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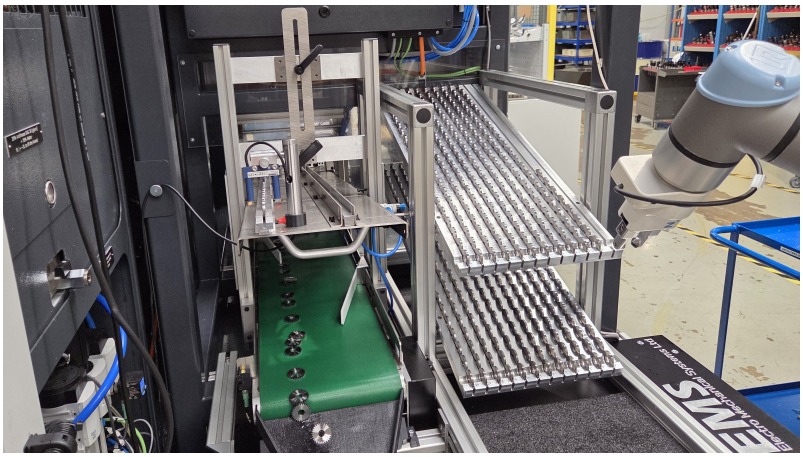
# EMS BOOSTS OUT-OF-HOURS PRODUCTIVITY WITH MACHINE TENDING COBOT





## Industry: Metals & Machining

Based in Dorset, Electro Mechanical Systems (EMS) is a supplier of small DC motors and linear actuators. Equipped with the latest CNC machine tools and a dedicated gear cutting suite, EMS manufactures bespoke actuation systems for a range of industries.

Following a large investment in a gear hobbing machine, EMS wanted to maximise output by keeping production running after working hours. To do this, EMS deployed a UR7e Universal Robots collaborative robot (cobot) from leading robotics distributor RARUK Automation to tend the gear hobbing machine.

## ROBOT USED

- UR7e robot

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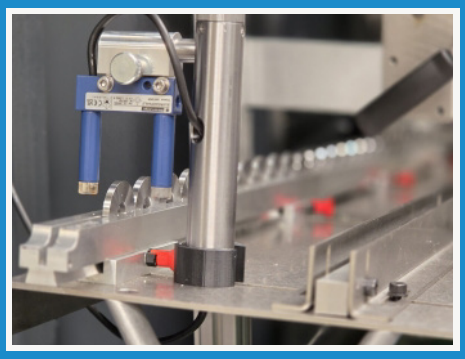
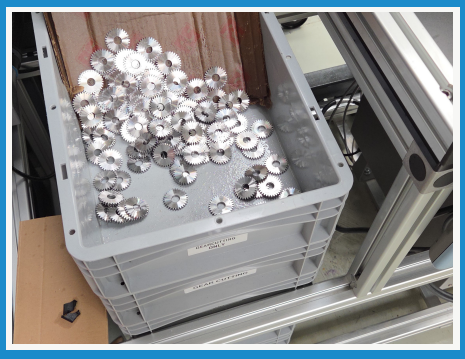
# THE CHALLENGE

Looking for a way to maximise the ROI on the gear hobbing machine, EMS were interested in automating the machine tending process after-hours, leading to maximum output.



***Pete Daly***
*Production Engineer at EMS*

*"The Affolter gear hobbing machine was a substantial capital investment for us; to maximise our return on the investment, we considered various ways of increasing production outside of the normal working hours. A cobot was the best solution."*



Automating the process of feeding blank parts into the Affolter machine would optimise the productivity and efficiency of the cell.

**Scan to watch application video!**

# THE SOLUTION

Having made the decision to automate with a collaborative robot, EMS looked into a range of solutions on the market and ultimately chose a UR7e from Universal Robots, supplied by RARUK Automation.

*"After obtaining quotes from several cobot suppliers, the decision to go with UR was based on ease of use and programming, the support offered and price." Daly says.*

*In order to ensure that the automation process went as smoothly as possible, EMS conducted in-house testing and 3D modeling before the cobot was installed.*

*"From receipt of cobot to shop floor implementation was around 2 months." Explains Pete Daly. "The reason for this was, we built a replica of the machine loading system in our R&D lab to test different methods and smooth out any potential issues. The whole setup was then installed on the machine."*

# THE OUTCOME

Overall, implementing the UR robot has been beneficial for EMS for a range of reasons, including improved product quality. For instance, using the collaborative robot during the day enables the skilled operator to perform more frequent quality checks, making the process more efficient whilst keeping quality standards high.

*Pete Daly says: "Staff were informed that the purpose of the cobot was, primarily, to extend the working hours of the machine, and secondly, to relieve the operator from the more tedious duties. Not to replace people, as is often the worry when people hear the word 'robot'. Now staff have seen it working and can see the benefits; we have been met with positivity."*

Lastly, the primary goal of increasing productivity and continued output after working hours has been achieved, enabling EMS to maximise its ROI on both the gear hobbing machine and the robot.

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*RARUK Automation specialises in the supply of cutting-edge automation and robotic solutions, dedicated to enhancing productivity and efficiency across all industries.*