

## acugrind-C

The acugrind-C is a centerless grinding machine designed to achieve, besides tight diameter tolerances, high concentricity accuracy (ID to OD). Parts typically ground on the machine are bushings or tubes. Prerequisite is an already existing accurate bore through where a high precision wire is pulled. The parts threaded onto this guiding wire form a processing chain of parts up to 1000 mm in length. The wire is mounted onto the oscillating axis of the machine. The special process is used with hard material workpieces as ruby or sapphire bearings, ceramic connectors for fiberglass (ferrules), carbide guide bushings or stainless steel medical tubes, waterjet cutting orifices, permanent magnets for micro drives and injection nozzles.

### Part OD

0.500 – 12.000 mm

### Bore size (guiding wire)

0.100 – 6.000 mm

### Maximum part or chain length

1000 mm

### Grinding wheel dimensions

1A1 175 x 20-70 x 45mm (other dimensions are available upon request)

### Process control

Siemens SIMATIC S7

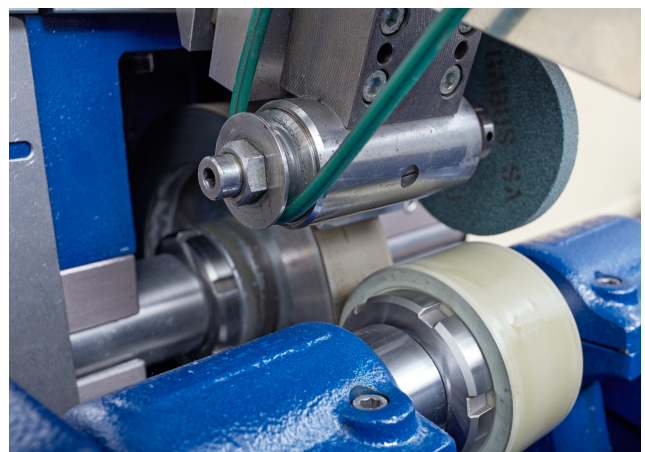
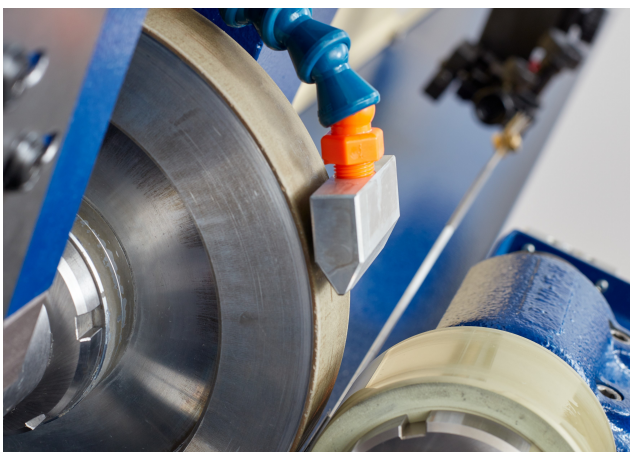
### Electrical specification

voltage 110VAC – 240VAC

frequency 50Hz – 60Hz

### Dimensions (length x width x depth)

2700 x 800 x 1900 mm



## APPLICATIONS

### Carbide tubes



### Workpiece specifications

Material	Carbide
Inner diameter	0.30 mm
Outer diameter	0.59 mm
Length	2.3 – 5.3 mm

### Honing process data

Achieved tolerances (diameter)	0 / + 0,0127 mm
Material removal	0.52 mm
Number of pieces / clamping (=1 group)	150 pieces (5.3 mm each)
Cycle time (group)	60 minutes
Cycle time (workpiece)	24 seconds

### Bearing jewels

Ruby bearings are used in every mechanical watch. Together with the metal pins of the balance wheels they form a journal bearing.

Furthermore they are used in different counters.



### Workpiece specifications

Material	Ruby
Inner diameter	1.605 mm
Outer diameter	2.653 mm
Length	1,88 mm

### Honing process data

Achieved tolerances (diameter)	+/-0,002
Material removal	0.147 mm
Number of pieces / clamping (=1 group)	500
Cycle time (group)	83.3 minutes
Cycle time (workpiece)	10 seconds

### Ceramic tubes



### Workpiece specifications

Material	Zirconium oxide
Inner diameter	0.90 mm
Outer diameter	1.302 mm
Length	10.1 mm

### Honing process data

Achieved tolerances (diameter)	0/+0.004 mm
Material removal	0.6 mm
Number of pieces / clamping (=1 group)	85
Cycle time (group)	30 minutes
Cycle time (workpiece)	21 seconds

## AVAILABLE ACCESSORIES

Dressing unit to dress the grinding wheel without dismounting it from the machine

Grinding wheels

Direction wheel

Blade holder

Dressing stone

[System to mount workpieces onto the honing wire: acuthread](#)

[Guiding wire, gradation: 0.001](#)

Coolant unit