

INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES



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**DRIVE SOLUTIONS FOR
SEWAGE PLANTS**

NORD[®]
DRIVESYSTEMS

NORD DRIVE SOLUTIONS FOR SEWAGE PLANTS



NORD DRIVESYSTEMS Group

Headquarters and technology centre in Bargteheide, 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, inverters etc. for complete drive systems from a single source.

Gear unit production	Motor production	Inverter production

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



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More than 3,900 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 whose solutions are used in sewage plants all over the world.

NORD DRIVESYSTEMS 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 to minimise CO₂ emissions.

- 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

The reliability and cost-effectiveness of NORD drive solutions have proven themselves in the sewage industry throughout the world.

- 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.





Double cover

IP66 brake

IP66 motor protection class

ICP (Internal Corrosion Protection)

Stainless steel
type plate

Encapsulated
terminal box

Increased corrosion
protection through
multiple coat painting

Stainless steel shaft

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

NORD DRIVESYSTEMS 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

NORD DRIVESYSTEMS is your worldwide project partner with subsidiaries and sales partners in 98 countries on 5 continents.

NORD DRIVE SOLUTIONS FOR SEWAGE PLANTS



UNICASE helical gear units (Catalogue G1000)



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

Power	0.12 – 160 kW
Torque	10 – 26,000 Nm
Speed ratio	1.35:1 – 14,340.31:1

UNICASE parallel shaft gear units (Catalogue G1000)



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

Power	0.12 – 200 kW
Torque	110 – 100,000 Nm
Speed ratio	4.03:1 – 15.685,03:1

UNICASE bevel gear units (Catalogue G1000)



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

Power	0.12 – 200 kW
Torque	180 – 50,000 Nm
Speed ratio	8.04:1 – 13,432.68:1

MAXXDRIVE® industrial gear units (Catalogue G1050)



- ✓ Parallel axis and right-angled gear units
- ✓ High axial precision
- ✓ Long life, low maintenance
- ✓ UNICASE housing

Power	1.5 – 4,000 kW
Torque	15,000 – 260,000 Nm
Speed ratio	5.60:1 – 30,000:1

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 the motor and the gear unit, alternatively between two 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 galvanised fan cover
- ✓ IP55 brake with stainless rotor disc and brake drive dog made from stainless material
- ✓ Special painting (optional)
- ✓ Stainless friction plates for brakes (optional)
- ✓ Stainless type plate (optional)
- ✓ Stainless fastening screws (optional)

IP66 option

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





Drive solutions from NORD DRIVESYSTEMS are environmentally friendly and help to minimise CO₂ emissions.

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