

INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES



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**DRIVE SOLUTIONS FOR  
THE FOOD AND  
BEVERAGE INDUSTRY**

**NORD**<sup>®</sup>  
DRIVESYSTEMS



# DRIVE SOLUTIONS FOR THE FOOD AND BEVERAGE INDUSTRY



# 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 and motor starters

**7 production locations with cutting-edge technology** produce gear units, motors, inverters etc. for complete drive systems from a single source.



**Subsidiaries and sales partners in 98 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 for or applicable to any legal purpose. For this reason, we do not assume any liability for legality, correctness and completeness.

**More than 4,000 employees throughout the world** create customised solutions.





# NORD DRIVE SOLUTIONS FOR PROCESSING AND PACKAGING

**NORD DRIVESYSTEMS is a global leader in drive solutions for food and beverage industry applications around the world.**

**NORD DRIVESYSTEMS offers:**

- Comprehensive application knowledge and technical support
- Complete drive solutions from a single source
- Strong global presence and support
- Thousands of installed units in the food industry
- Extensive, versatile portfolio of premium quality products
- High reliability, efficiency and durability
- Recognised production quality according to global standards

**NORD DRIVESYSTEMS is a driving force in the production of:**

- Fresh Foods
- Dried & Snack Foods
- Bakery Products
- Ready Meals
- Confectionary Products
- Beverages
- Liquid & Canned Foods



### Confectionary



### Vegetables



### Non-Alcoholic Beverages



### Alcoholic Beverages



## FROM PROCESSING ...

where raw ingredients are transformed



## ... TO PACKAGING

where products are enclosed and protected for distribution.



# FLEXIBLE SOLUTIONS FOR THE FOOD AND BEVERAGE INDUSTRY



## PROCESSING

### PUMPING



NORD DRIVESYSTEMS provides dedicated pump drives with special functions.

- High starting torques / soft starts as required
- Wall or motor mounted inverters
- H1 food-grade oil for gear lubrication
- Safe terminal or plug connections

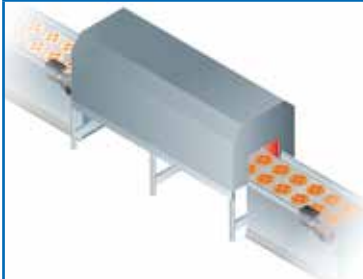
### MIXING, AGITATING, KNEADING



NORD DRIVESYSTEMS provides heavy-duty geared motors for agitators of any scale.

- Extra-strong output shaft bearings for heavy loads
- Temperature sensors for overheating protection
- Programmable inverters for STO and reverse operation
- Twin gearbox agitators with shafts turning in opposing directions

### HEATING, COOLING, FREEZING



NORD DRIVESYSTEMS provides drive solutions adapted to extreme temperatures.

- Various fan/fan-less configurations
- H1 low-/high-temperature food-grade oils, hydrophobic bearing lubricants
- Condensation drains
- Stainless steel fittings

### CUTTING, SLICING, DOSING



NORD DRIVESYSTEMS provides systems for CIP area installation and machine integration.

- Smooth Wash-down surfaces on all drive components
- FDA-compliant sealed aluminium surface tolerating pH 2-12
- Stainless steel fittings
- IP66 or optional IP69K ingress protection

## PACKAGING

### BOTTLING



NORD DRIVESYSTEMS provides drives tailored to filling and conveying systems.

- Absolute and incremental encoders
- Plug-and-play connections
- Smooth-surfaces
- High-quality paints or sealed surfaces for easy cleaning

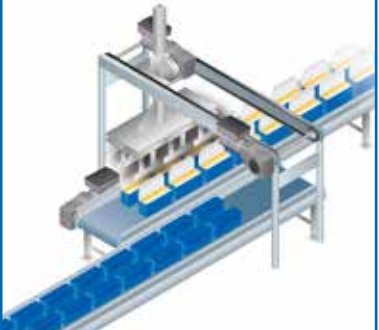
### CONVEYING



NORD DRIVESYSTEMS provides versatile solutions for horizontal, vertical and inclined conveyors.

- Encoders for precise positioning
- Energy-saving inverters for cabinet, wall or motor mounting
- High-quality paints or sealed surfaces for easy cleaning
- Soft start, deceleration ramp and STO functions

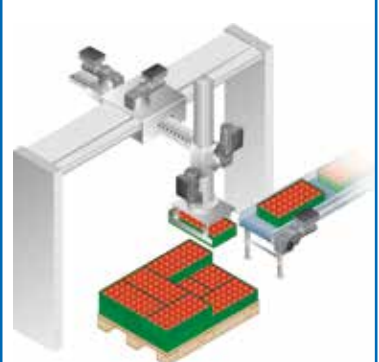
### SECONDARY PACKAGING



NORD DRIVESYSTEMS provides highly efficient systems for intermittent and continuous operation.

- Compact overall size, plug-and-play connections
- Inverters for motor mounting or wall mounting
- Encoders for precise positioning
- High-quality paints or sealed surfaces for easy cleaning

### PALLETIZING



NORD DRIVESYSTEMS provides precise positioning and dynamic motion solutions.

- Compact, lightweight aluminium drive units
- Cabinet-installed and motor mounted inverters for positioning with encoder feedback
- High-quality paints or sealed surfaces for easy cleaning
- Soft start, deceleration ramp, brake and STO functions



# EFFICIENT, RELIABLE AND PROVEN IN DEMANDING CONDITIONS



## Efficient

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

- NORD low inertia motors are designed for inverter operation and meet the latest international energy requirements.
- NORD frequency inverters ensure efficient operation, improved process control and optimum motor power.
- Service and maintenance-friendly NORD drives reduce downtimes and therefore contribute to greater efficiency and availability of the entire system.

## Reliable

It is vital to prevent breakdowns in the food industry. 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.

- Gear units with Unibase housings provide precise positioning of bearings and drive shafts.
- AUTOVENT ensures leak-free design.
- Precision-made gears with minimal wear are used throughout.
- The gear units are extraordinarily robust, run very quietly and have a particularly long service life.
- NORD inverters protect the drive system electronically and are able to visualise the operating data.

## Proven

The reliability and cost-effectiveness of electronically controlled NORD DRIVESYSTEMS conveyor drives have proven themselves in intralogistics throughout the world. The systems combine great flexibility and a graduated comprehensive range of functions with convenient operation. NORD drives ensure particularly high conveyance speeds that are more and more often required due to increased safety measures.

- Mechatronic drive systems from NORD DRIVESYSTEMS are based on lightweight and highly efficient 2-stage bevel geared motors.
- In combination with wall-mounted or motor-mounted frequency inverters, they form efficient drive systems. NORD DRIVESYSTEMS also supplies the required cable connectors and interfaces to a variety of bus systems as well as the respective software.



# DER ANTRIEB

■ Reliable ■ Versatile ■ Global



## The Gear Unit

- Strong bearings
- High power density
- High corrosion protection

## The Motor

- High efficiencies
- Global standards
- All operating conditions

## The Drive Electronics

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



# NORD DRIVE SOLUTIONS FOR THE FOOD AND BEVERAGE INDUSTRY

## Decentralised Inverters

- No need for shielded power cable
- Faster commissioning
- Ready-to-use motor-inverter unit
- Reduction in design time
- No special cable routing
- No integration into cabinet necessary
- Local machine control



Transportable wine pump with frequency inverter SK 200E



## SK 135E NORDAC *START* motor starters (Catalogue E3000)



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

Voltage	3~ 200 – 240 V
	3~ 380 – 500 V
Power	0.12 – 3 kW or up to 7.5 kW

## SK 180E NORDAC *BASE* frequency inverters (Catalogue E3000)



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

Voltage	1~ 110 – 120 V
	1~ 200 – 240 V
	3~ 200 – 240 V
	3~ 380 – 500 V
Power	0.25 – 2.2 kW

## SK 500E NORDAC *PRO* frequency inverters (Catalogue E3000)



- ✓ Energy-saving function
- ✓ Integrated POSICON positioning control
- ✓ Plug-on communication module (field bus)

Voltage	1~ 110 – 120 V
	1~ 200 – 240 V
	3~ 200 – 240 V
	3~ 380 – 480 V
Power	0.25 – 160 kW

## MAXXDRIVE® industrial gear units (Catalogue G1050)



- ✓ Foot, flange or shaft mounting
- ✓ Long life, low maintenance
- ✓ Parallel axis and right-angled gear units

Power	1.5 – 4,000 kW
Torque	15,000 – 250,000 Nm
Ratio	5.60: 1 – 30,000: 1



### UNICASE helical gear units (Catalogue G1000)



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

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

### UNICASE parallel shaft gear units (Catalogue G1000)



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

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

### NORDBLOC.1® 2-stage bevel gear units (Catalogue G1014)



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

Power	0.12 – 9.2 kW
Torque	50 – 660 Nm
Ratio	3.03:1 – 70:1

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



- ✓ Modular
- ✓ Universal mounting
- ✓ Lifetime lubrication
- ✓ IEC versions

Power	0.12 – 4.0 kW
Torque	21 – 427 Nm
Ratio	5.00:1 – 3,000.00:1

# nsd tupH

## Sealed Surface Conversion System

- Easy-to-clean surfaces
- Resistant to acids and alkalis (wide pH range)
- Cannot flake
- Corrosion-proof – no contact corrosion and no infiltration of corrosion even if surface is damaged
- Conforms to FDA Title 21 CFR 175.300
- Free from chromates



NORDBLOC.1® helical bevel gear unit SK 93.1 with HMT motor and SK 180E in nsd tupH



Mixers or filling systems, conveyors, freezers, conche machines –  
NORD DRIVESYSTEMS provides drive solutions optimized for these and  
all other food and beverage industry applications.

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**Member of the NORD DRIVESYSTEMS Group**

