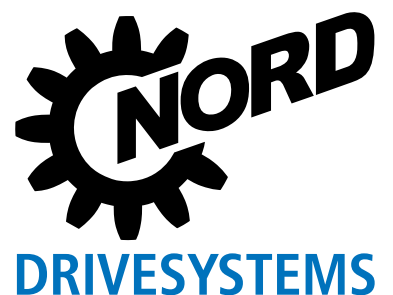


INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES



US

**DRIVE SOLUTIONS FOR THE
INTRALOGISTICS INDUSTRY**



NORD DRIVESYSTEMS GROUP

SERVING THE INTRALOGISTICS INDUSTRY





NORD Drivesystems - A Global Leader

Producing over 1 million reducers annually and employing 3000 people globally, NORD is constantly improving and expanding its products to meet a never ending variety of industrial challenges.

Our successful rise to the elite list of gearmotor manufacturer's has been accomplished by listening and working closely with our clients. With the help of our customers we have created optimal drive solutions and together we continue solid growth.

North American Facilities (sales, assembly & service)

- Waunakee, WI (Madison)
- Charlotte, NC
- Corona, CA (Los Angeles)
- Brampton, ON Canada (Toronto)
- Guadalupe, Mexico
- Over 40 District offices
- Over 500 Distributor branches

Global Facilities

- Operations in 35 Countries



NORD Product Portfolio

NORD Drivesystems' product portfolio is extensive and continuously evolving in order to meet the needs of today's fast-changing markets. NORD's range of drive equipment includes: helical in-line, helical shaft-mount, helical-bevel, helical-worm and worm gear units with torques from 90 lb-in to 2,200,000 lb-in, readily available AC motors and from 1/6 HP to 250 HP, variable frequency drives up to 250 HP, and mechanical variable speed drives.

Mechanical Products	Electrical Products	Electronic Products
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Gear units

Motors

Inverters & motor starters



Innovative drive solutions

- Products for many industries

DRIVE SOLUTIONS FOR AUTOMATED STORAGE SYSTEMS

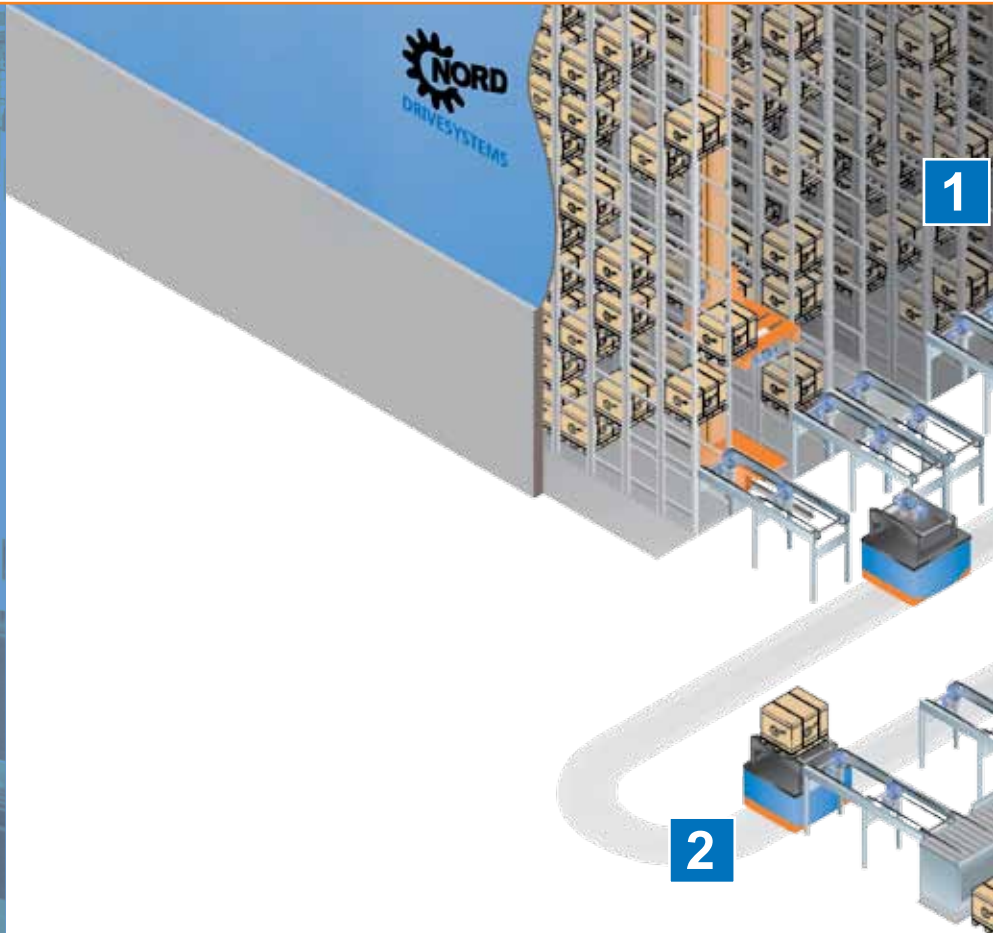
Complete Drive Solutions

NORD Drivesystems is a global leader in drive solutions that are utilized throughout airports worldwide. NORD provides:

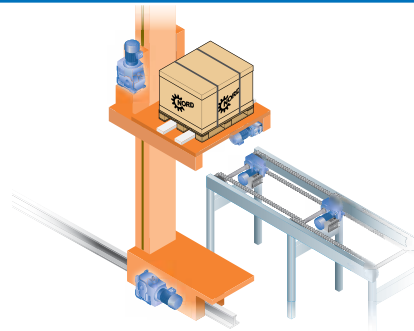
- Strong application knowledge and technical support
- Complete drive solutions from a single source
- Strong global presence and support
- Thousands of installed units in the intralogistics industry
- Large product portfolio with high quality standards
- High reliability, efficiency and durability
- Recognized production quality according to global standards

NORD's innovative drive solutions are specified and utilized for a range of intralogistics applications.

With reputation in the balance, we fully understand your requirements. We believe in building long term business relationships based on reliability and trust.

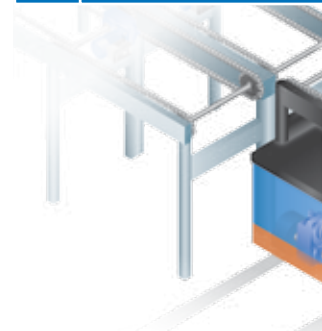


1 Stacker Cranes

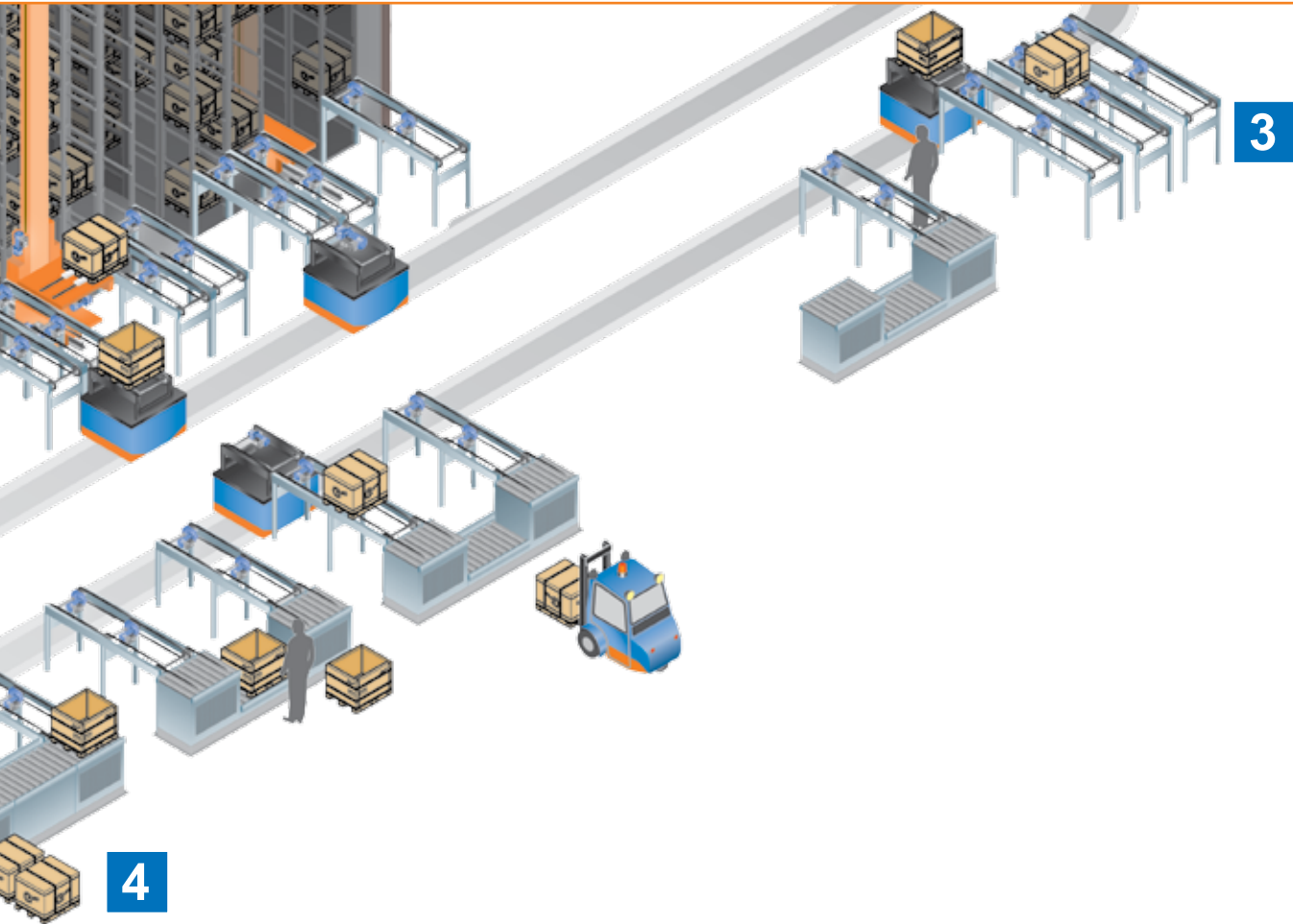


Automated storage facilities feature high storage density in order to maximize usage of available floor space. Agile Stacker Cranes are therefore indispensable to quickly retrieve and transfer goods. High-performance systems depend on dynamic drive technology in order to achieve a high rate of movement and accomplish excellent storage and retrieval throughput.

2 Automated C



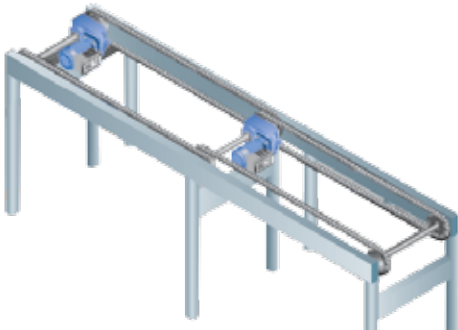
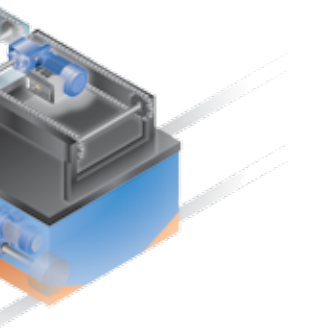
Automated Guided Vehicle (AGV) loads from a conveyor to a storage rack within a facility. As an AGV approaches a storage rack, it aligns itself with a Stacker Crane to ensure that loads are positioned for a swift and smooth transfer.



4 Guided Vehicle

3 Chain Conveyor

4 Roller Conveyor



icles are used to transport
 designated storage area
 GV stops at a destination
 racker Crane, NORD drives
 precisely positioned for a
 c.

Chain Conveyors are primarily used to transport heavy unit loads and industrial containers. NORD supplies robust drive solutions with a proven track record of durability and reliability - in both single and double-strand configurations.

Roller Conveyors are versatile transport systems suited for light or medium-weight item handling. Separate conveyor sections may be fitted with dedicated NORD drives for intelligent, differentiated speed adjustment along the line, which provides operators precise and dynamic control over the spacing and accumulation of loads.

FLEXIBLE COMBINATIONS FOR THE INTRALOGISTICS INDUSTRY



Gearboxes



Durable gears in UNICASE™ single-piece housings shoulder every load

- ✓ High efficiency
2-stage bevel design
- ✓ High power density
- ✓ Long service life

Motors



Powerful motors keep drivesystems in motion under all conditions.

- ✓ Designed to global standards
- ✓ High overload capacity
- ✓ Wide voltage range

AC Vector Drives



Intelligent drive electronics provide exactly the control you need

- ✓ Scalable functionality
- ✓ Full fieldbus connectivity
- ✓ Wide power range

Quick Setup Tools / Bus Systems



Comprehensive communication options enable access to the drives from any level to allow for versatile means of parameterization.

- ✓ All common bus systems
- ✓ Quick and easy commissioning with a plug in operating box or NORDCON software.
- ✓ Convenient handheld ParameterBox for local operation.

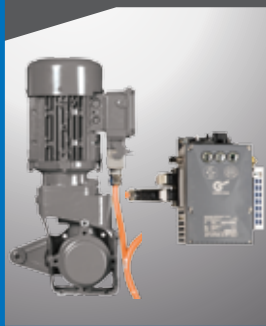
Local Controls



Switches and buttons are available directly at the drive units to immediately initiate starts, stops, mode adjustments or resets.

- ✓ Mains isolator switch
- ✓ Selector switch remote or local.
- ✓ Switch for start/stop and forward/reverse.
- ✓ Fault indicator and reset button.

Quick Connectors



All interfaces are designed for easy handling to ensure that drive systems can be easily configured and installed.

- ✓ Easy plug & play solution with all common quick connectors.
- ✓ Supply cable & motor output.
- ✓ Pluggable sensors & encoders.
- ✓ Ready-made cables.



EFFICIENT, RELIABLE & PROVEN DRIVE SOLUTIONS FOR INTRALOGISTICS



Efficient

NORD drive solutions demonstrate a commitment to eco-friendly designs that reduce overall carbon emissions harmful to our environment.

- Premium-efficient helical and helical-bevel gear solutions with 95-97 % efficiency.
- NORD's low-inertia, inverter-rated motors are designed to meet the latest global energy requirements.
- NORD AC Vector Drives help guarantee efficient operation, improved process control and optimized motor performance.
- Choosing NORD's energy efficient drive solutions leads to longer equipment service life and lowers the total cost of ownership.

Reliable

Downtime. It's the last word you can afford to hear when you work in the Intralogistics Industry. Reliability is a direct result of NORD's unique design and our components work in unison to keep key operations safe and profitable.

- Unicast gear housings provide accurate positioning of bearings and shafts.
- Autovent helps ensure a leak-free design.
- Infinite-life, high quality gearing, up to AGMA Class 13.
- Exceptional durability, quiet operation and long service life.

Proven

NORD's electronics provide a manageable and flexible system with superior functionality. Proven throughout the world, the intralogistics industry relies on the dependable and economical products from NORD Drivesystems.

- NORD's mechatronic drive systems are based on efficient 2-stage bevel geared motors which are light weight, easy to handle and energy efficient.
- NORD's range of electronics include power connectors, Bus systems, and software tools in either wall mount or motor mounted AC Vector Drives.



Gear Unit

- High efficiency
2-stage bevel design
- High power density
- Long service life

Motor

- Designed to global standards
- High overload capacity
- Wired voltage range

AC Vector Drives

- Scalable functionality
- Full fieldbus connectivity
- Wide power range



NORD DRIVE SOLUTIONS FOR THE INTRALOGISTICS INDUSTRY



Motor Starter (Catalog F3015)



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

U[V] 3~200 ... 500

P[hp] 0.33 - 10 hp

AC Vector Drive SK 180E (Catalog F3018)



- Stand alone operation
- 4 parameter sets (switch over online)
- Sensorless current vector control (ISD control)

U[V] 1~110 ... 120 ± 10%
1~200 ... 240 ± 10%
3~200 ... 240 ± 10%
3~380 ... 480 -20% / +10%

P[hp] 0.33 - 3.0 hp

AC Vector Drive SK 200E (Catalog F3020)



- Energy saving function
- Integrated "Posicon" position control

U[V] 1~110 ... 120 ± 10%
1~200 ... 240 ± 10%
3~200 ... 240 ± 10%
3~380 ... 500 -20% / +10%

P[hp] 0.33 - 30 hp

AC Vector Drive SK 500E (Catalog F3050)



- Energy saving function
- "Posicon" positioning control
- Plug-in modules, for communication (field bus)

U[V] 1~110 ... 120 ± 10%
1~200 ... 240 ± 10%
3~200 ... 240 ± 10%
3~380 ... 480 -20% / +10%

P[hp] 0.33 - 175 hp

Helical In-Line Gear Units (Catalog G1000)



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

hp	0.16 - 200
lb-in	23 - 204,983
i	1.24:1 - 14,340.31:1

Parallel Shaft Gear Units (Catalog G1000)



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

hp	0.16 - 250
lb-in	575 - 796,567
i	4.03:1 - 6,616.79:1

Helical-Bevel Gear Units (Catalog G1000)



- Up to 97% efficiency
- Foot, flange or shaft mounted
- Hollow or solid shaft
- UNICASE™ housing

hp	0.16 - 250
lb-in	796 - 442,537
i	3.58:1 - 13,432.68:1

FLEXBLOC™ Gear Units (Catalog G1035)



- Modular
- Universal mounting
- Lifetime lubrication
- IEC or NEMA versions

hp	0.33 - 5.0
lb-in	185 - 4,683
i	5.00:1 - 3,000:1





Whether for automated guided vehicles, stacker cranes, or any type of conveyor system,

NORD DRIVESYSTEMS

provides the optimum drive solution for every application.



NORD Gear Corporation

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