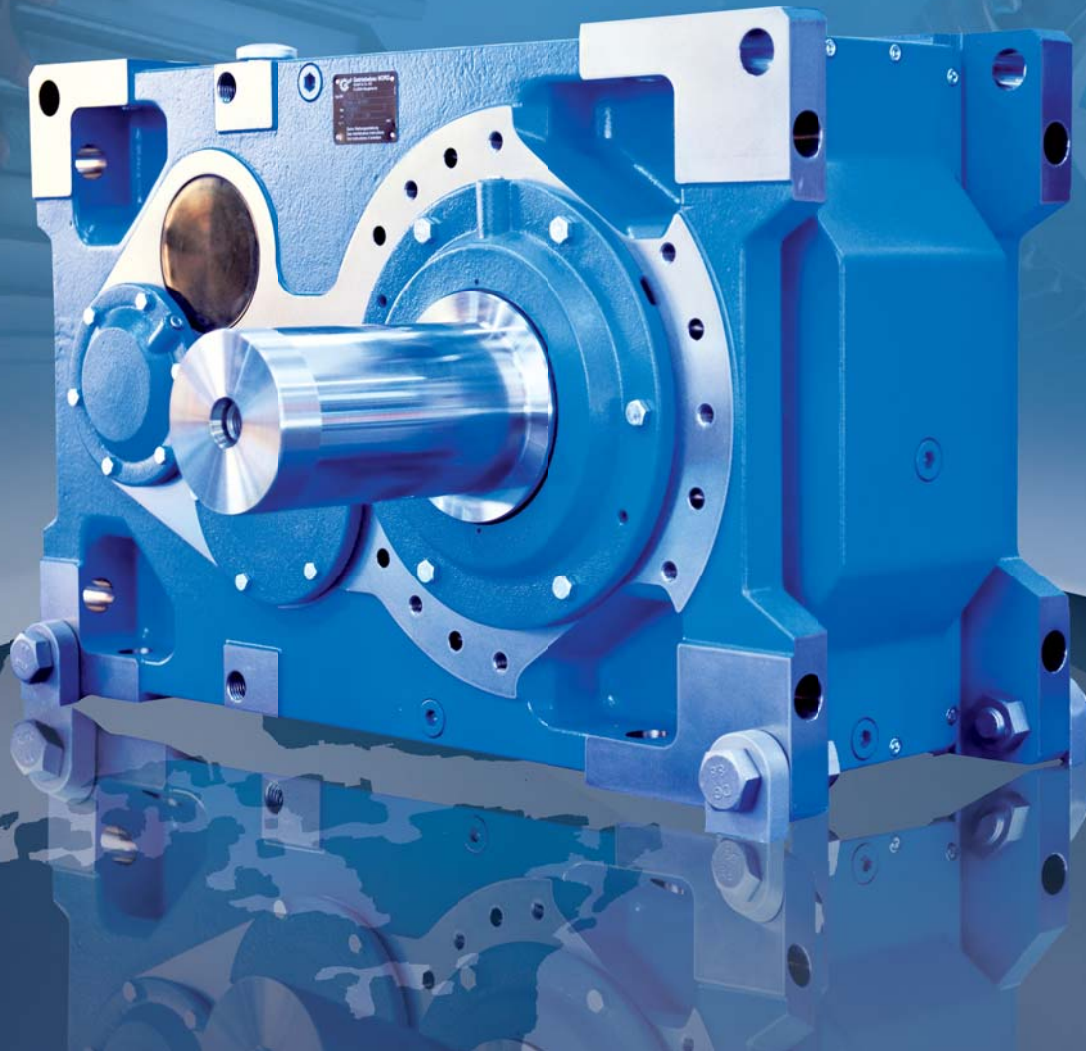


Intelligent Drivesystems



MAXXDRIVE® SERIES GEARMOTORS & SPEED REDUCERS

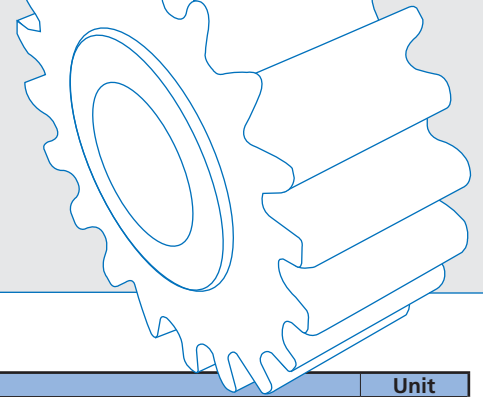
Large Industrial Gear Units

G1050


DRIVESYSTEMS

MAXXDRIVE® SERIES

Factor Definitions



Abbrev.	Description	Unit
d_o	Pitch diameter of externally mounted power transmission device	[in]
F_A	Allowable axial/thrust load force	[lb]
F_R	Allowable radial overhung load force	[lb]
F_{OHL}	Applied or calculated radial overhung load force	[lb]
F_T	Applied or calculated axial/thrust force	[lb]
i_{ges}	Exact reducer gear ratio	[:1]
i_N	Nominal gear ratio	[:1]
i_{req}	Calculated or required gear ratio	[:1]
L_{10h}	Reducer L-10 bearing life	[hours]
n_1	Actual reducer input speed	[rpm]
n_{1N}	Nominal reducer input speed	[rpm]
n_2	Actual reducer output speed	[rpm]
n_{2N}	Nominal reducer output speed	[rpm]
P_1	Reducer input power	[hp]
$P_{1,n}$	Required reducer input power at time interval "n"	[hp]
P_{1avg}	Average reducer input power	[hp]
P_m	Motor power	[hp]
P_N	Reducer mechanical power capacity	[hp]
P_{wg}	Reducer thermal power capacity (convection)	[hp]
$P_{wg,F}$	Reducer thermal power capacity (convection + shaft-fan)	[hp]
$P_{wg,FC}$	Reducer thermal power capacity (convection + shaft-fan + integrated water cooler)	[hp]
$P_{wg,C}$	Reducer thermal power capacity (convection + integrated water cooler)	[hp]
$P_{wg,CS1}$	Reducer thermal power capacity (oil/water cooling system)	[hp]
$P_{wg,CS2}$	Reducer thermal power capacity (oil/air cooling system)	[hp]
$P_{t0,20}$	Thermal power capacity with convection cooling (20°C ambient)	[hp]
P_{tF20}	Thermal power capacity with convection cooling (40°C ambient)	[hp]
P_{tF20}	Thermal power capacity with shaft-fan (20°C ambient)	[hp]
P_{tF40}	Thermal power capacity with shaft-fan (40°C ambient)	[hp]
$P_{tC,20}$	Thermal power capacity with integrated water coil (20°C ambient)	[hp]
$P_{tC,40}$	Thermal power capacity with integrated water coil (40°C ambient)	[hp]
Q_{CS1}	Cooling power capacity of oil/water cooling system	[hp]
Q_{CS2}	Cooling power capacity of air/oil cooling system	[hp]
s	Shrink disc safety factor	---
t_t	Total duty cycle time	[s]
t_n	Elapsed time for time interval "n"	[s]
t_w	Cooling water inlet temperature	[°C or °F]
T_1	Reducer input torque	[lb-in]
T_{1peak}	Peak load torque at reducer input	[lb-in]
T_2	Reducer output torque produced	[lb-in]
T_{2avg}	Average reducer output torque	[lb-in]
$T_{2,n}$	Required reducer output torque at time interval "n"	[lb-in]
T_{2max}	Rated torque of the gear unit	[lb-in]
T_{2peak}	Peak load torque at reducer output	[lb-in]
V_L	Air speed	[ft/s]
V_o	Oil flow rate	[gpm]
V_w	Water flow rate	[gpm]
X	Distance from the applied overhung load to the reducer shaft seal shoulder	[in]

Abbrev.	Description	Used For
f_{AN}	Start-up factor	Load limit
f_B	Service factor or operating service factor	Pre-selection
f_{ED}	Duty cycle factor	Pre-selection
f_H	Altitude factor	Thermal power limit
f_L	Fan-cooling air temperature factor	Thermal power limit
f_M	Input factor (takes into consideration the prime mover)	Load limit
f_n	Input speed factor	Thermal power limit
f_o	Oil supply factor	Thermal power limit
f_s	Peak load factor	Load limit
f_t	Ambient temperature factor	Thermal power limit
f_v	Ambient air velocity factor	Thermal power limit
f_w	Cooling water temperature factor	Thermal power limit
f_z	Power transmission factor	Radial & axial forces
η_N	Nominal or estimated gear reducer efficiency	Selected motor size

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 Gear Unit Options..... 41

 Thermal Options 49

 Lubrication 55

 Mounting 26

 Weights 62

	(rpm)	(Dp)
	1200	214
	1800	321
5,6	Exact Ratio	$\frac{1}{5,6}$
	Max Torque	M_{max}
		$\frac{1}{10,12}$

Ratings 65

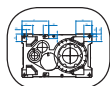
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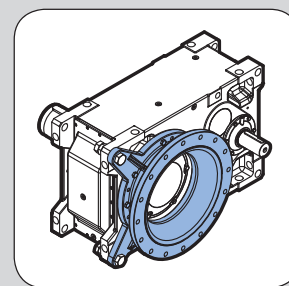
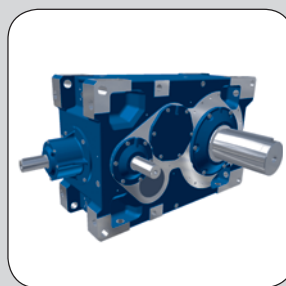


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www.nord.com



NORD Gear



Company Overview

Since 1965, NORD Gear has grown to global proportions on the strength of product performance, superior customer service, and intelligent solutions to a never ending variety of industrial challenges.

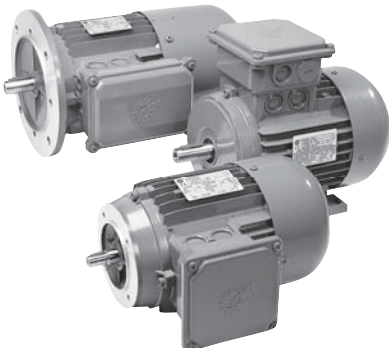
All mechanical and electrical components of a drive system are available from NORD Gear. Our products cover the full range of drive equipment: large industrial gearboxes, helical in-line, Clincher™ shaft-mount, helical-bevel, and helical-worm gearboxes, motors and AC drives from 1/6 hp to 1500 hp, with torques from 90 lb-in to over 2,000,000 lb-in.

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

NORD Gear makes its wide range of products easily available through a global network that provides all customers with prompt delivery and expert support services to consistently exceed customer expectations. We are firmly committed to being thoroughly responsive to the ideas and specifications of every customer, anywhere in the world.

High-Performance Motors & Brakemotors

NORD motors are designed to run cool for an increased service life. Low rotor inertia and high starting torque allow peak performance in the most difficult applications for both inverter and vector duty motors per NEMA MG 1-2006 Section 31.4.4.2 voltage spikes. Our motors are internationally accepted, conforming to North American NEMA MG 1 and international IEC electrical specifications. High performance options include brakes, encoders, and forced cooling fans.



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 paired with a globally linked network, we have the ability to offer our customers:

- Fast, reliable responses
- Greater product versatility
- Shorter lead times
- Timely shipping
- Rapid delivery

Quality

Quality is assured at NORD's 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 & assembly.



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.





Manufacturing

NORD continually invests in research, manufacturing and automation technology. This is to ensure the highest possible quality at affordable prices. NORD invests heavily in our North American facilities as well as our factories around the world. Recent examples include expanding our Waunakee factory and adding numerous new large gear unit assembly cells. In our Glinde, Germany gear factory we added a state-of-the-art multi-chamber vacuum carburization system.



Global Availability

From Shanghai to Charlotte, and all points in-between, NORD reaches customers around the world. Deliveries, service, and product support are close at hand, regardless of your location.

Worldwide Standards

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

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 North America and giving our customers the shortest lead times in the industry.

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 have been developed to suit your needs.

Modular Design

NORD's modular design philosophy provides you with a competitive edge by allowing you to configure drive systems that are an exact fit to your specific applications.

More than 20,000,000 combinations of totally unique gearmotors and speed reducers are possible – assembled in-line or right-angle, mounted by foot or flange, featuring solid or hollow shafts with either metric or inch shaft extensions – to give you complete freedom to specify a drive solution that's perfect for you.

Benefits

- More output speeds
- More mounting arrangements/Greater flexibility
- Fewer gear stages/Lower cost
- Metric and inch products

NORD engineers are readily available to assist you with your custom applications. Most standard drives can be modified to your purposes, and custom designs can be developed for special applications.



Key Features



MAXXDRIVE™ Gear Units

NORD large industrial gear units have been developed according to the well-proven UNICASE™ housing design in which all bearings and seals are contained within a single casting. The UNICASE™ concept was pioneered by NORD Gear in 1980 and features the highest levels of precision, rigidity and strength by eliminating splits and bolt on carriers. There are no separations in the housing which are subjected to torques or radial loads.

The UNICASE™ principle enables a more compact design that includes larger roller bearings, which guarantee a prolonged operating life. Ease of service to the gear unit is ensured by a large assembly cover over the face plate of the gear unit.

Our UNICASE™ housings are made of cast iron. Ductile iron may be supplied upon request.

Optimized geometries and precise shaft alignment are a result of the UNICASE™ style housing and provide excellent load-bearing capacity, long operating life, insignificant noise levels as well as provide the highest level of system lubrication integrity.

Advantages of UNICASE™ Housings

- Optimum sealing
- Quiet running
- High torque capacity
- Increased operating life of bearings & gears
- High reliability
- Prolonged operating life
- Increased lubricant life
- Symmetrical design
- A B14 face flange on the output side
- Mounting pads on all 6 sides
- Mirror-image installation possible
- Same housing size, installation dimensions for all ratios (2 and 3 stage)

Gear, Bearing and Shaft Standards

All of the gears in the NORD MAXXDRIVE™ product line are keyed to provide a positive connection. These gears are additionally mounted with a press-fit between the shaft and gear hub.

The gears included in our MAXXDRIVE™ line are made of high caliber alloy steels and are case hardened. The gear quality meets DIN ISO 6-7 (AGMA 11-10).

The MAXXDRIVE's™ nominal bearing life is estimated at more than 9,000 hours which is based upon the maximum gearbox output torque (T_{2max}) and output speed (n_2). Most competitive product averages are approximately 3000 to 5000 L-10 hrs. The nominal torque ratings and speeds that these calculations are based upon may be found in the ratings section of this catalog.

All NORD gear units provide the very highest level of quality, safety and reliability. The gearing, bearing and shaft capacities are calculated according to the international standards as shown.

Gear Type	DIN Standard	AGMA Standard
Helical gears	DIN 3990	AGMA 2001
Bevel gears	DIN 3992	AGMA 2003
Bearings	DIN ISO 281	N/A
Shafts	DIN 743	N/A

The gears and bearings are designed to be partially submerged in oil during operation. Pressure circulation lubrication is available as an option in the form of a motor or a flange mounted pump. In addition to this option there are many other alternative oil circulation and cooling methods available for the MAXXDRIVE™ product line.

Temperature Management

Please refer to the options section on page 30 for more information on the following available cooling system options

Available Temperature Management Options

- Fan, 3 options
- External oil/air cooler
- External oil/water cooler
- Internal cooling coils (water)
- Heating cartridges



Lubrication Overview

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.

MAXXDRIVE™ gear units that are mounted in a standard horizontal position are intended to be oil splash lubricated. MAXXDRIVE™ gear units mounted in a vertical or standing position utilize bath or immersion lubrication to ensure oil is delivered to the critical bearing and gear mesh areas. Forced lubrication or pressure lubrication is also an option.

The MAXXDRIVE™ gear units are designed to be able to operate with high performance mineral oil containing an extreme pressure (EP) additive. A viscosity grade ISO VG220 EP (AGMA 5 EP) mineral oil is typical for ambient temperature conditions between 0°C-40°C (32°F-104°F).

While the MAXXDRIVE™ gear units are designed to be able to operate with high performance mineral oil, NORD strongly recommends the use of synthetic oil. Compared to mineral oil, synthetic oil offers the following advantages that provided added wear protection and extend reducer component life:

- Higher film strength, lower traction coefficient and improved lubricity.
- Reduced internal friction (by as much as ½ compared to mineral oil) resulting in lower operating temperatures and improved gear efficiency.
- Superior wear and thermo-oxidative resistance, provides enhanced system cleanliness and enables longer service intervals.
- Higher viscosity index offers improved low temperature and high temperature stability.

Additional lubrication guidelines can be found on page 55 of this catalog as well as in the MAXXDRIVE™ maintenance instructions (www.NORD.com).

Durable and Flexible

The MAXXDRIVE™ large industrial speed reducers offer a unique combination of flexibility and durability. The drives are extremely versatile in terms of mounting configurations. They employ a “universal” housing design with mounting surfaces on all six sides. The same housing is used for both our off-set parallel and right-angle drives.

Sealing systems

The standard shaft seals that are provided are nitrile rubber NBR (Buna-N), and optionally FKM (Fluoroelastomers). For specific ambient conditions, sealing systems incorporating gamma-ring, labyrinth and Taconite seals are also available. In case other specialized sealing requirements are needed please contact NORD Gear.

Available sealing options

- Single seal NBR/FKM
- Double seal NBR/FKM
- Dust protection seal
- Taconite seal
(labyrinth seal, can be re-lubricated)
- Gamma ring seal, dust protection
- Special sealing options by request

Design Advantages

There are countless advantages for using NORD MAXXDRIVE™ gear units for your large industrial gearbox needs. Here is an overview of some of the significant advantages that this product has to offer.

- Heavy duty design for severe applications
- Competitive features/construction
- High power density
- Modular & Flexible Design
- Increased bearing life compared to split case housings (due to larger bearings)
- Quiet running - optimized cyclo-paloid bevel gears by Klingelberg (HPG / Wiener)
- One piece housing, which provides higher stiffness than a split case design
- Large motor combinations are possible
- Efficient axial fan cooling (optimized air flow over gearcase surfaces)
- Increased accessory life due to the use of synthetic lubricants
- Gears - case hardened and ground (Rc 60 Minimum)
- Antifriction - high quality bearings

General Warnings & Cautions



Vertical Mounting Position

Consult NORD for determination of the thermal power limits if either the parallel shaft or bevel gear reducer is to be mounted as follows:

- Upright or standing mounting position (M2 or M4).
- Vertical output-shaft mounting position (M5 or M6).

The mounting positions are displayed on page 26.



IMPORTANT NOTE



In standing position or vertical-shaft applications a higher operating temperature rise may result due to the higher oil volumes which create greater oil churning losses. In many instances, NORD may be able to recommend a forced oil lubrication system in order to avoid these higher operating temperature conditions.

Vertical Motor or Vertical Input Shaft

Parallel-shaft gear units with a motor or input shaft which is pointing vertical-up (M5 or M6 mounting position) require either a higher oil level to lubricate the high-end bearings and gearing or they will require a forced oil lubrication system.

Raising the oil level will result in higher gear pitch-line velocities, increased oil churning or splashing losses and additional heating inside the gear unit. To avoid excessive pressure build-up, a critical loss in oil volume through the air vent or shaft seals and possible oil foaming, NORD may need to recommend adding an oil expansion chamber (Option OA) or an oil tank (Option OT). For details on the OA and OT Options see page 49.

Alternatively NORD may suggest maintaining a lower oil level and adding a forced lubrication. This will assure lubrication to the all the critical gear and bearing areas and also allow the gear unit to operate at lower oil sump temperatures. Consult NORD for details.

Ventilation

All gear units include a vent to compensate for the differences in air pressure between the interior of the gear unit and its environment. Both 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.

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.

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.

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.

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

Prior to installation, storage for up to 9 months is possible, so long as the following is observed:

- Store the gear unit in its actual mounting position in accordance with the specified oil fill-level, in a clean and dry temperature controlled area.
- Avoid temperature fluctuations within the range of -5°C to 50°C (23°F to 122°F) and avoid relative humidity conditions in excess of 60%.
- Protect all exposed or unpainted shaft and flange surfaces with an anti-corrosion agent or grease.
- Store in a location free from shock & vibration, to avoid damage to the bearing elements & raceways.
- Whenever possible, rotate the shafts periodically, to help prevent brinelling of the bearings and to help keep the shaft seals pliable.
- Avoid exposure to the sun or UV light and other aggressive/corrosive materials (ozone gases, solvents, acids, caustic solutions, salts, radioactivity, etc).

Selection Inquiry



Contact: _____ **Company:** _____
Telephone: _____ **Email:** _____
Fax: _____ **Date:** _____
Project Name: _____ **Application:** _____
Qty: _____ **Type:** SK _____

Gearbox Parameters

Gear Unit Type

- Parallel Gear Unit SK..207 / SK..307
- Helical Bevel Gear Unit SK..407 / SK..507

Mounting Position

- M1 M4
- M2 M5
- M3 M6
- Special _____

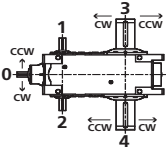
Mounting Surface

- F1 F4
- F2 F5
- F3 F6
- Special _____

Gear Unit Attachment

- Foot
- Flange
- Torque Support
- Other _____

Shaft Position (Check all that apply)



- Shaft Position 0
- Shaft Position 1
- Shaft Position 2
- Shaft Position 3
- Shaft Position 4

- Backstop Required
- Position 3 CW Rotation CCW Rotation
- Position 4 CW Rotation CCW Rotation

Output Shafts

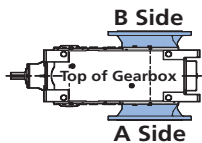
- Solid Shaft with Keyway
- Hollow Shaft with Keyway
- Hollow Shaft with Shrink Disc
- Other, See Sketch _____

Machine Shaft Bearing

- Two Bearings, Only the gear unit transmits torque
- Other, See Sketch _____

Flange

- None
- B14-Face Flange
- B5 Flange - Outside Diameter _____ [mm]



- Flange Side A
- Flange Side B

Gearbox Parameters ctd.

Required Output Speed N_2 [rpm]

Normal _____ [rpm] Min. _____ [rpm] Max. _____ [rpm]

Input Speed n_1 [rpm]

Normal _____ [rpm] Min. _____ [rpm] Max. _____ [rpm]

Ratio i_{ges}

_____ Min. _____ Max. _____

Input Power P_1 [hp]

Normal _____ [hp] Min. _____ [hp] Max. _____ [hp]

Output Torque T_2 [lb-in]

Normal _____ [lb-in] Min. _____ [lb-in] Max. _____ [lb-in]

Service Factor f_B Min. _____

related to: Motor Power/Torque Operating Power/Torque

Time of Operation

- ≤ 0.5 hours per day
- 0.5 - 10 hours per day
- > 10 hours per day

Switch-on time _____ %

Frequency of peak loads / Number of start-ups

_____ per hour

Low Speed Shaft Loading

- Direct Coupled - No Axial or Radial Loads
- F_{OHL} - Overhung Load
- F_T - Axial Load

Pitch Diameter

- Pinion _____ [in]
- Sprocket _____ [in]
- V-Belt _____ [in]
- Flat-Belt _____ [in]
- Other: _____ [in]

Radial Load (F_{OHL}) _____ [lb]

Distance from load center to shaft shoulder _____ [in]

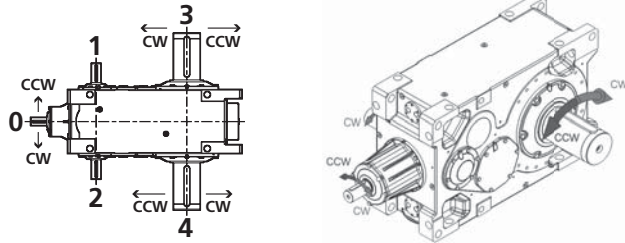
Axial Load (F_T) _____ [lb]

Direction toward Geardrive _____ +(in) /-(out)



Gearbox Parameters ctd.

Direction of rotation under load (output, plan view)



- Single Direction Clockwise (CW) Counter Clockwise (CW)
 Both Directions
 Reversible

Permissible Cooling (If necessary)

	Approved	Not Approved
Fan	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Cover / Cooling Cartridge	<input type="checkbox"/>	<input type="checkbox"/>
External Oil / Air Cooler	<input type="checkbox"/>	<input type="checkbox"/>
External Oil / Water Cooler	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Water Available	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Cooling Water Temperature _____ °C		
Type of Cooling Water (sea water, pond water, pool water, etc.)		

Environmental Parameters

Installation Environment

- Small Space ($V_L \leq 1.6 \text{ ft/s [0.5 m/s]}$)
 Large Rooms & Halls ($V_L \leq 4.6 \text{ ft/s [1.4 m/s]}$)
 Outdoors, shaded from sun ($V_L \leq 9.8 \text{ ft/s [3.0 m/s]}$)

Ambient Conditions

- Normal Corrosive
 Dusty Dry
 Damp Seawater
 Other _____

Ambient Temperature [°F or °C]

Normal _____ Min. _____ Max. _____

Altitude [ft or M] _____ Above Sea Level

Motor Related Parameters

Drive Type

- Three Phase-Motor AC Vector Drive
 Other _____

Motor Type

- B3 (Foot Mounted) B5 (Flange Mounted) NEMA C-face
 Other _____

Electric Motor Standards

- IEC NEMA Size _____

Connection of the Motor to the Gear Unit

- Free Shaft End
 Motor Adapter with elastic coupling
 Motor Swing Base / Base Frame
 Other, See Sketch _____

Coupling on Output Side

- Elastic Coupling Flexible Coupling
 Other _____

Selection Information



Gear Unit Selection Procedure

Selecting a MAXXDRIVE™ gear unit requires three fundamental steps. A variety of options or methods are provided to aid in the pre-selection.

1. Pre-selection

- Motorized Reducer Method (page 10).
- Input Power Method (page 11).
- Output Torque Method (page 11).
- Variable Output Torque Method (page 12).

2. Check of peak load conditions (page 14).

3. Check of the thermal power capacity (page 15).

Standard Installation and Operating Conditions

The standard or default selection criteria are defined as follows:

- Ambient temperature: 68 °F (20°C)
- Ambient air condition: large open area with good air circulation and convection cooling; sustained ambient air velocity approaching $V_L \approx 4.10$ ft/s (1.25 m/s).
- Installation foundation: flat and level steel sub-construction.
- Installation altitude: ≤ 3280 ft (1000 m) above sea level.
- Mounting position: horizontal (page 26).
 - M1 is standard for 2-stage gear units.
 - M3 is standard for 3-stage gear units.
- Lubrication method: oil-splash lubrication.
- If water cooled, cooling water inlet temperature: 68 °F (20°C).

The detailed selection procedure accounts for variations in ambient temperature, ambient air conditions, installation altitude, mounting position, and lubrication method.

When increased thermal power capacity is required, selection procedures are provided in order to help determine which reducer cooling options or accessories are most appropriate.

IMPORTANT NOTE

Motorized reducer selection tables and reducer power ratings tables are based upon typical input speeds of 1800 rpm or 1200 rpm. For input speeds between 500 and 1800 rpm, one can make a selection based upon the reducer output torque method.

WARNING

To assure proper reducer lubrication cooling during operation, consult NORD when operating input speed requirements exceed 1800 rpm.

Pre-selection: Motorized Reducer Method

The selection of the gear reducer is based upon the reducer Input Power (P_1) when utilizing a three-phase induction motor.

1. Determine the nominal input speed (n_{1N}) of the motor.

$$n_{1N} = 1800 \text{ rpm (synchronous speed, 4-pole electric motor)}$$

or

$$n_{1N} = 1200 \text{ rpm (synchronous speed, 2-pole electric motor)}$$

IMPORTANT NOTE

Motorized reducer ratings are based upon nominal input speed (n_{1N}) conditions of either 1800 rpm or 1200 rpm. For input speeds other than those shown, consult with NORD.

2. Record the required output speed (n_2) or required ratio (i_{req}) of the gear reducer. Calculate i_{req} if n_2 is known, or calculate n_2 if i_{req} is known.

$$i_{req} = \frac{n_{1N}}{n_2} \dots \text{ or } \dots n_2 = \frac{n_{1N}}{i_{req}}$$

3. Determine the operating service factor (f_B) from the service Factor Tables on pages 19 - 23.

WARNING

Consult NORD if uncertain about what operating service factor (f_B) is required and in cases where a lower service factor than shown in the table on page 19 is desired.

4. Use the Gearmotor selection tables to select a gear unit based upon the motor power (P_1), required operating service factor (f_B), and the required gear ratio (i_{req}) or output speed (n_2).



Parallel shaft gear units \Rightarrow pages 68 – 103
Right-angle gear units \Rightarrow pages 106 – 142



Pre-selection: Input Power Method

The selection of the gear reducer is based upon the known Input Power (P_1).

1. Determine if the nominal input speed (n_{1N}) will be 1800 rpm or 1200 rpm.

	<i>IMPORTANT NOTE</i>	
<p>Reducer power ratings are based upon nominal input speed (n_{1N}) conditions of either 1800 rpm or 1200 rpm. For input speeds less than 1800 rpm, but different than those shown, one may make a selection based upon output torque.</p>		

2. Record the required output speed (n_2) or required ratio (i_{req}) of the gear reducer. Calculate (i_{req}) if (n_2) is known, or calculate (n_2) if (i_{req}) is known.



$$i_{req} = \frac{n_{1N}}{n_2} \text{ or } \dots \quad n_2 = \frac{n_{1N}}{i_{req}}$$

3. Record the required input power (P_1). The required input power (P_1) may also be calculated as follows, if one knows the required output speed (n_2) and required reducer output torque (T_2).

$$P_1 = \frac{T_2 \times n_2}{63025 \times \eta_N} \text{ where...}$$

η_N = nominal gear reducer efficiency (page 24)

4. Determine the Operating Service Factor (f_B) from the table on pages 19 - 23.

	<i>WARNING</i>	
<p>Consult NORD if uncertain about what operating service factor (f_B) is required and in cases where a lower service factor than shown in the table on page 19 is desired.</p>		

5. Determine the Input Factor (f_M) from, page 24. This factor will help account for possible torque fluctuations from the type of prime mover.

6. Calculate the required rated power (P_N) for the gear reducer as follows:

$$P_N = P_1 \cdot f_B \cdot f_M$$



7. Utilize the ratings tables to select a gear unit and gear ratio, in accordance to the input power (P_1) and the required gear ratio (i_{req}) or output speed (n_2).

Parallel shaft gear units \Rightarrow pages 68 – 103
 Right-angle gear units \Rightarrow pages 106 – 142

Pre-selection: Output Torque Method

The selection of the gear reducer is based upon the required Reducer Output Torque (T_2).

1. Determine the nominal input speed (n_{1N}).

	<i>IMPORTANT NOTE</i>	
<p>Motorized reducer selection tables and reducer power ratings tables are based upon typical input speeds of 1800 rpm or 1200 rpm. For input speeds between 500 and 1800 rpm maximum, one can make a selection based upon the reducer output torque method.</p>		

2. Record the required output speed (n_2) or required ratio (i_{req}) of the gear reducer. Calculate (i_{req}) if (n_2) is known, or calculate (n_2) if (i_{req}) is known.



$$i_{req} = \frac{n_{1N}}{n_2} \text{ or } \dots \quad n_2 = \frac{n_{1N}}{i_{req}}$$

3. Record the required reducer output torque (T_2). The required reducer output torque (T_2) may also be calculated as follows, if one knows the required output speed (n_2) and required input power (P_1).

$$T_2 = \frac{P_1 \times 63025 \times \eta_N}{n_2} \text{ where...}$$

η_N = nominal gear reducer efficiency (page 24)

4. Determine the Operating Service Factor (f_B) from the table on pages 19 - 23.

	<i>WARNING</i>	
<p>Consult NORD if uncertain about what operating service factor (f_B) is required and in cases where a lower service factor than shown in the table on page 19 is desired.</p>		

5. Determine the Input Factor (f_M) from, page 24. This factor will help account for possible torque fluctuations from the type of prime mover.

6. Calculate the required Rated Torque (T_{2max}) for the gear reducer as follows:

$$T_{2MAX} = T_2 \cdot f_B \cdot f_M$$

7. Utilize the ratings tables to select a gear unit and gear ratio, in accordance to the reducer output torque (M_2) and the required gear ratio (i_{req}) or output speed (n_2).

Parallel shaft gear units \Rightarrow pages 68 – 103
 Right-angle gear units \Rightarrow pages 106 – 142

Selection Information



Pre-selection: Variable Output Torque Method

In many gear reducer applications, the required reducer output torque varies from one time interval to the next, over the typical operational duty cycle. In these situations variable torque loads, at constant speed operation, can be converted to an average torque in order to make a selection.

1. Determine if the Nominal Input Speed (n_{1N}) will be 1800 rpm or 1200 rpm.



IMPORTANT NOTE



Reducer ratings are based upon a Nominal Input Speed (n_{1N}) of either 1800 rpm or 1200 rpm. For input speeds other than those shown, consult with NORD.

2. Record the Required Output Speed (n_2) or Required Ratio (i_{req}) of the gear reducer.
3. Calculate i_{req} if n_2 is known, or calculate (n_2) if (i_{req}) is known.

$$i_{req} = \frac{n_{1N}}{n_2} \text{ or } \dots n_2 = \frac{n_{1N}}{i_{req}}$$

4. Calculate the Average Reducer Output Torque (T_{2avg}) as follows:

$$T_{2avg} = 6.6 \sqrt{\left((T_{2.1})^{6.6} \cdot \frac{t_1}{t_t} \right) + \left((T_{2.2})^{6.6} \cdot \frac{t_2}{t_t} \right) + \dots + \left((T_{2.n})^{6.6} \cdot \frac{t_n}{t_t} \right)}$$

where:

- T_{2avg} = Average reducer output torque
- $T_{2.1} \dots T_{2.n}$ = Required reducer output torque at a specific time interval.
- $t_1 \dots t_n$ = Specific time interval.
- t_t = Total duty cycle time, representing all torque and time intervals

5. Determine the Operating Service Factor (f_B) from the table on pages 19 - 23.



WARNING



Consult NORD if uncertain about what operating service factor (f_B) is required and in cases where a lower service factor than shown in the table on page 19 is desired.

6. Determine the Input Factor (f_M) from, page 24. This factor will help account for possible torque fluctuations from the type of prime mover.

7. Calculate the required rated torque (T_{2max}) for the gear reducer as follows:

$$T_{2max} = T_{2avg} \cdot f_B \cdot f_M$$

8. Use the ratings tables to select a gear unit and gear ratio, in accordance to the average reducer output torque (T_{2avg}) and the required gear ratio (i_{req}) or output speed (n_2) requirements.

Parallel shaft gear units \Rightarrow pages 68 – 103

Right-angle gear units \Rightarrow pages 106 – 142

9. Using the formula shown, calculate the average input power (P_{1avg}).

$$P_{1avg} \geq \frac{T_{2avg} \times n_{1N}}{63025 \times i_N \times \eta_N}$$

where:

- P_{1avg} = Average required input power for a specific time interval.
- T_{2avg} = Average required reducer output torque
- n_{1N} = Nominal (motor) input speed
- η_N = Nominal gear reducer efficiency (page 24)

10. Using the formula shown, calculate the Required Input Power ($P_{1.n}$) for each portion of the duty cycle. Then determine the maximum ($P_{1.n}$) value.

$$P_{1.n} \geq \frac{T_{2.n} \times n_{1N}}{63025 \times i_N \times \eta_N}$$

where:

- T_{2avg} = Average reducer output torque
- $T_{2.1} \dots T_{2.n}$ = Required reducer output torque at a specific time interval.
- $t_1 \dots t_n$ = Specific time interval.
- t_{ges} = Total duty cycle time, representing all torque and time intervals



11. Select a motor power (P_1) that is equally suited to deliver both the average required power (P_{1avg}), calculated in Step 9, and the maximum required power ($P_{1,n}$ maximum), determined in Step 10.



IMPORTANT NOTE



Utilizing the motor's overload capacity it may not be necessary to select the motor power based upon the maximum power required for the duty cycle. Consult your motor supplier and/or NORD if help is needed.



IMPORTANT NOTE



When trying to determine the motor power, it is common practice to round the calculated power to the next available standard motor power.

By utilizing the motor's overload capacity, often times the motor does not need to be selected based upon the maximum power required for the duty cycle.

12. Using the selected motor power (P_1) from Step 11, verify that the Rated Torque (T_{2max}) of the selected gear reducer is larger than the value calculated below.

$$T_{2max} \geq \frac{P_1 \cdot i_{ges} \cdot 63205}{n_1} \cdot \eta_N \cdot f_B \cdot f_m$$

where:

P_1 = Motor power determined in step 16

i_{ges} = Exact gear ratio for the gear unit selected in step 16

n_{1N} = Nominal (motor) input speed

η_N = Nominal gear reducer efficiency
(page 24)

Selection Information



Check of peak load conditions

After the initial pre-selection of the MAXXDRIVE™ gear reducer, the peak load conditions must be determined at the reducer output, and compared to the reducer rated torque, in order to verify that the gear unit has a sufficient mechanical rating or capacity.

The peak load torque is the highest possible torque that may occur in the application. When the equipment builder or machine designer has determined the peak operating loads, these conditions should be considered during the selection verification process. Otherwise peak load torques estimates need to be made.



IMPORTANT NOTE



If the gear reducer rated torque does not equal or exceed the peak load torque, a larger capacity gear unit must be considered in order to avoid damage to the unit or unit failure.

Method 1 : Peak load at the output is known.

If the machine designer or equipment builder knows the peak load developed at the reducer output, the reducer selection can be verified by applying the following formula.

$$T_{2max} \geq T_{2peak} \cdot f_s$$

T_{2max} = Gear reducer rated torque
 T_{2peak} = Peak load torque at the reducer output
 f_s = Peak load factor (page 24)

Method 2 : Peak load at the input is known.

If the machine designer or equipment builder knows the peak load developed at the reducer input, the reducer selection can be verified by applying the following formula.

$$T_{2max} \geq T_{1peak} \cdot i_{ges} \cdot f_s$$

T_{2max} = Gear reducer rated torque
 T_{1peak} = Peak load torque at the reducer input
 i_{ges} = Exact gear ratio for the selected gear unit
 f_s = Peak load factor (page 24)



IMPORTANT NOTE



When brakes are supplied between the motor and the gear reducer, or when brake motors are utilized, the peak torque developed by the braking action must also be considered.

Method 3 : Estimating peak load torque at the output

Often, the peak load torque at the reducer output is not known. When this is the case and estimate of the peak load torque can be made from the known input shaft loads and by taking into consideration the Start-Up Factor (f_{AN}).

$$T_{2max} \geq \frac{P_1 \cdot i_{ges} \cdot 63205}{n_1} \cdot \eta_N \cdot f_{AN} \cdot f_s$$

where:

T_{2max} = gear reducer rated torque
 P_1 = Motor power determined in step 11
 i_{ges} = exact gear ratio for the gear unit selected in step 11
 n_1 = input speed to the gear unit
 η_N = nominal gear reducer efficiency (page 24)
 f_{AN} = start -up factor (page 24)
 f_s = peak load factor (page 24)



Check of Thermal Power Capacity

Before finalizing the gear reducer selection, one must check to make certain the reducer's thermal power capacity (P_{wg}) exceeds the input power (P_1) or motor power (P_M) being delivered to the gear unit.

$$P_{wg} > P_1 \quad \text{and} \quad P_{wg} > P_M$$

WARNING
<p>If the gear drive's thermal power capacity is limited there will not be sufficient thermal energy dispersion and the gear unit can overheat causing significant internal damage.</p>

The thermal power capacity of the gear reducer is influenced by a variety of factors. These additional factors must be considered in making the final gear reducer selection:

- Heat transfer to and from adjoining surfaces
- Mechanical loading of the gear unit
- Size and type of gear unit
- Ratio
- Input speed
- Type of lubrication used
- Oil fill level
- Operation duty cycle
- If there is an additional oil circulating system
- If an oil cooling system is utilized

When to Consult NORD

Consult NORD for a detailed application review if two or more of the following conditions apply:

- Vertical or upright mounting position (M2, M4, M5 or M6).
- Input power $P_1 > 670$ hp (500 kW)
- Ratio $i_{ges} < 14.4$ (for bevel gear units $i_{ges} < 28.8$)
- Input speeds $n_1 > 1800$ rpm
- Increased ambient temperature $> 104^\circ\text{F}$ (40°C)

Consult NORD for recommendations if there are special installation conditions that may affect the operating temperature of the unit. Examples include, but are not limited to, the following:

- Installation in a confined space
- Installation in an area with limited air flow
- Exposure to high ambient conditions or heat radiation
- Exposure to solar heating

WARNING
<p>For installation outdoors, adequate shading from the sun must be provided.</p>

Standard Installation & Operating Conditions

The thermal power rating of the gear unit is always defined at standard installation and operating conditions as follows.

Standard Installation and Operating Conditions

The standard or default selection criteria are defined as follows:

- Ambient temperature: 68°F (20°C)
- Ambient air condition: large open area with good air circulation and convection cooling; sustained ambient air velocity approaching $V_L \approx 4.10$ ft/s (1.25 m/s).
- Installation foundation: flat and level steel sub-construction.
- Installation altitude: ≤ 3280 ft (1000 m) above sea level.
- Mounting position: horizontal (page 26).
 - M1 is standard for 2-stage gear units.
 - M3 is standard for 3-stage gear units.
- Lubrication method: oil-splash lubrication.
- If water cooled, cooling water inlet temperature: 68°F (20°C).

Method 1 : Applying the Motorized Reducer Selection Tables

When the motorized reducer selection tables (pages 65 – 142) are utilized in the initial gear unit selection, the base thermal power rating ($P_{t0.20}$) is listed in the same table along with other critical performance data. The rating displayed is based upon convection cooling of the gear unit and standard installation and operating conditions apply.

Cooling system options are recommend as shown in the selection table under the column labeled "CS".

Column "CS"	Recommended Cooling System Option
–	Indicates that no additional measures are required so long as standard installation and operating conditions are applicable.
Fan	Fan cooling with shaft-driven fan.
CC	Integrated water cooling coil.
A,B,...H	Letter designates suggested size of either the oil/water or oil/air external cooling system.
Fan	Utilizing fan cooling as opposed to an integrated water cooling coil generates a higher thermal power capacity.

Selection Information



Method 2 : Applying the Reducer Rating Tables

The thermal ratings tables provided the following thermal power capacities based upon temperature conditions of 68 °F (20°C) and 104 °F (40°C), and based upon standard installation and operating conditions.

- Convection cooling only ($P_{t0.20}$ or $P_{t0.40}$).
- Convection + shaft-driven fan ($P_{tf.20}$ or $P_{tf.40}$).
- Convection + integrated water coil ($P_{tc.20}$ or $P_{tc.40}$).



WARNING



Published thermal ratings are based upon standard installation and operating conditions. When this is not the case the thermal power capacity must be verified through direct calculation or analysis.

Method 3 : Direct Calculation or Analysis

The published thermal power ratings are always defined at standard installation and operating conditions. When this is not the case the thermal power capacity must be verified through direct calculation or analysis.

To avoid gear reducer overheating, one must check to make certain the reducer's thermal power capacity (P_{wg}) exceeds the input power (P_i) or motor power (P_M) being delivered to the gear unit.

$$P_{wg} > P_i \quad \text{and} \quad P_{wg} > P_M$$

By utilizing the gear reducer operating factors listed on pages 24 - 25, one can determine the thermal power capacity of the gear reducer, for the type of cooling option that is used or specified.

Aside from relying on pure convection or air cooling, NORD can provide a variety of cooling options to increase the thermal capacity of the gear reducer, including:

- The addition of a shaft-driven fan (page 50)
- The addition of an internal water cooler (page 51)
- The addition of an oil/water cooling system (page 53)
- The addition of an oil/air cooling system (page 53)

Case 1: Convection Cooling Only

$$P_{wg} = P_{t0.20} \cdot f_t \cdot f_v \cdot f_H \cdot f_{ED} \cdot f_o$$

P_{wg} = Thermal power rating for convection cooling.

$P_{t0.20}$ = Thermal power capacity from fan.

f_t = Ambient temperature factor.

f_v = Ambient air velocity factor.

f_H = Installation altitude factor.

f_{ED} = Duty cycle factor

f_o = Oil supply factor

Case 2: Convection Cooling + Shaft-Driven Fan

$$P_{wg,F} = P_{wg} + P_{tf.20} \cdot f_L \cdot f_H \cdot f_n$$

$P_{wg,F}$ = Calculated thermal rating with an added shaft fan.

P_{wg} = Thermal power rating for convection cooling.

$P_{tf.20}$ = Additional thermal power capacity from fan.

f_L = Fan - cooling air temperature factor.

f_H = Installation altitude factor.

f_n = Input speed factor.

Case 3: Convection Cooling + Integrated Water Coil

$$P_{wg,C} = P_{wg} + P_{tc.20} \cdot f_w$$

$P_{wg,C}$ = Calculated thermal rating with an added water coil.

P_{wg} = Thermal power rating for convection cooling.

$P_{tc.20}$ = Additional thermal power capacity from water coil.

f_w = Cooling water temperature factor.

Case 4: Convection Cooling + Shaft-Fan + Integrated Water Coil

$$P_{wg,FC} = P_{wg,F} + P_{tc.20} \cdot f_w$$

$P_{wg,FC}$ = Calculated thermal rating with an added shaft, fan and water coil.

$P_{wg,F}$ = Calculated thermal rating with an added shaft fan.

$P_{tc.20}$ = Additional thermal power capacity from water coil.

f_w = Cooling water temperature factor.



Case 5: Convection Cooling + Oil/Water Cooling System

$$P_{wg,CS1} = P_{wg} + \left(\frac{Q_{CS1}}{(1-\eta_n)} \cdot f_w \right)$$

$P_{wg,CS1}$ = Calculated thermal rating with a water cooling system.

P_{wg} = Thermal power rating for convection cooling.

Q_{CS1} = Cooling power capacity of the oil/water cooling system

η_n = nominal gear reducer efficiency (page 24)

f_w = Cooling water temperature factor.



IMPORTANT NOTE



For help in determining the size of the oil cooler or the cooling power capacity (Q_{CS1}) of the oil/water cooler, see separate instructions on page 53.

Case 6: Convection Cooling + Oil/Air Cooling System

$$P_{wg,CS2} = P_{wg} + \left(\frac{Q_{CS2}}{(1-\eta_n)} \cdot f_L \right)$$

$P_{wg,CS2}$ = Calculated thermal rating with an air cooling system.

P_{wg} = Thermal power rating for convection cooling.

Q_{CS2} = Cooling power capacity of the oil/air cooling system

η_n = nominal gear reducer efficiency (page 24)

f_L = Fan cooling air temperature factor.



IMPORTANT NOTE



For help in determining the size of the oil cooler or the cooling power capacity (Q_{CS2}) of the oil/air cooler, see separate instructions on page 53.

Selection Information



Radial Overhung Load

A radial overhung load force ($F_{R\text{vorh}}$) exists when a resultant force is applied to the reducer shaft, by transferring power at a right angle, through an externally mounted power transmission device, such as a belt pulley, chain sprocket, or gear.

The motorized reducer selection tables (pages 65 – 142) list the permissible radial overhung load force (F_R) that may be applied to the reducer output shaft and bearings. The forces listed apply for foot-mounted and flange-mounted gear units with solid shafts.

The overhung load ratings are...

- to be applied at the midpoint of the shaft.
- to be applied without thrust loads.
- based upon the least favorable loading direction and least favorable direction of rotation.

When calculating the applied radial overhung load force ($F_{R\text{vorh}}$), corresponding power transmission factor (f_z) must be taken into account.

$$F_{\text{OHL}} = \frac{2 \cdot T_2}{d_o} \cdot f_z \cdot f_B \leq F_R$$

F_{OHL} = calculated radial load force on the reducer output shaft.

F_R = permissible radial overhung load force [lb]

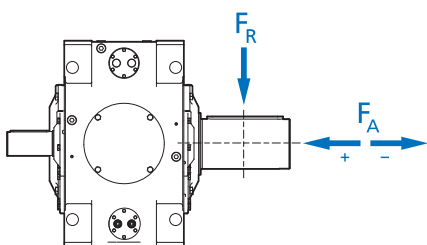
T_2 = output torque of gear reducer [lb-in]

d_o = effective pitch diameter of external power transmission device [in]

f_z = power transmission factor

f_B = operating service factor

Transmission Component	Factor f_z	Notes
Gear	1.1	17 teeth or less
Gear	1.2	18 teeth or more
Chain sprocket	1.4	13 teeth or less
Chain sprocket	1.2	13 to 20 teeth
Chain sprocket	1.0	20 teeth or more
Timing belt pulley	1.5	---
V-belt pulley	1.7	---
Flat belt pulley	2.5	---



Thrust Load

Loads that are directed towards or away from the gearbox, along the axis of the shaft, are called thrust or axial loads.

The motorized reducer selection tables (pages 65 – 142) list the permissible thrust/axial load force (F_A) that may be applied to the reducer output shaft and bearings. The forces listed apply for foot-mounted and flange-mounted gear units with solid shafts.

Axial force ratings are

- to be applied without radial loads.
- based upon the least favorable loading direction and least favorable direction of rotation.

In application, the applied axial force must be less than or equal to the permissible axial load force.

$$F_T \cdot f_B \leq F_A$$

F_T = Applied thrust/axial load force [lb]

F_A = Permissible axial load force [lb]

f_B = Operating service factor



IMPORTANT NOTES



- Consult NORD if the applied radial load force is not at the center of the output shaft or if evaluation of an input shaft overhung load is required.
- Both the permissible radial overhung load force (F_R) and the permissible rated thrust/axial load force (F_A) are based upon an operating service factor condition $f_B=1.0$.
- In cases where the reducer is subjected to high inertia loads, shock load conditions, suddenly applied forces or long periods of operation, (> 5 hours/day) an appropriate operating service factor $f_B > 1$ must be considered.
- When checking the applied radial axial load forces against the catalog rated loads, the calculated load conditions must be increased by the appropriate service factor.
- Please consult NORD if a combined overhung load and thrust load are applied simultaneously.
- Higher radial and axial forces may be possible. For a precise calculation, please state the direction and location of the applied force/s, the desired rotation of the shaft, and the required operating life.



Service Factors f_B

The operating factor provides the minimum recommended service factor for various applications and takes into account the usual conditions for the particular application listed. If the operating factor is known for the application, this should be used. If no values are available for the application, refer to the tables below or consult with NORD to determine a suitable service factor.

Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
WASTE WATER			
Concentrator (central drive)	1.15	1.25	1.50
Filter presses	1.00	1.30	1.50
Vacuum filter	1.15	1.30	1.50
Flocculation agitator	0.80	1.00	1.30
Aerator	2.00	2.00	2.00
Circular aerator	–	1.80	2.00
Brush aerator	–	–	2.00
Screening plant	1.00	1.20	1.30
Circular and longitudinal scrapers	1.00	1.30	1.50
Collectors	1.15	1.25	1.50
Sludge collectors	1.25	1.25	1.25
Pre-concentrator	–	1.10	1.30
Sludge compressor	1.50	1.50	1.50
Achimedean screw water pumps	–	1.30	1.50
Water turbines	–	–	2.00
Settling tanks	1.00	1.00	1.25
Chemical substance loaders	1.25	1.25	1.25
Dehydration screens	1.50	1.50	1.50
Slag crushers	1.50	1.50	1.50
Slow or fast mixers	1.50	1.50	1.50
PUMPS			
Impeller pumps	1.15	1.35	1.45
Displacement pumps			
1 Piston	1.35	1.50	1.80
> 1 Piston	1.20	1.40	1.50
EXCAVATORS			
Bucket chain	–	1.60	1.60
Tippers	–	1.30	1.50
Tracklaying vehicles	1.20	1.60	1.80
BUCKET WHEELS			
as pick-ups	–	1.70	1.70
for original material	–	2.20	2.20
Cutting heads	–	2.20	2.20
Slewing gear ¹⁾	–	1.40	1.80
DREDGERS			
Conveyors	1.25	1.25	1.50
Cutting head drives	2.00	2.00	2.00
Screens	1.75	1.75	2.00
Stackers	1.25	1.25	1.50
Hoisting winches	1.25	1.25	1.50

Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
MINING			
Crushers	1.55	1.75	2.00
Vibrators and screens	1.55	1.75	2.00
Slewing gear	–	1.55	1.80
BUCKET WHEEL EXCAVATORS			
Grinding machine for sand	1.25	1.25	1.50
Hammer mills	1.75	1.75	2.00
CHEMICAL INDUSTRY			
PLASTICS			
Extruders	–	–	1.60
Extruders (plastics)	–	1.40	1.60
- with variable speed	1.50	1.50	1.50
- with fixed speed	1.75	1.75	1.75
Batch kneaders	1.75	1.75	1.75
Continuous mixers	1.50	1.50	1.50
Mixing plant	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Blower units	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Films	1.25	1.25	1.25
Pre-shredder	1.50	1.50	1.50
Bars	1.25	1.25	1.25
Sheets	1.25	1.25	1.25
Tubes	1.25	1.25	1.50
RUBBER			
Extruders (rubber)	–	1.50	1.80
Rubber kneader	–	1.80	1.80
Continuous mixers	1.50	1.50	1.50
Refiners - two-cylinder	1.50	1.50	1.50
Rubber rollers (2 in series)	1.55	1.75	2.00
Rubber rollers (3 in series)	–	1.50	1.75
Heating rollers	1.35	1.50	1.75
Rubber calenders	–	1.50	1.50
Calenders	–	1.65	1.65
Cooling drums	–	1.30	1.40
Mills	1.55	1.75	2.00
Sheet rollers	1.55	1.75	2.00
Refining rollers	1.55	1.75	2.00

¹⁾ Select according to the maximum torque



Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
CHEMICAL INDUSTRY (CTD.)			
MIXERS			
for homogeneous material	–	1.35	1.40
for inhomogeneous material	1.40	1.60	1.70
AGITATORS FOR AGITATED MATERIALS			
with uniform density	1.00	1.30	1.50
with varying density	1.20	1.50	1.65
with uneven gassing	1.40	1.60	1.80
Toasters	1.00	1.30	1.50
Centrifuges	1.00	1.20	1.30
IRON SMELTING METAL PRODUCTION AND PROCESSING			
Sheet turning device	1.00	1.00	1.20
Block press	1.00	1.20	1.20
Reelers	–	1.60	1.60
Cooling bed scrapers	–	1.50	1.50
Sheet pusher	1.50	1.50	1.50
Winders / Coiling machines	–	1.60	1.75
Cutting rollers	1.55	1.75	2.00
Wire-pulling machines	1.35	1.50	1.75
Sheet metal bending machines ¹⁾	–	1.00	1.00
ROLL-ALIGNING MACHINES			
Roller conveyors - continuous	–	1.50	1.50
Roller conveyors - intermittent	–	2.00	2.00
Tube reversing	–	1.80	1.80
SHEARING			
General	2.00	2.00	2.00
Continuous cutting ¹⁾	–	1.50	1.50
Cranked cutting ¹⁾	1.00	1.00	1.00
Continuous casting drivers ¹⁾	–	1.40	1.40
ROLLERS			
Sheet metal reversing	–	2.50	2.50
Sheet slab reversing	–	2.50	2.50
Wire reversing	–	1.80	1.80
Thin sheet metal reversing	–	2.00	2.00
Thick sheet metal reversing	–	1.80	1.80
Roller adjusters	0.90	1.00	–
ENERGY			
Frequency converters	–	1.80	2.00
Water wheels	–	–	1.70
Water turbines	–	–	2.00
Electricity generators	1.00	1.00	1.25

Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
CONVEYOR PLANT			
Bucket conveyors	–	1.40	1.50
Bucket conv. with centrifugal emptying	1.15	1.15	1.25
Conveyor reels	1.40	1.60	1.60
LOADERS			
Plate feeder	1.25	1.25	1.50
Belt feeder	1.15	1.15	1.50
Table feeder	1.00	1.00	1.25
Swivelling loader	1.75	1.75	2.00
Helical loader	1.15	1.25	1.50
CONVEYERS			
Evenly distributed load	1.15	1.15	1.25
Heavy duty	1.25	1.25	1.50
Unevenly distributed load	1.25	1.25	1.50
Belt conveyors ≤ 100 kW	1.15	1.25	1.40
Belt conveyors > 100 kW	1.15	1.30	1.50
GOODS LIFTS ¹⁾			
Vertical conveyors - other	–	1.50	1.80
Passenger lifts ¹⁾	–	1.50	1.80
Slat conveyors	–	1.25	1.50
Vibrators and screens	1.55	1.75	2.00
Swinging or vibrating conveyors	1.75	1.75	2.00
Escalators	1.15	1.25	1.55
Rail vehicles	–	1.50	–
ELEVATORS			
Loading	1.25	1.25	1.50
Gravity emptying	1.15	1.15	1.25
HOISTING WINCHES ¹⁾			
Heavy duty	1.75	1.75	2.00
Medium duty	1.25	1.25	1.50
Inclined lifts	1.25	1.25	1.50
WOOD INDUSTRY			
GENERAL			
Debarking machines - spindle feed	1.25	1.25	1.50
Main drive	1.75	1.75	1.75
Conveyors - Burners	1.25	1.25	1.50
Main or heavy duty	1.50	1.50	1.50
Main trunk	1.75	1.75	2.00
Sawing, carousel	1.25	1.25	1.50

¹⁾ Select according to the maximum torque



Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
WOOD INDUSTRY (CTD.)			
CONVEYORS			
Plate	1.75	1.75	2.00
Transfer	1.25	1.25	1.50
CHAINS			
Floor	1.50	1.50	1.50
Green wood	1.50	1.50	1.75
MANUAL SAWING			
Chain	1.50	1.50	1.75
Work driver	1.50	1.50	1.75
Paring cylinder	1.75	1.75	2.00
FEEDS			
Trimming machine	1.25	1.25	1.50
Multiple blades	1.75	1.75	1.75
Cutter	1.25	1.25	1.50
Stacked trunks	1.75	1.75	1.75
Trunk conveyor - ramp with wheels	1.75	1.75	1.75
Trunk tipping device	1.75	1.75	1.75
Planing machine feed	1.25	1.25	1.50
Trunk tipping roller trains	1.50	1.50	1.50
With rollers	1.75	1.75	1.75
Selection table	1.25	1.25	1.50
Roller train with tilting table	1.25	1.25	1.50
POSITIONING PLATFORMS			
Chain	1.50	1.50	1.75
Track	1.50	1.50	1.75
Plate drive	1.25	1.25	1.50
Drives for veneer turning machines	1.25	1.25	1.50
COMPACTORS			
Compactors	2.00	2.00	2.00
CRANES ^{1) / 2)}			
CRANES AND LIFTING GEAR			
Slewing gear ¹⁾	1.00	1.40	1.80
Derricking gear	1.00	1.10	1.40
Bridge trolleys for portal cranes	3.00	3.00	3.00
Bridge trolleys	1.10	1.60	2.00
Lifting gear	1.00	1.10	1.40
Luffing gear	1.00	1.20	1.60

Service factors - f_B			
Application	Load Duration		
	Up to 3 hrs per day	5-10 hrs per day	Over 10 hrs per day
CRANES ^{2) / 1)} (CTD.)			
REPAIR DOCKS			
Main pulley system	2.50	2.50	2.50
Auxiliary pulley system	2.50	2.50	3.00
Arm pulley systems	2.50	2.50	3.00
Yaw drive	2.50	2.50	3.00
Traveling drive	3.00	3.00	3.00
INDUSTRIAL USE			
Main pulley system	2.50	2.50	3.00
Auxiliary pulley system	2.50	2.50	3.00
Bridge cranes	3.00	3.00	3.00
Traveling drive for crane car	3.00	3.00	3.00
MILLS AND DRUMS			
Cooling and drying drums	–	1.50	1.60
Rotary kilns	–	–	2.00
Ball mills	–	–	2.00
Coal mills	–	1.50	1.75
ROTARY MILLS			
Ball and rod mills	2.00	2.00	2.00
Cylindrical ring gear	2.00	2.00	2.00
Helical ring gear	1.50	1.50	1.50
Direct coupling	2.00	2.00	2.00
Cement kilns	1.50	1.50	1.50
Dryers and coolers	1.50	1.50	1.50
FOODSTUFFS INDUSTRY			
Cane sugar production			
Sugar cane knives ¹⁾	–	–	1.70
Sugar cane mills	–	–	1.70
Diced mash	–	–	1.20
Extraction system, cooling machine, boiler	–	–	1.40
Beet washing, cutting machine	–	–	1.50
Beet peeling machine	2.00	2.00	2.00
Oil mills	1.50	1.50	1.50
Mills (low speed)	1.75	1.75	1.75
Kneading machines	1.25	1.25	1.50
Mincing machines	1.25	1.25	1.50
Slicing machines	1.25	1.25	1.50
Crushers and mills	–	–	1.75
Drying drums	–	1.25	1.50

¹⁾ Select according to the maximum torque

²⁾ Precise categorisation of the load can be carried out e.g. according to FEM1001.



Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
PAPER MACHINES / PAPER AND CELLULOSE INDUSTRY			
all types ³⁾	–	1.80	2.00
PULPER DRIVES			
Debarking drums and machines	1.55	1.80	–
Rollers (pick-up, screen suction and screen feed rollers)	–	1.80	2.00
Drying cylinders (roller bearings)	–	1.80	2.00
Calenders (roller bearings)	–	1.80	2.00
Filters (Pressure and suction filters)	–	1.80	2.00
Chopping machines and shredders	1.55	1.75	2.00
Jordan mills	–	1.50	1.75
Presses (bark, felt, gluing and suction presses)	–	–	1.75
Rolling devices	–	–	1.75
HYDRAPULPERS			
Washing filters	–	–	1.50
Yankee cylinders (dryers)	1.25	1.25	1.25
Agitators (kneaders)	1.50	1.50	1.50
Agitators for pure liquor	1.25	1.25	1.25
Paring cylinder	2.00	2.00	2.00
Debarking machines (mechanical)	2.00	2.00	2.00
Refiners	1.50	1.50	1.50
Paper shredders	1.25	1.25	1.25
Calenders	1.25	1.25	1.25
Shredders	2.00	2.00	2.00
chip loaders	1.50	1.50	1.50
Patination cylinders	1.25	1.25	1.25
CONVEYORS			
Chips, bark, chemicals	1.25	1.25	1.25
Trunk (incl. table)	2.00	2.00	2.00
Sleeve presses	1.25	1.25	1.25
Millers	2.00	2.00	2.00
Cylindrical tools	1.25	1.25	1.25

Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
HYDRAPULPERS (CTD)			
DRYERS			
Paper machine	1.25	1.25	1.25
with conveyors	1.25	1.25	1.25
Embossing machines	1.25	1.25	1.25
Extrusion presses	1.50	1.50	1.50
Pulp refiners	1.50	1.50	1.50
Kiln drives	1.50	1.50	1.50
Paper rollers	1.25	1.25	1.25
Plates	1.50	1.50	1.50
Presses - mat and suction	1.25	1.25	1.25
Kneading machines	2.00	2.00	2.00
Vacuum pumps	1.50	1.50	1.50
Flat reelers	1.25	1.25	1.25
SCREENS			
Chips	1.50	1.50	1.50
Rotating screens	1.50	1.50	1.50
Vibrating screens	2.00	2.00	2.00
Glue presses	1.25	1.25	1.25
Super calender	1.25	1.25	1.25
Concentrator (AC motor)	1.50	1.50	1.50
Concentrator (DC motor)	1.25	1.25	1.25
Washing machine (AC motor)	1.50	1.50	1.50
Washing machine (DC motor)	1.25	1.25	1.25
Coiling and uncoiling holders	1.25	1.25	1.50
Surface rinsing machines	1.25	1.25	1.25
PUMPS			
Pumps	–	1.40	1.50
Centrifugal pumps /Impeller pumps	1.15	1.35	1.45
Piston pumps (1 cylinder)	1.35	1.50	1.80
Piston pumps (multiple cylinders)	1.20	1.40	1.50
Archimedian pumps	–	1.25	1.50
Rotary pumps (gear pumps, vane pumps, positive displacement rotary pumps)	–	–	1.25

³⁾ Thermal investigation is generally necessary



Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
AGITATORS AND MIXERS			
Agitators for liquids	1.00	1.25	1.50
Agitators for liquids (with suspended solids)	1.25	1.25	1.50
Agitators for liquids (variable density)	1.20	1.50	1.65
Agitators for solid media (inhomogeneous materials)	1.40	1.60	1.70
Agitators for solid media (homogeneous materials)	–	1.35	1.40
CABLE RAILWAYS			
Materials cableways	–	1.40	1.50
Pendulum cableways	–	1.60	1.80
Ski tows	–	1.30	1.40
Circulating cableways	–	1.40	1.60
Fixed cable cableways			
SCREENS			
Air washers	1.00	1.00	1.25
Rotary screen - stone or gravel	1.25	1.25	1.50
Mobile screens with water input	1.00	1.00	1.25
TEXTILE MACHINERY			
General	1.25	1.25	1.50
VENTILATORS AND FANS			
Centrifugal fans	1.00	1.00	1.25
Pressure ventilated fans	1.25	1.25	1.25
Push-pull counterflow fans	1.50	1.50	1.50
Industrial and mining fans	1.50	1.50	1.50
Blowers (axial and radial)	1.50	1.50	1.50
Centrifugal blowers	1.00	1.00	1.25
Rotary blowers	1.25	1.25	1.50
Rotary vane blowers	1.25	1.25	1.50
Heat exchangers	1.50	1.50	1.50
Cooling tower fans	–	–	2.00
Dry cooling towers	–	–	2.00
Wet cooling towers	2.00	2.00	2.00

Service factors - f_B			
Application	Load Duration		
	Up to 5 hrs per day	5-10 hrs per day	Over 10 hrs per day
COMPRESSORS			
Piston compressors	–	1.80	1.90
Rotary compressors	–	1.40	1.50
Radial compressors	–	1.40	1.50
Screw compressors	–	1.50	1.75
Centrifugal compressors	1.25	1.25	1.50
Rotary vane compressors	1.25	1.25	1.50
Multi-cylinder reciprocating piston compressors	1.50	1.50	1.75
Single cylinder reciprocating piston compressors	1.75	1.75	2.00
CEMENT INDUSTRY AND CLAY PROCESSING			
Concrete mixers	1.50	1.50	1.75
Crushers ¹⁾	1.55	1.75	2.00
Rotary kilns	–	–	2.00
Tube mills	–	–	2.00
Separators	–	1.60	1.60
Rolling mills	–	–	2.00
Brick presses	1.75	1.75	2.00
Tile presses	1.75	1.75	2.00
Kneading machines	1.25	1.25	1.50

¹⁾ Select according to the maximum torque

Gear Unit Selection Factors



Efficiency for Calculations η_N

The stated efficiency is only to be used for calculation purposes and does not correspond to the actual efficiency of the gear unit. The factor applies to a normal oil level and the installation positions M1 or M3. An increased oil level causes reduced efficiency.

η_N	Calculated Efficiency			
	SK..207	SK..307	SK..407	SK..507
	0.975	0.960	0.955	0.935

Input factors f_M

Additional torque fluctuations due to the type of input machinery are taken into account with the input factor.

f_M	Type of Drive Machine		
	Electric motors Hydro motors Turbines	Piston machines 4-6 cylinder. Degree of inequality 1: 100 to 1 : 200	Piston machines 1 - 3 cylinder. Degree of inequality 1: 100
	1	1.25	1.5

Start-up factors f_{AN}

The start-up factor must be taken into account if the torque applied to the drive during start-up is not known. If the ratio between the start-up torque and the input torque is known, this may be used in the calculation.

f_{AN}	Type of drive running					
	Direct drive	Soft start	Frequency inverter	Star/Delta	Fluid coupling	Fluid coupling with delay chamber
	3	1.8	1.5...2.0 ¹⁾	1.3	2	1.6

¹⁾ Depending on the start-up ramp setting

Peak load factor with reversing factor f_s

The peak load factor takes into account the frequency and direction of peak loads.

f_s	Direction of load	Load peaks per hour					
		1 - 5	6 - 20	21 - 40	41 - 80	81 - 160	> 160
	one-directional	0.50	0.63	0.70	0.79	0.88	1.05
reversible	0.70	0.87	0.97	1.09	1.22	1.46	

Ambient temperature factors f_t

Takes into account the possibility of heat dissipation at various cooling air temperatures.

f_t	Gearbox cooling	Ambient temperature								
		50°F (10°C)	59°F (15°C)	68°F (20°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
	convective cooling	1.14	1.07	1.00	0.93	0.86	0.79	0.71	0.64	0.57
	convective cooling + shaft driven fan	1.14	1.07	1.00	0.93	0.86	0.79	0.71	0.64	0.57
	convective cooling + integrated water cooler	1.06	1.03	1.00	0.97	0.95	0.91	0.88	0.84	0.81
	convective cooling + shaft driven fan + integrated water cooler	1.06	1.03	1.00	0.97	0.95	0.91	0.88	0.84	0.81



Air movement factors f_v

The airspeed over the gearbox influences the dissipation of heat by convectional methods.

f_v	Air movement over gearbox		
	small room, little air movement air speed = 1.64 ft/s	large room with free air movement air speed = 1.25 ft/s	continuous strong air movement air speed = 13.1 ft/s
	0.72	1.00	1.28

Installation altitude factors f_H

The installation altitude factor takes into account the lower heat dissipation of the gearbox at higher altitudes

f_H	Installation altitude above sea level				
	0 ft	3,280 ft	6,560 ft	9,840 ft	13,120 ft
	1.00	0.96	0.91	0.87	0.83

Switch-on time factor f_{ED}

With lower switch-on times, the heat generated by the gearbox decreases.

f_{ED}	Switch-on time				
	100 %	80 %	60 %	40 %	20 %
	1.00	1.08	1.19	1.37	1.75

Oil supply factors f_o

Higher oil levels decrease the efficiency and cause higher gearbox temperatures. This can be taken into account with the following factors. For installation positions other than M1 or M3, please consult NORD.

f_o	Installation position		Type of lubrication		
			Oil bath lubrication	Pressure lubrication	Full oil level
	horizontal	M1 / M3	1.0	1.2	0.6
	vertical	M5	0.6	0.9	0.5
	vertical	M6	0.6	0.9	0.5
	standing	M2	0.4	1.0	0.3
	standing	M4	0.5	0.9	0.4

Cooling air temperature factor f_L

Takes into account the possibility of heat dissipation at various cooling air temperatures

f_L	Air temperature at fan inlet					
	15°C (59°F)	20°C (68°F)	25°C (77°F)	30°C (86°F)	35°C (95°F)	40°C (104°F)
	1.09	1.00	0.91	0.82	0.73	0.64

Speed factor f_n

By means of the speed factor, the speed can be approximately taken into account. For speeds $n_{IN} = 1000 / 1500 / 1200 / 1800$ RPM power tables have been produced, to provide more accurate figures.

f_n	Input speed in min^{-1}								
	500	750	800	900	1000	1200	1400	1500	1800
	0.28	0.42	0.44	0.50	0.56	0.67	0.78	0.83	1.00

Cooling water temperature factors f_w

Cooling water with a temperature above 68°F (20°C) reduces the cooling capacity of the cooling system. For intermediate temperatures, the factor for the next higher temperature must be selected.

f_w	Water inlet temperature			
	15°C (59°F)	20°C (68°F)	25°C (77°F)	30°C (86°F)
	1.17	1.00	0.83	0.67

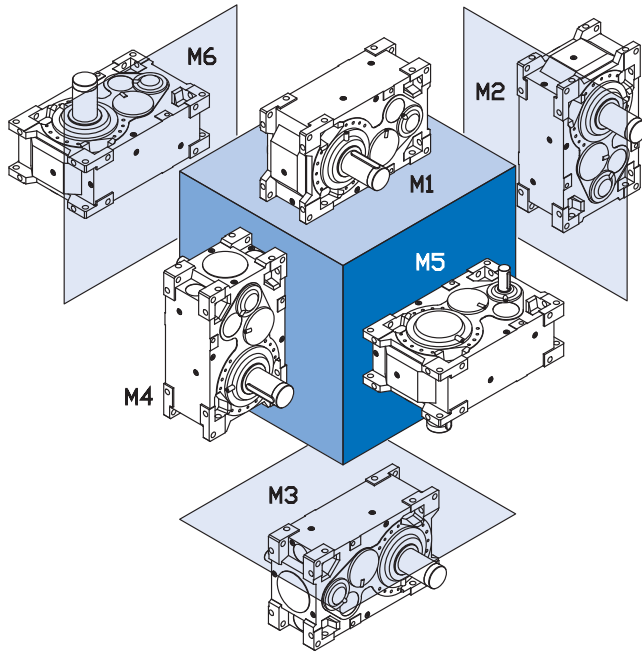
Mounting Configuration



Mounting Position System

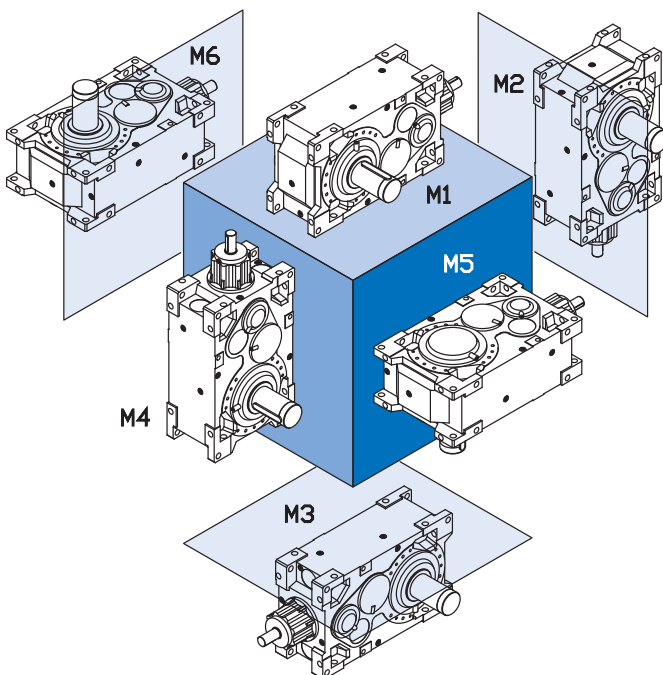
For gear units and gear motors, NORD specifies between six installation positions from M1 to M6 as shown in the following diagrams.

MAXXDRIVE™ Parallel Gear Unit



- M1 Standard Installation
2-Stages (horizontal)
- M2 Output high end (standing)
- M3 Standard installation
3-stages (horizontal)
- M4 Output low end (standing)
- M5 Output downwards (vertically)
- M6 Output upwards (vertically)

MAXXDRIVE™ Bevel Gear Unit



- M1 Standard Installation
3-Stages (horizontal)
- M2 Output high end (standing)
- M3 Standard installation
4-stages (horizontal)
- M4 Output low end (standing)
- M5 Output downwards (vertically)
- M6 Output upwards (vertically)

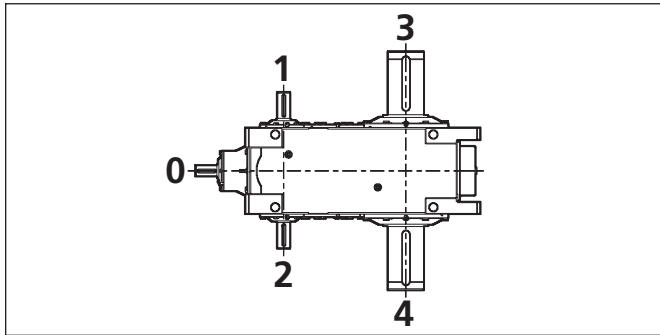


Mounting Configuration

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

Shaft Configuration

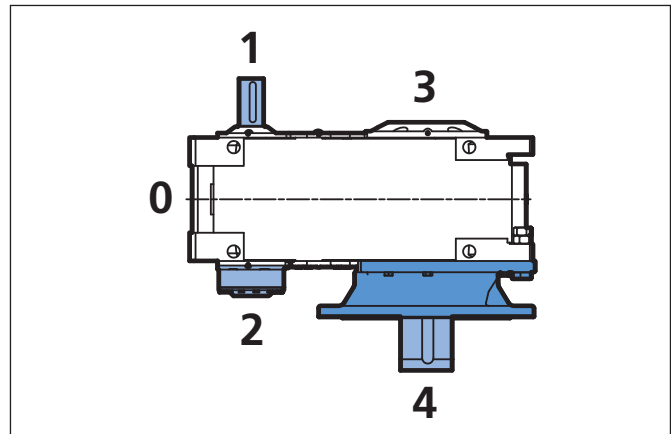
The positions of the required shaft outlets are determined by viewing the gearbox from above in a default horizontal mounting position. M1 is the default (standard) for 2-stage parallel and 4-stage helical-bevel gear units. Mounting position M3 is the default (standard) for 3-stage gear parallel and 4-stage helical-bevel units.



Position of Attachments

The positions of attached elements such as backstops, fans, flange-mounted pumps, drive flanges, agitator flanges etc. are determined according to the same principle as the shaft positions.

Example:



Where:

- 0 = ---
- 1 = End of the input shaft
- 2 = Backstop
- 3 = ---
- 4 = Output Shaft & Output Flange

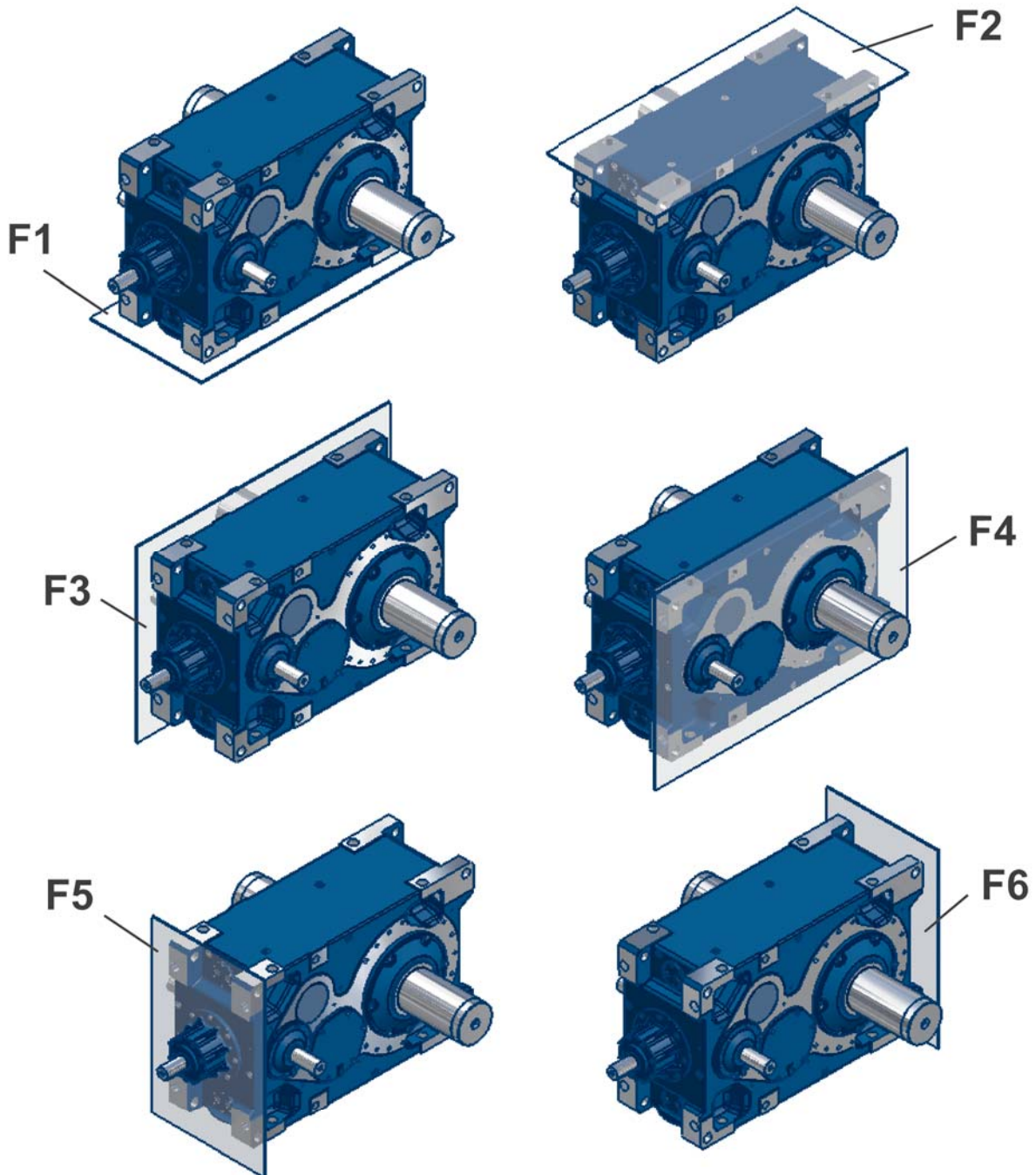
Mounting Configuration



Mounting Surfaces

The mounting surface specifies the side on which the gear unit is fixed. Six mounting surfaces are available based on the diagram below (F1 - F6).

In the following diagram, the mounting surfaces for mounting position M1 are indicated.





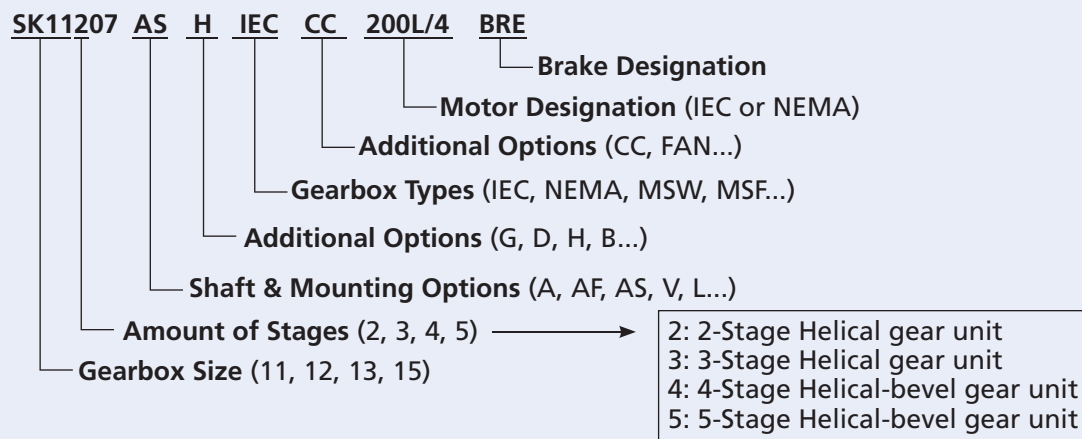
Nomenclature

Parallel Gear Unit		Helical-bevel Gear Unit		Output Torque
2-stage	3-stage	4-stage	5-stage	T_{2max}
SK 11207	SK 11307	SK 11407	SK 11507	5310 lb-in
SK 12207	SK 12307	SK 12407	SK 12507	76568 lb-in
SK 13207	SK 13307	SK 13407	SK 13507	1194851 lb-in
SK 15207	SK 15307	SK 15407	SK 15507	1770150 lb-in

Combinations with parallel and bevel gear units

Parallel gear units		Bevel gear units		Output Torque
Nominal Ratio	5-stage	Nominal Ratio	6-stage	M_{2max}
i_N		i_N		
180 - 1600 125 - 160	SK 11307 / 6282 SK 11307 / 7282	200 - 1600	SK 11307 / 9052.1	584150 lb-in
180 - 1600 125 - 160	SK 12307 / 7282 SK 12307 / 8282	200 - 1600	SK 12307 / 9072.1	849672 lb-in
200 - 1600 125 - 180	SK 13307 / 7282 SK 13307 / 9282	315 - 1600 180 - 280	SK 13307 / 9072.1 SK 13307 / 9082.1	1194851 lb-in
250 - 1600 180 - 200 125 - 160	SK 15307 / 8282 SK 15307 / 9282 SK 15307 / 10282	280 - 1600 180 - 250	SK 15307 / 9082.1 SK 15307 / 9086.1	2026822 lb-in

Ordering Example



Example Explanation

Case Size 11 Gearbox with a 2-Stage Helical gear unit, Hollow Shaft with Shrink disc and Cover, an IEC gearbox type with a Cooling Coil and a 200L/4 Motor that is provided with a brake.

Gear Unit Options



Large Industrial Gearbox Options

Abbreviation	Description	Output Design	Options for Output	Input Design	Additional Options					Page
						SK11.07	SK 12.07	SK 13.07	SK 15.07	
A	Keyed hollow shaft	X				✓	✓	✓	✓	36
AS	Hollow shaft with shrink disc	X				✓	✓	✓	✓	37
B	Fixing kit for hollow shaft		X			✓	✓	✓	✓	38
CC	Internal water cooler				X	✓	✓	✓	✓	51
CS1	External oil / water cooler				X	✓	✓	✓	✓	53
CS2	External oil / air cooler				X	✓	✓	✓	✓	53
D	Torque support		X			✓	✓	✓	✓	41
EA	Hollow shaft, with spline, DIN 5480	X				¹⁾	¹⁾	¹⁾	¹⁾	36
ED	Elastic torque support		X			✓	✓	✓	✓	41
EV	Splined solid shaft, DIN 5480	X				✓	✓	✓	✓	36
EW	Splined solid input shaft, DIN 5480			X		✓	✓	✓	✓	36
F	Flat output flange		X			✓	✓	✓	✓	39
FAN	Fan				X	✓	✓	✓	✓	50
FK	High output flange		X			✓	✓	✓	✓	39
F1	Input flange			X		✓	✓	✓	✓	43
H	Cover (contact protection)		X	X		✓	✓	✓	✓	44
IEC	Adapter for fitting B5 IEC standard motors			X		✓	✓	✓	✓	43
L	Double solid shaft	X				✓	✓	✓	✓	36
LC	Pressure circulation lubrication				X	¹⁾	¹⁾	¹⁾	¹⁾	55
MC	Motor scoop				X	¹⁾	¹⁾	¹⁾	¹⁾	44
MD	Direct motor drive			X		¹⁾	¹⁾	---	---	

¹⁾ on request



Abbreviation	Description	Output Design	Options for Output	Input Design	Additional Options	Size				Page
						SK11.07	SK 12.07	SK 13.07	SK 15.07	
MF	Motor base frame (options: see MF..)				X	1)	1)	1)	1)	42
MS	Motor Swing Base (options: see MS ..)				X	1)	1)	1)	1)	42
MO	Monitoring devices & sensors				X	1)	1)	1)	1)	44
MFB	Base frame with brake				X	✓	✓	✓	✓	42
MSB	Swing base with brake				X	✓	✓	✓	✓	42
MFK	Base frame with elastic coupling				X	✓	✓	✓	✓	42
MFT	Base frame with fluid coupling				X	✓	✓	✓	✓	42
MSK	Swing base with elastic coupling				X	✓	✓	✓	✓	42
MST	Swing base with fluid coupling				X	✓	✓	✓	✓	42
MFTB	Base frame with fluid coupling and brake				X	✓	✓	✓	✓	42
MSTB	Swing base with fluid coupling and brake				X	✓	✓	✓	✓	42
MT	Motor bracket				X	1)	1)	1)	1)	44
NEMA	Adapter for fitting B5 NEMA C-flange standard motors			X		✓	✓	✓	✓	43
OA	Oil expansion chamber				X	✓	✓	✓	✓	49
OT	Oil tank				X	✓	✓	✓	✓	49
OH	Oil heater				X	✓	✓	✓	✓	54
R	Backstop			X		✓	✓	✓	✓	46
V	Solid shaft	X				✓	✓	✓	✓	36
VL2	Aerator / agitator drive	X				✓	✓	✓	✓	40
VL3	Aerator / agitator drive with "Drywell"	X				✓	✓	✓	✓	40
WX	Auxiliary drive			X		✓	✓	✓		44
W1/W2/W3	W-Solid Shaft Input Seals 1/2/3 - number of seals			X		✓	✓	✓		45

1) on request

Gear Unit Options



Examples



SK 13207 - V

Two-stage parallel gear unit
with solid output shaft



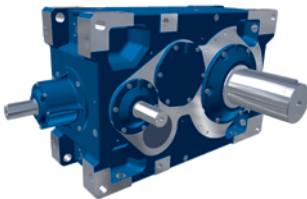
SK 13307 - A

Three-stage parallel gear unit
with hollow output shaft



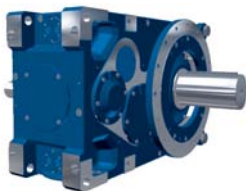
SK 13407 - V

Three-stage right-angle gear unit
with solid output shaft



SK 13507 - V - W

Four-stage right-angle gear unit
with solid output shaft
with additional free input shaft



SK 13207 - V - F

Two-stage parallel gear unit
with solid shaft and block flange on output



SK 13207 - V - F

Two-stage parallel gear unit
with solid shaft and block flange on output



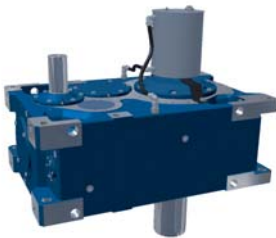
SK 13207 - A - ED

Two-stage parallel gear unit
with hollow output shaft
and elastic torque support



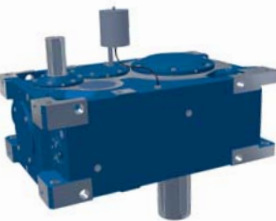
SK 13207 - A - D

Two-stage parallel gear unit
with hollow output shaft
and standard torque support



SK 13207 - V - OT

Two-stage parallel gear unit
with solid output shaft
and oil tank



SK 13207 - V - OA

Two-stage parallel gear unit
with solid output shaft
and oil expansion chamber



SK 13207 - V - VL2 - IEC

Two-stage parallel gear unit
with solid output shaft, attached IEC motor,
and "agitator flange" with reinforced bearings



SK 13207 - ASH - VL3 - NEMA

Two-stage parallel gear unit
with hollow output shaft with shrink disc & cover
"agitator flange" with "Drywell"
and attached NEMA motor

Gear Unit Options



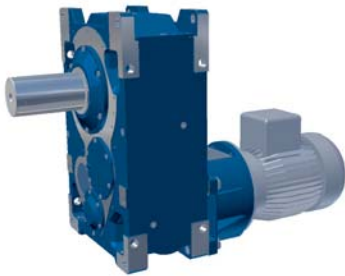
SK 13207 - V - FK

Two-stage right-angle gear unit
with solid shaft and collar flange on output



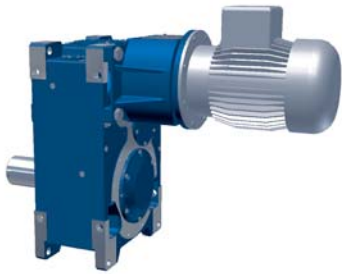
SK 13207 - V - IEC

Two-stage right-angle unit
with solid output shaft, and an attached IEC motor



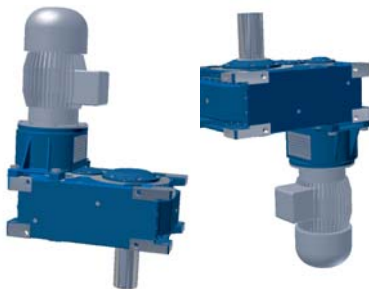
SK 13207 - V - NEMA

Two-stage parallel unit
with solid output shaft, and an attached NEMA motor



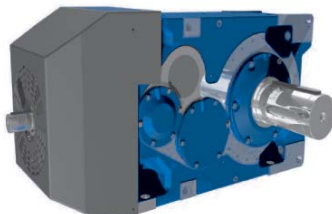
SK 13207 - V - IEC

Two-stage parallel gear unit
with solid output shaft, and an attached IEC motor



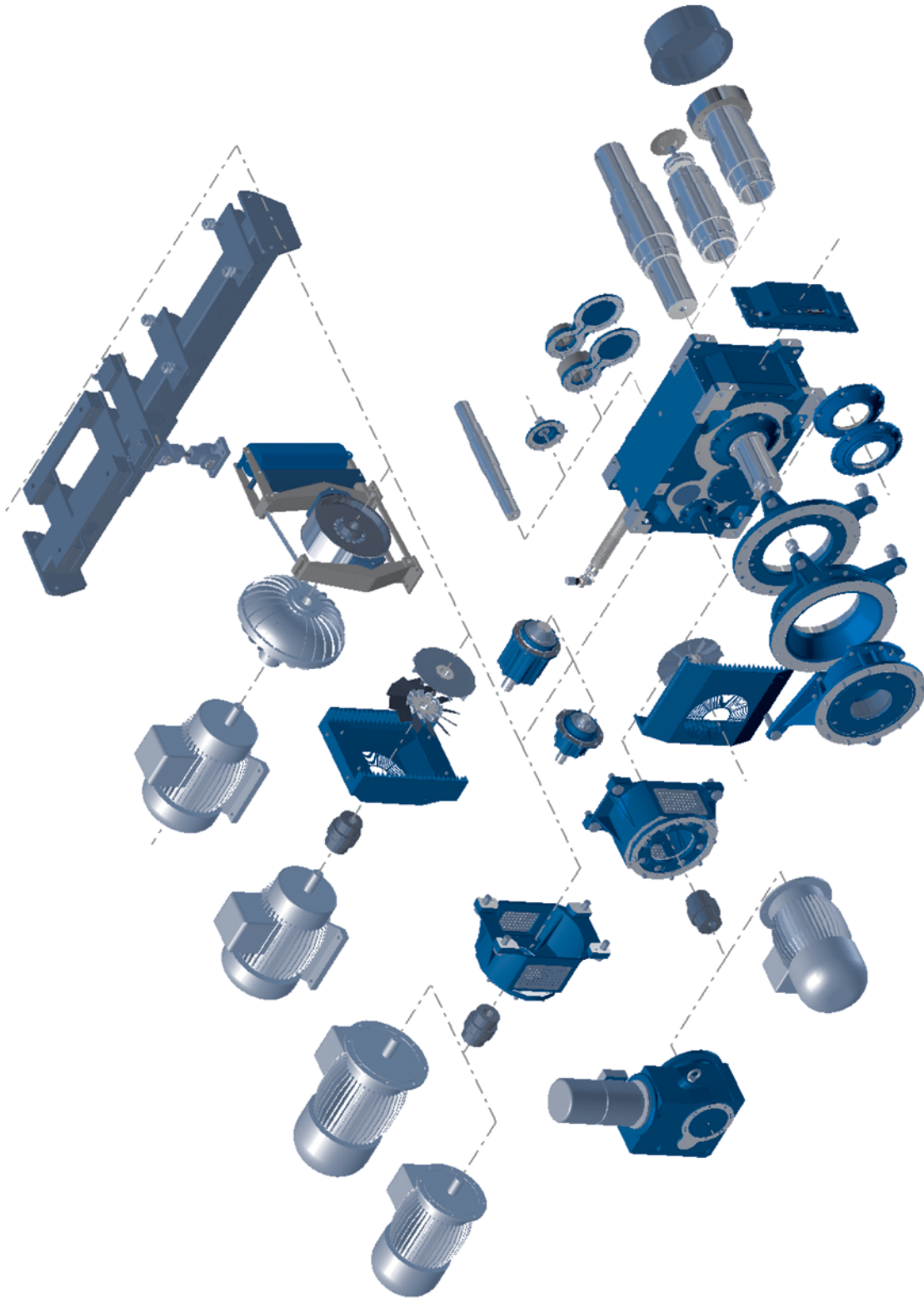
SK 13207 - V - NEMA

Two-stage parallel gear unit
with solid output shaft, and an attached NEMA motor



SK 13407 - V - FAN

Three-stage right angle gear unit
with solid output shaft
with attached fan and protective cover



Shaft Options



Shaft Options

Solid Shaft (Blank or V)

NORD's standard keyed solid shafts include a centered threaded hole. When installing drive elements such as sprockets, coupling hubs, pulleys, etc. the threaded hole and a suitable assembly device can be used to assemble the drive element. Shafts are available as inch or metric versions.

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.

Keyed Hollow Shaft (A)

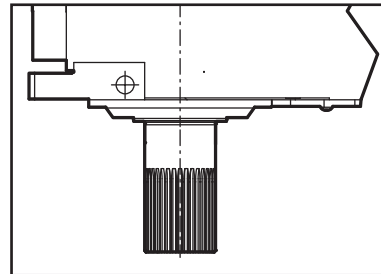
NORD's standard keyed hollow shafts feature standard keyway dimensions and are available in both inch and metric designs. Many NORD reducers offer a variety of hollow shaft diameters.

Hollow Shaft with Spline (EA)

Hollow shafts with an involuted metric spline profile, according to DIN 5480, are available for some NORD hollow shaft reducers. These spline shafts are commonly used on crane travel drives.

Solid Output Shaft with Spline (EV)

Solid output shafts with an involuted metric spline profile, according to DIN 5480, are available for some reducers.



Solid Input Shaft with Spline (EW)

Solid output shafts with an involuted metric spline profile, according to DIN 5480, are available for some reducers.



Hollow Shaft with Shrink disc

For gearbox versions with a hollow shaft design the use of a shrink disc is advised. The customer's shaft length that may be inserted into the hollow shaft of the gearbox can be found on page 156.

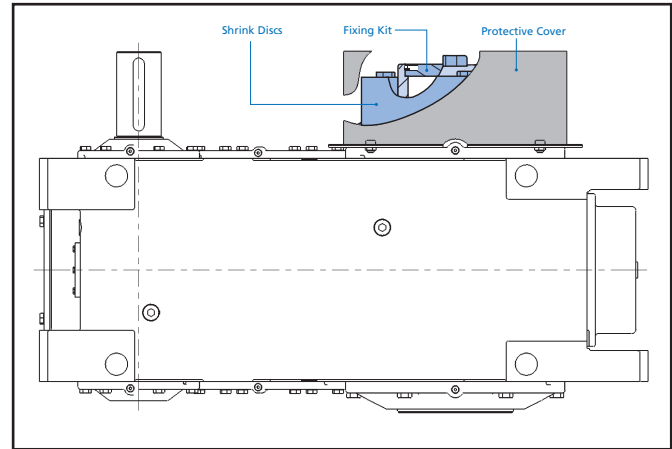
The diameter of the shaft should be according to either ISO standard g_6 . The material of the customer's insert must yield a minimum strength of at least:

$$R_e = 52,260 \text{ psi (360 N/mm}^2\text{)}$$

That way the pressing that creates the frictional coupling may be built up to ensure that no permanent deformation occurs.

T_{2max} = Maximum permissible drive torque

s = Safety factor of the shrink disc for fitclass g_6 with T_{2max}



Gearbox		Shrink disc				Hexagonal bolt DIN 933 - 12.9
Type of gear unit		Type	[lb-in]	[Nm]	s	Type
SK 11207	ASH	220	495,999	56,000	2.6	M20
SK 11307	ASH		584,570	66,000	2.2	
SK 11407	ASH		495,999	56,000	2.6	
SK 11507	ASH	240	584,570	66,000	2.2	M20
SK 12207	ASH		841,426	95,000	2.1	
SK 12307	ASH		850,284	96,000	2.1	
SK 12407	ASH	240	841,426	95,000	2.1	M20
SK 12507	ASH		850,284	96,000	2.1	
SK 13207	ASH		1,115,997	126,000	2.5	
SK 13307	ASH	280	1,195,711	135,000	2.3	M24
SK 13407	ASH		1,115,997	126,000	2.5	
SK 13507	ASH		1,195,711	135,000	2.3	
SK 15207	ASH	300	1,620,853	183,000	2.4	M24
SK 15307	ASH		2,028,280	229,000	2.0	
SK 15407	ASH		1,620,853	183,000	2.4	
SK 15507	ASH	300	2,028,280	229,000	2.0	M24

Shaft Options



Fixing Kits for Hollow Shafts (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 of the necessary parts to secure the shaft in the axial direction by using a tapped hole in the end of the mating male shaft.

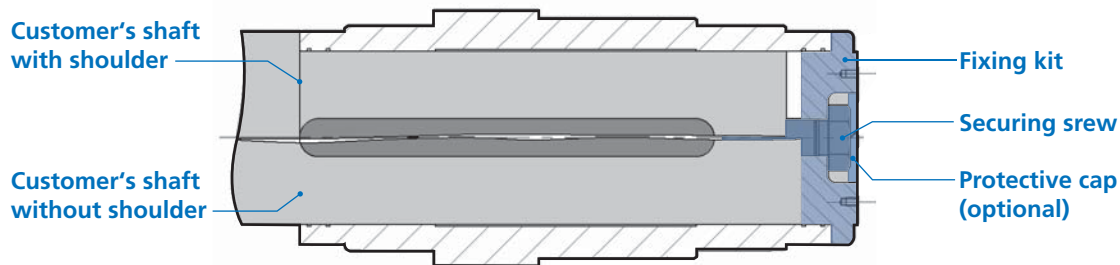
The fixing kits are used for assembling, dismantling and axial fixing to the customer's shaft. The customer's shaft may be with or without a shoulder.

The threaded rod, assembly nut and dismantling screw are not provided with the fixing kit option.

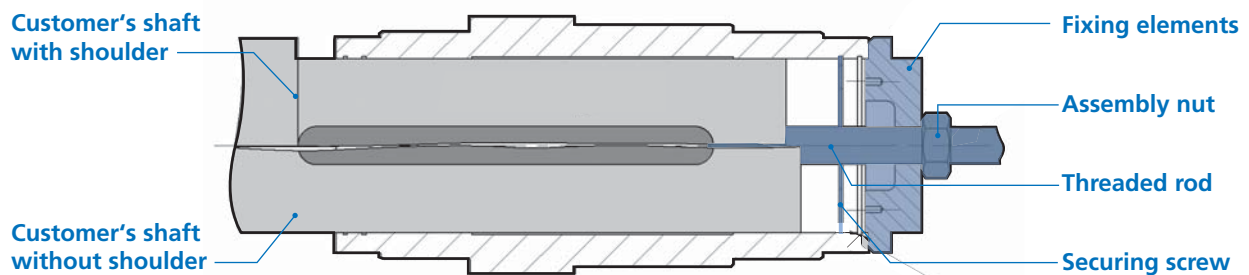
Specifications for use:

- The solid shaft that is used must have a tap according to and our factory standards.
- Space must be available to fit the fixing kit. The permissible shaft dimensions can be obtained from the table in the dimensions section on page 156 & 160.

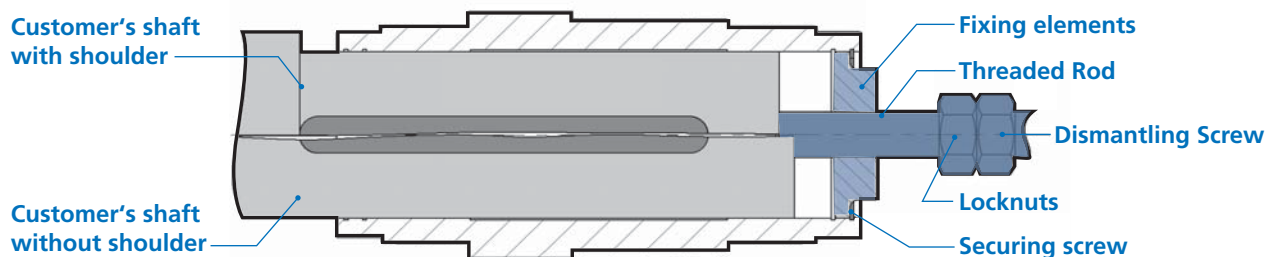
Installation (fixing)



Assembly



Dismantling





Output flanges (F, FK, VL2/VL3)

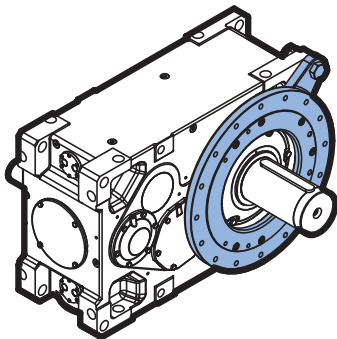
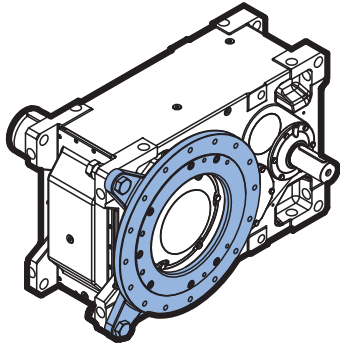
In addition to the six mounting surfaces of the housing, the gearbox may be equipped with various mounting flanges. The output flange is designed to accommodate mounting a gearbox with an attached motor. However, the permissible motor weights (found on page 43) must not be exceeded.

Please contact us if you wish to use the mounting flange in order to attach to parts of an application process. In this case, technical clarification is essential.

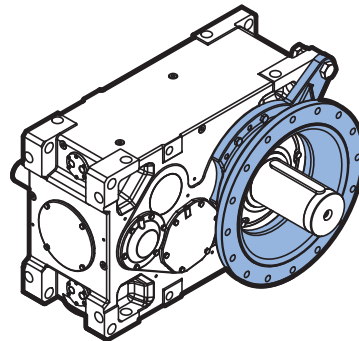
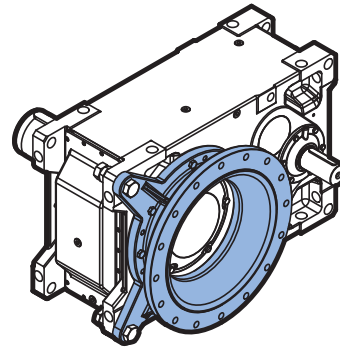
The following types of output flanges are available:

- Flat output flange (F)
- High output flange(FK)
- VL2 / VL3 flange (agitators) (Found on the following page)

Flat output flange (F) (block flange / B14 / with threaded holes)



High output flange (FK) (collared flange / B14 / with through holes)



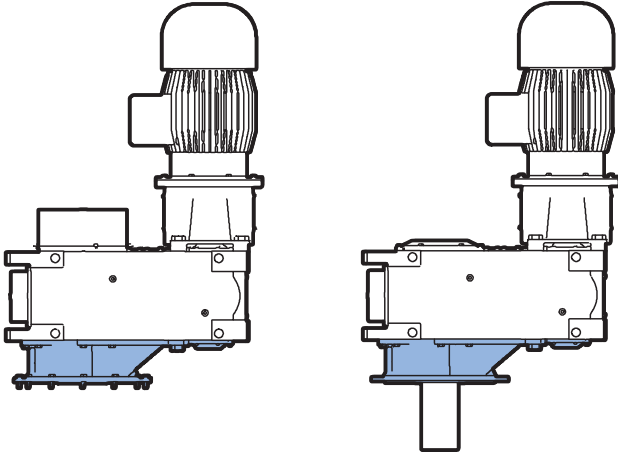
Mounting Options



Reinforced output design (VL2 / VL3) (agitator flange)

Spread Bearing Design (VL2)

The VL2 option is specifically designed for agitator or mixer applications requiring increased bearing load carrying capacities.



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. Included with the VL2 design is a grease fitting for the lower bearing and a removeable plug to allow excess grease to purge from the bearing cavity.

Spread Bearing Design with Oil Safe Dry Cavity (VL3)

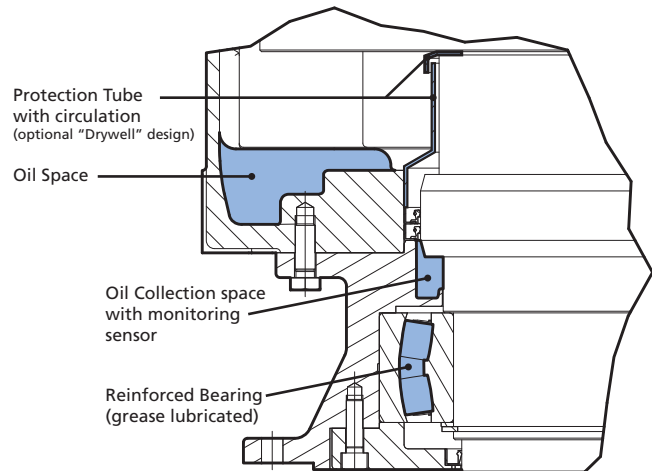
The VL3 dry cavity design adds additional oil leak protective measures to the VL2 spread bearing design. If in any case oil does leak past the reducer seals, it would flow down to the oil slinger mounted onto the shaft. As the shaft rotates, the oil will sling off into the dry cavity and is detected by an oil sensor.

IMPORTANT NOTE

Calculation of the bearing life on request.

For the calculation we require the following data:

Input power	P_1	[hp]
Output speed	n_2	[rpm]
Axial force (thrust)	F_T	[lb]
Radial force	F_{OHL}	[lb]
Distance of the point of action of the radial force from the flange support	X	[in]
Required bearing life	L_{10h}	[h]



IMPORTANT NOTE

Upon request a drywell design may be offered.



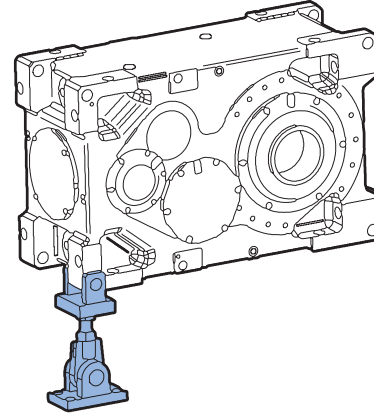
Torque Support (D) (ED)

For shaft mounted versions of hollow shaft gearboxes, optional torque supports are available. In addition to a simple torque support (D), NORD offers a torque support with an integral elastic bushing (ED), which has better damping characteristics (vibration damping).

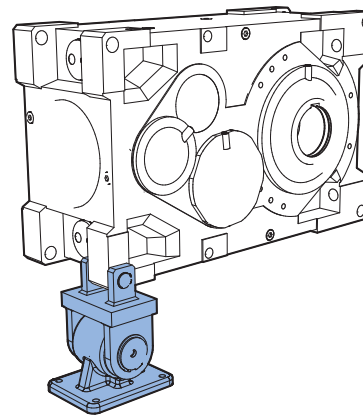
The torque support should be assembled on the machinery side, in order to keep the bending moment on the machinery shaft low. Loading under tension or compression and installation upwards or downwards are not permissible. The torque support may only be installed closest to the input side, otherwise the permissible loading of the gear unit will be exceeded.

Preloading the torque support during installation or operation must be avoided, otherwise the life-span of the drive shaft bearings may be reduced. Torque supports are not suitable for the transmission of radial forces, therefore may only be used in direct-coupled applications that cannot transmit the specified radial forces.

Standard Torque Support (D)



Elastic Torque Support (ED)



Gear Unit Options



Motor Swing Base (MS)

The motor swing base is designed specifically for use with right-angle shaft mounted gear unit where the gearbox and motor are mounted on a common base frame. The torque is taken up via torque support or torque reaction arm.

Optional components (can be combined):

- Elastic coupling, fluid coupling
- Drum brake, disc brake
- Radial / Axial fan
- Auxiliary drive (with freewheeling coupling, back stop, motor brake , etc.)
- Torque support, attachment plate

Motor Base Frame (MF)

Motor base frames (or motor bases) are similar to a motor swing base except the entire base frame is intended to be foot mounted to the supporting machine structure.

Couplings (MSK, MST, MFK, MFT)

Upon request, NORD can provide a variety of coupling types and styles. Please contact NORD if you have special requirements for input or output couplings.

- Common input couplings include: flexible, jaw-style, fluid couplings (to help control start-up), and safety couplings or torque-overload couplings.
- Common output couplings include: elastic bolt couplings (for shorter span lengths), and flange couplings or gear couplings (for larger span lengths).

Swing Base with Brake (MSB) & Base Frame with Brake (MFB)

A motor swing base or base frame can be supplied with an optional disc or drum brakes installed between the motor and the gear unit.

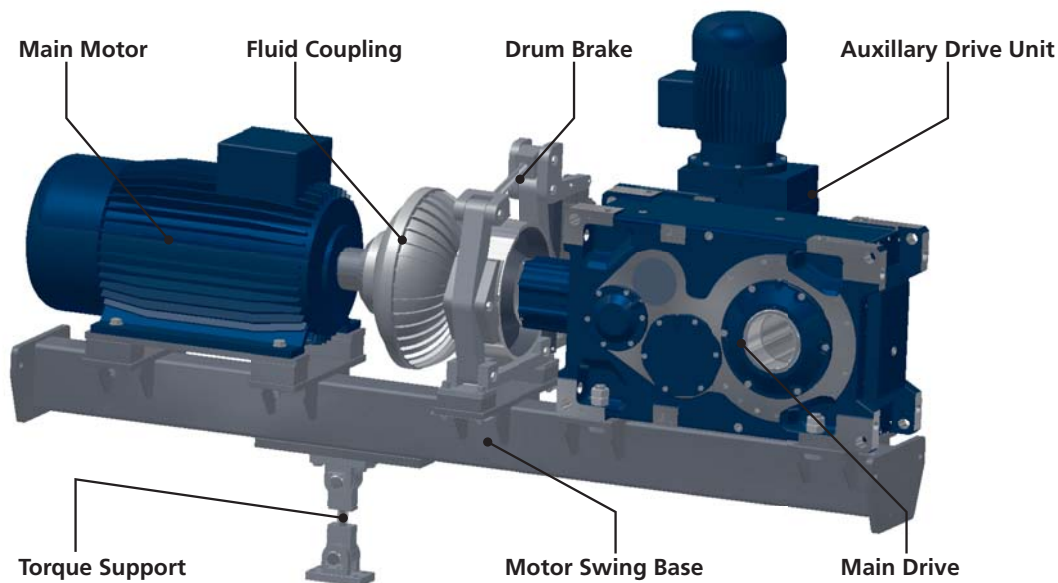
For applications with a relatively high external moment of inertia ($m_{af} > 2$), as often the case with travelling drives, slewing gear, turntables, gate drives, agitators and surface ventilators, it is recommended that a brake torque be selected that is no greater than 1.2 times the nominal torque of the motor.

When a higher brake torque is required this must be considered in the selection of the gear unit. Please consult NORD. Also contact NORD if an output-side brake is necessary.

Motor Swing Base and Motor Base Options

Both the motor swing base and the motor base are commonly supplied with either an elastic input coupling or a fluid coupling. In addition, many drive packages require a brake between the motor and the input-side of the reducer. The most common motor swing base or motor base options may be specified as follows:

Description	Option Code
Swing base with elastic coupling	MSK
Motor base with elastic coupling	MFK
Swing base with fluid coupling	MST
Motor base with fluid coupling	MFT
Swing base with fluid coupling and brake	MSTB
Motor base with fluid coupling and brake	MFTB





Input Flange (F1)

Gear units with input flange and solid-shaft input can be supplied to allow for additional drive components to be attached to the input (high speed) side of the reducer. It is possible to use the input flange to install an accessory such as a disc brake or a torque overload or to install an additional gear reduction mechanism to the main reducer.

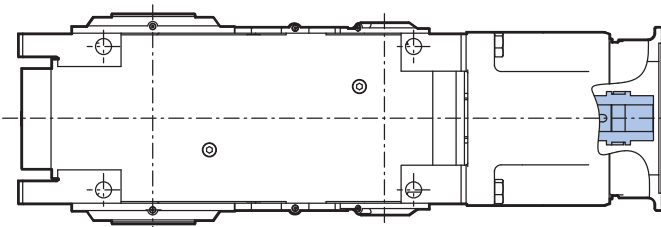
Direct motor attachments & IEC/NEMA adapters

Input adapters according to NEMA/IEC and Transnorm standards can be supplied. The maximum input power stated in the power and ratio tables cannot be exceeded.

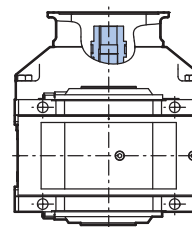
For higher speeds than those stated in the power and ratio tables, special measures may be necessary. In these situations please contact NORD Gear.

Motor attached to IEC/NEMA adapter cylinders with an elastic coupling

Right Angle Drives



Parallel Drives



Maximum permissible motor weight paired with an elastic coupling according to size														
NEMA		56C	143T	145T	182T	184T	210T	250T	280T	324T	326T	365T		
lb		66	88	110	132	176	220	440	550	770	1100	1540		
kg		30	40	50	60	80	100	200	250	350	500	700		
IEC	63	71	80	90	100	112	132	160	180	200	225	250	280	315
lb	55	66	88	110	132	176	220	440	550	770	1100	1540	2200	3370
kg	25	30	40	50	60	80	100	200	250	350	500	700	1000	1500
Transnorm	315	355	400	450										
lb	3310	4850	7050	9700										
kg	1500	2200	3200	4400										

Gear Unit Options



Motor Scoop (MC)

The motor scoop provides a “soft” mounting” for a standard NEMA T-frame or IEC B3 footed motor. The motor bracket or scoop is mounted to the gear unit in a cantilevered fashion to allow direct-coupling of the motor to the reducer’s input shaft. Motor scoops can have the tendency to deflect or twist during reducer operation and in some cases vibrations may result that exceed those considered acceptable for rigid “hard” mounted machinery. The motor size, weight, location, and starting torque all need to be considered in order to provide an adequate design.

Motor Bracket (MT)

The motor bracket provides a convenient way to mount a standard NEMA T-frame or IEC B3 footed motor with belt drive to the reducer. Often the motor bracket is mounted “over-the-top” of the reducer and referred to as a “top-mount” or “piggyback” motor bracket.

The motor is belt driven to the reducer input shaft using pulleys mounted to both the motor shaft and the reducer shaft. When mounted to the gear unit, the entire assembly is adjustable in order to allow proper tensioning of the external belt drive assembly. The motor bracket can be used when installation space is restricted or it may be used to change the total ratio of the mechanical drive assembly. The belt-pulley drive arrangement can be used as a safety element, as it reacts to overload by slipping. Factory consultation is necessary if one intends to use the belt-pulley drive as a safety device.

Shaft Cover (H)

The Shaft cover provides protection from rotating parts and the shrink disc when applicable.

Auxiliary drives (WX)

The auxiliary drive is flange-mounted to the side face of the main right angle reducer, opposite the low speed shaft, using an intermediate flange and shaft connection. The connection between the main drive and the auxiliary drive is assembled with an overrunning clutch. During normal operation of the main drive, the clutch is disengaged. When it becomes necessary to operate the system at slow speed or “inch” the main reducer, the main motor is stopped and auxiliary motor and reducer engage the main drive through the clutch connection.

The auxiliary drive or inching drive is available to allow for the inspection and maintenance of belts and buckets and to allow for slow speed operation of conveyors or elevators that operate in cold-weather. The auxiliary drive should be equipped with a brake or brake motor in order to prevent unintended rotation or back driving.

The following auxiliary drive options are available :

- with overrunning clutch and backstop assembled in the intermediate flange to prevent reverse rotation of the system (standard design).
- with overrunning clutch in the flange and separate backstop as part of the main drive to prevent reverse rotation of the system.
- with overrunning clutch assembled in the intermediate flange and no backstop to prevent reverse rotation of the system.

Monitoring devices and sensors (MO)

The following monitoring devices are also available as options. Please contact us for detailed information about any of the options listed below.

- Oil sight glass
- Oil level glass
- Oil dip-stick
- Pt100 (Temperature)
- PTC thermistor (Temperature)
- Bimetal switch (Temperature)
- Particle counter (oil)
- Water content (oil)
- Electrical contamination indicator for oil filter
- Optical contamination indicator for oil filter
- SPM nipple (vibrations)
- Bearing condition monitor with evaluation unit
- Oil condition monitoring
- Pressure monitoring (oil circulation)
- Other special requirements available upon request



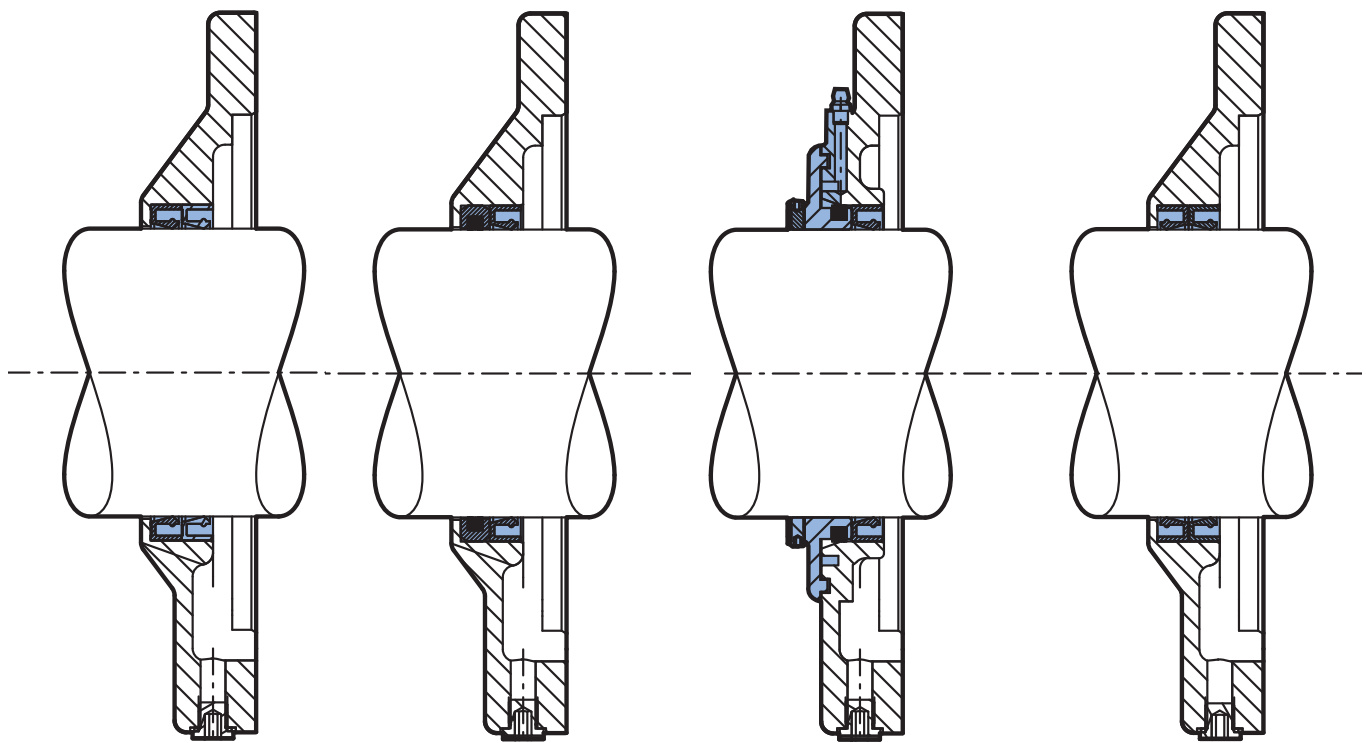
Sealing systems

The gearbox is supplied with one shaft seal on the drive input shaft and two shaft seals on the output shaft. The seal material is NBR (Buma N) or optional FKM (Fluoroelastomer). For operating oil temperatures (oil temperatures) above 85°C, FKM seals should be used. The optional shaft sealing rings can be supplied with or without a dust protection collar.

The following output seal designs are available:

- Two shaft sealing rings (standard)
- Labyrinth seal
- Taconite seals
- Gamma ring seals (without illustration)

Please contact us if sealing systems other than those listed here are required.



Standard

(Drive with one output with two shaft sealing rings)

Labyrinth Seal

Taconite F

(Grease-Lubricated labyrinth seal; can be re-lubricated)

Taconite E

(Grease-filled outer shaft sealing ring)

Gear Unit Options



Backstops (R)

Optional backstops, which allow rotation in only one direction and block the other direction of rotation may be supplied.

The lubrication of the backstop is provided by the oil from the gear reducer.

Three-phase motors larger than IEC size 80 may be equipped with a grease-lubricated backstop. The backstops lift off due to centrifugal force above a certain lift-off speed (see table) and are then free of friction.

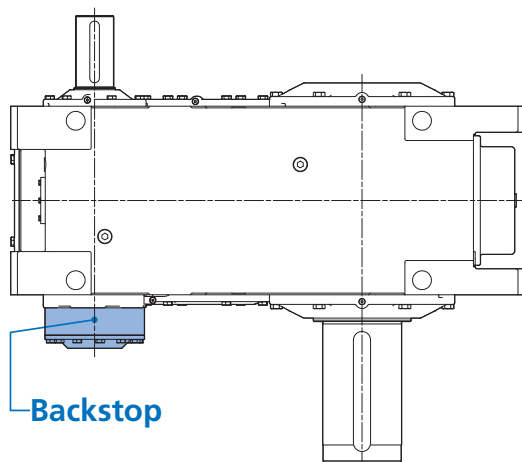
IMPORTANT NOTE

Please contact NORD if the motor input speed is greater than 1800 rpm.

For drive units with a backstop, the output shaft's direction of rotation must be specified. The direction of rotation is based upon looking directly at the drive shaft.

CW = Clockwise direction of rotation,
Right-hand rotation
CCW = Counterclockwise direction of rotation,
Left-hand rotation

For angular drives, both the position of the output shaft and the side on which the backstop is installed determine the direction of rotation. The direction of view for declaring the rotation direction is always towards the output shaft that is being specified.



IMPORTANT NOTE

For hollow shaft gearboxes with shrink discs, the customer solid shaft is on the side opposite to the shrink disc. For hollow shafts with parallel keys or splined hubs, and for solid shafts on both sides, the side on which the return stop is mounted is the direction of view towards the gearbox.

WARNING

Danger of failure and distraction. Check the direction of rotation of the motor and the gearbox before starting up your application. Arrows on the gearbox indicate the direction of rotation.

WARNING

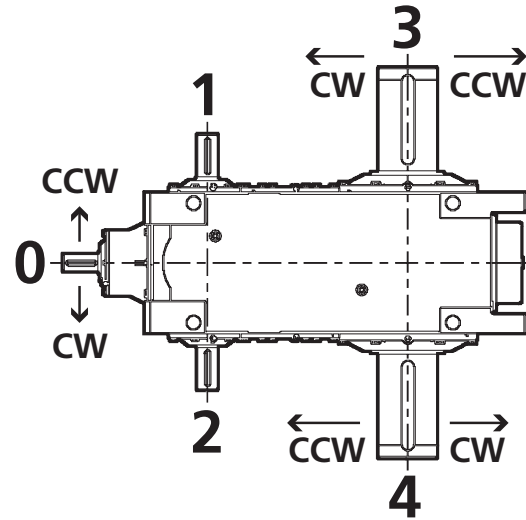
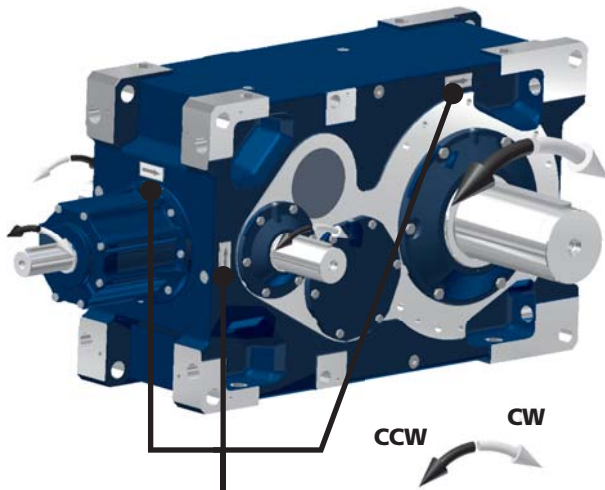
The backstops are designed for double the rated gearbox torque (T_{2max}) with reference to the output. If greater safety is required, please consult NORD.

Gearbox	Stages	Nominal Gear Ratio i_N	Lift-off speed n_1 [rpm]
SK 11207	2	5.6 - 20	320
SK 11307	3	31.5 - 112	400
		22.4 - 28	320
SK 11407	3	11.2 - 80	1140
SK 11507	4	112 - 400	1420
		80 - 100	1140
SK 12207	2	5.6 - 20	250
SK 12307	3	22.4 - 112	320
SK 12407	3	12.6 - 71	890
SK 12507	4	80 - 400	1140
SK 13207	2	5.6 - 20	250
SK 13307	3	22.4 - 112	320
SK 13407	3	12.6 - 71	890
SK 13507	4	80 - 400	1140
SK 15207	2	5.6 - 20	220
SK 15307	3	22.4 - 112	250
SK 15407	3	12.6 - 71	785
SK 15507	4	80 - 400	890



Rotation Direction of Input/Output shafts

The direction of rotation for the gearbox shafts are dependant upon the installation position and the shaft configuration.



These labels mark the direction of free rotation in case backstops are used.

Installation position ¹⁾ M1 Direction of view ¹⁾ F2		Rotation Direction of Input			Rotation Direction of Output	
Shaft Positions ¹⁾ =>		0	1	2	3	4
SK ..207	or	---	CW	CCW	CW	CCW
		---	CCW	CW	CCW	CW
SK ..307	or	---	CW	CCW	CCW	CW
		---	CCW	CW	CW	CCW
SK ..407 (Standard)	or	CW	CW	CCW	CW	CCW
		CCW	CCW	CW	CCW	CW
SK ..407 (Optional)	or	CW	CCW	CW	CCW	CW
		CCW	CW	CCW	CW	CCW
SK ..507 (Standard)	or	CW	CW	CCW	CCW	CW
		CCW	CCW	CW	CW	CCW
SK ..507 (Optional)	or	CW	CCW	CW	CW	CCW
		CCW	CW	CCW	CCW	CW

1) Please see pages 26 - 28

Gear Unit Options



Paint Coating Options

Type	Version	Film Thickness		Recommended use
		TFD [Nm]	TFD total [Nm]	
F1	1 x 1-K dip-primed, red-brown (cast iron components) and 1 x 1-K universal primer	40 30	30-70	For final painting by the customer
F2	1 x 1-K dip-primed, red-brown (cast iron components) and 1 x 2-K polyurethane (2-K-PUR)HS finishing coat	40 40	40-80	For indoor installation with normal climatic conditions
F3.0	1 x 1-K dip-primed, red-brown (cast iron components) and 1 x 2-K polyurethane (2-K-PUR) primer and 1 x 2-K polyurethane (2-K PUR)HS finishing coat	40 70 40	110-150	For indoor and outdoor installation with low environmental contamination
F3.1	1 x 1-K dip-primed, red-brown (cast iron components) and 2 x 2-K polyurethane (2-K-PUR) primer and 1 x 2-K polyurethane (2-K PUR)HS finishing coat	40 2x70 40	180-220	For indoor and outdoor installation with moderate environmental contamination
F3.2	1 x 1-K dip-primed, red-brown (cast iron components) and 2 x 2-K polyurethane (2-K-PUR) primer and 2 x 2-K polyurethane (2-K PUR)HS finishing coat	40 2x70 2x40	220-260	For indoor and outdoor installation with severe climatic conditions
F3.3	1 x 1-K dip-primed, red-brown (cast iron components) and 2 x 2-K epoxy zinc phosphate primer and 2 x 2-K polyurethane (2-K PUR)HS finishing coat	2x70 2x40	220-260	Coastal and offshore regions
F3.4	1 x 1-K dip-primed, red-brown (cast iron components) and 1 x 2-K epoxy zinc phosphate primer and 1 x Epoxy EFDEDUR chemical resistant finishing coat	40 70 40	110-150	For high chemical exposure
F3.5	1 x 1-K dip-primed, red-brown (cast iron components) and 1 x 2-K epoxy zinc phosphate primer and 1 x FREOPOX Coating	40 70 40	110-150	Machinery for the field of foodstuffs packaging
Z	Compensation of contour depressions and crevices with seam sealer on polyurethane basis			

1-K = single component 2-K = two-component, TFD = Dry film thickness max. [µm], HS = high solids



Parallel Shaft Unit with Motor or Input Vertical-Up

Parallel-shaft gear units with a motor or input shaft which is pointing vertical-up (M5 or M6 mounting position) require either a higher oil level to lubricate the high-end bearings and gearing or they will require a forced oil lubrication system.

Raising the oil level will result in higher gear pitch-line velocities, increased oil churning or splashing losses and additional heating inside the gear unit. To avoid excessive pressure build-up, a critical loss in oil volume through the air vent or shaft seals, and possible oil foaming, NORD may need to recommend adding an oil expansion chamber (Option OA) or an oil tank (Option OT).



IMPORTANT NOTE



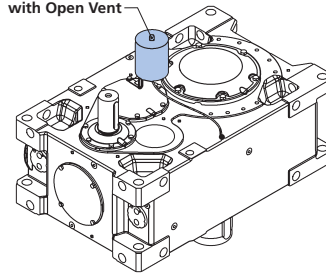
When the following conditions exist consult NORD in order to determine if an Oil Expansion Chamber (OA) or an Oil Tank (OT) option is needed:

- Parallel shaft unit with motor or input shaft vertical-up (M5 or M6 mounting position)
- Reducer Output Shaft Speed < 75 rpm
 - Input speed = 1800 rpm and Ratio < 24:1
 - Input speed = 1500 rpm and Ratio < 20:1
 - Input speed = 1200 rpm and Ratio < 16:1
 - Input speed = 1000 rpm and Ratio < 13:1

Oil Expansion Chamber (OA)

When heating of the air space located above the oil is a concern NORD may require an oil expansion chamber to allow for expansion of the oil-air mixture, avoid excessive pressure build-up, and to prevent a critical loss in oil volume through the air vent or shaft seals. During operation the oil expansion chamber provides a safe overflow area for the expanded oil-air mixture. As heat is released from the system and the reducer cools, gravity allows the oil to return to the reducer's oil sump. When using the oil expansion chamber, there may be some instances where gear units will also require specially sealed, grease-lubricated bearings.

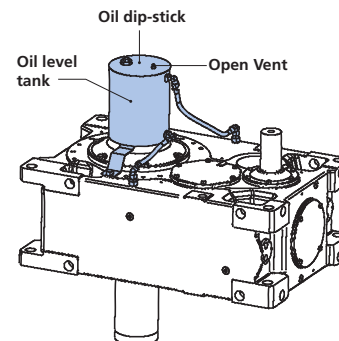
Oil Expansion Chamber with Open Vent



Oil Tank (OT)

Sometimes the gearbox must be completely filled with oil in order to prevent excessive foaming and aeration while also preventing excessive pressure build-up or a critical loss in oil volume through the air vent or shaft seals. The oil tank 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 critical bearing and gear areas are submerged in oil, especially the high-speed gear set. This prevents oil foaming.

The oil tank is larger in volume than the oil expansion chamber and is vented. The oil tank has two flexible oil hoses connected to the gear unit to help assure proper ventilation and passive oil circulation. Prior to start-up the oil level must be topped off and checked using the oil level dipstick that is part of the oil tank.



Thermal Options



Gearbox Cooling Using a Fan (FAN)

Through the use of fans, the thermal power capacity of the gearbox may be increased substantially. Usually, a fan can be retrofitted to the gear unit. However this must be checked for each individual case (installation space, type of gearbox, mounting position, etc.). The fan cover provides protection against contact and guides the flow of cooling air over the gearbox housing.

Installation conditions for fans

An adequate supply of air to the fan must be ensured, the vent grill in the fan cover must be kept clear.



WARNING



Fans cannot be combined with all additional options. Please contact NORD when considering options IEC, NEMA, VL,F, FK, F1 and WX.

Standard fan (FAN)

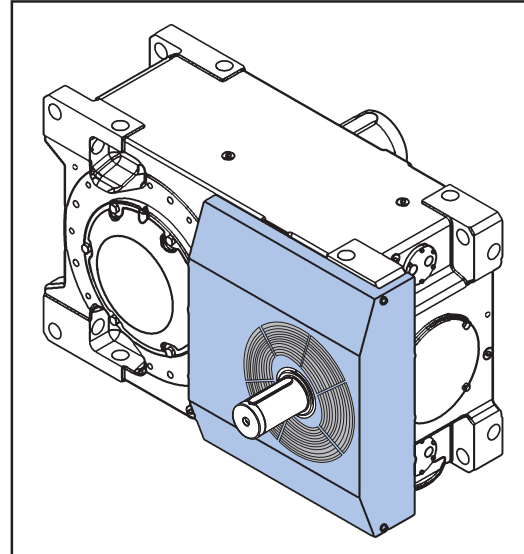
The standard fan is suitable for both directions of rotation. It requires the free axial entry of air and is connected directly to the high speed shaft.

High-power fan (FAN*)

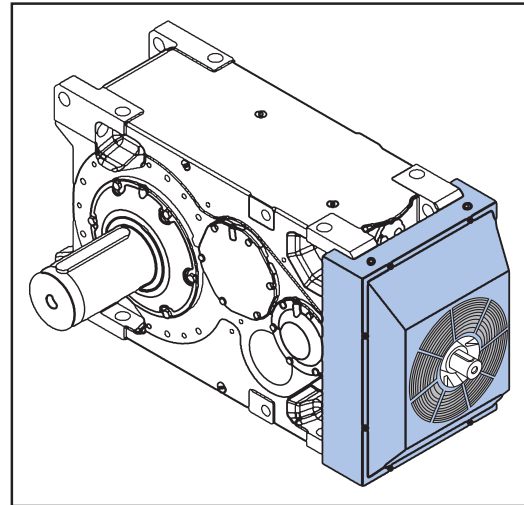
The high-power fan is also directly connected to the high speed shaft. It provides a higher cooling power than the standard fan, but only works in one direction of rotation. A further advantage is that the intake of air can be in a radial direction and therefore a brake or a fluid-coupling may be installed directly in front (see motor swing bases). Further information is available upon request.

Electric fan

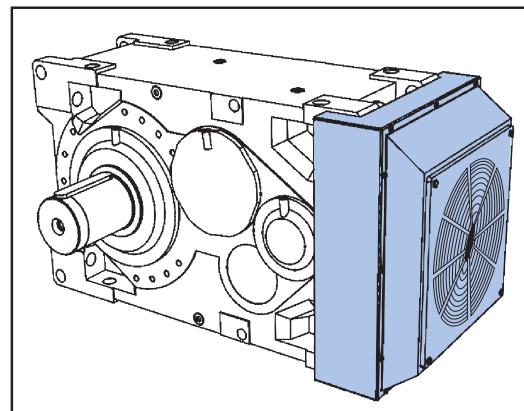
NORD provides an electric fan as well. This is switched on as required via a temperature switch. The fan can be attached to both ends of a parallel gear unit. This option is not available when a through passage of a shaft is not possible. Because of this requirement the Electric fan is solely available with the parallel Maxxdrive™ gear units. Further information is available upon request.



Helical Gear Unit with Standard Fan



Bevel Gear Unit with Standard Fan



Helical Gear Unit with Electric Fan



Internal Water Cooler (CC)

The internal water cooler is a cooling coil inside the gearbox, located in the oil sump, where the end user connects the coil to a suitable water supply. Two cooling coils may be installed for mounting positions M2, M4, M5, M6 and with complete oil filling upon your request. The thermal power limit (P_{WG}) can be increased according to the following table.

WARNING	
<ul style="list-style-type: none"> Integrated water cooling can be used for oil splash and immersion lubrication, however, not with pressure circulation lubrication. The cooling element must be completely submerged in the oil bath. 	

As an option, mechanical and electrical solutions for controlling the flow of cooling water are available. This allows the water consumption to be regulated by the actual required cooling power.

IMPORTANT NOTE	
Sea water-resistant integrated cooling is available on request. Consultation with NORD is necessary in case of any other aggressive cooling media.	

Connection of the Internal Water Cooler

Temperature-controlled cooling water with quantity regulation and a temperature sensor (optional).

Operating Conditions

Water inlet temperature:	68 °F	20 °C
Oil temperature:	194 °F	90 °C
Ambient temperature:	68 °F	20 °C
Flow rate:	maximum 3.2 g/min	maximum 12 l/min
Pressure drop of cooling water	approx. 7.25-14.5 psi	approx. 0.5 - 1 bar

For other operating conditions, corrections to the specified thermal power limit must be taken into account.

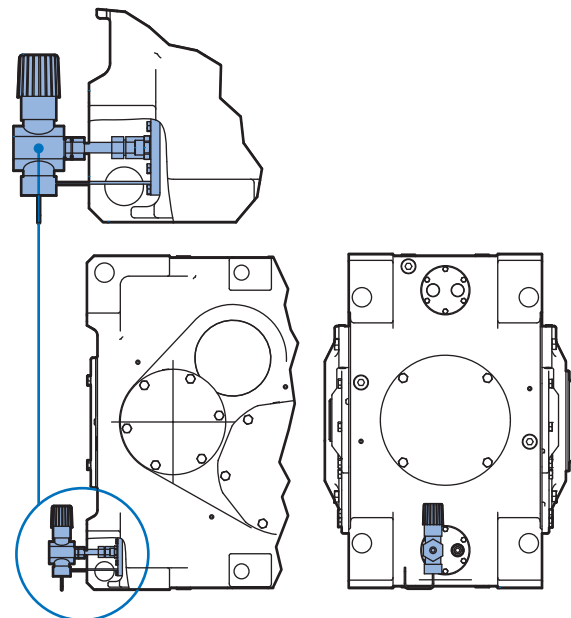
Optional:

Temperature-controlled flow regulator to control the rate of water flow.

IMPORTANT NOTE	
For low temperatures the internal water cooler may also be used as an oil heater by filling it with warm water before starting up the gearbox .	

Additional Thermal Power Limit ($P_{tc,20}$) with Second Cooling Coil

Gearbox	+ $P_{tc,20}$ [hp]	+ $P_{tc,20}$ [kW]
SK 11207	188	252
SK 11307	117	157
SK 11407	104	140
SK 11507	72	97
SK 12207	261	350
SK 12307	163	219
SK 12407	145	195
SK 12507	101	135
SK 13207	335	449
SK 13307	210	281
SK 13407	186	249
SK 13507	129	173
SK 15207	335	449
SK 15307	210	281
SK 15407	186	249
SK 15507	129	173



Thermal Options



External Cooling Units

In order to increase the thermal power capacity of the MAXXDRIVE™ gear unit NORD has standard oil cooling/lubricating systems designed. These designs are readily available and offer a good price/performance ratio. The basic elements consist of a circulating oil pump, oil and heat exchanger mounted on a mounting platform or base. The optional oil filter with visual contamination indicator is also recommended in most all cases.

If other forms of reducer cooling (convection, shaft fan, water cooler, etc.) are not sufficient or not desired a standard oil cooler option can be supplied. Nord offers oil/water (CS1) and oil/air (CS2) oil coolers with a variety of optional accessories.

Optional accessories:

- Thermometer.
- Pressure switch.
- Manometer.
- Optical status monitoring.
- Electrical status monitoring.
- Oil Filter.
- Filter with bypass.
- Particle counter.

Standard operating parameters:

- Water temperature (if applicable): 68°F (20°C).
- Maximum oil temperature: 194°F (90°C).
- Ambient temperature: 68°F (20°C).

Please consult NORD if there are additional cooling system requirements or requests.

Determining the Required Oil Cooler Size

There are two methods of determining the required oil cooler size, depending upon whether the oil cooler must provide all the cooling capacity for the gear unit or whether the oil cooler provides supplemental cooling.

Method 1 – Oil Cooler Provides All the Cooling Capacity

1. Determine the required oil cooling power as follows:

$$P_{CS} = P_1 \cdot (1 - \eta_N)$$

P_{CS} = The required cooling power of the oil cooling system
 P_1 = Installed motor power or required input power to the gear unit

η_N = Nominal gear reducer efficiency (in decimal form)

2. Select an oil cooler by applying the following criteria:

$$Q_{CS} \geq P_{CS} \cdot (1 - \eta_N)$$

Q_{CS} = The cooling power capacity of the selected oil cooling system

P_{CS} = Required cooling power of the oil cooling system
 η_N = Nominal gear reducer efficiency

Method 2 – Oil Cooler Provides Additional/Supplemental Cooling Capacity

1. Determine the required oil cooling power as follows:

$$P_{CS} = (P_1 - P_{wg}) \cdot (1 - \eta_N)$$

P_{CS} = The required cooling power of the oil cooling system
 P_1 = Installed motor power or required input power to the gear unit

P_{wg} = Calculated thermal power capacity with an additional cooling method (see page 16)

η_N = Nominal gear reducer efficiency (in decimal form)

2. Select an oil cooler by applying the following criteria:

$$Q_{CS} \geq P_{CS} \cdot (1 - \eta_N)$$

Q_{CS} = The cooling power capacity of the selected oil cooling system

P_{CS} = Required cooling power of the oil cooling system
 η_N = Nominal gear reducer efficiency



IMPORTANT NOTE

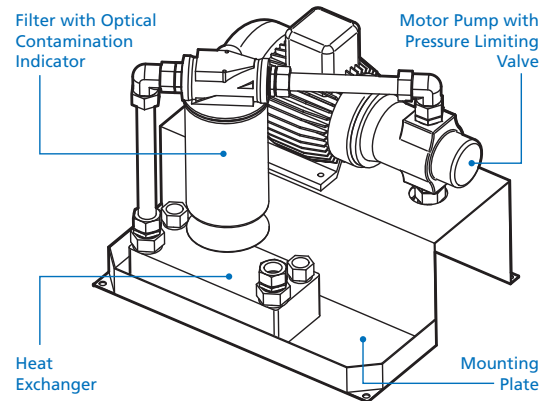


The oil cooler thermal power limits shown in the respective tables are based upon standard installation and operating conditions (page 10) for the case when the oil cooler must provide all the cooling capacity for the gear unit.



External oil / water cooler (CS1)

The oil/water cooling system can be combined with all gear units and can be mounted on all mounting surfaces and the optional oil filter can be rotated into a suitable position. The customer must always supply the water inlet piping. The cooling system can also be installed separately, in which case NORD does not supply the piping between the gearbox and the cooling system.



IMPORTANT NOTE



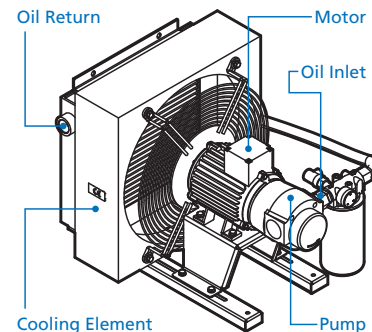
Additional measuring devices for the cooling system are available upon request

CS1 Cooler Specifications

CS1 Oil Cooler Size	Cooling Power Q_{CS} [hp]	Thermal Power Limit with P_{WG} CS1				Water Flow Rate V_w [gpm]	Oil Flow Rate V_{oi} [gpm]	Water Inlet Temp.		Pump Motor Power [hp]
		SK..2 07 [hp]	SK..3 07 [hp]	SK..4 07 [hp]	SK..5 07 [hp]			t_w [°F]	[°C]	
A	4.8	193	121	108	74	1.32	3.17	68	20	0.89
B	11.3	451	282	251	174	2.64	6.34	68	20	2.40
C	16.9	676	423	375	261	2.64	6.34	68	20	2.40
D	20.9	837	523	465	322	5.28	12.70	68	20	2.40
E	26.6	1062	665	591	409	5.28	12.70	68	20	2.40
F	37	1480	925	822	570	5.28	12.70	68	20	2.40
G	50.7	2028	1266	1126	780	10.60	25.40	68	20	4.80
H	80.5	3218	2012	1788	1237	10.60	25.40	68	20	4.80

External oil / air cooler (CS2)

If cooling water is not available and other forms of cooling (convection, shaft fan, etc.) are not sufficient or not desired, an oil/air cooler can be supplied. can be used.



CS2 Cooler Specifications

CS2 Oil Cooler Size	Cooling Power Q_{CS} [hp]	Thermal Power Limit with P_{WG} CS2				Oil Flow Rate V_{oi} [gpm]	Pump Motor Power [hp]	Weight [lb]
		SK..2 07 [hp]	SK..3 07 [hp]	SK..4 07 [hp]	SK..5 07 [hp]			
A	4.8	193	121	108	74	12	2 X 0.40	68
B	11.3	451	282	251	174	24	1.2	75
C	16.9	676	423	375	261	24	1.2	75
D	20.9	837	523	465	322	48	2.4	117
E	26.6	1062	665	591	409	48	2.4	117
F	37	1480	925	822	570	48	2.4	117
G	50.7	2028	1266	1126	780	96	4.8	187
H	80.5	3218	2012	1788	1237	96	4.8	187

Thermal Options

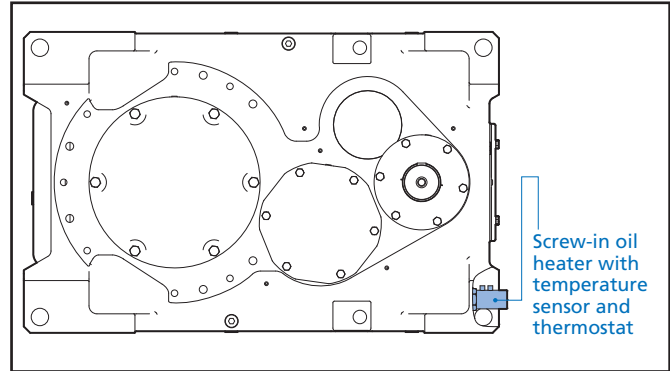


Oil heater (OH)

In case the ambient temperature is lower than what is permissible, the gear oil must be heated prior to a cold start, in order to ensure an adequate supply of lubricant. For these conditions, an oil heating cartridge may be installed into the gearbox.

The oil heater has both a temperature sensor and a thermostat, which is pre-set. Further variations are available on request.

If pressure circulation lubrication is used, the operational viscosity of the gear oil on start-up must be above 1800 cSt. For ISO-VG220 this corresponds to a temperature of at least (50°F) 10°C for mineral oil, and a temperature of at least (32°F) 0°C for synthetic oil. Below this range an oil heater must be used.



WARNING



The oil heater must be fully immersed in the oil bath in order to prevent damage. An oil heater is not allowed when you are using pressure circulated lubrication.



Lubrication systems

NORD recommends only high quality gear oils that provide excellent wear and load bearing protection, corrosion protection and aging resistance. The lubricant must also contain anti-wear and/or extreme pressure additives to provide adequate protection while operating in a mixed friction regime (or when partial to full boundary lubrication conditions exist).

As a minimum, the lubricating oil should also meet the following criteria:

- The gear oil must exhibit high film strength in order to handle high torque, shock loads, and start-up conditions.
- The gear oil should have the ability to operate at moderate sump temperatures without losing viscosity or thickness. Sump temperatures should be allowed to approach 80°C-85°C (176°F-185°F) for mineral oil or 105°C (221°F) for synthetic oil
- The gear oil should have a minimum viscosity index of 95 or higher.
- FZG scuffing load test result > Stage 12 (per DIN 51354-2).
- FAG-FE-8 roller bearing test should result in roller element wear < 30 mg and cage wear less than 100 mg (per DIN51819-3).
- Compatibility with standard elastomeric sealing materials must also be assured.

Lubrication Types

The lubricant is an element of design and often an optimal lubricant viscosity or type is recommended by NORD on the basis of the operating and ambient conditions and the type of gear unit being specified.

Only CLP (DIN 51517- 3) quality oils are approved for the MAXXDRIVE™ gear units. A list of possible oils meeting the general CLP requirements (found on page 57), are categorized in the following table.

CLP	High-performance mineral oil (an EP additive is recommended by NORD).
CLP HC	Synthetic polyalphaolefin oil
CLP PG	Synthetic polyglycol oil
CLP PAO H1 or CLP PG H1	Food-grade oil (must qualify as an NSF-H1 oil per FDA 212 CFR 178.3570).
E	Bio-degradable oil

⚠ IMPORTANT NOTE ⚠

NORD will determine the type and viscosity of the lubricant for each specific order. This will be entered in the order confirmation and on the reducer nameplate.

Lubrication Methods

MAXXDRIVE™ gear units that are mounted in a horizontal position are intended to be oil splash lubricated. Those units mounted in a vertical or standing position may utilize bath (immersion) lubrication. In many instances forced lubrication or pressure lubrication offers advantages as well.

1. Splash Lubrication

The gearbox oil is kept at a relatively low level. The gearing and bearing components that do not dip into the oil are lubricated by splashing oil. This is the usual form of lubrication for horizontal installation positions (M1/M3). In slow speed operation, oil splash may not deliver lubricant to all critical areas. In high speed operation, oil splash may contribute to excessive churning losses and undesirable reducer heating.

2. Bath (Immersion) Lubrication

The gear unit is full or nearly full with oil with all gear and bearing surfaces completely or partially immersed in an oil bath. Bath lubrication is one way of assuring proper lubrication to gear units mounted in standing (M2 or M4) or vertical (M5 or M6) positions. Bath lubrication may sometimes lead to higher oil churning losses, higher operating temperatures, and reduced efficiency. These instances may also dictate the need for larger gear cases or additional cooling options and accessories. Pressure (forced) lubrication may eliminate the need for more costly accessories or options while also reducing operating temperatures and extending lubrication life.

3. Pressure (Forced) Lubrication

With pressure or forced lubrication, a pump (shaft driven or motorized) is provided, which allows a relatively low oil level to be maintained. The pump and oil distribution lines deliver the oil to all critical gear and bearing areas. Oil levels may be lowered, even compared to standard splash oil levels. This type of lubrication is advisable for the following operating conditions:

- When splash or bath lubrication is not possible or not thermally advantageous.
- When high input speeds are present and the speed limit for other lubrication methods are being exceeded (based on size, ratio and mounting).
- If a drywell is required with a vertical output shaft.

⚠ IMPORTANT NOTE ⚠

Consult NORD when considering either bath lubrication or pressure lubrication so that appropriate options and accessories can be recommended.

Lubrication



Typical Lubrication Recommendations

The MAXXDRIVE™ gear units are designed to be able to operate with high performance mineral oil containing an extreme pressure (EP) additive. A viscosity grade ISO VG220 EP (AGMA 5 EP) mineral oil is typical for ambient temperature conditions between 0°C-40°C (32°F-104°F).

While the MAXXDRIVE™ gear units are designed to be able to operate with high performance mineral oil, NORD strongly recommends the use of synthetic oil. Compared to mineral oil, synthetic oil offers the following advantages that provided added wear protection and extend reducer component life:

- Higher film strength, lower traction coefficient and improved lubricity.
- Reduced internal friction (reduced by as much as ½ compared to mineral oil) resulting in lower operating temperatures and improved gear efficiency.
- Superior wear and thermo-oxidative resistance, provides enhanced system cleanliness and enables longer service intervals.
- Higher viscosity index offering improved low temperature and high temperature stability.

Oil Filling Guidelines

Prior to start-up the proper oil fill level must be established.

IMPORTANT NOTE

- The MAXXDRIVE™ gear units are not filled with oil upon delivery. The tables starting on page 58 provide a guideline for the lubrication amount based upon the installation position.
- The actual oil volume will vary depending upon the gear unit type and configuration, mounting position and ratio.
- When filling the reducer, always check the oil-fill level using the reducer's oil level plug. Oil plug locations for common mounting configurations are shown on page 60.
- In some instances NORD may supply a pre-stage gear unit or an auxiliary (inching) drive and these units are typically filled with the proper type and amount of oil (see separate user manual documentation).

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, whichever comes first.

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 3 years, whichever comes first.

Often gear reducers are exposed to extreme operating conditions or hostile environments such as: high humidity or wet conditions, high ambient temperatures or high operating temperatures, 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.

WARNING

- 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.
- When making a lubrication change, check with the lubrication supplier to assure compatibility with the original oil used and to obtain recommended cleaning or flushing procedures.






Importance of Routine Oil Analysis

Routine oil analysis, sound lubrication practices, and good tracking of oil performance trends will help establish proper lubrication maintenance and changeout intervals. To maximize equipment reliability NORD Gear recommends a condition-based lubrication maintenance program be applied to the MAXXDRIVE™ gear units. 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).
- The total acid number (TAN) tests indicate a significant level of oxidative break-down of the oil, and a critical reduction in performance; If the TAN number measured changes by more than 5% over the new oil, then an oil change would be recommended.

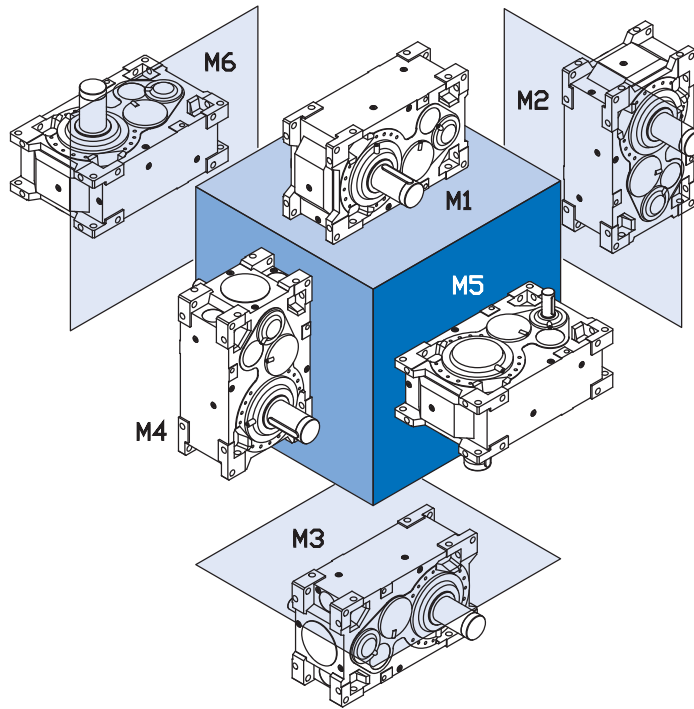


Available Lubricants

DIN / ISO AGMA ISO VG						Mobil	
CLP 220 L-CKC 220 AGMA 5EP	Degol BG 220 Plus Degol BMB 220	Energol GR-XP 220	Alpha SP 220 Alpha MAX 220 Optigear BM 220 Tribol 1100 / 220	Renolin CLP 220 Renolin CLP 220 Plus Gearmaster CLP 220	Klüberoil GEM 1 - 220 N	Mobilgear 600 XP 220 Mobilgear XMP 220	Shell Omala F 220
CLP 320 L-CKC 320 AGMA 6EP	Degol BG 320 Plus Degol BMB 320	Energol GR-XP 320	Alpha SP 320 Alpha MAX 320 Optigear BM 320 Tribol 1100 / 320	Renolin CLP 320 Renolin CLP 320 Plus Gearmaster CLP 320	Klüberoil GEM 1 - 320 N	Mobilgear 600 XP 320 Mobilgear XMP 320	Shell Omala F 320
CLP 680 L-CKC 680 AGMA 8EP	Degol BG 680 Plus Degol BMB 680	Energol GR-XP 680	Alpha SP 680 Optigear BM 680 Tribol 1100 / 680	Renolin CLP 680 Renolin CLP 680 Plus Gearmaster CLP 680	Klüberoil GEM 1 - 680 N	Mobilgear 600 XP 680 Mobilgear XMP 680	-
CLP PG 220 L-CKT 220 AGMA 5EP	Degol GS 220	Energyn EP-XP 220	Tribol 1300 / 220	Renolin PG 220 Gearmaster PGP 220	Klübersynth GH 6 - 220	-	Shell Tivela S 220 Shell Cassida WG 220
CLP PG 320 L-CKT 320 AGMA 6EP	Degol GS 320	Energyn EP-XP 320	Tribol 1300 / 320	Renolin PG 320 Gearmaster PGP 320	Klübersynth GH 6 - 320	-	Shell Tivela S 320 Shell Cassida WG 320
CLP PG 680 L-CKT 680 AGMA 8EP	Degol GS 680	Energyn EP-XP 680	Tribol 1300 / 680	Renolin PG 680 Gearmaster PGP 680	Klübersynth GH 6 - 680	-	Shell Tivela S 680 Shell Cassida WG 680
CLP HC 220 L-CKT 220 AGMA 5EP	Degol PAS 220	Energyn EP-XF 220	Optigear Synth X 220 Tribol 1710 / 220	Renolin Unisyn CLP 220 Gearmaster SYN 220	Klübersynth GEM 4 - 220N	Mobil SHC 630	Shell Omala HD 220
CLP HC 320 L-CKT 320 AGMA 6EP	Degol PAS 320	Energyn EP-XF 320	Optigear Synth X 320 Tribol 1710 / 320	Renolin Unisyn CLP 320 Gearmaster SYN 320	Klübersynth GEM 4 - 320N	Mobil SHC 632	Shell Omala HD 320
CLP HC 680 L-CKT 680 AGMA 8EP	-	-	Optigear Synth X 680	Renolin Unisyn CLP 680 Gearmaster SYN 680	Klübersynth GEM 4 - 680N	-	Shell Omala HD 680
E 220 L-CKT 220 AGMA 5EP	DegolBAB 220	-	Tribol BioTop 1418 / 220	Plantogear 220 S Gearmaster ECO 220	Klübersynth GEM 2 - 220	-	Shell Naturelle Gear Fluid EP 220
E 320 L-CKT 320 AGMA 6EP	DegolBAB 320	-	Tribol BioTop 1418 / 320	Plantogear 320 S Gearmaster ECO 320	Klübersynth GEM 2 - 320	-	Shell Naturelle Gear Fluid EP 320
E 680 L-CKT 680 AGMA 8EP	DegolBAB 680	-	-	Plantogear 680 S Gearmaster ECO 680	-	-	-
CLP PG H1 220 L-CKT 220 AGMA 5EP	-	-	Optileb GT 220	-	Klübersynth UH1 6 - 220	-	Shell Cassida WG 220
CLP PG H1 320 L-CKT 320 AGMA 6EP	-	-	Optileb GT 320	-	Klübersynth UH1 6 - 320	-	Shell Cassida WG 320
CLP PG H1 680 L-CKT 680 AGMA 8EP	-	-	Optileb GT 680	-	Klübersynth UH1 6 - 680	-	Shell Cassida WG 680

This table shows comparable lubricants from various manufacturers. The manufacturer can be changed within a particular viscosity or lubricant type. We must be contacted in case of change of viscosity or lubricant type, as otherwise no warranty for the functionality of our gearboxes can be accepted.

Industrial Gear Unit Helical Mounted Positions & Oil Fill Quantities



Unit Type	M1		M2		M3		M4 ¹⁾		M5 ²⁾		M6 ²⁾		max ³⁾	
	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters
SK 11207	111	105	137 / 53 ⁴⁾	130 / 50 ⁴⁾	111	105	148 / 42 ⁴⁾	140 / 40 ⁴⁾	143 / 48 ⁴⁾	135 / 45 ⁴⁾	143 / 48 ⁴⁾	135 / 45 ⁴⁾	190	180
SK 11307	111	105	137 / 53 ⁴⁾	130 / 50 ⁴⁾	111	105	148 / 42 ⁴⁾	140 / 40 ⁴⁾	143 / 48 ⁴⁾	135 / 45 ⁴⁾	143 / 48 ⁴⁾	135 / 45 ⁴⁾	190	180
SK 12207	123	116	195 / 88 ⁴⁾	185 / 83 ⁴⁾	123	116	215 / 69 ⁴⁾	203 / 65 ⁴⁾	210 / 73 ⁴⁾	199 / 69 ⁴⁾	210 / 73 ⁴⁾	199 / 69 ⁴⁾	283	268
SK 12307	123	116	195 / 88 ⁴⁾	185 / 83 ⁴⁾	123	116	215 / 69 ⁴⁾	203 / 65 ⁴⁾	210 / 73 ⁴⁾	199 / 69 ⁴⁾	210 / 73 ⁴⁾	199 / 69 ⁴⁾	283	268
SK 13207	163	154	271 / 113 ⁴⁾	256 / 107 ⁴⁾	163	154	306 / 77 ⁴⁾	290 / 73 ⁴⁾	283 / 100 ⁴⁾	268 / 95 ⁴⁾	283 / 100 ⁴⁾	268 / 95 ⁴⁾	384	363
SK 13307	163	154	271 / 113 ⁴⁾	256 / 107 ⁴⁾	163	154	306 / 77 ⁴⁾	290 / 73 ⁴⁾	283 / 100 ⁴⁾	268 / 95 ⁴⁾	283 / 100 ⁴⁾	268 / 95 ⁴⁾	384	363
SK 15207	378	358	439 / 169 ⁴⁾	415 / 160 ⁴⁾	354	335	476 / 180 ⁴⁾	450 / 125 ⁴⁾	428 / 180 ⁴⁾	405 / 170 ⁴⁾	435 / 172 ⁴⁾	412 / 163 ⁴⁾	608	575
SK 15307	378	358	439 / 169 ⁴⁾	415 / 160 ⁴⁾	354	335	476 / 180 ⁴⁾	450 / 125 ⁴⁾	428 / 180 ⁴⁾	405 / 170 ⁴⁾	435 / 172 ⁴⁾	412 / 163 ⁴⁾	608	575

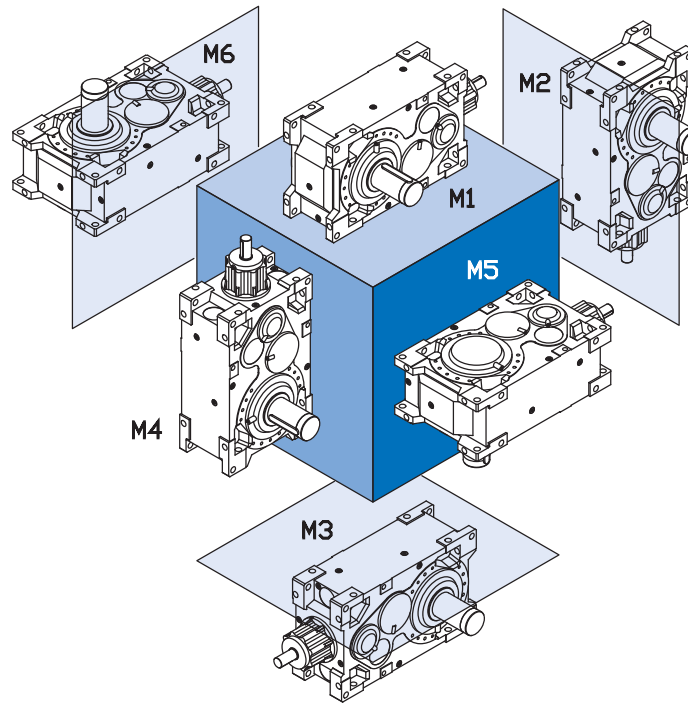
Unit Type	R		VL2		VL3		OT		CS	
	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters
SK 11207	+2	+2	+16	+15	+16	+15	+16	+15	+5	+5
SK 11307	+2	+2	+16	+15	+16	+15	+16	+15	+8	+8
SK 12207	+3	+3	+21	+20	+21	+20	+16	+15	+8	+8
SK 12307	+3	+3	+21	+20	+21	+20	+16	+15	+13	+12
SK 13207	+5	+5	+26	+25	+26	+25	+16	+15	+13	+12
SK 13307	+5	+5	+26	+25	+26	+25	+16	+15	+13	+12
SK 15207	+7	+7	+32	+30	+32	+30	+16	+15	+16	+15
SK 15307	+7	+7	+32	+30	+32	+30	+16	+15	+16	+15

1) Pressure (forced) lubrication is necessary for the bevel gear stages

2) With pressure (forced) lubrication

3) Please check thermal capacity of the gear unit

4) Reduced oil level with pressure (forced) lubrication



Unit Type	M1		M2		M3		M4 ¹⁾		M5 ²⁾		M6 ²⁾		max ³⁾	
	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters
SK 11407	113	112	145	137	118	112	155	147	150	142	150	147	155	187
SK 11507	113	112	145	137	118	112	155	147	150	142	150	147	155	187
SK 12407	127	126	206	195	133	126	225	213	221	209	221	209	221	278
SK 12507	127	126	206	195	133	126	225	213	221	209	221	209	221	278
SK 13407	169	168	285	270	178	168	321	304	298	282	298	282	298	377
SK 13507	169	168	285	270	178	168	321	304	298	282	298	282	298	377
SK 15407	383	382	464	439	379	359	501	474	453	429	453	436	461	599
SK 15507	383	382	464	439	379	359	501	474	453	429	453	436	461	599

Unit Type	R		VL2		VL3		OT		CS	
	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters	Quarts	Liters
SK 11207	+2	+2	+16	+15	+16	+15	+16	+15	+5	+5
SK 11307	+2	+2	+16	+15	+16	+15	+16	+15	+8	+8
SK 12207	+3	+3	+21	+20	+21	+20	+16	+15	+8	+8
SK 12307	+3	+3	+21	+20	+21	+20	+16	+15	+13	+12
SK 13207	+5	+5	+26	+25	+26	+25	+16	+15	+13	+12
SK 13307	+5	+5	+26	+25	+26	+25	+16	+15	+13	+12
SK 15207	+7	+7	+32	+30	+32	+30	+16	+15	+16	+15
SK 15307	+7	+7	+32	+30	+32	+30	+16	+15	+16	+15

1) Pressure (forced) lubrication is necessary for the bevel gear stages

2) With pressure (forced) lubrication

3) Please check thermal capacity of the gear unit

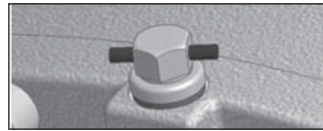
4) Reduced oil level with pressure (forced) lubrication

Oil & Drain Plug Locations

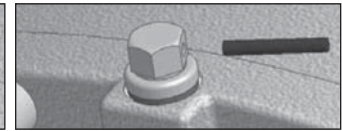


Oil Fill, Drain and Vent Locations

All MAXXDRIVE™ gear units are supplied with an oil level plug, an oil fill plug and a vent. All of the remaining holes are sealed. Alternative positions based on the locations of the remaining holes can be provided if requested.



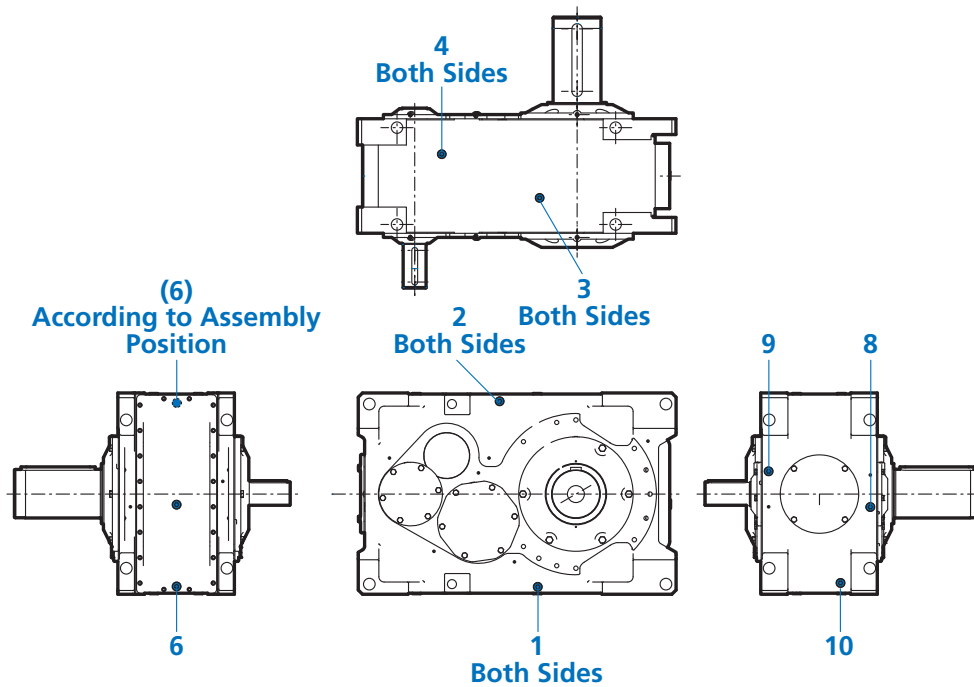
Sealed vent



Activated vent

⚠ WARNING ⚠

To prevent build-up of excessive pressure, sealed vents must be activated as shown prior to gear unit start up.



No.	Thread	Installation position ³⁾					
		M1	M2	M3	M4	M5	M6
1	G1"	■	▼ ¹⁾	▽	▼ ¹⁾	■ / ▽	■ / ▽
2	G1"	▽	▼ ¹⁾	■	▼ ¹⁾	■ / ▽	■ / ▽
3	G1"	▽	▼	▽	▼ ¹⁾	▽	▼ ¹⁾
4	G1"	▽	---	▽	▼	▼ ¹⁾	▼
6	G1"	■ / ▽ ²⁾	---	■ / ▽ ²⁾	■	▼ ¹⁾	▼ ¹⁾
7	G1"	▼ ¹⁾	▼	▼ ¹⁾	■	▼ ¹⁾	▼ ¹⁾
8	G1"	▼	■	▼	▼	■	▽
9	G1"	▼ ¹⁾	■	▼ ¹⁾	▽	▽	■
10	G1"	■	▽	▽	■	▼ ¹⁾	▼ ¹⁾

- 1) Special Oil Level
- 2) Dependant on Cover Assembly
- 3) Installation M1 - M6 refer to page 26

Blue Labeling Verifies the Standard Location

= Oil Drain Plug

 = Vent

 = Oil Fill Level



Solid & Hollow Shaft Tolerances

Solid Shaft Diameter Tolerance	[mm]
> 14 - 50	ISO k6
> 50	ISO m6

Shaft Tolerance According to: DIN 748

Solid Shaft Drill & Tap End - Threaded Holes	[mm]
= \varnothing 13 - \varnothing 16	M5
> \varnothing 16 - \varnothing 21	M6
> \varnothing 21 - \varnothing 24	M8
> \varnothing 24 - \varnothing 30	M10
> \varnothing 30 - \varnothing 38	M12
> \varnothing 38 - \varnothing 50	M16
> \varnothing 50 - \varnothing 85	M20
> \varnothing 85 - \varnothing 130	M24
> \varnothing 130 - \varnothing 225	M36
> \varnothing 225 - \varnothing 320	M48

Solid Shaft Parallel Keys	[mm]
According to DIN 6885 Sheets 1 & 3	

Keyed Hollow Bore Tolerances	[mm]
According to DIN 748 & ISO H7	

Splined Hollow Shaft Tolerance	[mm]
Splined Hub Section of DIN 5480 9H	

Hollow Shaft Parallel Keys	[mm]
According to DIN 6885 Sheets 1 & 3	

Customer Shaft & Other Tolerances



Customer Shafts	[mm]
Tolerance According to ISO h6	
Heavy Duty Operation According to ISO k6	
L = Length of plug-in shaft	
DIN 5480 Recommended Fitting 8f	
Shrink Disc Tolerance According to ISO g6	

Customer Shaft Parallel Keys	[mm]
According to DIN 6885 Sheets 1 & 3	

Axle Height
Axle Height According to DIN 747

Flanges
Tolerance of bolt hole According to DIN 42 948
Tolerance of the pilot According to DIN 42 948
$\leq \varnothing$ 230 mm according to ISO j6
$> \varnothing$ 230 mm according to ISO h6

Cast Iron Surfaces
Cast iron surfaces are subject to minor variations due to the manufacturing process.

 IMPORTANT NOTE 
Alternate inch dimensions and tolerances are available upon request.

SK..207

SK..307



	V	L	A	AS
SK 11207	3064 lb	3219 lb	2756 lb	2866 lb
SK 11307	3219 lb	3373 lb	2910 lb	3020 lb
SK 12207	4420 lb	4652 lb	3935 lb	4101 lb
SK 12307	4652 lb	4883 lb	4167 lb	4332 lb
SK 13207	6217 lb	6570 lb	5423 lb	5732 lb
SK 13307	6702 lb	7055 lb	5908 lb	6217 lb
SK 15207	9833 lb	10240 lb	8896 lb	9215 lb
SK 15307	10362 lb	10770 lb	9425 lb	9744 lb

	R	VFVL2/3	AFVL2/3	ASFVL2/3	F	FK
SK 11207	+ 44 lb	+ 948 lb	+ 507 lb	+ 639 lb	+ 331 lb	+ 408 lb
SK 11307	+ 33 lb					
SK 12207	+ 77 lb	+ 1323 lb	+ 750 lb	+ 904 lb	+ 452 lb	+ 573 lb
SK 12307	+ 33 lb					
SK 13207	+ 77 lb	+ 1874 lb	+ 1036 lb	+ 1268 lb	+ 650 lb	+ 805 lb
SK 13307	+ 33 lb					
SK 15207	+ 132 lb	+ 3153 lb	+ 1852 lb	+ 2138 lb	---	---
SK 15307	+ 77 lb					

	D	ED	WX	H (FAN)	H (AS)	CC
SK 11207	+ 66 lb	+ 254 lb	+ 243 lb	+ 49 lb	+ 22	+ 22
SK 11307						
SK 12207	+ 77 lb	+ 254 lb	+ 243 lb	+ 55 lb	+ 24	+ 26
SK 12307						
SK 13207	+ 88 lb	+ 298 lb	+ 243 lb	+ 62 lb	+ 29	+ 33
SK 13307						
SK 15207	+ 99 lb	+ 298 lb	+ 265 lb	+ 77 lb	+ 35	+ 33
SK 15307						

	IEC 160	IEC 180	IEC 200	IEC 225	IEC 250	IEC 280	IEC 315	IEC 315 TN	IEC 355 TN
SK 11207	+ 313 lb	+ 313 lb	+ 304 lb	+ 324 lb	+ 357 lb	+ 357 lb	+ 403 lb	+ 452 lb	+ 518 lb
SK 11307									
SK 12207	+ 370 lb	+ 370 lb	+ 359 lb	+ 379 lb	+ 414 lb	+ 414 lb	+ 461 lb	+ 509 lb	+ 573 lb
SK 12307									
SK 13207	+ 406 lb	+ 406 lb	+ 397 lb	+ 417 lb	+ 450 lb	+ 450 lb	+ 496 lb	+ 545 lb	+ 611 lb
SK 13307									
SK 15207	+ 507 lb	+ 507 lb	+ 498 lb	+ 518 lb	+ 551 lb	+ 551 lb	+ 597 lb	+ 646 lb	+ 710 lb
SK 15307									



CAUTIONS



The weight data is based on gear units without oil and add-ons. The actual weights can be supplied with the gear unit documentation.



	V	L	A	AS
SK 11407	3219 lb	3373 lb	2910 lb	3020 lb
SK 11507	3384 lb	3538 lb	3075 lb	3186 lb
SK 12407	4817 lb	5049 lb	4332 lb	4497 lb
SK 12507	4839 lb	5071 lb	4354 lb	4519 lb
SK 13407	6548 lb	6900 lb	5754 lb	6151 lb
SK 13507	7033 lb	7385 lb	6239 lb	6548 lb
SK 15407	10516 lb	10924 lb	9579 lb	9899 lb
SK 15507	10902 lb	11310 lb	9965 lb	10285 lb

	R	VFVL2/3	AFVL2/3	ASFVL2/3	F	FK
SK 11407	+ 44 lb	+ 939 lb	+ 514 lb	+ 637 lb	+ 324 lb	+ 403 lb
SK 11507	+ 29 lb					
SK 12407	+ 73 lb	+ 1327 lb	+ 745 lb	+ 902 lb	+ 456 lb	+ 569 lb
SK 12507	+ 29 lb					
SK 13407	+ 73 lb	+ 644 lb	+ 642 lb	+ 644 lb	+ 646 lb	+ 805 lb
SK 13507	+ 29 lb					
SK 15407	+ 132 lb	+ 3146 lb	+ 1850 lb	+ 2136 lb	+ 882 lb	---
SK 15507	+ 73 lb					

	D	ED	WX	H (FAN)	H (AS)	CC
SK 11407	+ 66 lb	+ 254 lb	+ 243 lb	+ 49 lb	+ 22 lb	+ 22 lb
SK 11507						
SK 12407	+ 77 lb	+ 254 lb	+ 243 lb	+ 55 lb	+ 24 lb	+ 26 lb
SK 12507						
SK 13407	+ 88 lb	+ 298 lb	+ 243 lb	+ 62 lb	+ 29 lb	+ 33 lb
SK 13507						
SK 15407	+ 99 lb	+ 298 lb	+ 265 lb	+ 77 lb	+ 35 lb	+ 33 lb
SK 15507						

	IEC 160	IEC 180	IEC 200	IEC 225	IEC 250	IEC 280	IEC 315	IEC 315 TN	IEC 355 TN
SK 11407	+ 375 lb	+ 375 lb	+ 366 lb	+ 386 lb	+ 419 lb	+ 419 lb	+ 465 lb	+ 514 lb	+ 580 lb
SK 11507	+ 317 lb	+ 317 lb	+ 309 lb	+ 328 lb	+ 362 lb	+ 362 lb	+ 408 lb	+ 456 lb	+ 522 lb
SK 12407	+ 489 lb	+ 489 lb	+ 481 lb	+ 498 lb	+ 534 lb	+ 534 lb	+ 580 lb	+ 628 lb	+ 692 lb
SK 12507	+ 388 lb	+ 388 lb	+ 379 lb	+ 399 lb	+ 432 lb	+ 432 lb	+ 478 lb	+ 527 lb	+ 593 lb
SK 13407	+ 589 lb	+ 589 lb	+ 578 lb	+ 597 lb	+ 633 lb	+ 633 lb	+ 679 lb	+ 728 lb	+ 791 lb
SK 13507	+ 476 lb	+ 476 lb	+ 467 lb	+ 487 lb	+ 520 lb	+ 520 lb	+ 567 lb	+ 615 lb	+ 679 lb
SK 15407	+ 683 lb	+ 683 lb	+ 675 lb	+ 694 lb	+ 728 lb	+ 728 lb	+ 774 lb	+ 822 lb	+ 886 lb
SK 15507	+ 529 lb	+ 529 lb	+ 520 lb	+ 538 lb	+ 573 lb	+ 573 lb	+ 619 lb	+ 668 lb	+ 732 lb



CAUTIONS



The weight data is based on gear units without oil and add-ons. The actual weights can be supplied with the gear unit documentation.

Notes

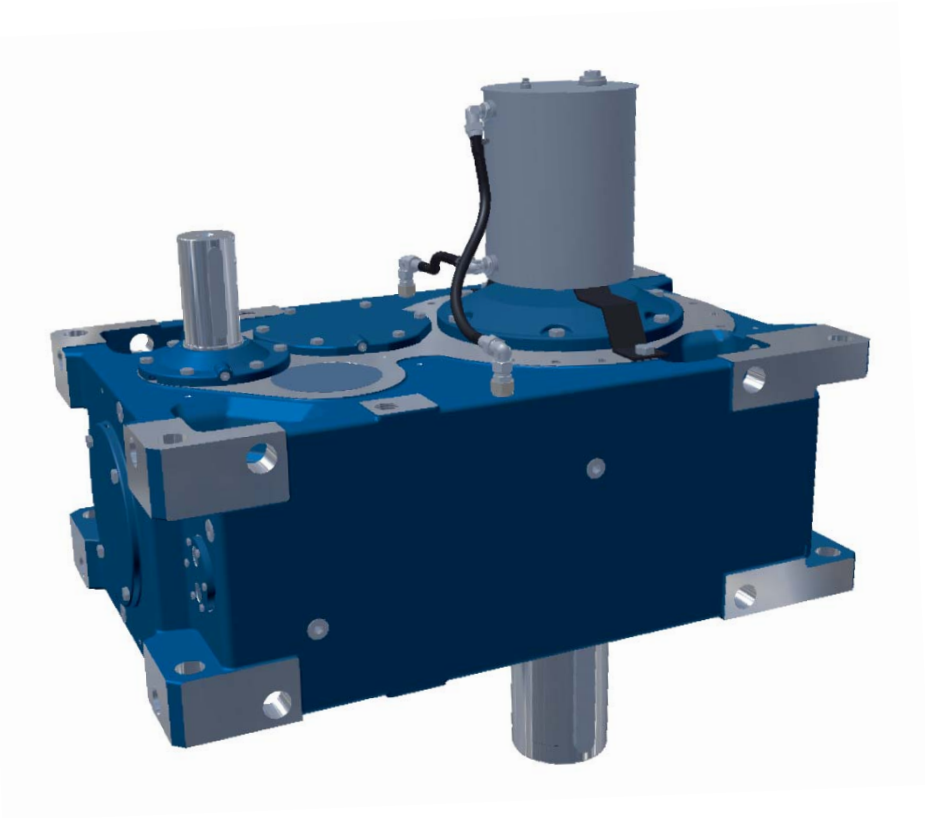


A large, empty grid of blue lines, intended for taking notes. The grid consists of approximately 20 columns and 30 rows of squares.

MAXXDRIVE™ Parallel Mechanical Selection

Selection

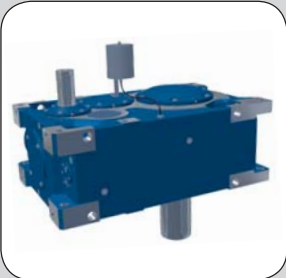
- SK..207 Parallel Mechanical/Thermal Ratings
- SK..307 Parallel Mechanical/Thermal Ratings



UNICASE™

www.nord.com

Nom. Ratio	Nominal Input Speed	Nominal Output Speed	SK 11207 Rated Power
i_N	n_{1N} [rpm]	n_{2N} [rpm]	P_N [hp]
5.6	1200	214	1081
	1800	321	1621
	Exact Ratio	i_{ges}	5.77
	Max Torque	T_{2max} [lb-in-1000]	327.4



Nom. Ratio	SK 11207 Thermal Rating [hp]					
	i_N	Fan		CC		
		P_{f20} [P _f] 20° C	P_{f40} [P _f] 40° C	P_{cc20} [P _{cc}] 20° C	P_{cc40} [P _{cc}] 40° C	
5.6	426	302	+204	+131	+337	+337

Structure of the Ratings Tables



RATINGS

Structure of the Mechanical Ratings Tables

Nominal Input Speed
The actual motor speeds depend on the size of the motor, and may differ

Nominal Output Speed
The Nominal Input Speed divided by the Nominal Ratio

Type of Gear Unit

Nom. Ratio	Nominal Input Speed		SK 11207			SK 12207			SK 13207			SK 15207						
	n_{1N} [rpm]	n_{2N} [rpm]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]				
5.6	1200	214	1081	117	47	27.266	1733	148	63	48.505	2276	232	97	86.236	3741	198	65	185.785
	1800	321	1621				2599				3413				5612			
	Exact Ratio i_{ges}		5.77			5.64			5.85			5.54						
	Max Torque T_{zmax} [lb-in·1000]		327.48			513.34			699.21			1,088.64						

Nominal Ratio
Sized according to Standard Series
Exact Ratio

Nominal Torque with Service Factor (f_s) = 1.0

Axial Force on Output (Maximum Permissible)

Radial Force on Output (Maximum Permissible)

Moment of Inertia Relative to the Input Shaft

Nominal Output with Service Factor (f_s) = 1.0 and Nominal Input Speed
 $n_{1N} = 1200$ rpm or
 $n_{1N} = 1800$ rpm

Structure of the Thermal Ratings Tables ^{1) 2)}

Type of Gear Unit

Nom. Ratio	SK 11207						SK 12207						SK 13207						SK 15207					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	--- [P _{To}]		FAN [P _F]		CC [P _{CC}]		--- [P _{To}]		FAN [P _F]		CC [P _{CC}]		--- [P _{To}]		FAN [P _F]		CC [P _{CC}]		--- [P _{To}]		FAN [P _F]		CC [P _{CC}]	
5.6	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C
	426	302	+204	+131	+337	+337	477	339	+229	+147	+469	+469	666	473	+320	+205	+602	+602	943	670	+453	+290	+602	+602

Nominal Ratio
Sized according to Standard Series

Cooling Type
--- : No Additional Cooling
Fan : Built in Fan Cooling
CC : Integrated Water Cooling

Thermal Power Limit ^{1) 2)}
Without any additional thermal cooling at Ambient Temp.

Additional Thermal Power Limit ^{1) 2)}
With Built in Fan at Ambient Temperature with nominal speed = 1800 rpm

Additional Thermal Power Limit
With Integrated Water Cooling at Ambient Temperature



Structure of the Power & Gear Ratio Ratings Tables

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS			
[hp]	[rpm]	[lb-in*1000]			[lb*1000]	[lb*1000]	[hp]	---		[lb]	
40	11	34.7	1.8	114.28	79	38	111	---	SK 11307 - 364T	1460	
	11	34.7	1.9	104.39	79	38	118	---			
	13	29.4	2.1	89.30	79	38	132	---			

Permissible Radial Force On Output side For Standard Bearings
 The stated values for F_R are calculated for $F_A = 0$ N

Permissible Axial Force On Output side For Standard Bearings
 The stated values for F_A are calculated for $F_R = 0$ N

Thermal Power Limit for Standard Ambient Conditions¹⁾

Optional Cooling System Related To Standard Ambient Conditions¹⁾
 --- : No Additional Cooling System
 FAN : Built In Fan (page 50)
 CC : Integrated Water Cooling (page 51)
 A - H : Size of External Cooling Units (page 53)
 FAN* : High powered fan (page 50)
 It has a greater thermal power limit than the integrated water cooling
 / : Forward slash stands for "or"

1) Standard ambient conditions

Ambient temperature:	68°F (20°C)
Air circulation at installation location	large hall with good air circulation ($v_L = 4.10$ ft/s or 1.25 m/s)
Installation:	Foundation steel sub-construction
Installation altitude:	≤ 3280ft (1000m) above sea level
Installation position	Horizontal installation (M1 for 2-stage or M3 for 3 stage)
Type of lubrication:	Oil-splash lubrication
Cooling water inlet temperature	68°F (20° C)

²⁾ Intermediate figures from 0° C to 50° C can be interpolated.



SK..207 Parallel Mechanical Ratings



MECHANICAL

Nom. Ratio	Nominal Input Speed	Nominal Output Speed	SK 11207				SK 12207				SK 13207				SK 15207			
			Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia
i_N	n_{1N} [rpm]	n_{2N} [rpm]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb·ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb·ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb·ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb·ft ²]
5.6	1200	214	1081	117	47	27.266	1733	148	63	48.505	2276	232	97	86.236	3741	198	65	185.785
	1800	321	1621				2599				3413				5612			
	Exact Ratio i_{ges}		5.77				5.64				5.85				5.54			
Max Torque T_{2max} [lb-in·1000]		327.48				513.34				699.21				1,088.64				
6.3	1200	190	1041	130	56	21.785	1751	146	63	38.752	2271	223	94	68.912	3571	209	70	148.457
	1800	286	1562				2626				3407				5356			
	Exact Ratio i_{ges}		6.31				6.16				6.38				6.04			
Max Torque T_{2max} [lb-in·1000]		345.18				566.45				761.16				1,132.90				
7.1	1200	169	914	130	54	20.052	1507	151	65	35.643	2005	238	101	63.389	3134	211	70	136.568
	1800	254	1371				2260				3008				4702			
	Exact Ratio i_{ges}		7.19				7.27				7.31				7.15			
Max Torque T_{2max} [lb-in·1000]		345.18				575.30				770.02				1,177.15				
8.0	1200	150	899	144	61	19.364	1509	144	63	34.409	1964	236	99	61.206	2938	236	79	131.870
	1800	225	1349				2263				2946				4407			
	Exact Ratio i_{ges}		7.87				7.93				7.98				7.80			
Max Torque T_{2max} [lb-in·1000]		371.73				628.40				823.12				1,203.70				
9.0	1200	133	782	144	58	15.496	1315	155	67	27.551	1711	245	103	48.995	2652	234	79	105.553
	1800	200	1173				1972				2566				3978			
	Exact Ratio i_{ges}		9.05				9.10				9.26				8.96			
Max Torque T_{2max} [lb-in·1000]		371.73				628.40				831.97				1,247.96				
10.0	1200	120	748	160	67	15.069	1273	160	70	26.792	1650	256	108	47.636	2481	256	88	102.634
	1800	180	1122				1909				2475				3722			
	Exact Ratio i_{ges}		9.91				9.93				10.11				9.78			
Max Torque T_{2max} [lb-in·1000]		389.43				663.81				876.22				1,274.51				



Nom. Ratio i_N	SK 11207						SK 12207						SK 13207						SK 15207					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]	[P _{To}]	[P _f]	[P _{cc}]
20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	
5.6	426	302	+204	+131	+337	+337	477	339	+229	+147	+469	+469	666	473	+320	+205	+602	+602	943	670	+453	+290	+602	+602
6.3	341	242	+164	+105	+337	+337	390	277	+187	+120	+469	+469	533	378	+256	+164	+602	+602	755	536	+362	+232	+602	+602
7.1	379	269	+182	+116	+337	+337	429	305	+206	+132	+469	+469	592	420	+284	+182	+602	+602	838	595	+402	+257	+602	+602
8.0	284	202	+136	+87	+337	+337	330	234	+158	+101	+469	+469	444	315	+213	+136	+602	+602	686	487	+329	+211	+602	+602
9.0	341	242	+164	+105	+337	+337	390	277	+187	+120	+469	+469	533	378	+256	+164	+602	+602	755	536	+362	+232	+602	+602
10.0	228	162	+109	+70	+337	+337	269	191	+129	+83	+469	+469	356	253	+171	+109	+602	+602	504	358	+242	+155	+602	+602

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..207 Parallel Mechanical Ratings



MECHANICAL

Nom. Ratio	Nominal Input Speed	Nominal Output Speed	SK 11207				SK 12207				SK 13207				SK 15207			
			Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia
i_N	n_{1N} [rpm]	n_{2N} [rpm]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb·1000]	F_A [lb·1000]	J_{red} [lb-ft ²]
11.2	1200	107	639	157	65	10.987	1104	166	72	19.530	1497	263	110	34.749	2209	256	85	74.869
	1800	161	958				1656				2245				3314			
	Exact Ratio i_{ges}		11.61				11.60				11.37				11.44			
	Max Torque T_{2max} [lb-in·1000]		389.43				672.66				893.93				1,327.61			
12.5	1200	96	623	175	74	10.702	1065	175	76	19.032	1413	277	117	33.846	2066	283	94	72.924
	1800	144	935				1597				2120				3099			
	Exact Ratio i_{ges}		12.71				12.66				12.40				12.48			
	Max Torque T_{2max} [lb-in·1000]		415.99				708.06				920.48				1,354.16			
14.0	1200	86	548	169	70	6.526	949	184	79	11.628	1266	283	119	20.671	1888	279	94	44.542
	1800	129	822				1423				1899				2832			
	Exact Ratio i_{ges}		14.46				14.39				14.24				14.19			
	Max Torque T_{2max} [lb-in·1000]		415.99				716.91				947.03				1,407.27			
16.0	1200	75	532	189	81	6.360	902	191	81	11.296	1204	299	126	20.095	1763	308	103	43.284
	1800	113	798				1353				1807				2645			
	Exact Ratio i_{ges}		15.83				15.69				15.53				15.48			
	Max Torque T_{2max} [lb-in·1000]		442.54				743.46				982.43				1,433.82			
18.0	1200	67	455	187	76	5.458	781	205	88	9.682	1045	315	133	17.224	1582	303	101	37.114
	1800	100	683				1171				1568				2373			
	Exact Ratio i_{ges}		18.50				18.34				18.38				18.11			
	Max Torque T_{2max} [lb-in·1000]		442.54				752.31				1,008.99				1,504.63			
20.0	1200	60	441	205	85	5.292	758	209	90	9.421	1000	324	137	16.763	1475	335	115	36.118
	1800	90	662				1137				1500				2213			
	Exact Ratio i_{ges}		20.25				20.01				20.05				19.76			
	Max Torque T_{2max} [lb-in·1000]		469.09				796.57				1,053.24				1,531.18			



Nom. Ratio i_N	SK 11207						SK 12207						SK 13207						SK 15207					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{T0}]		[P _{Tf}]		[P _{Tcc}]		[P _{T0}]		[P _{Tf}]		[P _{Tcc}]		[P _{T0}]		[P _{Tf}]		[P _{Tcc}]		[P _{T0}]		[P _{Tf}]		[P _{Tcc}]	
	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C
11.2	310	220	+149	+95	+337	+337	331	235	+159	+102	+469	+469	485	344	+233	+149	+602	+602	686	487	+329	+211	+602	+602
12.5	201	143	+96	+62	+337	+337	239	170	+115	+73	+469	+469	333	236	+160	+102	+602	+602	472	335	+227	+145	+602	+602
14.0	244	173	+117	+75	+337	+337	287	204	+138	+88	+469	+469	381	271	+183	+117	+602	+602	581	413	+279	+178	+602	+602
16.0	228	162	+109	+70	+337	+337	269	191	+129	+83	+469	+469	381	271	+183	+117	+602	+602	540	383	+259	+166	+602	+602
18.0	190	135	+91	+58	+337	+337	226	160	+108	+69	+469	+469	297	211	+143	+91	+602	+602	445	316	+214	+137	+602	+602
20.0	171	121	+82	+53	+337	+337	205	146	+98	+63	+469	+469	281	200	+135	+86	+602	+602	420	298	+202	+129	+602	+602

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..307 Parallel Mechanical Ratings



MECHANICAL

Nom. Ratio	Nominal Input Speed	Nominal Output Speed	SK 11307				SK 12307				SK 13307				SK 15307			
			Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia	Rated Power	OHL	Thrust	Inertia
i_N	n_{1N} [rpm]	n_{2N} [rpm]	P_N [hp]	F_R [lb-1000]	F_A [lb-1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb-1000]	F_A [lb-1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb-1000]	F_A [lb-1000]	J_{red} [lb-ft ²]	P_N [hp]	F_R [lb-1000]	F_A [lb-1000]	J_{red} [lb-ft ²]
22.4	1200	54	461	178	85	7.024	693	209	90	12.482	923	324	137	22.182	1481	335	115	47.793
	1800	80	691				1039				1385				2222			
	Exact Ratio i_{ges}	22.32				22.13				21.90				21.84				
	Max Torque T_{2max} [lb-in-1000]	539.90				805.42				1,062.09				1,699.34				
25.0	1200	48	400	178	85	5.838	586	209	90	10.370	819	324	137	18.452	1339	335	115	39.748
	1800	72	601				879				1229				2009			
	Exact Ratio i_{ges}	26.09				25.87				25.92				25.54				
	Max Torque T_{2max} [lb-in-1000]	548.75				796.57				1,155.19				1,796.70				
28.0	1200	64	566	178	85	5.790	561	209	90	10.275	804	324	137	18.279	1288	335	115	39.369
	1800	43	378				842				1207				1932			
	Exact Ratio i_{ges}	28.56				28.22				28.28				27.86				
	Max Torque T_{2max} [lb-in-1000]	557.60				831.97				1,194.85				1,885.21				
31.5	1200	38	338	178	85	2.990	461	209	90	5.316	644	324	137	9.443	1081	335	115	20.337
	1800	57	507				691				966				1621			
	Exact Ratio i_{ges}	31.90				31.82				31.91				31.49				
	Max Torque T_{2max} [lb-in-1000]	566.45				770.02				1,079.79				1,787.85				
35.5	1200	34	304	178	85	2.943	456	209	90	5.244	644	324	137	9.328	1079	335	115	20.100
	1800	51	456				685				966				1619			
	Exact Ratio i_{ges}	34.93				34.71				34.81				34.35				
	Max Torque T_{2max} [lb-in-1000]	557.60				831.97				1,177.15				1,947.17				
40.0	1200	30	272	178	85	2.492	374	209	90	4.414	515	324	137	7.852	906	335	115	16.920
	1800	45	409				561				773				1359			
	Exact Ratio i_{ges}	40.83				40.58				41.20				40.18				
	Max Torque T_{2max} [lb-in-1000]	584.15				796.57				1,115.19				1,911.76				
45.0	1200	27	237	178	85	2.468	354	209	90	4.366	506	324	137	7.783	880	335	115	16.777
	1800	40	356				531				759				1321			
	Exact Ratio i_{ges}	44.70				44.26				44.94				43.83				
	Max Torque T_{2max} [lb-in-1000]	557.60				823.12				1,194.85				2,026.82				
50.0	1200	24	215	178	85	1.542	293	209	90	2.753	410	324	137	4.908	701	335	115	10.584
	1800	36	322				440				615				1051			
	Exact Ratio i_{ges}	50.25				50.01				50.17				50.02				
	Max Torque T_{2max} [lb-in-1000]	566.45				770.02				1,079.79				1,840.96				



Nom. Ratio i_N	SK 11307						SK 12307						SK 13307						SK 15307					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{TO}]		[P _{IF}]		[P _{CC}]		[P _{TO}]		[P _{IF}]		[P _{CC}]		[P _{TO}]		[P _{IF}]		[P _{CC}]		[P _{TO}]		[P _{IF}]		[P _{CC}]	
	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C
22.4	171	121	+82	+53	+211	+211	205	146	+98	+63	+293	+293	282	200	+135	+87	+376	+376	421	299	+202	+129	+376	+376
25.0	149	106	+72	+46	+211	+211	180	128	+86	+55	+293	+293	233	165	+112	+72	+376	+376	361	256	+173	+111	+376	+376
28.0	137	97	+66	+42	+211	+211	166	118	+80	+51	+293	+293	223	158	+107	+69	+376	+376	345	245	+166	+106	+376	+376
31.5	171	121	+82	+53	+211	+211	205	146	+98	+63	+293	+293	282	200	+135	+87	+376	+376	421	299	+202	+129	+376	+376
35.5	163	116	+78	+50	+211	+211	196	139	+94	+60	+293	+293	282	200	+135	+87	+376	+376	399	283	+192	+123	+376	+376
40.0	143	102	+69	+44	+211	+211	173	123	+83	+53	+293	+293	233	165	+112	+72	+376	+376	345	245	+166	+106	+376	+376
45.0	132	94	+63	+41	+211	+211	160	114	+77	+49	+293	+293	223	158	+107	+69	+376	+376	330	234	+158	+101	+376	+376
50.0	156	111	+75	+48	+211	+211	188	133	+90	+58	+293	+293	255	181	+122	+78	+376	+376	379	269	+182	+116	+376	+376

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..307 Parallel Mechanical Ratings



MECHANICAL

Nom. Ratio i_N	Nominal Input Speed n_{1N} [rpm]	Nominal Output Speed n_{2N} [rpm]	SK 11307				SK 12307				SK 13307				SK 15307			
			Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb·ft ²]
56.0	1200	21	193	178	85	1.542	284	209	90	2.729	409	324	137	4.862	683	335	115	10.465
	1800	32	289				426				614				1024			
	Exact Ratio i_{ges}	55.01				54.55				54.73				54.56				
	Max Torque T_{2max} [lb-in·1000]	557.60				814.27				1,177.15				1,956.02				
63.0	1200	19	173	178	85	1.353	238	209	90	2.397	328	324	137	4.265	570	335	115	9.184
	1800	29	259				357				492				855			
	Exact Ratio i_{ges}	64.31				63.77				64.78				63.82				
	Max Torque T_{2max} [lb-in·1000]	584.15				796.57				1,115.19				1,911.76				
71.0	1200	17	148	178	85	1.329	223	209	90	2.373	322	324	137	4.237	554	335	115	9.136
	1800	25	223				334				483				831			
	Exact Ratio i_{ges}	70.40				69.56				70.66				69.62				
	Max Torque T_{2max} [lb-in·1000]	548.75				814.27				1,194.85				2,026.82				
80.0	1200	15	132	178	85	0.997	181	209	90	1.780	256	324	137	3.169	438	335	115	6.834
	1800	23	198				271				384				656			
	Exact Ratio i_{ges}	81.58				81.18				80.34				80.10				
	Max Torque T_{2max} [lb-in·1000]	566.45				770.02				1,079.79				1,840.96				
90.0	1200	13	117	178	85	0.997	173	209	90	1.780	256	324	137	3.151	426	335	115	6.787
	1800	20	175				260				384				639			
	Exact Ratio i_{ges}	89.30				88.55				87.64				87.37				
	Max Torque T_{2max} [lb-in·1000]	548.75				805.42				1,177.15				1,956.02				
100.0	1200	12	107	178	85	0.925	147	209	90	1.637	205	324	137	2.918	356	335	115	6.289
	1800	18	160				220				307				534			
	Exact Ratio i_{ges}	104.39				103.51				103.73				102.20				
	Max Torque T_{2max} [lb-in·1000]	584.15				796.57				1,115.19				1,911.76				
112.0	1200	11	91	178	85	0.925	137	209	90	1.637	201	324	137	2.907	346	335	115	6.265
	1800	16	137				206				302				519			
	Exact Ratio i_{ges}	114.28				112.91				113.15				111.48				
	Max Torque T_{2max} [lb-in·1000]	548.75				814.27				1,194.85				2,026.82				



Nom. Ratio i_N	SK 11307						SK 12307						SK 13307						SK 15307					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{Tr0}]		[P _f]		[P _{cc}]		[P _{Tr0}]		[P _f]		[P _{cc}]		[P _{Tr0}]		[P _f]		[P _{cc}]		[P _{Tr0}]		[P _f]		[P _{cc}]	
	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C
56.0	149	106	+72	+46	+211	+211	180	128	+86	+55	+293	+293	255	181	+122	+78	+376	+376	361	256	+173	+111	+376	+376
63.0	132	94	+63	+41	+211	+211	160	114	+77	+49	+293	+293	214	152	+103	+66	+376	+376	316	224	+152	+97	+376	+376
71.0	123	87	+59	+38	+211	+211	149	106	+72	+46	+293	+293	206	146	+99	+63	+376	+376	304	216	+146	+93	+376	+376
80.0	137	97	+66	+42	+211	+211	166	118	+80	+51	+293	+293	223	158	+107	+69	+376	+376	330	234	+158	+101	+376	+376
90.0	132	94	+63	+41	+211	+211	160	114	+77	+49	+293	+293	223	158	+107	+69	+376	+376	316	224	+152	+97	+376	+376
100.0	118	84	+57	+36	+211	+211	144	102	+69	+44	+293	+293	192	136	+92	+59	+376	+376	281	200	+135	+86	+376	+376
112.0	111	79	+53	+34	+211	+211	135	96	+65	+41	+293	+293	185	131	+89	+57	+376	+376	271	192	+130	+83	+376	+376

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

Notes

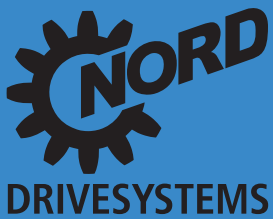


A large grid of blue lines for taking notes, consisting of approximately 20 columns and 30 rows.

MAXXDRIVE™ Parallel Gearmotor Selection

Selection

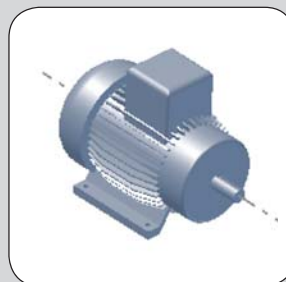
- SK..207 Parallel Gearmotor Ratings
1200 rpm 40hp - 1500 hp
- SK..307 Parallel Gearmotor Ratings
1800 rpm 50 hp - 1500 hp



UNICASE™

www.nord.com

Input Power	Output Speed	Output Torque
P_1	n_2	M_2
[hp]	[rpm]	[lb-in*1000]
40	11	34.7
	11	34.7
	13	29.4




40 hp - 100 hp Parallel Drives $n_1 = 1200 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
40	13	193.94	2.8	89.30	17.8	8.5	132	---	SK 11307 - 364T	3219	144			
	11	229.20	2.5	104.39	17.8	8.5	118	---						
	11	229.20	2.4	114.28	17.8	8.5	111	---						
50	12	262.63	3.0	103.51	20.9	9.0	144	---	SK 12307 - 365T	4652	144			
	11	286.50	2.8	112.91	20.9	9.0	135	---						
60	17	185.38	3.0	70.40	17.8	8.5	123	---	SK 11307 - 365T	3219	144			
	15	210.10	2.7	81.58	17.8	8.5	137	---						
	13	242.42	2.3	89.30	17.8	8.5	132	---						
	11	286.50	2.0	104.39	17.8	8.5	118	---						
	11	286.50	1.9	114.28	17.8	8.5	111	---						
	13	290.91	2.8	88.55	20.9	9.0	160	---				SK 12307 - 404/5T	4652	144
11	343.80	2.3	103.51	20.9	9.0	144	---							
11	343.80	2.4	112.91	20.9	9.0	135	---							
75	18	210.10	2.8	64.31	17.8	8.5	132	---	SK 11307 - 404/5T	3219	144			
	17	222.46	2.5	70.40	17.8	8.5	123	---						
	15	252.12	2.2	81.58	17.8	8.5	137	---						
	13	290.91	1.9	89.30	17.8	8.5	132	---						
	11	343.80	1.7	104.39	17.8	8.5	118	---						
	10	378.18	1.5	114.28	17.8	8.5	111	---						
	24	196.97	2.9	50.25	17.8	8.5	156	---				SK 11307 - 404/5T	3219	144
	22	214.88	2.6	55.01	17.8	8.5	149	---						
18	262.63	2.2	64.31	17.8	8.5	132	---							
17	278.07	2.0	70.40	17.8	8.5	123	---							
15	315.15	1.8	81.58	17.8	8.5	137	---							
13	363.63	1.5	89.30	17.8	8.5	132	---							
11	429.75	1.4	104.39	17.8	8.5	118	---							
75	17	278.07	2.9	69.56	20.9	9.0	149	---	SK 12307 - 404/5T	4652	144			
	15	315.15	2.4	81.18	20.9	9.0	166	---						
	13	363.63	2.2	88.55	20.9	9.0	160	---						
	11	429.75	1.9	103.51	20.9	9.0	144	---						
	11	429.75	1.9	112.91	20.9	9.0	135	---						
75	11	429.75	2.6	103.73	32.4	13.7	192	---	SK 13307 - 404/5T	6702	144			
	10	472.73	2.5	113.15	32.4	13.7	185	---						
100	29	217.34	2.7	40.83	17.8	8.5	143	---	SK 11307 - 444/5T	3219	144			
	27	233.44	2.4	44.70	17.8	8.5	132	---						
	24	262.63	2.9	50.01	20.9	9.0	188	---						
	24	262.63	2.2	50.25	17.8	8.5	156	---						
	22	286.50	2.8	54.55	20.9	9.0	180	---						
	22	286.50	1.9	55.01	17.8	8.5	149	---						
	19	331.74	2.4	63.77	20.9	9.0	160	---						



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
100	18	350.17	1.7	64.31	17.8	8.5	132	---	SK 12307 - 444/5T	4652	144				
	17	370.76	2.2	69.56	20.9	9.0	149	---							
	17	370.76	1.5	70.40	17.8	8.5	123	---							
	15	420.20	1.8	81.18	20.9	9.0	166	---							
	15	420.20	1.3	81.58	17.8	8.5	137	---							
	13	484.85	1.7	88.55	20.9	9.0	160	---							
	11	573.00	1.4	103.51	20.9	9.0	144	---							
	11	573.00	1.4	112.91	20.9	9.0	135	---							
	15	420.20	2.6	80.34	32.4	13.7	223	---							
	14	450.21	2.6	87.64	32.4	13.7	223	---							
	11	573.00	1.9	103.73	32.4	13.7	192	---							
	10	630.30	1.9	113.15	32.4	13.7	185	---							
	125	37	212.94	2.7	31.90	17.8	8.5	171				---	SK 11307 - 444/5T	3219	144
		34	231.73	2.4	34.93	17.8	8.5	163				---			
29		271.68	2.2	40.83	17.8	8.5	143	---							
27		291.81	1.9	44.70	17.8	8.5	132	---							
24		328.28	1.7	50.25	17.8	8.5	156	---							
22		358.13	1.6	55.01	17.8	8.5	149	---							
19		414.67	1.4	64.31	17.8	8.5	132	---							
29		271.68	2.9	40.58	20.9	9.0	173	---	SK 12307 - 444/5T	4652	144				
27		291.81	2.8	44.26	20.9	9.0	160	---							
24		328.28	2.3	50.01	20.9	9.0	188	---							
22		358.13	2.3	54.55	20.9	9.0	180	---							
19		414.67	1.9	63.77	20.9	9.0	160	---							
17		463.46	1.8	69.56	20.9	9.0	149	---							
15		525.25	1.5	81.18	20.9	9.0	166	---							
13		606.06	1.3	88.55	20.9	9.0	160	---							
18		437.71	2.5	64.78	32.4	13.7	214	---				SK 13307 - 444/5T	6702	144	
17		463.46	2.6	70.66	32.4	13.7	206	---							
15		525.25	2.1	80.34	32.4	13.7	223	---							
14		562.77	2.1	87.64	32.4	13.7	223	---							
11		716.25	1.6	103.73	32.4	13.7	192	---							
11		716.25	1.7	113.15	32.4	13.7	185	---							
12		656.56	2.9	102.20	33.5	11.5	281	---	SK 15307 - 444/5T	10362	144				
11	716.25	2.8	111.48	33.5	11.5	271	---								
150	59	160.25	2.9	20.25	20.5	8.5	171	---	SK 11307 - 447/9T	3219	144				
	46	205.53	2.7	26.09	17.8	8.5	149	---							
	42	225.11	2.5	28.56	17.8	8.5	137	A/FAN							
	37	255.53	2.2	31.90	17.8	8.5	171	---							
	34	278.07	2.0	34.93	17.8	8.5	163	---							
	29	326.02	1.8	40.83	17.8	8.5	143	A/FAN							
	27	350.17	1.6	44.70	17.8	8.5	132	A/FAN							


150 hp - 200 hp Parallel Drives $n_1 = 1200 \text{ rpm}$



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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
150	24	393.94	1.4	50.25	17.8	8.5	156	---	SK 11207 - 447/9T	3064	144
	29	326.02	2.4	40.58	20.9	9.0	173	---	SK 12307 - 447/9T	4652	144
	27	350.17	2.4	44.26	20.9	9.0	160	---			
	24	393.94	2.0	50.01	20.9	9.0	188	---			
	22	429.75	1.9	54.55	20.9	9.0	180	---			
	19	497.61	1.6	63.77	20.9	9.0	160	---			
	17	556.15	1.5	69.56	20.9	9.0	149	---			
	24	393.94	2.7	50.17	32.4	13.7	255	---	SK 13307 - 447/9T	6702	144
	22	429.75	2.7	54.73	32.4	13.7	255	---			
	18	525.25	2.1	64.78	32.4	13.7	214	---			
	17	556.15	2.1	70.66	32.4	13.7	206	---			
	15	630.30	1.7	80.34	32.4	13.7	223	---			
	14	675.32	1.7	87.64	32.4	13.7	223	---			
	11	859.50	1.3	103.73	32.4	13.7	192	---			
	11	859.50	1.4	113.15	32.4	13.7	185	---			
15	630.30	2.9	80.10	33.5	11.5	330	---	SK 15307 - 447/9T	10362	144	
14	675.32	2.9	87.37	33.5	11.5	316	---				
12	787.88	2.4	102.20	33.5	11.5	281	---				
11	859.50	2.4	111.48	33.5	11.5	271	---				
200	53	237.85	2.3	22.32	17.8	8.5	171	A/FAN	SK 11307 - 447/9T	3219	144
	46	274.04	2.0	26.09	17.8	8.5	149	A/CC			
	42	300.14	1.9	28.56	17.8	8.5	137	A/CC			
	37	340.70	1.7	31.90	17.8	8.5	171	A/FAN			
	34	370.76	1.5	34.93	17.8	8.5	163	A/FAN			
	29	434.69	1.3	40.83	17.8	8.5	143	A/CC			
	82	153.73	2.7	14.46	16.9	7.0	244	---	SK 11207 - 447/9T	3064	144
	75	168.08	2.6	15.83	18.9	8.1	228	---			
	64	196.97	2.2	18.50	18.7	7.6	190	A/FAN			
	59	213.66	2.2	20.25	20.5	8.5	171	A/FAN			
	46	274.04	2.9	25.87	20.9	9.0	180	A/FAN	SK 12307 - 447/9T	4652	144
	42	300.14	2.8	28.22	20.9	9.0	166	A/FAN			
	37	340.70	2.3	31.82	20.9	9.0	205	---			
	34	370.76	2.2	34.71	20.9	9.0	196	A/FAN			
	29	434.69	1.8	40.58	20.9	9.0	173	A/FAN			
27	466.89	1.8	44.26	20.9	9.0	160	A/FAN				
24	525.25	1.5	50.01	20.9	9.0	188	A/FAN				
22	573.00	1.4	54.55	20.9	9.0	180	A/FAN				



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in·1000]			[lb·1000]	[lb·1000]	[hp]	---		[lb]	
200	54	233.44	4.5	21.90	32.4	13.7	282	---	SK 13307 - 447/9T	6702	144
	29	434.69	2.6	41.20	32.4	13.7	233	---			
	27	466.89	2.6	44.94	32.4	13.7	223	---			
	24	525.25	2.1	50.17	32.4	13.7	255	---			
	22	573.00	2.1	54.73	32.4	13.7	255	---			
	18	700.33	1.6	64.78	32.4	13.7	214	---			
	17	741.53	1.6	70.66	32.4	13.7	206	---			
	187	67.41	11.3	6.38	22.3	9.4	533	---	SK 13207 - 447/9T	6217	144
	59	213.66	4.9	20.05	32.4	13.7	281	---	SK 15307 - 447/9T	10362	144
	19	663.47	2.9	63.82	33.5	11.5	316	---			
	17	741.53	2.7	69.62	33.5	11.5	304	---			
	15	840.40	2.2	80.10	33.5	11.5	330	---			
	14	900.43	2.2	87.37	33.5	11.5	316	---			
	12	1050.50	1.8	102.20	33.5	11.5	281	---			
11	1146.00	1.8	111.48	33.5	11.5	271	---				
250	53	297.31	1.8	22.32	17.8	8.5	171	A	SK 11307 - 447/9T	3219	144
	46	342.55	1.6	26.09	17.8	8.5	149	A			
	42	375.18	1.5	28.56	17.8	8.5	137	A			
	37	425.88	1.3	31.90	17.8	8.5	171	A			
	120	131.31	3.0	9.91	16.0	6.7	228	A/FAN	SK 11207 - 447/9T	3064	144
	103	152.99	2.5	11.61	15.7	6.5	310	---			
	94	167.63	2.5	12.71	17.5	7.4	201	A/FAN			
	82	192.16	2.2	14.46	16.9	7.0	244	A/FAN			
	75	210.10	2.1	15.83	18.9	8.1	228	A/FAN			
	64	246.21	1.8	18.50	18.7	7.6	190	A/CC			
	59	267.08	1.8	20.25	20.5	8.5	171	A/CC			
	54	291.81	2.8	22.13	20.9	9.0	205	A/FAN	SK 12307 - 447/9T	4652	144
	46	342.55	2.3	25.87	20.9	9.0	180	A/CC			
	42	375.18	2.2	28.22	20.9	9.0	166	A/CC			
	37	425.88	1.8	31.82	20.9	9.0	205	A/FAN			
	34	463.46	1.8	34.71	20.9	9.0	196	A/CC			
	29	543.36	1.5	40.58	20.9	9.0	173	A/CC			
	27	583.61	1.4	44.26	20.9	9.0	160	A/CC			
	37	425.88	2.5	31.91	32.4	13.7	282	---	SK 13307 - 447/9T	6702	144
	34	463.46	2.5	34.81	32.4	13.7	282	---			
	29	543.36	2.1	41.20	32.4	13.7	233	A/FAN			
	27	583.61	2.0	44.94	32.4	13.7	223	A/FAN			
	24	656.56	1.6	50.17	32.4	13.7	255	---			
	22	716.25	1.6	54.73	32.4	13.7	255	---			
	18	875.42	1.3	64.78	32.4	13.7	214	A/FAN			


250 hp - 300 hp Parallel Drives $n_1 = 1200 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
250	24	656.56	2.8	50.02	33.5	11.5	379	---	SK 15307 - 447/9T	10362	144
	22	716.25	2.7	54.56	33.5	11.5	361	---			
	19	829.34	2.3	63.82	33.5	11.5	316	---			
	17	926.91	2.2	69.62	33.5	11.5	304	---			
	15	1050.50	1.8	80.10	33.5	11.5	330	---			
	14	1125.54	1.7	87.37	33.5	11.5	316	---			
	12	1313.13	1.5	102.20	33.5	11.5	281	---			
11	1432.50	1.4	111.48	33.5	11.5	271	---				
300	53	356.77	1.5	22.32	17.8	8.5	171	B	SK 11307 - 447/9T	3219	144
	46	411.07	1.3	26.09	17.8	8.5	149	B			
	151	125.23	3.0	7.87	14.4	6.1	284	A/FAN	SK 11207 - 447/9T	3064	144
	131	144.34	2.6	9.05	14.4	5.8	341	---			
	120	157.58	2.5	9.91	16.0	6.7	228	A/CC			
	102	185.38	2.1	11.61	15.7	6.5	310	---			
	94	201.16	2.1	12.71	17.5	7.4	201	A/CC			
	82	230.60	1.8	14.46	16.9	7.0	244	A/FAN			
	75	252.12	1.8	15.83	18.9	8.1	228	A/CC			
	64	295.45	1.5	18.50	18.7	7.6	190	A/CC			
	59	320.49	1.5	20.25	20.5	8.5	171	A/CC			
	54	350.17	2.3	22.13	20.9	9.0	205	A	SK 12307 - 447/9T	4652	144
	46	411.07	1.9	25.87	20.9	9.0	180	B			
	42	450.21	1.8	28.22	20.9	9.0	166	B			
	37	511.05	1.5	31.82	20.9	9.0	205	A			
	34	556.15	1.5	34.71	20.9	9.0	196	A			
	65	290.91	2.6	18.34	20.5	8.8	226	A/CC	SK 12207 - 447/9T	4420	144
	59	320.49	2.5	20.01	20.9	9.0	205	A/CC			
	46	411.07	2.7	25.92	32.4	13.7	233	A/CC	SK 13307 - 447/9T	6702	144
42	450.21	2.7	28.28	32.4	13.7	223	A/CC				
37	511.05	2.1	31.91	32.4	13.7	282	A/FAN				
34	556.15	2.1	34.81	32.4	13.7	282	A/FAN				
29	652.03	1.7	41.20	32.4	13.7	233	A/CC				
26	727.27	1.6	44.94	32.4	13.7	223	A/CC				
24	787.88	1.4	50.17	32.4	13.7	255	A/FAN				
22	859.50	1.4	54.73	32.4	13.7	255	A/FAN				
27	700.33	2.9	43.83	33.5	11.5	330	---	SK 15307 - 447/9T	10362	144	
24	787.88	2.3	50.02	33.5	11.5	379	---				
22	859.50	2.3	54.56	33.5	11.5	361	---				
19	995.21	1.9	63.82	33.5	11.5	316	---				
17	1112.29	1.8	69.62	33.5	11.5	304	---				
15	1260.60	1.5	80.10	33.5	11.5	330	---				
14	1350.64	1.4	87.37	33.5	11.5	316	---				



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
350	53	416.24	1.3	22.32	17.8	8.5	171	B	SK 11307 - 585/6	3219	144
	189	116.72	3.0	6.31	13.0	5.6	341	A/FAN*	SK 11207 - 585/6	3064	144
	166	132.89	2.6	7.19	13.0	5.4	379	---			
	151	146.10	2.5	7.87	14.4	6.1	284	A/FAN*			
	132	167.13	2.2	9.05	14.4	5.8	341	A/FAN*			
	120	183.84	2.1	9.91	16.0	6.7	228	A			
	103	214.18	1.8	11.61	15.7	6.5	310	A/FAN*			
	94	234.69	1.8	12.71	17.5	7.4	201	A			
	82	269.03	1.5	14.46	16.9	7.0	244	A			
	75	294.14	1.5	15.83	18.9	8.1	228	A			
	64	344.70	1.3	18.50	18.7	7.6	190	A			
	54	408.53	2.0	22.13	20.9	9.0	205	B	SK 12307 - 585/6	4652	144
	46	479.58	1.7	25.87	20.9	9.0	180	B			
	42	525.25	1.6	28.22	20.9	9.0	166	B			
37	596.23	1.3	31.82	20.9	9.0	205	B				
34	648.84	1.3	34.71	20.9	9.0	196	B				
83	265.79	2.7	14.39	18.4	7.9	287	A/FAN	SK 12207 - 585/6	4420	144	
76	290.27	2.6	15.69	19.1	8.1	269	A/CC				
65	339.39	2.2	18.34	20.5	8.8	226	A/CC				
60	367.68	2.2	20.01	20.9	9.0	205	A/CC				
54	408.53	2.6	21.90	32.4	13.7	282	A/FAN				SK 13307 - 585/6
46	479.58	2.3	25.92	32.4	13.7	233	A/CC				
42	525.25	2.3	28.28	32.4	13.7	223	B/CC				
37	596.23	1.8	31.91	32.4	13.7	282	A/FAN				
34	648.84	1.8	34.81	32.4	13.7	282	A/FAN				
29	760.71	1.5	41.20	32.4	13.7	233	A/CC				
27	817.06	1.5	44.94	32.4	13.7	223	B/CC				
65	339.39	3.0	18.38	31.5	13.3	297	A/FAN	SK 13207 - 585/6	6217	144	
59	373.91	2.8	20.05	32.4	13.7	281	A/FAN				
30	735.35	2.6	40.18	33.5	11.5	345	A/FAN	SK 15307 - 585/6	10362	144	
27	817.06	2.5	43.83	33.5	11.5	330	A/FAN				
24	919.19	2.0	50.02	33.5	11.5	379	---				
22	1002.75	2.0	54.56	33.5	11.5	361	---				
19	1161.08	1.6	63.82	33.5	11.5	316	A/FAN				
17	1297.68	1.6	69.62	33.5	11.5	304	A/FAN				


400 hp - 450 hp Parallel Drives $n_1 = 1200 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
400	207	121.80	2.7	5.77	11.7	4.7	426	---	SK 11207 - 585/6	3064	144
	189	133.40	2.6	6.31	13.0	5.6	341	A/FAN*			
	166	151.88	2.3	7.19	13.0	5.4	379	A/FAN*			
	151	166.97	2.2	7.87	14.4	6.1	284	A			
	132	191.00	1.9	9.05	14.4	5.8	341	A/FAN*			
	120	210.10	1.9	9.91	16.0	6.7	228	A			
	103	244.78	1.6	11.61	15.7	6.5	310	A			
	94	268.21	1.6	12.71	17.5	7.4	201	B			
	82	307.46	1.4	14.46	16.9	7.0	244	A			
	75	336.16	1.3	15.83	18.9	8.1	228	A			
	54	466.89	1.7	22.13	20.9	9.0	205	B	SK 12307 - 585/6	4652	144
	46	548.09	1.5	25.87	20.9	9.0	180	B			
	42	600.29	1.4	28.22	20.9	9.0	166	B			
	103	244.78	2.7	11.60	16.6	7.2	331	A/FAN	SK 12207 - 585/6	4420	144
	94	268.21	2.6	12.66	17.5	7.6	239	A/CC			
	83	303.76	2.4	14.39	18.4	7.9	287	A/CC			
	76	331.74	2.2	15.69	19.1	8.1	269	A/CC			
	65	387.88	1.9	18.34	20.5	8.8	226	A/CC			
60	420.20	1.9	20.01	20.9	9.0	205	B/CC				
54	466.89	2.3	21.90	32.4	13.7	282	A	SK 13307 - 585/6	6702	144	
46	548.09	2.0	25.92	32.4	13.7	233	B				
42	600.29	2.0	28.28	32.4	13.7	223	B				
37	681.41	1.6	31.91	32.4	13.7	282	A				
34	741.53	1.6	34.81	32.4	13.7	282	A				
65	387.88	2.6	18.38	31.5	13.3	297	A/CC	SK 13207 - 585/6	6217	144	
59	427.32	2.5	20.05	32.4	13.7	281	A/CC				
38	663.47	2.7	31.49	33.5	11.5	421	---	SK 15307 - 585/6	10362	144	
35	720.34	2.7	34.35	33.5	11.5	399	---				
30	840.40	2.3	40.18	33.5	11.5	345	A/FAN*				
27	933.78	2.2	43.83	33.5	11.5	330	A/FAN*				
24	1050.50	1.8	50.02	33.5	11.5	379	A/FAN*				
22	1146.00	1.7	54.56	33.5	11.5	361	A/FAN*				
19	1326.95	1.4	63.82	33.5	11.5	316	A/FAN*				
17	1483.06	1.4	69.62	33.5	11.5	304	A				
450	207	137.02	2.4	5.77	11.7	4.7	426				A/FAN*
	189	150.07	2.3	6.31	13.0	5.6	341	A			
	166	170.86	2.0	7.19	13.0	5.4	379	A/FAN*			
	152	186.60	2.0	7.87	14.4	6.1	284	A			
	132	214.88	1.7	9.05	14.4	5.8	341	A			
	120	236.36	1.6	9.91	16.0	6.7	228	B			
	103	275.37	1.4	11.61	15.7	6.5	310	A			
	94	301.74	1.4	12.71	17.5	7.4	201	B			



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page																																																																																																																																																																																																																																																																																																																																																			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67																																																																																																																																																																																																																																																																																																																																																						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]																																																																																																																																																																																																																																																																																																																																																				
450	54	525.25	1.5	22.13	20.9	9.0	205	B	SK 12307 - 586/7	4652	144																																																																																																																																																																																																																																																																																																																																																			
	46	616.60	1.3	25.87	20.9	9.0	180	B				131	216.52	2.9	9.10	15.5	6.7	390	A/FAN	SK 12207 - 586/7	4420	144	120	236.36	2.8	9.93	16.0	7.0	269	A/CC	103	275.37	2.4	11.60	16.6	7.2	331	A/CC	94	301.74	2.3	12.66	17.5	7.6	239	B/CC	83	341.73	2.1	14.39	18.4	7.9	287	A/CC	76	373.20	2.0	15.69	19.1	8.1	269	A/CC	65	436.36	1.7	18.34	20.5	8.8	226	B/CC	60	472.73	1.7	20.01	20.9	9.0	205	B/CC	54	525.25	2.0	21.90	32.4	13.7	282	B	SK 13307 - 586/7	6702	144	46	616.60	1.8	25.92	32.4	13.7	233	B	42	675.32	1.8	28.28	32.4	13.7	223	B	37	766.58	1.4	31.91	32.4	13.7	282	B	34	834.22	1.4	34.81	32.4	13.7	282	B	84	337.66	2.8	14.24	28.3	11.9	381	A/FAN	SK 13207 - 586/7	6217	144	77	368.36	2.7	15.53	29.9	12.6	381	A/FAN	65	436.36	2.3	18.38	31.5	13.3	297	A/CC	60	472.73	2.2	20.05	32.4	13.7	281	A/CC	47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144	43	659.62	2.9	27.86	33.5	11.5	345	A	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*	30	945.45	2.0	40.18	33.5	11.5	345	A	27	1050.50	1.9	43.83	33.5	11.5	330	B	24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*	22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500	207	152.25	2.2	5.77	11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189	166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87	14.4	6.1	284	B	132	238.75	1.6	9.05	14.4	5.8	341	A	120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8	4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5	7.6	239	B	83	379.70	1.9	14.39	18.4	7.9	287	B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25	1.5	20.01	20.9
	131	216.52	2.9	9.10	15.5	6.7	390	A/FAN	SK 12207 - 586/7	4420	144																																																																																																																																																																																																																																																																																																																																																			
	120	236.36	2.8	9.93	16.0	7.0	269	A/CC																																																																																																																																																																																																																																																																																																																																																						
	103	275.37	2.4	11.60	16.6	7.2	331	A/CC																																																																																																																																																																																																																																																																																																																																																						
	94	301.74	2.3	12.66	17.5	7.6	239	B/CC																																																																																																																																																																																																																																																																																																																																																						
	83	341.73	2.1	14.39	18.4	7.9	287	A/CC																																																																																																																																																																																																																																																																																																																																																						
	76	373.20	2.0	15.69	19.1	8.1	269	A/CC																																																																																																																																																																																																																																																																																																																																																						
	65	436.36	1.7	18.34	20.5	8.8	226	B/CC																																																																																																																																																																																																																																																																																																																																																						
	60	472.73	1.7	20.01	20.9	9.0	205	B/CC				54	525.25	2.0	21.90	32.4	13.7	282	B	SK 13307 - 586/7	6702	144	46	616.60	1.8	25.92	32.4	13.7	233	B	42	675.32	1.8	28.28	32.4	13.7	223	B	37	766.58	1.4	31.91	32.4	13.7	282	B	34	834.22	1.4	34.81	32.4	13.7	282	B	84	337.66	2.8	14.24	28.3	11.9	381	A/FAN	SK 13207 - 586/7	6217	144	77	368.36	2.7	15.53	29.9	12.6	381	A/FAN	65	436.36	2.3	18.38	31.5	13.3	297	A/CC	60	472.73	2.2	20.05	32.4	13.7	281	A/CC	47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144	43	659.62	2.9	27.86	33.5	11.5	345	A	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*	30	945.45	2.0	40.18	33.5	11.5	345	A	27	1050.50	1.9	43.83	33.5	11.5	330	B	24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*	22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500	207	152.25	2.2	5.77	11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189	166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87	14.4	6.1	284	B	132	238.75	1.6	9.05	14.4	5.8	341	A	120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10		15.5	6.7	390	A	SK 12207 - 587/8	4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5	7.6	239	B	83	379.70	1.9	14.39	18.4	7.9	287	B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25	1.5	20.01	20.9	9.0	205	B																																																															
	54	525.25	2.0	21.90	32.4	13.7	282	B	SK 13307 - 586/7	6702	144																																																																																																																																																																																																																																																																																																																																																			
	46	616.60	1.8	25.92	32.4	13.7	233	B																																																																																																																																																																																																																																																																																																																																																						
	42	675.32	1.8	28.28	32.4	13.7	223	B																																																																																																																																																																																																																																																																																																																																																						
	37	766.58	1.4	31.91	32.4	13.7	282	B				34	834.22	1.4	34.81	32.4	13.7	282	B	84	337.66	2.8	14.24	28.3	11.9	381	A/FAN	SK 13207 - 586/7	6217	144	77	368.36	2.7	15.53	29.9	12.6	381	A/FAN	65	436.36	2.3	18.38	31.5	13.3	297	A/CC	60	472.73	2.2	20.05	32.4	13.7	281	A/CC	47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144	43	659.62	2.9	27.86	33.5	11.5	345	A	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*	30	945.45	2.0	40.18	33.5	11.5	345	A				27	1050.50	1.9	43.83	33.5	11.5	330	B	24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*	22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500	207	152.25	2.2	5.77	11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189	166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87		14.4	6.1	284	B	132	238.75	1.6	9.05				14.4	5.8	341	A	120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8	4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5		7.6	239	B	83				379.70	1.9	14.39	18.4	7.9	287	B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25	1.5	20.01	20.9	9.0	205	B																																																																																								
	34	834.22	1.4	34.81	32.4	13.7	282	B	84	337.66	2.8	14.24	28.3	11.9	381	A/FAN	SK 13207 - 586/7	6217	144	77	368.36	2.7	15.53	29.9	12.6	381	A/FAN				65	436.36	2.3	18.38	31.5	13.3	297	A/CC	60	472.73	2.2	20.05	32.4	13.7	281	A/CC	47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144	43	659.62	2.9	27.86	33.5				11.5	345	A	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*	30	945.45	2.0	40.18	33.5	11.5	345	A	27	1050.50	1.9	43.83	33.5				11.5	330	B	24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*	22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500	207	152.25	2.2	5.77		11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189				166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87	14.4		6.1	284	B	132	238.75	1.6	9.05	14.4				5.8	341	A	120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8				4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1		12.66	17.5	7.6	239				B	83	379.70	1.9	14.39	18.4	7.9	287	B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25	1.5	20.01	20.9	9.0	205	B																																																																																						
	84	337.66	2.8	14.24	28.3	11.9	381	A/FAN	SK 13207 - 586/7	6217	144																																																																																																																																																																																																																																																																																																																																																			
	77	368.36	2.7	15.53	29.9	12.6	381	A/FAN																																																																																																																																																																																																																																																																																																																																																						
	65	436.36	2.3	18.38	31.5	13.3	297	A/CC																																																																																																																																																																																																																																																																																																																																																						
	60	472.73	2.2	20.05	32.4	13.7	281	A/CC				47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144	43	659.62	2.9	27.86	33.5	11.5	345	A	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*	30	945.45	2.0	40.18	33.5	11.5	345	A				27	1050.50	1.9	43.83	33.5				11.5	330	B	24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*	22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500	207	152.25	2.2	5.77	11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189	166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87	14.4	6.1	284		B	132	238.75	1.6		9.05	14.4	5.8	341				A				120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131		240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8	4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5	7.6	239	B	83	379.70	1.9	14.39	18.4	7.9	287							B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25		1.5	20.01	20.9	9.0	205	B																																																																																																																								
	47	603.48	3.0	25.54	33.5	11.5	361	A/FAN*	SK 15307 - 586/7	10362	144																																																																																																																																																																																																																																																																																																																																																			
	43	659.62	2.9	27.86	33.5	11.5	345	A																																																																																																																																																																																																																																																																																																																																																						
	38	746.41	2.4	31.49	33.5	11.5	421	A/FAN*																																																																																																																																																																																																																																																																																																																																																						
	35	810.39	2.4	34.35	33.5	11.5	399	A/FAN*																																																																																																																																																																																																																																																																																																																																																						
	30	945.45	2.0	40.18	33.5	11.5	345	A																																																																																																																																																																																																																																																																																																																																																						
27	1050.50	1.9	43.83	33.5	11.5	330	B																																																																																																																																																																																																																																																																																																																																																							
24	1181.81	1.6	50.02	33.5	11.5	379	A/FAN*																																																																																																																																																																																																																																																																																																																																																							
22	1289.25	1.5	54.56	33.5	11.5	361	A/FAN*	500				207	152.25	2.2	5.77	11.7	4.7	426	A/FAN*	SK 11207 - 587/8	3064	144	189	166.75	2.1	6.31	13.0	5.6	341	A	166	189.85	1.8	7.19	13.0	5.4	379	A	152	207.34	1.8	7.87	14.4	6.1	284	B	132	238.75	1.6	9.05	14.4	5.8	341	A	120	262.63	1.5	9.91	16.0	6.7	228	B	54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8	4420	144		120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5	7.6	239	B	83	379.70	1.9	14.39	18.4	7.9	287	B	76	414.67		1.8	15.69	19.1	8.1		269	B	65	484.85	1.6	18.34	20.5	8.8	226	B	60	525.25	1.5	20.01	20.9	9.0	205	B																																																																																																																																																																																																															
500	207	152.25	2.2	5.77	11.7	4.7	426		A/FAN*	SK 11207 - 587/8	3064	144																																																																																																																																																																																																																																																																																																																																																		
	189	166.75	2.1	6.31	13.0	5.6	341		A																																																																																																																																																																																																																																																																																																																																																					
	166	189.85	1.8	7.19	13.0	5.4	379		A																																																																																																																																																																																																																																																																																																																																																					
	152	207.34	1.8	7.87	14.4	6.1	284		B																																																																																																																																																																																																																																																																																																																																																					
	132	238.75	1.6	9.05	14.4	5.8	341		A																																																																																																																																																																																																																																																																																																																																																					
	120	262.63	1.5	9.91	16.0	6.7	228		B				54	583.61	1.4	22.13	20.9	9.0	205	C	SK 12307 - 587/8	4652	144	131	240.57	2.6	9.10	15.5	6.7	390	A	SK 12207 - 587/8	4420	144	120	262.63	2.5	9.93	16.0	7.0	269	B	103	305.97	2.2	11.60	16.6	7.2	331	A	94	335.27	2.1	12.66	17.5	7.6	239	B	83	379.70	1.9	14.39	18.4	7.9	287	B	76	414.67	1.8	15.69	19.1	8.1	269	B	65	484.85	1.6	18.34	20.5	8.8	226					B	60	525.25	1.5	20.01	20.9	9.0	205	B																																																																																																																																																																																																																																																																
	54	583.61	1.4	22.13	20.9	9.0	205		C	SK 12307 - 587/8	4652	144																																																																																																																																																																																																																																																																																																																																																		
	131	240.57	2.6	9.10	15.5	6.7	390		A	SK 12207 - 587/8	4420	144																																																																																																																																																																																																																																																																																																																																																		
	120	262.63	2.5	9.93	16.0	7.0	269		B																																																																																																																																																																																																																																																																																																																																																					
	103	305.97	2.2	11.60	16.6	7.2	331		A																																																																																																																																																																																																																																																																																																																																																					
	94	335.27	2.1	12.66	17.5	7.6	239		B																																																																																																																																																																																																																																																																																																																																																					
	83	379.70	1.9	14.39	18.4	7.9	287		B																																																																																																																																																																																																																																																																																																																																																					
	76	414.67	1.8	15.69	19.1	8.1	269		B																																																																																																																																																																																																																																																																																																																																																					
	65	484.85	1.6	18.34	20.5	8.8	226		B																																																																																																																																																																																																																																																																																																																																																					
	60	525.25	1.5	20.01	20.9	9.0	205		B																																																																																																																																																																																																																																																																																																																																																					


500 hp - 600 hp Parallel Drives $n_1 = 1200$ rpm



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page	
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67				
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]		
500	55	573.00	1.9	21.90	32.4	13.7	282	B	SK 13307 - 587/8	6702	144	
	46	685.11	1.6	25.92	32.4	13.7	233	B				
	42	750.36	1.6	28.28	32.4	13.7	223	B				
	105	300.14	3.0	11.37	26.3	11.0	485	A/FAN	SK 13207 - 587/8	6217	144	
		96	328.28	2.8	12.40	27.7	11.7	333				A/CC
		84	375.18	2.5	14.24	28.3	11.9	381				A/CC
		77	409.29	2.4	15.53	29.9	12.6	381				A/CC
		65	484.85	2.1	18.38	31.5	13.3	297				B/CC
		60	525.25	2.0	20.05	32.4	13.7	281				B/CC
	55	573.00	3.0	21.84	33.5	11.5	421	A/FAN*	SK 15307 - 587/8	10362	144	
		47	670.53	2.7	25.54	33.5	11.5	361				B
		43	732.91	2.6	27.86	33.5	11.5	345				B
38		829.34	2.2	31.49	33.5	11.5	421	A/FAN*				
35		900.43	2.2	34.35	33.5	11.5	399	A/FAN*				
30		1050.50	1.8	40.18	33.5	11.5	345	B				
27		1167.22	1.7	43.83	33.5	11.5	330	B				
24		1313.13	1.4	50.02	33.5	11.5	379	B				
22		1432.50	1.4	54.56	33.5	11.5	361	B				
60		525.25	2.9	19.76	33.5	11.5	420	A/FAN				
600	207	182.70	1.8	5.77	11.7	4.7	426	A	SK 11207 - 587/8	3064	144	
	189	200.10	1.7	6.31	13.0	5.6	341	B				
	166	227.82	1.5	7.19	13.0	5.4	379	B				
	151	250.45	1.5	7.87	14.4	6.1	284	B				
	132	286.50	1.3	9.05	14.4	5.8	341	B				
211	179.23	2.9	5.64	14.8	6.3	477	A/FAN*	SK 12207 - 587/8	4420	144		
	194	194.94	2.9	6.16	14.6	6.3	390				B	
	164	230.60	2.5	7.27	15.1	6.5	429				A	
	150	252.12	2.5	7.93	14.4	6.3	330				B	
	131	288.69	2.2	9.10	15.5	6.7	390				B	
	120	315.15	2.1	9.93	16.0	7.0	269				B	
	103	367.17	1.8	11.60	16.6	7.2	331				B	
	94	402.32	1.8	12.66	17.5	7.6	239				B	
	83	455.64	1.6	14.39	18.4	7.9	287				B	
	76	497.61	1.5	15.69	19.1	8.1	269				B	
65	581.82	1.3	18.34	20.5	8.8	226	B					
54	700.33	1.5	21.90	32.4	13.7	282	C	SK 13307 - 587/8	6702	144		
	46	822.13	1.4	25.92	32.4	13.7	233				C	
	42	900.43	1.3	28.28	32.4	13.7	223				C	



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
600	129	293.16	2.8	9.26	24.5	10.3	533	A/FAN	SK 13207 - 587/8	6217	144
	118	320.49	2.7	10.11	25.6	10.8	356	B/CC			
	105	360.17	2.5	11.37	26.3	11.0	485	A/FAN			
	96	393.94	2.3	12.40	27.7	11.7	333	B/CC			
	84	450.21	2.1	14.24	28.3	11.9	381	B/CC			
	77	491.14	2.0	15.53	29.9	12.6	381	B/CC			
	65	581.82	1.7	18.38	31.5	13.3	297	B/CC			
	59	640.98	1.6	20.05	32.4	13.7	281	B/CC			
	55	687.60	2.5	21.84	33.5	11.5	421	B	SK 15307 - 587/8	10362	144
	47	804.64	2.2	25.54	33.5	11.5	361	B			
	43	879.49	2.1	27.86	33.5	11.5	345	B			
	38	995.21	1.8	31.49	33.5	11.5	421	B			
	35	1080.51	1.8	34.35	33.5	11.5	399	B			
	30	1260.60	1.5	40.18	33.5	11.5	345	B			
	27	1400.67	1.4	43.83	33.5	11.5	330	B			
	77	491.14	2.9	15.48	30.8	10.3	540	A/FAN	SK 15207 - 587/8	9833	144
	66	573.00	2.6	18.11	30.3	10.1	445	A/CC			
	60	630.30	2.4	19.76	33.5	11.5	420	A/CC			
700	208	212.12	1.5	5.77	11.7	4.7	426	B	SK 11207	3064	144
	190	232.22	1.5	6.31	13.0	5.6	341	B			
	167	264.20	1.3	7.19	13.0	5.4	379	B			
	213	207.14	2.5	5.64	14.8	6.3	477	B	SK 12207	4420	144
	195	226.26	2.5	6.16	14.6	6.3	390	B			
	165	267.40	2.2	7.27	15.1	6.5	429	B			
	151	292.19	2.2	7.93	14.4	6.3	330	B			
	132	334.25	1.9	9.10	15.5	6.7	390	B			
	121	364.64	1.8	9.93	16.0	7.0	269	B			
	103	428.36	1.6	11.60	16.6	7.2	331	B			
	95	464.43	1.5	12.66	17.5	7.6	239	C			
	83	531.58	1.3	14.39	18.4	7.9	287	B			
	55	802.20	1.3	21.90	32.4	13.7	282	C	SK 13307	6702	144
	164	269.03	2.9	7.31	23.8	10.1	592	A/FAN*	SK 13207	6217	144
	150	294.14	2.8	7.98	23.6	9.9	444	B			
	130	339.39	2.5	9.26	24.5	10.3	533	A			
	119	370.76	2.4	10.11	25.6	10.8	356	B			
	106	416.24	2.1	11.37	26.3	11.0	485	B			
97	454.86	2.0	12.40	27.7	11.7	333	B				
84	525.25	1.8	14.24	28.3	11.9	381	B				
77	573.00	1.7	15.53	29.9	12.6	381	B				
65	678.79	1.5	18.38	31.5	13.3	297	B				
60	735.35	1.4	20.05	32.4	13.7	281	B				



700 hp - 800 hp Parallel Drives $n_1 = 1200 \text{ rpm}$




GEARMOTOR

Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{t0.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight [lb]	Dim. Page
800	55	802.20	2.1	21.84	33.5	11.5	421	B	SK 15307	10362	144
	47	938.75	1.9	25.54	33.5	11.5	361	C			
	43	1026.07	1.8	27.86	33.5	11.5	345	C			
	38	1161.08	1.5	31.49	33.5	11.5	421	B			
	35	1260.60	1.5	34.35	33.5	11.5	399	C			
	96	459.59	2.9	12.48	28.3	9.4	472	B			
	85	519.07	2.7	14.19	27.9	9.4	581	A/FAN*			
	78	565.65	2.5	15.48	30.8	10.3	540	A			
	66	668.50	2.3	18.11	30.3	10.1	445	B			
	61	723.30	2.1	19.76	33.5	11.5	420	B			
800	208	242.42	1.4	5.77	11.7	4.7	426	B	SK 11207	3064	144
	190	265.39	1.3	6.31	13.0	5.6	341	C			
	213	236.73	2.2	5.64	14.8	6.3	477	B	SK 12207	4420	144
	195	258.58	2.2	6.16	14.6	6.3	390	B			
	165	305.60	1.9	7.27	15.1	6.5	429	B			
	151	333.93	1.9	7.93	14.4	6.3	330	C			
	132	382.00	1.6	9.10	15.5	6.7	390	B			
	121	416.73	1.6	9.93	16.0	7.0	269	C			
	103	489.55	1.4	11.60	16.6	7.2	331	C			
	95	530.78	1.3	12.66	17.5	7.6	239	C			
205	245.97	2.8	5.85	23.2	9.7	666	A/FAN*	SK 13207	6217	144	
188	268.21	2.8	6.38	22.3	9.4	533	B				
164	307.46	2.5	7.31	23.8	10.1	592	B				
150	336.16	2.4	7.98	23.6	9.9	444	B				
130	387.88	2.1	9.26	24.5	10.3	533	B				
119	423.73	2.1	10.11	25.6	10.8	356	B				
106	475.70	1.9	11.37	26.3	11.0	485	B				
97	519.84	1.8	12.40	27.7	11.7	333	C				
84	600.29	1.6	14.24	28.3	11.9	381	B				
77	654.86	1.5	15.53	29.9	12.6	381	B				
65	775.75	1.3	18.38	31.5	13.3	297	C				
55	916.80	1.9	21.84	33.5	11.5	421	C	SK 15307	10362	144	
47	1072.85	1.7	25.54	33.5	11.5	361	D				
43	1172.65	1.6	27.86	33.5	11.5	345	D				
38	1326.95	1.3	31.49	33.5	11.5	421	C				
35	1440.69	1.4	34.35	33.5	11.5	399	C				
105	480.23	2.8	11.44	25.6	8.5	686	A/FAN*	SK 15207	9833	144	
96	525.25	2.6	12.48	28.3	9.4	472	B				
85	593.22	2.4	14.19	27.9	9.4	581	B				
78	646.46	2.2	15.48	30.8	10.3	540	B				
66	764.00	2.0	18.11	30.3	10.1	445	B				
61	826.62	1.9	19.76	33.5	11.5	420	B				



900 hp - 1000 hp Parallel Drives $n_1 = 1200$ rpm



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in·1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
900	213	266.32	1.9	5.64	14.8	6.3	477	B	SK 12207	4420	144
	195	290.91	1.9	6.16	14.6	6.3	390	C			
	165	343.80	1.7	7.27	15.1	6.5	429	C			
	151	375.68	1.7	7.93	14.4	6.3	330	C			
	132	429.75	1.5	9.10	15.5	6.7	390	C			
	121	468.82	1.4	9.93	16.0	7.0	269	C			
	205	276.72	2.5	5.85	23.2	9.7	666	B	SK 13207	6217	144
	188	301.74	2.5	6.38	22.3	9.4	533	B			
	164	345.90	2.2	7.31	23.8	10.1	592	B			
	150	378.18	2.2	7.98	23.6	9.9	444	C			
	130	436.36	1.9	9.26	24.5	10.3	533	B			
	119	476.70	1.8	10.11	25.6	10.8	356	C			
	106	535.16	1.7	11.37	26.3	11.0	485	B			
	97	584.81	1.6	12.40	27.7	11.7	333	C			
	84	675.32	1.4	14.24	28.3	11.9	381	C			
77	736.71	1.3	15.53	29.9	12.6	381	C				
55	1031.40	1.6	21.84	33.5	11.5	421	D	SK 15307	10362	144	
47	1206.96	1.5	25.54	33.5	11.5	361	E				
43	1319.23	1.4	27.86	33.5	11.5	345	E				
134	423.34	2.9	8.96	23.4	7.9	755	A/FAN*	SK 15207	9833	144	
123	461.20	2.8	9.78	25.6	8.8	504	B				
105	540.26	2.5	11.44	25.6	8.5	686	B				
96	590.91	2.3	12.48	28.3	9.4	472	B				
85	667.38	2.1	14.19	27.9	9.4	581	B				
78	727.27	2.0	15.48	30.8	10.3	540	B				
66	859.50	1.8	18.11	30.3	10.1	445	C				
61	929.95	1.6	19.76	33.5	11.5	420	C				
1000	319	197.59	2.6	5.64	14.8	6.3	477	C	SK 12207	4420	144
	292	215.86	2.6	6.16	14.6	6.3	390	C			
	248	254.15	2.3	7.27	15.1	6.5	429	C			
	227	277.67	2.3	7.93	14.4	6.3	330	C			
	198	318.33	2.0	9.10	15.5	6.7	390	C			
	308	204.64	3.4	5.85	23.2	9.7	666	B			
	282	223.51	3.4	6.38	22.3	9.4	533	C			
	246	256.22	3.0	7.31	23.8	10.1	592	B			
	226	278.89	3.0	7.98	23.6	9.9	444	C			
	194	324.90	2.6	9.26	24.5	10.3	533	C			
	178	354.10	2.5	10.11	25.6	10.8	356	C			
	158	398.92	2.2	11.37	26.3	11.0	485	C			
	145	434.69	2.1	12.40	27.7	11.7	333	C			


1000 hp - 1500 hp Parallel Drives $n_1 = 1200 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page																																																																																																																																																																																																																																																																																																																																											
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67																																																																																																																																																																																																																																																																																																																																														
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]																																																																																																																																																																																																																																																																																																																																												
1000	82	768.66	2.2	21.84	33.5	11.5	421	E	SK 15307	10362	144																																																																																																																																																																																																																																																																																																																																											
	70	900.43	2.0	25.54	33.5	11.5	361	E				231	272.86	4.4	7.80	23.6	7.9	686	B	SK 15207	9833	144	201	313.58	4.0	8.96	23.4	7.9	755	B	184	342.55	3.7	9.78	25.6	8.8	504	C	157	401.47	3.3	11.44	25.6	8.5	686	B	144	437.71	3.1	12.48	28.3	9.4	472	C	127	496.30	2.8	14.19	27.9	9.4	581	B	116	543.36	2.6	15.48	30.8	10.3	540	C	99	636.67	2.4	18.11	30.3	10.1	445	C	91	692.64	2.2	19.76	33.5	11.5	420	C	1250	319	246.98	2.1	5.64	14.8	6.3	477	D	SK 12207	4420	144	292	269.82	2.1	6.16	14.6	6.3	390	E	1250	308	255.80	2.7	5.85	23.2	9.7	666	C	SK 13207	6217	144	282	279.39	2.7	6.38	22.3	9.4	533	D	246	320.27	2.4	7.31	23.8	10.1	592	C	226	348.62	2.4	7.98	23.6	9.9	444	D	194	406.12	2.0	9.26	24.5	10.3	533	D	178	442.63	2.0	10.11	25.6	10.8	356	E	325	242.42	4.5	5.54	19.8	6.5	943	B	SK 15207	9833	144	298	264.39	4.3	6.04	20.9	7.0	755	C	252	312.65	3.8	7.15	21.1	7.0	838	B	231	341.07	3.5	7.80	23.6	7.9	686	C	201	391.98	3.2	8.96	23.4	7.9	755	C	184	428.19	3.0	9.78	25.6	8.8	504	D	157	501.83	2.6	11.44	25.6	8.5	686	C	144	547.14	2.5	12.48	28.3	9.4	472	D	127	620.37	2.3	14.19	27.9	9.4	581	C	116	679.20	2.1	15.48	30.8	10.3	540	D	1500	308	306.96	2.3	5.85	23.2	9.7	666	D	SK 13207	6217	144	282	335.27	2.3	6.38	22.3	9.4	533	E	246	384.33	2.0	7.31	23.8	10.1	592	E	226	418.34	2.0	7.98	23.6	9.9	444	E	1500	325	290.91	3.7	5.54	19.8	6.5	943	C	SK 15207	9833	144	298	317.27	3.6	6.04	20.9	7.0	755	D	252	375.18	3.1	7.15	21.1	7.0	838	C	231	409.29	2.9	7.80	23.6	7.9	686	D	201	470.37	2.7	8.96	23.4	7.9	755	D	184	513.83	2.5	9.78	25.6	8.8	504	E	157	602.20	2.2	11.44	25.6	8.5	686	D	144	656.56	2.1	12.48	28.3
	231	272.86	4.4	7.80	23.6	7.9	686	B	SK 15207	9833	144																																																																																																																																																																																																																																																																																																																																											
	201	313.58	4.0	8.96	23.4	7.9	755	B																																																																																																																																																																																																																																																																																																																																														
	184	342.55	3.7	9.78	25.6	8.8	504	C																																																																																																																																																																																																																																																																																																																																														
	157	401.47	3.3	11.44	25.6	8.5	686	B																																																																																																																																																																																																																																																																																																																																														
	144	437.71	3.1	12.48	28.3	9.4	472	C																																																																																																																																																																																																																																																																																																																																														
	127	496.30	2.8	14.19	27.9	9.4	581	B																																																																																																																																																																																																																																																																																																																																														
116	543.36	2.6	15.48	30.8	10.3	540	C																																																																																																																																																																																																																																																																																																																																															
99	636.67	2.4	18.11	30.3	10.1	445	C																																																																																																																																																																																																																																																																																																																																															
91	692.64	2.2	19.76	33.5	11.5	420	C	1250	319	246.98	2.1	5.64	14.8	6.3	477	D	SK 12207	4420	144	292	269.82	2.1	6.16	14.6	6.3	390	E	1250	308	255.80	2.7	5.85	23.2	9.7	666	C	SK 13207	6217	144	282	279.39	2.7	6.38	22.3	9.4	533	D	246	320.27	2.4	7.31	23.8	10.1	592	C	226	348.62	2.4	7.98	23.6	9.9	444	D	194	406.12	2.0	9.26	24.5	10.3	533	D	178	442.63	2.0	10.11	25.6	10.8	356	E	325	242.42	4.5	5.54	19.8	6.5	943	B	SK 15207	9833	144	298	264.39	4.3	6.04	20.9	7.0	755	C	252	312.65	3.8	7.15	21.1	7.0	838	B	231	341.07	3.5	7.80	23.6	7.9	686	C	201	391.98	3.2	8.96	23.4	7.9	755	C	184	428.19	3.0	9.78	25.6	8.8	504	D	157	501.83	2.6	11.44	25.6	8.5	686	C	144	547.14	2.5	12.48	28.3	9.4	472	D	127	620.37	2.3	14.19	27.9	9.4	581	C	116	679.20	2.1	15.48	30.8	10.3	540	D	1500	308	306.96	2.3	5.85	23.2	9.7	666	D	SK 13207	6217	144	282	335.27	2.3	6.38	22.3	9.4	533	E	246	384.33	2.0	7.31	23.8	10.1	592	E	226	418.34	2.0	7.98	23.6	9.9	444	E	1500	325	290.91	3.7	5.54	19.8	6.5	943	C	SK 15207	9833	144	298	317.27	3.6	6.04	20.9	7.0	755	D	252	375.18	3.1	7.15	21.1	7.0	838	C	231	409.29	2.9	7.80	23.6	7.9	686	D	201	470.37	2.7	8.96	23.4	7.9	755	D	184	513.83	2.5	9.78	25.6	8.8	504	E	157	602.20	2.2	11.44	25.6	8.5	686	D	144	656.56	2.1	12.48	28.3	9.4	472	E																																																																												
1250	319	246.98	2.1	5.64	14.8	6.3	477		D	SK 12207	4420	144																																																																																																																																																																																																																																																																																																																																										
	292	269.82	2.1	6.16	14.6	6.3	390	E	1250				308	255.80	2.7	5.85	23.2	9.7	666	C	SK 13207	6217	144	282	279.39	2.7	6.38		22.3	9.4	533	D	246	320.27	2.4	7.31				23.8	10.1	592	C	226	348.62	2.4	7.98	23.6	9.9	444	D	194	406.12	2.0	9.26	24.5	10.3	533	D	178	442.63	2.0	10.11	25.6	10.8	356	E	325	242.42	4.5	5.54	19.8	6.5	943	B	SK 15207	9833	144	298	264.39	4.3	6.04	20.9	7.0	755	C	252				312.65	3.8	7.15	21.1	7.0	838	B	231	341.07	3.5	7.80	23.6	7.9	686	C	201	391.98	3.2	8.96	23.4	7.9	755	C	184	428.19	3.0	9.78	25.6	8.8	504	D	157	501.83	2.6	11.44	25.6	8.5	686	C	144	547.14	2.5	12.48	28.3	9.4	472	D	127	620.37	2.3	14.19	27.9	9.4	581	C	116	679.20	2.1	15.48	30.8	10.3	540	D	1500	308	306.96	2.3	5.85	23.2	9.7	666	D		SK 13207	6217	144	282	335.27	2.3	6.38	22.3				9.4	533	E	246	384.33	2.0	7.31	23.8	10.1	592	E	226	418.34	2.0	7.98	23.6	9.9	444	E	1500	325	290.91	3.7	5.54		19.8	6.5	943	C	SK 15207	9833	144	298				317.27	3.6	6.04	20.9	7.0	755	D	252	375.18	3.1	7.15	21.1	7.0	838	C	231	409.29	2.9	7.80	23.6	7.9	686	D	201	470.37	2.7	8.96	23.4	7.9	755	D	184	513.83	2.5	9.78	25.6	8.8	504	E	157	602.20	2.2	11.44	25.6	8.5	686	D	144	656.56	2.1	12.48	28.3	9.4	472	E																																																																													
1250	308	255.80	2.7	5.85	23.2	9.7	666	C		SK 13207	6217	144																																																																																																																																																																																																																																																																																																																																										
	282	279.39	2.7	6.38	22.3	9.4	533	D																																																																																																																																																																																																																																																																																																																																														
	246	320.27	2.4	7.31	23.8	10.1	592	C																																																																																																																																																																																																																																																																																																																																														
	226	348.62	2.4	7.98	23.6	9.9	444	D																																																																																																																																																																																																																																																																																																																																														
	194	406.12	2.0	9.26	24.5	10.3	533	D																																																																																																																																																																																																																																																																																																																																														
	178	442.63	2.0	10.11	25.6	10.8	356	E																																																																																																																																																																																																																																																																																																																																														
	325	242.42	4.5	5.54	19.8	6.5	943	B					SK 15207	9833	144																																																																																																																																																																																																																																																																																																																																							
	298	264.39	4.3	6.04	20.9	7.0	755	C																																																																																																																																																																																																																																																																																																																																														
252	312.65	3.8	7.15	21.1	7.0	838	B																																																																																																																																																																																																																																																																																																																																															
231	341.07	3.5	7.80	23.6	7.9	686	C																																																																																																																																																																																																																																																																																																																																															
201	391.98	3.2	8.96	23.4	7.9	755	C																																																																																																																																																																																																																																																																																																																																															
184	428.19	3.0	9.78	25.6	8.8	504	D																																																																																																																																																																																																																																																																																																																																															
157	501.83	2.6	11.44	25.6	8.5	686	C																																																																																																																																																																																																																																																																																																																																															
144	547.14	2.5	12.48	28.3	9.4	472	D																																																																																																																																																																																																																																																																																																																																															
127	620.37	2.3	14.19	27.9	9.4	581	C																																																																																																																																																																																																																																																																																																																																															
116	679.20	2.1	15.48	30.8	10.3	540	D	1500	308	306.96	2.3	5.85	23.2	9.7	666	D	SK 13207	6217	144	282	335.27	2.3	6.38	22.3	9.4	533	E	246	384.33	2.0	7.31	23.8	10.1	592	E	226	418.34	2.0	7.98	23.6	9.9	444	E	1500	325	290.91	3.7	5.54	19.8	6.5	943	C	SK 15207	9833	144	298	317.27	3.6	6.04	20.9	7.0	755	D	252	375.18	3.1	7.15	21.1	7.0	838	C	231	409.29	2.9	7.80	23.6	7.9	686	D	201	470.37	2.7	8.96	23.4	7.9	755	D	184	513.83	2.5	9.78	25.6	8.8	504	E	157	602.20	2.2	11.44	25.6	8.5	686	D	144	656.56	2.1	12.48	28.3	9.4	472	E																																																																																																																																																																																																																																							
1500	308	306.96	2.3	5.85	23.2	9.7	666		D	SK 13207	6217	144																																																																																																																																																																																																																																																																																																																																										
	282	335.27	2.3	6.38	22.3	9.4	533		E																																																																																																																																																																																																																																																																																																																																													
	246	384.33	2.0	7.31	23.8	10.1	592		E																																																																																																																																																																																																																																																																																																																																													
	226	418.34	2.0	7.98	23.6	9.9	444	E																																																																																																																																																																																																																																																																																																																																														
1500	325	290.91	3.7	5.54	19.8	6.5	943	C	SK 15207	9833	144																																																																																																																																																																																																																																																																																																																																											
	298	317.27	3.6	6.04	20.9	7.0	755	D																																																																																																																																																																																																																																																																																																																																														
	252	375.18	3.1	7.15	21.1	7.0	838	C																																																																																																																																																																																																																																																																																																																																														
	231	409.29	2.9	7.80	23.6	7.9	686	D																																																																																																																																																																																																																																																																																																																																														
	201	470.37	2.7	8.96	23.4	7.9	755	D																																																																																																																																																																																																																																																																																																																																														
	184	513.83	2.5	9.78	25.6	8.8	504	E																																																																																																																																																																																																																																																																																																																																														
	157	602.20	2.2	11.44	25.6	8.5	686	D																																																																																																																																																																																																																																																																																																																																														
	144	656.56	2.1	12.48	28.3	9.4	472	E																																																																																																																																																																																																																																																																																																																																														



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
50	16	195.60	2.8	114.28	17.8	8.5	111	---	SK 11307 - 326T	3219	144
60	20	189.41	2.9	89.30	17.8	8.5	132	---	SK 11307 - 364T	3219	144
	17	224.81	2.6	104.39	17.8	8.5	118	---			
	16	238.97	2.3	114.28	17.8	8.5	111	---			
75	26	183.21	3.0	70.40	17.8	8.5	123	---	SK 11307 - 365T	3219	144
	22	217.73	2.6	81.58	17.8	8.5	137	---			
	20	238.97	2.3	89.30	17.8	8.5	132	---			
	17	277.91	2.1	104.39	17.8	8.5	118	---			
	16	288.53	1.9	114.28	17.8	8.5	111	---			
	17	274.37	2.9	103.51	20.9	9.0	144	---	SK 12307 - 365T	4652	144
	16	291.19	2.8	112.91	20.9	9.0	135	---			
100	32	199.14	2.8	55.01	17.8	8.5	149	---	SK 11307 - 404/5T	3219	144
	28	224.81	2.6	64.31	17.8	8.5	132	---			
	25	249.59	2.2	70.40	17.8	8.5	123	---			
	22	283.22	2.0	81.58	17.8	8.5	137	---			
	20	323.05	1.7	89.30	17.8	8.5	132	---			
	17	365.54	1.6	104.39	17.8	8.5	118	---			
	16	392.09	1.4	114.28	17.8	8.5	111	---			
	22	284.99	2.7	81.18	20.9	9.0	166	---	SK 12307 - 404/5T	4652	144
	20	309.78	2.6	88.55	20.9	9.0	160	---			
	17	379.70	2.1	103.51	20.9	9.0	144	---			
16	387.66	2.1	112.91	20.9	9.0	135	---				
125	40	199.14	2.8	44.70	17.8	8.5	132	---	SK 11307 - 444/5T	3219	144
	36	217.73	2.6	50.25	17.8	8.5	156	---			
	32	242.51	2.3	55.01	17.8	8.5	149	---			
	28	277.91	2.1	64.31	17.8	8.5	132	---			
	25	323.05	1.7	70.40	17.8	8.5	123	A/FAN			
	22	354.03	1.6	81.58	17.8	8.5	137	---			
	20	392.09	1.4	89.30	17.8	8.5	132	---			
	28	284.11	2.8	63.77	20.9	9.0	160	---			
	26	301.81	2.7	69.56	20.9	9.0	149	---			
	22	349.60	2.2	81.18	20.9	9.0	166	---			
	20	402.71	2.0	88.55	20.9	9.0	160	---			
	17	468.20	1.7	103.51	20.9	9.0	144	---			
	16	478.83	1.7	112.91	20.9	9.0	135	---			
	17	464.66	2.4	103.73	32.4	13.7	192	---	SK 13307 - 444/5T	6702	144
16	498.30	2.4	113.15	32.4	13.7	185	---				


150 hp - 200 hp Parallel Drives $n_1 = 1800 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
150	44	215.96	2.7	40.83	17.8	8.5	143	A/FAN	SK 11307 - 444/5T	3219	144			
	40	232.77	2.4	44.70	17.8	8.5	132	A/FAN						
	35	269.95	2.1	50.25	17.8	8.5	156	---						
	32	293.84	1.9	55.01	17.8	8.5	149	---						
	28	343.41	1.7	64.31	17.8	8.5	132	A/FAN						
	25	365.54	1.5	70.40	17.8	8.5	123	A/FAN						
	22	435.46	1.3	81.58	17.8	8.5	137	A/FAN						
	36	265.52	2.9	50.01	20.9	9.0	188	---				SK 12307 - 444/5T	4652	144
	33	291.19	2.8	54.55	20.9	9.0	180	---						
	28	331.90	2.4	63.77	20.9	9.0	160	---						
	26	369.96	2.2	69.56	20.9	9.0	149	---						
	22	427.49	1.8	81.18	20.9	9.0	166	---						
	20	473.52	1.7	88.55	20.9	9.0	160	---						
	17	569.10	1.4	103.51	20.9	9.0	144	A/FAN						
16	581.49	1.4	112.91	20.9	9.0	135	A/FAN							
22	431.92	2.5	80.34	32.4	13.7	223	---	SK 13307 - 444/5T	6702	144				
20	470.86	2.5	87.64	32.4	13.7	223	---							
17	557.60	2.0	103.73	32.4	13.7	192	---							
16	597.43	2.0	113.15	32.4	13.7	185	---							
200	63	202.68	2.8	28.56	17.8	8.5	137	A/CC	SK 11307 - 447/9T	3219	144			
	56	226.58	2.5	31.90	17.8	8.5	171	A/FAN						
	51	242.51	2.3	34.93	17.8	8.5	163	A/FAN						
	44	292.07	2.0	40.83	17.8	8.5	143	A/FAN						
	40	309.78	1.8	44.70	17.8	8.5	132	A/CC						
	36	354.03	1.6	50.25	17.8	8.5	156	A/FAN						
	33	371.73	1.5	55.01	17.8	8.5	149	A/FAN						
	44	284.11	2.8	40.58	20.9	9.0	173	A/FAN				SK 12307 - 447/9T	4652	144
	40	316.86	2.6	44.26	20.9	9.0	160	A/FAN						
	36	349.60	2.2	50.01	20.9	9.0	188	A/FAN						
	33	387.66	2.1	54.55	20.9	9.0	180	A/FAN						
	28	442.54	1.8	63.77	20.9	9.0	160	A/FAN						
	26	478.83	1.7	69.56	20.9	9.0	149	A/FAN						
	22	592.12	1.3	81.18	20.9	9.0	166	A/FAN						
	280	45.14	16.9	6.38	22.3	9.4	533	---	SK 13307 - 447/9T	6702	144			
	89	142.50	7.4	20.05	32.4	13.7	281	---						
	82	154.00	6.9	21.90	32.4	13.7	282	---						
	28	446.08	2.5	64.78	32.4	13.7	214	---						
25	498.30	2.4	70.66	32.4	13.7	206	---							
22	568.22	1.9	80.34	32.4	13.7	223	---							
20	619.55	1.9	87.64	32.4	13.7	223	---							



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page																																																																																																																																																																																																																																																																																																												
200	17	743.46	1.5	103.73	32.4	13.7	192	A/FAN	SK 13207 - 447/9T	6217	144																																																																																																																																																																																																																																																																																																												
	16	796.57	1.5	113.15	32.4	13.7	185	A/FAN					17	735.50	2.6	102.20	33.5	11.5	281	---	SK 15307 - 447/9T	10362	144	16	779.75	2.6	111.48	33.5	11.5	271	---	250	80	200.03	2.7	22.32	17.8	8.5	171	A	SK 11307 - 447/9T	3219	144	69	228.35	2.4	26.09	17.8	8.5	149	A	63	246.05	2.3	28.56	17.8	8.5	137	A	56	283.22	2.0	31.90	17.8	8.5	171	A	51	309.78	1.8	34.93	17.8	8.5	163	A	44	365.54	1.6	40.83	17.8	8.5	143	A	40	398.28	1.4	44.70	17.8	8.5	132	A	97	163.74	2.7	18.50	18.7	7.6	190	A/FAN	SK 11207 - 447/9T	3064	144	88	180.56	2.6	20.25	20.5	8.5	171	A/CC	56	284.99	2.7	31.82	20.9	9.0	205	A/FAN	SK 12307 - 447/9T	4652	144	52	308.01	2.7	34.71	20.9	9.0	196	A/FAN	44	362.00	2.2	40.58	20.9	9.0	173	A/CC	40	392.09	2.1	44.26	20.9	9.0	160	A/CC	36	427.49	1.8	50.01	20.9	9.0	188	A/FAN	33	478.83	1.7	54.55	20.9	9.0	180	A/FAN	28	569.10	1.4	63.77	20.9	9.0	160	A/CC	26	626.63	1.3	69.56	20.9	9.0	149	A/CC	36	431.92	2.5	50.17	32.4	13.7	255	---	SK 13307 - 447/9T	6702	144	33	470.86	2.5	54.73	32.4	13.7	255	---	28	557.60	2.0	64.78	32.4	13.7	214	A/FAN	25	629.29	1.9	70.66	32.4	13.7	206	A/FAN	22	719.57	1.5	80.34	32.4	13.7	223	A/FAN	20	785.06	1.5	87.64	32.4	13.7	223	A/FAN	22	708.06	2.6	80.10	33.5	11.5	330	---	SK 15307 - 447/9T	10362	144	20	782.41	2.5	87.37	33.5	11.5	316	---	17	910.74	2.1	102.20	33.5	11.5	281	---	16	964.73	2.1	111.48	33.5	11.5	271	---	300	124	154.00	2.7	14.46	16.9	7.0	244	A/FAN	SK 11307 - 447/9T	3219	144	113	169.93	2.6	15.83	18.9	8.1	228	A/FAN	97	192.06	2.3	18.50	18.7	7.6	190	A/CC	88	213.30	2.2	20.25	20.5	8.5	171	A/CC	80	234.54	2.3	22.32	17.8	8.5	171	B	69	274.37	2.0	26.09
	17	735.50	2.6	102.20	33.5	11.5	281	---	SK 15307 - 447/9T	10362	144																																																																																																																																																																																																																																																																																																												
	16	779.75	2.6	111.48	33.5	11.5	271	---				250	80	200.03	2.7	22.32	17.8	8.5	171	A	SK 11307 - 447/9T	3219	144	69	228.35	2.4	26.09	17.8	8.5	149	A		63	246.05	2.3	28.56	17.8	8.5	137	A				56	283.22	2.0	31.90	17.8	8.5	171	A	51	309.78	1.8	34.93	17.8	8.5	163	A	44	365.54	1.6	40.83	17.8	8.5	143	A	40	398.28	1.4	44.70	17.8	8.5	132	A	97	163.74	2.7	18.50	18.7	7.6	190	A/FAN	SK 11207 - 447/9T	3064	144	88	180.56	2.6	20.25	20.5	8.5	171	A/CC	56	284.99	2.7	31.82	20.9	9.0	205	A/FAN	SK 12307 - 447/9T	4652	144	52	308.01	2.7	34.71	20.9	9.0	196	A/FAN	44	362.00	2.2	40.58	20.9				9.0	173	A/CC	40	392.09	2.1	44.26	20.9	9.0	160	A/CC	36	427.49	1.8	50.01	20.9	9.0	188	A/FAN	33	478.83	1.7	54.55	20.9	9.0	180	A/FAN	28	569.10	1.4	63.77	20.9	9.0	160	A/CC	26	626.63	1.3	69.56	20.9	9.0	149	A/CC	36	431.92	2.5	50.17	32.4	13.7	255	---	SK 13307 - 447/9T	6702	144	33	470.86	2.5	54.73	32.4	13.7	255	---	28	557.60				2.0	64.78	32.4	13.7	214	A/FAN	25	629.29	1.9	70.66	32.4	13.7	206	A/FAN	22	719.57	1.5	80.34	32.4	13.7	223	A/FAN	20	785.06	1.5	87.64	32.4	13.7	223	A/FAN	22	708.06	2.6	80.10	33.5	11.5	330	---	SK 15307 - 447/9T	10362	144	20	782.41	2.5	87.37	33.5	11.5	316				---	17	910.74	2.1	102.20	33.5	11.5	281	---	16	964.73	2.1	111.48	33.5	11.5	271	---	300	124	154.00	2.7	14.46	16.9	7.0		244	A/FAN	SK 11307 - 447/9T	3219	144	113	169.93	2.6				15.83	18.9	8.1	228	A/FAN	97	192.06	2.3	18.50	18.7	7.6	190	A/CC	88	213.30	2.2	20.25	20.5	8.5	171	A/CC	80	234.54	2.3	22.32	17.8	8.5	171	B	69	274.37	2.0	26.09	17.8	8.5	149
250	80	200.03	2.7	22.32	17.8	8.5	171	A	SK 11307 - 447/9T	3219	144																																																																																																																																																																																																																																																																																																												
	69	228.35	2.4	26.09	17.8	8.5	149	A																																																																																																																																																																																																																																																																																																															
	63	246.05	2.3	28.56	17.8	8.5	137	A																																																																																																																																																																																																																																																																																																															
	56	283.22	2.0	31.90	17.8	8.5	171	A																																																																																																																																																																																																																																																																																																															
	51	309.78	1.8	34.93	17.8	8.5	163	A																																																																																																																																																																																																																																																																																																															
	44	365.54	1.6	40.83	17.8	8.5	143	A																																																																																																																																																																																																																																																																																																															
	40	398.28	1.4	44.70	17.8	8.5	132	A																																																																																																																																																																																																																																																																																																															
	97	163.74	2.7	18.50	18.7	7.6	190	A/FAN					SK 11207 - 447/9T	3064	144																																																																																																																																																																																																																																																																																																								
	88	180.56	2.6	20.25	20.5	8.5	171	A/CC																																																																																																																																																																																																																																																																																																															
	56	284.99	2.7	31.82	20.9	9.0	205	A/FAN					SK 12307 - 447/9T	4652	144																																																																																																																																																																																																																																																																																																								
	52	308.01	2.7	34.71	20.9	9.0	196	A/FAN																																																																																																																																																																																																																																																																																																															
	44	362.00	2.2	40.58	20.9	9.0	173	A/CC																																																																																																																																																																																																																																																																																																															
	40	392.09	2.1	44.26	20.9	9.0	160	A/CC																																																																																																																																																																																																																																																																																																															
	36	427.49	1.8	50.01	20.9	9.0	188	A/FAN																																																																																																																																																																																																																																																																																																															
33	478.83	1.7	54.55	20.9	9.0	180	A/FAN																																																																																																																																																																																																																																																																																																																
28	569.10	1.4	63.77	20.9	9.0	160	A/CC																																																																																																																																																																																																																																																																																																																
26	626.63	1.3	69.56	20.9	9.0	149	A/CC																																																																																																																																																																																																																																																																																																																
36	431.92	2.5	50.17	32.4	13.7	255	---	SK 13307 - 447/9T	6702	144																																																																																																																																																																																																																																																																																																													
33	470.86	2.5	54.73	32.4	13.7	255	---																																																																																																																																																																																																																																																																																																																
28	557.60	2.0	64.78	32.4	13.7	214	A/FAN																																																																																																																																																																																																																																																																																																																
25	629.29	1.9	70.66	32.4	13.7	206	A/FAN																																																																																																																																																																																																																																																																																																																
22	719.57	1.5	80.34	32.4	13.7	223	A/FAN																																																																																																																																																																																																																																																																																																																
20	785.06	1.5	87.64	32.4	13.7	223	A/FAN																																																																																																																																																																																																																																																																																																																
22	708.06	2.6	80.10	33.5	11.5	330	---	SK 15307 - 447/9T	10362	144																																																																																																																																																																																																																																																																																																													
20	782.41	2.5	87.37	33.5	11.5	316	---																																																																																																																																																																																																																																																																																																																
17	910.74	2.1	102.20	33.5	11.5	281	---																																																																																																																																																																																																																																																																																																																
16	964.73	2.1	111.48	33.5	11.5	271	---																																																																																																																																																																																																																																																																																																																
300	124	154.00	2.7	14.46	16.9	7.0	244	A/FAN	SK 11307 - 447/9T	3219	144																																																																																																																																																																																																																																																																																																												
	113	169.93	2.6	15.83	18.9	8.1	228	A/FAN																																																																																																																																																																																																																																																																																																															
	97	192.06	2.3	18.50	18.7	7.6	190	A/CC																																																																																																																																																																																																																																																																																																															
	88	213.30	2.2	20.25	20.5	8.5	171	A/CC																																																																																																																																																																																																																																																																																																															
	80	234.54	2.3	22.32	17.8	8.5	171	B																																																																																																																																																																																																																																																																																																															
	69	274.37	2.0	26.09	17.8	8.5	149	B																																																																																																																																																																																																																																																																																																															


300 hp - 350 hp Parallel Drives $n_1 = 1800$ rpm



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page	
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67				
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]		
300	63	298.27	1.9	28.56	17.8	8.5	137	B	SK 11207 - 447/9T	3064	144	
	56	332.79	1.7	31.90	17.8	8.5	171	B				
	51	371.73	1.5	34.93	17.8	8.5	163	B				
	44	416.87	1.4	40.83	17.8	8.5	143	B				
	69	274.37	2.9	25.87	20.9	9.0	180	B	SK 12307 - 447/9T	4652	144	
		63	297.39	2.8	28.22	20.9	9.0	166				B
		56	334.56	2.3	31.82	20.9	9.0	205				A
		52	362.00	2.3	34.71	20.9	9.0	196				A
		44	419.53	1.9	40.58	20.9	9.0	173				B
		40	484.14	1.7	44.26	20.9	9.0	160				B
		36	513.34	1.5	50.01	20.9	9.0	188				A
		33	581.49	1.4	54.55	20.9	9.0	180				B
43	446.08	2.5	41.20	32.4	13.7	233	A/FAN	SK 13307 - 447/9T	6702	144		
	40	477.94	2.5	44.94	32.4	13.7	223				A/FAN	
	36	514.23	2.1	50.17	32.4	13.7	255				A/FAN	
	33	560.25	2.1	54.73	32.4	13.7	255				A/FAN	
	28	655.84	1.7	64.78	32.4	13.7	214				A/FAN	
	25	747.00	1.6	70.66	32.4	13.7	206				A/CC	
28	682.39	2.8	63.82	33.5	11.5	316	---	SK 15307 - 447/9T	10362	144		
	26	723.99	2.8	69.62	33.5	11.5	304				---	
	22	876.22	2.1	80.10	33.5	11.5	330				---	
	20	931.10	2.1	87.37	33.5	11.5	316				---	
	17	1124.93	1.7	102.20	33.5	11.5	281				A/FAN	
	16	1192.20	1.7	111.48	33.5	11.5	271				A/FAN	
350	80	269.95	2.0	22.32	17.8	8.5	171	B	SK 11307 - 447/9T	3219	144	
	68	323.05	1.7	26.09	17.8	8.5	149	B				
	63	354.03	1.6	28.56	17.8	8.5	137	B				
	56	404.48	1.4	31.90	17.8	8.5	171	B				
	51	429.26	1.3	34.93	17.8	8.5	163	B				
	154	144.27	2.7	11.61	15.7	6.5	310	A/FAN*	SK 11207 - 447/9T	3064	144	
	141	154.00	2.7	12.71	17.5	7.4	201	A				
	124	180.56	2.3	14.46	16.9	7.0	244	A				
	113	192.06	2.3	15.83	18.9	8.1	228	A				
	97	232.77	1.9	18.50	18.7	7.6	190	A				
88	246.94	1.9	20.25	20.5	8.5	171	A					
81	268.18	3.0	22.13	20.9	9.0	205	B	SK 12307 - 447/9T	4652	144		
	69	318.63	2.5	25.87	20.9	9.0	180				B	
	63	346.95	2.4	28.22	20.9	9.0	166				B	
	56	385.01	2.0	31.82	20.9	9.0	205				B	
	51	438.11	1.9	34.71	20.9	9.0	196				B	
	44	498.30	1.6	40.58	20.9	9.0	173				B	
40	548.75	1.5	44.26	20.9	9.0	160	B					



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
350	56	400.05	2.7	31.91	32.4	13.7	282	A/FAN	SK 13307 - 447/9T	6702	144			
	51	436.34	2.7	34.81	32.4	13.7	282	A/FAN						
	43	507.15	2.2	41.20	32.4	13.7	233	A/CC						
	40	543.44	2.2	44.94	32.4	13.7	223	B/CC						
	36	600.08	1.8	50.17	32.4	13.7	255	A/FAN						
	33	654.07	1.8	54.73	32.4	13.7	255	A/FAN						
	28	796.57	1.4	64.78	32.4	13.7	214	B/CC						
	25	853.21	1.4	70.66	32.4	13.7	206	B/CC						
	33	674.43	2.9	54.56	33.5	11.5	361	---				SK 15307 - 447/9T	10362	144
	28	796.57	2.4	63.82	33.5	11.5	316	A/FAN						
	26	844.36	2.4	69.62	33.5	11.5	304	A/FAN						
	22	1023.15	1.8	80.10	33.5	11.5	330	A/FAN						
	20	1086.87	1.8	87.37	33.5	11.5	316	A/FAN						
	17	1274.51	1.5	102.20	33.5	11.5	281	A/FAN						
	16	1351.51	1.5	111.48	33.5	11.5	271	A/FAN						
	400	80	317.74	1.7	22.32	17.8	8.5	171						
68	365.54	1.5	26.09	17.8	8.5	149	B							
63	404.48	1.4	28.56	17.8	8.5	137	B							
	197	128.34	2.9	9.05	14.4	5.8	341	A/FAN*	SK 11207 - 447/9T	3064	144			
	180	138.96	2.8	9.91	16.0	6.7	228	A						
	154	161.97	2.4	11.61	15.7	6.5	310	A/FAN*						
	141	180.56	2.3	12.71	17.5	7.4	201	B						
	124	207.99	2.0	14.46	16.9	7.0	244	A						
	113	221.27	2.0	15.83	18.9	8.1	228	A						
	97	260.21	1.7	18.50	18.7	7.6	190	B						
	88	292.96	1.6	20.25	20.5	8.5	171	B						
	81	309.78	2.6	22.13	20.9	9.0	205	B	SK 12307 - 447/9T	4652	144			
	69	362.00	2.2	25.87	20.9	9.0	180	B						
	63	396.51	2.1	28.22	20.9	9.0	166	B						
	56	453.16	1.7	31.82	20.9	9.0	205	B						
	51	489.45	1.7	34.71	20.9	9.0	196	B						
	44	569.10	1.4	40.58	20.9	9.0	173	B						
	40	632.83	1.3	44.26	20.9	9.0	160	B						
	97	259.33	2.9	18.34	20.5	8.8	226	A/CC	SK 12207 - 447/9T	4420	144			
	89	284.11	2.8	20.01	20.9	9.0	205	B/CC						
	56	449.62	2.4	31.91	32.4	13.7	282	A	SK 13307 - 447/9T	6702	144			
	51	490.33	2.4	34.81	32.4	13.7	282	A						
	43	586.80	1.9	41.20	32.4	13.7	233	B						
	40	629.29	1.9	44.94	32.4	13.7	223	B						
	36	719.57	1.5	50.17	32.4	13.7	255	B						
	33	785.06	1.5	54.73	32.4	13.7	255	B						


400 hp - 450 hp Parallel Drives $n_1 = 1800 \text{ rpm}$



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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
400	36	708.06	2.6	50.02	33.5	11.5	379	A/FAN*	SK 15307 - 447/9T	10362	144
	33	752.31	2.6	54.56	33.5	11.5	361	A/FAN*			
	28	910.74	2.1	63.82	33.5	11.5	316	A/FAN*			
	26	964.73	2.1	69.62	33.5	11.5	304	A/FAN*			
	22	1150.60	1.6	80.10	33.5	11.5	330	A/FAN*			
	20	1222.29	1.6	87.37	33.5	11.5	316	A/FAN*			
	17	1470.99	1.3	102.20	33.5	11.5	281	A			
450	80	360.23	1.5	22.32	17.8	8.5	171	B	SK 11307 - 447/9T	3219	144
	68	422.18	1.3	26.09	17.8	8.5	149	C			
	227	123.91	3.0	7.87	14.4	6.1	284	A	SK 11207 - 447/9T	3064	144
	197	143.38	2.6	9.05	14.4	5.8	341	A/FAN*			
	180	155.77	2.5	9.91	16.0	6.7	228	B			
	154	185.87	2.1	11.61	15.7	6.5	310	A			
	141	198.26	2.1	12.71	17.5	7.4	201	B			
	124	231.00	1.8	14.46	16.9	7.0	244	B			
	113	246.05	1.8	15.83	18.9	8.1	228	B			
	97	294.73	1.5	18.50	18.7	7.6	190	B			
88	312.43	1.5	20.25	20.5	8.5	171	B				
	81	350.49	2.3	22.13	20.9	9.0	205	B	SK 12307 - 447/9T	4652	144
	69	419.53	1.9	25.87	20.9	9.0	180	B			
	63	462.01	1.8	28.22	20.9	9.0	166	C			
	56	513.34	1.5	31.82	20.9	9.0	205	B			
	51	554.94	1.5	34.71	20.9	9.0	196	B			
	97	289.42	2.6	18.34	20.5	8.8	226	B/CC	SK 12207 - 447/9T	4420	144
	89	318.63	2.5	20.01	20.9	9.0	205	B/CC			
	69	413.33	2.7	25.92	32.4	13.7	233	B	SK 13307 - 447/9T	6702	144
	63	442.54	2.7	28.28	32.4	13.7	223	B			
	56	514.23	2.1	31.91	32.4	13.7	282	B			
	51	560.25	2.1	34.81	32.4	13.7	282	B			
	43	655.84	1.7	41.20	32.4	13.7	233	B			
	40	702.75	1.7	44.94	32.4	13.7	223	B			
	36	770.90	1.4	50.17	32.4	13.7	255	B			
33	840.82	1.4	54.73	32.4	13.7	255	B				
	41	699.21	2.9	43.83	33.5	11.5	330	B/FAN*	SK 15307 - 447/9T	10362	144
	36	800.11	2.3	50.02	33.5	11.5	379	A/FAN*			
	33	850.56	2.3	54.56	33.5	11.5	361	A/FAN*			
	28	1006.33	1.9	63.82	33.5	11.5	316	B			
	26	1066.52	1.9	69.62	33.5	11.5	304	B			
	22	1315.22	1.4	80.10	33.5	11.5	330	B/FAN*			
	20	1397.53	1.4	87.37	33.5	11.5	316	B			



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in·1000]			[lb·1000]	[lb·1000]	[hp]	---		[lb]	
500	80	385.89	1.4	22.32	17.8	8.5	171	C	SK 11307 - 585/6	3219	144
249	127.45	2.7	7.19	13.0	5.4	379	A/FAN*	SK 11207 - 585/6	3064	144	
227	138.07	2.7	7.87	14.4	6.1	284	B				
198	161.97	2.3	9.05	14.4	5.8	341	A				
180	177.02	2.2	9.91	16.0	6.7	228	B				
154	205.34	1.9	11.61	15.7	6.5	310	A				
141	218.61	1.9	12.71	17.5	7.4	201	B				
124	260.21	1.6	14.46	16.9	7.0	244	B				
113	277.03	1.6	15.83	18.9	8.1	228	B				
97	315.97	1.4	18.50	18.7	7.6	190	B				
88	361.11	1.3	20.25	20.5	8.5	171	B				
81	383.24	2.1	22.13	20.9	9.0	205	C	SK 12307 - 585/6	4652	144	
69	468.20	1.7	25.87	20.9	9.0	180	C				
63	489.45	1.7	28.22	20.9	9.0	166	C				
56	549.63	1.4	31.82	20.9	9.0	205	C				
52	593.89	1.4	34.71	20.9	9.0	196	C				
124	255.79	2.8	14.39	18.4	7.9	287	B	SK 12207 - 585/6	4420	144	
114	275.26	2.7	15.69	19.1	8.1	269	B				
97	327.48	2.3	18.34	20.5	8.8	226	B				
89	362.00	2.2	20.01	20.9	9.0	205	B				
82	379.70	2.8	21.90	32.4	13.7	282	B	SK 13307 - 585/6	6702	144	
69	464.66	2.4	25.92	32.4	13.7	233	B				
63	498.30	2.4	28.28	32.4	13.7	223	B				
56	568.22	1.9	31.91	32.4	13.7	282	B				
51	619.55	1.9	34.81	32.4	13.7	282	B				
43	743.46	1.5	41.20	32.4	13.7	233	B				
40	796.57	1.5	44.94	32.4	13.7	223	B				
44	708.06	2.7	40.18	33.5	11.5	345	B	SK 15307 - 585/6	10362	144	
41	779.75	2.6	43.83	33.5	11.5	330	B				
36	876.22	2.1	50.02	33.5	11.5	379	B/FAN*				
33	978.01	2.0	54.56	33.5	11.5	361	B/FAN*				
28	1124.93	1.7	63.82	33.5	11.5	316	B				
26	1192.20	1.7	69.62	33.5	11.5	304	B				
22	1416.12	1.3	80.10	33.5	11.5	330	B				




600 hp - 700 hp Parallel Drives $n_1 = 1800 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
600	310	121.26	2.7	5.77	11.7	4.7	426	A	SK 11207 - 586/7	3064	144			
	284	132.76	2.6	6.31	13.0	5.6	341	B						
	249	150.46	2.3	7.19	13.0	5.4	379	B						
	227	169.05	2.2	7.87	14.4	6.1	284	B						
	198	195.60	1.9	9.05	14.4	5.8	341	B						
	181	205.34	1.9	9.91	16.0	6.7	228	B						
	154	243.40	1.6	11.61	15.7	6.5	310	B						
	141	260.21	1.6	12.71	17.5	7.4	201	B						
	124	297.39	1.4	14.46	16.9	7.0	244	B						
	113	340.75	1.3	15.83	18.9	8.1	228	B						
	81	473.52	1.7	22.13	20.9	9.0	205	C				SK 12307 - 586/7	4652	144
	69	531.05	1.5	25.87	20.9	9.0	180	C						
	63	593.89	1.4	28.22	20.9	9.0	166	D						
	154	248.71	2.7	11.60	16.6	7.2	331	B	SK 12207 - 586/7	4420	144			
	141	272.60	2.6	12.66	17.5	7.6	239	B						
	124	299.16	2.4	14.39	18.4	7.9	287	B						
	114	338.10	2.2	15.69	19.1	8.1	269	B						
	98	395.63	1.9	18.34	20.5	8.8	226	B						
	89	419.53	1.9	20.01	20.9	9.0	205	B						
	82	462.01	2.3	21.90	32.4	13.7	282	C	SK 13307 - 586/7	6702	144			
	69	557.60	2.0	25.92	32.4	13.7	233	C						
	63	597.43	2.0	28.28	32.4	13.7	223	C						
	56	675.31	1.6	31.91	32.4	13.7	282	C						
	51	735.50	1.6	34.81	32.4	13.7	282	C						
97	387.66	2.6	18.38	31.5	13.3	297	B/CC	SK 13207 - 586/7	6217	144				
89	421.30	2.5	20.05	32.4	13.7	281	B/CC							
57	662.04	2.7	31.49	33.5	11.5	421	B	SK 15307 - 586/7	10362	144				
52	721.34	2.7	34.35	33.5	11.5	399	B							
45	831.09	2.3	40.18	33.5	11.5	345	B							
41	921.36	2.2	43.83	33.5	11.5	330	B							
36	1023.15	1.8	50.02	33.5	11.5	379	B							
33	1150.60	1.7	54.56	33.5	11.5	361	B							
28	1365.67	1.4	63.82	33.5	11.5	316	C							
26	1447.98	1.4	69.62	33.5	11.5	304	C							
700	310	142.50	2.3	5.77	11.7	4.7	426	B	SK 11207 - 587/8	3064	144			
	284	156.66	2.2	6.31	13.0	5.6	341	B						
	249	181.44	1.9	7.19	13.0	5.4	379	B						
	227	195.60	1.9	7.87	14.4	6.1	284	B						
	198	218.61	1.7	9.05	14.4	5.8	341	B						
	181	243.40	1.6	9.91	16.0	6.7	228	C						
	154	277.91	1.4	11.61	15.7	6.5	310	B						
	141	320.40	1.3	12.71	17.5	7.4	201	C						




Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
700	81	537.24	1.5	22.13	20.9	9.0	205	D	SK 12307 - 587/8	4652	144
	197	224.81	2.8	9.10	15.5	6.7	390	B	SK 12207 - 587/8	4420	144
	180	246.05	2.7	9.93	16.0	7.0	269	B			
	154	292.07	2.3	11.60	16.6	7.2	331	B			
	141	308.01	2.3	12.66	17.5	7.6	239	C			
	124	358.46	2.0	14.39	18.4	7.9	287	B			
	114	391.20	1.9	15.69	19.1	8.1	269	B			
	98	442.54	1.7	18.34	20.5	8.8	226	C			
	89	498.30	1.6	20.01	20.9	9.0	205	C			
	82	531.05	2.0	21.90	32.4	13.7	282	C	SK 13307 - 587/8	6702	144
	69	655.84	1.7	25.92	32.4	13.7	233	D			
	63	702.75	1.7	28.28	32.4	13.7	223	D			
	56	770.90	1.4	31.91	32.4	13.7	282	C			
	51	840.82	1.4	34.81	32.4	13.7	282	C			
	126	350.49	2.7	14.24	28.3	11.9	381	B	SK 13207 - 587/8	6217	144
	115	377.93	2.6	15.53	29.9	12.6	381	B			
	97	458.47	2.2	18.38	31.5	13.3	297	B			
	89	501.84	2.1	20.05	32.4	13.7	281	B			
	70	619.55	2.9	25.54	33.5	11.5	361	C	SK 15307 - 587/8	10362	144
	64	698.32	2.7	27.86	33.5	11.5	345	C			
	57	777.10	2.3	31.49	33.5	11.5	421	B			
	52	847.02	2.3	34.35	33.5	11.5	399	C			
	45	1006.33	1.9	40.18	33.5	11.5	345	C			
	41	1066.52	1.9	43.83	33.5	11.5	330	C			
36	1227.60	1.5	50.02	33.5	11.5	379	C				
33	1303.72	1.5	54.56	33.5	11.5	361	C				
800	310	163.74	2.0	5.77	11.7	4.7	426	B	SK 11207 - 587/8	3064	144
	284	181.44	1.9	6.31	13.0	5.6	341	C			
	249	202.68	1.7	7.19	13.0	5.4	379	B			
	227	218.61	1.7	7.87	14.4	6.1	284	C			
	198	247.82	1.5	9.05	14.4	5.8	341	C			
	181	277.91	1.4	9.91	16.0	6.7	228	C			
	246	205.34	2.8	7.27	15.1	6.5	429	B	SK 12207 - 587/8	4420	144
	226	224.81	2.8	7.93	14.4	6.3	330	C			
	197	251.36	2.5	9.10	15.5	6.7	390	B			
	180	277.03	2.4	9.93	16.0	7.0	269	C			
	154	320.40	2.1	11.60	16.6	7.2	331	C			
	141	354.03	2.0	12.66	17.5	7.6	239	C			
	124	398.28	1.8	14.39	18.4	7.9	287	C			
	114	437.23	1.7	15.69	19.1	8.1	269	C			
	98	501.84	1.5	18.34	20.5	8.8	226	C			
	89	569.10	1.4	20.01	20.9	9.0	205	C			


800 hp - 900 hp Parallel Drives $n_1 = 1800 \text{ rpm}$



GEARMOTOR

Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
800	82	624.86	1.7	21.90	32.4	13.7	282	D	SK 13307 - 587/8	6702	144
	69	743.46	1.5	25.92	32.4	13.7	233	E			
	63	796.57	1.5	28.28	32.4	13.7	223	E			
	157	319.51	2.8	11.37	26.3	11.0	485	B	SK 13207 - 587/8	6217	144
	144	354.03	2.6	12.40	27.7	11.7	333	C			
	126	394.74	2.4	14.24	28.3	11.9	381	B			
	115	446.96	2.2	15.53	29.9	12.6	381	B			
	97	531.05	1.9	18.38	31.5	13.3	297	C			
	89	554.06	1.9	20.05	32.4	13.7	281	C			
	82	607.16	2.8	21.84	33.5	11.5	421	C	SK 15307 - 587/8	10362	144
	70	718.68	2.5	25.54	33.5	11.5	361	D			
	64	785.95	2.4	27.86	33.5	11.5	345	D			
	57	893.93	2.0	31.49	33.5	11.5	421	C			
	52	973.58	2.0	34.35	33.5	11.5	399	C			
	45	1124.93	1.7	40.18	33.5	11.5	345	D			
	41	1266.54	1.6	43.83	33.5	11.5	330	D			
	36	1416.12	1.3	50.02	33.5	11.5	379	C			
	99	501.84	3.0	18.11	30.3	10.1	445	B			
91	546.98	2.8	19.76	33.5	11.5	420	B				
900	312	182.33	1.8	5.77	11.7	4.7	426	C	SK 11207	3064	144
	285	202.68	1.7	6.31	13.0	5.6	341	C			
	250	230.12	1.5	7.19	13.0	5.4	379	C			
	229	247.82	1.5	7.87	14.4	6.1	284	C			
	199	285.88	1.3	9.05	14.4	5.8	341	C			
	319	177.02	2.9	5.64	14.8	6.3	477	B	SK 12207	4420	144
	292	195.60	2.9	6.16	14.6	6.3	390	C			
	248	230.12	2.5	7.27	15.1	6.5	429	C			
	227	251.36	2.5	7.93	14.4	6.3	330	C			
	198	285.88	2.2	9.10	15.5	6.7	390	C			
	181	315.97	2.1	9.93	16.0	7.0	269	C			
	155	373.50	1.8	11.60	16.6	7.2	331	C			
	142	392.97	1.8	12.66	17.5	7.6	239	C			
	125	447.85	1.6	14.39	18.4	7.9	287	C			
	115	495.64	1.5	15.69	19.1	8.1	269	C			
98	578.84	1.3	18.34	20.5	8.8	226	C				
	194	297.39	2.8	9.26	24.5	10.3	533	B	SK 13307	6702	144
	178	324.82	2.7	10.11	25.6	10.8	356	C			
	158	357.57	2.5	11.37	26.3	11.0	485	B			



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
900	145	383.24	2.4	12.40	27.7	11.7	333	C	SK 13207	6217	144
	126	451.39	2.1	14.24	28.3	11.9	381	C			
	116	491.22	2.0	15.53	29.9	12.6	381	C			
	98	593.89	1.7	18.38	31.5	13.3	297	C			
	90	619.55	1.7	20.05	32.4	13.7	281	C			
	82	708.06	1.5	21.90	32.4	13.7	282	E			
	69	796.57	1.4	25.92	32.4	13.7	233	F			
	64	918.71	1.3	28.28	32.4	13.7	223	F			
	82	679.74	2.5	21.84	33.5	11.5	421	D			
	70	816.92	2.2	25.54	33.5	11.5	361	E			
	65	856.75	2.2	27.86	33.5	11.5	345	E			
	57	993.05	1.8	31.49	33.5	11.5	421	D			
	52	1081.56	1.8	34.35	33.5	11.5	399	D			
	45	1274.51	1.5	40.18	33.5	11.5	345	E			
41	1351.51	1.5	43.83	33.5	11.5	330	E				
900	116	494.76	2.9	15.48	30.8	10.3	540	B	SK 15207	9833	144
	99	578.84	2.6	18.11	30.3	10.1	445	C			
	91	612.47	2.5	19.76	33.5	11.5	420	C			
1000	312	204.45	1.6	5.77	11.7	4.7	426	C	SK 11207	3064	144
	285	215.96	1.6	6.31	13.0	5.6	341	C			
	250	246.94	1.4	7.19	13.0	5.4	379	C			
	229	265.52	1.4	7.87	14.4	6.1	284	D			
1000	319	197.37	2.6	5.64	14.8	6.3	477	C	SK 12207	4420	144
	292	217.73	2.6	6.16	14.6	6.3	390	C			
	248	250.48	2.3	7.27	15.1	6.5	429	C			
	227	273.49	2.3	7.93	14.4	6.3	330	C			
	198	314.20	2.0	9.10	15.5	6.7	390	C			
	181	349.60	1.9	9.93	16.0	7.0	269	D			
	155	395.63	1.7	11.60	16.6	7.2	331	C			
	142	442.54	1.6	12.66	17.5	7.6	239	D			
	125	512.46	1.4	14.39	18.4	7.9	287	D			
	115	531.05	1.4	15.69	19.1	8.1	269	D			
82	758.51	1.4	21.90	32.4	13.7	282	F	SK 13307	6702	144	
1000	226	274.37	3.0	7.98	23.6	9.9	444	C	SK 13207	6217	144
	194	320.40	2.6	9.26	24.5	10.3	533	C			
	178	350.49	2.5	10.11	25.6	10.8	356	C			
	158	406.25	2.2	11.37	26.3	11.0	485	C			
	145	438.11	2.1	12.40	27.7	11.7	333	C			
	126	498.30	1.9	14.24	28.3	11.9	381	C			
	116	546.09	1.8	15.53	29.9	12.6	381	C			
	98	631.06	1.6	18.38	31.5	13.3	297	D			
90	701.86	1.5	20.05	32.4	13.7	281	D				


1000 hp - 1250 hp Parallel Drives $n_1 = 1800 \text{ rpm}$



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page		
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67					
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]			
1000	82	772.67	2.2	21.84	33.5	11.5	421	E	SK 15307	10362	144		
	70	898.35	2.0	25.54	33.5	11.5	361	E					
	65	992.17	1.9	27.86	33.5	11.5	345	E					
	57	1117.85	1.6	31.49	33.5	11.5	421	E					
	52	1216.98	1.6	34.35	33.5	11.5	399	E					
	45	1365.67	1.4	40.18	33.5	11.5	345	E					
	41	1559.50	1.3	43.83	33.5	11.5	330	F					
	127	502.72	2.8	14.19	27.9	9.4	581	B	SK 15207	9833	144		
	116	551.40	2.6	15.48	30.8	10.3	540	C					
	99	626.63	2.4	18.11	30.3	10.1	445	C					
	91	695.67	2.2	19.76	33.5	11.5	420	C					
	1250	319	244.28	2.1	5.64	14.8	6.3	477	D	SK 12207	4420	144	
292		269.95	2.1	6.16	14.6	6.3	390	E					
248		319.51	1.8	7.27	15.1	6.5	429	D					
227		348.72	1.8	7.93	14.4	6.3	330	E					
198		392.97	1.6	9.10	15.5	6.7	390	E					
181		442.54	1.5	9.93	16.0	7.0	269	E					
155		517.77	1.3	11.60	16.6	7.2	331	E					
308		259.33	2.7	5.85	23.2	9.7	666	C	SK 13207	6217	144		
282		282.34	2.7	6.38	22.3	9.4	533	D					
246		321.28	2.4	7.31	23.8	10.1	592	C					
226		343.41	2.4	7.98	23.6	9.9	444	D					
194		415.99	2.0	9.26	24.5	10.3	533	D					
178		438.11	2.0	10.11	25.6	10.8	356	E					
158		496.53	1.8	11.37	26.3	11.0	485	D					
145		541.67	1.7	12.40	27.7	11.7	333	E					
126		631.06	1.5	14.24	28.3	11.9	381	E					
116		701.86	1.4	15.53	29.9	12.6	381	E					
82		944.38	1.8	21.84	33.5	11.5	421	F				SK 15307	10362
70	1123.16	1.6	25.54	33.5	11.5	361	F						
65	1178.03	1.6	27.86	33.5	11.5	345	F						
184	424.84	3.0	9.78	25.6	8.8	504	D	SK 15207	9833	144			
157	510.69	2.6	11.44	25.6	8.5	686	C						
144	541.67	2.5	12.48	28.3	9.4	472	D						
127	611.59	2.3	14.19	27.9	9.4	581	C						
116	682.39	2.1	15.48	30.8	10.3	540	D						
99	792.14	1.9	18.11	30.3	10.1	445	D						
91	850.56	1.8	19.76	33.5	11.5	420	D						



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
1500	319	301.81	1.7	5.64	14.8	6.3	477	E	SK 12207	4420	144
	292	332.79	1.7	6.16	14.6	6.3	390	F			
	248	383.24	1.5	7.27	15.1	6.5	429	F			
	227	418.64	1.5	7.93	14.4	6.3	330	F			
	198	483.25	1.3	9.10	15.5	6.7	390	F			
	308	303.58	2.3	5.85	23.2	9.7	666	D	SK 13207	6217	144
	282	331.02	2.3	6.38	22.3	9.4	533	E			
	246	385.01	2.0	7.31	23.8	10.1	592	E			
	226	411.56	2.0	7.98	23.6	9.9	444	E			
	194	489.45	1.7	9.26	24.5	10.3	533	E			
	178	547.86	1.6	10.11	25.6	10.8	356	F			
	158	595.66	1.5	11.37	26.3	11.0	485	E			
	145	657.61	1.4	12.40	27.7	11.7	333	F			
	82	1132.90	1.5	21.84	33.5	11.5	421	G	SK 15307	10362	144
	70	1382.49	1.3	25.54	33.5	11.5	361	G			
	231	415.10	2.9	7.80	23.6	7.9	686	D	SK 15207	9833	144
201	462.01	2.7	8.96	23.4	7.9	755	D				
184	509.80	2.5	9.78	25.6	8.8	504	E				
157	603.62	2.2	11.44	25.6	8.5	686	D				
144	645.22	2.1	12.48	28.3	9.4	472	E				
127	740.81	1.9	14.19	27.9	9.4	581	E				
116	796.57	1.8	15.48	30.8	10.3	540	E				
99	940.83	1.6	18.11	30.3	10.1	445	E				
91	1020.49	1.5	19.76	33.5	11.5	420	F				



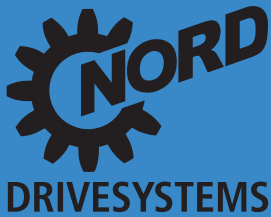
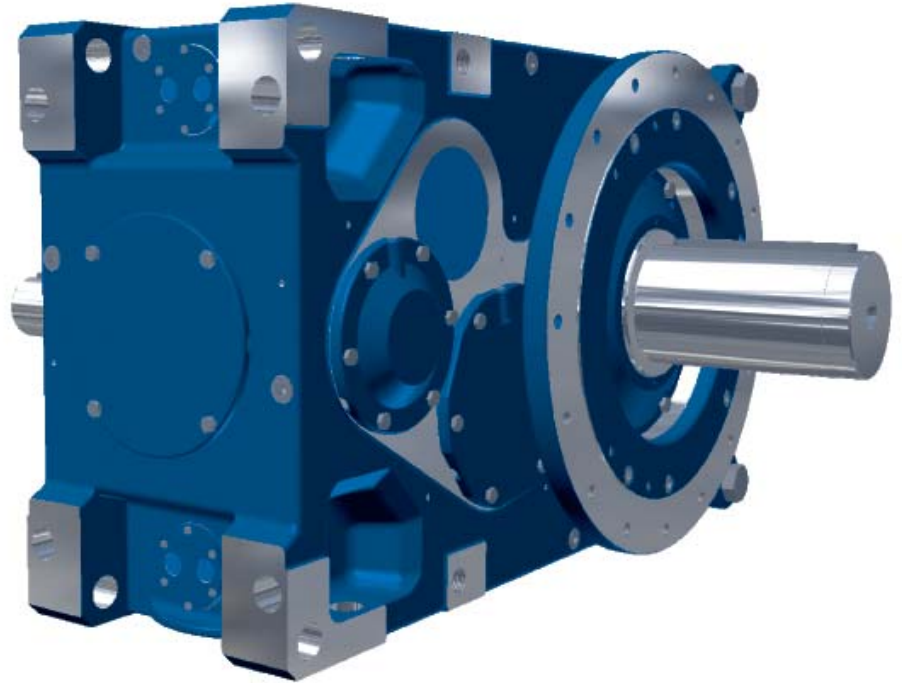


A large grid of blue lines forming a graph paper area for taking notes.

MAXXDRIVE™ Right-angle Mechanical Selection

Selection

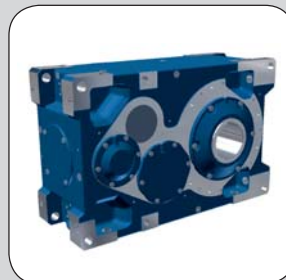
- SK..407 Right-angle Mechanical/Thermal Ratings
- SK..507 Right-angle Mechanical/Thermal Ratings



UNICASE™

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Nom. Ratio	Nominal Input Speed	Nominal Output Speed	SK 11207 Rated Power
i_N	n_{1N} [rpm]	n_{2N} [rpm]	P_N [hp]
5.6	1200	214	1081
	1800	321	1621
	Exact Ratio	i_{ges}	5.77
	Max Torque	T_{2max} [lb-in-1000]	327.4



Nom. Ratio	SK 11207 Thermal Rating [hp]					
	Fan		CC			
	P_{70}	P_{40}	P_{70}	P_{40}	P_{70}	P_{40}
i_N	20° C	40° C	20° C	40° C	20° C	40° C
5.6	426	302	+204	+131	+337	+337

SK..407 Right-angle Mechanical Ratings



MECHANICAL

Nom. Ratio i_N	Nominal Input Speed n_{1N} [rpm]	Nominal Output Speed n_{2N} [rpm]	SK 11407				SK 12407				SK 13407				SK 15407			
			Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]
12.5	1200	96	542	64	26	0.444	723	69	30	0.790	1021	109	46	1.404	1376	104	35	3.026
	1800	144	813				1085				1531				2065			
	Exact Ratio i_{ges}		12.74				12.81				13.04				12.61			
	Max Torque T_{2max} [lb-in-1000]		362.88				486.79				699.21				911.63			
14.0	1200	86	544	71	30	0.433	724	71	31	0.770	1019	114	48	1.370	1384	114	39	2.952
	1800	129	815				1086				1529				2076			
	Exact Ratio i_{ges}		13.95				13.97				14.22				13.76			
	Max Torque T_{2max} [lb-in-1000]		398.28				531.05				761.16				1,000.13			
16.0	1200	75	536	70	29	0.362	722	74	32	0.644	1011	117	49	1.146	1382	114	38	2.468
	1800	113	804				1083				1517				2072			
	Exact Ratio i_{ges}		16.34				16.33				16.00				16.10			
	Max Torque T_{2max} [lb-in-1000]		460.24				619.55				849.67				1,168.30			
18.0	1200	67	518	78	33	0.354	729	78	34	0.630	1014	123	52	1.121	1382	126	42	2.414
	1800	100	777				1093				1521				2073			
	Exact Ratio i_{ges}		17.89				17.81				17.45				17.56			
	Max Torque T_{2max} [lb-in-1000]		486.79				681.51				929.33				1,274.51			
20.0	1200	60	455	75	31	0.277	724	82	35	0.492	1017	126	53	0.875	1375	124	42	1.884
	1800	90	683				1086				1526				2062			
	Exact Ratio i_{ges}		20.35				20.25				20.04				19.98			
	Max Torque T_{2max} [lb-in-1000]		486.79				770.02				1,070.94				1,442.67			
22.4	1200	54	439	84	36	0.271	725	85	36	0.482	1002	133	56	0.857	1377	137	46	1.847
	1800	80	658				1087				1503				2065			
	Exact Ratio i_{ges}		22.27				22.09				21.86				21.79			
	Max Torque T_{2max} [lb-in-1000]		513.34				840.82				1,150.60				1,575.43			
25.0	1200	48	382	83	34	0.255	594	91	39	0.453	821	140	59	0.806	1316	135	45	1.737
	1800	72	573				891				1231				1973			
	Exact Ratio i_{ges}		26.04				25.82				25.87				25.49			
	Max Torque T_{2max} [lb-in-1000]		522.19				805.42				1,115.19				1,761.30			
28.0	1200	43	367	91	38	0.251	568	93	40	0.446	806	144	61	0.792	1230	149	51	1.707
	1800	64	550				853				1209				1845			
	Exact Ratio i_{ges}		28.50				28.16				28.22				27.81			
	Max Torque T_{2max} [lb-in-1000]		548.75				840.82				1,194.85				1,796.70			



Nom. Ratio i_N	SK 11407						SK 12407						SK 13407						SK 15407					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]	
20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	
12.5	137	97	+110	+70	+187	+187	166	118	+133	+85	+261	+261	214	152	+171	+110	+335	+335	303	215	+242	+155	+335	+335
14.0	114	81	+91	+58	+187	+187	139	99	+111	+71	+261	+261	179	127	+143	+92	+335	+335	253	180	+202	+130	+335	+335
16.0	132	94	+106	+68	+187	+187	154	109	+123	+79	+261	+261	206	146	+165	+105	+335	+335	292	207	+234	+150	+335	+335
18.0	107	76	+86	+55	+187	+187	131	93	+105	+67	+261	+261	173	123	+138	+89	+335	+335	245	174	+196	+125	+335	+335
20.0	118	84	+94	+60	+187	+187	144	102	+115	+74	+261	+261	185	131	+148	+95	+335	+335	271	192	+217	+139	+335	+335
22.4	114	81	+91	+58	+187	+187	140	99	+112	+72	+261	+261	185	131	+148	+95	+335	+335	262	186	+210	+134	+335	+335
25.0	104	74	+83	+53	+187	+187	127	90	+102	+65	+261	+261	163	116	+130	+83	+335	+335	238	169	+190	+122	+335	+335
28.0	98	70	+78	+50	+187	+187	120	85	+96	+61	+261	+261	158	112	+126	+81	+335	+335	231	164	+185	+118	+335	+335

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..407 Right-angle Mechanical Ratings



MECHANICAL

Nom. Ratio i_N	Nominal Input Speed n_{1N} [rpm]	Nominal Output Speed n_{2N} [rpm]	SK 11407				SK 12407				SK 13407				SK 15407			
			Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]
31.5	1200	38	300	75	31	0.160	387	82	35	0.285	544	126	53	0.507	758	124	42	1.093
	1800	57	450				581				816				1137			
	Exact Ratio i_{ges}		31.46				31.31				30.99				30.89			
	Max Torque T_{2max} [lb-in-1000]		495.64				637.25				885.08				1,230.25			
35.5	1200	34	298	84	36	0.156	385	85	36	0.277	543	133	56	0.493	760	137	46	1.062
	1800	51	448				577				815				1140			
	Exact Ratio i_{ges}		34.45				34.16				33.80				33.70			
	Max Torque T_{2max} [lb-in-1000]		539.90				690.36				964.73				1,345.31			
40.0	1200	30	276	83	34	0.132	384	91	39	0.235	531	83	34	0.132	761	91	39	0.235
	1800	45	414				576				796				1141			
	Exact Ratio i_{ges}		40.26				39.92				40.26				39.92			
	Max Torque T_{2max} [lb-in-1000]		584.15				805.42				1,115.19				1,575.43			
45.0	1200	27	241	91	38	0.128	360	93	40	0.228	521	144	61	0.405	760	149	51	0.873
	1800	40	361				540				782				1140			
	Exact Ratio i_{ges}		44.08				43.55				43.64				43.00			
	Max Torque T_{2max} [lb-in-1000]		557.60				823.12				1,194.85				1,717.05			
50.0	1200	24	155	75	31	0.117	241	82	35	0.208	357	126	53	0.370	475	124	42	0.798
	1800	36	232				362				536				713			
	Exact Ratio i_{ges}		51.25				51.01				50.48				50.33			
	Max Torque T_{2max} [lb-in-1000]		415.99				646.10				947.03				1,256.81			
56.0	1200	21	156	84	36	0.114	242	85	36	0.202	358	133	56	0.360	476	137	46	0.775
	1800	32	234				363				537				714			
	Exact Ratio i_{ges}		56.11				55.64				55.07				54.90			
	Max Torque T_{2max} [lb-in-1000]		460.24				708.06				1,035.54				1,371.87			
63.0	1200	19	154	83	34	0.094	236	91	39	0.166	326	140	59	0.296	475	135	45	0.637
	1800	29	231				354				489				712			
	Exact Ratio i_{ges}		65.59				65.04				65.17				64.21			
	Max Torque T_{2max} [lb-in-1000]		531.05				805.42				1,115.19				1,601.99			
71.0	1200	17	146	91	38	0.091	219	93	40	0.161	320	144	61	0.287	474	149	51	0.618
	1800	25	218				328				480				711			
	Exact Ratio i_{ges}		71.80				70.94				71.09				70.05			
	Max Torque T_{2max} [lb-in-1000]		548.75				814.27				1,194.85				1,743.60			



SK..407 Right-angle Thermal Ratings



Nom. Ratio i_N	SK 11407						SK 12407						SK 13407						SK 15407					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	---		FAN		CC		---		FAN		CC		---		FAN		CC		---		FAN		CC	
	[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]		[P _{T0}]		[P _F]		[P _{CC}]	
	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C
31.5	118	84	+94	+60	+187	+187	144	102	+115	+74	+261	+261	185	131	+148	+95	+335	+335	271	192	+217	+139	+335	+335
35.5	114	81	+91	+58	+187	+187	140	99	+112	+72	+261	+261	185	131	+148	+95	+335	+335	262	186	+210	+134	+335	+335
40.0	104	74	+83	+53	+187	+187	127	90	+102	+65	+261	+261	163	116	+130	+83	+335	+335	238	169	+190	+122	+335	+335
45.0	98	70	+78	+50	+187	+187	120	85	+96	+61	+261	+261	158	112	+126	+81	+335	+335	231	164	+185	+118	+335	+335
50.0	118	84	+94	+60	+187	+187	144	102	+115	+74	+261	+261	185	131	+148	+95	+335	+335	271	192	+217	+139	+335	+335
56.0	114	81	+91	+58	+187	+187	140	99	+112	+72	+261	+261	185	131	+148	+95	+335	+335	262	186	+210	+134	+335	+335
63.0	104	74	+83	+53	+187	+187	127	90	+102	+65	+261	+261	163	116	+130	+83	+335	+335	238	169	+190	+122	+335	+335
71.0	98	70	+78	+50	+187	+187	120	85	+96	+61	+261	+261	158	112	+126	+81	+335	+335	231	164	+185	+118	+335	+335

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..507 Right-angle Mechanical Ratings



MECHANICAL

Nom. Ratio i_N	Nominal Input Speed n_{1N} [rpm]	Nominal Output Speed n_{2N} [rpm]	SK 11507				SK 12507				SK 13507				SK 15507			
			Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Inertia J_{red} [lb-ft ²]
80.0	1200	15	117	79	38	0.093	172	93	40	0.166	263	144	61	0.294	353	149	51	0.634
	1800	23	176				258				394				529			
	Exact Ratio i_{ges}	79.13				78.46				77.66				77.42				
	Max Torque T_{2max} [lb-in-1000]	468.79				708.06				1,070.94				1,433.82				
90.0	1200	13	117	79	38	0.068	167	93	40	0.121	231	144	61	0.216	352	149	51	0.465
	1800	20	175				251				347				528			
	Exact Ratio i_{ges}	92.50				91.72				91.91				90.56				
	Max Torque T_{2max} [lb-in-1000]	566.45				805.42				1,115.19				1,672.79				
100.0	1200	12	103	79	38	0.067	155	93	40	0.119	227	144	61	0.211	321	149	51	0.455
	1800	18	155				232				340				527			
	Exact Ratio i_{ges}	101.26				100.05				100.26				98.78				
	Max Torque T_{2max} [lb-in-1000]	548.75				814.27				1,194.85				1,823.25				
112.0	1200	11	97	79	38	0.053	131	93	40	0.095	182	144	61	0.168	315	149	51	0.363
	1800	17	145				197				273				473			
	Exact Ratio i_{ges}	113.11				112.83				113.14				111.66				
	Max Torque T_{2max} [lb-in-1000]	575.30				778.87				1,079.79				1,849.81				
125.0	1200	10	84	79	38	0.052	125	93	40	0.093	182	144	61	0.165	314	149	51	0.356
	1800	14	127				187				272				471			
	Exact Ratio i_{ges}	123.83				123.08				123.42				121.80				
	Max Torque T_{2max} [lb-in-1000]	548.75				805.42				1,177.15				2,009.12				
140.0	1200	9	77	79	38	0.044	107	93	40	0.077	145	144	61	0.138	255	149	51	0.296
	1800	13	115				160				218				383			
	Exact Ratio i_{ges}	144.75				143.87				146.08				142.47				
	Max Torque T_{2max} [lb-in-1000]	584.15				805.42				1,115.19				1,911.76				
160.0	1200	8	66	79	38	0.043	98	93	40	0.076	142	144	61	0.135	249	149	51	0.292
	1800	11	99				147				213				374			
	Exact Ratio i_{ges}	158.47				156.94				159.35				155.41				
	Max Torque T_{2max} [lb-in-1000]	548.75				805.42				1,186.00				2,035.67				
180.0	1200	7	61	79	38	0.037	84	93	40	0.066	116	144	61	0.177	199	149	51	0.253
	1800	10	92				125				173				298			
	Exact Ratio i_{ges}	178.17				177.31				177.88				177.34				
	Max Torque T_{2max} [lb-in-1000]	575.30				778.87				1,079.79				1,849.81				

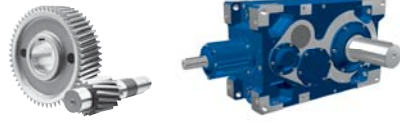


Nom. Ratio i_N	SK 11507						SK 12507						SK 13507						SK 15507					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]	
20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	
80.0	98	70	+78	+50	+130	+130	121	86	+97	+62	+181	+181	158	112	+126	+81	+232	+232	231	164	+185	+118	+232	+232
90.0	91	65	+73	+47	+130	+130	111	79	+89	+57	+181	+181	142	101	+114	+73	+232	+232	212	151	+170	+109	+232	+232
100.0	86	91	+69	+44	+130	+130	106	75	+85	+54	+181	+181	138	98	+110	+71	+232	+232	206	146	+165	+105	+232	+232
112.0	98	70	+78	+50	+130	+130	121	86	+97	+62	+181	+181	158	112	+126	+81	+232	+232	231	164	+185	+118	+232	+232
125.0	96	68	+77	+49	+130	+130	117	83	+94	+60	+181	+181	158	112	+126	+81	+232	+232	224	159	+179	+115	+232	+232
140.0	88	62	+70	+45	+130	+130	109	77	+87	+56	+181	+181	142	101	+114	+73	+232	+232	206	146	+165	+105	+232	+232
160.0	84	60	+67	+43	+130	+130	104	74	+83	+53	+181	+181	138	98	+110	+71	+232	+232	201	143	+161	+103	+232	+232
180.0	93	66	+74	+48	+130	+130	114	81	+91	+58	+181	+181	150	107	+120	+77	+232	+232	218	155	+174	+112	+232	+232

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

SK..507 Right-angle Mechanical Ratings



MECHANICAL

Nom. Ratio i_N	Nominal Input Speed n_{1N} [rpm]	Nominal Output Speed n_{2N} [rpm]	SK 11507				SK 12507				SK 13507				SK 15507			
			Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb-ft ²]	Rated Power P_N [hp]	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Inertia J_{red} [lb-ft ²]
200.0	1200	6	54	79	38	0.037	78	93	40	0.065	115	144	61	0.116	198	149	51	0.249
	1800	9	80				118				173				297			
	Exact Ratio i_{ges}		195.05				193.41				194.04				193.45			
	Max Torque T_{2max} [lb-in·1000]		548.75				796.57				1,177.15				2,009.12			
224.0	1200	5	49	79	38	0.032	68	93	40	0.057	92	144	61	0.101	161	149	51	0.219
	1800	8	73				102				139				241			
	Exact Ratio i_{ges}		228.01				226.08				229.66				226.28			
	Max Torque T_{2max} [lb-in·1000]		584.15				805.42				1,115.19				1,911.76			
250.0	1200	5	42	79	38	0.032	63	93	40	0.057	91	144	61	0.100	160	149	51	0.216
	1800	7	63				94				136				240			
	Exact Ratio i_{ges}		249.61				246.62				250.52				246.83			
	Max Torque T_{2max} [lb-in·1000]		548.75				814.27				1,194.85				2,071.08			
280.0	1200	4	37	79	38	0.029	52	93	40	0.051	72	144	61	0.090	124	149	51	0.194
	1800	6	56				77				108				186			
	Exact Ratio i_{ges}		289.22				287.82				284.85				283.98			
	Max Torque T_{2max} [lb-in·1000]		566.45				778.87				1,079.79				1,849.81			
315.0	1200	4	35	79	38	0.028	52	93	40	0.050	72	144	61	0.090	123	149	51	0.193
	1800	6	52				77				108				185			
	Exact Ratio i_{ges}		316.62				313.96				310.73				309.77			
	Max Torque T_{2max} [lb-in·1000]		575.30				849.67				1,177.15				2,009.12			
355.0	1200	3	30	79	38	0.026	42	93	40	0.047	58	144	61	0.083	100	149	51	0.178
	1800	5	45				63				87				151			
	Exact Ratio i_{ges}		370.12				366.99				367.77				362.35			
	Max Torque T_{2max} [lb-in·1000]		584.15				805.42				1,115.19				1,911.76			
400.0	1200	3	28	79	38	0.026	42	93	40	0.046	57	144	61	0.082	101	149	51	0.178
	1800	5	42				63				85				151			
	Exact Ratio i_{ges}		405.18				400.33				401.17				395.26			
	Max Torque T_{2max} [lb-in·1000]		593.00				876.22				1,194.85				2,088.78			



Nom. Ratio i_N	SK 11507						SK 12507						SK 13507						SK 15507					
	Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]						Thermal Rating [hp]					
	--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]		--- [P _{r0}]		FAN [P _{rf}]		CC [P _{cc}]	
20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	20° C	40° C	
200.0	91	65	+73	+47	+130	+130	111	79	+89	+57	+181	+181	150	107	+120	+77	+232	+232	212	151	+170	+109	+232	+232
224.0	84	60	+67	+43	+130	+130	104	74	+83	+53	+181	+181	135	96	+108	+69	+232	+232	196	139	+157	+100	+232	+232
250.0	80	57	+64	+41	+130	+130	99	70	+79	+51	+181	+181	132	94	+106	+68	+232	+232	191	136	+153	+98	+232	+232
280.0	86	61	+69	+44	+130	+130	106	75	+85	+54	+181	+181	138	98	+110	+71	+232	+232	201	143	+161	+103	+232	+232
315.0	84	60	+67	+43	+130	+130	104	74	+83	+53	+181	+181	138	98	+110	+71	+232	+232	196	139	+157	+100	+232	+232
335.0	79	56	+63	+40	+130	+130	97	69	+78	+50	+181	+181	126	89	+101	+65	+232	+232	182	129	+146	+93	+232	+232
400.0	75	53	+60	+38	+130	+130	93	66	+74	+48	+181	+181	123	87	+98	+63	+232	+232	178	126	+142	+91	+232	+232

20°C = 68°F
40°C = 104°F

Nominal speed for all FAN ratings = 1800rpm

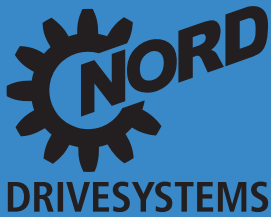
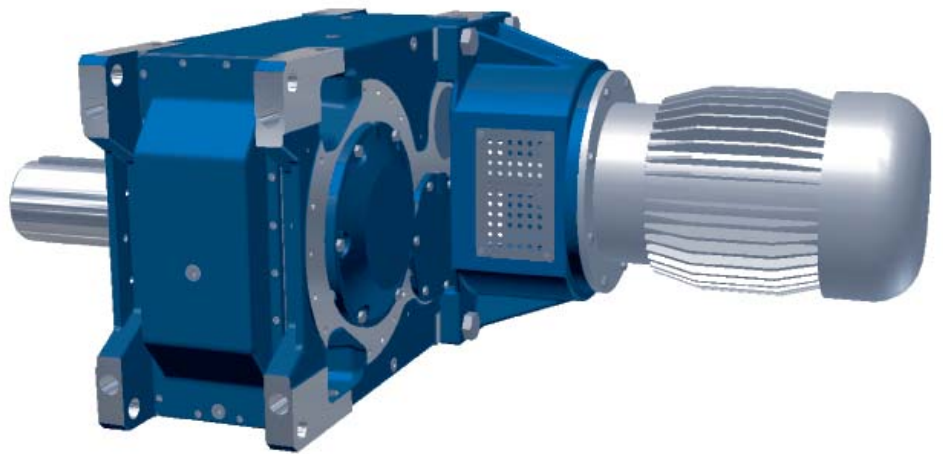


A large grid of blue lines on a white background, intended for taking notes.

MAXXDRIVE™ Right-angle Gearmotor Selection

Selection

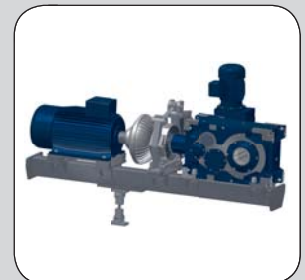
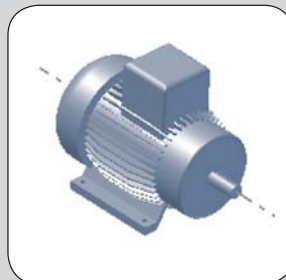
- SK..407 Right-angle Gearmotor Ratings
1200 rpm 10hp - 1000hp
- SK..507 Right-angle Gearmotor Ratings
1800 rpm 15hp - 1500hp



UNICASE™

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Input Power	Output Speed	Output Torque
P_1	n_2	M_2
[hp]	[rpm]	[lb-in*1000]
40	11	34.7
	11	34.7
	13	29.4




10 - 25 hp Right-angle Drives $n_1 = 1200$ rpm



GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
10	3.0	210.10	2.8	405.18	17.8	8.5	75	---	SK 11507 - 256T	3384	150
15	3.3	286.50	2.8	366.99	20.9	9.0	77	---	SK 12507 - 284T	4839	150
	3.0	315.15	2.8	400.33	20.9	9.0	74	---			
15	4.8	196.97	2.8	249.61	17.8	8.5	80	---	SK 11507 - 284T	3384	150
	4.1	230.60	2.5	289.22	17.8	8.5	86	---			
	3.8	248.80	2.3	316.62	17.8	8.5	84	---			
	3.2	295.45	2.0	370.12	17.8	8.5	79	---			
	3.0	315.15	1.9	405.18	17.8	8.5	75	---			
	3.0	315.15	1.9	405.18	17.8	8.5	75	---			
20	4.2	300.14	2.6	287.82	20.9	9.0	84	---	SK 12507 - 286T	4839	150
	3.8	331.74	2.6	313.96	20.9	9.0	82	---			
	3.3	382.00	2.1	366.99	20.9	9.0	77	---			
	3.0	420.20	2.1	400.33	20.9	9.0	74	---			
20	3.3	382.00	2.9	367.77	32.4	13.7	80	---	SK 13507 - 286T	7033	150
	3.0	420.20	2.8	401.17	32.4	13.7	79	---			
20	6.2	203.32	2.7	195.05	17.8	8.5	91	---	SK 11507 - 286T	3384	150
	5.3	237.85	2.5	228.01	17.8	8.5	84	---			
	4.8	262.63	2.1	249.61	17.8	8.5	80	---			
	4.1	307.46	1.8	289.22	17.8	8.5	86	---			
	3.8	331.74	1.7	316.62	17.8	8.5	84	---			
	3.2	393.94	1.5	370.12	17.8	8.5	79	---			
	3.0	420.20	1.4	405.18	17.8	8.5	75	---			
	3.0	420.20	1.4	405.18	17.8	8.5	75	---			
25	7.6	207.34	2.6	158.47	17.8	8.5	84	---	SK 11507 - 324T	3384	150
	6.7	235.19	2.4	178.17	17.8	8.5	93	---			
	6.2	254.15	2.2	195.05	17.8	8.5	91	---			
	5.3	297.31	2.0	228.01	17.8	8.5	84	---			
	4.8	328.28	1.7	249.61	17.8	8.5	80	---			
	4.1	384.33	1.5	289.22	17.8	8.5	86	---			
	4.1	384.33	1.5	289.22	17.8	8.5	86	---			
25	5.3	297.31	2.7	226.08	20.9	9.0	82	---	SK 12507 - 324T	4839	150
	4.9	321.58	2.5	246.62	20.9	9.0	79	---			
	4.2	375.18	2.1	287.82	20.9	9.0	84	---			
	3.8	414.67	2.0	313.96	20.9	9.0	82	---			
	3.3	477.50	1.7	366.99	20.9	9.0	77	---			
	3.0	525.25	1.7	400.33	20.9	9.0	74	---			
	3.0	525.25	1.7	400.33	20.9	9.0	74	---			
	3.0	525.25	1.7	400.33	20.9	9.0	74	---			
25	4.2	375.18	2.9	284.85	32.4	13.7	88	---	SK 13507 - 324T	7033	150
	3.9	404.04	2.9	310.73	32.4	13.7	88	---			
	3.3	477.50	2.3	367.77	32.4	13.7	80	---			
	3.0	525.25	2.3	401.17	32.4	13.7	79	---			
25	3.8	414.67	1.4	316.62	17.8	8.5	84	---	SK 11507 - 324T	3384	150



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
30	9.7	194.94	2.8	123.83	17.8	8.5	96	---	SK 11507 - 326T	3384	150				
	8.3	227.82	2.6	144.75	17.8	8.5	88	---							
	7.6	248.80	2.2	158.47	17.8	8.5	84	---							
	6.7	282.22	2.0	178.17	17.8	8.5	93	---							
	6.2	304.98	1.8	195.05	17.8	8.5	91	---							
	5.3	356.77	1.6	228.01	17.8	8.5	84	---							
	4.8	393.94	1.4	249.61	17.8	8.5	80	---							
	30	6.8	278.07	2.8	177.31	20.9	9.0	91	---	SK 12507 - 326T	4839	150			
		6.2	304.98	2.6	193.41	20.9	9.0	88	---						
		5.3	356.77	2.3	226.08	20.9	9.0	82	---						
		4.9	385.90	2.1	246.62	20.9	9.0	79	---						
		4.2	450.21	1.7	287.82	20.9	9.0	84	---						
		3.8	497.61	1.7	313.96	20.9	9.0	82	---						
		3.3	573.00	1.4	366.99	20.9	9.0	77	---						
		3.0	630.30	1.4	400.33	20.9	9.0	74	---						
30		4.2	450.21	2.4	284.85	32.4	13.7	88	---				SK 13507 - 326T	7033	150
		3.9	484.85	2.4	310.73	32.4	13.7	88	---						
	3.3	573.00	1.9	367.77	32.4	13.7	80	---							
	3.0	630.30	1.9	401.17	32.4	13.7	79	---							
40	15.0	168.08	2.9	79.13	17.8	8.5	98	---	SK 11507 - 364T	3384	150				
	13.0	193.94	2.9	92.50	17.8	8.5	91	---							
	12.0	210.10	2.6	101.26	17.8	8.5	86	---							
	11.0	229.20	2.5	113.11	17.8	8.5	98	---							
	9.7	259.92	2.1	123.83	17.8	8.5	96	---							
	8.3	303.76	1.9	144.75	17.8	8.5	88	---							
	7.6	331.74	1.7	158.47	17.8	8.5	84	---							
	6.7	376.30	1.5	178.17	17.8	8.5	93	---							
	6.2	406.65	1.3	195.05	17.8	8.5	91	---							
	40	8.3	303.76	2.7	143.87	20.9	9.0	86	---	SK 12507 - 364T	4839	150			
		7.6	331.74	2.4	156.94	20.9	9.0	82	---						
		6.8	370.76	2.1	177.31	20.9	9.0	91	---						
		6.2	406.65	2.0	193.41	20.9	9.0	88	---						
		5.3	475.70	1.7	226.08	20.9	9.0	82	---						
		4.9	514.53	1.6	246.62	20.9	9.0	79	---						
		4.2	573.00	1.4	300.00	20.9	9.0	74	---						
	40	6.7	376.30	2.9	177.88	32.4	13.7	96	---	SK 13507 - 364T	7033	150			
		6.2	406.65	2.9	194.04	32.4	13.7	96	---						
		5.2	484.85	2.3	229.66	32.4	13.7	86	---						
		4.8	525.25	2.3	250.52	32.4	13.7	84	---						
		4.2	600.29	1.8	284.85	32.4	13.7	88	---						
3.9		646.46	1.8	310.73	32.4	13.7	88	---							
3.3		764.00	1.5	367.77	32.4	13.7	80	---							
3.0		840.40	1.4	401.17	32.4	13.7	79	---							
40		3.3	764.00	2.5	362.35	33.5	11.5	232	---				SK 15507 - 364T	10902	150
		3.0	840.40	2.5	395.26	33.5	11.5	232	---						


50 - 60 hp Right-angle Drives $n_1 = 1200$ rpm



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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
50	15.0	210.10	2.3	79.13	17.8	8.5	98	---	SK 11507 - 365T	3384	150
	13.0	242.42	2.3	92.50	17.8	8.5	91	---			
	12.0	262.63	2.1	101.26	17.8	8.5	86	---			
	11.0	286.50	2.0	113.11	17.8	8.5	98	---			
	9.7	324.90	1.7	123.83	17.8	8.5	96	---			
	8.3	379.70	1.5	144.75	17.8	8.5	88	---			
	7.6	414.67	1.3	158.47	17.8	8.5	84	---			
17.0	185.38	3.0	71.80	20.5	8.5	98	---	SK 11407 - 365T	3219	150	
11.0	286.50	2.7	112.83	20.9	9.0	96	---	SK 12507 - 365T	4839	150	
	9.7	324.90	2.5	123.08	20.9	9.0	93				---
	8.3	379.70	2.1	143.87	20.9	9.0	86				---
	7.6	414.67	1.9	156.94	20.9	9.0	82				---
	6.8	463.46	1.7	177.31	20.9	9.0	91				---
	6.2	508.31	1.6	193.41	20.9	9.0	88				---
	5.3	594.62	1.4	226.08	20.9	9.0	82				---
8.2	384.33	2.9	146.08	32.4	13.7	91	---	SK 13507 - 365T	7033	150	
	7.5	420.20	2.8	159.35	32.4	13.7	88				---
	6.7	470.37	2.3	177.88	32.4	13.7	96				---
	6.2	508.31	2.3	194.04	32.4	13.7	96				---
	5.2	606.06	1.8	229.66	32.4	13.7	86				---
	4.8	656.56	1.8	250.52	32.4	13.7	84				---
	4.2	750.36	1.4	284.85	32.4	13.7	88				---
3.9	808.08	1.5	310.73	32.4	13.7	88	---				
4.2	750.36	2.5	283.98	33.5	11.5	232	---	SK 15507 - 365T	10902	150	
	3.9	808.08	2.5	309.77	33.5	11.5	232				---
	3.3	955.00	2.0	362.35	33.5	11.5	232				---
	3.0	1050.50	2.0	395.26	33.5	11.5	232				---
60	15.0	252.12	1.9	79.13	17.8	8.5	98	---	SK 11507 - 404/5T	3384	150
	13.0	290.91	1.9	92.50	17.8	8.5	91	---			
	12.0	315.15	1.7	101.26	17.8	8.5	86	---			
	11.0	343.80	1.7	113.11	17.8	8.5	98	---			
	9.6	393.94	1.4	123.83	17.8	8.5	96	---			
23.0	164.43	2.5	51.25	16.9	7.0	118	---	SK 11407 - 404/5T	3219	150	
	21.0	180.09	2.6	56.11	18.9	8.1	114				---
	18.0	210.10	2.5	65.59	18.7	7.6	104				---
	17.0	222.46	2.5	71.80	20.5	8.5	98				---



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
60	15.0	252.12	2.8	78.46	20.9	9.0	96	---	SK 12507 - 404/5T	4839	150				
	13.0	290.91	2.8	91.72	20.9	9.0	88	---							
	12.0	315.15	2.6	100.05	20.9	9.0	84	---							
	11.0	343.80	2.3	112.83	20.9	9.0	96	---							
	9.7	389.88	2.1	123.08	20.9	9.0	93	---							
	8.3	455.64	1.8	143.87	20.9	9.0	86	---							
	7.6	497.61	1.6	156.94	20.9	9.0	82	---							
	6.7	564.45	1.4	177.31	20.9	9.0	91	---							
	6.1	619.97	1.3	193.41	20.9	9.0	88	---							
	8.1	466.89	2.4	146.08	32.4	13.7	91	---				SK 13507 - 404/5T	7033	150	
	7.5	504.24	2.4	159.35	32.4	13.7	88	---							
	6.7	564.45	1.9	177.88	32.4	13.7	96	---							
	6.1	619.97	1.9	194.04	32.4	13.7	96	---							
	5.2	727.27	1.5	229.66	32.4	13.7	86	---							
4.7	804.64	1.5	250.52	32.4	13.7	84	---								
60	5.3	713.55	2.7	226.28	33.5	11.5	232	---	SK 15507 - 404/5T	10902	150				
	4.8	787.88	2.6	246.83	33.5	11.5	232	---							
	4.2	900.43	2.1	283.98	33.5	11.5	232	---							
	3.8	995.21	2.0	309.77	33.5	11.5	232	---							
	3.3	1146.00	1.7	362.35	33.5	11.5	232	---							
	3.0	1260.60	1.7	395.26	33.5	11.5	232	---							
	75	15.0	315.15	1.5	79.13	17.8	8.5	98				---	SK 11507 - 404/5T	3384	150
		13.0	363.63	1.6	92.50	17.8	8.5	91				---			
		12.0	393.94	1.4	101.26	17.8	8.5	86				---			
	75	23.0	205.53	2.0	51.25	16.9	7.0	118				---	SK 11407 - 404/5T	3219	150
21.0		225.11	2.0	56.11	18.9	8.1	114	---							
18.0		262.63	2.0	65.59	18.7	7.6	104	---							
17.0		278.07	2.0	71.80	20.5	8.5	98	---							
75	15.0	315.15	2.2	78.46	20.9	9.0	96	---	SK 12507 - 404/5T	4839	150				
	13.0	363.63	2.2	91.72	20.9	9.0	88	---							
	12.0	393.94	2.1	100.05	20.9	9.0	84	---							
	11.0	429.75	1.8	112.83	20.9	9.0	96	---							
	9.6	492.42	1.6	123.08	20.9	9.0	93	---							
	8.3	569.55	1.4	143.87	20.9	9.0	86	---							
	7.6	622.01	1.3	156.94	20.9	9.0	82	---							
	17.0	278.07	2.9	70.94	20.9	9.0	96	---				SK 12407 - 404/5T	4817	150	

75 - 100 hp Right-angle Drives $n_1 = 1200$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
75	10.0	472.73	2.3	113.14	32.4	13.7	101	---	SK 13507 - 404/5T	7033	150				
	9.6	492.42	2.4	123.42	32.4	13.7	101	---							
	8.1	583.61	1.9	146.08	32.4	13.7	91	---							
	7.4	638.82	1.9	159.35	32.4	13.7	88	---							
	6.7	705.56	1.5	177.88	32.4	13.7	96	---							
	6.1	774.96	1.5	194.04	32.4	13.7	96	---							
	6.7	705.56	2.6	177.34	33.5	11.5	232	---	SK 15507 - 404/5T	10902	150				
	6.1	774.96	2.6	193.45	33.5	11.5	232	---							
	5.2	909.09	2.1	226.28	33.5	11.5	232	---							
	4.8	984.84	2.1	246.83	33.5	11.5	232	---							
	4.2	1125.54	1.6	283.98	33.5	11.5	232	---							
	3.8	1244.01	1.6	309.77	33.5	11.5	232	---							
	3.3	1432.50	1.3	362.35	33.5	11.5	232	---							
	3.0	1575.75	1.3	395.26	33.5	11.5	232	---							
	100	38.0	165.87	3.0	31.46	16.9	7.0	118				---	SK 11407 - 444/5T	3219	150
		34.0	185.38	2.9	34.45	18.9	8.1	114				---			
30.0		210.10	2.8	40.26	18.7	7.6	104	---							
27.0		233.44	2.4	44.08	20.5	8.5	98	A/FAN							
23.0		274.04	1.5	51.25	16.9	7.0	118	---							
21.0		300.14	1.5	56.11	18.9	8.1	114	---							
18.0		350.17	1.5	65.59	18.7	7.6	104	---							
17.0		370.76	1.5	71.80	20.5	8.5	98	A/FAN	SK 12507 - 444/5T	4839	150				
15.0		420.20	1.7	78.46	20.9	9.0	96	A/FAN							
13.0		484.85	1.7	91.72	20.9	9.0	88	A/FAN							
12.0		525.25	1.6	100.05	20.9	9.0	84	A/FAN							
11.0		573.00	1.4	112.83	20.9	9.0	96	A/FAN							
23.0		274.04	2.4	51.01	18.4	7.9	114	---				SK 12407 - 444/5T	4817	150	
21.0		300.14	2.4	55.64	19.1	8.1	111	---							
18.0		350.17	2.3	65.04	20.5	8.8	101	---							
17.0		370.76	2.2	70.94	20.9	9.0	96	A/FAN							
15.0		420.20	2.5	77.66	32.4	13.7	101	---	SK 13507 - 444/5T	7033	150				
13.0		484.85	2.3	91.91	32.4	13.7	91	A/FAN							
12.0		525.25	2.3	100.26	32.4	13.7	88	A/FAN							
11.0		573.00	1.9	113.14	32.4	13.7	101	---							
9.6		656.56	1.8	123.42	32.4	13.7	101	---							
8.1		778.15	1.4	146.08	32.4	13.7	91	A/FAN							
7.5		840.40	1.4	159.35	32.4	13.7	88	A/FAN							
8.3		759.40	2.5	142.47	33.5	11.5	232	---				SK 15507 - 444/5T	10902	150	
7.6	829.34	2.5	155.41	33.5	11.5	232	---								
6.7	940.75	2.0	177.34	33.5	11.5	232	---								
6.1	1033.28	1.9	193.45	33.5	11.5	232	---								
5.3	1189.25	1.6	226.28	33.5	11.5	232	---								
4.8	1313.13	1.6	246.83	33.5	11.5	232	---								



125 - 150 hp Right-angle Drives $n_1 = 1200$ rpm



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
125	42.0	187.59	2.9	28.50	20.5	8.5	98	A/FAN	SK 11407 - 444/5T	3219	150
	38.0	207.34	2.4	31.46	16.9	7.0	118	A/FAN			
	35.0	225.11	2.4	34.45	18.9	8.1	114	A/FAN			
	30.0	262.63	2.2	40.26	18.7	7.6	104	A/FAN			
	27.0	291.81	1.9	44.08	20.5	8.5	98	A/FAN			
	15.0	525.25	1.3	78.46	20.9	9.0	96	A/FAN	SK 12507 - 444/5T	4839	150
	13.0	606.06	1.3	91.72	20.9	9.0	88	A/FAN			
	27.0	291.81	2.8	43.55	20.9	9.0	96	A/FAN	SK 12407 - 444/5T	4817	150
	23.0	342.55	1.9	51.01	18.4	7.9	114	A/FAN			
	21.0	375.18	1.9	55.64	19.1	8.1	111	A/FAN			
	18.0	437.71	1.8	65.04	20.5	8.8	101	A/FAN			
	17.0	463.46	1.8	70.94	20.9	9.0	96	A/FAN			
	15.0	525.25	2.0	77.66	32.4	13.7	101	A/FAN	SK 13507 - 444/5T	7033	150
	13.0	606.06	1.8	91.91	32.4	13.7	91	A/FAN			
	12.0	656.56	1.8	100.26	32.4	13.7	88	A/FAN			
11.0	716.25	1.5	113.14	32.4	13.7	101	A/FAN				
9.6	820.70	1.4	123.42	32.4	13.7	101	A/FAN				
24.0	328.28	2.9	50.48	28.3	11.9	118	A/FAN	SK 13407 - 444/5T	6548	150	
22.0	358.13	2.9	55.07	29.9	12.6	118	A/FAN				
18.0	437.71	2.5	65.17	31.5	13.3	104	A/FAN				
17.0	463.46	2.6	71.09	32.4	13.7	101	A/FAN				
15.0	525.25	2.7	77.42	33.5	11.5	232	---	SK 15507 - 444/5T	10902	150	
13.0	606.06	2.8	90.56	33.5	11.5	232	---				
12.0	656.56	2.8	98.78	33.5	11.5	232	---				
11.0	716.25	2.6	111.66	33.5	11.5	232	---				
9.8	803.95	2.5	121.80	33.5	11.5	232	---				
8.4	937.95	2.0	142.47	33.5	11.5	232	---				
7.7	1023.21	2.0	155.41	33.5	11.5	232	---				
6.7	1175.93	1.6	177.34	33.5	11.5	232	---				
6.2	1270.77	1.6	193.45	33.5	11.5	232	---				
150	54.0	175.08	2.9	22.27	18.9	8.1	114				A/FAN
	46.0	205.53	2.5	26.04	18.7	7.6	104	A/FAN			
	42.0	225.11	2.4	28.50	20.5	8.5	98	A/FAN			
	38.0	248.80	2.0	31.46	16.9	7.0	118	A/FAN			
	35.0	270.13	2.0	34.45	18.9	8.1	114	A/FAN			
	30.0	315.15	1.9	40.26	18.7	7.6	104	A/FAN			
	27.0	350.17	1.6	44.08	20.5	8.5	98	A/FAN			

150 - 200 hp Right-angle Drives $n_1 = 1200$ rpm




GEARMOTOR

Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
150	38.0	248.80	2.6	31.31	18.4	7.9	114	A/FAN	SK 12407 - 447/9T	4817	150			
	35.0	270.13	2.6	34.16	19.1	8.1	111	A/FAN						
	30.0	315.15	2.6	39.92	20.5	8.8	101	A/FAN						
	27.0	350.17	2.4	43.55	20.9	9.0	96	A/CC						
	23.0	411.07	1.6	51.01	18.4	7.9	114	A/FAN						
	21.0	450.21	1.6	55.64	19.1	8.1	111	A/FAN						
	18.0	525.25	1.5	65.04	20.5	8.8	101	A/FAN						
	17.0	556.15	1.5	70.94	20.9	9.0	96	A/CC						
	15.0	630.30	1.7	77.66	32.4	13.7	101	A/FAN						
	13.0	727.27	1.5	91.91	32.4	13.7	91	A/CC						
	12.0	787.88	1.5	100.26	32.4	13.7	88	A/CC						
	24.0	393.94	2.4	50.48	28.3	11.9	118	A/FAN				SK 13407 - 447/9T	6548	150
	22.0	429.75	2.4	55.07	29.9	12.6	118	A/FAN						
	18.0	525.25	2.1	65.17	31.5	13.3	104	A/FAN						
	17.0	556.15	2.1	71.09	32.4	13.7	101	A/FAN						
15.0	630.30	2.3	77.42	33.5	11.5	232	---	SK 15507 - 447/9T	10902	150				
13.0	727.27	2.3	90.56	33.5	11.5	232	---							
12.0	787.88	2.3	98.78	33.5	11.5	232	---							
11.0	859.50	2.2	111.66	33.5	11.5	232	---							
9.8	964.75	2.1	121.80	33.5	11.5	232	---							
8.4	1125.54	1.7	142.47	33.5	11.5	232	---							
7.7	1227.86	1.7	155.41	33.5	11.5	232	---							
6.7	1411.12	1.3	177.34	33.5	11.5	232	---							
6.2	1524.92	1.3	193.45	33.5	11.5	232	---							
200	93.0	135.55	2.7	12.74	14.4	5.8	137				A/FAN*	SK 11407 - 447/9T	3219	150
	85.0	148.31	2.7	13.95	16.0	6.7	114	A						
	73.0	172.69	2.7	16.34	15.7	6.5	132	A/FAN*						
	67.0	188.15	2.6	17.89	17.5	7.4	107	A						
	59.0	213.66	2.3	20.35	16.9	7.0	118	A						
	53.0	237.85	2.2	22.27	18.9	8.1	114	A						
	46.0	274.04	1.9	26.04	18.7	7.6	104	A						
	42.0	300.14	1.8	28.50	20.5	8.5	98	A						
	38.0	331.74	1.5	31.46	16.9	7.0	118	A						
	35.0	360.17	1.5	34.45	18.9	8.1	114	A						
	30.0	420.20	1.4	40.26	18.7	7.6	104	A						
	46.0	274.04	2.9	25.82	20.5	8.8	101	A/CC	SK 12407 - 447/9T	4817	150			
	42.0	300.14	2.8	28.16	20.9	9.0	96	A/CC						
	38.0	331.74	1.9	31.31	18.4	7.9	114	A/CC						
	35.0	360.17	1.9	34.16	19.1	8.1	111	A/CC						
	30.0	420.20	1.9	39.92	20.5	8.8	101	A/CC						
	27.0	466.89	1.8	43.55	20.9	9.0	96	A/CC						



200 - 250 hp Right-angle Drives $n_1 = 1200 \text{ rpm}$



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in·1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb·1000]	Thrust F_A [lb·1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
200	15.0	840.40	1.3	77.66	32.4	13.7	101	B/CC	SK 13507 - 447/9T	7033	150
	38.0	331.74	2.7	30.99	28.3	11.9	118	A/CC	SK 13407 - 447/9T	6548	150
	35.0	360.17	2.7	33.80	29.9	12.6	118	A/CC			
	30.0	420.20	2.7	40.01	31.5	13.3	104	A/CC			
	27.0	466.89	2.6	43.64	32.4	13.7	101	A/CC			
	24.0	525.25	1.8	50.48	28.3	11.9	118	A/CC			
	22.0	573.00	1.8	55.07	29.9	12.6	118	A/CC			
	18.0	700.33	1.6	65.17	31.5	13.3	104	A/CC			
	17.0	741.53	1.6	71.09	32.4	13.7	101	A/CC			
	15.0	840.40	1.7	77.42	33.5	11.5	232	---	SK 15507 - 447/9T	10902	150
	13.0	969.69	1.7	90.56	33.5	11.5	232	---			
	12.0	1050.50	1.7	98.78	33.5	11.5	232	---			
	11.0	1146.00	1.6	111.66	33.5	11.5	232	---			
	9.8	1286.33	1.6	121.80	33.5	11.5	232	---			
250	24.0	525.25	2.4	50.33	27.9	9.4	335	---	SK 15407 - 447/9T	10516	150
	22.0	573.00	2.4	54.90	30.8	10.3	335	---			
	19.0	663.47	2.4	64.21	30.3	10.1	335	---			
	17.0	741.53	2.4	70.05	33.5	11.5	335	---			
	93.0	169.44	2.1	12.74	14.4	5.8	137	B			
	85.0	185.38	2.1	13.95	16.0	6.7	114	B			
	73.0	215.86	2.1	16.34	15.7	6.5	132	B			
	67.0	235.19	2.1	17.89	17.5	7.4	107	B			
	59.0	267.08	1.8	20.35	16.9	7.0	118	B			
	53.0	297.31	1.7	22.27	18.9	8.1	114	B			
	46.0	342.55	1.5	26.04	18.7	7.6	104	B			
	42.0	375.18	1.5	28.50	20.5	8.5	98	B			
	93.0	169.44	2.9	12.81	15.5	6.7	132	B/CC	SK 12407 - 447/9T	4817	150
	85.0	185.38	2.9	13.97	16.0	7.0	111	B/CC			
73.0	215.86	2.9	16.33	16.6	7.2	123	B/CC				
67.0	235.19	2.9	17.81	17.5	7.6	104	B/CC				
59.0	267.08	2.9	20.25	18.4	7.9	114	B/CC				
54.0	291.81	2.9	22.09	19.1	8.1	111	B/CC				
46.0	342.55	2.4	25.82	20.5	8.8	101	B/CC				
42.0	375.18	2.2	28.16	20.9	9.0	96	B/CC				
38.0	414.67	1.5	31.31	18.4	7.9	114	B/CC				
35.0	450.21	1.5	34.16	19.1	8.1	111	B/CC				
30.0	525.25	1.5	39.92	20.5	8.8	101	B/CC				
27.0	583.61	1.4	43.55	20.9	9.0	96	B/CC				

250 - 300 hp Right-angle Drives $n_1 = 1200$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
250	38.0	414.67	2.1	30.99	28.3	11.9	118	B/CC	SK 13407 - 447/9T	6548	150				
	35.0	450.21	2.1	33.80	29.9	12.6	118	B/CC							
	30.0	525.25	2.1	40.01	31.5	13.3	104	B/CC							
	27.0	583.61	2.0	43.64	32.4	13.7	101	B/CC							
	24.0	656.56	1.4	50.48	28.3	11.9	118	B/CC							
	22.0	716.25	1.4	55.07	29.9	12.6	118	B/CC							
	18.0	875.42	1.3	65.17	31.5	13.3	104	B/CC							
	15.0	1050.50	1.4	77.42	33.5	11.5	232	A/FAN*				SK 15507 - 447/9T	10902	150	
	13.0	1212.12	1.4	90.56	33.5	11.5	232	A/FAN*							
	12.0	1313.13	1.4	98.78	33.5	11.5	232	A/FAN*							
	300	24.0	656.56	1.9	50.33	27.9	9.4	335				---	SK 15407 - 447/9T	10516	150
		22.0	716.25	1.9	54.90	30.8	10.3	335				---			
19.0		829.34	1.9	64.21	30.3	10.1	335	---							
17.0		926.91	1.9	70.05	33.5	11.5	335	---							
93.0		203.32	1.8	12.74	14.4	5.8	137	B	SK 11407 - 447/9T	3219	150				
		85.0	222.46	1.8	13.95	16.0	6.7	114				B			
		73.0	259.03	1.8	16.34	15.7	6.5	132				B			
		67.0	282.22	1.7	17.89	17.5	7.4	107				B			
		58.0	326.02	1.5	20.35	16.9	7.0	118				B			
		53.0	356.77	1.4	22.27	18.9	8.1	114				B			
		93.0	203.32	2.4	12.81	15.5	6.7	132				B	SK 12407 - 447/9T	4817	150
			85.0	222.46	2.4	13.97	16.0	7.0				111			
	73.0		259.03	2.4	16.33	16.6	7.2	123				B			
	67.0		282.22	2.4	17.81	17.5	7.6	104				B			
	59.0		320.49	2.4	20.25	18.4	7.9	114				B			
	54.0		350.17	2.4	22.09	19.1	8.1	111				B			
46.0	411.07	2.0	25.82	20.5	8.8	101	B	SK 13407 - 447/9T	6548	150					
	42.0	450.21	1.9	28.16	20.9	9.0	96				B				
	42.0	450.21	2.7	28.22	32.4	13.7	101				B/CC				
	38.0	497.61	1.8	30.99	28.3	11.9	118				B/CC				
	35.0	540.26	1.8	33.80	29.9	12.6	118				B/CC				
	30.0	630.30	1.8	40.01	31.5	13.3	104				B/CC				
	27.0	700.33	1.7	43.64	32.4	13.7	101				B/CC				
	39.0	484.85	2.5	30.89	27.9	9.4	335				---	SK 15407 - 447/9T	10516	150	
		35.0	540.26	2.5	33.70	30.8	10.3				335				---
		30.0	630.30	2.5	39.42	30.3	10.1				335				---
		28.0	675.32	2.5	43.00	33.5	11.5				335				---
		24.0	787.88	1.6	50.33	27.9	9.4				335				---
22.0		859.50	1.6	54.90	30.8	10.3	335	---							
19.0		995.21	1.6	64.21	30.3	10.1	335	---							
17.0		1112.29	1.6	70.05	33.5	11.5	335	---							



350 - 400 hp Right-angle Drives $n_1 = 1200$ rpm

Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page
350	94.0	234.69	1.5	12.74	14.4	5.8	137	B	SK 11407 - 585/6	3219	150
	85.0	259.54	1.5	13.95	16.0	6.7	114	B			
	73.0	302.20	1.5	16.34	15.7	6.5	132	B			
	67.0	329.26	1.5	17.89	17.5	7.4	107	B			
	59.0	373.91	1.3	20.35	16.9	7.0	118	B			
	93.0	237.21	2.1	12.81	15.5	6.7	132	B	SK 12407 - 585/6	4817	150
	85.0	259.54	2.0	13.97	16.0	7.0	111	B			
	73.0	302.20	2.1	16.33	16.6	7.2	123	B			
	67.0	329.26	2.1	17.81	17.5	7.6	104	B			
	59.0	373.91	2.1	20.25	18.4	7.9	114	B			
	54.0	408.53	2.1	22.09	19.1	8.1	111	B			
	46.0	479.58	1.7	25.82	20.5	8.8	101	B			
	42.0	525.25	1.6	28.16	20.9	9.0	96	C			
	91.0	242.42	2.9	13.04	24.5	10.3	137	B	SK 13407 - 585/6	6548	150
	84.0	262.63	2.9	14.22	25.6	10.8	114	B			
75.0	294.14	2.9	16.00	26.3	11.0	132	B				
68.0	324.42	2.9	17.45	27.7	11.7	111	B				
59.0	373.91	2.9	20.04	28.3	11.9	118	B				
55.0	401.10	2.9	21.86	29.9	12.6	118	B				
46.0	479.58	2.3	25.87	31.5	13.3	104	B				
42.0	525.25	2.3	28.22	32.4	13.7	101	B				
38.0	580.54	1.5	30.99	28.3	11.9	118	B				
35.0	630.30	1.5	33.80	29.9	12.6	118	B				
30.0	735.35	1.5	40.01	31.5	13.3	104	B				
27.0	817.06	1.5	43.64	32.4	13.7	101	B				
39.0	565.65	2.2	30.89	27.9	9.4	335	A/FAN*	SK 15407 - 585/6	10516	150	
35.0	630.30	2.1	33.70	30.8	10.3	335	A/FAN*				
30.0	735.35	2.1	39.42	30.3	10.1	335	A/FAN*				
28.0	787.88	2.2	43.00	33.5	11.5	335	A/FAN*				
24.0	919.19	1.4	50.33	27.9	9.4	335	A/FAN*				
22.0	1002.75	1.4	54.90	30.8	10.3	335	A/FAN*				
19.0	1161.08	1.4	64.21	30.3	10.1	335	A/FAN*				
17.0	1297.68	1.3	70.05	33.5	11.5	335	A/FAN*				
400	94.0	268.21	1.4	12.74	14.4	5.8	137	C	SK 11407 - 585/6	3219	150
	85.0	296.61	1.3	13.95	16.0	6.7	114	C			
	73.0	345.37	1.3	16.34	15.7	6.5	132	C			
	93.0	271.10	1.8	12.81	15.5	6.7	132	C	SK 12407 - 585/6	4817	150
	85.0	296.61	1.8	13.97	16.0	7.0	111	C			
	73.0	345.37	1.8	16.33	16.6	7.2	123	C			
	67.0	376.30	1.8	17.81	17.5	7.6	104	C			
	59.0	427.32	1.8	20.25	18.4	7.9	114	C			
	54.0	466.89	1.8	22.09	19.1	8.1	111	C			
	46.0	548.09	1.5	25.82	20.5	8.8	101	C			
	42.0	600.29	1.4	28.16	20.9	9.0	96	C			



400 - 500 hp Right-angle Drives $n_1 = 1200$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
400	91.0	277.06	2.5	13.04	24.5	10.3	137	C	SK 13407 - 585/6	6548	150			
	84.0	300.14	2.5	14.22	25.6	10.8	114	C						
	75.0	336.16	2.5	16.00	26.3	11.0	132	C						
	68.0	370.76	2.5	17.45	27.7	11.7	111	C						
	59.0	427.32	2.5	20.04	28.3	11.9	118	C						
	55.0	458.40	2.5	21.86	29.9	12.6	118	C						
	46.0	548.09	2.0	25.87	31.5	13.3	104	C						
	42.0	600.29	2.0	28.22	32.4	13.7	101	C						
	38.0	663.47	1.3	30.99	28.3	11.9	118	C						
	35.0	720.34	1.3	33.80	29.9	12.6	118	C						
	30.0	840.40	1.3	40.01	31.5	13.3	104	C						
	27.0	933.78	1.3	43.64	32.4	13.7	101	C						
	39.0	646.46	1.9	30.89	27.9	9.4	335	A/FAN*				SK 15407 - 585/6	10516	150
	35.0	720.34	1.9	33.70	30.8	10.3	335	A/FAN*						
30.0	840.40	1.9	39.42	30.3	10.1	335	A/FAN*							
28.0	900.43	1.9	43.00	33.5	11.5	335	A/FAN*							
450	93.0	304.98	1.6	12.81	15.5	6.7	132	C	SK 12407 - 586/7	4817	150			
	85.0	333.69	1.6	13.97	16.0	7.0	111	C						
	73.0	388.54	1.6	16.33	16.6	7.2	123	C						
	67.0	423.34	1.6	17.81	17.5	7.6	104	C						
	59.0	480.74	1.6	20.25	18.4	7.9	114	C						
	54.0	525.25	1.6	22.09	19.1	8.1	111	C						
	46.0	616.60	1.3	25.82	20.5	8.8	101	C						
	91.0	311.69	2.2	13.04	24.5	10.3	137	C	SK 13407 - 586/7	6548	150			
	84.0	337.66	2.3	14.22	25.6	10.8	114	C						
	75.0	378.18	2.2	16.00	26.3	11.0	132	C						
	68.0	417.11	2.2	17.45	27.7	11.7	111	C						
	60.0	472.73	2.3	20.04	28.3	11.9	118	C						
	55.0	515.70	2.2	21.86	29.9	12.6	118	C						
	46.0	616.60	1.8	25.87	31.5	13.3	104	C						
42.0	675.32	1.8	28.22	32.4	13.7	101	C							
47.0	603.48	2.9	25.49	30.3	10.1	335	B/FAN*	SK 15407 - 586/7	10516	150				
43.0	659.62	2.7	27.81	33.5	11.5	335	B/FAN*							
39.0	727.27	1.7	30.89	27.9	9.4	335	B/FAN*							
35.0	810.39	1.7	33.70	30.8	10.3	335	B/FAN*							
30.0	945.45	1.7	39.42	30.3	10.1	335	B/FAN*							
28.0	1012.98	1.7	43.00	33.5	11.5	335	B/FAN*							
500	93.0	338.87	1.4	12.81	15.5	6.7	132	C	SK 12407 - 587/8	4817	150			
	85.0	370.76	1.4	13.97	16.0	7.0	111	D						
	73.0	431.71	1.4	16.33	16.6	7.2	123	D						
	67.0	470.37	1.4	17.81	17.5	7.6	104	D						
	59.0	534.15	1.4	20.25	18.4	7.9	114	D						
	54.0	583.61	1.4	22.09	19.1	8.1	111	D						



500 - 700 hp Right-angle Drives $n_1 = 1200$ rpm



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page			
500	92.0	342.55	2.0	13.04	24.5	10.3	137	C	SK 13407 - 587/8	6548	150			
	84.0	375.18	2.0	14.22	25.6	10.8	114	D						
	75.0	420.20	2.0	16.00	26.3	11.0	132	C						
	68.0	463.46	2.0	17.45	27.7	11.7	111	D						
	60.0	525.25	2.0	20.04	28.3	11.9	118	D						
	55.0	573.00	2.0	21.86	29.9	12.6	118	D						
	46.0	685.11	1.6	25.87	31.5	13.3	104	D						
	42.0	750.36	1.6	28.22	32.4	13.7	101	D						
	95.0	331.74	2.7	12.61	23.4	7.9	335	B/FAN*				SK 15407 - 587/8	10516	150
	87.0	362.24	2.8	13.76	25.6	8.8	335	B/FAN*						
	74.0	425.88	2.7	16.10	25.6	8.5	335	B/FAN*						
	68.0	463.46	2.8	17.56	28.3	9.4	335	B/FAN*						
	60.0	525.25	2.7	19.98	27.9	9.4	335	B/FAN*						
	55.0	573.00	2.7	21.79	30.8	10.3	335	B/FAN*						
47.0	670.53	2.6	25.49	30.3	10.1	335	B/FAN*							
43.0	732.91	2.5	27.81	33.5	11.5	335	B/FAN*							
39.0	808.08	1.5	30.89	27.9	9.4	335	B/FAN*							
35.0	900.43	1.5	33.70	30.8	10.3	335	B/FAN*							
30.0	1050.50	1.5	39.42	30.3	10.1	335	B/FAN*							
28.0	1125.54	1.5	43.00	33.5	11.5	335	B/FAN*							
600	91.0	415.58	1.7	13.04	24.5	10.3	137	D	SK 13407 - 587/8	6548	150			
	84.0	450.21	1.7	14.22	25.6	10.8	114	E						
	75.0	504.24	1.7	16.00	26.3	11.0	132	E						
	68.0	556.15	1.7	17.45	27.7	11.7	111	E						
	59.0	640.98	1.7	20.04	28.3	11.9	118	E						
	55.0	687.60	1.7	21.86	29.9	12.6	118	E						
	46.0	822.13	1.4	25.87	31.5	13.3	104	E						
	42.0	900.43	1.3	28.22	32.4	13.7	101	E						
	95.0	398.08	2.3	12.61	23.4	7.9	335	C				SK 15407 - 587/8	10516	150
	87.0	434.69	2.3	13.76	25.6	8.8	335	C						
	74.0	511.05	2.3	16.10	25.6	8.5	335	C						
	68.0	556.15	2.3	17.56	28.3	9.4	335	C						
	60.0	630.30	2.3	19.98	27.9	9.4	335	C						
	55.0	687.60	2.3	21.79	30.8	10.3	335	C						
47.0	804.64	2.2	25.49	30.3	10.1	335	C							
43.0	879.49	2.0	27.81	33.5	11.5	335	C							
700	92.0	479.58	1.5	13.04	24.5	10.3	137	E	SK 13407	6548	150			
	84.0	525.25	1.4	14.22	25.6	10.8	114	E						
	75.0	588.28	1.4	16.00	26.3	11.0	132	E						
	69.0	639.44	1.5	17.45	27.7	11.7	111	E						
	60.0	735.35	1.5	20.04	28.3	11.9	118	E						
	55.0	802.20	1.4	21.86	29.9	12.6	118	E						

700 - 1000 hp Right-angle Drives $n_1 = 1200$ rpm




GEARMOTOR

Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight [lb]	Dim. Page
700	95.0	464.43	2.0	12.61	23.4	7.9	335	C	SK 15407	10516	150
	87.0	507.14	2.0	13.76	25.6	8.8	335	C			
	75.0	588.28	2.0	16.10	25.6	8.5	335	C			
	68.0	648.84	2.0	17.56	28.3	9.4	335	C			
	60.0	735.35	2.0	19.98	27.9	9.4	335	C			
	55.0	802.20	2.0	21.79	30.8	10.3	335	C			
	47.0	938.75	1.9	25.49	30.3	10.1	335	C			
	43.0	1026.07	1.8	27.81	33.5	11.5	335	C			
800	95.0	530.78	1.7	12.61	23.4	7.9	335	E	SK 15407	10516	150
	87.0	579.59	1.7	13.76	25.6	8.8	335	E			
	75.0	672.32	1.7	16.10	25.6	8.5	335	E			
	68.0	741.53	1.7	17.56	28.3	9.4	335	E			
	60.0	840.40	1.7	19.98	27.9	9.4	335	E			
	55.0	916.80	1.7	21.79	30.8	10.3	335	E			
	47.0	1072.85	1.6	25.49	30.3	10.1	335	E			
	43.0	1172.65	1.5	27.81	33.5	11.5	335	E			
900	95.0	597.13	1.5	12.61	23.4	7.9	335	E	SK 15407	10516	150
	87.0	652.03	1.5	13.76	25.6	8.8	335	E			
	75.0	756.36	1.5	16.10	25.6	8.5	335	E			
	68.0	834.22	1.5	17.56	28.3	9.4	335	E			
	60.0	945.45	1.5	19.98	27.9	9.4	335	E			
	55.0	1031.40	1.5	21.79	30.8	10.3	335	E			
	47.0	1206.96	1.5	25.49	30.3	10.1	335	E			
	43.0	1319.23	1.4	27.81	33.5	11.5	335	E			
1000	143.0	440.77	2.1	12.61	23.4	7.9	335	F	SK 15407	10516	150
	131.0	481.15	2.1	13.76	25.6	8.8	335	F			
	112.0	562.77	2.1	16.10	25.6	8.5	335	F			
	103.0	611.94	2.1	17.56	28.3	9.4	335	F			
	90.0	700.33	2.1	19.98	27.9	9.4	335	F			
	83.0	759.40	2.1	21.79	30.8	10.3	335	F			
	71.0	887.75	2.0	25.49	30.3	10.1	335	F			



15 - 40 hp Right-angle Drives $n_1 = 1800$ rpm



Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight  [lb]	Dim. Page				
15	4.4	211.53	2.8	405.18	17.8	8.5	75	---	SK 11507 - 254T	3384	150				
20	6.2	202.68	2.8	289.22	17.8	8.5	86	---	SK 11507 - 256T	3384	150				
	5.7	221.27	2.6	316.62	17.8	8.5	84	---							
	4.9	254.02	2.3	370.12	17.8	8.5	79	---							
	4.4	282.34	2.1	405.18	17.8	8.5	75	---							
25	7.9	201.80	2.9	228.01	17.8	8.5	84	---	SK 11507 - 284T	3384	150				
	7.2	219.50	2.5	249.61	17.8	8.5	80	---							
	6.2	257.56	2.2	289.22	17.8	8.5	86	---							
	5.7	274.37	2.1	316.62	17.8	8.5	84	---							
	4.9	324.82	1.8	370.12	17.8	8.5	79	---							
	4.4	348.72	1.7	405.18	17.8	8.5	75	---	SK 12507 - 284T	4839	150				
	4.9	322.17	2.5	366.99	20.9	9.0	77	---							
	4.5	350.49	2.5	400.33	20.9	9.0	74	---							
	30	9.2	203.57	2.7	195.05	17.8	8.5	91				---	SK 11507 - 286T	3384	150
		7.9	243.40	2.4	228.01	17.8	8.5	84				---			
7.2		261.10	2.1	249.61	17.8	8.5	80	---							
6.2		298.27	1.9	289.22	17.8	8.5	86	---							
5.7		338.10	1.7	316.62	17.8	8.5	84	---							
4.9		389.43	1.5	370.12	17.8	8.5	79	---							
4.4		423.95	1.4	405.18	17.8	8.5	75	---	SK 12507 - 286T	4839	150				
6.3		299.16	2.6	287.82	20.9	9.0	84	---							
5.7		326.59	2.6	313.96	20.9	9.0	82	---							
4.9		383.24	2.1	366.99	20.9	9.0	77	---							
4.5	416.87	2.1	400.33	20.9	9.0	74	---	SK 13507 - 286T	7033	150					
4.9	384.12	2.9	367.77	32.4	13.7	80	---								
4.5	426.61	2.8	401.17	32.4	13.7	79	---								
40	12.0	208.88	2.8	144.75	17.8	8.5	88	---	SK 11507 - 324T	3384	150				
	11.0	228.35	2.4	158.47	17.8	8.5	84	---							
	10.0	250.48	2.3	178.17	17.8	8.5	93	---							
	9.2	274.37	2.0	195.05	17.8	8.5	91	---							
	7.9	324.82	1.8	228.01	17.8	8.5	84	---							
	7.2	343.41	1.6	249.61	17.8	8.5	80	---							
	6.2	404.48	1.4	289.22	17.8	8.5	86	---							
	9.3	274.37	2.9	193.41	20.9	9.0	88	---				SK 12507 - 324T	4839	150	
	8.0	309.78	2.6	226.08	20.9	9.0	82	---							
	7.3	338.98	2.4	246.62	20.9	9.0	79	---							
	6.3	409.79	1.9	287.82	20.9	9.0	84	---							
	5.7	446.96	1.9	313.96	20.9	9.0	82	---							
	4.9	503.61	1.6	366.99	20.9	9.0	77	---							
	4.5	547.86	1.6	400.33	20.9	9.0	74	---							


40 - 60 hp Right-angle Drives $n_1 = 1800$ rpm



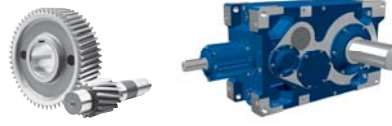
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Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight [lb]	Dim. Page				
40	6.3	400.05	2.7	284.85	32.4	13.7	88	---	SK 13507 - 324T	7033	150				
	5.8	436.34	2.7	310.73	32.4	13.7	88	---							
	4.9	507.15	2.2	367.77	32.4	13.7	80	---							
	4.5	569.10	2.1	401.17	32.4	13.7	79	---							
50	16.0	198.26	2.9	113.11	17.8	8.5	98	---	SK 11507 - 326T	3384	150				
	15.0	210.65	2.6	123.83	17.8	8.5	96	---							
	12.0	265.52	2.2	144.75	17.8	8.5	88	---							
	11.0	288.53	1.9	158.47	17.8	8.5	84	---							
	10.0	319.51	1.8	178.17	17.8	8.5	93	---							
	9.2	343.41	1.6	195.05	17.8	8.5	91	---							
	7.9	389.43	1.5	228.01	17.8	8.5	84	---	SK 12507 - 326T	4839	150				
	11.0	287.65	2.8	156.94	20.9	9.0	82	---							
	10.0	311.55	2.5	177.31	20.9	9.0	91	---							
	9.3	331.90	2.4	193.41	20.9	9.0	88	---							
	8.0	402.71	2.0	226.08	20.9	9.0	82	---							
	7.3	428.38	1.9	246.62	20.9	9.0	79	---							
	6.3	486.79	1.6	287.82	20.9	9.0	84	---							
	5.7	566.45	1.5	313.96	20.9	9.0	82	---							
50	7.8	398.28	2.8	229.66	32.4	13.7	86	---	SK 13507 - 326T	7033	150				
	7.2	442.54	2.7	250.52	32.4	13.7	84	---							
	6.3	491.22	2.2	284.85	32.4	13.7	88	---							
	5.8	535.47	2.2	310.73	32.4	13.7	88	---							
	4.9	655.84	1.7	367.77	32.4	13.7	80	---							
	4.5	702.75	1.7	401.17	32.4	13.7	79	---							
	60	23.0	161.97	3.0	79.13	17.8	8.5	98				---	SK 11507 - 364T	3384	150
		19.0	202.68	2.8	92.50	17.8	8.5	91				---			
18.0		210.65	2.6	101.26	17.8	8.5	86	---							
16.0		239.86	2.4	113.11	17.8	8.5	98	---							
15.0		249.59	2.2	123.83	17.8	8.5	96	---							
12.0		307.12	1.9	144.75	17.8	8.5	88	---							
11.0		343.41	1.6	158.47	17.8	8.5	84	---							
10.0		383.24	1.5	178.17	17.8	8.5	93	---							
9.2		422.18	1.3	195.05	17.8	8.5	91	---	SK 12507 - 364T	4839	150				
13.0		287.65	2.8	143.87	20.9	9.0	86	---							
11.0		350.49	2.3	156.94	20.9	9.0	82	---							
10.0		370.85	2.1	177.31	20.9	9.0	91	---							
9.3		398.28	2.0	193.41	20.9	9.0	88	---							
8.0		473.52	1.7	226.08	20.9	9.0	82	---							
7.3	508.92	1.6	246.62	20.9	9.0	79	---								



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
60	10.0	372.62	2.9	177.88	32.4	13.7	96	---	SK 13507 - 364T	7033	150				
	9.3	406.25	2.9	194.04	32.4	13.7	96	---							
	7.8	485.02	2.3	229.66	32.4	13.7	86	---							
	7.2	519.54	2.3	250.52	32.4	13.7	84	---							
	6.3	600.08	1.8	284.85	32.4	13.7	88	---							
	5.8	654.07	1.8	310.73	32.4	13.7	88	---							
	4.9	796.57	1.4	367.77	32.4	13.7	80	---							
	4.5	853.21	1.4	401.17	32.4	13.7	79	---							
	5.0	764.70	2.5	362.35	33.5	11.5	232	---				SK 15507 - 364T	10902	150	
	4.6	835.51	2.5	395.26	33.5	11.5	232	---							
	75	23.0	202.68	2.4	79.13	17.8	8.5	98				---	SK 11507 - 365T	3384	150
		19.0	246.05	2.3	92.50	17.8	8.5	91				---			
		18.0	261.10	2.1	101.26	17.8	8.5	86				---			
		16.0	302.70	1.9	113.11	17.8	8.5	98				---			
15.0		323.05	1.7	123.83	17.8	8.5	96	---							
12.0		389.43	1.5	144.75	17.8	8.5	88	---							
11.0		422.18	1.3	158.47	17.8	8.5	84	---							
25.0		189.41	2.9	71.80	20.5	8.5	98	---	SK 11407 - 365T	3219	150				
16.0		299.16	2.6	112.83	20.9	9.0	96	---							
15.0		309.78	2.6	123.08	20.9	9.0	93	---	SK 12507 - 365T	4839	150				
13.0		366.42	2.2	143.87	20.9	9.0	86	---							
11.0		423.95	1.9	156.94	20.9	9.0	82	---							
10.0		486.79	1.6	177.31	20.9	9.0	91	---							
9.3		498.30	1.6	193.41	20.9	9.0	88	---							
8.0		575.30	1.4	226.08	20.9	9.0	82	---							
12.0		398.28	2.8	146.08	32.4	13.7	91	---				SK 13507 - 365T	7033	150	
11.0		423.95	2.8	159.35	32.4	13.7	88	---							
10.0		469.09	2.3	177.88	32.4	13.7	96	---							
9.3		511.57	2.3	194.04	32.4	13.7	96	---							
7.8		619.55	1.8	229.66	32.4	13.7	86	---							
7.2		663.81	1.8	250.52	32.4	13.7	84	---							
6.3		770.90	1.4	284.85	32.4	13.7	88	---							
5.8		840.82	1.4	310.73	32.4	13.7	88	---							
6.3		739.92	2.5	283.98	33.5	11.5	232	---	SK 15507 - 365T	10902	150				
5.8		803.65	2.5	309.77	33.5	11.5	232	---							
5.0		955.88	2.0	362.35	33.5	11.5	232	---							
4.6		1044.39	2.0	395.26	33.5	11.5	232	---							

100 - 125 hp Right-angle Drives $n_1 = 1800$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page				
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67							
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]					
100	22.0	286.76	1.7	79.13	17.8	8.5	98	A/FAN	SK 11507 - 404/5T	3384	150				
	19.0	332.79	1.7	92.50	17.8	8.5	91	A/FAN							
	18.0	343.41	1.6	101.26	17.8	8.5	86	A/FAN							
	16.0	383.24	1.5	113.11	17.8	8.5	98	A/FAN							
	35.0	180.56	2.3	51.25	16.9	7.0	118	---	---	SK 11407 - 404/5T	3219	150			
		32.0	200.03	2.3	56.11	18.9	8.1	114	---						
		27.0	231.00	2.3	65.59	18.7	7.6	104	---						
		25.0	249.59	2.2	71.80	20.5	8.5	98	A/FAN						
	23.0	272.60	2.6	78.46	20.9	9.0	96	A/FAN	SK 12507 - 404/5T	4839	150				
		19.0	335.44	2.4	91.72	20.9	9.0	88				A/FAN			
		18.0	354.03	2.3	100.05	20.9	9.0	84				A/FAN			
		16.0	389.43	2.0	112.83	20.9	9.0	96				A/FAN			
14.0		447.85	1.8	123.08	20.9	9.0	93	A/FAN							
12.0		537.24	1.5	143.87	20.9	9.0	86	A/FAN							
11.0		575.30	1.4	156.94	20.9	9.0	82	A/FAN							
16.0		400.05	2.7	113.14	32.4	13.7	101	---				SK 13507 - 404/5T	7033	150	
14.0	453.16	2.6	123.42	32.4	13.7	101	---								
12.0	531.05	2.1	146.08	32.4	13.7	91	A/FAN								
11.0	564.68	2.1	159.35	32.4	13.7	88	A/FAN								
10.0	635.48	1.7	177.88	32.4	13.7	96	A/FAN								
9.2	692.13	1.7	194.04	32.4	13.7	96	A/FAN								
7.8	796.57	1.4	229.66	32.4	13.7	86	A/FAN								
7.1	918.71	1.3	250.52	32.4	13.7	84	A/FAN								
10.0	638.14	2.9	177.34	33.5	11.5	232	---	SK 15507 - 404/5T	10902	150					
	9.2	693.01	2.9	193.45	33.5	11.5	232				---				
	7.9	796.57	2.4	226.28	33.5	11.5	232				---				
	7.2	862.95	2.4	246.83	33.5	11.5	232				---				
	6.3	1027.57	1.8	283.98	33.5	11.5	232				---				
	5.7	1116.08	1.8	309.77	33.5	11.5	232				---				
	4.9	1274.51	1.5	362.35	33.5	11.5	232				---				
	4.5	1392.22	1.5	395.26	33.5	11.5	232				---				
	125	23.0	347.83	1.4	79.13	17.8	8.5				98	A/FAN	SK 11507 - 444/5T	3384	150
		19.0	404.48	1.4	92.50	17.8	8.5				91	A/FAN			
40.0	199.14	2.8	44.08	20.5	8.5	98	A/FAN	SK 11407 - 444/5T	3219	150					
	35.0	231.00	1.8	51.25	16.9	7.0	118				A/FAN				
	32.0	242.51	1.9	56.11	18.9	8.1	114				A/FAN				
	27.0	294.73	1.8	65.59	18.7	7.6	104				A/FAN				
	25.0	323.05	1.7	71.80	20.5	8.5	98				A/FAN				
	23.0	337.21	2.1	78.46	20.9	9.0	96				A/FAN	SK 12507 - 444/5T	4839	150	
19.0	423.95	1.9	91.72	20.9	9.0	88	A/FAN								
18.0	428.38	1.9	100.05	20.9	9.0	84	A/FAN								
16.0	486.79	1.6	112.83	20.9	9.0	96	A/FAN								
14.0	575.30	1.4	123.08	20.9	9.0	93	A/FAN								



125 - 150 hp Right-angle Drives $n_1 = 1800$ rpm



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in·1000]			[lb·1000]	[lb·1000]	[hp]	---		[lb]				
125	35.0	223.04	2.9	51.01	18.4	7.9	114	A/FAN	SK 12407 - 444/5T	4817	150			
	32.0	244.28	2.9	55.64	19.1	8.1	111	A/FAN						
	27.0	287.65	2.8	65.04	20.5	8.8	101	A/FAN						
	25.0	313.32	2.6	70.94	20.9	9.0	96	A/FAN						
125	19.0	413.33	2.7	91.91	32.4	13.7	91	A/FAN	SK 13507 - 444/5T	7033	150			
	18.0	442.54	2.7	100.26	32.4	13.7	88	A/FAN						
	16.0	491.22	2.2	113.14	32.4	13.7	101	A/FAN						
	14.0	560.25	2.1	123.42	32.4	13.7	101	A/FAN						
	12.0	655.84	1.7	146.08	32.4	13.7	91	A/FAN						
	11.0	697.44	1.7	159.35	32.4	13.7	88	A/FAN						
	10.0	770.90	1.4	177.88	32.4	13.7	96	A/FAN						
	9.2	840.82	1.4	194.04	32.4	13.7	96	A/FAN						
125	11.0	726.65	2.8	155.41	33.5	11.5	232	---	SK 15507 - 444/5T	10902	150			
	10.0	804.53	2.3	177.34	33.5	11.5	232	---						
	9.2	873.57	2.3	193.45	33.5	11.5	232	---						
	7.9	1006.33	1.9	226.28	33.5	11.5	232	---						
	7.2	1090.41	1.9	246.83	33.5	11.5	232	---						
	6.3	1232.91	1.5	283.98	33.5	11.5	232	---						
	5.8	1339.12	1.5	309.77	33.5	11.5	232	---						
150	57.0	165.51	3.0	31.46	16.9	7.0	118	A/FAN	SK 11407 - 444/5T	3219	150			
	52.0	179.67	3.0	34.45	18.9	8.1	114	A/FAN						
	44.0	215.96	2.7	40.26	18.7	7.6	104	A/FAN						
	40.0	232.77	2.4	44.08	20.5	8.5	98	A/FAN						
	35.0	277.03	1.5	51.25	16.9	7.0	118	A/FAN						
	32.0	287.65	1.6	56.11	18.9	8.1	114	A/FAN						
	27.0	354.03	1.5	65.59	18.7	7.6	104	A/FAN						
	25.0	365.54	1.5	71.80	20.5	8.5	98	A/FAN						
	23.0	416.87	1.7	78.46	20.9	9.0	96	A/FAN				SK 12507 - 444/5T	4839	150
	19.0	503.61	1.6	91.72	20.9	9.0	88	A/FAN						
18.0	508.92	1.6	100.05	20.9	9.0	84	A/FAN							
16.0	599.20	1.3	112.83	20.9	9.0	96	A/FAN							
150	35.0	269.06	2.4	51.01	18.4	7.9	114	A/FAN	SK 12407 - 444/5T	4817	150			
	32.0	294.73	2.4	55.64	19.1	8.1	111	A/FAN						
	27.0	350.49	2.3	65.04	20.5	8.8	101	A/FAN						
	25.0	369.96	2.2	70.94	20.9	9.0	96	A/FAN						
150	23.0	411.56	2.6	77.66	32.4	13.7	101	A/FAN	SK 13507 - 444/5T	7033	150			
	19.0	507.15	2.2	91.91	32.4	13.7	91	A/FAN						
	18.0	519.54	2.3	100.26	32.4	13.7	88	A/FAN						
	16.0	600.08	1.8	113.14	32.4	13.7	101	A/FAN						
	14.0	692.13	1.7	123.42	32.4	13.7	101	A/FAN						
	12.0	796.57	1.4	146.08	32.4	13.7	91	A/FAN						
	11.0	847.02	1.4	159.35	32.4	13.7	88	A/FAN						


150 - 200 hp Right-angle Drives $n_1 = 1800$ rpm



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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
150	13.0	735.50	2.6	142.47	33.5	11.5	232	---	SK 15507 - 444/5T	10902	150			
	11.0	847.90	2.4	155.41	33.5	11.5	232	---						
	10.0	924.90	2.0	177.34	33.5	11.5	232	---						
	9.2	1004.56	2.0	193.45	33.5	11.5	232	---						
	7.9	1194.85	1.6	226.28	33.5	11.5	232	---						
	7.2	1294.86	1.6	246.83	33.5	11.5	232	---						
200	69.0	179.67	2.9	26.04	18.7	7.6	104	A	SK 11407 - 447/9T	3219	150			
	63.0	203.57	2.7	28.50	20.5	8.5	98	A						
	57.0	225.69	2.2	31.46	16.9	7.0	118	A/FAN*						
	52.0	245.17	2.2	34.45	18.9	8.1	114	A/FAN*						
	44.0	292.07	2.0	40.26	18.7	7.6	104	A						
	41.0	309.78	1.8	44.08	20.5	8.5	98	A						
	57.0	219.50	2.9	31.31	18.4	7.9	114	A/FAN	SK 12407 - 447/9T	4817	150			
	52.0	246.94	2.8	34.16	19.1	8.1	111	A/FAN						
	45.0	277.91	2.9	39.92	20.5	8.8	101	A/CC						
	41.0	304.47	2.7	43.55	20.9	9.0	96	A/CC						
	35.0	359.34	1.8	51.01	18.4	7.9	114	A/FAN						
	32.0	392.97	1.8	55.64	19.1	8.1	111	A/FAN						
	27.0	473.52	1.7	65.04	20.5	8.8	101	A/CC						
	25.0	508.92	1.6	70.94	20.9	9.0	96	A/CC						
	23.0	535.47	2.0	77.66	32.4	13.7	101	B/CC				SK 13507 - 447/9T	7033	150
	19.0	655.84	1.7	91.91	32.4	13.7	91	B/CC						
	18.0	702.75	1.7	100.26	32.4	13.7	88	B/CC						
	16.0	770.90	1.4	113.14	32.4	13.7	101	B/CC						
14.0	905.43	1.3	123.42	32.4	13.7	101	B/CC							
35.0	364.65	2.6	50.48	28.3	11.9	118	A/FAN	SK 13407 - 447/9T	6548	150				
32.0	398.28	2.6	55.07	29.9	12.6	118	A/FAN							
27.0	464.66	2.4	65.17	31.5	13.3	104	A/CC							
25.0	498.30	2.4	71.09	32.4	13.7	101	A/CC							
23.0	551.40	2.6	77.42	33.5	11.5	232	---	SK 15507 - 447/9T	10902	150				
20.0	619.55	2.7	90.56	33.5	11.5	232	---							
18.0	700.98	2.6	98.78	33.5	11.5	232	---							
16.0	804.53	2.3	111.66	33.5	11.5	232	---							
15.0	837.28	2.4	121.80	33.5	11.5	232	---							
13.0	955.88	2.0	142.47	33.5	11.5	232	---							
12.0	1071.83	1.9	155.41	33.5	11.5	232	---							
10.0	1232.91	1.5	177.34	33.5	11.5	232	---							
9.2	1339.12	1.5	193.45	33.5	11.5	232	---							



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in·1000]			[lb·1000]	[lb·1000]	[hp]	---		[lb]	
250	88.0	180.56	2.7	20.35	16.9	7.0	118	B	SK 11407 - 447/9T	3219	150
	80.0	197.37	2.6	22.27	18.9	8.1	114	B			
	69.0	227.46	2.3	26.04	18.7	7.6	104	B			
	63.0	249.59	2.2	28.50	20.5	8.5	98	B			
	57.0	275.26	1.8	31.46	16.9	7.0	118	B			
	52.0	300.04	1.8	34.45	18.9	8.1	114	B			
	44.0	365.54	1.6	40.26	18.7	7.6	104	B			
41.0	371.73	1.5	44.08	20.5	8.5	98	B				
250	57.0	277.03	2.3	31.31	18.4	7.9	114	B/CC	SK 12407 - 447/9T	4817	150
	52.0	300.04	2.3	34.16	19.1	8.1	111	B/CC			
	45.0	350.49	2.3	39.92	20.5	8.8	101	B/CC			
	41.0	392.09	2.1	43.55	20.9	9.0	96	B/CC			
	35.0	461.12	1.4	51.01	18.4	7.9	114	B/CC			
	32.0	505.38	1.4	55.64	19.1	8.1	111	B/CC			
	27.0	575.30	1.4	65.04	20.5	8.8	101	B/CC			
	25.0	626.63	1.3	70.94	20.9	9.0	96	B/CC			
250	23.0	669.12	1.6	77.66	32.4	13.7	101	B	SK 13507 - 447/9T	7033	150
	19.0	857.64	1.3	91.91	32.4	13.7	91	B			
	18.0	853.21	1.4	100.26	32.4	13.7	88	B			
250	35.0	451.39	2.1	50.48	28.3	11.9	118	B/CC	SK 13407 - 447/9T	6548	150
	32.0	492.99	2.1	55.07	29.9	12.6	118	B/CC			
	27.0	586.80	1.9	65.17	31.5	13.3	104	B/CC			
	25.0	629.29	1.9	71.09	32.4	13.7	101	B/CC			
250	23.0	682.39	2.1	77.42	33.5	11.5	232	A/FAN*	SK 15507 - 447/9T	10902	150
	20.0	796.57	2.1	90.56	33.5	11.5	232	A/FAN*			
	18.0	868.26	2.1	98.78	33.5	11.5	232	A/FAN*			
	16.0	973.58	1.9	111.66	33.5	11.5	232	A/FAN*			
	15.0	1057.66	1.9	121.80	33.5	11.5	232	A/FAN*			
	13.0	1194.85	1.6	142.47	33.5	11.5	232	A/FAN*			
	12.0	1272.74	1.6	155.41	33.5	11.5	232	A/FAN*			
250	36.0	433.69	2.9	50.33	27.9	9.4	335	---	SK 15407 - 447/9T	10516	150
	33.0	472.63	2.9	54.90	30.8	10.3	335	---			
	28.0	571.76	2.8	64.21	30.3	10.1	335	---			
	26.0	600.97	2.9	70.05	33.5	11.5	335	---			

300 - 350 hp Right-angle Drives $n_1 = 1800$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
300	140.0	134.53	2.7	12.74	14.4	5.8	137	B	SK 11407 - 447/9T	3219	150			
	128.0	147.81	2.7	13.95	16.0	6.7	114	B						
	109.0	170.82	2.7	16.34	15.7	6.5	132	B						
	100.0	187.64	2.6	17.89	17.5	7.4	107	B						
	88.0	211.53	2.3	20.35	16.9	7.0	118	B						
	80.0	233.66	2.2	22.27	18.9	8.1	114	B						
	69.0	275.26	1.9	26.04	18.7	7.6	104	B						
	63.0	304.47	1.8	28.50	20.5	8.5	98	B						
	57.0	330.13	1.5	31.46	16.9	7.0	118	B						
	52.0	360.23	1.5	34.45	18.9	8.1	114	B						
	44.0	416.87	1.4	40.26	18.7	7.6	104	B						
	69.0	277.91	2.9	25.82	20.5	8.8	101	B				SK 12407 - 447/9T	4817	150
	63.0	300.04	2.8	28.16	20.9	9.0	96	B						
	57.0	335.44	1.9	31.31	18.4	7.9	114	B						
52.0	363.77	1.9	34.16	19.1	8.1	111	B							
45.0	423.95	1.9	39.92	20.5	8.8	101	B							
41.0	457.58	1.8	43.55	20.9	9.0	96	B	SK 13507 - 447/9T	7033	150				
23.0	824.00	1.3	77.66	32.4	13.7	101	C							
58.0	327.48	2.7	30.99	28.3	11.9	118	B/CC				SK 13407 - 447/9T	6548	150	
53.0	357.57	2.7	33.80	29.9	12.6	118	B/CC							
45.0	413.33	2.7	40.01	31.5	13.3	104	B/CC							
41.0	459.35	2.6	43.64	32.4	13.7	101	B/CC							
35.0	525.73	1.8	50.48	28.3	11.9	118	B/CC							
32.0	575.30	1.8	55.07	29.9	12.6	118	B/CC							
27.0	697.44	1.6	65.17	31.5	13.3	104	B/CC							
25.0	747.00	1.6	71.09	32.4	13.7	101	B/CC							
23.0	843.48	1.7	77.42	33.5	11.5	232	A/FAN*							SK 15507 - 447/9T
20.0	929.33	1.8	90.56	33.5	11.5	232	A/FAN*							
18.0	1072.71	1.7	98.78	33.5	11.5	232	A/FAN*							
16.0	1155.91	1.6	111.66	33.5	11.5	232	A/FAN*							
15.0	1255.92	1.6	121.80	33.5	11.5	232	A/FAN*							
300	36.0	523.96	2.4	50.33	27.9	9.4	335	---	SK 15407 - 447/9T	10516	150			
	33.0	571.76	2.4	54.90	30.8	10.3	335	---						
	28.0	667.35	2.4	64.21	30.3	10.1	335	---						
	26.0	726.65	2.4	70.05	33.5	11.5	335	---						
	350	140.0	157.54	2.3	12.74	14.4	5.8	137				B	SK 11407 - 447/9T	3219
128.0	173.47	2.3	13.95	16.0	6.7	114	B							
109.0	200.03	2.3	16.34	15.7	6.5	132	B							
100.0	221.27	2.2	17.89	17.5	7.4	107	B							
88.0	255.79	1.9	20.35	16.9	7.0	118	B							
80.0	269.95	1.9	22.27	18.9	8.1	114	B							
69.0	326.59	1.6	26.04	18.7	7.6	104	B							
63.0	343.41	1.6	28.50	20.5	8.5	98	C							



350 - 400 hp Right-angle Drives $n_1 = 1800$ rpm



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page			
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67						
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]				
350	69.0	322.17	2.5	25.82	20.5	8.8	101	B	SK 12407 - 447/9T	4817	150			
	63.0	350.49	2.4	28.16	20.9	9.0	96	C						
	57.0	398.28	1.6	31.31	18.4	7.9	114	B						
	52.0	431.92	1.6	34.16	19.1	8.1	111	B						
	45.0	503.61	1.6	39.92	20.5	8.8	101	B						
	41.0	548.75	1.5	43.55	20.9	9.0	96	C						
	58.0	385.01	2.3	30.99	28.3	11.9	118	B				SK 13407 - 447/9T	6548	150
	53.0	419.53	2.3	33.80	29.9	12.6	118	B						
	45.0	485.02	2.3	40.01	31.5	13.3	104	B						
	41.0	543.44	2.2	43.64	32.4	13.7	101	B						
	35.0	631.06	1.5	50.48	28.3	11.9	118	B						
	32.0	690.36	1.5	55.07	29.9	12.6	118	B						
	27.0	796.57	1.4	65.17	31.5	13.3	104	B						
	25.0	853.21	1.4	71.09	32.4	13.7	101	B						
	23.0	955.88	1.5	77.42	33.5	11.5	232	B/FAN*	SK 15507 - 447/9T	10902	150			
	20.0	1115.19	1.5	90.56	33.5	11.5	232	B/FAN*						
	18.0	1215.21	1.5	98.78	33.5	11.5	232	B/FAN*						
	16.0	1423.20	1.3	111.66	33.5	11.5	232	B/FAN*						
	15.0	1434.71	1.4	121.80	33.5	11.5	232	B/FAN*						
	36.0	598.31	2.1	50.33	27.9	9.4	335	A/FAN*	SK 15407 - 447/9T	10516	150			
33.0	653.19	2.1	54.90	30.8	10.3	335	A/FAN*							
28.0	800.99	2.0	64.21	30.3	10.1	335	A/FAN*							
26.0	830.20	2.1	70.05	33.5	11.5	335	A/FAN*							
400	140.0	181.44	2.0	12.74	14.4	5.8	137	C	SK 11407 - 447/9T	3219	150			
	128.0	199.14	2.0	13.95	16.0	6.7	114	C						
	109.0	230.12	2.0	16.34	15.7	6.5	132	C						
	100.0	255.79	1.9	17.89	17.5	7.4	107	C						
	88.0	286.76	1.7	20.35	16.9	7.0	118	C						
	80.0	321.28	1.6	22.27	18.9	8.1	114	C						
	69.0	372.62	1.4	26.04	18.7	7.6	104	C						
	63.0	392.09	1.4	28.50	20.5	8.5	98	C						
	140.0	180.56	2.7	12.81	15.5	6.7	132	C				SK 12407 - 447/9T	4817	150
	128.0	196.49	2.7	13.97	16.0	7.0	111	C						
	109.0	229.23	2.7	16.33	16.6	7.2	123	C						
	100.0	252.25	2.7	17.81	17.5	7.6	104	C						
	88.0	284.99	2.7	20.25	18.4	7.9	114	C						
	81.0	311.55	2.7	22.09	19.1	8.1	111	C						
	69.0	366.42	2.2	25.82	20.5	8.8	101	C						
	63.0	400.05	2.1	28.16	20.9	9.0	96	C						
	57.0	454.93	1.4	31.31	18.4	7.9	114	C						
	52.0	492.99	1.4	34.16	19.1	8.1	111	C						
	45.0	575.30	1.4	39.92	20.5	8.8	101	C						
	41.0	632.83	1.3	43.55	20.9	9.0	96	C						

400 - 450 hp Right-angle Drives $n_1 = 1800$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page	
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67				
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]		
400	58.0	442.54	2.0	30.99	28.3	11.9	118	C	SK 13407 - 447/9T	6548	150	
	53.0	482.37	2.0	33.80	29.9	12.6	118	C				
	45.0	557.60	2.0	40.01	31.5	13.3	104	C				
	41.0	629.29	1.9	43.64	32.4	13.7	101	C				
	35.0	728.42	1.3	50.48	28.3	11.9	118	C				
	32.0	796.57	1.3	55.07	29.9	12.6	118	C				
	23.0	1102.80	1.3	77.42	33.5	11.5	232	B/FAN*	SK 15507 - 447/9T	10902	150	
	20.0	1286.90	1.3	90.56	33.5	11.5	232	B/FAN*				
	18.0	1402.84	1.3	98.78	33.5	11.5	232	B/FAN*				
	400	58.0	439.00	2.8	30.89	27.9	9.4	335	A/FAN*	SK 15407 - 447/9T	10516	150
		53.0	480.60	2.8	33.70	30.8	10.3	335	A/FAN*			
		45.0	562.91	2.8	39.42	30.3	10.1	335	A/FAN*			
42.0		592.12	2.9	43.00	33.5	11.5	335	A/FAN*				
36.0		698.32	1.8	50.33	27.9	9.4	335	A/FAN*				
33.0		762.05	1.8	54.90	30.8	10.3	335	A/FAN*				
28.0		890.39	1.8	64.21	30.3	10.1	335	A/FAN*				
26.0		968.27	1.8	70.05	33.5	11.5	335	A/FAN*				
450		140.0	201.80	1.8	12.74	14.4	5.8	137	C	SK 11407 - 447/9T	3219	150
		128.0	221.27	1.8	13.95	16.0	6.7	114	C			
		109.0	255.79	1.8	16.34	15.7	6.5	132	C			
		100.0	286.76	1.7	17.89	17.5	7.4	107	C			
	88.0	324.82	1.5	20.35	16.9	7.0	118	C				
	80.0	366.42	1.4	22.27	18.9	8.1	114	C				
	139.0	202.68	2.4	12.81	15.5	6.7	132	C	SK 12407 - 447/9T	4817	150	
	128.0	221.27	2.4	13.97	16.0	7.0	111	C				
	109.0	258.44	2.4	16.33	16.6	7.2	123	C				
	100.0	284.11	2.4	17.81	17.5	7.6	104	C				
	88.0	321.28	2.4	20.25	18.4	7.9	114	C				
	81.0	350.49	2.4	22.09	19.1	8.1	111	C				
69.0	402.71	2.0	25.82	20.5	8.8	101	C					
63.0	442.54	1.9	28.16	20.9	9.0	96	C					
450	69.0	413.33	2.7	25.87	31.5	13.3	104	C	SK 13407 - 447/9T	6548	150	
	63.0	442.54	2.7	28.22	32.4	13.7	101	C				
	58.0	492.10	1.8	30.99	28.3	11.9	118	C				
	53.0	536.36	1.8	33.80	29.9	12.6	118	C				
	45.0	619.55	1.8	40.01	31.5	13.3	104	C				
	41.0	702.75	1.7	43.64	32.4	13.7	101	C				



450 - 500 hp Right-angle Drives $n_1 = 1800$ rpm



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in·1000]			[lb·1000]	[lb·1000]	[hp]	---		[lb]	
450	58.0	492.10	2.5	30.89	27.9	9.4	335	B/FAN*	SK 15407 - 447/9T	10516	150
	53.0	538.13	2.5	33.70	30.8	10.3	335	B/FAN*			
	45.0	630.17	2.5	39.42	30.3	10.1	335	B/FAN*			
	42.0	686.82	2.5	43.00	33.5	11.5	335	B/FAN*			
	35.0	785.95	1.6	50.33	27.9	9.4	335	B/FAN*			
	33.0	857.64	1.6	54.90	30.8	10.3	335	B/FAN*			
	28.0	1001.02	1.6	64.21	30.3	10.1	335	B/FAN*			
	25.0	1162.10	1.5	70.05	33.5	11.5	335	B/FAN*			
500	140.0	226.58	1.6	12.74	14.4	5.8	137	C	SK 11407 - 585/6	3219	150
	128.0	248.71	1.6	13.95	16.0	6.7	114	D			
	109.0	287.65	1.6	16.34	15.7	6.5	132	C			
	100.0	324.82	1.5	17.89	17.5	7.4	107	D			
	88.0	347.83	1.4	20.35	16.9	7.0	118	D			
	80.0	394.74	1.3	22.27	18.9	8.1	114	D			
	140.0	221.27	2.2	12.81	15.5	6.7	132	C	SK 12407 - 585/6	4817	150
	128.0	241.63	2.2	13.97	16.0	7.0	111	D			
	109.0	294.73	2.1	16.33	16.6	7.2	123	D			
	100.0	309.78	2.2	17.81	17.5	7.6	104	D			
	88.0	349.60	2.2	20.25	18.4	7.9	114	D			
	81.0	382.35	2.2	22.09	19.1	8.1	111	D			
	69.0	447.85	1.8	25.82	20.5	8.8	101	D			
	63.0	494.76	1.7	28.16	20.9	9.0	96	D			
	69.0	464.66	2.4	25.87	31.5	13.3	104	D	SK 13407 - 585/6	6548	150
	63.0	498.30	2.4	28.22	32.4	13.7	101	D			
58.0	553.17	1.6	30.99	28.3	11.9	118	D				
53.0	602.74	1.6	33.80	29.9	12.6	118	D				
45.0	697.44	1.6	40.01	31.5	13.3	104	D				
41.0	747.00	1.6	43.64	32.4	13.7	101	D				
58.0	534.59	2.3	30.89	27.9	9.4	335	B/FAN*	SK 15407 - 585/6	10516	150	
53.0	585.03	2.3	33.70	30.8	10.3	335	B/FAN*				
45.0	716.03	2.2	39.42	30.3	10.1	335	B/FAN*				
42.0	746.12	2.3	43.00	33.5	11.5	335	B/FAN*				
36.0	897.47	1.4	50.33	27.9	9.4	335	B/FAN*				
33.0	979.78	1.4	54.90	30.8	10.3	335	B/FAN*				
28.0	1144.40	1.4	64.21	30.3	10.1	335	B/FAN*				
26.0	1245.30	1.4	70.05	33.5	11.5	335	B/FAN*				

600 - 700 hp Right-angle Drives $n_1 = 1800$ rpm




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Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{t0.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
600	140.0	278.80	1.3	12.74	14.4	5.8	137	D	SK 11407 - 586/7	3219	150
	128.0	306.24	1.3	13.95	16.0	6.7	114	E			
	109.0	354.03	1.3	16.34	15.7	6.5	132	E			
	140.0	270.83	1.8	12.81	15.5	6.7	132	E	SK 12407 - 586/7	4817	150
	128.0	294.73	1.8	13.97	16.0	7.0	111	E			
	110.0	344.29	1.8	16.33	16.6	7.2	123	E			
	100.0	378.81	1.8	17.81	17.5	7.6	104	E			
	88.0	427.49	1.8	20.25	18.4	7.9	114	E			
	81.0	467.32	1.8	22.09	19.1	8.1	111	E			
	69.0	537.24	1.5	25.82	20.5	8.8	101	E			
	64.0	600.97	1.4	28.16	20.9	9.0	96	E			
	137.0	279.68	2.5	13.04	24.5	10.3	137	D	SK 13407 - 586/7	6548	150
	126.0	304.47	2.5	14.22	25.6	10.8	114	E			
	112.0	339.87	2.5	16.00	26.3	11.0	132	E			
	103.0	371.73	2.5	17.45	27.7	11.7	111	E			
	89.0	428.38	2.5	20.04	28.3	11.9	118	E			
	82.0	460.24	2.5	21.86	29.9	12.6	118	E			
	69.0	557.60	2.0	25.87	31.5	13.3	104	E			
	63.0	597.43	2.0	28.22	32.4	13.7	101	E			
	58.0	631.94	1.4	30.99	28.3	11.9	118	E			
	53.0	689.47	1.4	33.80	29.9	12.6	118	E			
	45.0	857.64	1.3	40.01	31.5	13.3	104	E			
	41.0	918.71	1.3	43.64	32.4	13.7	101	E			
		58.0	647.87	1.9	30.89	27.9	9.4	335			
53.0		708.06	1.9	33.70	30.8	10.3	335	C/FAN*			
45.0		829.32	1.9	39.42	30.3	10.1	335	C/FAN*			
42.0		903.66	1.9	43.00	33.5	11.5	335	C/FAN*			
700	140.0	324.82	1.5	12.81	15.5	6.7	132	E	SK 12407 - 587/8	4817	150
	128.0	354.03	1.5	13.97	16.0	7.0	111	E			
	110.0	413.33	1.5	16.33	16.6	7.2	123	E			
	101.0	425.72	1.6	17.81	17.5	7.6	104	F	SK 13407 - 587/8	6548	150
	88.0	513.34	1.5	20.25	18.4	7.9	114	E			
	81.0	560.25	1.5	22.09	19.1	8.1	111	E			
	137.0	317.74	2.2	13.04	24.5	10.3	137	E			
	126.0	346.06	2.2	14.22	25.6	10.8	114	E	SK 13407 - 587/8	6548	150
	112.0	385.89	2.2	16.00	26.3	11.0	132	E			
	103.0	422.18	2.2	17.45	27.7	11.7	111	E			
	89.0	486.79	2.2	20.04	28.3	11.9	118	E			
	82.0	547.86	2.1	21.86	29.9	12.6	118	E			
	69.0	655.84	1.7	25.87	31.5	13.3	104	F			
	63.0	702.75	1.7	28.22	32.4	13.7	101	F			



700 - 800 hp Right-angle Drives $n_1 = 1800$ rpm



Input Power	Output Speed	Output Torque	Service Factor	Gear Ratio	OHL	Thrust	Thermal Limit	Cooling System	Model Type	Weight	Dim. Page
P_1	n_2	T_2	f_B	i_{ges}	F_R	F_A	$P_{10.20}$	CS page 67			
[hp]	[rpm]	[lb-in-1000]			[lb-1000]	[lb-1000]	[hp]	---		[lb]	
700	142.0	314.20	2.9	12.61	23.4	7.9	335	C	SK 15407 - 587/8	10516	150
	130.0	345.18	2.9	13.76	25.6	8.8	335	C			
	111.0	402.71	2.9	16.10	25.6	8.5	335	C			
	102.0	439.88	2.9	17.56	28.3	9.4	335	C			
	90.0	497.41	2.9	19.98	27.9	9.4	335	C			
	82.0	543.44	2.9	21.79	30.8	10.3	335	C			
	70.0	629.29	2.8	25.49	30.3	10.1	335	C			
	64.0	691.24	2.6	27.81	33.5	11.5	335	C			
	58.0	769.13	1.6	30.89	27.9	9.4	335	C			
	53.0	840.82	1.6	33.70	30.8	10.3	335	C			
	45.0	985.09	1.6	39.42	30.3	10.1	335	C			
	42.0	1073.60	1.6	43.00	33.5	11.5	335	C			
800	140.0	347.83	1.4	12.81	15.5	6.7	132	F	SK 12407 - 587/8	4817	150
	128.0	408.90	1.3	13.97	16.0	7.0	111	F			
	110.0	442.54	1.4	16.33	16.6	7.2	123	F			
	101.0	486.79	1.4	17.81	17.5	7.6	104	F			
	88.0	592.12	1.3	20.25	18.4	7.9	114	F			
	81.0	600.97	1.4	22.09	19.1	8.1	111	F			
	137.0	368.19	1.9	13.04	24.5	10.3	137	F	SK 13407 - 587/8	6548	150
	126.0	400.94	1.9	14.22	25.6	10.8	114	F			
	112.0	446.96	1.9	16.00	26.3	11.0	132	F			
	103.0	489.45	1.9	17.45	27.7	11.7	111	F			
	89.0	563.79	1.9	20.04	28.3	11.9	118	F			
	82.0	605.39	1.9	21.86	29.9	12.6	118	F			
69.0	743.46	1.5	25.87	31.5	13.3	104	F	SK 15407 - 587/8	10516	150	
63.0	796.57	1.5	28.22	32.4	13.7	101	F				
142.0	350.49	2.6	12.61	23.4	7.9	335	E				
130.0	385.01	2.6	13.76	25.6	8.8	335	E				
111.0	449.62	2.6	16.10	25.6	8.5	335	E				
102.0	490.33	2.6	17.56	28.3	9.4	335	E				
90.0	554.94	2.6	19.98	27.9	9.4	335	E				
82.0	606.28	2.6	21.79	30.8	10.3	335	E				
70.0	733.73	2.4	25.49	30.3	10.1	335	E				
64.0	781.52	2.3	27.81	33.5	11.5	335	E				
58.0	878.88	1.4	30.89	27.9	9.4	335	E				
53.0	961.19	1.4	33.70	30.8	10.3	335	E				
45.0	1124.93	1.4	39.42	30.3	10.1	335	E				
42.0	1226.71	1.4	43.00	33.5	11.5	335	E				

900 - 1500 hp Right-angle Drives $n_1 = 1800$ rpm

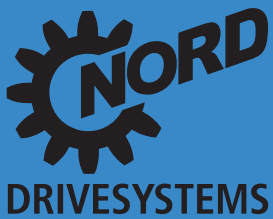
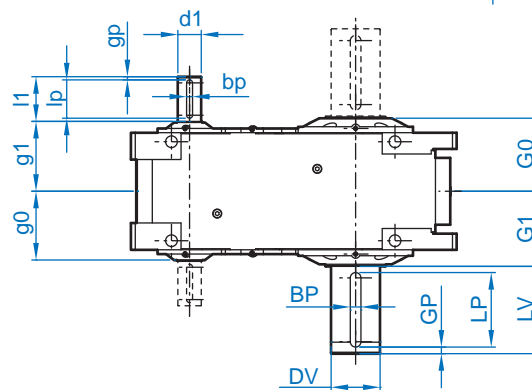
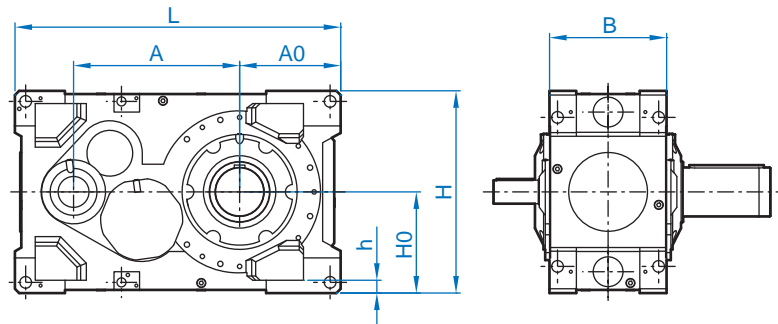


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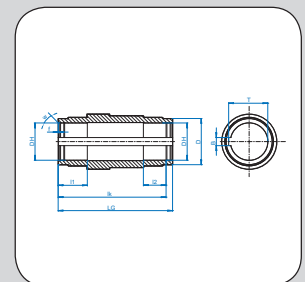
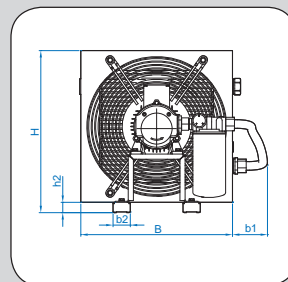
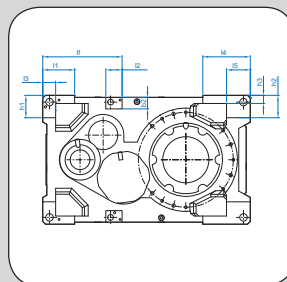
Input Power P_1 [hp]	Output Speed n_2 [rpm]	Output Torque T_2 [lb-in-1000]	Service Factor f_B	Gear Ratio i_{ges}	OHL F_R [lb-1000]	Thrust F_A [lb-1000]	Thermal Limit $P_{10.20}$ [hp]	Cooling System CS page 67 ---	Model Type	Weight [lb]	Dim. Page			
900	138.0	411.56	1.7	13.04	24.5	10.3	137	F	SK 13407	6548	150			
	127.0	447.85	1.7	14.22	25.6	10.8	114	F						
	113.0	500.07	1.7	16.00	26.3	11.0	132	F						
	103.0	546.98	1.7	17.45	27.7	11.7	111	F						
	90.0	630.17	1.7	20.04	28.3	11.9	118	F						
	82.0	677.08	1.7	21.86	29.9	12.6	118	F						
	70.0	796.57	1.4	25.87	31.5	13.3	104	F						
	64.0	918.71	1.3	28.22	32.4	13.7	101	F						
	143.0	396.51	2.3	12.61	23.4	7.9	335	E				SK 15407	10516	150
	131.0	434.57	2.3	13.76	25.6	8.8	335	E						
	112.0	508.03	2.3	16.10	25.6	8.5	335	E						
	103.0	554.06	2.3	17.56	28.3	9.4	335	E						
	90.0	627.52	2.3	19.98	27.9	9.4	335	E						
	83.0	685.05	2.3	21.79	30.8	10.3	335	E						
71.0	800.99	2.2	25.49	30.3	10.1	335	E							
65.0	855.87	2.1	27.81	33.5	11.5	335	E							
1000	138.0	466.43	1.5	13.04	24.5	10.3	137	G	SK 13407	6548	150			
	127.0	507.15	1.5	14.22	25.6	10.8	114	G						
	113.0	566.45	1.5	16.00	26.3	11.0	132	G						
	103.0	619.55	1.5	17.45	27.7	11.7	111	G						
	90.0	714.26	1.5	20.04	28.3	11.9	118	G						
	82.0	767.36	1.5	21.86	29.9	12.6	118	G						
	143.0	433.69	2.1	12.61	23.4	7.9	335	F	SK 15407	10516	150			
	131.0	476.17	2.1	13.76	25.6	8.8	335	F						
	112.0	556.71	2.1	16.10	25.6	8.5	335	F						
	103.0	607.16	2.1	17.56	28.3	9.4	335	F						
	90.0	686.82	2.1	19.98	27.9	9.4	335	F						
	83.0	750.54	2.1	21.79	30.8	10.3	335	F						
	71.0	880.65	2.0	25.49	30.3	10.1	335	F						
	65.0	945.26	1.9	27.81	33.5	11.5	335	F						
1250	143.0	536.36	1.7	12.61	23.4	7.9	335	G	SK 15407	10516	150			
	131.0	588.57	1.7	13.76	25.6	8.8	335	G						
	112.0	686.82	1.7	16.10	25.6	8.5	335	G						
	103.0	749.66	1.7	17.56	28.3	9.4	335	G						
	90.0	901.89	1.6	19.98	27.9	9.4	335	G						
	83.0	926.67	1.7	21.79	30.8	10.3	335	G						
	71.0	1101.03	1.6	25.49	30.3	10.1	335	G						
	65.0	1197.51	1.5	27.81	33.5	11.5	335	G						
1500	143.0	651.42	1.4	12.61	23.4	7.9	335	H	SK 15407	10516	150			
	131.0	714.26	1.4	13.76	25.6	8.8	335	H						
	112.0	834.63	1.4	16.10	25.6	8.5	335	H						
	103.0	910.74	1.4	17.56	28.3	9.4	335	H						
	90.0	1030.23	1.4	19.98	27.9	9.4	335	H						
	83.0	1124.93	1.4	21.79	30.8	10.3	335	H						
	71.0	1355.05	1.3	25.49	30.3	10.1	335	H						

Gearmotors & C-Face Reducers

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- Parallel Drives SK...207 SK...307 [IEC]
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- Right-angle Drives SK...407 SK...507 [FAN]
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- SK...07 EV/EA
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- SK...07 Mach. Bolt Hole Detail
- SK...07 H/B
- SK...07 R
- SK...07 F
- SK...07 FK
- SK...07 VFVL2/3
- SK...07 AFVL2/3
- SK...07 AFSAVL2/3
- SK...07 D/ED
- SK...07 WX
- SK...07 F1/EW
- SK...07 OK/OT
- SK...07 OT2/CC
- SK...07 CS Water Cooler
- SK...07 CS Air Cooler
- SK...07 OH
- SK...07 MF/MS...

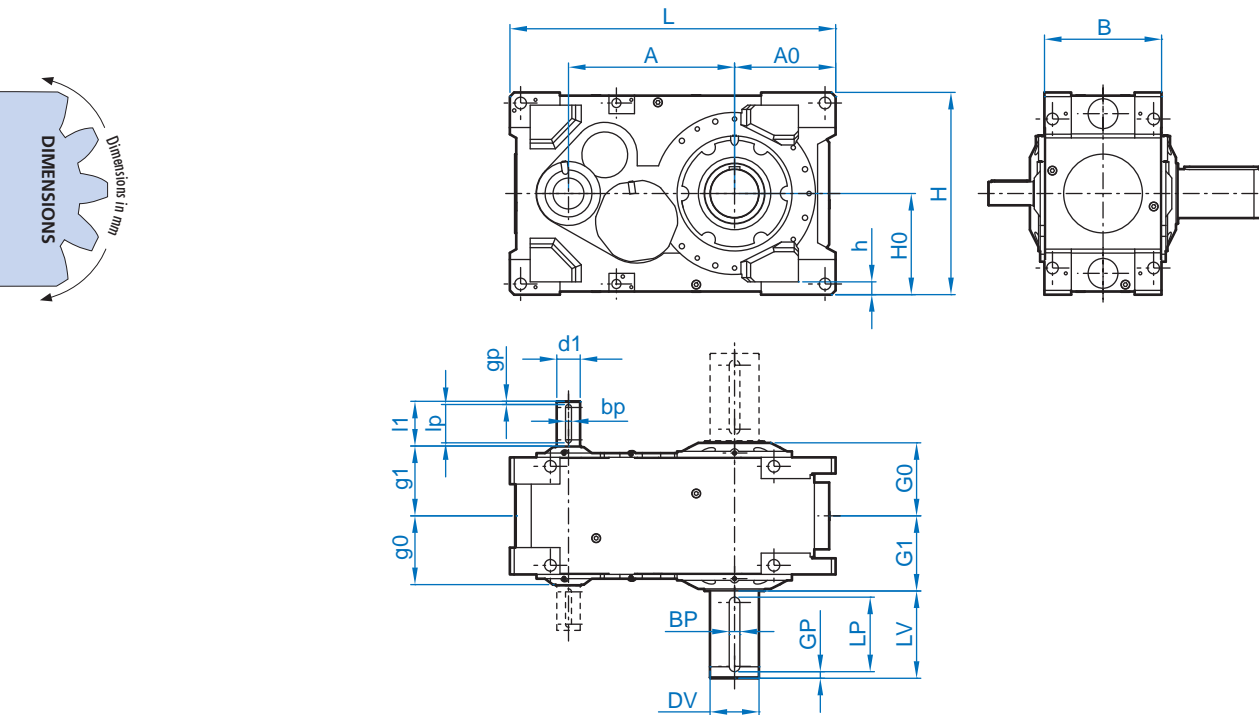


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Parallel Drives SK...207 & SK...307

SK 11207 - SK 15307

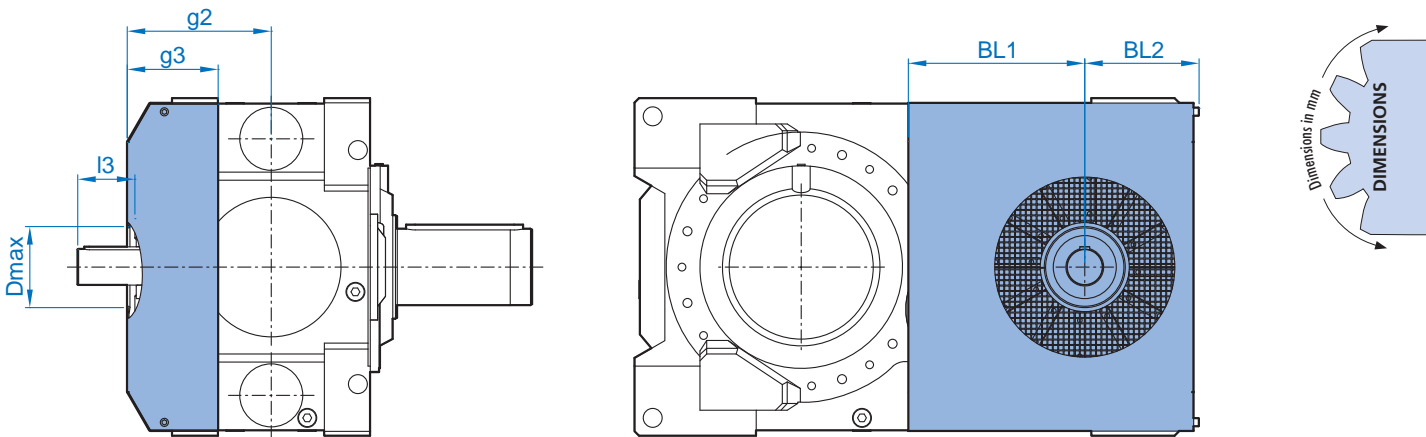


	L	B	H0	H	h	A	A0	g0	g1	G0	G1	DV	LV	LP	BP	GP
SK 11.07	1210	440	375	750	52	630	370	254	260	270	280	∅ 170	300	260	40	20
SK 12.07	1345	510	425	850	57	695	405	288.5	294	305	315	∅ 200	350	300	45	25
SK 13.07	1530	550	475	950	60	780	475	323	328	343	353	∅ 230	410	350	50	31
SK 15.07	1800	650	550	1100	70	935	545	361	371	385	395	∅ 250	410	360	56	25

	SK..207					
	i_N	d1	l1	lp	bp	gp
SK 11.07	5.6 ... 20	∅ 80	170	140	22	15
SK 12.07	5.6 ... 20	∅ 100	210	180	28	15
SK 13.07	5.6 ... 20	∅ 110	210	180	28	15
SK 15.07	5.6 ... 20	∅ 120	245	200	32	25

	SK..307					
	i_N	d1	l1	lp	bp	gp
22.4 ... 112	∅ 70	140	125	20	7.5	
22.4 ... 112	∅ 80	170	140	22	15	
22.4 ... 112	∅ 80	170	140	22	15	
22.4 ... 45	∅ 100	210	180	28	15	
50 ... 112	∅ 80	170	140	22	15	

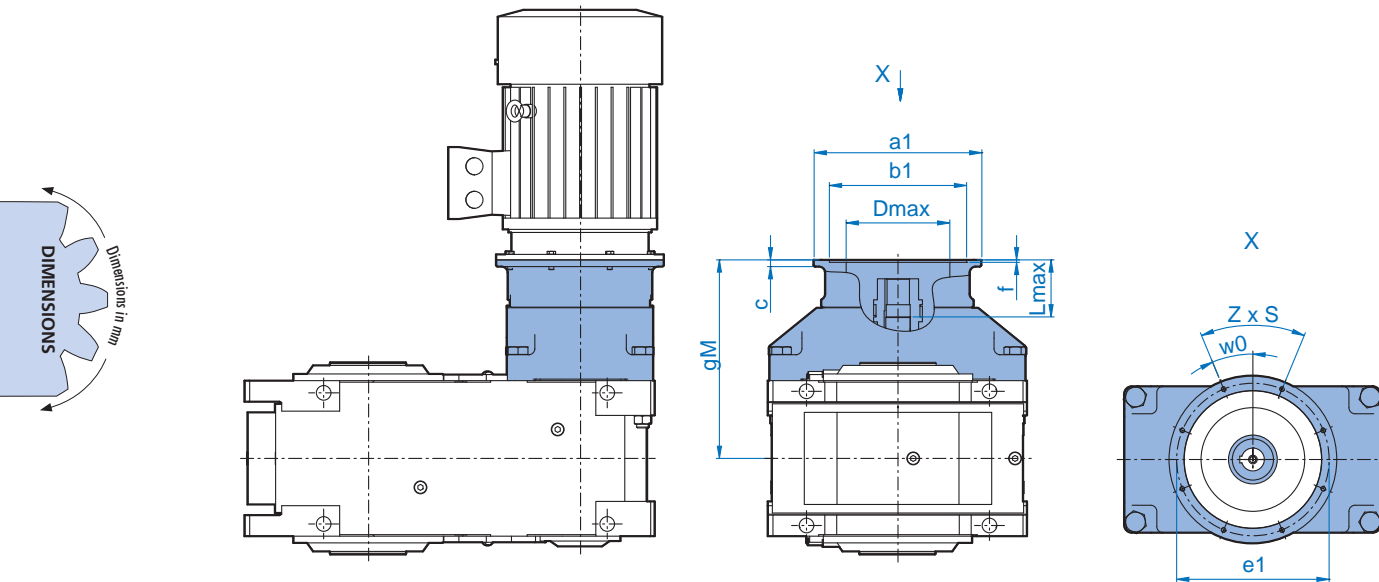
SK 11207 - SK 15307



	i_N	BL1	BL2	g2	g3	l3	Dmax
SK 11207	5.6 ... 20	390	252	307	189	133	ø 160
SK 11307	22.4 ... 112	390	252	307	189	103	ø 160
SK 12207	5.6 ... 20	430	287	358	217	158	ø 180
SK 12307	22.4 ... 112	430	287	358	217	118	ø 180
SK 13207	5.6 ... 20	490	317	392	243	158	ø 200
SK 13307	22.4 ... 112	490	317	392	243	118	ø 200
SK 15207	5.6 ... 20	580	362	450	275	178	ø 240
SK 15307	22.4 ... 45	580	346	469	292	143	ø 240
SK 15307	50 ... 112	580	346	469	292	103	ø 240

Parallel Drives SK...207 & SK...307 (IEC)

SK 11207 - SK 15307



		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 11207	IEC	160	545	350	250	300	15	6.5	4 x 17.5	45	228	115
		180	545	350	250	300	15	6.5	4 x 17.5	45	228	115
		200	545	400	300	350	17	6.5	4 x 17.5	45	276	115
		225	575	450	350	400	18	6.5	8 x 17.5	22.5	290	145
		250	575	550	450	500	22	8	8 x M16	22.5	340	145
		280	575	550	450	500	22	8	8 x M16	22.5	340	145
	TN ²⁾	315	605	660	550	600	22	8	8 x 22	22.5	340	175
		315T	605	800	680	740	25	8	8 x 22	22.5	340	175
		355T	605	900	780	840	25	8	8 x 22	22.5	340	175
SK 11307	IEC	160	545	350	250	300	15	6.5	4 x 17.5	45	228	145
		180	545	350	250	300	15	6.5	4 x 17.5	45	228	145
		200	545	400	300	350	17	6.5	4 x 17.5	45	276	145
		225	575	450	350	400	18	6.5	8 x 17.5	22.5	290	175
		250	575	550	450	500	22	8	8 x M16	22.5	340	175
		280	575	550	450	500	22	8	8 x M16	22.5	340	175
	TN ²⁾	315	605	660	550	600	22	8	8 x 22	22.5	340	205
		315T	605	800	680	740	25	8	8 x 22	22.5	340	205
		355T	605	900	780	840	25	8	8 x 22	22.5	340	205
SK 12207	IEC	160	621	350	250	300	15	6.5	4 x 17.5	45	228	117
		180	621	350	250	300	15	6.5	4 x 17.5	45	228	117
		200	621	400	300	350	17	6.5	4 x 17.5	45	276	117
		225	651	450	350	400	18	6.5	8 x 17.5	22.5	290	147
		250	651	550	450	500	22	8	8 x M16	22.5	340	147
		280	651	550	450	500	22	8	8 x M16	22.5	340	147
	TN ²⁾	315	681	660	550	600	22	8	8 x 22	22.5	340	177
		315T	681	800	680	740	25	8	8 x 22	22.5	340	177
		355T	681	900	780	840	25	8	8 x 22	22.5	340	177

		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 12307	IEC	160	621	350	250	300	15	6.5	4 x 17.5	45	228	157
		180	621	350	250	300	15	6.5	4 x 17.5	45	228	157
		200	621	400	300	350	17	6.5	4 x 17.5	45	276	157
		225	651	450	350	400	18	6.5	8 x 17.5	22.5	290	187
		250	651	550	450	500	22	8	8 x M16	22.5	340	187
		280	651	550	450	500	22	8	8 x M16	22.5	340	187
	315	681	660	550	600	22	8	8 x 22	22.5	340	217	
	TN ²⁾	315T	681	800	680	740	25	8	8 x 22	22.5	340	217
355T		681	900	780	840	25	8	8 x 22	22.5	340	217	
SK 13207	IEC	160	656	350	250	300	15	6.5	4 x 17.5	45	228	118
		180	656	350	250	300	15	6.5	4 x 17.5	45	228	118
		200	656	400	300	350	17	6.5	4 x 17.5	45	276	118
		225	686	450	350	400	18	6.5	8 x 17.5	22.5	290	148
		250	686	550	450	500	22	8	8 x M16	22.5	340	148
		280	686	550	450	500	22	8	8 x M16	22.5	340	148
	315	716	660	550	600	22	8	8 x 22	22.5	340	178	
	TN ²⁾	315T	716	800	680	740	25	8	8 x 22	22.5	340	178
355T		716	900	780	840	25	8	8 x 22	22.5	340	178	
SK 13307	IEC	160	656	350	250	300	15	6.5	4 x 17.5	45	228	158
		180	656	350	250	300	15	6.5	4 x 17.5	45	228	158
		200	656	400	300	350	17	6.5	4 x 17.5	45	276	158
		225	686	450	350	400	18	6.5	8 x 17.5	22.5	290	188
		250	686	550	450	500	22	8	8 x M16	22.5	340	188
		280	686	550	450	500	22	8	8 x M16	22.5	340	188
	315	716	660	550	600	22	8	8 x 22	22.5	340	218	
	TN ²⁾	315T	716	800	680	740	25	8	8 x 22	22.5	340	218
355T		716	900	780	840	25	8	8 x 22	22.5	340	218	
SK 15207	IEC	160	735	350	250	300	15	6.5	4 x 17.5	45	228	119
		180	735	350	250	300	15	6.5	4 x 17.5	45	228	119
		200	735	400	300	350	17	6.5	4 x 17.5	45	276	119
		225	765	450	350	400	18	6.5	8 x 17.5	22.5	290	149
		250	765	550	450	500	22	8	8 x M16	22.5	340	149
		280	765	550	450	500	22	8	8 x M16	22.5	340	149
	315	795	660	550	600	22	8	8 x 22	22.5	340	179	
	TN ²⁾	315T	795	800	680	740	25	8	8 x 22	22.5	340	179
355T		795	900	780	840	25	8	8 x 22	22.5	340	179	
SK 15307	IEC	160	735	350	250	300	15	6.5	4 x 17.5	45	228	154 / 194
		180	735	350	250	300	15	6.5	4 x 17.5	45	228	154 / 194
		200	735	400	300	350	17	6.5	4 x 17.5	45	276	154 / 194
		225	765	450	350	400	18	6.5	8 x 17.5	22.5	290	184 / 224
		250	765	550	450	500	22	8	8 x M16	22.5	340	184 / 224
		280	765	550	450	500	22	8	8 x M16	22.5	340	184 / 224
	315	795	660	550	600	22	8	8 x 22	22.5	340	214 / 254	
	TN ²⁾	315T	795	800	680	740	25	8	8 x 22	22.5	340	214 / 254
355T		795	900	780	840	25	8	8 x 22	22.5	340	214 / 254	

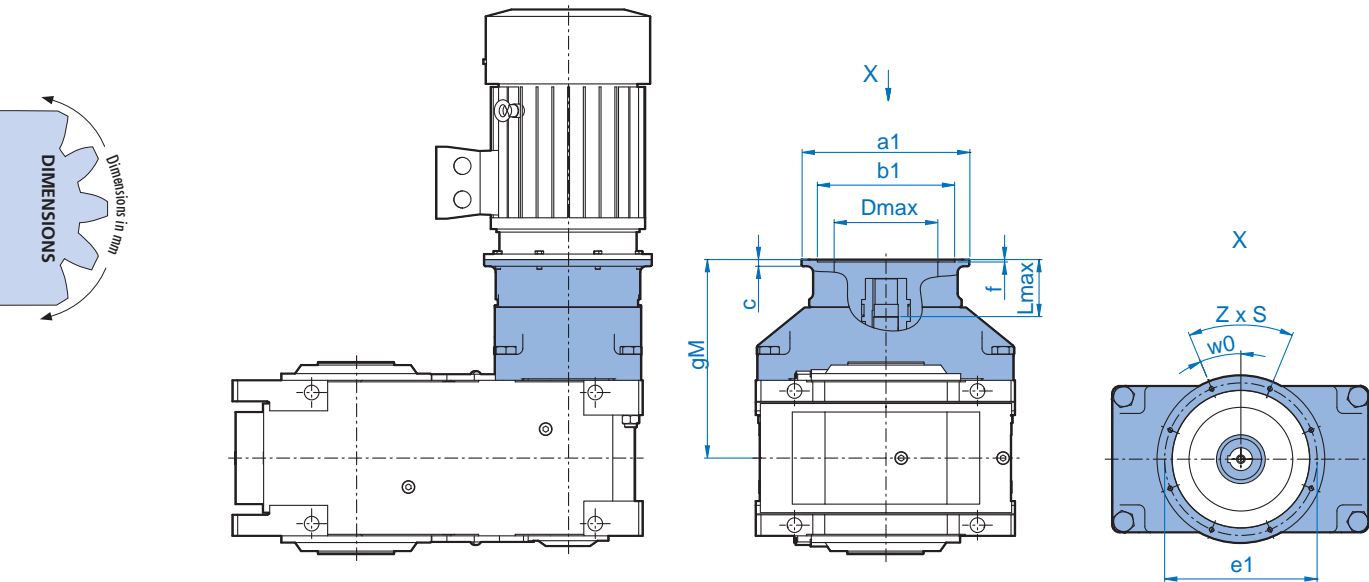


¹⁾ Type designation and dimensions up to 200kW correspond to NORD motors

²⁾ Data for Transnorm motors available on request

Parallel Drives SK...207 & SK...307 (NEMA)

SK 11207 - SK 15307



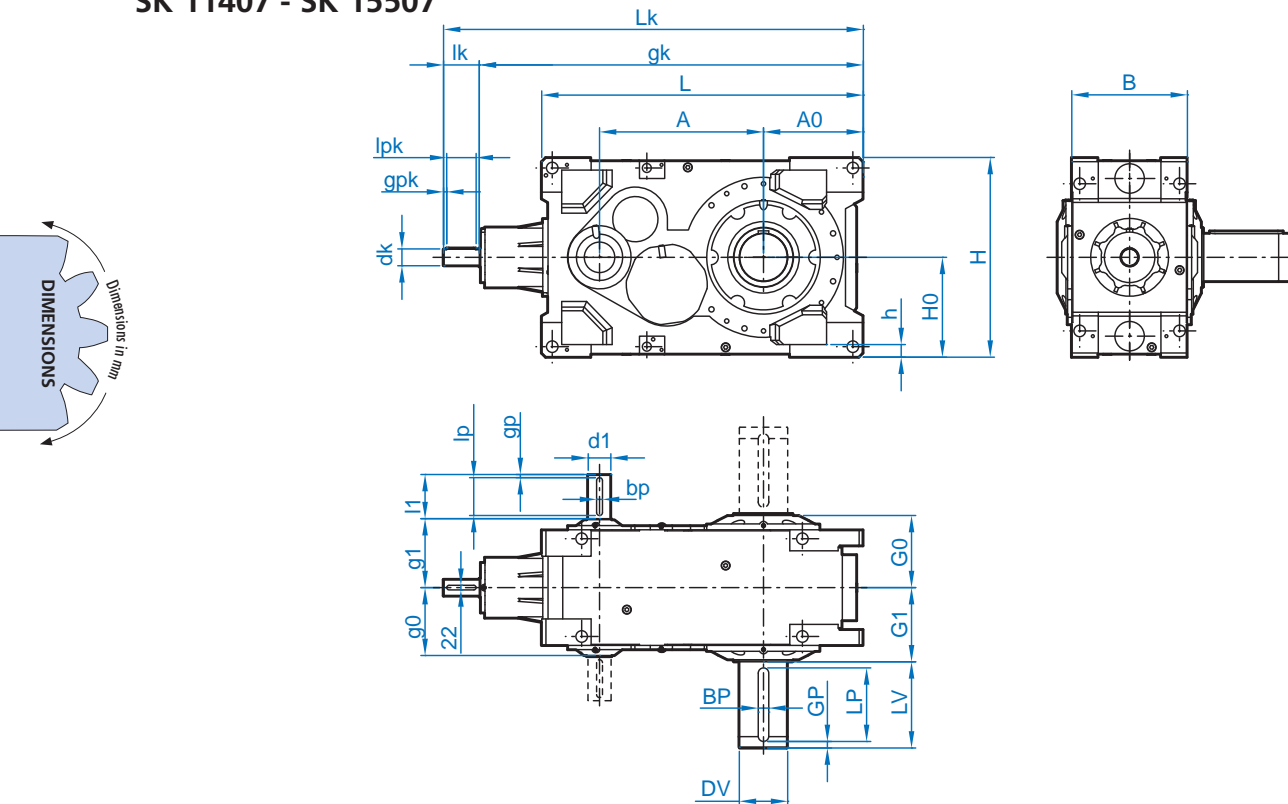
		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 11207	NEMA	254/256 TC	568	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	138
		284/286 TC	568	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	138
		324/326 TC	579	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	149
		364/365 TC	609	450	317.5	279.4	52	4	4 x 5/8-11	45	280	179
		404/405 TC	623	550	317.5	500	70	4	4 x 5/8-11	45	330	193
		444/445 TC	655	550	406.4	500	102	4.5	4 x 5/8-11	45	330	225
SK 11307	NEMA	254/256 TC	568	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	168
		284/286 TC	568	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	168
		324/326 TC	579	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	179
		364/365 TC	609	450	317.5	279.4	52	4	4 x 5/8-11	45	280	209
		404/405 TC	623	550	317.5	500	70	4	4 x 5/8-11	45	330	223
		444/445 TC	655	550	406.4	500	102	4.5	4 x 5/8-11	45	330	255
		447/449 TC	650	660	406.4	600	67	4.5	4 x 5/8-11	45	330	250

		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 12207	NEMA	254/256 TC	644	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	140
		284/286 TC	644	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	140
		324/326 TC	655	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	151
		364/365 TC	685	450	317.5	279.4	52	4	4 x 5/8-11	45	280	181
		404/405 TC	699	550	317.5	500	70	4	4 x 5/8-11	45	330	195
		444/445 TC	731	550	406.4	500	102	4.5	4 x 5/8-11	45	330	227
		447/449 TC	726	660	406.4	600	67	4.5	4 x 5/8-11	45	330	222
SK 12307	NEMA	254/256 TC	644	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	180
		284/286 TC	644	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	180
		324/326 TC	655	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	191
		364/365 TC	685	450	317.5	279.4	52	4	4 x 5/8-11	45	280	221
		404/405 TC	699	550	317.5	500	70	4	4 x 5/8-11	45	330	235
		444/445 TC	731	550	406.4	500	102	4.5	4 x 5/8-11	45	330	267
		447/449 TC	726	660	406.4	600	67	4.5	4 x 5/8-11	45	330	262
SK 13207	NEMA	254/256 TC	679	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	141
		284/286 TC	679	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	141
		324/326 TC	690	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	152
		364/365 TC	720	450	317.5	279.4	52	4	4 x 5/8-11	45	280	182
		404/405 TC	734	550	317.5	500	70	4	4 x 5/8-11	45	330	196
		444/445 TC	766	550	406.4	500	102	4.5	4 x 5/8-11	45	330	228
		447/449 TC	761	660	406.4	600	67	4.5	4 x 5/8-11	45	330	223
SK 13307	NEMA	254/256 TC	679	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	181
		284/286 TC	679	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	181
		324/326 TC	690	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	192
		364/365 TC	720	450	317.5	279.4	52	4	4 x 5/8-11	45	280	222
		404/405 TC	734	550	317.5	500	70	4	4 x 5/8-11	45	330	236
		444/445 TC	766	550	406.4	500	102	4.5	4 x 5/8-11	45	330	268
		447/449 TC	761	660	406.4	600	67	4.5	4 x 5/8-11	45	330	263
SK 15207	NEMA	254/256 TC	758	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	142
		284/286 TC	758	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	142
		324/326 TC	769	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	153
		364/365 TC	799	450	317.5	279.4	52	4	4 x 5/8-11	45	280	183
		404/405 TC	813	550	317.5	500	70	4	4 x 5/8-11	45	330	197
		444/445 TC	845	550	406.4	500	102	4.5	4 x 5/8-11	45	330	229
		447/449 TC	840	660	406.4	600	67	4.5	4 x 5/8-11	45	330	224
SK 15307	NEMA	254/256 TC	758	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	177 / 217
		284/286 TC	758	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	177 / 217
		324/326 TC	769	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	188 / 228
		364/365 TC	799	450	317.5	279.4	52	4	4 x 5/8-11	45	280	218 / 258
		404/405 TC	813	550	317.5	500	70	4	4 x 5/8-11	45	330	232 / 272
		444/445 TC	845	550	406.4	500	102	4.5	4 x 5/8-11	45	330	264 / 304
		447/449 TC	840	660	406.4	600	67	4.5	4 x 5/8-11	45	330	259 / 299



Right Angle Drives SK...407 & SK...507

SK 11407 - SK 15507

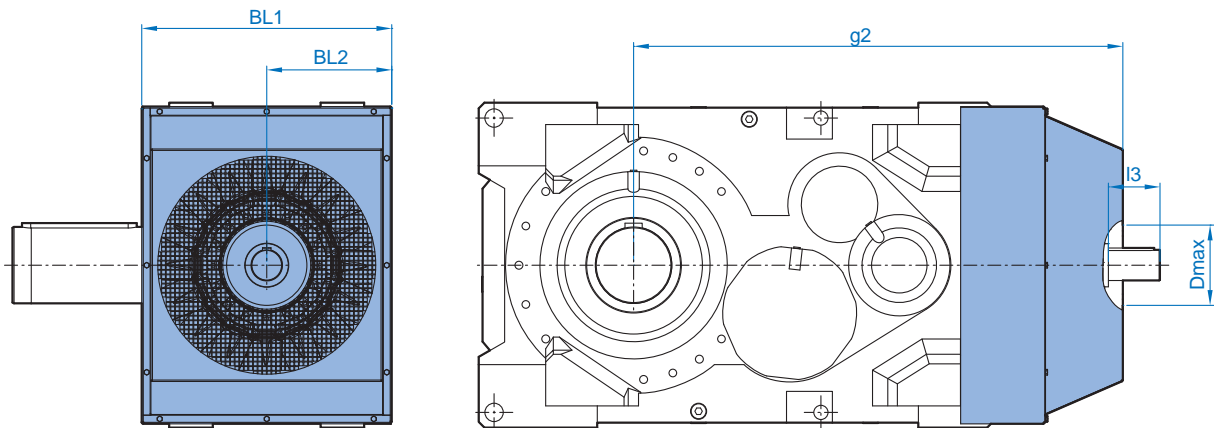


	L	B	H0	H	h	A	A0	g0	g1	G0	G1	DV	LV	LP	BP	GP
SK 11.07	1210	440	375	750	52	630	370	254	260	270	280	∅ 170	300	260	40	20
SK 12.07	1345	510	425	850	57	695	405	288,5	294	305	315	∅ 200	350	300	45	25
SK 13.07	1530	550	475	950	60	780	475	323	328	343	353	∅ 230	410	350	50	31
SK 15.07	1800	650	550	1100	70	935	545	361	371	385	395	∅ 250	410	360	56	25

	SK..407													
	i_N	LK	gk	dk	lk	lpk	bpk	gpk	d1	l1	lp	bp	gp	
SK 11.07	12.6 .. 45	1564	1424	∅ 70	140	125	20	7.5	∅ 70	140	125	20	7.5	
	50 .. 71	1534		∅ 50	110	90	14	10						
SK 12.07	12.6 .. 45	1782	1612	∅ 80	170	140	22	15	∅ 80	170	140	22	15	
	50 .. 71	1752		∅ 70	140	125	20	7.5						
SK 13.07	12.6 .. 45	1997	1827	∅ 80	170	140	22	15	∅ 80	170	140	22	15	
	50 .. 71	1967		∅ 70	140	110	20	15						
SK 15.07	12.6 .. 45	2332	2132	∅ 100	200	180	28	15	∅ 100	210	180	28	15	
	50 .. 71	2302		∅ 80	170	140	22	15						

	SK..507												
	i_N	LK	gk	dk	lk	lpk	bpk	gpk	d1	l1	lp	bp	gp
SK 11.07	80 .. 400	1481	1371	∅ 50	110	90	14	10	∅ 70	140	125	20	7.5
SK 12.07	80 .. 400	1634	1524	∅ 50	110	90	14	10	∅ 80	170	140	22	15
SK 13.07	80 .. 400	1907	1767	∅ 70	140	125	20	7.5	∅ 80	170	140	22	15
SK 15.07	80 .. 400	2192	2052	∅ 70	140	110	20	15	∅ 100	210	180	28	15

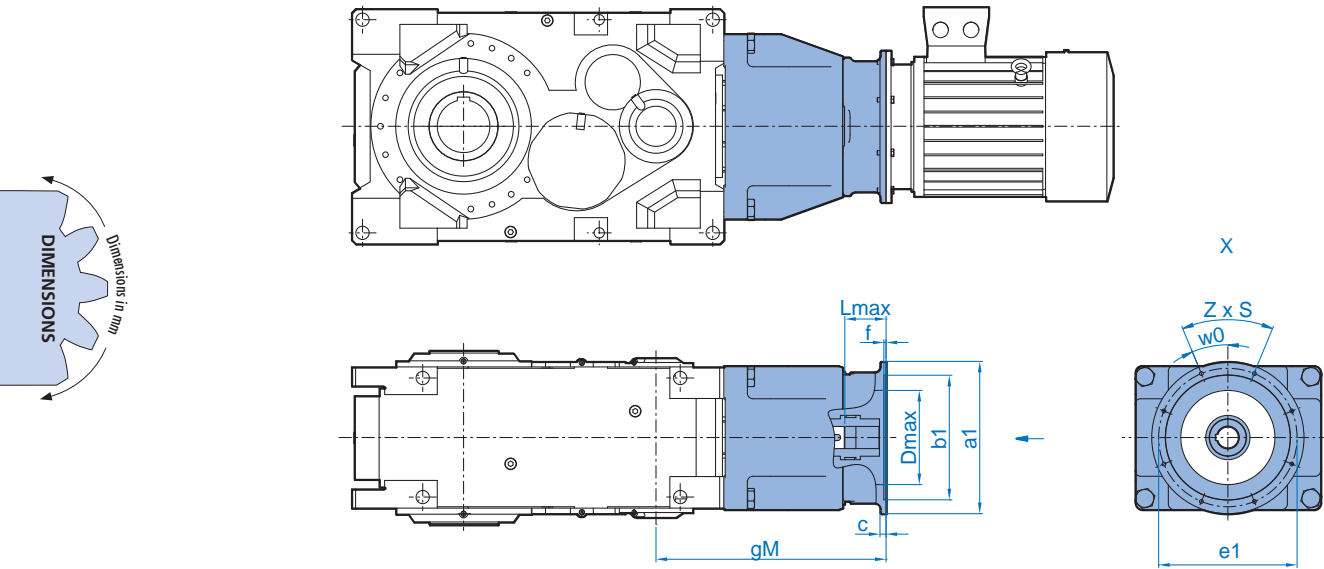
SK 11407 - SK 15507



	i_N	BL1	BL2	g2	l3	Dmax
SK 11407	12.6 ... 45	574	287	1125	100	ø 210
	50 ... 71				70	
SK 11507	80 ... 400	574	287	1050	70	ø 210
SK 12407	12.6 ... 45	654	327	1280	135	ø 220
	50 ... 71				105	
SK 12507	80 ... 400	654	327	1190	75	ø 220
SK 13407	12.6 ... 45	704	352	1425	135	ø 240
	50 ... 71				105	
SK 13507	80 ... 400	704	352	1365	105	ø 240
SK 15407	12.6 ... 45	814	407	1665	160	ø 250
	50 ... 71				130	
SK 15507	80 ... 400	814	407	1585	100	ø 250

Right Angle Drives SK...407 & SK...507 (IEC)

SK 11407 - SK 15507



		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 11407	IEC	160	684	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		180	684	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		200	684	400	300	350	17	6.5	4 x 17.5	45	276	120 / 150
		225	714	450	350	400	18	6.5	8 x 17.5	22.5	290	150 / 180
		250	714	550	450	500	22	8	8 x M16	22.5	340	150 / 180
		280	714	550	450	500	22	8	8 x M16	22.5	340	150 / 180
	TN ²⁾	315T	744	800	680	740	25	8	8 x 22	22.5	340	180 / 210
		355T	744	900	780	840	25	8	8 x 22	22.5	340	180 / 210
SK 11507	IEC	160	601	350	250	300	15	6.5	4 x 17.5	45	228	120
		180	601	350	250	300	15	6.5	4 x 17.5	45	228	120
		200	601	400	300	350	17	6.5	4 x 17.5	45	276	120
		225	631	450	350	400	18	6.5	8 x 17.5	22.5	290	150
		250	631	550	450	500	22	8	8 x M16	22.5	340	150
		280	631	550	450	500	22	8	8 x M16	22.5	340	150
	TN ²⁾	315T	661	660	550	600	22	8	8 x 22	22.5	340	180
		315T	661	800	680	740	25	8	8 x 22	22.5	340	180
		355T	661	900	780	840	25	8	8 x 22	22.5	340	180
SK 12407	IEC	160	801	350	250	300	15	6.5	4 x 17.5	45	228	119 / 149
		180	801	350	250	300	15	6.5	4 x 17.5	45	228	119 / 149
		200	801	400	300	350	17	6.5	4 x 17.5	45	276	119 / 149
		225	831	450	350	400	18	6.5	8 x 17.5	22.5	290	149 / 179
		250	831	550	450	500	22	8	8 x M16	22.5	340	149 / 179
		280	831	550	450	500	22	8	8 x M16	22.5	340	149 / 179
	TN ²⁾	315	861	660	550	600	22	8	8 x 22	22.5	340	179 / 209
		315T	861	800	680	740	25	8	8 x 22	22.5	340	179 / 209
		355T	861	900	780	840	25	8	8 x 22	22.5	340	179 / 209

		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 12507	IEC	160	650	350	250	300	15	6.5	4 x 17.5	45	228	116
		180	650	350	250	300	15	6.5	4 x 17.5	45	228	116
		200	650	400	300	350	17	6.5	4 x 17.5	45	276	116
		225	680	450	350	400	18	6.5	8 x 17.5	22.5	290	146
		250	680	550	450	500	22	8	8 x M16	22.5	340	146
		280	680	550	450	500	22	8	8 x M16	22.5	340	146
		315	710	660	550	600	22	8	8 x 22	22.5	340	176
	TN 2)	315T	710	800	680	740	25	8	8 x 22	22.5	340	176
		355T	710	900	780	840	25	8	8 x 22	22.5	340	176
SK 13407	IEC	160	862	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		180	862	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		200	862	400	300	350	17	6.5	4 x 17.5	45	276	120 / 150
		225	892	450	350	400	18	6.5	8 x 17.5	22.5	290	150 / 180
		250	892	550	450	500	22	8	8 x M16	22.5	340	150 / 180
		280	892	550	450	500	22	8	8 x M16	22.5	340	150 / 180
		315	922	660	550	600	22	8	8 x 22	22.5	340	180 / 210
	TN 2)	315T	922	800	680	740	25	8	8 x 22	22.5	340	180 / 210
		355T	922	900	780	840	25	8	8 x 22	22.5	340	180 / 210
SK 13507	IEC	160	771	350	250	300	15	6.5	4 x 17.5	45	228	119
		180	771	350	250	300	15	6.5	4 x 17.5	45	228	119
		200	771	400	300	350	17	6.5	4 x 17.5	45	276	119
		225	801	450	350	400	18	6.5	8 x 17.5	22.5	290	149
		250	801	550	450	500	22	8	8 x M16	22.5	340	149
		280	801	550	450	500	22	8	8 x M16	22.5	340	149
		315	831	660	550	600	22	8	8 x 22	22.5	340	179
	TN 2)	315T	831	800	680	740	25	8	8 x 22	22.5	340	179
		355T	831	900	780	840	25	8	8 x 22	22.5	340	179
SK 15407	IEC	160	972	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		180	972	350	250	300	15	6.5	4 x 17.5	45	228	120 / 150
		200	972	400	300	350	17	6.5	4 x 17.5	45	276	120 / 150
		225	1002	450	350	400	18	6.5	8 x 17.5	22.5	290	150 / 180
		250	1002	550	450	500	22	8	8 x M16	22.5	340	150 / 180
		280	1002	550	450	500	22	8	8 x M16	22.5	340	150 / 180
		315	1032	660	550	600	22	8	8 x 22	22.5	340	180 / 210
	TN 2)	315T	1032	800	680	740	25	8	8 x 22	22.5	340	180 / 210
		355T	1032	900	780	840	25	8	8 x 22	22.5	340	180 / 210
SK 15507	IEC	160	832	350	250	300	15	6.5	4 x 17.5	45	228	120
		180	832	350	250	300	15	6.5	4 x 17.5	45	228	120
		200	832	400	300	350	17	6.5	4 x 17.5	45	276	120
		225	862	450	350	400	18	6.5	8 x 17.5	22.5	290	150
		250	862	550	450	500	22	8	8 x M16	22.5	340	150
		280	862	550	450	500	22	8	8 x M16	22.5	340	150
		315	892	660	550	600	22	8	8 x 22	22.5	340	180
	TN 2)	315T	892	800	680	740	25	8	8 x 22	22.5	340	180
		355T	892	900	780	840	25	8	8 x 22	22.5	340	180

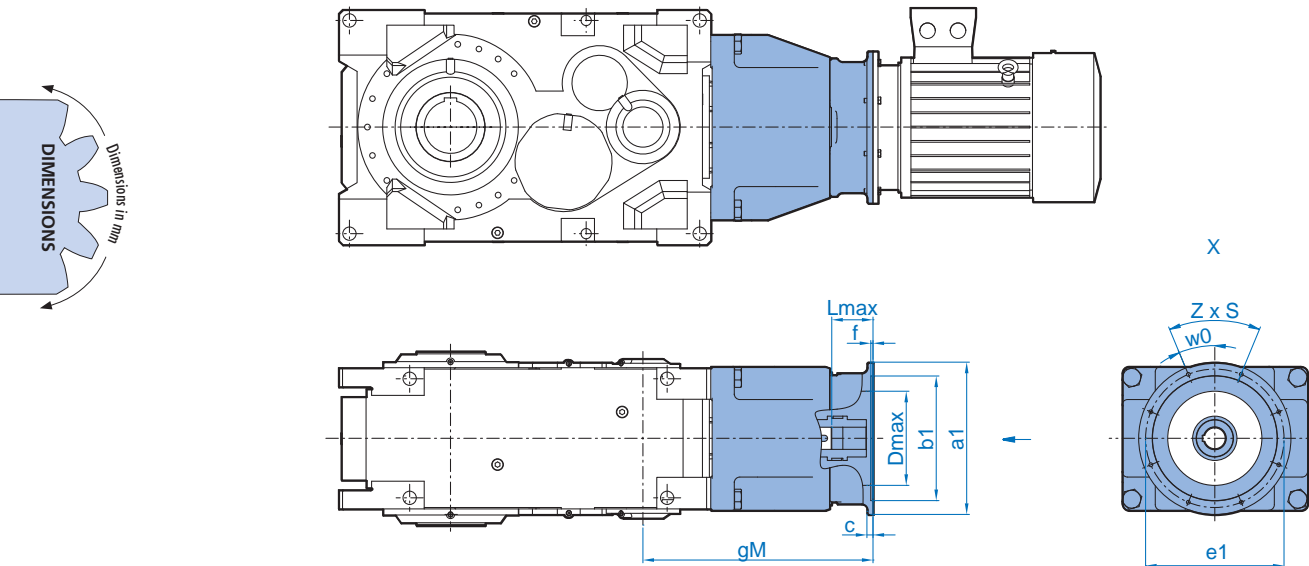


1) Type designation and dimensions up to 200kW correspond to NORD motors

2) Data for Transnorm motors available on request

Right Angle Drives SK...407 & SK...507 (NEMA)

SK 11407 - SK 15507



		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 11407	NEMA	254/256 TC	707	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	143 / 173
		284/286 TC	707	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	143 / 173
		324/326 TC	718	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	154 / 184
		364/365 TC	748	450	317.5	279.4	52	4	4 x 5/8-11	45	280	184 / 214
		404/405 TC	762	550	317.5	500	70	4	4 x 5/8-11	45	330	198 / 228
		444/445 TC	794	550	406.4	500	102	4.5	4 x 5/8-11	45	330	230 / 260
		447/449 TC	789	660	406.4	600	67	4.5	4 x 5/8-11	45	330	225 / 255
SK 11507	NEMA	254/256 TC	624	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	143
		284/286 TC	624	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	143
		324/326 TC	635	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	154
		364/365 TC	665	450	317.5	279.4	52	4	4 x 5/8-11	45	280	184
		404/405 TC	679	550	317.5	500	70	4	4 x 5/8-11	45	330	198
		444/445 TC	711	550	406.4	500	102	4.5	4 x 5/8-11	45	330	230
		447/449 TC	706	660	406.4	600	67	4.5	4 x 5/8-11	45	330	225

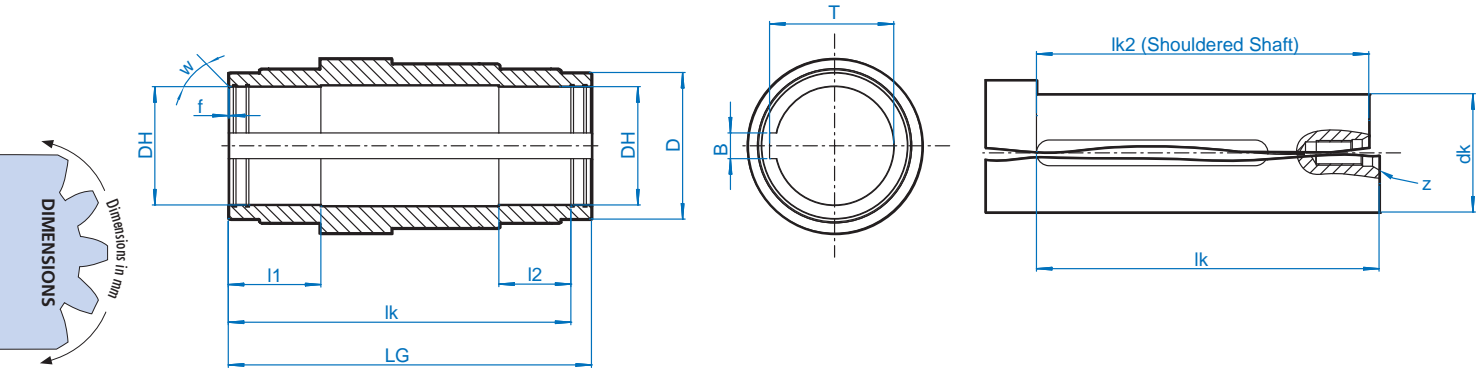
		gM	a1	b1	e1	c	f	z x s	w0	Dmax	Lmax	
SK 12407	NEMA	254/256 TC	824	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	142 / 172
		284/286 TC	824	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	142 / 172
		324/326 TC	835	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	153 / 183
		364/365 TC	865	450	317.5	279.4	52	4	4 x 5/8-11	45	280	183 / 213
		404/405 TC	879	550	317.5	500	70	4	4 x 5/8-11	45	330	197 / 227
		444/445 TC	911	550	406.4	500	102	4.5	4 x 5/8-11	45	330	229 / 259
		447/449 TC	906	660	406.4	600	67	4.5	4 x 5/8-11	45	330	224 / 254
SK 12507	NEMA	254/256 TC	673	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	139
		284/286 TC	673	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	139
		324/326 TC	684	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	150
		364/365 TC	714	450	317.5	279.4	52	4	4 x 5/8-11	45	280	180
		404/405 TC	728	550	317.5	500	70	4	4 x 5/8-11	45	330	194
		444/445 TC	760	550	406.4	500	102	4.5	4 x 5/8-11	45	330	226
		447/449 TC	755	660	406.4	600	67	4.5	4 x 5/8-11	45	330	221
SK 13407	NEMA	254/256 TC	885	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	143 / 173
		284/286 TC	885	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	143 / 173
		324/326 TC	896	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	154 / 184
		364/365 TC	926	450	317.5	279.4	52	4	4 x 5/8-11	45	280	184 / 214
		404/405 TC	940	550	317.5	500	70	4	4 x 5/8-11	45	330	198 / 228
		444/445 TC	972	550	406.4	500	102	4.5	4 x 5/8-11	45	330	230 / 260
		447/449 TC	967	660	406.4	600	67	4.5	4 x 5/8-11	45	330	225 / 255
SK 13507	NEMA	254/256 TC	794	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	142
		284/286 TC	794	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	142
		324/326 TC	805	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	153
		364/365 TC	835	450	317.5	279.4	52	4	4 x 5/8-11	45	280	183
		404/405 TC	849	550	317.5	500	70	4	4 x 5/8-11	45	330	197
		444/445 TC	881	550	406.4	500	102	4.5	4 x 5/8-11	45	330	229
		447/449 TC	876	660	406.4	600	67	4.5	4 x 5/8-11	45	330	224
SK 15407	NEMA	254/256 TC	995	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	143 / 173
		284/286 TC	995	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	143 / 173
		324/326 TC	1006	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	154 / 184
		364/365 TC	1036	450	317.5	279.4	52	4	4 x 5/8-11	45	280	184 / 214
		404/405 TC	1050	550	317.5	500	70	4	4 x 5/8-11	45	330	198 / 228
		444/445 TC	1082	550	406.4	500	102	4.5	4 x 5/8-11	45	330	230 / 260
		447/449 TC	1077	660	406.4	600	67	4.5	4 x 5/8-11	45	330	225 / 255
SK 15507	NEMA	254/256 TC	855	350	215.9	184.15	38	5.8	4 x 1/2-13	45	220	143
		284/286 TC	855	350	266.7	228.6	38	5.8	4 x 1/2-13	45	220	143
		324/326 TC	866	400	317.5	279.4	51	5.8	4 x 5/8-11	45	265	154
		364/365 TC	896	450	317.5	279.4	52	4	4 x 5/8-11	45	280	184
		404/405 TC	910	550	317.5	500	70	4	4 x 5/8-11	45	330	198
		444/445 TC	942	550	406.4	500	102	4.5	4 x 5/8-11	45	330	230
		447/449 TC	937	660	406.4	600	67	4.5	4 x 5/8-11	45	330	225



¹⁾ Type designation and dimensions up to 200kW correspond to NORD motors

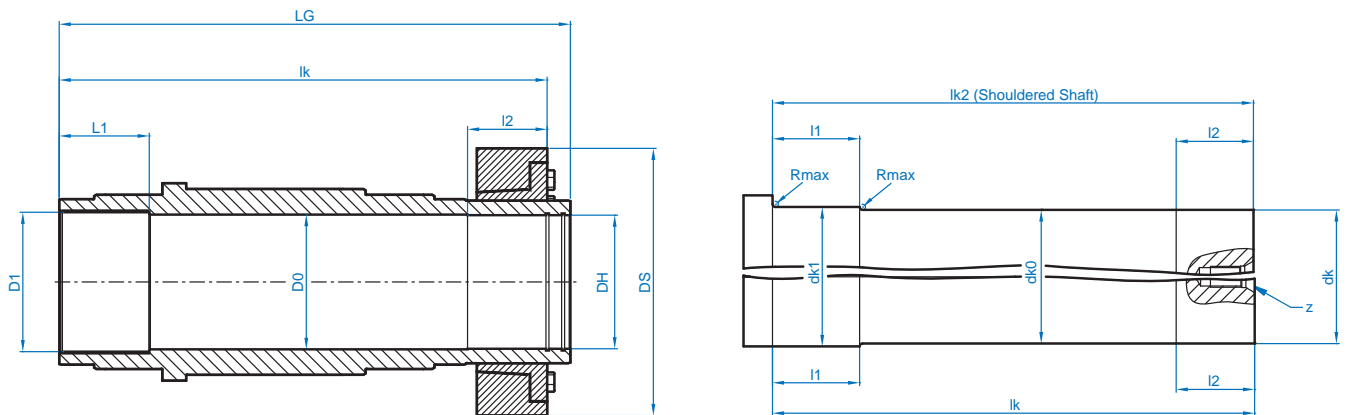
²⁾ Data for Transnorm motors available on request

SK...07 A - Keyed Hollow Shaft



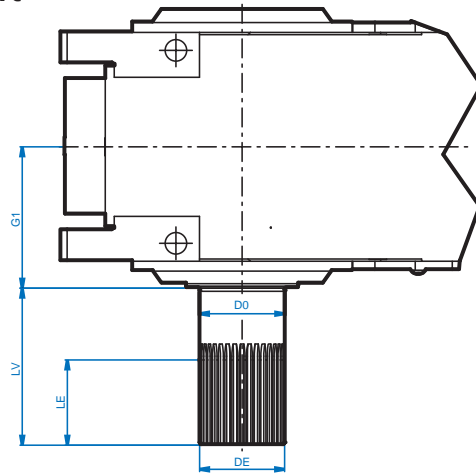
	DH	LG	dk	lk	lk2	l1	l2	D	f	w	B	T	z	dG
SK 11..07	ø170 H7	560	ø170 j6	525	523	140	105	240	2	30	40	179.4	M30	M36
SK 12..07	ø190 H7	630	ø190 j6	595	593	160	125	250	2	30	45	200.4	M30	M36
SK 13..07	ø230 H7	706	ø230 j6	666	664	180	140	285	2	30	50	241.4	M36	M42
SK 15..07	ø250 H7	790	ø250 j6	745	743	200	155	320	2	30	56	262.4	M36	M42

SK...07 AS - Shrink Disc Hollow Shaft



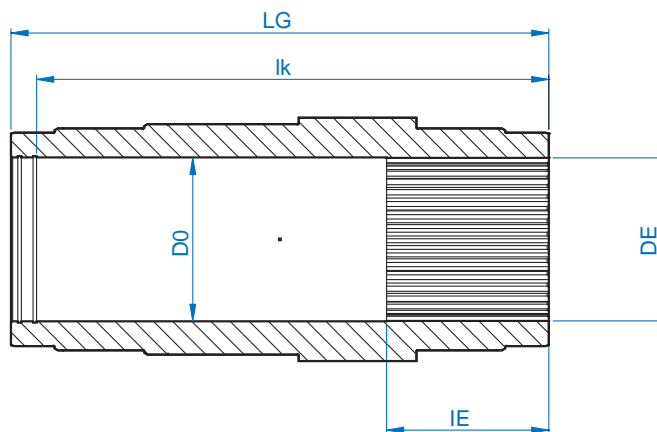
	DH	D0	D1	L1	DS	LG	dk1	dk0	dk	lk	lk2	l1	l2	Rmax	z
SK 11..07	ø170 H7	ø172	ø180	125	ø370	690	ø180 h8	ø170	ø170 g6	658	656	125	105	5	M30
SK 12..07	ø190 H7	ø192	ø200	135	ø405	770	ø200 h8	ø190	ø190 g6	736	734	130	120	5	M30
SK 13..07	ø230 H7	ø232	ø240	155	ø460	880	ø240 h8	ø230	ø230 g6	838	836	150	135	5	M36
SK 15..07	ø250 H7	ø252	ø260	175	ø485	970	ø260 h8	ø250	ø250 g6	928	926	170	150	5	M36

SK...07 EV - Splined Solid Shaft



	DE	LE	G1	LV	D0
SK 11..07	W 170 x 5 x 30 x 32 - DIN 5480	160	280	300	ø 170
SK 12..07	W 190 x 5 x 30 x 36 - DIN 5480	190	315	350	ø 190
SK 13..07	W 220 x 5 x 30 x 42 - DIN 5480	215	353	410	ø 220
SK 15..07	W 250 x 5 x 30 x 48 - DIN 5480	245	395	410	ø 250

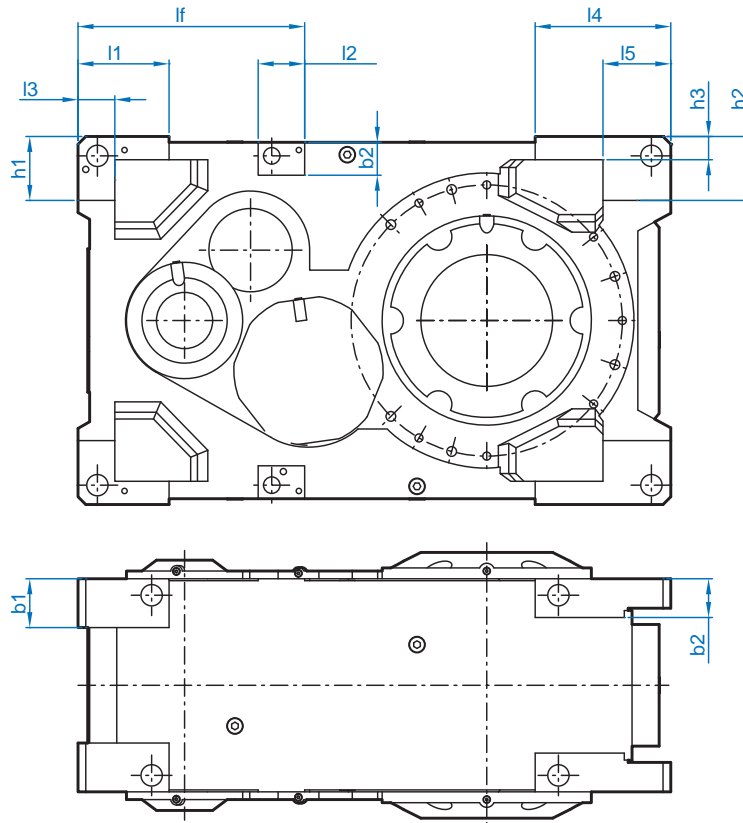
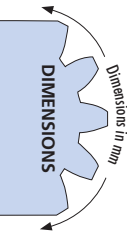
SK...07 EA - Splined Hollow Shaft



	DE	LE	LG	D0	lk
SK 11..07	N 170 x 5 x 30 x 32 - DIN 5480	160	560	ø 170	525
SK 12..07	N 190 x 5 x 30 x 36 - DIN 5480	190	630	ø 190	595
SK 13..07	N 220 x 5 x 30 x 42 - DIN 5480	215	706	ø 220	666
SK 15..07	N 250 x 5 x 30 x 48 - DIN 5480	245	790	ø 250	745

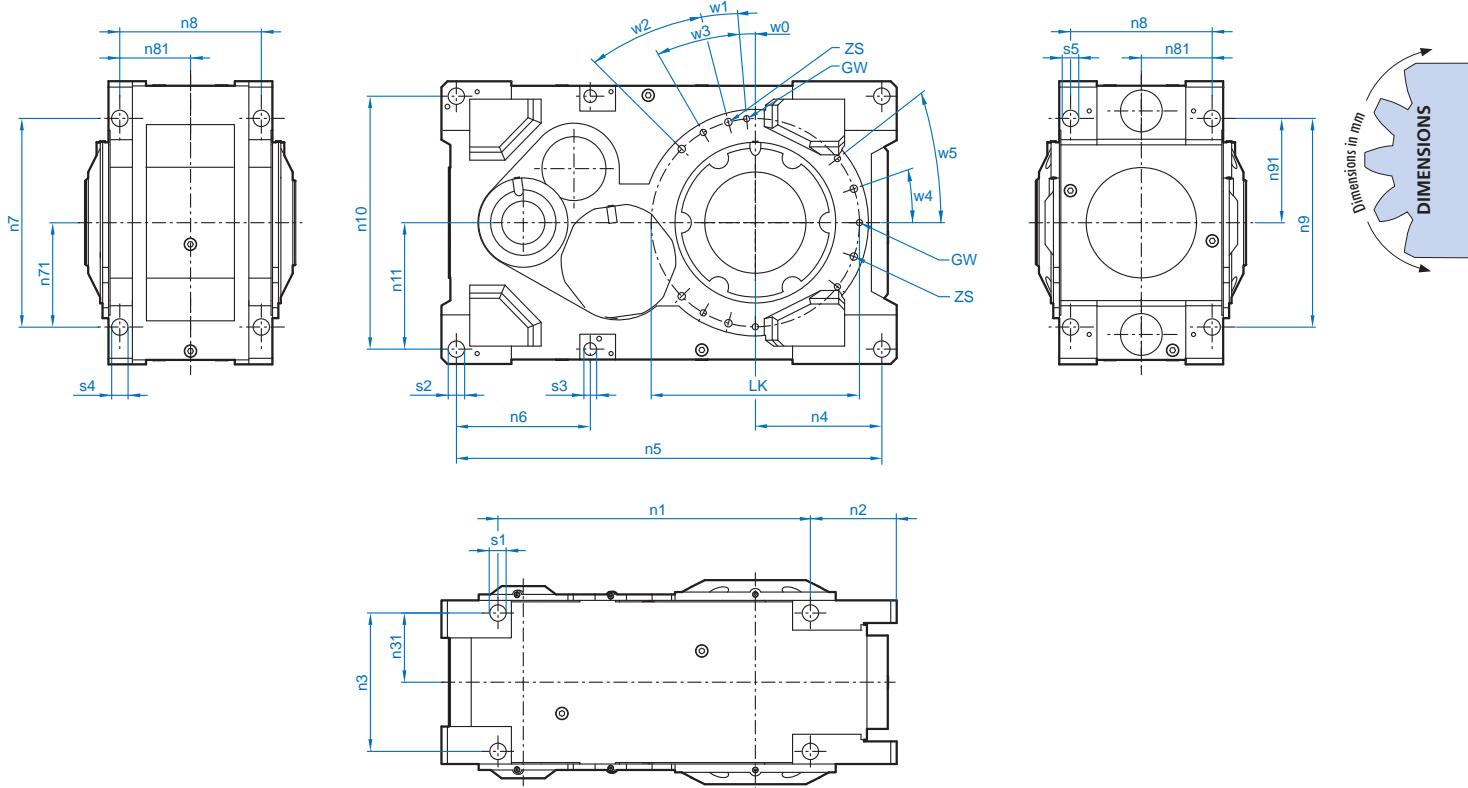
SK...07

SK 11..07 - SK 15..07 Mounting Pad Detail



	b1	b2	h1	h2	h3	l1	l2	l3	l4	l5	lf
SK 11..07	102	85	155	155	52	195	100	80	270	145	458
SK 12..07	114	95	190	190	57	265	125	85	310	175	540
SK 13..07	126	100	198	198	60	235	120	95	350	175	585
SK 15..07	150	120	235	235	70	330	170	115	445	210	690

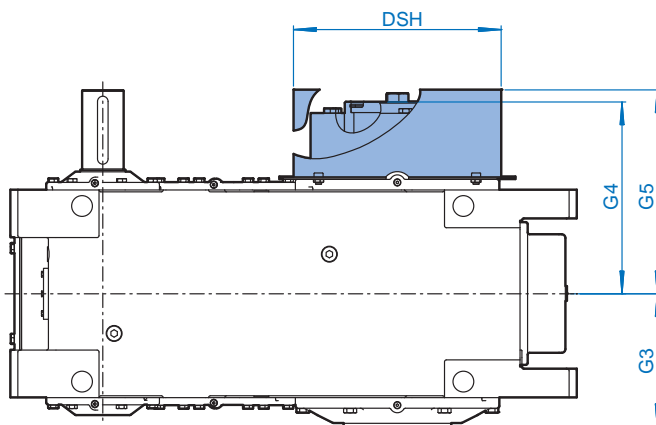
SK 11..07 - SK 15..07 - Machined Bolt Hole Detail



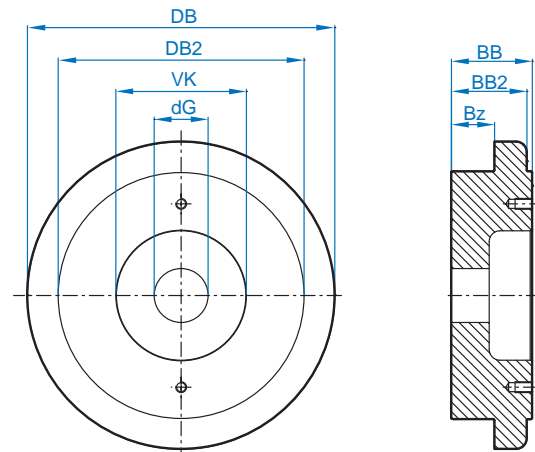
	LK	GW	ZS	w0	w1	w2	w3	w4	w5	s1 / s2 / s4	s3 / s5
SK 11..07	∅ 530	M20 x 30	∅ 30 H7	5°	15 °	30 °	30 °	17,5 °	35°	∅ 42	M 36
SK 12..07	∅ 600	M24 x 36	∅ 30 H7	5°	15 °	30 °	30 °	20 °	40°	∅ 48	M 42
SK 13..07	∅ 700	M24 x 36	∅ 35 H7	0°	15 °	30 °	30 °	19 °	38°	∅ 55	M 48
SK 15..07	∅ 800	M30 x 60	∅ 50 H7	0°	15 °	30 °	30 °	18 °	36°	∅ 65	M 56

	n1	n2	n3	n31	n4	n5	n6	n7	n71	n8	n81	n9	n91	n10	n11
SK 11..07	850	217.5	370	185	330	1130	340	520	260	385	192.5	520	260	670	335
SK 12..07	930	257.5	430	215	365	1265	410	600	300	440	220	600	300	770	385
SK 13..07	1050	290	465	232.5	425	1430	450	700	350	475	237.5	700	350	850	425
SK 15..07	1230	345	550	225	490	1690	530	800	400	560	280	800	400	990	495

SK 11...07 - SK 15..07



Fixing Kit Cover



Fixing Kit

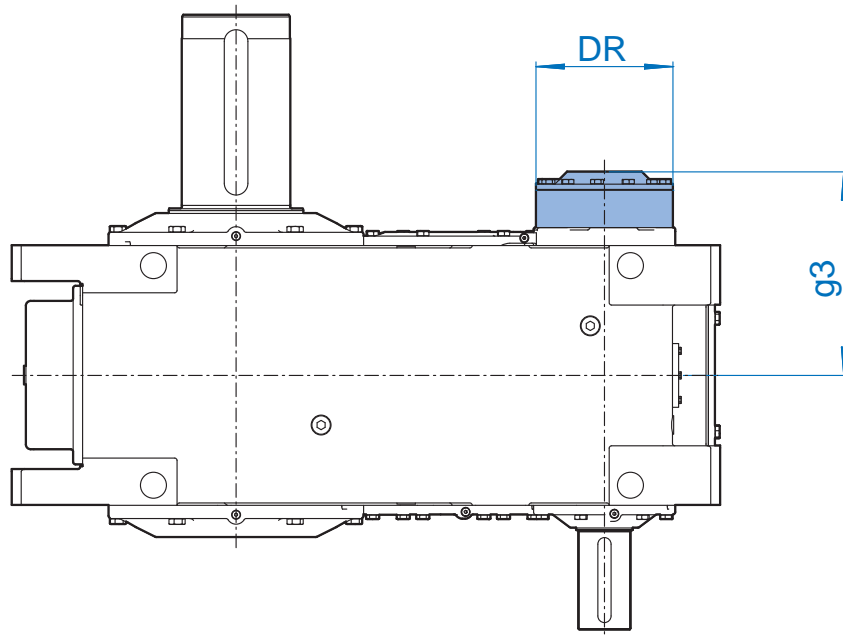
H -Cover Dimensions

	DSH	G3	G4	G5
SK 11..07	∅ 460	280	410	440
SK 12..07	∅ 500	315	455	480
SK 13..07	∅ 550	353	527	555
SK 15..07	∅ 630	395	575	605

B -Fixing Kit Dimensions

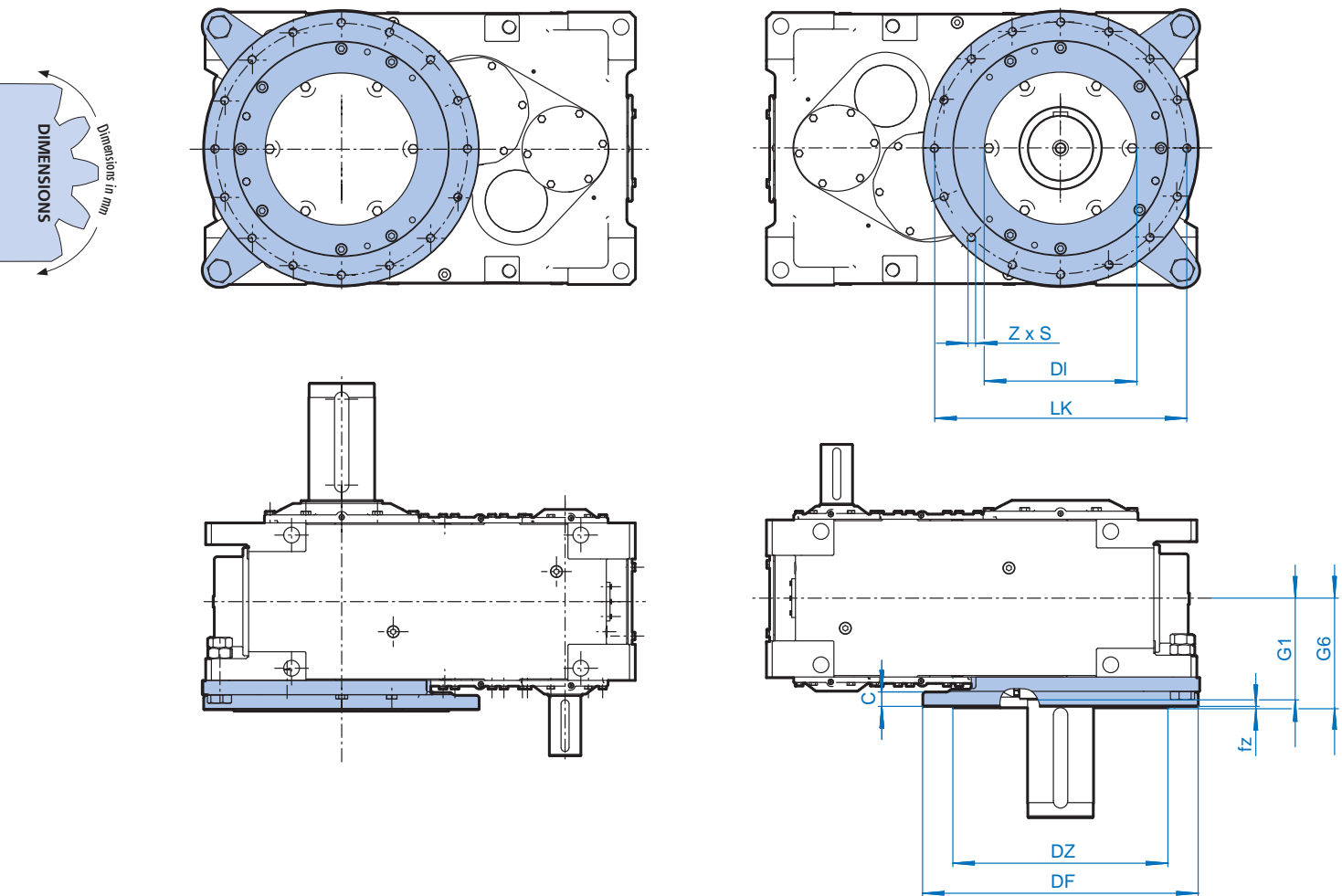
DB	DB2	VK	BB	BB2	Bz	dG
∅ 215	∅169.8	∅ 100	42.5	37.5	27.5	M30
∅235	∅189.8	∅ 100	44.5	39.5	29.5	M30
∅275	∅229.8	∅ 100	56.5	51.5	36.5	M36
∅295	∅249.8	∅ 100	56.5	51.5	36.5	M36

SK 11207 - 15507 - Backstop



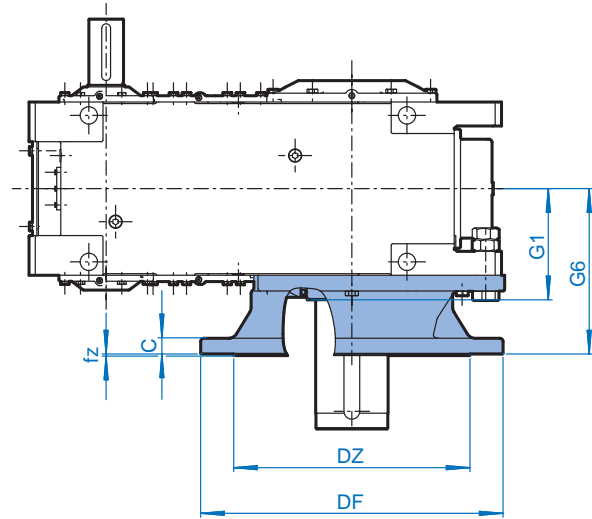
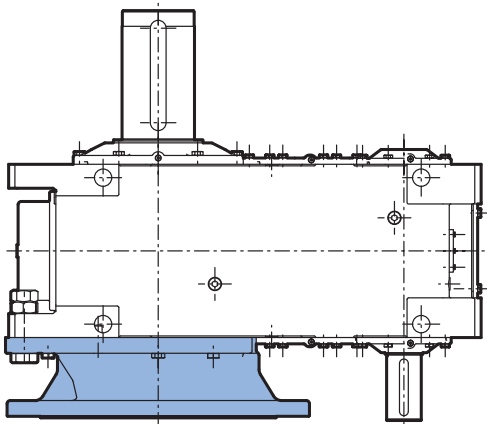
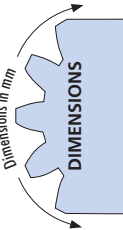
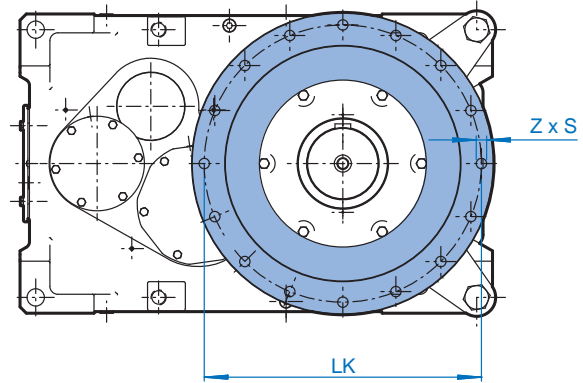
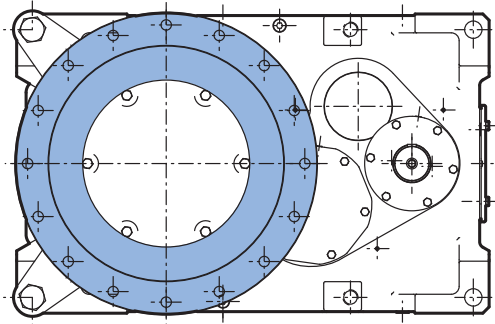
	i_N	DR	g3
SK 11207	5.6 - 20	245	360
SK 11307	31.5 - 112	190	340
	22.4 - 28	210	350
SK 11407	11.2 - 80	245	360
SK 11507	112 - 400	190	340
	80 - 100	210	350
SK 12207	5.6 - 20	290	415
SK 12307	22.4 - 112	210	385
SK 12407	12.6 - 71	290	415
SK 12507	80 - 400	210	385
SK 13207	5.6 - 20	290	431
SK 13307	22.4 - 112	210	410
SK 13407	12.6 - 71	290	431
SK 13507	80 - 400	210	416.5
SK 15207	5.6 - 20	400	510
SK 15307	22.4 - 112	290	485
SK 15407	12.6 - 71	400	510
SK 15507	80 - 400	290	485

SK 11...07 - SK 14...07 - Block Flange



	DF	G1	G6	LK	DZ	DI	c	fz	z	s
SK 11..07	ø 730	280	300	ø 680	ø 580	ø 420	40	5	12	M24
SK 12..07	ø 840	315	334	ø 760	ø 650	ø 470	50	5	12	M30
SK 13..07	ø 960	353	375	ø 880	ø 750	ø 530	50	5	16	M30
SK 15..07	ø 1100	395	435	ø 930	ø 900	ø 600	60	10	16	M36

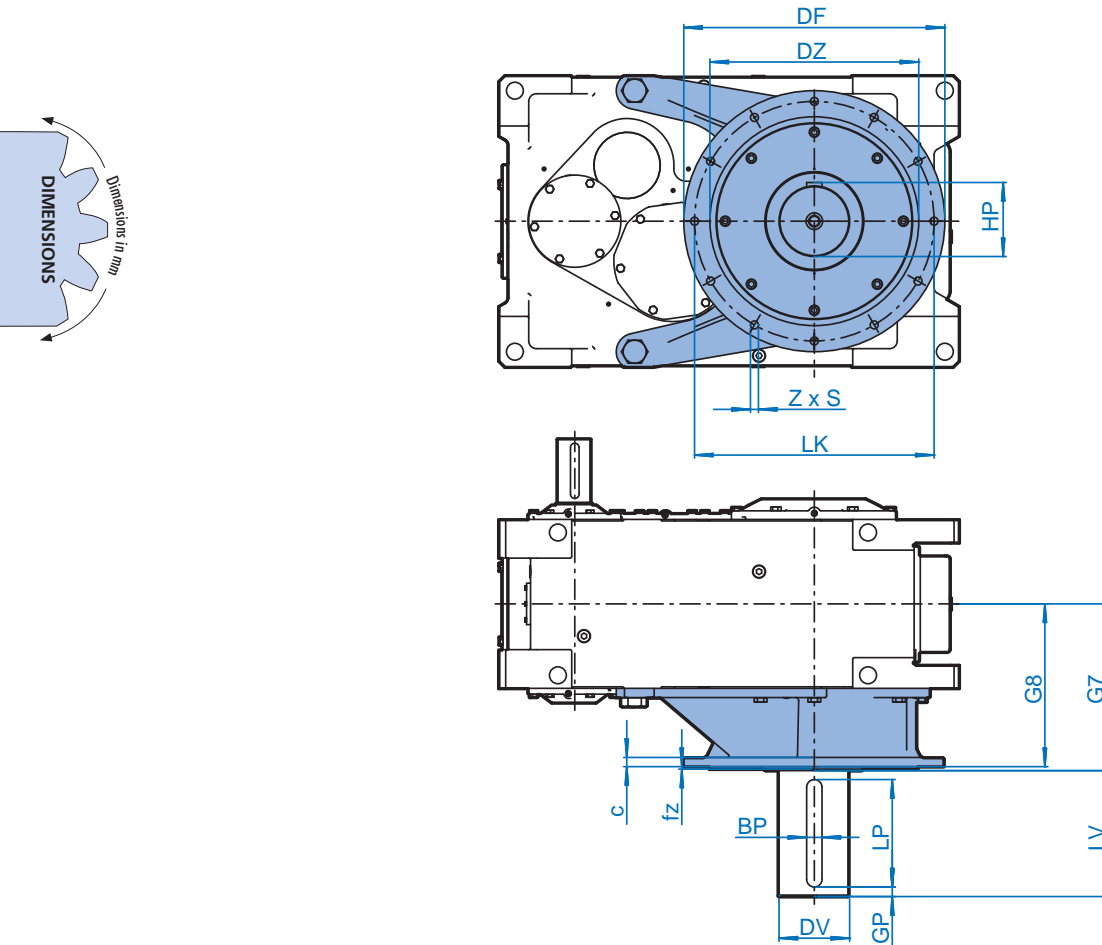
SK 11...07 - SK 14...07 - Collared Flange



	DF	G1	G6	LK	DK	DI	c	fz	z	s
SK 11..07	ø 730	280	420	680	ø 560	ø 420	40	5	12	ø 26
SK 12..07	ø 840	315	470	760	ø 650	ø 470	50	5	12	ø 33
SK 13..07	ø 960	353	525	880	ø 750	ø 530	50	5	16	ø 33
SK 15..07	---	---	---	---	---	---	---	---	---	---

SK...07 VFVL2/3

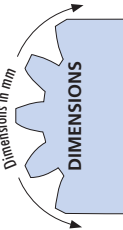
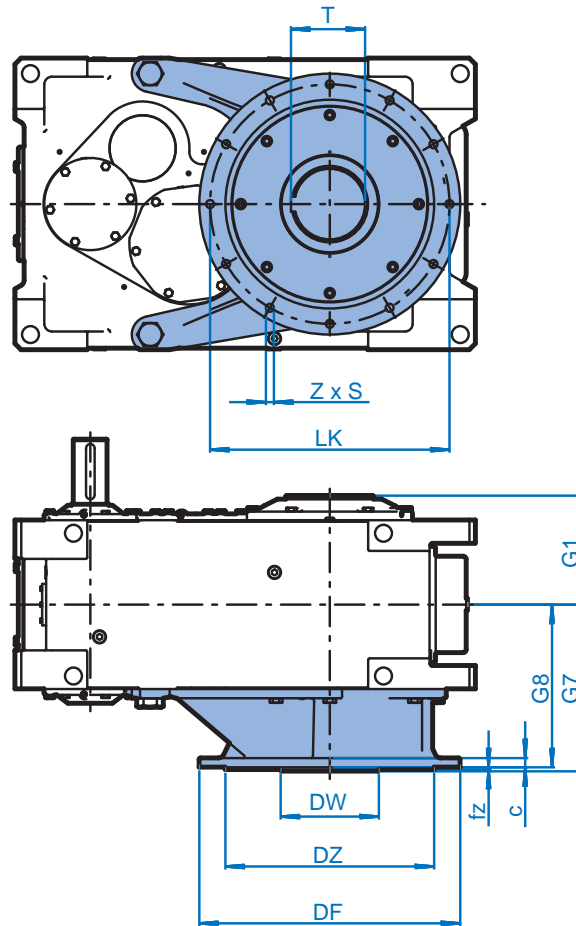
SK 11...07 - SK 15...07 Agitator & Drywell - Solid Shaft



	G7	G8	DF	DZ	DW	LK	fz	c	z	s
SK 11..07	430	420	∅ 675	∅ 540	∅ 250	∅ 620	5	40	10	∅ 22
SK 12..07	485	470	∅ 760	∅ 600	∅ 285	∅ 700	5	50	12	∅ 22
SK 13..07	543	525	∅ 850	∅ 680	∅ 320	∅ 780	5	50	12	∅ 26
SK 15..07	645	630	∅ 1000	∅ 800	∅ 380	∅ 930	8	60	16	∅ 33

	DV	LV	LP	BP	GP
SK 11..07	∅ 170	300	280	40	10
SK 12..07	∅ 200	350	300	45	25
SK 13..07	∅ 230	410	350	50	25
SK 15..07	∅ 250	410	350	56	30

SK 11...07 - SK 15...07 Agitator & Drywell - Hollow Shaft

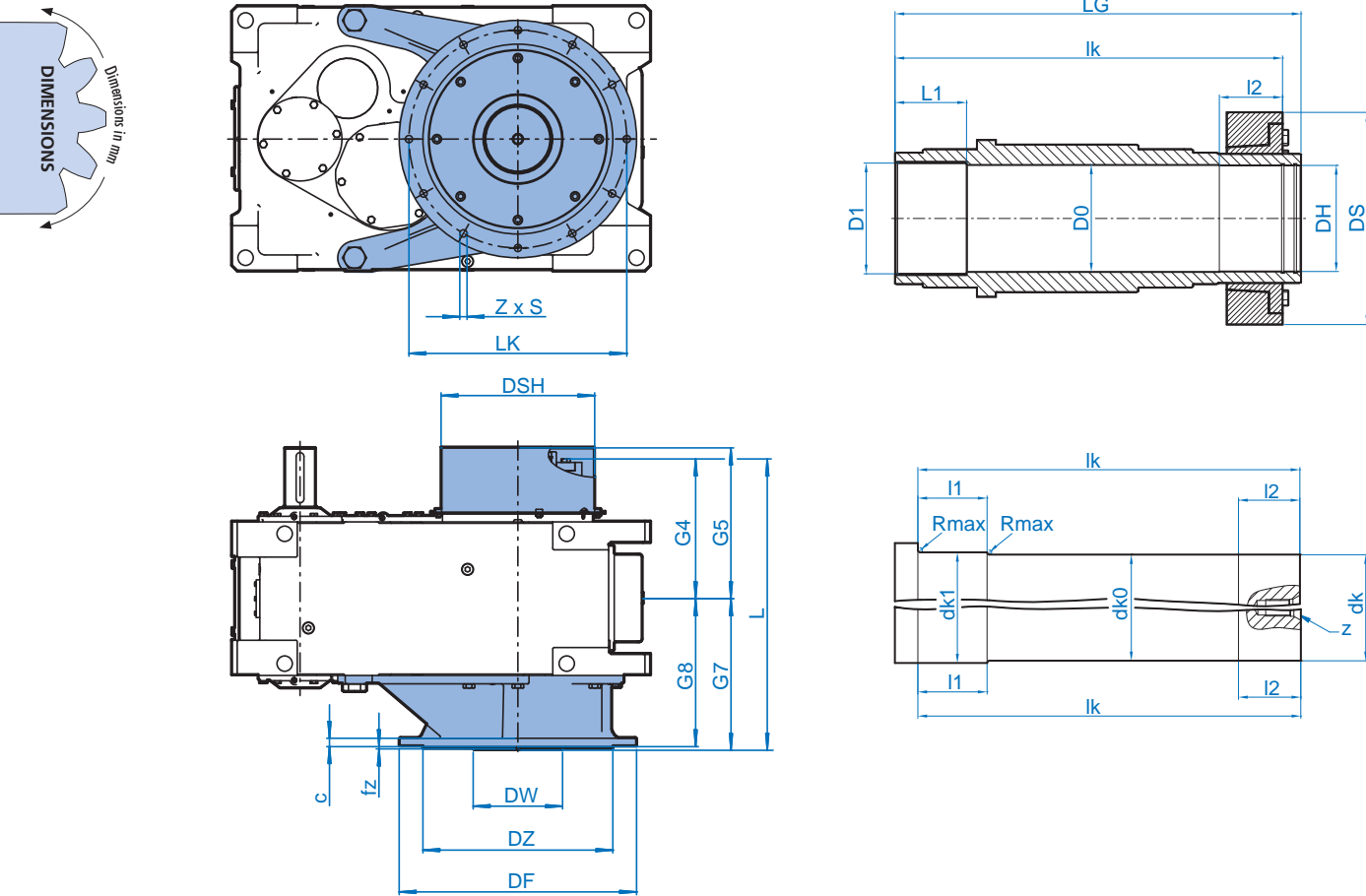


	G7	G8	G1	DF	DZ	DW	LK	fz	c	z	s
SK 11..07	430	420	280	ø 675	ø 540	ø 250	ø 620	5	40	10	ø 22
SK 12..07	485	470	315	ø 760	ø 600	ø 285	ø 700	5	50	12	ø 22
SK 13..07	543	530	352	ø 850	ø 680	ø 320	ø 780	5	50	12	ø 26
SK 15..07	645	630	395	ø 1000	ø 800	ø 380	ø 930	8	60	16	ø 33

	DH	D2	LG	dk	lk	l1	l2	B	T	z
SK 11..07	ø170 H7	ø200	710	ø170 j6	530	140	140	40	179.4	M30
SK 12..07	ø190 H7	ø220	800	ø190 j6	600	160	160	45	200.4	M30
SK 13..07	ø230 H7	ø250	895	ø230 j6	650	180	180	50	241.4	M36
SK 15..07	ø250 H7	ø280	1040	ø250 j6	760	200	200	56	262.4	M36

SK...07 AFSAVL2/3

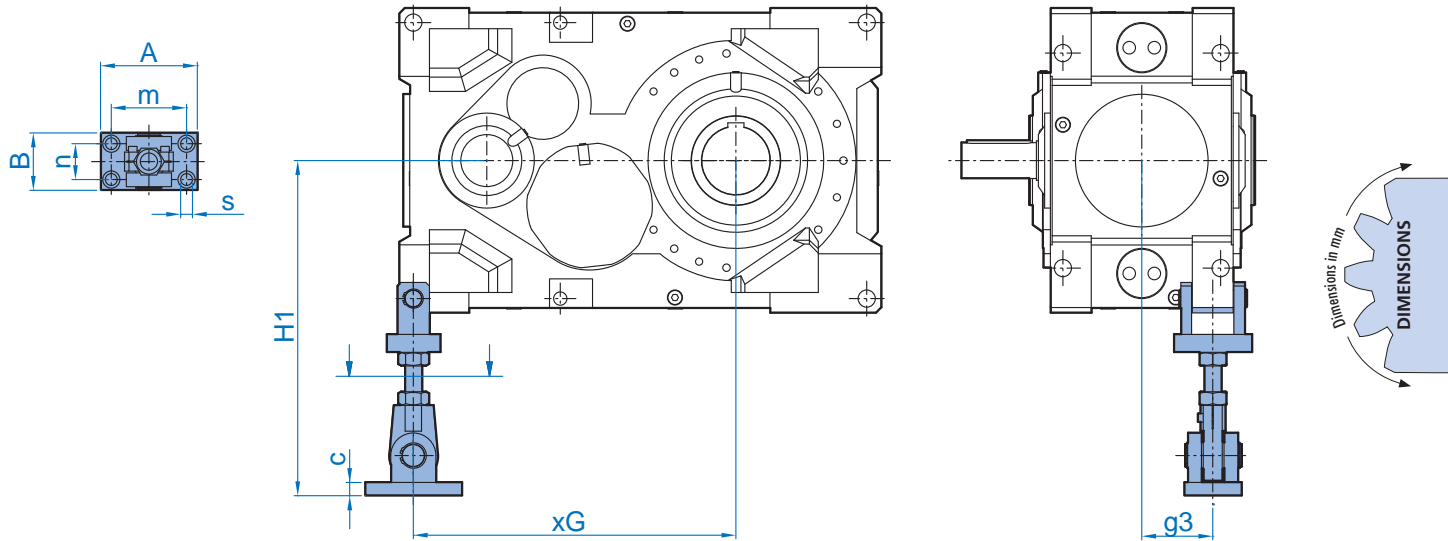
SK 11...07 - SK 15...07 Agitator & Drywell - Hollow Shaft with Shrink Disc



	G4	G5	G7	G8	DF	DW	DZ	DSH	L	LK	c	fz	z	z	s
SK 11..07	410	440	430	420	∅ 675	∅ 250	∅ 540	∅ 436	840	∅ 620		5	10	M30	∅ 22
SK 12..07	450	480	485	470	∅ 760	∅ 285	∅ 600	∅ 490	935	∅ 700		5	12	M30	∅ 22
SK 13..07	527	555	543	530	∅ 850	∅ 320	∅ 680	∅ 550	1070	∅ 780		5	12	M36	∅ 26
SK 15..07	575	605	645	630	∅ 1000	∅ 380	∅ 800	∅ 650	1220	∅ 930		8	16	M36	∅ 33

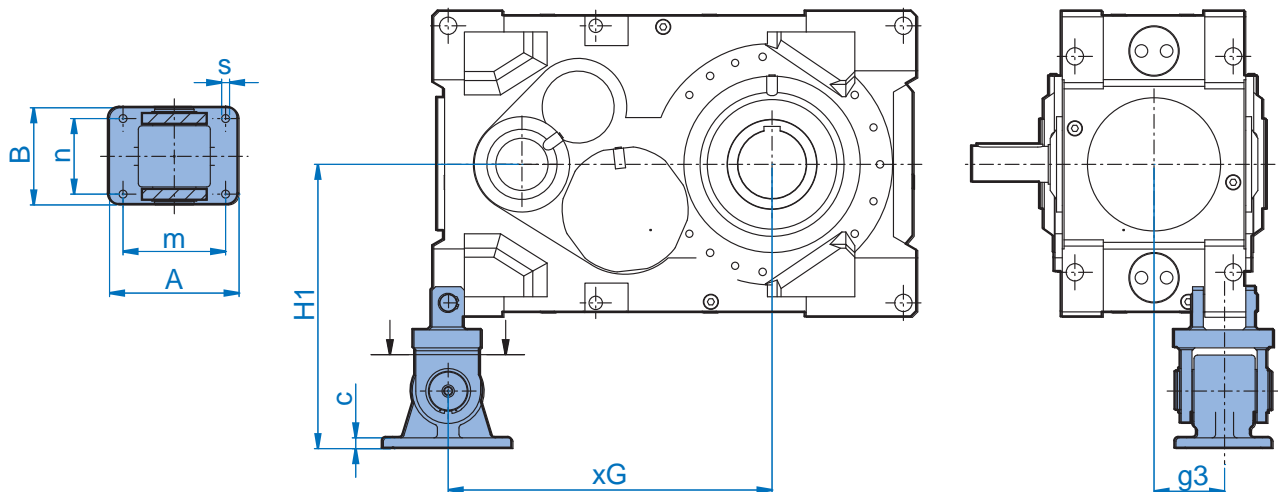
	D0	D1	D2	DH	DS	LG	dk	dk0	dk1	lk	l1	l2	R
SK 11..07	∅172	∅180	∅190	∅170 H7	∅370	870	∅170 g6	∅170	∅180 h8	658	125	105	5
SK 12..07	∅192	∅200	∅230	∅190 H7	∅405	960	∅190 g6	∅190	∅200 h8	730	130	120	5
SK 13..07	∅232	∅240	∅250	∅230 H7	∅460	1090	∅230 g6	∅230	∅240 h8	830	150	135	5
SK 15..07	∅252	∅260	∅270	∅250 H7	∅485	1245	∅250 g6	∅250	∅260 h8	925	170	150	5

SK 11...07 - SK 15...07 D - Torque Support



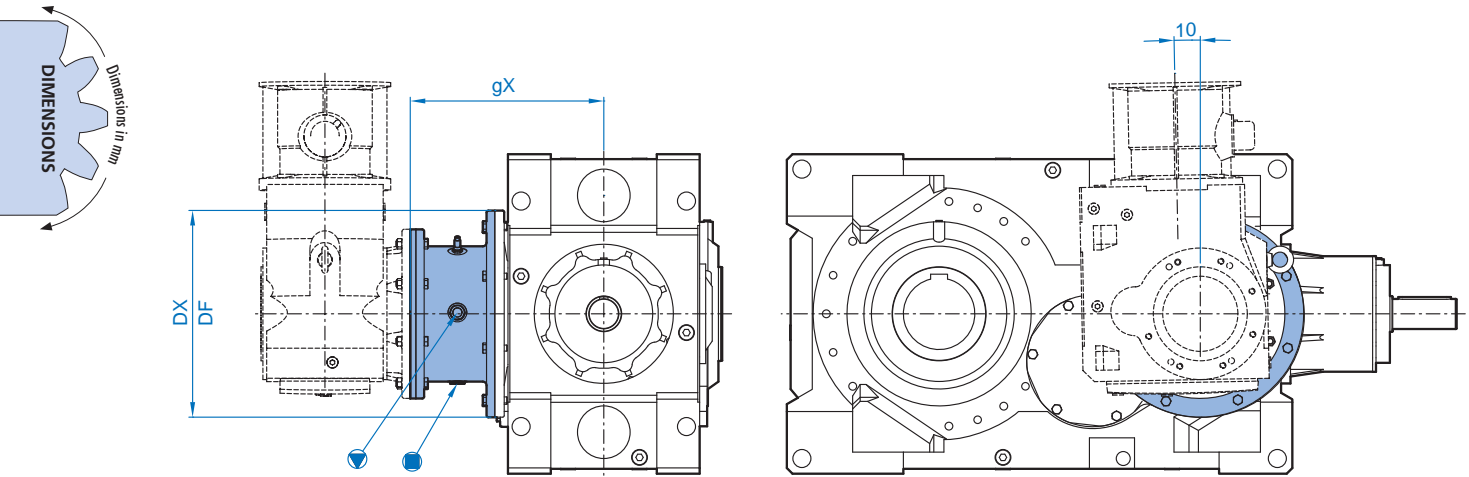
	H1max	H1min	xG	g3	c	A	B	m	n	s
SK 11..07	865	815	800	165	29	240	220	180	160	22
SK 12..07	910	860	900	195	29	240	220	180	160	22
SK 13..07	990	940	1005	210	29	290	250	220	180	26
SK 15..07	1120	1070	1200	245	39	330	300	250	220	33

SK 11...07 - SK 15...07 ED - Elastic Torque Support



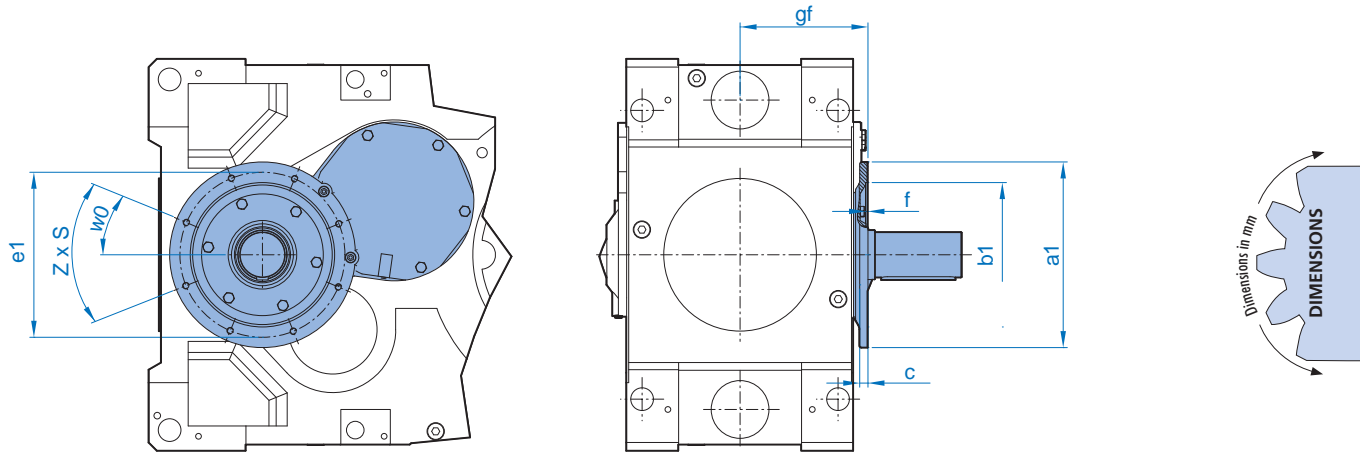
	H1	xG	g3	c	A	B	m	n	s
SK 11..07	750	800	165	30	360	270	285	210	22
SK 12..07	790	900	196	30	360	270	285	210	22
SK 13..07	890	1005	210	40	400	320	310	230	33
SK 15..07	980	1200	245	40	400	320	310	230	33

SK 11...07 - SK 15...07 WX - Auxillary Drive



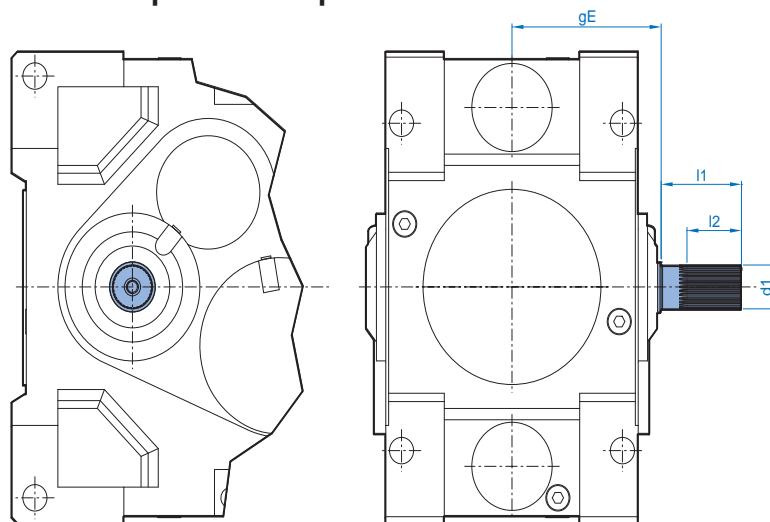
		DX	DF	gX	w
SK 11..07	SK 9052.1 VF	450	450	465	1°
	SK 9072.1 VF	450	450	445	1°
SK 12..07	SK 9072.1 VF	550	450	545	1°
	SK 9082.1 VF	550	450	515	1°
SK 13..07	SK 9072.1 VF	550	450	565	1°
	SK 9082.1 VF	550	450	535	1°
SK 15..07	SK 9082.1 VF	550	550	655	1°
	SK 9092.1 VF	550	660	620	1°

SK 11...07 - SK 15...07 F1 - Input Flange



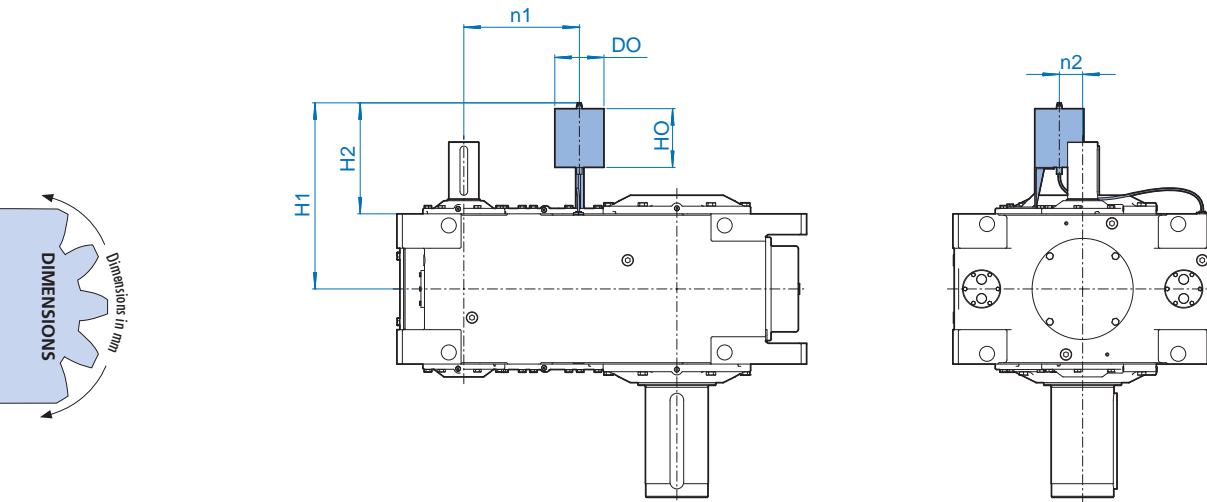
	gf	a1	b1	e1	c	f	w0	z x s
SK 11..07	255	450	350	400	20	6.5	22.5°/27.5°	8 x M16
SK 12..07	290	550	450	500	25	6.5	21.5°	8 x M16
SK 13..07	310	550	450	500	25	6.5	23°	8 x M16
SK 15..07	370	550	450	500	25	6.5	24°	8 x M16

SK 11...07 - SK 15...07 EW - Input Shaft Splined



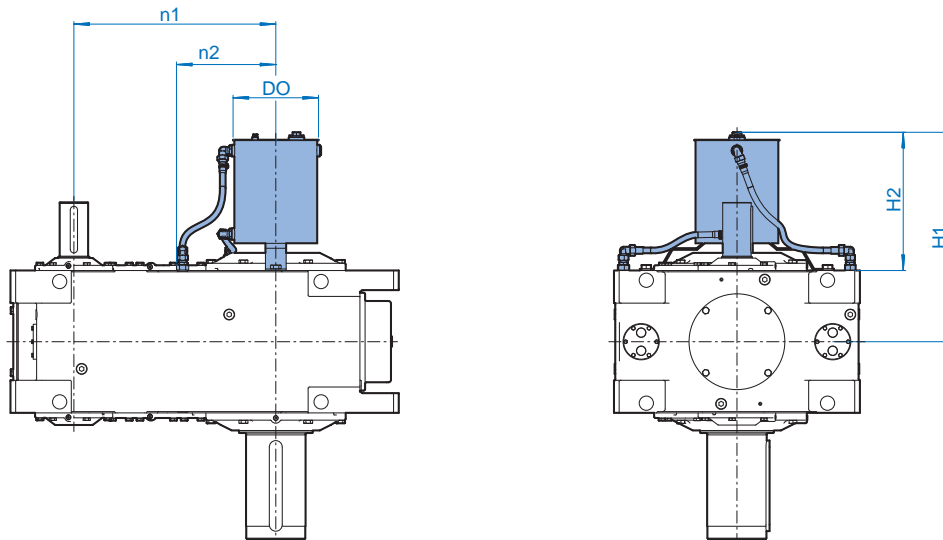
	gE	l1	l2	d1
SK 11307	260	140	95	W70 x 2 x 34 - DIN 5480
SK 12307	294	170	142	W85 x 3 x 27 - DIN 5480
SK 13307	328	170	142	W85 x 3 x 27 - DIN 5480
SK 15307	371	210	170	W105 x 3 x 34 - DIN 5480

SK 11...07 - SK 15...07 OA - Oil Expansion Chamber



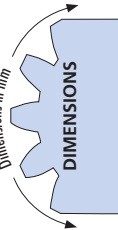
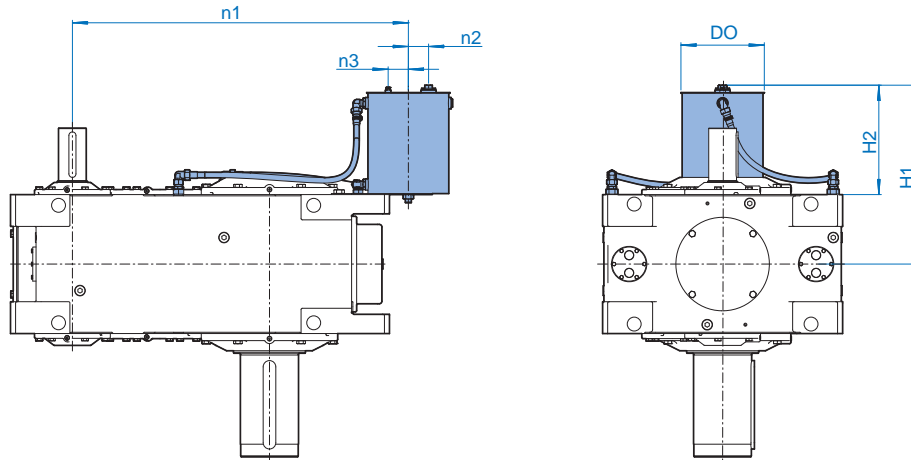
M5 / M6	DO	HO	H1	H2	n1	n2	
SK 11..07	∅ 180	215	625	406	335	70	+ 3.5 kg
SK 12..07	∅ 180	215	660	406	375	75	+ 3.5 kg
SK 13..07	∅ 180	215	680	406	425	85	+ 3.5 kg
SK 15..07	∅ 180	215	735	406	500	100	+ 3.5 kg

SK 11...07 - SK 15...07 OT - Oil Tank



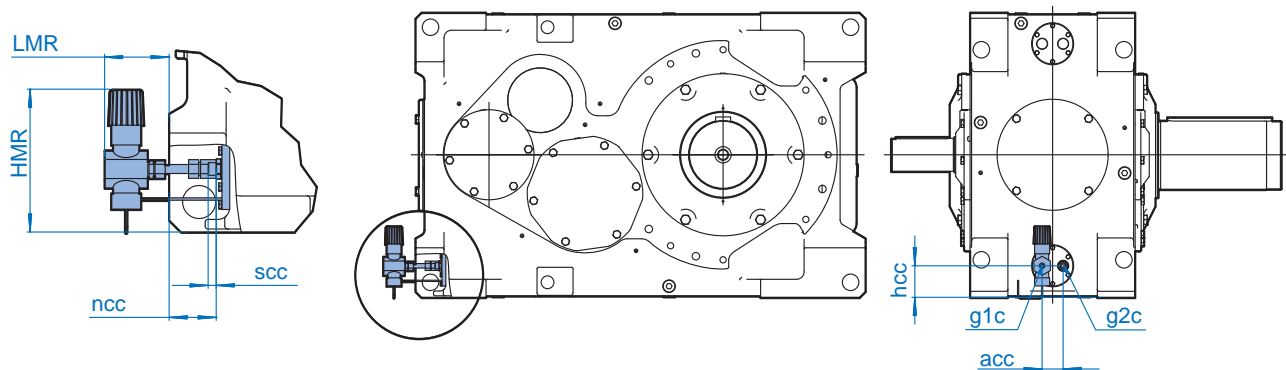
M5 / M6	DO	HO	H1	H2	n1	n2		
SK 11..07	∅ 190	400	645	425	625	305	+ 7 L	+ 6 kg
SK 12..07	∅ 330	400	730	477	695	340	+ 18 L	+ 15 kg
SK 13..07	∅ 330	400	810	535	780	380	+ 18 L	+ 15 kg
SK 15..07	∅ 330	400	965	636	925	460	+ 18 L	+ 15 kg

SK 11...07 - SK 15...07 OT2 - Oil Tank



M5 / M6	DO	HO	H1	H2	n1		
SK 11..07	∅ 190	400	645	425	1060	+ 7 L	+ 6 kg
SK 12..07	∅ 330	400	730	477	1185	+ 18 L	+ 15 kg
SK 13..07	∅ 330	400	810	535	1330	+ 18 L	+ 15 kg
SK 15..07	∅ 330	400	965	636	1580	+ 18 L	+ 15 kg

SK 11...07 - SK 15...07 CC - Internal Water Cooler (Cooling Coil)

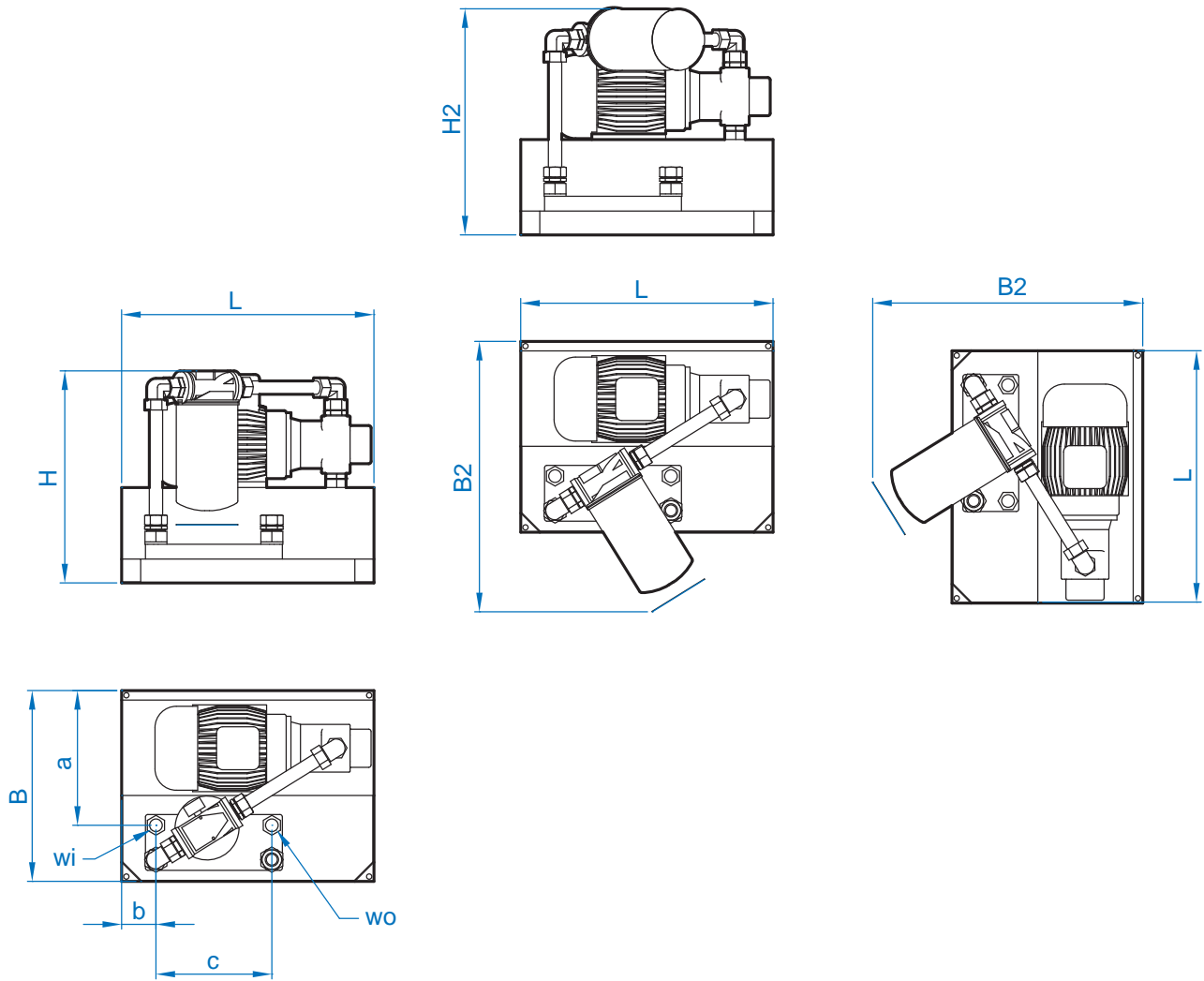
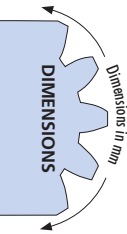


	g1c	g2c	scc	acc	hcc	ncc	HMR	LMR
SK 11..07	G 1/2	G 1/2	13	70	90	65	238	108
SK 12..07	G 1/2	G 1/2	13	70	110	73	238	108
SK 13..07	G 1/2	G 1/2	13	70	100	78	238	108
SK 15..07	G 1/2	G 1/2	13	70	110	93	238	108

SK...07 CS Water Cooler

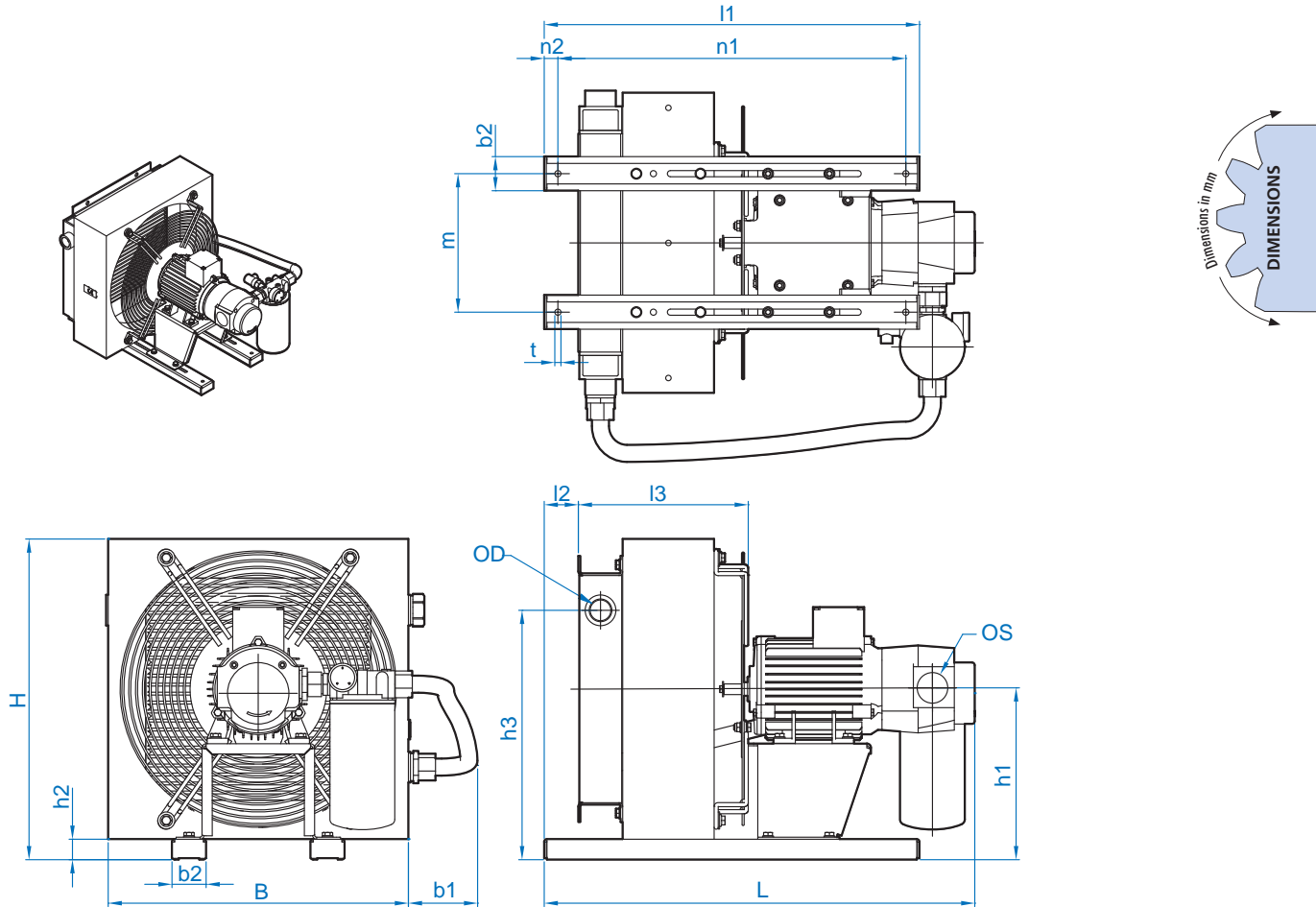


CS Water Cooler Dimensions



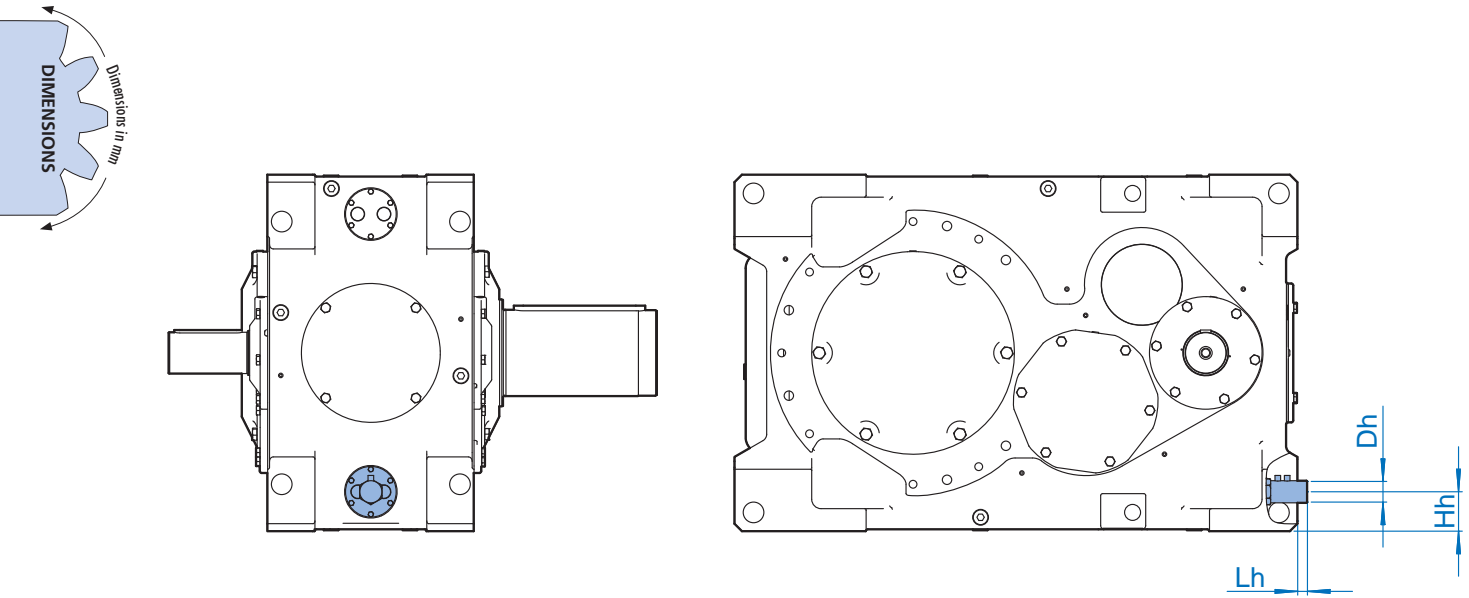
	L	B	B2	H	H2	a	b	c	wi	wo
A	480	420	500	400	430	250	80	278	G 1/2	G 1/2
B	520	394	530	431	450	287	175.5	234	G 3/4	G 3/4
C	520	394	530	431	450	287	175.5	234	G 3/4	G 3/4
D	530	450	570	450	480	282	70	243	G 3/4	G 3/4
E	530	450	570	450	480	282	70	243	G 3/4	G 3/4
F	530	450	570	450	480	282	70	243	G 3/4	G 3/4
G	600	550	650	500	530	340	50	320	G 1	G 1
H	600	550	650	500	530	340	50	320	G 1	G 1

CS Air Cooler Dimensions



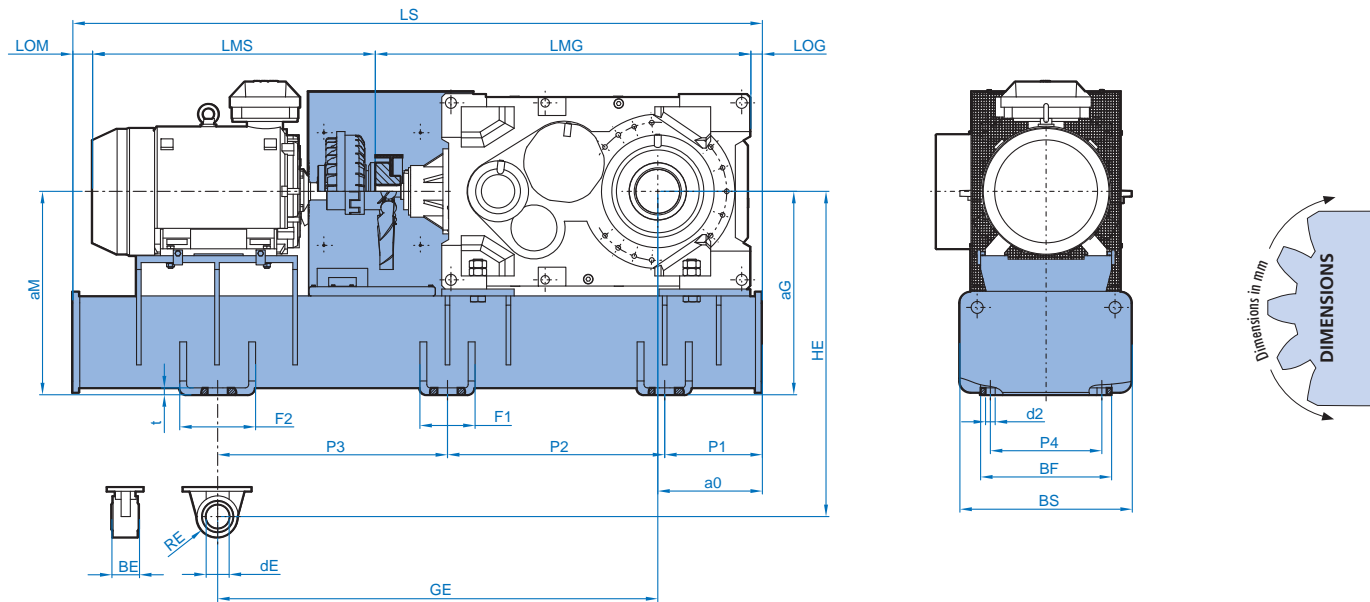
	L	l1	l2	l3	B	b1	b2	H	h1	h2	h3	n1	n2	m	t	os	od
A	590		50		440	144			250			520	20	203	ø9	G1 1/2	G1
B	632	550	50	215	440	103	50	470	262	30	136	510	20	203	ø9	G1 1/2	G1
C	632	550	50	215	440	103	50	470	262	30	136	510	20	203	ø9	G1 1/2	G1
D	718	650	70	265	580	104	50	470	322	30	204	610	20	356	ø14	G1 1/2	G1
E	718	650	70	265	580	104	50	470	322	30	204	610	20	356	ø14	G1 1/2	G1
F	718	650	70	265	580	104	50	470	322	30	204	610	20	356	ø14	G1 1/2	G1
G	832	650	70	343	692	99	50	866	450	30	196	610	20	356	ø14	G1 1/2	G1 1/4
H	832	650	70	343	692	99	50	866	450	30	196	610	20	356	ø14	G1 1/2	G1 1/4

SK 11...07 - SK 15...07 OH - Oil Heater



	Dh	Hh	Lh	1.0 kW	1.2 kW	1.4 kW	1.6 kW	2.0 kW
SK 11..07	ø 59	105	20	X	X			
SK 12..07	ø 59	105	23	X	X	X		
SK 13..07	ø 59	105	26		X	X	X	
SK 15..07	ø 59	105	30		X	X	X	X

SK 11407-15507 MS... Bases



MSK / MSB		160M/4	160L/4	180M/4	180L/4	200L/4	225S/4	225M/4	250M/4	280S/4	280M/4
SK 11407	(12.5 - 45)						MS07	MS07	MS07	MS07	MS07
SK 11407	(50 - 71)						MS07	MS07	MS07	MS07	MS07
SK 11507	(80 - 400)	MS05	MS05	MS05	MS05	MS05	MS05	MS05	MS07	MS07	MS07
SK 12407	(12.5 - 45)						MS10	MS10	MS10	MS10	MS10
SK 12407	(50 - 71)						MS08	MS10	MS10	MS10	MS10
SK 12507	(80 - 400)	MS06	MS08	MS08	MS08	MS08	MS08	MS08	MS08	MS10	MS10
SK 13407	(12.5 - 45)								MS12	MS12	MS12
SK 13407	(50 - 71)								MS12	MS12	MS12
SK 13507	(80 - 400)			MS10	MS10	MS10	MS10	MS10	MS10	MS12	MS12
SK 15407	(12.5 - 45)								MS15	MS15	MS15
SK 15407	(50 - 71)								MS15	MS15	MS15
SK 15507	(80 - 400)						MS13	MS13	MS13	MS15	MS15

MST / MSTB		160M/4	160L/4	180M/4	180L/4	200L/4	225S/4	225M/4	250M/4	280S/4	280M/4
SK 11407	(12.5 - 45)						MS07	MS07	MS07	MS07	MS07
SK 11407	(50 - 71)						MS07	MS07	MS07	MS07	MS07
SK 11507	(80 - 400)	MS05	MS05	MS05	MS05	MS05	MS05	MS05	MS07	MS07	MS07
SK 12407	(12.5 - 45)						MS10	MS10	MS10	MS10	MS10
SK 12407	(50 - 71)						MS08	MS10	MS10	MS10	MS10
SK 12507	(80 - 400)	MS06	MS08	MS08	MS08	MS08	MS08	MS08	MS08	MS10	MS10
SK 13407	(12.5 - 45)								MS12	MS12	MS12
SK 13407	(50 - 71)								MS12	MS12	MS12
SK 13507	(80 - 400)			MS10	MS10	MS10	MS10	MS10	MS10	MS12	MS12
SK 15407	(12.5 - 45)								MS15	MS15	MS15
SK 15407	(50 - 71)								MS15	MS15	MS15
SK 15507	(80 - 400)						MS13	MS13	MS13	MS15	MS15

SK 11407 - SK 15507 MS...



MSK / MSB		315S/4	315M/4	315MA/4	315L/4	315LA/4	315LB/4	355S/4	355M/4
SK 11407	(12.5 - 45)	MS09	MS09	MS09	MS09	MS11	MS11	MS11	MS11
SK 11407	(50 - 71)	MS07	MS09	MS09	MS09	MS09	MS09	MS11	MS11
SK 11507	(80 - 400)								
SK 12407	(12.5 - 45)	MS10	MS12	MS12	MS12	MS12	MS12	MS14	MS14
SK 12407	(50 - 71)	MS10	MS10	MS12	MS12	MS12	MS12	MS14	MS14
SK 12507	(80 - 400)								
SK 13407	(12.5 - 45)	MS12	MS12	MS14	MS14	MS14	MS14	MS16	MS16
SK 13407	(50 - 71)	MS12	MS12	MS14	MS14	MS14	MS14	MS16	MS16
SK 13507	(80 - 400)								
SK 15407	(12.5 - 45)	MS17	MS17	MS17	MS17	MS17	MS17	MS18	MS18
SK 15407	(50 - 71)	MS15	MS17	MS17	MS17	MS17	MS17	MS18	MS18
SK 15507	(80 - 400)	MS15	MS15	MS15	MS15	MS17	MS17		

MST / MSTB		315S/4	315M/4	315MA/4	315L/4	315LA/4	315LB/4	355S/4	355M/4
SK 11407	(12.5 - 45)	MS09	MS09	MS09	MS09	MS11	MS11	MS11	MS11
SK 11407	(50 - 71)	MS07	MS09	MS09	MS09	MS09	MS09	MS11	MS11
SK 11507	(80 - 400)								
SK 12407	(12.5 - 45)	MS10	MS12	MS12	MS12	MS12	MS12	MS14	MS14
SK 12407	(50 - 71)	MS10	MS10	MS12	MS12	MS12	MS12	MS14	MS14
SK 12507	(80 - 400)								
SK 13407	(12.5 - 45)	MS12	MS12	MS14	MS14	MS14	MS14	MS16	MS16
SK 13407	(50 - 71)	MS12	MS12	MS14	MS14	MS14	MS14	MS16	MS16
SK 13507	(80 - 400)								
SK 15407	(12.5 - 45)	MS17	MS17	MS17	MS17	MS17	MS17	MS18	MS18
SK 15407	(50 - 71)	MS15	MS17	MS17	MS17	MS17	MS17	MS18	MS18
SK 15507	(80 - 400)	MS15	MS15	MS15	MS15	MS17	MS17		

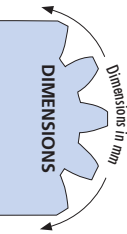
	P1 [kW]	LMS	
		MSK / MSB	MST / MSTB
132S/4	5.5	476.5	538.5
132M/4	7.5	476.5	538.5
160M/4	11	614	683
160L/4	15	614	683
180M/4	18.5	699	734
180L/4	22	699	734
200L/4	30	750	815
225S/4	37	819	884
225M/4	45	819	882
250M/4	55	917	980
280S/4	75	1000	1072
280M/4	90	1000	1072
315S/4	110	1147	1184
315M/4	132	1147	1184

	P1 [kW]	LMS	
		MSK / MSB	MST / MSTB
315MA/4	160	1307	1385
315L/4	200	1307	1385
315LA/4	250	1460	1533
315LB/4	315	1460	1533
355S/4	355	1690	1759
355M/4	400	1690	1759

Gearbox	i_N	MS	LS	LMG	LOG	BS	P1	P2	P3	P4	F1	F2	BF
SK 11407	(12.5 - 45)	MS07	2650	1564	70	720	250	800	590	560	220	330	660
SK 11407	(12.5 - 45)	MS09	2920	1564	70	720	250	800	590	560	220	330	660
SK 11407	(12.5 - 45)	MS11	3190	1564	70	720	250	800	590	560	220	330	660
SK 11407	(50 - 71)	MS05	2380	1564	70	720	250	800	590	560	220	330	660
SK 11407	(50 - 71)	MS07	2650	1564	70	720	250	800	590	560	220	330	660
SK 11407	(50 - 71)	MS09	2920	1564	70	720	250	800	590	560	220	330	660
SK 11407	(50 - 71)	MS11	3190	1564	70	720	250	800	590	560	220	330	660
SK 11507	(80 - 400)	MS05	2380	1481	70	720	250	800	590	560	220	330	660
SK 11507	(80 - 400)	MS07	2650	1481	70	720	250	800	590	560	220	330	660
SK 12407	(12.5 - 45)	MS14	3460	1782	130	620	300	900	935	485	240	450	570
SK 12407	(12.5 - 45)	MS08	2650	1782	130	620	300	900	935	485	240	450	570
SK 12407	(12.5 - 45)	MS10	2920	1782	130	620	300	900	935	485	240	450	570
SK 12407	(12.5 - 45)	MS12	3190	1782	130	620	300	900	935	485	240	450	570
SK 12407	(50 - 71)	MS14	3460	1782	130	620	300	900	935	485	240	450	570
SK 12407	(50 - 71)	MS08	2650	1782	130	620	300	900	935	485	240	450	570
SK 12407	(50 - 71)	MS10	2920	1782	130	620	300	900	935	485	240	450	570
SK 12407	(50 - 71)	MS12	3190	1782	130	620	300	900	935	485	240	450	570
SK 12507	(80 - 400)	MS06	2380	1634	130	620	300	900	935	485	240	450	570
SK 12507	(80 - 400)	MS08	2650	1634	130	620	300	900	935	485	240	450	570
SK 12507	(80 - 400)	MS10	2920	1634	130	620	300	900	935	485	240	450	570
SK 13407	(12.5 - 45)	MS14	3460	1997	60	620	300	900	935	485	240	450	570
SK 13407	(12.5 - 45)	MS16	3730	1997	60	620	300	900	935	485	240	450	570
SK 13407	(12.5 - 45)	MS10	2920	1997	60	620	300	900	935	485	240	450	570
SK 13407	(12.5 - 45)	MS12	3190	1997	60	620	300	900	935	485	240	450	570
SK 13407	(50 - 71)	MS14	3460	1997	60	620	300	900	935	485	240	450	570
SK 13407	(50 - 71)	MS16	3730	1997	60	620	300	900	935	485	240	450	570
SK 13407	(50 - 71)	MS10	2920	1997	60	620	300	900	935	485	240	450	570
SK 13407	(50 - 71)	MS12	3190	1997	60	620	300	900	935	485	240	450	570
SK 13507	(80 - 400)	MS08	2650	1907	60	620	300	900	935	485	240	450	570
SK 13507	(80 - 400)	MS10	2920	1907	60	620	300	900	935	485	240	450	570
SK 13507	(80 - 400)	MS12	3190	1907	60	620	300	900	935	485	240	450	570
SK 15407	(12.5 - 45)	MS15	3460	2332	60	720	400	1050	855	570	380	570	670
SK 15407	(12.5 - 45)	MS17	3730	2332	60	720	400	1050	855	570	380	570	670
SK 15407	(12.5 - 45)	MS18	4000	2332	60	720	400	1050	855	570	380	570	670
SK 15407	(50 - 71)	MS15	3460	2332	60	720	400	1050	855	570	380	570	670
SK 15407	(50 - 71)	MS17	3730	2332	60	720	400	1050	855	570	380	570	670
SK 15407	(50 - 71)	MS18	4000	2332	60	720	400	1050	855	570	380	570	670
SK 15507	(80 - 400)	MS15	3460	2192	60	720	400	1050	855	570	380	570	670
SK 15507	(80 - 400)	MS17	3730	2192	60	720	400	1050	855	570	380	570	670
SK 15507	(80 - 400)	MS13	3190	2192	60	720	400	1050	855	570	380	570	670



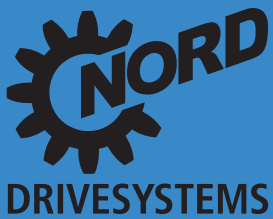
SK 11407 - SK 15507 MS...



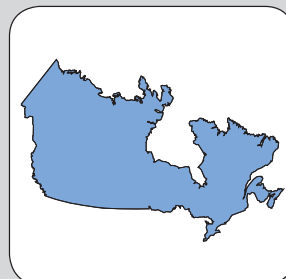
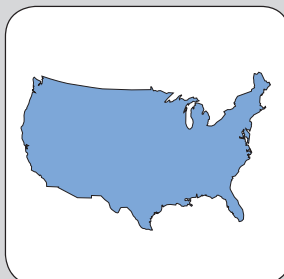
Gearbox	i_N	MS	t	d1	d2	aG	aM	(a0)	GE	HE	dE	BE	RE
SK 11407	(12.5 - 45)	MS07	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(12.5 - 45)	MS09	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(12.5 - 45)	MS11	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(50 - 71)	MS05	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(50 - 71)	MS07	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(50 - 71)	MS09	30	40	36	695	695	440	1200	855	100	120	80
SK 11407	(50 - 71)	MS11	30	40	36	695	695	440	1200	855	100	120	80
SK 11507	(80 - 400)	MS05	30	40	36	695	695	440	1200	855	100	120	80
SK 11507	(80 - 400)	MS07	30	40	36	695	695	440	1200	855	100	120	80
SK 12407	(12.5 - 45)	MS14	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(12.5 - 45)	MS08	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(12.5 - 45)	MS10	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(12.5 - 45)	MS12	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(50 - 71)	MS14	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(50 - 71)	MS08	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(50 - 71)	MS10	30	46	42	885	885	535	1600	1065	110	180	90
SK 12407	(50 - 71)	MS12	30	46	42	885	885	535	1600	1065	110	180	90
SK 12507	(80 - 400)	MS06	30	46	42	885	885	535	1600	1065	110	180	90
SK 12507	(80 - 400)	MS08	30	46	42	885	885	535	1600	1065	110	180	90
SK 12507	(80 - 400)	MS10	30	46	42	885	885	535	1600	1065	110	180	90
SK 13407	(12.5 - 45)	MS14	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(12.5 - 45)	MS16	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(12.5 - 45)	MS10	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(12.5 - 45)	MS12	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(50 - 71)	MS14	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(50 - 71)	MS16	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(50 - 71)	MS10	30	46	42	935	935	535	1600	1115	110	180	90
SK 13407	(50 - 71)	MS12	30	46	42	935	935	535	1600	1115	110	180	90
SK 13507	(80 - 400)	MS08	30	46	42	935	935	535	1600	1115	110	180	90
SK 13507	(80 - 400)	MS10	30	46	42	935	935	535	1600	1115	110	180	90
SK 13507	(80 - 400)	MS12	30	46	42	935	935	535	1600	1115	110	180	90
SK 15407	(12.5 - 45)	MS15	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15407	(12.5 - 45)	MS17	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15407	(12.5 - 45)	MS18	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15407	(50 - 71)	MS15	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15407	(50 - 71)	MS17	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15407	(50 - 71)	MS18	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15507	(80 - 400)	MS15	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15507	(80 - 400)	MS17	40	52	48	1030	1030	605	1700	1230	124	230	100
SK 15507	(80 - 400)	MS13	40	52	48	1030	1030	605	1700	1230	124	230	100

Contact Information:

- North America
- Global



www.nord.com



International Contacts - North America



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International Contacts

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Waunakee, WI 53597
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Email: info.us@nord.com

United States - West

NORD Gear Corporation
1137 W. Bradford Circle
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Toll free: 1-888-314-6673 Fax: 1-888-408-6673
Phone: 1-608-849-0190
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United States - East

NORD Gear Corporation
100 Forsyth Hall Drive
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Charlotte, NC 28273
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Uzbekistan

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Rudolf-Diesel Str.1
22941 Bargteheide / Hamburg Germany
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Vietnam

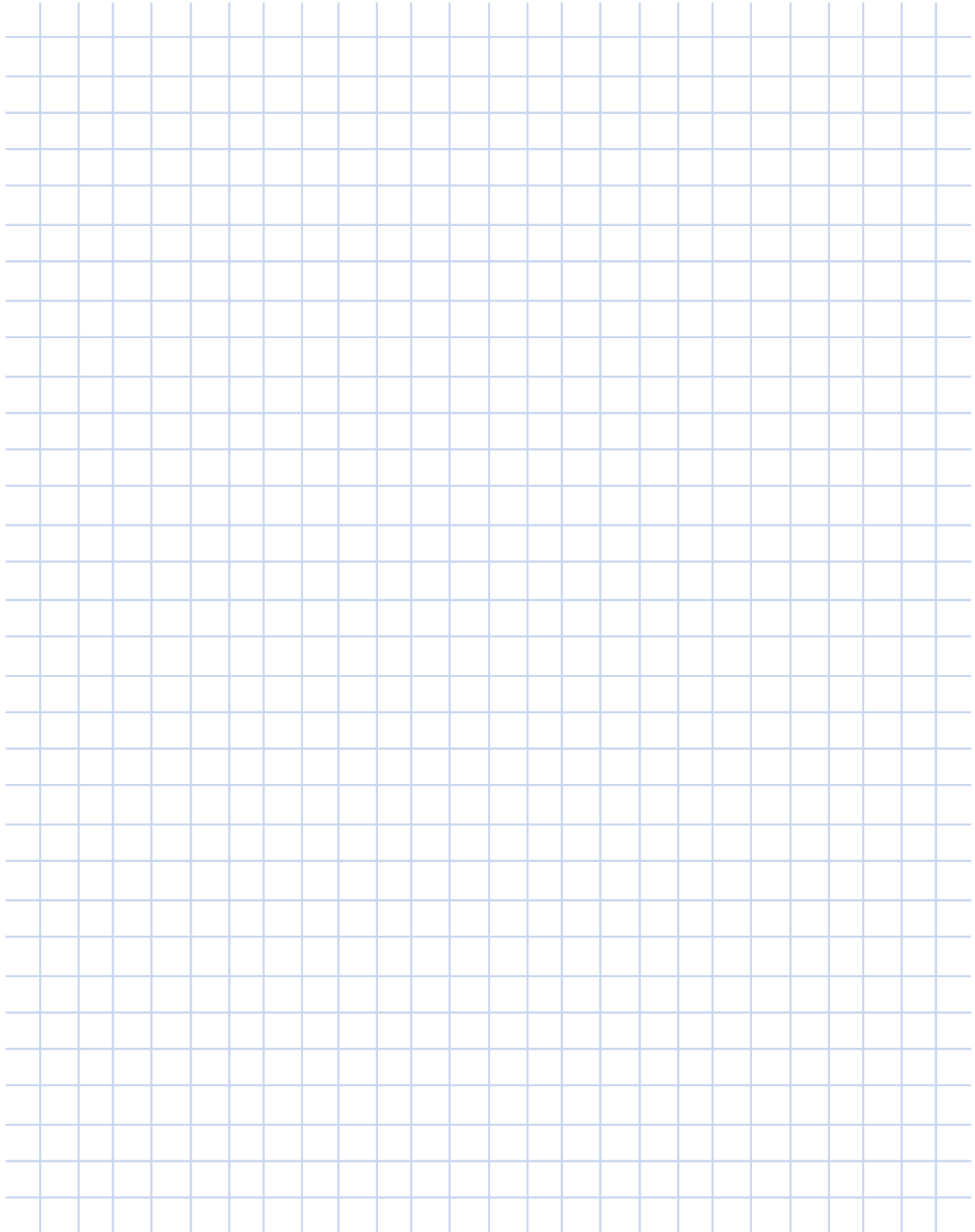
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Zimbabwe

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



NORD GEAR CORPORATION

Conditions of Sale

1. CONTRACT

An order placed 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 represent 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 at 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 to 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 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 purchaser 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 attorneys' 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 with 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 Company Terms 12/4/06

NORD GEAR LIMITED

Terms and Conditions of Sale

1. CONTRACT

Any contract between Nord Gear Limited, 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.

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 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 Brampton, Ontario. 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 Brampton, Ontario, or at such place or places in Canada 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, within one year from date of original factory invoice, 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 REMEDIES OF THE BUYER SET FORTH IN THIS SECTION 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 costs of the return of such goods to Seller 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 provisions 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 test. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. THE 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 the Seller's catalogs, sales manuals, photographs and drawings constitute only an approximate guide. The Seller reserves the right to make any changes 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. 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 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 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 or judgment 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) 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. (b) If the Buyer does not give delivery instructions to the Seller at least (10) days prior to the delivery date as 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 on any warehouse. 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 the Buyer becomes bankrupt or insolvent, or any petition for reorganization or for appointment of a receiver 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 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 the Buyer. If a deficiency results after the resale, the Buyer agrees to pay such forthwith, together with reasonable solicitor'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 solicitor's fees, shall forthwith be due and payable from Buyer to Seller.

13. SECURITY INTEREST AND TITLE

In provinces which are governed by a Personal Property Security Act, this contract shall serve as Security Agreement, reserving in Seller a security interest until full payment of 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 herein. 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

The 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. The Buyer shall pay, in addition to the Seller's price the amount of any such taxes or shall reimburse the Seller for the amount thereof that the Seller may be required to pay. At the option of 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 Seller does not charge for standard packaging for domestic shipment. The 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 affect, 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.

23. NON ASSIGNMENT BY BUYER

Contract or contracts may not be assigned by the Buyer without prior written consent of the Seller.

24. APPLICABLE LAW

All contracts are governed by the applicable laws of Ontario.

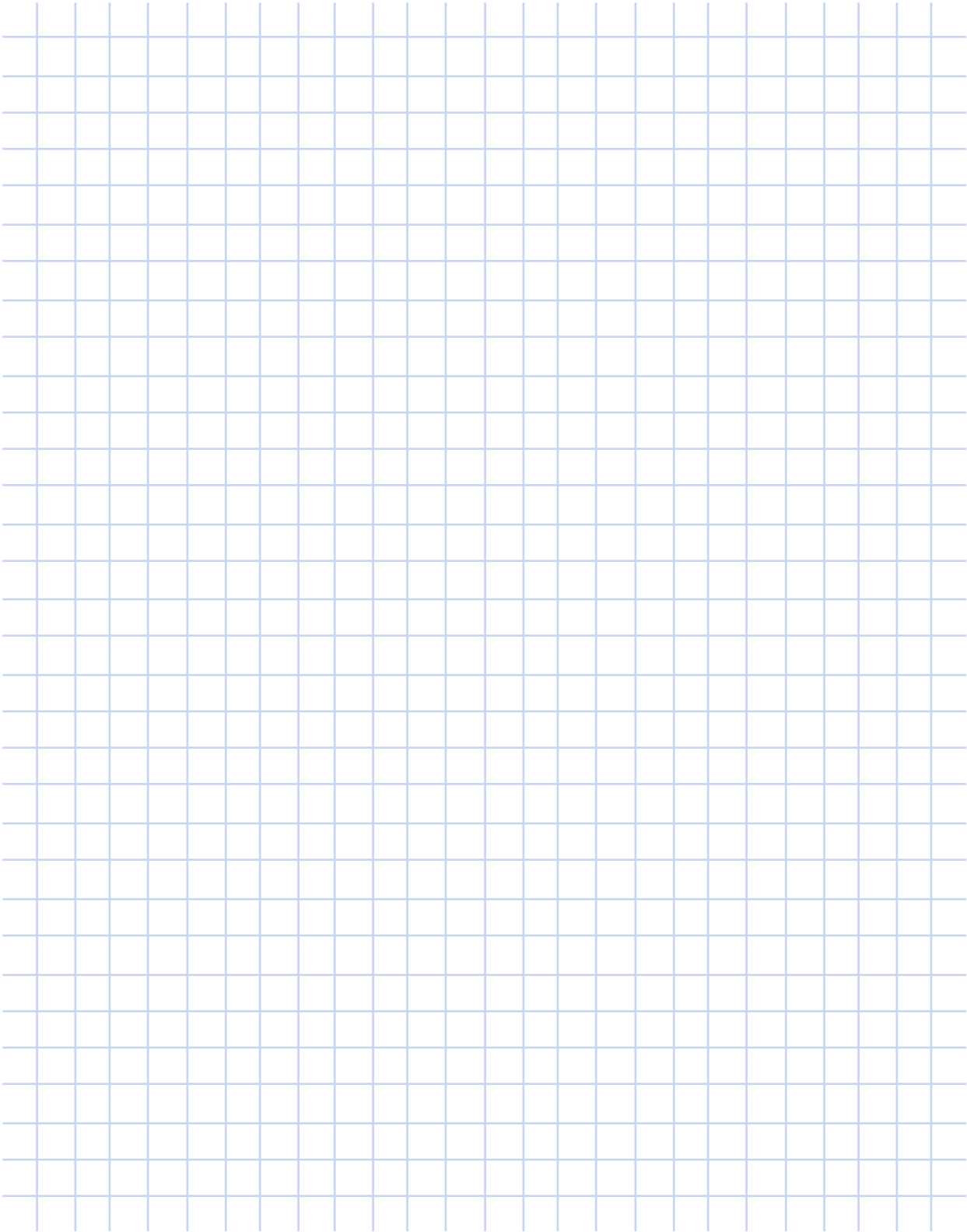
25. This instrument sets forth the entire understanding and agreement of the parties hereto in respect of the subject matter hereof, and all prior undertakings between the parties hereto, together with all representations and obligations of such parties in respect of such subject matter, shall be superseded by and merged into this instrument.

26. The provisions of this agreement shall bind and enure 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.

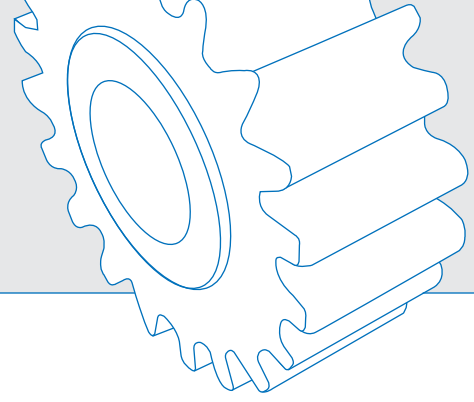
27. The parties acknowledge that they have requested this Contract and all notices or other documents relating thereto be drafted in the English language.

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."



Product Overview



We can match our NORDAC Frequency Inverters with our Inverter/Vector Duty Motors and UNICASE™ Speed Reducers to provide a total AC Motor Drive solution from one trusted source.

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® 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



RIGHT ANGLE HELICAL-BEVEL 2-STAGE

- Foot, Flange or Shaft Mount
- Torque up to 5,840 lb-in
- Gear ratios – 4.1:1 to 72:1



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



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

HIGH PERFORMANCE MOTORS & BRAKEMOTORS



INVERTER/VECTOR DUTY

- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

NORDAC INVERTER/VECTOR DRIVES



SK 200E

- Motor or remote mounted
- IP55 or IP66 protection class
- 380-480V, 3-phase, to 10 hp
- 200-240V, 3-phase, to 5 hp
- 200-240V, 1-phase, to 1.5 hp
- 110-120V, 1-phase, to 1 hp



TRIO SK300E

- Motor or remote mounted
- IP55 – washdown
- 380-460V, 3-phase, to 5hp
- 200-240V, 3-phase, to 3hp



SK500/520/530E

- Compact, high performance
- 380-480V, 3-phase, to 10hp
- 200-240V, 3-phase, to 5hp
- 200-240V, 1-phase, to 3hp
- 110-120V, 1-phase, to 1.5hp



SK700E

- Flexible high performance
- 380-460V, 3-phase, to 200hp



DRIVESYSTEMS

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EAST

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