DRIVE SOLUTIONS FOR
THE FOOD AND
BEVERAGE INDUSTRY
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NORD DRIVESYSTEMS Group

Headquarters and technology centre in Bargteheide, near Hamburg

Innovative drive solutions for more than 100 branches of industry

Mechanical products
- Gear units

Electrical products
- Motors

Electronic products
- Frequency inverters and motor starters

7 production locations with cutting-edge technology produce gear units, motors, inverters etc. for complete drive systems from a single source.

Subsidiaries and sales partners in 98 countries on 5 continents provide local stocks, assembly centres, technical support and customer service.

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

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.
NORD DRIVESYSTEMS is a global leader in drive solutions for food and beverage industry applications around the world.

NORD DRIVESYSTEMS offers:

- 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 industry
- Extensive, versatile portfolio of premium quality products
- High reliability, efficiency and durability
- Recognised production quality according to global standards

NORD DRIVESYSTEMS is a driving force in the production of:

- Fresh Foods
- Dryed & Snack Foods
- Bakery Products
- Ready Meals
- Confectionary Products
- Beverages
- Liquid & Canned Foods
FROM PROCESSING ...
where raw ingredients are transformed

... TO PACKAGING
where products are enclosed and protected for distribution.
FLEXIBLE SOLUTIONS FOR THE
FOOD AND BEVERAGE INDUSTRY

PROCESSING

**PUMPING**
NORD DRIVESYSTEMS provides dedicated pump drives with special functions.
- High starting torques / soft starts as required
- Wall or motor mounted inverters
- H1 food-grade oil for gear lubrication
- Safe terminal or plug connections

**MIXING, AGITATING, KNEADING**
NORD DRIVESYSTEMS provides heavy-duty geared motors for agitators of any scale.
- Extra-strong output shaft bearings for heavy loads
- Temperature sensors for overheating protection
- Programmable inverters for STO and reverse operation
- Twin gearbox agitators with shafts turning in opposing directions

**HEATING, COOLING, FREEZING**
NORD DRIVESYSTEMS provides drive solutions adapted to extreme temperatures.
- Various fan/fan-less configurations
- H1 low-/high-temperature food-grade oils, hydrophobic bearing lubricants
- Condensation drains
- Stainless steel fittings

**CUTTING, SLICING, DOSING**
NORD DRIVESYSTEMS provides systems 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
# PACKAGING

## BOTTLING

NORD DRIVESYSTEMS provides drives tailored to filling and conveying systems.
- Absolute and incremental encoders
- Plug-and-play connections
- Smooth-surfaces
- High-quality paints or sealed surfaces for easy cleaning

## CONVEYING

NORD DRIVESYSTEMS provides versatile solutions for horizontal, vertical and inclined conveyors.
- Encoders for precise positioning
- Energy-saving inverters for cabinet, wall or motor mounting
- High-quality paints or sealed surfaces for easy cleaning
- Soft start, deceleration ramp and STO functions

## SECONDARY PACKAGING

NORD DRIVESYSTEMS provides highly efficient systems for intermittent and continuous operation.
- Compact overall size, plug-and-play connections
- Inverters for motor mounting or wall mounting
- Encoders for precise positioning
- High-quality paints or sealed surfaces for easy cleaning

## PALLETIZING

NORD DRIVESYSTEMS provides precise positioning and dynamic motion solutions.
- Compact, lightweight aluminium drive units
- Cabinet-installed and motor mounted inverters for positioning with encoder feedback
- High-quality paints or sealed surfaces for easy cleaning
- Soft start, deceleration ramp, brake and STO functions
Efficient, Reliable and Proven in Demanding Conditions

Efficient
NORD DRIVESYSTEMS drive solutions are environmentally friendly and help to minimise CO₂ emissions.

- NORD low inertia motors are designed for inverter operation and meet the latest international energy requirements.
- NORD frequency inverters ensure efficient operation, improved process control and optimum motor power.
- Service and maintenance-friendly NORD drives reduce downtimes and therefore contribute to greater efficiency and availability of the entire system.

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

- Gear units with Unicase housings provide precise positioning of bearings and drive shafts.
- AUTOVENT ensures leak-free design.
- Precision-made gears with minimal wear are used throughout.
- The gear units are extraordinarily robust, run very quietly and have a particularly long service life.
- NORD inverters protect the drive system electronically and are able to visualise the operating data.

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

- Mechatronic drive systems from NORD DRIVESYSTEMS are based on lightweight and highly efficient 2-stage bevel geared motors.
- In combination with wall-mounted or motor-mounted frequency inverters, they form efficient drive systems. NORD DRIVESYSTEMS also supplies the required cable connectors and interfaces to a variety of bus systems as well as the respective software.
The Drive Electronics
- Compact design
- Easy commissioning
- Protection class up to IP69K

The Motor
- High efficiencies
- Global standards
- All operating conditions

The Gear Unit
- Strong bearings
- High power density
- High corrosion protection

DER ANTRIEB
- Reliable
- Versatile
- Global
NORD DRIVE SOLUTIONS FOR THE FOOD AND BEVERAGE INDUSTRY

Decentralised Inverters

- No need for shielded power cable
- Faster commissioning
- Ready-to-use motor-inverter unit
- Reduction in design time
- No special cable routing
- No integration into cabinet necessary
- Local machine control

SK 135E NORDAC START motor starters (Catalogue E3000)

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

<table>
<thead>
<tr>
<th>Voltage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3~ 200 – 240 V</td>
<td></td>
</tr>
<tr>
<td>3~ 380 – 500 V</td>
<td></td>
</tr>
</tbody>
</table>

| Power         | 0.12 – 3 kW or up to 7.5 kW |

SK 180E NORDAC BASE frequency inverters (Catalogue E3000)

- Stand-alone operation
- 4 parameter sets (which can be switched online)
- Sensorless current vector control (ISD control)

<table>
<thead>
<tr>
<th>Voltage</th>
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<tbody>
<tr>
<td>1~ 110 – 120 V</td>
<td></td>
</tr>
<tr>
<td>1~ 200 – 240 V</td>
<td></td>
</tr>
<tr>
<td>3~ 200 – 240 V</td>
<td></td>
</tr>
<tr>
<td>3~ 380 – 500 V</td>
<td></td>
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</tbody>
</table>

| Power         | 0.25 – 2.2 kW |

SK 500E NORDAC PRO frequency inverters (Catalogue E3000)

- Energy-saving function
- Integrated POSICON positioning control
- Plug-on communication module (field bus)

<table>
<thead>
<tr>
<th>Voltage</th>
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<tbody>
<tr>
<td>1~ 110 – 120 V</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>3~ 200 – 240 V</td>
<td></td>
</tr>
<tr>
<td>3~ 380 – 480 V</td>
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</tbody>
</table>

| Power         | 0.25 – 160 kW |

MAXXDRIVE® industrial gear units (Catalogue G1050)

- Foot, flange or shaft mounting
- Long life, low maintenance
- Parallel axis and right-angled gear units

| Power         | 1.5 – 4,000 kW |
| Torque        | 15,000 – 250,000 Nm |
| Ratio         | 5.60:1 – 30,000:1 |

Transportable wine pump with frequency inverter SK 200E
<table>
<thead>
<tr>
<th><strong>UNICASE helical gear units</strong> (Catalogue G1000)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Foot or flange mounted</td>
<td></td>
</tr>
<tr>
<td>✓ Long life, low maintenance</td>
<td></td>
</tr>
<tr>
<td>✓ High quality sealing</td>
<td></td>
</tr>
<tr>
<td>✓ UNICASE housing</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>0.12 – 160 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>10 – 26,000 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>1.35:1 – 14,340.31:1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>UNICASE parallel shaft gear units</strong> (Catalogue G1000)</th>
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</thead>
<tbody>
<tr>
<td>✓ Foot, flange or shaft mounted</td>
<td></td>
</tr>
<tr>
<td>✓ Hollow or solid shaft</td>
<td></td>
</tr>
<tr>
<td>✓ Short design</td>
<td></td>
</tr>
<tr>
<td>✓ UNICASE housing</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>0.12 – 200 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>110 – 100,000 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>4.03:1 – 15.685.03:1</td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>NORDBLOC.1® 2-stage bevel gear units</strong> (Catalogue G1014)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>✓ Foot, flange or shaft mounted</td>
<td></td>
</tr>
<tr>
<td>✓ Hollow or solid shaft</td>
<td></td>
</tr>
<tr>
<td>✓ UNICASE housing</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>0.12 – 9.2 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>50 – 660 Nm</td>
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<tr>
<td>Ratio</td>
<td>3.03:1 – 70:1</td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>UNIVERSAL SI worm gear units</strong> (Catalogue G1035)</th>
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</thead>
<tbody>
<tr>
<td>✓ Modular</td>
<td></td>
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<tr>
<td>✓ Universal mounting</td>
<td></td>
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<tr>
<td>✓ Lifetime lubrication</td>
<td></td>
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<tr>
<td>✓ IEC versions</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>0.12 – 4.0 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>21 – 427 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>5.00:1 – 3,000.00:1</td>
</tr>
</tbody>
</table>

**Sealed Surface Conversion System**

- Easy-to-clean surfaces
- Resistant to acids and alkalis (wide pH range)
- Cannot flake
- Corrosion-proof – no contact corrosion and no infiltration of corrosion even if surface is damaged
- Conforms to FDA Title 21 CFR 175.300
- Free from chromates

NORDBLOC.1® helical bevel gear unit SK 93.1 with HMT motor and SK 180E in nsd tupH
Mixers or filling systems, conveyors, freezers, conche machines – NORD DRIVESYSTEMS provides drive solutions optimized for these and all other food and beverage industry applications.

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