

PV

PV SECOND-HAND MACHINES



ARNOLD
GRUPPE

— SINCE 1950 —

Version 05/2012



72/860

Surface grinding machine

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 500 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

Machine	Serial no.	Construction year	State	Stock Location
72/860	4371/06/09255	2009	partially dismantled, not ready for demonstration	Germany
72/860	4372/06/09255	2009	partially dismantled, not ready for demonstration	Germany
72/860	4373/06/09255	2009	partially dismantled, not ready for demonstration	Germany
72/860	4374/06/09255	2009	partially dismantled, not ready for demonstration	Germany
72/860	4345/07/09255	2009	partially dismantled, not ready for demonstration	Germany



72/854

Chamfering and profiling machine

This machine is suitable for grinding from even (45°) or round chamfer of squared mono- and multi crystalline silicon workpieces with diameter format 90 - 210 mm, with two grinding aggregates (1 x cup wheel, 1 x fine profile wheel). With the machine can be processed workpiece lengths of 100 – 1000 mm, a combination of several workpieces is possible.

The machine excels by following advantages:

- grinding from even (45°) or round chamfers
- high flexible machine concept
- low investment costs
- low cost of ownership
- low tool costs => high lifetime of grinding disks ≥ 6 months
- machine uptime 97%

Quality data of workpiece:

- average value Ra ≤ 0,7 μm (profiling)
- average value Ra ≤ 0,1 μm (chamfering 45°)

Technical details

- Workpiece length: 100 - 1000 mm
- Workpiece format: 90 - 210 mm
- Workpiece weight: approx. 100 kg
- Machine measurements (LxWxH): 2500 x 1250 x 1700 mm
- Machine weight approx.: 1000 kg

Properties

- grinding spindle with special labyrinth sealing (2 pce)
- precision spindle with air protection (2 pce)
- tool carriage driven via AC-servo motor (2 pce)
- manual OP 177B Color 7
- SPS Siemens S7-300 with 2 axis positioning modules

Machine	Serial no.	Construction year	State	Stock Location
72/854	-	-	Operational; round profiling aggregat is paratially dismantled	Germany
72/854	004256	2010	Operational	Germany

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