

Universal Robots Delivers Automation Benefits

Installing a Universal Robots cobot is boosting machine performance for linear motion expert, HepcoMotion.

In order to meet the growing demand for their product, HepcoMotion decided to automate the loading and unloading of a CNC milling machine. The UR10, supplied by X-STK | Applied Automation, has increased efficiency by 47%.

Choosing the right robot for this application presented a number of challenges. Space was limited and machine downtime needed to be minimal.

As Universal Robots can operate without guarding, the largest of the UR robots, the UR10, still fit within the available area. It also has a 1300mm reach radius which was required for the operation.


UR robots can be deployed quickly and offer a plug and play solution. They are very easy to programme. No specialist skills are required to deploy the UR robot, unlike conventional robots. Operators use an intuitive, 3D visualisation and can simply move the robot arm to desired waypoints or touch arrow keys on the tablet. X-STK | Applied Automation runs training courses for customers and has found that people pick up basic programming within an hour. To learn the equivalent level of programming for other industrial robots can take up to two days.

Deploying the UR10 quickly allowed Hepco to get the process up and running with minimal disruption. The average set up time for a UR robot is just half a day. The price point, ease of programming, set up and lack of expensive guarding requirements also mean UR robots offer fast payback on investment.

The UR10 in operation at Hepco is the largest of the three in the Universal Robots product range. It has the biggest footprint and payload. The robots are categorised based on payload limits and the UR3 and UR5 also differ in reach, weight and footprint. The UR5 is suited to applications such as pick and place and the UR3 is a lighter weight table top arm. All offer the same ease of use.

Collaborative robots

Universal Robots 'cobots' are collaborative, they can work safely right alongside employees without guarding after a risk assessment has been carried out. Built-in force control limits the force at contact. One of the world's biggest healthcare companies, Johnson and Johnson, has introduced a UR5 to a production process. The cobot performs complicated pick and place tasks on the assembly line alongside workers.



The UR cobots are also lightweight and can be easily moved and redeployed to other tasks in the factory. Rapidly growing manufacturer of motorbike accessories, SHAD, needed an economically viable solution for short production runs as they have frequently changing product lines. They now use a UR5 for a screw driving application and chose UR as they would be able to move the cobot around the facility and quickly reprogramme it.

The family of UR cobots are sold in 55 countries around the world. UR boasts you can automate virtually anything in almost any environment and industry. The cobots are used for tasks ranging from high precision lab work to welding and assembly, in multi-nationals and small businesses.

The ease of use, flexibility and price brings value to areas where automation was previously impractical. They are making it accessible to smaller companies and improving productivity.

The new age of robotics

Collaborative robots may herald a new age of robotics, but they do still need to overcome fears about health and safety and job security. When working with manufacturers to specify cobots, the X-STK teams urges manufacturers to consider UR a tool, one that is safe just requiring a risk assessment and one that works with, rather than replaces, employees by taking on the repetitive and dangerous tasks. Cobots are changing the way in which robots and humans interact and although they currently account for only a small proportion of the robotics market, growth expectations are significant.