Intelligent Drivesystems, Worldwide Services

VARIABLE FREQUENCY DRIVE FOR CONTROL CABINET APPLICATIONS

US

NORDAC® *PRO*

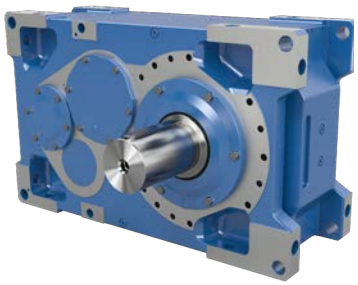
SK 500E

NORD® DRIVESYSTEMS

NORD DELIVERS COMPLETE DRIVE SOLUTIONS
FROM A SINGLE SOURCE

NORD Delivers

NORD offers full-featured drive solutions that can tackle the toughest requirements. All components are carefully selected and precisely configured to meet your exact specifications. In the rare case that standard components won't meet your needs, our in-house engineering team will work with you to design custom components or a complete customized system.

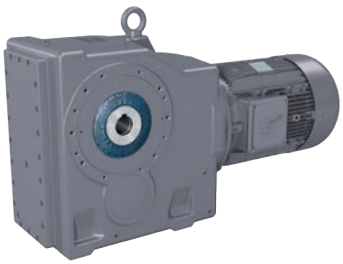


Reduce Lead Times and Decrease Inventory

- 25% of orders ship same day or next day with NO expedite fees
- 47% of orders ship within 5 working days
- 81% of orders ship in 2-3 weeks

Global Product Designs, Standards, and Support

- Innovative product range (one-stop shop)
- Global connected presence
- Mechanical and electrical application engineers ready to assist you
- Online resources



Increase Efficiency and Reduce Operation Costs

- First-class customer service and support, plus myNORD online tools
- Product flexibility through standard components and customizations
- Program personalization, such as weekly shipment schedules and custom nameplates
- Partner with a company that is easy to do business with and wants to see you succeed!

NORD DRIVESYSTEMS

High-performance Solutions

NORD's extensive product portfolio is continuously evolving to meet the needs of today's fast-changing markets, but NORD does far more than manufacture the world's finest drive components. We provide our customers with optimum drive configurations for their specific purposes, providing each and every one of them with complete and efficient systems at a price/quality ratio that's unmatched.

By continuing to invest in the latest research, manufacturing, and automation technology, we are able to deliver innovative drive systems with the highest quality, reliability, and value found in the marketplace today. In short, we never stop improving.

On-time Delivery

NORD's linked global network of assembly and manufacturing operations gives you the best of both worlds – a world leader with local representatives. NORD has subsidiaries and sales partners in 98 countries on five continents, ensuring local inventory, assembly centers, technical support, and customer service.

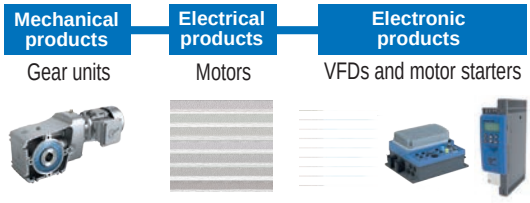
This approach also allows us to provide the shortest lead times in the industry. As a NORD customer, you can rest assured that your order will be delivered on time and on spec. We offer our customers:

- Fast, accurate, reliable service
- Unmatched product versatility and customizations
- Short lead times
- Technical guidance from experienced engineers
- MyNORD online tools (configure, price, quote, and track your order)
- 24/7/365 after hours emergency support via the NORD 911 hotline

Peace of Mind

NORD's customer-first approach means superior drive solutions and peace of mind are just a call or click away. Put NORD's global team of engineers, manufacturing, service and support technicians to work for you. Together, we'll build something great!

Headquarters and technology center in Bargteheide, near Hamburg



Innovative drive solutions for more than 100 branches of industry

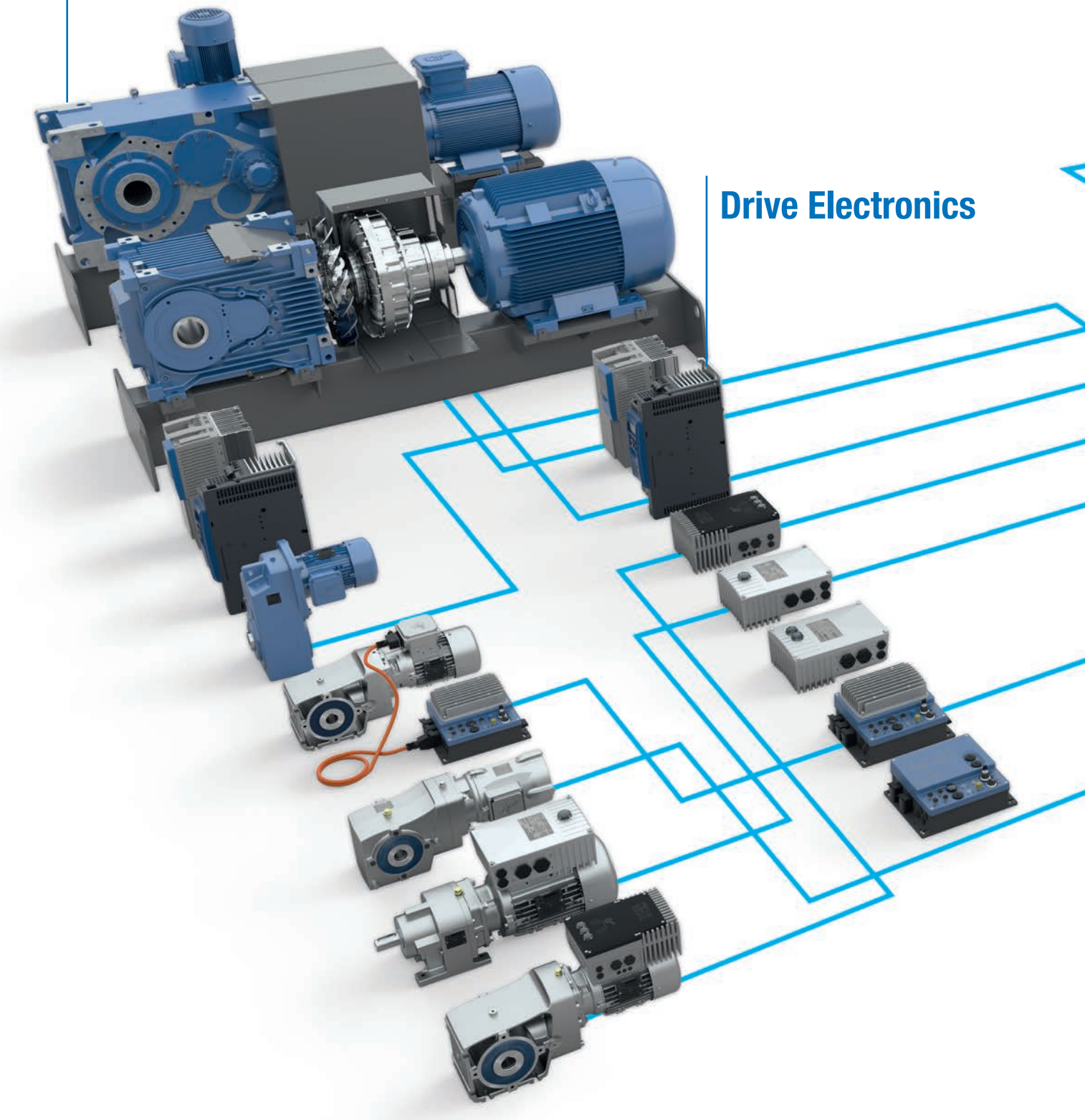
7 production locations with cutting-edge technology produce gear units, motors, VFDs, and more to provide complete drive systems from a single source.

The map shown above is for information only and does not claim to be created for or applicable to any legal purpose. For this reason, we do not assume any liability for legality, correctness and completeness.

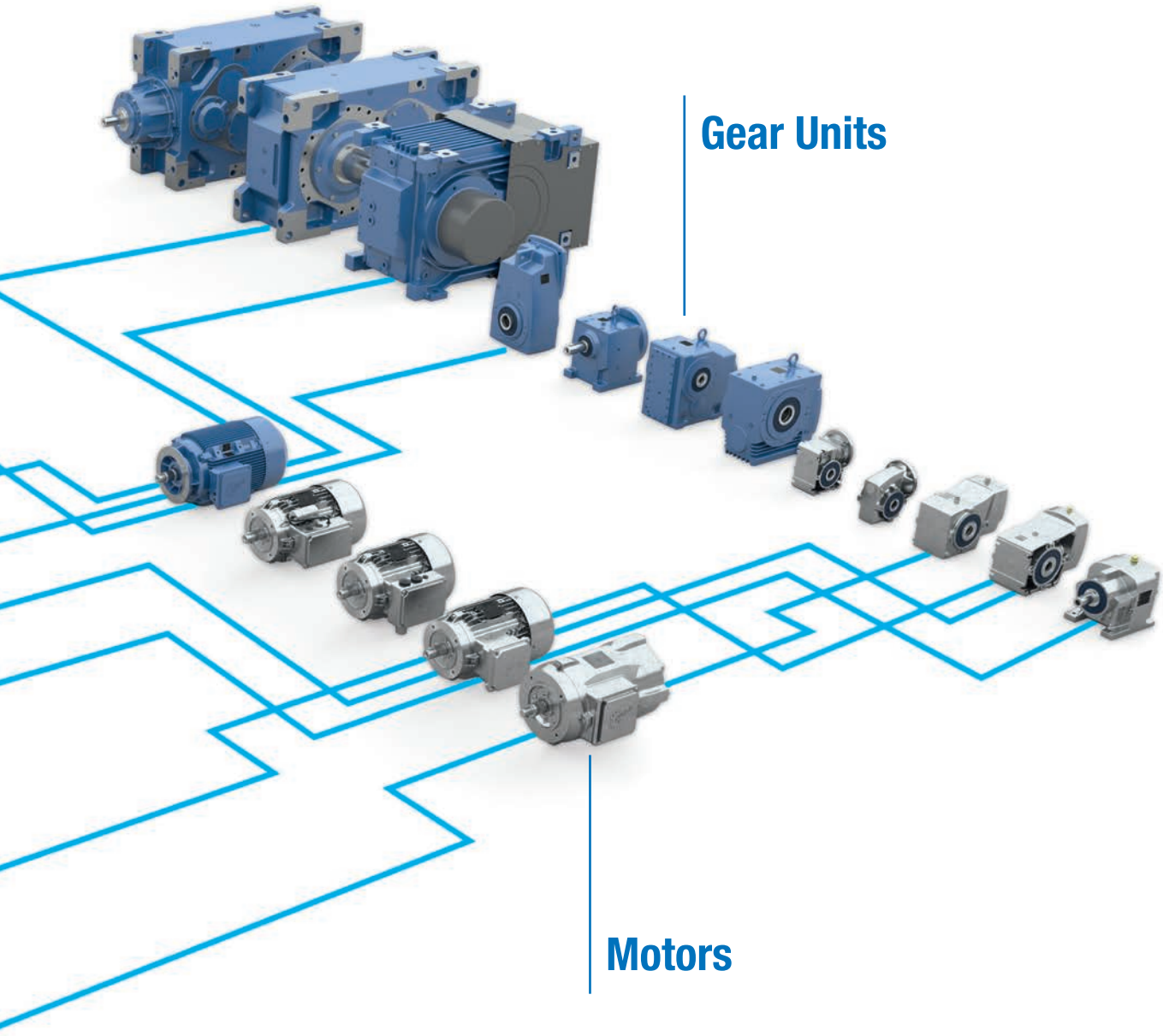
Subsidiaries and sales partners in 98 countries on 5 continents provide local inventory, assembly, technical support, and industry-leading customer service.

More than 4,000 employees throughout the world create customized solutions.

Drive Solutions



Drive Electronics



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.

NORDAC® *PRO*, SK 500E SERIES

NORDAC® *PRO* SK 500E variable frequency drives are available for motors with rated powers of 0.25 - 160 kW (0.33 - 200 HP). Their compact design is perfect for space-saving installation in control cabinets.

Notable features across the entire product line include:

- Sensorless current vector control ensures constant speeds in case of fluctuating loads and very high torques during start-up
- 200% overload capacity provides greater operational safety in cranes and lifting gear applications
- Operation of asynchronous and synchronous motors
- Integrated brake chopper for 4-quadrant operation
- Integrated line filter as the basis for optimal EMC performance

These features are as much a part of the basic configuration as the separately configurable PID or the process controller. These controllers independently carry out the control tasks in your application.

The range is supplied with either an integrated 24 V power supply unit or a separate connection for the control board supply.

With externally powered variable frequency drives, access to parameter data and communication through any bus interfaces is possible even when the power is off. Moreover, an evacuation run controlled by the VFD can be performed, which improves safety for lifting gear and similar safety-critical drive applications.

The SK 51xE and SK 53xE models support the Safe Stop function according to EN 13849-1 (up to the maximum safety category 4, stop category 0 and 1). In addition, the SK 53xE version equipped with the built-in POSICON function makes it ideally suitable for all types of positioning tasks (relative and absolute).

As standard, an integrated PLC on all SK 520E models and higher greatly simplifies programming of drive-related functions in accordance with IEC 61131-3.

In addition, the top model SK 540E/SK 545E features a universal encoder interface which allows connection of SSI or EnDat encoders. The variable frequency drives maintain uniform dimensions even with the different functional configurations.

Basic configuration

- Sensorless current vector control (ISD control) for high precision control and fast response times
- Brake management, electromechanical holding brake
- Brake chopper to divert generated energy to a brake resistor
- RS-232 diagnostic interface
- 4 switchable parameter sets for flexible use of parameter settings (e.g. switching between drive units with different motor data)
- All common drive functions, such as acceleration/braking on a ramp
- Parameters are pre-set with standard values and available for immediate use
- Scalable display values
- Stator resistance measurement to ensure optimal control characteristics

Optional

- Interfaces for many bus systems
- Various control options (switches, potentiometers or parameterization units)
- Variants with functional safety (Safe Stop (STO, SS1))
  Available for SK 510E and above
  (except for drives with AC voltages <230 V AC)
- Variants with incremental encoder interface for speed feedback (servo mode)
  Available for SK 520E and higher
- Variants with PLC functionality
  Available for SK 520E and higher
- POSICON variants with positioning function (relative and absolute)
  Available for SK 530E and higher
- Universal encoder interface
  Available for SK 540E and higher

STANDARDS
AND APPROVALS

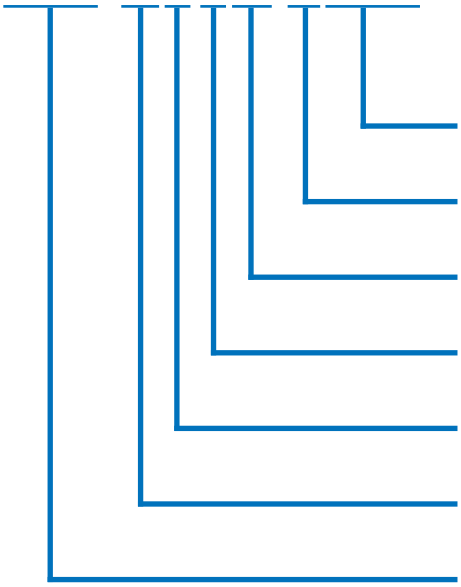
All devices of the entire series comply with the standards and directives listed below.

Approval	Directive	Applied standards	Certificates	Code
CE (European Union)	Low Voltage Directive 2014/35/EU EMC 2014/30/EU RoHS 2011/65/EU	EN 61800-5-1 EN 60529 EN 61800-3 EN 50581	C310600	CE
UL (USA)		UL 61800-5-1	E171342	c UL us LISTED
CSA (Canada)		C22.2 No.274-13	E171342	
RCM (Australia)	F2018L00028	EN 61800-3	133520966	
EAC (Eurasia)	TR CU 004/2011, TR CU 020/201	IEC 61800-5-1 IEC 61800-3	TC RU C DE.АЛ32.В.00000	EAC

VARIABLE FREQUENCY DRIVE DESIGNATIONS AND TECHNOLOGY UNITS

Variable Frequency Drives

SK 530E-370-323-A(-CP)



Configuration versions **CP =** Cold Plate or External heat sink technology

Radio interference filter: **O** = without, **A** = Class A1(C2) or B (C1)

AC voltage **x12** = 115 V, **x23** = 230 V, **x40** = 400 V, **x50** = 500 V

Number of AC voltage phases: **1xx** = 1-phase, **3xx** = 3-phase [1]

Digits before decimal point for power: **0** = 0.xx, **1** = x.x0, **2** = xx.0

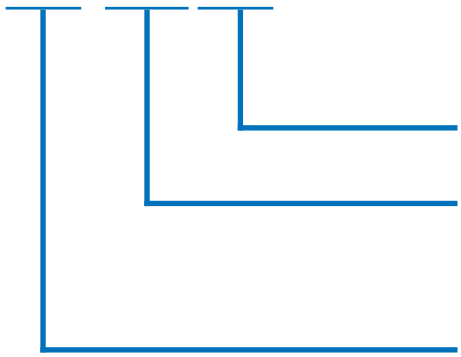
Device rated power: **250** = 0.25 kW, **370** = 0.37 kW, ... **163** = 160.0 kW

Variable frequency drive series:
SK 500E, SK 505E, SK 510E, SK 511E, SK 515E,
SK 520E, SK 530E, SK 535E, SK 540E, SK 545E,
(…)
Options, only implemented if required.

[1] Designation -3 also includes combined devices intended for single and three-phase operation (please refer to the technical data)

Technology Units

SK TU3-CAO(-…)



Version labeling

Option type: **CAO** = CANopen, PBR = PROFIBUS DP,
ECT = EtherCAT®, DEV = DeviceNet,
IOE= I/O extension

Group: **TU** = Technology unit
(...)
Options, only implemented if required.

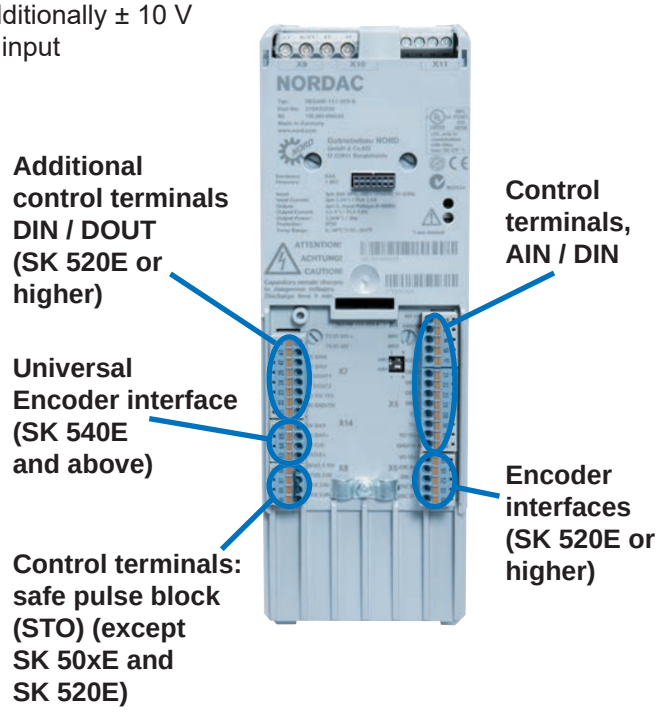
NORDAC® *PRO* SK 500E
ALL VERSIONS AT A GLANCE

		SK 500E	SK 510E	SK 511E	SK 520E	SK 530E	SK 535E	SK 540E	SK 545E	SK 515E	SK 535E	SK 545E
		Size 1-4								Size 5-11		
Basic functions	Sensorless current vector control (ISD control)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Brake management for mechanical holding brake	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Brake chopper (brake resistor optional)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	RS-232 diagnostic interface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4 switchable parameter sets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Parameters pre-set with standard values	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Scalable display values	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Stator resistance measurement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Energy-saving function, optimized efficiency in partial load operation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Line filter class C2, up to 5 m motor cable class C1 up to Size 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Monitoring functions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Load monitor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Link circuit coupling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Lifting gear functionality	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Process controller / PID controller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Synchronous motor operation (PMSM)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Options	Cold plate up to Size 4, External heat sink technology up to Size 2	❍	❍	❍	❍	❍	❍	❍	❍			
	All common field bus systems	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Safe Stop function (STO, SS1) (not for 115 V devices)		✓	✓		✓	✓	✓	✓	✓	✓	✓
	CANopen on board			✓	✓	✓	✓	✓	✓	✓	✓	✓
	Evacuation run						✓		✓	✓	✓	✓
	Incremental encoder input (servo mode)				✓	✓	✓	✓	✓		✓	✓
	POSICON					✓	✓	✓	✓		✓	✓
	Internal 24 V power supply unit to supply the control board	✓	✓	✓	✓	✓		✓		✓	✓	✓
	External 24 V power supply for the control board						✓		✓	✓	✓	✓
	Automatic switching between external and internal 24 V control voltage									✓	✓	✓
	PLC functionality				✓	✓	✓	✓	✓		✓	✓
	Universal encoder interface							✓	✓			✓

✓ Available as standard
❍ Optional

		SK 500E	SK 510E	SK 511E	SK 520E	SK 530E	SK 535E	SK 540E	SK 545E	SK 515E	SK 535E	SK 545E
		Size 1-4								Size 5-11		
Control terminals	DIN	5	5	5	7	7	7	5-7 [1]	5-7 [1]	5	7	6-8 [1]
	DOUT	0	0	0	2	2	2	3-1 [1]	3-1 [1]	0	2	3-1 [1]
	Signal relay [2] (… 230 V AC, 2 A)	2	2	2	2	2	2	2	2	2	2	2
	AIN [3]	2	2	2	2	2	2	2	2	2	2	2
	AOUT [3]	1	1	1	1	1	1	1	1	1	1	1
	Temperature sensor (PTC)	1 [4]	1 [4]	1 [4]	1 [4]	1 [4]	1 [4]	1	1	1	1	1
Encoder interfaces	TTL RS422				✓	✓	✓	✓	✓		✓	✓
	HTL [4]				✓	✓	✓	✓	✓		✓	✓
	SIN/COS							✓	✓			✓
	SSI							✓	✓			✓
	BISS							✓	✓			✓
	Hiperface							✓	✓			✓
	Endat 2.1							✓	✓			✓
	CANopen					✓	✓	✓	✓		✓	✓
Communication	CAN / CANopen			2	2	2	2	2	2	2	2	2
	RS-485 / RS-232	1	1	1	1	1	1	1	1	1	1	1
	RS-485				1	1	1	1	1		1	1
	Modbus RTU							✓	✓			✓

1 2 digital IOs optionally parameterizable as DIN or DOUT
2 with parameterizable DOUT functions
3 AIN/AOUT can also be used for digital signals
AIN: 0(2) – 10 V, 0(4) – 20 mA, size 5 and above additionally ± 10 V
4 Function can only be implemented through a digital input



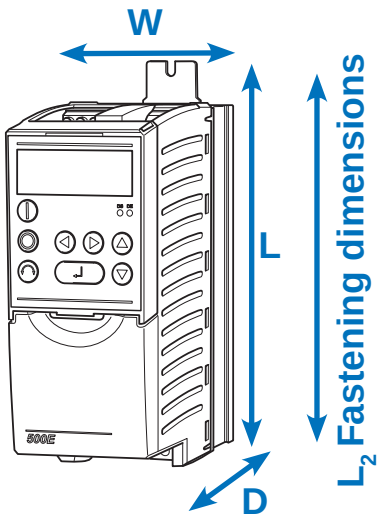
NORDAC® *PRO* SK 500E

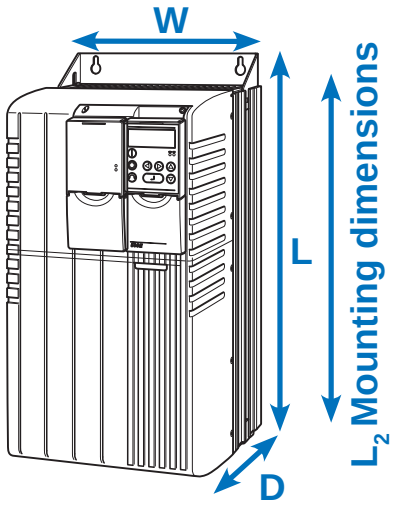
1~ 110 ... 120 V AND 1/3~ 200 ... 240 V

Output frequency	0.0 ... 400.0 Hz
Pulse frequency	3.0 ... 16.0 kHz
Typical overload capacity	150 % for 60 s, 200 % for 3.5 s
Efficiency	Size 1 -4 approx. 95% Size 5 -7 approx. 97% Size 8 -11 approx. 98%
Ambient temperature	0 °C ... +40 °C (S1) 0 °C ... +50 °C (S3, -70 % ED)
Protection class	IP20
Regulation and control	Sensorless current vector control (ISD), linear V/f characteristic
Motor temperature monitoring	I^2t Motor PTC / bi-metal switch
Leakage current	<30 mA, may be considerably less depending on the size and configuration (refer to the manual for details)

Variable frequency drives SK 5xxE ...	Nominal motor power		Nominal output current rms [A]	AC voltage	Output voltage
	230 V [kW]	240 V [hp]			
-250-112-O	0.25	1/3	1.7	1~ 110 ... 120 V, +/- 10 %, 47 ... 63 Hz	3~ 0 - 2x AC line voltage
-370-112-O	0.37	1/2	2.2		
-550-112-O	0.55	3/4	3.0		
-750-112-O	0.75	1	4.0		
-111-112-O	1.1	1 1/2	5.3		

Variable frequency drives SK 5xxE ...	Nominal motor power		Nominal output current rms [A]	AC voltage	Output voltage
	230 V [kW]	240 V [hp]			
-250-323-A	0.25	1/3	1.7	1/3~ 200 ... 240 V, +/- 10 %, 47 ... 63 Hz	3~ 0 up to AC line voltage
-370-323-A	0.37	1/2	2.2		
-550-323-A	0.55	3/4	3.0		
-750-323-A	0.75	1	4.0		
-111-323-A	1.1	1 1/2	5.5		
-151-323-A	1.5	2	7.0		
-221-323-A	2.2	3	9.5		
-301-323-A	3.0	4	12.5	3~ 200 ... 240 V, +/- 10 %, 47 ... 63 Hz	
-401-323-A	4.0	5	16.0		
-551-323-A	5.5	7 1/2	22		
-751-323-A	7.5	10	28		
-112-323-A	11	15	46		
-152-323-A	15	20	60		





Variable frequency drives SK 5xxE ...	Weight [kg / lbs]	Dimensions L (L_2) x W x D	Size
-250-112-O	1.4 kg / 3.1 lbs	186 (220) x 74 x 153 mm 7.32 (8.66) x 2.91 x 6.02 in	1
-370-112-O	1.4 kg / 3.1 lbs		
-550-112-O	1.4 kg / 3.1 lbs		
-750-112-O	1.4 kg / 3.1 lbs		
-111-112-O	1.4 kg / 3.1 lbs		

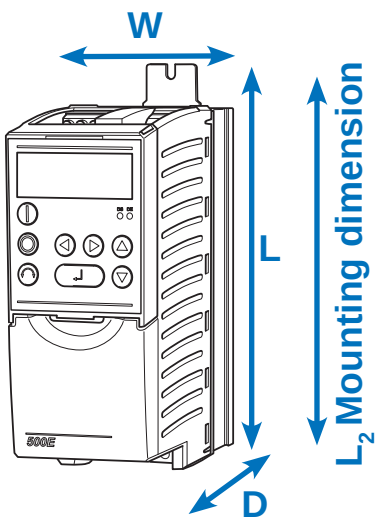
Variable frequency drives SK 5xxE ...	Weight [kg / lbs]	Dimensions L (L_2) x W x D	Size
-250-323-A	1.4 kg / 3.1 lbs	186 (220) x 74 x 153 mm 7.32 (8.66) x 2.91 x 6.02 in	1
-370-323-A	1.4 kg / 3.1 lbs		
-550-323-A	1.4 kg / 3.1 lbs		
-750-323-A	1.4 kg / 3.1 lbs		
-111-323-A	1.8 kg / 3.9 lbs	226 (260) x 74 x 153 mm 8.89 (10.23) x 2.91 x 6.02 in	2
-151-323-A	1.8 kg / 3.9lbs		
-221-323-A	1.8 kg / 3.9 lbs		
-301-323-A	2.7 kg / 5.9 lbs	241 (275) x 98 x 181 mm 9.48 (10.8) x 3.85 x 7.12 in	3
-401-323-A	2.7 kg / 5.9 lbs		
-551-323-A	8.0 kg / 17.6 lbs	327 (357) x 162 x 224 mm 12.87 (14.05) x 6.37 x 8.81 in	5
-751-323-A	8.0 kg / 17.6 lbs		
-112-323-A	10.3 kg / 22.7 lbs	367 (397) x 180 x 234 mm 14.44 (15.62) x 7.08 x 9.21 in	6
-152-323-A	15.0 kg / 33 lbs	456 (485) x 210 x 236 mm 17.95 (19.09) x 8.26 x 9.29 in	7

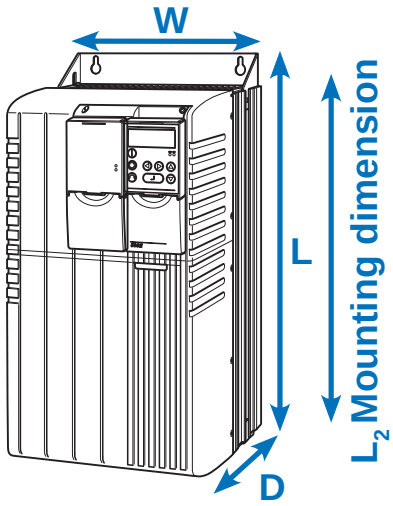
NORDAC® *PRO* SK 500E

3~ 380 ... 480 V

Output frequency	0.0 ... 400.0 Hz
Pulse frequency	3.0 ... 16.0 kHz
Typical overload capacity	150 % for 60 s, 200 % for 3.5 s
Efficiency	Size 1 -4 approx. 95% Size 5 -7 approx. 97% Size 8 -11 approx. 98%
Ambient temperature	0 °C ... +40 °C (S1) 0 °C ... +50 °C (S3, -70 % ED)
Protection class	IP20
Regulation and control	Sensorless current vector control (ISD), linear V/f characteristic
Motor temperature monitoring	I^2t Motor PTC / bi-metal switch
Leakage current	<30 mA, may be considerably less depending on the size and configuration of the variable frequency drive (refer to the manual for details)

Variable frequency drives SK 5xxE ...	Nominal motor power		Nominal output current rms [A]	AC voltage	Output voltage
	400 V [kW]	480 V [hp]			
-550-340-A	0.55	3/4	1.7	3~ 380 ... 480 V, -20 % / +10 %, 47 ... 63 Hz	3~0 up to AC line voltage
-750-340-A	0.75	1	2.3		
-111-340-A	1.1	1 1/2	3.1		
-151-340-A	1.5	2	4.0		
-221-340-A	2.2	3	5.5		
-301-340-A	3.0	4	7.5		
-401-340-A	4.0	5	9.5		
-551-340-A	5.5	7 1/2	12.5		
-751-340-A	7.5	10	16.0		
-112-340-A	11.0	15	24.0		
-152-340-A	15.0	20	31.0		
-182-340-A	18.5	25	38.0		
-222-340-A	22.0	30	46.0		
-302-340-A	30.0	40	60.0		
-372-340-A	37.0	50	75.0		
-452-340-A	45.0	60	90.0		
-552-340-A	55.0	75	110.0		
-752-340-A	75.0	100	150.0		
-902-340-A	90.0	125	180.0		
-113-340-A	110.0	150	220.0		
-133-340-A	132.0	180	260.0		
-163-340-A	160.0	220	320.0		



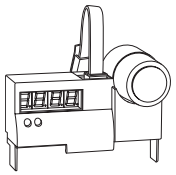


Variable frequency drives SK 5xxE ...	Weight [kg / lbs]	Dimensions L (L_2) x W x D	Size
-550-340-A	1.4 kg / 3.1 lbs	186 (220) x 74 x 153 mm 7.32 (8.66) x 2.91 x 6.02 in	1
-750-340-A	1.4 kg / 3.1 lbs		
-111-340-A	1.8 kg / 3.9 lbs	226 (260) x 74 x 153 mm 8.89 (10.23) x 2.91 x6.02 in	2
-151-340-A	1.8 kg / 3.9 lbs		
-221-340-A	1.8 kg / 3.9 lbs		
-301-340-A	2.7 kg / 5.9 lbs	241 (275) x 98 x 181 mm 9.48 (10.82) x 3.85 x 7.12 in	3
-401-340-A	2.7 kg / 5.9 lbs		
-551-340-A	3.1 kg / 6.8 lbs	286 (320) x 98 x 181 mm 11.25 (12.59) x 3.85 x 7.12 in	4
-751-340-A	3.1 kg / 6.8 lbs		
-112-340-A	8.0 kg / 17.6 lbs	327 (357) x 162 x 224 mm 12.87 (14.05) x 6.37 x 8.81 in	5
-152-340-A	8.0 kg / 17.6 lbs		
-182-340-A	10.3 kg / 22.7 lbs	367 (397) x 180 x 234 mm 14.44 (15.62) x 7.08 x 9.21 in	6
-222-340-A	10.3 kg / 22.7 lbs		
-302-340-A	16.0 kg / 35.2 lbs	456 (485) x 210 x 236 mm 17.95 (19.09) x 8.26 x 9.29 in	7
-372-340-A	16.0 kg / 35.2 lbs		
-452-340-A	20.0 kg / 44.0 lbs	598 (582) x 265 x 286 mm 23.54 (22.91) x 10.43 x 11.25 in	8
-552-340-A	20.0 kg / 44.0 lbs		
-752-340-A	25.0 kg / 55.1 lbs	636 (620) x 265 x 286 mm 25.03 (24.40) x 10.43 x 11.25 in	9
-902-340-A	25.0 kg / 55.1 lbs		
-113-340-A	46.0 kg / 101.4 lbs	720 (704) x 395 x 292 mm 28.34 (27.71) x 15.55 x 11.49 in	10
-133-340-A	49.0 kg / 108.0 lbs		
-163-340-A	52.0 kg / 114.6 lbs	799 (783) x 395 x 292 mm 31.45 (30.82) x 15.55 x 11.49 in	11

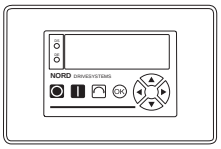
INTERFACES FOR
OPERATION, PARAMETERIZATION AND COMMUNICATION

Operation and parameterization

Optional modules with up to 14 languages for displaying status and operational indicators, parameterization and operation of the variable frequency drive. In addition to options for direct mounting on the device or installation in a control cabinet door, handheld versions are also available.



SK CSX-0



SK PAR-3E

Type Designation Material No.	Description	Remarks
Potentiometer Box SK TU3-POT 275 900 110	Suitable for control, potentiometer 0 … 100% .	Installation in the SK TU3 slot on the VFD.[1]
Parameter Box SK TU3-PAR 275 900 100	Suitable for control and parameterization, LCD screen (illuminated), plain text display in 14 languages, memory for 5 device data sets, convenient control keypad.	Installation in the SK TU3 slot on the variable frequency drive.[1]
Control Box SK TU3-CTR 275 900 090	Suitable for control and parameterization, 4-digit, 7-segment display, convenient control keypad.	Installation in the SK TU3 slot on the VFD.[1]
Simple Box SK CSX-0 275 900 095	Suitable for control and parameterization, 4-digit, 7-segment display, direct control of a device, one-button operation.	The module is connected to the RJ 12 interface of the VFD and does not occupy the option slot for SK TU3 modules. Simultaneous control of a bus interface is therefore possible. Mounted on the VFD
Parameter Box SK PAR-3E 275 281 414	Suitable for control and parameterization, LCD screen (illuminated), plain text display in 14 languages, direct control of up to 5 devices, memory for 5 device data sets, convenient control keypad, for installation in a control cabinet door.	Connection for data exchange with NORDCON on a PC via RS-232 (USB 2.0), including 1 m connection cable, 4.5 … 30 V DC/1.3 W Supply e.g. directly via the VFD. Control cabinet installation
Simple Control Box SK CSX-3E 275 281 413	Suitable for control and parameterization, 4-digit, 7-segment display, direct control of a variable frequency drive, convenient control keypad.	Electrical data: 4.5 … 30 V DC / 1.3 W, Supply e.g. directly via the VFD. Control cabinet installation
NORDCON Control and parameterization software	Software for control and parameterization as well as support for commissioning and fault analysis of NORD electronic drive technology. Parameter names in 14 languages	Free download: www.nord.com
NORDAC® *ACCESS BT* Bluetooth stick SK TIE5-BT-STICK 275 900 120	The NORDCON APP and NORDAC® ACCESS BT—a mobile app and Bluetooth stick—work together to provide a wireless solution for commissioning, drive optimization, and service requests for all NORD electronic drive systems	The app is available for free download through the App Store for iOS and Google Play for Android users. The Bluetooth stick can be purchased directly from any authorized NORD distributor.

[1] Cannot be combined with other SK TU3 modules as only one slot is available on VFD.

Designation Material No.	Description Connection	Remarks
SK TU3-IBS 275 900 065	Field bus interface INTERBUS 2 x Sub-D9	Baud rate: 500 kBit/s (2 Mbit/s)
SK TU3-PBR 275 900 030	Field bus interface PROFIBUS DP. Sub-D9	Baud rate: maximum 1.5 MBaud Protocol: DPV 0 Addressing: via parameter
SK TU3-PBR-24V 275 900 160		Baud rate: maximum 12 MBaud Protocol: DPV 0 Addressing: via rotary coding switch or parameter 24 V DC connection: via connection terminals
SK TU3-CAO 275 900 075	Field bus interface CANopen Sub-D9	Baud rate: maximum 1 MBaud Protocol: DS 301 and DS 402
SK TU3-DEV 275 900 085	Field bus interface DeviceNet 5-pole screw terminals	Baud rate: maximum 500 kBaud Profile: AC-Drive and NORD-AC
SK TU3-AS1 275 900 170	Field bus interface AS-Interface 5-pole and 8-pole screw terminals	4 sensors/2 actuators
SK TU3-ECT 275 900 180	Ethernet-based bus interface EtherCAT. 2 x RJ45	Baud rate: maximum 100 MBaud 24 V DC connection: via terminal Usable as a gateway to control up to a total of four variable frequency drives.
SK TU3-EIP 275 900 150	Ethernet-based bus interface EtherNet / IP 2 x RJ45	Baud rate: maximum 100 MBaud, 24 V DC connection: via terminal Usable as a gateway to control up to a total of eight variable frequency drives.
SK TU3-POL 275 900 140	Ethernet-based bus interface POWERLINK 2 x RJ45	
SK TU3-PNT 275 900 190	Ethernet-based bus interface PROFINET IO. 2 x RJ45	

LINE FILTER
IMPROVEMENT OF EMC

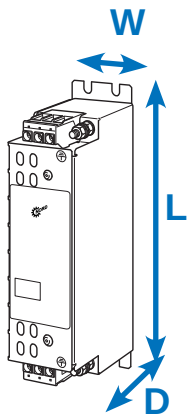
General

Line filters are used to reduce the emission of electromagnetic interference. SK 500E series variable frequency drives are equipped with an integrated class C2 (max. 20 m shielded motor cable) or class C1 (size 1-4, max. 5 m shielded motor cable) line filter.

Various adaptive line filters are available for longer cable lengths or to improve interference suppression.

Chassis line filter, SK HLD

The line filter meets protection class IP20 and enables interference suppression Class C1 with max. 25 m shielded motor cable and Class C2 with max. 50 m cable. The line filters are installed separately from the VFD.



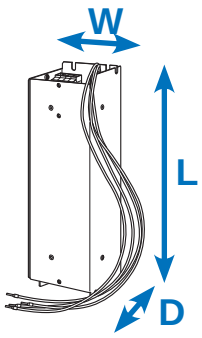
Variable frequency drives SK 5xxE ...		Line filter type Material No.	Continuous current [A]	Leakage current[1] [mA]	L x W x D
3~ 230 V	0.25 ... 1.1 kW 1/3 ... 1.5 HP	SK HLD 110-500/8 278 272 008	8	20 / 190	190 x 45 x 75 mm 7.48 x 1.77 x 2.95 in
	1.5 ... 2.2 kW 2.0 ... 3 HP	SK HLD 110-500/16 278 272 016	16	21 / 205	250 x 45 x 75 mm 9.84 x 1.77 x 2.95 in
	3.0 ... 5.5 kW 4 ... 7.5 HP	SK HLD 110-500/30 278 272 030	30	29 / 280	270 x 55 x 95 mm 10.62 x 2.16 x 3.74 in
	7.5 kW / 10.1 HP	SK HLD 110-500/42 278 272 042	42	30 / 290	310 x 55 x 95 mm 12.20 x 2.16 x 3.74 in
	11 kW / 15 HP	SK HLD 110-500/75 278 272 075	75	22 / 210	310 x 85 x 135 mm 12.20 x 3.34 x 5.31 in
	15 kW / 20 HP	SK HLD 110-500/100 278 272 100	100	30 / 290	325 x 95 x 150 mm 12.79 x 3.74 x 5.90 in
3~ 480 V	0.55 ... 2.2 kW 3/4 ... 3 HP	SK HLD 110-500/8 278 272 008	8	20 / 190	190 x 45 x 75 mm 7.48 x 1.77 x 2.95 in
	3.0 ... 5.5 kW 4 ... 7.5 HP	SK HLD 110-500/16 278 272 016	16	21 / 205	250 x 45 x 75 mm 9.84 x 1.77 x 2.95 in
	7.5 kW / 10 HP	SK HLD 110-500/30 278 272 030	30	29 / 280	270 x 55 x 95 mm 10.62 x 2.16 x 3.74 in
	11 kW / 15HP	SK HLD 110-500/42 278 272 042	42	30 / 290	310 x 55 x 95 mm 12.20 x 2.16 x 3.74 in
	15 ...18.5 kW 20 ... 25 HP	SK HLD 110-500/55 278 272 055	55	30 / 290	255 x 85 x 95 mm 10.03 x 3.34 x 3.74 in
	22 kW / 30 HP	SK HLD 110-500/75 278 272 075	75	22 / 210	310 x 85 x 135 mm 12.20 x 3.34 x 5.31 in
	30 kW / 40 HP	SK HLD 110-500/100 278 272 100	100	30 / 290	325 x 95 x 150 mm 12.79 x 3.74 x 5.90 in
	37... 45 kW 50 ... 60 HP	SK HLD 110-500/130 278 272 130	130	22 / 210	325 x 95 x 150 mm 12.79 x 3.74 x 5.90 in
	55 kW / 75 HP	SK HLD 110-500/180 278 272 180	180	31 / 300	440 x 130 x 181 mm 17.32 x 5.11 x 7.12 in
	75 ... 90 kW 100 ... 125 HP	SK HLD 110-500/250 278 272 250	250	37 / 355	525 x 155 x 220 mm 20.66 x 6.10 x 8.66 in
	110 ... 160 kW 150 ... 200 HP	Currently in preparation			

[1] Leakage current 1. value: rated for the maximum permissible input voltage fluctuation according to IEC 38 + 10%

Leakage current 2nd value: calculated at maximum input voltage and failure of 2 phases (typically at 50 Hz)

Bottom-mounted line filter, combination filter SK NHD

The line filter meets protection class IP20 and is available for VFD powers of up to 10 HP (7.5 kW). The line filter can be mounted flat underneath the drive. This reduces the space requirement. These combination filters combine the advantages of a line filter and a line choke in a single housing and enable class C1 interference suppression with max. 50 m shielded motor cable and class C2 with max. 100 m cable.



Variable frequency drives SK 5xxE ...		Line filter type Material No.	Continuous current [A]	Inductance [mH]	Leakage current[1] [mA]	L x W x D
3~ 230 V	0.25 ... 0.75 kW 1/3 ...1 HP	SK NHD-480/6-F 278 273 006	5.5	3 x 6.4	1 / 10	290 x 88 x 74 mm 11.41 x 3.46 x 2.91 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK NHD-480/10-F 278 273 010	9.5	3 x 3.7	12 / 120	305 x 115 x 98 mm 12.00 x 4.52 x 3.85 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK NHD-480/16-F 278 273 016	16	3 x 2.2	12 / 120	350 x 140 x 98 mm 13.77 x 5.51 x 3.85 in
3~ 480 V	0.55 ... 0.75 kW 3/4 ... 1 HP	SK NHD-480/3-F 278 273 003	2.3	3 x 15.3	1 / 10	250 x 75 x 60 mm 9.84 x 2.95 x 2.36 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK NHD-480/6-F 278 273 006	5.5	3 x 6.4	1 / 10	290 x 88 x 74 mm 11.41 x 3.46 x 2.91 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK NHD-480/10-F 278 273 010	9.5	3 x 3.7	12 / 120	305 x 115 x 98 mm 12.00 x 4.52 x 3.85 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK NHD-480/16-F 278 273 016	16	3 x 2.2	12 / 120	350 x 140 x 98 mm 13.77 x 5.51 x 3.85 in

[1] Leakage current 1. value: rated for the maximum permissible input voltage fluctuation according to IEC 38 + 10%

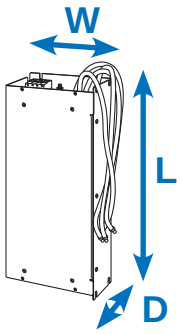
Leakage current 2nd value: calculated at maximum input voltage and failure of 2 phases (typically at 50 Hz)

LINE FILTER
IMPROVEMENT OF EMC

Bottom-mounted line filter, SK LF2

The line filter meets protection class IP00 and is available for variable frequency drive powers of up to 50 HP (37 kW). The line filter can be mounted flat underneath the VFD, which reduces the space requirement.

These line filters enable class C1 interference suppression with max. 50 m shielded motor cable and class C2 with max. 100 m cable.



Variable frequency drives SK 5xxE ...		Line filter type Material No.	Continuous current [A]	Leakage current[1] [mA]	L x W x D
3~ 230 V	5.5 ... 7.5 kW 7.5 ... 10 HP	SK LF2-480/45-F 278 273 045	45	12 / 120	388 x 164 x 75 mm 15.27 x 6.45 x 2.95 in
	11 kW / 15 HP	SK LF2-480/66-F 278 273 066	66	12 / 120	428 x 182 x 75 mm 16.85 x 7.16 x 2.95 in
	15 kW / 20 HP	SK LF2-480/105-F 278 273 105	105	22 / 210	527 x 210 x 95 mm 20.74 x 8.26 x 3.74 in
3~ 480 V	0.55 ... 0.75 kW 3/4 ... 1 HP	SK LF2-480/2-F 278 273 002	2.3	6.4 / 61.5	250 x 75 x 48 mm 9.84 x 2.95 x 1.88 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK LF2-480/5-F 278 273 005	5.5	7.7 / 74.3	290 x 88 x 48 mm 11.41 x 3.46 x 1.88 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK LF2-480/9-F 278 273 009	9.5	19.5 / 187	305 x 115 x 54 mm 12.00 x 4.52 x 2.12 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK LF2-480/15-F 278 273 015	16	20.2 / 193	350 x 115 x 54 mm 13.77 4.52 x 2.12 in
	11 ... 15 kW 15 ... 20 HP	SK LF2-480/45-F 278 273 045	45	12 / 120	388 x 164 x 75 mm 15.27 x 6.45 x 2.95 in
	18.5 ... 22 kW 20 ... 30 HP	SK LF2-480/66-F 278 273 066	66	12 / 120	428 x 182 x 75 mm 16.85 x 7.16 x 2.95 in
	30 ... 37 kW 40 ... 50 HP	SK LF2-480/105-F 278 273 105	105	22 / 210	527 x 210 x 95 mm 20.74 x 8.26 x 3.74 in

[1] Leakage current 1st value: rated for the maximum permissible input voltage fluctuation according to IEC 38 + 10%

Leakage current 2nd value: calculated at maximum input voltage and failure of 2 phases (typically at 50 Hz)

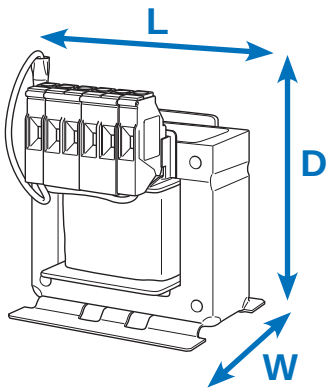
AC LINE VOLTAGE-SIDE INPUT CHOKES
REDUCTION OF FEEDBACK

General

It may be necessary for some drive systems to use AC line voltage chokes to reduce dangerous current peaks.

With their use, external feedback effects are considerably reduced and the proportion of current harmonics is cut to a minimum. The input current is reduced to approximately the value of the output current.

It is recommended that a line choke be used at all times for a VFD capacity of 60 HP (45 kW) and above. This will have an additional positive effect on device protection and EMC characteristics. All chokes have protection class IP00 and are UL certified.

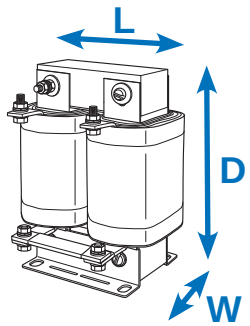


Variable frequency drives SK 5xxE ...		Choke type Material No.	Continuous current [A]	Inductance [mH]	L x W x D
1~ 230 V	0.25 ... 0.75 kW 1/3 ... 1 HP	SK CI1-230/8-C 278 999 030	8	2 x 1.0	65 x 78 x 89 mm 2.55 x 3.07 x 3.50 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK CI1-230/20-C 278 999 040	20	2 x 0.4	90 x 96 x 106 mm 3.54 x 3.77 x 4.17 in
3~ 230 V	0.25 ... 0.75 kW 1/3 ... 1 HP	SK CI1-480/6-C 276 993 006	6	3 x 4.88	96 x 60 x 117 mm 3.54 x 2.36 x 4.60 in
	1.1 ... 1.5 kW 1.5 ... 2 HP	SK CI1-480/11-C 276 993 011	11	3 x 2.93	120 x 85 x 140 mm 4.72 x 3.34 x 5.5 in
	2.2 ... 3.0 kW 3 ... 4 HP	SK CI1-480/20-C 276 993 020	20	3 x 1.47	155 x 110 x 177 mm 6.10 x 4.33 x 6.96 in
	4.0 ... 7.5 kW 5 ... 10 HP	SK CI1-480/40-C 276 993 040	40	3 x 0.73	155 x 115 x 172 mm 6.10 x 4.52 x 6.77 in
	11 ... 15 kW 15 ... 20 HP	SK CI1-480/70-C 276 993 070	70	3 x 0.47	185 x 122 x 220 mm 7.28 x 4.80 x 8.66 in
3~ 480 V	0.55 ... 2.2 kW 3/4 ... 3 HP	SK CI1-480/6-C 276 993 006	6	3 x 4.88	96 x 60 x 117 mm 3.54 x 2.36 x 4.60 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK CI1-480/11-C 276 993 011	11	3 x 2.93	120 x 85 x 140 mm 4.72 x 3.34 x 5.5 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK CI1-480/20-C 276 993 020	20	3 x 1.47	155 x 110 x 177 mm 6.10 x 4.33 x 6.96 in
	11 ... 15 kW 15 ... 20 HP	SK CI1-480/40-C 276 993 040	40	3 x 0.73	155 x 115 x 172 mm 6.10 x 4.52 x 6.77 in
	18.5 ... 30 kW 25 ... 40 HP	SK CI1-480/70-C 276 993 070	70	3 x 0.47	185 x 122 x 220 mm 7.28 x 4.80 x 8.66 in
	37 ... 45 kW 50 ... 60 HP	SK CI1-480/100-C 276 993 100	100	3 x 0.29	240 x 148 x 263 mm 9.44 x 5.82 x 10.35 in
	55 ... 75 kW 75 ... 100 HP	SK CI1-480/160-C 276 993 160	160	3 x 0.18	352 x 140 x 268 mm 13.85 x 5.51 x 10.55 in
	90 kW / 125 HP	SK CI1-480/280-C 276 993 280	280	3 x 0.10	352 x 169 x 268 mm 13.85 x 5.51 x 10.55 in
	110 ... 132 kW 150 ... 180 HP	SK CI1-480/350-C 276 993 350	350	3 x 0.08	352 x 169 x 268 mm 13.85 x 5.51 x 10.55 in
	160 kW / 200 HP	not available			

LINK CIRCUIT CHOKE
REDUCTION OF SYSTEM FEEDBACK

Link circuit choke, SK DCL

Similar to a line choke, the link circuit choke reduces the inherent network loads of a variable frequency drive. It is connected to easily accessible contacts in the VFD's intermediate circuit and is available for 45 kW and above. All chokes have protection class IP00 and are UL certified.



Variable frequency drives SK 5xxE ...	Choke type Material No.	Continuous current [A]	Inductance [mH]	L x W x D
45 ... 55 kW 60 ... 75 HP	SK DCL-950/120-C 276 997 120	120	0.50	148 x 147 x 230 mm 5.82 x 5.78 x 9.05 in
75 ... 90 kW 100 ... 125 HP	SK DCL-950/200-C 276 997 200	200	0.30	170 x 153 x 260 mm 6.69 x 6.02 x 10.23 in
110 kW / 150 HP	SK DCL-950/260-C 276 997 260	260	0.25	180 x 174 x 284 mm 7.08 x 6.85 x 11.18 in
132 kW / 180 HP	SK DCL-950/320-C 276 997 320	320	0.20	180 x 189 x 282 mm 7.08 x 7.44 x 11.10 in
160 kW / 200 HP	SK DCL-950/380-C 276 997 380	300	0.17	180 x 189 x 282 mm 7.08 x 7.44 x 11.10 in

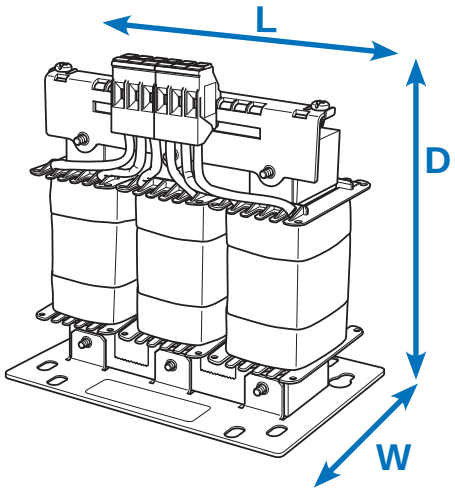
MOTOR-SIDE CHOKES
COMPENSATION FOR CABLE CAPACITANCES

General

Long motor cable lengths (cable capacity) often require the use of additional motor chokes (output chokes) on the VFD output.

In addition, the use of motor chokes has a positive effect on device protection and EMC characteristics.

The specified motor chokes are rated for a pulse frequency of 3 to 6 kHz and an output frequency of 0 to 120 Hz. All chokes have protection class IP00 and are UL certified.



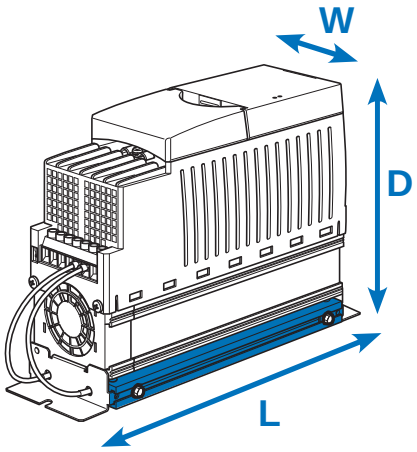
Variable frequency drives SK 5xxE ...		Choke type Material No.	Continuous current [A]	Inductance [mH]	L x W x D
3~ 230 V	0.25 ... 0.75 kW 1/3 ... 1 HP	SK CO1-460/4-C 276 996 004	4	3 x 3.5	120 x 104 x 140 mm 4.72 x 4.09 x 5.51 in
	1.1 ... 1.5 kW 1.5 ... 2 HP	SK CO1-460/9-C 276 996 009	9	3 x 2.5	155 x 110 x 160 mm 6.10 x 4.33 x 6.29 in
	2.2 ... 4.0 kW 3 ... 5 HP	SK CO1-460/17-C 276 996 017	17	3 x 1.2	185 x 102 x 201 mm 7.28 x 4.01 x 7.91 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK CO1-460/33-C 276 996 033	33	3 x 0.6	185 x 122 x 201 mm 7.28 x 4.80 x 7.91 in
	11 ... 15 kW 15 ... 20HP	SK CO1-480/60-C 276 992 060	60	3 x 0.33	185 x 112 x 210 mm 7.28 x 4.40 x 8.26 in
3~ 480 V	0.55 ... 1.5 kW 3/4 ...2 HP	SK CO1-460/4-C 276 996 004	4	3 x 3.5	120 x 104 x 140 mm 4.72 x 4.09 x 5.51 in
	2.2 ... 4.0 kW 3 ... 5 HP	SK CO1-460/9-C 276 996 009	9	3 x 2.5	155 x 110 x 160 mm 6.10 x 4.33 x 6.29 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK CO1-460/17-C 276 996 017	17	3 x 1.2	185 x 102 x 201 mm 7.28 x 4.01 x 7.91 in
	11 ... 15 kW 15 ... 20 HP	SK CO1-460/33-C 276 996 033	33	3 x 0.6	185 x 122 x 201 mm 7.28 x 4.80 x 7.91 in
	18.5 ... 30 kW 25 ... 40 HP	SK CO1-480/60-C 276 992 060	60	3 x 0.33	185 x 112 x 210 mm 7.28 x 4.40 x 8.26 in
	37 ... 45 kW 50 ... 60 HP	SK CO1-460/90-C 276 996 090	90	3 x 0.22	352 x 144 x 325 mm 13.85 x 5.66 x 12.79 in
	55 ... 75 kW 75 ... 100 HP	SK CO1-460/170-C 276 996 170	170	3 x 0.13	412 x 200 x 320 mm 16.22 x 7.87 12.59 in
	90 ... 110 kW 125... 150 HP	SK CO1-460/240-C 276 996 240	240	3 x 0.07	412 x 225 x 320 mm 16.22 x 8.85 x 12.59 in
	132 ... 160 kW 180 ... 200 HP	SK CO1-460/330-C 276 996 330	330	3 x 0.03	352 x 188 x 268 mm 13.85 x 7.40 x 10.55 in

BRAKE RESISTORS
FOR DYNAMIC DRIVE CHARACTERISTICS

Bottom-mounted brake resistors SK BR4

These resistors are available in four sizes for variable frequency drives of up to 10 HP (7.5 kW). This brake resistor can be mounted flat or vertically next to the VFD, reducing the space requirement.

The specified resistance values are electrically matched to standard applications. All brake resistors have protection class IP40 and are UL certified.



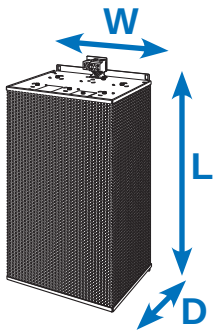
Variable frequency drives SK 5xxE ...		Resistor type Material No.	Resistance [Ω]	Continuous output [W]	Short-term power [kW][1]	L x W x D
230 V/115 V	0.25 ... 0.37 kW 1/3 ...1/2 HP	SK BR4-240/100 275 991 110	240	100	2.2	230 x 88 x 175 mm 9.05 x 3.46 x 6.88 in
	0.55 ... 0.75 kW 3/4 ...1 HP	SK BR4-150/100 275 991 115	150	100	2.2	230 x 88 x 175 mm 9.05 x 3.46 x 6.88 in
	1.1 ... 2.2 kW 1.5 ...3 HP	SK BR4-75/200 275 991 120	75	200	4.4	270 x 88 x 175 mm 10.62 x 3.46 x 6.88 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK BR4-35/400 275 991 140	35	400	8.8	285 x 98 x 239 mm 11.22 x 3.85 x 9.40 in
480 V	0.55 ... 0.75 kW 3/4 ...1 HP	SK BR4-400/100 275 991 210	400	100	2.2	230 x 88 x 175 mm 9.05 x 3.46 x 6.88 in
	1.1 ... 2.2 kW 1.5 ...3 HP	SK BR4-220/200 275 991 220	220	200	4.4	270 x 88 x 175 mm 10.62 x 3.46 x 6.88 in
	3.0 ... 4.0 kW 4 ... 5 HP	SK BR4-100/400 275 991 240	100	400	8.8	285 x 98 x 239 mm 11.22 x 3.85 x 9.40 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK BR4-60/600 275 991 260	60	600	13.0	330 x 98 x 239 mm 12.99 x 3.85 x 9.40 in
	Temperature monitoring for BR4 resistors with installation close to the VFD 275 991 100		Bimetallic switch as contactor			Broad brake resistor + 10 mm (on one side) The dimensions apply to the VFD, including the brake resistor
	Temperature monitoring for BR4 resistors with direct installation under the variable frequncy drive 275 991 200		Bimetallic switch as contactor			

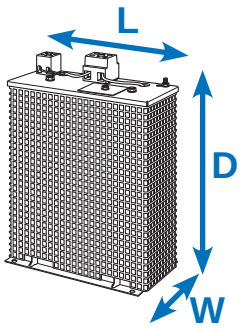
[1] Once within 120 s, for a maximum duration of 1.2 s

Chassis brake resistors, SK BR2

The resistor elements are integrated into a housing cage and must be connected to the particular variable frequency drive via a separate connecting cable.

The brake resistors must be mounted horizontally (except SK BR2-xxx/400-C) using a short shielded cable. All brake resistors have protection class IP20.





only SK BR2-xxx/400-C

Variable frequency drives SK 5xxE ...		Resistor type Material No.	Resistance [Ω]	Continuous output [W]	Short-term power [kW]²	L x W x D
230 V	3.0 ... 4.0 kW 4 ... 5 HP	SK BR2-35/400-C¹ 278 282 045	35	400	12	178 x 100 x 252 mm 7.00 x 3.93 x 9.92 in
	5.5 ... 7.5 kW 7.5 ... 10 HP	SK BR2-22/600-C 278 282 065	22	600	18	385 x 92 x 120 mm 15.15 x 3.62 x 4.72 in
	11 kW / 15 HP	SK BR2-12/1500-C 278 282 015	12	1500	45	585 x 185 x 120 mm 23.03 x 7.28 x 4.72 in
	15 kW / 20 HP	SK BR2-9/2200-C 278 282 122	9	2200	66	485 x 275 x 120 mm 19.09 x 10.82 x 4.72 in
480 V	3.0 ... 4.0 kW 4 ... 5 HP	SK BR2-100/400-C¹ 278 282 040	100	400	12	178 x 100 x 252 mm 7.00 x 3.93 x 9.92 in
	5.5 ... 7.5 kW 7.4 ... 10 HP	SK BR2-60/600-C 278 282 060	60	600	18	385 x 110 x 120 mm 15.15 x 3.62 x 4.72 in
	11 ... 15 kW 15 ... 20 HP	SK BR2-30/1500-C 278 282 150	30	1500	45	585 x 185 x 120 mm 23.03 x 7.28 x 4.72 in
	18.5 ... 22 kW 25 ... 30 HP	SK BR2-22/2200-C 278 282 220	22	2200	66	485 x 275 x 120 mm 19.09 x 10.82 x 4.72 in
	30 ... 37 kW 40 ... 50 HP	SK BR2-12/4000-C 278 282 400	12	4000	120	585 x 266 x 210 mm 23.03 x 10.47 x 8.26 in
	45 ... 55 kW 60 ... 75 HP	SK BR2-8/6000-C 278 282 600	8	6000	180	395 x 490 x 260 mm 15.55 x 19.29 x 10.23 in
	75 ... 110 kW 100 ... 150 HP	SK BR2-6/7500-C 278 282 750	6	7500	225	595 x 490 x 260 mm 23.42 x 19.29 x 10.23 in
	132 ... 160 kW 180 ... 218 HP	SK BR2-3/7500-C 278 282 753	3	7500	225	595 x 490 x 260 mm 23.42 x 19.29 x 10.23 in
	132 ... 160 kW 180 ... 200 HP	SK BR2-3/17000-C 278 282 754	3	17 000	510	795 x 490 x 260 mm 31.29 x 19.29 x 10.23 in
	Temperature monitoring For BR2 resistors integrated (Terminals 4 mm²)		Bimetallic switch as contactor			

¹ Type of assembly: vertical

² Once within 120 s, for a maximum duration of 1.2 s

EMC Kit

For EMC-compliant connection of shielded cables and to produce strain relief.

NORDAC® *PRO* Size	EMC Kit	Material No.
Size 1 and size 2	SK EMC 2-1	275 999 011
Size 3 and size 4	SK EMC 2-2	275 999 021
Size 5	SK EMC 2-3	275 999 031
Size 6	SK EMC 2-4	275 999 041
Size 7	SK EMC 2-5	275 999 051
Size 8 and size 9	SK EMC 2-6	275 999 061
Size 10 and size 11	SK EMC 2-7	275 999 071

Connection Kit HTL encoder WK 4/2/4*680 OHM

For connection of an HTL encoder to the TTL encoder input of the variable frequency drive, snap-on rail mounting.
Material No.: 278 910 340

RJ45 WAGO connection module

For example to connect a CANopen encoder to one of the two RJ45 - connection sockets of the variable frequency drive.
Material No.: 278 910 300

Signal converter +/- 10 V

For connection of a bipolar analog signal to the unipolar analog input of a NORDAC® *PRO* (up to size 4), snap-on rail mounting.
Material No.: 278 910 320

IO expansion SK EBIOE-2

The generous number of standard inputs and outputs on the device can be supplemented using an extension provided for snap-on rail mounting.
Material No.: 275 900 210
Available for SK 540E and higher

Electronic brake rectifier SK EBGR-1

For direct control and supply of an electromagnetic holding brake.
Material No.: 19 140 990

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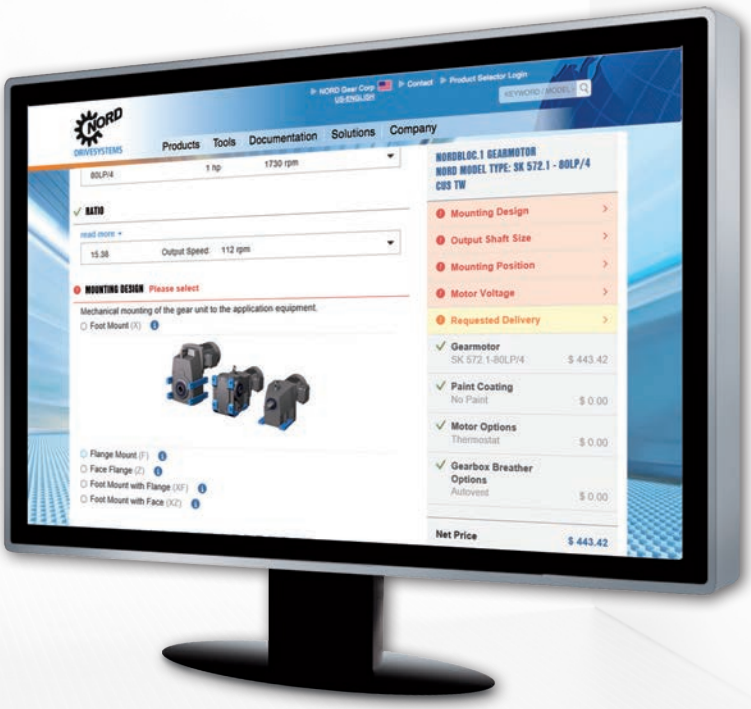

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Tel. 888.314.6673

Corona, CA
1180 Railroad St.
Corona, CA 92882
Tel. 888.314.6673

Charlotte, NC
300E Forsyth Hall Dr.
Charlotte, NC 28273
Tel. 888.314.6673

NORD Gear Limited - Canada
MEMBER OF THE NORD DRIVESYSTEMS GROUP
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