

Collaborative robotics in the medical and cosmetics industry.

Industry e-book

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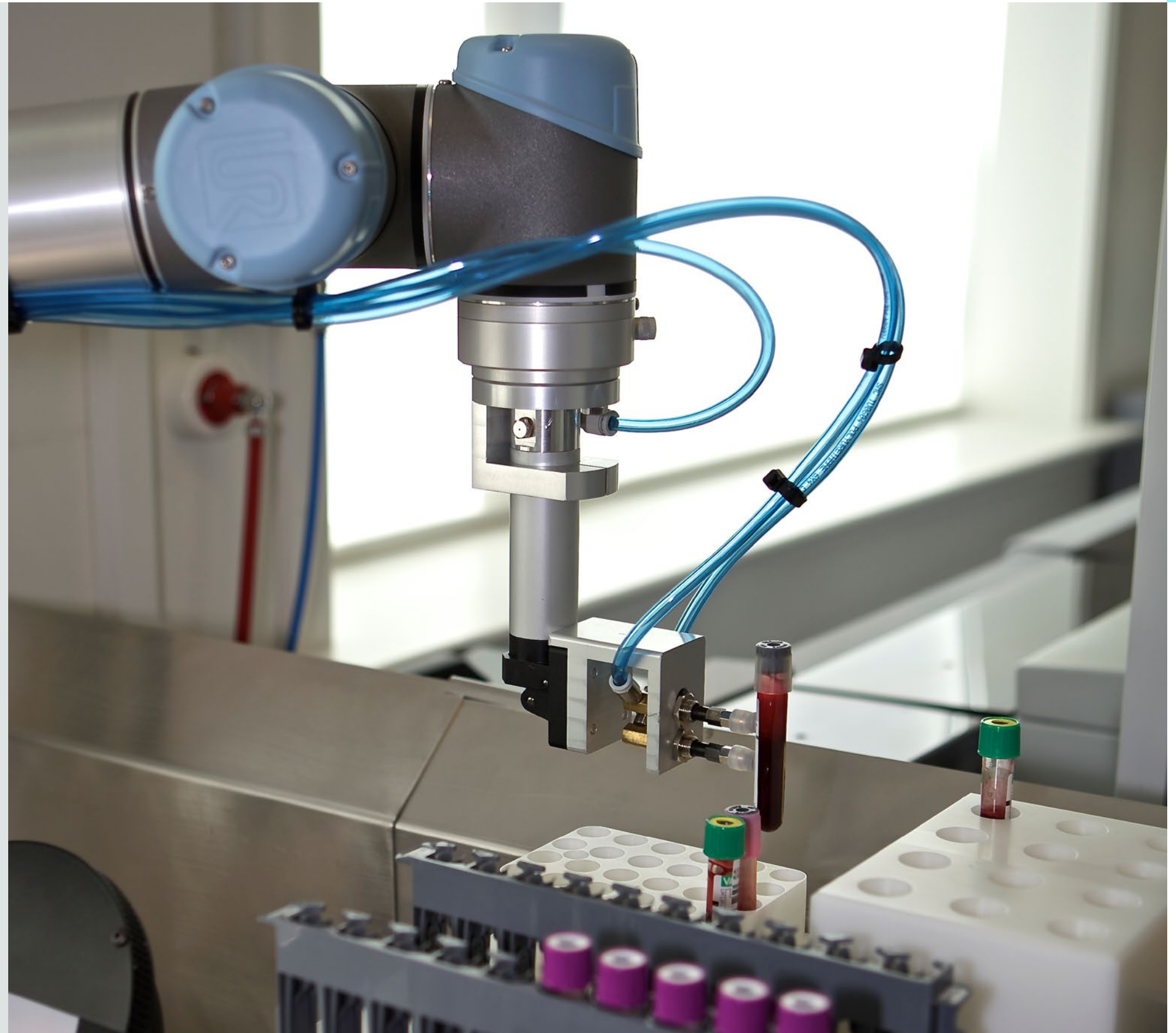


01

Collaborative automation in the medical and cosmetics industry.

Chemicals and pharma make up a complex industry dominated by heavy demands on quality, precision and accuracy. Repetitive processes requiring a high degree of repeatability make everyday work difficult for employees.

Automating production is essential for manufacturers to relieve employees and remain competitive. Collaborative robots provide the best chance of rising to the growing challenges of the industry.



02

Stay competitive and boost productivity.

Collaborative robots (cobots) provide attractive opportunities for automation in the chemical and pharmaceuticals industry for a wide range of applications and production facilities.



>50k

Massive installed base

Universal Robots' 50,000+ cobot solutions have been deployed around the world in both tier 1 automotive suppliers and small machine shops, and thousands of facilities in between.

1/2

Simple to redeploy

Cobots can be reconfigured and programmed for a new task in as little as half a day.

90

Easy programming

After an online 90-minute course on [UR Academy](#), anyone can become a certified cobot programmer. There are even in-person classes for hands-on learning.

17

Collaborative-ready

The e-Series 17 standard adjustable safety functions effectively and easily mitigate risk in a work cell, following a risk assessment.

1

Quick payback

UR cobots routinely deliver payback within a year.

03

Significance of human-robot collaboration in medical and cosmetics.

The chemicals and pharmaceuticals industry relies on accuracy, precision and quality. Collaborative robots help tackle these requirements while also securing employee satisfaction.

Our cobots are extremely quick to implement and adapt to different processes. They provide a variety of automation solutions for your industry:



Lab Analysis & Testing

Collaborative robots help automate complex research projects; they work 24/7 while maximizing efficiency in the space available. Seamless integration with laboratory peripherals rapidly increases repeatability in test analysis while ensuring consistently high quality.



Injection Moulding

Cobots allow for almost complete automation in injection moulding applications while also saving space. They also guarantee uniformly high quality as well as constant dosing after many repetitions.



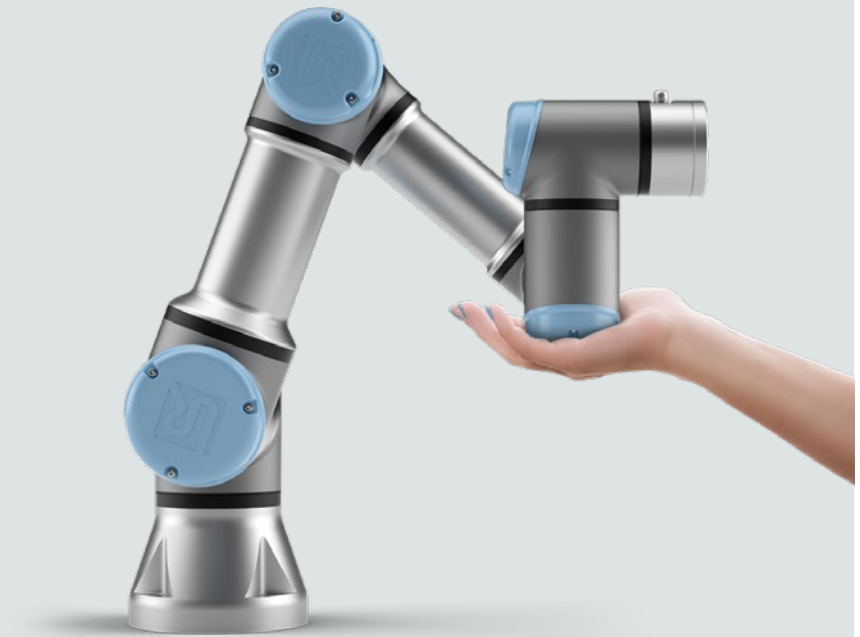
Pick & Place

Collaborative robots boost process accuracy and cut down on waste. Cobots allow for complete automation in pick-and-place processes to continue after closing time. The lightweight design and small footprint mean that the robotic arms are suitable for operation and retooling for various processes in constricted spaces.



Machine Tending

Cobots increase production rates in this monotonous activity while relieving employees from this unergonomic task.

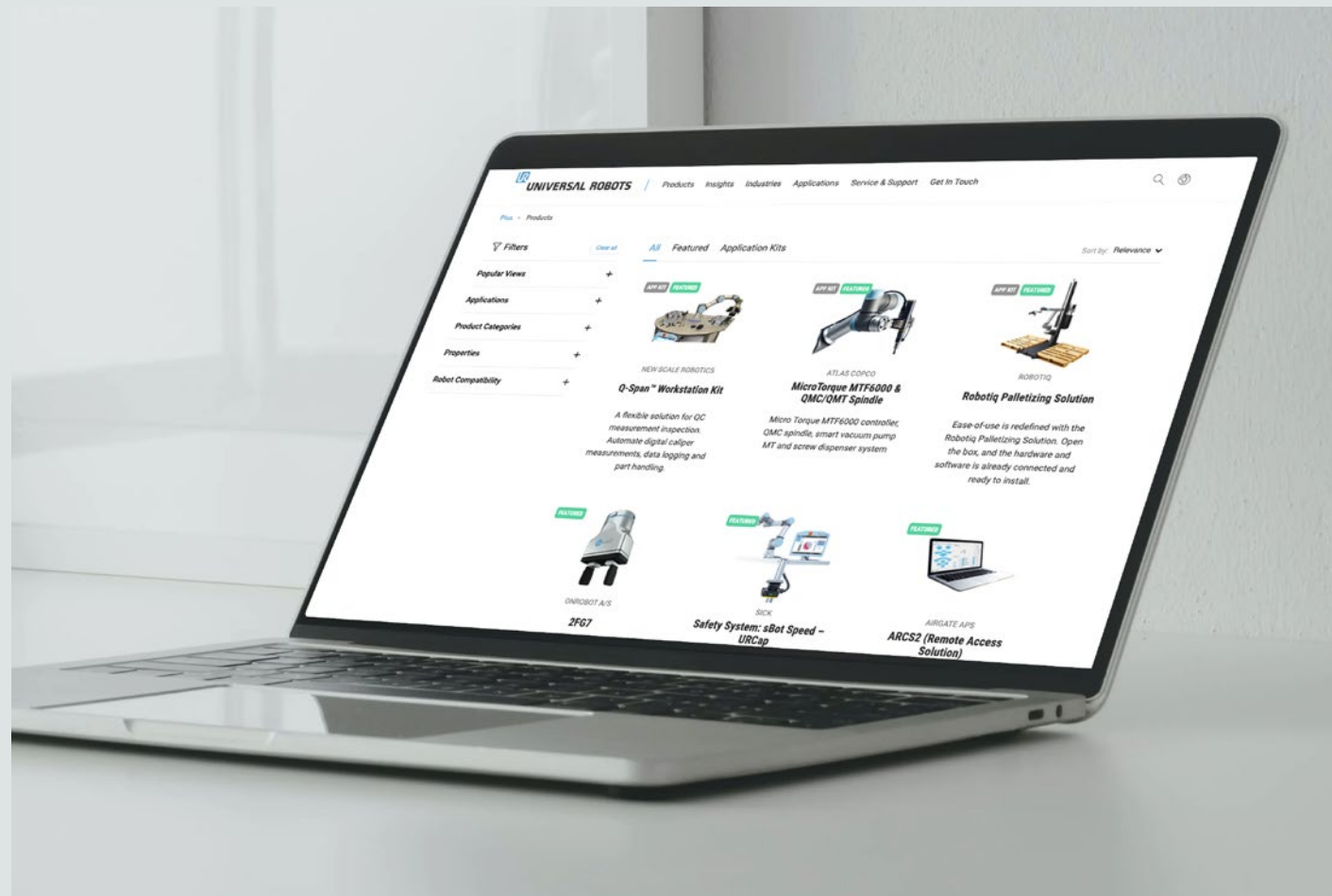


04

Automate easier than ever with UR+

The Universal Robots+ (UR+) ecosystem ensures smooth integration of 3rd party innovative peripheral products and software to match your requirements for highly specific robot applications.

UR+ solutions are certified for our cobots and provide Plug & Produce compatibility for guaranteed immediate deployment.



Plug & Produce

compatibility

Explore UR+ for a range of:

- Grippers
- Vision Systems
- Software
- Process Tools
- Hardware



universal-robots.com/plus

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Medical and cosmetics case stories from around the world.



Copenhagen University Hospital in Gentofte uses collaborative robot arms for a smooth workflow and rapid response in patient care.

Copenhagen University Hospital



“ These robots have been eagerly welcomed by the staff. They realize that every blood sample not yet tested in the laboratory means a waiting patient. Being able to deliver practically all blood tests within an hour means that our outpatients can save a trip to the hospital – their test results now reach their consulting physicians within an hour. For inpatients, this means that results from samples taken in the morning are back before the morning rounds.

Steen Stender
Head Physician

The Challenge

The increasing number of blood samples has proved to be a challenge for the University Hospital in Gentofte – 90% of the samples needs to be ready for analysis within an hour. This requires manually sorting them into four categories beforehand. This repetitive activity costs the staff a lot of valuable time. A cost-effective automation solution that saves space and allows for interaction with lab technicians would be an ideal solution.

The Solution

The hospital has deployed two UR5 cobots to tackle the high number of samples. Support for direct interaction with humans as well as fast implementation and user-friendliness sealed the deal. The first cobot is deployed in the lab sorting samples onto their respective shelves according to color, using a camera powered recognition system. The two arms pick up the test tube and place it into a device for centrifuge and analysis. Fitted with a host of safety features, the cobots are able to work together with the lab staff without requiring a safety fence.

The Result

The two UR5 cobots sort seven to eight samples per minute and three thousand test tubes per day. The University Hospital’s lab has reached its goals without additional staffing with the help of its robotic arms, despite the increasing numbers of blood samples. The two UR5 cobots complete more than 90% of the results in less than an hour after the blood samples arrive in the laboratory while also relieving qualified laboratory staff from this time-consuming, repetitive task.

MARKA is an Italian chemical company manufacturing cleaning products. Previously the company was mainly a contract manufacturer for others but then opted for self-branding.

MARKA

The Challenge

The company's decision to make its own consumer goods for retail presented the production department with the challenge of making smaller batches while maintaining the same performance and quality standards as in its mass production. The company opted to deploy robots in order to meet these requirements. MARKA placed one production-focused condition on automation: The robot would have to be able to cap a bottle. The shape of the cap made it difficult to grasp for precise positioning at constant pressure while twisting the cap on.

The Solution

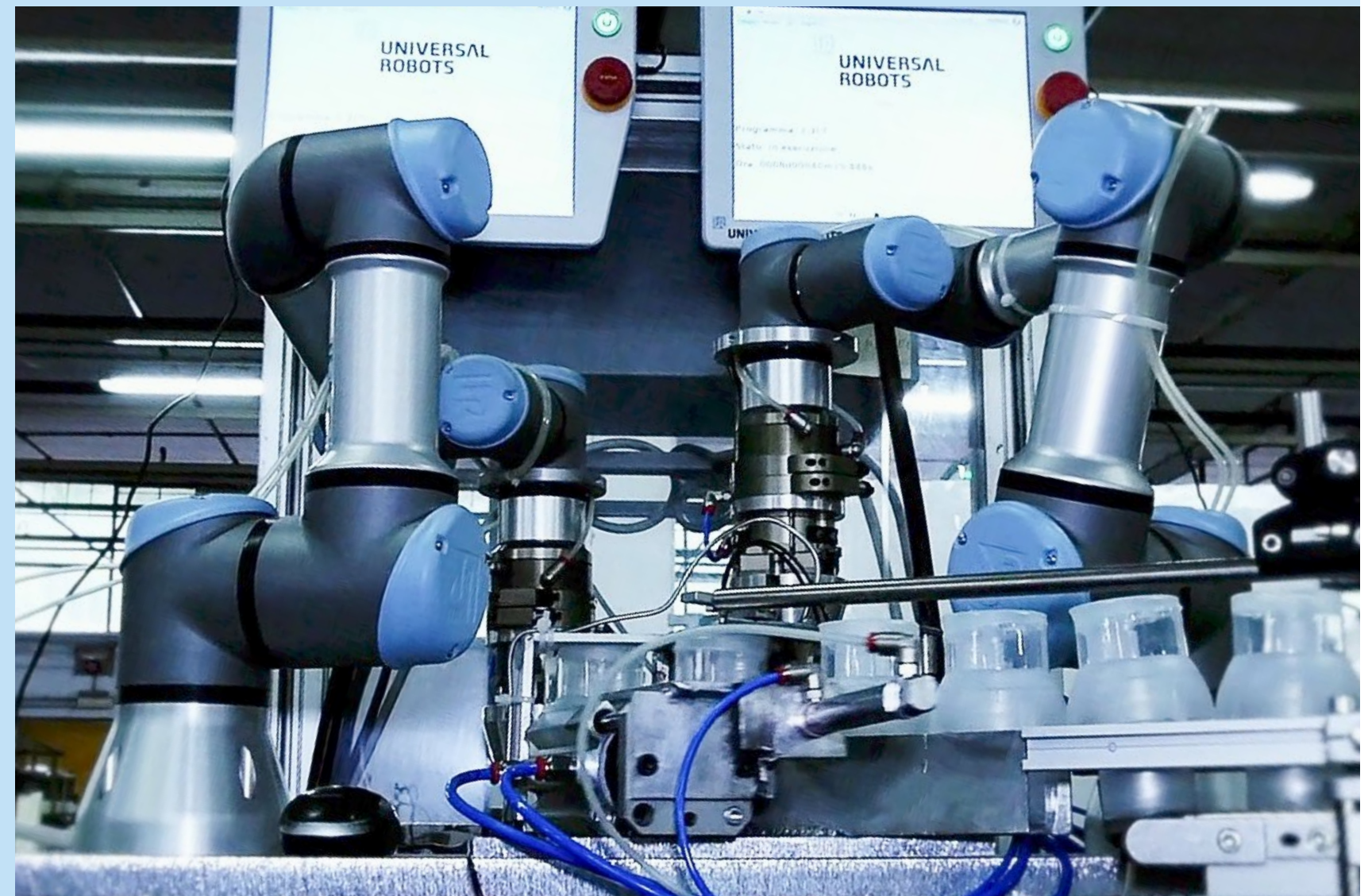
The company opted for our collaborative robot as an automation solution. The UR3 rises to the challenge of precise positioning thanks to its six-axis movement and integrated torque sensors. The robot's fast implementation time at only four hours also clinched it for the company. The preinstalled drag-and-drop program allowed MARKA to connect the UR3 directly into its production processes.

The Result

The UR3 has simplified the production cycle, as even unskilled operators can stop, reset and restart production without the need to stay close to the machine. The robot's intuitive user interface provides production staff with safe and reliable support.

“ We have increased the overall quality of the finished product thanks to the robot from Universal Robots, and we also recovered our investment cost within one year.

Giorgio Belotti
Production Manager



RNB Cosméticos is a cosmetics laboratory and intermediate supplier dedicated to researching, developing and manufacturing cosmetics, face and body care products, and sunblock and perfume.

RNB Cosméticos



“ We do not hire experts to operate a high-tech robot. We train our employees as experts with ever increasing qualifications.

Aurelio Tornero
General Industrial Manager

The Challenge

The company needed to replace its obsolete robots with a more versatile automation solution. The ideal solution was to be user-friendly and easy to program. The aim of the new robots would be to relieve employees from repetitive and ergonomically unpleasant tasks and give the employees more time to deal with more mentally demanding activities such as machine operation.

The Solution

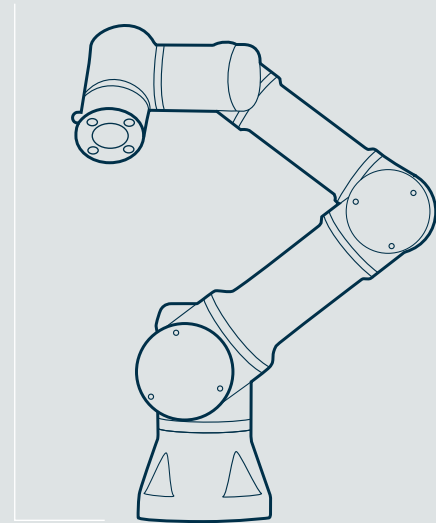
RNB Cosméticos opted for our cobots thanks to their rapid implementation and suitability for use in constricted spaces together with their human colleagues. Sinterpack supplied turnkey end-of-line palletizing cells equipped with several UR10 cobots and compatible grippers. Currently, the robotic arms at RNB Cosméticos handle packets at six cycles per minute.

The Result

Deploying the cobots has resulted in an increase in professional qualifications amongst the staff. Staff members have specialized in operating the robots, and are also responsible for monitoring both operations and the production line. The cobots have not only secured existing jobs but also led to new employees being taken on to meet the increase in production.

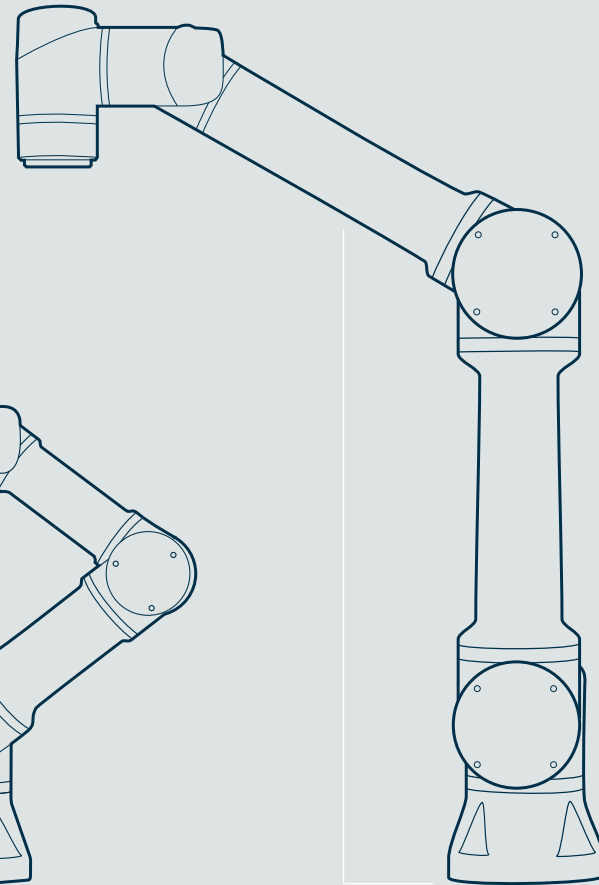
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Our cobots at a glance.



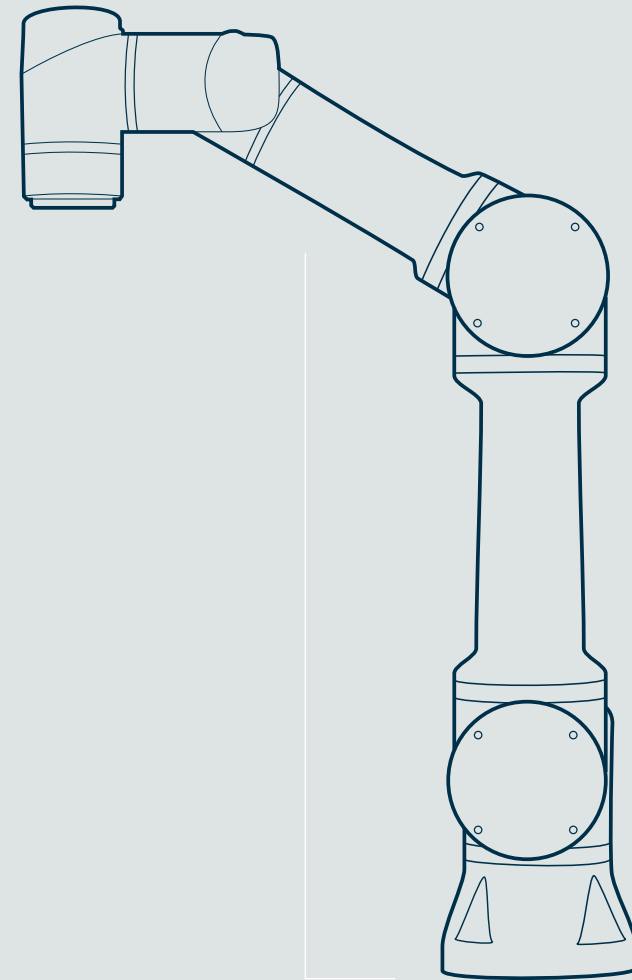
UR3e

Small but powerful, the UR3e has a payload of 3 kg and reach radius of 500 mm. With 360-degree rotation on all wrist joints and infinite rotation on the end joint, this tabletop cobot handles high precision tasks and light assembly tasks with ease.



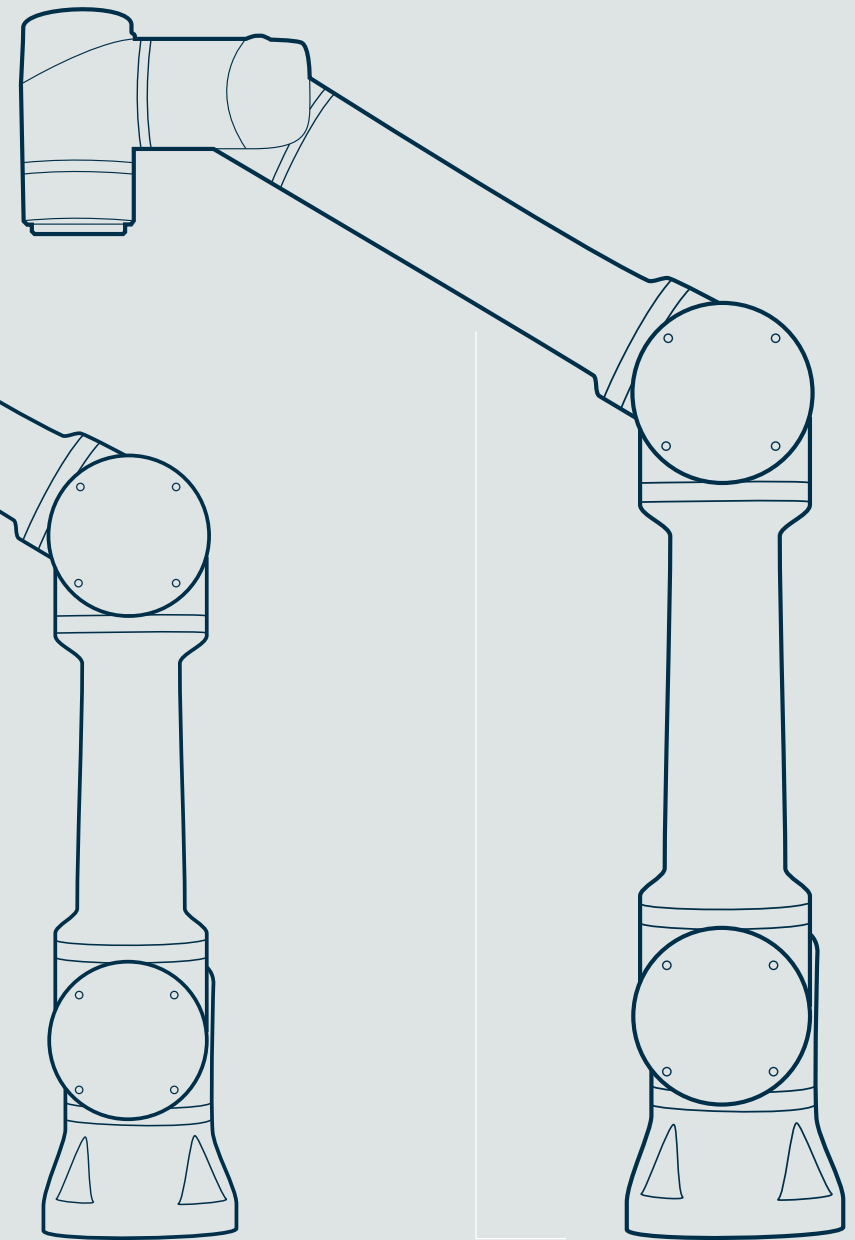
UR5e

The medium-sized member of the Universal Robots family is ideal for automating low weight processing tasks with its 5 kg payload and 850 mm reach radius. Easy to program and fast to set up, the UR5e strikes the perfect balance between size and power.



UR16e

With its 16 kg payload, the UR16e helps reduce the costs, injuries, and downtime associated with heavy part handling. A small footprint and 900 mm reach make the UR16e ideal for applications such as heavy-duty material handling and CNC machine tending applications, including multipart handling.



UR10e






Capable of automating tasks up to 12.5 kg with the same reliability and performance characterized by the e-Series, the UR10e has a reach radius of 1300 mm. This enables it to carry out tasks like packaging and palletizing in facilities where there is a greater distance between different operating areas.

Ask our experts
to find out more
about automating
using our cobots.

Contact

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