



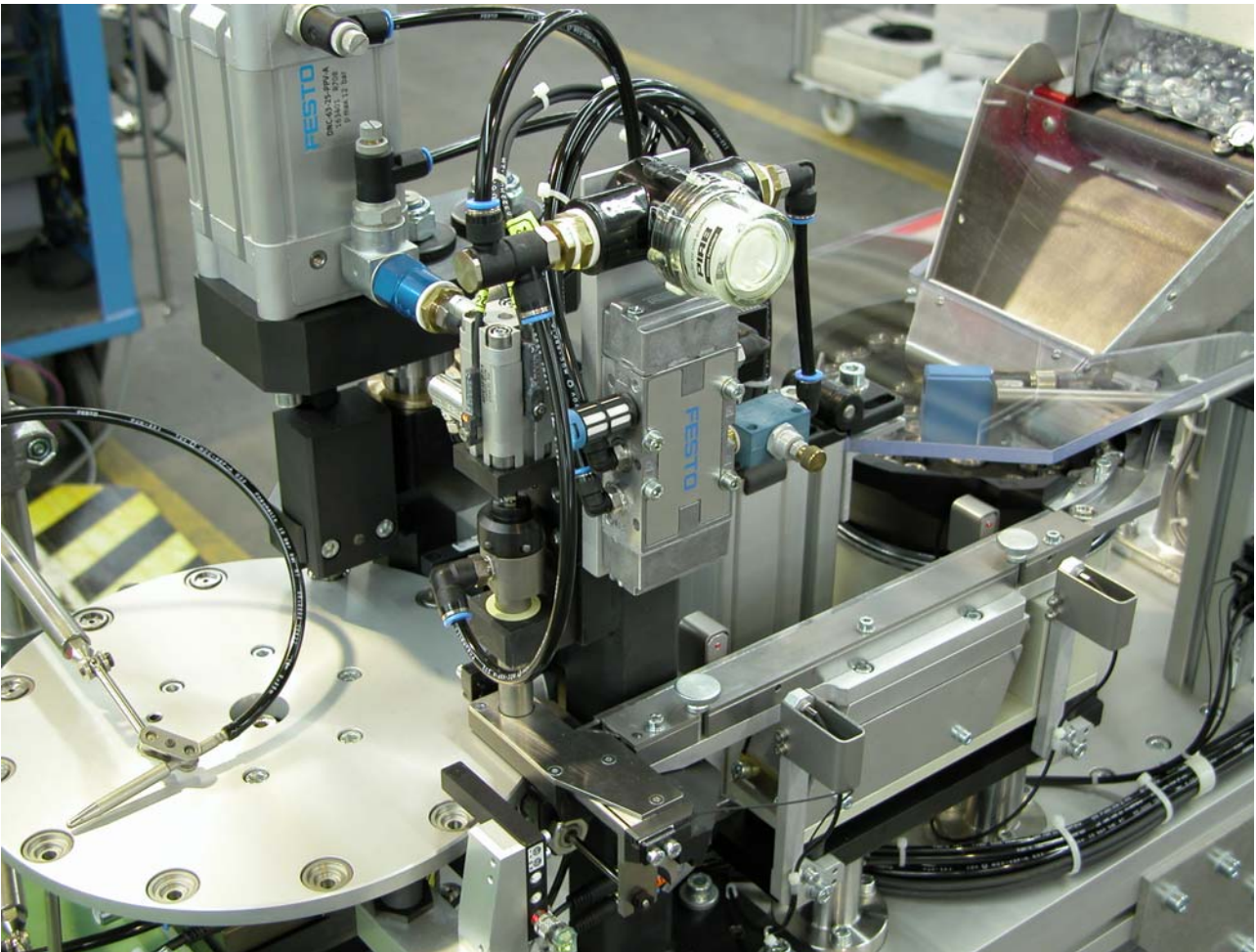
Sorting and Feeding of Valve Seats



Feeding Systems
Reference-No.180



Valve Seat Workpieces



RNA Automation Ltd

Operation Description:

Sector

Automobile Suppliers (Manufacturers of ABS/ESP Systems).

Workpiece

Valve Seats for ABS/ESP brake pressure regulators.

Performance Requirements

Valve seats are sorted, dimensionally calibrated in a rotating distributor and then prepared for an extraction-handler in the assembly line.

Discharging Position

Lying flat with the small diameter downwards.

Operation Description

The workpieces are filled into a bulk hopper and dosed into a bowl feeder. The valve seats are sorted in the bowl feeder and passed to a linear feeder as accumulation track.

At the end of the accumulation track each valve seat is individually passed to a rotating distributor.

A mandrel is passed into the valve seat at a station and calibrates it. The calibration process is tested with a force measurement instrument.

At a later station of the rotating distributor a handler of the assembly machine extracts the valve seats.

Feeding rate

8 parts per minute.

Control

All sensors/actuators are wired to a Profibus node. The operation-feed from the assembly station is controlled over the bus. Control cards with plug-in technology serve for the operation of the drives and the hopper.

Elements of the Feeding system

Bulk hopper, bowl feeder, linear conveyor, separation station, rotating distributor, calibration station with force measurement module, Profibus nodes.

Execution

The entire feed installation is built upon a standard basis framework which is docked to an assembly machine as coherent module.

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