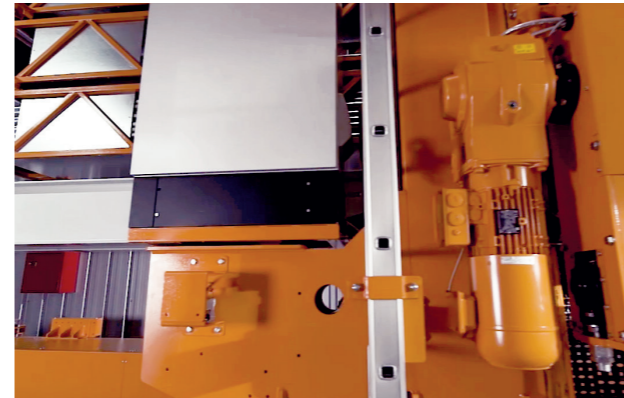


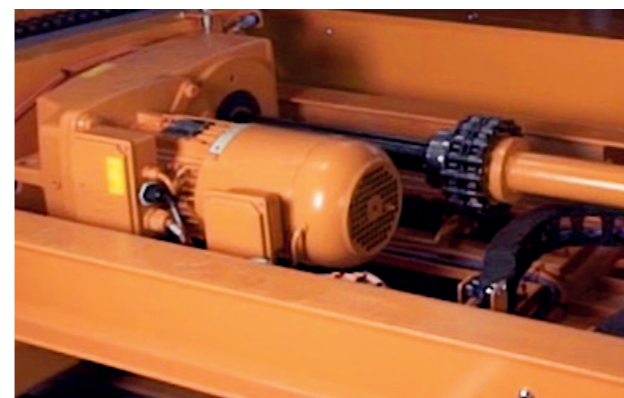
Further references  
and applications:  
[www.nord.com/references](http://www.nord.com/references)



Continuity  
in production



Optimal  
space utilisation



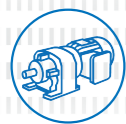
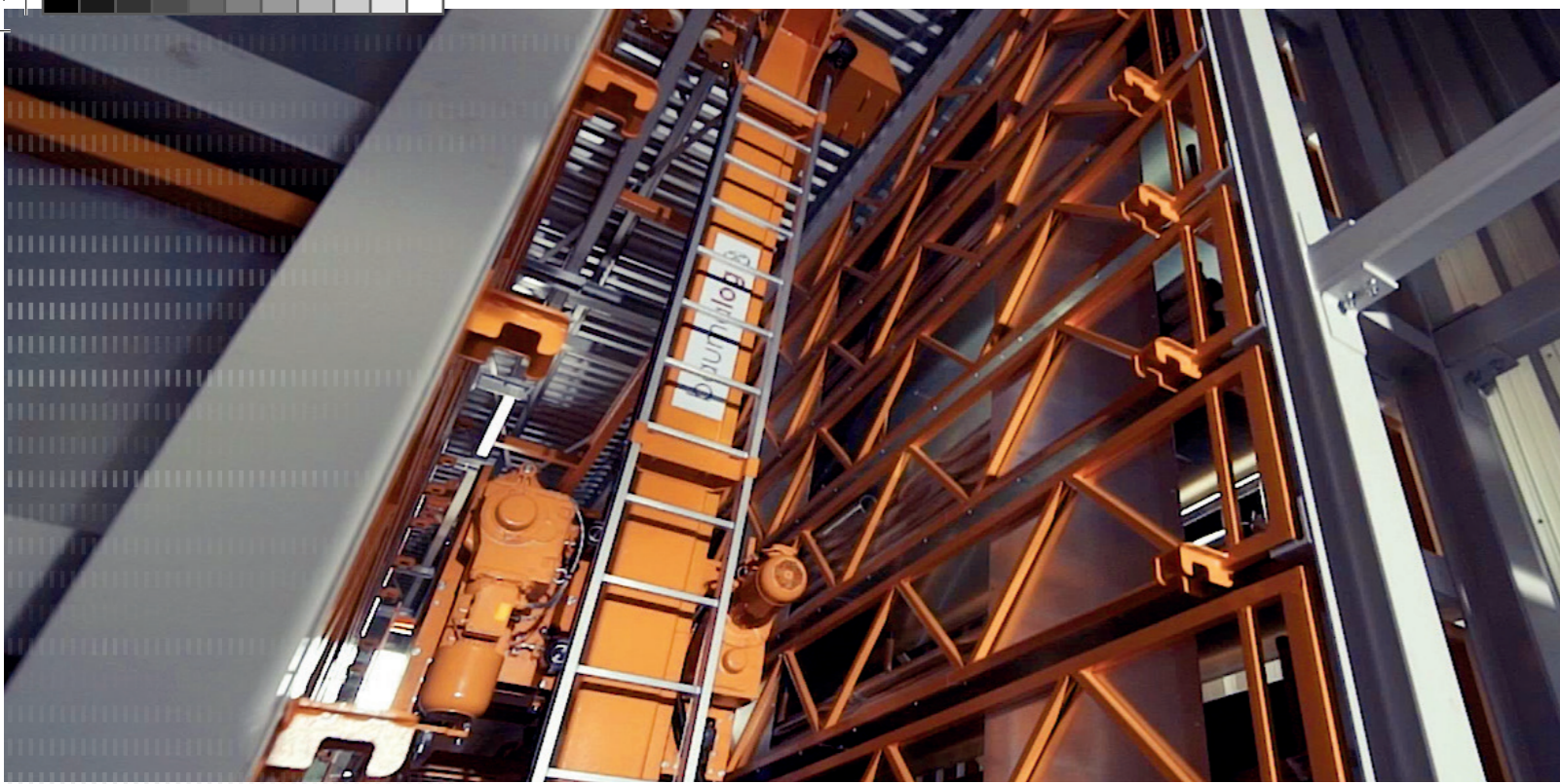
Shorter  
delivery times

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# Drive solutions for the automation of storage processes

Case Study: Baumalog Sp. z o.o.





#### Geared motors

Helical geared motors  
Parallel shaft geared motors

#### Automated storage processes

Thanks to drive solutions from NORD, Baumalog Sp. z o.o. has significantly facilitated the storage and transport processes for metal profiles at Retech Sp. z o.o. Storing components used in production is one of the major challenges for

manufacturers. The higher the sales figures, the higher the demands on the storage management and the more important the technical reliability: everything has to work out smoothly. The automation of storage and transport processes allows for a considerable increase of the production potential coupled with increased safety at work. In this field, the market offers modern solutions with individual layout and latest technology for robotics, automation and IT. An adequate adjustment of the automatic storage system improves the logistic processes which in turn reduces the number of faults caused by human error, and allows for shorter lead times for customer orders.

Retech Sp. z o.o. provides stainless steel solutions for the hotel and restaurant industry. After the purchase of a fibre-optic laser-cutting tool for profiles, the company's challenge was to provide sufficient materials for the processing to ensure the continuity of the production process as well as to fully utilise the advantages

of the latest laser cutting technology. Retech decided for an automatic material supply with solutions from Baumalog. The automatic pipe and profile warehouses have been developed according to specific customer requirements. The eight metre high warehouse consists of a supporting structure with two rows of shelves, each with five columns containing 68 moving racks. Each rack measures 6200 x 450 x 600 mm and is able to carry loads of 1,750 kg. A further aspect is the respective control. The system was equipped with a mobile loading station that allows for the profiles to be loaded outside the warehouse and transported into the warehouse. In addition, there are two mobile unloading stations that work hand in hand with the travelling cranes and the laser-cutting tools for the profiles in the warehouse. The whole system works fully automatically. By order of the operator at the control panel, the respective products are moved to one of the unloading stations.

Six NORD gear units were needed for the warehouse column and the loading and unloading stations supplied by Baumalog. NORD DRIVESYSTEMS is one of the leading global manufacturers of drive technology, gear units, motors and drive electronics. The NORD range of drives comprises gear units, industrial gear units, electric motors and drive electronics. The comprehensive NORD range offers intelligent mechanical and electrical solutions with fast delivery that allow for a flexible configuration for the storage automation. For this project, NORD supplied six gear units with powers of 0.75 kW to 3 kW. In addition to the mechanical solutions, frequency inverters for control cabinets are also used in the Baumalog-designed automated warehouse. NORDAC PRO frequency inverters are used to control the geared motors. The variable cooling concept ensures an optimum heat dissipation. Comprehensive safety systems for all gear unit elements are part of the standard. The positioning control ensures the precise

positioning of the gear unit between different points, irrespective of the control unit, as well as the relative positioning of the infinite loop axis. The NORD drive solutions used ensure every imaginable movement in this project. The geared motors allow for: the operation of the storage and retrieval device on tracks between the high racks, the movement of the vertical conveyor to take materials from the shelf or to return them to the shelf, as well as the horizontal movement of the racks and the movement of the vertical conveyor to the warehouse column. They also control a loading and unloading station outside the building, and unloading stations inside the building from where materials are brought to the laser cutter. The automation of storage and transport processes for profiles at Retech contributed to a significant improvement of the production process and an increased work safety. The use of high-end components (e.g. NORD drive solutions) also ensures a smooth and trouble-free operation of the entire system.



#### The NORDAC PRO inverter series

Specially developed for installation inside the control cabinet. These frequency inverters work with synchronous and asynchronous motors, and their various additional options meet all customer requirements. They are available with powers from 0.25 to 160 kW and can be extended with various additional modules.



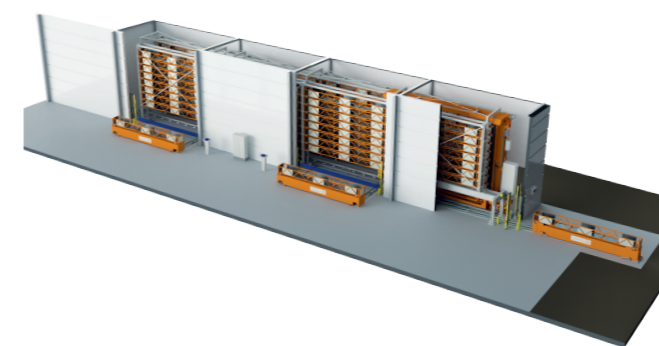
SK 500P - NORDAC PRO -  
Frequency inverter



Marcin Kozłowski,  
CEO at Baumalog

#### Customer profile

Baumalog is a Polish mechanical engineering company that produces automatic storage and transport systems used in many industries. The company designs, produces and installs solutions for the automation of processing runs (especially in the fields of sheet metals, profiles, bars and other materials with different dimensions and weights), and for the increase of process efficiency in internal logistics, that optimise the material flow during the production process as well as during picking and dispatch. Baumalog is also the Polish distributor for automatic vertical lift racking systems of the Italian Modula company.



#### The project described in keywords

Baumalog uses NORD drive solutions for all offered storage automation solutions. Among others, the company sees its advantages in the high efficiency, absolute reliability, quiet running, comprehensive product range and easy installation. Baumalog has been using drive solutions from NORD DRIVESYSTEMS® for its storage and transport projects for many years now: inverters and geared motors with high efficiency and absolute reliability.