

Drive Solutions for the Food & Beverage Industry

Complete drive solutions from a single source

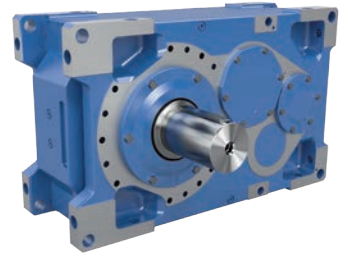


Complete Drive Solutions from a Single Source



NORD Delivers

NORD offers first-class customer service and support along with 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

- ▶ Fastest lead times in the industry with NO expedite fees
- ▶ Over 20,000,000 standard configurations to reduce or eliminate the need for custom components
- ▶ Modular drives, motors, and electronic controls minimize inventory of replacement units and parts



Global Product Designs, Standards, and Support

- ▶ Innovative, industry-standard products to support a wide range of applications
- ▶ Global sales and support network
- ▶ Dedicated mechanical and electrical application engineers ready to assist you
- ▶ Online resources available to you any time
- ▶ 24/7/365 emergency breakdown service



Increase Efficiency and Reduce Operation Costs

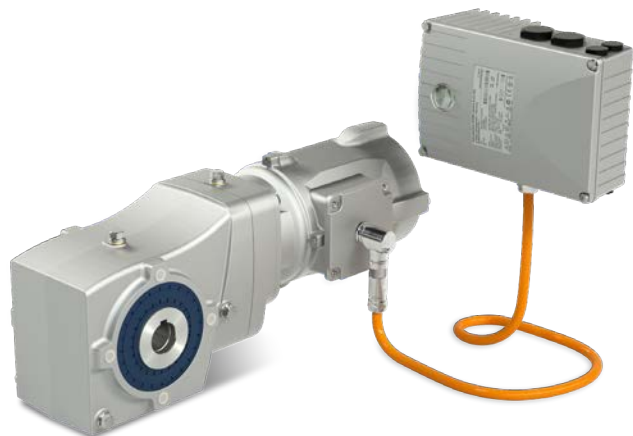
- ▶ myNORD online tools for fast selection, configuration, ordering, and tracking of your drive units
- ▶ Drive systems that are perfectly matched to your application for optimum performance and energy efficiency
- ▶ Program personalization, such as weekly shipment schedules and custom nameplates
- ▶ Partner with a company that is easy to do business with and wants to see you succeed!





Integrated Solutions for the Special Requirements of the Food & Beverage Industry

- ▶ Simple commissioning
- ▶ Easy maintenance and safe, reliable operation
- ▶ Lower Total Cost of Ownership (TCO)
- ▶ Modular design
- ▶ Energy savings
- ▶ Project and product support
- ▶ Global NORD sales and support network



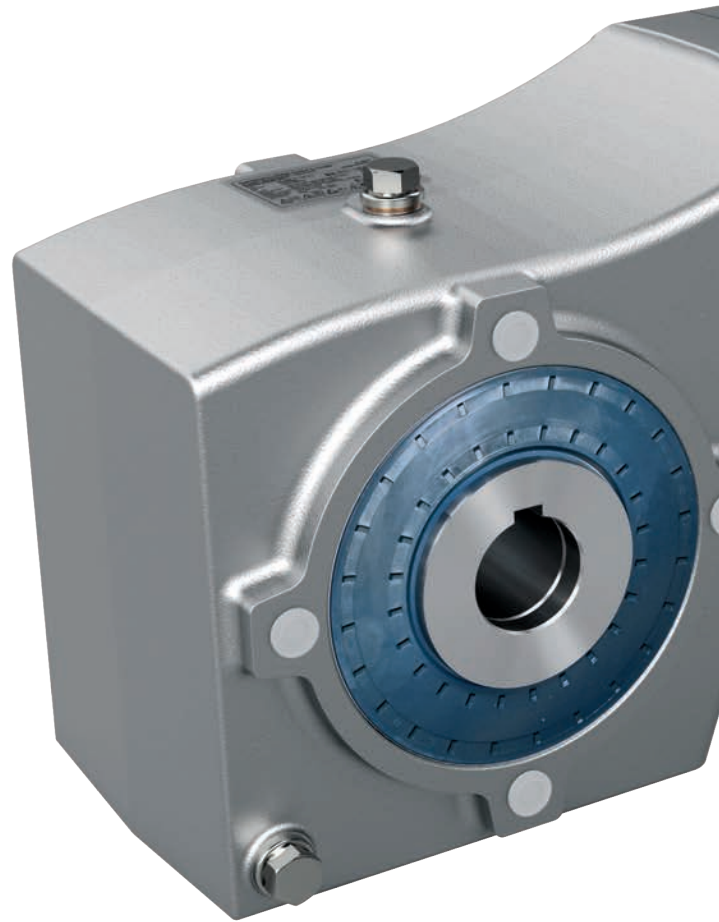
Drive Solutions for the Food & Beverage Industry

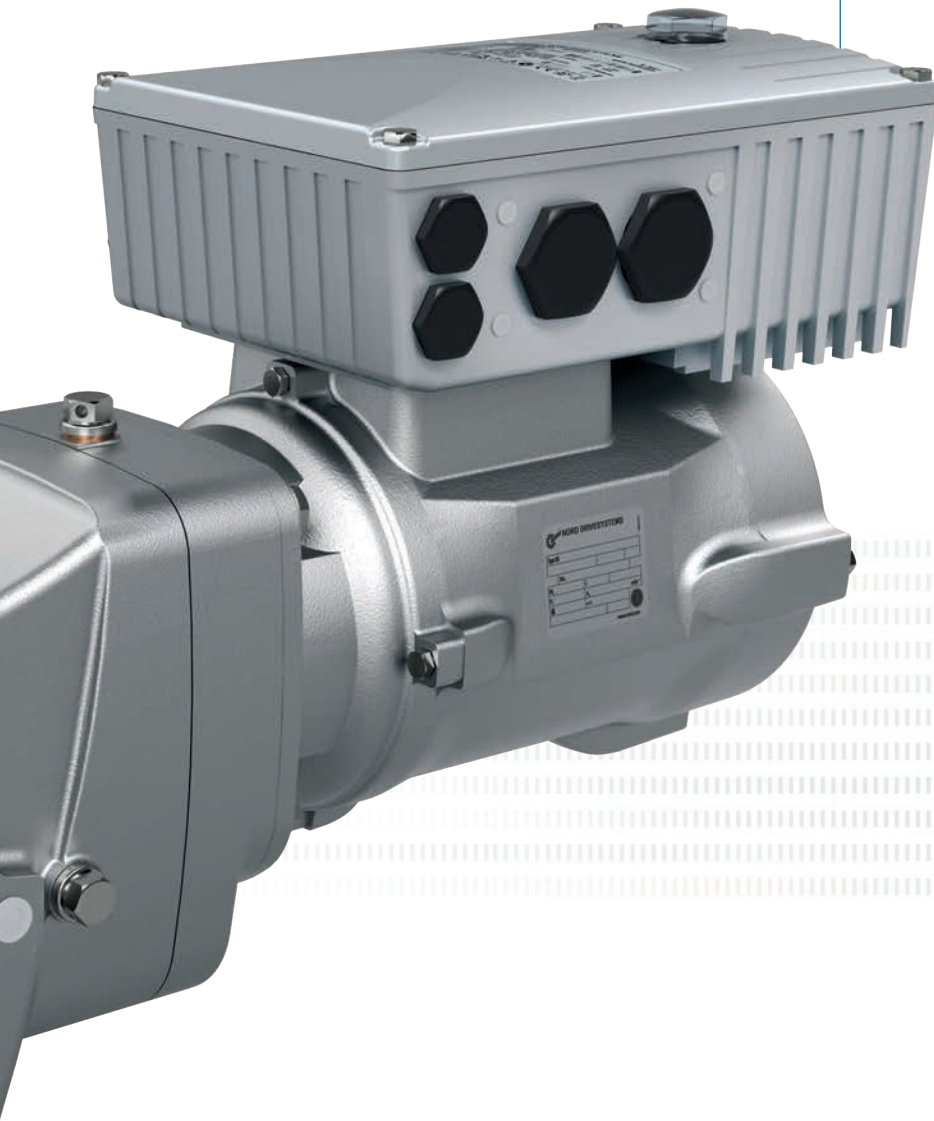


From Processing to Packaging

NORD DRIVESYSTEMS is a global leader in drive solutions for food and beverage industry applications around the world. NORD is a driving force in the production of:

- ▶ Fresh foods
- ▶ Dried and snack foods
- ▶ Bakery products
- ▶ Ready meals
- ▶ Confectionery products
- ▶ Beverages
- ▶ Liquid and canned foods





Industry Specific Solutions

- ▶ Smooth body motors with hygienic, wash-down design for easy cleaning
- ▶ Aluminum alloy housings for optimal heat dissipation
- ▶ Intelligent VFDs enable dynamic control of gear units and can be configured precisely for system needs
- ▶ Special lubricants for low/high temperatures
- ▶ Temperature sensors to protect against overheating
- ▶ Stainless steel shafts and accessories
- ▶ Protection class IP66 or IP69K

NORD DRIVESYSTEMS Provides:

- ▶ Comprehensive application knowledge and technical support
- ▶ Complete drive solutions from a single source
- ▶ Strong global presence and support
- ▶ Thousands of installed units in the food and beverage industry
- ▶ Extensive, versatile portfolio of premium quality products
- ▶ High reliability, efficiency, and durability
- ▶ Recognized production quality according to global standards

Drive Solutions for the Food & Beverage Industry

NORD DRIVESYSTEMS is a globally active provider of robust, reliable drive technology, including drives for the specialized environments of the food and beverage industry. NORD designs customized, individual drive solutions that meet the requirements of most food and beverage applications.

Packaging

- ▶ Bottling
- ▶ Capping
- ▶ Labeling
- ▶ Conveyors
- ▶ Sealers

Processing

- ▶ Mixers
- ▶ Agitators
- ▶ Tanks
- ▶ Cooker coolers
- ▶ Blenders

Food Industries

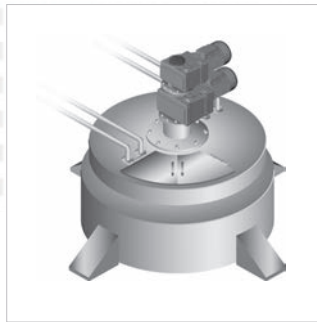
- ▶ Fresh foods
- ▶ Dried and snack foods
- ▶ Bakery products
- ▶ Ready meals
- ▶ Confectionery products
- ▶ Beverages
- ▶ Liquid and canned foods



Pumping

Pump systems require reliable drives for both high and low fluid viscosities. NORD systems are built for durability and can handle all specialized pump controls.

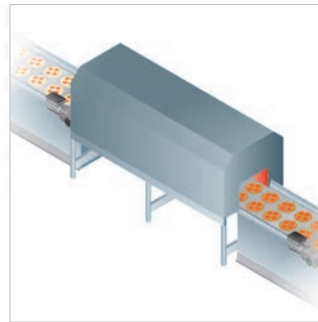
- ▶ High starting torques/soft starts as required
- ▶ Wall or motor mounted variable frequency drives
- ▶ H1 food-grade oil for gear lubrication
- ▶ Safe terminal or plug connections



Mixing, Agitating, Kneading

Drive loads and operation duty vary for mixing, agitating, and kneading applications. NORD provides units that are robust, reliable, and ensure smooth operation over a long service life.

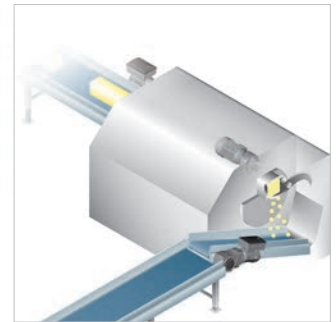
- ▶ Extra-strong output shaft bearings for heavy loads
- ▶ Temperature sensors for overheating protection
- ▶ Programmable VFDs for STO and reverse operation
- ▶ Twin gearbox agitators with shafts turning in opposite directions



Heating, Cooling, Freezing

NORD units can be configured with corrosion resistant surfaces, stainless steel fittings, and wash down housings to combat harsh environmental conditions.

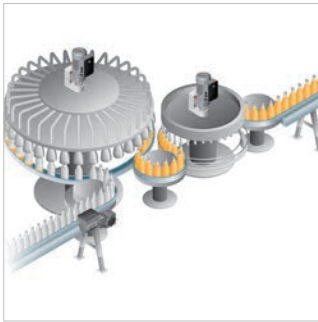
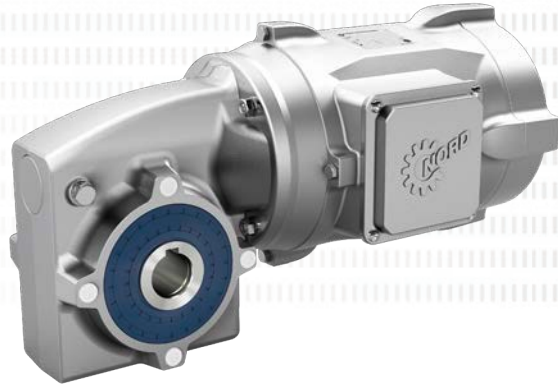
- ▶ Various fan/fan-less configurations
- ▶ H1 low- and high-temperature food-grade oils, hydrophobic bearing lubricants
- ▶ Condensation drains
- ▶ Stainless steel fittings



Cutting, Slicing, Dosing

NORD's gear units are wash-down ready and are ideal for CIP area installation and machine integration.

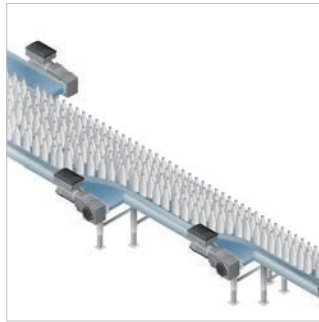
- ▶ Smooth wash-down surfaces on all drive components
- ▶ FDA-compliant sealed aluminium surface tolerating pH 2–12
- ▶ Stainless steel fittings
- ▶ IP66 or optional IP69K ingress protection



Bottling

Integrated positioning functions in NORD variable frequency drives allow for optimum precision and speed control of bottling systems.

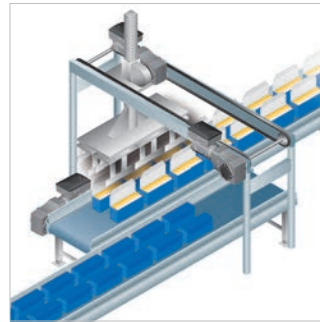
- ▶ Absolute and incremental encoders
- ▶ Plug-and-play connections
- ▶ Smooth surfaces
- ▶ POSICON integrated positioning mode and synchronization



Conveying

NORD provides various solutions for horizontal, vertical, and inclined conveyors. Units can be individually controlled by conveyor section to manage speed and prevent blockages.

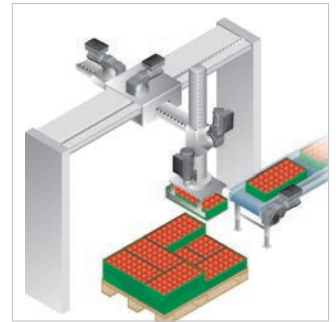
- ▶ Encoders for precise positioning
- ▶ Energy-saving VFDs for cabinet, wall, or motor mounting
- ▶ Wide range of high-quality surface protection options
- ▶ Soft start, deceleration ramp and STO functions



Secondary Packaging

Drive solutions from NORD offer intelligent control of systems and enable dynamic movement for intermittent, continuous, and smooth operation.

- ▶ Compact overall size
- ▶ Plug-and-play connections
- ▶ VFDs for motor mounting or wall mounting
- ▶ Encoders for precise positioning
- ▶ Easy cleaning with high-quality surface treatments and paints



Palletizing

NORD helical bevel gear units combined with decentralized VFDs provide precise positioning, high-efficiency, and dynamic control for palletizing systems.

- ▶ Compact, lightweight aluminium drive units
- ▶ Cabinet-installed and motor mounted VFDs for positioning with encoder feedback
- ▶ Soft start, deceleration ramp, brake and STO functions

Drive Solutions for the Food & Beverage Industry

Efficient, Reliable, and Proven Drive Solutions from a Single Source



Efficient

NORD drive solutions are environmentally friendly and help to minimize CO₂ emissions with their highly efficient operation.

- ▶ Low inertia motors designed for use with variable frequency drives meet the latest international energy requirements.
- ▶ Variable frequency drives ensure efficient operation, improved process control, and optimum motor power.
- ▶ Service and maintenance-friendly NORD drives reduce downtimes and contribute to greater efficiency and availability of the entire system.

Reliable

It is vital to prevent breakdowns in the food and beverage industry. For this reason, reliability is our main focus when developing drive solutions. All of our system components are precisely matched to ensure smooth operation.

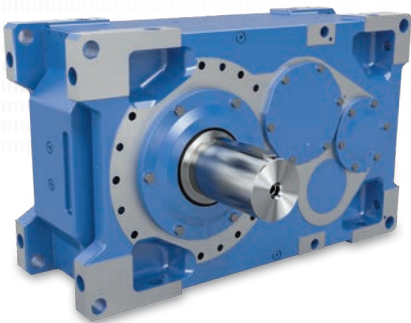
- ▶ Gear units with UNICASE™ housings provide precise positioning of bearings and drive shafts.
- ▶ AUTOVENT™ leak-free design.
- ▶ Precision-made gears with minimal wear are used throughout.
- ▶ Robust gear units that operate quietly and have a long service life.
- ▶ NORD VFDs protect the drive system electronically and can visualize operating data.



Proven

The reliability and cost-effectiveness of electronically controlled NORD DRIVESYSTEMS conveyor drives have proven themselves in food and beverage applications throughout the world. These systems combine great flexibility and a graduated comprehensive range of functions with convenient operation. NORD drives ensure high conveyance speeds that are more often required due to increased safety measures.

- ▶ Mechatronic drive systems based on lightweight, highly efficient 2-stage helical bevel geared motors.
- ▶ Gear units and electric motors combined with wall- or motor-mounted VFDs to form complete, highly efficient drive systems. NORD DRIVESYSTEMS also supplies the required cable connectors and interfaces for a variety of bus systems as well as their respective software.



Industrial

NORD DRIVESYSTEMS is the only manufacturer which produces modular industrial gear units with an output torque of up to 2,495,900 lb-in in a one-piece UNICASE housing. Because of this design, mixer drives can often be implemented without additional bearings. More information on MAXXDRIVE® industrial gear units can be found in the G1050 catalog and F1050 flyer.



Drive Solutions for the Food & Beverage Industry

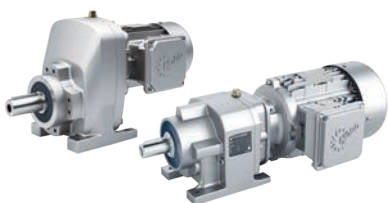
DuoDrive Integrated Gear Unit and Motor (Catalog G5010)



- ✓ Integrated gear unit and motor
- ✓ System efficiency up to 92%
- ✓ Simple plug-and-play commissioning
- ✓ High power density

Sizes: 2
Power: 0.50 – 4.00 hp
Torque: 230 – 2,186 lb-in
Ratio: 3.24:1 – 18.1:1

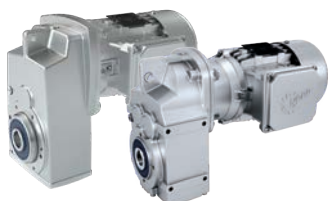
NORDBLOC.1® Helical Inline Gear Units (Catalog G1000)



- ✓ Foot or flange-mounted
- ✓ Die-cast iron or aluminum housing
- ✓ UNICASE housing
- ✓ Available in single, double, or triple reduction

Sizes: 16
Power: 0.16 – 50 hp
Torque: 266 – 29,207 lb-in
Ratio: 1.07:1 – 456.77:1

UNICASE™ Parallel Shaft Gear Units (Catalog G1000)



- ✓ Foot, flange, or shaft mounted
- ✓ Hollow or solid shaft
- ✓ Compact design
- ✓ Cast-iron or aluminum UNICASE housing

Sizes: 15
Power: 0.16 – 200 hp
Torque: 974 – 680,200 lb-in
Ratio: 4.03:1 – 15,685.03:1

NORDBLOC.1® 2-Stage Helical Bevel Gear Units (Catalog G1000)



- ✓ Foot, flange, or shaft mounted
- ✓ Hollow or solid shaft
- ✓ Aluminum housing
- ✓ Compact design

Sizes: 6
Power: 0.16 – 10 hp
Torque: 443 – 5,842 lb-in
Ratio: 3.03:1 – 70:1

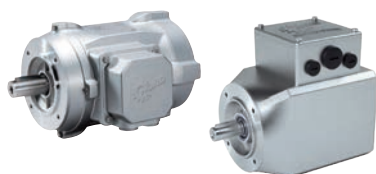
UNIVERSAL SI and SMI Worm Gear Units (Catalog G1000)



- ✓ Smooth-surfaces
- ✓ Universal mounting options
- ✓ Life-long lubrication
- ✓ NEMA and IEC versions

Sizes: 5
Performance: 0.16 – 5.00 hp
Torque range: 186 – 3,780 lb-in
Ratio: 5.00:1 – 3,000:1

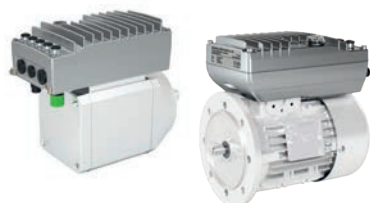
Smooth Surface Motors (Catalog M7000, M5000)



- ✓ Wash-down design
- ✓ Various motor protection options
- ✓ IP66 or IP69K protection
- ✓ Inverter/vector duty

Sizes: 71 – 100
Performance: 0.16 – 1.50 hp

NORDAC® *ON/ON+* SK 300P Variable Frequency Drives (Catalog E3000)



- ✓ Wall or motor mounted
- ✓ Ethernet communication
- ✓ Compact design
- ✓ Plug-and-Play solution

NORDAC *ON*
Sizes: 3
Voltage: 3~ 400V
Power: 0.50 – 3 hp

NORDAC *ON+*
Sizes: 3
Voltage: 3~ 400V
Power: 0.50 – 4 hp

NORDAC® *START* SK 135E Motor Starters (Catalog E3000)



- ✓ Integrated electronic brake rectifier
- ✓ Consistent parameter structure
- ✓ Reversing starter with soft start function

Sizes: 2
Voltage: 3~ 200 – 240 V, 3~ 380 – 500 V
Power: 0.16 – 4 hp resp. up to 10 hp

NORDAC® *BASE* SK 180E Variable Frequency Drives (Catalog E3000)



- ✓ Stand-alone operation
- ✓ 4 parameter sets
- ✓ Sensorless current vector control (ISD control)
- ✓ Integrated PLC

Sizes: 2
Voltage: 1~ 110 – 120 V, 1~ 200 – 240 V, 3~ 200 – 240 V, 3~ 380 – 500 V
Power: 0.33 – 3 hp

NORDAC® *FLEX* SK 200E Variable Frequency Drives (Catalog E3000)



- ✓ Energy saving function
- ✓ Integrated POSICON positioning control
- ✓ Integrated PLC

Sizes: 4
Voltage: 1~ 110 – 120 V, 1~ 200 – 240 V, 3~ 200 – 240 V, 3~ 380 – 500 V
Power: 0.33 – 30 hp

NORDAC® *PRO* SK 500P Variable Frequency Drives (Catalog E3000)

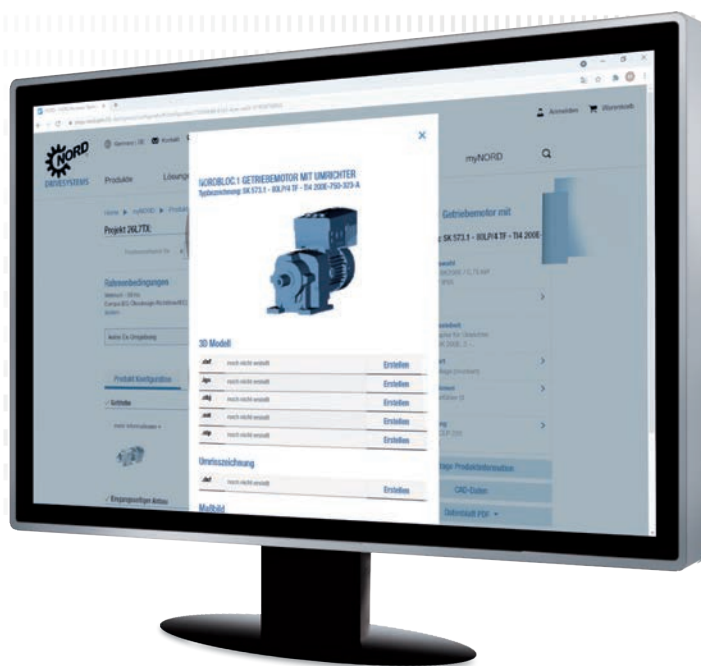


- ✓ Precise current vector control with high overload reserves for operating asynchronous and synchronous motors
- ✓ Universal interface for real time Ethernet
- ✓ Integrated PLC for drive-related functions even in the basic device

Size: 5
Voltage: 1~ 200 – 240 V, 3~ 380 – 480 V
Power: 0.33 – 30 hp

Ordering is Easy With myNORD Online Tools!

- ▶ Obtain drawing files direct from quote configuration
- ▶ Effortlessly select & configure customized drive solutions
- ▶ Create quotes with account-specific net pricing
- ▶ Order-specific documentation
- ▶ 24/7/365 order tracking
- ▶ Select and order spare parts



Register now at myNORD.com!



US

Central Region
Corporate Headquarters
800 NORD Drive
Waunakee, WI 53597
Tel. 888.314.6673
info.us@nord.com
www.nord.com

East Region
300E Forsyth Hall Dr.
Charlotte, NC 28273
Tel. 888.314.6673
info.us@nord.com

West Region
1180 Railroad St.
Corona, CA 92882
Tel. 888.314.6673
info.us@nord.com

South Region
350 Cypress Hill Dr, Suite 400
McKinney, TX 75071
Tel. 888.314.6673
info.us@nord.com

CA

NORD Gear Limited
Brampton, ON
41 West Drive
Brampton, ON L6T4A1
Tel. 800.668.4378
info.ca@nord.com

MX

NORD DRIVE SYSTEMS SA DE CV
Queretaro, Mexico
Av. Industria Textil B.6
Parque Industrial PYME, Huimilpan
QRO - Mexico 76950
Tel. 52 442 688 7110
info.mx@nord.com