

NORD Industrial gear units

Modular building block system



NORD DRIVESYSTEMS Group



Industrial gear units



Geared motors



Frequency inverters and motor starters

- ▶ Headquarters and technology centre in Bargteheide near Hamburg.
- ▶ Innovative drive solutions for more than 100 branches of industry.
- ▶ 7 production locations with cutting edge technology produce gear units, motors and drive electronics for complete drive systems from a single source.
- ▶ NORD has 48 subsidiaries in 36 countries and further sales partners in more than 50 countries, providing local stocks, assembly centres, technical support and customer service.
- ▶ More than 4,000 employees throughout the world create customised solutions.



Headquarters in Bargteheide



Gear unit production



Inverter production



Motor production



Production and assembly



Motor mounting

Industrial gear units – main fields of application

- ▶ Materials transport
(belt, plate, screw &
chain conveyors, etc.)
- ▶ Bucket conveyors
- ▶ Stack conveyors and
reloading excavators
- ▶ Bulk handling
(agitators and mixers etc)
- ▶ Pumps
- ▶ Crane, hoist and winch
- ▶ Water & waste industry
- ▶ Mining industry
- ▶ Paper industry
- ▶ Timber industry
- ▶ Steel industry
- ▶ Sugar industry
- ▶ Chemical industry



Advantages of NORD industrial gear units

- ▶ Greater precision due to FEM optimised, torsionally rigid housing
- ▶ Unicase one-piece housing design up to 282,000 Nm
- ▶ Lower weight than jointed housing gear units
- ▶ Longer bearing life than jointed housing gear units
- ▶ Various seal systems, e.g. Taconite
- ▶ Noise-optimised bevel gears (HPG/Wiener)
- ▶ Optional axial or radial fans
- ▶ Modular system
- ▶ Greater reliability through the use of synthetic oils; lower maintenance due to longer oil life
- ▶ Option for attaching a flange-mounted pump (for oil supply to the bearings) for longitudinal inclination angles $>5^\circ$ / and transverse inclination angles $>3^\circ$
- ▶ Symmetrical design - for conveyor systems (double drive) the gear units can be exchanged without conversion (see page 4)
- ▶ 2- and 3-stage gear units have identical dimensions, subsequent modification of the gear ratio is possible using the same housing, as the distance between the shafts remains constant
- ▶ Additional external oil cooler possible
- ▶ Optional torque-limited back stop (double drive unit)
- ▶ Additional modules can be attached to the standard housing (e.g. heater cartridges) Stock components (including spare parts) for short delivery times

Industrial gear units

NORD 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.

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

Sizes: 11

Power: 2.2 – 3,000 kW

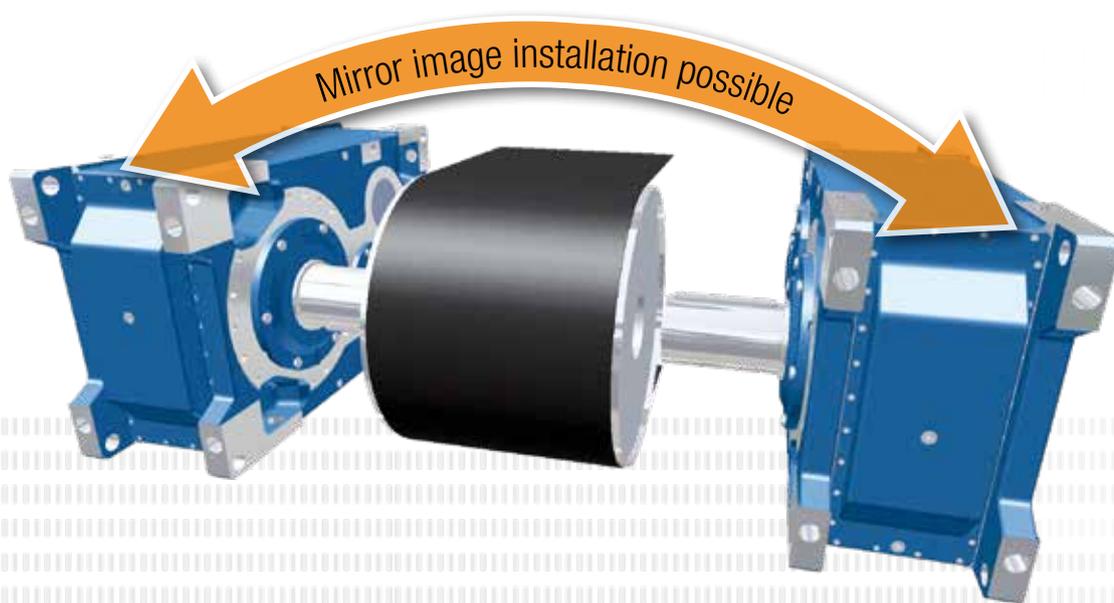
Torque: 15/20/25/30/40/50/75/110/150/190/282 kNm

Ratio: 5.54 – 30,000*:1

*with first stage gear unit

In addition to positive parallel key fitting, the gears also have a press-fit between the shaft and the hub. Standard shaft seals are NBR quality. Shaft seals made of FKM (Viton) are available as an option. For special ambient conditions, other sealing systems such as gamma-ring seals, labyrinth seals and Taconite seals are available. Please contact us if you require other specialised sealing systems.

Gear units can be mounted either on the left or right hand sides!



Monitoring devices and sensors

The following measuring devices are available:

- ▶ Oil inspection glass
- ▶ Oil level glass
- ▶ Dipstick
- ▶ PT100 (temperature)
- ▶ Temperature sensor, PTC thermistor
- ▶ Temperature sensor, bimetal switch
- ▶ Particle counter (oil)
- ▶ Measurement of water content (oil)
- ▶ Oil filter contamination indicator, electrical
- ▶ Oil filter contamination indicator, visual
- ▶ SPM nipple (vibration sensor)
- ▶ Bearing condition monitor with evaluation unit
- ▶ Pressure monitoring (oil circulation)
- ▶ Special requirements on request

Temperature management

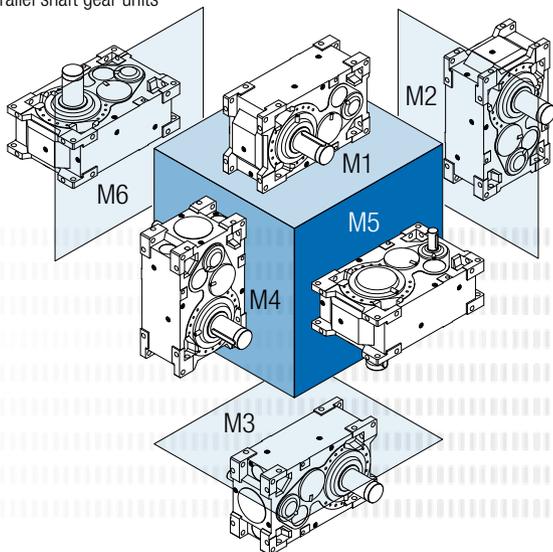
The following features are available:

- ▶ Fans, 3 options (axial, radial or electric fans)
- ▶ External oil-air-cooler
- ▶ External oil-water-cooler
- ▶ Internal cooling coils (water)
- ▶ Heating cartridges

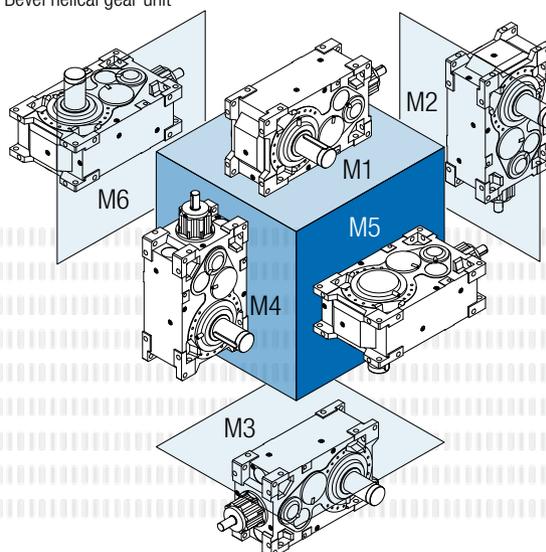
Sealing systems

- ▶ Single seal NBR/FKM
- ▶ Double seal NBR/FKM
- ▶ Dust protection seal
- ▶ Taconite seal (re-lubricated labyrinth seals)
- ▶ Gamma-ring seal, dust protection
- ▶ Special requirements on request

Parallel shaft gear units



Bevel helical gear unit



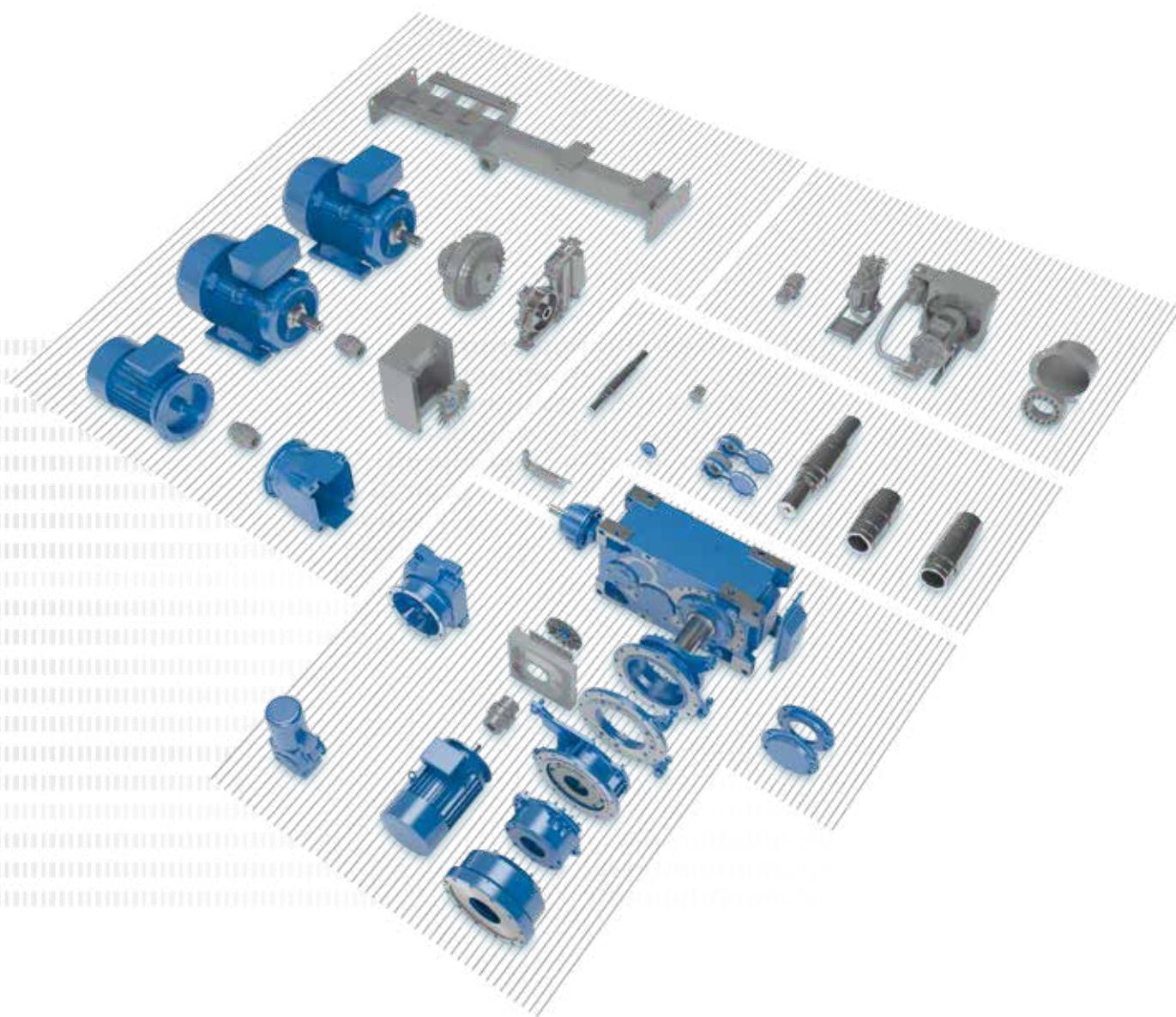
6 installation orientations

NORD industrial helical or bevel helical gear units can be mounted in 6 orientations without an additional adapter.

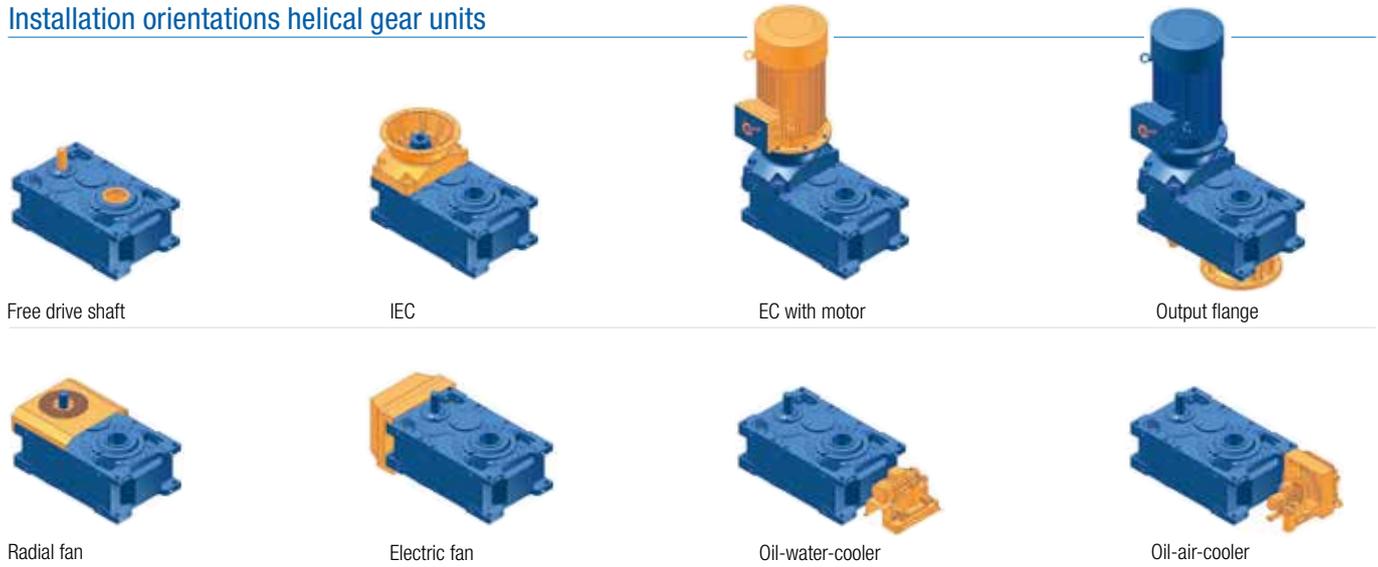
Industrial gear units

Industrial gear unit modules

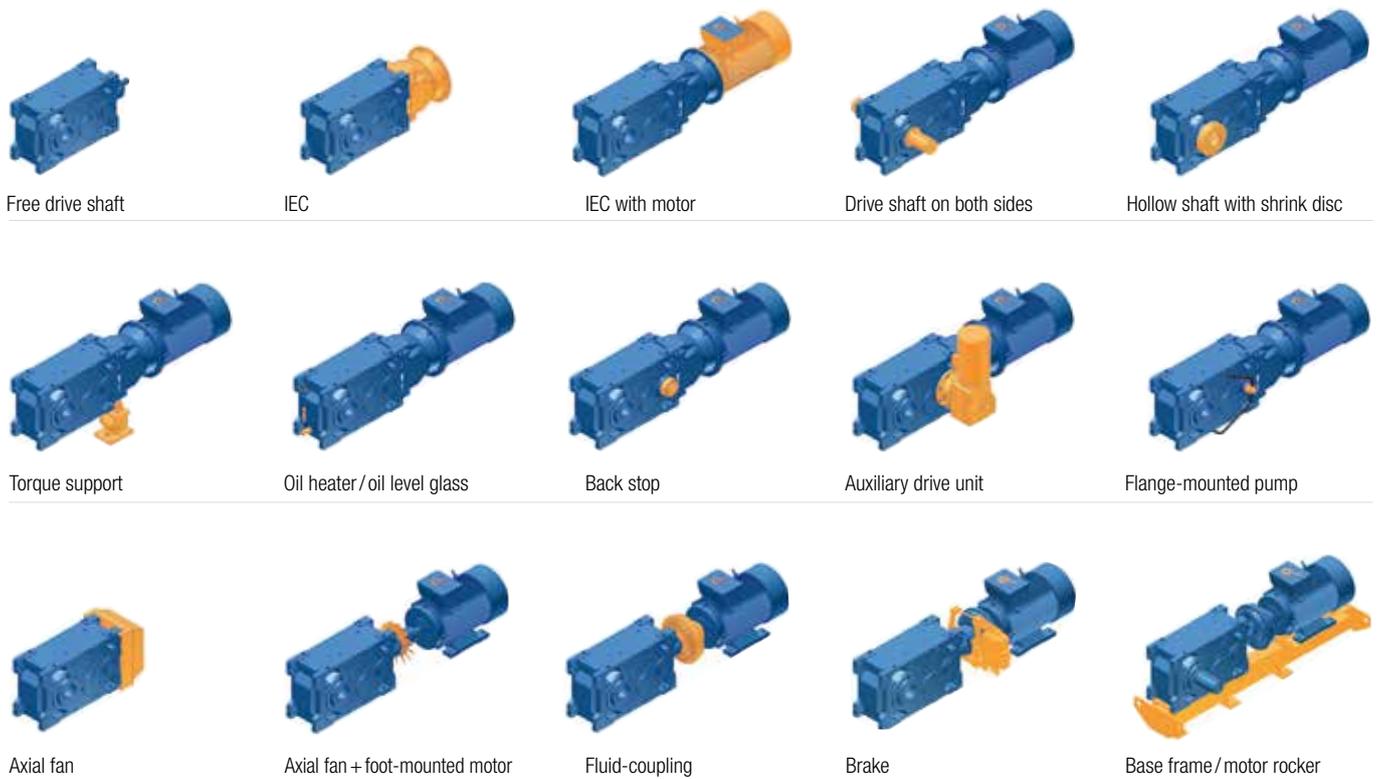
Users do not just need drive components, but rather complete solutions and functioning systems. Because of this, NORD DRIVESYSTEMS pursues a consistent system philosophy, which is reflected in the perfectly matched modules of our range of industrial gear units. The optimally matched individual components 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.



Installation orientations helical gear units



Installation orientations bevel helical gear unit



Combinations other than those listed here are available on request.

Headquarters:
Getriebebau NORD GmbH & Co. KG
Getriebebau-Nord-Str. 1
22941 Bargteheide, Germany
T +49 4532 289 0,
F +49 4532 289 2253
info@nord.com