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DCAM - DEPRAG COMPACT ASSEMBLY MODULE

This Screwdriving Station was designed for the feeding and assembly of screws. This machine drives multiple screws, located on different height levels into a product, using a freely programmable pattern.

Machine Function:

The parts needing assembly are presented to the DCAM by a conveyor. They are securely positioned in a part fixture, which is integrated into a pallet. The machine proceeds as follows:

1. The conveyor moves a pallet into the DCAM.
2. A lift/locate device pushes the pallet under the screwdriving head.
3. A screw is fed into the screwdriver tooling [nosepiece].
4. The X-Y-Z axes move the screwdriver head to the first screw location and the screwdriver assembles the first screw to a preset torque.
5. While the first screw is assembled, another screw is fed to the screwdriver tooling and the cycle repeats. All assemblies are verified in regards to correct depth and accurate torque.
6. The lift/locate device unlocks and the assembled part, located on the pallet, moves downstream for further handling.
7. The cycle time [depending on which product is being assembled] is between 16 to 28 complete parts per minute.



DCAM [DEPRAG Compact Assembly Module]

Screwfeeder:

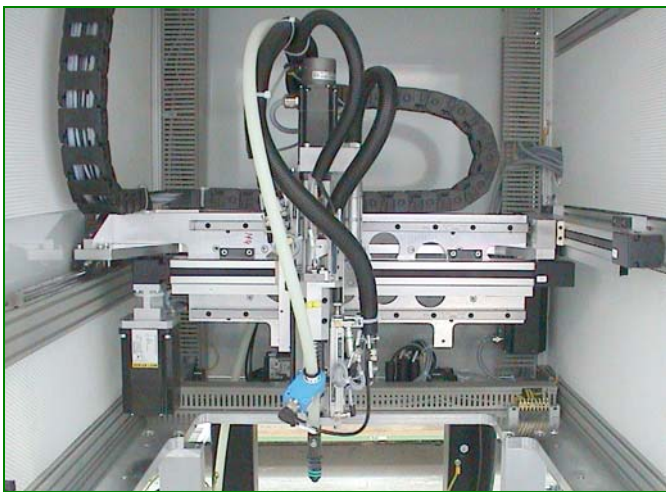
The Screwfeeder of choice is a DEPRAG standard capacity Single-Screwfeeder, which allows the feeding of one [1] screw. A 10-liter refill hopper assures that a sufficient quantity of screws is in the feeder bowl at all times.

Screwdriver Spindle:

The Screwdriver Spindle used, is a DEPRAG Model No. 347-328-31, with automatic shut-off clutch, function feedback port and many other features. Click [HERE](#) for a description of the DEPRAG special spindle features and [HERE](#) to download our Spindle catalog. The Spindle has a speed of 1,550 rpm and a torque capability of 0.4 – 3 Nm [4 to 27 inch pounds].

Controls:

A DEPRAG Motion-Controller Model MC-283 controls the complete machine process.



Screwdriving Head with X-Y-Z positioning device