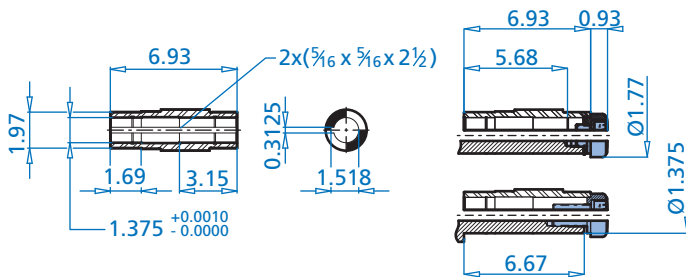


SK 1382NB/AF

SK 1382NB/AFB

SK 1382NB/AFS

AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
6.30 (160)	5,12	4,331 +0.0005 -0.0004	0,14	0,35	0,47
7.87 (200)	6,50	5,118 +0.0006 -0.0004	0,14	0,43	0,47

Motor Dimensions

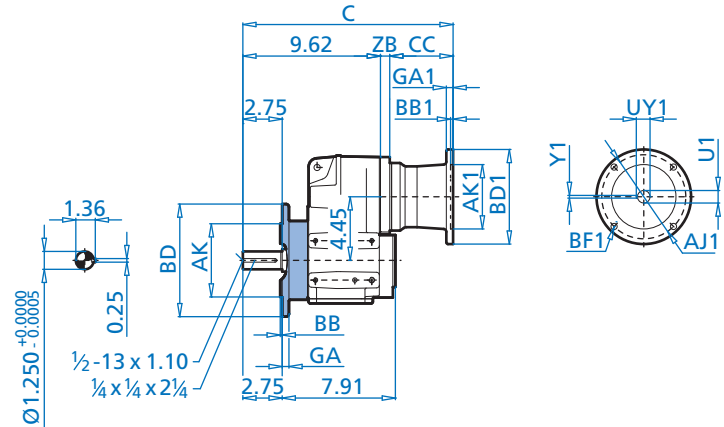
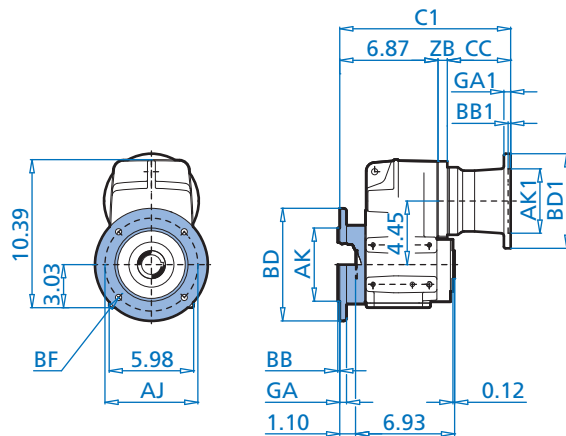
	63S/L	71S/L	80S/L	90S/L	100L/LA	For Other Connection Possibilities please see → 262
Premium efficiency			80LP	90SP/LP	100LP	
AB	4,51	4,86	5,59	5,79	6,65	
AB (BR)	4,84	5,24	5,59	5,79	6,77	
C	17,99	18,85	19,71	21,84	23,06	
C (BR)	20,20	21,13	22,23	24,79	26,66	
C1	15,24	16,10	16,96	19,09	20,31	
C1 (BR)	17,45	18,38	19,48	22,04	23,91	
FP	5,09	5,72	6,43	7,19	7,90	
ZB	0,79	0,79	0,79	1,38	1,38	

(BR) Denotes Brakemotor



SK 1382NB/AF

SK 1382NB/VF

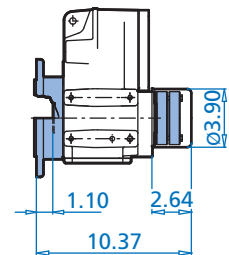
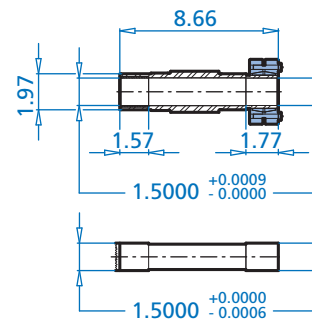
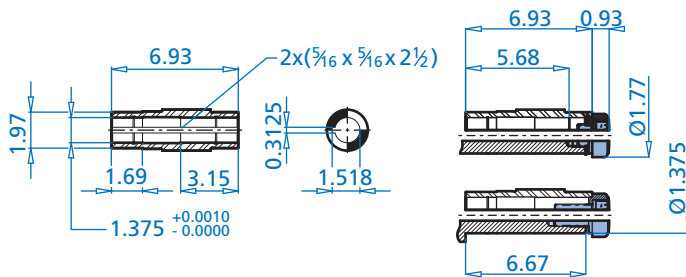


SK 1382NB/AF

SK 1382NB/AFB

SK 1382NB/AFS

AFSH



Dimensions

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
6.30 (160)	5,12	4,331 +0.0005 -0.0004	0,14	0,35	0,47
7.87 (200)	6,50	5,118 +0.0006 -0.0004	0,14	0,43	0,47

NEMA Dimensions

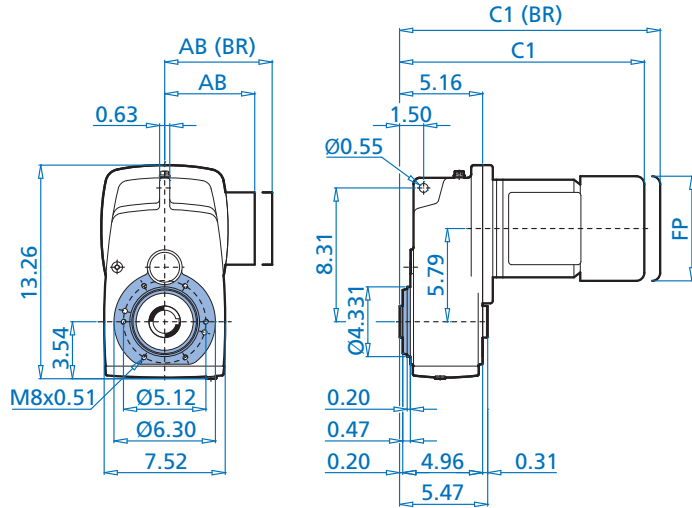
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC	ZB
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	14,70	11,95	4,29	0,79
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	14,70	11,95	4,29	0,79
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	16,51	13,76	5,51	1,38

Alternate Shafts on Pages 278 - 285

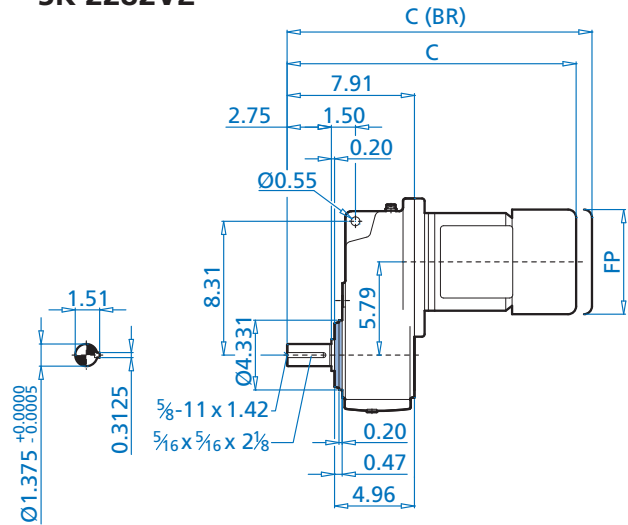
SK 2282 + Motor



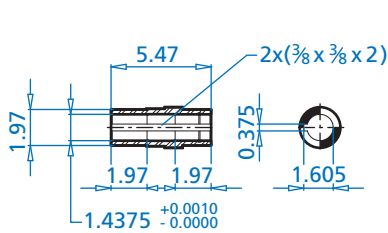
SK 2282AZ



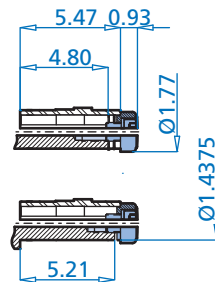
SK 2282VZ



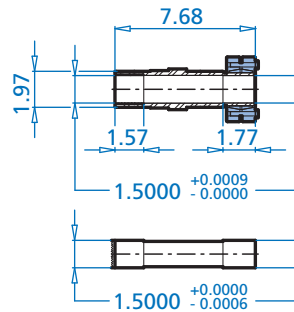
SK 2282AZ



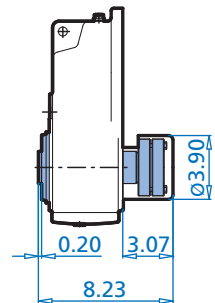
SK 2282AZB




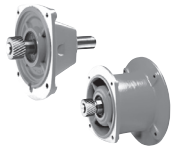
SK 2282AZS



AZSH



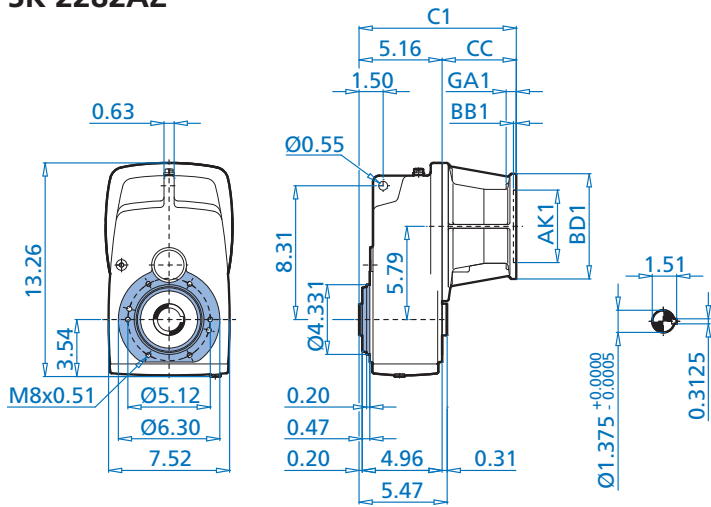
Motor Dimensions

Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	112MP	For Other Connection Possibilities please see  262
Premium efficiency		80LP	90SP/LP	100LP			
AB	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	
C	16,98	17,96	19,54	20,76	21,63	22,62	
C (BR)	19,26	20,48	22,49	24,36	25,33	26,32	
C1	14,23	15,21	16,79	18,01	18,88	19,87	
C1 (BR)	16,51	17,73	19,74	21,61	22,58	23,57	
FP	5,72	6,43	7,19	7,90	8,87	8,87	

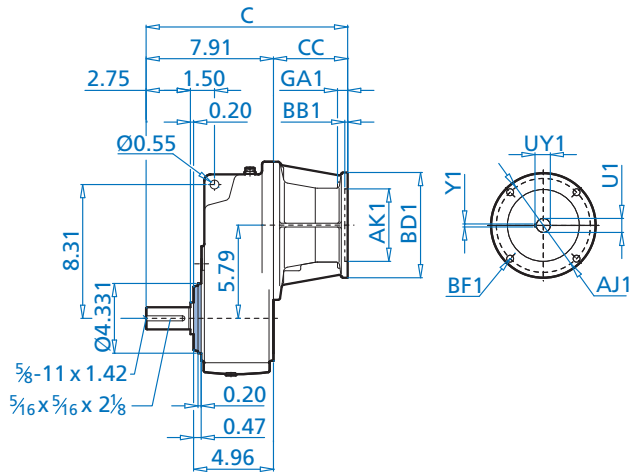
(BR) Denotes Brakemotor



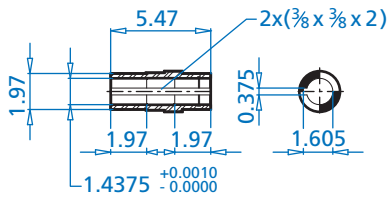
SK 2282AZ



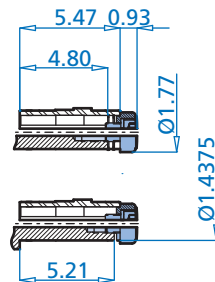
SK 2282VZ



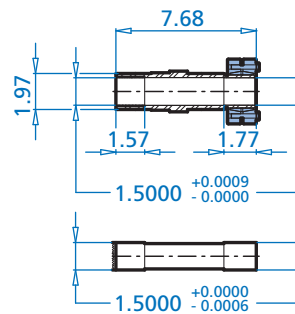
SK 2282AZ



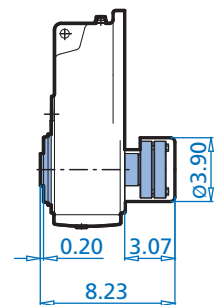
SK 2282AZB



SK 2282AZS



AZSH



Dimensions

Alternate Shafts on Pages 276 - 285

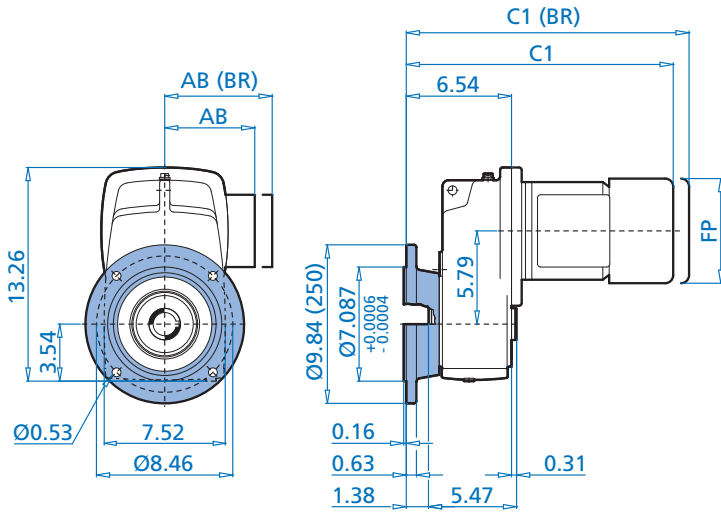
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	12,51	9,76	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	12,51	9,76	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	14,55	11,80	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	14,55	11,80	6,65

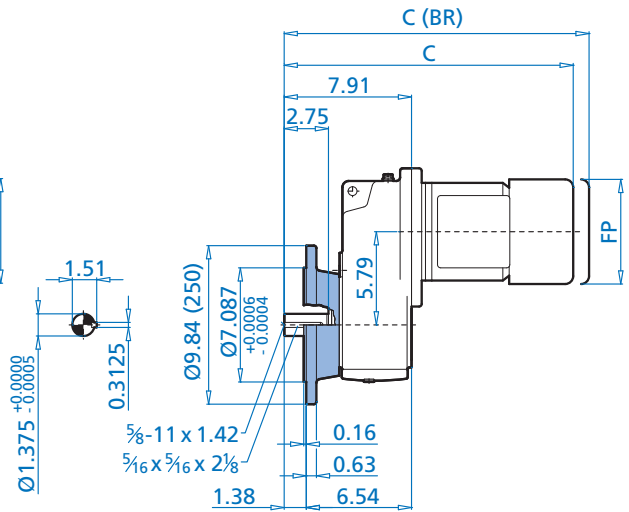
SK 2282 + Motor



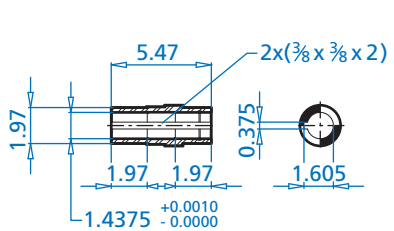
SK 2282AF



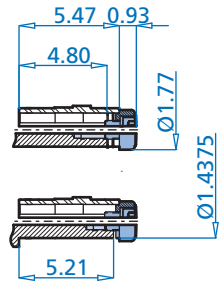
SK 2282VF



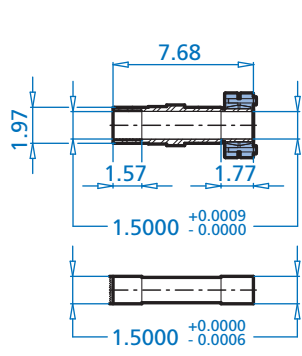
SK 2282AF



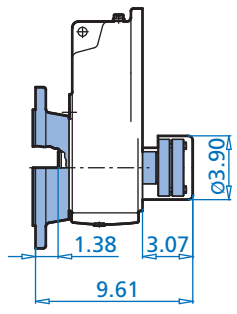
SK 2282AFB



SK 2282AFS




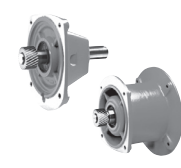
AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

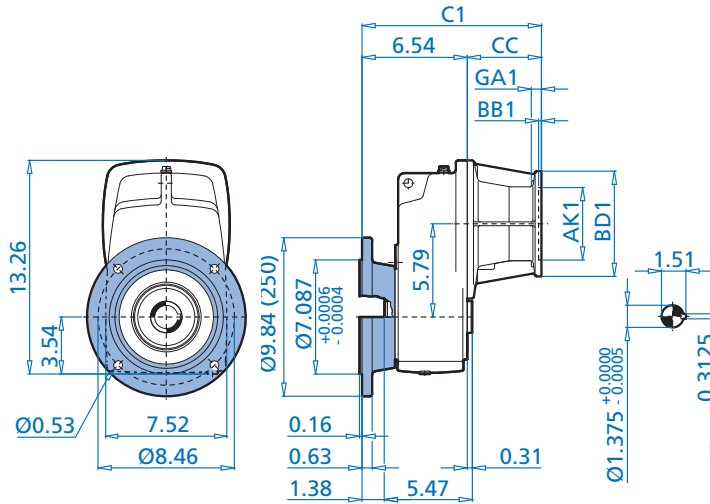
Motor Dimensions

Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	112MP	For Other Connection Possibilities please see  262
Premium efficiency		80LP	90SP/LP	100LP			
AB	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	
C	16,98	17,96	19,54	20,76	21,63	22,62	
C (BR)	19,26	20,48	22,49	24,36	25,33	26,32	
C1	15,61	16,59	18,17	19,39	20,26	21,25	
C1 (BR)	17,89	19,11	21,12	22,99	23,96	24,95	
FP	5,72	6,43	7,19	7,90	8,87	8,87	

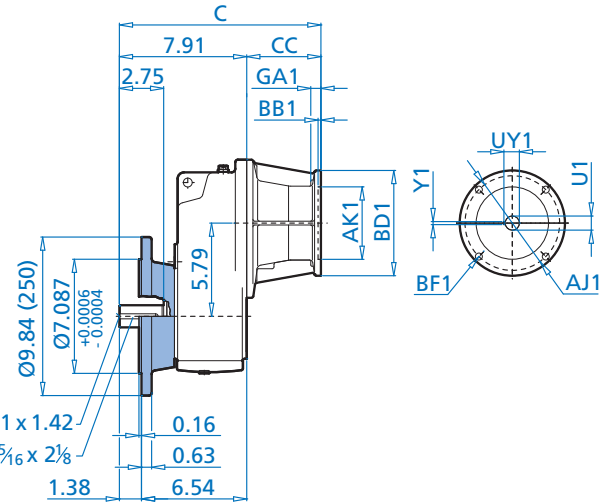
(BR) Denotes Brakemotor



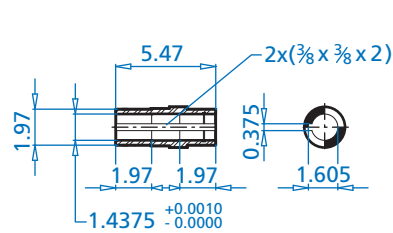
SK 2282AF



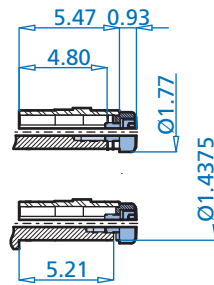
SK 2282VF



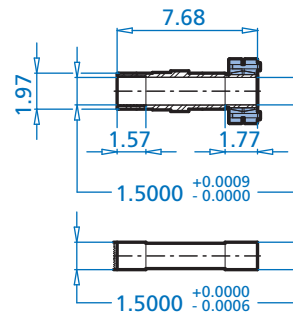
SK 2282AF



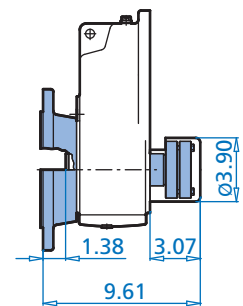
SK 2282AFB



SK 2282AFS



AFSH



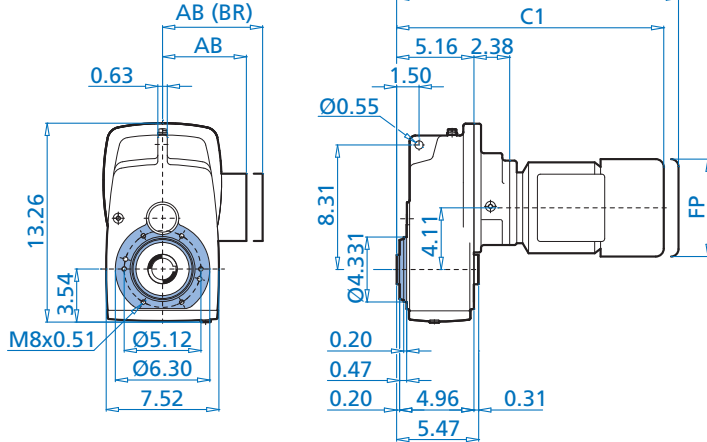
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	12,51	11,14	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	12,51	11,14	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	14,55	13,18	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	14,55	13,18	6,65

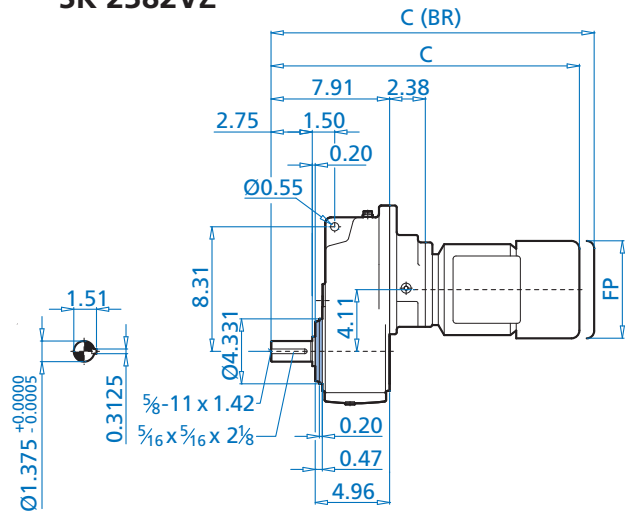
SK 2382 + Motor



SK 2382AZ

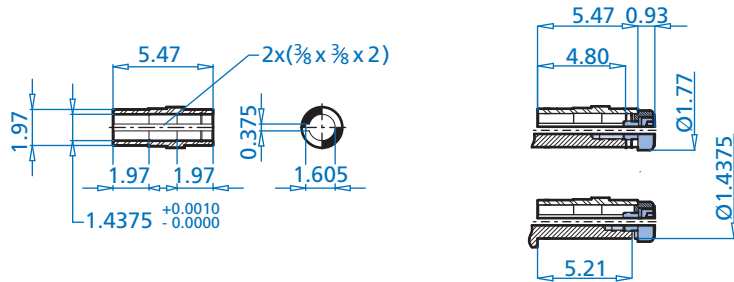


SK 2382VZ



SK 2382AZ

SK 2382AZB



Dimensions

Alternate Shafts on Pages 278 - 285

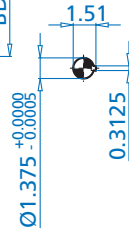
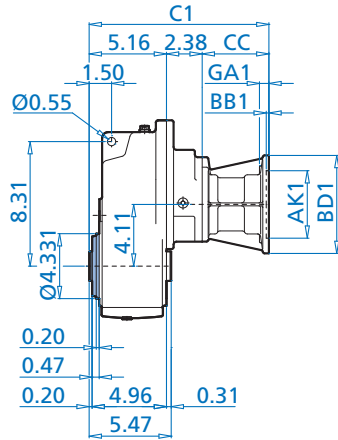
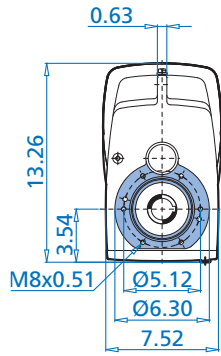
Motor Dimensions

	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see ⇨ 262
Premium efficiency			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	18,02	19,60	20,58	22,16	
C (BR)	20,23	21,88	23,10	25,11	
C1	15,27	16,85	17,83	19,41	
C1 (BR)	17,48	19,13	20,35	22,36	
FP	5,09	5,72	6,43	7,19	

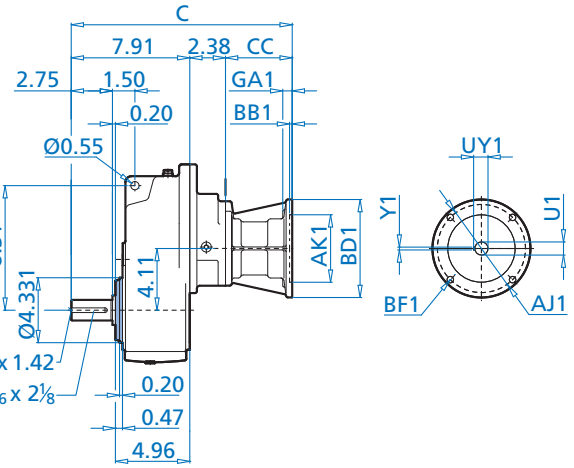
(BR) Denotes Brakemotor



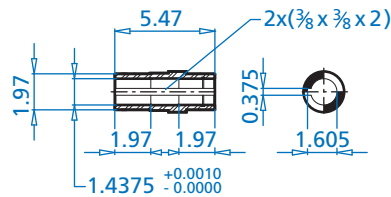
SK 2382AZ



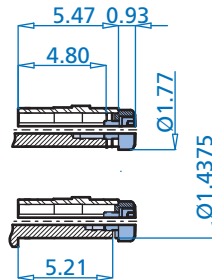
SK 2382VZ



SK 2382AZ



SK 2382AZB



NEMA Dimensions

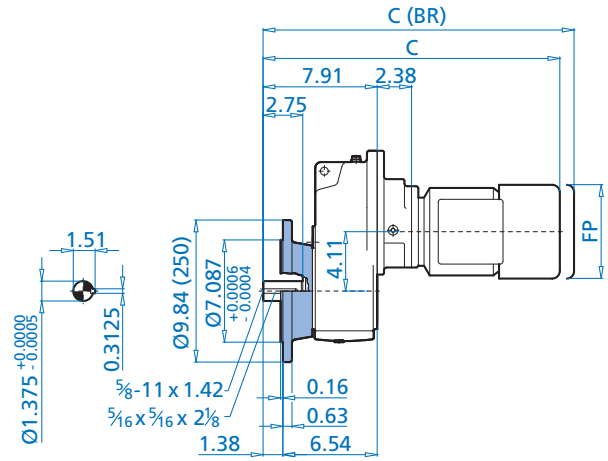
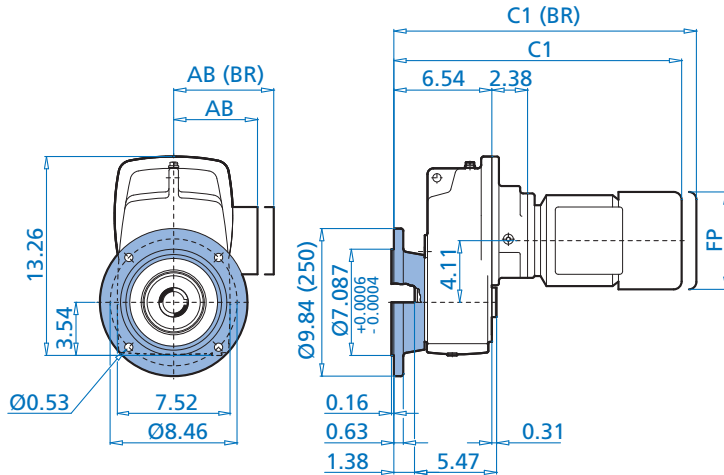
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	14,74	11,99	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	14,74	11,99	4,45

SK 2382 + Motor



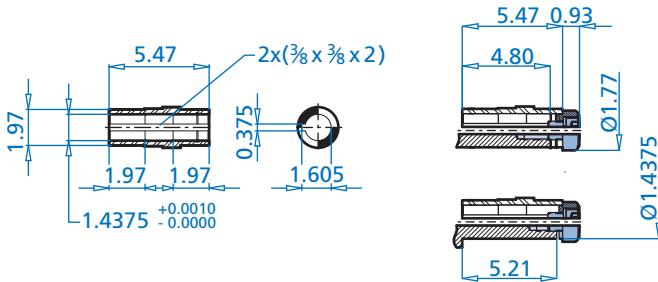
SK 2382AF

SK 2382VF



SK 2382AF

SK 2382AFB



Dimensions

Alternate Shafts on Pages 278 - 285

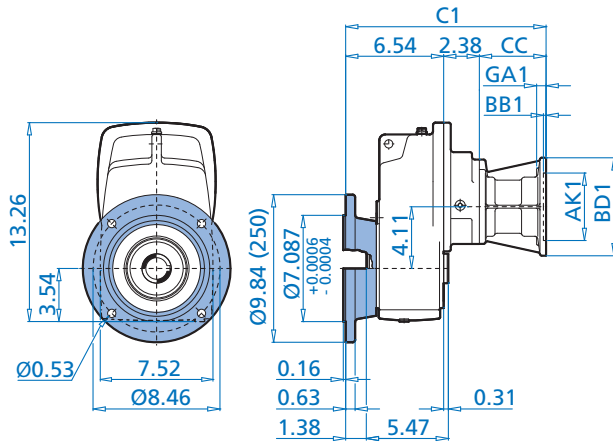
Motor Dimensions

Standard efficiency	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see → 262
Premium efficiency			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	18,02	19,60	20,58	22,16	
C (BR)	20,23	21,88	23,10	25,11	
C1	16,65	18,22	19,21	20,78	
C1 (BR)	18,85	20,51	21,73	23,74	
FP	5,09	5,72	6,43	7,19	

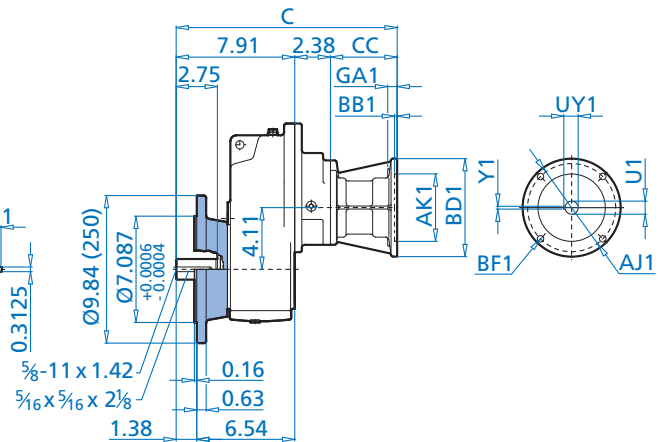
(BR) Denotes Brakemotor



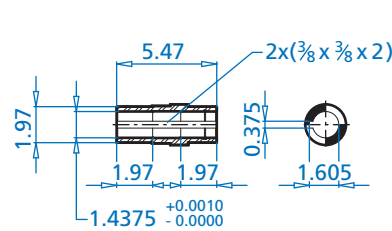
SK 2382AF



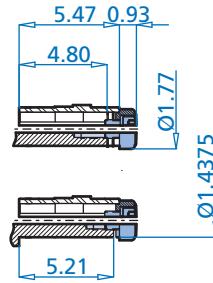
SK 2382VF



SK 2382AF



SK 2382AFB



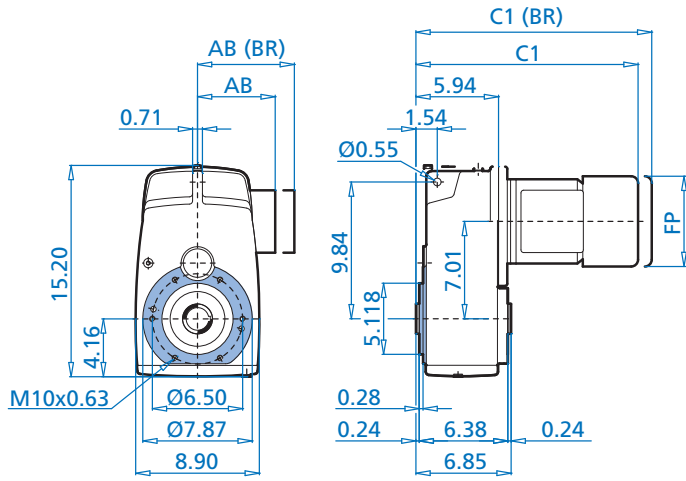
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	14,74	13,37	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	14,74	13,37	4,45

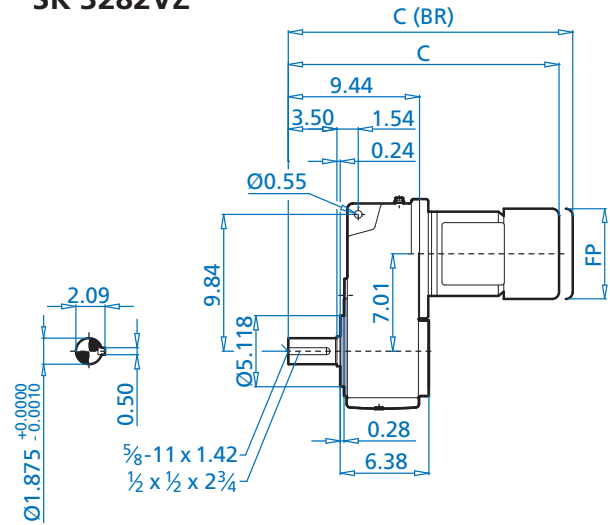
SK 3282 + Motor



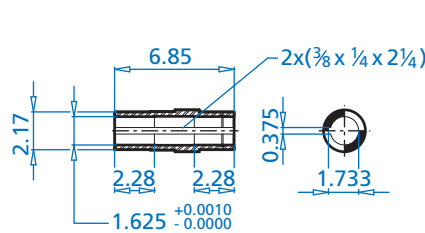
SK 3282AZ



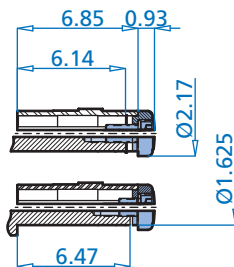
SK 3282VZ



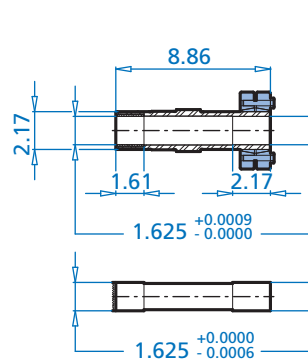
SK 3282AZ



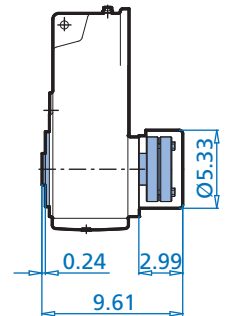
SK 3282AZB



SK 3282AZS



AZSH

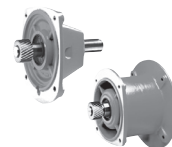


Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

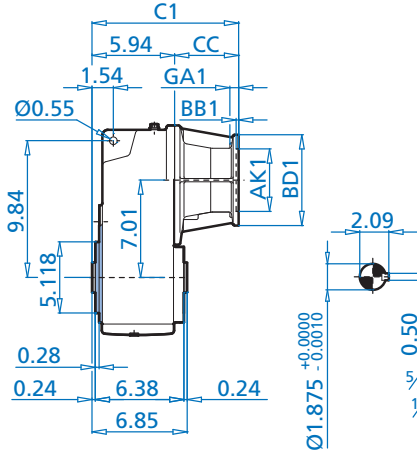
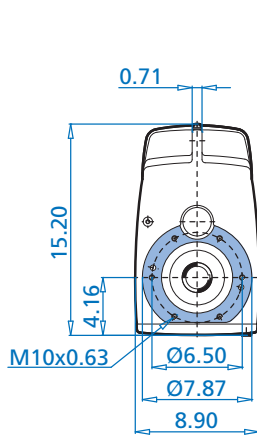
Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	132S/M	For Other Connection Possibilities please see ⇨ 262
Premium efficiency		80LP	90SP/LP	100LP	112MP	132SP/MP	
AB	4,86	5,59	5,79	6,65	7,05	7,05	8,03
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	7,91
C	18,52	19,50	21,07	22,30	23,17	24,16	26,59
C (BR)	20,80	22,02	24,03	25,90	26,87	27,86	30,80
C1	15,02	16,00	17,57	18,80	19,67	20,66	23,09
C1 (BR)	17,30	18,52	20,53	22,40	23,37	24,36	27,30
FP	5,72	6,43	7,19	7,90	8,87	8,87	10,45



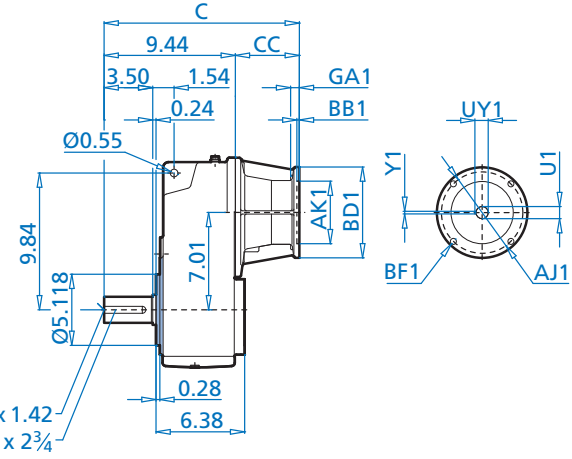
(BR) Denotes Brakemotor



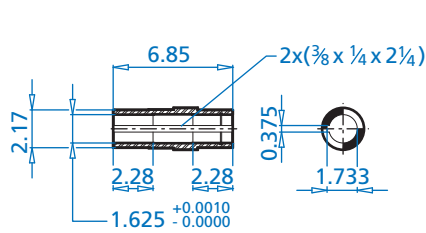
SK 3282AZ



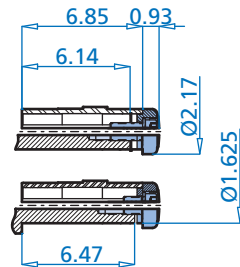
SK 3282VZ



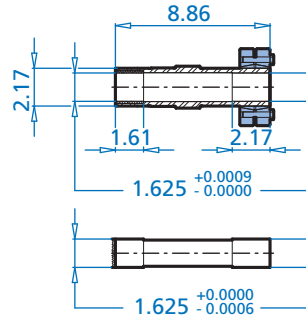
SK 3282AZ



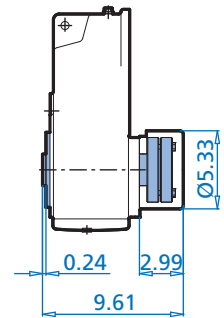
SK 3282AZB



SK 3282AZS



AZSH



Dimensions

Alternate Shafts on Pages 276 - 285

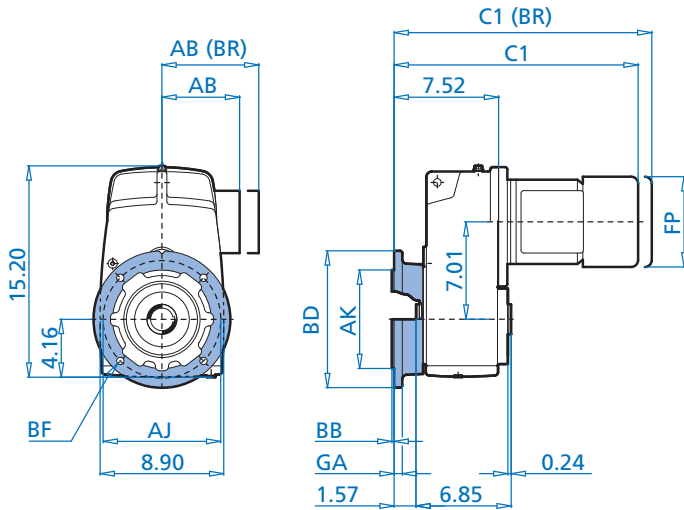
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	14,05	10,55	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	14,05	10,55	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	16,09	12,59	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	16,09	12,59	6,65

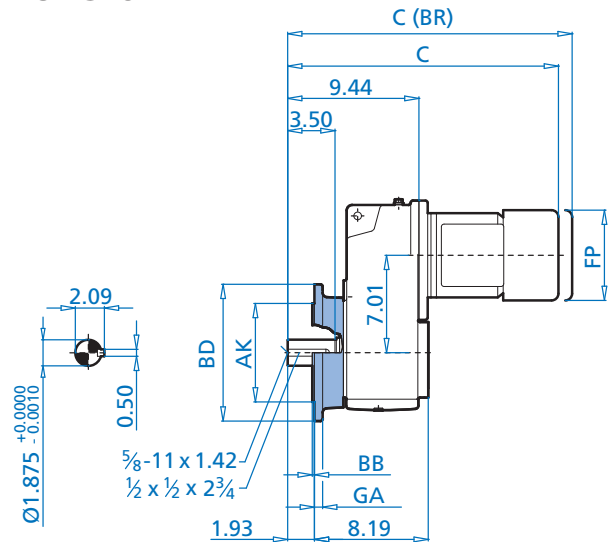
SK 3282 + Motor



SK 3282AF



SK 3282VF

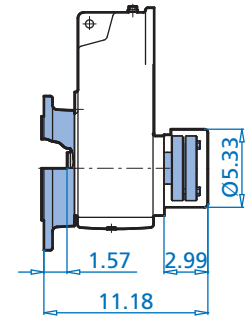
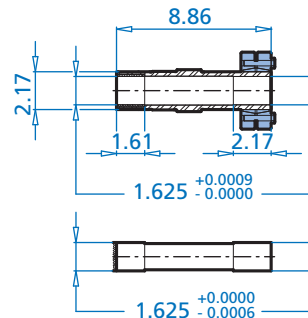
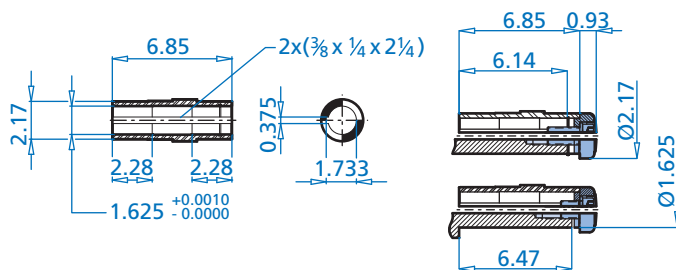


SK 3282AF

SK 3282AFB

SK 3282AFS

AFSH

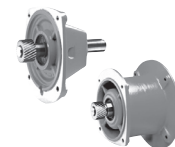


Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

Motor Dimensions

Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	132S/M	For Other Connection Possibilities please see ⇨ 262
Premium efficiency		80LP	90SP/LP	100LP	112MP	132SP/MP	
AB	4,86	5,59	5,79	6,65	7,05	7,05	8,03
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	7,91
C	18,52	19,50	21,07	22,30	23,17	24,16	26,59
C (BR)	20,80	22,02	24,03	25,90	26,87	27,86	30,80
C1	16,59	17,57	19,15	20,37	21,24	22,23	24,66
C1 (BR)	18,87	20,09	22,10	23,97	24,94	25,93	28,87
FP	5,72	6,43	7,19	7,90	8,87	8,87	10,45

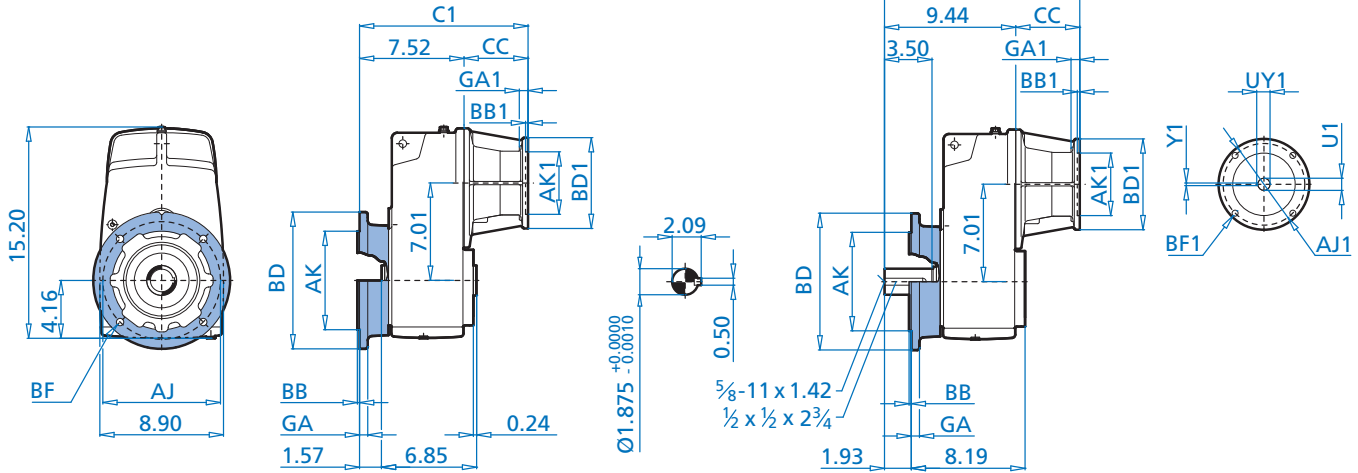


(BR) Denotes Brakemotor



SK 3282AF

SK 3282VF

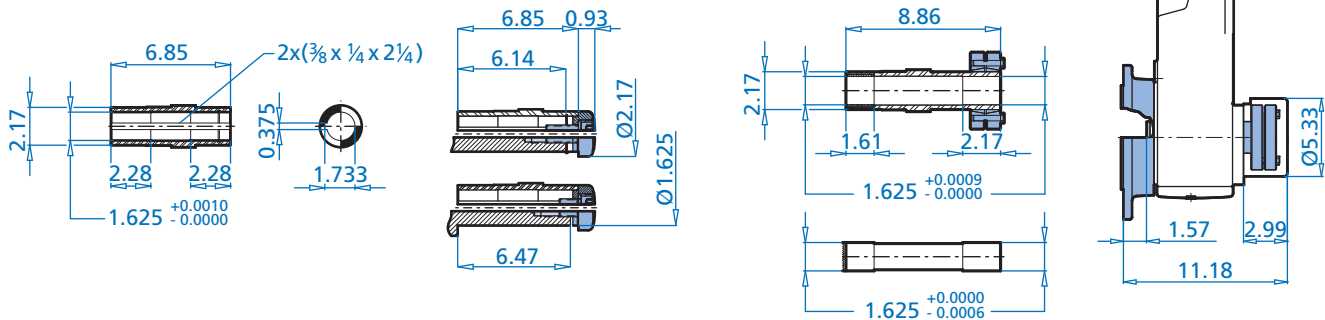


SK 3282AF

SK 3282AFB

SK 3282AFS

AFSH



Dimensions

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

NEMA Dimensions

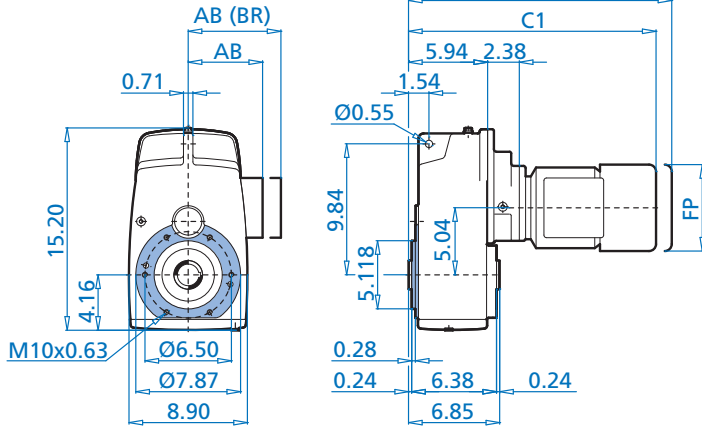
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	14,05	12,13	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	14,05	12,13	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	16,09	14,17	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	16,09	14,17	6,65

Alternate Shafts on Pages 278 - 285

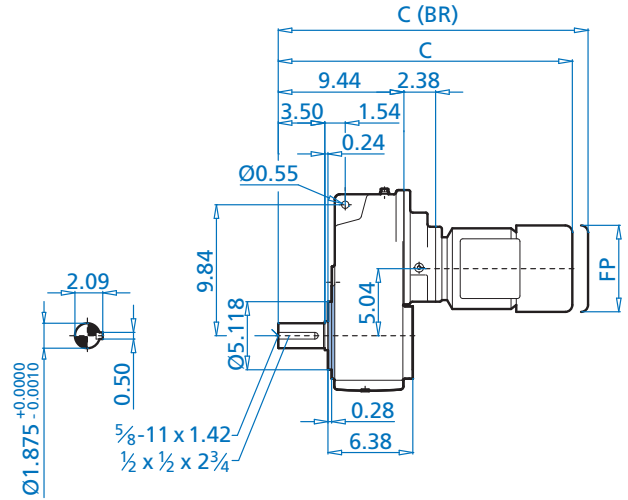
SK 3382 + Motor



SK 3382AZ



SK 3382VZ

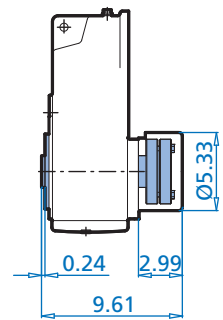
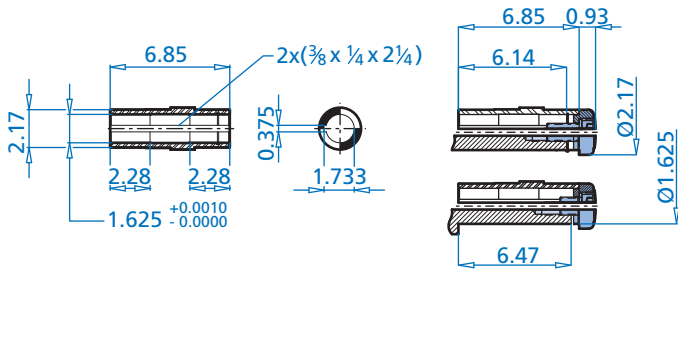


SK 3382AZ

SK 3382AZB

SK 3382AZS

AZSH



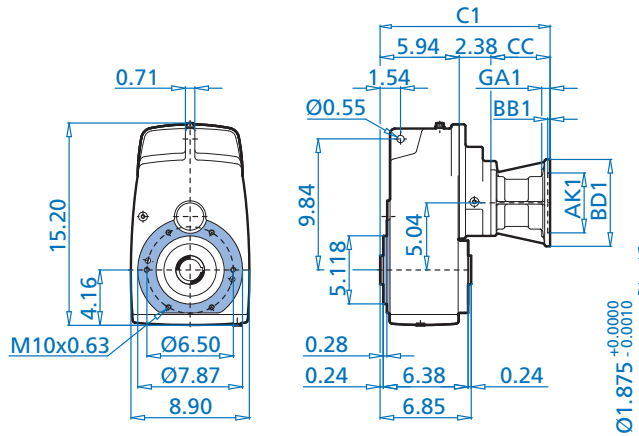
Motor Dimensions

Standard efficiency	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see → 262
Premium efficiency			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	19,56	21,13	22,12	23,69	
C (BR)	21,76	23,42	24,64	26,65	
C1	16,06	17,63	18,62	20,19	
C1 (BR)	18,26	19,92	21,14	23,15	
FP	5,09	5,72	6,43	7,19	

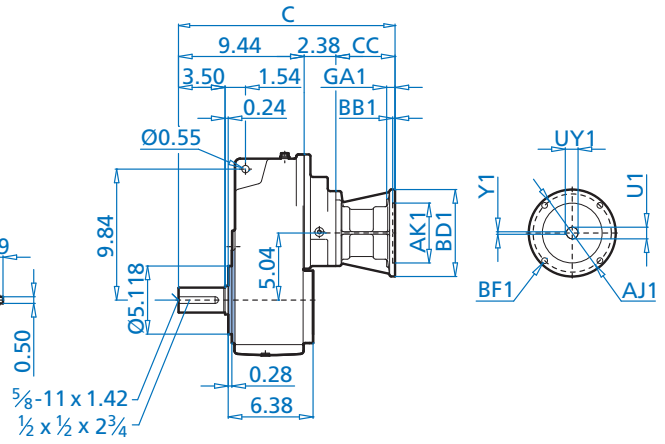
(BR) Denotes Brakemotor



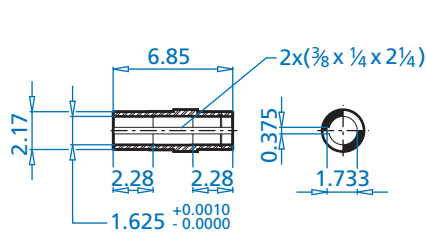
SK 3382AZ



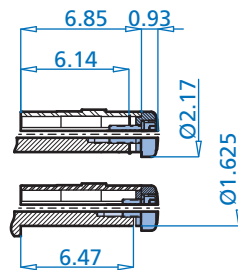
SK3382VZ



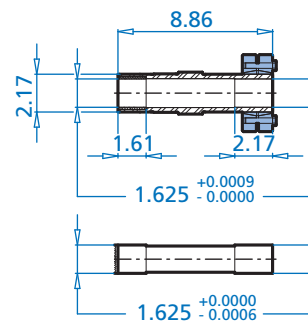
SK 3382AZ



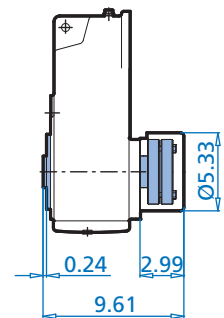
SK 3382AZB



SK 3382AZS



AZSH



Dimensions

Alternate Shafts on Pages 276 - 285

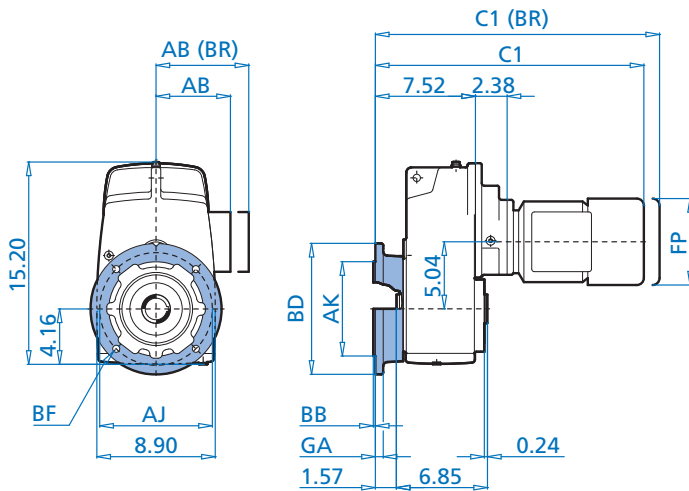
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	16,28	12,78	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	16,28	12,78	4,45
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	17,48	13,98	5,65

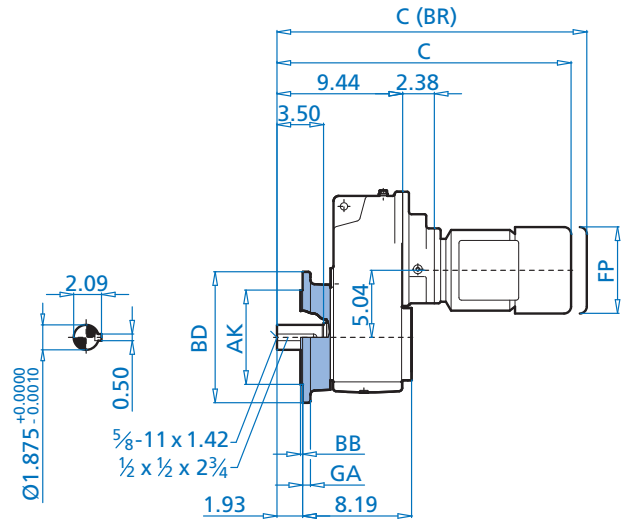
SK 3382 + Motor



SK 3382AF



SK 3382VF

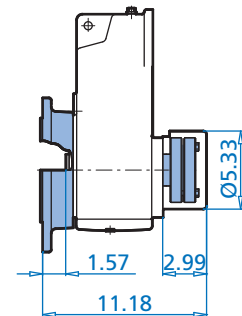
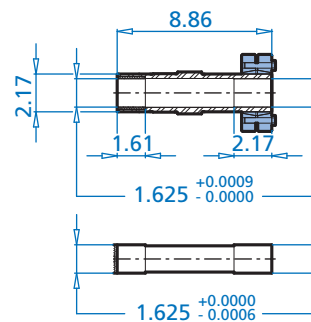
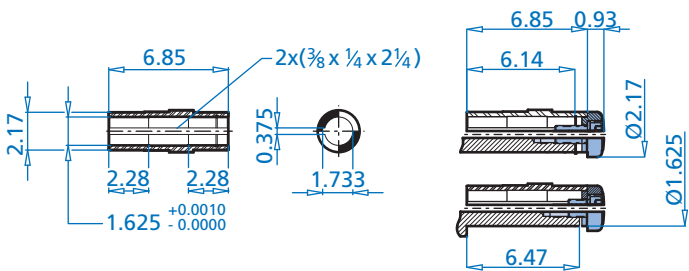


SK 3382AF

SK 3382AFB

SK 3382AFS

AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

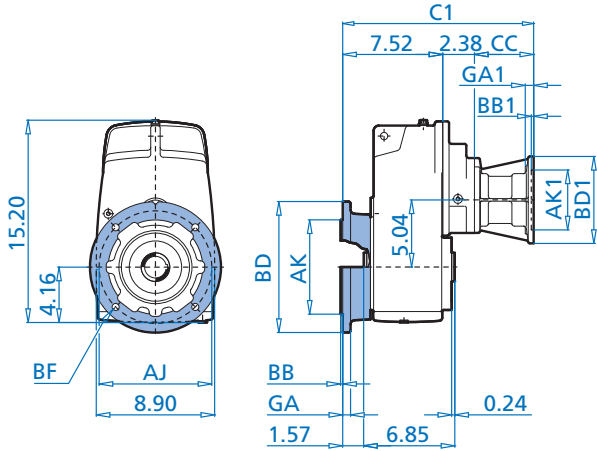
Motor Dimensions

	63S/L	71S/L	80S/L	90S/L	For Other Connection Possibilities please see ⇨ 262
			80LP	90SP/LP	
AB	4,51	4,86	5,59	5,79	
AB (BR)	4,84	5,24	5,59	5,79	
C	19,56	21,13	22,12	23,69	
C (BR)	21,76	23,42	24,64	26,65	
C1	17,63	19,21	20,19	21,77	
C1 (BR)	19,84	21,49	22,71	24,72	
FP	5,09	5,72	6,43	7,19	

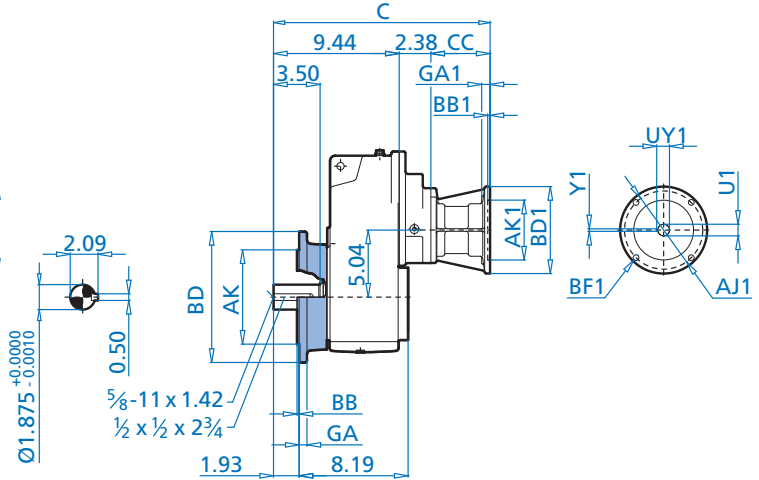
(BR) Denotes Brakemotor



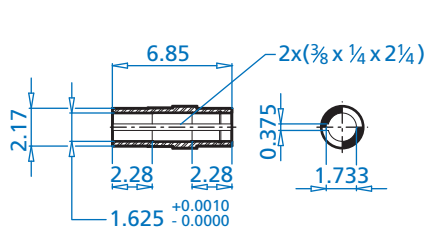
SK 3382AF



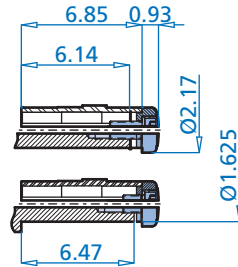
SK 3382VF



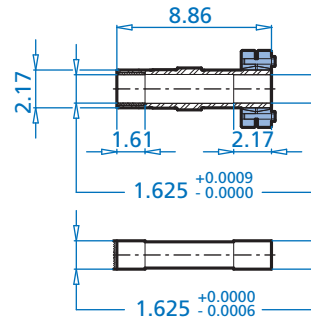
SK 3382AF



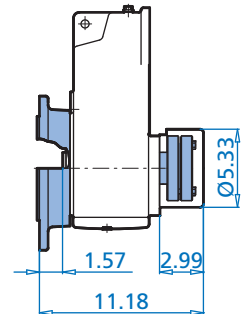
SK 3382AFB



SK 3382AFS



AFSH



Dimensions

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 $+0.0006$ / -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 $+0.0006$ / -0.0005	0,16	0,55	0,79

NEMA Dimensions

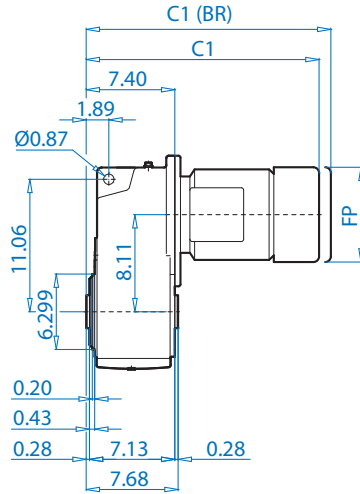
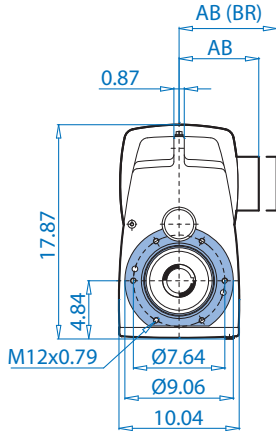
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	16,28	14,35	4,45
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	16,28	14,35	4,45
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	17,48	15,55	5,65

Alternate Shafts on Pages 276 - 285

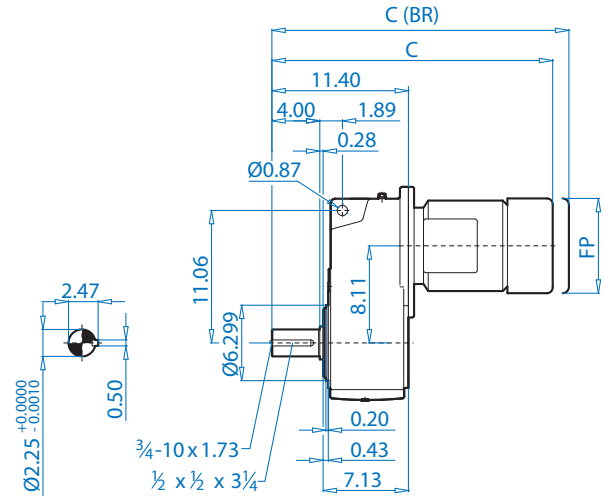
SK 4282 + Motor



SK 4282AZ



SK 4282VZ

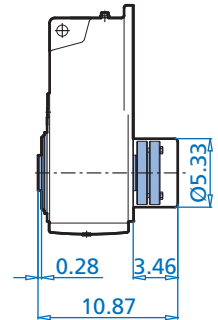
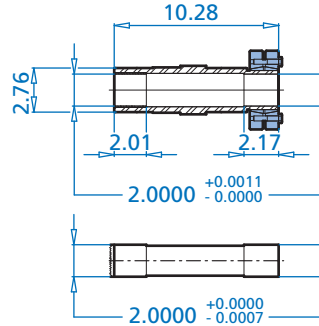
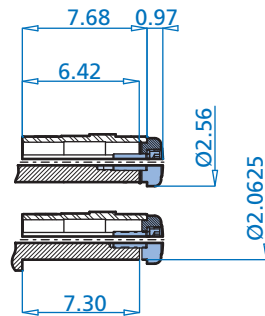
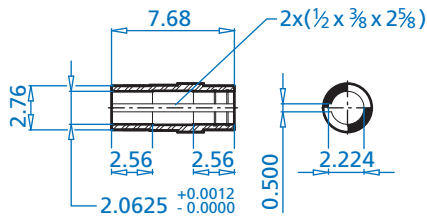


SK 4282AZ

SK 4282AZB

SK 4282AZS

AZSH



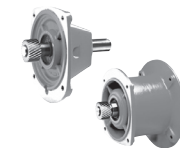
Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

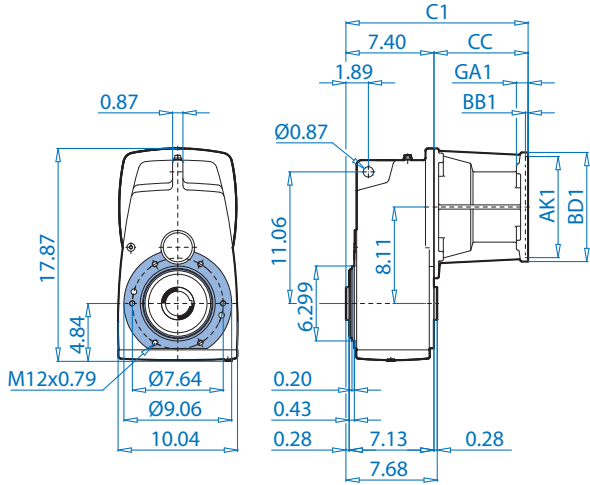
Standard efficiency	90S/L	100L/LA	112M	132S/M	160M/L	For Other Connection Possibilities please see ⇨ 262	
Premium efficiency	90SP/LP	100LP	-	112MP	132SP/MP	160MP	160LP
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53
C	22,24	23,46	24,33	25,33	27,76	30,81	32,57
C (BR)	25,20	27,07	28,04	29,03	31,97	36,13	37,85
C1	18,24	19,46	20,33	21,33	23,76	26,81	28,57
C1 (BR)	21,20	23,07	24,04	25,03	27,97	32,13	33,85
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56

(BR) Denotes Brakemotor

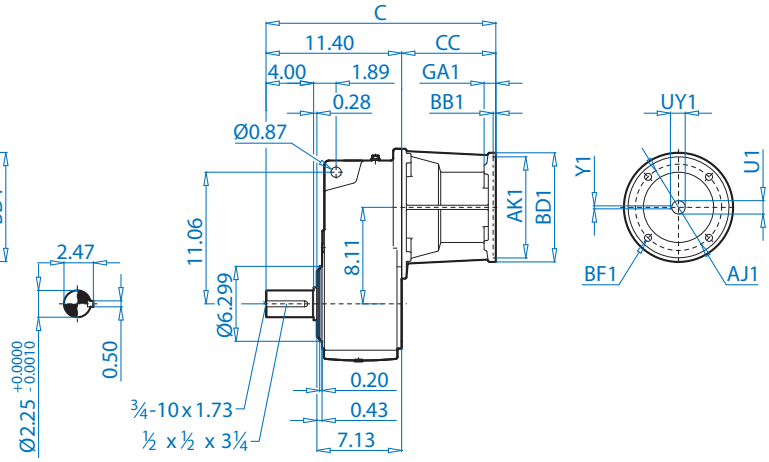




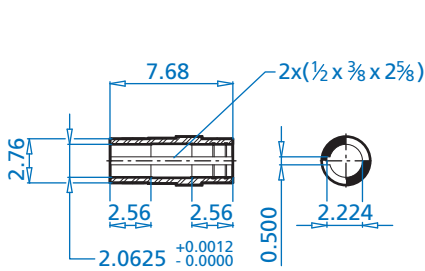
SK 4282AZ



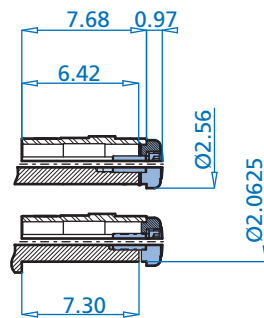
SK4282VZ



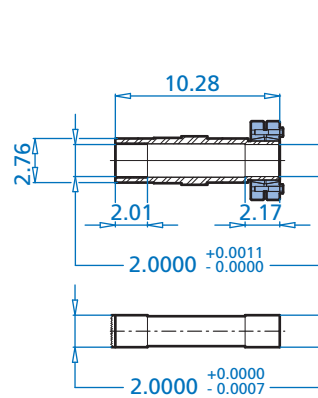
SK 4282AZ



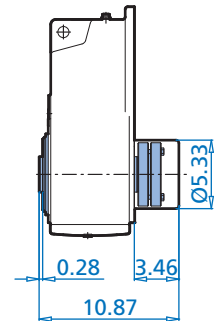
SK 4282AZB



SK 4282AZS



AZSH



Dimensions

Alternate Shafts on Pages 276 - 285

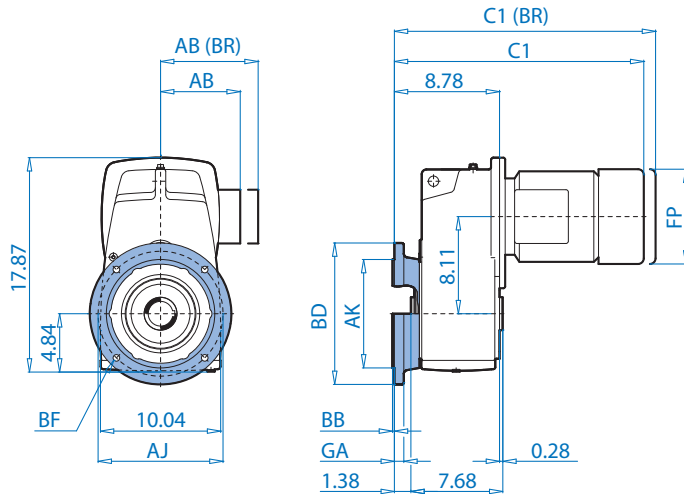
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	15,73	11,73	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	15,73	11,73	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	19,31	15,31	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	19,31	15,31	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	19,31	15,31	7,91

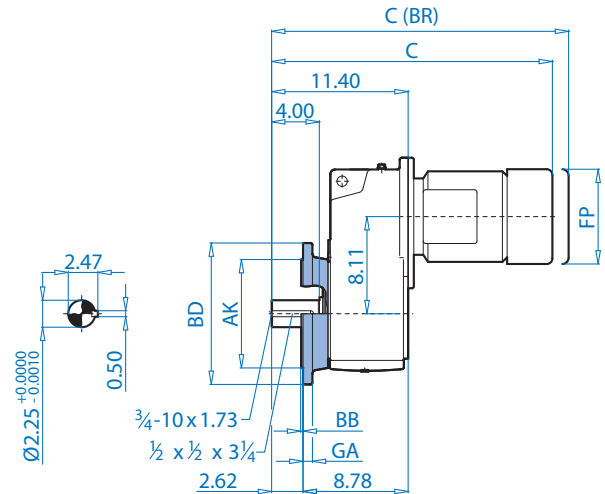
SK 4282 + Motor



SK 4282AF



SK 4282VF

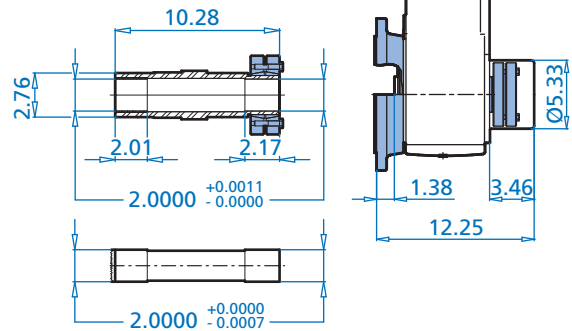
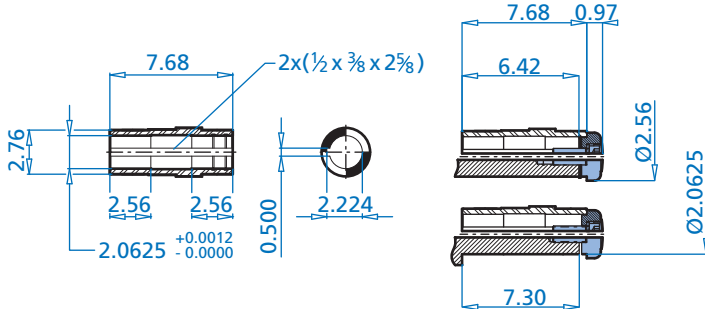


SK 4282AF

SK 4282AFB

SK 4282AFS

AFSH

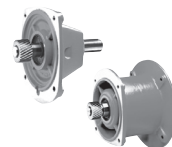


Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

Motor Dimensions

Standard efficiency	90S/L	100L/LA	112M	132S/M	160M/L	For Other Connection Possibilities please see ⇨ 262	
Premium efficiency	90SP/LP	100LP	-	112MP	132SP/MP	160MP	160LP
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53
C	22,24	23,46	24,33	25,33	27,76	30,81	32,57
C (BR)	25,20	27,07	28,04	29,03	31,97	36,13	37,85
C1	19,62	20,84	21,71	22,70	25,13	28,19	29,95
C1 (BR)	22,57	24,44	25,41	26,41	29,35	33,50	35,22
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56

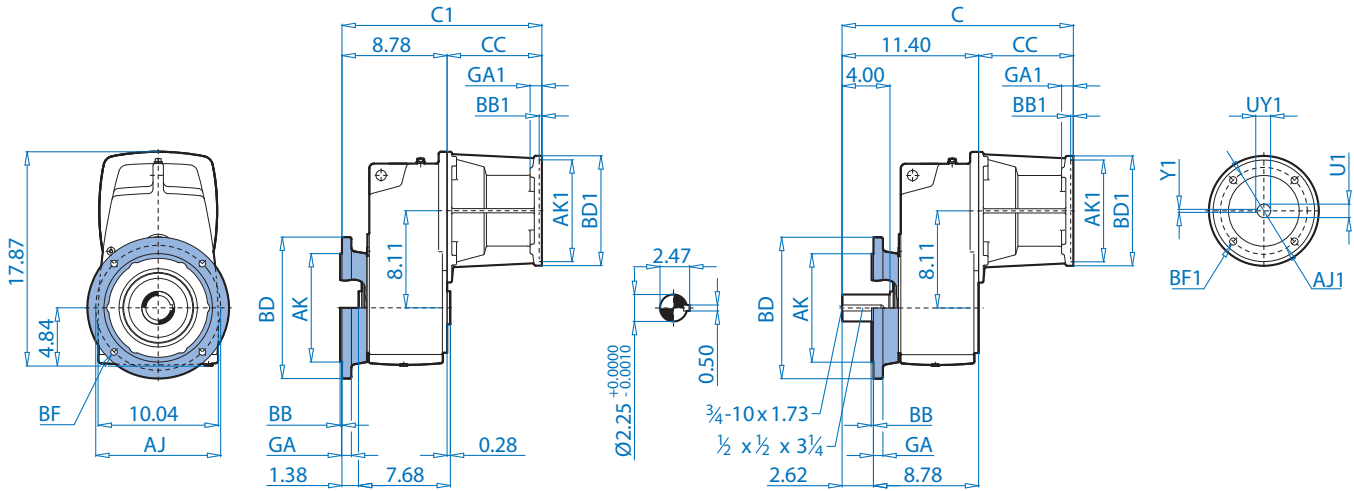


(BR) Denotes Brakemotor



SK 4282AF

SK 4282VF

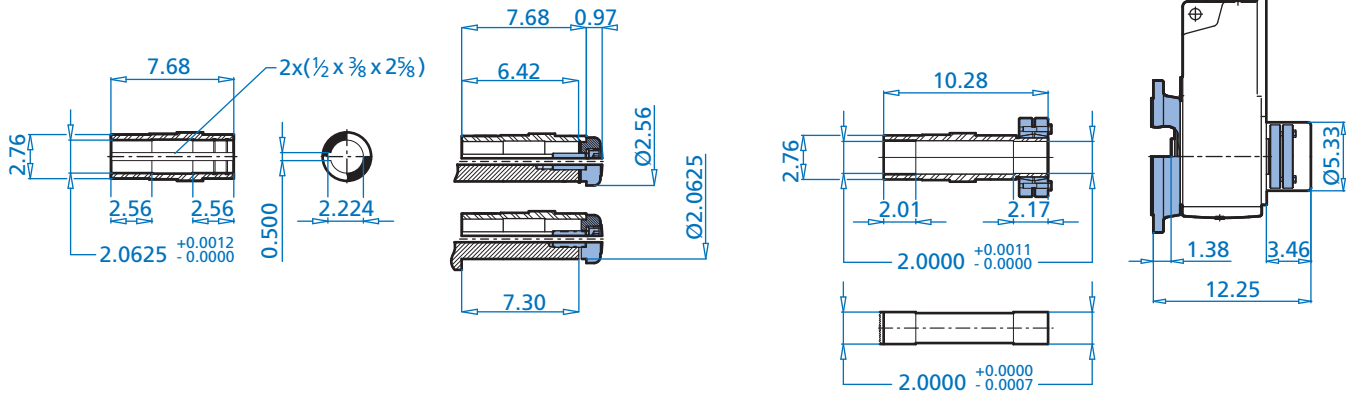


SK 4282AF

SK 4282AFB

SK 4282AFS

AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

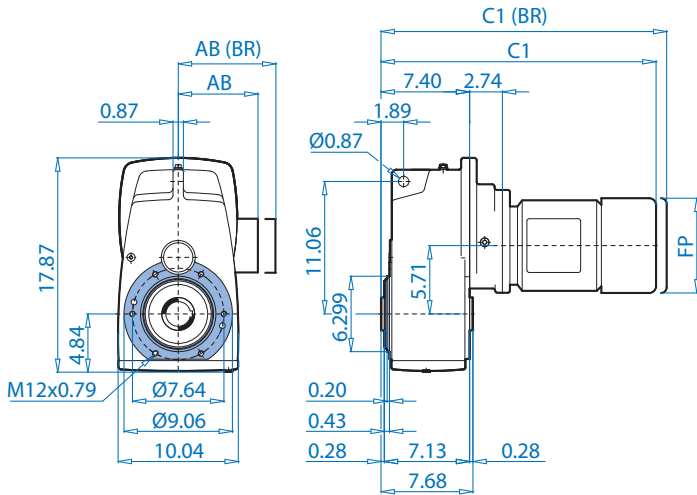
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	15,73	13,11	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	15,73	13,11	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	19,31	16,69	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	19,31	16,69	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	19,31	16,69	7,91

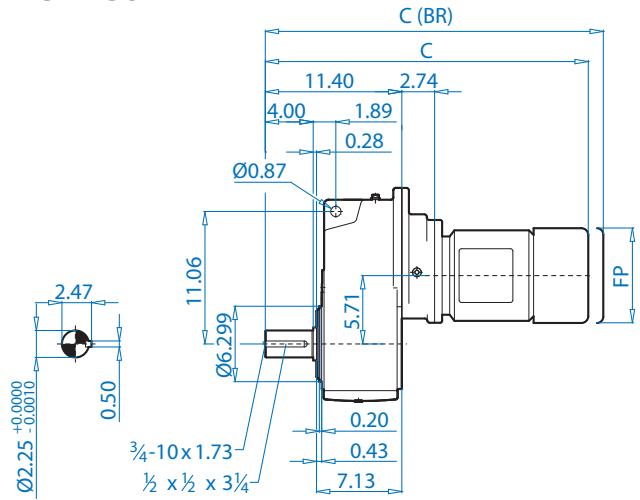
SK 4382 + Motor



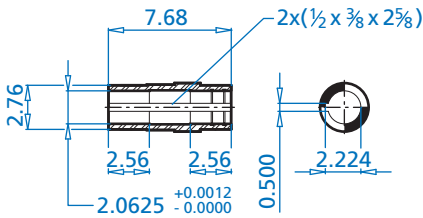
SK 4382AZ



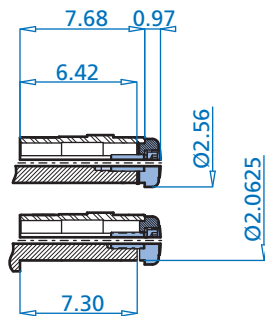
SK 4382VZ



SK 4382AZ



SK 4382AZB



Dimensions

Alternate Shafts on Pages 278 - 285

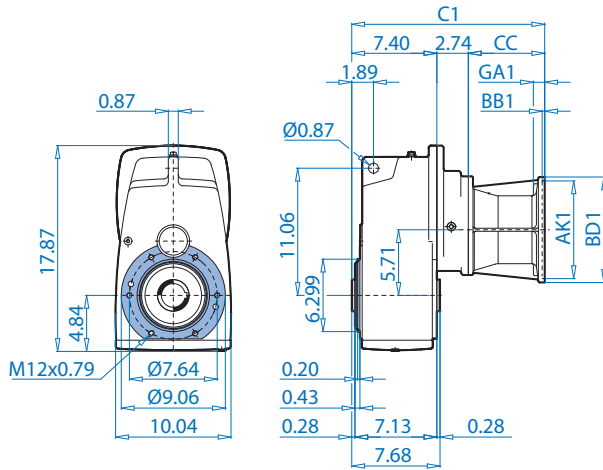
Motor Dimensions

Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	112MP	For Other Connection Possibilities please see ⇨ 262
Premium efficiency		80LP	90SP/LP	100LP			
AB	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	
C	23,21	24,19	25,77	26,99	27,86	28,85	
C (BR)	25,49	26,71	28,72	30,59	31,56	32,55	
C1	19,21	20,19	21,77	22,99	23,86	24,85	
C1 (BR)	21,49	22,71	24,72	26,59	27,56	28,55	
FP	5,72	6,43	7,19	7,90	8,87	8,87	

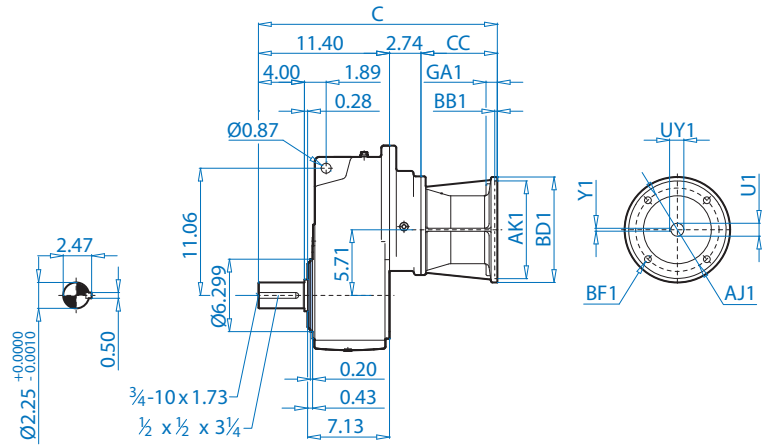
(BR) Denotes Brakemotor



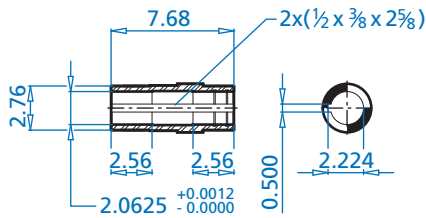
SK 4382AZ



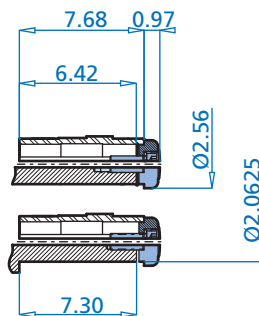
SK 4382VZ



SK 4382AZ



SK 4382AZB



NEMA Dimensions

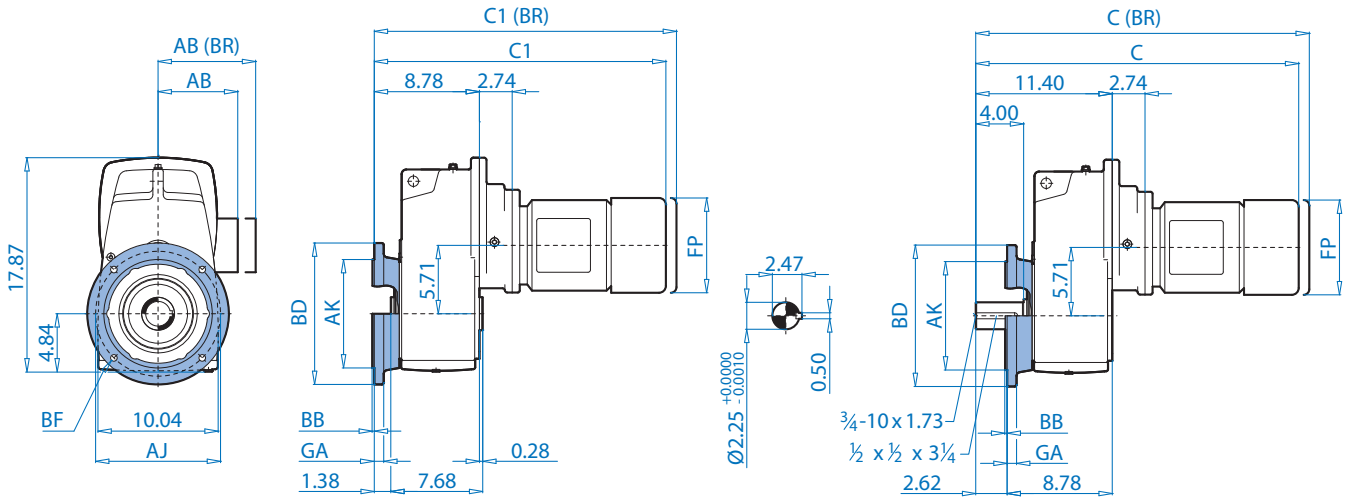
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	18,74	14,74	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	18,74	14,74	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	20,78	16,78	6,65

SK 4382 + Motor



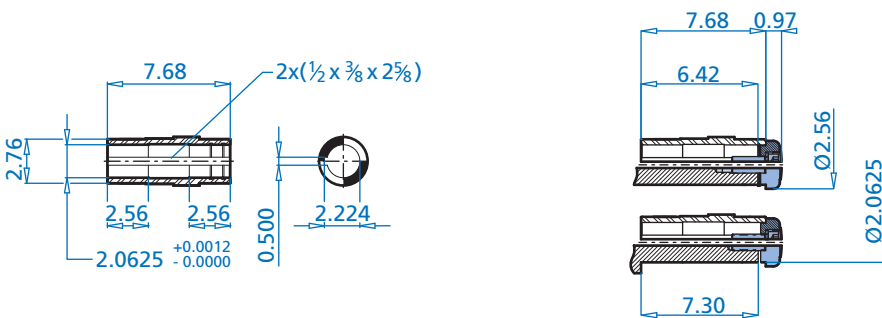
SK 4382AF

SK 4382VF



SK 4382AF

SK 4382AFB



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 +0.0006 -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 +0.0006 -0.0005	0,16	0,55	0,79

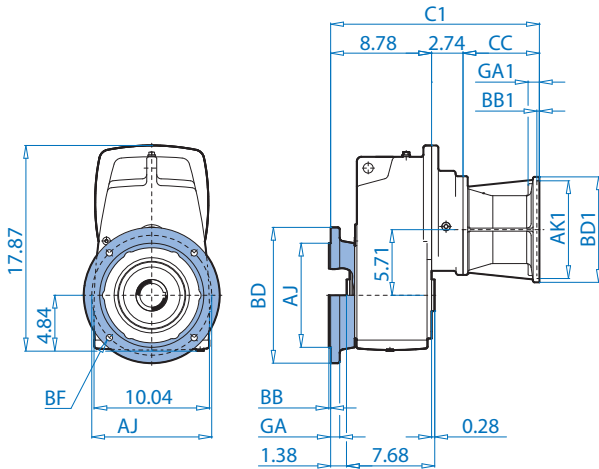
Motor Dimensions

Standard efficiency	71S/L	80S/L	90S/L	100L/LA	112M	112MP	For Other Connection Possibilities please see ⇨ 262
Premium efficiency		80LP	90SP/LP	100LP			
AB	4,86	5,59	5,79	6,65	7,05	7,05	
AB (BR)	5,24	5,59	5,79	6,77	7,17	7,17	
C	23,21	24,19	25,77	26,99	27,86	28,85	
C (BR)	25,49	26,71	28,72	30,59	31,56	32,55	
C1	20,59	21,57	23,15	24,37	25,24	26,23	
C1 (BR)	22,87	24,09	26,10	27,97	28,94	29,93	
FP	5,72	6,43	7,19	7,90	8,87	8,87	

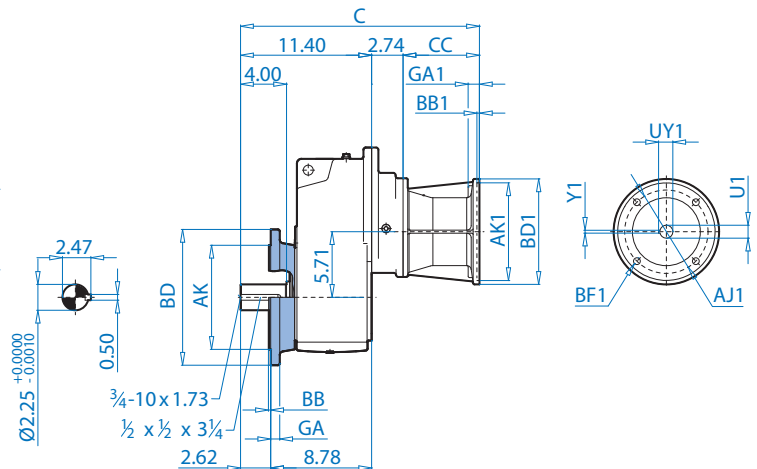
(BR) Denotes Brakemotor



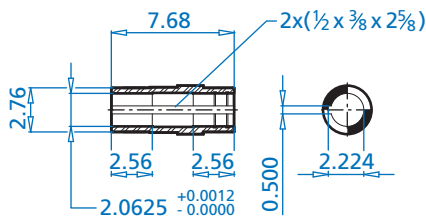
SK 4382AF



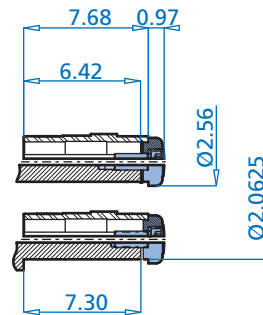
SK 4382VF



SK 4382AF



SK 4382AFB



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
9.84 (250)	8,46	7,087 $+0.0006$ -0.0004	0,16	0,55	0,59
11.81 (300)	10,43	9,055 $+0.0006$ -0.0005	0,16	0,55	0,79

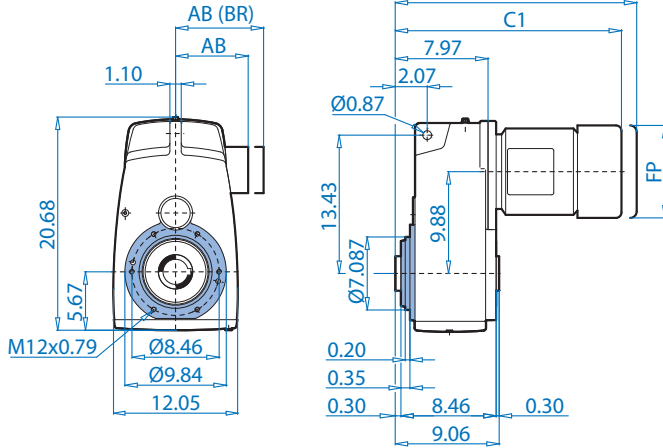
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	18,74	16,12	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	18,74	16,12	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	20,78	18,16	6,65

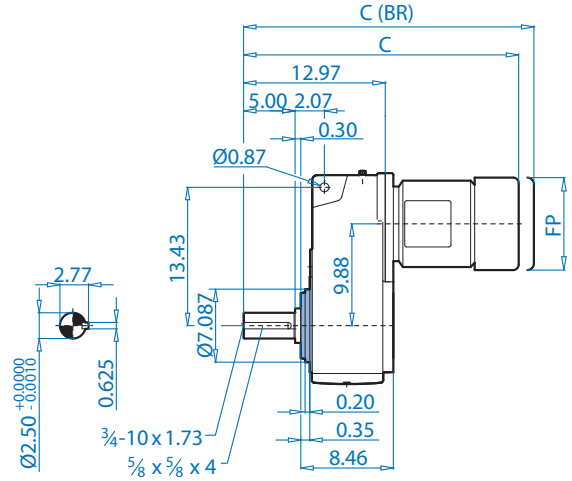
SK 5282 + Motor



SK 5282AZ



SK 5282VZ

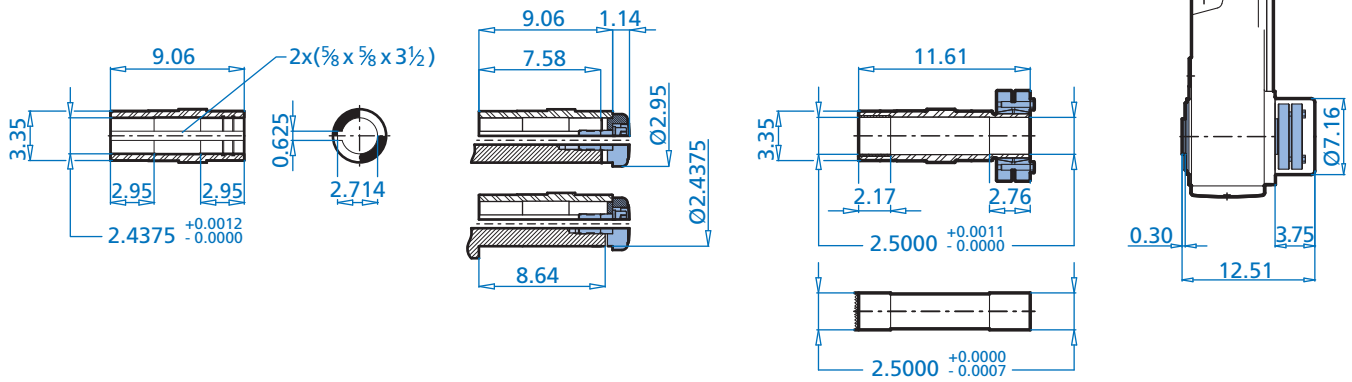


SK 5282AZ

SK 5282AZB

SK 5282AZS

AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

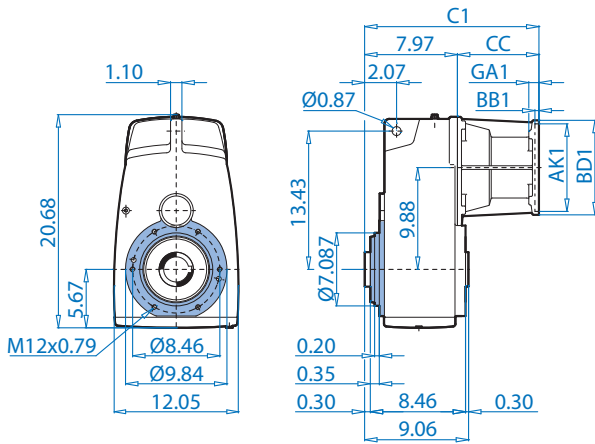
Motor Dimensions

Standard eff.	90S/L	100L/LA	112M		132S/M	160M/L		180MX	180LX		For Other Connection Possibilities please see ⇨ 262
Premium eff.	90SP/LP	100LP	112MP		132SP/MP	160MP	160LP			180MP/LP	
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	
C	23,81	25,04	25,91	26,90	29,33	32,38	34,14	32,38	34,14	37,93	
C (BR)	26,77	28,64	29,61	30,60	33,54	37,70	39,42	37,70	39,42	42,96	
C1	18,81	20,04	20,91	21,90	24,33	27,38	29,14	27,38	29,14	32,93	
C1 (BR)	21,77	23,64	24,61	25,60	28,54	32,70	34,42	32,70	34,42	37,96	
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	

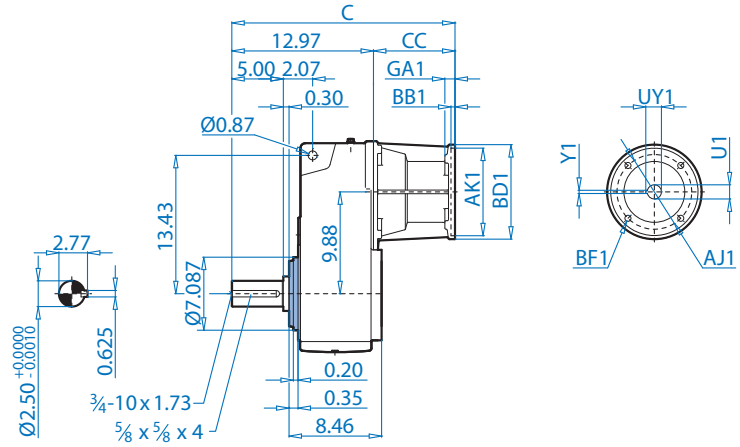
(BR) Denotes Brakemotor



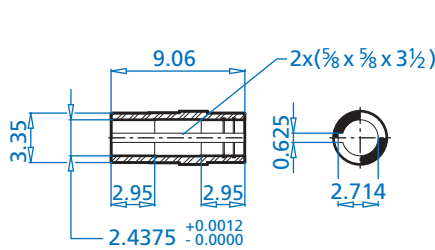
SK 5282AZ



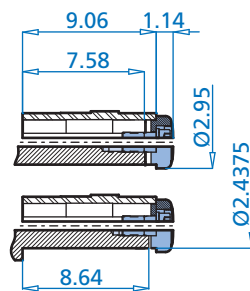
SK 5282VZ



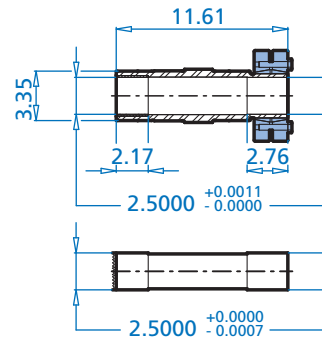
SK 5282AZ



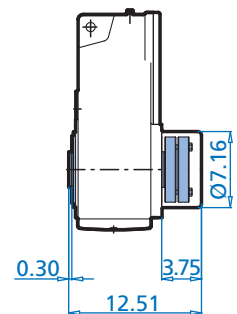
SK 5282AZB



SK 5282AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

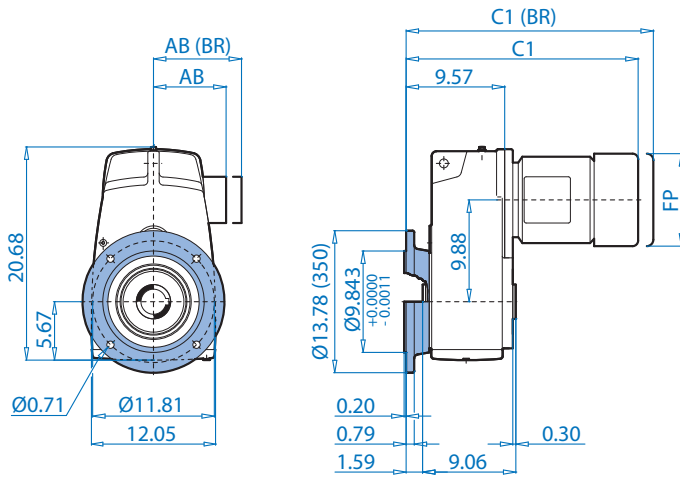
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	17,30	12,30	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	17,30	12,30	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	20,89	15,89	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	20,89	15,89	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	20,89	15,89	7,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	1,875	2,096	0,500	21,52	16,52	8,54

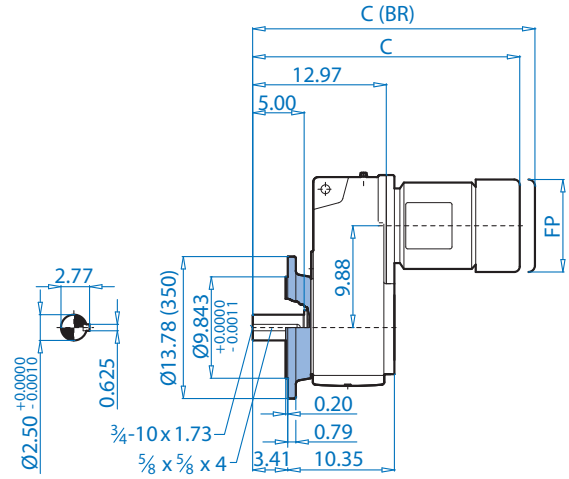
SK 5282 + Motor



SK 5282AF



SK 5282VF

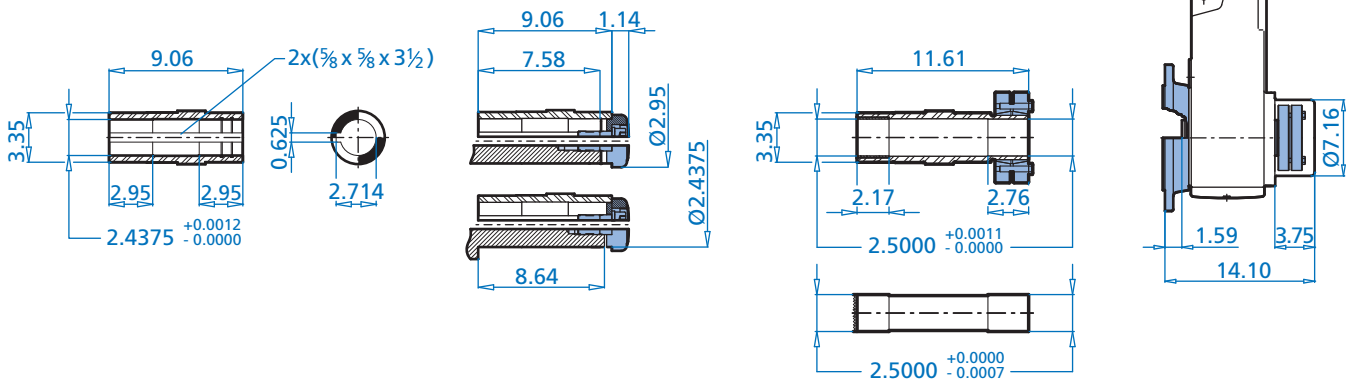


SK 5282AF

SK 5282AFB

SK 5282AFS

AFSH



Motor Dimensions

Standard eff.	90S/L	100L/LA	112M		132S/M	160M/L		180MX	180LX		For Other Connection Possibilities please see ⇨ 262
Premium eff.	90SP/LP	100LP		112MP	132SP/MP	160MP	160LP			180MP/LP	
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	
C	23,81	25,04	25,91	26,90	29,33	32,38	34,14	32,38	34,14	37,93	
C (BR)	26,77	28,64	29,61	30,60	33,54	37,70	39,42	37,70	39,42	42,96	
C1	20,41	21,63	22,50	23,49	25,92	28,98	30,74	28,98	30,74	34,52	
C1 (BR)	23,36	25,23	26,20	27,19	30,13	34,29	36,01	34,29	36,01	39,56	
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	

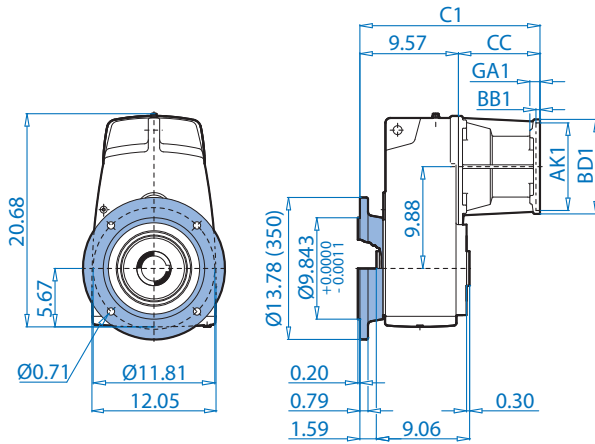
(BR) Denotes Brakemotor



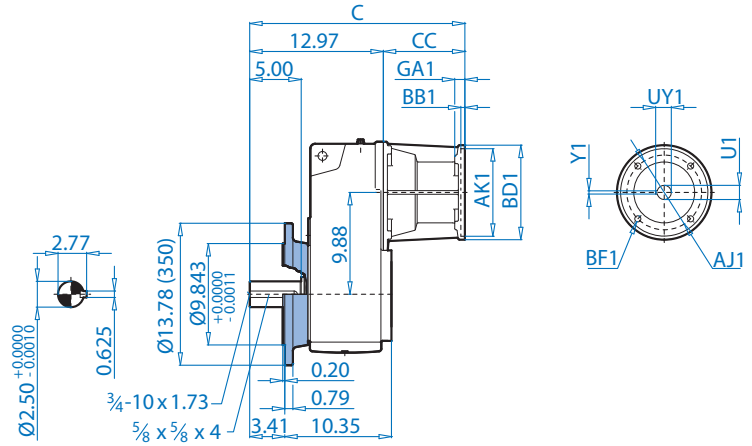


SK 5282 + NEMA

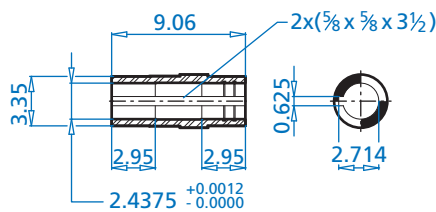
SK 5282AF



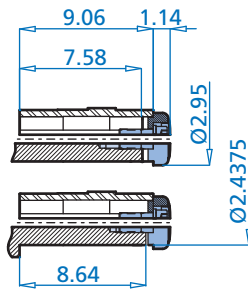
SK 5282VF



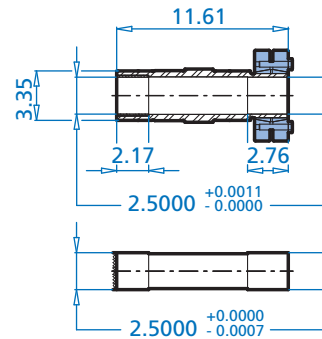
SK 5282AF



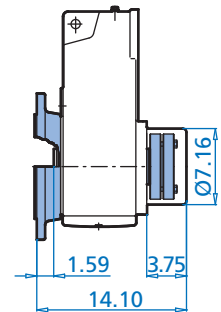
SK 5282AFB



SK 5282AFS



AFSH



Dimensions

NEMA Dimensions

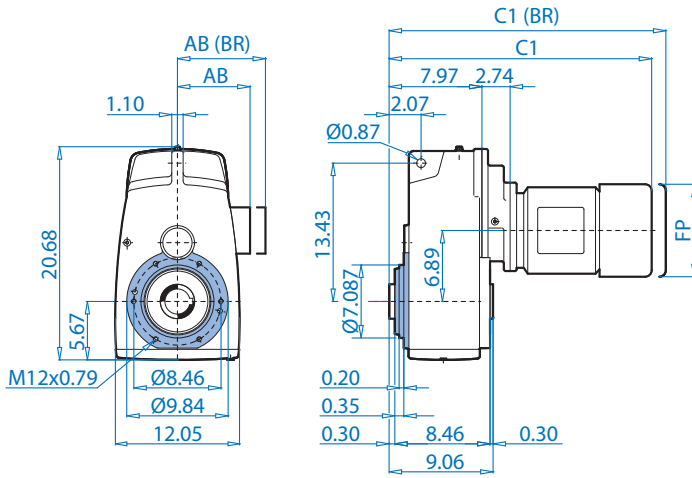
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	17,30	13,90	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	17,30	13,90	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	20,89	17,48	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	20,89	17,48	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	20,89	17,48	7,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	1,875	2,096	0,500	21,52	18,11	8,54

Alternate Shafts on Pages 276 - 285

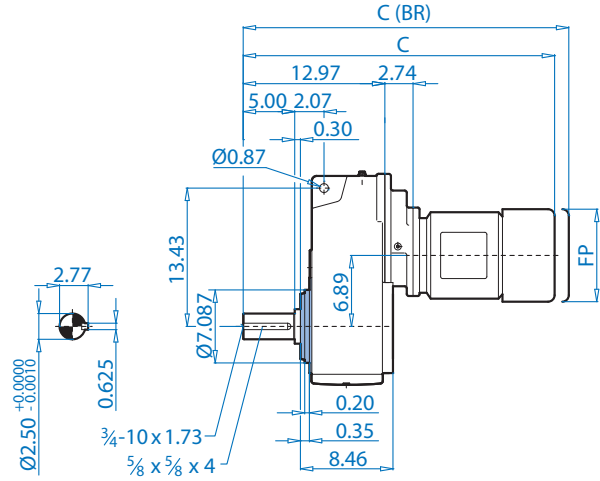
SK 5382 + Motor



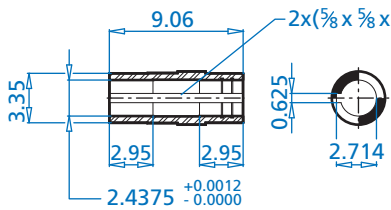
SK 5382AZ



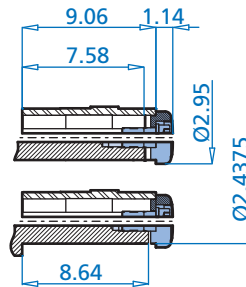
SK 5382VZ



SK 5382AZ

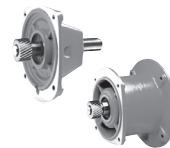


SK 5382AZB



Motor Dimensions

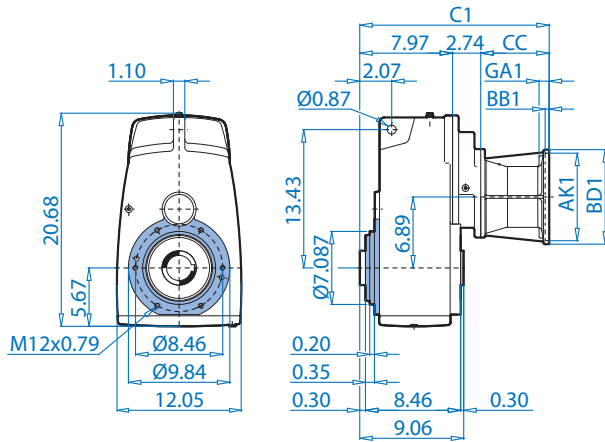
Standard efficiency	80S/L	90S/L	100L/LA	112M	132S/M	For Other Connection Possibilities please see ⇨ 262
Premium efficiency	80LP	90SP/LP	100LP	112MP	132SP/MP	
AB	5,59	5,79	6,65	7,05	7,05	8,03
AB (BR)	5,59	5,79	6,77	7,17	7,17	7,91
C	25,76	27,34	28,56	29,43	30,42	32,85
C (BR)	28,28	30,29	32,16	33,13	34,12	37,06
C1	20,76	22,34	23,56	24,43	25,42	27,85
C1 (BR)	23,28	25,29	27,16	28,13	29,12	32,06
FP	6,43	7,19	7,90	8,87	8,87	10,45



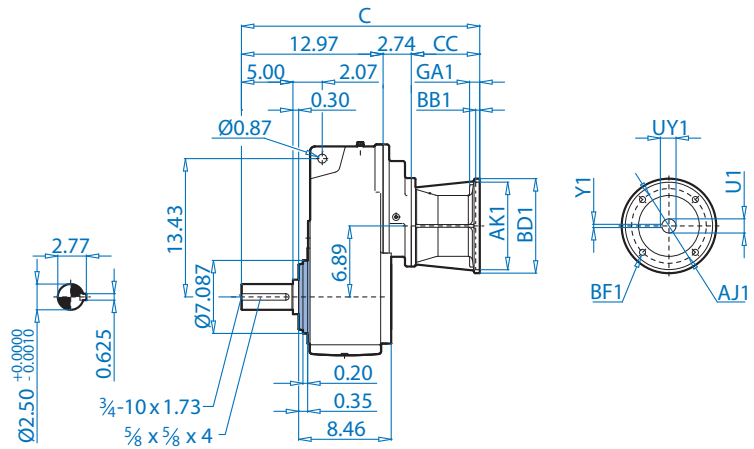
(BR) Denotes Brakemotor



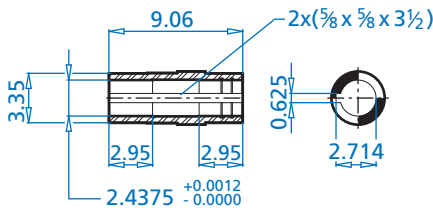
SK 5382AZ



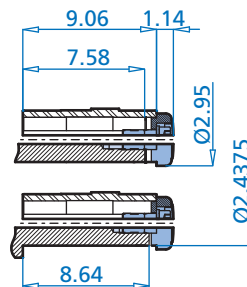
SK 5382VZ



SK 5382AZ



SK 5382AZB



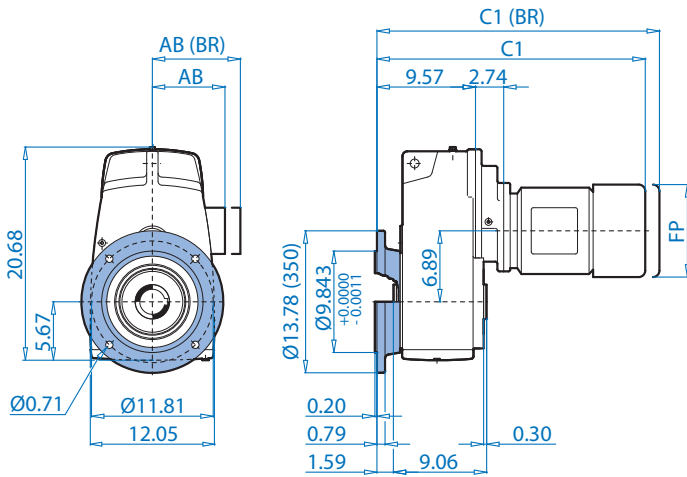
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	20,31	15,31	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	20,31	15,31	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	22,35	17,35	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	22,35	17,35	6,65

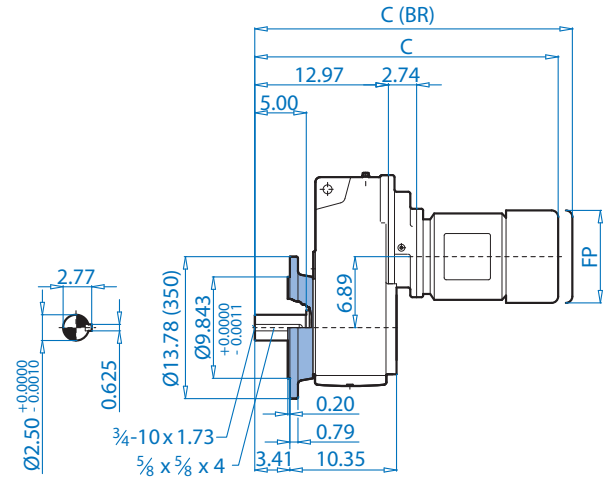
SK 5382 + Motor



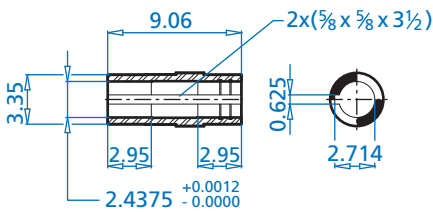
SK 5382AF



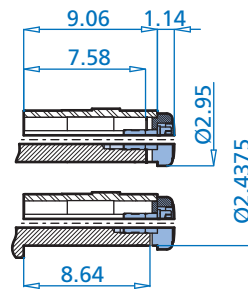
SK 5382VF



SK 5382AF



SK 5382AFB

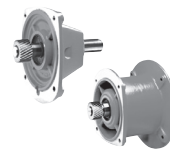


Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

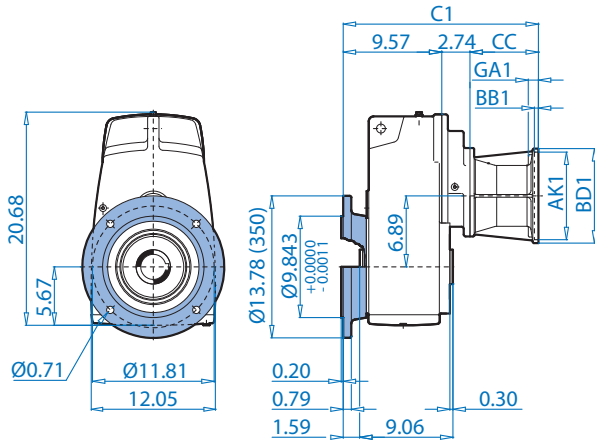
Standard efficiency	80S/L	90S/L	100L/LA	112M	132S/M	For Other Connection Possibilities please see ⇨ 262
Premium efficiency	80LP	90SP/LP	100LP	112MP	132SP/MP	
AB	5,59	5,79	6,65	7,05	7,05	8,03
AB (BR)	5,59	5,79	6,77	7,17	7,17	7,91
C	25,76	27,34	28,56	29,43	30,42	32,85
C (BR)	28,28	30,29	32,16	33,13	34,12	37,06
C1	22,36	23,93	25,15	26,02	27,02	29,44
C1 (BR)	24,88	26,89	28,76	29,72	30,72	33,66
FP	6,43	7,19	7,90	8,87	8,87	10,45



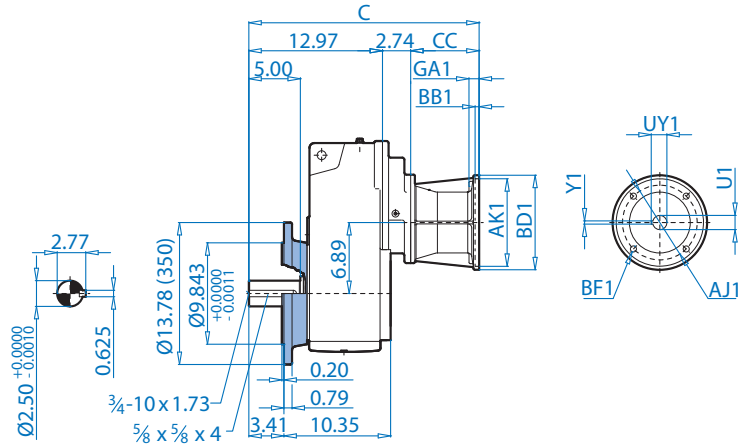
(BR) Denotes Brakemotor



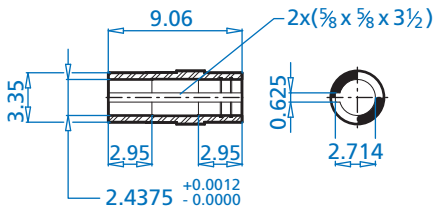
SK 5382AF



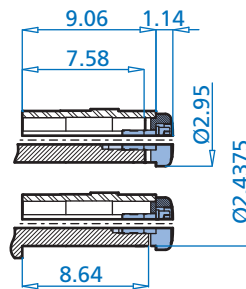
SK 5382VF



SK 5382AF



SK 5382AFB



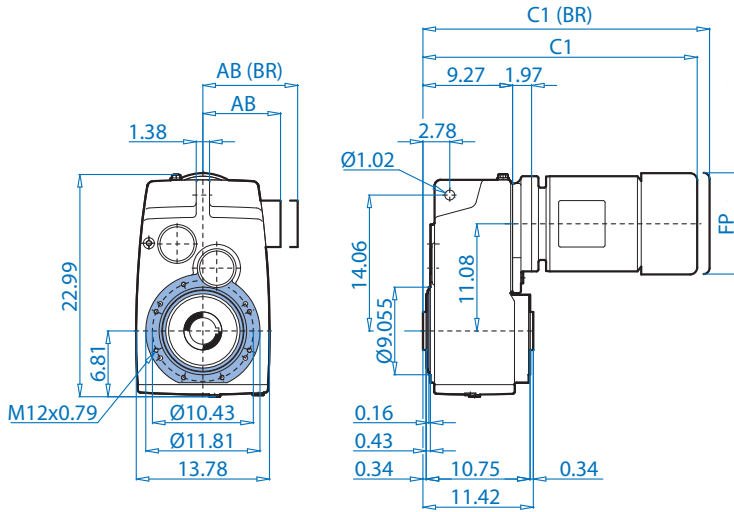
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	20,31	16,91	4,61
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	20,31	16,91	4,61
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	22,35	18,95	6,65
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	22,35	18,95	6,65

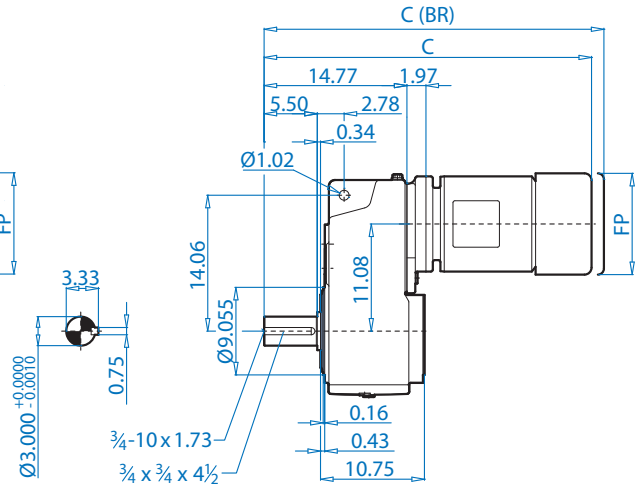
SK 6282 + Motor



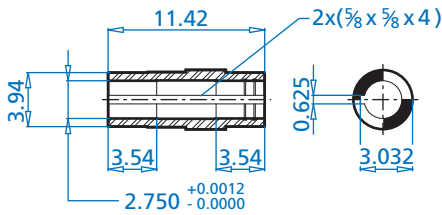
SK 6282AZ



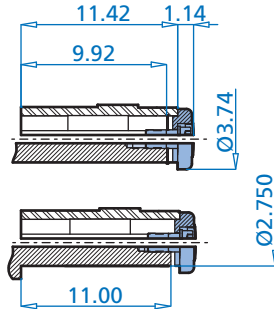
SK 6282VZ



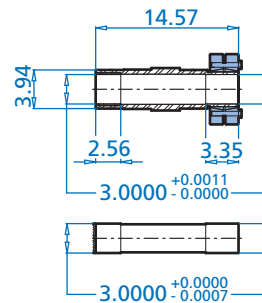
SK 6282AZ



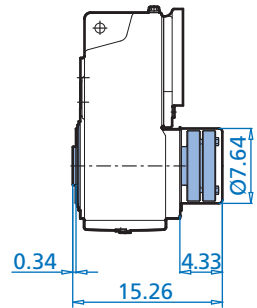
SK 6282AZB



SK 6282AZS



AZSH



Motor Dimensions

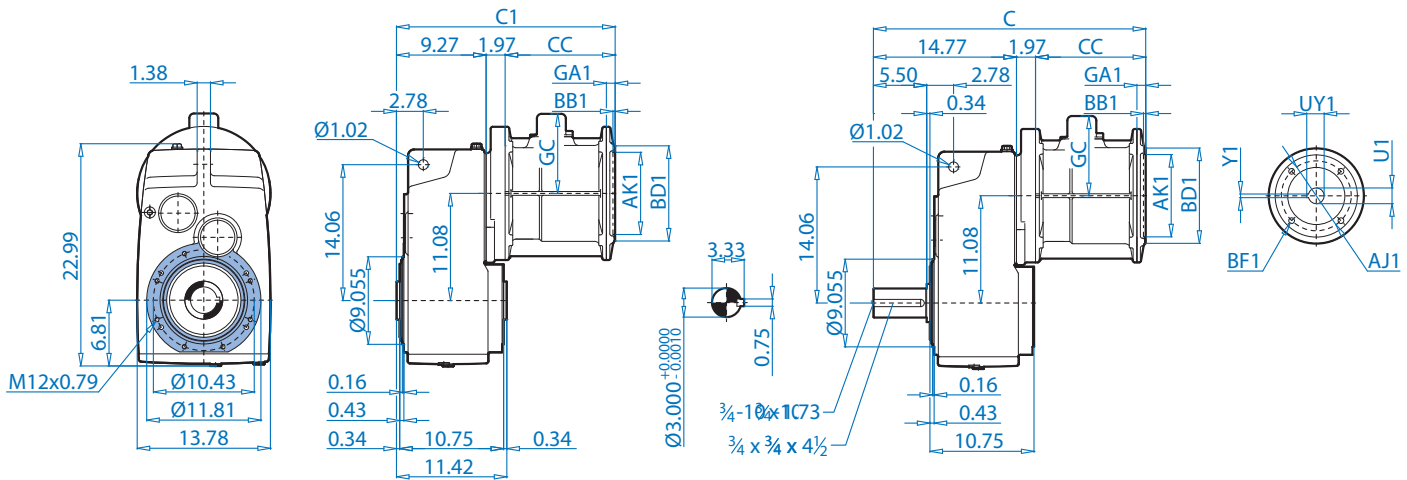
Standard eff.	100L/LA	112M		132S/M	160M/L		180MX	180LX		200LX		For Other Connection Possibilities please see ⇒ 262
Premium eff.	100LP		112MP	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
C	28,80	29,56	30,55	33,88	36,15	37,91	36,15	37,91	40,91	40,91	45,95	
C (BR)	32,41	33,26	34,25	38,09	41,46	43,19	41,46	43,19	45,94	45,94	53,04	
C1	23,30	24,06	25,05	28,38	30,65	32,41	30,65	32,41	35,41	35,41	40,45	
C1 (BR)	26,91	27,76	28,75	32,59	35,96	37,69	35,96	37,69	40,44	40,44	47,54	
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	

(BR) Denotes Brakemotor



SK 6282AZ

SK 6282VZ

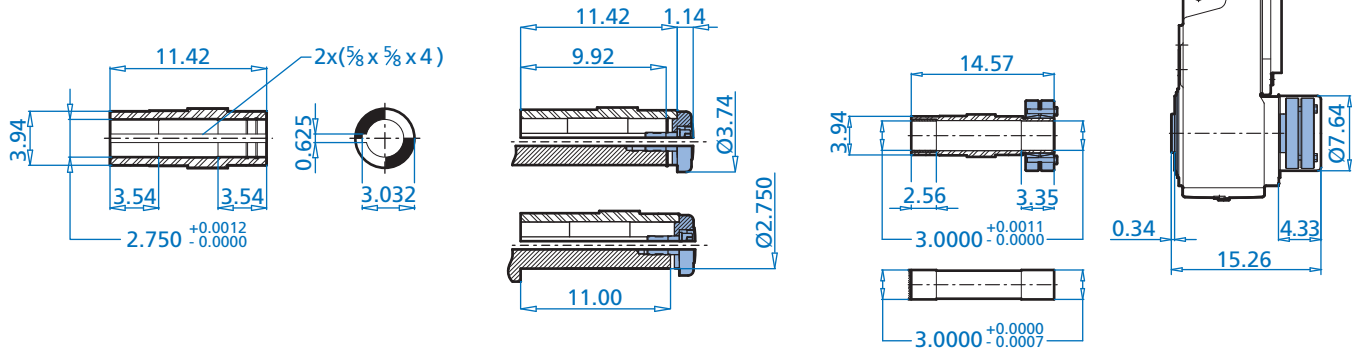


SK 6282AZ

SK 6282AZB

SK 6282AZS

AZSH



Dimensions

NEMA Dimensions

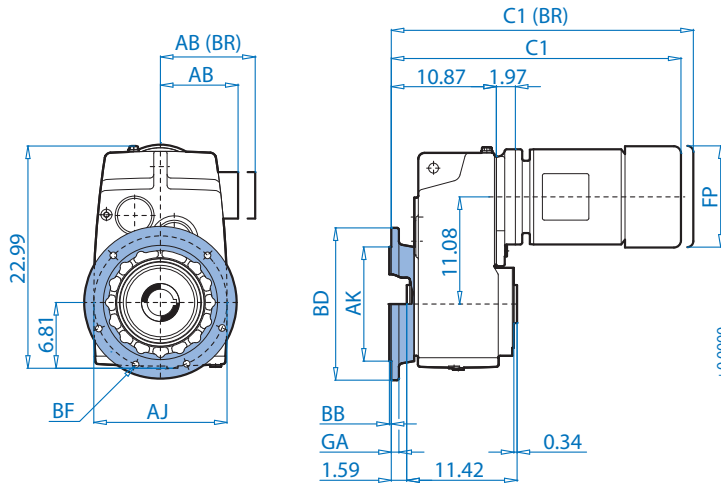
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	24,26	18,76	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	24,26	18,76	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	28,12	22,62	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	28,12	22,62	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	27,09	21,59	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	30,01	24,51	13,27

Alternate Shafts on Pages 276 - 285

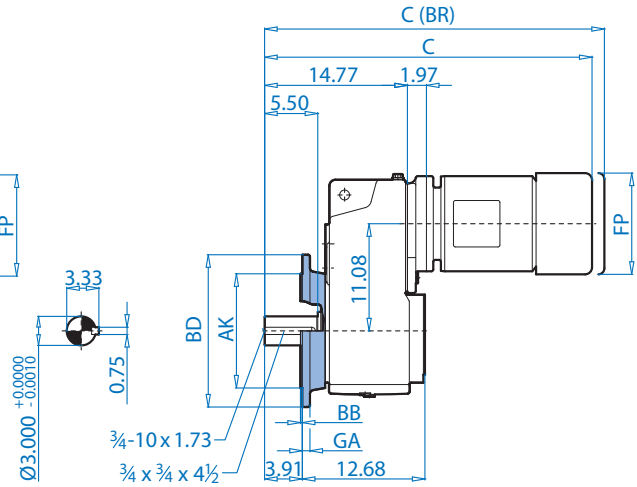
SK 6282 + Motor



SK 6282AF



SK 6282VF

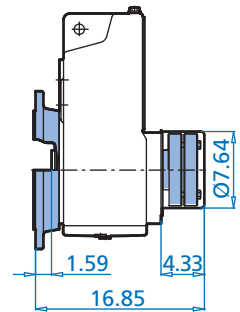
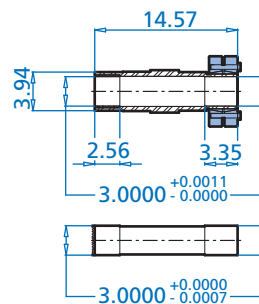
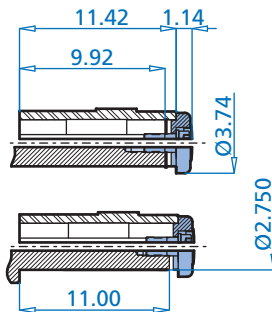
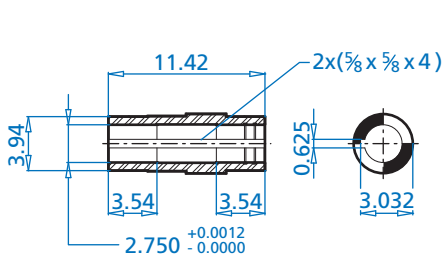


SK 6282AF

SK 6282AFB

SK 6282AFS

AFSH



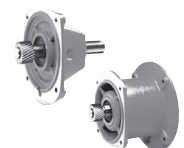
Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA	Bolt Holes
15.75 (400)	13,78	11,811 +0.0000 -0.0013	0,20	0,69	0,79	4
17.72 (450)	15,75	13,780 +0.0000 -0.0014	0,20	0,69	0,87	8

Motor Dimensions

Standard eff.	100L/LA	112M	132S/M	160M/L	180MX	180LX	200LX	225SP/MP	For Other Connection Possibilities please see ⇨ 262		
Premium eff.	100LP	112MP	132SP/MP	160MP	160LP	180MP/LP	225SP/MP				
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	10,18	10,18	13,68	
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	10,18	10,18	13,68	
C	28,80	29,56	30,55	33,88	36,15	37,91	36,15	37,91	40,91	40,91	45,95
C (BR)	32,41	33,26	34,25	38,09	41,46	43,19	41,46	43,19	45,94	45,94	53,04
C1	24,90	25,65	26,64	29,98	32,24	34,00	32,24	34,00	37,00	37,00	42,05
C1 (BR)	28,50	29,35	30,34	34,19	37,56	39,28	37,56	39,28	42,04	42,04	49,13
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87

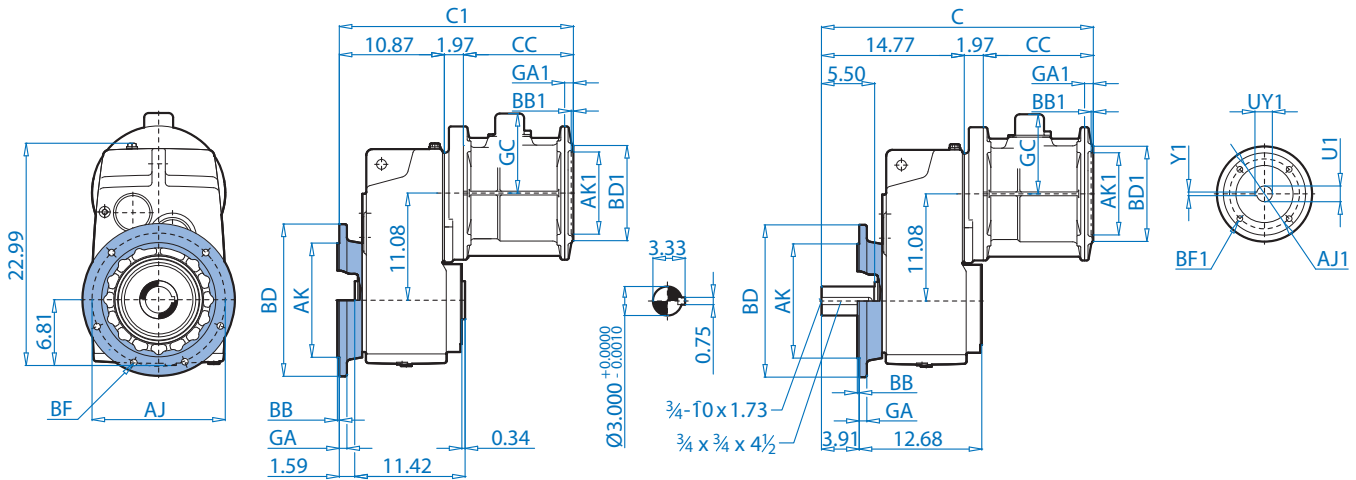
(BR) Denotes Brakemotor





SK 6282AF

SK 6282VF

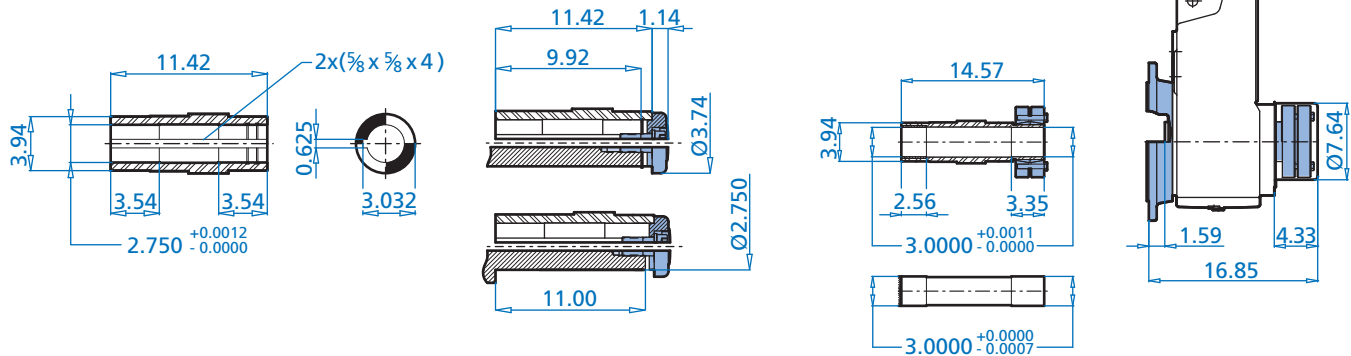


SK 6282AF

SK 6282AFB

SK 6282AFS

AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA	Bolt Holes
15.75 (400)	13,78	11,811 <small>+0.0000 -0.0013</small>	0,20	0,69	0,79	4
17.72 (450)	15,75	13,780 <small>+0.0000 -0.0014</small>	0,20	0,69	0,87	8

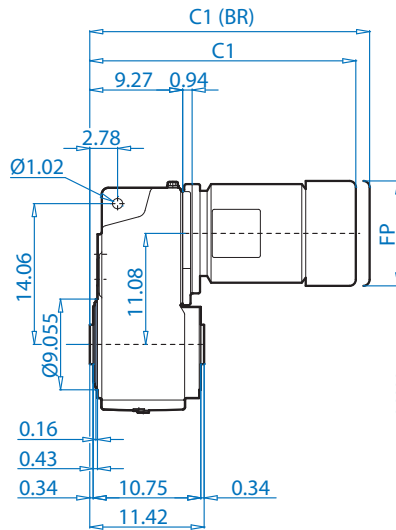
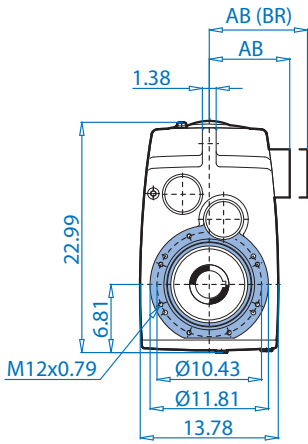
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	24,26	20,35	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	24,26	20,35	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	28,12	24,21	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	28,12	24,21	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	27,09	23,19	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	30,01	26,10	13,27

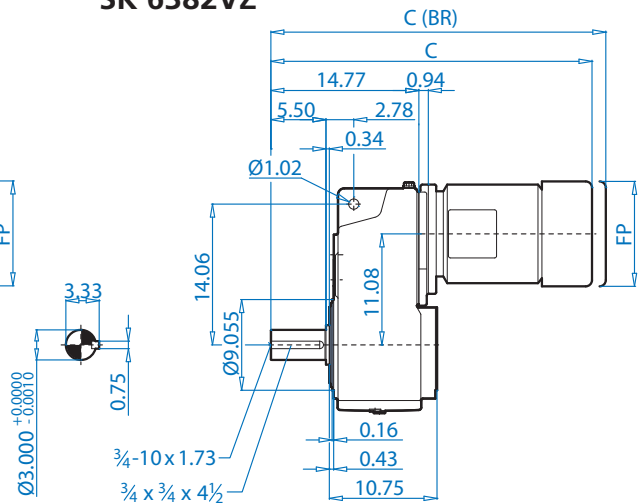
SK 6382 + Motor



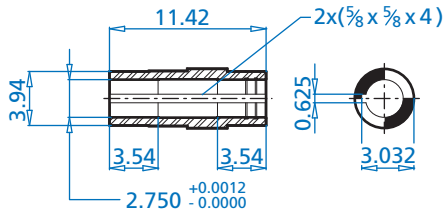
SK 6382AZ



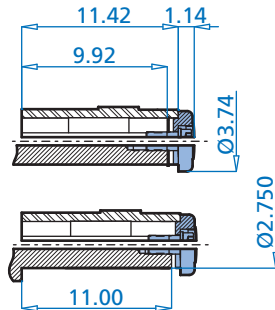
SK 6382VZ



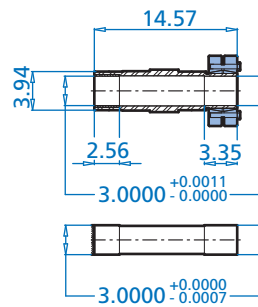
SK 6382AZ



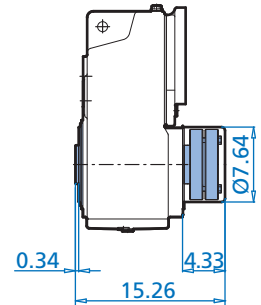
SK 6382AZB



SK 6382AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

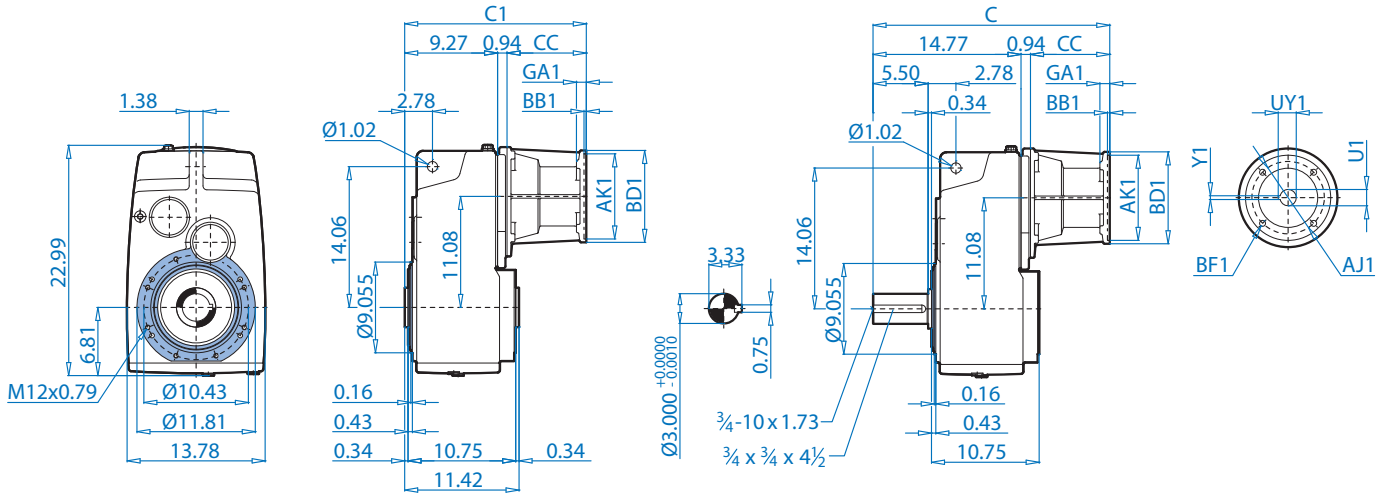
Standard eff.	90S/L	100L/LA	112M	132S/M	160M/L	180MX	180LX				For Other Connection Possibilities please see 262
Premium eff.	90SP/LP	100LP	112MP	132SP/MP	160MP	160LP			180MP/LP		
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	
C	26,56	27,78	28,65	29,64	32,07	35,13	36,89	35,13	36,89	40,67	
C (BR)	29,51	31,38	32,35	33,34	36,28	40,44	42,16	40,44	42,16	45,71	
C1	21,06	22,28	23,15	24,14	26,57	29,63	31,39	29,63	31,39	35,17	
C1 (BR)	24,01	25,88	26,85	27,84	30,78	34,94	36,66	34,94	36,66	40,21	
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	

(BR) Denotes Brakemotor



SK 6382AZ

SK 6382VZ

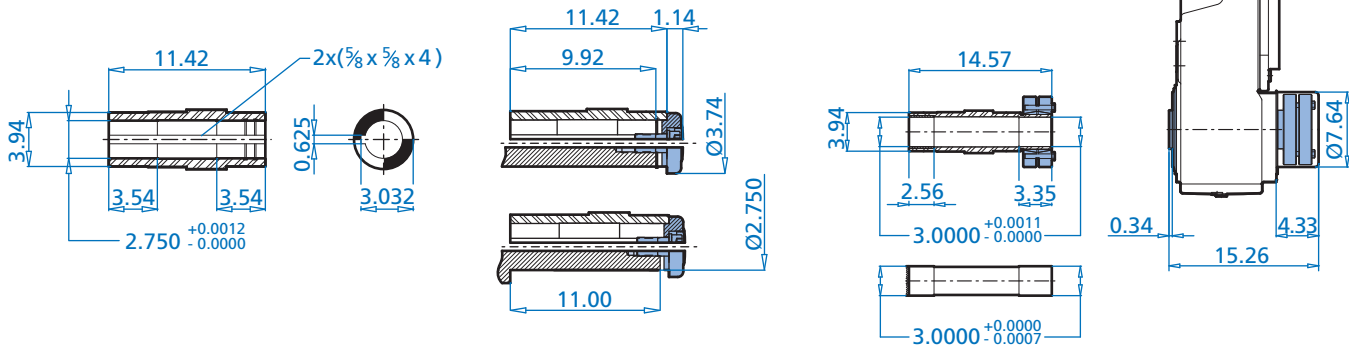


SK 6382AZ

SK 6382AZB

SK 6382AZS

AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

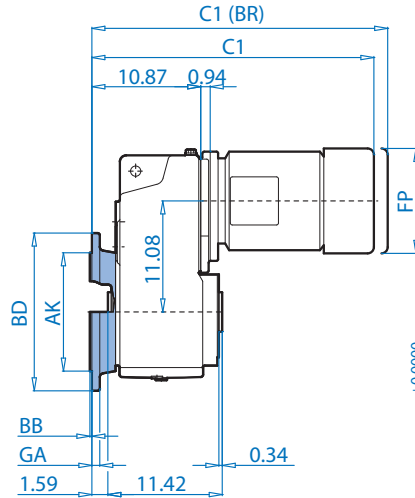
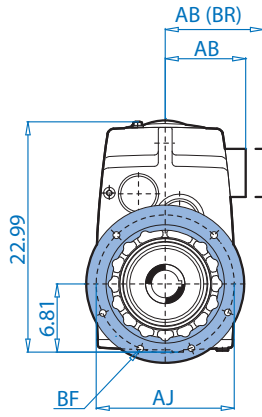
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	20,05	14,55	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	20,05	14,55	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	23,63	18,13	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	23,63	18,13	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	23,63	18,13	7,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	1,875	2,096	0,500	24,26	18,76	8,54

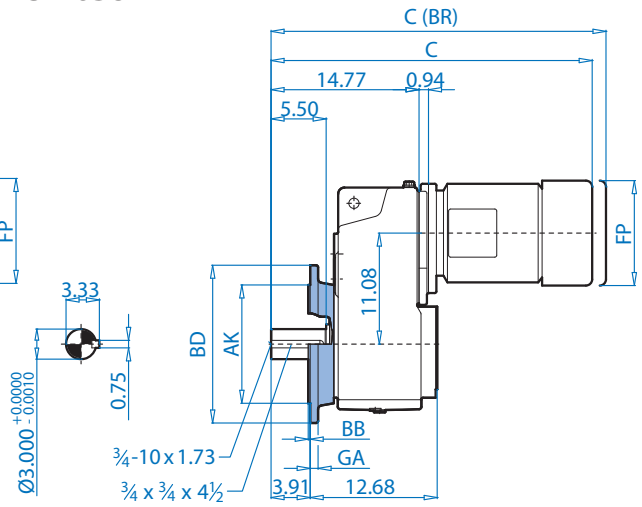
SK 6382 + Motor



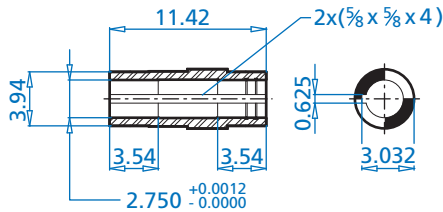
SK 6382AF



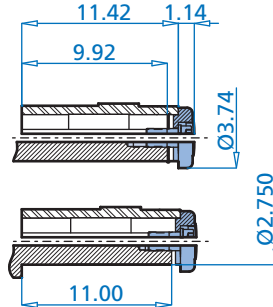
SK 6382VF



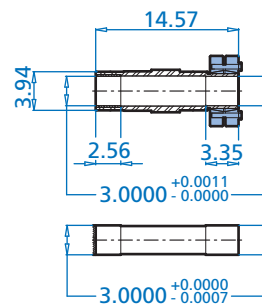
SK 6382AF



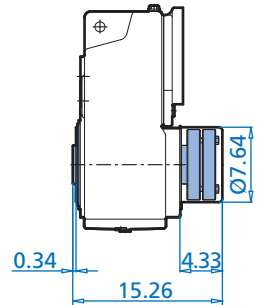
SK 6382AFB



SK 6382AFS



AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA	Bolt Holes
15.75 (400)	13,78	11,811 +0.0000 -0.0013	0,20	0,69	0,79	4
17.72 (450)	15,75	13,780 +0.0000 -0.0014	0,20	0,69	0,87	8

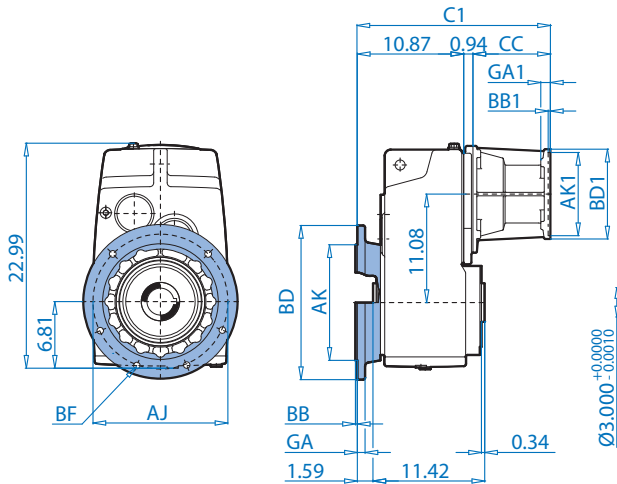
Motor Dimensions

Standard eff.	90S/L	100L/LA	112M		132S/M	160M/L		180MX	180LX		For Other Connection Possibilities please see → 262
Premium eff.	90SP/LP	100LP		112MP	132SP/MP	160MP	160LP			180MP/LP	
AB	5,79	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	
AB (BR)	5,79	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	
C	26,56	27,78	28,65	29,64	32,07	35,13	36,89	35,13	36,89	40,67	
C (BR)	29,51	31,38	32,35	33,34	36,28	40,44	42,16	40,44	42,16	45,71	
C1	22,65	23,87	24,74	25,74	28,17	31,22	32,98	31,22	32,98	36,76	
C1 (BR)	25,61	27,48	28,44	29,44	32,38	36,54	38,26	36,54	38,26	41,80	
FP	7,19	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	

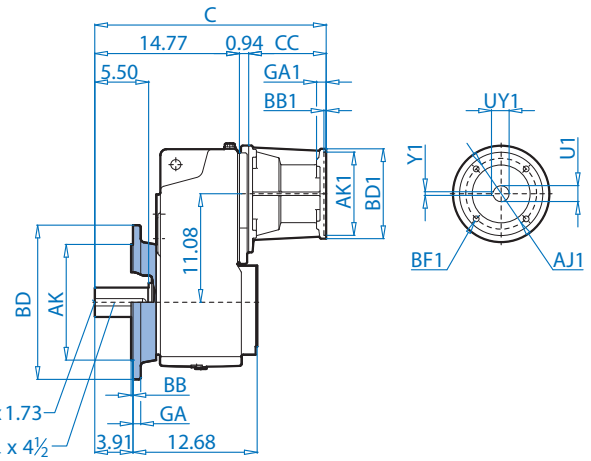
(BR) Denotes Brakemotor



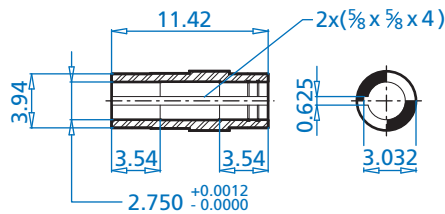
SK 6382AF



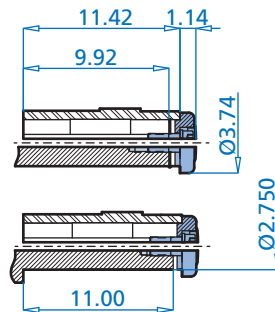
SK 6382VF



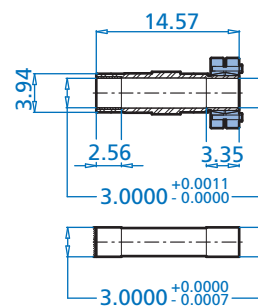
SK 6382AF



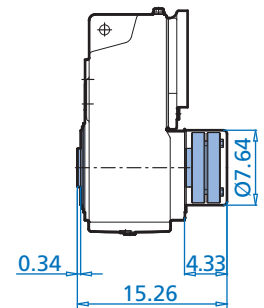
SK 6382AFB



SK 6382AFS



AFSH



Dimensions

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA	Bolt Holes
15.75 (400)	13,78	11,811 ^{+0.0000} _{-0.0013}	0,20	0,69	0,79	4
17.72 (450)	15,75	13,780 ^{+0.0000} _{-0.0014}	0,20	0,69	0,87	8

NEMA Dimensions

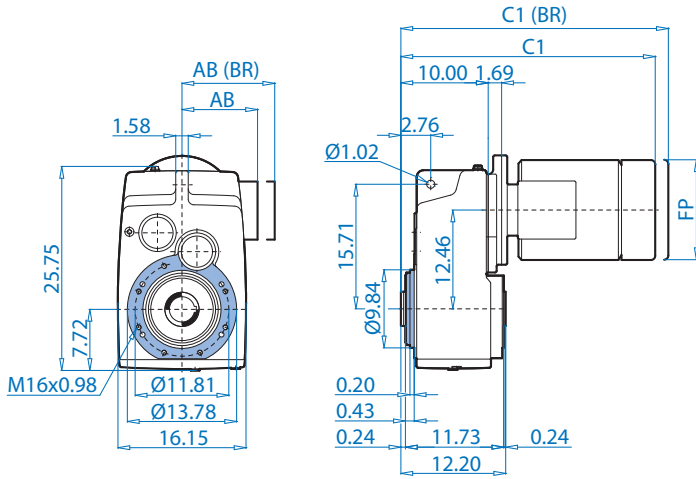
Type	AJ1	AK1	BB1	BD1	BF1	GA1	U1	UY1	Y1	C	C1	CC
56C	5,875	4,500	0,18	6,54	0,43	0,47	0,625	0,709	0,188	20,05	16,14	4,33
140TC	5,875	4,500	0,18	6,54	0,43	0,47	0,875	0,964	0,188	20,05	16,14	4,33
180TC	7,250	8,500	0,23	9,17	0,59	0,71	1,125	1,241	0,250	23,63	19,72	7,91
210TC	7,250	8,500	0,23	9,17	0,59	0,98	1,375	1,518	0,312	23,63	19,72	7,91
250TC	7,250	8,500	0,23	9,17	0,59	0,98	1,625	1,796	0,375	23,63	19,72	7,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	1,875	2,096	0,500	24,26	20,35	8,54

Alternate Shafts on Pages 276 - 285

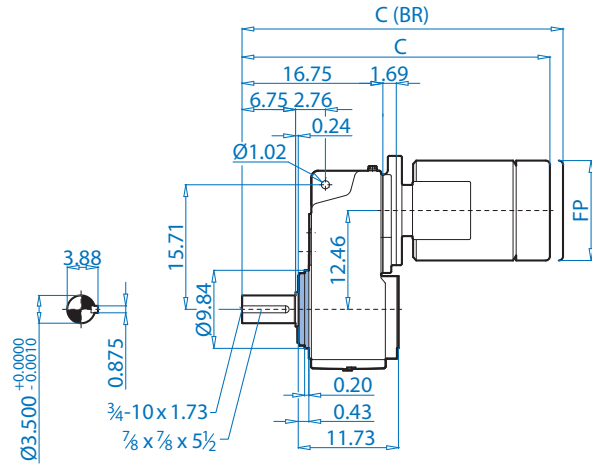
SK 7282 + Motor



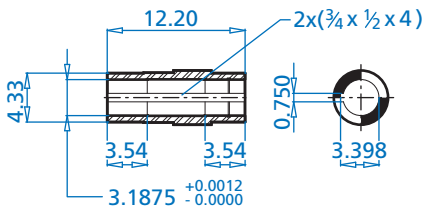
SK 7282AZ



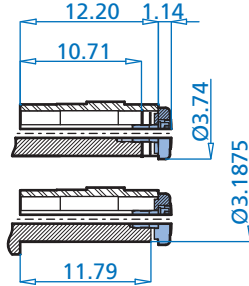
SK 7282VZ



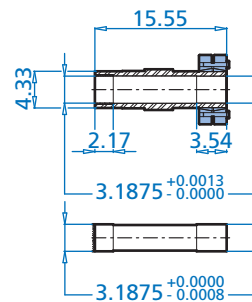
SK 7282AZ



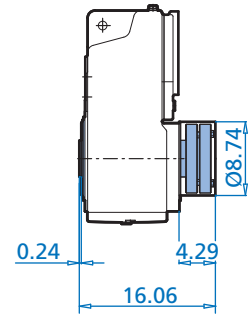
SK 7282AZB



SK 7282AZS



AZSH

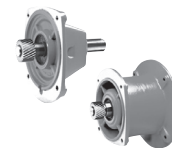


Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

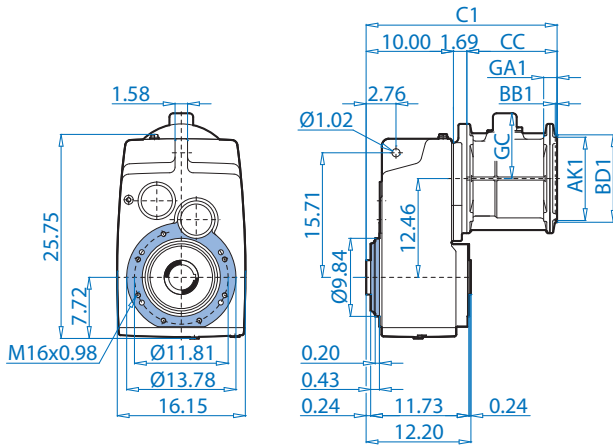
Standard eff.	132S/M	160M/L		180MX	180LX		200LX		For Other Connection Possibilities please see \Rightarrow 262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
C	35,58	37,85	39,61	37,85	39,61	42,61	42,61	47,65	
C (BR)	39,80	43,17	44,89	43,17	44,89	47,65	47,65	54,74	
C1	28,83	31,10	32,86	31,10	32,86	35,86	35,86	40,91	
C1 (BR)	33,05	36,42	38,14	36,42	38,14	40,90	40,90	47,99	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	



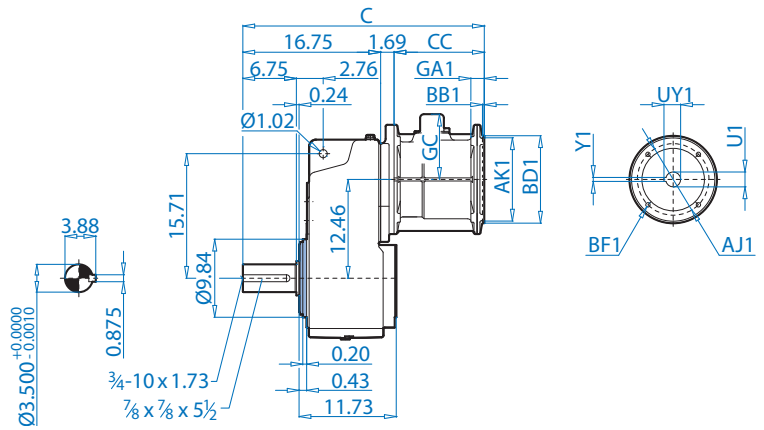
(BR) Denotes Brakemotor



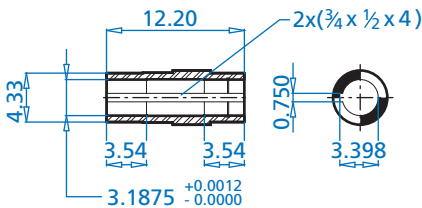
SK 7282AZ



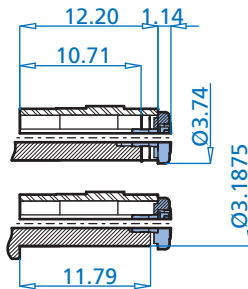
SK 7282VZ



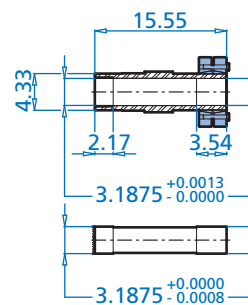
SK 7282AZ



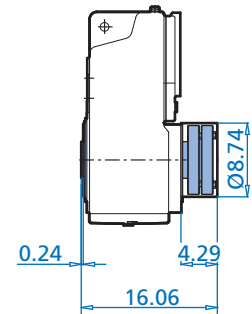
SK 7282AZB



SK 7282AZS



AZSH



Dimensions

NEMA Dimensions

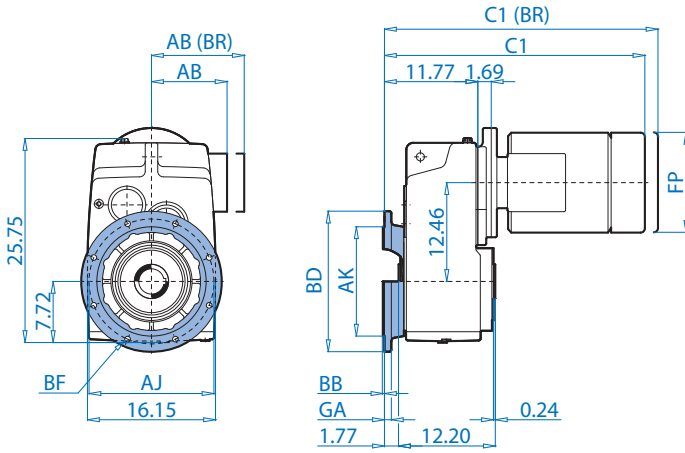
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	25,96	19,21	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	25,96	19,21	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	29,82	23,07	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	29,82	23,07	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	28,80	22,05	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	31,71	24,96	13,27

Alternate Shafts on Pages 276 - 285

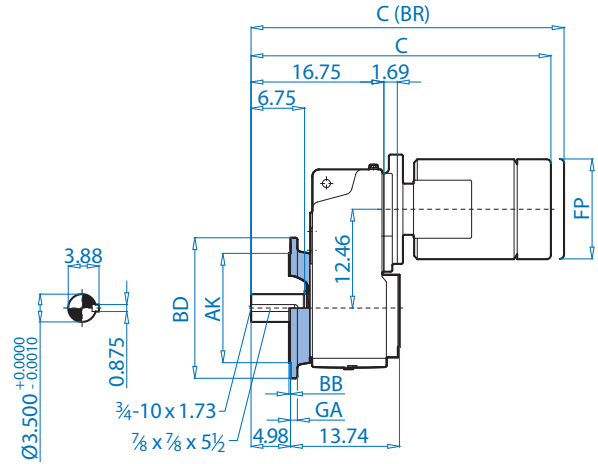
SK 7282 + Motor



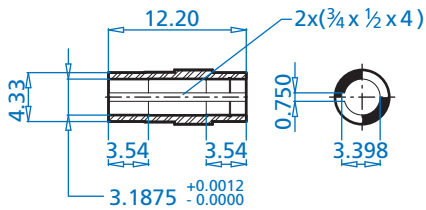
SK 7282AF



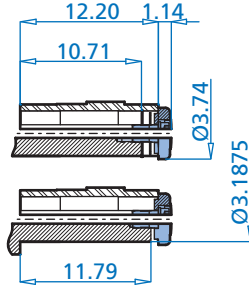
SK 7282VF



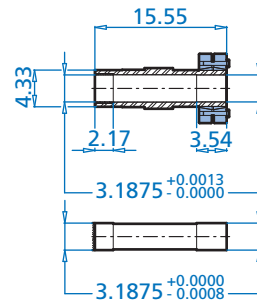
SK 7282AF



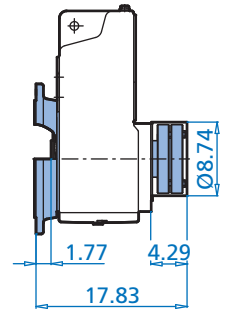
SK 7282AFB



SK 7282AFS



AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
17.72 (450)	15,748	13,780 +0.0000 -0.0014	0,20	0,69	0,87
21.65 (550)	19,685	17,717 +0.0000 -0.0016	0,20	0,71	1,10

Motor Dimensions

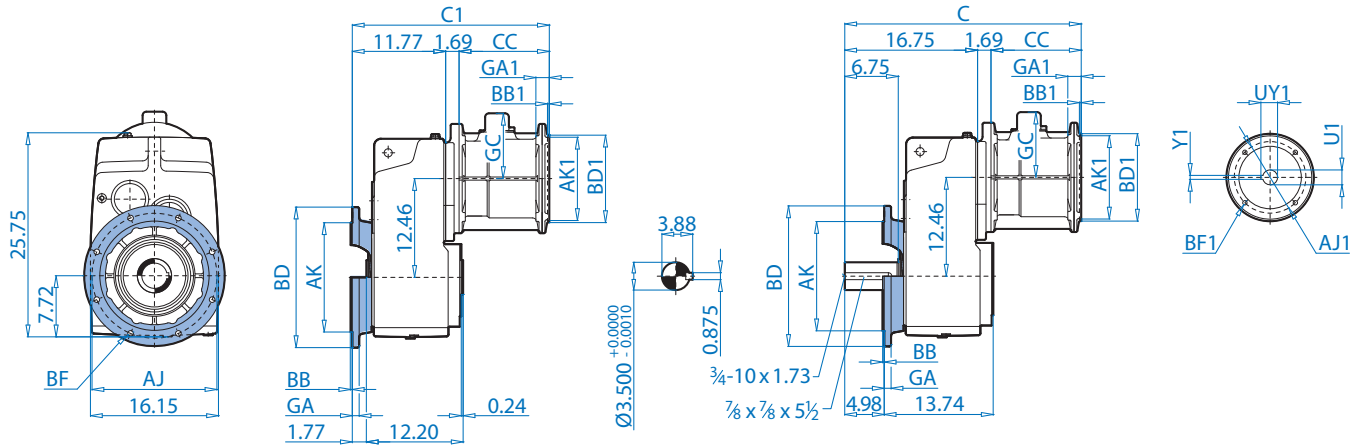
Standard eff.	132S/M	160M/L	180MX	180LX	200LX	For Other Connection Possibilities please see 262			
Premium eff.	132SP/MP	160MP	160LP		180MP/LP	225SP/MP			
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
C	35,58	37,85	39,61	37,85	39,61	42,61	42,61	47,65	
C (BR)	39,80	43,17	44,89	43,17	44,89	47,65	47,65	54,74	
C1	30,61	32,87	34,63	32,87	34,63	37,63	37,63	42,68	
C1 (BR)	34,82	38,19	39,91	38,19	39,91	42,67	42,67	49,76	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	

(BR) Denotes Brakemotor



SK 7282AF

SK 7282VF

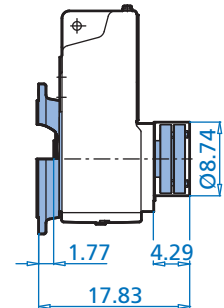
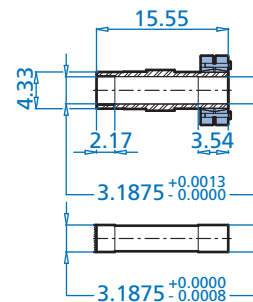
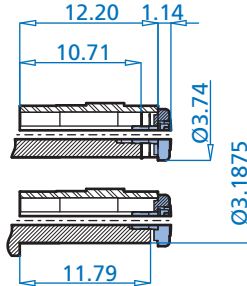
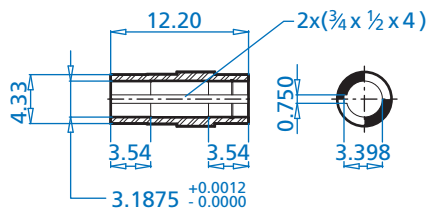


SK 7282AF

SK 7282AFB

SK 7282AFS

AFSH



Dimensions

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
17.72 (450)	15,75	13,780 +0.0000 -0.0014	0,20	0,71	0,87
21.65 (550)	19,69	17,717 +0.0000 -0.0016	0,20	0,71	1,10

NEMA Dimensions

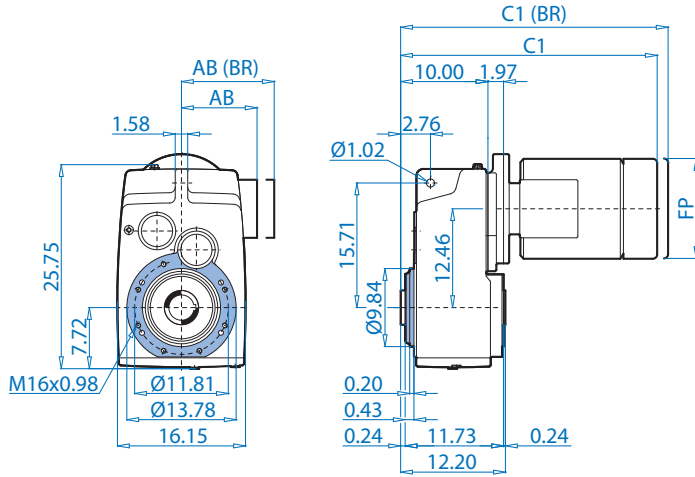
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	25,96	20,98	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,38	1,518	0,31	25,96	20,98	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	29,82	24,84	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	29,82	24,84	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	28,80	23,82	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	31,71	26,73	13,27

Alternate Shafts on Pages 278 - 285

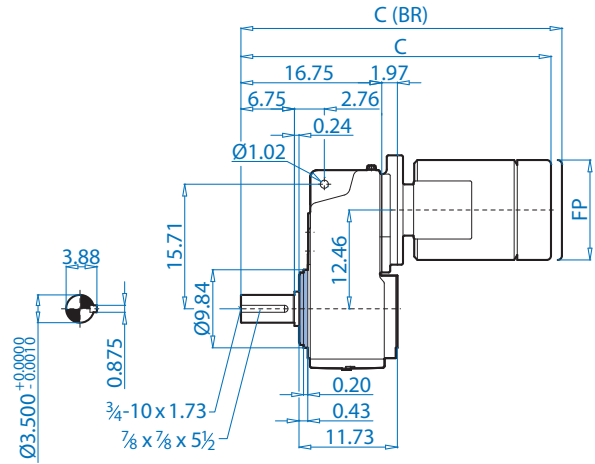
SK 7382 + Motor



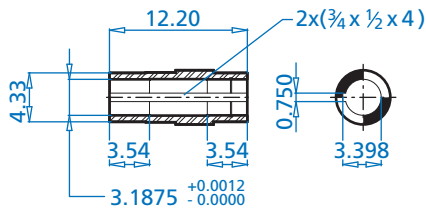
SK 7382AZ



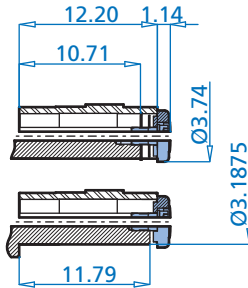
SK 7382VZ



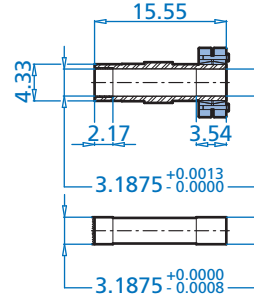
SK 7382AZ



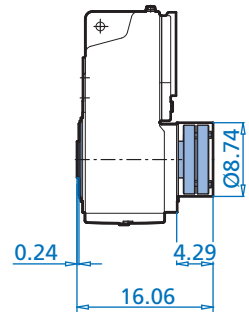
SK 7382AZB



SK 7382AZS



AZSH



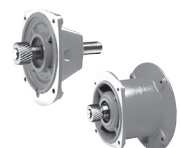
Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

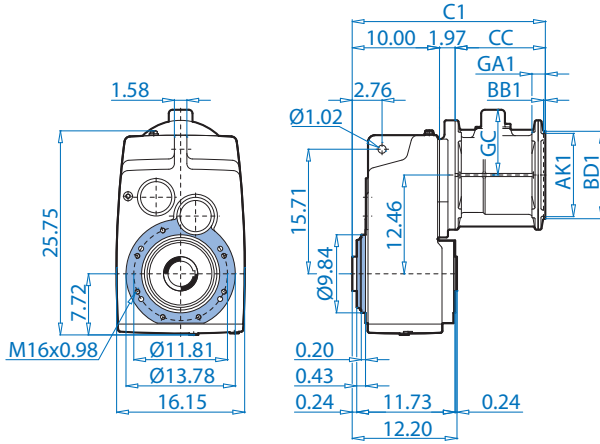
Standard eff.	100L/LA	112M	132S/M	160M/L	180MX	180LX	200LX	For Other Connection Possibilities please see → 262		
Premium eff.	100LP	112MP	132SP/MP	160MP	160LP	180MP/LP	225SP/MP			
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	10,18	10,18	13,68
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	10,18	10,18	13,68
C	30,78	31,53	32,53	35,86	38,13	39,89	38,13	39,89	42,88	47,93
C (BR)	34,38	35,23	36,23	40,07	43,44	45,16	43,44	45,16	47,92	55,02
C1	24,03	24,78	25,78	29,11	31,38	33,14	31,38	33,14	36,13	41,18
C1 (BR)	27,63	28,48	29,48	33,32	36,69	38,41	36,69	38,41	41,17	48,27
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	17,87

(BR) Denotes Brakemotor

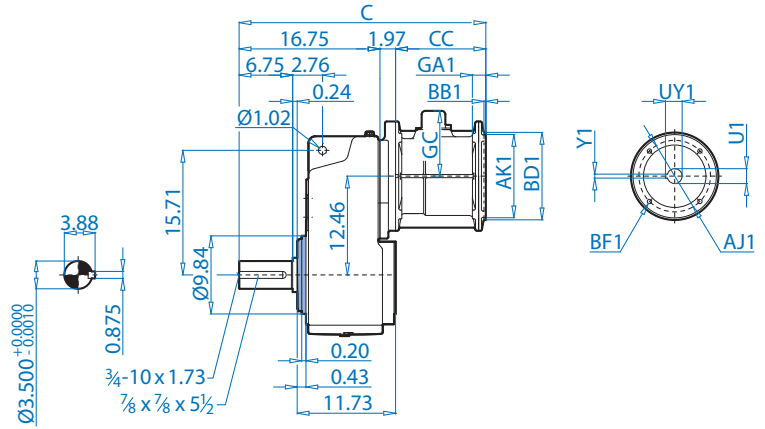




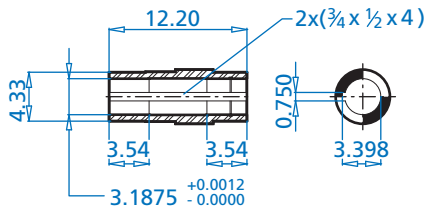
SK 7382AZ



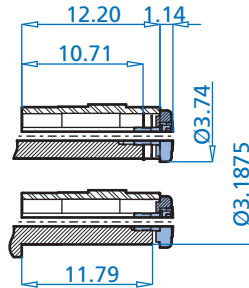
SK 7382VZ



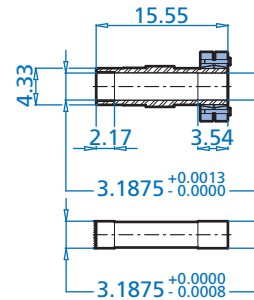
SK 7382AZ



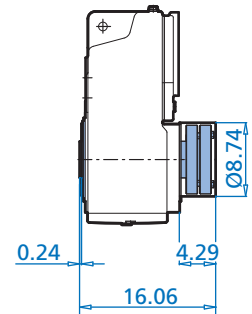
SK 7382AZB



SK 7382AZS



AZSH



Dimensions

Alternate Shafts on Pages 276 - 285

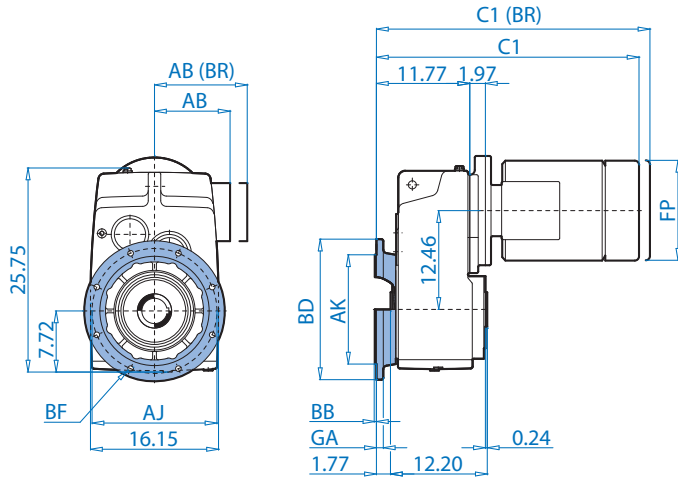
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	26,24	19,49	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,31	26,24	19,49	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	30,10	23,35	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	30,10	23,35	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	29,07	22,32	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	31,99	25,24	13,27

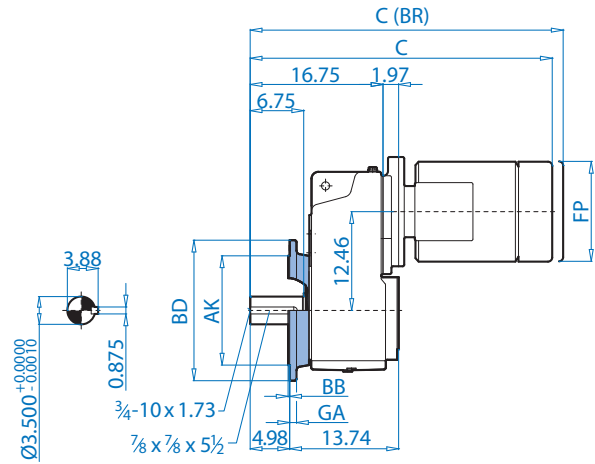
SK 7382 + Motor



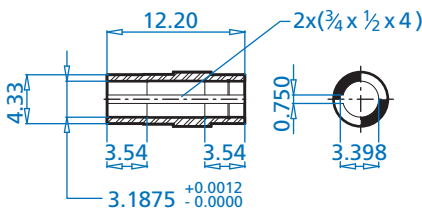
SK 7382AF



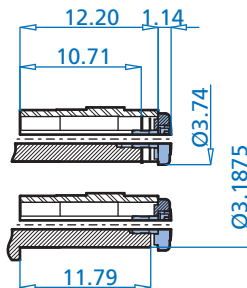
SK 7382VF



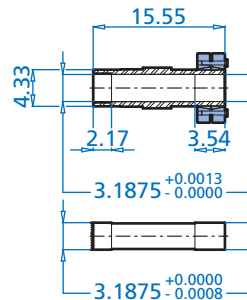
SK 7382AF



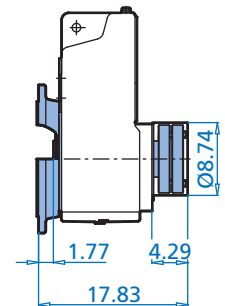
SK 7382AFB



SK 7382AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
17.72 (450)	15,75	13,780 +0.0000 -0.0014	0,20	0,71	0,87
21.65 (550)	19,69	17,717 +0.0000 -0.0016	0,20	0,71	1,10

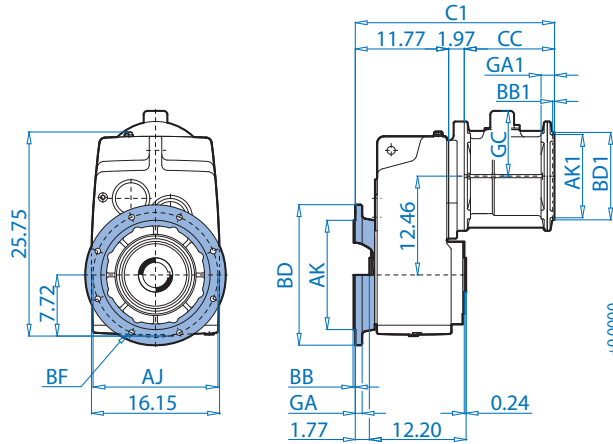
Motor Dimensions

Standard eff.	100L/LA	112M		132S/M	160M/L		180MX	180LX		200LX		For Other Connection Possibilities please see ⇨ 262
Premium eff.	100LP		112MP	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	
C	30,78	31,53	32,53	35,86	38,13	39,89	38,13	39,89	42,88	42,88	47,93	
C (BR)	34,38	35,23	36,23	40,07	43,44	45,16	43,44	45,16	47,92	47,92	55,02	
C1	25,80	26,56	27,55	30,88	33,15	34,91	33,15	34,91	37,91	37,91	42,95	
C1 (BR)	29,41	30,26	31,25	35,09	38,46	40,19	38,46	40,19	42,94	42,94	50,04	
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	

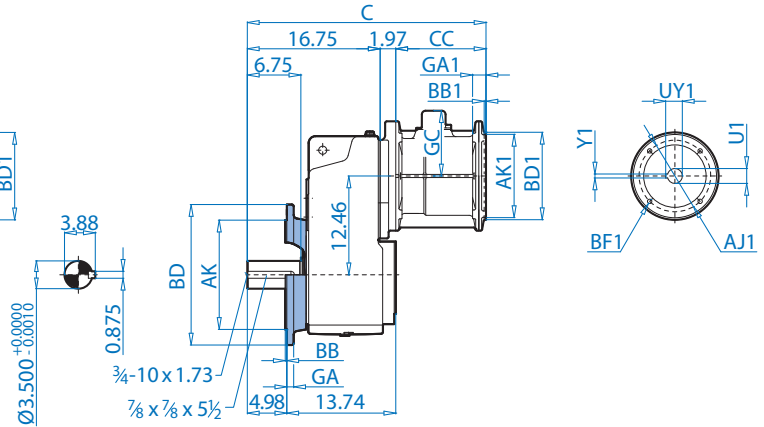
(BR) Denotes Brakemotor



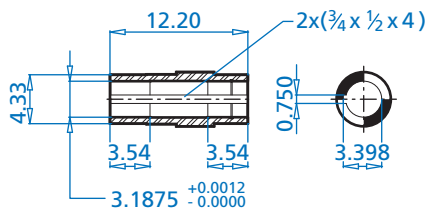
SK 7382AF



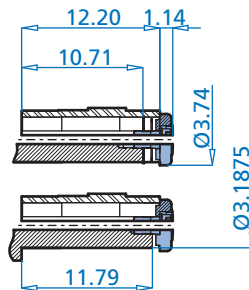
SK 7382VF



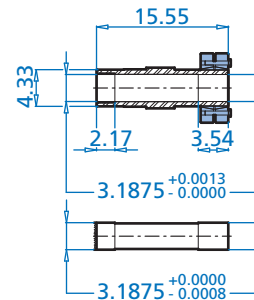
SK 7382AF



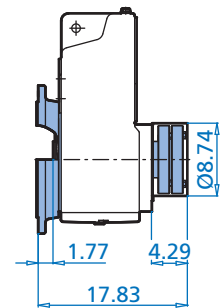
SK 7382AFB



SK 7382AFS



AFSH



Mounting Flange

BD (mm)	AJ	AK	BB	BF	GA
17.72 (450)	15,75	13,780 $+0.0000$ -0.0014	0,20	0,71	0,87
21.65 (550)	19,69	17,717 $+0.0000$ -0.0016	0,20	0,71	1,10

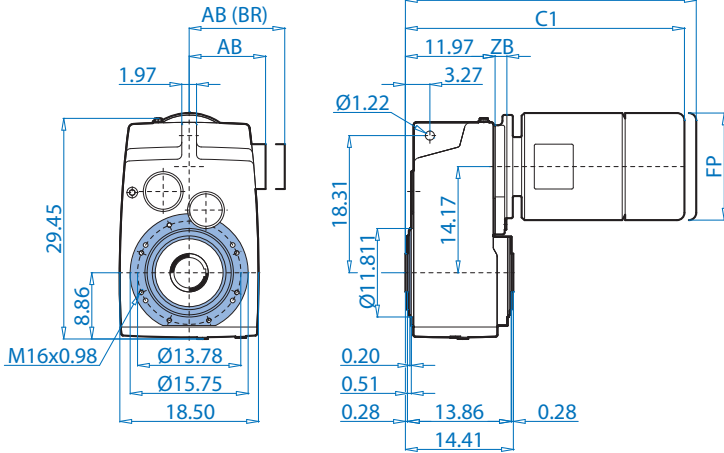
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	26,24	21,26	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	26,24	21,26	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	30,10	25,12	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	30,10	25,12	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	29,07	24,09	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	31,99	27,01	13,27

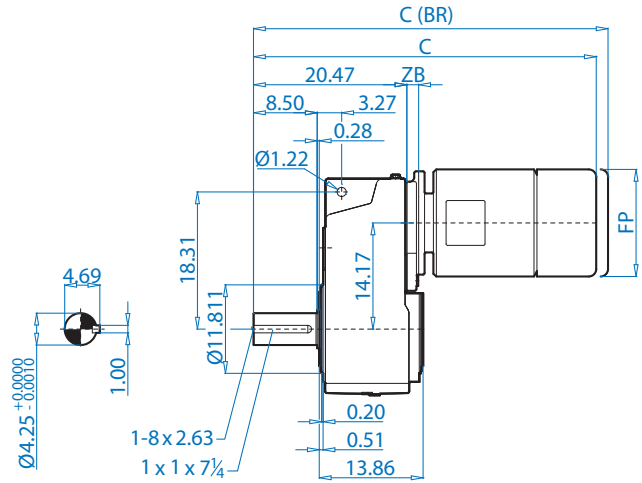
SK 8282 + Motor



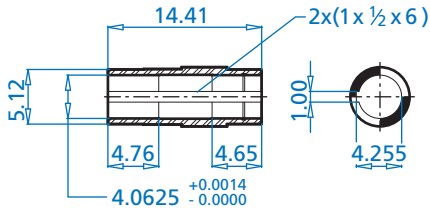
SK 8282AZ



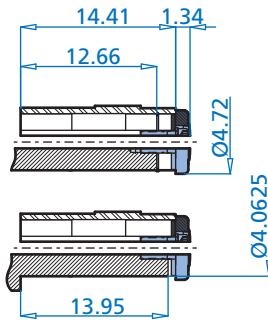
SK 8282VZ



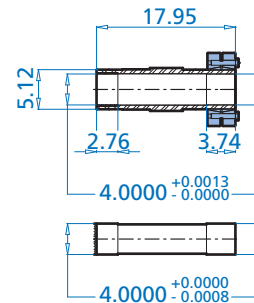
SK 8282AZ



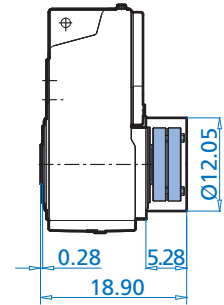
SK 8282AZB



SK 8282AZS



AZSH



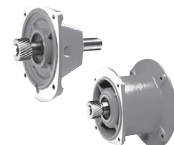
Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

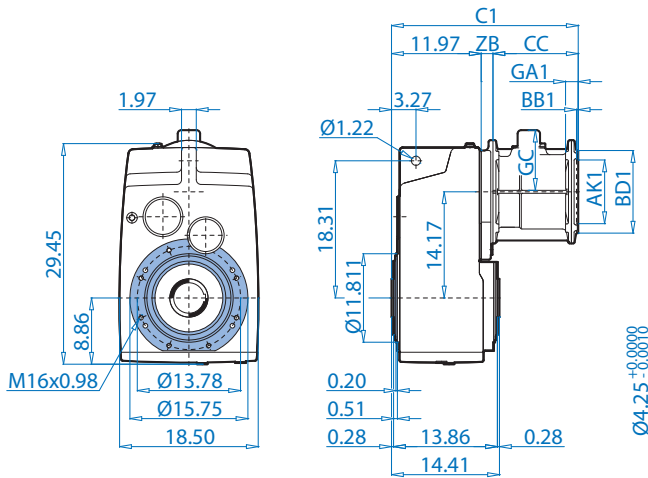
Standard eff.	132S/M	160M/L	180MX	180LX	200LX						For Other Connection Possibilities please see → 262
Premium eff.	132SP/MP	160MP	160LP		180MP/LP		225SP/MP	250WP	280SP		
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
C	39,19	41,45	43,21	41,45	43,21	46,21	46,21	51,26	51,85	55,31	
C (BR)	43,40	46,77	48,49	46,77	48,49	51,25	51,25	58,34	58,93	62,71	
C1	30,69	32,95	34,71	32,95	34,71	37,71	37,71	42,76	43,35	46,81	
C1 (BR)	34,90	38,27	39,99	38,27	39,99	42,75	42,75	49,84	50,43	54,21	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	
ZB	1,57	1,57	1,57	1,57	1,57	1,57	1,57	1,57	2,17	2,17	

(BR) Denotes Brakemotor

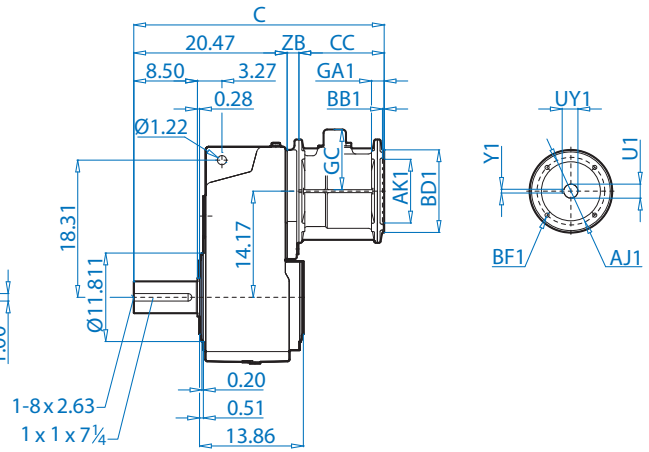




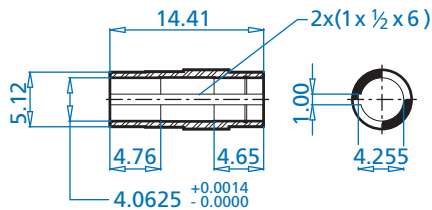
SK 8282AZ



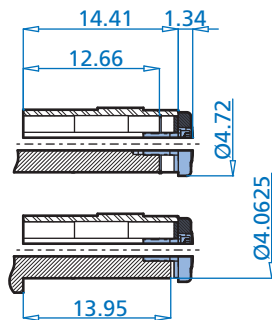
SK 8282VZ



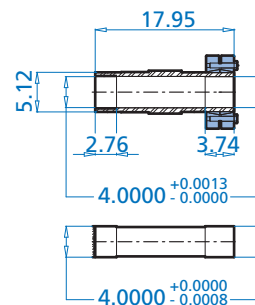
SK 8282AZ



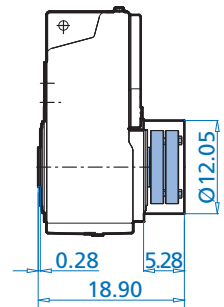
SK 8282AZB



SK 8282AZS



AZSH



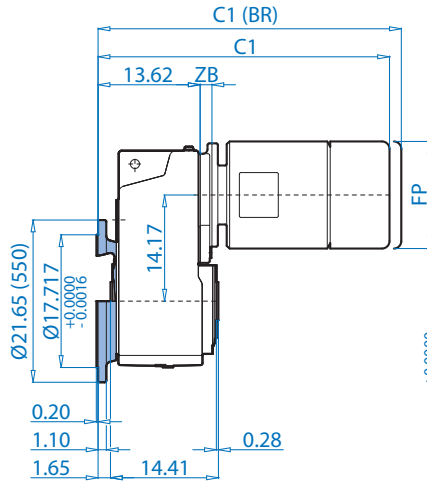
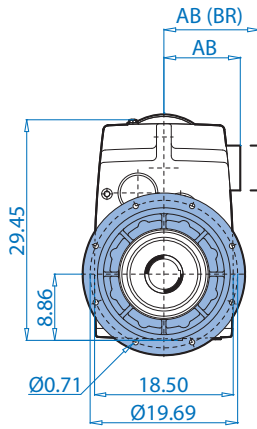
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	29,56	21,06	7,52	1,57
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	29,56	21,06	7,52	1,57
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	33,42	24,92	11,38	1,57
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	33,42	24,92	11,38	1,57
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	32,40	23,90	10,35	1,57
360TC	11,000	12,500	0,16	17,72	0,71	1,34	11,65	2,375	2,651	0,625	35,92	27,42	13,29	2,17

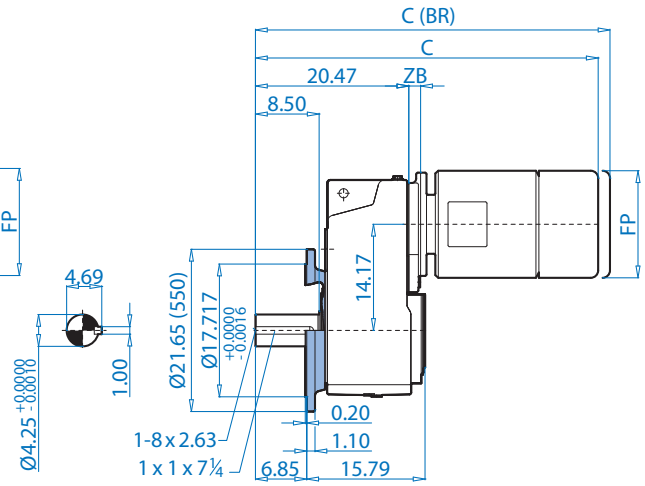
SK 8282 + Motor



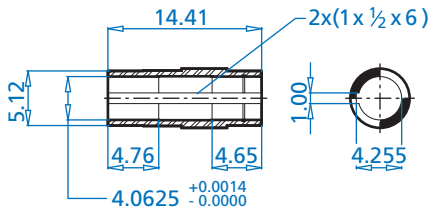
SK 8282AF



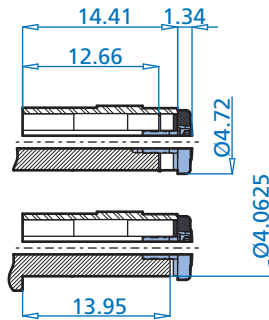
SK 8282VF



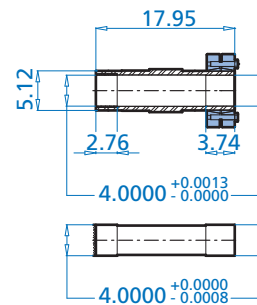
SK 8282AF



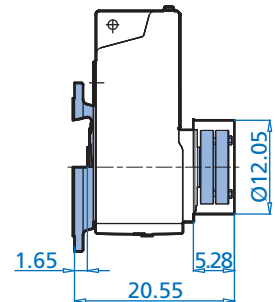
SK 8282AFB



SK 8282AFS



AFSH

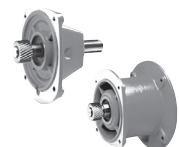


Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

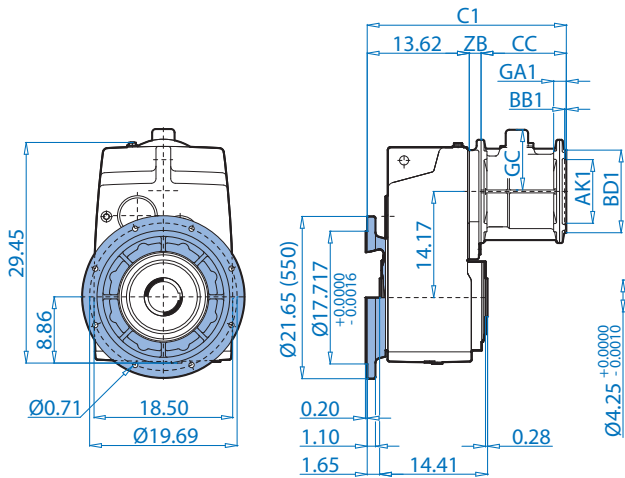
Standard eff.	132S/M	160M/L		180MX	180LX		200LX				For Other Connection Possibilities please see → 262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	250WP	280SP	
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
C	39,19	41,45	43,21	41,45	43,21	46,21	46,21	51,26	51,85	55,31	
C (BR)	43,40	46,77	48,49	46,77	48,49	51,25	51,25	58,34	58,93	62,71	
C1	32,34	34,61	36,37	34,61	36,37	39,36	39,36	44,41	45,00	48,46	
C1 (BR)	36,55	39,92	41,64	39,92	41,64	44,40	44,40	51,50	52,09	55,87	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	
ZB	1,57	1,57	1,57	1,57	1,57	1,57	1,57	1,57	2,17	2,17	



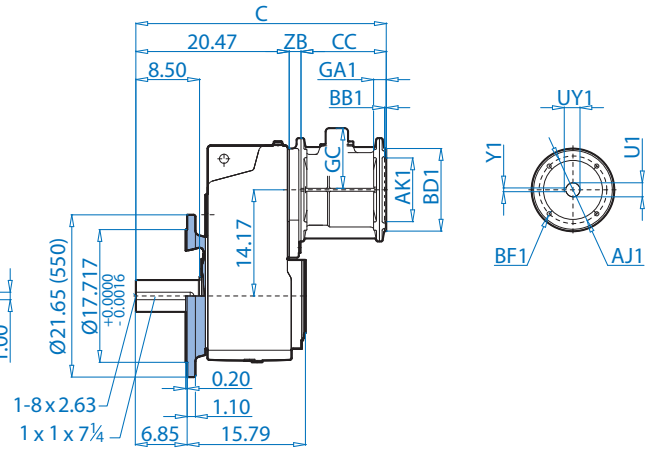
(BR) Denotes Brakemotor



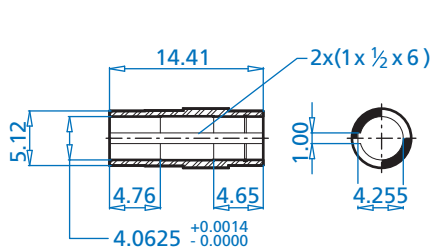
SK 8282AF



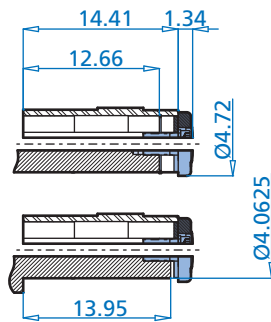
SK 8282VF



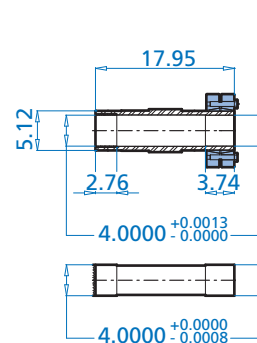
SK 8282AF



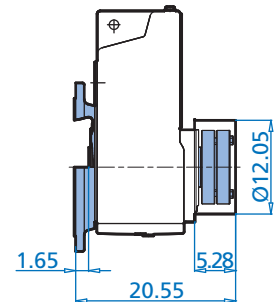
SK 8282AFB



SK 8282AFS



AFSH



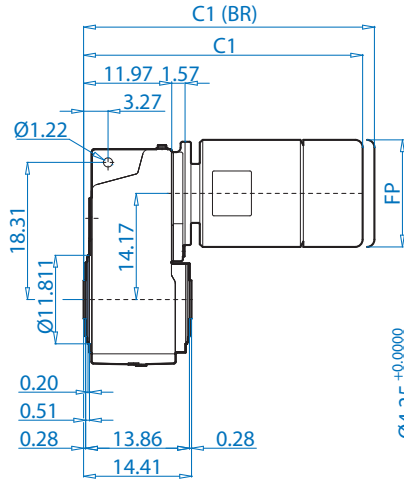
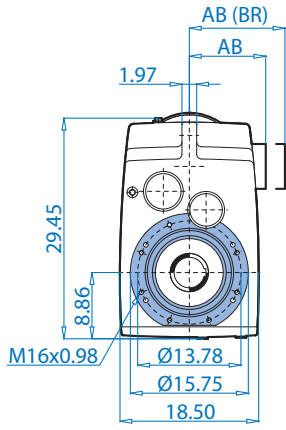
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	29,56	22,72	7,52	1,57
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	29,56	22,72	7,52	1,57
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	33,42	26,57	11,38	1,57
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	33,42	26,57	11,38	1,57
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	32,40	25,55	10,35	1,57
360TC	11,000	12,500	0,16	17,72	0,71	1,34	11,65	2,375	2,651	0,625	35,92	29,07	13,29	2,17

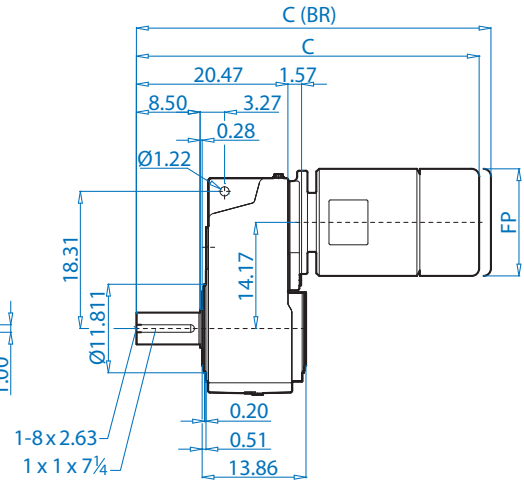
SK 8382 + Motor



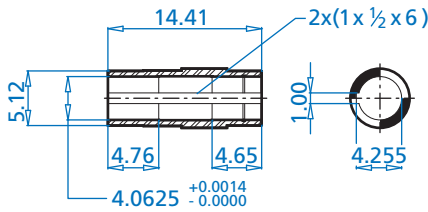
SK 8382AZ



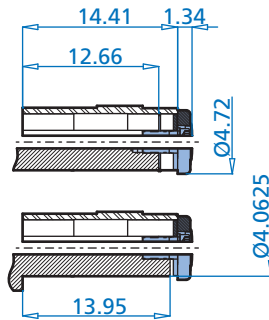
SK 8382VZ



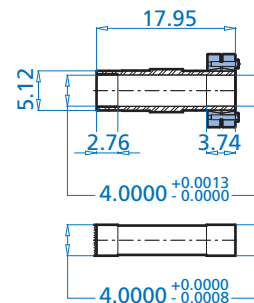
SK 8382AZ



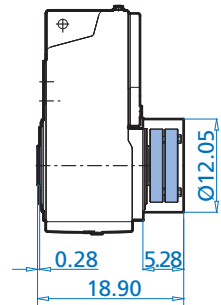
SK 8382AZB



SK 8382AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

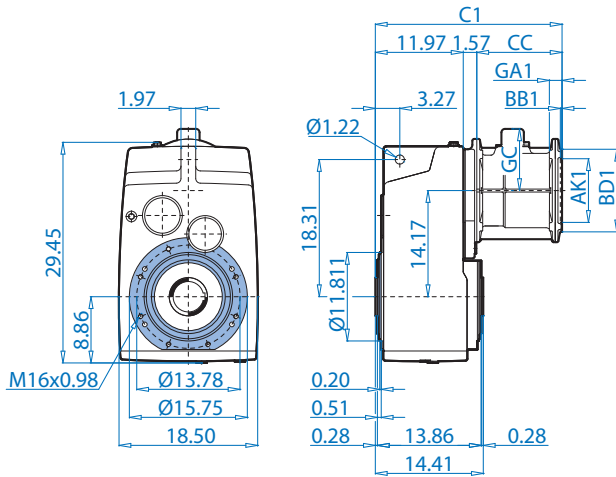
Standard eff.	100L/LA	112M	132S/M	160M/L	180MX	180LX	200LX	For Other Connection Possibilities please see ⇒ 262		
Premium eff.	100LP	112MP	132SP/MP	160MP	160LP	180MP/LP	225SP/MP			
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	10,18	10,18	13,68
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	10,18	10,18	13,68
C	34,11	34,86	35,85	39,19	41,45	43,21	41,45	43,21	46,21	51,26
C (BR)	37,71	38,56	39,55	43,40	46,77	48,49	46,77	48,49	51,25	58,34
C1	25,61	26,36	27,35	30,69	32,95	34,71	32,95	34,71	37,71	42,76
C1 (BR)	29,21	30,06	31,05	34,90	38,27	39,99	38,27	39,99	42,75	49,84
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	17,87

(BR) Denotes Brakemotor

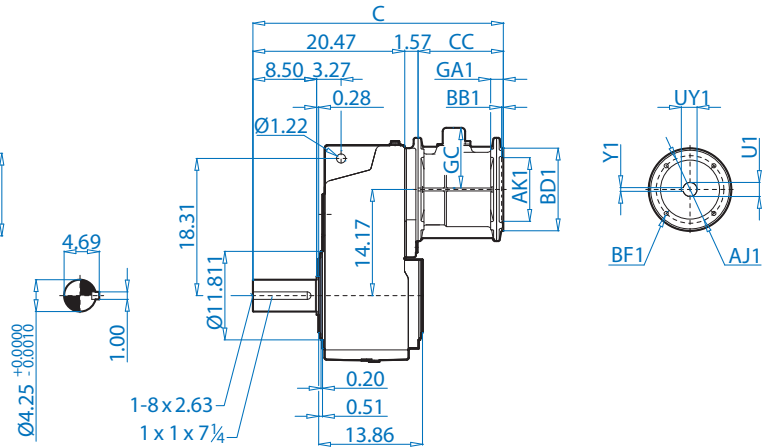




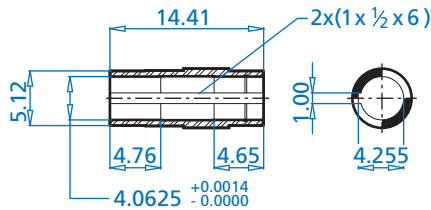
SK 8382AZ



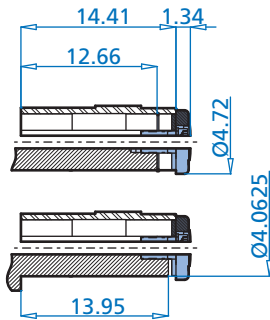
SK 8382VZ



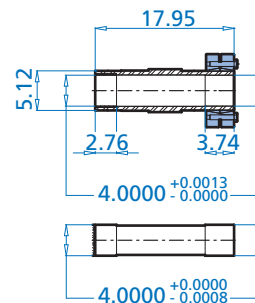
SK 8382AZ



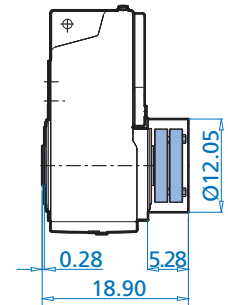
SK 8382AZB



SK 8382AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

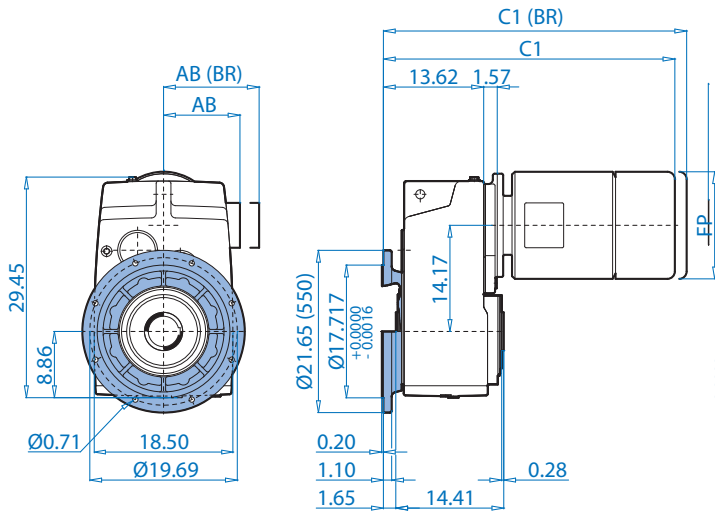
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	29,56	21,06	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	29,56	21,06	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	33,42	24,92	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	33,42	24,92	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	32,40	23,90	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	35,31	26,81	13,27

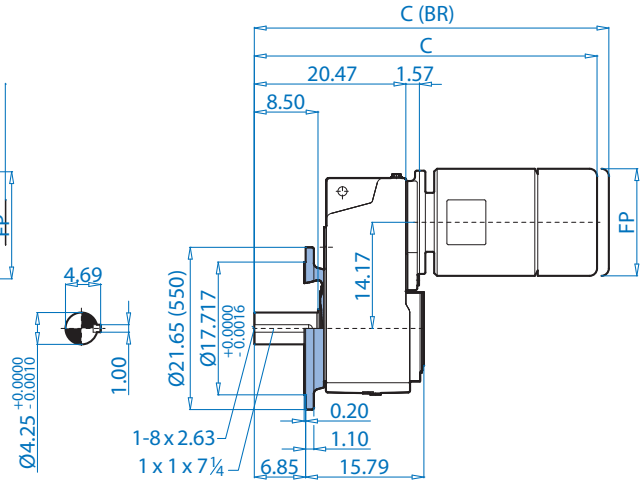
SK 8382 + Motor



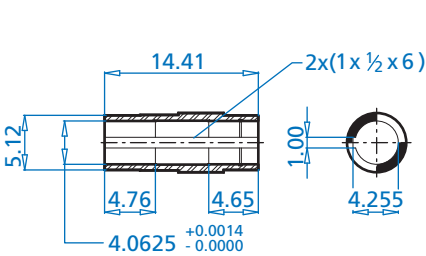
SK 8382AF



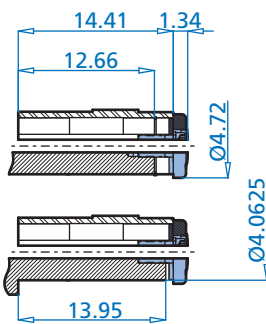
SK 8382VF



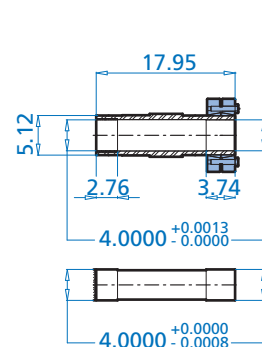
SK 8382AF



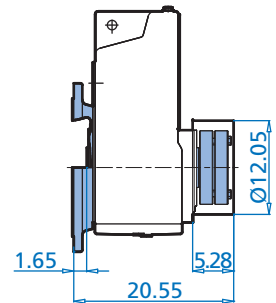
SK 8382AFB



SK 8382AFS



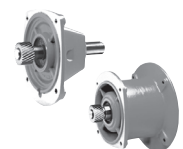
AFSH



Motor Dimensions

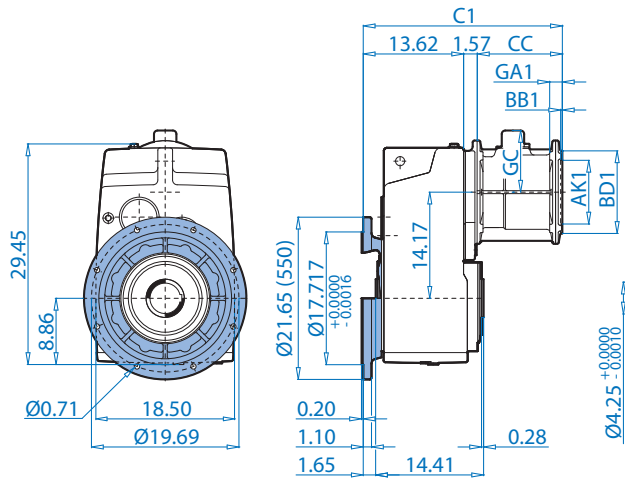
Standard eff.	100L/LA	112M	132S/M	160M/L	180MX	180LX	200LX	For Other Connection Possibilities please see ⇒ 262		
Premium eff.	100LP	112MP	132SP/MP	160MP	160LP	180MP/LP	225SP/MP			
AB	6,65	7,05	7,05	8,03	9,53	9,53	9,53	10,18	10,18	13,68
AB (BR)	6,77	7,17	7,17	7,91	9,53	9,53	9,53	10,18	10,18	13,68
C	34,11	34,86	35,85	39,19	41,45	43,21	41,45	43,21	46,21	51,26
C (BR)	37,71	38,56	39,55	43,40	46,77	48,49	46,77	48,49	51,25	58,34
C1	27,26	28,01	29,00	32,34	34,61	36,37	34,61	36,37	39,36	44,41
C1 (BR)	30,86	31,71	32,70	36,55	39,92	41,64	39,92	41,64	44,40	51,50
FP	7,90	8,87	8,87	10,45	12,56	12,56	12,56	12,56	14,06	17,87

(BR) Denotes Brakemotor

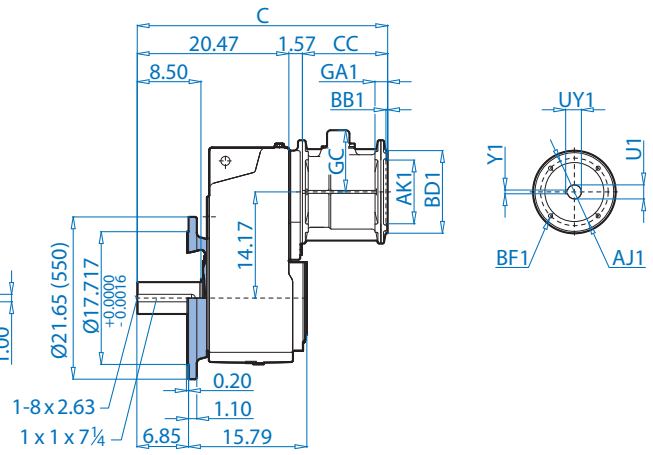




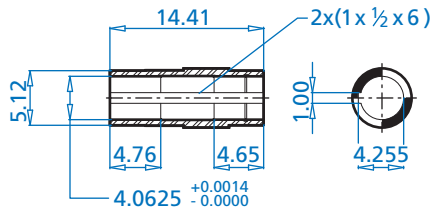
SK 8382AF



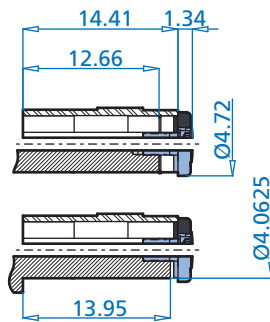
SK 8382VF



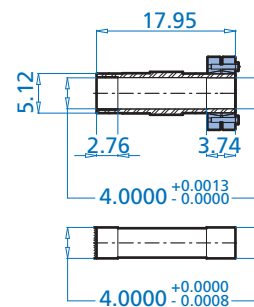
SK 8382AF



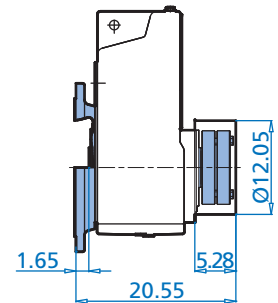
SK 8382AFB



SK 8382AFS



AFSH

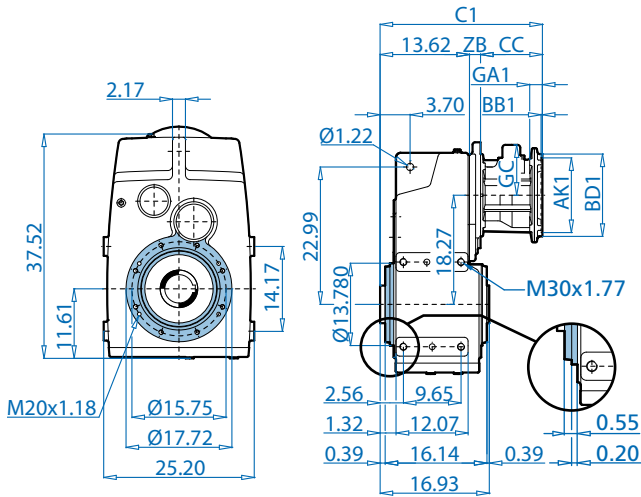


NEMA Dimensions

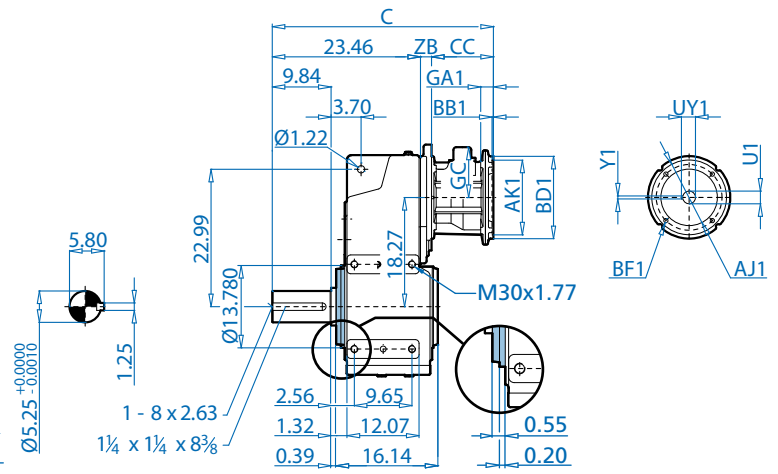
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	29,56	22,72	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	29,56	22,72	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	33,42	26,57	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	33,42	26,57	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	32,40	25,55	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	35,31	28,46	13,27



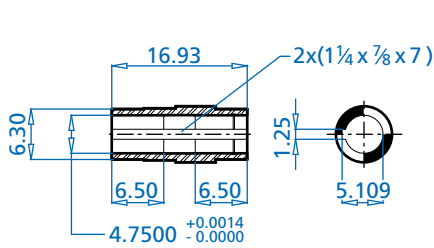
SK 9282AZ



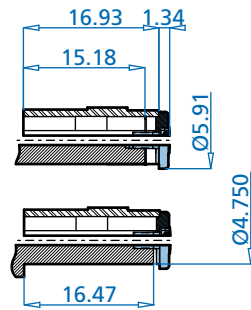
SK 9282VZ



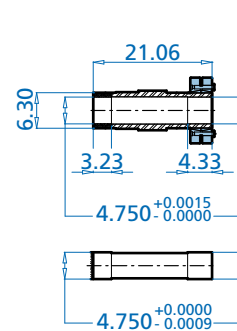
SK 9282AZ



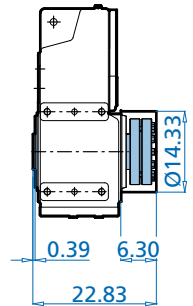
SK 9282AZB



SK 9282AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

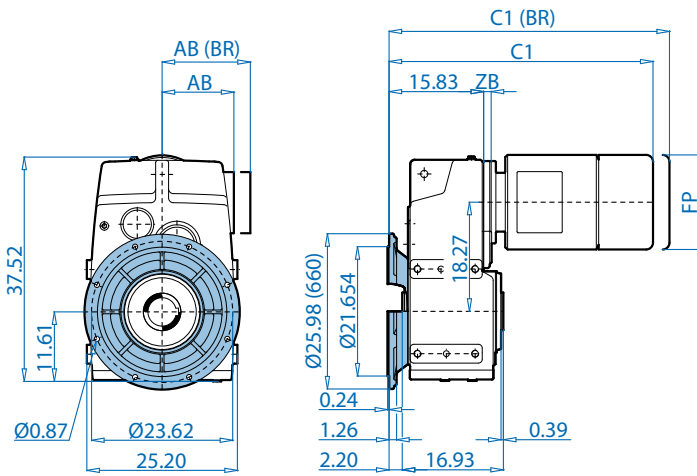
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	32,24	22,40	7,52	1,26
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	32,24	22,40	7,52	1,26
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	36,10	26,26	11,38	1,26
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	36,10	26,26	11,38	1,26
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	35,08	25,24	10,35	1,26
360TC	11,000	12,500	0,16	17,72	0,71	1,34	11,65	2,375	2,651	0,625	38,60	28,76	13,29	1,85

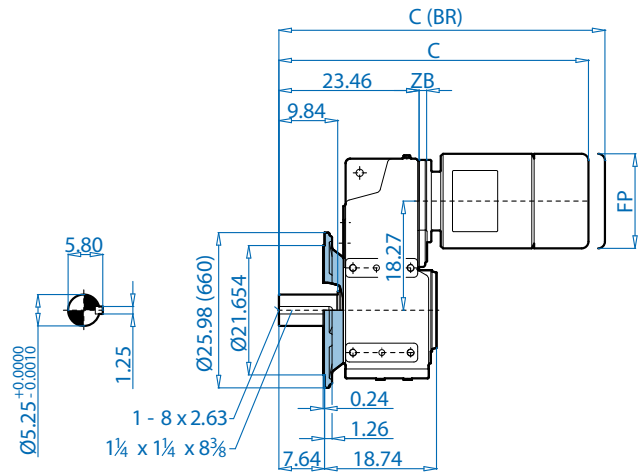
SK 9282 + Motor



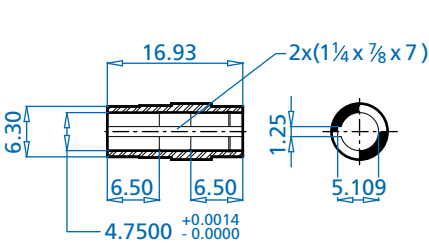
SK 9282AF



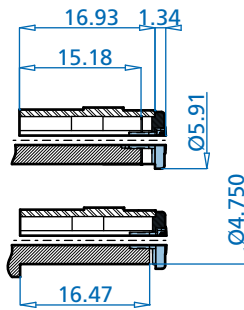
SK 9282VF



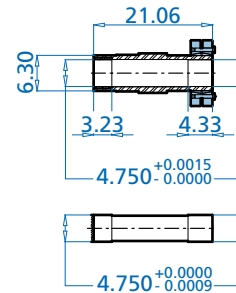
SK 9282AF



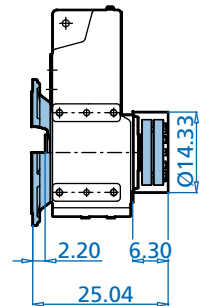
SK 9282AFB



SK 9282AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

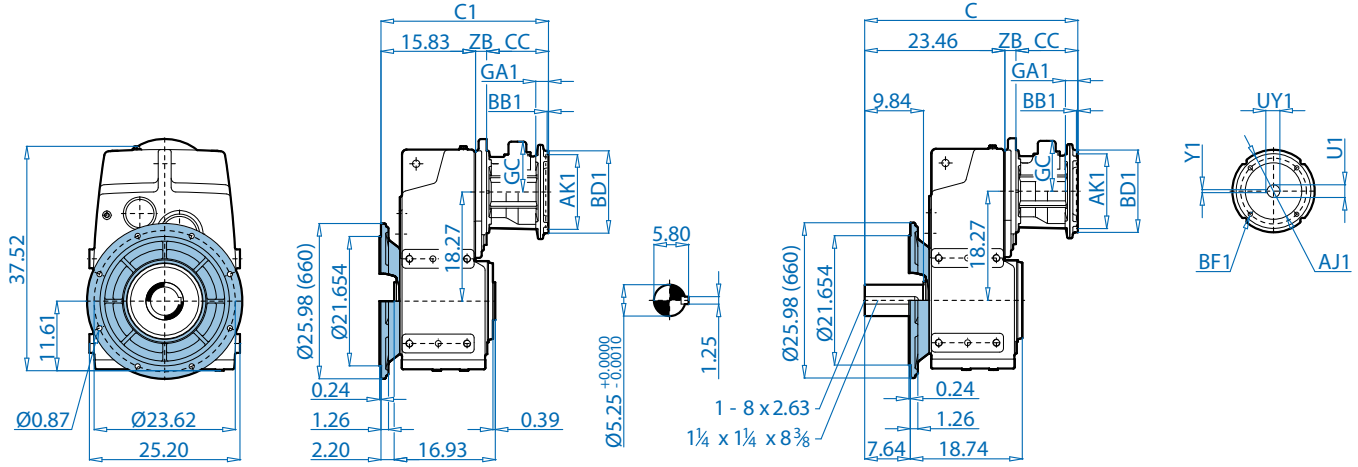
Standard efficiency	225SP/MP	250WP	280SP	280MP	315SP	315MP/RP	For Other Connection Possibilities please see → 262
Premium efficiency							
AB	13,68	13,68	16,97	16,97	20,31	20,31	
AB (BR)	13,68	13,68	16,97	16,97	-	-	
C	53,94	54,53	57,99	57,60	61,22	67,72	
C (BR)	61,02	61,61	65,39	65,00	-	-	
C1	46,30	46,89	50,35	49,96	53,58	60,08	
C1 (BR)	53,39	53,98	57,76	57,36	-	-	
FP	17,87	17,87	21,69	21,69	24,25	24,25	
ZB	1,26	1,85	1,85	1,85	1,85	1,85	

(BR) Denotes Brakemotor



SK 9282AF

SK 9282VF

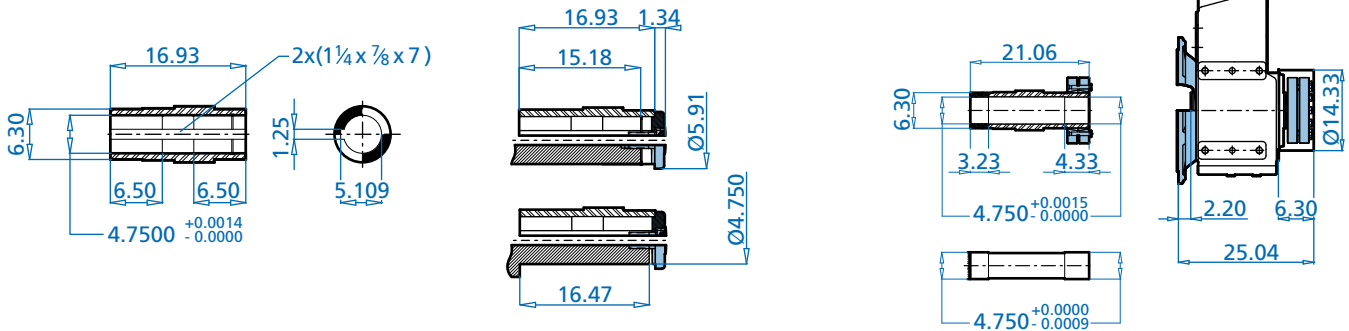


SK 9282AF

SK 9282AFB

SK 9282AFS

AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

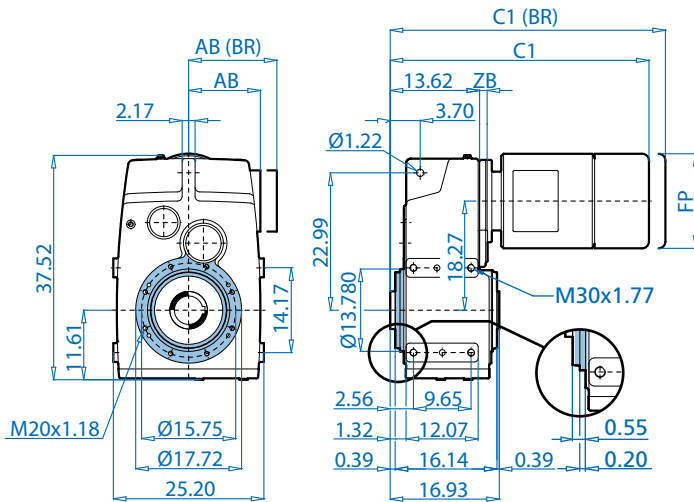
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	32,24	24,61	7,52	1,26
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	32,24	24,61	7,52	1,26
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	36,10	28,46	11,38	1,26
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	36,10	28,46	11,38	1,26
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	35,08	27,44	10,35	1,26
360TC	11,000	12,500	0,16	17,72	0,71	1,34	11,65	2,375	2,651	0,625	38,60	30,96	13,29	1,85

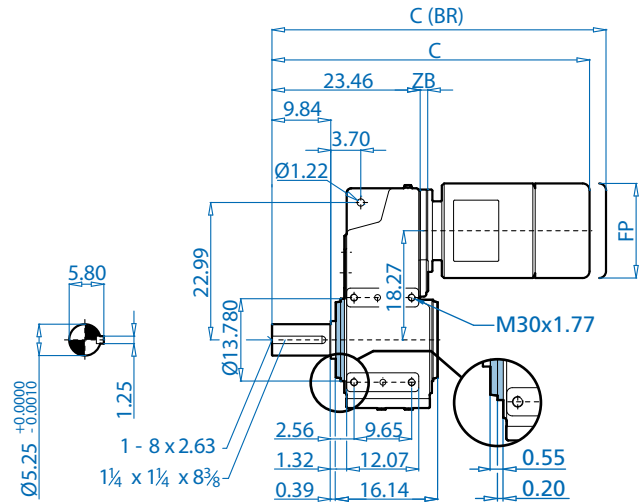
SK 9382 + Motor



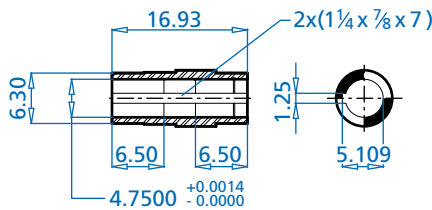
SK 9382AZ



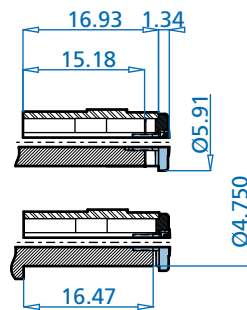
SK 9382VZ



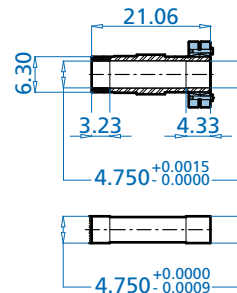
SK 9382AZ



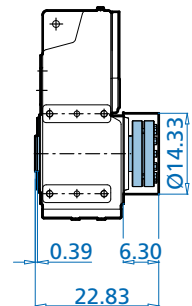
SK 9382AZB



SK 9382AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

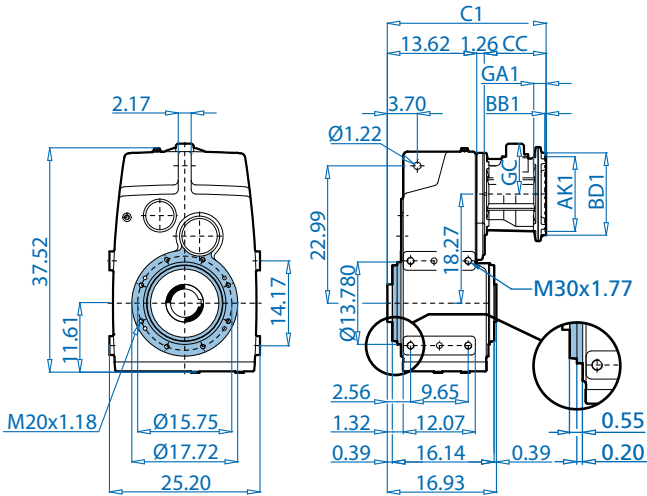
Standard eff.	132S/M	160M/L		180MX	180LX		200LX				For Other Connection Possibilities please see → 262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	250WP	280SP	
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
C	41,87	44,13	45,89	44,13	45,89	48,89	48,89	53,94	54,53	57,99	
C (BR)	46,08	49,45	51,17	49,45	51,17	53,93	53,93	61,02	61,61	65,39	
C1	32,02	34,29	36,05	34,29	36,05	39,05	39,05	44,09	44,69	48,15	
C1 (BR)	36,24	39,61	41,33	39,61	41,33	44,09	44,09	51,18	51,77	55,55	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	
ZB	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,85	1,85	

(BR) Denotes Brakemotor

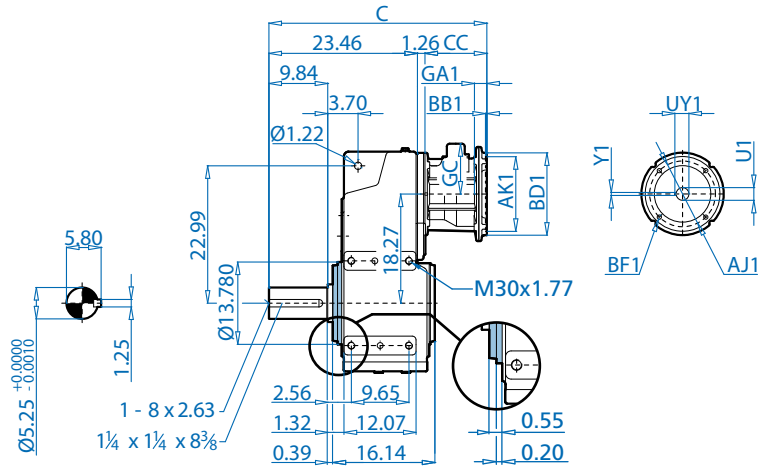




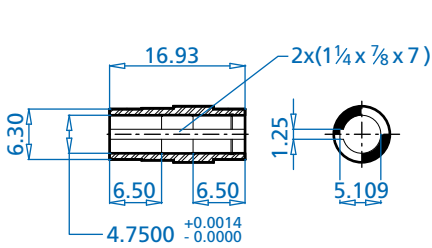
SK 9382AZ



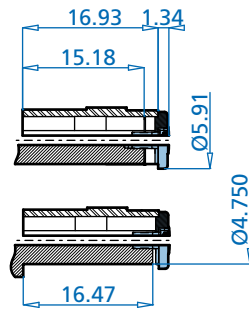
SK 9382VZ



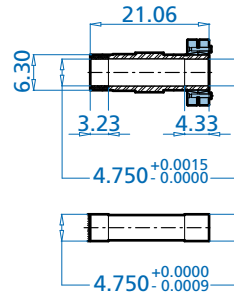
SK 9382AZ



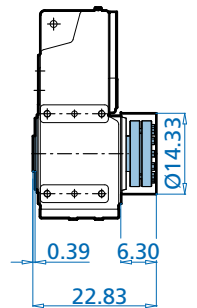
SK 9382AZB



SK 9382AZS



AZSH



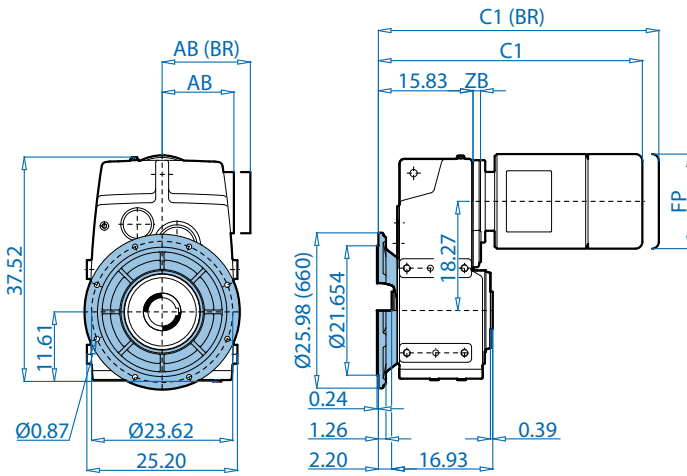
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	32,24	22,40	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	32,24	22,40	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	36,10	26,26	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	36,10	26,26	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	35,08	25,24	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	37,99	28,15	13,27

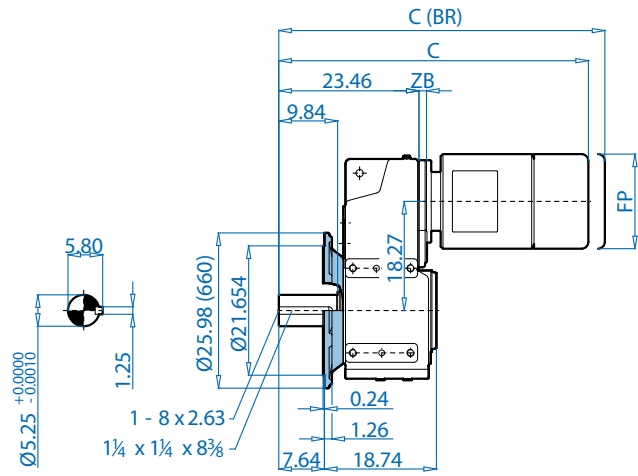
SK 9382 + Motor



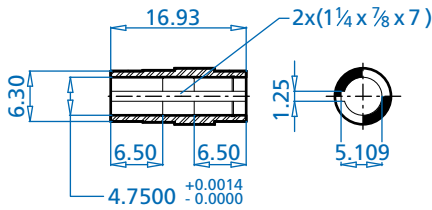
SK 9382AF



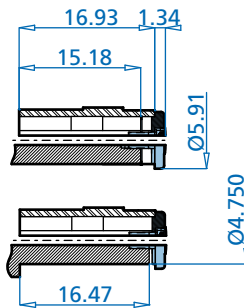
SK 9382VF



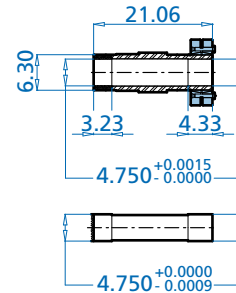
SK 9382AF



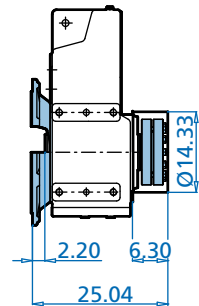
SK 9382AFB



SK 9382AFS





AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

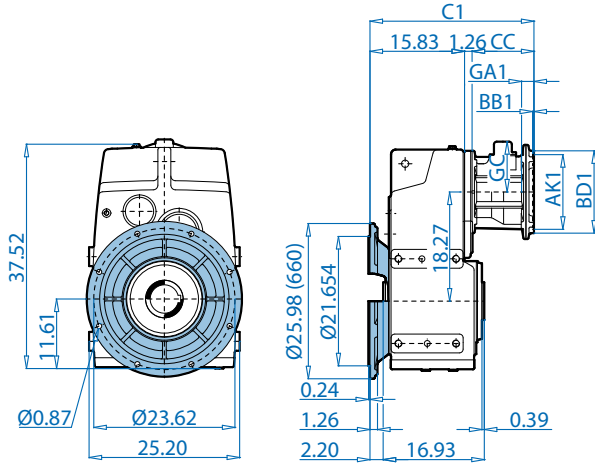
Motor Dimensions

Standard eff.	132S/M	160M/L		180MX	180LX		200LX				For Other Connection Possibilities please see  262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	250WP	280SP	
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	
C	41,87	44,13	45,89	44,13	45,89	48,89	48,89	53,94	54,53	57,99	
C (BR)	46,08	49,45	51,17	49,45	51,17	53,93	53,93	61,02	61,61	65,39	
C1	34,23	36,50	38,26	36,50	38,26	41,25	41,25	46,30	46,89	50,35	
C1 (BR)	38,44	41,81	43,53	41,81	43,53	46,29	46,29	53,39	53,98	57,76	
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	
ZB	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,85	1,85	

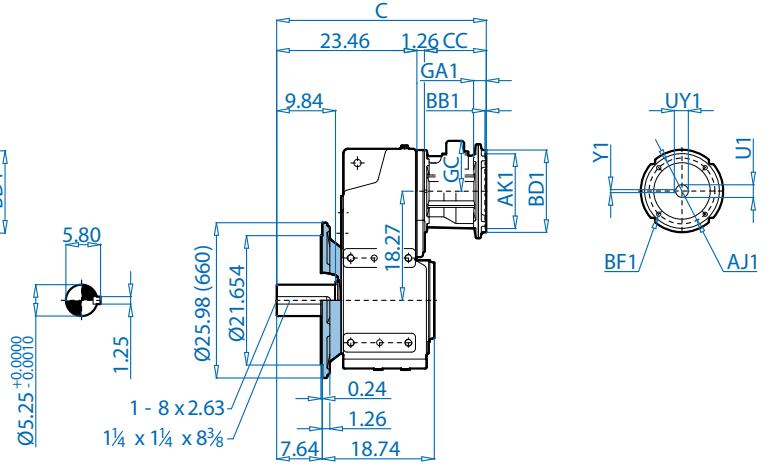
(BR) Denotes Brakemotor



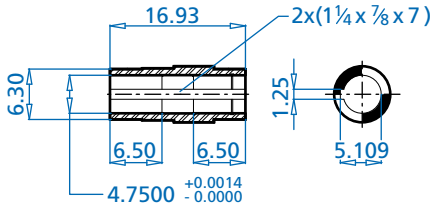
SK 9382AF



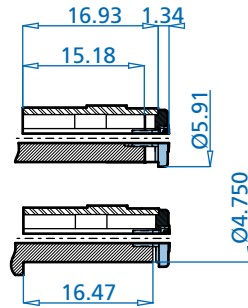
SK 9382VF



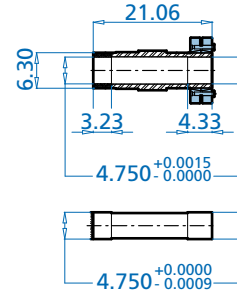
SK 9382AF



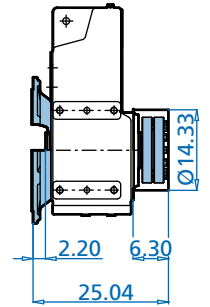
SK 9382AFB



SK 9382AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

NEMA Dimensions

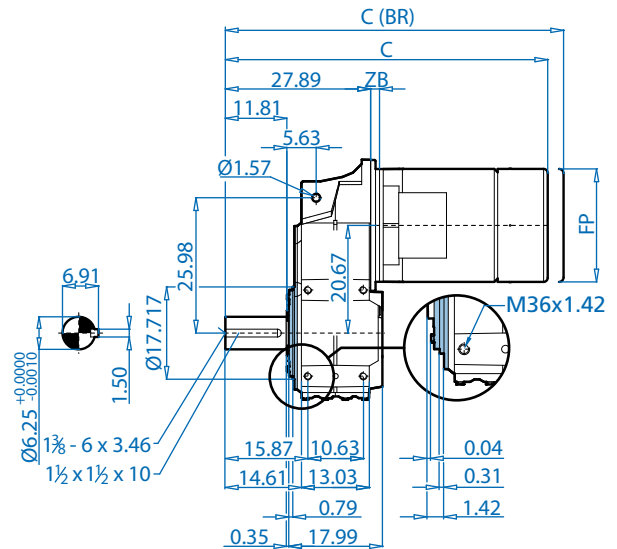
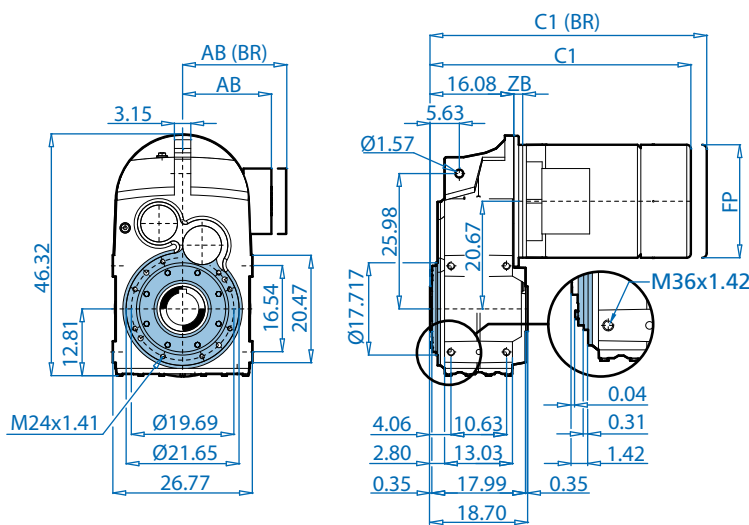
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC
180TC	7,250	8,500	0,23	9,17	0,59	0,71	N/A	1,125	1,241	0,250	32,24	24,61	7,52
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	32,24	24,61	7,52
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	36,10	28,46	11,38
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	36,10	28,46	11,38
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	35,08	27,44	10,35
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	37,99	30,35	13,27

SK 10382.1 + Motor



SK 10382.1AZ

SK 10382.1VZ

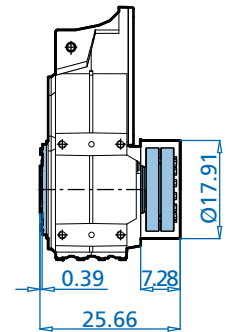
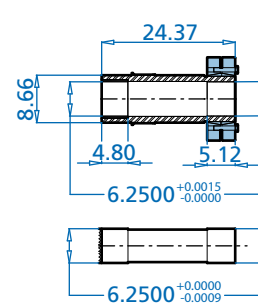
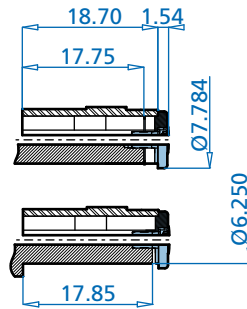
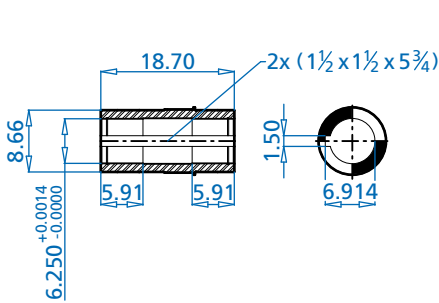


SK 10382.1AZ

SK 10382.1AZB

SK 10382.1AZS

AZSH



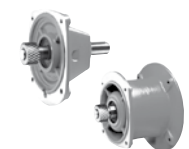
Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

Standard eff.	132S/M	160M/L		180MX	180LX		200LX								For Other Connection Possibilities please see ⇨ 262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	250WP	280SP	280MP	315SP	315MP/RP		
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	20,31	20,31		
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	-	-		
C	46,18	48,44	50,20	48,44	50,20	53,20	53,20	58,25	58,82	62,28	61,89	65,51	72,01		
C (BR)	50,39	53,76	55,48	53,76	55,48	58,24	58,24	65,33	65,91	69,69	69,29	-	-		
C1	34,37	36,63	38,39	36,63	38,39	41,39	41,39	46,44	47,01	50,47	50,08	53,70	60,20		
C1 (BR)	38,58	41,95	43,67	41,95	43,67	46,43	46,43	53,52	54,09	57,87	57,48	-	-		
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	21,69	24,25	24,25		
ZB	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,71	1,71	1,71	1,71	1,71		

(BR) Denotes Brakemotor

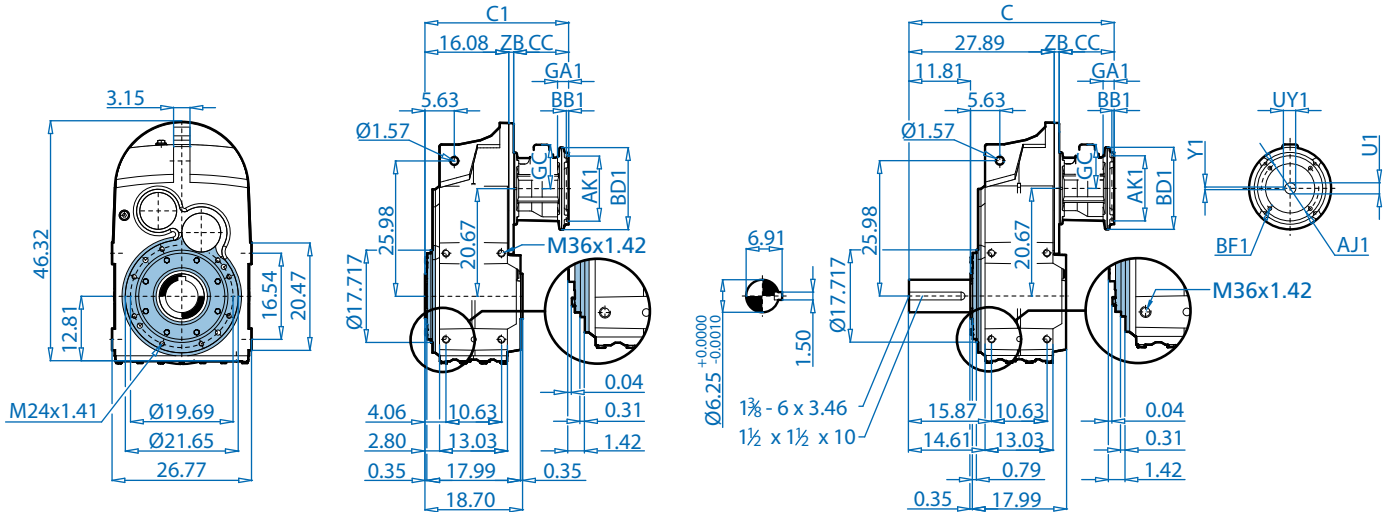




SK 10382.1 + NEMA

SK 10382.1AZ

SK 10382.1VZ

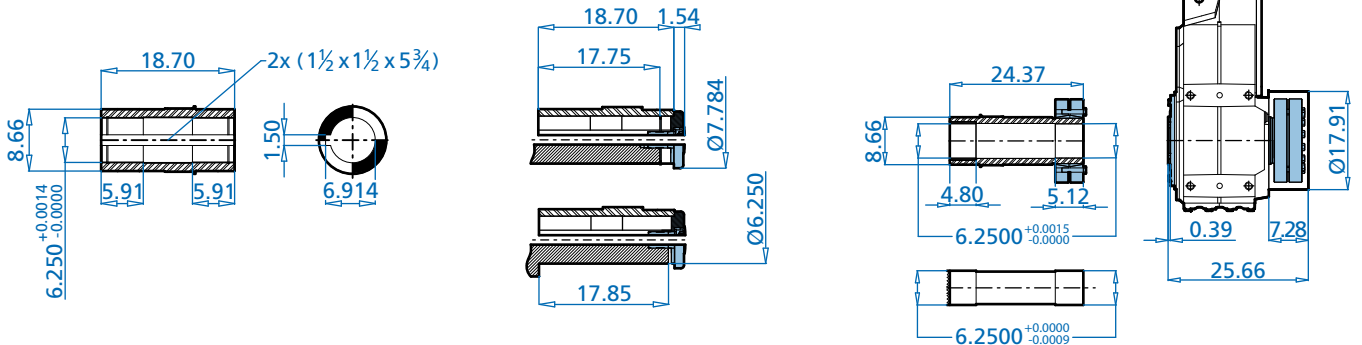


SK 10382.1AZ

SK 10382.1AZB

SK 10382.1AZS

AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

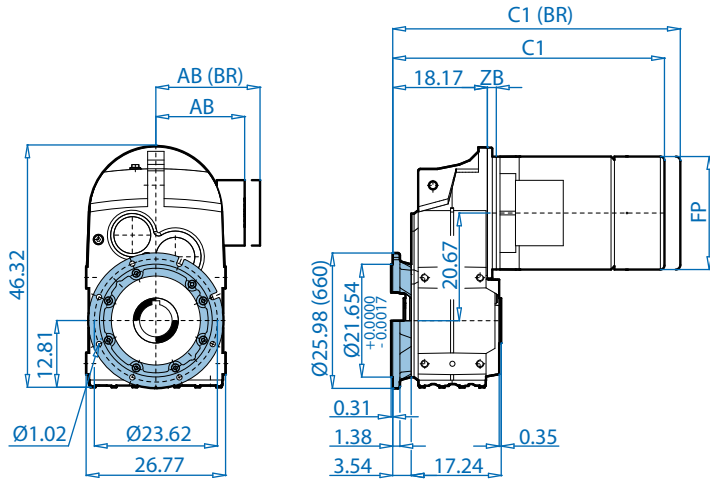
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	36,56	24,74	7,52	1,14
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	40,41	28,60	11,38	1,14
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	40,41	28,60	11,38	1,14
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	39,39	27,58	10,35	1,14
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	42,87	31,06	13,27	1,71

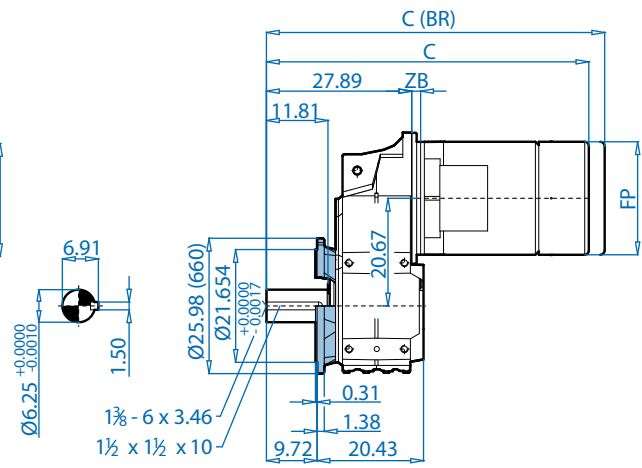
SK 10382.1 + Motor



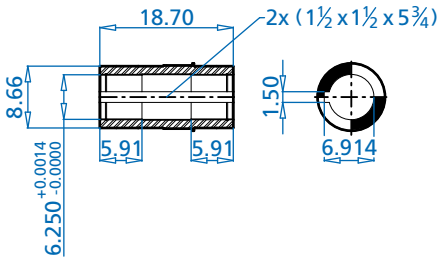
SK 10382.1AF



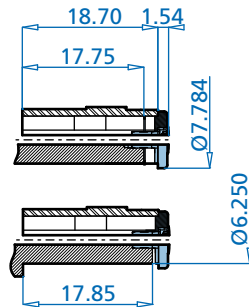
SK 10382.1VF



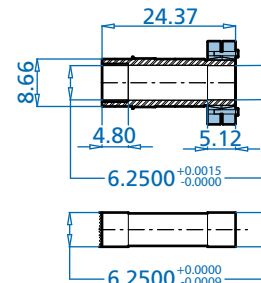
SK 10382.1AF



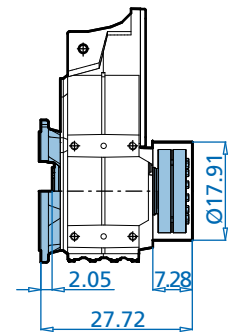
SK 10382.1AFB



SK 10382.1AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

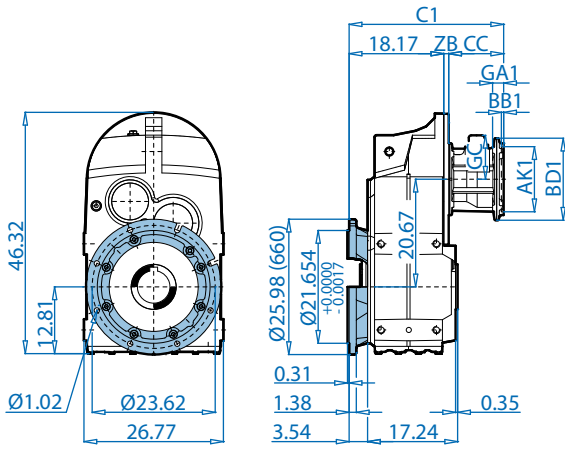
Standard eff.	132S/M	160M/L		180MX	180LX		200LX								For Other Connection Possibilities please see ⇨ 262
Premium eff.	132SP/MP	160MP	160LP			180MP/LP		225SP/MP	250WP	280SP	280MP	315SP	315MP/RP		
AB	8,03	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	20,31	20,31		
AB (BR)	7,91	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	-	-		
C	46,18	48,44	50,20	48,44	50,20	53,20	53,20	58,25	58,82	62,28	61,89	65,51	72,01		
C (BR)	50,39	53,76	55,48	53,76	55,48	58,24	58,24	65,33	65,91	69,69	69,29	-	-		
C1	36,45	38,72	40,48	38,72	40,48	43,48	43,48	48,52	49,09	52,56	52,17	55,79	62,28		
C1 (BR)	40,67	44,04	45,76	44,04	45,76	48,52	48,52	55,61	56,18	59,96	59,57	-	-		
FP	10,45	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	21,69	24,25	24,25		
ZB	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,71	1,71	1,71	1,71	1,71		

(BR) Denotes Brakemotor

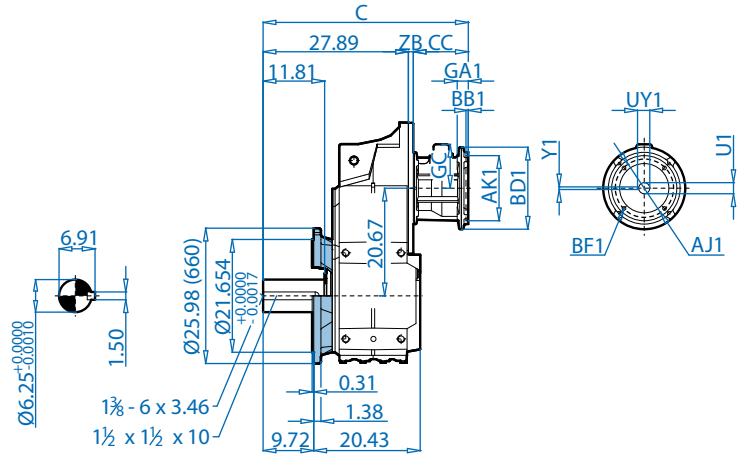




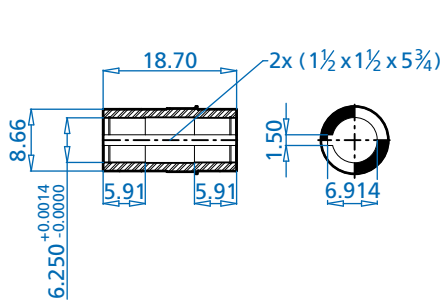
SK 10382.1AF



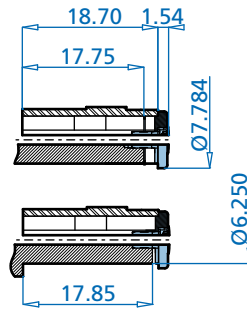
SK 10382.1VF



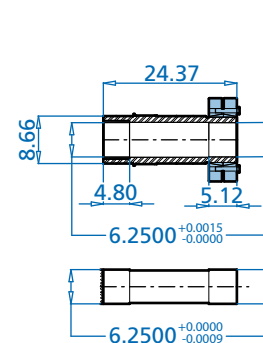
SK 10382.1AF



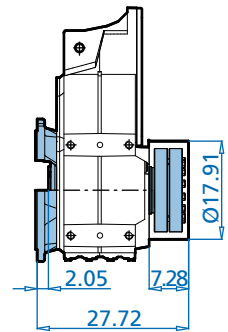
SK 10382.1AFB



SK 10382.1AFS



AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

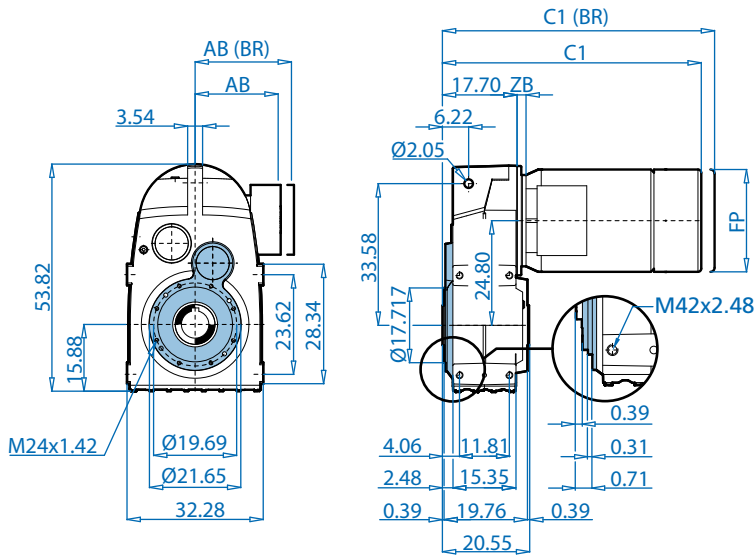
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
210TC	7,250	8,500	0,23	9,17	0,59	0,98	N/A	1,375	1,518	0,312	36,56	26,83	7,52	1,14
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	40,41	30,69	11,38	1,14
280TC	9,000	10,500	0,23	13,78	0,55	1,18	8,23	1,875	2,096	0,500	40,41	30,69	11,38	1,14
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	39,39	29,67	10,35	1,14
360TC	11,000	12,500	0,16	17,72	0,71	1,34	9,65	2,375	2,651	0,625	42,87	33,15	13,27	1,71

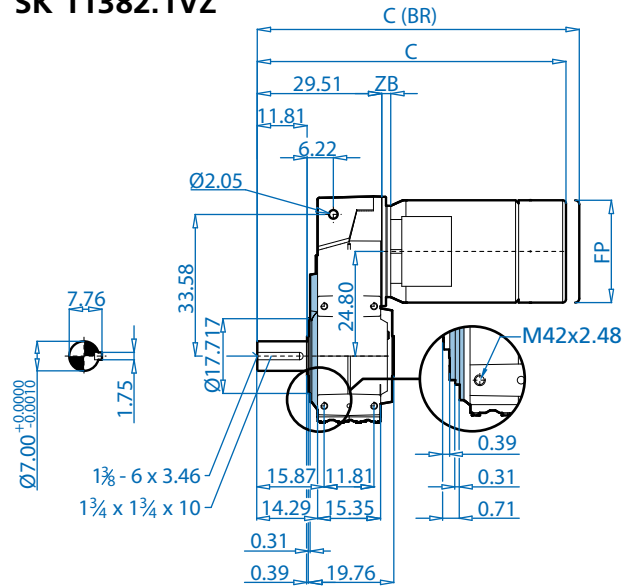
11382.1 + Motor



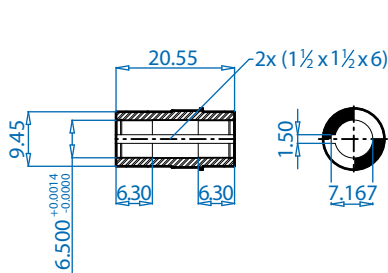
SK 11382.1AZ



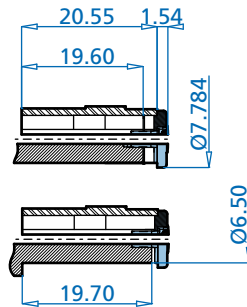
SK 11382.1VZ



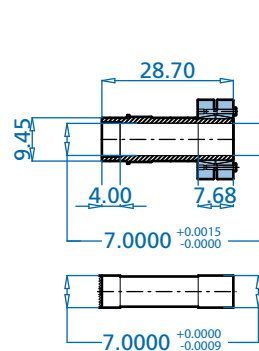
SK 11382.1AZ



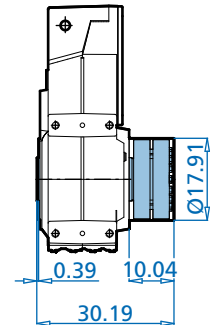
SK 11382.1AZB



SK 11382.1AZS




AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

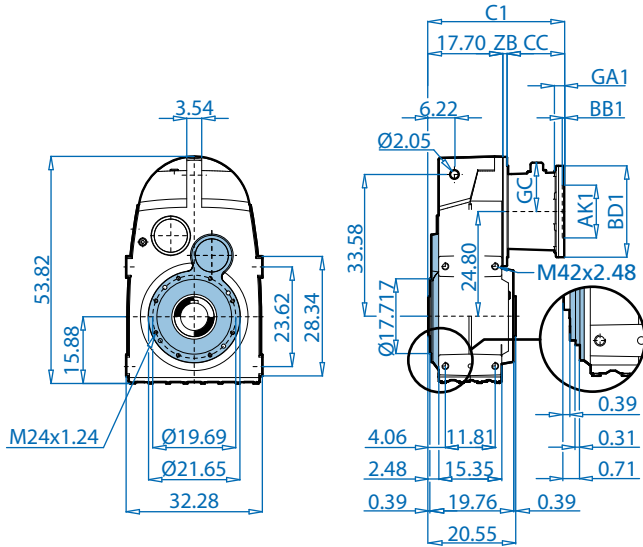
Motor Dimensions

Standard eff.	160M/L	180MX	180LX	200LX									For Other Connection Possibilities please see  262
Premium eff.	160MP	160LP		180MP/LP	225SP/MP	250WP	280SP	280MP	315SP	315MP/RP			
AB	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	20,31	20,31	
AB (BR)	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	-	-	
C	49,82	51,58	49,82	51,58	54,58	54,58	59,63	59,98	63,44	63,05	66,67	73,17	
C (BR)	55,14	56,86	55,14	56,86	59,62	59,62	67,07	67,07	70,85	70,45	-	-	
C1	38,01	39,77	38,01	39,77	42,77	42,77	47,81	48,17	51,63	51,24	54,86	61,36	
C1 (BR)	43,33	45,05	43,33	45,05	47,81	47,81	54,90	55,26	59,04	58,64	-	-	
FP	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	21,69	24,25	24,25	
ZB	0,91	0,91	0,91	0,91	0,91	0,91	0,91	1,26	1,26	1,26	1,26	1,26	

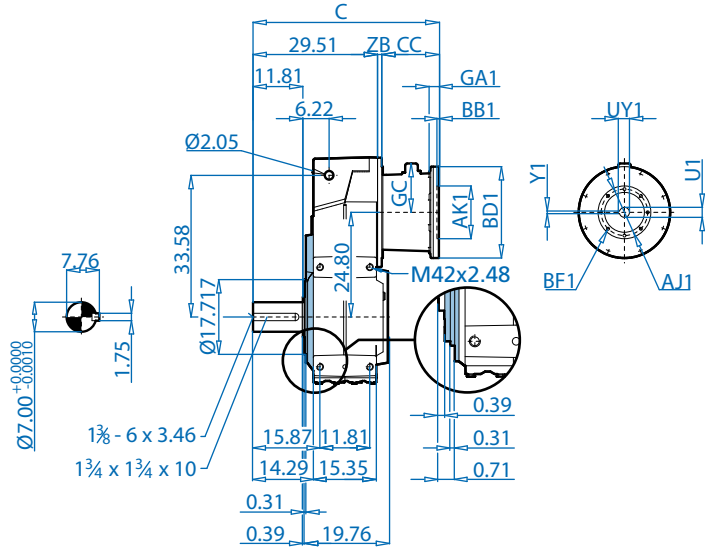
(BR) Denotes Brakemotor



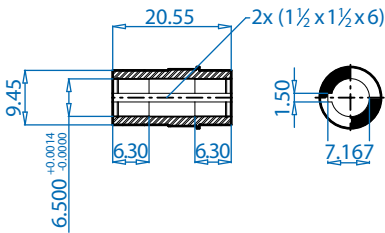
SK 11382.1AZ



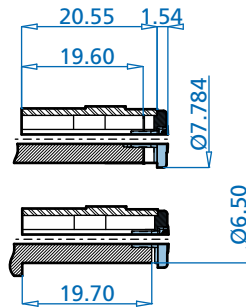
SK 11382.1VZ



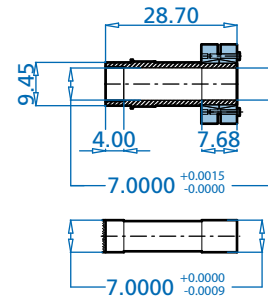
SK 11382.1AZ



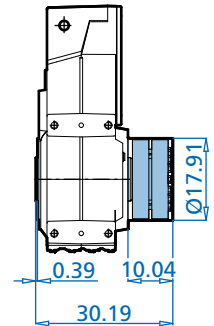
SK 11382.1AZB



SK 11382.1AZS



AZSH



Dimensions

Alternate Shafts on Pages 278 - 285

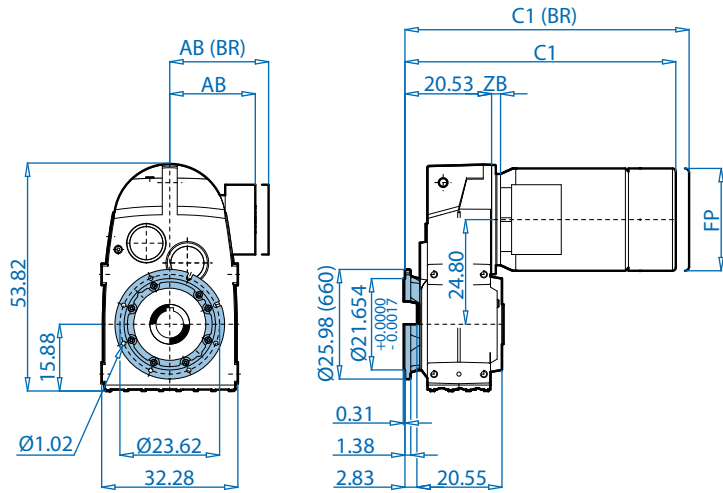
NEMA Dimensions

Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
250TC	7,250	8,500	0,23	13,78	0,59	0,98	8,23	1,625	1,796	0,375	41,79	29,98	11,38	0,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	41,79	29,98	11,38	0,91
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	40,77	28,96	10,35	0,91
360TC	11,000	12,500	0,24	21,65	0,71	1,34	9,65	2,375	2,651	0,625	44,04	32,22	13,27	1,26

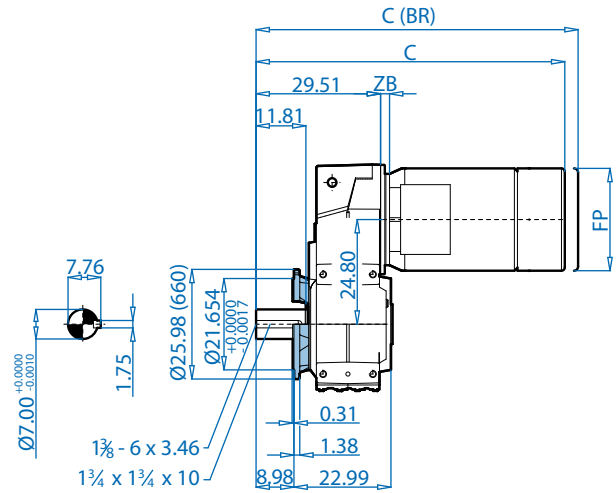
SK 11382.1 + Motor



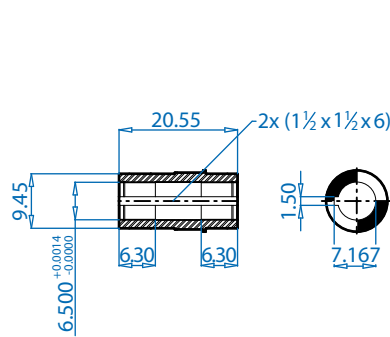
SK 11382.1AF



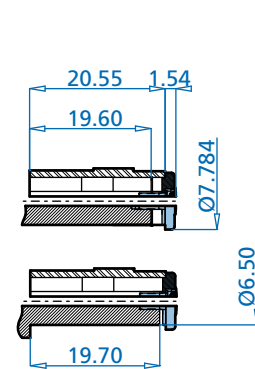
SK 11382.1VF



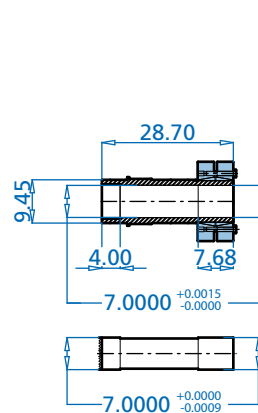
SK 11382.1AF



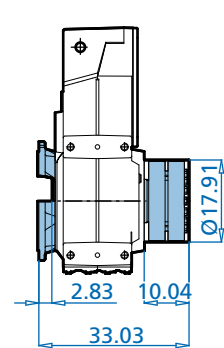
SK 11382.1AFB



SK 11382.1AFS




AFSH



Dimensions

Alternate Shafts on Pages 278 - 285

Motor Dimensions

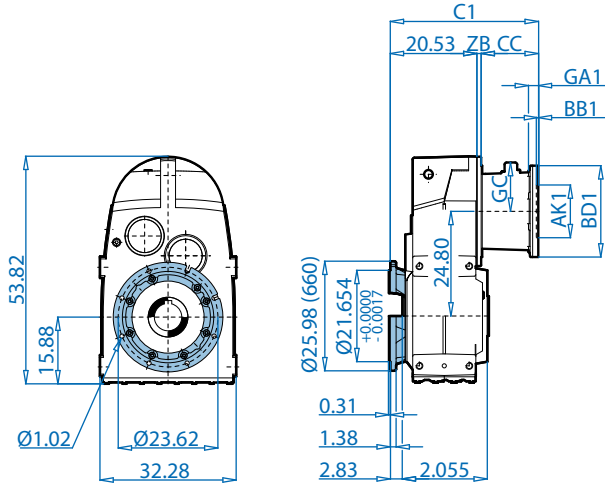
Standard eff.	160M/L		180MX	180LX	200LX								For Other Connection Possibilities please see  262
Premium eff.	160MP	160LP			180MP/LP	225SP/MP	250WP	280SP	280MP	315SP	315MP/RP		
AB	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	20,31	20,31	
AB (BR)	9,53	9,53	9,53	9,53	10,18	10,18	13,68	13,68	16,97	17,05	-	-	
C	49,82	51,58	49,82	51,58	54,58	54,58	59,63	59,98	63,44	63,05	66,67	73,17	
C (BR)	55,14	56,86	55,14	56,86	59,62	59,62	66,71	67,07	70,85	70,45	-	-	
C1	40,85	42,61	40,85	42,61	45,60	45,60	50,65	51,00	54,47	54,07	57,70	64,19	
C1 (BR)	46,16	47,88	46,16	47,88	50,64	50,64	57,74	58,09	61,87	61,48	-	-	
FP	12,56	12,56	12,56	12,56	14,06	14,06	17,87	17,87	21,69	21,69	24,25	24,25	
ZB	0,91	0,91	0,91	0,91	0,91	0,91	0,91	1,26	1,26	1,26	1,26	1,26	

(BR) Denotes Brakemotor

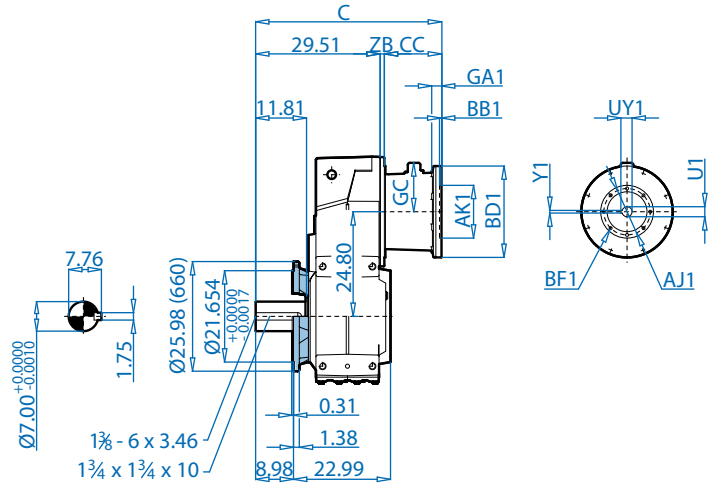




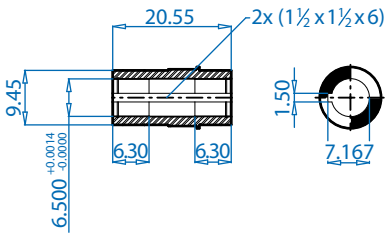
SK 11382.1AF



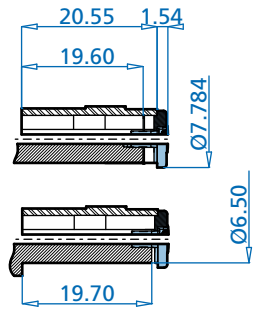
SK 11382.1VF



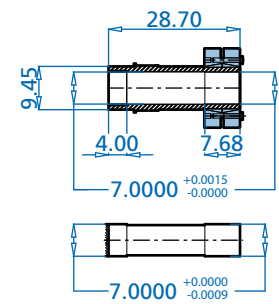
SK 11382.1AF



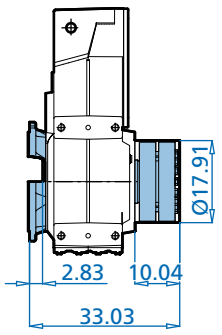
SK 11382.1AFB



SK 11382.1AFS



AFSH

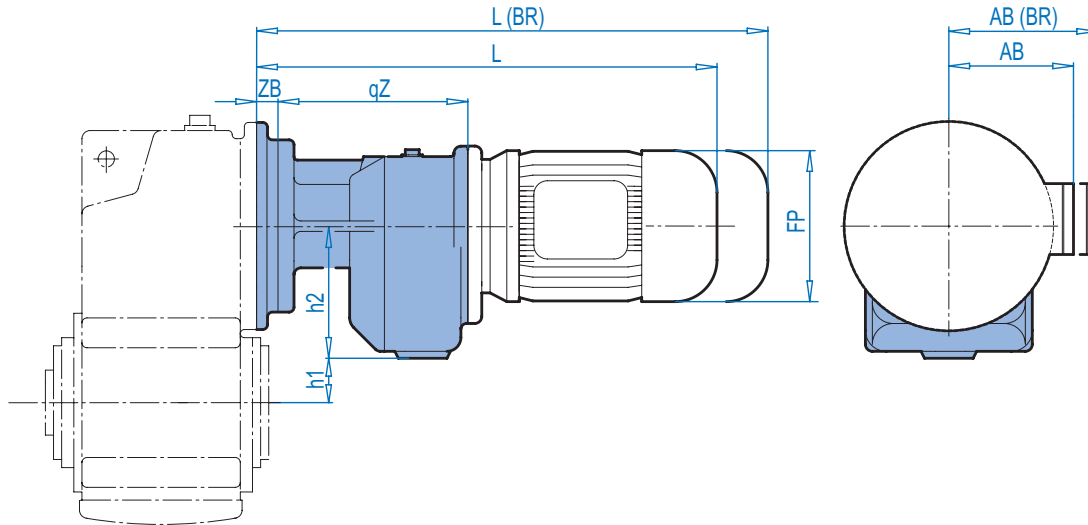


Dimensions

Alternate Shafts on Pages 278 - 285

NEMA Dimensions

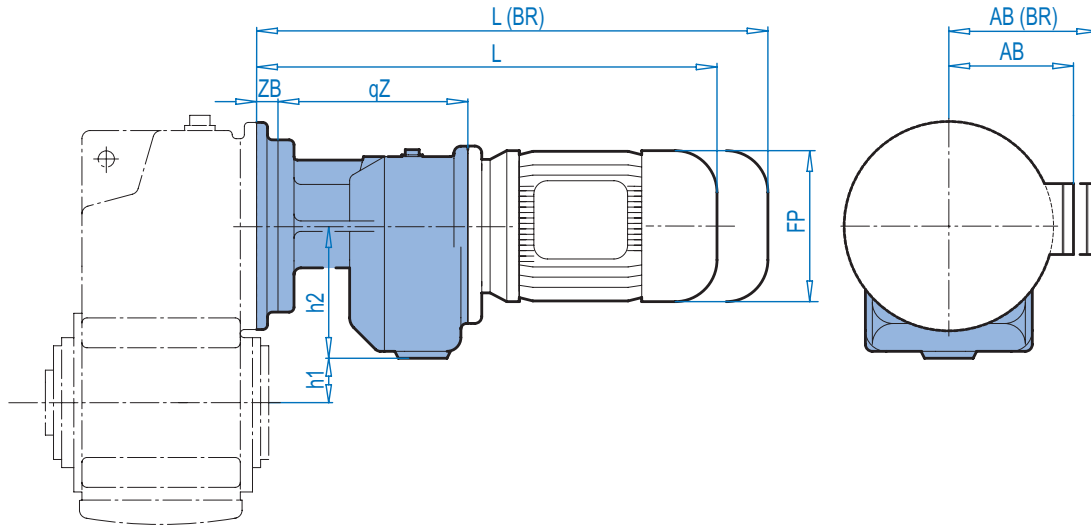
Type	AJ1	AK1	BB1	BD1	BF1	GA1	GC	U1	UY1	Y1	C	C1	CC	ZB
250TC	7,250	8,500	0,23	21,65	0,59	0,98	8,23	1,625	1,796	0,375	41,79	32,81	11,38	0,91
280TC	9,000	10,500	0,23	13,78	0,55	0,79	8,23	1,875	2,096	0,500	41,79	32,81	11,38	0,91
320TC	11,000	12,500	0,23	15,75	0,71	1,18	8,43	2,125	2,350	0,500	40,77	31,79	10,35	0,91
360TC	11,000	12,500	0,24	21,65	0,71	1,34	9,65	2,375	2,651	0,625	44,04	35,06	13,27	1,26



Compound Gear Unit dimensions

Type	SK 1282/02			SK 2282/02			SK 3282/12				SK 4282/12							
Standard eff.	63S/L			63S/L			71S/L			63S/L		71S/L		80S/L		90S/L		100L
Energy eff.										80LP		90SP/LP		80LP		90SP/LP		100LP
L	13.30	13.95	15.53	14.46	16.04	17.02	18.60	14.62	16.20	17.18	18.76	19.98						
L (BR)	15.51	16.16	17.81	16.67	18.32	19.54	21.55	16.83	18.48	19.70	21.71	23.58						
ZB	0.00	0.65		0.65			0.81											
qZ	5.57	5.57		6.08			6.08											
h1	1.30	2.28		2.83			3.94											
h2	3.50	3.50		4.17			4.17											
AB	4.51	4.51	4.86	4.51	4.86	5.59	5.79	4.51	4.86	5.59	5.79	6.65						
AB (BR)	4.84	4.84	5.24	4.84	5.24	5.59	5.79	4.84	5.24	5.59	5.79	6.77						
FP	5.09	5.09	5.72	5.09	5.72	6.43	7.19	5.09	5.72	6.43	7.19	7.90						
	182			190			198				206							

Type	SK 5282/12			SK 6382/22			SK 7382/22			SK 7382/32			
Standard eff.	71S/L		80S/L	90S/L		80S/L	90S/L		100L		112MP		132S/M
Energy eff.			80LP	90SP/LP		80LP	90SP/LP		100LP		112MP		132SP/MP
L	16.20	17.18	18.76	18.24	19.82	21.04	18.24	19.82	21.04	22.90	24.44	26.87	
L (BR)	18.48	19.70	21.71	20.76	22.77	24.64	20.76	22.77	24.64	26.60	28.14	31.08	
ZB	0.81			1.12			1.12			1.12			
qZ	6.08			7.07			7.07			8.60			
h1	3.94			6.16			7.54			7.28			
h2	4.17			4.92			4.92			6.89			
AB	4.86	5.59	5.79	5.59	5.79	6.65	5.59	5.79	6.65	7.05	7.05	8.03	
AB (BR)	5.24	5.59	5.79	5.59	5.79	6.77	5.59	5.79	6.77	7.17	7.17	7.91	
FP	5.72	6.43	7.19	6.43	7.19	7.90	6.43	7.19	7.90	8.87	8.87	10.45	
	214			226			234			234			

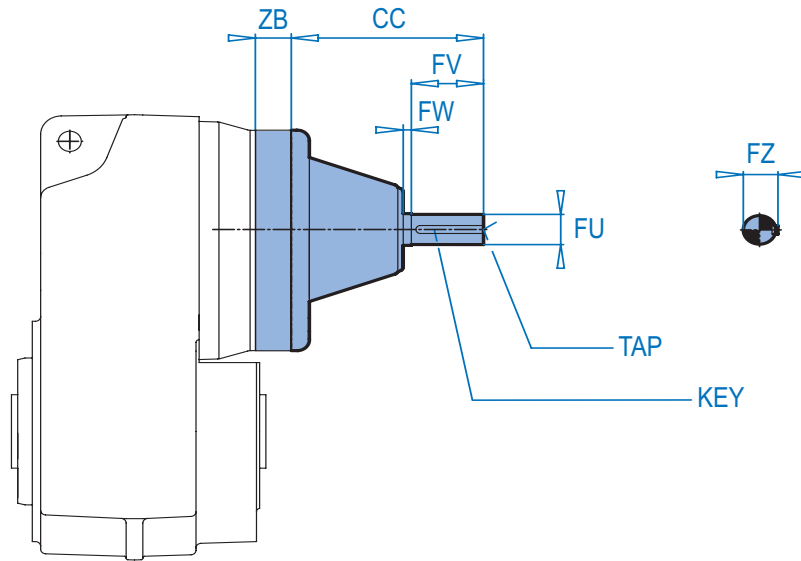


Compound Gear Unit dimensions

Type	SK 8382/32				SK 8382/42			SK 9382/42			
Standard eff.	80S/L	90S/L	100L		90S/L	100L		90S/L	100L		132S/M
Energy eff.	80LP	90SP/LP	100LP	112MP	90SP/LP	100LP	112MP	90SP/LP	100LP	112MP	132SP/MP
L	20.23	21.81	23.03	24.89	22.67	23.89	25.76	22.36	23.58	25.44	27.87
L (BR)	22.75	24.76	26.63	28.59	25.63	27.50	29.46	25.31	27.18	29.14	32.08
ZB	1.57				1.57			1.26			
qZ	8.60				10.26			10.26			
h1	8.07				7.28			11.38			
h2	6.10				6.89			6.89			
AB	5.59	5.79	6.65	7.05	5.79	6.65	7.05	5.79	6.65	7.05	8.03
AB (BR)	5.59	5.79	6.77	7.17	5.79	6.77	7.17	5.79	6.77	7.17	7.91
FP	6.43	7.19	7.90	8.87	7.19	7.90	8.87	7.19	7.90	8.87	10.45
	📖 242				📖 242			📖 250			

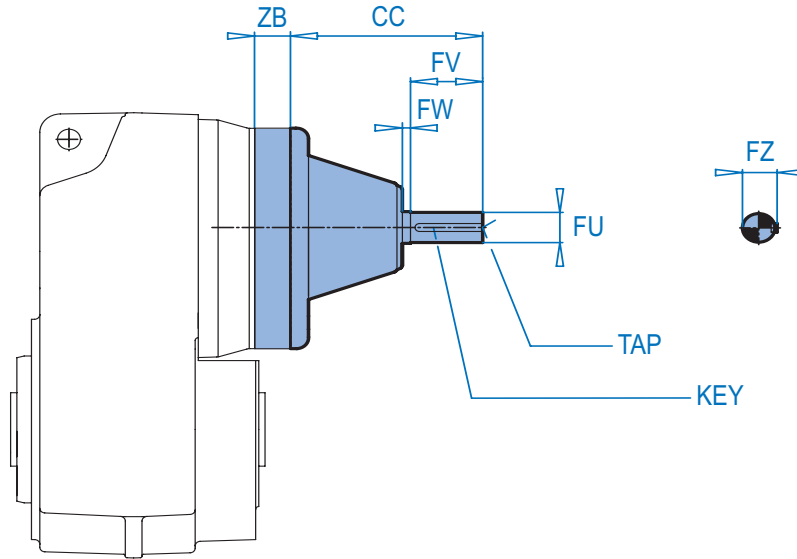
Type	SK 9382/52			
Standard eff.		132S/M		
Energy eff.	112MP	132SP/MP	160MP	160LP
L	26.98	29.41	32.46	34.22
L (BR)	30.68	33.62	37.78	39.54
ZB	1.26			
qZ	11.79			
h1	9.92			
h2	8.35			
AB	7.05	8.03	9.53	
AB (BR)	7.17	7.91	9.53	
FP	8.87	10.45	12.56	
	📖 250			

Solid Input Shaft W-Input



Dimensions

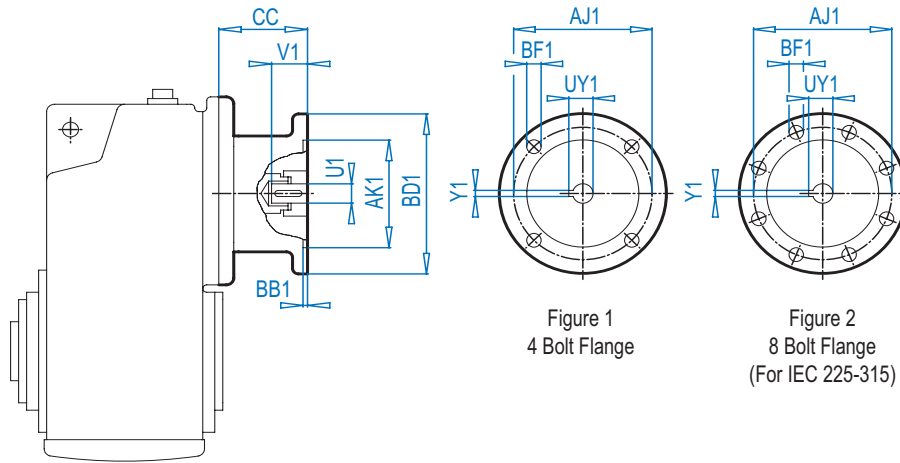
Unit	Units	CC	ZB	FW	FV	FU	FZ	TAP	KEY	Unit Dimensions
SK 0182NB	[in]	3.85	---	0.16	1.13	0.500	0.56	1/4-20	1/8 x 1/8 x 7/8	⇒ 174
	[mm]	110	---	4	40	14	16	M5	5 x 5 x 32	
SK 0282NB	[in]	3.85	---	0.16	1.13	0.500	0.56	1/4-20	1/8 x 1/8 x 7/8	⇒ 178
	[mm]	110	---	4	40	14	16	M5	5 x 5 x 32	
SK 1382NB	[in]	4.29	0.77	0.16	1.57	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 186
	[mm]	110	19.5	4	40	16	18	M5	5 x 5 x 32	
SK 1282	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 182
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 1282/02	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 262
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 2282	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 190
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 2282/02	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 262
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 2382	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 194
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 3282	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 198
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 3282/12	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 262
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 3382	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 202
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 4282	[in]	8.36	---	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 206
	[mm]	213	---	8	80	38	41	M12	10 x 10 x 80	
SK 4282/12	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 262
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 4382	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 210
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 5282	[in]	8.36	---	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 214
	[mm]	213	---	8	80	38	41	M12	10 x 10 x 80	
SK 5282/12	[in]	4.73	---	0.28	1.50	0.625	0.70	1/4-20	3/16 x 3/16 x 1 1/4	⇒ 262
	[mm]	122	---	7	40	16	18	M5	5 x 5 x 32	
SK 5382	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 218
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 6282	[in]	11.38	1.97	0.31	4.38	1.625	1.79	5/8-11	3/8 x 3/8 x 3 5/8	⇒ 222
	[mm]	288	50	8	110	42	45	M16	12 x 12 x 90	



Unit	Units	CC	ZB	FW	FV	FU	FZ	TAP	KEY	Unit Dimensions
SK 6382	[in]	8.36	0.94	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 226
	[mm]	213	24	8	80	38	41	M12	10 x 10 x 80	
	[mm]	288	24	8	110	42	45	M16	12 x 12 x 90	
SK 6382/22	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 262
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 6382/32	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 262
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 7282	[in]	11.38	1.69	0.31	4.38	1.625	1.79	5/8-11	3/8 x 3/8 x 3 5/8	⇒ 230
	[mm]	288	43	8	110	42	45	M16	12 x 12 x 90	
SK 7382	[in]	11.38	1.97	0.31	4.38	1.625	1.79	5/8-11	3/8 x 3/8 x 3 5/8	⇒ 234
	[mm]	288	50	8	110	42	45	M16	12 x 12 x 90	
SK 7382/22	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 262
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 7382/32	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 262
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 8282	[in]	15.62	2.17	0.47	5.50	2.500	2.77	3/4-10	5/8 x 5/8 x 4 5/8	⇒ 238
	[mm]	397	55	12	140	65	69	M20	18 x 18 x 110	
SK 8382	[in]	11.38	1.57	0.31	4.38	1.625	1.79	5/8-11	3/8 x 3/8 x 3 5/8	⇒ 242
	[mm]	288	40	8	110	42	45	M16	12 x 12 x 90	
	[mm]	397	40	12	140	65	69	M20	18 x 18 x 110	
SK 8382/32	[in]	6.80	---	0.31	2.00	0.875	0.96	1/4-20	3/16 x 3/16 x 1 5/8	⇒ 263
	[mm]	172	---	8	50	24	27	M8	8 x 8 x 50	
SK 8382/42	[in]	8.36	---	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 263
	[mm]	213	---	8	80	38	41	M12	10 x 10 x 80	
SK 9282	[in]	15.62	1.85	0.47	5.50	2.500	2.77	3/4-10	5/8 x 5/8 x 4 5/8	⇒ 246
	[mm]	397	47	12	140	65	69	M20	18 x 18 x 110	
SK 9382	[in]	11.38	1.26	0.31	4.38	1.625	1.79	5/8-11	3/8 x 3/8 x 3 5/8	⇒ 250
	[mm]	288	32	8	110	42	45	M16	12 x 12 x 90	
	[mm]	397	32	12	140	65	69	M20	18 x 18 x 110	
SK 9382/42	[in]	8.36	---	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 263
	[mm]	213	---	8	80	38	41	M12	10 x 10 x 80	
SK 9382/52	[in]	8.36	---	0.31	3.12	1.500	1.66	5/8-11	3/8 x 3/8 x 2 1/2	⇒ 263
	[mm]	213	---	8	80	38	41	M12	10 x 10 x 80	
SK 10382.1	[in]	9.96	1.71	0.53	5.51	2.750	3.03	3/4-10	5/8 x 5/8 x 4 5/8	⇒ 254
	[mm]	253	43.5	13.5	140	70	74.5	M20	20 x 20 x 140	
SK 11382.1	[in]	9.96	1.26	0.53	5.51	2.750	3.03	3/4-10	5/8 x 5/8 x 4 5/8	⇒ 258
	[mm]	253	32	13.5	140	70	74.5	M20	20 x 20 x 140	

Dimensions

IEC Inputs

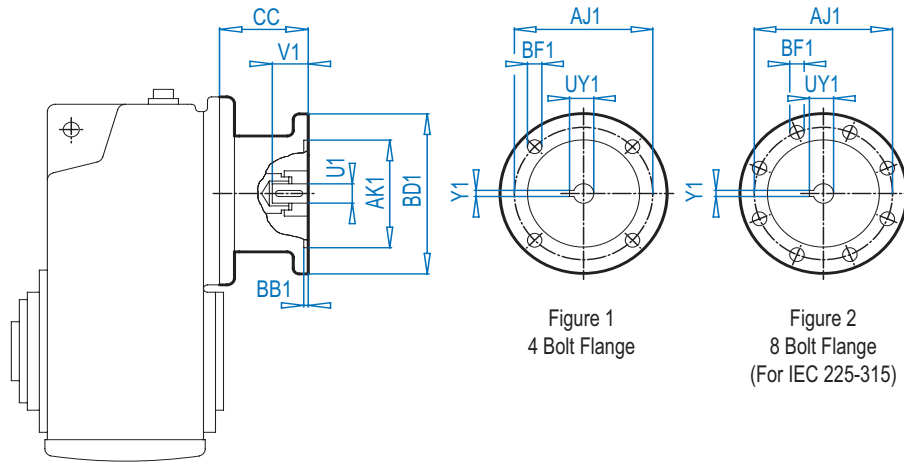


IEC Dimensions (mm)

Input	AJ1	AK1	BB1	BD1	BF1	U1	V1	UY1	Y1	Flange
IEC 63	115	95	3.5	140	M8	11	23	12.8	4	Fig. 1
IEC 71	130	110	4.0	160	M8	14	30	16.3	5	Fig. 1
IEC 80	165	130	4.0	200	M10	19	40	21.8	6	Fig. 1
IEC 90	165	130	4.0	200	M10	24	50	27.3	8	Fig. 1
IEC 100	215	180	5.0	250	M12	28	60	31.3	8	Fig. 1
IEC 112	215	180	5.0	250	M12	28	60	31.3	8	Fig. 1
IEC 132	265	230	5.0	300	M12	38	80	41.3	10	Fig. 1
IEC 160	300	250	6.0	350	M16	42	110	45.3	12	Fig. 1
IEC 180	300	250	6.0	350	M16	48	110	51.8	14	Fig. 1
IEC 200	350	300	6.0	400	M16	55	110	59.3	16	Fig. 1
IEC 225	400	350	6.0	450	M16	60	140	64.4	18	Fig. 2
IEC 250	500	450	6.0	550	M16	65	140	69.4	18	Fig. 2
IEC 280	500	450	6.0	550	M16	75	140	79.9	20	Fig. 2
IEC 315	600	550	7.0	660	M20	80	170	85.4	22	Fig. 2

CC Dimensions

Unit	IEC63	IEC 71	IEC 80	IEC 90	IEC 100	IEC 112	IEC 132	IEC 160	IEC 180	IEC 200	IEC 225	IEC 250	IEC 280	IEC 315
SK 0182NB	3.35	3.35	4.06	4.06	4.96	4.96	-	-	-	-	-	-	-	-
SK 0282NB	3.35	3.35	4.06	4.06	4.96	4.96	-	-	-	-	-	-	-	-
SK 1382NB	3.35	3.35	4.06	4.06	4.96	4.96	-	-	-	-	-	-	-	-
SK 1282	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 1282/02	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 2282	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 2282/02	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 2382	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 3282	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 3282/12	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 3382	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 4282	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 4282/12	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 4382	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 5282	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 5282/12	3.35	3.50	4.13	4.13	5.12	5.12	-	-	-	-	-	-	-	-
SK 5382	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 6282	-	-	-	-	5.00	5.00	6.97	10.47	10.47	9.02	11.93	11.93	11.95	-
SK 6382	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 6382/22	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 6382/32	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-



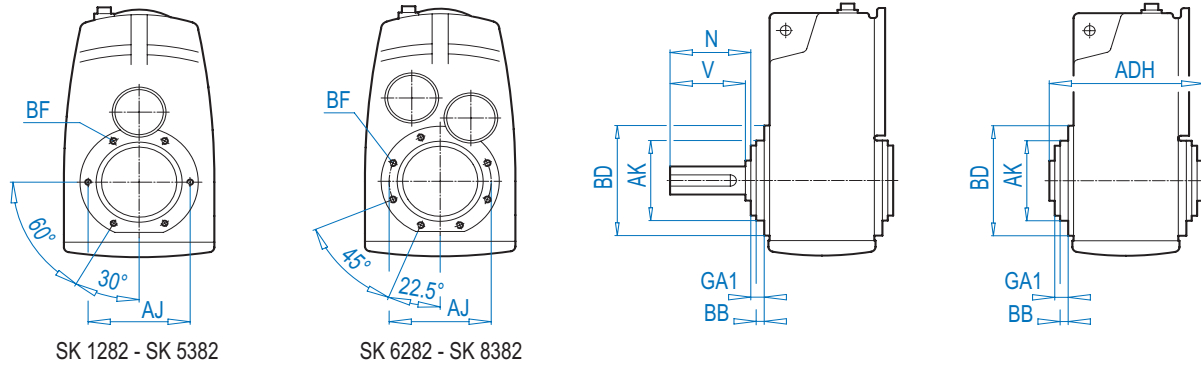
IEC Dimensions (mm)

Input	AJ1	AK1	BB1	BD1	BF1	U1	V1	UY1	Y1	Flange
IEC 63	115	95	3.5	140	M8	11	23	12.8	4	Fig. 1
IEC 71	130	110	4.0	160	M8	14	30	16.3	5	Fig. 1
IEC 80	165	130	4.0	200	M10	19	40	21.8	6	Fig. 1
IEC 90	165	130	4.0	200	M10	24	50	27.3	8	Fig. 1
IEC 100	215	180	5.0	250	M12	28	60	31.3	8	Fig. 1
IEC 112	215	180	5.0	250	M12	28	60	31.3	8	Fig. 1
IEC 132	265	230	5.0	300	M12	38	80	41.3	10	Fig. 1
IEC 160	300	250	6.0	350	M16	42	110	45.3	12	Fig. 1
IEC 180	300	250	6.0	350	M16	48	110	51.8	14	Fig. 1
IEC 200	350	300	6.0	400	M16	55	110	59.3	16	Fig. 1
IEC 225	400	350	6.0	450	M16	60	140	64.4	18	Fig. 2
IEC 250	500	450	6.0	550	M16	65	140	69.4	18	Fig. 2
IEC 280	500	450	6.0	550	M16	75	140	79.9	20	Fig. 2
IEC 315	600	550	7.0	660	M20	80	170	85.4	22	Fig. 2

CC Dimensions

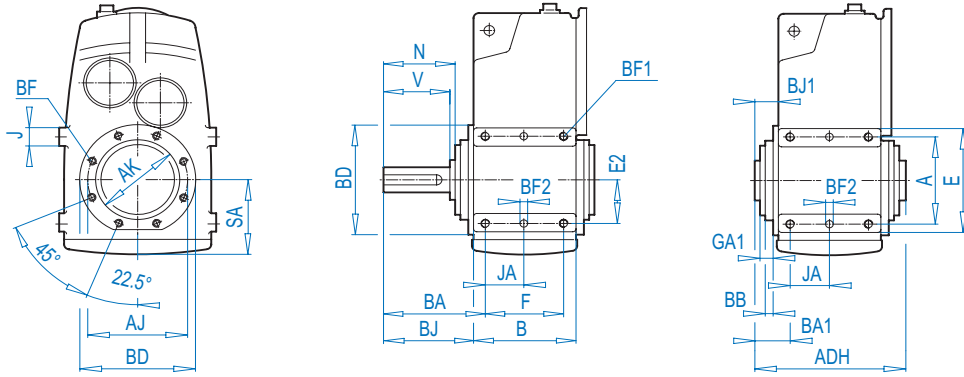
Unit	IEC63	IEC 71	IEC 80	IEC 90	IEC 100	IEC 112	IEC 132	IEC 160	IEC 180	IEC 200	IEC 225	IEC 250	IEC 280	IEC 315
SK 7282	-	-	-	-	5.00	5.00	6.97	10.47	10.47	9.02	11.93	11.93	11.95	-
SK 7382	-	-	-	-	5.00	5.00	6.97	10.47	10.47	9.02	11.93	11.93	11.95	-
SK 7382/22	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 7382/32	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 8282	-	-	-	-	-	-	6.97	10.47	10.47	9.02	11.93	11.93	11.95	15.02
SK 8382	-	-	-	-	5.00	5.00	6.97	10.47	10.47	9.02	11.93	11.93	11.95	-
SK 8382/32	-	3.46	4.21	4.21	4.88	4.88	6.14	-	-	-	-	-	-	-
SK 8382/42	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 9282	-	-	-	-	-	-	6.97	10.47	10.47	9.02	11.93	11.93	11.95	15.02
SK 9382	-	-	-	-	5.00	5.00	6.97	10.47	10.47	9.02	11.93	11.93	11.95	-
SK 9382/42	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 9382/52	-	-	-	4.29	5.24	5.24	7.48	7.64	7.64	-	-	-	-	-
SK 10382.1	-	-	-	-	-	-	-	10.47	10.47	9.02	11.93	11.93	11.95	15.02
SK 11382.1	-	-	-	-	-	-	-	10.47	10.47	9.02	11.93	11.93	11.95	15.02

B14 Flange Design (Z)



Type	Mounting Dimensions			B14 Flange			Shaft dimensions		
	BD	AK	GA1	AJ	BB	BF(mm)	ADH	V	N
SK 1282 Z	5.51	3.740 <small>+0.0005 -0.0004</small>	0.51	4.53	0.24	M8 x 13	4.80	2.75	2.90
SK 2282 Z SK 2382 Z	6.30	4.331 <small>+0.0005 -0.0004</small>	0.47	5.12	0.20	M8 x 13	5.47	2.75	2.95
SK 3282 Z SK 3382 Z	7.87	5.118 <small>+0.0006 -0.0004</small>	0.28	6.50	0.28	M10 x 16	6.85	3.50	3.74
SK 4282 Z SK 4382 Z	9.06	6.299 <small>+0.0006 -0.0004</small>	0.43	7.64	0.20	M12 x 20	7.68	4.00	4.28
SK 5282 Z SK 5382 Z	9.84	7.087 <small>+0.0006 -0.0005</small>	0.35	8.46	0.20	M12 x 20	9.06	5.00	5.30
SK 6282 Z SK 6382 Z	11.81	9.055 <small>+0.0000 -0.0011</small>	0.43	10.43	0.16	M12 x 20	11.42	5.50	5.84
SK 7282 Z SK 7382 Z	13.78	9.843 <small>+0.0000 -0.0013</small>	0.43	11.81	0.20	M16 x 25	12.20	6.75	6.99
SK 8282 Z SK 8382 Z	15.75	11.811 <small>+0.0000 -0.0013</small>	0.51	13.78	0.20	M16 x 25	14.41	8.50	8.78

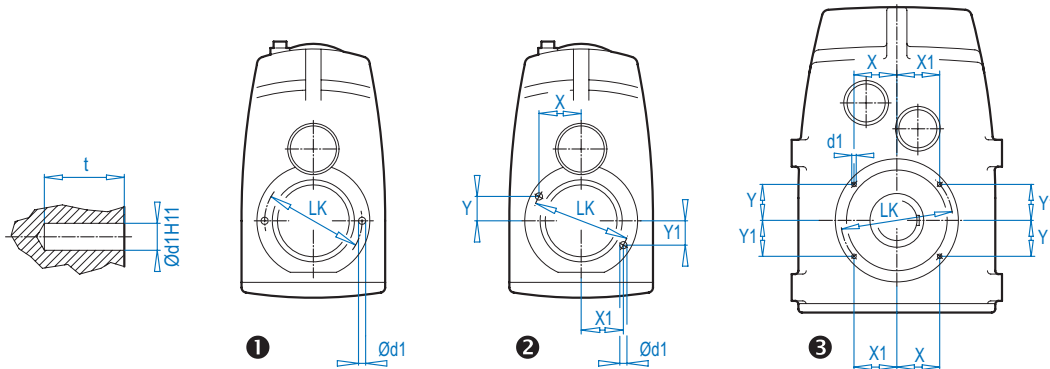
Dimensions



Type	Mounting Dimensions			B14 Flange			Foot				Outline dimensions			Shaft dimensions	
	BD	AK	GA1	AJ	BB	BF (mm)	F A	B E	J JA	BF2 (mm) BF1 (mm)	SA E2	BA BJ	BA1 BJ1	ADH	V N
SK 0182 NB Z	3.94	2.756 <small>+0.0005 -0.0004</small>	0.51	3.35	0.12	M8 x 14	2.52 1.97	3.07 2.60	0.63 N/A	N/A M6 x 12	2.15 0.98	2.29 2.01	0.79 0.51	3.94	1.50 1.62
SK 0282 NB Z	4.72	3.150 <small>+0.0005 -0.0004</small>	0.55	3.94	0.12	M6 x 12	2.17 2.76	2.93 3.74	0.98 N/A	N/A M8 x 13	2.76 1.38	3.07 2.68	0.94 0.55	4.80	2.12 2.24
SK 1382 NB Z	5.51	3.740 <small>+0.0006 -0.0005</small>	0.75	4.53	0.12	M8 x 13	3.94 2.76	4.96 3.94	1.18 N/A	N/A M10 x 13	3.03 1.38	3.97 3.50	1.22 0.75	6.93	2.75 2.87
SK 9282 Z SK 9382 Z	17.72	13.780 <small>+0.0000 -0.0014</small>	0.55	15.75	0.20	M20 x 30	9.65 14.17	12.05 17.32	3.15 4.82	∅25 x 30 M30 x 45	11.61 7.09	12.40 11.16	2.56 1.32	16.93	9.84 10.23
SK 10382.1 Z	21.65	17.717 <small>+0.0000 -0.0016</small>	1.42	19.69	0.31	M24 x 36	10.63 16.54	13.03 20.47	4.72 5.31	∅25 x 30 M36 x 54	12.48 8.27	15.87 14.61	4.06 2.80	18.70	11.81 12.17
SK 11382.1 Z	21.65	17.717 <small>+0.0000 -0.0016</small>	0.71	19.69	0.31	M24 x 36	11.81 23.62	14.96 28.34	3.94 5.91	∅25 x 30 M42 x 63	15.47 11.81	15.87 14.29	4.06 2.48	20.55	11.81 12.20



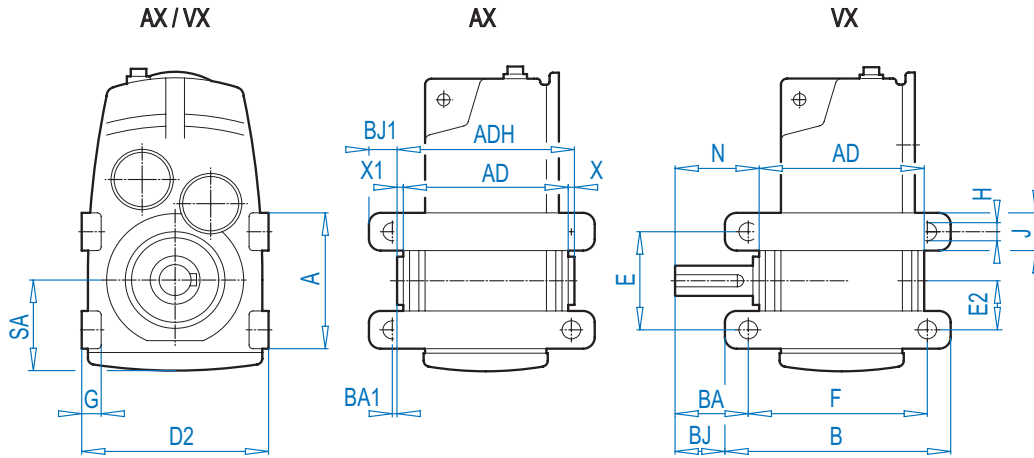
B14 Flange Design (Z) Dowel Pin Hole Locations



Type Outline dimensions

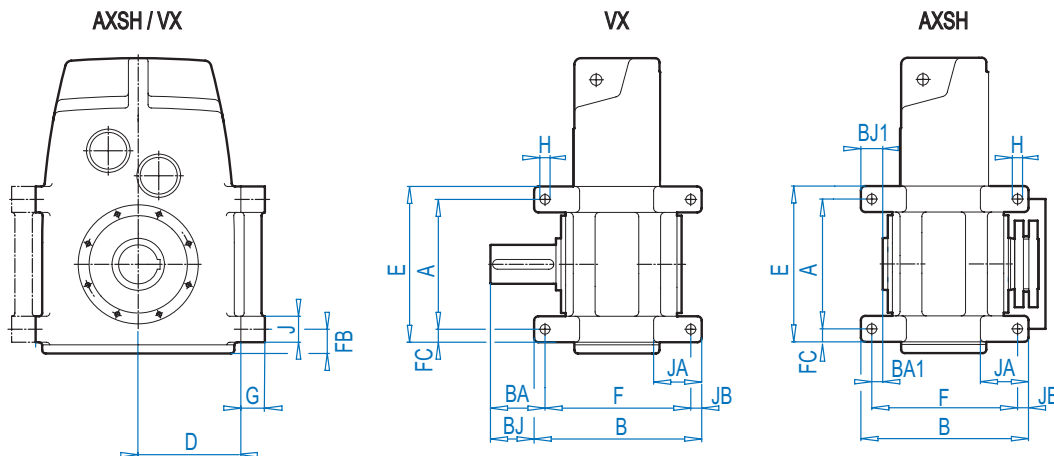
Type	Diagram	$d1^{H11} \times t$ (mm)	LK	X	X1	Y	Y1
SK 0182 NB Z	①	Ø 6 x 10	3.346	1.616	-	0.433	-
SK 0282 NB Z	①	Ø 6 x 12	3.937	-	-	-	-
SK 1382 NB Z	①	Ø 8 x 12	4.528	-	-	-	-
SK 1282 Z	②	Ø 8 x 12	4.528	2.210	2.210	0.490	0.490
SK 2282 Z	②	Ø 8 x 12	5.118	2.472	2.472	0.662	0.662
SK 3282 Z	②	Ø 10 x 15	6.496	3.171	3.171	0.703	0.703
SK 3382 Z	②	Ø 10 x 15	6.496	3.171	3.171	0.703	0.703
SK 4282 Z	②	Ø 12 x 20	7.638	3.689	3.689	0.989	0.989
SK 4382 Z	②	Ø 12 x 20	7.638	3.689	3.689	0.989	0.989
SK 5282 Z	②	Ø 12 x 20	8.465	4.132	4.132	0.916	0.916
SK 5382 Z	②	Ø 12 x 20	8.465	4.132	4.132	0.916	0.916
SK 6282 Z	③	Ø 12 x 20	10.433	4.400	4.400	2.803	2.803
SK 6382 Z	③	Ø 12 x 20	10.433	4.400	4.400	2.803	2.803
SK 7282 Z	③	Ø 16 x 30	11.811	4.981	4.981	3.173	3.173
SK 7382 Z	③	Ø 16 x 30	11.811	4.981	4.981	3.173	3.173
SK 8282 Z	③	Ø 16 x 30	13.780	5.811	5.811	3.702	3.702
SK 8382 Z	③	Ø 16 x 30	13.780	5.811	5.811	3.702	3.702
SK 9282 Z	③	Ø 16 x 30	15.748	6.641	6.641	4.231	4.231
SK 9382 Z	③	Ø 16 x 30	15.748	6.641	6.641	4.231	4.231
SK 10382.1 Z	③	Ø 25 x 35	19.685	6.960	8.063	6.960	5.645
SK 11382.1 Z	③	Ø 25 x 25	19.685	6.960	8.063	6.960	5.645

Footed Housing (X)



Type	Mounting dimensions							Outline dimensions											
	F	E	G	B	A	J	H	E2	SA	BA	BJ	BA1	BJ1	AD	ADH	X1	X	D2	N
SK 1282 X	5.59	3.15	0.63	6.46	4.33	1.18	0.43	1.69	3.03	2.09	1.65	0.28	0.71	4.53	4.80	0.16	0.12	6.69	2.90
SK 2282 X SK 2382 X	6.50	3.15	0.79	7.68	4.57	1.42	0.51	1.93	3.54	2.54	1.95	0.22	0.81	4.96	5.47	0.20	0.31	7.87	2.95
SK 3282 X SK 3382 X	7.68	4.92	0.98	8.86	6.50	1.57	0.51	2.44	4.21	3.11	2.52	0.43	1.02	6.38	6.85	0.24	0.24	9.29	3.74
SK 4282 X SK 4382 X	8.66	4.92	1.10	10.24	6.69	1.77	0.71	2.87	4.84	3.96	3.17	0.37	1.16	7.13	7.68	0.28	0.28	11.02	4.28
SK 5282 X SK 5382 X	9.84	6.89	1.38	11.42	8.66	1.77	0.71	3.54	5.75	4.63	3.84	0.49	1.28	8.46	9.05	0.30	0.30	12.60	5.30
SK 6282 X SK 6382 X	12.99	7.68	1.57	15.35	10.43	2.76	1.02	3.98	6.77	4.82	3.64	1.02	2.20	10.75	11.42	0.33	0.33	14.17	5.78
SK 7282 X SK 7382 X	14.57	8.46	1.77	17.32	12.01	3.54	1.30	4.45	7.76	5.51	4.13	1.18	2.56	11.73	12.20	0.24	0.24	16.69	6.95
SK 8282 X SK 8382 X	16.54	9.45	2.36	19.69	13.78	4.33	1.30	4.88	8.86	7.48	5.90	1.02	2.60	13.86	14.41	0.28	0.28	19.69	8.78

Dimensions

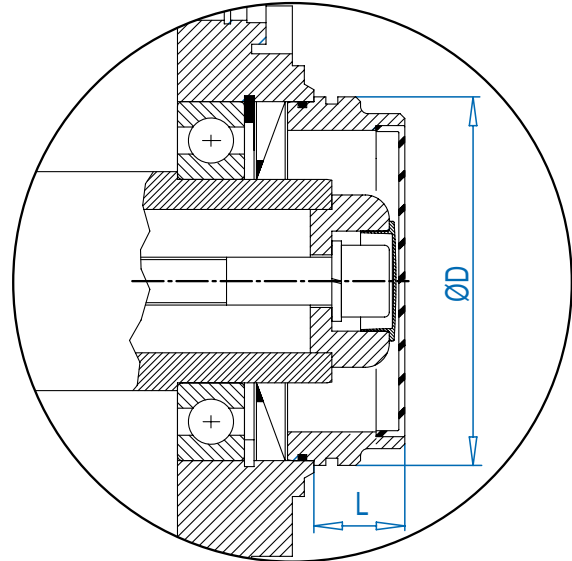
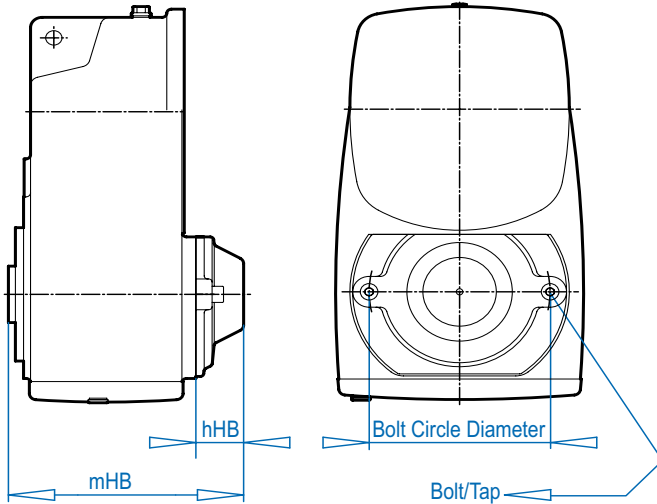


Type	Mounting dimensions											Outline dimensions				
	F	E	G	B	A	J	H	JA	FB	FC	JB	BA	BJ	BA1	BJ1	D
SK 9282 X SK 9382 X	18.50	18.11	2.76	22.44	14.17	3.94	1.77	7.48	4.53	1.97	1.97	8.86	6.89	0.98	2.95	12.60
SK 10382.1 X	17.72	20.87	3.94	20.87	16.54	4.33	1.54	6.69	4.56	2.17	1.57	12.32	10.75	0.51	1.06	13.39
SK 11382.1 X	19.69	28.35	6.69	23.62	23.62	4.72	1.77	7.87	3.58	2.36	1.97	12.13	10.16	0.31	1.65	16.14



SK ... AH
SK ... AZH

SK ... AH66
SK ... AZH66



Type

Type	hHB	mHB	Bolt Circle Dia.	Bolt/Tap
SK 0182 NB AH SK 0182 NB AZH	0.98	4.80	3.35	M6 x 13
SK 0282 NB AH SK 0282 NB AZH	1.22	5.90	3.94	M6 x 10
SK 1382 NB AH SK 1382 NB AZH	1.69	8.27	4.53	M8 x 13
SK 1282 AH SK 1282 AZH	1.46	5.90	3.94	M6 x 10
SK 2282 AH SK 2282 AZH SK 2382 AH SK 2382 AZH	1.69	6.85	4.53	M8 x 12
SK 3282 AH SK 3282 AZH SK 3382 AH SK 3382 AZH	1.77	8.39	6.50	M10 x 16
SK 4282 AH SK 4282 AZH SK 4382 AH SK 4382 AZH	1.77	9.17	6.50	M10 x 16
SK 5282 AH SK 5282 AZH SK 5382 AH SK 5382 AZH	2.09	10.87	8.46	M12 x 20
SK 6282 AH SK 6282 AZH SK 6382 AH SK 6382 AZH	2.09	13.19	9.06	M12 x 20
SK 7282 AH SK 7282 AZH SK 7382 AH SK 7382 AZH	2.09	14.06	11.81	M16 x 25
SK 8282 AH SK 8282 AZH SK 8382 AH SK 8382 AZH	2.76	16.38	13.78	M16 x 25
SK 9282 AH SK 9282 AZH SK 9382 AH SK 9382 AZH	3.31	18.90	15.75	M20 x 40

Type

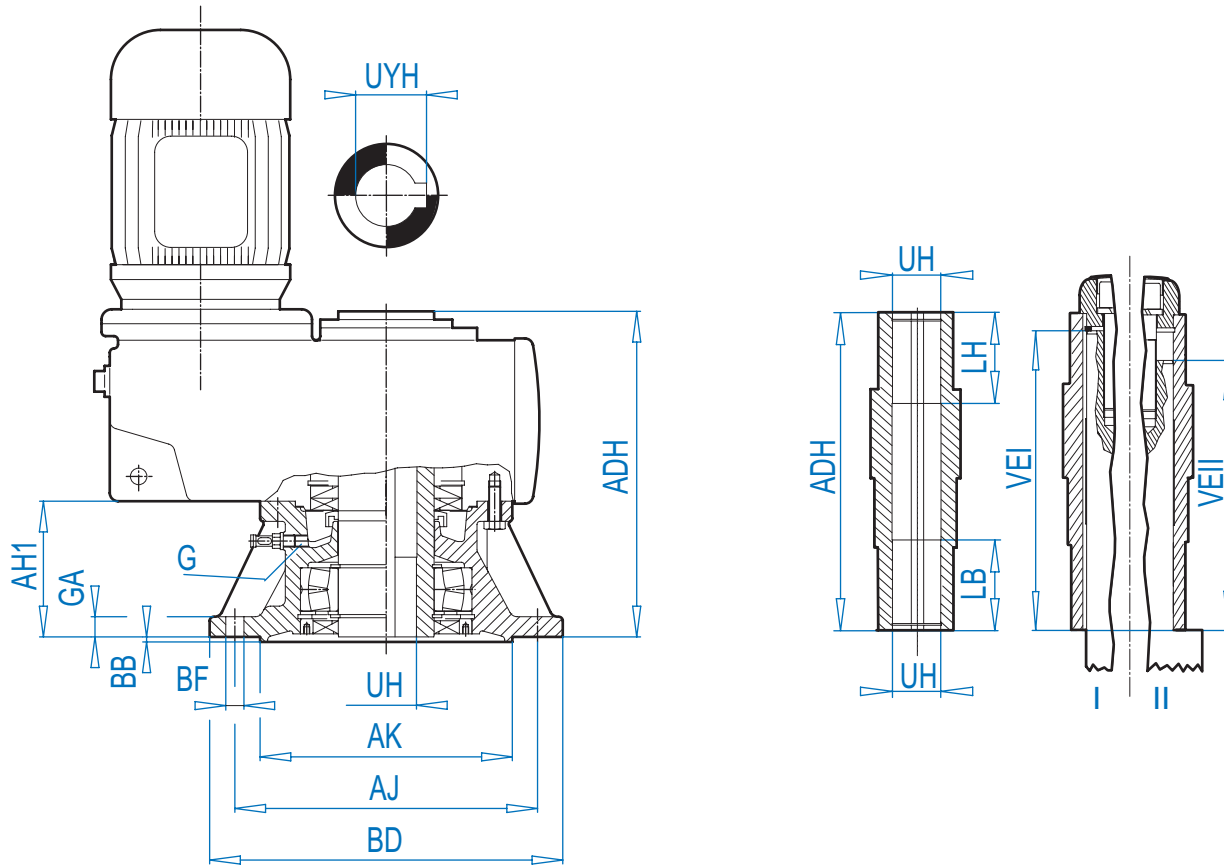
Type	øD	L
SK 1282 AH66 SK 1282 AZH66	3.15	0.98
SK 2282 AH66 SK 2282 AZH66	2.20	1.50
SK 3282 AH66 SK 3282 AZH66	4.09	1.38
SK 4282 AH66 SK 4282 AZH66	4.09	1.34
SK 5282 AH66 SK 5282 AZH66	6.14	1.50
SK 6282 AH66 SK 6282 AZH66	7.40	1.73
SK 7282 AH66 SK 7282 AZH66	8.46	1.38
SK 8282 AH66 SK 8282 AZH66	9.65	1.97

Dimensions

Spread Bearing Design (VL2) & (VL3)



SK ... AFVL2
SK ... AFVL3

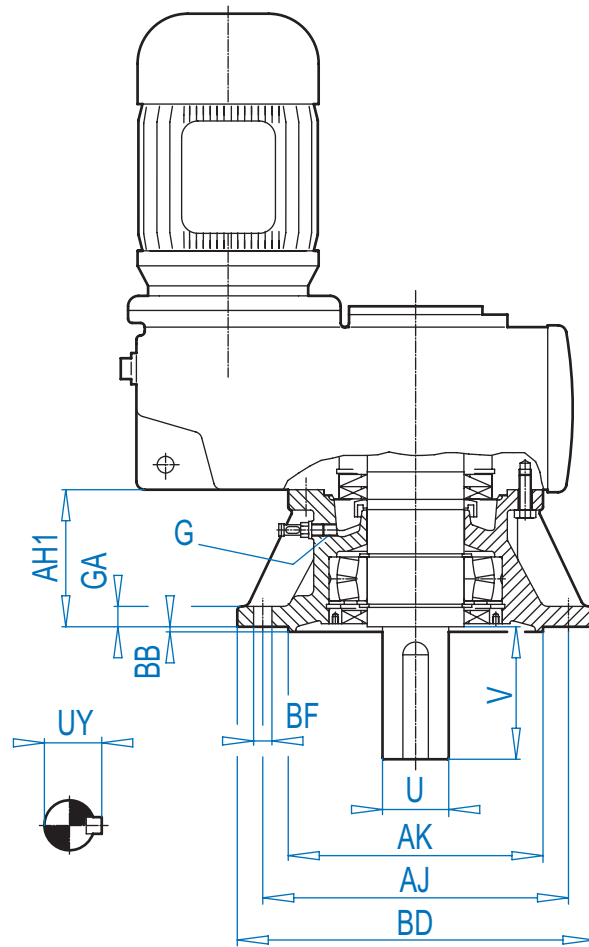


Dimensions

Type	Outline dimensions								Shaft dimensions						
	BD	AK	GA	AJ	BB	AH1	BF	G (mm)	UH	UYH	ADH	LB	LH	VE I	VE II
SK 1282 AF.. SK 1382 AF..	7.87	5.118	0.47	6.50	0.14	2.95	0.43	M12 x 1.5	1.1875	1.31	7.09	1.57	1.57	6.13	6.88
SK 2282 AF.. SK 2382 AF..	9.84	7.087	0.63	8.46	0.16	3.39	0.55	M12 x 1.5	1.4375	1.61	8.19	1.97	1.97	7.52	7.93
SK 3282 AF.. SK 3382 AF..	11.81	9.055	0.79	10.43	0.16	3.35	0.55	M12 x 1.5	1.625	1.73	9.69	2.28	2.28	8.98	9.31
SK 4282 AF.. SK 4382 AF..	11.81	9.055	0.79	10.43	0.16	4.45	0.55	M12 x 1.5	2.0625	2.23	11.42	2.56	2.56	10.07	11.04
SK 5282 AF.. SK 5382 AF..	13.78	9.834	0.79	11.81	0.20	5.31	0.71	M12 x 1.5	2.4375	2.71	13.70	3.11	3.11	12.23	13.28
SK 6282 AF.. SK 6382 AF..	15.75	11.811	0.87	13.78	0.20	6.54	0.71	M24 x 1.5	2.750	3.03	17.19	4.72	4.72	16.73	16.77
SK 7282 AF.. SK 7382 AF..	17.72	13.780	0.94	15.75	0.20	7.24	0.71	M24 x 1.5	3.1875	3.40	18.78	4.96	4.96	18.26	18.36
SK 8282 AF.. SK 8382 AF..	21.65	17.717	1.10	19.69	0.20	8.27	0.71	M30 x 2	4.000	4.32	21.89	6.06	6.06	20.01	21.43
SK 9282 AF.. SK 9382 AF..	25.98	21.654	1.26	23.62	0.24	10.31	0.87	M30 x 2	4.750	5.11	26.30	7.32	7.32	24.55	25.84
SK 10382.1 AF..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	6.250	6.91	29.13	5.91	5.91	28.18	28.28
SK11382.1 AF..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	6.500	7.17	31.73	6.30	6.30	30.78	30.88



SK ... VFVL2
SK ... VFVL3



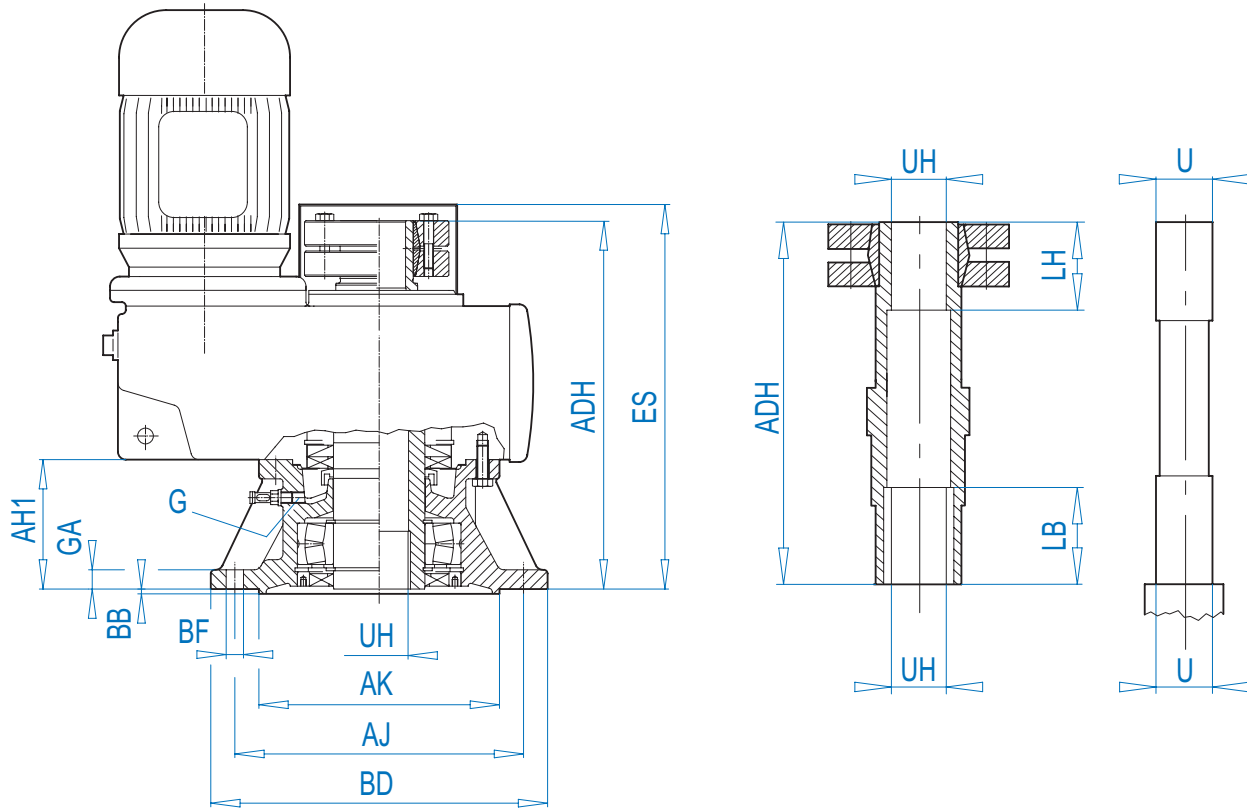
Dimensions

Type	Outline dimensions								Shaft dimensions			
	BD	AK	GA	AJ	BB	AH1	BF	G (mm)	U	V	UY	Key
SK 1282 VF.. SK 1382 VF..	7.87	5.118	0.47	6.50	0.14	2.95	0.43	M12 x 1.5	1.250	2.75	1.36	1/4 x 1/4 x 2-1/4
SK 2282 VF.. SK 2382 VF..	9.84	7.087	0.63	8.46	0.16	3.39	0.55	M12 x 1.5	1.375	2.75	1.51	5/16 x 5/16 x 2-1/4
SK 3282 VF.. SK 3382 VF..	11.81	9.055	0.79	10.43	0.16	3.35	0.55	M12 x 1.5	1.875	3.50	2.09	1/2 x 1/2 x 2-3/4
SK 4282 VF.. SK 4382 VF..	11.81	9.055	0.79	10.43	0.16	4.45	0.55	M12 x 1.5	2.250	4.00	2.47	1/2 x 1/2 x 3-1/4
SK 5282 VF.. SK 5382 VF..	13.78	9.834	0.79	11.81	0.20	5.31	0.71	M12 x 1.5	2.500	5.00	2.77	5/8 x 5/8 x 4
SK 6282 VF.. SK 6382 VF..	15.75	11.811	0.87	13.78	0.20	6.54	0.71	M24 x 1.5	3.000	5.50	3.33	3/4 x 3/4 x 4-1/2
SK 7282 VF.. SK 7382 VF..	17.72	13.780	0.94	15.75	0.20	7.24	0.71	M24 x 1.5	3.500	6.75	3.88	7/8 x 7/8 x 5-1/2
SK 8282 VF.. SK 8382 VF..	21.65	17.717	1.10	19.69	0.20	8.27	0.71	M30 x 2	4.250	8.50	4.69	1 x 1 x 7-1/4
SK 9282 VF.. SK 9382 VF..	25.98	21.654	1.26	23.62	0.24	10.31	0.87	M30 x 2	5.250	9.84	5.80	1-1/4 x 1-1/4 x 8-3/8
SK 10382.1 VF..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	6.250	11.81	6.91	1-1/2 x 1-1/2 x 10
SK 11382.1 VF..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	7.000	11.81	7.77	1-3/4 x 1-3/4 x 10

Spread Bearing Design (VL2) & (VL3)



SK ... AFSVL2
SK ... AFSVL3

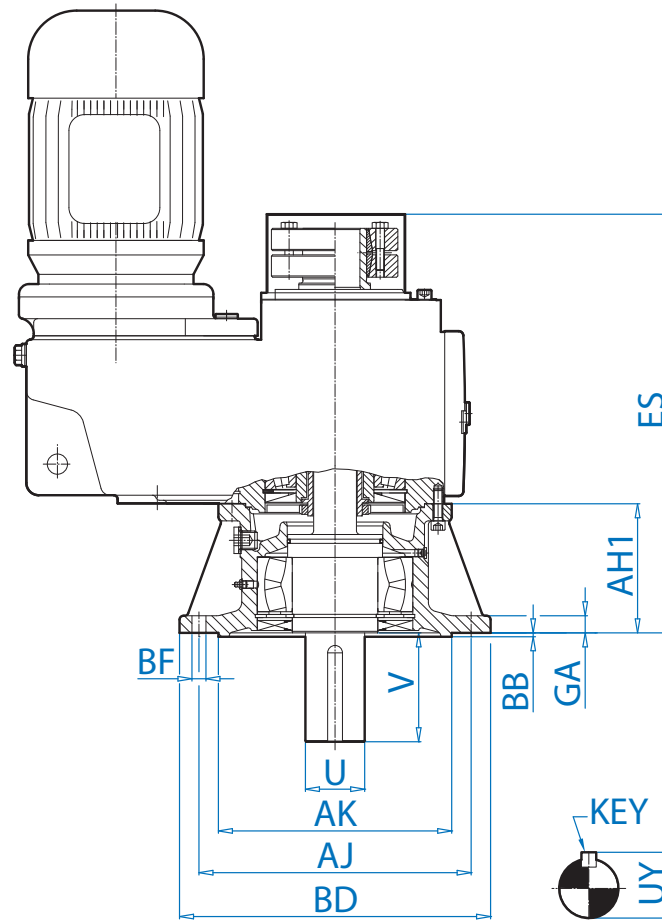


Dimensions

Type	Outline dimensions								Shaft dimensions					
	BD	AK	GA	AJ	BB	AH1	BF	G (mm)	U	UH	ADH	LB	LH	ES
SK 1282 AFS.. SK 1382 AFS..	7.87	5.118	0.47	6.50	0.14	2.95	0.43	M12 x 1.5	1.2500	1.2500	8.66	1.22	1.57	9.13
SK 2282 AFS.. SK 2382 AFS..	9.84	7.087	0.63	8.46	0.16	3.39	0.55	M12 x 1.5	1.5000	1.5000	10.39	1.61	1.77	10.94
SK 3282 AFS.. SK 3382 AFS..	11.81	9.055	0.79	10.43	0.16	3.35	0.55	M12 x 1.5	1.6250	1.6250	11.69	1.63	2.17	12.44
SK 4282 AFS.. SK 4382 AFS..	11.81	9.055	0.79	10.43	0.16	4.45	0.55	M12 x 1.5	2.0000	2.0000	14.02	2.01	2.17	14.88
SK 5282 AFS.. SK 5382 AFS..	13.78	9.834	0.79	11.81	0.20	5.31	0.71	M12 x 1.5	2.5000	2.5000	16.26	2.17	2.76	17.15
SK 6282 AFS.. SK 6382 AFS..	15.75	11.811	0.87	13.78	0.20	6.54	0.71	M24 x 1.5	3.0000	3.0000	20.33	2.60	3.35	21.18
SK 7282 AFS.. SK 7382 AFS..	17.72	13.780	0.94	15.75	0.20	7.24	0.71	M24 x 1.5	3.1875	3.1875	22.13	2.20	3.54	22.83
SK 8282 AFS.. SK 8382 AFS..	21.65	17.717	1.10	19.69	0.20	8.27	0.71	M30 x 2	4.0000	4.0000	25.39	2.80	3.74	26.38
SK 9282 AFS.. SK 9382 AFS..	25.98	21.654	1.26	23.62	0.24	10.31	0.87	M30 x 2	4.7500	4.7500	30.43	3.23	4.33	31.26
SK 10382.1 AFS..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	6.2500	6.2500	37.17	4.80	5.12	38.07
SK 11382.1 AFS..	25.98	21.654	1.38	23.62	0.31	11.89	1.02	M30 x 2	7.0000	7.0000	37.72	3.98	7.68	39.25



SK ... VFSVL4



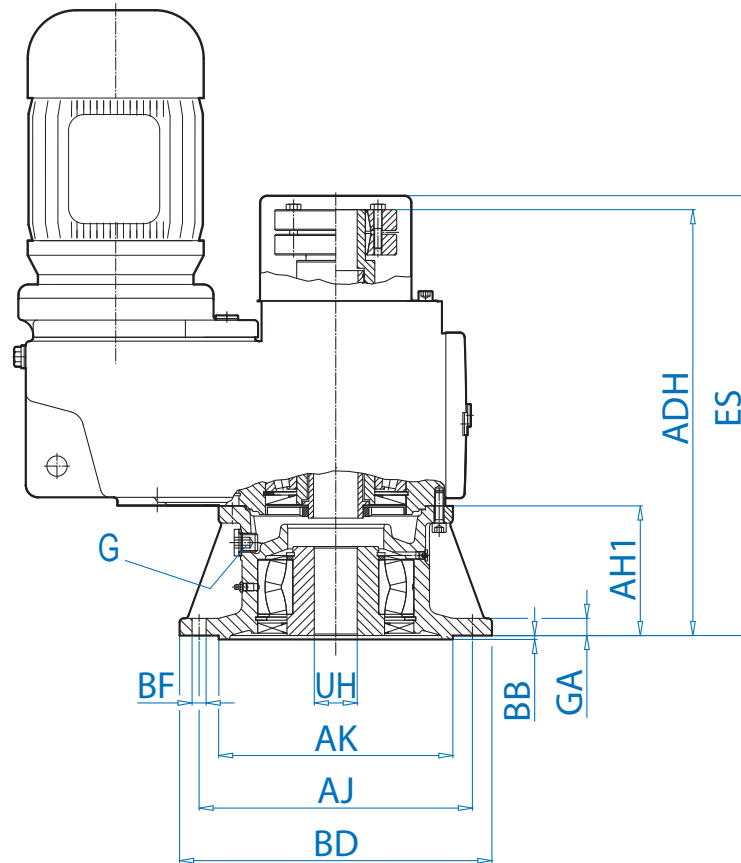
Dimensions

Type	Outline dimensions							Shaft dimensions				
	BD	AK	GA	AJ	BB	AH1	BF	U	V	UY	Key	ES
SK 4282 AFS.. SK 4382 AFS..	11.81	9.055	0.79	10.43	0.16	4.45	0.55	2.250	4.00	2.47	1/2 x 1/2 x 3-1/4	16.26
SK 5282 AFS.. SK 5382 AFS..	13.78	9.834	0.79	11.81	0.20	5.31	0.71	2.500	5.00	2.77	5/8 x 5/8 x 4	18.98
SK 6282 AFS.. SK 6382 AFS..	15.75	11.811	0.87	13.78	0.20	6.54	0.71	3.000	5.50	3.33	3/4 x 3/4 x 4-1/2	23.15
SK 7282 AFS.. SK 7382 AFS..	17.72	13.780	0.94	15.75	0.20	7.24	0.71	3.500	6.75	3.88	7/8 x 7/8 x 5-1/2	25.12
SK 8282 AFS.. SK 8382 AFS..	21.65	17.717	1.10	19.69	0.20	8.27	0.71	4.250	8.50	4.69	1 x 1 x 7-1/4	30.35
SK 9282 AFS.. SK 9382 AFS..	25.98	21.654	1.26	23.62	0.24	10.31	0.87	5.250	9.84	5.80	1-1/4 x 1-1/4 x 8-3/8	35.47

Spread Bearing Design (VL4)



SK ... AFSVL4

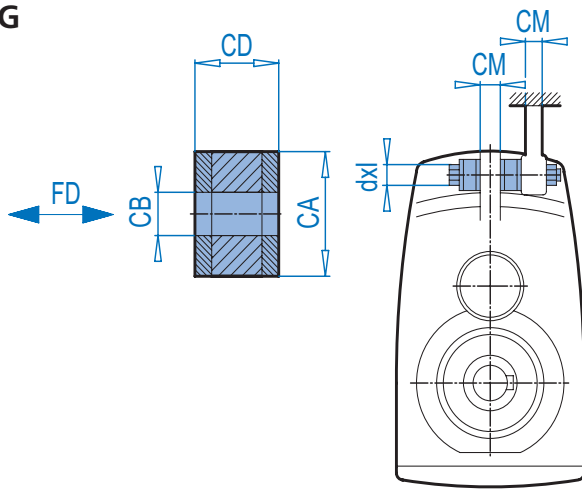


Dimensions

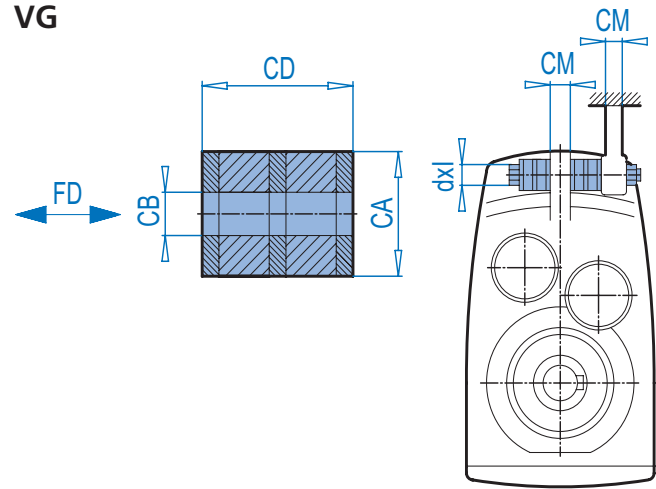
Type	Outline dimensions								Shaft dimensions		
	BD	AK	GA	AJ	BB	AH1	BF	G (mm)	UH	ADH	ES
SK 4282 AFS.. SK 4382 AFS..	11.81	9.055	0.79	10.43	0.16	4.45	0.55	M12 x 1.5	1.625	14.02	16.26
SK 5282 AFS.. SK 5382 AFS..	13.78	9.834	0.79	11.81	0.20	5.31	0.71	M12 x 1.5	2.0625	16.26	18.98
SK 6282 AFS.. SK 6382 AFS..	15.75	11.811	0.87	13.78	0.20	6.54	0.71	M24 x 1.5	2.4375	20.35	23.15
SK 7282 AFS.. SK 7382 AFS..	17.72	13.780	0.94	15.75	0.20	7.24	0.71	M24 x 1.5	2.750	22.13	25.12
SK 8282 AFS.. SK 8382 AFS..	21.65	17.717	1.10	19.69	0.20	8.27	0.71	M30 x 2	3.1875	25.39	30.35
SK 9282 AFS.. SK 9382 AFS..	25.98	21.654	1.26	23.62	0.24	10.31	0.87	M30 x 2	4.0625	30.43	35.47



G



VG



SK G

Type	CB	CA	CD	CM	d x l [mm]	FD° [lbs]	sFD°
SK 0182NB G	0.43	1.18	0.59	0.39	M10 x 70	217	0.059
SK 0282NB G	0.43	1.18	0.59	0.47	M10 x 70	234	0.067
SK 1382NB G	0.43	1.18	0.59	0.55	M10 x 80	504	0.142
SK 1282 G	0.43	1.18	0.59	0.55	M10 x 80	402	0.110
SK 2282 G	0.49	1.57	0.59	0.63	M12 x 90	600	0.071
SK 2382 G							
SK 3282 G	0.49	1.57	0.59	0.71	M12 x 90	935	0.114
SK 3382 G							
SK 4282 G	0.83	2.36	1.18	0.87	M20 x 150	1661	0.287
SK 4382 G							
SK 5282 G	0.83	2.36	1.18	1.10	M20 x 150	2133	0.370
SK 5382 G							
SK 6282 G	0.98	3.15	1.57	1.38	M24 x 190	3779	0.362
SK 6382 G							
SK 7282 G	0.98	3.15	1.57	1.57	M24 x 200	4676	0.449
SK 7382 G							
SK 8282 G	1.22	3.94	1.97	1.97	M30 x 260	6382	0.642
SK 8382 G							
SK 9282 G	1.22	3.94	1.97	2.17	M30 x 260	9777	0.961
SK 9382 G							

SK ... VG

Type	CB	CA	CD	CM	d x l [mm]	FD° [lbs]	sFD°
SK 7282 VG	0.98	3.35	2.36	1.57	M24 x 240	4676	0.480
SK 7382 VG							
SK 8282 VG	1.22	4.33	3.54	1.97	M30 x 340	6382	0.760
SK 8382 VG							
SK 9282 VG	1.22	5.51	4.33	2.17	M30 x 380	9776	0.835
SK 9382 VG							
SK 10382.1 VG	1.22	5.51	4.33	3.15	M30 x 430	12670	1.079
SK 11382.1 VG	1.93	7.09	5.91	3.54	M48 x 550	18185	1.516

° Compressive force acting upon the rubber buffer.

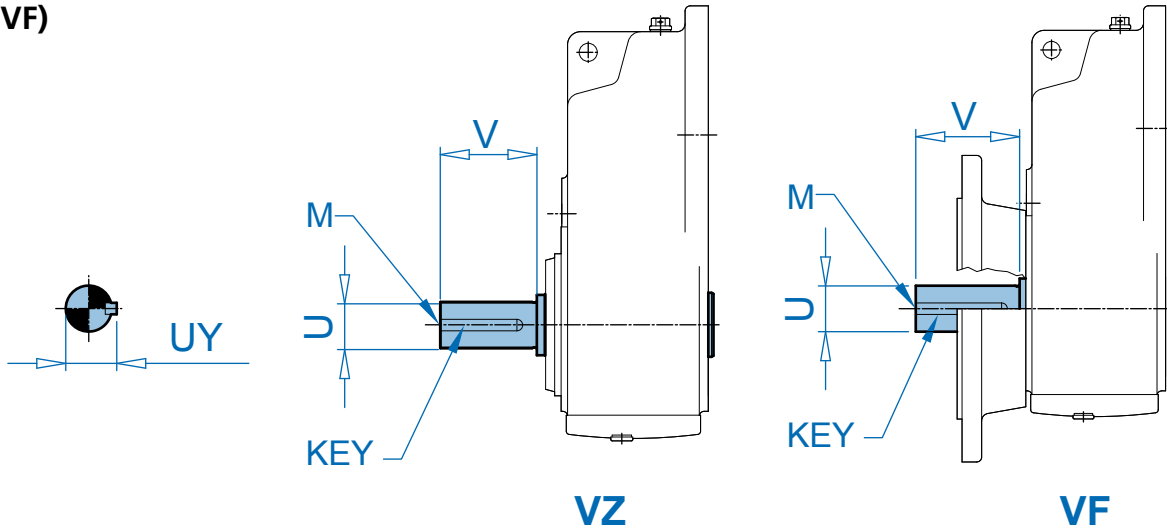
° Distance that each rubber buffer compresses at applied force.

Dimensions

Solid Shaft Dimensions



Solid Shaft Dimensions (VZ/VF)



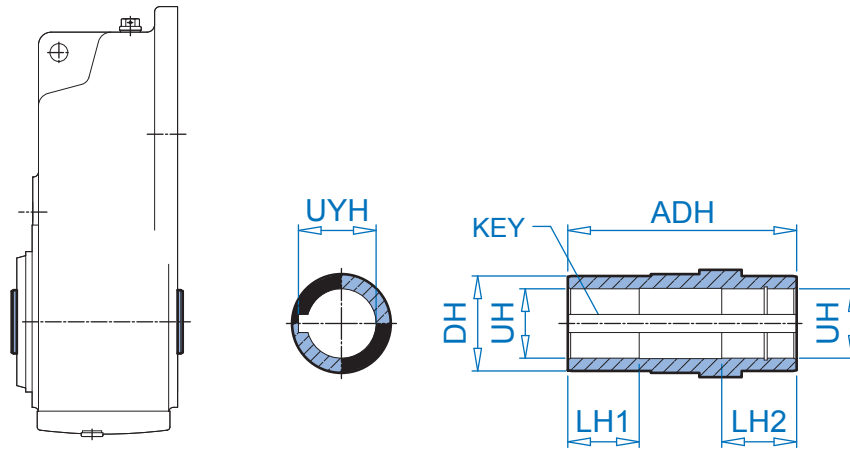
Dimensions

UNIT	U	Diameter Tolerance	V	UY	Key Size W x H x L	Key Qty.	Drill & Tap M
SK 0182NB VZ/VF	0.750	+0.0000 / -0.0005	1.50	0.83	3/16 x 3/16 x 1-1/4	1	1/4-20 x 0.59
	25mm	+0.015 / +0.002mm	50mm	28.0mm	8 x 7 x 40mm	1	M10 x 22
SK 0282NB VZ/VF	1.000	+0.0000 / -0.0005	2.13	1.11	1/4 x 1/4 x 1-5/8	1	3/8-16 x 0.87
	25mm	+0.015 / +0.002mm	50mm	28.0mm	8 x 7 x 40mm	1	M10 x 22
SK 1382NB VZ/VF	1.250	+0.0000 / -0.0005	2.75	1.36	1/4 x 1/4 x 2-1/4	1	1/2-13 x 1.10
	30mm	+0.015 / +0.002mm	60mm	33.0mm	8 x 7 x 50mm	1	M10 x 22
SK 1282 VZ/VF	1.250	+0.0000 / -0.0005	2.75	1.36	1/4 x 1/4 x 2-1/4	1	1/2-13 x 1.10
SK 1382 VZ/VF	30mm	+0.015 / +0.002mm	60mm	33.0mm	8 x 7 x 50mm	1	M10 x 22
SK 2282 VZ/VF	1.375	+0.0000 / -0.0005	2.75	1.51	5/16 x 5/16 x 2-1/8	1	5/8-11 x 1.42
SK 2382 VZ/VF	35mm	+0.018 / +0.002mm	70mm	38.0mm	10 x 8 x 60mm	1	M12 x 28
SK 3282 VZ/VF	1.875	+0.0000 / -0.0010	3.50	2.09	1/2 x 1/2 x 2-3/4	1	5/8-11 x 1.42
SK 3382 VZ/VF	45mm	+0.018 / +0.002mm	90mm	48.5mm	14 x 9 x 80mm	1	M16 x 36
SK 4282 VZ/VF	2.250	+0.0000 / -0.0010	4.00	2.47	1/2 x 1/2 x 3-1/4	1	3/4-10 x 1.73
SK 4382 VZ/VF	55mm	+0.030 / +0.011mm	110mm	59.0mm	16 x 10 x 90mm	1	M20 x 42
SK 5282 VZ/VF	2.500	+0.0000 / -0.0010	5.00	2.77	5/8 x 5/8 x 4	1	3/4-10 x 1.73
SK 5382 VZ/VF	65mm	+0.030 / +0.011mm	130mm	69.0mm	18 x 11 x 100mm	1	M20 x 42
SK 6282 VZ/VF	3.000	+0.0000 / -0.0010	5.50	3.33	3/4 x 3/4 x 4-1/2	1	3/4-10 x 1.73
SK 6382 VZ/VF	75mm	+0.030 / +0.011mm	140mm	79.5mm	20 x 12 x 125mm	1	M20 x 42
SK 7282 VZ/VF	3.500	+0.0000 / -0.0010	6.75	3.88	7/8 x 7/8 x 5-1/2	1	3/4-10 x 1.73
SK 7382 VZ/VF	90mm	+0.035 / +0.013mm	170mm	95.0mm	25 x 14 x 140mm	1	M24 x 50
SK 8282 VZ/VF	4.250	+0.0000 / -0.0010	8.50	4.69	1 x 1 x 7-1/4	1	1-8 x 2.63
SK 8382 VZ/VF	110mm	+0.035 / +0.013mm	210mm	116mm	28 x 16 x 180mm	1	M24 x 50
SK 9282 VZ/VF	5.250	+0.0000 / -0.0010	9.84	5.80	1-1/4 x 1-1/4 x 8-3/8	1	1-8 x 2.63
SK 9382 VZ/VF	140mm	+0.040 / +0.015mm	250mm	148mm	36 x 20 x 200mm	1	M24 x 50
SK 10382.1 VZ/VF	6.250	+0.0000 / -0.0010	11.81	6.91	1-1/2 x 1-1/2 x 10	1	1 3/8 - 6 x 3.46
	160mm	+0.040 / +0.015mm	300mm	169mm	40 x 22 x 250mm	1	M36 x 74
SK 11382.1 VZ/VF	7.000	+0.0000 / -0.0010	11.81	7.77	1-3/4 x 1-3/4 x 10	1	1 3/8 - 6 x 3.46
	180mm	+0.040 / +0.015mm	300mm	190mm	45 x 25 x 250mm	1	M36 x 74

- Dimensions are in inches unless otherwise noted.
- Metric Keys are captured in keyways.
- For shaft sizes not shown, consult NORD.



Hollow Shaft Dimensions (AZ-AF-AX)



Type	UH	Diameter Tolerance	ADH	LH1	LH2	DH	UYH	Key Size W x H x L	Key Qty.
SK 0182 NB AZ/AF/AX	0.750*	+0.0010 / -0.0000	3.94	1.18	1.18	1.38	0.837	3/16 x 3/16 x 1-1/2	2
	0.500	+0.0010 / -0.0000	3.94	1.18	1.18	1.38	0.560	1/8 x 1/8 x 1-1/2	2
	25mm	+0.021 / -0.000 mm	100mm	30mm	30mm	35mm	28.3 mm	8 x 7 x 40mm	2
SK 0282NB AZ/AF/AX	1.000*	+0.0010 / -0.0000	4.80	1.57	1.57	1.57	1.114	1/4 x 1/4 x 2-1/8	2
	1.1875	+0.0010 / -0.0000	4.80	1.57	1.57	1.57	1.304	1/4 x 1/4 x 2	2
	0.750	+0.0010 / -0.0000	4.80	1.57	1.57	1.57	0.837	3/16 x 3/16 x 1-1/2	2
	25mm	+0.021 / -0.000 mm	122mm	40mm	40mm	40mm	28.3 mm	8 x 7 x 40mm	2
	30mm	+0.021 / -0.000 mm	122mm	40mm	40mm	40mm	33.3 mm	8 x 7 x 40mm	2
SK 1382NB AZ/AF/AX	1.375*	+0.0010 / -0.0000	6.93	1.69	3.15	1.97	1.518	5/16 x 5/16 x 2-1/2	2
	1.4375	+0.0010 / -0.0000	6.93	2.36	2.36	1.97	1.605	3/8 x 3/8 x 2-1/2	2
	1.250	+0.0010 / -0.0000	6.93	2.36	3.15	1.97	1.367	1/4 x 1/4 x 2-1/4	2
	35mm	+0.025 / -0.000 mm	176mm	60mm	80mm	50mm	38.3 mm	10 x 8 x 60mm	2
SK 1282 AZ/AF/AX	1.1875*	+0.0010 / -0.0000	4.80	1.57	1.57	1.77	1.304	1/4 x 1/4 x 1-5/8	2
	1.250	+0.0010 / -0.0000	4.80	1.57	1.57	1.77	1.367	1/4 x 1/4 x 1-5/8	2
	1.000	+0.0010 / -0.0000	4.80	1.57	1.57	1.77	1.114	1/4 x 1/4 x 1-5/8	2
	0.750	+0.0010 / -0.0000	4.80	1.57	1.57	1.77	0.837	3/16 x 3/16 x 1-1/2	2
	30mm	+0.021 / -0.000 mm	122mm	40mm	40mm	45mm	33.3 mm	8 x 7 x 40mm	2
SK 2282 AZ/AF/AX SK 2382 AZ/AF/AX	1.4375*	+0.0010 / -0.0000	5.47	1.97	1.97	1.97	1.605	3/8 x 3/8 x 2	2
	1.500	+0.0010 / -0.0000	5.47	1.97	1.97	1.97	1.606	3/8 x 1/4 x 2	2
	1.375	+0.0010 / -0.0000	5.47	1.97	1.97	1.97	1.518	5/16 x 5/16 x 2	2
	1.250	+0.0010 / -0.0000	5.47	1.97	1.97	1.97	1.367	1/4 x 1/4 x 2-1/8	2
	35mm	+0.025 / -0.000 mm	139mm	50mm	50mm	50mm	38.3 mm	10 x 8 x 42mm	2
SK 3282 AZ/AF/AX SK 3382 AZ/AF/AX	1.625*	+0.0010 / -0.0000	6.85	2.28	2.28	2.17	1.733	3/8 x 1/4 x 2-1/4	2
	1.500	+0.0010 / -0.0000	6.85	2.28	2.28	2.17	1.606	3/8 x 1/4 x 2-1/4	2
	1.4375	+0.0010 / -0.0000	6.85	2.28	2.28	2.17	1.605	3/8 x 3/8 x 2-1/2	2
	40mm	+0.025 / -0.000 mm	174mm	58mm	58mm	55mm	43.3 mm	12 x 8 x 50mm	2
SK 4282 AZ/AF/AX SK 4382 AZ/AF/AX	2.0625*	+0.0012 / -0.0000	7.68	2.56	2.56	2.76	2.224	1/2 x 3/8 x 2-5/8	2
	1.9375	+0.0012 / -0.0000	7.68	2.56	2.56	2.76	2.160	1/2 x 1/2 x 2-3/4	2
	2.000	+0.0012 / -0.0000	7.68	2.56	2.56	2.76	2.223	1/2 x 1/2 x 2-3/4	2
	1.6875	+0.0012 / -0.0000	7.68	2.56	2.56	2.76	1.859	3/8 x 3/8 x 2-1/2	2
	50mm	+0.025 / -0.000 mm	195mm	65mm	65mm	70mm	53.8 mm	14 x 9 x 63mm	2

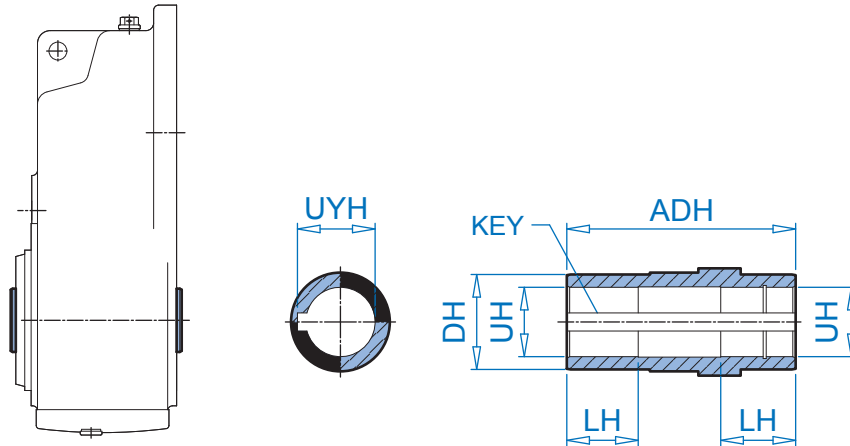
* standard size

- Dimensions are in inches unless otherwise noted.
- For shaft sizes not shown, consult NORD.

Hollow Shaft Dimensions



Hollow Shaft Dimensions (AZ-AF-AX)



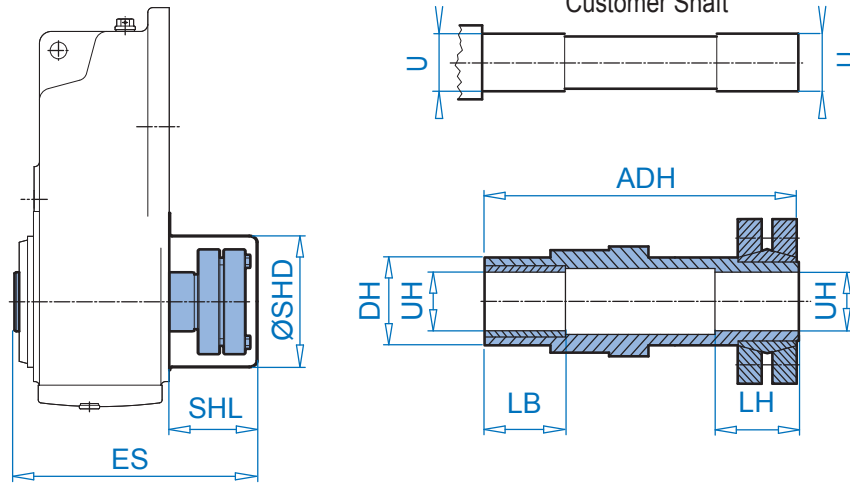
Dimensions

Type	UH	Diameter Tolerance	ADH	LH	DH	UYH	Key Size W x H x L	Key Qty.
SK 5282 AZ/AF/AX	2.4375*	+0.0012 / -0.0000	9.06	2.95	3.35	2.714	5/8 x 5/8 x 3-1/2	2
SK 5382 AZ/AF/AX	2.375	+0.0012 / -0.0000	9.06	2.95	3.35	2.651	5/8 x 5/8 x 3-1/2	2
	2.1875	+0.0012 / -0.0000	9.06	2.95	3.35	2.414	1/2 x 1/2 x 3	2
	60mm	+0.030 / -0.000 mm	230mm	79mm	85mm	64.4 mm	18 x 11 x 70mm	2
SK 6282 AZ/AF/AX	2.750*	+0.0012 / -0.0000	11.42	3.54	3.94	3.032	5/8 x 5/8 x 4	2
SK 6382 AZ/AF/AX	2.9375	+0.0012 / -0.0000	11.42	3.54	3.94	3.144	3/4 x 1/2 x 4	2
	2.4375	+0.0012 / -0.0000	11.42	3.54	3.94	2.714	5/8 x 5/8 x 3-1/2	2
	70mm	+0.030 / -0.000 mm	290mm	120mm	100mm	74.9 mm	20 x 12 x 125mm	2
SK 7282 AZ/AF/AX	3.1875*	+0.0012 / -0.0000	12.20	3.54	4.33	3.398	3/4 x 1/2 x 4	2
SK 7382 AZ/AF/AX	3.250	+0.0012 / -0.0000	12.20	3.54	4.33	3.461	3/4 x 1/2 x 4	2
	2.9375	+0.0012 / -0.0000	12.20	3.54	4.33	3.144	3/4 x 1/2 x 4	2
	80mm	+0.030 / -0.000 mm	310mm	80mm	110mm	85.4 mm	22 x 14 x 128mm	2
SK 8282 AZ/AF/AX	4.0625*	+0.0014 / -0.0000	14.41	4.65	5.12	4.253	1 x 1/2 x 6	2
SK 8382 AZ/AF/AX	3.9375	+0.0014 / -0.0000	14.41	6.06	5.12	4.253	1 x 3/4 x 4-3/4	2
	4.000	+0.0014 / -0.0000	14.41	4.65	5.12	4.316	1 x 3/4 x 4-3/4	2
	3.4375	+0.0014 / -0.0000	14.41	6.06	5.12	3.823	7/8 x 7/8 x 4-3/4	2
	100mm	+0.035 / -0.000 mm	366mm	154mm	130mm	106.4 mm	28 x 16 x 150mm	2
SK 9282 AZ/AF/AX	4.750*	+0.0014 / -0.0000	16.93	6.50	6.30	5.109	1-1/4 x 7/8 x 7	2
SK 9382 AZ/AF/AX	4.9375	+0.0014 / -0.0000	16.93	6.50	6.30	5.300	1-1/4 x 7/8 x 7	2
	4.4375	+0.0014 / -0.0000	16.93	7.32	6.30	4.885	1 x 1 x 7-1/4	2
	120mm	+0.035 / -0.000 mm	430mm	120mm	160mm	127.4mm	32 x 18 x 180mm	2
SK 10382.1 AZ/AF/AX	6.25	+0.0014 / -0.0000	18.70	5.91	8.66	6.914	1-1/2 x 1-1/2 x 5-3/4	2
	160 mm	+0.040 / -0.000 mm	475mm	150mm	220mm	169.4mm	40 x 22 x 150mm	2
SK 11382.1 AZ/AF/AX	6.50	+0.0014 / -0.0000	20.55	6.30	9.45	7.167	1-1/2 x 1-1/2 x 6	2
	180mm	+0.040 / -0.000 mm	522mm	160mm	240mm	190.4mm	45 x 25 x 160mm	2

* standard size



Shrink Disc Shaft Dimensions (AZSH)



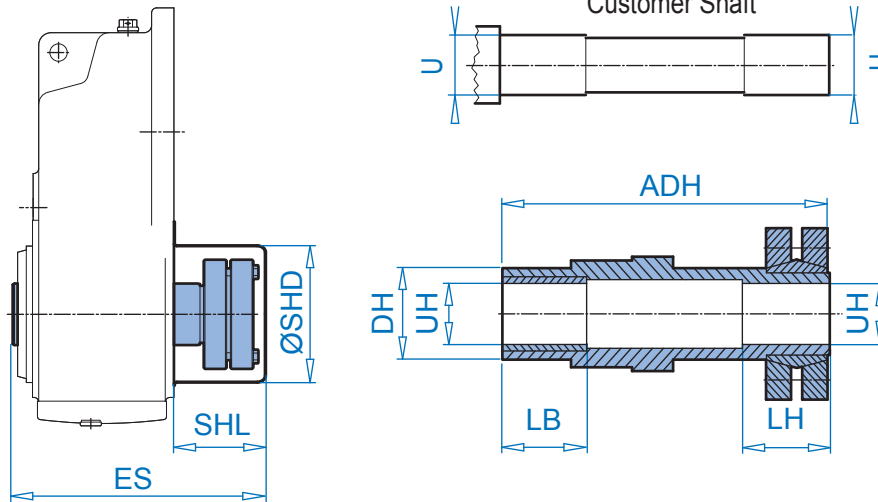
TYPE	Hollow Shaft		Shrink Disc				Shrink Disc Cover			Customer Shaft	
	UH	Tolerance	ADH	LB	LH	DH	ES	SHL	SHD	U	Tolerance
SK 0282NB AZSH	1.1875	+0.0009 / -0.0000	6.30	1.18	1.57	1.57	7.07	2.17	3.03	1.1875	+0.0000 / -0.0006
	30mm	+0.021 / -0.000mm	160mm	30mm	40mm	40mm	172.5mm	55mm	77mm	30mm	+0.000 / -0.013mm
SK 1382NB AZSH	1.500	+0.0009 / -0.0000	8.66	1.57	1.77	1.97	9.55	2.64	3.90	1.500	+0.0000 / -0.0006
	35mm	+0.025 / -0.000mm	220mm	40mm	45mm	50mm	235.5mm	67mm	99mm	35mm	+0.000 / -0.016mm
SK 1282 AZSH	1.250	+0.0009 / -0.0000	6.38	1.18	1.57	1.77	6.85	2.17	3.38	1.250	+0.0000 / -0.0006
	30mm	+0.021 / -0.000mm	162mm	31mm	40mm	45mm	174mm	55mm	86mm	30mm	+0.000 / -0.013mm
SK 2282 AZSH	1.500	+0.0009 / -0.0000	7.68	1.57	1.77	1.97	8.23	3.07	3.90	1.500	+0.0000 / -0.0006
SK 2382 AZSH	35mm	+0.025 / -0.000mm	195mm	41.5mm	45mm	50mm	209mm	78mm	99mm	35mm	+0.000 / -0.016mm
SK 3282 AZSH	1.625	+0.0009 / -0.0000	8.86	1.61	2.17	2.17	9.61	3.46	5.33	1.625	+0.0000 / -0.0006
SK 3382 AZSH	40mm	+0.025 / -0.000mm	225mm	41mm	55mm	55mm	246mm	78mm	136mm	40mm	+0.000 / -0.016mm
SK 4282 AZSH	2.000	+0.0011 / -0.0000	10.28	2.01	2.17	2.76	10.87	3.47	5.33	2.000	+0.0000 / -0.0007
SK 4382 AZSH	50mm	+0.025 / -0.000mm	261mm	51mm	55mm	70mm	246mm	78mm	136mm	50mm	+0.000 / -0.016mm
SK 5282 AZSH	2.500	+0.0011 / -0.0000	11.61	2.17	2.76	3.35	12.50	3.74	7.16	2.500	+0.0000 / -0.0007
SK 5382 AZSH	60mm	+0.030 / -0.000mm	295mm	61mm	70mm	85mm	317.5mm	95mm	182mm	60mm	+0.000 / -0.019mm
SK 6282 AZSH	3.000	+0.0011 / -0.0000	14.57	2.56	3.35	3.94	15.26	4.33	7.64	3.000	+0.0000 / -0.0007
SK 6382 AZSH	70mm	+0.030 / -0.000mm	370mm	71mm	85mm	100mm	387.5mm	110mm	194mm	70mm	+0.000 / -0.019mm
SK 7282 AZSH	3.1875	+0.0013 / -0.0000	15.55	2.17	3.54	4.33	16.06	4.29	8.74	3.1875	+0.0000 / -0.0008
SK 7382 AZSH	80mm	+0.030 / -0.000mm	395mm	81mm	90mm	110mm	413mm	109mm	222mm	80mm	+0.000 / -0.019mm
SK 8282 AZSH	4.000	+0.0013 / -0.0000	17.95	2.76	3.74	5.12	18.90	5.28	12.05	4.000	+0.0000 / -0.0008
SK 8382 AZSH	100mm	+0.035 / -0.000mm	456mm	71mm	95mm	130mm	493mm	134mm	306mm	100mm	+0.000 / -0.022mm
SK 9282 AZSH	4.750	+0.0015 / -0.0000	21.06	3.23	4.33	6.30	21.89	6.30	14.33	4.750	+0.0000 / -0.0009
SK 9382 AZSH	125mm	+0.040 / -0.000mm	535mm	82mm	110mm	160mm	580mm	160mm	364mm	125mm	+0.000 / -0.025mm
SK 10382.1 AZSH	6.250*	+0.0014 / -0.0000	24.37	4.80	5.12	8.66	25.66	7.28	17.91	6.250	+0.0000 / -0.0009
	6.250	+0.0014 / -0.0000	25.98	4.80	5.12	8.66	25.66	7.28	17.91	6.250	+0.0000 / -0.0009
	160mm*	+0.035 / -0.000 mm	619mm	122mm	130mm	220mm	652mm	185mm	455mm	160mm	+0.000 / -0.025mm
	160mm	+0.035 / -0.000 mm	660mm	122mm	130mm	220mm	652mm	185mm	455mm	160mm	+0.000 / -0.025mm
SK 11382.1 AZSH	7.000*	+0.0014 / -0.0000	28.70	4.00	7.68	9.45	30.19	10.04	17.91	7.000	+0.0000 / -0.0009
	7.000	+0.0014 / -0.0000	29.72	4.00	7.68	9.45	30.19	10.04	17.91	7.000	+0.0000 / -0.0009
	180mm*	+0.035 / -0.000 mm	729mm	101.5	195mm	240mm	767mm	255mm	455mm	180mm	+0.000 / -0.025mm
	180mm	+0.035 / -0.000 mm	755mm	101.5	195mm	240mm	767mm	255mm	455mm	180mm	+0.000 / -0.025mm

* standard size

Heavy Duty Shrink Disc Shaft Dimensions



Heavy Duty Shrink Disc Shaft Dimensions (AZVSH)



Dimensions

Type	Hollow Shaft		Shrink Disc				Shrink Disc Cover			Customer Shaft	
	UH	Tolerance	ADH	LB	LH	DH	ES	SHL	SHD	U	Tolerance
SK 7282 AZVSH	3.1875	+0.0013 / -0.0000	16.89	2.20	4.72	4.33	17.56	5.79	10.04	3.1875	+0.0000 / -0.0008
SK 7382 AZVSH	85mm	+0.035 / -0.000	429mm	56mm	120mm	110mm	451mm	147mm	255mm	85mm	+0.000 / -0.019mm
SK 8282 AZVSH	4.000	+0.0013 / -0.0000	20.08	2.76	5.87	5.12	21.49	7.87	12.60	4.000	+0.0000 / -0.0008
SK 8382 AZVSH	100mm	+0.035 / -0.000	510mm	71.5mm	149mm	130mm	559mm	200mm	320mm	100mm	+0.000 / -0.022mm
SK 9282 AZVSH	4.750	+0.0015 / -0.0000	23.90	3.23	7.17	6.30	24.84	9.25	14.17	4.750	+0.0000 / -0.0009
SK 9382 AZVSH	130mm	+0.040 / -0.000	607mm	82mm	182mm	160mm	655mm	235mm	360mm	130mm	+0.000 / -0.022mm
SK 10382.1 AZVSH	6.250 ^o	+0.0015 / -0.0000	24.37	4.80	5.12	8.66	25.66	7.28	17.91	6.250	+0.0000 / -0.0009
	6.250 ^o	+0.0015 / -0.0000	25.98	4.80	5.12	8.66	27.05	8.66	17.91	6.250	+0.0000 / -0.0009
	160mm ^o	+0.040 / -0.000 mm	619mm	122mm	130mm	220mm	652mm	185mm	455mm	160mm	+0.000 / -0.025mm
	160mm ^o	+0.040 / -0.000 mm	660mm	122mm	130mm	220mm	687mm	220mm	455mm	160mm	+0.000 / -0.025mm
SK11382.1 AZVSH	7.000 ^o	+0.0015 / -0.0000	28.70	4.00	7.68	9.45	30.19	10.04	17.91	7.000	+0.0000 / -0.0009
	7.000 ^o	+0.0015 / -0.0000	29.72	4.02	7.68	9.45	30.87	10.71	17.91	7.000	+0.0000 / -0.0009
	180mm ^o	+0.040 / -0.000 mm	729mm	101.5mm	195mm	240mm	767mm	255mm	455mm	180mm	+0.000 / -0.025mm
	180mm ^o	+0.040 / -0.000 mm	755mm	102mm	195mm	240mm	784mm	272mm	455mm	180mm	+0.000 / -0.025mm

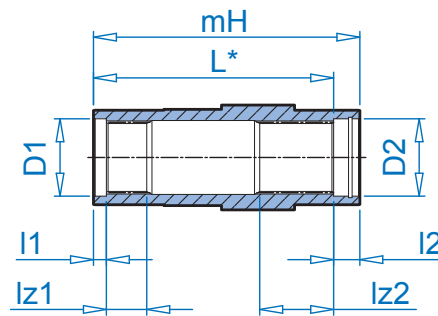
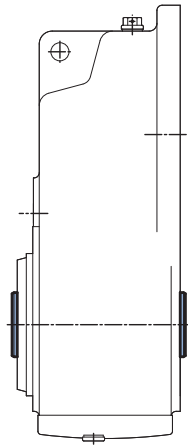
^o standard size

^o long shaft (matches SK10382 AZVSH model)

^o long shaft (matches SK11382 AZVSH model)

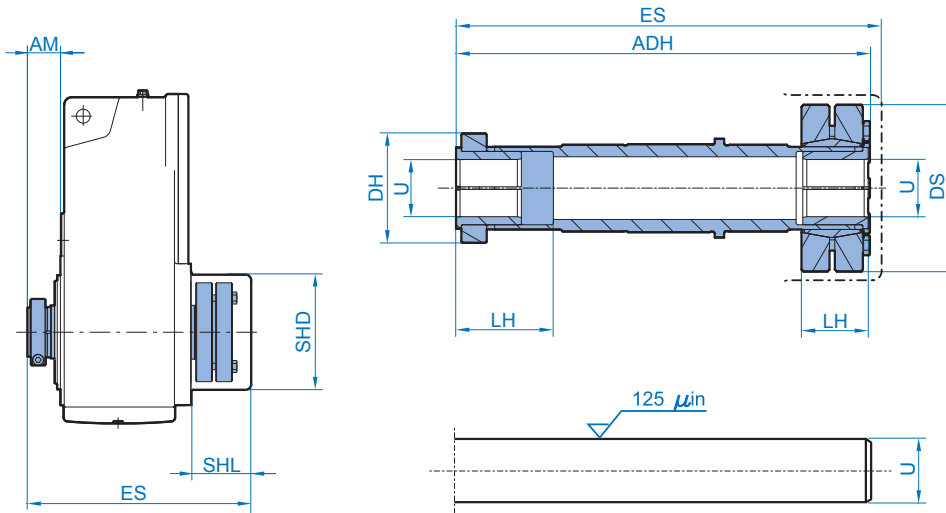


Splined Hollow Shaft Dimensions (EA)



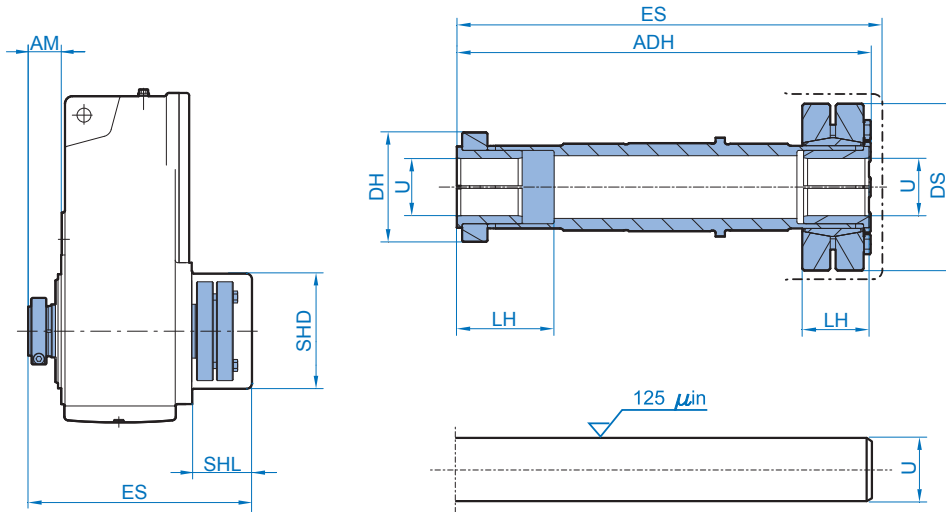
Type	Hub Profile DIN 5480 [mm]	l1 [mm]	l2 [mm]	lz1 [mm]	lz2 [mm]	mH [mm]	D1/D2 [mm]	L [mm]
SK 1282 EA	N30 x 1.25 x 30 x 22 x 9H	5	22	33	33	122	35	100
SK 2282 EA	N35 x 2 x 30 x 16 x 9H	5	29	40	33	139	40	110
SK 3282 EA	N40 x 2 x 30 x 18 x 9H	8	34	41	50	174	45	110
SK 4282 EA	N50 x 2 x 30 x 24 x 9H	10	35	43	53	195	55	160
SK 5282 EA	N60 x 2 x 30 x 28 x 9H	15	45	43	65	230	65	185
SK 6282 EA	N70 x 2 x 30 x 34 x 9H	15	45	53	98.5	290	75	245
SK 7282 EA	N85 x 3 x 30 x 27 x 9H	15	60	47	86	310	90	250
SK 8282 EA	N105 x 3 x 30 x 34 x 9H	15	56	57	122	366	110	310
SK 9282 EA	N130 x 5 x 30 x 24 x 9H	15	60	67	147	430	135	370

GRIPMAXX™ Keyless Bushing Systems



Dimensions

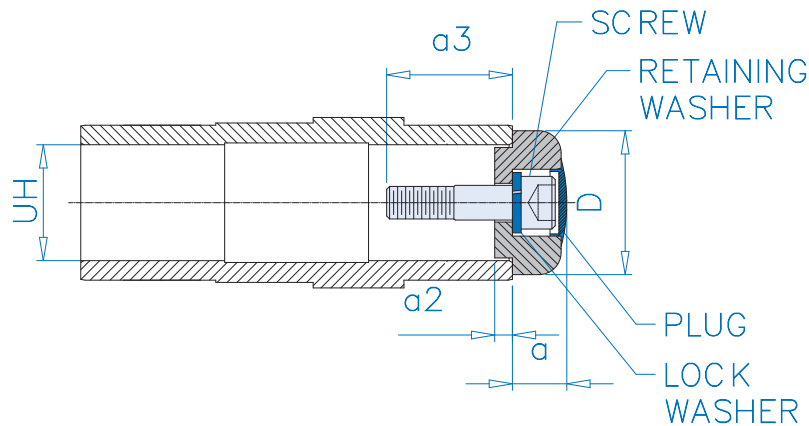
Type	Customer Bore Size		Bushing P/N	Hollow Shaft P/N	Shrink Disc P/N	Clamp Ring P/N	AM	LH	ADH	ES	DS	DH	SHD	SHL
	U"	Tolerance												
SK 1282	5/8"	- 0.004"	29845300	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	3/4"	- 0.005"	29845320	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	20 mm	- 0.130 mm	29845330	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	25 mm	- 0.130 mm	29845340	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	1"	- 0.005"	29845350	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	1 1/4"	- 0.006"	29845360	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	30 mm	- 0.160 mm	29845370	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	1 3/16"	- 0.006"	29845380	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 1282	1 1/4"	- 0.006"	29845420	81239000	29850420	29840430	1.38	1.93	7.40	7.56	3.15	2.24	3.38	2.17
SK 2282 / SK 2382	1 1/4"	- 0.006"	29845390	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	30 mm	- 0.160 mm	29845400	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	1 3/16"	- 0.006"	29845410	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	1 1/4"	- 0.006"	29845430	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	1 3/8"	- 0.006"	29845440	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	35 mm	- 0.160 mm	29845450	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	1 7/16"	- 0.006"	29845460	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 2282 / SK 2382	1 1/2"	- 0.006"	29845480	82239000	29850490	29840500	1.57	1.73	8.94	9.13	3.54	2.87	3.90	3.07
SK 3282 / SK 3382	1 3/16"	- 0.006"	29845500	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	1 1/4"	- 0.006"	29845510	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	1 3/8"	- 0.006"	29845520	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	35 mm	- 0.160 mm	29845530	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	1 7/16"	- 0.006"	29845540	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	1 1/2"	- 0.006"	29845550	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	40 mm	- 0.160 mm	29845560	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 3282 / SK 3382	1 5/8"	- 0.006"	29845570	83239000	29850570	29840560	1.42	1.93	10.12	10.51	4.41	2.87	5.33	2.99
SK 4282 / SK 4382	1 3/8"	- 0.006"	29845580	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	35 mm	- 0.160 mm	29845590	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1 7/16"	- 0.006"	29845600	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1 1/2"	- 0.006"	29845610	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	40 mm	- 0.160 mm	29845620	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1 5/8"	- 0.006"	29845630	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1-11/16"	- 0.006"	29845640	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1 3/4"	- 0.006"	29845650	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	45 mm	- 0.160 mm	29845660	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1-13/16"	- 0.006"	29845670	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	1-15/16"	- 0.006"	29845680	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	50 mm	- 0.190 mm	29845690	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 4282 / SK 4382	2"	- 0.007"	29845700	84239000	29850640	29840630	1.61	1.93	11.54	11.77	4.92	3.23	5.33	3.47
SK 5282 / SK 5382	1 5/8"	- 0.006"	29845710	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	1-11/16"	- 0.006"	29845720	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	1 3/4"	- 0.006"	29845730	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74



Type	Customer Bore Size		Bushings P/N	Hollow Shaft P/N	Shrink Disc P/N	Clamp Ring P/N	AM	LH	ADH	ES	DS	DH	SHD	SHL
	U"	Tolerance												
SK 5282 / SK 5382	45 mm	- 0.160 mm	29845740	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	1-13/16"	- 0.006"	29845750	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	1-15/16"	- 0.006"	29845760	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	50 mm	- 0.190 mm	29845770	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2"	- 0.007"	29845780	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	55 mm	- 0.190 mm	29845790	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2-3/16"	- 0.007"	29845800	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2-1/4"	- 0.007"	29845810	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	60 mm	- 0.190 mm	29845820	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2-3/8"	- 0.007"	29845830	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2-7/16"	- 0.007"	29845840	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 5282 / SK 5382	2-1/2"	- 0.007"	29845850	85239000	29850780	29840790	1.56	2.72	13.07	13.41	6.14	3.78	7.16	3.74
SK 6282 / SK 6382	2-7/16"	- 0.007"	29845940	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	2-1/2"	- 0.007"	29845950	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	65 mm	- 0.190 mm	29845960	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	2-5/8"	- 0.007"	29845970	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	2-3/4"	- 0.007"	29845980	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	70 mm	- 0.190 mm	29846000	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	2-15/16"	- 0.007"	29846020	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	75 mm	- 0.190 mm	29846040	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 6282 / SK 6382	3"	- 0.007"	29846060	86239000	29850940	29840950	1.67	3.31	15.83	16.32	7.17	4.33	7.64	4.33
SK 7282 / SK 7382	75 mm	- 0.190 mm	29846100	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 7282 / SK 7382	2-15/16"	- 0.007"	29846090	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 7282 / SK 7382	3"	- 0.007"	29846110	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 7282 / SK 7382	80 mm	- 0.220 mm	29846120	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 7282 / SK 7382	3-3/16"	- 0.008"	29846130	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 7282 / SK 7382	3-1/4"	- 0.008"	29846140	87239000	29851100	29841110	1.81	3.39	17.56	18.70	8.19	5.20	10.14	5.79
SK 8282 / SK 8382	90 mm	- 0.220 mm	29846300	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	3-5/8"	- 0.008"	29846310	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	3-7/16"	- 0.008"	29846280	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	95 mm	- 0.220 mm	29851300	88239000	88296010	88239000	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	100 mm	- 0.220 mm	29846330	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	3-15/16"	- 0.008"	29846330	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 8282 / SK 8382	4"	- 0.008"	29846340	88239000	29851300	29841310	1.93	3.66	20.04	22.64	9.45	5.91	12.76	7.87
SK 9282 / SK 9382	110 mm	- 0.220 mm	29846500	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	4-7/16"	- 0.008"	29846510	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	4-1/2"	- 0.008"	29846520	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	120 mm	- 0.250 mm	29846550	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	4-3/4"	- 0.009"	29846530	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	125 mm	- 0.250 mm	29846540	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25
SK 9282 / SK 9382	4-15/16"	- 0.009"	29846560	89239000	29851610	29841620	2.36	4.21	23.58	26.26	11.65	7.09	14.33	9.25

Dimensions

Fixing Kit Dimensions



Inch Shaft Hollow Bore (in)

UH	D	a	a2	Screw ①	a3 ①	Screw ②	a3 ②	Screw ③	a3 ③
0.5000	0.984	0.565	0.110	10 - 32 x 5/8	0.499	-	-	-	-
0.7500	1.181	0.557	0.118	1/4 - 20 x 3/4	0.652	1/4 - 20 x 1	0.902	-	-
1.0000	1.496	0.767	0.150	3/8 - 16 x 3/4	0.624	3/8 - 16 x 1-1/4	1.124	-	-
1.1875	1.575	0.769	0.150	7/16 - 14 x 2-1/16	2.016	-	-	-	-
1.2500	1.575	0.769	0.150	7/16 - 14 x 2-1/16	2.016	-	-	-	-
1.3750	1.772	0.946	0.197	5/8 - 11 x 1-1/2	1.461	5/8 - 11 x 2-1/4	2.211	5/8 - 11 x 1	0.961
1.4375	1.772	0.946	0.197	5/8 - 11 x 1-1/2	1.461	5/8 - 11 x 2-1/4	2.211	5/8 - 11 x 1	0.961
1.5000	1.772	0.946	0.197	5/8 - 11 x 1-1/2	1.461	5/8 - 11 x 2-1/4	2.211	5/8 - 11 x 1	0.961
1.6250	2.165	0.927	0.315	5/8 - 11 x 2	2.000	5/8 - 11 x 1-1/2	1.500	-	-
1.6875	2.165	0.927	0.315	5/8 - 11 x 2	2.000	5/8 - 11 x 1-1/2	1.500	-	-
1.9375	2.362	0.966	0.315	5/8 - 11 x 2-1/4	2.000	-	-	-	-
2.0000	2.559	0.971	0.315	5/8 - 11 x 2-1/4	2.250	-	-	-	-
2.0625	2.559	0.971	0.315	5/8 - 11 x 2-1/4	2.250	-	-	-	-
2.1875	2.559	0.971	0.315	5/8 - 11 x 2-1/4	2.250	-	-	-	-
2.3750	2.953	1.129	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
2.4375	2.953	1.129	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
2.7500	3.740	1.132	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
2.9375	3.740	1.132	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
3.1875	3.740	1.132	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
3.2500	4.106	1.132	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
3.4375	4.106	1.132	0.354	3/4 - 10 x 2-1/2	2.500	-	-	-	-
3.9375	4.724	1.299	0.394	7/8 - 9 x 3-1/2	3.500	-	-	-	-
4.0000	4.724	1.299	0.394	7/8 - 9 x 3-1/2	3.500	-	-	-	-
4.0625	4.724	1.299	0.394	7/8 - 9 x 3-1/2	3.500	-	-	-	-
4.4375	5.315	1.299	0.386	7/8 - 9 x 3-1/2	3.500	-	-	-	-
4.7500	5.906	1.299	0.394	7/8 - 9 x 3-1/2	3.500	-	-	-	-
4.9375	5.906	1.299	0.394	7/8 - 9 x 3-1/2	3.500	-	-	-	-
6.250	7.874	1.535	0.787	1" - 8 x 3	2.750	-	-	-	-
6.500	7.874	1.535	0.787	1" - 8 x 3	2.750	-	-	-	-

Metric Hollow Bore (mm)

UH	D	a	a2	Screw ①	a3 ①	Screw ②	a3 ②
25	38	19	3.8	M10 x 45	41.8	M10 x 30	26.8
30	40	19	3.8	M10 x 45	43.8	M10 x 30	28.8
35	45	23.5	5	M12 x 55	54	M12 x 35	34
40	55	23.7	8	M16 x 70	70	M16 x 45	45
50	65	24.7	8	M16 x 70	70	M16 x 45	45
60	75	29	9	M20 x 90	90	M20 x 55	55
70	95	29.3	9	M20 x 90	90	M20 x 55	55
80	102	29	9	M20 x 100	100	M20 x 55	55
100	120	34.5	10	M24 x 110	110	M24 x 65	65
120	150	34.5	10	M24 x 110	110	M24 x 65	65
160	200	34	20	M24 x 110	110	M24 x 65	65
180	240	34	20	M24 x 110	110	M24 x 65	65

①, ②, ③ - Each fixing element kit may contain up to 3 different kinds of screws



DRIVESYSTEMS

Motors

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Standards

All motors are in accordance with existing standards and regulations:

NEMA MG 1 - Motors and Generators:

- Electrical performance
- Motors for operation on variable AC vector drive

UL 1004 – Electric Motors

CSA C22.2 No. 100-04 - Motors and Generators:

Industrial Products IEC 60034 - parts 1, 5, 6, 8, 9, 11, 12 and 14.









- Part 1 – General rules
- Part 5 – Types of enclosures
- Part 6 – Types of cooling
- Part 8 – Terminal lead designations and sense of rotation
- Part 9 – Noise limits
- Part 11 – Integrated thermal protection
- Part 12 – Starting Performance
- Part 14 – Mechanical vibration

Inverter/Vector Duty

NORD single-speed motors are Inverter/Vector Duty. The construction of the NORD motors insulating system takes into account the non-sinusoidal wave forms produced by variable frequency drives. NORD uses high grade insulating components and extra first turn protection as well as double coated wire to ensure long service life when connected to AC vector drives. NORD motors can produce full torque at zero speed if properly sized, selected and controlled.



IEC 60038 – Standard voltages

	NORD motors carry the CE mark in accordance with the Low Voltage Directive and, if installed properly, the Electromagnetic Compatibility Directive (EMC). The CE mark is required for installation in European Union (EU) states.
	Many NORD motors from frame size 63 to 315 are an Underwriters Laboratories Recognized component per UL standard 1004. <ul style="list-style-type: none"> ■ File number E191510
	The Canadian Standards Association CUS mark indicates that CSA has tested and approved NORD motors according to both US and Canadian standards. It is equivalent to the Underwriters Laboratories RU recognition mark (UL standard 1004) and the CSA mark according to CSA Standard C22.2 No. 100-04 <ul style="list-style-type: none"> ■ File number LR112560
	NORD Energy Efficient motors up to frame 180 have been evaluated by the United States Department of Energy and received a Certificate of Compliance to certify the efficiency ratings. The certificate of compliance is CC 092B.
	NORD Premium Efficient motors up to frame 180 have been evaluated by the United States Department of Energy and received a Certificate of Compliance to certify the efficiency ratings. The certificate of compliance is CC 092B.
	NORD energy efficient motors carry the CSA energy efficiency verification mark. This mark ensures that CSA has verified that NORD motors are designed and manufactured to meet energy efficiency requirements number EEV112560.
	China Compulsory Certification Nr.: 200 701 040 125 842 9
	GOST® certificate for the import of motors into Russia.



Global Standards and Directives

Energy savings, lowering operational costs, and protecting the environment are all important to our future. That is precisely why NORD supports global efforts to increase energy efficiency and minimize the human impact on our environment.

NORD's energy-saving motors and brake motors include premium efficient designs and optimal designs for intermittent duty applications. All NORD motors are inverter-duty that obtain improved dynamic performance and increased system efficiencies when paired with our high performance AC-drives.

NORD is able to provide motors that satisfy the latest global energy efficiency directives. Energy efficiency overviews by region may be found on the NORD website by clicking on "Products" then "Motor Efficiency Classes".

The screenshot shows the NORD website's 'NATIONAL REGULATIONS' page. The navigation menu includes 'Products', 'Tools', 'Documentation', 'Solutions', and 'Company'. The left sidebar lists 'Gear Drives', 'Motors', 'Drive Electronics', 'Motor Efficiency Classes', and 'Country Regulations'. The main content area is titled 'NATIONAL REGULATIONS' and includes the text: 'The implementation of the international standard IEC 60034-30-1:2014 will be carried out in different ways.' Below this is a world map with callouts for various regions. A 'SALES CONTACT' button is visible on the right. At the bottom, a list of countries with PDF links is provided:

- European Union | PDF (152 KB)
- Switzerland | PDF (140 KB)
- USA | PDF (280 KB)
- Canada | PDF (345 KB)
- Mexico | PDF (222 KB)
- Brasil | PDF (189 KB)
- Australia | PDF (105 KB)
- China | PDF (117 KB)
- South Korea | PDF (171 KB)

This catalogue has been produced with the greatest care on the most current legislation. However, NORD cannot accept liability for technical changes in regards to global requirements.



Standard Motor Construction

Our motors are an important part of our ability to provide a high quality, competitive, and complete drive system. NORD motors are designed for across-the-line or inverter/vector duty operation. NORD motors are constructed with superior insulating methods to provide excellent moisture protection, low temperature rise, and voltage spike resistance in accordance with NEMA MG1. Low rotor inertia and high starting torque allow peak performance in difficult applications involving high start/stop cycling rates or rapid acceleration/deceleration. Standard motors offer protection from the elements with many standard and optional design features.

NORD offers a variety of high performance motors including:

- NORD continuous duty, premium efficient motors (1–75 HP) satisfy global energy efficiency mandates, NORD's premium efficient motors provide maximum energy savings, offer low rotor inertia, provide quick starts & stops, & handle high cycle rates in dynamic applications.
- NORD 60 minute duty motors (1 - 40 HP) motors are labeled "60 MIN" duty & are perfectly suited for intermittent or time limited applications. These motors offer higher cycling capacity, lower motor rotor inertia, & lower energy consumption while starting or stopping, as compared to the NORD Premium Efficient motors. NORD can also provide motors that satisfy other periodic duty or intermittent duty ratings.
- NORD continuous duty, standard efficient motors (0.16 – 0.75 HP) satisfy global energy efficiency mandates. Like 60 minute duty motors, these motors offer higher cycling capacity, lower motor rotor inertia, and lower energy consumption while starting or stopping, as compared to the NORD Premium Efficient motors.

Some of the standard design benefits include:

- Shaft lip seals on both ends of the motor shafts.
- Stator to endbell connections sealed to exclude moisture.
- Double coated magnetic wire insulation.
- Inverter/vector duty insulation system conforms to NEMA MG1, section 31.4 voltage spikes.
- Moisture resistant varnish dipped windings with improved varnish materials.
- Inorganic insulating components for tropical protection.
- Conduit box sealed with gaskets.
- Corrosion resistant alloy materials.
- Threaded cable entry holes.

Asynchronous Low Voltage Motors

The motors listed in this catalogue are low voltage asynchronous motors, which can be used as gear motors or stand-alone motors.

Non-Sparking Fan

The standard NORD motor fan is a non-sparking design. The fan will also provide proper airflow in either direction of rotation.

Terminal Block

Each NORD motor uses a terminal block, which is a superior method of wire termination when compared to pigtail leads. A terminal block ensures long-term reliability of the power connections.

Inverter/Vector Duty – Voltage Spikes

All NORD motors are constructed with an insulating system designed to withstand the repeated voltage spikes generated by modern AC vector drives. The insulation system withstands the ratings in conformance with NEMA MG1 Section 31.4.4.2 Voltage Spikes.

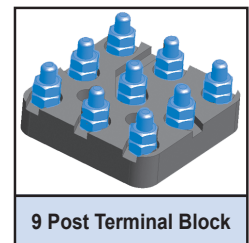
$$V_{\text{peak}} \leq 3.1 \times V_{\text{rated}} \text{ with a Rise time } \geq 0.1 \mu\text{s}.$$



Motor Production



Motor Production



9 Post Terminal Block



Insulation System

Insulation System

The NORD motor insulation system is designed to provide a superior degree of protection. NORD utilizes the following insulation components:

- Magnet wire – double coated insulation
- Varnish dip impregnation
- Slot liners
- Phase paper & separators
- Top sticks
- Wire sleeve connectors

Other motor manufacturers eliminate some of these insulating components for cost reduction which leads to less reliability.

Tropical Protection (Anti-fungal)

As a standard the NORD motor insulation system is tropically protected. The insulating and construction components are made of inorganic materials that resist fungal growth.

Low Inertia

The motor inertia in all NORD motors is extremely low which allows for an increased dynamic motor control capability. Low motor inertia is a significant advantage when using NORD motors with AC vector drives or controllers. NORD motors have the ability to cycle more frequently and require less mechanical energy to start than the standard NEMA frame motors. This leaves more energy to start the load.

High Starting Torque

NORD motors produce a higher starting torque than what is required by NEMA standards. This is achieved through improved motor winding, rotor design and construction.

Service Factor

NORD standard motors that are rated 230/460V-60Hz and 332/575V-60Hz have a service factor of 1.15. All other motors have a service factor of 1.0 or as noted in the motor rating tables beginning on page 315.

Poles / speeds

NORD offers a variety of single and two speed motors in addition to the standard 4 pole motor. NORD single speed motors are inverter/vector duty rated, however, it is not recommended to run a NORD two speed motor with an AC vector drive.

Number of Poles	Synchronous Speed at 60Hz	Synchronous Speed at 50Hz
Single Speed Motors		
4	1800 rpm	1500 rpm
2	3600 rpm	3000 rpm
6	1200 rpm	1000 rpm
Two Speed Motors		
4-2 - single winding	1800/3600 rpm	1500/3000 rpm
8-2 - dual winding	900/3600 rpm	750/3000 rpm

Other speeds available upon request.



Voltage and Frequency Variation

Voltage and frequency variations are based upon the assumption that the nameplate horsepower will not be exceeded and that the motor temperature may increase. Standard allowable deviations are based upon the type of motor labeling.

Poles	Efficiency	50 Hz NORD Motors			60 Hz NORD Motors		
		Motor Size Range	Power Range	Nominal Voltage	Motor Size Range	Power Range	Nominal Voltage
4	Standard (IE1)	63 S/4 - 100 L/4	0.12 - 2.2 kW	230/400 V Δ/Y	63 S/4 - 200 LX/4	0.16 - 40 Hp	230/460 V Y/YY
		100 LA/4 - 200 LX/4	3 - 30 kW	400/690 V Δ/Y			332/575 V Δ/Y
	Premium Efficient (IE3)	80 LP/4 - 100 LP/4	0.75 - 2.2 kW	230/400 V Δ/Y	80 LP/4 - 180LP/4	1 - 30 HP	230/460 V Y/YY
		100 AP/4 - 180 LP/4	3 - 22 kW	400/690 V Δ/Y			332/575 V Δ/Y
4-2	Standard (IE1)	63 S/4-2 - 160L/4-2	0.10/0.15 - 13/17 kW	400 V Δ/YY	63 S/4-2 - 132 M/4-2	0.13/0.20 - 8.7/10.7 HP	230V or 460V or 575V Δ/YY
8-2		71 S/8-2 WU - 132 M/8-2 WU	0.045/0.22 - 1.4/5.5 kW	400 V Y/Y	71 S/8-2 WU - 132 M/8/2 WU	0.06/0.3 - 1.9/7.4 HP	230V or 460V or 575V Y/Y

NEMA and CSA Labeled Motors

Variations are based upon the nominal utilization voltage, and not the service (supply) voltage as per ANSI C84.1. Voltage and frequency tolerances follow the guidelines set forth in NEMA MG-1.

Service Voltages	Utilization Voltages	Voltage Variation	Frequency Variation	Voltage/Frequency Variation
120V	115V	+/- 10%	+/- 5%	+/- 5%
208V	200V			
240V	230V			
480V	460V			
600V	575V			

50Hz CE Labeled Motors

Standard NORD motors are designed in accordance with IEC 60034-1, It is common practice to display the rated voltage on the motor nameplate. Alternatively, the allowable voltage range may be displayed on the motor nameplate. Allowable voltage and frequency variations are as specified in the table below:

Motor Voltage	Voltage Tolerance	Allowable Voltage Range	Frequency Variation
230/400V	+/- 5%	220-240 / 380-420V	+/- 2%
400/690V	+/- 5%	380-420 / 660-725V	+/- 2%

Voltage harmonization was introduced to the European Union in 1983, as part of IEC 60038 (formerly IEC 38). From 1995-2008 a transition period allowed motors to be labeled with the "harmonized voltage" however a reduced allowable voltage tolerance was permitted by the IEC 60038 standard as displayed in the table below:

Previous Motor Voltage	Harmonized Motor Voltage	Voltage Tolerance
220/380V	230/400V	+6 / -10%
240/415V	230/400V	+10 / -6%
380/660V	400/690V	+6 / -10%

US and Canadian Standard (CUS)

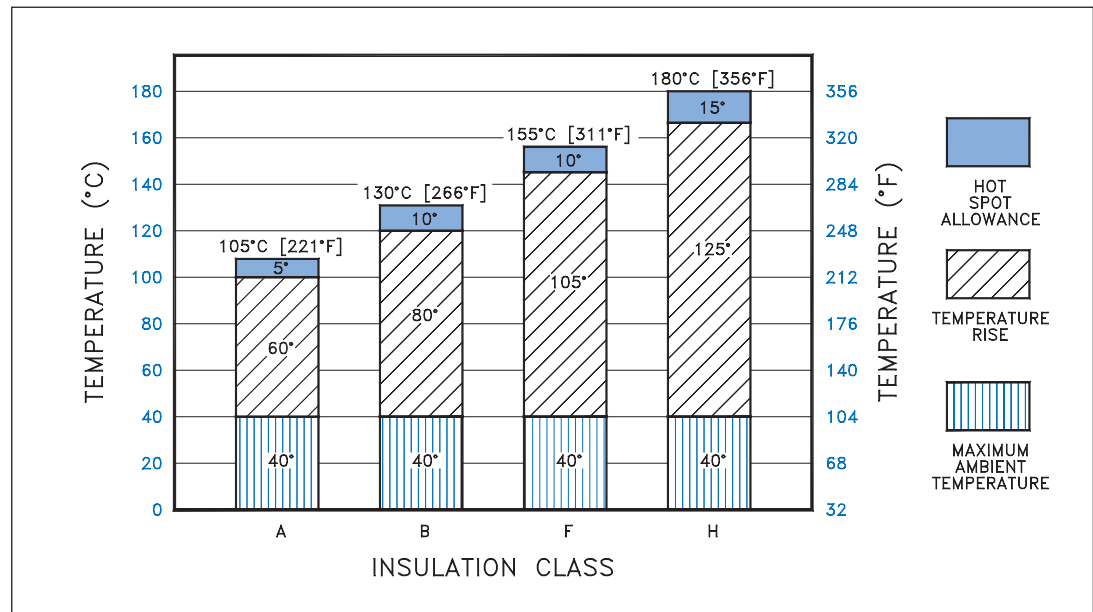
CUS motor construction defines that NORD motors are constructed in accordance to UL 1004 (electric motors) and CSA C22.2 No. 100-04 (motors and generators) guidelines. This option is standard for 208, 230, 460, and 575 Volt operation at 60 Hz.

Motors nameplated with the CUS option will be marked  and  indicating that the Underwriters Laboratories and CSA have tested and approved NORD motors according to both US and Canadian standards.



Insulation Class

NORD motors are constructed with a thermal class F insulating system. These motors are also designed for a class B temperature rise of up to 80°C. The use of class F insulation with a class B temperature rise provides increased operating life. Motors constructed with class H insulation are also available as an option.



Ambient Temperature

NORD motors are designed to operate with a maximum ambient temperature of 40°C (104°F). If the motor's operating environment exceeds 40°C, the motor's nominal power P_n either needs to be de-rated (see table below) or upgraded insulation is required.

Ambient temp [°F]	113	122	131	140
Ambient temp [°C]	45	50	55	60
De-rate factor	0.96	0.92	0.87	0.82

Motor Rated Power = $[P_n \times \text{De-rate factor}]$



Elevation

NORD motors are designed to operate at an elevation of up to 3300 ft (1000 m) above sea level. At higher elevations the air is thinner resulting in less cooling capacity. If the motor's installation elevation exceeds 3300 ft (1000 m), the motor's nominal power (P_n) either needs to be de-rated (see table below) or upgraded insulation systems need to be considered.

Altitude [ft]	5000	6500	8200	10000	11500	13000
Altitude [m]	1500	2000	2500	3000	3500	4000
De-rate Factor	0.97	0.94	0.90	0.86	0.83	0.80

Motor Rated Power = [P_n x De-rate factor]

Enclosure

The NORD standard motors are provided with Totally Enclosed Fan-Cooled (TEFC) with an IP55 enclosure rating. Other enclosures are available, including Totally Enclosed Non-Ventilated (TENV), Totally Enclosed Blower-Cooled (TEBC), and IP66.

The motor integral cooling fan provides proper air flow in either direction of rotation. The IEC cooling classification is IC 411 according to IEC 60034-6.

	1st digit Foreign body protection		2nd digit Water protection
0	No protection	0	No Protection
1	Protected against solid objects 50mm (2 in) in diameter and larger	1	Protected against dripping water
2	Protected against solid objects 12 mm (1/2 in) in diameter and larger	2	Protected against dripping water up to a 15 degree angle
3	Protected against solid objects 2.5 mm (0.1 in) in diameter and larger	3	Protection against sprayed water
4	Protected against solid objects 1 mm (0.04 in) in diameter and larger	4	Protection against splashed water
5	Protected against dust	5	Protection against water jets
6	Dust tight	6	Protection against high pressure water jets
7	--	7	Protection against intermittent submersion in water
8	--	8	Protection against continuous submersion in water



Duty Classes

The following duty types are defined in IEC 60034-1.

Duty Type	Explanation Excerpts
S1	Continuous operation at a constant load, the motor reaches thermal equilibrium
S2	Short-time operation at a constant load for a given time followed by a time of rest until the motor is completely cooled down to ambient temperature. Example: S2-10 minutes Recommended values for determination: 10, 30 min.
S3	Sequential intermittent operation, identical run and rest cycles with a constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise. The cyclic duration factor (cdf) indicates the portion of operation time in relation to a complete duty cycle. The typical duty cycle time is 10 minutes, unless otherwise specified. Example: S3-40% Recommended values for determination: 25, 40, 60%
S6	Continuous operation with intermittent load sequential, identical cycles of running with constant load and running with no load. No rest periods. Example: S6-40% Recommended values for determination: 25, 40, 60%

Power Increasing Factor for Short-term & Intermittent Operation

Motor ratings in this catalog are based on continuous duty operation (S1). If a motor is designed for S1 duty, but is to be operated for short-time or intermittent operation it can be subjected to higher loads. The available motor power can be raised above the motor rated power by the “increasing factor” in the table below.

Duty Type		Increasing Factor
S2	Operating time	10 min
		30 min
S3	Cyclic duration factor (cdf)	25%
		40%
		60%
S6	Cyclic duration factor (cdf)	25%
		40%
		60%

Motor Rated Power = $[P_n \times \text{Increasing factor}]$





Protective Features

All NORD Motors and Speed Reducers are constructed to provide a high degree of protection against wet and severe environments. NORD motors and speed reducers are sealed against moisture ingress and use corrosion and moisture resistant components. NORD has recently made many enhancements in the motor and gear units standard construction to provide improved environmental protection. Many of the standard protection features of the NORD units are only available at an additional cost from other motor and gear drive suppliers. NORD designs all gearmotors, speed reducers and motors for installation in harsh industrial, commercial and municipal installation environments.

Motors for Indoor Operation - Option Codes

Motors for Outdoor Operation - Option Codes

	Dry Conditions	Wet or Humid Conditions		Sheltered from the Elements	Exposed to the Elements
Ambient Temp. Fluctuation	–	KB, SH	Ambient Temp. Fluctuation	KB, SH	KB, SH, KKV
Paint	–	NSD+	Paint	NSD+	NSDx3
Vertical Motor Mount 	RD	RDD	Vertical Motor Mount 	RD	RDD

Option Code Key

KB	Condensation Drain Holes - Plugged
SH	Space Heater
KKV	Terminal Box Sealed with Resin
NSD+	NORD Severe Duty Paint
NSDx3	NORD Severe Extreme Duty X3 Paint
RD	Canopy Drip Cover
RDD	Double Fan Cover



Mounting Positions

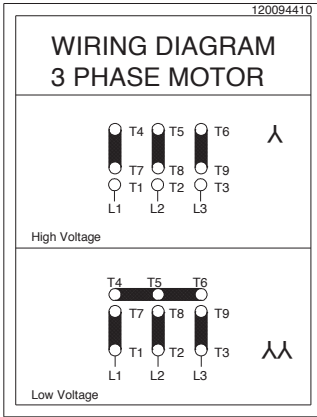
The motor mounting position helps to determine the use of specific options as well as help specify the terminal box location as well as the conduit entry location. However, unless a drip cover is used for shaft-up or shaft-down applications, drip-proof motors must be mounted in the horizontal or sidewall position to meet its enclosure definition. If considering any mounting positions that are not shown as catalog-standard options, it is critical that the customer consult with NORD prior to ordering. When mounting motors, secure the motor tightly to the mounting base of your equipment or onto to a flat and rigid surface.

<p>Mounting Positions Footed Motors</p>	<p>Terminal Block & Conduit Entry For Footed Motors</p> <p>Hand Lever Positions For Footed Motors</p>
<p>Mounting Positions Flanged Motors</p>	<p>Terminal Block & Conduit Entry For Flanged Motors</p> <p>Hand Lever Positions For Flanged Motors</p>

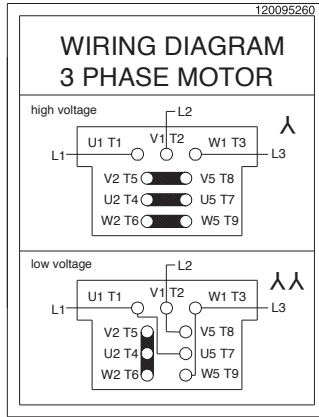


Motor Connection Diagrams

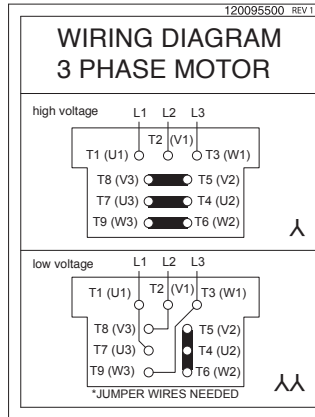
NORD Frames 63-225
230 / 460V, 60Hz, 3Ø | 200 / 400V, 50Hz, 3Ø



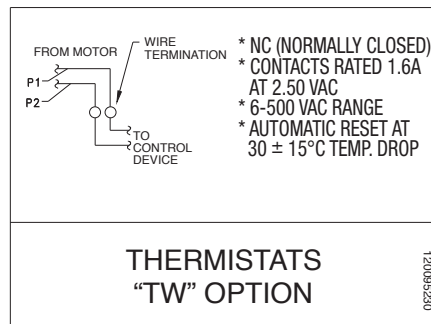
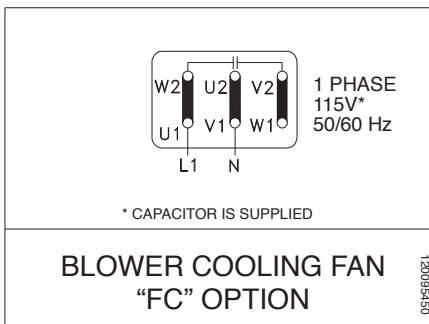
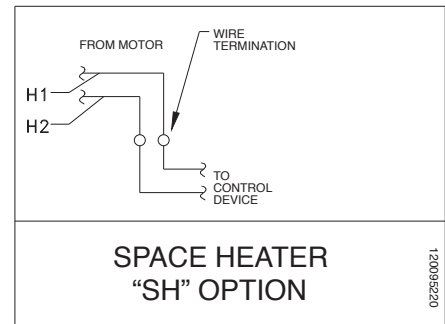
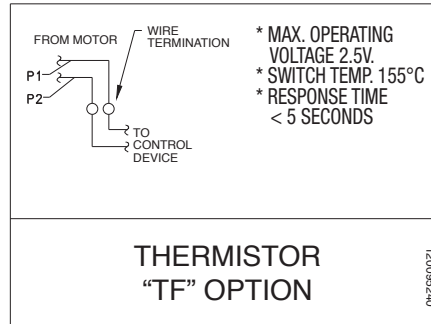
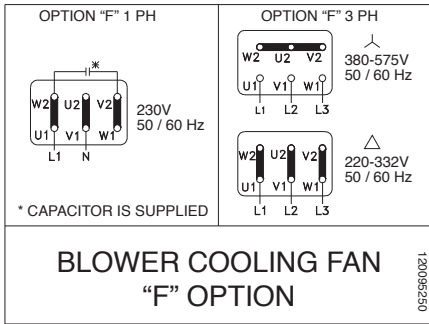
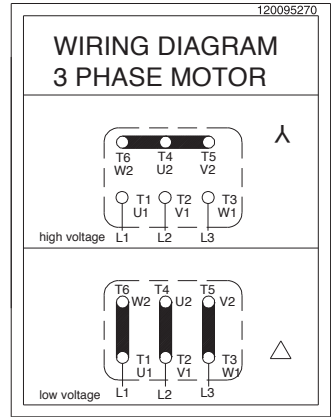
NORD Mfg by Siemens - Frames 200+
230 / 460V, 60Hz, 3Ø | 200 / 400V, 50Hz, 3Ø
190 / 380V, 60Hz, 3Ø



NORD Mfg by Siemens - Frames 200+
230 / 460V, 60Hz, 3Ø | 200 / 400V, 50Hz, 3Ø
190 / 380V, 60Hz, 3Ø



NORD Frames 63-225
460 / 800V, 60Hz, 3Ø | 230 / 400V, 50Hz, 3Ø
208 / 360V, 60Hz, 3Ø | 400 / 690V, 50Hz, 3Ø
332 / 575V, 60Hz, 3Ø





Motor Options & Construction

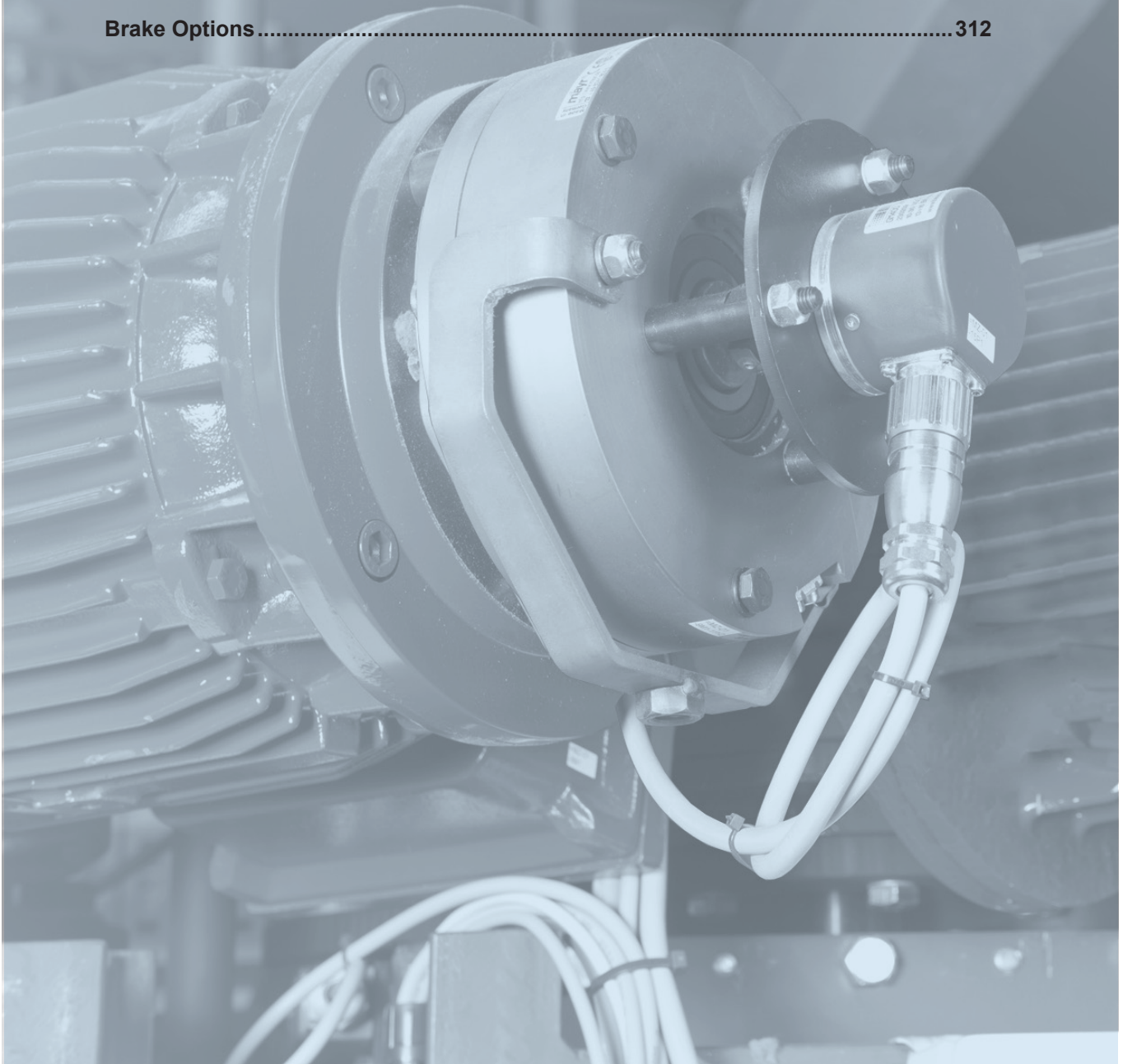
NORD motors are stocked in one of two ways. The first method is to stock a complete motor that is ready to be assembled to a gear reducer or shipped as a stand alone motor. The second method, the motor is assembled from component parts. The **M Modify** next to a motor option designates that the option can be added to a complete motor by simple modification. The **B Build** next to a motor option indicates that the motor will need to be built from component parts in order to incorporate the motor option.

Motor Options

Abbreviation	Description	M Modify	B Build
AG	Absolute Encoder		✓
AICM	Additional Insulation		✓
ECR	Single Phase Motors, 60Hz		✓
EKK	Small Terminal Box	✓	
EP	Epoxy Dipped Windings		✓
F	Blower Cooling Fan	✓	
FC	Blower Cooling Fan	✓	
HR	Hand Wheel		✓
IG...P	Incremental Encoder		✓
ISO H	Class H Insulation		✓
KB	Condensation Drain Holes - Plugged		✓
KBO	Condensation Drain Holes - Open		✓
KKV	Terminal Box Sealed with Resin		✓
MG	Magnetic Encoder		✓
MS	Quick Power Plug Connector	✓	
OL	Totally Enclosed Non-Ventilated	✓	
OL/H	Totally Enclosed Non Ventilated without Fan Cover		✓
RD	Canopy Drip Cover	✓	
RDD	Double Fan Cover	✓	
RLS	Motor Backstop		✓
RS	Round Motor Power Connectors		✓
SH	Space Heater		✓
TF	Thermistor		✓
TW	Thermostat		✓
WE	2nd Shaft Extension on Fan Side		✓
WU	High Resistance Rotor		✓
-	IP65 Enclosure Protection	✓	
-	IP66 Enclosure Protection	✓	
-	Paint Coatings	✓	
-	Pre-Fabricated Motor Power Cable	✓	

For detailed motor option information please refer to the M7000 motor catalog

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Motor Brake (Option BRE)

The standard NORD motor brake is spring-set when power is removed from the BRE circuit (power-off). The brake coil utilizes a DC voltage supplied through a rectified power source.

Advantages

- Each NORD motor frame size has a number of available brake sizes, each with different torque capacities.
- Brake torque adjustments are possible by changing the brake spring combinations. In addition, brake sizes from 5-40 Nm (3.7-30 lb-ft) are typically supplied with an additional spanner-nut adjustment on the back of the brake.
- NORD brakes provide a high degree of safety because when power is removed the brake will automatically set to hold the load.
- The brake rotor or brake disc is environmentally safe and asbestos-free.
- The connection between the rectifier and the brake coil is completed at the factory and the brake air-gap is factory-set but can be adjusted in the event of wear.

Basic Brake Operation

The standard NORD motor brake is “spring set”. When power is removed and the brake is de-energized (power-off), the brake springs exert a force against the armature plate in turn preventing the brake rotor (or brake disc) from rotating. When the brake coil is energized (power-on), a magnetic field pulls the armature plate across the air gap to the brake casing, which releases the brake rotor and allows the motor shaft to rotate.

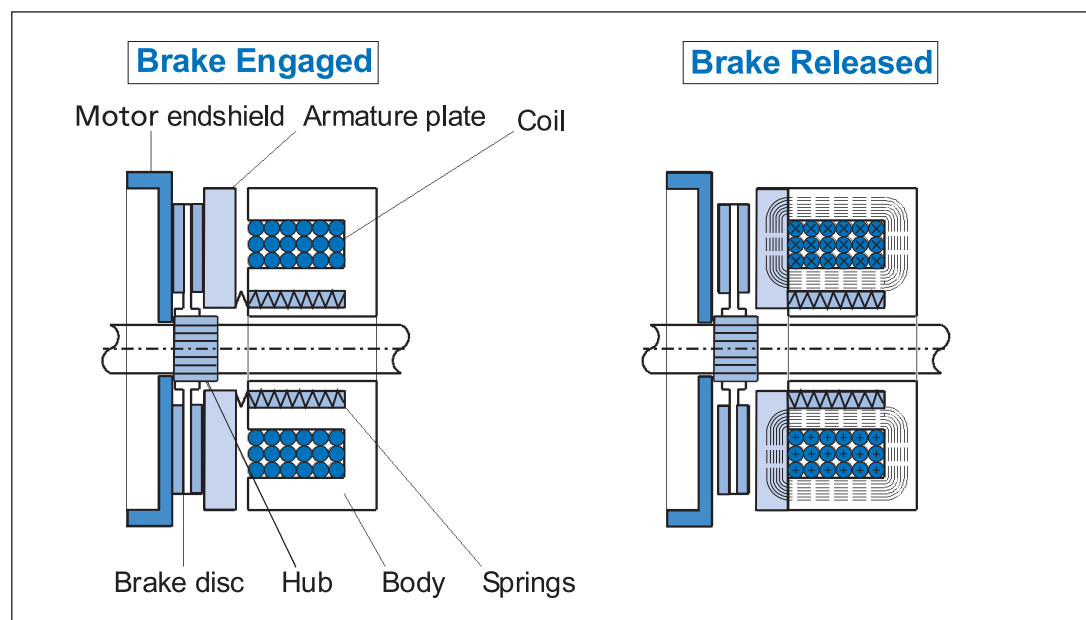
NORD brakes are DC voltage brakes and in most instances are supplied with a motor mounted brake rectifier for easy connections to AC power. AC power is taken directly from the power line or from the terminal block of the motor and converted to DC by the supplied rectifier.



IMPORTANT NOTE



If the motor is connected to a frequency inverter, soft start, or is a two-speed motor, the AC power must be supplied separately to the brake rectifier.





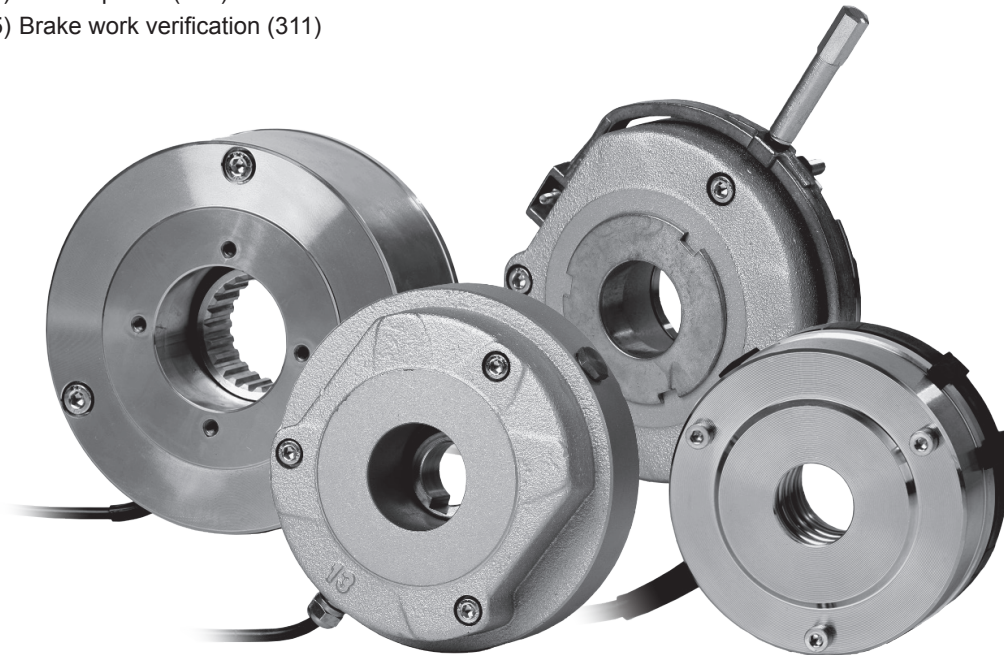
Brake Selection

The selection of a motor brake system is broken down into five phases. The selection of the braking torque, the selection of the braking times (release times and setting times), the selection of the electrical supply and connection, the selection of brake options, and the final phase is the verification of the permissible brake work.

Each NORD motor may be supplied with a number of brake torque sizes. Each brake may be adjusted to different brake torque values.

Selection steps

- 1) Brake torque selection (304)
- 2) Brake times & electrical selection (306)
- 3) Electrical supply and connection (306)
- 4) Brake options (312)
- 5) Brake work verification (311)



Brake Torque Selection



Brake Torque Selection

Each NORD motor size has a number of brake torque sizes available. The BRE value in the table below is the standard brake torque size for each motor.

Example for ordering: SK 32 - S/4 **BRE10** (**BRE 10** indicates a brake torque size of 10 Nm)

General Selection Considerations

NORD relies on the equipment builder to specify appropriate brake sizing for their application, while giving consideration to the following:

- For most applications, we advise sizing the brake to 1.5 - 2 times the motor rated torque.
- For vertical applications, it may be advisable to size the brake up to 3 times the motor rated torque.
- For some applications, it may be necessary to specify a reduced brake torque setting to prevent excessive peak load conditions developed at the reducer output.
- On travel drive applications, excessive brake torque may lead to wheel skid; in addition on crane applications excess hoist-cable swing can result.

	CAUTION	
BRE800 and BRE1200 brakes may only be controlled with a fast reaction rectifier (overexcitation), the maximum permissible nominal currents of the rectifier must be considered!		

Motor Size & Efficiency			Brake Size and Torque												
Frame Size	SE	PE		BRE5	BRE10	BRE20	BRE40	BRE60	BRE100	BRE150	BRE250	BRE400	BRE800	BRE1200	
			Nm	5	10	20	40	60	100	150	250	400	800	1200	
			lb-in	44	89	177	354	531	885	1328	2213	3540	7080	10620	
			lb-ft	3.7	7.4	14.8	29.5	44.3	73.8	111	184	295	590	354	
63	S/L			Std.	Opt. * #										
71	S/L			Std.	Opt. *										
80	S			Std.	Opt.	Opt. *									
80	L	LP		Opt.	Std.	Opt. *									
90	S	SP			Opt.	Std.	Opt.*								
90	L	LP			Opt.	Std.	Opt.*								
100	L	LP				Std.	Opt.	Opt. * #							
100	LA	AP				Opt.	Std.	Opt. * #							
112	M	MP				Opt.	Opt.	Std.							
132	S	SP						Std.	Opt.	Opt. *					
132	M	MP						Opt.	Std.	Opt. *					
132	MA							Opt.	Opt.	Std. *					
160									Opt.	Std.	Opt.				
160	M	MP							Opt.	Std.	Opt.				
160	L	LP							Opt.	Opt.	Std.				
180	MX									Opt.	Std.				
180	LX									Opt.	Std.				
180		MP									Std.	Opt.* #			
180		LP									Std.	Opt.* #			
200	LX										Opt.	Std.* #			
225		RP									Opt.	Std.			
225		SP									Opt.	Std.			
225		MP										Opt.	Std.		
250		WP										Opt.	Std.		
280		SP											Std.* ²⁾	Opt.* ³⁾	
280		MP											Std.* ²⁾	Opt.* ³⁾	
Weight	kg			2	3	5.5	7	10	16	22	32	50	53	56	
	lb			4.4	6.6	12.1	15.4	22	35	49	71	110	117	124	
Inertia	kg-m ² x 10 ⁻³			0.015	0.045	0.153	0.45	0.86	1.22	2.85	6.65	19.5	39	58.5	
	lb-ft ² x 10 ⁻³			0.356	1.068	3.63	10.68	20.4	29.0	67.6	158	463	926	1389	

* IP66 brake not possible

²⁾When used as a stopping brake, evaluation is essential.

Std - Standard Offering

Manual brake release option not possible

³⁾Designed as a holding brake or emergency stop only.

Opt - Optional Offering



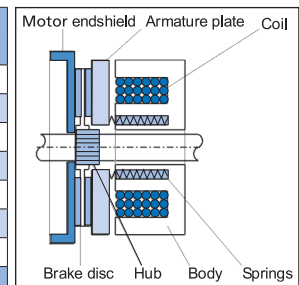
CAUTIONS	
⚠	<ul style="list-style-type: none"> • Brake torque - The brake torque is measured with a mean friction radius of the brake pad surface with a circumferential speed of 1m/sec (197 fpm). • Brake torque tolerance - For different applications and operating conditions, brake torque can vary from +40/-20% compared to the rated brake torque. • Hoisting (lifting/lowering) applications - must have the brake wired for fast response (DC-switching) • Initial operation & wear-in period - In new condition, the brake will have a reduced torque of up to 30%. In order to achieve full rated brake torque, a short run-in period is required. The run in time will vary depending on system loads. • The brake rotor or brake pad - must be protected against foreign matter, oil and grease. Contaminants of this type can greatly influence wear and reduce breaking torque.

Brake Torque Adjustment (ADJ)

Brake torque adjustments are possible by changing the brake spring combinations or by removing springs.

Brake Torque Reduction - Spring Removal

"Brake Size"	7 Springs		5 Springs		3 Springs	
	[Nm]	[lb-ft]	[Nm]	[lb-ft]	[Nm]	[lb-ft]
BRE 5	5	3.7	3.5	2.6	2	1.5
BRE10	10	7.4	7	5.2	4	3.0
BRE20	20	14.8	14	10.3	8	5.9
BRE40	40	29.5	28	20.7	17	12.5
BRE60	60	44.3	43	31.7	26	19.2
BRE100	100	73.8	70	51.6	42	31.0
BRE150	150	111	107	78.9	65	47.9
"Brake Size"	8 Springs		6 Springs		4 Springs	
	[Nm]	[lb-ft]	[Nm]	[lb-ft]	[Nm]	[lb-ft]
BRE250	250	184	187	138	125	92
BRE400	400	295	300	221	200	148
BRE800	800	590	600	443	400	295
BRE1200	1200	885	900	664	600	443



When adjusting the brake torque, start by removing the outer springs at opposite corners to prevent uneven brake wear.

On brake sizes 5-150 Nm (3.7-111 lb-ft) full brake torque is achieved with all (7) springs. The brake springs are placed in such a manner where there are (3) inner and (4) outer springs.

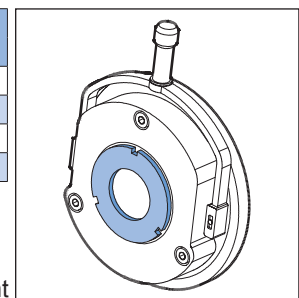
On brake sizes 250-1200 Nm (184-885 lb-ft) full brake torque is achieved with all (8) springs. The brake springs are placed in such a manner where there are (4) inner and (4) outer springs.

Spanner Nut Adjustment

"Brake Size"	Torque Reduction*		Max. Turns	Minimum Torque*	
	[Nm]	[lb-ft]		[Nm]	[lb-ft]
BRE 5	0.2	0.15	6	0.8	0.59
BRE10	0.2	0.15	12	1.6	1.18
BRE20	0.3	0.22	12	4.4	3.25
BRE40	1	0.74	9	8.0	5.90

* With the minimum number of springs and maximum number of turns to the spanner nut.

* Per each turn of the spanner nut



In addition, brake sizes from 5-40 Nm (3.7-30 lb-ft) are typically supplied with a threaded adjustment nut or spanner nut. Additional fine torque adjustment can be made by unscrewing the spanner nut a number of turns or "clicks" with a spanner wrench.



Brake Times & Electrical Selection

Brake timing performance is critical in selecting the optimal brake system. NORD brakes can provide exceptional performance in terms of the release (start) times and engagement (stop) times. Use the following guidelines in order to select the correct brake control components and connections.

- 1) Determine if the brake needs to be wired directly from the motor terminal block or powered by a separate source.
 - If you are using a AC vector drive, soft-start or a two- speed motor you will need to supply the rectifier from a separate power source.
 - If the motor is powered direct across-the-line the rectifier power can be supplied from the motor's terminal block.
- 2) What type of performance do I need?
 - Is the standard brake performance OK?
 - Is a higher performance required for fast brake release or very fast brake stopping?
- 3) Determine the brake supply voltage and check the rectifier compatibility table on page 308.



Selection Suggestions

When Fast or Very Fast Stopping is Recommended

Any applications that require quick stops and positive action at stand-still, as well as all vertically mounted applications.

Recommended Applications

- conveyors and inclined conveyors
- hoists and lifts
- bulk material handling equipment (bucket elevators, idler conveyor's)

When Fast-Release is Recommended (Overexcitation)

Any application that is very high-cycling with frequent starts and stops. These applications require the brake to release very-quickly in order to avoid excessive heat build-up in the AC motor and brake coil.

Recommended Applications

- Index conveyors
- Diverters
- Storage and retrieval crane systems

	CAUTION	
Hoisting (lifting/lowering) applications - must have the brake wired for fast brake engagement.		

Power Source	Brake Release (start)	Brake engagement (stop)	Braking Method *	Rectifier
Motor Terminal Block	Standard	Standard (AC switching)	10	GVE/GHE/GUE
	Standard	Fast (DC switching)	15	GVE/GHE/GUE
	Standard	Very Fast (Reduced power holding)	40	GPE/PMG
	Fast (Overexcitation)	Standard (AC switching)	30	GPE/PMG
	Fast (Overexcitation)	Fast (DC switching)	35	GPE/PMG
Separate Power Source	Standard	Standard (AC switching)	20	GVE/GHE/GUE
	Standard	Fast (DC switching)	25	GVE/GHE/GUE
	Standard	Very Fast (Reduced power holding)	55	GPU/PMG
	Fast (Overexcitation)	Standard (AC switching)	45	GPU/PMG
	Fast (Overexcitation)	Fast (DC switching)	50	GPU/PMG

* Braking methods referenced in connection diagrams on pages 134 - 144 of the M7000 (09.15) catalog

Rectifier Styles

GV - Full Wave Rectifier (Bridge)

GH - Half Wave Rectifier

GU - Combination Rectifier, can be connected full or half wave

GPE - Hybrid Rectifier, Full wave then switches to half wave.

PMG - Hybrid Rectifier, Full wave then switches to half wave.

GPU - Hybrid Rectifier, Full wave, then switches to half wave. Has integrated DC Switching via voltage sensing.



Brake Rectifier Compatibility

Brake Voltage (VAC)	Coil Voltage (VDC)	Braking Method	Rectifier Type	Rectifier P/N	BRE 5	BRE 10	BRE 20	BRE 40	BRE 60	BRE 100	BRE 150	BRE 250	BRE 400	BRE 800
115	105	20	GVE20L	19141000	X	X	X	X	X	X	X			
	105	25	GVE20L	19141000	X	X	X	X	X	X	X			
208	180	10	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	180	15	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	180	20	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	180	25	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	105	30	GPE20L	19140230	X	X	X	X						
	105	30	PMG500	19140200					X	X	X	X	X	X
	105	35	GPE20L	19140230	X	X	X	X						
	105	35	PMG500	19140200					X	X	X	X	X	X
	180	40	GPE20L	19140230	X	X	X	X	X	X	X			
	180	40	PMG500	19140200								X	X	X
	105	45	GPU20L	19140090	X	X	X	X						
	105	45	PMG500	19140200					X	X	X	X	X	X
	105	50	GPU20L	19140090	X	X	X	X						
	105	50	PMG500	19140200					X	X	X	X	X	X
180	55	GPU20L	19140090	X	X	X	X	X	X	X				
180	55	PMG500	19140200								X	X	X	
230	105	10	GHE40L	19141010	X	X	X	X	X	X	X			
	205	10	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	205	10	GUE40V	19140300	X	X	X	X	X	X	X			
	105	15	GHE40L	19141010	X	X	X	X	X	X	X			
	205	15	GVE20L	19141000	X	X	X	X	X	X	X	X	X	
	205	15	GUE40V	19140300	X	X	X	X	X	X	X			
	105	20	GHE40L	19141010	X	X	X	X	X	X	X			
	205	20	GUE40V	19140300	X	X	X	X	X	X	X	X	X	
	205	20	GVE20L	19141000	X	X	X	X	X	X	X			
	105	25	GHE40L	19141010	X	X	X	X	X	X	X			
	205	25	GUE40V	19140300	X	X	X	X	X	X	X	X	X	
	205	25	GVE20L	19141000	X	X	X	X	X	X	X			
	105	30	GPE20L	19140230	X	X	X	X						
	105	30	PMG500	19140200					X	X	X	X	X	X
	105	35	GPE20L	19140230	X	X	X	X						
	105	35	PMG500	19140200					X	X	X	X	X	X
	205	40	GPE20L	19140230	X	X	X	X	X	X	X			
	205	40	PMG500	19140200					X	X	X	X	X	X
	105	45	GPU20L	19140090	X	X	X	X						
	105	45	PMG500	19140200					X	X	X	X	X	X
	105	50	GPU20L	19140090	X	X	X	X						
	105	50	PMG500	19140200					X	X	X	X	X	X
	205	55	GPU20L	19140090	X	X	X	X	X	X	X			
	205	55	PMG500	19140200								X	X	X
205	55	GPU20	19140090	X	X	X	X	X	X	X				
205	55	PMG500	19140200								X	X	X	



Brake Rectifier Compatibility

Brake Voltage (VAC)	Coil Voltage (VDC)	Braking Method	Rectifier Type	Rectifier P/N	BRE 5	BRE 10	BRE 20	BRE 40	BRE 60	BRE 100	BRE 150	BRE 250	BRE 400	BRE 800
332	180	30	GPE40L	19140240	X	X	X	X	X	X	X			
	180	30	PMG500	19140200								X	X	X
	180	35	GPE40L	19140240	X	X	X	X	X	X	X			
	180	35	PMG500	19140200								X	X	X
	180	45	GPU40L	19140170	X	X	X	X	X	X	X			
	180	50	GPU40L	19140170	X	X	X	X	X	X	X			
400	180	10	GHE40L	19141010	X	X	X	X	X	X	X			
	180	10	GUE40V	19140300	X	X	X	X	X	X	X			
	180	15	GHE40L	19141010	X	X	X	X	X	X	X			
	180	15	GUE40V	19140300	X	X	X	X	X	X	X			
	180	20	GHE40L	19141010	X	X	X	X	X	X	X			
	180	20	GUE40V	19140300	X	X	X	X	X	X	X			
	180	25	GHE40L	19141010	X	X	X	X	X	X	X			
	180	25	GUE40V	19140300	X	X	X	X	X	X	X			
	180	30	GPE40L	19140240	X	X	X	X	X	X	X			
	180	30	PMG500	19140200								X	X	X
	180	35	GPE40L	19140240	X	X	X	X	X	X	X			
	180	35	PMG500	19140200								X	X	X
	180	45	GPU20L	19140090	X	X	X	X	X	X	X			
	180	45	PMG500	19140200								X	X	X
	180	50	GPU20L	19140090	X	X	X	X	X	X	X			
	180	50	PMG500	19140200								X	X	X
460	205	10	GHE40L	19141010	X	X	X	X	X	X	X	X	X	
	205	10	GUE40V	19140300	X	X	X	X	X	X	X			
	205	15	GHE40L	19141010	X	X	X	X	X	X	X	X	X	
	205	15	GUE40V	19140300	X	X	X	X	X	X	X			
	205	20	GHE40L	19141010	X	X	X	X	X	X	X	X	X	
	205	20	GUE40V	19140300	X	X	X	X	X	X	X			
	205	25	GHE40L	19141010	X	X	X	X	X	X	X	X	X	
	205	25	GUE40V	19140300	X	X	X	X	X	X	X			
	205	30	GPE40L	19140240	X	X	X	X	X	X	X			
	205	30	PMG500	19140200								X	X	X
	205	35	GPE40L	19140240	X	X	X	X	X	X	X			
	205	35	PMG500	19140200								X	X	X
	205	45	GPU40L	19140170	X	X	X	X	X	X	X			
	205	45	PMG500	19140200								X	X	X
	205	50	GPU40L	19140170	X	X	X	X	X	X	X			
	205	50	PMG500	19140200								X	X	X
575	250	10	GHE50L	19141020	X	X	X	X	X	X	X	X	X	
	250	15	GHE50L	19141020	X	X	X	X	X	X	X	X	X	
	250	20	GHE50L	19141020	X	X	X	X	X	X	X	X	X	
	250	25	GHE50L	19141020	X	X	X	X	X	X	X	X	X	

Brakes

Brake Performance Data



Brake Performance Data

Brake Size		BRE5	BRE10	BRE20	BRE40	BRE60	BRE100	BRE150	BRE250	BRE400	BRE800*	BRE1200*
Brake torque $-_{max}$	[lb-ft]	3.7	7.4	15	30	44	74	110	185	295	590	1180
	[lb-in]	44	89	177	354	531	885	1330	2200	3500	7100	10600
	[Nm]	5	10	20	40	60	100	150	250	400	800	1200
Power coil P_{20}	[W]	22	28	39	42	50	75	76	100	140	140	140
Nominal air gap	[in]	0.008	0.008	0.008	0.012	0.012	0.016	0.020	0.020	0.020	0.024	0.024
	[mm]	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.6
Maximum air gap (re-adjust) a_{max}	[in]	0.024	0.028	0.031	0.035	0.039	0.043	0.043	0.047	0.047	0.047	0.047
	[mm]	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2
Max brake pad wear - must be replaced	[in]	0.118	0.118	0.111	0.118	0.138	0.138	0.138	0.138	0.138	0.138	0.138
	[mm]	3	3	2.8	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Minimum brake pad thickness	[in]	0.177	0.217	0.295	0.374	0.453	0.492	0.571	0.571	0.650	0.650	0.650
	[mm]	4.5	5.5	7.5	9.5	11.5	12.5	14.5	14.5	16.5	16.5	16.5
Max work per cycle W_{max}	[J x 10 ³]	3	6	12	25	35	50	75	105	150	112	112
	[lb-ft x 10 ³]	2.2	4.4	8.9	18.4	25.8	36.9	55.3	77.4	110.6	82.6	82.6
Work until re-adjust W_m	[J x 10 ⁷]	5	12	20	35	60	125	200	340	420	420	210
	[lb-ft x 10 ⁷]	3.7	8.9	14.8	25.8	44.3	92.2	147.5	250.8	309.8	309.8	154.9
Heat load per cycle	[J/s]	80	100	130	160	200	250	300	350	400	600	600
	[lb-ft/s]	59.0	73.8	95.9	118.0	147.5	184.4	221.3	258.1	295.0	442.5	442.5
Release time (start) t_1	[ms]	35	45	70	80	120	160	200	220	230	400	450
Release time (start) $t_{1,OE}$	[ms]	15	15	28	28	75	110	110	n/a	n/a	n/a	n/a
Setting time (stop) $t_{2,AC}$	[ms]	70	95	140	175	210	280	350	500	800	1000	600
Setting time (stop) $t_{2,DC}$	[ms]	30	45	30	75	90	120	150	180	200	250	180
Setting time (stop) $t_{2,DCRP}$	[ms]	5	6	11	12	12	13	17	24	n/a	n/a	n/a
IR relay delay (stop) $t_{2,IR}$	[ms]	18	18	18	18	18	18	18	18	18	n/a	n/a
Current – 250VDC coil	[A]	0.09	0.11	0.14	0.18	0.19	0.31	0.31	0.4	0.6	0.6	0.6
Current – 225VDC coil	[A]	0.09	0.13	0.18	0.20	0.22	0.35	0.36	0.5	0.6	0.6	0.6
Current – 205VDC coil	[A]	0.11	0.13	0.15	0.24	0.28	0.44	0.45	0.5	0.7	0.7	0.7
Current – 180VDC coil	[A]	0.12	0.16	0.19	0.25	0.30	0.46	0.47	0.6	0.8	0.8	0.8
Current – 105VDC coil	[A]	0.21	0.32	0.39	0.46	0.60	0.88	0.89	1.1	1.3	1.3	1.3
Current – 24VDC coil	[A]	0.92	1.17	1.42	1.75	2.08	3.10	3.20	4.2	5.9	5.9	5.9

* Holding Brakes with emergency-stop properties - switched with fast acting brake rectifier

Release times

t_1 – Brake release time - Standard

$t_{1,OE}$ – Brake release time – Overexcitation (GP)

Set (stop) times

$t_{2,AC}$ – Brake set time – AC switching

$t_{2,DC}$ – Brake set time – DC switching

$t_{2,DCRP}$ – Brake set time – DC switching reduced power

$t_{2,IR}$ – Additional brake stopping of the IR relay



IMPORTANT NOTE



An increased air gap will alter the braking times listed above.



Brake Size Calculation

Torque and inertias below are based on the motor speed. Load side torques must always be divided by the gear reduction ratio. Inertias must be divided by the square of the gear ratio. You must also consider any external reduction ratio outside the gearbox.

Selection for holding loads (static)

$$T_{req} = T_{stat} = T_{load} \times K$$

Selection for stopping loads (static + dynamic)

$$\sum J = J_{motor} + \frac{J_{load}}{i^2}$$

Typically other inertias, like the gearbox, can be ignored.

$$T_{dyn} = \frac{\sum J \times n}{25.7 \times t}$$

$$T_{req} = (T_{dyn} + T_{load}) \times K$$

For driving loads use: $-T_{load}$

For overhauling loads use: $+T_{load}$

Brake Work Verification

$$W = \frac{\sum J \times n^2}{5880} \times \frac{T_B}{T_B \pm T_{load}} \Rightarrow W \leq W_{max}$$

For driving loads use: $+T_{load}$

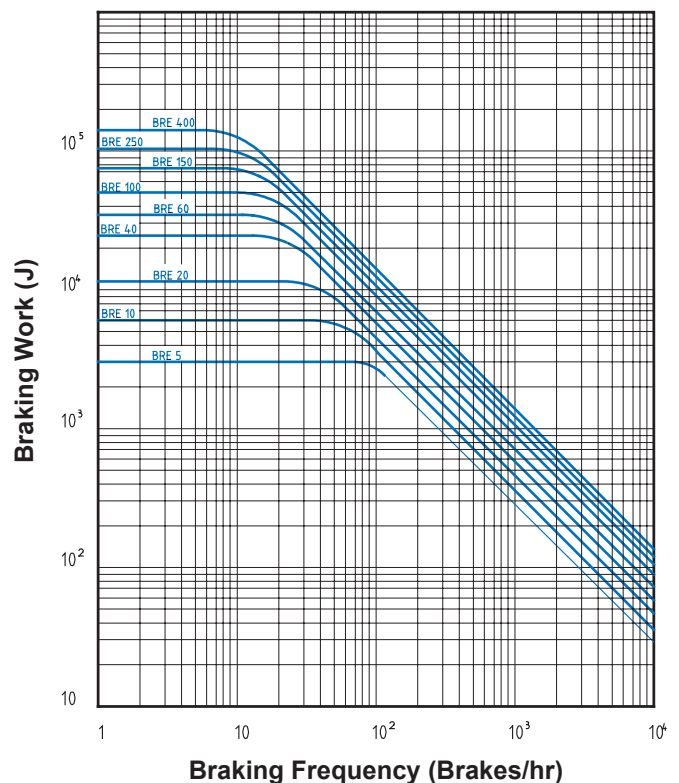
For overhauling loads use: $-T_{load}$

The permissible values for W_{max} (Friction work) depend on the stopping frequency. See diagram at right.

In applications where the brake is operated frequently, two brake work values should be evaluated to ensure adequate brake life: the braking work compared to the braking frequency and the maximum work limit for a single operation, such as an E-stop. Reviewing these two values will help determine the optimal solution and ensure long brake life.

Abbreviation Key

c/h	=	Number of brakes per hour
J [lb-ft ²]	=	Inertia
J _{motor} [lb-ft ²]	=	Motor inertia
i	=	System reduction ratio
K	=	Safety factors. Based on application and according to industry rules and practices Hoisting >2 Hoisting with people >2..3 Travel drives 0.5 to 1.5
T _B [lb-in]	=	Brake torque
T _{dyn} [lb-in]	=	Dynamic torque
T _{req} [lb-in]	=	Required brake torque
T _{load} [lb-in]	=	Load torque
T _{stat} [lb-in]	=	Static torque
n [rpm]	=	Motor speed
t _r [sec]	=	Stopping time
W [lb-ft]	=	Brake work
W _{max} [lb-ft]	=	Maximum brake work for one brake operations





Brake Options

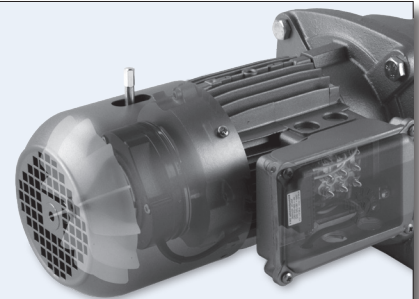
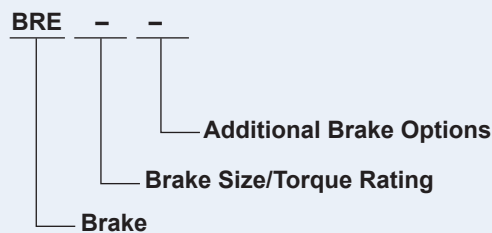
Abbreviation	Description
ADJ	Torque Adjustment - Brake torque may be adjusted at the factory
DBR	Double Brake (2xBRE) - Double brakes are used for redundancy and additional safety
FHL	Locking Hand Release Lever - Lockable manual hand release lever
HL	Hand Release Lever - Manual hand release lever
HLH	Hand Release Lever with Hole - Hand lever with 5.5 mm hole
IP66	IP66 Brake Enclosure - Brake with IP66 enclosure
IR	Current Sensing Relay - Fast brake engagement (stopping) without external control equipment
MIK	Micro-Switch - Brake fitted with a micro-switch for sensing the brake state (released or engaged)
NRB1	Quiet Brake Release - An o-ring is placed between the coil body and the armature plate for noise reduction
NRB2	Quiet Brake Motor Operation - An o-ring is placed between the carrier hub & the armature plate to prevent clattering.
RG	Corrosion Protected Brake - Corrosion protected brake
SR	Dust & Corrosion Protected Brake - Dust & corrosion protected brake

Rectifier Options

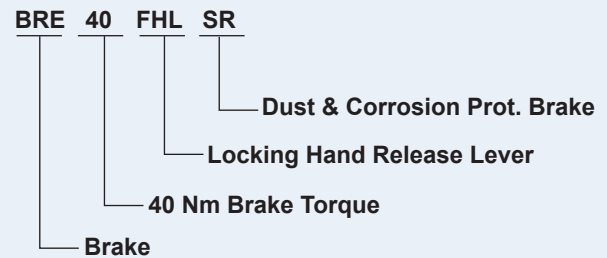
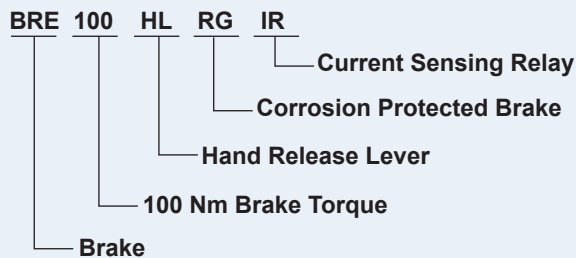
Abbreviation	Description
Rectifiers	Most NORD brakes are provided with a rectifier that converts AC voltage to DC voltage. Rectifiers are used because most motors are AC powered, but brakes require DC power.
GHE	Half Wave Rectifiers
GPE	Push Hybrid Rectifiers - External DC Switching
GPU	Push Hybrid Rectifiers - Integrated DC Switching
GUE	Dual Rectifier - Full/Half-Wave
GVE	Full Wave Rectifiers
PMG	Push Hybrid Rectifier - Integrated DC Switching
EBGR	Digital Input Dual Wave Rectifier

For detailed brake option and rectifier information please refer to the M7000 motor catalog

Brake Nomenclature



Ordering Examples



Brake, 100 Nm with a hand release lever, corrosion protected brake, and a current sensing relay.

Brake, 40 Nm with a locking hand release lever and dust & corrosion protected brake.



DRIVESYSTEMS

Ratings

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Continuous Duty 230/460V - 60Hz



Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 60Hz • 1.15 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		Eff. Class	n _N Full-Load Speed	I _n Full-Load Current		I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full-Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _v /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]			[A]	[A]									
				[rpm]	[A]	[A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
63 S/4	0.16	0.12	-	1700	0.88	0.44	250%	F	5.93	2.7	3.5	0.66	52.0%	0.0050	7.9
63 L/4	0.25	0.18	-	1680	1.12	0.56	270%	E	9.38	2.3	2.5	0.71	57.0%	0.0066	9.3
71 S/4	0.33	0.25	-	1710	1.56	0.78	310%	G	12.2	2.4	2.7	0.64	63.0%	0.017	12
71 L/4	0.5	0.37	-	1720	1.90	0.95	350%	F	18.3	2.3	2.7	0.69	71.0%	0.020	14
80 S/4	0.75	0.55	-	1710	2.70	1.35	350%	F	27.6	2.2	2.3	0.71	72.0%	0.026	18
80 LP/4	1	0.75	pe	1730	3.14	1.57	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4	1.5	1.1	pe	1740	4.20	2.10	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4	2	1.5	pe	1730	5.60	2.80	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4	3	2.2	pe	1770	7.68	3.84	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4	5	3.7	pe	1755	13.0	6.50	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4	7.5	5.5	pe	1770	19.5	9.75	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4	10	7.5	pe	1765	26.7	13.4	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4	15	11	pe	1770	35.6	17.8	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4	20	15	pe	1775	47.6	23.8	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4	25	18.5	pe	1780	60.6	30.3	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4	30	22	pe	1780	69.6	34.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4	40	30	pe	1785	-	49.5	890	K	1420	3.4	3.8	0.81	94.5	11.63	694
225 SP/4	50	37	pe	1785	-	59.7	880	K	1752	3.0	3.7	0.82	94.6	12.81	728
225 MP/4	60	45	pe	1785	-	72.0	910	K	2131	3.3	3.6	0.83	95.2	15.90	805
250 WP/4	75	55	pe	1785	-	84.4	920	J	2604	2.9	3.2	0.86	95.4	19.46	882
280 SP/4	100	75	pe	1788	-	115	770	H	3523	2.8	3.3	0.85	95.4	33.24	1257
280 MP/4	125	90	pe	1788	-	141	800	J	4408	2.9	3.3	0.87	95.4	40.36	1478
315 SP/4	150	110	pe	1790	-	170	750	H	5284	3.0	3.1	0.86	95.8	52.23	1676
315 MP/4	175	132	pe	1790	-	196	820	J	6160	3.4	3.3	0.87	96.2	68.85	2117
315 RP/4	200	150	pe	1791	-	225	850	J	7045	3.5	3.6	0.87	96.2	73.60	2183
315 LP/4	250	185	pe	1791	-	280	900	K	8798	3.9	3.6	0.87	96.2	87.85	2624

Motor Ratings





Inverter duty • Induction motor • TEFC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 230/460V – 60Hz • 1.15 Service Factor
 60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		n _n Full-Load Speed	I _n Full-Load Current		I _s /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full-Load Torque	T _s /T _n Locked Rotor Torque Ratio	T _b /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]		[A]	[A]									
80 L/4	1	0.75	1650	3.66	1.83	390%	G	38.2	2.2	2.3	0.74	70.0%	0.034	20
90 S/4	1.5	1.1	1660	4.84	2.42	490%	G	57.0	2.5	2.8	0.78	73.0%	0.056	26
90 L/4	2	1.5	1660	6.34	3.17	510%	H	75.9	2.5	2.8	0.80	74.0%	0.074	31
100 L/4	3	2.2	1705	9.00	4.50	490%	G	111	2.3	2.6	0.81	76.0%	0.107	40
100 LA/4	5	3.7	1725	15.2	7.60	510%	G	183	2.7	3.1	0.75	81.0%	0.142	46
132 S/4	7.5	5.5	1735	19.8	9.90	540%	G	272	2.4	2.7	0.82	85.0%	0.570	97
132 M/4	10	7.5	1735	25.8	12.9	630%	H	363	2.9	3.2	0.84	87.0%	0.759	121
160 M/4	15	11	1770	35.8	17.9	820%	J	534	2.9	3.8	0.85	90.7%	1.19	172
160 L/4	20	15	1760	48.4	24.2	850%	K	716	2.9	3.9	0.87	89.4%	1.59	205
180 MX/4	25	18.5	1760	59.0	29.5	880%	K	895	3.4	4.3	0.87	90.5%	1.90	236
180 LX/4	30	22	1765	74.4	37.2	890%	K	1071	3.6	4.4	0.80	92.8%	2.18	269
200 LX/4	40	30	1770	98.6	49.3	690%	H	1424	3.2	3.6	0.83	92.1%	3.80	342



Inverter Duty - Continuous Duty

5:1 Constant Torque (VR)

230/460V - 60-12Hz



Inverter duty • Induction motor • TEFC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 230/460V – 60Hz • 1.0 Service Factor
 Continuous Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	Power		Eff. Class	Operating Range			Motor Across the line data											
	P _n Full Load Power			n ₆₀ Full Load Speed	n ₁₂ Full Load Speed	T ₆₀₋₁₂ Full Load Torque	n _N Full Load Speed	I _n Full-Load Current		I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]		60 Hz [rpm]	12 Hz [rpm]	60-12 Hz [lb-in]	60 Hz [rpm]	230 V [A]	460 V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
63 S/4-VR	0.16	0.12	-	1700	340	5.93	1700	0.88	0.44	250	F	5.93	2.7	3.5	0.66	52.0	0.0050	7.9
63 L/4-VR	0.25	0.18	-	1680	336	9.38	1680	1.12	0.56	270	E	9.38	2.3	2.5	0.71	57.0	0.0066	9.3
71 S/4-VR	0.33	0.25	-	1710	342	12.2	1710	1.56	0.78	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-VR	0.5	0.37	-	1720	344	18.3	1720	1.90	0.95	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-VR	0.75	0.55	-	1710	342	27.6	1710	2.70	1.35	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-VR	1	0.75	pe	1730	346	36.4	1730	3.14	1.57	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-VR	1.5	1.1	pe	1740	348	54.3	1740	4.20	2.10	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-VR	2	1.5	pe	1730	346	72.9	1730	5.60	2.80	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-VR	3	2.2	pe	1770	354	107	1770	7.68	3.84	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-VR	5	3.7	pe	1755	351	180	1755	13	6.5	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-VR	7.5	5.5	pe	1770	354	267	1770	19.5	9.75	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-VR	10	7.5	pe	1765	353	357	1765	26.7	13.4	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-VR	15	11	pe	1770	354	534	1770	35.6	17.8	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-VR	20	15	pe	1775	355	710	1775	47.6	23.8	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-VR	25	18.5	pe	1780	356	885	1780	60.6	30.3	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-VR	30	22	pe	1780	356	1062	1780	69.6	34.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-VR	40	30	pe	1785	357	1412	1785	-	49.5	890	K	1412	3.4	3.8	0.81	0.9	11.63	694
225 SP/4-VR	50	37	pe	1785	357	1765	1785	-	59.7	880	K	1765	3.0	3.7	0.82	0.9	12.81	728
225 MP/4-VR	60	45	pe	1785	357	2118	1785	-	72.0	910	K	2118	3.3	3.6	0.83	1.0	15.90	805
250 WP/4-VR	75	55	pe	1785	357	2648	1785	-	84.4	820	J	2648	2.9	3.2	0.86	1.0	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 5:1 Constant Torque (VR) 230/460V - 60-12Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Operating Range			Motor Across the line data											
			n ₆₀ Full Load Speed	n ₁₂ Full Load Speed	T ₆₀₋₁₂ Full Load Torque	n _N Full Load Speed	I _n Full-Load Current		I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _g /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
			60 Hz [rpm]	12 Hz [rpm]	60-12 Hz [lb-in]	60 Hz [rpm]	230 V [A]	460 V [A]									
80 L/4-VR	1	0.75	1650	330	38.2	1650	3.66	1.83	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-VR	1.5	1.1	1660	332	57.0	1660	4.84	2.42	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-VR	2	1.5	1660	332	75.9	1660	6.34	3.17	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-VR	3	2.2	1705	341	111	1705	9.00	4.50	490	G	111	2.3	2.6	0.81	76.0	0.107	40
100 LA/4-VR	5	3.7	1725	345	183	1725	15.2	7.62	510	G	183	2.7	3.1	0.75	81.0	0.142	46
132 S/4-VR	7.5	5.5	1735	347	272	1735	19.8	9.90	540	G	272	2.4	2.7	0.82	85.0	0.570	97
132 M/4-VR	10	7.5	1735	347	363	1735	25.8	12.9	630	H	363	2.9	3.2	0.84	87.0	0.759	121
160 M/4-VR	15	11	1770	354	534	1770	35.8	17.9	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-VR	20	15	1760	352	716	1760	48.4	24.2	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-VR	25	18.5	1760	352	895	1760	59.0	29.5	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-VR	30	22	1765	353	1071	1765	74.4	37.2	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-VR	40	30	1770	354	1424	1770	98.6	49.3	690	H	1424	3.2	3.6	0.83	92.1	3.80	342

Motor Ratings



Inverter Duty - Continuous Duty 10:1 Constant Torque (VN) 230/460V - 60-6Hz



Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 60Hz • 1.0 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n		Eff. Class	Operating Range						Motor Across the line data									
	Full Load Power			n ₆₀ Full Load Speed	n ₆ Full Load Speed	T ₆₀₋₆ Full Load Torque	n _N Full Load Speed	I _n Full-Load Current			I ₂ /I ₁ Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T ₄ /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]						60 Hz	6 Hz	60-6 Hz									
				[rpm]	[rpm]	[lb-in]	[rpm]	[A]	[A]		[lb-in]				[%]	[lb-ft ²]	[lb]		
63 S/4-VN	0.12	0.09	-	1720	172	4.40	1720	0.76	0.38	290	J	4.40	3.6	4.7	0.57	52.0	0.005	7.9	
63 L/4-VN	0.16	0.12	-	1720	172	5.86	1720	0.90	0.45	335	J	5.86	3.7	4.0	0.64	52.0	0.007	9.3	
71 S/4-VN	0.25	0.18	-	1740	174	9.06	1740	1.06	0.53	454	J	9.06	3.2	3.6	0.70	63.0	0.017	11.9	
71 L/4-VN	0.33	0.25	-	1745	175	11.9	1745	1.48	0.74	449	K	11.9	3.5	4.2	0.64	65.0	0.020	13.9	
80 S/4-VN	0.50	0.37	-	1745	175	18.1	1745	2.79	1.40	338	J	18.1	3.4	3.5	0.46	73.0	0.026	17.6	
80 LP/4-VN	0.75	0.55	pe	1750	175	27.0	1750	2.32	1.16	881	M	27.0	4.7	5.1	0.71	85.6	0.045	22	
90 SP/4-VN	1	0.75	pe	1760	176	35.8	1760	3.34	1.67	1057	R	35.8	6.4	7.4	0.65	86.3	0.081	33	
90 LP/4-VN	1.5	1.1	pe	1755	176	53.9	1755	4.59	2.30	926	N	53.9	5.3	5.8	0.70	87.5	0.093	37	
100 LP/4-VN	2	1.5	pe	1780	178	70.8	1780	5.72	2.86	1234	R	70.8	4.5	6.8	0.73	89.9	0.18	56	
112 MP/4-VN	3	2.2	pe	1775	178	107	1775	9.33	4.67	1323	S	107	6.9	7.8	0.67	89.8	0.30	78	
132 SP/4-VN	5	3.7	pe	1780	178	177	1780	15.7	7.9	1265	R	177	7.1	7.5	0.65	91.7	0.75	121	
132 MP/4-VN	7.5	5.5	pe	1775	178	266	1775	21.5	10.8	1192	P	266	6.3	6.7	0.71	92.0	0.84	137	
160 MP/4-VN	10	7.5	pe	1780	178	354	1780	27.6	13.8	1134	N	354	4.8	5.7	0.73	92.4	1.59	205	
160 LP/4-VN	15	11	pe	1780	178	531	1780	38.4	19.2	1338	P	531	5.7	6.3	0.78	93.2	2.18	269	
180 MP/4-VN	20	15	pe	1785	179	706	1785	49.6	24.8	1234	N	706	4.9	5.0	0.81	93.6	3.08	302	
180 LP/4-VN	25	18.5	pe	1785	179	883	1785	59.7	29.9	1026	L	883	4.0	4.1	0.83	94.0	3.80	342	
225 RP/4-VN	30	22	pe	1790	179	1056	1790	-	40.0	1101	N	1056	4.5	5.1	0.74	94.5%	11.63	694	
225 SP/4-VN	40	30	pe	1790	179	1408	1790	-	50.6	1038	M	1408	3.8	4.6	0.78	94.8%	12.81	728	
225 MP/4-VN	50	37	pe	1790	179	1760	1790	-	62.1	1055	M	1760	4.0	4.3	0.79	95.3%	15.90	805	
250 WP/4-VN	60	45	pe	1785	179	2118	1785	-	70.7	979	L	2118	3.6	4.0	0.83	95.4%	19.46	882	

Motor Ratings





Inverter Duty - Intermittent Duty 10:1 Constant Torque (VN) 230/460V - 60-6Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Operating Range			Motor Across the line data												
			n ₆₀ Full Load Speed	n ₆ Full Load Speed	T ₆₀₋₆ Full Load Torque	n _N Full Load Speed	I _n Full-Load Current		I _L /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _L /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight	
	60 Hz	6 Hz	60-6 Hz	60 Hz	230 V	460 V	[HP]	[kW]										[rpm]
80 L/4-VN	0.75	0.55	1740	174	27.2	1740	3.84	1.92	371	J	27.2	3.1	3.2	0.51	72.0	0.034	19.8	
90 S/4-VN	1	0.75	1760	176	35.8	1760	3.90	1.95	609	L	35.8	4.0	4.5	0.65	74.0	0.056	26.5	
90 L/4-VN	1.5	1.1	1750	175	54.0	1750	4.86	2.43	666	K	54.0	3.5	3.9	0.76	76.0	0.074	30.9	
100 L/4-VN	2	1.5	1760	176	71.6	1760	7.26	3.63	608	K	71.6	3.6	4.0	0.68	76.0	0.11	39.7	
100 LA/4-VN	3	2.2	1760	176	107	1760	13.0	6.48	598	M	107	4.6	5.3	0.50	86.0	0.14	46.3	
132 S/4-VN	5	3.7	1775	178	178	1775	13.9	6.96	768	K	178	3.7	4.1	0.78	86.0	0.57	97.0	
132 M/4-VN	7.5	5.5	1770	177	267	1770	20.5	10.2	794	K	267	3.9	4.4	0.78	88.0	0.76	121	
160 M/4-VN	10	7.5	1780	178	354	1780	26.9	13.4	1092	N	354	4.4	5.7	0.77	90.4	1.19	172	
160 L/4-VN	15	11	1775	178	533	1775	37.9	18.9	1085	M	533	3.9	5.2	0.81	91.2	1.59	205	
180 MX/4-VN	20	15	1775	178	710	1775	51.1	25.6	1015	M	710	4.3	5.4	0.80	91.5	1.90	236	
180 LX/4-VN	25	18.5	1775	178	888	1775	69.1	34.5	958	M	888	4.3	5.3	0.74	91.4	2.18	269	
200 LX/4-VN	30	22	1785	179	1059	1785	85.0	42.5	801	L	1059	4.3	4.8	0.72	92.4	3.80	342	

Motor Ratings



Inverter Duty - Continuous Duty

20:1 Constant Torque (VW)

230/460V - 80-4Hz



Inverter duty • Induction motor • TEBC
 Synchronous speed 1800rpm @ 80Hz • 4-pole • Three-phase
 Voltages: 230/460V – 60Hz • 1.0 Service Factor
 Continuous Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	Power		Eff. Class	Operating Range					Motor Across the line data									
	P _n			Full Load Speed	n ₄ Full Load Speed	T ₈₀₋₄ Full Load Torque	n _N Full Load Speed	I _n		I ₂ /I ₁ Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T ₁ /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	Full Load Power							230 V	460 V									
	[HP]	[kW]						[A]	[A]									
63 S/4-VW	0.16	0.12	-	2250	113	4.48	1700	0.88	0.44	250	F	5.93	2.7	3.5	0.66	52.0	0.0050	7.9
63 L/4-VW	0.25	0.18	-	2220	111	7.10	1680	1.12	0.56	270	E	9.38	2.3	2.5	0.71	57.0	0.0066	9.3
71 S/4-VW	0.33	0.25	-	2285	114	9.10	1710	1.56	0.78	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-VW	0.5	0.37	-	2280	114	13.8	1720	1.90	0.95	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-VW	0.75	0.55	-	2285	114	20.7	1710	2.70	1.35	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-VW	1	0.75	pe	2230	112	28.3	1730	3.14	1.57	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-VW	1.5	1.1	pe	2320	116	40.7	1740	4.20	2.10	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-VW	2	1.5	pe	2310	116	54.6	1730	5.60	2.80	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-VW	3	2.2	pe	2360	118	80.1	1770	7.68	3.84	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-VW	5	3.7	pe	2335	117	135	1755	13	6.5	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-VW	7.5	5.5	pe	2355	118	201	1770	19.5	9.75	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-VW	10	7.5	pe	2350	118	268	1765	26.7	13.4	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-VW	15	11	pe	2360	118	401	1770	35.6	17.8	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-VW	20	15	pe	2360	118	534	1775	47.6	23.8	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-VW	25	18.5	pe	2380	119	662	1780	60.6	30.3	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-VW	30	22	pe	2370	119	798	1780	69.6	34.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-VW	40	30	pe	2380	119	1059	1785	-	49.5	890	K	1412	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4-VW	50	37	pe	2380	119	1324	1785	-	59.7	880	K	1765	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4-VW	60	45	pe	2380	119	1589	1785	-	72.0	910	K	2118	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4-VW	75	55	pe	2375	119	1990	1785	-	84.4	820	J	2648	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 20:1 Constant Torque (VW) 230/460V - 80-4Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 80Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P_n Full Load Power		Operating Range			Motor Across the line data											
			n_{80} Full Load Speed	n_4 Full Load Speed	T_{80-4} Full Load Torque	n_n Full Load Speed	I_n Full-Load Current		I_L/I_n Locked Rotor Current Ratio	NEMA Code Letter	T_n Full Load Torque	T_L/T_n Locked Rotor Torque Ratio	T_k/T_n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J_n Rotor Inertia	Wt. Weight
	80 Hz [rpm]	4 Hz [rpm]	80-4 Hz [lb-in]	60 Hz [rpm]	230 V [A]	460 V [A]	[%]	[lb-in]									
80 L/4-VW	1	0.75	2290	115	27.5	1650	3.66	1.83	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-VW	1.5	1.1	2310	116	40.9	1660	4.84	2.42	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-VW	2	1.5	2305	115	54.7	1660	6.34	3.17	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-VW	3	2.2	2310	116	81.9	1705	9.00	4.50	490	G	111	2.3	2.6	0.81	76.0	0.11	40
100 LA/4-VW	5	3.7	2295	115	137	1725	15.2	7.6	510	G	183	2.7	3.1	0.75	81.0	0.14	46
132 S/4-VW	7.5	5.5	2340	117	202	1735	19.8	9.9	540	G	272	2.4	2.7	0.82	85.0	0.57	97
132 M/4-VW	10	7.5	2340	117	269	1735	25.8	12.9	630	H	363	2.9	3.2	0.84	87.0	0.76	121
160 M/4-VW	15	11	2350	118	402	1770	35.8	17.9	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-VW	20	15	2350	118	536	1760	48.4	24.2	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-VW	25	18.5	2354	118	669	1760	59.0	29.5	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-VW	30	22	2360	118	801	1765	74.4	37.2	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-VW	40	30	2370	119	1064	1770	98.6	49.3	690	H	1424	3.2	3.6	0.83	92.1	3.80	342



Inverter Duty - Continuous Duty 1000:1 Constant Torque (F VZ) 230/460V - 60-0Hz



Inverter duty • Induction motor • TEBC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 230/460V – 60Hz • 1.0 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Eff. Class	Operating Range			Motor Across the line data											
				n ₆₀ Full Load Speed	n ₀ Full Load Speed	T ₆₀₋₀ Full Load Torque	n _N Full Load Speed	I _n Full-Load Current		I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	60 Hz	0 Hz		60-0 Hz	60 Hz	230 V	460 V											
	[HP]	[kW]		[rpm]	[rpm]	[lb-in]	[rpm]	[A]	[A]	[%]	[lb-in]	[%]	[lb-ft ²]	[lb]				
63 S/4-F VZ	0.16	0.12	-	1700	0	5.93	1700	0.88	0.44	250	F	5.93	2.7	3.5	0.66	52.0	0.005	7.9
63 L/4-F VZ	0.25	0.18	-	1680	0	9.38	1680	1.12	0.56	270	E	9.38	2.3	2.5	0.71	57.0	0.007	9.3
71 S/4-F VZ	0.33	0.25	-	1710	0	12.2	1710	1.56	0.78	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-F VZ	0.5	0.37	-	1720	0	18.3	1720	1.90	0.95	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-F VZ	0.75	0.55	-	1710	0	27.6	1710	2.70	1.35	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-F VZ	1	0.75	pe	1730	0	36.4	1730	3.14	1.57	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-F VZ	1.5	1.1	pe	1740	0	54.3	1740	4.20	2.10	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-F VZ	2	1.5	pe	1730	0	72.9	1730	5.60	2.80	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-F VZ	3	2.2	pe	1770	0	107	1770	7.68	3.84	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-F VZ	5	3.7	pe	1755	0	180	1755	13.0	6.50	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-F VZ	7.5	5.5	pe	1770	0	267	1770	19.5	9.75	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-F VZ	10	7.5	pe	1765	0	357	1765	26.7	13.4	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-F VZ	15	11	pe	1770	0	534	1770	35.6	17.8	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-F VZ	20	15	pe	1775	0	710	1775	47.6	23.8	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-F VZ	25	18.5	pe	1780	0	885	1780	60.6	30.3	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-F VZ	30	22	pe	1780	0	1062	1780	69.6	34.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-F VZ	40	30	pe	1785	0	1412	1785	-	49.5	890	K	1412	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4-F VZ	50	37	pe	1785	0	1765	1785	-	59.7	880	K	1765	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4-F VZ	60	45	pe	1785	0	2118	1785	-	72.0	910	K	2118	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4-F VZ	75	55	pe	1785	0	2648	1785	-	84.4	820	J	2648	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty

1000:1 Constant Torque (F VZ)

230/460V - 60-0Hz

Inverter duty • Induction motor • TEBC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 230/460V – 60Hz • 1.0 Service Factor
 60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	Power P_n Full Load Power		Operating Range			Motor Across the line data											
			n_{60} Full Load Speed	n_0 Full Load Speed	T_{60-0} Full Load Torque	n_N Full Load Speed	I_n Full-Load Current		I_L/I_n Locked Rotor Current Ratio	NEMA Code Letter	T_n Full Load Torque	T_L/T_n Locked Rotor Torque Ratio	T_k/T_n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J_m Rotor Inertia	Wt. Weight
	60 Hz [rpm]	0 Hz [rpm]	60-0 Hz [lb-in]	60 Hz [rpm]	230 V [A]	460 V [A]	[%]	[lb-in]									
80 L/4-F VZ	1	0.75	1650	0	38.2	1650	3.66	1.83	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-F VZ	1.5	1.1	1660	0	57.0	1660	4.84	2.42	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-F VZ	2	1.5	1660	0	75.9	1660	6.34	3.17	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-F VZ	3	2.2	1705	0	111	1705	9.00	4.50	490	G	111	2.3	2.6	0.81	76.0	0.107	40
100 LA/4-F VZ	5	3.7	1725	0	183	1725	15.2	7.6	510	G	183	2.7	3.1	0.75	81.0	0.142	46
132 S/4-F VZ	7.5	5.5	1735	0	272	1735	19.8	9.9	540	G	272	2.4	2.7	0.82	85.0	0.570	97
132 M/4-F VZ	10	7.5	1735	0	363	1735	25.8	12.9	630	H	363	2.9	3.2	0.84	87.0	0.759	121
160 M/4-F VZ	15	11	1770	0	534	1770	35.8	17.9	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-F VZ	20	15	1760	0	716	1760	48.4	24.2	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-F VZ	25	18.5	1760	0	895	1760	59.0	29.5	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-F VZ	30	22	1765	0	1071	1765	74.4	37.2	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-F VZ	40	30	1770	0	1424	1770	98.6	49.3	690	H	1424	3.2	3.6	0.83	92.1	3.80	342



Continuous Duty 575V - 60Hz



Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 332/575V – 60Hz • 1.15 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		Eff. Class	n _N Full Load Speed	I _n Full Load Current	I _l /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _l /T _n Locked Rotor Torque Ratio	T _b /T _n Break Down Torque Ratio	pf Power Factor	Eff. Normal Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]												
	575V													
63 S/4	0.16	0.12	-	1700	0.37	250	G	5.93	2.7	3.5	0.66	52.0	0.0050	7.9
63 L/4	0.25	0.18	-	1680	0.46	270	E	9.38	2.3	2.5	0.71	57.0	0.0066	9.3
71 S/4	0.33	0.25	-	1710	0.66	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4	0.5	0.37	-	1720	0.80	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4	0.75	0.55	-	1710	1.12	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4	1	0.75		1730	1.26	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4	1.5	1.1		1740	1.68	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4	2	1.5		1730	2.24	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4	3	2.2		1770	3.07	920	L	107	3.0	4.5	0.79	90.0	0.19	62
112 MP/4	5	3.7		1755	5.20	950	L	180	4.1	4.6	0.80	90.3	0.33	78
132 SP/4	7.5	5.5		1770	7.80	1020	M	267	4.7	5.0	0.77	91.7	0.76	121
132 MP/4	10	7.5		1765	10.7	960	M	357	4.7	5.0	0.77	91.7	0.83	137
160 MP/4	15	11		1770	14.2	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4	20	15		1775	19.0	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4	25	18.5		1780	24.2	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4	30	22		1780	27.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4	40	30		1785	39.6	890%	K	1420	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4	50	37		1785	47.8	880%	K	1752	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4	60	45		1785	57.6	910%	K	2131	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4	75	55		1785	67.5	920%	J	2604	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter duty • Induction motor • TEFC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 332/575V – 60Hz • 1.15 Service Factor
 60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		n _N Full Load Speed	I _n Full Load Current	I _s /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _s /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	Eff. Normal Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]											
80 L/4	1	0.75	1650	1.46	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4	1.5	1.1	1660	1.94	490	H	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4	2	1.5	1660	2.54	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4	3	2.2	1705	3.63	490	G	111	2.3	2.6	0.81	76.0	0.11	40
100 LA/4	5	3.7	1725	6.10	510	G	183	2.7	3.1	0.75	81.0	0.14	46
132 S/4	7.5	5.5	1735	7.92	540	G	272	2.4	2.7	0.82	85.0	0.57	97
132 M/4	10	7.5	1735	10.3	630	H	363	2.9	3.2	0.84	87.0	0.76	121
160 M/4	15	11	1770	14.5	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4	20	15	1760	19.3	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4	25	18.5	1760	23.6	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4	30	22	1765	29.8	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4	40	30	1770	39.4	690	H	1424	3.2	3.6	0.83	92.1	3.80	342

Inverter Duty - Continuous Duty

5:1 Constant Torque (VR)

575V - 60-12Hz



Inverter duty • Induction motor • TEFC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 575V – 60Hz • 1.0 Service Factor
 Continuous Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	Power P _n		Eff. Class	Operating Range			Motor Across the line Data										
	Full Load Power			n ₆₀	n ₁₂	T ₆₀₋₁₂	n _N	I _n	I ₂ /I _n	NEMA Code Letter	T _n	T ₂ /T _n	T _k /T _n	pf Power Factor	η	J _m	Wt. Weight
	[HP]	[kW]		60 Hz [rpm]	12 Hz [rpm]	60-12 Hz [lb-in]	60 Hz [rpm]	575 V [A]	Locked Rotor Current Ratio [%]		Full Load Torque [lb-in]	Locked Rotor Torque Ratio	Break Down Torque Ratio		Full Load Eff. [%]	Rotor Inertia [lb-ft ²]	
63 S/4-VR	0.16	0.12	-	1700	340	5.93	1700	0.35	250	F	5.93	2.7	3.5	0.66	52.0	0.0050	7.9
63 L/4-VR	0.25	0.18	-	1680	336	9.38	1680	0.45	270	E	9.38	2.3	2.5	0.71	57.0	0.0066	9.3
71 S/4-VR	0.33	0.25	-	1710	342	12.2	1710	0.62	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-VR	0.5	0.37	-	1720	344	18.3	1720	0.76	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-VR	0.75	0.55	-	1710	342	27.6	1710	1.08	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-VR	1	0.75	pe	1730	346	36.4	1730	1.26	650	K	36.43	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-VR	1.5	1.1	pe	1740	348	54.3	1740	1.68	840	L	54.33	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-VR	2	1.5	pe	1730	346	72.9	1730	2.24	760	K	72.86	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-VR	3	2.2	pe	1770	354	107	1770	3.07	920	L	106.82	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-VR	5	3.7	pe	1755	351	180	1755	5.20	950	L	179.56	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-VR	7.5	5.5	pe	1770	354	267	1770	7.80	1020	M	267.06	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-VR	10	7.5	pe	1765	353	357	1765	10.7	960	M	357.08	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-VR	15	11	pe	1770	354	534	1770	14.2	880	K	534.11	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-VR	20	15	pe	1775	355	710	1775	19.0	1080	M	710.14	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-VR	25	18.5	pe	1780	356	885	1780	24.2	1010	L	885.19	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-VR	30	22	pe	1780	356	1062	1780	27.8	880	K	1062.23	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-VR	40	30	pe	1785	357	1412	1785	39.6	890	K	1412	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4-VR	50	37	pe	1785	357	1765	1785	47.8	880	K	1765	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4-VR	60	45	pe	1785	357	2118	1785	57.6	910	K	2118	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4-VR	75	55	pe	1785	357	2648	1785	67.5	820	J	2648	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 5:1 Constant Torque (VR) 575V - 60-12Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P_n Full Load Power		Operating Range			Motor Across the line Data										
			n_{60} Full Load Speed	n_{12} Full Load Speed	T_{60-12} Full Load Torque	n_N Full Load Speed	I_n Full-Load Current	I_L/I_n Locked Rotor Current Ratio	NEMA Code Letter	T_n Full Load Torque	T_L/T_n Locked Rotor Torque Ratio	T_k/T_n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J_m Rotor Inertia	Wt. Weight
	[HP]	[kW]	60 Hz [rpm]	12 Hz [rpm]	60-12 Hz [lb-in]	60 Hz [rpm]	575 V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
80 L/4-VR	1	0.75	1650	330	38.2	1650	1.46	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-VR	1.5	1.1	1660	332	57.0	1660	1.94	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-VR	2	1.5	1660	332	75.9	1660	2.54	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-VR	3	2.2	1705	341	111	1705	3.60	490	G	111	2.3	2.6	0.81	76.0	0.107	40
100 LA/4-VR	5	3.7	1725	345	183	1725	6.08	510	G	183	2.7	3.1	0.75	81.0	0.142	46
132 S/4-VR	7.5	5.5	1735	347	272	1735	7.92	540	G	272	2.4	2.7	0.82	85.0	0.570	97
132 M/4-VR	10	7.5	1735	347	363	1735	10.3	630	H	363	2.9	3.2	0.84	87.0	0.759	121
160 M/4-VR	15	11	1770	354	534	1770	14.3	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-VR	20	15	1760	352	716	1760	19.4	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-VR	25	18.5	1760	352	895	1760	23.6	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-VR	30	22	1765	353	1071	1765	29.8	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-VR	40	30	1770	354	1424	1770	39.4	690	H	1424	3.2	3.6	0.83	92.1	3.80	342

Motor Ratings



Inverter Duty - Continuous Duty 10:1 - Constant Torque (VN) 575V - 60-6Hz



Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n		Eff. Class	Operating Range			Motor Across the line data										
	Full Load Power			n ₆₀	n ₆	T ₆₀₋₆	n _N	I _n	I ₂ /I _n	NEMA Code Letter	T _n	T ₂ /T _n	T _k /T _n	pf	η	J _m	Wt. Weight
	[HP]	[kW]		60 Hz [rpm]	6 Hz [rpm]	60-6 Hz [lb-in]	60 Hz [rpm]	575V [A]	Locked Rotor Current Ratio [%]		Full Load Torque [lb-in]	Locked Rotor Torque Ratio	Break Down Torque Ratio	Power Factor	Full Load Eff. [%]	Rotor Inertia [lb-ft ²]	
63 S/4-VN	0.12	0.09	-	1720	172	4.40	1720	0.30	290	J	4.40	3.6	4.7	0.57	52.0	0.005	7.9
63 L/4-VN	0.16	0.12	-	1720	172	5.86	1720	0.36	335	J	5.86	3.7	4.0	0.64	52.0	0.007	9.3
71 S/4-VN	0.25	0.18	-	1740	174	9.06	1740	0.43	454	J	9.06	3.2	3.6	0.70	63.0	0.017	11.9
71 L/4-VN	0.33	0.25	-	1745	175	11.9	1745	0.59	449	K	11.9	3.5	4.2	0.64	65.0	0.020	13.9
80 S/4-VN	0.50	0.37	-	1745	175	18.1	1745	1.12	338	J	18.1	3.4	3.5	0.46	73.0	0.026	17.6
80 LP/4-VN	0.75	0.55		1750	175	27.0	1750	0.93	881	M	27.0	4.7	5.1	0.71	85.6	0.045	22
90 SP/4-VN	1	0.75		1760	176	35.8	1760	1.33	1057	R	35.8	6.4	7.4	0.65	86.3	0.081	33
90 LP/4-VN	1.5	1.1		1755	176	53.9	1755	1.84	926	N	53.9	5.3	5.8	0.70	87.5	0.093	37
100 LP/4-VN	2	1.5		1780	178	70.8	1780	2.29	1234	R	70.8	4.5	6.8	0.73	89.9	0.18	56
112 MP/4-VN	3	2.2		1775	178	107	1775	3.73	1323	S	107	6.9	7.8	0.67	89.8	0.30	78
132 SP/4-VN	5	3.7		1780	178	177	1780	6.29	1265	R	177	7.1	7.5	0.65	91.7	0.75	121
132 MP/4-VN	7.5	5.5		1775	178	266	1775	8.6	1192	P	266	6.3	6.7	0.71	92.0	0.84	137
160 MP/4-VN	10	7.5		1780	178	354	1780	11.0	1134	N	354	4.8	5.7	0.73	92.4	1.59	205
160 LP/4-VN	15	11		1780	178	531	1780	15.4	1338	P	531	5.7	6.3	0.78	93.2	2.18	269
180 MP/4-VN	20	15		1785	179	706	1785	19.8	1234	N	706	4.9	5.0	0.81	93.6	3.08	302
180 LP/4-VN	25	18.5		1785	179	883	1785	23.9	1026	L	883	4.0	4.1	0.83	94.0	3.80	342
225 RP/4-VN	30	22		1790	179	1056	1790	32.0	1101	N	1056	4.5	5.1	0.74	94.5%	11.63	694
225 SP/4-VN	40	30		1790	179	1408	1790	40.5	1038	M	1408	3.8	4.6	0.78	94.8%	12.81	728
225 MP/4-VN	50	37		1790	179	1760	1790	49.7	1055	M	1760	4.0	4.3	0.79	95.3%	15.90	805
250 WP/4-VN	60	45		1785	179	2118	1785	56.6	979	L	2118	3.6	4.0	0.83	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 10:1 Constant Torque (VN) 575V - 60-6Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Operating Range			Motor Across the line data										
			n ₆₀ Full Load Speed	n ₆ Full Load Speed	T ₆₀₋₆ Full Load Torque	n _N Full Load Speed	I _n Full Load Current	I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]	60 Hz [rpm]	6 Hz [rpm]	60-6 Hz [lb-in]	60 Hz [rpm]	575V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
80 L/4-VN	0.75	0.55	1740	174	27.2	1740	1.54	371	J	27.2	3.1	3.2	0.51	72.0	0.034	19.8
90 S/4-VN	1	0.75	1760	176	35.8	1760	1.56	609	L	35.8	4.0	4.5	0.65	74.0	0.056	26.5
90 L/4-VN	1.5	1.1	1750	175	54.0	1750	1.94	666	K	54.0	3.5	3.9	0.76	76.0	0.074	30.9
100 L/4-VN	2	1.5	1760	176	71.6	1760	2.90	608	K	71.6	3.6	4.0	0.68	76.0	0.11	39.7
100 LA/4-VN	3	2.2	1760	176	107	1760	5.19	598	M	107	4.6	5.3	0.50	86.0	0.14	46.3
132 S/4-VN	5	3.7	1775	178	178	1775	5.57	768	K	178	3.7	4.1	0.78	86.0	0.57	97.0
132 M/4-VN	7.5	5.5	1770	177	267	1770	8.19	794	K	267	3.9	4.4	0.78	88.0	0.76	121
160 M/4-VN	10	7.5	1780	178	354	1780	10.8	1092	N	354	4.4	5.7	0.77	90.4	1.19	172
160 L/4-VN	15	11	1775	178	533	1775	15.2	1085	M	533	3.9	5.2	0.81	91.2	1.59	205
180 MX/4-VN	20	15	1775	178	710	1775	20.5	1015	M	710	4.3	5.4	0.80	91.5	1.90	236
180 LX/4-VN	25	18.5	1775	178	888	1775	27.6	958	M	888	4.3	5.3	0.74	91.4	2.18	269
200 LX/4-VN	30	22	1785	179	1059	1785	34.0	801	L	1059	4.3	4.8	0.72	92.4	3.80	342

Motor Ratings



Inverter Duty - Continuous Duty

20:1 Constant Torque (VW)

575V - 80-4Hz



Inverter duty • Induction motor • TEFC
 Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
 Voltages: 575V – 60Hz • 1.0 Service Factor
 Continuous Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	Power P _n		Eff. Class	Operating Range			Motor Across the line data										
	Full Load Power			n ₆₀	n ₆	T ₆₀₋₆	n _N	I _n	I ₂ /I _n	NEMA Code Letter	T _n	T ₂ /T _n	T _k /T _n	pf	η	J _m	Wt. Weight
	[HP]	[kW]		Full Load Speed	Full Load Speed	Full Load Torque	Full Load Speed	Full Load Current	Locked Rotor Current Ratio		Full Load Torque	Locked Rotor Torque Ratio	Break Down Torque Ratio	Power Factor	Full Load Eff.	Rotor Inertia	
		80 Hz	4 Hz	80-4 Hz	60 Hz	575V				[lb-in]				[%]	[lb-ft ²]	[lb]	
63 S/4-VW	0.16	0.12	-	2250	113	4.48	1700	0.35	250	F	5.93	2.7	3.5	0.66	52.0	0.0050	7.9
63 L/4-VW	0.25	0.18	-	2220	111	7.10	1680	0.45	270	E	9.38	2.3	2.5	0.71	57.0	0.0066	9.3
71 S/4-VW	0.33	0.25	-	2285	114	9.10	1710	0.62	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-VW	0.5	0.37	-	2280	114	13.8	1720	0.76	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-VW	0.75	0.55	-	2285	114	20.7	1710	1.08	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-VW	1	0.75	pe	2230	112	28.3	1730	1.26	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-VW	1.5	1.1	pe	2320	116	40.7	1740	1.68	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-VW	2	1.5	pe	2310	116	54.6	1730	2.24	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-VW	3	2.2	pe	2360	118	80.1	1770	3.07	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-VW	5	3.7	pe	2335	117	135	1755	5.20	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-VW	7.5	5.5	pe	2355	118	201	1770	7.80	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-VW	10	7.5	pe	2350	118	268	1765	10.7	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-VW	15	11	pe	2360	118	401	1770	14.2	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-VW	20	15	pe	2360	118	534	1775	19.0	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-VW	25	18.5	pe	2380	119	662	1780	24.2	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-VW	30	22	pe	2370	119	798	1780	27.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-VW	40	30	pe	2380	119	1059	1785	39.6	890	K	1412	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4-VW	50	37	pe	2380	119	1324	1785	47.8	880	K	1765	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4-VW	60	45	pe	2380	119	1589	1785	57.6	910	K	2118	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4-VW	75	55	pe	2375	119	1990	1785	67.5	820	J	2648	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 20:1 Constant Torque (VW) 575V - 80-4Hz

Inverter duty • Induction motor • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Operating Range			Motor Across the line data										
			n ₆₀ Full Load Speed	n ₆ Full Load Speed	T _{60.6} Full Load Torque	n _N Full Load Speed	I _n Full Load Current	I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]	80 Hz [rpm]	4 Hz [rpm]	80-4 Hz [lb-in]	60 Hz [rpm]	575V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
80 L/4-VW	1	0.75	2290	115	27.5	1650	1.46	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-VW	1.5	1.1	2310	116	40.9	1660	1.94	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-VW	2	1.5	2305	115	54.7	1660	2.54	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-VW	3	2.2	2310	116	81.9	1705	3.60	490	G	111	2.3	2.6	0.81	76.0	0.11	40
100 LA/4-VW	5	3.7	2295	115	137	1725	6.08	510	G	183	2.7	3.1	0.75	81.0	0.14	46
132 S/4-VW	7.5	5.5	2340	117	202	1735	7.92	540	G	272	2.4	2.7	0.82	85.0	0.57	97
132 M/4-VW	10	7.5	2340	117	269	1735	10.32	630	H	363	2.9	3.2	0.84	87.0	0.76	121
160 M/4-VW	15	11	2350	118	402	1770	14.3	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-VW	20	15	2350	118	536	1760	19.4	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-VW	25	18.5	2354	118	669	1760	23.6	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-VW	30	22	2360	118	801	1765	29.8	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-VW	40	30	2370	119	1064	1770	39.4	690	H	1424	3.2	3.6	0.83	92.1	3.80	342

Motor Ratings



Inverter Duty - Continuous Duty 1000:1 Constant Torque (F VZ) 575V - 60-0Hz



Inverter duty • Induction motor • TEBC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
Continuous Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Eff. Class	Operating Range			Motor Across the line data										
				n ₆₀ Full Load Speed	n ₆ Full Load Speed	T ₆₀₋₆ Full Load Torque	n _N Full Load Speed	I _N Full Load Current	I _L /I _N Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _L /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]		60 Hz [rpm]	0 Hz [rpm]	60-0 Hz [lb-in]	60 Hz [rpm]	575V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
63 S/4-F VZ	0.16	0.12	-	1700	0	5.93	1700	0.35	250	F	5.93	2.7	3.5	0.66	52.0	0.005	7.9
63 L/4-F VZ	0.25	0.18	-	1680	0	9.38	1680	0.45	270	E	9.38	2.3	2.5	0.71	57.0	0.007	9.3
71 S/4-F VZ	0.33	0.25	-	1710	0	12.2	1710	0.62	310	G	12.2	2.4	2.7	0.64	63.0	0.017	12
71 L/4-F VZ	0.5	0.37	-	1720	0	18.3	1720	0.76	350	F	18.3	2.3	2.7	0.69	71.0	0.020	14
80 S/4-F VZ	0.75	0.55	-	1710	0	27.6	1710	1.08	350	F	27.6	2.2	2.3	0.71	72.0	0.026	18
80 LP/4-F VZ	1	0.75	pe	1730	0	36.4	1730	1.26	650	K	36.4	3.5	3.8	0.70	86.1	0.045	22
90 SP/4-F VZ	1.5	1.1	pe	1740	0	54.3	1740	1.68	840	L	54.3	4.2	4.9	0.76	86.9	0.081	33
90 LP/4-F VZ	2	1.5	pe	1730	0	72.9	1730	2.24	760	K	72.9	3.9	4.3	0.78	87.0	0.093	37
100 LP/4-F VZ	3	2.2	pe	1770	0	107	1770	3.07	920	L	107	3.0	4.5	0.79	90.0	0.192	62
112 MP/4-F VZ	5	3.7	pe	1755	0	180	1755	5.20	950	L	180	4.1	4.6	0.80	90.3	0.332	78
132 SP/4-F VZ	7.5	5.5	pe	1770	0	267	1770	7.80	1020	M	267	4.7	5.0	0.77	91.7	0.759	121
132 MP/4-F VZ	10	7.5	pe	1765	0	357	1765	10.7	960	M	357	4.7	5.0	0.77	91.7	0.831	137
160 MP/4-F VZ	15	11	pe	1770	0	534	1770	14.2	880	K	534	3.2	3.8	0.84	92.5	1.59	205
160 LP/4-F VZ	20	15	pe	1775	0	710	1775	19.0	1080	M	710	4.3	4.7	0.85	93.0	2.18	269
180 MP/4-F VZ	25	18.5	pe	1780	0	885	1780	24.2	1010	L	885	3.9	4.0	0.82	93.6	3.80	342
180 LP/4-F VZ	30	22	pe	1780	0	1062	1780	27.8	880	K	1062	3.3	3.4	0.85	93.6	3.80	342
225 RP/4-F VZ	40	30	pe	1785	0	1412	1785	39.6	890	K	1412	3.4	3.8	0.81	94.5%	11.63	694
225 SP/4-F VZ	50	37	pe	1785	0	1765	1785	47.8	880	K	1765	3.0	3.7	0.82	94.6%	12.81	728
225 MP/4-F VZ	60	45	pe	1785	0	2118	1785	57.6	910	K	2118	3.3	3.6	0.83	95.2%	15.90	805
250 WP/4-F VZ	75	55	pe	1785	0	2648	1785	67.5	820	J	2648	2.9	3.2	0.86	95.4%	19.46	882

Motor Ratings





Inverter Duty - Intermittent Duty 1000:1 Constant Torque (F VZ) 575V - 60-0Hz

Inverter duty • Induction motor • TEBC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
Voltages: 575V – 60Hz • 1.0 Service Factor
60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
Class B temperature rise • Class F insulation

Motor Type	Power P _n Full Load Power		Operating Range			Motor Across the line data										
			n ₆₀ Full Load Speed	n ₆ Full Load Speed	T ₆₀₋₆ Full Load Torque	n _N Full Load Speed	I _n Full Load Current	I ₂ /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T ₂ /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full Load Eff.	J _m Rotor Inertia	Wt. Weight
	[HP]	[kW]	60 Hz [rpm]	0 Hz [rpm]	60-0 Hz [lb-in]	60 Hz [rpm]	575V [A]	[%]		[lb-in]				[%]	[lb-ft ²]	[lb]
80 L/4-F VZ	1	0.75	1650	0	38.2	1650	1.46	390	G	38.2	2.2	2.3	0.74	70.0	0.034	20
90 S/4-F VZ	1.5	1.1	1660	0	57.0	1660	1.94	490	G	57.0	2.5	2.8	0.78	73.0	0.056	26
90 L/4-F VZ	2	1.5	1660	0	75.9	1660	2.54	510	H	75.9	2.5	2.8	0.80	74.0	0.074	31
100 L/4-F VZ	3	2.2	1705	0	111	1705	3.60	490	G	111	2.3	2.6	0.81	76.0	0.107	40
100 LA/4-F VZ	5	3.7	1725	0	183	1725	6.08	510	G	183	2.7	3.1	0.75	81.0	0.142	46
132 S/4-F VZ	7.5	5.5	1735	0	272	1735	7.92	540	G	272	2.4	2.7	0.82	85.0	0.570	97
132 M/4-F VZ	10	7.5	1735	0	363	1735	10.32	630	H	363	2.9	3.2	0.84	87.0	0.759	121
160 M/4-F VZ	15	11	1770	0	534	1770	14.3	820	J	534	2.9	3.8	0.85	90.7	1.19	172
160 L/4-F VZ	20	15	1760	0	716	1760	19.4	850	K	716	2.9	3.9	0.87	89.4	1.59	205
180 MX/4-F VZ	25	18.5	1760	0	895	1760	23.6	880	K	895	3.4	4.3	0.87	90.5	1.90	236
180 LX/4-F VZ	30	22	1765	0	1071	1765	29.8	890	K	1071	3.6	4.4	0.80	92.8	2.18	269
200 LX/4-F VZ	40	30	1770	0	1424	1770	39.4	690	H	1424	3.2	3.6	0.83	92.1	3.80	342



Continuous Duty 400V - 50Hz



Inverter Duty • Induction motor • TEFC
 Synchronous speed 1500rpm @ 50Hz • 4-pole • Three-phase
 Voltages: 400V – 50Hz • 1.0 Service Factor
 Continuous Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		Eff. Class	n _N Full Load Speed	I _n Full Load Current	I _a /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _a /T _n Locked Rotor Torque Ratio	T _b /T _n Break Down Torque Ratio	pf Power Factor	η Full-Load Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]												
63 S/4	0.16	0.12	-	1335	0.55	290	H	7.55	2.7	2.7	0.64	50.0	0.0050	7.9
63 L/4	0.25	0.18	-	1390	0.68	300	G	11.3	2.6	2.7	0.61	58.0	0.0066	9.3
71 S/4	0.33	0.25	-	1380	0.76	330	F	15.1	2.2	2.1	0.77	63.0	0.017	12
71 L/4	0.5	0.37	-	1380	1.09	360	F	22.8	2.0	2.4	0.71	67.0	0.020	14
80 S/4	0.75	0.55	-	1375	1.52	330	E	34.4	1.9	2.0	0.73	75.1	0.026	18
80 LP/4	1	0.75	IE3	1415	1.79	540	H	44.5	3.0	3.1	0.72	83.7	0.045	22
90 SP/4	1.5	1.1	IE3	1430	2.38	680	J	66.1	3.6	4.0	0.78	85.3	0.081	33
90 LP/4	2	1.5	IE3	1415	3.23	590	H	89.1	3.3	3.5	0.79	85.3	0.093	37
100 LP/4	3	2.2	IE3	1465	4.27	820	K	129	2.6	3.9	0.83	88.1	0.19	62
100 AP/4	4	3	IE3	1460	6.06	730	J	173	2.4	3.6	0.81	88.1	0.19	62
112 MP/4	5.4	4	IE3	1440	7.85	740	J	236	3.3	3.5	0.83	88.6	0.33	78
132 SP/4	7.5	5.5	IE3	1465	10.9	860	K	323	3.9	4.1	0.80	90.9	0.76	121
132 MP/4	10	7.5	IE3	1460	15.7	750	K	432	3.9	4.2	0.77	90.4	0.83	137
160 SP/4	12	9.2	IE3	1470	16.7	810	J	514	2.9	3.3	0.88	91.0	1.59	205
160 MP/4	15	11	IE3	1465	20.5	740	J	645	2.9	3.4	0.85	91.4	1.59	205
160 LP/4	20	15	IE3	1465	27.9	910	K	860	3.8	4.3	0.85	92.3	2.18	269
180 MP/4	25	18.5	IE3	1480	34.0	920	K	1065	3.4	3.8	0.84	93.1	3.80	342
180 LP/4	30	22	IE3	1475	39.3	800	J	1282	2.8	3.2	0.87	93.1	3.80	342
225 RP/4	40	30	IE3	1485	56.2	780	J	1707	3.0	3.4	0.82	94.1	11.63	694
225 SP/4	50	37	IE3	1485	68.2	770	J	2106	2.9	3.2	0.83	94.1	12.81	728
225 MP/4	60	45	IE3	1485	81.7	800	J	2561	3.0	3.4	0.83	94.6	15.90	805
250 WP/4	75	55	IE3	1480	96.1	700	H	3141	2.6	2.8	0.87	94.6	19.46	882
280 SP/4	101	75	IE3	1485	133	690	J	4266	2.5	3	0.86	95.0	33.24	1257
280 MP/4	121	90	IE3	1485	157	720	J	5125	2.6	3	0.87	95.2	40.36	1478
315 SP/4	148	110	IE3	1488	191	380	C	6249	2.6	2.9	0.87	95.4	52.23	1676
315 MP/4	177	132	IE3	1490	230	730	J	7488	2.8	3	0.87	95.6	68.85	2117
315 RP/4	215	160	IE3	1490	275	730	J	9072	2.9	3.1	0.87	95.8	73.60	2183
315 LP/4	268	200	IE3	1490	340	740	J	11364	3.2	3	0.88	96.0	87.85	2624

* Standard motors 10hp (7.5kw) and below are rated 230Δ / 400Y volts, while motors above 10hp (7.5kw) are rated 400Δ / 690Y volts.



Motor Ratings



Inverter Duty • Induction motor • TEFC
 Synchronous speed 1500rpm @ 50Hz • 4-pole • Three-phase
 Voltages: 400V – 50Hz • 1.0 Service Factor
 60 Minute Duty • 40°C Ambient • up to 3300ft Elevation
 Class B temperature rise • Class F insulation

Motor Type	P _n Full Load Power		n _N Full Load Speed	I _n Full Load Current	I _a /I _n Locked Rotor Current Ratio	NEMA Code Letter	T _n Full Load Torque	T _a /T _n Locked Rotor Torque Ratio	T _k /T _n Break Down Torque Ratio	pf Power Factor	η Full-Load Efficiency	J _m Rotor Inertia	Wt. Weight
	[hp]	[kW]											
80 L/4	1	0.75	1375	2.10	350%	F	45.8	2.0	2.1	0.74	75.5%	0.033	20
90 S/4	1.5	1.1	1395	2.81	440%	G	67.8	2.3	2.6	0.74	77.6%	0.056	26
90 L/4	2	1.5	1395	3.55	480%	G	90.4	2.3	2.6	0.78	77.5%	0.074	31
100 L/4	3	2.2	1440	5.20	510%	G	131	2.3	3.0	0.74	80.8%	0.11	40
100 LA/4	4	3	1415	6.52	540%	G	178	2.5	2.9	0.76	83.3%	0.14	46
112 M/4	5.4	4	1445	8.31	540%	G	236	2.3	2.9	0.80	85.1%	0.26	66
132 S/4	7.5	5.5	1445	11.4	550%	G	327	2.1	2.7	0.81	87.9%	0.57	97
132 M/4	10	7.5	1445	14.8	550%	G	436	2.5	2.8	0.84	87.7%	0.76	121
132 MA/4	12.3	9.2	1450	18.8	600%	H	535	2.6	3.1	0.80	86.9%	0.83	137
160 M/4	15	11	1455	20.9	650%	H	650	2.4	2.9	0.85	88.8%	1.19	172
160 L/4	20	15	1460	28.2	750%	J	863	2.9	3.5	0.85	89.7%	1.59	205
180 MX/4	25	18.5	1460	35.4	750%	J	1079	3.2	3.8	0.83	90.3%	1.90	236
180 LX/4	30	22	1460	42.6	750%	J	1295	3.3	3.8	0.82	90.3%	2.18	269
200 LX/4	40	30	1470	57.6	690%	H	1715	2.6	3.0	0.83	90.7%	3.80	342

* Standard motors 10hp (7.5kw) and below are rated 230Δ / 400Y volts, while motors above 10hp (7.5kw) are rated 400Δ / 690Y volts.





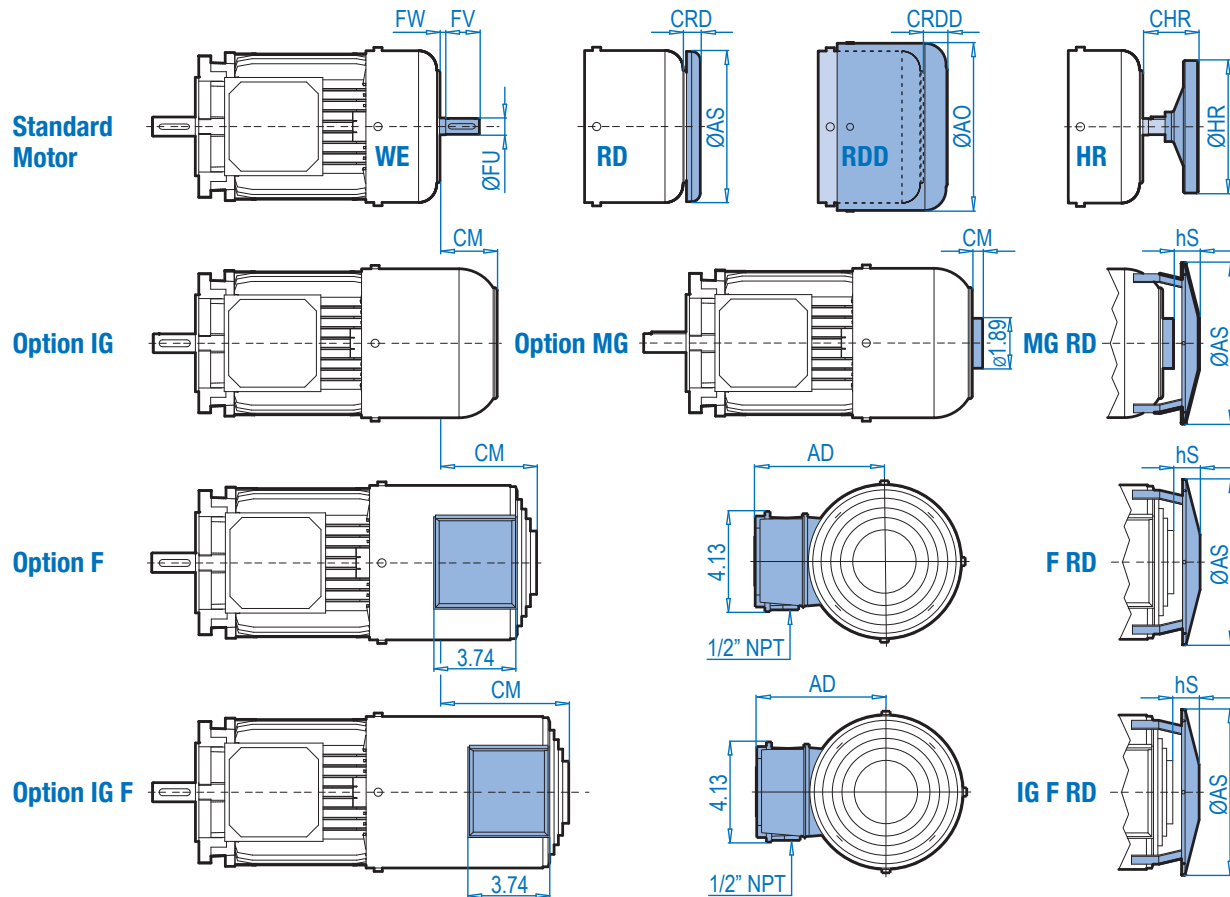
DRIVESYSTEMS

Dimensions

Integral Motor Option Dimensions.....	338
Conduit Box and Cable Entry Dimensions	340



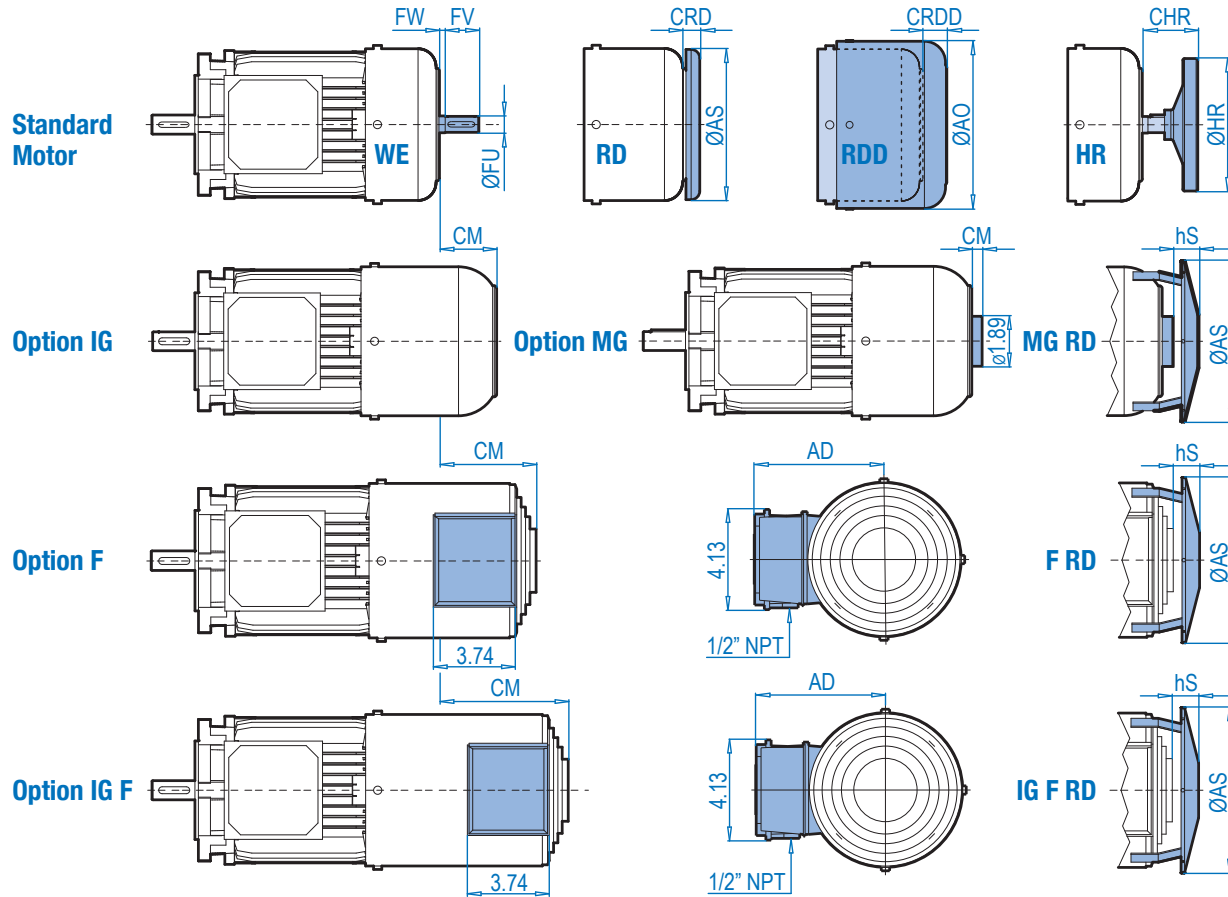
Motor Option Dimensions



Motor Frame Size		WE (mm)				RD		RDD		HR		MG	MG RD		IG	F	IG F	F RD / IG F RD		
Std. Eff.	Prem. Eff.	FU	Tap	FW	FV	AS	CRD	AS	CRDD	HR	CHR	CM	AS	hS	CM	CM	CM	AS	hs	AD
63 S/L	-	11	M4	0	23	4.84	0.43	5.43	1.02	3.94	1.54	0.41	4.84	0.43	2.17	3.46	6.22	5.24	1.46	4.49
71 S/L	-	11	M4	1	23	5.43	0.43	6.14	0.94	3.94	1.57	0.45	5.43	0.43	2.20	3.50	5.67	5.91	1.46	4.84
80 S	80 LP	14	M5	3	30	6.14	0.59	6.93	1.02	3.94	1.93	0.39	6.14	0.35	2.40	3.54	5.51	6.69	1.57	5.20
90 S/L	90 SP/LP	19	M6	7	40	6.93	0.59	7.64	1.22	6.30	2.64	0.55	6.93	0.35	2.83	4.09	5.87	7.40	1.18	5.59
100 L/LA	100 LP/AP	24	M8	6	50	7.64	0.59	8.58	1.10	6.30	2.99	0.49	7.64	0.33	2.72	3.74	6.10	8.27	1.10	5.94
112 M	112 MP	24	M8	4	50	8.58	0.59	10.16	1.50	6.30	2.91	0.49	8.58	0.33	2.68	3.90	5.87	9.80	1.30	6.42
132 S/M	132 SP/MP	32	M12	18	80	10.12	0.67	12.20	1.61	7.87	4.69	0.39	10.12	0.43	2.48	4.53	6.10	11.81	1.26	7.20
160 M/L	-	42	M16	9	110	12.20	0.67	14.45	1.77	7.87	5.59	0.63	12.20	0.41	2.76	5.91	9.25	13.31	1.26	8.27
-	160 SP/MP/LP	42	M16	9	110	12.20	0.67	14.45	1.77	12.40	5.59	0.63	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27
180 MX	-	42	M16	9	110	12.20	0.67	14.45	1.77	12.40	5.59	0.63	12.20	0.41	2.76	5.91	9.25	13.31	1.26	8.27
180 LX	-	42	M16	9	110	12.20	0.67	14.45	1.77	12.40	5.59	0.63	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27
-	180 MP/LP	48	M16	7	110	13.70	0.59	15.87	2.68	12.40	5.59	0.51	13.70	0.41	4.29	6.02	9.17	13.31	1.26	8.27
200 LX	-	48	M16	7	110	13.70	0.59	15.87	2.68	12.40	5.59	0.51	13.70	0.41	4.29	6.02	9.17	13.31	1.26	8.27
-	225 RP/SP/MP	55	M20	10	110	13.70	3.41	20.43	3.31	-	-	-	-	-	2.64	5.00	11.30	-	-	9.84
-	250 WP	55	M20	10	110	13.70	3.41	20.43	3.31	-	-	-	-	-	2.64	5.00	11.30	-	-	9.84
-	280 SP/MP	65	M20	10	140	21.69	4.33	-	-	-	-	-	-	-	-	-	-	-	-	-
-	315 SP/MP/RP	70	M20	10	140	24.25	4.33	-	-	-	-	-	-	-	-	-	-	-	-	-



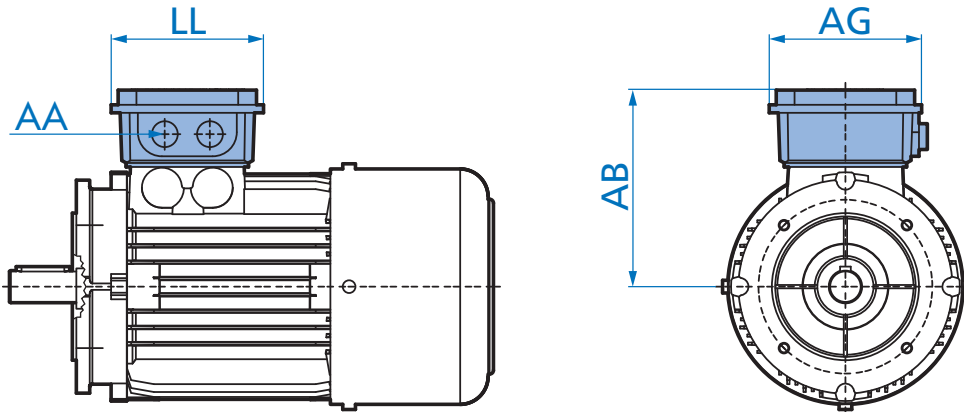
Brakemotor Option Dimensions



Motor Frame Size	BRE	WE (mm)					RD		RDD		HR		MG			IG			F		IG F		FRD / IG FRD		
Std. Eff.	Prem. Eff.	(Nm)	FU	Tap	FW	FV	AS	CRD	AS	CRDD	HR	CHR	CM	AS	hS	CM	CM	CM	AS	hs	AD	AS	hs	AD	
63 S/L	-	5	11	M4	4	23	4.84	0.43	5.43	1.02	3.94	1.69	0.57	4.84	0.43	2.44	3.54	4.92	5.24	1.46	4.49				
71 S/L	-	5	11	M4	4	23	5.43	0.43	6.14	0.94	3.94	1.69	0.67	5.43	0.43	2.91	3.70	5.47	5.91	1.46	4.84				
80 S	-	5	14	M5	4	30	6.14	0.59	6.93	1.02	3.94	1.97	0.47	6.14	0.35	2.24	3.54	5.51	6.69	1.57	5.20				
-	80 LP	10	14	M5	4	30	6.14	0.59	6.93	1.02	3.94	1.97	0.47	6.14	0.35	2.24	3.54	5.51	6.69	1.57	5.20				
90 S/L	90 SP/LP	20	14	M5	8	30	6.93	0.59	7.64	1.18	6.30	2.28	0.51	6.93	0.35	2.76	3.94	5.71	7.40	1.18	5.59				
100 L/LA	100 LP	20	24	M8	10	50	7.64	0.59	8.58	1.10	6.30	3.15	0.51	7.64	0.33	2.76	4.13	5.51	8.27	1.10	5.94				
-	100AP	40	24	M8	10	50	7.64	0.59	8.58	1.10	6.30	3.15	0.51	7.64	0.33	2.76	4.13	5.51	8.27	1.10	5.94				
112 M	-	60	24	M8	7	50	8.58	0.59	10.16	1.50	6.30	3.03	0.49	8.58	0.35	2.52	4.13	5.51	9.80	1.30	6.42				
-	112 MP	60	24	M8	7	50	8.58	0.59	10.16	1.50	6.30	3.03	0.49	8.58	0.33	2.52	4.13	5.51	9.80	1.30	6.42				
132 S	-	60	32	M12	10	80	10.12	0.67	12.20	1.42	7.87	4.37	0.33	10.12	0.45	2.56	4.92	6.10	11.81	0.98	7.20				
132 M	132 MP	100	32	M12	10	80	10.12	0.67	12.20	1.42	7.87	4.37	0.33	10.12	0.45	2.56	4.92	6.10	11.81	0.98	7.20				
160 M	160 SP/MP	150	28	M10	9	60	12.20	0.67	14.45	1.77	7.87	5.59	0.67	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27				
160 L	-	250	42	M16	9	110	12.20	0.67	14.45	1.77	12.40	5.59	0.67	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27				
-	160 LP	250	42	M16	9	110	12.20	0.67	14.45	1.77	12.40	5.59	0.67	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27				
180 MX	-	250	42	M16	9	110	12.20	0.67	15.87	1.77	12.40	5.59	0.67	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27				
180 LX	-	250	42	M16	9	110	12.20	0.67	15.87	1.77	12.40	5.59	0.67	12.20	0.41	2.76	5.71	9.25	13.31	1.26	8.27				
-	180 MP/LP	250	48	M16	9	110	13.70	0.67	15.87	2.76	12.40	5.59	0.71	13.70	0.41	2.76	5.75	9.88	13.31	1.26	8.27				
200 LX	-	250	48	M16	9	110	13.70	0.67	15.87	2.76	12.40	5.59	0.71	13.70	0.41	2.76	5.75	9.88	13.31	1.26	8.27				
-	225 RP/SP	400	55	M20	10	110	13.70	3.41	20.43	3.31	-	-	-	-	-	2.56	7.44	10.98	-	-	9.84				
-	225 MP	800	55	M20	10	110	13.70	3.41	20.43	3.31	-	-	-	-	-	2.56	7.44	10.98	-	-	9.84				
-	250 WP	800	55	M20	10	110	13.70	3.41	20.43	3.31	-	-	-	-	-	2.56	7.44	10.98	-	-	9.84				
-	280 SP/MP	800	65	M20	10	140	21.69	4.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Dimensions

Conduit Box & Cable Entry Dimensions



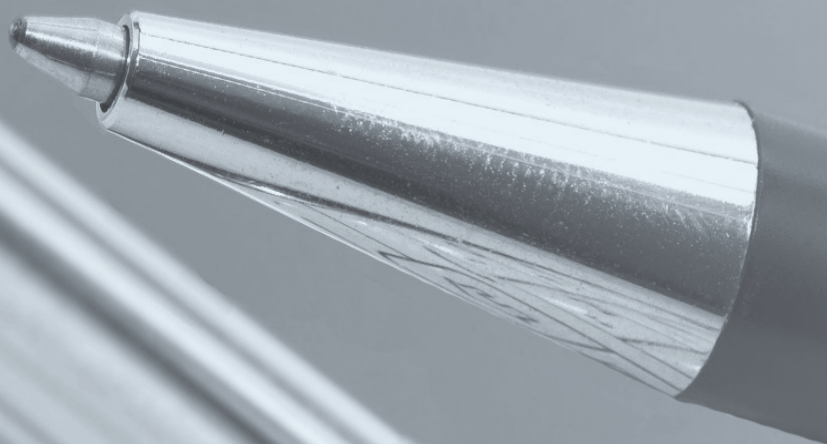
Motor Frame Size		Motor Conduit Box & Cable Entry Dimensions									
60 Min. (IE1)	Prem. Eff. (IE3)	AB		LL		AG		FP		AA	Conduit Adapter
		inch	mm	inch	mm	inch	mm	inch	mm		
63 S/L	-	4.51	115	3.95	100	3.95	100	5.08	129	M20 x 1.5	1/2" NPT
71 S/L	-	4.86	124	3.95	100	3.95	100	5.72	145	M20 x 1.5	1/2" NPT
80 S	80 LP	5.59	142	4.49	114	4.49	114	6.43	163	M25 x 1.5	3/4" NPT
90 S/L	90 SP/LP	5.79	147	4.49	114	4.49	114	7.19	183	M32 x 1.5	1" NPT
100 L/LA	100 LP/AP	6.65	169	4.49	114	4.49	114	7.90	201	M32 x 1.5	1" NPT
112 M	112 MP	7.05	179	4.49	114	4.49	114	8.87	225	M40 x 1.5	1" NPT
132 S/M	132 SP/MP	8.03	204	4.80	122	4.80	122	10.45	265	M40 x 1.5	1" NPT
160 M/L	160 SP/MP/LP	9.53	242	7.32	186	7.32	186	12.56	319	M40 x 1.5	1" NPT
180 MX/LX	-	9.53	242	7.32	186	7.32	186	12.56	319	M40 x 1.5	1" NPT
-	180 MP/LP	10.18	259	7.32	186	7.32	186	14.06	357	M40 x 1.5	1" NPT
200 LX	-	10.18	259	7.32	186	7.32	186	14.06	357	M40 x 1.5	1" NPT
-	225 RP/SP/MP	13.68	348	9.65	245	9.65	245	17.87	454	M50 x 1.5	1-1/2" NPT
-	250 WP	13.68	348	9.65	245	9.65	245	17.87	454	M50 x 1.5	1-1/2" NPT
-	280 SP/MP	16.97	431	9.17	233	12.56	319	21.69	551	M63 x 1.5	-
-	315 SP/MP/RP	20.31	516	11.77	299	14.72	374	24.25	616	M63 x 1.5	-

Motor Frame Size		Brakemotor Conduit Box & Cable Entry Dimensions									
60 Min. (IE1)	Prem. Eff. (IE3)	AB		LL		AG		FP		AA	Conduit Adapter
		inch	mm	inch	mm	inch	mm	inch	mm		
63 S/L	-	4.84	123	5.28	134	3.50	89	5.09	129	M20 x 1.5	1/2" NPT
71 S/L	-	5.24	133	5.28	134	3.50	89	5.72	145	M20 x 1.5	1/2" NPT
80 S	80 LP	5.59	142	6.02	153	4.25	108	6.43	163	M25 x 1.5	3/4" NPT
90 S/L	90 SP/LP	5.79	147	6.02	153	4.25	108	7.19	183	M32 x 1.5	1" NPT
100 L/LA	100 LP/AP	6.77	172	6.02	153	4.25	108	7.90	201	M32 x 1.5	1" NPT
112 M	112 MP	7.17	182	6.02	153	4.25	108	8.87	225	M40 x 1.5	1" NPT
132 S/M	132 SP/MP	7.91	201	7.29	185	5.48	139	10.45	265	M40 x 1.5	1" NPT
160 M/L	160 SP/MP/LP	9.53	242	7.32	186	7.32	186	12.56	319	M40 x 1.5	1" NPT
180 MX/LX	-	9.53	242	7.32	186	7.32	186	12.56	319	M40 x 1.5	1" NPT
-	180 MP/LP	10.18	259	7.32	186	7.32	186	14.06	357	M40 x 1.5	1" NPT
200 LX	-	10.18	259	7.32	186	7.32	186	14.06	357	M40 x 1.5	1" NPT
-	225 RP/SP/MP	13.68	348	9.65	245	9.65	245	17.87	454	M50 x 1.5	1-1/2" NPT
-	250 WP	13.68	348	9.65	245	9.65	245	17.87	454	M50 x 1.5	1-1/2" NPT
-	280 SP/MP	16.97	431	9.17	233	12.56	319	21.69	551	M63 x 1.5	-



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United States

NORD Gear Corporation - Midwest Headquarters
800 Nord Drive, P.O. 367
Waunakee, WI 53597

toll free: 1-888-314-6673
phone: 1-608-849-7300
fax: 1-800-373-6673
email: info.us@nord.com

NORD Gear Corporation - East
300-E Forsyth Hall Drive
Charlotte, NC 28273

toll free: 1-888-314-6673
phone: 1-980-215-7575
fax: 1-888-259-6673
email: info.us@nord.com

NORD Gear Corporation - West
1180 Railroad Street
Corona, CA 92882

toll free: 1-888-314-6673
phone: 1-951-393-6565
fax: 1-888-408-6673
email: info.us@nord.com

For Sales office or distributors please contact us or see our website at www.nord.com



Global Headquarters Germany

Getriebebau NORD GmbH & Co. KG
Getriebebau-Nord-Straße 1
22941 Bargteheide
Germany

phone: +49-4532-2890
Fax: +49 4532-289-2253
eMail: info@nord.com

For Sales office or distributors please contact us or see our website at www.nord.com



Canada

NORD Gear Limited
41 West Drive
Brampton, Ontario L6T 4A1

toll free: 1-800-668-4378
phone: 1-905-796-3606
fax: 1-905-796-8130
eMail: info.ca@nord.com

For Sales office or distributors please contact us or see our website at www.nord.com



Mexico

Mexico NORD Drivesystems SA DE CV
Mexico Regional Office
Av. Lázaro Cárdenas 1007 Pte.
San Pedro Garza Garcia, N.L.
México, C.P. 66266

phone: +52-81-8220-9165
fax: +52-81-8220-9044
eMail: info.mx@nord.com

For Sales office or distributors please contact us or see our website at www.nord.com



Nord Locator Tool

For international contacts (outside of North America), NORD makes it easy for you to locate address and phone number of the sales contact or facility nearest you on our homepage or with the web address: www.locator.nord.com.



SALES CONTACT →

1 **Country**
United States ▾

2 **or State search**
please select a State ▾

3 **Distance**
25 miles ▾

Zip code

or Phone number search
(Include at least the first 6 digits)

It is as easy as submitting your location and we provide you with a list of our nearest district managers, distributors and plant locations for your convenience.

NORD Office for

United States/Idaho Print List

NORD district manager(s) for Idaho

NORD Gear Corp
Scott Patzer
7645 E Amphlett Ave
Denver, CO 80231
Phone: 1-720-532-5371
Fax: 1-800-551-3732
E-Mail: scott.patzer@nord.com
Homepage: <http://www.nord.com> Save VCard
Print

NORD Gear Corp
DuWayne Weber
2201 13th Ave Ct SW
Puyallup, WA 98373-4011
Phone: 1-253-386-2150
Fax: 1-800-564-3707
E-Mail: duwayne.weber@nord.com
Homepage: <http://www.nord.com> Save VCard
Print

NORD plant for Idaho

NORD Gear Corp - West
1180 Railroad St
Corona, CA 92882
Phone: 1-988-314-6673
Fax: 1-988-498-6073
E-Mail: info.us@nord.com
Homepage: <http://www.nord.com> Save VCard
Google Maps
Print

Distributors Idaho

Bearings & Industrial Sales Inc
625 Lindsay Blvd
Idaho Falls, ID 83402
Phone: 1-208-522-0266
Fax: 1-208-522-0272 Print

NORD GEAR CORPORATION

Terms and Conditions of Sale

1. CONTRACT

Any contract between Nord Gear Corporation, hereinafter designated as Seller, and the Buyer is subject to the terms and conditions of sale hereinafter set forth. Any deviation from such terms and conditions must be specifically set forth in writing and consented to by Seller. Accordingly, the Buyer and Seller acknowledge and agree that the terms and conditions set forth below and on the face hereof shall govern Buyer's purchase of the goods described on the face hereof and shall take precedence over and represents the final agreement between Buyer and Seller, notwithstanding any inconsistent, contradictory or other prior or further conditions contained in any oral or written request or purchase order issued by Buyer or any other document furnished by Buyer in connection with its purchase of the Goods, regardless of whether such document or documents are exchanged simultaneously with this Invoice or prior or subsequent thereto. Any additional or different terms or conditions which may appear in any communication, oral or written, from Seller, its officers, employees, agents or representatives, are hereby expressly rejected and shall not be effective or binding upon the Seller, unless specifically hereafter agreed to in writing by Seller and no such additional or different terms or conditions in any document submitted to Seller by Buyer shall become part of the contract between Buyer and Seller, unless such written acceptance by Seller specifically recognizes and assents to their inclusion. Any objection by Buyer to the terms and conditions hereof shall be ineffective unless Seller is advised in writing thereof within two (2) days of the date of this Invoice.

2. CONFIRMATION

An order shall be deemed accepted only when duly confirmed by Seller, at Nord Gear Corporation's home office in Waunakee, Wisconsin, and upon such confirmation the order shall become a contract binding upon the parties hereto, their successors and assigns.

3. PRICES

Prices shown are list prices and may be subject to applicable discounts. Unless otherwise agreed upon in writing, prices are FOB factory Waunakee, Wisconsin. Prices and discounts are subject to change without notice until order is accepted. Seller's prices do not include cost of any inspection permits required.

4. LIMITED WARRANTY

Seller warrants the goods sold hereunder to be free from defects in material and workmanship under normal use and service not arising from misuse, negligence, or accident, including but not limited to the use, installation, and transportation of the goods by the Buyer, its agents, servants, employees, or by carriers. Such obligations under this warranty are limited to remedying any deficiencies in the goods at Waunakee, Wisconsin, or at such place or places in the United States of America as may be designated by Seller. THIS WARRANTY SHALL PERTAIN TO ANY PART OR PARTS OF ANY GOODS TO WHICH BUYER OR ITS ASSIGNS HAS GIVEN WRITTEN NOTICE OF CLAIMED DEFECTS TO SELLER. NORD GEAR CORP. WARRANTS ITS PRODUCTS AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF 12 MONTHS FROM DATE OF INSTALLATION OR 18 MONTHS FROM DATE OF SHIPMENT WHICHEVER COMES FIRST ON ALL COMPONENTS. 36 MONTHS FROM DATE OF INVOICE OR 24 MONTHS FROM DATE OF INSTALLATION WHICHEVER COMES FIRST ON GEARS AND HOUSINGS ONLY. PARTS WHICH ARE SUBJECT TO OPERATIONAL WEAR AND TEAR, SUCH AS BELTS & TRACTION DISCS, ARE NOT COVERED BY THE LIMITED WARRANTY. Buyer shall be required to furnish Seller with details of such defects and this warranty shall be effective as to such goods which Seller's examination shall disclose to its satisfaction to have been defective and which of Seller's option shall promptly thereafter be returned to Seller or its nominees. THE LIMITED WARRANTY SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH HEREIN, SELLER HAS MADE AND MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. AS TO THE GOODS SOLD HEREUNDER, INCLUDING, BUT NOT LIMITED TO, THEIR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. ANY DESCRIPTION OR MODEL OF THE GOODS IS FOR IDENTIFICATION OR ILLUSTRATIVE PURPOSES ONLY AND SHALL NOT BE DEEMED TO CREATE ANY WARRANTY, EXPRESS OR IMPLIED. SELLER MAKES NO REPRESENTATIONS AS TO THE CAPACITY OR PERFORMANCE OF THE GOODS SOLD HEREUNDER, EXCEPT AS SET FORTH IN THE INVOICE'S SPECIFICATIONS OR OTHER VALID AGREEMENT OR CONDITION AGREED TO BETWEEN THE PARTIES, AND ANY SUCH REPRESENTATIONS ARE EXPRESSLY CONDITIONED UPON THE CORRECTNESS OF THE DATA AND INFORMATION FURNISHED BY THE BUYER AND UPON THE GOODS BEING PROPERLY INSTALLED AND MAINTAINED. THE REMEDIES OF THE BUYER PROVIDED HEREUNDER ARE EXCLUSIVE. In no event shall the Seller be liable to the Buyer or to any other person for any loss or damage, direct or indirect, arising out of or caused by the use or operation of the goods, or for the loss of profits, business, or good will, or for any incidental, special or consequential damages. Seller shall in no event be liable to any person or firm (including any assignee or Buyer) except Buyer and its successors. Unless specifically authorized by Seller in writing, Seller shall not become responsible for any repair work done by Buyer or any other party on any goods sold. Any and all costs of the return to the Seller of such goods and all related costs to remove and re-install such goods, shall be borne by Buyer. Goods sold but not manufactured by the Seller are being warranted as to defects in material and workmanship consistent with the limited warranty policy of the original manufacturer of the goods and if there is not such a limited warranty policy, the warranty shall be limited to the provision of the preceding paragraph of Article 4 herein. Standards for the operating characteristics of the gearboxes and the gearmotors are in conformity with Seller's tests.

5. SHORTAGE AND NONCONFORMITY

Any claim of shortage or that the goods do not conform with the specifications of the order or model must be made in writing within ten (10) days after delivery of the goods (as to which such claim is made) to Buyer or its nominees, but in no event shall the claim be later than within the time limit provided by the carrier or insurance company, otherwise such claim shall be deemed waived. Buyer may not return any goods claimed to be in non-conformity without Seller's prior written authorization. Goods returned without permission will not be accepted, including for credit, and will be returned to Buyer, F.O.B. Seller's plant. Any claim based on the receipt of damaged Goods must be filed with the carrier which delivered the goods. The samples, measurements, dimensions and weights contained in the Seller's catalogs, sales manuals, photographs and drawings constitute only an approximate guide. The Seller reserves the right to make any change which the Seller, in its absolute discretion, considers necessary. While the goods will be delivered principally according to specifications or standards or quantities agreed upon, insignificant deviations or insignificant changes in construction are permissible. The same applies to partial deliveries. In the event that Buyer has a verified claim of shortage or nonconformity of the goods to the specifications of the order or the model, and if such claim has been submitted within the required time limit as set forth above, the Seller shall, at its own expense, make up for the shortage of the goods, or replace or repair the goods, as the case may be, but in no event shall Seller be or become liable to Buyer or to any other person or persons for any loss in damage, direct or indirect, arising out of or caused by such incidents or for the loss of profits, business or good will. The liability of the Seller to Buyer, if any hereunder, for breach of warranty, contract, negligence or otherwise, shall in no event exceed the amount of the purchase price of the goods sold with respect to which any damages are claimed. Shipping dates are estimates unless parties expressly agree on time of the essence.

6. FORCE MAJEURE

The obligation of the Seller shall be modified or excused, as the case may be, for reasons of Acts of God, war, governmental law regulations, strikes or lock-outs, fire, breakdown of machinery, whether in its own business enterprise, or if for any other cause beyond Seller's control, the goods cannot be delivered or their delivery becomes delayed in whole or in part. In the above instances time for delivery shall be extended for the period of the delay caused, with the proviso, however, that either party may cancel in writing the undelivered portion of the order or contract if the delay exceeds six (6) months from the delivery date originally confirmed by Seller. In no event shall Seller become liable in the aforesaid instances to Buyer or any third party for consequential damages or business loss.

7. SHIPMENT AS UNIT

Each shipment by Seller shall be treated as a separate and distinct unit with respect, but only with respect to forwarding, terms of payment, and the making of claims by the Buyer: provided, however, that if the Buyer defaults in the payment of any obligation to Seller or any installments thereof, under any agreement between Buyer and Seller, or if Buyer refuses to accept any goods when tendered for delivery, the Seller may, on fifteen (15) days written notice to the Buyer, without prejudice to Seller's other lawful remedies, either defer further performance until the defaulted payments are made in full, or make future deliveries for cash in advance only, or treat the entire contract or contracts with Buyer as breached by the Buyer and pursue its remedies for breach.

8. BUYER'S REFUSAL OF DELIVERY

If Buyer refuses to accept delivery of any goods tendered for delivery, then Seller, without prejudice to Seller's other lawful remedies, may either store or cause such goods to be stored in a warehouse, for buyer's account and at Buyer's cost, risk and expense, or sell such goods (without notice) to any purchasers at public or private sale, and hold the Buyer liable for any difference between (a) the contract price of the goods, and (b) the price at which goods are resold less the costs and expense of such resale including brokerage commissions, or restocking charges.

9. GOODS IN TRANSIT

If prior to delivery or while the goods are in transit, Buyer or Seller becomes bankrupt or insolvent, or any petition in bankruptcy or for the reorganization or for a state court receivership is filed against Buyer or Seller, as the case may be, then the other party hereto may forthwith terminate this contract by giving written notice of such termination. Such termination shall not affect any claim for damages available to the Buyer, provided that if Buyer is then indebted to Seller, the amount of any such damage claim shall be abated to the extent that the indebtedness of Buyer to Seller, as actually paid in money, is abated by any order of judgement entered or any plan adopted in any bankruptcy, reorganization, receivership, or similar proceeding. Such termination shall not prejudice the Seller's rights to any amounts then due under the contract. If Buyer becomes bankrupt or insolvent or any petition in bankruptcy or for reorganization or if a state court receivership is filed against Buyer, then, at its option Seller may take possession of any goods theretofore sold to Buyer, in connection with which the full purchase price has not been paid, analogous to the terms and provisions set forth in Paragraphs 11 and 12 hereinafter.

10. DELIVERY

(a) Any indicated dates of delivery are approximate only, but NORD Gear will attempt to meet them whenever possible. (b) NORD Gear will not be liable for any penalty clauses contained in any specifications or order submitted unless agreed to in writing by an authorized officer of NORD Gear Corporation. (c) Unless otherwise agreed, delivery of the goods to any carrier shall constitute delivery to the Buyer, and thereafter the risk of loss or damage to the goods shall be upon the Buyer. (d) If the Buyer does not give delivery instructions to the Seller at least (10) days prior to the delivery date ex factory confirmed by the Seller, the Seller may deliver the goods to a carrier of its own choosing, at Buyer's cost and risk, or, at Seller's option, may store the goods on the pier or any warehouse, at Buyer's cost and risk. Any purchase price in such event becomes due and payable within ten (10) days of such storage.

11. PAYMENT OF PURCHASE PRICE

Time of payment is of the essence under the contract. Unless otherwise provided, terms of payment are 30 days net from the date of invoice with a 1% discount if paid within 10 days of date of invoice. Upon default in any of the terms of the contract, or failure to comply with any of the conditions thereof, or upon seizure of the property under execution or other legal process, or if the Buyer becomes bankrupt or insolvent, or any petition for reorganization or for a state court receivership is filed against Buyer, or if the Buyer makes any assignment for the benefit of its creditors or otherwise sells, encumbers or disposes of the goods, or if for any other reason the Seller should deem itself insecure, the full amount of the purchase price then remaining unpaid shall at once become due and payable at the option of the Seller.

12. BUYER'S DEFAULT

Upon the Buyer's default, the Seller may dispose of the merchandise in any manner that it deems fit and, if it desires to resell same, may do so at private or public sale, with or without notice, and with or without the property being at the place of sale, subject, however, to applicable laws. The Seller or its assigns shall have the right to bid at such sale and may become the purchaser of the property. The proceeds of the sale shall first be applied to the expenses incurred in retaking, repairing, storing and selling the goods, reasonable attorney's fees included, and then shall be applied to the payment of the balance due under the contract. Any surplus amount shall be paid to the Buyer. If a deficiency results after the resale, the Buyer agrees to pay such forthwith, together with reasonable attorney's fees, for the recovery of the goods incurred by the Seller. If upon the Buyer's default, the Seller elects not to resell any goods which it may repossess, then the cost of repossession, including reasonable attorney's fees, shall forthwith be due and payable from Buyer to Seller. Buyer agrees to pay all reasonable costs and reasonable attorney's fees incurred by Seller in enforcing Seller's rights against Buyer, including Seller's right to payment of the purchase price of the goods and Buyer's payment of all other amounts owing to Seller required under this Invoice and Conditions of Sale.

13. SECURITY INTEREST AND TITLE

In states and localities which are governed by the Uniform Commercial Code, this contract shall serve as security agreement, reserving in Seller a security interest until full payment of purchase price. The provisions of the Uniform Commercial Code regarding security interest shall have preference and apply if inconsistent with other terms of the conditions of sale. In states and localities where the Uniform Commercial Code does not apply, title to the goods shall remain in the Seller or its assigns until full payment of the purchase price. Buyer agrees to execute forthwith any and all documents in such a way and form as Seller may need for filing or recording the security interest under the Uniform Commercial Code with the proper registers or offices, or for filing or recording the conditional sales contract.

14. SALES AND USE TAX

Buyer agrees to bear and pay any sales or use tax in connection with the purchase herein, and to hold the Seller harmless from payment. At the option the Seller, Buyer shall give evidence of payment or of exemption certificate.

15. INSURANCE

The Buyer shall keep the goods insured against damage by fire, water or other casualty as required by Seller, with a company acceptable to Seller, with loss payable to Seller for the total purchase price until the Seller is fully paid. Seller, if it so elects, may place said insurance at Buyer's expense; Seller may cancel such insurance at any time and without notice and may receive the return premium, if any.

16. MODIFICATION BY SELLER

Any contract may be assigned or transferred by the Seller, or the time for the making of any payment due by Buyer may be extended by Seller without derogation of any of the rights of the Seller or its assigns. Waiver by any party of any default shall not be deemed a waiver of any subsequent default.

17. RETURNED GOODS

No goods will be accepted for return unless authorized in writing by Seller. In all cases, transportation and restocking charges will be borne by Buyer.

18. PACKING

The Buyer will be charged for export packaging or other special packing desired. Cost for cartage to ship or transfer express will be added to the invoice. No credit will be allowed if no packing is required.

19. CHANGES/CANCELLATION

NORD Gear will not accept changes in specifications to a confirmed order unless such changes are requested in writing and confirmed back in writing. In addition, the purchaser must to agree to any additional charges that may arise from the change. Placing orders on hold or cancellation of orders require Seller's written approval, and are subject to cancellation and/or restocking charges.

20. BUYER'S RESPONSIBILITY AS TO MAINTENANCE

Buyer shall use and shall require its employees and agents to use all safety devices and guards and shall maintain the same in proper working order. Buyer shall use and require its employees and agents to use safe operation procedures in operating the equipment and shall further obey and have its employees and agents obey safety instructions given by Seller. If Buyer fails to meet the obligations herein, Buyer agrees to defend, indemnify and save Seller harmless from any liability or obligation with regard to any personal injuries or property damages directly or indirectly connected with the operation of the equipment. Buyer further agrees to notify Seller promptly and in any event not later than ten (10) days after notice or knowledge of any accident or malfunction involving Seller's equipment which has caused personal injury or property damages and to cooperate fully with Seller in investigating and determining the causes of such accident and malfunction. In the event that Buyer fails to give such notice to Seller or to cooperate with Seller, Buyer shall be obligated to defend, indemnify and save Seller harmless from any such claims arising from such accident.

21. MISCELLANEOUS PROVISIONS

(a) If for any reason a provision of a contract is legally invalid, then in such event the rest of the contract shall remain in full force and effect, except that the parties shall try to replace such invalid provision closest to their original mutual intentions. (b) This Invoice and these Conditions of Sale constitute the entire agreement between the parties regarding the subject matter hereof and supercedes all prior agreements, understandings and statements, whether oral or written, regarding such subject matter. No modification to, change in or departure from, the provisions of this Invoice and Conditions of Sale shall be valid or binding on Seller, unless approved in writing by Seller. No course of dealing or usage of trade shall be applicable unless expressly incorporated into this Invoice and Conditions of Sale. Any amendments to any contract or contracts between the parties shall be valid only upon the written consent of both parties.

22. NON ASSIGNMENT BY BUYER

Contract or contracts may not be assigned by the Buyer without prior written consent of the Seller.

23. APPLICABLE LAW AND VENUE

All contracts and their interpretation are governed by the applicable, substantive laws of the State of Wisconsin. Any litigation brought by the Buyer regarding this Invoice or goods purchased hereunder may only be brought in the Circuit Court for Dane County, Wisconsin.

NORD GEAR LIMITED

Terms and Conditions of Sale

1. CONTRACT

Any contract between Nord Gear Limited, hereinafter designated as "Seller", and the party or parties accepting these terms and conditions of sale and any agent, officer, servant, employee or subcontractor of such party or parties, hereinafter designated as "Buyer", is subject to the terms and conditions of sale hereinafter set forth. Any deviation from such terms and conditions must be specifically set forth in writing and consented to by Seller.

2. CONFIRMATION

An order shall be deemed accepted only when duly confirmed by Seller, at Nord Gear Limited's home office in Brampton, Ontario, and upon such confirmation the orders shall become a contract binding upon the parties hereto, their successors and assigns.

3. PRICES

Prices shown are list prices and may be subject to applicable discounts. Unless otherwise agreed upon in writing, prices are FOB factory Brampton, Ontario. Prices and discounts are subject to change without notice until the order is accepted. Seller's prices do not include cost of any inspection permits required.

4. LIMITED WARRANTY

Seller warrants the goods sold hereunder to be free from defects in material and workmanship under normal use and service not arising from misuse, negligence, or accident, including but not limited to the use, installation, and transportation of the goods by Buyer, its agents, servants, employees, or by carriers. This warranty shall pertain to any part or parts of any goods to which Buyer or its assigns has within one year from date of delivery given written notice of claimed defects to Seller. Buyer shall be required to furnish Seller with details of such defects and this warranty shall be effective as to such goods which Seller's examination shall disclose to its satisfaction to have been defective and which at Seller's option shall promptly thereafter be returned to Seller or its nominees. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH ABOVE, SELLER HAS MADE NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AS TO THE GOODS SOLD HEREUNDER, INCLUDING, BUT NOT LIMITED TO THEIR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. ANY DESCRIPTION OR MODEL OF THE GOODS IS FOR IDENTIFICATION OR ILLUSTRATIVE PURPOSES ONLY AND SHALL NOT BE DEEMED TO CREATE AN EXPRESS WARRANTY. The Buyer's exclusive remedy for claims arising from defective or nonconforming goods shall be limited to the repair or replacement thereof at the Seller's sole option. THE SELLER SHALL NOT BE RESPONSIBLE OR LIABLE FOR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE SALE, DELIVERY, USE, PERFORMANCE, OR SERVICE OF THE GOODS SOLD UNDER THIS AGREEMENT. SELLER SHALL NOT BE LIABLE FOR ANY LOST PROFITS OR FOR ANY CLAIM OR DEMAND AGAINST SELLER BY ANY PARTY. IN NO EVENT WILL SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SELLER'S AGGREGATE LIABILITY FOR DAMAGES UNDER THIS AGREEMENT, WHETHER ARISING FROM OR BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, TORT OR OTHER CAUSE OF ACTION, SHALL IN NO CASE EXCEED THE PURCHASE PRICE THAT BUYER PAYS FOR THE PARTICULAR GOODS INVOLVED. Seller shall in no event be liable to any person or firm (including any assignee or Buyer) except Buyer and its successors. Unless specifically authorized by Seller in writing, Seller shall not become responsible for any repair work done by Buyer or any other party on any goods sold. Any costs of the return of such goods to Seller shall be borne by Buyer. Goods sold but not manufactured by Seller are being warranted as to defects in material and workmanship consistent with the limited warranty policy of the original manufacturer of the goods and if there is not such a limited warranty policy, the warranty shall be limited to the provisions of Article 4 herein. Standards for the operating characteristics of the gearboxes and the gear motors are in conformity with Seller's tests. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE SELLER DOES NOT ASSUME, NOR DOES IT AUTHORIZE ANY PERSON TO ASSUME, ON ITS BEHALF, ANY OTHER OBLIGATION OR LIABILITY.

5. SHORTAGE AND NONCONFORMITY

Any claim of shortage or that the goods do not conform with the specifications of the order or model must be made in writing within ten (10) days after delivery of the goods (as to which such claim is made) to Buyer or its nominees, but in no event shall the claim be later than within the time limit provided by the carrier or insurance company, otherwise such claim shall be deemed waived. The samples, measurements, dimensions and weights contained in Seller's catalogs, sales manuals, photographs and drawings constitute only an approximate guide. Seller reserves the right to make any changes which Seller, in its absolute discretion, considers necessary. While the goods will be delivered principally according to specifications of standards or quantities agreed upon, insignificant deviations or insignificant changes in construction are permissible. The same applies to partial deliveries. In the event that Buyer has a verified claim of shortage or nonconformity of the goods to the specifications of the order or the model, and if such claim has been submitted within the required time limit as set forth above, Seller shall, at its own expense, make up for the shortage of the goods, or replace or repair the goods, as the cause may be, but in no event shall Seller be or become liable to Buyer or to any other person or persons for any loss in damage, direct or indirect, arising out of or caused by such incidents or for the loss of profits, business of good will. Shipping dates are estimates unless parties expressly agree on time of the essence.

6. FORCE MAJEURE

The obligation of Seller shall be modified or excused, as the case may be, for reasons of Acts of God, war, governmental law regulations, strikes or lock-outs, fire, breakdown of machinery, whether in its own business enterprise, or if for any other cause beyond Seller's control, the goods cannot be delivered or their delivery becomes delayed in whole or in part. In the above instances time for delivery shall be extended for the period of the delay caused, with the proviso, however, that either party may cancel in writing the undelivered portion of the order of contract if the delay exceeds six (6) months from the delivery date originally confirmed by Seller. In no event shall Seller become liable in the aforesaid instances to Buyer or any third party for consequential damages or business loss.

7. SHIPMENT AS UNIT

Each shipment by Seller shall be treated as a separate and distinct unit with respect, but only with respect to forwarding, terms of payment, and the making of claims by Buyer, provided, however, that if Buyer defaults in the payment of any obligation to Seller or any installments thereof, under any agreement between Buyer and Seller, or if Buyer refuses to accept any goods when tendered for delivery, Seller may, on fifteen (15) days written notice to Buyer, without prejudice to Seller's other lawful remedies, either defer further performance until the defaulted payments are made in full, or make future deliveries for cash in advance only, or to treat the entire contract or contracts with Buyer as breached by Buyer and pursue its remedies for breach.

8. BUYER'S REFUSAL OF DELIVERY

If Buyer refuses to accept delivery of any goods tendered for delivery, then Seller, without prejudice to Seller's other lawful remedies, may either store or cause such goods to be stored in a warehouse, for Buyer's account and at Buyer's cost, risk and expense, or sell such goods (without notice) to any purchaser at public or private sale, and hold Buyer liable for any difference between (A) the contract price of the goods, and (B) the price at which goods are resold less the costs and expense of such resale including brokerage commissions, or restocking charges.

9. GOODS IN TRANSIT

If prior to delivery or while the goods are in transit, Buyer or Seller becomes bankrupt or insolvent, or any petition in bankruptcy or for the reorganization or for appointment of a receiver is filed against Buyer or Seller, as the case may be, then the other party hereto may forthwith terminate this contract by giving written notice of such termination. Such termination shall not affect any claim for damages available to Buyer, to Seller, as actually paid in money, is abated by any order of judgment entered or any plan adopted in any bankruptcy, reorganization, receivership, or similar proceeding. Such termination shall not prejudice Seller's rights to any amounts then due under the contract. If Buyer becomes bankrupt or insolvent or any petition in bankruptcy or for reorganization or if a state court receivership is filed against Buyer, then, at its option, Seller may take possession of any goods theretofore sold to Buyer, in connection with which the full purchase price has not been paid, analogous to the terms and provisions set forth in Paragraphs 11 and 12 hereinafter.

10. DELIVERY

(A) Unless otherwise agreed, delivery of the goods to any carrier shall constitute delivery to Buyer, and thereafter the risk of loss or damage to the goods shall be upon Buyer. (B) If Buyer does not give delivery instructions to Seller at least ten (10) days prior to the delivery date ex factory confirmed by Seller, Seller may deliver the goods to a carrier of its own choosing, at Buyer's cost and risk, or, at Seller's option may store the goods on the pier or on any warehouse at Buyer's cost and risk. Any purchase price in such event becomes due and payable within ten (10) days of such storage.

11. PAYMENT OF PURCHASE PRICE

Time of payment is of the essence under the contract. Upon default in any of the terms of the contract, or failure to comply with any of the conditions thereof, or upon seizure of the property under execution or other legal process, or if Buyer becomes bankrupt or insolvent, or any petitions for reorganization or for appointment of a receiver is filed against Buyer, or if Buyer makes any assignment for the benefit of its creditors or otherwise sells, encumbers or disposes of the goods, or if for any other reason Seller should deem itself insecure, the full amount of the purchase price then remaining unpaid shall at once become due and payable at the option of Seller. Interest on the delinquent payment from the due date thereof until paid shall be at a rate of two (2%) percent per month.

12. BUYER'S DEFAULT

Upon Buyer's default, Seller may dispose of the merchandise in any manner that it deems fit and, if it desires to resell same, may do so at private or public sale, with or without notice, and with or without the property being at the place of sale, subject, however, to applicable laws. Seller or its assigns shall have the right to bid at such sale and may become the purchaser of the property. The proceeds of the sale shall first be applied to the expenses incurred in retaking, repairing, storing and selling the goods; reasonable solicitor's fees included, and then shall be applied to the payment of the balance due under the contract. Any surplus amount shall be paid to Buyer. If a deficiency results after the sale, Buyer agrees to pay such forthwith, together with reasonable solicitor's fees, for the recovery of the goods incurred by Seller. If upon Buyer's default, Seller elects not to resell any goods which it may repossess, then the cost of repossession, including reasonable solicitor's fees, shall forthwith be due and payable from Seller to Buyer.

13. SECURITY INTEREST AND TITLE

In provinces which are governed by a Personal Property Security Act, this contract shall serve as a security agreement, reserving in Seller a security interest until full payment of the purchase price. The provisions of the Personal Property Security Act regarding security interest shall have preference and apply if inconsistent with other terms of the conditions of sale hereunder. In provinces where a Personal Property Security Act does not apply, title to the goods shall remain in the Seller or its assigns until full payment of the purchase price. Buyer agrees to execute forthwith any and all documents in such a way and form as Seller may need for filing or recording the security interest under a Personal Property Security Act with the proper registers or offices, or for filing or recording the Conditional Sales Contract herein.

14. SALES AND USE TAX

Seller's prices do not include sales, use, excise or other taxes payable to any governmental authority in respect of the sale of Seller's goods. Buyer shall pay, in addition to Seller's price, the amount of any such taxes or shall reimburse Seller for the amount thereof that Seller may be required to pay. At the option of Seller, Buyer shall give evidence of payment or of exemption certificate.

15. INSURANCE

Buyer shall keep the goods insured against damage by fire, water or other casualty as required by Seller, with a company acceptable to Seller, with loss payable to Seller for the total purchase price until Seller is fully paid. Seller, if it so elects, may place said insurance at Buyer's expense; Seller may cancel such insurance at any time and without notice and may receive the return premium, if any.

16. MODIFICATION BY SELLER

Seller may be assigned or transferred by Seller, or the time for the making of any payment due by Buyer may be extended by Seller without derogation of any of the rights of Seller or its assigns. Waiver by any party of any default shall not be deemed a waiver of any subsequent default.

17. RETURNED GOODS

No goods will be accepted for return unless authorized in writing by Seller. In all cases, transportation and restocking charges will be borne by Buyer.

18. PACKING

Seller does not charge for standard packaging for domestic shipment. Buyer will be charged, however, for export packaging or other special packing desired. Cost for cartage to ship or transfer express will be added to the invoice. No credit will be allowed if no packing is required.

19. EXPORT ORDER

Export orders are to be accompanied by a confirmed irrevocable Letter of Credit in Seller's favor, in Canadian currency, with an accredited Canadian bank, subject to Seller's draft, with shipping documents attached.

20. CANCELLATION

Placing orders on hold or cancellation of orders require Seller's written approval, and are subject to cancellation and/or restocking charges.

21. BUYER'S RESPONSIBILITY AS TO MAINTENANCE

Buyer shall use and shall require its employees and agents to use all safety devices and guards and shall maintain the same in proper working order. Buyer shall use and require its employees and agents to use safe operating procedures in operating the equipment and shall further obey and have its employees and agents obey safety instructions given by Seller. If Buyer fails to meet the obligations herein, Buyer agrees to indemnify and save Seller harmless from any liability or obligation with regard to any personal injuries or property damages directly or indirectly connected with the operation of the equipment. Buyer further agrees to notify Seller promptly and in any event not later than ten (10) days after notice or knowledge of any accident or malfunction involving Seller's equipment which has caused personal injury or property damages and to cooperate fully with Seller in investigating and determining the causes of such accident and malfunction. In the event that Buyer fails to give such notice to Seller or to cooperate with Seller, Buyer shall be obligated to indemnify and save Seller harmless from any such claims arising from such accident.

22. MISCELLANEOUS PROVISIONS

(A) If for any reason a provision of a contract is legally invalid, then in such event the rest of the contract shall remain in full force and effect, except that the parties shall try to replace such invalid provision with a provision closest to their original mutual intentions. (B) Any amendments to any contract or contracts require the consent in writing by both parties. Headings in this document are for ease of reference only.

23. NON ASSIGNMENT BY BUYER

Contract or contracts may not be assigned by Buyer without prior written consent of Seller.

24. APPLICABLE LAW

This agreement shall be governed by the laws of the Province of Ontario and the applicable laws of Canada. Buyer and Seller agree that any judicial proceeding with respect to this agreement must be brought and maintained in the City of Toronto, in the Province of Ontario.

25.

This instrument sets forth the entire understanding and agreement of the parties hereto in respect of the subject matter hereof, and all prior undertaking between the parties hereto, together with all representations and obligations of such parties in respect of such subject matter, shall be superseded by and merged into this instrument.

26.

The provisions of this agreement shall bind and ensure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and (subject to any restrictions or assignment herein above set forth) assigns, as the case may be.

27.

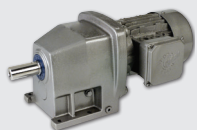
The parties acknowledge that they have requested this document and all notices or other documents relating thereto be drafted in the English language.

Les parties reconnaissent qu'ils ont requis que ce contrat et tous les avis ou autres documents qui s'y rapportent soient rédigés en langue anglaise.

Terms and Conditions in French available upon request.

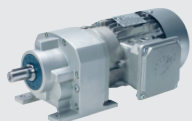


UNICASE™ SPEED REDUCERS



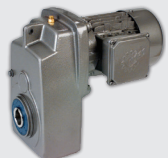
HELICAL IN-LINE

- Foot or Flange Mount
- Torque up to 205,000 lb-in
- Gear ratios – 1.82:1 to over 300,000:1



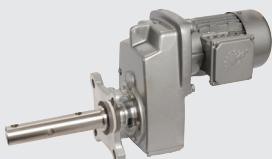
NORDBLOC®.1 HELICAL IN-LINE

- Foot or Flange Mount
- Torque up to 26,550 lb-in
- Gear ratios – 1.88:1 to over 370:1



PARALLEL HELICAL CLINCHER™

- Shaft, Flange or Foot Mount
- Torque up to 797,000 lb-in
- Gear ratios – 4.26:1 to over 300,000:1



SCP SCREW CONVEYOR PACKAGE

- Shaft, or Flange Mount
- Torque up to 53,100 lb-in
- Gear ratios – 4.32:1 to over 1500:1



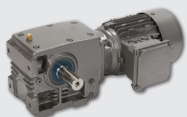
RIGHT ANGLE HELICAL-BEVEL 2-STAGE

- Foot, Flange or Shaft Mount
- Torque up to 5,840 lb-in
- Gear ratios – 4.1:1 to 70:1



RIGHT ANGLE HELICAL-BEVEL

- Foot, Flange or Shaft Mount
- Torque up to 283,000 lb-in
- Gear ratios – 8.04:1 to over 300,000:1



RIGHT ANGLE HELICAL-WORM

- Foot, Flange or Shaft Mount
- Torque up to 27,585 lb-in
- Gear ratios – 4.40:1 to over 300,000:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS



INVERTER/VECTOR DUTY

- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

UNICASE™ SPEED REDUCERS



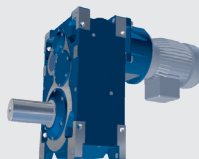
MINICASE™ RIGHT ANGLE WORM

- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 500:1



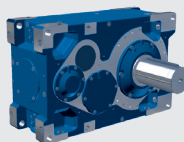
FLEXBLOC™ WORM

- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1



MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS PARALLEL HELICAL

- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1



MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS HELICAL-BEVEL

- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

NORDAC AC VECTOR DRIVES



SK180E FAMILY

- Distributed, simple speed control
- 380-480V, 3-phase to 3.0 hp
- 200-240V, 3-phase to 1.5 hp
- 200-240V, 1-phase to 1.5 hp
- 100-120V, 1-phase to 0.75 hp



SK200E FAMILY

- Distributed, high performance
- 380-480V, 3-phase to 30 hp
- 200-240V, 3-phase to 15 hp
- 200-240V, 1-phase to 1.5 hp
- 100-120V, 1-phase to 1 hp



SK500E FAMILY

- Compact, cabinet mount, high performance
- 380-480V, 3-phase, to 125 hp
- 200-240V, 3-phase, to 25 hp
- 200-240V, 1-phase, to 3 hp
- 100-120V, 1-phase, to 1.5 hp



Global Vision, Local Support

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. By providing all of our customers with prompt delivery, and expert support services, we are firmly committed to exceeding customer expectations and being responsive to the ideas and specifications of every customer, anywhere in the world.



Global Presence

Allows for short lead times and quick response times throughout the world.

Dependable Service

With emergency service available 24/7 we can help you out when you need us most.

Modular Design

More than 20 million totally unique product combinations guarantees that you wont need to look anywhere else.

Innovative Products

Our engineers are hard at work creating solutions to everyday problems.

Quality Manufacturing

NORD produces maintenance free products that have a long life in order to save you money for the long haul.

We Have you Covered

NORD provides Gear Drives, Motors & AC inverters in order to provide you with a complete Drivesystem solution.



NORD Gear Corporation

MEMBER OF THE NORD DRIVESYSTEMS GROUP
info.us@nord.com

Waunakee, WI
800 NORD Drive
Waunakee, WI 53597
Tel. 608.849.7300

Corona, CA
1180 Railroad St.
Corona, CA 92882
Tel. 951.393.6565

Charlotte, NC
300 Forsyth Hall Dr.
Charlotte, NC 53597
Tel. 980.215.7575

NORD Gear Limited - Canada

MEMBER OF THE NORD DRIVESYSTEMS GROUP
info.ca@nord.com

Brampton, ON
41 West Drive
Brampton, ON L6T4A1
Tel. 800.668.4378