

Special Horizontal Honing Machine Model RT61409

The machine is designed for diamond-abrasive honing of deep cylinder holes in workpieces, including pipes, cylinders and barrels made of magnetic and non-magnetic material.



Specification

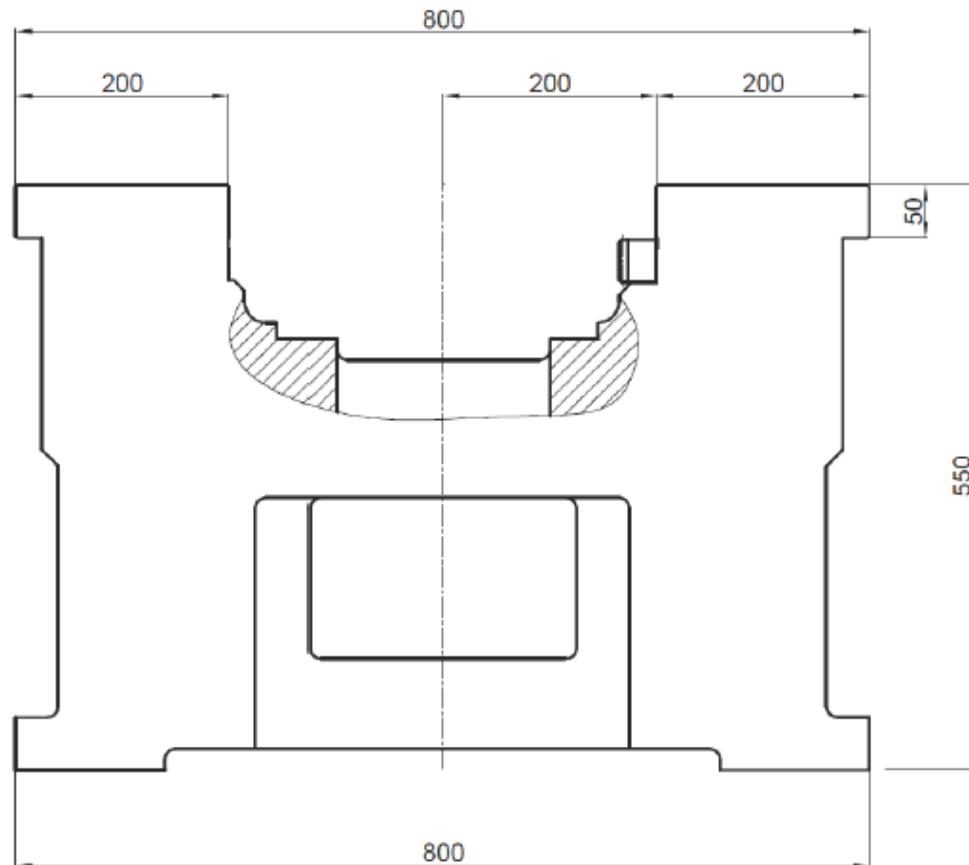
Center axis height, mm:	
- over machine bed	500
- over hone bed	164
- from base of machine bed	1050
- from base of hone bed	1102
Maxim. outer diameter of workpiece, mm:	
- set in roller rest	125...500
- set in chuck	125...500
Bore diameter in spindles of headstock and ring rest, mm	525
Maxim. workpiece length, mm:	
- set in chucks of headstock	1500
- set in chucks of headstock and ring rest (with removed rests from bed and loading stands)	2500
- maxim. workpiece length	6000
Maxim. diameter of machining bores, mm	70...250
Maxim. length of stroke of hone spindle stock, mm	6100
Range of spindles speed, rpm:	
- of headstock	4...180
- of hone spindle stock	15...450
No. of spindle speeds of headstock	3
Spindle speed changing	manual
Spindle speed control of headstock in ranges	stepless
Spindle speed control of hone spindle stock	stepless
Feed range of hone spindle stock, mm/min	1000...40000
Feed control of hone spindle stock	stepless
Stroke of hone spindle stock along carriage ways, mm	300
Maxim. spindle torque of headstock, kN.m.	8
Maxim. power of pumping station, l/min	50
Maxim. coolant pressure, MPa	1
Coolant type	On oil base
Coolant kinematic viscosity at 50°C, mm ² /c	5
Degree of filtration, mkm	5
Drive power of, kw:	
- headstock	57
- spindle rotation of hone spindle stock	12,19
- unclamping of hone bars	5, 28
- feed of hone spindle stock	6, 53
Total power of electric motors, kW	89,72
Air supply, l/min	30
Pressure of supplied air, MPa	0,6
Voltage, V	380±10%
Frequency, Hz	50±3%
Machine dimensions (without detached units and el. equipment), mm	
- length	19500
- width	3850
- height	2000
Mass (without detached units and el. equipment), kg	31450

Basic units

1. Workpiece bed

Workpiece bed is made of high rigidity cast iron and consists of a number of sections fixed to each other. Box type design of ways, inner ribs along with heat treatment and stress releasing processes provide stable precision.

Special trays and drain holes are made on the bed to extract coolant.



2. Spindle of headstock

Spindle braking

Type of drive belt

Belt size

No. of belts

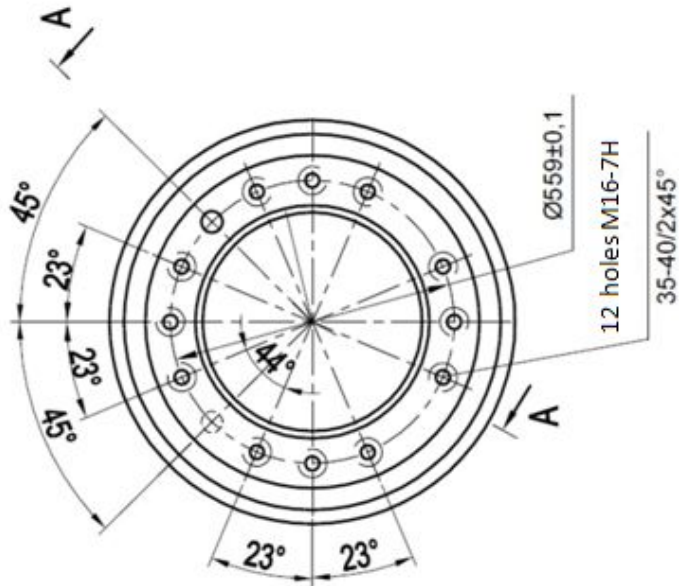
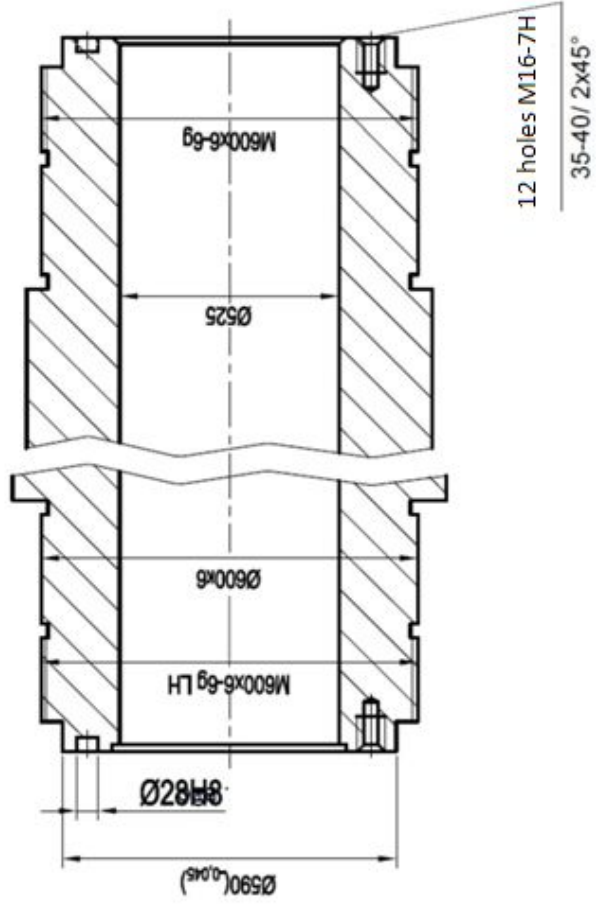
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V belt

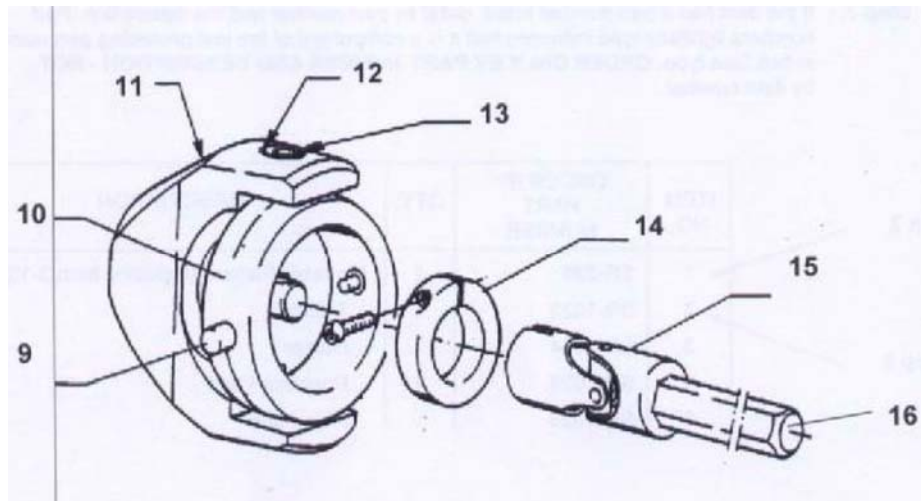
SPC-2500 "Optibel"

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A-A



3. Spindle of hone stock



- 9 – HT-2027- bolt – 2 pcs.
- 10 – HT-2026- ring – 1 ps.
- 11 – GB-1021-1- spindle end
- 12 – IR 20×24×16 – bushing – 2 pcs.
- 13 – HB-1030 – screw – 2 pcs.
- 14 – BN 325-25 – clamp ring
- 15 – SA-004515 – flex joint
- 16 – HT-2028 – hexagon end

4. Chucks

No. of chucks set on the machine	4
3.1) Type of headstock chuck	Non self-centering
No of chuck jaws	4
Diameter of through-hole bore in chuck, mm	525
No. of chucks set on headstock	2
3.2) Type of chuck of ring rest	Non self-centering
No. of chuck jaws	4
Diameter of through-hole bore in chuck, mm	525
No. of chucks set on ring rest	2

4. Centering stand

Stand travel along bed:	
Manual – at 1 rev. of square, mm	3,3
Mechanical, mm/min	4670

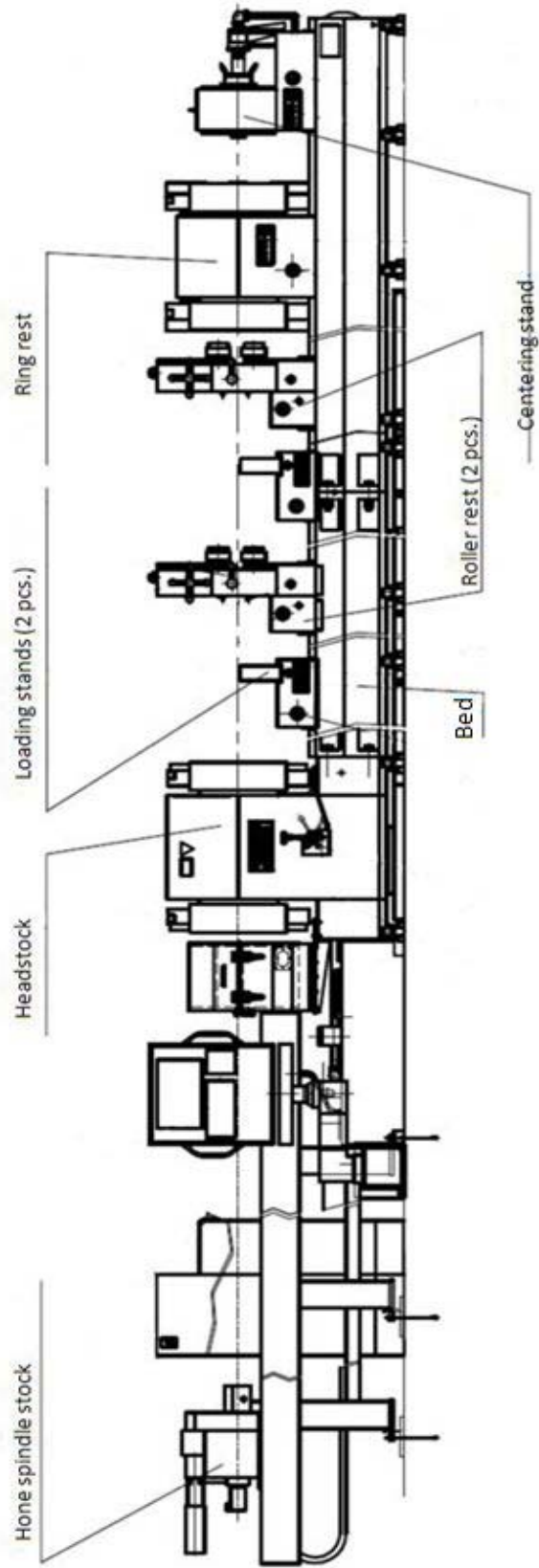
5. Roller rest

No. of support rollers	3
Diameter of support rollers, mm	210
Rest travel along bed:	
Manual – at 1 rev. of square, mm	58
Mechanical, mm/min	-
Quill travel at 1 rev. of square, mm	3,0
No. of roller rests set on bed	2

Machine components

#	Part	Part number
1	Machine bed	RT61409.11.000
2	Cover	RT61409.14.000
3	Motor base	RT61409.15.000
4	Guard for left chuck of ring rest	RT61409.18.000
5	Headstock	RT61409.20.000
6	Integration of revolution sensor	RT61409.23.000
7	Centering stand	RT61409.36.000
8	Machine setup	RT61409.46.000
9	Loading stand	RT61409.54.000
10	Cable chain of ring rest	RT61409.55.000
11	Cable chain of centering stand	RT61409.56.000
12	Roller rest	RT61409.63.000
13	Roller rest	RT61409.64.000
14	Ring rest	RT61409.65.000
15	Hydraulic interconnection	RT61409.75.000
16	Cooling	RT61409.77.000
17	Control station	RT61409.80.000
18	Electrical interconnection	RT61409.81.000
19	Control board	RT61409.82.000
20	Terminal-block box	RT61409.83.000
21	Board stand	RT61409.84.000
22	4-jaw chuck of headstock	RT61409.93.000
23	4-jaw chuck of ring rest	RT61409.94.000
30	Guard for chuck of ring rest	2840P.17.000
31	Guard for chucks of headstock	2B840PF1.18.000
	CNC Siemens 808D Advanced	6FC5398-4DP10-OPA1
35	Special horizontal hone machine "Sunnen AG" with gearbox	HTC-6101W
35.1	Coolant system with pump and paper filters	PFE401G
35.2	Bracket for system	NTW-523
35.3	Filter. Elements 5mkm	PFE-105-0001
35.4	Hone tools: Honing head \varnothing 75, 90 mm Honing head \varnothing 120 mm	
35.5	Adapter	
35.6	Extender	
35.7	Support bushing	
35.8	Hone module	
35.9	Hone bars	
35.10	Hone bars	
35.11	Hone bars	
36	Hydraulic station	

Machine general view



Pic. 1