

**KNOW-HOW from P&S**  
**for YOUR ADVANTAGE.**

# CSM-10

chamfer grinding machine



## The Machine



The CSM-10 chamfer grinding machine is a fully automated production system for grinding chamfers, workpieces to length and axial runout as well tips. The movement of the grinding axes is performed by linear motors. This allows to process any angle onto the rods. With the optional available chamfer measuring station chamfer angle and length can be checked inline and automatically corrected in case of any deviation. The production range is between  $\varnothing 6$  and  $\varnothing 25,4$  mm and blank length of 50 to 200 mm. Due to the dynamics and stable structure of the system a very short cycle time is achieved. The P&S SL-25 step loader integrated as loading/unloading device allows huge quantities to be automatically and safely loaded to and unloaded out of the machine. As option we offer a turning station for processing the workpieces on both end faces.

- Fully automated
- Autonomy due to the high loading capacity
- Diameter range  $\varnothing 6 - 25,4$ mm (1 Inch)
- Chamfer grinding, Axial runout, grinding to length, tip grinding
- Various production angles
- Short cycle times

## Loading



- Rods are getting loaded into the step loader manually by hand or automated
  - $\varnothing 6$  mm  $\triangleq$  2.000 pcs.
  - $\varnothing 10$  mm  $\triangleq$  650 pcs.
  - $\varnothing 20$  mm  $\triangleq$  250 pcs.
- Rods are getting separated and lifted into the inside magazine

## Input Check and Sorter



- Single Rod is getting loaded into the prism
- Length and diameter of the rod is getting checked
- If the length or diameter deviate the rod will be sorted out by the input sorter station and next rod will be loaded into the prism (option). This will keep the production running even if a rod with wrong dimension was accidentally loaded.

## Grinding



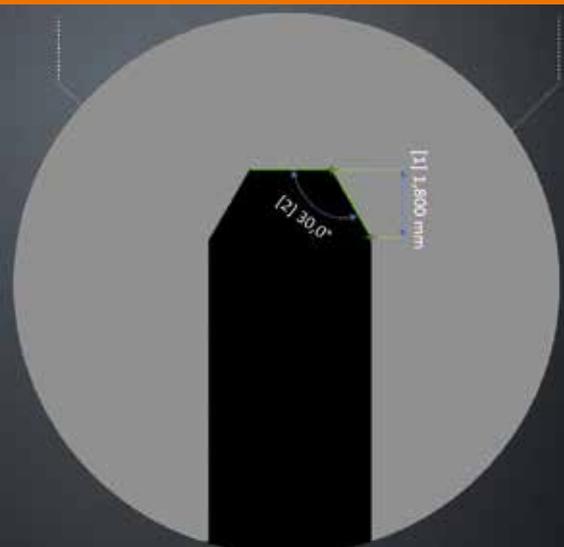
- Rod is automatically positioned by a servo axis and clamped in a collet
- Two fixed stops for chamfer and length grinding
- The next rod is positioned in the prism parallel to the grinding cycle
- After the grinding process the rod is picked up and transported into the removal station

## Unloading



- The ground chamfers are getting measured and if necessary the values of the grinding axes corrected
- This means highest repeat accuracy
- Removal of parts by the unloading magazine into the P&S SL-25 step loader

## Quality Control



### Options:

- Input sorter
- Chamfer measurement
- Turning station [for processing both rod end faces]
- Machine data acquisition [MDA]
- Oil mist suction
- Compact fire protection
- Coolant filtering system
- Coolant return pump tank
- Etc.



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