

Pin mounting crankshafts



Task:

Inserting three cylinder pins into a crankshaft. The cylinder pins must protrude by a tolerated residual length.

Our solution:

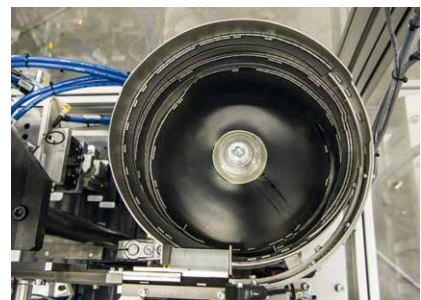
The crankshaft is inserted into a clamping device either by hand or by a loader and oriented to the pin bearings. The locating holes face upwards. The mounting fixture can be moved longitudinally on an NC axis. The pins are added using a vibration feeder in a standing, correct position. The drill hole is scanned for mechanically by a stylus in order to compensate for production tolerances in the shaft, thus ensuring fault-tolerant joining. Checks are carried out that the pins are present before insertion. A pneumatic processor places the pin in the drill hole. The pin is positioned and held while the insertion unit inserts the pin over the fingers. Then the shaft is moved to the next drill hole and the next pin is placed and inserted.



Clamping device



Inserting station



Vibratory bowl

Your benefits:

- + Saving personnel costs through automation
- + Secure handling
- + Optimisation of cycle times

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Technical details:

Workpiece	Crankshaft
Length	670 mm
Weight	20 kg
Diameter of drill hole	3.16 mm
Diameter of pin	3.18 mm
Dimensions of cell	2,400 x 2,000 mm
Cycle time	2 min. line time
Insertion drive	max. 10 kN
Insertion	pneumatic / hydraulic / optional: force-displacement monitoring
Vibratory spiral conveyor	automatic sortation and feeding device, single track, Monitoring of present
Control	Siemens SPS S7

We provide ready to use robot systems and automation solutions:



Processing:

Deburring
Milling
Grinding
Stroke filing
Polishing



Assembly:

Assembling
Screwing
Shrinking
Pressing
Glueing



Handling:

Picking up
Stacking
Insertion
Removal
Placing

Everything from a single source:

Thanks to our integration into the **Pütz Group** and the resulting **synergy effects**, we are able to offer you not just robot systems and automation solutions, but also the appropriate test technology to test surfaces for dimensional accuracy.

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