

Chamfering machine 72/852.500-125/156

Chamfering machine

Item number: **VT4-00217**



The machine is suitable for chamfering of squared mono- or multi crystalline silicon workpieces in the format of **125 x 125 mm** and **156 x 156 mm** with two parallel arranged grinding aggregates (2x combined pre- and fine grinding wheels).

Workpiece lengths of **180 up to 500 mm** can be processed.

The fully automatic machine excels by following advantages:

- grinding of chamfers 45°
- equipped with two loading areas for manual and fully automatic loading, for instance via industrial robot
- pneumatic clamping of workpiece
- automatic edge detection and adjustment of grinding tools with block length detection for optimized cycle time by using high-resolution measuring systems
- detection and evaluation of workpiece specific quality data after grinding, for instance size of chamfer, chippings and unground chamfer sections
- automatic wheel correction

• high throughput even when a high removal is achieved by using 2 combined pre- and fine grinding discs, for instance:

Brick size as grown: 156,0 x 156,0 x 250 mm
Final brick size: 156,0 x 156,0 x 250 mm with
a chamfer width of 1,0 mm
Cycle time: $\leq 4\text{ min}$
Machine capacity: approx. 118.000 bricks/year
(based on a 24/7-production)

Optional:

- workpiece format 210 x 210 mm²
- ARPAT –“Arnold Remote Production Analyses Tool”- machine internal MES

Quality data of workpiece:

- geometric tolerance chamfer width +/- 0,05 mm

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- average value Ra $< 0,1 \mu m$

- grinding spindles (2 pieces) with air protected spindle bearings
- infinitely variable grinding spindle drive (2 pieces) via AC-servo motor
- linear axis (3 pieces) with ball screw drive via AC-servo motor
- CPU Siemens S7/317
- high end industrial PC with dual core processor
- 15" touch panel with HMI, visualisation based on WinCC flexible
- integrated recipe management
- high-resolution laser measuring sensors (2 pieces)
- Optional: workpiece format 210 x 210 mm²
- Optional: ARPAT –“Arnold Remote Production Analyses Tool”- machine internal MES

Workpiece length	180 - 500 mm
Workpiece format	125 x 125 mm ² ; 156 x 156 mm ²
Workpiece weight	max. 30 kg
Machine measurements without switch cabinet (LxWxH)	3960 x 2020 x 2400 mm
Machine weight	2000 kg

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