

DRIVE SYSTEMS FOR MATERIAL HANDLING

CASE STUDY: BCS GROUP



Over 1000 Installed Drives

Motors, gear units and Vector drives
in Australia's fastest sorting facility



AC Vector Drives

Easy installation and maintenance
with plug-in connectors



2-stage helical-bevel gear units

High power density and quality
bearings in a compact design



Efficient motors

Energy cost savings while
conforming to all global standards



The complete drive solution

Reliable – Versatile – Integrated



BCS Group chose NORDs 92.1 Series helical bevel gearmotors equipped with distributed control AC Vector Drives for Australia's fastest courier sorting facility.



GEAR UNITS

High quality bearings
Low noise
High power density



MOTORS

Efficient design
Global standards
All operating conditions



DRIVE ELECTRONICS

Compact design
Easy commissioning
Scalable functionality

The gearmotors powering Australia's quickest courier sorting facility

Chosen to supply a high quality state-of-the-art material handling system for Australia's largest mover of freight, the BCS Group required approximately one thousand gearmotors and AC Vector Drives. BCS chose to go with a solution provided by NORD Drivesystems due to the innovative product features that provided efficiencies for both BCS and their client.

Background: In 2014, Toll IPEC decided to boost its parcel delivery capabilities by building a freight sorting facility located in Melbourne. The new 'mega centre' would become a key component of the company's extensive national distribution network. Melbourne's Tullamarine region was chosen as the location for the facility which is one of the largest of its kind in Australia. The centre promised to deliver impressive benefits to Toll including a parcel sorting capacity of up to 35,000 parcels per hour.

BCS Group: Toll chose the BCS Group to supply the material handling system for the new Melbourne facility. BCS' automated solution incorporates many processes that include package arrival into the depot, data gathering, high speed sortation, flexible loading/dispatch solutions, and both system monitoring and intelligence.

NORD Drivesystems: A facility of this size requires an extensive conveyor system to move parcels around the facility. Such a system requires a large quantity of both gearmotors & distributed control AC vector drives. BCS chose NORD's 92.1 series 2-stage helical-bevel gearmotors paired with integrated AC drives.

"The conveyors run the delivery of all parcels into the sorter and basic distribution from the sorter as well," explained Frank Kassai, Group Engineering Manager at BCS. "We were looking at installing over one thousand motors and drives. They were all different sizes and ranged [from] 0.37 kW up to 5.5kW.

FOCUS ON THE CUSTOMER



Our expertise lies in delivering end to end solutions consisting of logistics hardware, automation controls and elegant software products that have made BCS a supplier of choice to airports, airlines, freight and industrial customers around the world. Our business breaks into three business units being Airport Systems, Operations and Maintenance and our newest business unit, Services and Solutions (SaS)



BCS solution for Toll IPEC facility Melbourne, Australia



“The advantage of NORD is that it has a two stage bevel gearbox for high efficiency. In addition, the maintenance and installation is made easy by the fact that NORD offers plugin connections as part of the base product as well as a drive that actually mounts on top of the motor”.

Frank Kassai, Group Engineering Manager at BCS

Why did they choose NORD? “An advantage to using the NORD solution is that it included a highly efficient two-stage bevel gearbox. In addition, the maintenance and installation is made easy by the NORD plugin connections included as part of the base product and an AC drive that actually mounts on top of the motor”, explained Frank Kassai. “With the NORD products, if you have a failure, you can plug in a new motor and reprogram it. This enables the operator to change a motor out in just a few minutes, without the need for an electrician to physically rewire a new one”. The gearboxes are also configurable which means they can have different shaft sizes for various applications systems. “Toll Melbourne’s project was the largest courier project of its kind delivered by BCS in Australia, and the installation and commissioning processes was seamless”, explained Frank Kassai. “NORD had actually pre-programmed our drives before we received them on site which shortened the installation process.”

One of BCS’s main concerns when selecting NORD was whether they would be able to provide the same level of support that BCS had been accustomed to. “We are extremely happy with the support from NORD. Nothing has been a problem.” Toll’s Melbourne facility began operations in late 2015.

Future BCS projects: The Toll Melbourne facility is not the only successful BCS project that includes NORD drives. There are other projects in the courier market as well as in airport baggage handling sites throughout Australia.

NORD’s helical-bevel gearmotors paired with distributed control AC vector drives may be used in many other applications or industry sectors. Kassai suggested that BCS has absolutely no concerns using NORD on their future projects within airports or in other warehouse distribution applications.

The Gear Unit: NORD’s gear units consist of only quality components developed and manufactured in NORD’s production centers. Featuring superior power density and long-lasting bearings, these units ensure maintenance-free operation, include an extended service life, and run quietly.

The Motor: NORD’s efficient motors meet current legislative requirements and are suitable for global installation. NORD supplies drive solutions for a wide range of environmental conditions: indoor or outdoor areas, heat, cold, demanding hygienic requirements, within hazardous environments, etc.

The AC Drive: NORD’s motor starters and AC vector drives are very compact, feature consistent operation & enable easy commissioning. A varied range of products and options provides a feature set that is configurable to your specific application requirements.

FOCUS ON THE PROJECT

The new Toll IPEC freight sorting facility at Melbourne’s Tullamarine area would become a key component of the company’s extensive national distribution center. Toll chose the BCS Group to supply the material handling system. BCS chose NORD DRIVESYSTEMS Australia to supply more than 1,000 geared motors.

- Pre-programmed frequency inverters for short commissioning process
- Plug-in connections for easy installation and maintenance
- Over 1,000 motors and drives from 0.37 kW up to 5.5 kW





**MORE REFERENCES AND
CASE STUDIES MAY BE FOUND AT :**

▪ www.nord.com/references



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Global Vision, Local Support

NORD makes its wide product range easily available through a global network that includes representation in over 60 countries. By providing all of our customers with prompt delivery, and expert support services, we are firmly committed to exceeding customer expectations and being responsive to the ideas and specifications of every customer, anywhere in the world.