

2.7 Standard Specifications and Standard Accessories

2.7.1 Standard Specifications of Machine

Name		SS20	SS32
Machining range, Machine capacity	Chuckling barstock dia.	Ø3 to Ø20mm	Ø8 to Ø32mm
	Max. machining length	220mm(Rotary guide bushing) / 45mm(Guide-bushing-less)	320mm(Rotary guide bushing) (12.598)
	Max. drilling diameter	Ø10	Ø12
	Max. tapping diameter	M8	M10
	Max. back spindle chucking dia.	Ø20	Ø32
	Max. back spindle drilling dia.	Ø10 (39.4)	
	Max. back spindle tapping dia.	M8 (314)	
	Max. tool spindle drilling diameter	Ø8	
	Max. tool spindle tapping diameter	M6	
	Max. tool spindle slotting cutter dia.	Ø45	
Machine	Main spindle speed	200 to 10,000min ⁻¹ (In use of rotary guide bushing, Max.8,000 min ⁻¹)	200 to 8,000min ⁻¹
	Back spindle speed *1	200 to 10,000min ⁻¹	200 to 8,000min ⁻¹
	Rotary guide bushing *2	200 to 8,000min ⁻¹	
	Tool spindle speed	200 to 5,000min ⁻¹	
	Total tool number (Standard Specifications)	24 (Standard spec.)	
	Tool size	16mm × 16mm × 100mm	
	Rapid traverse rate	32m/min(X1,Y1,Y2:24m/min)	
	Controllable axes	7(including C1 axis)	
Motors	Main spindle	1.5/3.7kW	3.7/5.5kW
	Back spindle	1.5/3.7kW	
	Tool spindle	1.0kW	
	Rotary guide bushing	0.55/1.1kW	
	X1·X2·Z1·Z2·Y2 axes	0.75kW	
	Y1 axis	1.0kW	
	Coolant pump	0.39/0.62 kW (50/60Hz)	
	Lubricating pump	3W	
Power supply, etc	Weight	3,400kg	
	Power source requirements	17kVA	18kVA
	Compressed air requirement	0.4MPa or above	
	Air discharge rate	40NL/min	
	Width x depth x height	2,020 × 1,675 × 2,020mm	

*1 When the front discharge unit is mounted, the back spindle speed is restricted.

*2 Option ; Not applicable for non-round barstocks.

*3 Standard specifications of this machine does not correspond to high-pressure coolant of 2MPa or more.

2.7.2 Standard NC Specifications

Item	SS20/32
NC unit	FANUC 31i-A
No. of control axes	7 axes
Controllable axes	X1,Z1,Y1,X2,Z2,Y2,C1
Axis composition	X1-Z1 (Simultaneous control) Z1-Y1 (Simultaneous control) X2-Z2 (Simultaneous control) X1-Z2 (Simultaneous control) Z1-Z2 (Axial Synchronized Control) Z2-Y2 (Simultaneous control)
Least input increment	0.001mm (Diametrical designation for X1,X2 axes)
Least command increment	X1,X2 axes 0.0005mm Other axes 0.001mm
Maximum commandable value	±8 digits
Interpolation method	Linear/circular
Rapid traverse rate	32m/min(X1,Y1,Y2:24m/min)
Cutting feed rate	1 to 6,000mm/min
Feed rate override	0 to 150%, 10% step
Dwell	G04 0 to 99999.999
Absolute/incremental command	X, Z, Y, C : Absolute U, W, V, H : Incremental
Amount of tool offset	±6 digits
No.of tool offsets	99
LCD/MDI	10.4" color LCD
Display language	English
Part program storage size	64Kbyte(equivalent to 80m tape for each path system)
No.of registerable programs	63
Miscellaneous function	Main :5-digit, Sub:3-digit
Spindle function	S5 digits
Tool function	T4 digits
Chasing function, Continuous thread cutting, Manual pulse generator, Memory-card interface (Max. 128 files), Background editing, Run time & parts number display, Custom macro, Constant surface speed control, Spindle synchronous control (rotation/phase), Z ₁ -Z ₂ synchronous control, Tool geometry/wear offset, Programmable data input, Chamfering and corner R, Tool nose radius compensation, HRV control, Multiple repetitive cycle, Expanded program editing, Canned cycle for drilling, Rigid tap (main spindle, back spindle),Cut-off detection (differential), Spindle speed fluctuation detection	

2.7.3 Standard Accessories

No.	Name	Part No.	SS20	SS32	Number of standard accessories per machine	Remarks
1	Main spindle adapter	3254-Y541	○		1	
	Main spindle adapter	3269-Y031		○	1	
2	Back chuck adapter	3268-Y041	○		1	
	Back chuck adapter	3216-Y082		○	1	
3	Back adapter	3268-Y211	○	○	2	
4	Standard tools	3268-X010	○		1	
	Standard tools	3269-X010		○	1	
5	Transit clamps	3268-X021	○		1	
	Transit clamps	3269-X020		○	1	
6	Display of run time and parts count		○	○	1	
7	Memory card interface		○	○	1	
8	Chasing function		○	○	1	
9	Door interlock		○	○	1	
10	Coolant flow switch		○	○	1	
11	Part program storage size 64Kbyte		○	○	1	
12	NC spare parts	FANUC	○	○	1	
13	Inspection report		○	○	1	
14	Parameter sheet		○	○	1	
15	Instruction manual	for machine	○	○	1	
16	User's Manual (Common to Lathe System / Machining Center System) for NC	FANUC	○	○	1	
17	User's Manual(For Lathe System) for NC	FANUC	○	○	1	
18	Maintenance manual for NC	FANUC	○	○	1	
19	Maintenance Manual for control motor amplifier	FANUC	○	○	1	