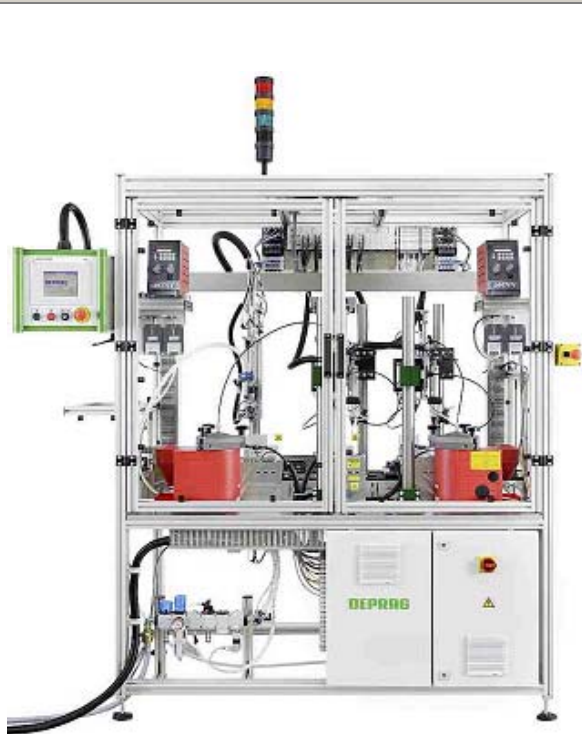


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DEPRAG Automatic Station for the Assembly of Engine- and Transmission Parts



Total Machine View

This month's Assembly Machine was manufactured for an automotive sub-supplier.

The **requirement** was the press-insertion of a relay roller-bearing, the insertion of a timing-belt holder, as well as the dispensing of an adhesive with activator onto two halves of a bearing cap.

Total cycle time per pallet: **10 seconds.**

Solution:

One **DEPRAG** conveyor-integrated automatic Assembly Station, consisting of:

- Machine Frame made from aluminum profiles
- **BOSCH** TS2 Conveyor with **SIEMENS** RFID-system
- **3 DEPRAG – Lift- and Locate Stations**
- **Automatic Part- and Style Recognition System**
- **2 DEPRAG – Feeding- and Placement Units**
- 4 **LOCTITE** - Dispensing Systems
- **DEPRAG LC2plus** Controller with **TP2plus** Display
- **1 Beacon Light** for machine status

Cycle Description:

This automatic station is part of a **DEPRAG** built machine park, consisting of 14 individual Stations.

A pallet, loaded with two bearing-cap halves, arrives at the pre-stop station and the pallet contents are verified in regards to the correct engine style. The relay roller-bearing is automatically fed (blow-feeding) and press-inserted at Station 1. Simultaneously, the timing-belt holder is inserted. On Station 2, the adhesive is applied - using centrifugal force and a rotational motion - to the two halves of the bearing-cap. On Station 3, an activator is vertically applied to the same bearing halves. A data block attached to the pallet, documents every operational step.

Additionally, the time when the adhesive was applied is stored. This helps to avoid a late insertion of the bearing into the bearing cap.

The bearing is inserted by the next machine. However, the insertion process has to be made within 3 minutes from when the adhesive was applied, otherwise the hardening process would already have started.

A beacon light indicates the machine status:



RED – Error
YELLOW – Not O.K. Part
GREEN – Ready