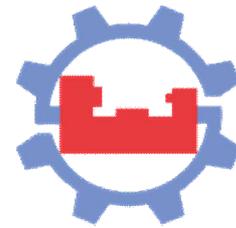
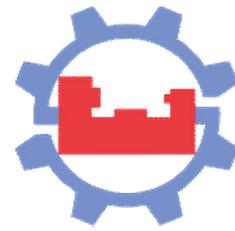


Basic technical data and specifications	2A656RF11
Machine Specifications	
Accuracy class N according to GOST 8-82	

Name of parameters	Machine data
1. Key Features	GOST 7058-84 version III
2. The width of the working surface of the plate, mm	4500 ^{-8,0}
3. The length of the working surface of the plate, mm with front pillar movement:	
3150 mm	4200 ^{-8,0}
6150 mm	6300 ^{-9,8*}
9150 mm	10500 ^{-16,0*}
12150 mm	14700 ^{-18,0*}
4. The distance between the T-grooves of the plate, mm	300±0,6
5. The width of the T-shaped grooves of the plate according to GOST 1574-75, mm	28 ^{+0,21}
6. Extendable spindle diameter, mm	160 ^{-0,63}
7. The end of the retractable spindle according to GOST 24644-81	
Inner cone according to ST SEV 147-75	Metric 80
The degree of accuracy of the cone according to GOST 2848-75	AT6
Inner cone according to GOST 15945-82	50*
The degree of accuracy of the cone according to GOST 19860-74	AT5
8. The diameter of the centering surface of the retractable spindle, mm	235 ^{-0,02}
9. The largest preset longitudinal movement Z of the retractable spindle, mm	1250 ⁺⁵
10. The largest preset vertical movement of the spindle headstock Y, mm	2000 ⁺⁵ 2700 ^{+5*}
11. The largest preset transverse movement X of the front pillar, mm	3150 ⁺⁵ 6150 ^{+5**}

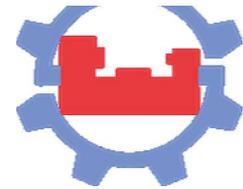
	9150 ^{+5**}
	12150 ^{+5**}
12. Spindle speed limits, 50 Hz (60 Hz), min	from 7,5 ^{±0,75} to 950 ^{±9,5} (from 9,0 ^{±0,90} to 900 ^{±9,0})
13. The number of steps of the spindle speed 50 Hz (60 Hz)	22 (21)
14. The limits of the values of the feed spindle retractable headstock spindle, front strut, mm / min	from 2,5 ^{±0,25} to 2000 ^{±200}
	2500 _{.375}
15. Number of feed steps	31
16. Speed of fast installation movements, mm / min	
retractable spindle	4000 _{.400}
headstock spindle	4000 _{.400}
front strut	5000 _{.500}
17. The greatest permissible torque: on a milling (hollow) spindle, on a retractable spindle with a metric cone 80 AT6, N.m	5000
on a retractable spindle with a cone 50 AT5, N.m	2400
18. The largest main component of the cutting force P with a single-ended cutter fixed in a retractable spindle, at a distance from the end of the hollow spindle to the tip of the cutter no more than 300 mm, N (kgf)	
for cone Metric 80 AT6	16000 (1600)
for cone 50 AT5	10000 (1000)
19. The greatest allowable feed force of the headstock, front strut, extendable spindle, N (kgf)	30000 (3000)
20. Overall dimensions of the machine with its equipment and accessories installed outside, mm	
width	11500±560





length	11500±560
with front pillar movement:	
3150 mm	8100±100
6150 mm	12300±100
9150 mm	13100±50*
9150 mm	16230±100**
12150 mm	19600±100**
height	5650±30
	6350±30**
21. The largest mass of the processed product when installed on a plate for machine tools, kg:	
with front pillar movement:	
3150 mm	150000***
6150 mm	225000***
9150 mm	375000***
12150 mm	525000***
Mass of the machine without electrical equipment installed outside the machine, kg:	
with front pillar movement:	
3150 mm	41500 ⁺⁴⁰⁰⁰
	53000 ^{+5000*}
6150 mm	57000 ⁺⁵⁷⁰⁰
	68500 ^{+6800*}
9150 mm	64750 ⁺⁶⁴⁰⁰
	76250 ^{+7600*}
12150 mm	75200 ⁺⁷⁵⁰⁰
	86700 ^{+8670*}
23. The mass of electrical equipment installed outside the machine, kg	
	1500 ± 75
Electrical characteristics	
30. Type of current supply network	
	variable
	three phase
31. Current frequency, Hz	
	50 ± 1 (60 + 1)
32. Voltage, V	
	380 ± 38
	by order
	220 ± 20
33. Current type of electric drive of the main movement	
	variable
34. Current type of electric drive feed	
	constant from own converters
35. Current type of auxiliary electric drives	
	three-phase variable
36. The voltage of local lighting, In	
	24 (variable)
37. The number of electric motors on the machine, pcs	
	11
with accessories, pcs	
	14
38. Power of the main motor	
	18,5*





39. The total power of all electric motors of the machine with accessories kW	51, 3*
40. The total power consumed by the machine at full load, kW	35*
The characteristic of the digital indication device "Size 2M"	
45. Number of coordinates displayed	4
46. Resolution of digital indication, mm	0,01
47. The largest value of the specified displacement, mm	±9999,99
48. mode of operation	Indication, pre-selection of coordinates
49. Number of simultaneously displayed coordinates	2
50. The offset of the start of the report (floating zero) within the entire movement of the node	got
51. The choice of the direction of reference coordinates from floating zero	got
Accessories available on request for a fee	
Removable table *	
61. The width of the working surface of the table, mm	2000 _{-3,7}
62. The length of the working surface of the table, mm	2500 _{-4,4}
63. The largest mass of the workpiece mounted on the table, kg	16000 ⁺¹⁰⁰⁰
64. Number of T-grooves	9
65. The distance between the T-grooves, mm	200 ^{+0,6}
66. The width of the Central T-shaped groove, mm	28 ^{+0,052}
Width of other T-grooves, mm	28 ^{+0,21}
67. The largest preset longitudinal movement, preset, mm	1000 ⁺⁵
68. The feed limits for the longitudinal movement of the table, mm / min	от 2,0 ^{+0,2} до 2000 ⁺²⁰⁰
69. The greatest allowable feed force in the longitudinal direction, N (kgf)	30000 (3000)
70. Number of feed steps	31
71. Speed of quick installation movements of an unloaded table:	
with longitudinal movement, mm / min	3150 ₋₃₁₅
when turning the table, min	0,6 _{-0,6}
72. Overall dimensions of a removable table, mm	
length	3745±10



width	3100±10
height	850 ₋₅
73. Table weight, kg	11100 ⁺¹¹⁰⁰



Angle milling head	
75. The end of the head spindle according to GOST 24644-81	
Inner cone according to GOST 15945-82	50
The degree of accuracy of the cone according to GOST19860-74	AT5
76. The end of the mandrel for attaching the head to the retractable spindle	
Cone according to ST SEV 147-75	Metric 80*
The degree of accuracy of the cone according to GOST 2848-75	AT6
Cone according to GOST 15945-82	50*
The degree of accuracy of the cone according to GOST19860-74	AT5
77. Thread size ramrod	M24 ₋₈₀
78. The limits of the spindle speed of the head 50 Hz, (60 Hz), min	от 7,5 ^{±0,75} до 950 ^{±9,5} (от 9,0 ^{±0,90} до 900 ^{±9,0})
79. The greatest permissible effective power of milling by a head, kW	12
81. Overall dimensions of the head, mm	
length	925 _{-2,3}
width	570 _{-1,75}
height	520 _{-1,75}
82. Mass of the head of the milling, kg	400 ⁺⁴⁰

Removable faceplate	
85. Diameter of the faceplate, mm	800 _{-2,0}
86. Radial displacement of the faceplate support, mm	200 ^{+2,0}
87. Width of a T-shaped groove of a support, mm	22 ^{+0,21}
88. The distance between the axes of the T-shaped grooves of the caliper, mm	
	250±0,3
89. The limits of the faceplate rotation frequency, 50 Hz (60 Hz), min-1	от 7,5 ^{±0,75} до 190 ^{±19} (от 9,0 ^{±0,90} до 180 ^{±18})
90. The feed limits of the radial caliper, mm / min	от 2,0 ^{±0,2} до 1250 ^{±125*}

<p>91. The largest main component of the cutting force PZ when turning the end face with a radial feed by a single-end cutter mounted on the radial support of the face plate at a distance of not more than 200 mm from the face of the face plate to the tip of the face (with a radial force on the tool not more than 500 kgf), N (kgf)</p>	<p>7000 (700)</p>
<p>92. Weight of the faceplate, kg</p>	<p>500⁺⁵⁰</p>

