

## Vision system selects inspection positions

**Previously, vision systems used for quality inspection were installed rigidly at one point in the assembly process. The workpieces to be inspected were transported past the camera lens on a conveyor belt. Now, the SBOC/Q vision system by Festo, which is a part of a ready-to-install axis gantry positions itself precisely at the workpiece to be inspected.**

THE VISION SYSTEM INTEGRATOR JAM Automation from Radevormwald (Germany) developed an assembly and inspection cell for an automobile-industry subcontractor. In a first step, the machine presses nine sockets made of soft plastic into a flange plate made of harder plastic. In a second step, the vision system carries out a 100-% inspection of the press-fitted plastic sockets. During this, the vision system travels automatically to each individual position of the sockets. Once all the plastic sockets have been correctly press-fitted into the flange plate, nine lamps light on the machine control panel. The machine operator can remove the flange plate from the machine and insert a new one.

The SBOC/Q vision system is installed as the front end of an electric cantilever-arm handling unit. It provides complete control of the handling unit, thanks to the integrated Codesys PLC with CANopen NMT master functionality. No additional controller is required. "Previously inspection operations of this kind were carried out only by manual visual means - which took much more time and resulted in an higher error rate," explains Michael Voss, Managing Partner of JAM Automation. The machine allows manufacturing process to be documented seamlessly and statistics to be evaluated.

Festo delivers the cantilever-arm handling unit in ready-to-install, assembled and tested form directly to the customer's machine - together with all design data and circuit diagrams and a comprehensive functional and price guarantee. JAM Automation was supplied with a complete solution meaning less work for the customer's staff, simplifying the purchasing process and reducing system design costs and process costs. "'Fit and forget' is the objective for our customers," explains Peter Löbelenz, Head of Festo's Handling Technology Team for Germany and Europe in Esslingen.

Are there alternatives to a cantilever-arm handling unit in cases where a vision system for "moving pictures" is required? Voss says: "Fitting a vision system to a Scara robot would produce similar results, but the costs of the inspection function would be nearly three times as high." Festo's vision system with an integrated controller opens up new possibilities. "The moving vision system allows easy inspection, in particular of large workpieces, which are very difficult to handle with conventional conveyor systems, and could even be incorporated into a flexible standard test cell," concludes Voss.

