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TEST- AND ASSEMBLY SYSTEM WITH FEEDING

This Assembly Station was designed to test and assemble parts with a cycle time of 6 seconds. The available floor-space is 0.6 x 3.2 meter [1.9 x 10 ft.].

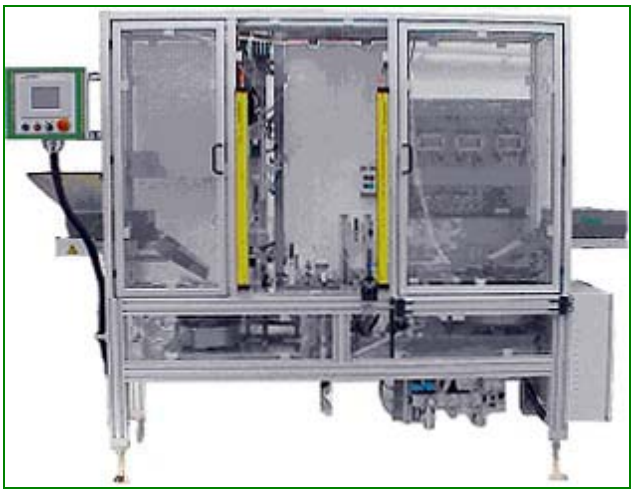
Machine Components:

This DEPRAG Assembly Machine consists of:
- Base Frame with light curtain
- Single Feeder SZG0511-0/4.0-S1 with a feed-bowl capacity of 4-liters
- Belt-driven Hopper B10
- SFM [Screwdriver Function Module]
- DEPRAG Minimat Air-Operated Screwdriver Spindle Model 347-520-31 [see LINK for specifications]
- Part Fixtures and additional components needed for signaling, positioning and testing of individual parts.

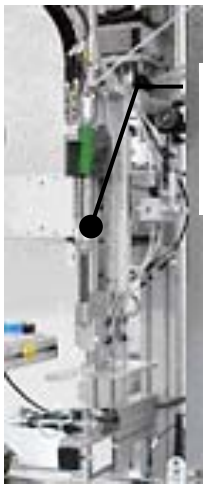
Machine Cycle Description:

1. The operator loads the part fixture with the product and inserts the stopper buffer and stopper pin into the tooling on the screwdriver spindle.
2. After clearing the light-curtain and activating the Opto-button, the machine starts its cycle.
3. The first step includes a testing device that verifies that every flange thread on the product is accurately sized.
4. An exhaust valve is automatically fed and press-inserted; a sensor verifies the correct positioning of the exhaust valve.
5. A sensor also verifies that the Screwdriver Tooling has an inserted stopper buffer and stopper pin.
6. A holding clip is automatically fed and press-inserted as well and again its positioning is verified by a sensor.
7. The screwdriver spindle now assembles the stopper buffer with stopper pin to an accurate depth.

Testing and Assembly Station



The actual size of this assembly unit is 0.6 x 2.7 m [2 x 8.8 ft.]



Screwdriver Function Module "SFM"

If the system indicates that the assembly was O.K., then the completed part is marked by a center punch and the Operator may remove the part. If the system indicates that the assembly is NOT O.K., then the part will not be marked and a supervisor has to use his key-switch to open the assembly unit and remove the incorrect assembled part.