

Drive Solutions for the Poultry Industry

Gear units, motors, and variable frequency drives

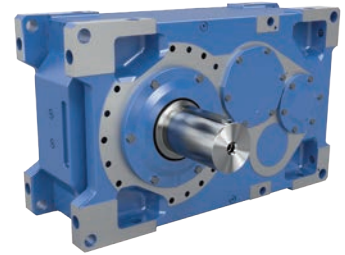


Complete Drive Solutions from a Single Source



NORD Delivers

NORD offers first-class customer service and support along with full-featured drive solutions that can tackle the toughest requirements. All components are carefully selected and precisely configured to meet your exact specifications. In the rare case that standard components won't meet your needs, our in-house engineering team will work with you to design custom components or a complete customized system.



Reduce Lead Times and Decrease Inventory

- ▶ Fastest lead times in the industry with NO expedite fees
- ▶ Over 20,000,000 standard configurations to reduce or eliminate the need for custom components
- ▶ Modular drives, motors, and electronic controls minimize inventory of replacement units and parts



Global Product Designs, Standards, and Support

- ▶ Innovative, industry-standard products to support a wide range of applications
- ▶ Global sales and support network
- ▶ Dedicated mechanical and electrical application engineers ready to assist you
- ▶ Online resources available to you any time
- ▶ 24/7/365 emergency breakdown service



Increase Efficiency and Reduce Operation Costs

- ▶ myNORD online tools for fast selection, configuration, ordering, and tracking of your drive units
- ▶ Drive systems that are perfectly matched to your application for optimum performance and energy efficiency
- ▶ Program personalization, such as weekly shipment schedules and custom nameplates
- ▶ Partner with a company that is easy to do business with and wants to see you succeed!





Integrated solutions for the special requirements of the poultry industry

- ▶ Reliable, quiet operation
- ▶ Easy maintenance
- ▶ Hygienic, wash-down ready
- ▶ Lower Total Cost of Ownership (TCO)
- ▶ Modular design
- ▶ Reduction of variants
- ▶ Energy savings
- ▶ Engineering and design support
- ▶ Global NORD sales and service network

Drive Solutions for the Poultry Industry

Conveying

Horizontal, vertical, and inclined conveyor systems require versatile drive systems. NORD's gear units can control individual conveyor sections for smooth operation and prevention of blockages that can cause costly downtime.

Cutting and Slicing

Gear units from NORD are ideal for CIP area installation and machine integration. Wash-down ready options are available to comply with strict hygiene guidelines.

Dosing and Sorting

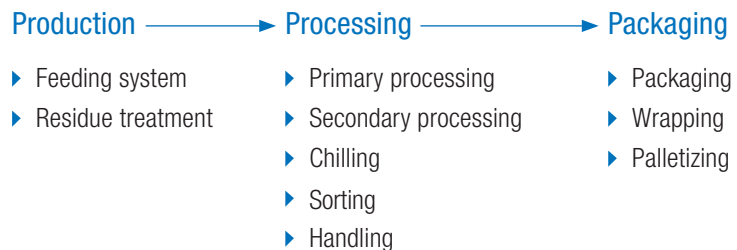
Drives for dosing and sorting applications need to be reliable and versatile. NORD's gear units provide high precision, high speed positioning for optimum performance and efficiency.

Pumping

NORD provides complete, dedicated pump drives with high starting torques, soft starts, and safe terminal or plug connections.



NORD DRIVESYSTEMS is a globally active provider of robust, reliable drive technology, including drives for the specialized environments of the poultry industry. NORD designs customized, individual drive solutions that meet the requirements of most poultry and egg production, processing, and packaging applications.



Heating, Cooling, and Freezing

Drive solutions from NORD can be adapted to extreme temperatures via special food-grade lubricants suited to low/high temperatures, condensation drains, and stainless steel fittings for ultimate protection. Various fan/fan-less designs are also available.



Packaging

Intermittent and continuous operation of packaging equipment can be easily achieved with NORD gear units combined with decentralized or wall-mounted VFD's.

Palletizing and Handling

NORD drive solutions provide scalable, dynamic motion for smooth operation of palletizers, de-palletizers, seal wrappers, and other handling equipment.

Preventive Maintenance

Add-ons such as NORD's Condition Monitoring for Predictive Maintenance solutions help keep your equipment running smoothly and monitor for issues before breakdowns occur.

NORD DRIVESYSTEMS Provides:

- ▶ Strong application knowledge and technical support with the experience of thousands of installed units in the poultry industry
- ▶ Complete drive solutions from a single source
- ▶ Strong worldwide presence and support
- ▶ Large product portfolio with high quality standards
- ▶ Highest reliability and robustness in certifications: ISO 9001, UL, CSA, GHOST-R, CCC, and ATEX

Drive Solutions for the Poultry Industry

NORD DRIVESYSTEMS develops and manufactures versatile drive solutions for all areas of the poultry industry.

NORD DRIVESYSTEMS developed the revolutionary UNICASE™ gear unit housings in the early 1980's. These fully enclosed housings combine all of the gear unit's components and is machined from a single piece of material.

- ▶ Housing block integrates all bearing points
- ▶ Complete machining in a single step
- ▶ High output torque
- ▶ High axial and radial load capacity
- ▶ Ultimate reliability
- ▶ Long service life
- ▶ Quiet operation



Conveying

Conveyors in the poultry industry require highly efficient, versatile drive systems to keep processes moving with minimal downtime. NORD's drive solutions offer the precise control and reliable performance needed for these specialized applications.

- ▶ Hygienic drive units, motors, and VFDs
- ▶ High-quality paints or sealed surfaces for easy cleaning and corrosion protection
- ▶ Soft start and STO functions

Cutting and Slicing

NORD's gear units are wash-down ready and ideal for CIP area installations and machine integrations.

- ▶ Smooth wash-down surfaces on all drive components
- ▶ Stainless steel fittings
- ▶ IP66 or optional IP69K
- ▶ FDA-compliant sealed aluminum surface tolerating PH 2-12

Dosing and Sorting

Dosing and sorting applications require precise control in addition to energy efficiency. NORD variable frequency drives can be wall or motor mounted for control over positioning and timing.

- ▶ Compact, lightweight aluminum drive units
- ▶ Cabinet- and motor-mounted VFDs for positioning with encoder feedback
- ▶ Motion control and safety functions

World-Class Paint Options (Flyer S3400)

NORD offers a variety of paint coatings that are USDA compliant and suited to the harsh elements of poultry environments. Many coatings are also available with an optional clear coat for optimum protection.

- ▶ **Basic (Standard)** - indoor installation
- ▶ **NSD2** - indoor and protected outdoor
- ▶ **NSD2+** - indoor and protected outdoor (option with clear coat)
- ▶ **NSDF3 Food Duty** - food packaging areas (option with clear coat)
- ▶ **NSD3 Outdoor** - low environmental impact (option with clear coat)
- ▶ **NSD4 Outdoor** - moderate environmental impact (option with clear coat)
- ▶ **NSD5 Outdoor** - high environmental impact (option with clear coat)



Heating, Cooling, and Freezing

NORD offers highly adaptable drive solutions with oil/lubricants capable of handling extreme temperatures and adhering to strict hygiene guidelines.

- ▶ Ventilated or non-ventilated configurations
- ▶ H1 low-/high-temperature food-grade oils, hydrophobic bearing lubricants
- ▶ Condensation drains; stainless steel fittings
- ▶ Status and maintenance monitoring

Packaging

Modular drivesystems from NORD are compact, have a long service life, and are incredibly versatile for the intermittent and continuous operation of packaging equipment.

- ▶ Compact size
- ▶ Plug-and-play connections
- ▶ VFDs for motor or wall mounting
- ▶ Encoders for precise positioning
- ▶ Food safe paints and other high-quality surface protection options

Predictive Maintenance

Condition Monitoring for Predictive Maintenance focuses on status based data to optimize system efficiency and keep machines running longer with minimal unplanned downtime.

- ▶ IIoT / Industry 4.0 READY!
- ▶ System integrated into the frequency drive
- ▶ Available for decentralized and control cabinet solutions
- ▶ Units can be proactively maintained to avoid breakdowns

Drive Solutions for the Poultry Industry

Overhead Conveyor Package (Catalog G1043)

- ▶ UNICASE™ housing design
- ▶ QUADRILIP™ seal system for oil leakage protection
- ▶ Industry standard mounting and shaft designs
- ▶ High overhung load capacity
- ▶ Oil sight glass with dry cavity
- ▶ VL3 spread bearing design to handle high-overhung loads
- ▶ Multiple input options available
- ▶ Large ratio per gear stage
- ▶ Output flange mounted
- ▶ Low Total Cost of Ownership
- ▶ Low maintenance, long service life

Size: 3

Power: 0.33 – 60 hp

Torque: Up to 75,225 lb-in

Ratio: 8.10:1 – 3,735.92:1



Screw Conveyor Package (Catalog G1129)

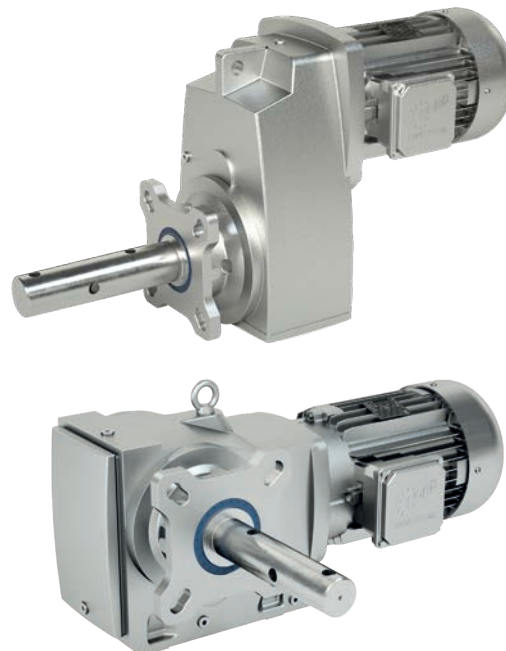
- ▶ UNICASE™ housing design
- ▶ QUADRILIP™ seal system for oil leakage protection
- ▶ Dual Viton lip seals
- ▶ Direct coupled input design
- ▶ Closely stepped ratios
- ▶ 3-hole or 2-hole tapered CEMA drive shaft
- ▶ Material evacuation ports
- ▶ Directly coupled gearmotor or standard NEMA C-face adapter
- ▶ Available for parallel and right-angle gear units
- ▶ Long service life and low maintenance
- ▶ Versatile flange with multiple bolt patterns
- ▶ Compact and cost effective

Sizes: 11

Power: 0.16 – 60 hp

Torque: Up to 53,100 lb-in

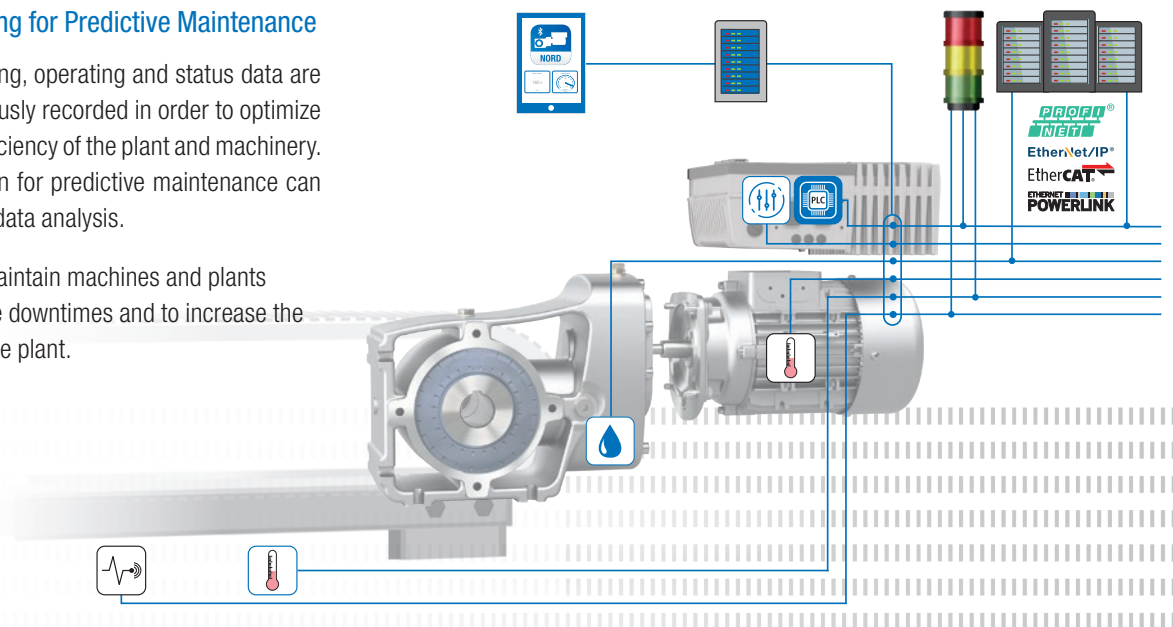
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Condition Monitoring for Predictive Maintenance

In condition monitoring, operating and status data are regularly or continuously recorded in order to optimize the reliability and efficiency of the plant and machinery. Important information for predictive maintenance can be derived from the data analysis.

The objective is to maintain machines and plants proactively, to reduce downtimes and to increase the efficiency of the entire plant.



System Vibration Sensor		<ul style="list-style-type: none"> ▶ NORD qualified sensors ▶ Connection of customized sensors (analog / digital)
System Temperature Sensor		<ul style="list-style-type: none"> ▶ PT1000-based motor temperature sensor ▶ Ambient or system temperature
Oil Change		<ul style="list-style-type: none"> ▶ Determination of the optimal time for oil change on the basis of virtual oil temperature ▶ The algorithm is executed in the internal PLC
Drive Parameters		<ul style="list-style-type: none"> ▶ Readout of drive system parameters ▶ Basis for virtual sensors
Integrated PLC		<ul style="list-style-type: none"> ▶ Pre-processing of drive-specific parameters and sensors related to the drive ▶ Evaluation of drive conditions
Beacon Signal		<ul style="list-style-type: none"> ▶ Local display of drive conditions ▶ Scalable display
Local Data Management		<ul style="list-style-type: none"> ▶ Processing of drive data for drive and system analysis ▶ Condition monitoring
Local Dashboard		<ul style="list-style-type: none"> ▶ Display of drive and system data
Higher Level PLC		<ul style="list-style-type: none"> ▶ Processing of condition monitoring information by the customer ▶ Combination of the collected condition monitoring data with the process data

Drive Solutions for the Poultry Industry

DuoDrive Integrated Gear Unit and Motor (Catalog G5010)



- ✓ Integrated gear unit and motor
- ✓ System efficiency up to 92%
- ✓ Simple plug-and-play commissioning
- ✓ High power density

Sizes: 2
Power: 0.50 – 4.00 hp
Torque: 230 – 2,186 lb-in
Ratio: 3.24:1 – 18.1:1

UNICASE™ Helical Inline Gear Units (Catalog G1000)



- ✓ Foot or flange mounted
- ✓ Long life, low maintenance
- ✓ Closely stepped ratios
- ✓ Cast-iron UNICASE housing

Sizes: 11
Power: 0.16 – 200 hp
Torque: 89 – 230,119 lb-in
Ratio: 1.35:1 – 14,340.31:1

NORDBLOC.1® Helical Inline Gear Units (Catalog G1000)



- ✓ Foot or flange-mounted
- ✓ Die-cast iron or aluminum housing
- ✓ UNICASE housing
- ✓ Available in single, double, or triple reduction

Sizes: 13
Power: 0.16 – 50 hp
Torque: 266 – 29,207 lb-in
Ratio: 1.07:1 – 456.77:1

UNICASE™ Helical Bevel Gear Units (Catalog G1000)



- ✓ Foot, flange, or shaft mounted
- ✓ Hollow or solid shaft
- ✓ Cast-iron UNICASE housing
- ✓ Closely-stepped ratios

Sizes: 11
Power: 0.16 – 250 hp
Torque: 1,593 – 442,537 lb-in
Ratio: 8.04:1 – 13,432.68:1

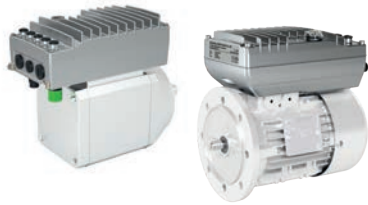
NORDBLOC.1® 2-Stage Helical Bevel Gear Units (Catalog G1000)



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

Sizes: 6
Power: 0.16 – 10 hp
Torque: 443 – 5,842 lb-in
Ratio: 3.03:1 – 70:1

NORDAC® *ON/ON+* SK 300P Variable Frequency Drives (Catalog E3000)



- ✓ Wall or motor mounted
- ✓ Ethernet communication
- ✓ Compact design
- ✓ Plug-and Play solution

Sizes: 3
 Voltage: 3~ 400 V
 Power: NORDAC *ON*: 0.50 – 3.00 hp
 NORDAC *ON+*: 0.50 – 4.00 hp

NORDAC® *BASE* SK 180E Variable Frequency Drives (Catalog E3000)



- ✓ Stand-alone operation
- ✓ 4 parameter sets
- ✓ Sensorless current vector control (ISD control)
- ✓ Integrated PLC

Sizes: 2
 Voltage: 1~ 110 – 120 V, 1~ 200 – 240 V, 3~ 200 – 240 V, 3~ 380 – 500 V
 Power range: 0.33 – 3.00 hp

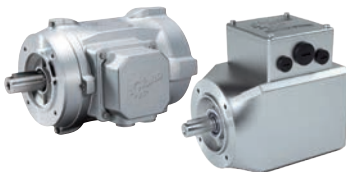
NORDAC® *FLEX* SK 200E Variable Frequency Drives (Catalog E3000)



- ✓ Plug-in storage module (EEPROM)
- ✓ Integrated POSICON positioning control
- ✓ Integrated PLC
- ✓ Functional safety options

Sizes: 4
 Voltage: 1~ 110 – 120 V, 1~ 200 – 240 V, 3~ 200 – 240 V, 3~ 380 – 500 V
 Power range: 0.33 – 30 hp

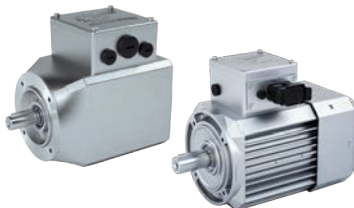
Smooth Surface Motors (Catalog M7000, M5000)



- ✓ IP66 / IP69K (optional with gearmotor)
- ✓ Aluminum motors
- ✓ IE3, IE5, IE5+ options available
- ✓ Suited for VFD operation

Sizes: 71 – 100
 Performance: 0.16 – 1.50 hp

IE5+ Synchronous Motors (Catalog M5000)

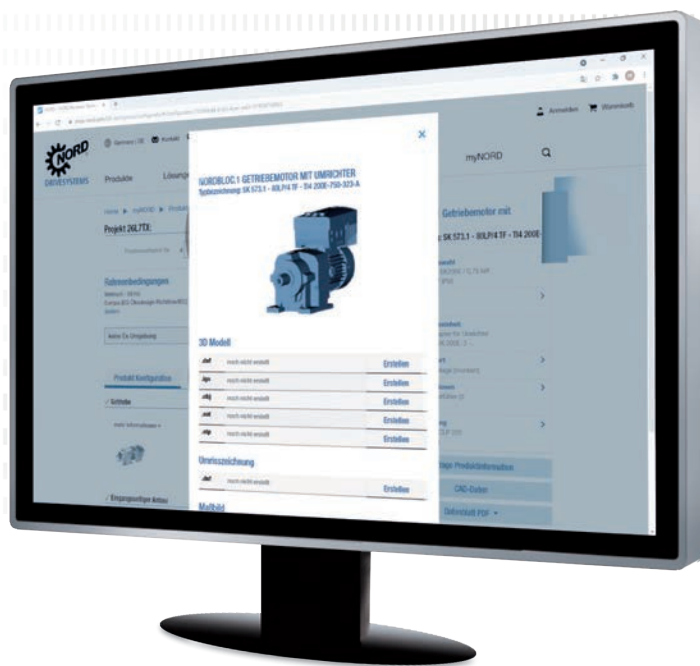


- ✓ Constant torque over wide speed range
- ✓ NEMA, IEC, or direct motor mounting
- ✓ Optional IP69K protection
- ✓ Variant reduction

Sizes: 71, 90
 Performance: Ventilated (TEFC): 0.50 – 5.00 hp
 Non-ventilated (TENV): 0.50 – 3.00 hp

Ordering is Easy With myNORD Online Tools!

- ▶ Obtain drawing files direct from quote configuration
- ▶ Effortlessly select & configure customized drive solutions
- ▶ Create quotes with account-specific net pricing
- ▶ Order-specific documentation
- ▶ 24/7/365 order tracking
- ▶ Select and order spare parts



Register now at myNORD.com!



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