COMPLETE DRIVE SYSTEMS FROM A SINGLE SOURCE
Reliable gear unit with one-piece UNICASE housing can cater for any load.
- 2-stage, high efficiency bevel gear design
- High power density
- Long service life

Powerful motors up to IE4 keep the drive systems moving in any operating situation.
- Designed in compliance with international standards
- High overload capacity
- Energy-efficient

Intelligent drive electronics provide exactly the control facilities you need.
- Scalable functions
- Full field bus connection facilities
- Wide power range
- PLC integrated at no extra cost
From the three components - gearbox, motor and drive electronics - the NORD product package provides an optimal and individual drive solution. Each of the variants combines: the highest product quality, short planning and assembly times, high delivery availability, and a good price/performance ratio.

Extensive communication options enable access to the drive units from all levels, providing a wide range of adjustments.
- All common bus systems
- Quick and simple commissioning with plug-in control box or using NORD CON software
- Convenient handheld console for local operation
- Optionally with intralogistics options

Switches and buttons are located directly on the drive units and enable direct starting, stopping or mode changes.
- Mains switch
- Selector switch for local or remote control
- Start/Stop and Forward/Reverse switch
- Energy-efficient

All interfaces designed for ease of operation. The drives can be easily configured and installed.
- Simple Plug-and-Play with all common quick connection plugs
- Plug-in supply cable and motor output
- Plug-in sensors and encoders
- Pre-assembled cables
- PLC integrated at no extra cost
NORD DRIVESYSTEMS
GEARED MOTORS

As early as 1981 NORD DRIVESYSTEMS developed the revolutionary UNICASE construction. A closed housing manufactured from a single block combines all the elements of the gear unit.

- Single housing which integrates all bearings
- Complete machining in one step
- High output torques
- High axial and radial loads
- High reliability
- Long service life
- Quiet running

**UNICASE Helical gear units** (Catalogue G1000)

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

<table>
<thead>
<tr>
<th>Sizes</th>
<th>11</th>
</tr>
</thead>
<tbody>
<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>

**NORDBLOC.1® Helical gear units** (Catalogue G1000)

- Foot or flange-mounted
- Die-cast aluminium housing
- UNICASE housing
- Industry standard dimensions

<table>
<thead>
<tr>
<th>Sizes</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.12 – 37 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>30 – 3,300 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>1.07:1 – 456.77:1</td>
</tr>
</tbody>
</table>

**UNICASE Parallel shaft gear units** (Catalogue G1000)

- Foot mounted, flange mounted or hollow shaft mounted
- Hollow or solid shaft
- Compact design
- UNICASE cast-iron housing

<table>
<thead>
<tr>
<th>Sizes</th>
<th>15</th>
</tr>
</thead>
<tbody>
<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 – 6,616.79:1</td>
</tr>
</tbody>
</table>

**UNICASE Bevel Gear Units** (Catalogue G1000)

- Foot mounted, flange mounted or hollow shaft mounted
- Hollow or solid shaft
- UNICASE cast-iron housing

<table>
<thead>
<tr>
<th>Sizes</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.12 – 200 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>180 – 50,000 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>8.04:1 – 13,432.68:1</td>
</tr>
</tbody>
</table>
### NORDBLOC.1® 2-stage bevel gear units (Catalogue G1014)

- Foot mounted, flange mounted or hollow shaft mounted
- Hollow or solid shaft
- UNICASE aluminium housing

<table>
<thead>
<tr>
<th>Sizes</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.12 – 9.2 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>50 – 660 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>3.03:1 – 70:1</td>
</tr>
</tbody>
</table>

### UNICASE Helical worm gear units (Catalogue G1000)

- Foot mounted, flange mounted or hollow shaft mounted
- Hollow or solid shaft
- UNICASE cast-iron housing

<table>
<thead>
<tr>
<th>Sizes</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.12 – 15 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>94 – 3,058 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>4.40:1 – 7,095.12:1</td>
</tr>
</tbody>
</table>

### UNIVERSAL SI worm gear units (Catalogue G1035)

- Modular
- Universal attachment
- Life-long lubrication
- IEC versions

<table>
<thead>
<tr>
<th>Sizes</th>
<th>5</th>
</tr>
</thead>
<tbody>
<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>

### UNIVERSAL SMI worm gear units (Catalogue G1035)

- Modular
- Universal attachment
- Life-long lubrication
- IEC versions

<table>
<thead>
<tr>
<th>Sizes</th>
<th>5</th>
</tr>
</thead>
<tbody>
<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>
NORD DRIVESYSTEMS
MAXXDRIVE™ INDUSTRIAL GEAR UNITS

Up to 250,000 Nm

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

MAXXDRIVE™ Industrial gear units (Catalogue G1050)

- 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 for 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

<table>
<thead>
<tr>
<th>Sizes</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>1.5 – 4,000 kW</td>
</tr>
<tr>
<td>Torque</td>
<td>15,000 – 250,000 Nm</td>
</tr>
<tr>
<td>Ratio</td>
<td>5.60:1 – 30,000:1</td>
</tr>
</tbody>
</table>

Modular Industrial Gear Units

The optimally matched individual components form the basis for a wide range of versions, great flexibility and short planning and installation times. This enables the drive solutions to be individually tailored to the customer’s requirements with short delivery times, even for large gear units.
NORD DRIVESYSTEMS
SYNCHRONOUS AND ASYNCHRONOUS MOTORS

NORD DRIVESYSTEMS develops its own motors and supplies them to all major markets throughout the world.

This ensures a high level of independence from external suppliers and therefore provides our customers with the decisive advantage of short and highly dependable delivery times.

International energy efficiency standards

- EU: IE1 – IE4 as per IEC 60034-30
- US: ee labeling as per EISA 2007 (Dept. of Energy)
- CA: CSA energy verified as per EER 2010
- CN: CEL as per GB 18613
- KR: KEL as per REELS 2010
- BR: Alto Rendimento as per Decreto nº 4.508
- AU: MEPS as per AS/NZS 1359.5
“NORD 4.0 READY!” means that NORD drive units are networked, autonomous and scalable. The key to this are our frequency inverters with their powerful processors and comprehensive equipment with interfaces and functions. Frequency inverters not only monitor themselves and the motor, but also their effect on the load situation within the plant segments and beyond.

The integrated PLC processes the data from the sensors and actuators and if necessary initiates a sequence control and communicates high quality drive and application data to the control centre and other networked components. For example, intelligent sequence controls can enable the drive unit to decide independently on a branch position and act accordingly. However, the drive units can also communicate with each other: “Attention, I am directing a package toward you; start your conveyor belt.” A slave drive can then synchronise to a master for a certain task and then return to normal operation. Hundreds of typical functions and parameters are saved and can be simply adopted.

In this way, the frequency inverter can coordinate both simple and complex applications independently from the plant control system and if necessary can respond to changes to the process or remedy many process faults independently without external intervention.

NORDAC PRO frequency inverter SK 500E (Catalogue F3050)

- Stand-alone operation
- Energy-saving function
- Integrated “POSICON” positioning control
- Plug-in communication modules (field bus)

<table>
<thead>
<tr>
<th>Sizes</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>1~ 110 – 120 V</td>
</tr>
<tr>
<td></td>
<td>1~ 200 – 240 V</td>
</tr>
<tr>
<td></td>
<td>3~ 200 – 240 V</td>
</tr>
<tr>
<td></td>
<td>3~ 380 – 480 V</td>
</tr>
<tr>
<td>Power</td>
<td>0.25 – 160 kW</td>
</tr>
</tbody>
</table>
### NORDAC START motor starter SK 135E (Catalogue F3015)

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

<table>
<thead>
<tr>
<th>Sizes</th>
<th>2</th>
</tr>
</thead>
</table>
| Voltage| 3~ 200 – 240 V  
3~ 380 – 500 V |
| Power  | 0.12 – 3 kW or up to 7.5 kW |

### NORDAC BASE frequency inverter SK 180E (Catalogue F3018)

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

<table>
<thead>
<tr>
<th>Sizes</th>
<th>2</th>
</tr>
</thead>
</table>
| Voltage| 1~ 110 – 120 V  
1~ 200 – 240 V  
3~ 200 – 240 V  
3~ 380 – 500 V |
| Power  | 0.25 – 2.2 kW |

### NORDAC FLEX frequency inverter SK 200E (Catalogue F3020)

- Energy-saving function
- Integrated “POSICON” positioning control
- Integrated PLC

<table>
<thead>
<tr>
<th>Sizes</th>
<th>4</th>
</tr>
</thead>
</table>
| Voltage| 1~ 110 – 120 V  
1~ 200 – 240 V  
3~ 200 – 240 V  
3~ 380 – 500 V |
| Power  | 0.25 – 22 kW |

### NORDAC LINK field distribution system SK 250E (Catalogue F3025)

- Frequency inverter or motor starter
- All connections in plug-in version for easy commissioning and maintenance
- PLC functionality for drive-integrated functions

<table>
<thead>
<tr>
<th>Sizes</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>3~ 380 – 500 V</td>
</tr>
</tbody>
</table>
| Power  | Frequency inverter 0.75 – 7.5 kW  
Motor starter 0.12 – 3 kW |
Sealed Surface Conversion System

- Special shaft sealing rings
- Food-compatible oil

**nsd tupH for extreme requirements:**

- Food & beverage industry
- Dairies
- Pharmaceutical industry
- Water and sewage plants
- Car wash equipment
- Offshore and coastal areas
- Cleaning with chemicals (Wash-down, wide pH range)

**Tests performed on surface-treated aluminium housing components:**

- ASTM D714 Blister formation
- ASTM D610-08 Corrosion
- ASTM D1654-08 Scratching
- ASTM B117-09 Salt spray test
- ASTM D3170 Gravelometer test
- DIN EN ISO 9227 Salt spray mist test
- DIN EN ISO 2409 Cross-cut test

**Products available with nsd tupH:**

- NORDBLOC.1® Helical bevel gear units (up to size 6)
- NORDBLOC.1® 2-stage bevel gear units
- UNIVERSAL SMI Worm gear units
- Smooth motors
- Frequency inverter SK 180E
- Motor starter SK 135E

**NORD geared motors with nsd tupH**

- are the optimal choice for use in challenging environmental conditions:

- Easy to clean surfaces
- Resistant to acids and alkalis (wide pH range)
- No blistering, even if damaged
- No flaking
- Corrosion resistant, prevents contact corrosion
- Alternative to stainless steel
- Conforms to FDA Title 21 CFR 175.300
- Free from chromates

**The complete solution for extreme conditions:**

- Surface-treated housing components
- DIN and standard components made from stainless steel
- Wash-down housing (gear unit and motor)
- Stainless steel shafts
NORD DRIVESYSTEMS Group

Headquarters and Technology Centre in Bargteheide, close to Hamburg

Innovative drive solutions for more than 100 branches of industry

7 state-of-the-art production plants produce gear units, motors and inverters also for complete drive solutions from a single source.

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

More than 3,600 employees throughout the world create customer oriented solutions.
NORD DRIVESYSTEMS Group

Headquarters and Technology Centre
in Bargteheide, close to Hamburg

Innovative drive solutions
for more than 100 branches of industry

Mechanical products
parallel shaft, helical gear, bevel gear and worm gear units

Electrical products
IE2/IE3/IE4 motors

Electronic products
centralised and decentralised frequency inverters,
motor starters and field distribution systems

7 state-of-the-art production plants
for all drive components

Subsidiaries and sales partners
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provide local stocks, assembly, production,
technical support and customer service.

More than 3,600 employees throughout the world
create customer oriented solutions.

www.nord.com/locator

Headquarters:
Getriebebau NORD GmbH & Co. KG
Getriebebau-Nord-Str. 1, 22941 Bargteheide, Germany
T +49 4532 2890, F +49 4532 289 2253
info@nord.com

Member of the NORD DRIVESYSTEMS Group