Sorting and Feeding of Springs

Sorting of the Springs with Step Feeder

Entire Installation
Dumper, Sorter, Handling

RNA Automation Ltd
Description:

Sector
Automotive Industry

Component
Springs Ø40-80 mm, length 40-80 mm, in total 9 types, also square types

Technical Requirements
Arrangement of the springs for a bending machine

Discharge Position
Standing, with the first coil positioned unwound on the elevation plate

Operation Description
Lattice boxes with 1,000 kg of springs are emptied with a dumper into a bulk hopper. The springs are dosed into a stepping feeder through an intermediate hopper. The stepping feeder throws the springs onto a sorting track on a linear feeder.

To cover the variety of types, springs considered flat due to their Ø/height ratio are handled in a conceptionally different way than other types: springs standing on their edge are mechanically sorted out and all other springs run through the sorting track and are passed directly into the machining equipment.

With other types sorting is done lengthwise in the direction of the axis. After the first accumulation stretch, a module with a separator and handling is swung into the flow of material. The lengthwise-positioned springs are dropped into a mandrel and are pivoted 90° and are then set onto the accumulation conveyor with a handling in a standing position.

The conveyor passes the springs to the elevation plate for the alignment of the pivot bearing.

Performance
10 parts per minute