

# Cobots as QA inspection tools



In today's manufacturing environment, quality assurance is more important than ever. And – fortunately for manufacturers – robotic technology can take QA inspections to a whole new level of speed and accuracy. Still, however, too much inspection work is being carried out manually on factory floors. Lightweight, small-footprint cobots from Universal Robots make it easier than ever for factories to automate the repetitive parts of their inspection work – while freeing up human workers to focus on more complex, higher-value parts of the process.

## Major assistance, minor disruption

Thanks to their very small footprint, cobots can be deployed for inspection work without big changes to your factory layout.

Deployment is quick and painless, and even operators with little or no programming experience can easily program the cobot and put it to work. Redeployment is also fast and easy, giving your factory the competitive edge that goes with being able to quickly adapt to ever-changing needs.

## Designed for inspection work

Our cobots are designed with inspections in mind. They carry vision sensors easily – in fact, six degrees of freedom mean that a single onboard sensor can inspect several checkpoints in different places on the part with high precision and accuracy. Universal Robots+ ecosystem provides access to a wide range of proven 2D and 3D inspection sensors, all integrated via the Polyscope interface.

## Business benefits

- Increase consistency and maintain high product quality
- Pinpoint faulty parts before they are packed and shipped
- Easy understand programming and waypoints setting by simply moving the robot with the hand into position
- Small size and lightweight robots, easy deployment in tight space conditions
- Relieve operators from repetitive tasks to do higher value work

## Advantages

- Very small footprint (128 mm, 149 mm or 190 mm diameter)
- Unrestricted workspace (full reach radius: 500 mm, 850 mm, 1300 mm)
- High pose repeatability (UR3e and UR5e:  $\pm 0.03$  mm, UR10e:  $\pm 0.05$  mm)
- Integration with UR+ (Sick inspector, Roboscanner, Streamline, more to come)
- Extensive, flexible connectivity/communications (TCP/IP 100Mbit, Modbus TCP, Profinet, EthernetIP)

## Contact

Want to find out more about how cobot-assisted process work can help your business?

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# Cobot-assisted inspections in your industry

Companies in many different industries use cobots from Universal Robots for quality assurance inspections. Those listed below are especially common. If you don't see your industry included, contact us to find out how a UR cobot can help with your particular needs.

## Automotive manufacturing

- Makes it possible to automate tasks inconceivable with traditional industrial robotics
- Faster throughput on assembly lines
- Exceptional flexibility – average set-up times of only half a day
- Lightweight, space-saving and easy to re-deploy to new uses without altering production layouts
- All the advantages of advanced robotic automation, with none of the traditional added costs

## Food and agriculture

- Outer casing specifically designed to reduce the risk of dust and debris accumulation
- Work in heat, cold and other harsh environments, while freeing workers to focus on higher-value work
- Robotic arms improve consistency while reducing waste
- Non-stop productivity along the food production chain

## Metal and machining

- Boost productivity and improve tool and part precision
- Adjust production line on fly, despite different processes, materials and specialized products
- Achieve up to 0.05 mm (0.002") accuracy – every time
- Reduce the risk of worker injuries from dangerous machinery

### CASE Lear Corporation

**Country** Germany

**Cobot** UR5



#### Result

Global automotive supplier Lear Corporation has optimized just-in-time assembly by introducing robotic technology on the production line. Every day the cobot arm completes around 8,500 drilling actions on car seats – and monitors the process digitally to prevent faulty seats from continuing on the conveyor belt. The result is an increase in both production speed and product reliability.

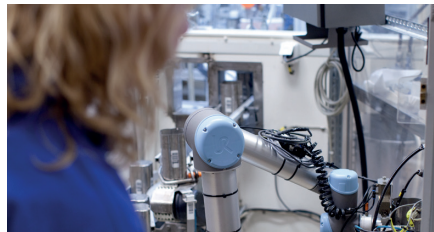
#### See the video:

[universal-robots.com/case-stories/lear/](https://universal-robots.com/case-stories/lear/)

### CASE Nordic Sugar

**Country** Sweden

**Cobot** UR5



#### Result

Nordic Sugar's investment in cobots from Universal Robots paid for itself in just four months, partly because the company no longer has to call expensive consultants just to redeploy the cobot to another task. What's more, a very small footprint means that cobots don't take up nearly the amount of space that a traditional robot would.

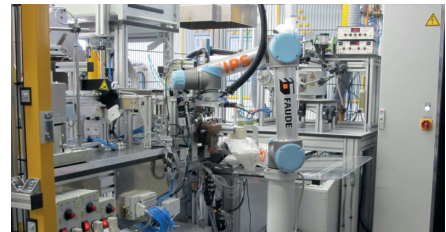
#### See the video:

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### CASE Ferdinand Wagner

**Country** Germany

**Cobot** UR5



#### Result

A two-cobot setup scans welding and soldering work on over 160 parts per hour, enabling the company to boost productivity and achieve its cost stability targets.

#### See the video:

[universal-robots.com/case-stories/ferdinand-wagner/](https://universal-robots.com/case-stories/ferdinand-wagner/)

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