

Sonplas

Electronics, mechatronics & hydraulics

Assembly line rollbar system

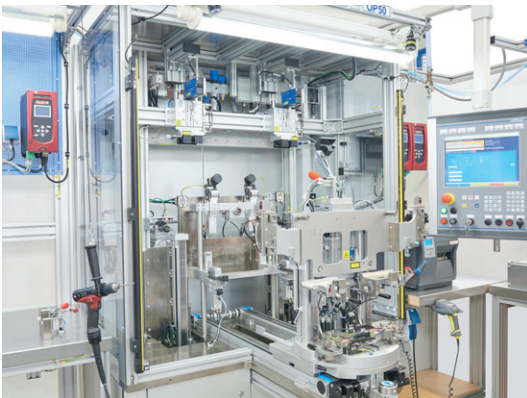




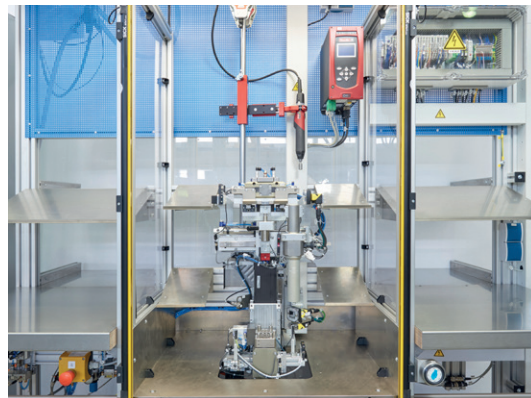
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Assembly line rollbar system

The machine is divided in pre- and main assembly. The pre-assembly is used for assembly and test of the drive unit. It consists of four handwork places with manual loading and automatic test. The main assembly is also built as a handwork place with manual loading and automatic test. Several mounting parts are assembled using a controlled screwing device. The correct assembly of the mounting part is checked with different sensors. During the automatic test the following characteristic values are checked: Resistance of the pyrotechnical device, rollbar height in retracted and extended position, curve while moving out the rollbar, Max. force while moving out the rollbar. A unique identifiable label is printed with the label printer existing in the machine.



Main assembly



Pre assembly



Highlights

- custom-built machine interface
- Touchscreen
- Server for type settings and analysis of the saved data/results
- Graphical display of characteristic curves
- Contact-free laser-triangulation-position measuring system
- Integrated force and torque sensors
- Data acquisition with analog input modules (16 bit A/D resolution)



Technical data

Position measuring system

- Range: 500 mm
- Linearity: +/- 0,08 % (of Range)
- Resolution: 30 µm
- Meas. frequency: 2,5 kHz

Force measuring:

- Force sensor: DMS sensors (precision class 0.5)
- Move out force: 1 kN (OP50)
- Press in force: 2 kN (OP10.2)
- Press in force: 1 kN (OP20)
- Torque sensor: 20 Nm
- Power supply: 400V, 50 Hz
- Compressed air supply: at least 5,5 bar