



BLUMENBECKER

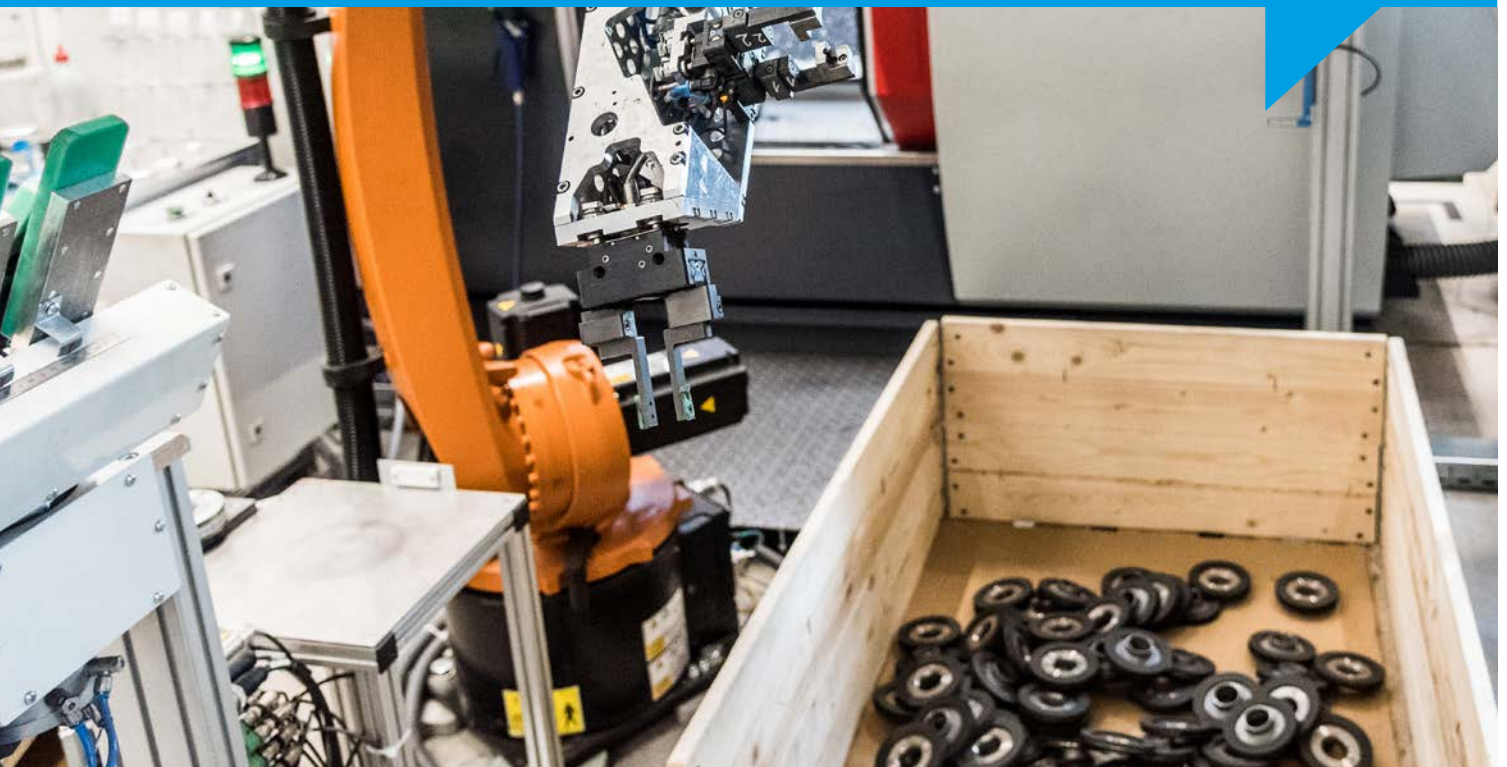
WE DELIVER SOLUTIONS

AUTOMATION TECHNOLOGY **ENGINEERING** INDUSTRIAL TRADE INDUSTRIAL SERVICE TECHNICS

REFERENCE

Industrial Robotics | Bin Picking

Bin-picking technology in electromagnetic brake manufacturing



CLIENT:

INTORQ

INTORQ GmbH & Co. KG
Wülmsers Weg 5
D-31855 Aerzen

PROJECT COMPLETED BY:

Blumenbecker Prag s.r.o.
Počernická 96, 108 00 Prag 10
T: +420 225 511-111

Blumenbecker Industrie-Robotik GmbH
Trautenastraße 10, 38114 Braunschweig
T: +49 531 48207-100

COMMISSION:

Identification, picking, feeding and returning of
blanks of electromagnetic blanks to a CNC machine

Execution: End of 2018

BIN-PICKING AT THE HIGHEST LEVEL

BIN PICKING is a technology whereby a robot, equipped with a 3D camera, is able to pick items out of a container filled with randomly placed, often irregularly shaped parts and align them properly before delivering them to the next station. Blumenbecker is a pioneer in this field, specialising in the development of sensor systems for industrial robots and the design of special gripping tools.

INTORQ GMBH & CO. KG

Headquartered southwest of Hanover in the town of Aerzen, INTORQ GmbH & Co. KG manufactures brakes and clutches for electric drives used worldwide in cranes, forklifts, elevators and wind turbines. The young, family-owned company also has branches in India, China and the USA. The Intorq brand stands for reliable brake solutions with the highest production standards.

THE COMMISSION

The remit was to supply a CNC machine with rotors in six sizes plus sub-variants. The die cast parts had been randomly placed in the supply bin. With the previous system, the components would be pre-sorted by hand and repacked before the robot could feed them to the CNC turning machine. The identification, picking, feed and return of the raw parts was now to be undertaken automatically as part of a continuous process.





»Right from the start we had the feeling that Blumenbecker knew exactly what they were doing. They immediately understood our requirements and implemented them very quickly. Most importantly, we got a tried and tested, fully developed process that works great.«

Jürgen Kampmeier, Ressourcenmanagement, INTORQ GmbH & Co. KG

PROJECT SCOPE

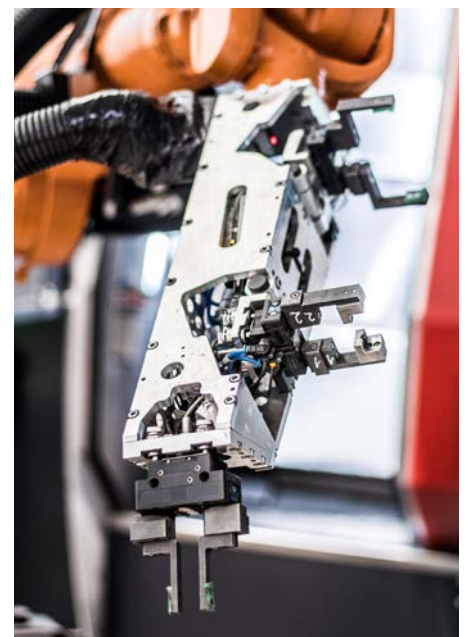
■ A particular challenge was to insert fully geared rotors onto a full-mesh mandrel. Here, the programmers and designers of the robot gripper had to put all their skills to the test. The Prague-based specialists first built the entire machine as a 3D model, at the same time simulating the desired behaviour of the robot and programming the control software. Incidentally, this was an in-house development that works with all types of robot from KUKA to ABB. Problems such as colliding with the bin were identified and averted in offline mode. At the Intorq factory, the finished programs then only had to be installed on the real robots, allowing the machine to be put back into service in no time.

As well as programming the control software, Blumenbecker Prag s.r.o. also developed and manufactured the robot grippers. For Intorq, the production team designed a special 3-way gripper that can pick up three parts at once. The robot uses a 3D camera to locate the correct component in the bin. The part is then picked up and delivered to the CNC machine, while in the same operation the robot removes the machined workpieces and safely sets these aside as rapidly as possible.

The total implementation time was only six weeks.

ADVANTAGES

■ Thanks to Blumenbecker Intorq obtained a tailor-made, automated all-in-one solution from a single source in just six weeks. Offline programming guarantees mature and reliable processes and shortens commissioning. In addition, the control software developed by Blumenbecker is compatible with all robot types. The 3-way robot gripper, specially designed for Intorq, can pick up three components simultaneously and thus avoids empty runs. Blumenbecker was able to excel in this project due to its high-level technology expertise.



3-way gripper specially developed for Intorq

WE LOOK FORWARD TO
HEARING FROM YOU.

Blumenbecker Industrie-Robotik GmbH, Trautenaustraße 10, 38114 Braunschweig
T: +49 531 48207-100, bir@blumenbecker.com, www.bir.blumenbecker.com

Blumenbecker Prag s.r.o., Počernická 96, 108 00 Prag 10, Tschechische Republik
T: +420 225 511-111, bpr@blumenbecker.com, www.bpr.blumenbecker.com