



OPEN JOINT-STOCK COMPANY  
"RYAZAN MACHINE TOOL WORKS"



## SPECIAL DEEP HOLE DRILLING AND BORING MACHINE

Model RT295115 with CNC

OPERATION MANUAL

RT295115.00.000P3

2007

## 1. GENERAL

1.1. Special deep hole boring machine model RT295112 with CNC is designed to carry out boring of deep cylinder-shaped holes in the cylindrical workpieces of shaft, tube and cylinder types made of non-magnetic materials in accordance with Specifications shown in Section 2.

**ATTENTION! STRICTLY FOLLOW THE RECOMMENDATIONS AND DIRECTIONS OF THE OPERATION MANUAL AND ATTACHED TECHNICAL DOCUMENTATION ON THE MACHINE COMPONENTS.**

The machine is completed with one-axis «CNC FAGOR» system which ensures control of the travelling stock movement.

Accuracy class of the machine is  $\Pi$  according to GOST 8-82.

Kind of climatic execution is YXЛ4 according to GOST 15150-69.

1.2. Assembly drawing RT295115.00.000СБ (see Attachment to the Manual).

## 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	20000
6. RPM: - main drill stock - travelling stock	11,2...355 36...460
7. Number of rotation ranges: - main drill stock  - travelling stock	9 (22,4; 31,5; 45; 63; 90; 125; 180; 250; 355)  9 (63; 80; 100; 125; 160; 200; 250; 315; 400)
8. Range switchover mode	manual

2.2. Main Data

1) Main drill stock spindle Fig. 2.1	available
spindle deceleration.....	V-belts
kind of belts.....	C-2000III GOST 1284.1-80
size of belts.....	9
quantity of belts.....	2-15L
designation of spindle end acc. to GOST 12595-2003.....	available
spindle braking.....	
2) Travelling stock spindle Fig. 2.2	available
spindle deceleration.....	2-15L
designation of spindle end acc. to GOST 12595-2003.....	available
spindle braking.....	
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.....	300
6) Drill tube rest	
travel of the rest along the bed:	
manual – per one rotation of the square, mm.....	88
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

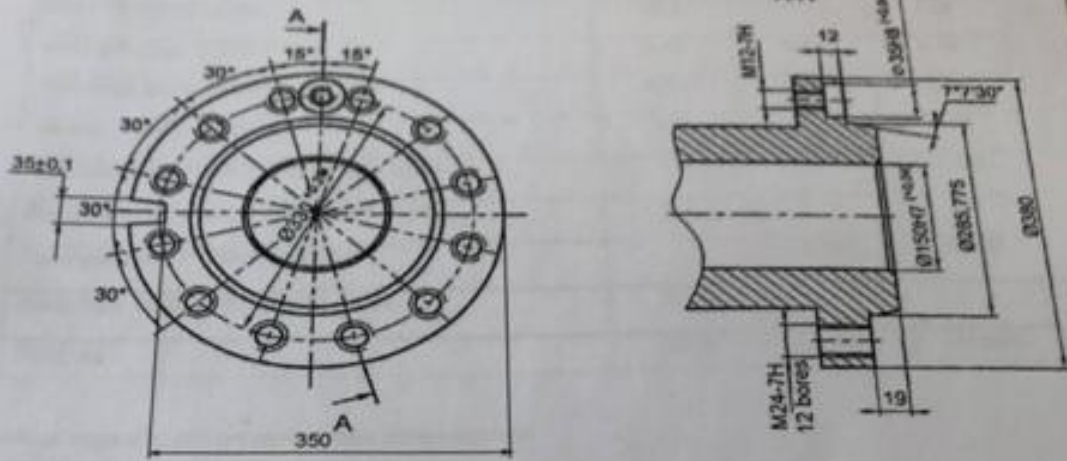


Fig. 2.1

Travelling Stock Spindle

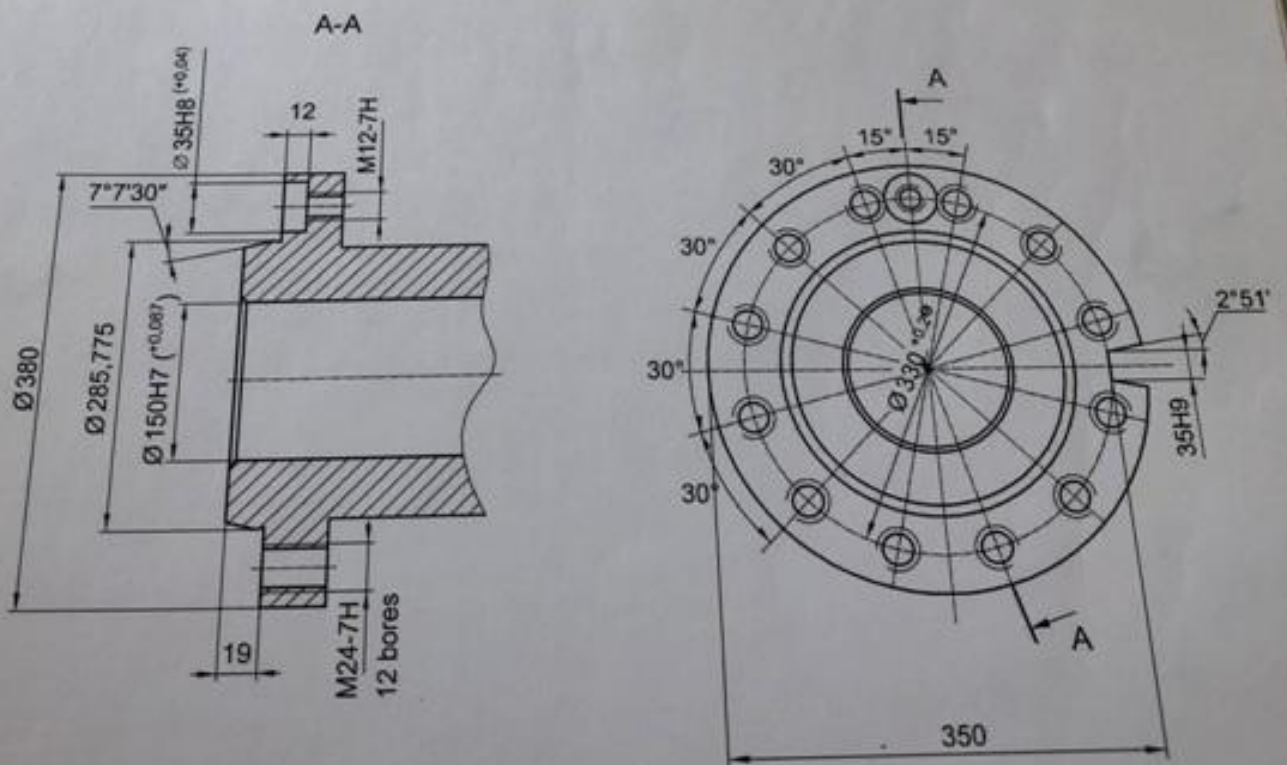


Fig. 2.2