

A Brand New Generation of Collaborative Robots

Innovative new features make the flexible robot arm even more valuable to your production.

Programming is Child's Play

to teach desired waypoints.

Teach Mode: Train the robot by

simply grabbing the robot arm

Quick Start-up: Our robots stay on track The new True Absolute Encoders

acquire absolute position immediately upon power-up and do not require batteries. Once initialized you never have to reposition the robot. Perfect for applications requiring automatic startup and integration into other machinery.

Turn your production into a healthier workplace

The UR robot is approved and certified by TÜV (Technical Inspection Association) and subject to risk assessment of the application, the robot can operate with no safety guarding. You can apply a UR robot to dirty, dangerous and dull jobs that previously had to be done by humans, thereby reducing injury rates – both repetitive strain and accidents. Built-in emergency stop adds additional safety.

Help wherever you need a hand

Simple, space-saving and easy to integrate without changing the production layout. Almost any manual task can be automated at low cost.

Patented adjustable safety parameters

Adjust the robot's safety parameters to match each specific production task. UR produces the only robot with this advanced, patented safety feature; password protected to avoid unauthorised adjustments.

Flexible, collaborative and lightweight co-worker

The six-axis robot arm weighs only 18 and 28 kg respectively, and handles payloads up to 5 and 10 kg. The reach is 850 - 1300 mm.

Danish Design

Modern, sleek design. Looks as good as it works. User Interface in multiple languages.

Let the play begin

Touch Screen: User friendly, yet sophisticated 3D visualisation via an intuitive tablet. Training a UR robot to perform a task can easily be done via the arrow

UNIVERSAL ROBOTS keys on the graphical user interface. This patended technology enables users with no previous programming experience to quickly set up and operate the UR Robots, allowing the machine operators to be promoted to robot programmers.

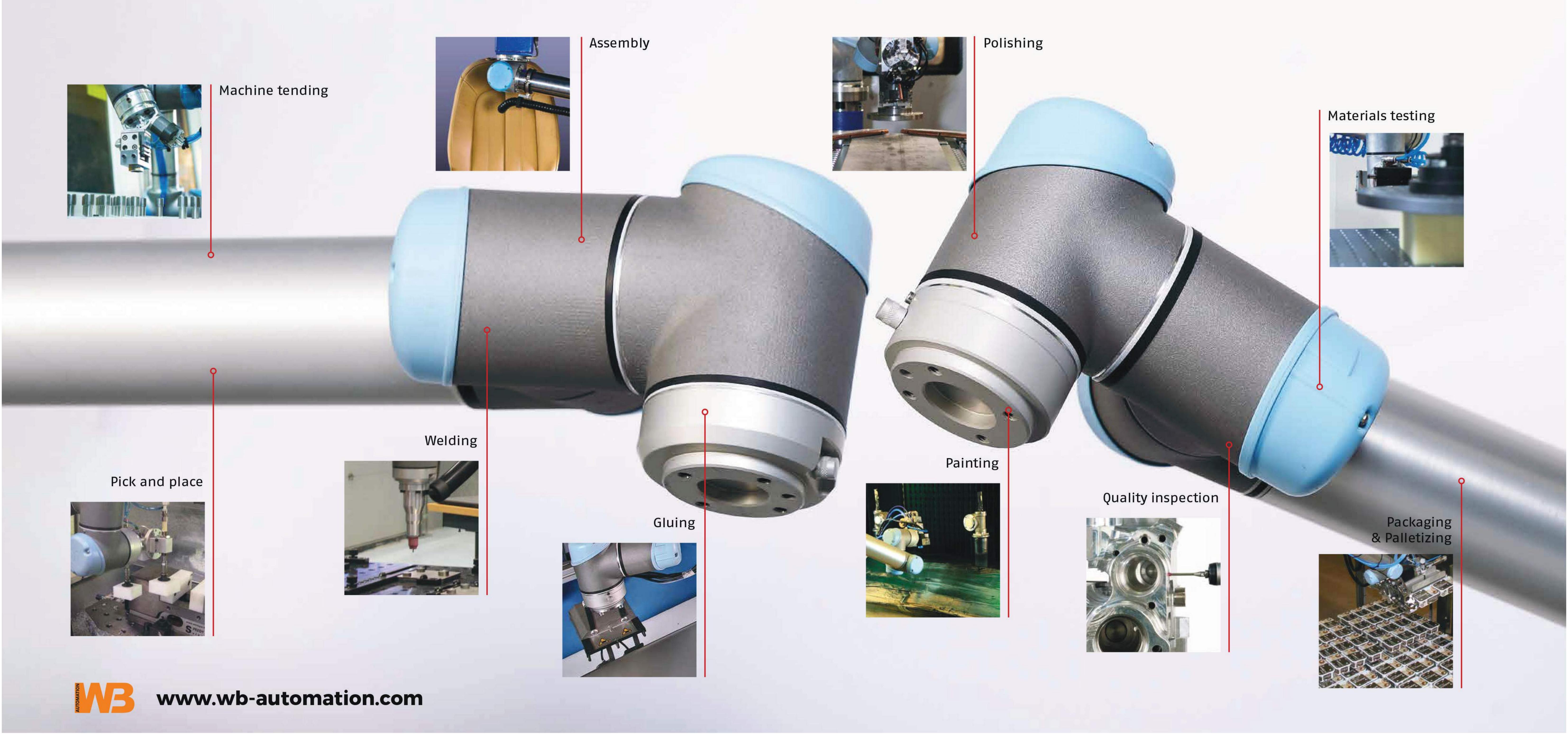


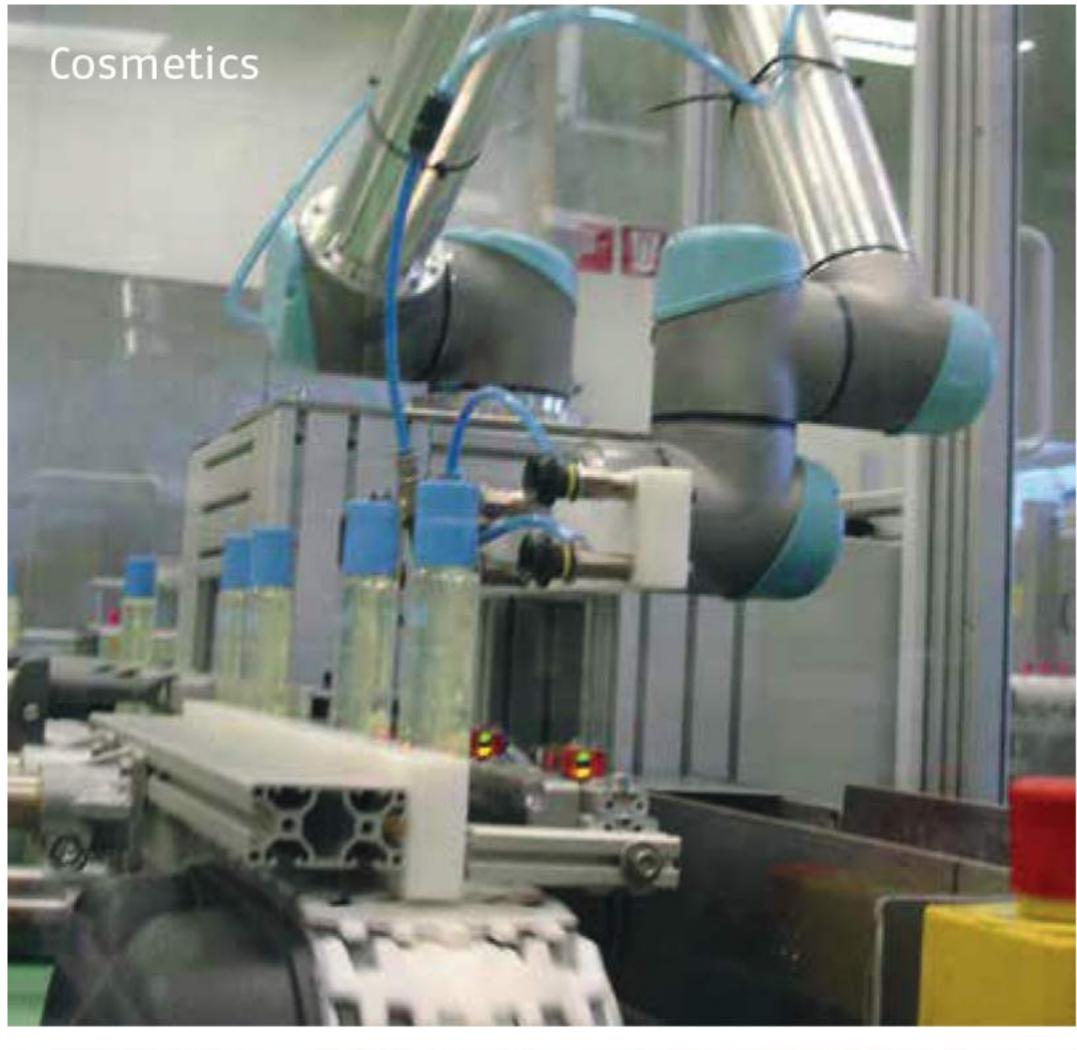
www.wb-automation.com



Possibilities

Our robots are indeed universal. They fit into any production plant. Get a competitive edge by using our flexible, user-friendly robots for small-batch, mixed product assembly and materials handling.











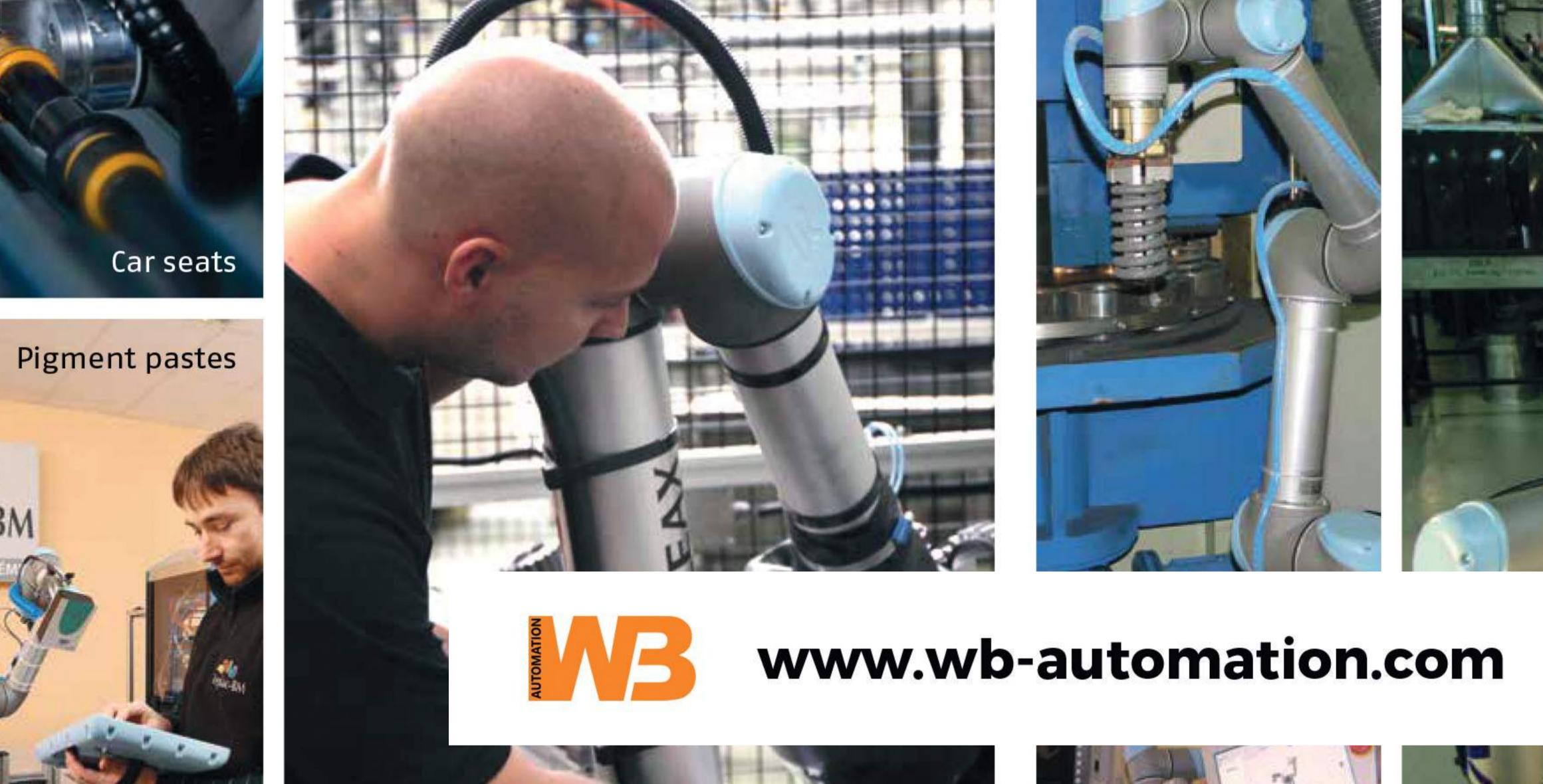






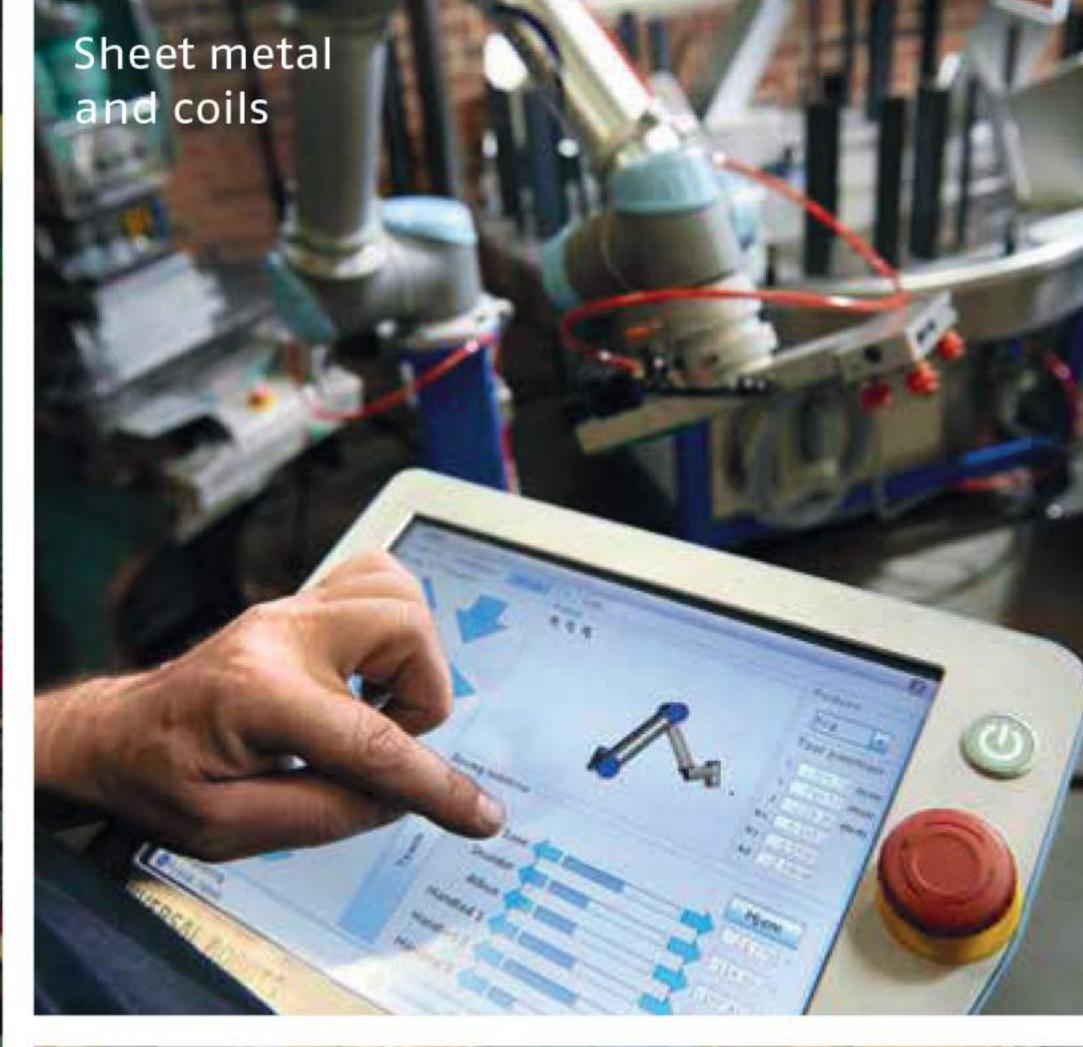




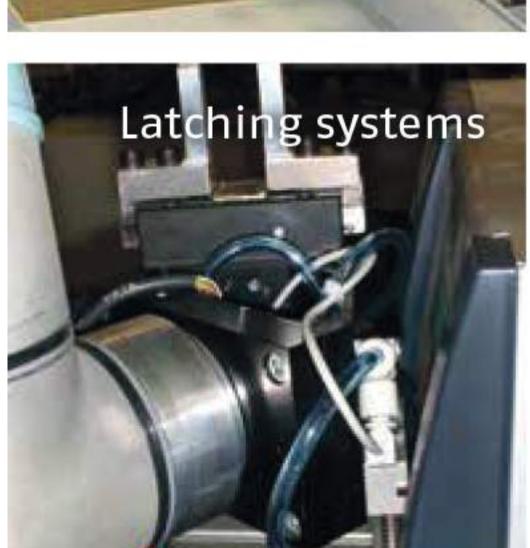


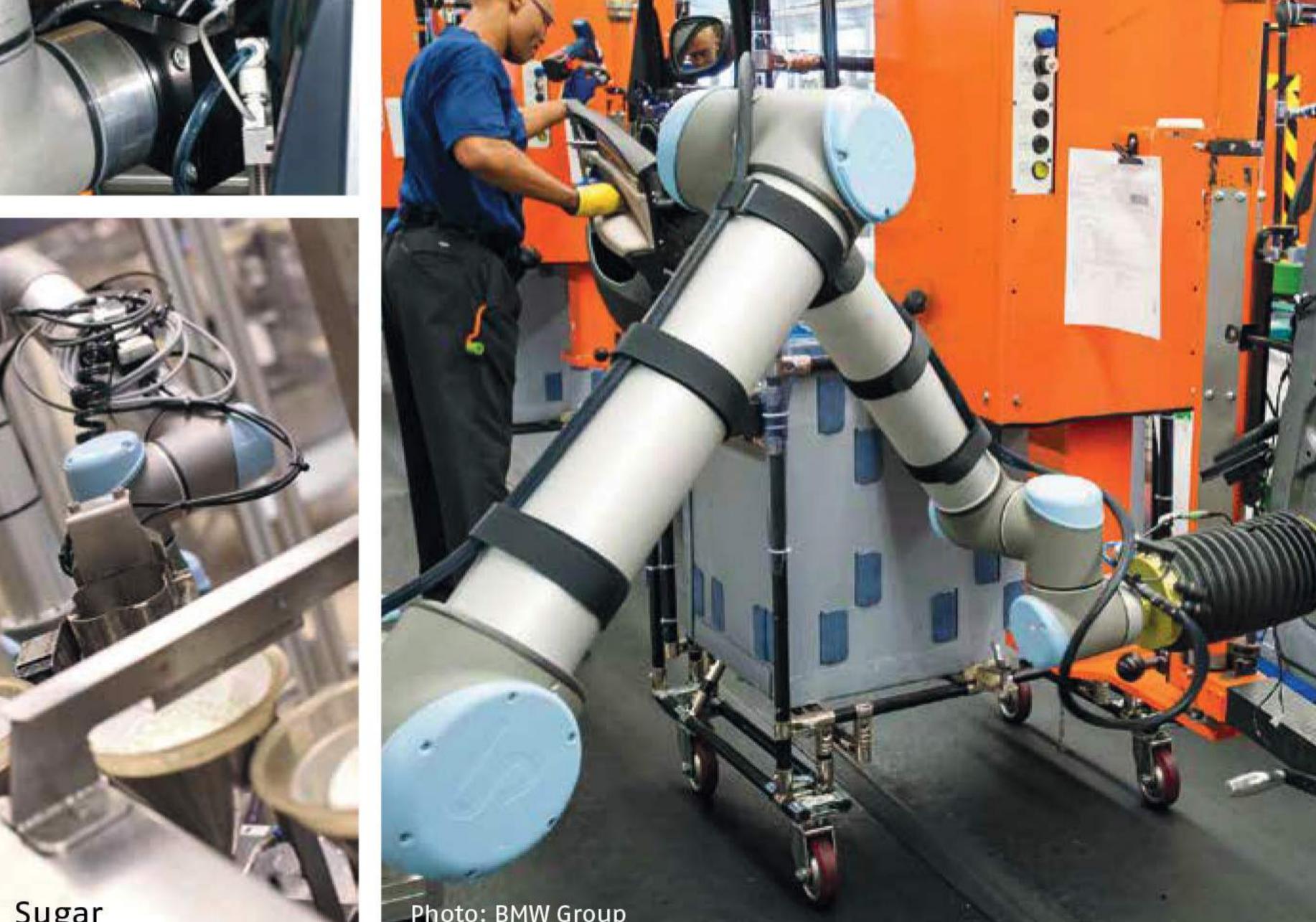


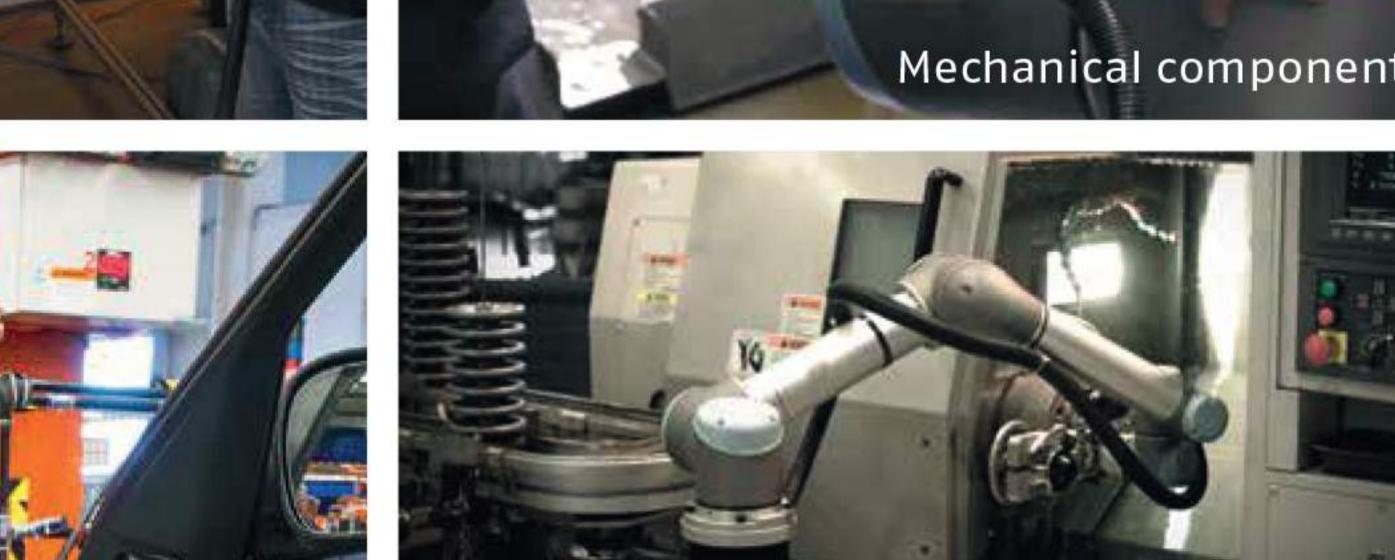




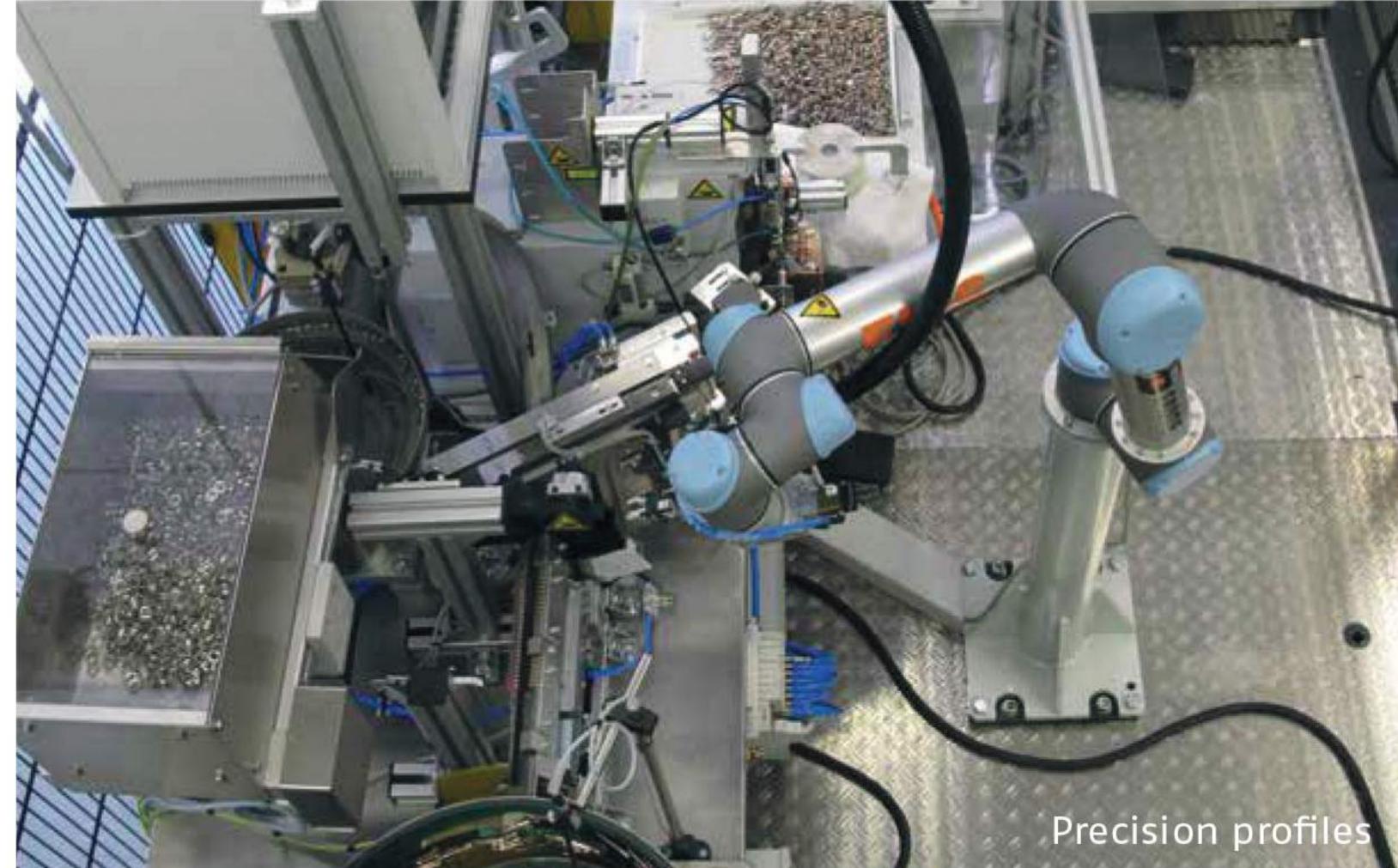


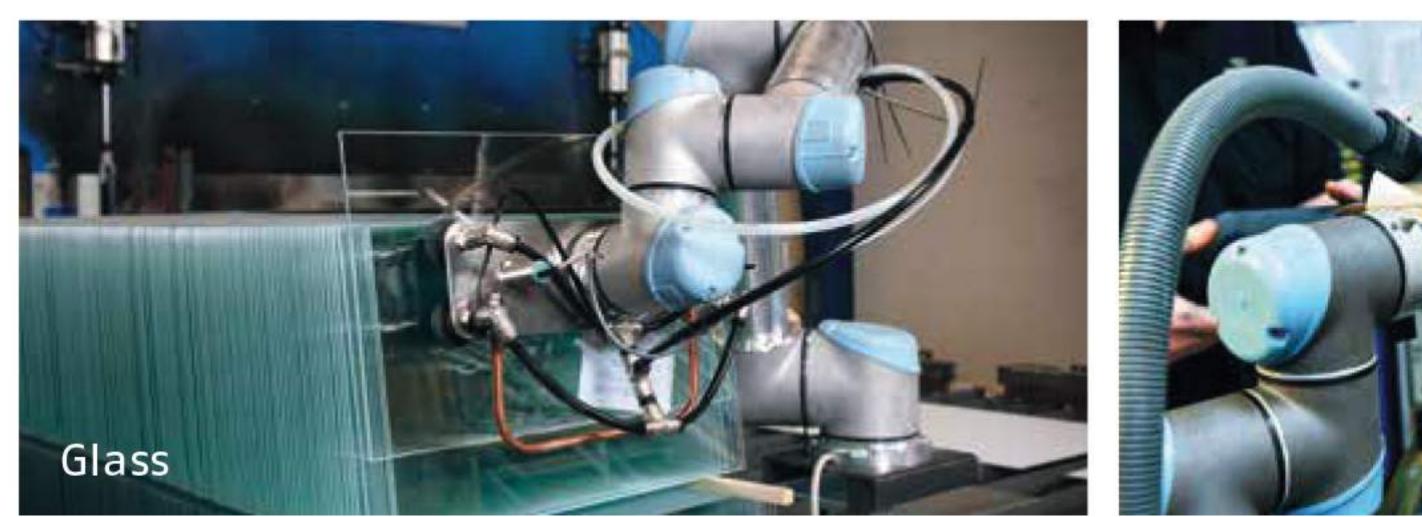


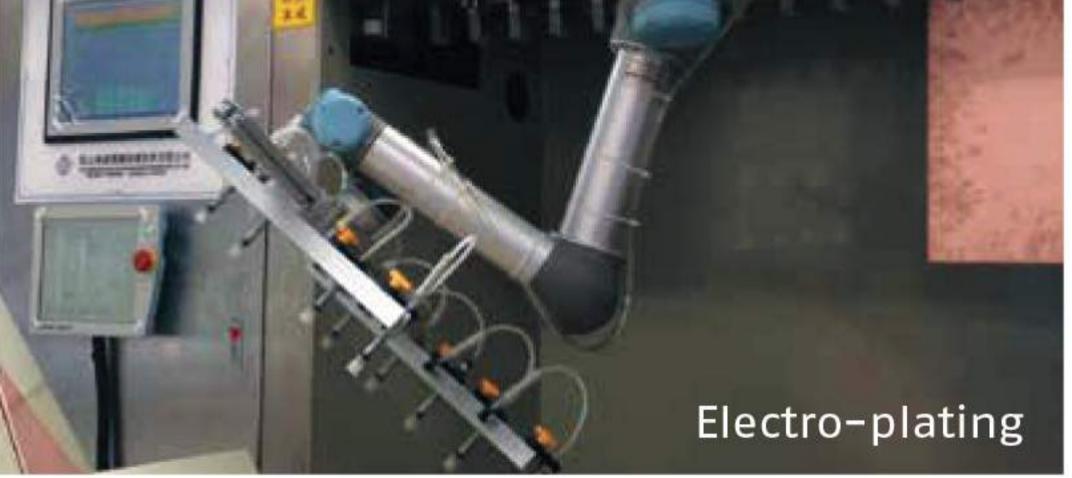


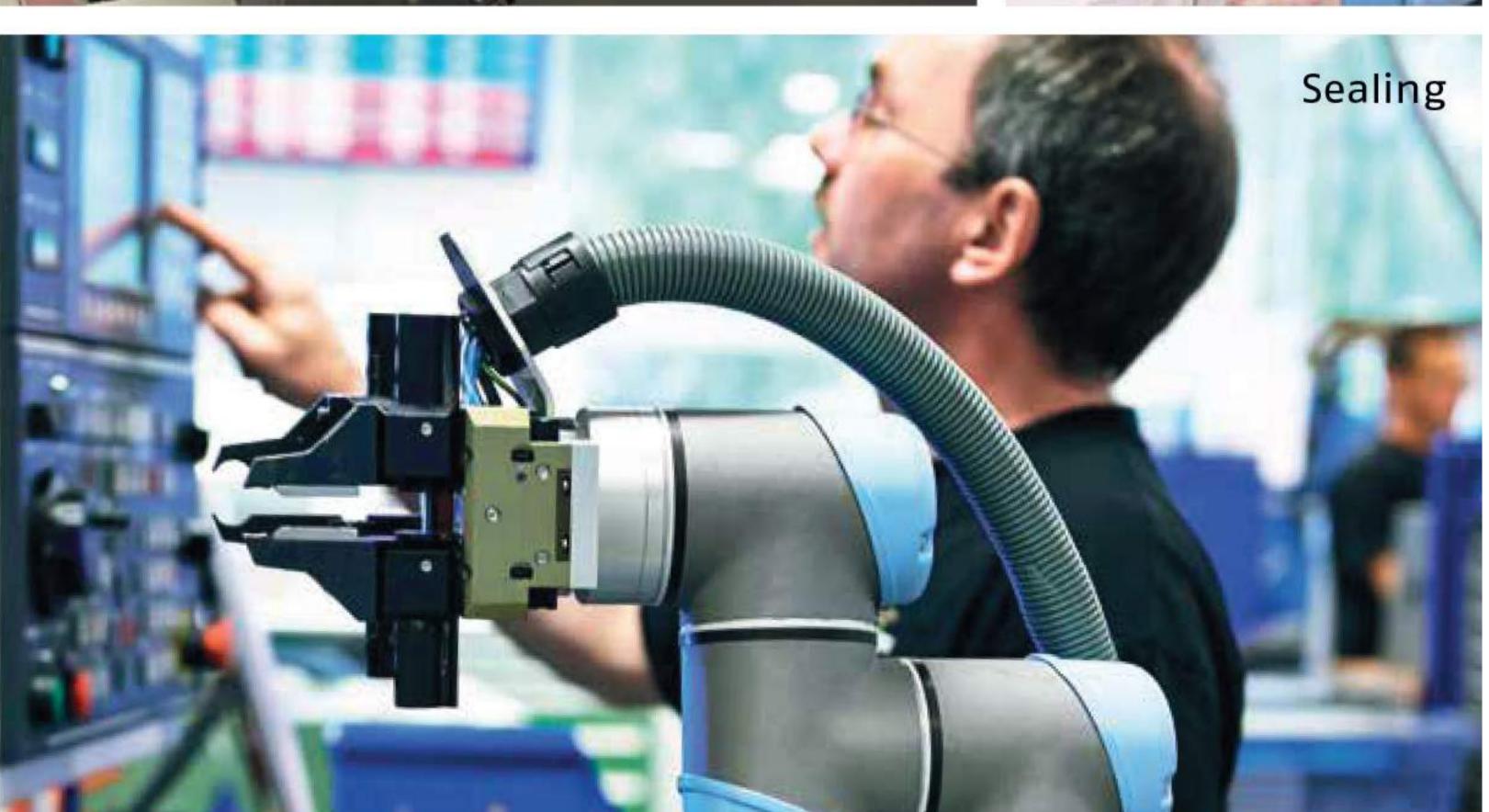














GET INSPIRED: www.universal-robots.com/cases

SME-SUITABLE ROBOT:

Fast ROI Easy to fit

Creates new jobs

Careful handling of items



Experiences

Trelleborg, Denmark

Robots: 38 x UR5 + 4 x UR10

Industry: Engineered polymer solutions ROI: Average of 12-18 months per robot Number of employees: 350 in Denmark, 8,800 worldwide.

Tasks: The many robots carry out machine tending, mainly CNC machines. The company always has an extra robot not integrated in production, which is used for experiments in order to identify and develop new applications.

> Project team: Jesper Riis, Plant Manager, Henrik Tørnes, Process Technical Manager, Istvan Mihura, **Head of Department:**

Thanks to the UR Robots, we have reduced the time of delivery significantly and we have been able to create more jobs at our plant here in Denmark. We are now able to attract an increased amount of business as the robots have enabled us to be even more price competitive than before.





PLC Industries, Singapore

Robots: 2 x UR10

Industry: Precision mechanical engineering ROI: 12 months

Number of employees: 53

Tasks: The UR10s at PLC serve two main functions - the picking and placing as well as loading and unloading of raw materials. Each robot serves two CNC machines. Equipped with customized grippers, the robots place the finished products neatly on a compartmentalized tray for workers to proceed with the next steps in the production process.

Yong Hock Thye, **Business Development Director:**

I was most impressed by how quiet the robots function – you hardly notice them but they can go about their work 24/7 with no glitches. It is not aggressive in its outlook and gives workers that peace of mind to concentrate on their individual tasks. With a payback period of under a year for each robot paired with the positive experience we have had so far, we are confident in achieving greater success by strengthening our collaboration with Universal Robots in the years to come.

Ferd. Wagner Profile, Germany

Robots: 2 x UR5 Employees: 90

Industry: Metal processing/Welding and

Soldering

Tasks: Two UR Robots are used in the welding and soldering process when two components are connected. During the brazing, the temperature is 800 degrees Celsius. By the end of the process, the quality of the finished metal parts is controlled by a vision guidance.

Production Manager, Bernhard Eckert:

It was no longer viable in the long term to handle 500,000 - 600,000 components manually per year. The careful and gentle handling of the parts was especially important to us. The decorative surfaces, are still polished by hand, and could easily be damaged. In addition to quality assurance, the maneuverability of the robot and the quality of the gripping tools played a big role in our decision to acquire the UR5s.



Cascina Italia, Italy

Robots: 4 x UR5 Employees: 85 ROI: 12 months

Tasks: The collaborative robot works on a packaging line handling 15,000 eggs per hour. The robots are equipped with a pneumatic gripper and fills boxes with egg trays containing 10 eggs each. The job demands very precise handling and the careful placement of nine layers of 10 eggs in eachbox. Cascina Italia has a total of four automatic filling lines equipped with UR5 robots sold by Alumotion; three of them are flexible lines: they can handle variable size boxes (96, 144, 192 eggs), the fourth is a dedicated line that fills a big box holding about 1400 eggs.

Plant Manager, Ruggero Moretti:

We didn't expect to be able to use a robot for the job, but after seeing a demo of the robot at our own factory, it was easy for us to visualize the benefits. Ninety days later, the new robot was running on the line. The lightweight robot colleague can easily be moved between packaging lines, which is crucial for Cascina Italia as we handle four different egg sizesand also needed a robot that could work within significant space restraints right next to our employees. The great thing with Universal Robots' arm is that its force control feature allows it to avoid breaking the eggs in case something goes wrong during the filling operations.

BMW, USA

Robots: 4 x UR10 Employees: 7,000 Industry: Automotive

Tasks: At BMW's South Carolina plant that rolls out 1,100 vehicles each day, UR Robots do glass gluing and also help workers perform a roll operation that follows the perimeter of a door panel, pressing a glue bead around the panel to create a watertight seal applied before the door casing is attached.

Richard Morris, VP of Assembly and Logistics at BMW Manufacturing:

Assembly robots will not replace human workers; they will extend their careers. Our workers are getting older as the retirement age goes up. We actually need something to compensate and keep our staff healthy, and keep them in the labor force for a long time. We want to get the robots to support the humans. The application of a robot should be based on a simple rule: When the job is dirty, dumb or dangerous - and I would add also when extreme repeatability and accuracy is needed, then robots should do the job. Cobots make it possible. One of the tasks that UR10 handles is pretty heavy work because you have to roll this glue line to the door. If you do it several times a day, it's like playing a Wimbledon match.



Photo: BMW Group



When we started developing the idea of a lightweight and flexible robot, the industry was dominated by rigid, heavy and unwieldy automation solutions; even for simple pick and place tasks.

We created a collaborative robot that completely changed the game. In doing this, we reversed the features of the classic industrial robot on nearly every point. A Universal Robot can be moved and reprogrammed to perform new tasks in minutes with the potential of operating without safety guarding right next to employees. We now enable automation in areas previously considered too complex or costly.

> The near future will see even more advances in this emergent field, changing the way we work and interact with robots.

> > Chief Technology Officer Esben H. Østergaard

A Brilliant Idea Global Success

Whether you run a five person machine shop in Germany, perform analysis of sugar beets in Sweden, manage a large auto assembly line in South Carolina or assemble rickshaws in India, you need a flexible automation solution.

Universal Robots has taken the global market by storm because our robots optimize production in all industries. By offering a user-friendly, affordable robot, we lower the automation barrier tremendously and will continue to do so by introducing robots with features that enable our end users to be more productive and profitable, while providing a safer work environment for employees.

Chief Executive Officer Enrico Krog Iversen



