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DEPRAG Assembly Station in ESD-Design

This month's machine assembles a measuring-instrument, which is used in the medical and pharmaceutical industry. The specific requirement was an ESD-safe design, which was achieved by using specialized ESD-panels in the machine enclosure and a grounded machine frame.

The machine incorporates a connection, which attaches to the Operator's wrist, grounding the Operator as well.

A Siemens S7 controller and an OP7 operator-interface monitors and displays the entire machine sequence.

Station 1:

Load individual parts into part fixture located on the rotary index table.
Unload completed parts.

Station 2:

A spring-loaded hold-down device positions the parts.
A Screwfeeder with a 5-fold distributor feeds five screws and assembles all screws simultaneously, using a 5-Spindle SFM [Screwdriver Function Module]. The air-operated Screwdriver Spindles are DEPRAG Micromats, which are calibrated to a torque of 0.18 Nm [1.6 inch pounds]. The parts are assembled to torque with verification of an accurate depth.

Station 3:

At Tape-on-Reel Feeder presents a NOT O.K. label to a vacuum handling system, which removes the label from the pick-nest and affixes it to the product, which had an error (torque or depth) during assembly.

