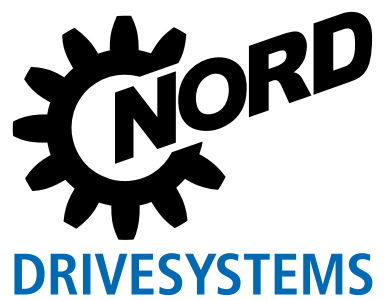




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# DRIVE SOLUTIONS FOR SEWAGE PLANTS



# NORD DRIVE SOLUTIONS FOR SEWAGE PLANTS






# NORD DRIVESYSTEMS Group

**Headquarters and Technology Centre**  
near Hamburg



**Innovative drive solutions**  
for more than 100 branches  
of industry

Mechanical products	Electrical products	Electronic products
Gear units	Motors	Frequency inverters, motor starters and field distributors
		

**7 production locations with cutting edge technology**  
produce gear units, motors,  
frequency inverters etc., from  
a single source – even for  
complex drive systems



Gear unit production



Motor production



Inverter production

**Subsidiaries and sales partners in 89 countries on 5 continents**  
provide local stocks,  
assembly centres, technical  
support and customer service



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

**More than 3,300 employees throughout the world**  
create customised solutions.



# EFFICIENT, RELIABLE & PROVEN DRIVE SOLUTIONS FOR SEWAGE PLANTS

**NORD DRIVESYSTEMS is one of the world's leading drive technology companies and provides solutions used in sewage plants all over the world.**

**NORD provides:**

- Extensive knowledge of applications and technical support
- Complete drive solutions from a single source
- Strong global presence and service
- Thousands of installed drives in the sewage industry throughout the world
- Wide range of products with high quality standards
- Great reliability, economy and service life
- Recognised product quality compliant with international standards

## Efficient

NORD drive solutions are environmentally friendly and help minimise CO<sub>2</sub> emissions.

- Extremely efficient helical, parallel shaft and bevel gear units reach efficiencies up to 97%.
- NORD motors meet the latest international energy requirements.
- NORD frequency inverters ensure efficient operation, improved process control, and optimised motor performance.
- Easy to service and maintain, NORD drives reduce standstill times and thus contribute to an increased efficiency and availability of the entire system.

## Reliable

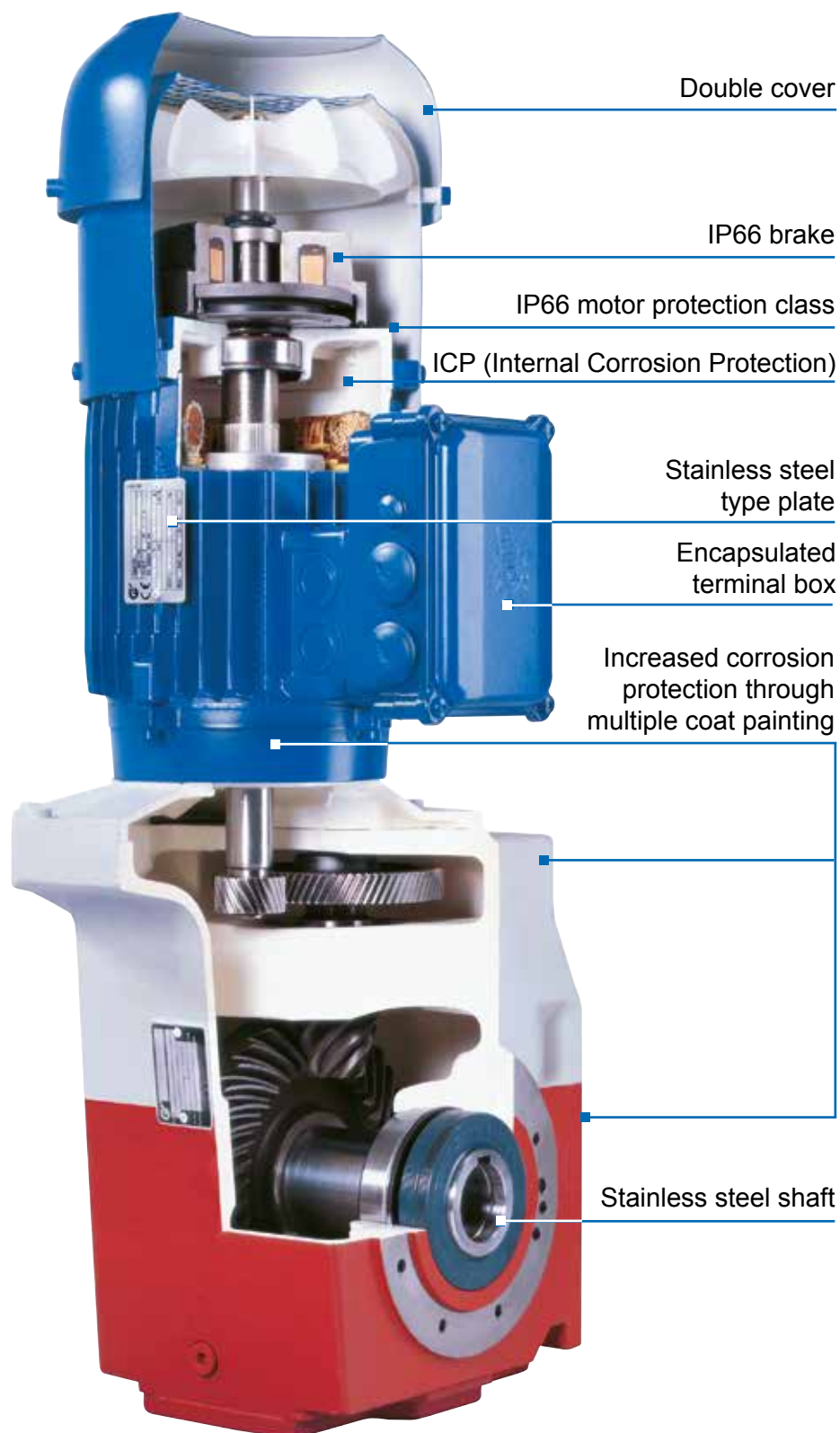
It is vital to prevent breakdowns in sewage systems. For this reason, reliability is our main focus when developing drive solutions. All of our system components are precisely matched to each other and ensure smooth operation.

- Autovent ensures a leak free operation.
- Biodegradable oils are available.
- Precisely machined gear wheels
- The gear units are extraordinarily robust, run very quietly and have a particularly long service life.
- NORD inverters electronically protect the drive system and can visualise the operating data.

## Tried-and-tested

- We offer you various possibilities for reinforcing the output shafts.
- Increased bearing spacing is available as an option to reduce loads on the bearing, so that service life is increased.
- Use of corrosion-resistant shaft material.





With its expertise for drive solutions in the sewage industry, NORD creates economical applications that meet all current and future requirements.

NORD supports you with:

#### DESIGN

- myNORD
- Reduced number of variants
- Project design/optimisation
- Drive system design
- Application solutions
- Green solutions
- CAD drawings

#### COMMISSIONING

- Plug-and-Play
- Support
- Training
- Documentation
- Smart commissioning




#### SERVICE

- Predictive maintenance (PLC function)
- Spare parts, express shipping
- Global presence
- 24/7 support

With subsidiaries and sales partners in 89 countries on 5 continents, NORD is your worldwide project partner.

# NORD DRIVE SOLUTIONS FOR SEWAGE PLANTS



Helical geared motors (Catalogue G1000)							
	<ul style="list-style-type: none"> <li>✓ Foot or flange-mounted</li> <li>✓ Long life, low maintenance</li> <li>✓ Optimum sealing</li> <li>✓ Unicase housing</li> </ul>						
	<table border="1"> <tr> <td>Power ranges:</td> <td>0.12 – 160 kW</td> </tr> <tr> <td>Torque:</td> <td>10 – 26,000 Nm</td> </tr> <tr> <td>Speed ratios:</td> <td>1.35:1 – 14,340.31:1</td> </tr> </table>	Power ranges:	0.12 – 160 kW	Torque:	10 – 26,000 Nm	Speed ratios:	1.35:1 – 14,340.31:1
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	Torque:	10 – 26,000 Nm					
Speed ratios:	1.35:1 – 14,340.31:1						
<h3>Parallel shaft geared motors (Catalogue G1000)</h3>							
	<ul style="list-style-type: none"> <li>✓ Foot mounted, flange mounted or hollow shaft mounted</li> <li>✓ Hollow or solid shaft</li> <li>✓ Compact design</li> <li>✓ Unicase housing</li> </ul>						
	<table border="1"> <tr> <td>Power ranges:</td> <td>0.12 – 200 kW</td> </tr> <tr> <td>Torque:</td> <td>110 – 100,000 Nm</td> </tr> <tr> <td>Speed ratios:</td> <td>4.03:1 – 6,616.79:1</td> </tr> </table>	Power ranges:	0.12 – 200 kW	Torque:	110 – 100,000 Nm	Speed ratios:	4.03:1 – 6,616.79:1
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Speed ratios:	4.03:1 – 6,616.79:1						
<h3>Bevel geared motors (Catalogue G1000)</h3>							
	<ul style="list-style-type: none"> <li>✓ High axial torques</li> <li>✓ High axial and radial loads</li> <li>✓ Long life, low maintenance</li> <li>✓ Unicase housing</li> </ul>						
	<table border="1"> <tr> <td>Power ranges:</td> <td>0.12 – 200 kW</td> </tr> <tr> <td>Torque:</td> <td>180 – 50,000 Nm</td> </tr> <tr> <td>Speed ratios:</td> <td>8.04:1 - 13,432.68:1</td> </tr> </table>	Power ranges:	0.12 – 200 kW	Torque:	180 – 50,000 Nm	Speed ratios:	8.04:1 - 13,432.68:1
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## VL bearings



### VL II reinforced drive shaft bearings

- ✓ Large bearing spacing + reinforced bearings = maximum radial and axial load capacity
- ✓ Longer service life

### VL III DRYWELL

- ✓ Additional oil drip plate
- ✓ Oil leak detector or oil sensor

### VL IV TRUE DRYWELL

Prevents the risk of leakage with downward-facing output shafts

- ✓ No rubbing seals below the oil level
- ✓ Available for bevel gear and parallel shaft gear units
- ✓ Hollow shaft version with shrink disc, optionally with mit push-in shaft

## Overload protection



- ✓ Safety coupling installed between motor and gear unit, alternatively between 2 gear units
- ✓ IEC/NEMA connection dimensions
- ✓ Backlash-free torque transfer
- ✓ Simple torque setting
- ✓ Integrated sensor
- ✓ Protected in housing

## Option: Various sealing systems + shaft materials

### Double shaft sealing rings

- ✓ Optimum sealing
- ✓ Long life Gasket
- ✓ Clean gear oil

### FKM Material

- ✓ Resistant to chemicals
- ✓ High temperatures

### Labyrinth seals

- ✓ Re-greaseable and low maintenance or non-re-greaseable versions
- ✓ Protects against splashed water and dirt

### Mechanical seal

- ✓ For contact with aggressive and contaminated liquids
- ✓ For use with underwater drive units

### Sealing system prevents leakage with downward-facing output shafts

- ✓ TRUE DRYWELL

### Rust-proof shafts

## Outdoor motor installation



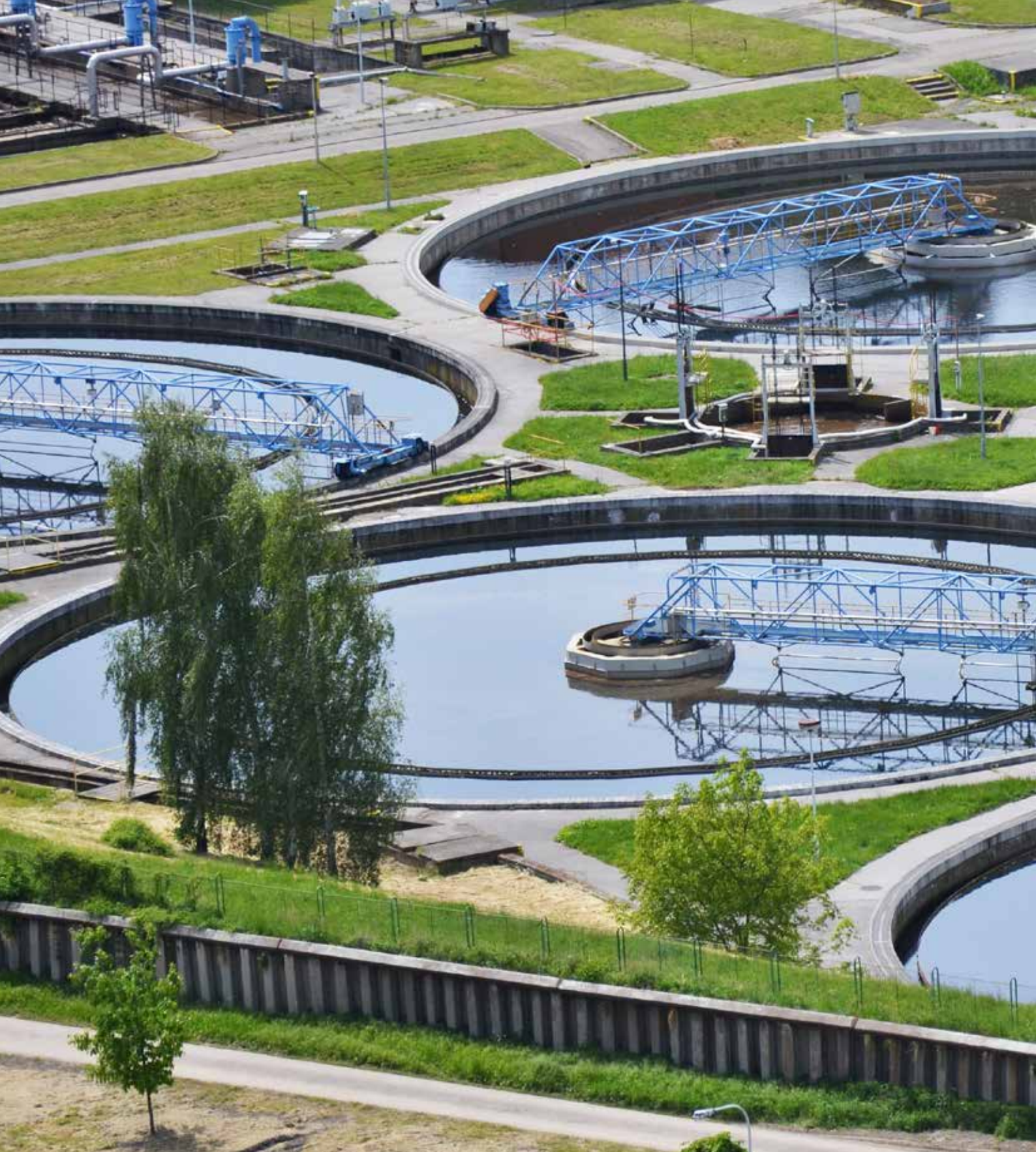
### IP55 protection class as standard

- ✓ Motor with shaft sealing ring on the B side
- ✓ Electrolytically galvanized fan cover
- ✓ Brake IP55 with stainless rotor disc and brake drive dog made from stainless material
- ✓ Special paint (optional)
- ✓ Stainless friction plates for brakes (optional)
- ✓ Stainless type plate (optional)
- ✓ Stainless fastening screws (optional)

### AS66 option

- ✓ IP66 motor with shaft sealing ring on the B side
- ✓ Electrolytically galvanized fan cover
- ✓ Encapsulated terminal box
- ✓ Stainless type plate
- ✓ Ball bearing in 2 RS version with sealing discs
- ✓ IP66 brake





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