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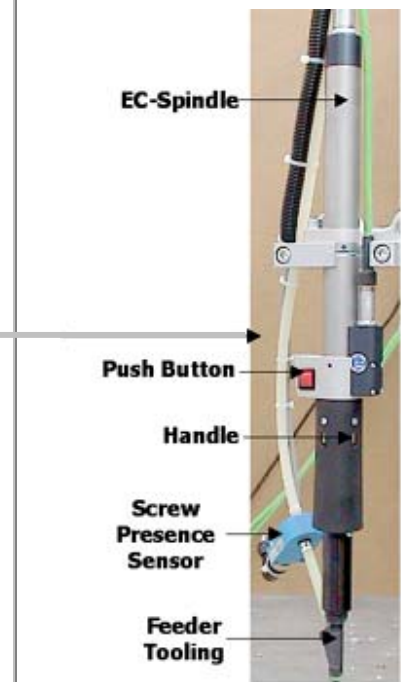
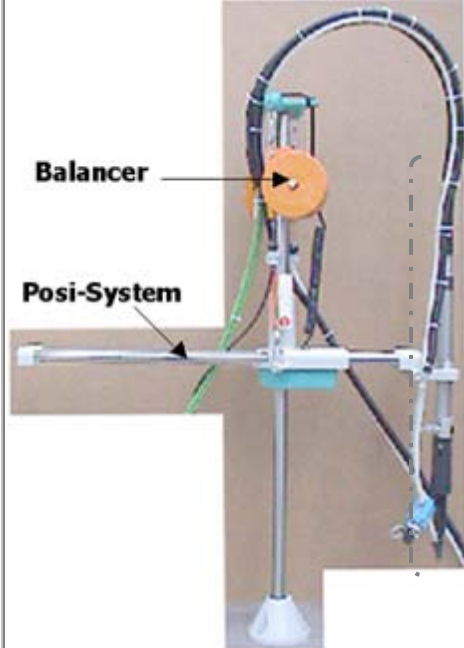
"Hand-Guided" EC-Screwdriver System with feeding

The equipment featured in this E-News is for the manufacturing of an automotive component. The complete process requires one manual assembly station.

The important criteria for this application was as follows:

- Station had to be hand guided
- Screw required extremely low torque of 0.5 Nm = 4.4 in.lbs.
- Assembly required torque and angle control, as well as data collection
- System must include auto-feeding of screw
- Manual support arm to include an XY-position verification system

Using the smallest of the DEPRAG EC-Electric Screwdriver Spindles, Model # 310E30-002, which has a torque capability of 1.8 in.lbs. to 18 in.lbs., DEPRAG was able to integrate this spindle with a Linear Stand to allow a smooth operation by the user.

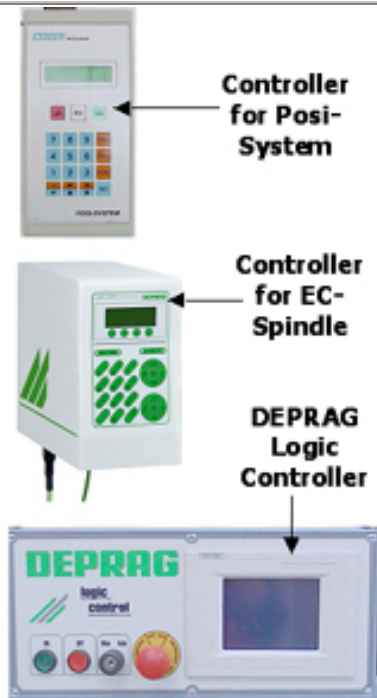


The Linear Stand was equipped with a "Posi-System", which incorporates a linear encoder. This type of encoder allows the verification of accurate positions in a plane, using angle and radius.

The Screwdriver was equipped with an ergonomic handle and an easy to reach push-button. When the cycle is initiated, the logic controller verifies the screwdrivers XY-position and then starts the screwdriver cycle. At the end of a good screw cycle, the torque/angle results are stored and another screw is blow-fed into the feeder tooling.

An automatic Screwfeeder with floor stand and complete maintenance unit was integrated into this system to auto feed the screws to the tooling of the Screwdriver. The transport of each screw is being made through a feedhose and the feeding capacity of such a Screwfeeder can be as fast as one screw per second.

Both the controller for the Linear Stand with "Posi-System", as well as the DEPRAG AST-30 controller for the EC-Screwdriver Spindle, was slaved to a DEPRAG logic-controller.



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