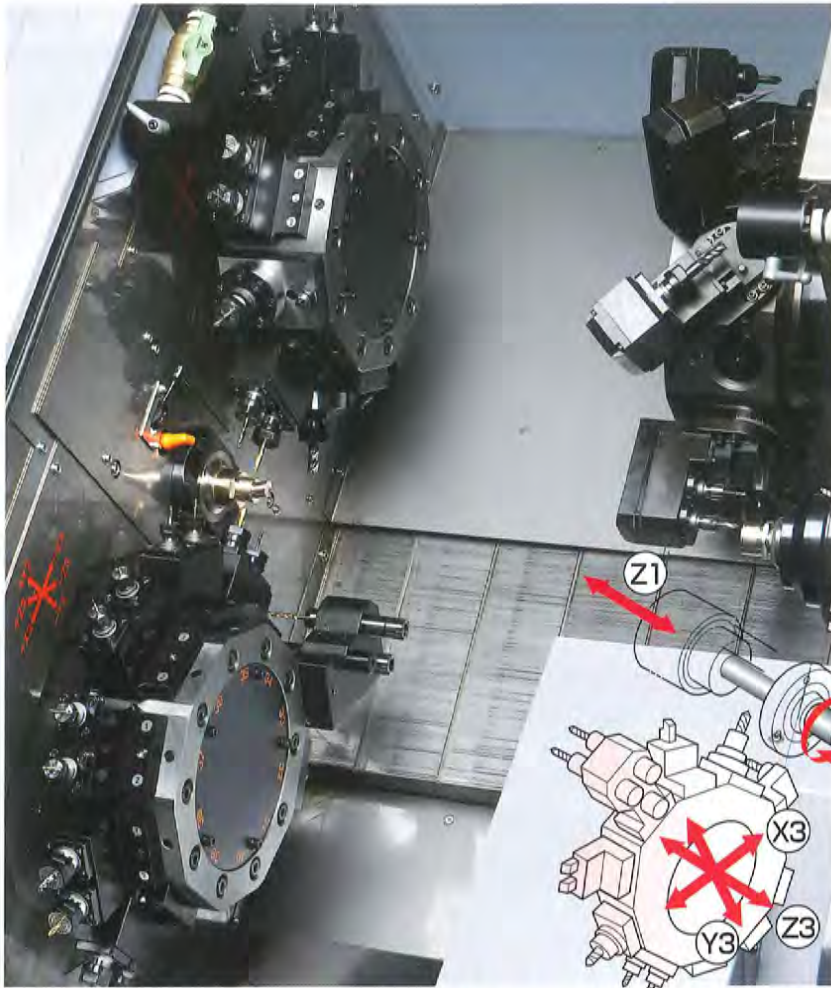




SWISS TYPE AUTOMATIC LATHE equipped with star motion control system 

ST-38

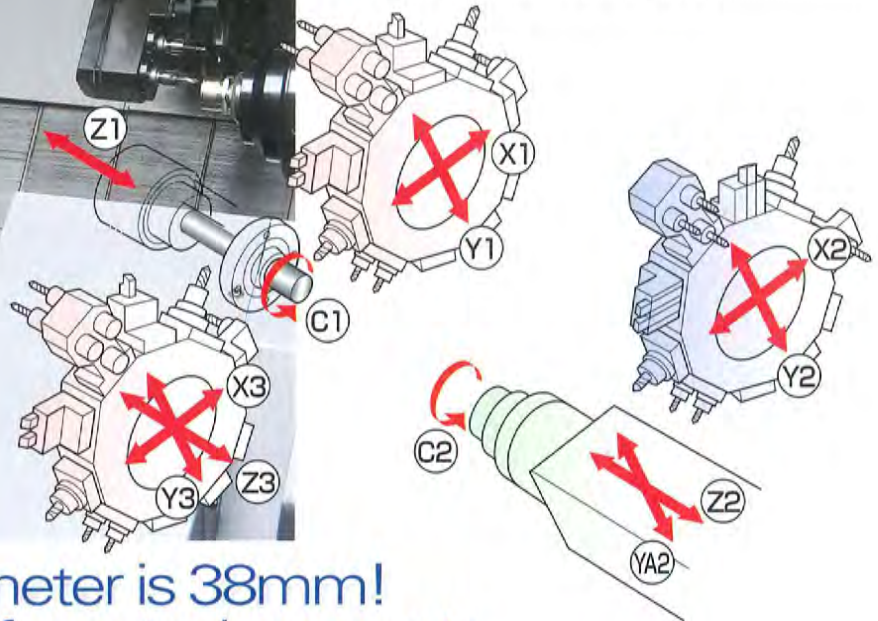




SWISS TYPE AUTOMATIC LATHE
equipped with star motion control system

ST-38

- Universal and varied overlap machining achieved by employing three turrets
- Complex machining capabilities equal to the front side achieved by using a turret exclusively designed for back machining
- Deep-hole drilling of front and rear ends, and one-chuck machining of long parts



Max. machining diameter is 38mm!
Complex machining for extra large parts
with high speed and universal control.

Multi-turret lathe for large diameter parts enables greater capability for the needs of machining parts for the Medical, Automotive and Aviation industries.

High productivity

- STAR Motion Control System is a unique control technology which minimizes non-cutting time.
- Simultaneous machining such as turning, milling etc. is achieved by opposing twin turret tool posts and dramatically reduces the machining time.
- Overlap machining of front and rear ends by back working turret tool post for shorter machining times.
- Mounting multiple tools onto one turret station reduces the number of indexing times and tool change time.

High Accuracy

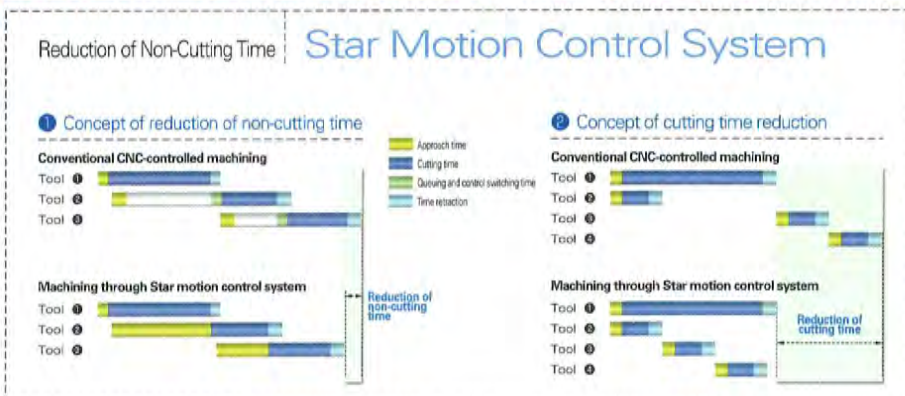
- Spindle Cooling Unit controls thermal displacement by exhausting heat generation of the main and sub spindles out of the machine.
- Coolant Chiller Unit regulates increases of the machine temperature to restrict thermal displacement.
- STAR Motion Control System minimizes vibration during rapid traverse.

Machining Capabilities

- Possible to machine large bars of 38mm in diameter and 32mm hexagonal bars.
- The turret exclusive for back machining allows combined machining equivalent to main machining.
- Combining this machine with a high-pressure coolant unit enables deep-hole drilling (maximum 120mm) on both the front and rear ends.
- The headstock stroke is 350mm (*1)
- The YA2 axis is provided for picking up eccentric parts.

(*1) : This length changes to 315mm when the rotary magic guide bush unit is used.

By the program optimization, the time required for the processes of [Retracting], [Next tool selection] and [Approach] can be minimized to reduce the non-cutting time.



ST-38 tool post configuration

Turret exclusively designed for back machining.
Multiple capabilities of main and back machining revolutionise the configuration of complex machining.



Tool post on the front side

Complex machining such as turning, milling, skewed hole drilling and deep-hole drilling can be performed simultaneously by opposing twin turrets, reducing the cutting time.

Opposing turret tool posts on the front side



Tool post on the rear side

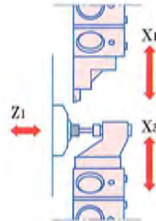
Complex machining is possible equally and simultaneously with the front end machining. Even eccentric components can be picked up and machined on the rear ends.

Back turret tool post on the rear side

Variation of front end machining



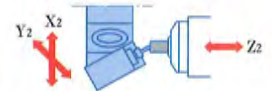
Machining and Positioning of the Twin Turrets



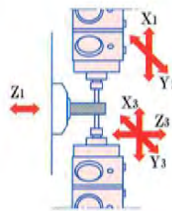
Variation of rear end machining



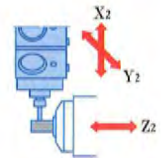
Skewed Hole Drilling



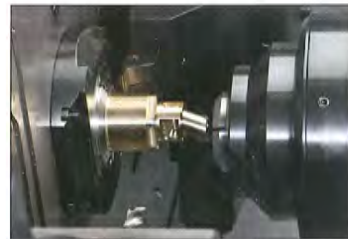
Cross Drilling + Cross Milling



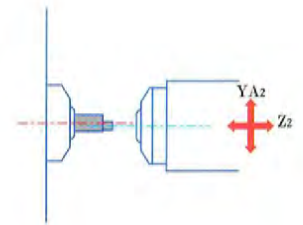
Back Cross Milling



Machining bar materials of up to 350mm in length is possible with just one chucking.



Pick-up of eccentric parts (with YA2 axis)



ST-38 Tool units



Toolholder □20mm



Slotting unit



Milling unit ER25



2-spindle Cross drilling unit



Polygon machining unit



Thread whirling unit



Gear hobbing unit



2-spindle skewed hole drilling unit

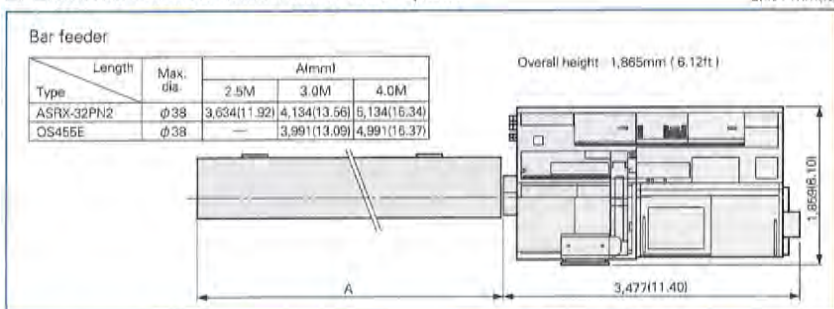
□ Standard Machine Specifications

Item	Specifications	
Max. machining diameter	φ38mm (1-1/2in)	
Max. headstock stroke	Standard 350mm (13-25/32in) With R.M.G.B. 315mm (12-13/32in)	
Front turret tool post	Near side turret 10 stations Far side turret 10 stations	
Number of turning tools	Max. 2 tools/station (□16mm)	
Tool shank	□16mm / □20mm	
Sleeve holder	Number of tools	Max. 3 tools/station
	Max. drilling capability	φ23mm (29/32in)
	Max. tapping capability	M16×P2.0
Power driven att.	Number of tools	Max. 2 tools/station
	Max. drilling capability	φ10mm (25/64in)
	Max. tapping capability	M8×P1.25
	Spindle speed	Max. 5,700min ⁻¹
Rapid feed rate	Drive motor	2.7kw(continuous)/4.0kw(5min/30%ED)
		30m/min (X1, X2, X3, Z1, Z2, Z3)
		15m/min (Y1, Y2, Y3) 3.9m/min (YA2)
Main spindle indexing angle	C-axis control	
Main spindle speed	Max. 7,000min ⁻¹	
Main spindle motor	7.5kw(continuous)/11kw(10min/25%ED)	
Coolant tank capability	245ℓ	
Dimensions (Width×Depth×Height)	3,477×1,859×1,865mm	
Center height	1,134mm (including leveling pads)	
Weight	6,250kg	
Power consumption	10.5KVA	
A-weighted sound pressure : note-1	Max. 71dB(A)	

□ Backworking Attachment Specifications

Item	Specifications	
Max. chucking diameter	φ38mm (1-1/2in)	
Max. part pick-up length	150mm (5-7/8in)	
Max. parts projection length	75mm (2-15/16in)	
Back working turret tool post	10 station	
Number of turning tools	Max. 2 tools/station (□16mm)	
Tool shank	□16mm / □20mm	
Sleeve holder	Number of tools	Max. 3 tools/station
	Max. drilling capability	φ23mm (29/32in)
	Max. tapping capability	M12×P1.75
Power driven att.	Number of tools	Max. 2 tools/station
	Max. drilling capability	φ10mm (25/64in)
	Max. tapping capability	M8×P1.25
	Spindle speed	Max. 5,700min ⁻¹
Drive motor	2.7kw(continuous)/4.0kw(5min/30%ED)	
Sub spindle indexing angle	C-axis control	
Sub spindle speed	Max. 7,000min ⁻¹	
Sub spindle motor	5.5kw(continuous)/7.5kw(10min/40%ED)	

□ External Dimensions and Floor Space



※Design features, specifications and technical execution are subject to change without prior notice.

※This product is an export control item subject to the foreign exchange and foreign trade laws. Thus, before exporting this product, or taking it overseas, contact your STAR MICRONICS dealer.

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□ Standard Accessories and Functions

- CNC unit FANUC 31i-B5
- Operation panel 10.4-inch color LCD display
- Hydraulic unit
- Pneumatic unit
- Automatic centralized lubrication unit
- Coolant level detector
- Door interlock system
- Broken cutoff tool detector
- Drive unit for revolving guide bush
- Revolving guide bush unit
- Main/Sub collet
- C-axis control (Main/Sub)
- Spindle clamp unit (Main/Sub)
- Main spindle cooling unit
- Coolant chiller
- Drive system for power-driven attachment (Turret)
- Air purge for revolving guide bush
- Sub spindle air purge unit
- Parts separator
- Parts conveyor
- Automatic bar feeder interface
- High-pressure coolant unit interface
- Work light
- Leakage breaker

□ Optional Accessories and Functions

- Coolant flow detector
- Water removal unit
- Beacon
- Rotary magic guide bush unit
- For pneumatic unit rotary magic guide bush
- Parts ejector (Air cylinder type)
- Parts ejector (Spring type)
- Parts ejector with guide tube
- Parts stopper unit
- Coolant unit (6.9MPa/2.5MPa/0.7MPa)
- Coolant valve
- Coolant pipings
- Manual pulse generator
- Transformer CE marking version
- Transformer CE marking specifications
- Tool presetter

Note)

The machining capacities apply to SUS303 material. The machining capacities may differ from listed values depending on the machining conditions, such as the material to be machined or the tools to be used.

- note-1 :
- Measures conforming to ISO standard.
 - A-weighted sound pressure is a general assessment standard characteristic that corrected the sound level to human acoustic sense.

9001 ISO 14001
CERTIFIED

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