Case Study
Pharmaceutical

Assembly Press

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Engineering Solutions

Assembly Press

Mecelec Design has designed and built a machine that automatically feeds and inserts 6 sealing balls of two different sizes into a double over-head camshaft carrier on an automotive engine.

Ball are fed automatically from two bulk hoppers to escapement mechanisms that feed them individually to the 6 insert positions

During the insert operations the pressing force and insert distance are accurately monitored. A pressure decay leak test is then carried out at each insert position to ensure an oil-tight joint.

A unique pass stamp is applied to the part following successful assembly and testing

A purpose designed hydraulic power pack that supplies the insert cylinders is housed in the base frame of the machine and is designed to be easily removed for maintenance purposes.

Technical Data	
Leak Test Pressure	2 Bar
Air Supply	6 Bar
Insert Force	2 x 3 Tonnes & 4 x 4 Tonnes
Electrical Power Supply	3 Phase 415VAC @ 16A
Control System	Mitsubishi Q01 Series
Operator Interface	Proface GP2301
Cycle Time	<45 seconds

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Case Study
Automotive
English

Ball Insert Machine

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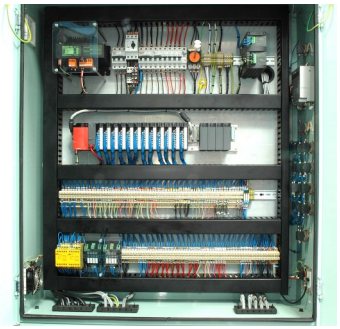
Engineering Solutions

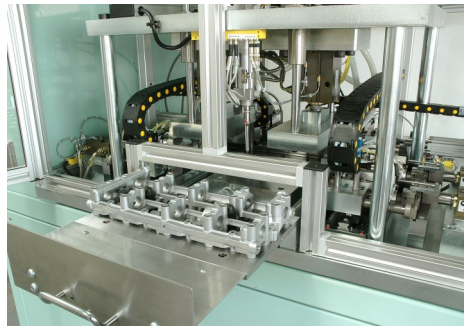
Force and distance monitoring is accurately recorded at each pressing position and has to fall within pre-set tolerances for the carrier to be accepted as a pass

A high-precision pressure transducer accurately monitors the leak test at each insert position

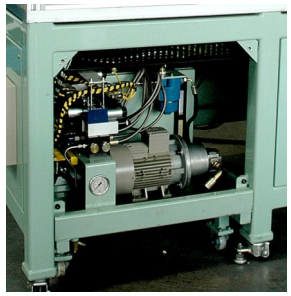


The electrical enclosure for the machine forms an integral part of the frame structure and is located for ease of access

The machine tooling is built to withstand the large pressing forces with a substantial inbuilt safety factor. The machine guarding exceeds all current health and safety legislation



The pneumatic control for the machine is conveniently located at the side of the machine in a purpose built enclosure.



A purpose designed hydraulic power pack is housed within the base frame of the machine. This can be wheeled out for maintenance access.

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