



OPEN JOINT-STOCK COMPANY
"RYAZAN MACHINE TOOL WORKS"



SPECIAL DEEP HOLE DRILLING AND BORING MACHINE

Model RT295112 with CNC

OPERATION MANUAL

RT295112.00.000P3

2008

RT295112.00.000P3

2. MAIN SPECIFICATIONS AND CHARACTERISTICS

2.1. Specification

Main parameters, sizes and purpose indices should correspond to Table 2.1.

Table 2.1

Characteristic	Value
1. Centre height over bed	500
2. Maximum outer diameters of the set workpiece, mm In the roller rest In the chuck	125...410 125...410
3. Maximum machining length, mm	2000...10000
4. Maximum diameters of the machined holes, mm drilling from solid boring (burnishing)	50...135 55...260
5. Maximum traverse of the travelling stock with cable and hose support chain (limited by the length of the linear transducer), mm	22000
6. RPM: - main drill stock - travelling stock	11.2...355 31.5...400
7. Number of rotation ranges: - main drill stock - travelling stock	9 (22,4; 31,5; 45; 63; 90; 125; 180; 250; 355) 9 (72; 91; 115; 145; 182,5; 230; 290; 365; 460)
8. Range switchover mode	manual
9. Control of spindle rotation within ranges	stepless
10. Reduction of spindle rotation within ranges	2 times
11. Maximum spindle torque, kN.m, - main drill stock - travelling stock	8 5
12. Working feed of the travelling stock, mm/min	5...3000
13. Rapid traverse of the travelling stock, mm/min	5000
14. Feed control	stepless
15. Minimum programmable increment, mm	0,01
16. Number of controlled shape-generating coordinates / Number of simultaneously controlled shape-generating coordinates	1/1
17. Positioning accuracy during one-direction approach, microns	125

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Characteristic	Value
18. Maximum throughput of the coolant pumping station, l/min	790
19. Maximum coolant system pressure, MPa	2.5...4.0
20. Applied coolant	with oily base
21. Coolant kinematic viscosity at 50°C, mm ² /cat	12.5...20
22. Coolant filtration rating, microns	20...40
23. Coolant operating temperature, °C	15...55°
24. Motor power, kW:	
- main drill stock	55
- travelling stock	55
25. Feed motor power, kW	10.5
26. Total power of the machine motors, kW	170
27. Machine dimensions (without separately located units and el. equipment), mm:	
- length	30720
- width	3820
- height	1860
28. Machine weight (with separately located units and el. equipment), kg	47200

2.2. Main Data

- 1) Main drill stock spindle Fig. 2.1
- spindle deceleration.....available
- kind of belts.....V-belts
- size of belts.....C-2000III GOST 1284.1-80
- quantity of belts.....9
- designation of spindle end acc. to GOST 12595-2003.....2-15L
- spindle braking.....available
- 2) Travelling stock spindle Fig. 2.2
- spindle deceleration.....available
- designation of spindle end acc. to GOST 12595-2003.....2-15L
- spindle braking.....available
- 3) Feed gearbox
- Lead screw driving force during cutting at 5...300 mm/min, kN.....80
- 4) Chucks
- number of chucks mounted on the machine.....1
- 4.1) kind of chuck on the main drill stock.....self-centering
- number of jaws.....4
- 5) Pressure head saddle
- travel of the saddle along the bed:
- manual – per one rotation of the square, mm.....3,3
- mechanical, mm/min.....3000
- decelerated mechanical, mm/min.....3000

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6) Drill tube rest		
travel of the rest along the bed		
manual – per one rotation of the square, mm	58
mechanical, mm/min	.....	N/A
coupling device	.....	available

7) Roller rest		
number of supporting rollers	.....	3
diameter of supporting rollers, mm	.....	210
travel of the rest along the bed:		
manual – per one rotation of the square, mm	.....	58
mechanical, mm/min	.....	N/A
quill travel per one rotation of the square, mm	3.0

Main Drill Stock Spindle

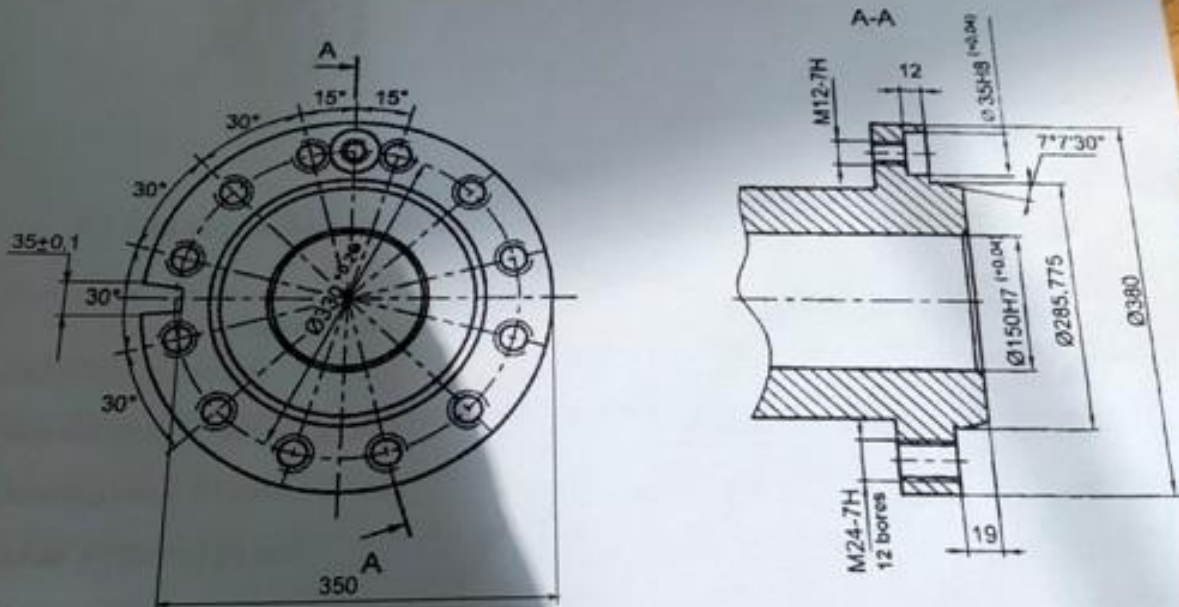


Fig. 2.1

Travelling Stock Spindle

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