

CONTINENTAL Automotive Spain:

UR10 at the center of the 4.0 industrialization process, reducing changeovers by 50%

IN SHORT:

The multinational Continental is a good example of the transition taking place in the industry; as a leading company in the automotive sector, Continental is by far the most robotized Spanish manufacturer in the business and the first to pioneer the move towards industry 4.0. In 2016, the company decided to acquire several UR10 cobots to automate the manufacture and handling of PCB boards, bringing down changeover times by 50%, from 40 to 20 minutes when compared to performing the task manually.

ROI: 24 months

Challenges:

Continental is a constantly growing company which, during its 25 years of history in the automotive industry, has always focused on innovation and as a result, has won numerous major projects in the face of competition from other top level players.

Cyril Hogard, plant manager at Continental Automotive Spain, emphasizes that one of the main challenges of the industry is to improve productivity given that the company operates within a very competitive sector. When he first heard about collaborative robots 2 years ago he was quickly convinced that the cobots would be a cornerstone for the growth of Continental Automotive within Industry 4.0, based among other things on fast and easy integration, minimal maintenance and improved productivity.

Solutions:

The company Continental Automotive Spain chose Universal Robots to perform the tasks of handling and validating PCB boards and components during their manufacturing process, a monotonous and repetitive task which at the same time requires precision and delicacy.

Initially they installed two UR10 robots for loading and unloading PCB boards and for assembly of components. Currently six UR10 cobots are installed with three additional UR10 projects underway.

The first project was initiated with special enthusiasm as the use of collaborative robots meant working with a groundbreaking technology with processes based on a more modern robotic philosophy, in accordance with the new Industry 4.0, heralding the emergence of the Smart Factory where automation and the Industrial Internet of Things (IIOT) are key.

The UR robot application was accomplished by the engineer Víctor Cantón, who accepted the challenge despite having no experience in robotics up until then. However, within a few weeks he understood the basics of the UR cobots and was able to start the programming. Having a UR available at a very early stage of the project allowed him to carry out tests and calculations of the cycle and movements in a laboratory in order to streamline and accelerate the implementation.

Benefits

The Continental team is very pleased with the results of the implementation of the UR cobots on their production line:

- Control and flexibility: The company managed to keep control over the decisions made by the robot thanks to very simple programming; all the electronics and robot controllers are combined within a central point, allowing them to make programming changes without the help of outside experts.
- Less burden for the team: The cobot arrival meant a change in the role of operators who no longer have to perform menial tasks such as moving components from one station to the next. They can now concentrate on skilled tasks that contribute to improving production.
- Cost reduction: Automating the work of moving parts and components around the plant has allowed Continental to reduce operating costs by bringing down changeover times by 50%, from 40 to 20 minutes when compared to performing the task manually.
- Security: the team at Continental is very satisfied with the security measures associated with collaborative robots. For example, the operator can enter the cell at any time and the robot stops instantly due to additional sensors that stop when the operator get close to the robot.~~the robot when the cell door is opened.~~
- ROI: It is expected that the robots acquired will become profitable within a maximum period of 24 months.

Company Facts:

+25 years of experience in the automotive industry with an annual turnover of +€350 million.

Company name:

Continental Automotive Spain

Country:

Spain

Company size:

600 employees, Rubí (Barcelona)

Products:

Car instrument panels

+4 million manufactured products per year

Industry:

Automotive

Tasks:

Pick & place, machine tending

Automation Challenges Solved:

Productivity improvement by bringing down changeovers by 50%, from 40 to 20 minutes. Simple programming and implementation enabled Continental to keep the control of the robot in-house.

Key Value Drivers:

Easy programming, flexibility, collaboration and employee safety.