

## Surface grinding machines

Herbert Arnold GmbH & Co. KG Weilburg  
Amtsgericht Limburg HRA-Nr. 2032 P.h.G.: H. u. W. Arnold GmbH Weilburg  
Amtsgericht Limburg HRB-Nr. 3071 Geschäftsführer: Dipl.-Ing. Wolfram Arnold

**Address**

Herbert Arnold GmbH & Co. KG  
Weilstrasse 6  
D-35781 Weilburg

Telephone: +49 (0) 64 71 93 94 -0  
Telefax: +49 (0) 64 71 20 65  
E-Mail: [info@h-arnold.de](mailto:info@h-arnold.de)  
Website: [www.h-arnold.de](http://www.h-arnold.de)

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## Surface grinding machine 72/860.1000-125/156

Item number: VT4-00219

Category: Surface grinding machines



The machine is suitable for grinding of the lateral areas of squared mono- and multi crystalline silicon work pieces in the format 125 x 125 mm<sup>2</sup> and 156 x 156 mm<sup>2</sup>, with four parallel arranged grinding aggregates. Workpiece lengths of 400 up to 1000 mm can be processed. The fully automatic grinding machine excels by following advantages:

- automatic change of format
- equipped with two loading areas for manual and fully automatic loading, for instance with the help of an industry robot
- geometric correction by parallel arranging of grinding aggregates
- very high repeatability
- pneumatic clamping and centering of workpiece
- squared ingot/brick can be processed without preparation
- automatic wheel wear compensation
- automatic adjustment of grinding tools with block detection for optimized cycle time by using high-resolution measuring systems
- detection and evaluation of the workpiece specific quality data after grinding, for instance geometric size, angularity (optional)
- high throughput, even when a high removal is achieved by using 4 grinding disks and separate pre- and fine grinding process for instance: brick size as grown: 157,0 x 157,0 x 1000 mm final brick size: 156,0 x 156,0 x 1000 mm cycle time: 21 min machine capacity: approx. 22.000 bricks/year (based 24/7-production) Quality data of workpieces:
- angularity +/- 0,02° (89,980° - 90,020°)
- geometric tolerance block width +/- 0,05 mm
- average value Ra < 0,1 µm

- grinding spindles (4 pieces) with air protected spindle bearings
- infinitely variable grinding spindle drive (4 pieces) via AC-servo motor
- linear axis (5 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 mm<sup>2</sup>
- Optional: ARPAT – "Arnold Remote Production Analysis Tool"

## Surface Grinding Machine 72/860.500-125/156

Item number: VT4-00216

Category: Surface grinding machines



The machine is suitable for grinding of the lateral areas of squared mono- and multi crystalline silicon work pieces in the format 125 x 125 mm<sup>2</sup> and 156 x 156 mm<sup>2</sup>, with four parallel arranged grinding aggregates. Workpiece lengths from 180 up to 500 mm can be processed. The fully automatic grinding machine excels by following advantages:

- automatic change of format

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