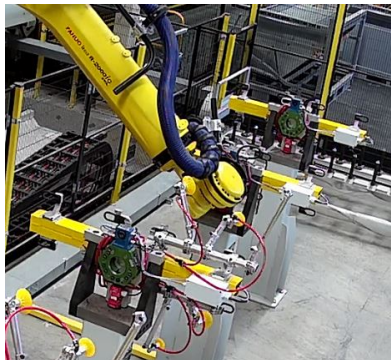


SOLUTIONS | TOOL CHANGER | TOOL CHANGE SOLUTION FOR STAMPING PROCESS



Stamping production lines are heavy industrial means that are expensive. To get the right return on investment those tools have to be used as much as possible and produce everything they can afford. That is the purpose of dies that are changed every time production flow needs to output different design of parts. Automation equipment such as robots has to adapt to these production changes and at PES, we know a way to give the robots the capabilities to adapt to this kind of change is to equip them with tool changers.

Stamping lines robots have to be lightweight to move fast and they generally handle large EOAT. Those large EOAT's have to be stored on docking stations when you use a tool changer and storing them horizontally can rapidly tend to take up large floor space areas. PES has developed the perfect tool changer solution that gives an answer to both issues. First, the tool changer on axis-6 comes with the minimum equipment that is the pneumatic and electrical interfaces, and the tool presence sensor, all the safe control equipment is placed on a dedicated box that aims at being installed on axis-3 to save robot payload. Second, the tool changer on the tool side is mounted so the EOAT can be uncoupled in a vertical position on a specially designed docking station. In conclusion, you give to the robot the tool change capability while keeping added payload at a minimum and saving floor space.

Electrical Features

- **Axis-3 control box:** power and field bus connections (+ tool changer and pneumatic control components)
- **Tool changer:** discrete I/Os and 8 integrated pneumatic ports
- Tool presence and docking monitoring
- Tool changer status control and monitoring through discrete I/Os or Fieldbus

Mechanical Features

- Cam lock mechanism with integrated wear compensation
- Tough design for payloads up to 200kg (Epsilon 125) and 300kg (Sigma 3)
- Custom robot interface available

Interesting Options

- Vertical docking station
- RFID docking system with communication through the docking station



Advantages

Epsilon 125 : lightweight and compact, 8
integrated air connections

Simple installation and maximum flexibility

Proven-in-Use turnkey functional package



Benefits

No need to increase robot payload

Increased performance/cost ratio

Low maintenance costs

Limited integration costs

Reduced store area



Facts & Figures

With a good integration, tool change can be performed in **less than 5 seconds**

Cam locking mechanism can outreach **5 millions of operation cycles**

PES Tool Changing Solution complies with **Level-D safety performance level requirements**

PES is a leading supplier of tool changing systems in the automotive industry worldwide for
more than 20 years with hundreds of units in operation