



BLUMENBECKER

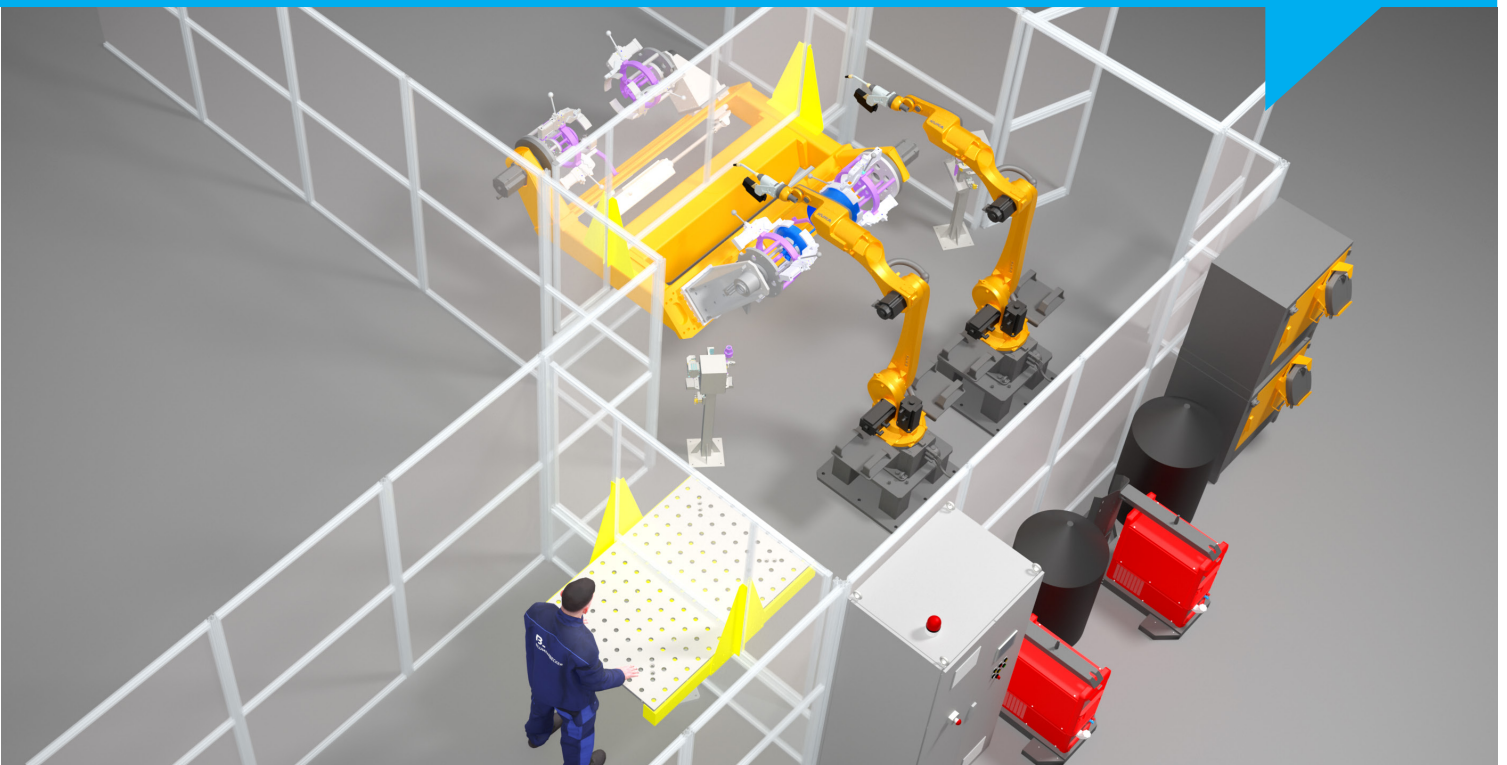
WE DELIVER SOLUTIONS

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

REFERENCE

Industrial Robotics | Laser Welding

Development of a robot welding system for pressure tanks of water heaters



CLIENT:

Tatramat - water heaters, Ltd.
Hlavná 1400/1
058 01 Poprad
Slovakia

PROJECT COMPLETED BY:

Blumenbecker Slovakia s.r.o.
Staviteľská 1
831 04 Bratislava 3
T: +421 2 326631 50
F: +421 2 326631 51
bsl@blumenbecker.com

COMMISSION:

Automation of the welding station for welding
the pressure tanks of water heaters

Execution: 2019

YOUR **SYSTEM INTEGRATOR** FOR COMPLEX ENGINEERING AND AUTOMATION TASKS

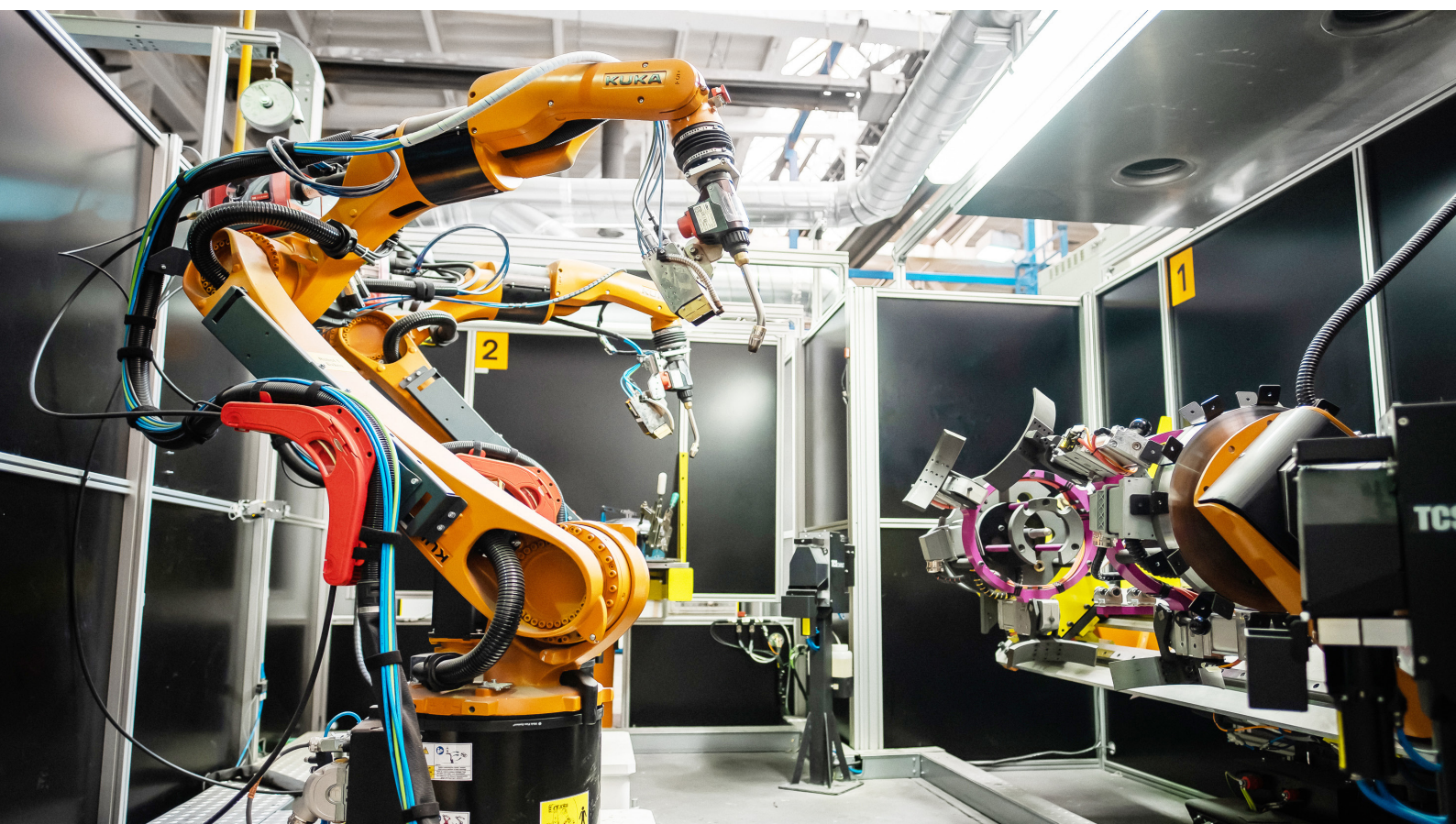
Whether it is the automation of a single welding workstation or a complete welding line. Blumenbecker is your partner for customised solutions. Thanks to the wide-ranging expertise of the staff, almost all questions regarding the design and implementation of new systems or the upgrading and conversion of existing systems can be answered. Comprehensive support during the project phase is guaranteed, as is project planning for hardware and software, commissioning, shift supervision and support from a single source.

THE CLIENT

■ In Poprad, Slovakia, at the foot of the High Tatras in 1845 the Tatramat s.r.o. was founded. Started as a manufacturer of nails and curry comb for farm animals, the company developed to the well-known manufacturer of products for water heating and special heat pumps. Years of experience combined with modern technology form the foundation of the well-known brand Tatramat.

THE COMMISSION

■ The previous welding station for welding the pressure tanks of water heaters was a semi-automatic system. In each case one skilled worker per shift was needed there. Go to improvement of product quality and because experienced welders always are harder to find, it was decided that the plant should be automate. Another reason was the modification of the welded joint. The original welding seam was problematic for the operation after the welding process. That is the reason for the decision, that the seam should take a form of a butt weld.



» *The Blumenbecker solution helps us meet our claim of being the quality leader in the market.*«

Jan Girgas, Technical Manager,
Tatramat s.r.o.

PROJECT SCOPE

Blumenbecker Slovakia used the design drawings to create from Tatramat developed a concept for the automation of the welding station and then visualized this in a 3D model.

This allowed the customer to inspect the new welding system in advance and make adjustments. Afterwards the implementation started.

In the case of butt welds, the parts to be welded must be precisely aligned at an angle of 180 degrees. This guaranteed Blumenbecker Slovakia through mechanical guide elements for alignment of the fixed parts and monitoring sensors.

Two synchronous KUKA KR CYBERTECH industrial robots are used to weld the circumferential butt weld simultaneously. The welding technology has been supplied by Fronius. The optical guidance is provided by a Scansonic laser system, which is specially developed for butt welds.

The system is equipped with a rotary table This allows welding to take place on one side while a new part is being positioned on the other This means that the fixed part is immediately ready for welding. This is an enormous time saving.

The robot welding station also meets the latest standard. Among other things, safety doors and light curtains protect man and machine. The modular design makes future extensions or changes to the type of production a simple process, thus offering maximum flexibility.

Blumenbecker Slovakia also trained the operating personnel. This enables the customer's staff to make changes to the programme themselves in order to weld different products.

One of the Tantramat end products:
Water heater



ADVANTAGES

The advantages of automation of the welding station are improved weld seam quality and a reduction in processing time, thus increasing productivity. Due to its modular design, the system can be flexibly expanded and modified.

WE LOOK FORWARD TO
HEARING FROM YOU.