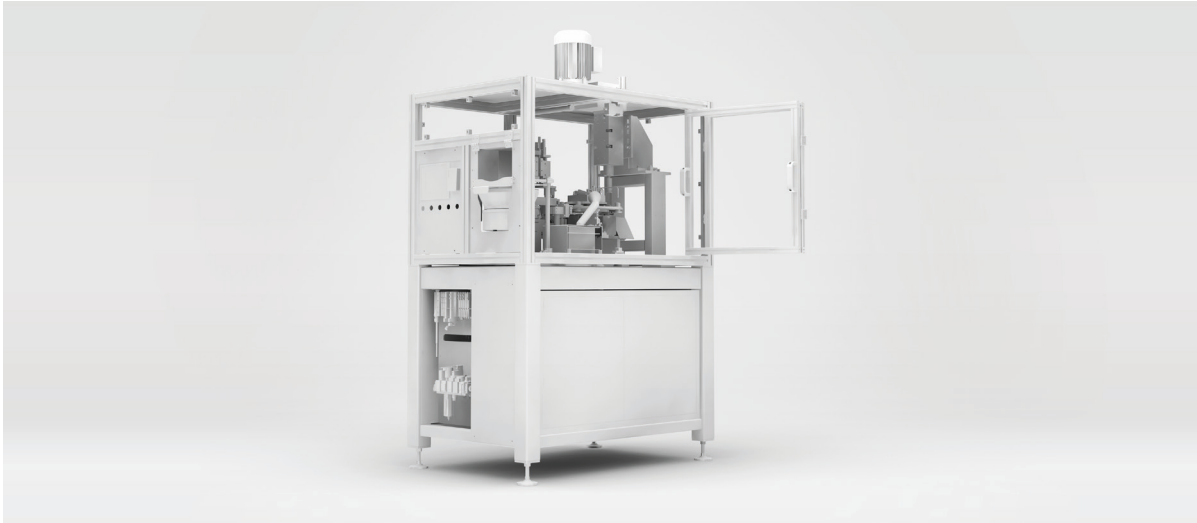


## Thread machining with automatic part feeding



### Task

An old thread cutting machine is supposed to be replaced due to a quantity increase. This includes newly designing, manufacturing, assembling and programming the new machine for two types of parts. The clean stampings are supplied to the thread machine by hand as bulk material. The separation, alignment and feed onto the rotary indexing table or slide must take place automatically. The presence monitoring of the bore must take place before thread machining. After machining takes place, the workpiece and the retainer are cleaned, in order to be able to place the chip-free workpiece in a container. An autonomous running time of one hour and a cycle time of 3.5 seconds per part must be guaranteed.

### Solution

The unit is equipped with a rotary indexing table and six stations. The drive is an electro-mechanical rotary indexing table by Weiss. The parts are placed into the collection nest of the rotary plate from a spiral conveyor with a pneumatic handling device. At the next station, the optical detection of the boring is carried out. At station 4, the thread is cut with a processing unit by Suhner. In station 5, the thread is cleaned using compressed air. The workpiece is then blown into the finished parts container at station 6.

### Result

The unit is set up in compact form on a base of 1,200 to 800 mm. The operating personnel can choose the part type via the touch panel. Using a push button on the operating panel, the unit can be started, stopped, reset and step operation or an emergency stop can be engaged. From the same side, bulk material can be fed into the spiral conveyor during operation. This ensures seamless production in combination with high availability. The cycle time is 2.8 to 3.2 seconds depending on the type of part.

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