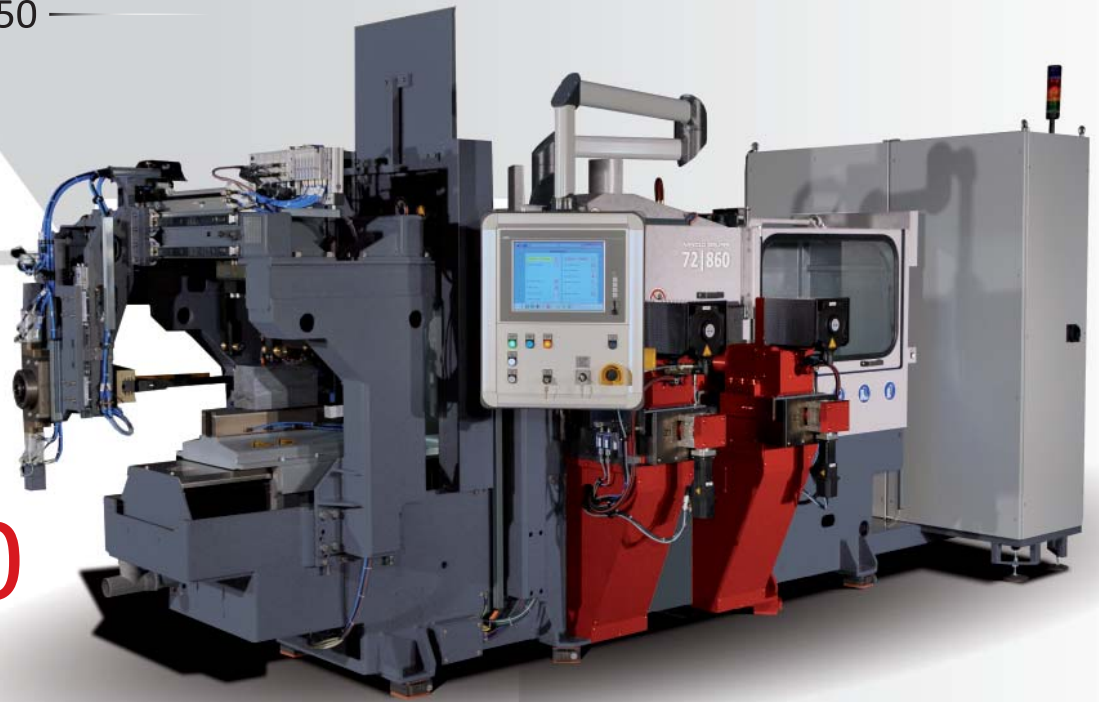


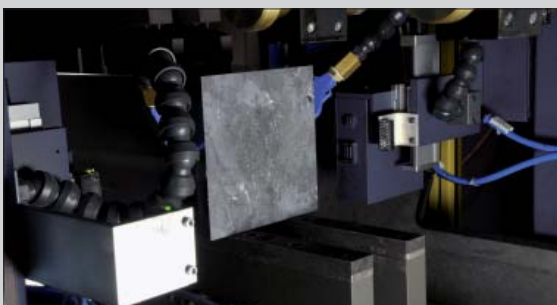


72 | 860

SURFACE GRINDING
MACHINE



Machine	72/860.500 - 125/156	72/860.1000 - 125/156
Item number	VT4-00219	VT4-00216
Work piece format	125 x 125 mm 156 x 156 mm	125 x 125 mm 156 x 156 mm
Work piece length	180 - 500 mm	400 - 1000 mm



The 72/860 is suitable for grinding of the lateral surfaces of squared mono- and multi crystalline silicon work pieces in the format 125 x 125 mm and 156 x 156 mm, with four parallelly arranged grinding aggregates (2x pre- and 2x fine grinding). Work piece lengths of 180 up to 1000 mm can be processed.

The fully automatic machine excels by following advantages:

- highly flexible machine concept for mono & multi Si
- fully automatic machine concept
- adaptive Grinding Process Control
- automatic change of work piece format (125/156)
- equipped with two loading zones for manual and fully automatic loading, for instance with the help of an industrial robot
- geometric correction by parallel arrangement of grinding aggregates
- very high repeatability
- fully automatic pneumatic clamping and centering of work piece
- squared ingot/brick can be processed without preparation
- automatic wheel correction
- high process stability
- high machine availability 97% acc. to SEMI E10
- automatic adjustment of grinding tools with block detection for optimized cycle time by using high-resolution measuring systems
- detection and evaluation of the work piece specific quality data after grinding, for instance geometric measures, angularity etc.
- high throughput, even when a high removal is achieved by using 4 grinding disks and separate pre- and fine grinding processes

Specifications:

- arithmetical surface roughness $R_a \leq 0,1\mu\text{m}^1$
- average surface roughness $R_z \leq 1,0\mu\text{m}^1$
- geometric tolerances $\pm 0,05\text{ mm}$ by process capability index $\geq 1,67^2$
- angularity $90^\circ \pm 0,05^\circ$

Throughput

- cycle time $\leq 7,9$ Minuten (incl. loading, truning and unloading)
- rough size 157,00 mm x 157,00 mm x 300 mm (width x height x length)
- final size 156,00 mm x 156,00 mm x 300 mm (width x height x length)

¹ surface quality depends on used grinding wheel diamond sizes ² In a long-term test with more than 1,000 workpieces we were able to demonstrate that we deliver at a geometric tolerance of $\pm 0,05\text{ mm}$ (height/width), a process capability index (Cpk) of higher than or equal 1.67. This means that of more than 1,000,000 workpieces, less than 1 workpiece is outside the tolerance range.