

INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES



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**DRIVE SOLUTIONS FOR
THE BEVERAGE INDUSTRY**


DRIVESYSTEMS

NORD DRIVE SOLUTIONS FOR THE BEVERAGE INDUSTRY



NORD DRIVESYSTEMS GROUP

Headquarters and Technology Centre

→ Near Hamburg



Innovative drive solutions

→ for more than 100 industrial sectors

Mechanical products

Gear units



Gear unit production

Electrical products

Motors



Motor production

Electronic products

Inverters and motor starters



Inverter production

7 production locations with cutting edge technology

→ produce complete drive systems from a single source – geared motors, as well as the matching electronics and software for the necessary functions.



Subsidiaries in 36 countries on 5 continents

→ Provide local component stocks, assembly centres, technical support and customer service



More than 3,200 employees throughout the world

→ create application-specific solutions for our customers



www.nord.com/locator

NORD DRIVE SOLUTIONS FOR CLEANING, BOTTLING AND PACKAGING

NORD DRIVESYSTEMS is one of the world's leading drive technology companies. Our solutions are used throughout the world for a wide variety of applications in the beverage industry. 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 food and beverage industry
- Wide range of products with high quality standards
- Great reliability, economy and service life
- Recognised product quality compliant with international standards

NORD covers a wide range of applications in the beverage industry with industry-specific, innovative drive solutions.

We know your business and precisely understand your requirements. We prefer long-term collaboration with our customers and partners. You can be confident that we will do everything that we can to reinforce the good reputation of your brand.

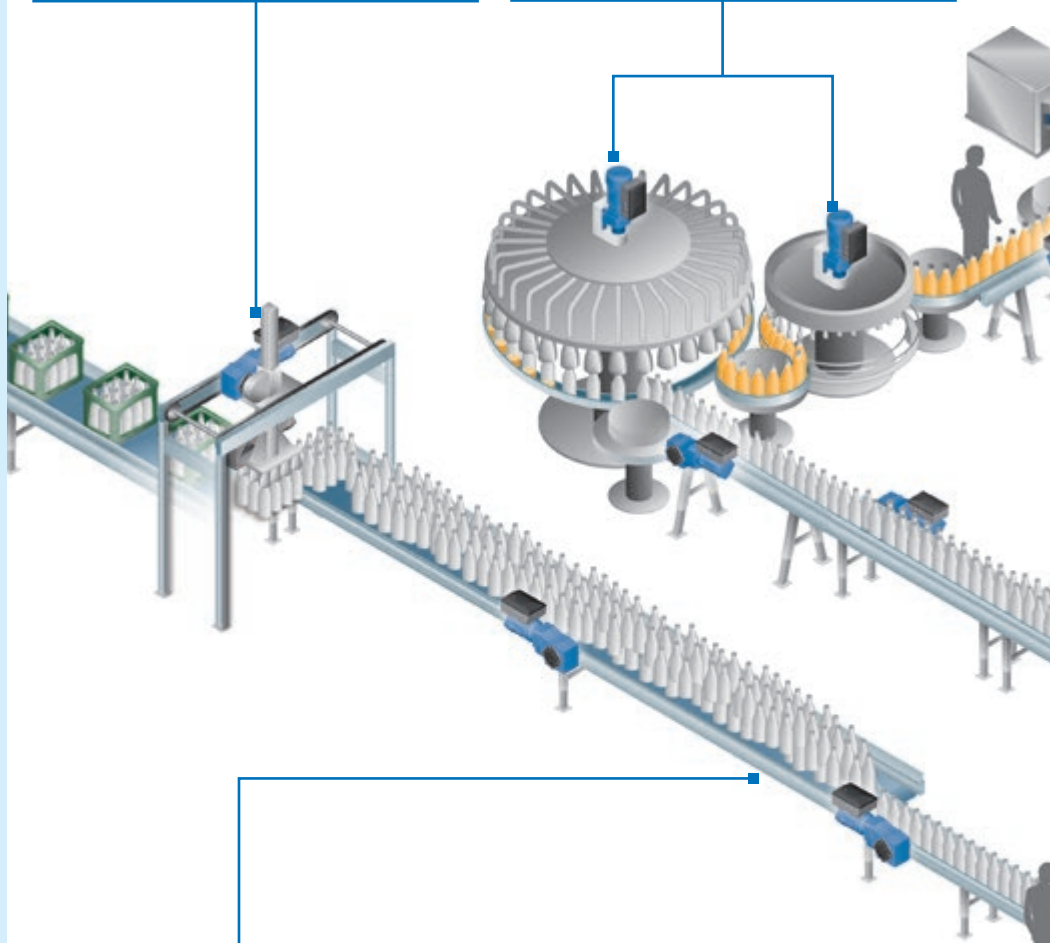


Unpacking

With the aid of palletising with dynamic drive units, cartons and pallets can be unpacked fully automatically and the empty bottles can be quickly fed into further processing stages.

Bottling and capping

Automatic bottling and capping machines require high precision positioning to quickly and hygienically bottle the products and securely cap them.



Conveying

NORD drive units can be individually controlled according to the section, so that the speed of the section can be intelligently managed to prevent blockages.

Labelling

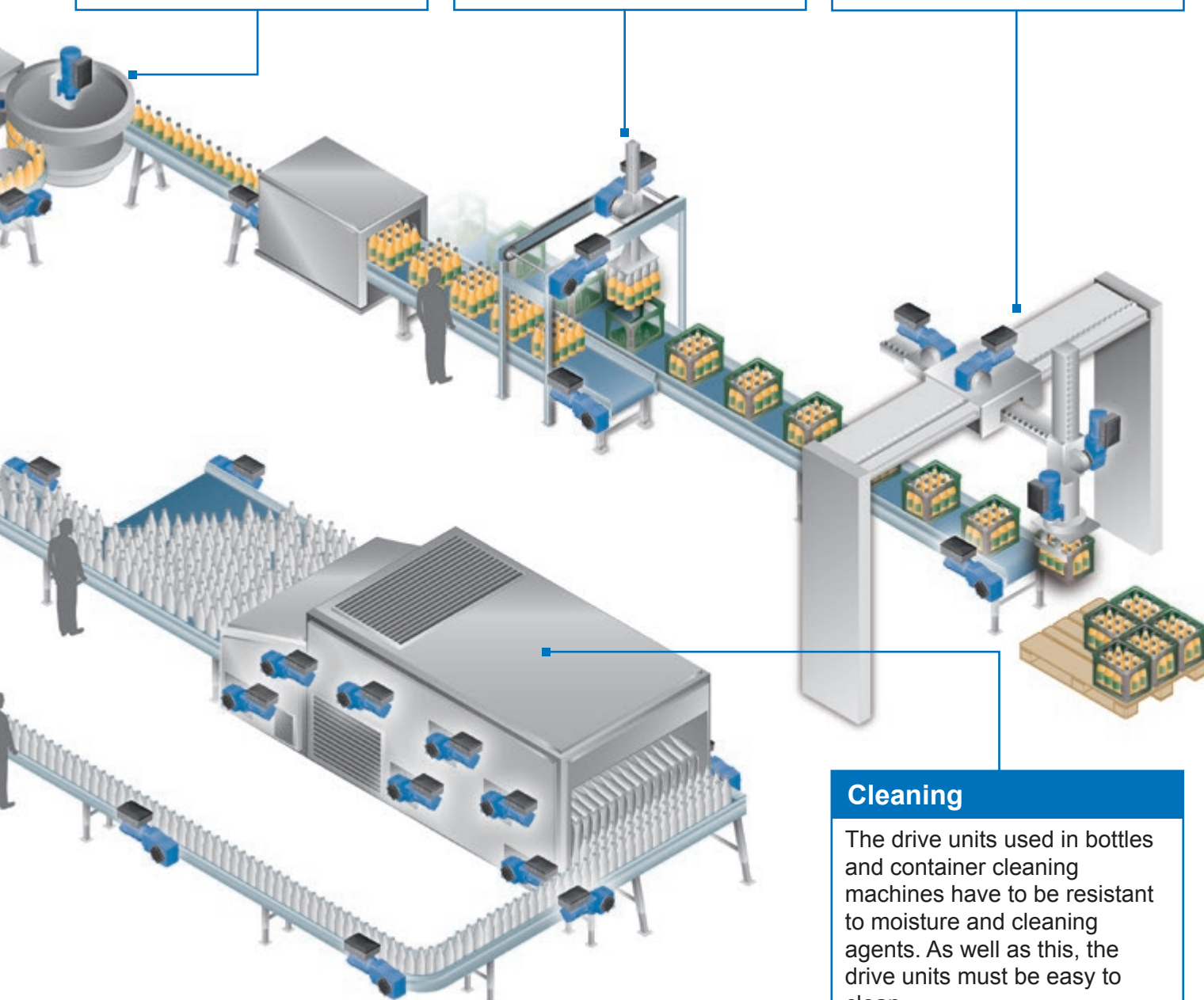
Labelling machines for every type of container, regardless of whether you use cold or hot adhesives, require precise and even guidance of the container to be labelled.

Packaging

Packaging machines require a large number of directions of movement to gently pack the individual products into cartons or to combine beverage crates into packaging units.

Palletising

Palletising systems require dynamic drive solutions for precise positioning in several axes in order to quickly combine packaging units into larger dispatch consignments.



Cleaning

The drive units used in bottles and container cleaning machines have to be resistant to moisture and cleaning agents. As well as this, the drive units must be easy to clean.

APPLICATIONS IN THE BEVERAGE INDUSTRY

From start to finish

NORD DRIVESYSTEMS develops and produces scalable drive solutions for all segments of the beverage industry. From production and processing of beverages, up to bottling and packaging.

Water, juice, milk products, wine, beer or spirits

- Shredding and pressing
- Washing and rinsing
- Sterilising
- Bottling
- Closing and sealing
- Labelling
- Palletising

Conveyors and handling machinery

- Palletisers
- Conveyor systems
- Belt gap adjusters
- Deflectors
- Storage, table, container packaging, mat, bottle neck guidance and container conveyors



Unpacking and palletising

Palletisers and packaging machines require dynamic drive solutions and precise, simultaneous positioning in several axes. NORD supplies asynchronous and synchronous motors with wall or motor-mounted inverters and closed-loop operation.

- Compact design
- Motors with Super Premium Efficiency or IE4
- Servo mode control systems with integrated encoders for precise positioning
- Smooth housings for gear units, motors and inverters
- Suitable for wash-down

Cleaning

Cleaning and rinsing is one of the most important processes in the beverage industry. NORD products are precise and powerful and reliably fulfil all requirements. They are permanently resistant to commonly used cleaning agents.

- nsd tupH surface treatment for easy cleaning (wash-down)
- Resistant to acids and alkalis (wide pH range)
- Fanless motors prevent the spread of bacteria
- Energy-efficient

Conveying

NORD supplies a wide range of products, which can be perfectly matched to your conveyor system and which correspond to the specifications of your application. NORD drive units are used in a wide variety of conveyor systems in the beverage industry.

- Encoders for precise positioning
- Energy-saving inverters for control cabinet, wall or motor mounting
- nsd tupH surface treatment for easy cleaning (wash-down)
- Soft start brake ramps and STO function

Bottling and capping

NORD supplies tailor-made drive systems for bottling and capping machines.

- Absolute and incremental encoders
- Plug-n-Play connection technology
- Low backlash gear units and closed-loop IE4 synchronous motor technology
- nsd tupH surface treatment for easy cleaning (wash-down)

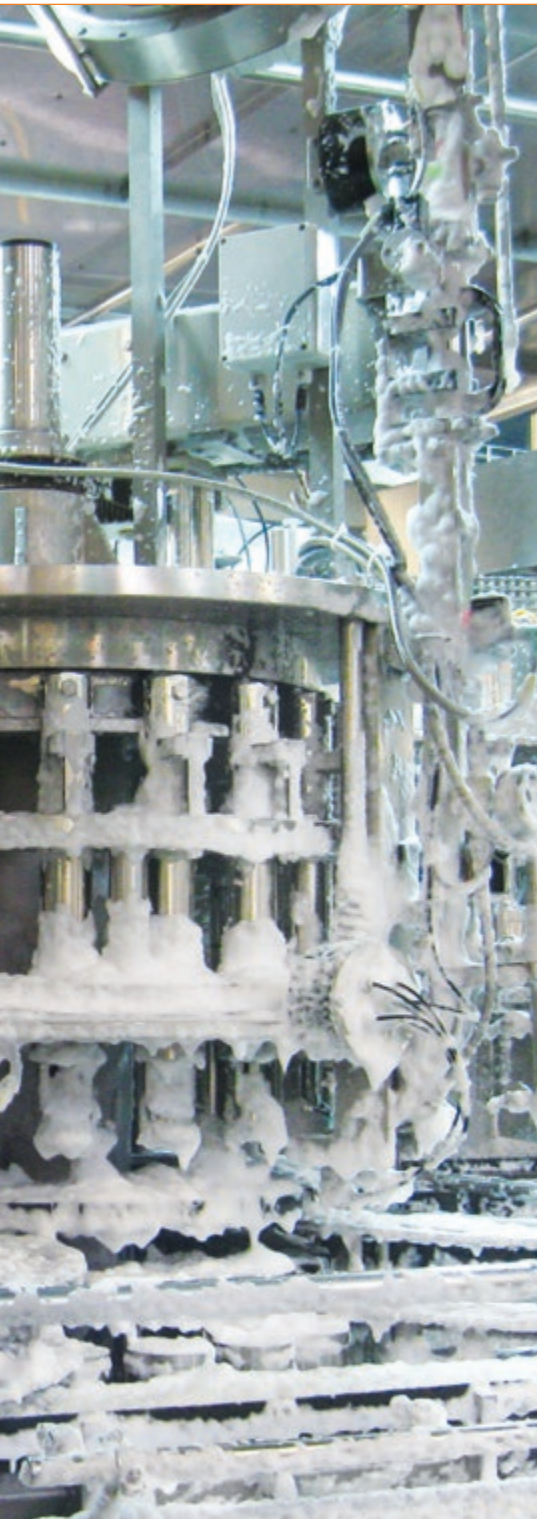
Packaging

NORD supplies systems with very low energy consumption for intermittent and continuous operation.

- Compact size
- Plug-n-Play connections
- Operation with decentralised or wall-mounted inverters
- Encoders for precise positioning
- nsd tupH surface treatment for easy cleaning (wash-down)

NORD DRIVE SOLUTIONS

RELIABLE, SAFE AND EFFICIENT



Foam cleaning of bottling plant

Efficient

NORD drive solutions are environmentally friendly and fulfil all current national and international energy saving standards.

- Lightweight aluminium construction
- NORD motors for all requirements, including IE3 and IE4; NORD helical and bevel gear units achieve efficiencies of 95-97%
- Intelligent NORD inverters with energy saving flux reduction for optimal operation under partial load

Reliable

From pinions to circuit boards, all NORD mechatronic components are produced in our own factories, which means unsurpassed reliability, long operating times, long service life and low total operating costs. Countless options cater for all requirements of the food and beverage industry.

- Special lubricants for low/high temperatures and cleaning with hot water
- Temperature sensors to protect against overheating
- Protection class IP66 or IP69K
- Stainless steel shafts and accessories; metal fan blades; fanless designs
- Protection against moisture; rust protection (dust and rust); multi-layer coatings; nsd tupH

Tried-and-tested

Demanding environments are common in the food and beverage industry. These include extreme temperatures, use of high pressure jet cleaning and various hazard areas, e.g. for alcoholic beverages and chemically aggressive environments in cleaning processes. NORD special solutions for this problem have proven themselves throughout the world.

- Explosion protected motors (ATEX, NEC) for Zone 1/21 and Zone 2/22 explosion hazard areas
- nsd tupH surface treatment system to protect against corrosion, chemical, pressure jet and steam jet cleaning
- Dairy version; condensation drains; condensation protection heaters



DER ANTRIEB

■ Reliable ■ Versatile ■ Global



The Gear Unit

- Generously dimensioned bearings
- High power density
- High level of corrosion protection

The Motor

- High efficiency
- International standards
- All operating conditions

The Drive Electronics

- Compact design
- Simple commissioning
- Protection class up to IP69K



NORD DRIVE SOLUTIONS FOR THE BEVERAGE INDUSTRY



Bevel gear units (Catalogue G1000 & G1014)



- Up to 97% efficiency
- Foot, flange or shaft mounted
- Hollow or solid shaft
- Unicase cast-iron housing

kW	0.12 – 9.2
Nm	50 – 660
i	3.58:1 - 70:1

NORDBLOC.1 Helical Gear Unit (Catalogue G1000)



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

kW	0.12 – 37
Nm	28 – 3,300
i	2.1:1 – 456.77:1

SMI worm gear units (Catalogue G1035)



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

kW	0.12 – 4.0
Nm	21 – 427
i	5.00:1 – 3,000.00:1

Smooth motors (Catalogue M7010)



- Sizes 80, 90, 100
- IP66 / IP69K (Optional)
- Aluminium motors
- Optional: nsd tupH surface treatment



kW	0.37 – 2.2
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NORDAC START SK 135E motor starters (Catalogue F3015)

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

U[V]	3 ~ 230V	3 ~ 400V
P[kW]	0.12 – 4kW	0.25 – 7.5kW

NORDAC BASE SK 180E frequency inverters (Catalogue F3018)

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

U[V]	1 ~ 115V
	1 ~ 230V
	3 ~ 230V
	3 ~ 400V
P[kW]	0.25 – 2.2

NORDAC FLEX SK 200E frequency inverters (Catalogue F3020)

- Energy-saving function
- Integrated “Posicon” positioning control
- Plug-on communication module (field bus)

U[V]	1 ~ 115V
	1 ~ 230V
	3 ~ 230V
	3 ~ 400V
P[kW]	0.25 – 22

NORDAC PRO SK 500E frequency inverters (Catalogue F3050)

- Energy-saving function
- Integrated “Posicon” positioning control
- Plug-on communication module (field bus)

U[V]	1 ~ 115V
	1 ~ 230V
	3 ~ 230V
	3 ~ 400V
P[kW]	0.25 – 160

nsd tupH

Sealed Surface Conversion System

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



NORDBLOC.1 SK 93.1 bevel gear unit with HMT smooth surface motor and SK 180E in nsd tupH version.

Whether for bottle cleaning, bottling and capping, packaging and transporting, NORD DRIVESYSTEMS provides the optimum drive solutions for every application.



Headquarters:

Getriebebau NORD GmbH & Co. KG

Getriebebau-Nord-Straße 1

22941 Bargteheide, Germany

Fon.: +49 (0) 4532 / 289-0

Fax: +49 (0) 4532 / 289-2253

Member of the NORD DRIVESYSTEMS Group

