

Machine Specification

Part	Description	SA20XIII	SA32XIII	SA38XIII	SA45XIII
Machining Capacity	Max. Turning Bar Dia.	Ø20mm	Ø32mm	Ø38mm	Ø45mm
	Max. Turning Bar Length	270mm	270mm	270mm	120mm
	Max. Main Spindle Drilling / Tapping	Ø10mm / M8	Ø12mm / M10	Ø12mm / M10	Ø16mm / M12
	Max. Sub Spindle Chucking Dia.	Ø20mm	Ø32mm	Ø38mm	Ø45mm
	Max. Back-end Face Drilling / Tapping	Ø8mm / M6	Ø10mm / M8	Ø10mm / M8	Ø13mm / M10
	Max. Cross Disc-Mill Dia.	Ø32mm	Ø40mm	Ø40mm	Ø40mm
Machine Capability	Max. Main Spindle Speed	8,000rpm	8,000rpm	8,000rpm	6,000rpm
	Max. Sub Spindle Speed	8,000rpm	8,000rpm	8,000rpm	6,000rpm
	OD / Cross Live Tool	6 / 4	5 / 4	5 / 4	2 / 4
	1 Channel Tool	Max. Cross Spindle Speed	6,000rpm	6,000rpm	6,000rpm
		Max. Drilling / Tapping	Ø8mm / M6	Ø12mm / M10	Ø12mm / M10
		Bite Shank	□12 × 120mm	□16 × 120mm	□16 × 120mm
	2 Channel Tool	OD / Cross Live Tool / ID Tool	2 / 4 (Modular) / 3	2 / 4 (Modular) / 4	2 / 4 (Modular) / 4
		Max. Cross Spindle Speed	6,000rpm	6,000rpm	6,000rpm
		Max. Drilling / Tapping	Ø8mm / M6	Ø12mm / M10	Ø12mm / M10
		Bite Shank	□12 × 120mm	□16 × 120mm	□16 × 120mm
	Front-end Face Tools (Sub)	2 (Fix, Live:option)	2 (Fix, Live:option)	2 (Fix, Live:option)	2 (Fix, Live:option)
	Back-end Face Tools	8 (Fix:4 / Live:4)	8 (Fix:4 / Live:4)	8 (Fix:4 / Live:4)	8 (Fix:4 / Live:4)
	Rapid Traverse	32M / min.	32M / min.	32M / min.	32M / min.
	Main Spindle Positioning	Cs + 1/1,000°	Cs + 1/1,000°	Cs + 1/1,000°	Cs + 1/1,000°
	Sub Spindle Positioning	Cs + 1/1,000°	Cs + 1/1,000°	Cs + 1/1,000°	Cs + 1/1,000°
Motor	Main Spindle	2.2 / 3.7kW	5.5 / 7.5kW	5.5 / 7.5kW	11 / 15kW
	Sub Spindle	1.5 / 2.2kW	1.5 / 2.2kW	1.5 / 2.2kW	2.2 / 5.5kW
	Cross / Back Tools Unit	1.0kW	2.2 / 1.0kW	2.2 / 1.0kW	2.2 / 1.0kW
	Servo	1.0kW	1.0kW	1.0kW	1.0kW
	Coolant Pump	0.9kW	0.9kW	0.9kW	0.9kW
	Lubrication Pump	0.04kW	0.04kW	0.04kW	0.04kW
Dimension	Coolant Oil Capacity	250ℓ	280ℓ	280ℓ	300ℓ
	Lubrication Capacity	2ℓ	2ℓ	2ℓ	2ℓ
	Power Consumption	20KVA	20KVA	20KVA	30KVA
	Center Height	1,000mm	1,000mm	1,000mm	1,100mm
	Length × Width × Height	2,230 × 1,400 × 1,850mm	2,230 × 1,400 × 1,900mm	2,230 × 1,400 × 1,900mm	2,230 × 1,500 × 2,000mm
	Net Weight	3,600kg	4,000kg	4,100kg	4,300kg

* Above specification may be changed without prior notice.

NC Specification

Description	SA 20XIII / 32XIII / 38XIII / 45XIII
NC Controller	FANUC 31i-B
No. of Controllable Axis	11
Axis Designation	X1, Z1, Y1, X2, Z2, Y2, X3, Z3, Y3, C1, C3
Min. Input Increment	0.001mm
Min. Command Increment	0.001mm (X axis : 0.0005mm)
Max. Programmable Value	±8 digits
Interpolation Function	Linear / Circular
Feedrate	1~6,000mm / min.
Feedrate Override	0~150%, 10% step
Dwell	G04 0.001~9999.999
ABS / INC Command	X, Z, Y, C : Absolute U, V, W, H : Incremental
Tool Offset	±6 digits
No. of Tool Offset	128 sets
CRT / MDI	10.4" COLOR
Display Language	English, others
Tape Memory	512 Kbyte
No. of Registerable Program	500 sets
Miscellaneous Function	M5 / M3 digits
Main Spindle Function	S4 digits
Tool Function	T4 digits

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Machine Standard

Synchronous Rotary Guide Bush Holder Unit
Part conveyor
M-code Air Blow
Part Ejection Detector
4 Spindle Cross Drill Unit
4 Spindle Modular Cross Drill Unit
Main / Sub Spindle Positioning : 1/1,000°
Cs Control on Main & Sub Spindle
Back-end Face Tool Unit (Live 2, Fixed 2)
Coolant Flow Detector
Pneumatic Brake Unit (SA20XIII~38XIII)
Hydraulic Brake Unit (SA45XIII)
Patrol Light
Barfeeder Interface
Service Tool Kit
Instruction Manual
FANUC Manual (Operator / Maintenance / Parameter)

Machine Option

Barfeeder
Long Part Discharging Unit
Chip Conveyor
Back-end Face Tool Unit (Live 4, Fixed 4)
M-code Oil Blow
Front-end Face Revolving Unit (2)
Cut-Off Breakage Detector
Polygon Function
Thread Whirling Device

NC Standard

Circle, Semi-circle Designation
Work Coordinate Shift (G50)
Machine Lock
Single Block
Software Operation Panel
Tool Offset Display
Input / Output Interface
Working Hour / No. of Part Display
Tool Radius Compensation
Chamfer / Corner R
Automatic Power-Off
Inch / Metric Conversion
Back-ground Editing
Constant Surface Speed Control
Synchronous / Composite Function
Z1-Z3 Synchronous Function
MPG(handle wheel) : 0.001mm
Synchronous Control (Main & Sub)
Rigid Tapping on All Spindles

NC Option

MPG Program Check
IC Card
Additional G-Code
Remote Control System (Ethernet)
Fanuc Warranty Service (2 years)
Helical Interpolation
3 Dimensional Coordinate Conversion

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NEXTURN
SWISS TURN LEADER

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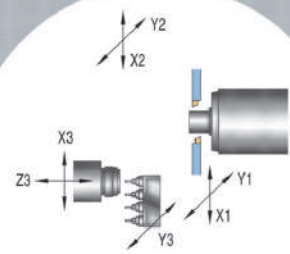
CNC SWISS TYPE AUTOMATIC LATHE

SA20XIII / 32XIII / 38XIII / 45XIII

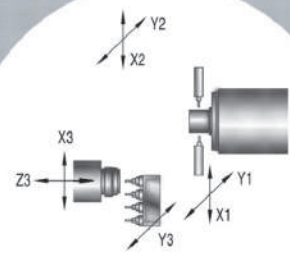


NEXTURN
SWISS TURN LEADER

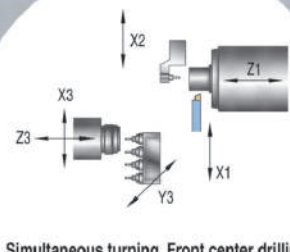
■ Max. 29 tools, Maximized Machining Efficiency, for Complex Parts.



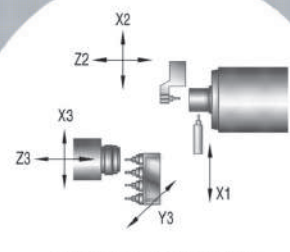
Balance turning +
Back tool machining
(X1+Y1+X2+Y2, Z3+X3+Y3)



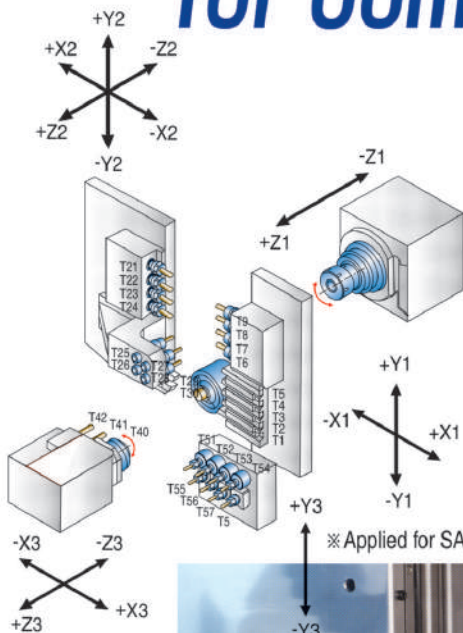
Simultaneous cross drilling
milling+Back tool machining
(X1+Y1+X2+Y2, Z3+X3+Y3)



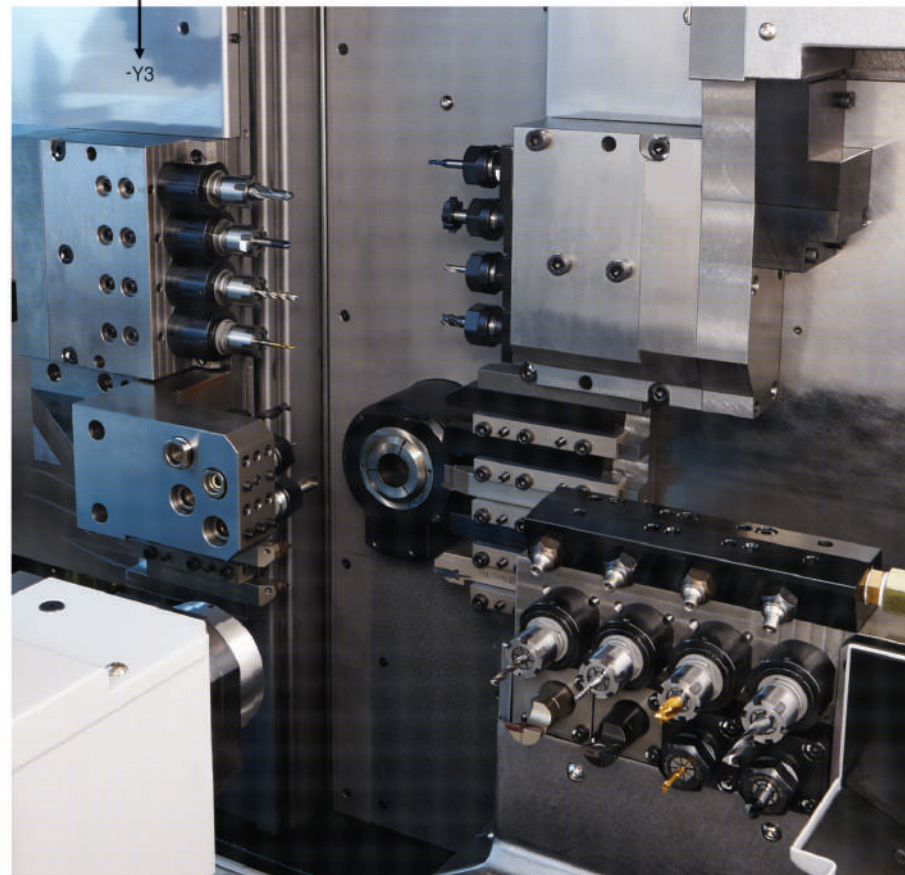
Simultaneous turning, Front center drilling
+ Back tool machining
(Z1+X1+X2, Z3+X3+Y3)



Front center drilling + Cross
drilling + Back tool machining
(X1+Z2+X2, Z3+X3+Y3)



※ Applied for SA32XIII



■ High Productivity

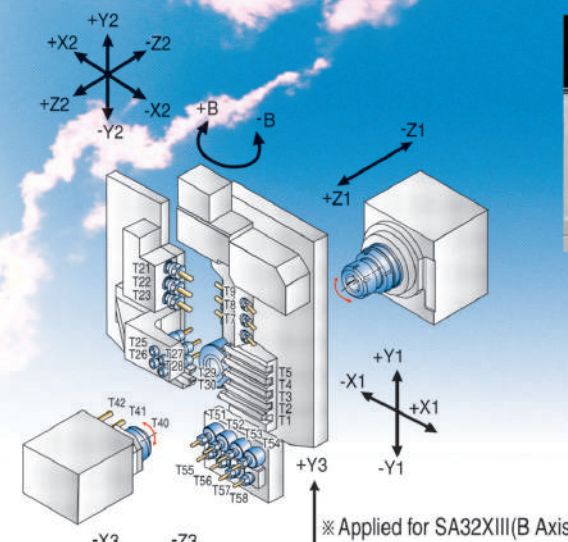
- Optimized Tooling Layout (Opposing Gang Slide)
- Minimized Non-Cutting Time with 3 Path Tooling Layout
- Optimized Tooling Distribution on Path 1 / Path 2 / Path 3 allows Best Cycle Time and Minimum Idle Time

■ Minimized Cycle Time with 3 Path Control

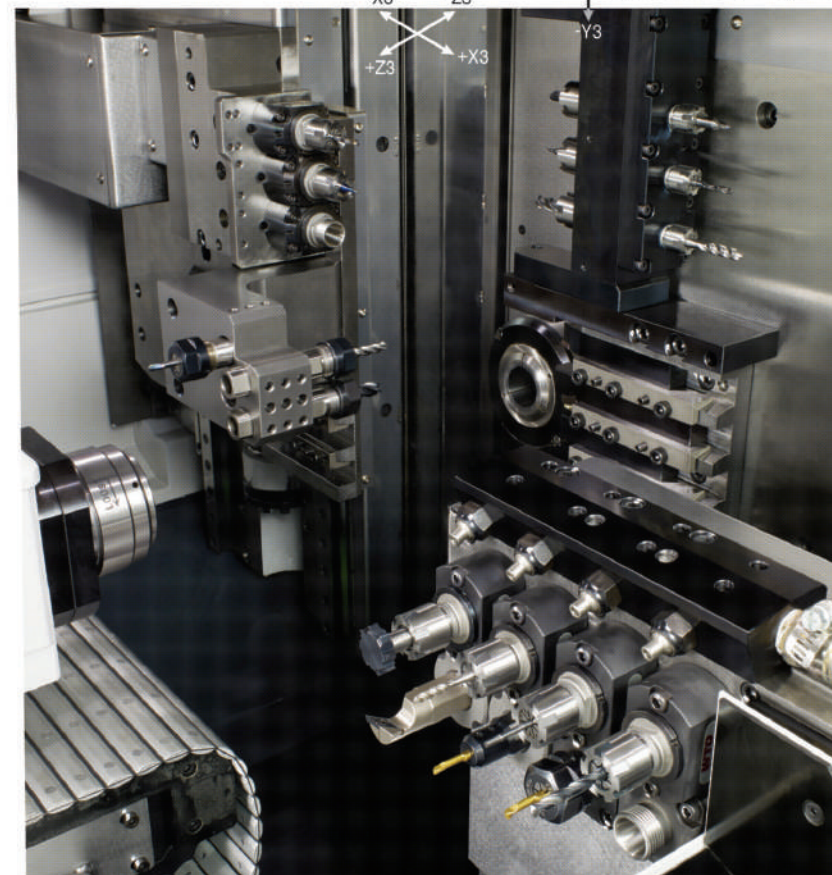
■ Optimized Opposing Gang Tooling System for High Precision

■ Max. 14 Live Tools Available for Complex Machining

■ Complex Tooling System with Multi Axis



※ Applied for SA32XIII(B Axis)



■ Rotary Guide Bushing Unit

- Rotary Synchronous Type
- Dual Bearing Structure with High Accuracy
- Strong and Accurate Bearing Support on Both Ends
- Spline Shaft Driven



■ Easy Operation System

- Easy Positioning Operation Panel with the Convenience and MPG Mounted
- Fully Opening Type Covers & Doors (RH / LH)
- Minimized Operational Key with Software Configuration
- Easy for Trouble Check and Remedy by Modulated Pneumatic System
- Slant Bed Structure with Easy Chip Disposal / Coolant Discharge

■ High Accuracy

- Ultra Precision Ball Screw / LM Guide
- 1/1,000" Positioning, Cs for Main & Sub Spindles
- Pneumatic Brake with High Accuracy / High Rigidity for Main & Sub Spindles
- Keep Optimal Repeated Precision Level by Ball Screw Dual Pressure

■ Convenience

- Coolant Ejection from Each Tool Block
- Easy Chip Disposal with Downward Tool Direction
- Safe & Versatile Shock Protection Software
- Easy & Simple Operational Panel
- Versatile Tool Management Program

■ Reliability

- Outstanding Electric System using all Fanuc Products
- Cut-Off Tool Breakage Detector by Mechanical Sensors
- Complete Oil Block for Main Spindle Area by Dual Slide Cover
- Cable, Sensor, Main Spindle, Ball Screw Protected against Erosion or Hardening
- Regular CNC Educational Program Course Available

■ Powerful Back-End Tool Station

- Balanced Process by Powerful Back-End Machining Reducing Cycle Time
- Rigid Off-center Drilling and Tapping with High Speed and High Accuracy
- No. of Tools : 8 (Live 4, Fixed 4)
- Max. Spindle Speed : 5,000 rpm
- Motor Output : 1.0 kW (Fanuc)

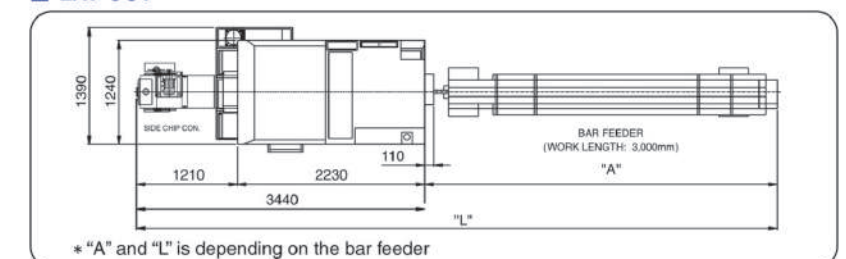
■ Rigid Tapping Function

- Tap Holder not Required
- Save time with High Tapping Speed

■ Modular Type Drilling Unit

- Simple Change for Driven Tools / Fixed Tools (Back Tools)
- Special Tool Holder Adoptable (Cross)
- Angled drilling, Whirling, Hobbing, Slotting Unit

■ LAY-OUT



* "A" and "L" is depending on the bar feeder