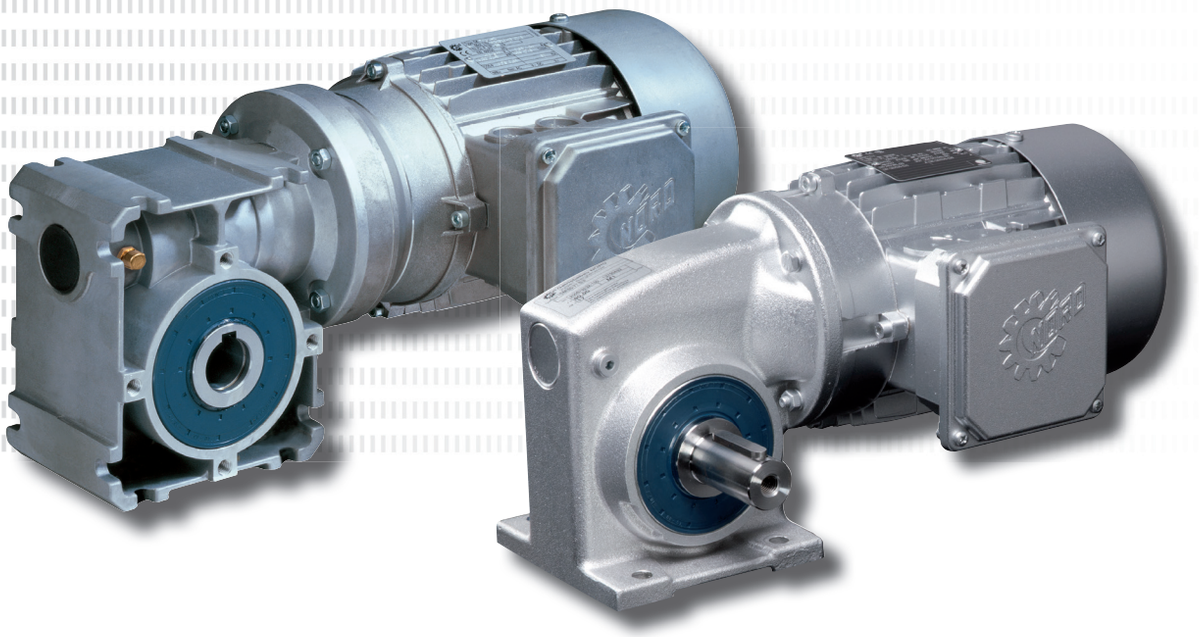


EN

UNIVERSAL

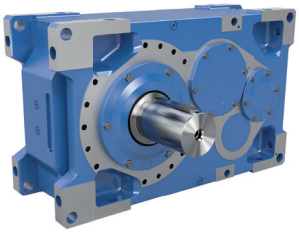
WORM GEAR UNITS SI and SMI

G1035 IE1 Standard IE2 IE3

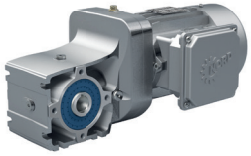
NORD DRIVESYSTEMS

Contents

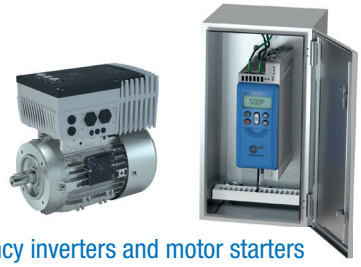
NORD DRIVESYSTEMS Group



Industrial gear units



Geared motors



Frequency inverters and motor starters

- Headquarters and technology centre in Bargteheide near Hamburg.
- Innovative drive solutions for more than 100 branches of industry.
- 7 production locations with cutting edge technology produce gear units, motors and drive electronics for complete drive systems from a single source.
- NORD has 51 subsidiaries in 36 countries and further sales partners in more than 50 countries, providing local stocks, assembly centres, technical support and customer service.
- More than 4,000 employees throughout the world create customised solutions.

Headquarters in Bargteheide

Gear unit production

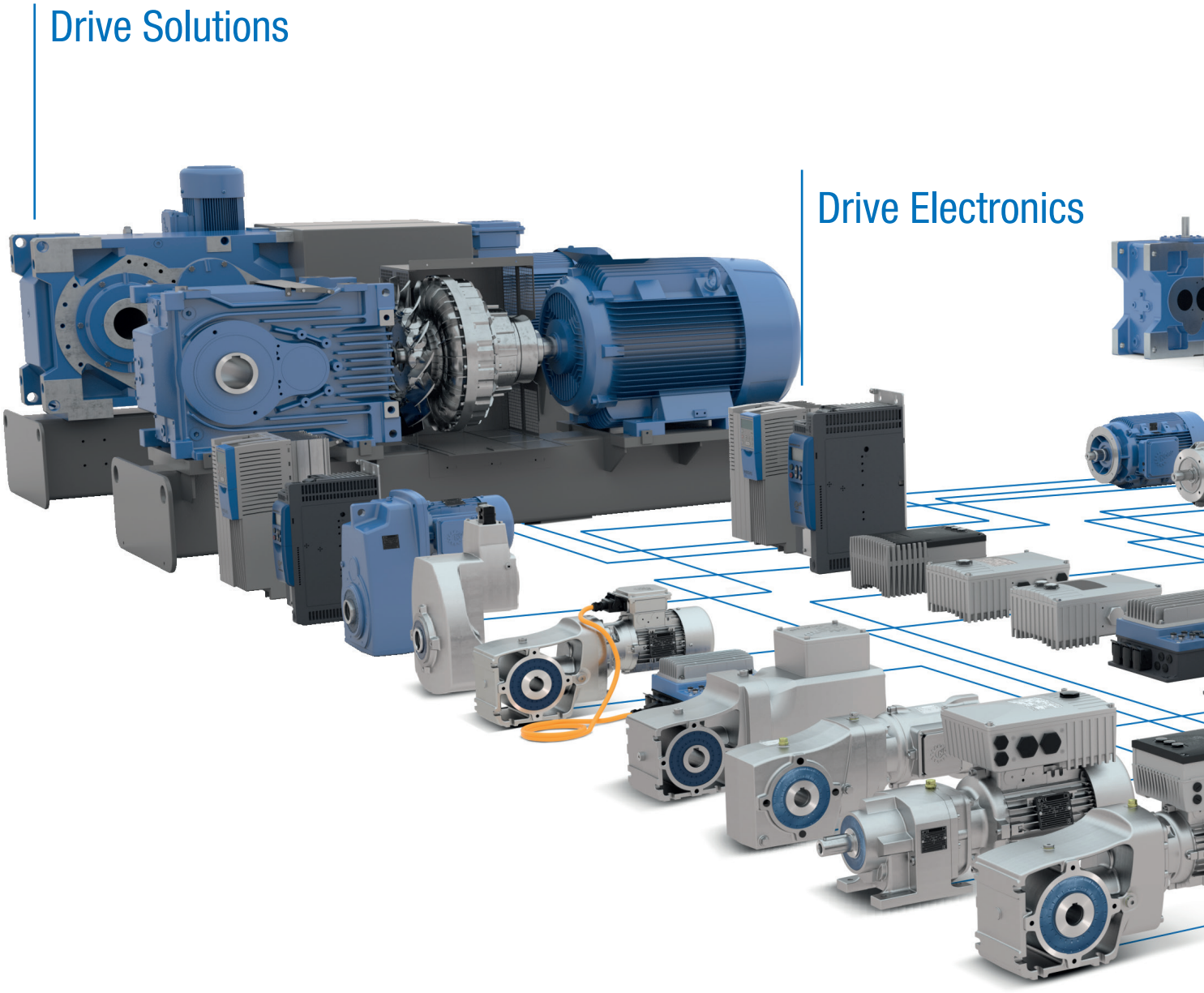
Inverter production

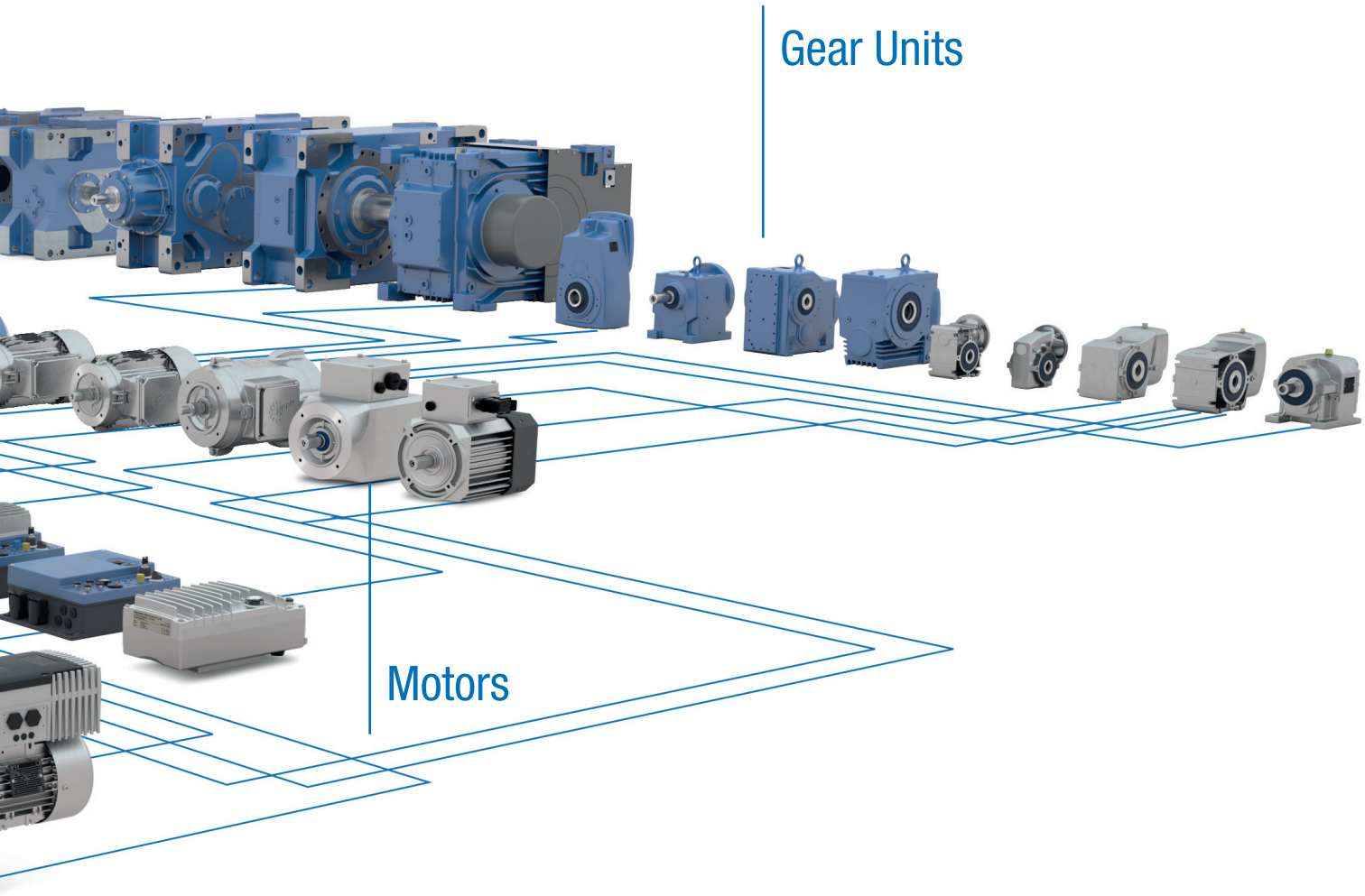
Motor production

Production and assembly

Motor mounting

Product overview



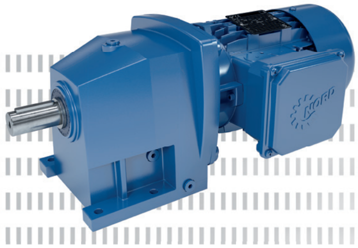


ATEX

Our products are available in ATEX certified versions.

An optimum and individual drive solution can therefore be created using the modular NORD system consisting of the gear unit, motor and drive electronics. The modular products are perfectly matched and can be combined in many variants. In addition, we offer planning, project management, installation, and service from a single source. If required, industry solutions can be configured as a complete logistics package, programmed and ready for use. Each modular NORD product combines: highest product quality, short planning and assembly times, high delivery availability, and a good price/ performance ratio. Our products are also available in ATEX certified versions.

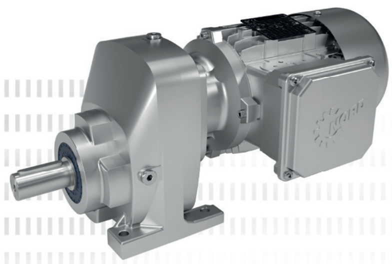
Product overview
Geared motors



UNICASE helical gear units

- CaFoot or flange mounted
- Long life, low-maintenance
- Optimum sealing
- UNICASE housing

Sizes	11
kW	0.12 – 160
Nm	10 – 26,000
i	1.35:1 – 14,340.31:1



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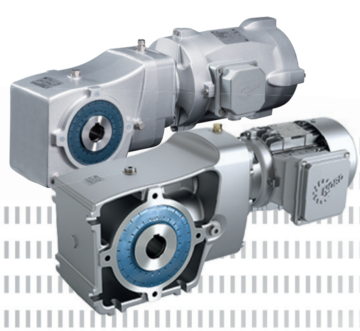
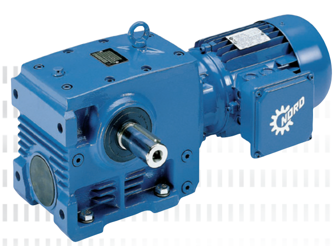


NORDBLOC.1® bevel gear units

- Foot mounted, flange mounted or face mounted
- Hollow or solid shaft
- UNICASE housing

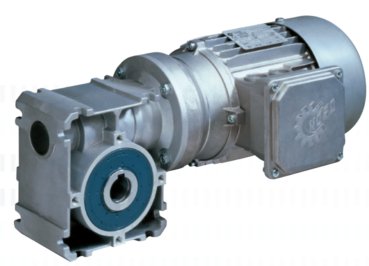
Sizes	6
kW	0.12 – 9.2
Nm	50 – 660
i	3.03:1 – 70:1



UNICASE helical worm gear units

- Foot mounted, flange mounted or face mounted
- Hollow or solid shaft
- UNICASE housing

Sizes	6
kW	0.12 – 15
Nm	94 – 3,058
i	4.40:1 – 7,095.12:1



UNIVERSAL SI worm gear units

- Modular
- Universal mounting
- Lubricated for life

Sizes	5
kW	0.12 – 4.0
Nm	21 – 427
i	5.00:1 – 3,000.00:1

UNICASE bevel gear units

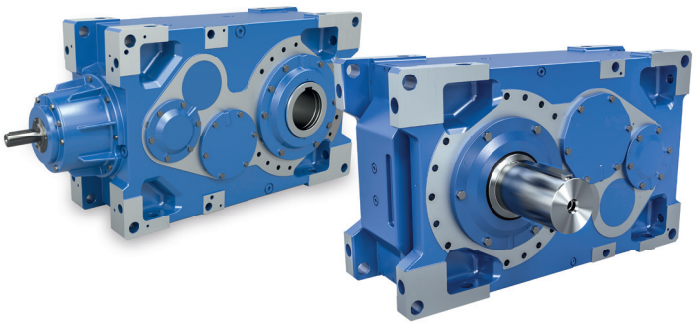
- Foot mounted, flange mounted or face mounted
- Hollow or solid shaft
- UNICASE housing

Sizes	11
kW 0.	12 – 200
Nm	180 – 50,000
i	8.04:1 – 13,432.68:1

UNIVERSAL SMI worm gear units

- Smooth surfaces
- Lubricated for life

Sizes	5
kW	0.12 – 4.0
Nm	21 – 427
i	5.00:1 – 3,000.00:1

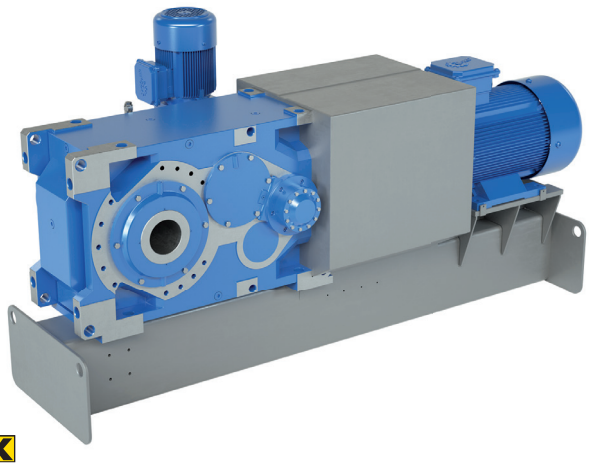


MAXXDRIVE® industrial gear units

- All bearing points and sealing surfaces are machined in a single operation
- No separating joints in the housing, no sealing surfaces subject to torque
- High-precision axis alignment, quiet running
- Long life, low-maintenance
- Gear ratio range 5.54 to 400:1 with the same foot dimensions
- Parallel axis and right-angled gear units

Sizes	11
kW	1.5 – 4,000
kNm	15/20/25/30/40/50/75/110/150/190/250
i	5.60:1 – 30,000:1

NORD DRIVESYSTEMS is the only manufacturer that produces modular industrial gear units with an output torque of up to 250,000 Nm in a one-piece UNICASE housing.



ATEX

NORD gear motors and industrial gear units are also available in ATEX certified versions.

Product overview
Drive electronics

Functions

- High precision regulation with current vector control
- Compatible with all common bus systems
- 4-quadrant operation
- PLC functionality for drive-related functions
- Energy-saving function for partial load operation
- Control and parameterisation tools and simple parameter structure
- Integrated line filter for compliance with EMC regulations
- Operation of synchronous and asynchronous motors
- Control and closed loop regulation
- POSICON – integrated positioning mode and synchronisation
- STO and SS1 – integrated functional safety
- Integrated brake rectifier for motor brake control

Advantages

- Scalable functionality – flexibility of equipment and function
- High torque capability for all drive applications
- Simple commissioning and operation

NORD drive electronics are available in ATEX certified versions.

NORDAC *PRO*
Control cabinet inverter SK 500E

The inverter for all drive applications. Proven technology, large power range and capable of functional expansion with plug-in option modules. Optimised heat dissipation thanks to the variable cooling concept.

Nominal ratings:

- Power range up to 160 kW
- Control cabinet installation
- IP20

NORDAC *PRO*
Control cabinet inverter SK 500P

The next generation of control cabinet inverters. Compact size, innovative and extremely flexible communication and interface concept, functional expansion with optional modules.

Nominal ratings:

- Power range up to 5.5 kW
- Control cabinet installation
- IP20

NORDAC *FLEX*
Decentralised frequency inverter SK 200E

Decentralised drive unit with versatile installation options. Simple commissioning and maintenance through extensive plug-in capability and simple parameter transfer via EEPROM.

Nominal ratings:

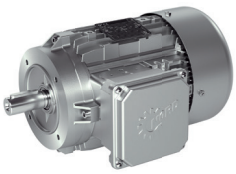
- Power range up to 22 kW
- Wall or motor mounting
- IP55, IP66

NORDAC *BASE*
Decentralised frequecy inverter SK 180E

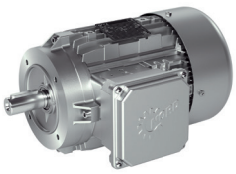
Economical decentralised version for simple drive applications. Low installation costs as well as robust design for simple installation outside the control cabinet.

Nominal ratings:

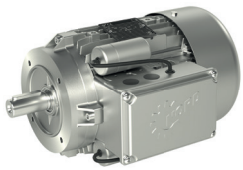
- Power range up to 2.2 kW
- Wall or motor mounting
- IP55, IP66, IP69K



Energy-saving motors

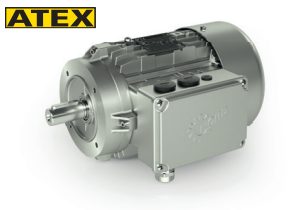


Switchable pole motors

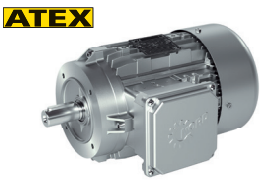


Single-phase motors

Smooth motors



Explosion protected motors, gas atmospheres



Explosion protected motors, dust atmospheres

Special features

- Motors developed and produced by NORD.
- We produce energy-efficient products for all parts of the world.
- Products available at all international locations.

NORDAC *START*: Motor starter SK 135E

The decentralised starter for all types of soft starting. With integrated motor protection and reversing function for flexible integration into the system.

Nominal ratings:

- Power range up to 7.5 kW
- Wall or motor mounting
- IP55, IP66, IP69K

NORDAC *LINK*: Frequency inverter SK 250E-FDS

The field distributor for flexible, decentralised installation. Flexibility of equipment and function – free configurability according to requirements and the application. Available as inverter and starter. Fast commissioning through high level of plug-in capability. Simple servicing of the system through integrated maintenance switch and local manual control facility.

Nominal ratings:

- Power range up to 7.5 kW
- Wall mounting
- IP55, IP65

Motor starter SK 155E-FDS

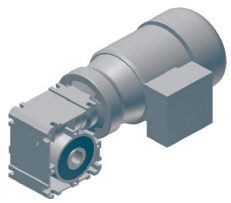
Nominal ratings:

- Power range up to 3 kW
- Wall mounting
- IP65

General product informations

This catalogue contains both series of the NORD UNIVERSAL worm gear product range - SI worm gear units and SMI worm gear units

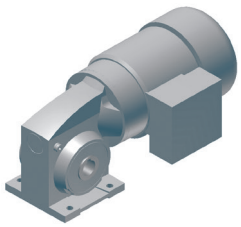
SI-Worm gear units



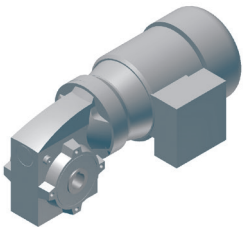
The **SI series** is a modular gear unit family which uses a universal housing. The basic gear unit is supplemented with a range of easily configured components which are either supplied as assembled units by NORD, or which are assembled by the customer.

These modular standard components provide maximum flexibility for applications. Due to the global availability of the individual components, very short delivery times are guaranteed.

SMI-Worm gear unit



Foot-mounted version X



Flange-mounted version Z

The **SMI** series is characterised by its smooth surface design. This series can either be supplied with IEC/NEMA motors, or for direct mounting on the motor without a coupling.

Because of the smooth surfaces, the **SMI** series is especially suitable for washdown applications, as well as for applications in the food and **beverage industry**. A differentiation is made between the foot-mounted version (Version X) and the flange-mounted version (Version Z).

Components for individual combinations

The possibility of ordering from a selection of individual components demonstrates the variety and versatility of NORD UNIVERSAL worm gear units.

NORD offers this solution for the **SI** series. Customers can select the optimum combination for their application using only a few components.
The great flexibility of being able to order individual components instead of completely assembled drive units often results in lower stock levels for our customers.

The components include all parts which are required for the assembly of complete drive units, including assembly instructions. It is no longer necessary to state the version and the mounting position.

Fully assembled drive units ex-works

Ordering of completely assembled drive units ex-works is made via the type designation (⇨ 🕮A34-35). For this type of order, the installation position and the speed ratio must be stated in addition to the version.

Gear unit versions for **direct mounting on the motor** can only be ordered in this manner.

Similarly, the **SMI** series is only supplied in the form of complete drive units. For solid shaft versions a one-piece output shaft is always supplied. The dimensions of this shaft correspond to those of the plug-in shaft of the SI series.

NORD UNIVERSAL worm gearmotors with directly mounted motors

NORD also supplies both UNIVERSAL worm gear motors from the series SI and SMI in a version for direct mounting on the motor without the use of a coupling. These gear units are only assembled to order.

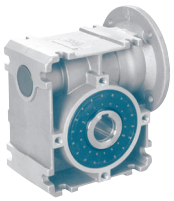
Because the gear unit is attached to the motor without a coupling, the direct motor-mounted version is especially compact, which is useful where space is at a premium. For further information please refer to Page ⇨ 🕮A29.

Version wihout of a coupling - for further information ⇨ 🕮A33

Construction kit system

Construction kit – overview

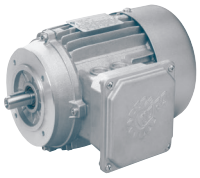
Worm gear units

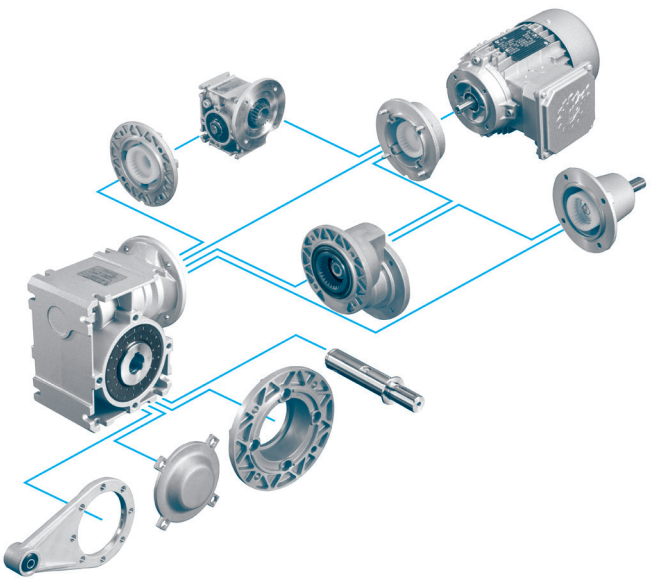


Helical gear input stage H10

Double worm gear adapter

IEC three-phase motor / brake motor





IEC motor adapter
NEMA motor adapter

Free drive shaft Type W

Plug-in shaft V, L, VF

vent
(not illustrated)

Output flange B5

Torque support

Cover

Overview of versions

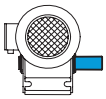
(⇨ 🕮A27-32 mounting variants)

Basic version

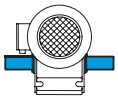
Plug-in shaft

VA

VB



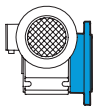
L



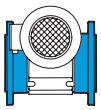
Flange B5

FA

FB

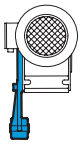


FF



Torque support

DA/270



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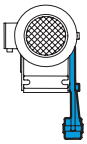
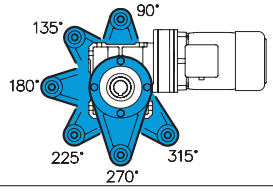


DA/90...315



Covering cap

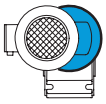
HA

HB

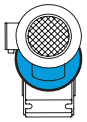
Helical gear input stage H10

T1

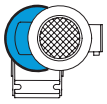
T2



T3

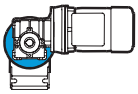


T4



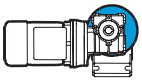
Double worm gear input stage

U1

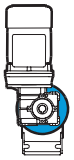


U2

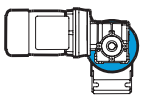
U3



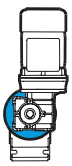
U4



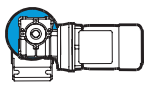
U5



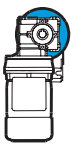
U6



U7

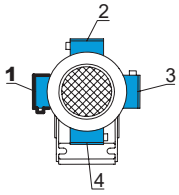


U8

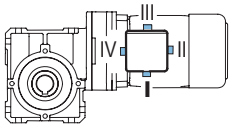


Terminal box

KK1/I, KK2/I, KK3/I,K K4/I

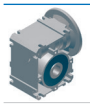
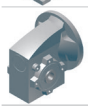


Kabeleinführung **KK1/I,** KK1/II, KK1/III, K K1/IV:K1/IV



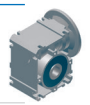
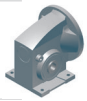
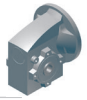
IEC / NEMA mounting

Overview of IEC / NEMA adapters

Designation		Description	Sizes and version						
			SI 31	SMI 31X	SMI 31Z	SI 40	SMI 40X	SMI 40Z	🕮
	1SI__	UNIVERSAL worm gear units	●			●			B52 - 77
	1SMI__X	UNIVERSAL worm gear units Foot-mounted version, smooth surface		●			●		
	1SMI__Z	UNIVERSAL worm gear units Flange-mounted version, smooth surface			●			●	
		Input options							
	IEC__	IEC Motor Adapter							
		IEC56	●	●	●	●	●	●	B30 - 47
		IEC63	●	●	●	●	●	●	
		IEC71	●	●	●	●	●	●	
		IEC80				●	●	●	
		IEC90				●	●	●	
		IEC100							
		IEC112							
	NEMA__	NEMA Motor Adapter							
		NEMA 48C	●	●	●				See USA catalogue www.2.nord.com - Heading DOCUMENTATION B72 - 77
		NEMA 56C	●	●	●	●	●	●	
		NEMA140TC				●	●	●	
		NEMA180TC							
	H10	Helical gear input stage				●	●	●	
	W	Free drive shaft				●	●	●	
	__/__	Double worm gear adapter				●	●	●	
		Output options							
	D	Torque support	●		●	●		●	B52 - 71
	F	Output flange B5	●		●	●		●	
	H	Covering cap	●		●	●		●	
	L	Plug-in shaft on both sides	●	●	●	●	●	●	
	V	Plug-in shaft on one side	●	●	●	●	●	●	
	VF	One-side extended plug-in shaft with output flange B5	●		●	●		●	
		Further options							
		Vent	●	●	●	●	●	●	
		Painting	●	●	●	●	●	●	
		Long-term storage	●	●	●	●	●	●	

● One-piece solid shaft, as only assembled to order, Plug-in shaft are available on special request

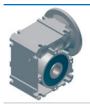
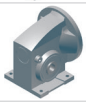
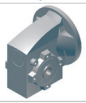
Overview of IEC / NEMA adapters

	Sizes and version									Description	Designation	
	SI 50	SMI 50X	SMI 50Z	SI 63	SMI 63X	SMI 63Z	SI 75	SMI 75X	SMI 75Z			
B52 - 77	•			•			•			UNIVERSAL worm gear units	1SI__	
		•			•			•		UNIVERSAL worm gear units Foot-mounted version, smooth surface	1SMI__X	
			•			•			•	UNIVERSAL worm gear units Flange-mounted version, smooth surface	1SMI__Z	
Input options												
										IEC Motor Adapter	IEC__	
B30 - 47	•	•	•	•	•	•				IEC56		
	•	•	•	•	•	•				IEC63		
	•	•	•	•	•	•	•	•	•	IEC71		
	•	•	•	•	•	•	•	•	•	IEC80		
	•	•	•	•	•	•	•	•	•	IEC90		
							•	•	•	IEC100		
							•	•	•	IEC112		
										NEMA Motor Adapter	NEMA__	
B72 - 77 See USA catalogue www.2.nord.com - Heading "DOCUMENTATION"										NEMA 48C		
	•	•	•	•	•	•	•	•	•	NEMA 56C		
	•	•	•	•	•	•	•	•	•	NEMA140TC		
				•	•	•	•	•	•	NEMA180TC		
	•	•	•	•	•	•	•	•	•	Helical gear input stage	H10	
	•	•	•	•	•	•	•	•	•	Free drive shaft	W	
	•	•	•	•	•	•	•	•	•	Double worm gear adapter	__/__	
Output options												
B52 - 71	•		•	•		•	•		•	Drehmomentstütze	D	
	•		•	•		•	•		•	Abtriebsflansch B5	F	
	•		•	•		•	•		•	Abdeckhaube	H	
	•	•	•	•	•	•	•	•	•	Beidseitige Einsteckwelle	L	
	•	•	•	•	•	•	•	•	•	Einseitige Einsteckwelle	V	
	•		•	•		•	•		•	Einseitige verlängerte Einsteck-welle mit Abtriebsflansch B5	VF	
Further options												
	•	•	•	•	•	•	•	•	•	Vent		
	•	•	•	•	•	•	•	•	•	Painting		
	•	•	•	•	•	•	•	•	•	Long-term storage		

● One-piece solid shaft, as only assembled to order, Plug-in shaft are available on special request

Direct motor mounting

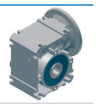
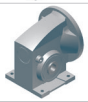
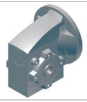
Overview of direct motor mounting

Designation		Description	Sizes and version						
			SID 31	SMID 31X	SMID 31Z	SID 40	SMID 40X	SMID 40Z	🕮
	1SID__	UNIVERSAL worm gear units	●			●			
	1SMID__X	UNIVERSAL worm gear unit, foot-mounted version, smooth surface		●			●		
	1SMID__Z	UNIVERSAL worm gear unit, flange-mounted version, smooth surface			●			●	
		Input options							
		Direct motor mounting							
		Motor size 63	●	●	●	●	●	●	
		Motor size 71	●	●	●	●	●	●	
		Motor size 80				●	●	●	
		Motor size 90							
	2S__	Helical gear input stage				●	●	●	
	__/__	Double worm gear adapter				●	●	●	
		Output option							
	D	Torque support	●		●	●		●	
	F	Output flange B5	●		●	●		●	
	H	Covering cap	●		●	●		●	
	L	Plug-in shaft on both sides	●	●	●	●	●	●	
	V	Plug-in shaft on one side	●	●	●	●	●	●	
	VF	One-side extended plug-in shaft with output flange B5	●		●	●		●	
		Further options							
		Vent	●	●	●	●	●	●	
		Painting	●	●	●	●	●	●	
		Long-term storage	●	●	●	●	●	●	

● One-piece solid shaft, as only assembled to order, Plug-in shaft are available on special request

The NORDCAD program can be found on the NORD homepage under www.nord.com - Heading DOCUMENTATION

Overview of direct motor mounting

Sizes and version									Description	Designation
SID 50	SMID 50X	SMID 50Z	SID 63	SMID 63X	SMID 63Z	SID 75	SMID 75X	SMID 75Z		
•			•						UNIVERSAL worm gear units	1SID__ 
	•			•					UNIVERSAL worm gear unit, foot-mounted version, smooth surface	1SMID__X 
		•			•				UNIVERSAL worm gear unit, flange-mounted version, smooth surface	1SMID__Z 
Input options										
									Direct motor mounting	
									Motor size 63	
•	•	•							Motor size 71	
•	•	•	•	•	•				Motor size 80	
•	•	•	•	•	•				Motor size 90	
•	•	•	•	•	•				Helical gear input stage	2S__
•	•	•	•	•	•				Double worm gear adapter	__/__
Output options										
•		•	•		•				Torque support	D
•		•	•		•				Output flange B5	F
•		•	•		•				Covering cap	H
•	•	•	•	•	•				Plug-in shaft on both sides	L
•	•	•	•	•	•				Plug-in shaft on one side	V
•		•	•		•				One-side extended plug-in shaft with output flange B5	VF
Further options										
•	•	•	•	•	•				Vent	
•	•	•	•	•	•				Painting	
•	•	•	•	•	•				Long-term storage	

The NORDCAD program can be found on the NORD homepage under www.nord.com - Heading DOCUMENTATION

● One-piece solid shaft, as only assembled to order, Plug-in shaft are available on special request

Description of gear units

Sizes

Both the SI and SMI gear unit series are available in sizes 31, 40, 50, 63 and 75.

Speed ratios

The speed ratios of the single-stage gear units cover a wide range. The speed ratios are the same for all sizes

Standard speed ratios												
5	7,5	10	12,5	15	20	25	30	40	50	60	80	100

All speed ratios are finite and specified precisely. The worms of all worm gear units in the NORD UNIVERSAL range have a right-handed helix, from which the direction of rotation results.

Mounting H10 Helical gear

Size 40, 50, 63 and 75 SI and SMI series gear units can be extended to form 2-stage helical worm gear units by fitting a H10 helical gear. The speed ratio of the H10 helical gear is the same for all sizes, namely $i_{vor} = 10$

In addition, the SMI gear unit series also provides the possibility of creating a highly compact first stage with a speed ratio of $i_{vor} = 5$ by mounting the motor directly. This first stage is available for sizes 40, 50 and 63.

Mounting Double worm gear

By means of the double worm gear adapter the speed ratio range can be extended up to $i_{ges} = 10000$. The double worm gear adapter allows the combination of two worm gear units to form a single drive unit. This is available for SI and SMI series gear units. Sizes 40/31, 50/31, 63/31 and 75/40 can be combined

Combinations

Torques

In continuous operation with uniform loading, the maximum output torques M_{2max} represent the maximum load limit. Design of the gear units is carried out according to the section “Gear unit selection” taking the operating factors into account

- IEC motor mounting
- Direct motor mounting

Type designations and torques

Type	IEC motor mounting Type series		IEC motor mounting Torques [Nm]		Direct motor mounting Type series		Direct motor mounting Torques [Nm]	
	SI	SMI	M_{2max}	M_{2grenz}	SID	SMID	M_{2grenz}	M_{2grenz}
Single-stage worm gear units	1SI31	1SMI31	30	75	1SID31	1SMID31	30	55
	1SI40	1SMI40	50	125	1SID40	1SMID40	50	90
	1SI50	1SMI50	90	225	1SID50	1SMID50	90	160
	1SI63	1SMI63	160	400	1SID63	1SMID63	160	290
	1SI75	1SMI75	260	650	-	-	-	-
$i_{vor} = 10$	1SI40/H10	1SMI40/H10	81	125	-	-	-	-
	1SI50/H10	1SMI50/H10	146	225	-	-	-	-
	1SI63/H10	1SMI63/H10	250	400	-	-	-	-
Helical worm gear units	1SI75/H10	1SMI75/H10	429	650	-	-	-	-
$i_{vor} = 5$	-	-	-	-	2SID40	2SMID40	74	90
	-	-	-	-	2SID50	2SMID50	133	160
	-	-	-	-	2SID63	2SMID63	237	290
Double worm gear units	1SI40/31	1SMI40/31	99	125	1SID40/31	2SMID40/31	99	125
	1SI50/31	1SMI50/31	178	225	1SID50/31	2SMID50/31	178	225
	1SI63/31	1SMI63/31	316	400	1SID63/31	2SMID63/31	316	400
	1SI75/40	1SMI75/40	427	650	1SID75/40	2SMID75/40	427	650

Torques M_{2max}

The torques M_{2max} apply for input speed $n_1 = 1400\ min^{-1}$

max. output torques M_{2max}

The maximum output torques M_{2max} represent the load limit in continuous operation with constant load. The above mentioned maximum output torques M_{2max} apply for input speed $n_1 = 1400 min^{-1}$ and for speed ratio iges with the highest bearing capacity of the gear unit type.
The maximum output torques M_{2max} valid for the different speed ratios and speeds can be obtained from the B29 - B33 lists.

Output limit torques M_{2grenz}

The output limit torques M_{2grenz} with stand static and short-term running under rarely occurring loads without damage to the gear unit.
The output limit torques M_{2grenz} represent the load limit and must not be exceeded even in case of impacts.
The IEC motor mounting withstands higher output limit torques M_{2grenz} than the direct motor mounting and should be given preference in case of impact applications.

- IEC motor mounting

- Free drive shaft Typ W

For the “free drive shaft type W” it must be noted that in addition to the maximum output torque, the maximum input shaft torque M_{1max} is also not exceeded.

Input shaft torque M_{1max}

Maximum input shaft torque M_{1max} for the free drive shaft type W

Size	31	40	50	63	75
maximum input shaft torque M_{1max} [Nm]	5	12			45

Input speed

The gear units are designed for a motor or input speed of up to 1800 min^{-1}. Higher input speeds reduce the service life of the gear unit. NORD UNIVERSAL worm gear units are suitable for short period or intermittent operation with frequency inverters up the the 87Hz characteristic curve.

Please enquire in case of other modes of operation with input speeds greater than 1800 min^{-1}.

Description of gear units

Efficiency

Specially smoothed gear flanks and the standard use of synthetic lubricants ensure favourable efficiencies for NORD UNIVERSAL worm gear units.

With new worm gear units, the efficiency is increased by running-in the worm gear meshing in the initial phase of normal operation.

The output torques and powers which are stated in the selection lists take the efficiency η in the run-in state into account.

Efficiency η [%] at n_1 = 1400 min^{-1}

i_{sch}	5	7,5	10	12,5	15	20	25	30	40	50	60	80	100
Baugröße 31	86	82	80	76	71	67	63	55	50	45	42	36	32
Baugröße 40	88	85	82	80	75	71	68	60	54	50	46	41	36
Baugröße 50	90	87	85	83	79	75	72	65	60	56	52	46	42
Baugröße 63	92	89	87	86	82	79	76	69	64	61	57	51	47
Baugröße 75	93	90	84	88	84	82	80	77	69	65	62	57	52

Efficiency on start-up n_a

Due to the hydrodynamic lubrication of the teeth, the efficiency of worm gear units increases with the input speed. Because of this, when starting from standstill, there is initially a lower efficiency η_a. This must be taken into account for the motor torque if the unit is to be started under load. The following table gives guideline values for the starting efficiency η_a depending on the worm gear speed ratio i_{sch}:

Efficiency on start-up

Speed ratio i_{sch}	5	7,5	10	13	15	20	25	30	40	50	60	80	100
Start-up efficiency η_a [%]	72	67	62	59	53	47	43	36	31	27	25	20	17

Lubrication

Ex-works, the worm gear units are lubricated for life with a high quality, synthetic long-life lubricant on a polyglycol basis. The gear units are therefore maintenance-free.
As standard, NORD UNIVERSAL worm gear units are equipped with oil plugs. This enables the worm gear units to be vented ⇨🕮A32 Venting.

Venting ⇨🕮 A32

Lubricant quantity

Lubricant quantity CLP PG VG 680 DIN 51502

Size	31	40	50	63	75
SI series	30 ml	55 ml	95 ml	180 ml	360 ml
SMI series	45 ml	80 ml	130 ml	240 ml	410 ml

⚠ When the gear types with direct motor mounting (SID, SMID) the lubricant quantity is dependent on the mounting position

Self-locking

Due to the self-locking of NORD UNIVERSAL worm gear units, the stationary gear unit cannot rotate, even with large torques at the output (worm gear shaft). Due to the self-locking characteristics while running, the drive automatically comes to rest when the motor is switched off.

With a mass-acceleration factor of $m_{af} > 1$ (see the section 'Gear unit selection') the self-locking can result in sudden blocking of the drive or rattling vibrations in case of load reversals in thrust operation (see VDI 2158). Gear units which are not self-locking should be selected for these fields of application.

Self-locking and self-braking depends on the speed ration in the worm stage.

Self-locking with NORD UNIVERSAL worm gear units

i_{sch} = 5 - 10	i_{sch} = 12,5 - 40	i_{sch} = 50 - 80	i_{sch} = 100
No self-locking	No specific statement regarding self-locking	Self-locking at rest and with no vibration	Self-locking
No self-braking	No self-braking	No specific statement regarding self-braking	Self-braking at $n_1 < 1500$ min^{-1} for sizes 31, 40, 50

Radial and axial forces

In the selection lists, the permissible radial forces F_R and F_{RF} are listed in addition to the torques M_2 which may act on the output shaft. Calculation of the permissible radial forced is based on the assumption that the external forces act on the centre of the shaft journal.

SI series worm gear units are supplied with a hollow shaft as standard. Plug-in shaft are available for the solid shaft versions. As standard, the SMI series is also available in a solid shaft version. The dimensions of the free ends of the shafts are correspond to the plug.in shaft.

Permissible radial forces F_R, F_{RF}

The permissible radial forces F_R apply for the plug-in shaft VA/I and L (see dimensioned drawings). The permissible radial forces F_{RF} apply for the plug-in shaft VA/II, which are used in combination with the B5 output flange.

With central application of the force on the hollow shaft, the permissible radial force is $2xF_R$.

The calculation of the permissible radial forces takes into account the unfavourable direction of the application of the force, the bearings of the gear unit, the gear unit housing and the shaft geometry.

For the input shaft Type W, the permissible radial forces with application of the force to the centre of the free end of the shaft are given in the following table.

Permissible radial force F_R on the free input shaft - Type W

Size	31	40	50	63	75
F_{Rzul}	-	1200 N			1500 N

With NORD UNIVERSAL worm gear units, the standard output shaft is equipped with unusually large ball bearings. Because of this, NORD UNIVERSAL the output sides of worm gear units can also withstand radial forces in addition to the axial forces.

Permissible axial forces F_A

Permissible axial force at output F_A

Size	31	40	50	63	75
F_{Azul}	1800 N	3200 N	4800 N	6300 N	8000 N

Weight

The following table shows the weights of the worm gear unit. The details are approximate values.

Weight of the worm gear

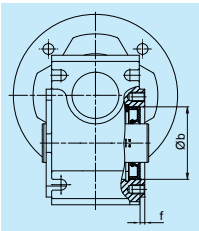
Size	31	40	50	63	75
Weight	1,3 kg	2,4 kg	4,1 kg	7,6 kg	12 kg

Description of gear units

Assembly / disassembly of plug-in shafts

A small amount of a suitable lubricant applied to the shaft or the the plug-in shaft and the hollow output shaft during assembly facilitates assembly and subsequent disassembly and reduces fretting corrosion. For this, we recommend the use of NORD Anti-Corrosion-Paste (5g per packet), available under order number 08900099.

Centring of output flange B14



The standard B14 output fl anges of NORD Sl and SMI series UNIVERSAL worm gear units (Version Z) provide the possibility for centring.

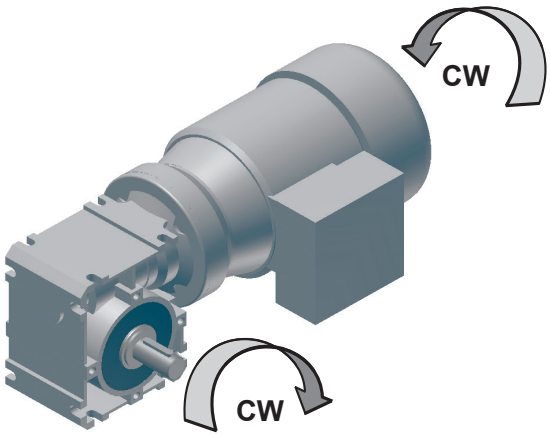
Centring of output flange B14					
Size	31	40	50	63	75
øbH7	47	62	80	100	120
f	3	3	3	4	4

Direction of rotation

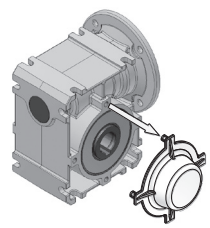
All worms of NORD UNIVERSAL worm gear units have a right-handed helix.
The direction of rotation results as follows:

Right-hand rotation
Left-hand rotation

CW = Clockwise - Clockwise direction of rotation, Right-hand rotation
CCW = CounterClockwise - Counter clockwise direction of rotation, Left-hand rotation

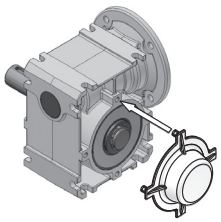


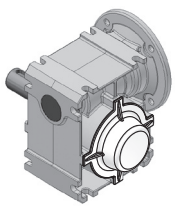
Fitting the covers



Many versions of the universal worm gear unit are supplied with plastic cover caps as standard. These cover caps protect the shaft sealing ring against the entry of dust and other possible contamination. The cover caps can be removed by hand without the use of tools and pushed onto the A or B side.

The cover cap must be removed before installing the universal worm gear unit. After installation is complete, the cover cap must be pushed into the threaded holes on the output fl ange on the corresponding side. Care must be taken that the cover cap is removed and pushed on vertically, in order not to damage the expansion elements of the cover cap.



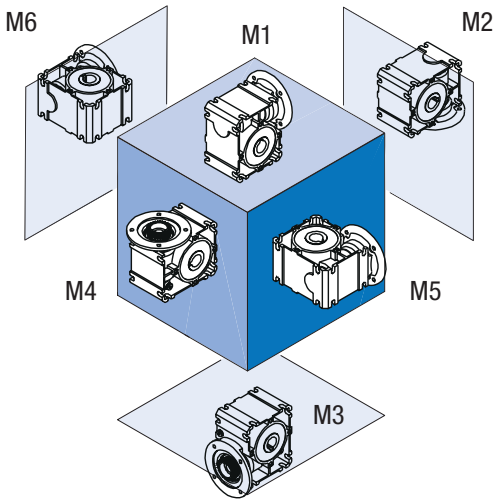


Installation positions

Installation position

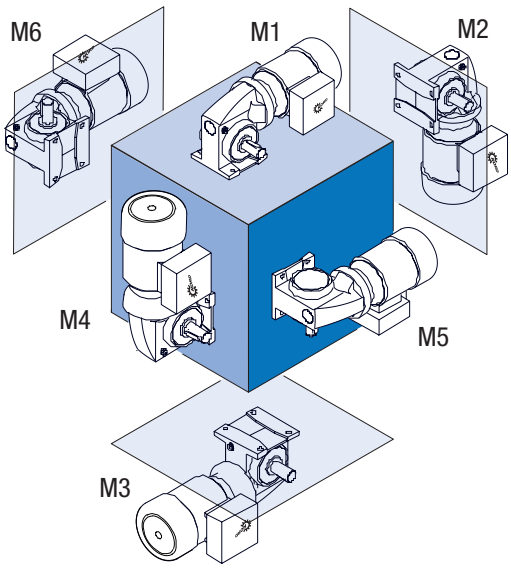
NORD UNIVERSAL worm gear units are suitable for all installation positions. Separate sealing of each stage of the gear unit and the design of the housing enables a uniform oil quantity for all installation positions.
For gear units with direct motor mounting, the installation position must be stated, in order to install the optional vent in the correct position at the factory. Please give us a call if you have any special questions!

SI-
Worm gear units

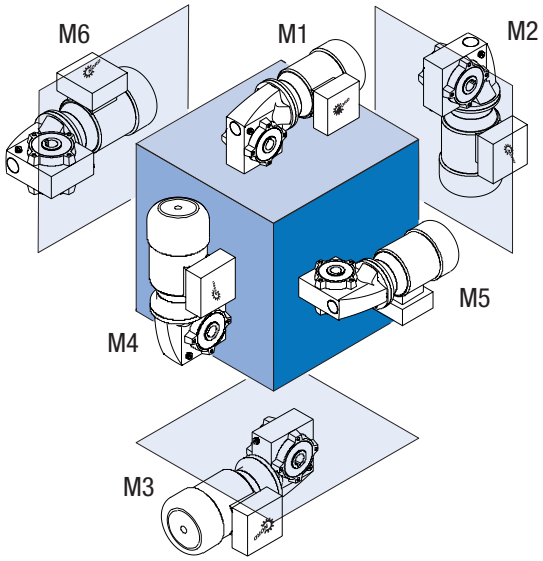


SMI-
Worm gear motors

Version VX



Version AZ



Gear unit selection

Selection list with 4-pole motors
⇨ B4

The selection lists for the combination of UNIVERSAL worm gear units with 4-pole standard three-phase motors state the resulting output torques of the gear unit M_2, output speeds n_2 and the operating factors f_B. The operating factor f_B designates the reliability of the gear unit with the stated drive power.

Every application has its own specific loads, e.g. due to shocks, frequent starts, intermittent operation and high ambient temperatures, and therefore requires a certain minimum operating factor f_{Bmin}, in order to ensure reliable operation.

When selecting gear units with the aid of the selection lists, care should be taken that the selected drive unit has the same or higher operating factor f_B than the minimum operating factor f_{Bmin}.

Selection list with W und IEC
⇨ B24

The selection list "n_1 = 1400 / 900 / 500 / 250 min^{-1}" on page ⇨ B24 and the following pages should be used if a standard 4-pole three-phase motor is not fitted.

This selection list is based on an operating factor of $_B$ = 1.0 Taking into account the minimum operating factor f_{Bmin} the installed motor power must not exceed P_{emax} / f_{Bmin}.

The necessary minimum operating factor f_{Bmin} for a particular application is calculated as follows:

$$f_{Bmin} = f_{B0} \bullet f_{B1} \bullet f_{B2}$$

The operating factor f_{B0} takes into account load types A, B or C, the frequency of switching and the daily operating time. The operating factor f_{B1} takes various ambient temperatures into account.

Minimum operating factor f_{B0}

The operating factor f_{B2} takes intermittent operation into account. The following diagrams are used to determine the operating factors f_{B0}, f_{B1} and f_{B2}.

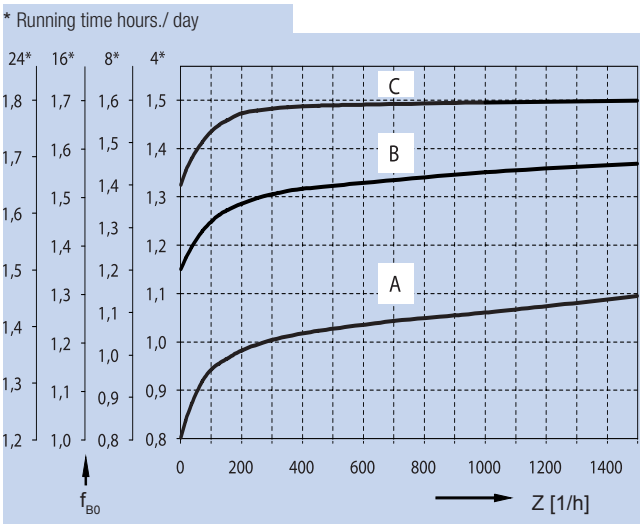


Diagramm 1: Minimum operating factor f_{B0}

If the gear unit transmits a very high power over a longer continuous period (>1h), high gear oil temperatures result, which reduce the service life.

High gear oil temperatures

In order to avoid these high temperatures, the motor powers listed below should not be exceeded in continuous operation. A larger gear units should be selected if higher motor powers are required in continuous operation.

Max. motor powers in continuous operation - Thermal power limits [kW]

i_{sch}	5	7,5	10	12,5	15	20	25	30	40	50	60	80	100
Size 50	1,5	1,5	1,5	1,1	1,1	0,75	0,55	0,55	0,37	0,37	0,37	0,25	0,18
Size 63	1,5	1,5	1,5	1,5	1,5	1,1	1,1	0,75	0,55	0,55	0,55	0,37	0,37
Size 75	4,0	4,0	30	2,2	2,2	1,5	1,1	1,1	0,75	0,75	0,55	0,37	0,37

Examples of gear unit loadings

A) uniform operation

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

B) irregular operation

Decoilers, feed drives for woodworking machines, hoists, balancing machines, tapping units, medium-size agitators and mixers, winches, sliding doors, dung removal machines, packaging machines, bending machines and gear pumps.

C) highly irregular operation

Shears, presses, punching machines, folding machines, tumbling barrels, vibrators and chopping machines

Load type

The load type results from the uniformity of operation and from the mass acceleration factor maf according to the following table. In each case, the next higher load type from operation and mass acceleration factor applies.

Exemple

irregular operation and $m_{af} = 0,2$ ⇨ Load type B

Load type	Operation	Mass acceleration factor m_{af}
A	uniform operation	$m_{af} \leq 0,25$
B	irregular operation	$0,25 < m_{af} \leq 3$
C	highly irregular operation	$3 < m_{af} \leq 10$

mass acceleration factor m_{af}

with m_{af} >10
Please contact us

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

$J_{ex.}$ all external moments of inertia

$J_{ex.red.}$ all external moments of inertia are reduced to the drive motort

$J_{Mot.}$ moment of inertia of the motor

i_{ges} Gear unit reduction ratio

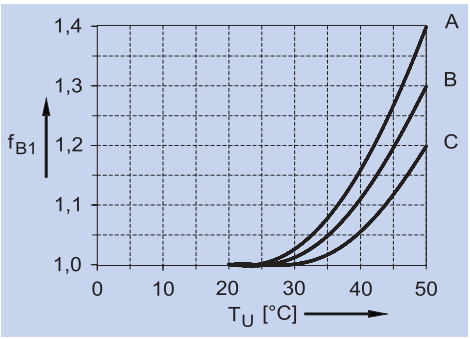


Diagramm 2: Operating factor f_{B1}

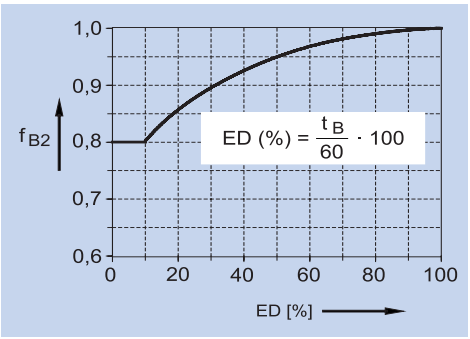


Diagramm 3: Operating factor f_{B2}

ED = Duration of switch-on
t_B = Load time in min/h

Energy-saving motors with the classification IE2 have higher breakdown torques and performance reserves. If required by the application and not limited electrically, they may also provide a permanently impermissible power. This should be considered when selecting a gear unit.

NORD three-phase motors

Self-cooled motors

The IEC three-phase motors are self-cooled, 4-pole squirrel-cage motors in a three-phase version. They are suitable both for mains operation as well as for operation with frequency inverters and are available as IE1 and IE2 versions. As standard, the three-phase motors are equipped with IEC-B14 flanges.
If required, B5 flanges, single-phase motors, 2, 6 and 8-pole motors, phase-switched motors, integrated encoders, external fans, ATEX and CUS/UL- compliant motors as well as other versions are available. Please request our motor catalogue M7000.

Motors with efficiency class IE1 with powers of 0.75 kW and above may only be used in special cases in Europe. For continuous operation under standard conditions, motors with efficiency class IE2 must be used. All motors comply with the standards for the product and have the CE mark.

Motor relevant standard

IEC 60034-30 (DIN-EN 60034-30)	Efficiency classification	IEC 60 034-9 (DIN EN 60 034-9)	Noise level limits
IEC 60 034-1 (DIN EN 60 034-1)	General regulations	IEC 60 034-11 (DIN EN 60 034-11)	Integrated thermal protection
IEC 60 034-5 (DIN EN 60 034-5)	Protection classes	IEC 60 034-14 (DIN EN 60 034-14)	Mechanical vibrations
IEC 60 034-6 (DIN EN 60 034-6)	Cooling types	IEC 60 038 (DIN EN 60 038)	IEC standard voltages
IEC 60 034-8 (DIN EN 60 034-8)	Connection designations and direction of rotation		

Standard / IE1

- 1500 1/min
- 50 Hz
- 230/400 V / 400/690 V
- 4-pole

$-20°C \leq T_{amb} \leq +45°C$

Type		P_N	n_N	I_N	cos	η			M_N	M_A/M_N	M_K/M_N	I_A/I_N	Noise emission from self-cooled motors 50 Hz 1500/min		J	kg
		S1,S9		400 V	φ	1/2xP$_N$	3/4xP$_N$	4/4xP$_N$					L_{PA}	L_{WA}		*
		[kW]		[A]		[%]	[%]	[%]	[Nm]				[db(A)]		[kgm²]	[kg]
**63	S/4	0,12	1335	0,55	0,64	40,9	48,1	49,9**	0,86	2,7	2,7	2,9	40	52	0,00021	3,6
**63	L/4	0,18	1360	0,68	0,64	51,2	56,0	56,2**	1,26	2,5	2,6	3,3	40	52	0,00028	4,2
**71	S/4	0,25	1380	0,76	0,77	51,7	58,2	61,3**	1,73	2,2	2,1	3,3	45	57	0,00072	5,4
**71	L/4	0,37	1380	1,09	0,71	52,8	59,2	64,4**	2,56	2,0	2,4	3,6	45	57	0,00086	6,3
80	S/4	0,55	1375	1,52	0,73	74,5	75,9	75,1	3,82	1,9	2,0	3,3	47	59	0,00109	8,0
80	L/4	0,75	1375	2,1	0,74	74,7	76,3	75,5	5,21	2,0	2,1	3,5	47	59	0,00145	9,0
90	S/4	1,1	1395	2,81	0,74	75,7	77,9	77,6	7,53	2,3	2,6	4,4	49	61	0,00235	12,0
90	L/4	1,5	1395	3,55	0,78	78,7	79,1	77,5	10,3	2,3	2,6	4,8	49	61	0,00313	14,0
100	L/4	2,2	1440	5,22	0,74	79,5	81,2	80,8	14,6	2,3	3,0	5,1	51	64	0,0045	18,0
100	LA/4	3	1415	6,54	0,80	83,3	84,2	83,3	20,2	2,5	2,9	5,4	51	64	0,006	21,0
112	M/4	4	1445	8,3	0,80	86,4	86,4	85,1	26,4	2,3	2,8	5,3	54	66	0,011	30,0

* Version B5, without options ** not IE1

IE1

- 1500 1/min
- 50 Hz
- 230/400 V / 400/690 V
- 4-pole

Type		P_N	n_N	M_N	I_N		cos	η			η[1)]	M_A/M_N	M_K/M_N	I_A/I_N	J	kg
		S1			230/400 V	400/690 V	φ	1/2xP$_N$	3/4xP$_N$	4/4xP$_N$	4/4xP$_N$					*
		[kW]	[1/min]	[Nm]	[A]	[A]		[%]	[%]	[%]	[%]				[kgm²]	[kg]
80	SH/4	0,55	1420	3,73	2,44/1,41	1,41/0,81	0,70	77,7	80,7	80,8	80,4	3,1	3,2	5,1	0,0014	9,0
80	LH/4	0,75	1415	5,06	3,05/1,76	1,76/1,02	0,75	81,6	83,0	82,4	81,6	3,0	3,1	5,2	0,0019	10,2
90	SH/4	1,1	1435	7,32	4,19/2,42	2,42/1,4	0,80	80,9	82,0	81,8	81,4	3,1	3,5	6,1	0,0034	15,1
90	LH/4	1,5	1415	10,1	5,8/3,34	3,34/1,93	0,79	81,3	82,4	82,8	82,8	3,3	3,5	5,8	0,0039	16,8
100	LH/4	2,2	1445	14,5	8,1/4,65	4,65/2,68	0,79	85,2	86,7	86,6	85,3	3,7	4,3	7,3	0,0075	25,2
100	AH/4	3	1425	20,3	11,4/6,59	6,59/3,8	0,77	86,4	86,7	85,6	85,5	3,1	3,5	6,3	0,0075	25,2
112	MH/4	4	1440	26,6	13,9/8,02	8,02/4,63	0,83	87,4	87,6	86,7	86,6	3,1	3,6	7,5	0,014	35,5

NORD brake motors

Motors for the IEC three-phase motors are also available with a brake. The brake motors are indicated in the selection lists and the dimensioned drawings section with the symbol (!). NORD brake motors are NORD three-phase motors with integrated electro-magnetic spring-loaded brakes.

Release and application the brake

The brake is released by means of the DC electromagnet. In case of power interruptions the brake is applied automatically by means of pressure springs. The adjustment ring enables continuous reduction of the braking torque by up to 50%.

As standard, the DC voltage of the brake windings is 205V or 180V DC. Therefore the rectifier which is installed in the terminal box enables the brake to be connected to the three-phase Δ230V/Y400V AC or Δ400V/Y690V AC power supply

If required, different winding voltages or brake torques, higher protection classes, dust protection rings, stainless scraper plates, manual release levers and other options are available.
Please request our motor catalogue M7000.

Techn. data of brakes

Type	M_B [Nm]	P_{20} [W]	W_{max} [J]	a [mm]
63S/4 BRE 5 63L/4 BRE 5	5	22	1500	0,2
71S/4 BRE 5 71L/4 BRE 5	5	22	1500	0,2
80S/4 BRE 5 80L/4 BRE10	5 10	22 28	1500 3000	0,2 0,2
90S/4 BRE10 90L/4 BRE20	10 20	28 34	3000 6000	0,2 0,3
100L/4 BRE20 100LA/4 BRE40	20 40	34 42	6000 12500	0,3 0,3
112M/4 BRE40	40	42	12500	0,3

Protection class: IP 55
Coil voltage: 205V DC suitable for Δ230V/Y400V AC
180V DC suitable for Δ400V/Y690V AC

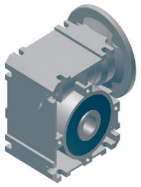
MB: Braking torque
P20: Coil power
Wmax: Max. friction per application at n1 = approx. 1400 min-1
a: Nominal air gap

NORD UNIVERSAL
Worm gear units

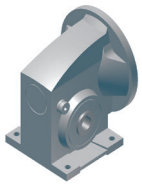
NORD UNIVERSAL Worm gear units

NORD UNIVERSAL worm gear units are available in three different housing versions:

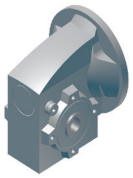
- Die-cast aluminium housing UNIVERSAL foot-mounted and flange-mounted, Type SI
- Cast aluminium housing, foot-mounted version, Type SMI X
- Cast aluminium housing, B14-flange-mounted version, Type SMI Z



SI - version



SMI - version X



SMI - version Z

Unicase concept

The one-piece housings are characterised by high rigidity and precision machining. The housings are a consistent continuation of the NORD “Unicase” concept. All bearing and seal seats are integrated into the housing and therefore ensure great reliability.

Long service life

Machining of the bearing seats and mounting surfaces is carried out in a single step. This ensures precise positioning of the intermeshing, bearings and radial shaft sealing rings and results in both a long service life of all components and quiet running

Oversize output bearings

The innovative assembly principle requires oversize output bearings, so that the gear units can accept high additional external loads. This design results in a very long bearing life. The use of larger output bearings also enable the use of large hollow shaft diameters or free shaft ends with an increased diameter.

Housing from a high-strength aluminium

All housings are produced from a high-strength aluminium alloy. NORD UNIVERSAL worm gear units therefore provide a better power-to-weight ratio than comparable cast iron worm gear units of a similar power. As well as this, the natural corrosion protection of the aluminium alloy also provides an advantage, as no additional painting is necessary for protected installations (indoor installation).

Maintenance free

As standard, NORD UNIVERSAL worm gear units are provided with life-long lubrication and do not require any maintenance.

Standard version Hollow shaft gear

The standard version of the NORD UNIVERSAL worm gear unit is designed as a hollow shaft version. The hollow shaft is equipped with a parallel key grove in accordance with DIN 6885 Sheet 1. The following table shows the standard diameter as well as the maximum possible hollow shaft diameter for each size.

Hollow shaft with key groove to DIN 6885 Blatt 1					
Size	31	40	50	63	75
Standard	14mm	18mm	25mm	25mm	35mm
max.	17mm	25mm	30mm	42mm	50mm

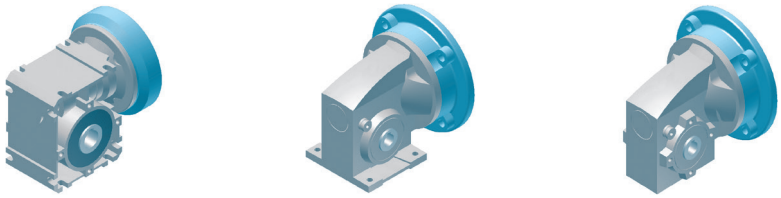
simple attachment of

- IEC-, NEMA-Motors
- components

The input sides of NORD UNIVERSAL worm gear units are equipped with coupling splines, which enables the simple attachment of IEC or NEMA motors, or the attachment of input components by means of a coupling sleeve. The coupling sleeve is always supplied with the relevant components.

IEC motor mounting, NEMA motor mounting

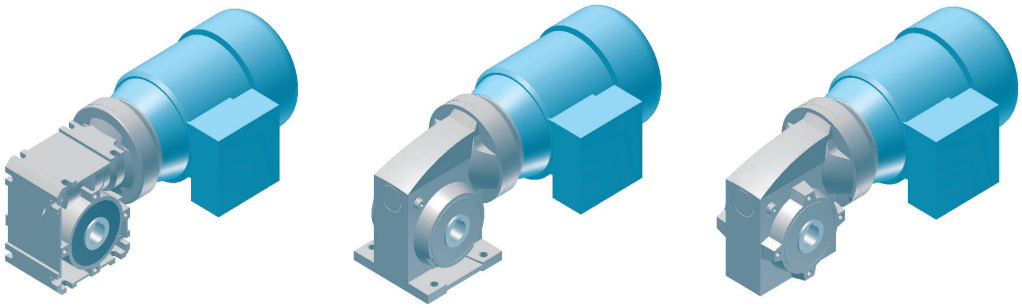
Short, compact motor mounts enable the attachment of standard IEC motor sizes from 56 to 112 or NEMA standard motors from 48C to 184TC (for details please refer to the USA Motor Catalogue www.2.nord.com - Heading DOCUMENTATION).



IEC three-phase motor / brake motor

In combination with the IEC standard motor mounting, NORD 3-phase squirrel-cage asynchronous motors can be mounted on NORD UNIVERSAL worm gear units.
The motors are also available as energy-efficient motors compliant with IE2, or as brake motors.

For further details, please refer to the NORD motor catalogue M7000.



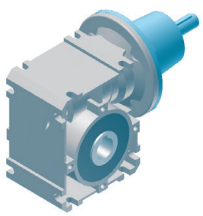
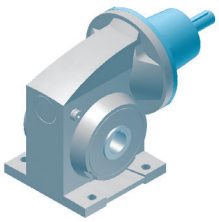
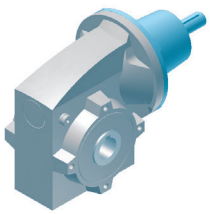
Type W free input shaft

The Type W free input shaft was developed to attach couplings, belt pulleys or chain wheels to the input of NORD UNIVERSAL worm gear units.

The Type W free drive shaft is available for sizes 40, 50, 63 and 75. The components includes the pre-assembled, lubricated-for-life unit, the coupling sleeve and all the necessary fastening elements.
The Type W free input shaft can be combined with NORD UNIVERSAL worm gear units as well as the H10 helical gear input. It can be used in all installation positions.

The free shaft end is produced in the tolerance k6. The dimensions are shown in the following table:

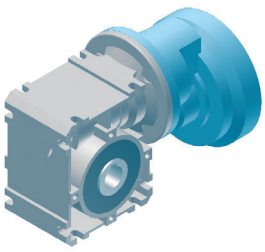
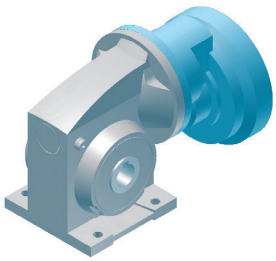
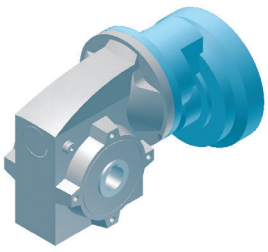
Free shaft end - Typ W Parallel key according to DIN 6885, Sheet 1					
Size	31	40	50	63	75
Shaft end	-	Ø16x40			Ø24x50

Helical input stage H10

With the H10 helical gear input, the NORD UNIVERSAL worm gear unit is converted into a 2-stage helical worm gear unit. The speed ratio of the H10 helical gear is the same for all sizes, namely $i_{vor} = 10$.

The H10 helical gear is a lubricated-for-life unit, which is available for all NORD UNIVERSAL worm gear units.

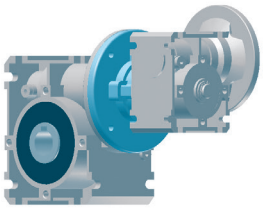




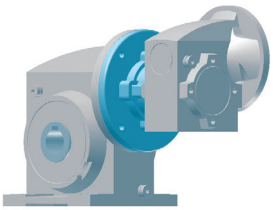
Double worm gear adapter

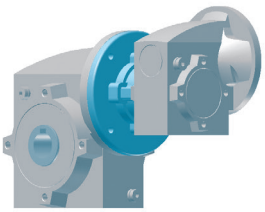
The double worm gear adapter enables the connection of two NORD UNIVERSAL worm gear units to form a double worm gear unit.

The double worm gear units can be installed as both angular gear units or as parallel axis units. The SI series or the SMI series can be used as input gear units.

The double gear unit adapter is available for the size combinations 40/31, 50/31, 63/31 and 75/40.





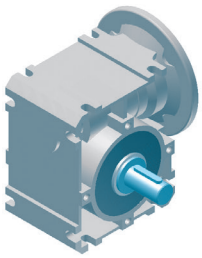


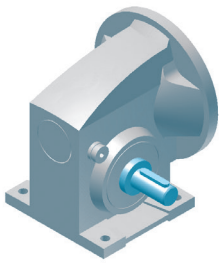
Plug-in shaft V

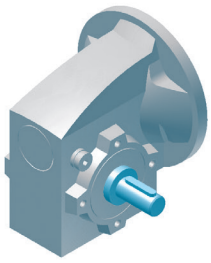
The plug-in shaft V (singe side plug-in shaft) are plugged in to the standard hollow shaft of the NORD UNIVERSAL worm gear unit and axially secured.

The standard journal dimensions for the individual sizes are shown in the following table. The tolerance of the free shaft journal is h6 for all units.

Free shaft end of the plug-in shaft with parallel key DIN 6885 Sheet 1					
Size	31	40	50	63	75
Shaft journal	ø14 x 30	Ø18 x 40	ø25 x 50	ø25 x 50	ø35 x 70

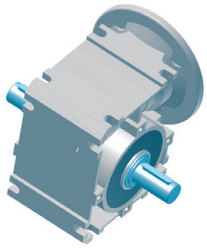
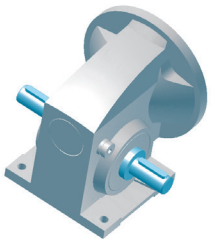
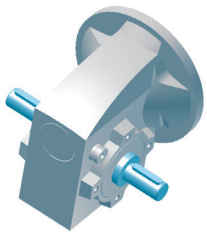






Plug-in shaft L

The plug-in shaft L converts the NORD UNIVERSAL worm gear unit with standard hollow shaft into a gear unit with solid shafts on both sides.
The dimensions of the free shaft ends correspond to those of version V.

Plug-in shaft for output flange B5 VF

The plug-in shaft VF is an extended form of the plug-in shaft V, which matches the B5 output flange.

The plug-in shaft VF is not available for NORD UNIVERSAL foot-mounted worm gear units (Type series SM X) as in this case, a flange cannot be fitted.

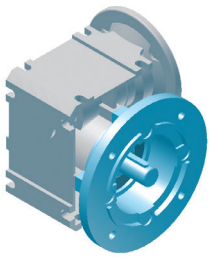
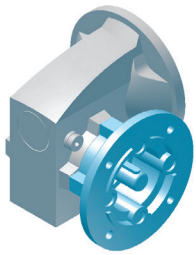
Attention

For the SMI series, instead of

- Plug-in shaft V
- Plug-in shaft L and
- Plug-in shaft for output flange B5 VF

an output shaft is supplied as standard, as these drive units are assembled to order.

Plug-in shaft are available by special request!

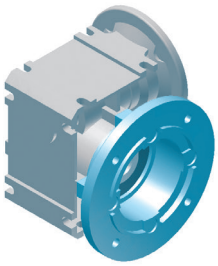



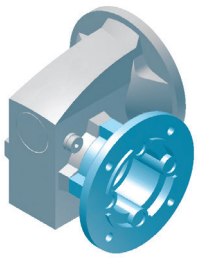
B5 flange

The B5 flange provides a simple possibility for mounting the NORD UNIVERSAL worm gear unit onto a large diameter flange with through holes.

The flange is centred on the NORD UNIVERSAL worm gear units in the radial shaft sealing ring holes (⇨🕮 A20).

B5 output flange are available in various flange diameters and optionally with inner or outer centring.



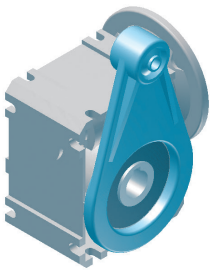


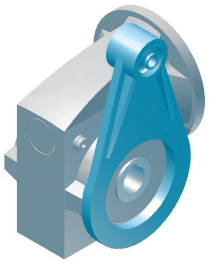
Torque arm

The torque arm is a compact and simple method for absorbing reaction torques with shaft-mounted gear units.

The torque arm is mounted on the B14 threaded holes of the NORD UNIVERSAL worm gear unit and can be installed with rotation steps of 45°.

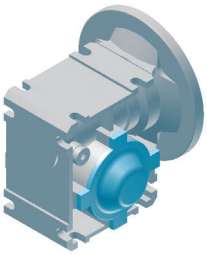
The torque arm includes a pressed-in rubber element on the fastening holes to absorb shock loads.

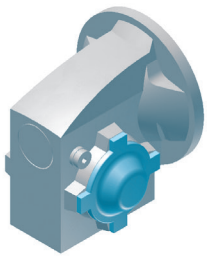




Cover

The cover covers the rotating output shaft and the shaft sealing rings.
The scope of delivery consists of the cover and the necessary screws.





Vent (not illustrated)

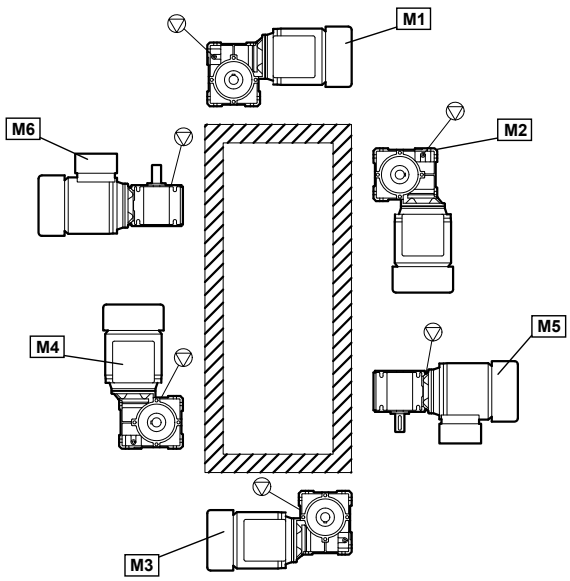
Optionally, the worm gear units can be supplied with a vent for most installation positions. The installation position must be stated for vented gear units ⇨🕮 A21.

The vent can be used for worm gear units in the following installation positions with input speeds n_1 = 1800min^{-1}.

Vent for worm gear units

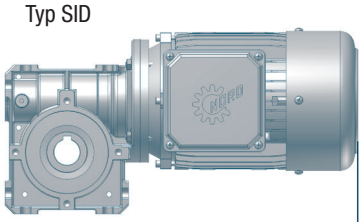
Size	Installation positions					
	M1	M2	M3	M4	M5	M6
31		•	•	•		•
40		•	•	•		•
50	•	•	•	•		•
63	•	•	•	•	•	•
75	•	•	•	•		•

The venting position in response to the mounting position

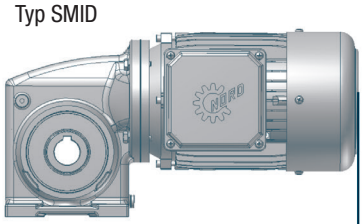


Direct motor mounting / IEC motor mounting

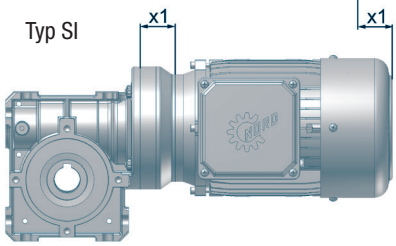
Typ SID



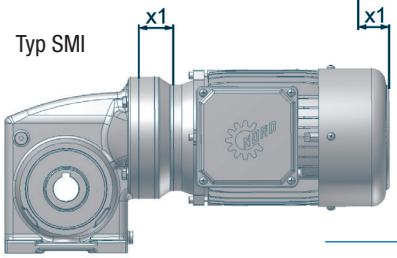
Typ SMID



Typ SI



Typ SMI



Direct motor mounting

Standard IEC motor mounting

considerably reduces the total length

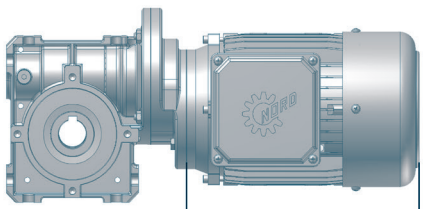
Reduction of total length by x1 [mm]				
Size	Motor sizes			
	63S/L	71S/L	80S/L	90S/L
31	29,5	29,5		
40	32,5	32,5	32,5	
50		32,5	32,5	45,5
63			32,5	32,5

Direct mounting of the motor considerably reduces the total length of NORD UNIVERSAL worm gear units. This applies to both the SI and the SMI series. The table shows the length reduction for the selection of direct motor mounting in comparison with an IEC standard motor mounting for the various sizes of gear units with mounting of various motor sizes.

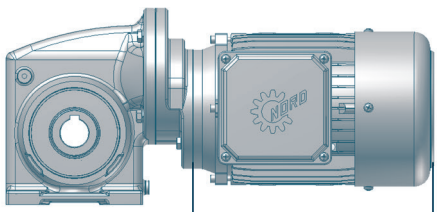
Direct motor mounting does not utilise a coupling. The worm is attached directly to a special motor shaft. For this reason, directly mounted motors can only be supplied as fully assembled worm gear motor units.

2-stage helical worm gear unit

Typ 2SID__

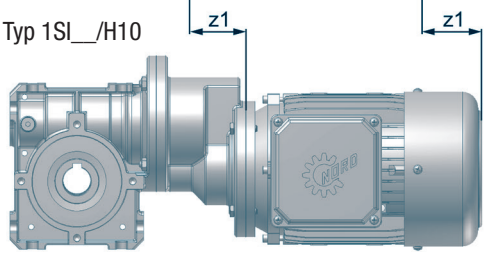


Typ 2SMID__

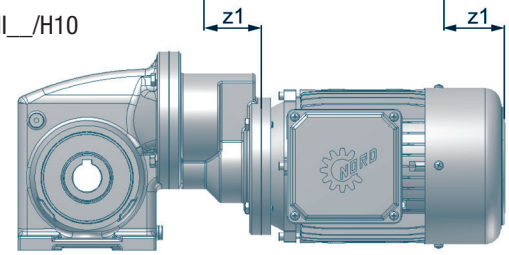


Direct motor mounting

Typ 1SI__/H10



Typ 1SMI__/H10



rd IEC motor mounting

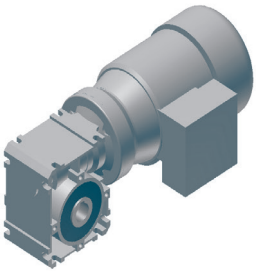
The total length of a helical worm gear unit from the NORD UNIVERSAL worm gear unit series has a shorter total length of z_1 = 48mm with direct mounting of the motor.
In the case of direct motor mounting, the input speed ratio i_{vor} is i_{vor} = 5.

Assembly combinations

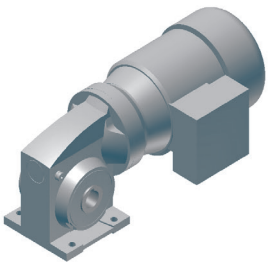
Combinations with the basic versions of NORD UNIVERSAL

- worm gear motors using the example of size 50

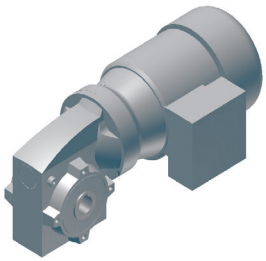
Single-stage worm gear motor with IEC motor



1SI50-IEC71-71S/4

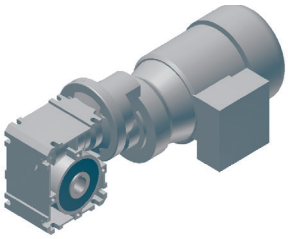


1SMI50X-IEC71-71S/4

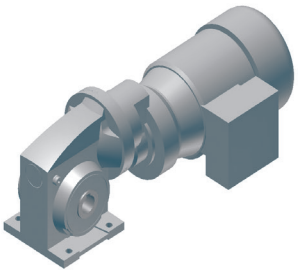


1SMI50Z-IEC71-71S/4

Helical worm gear motor with IEC motor



1SI50/H10-IEC71-71S/4



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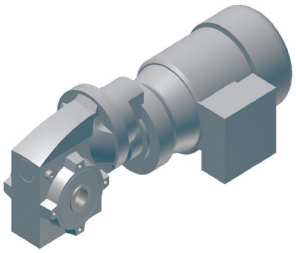
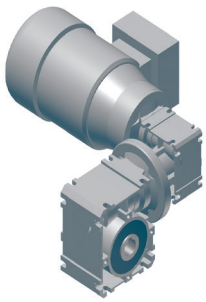


1SMI50/H10Z-IEC71-71S/4

Double worm gear motor with IEC motor



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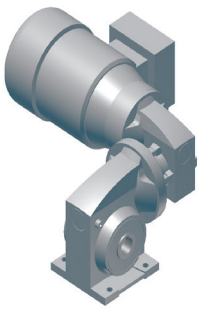

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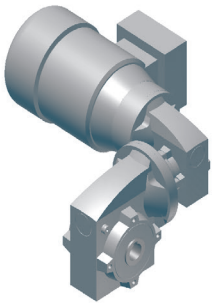
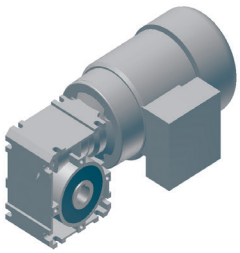
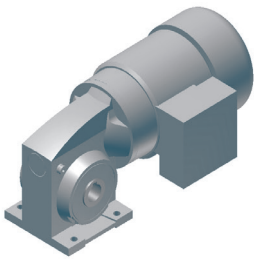


1SMI50/31Z-IEC71-71S/4

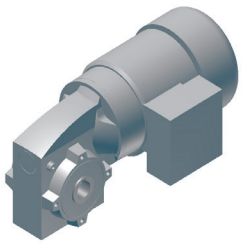
Single-stage worm gear motor with directly mounted motor



1SID50-71S/4

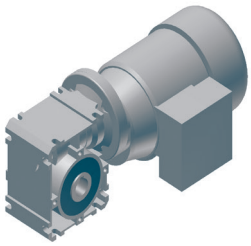


1SMID50X-71S/4

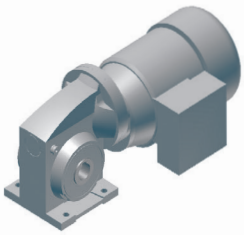


1SMID50Z-71S/4

Helical worm gear motor with directly mounted motor



2SID50-71S/4



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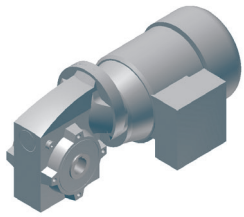
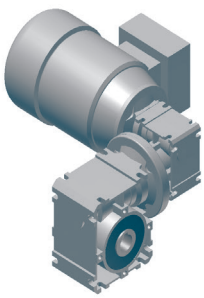


2SMID50Z-71S/4

Double worm gear motor with directly mounted motor



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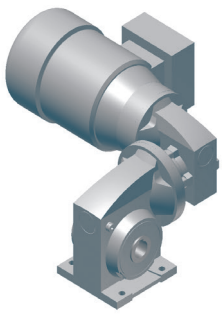

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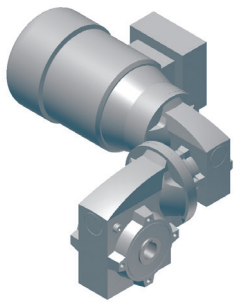
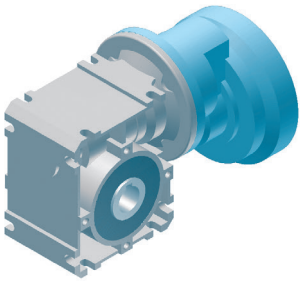


2SMID50/31Z-71S/4

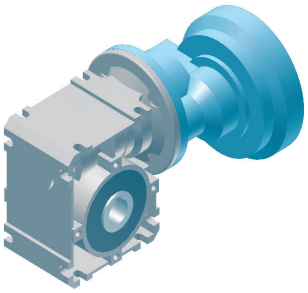
With our NORDCAD program you can depict all the possible variants as 3D models as well as 2D dimensioned drawings.
The NORDCAD program can be found on the NORD homepage under
www.nord.com - Heading DOCUMENTATION / Software.

Versions

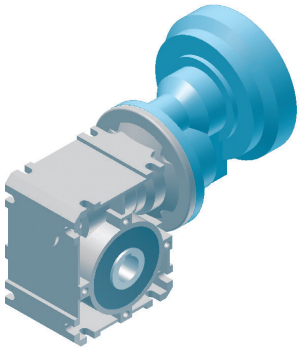
H10 helical gear input stage versions



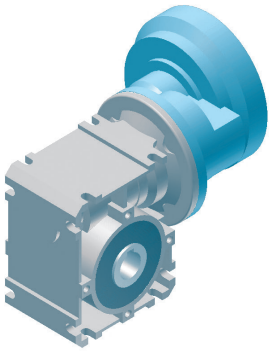
Version T1



Version T2

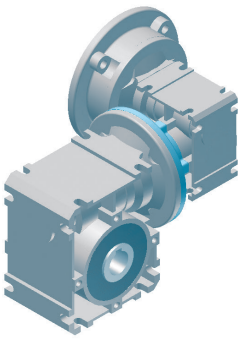


Version T3

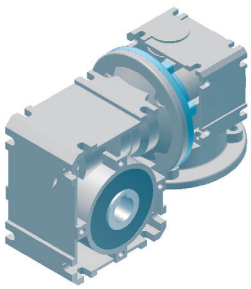


Version T4

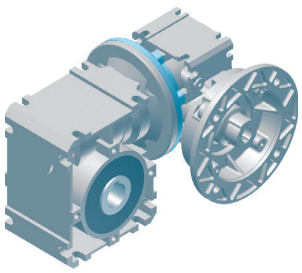
Double worm attachment versions



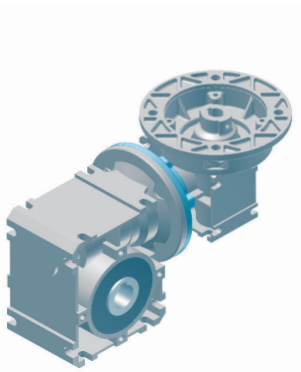
Version U1



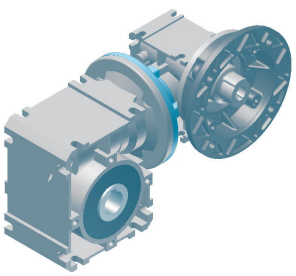
Version U2



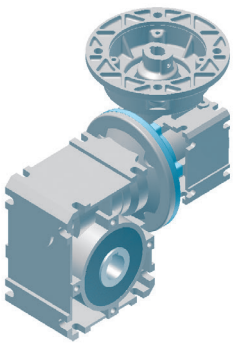
Version U3



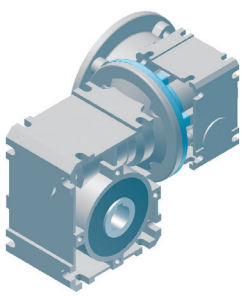
Version U4



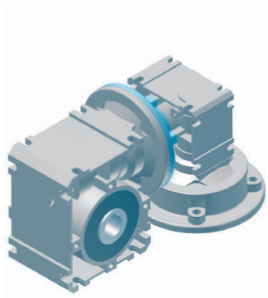
Version U5



Version U6

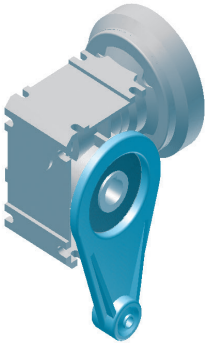


Version U7

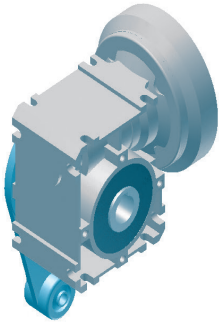


Version U8

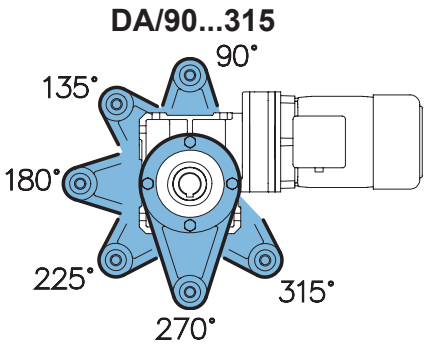
Torque support versions



Version DA/270

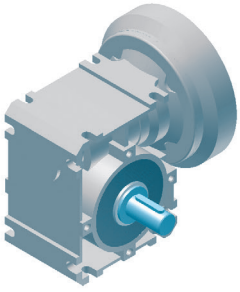


Version DB/270

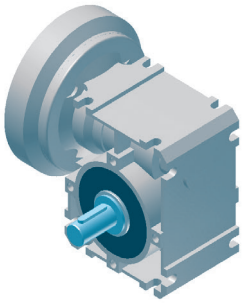


The torque support can be mounted in 45° steps to the angles 90 - 315 both on output side A and output side B.

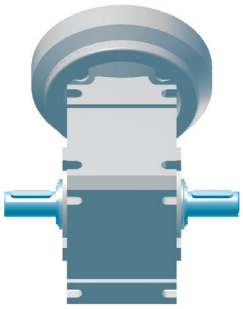
Plug-in shaft versions



Version VA

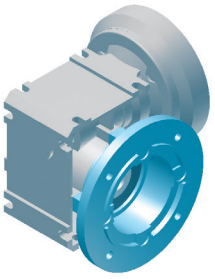


Version VB

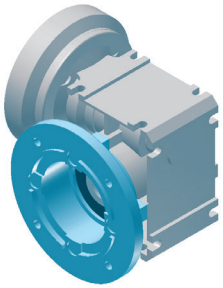


Version L

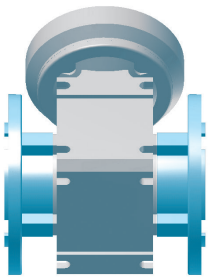
B5 output shaft versions



Version FA



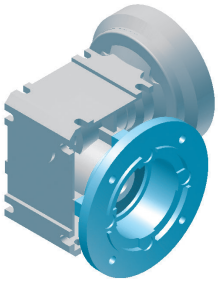
Version FB



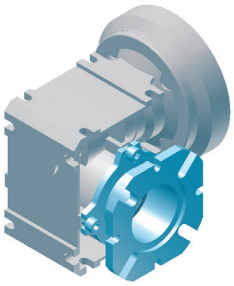
Version FF

Versions

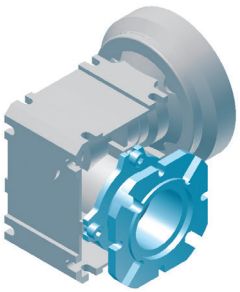
Type of flange



FA I round flange
with external centring

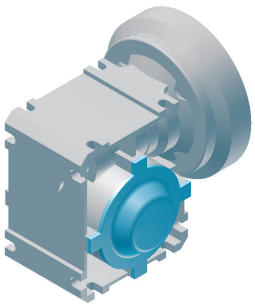


FA II square flange
with internal centring

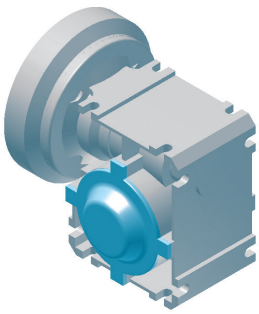


FA III square flange
with external centring

Cover versions



Version HA



Version HB

Order check list

UNIVERSAL SI worm gear motors

	Gear units	Size	Gear unit options		Input		Motor	Motor options
SK	1SI			-		-		

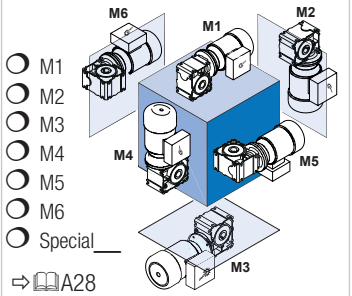
UNIVERSAL Version

Size
- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options
- ❒ V - single side plug-in shaft
  - ❍ VA ❍ VB
- ❒ L - plug-in shaft, both sides
- ❒ VF - plug-in shaft, output flange B5
  - ❍ VFA ❍ VFB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

See catalogue M7000

Mounting position for venting option



- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW	100LH/4 - 2.2kW	80S/4 BRE 5 - 0.55kW	100LH/4 BRE20 - 2.2kW
80L/4 - 0.75kW	100AH/4 - 3kW	80L/4 BRE10 - 0.75kW	100AH/4 BRE40 - 3kW
90S/4 - 1.1kW	112MH/4 - 4kW	90S/4 BRE10 - 1.1kW	112MH/4 BRE40 - 4kW
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	
100L/4 - 2.2kW		100L/4 BRE20 - 2.2kW	
100A/4 - 3kW		100A/4 BRE40 - 3kW	
112M/4 - 4kW		112M/4 BRE40 - 4kW	

NEMA - see USA catalogue
www.2.nord.com
- Heading DOCUMENTATION

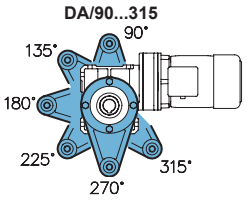
NEMA Adapter	IEC
N48C	IEC 63
N56C	IEC 71
N140TC	IEC 80
N180TC	IEC 90
	IEC 100
	IEC 112

Product specifications

Worms	Helical worm SI__/H10		Double worm SID__/31 or SI 75/40	
Speed ratios	Speed ratios	Version	Speed ratios	Version
❍ 5	❍ 50	❍ T1	❍ 150	❍ U1
❍ 7,5	❍ 75	❍ T2	❍ 225	❍ U2
❍ 10	❍ 100	❍ T3	❍ 300	❍ U3
❍ 12,5	❍ 125	❍ T4	❍ 375	❍ U4
❍ 15	❍ 150		❍ 450	❍ U5
❍ 20	❍ 200		❍ 600	❍ U6
❍ 25	❍ 250		❍ 750	❍ U7
❍ 30	❍ 300		❍ 900	❍ U8
❍ 40	❍ 400		❍ 1200	
❍ 50	❍ 500		❍ 1500	
❍ 60	❍ 600		❍ 1800	
❍ 80	❍ 800		❍ 2400	
❍ 100	❍ 1000		❍ 3000	

Painting	Direction of torque support (if selected)			
❍ Unpainted (standard)	❍ 90°	❍ 225°		
❍ Paint type _____	❍ 135°	❍ 270°		
Colour _____	❍ 180°	❍ 315°		

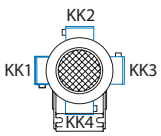
Output flange B5 versions (if selected)
- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



Details of geared motor only

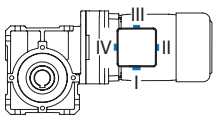
Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position



- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4

Cable gland



- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV
- * Brake motor options

Order check list

UNIVERSAL SI worm gear units

	Gear units	Size	Gear unit options		Input
SK	1SI			-	

UNIVERSAL Version

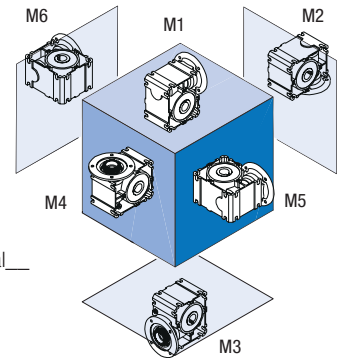
Size

- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options

- ❒ V - single side plug-in shaft
  - ❍ VA ❍ VB
- ❒ L - plug-in shaft, both sides
- ❒ VF - plug-in shaft, output flange B5
  - ❍ VFA ❍ VFB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

Mounting position for venting option



- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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Input options

- ❍ W
- ❍ IEC56
  - ❍ B14 C105 ❍ B5 A120
- ❍ IEC63
  - ❍ B14 C90 ❍ B14 C120 ❍ B5 A140
- ❍ IEC71
  - ❍ B14 C105 ❍ B14 C140 ❍ B5 A160
- ❍ IEC80
  - ❍ B14 C120 ❍ B14 C160 ❍ B5 A200
- ❍ IEC90
  - ❍ B14 C140 ❍ B14 C160 ❍ B5 A200
- ❍ IEC100
  - ❍ B14 C160 ❍ B14 C200 ❍ B5 A250
- ❍ IEC112
  - ❍ B14 C160 ❍ B14 C200 ❍ B5 A250

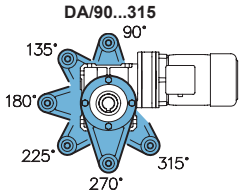
Product specifications

Worms		Helical worm SI__/H10			Double worm SID__/31 or SI 75/40	
Speed ratios		Speed ratios		Version	Speed ratios	Version
❍	5	❍	50	❍ T1	❍ 150	❍ U1
❍	7.5	❍	75	❍ T2	❍ 225	❍ U2
❍	10	❍	100	❍ T3	❍ 300	❍ U3
❍	12.5	❍	125	❍ T4	❍ 375	❍ U4
❍	15	❍	150		❍ 450	❍ U5
❍	20	❍	200		❍ 600	❍ U6
❍	25	❍	250		❍ 750	❍ U7
❍	30	❍	300		❍ 900	❍ U8
❍	40	❍	400		❍ 1200	
❍	50	❍	500		❍ 1500	
❍	60	❍	600		❍ 1800	
❍	80	❍	800		❍ 2400	
❍	100	❍	1000		❍ 3000	

Painting		Direction of torque support (if selected)			
❍	Unpainted (standard)	❍	90°	❍	225°
❍	Paint type _____	❍	135°	❍	270°
❍	Colour _____	❍	180°	❍	315°

Output flange B5 versions (if selected)

- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



Order check list

UNIVERSAL SMI worm gear motors

	Gear units	Size	Gear unit options		Input		Motor	Motor options
SK	1SMI		X	-		-		

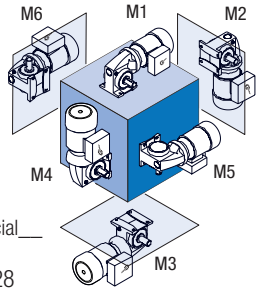
UNIVERSAL Version

Size
- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ Vent
- ❒ Pressure vent

See catalogue M7000

Mounting position for venting option



- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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NEMA - see USA catalogue
www.2.nord.com
- Heading DOCUMENTATION

NEMA Adapter	IEC
N48C	IEC 63
N56C	IEC 71
N140TC	IEC 80
N180TC	IEC 90
	IEC 100
	IEC 112

Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW	100LH/4 - 2.2kW	80S/4 BRE 5 - 0.55kW	100LH/4 BRE20 - 2.2kW
80L/4 - 0.75kW	100AH/4 - 3kW	80L/4 BRE10 - 0.75kW	100AH/4 BRE40 - 3kW
90S/4 - 1.1kW	112MH/4 - 4kW	90S/4 BRE10 - 1.1kW	112MH/4 BRE40 - 4kW
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	
100L/4 - 2.2kW		100L/4 BRE20 - 2.2kW	
100A/4 - 3kW		100A/4 BRE40 - 3kW	
112M/4 - 4kW		112M/4 BRE40 - 4kW	

Product specifications

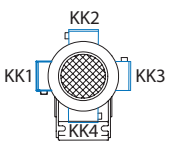
Worms	Helical worm SMI__/H10		Double worm gear SMI_/31 or SMI 75/40	
Speed ratios	Speed ratios	Version	Speed ratios	Version
❍ 5	❍ 50	❍ T1	❍ 150	❍ U1
❍ 7.5	❍ 75	❍ T2	❍ 225	❍ U2
❍ 10	❍ 100	❍ T3	❍ 300	❍ U3
❍ 12.5	❍ 125	❍ T4	❍ 375	❍ U4
❍ 15	❍ 150		❍ 450	❍ U5
❍ 20	❍ 200		❍ 600	❍ U6
❍ 25	❍ 250		❍ 750	❍ U7
❍ 30	❍ 300		❍ 900	❍ U8
❍ 40	❍ 400		❍ 1200	
❍ 50	❍ 500		❍ 1500	
❍ 60	❍ 600		❍ 1800	
❍ 80	❍ 800		❍ 2400	
❍ 100	❍ 1000		❍ 3000	

Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Details of geared motor only

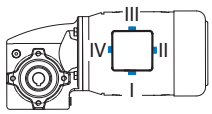
Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position



- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4

Cable gland



- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV

* Brake motor options

Order check list

UNIVERSAL SMI worm gear motors

	Gear units	Size	Gear unit options		Input		Motor	Motor options
SK	1SMI		Z	-		-		

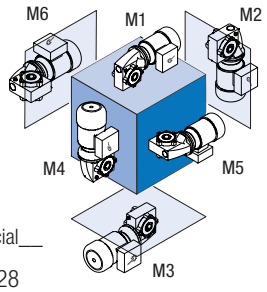
UNIVERSAL Version

Size
- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ VF - solid shaft, output flange B5
  - ❍ VFA ❍ VFB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

See catalogue M7000

Mounting position for venting option



- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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NEMA - see USA catalogue
www.2.nord.com
- Heading DOCUMENTATION

NEMA Adapter	IEC
N48C	IEC 63
N56C	IEC 71
N140TC	IEC 80
N180TC	IEC 90
	IEC 100
	IEC 112

Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW	100LH/4 - 2.2kW	80S/4 BRE 5 - 0.55kW	100LH/4 BRE20 - 2.2kW
80L/4 - 0.75kW	100AH/4 - 3kW	80L/4 BRE10 - 0.75kW	100AH/4 BRE40 - 3kW
90S/4 - 1.1kW	112MH/4 - 4kW	90S/4 BRE10 - 1.1kW	112MH/4 BRE40 - 4kW
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	
100L/4 - 2.2kW		100L/4 BRE20 - 2.2kW	
100A/4 - 3kW		100A/4 BRE40 - 3kW	
112M/4 - 4kW		112M/4 BRE40 - 4kW	

Product specifications

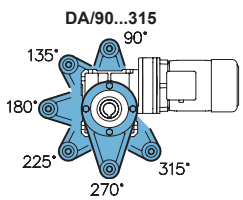
Worms		Helical worm SMI__/H10		Double worm gear SMI_/31 or SMI 75/40	
Speed ratios		Speed ratios	Version	Speed ratios	Version
❍	5	❍ 50	❍ T1	❍ 150	❍ U1
❍	7,5	❍ 75	❍ T2	❍ 225	❍ U2
❍	10	❍ 100	❍ T3	❍ 300	❍ U3
❍	12,5	❍ 125	❍ T4	❍ 375	❍ U4
❍	15	❍ 150		❍ 450	❍ U5
❍	20	❍ 200		❍ 600	❍ U6
❍	25	❍ 250		❍ 750	❍ U7
❍	30	❍ 300		❍ 900	❍ U8
❍	40	❍ 400		❍ 1200	
❍	50	❍ 500		❍ 1500	
❍	60	❍ 600		❍ 1800	
❍	80	❍ 800		❍ 2400	
❍	100	❍ 1000		❍ 3000	

Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Direction of torque support (if selected)

❍	90°	❍	225°
❍	135°	❍	270°
❍	180°	❍	315°

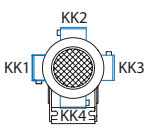
Output flange B5 versions (if selected)
- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



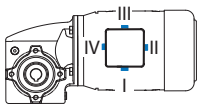
Details of geared motor only

Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position
- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4



Cable gland
- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV
- * Brake motor options



UNIVERSAL SMI worm gear unit

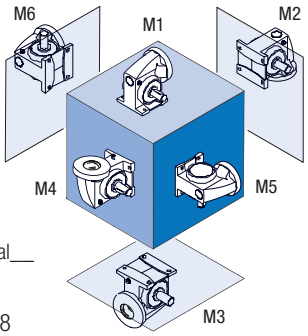
	Gear units	Size	Gear unit options		Input
SK	1SMI		X	-	

Gear units
UNIVERSAL Version

Size
- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ Vent
- ❒ Pressure vent

Mounting position for venting option



- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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Input options

❍ W			
❍ IEC56			
❍	❍ B14 C105	❍ B5 A120	
❍ IEC63			
❍	❍ B14 C90	❍ B14 C120	❍ B5 A140
❍ IEC71			
❍	❍ B14 C105	❍ B14 C140	❍ B5 A160
❍ IEC80			
❍	❍ B14 C120	❍ B14 C160	❍ B5 A200
❍ IEC90			
❍	❍ B14 C140	❍ B14 C160	❍ B5 A200
❍ IEC100			
❍	❍ B14 C160	❍ B14 C200	❍ B5 A250
❍ IEC112			
❍	❍ B14 C160	❍ B14 C200	❍ B5 A250

Product specifications

Worms	Helical worm SMI__/H10		Double worm SMI_/31 or SMI 75/40	
Speed ratios	Speed ratios	Version	Speed ratios	Version
❍ 5	❍ 50	❍ T1	❍ 150	❍ U1
❍ 7,5	❍ 75	❍ T2	❍ 225	❍ U2
❍ 10	❍ 100	❍ T3	❍ 300	❍ U3
❍ 12,5	❍ 125	❍ T4	❍ 375	❍ U4
❍ 15	❍ 150		❍ 450	❍ U5
❍ 20	❍ 200		❍ 600	❍ U6
❍ 25	❍ 250		❍ 750	❍ U7
❍ 30	❍ 300		❍ 900	❍ U8
❍ 40	❍ 400		❍ 1200	
❍ 50	❍ 500		❍ 1500	
❍ 60	❍ 600		❍ 1800	
❍ 80	❍ 800		❍ 2400	
❍ 100	❍ 1000		❍ 3000	

Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Order check list

UNIVERSAL SMI worm gear unit

	Gear units	Size	Gear unit options		Input
SK	1SMI		Z	-	

UNIVERSAL Version

Size

- ❍ 31
- ❍ 40
- ❍ 40/H10
- ❍ 40/31
- ❍ 50
- ❍ 50/H10
- ❍ 50/31
- ❍ 63
- ❍ 63/H10
- ❍ 63/31
- ❍ 75
- ❍ 75/H10
- ❍ 75/40

Gear unit options

- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ VF - solid shaft, output flange B5
  - ❍ VFA ❍ VFB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

Mounting position for venting option

- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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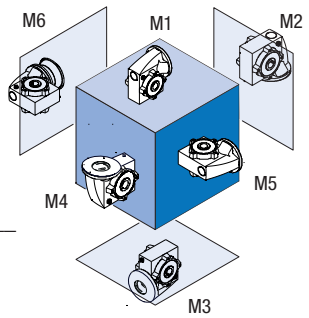


Input options

- ❍ W
- ❍ IEC56
  - ❍ B14 C105 ❍ B5 A120
- ❍ IEC63
  - ❍ B14 C90 ❍ B14 C120 ❍ B5 A140
- ❍ IEC71
  - ❍ B14 C105 ❍ B14 C140 ❍ B5 A160
- ❍ IEC80
  - ❍ B14 C120 ❍ B14 C160 ❍ B5 A200
- ❍ IEC90
  - ❍ B14 C140 ❍ B14 C160 ❍ B5 A200
- ❍ IEC100
  - ❍ B14 C160 ❍ B14 C200 ❍ B5 A250
- ❍ IEC112
  - ❍ B14 C160 ❍ B14 C200 ❍ B5 A250

Product specifications

Worms

Speed ratios
❍ 5
❍ 7,5
❍ 10
❍ 12,5
❍ 15
❍ 20
❍ 25
❍ 30
❍ 40
❍ 50
❍ 60
❍ 80
❍ 100

Helical worm SMI__/H10

Speed ratios	Version
❍ 50	❍ T1
❍ 75	❍ T2
❍ 100	❍ T3
❍ 125	❍ T4
❍ 150	
❍ 200	
❍ 250	
❍ 300	
❍ 400	
❍ 500	
❍ 600	
❍ 800	
❍ 1000	

Double worm SMI_/31 or SMI 75/40

Speed ratios	Version
❍ 150	❍ U1
❍ 225	❍ U2
❍ 300	❍ U3
❍ 375	❍ U4
❍ 450	❍ U5
❍ 600	❍ U6
❍ 750	❍ U7
❍ 900	❍ U8
❍ 1200	
❍ 1500	
❍ 1800	
❍ 2400	
❍ 3000	

Painting

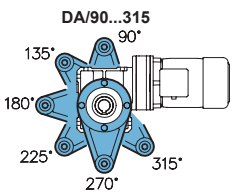
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Direction of torque support (if selected)

❍ 90°	❍ 225°
❍ 135°	❍ 270°
❍ 180°	❍ 315°

Output flange B5 versions (if selected)

- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



UNIVERSAL SID worm gear motor with direct motor mounting

	Nr. of stages	Gear units	Size	Gear unit options		Motor	Motor options
SK		SID			-		

Number of stages
- ❍ 1
- ❍ 2

Size
- ❍ 31
- ❍ 40
- ❍ 40/31
- ❍ 50
- ❍ 50/31
- ❍ 63
- ❍ 63/31
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ VF - solid shaft, output flange B5
  - ❍ VA ❍ VB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

See catalogue M7000

Mounting position for venting option

- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special___

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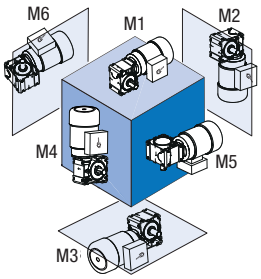


Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW		80S/4 BRE 5 - 0.55kW	
80L/4 - 0.75kW		80L/4 BRE10 - 0.75kW	
90S/4 - 1.1kW		90S/4 BRE10 - 1.1kW	
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	

Product specifications

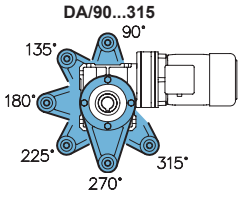
Worms Single-stage	Helical worm 2-stage	Double worm SID__/31 or SID 75/40	
Speed ratios	Speed ratios	Speed ratios	Version
❍ 5	❍ 25	❍ 150	❍ U1
❍ 7,5	❍ 37,5	❍ 225	❍ U2
❍ 10	❍ 50	❍ 300	❍ U3
❍ 12,5	❍ 62,5	❍ 375	❍ U4
❍ 15	❍ 75	❍ 450	❍ U5
❍ 20	❍ 100	❍ 600	❍ U6
❍ 25	❍ 125	❍ 750	❍ U7
❍ 30	❍ 150	❍ 900	❍ U8
❍ 40	❍ 200	❍ 1200	
❍ 50	❍ 250	❍ 1500	
❍ 60	❍ 300	❍ 1800	
❍ 80	❍ 400	❍ 2400	
❍ 100	❍ 500	❍ 3000	

Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Direction of torque support (if selected)

❍	90°	❍	225°
❍	135°	❍	270°
❍	180°	❍	315°

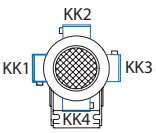
Output flange B5 versions (if selected)
- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



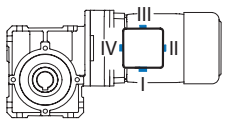
Details of geared motor only

Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position
- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4



Cable gland
- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV
- * Brake motor options



Order check list

UNIVERSAL SMID worm gear motor with direct motor mounting

	Nr. of stages	Gear units	Size	Gear unit options		Motor	Motor options
SK		SMID		X	-		

Number of stages
- ❍ 1
- ❍ 2

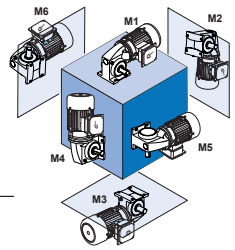
Size
- ❍ 31
- ❍ 40
- ❍ 40/31
- ❍ 50
- ❍ 50/31
- ❍ 63
- ❍ 63/31
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ Vent
- ❒ Pressure vent

See catalogue M7000

Mounting position for venting option

- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special_____



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Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW		80S/4 BRE 5 - 0.55kW	
80L/4 - 0.75kW		80L/4 BRE10 - 0.75kW	
90S/4 - 1.1kW		90S/4 BRE10 - 1.1kW	
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	

Product specifications

Worms Single-stage	Helical worm 2-stage	Double worm SMID__/31 or SMID 75/40	
Speed ratios	Speed ratios	Speed ratios	Version
❍ 5	❍ 25	❍ 150	❍ U1
❍ 7,5	❍ 37,5	❍ 225	❍ U2
❍ 10	❍ 50	❍ 300	❍ U3
❍ 12,5	❍ 62,5	❍ 375	❍ U4
❍ 15	❍ 75	❍ 450	❍ U5
❍ 20	❍ 100	❍ 600	❍ U6
❍ 25	❍ 125	❍ 750	❍ U7
❍ 30	❍ 150	❍ 900	❍ U8
❍ 40	❍ 200	❍ 1200	
❍ 50	❍ 250	❍ 1500	
❍ 60	❍ 300	❍ 1800	
❍ 80	❍ 400	❍ 2400	
❍ 100	❍ 500	❍ 3000	

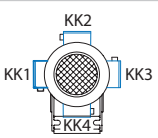
Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Details of geared motor only

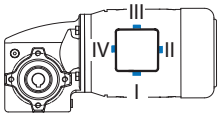
Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position

- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4



Cable gland
- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV



* Brake motor options

Order check list

UNIVERSAL SMID worm gear motor with direct motor mounting

	Nr. of stages	Gear units	Size	Gear unit options		Motor	Motor options
SK		SMID		Z	-		

Number of stages
- ❍ 1
- ❍ 2

Size
- ❍ 31
- ❍ 40
- ❍ 40/31
- ❍ 50
- ❍ 50/31
- ❍ 63
- ❍ 63/31
- ❍ 75/40

Gear unit options
- ❒ V - single side solid shaft
  - ❍ VA ❍ VB
- ❒ L - solid shaft, both sides
- ❒ VF - solid shaft, output flange B5
  - ❍ VA ❍ VB
- ❒ F - output flange B5
  - ❍ FA ❍ FB ❍ FF
- ❒ D - Torque support
  - ❍ DA ❍ DB
- ❒ H - cover
  - ❍ HA ❍ HB
- ❒ Vent
- ❒ Pressure vent

Motor

See catalogue M7000

Mounting position for venting option

- ❍ M1
- ❍ M2
- ❍ M3
- ❍ M4
- ❍ M5
- ❍ M6
- ❍ Special_____

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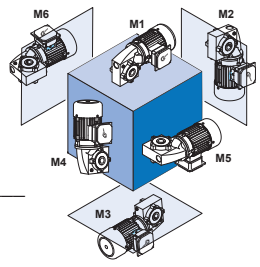


Motors	Energy efficient motors	Brake motors	Energy efficient brake motors
63S/4 - 0.12kW	80SH/4 - 0.55kW	63S/4 BRE 5 - 0.12kW	80SH/4 BRE 5 - 0.55kW
63L/4 - 0.18kW	80LH/4 - 0.75kW	63L/4 BRE 5 - 0.18kW	80LH/4 BRE10 - 0.75kW
71S/4 - 0.25kW	90SH/4 - 1.1kW	71S/4 BRE 5 - 0.25kW	90SH/4 BRE10 - 1.1kW
71L/4 - 0.37kW	90LH/4 - 1.5kW	71L/4 BRE 5 - 0.37kW	90LH/4 BRE20 - 1.5kW
80S/4 - 0.55kW		80S/4 BRE 5 - 0.55kW	
80L/4 - 0.75kW		80L/4 BRE10 - 0.75kW	
90S/4 - 1.1kW		90S/4 BRE10 - 1.1kW	
90L/4 - 1.5kW		90L/4 BRE20 - 1.5kW	

Product specifications

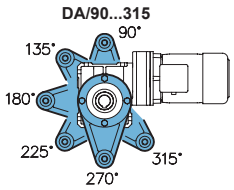
Worms Single-stage	Helical worm 2-stage	Double worm SMID__/31 or SMID 75/40	
Speed ratios	Speed ratios	Speed ratios	Version
❍ 5	❍ 25	❍ 150	❍ U1
❍ 7,5	❍ 37,5	❍ 225	❍ U2
❍ 10	❍ 50	❍ 300	❍ U3
❍ 12,5	❍ 62,5	❍ 375	❍ U4
❍ 15	❍ 75	❍ 450	❍ U5
❍ 20	❍ 100	❍ 600	❍ U6
❍ 25	❍ 125	❍ 750	❍ U7
❍ 30	❍ 150	❍ 900	❍ U8
❍ 40	❍ 200	❍ 1200	
❍ 50	❍ 250	❍ 1500	
❍ 60	❍ 300	❍ 1800	
❍ 80	❍ 400	❍ 2400	
❍ 100	❍ 500	❍ 3000	

Painting
- ❍ Unpainted (standard)
- ❍ Paint type _____
- ❍ Colour _____

Direction of torque support (if selected)

❍ 90°	❍ 225°
❍ 135°	❍ 270°
❍ 180°	❍ 315°

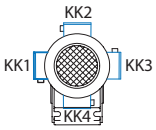
Output flange B5 versions (if selected)
- ❍ F I round flange, externally centred
- ❍ F II square flange, internally centred
- ❍ FIII square flange, externally centred



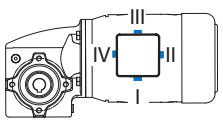
Details of geared motor only

Voltage/Frequency
- ❍ 230/400V - 50 Hz
- ❍ 400/690V - 50 Hz
- ❍ Other _____

Terminal box position
- ❍ KK1
- ❍ KK2
- ❍ KK3
- ❍ KK4

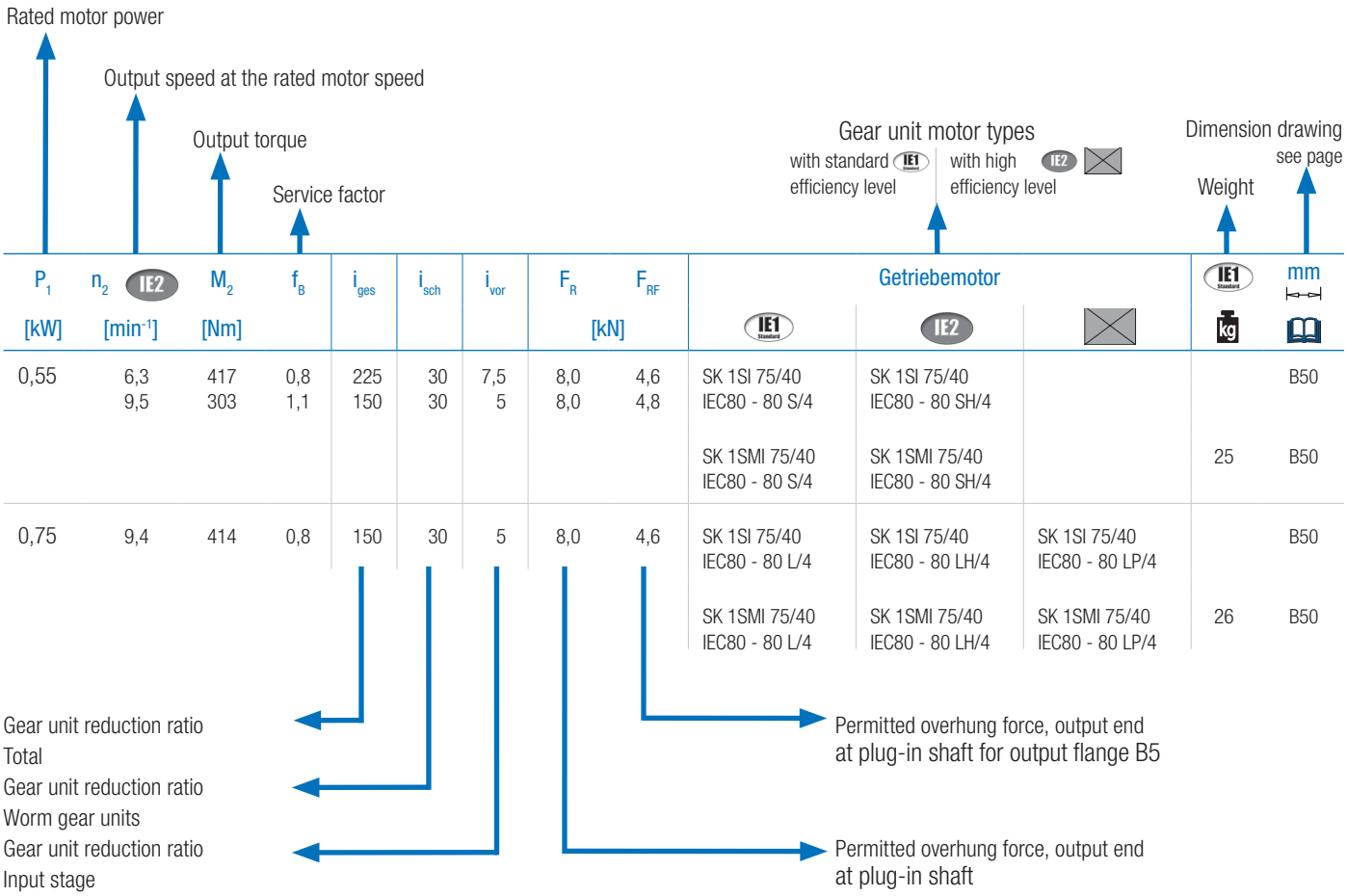


Cable gland
- ❍ I*
- ❍ II
- ❍ III*
- ❍ IV
- * Brake motor options



Selection list structure

0,55 kW → Gear unit motor power



P_1 [kW]	n_2 [min^{-1}]	IE2	M_2 [Nm]	f_B	i_{ges}	i_{sch}	i_{vor}	F_R [kN]	F_{RF} [kN]	Getriebemotor IE1 Standard	Getriebemotor IE2	Getriebemotor	IE1 Standard kg	mm
0,55	6,3		417	0,8	225	30	7,5	8,0	4,6	SK 1SI 75/40 IEC80 - 80 S/4	SK 1SI 75/40 IEC80 - 80 SH/4			B50
	9,5		303	1,1	150	30	5	8,0	4,8					
										SK 1SMI 75/40 IEC80 - 80 S/4	SK 1SMI 75/40 IEC80 - 80 SH/4		25	B50
0,75	9,4		414	0,8	150	30	5	8,0	4,6	SK 1SI 75/40 IEC80 - 80 L/4	SK 1SI 75/40 IEC80 - 80 LH/4	SK 1SI 75/40 IEC80 - 80 LP/4		B50
										SK 1SMI 75/40 IEC80 - 80 L/4	SK 1SMI 75/40 IEC80 - 80 LH/4	SK 1SMI 75/40 IEC80 - 80 LP/4	26	B50

According to the ecological design directive, known as EU Directive 2009/125/EU Ordinance No. 640/2009, at present only motors of at least efficiency class IE2 may be sold in the European Union for certain applications in the power range from 0.75 kW to 375 kW.
NORD already supplies motors with efficiency class IE2 from a power of 0.55 kW, even though this is only mandatory above a power of 0.75 kW. In addition, NORD already supplies highly efficient IE3 motors, which will only become mandatory from 2015 or 2017.
However, depending on the application, the previously used lower efficiency motors, e.g. ith efficiency class IE1 may also be used.

The exempted applications are listed on page ⇨ A9 of the NORD motor catalogue M7000.

The power and speed ratio tables for gear units and geared motors apply for both geared motor types with the high efficiency levels IE2 and IE3 as well as for geared motor types with standard efficiency (IE1).

The output speeds n2, output torques M2 and operating factors fB are based on motor powers of 0.55 kW and above for NORD motors with efficiency level IE2, and rated motor powers less than 0.55 kW are based on the nominal speeds of NORD motors with efficiency class IE1.

Regardless of the efficiency class which is actually selected, the output speeds n2, output torques M2 and operating factors fB as listed in the power and speed tables always give sufficiently accurate results, as the deviation in speed due to the efficiency class is at the most 3% for IE1 and IE3.
Usually, other influences, e.g. the torque required by the application (idling, partial load, full load) have a greater effect on the precise speed.

Please contact us in case you have very high requirements for precise speed.

The NORD motor catalogue M7000 lists the motor data for the various efficiency classes IE1, IE2, IE3.

Selection list structure

Power and speed ratio tables for various input speed

Gear unit motor types

various gear units input speed ratio tables for varios input speed

Type SI Type SMI				n_1 = 1400 min^{-1}			n_1 = 900 min^{-1}			n_1 = 500 min^{-1}			n_1 = 250 min^{-1}		
	i_{ges}	i_{sch}	i_{vor}	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]
SK 1SI 40/31	150	30	5	9,3	74	0,18	6	79	0,11	3,3	83	0,06	1,7	89	0,04
SK 1SMI 40/31	225	30	7,5	6,2	79	0,13	4	82	0,08	2,2	87	0,05	1,1	94	0,03
	300	30	10	4,7	81	0,11	3	85	0,06	1,7	89	0,04	0,83	96	0,02
W	375	30	12,5	3,7	83	0,10	2,4	87	0,05	1,3	92	0,03	0,67	97	0,02
	450	30	15	3,1	84	0,09	2	88	0,04	1,1	94	0,03	0,56	98	0,01
+	600	30	20	2,3	87	0,07	1,5	90	0,03	0,83	96	0,02	0,42	99	0,01
	750	30	25	1,9	88	0,06	1,2	93	0,03	0,67	97	0,02	0,33	100	0,01
IEC	900	30	30	1,6	90	0,06	1	94	0,02	0,56	98	0,01	0,28	104	0,01
	1200	30	40	1,2	93	0,05	0,75	97	0,02	0,42	99	0,01	0,21	109	0,01
	1500	30	50	0,93	95	0,05	0,6	98	0,01	0,33	100	0,01	0,17	112	0
mm ⇨ 📖 B53, 49	1800	30	60	0,78	96	0,04	0,5	99	0,01	0,28	104	0,01	0,14	115	0
	2400	30	80	0,58	98	0,04	0,38	100	0,01	0,21	109	0,01	0,1	117	0
	3000	30	100	0,47	99	0,03	0,3	102	0,01	0,17	112	0	0,08	119	0

Gear unit reduction ratio Total

Gear unit reduction ratio Worm gear units

Gear unit reduction ratio Input stage

max. drive power (f_B=1,0) at input of gear unit

max. output torque (f_B=1,0) at drive speed n_1=900min^{-1}

Gear unit output speed

Definitive dimensioned drawings, CAD models and CAD outline drawings of the drive units are available for download from the NORD homepage www.nord.com.

Dimensions and Tolerances

Category	Information
Output and input shafts	Tolerance of shaft diameters (DIN 478): Ø 14 - Ø 35 mm = ISO h6 Threaded holes: = Ø 14 - Ø 16 mm → M5 > Ø 16 - Ø 21 mm → M6 > Ø 21 - Ø 24 mm → M8 > Ø 24 - Ø 30 mm → M10 > Ø 30 - Ø 38 mm → M12 Parallel keys according to DIN 6885, sheets 1 and 3
Frame size	Hollow shaft tolerances - Ø (DIN 748) according to ISO H7 Parallel keys according to DIN 6885, sheets 1 and 3 Parallel keys according to DIN 6885, sheet 3
Flanges	Shaft height „h“ according to DIN 747
IEC - adapter	Tolerance of hole circle diameter according to DIN EN 50347 Tolerance of flange centring diameters: ≤ Ø 230 mm according to ISO j6 > Ø 230 mm according to ISO h6
Motors	Tolerance of hole circle diameter according to DIN EN 50347 Tolerance of flange centring diameters according to ISO H7
Thread	Some motor dimensions may change under certain circumstances. g1Bre, kBre, oBre, mBre, nBre, pBre } Brake motor dimensions
Threads	Fastening threads that can be used by the customer in cast parts (housing / attachment adapter IEC) are available as Standard thread according to DIN 13-1.

Drives are designed accordingto the following tolerances:

- Threaded holes in the shaft journal: based on DIN332/2
- Parallel keys: DIN 6885, Sheet 1
- Flange centring: H7 or j6 according to DIN ISO 286-2
- Shaft tolerances: H7 or h6 according to DIN ISO 286-2
- Flange hole circle diameter: DIN 42948
- Axis height: DIN 747

larger hollow shaft diameters

The dimensions kBre and g1Bre in the dimensioned drawings (⇨ B28 - B50) relate to the brake motor version. As standard, all NORD UNIVERSAL worm gear units have a hollow output shaft with normal dimensions. For large series, the gear unit concept allows the possibility of providing considerably larger hollow shaft diameters.

Hollow shaft with parallel key groove according to DIN 6885, sheet 1

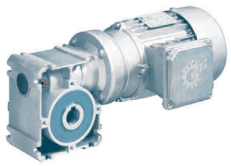
Size	31	40	50	63	75
Standard	14 mm	18 mm	25 mm	25 mm	35 mm
Max.	17 mm	25 mm	30 mm	42 mm	50 mm

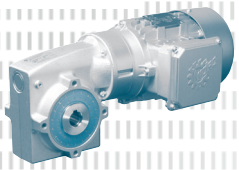
Abbreviations in the power and speed tables

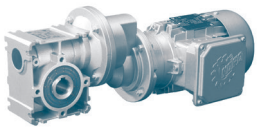
Abbreviations	Meaning	Unit
ED	Relative switch-on time	[%]
P_N	Nominal power	[kW]
n_N	Nominal speed	[min^{-1}]
n_{syn}	Synchronous speed:	[min^{-1}]
I_N	Nominal current	[A]
I_A/I_N	Start-up current / nominal current (Relationship of start-up current to nominal current)	[–]
cos ●	Power factor	[–]
η	Efficiency	[%]
M_N	Nominal torque	[Nm]
M_A/M_N	Starting torque / nominal torque (relationship of starting torque to nominal torque)	[–]
M_K/M_N	Breakdown torque / nominal torque (relationship of breakdown torque to nominal torque)	[–]
M_B	Braking torque	[Nm]
J	Moment of inertia	[kgm^2]
L_{PA}	Noise level	[dB(A)]
L_{WA}	Noise level	[dB(A)]
T_{amb}	Ambient temperature	[°C]
kg	Weight Gear motor	[kg]

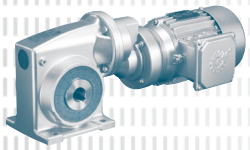
Notes

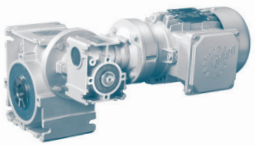
Worm gear unit
Type SI, SMI

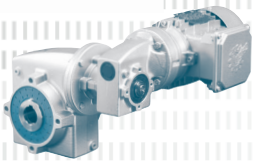






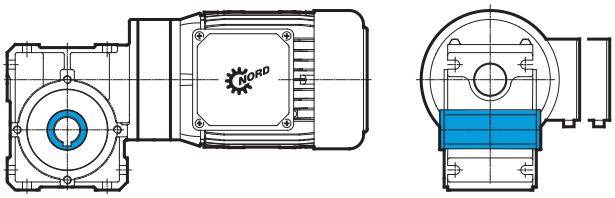




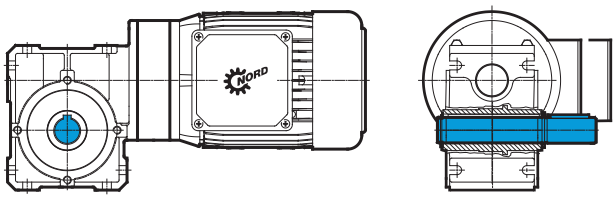


Available versions

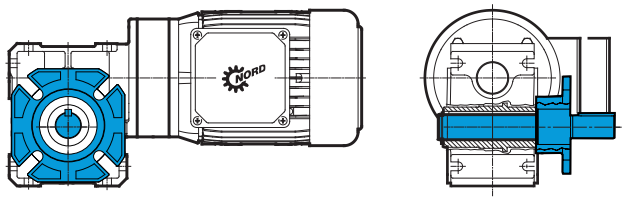
Examples - available versions - Type SI worm gear motors



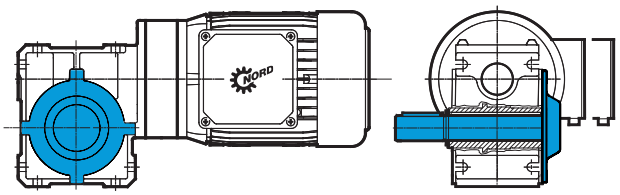
SK 1SI 63
IEC90 - 90 SH/4
Hollow shaft,
basic version



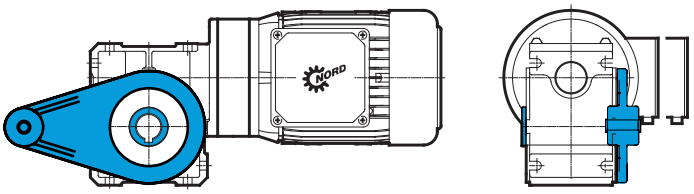
SK 1SI 40 VA/I
IEC80 - 80 SH/4
Plug-in shaft, side A



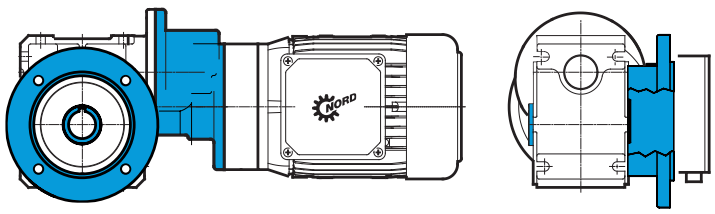
SK 1SI 40 VA/I FA/II
IEC80 - 80 SH/4
Plug-in shaft, side A,
flange, side A



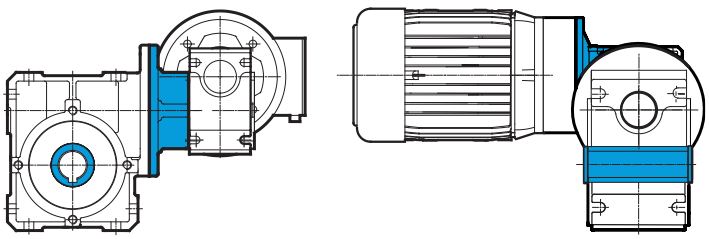
SK 1SI 50 VB/I HA
IEC90 - 90 SH/4
Plug-in shaft, side B,
cover side A



SK 1SI 50 DA 180°
IEC71 - 71 S/4
Hollow shaft,
torque support 180° side A



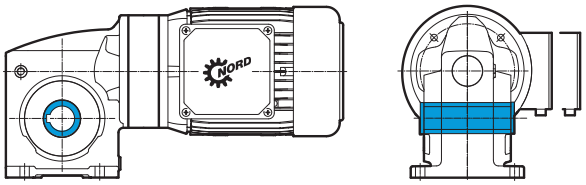
SK 1SI 63/H10 FA/I
IEC71 - 71 L/4
Hollow shaft,
flange side A,
helical worm gear motor T1



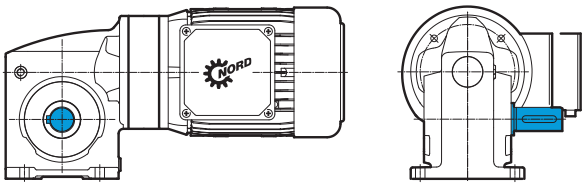
SK 1SI 75/40
IEC80 - 80 SH/4
Hollow shaft,
double worm gear motor U1,
terminal box location KK1

Examples - available versions - Type SMI worm gear motors

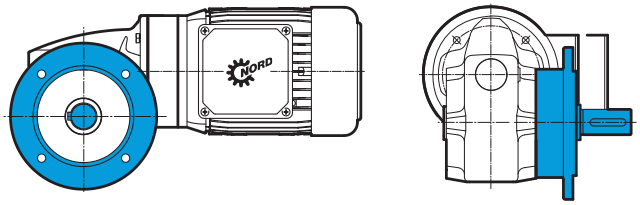
SK 1SMI 63 AX
IEC90 - 90 SH/4
Foot-mounted housing,
Hollow shaft,



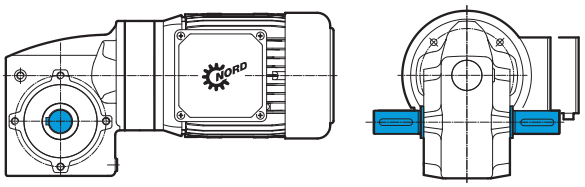
SK 1SMI 40 VX
IEC80 - 80 SH/4
Foot-mounted housing,
Solid shaft, side A



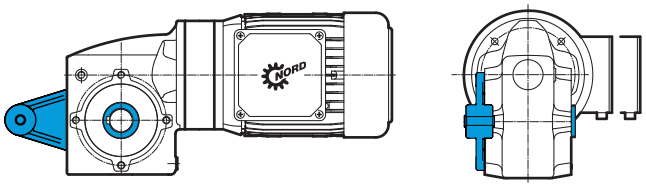
SK 1SMI 40 V FA/I
IEC80 - 80 SH/4
Solid shaft, side A,
flange, side A



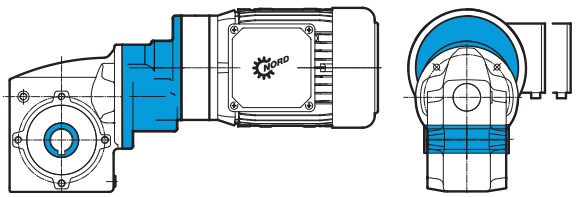
SK 1SMI 50 LZ
IEC90 - 90 SH/4
Solid shaft, side A and B,



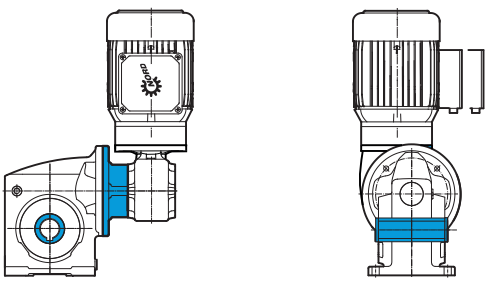
SK 1SMI 50 DB 180°
IEC71 - 71 S/4
Hollow shaft,
torque support 180°, side B



SK 1SMI 50/H10
IEC71 - 71 L/4
Hollow shaft,
helical worm gear unit motor T3



SK 1SMI 63/31
IEC71 - 71 L/4
Housing for foot mounting,
hollow shaft,
double worm gear motor U6,
terminal box location KK4



0,12 kW
1SI, 1SMI - Worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,12	13	39	2,8	100	100		5,6	2,5	SK 1SI 63 IEC63 - 63 S/4		SK 1SI 63 IEC63 - 63 SP/4		B36-37
									SK 1SMI 63 IEC63 - 63 S/4		SK 1SMI 63 IEC63 - 63 SP/4	10	B46-47
	13	35	1,8	100	100		4,8	2,5	SK 1SI 50 IEC63 - 63 S/4		SK 1SI 50 IEC63 - 63 SP/4		B34-35
	17	32	2,1	80	80		4,8	2,5					
	22	27	2,7	60	60		4,8	2,5					
									SK 1SMI 50 IEC63 - 63 S/4		SK 1SMI 50 IEC63 - 63 SP/4	8	B44-45
	13	31	1,1	100	100		2,8	1,1	SK 1SI 40 IEC63 - 63 S/4		SK 1SI 40 IEC63 - 63 SP/4		B32-33
	17	27	1,3	80	80		2,8	1,1					
	22	24	1,7	60	60		2,8	1,2					
	27	21	2,0	50	50		2,8	1,2					
	33	19	2,5	40	40		2,8	1,2					
	44	15	3,3	30	30		2,8	1,2					
	53	14	2,9	25	25		2,8	1,2					
									SK 1SMI 40 IEC63 - 63 S/4		SK 1SMI 40 IEC63 - 63 SP/4	6	B42-43
	13	26	0,8	100	100		1,8	0,6	SK 1SI 31 IEC63 - 63 S/4		SK 1SI 31 IEC63 - 63 SP/4		B30-31
	17	25	0,9	80	80		1,8	0,6					
	22	21	1,1	60	60		1,8	0,6					
	27	19	1,3	50	50		1,8	0,6					
	33	17	1,6	40	40		1,8	0,6					
	44	14	2,1	30	30		1,8	0,6					
	53	14	1,8	25	25		1,8	0,6					
	67	12	2,3	20	20		1,8	0,7					
	89	9	3,2	15	15		1,7	0,7					
	107	8	2,9	12,5	12,5		1,6	0,7					
	134	7	3,8	10	10		1,5	0,7					
	178	5	5,1	7,5	7,5		1,3	0,7					
	267	4	6,2	5	5		1,2	0,7					
									SK 1SMI 31 IEC63 - 63 S/4		SK 1SMI 31 IEC63 - 63 SP/4	5	B40-41

0,12 kW
1SI, 1SMI - Helical worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor				mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,12	1,3	249	1,2	1.000	100	10	8,0	5,0	SK 1SI 75/H10 IEC63 - 63 S/4		SK 1SI 75/H10 IEC63 - 63 SP/4		B51
	1,7	228	1,4	800	80	10	8,0	5,0					
	2,2	200	1,8	600	60	10	8,0	5,0					
	2,7	181	2,1	500	50	10	8,0	5,0					
	3,3	160	2,5	400	40	10	8,0	5,0					
	4,5	146	2,4	300	30	10	8,0	5,0					
	5,3	129	2,9	250	25	10	8,0	5,0					
	6,7	110	3,6	200	20	10	8,0	5,0					
	8,9	87,8	4,9	150	15	10	8,0	5,0					
	11	79,4	4,5	125	12	10	8,0	5,0					
	13	65,8	5,6	100	10	10	8,0	5,0					
	18	51,2	6,0	75	7,5	10	8,0	5,0					
	27	36,0	6,0	50	5	10	8,0	5,0					
									SK 1SMI 75/H10 IEC63 - 63 S/4		SK 1SMI 75/H10 IEC63 - 63 SP/4	19,3	B51
	1,3	*224	0,8	1000	100	10	4,6	2,1	SK 1SI 63/H10 IEC63 - 63 S/4		SK 1SI 63/H10 IEC63 - 63 SP/4		B50
	1,7	213	0,9	800	80	10	4,7	2,1					
	2,2	191	1,1	600	60	10	4,9	2,2					
	2,7	172	1,3	500	50	10	5,0	2,3					
	3,3	151	1,6	400	40	10	5,2	2,3					
	4,4	129	2,0	300	30	10	5,3	2,4					
	5,3	124	1,8	250	25	10	5,3	2,4					
	6,7	106	2,2	200	20	10	5,4	2,4					
	8,9	85	3,0	150	15	10	5,5	2,5					
	11	77	2,7	125	12,5	10	5,5	2,5					
	13	64	2,9	100	10	10	5,5	2,5					
									SK 1SMI 63/H10 IEC63 - 63 S/4		SK 1SMI 63/H10 IEC63 - 63 SP/4	11	B50
	1,3	*126	0,8	1000	100	10	4,8	2,4	SK 1SI 50/H10 IEC63 - 63 S/4		SK 1SI 50/H10 IEC63 - 63 SP/4		B50
	1,7	*135	0,8	800	80	10	4,8	2,3					
	2,2	*148	0,8	600	60	10	4,8	2,3					
	2,7	*156	0,8	500	50	10	4,8	2,3					
	3,3	148	0,9	400	40	10	4,8	2,3					
	4,4	124	1,2	300	30	10	4,8	2,4					
	5,3	120	1,0	250	25	10	4,8	2,4					
	6,7	103	1,3	200	20	10	4,8	2,4					
	8,9	84	1,7	150	15	10	4,8	2,4					
	11	76	1,5	125	12,5	10	4,8	2,5					
	13	64	1,9	100	10	10	4,8	2,5					
	18	50	2,6	75	7,5	10	4,8	2,5					
	27	35	2,9	50	5	10	4,8	2,5					
									SK 1SMI 50/H10 IEC63 - 63 S/4		SK 1SMI 50/H10 IEC63 - 63 SP/4	10	B50
	1,3	*69	0,8	1000	100	10	2,6	1,0	SK 1SI 40/H10 IEC63 - 63 S/4		SK 1SI 40/H10 IEC63 - 63 SP/4		B50
	1,7	*75	0,8	800	80	10	2,5	1,0					
	2,2	*82	0,8	600	60	10	2,4	1,0					
	2,7	*88	0,8	500	50	10	2,4	1,0					
	3,3	*94	0,8	400	40	10	2,3	0,9					
	4,4	*101	0,8	300	30	10	2,2	0,9					
	5,3	*86	0,8	250	25	10	2,4	1,0					
	6,7	*91	0,8	200	20	10	2,3	0,9					
	8,9	81	1,0	150	15	10	2,4	1,0					
	11	74	0,9	125	12,5	10	2,5	1,0					
	13	62	1,1	100	10	10	2,6	1,1					
	18	49	1,5	75	7,5	10	2,7	1,1					
	27	35	1,8	50	5	10	2,8	1,1					
									SK 1SMI 40/H10 IEC63 - 63 S/4		SK 1SMI 40/H10 IEC63 - 63 SP/4	8	B50

* Maximum output torque with $f_B = 0,8$

0,12 kW
1SI, 1SMI - Double worm gear motors

P_1	n_2 IE1	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,12	0,44	464	0,9	3000	30	100	8,0	4,4	SK 1SI 75/40 IEC63 - 63 S/4		SK 1SI 75/40 IEC63 - 63 SP/4		B53
	0,56	420	1,0	2400	30	80	8,0	4,5					
	0,74	362	1,1	1800	30	60	8,0	4,7					
	0,89	328	1,3	1500	30	50	8,0	4,7					
	1,1	289	1,4	1200	30	40	8,0	4,8					
	1,5	237	1,6	900	30	30	8,0	4,9					
	1,8	229	1,7	750	30	25	8,0	4,9					
	2,2	194	1,9	600	30	20	8,0	4,9					
									SK 1SMI 75/40 IEC63 - 63 S/4		SK 1SMI 75/40 IEC63 - 63 SP/4	20	B53
	0,44	340	0,9	3000	30	100	2,7	1,2	SK 1SI 63/31 IEC63 - 63 S/4		SK 1SI 63/31 IEC63 - 63 SP/4		B52
	0,56	334	0,9	2400	30	80	2,9	1,3					
	0,74	285	1,1	1800	30	60	3,8	1,7					
	0,89	261	1,2	1500	30	50	4,1	1,9					
	1,1	232	1,3	1200	30	40	4,5	2,0					
	1,5	195	1,5	900	30	30	4,8	2,2					
	1,8	187	1,5	750	30	25	4,9	2,2					
	2,2	162	1,7	600	30	20	5,1	2,3					
	3,0	132	2,1	450	30	15	5,3	2,4					
	3,6	120	2,2	375	30	12,5	5,3	2,4					
	4,4	102	2,6	300	30	10	5,4	2,4					
	5,9	81	3,1	225	30	7,5	5,5	2,5					
									SK 1SMI 63/31 IEC63 - 63 S/4		SK 1SMI 63/31 IEC63 - 63 SP/4	11	B52
	0,44	*222	0,8	3000	30	100	4,7	2,1	SK 1SI 50/31 IEC63 - 63 S/4		SK 1SI 50/31 IEC63 - 63 SP/4		B52
	0,56	*220	0,8	2400	30	80	4,7	2,1					
	0,74	*216	0,8	1800	30	60	4,7	2,1					
	0,89	*214	0,8	1500	30	50	4,7	2,1					
	1,1	*210	0,8	1200	30	40	4,8	2,1					
	1,5	195	0,8	900	30	30	4,8	2,2					
	1,8	187	0,9	750	30	25	4,8	2,2					
	2,2	159	1,0	600	30	20	4,8	2,3					
	3,0	129	1,2	450	30	15	4,8	2,4					
	3,6	115	1,3	375	30	12,5	4,8	2,4					
	4,4	98	1,5	300	30	10	4,8	2,4					
	5,9	78	1,8	225	30	7,5	4,8	2,5					
	8,9	56	2,4	150	30	5	4,8	2,5					
									SK 1SMI 50/31 IEC63 - 63 S/4		SK 1SMI 50/31 IEC63 - 63 SP/4	10	B52
	0,44	*124	0,8	3000	30	100	1,8	0,7	SK 1SI 40/31 IEC63 - 63 S/4		SK 1SI 40/31 IEC63 - 63 SP/4		B52
	0,56	*123	0,8	2400	30	80	1,8	0,7					
	0,74	*120	0,8	1800	30	60	1,9	0,8					
	0,89	*119	0,8	1500	30	50	1,9	0,8					
	1,1	*116	0,8	1200	30	40	1,9	0,8					
	1,5	*112	0,8	900	30	30	2,0	0,8					
	1,8	*110	0,8	750	30	25	2,0	0,8					
	2,2	*109	0,8	600	30	20	2,1	0,8					
	3,0	*105	0,8	450	30	15	2,1	0,9					
	3,6	*104	0,8	375	30	12,5	2,1	0,9					
	4,4	94	0,9	300	30	10	2,3	0,9					
	5,9	73	1,1	225	30	7,5	2,5	1,0					
	8,9	53	1,4	150	30	5	2,7	1,1					
									SK 1SMI 40/31 IEC63 - 63 S/4		SK 1SMI 40/31 IEC63 - 63 SP/4	8	B52

0,18 kW
1SI, 1SMI - Worm gear motors

P_1	n_2 IE1 Standard	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 Standard	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1 Standard	IE2	IE3	kg	
0,18	14	58	1,9	100	100		5,5	2,5	SK 1SI 63 IEC63 - 63 L/4		SK 1SI 63 IEC63 - 63 LP/4		B36-37
	17	52	2,3	80	80		5,5	2,5					
	23	43	3,0	60	60		5,6	2,5					
									SK 1SMI 63 IEC63 - 63 L/4		SK 1SMI 63 IEC63 - 63 LP/4	10	B46-47
	14	52	1,2	100	100		4,8	2,5	SK 1SI 50 IEC63 - 63 L/4		SK 1SI 50 IEC63 - 63 LP/4		B34-35
	17	47	1,4	80	80		4,8	2,5					
	23	39	1,9	60	60		4,8	2,5					
	27	35	2,2	50	50		4,8	2,5					
	34	30	2,7	40	40		4,8	2,5					
	45	24	3,7	30	30		4,8	2,5					
	54	23	3,3	25	25		4,8	2,5					
									SK 1SMI 50 IEC63 - 63 L/4		SK 1SMI 50 IEC63 - 63 LP/4	9	B44-45
	17	40	0,9	80	80		2,7	1,1	SK 1SI 40 IEC63 - 63 L/4		SK 1SI 40 IEC63 - 63 LP/4		B32-33
	23	35	1,1	60	60		2,8	1,1					
	27	32	1,4	50	50		2,8	1,1					
	34	27	1,7	40	40		2,8	1,1					
	45	22	2,2	30	30		2,8	1,2					
	54	21	2,0	25	25		2,8	1,2					
	68	18	2,5	20	20		2,8	1,2					
	91	14	3,4	15	15		2,8	1,2					
	109	13	3,2	12,5	12,5		2,8	1,2					
									SK 1SMI 40 IEC63 - 63 L/4		SK 1SMI 40 IEC63 - 63 LP/4	7	B42-43
	23	32	0,8	60	60		1,8	0,6	SK 1SI 31 IEC63 - 63 L/4		SK 1SI 31 IEC63 - 63 LP/4		B30-31
	27	28	0,9	50	50		1,8	0,6					
	34	25	1,1	40	40		1,8	0,6					
	45	21	1,4	30	30		1,8	0,6					
	54	20	1,3	25	25		1,8	0,6					
	68	17	1,6	20	20		1,8	0,6					
	91	13	2,2	15	15		1,6	0,6					
	109	12	2,0	12,5	12,5		1,5	0,7					
	136	10	2,6	10	10		1,4	0,7					
	181	8	3,5	7,5	7,5		1,3	0,7					
	272	5	4,2	5	5		1,1	0,7					
									SK 1SMI 31 IEC63 - 63 L/4		SK 1SMI 31 IEC63 - 63 LP/4	6	B40-41

0,18 kW
1SI, 1SMI - Helical worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor				
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	mm
0,18	1,4	368	0,8	1.000	100	10	8,0	5,0	SK 1SI 75/H10 IEC63 - 63 L/4		SK 1SI 75/H10 IEC63 - 63 L/4		B51
	1,7	336	1,0	800	80	10	8,0	5,0					
	2,3	295	1,2	600	60	10	8,0	5,0					
	2,7	268	1,4	500	50	10	8,0	5,0					
	3,4	236	1,7	400	40	10	8,0	5,0					
	4,5	215	1,7	300	30	10	8,0	5,0					
	5,4	190	2,0	250	25	10	8,0	5,0					
	6,8	162	2,5	200	20	10	8,0	5,0					
	9,1	130	3,3	150	15	10	8,0	5,0					
	11	117	3,0	125	12,5	10	8,0	5,0					
	14	97,0	3,8	100	10	10	8,0	5,0					
	18	75,4	4,1	75	7,5	10	8,0	5,0					
	27	53,0	4,1	50	5	10	8,0	5,0					
									SK 1SMI 75/H10 IEC63 - 63 L/4		SK 1SMI 75/H10 IEC63 - 63 L/4	19,9	B51
	2,7	253	0,9	500	50	10	4,2	1,9	SK 1SI 63/H10 IEC63 - 63 L/4		SK 1SI 63/H10 IEC63 - 63 L/4		B50
	3,4	222	1,1	400	40	10	4,6	2,1					
	4,5	190	1,4	300	30	10	4,9	2,2					
	5,4	183	1,2	250	25	10	4,9	2,2					
	6,8	157	1,5	200	20	10	5,1	2,3					
	9,1	125	2,0	150	15	10	5,3	2,4					
	11	114	1,8	125	12,5	10	5,4	2,4					
	14	95	2,0	100	10	10	5,4	2,4					
	18	74	2,0	75	7,5	10	5,5	2,5					
									SK 1SMI 63/H10 IEC63 - 63 L/4		SK 1SMI 63/H10 IEC63 - 63 L/4	12	B50
	4,5	182	0,8	300	30	10	4,8	2,2	SK 1SI 50/H10 IEC63 - 63 L/4		SK 1SI 50/H10 IEC63 - 63 L/4		B50
	6,8	154	0,9	200	20	10	4,8	2,3					
	9,1	123	1,2	150	15	10	4,8	2,4					
	11	112	1,1	125	12,5	10	4,8	2,4					
	14	94	1,3	100	10	10	4,8	2,4					
	18	73	1,7	75	7,5	10	4,8	2,5					
	27	52	2,0	50	5	10	4,8	2,5					
									SK 1SMI 50/H10 IEC63 - 63 L/4		SK 1SMI 50/H10 IEC63 - 63 L/4	10	B50
	14	91	0,8	100	10	10	2,3	0,9	SK 1SI 40/H10 IEC63 - 63 L/4		SK 1SI 40/H10 IEC63 - 63 L/4		B50
	18	72	1,0	75	7,5	10	2,5	1,0					
	27	51	1,2	50	5	10	2,7	1,1					
									SK 1SMI 40/H10 IEC63 - 63 L/4		SK 1SMI 40/H10 IEC63 - 63 L/4	8	B50

0,18 kW
1SI, 1SMI - Double worm gear motors

P_1	r_{IE1}	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,18	0,76	534	0,8	1800	30	60	8,0	4,2	SK 1SI 75/40 IEC63 - 63 L/4		SK 1SI 75/40 IEC63 - 63 LP/4		B53
	0,91	483	0,9	1500	30	50	8,0	4,4					
	1,1	426	0,9	1200	30	40	8,0	4,5					
	1,5	349	1,1	900	30	30	8,0	4,7					
	1,8	337	1,1	750	30	25	8,0	4,7					
	2,3	285	1,3	600	30	20	8,0	4,8					
	3,0	235	1,6	450	30	15	8,0	4,9					
	3,6	209	1,7	375	30	12,5	8,0	4,9					
	4,5	177	2,0	300	30	10	8,0	4,9					
									SK 1SMI 75/40 IEC63 - 63 L/4		SK 1SMI 75/40 IEC63 - 63 LP/4	20	B53
	0,91	384	0,8	1500	30	50	0,9	0,4	SK 1SI 63/31 IEC63 - 63 L/4		SK 1SI 63/31 IEC63 - 63 LP/4		B52
	1,1	341	0,9	1200	30	40	2,7	1,2					
	1,5	288	1,0	900	30	30	3,8	1,7					
	1,8	275	1,0	750	30	25	4,0	1,8					
	2,3	239	1,2	600	30	20	4,4	2,0					
	3,0	194	1,4	450	30	15	4,8	2,2					
	3,6	177	1,5	375	30	12,5	5,0	2,2					
	4,5	150	1,7	300	30	10	5,2	2,3					
	6,0	119	2,1	225	30	7,5	5,3	2,4					
	9,1	88	2,7	150	30	5	5,5	2,5					
									SK 1SMI 63/31 IEC63 - 63 L/4		SK 1SMI 63/31 IEC63 - 63 LP/4	12	B52
	3,0	190	0,8	450	30	15	4,8	2,2	SK 1SI 50/31 IEC63 - 63 L/4		SK 1SI 50/31 IEC63 - 63 LP/4		B52
	3,6	169	0,9	375	30	12,5	4,8	2,3					
	4,5	144	1,0	300	30	10	4,8	2,3					
	6,0	114	1,2	225	30	7,5	4,8	2,4					
	9,1	83	1,6	150	30	5	4,8	2,4					
									SK 1SMI 50/31 IEC63 - 63 L/4		SK 1SMI 50/31 IEC63 - 63 L/P4	10	B52
	9,1	78	0,9	150	30	5	2,5	1,0	SK 1SI 40/31 IEC63 - 63 L/4		SK 1SI 40/31 IEC63 - 63 LP/4		B52
									SK 1SMI 40/31 IEC63 - 63 L/4		SK 1SMI 40/31 IEC63 - 63 LP/4	8	B52

0,25 kW
1SI, 1SMI - Worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,25	14	90	2,1	100	100		8,0	5,0	SK 1SI 75 IEC71 - 71 S/4		SK 1SI 75 IEC71 - 71 SP/4		B38-39
	17	78	2,6	80	80		8,0	5,0					
									SK 1SMI 75 IEC71 - 71 S/4		SK 1SMI 75 IEC71 - 71 SP/4	19	B48-49
	14	81	1,4	100	100		5,5	2,5	SK 1SI 63 IEC71 - 71 S/4		SK 1SI 63 IEC71 - 71 SP/4		B36-37
	17	71	1,7	80	80		5,5	2,5					
	23	59	2,2	60	60		5,5	2,5					
	28	53	2,6	50	50		5,5	2,5					
	34	44	3,3	40	40		5,6	2,5					
									SK 1SMI 63 IEC71 - 71 S/4		SK 1SMI 63 IEC71 - 71 SP/4	12	B46-47
	14	71	0,9	100	100		4,8	2,5	SK 1SI 50 IEC71 - 71 S/4		SK 1SI 50 IEC71 - 71 SP/4		B34-35
	17	64	1,1	80	80		4,8	2,5					
	23	54	1,4	60	60		4,8	2,5					
	28	48	1,6	50	50		4,8	2,5					
	34	42	2,0	40	40		4,8	2,5					
	46	34	2,7	30	30		4,8	2,5					
	55	31	2,4	25	25		4,8	2,5					
	69	26	3,1	20	20		4,8	2,5					
									SK 1SMI 50 IEC71 - 71 S/4		SK 1SMI 50 IEC71 - 71 SP/4	10	B44-45
	23	48	0,8	60	60		2,7	1,1	SK 1SI 40 IEC71 - 71 S/4		SK 1SI 40 IEC71 - 71 SP/4		B32-33
	28	43	1,0	50	50		2,7	1,1					
	34	37	1,2	40	40		2,8	1,1					
	46	31	1,6	30	30		2,8	1,1					
	55	29	1,4	25	25		2,8	1,1					
	69	25	1,8	20	20		2,8	1,2					
	92	19	2,5	15	15		2,8	1,2					
	110	17	2,4	12,5	12,5		2,8	1,2					
	138	14	3,0	10	10		2,8	1,2					
									SK 1SMI 40 IEC71 - 71 S/4		SK 1SMI 40 IEC71 - 71 SP/4	8	B42-43
	34	35	0,8	40	40		1,8	0,6	SK 1SI 31 IEC71 - 71 S/4		SK 1SI 31 IEC71 - 71 SP/4		B30-31
	46	29	1,1	30	30		1,8	0,6					
	55	27	0,9	25	25		1,8	0,6					
	69	23	1,2	20	20		1,7	0,6					
	92	18	1,6	15	15		1,5	0,6					
	110	16	1,5	12,5	12,5		1,4	0,6					
	138	14	1,9	10	10		1,3	0,6					
	184	11	2,5	7,5	7,5		1,2	0,7					
	276	7	3,1	5	5		1,1	0,7					
									SK 1SMI 31 IEC71 - 71 S/4		SK 1SMI 31 IEC71 - 71 SP/4	7	B40-41

0,25 kW
1SI, 1SMI - Helical worm gear motors

P_1	r_{IE1}	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,25	2,3	404	0,9	600	60	10	8,0	5,0	SK 1SI 75/H10 IEC71 - 71 S/4		SK 1SI 75/H10 IEC71 - 71 SP/4		B51
	2,8	367	1,0	500	50	10	8,0	5,0					
	3,5	323	1,3	400	40	10	8,0	5,0					
	4,6	294	1,2	300	30	10	8,0	5,0					
	5,5	260	1,4	250	25	10	8,0	5,0					
	6,9	222	1,8	200	20	10	8,0	5,0					
	9,2	177	2,4	150	15	10	8,0	5,0					
	11	160	2,2	125	12,5	10	8,0	5,0					
	14	133	2,8	100	10	10	8,0	5,0					
	18	103	3,0	75	7,5	10	8,0	5,0					
	28	72,6	3,0	50	5	10	8,0	5,0					
									SK 1SMI 75/H10 IEC71 - 71 S/4		SK 1SMI 75/H10 IEC71 - 71 SP/4	21,1	B51
	3,5	304	0,8	400	40	10	3,5	1,6	SK 1SI 63/H10 IEC71 - 71 S/4		SK 1SI 63/H10 IEC71 - 71 SP/4		B50
	4,6	259	1,0	300	30	10	4,2	1,9					
	5,5	251	0,9	250	25	10	4,3	1,9					
	6,9	215	1,1	200	20	10	4,7	2,1					
	9,2	171	1,5	150	15	10	5,0	2,3					
	11	156	1,3	125	12,5	10	5,1	2,3					
	14	130	1,5	100	10	10	5,3	2,4					
	18	101	1,4	75	7,5	10	5,4	2,4					
	28	72	1,5	50	5	10	5,5	2,5					
									SK 1SMI 63/H10 IEC71 - 71 S/4		SK 1SMI 63/H10 IEC71 - 71 SP/4	13	B50
	9,2	169	0,8	150	15	10	4,8	2,3	SK 1SI 50/H10 IEC71 - 71 S/4		SK 1SI 50/H10 IEC71 - 71 SP/4		B50
	11	154	0,8	125	12,5	10	4,8	2,3					
	14	128	1,0	100	10	10	4,8	2,4					
	18	100	1,3	75	7,5	10	4,8	2,4					
	28	71	1,5	50	5	10	4,8	2,5					
									SK 1SMI 50/H10 IEC71 - 71 S/4		SK 1SMI 50/H10 IEC71 - 71 SP/4	12	B50
	28	70	0,9	50	5	10	2,5	1,0	SK 1SI 40/H10 IEC71 - 71 S/4		SK 1SI 40/H10 IEC71 - 71 SP/4		B50
									SK 1SMI 40/H10 IEC71 - 71 S/4		SK 1SMI 40/H10 IEC71 - 71 SP/4	10	B50

0,25 kW
1SI, 1SMI - Double worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,25	1,5	478	0,8	900	30	30	8,0	4,4	SK 1SI 75/40 IEC71 - 71 S/4		SK 1SI 75/40 IEC71 - 71 SP/4		B53
	1,8	468	0,8	750	30	25	8,0	4,4					
	2,3	398	0,9	600	30	20	8,0	4,6					
	3,1	321	1,1	450	30	15	8,0	4,8					
	3,7	291	1,2	375	30	12,5	8,0	4,8					
	4,6	243	1,4	300	30	10	8,0	4,9					
	6,1	195	1,7	225	30	7,5	8,0	4,9					
									SK 1SMI 75/40 IEC71 - 71 S/4		SK 1SMI 75/40 IEC71 - 71 SP/4	22	B53
	1,8	376	0,8	750	30	25	1,4	0,6	SK 1SI 63/31 IEC71 - 71 S/4		SK 1SI 63/31 IEC71 - 71 SP/4		B52
	2,3	327	0,9	600	30	20	3,0	1,3					
	3,1	265	1,0	450	30	15	4,1	1,8					
	3,7	242	1,1	375	30	12,5	4,4	2,0					
	4,6	205	1,3	300	30	10	4,8	2,1					
	6,1	163	1,5	225	30	7,5	5,1	2,3					
	9,2	121	2,0	150	30	5	5,3	2,4					
									SK 1SMI 63/31 IEC71 - 71 S/4		SK 1SMI 63/31 IEC71 - 71 SP/4	13	B52
	6,1	156	0,9	225	30	7,5	4,8	2,3	SK 1SI 50/31 IEC71 - 71 S/4		SK 1SI 50/31 IEC71 - 71 SP/4		B52
	9,2	116	1,1	150	30	5	4,8	2,4					
									SK 1SMI 50/31 IEC71 - 71 S/4		SK 1SMI 50/31 IEC71 - 71 SP/4	12	B52

0,37 kW
1SI, 1SMI - Worm gear motors

P_1	n_2 IE1 Standard	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 Standard	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1 Standard	IE2	IE3	kg	
0,37	14	133	1,4	100	100		8,0	5,0	SK 1SI 75 IEC71 - 71 L/4		SK 1SI 75 IEC71 - 71 LP/4		B38-39
	17	115	1,8	80	80		8,0	5,0					
	23	95	2,3	60	60		8,0	5,0					
	28	83	2,8	50	50		8,0	5,0					
									SK 1SMI 75 IEC71 - 71 L/4		SK 1SMI 75 IEC71 - 71 LP/4	20	B48-49
	14	120	0,9	100	100		5,3	2,4	SK 1SI 63 IEC71 - 71 L/4		SK 1SI 63 IEC71 - 71 LP/4		B36-37
	17	104	1,1	80	80		5,4	2,4					
	23	88	1,5	60	60		5,5	2,5					
	28	78	1,8	50	50		5,5	2,5					
	34	66	2,2	40	40		5,5	2,5					
	46	53	3,0	30	30		5,5	2,5					
	55	49	2,8	25	25		5,6	2,5					
									SK 1SMI 63 IEC71 - 71 L/4		SK 1SMI 63 IEC71 - 71 LP/4	12	B46-47
	23	80	0,9	60	60		4,8	2,4	SK 1SI 50 IEC71 - 71 L/4		SK 1SI 50 IEC71 - 71 LP/4		B34-35
	28	72	1,1	50	50		4,8	2,5					
	34	61	1,4	40	40		4,8	2,5					
	46	50	1,8	30	30		4,8	2,5					
	55	46	1,6	25	25		4,8	2,5					
	69	38	2,1	20	20		4,8	2,5					
	92	30	2,9	15	15		4,8	2,5					
	110	27	2,7	12,5	12,5		4,8	2,5					
									SK 1SMI 50 IEC71 - 71 L/4		SK 1SMI 50 IEC71 - 71 LP/4	11	B44-45
	34	55	0,8	40	40		2,7	1,1	SK 1SI 40 IEC71 - 71 L/4		SK 1SI 40 IEC71 - 71 LP/4		B32-33
	46	45	1,1	30	30		2,7	1,1					
	55	44	1,0	25	25		2,7	1,1					
	69	36	1,2	20	20		2,8	1,1					
	92	29	1,7	15	15		2,8	1,1					
	110	26	1,6	12,5	12,5		2,8	1,1					
	138	21	2,0	10	10		2,8	1,2					
	184	16	2,7	7,5	7,5		2,8	1,2					
									SK 1SMI 40 IEC71 - 71 L/4		SK 1SMI 40 IEC71 - 71 LP/4	9	B42-43
	69	34	0,8	20	20		1,5	0,6	SK 1SI 31 IEC71 - 71 L/4		SK 1SI 31 IEC71 - 71 LP/4		B30-31
	92	27	1,1	15	15		1,4	0,6					
	110	24	1,0	12,5	12,5		1,3	0,6					
	138	20	1,3	10	10		1,2	0,6					
	184	16	1,7	7,5	7,5		1,1	0,6					
	276	11	2,1	5	5		1,0	0,7					
									SK 1SMI 31 IEC71 - 71 L/4		SK 1SMI 31 IEC71 - 71 LP/4	8	B40-41

0,37 kW
1SI, 1SMI - Helical worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,37	3,5	479	0,8	400	40	10	8,0	5,0	SK 1SI 75/H10 IEC71 - 71 L/4		SK 1SI 75/H10 IEC71 - 71 LP/4		B51
	4,6	436	0,8	300	30	10	8,0	5,0					
	5,5	385	1,0	250	25	10	8,0	5,0					
	6,9	328	1,2	200	20	10	8,0	5,0					
	9,2	263	1,6	150	15	10	8,0	5,0					
	11	237	1,5	125	12,5	10	8,0	5,0					
	14	197	1,9	100	10	10	8,0	5,0					
	18	153	2,0	75	7,50	10	8,0	5,0					
	28	107	2,0	50	5	10	8,0	5,0					
									SK 1SMI 75/H10 IEC71 - 71 L/4		SK 1SMI 75/H10 IEC71 - 71 LP/4	22	B51
	9,2	253	1,0	150	15	10	4,2	1,9	SK 1SI 63/H10 IEC71 - 71 L/4		SK 1SI 63/H10 IEC71 - 71 LP/4		B50
	11	230	0,9	125	12,5	10	4,5	2,0					
	14	192	1,0	100	10	10	4,9	2,2					
	18	150	1,0	75	7,5	10	5,2	2,3					
	28	106	1,0	50	5	10	5,4	2,4					
									SK 1SMI 63/H10 IEC71 - 71 L/4		SK 1SMI 63/H10 IEC71 - 71 LP/4	14	B50
	18	148	0,9	75	7,5	10	4,8	2,3	SK 1SI 50/H10 IEC71 - 71 L/4		SK 1SI 50/H10 IEC71 - 71 LP/4		B50
	28	105	1,0	50	5	10	4,8	2,4					
									SK 1SMI 50/H10 IEC71 - 71 L/4		SK 1SMI 50/H10 IEC71 - 71 LP/4	12	B50

0,37 kW
1SI, 1SMI - Double worm gear motors

P_1	r	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor				mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,37	3,1	475	0,8	450	30	15	8,0	4,4	SK 1SI 75/40 IEC71 - 71 L/4		SK 1SI 75/40 IEC71 - 71 LP/4		B53
	3,7	430	0,8	375	30	12,5	8,0	4,5					
	4,6	359	1,0	300	30	10	8,0	4,7					
	6,1	289	1,2	225	30	7,5	8,0	4,8					
	9,2	210	1,5	150	30	5	8,0	4,9					
									SK 1SMI 75/40 IEC71 - 71 L/4		SK 1SMI 75/40 IEC71 - 71 LP/4	22	B53
	4,6	303	0,9	300	30	10	3,5	1,6	SK 1SI 63/31 IEC71 - 71 L/4		SK 1SI 63/31 IEC71 - 71 LP/4		B52
	6,1	241	1,0	225	30	7,5	4,4	2,0					
	9,2	178	1,3	150	30	5	5,0	2,2					
									SK 1SMI 63/31 IEC71 - 71 L/4		SK 1SMI 63/31 IEC71 - 71 LP/4	14	B52
	9,2	172	0,8	150	30	5	4,8	2,2	SK 1SI 50/31 IEC71 - 71 L/4		SK 1SI 50/31 IEC71 - 71 LP/4		B52
									SK 1SMI 50/31 IEC71 - 71 L/4		SK 1SMI 50/31 IEC71 - 71 LP/4	12	B52

0,55 kW
1SI, 1SMI - Worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,55	14	192	1,0	100	100		8,0	4,9	SK 1SI 75 IEC80 - 80 S/4	SK 1SI 75 IEC80 - 80 SH/4			B38-39
	18	169	1,2	80	80		8,0	4,9					
	24	138	1,6	60	60		8,0	5,0					
	28	120	1,9	50	50		8,0	5,0					
	36	102	2,4	40	40		8,0	5,0					
	47	85	2,6	30	30		8,0	5,0					
	57	74	3,1	25	25		8,0	5,0					
									SK 1SMI 75 IEC80 - 80 S/4	SK 1SMI 75 IEC80 - 80 SH/4		23	B48-49
	18	154	0,8	80	80		5,1	2,3	SK 1SI 63 IEC80 - 80 S/4	SK 1SI 63 IEC80 - 80 SH/4			B36-37
	24	126	1,0	60	60		5,3	2,4					
	28	113	1,2	50	50		5,4	2,4					
	36	96	1,5	40	40		5,4	2,4					
	47	77	2,1	30	30		5,5	2,5					
	57	70	1,9	25	25		5,5	2,5					
	71	58	2,5	20	20		5,5	2,5					
	95	45	3,4	15	15		5,6	2,5					
	114	40	3,2	12,5	12,5		5,6	2,5					
									SK 1SMI 63 IEC80 - 80 S/4	SK 1SMI 63 IEC80 - 80 SH/4		15	B46-47
	36	89	0,9	40	40		4,8	2,4	SK 1SI 50 IEC80 - 80 S/4	SK 1SI 50 IEC80 - 80 SH/4			B34-35
	47	72	1,2	30	30		4,8	2,5					
	57	67	1,1	25	25		4,8	2,5					
	71	55	1,5	20	20		4,8	2,5					
	95	44	2,0	15	15		4,8	2,5					
	114	38	1,9	12,5	12,5		4,8	2,5					
	142	31	2,4	10	10		4,8	2,5					
	189	24	3,2	7,5	7,5		4,8	2,5					
									SK 1SMI 50 IEC80 - 80 S/4	SK 1SMI 50 IEC80 - 80 SH/4		14	B44-45
	47	67	0,8	30	30		2,6	1,1	SK 1SI 40 IEC80 - 80 S/4	SK 1SI 40 IEC80 - 80 SH/4			B32-33
	71	53	0,9	20	20		2,7	1,1					
	95	42	1,2	15	15		2,7	1,1					
	114	37	1,1	12,5	12,5		2,8	1,1					
	142	30	1,4	10	10		2,8	1,1					
	189	24	1,9	7,5	7,5		2,8	1,2					
	284	16	2,3	5	5		2,5	1,2					
									SK 1SMI 40 IEC80 - 80 S/4	SK 1SMI 40 IEC80 - 80 SH/4		12	B42-43

1SI, 1SMI - Helical worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor				mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,55	7,1	475	0,8	200	20	10	8,0	5,0	SK 1SI 75/H10 IEC80 - 80S/4	SK 1SI 75/H10 IEC80 - 80SH/4			B51
	9,5	380	1,1	150	15	10	8,0	5,0					
	11	343	1,0	125	12,5	10	8,0	5,0					
	14	284	1,3	100	10	10	8,0	5,0					
	19	221	1,4	75	7,5	10	8,0	5,0					
	28	155	1,4	50	5	10	8,0	5,0					
									SK 1SMI 75/H10 IEC80 - 80S/4	SK 1SMI 75/H10 IEC80 - 80SH/4		24,7	B51

0,55 kW
1SI, 1SMI - Double worm gear motors

P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,55	6,3	417	0,8	225	30	7,5	8,0	4,6	SK 1SI 75/40 IEC80 - 80 S/4	SK 1SI 75/40 IEC80 - 80 SH/4			B53
	9,5	303	1,1	150	30	5	8,0	4,8					
									SK 1SMI 75/40 IEC80 - 80 S/4	SK 1SMI 75/40 IEC80 - 80 SH/4		25	B53

0,75 kW
1SI, 1SMI - Worm gear motors

P_1	n_2 IE1 Standard	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 Standard	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1 Standard	IE2	IE3	kg	
0,75	18	231	0,9	80	80		8,0	4,9	SK 1SI 75 IEC80 - 80 L/4	SK 1SI 75 IEC80 - 80 LH/4	SK 1SI 75 IEC80 - 80 LP/4		B38-39
	24	188	1,2	60	60		8,0	4,9					
	28	164	1,4	50	50		8,0	4,9					
	35	140	1,8	40	40		8,0	5,0					
	47	117	1,9	30	30		8,0	5,0					
	57	101	2,3	25	25		8,0	5,0					
	71	83	3,0	20	20		8,0	5,0					
									SK 1SMI 75 IEC80 - 80 L/4	SK 1SMI 75 IEC80 - 80 LH/4	SK 1SMI 75 IEC80 - 80 LP/4	24	B48-49
	24	173	0,8	60	60		5,0	2,2	SK 1SI 63 IEC80 - 80 L/4	SK 1SI 63 IEC80 - 80 LH/4	SK 1SI 63 IEC80 - 80 LP/4		B36-37
	28	154	0,9	50	50		5,1	2,3					
	35	132	1,1	40	40		5,3	2,4					
	47	105	1,5	30	30		5,4	2,4					
	57	96	1,4	25	25		5,4	2,4					
	71	80	1,8	20	20		5,5	2,5					
	94	62	2,5	15	15		5,5	2,5					
	113	54	2,4	12,5	12,5		5,5	2,5					
	142	44	3,0	10	10		5,6	2,5					
									SK 1SMI 63 IEC80 - 80 L/4	SK 1SMI 63 IEC80 - 80 LH/4	SK 1SMI 63 IEC80 - 80 LP/4	16	B46-47
	47	99	0,9	30	30		4,8	2,4	SK 1SI 50 IEC80 - 80 L/4	SK 1SI 50 IEC80 - 80 LH/4	SK 1SI 50 IEC80 - 80 LP/4		B34-35
	57	91	0,8	25	25		4,8	2,4					
	71	76	1,1	20	20		4,8	2,5					
	94	60	1,5	15	15		4,8	2,5					
	113	53	1,4	12,5	12,5		4,8	2,5					
	142	43	1,7	10	10		4,8	2,5					
	189	33	2,4	7,5	7,5		4,8	2,5					
	283	23	2,9	5	5		4,8	2,5					
									SK 1SMI 50 IEC80 - 80 L/4	SK 1SMI 50 IEC80 - 80 LH/4	SK 1SMI 50 IEC80 - 80 LP/4	15	B44-45
	94	57	0,9	15	15		2,6	1,1	SK 1SI 40 IEC80 - 80 L/4	SK 1SI 40 IEC80 - 80 LH/4	SK 1SI 40 IEC80 - 80 LP/4		B32-33
	113	51	0,8	12,5	12,5		2,7	1,1					
	142	42	1,0	10	10		2,7	1,1					
	189	32	1,4	7,5	7,5		2,8	1,1					
	283	22	1,7	5	5		2,4	1,2					
									SK 1SMI 40 IEC80 - 80 L/4	SK 1SMI 40 IEC80 - 80 LH/4	SK 1SMI 40 IEC80 - 80 LP/4	13	B42-43

0,75 kW
1SI, 1SMI - Helical worm gear motors

P_1	n_2	IE1	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1	mm
[kW]	[min^{-1}]		[Nm]					[kN]		IE1	IE2	IE3	kg	
0,75	9,4		520	0,8	150	15	10	8,0	5,0	SK 1SI 75/H10 IEC80 - 80 L/4	SK 1SI 75/H10 IEC80 - 80 LH/4	SK 1SI 75/H10 IEC80 - 80 LP/4		B51
	14		389	0,9	100	10	10	8,0	5,0					
	19		302	1,0	75	7,5	10	8,0	5,0					
	28		212	1,0	50	5	10	8,0	5,0					
										SK 1SMI 75/H10 IEC80 - 80 L/4	SK 1SMI 75/H10 IEC80 - 80 LH/4	SK 1SMI 75/H10 IEC80 - 80 LP/4	25,9	B51

0,75 kW
1SI, 1SMI - Double worm gear motors

P_1	r_{IE1}	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
0,75	9,4	414	0,8	150	30	5	8,0	4,6	SK 1SI 75/40 IEC80 - 80 L/4	SK 1SI 75/40 IEC80 - 80 LH/4	SK 1SI 75/40 IEC80 - 80 LP/4		B53
									SK 1SMI 75/40 IEC80 - 80 L/4	SK 1SMI 75/40 IEC80 - 80 LH/4	SK 1SMI 75/40 IEC80 - 80 LP/4	26	B53

1,10 kW + 1,50 kW
1SI, 1SMI - Worm gear motors

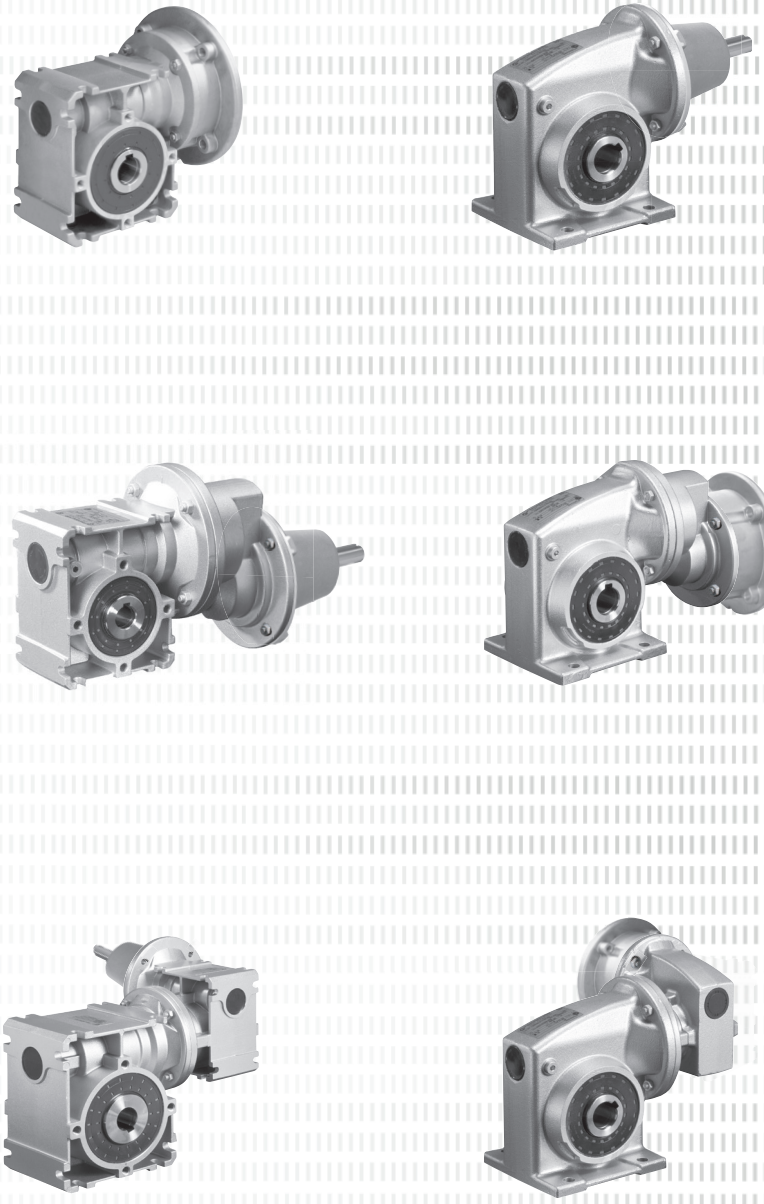
P_1	n_2	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 mm	
[kW]	[min^{-1}]	[Nm]					[kN]		IE1	IE2	IE3	kg	
1,10	24	272	0,8	60	60		8,0	4,8	SK 1SI 75 IEC90 - 90 S/4	SK 1SI 75 IEC90 - 90 SH/4	SK 1SI 75 IEC90 - 90 SP/4		B38-39
	29	238	1,0	50	50		8,0	4,9					
	36	202	1,2	40	40		8,0	4,9					
	48	171	1,3	30	30		8,0	4,9					
	57	146	1,6	25	25		8,0	5,0					
	72	120	2,0	20	20		8,0	5,0					
	96	92	2,9	15	15		8,0	5,0					
	115	81	2,7	12,5	12,5		8,0	5,0					
									SK 1SMI 75 IEC90 - 90 S/4	SK 1SMI 75 IEC90 - 90 SH/4	SK 1SMI 75 IEC90 - 90 SP/4	29	B48-49
	36	190	0,8	40	40		4,9	2,2	SK 1SI 63 IEC90 - 90 S/4	SK 1SI 63 IEC90 - 90 SH/4	SK 1SI 63 IEC90 - 90 SP/4		B36-37
	48	152	1,1	30	30		5,2	2,3					
	57	139	1,0	25	25		5,2	2,3					
	72	116	1,2	20	20		5,3	2,4					
	96	90	1,7	15	15		5,4	2,4					
	115	79	1,6	12,5	12,5		5,5	2,5					
	144	64	2,1	10	10		5,5	2,5					
	191	49	2,8	7,5	7,5		5,6	2,5					
									SK 1SMI 63 IEC90 - 90 S/4	SK 1SMI 63 IEC90 - 90 SH/4	SK 1SMI 63 IEC90 - 90 SP/4	21	B46-47
	96	87	1,0	15	15		4,8	2,4	SK 1SI 50 IEC90 - 90 S/4	SK 1SI 50 IEC90 - 90 SH/4	SK 1SI 50 IEC90 - 90 SP/4		B34-35
	115	76	0,9	12,5	12,5		4,8	2,5					
	144	62	1,2	10	10		4,8	2,5					
	191	48	1,6	7,5	7,5		4,8	2,5					
	287	33	2,0	5	5		4,8	2,5					
									SK 1SMI 50 IEC90 - 90 S/4	SK 1SMI 50 IEC90 - 90 SH/4	SK 1SMI 50 IEC90 - 90 SP/4	20	B44-45
1,50	35	279	0,9	40	40		8,0	4,8	SK 1SI 75 IEC90 - 90 L/4	SK 1SI 75 IEC90 - 90 LH/4	SK 1SI 75 IEC90 - 90 LP/4		B38-39
	47	234	0,9	30	30		8,0	4,9					
	57	202	1,1	25	25		8,0	4,9					
	71	166	1,5	20	20		8,0	4,9					
	94	128	2,1	15	15		8,0	5,0					
	113	111	1,9	12,5	12,5		8,0	5,0					
	142	90	2,5	10	10		8,0	5,0					
									SK 1SMI 75 IEC90 - 90 L/4	SK 1SMI 75 IEC90 - 90 LH/4	SK 1SMI 75 IEC90 - 90 LP/4	31	B48-49
	47	210	0,8	30	30		4,7	2,1	SK 1SI 63 IEC90 - 90 L/4	SK 1SI 63 IEC90 - 90 LH/4	SK 1SI 63 IEC90 - 90 LP/4		B36-37
	71	160	0,9	20	20		5,1	2,3					
	94	125	1,2	15	15		5,3	2,4					
	113	109	1,2	12,5	12,5		5,4	2,4					
	142	88	1,5	10	10		5,5	2,5					
	189	68	2,1	7,5	7,5		5,5	2,5					
	283	47	2,5	5	5		5,6	2,5					
									SK 1SMI 63 IEC90 - 90 L/4	SK 1SMI 63 IEC90 - 90 LH/4	SK 1SMI 63 IEC90 - 90 LP/4	23	B46-47
	142	86	0,9	10	10		4,8	2,4	SK 1SI 50 IEC90 - 90 L/4	SK 1SI 50 IEC90 - 90 LH/4	SK 1SI 50 IEC90 - 90 LP/4		B34-35
	189	66	1,2	7,5	7,5		4,8	2,5					
	283	46	1,4	5	5		4,6	2,5					
									SK 1SMI 50 IEC90 - 90 L/4	SK 1SMI 50 IEC90 - 90 LH/4	SK 1SMI 50 IEC90 - 90 LP/4	21	B44-45

2,20 kW + 3,00 kW + 4,00 kW
1SI, 1SMI - Worm gear motors

P_1	n_2 IE1 Standard	M_2	f_B	i_{ges}	i_{sch}	i_{vor}	F_R	F_{RF}	Gear motor			IE1 Standard	mm
[kW]	[min^{-1}]	[Nm]					[kN]		IE1 Standard	IE2	IE3	kg	
2,20	58	291	0,8	25	25		8,0	4,8	SK 1SI 75 IEC100 - 100 L/4	SK 1SI 75 IEC100 - 100 LH/4	SK 1SI 75 IEC100 - 100 LP/4		B38-39
	72	238	1,0	20	20		8,0	4,9					
	96	183	1,4	15	15		8,0	4,9					
	116	160	1,4	12,5	12,5		8,0	5,0					
	144	129	1,8	10	10		8,0	5,0					
	193	99	2,4	7,5	7,5		8,0	5,0					
	289	68	2,9	5	5		8,0	5,0					
									SK 1SMI 75 IEC100 - 100 L/4	SK 1SMI 75 IEC100 - 100 LH/4	SK 1SMI 75 IEC100 - 100 LP/4	39	B48-49
3,00	95	253	1,0	15	15		8,0	4,9	SK 1SI 75 IEC100 - 100 LA/4	SK 1SI 75 IEC100 - 100 AH/4	SK 1SI 75 IEC100 - 100 AP/4		B38-39
	114	221	1,0	12,5	12,5		8,0	4,9					
	142	179	1,3	10	10		8,0	4,9					
	190	137	1,7	7,5	7,5		8,0	5,0					
	285	93	2,1	5	5		8,0	5,0					
									SK 1SMI 75 IEC100 - 100 LA/4	SK 1SMI 75 IEC100 - 100 AH/4	SK 1SMI 75 IEC100 - 100 AP/4	39	B48-49
4,00	96	334	0,8	15	15		8,0	4,7	SK 1SI 75 IEC112 - 112 M/4	SK 1SI 75 IEC112 - 112 MH/4	SK 1SI 75 IEC112 - 112 MP/4		B38-39
	144	236	1,0	10	10		8,0	4,9					
	192	181	1,3	7,5	7,5		8,0	4,9					
	288	123	1,6	5	5		8,0	5,0					
									SK 1SMI 75 IEC112 - 112 M/4	SK 1SMI 75 IEC112 - 112 MH/4	SK 1SMI 75 IEC112 - 112 MP/4	49	B48-49

Notes

Gear units for W + IEC standard motors



W + IEC
Worm gear units

Typ SI Typ SMI				n_1 = 1400 min^{-1}			n_1 = 900 min^{-1}			n_1 = 500 min^{-1}			n_1 = 250 min^{-1}		
	i_{ges}	i_{sch}	i_{vor}	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]
SK 1SI 75 SK 1SMI75	100	100		14	185	0,52	9	217	0,43	5	250	0,33	2,5	278	0,21
	80	80		18	199	0,66	11	233	0,52	6,2	269	0,39	3,1	299	0,26
	60	60		23	218	0,85	15	255	0,69	8,3	295	0,50	4,2	327	0,33
	50	50		28	231	1,04	18	270	0,83	10	312	0,59	5	346	0,38
W	40	40		35	247	1,31	22	289	1,03	12	334	0,71	6,2	371	0,46
	30	30		47	216	1,38	30	253	1,07	17	292	0,75	8,3	324	0,45
+	25	25		56	228	1,67	36	267	1,30	20	308	0,89	10	342	0,54
	20	20		70	242	2,17	45	284	1,69	25	327	1,14	12	364	0,66
IEC	15	15		93	260	3,03	60	305	2,34	33	352	1,56	17	392	0,96
	12,5	12,5		112	216	2,88	72	252	2,21	40	291	1,47	20	324	0,86
	10	10		140	224	3,70	90	263	2,81	50	303	1,87	25	337	1,09
mm ⇨ B56, 38, 48	7,5	7,5		187	232	4,00	120	271	2,64	67	313	2,00	33	348	0,72
	5	5		280	194	4,00	180	227	2,64	100	262	2,00	50	291	0,72
SK 1SI 63 SK 1SMI 63	100	100		14	110	0,34	9	129	0,29	5	149	0,22	2,5	165	0,14
	80	80		18	118	0,44	11	138	0,34	6,2	160	0,25	3,1	177	0,16
	60	60		23	130	0,55	15	152	0,45	8,3	175	0,32	4,2	194	0,21
	50	50		28	137	0,66	18	160	0,53	10	185	0,38	5	206	0,24
W	40	40		35	147	0,84	22	172	0,65	12	198	0,45	6,2	220	0,29
	30	30		47	160	1,14	30	187	0,90	17	216	0,64	8,3	240	0,38
+	25	25		56	135	1,04	36	158	0,82	20	183	0,56	10	203	0,34
	20	20		70	144	1,34	45	169	1,05	25	195	0,71	12	216	0,41
IEC	15	15		93	155	1,50	60	182	0,99	33	210	0,75	17	233	0,27
	12,5	12,5		112	129	1,50	72	151	0,99	40	174	0,75	20	193	0,27
	10	10		140	134	1,50	90	157	0,99	50	181	0,75	25	201	0,27
mm ⇨ B56, 36, 46	7,5	7,5		187	139	1,50	120	163	0,99	67	188	0,75	33	209	0,27
	5	5		280	118	1,50	180	138	0,99	100	159	0,75	50	177	0,27
SK 1SI 50 SK 1SMI 50	100	100		14	62	0,22	9	72	0,18	5	84	0,13	2,5	93	0,08
	80	80		18	67	0,27	11	78	0,21	6,2	90	0,15	3,1	100	0,10
	60	60		23	73	0,34	15	85	0,28	8,3	98	0,20	4,2	109	0,12
	50	50		28	77	0,40	18	90	0,33	10	104	0,23	5	116	0,14
W	40	40		35	83	0,50	22	97	0,40	12	112	0,27	6,2	124	0,17
	30	30		47	90	0,68	30	105	0,54	17	122	0,38	8,3	135	0,23
+	25	25		56	76	0,62	36	89	0,49	20	103	0,33	10	114	0,20
	20	20		70	81	0,79	45	95	0,61	25	109	0,42	12	122	0,24
IEC	15	15		93	87	1,08	60	102	0,85	33	118	0,56	17	131	0,34
	12,5	12,5		112	72	1,02	72	85	0,79	40	98	0,52	20	109	0,30
	10	10		140	75	1,30	90	88	1,00	50	102	0,66	25	113	0,38
mm ⇨ B56, 34, 44	7,5	7,5		187	78	1,50	120	91	0,99	67	105	0,75	33	117	0,27
	5	5		280	66	1,50	180	77	0,99	100	89	0,75	50	99	0,27
SK 1SI 40 SK 1SMI 40	100	100		14	34	0,14	9	40	0,11	5	46	0,08	2,5	52	0,05
	80	80		18	37	0,17	11	43	0,13	6,2	50	0,10	3,1	55	0,06
	60	60		23	40	0,21	15	47	0,17	8,3	55	0,12	4,2	61	0,07
	50	50		28	43	0,25	18	50	0,20	10	58	0,14	5	64	0,09
W	40	40		35	46	0,31	22	54	0,24	12	62	0,17	6,2	69	0,10
	30	30		47	50	0,41	30	58	0,32	17	67	0,23	8,3	75	0,13
+	25	25		56	42	0,37	36	50	0,29	20	57	0,20	10	64	0,12
	20	20		70	45	0,47	45	53	0,37	25	61	0,25	12	68	0,14
IEC	15	15		93	49	0,63	60	57	0,49	33	66	0,33	17	73	0,20
	12,5	12,5		112	41	0,59	72	47	0,46	40	55	0,31	20	61	0,18
	10	10		140	42	0,75	90	50	0,50	50	57	0,38	25	64	0,14
mm ⇨ B56, 32, 42	7,5	7,5		187	44	0,75	120	52	0,50	67	60	0,38	33	66	0,14
	5	5		280	38	0,75	180	45	0,50	100	51	0,38	50	57	0,14

Typ SI Typ SMI				n_1 = 1400 min^{-1}			n_1 = 900 min^{-1}			n_1 = 500 min^{-1}			n_1 = 250 min^{-1}		
	i_{ges}	i_{sch}	i_{vor}	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]
SK 1SI 31 SK 1SMI 31	100	100		14	21	0,10	9	24	0,08	5	28	0,06	2,5	31	0,04
	80	80		18	22	0,12	11	26	0,09	6,2	30	0,06	3,1	33	0,04
	60	60		23	24	0,14	15	28	0,11	8,3	33	0,08	4,2	36	0,05
	50	50		28	26	0,17	18	30	0,13	10	35	0,09	5	39	0,05
W	40	40		35	28	0,20	22	32	0,16	12	37	0,11	6,2	41	0,07
	30	30		47	30	0,27	30	35	0,21	17	41	0,15	8,3	45	0,08
+	25	25		56	25	0,24	36	30	0,18	20	34	0,12	10	38	0,07
	20	20		70	27	0,30	45	32	0,23	25	37	0,15	12	41	0,09
IEC	15	15		93	29	0,37	60	34	0,24	33	40	0,19	17	44	0,07
	12,5	12,5		112	24	0,37	72	29	0,24	40	33	0,19	20	37	0,07
	10	10		140	26	0,37	90	30	0,24	50	34	0,19	25	38	0,07
mm ⇨ B30, 40	7,5	7,5		187	27	0,37	120	31	0,24	67	36	0,19	33	40	0,07
	5	5		280	23	0,37	180	27	0,24	100	31	0,19	50	35	0,07

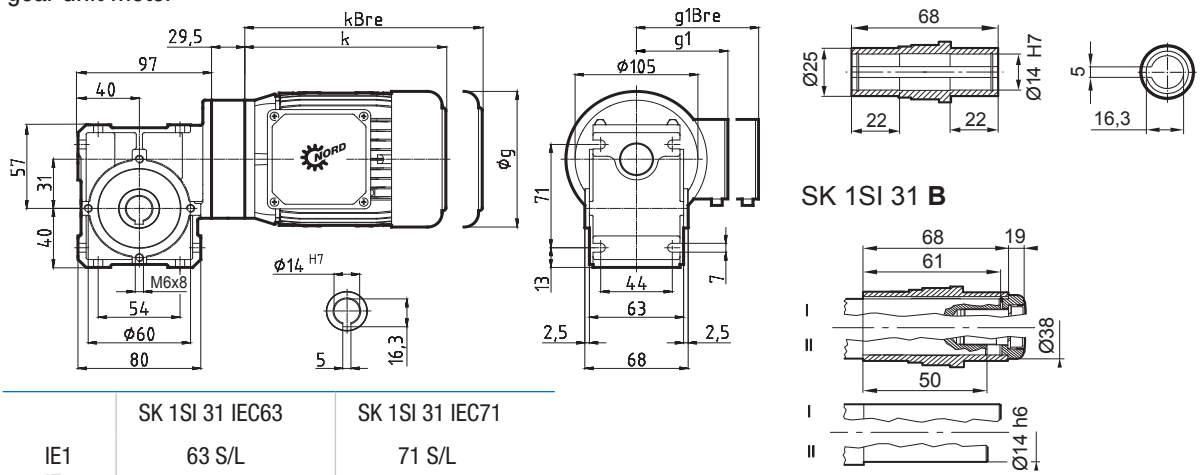
W + IEC
Helical worm gear units

Typ SI Typ SMI				n_1 = 1400 min^{-1}			n_1 = 900 min^{-1}			n_1 = 500 min^{-1}			n_1 = 250 min^{-1}		
	i_{ges}	i_{sch}	i_{vor}	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]
SK 1SI 75/H10	1000	100	10	1,4	304	0,15	0,90	317	0,11	0,50	334	0,07	0,25	359	0,04
SK 1SMI 75/H10	800	80	10	1,8	327	0,18	1,1	341	0,13	0,63	358	0,08	0,31	386	0,04
	600	60	10	2,3	358	0,22	1,5	373	0,16	0,83	393	0,10	0,42	423	0,05
W	500	50	10	2,8	379	0,26	1,8	395	0,18	1,0	416	0,11	0,50	448	0,06
	400	40	10	3,5	406	0,32	2,3	423	0,22	1,3	445	0,14	0,63	479	0,08
+	300	30	10	4,7	355	0,31	3,0	369	0,21	1,7	389	0,13	0,83	419	0,07
	250	25	10	5,6	374	0,36	3,6	390	0,25	2,0	410	0,15	1,0	442	0,08
IEC	200	20	10	7,0	398	0,46	4,5	415	0,32	2,5	436	0,19	1,3	470	0,10
	150	15	10	9,3	429	0,61	6,0	447	0,42	3,3	470	0,25	1,7	506	0,14
	125	12,5	10	11	354	0,56	7,2	369	0,38	4,0	388	0,23	2,0	418	0,13
mm ⇨ B56, 54, 51	100	10	10	14	369	0,70	9,0	384	0,48	5,0	404	0,29	2,5	435	0,16
	75	7,5	10	19	306	0,75	12	397	0,64	6,7	417	0,38	3,3	449	0,21
	50	5	10	28	215	0,75	18	329	0,75	10	349	0,45	5,0	376	0,24
SK 1SI 63/H10	1000	100	10	1,4	179	0,10	0,9	186	0,07	0,5	196	0,04	0,25	211	0,02
SK 1SMI 63/H10	800	80	10	1,8	192	0,12	1,1	200	0,08	0,62	210	0,05	0,31	227	0,03
	600	60	10	2,3	210	0,14	1,5	219	0,10	0,83	231	0,06	0,42	248	0,03
W	500	50	10	2,8	223	0,16	1,8	232	0,12	1	244	0,07	0,5	263	0,04
	400	40	10	3,5	239	0,19	2,2	248	0,13	1,2	261	0,08	0,62	282	0,05
+	300	30	10	4,7	260	0,26	3	271	0,18	1,7	285	0,11	0,83	307	0,06
	250	25	10	5,6	220	0,22	3,6	229	0,15	2	241	0,09	1	260	0,05
IEC	200	20	10	7	234	0,28	4,5	244	0,19	2,5	257	0,11	1,2	276	0,06
	150	15	10	9,3	253	0,37	6	263	0,25	3,3	277	0,15	1,7	298	0,09
	125	12,5	10	11	209	0,33	7,2	218	0,23	4	229	0,14	2	247	0,07
mm ⇨ B56, 54, 50	100	10	10	14	189	0,37	9	227	0,29	5	239	0,17	2,5	257	0,09
	75	7,5	10	19	145	0,37	12	227	0,37	6,7	248	0,23	3,3	267	0,12
	50	5	10	28	105	0,37	18	161	0,37	10	210	0,27	5	226	0,15
SK 1SI 50/H10	1000	100	10	1,4	101	0,06	0,9	105	0,04	0,5	110	0,02	0,25	119	0,01
SK 1SMI 50/H10	800	80	10	1,8	108	0,07	1,1	113	0,04	0,62	118	0,03	0,31	128	0,02
	600	60	10	2,3	118	0,08	1,5	123	0,06	0,83	130	0,03	0,42	140	0,02
W	500	50	10	2,8	125	0,09	1,8	131	0,06	1	137	0,04	0,5	148	0,02
	400	40	10	3,5	134	0,11	2,2	140	0,08	1,2	147	0,05	0,62	158	0,03
+	300	30	10	4,7	146	0,15	3	152	0,10	1,7	160	0,06	0,83	173	0,03
	250	25	10	5,6	124	0,13	3,6	129	0,09	2	136	0,05	1	146	0,03
IEC	200	20	10	7	132	0,16	4,5	137	0,11	2,5	144	0,07	1,2	155	0,03
	150	15	10	9,3	142	0,21	6	148	0,15	3,3	156	0,09	1,7	168	0,05
	125	12,5	10	11	118	0,19	7,2	122	0,13	4	129	0,08	2	139	0,04
mm ⇨ B56, 54, 50	100	10	10	14	122	0,24	9	128	0,16	5	134	0,10	2,5	145	0,05
	75	7,5	10	19	127	0,33	12	132	0,22	6,7	139	0,13	3,3	150	0,07
	50	5	10	28	103	0,37	18	111	0,26	10	117	0,15	5	126	0,08
SK 1SI 40/H10	1000	100	10	1,4	56	0,03	0,9	58	0,02	0,5	61	0,01	0,25	66	0,01
SK 1SMI 40/H10	800	80	10	1,8	60	0,04	1,1	62	0,03	0,62	66	0,02	0,31	71	0,01
	600	60	10	2,3	66	0,05	1,5	68	0,03	0,83	72	0,02	0,42	78	0,01
W	500	50	10	2,8	70	0,06	1,8	72	0,04	1	76	0,02	0,5	82	0,01
	400	40	10	3,5	75	0,07	2,2	78	0,05	1,2	82	0,03	0,62	88	0,02
+	300	30	10	4,7	81	0,09	3	85	0,06	1,7	89	0,04	0,83	96	0,02
	250	25	10	5,6	69	0,07	3,6	72	0,05	2	75	0,03	1	81	0,02
IEC	200	20	10	7	73	0,09	4,5	76	0,06	2,5	80	0,04	1,2	87	0,02
	150	15	10	9,3	79	0,12	6	82	0,08	3,3	87	0,05	1,7	93	0,03
	125	12,5	10	11	66	0,11	7,2	69	0,08	4	72	0,04	2	78	0,02
mm ⇨ B56, 54, 50	100	10	10	14	69	0,14	9	72	0,09	5	75	0,06	2,5	81	0,03
	75	7,5	10	19	72	0,19	12	75	0,13	6,7	79	0,07	3,3	85	0,04
	50	5	10	28	62	0,22	18	64	0,15	10	68	0,09	5	73	0,05

Typ SI Typ SMI				n_1 = 1400 min^{-1}			n_1 = 900 min^{-1}			n_1 = 500 min^{-1}			n_1 = 250 min^{-1}		
	i_{ges}	i_{sch}	i_{vor}	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]	n_2 [min^{-1}]	M_{2max} [Nm]	P_{emax} [kW]
SK 1SI 75/40 SK 1SMI 75/40 W + IEC mm ⇨ 🕮 B56, 53	3000	30	100	0,47	427	0,13	0,3	443	0,03	0,17	486	0,02	0,08	513	0,01
	2400	30	80	0,58	423	0,14	0,38	431	0,03	0,21	473	0,02	0,1	506	0,01
	1800	30	60	0,78	416	0,16	0,5	426	0,04	0,28	450	0,03	0,14	495	0,01
	1500	30	50	0,93	411	0,17	0,6	422	0,05	0,33	432	0,03	0,17	486	0,02
	1200	30	40	1,2	402	0,19	0,75	417	0,06	0,42	429	0,04	0,21	473	0,02
	900	30	30	1,6	388	0,22	1	408	0,08	0,56	424	0,05	0,28	450	0,03
	750	30	25	1,9	382	0,23	1,2	401	0,10	0,67	420	0,06	0,33	432	0,03
	600	30	20	2,3	375	0,25	1,5	390	0,12	0,83	414	0,07	0,42	429	0,04
	450	30	15	3,1	364	0,3	2	380	0,15	1,1	404	0,09	0,56	424	0,05
	375	30	12,5	3,7	358	0,36	2,4	374	0,17	1,3	396	0,10	0,67	420	0,06
	300	30	10	4,7	351	0,37	3	365	0,24	1,7	384	0,19	0,83	414	0,07
	225	30	7,5	6,2	340	0,37	4	356	0,24	2,2	377	0,19	1,1	404	0,07
	150	30	5	9,3	320	0,37	6	341	0,24	3,3	361	0,19	1,7	384	0,07
SK 1SI 63/31 SK 1SMI 63/31 IEC mm ⇨ 🕮 B52	3000	30	100	0,47	316	0,11	0,3	328	0,02	0,17	360	0,01	0,08	380	0,01
	2400	30	80	0,58	313	0,12	0,38	319	0,03	0,21	350	0,02	0,1	375	0,01
	1800	30	60	0,78	308	0,13	0,5	318	0,04	0,28	333	0,03	0,14	367	0,01
	1500	30	50	0,93	304	0,15	0,6	313	0,05	0,33	320	0,03	0,17	360	0,02
	1200	30	40	1,2	298	0,16	0,75	309	0,06	0,42	318	0,04	0,21	350	0,02
	900	30	30	1,6	288	0,19	1	302	0,08	0,56	314	0,05	0,28	333	0,03
	750	30	25	1,9	283	0,19	1,2	297	0,10	0,67	311	0,06	0,33	320	0,03
	600	30	20	2,3	278	0,21	1,5	289	0,12	0,83	307	0,07	0,42	318	0,04
	450	30	15	3,1	270	0,26	2	281	0,15	1,1	299	0,09	0,56	314	0,05
	375	30	12,5	3,7	265	0,29	2,4	277	0,17	1,3	294	0,10	0,67	311	0,06
	300	30	10	4,7	260	0,32	3	271	0,24	1,7	285	0,19	0,83	307	0,07
	225	30	7,5	6,2	251	0,37	4	264	0,24	2,2	279	0,19	1,1	299	0,07
	150	30	5	9,3	237	0,37	6	253	0,24	3,3	267	0,19	1,7	285	0,07
SK 1SI 50/31 SK 1SMI 50/31 IEC mm ⇨ 🕮 B52	3000	30	100	0,47	178	0,06	0,3	185	0,01	0,17	203	0,01	0,08	214	0
	2400	30	80	0,58	176	0,07	0,38	179	0,02	0,21	197	0,01	0,1	211	0,01
	1800	30	60	0,78	173	0,07	0,5	178	0,02	0,28	188	0,01	0,14	206	0,01
	1500	30	50	0,93	171	0,08	0,6	176	0,02	0,33	180	0,01	0,17	203	0,01
	1200	30	40	1,2	168	0,09	0,75	174	0,03	0,42	179	0,02	0,21	197	0,01
	900	30	30	1,6	162	0,11	1	170	0,04	0,56	177	0,02	0,28	188	0,01
	750	30	25	1,9	159	0,11	1,2	167	0,05	0,67	175	0,03	0,33	180	0,01
	600	30	20	2,3	156	0,12	1,5	163	0,06	0,83	173	0,03	0,42	179	0,02
	450	30	15	3,1	152	0,15	2	158	0,07	1,1	168	0,04	0,56	177	0,02
	375	30	12,5	3,7	149	0,17	2,4	156	0,09	1,3	165	0,05	0,67	175	0,03
	300	30	10	4,7	146	0,18	3	152	0,10	1,7	160	0,06	0,83	173	0,03
	225	30	7,5	6,2	141	0,22	4	148	0,13	2,2	157	0,08	1,1	168	0,04
	150	30	5	9,3	133	0,30	6	142	0,18	3,3	150	0,11	1,7	160	0,06
SK 1SI 40/31 SK 1SMI 40/31 IEC mm ⇨ 🕮 B52	3000	30	100	0,47	99	0,03	0,3	102	0,01	0,17	112	0	0,08	119	0
	2400	30	80	0,58	98	0,04	0,38	100	0,01	0,21	109	0,01	0,1	117	0
	1800	30	60	0,78	96	0,04	0,5	99	0,01	0,28	104	0,01	0,14	115	0
	1500	30	50	0,93	95	0,05	0,6	98	0,01	0,33	100	0,01	0,17	112	0
	1200	30	40	1,2	93	0,05	0,75	97	0,02	0,42	99	0,01	0,21	109	0,01
	900	30	30	1,6	90	0,06	1	94	0,02	0,56	98	0,01	0,28	104	0,01
	750	30	25	1,9	88	0,06	1,2	93	0,03	0,67	97	0,02	0,33	100	0,01
	600	30	20	2,3	87	0,07	1,5	90	0,03	0,83	96	0,02	0,42	99	0,01
	450	30	15	3,1	84	0,09	2	88	0,04	1,1	94	0,03	0,56	98	0,01
	375	30	12,5	3,7	83	0,10	2,4	87	0,05	1,3	92	0,03	0,67	97	0,02
	300	30	10	4,7	81	0,11	3	85	0,06	1,7	89	0,04	0,83	96	0,02
	225	30	7,5	6,2	79	0,13	4	82	0,08	2,2	87	0,05	1,1	94	0,03
	150	30	5	9,3	74	0,18	6	79	0,11	3,3	83	0,06	1,7	89	0,04

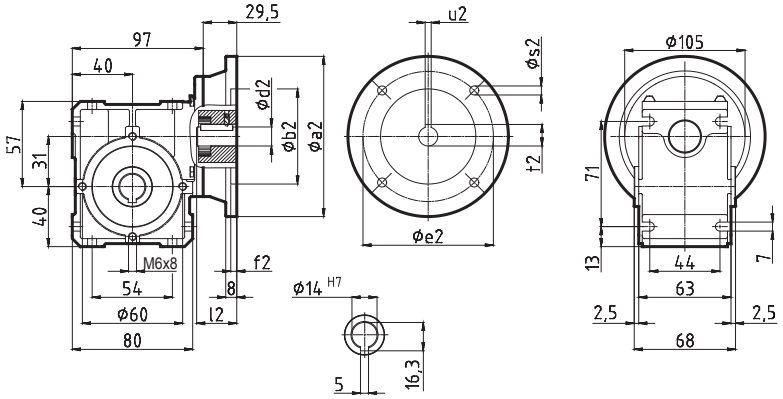
SK 1SI 31 IEC...

Worm gear unit motor



	SK 1SI 31 IEC63	SK 1SI 31 IEC71
IE1 IE2 IE3	63 S/L - SP/LP	71 S/L - SP/LP
g	130	145
g1	115	124
g1Bre	123	133
k	192	214
kBre	248	272

Worm gear unit for attachment to IEC standard motors

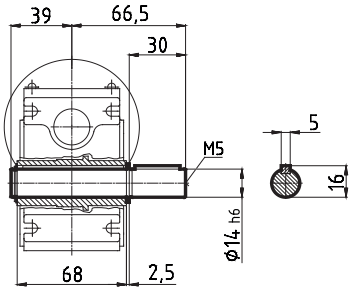


IEC-standard motor-adapter

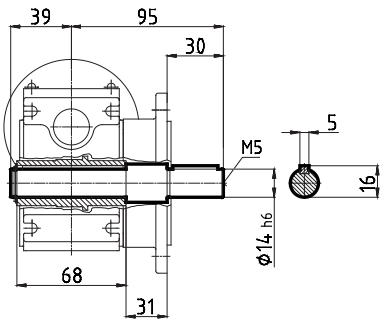
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140				
a2	105	120	90	120	140	105	140				
b2	70	80	60	80	95	70	95				
c2	-	-	-	-	8	-	-				
d2	9	9	11	11	11	14	14				
e2	85	100	75	100	115	85	115				
f2	3	3,5	3	3,5	3,5	3	3,5				
l2	20	20	23	23	23	30	30				
s2	7	7	6	7	9	7	9				
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3				
u2	3	3	4	4	4	5	5				

Plug-in shafts

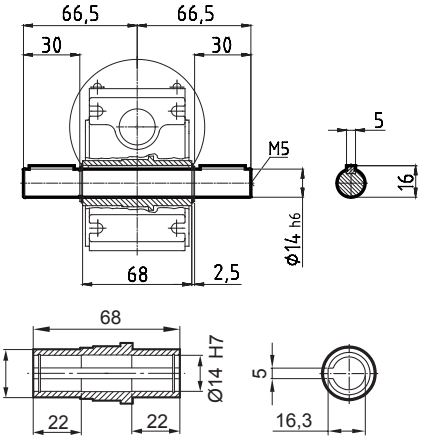
VA/I



VA/II

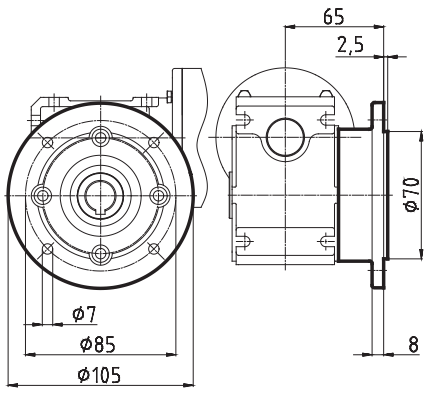


L

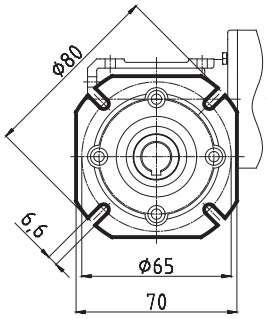


Output flange B5

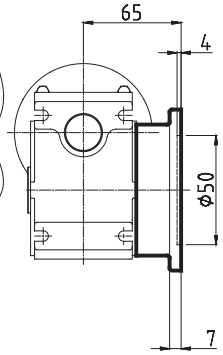
FA/I



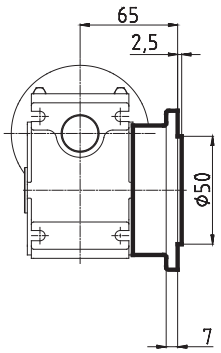
FA/II + FA/III



FA/II

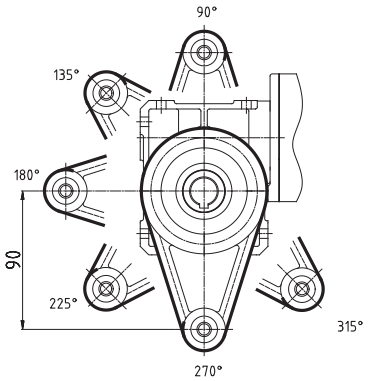


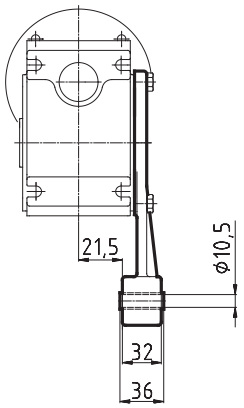
FA/III



Torque support

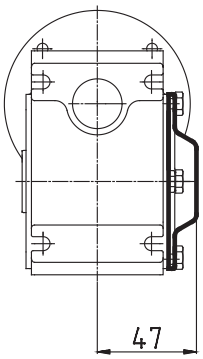
DA/I 90 .. DA/I 315





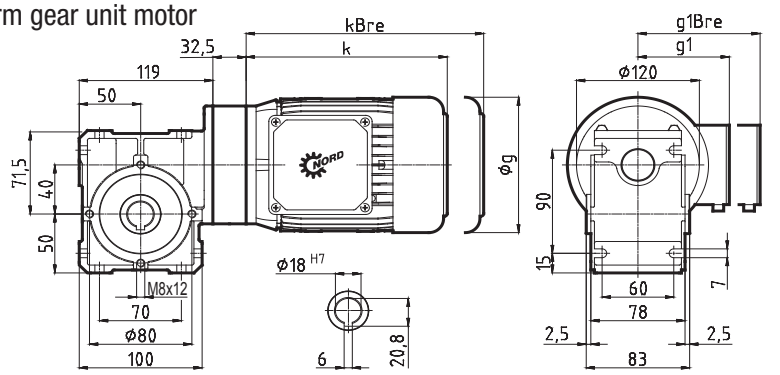
Covering cap

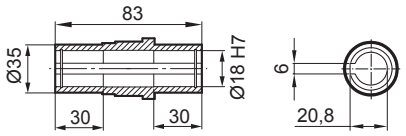
HA



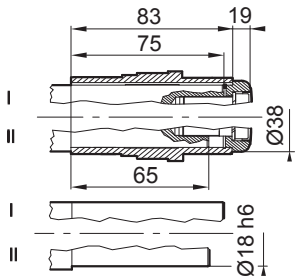
SK 1SI 40 IEC...

Worm gear unit motor



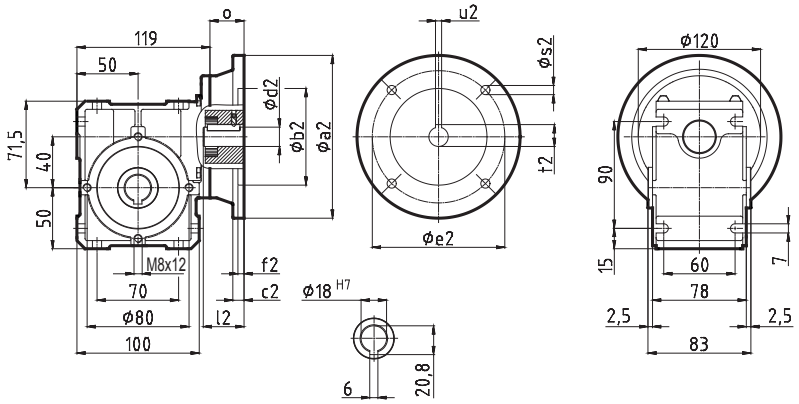


SK 1SI 40 B



	SK 1SI 40 IEC63	SK 1SI 40 IEC71	SK 1SI 40 IEC80
IE1 IE2 IE3	63 S/L - SP/LP	71 S/L - SP/LP	80 S / L SH / LH - / LP
g	130	145	165
g1	115	124	142
g1Bre	123	133	143
k	192	214	236
kBre	248	272	300

Worm gear unit for attachment to IEC standard motors

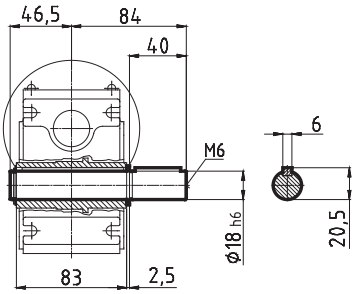


IEC-standard motor-adapter

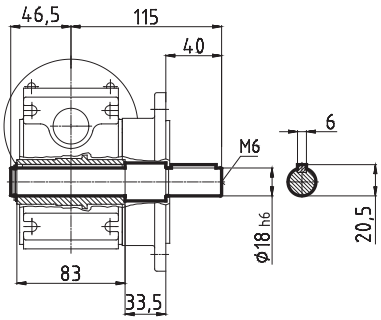
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200	IEC 90 B14 C140	IEC 90 B14 C160
a2	105	120	90	120	140	105	140	160	120	160	200	140	160
b2	70	80	60	80	95	70	95	110	80	110	130	95	110
c2	-	-	-	-	8	-	-	8	-	8	20	-	8
d2	9	9	11	11	11	14	14	14	19	19	19	24	24
e2	85	100	75	100	115	85	115	130	100	130	165	115	130
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4	3,5	4
l2	20	20	23	23	23	30	30	30	40	40	40	50	50
o	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	45,5	45,5
s2	7	7	6	7	9	7	9	9	7	9	M10	9	9
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8	27,3	27,3
u2	3	3	4	4	4	5	5	5	6	6	6	8	8

Plug-in shafts

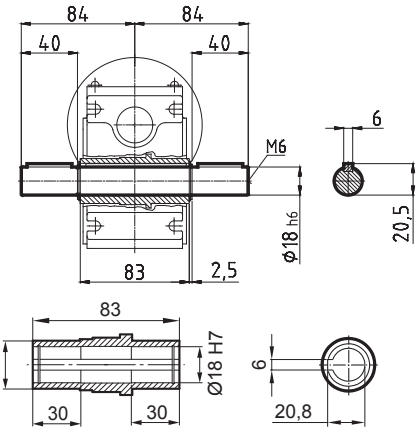
VA/I



VA/II

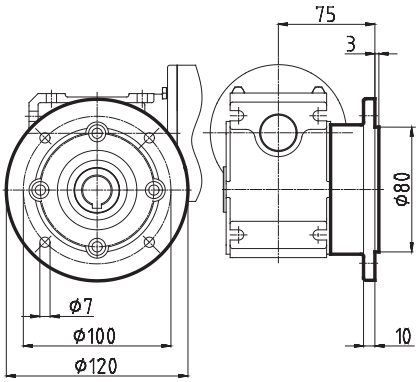


L

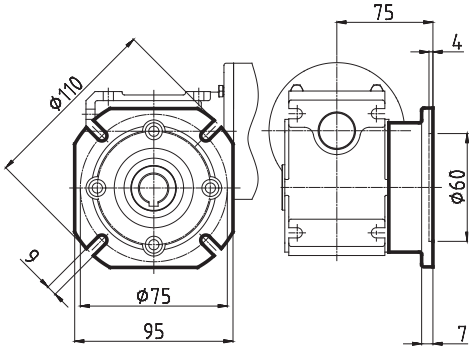


Output flange B5

FA/I

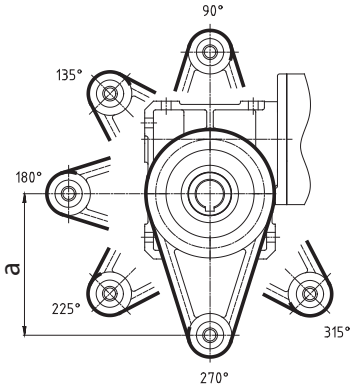


FA/II

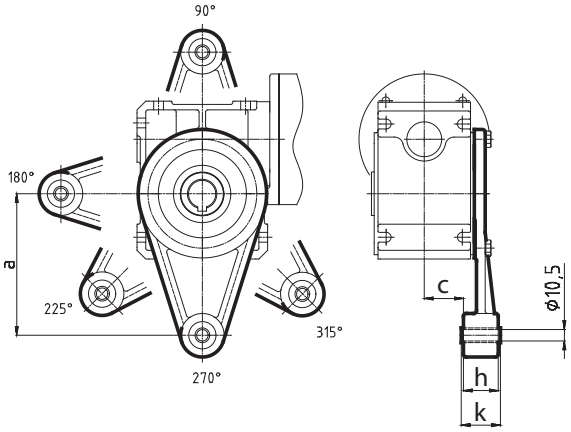


Torque support

DA/I 90 .. DA/I 315

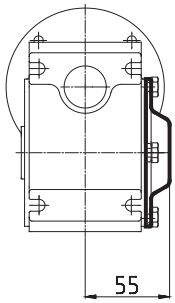


DA/III 90 .. DA/III 315



Covering cap

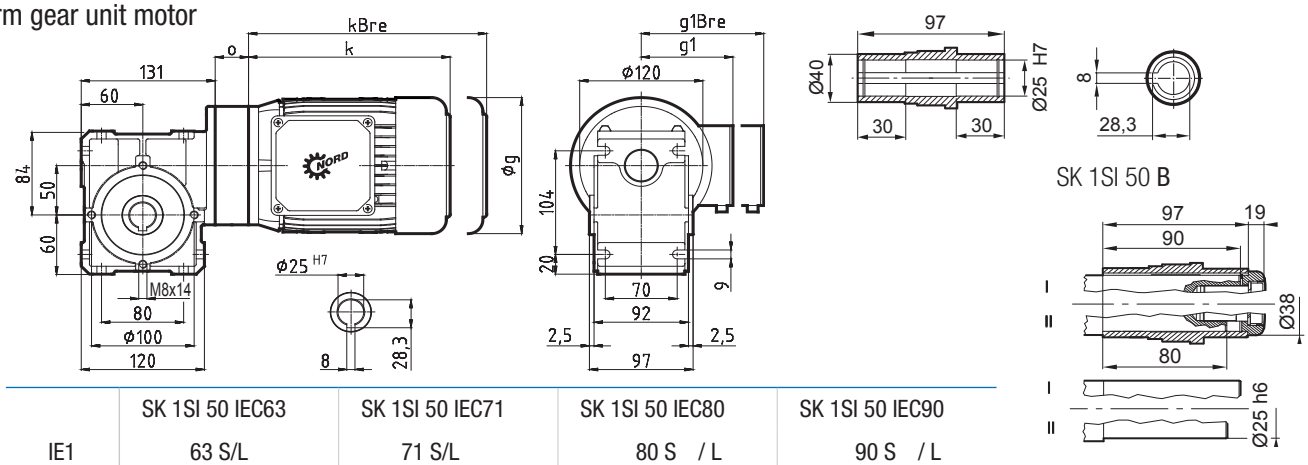
HA



	a	c	h	k
I	130	29	32	36
III	100	34	14	14

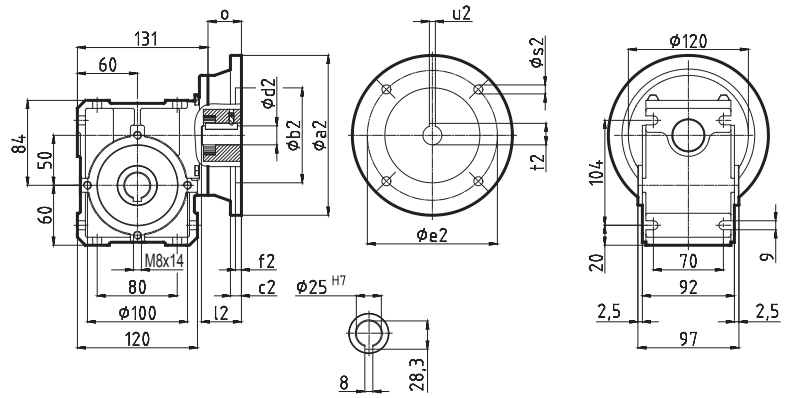
SK 1SI 50 IEC...

Worm gear unit motor



	SK 1SI 50 IEC63	SK 1SI 50 IEC71	SK 1SI 50 IEC80	SK 1SI 50 IEC90
IE1	63 S/L	71 S/L	80 S / L	90 S / L
IE2	-	-	SH / LH	SH / LH
IE3	SP/LP	SP/LP	- / LP	SP / LP
g	130	145	165	183
g1	116	124	142	147
g1Bre	124	133	143	148
k	192	214	236	276
kBre	248	272	300	351
o	32,5	32,5	32,5	45,5

Worm gear unit for attachment to IEC standard motors

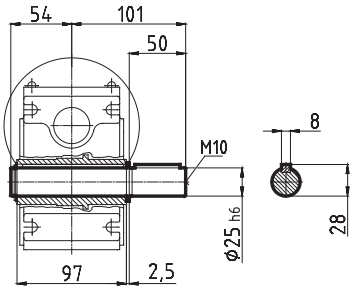


IEC-standard motor-adapter

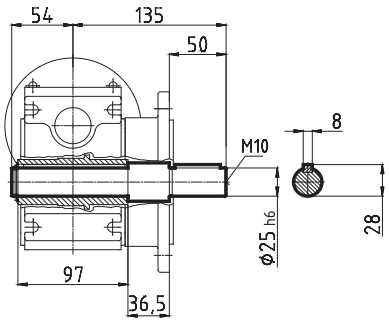
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200	IEC 90 B14 C140	IEC 90 B14 C160
a2	105	120	90	120	140	105	140	160	120	160	200	140	160
b2	70	80	60	80	95	70	95	110	80	110	130	95	110
c2	-	-	-	-	8	-	-	8	-	8	20	-	8
d2	9	9	11	11	11	14	14	14	19	19	19	24	24
e2	85	100	75	100	115	85	115	130	100	130	165	115	130
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4	3,5	4
l2	20	20	23	23	23	30	30	30	40	40	40	50	50
o	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	45,5	45,5
s2	7	7	6	7	9	7	9	9	7	9	M10	9	9
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8	27,3	27,3
u2	3	3	4	4	4	5	5	5	6	6	6	8	8

Plug-in shafts

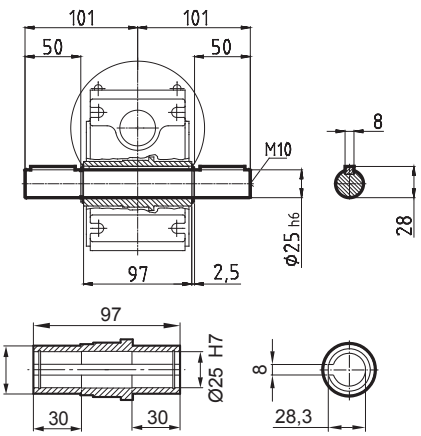
VA/I



VA/II

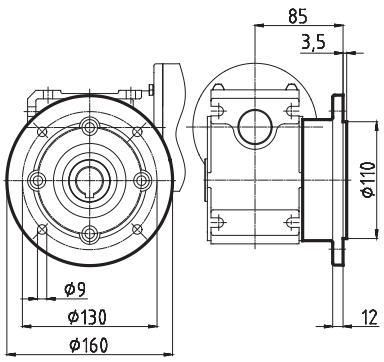


L

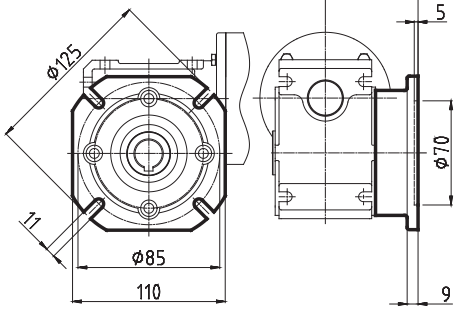


Output flange B5

FA/I

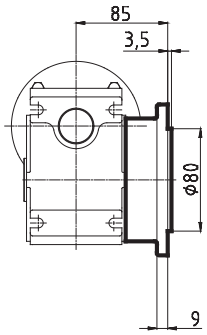


FA/II + FA/III



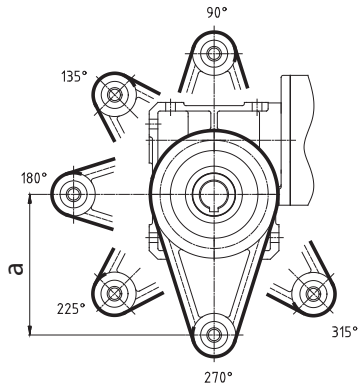
FA/II

FA/III

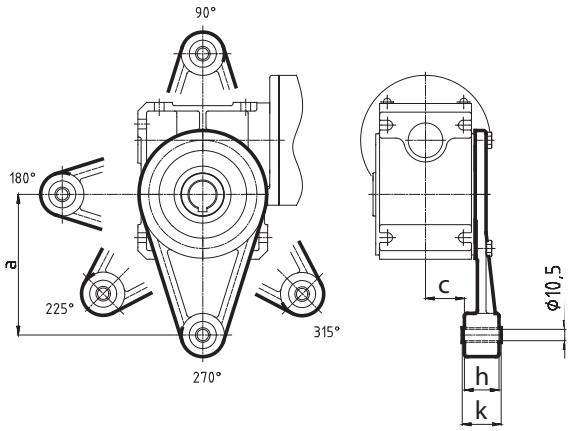


Torque support

DA/I 90 .. DA/I 315

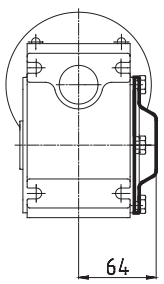


DA/II 90.. DA/II 315 + DA/III 90.. DA/III 315



Covering cap

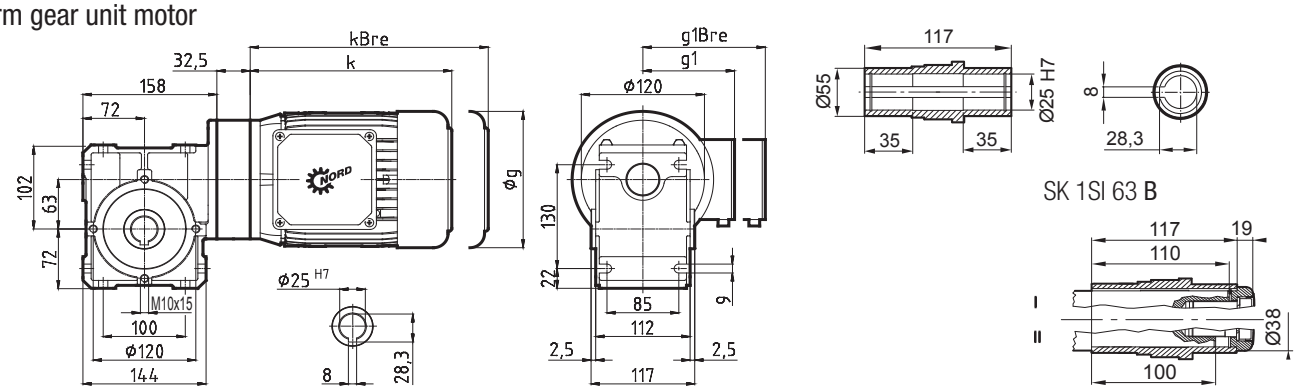
HA



	a	c	h	k
I	130	36	32	36
II	110	41	14	14
III	100	41	14	14

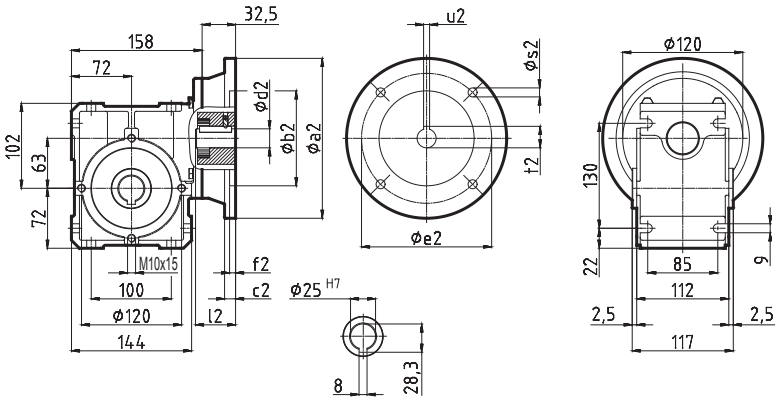
SK 1SI 63 IEC...

Worm gear unit motor



	SK 1SI 63 IEC63	SK 1SI 63 IEC71	SK 1SI 63 IEC80	SK 1SI 63 IEC90
IE1	63 S/L	71 S/L	80 S / L	90 S / L
IE2	-	-	SH / LH	SH / LH
IE3	SP/LP	SP/LP	- / LP	SP / LP
g	130	145	165	183
g1	116	124	142	147
g1Bre	124	133	143	148
k	192	214	236	276
kBre	248	272	300	351

Worm gear unit for attachment to IEC standard motors

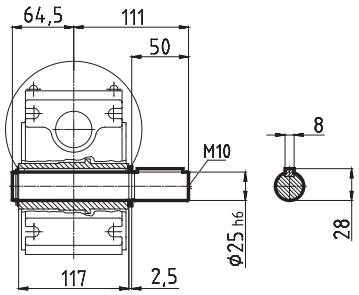


IEC-standard motor-adapter

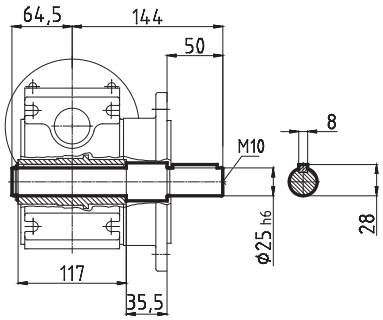
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200	IEC 90 B14 C140	IEC 90 B14 C160	IEC 90 B5 A200
a2	105	120	90	120	140	105	140	160	120	160	200	140	160	200
b2	70	80	60	80	95	70	95	110	80	110	130	95	110	130
c2	-	-	-	-	8	-	-	8	-	8	20	-	8	20
d2	9	9	11	11	11	14	14	14	19	19	19	24	24	24
e2	85	100	75	100	115	85	115	130	100	130	165	115	130	165
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4	3,5	4	4
l2	20	20	23	23	23	30	30	30	40	40	40	50	50	50
s2	7	7	6	7	9	7	9	9	7	9	M10	9	9	M10
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8	27,3	27,3	27,3
u2	3	3	4	4	4	5	5	5	6	6	6	8	8	8

Plug-in shafts

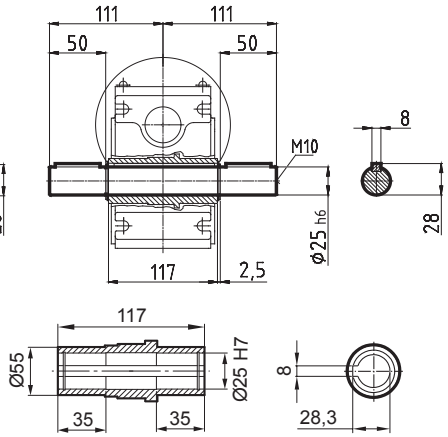
VA/I



VA/II

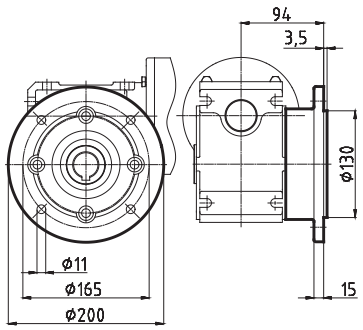


L

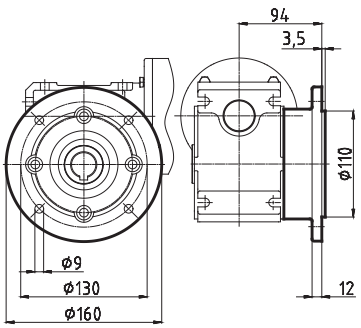


Output flange B5

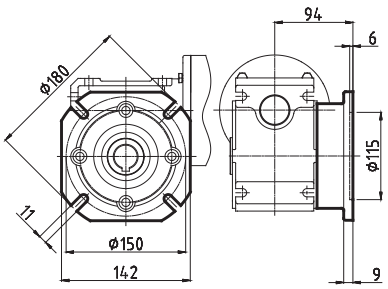
FA/I



FA/IV

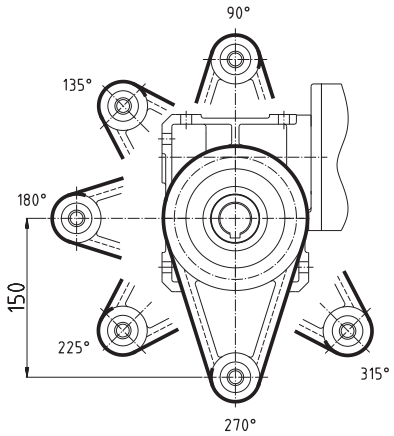


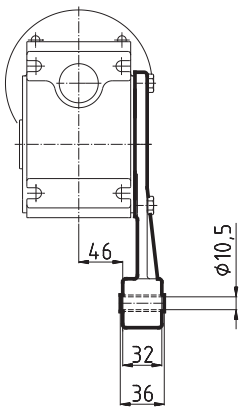
FA/II



Torque support

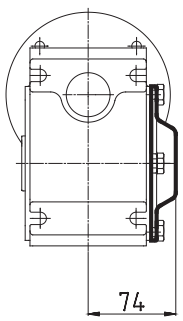
DA/I 90 .. DA/I 315





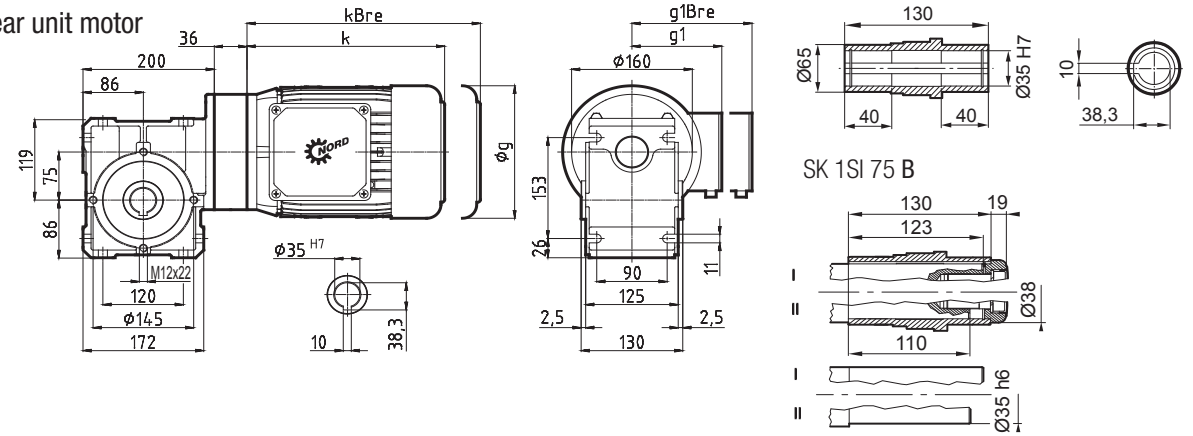
Covering cap

HA



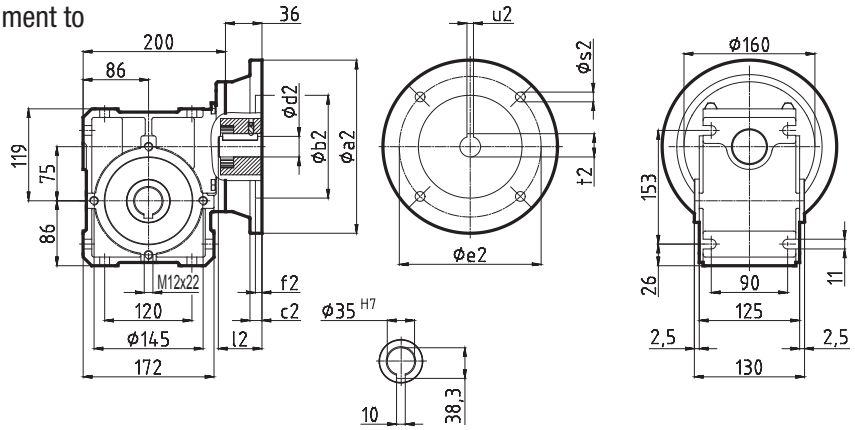
SK 1SI 75 IEC...

Worm gear unit motor



	SK 1SI 75 IEC71	SK 1SI 75 IEC80	SK 1SI 75 IEC90	SK 1SI 75 IEC100	SK 1SI 75 IEC112	
IE1 IE2 IE3	71 S/L - SP/LP	80 S / L SH / LH - / LP	90 S / L SH / LH SP / LP	100 L / LA LH / AH LP / AP	112 M - -	112 - MH MP
g	145	165	183	201	228	228
g1	124	142	147	169	179	179
g1Bre	133	143	148	159	170	170
k	214	236	276	306	326	351
kBre	272	300	351	397	419	444

Worm gear unit for attachment to IEC standard motors

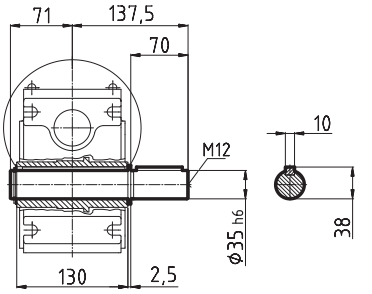


IEC-standard motor-adapter

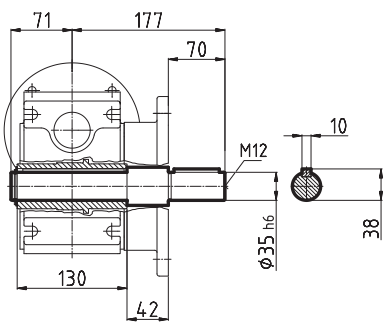
	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200	IEC 90 B14 C140	IEC 90 B14 C160	IEC 90 B5 A200	IEC 100 B14 C160	IEC 100 B14 C200	IEC 100 B5 A250	IEC 112 B14 C160	IEC 112 B14 C200	IEC 112 B5 A250
a2	105	140	160	120	160	200	140	160	200	160	200	250	160	200	250
b2	70	95	110	80	110	130	95	110	130	110	130	180	110	130	180
c2	-	-	-	-	-	-	-	-	-	-	-	12	-	-	12
d2	14	14	14	19	19	19	24	24	24	28	28	28	28	28	28
e2	85	115	130	100	130	165	115	130	165	130	165	215	130	165	215
f2	3	3,5	4	3,5	4	4	3,5	4	4	4	4	5	5	5	5
l2	30	30	30	40	40	40	50	50	50	60	60	60	60	60	60
s2	7	9	9	7	9	11	9	9	11	9	11	M12	9	11	M12
t2	16,3	16,3	16,3	21,8	21,8	21,8	27,3	27,3	27,3	31,3	31,3	31,3	31,3	31,3	31,3
u2	5	5	5	6	6	6	8	8	8	8	8	8	8	8	8

Plug-in shafts

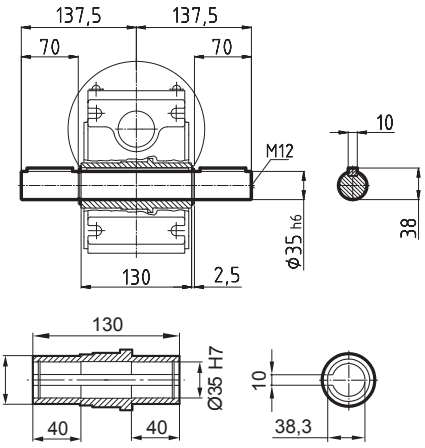
VA/I



VA/II

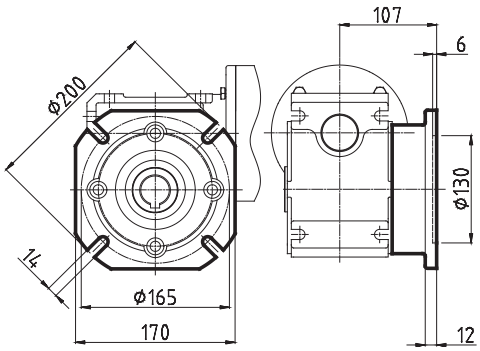


L



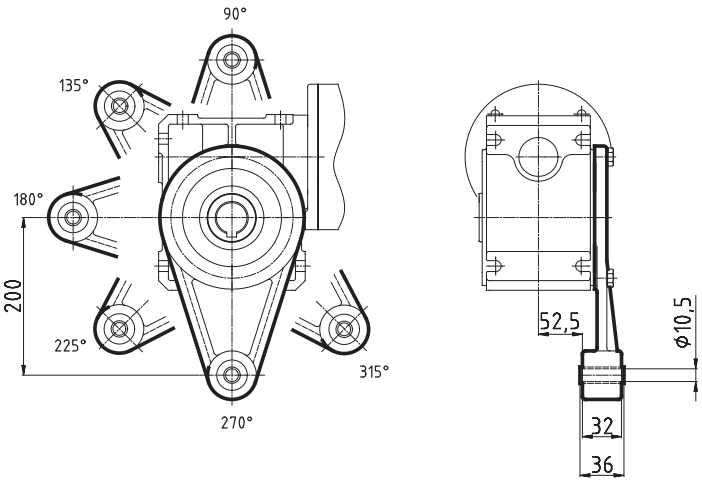
Output flange B5

FA/II



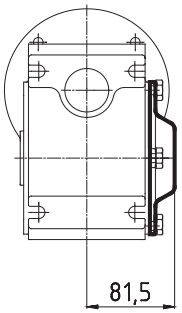
Torque support

DA/I 90 .. DA/I 315



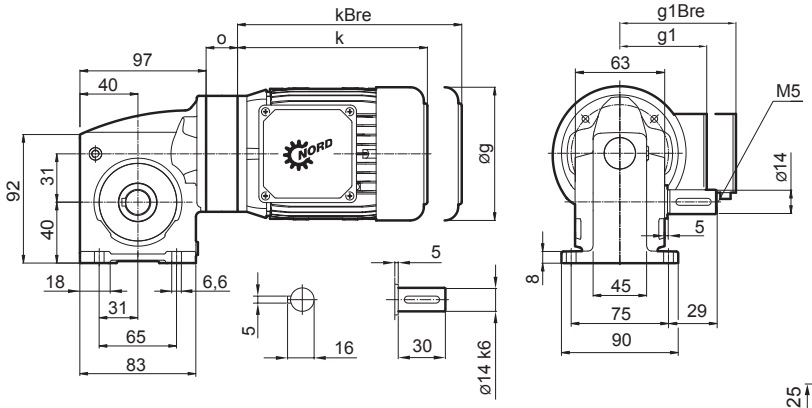
Covering cap

HA

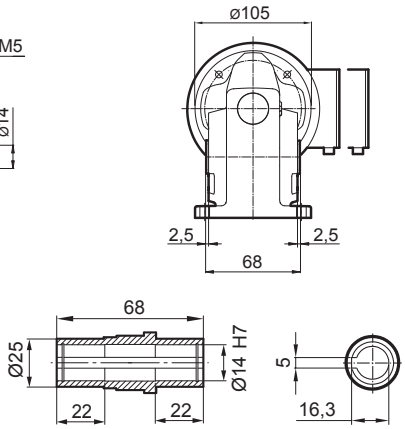


SK 1SMI 31

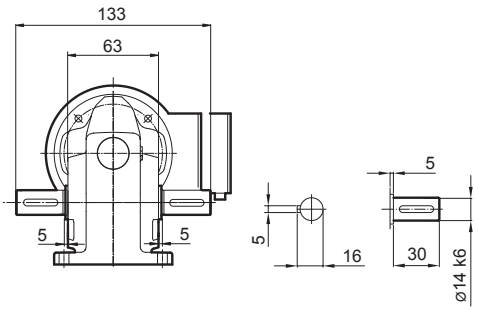
SK 1SMI 31 VX



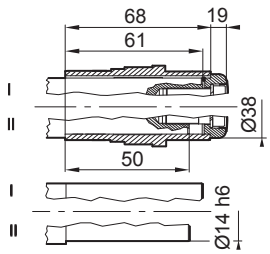
SK 1SMI 31 AX



SK 1SMI 31 LX

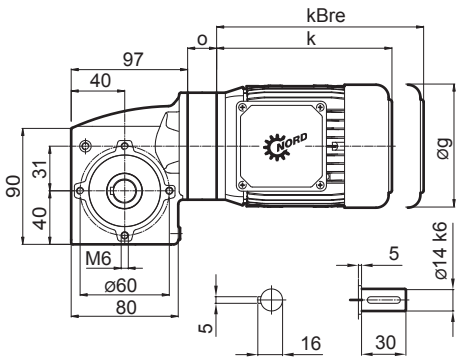


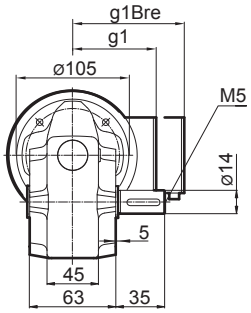
SK 1SMI 31 AXB(AZB)



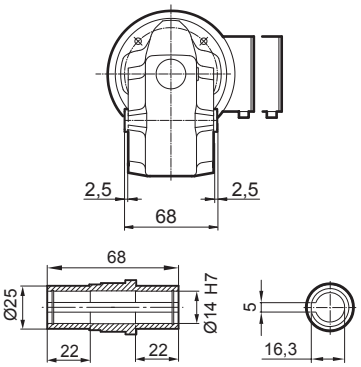
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP			
g	130	145			
g1	116	124			
g1Bre	124	133			
k	192	214			
kBre	248	272			
o	29,5	29,5			

SK 1SMI 31 VZ

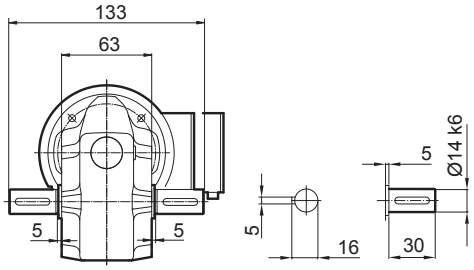




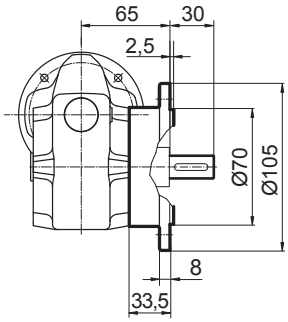
SK 1SMI 31 AZ



SK 1SMI 31 LZ

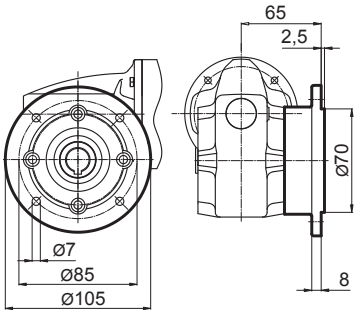


SK 1SMI 31 VF

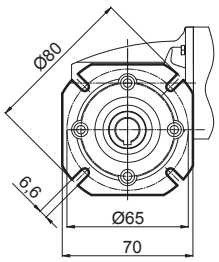


Output flange B5

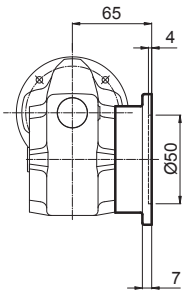
FA/I



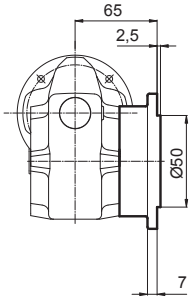
FA/II + F/III



FA/II

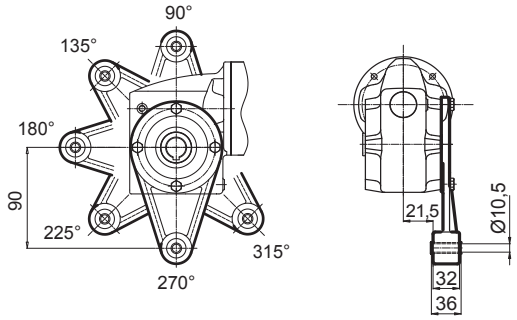


FA/III



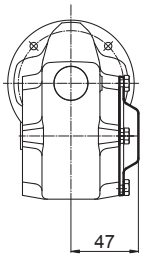
Torque support

DA/I 90 ... DA/I 315



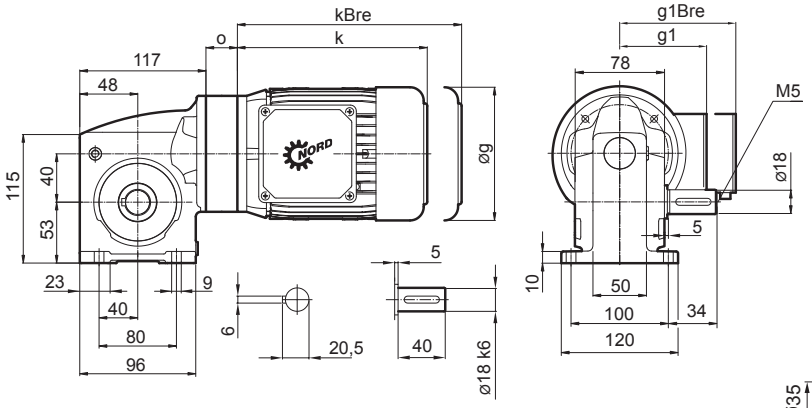
Covering cap

HA

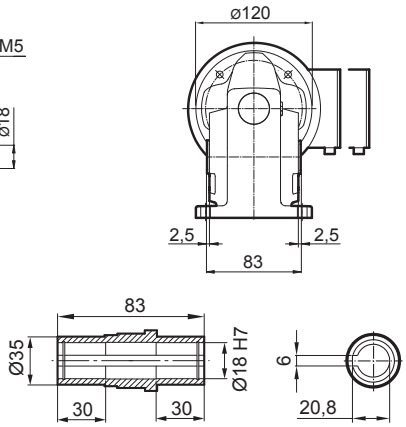


SK 1SMI 40

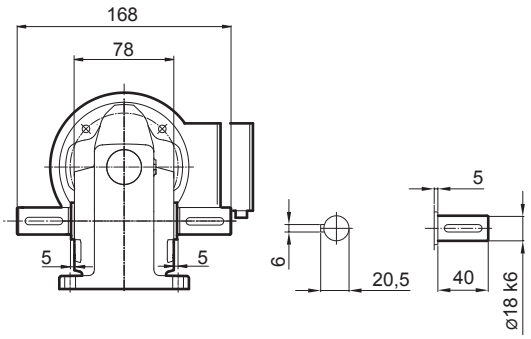
SK 1SMI 40 VX



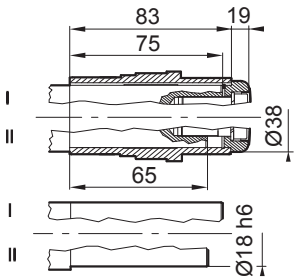
SK 1SMI 40 AX



SK 1SMI 40 LX

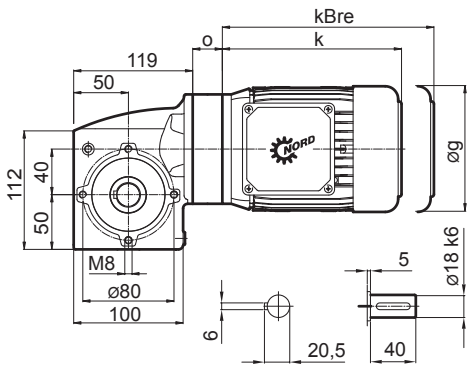


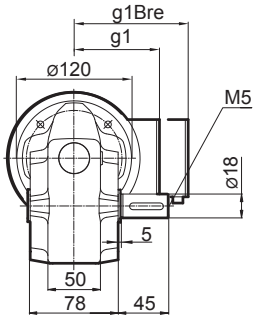
SK 1SMI 40 AXB(AZB)



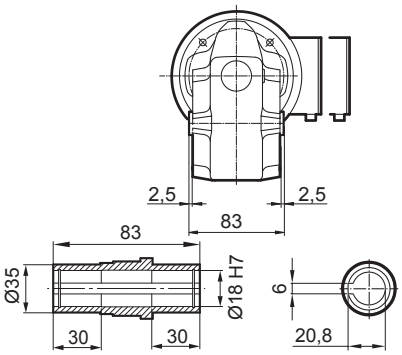
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP	80 S / L SH / LH - / LP		
g	130	145	165		
g1	116	124	142		
g1Bre	124	133	143		
k	192	214	236		
kBre	248	272	300		
o	32,5	32,5	32,5		

SK 1SMI 40 VZ

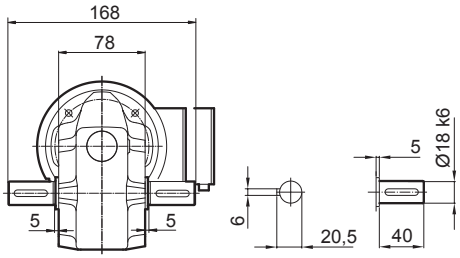




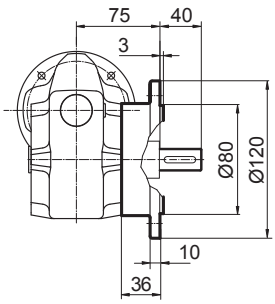
SK 1SMI 40 AZ



SK 1SMI 40 LZ

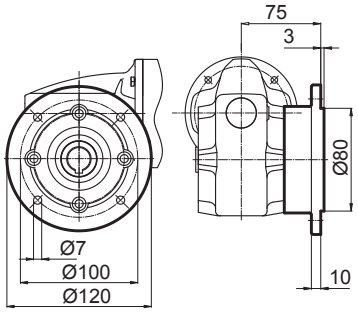


SK 1SMI 40 VF

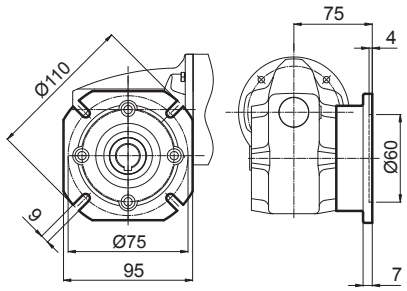


Output flange B5

FA/I

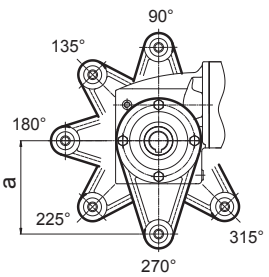


FA/II

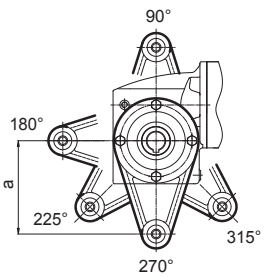


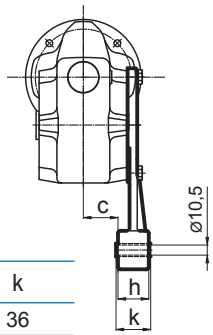
Torque support

DA/I 90 ... DA/I 315



DA/III 90 ... DA/III 315

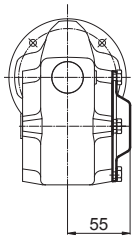




	a	c	h	k
I	130	29	32	36
III	100	34	14	14

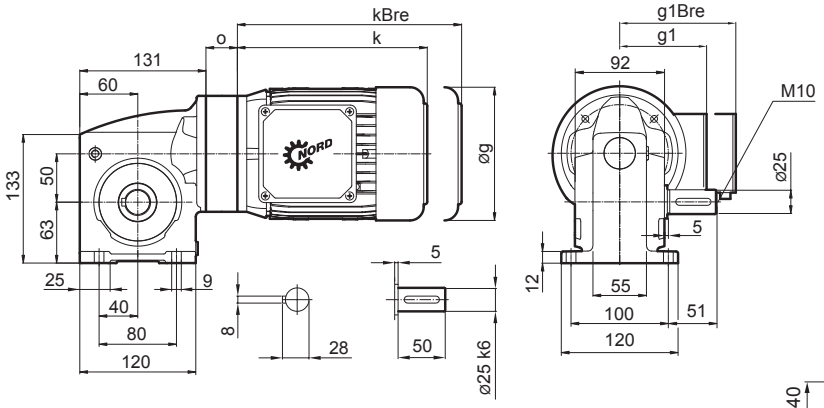
Covering cap

HA

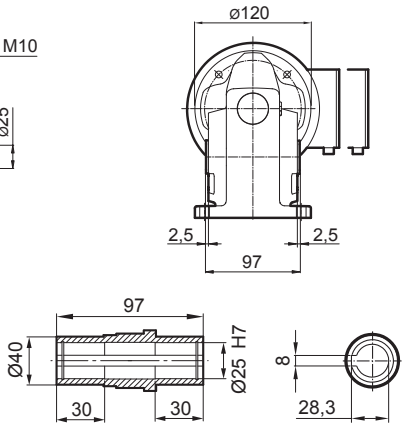


SK 1SMI 50

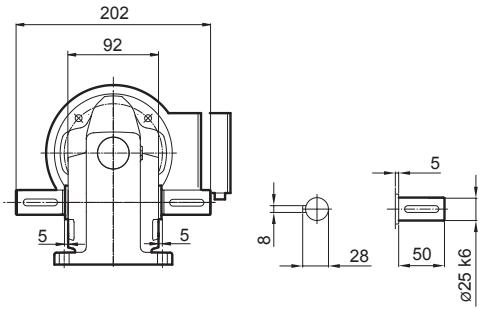
SK 1SMI 50 VX



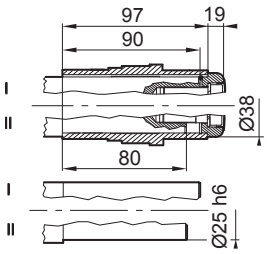
SK 1SMI 50 AX



SK 1SMI 50 LX

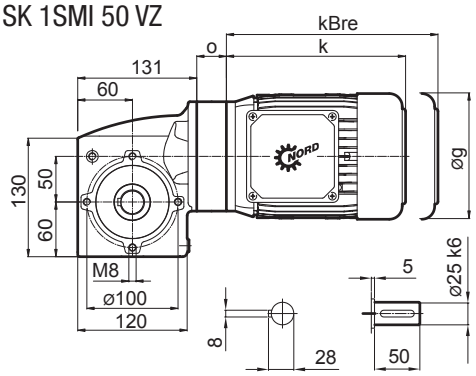


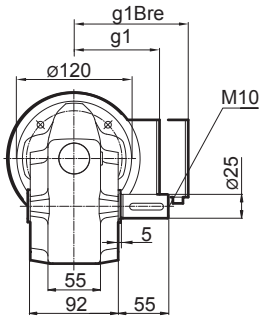
SK 1SMI 50 AXB(AZB)



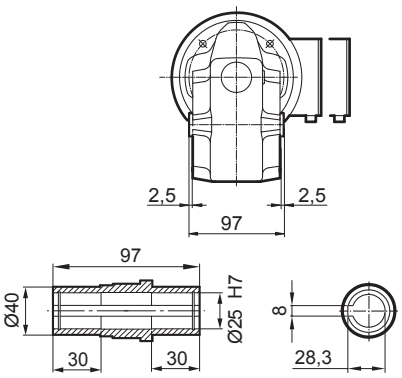
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP	80 S / L SH / LH - / LP	90 S / L SH / LH SP / LP	
g	130	145	165	183	
g1	116	124	142	147	
g1Bre	124	133	143	148	
k	192	214	236	276	
kBre	248	272	300	351	
o	32,5	32,5	32,5	45,5	

SK 1SMI 50 VZ

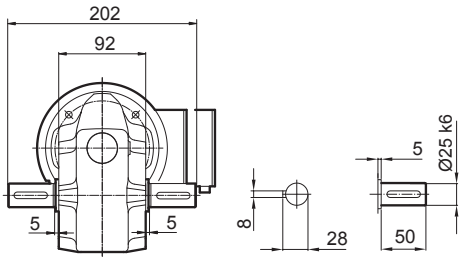




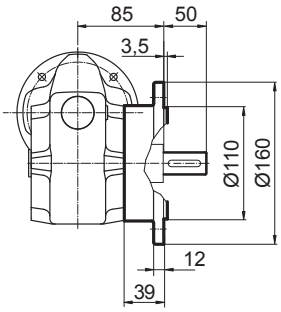
SK 1SMI 50 AZ



SK 1SMI 50 LZ

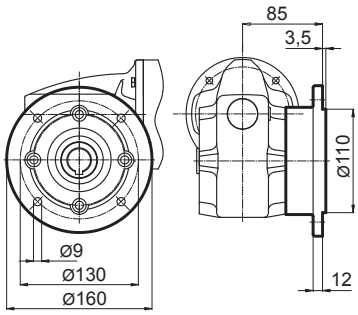


SK 1SMI 50 VF

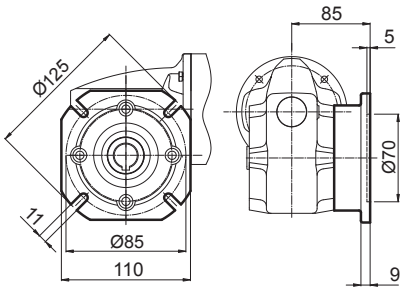


Output flange B5

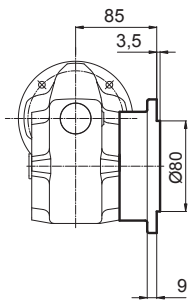
FA/I



FA/II + FA/III

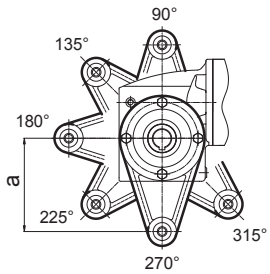


FA/III

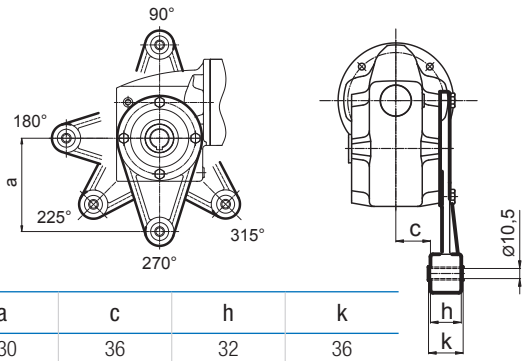


Torque support

DA/I 90 ... DA/I 315



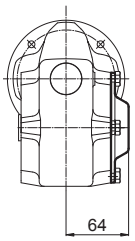
DA/II 90.. DA/II 315 + DA/III 90.. DA/III 315



	a	c	h	k
I	130	36	32	36
II	110	41	14	14
III	100	41	14	14

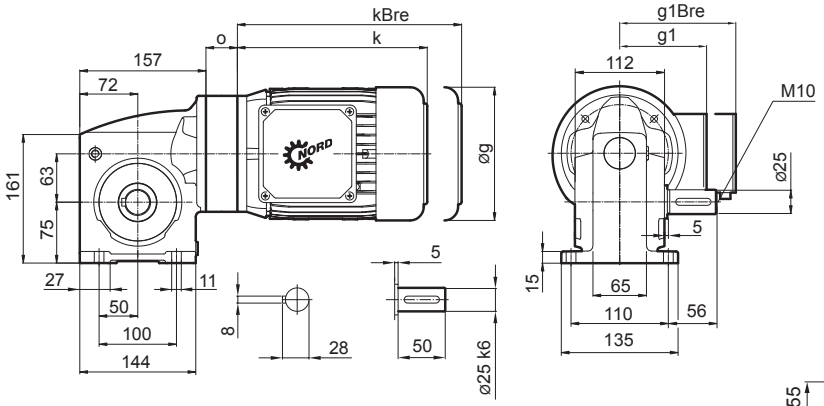
Covering cap

HA

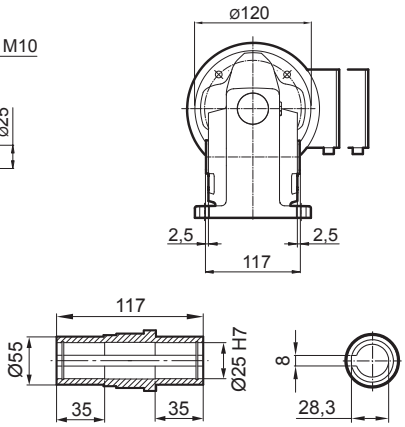


SK 1SMI 63

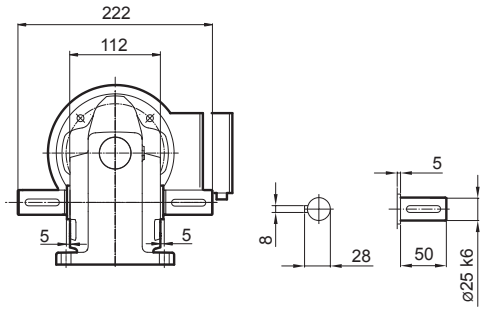
SK 1SMI 63 VX



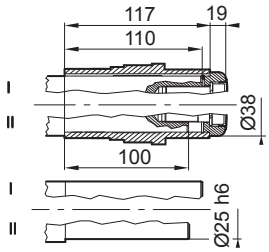
SK 1SMI 63 AX



SK 1SMI 63 LX

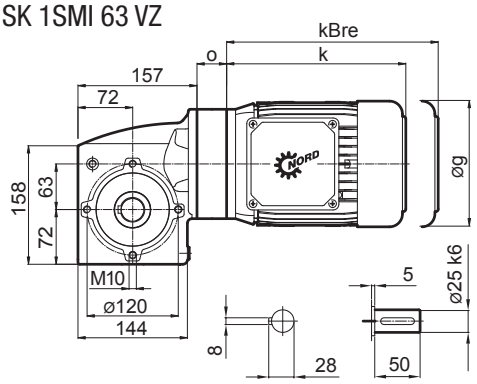


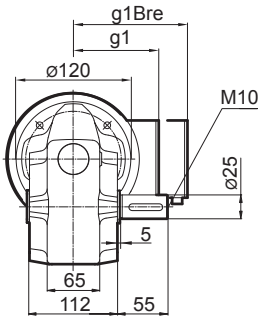
SK 1SMI 63 AXB(AZB)



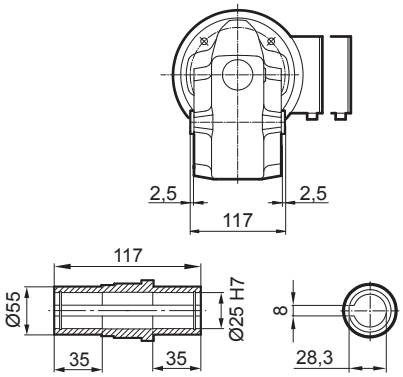
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP	80 S / L SH / LH - / LP	90 S / L SH / LH SP / LP	
g	130	145	165	183	
g1	116	124	142	147	
g1Bre	124	133	143	148	
k	192	214	236	276	
kBre	248	272	300	351	
o	32,5	32,5	32,5	32,5	

SK 1SMI 63 VZ

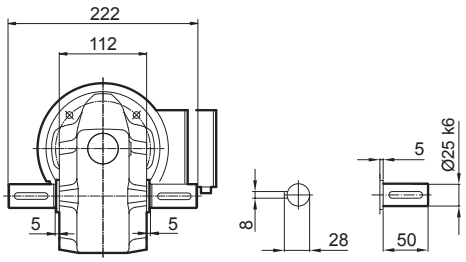




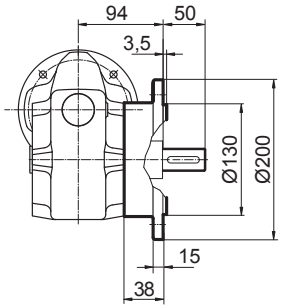
SK 1SMI 63 AZ



SK 1SMI 63 LZ

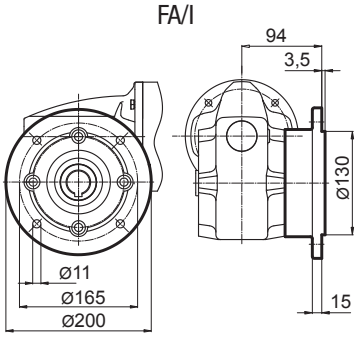


SK 1SMI 63 VF

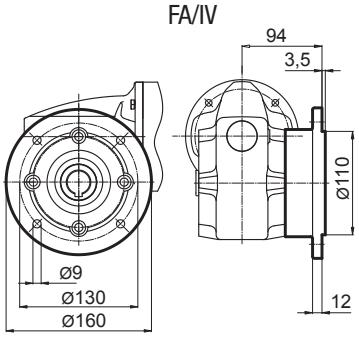


Output flange B5

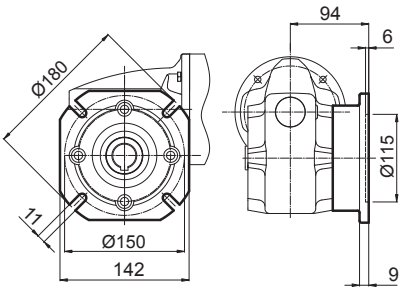
FA/I



FA/IV

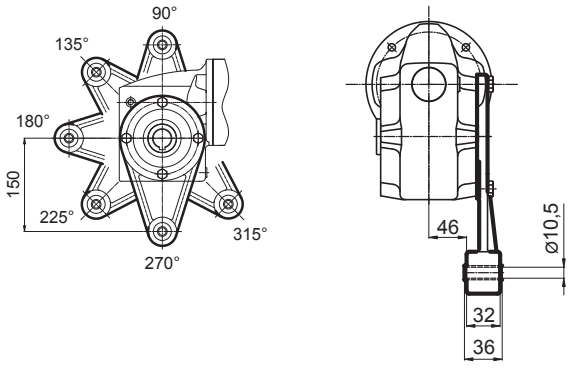


FA/II



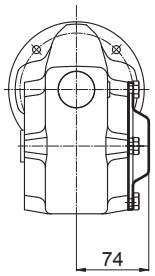
Torque support

DA/I 90 ... DA/I 315



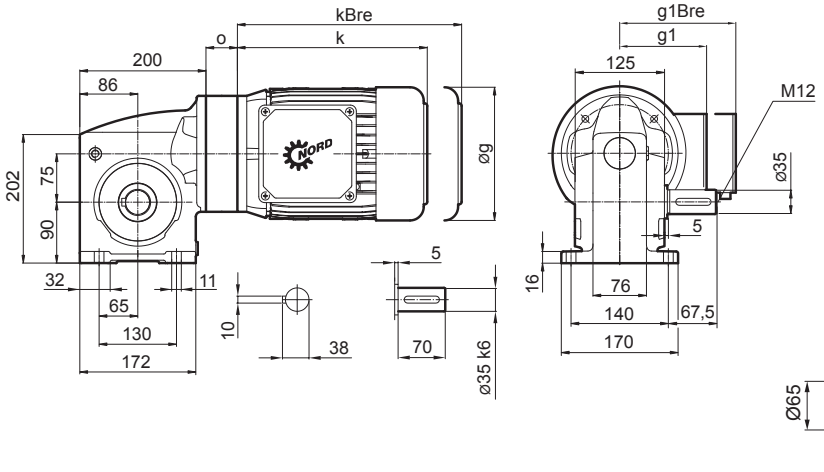
Covering cap

HA

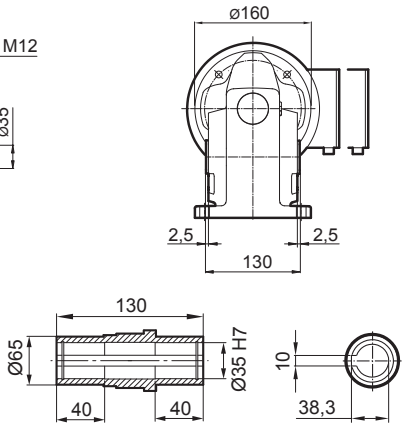


SK 1SMI 75

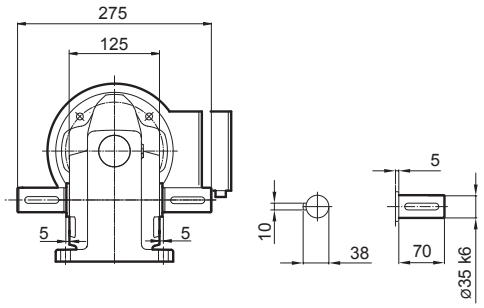
SK 1SMI 75 VX



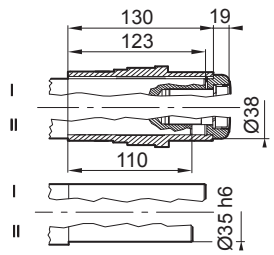
SK 1SMI 75 AX



SK 1SMI 75 LX

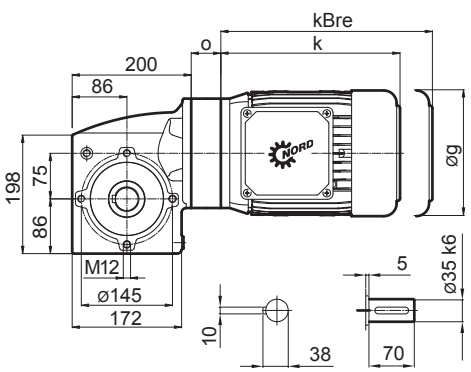


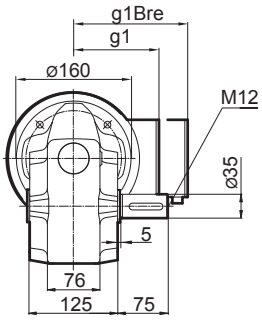
SK 1SMI 75 AXB(AZB)



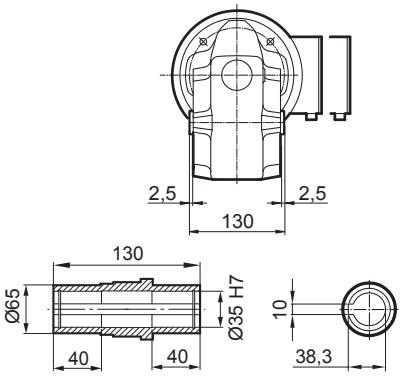
IE1 IE2 IE3	71 S / L - SP / LP	80 S / L SH / LH - / LP	90 S / L SH / LH SP / LP	100 L / LA LH / AH LP / AP	112 M - -	112 - MH MP
g	145	165	183	201	228	228
g1	124	142	147	169	179	179
g1Bre	133	143	148	159	170	170
k	214	236	276	306	326	351
kBre	272	300	351	397	419	444
o	36	36	36	36	36	36

SK 1SMI 75 VZ

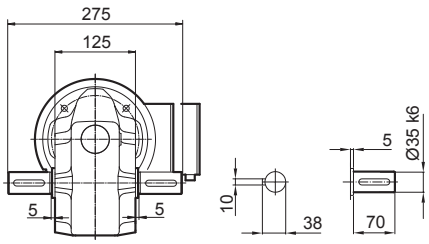




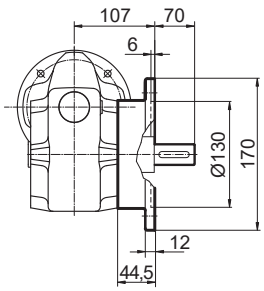
SK 1SMI 75 AZ



SK 1SMI 75 LZ

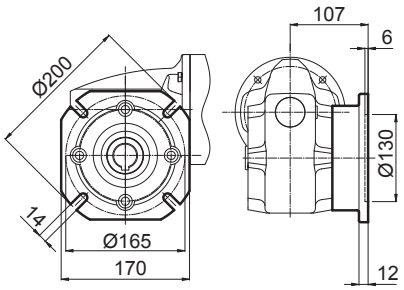


SK 1SMI 75 VF



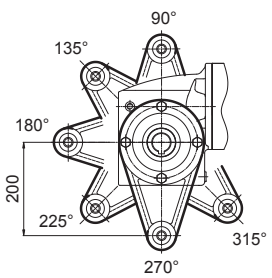
Output flange B5

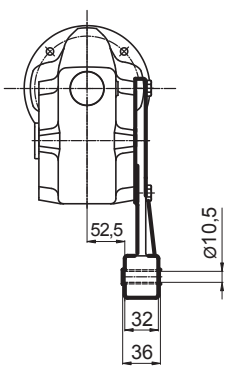
FA/II



Torque support

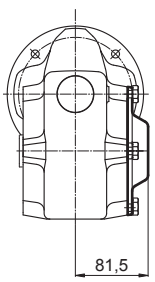
DA/I 90 ... DA/I 315





Covering cap

HA

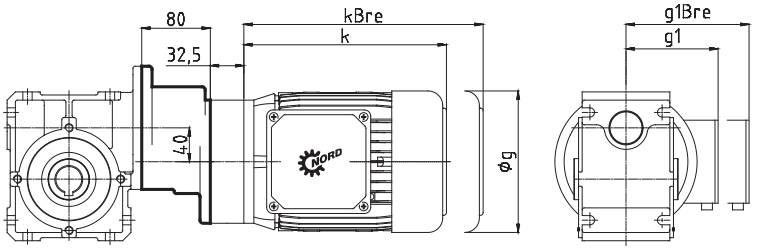


Helical input stage Type H10

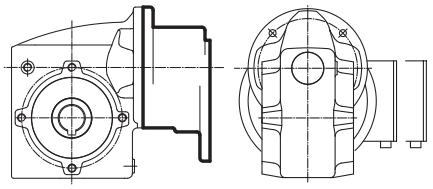
The helical input stage has a speed ratio i=10 and is suitable for the worm gear modules SK 1SI 40, SK 1SI 50 and SK 1SI 63 as well as for the worm gear units SK 1SMI 40, SK 1SMI 50 and SK 1SMI 63.
The helical input allows the construction of 2-stage helical worm gear motors and helical worm gear unit.

Helical worm gear motors

SK 1SI...



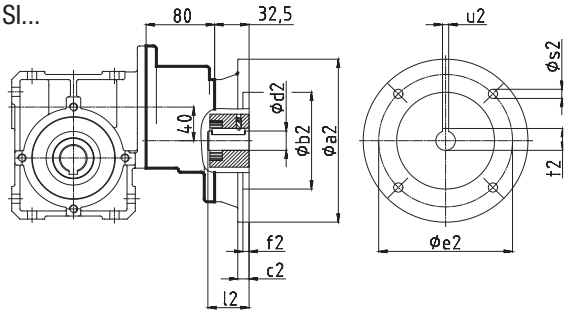
SK 1SMI...



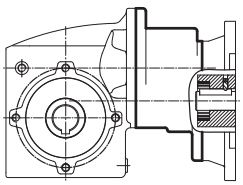
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP
g	130	145
g1	115	124
g1Bre	123	133
k	192	214
kBre	248	272

Helical worm gear unit for attachment to IEC standard motors

SK 1SI...



SK 1SMI...



IEC-standard motor-adapter

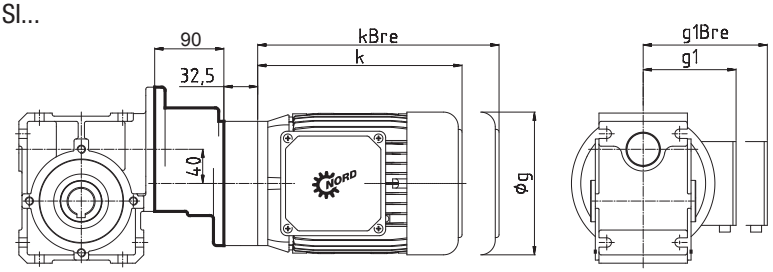
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200
a2	105	120	90	120	140	105	140	160	120	160	200
b2	70	80	60	80	95	70	95	110	80	110	130
c2	-	-	-	-	8	-	-	8	-	8	20
d2	9	9	11	11	11	14	14	14	19	19	19
e2	85	100	75	100	115	85	115	130	100	130	165
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4
l2	20	20	23	23	23	30	30	30	40	40	40
s2	7	7	6	7	9	7	9	9	7	9	M10
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8
u2	3	3	4	4	4	5	5	5	6	6	6

Helical input stage Type H10

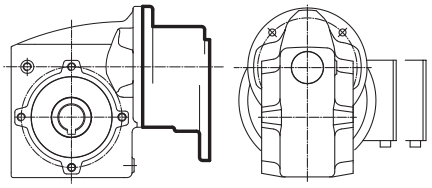
The helical input stage has a speed ratio i=10 and is suitable for the worm gear modules SK 1SI 75, as well as for the worm gear units SK 1SMI 75. The helical input allows the construction of 2-stage helical worm gear motors and helical worm gear unit.

Helical worm gear motors

SK 1SI...



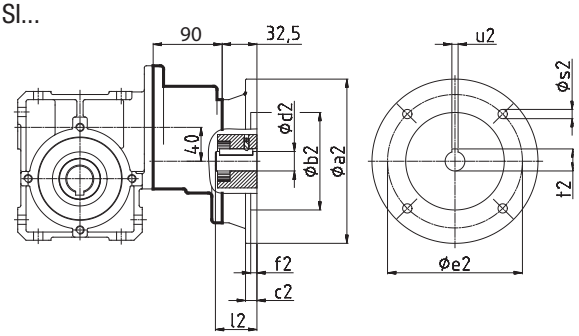
SK 1SMI...



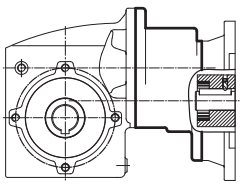
IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP	80 S / L SH / LH - / LP
g	130	145	165
g1	115	124	142
g1Bre	123	133	143
k	192	214	236
kBre	248	272	300

Helical worm gear unit for attachment to IEC standard motors

SK 1SI...



SK 1SMI...



IEC-standard motor-adapter

	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200
a2	105	120	90	120	140	105	140	160	120	160	200
b2	70	80	60	80	95	70	95	110	80	110	130
c2	-	-	-	-	8	-	-	8	-	8	20
d2	9	9	11	11	11	14	14	14	19	19	19
e2	85	100	75	100	115	85	115	130	100	130	165
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4
l2	20	20	23	23	23	30	30	30	40	40	40
s2	7	7	6	7	9	7	9	9	7	9	M10
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8
u2	3	3	4	4	4	5	5	5	6	6	6

SK 1SI 40... 50... 63/H10
SK 1SMI 40... 50... 63/H10

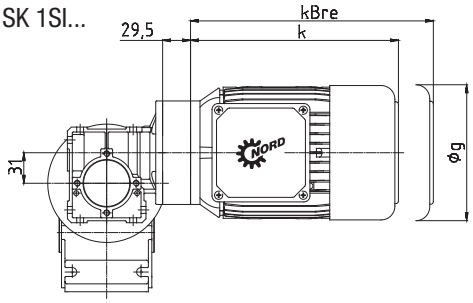
Double worm gear adapter

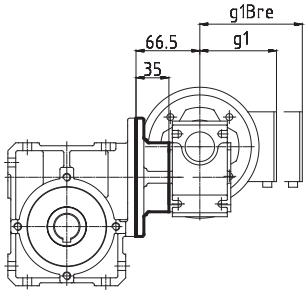
Double worm gear unit adapter

The double worm gear unit is an adapter which allows the worm gear SK 1SI 31 to be used as and input stage for the worm gear SK 1SI 40, SK 1SI 50 and SK 1SI 63 as well as for the worm gear units SK 1SMI 40, SK 1SMI 50 and SK 1SMI 63.
The double worm gear allows the construction of double worm gear motors and double worm gear units.

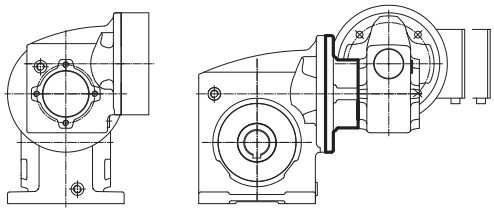
Double worm gear motors

SK 1SI...





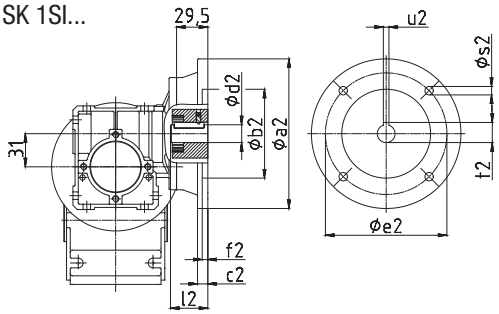
SK 1SMI...

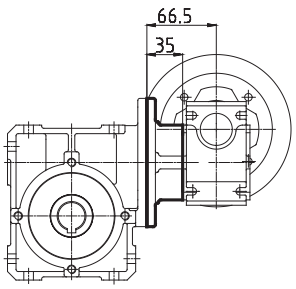


IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP
g	130	145
g1	115	124
g1Bre	123	133
k	192	214
kBre	248	272

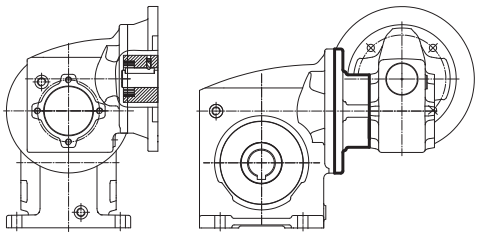
Double worm gear unit for attachment to IEC standard motors

SK 1SI...





SK 1SMI...



IEC-standard motor-adapter

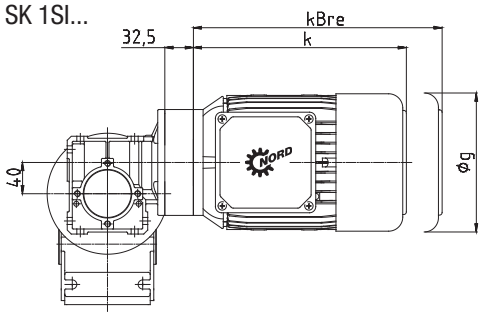
	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140
a2	105	120	90	120	140	105	140
b2	70	80	60	80	95	70	95
c2	-	-	-	-	8	-	-
d2	9	9	11	11	11	14	14
e2	85	100	75	100	115	85	115
f2	3	3,5	3	3,5	3,5	3	3,5
l2	20	20	23	23	23	30	30
s2	7	7	6	7	9	7	9
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3
u2	3	3	4	4	4	5	5

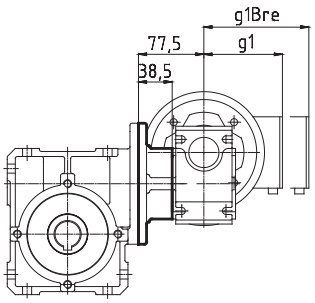
Double worm gear adapter

The double worm gear is an adapter, which allows the worm gear unit SK 1SI 40 to be used as the input stage for the worm gear SK 1SI 75 and for the worm gear unit SK 1SMI 75.
The double worm gear allows the construction of double worm gear motors and double worm gear units.

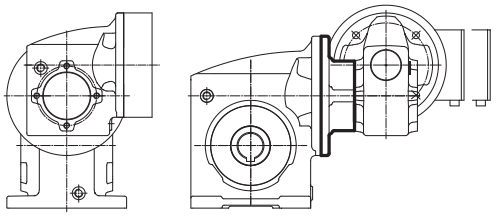
Double worm gear motor

SK 1SI...





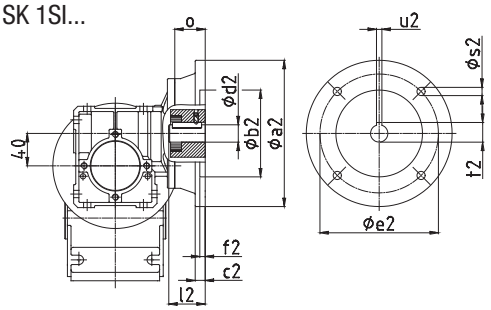
SK 1SMI...

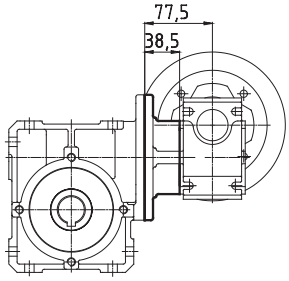


IE1 IE2 IE3	63 S / L - SP / LP	71 S / L - SP / LP
g	130	145
g1	115	124
g1Bre	123	133
k	192	214
kBre	248	272

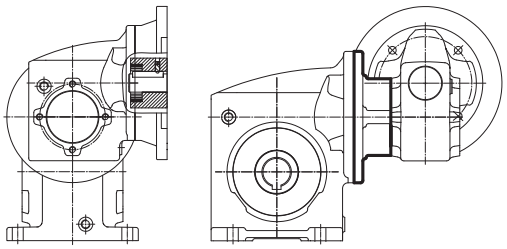
Double worm gear unit for attachment to IEC standard motors

SK 1SI...





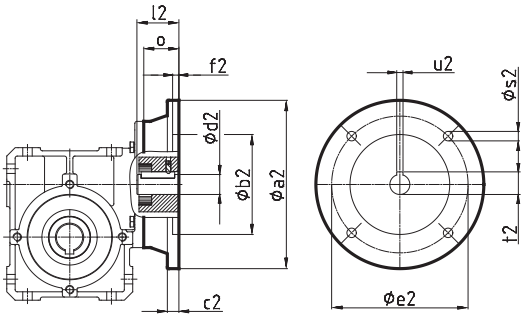
SK 1SMI...



IEC-standard motor-adapter

	IEC 56 B14 C105	IEC 56 B5 A120	IEC 63 B14 C90	IEC 63 B14 C120	IEC 63 B5 A140	IEC 71 B14 C105	IEC 71 B14 C140	IEC 71 B5 A160	IEC 80 B14 C120	IEC 80 B14 C160	IEC 80 B5 A200	IEC 90 B14 C140	IEC 90 B14 C160
a2	105	120	90	120	140	105	140	160	120	160	200	140	160
b2	70	80	60	80	95	70	95	110	80	110	130	95	110
c2	-	-	-	-	8	-	-	8	-	8	20	-	8
d2	9	9	11	11	11	14	14	14	19	19	19	24	24
e2	85	100	75	100	115	85	115	130	100	130	165	115	130
f2	3	3,5	3	3,5	3,5	3	3,5	4	3,5	4	4	3,5	4
l2	20	20	23	23	23	30	30	30	40	40	40	50	50
o	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	45,5	45,5
s2	7	7	6	7	9	7	9	9	7	9	M10	9	9
t2	11,4	11,4	12,8	12,8	12,8	16,3	16,3	16,3	21,8	21,8	21,8	27,3	27,3
u2	3	3	4	4	4	5	5	5	6	6	6	8	8

IEC standard motor adapter

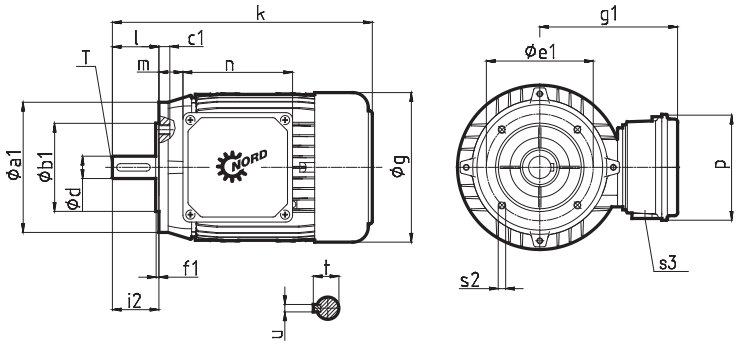


Motor-adapter			a2	b2	e2	f2	s2	d2	l2	t2	u2	o SI 31	o SI 40	o SI 50	o SI 63	o SI 75	o H10
IEC 56	B14	C105	105	70	85	3	7	9	20	11,4	3	29,5	32,5	32,5	32,5		32,5
IEC 56	B5	A120	120	80	100	3,5	7	9	20	11,4	3	29,5	32,5	32,5	32,5		32,5
IEC 63	B14	C90	90	60	75	3	6	11	23	12,8	4	29,5	32,5	32,5	32,5		32,5
IEC 63	B14	C120	120	80	100	3,5	7	11	23	12,8	4	29,5	32,5	32,5	32,5		32,5
IEC 63	B5	A140	140	95	115	3,5	9	11	23	12,8	4	29,5	32,5	32,5	32,5		32,5
IEC 71	B14	C105	105	70	85	3	7	14	30	16,3	5	29,5	32,5	32,5	32,5	36	32,5
IEC 71	B14	C140	140	95	115	3,5	9	14	30	16,3	5	29,5	32,5	32,5	32,5	36	32,5
IEC 71	B5	A160	160	110	130	4	9	14	30	16,3	5	-	32,5	32,5	32,5	36	32,5
IEC 80	B14	C120	120	80	100	3,5	7	19	40	21,8	6	-	32,5	32,5	32,5	36	32,5
IEC 80	B14	C160	160	110	130	4	9	19	40	21,8	6	-	32,5	32,5	32,5	36	32,5
IEC 80	B5	A200	200	130	165	4	M10	19	40	21,8	6	-	32,5	32,5	32,5	36	32,5
IEC 90	B14	C140	140	95	115	3,5	9	24	50	27,3	8	-	45,5	45,5	32,5	36	-
IEC 90	B14	C160	160	110	130	4	9	24	50	27,3	8	-	45,5	45,5	32,5	36	-
IEC 90	B5	A200	200	130	165	4	M10	24	50	27,3	8	-	45,5	45,5	32,5	36	-
IEC 100	B14	C160	160	110	130	4	9	28	60	31,3	8	-	-	-	-	36	-
IEC 100	B14	C200	200	130	165	4	11	28	60	31,3	8	-	-	-	-	36	-
IEC 100	B5	A250	250	180	215	5	M12	28	60	31,3	8	-	-	-	-	36	-
IEC 112	B14	C160	160	110	130	4	9	28	60	31,3	8	-	-	-	-	36	-
IEC 112	B14	C200	200	130	165	4	11	28	60	31,3	8	-	-	-	-	36	-
IEC 112	B5	A250	250	180	215	5	M12	28	60	31,3	8	-	-	-	-	36	-

Motor-adapter			Available version					
			SK 1SI 31	SK 1SI 40	SK 1SI 50	SK 1SI 63	SK 1SI 75	SK H10
IEC 56	B14	C105	✓	✓	✓	✓		✓
IEC 56	B5	A120	✓	✓	✓	✓		✓
IEC 63	B14	C90	✓ *	✓ *	✓ *	✓ *		✓ *
IEC 63	B14	C120	✓	✓	✓	✓		✓
IEC 63	B5	A140	✓	✓	✓	✓		✓
IEC 71	B14	C105	✓ *	✓ *	✓ *	✓ *	✓ *	✓ *
IEC 71	B14	C140	✓	✓	✓	✓	✓	✓
IEC 71	B5	A160		✓	✓	✓	✓	✓
IEC 80	B14	C120		✓ *	✓ *	✓ *	✓ *	✓
IEC 80	B14	C160		✓	✓	✓	✓	✓
IEC 80	B5	A200		✓	✓	✓	✓	✓
IEC 90	B14	C140		✓ *	✓ *	✓ *	✓ *	
IEC 90	B14	C160		✓	✓	✓	✓	
IEC 90	B5	A200		✓	✓	✓	✓	
IEC 100	B14	C160					✓	
IEC 100	B14	C200					✓	
IEC 100	B5	A250					✓ *	
IEC 112	B14	C160					✓	
IEC 112	B14	C200					✓	
IEC 112	B5	A250					✓ *	

* Standard

IEC three-phase motor / brake motor



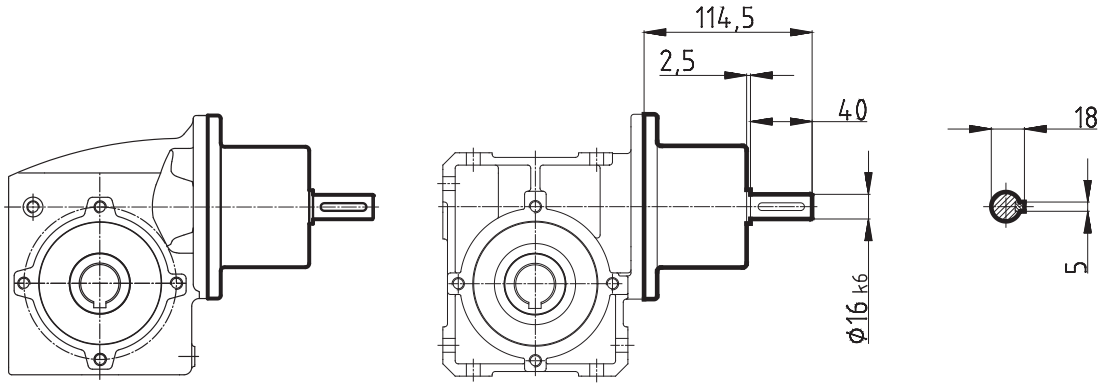
Three-phase motors							M_B	P_1	n_1	a1	kg	k	c1	d	t	f1	g	i2	s3	m
IE1		IE2	IE3				[Nm]	[kW]	[min⁻¹]	b1	[kg]		e1	T	u	s2	g1	l	n	p
63	S/4	-	SP/4	B14	C90			0,12	1335	90 60	3,6	215	8 75	11 M4	12,5 4	2,5 M5	130 115	23 23	M20 100	12 100
63	L/4	-	LP/4	B14	C90			0,18	1350	90 60	4,2	215	8 75	11 M4	12,5 4	2,5 M5	130 115	23 23	M20 100	12 100
71	S/4	-	SP/4	B14	C105			0,25	1380	105 70	5,4	244	12 85	14 M5	16 5	2,5 M6	145 124	30 30	M20 100	20 100
71	L/4	-	LP/4	B14	C105			0,37	1380	105 70	6,3	244	12 85	14 M5	16 5	2,5 M6	145 124	30 30	M20 100	20 100
80	S/4	SH/4	-	B14	C120			0,55	1375	120 80	8	276	12 100	19 M6	21,5 6	3,0 M6	165 142	40 40	M25 114	22 114
80	L/4	LH/4	LP/4	B14	C120			0,75	1375	120 80	9	276	12 100	19 M6	21,5 6	3,0 M6	165 142	40 40	M25 114	22 114
90	S/4	SH/4	SP/4	B14	C140			1,1	1395	140 95	12	326	15 115	24 M8	27 8	3,0 M8	183 147	50 50	M25 114	26 114
90	L/4	LH/4	LP/4	B14	C140			1,5	1395	140 95	14	326	15 115	24 M8	27 8	3,0 M8	183 147	50 50	M25 114	26 114
100	L/4	LH/4	LP/4	B5	A250			2,2	1440	250 180	24	366	15 215	28 M10	31 8	4,0 14	201 169	60 60	M32 114	32 114
100	LA/4	AH/4	AP/4	B5	A250			3,0	1415	250 180	27	366	15 215	28 M10	31 8	4,0 14	201 169	60 60	M32 114	32 114
112	M/4	-	-	B5	A250			4,0	1445	250 180	36	386	15 215	28 M10	31 8	4,0 14	228 179	60 60	M32 114	45 114
112	-	MH/4	MP/4	B5	A250			4,0	1445	250 180	36	411	15 215	28 M10	31 8	4,0 14	228 179	60 60	M32 114	45 114

Brake motors							M_B	P_1	n_1	a1	kg	k	c1	d	t	f1	g	i2	s3	m
IE1		IE2	IE3				[Nm]	[kW]	[min⁻¹]	b1	[kg]		e1	T	u	s2	g1	l	n	p
63	S/4	-	SP/4	B14	C90	BRE 5	5	0,12	1335	90 60	5,6	271	8 75	11 M4	12,5 4	2,5 M5	130 123	23 23	M20 132	19 87
63	L/4	-	LP/4	B14	C90	BRE 5	5	0,18	1350	90 60	6,2	271	8 75	11 M4	12,5 4	2,5 M5	130 123	23 23	M20 132	19 87
71	S/4	-	SP/4	B14	C105	BRE 5	5	0,25	1380	105 70	7,4	302	12 85	14 M5	16 5	2,5 M6	146 133	30 30	M20 132	27 87
71	L/4	-	LP/4	B14	C105	BRE 5	5	0,37	1380	105 70	8,3	302	12 85	14 M5	16 5	2,5 M6	146 133	30 30	M20 132	27 87
80	S/4	SH/4	-	B14	C120	BRE 5	5	0,55	1375	120 80	11	340	12 100	19 M6	21,5 6	3,0 M6	165 143	40 40	M25 153	26 108
80	L/4	LH/4	LP/4	B14	C120	BRE 10	10	0,75	1375	120 80	12	340	12 100	19 M6	21,5 6	3,0 M6	165 143	40 40	M25 153	26 108
90	S/4	SH/4	SP/4	B14	C140	BRE 10	10	1,1	1395	140 95	17	401	15 115	11 165	27 8	3,0 M8	183 148	50 50	M25 153	30 108
90	L/4	LH/4	LP/4	B14	C140	BRE 20	20	1,5	1395	140 95	19	401	15 115	24 M8	27 8	3,0 M8	183 148	50 50	M25 153	30 108
100	L/4	LH/4	LP/4	B5	A250	BRE 20	20	2,2	1440	250 180	31	457	15 215	28 M10	31 8	4,0 14	201 159	60 60	M25 153	36 108
100	LA/4	AH/4	AP/4	B5	A250	BRE 40	40	3,0	1415	250 180	34	479	15 215	28 M10	31 8	4,0 14	201 159	60 60	M25 153	36 108
112	M/4	-	-	B5	A250	BRE 40	40	4,0	1445	250 180	46	598	15 215	28 M10	31 8	4,0 14	228 170	60 60	M25 153	49 108
112	-	MH/4	MP/4	B5	A250	BRE 40	40	4,0	1445	250 180	46	623	15 215	28 M10	31 8	4,0 14	228 170	60 60	M25 153	49 108

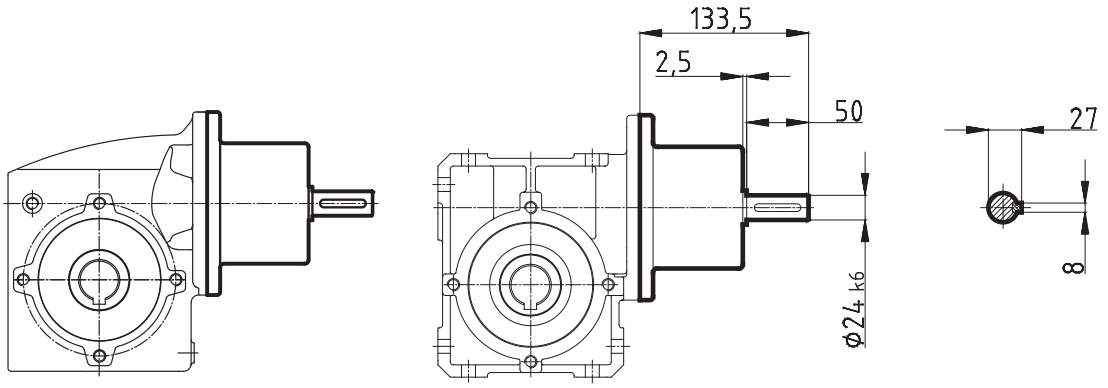
Free Drive Shaft - Type W

The Type W free drive shaft implements a free drive shaft for the worm dear modules SK 1SI 40, SK 1SI 50, SK 1SI 63, SK 1SI 75 as well as for the worm gear units SK 1SMI 40, SK 1SMI 50, SK 1SMI 63, SK 1SMI 75 and the helical gear input stage H10.

SK 1SI 40 ... 50 ... 63 - W
SK 1SMI 40 ... 50 ... 63 - W



SK 1SI 75 - W
SK 1SMI 75 - W



An overview of NORD range

G1000 Fixed speeds
UNICASE housing 50 / 60 Hz

- NORDBLOC.1® Helical geared motors
- Helical geared motors
- Parallel geared motors
- Helical-Bevel geared motors
- Helical-Worm geared motors

G4014 Electronic variable speed drives

- NORDBLOC.1® Helical geared motors
- Helical geared motors
- Parallel geared motors
- Helical-Bevel geared motors
- Helical-Worm geared motors

G1050 MAXXDRIVE® Large Industrial gear units
UNICASE housing 50 / 60 Hz

- Parallel-Axis gear units
- Right_Angle gear units

G1035 UNIVERSAL Worm gear units

- SI and SMI

F3018_E3000 Frequency inverter SK180E
F3020_E3000 Frequency inverter SK200E
F3060_E3000 NORDAC *PRO*
Frequency inverter SK 500P

DE

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