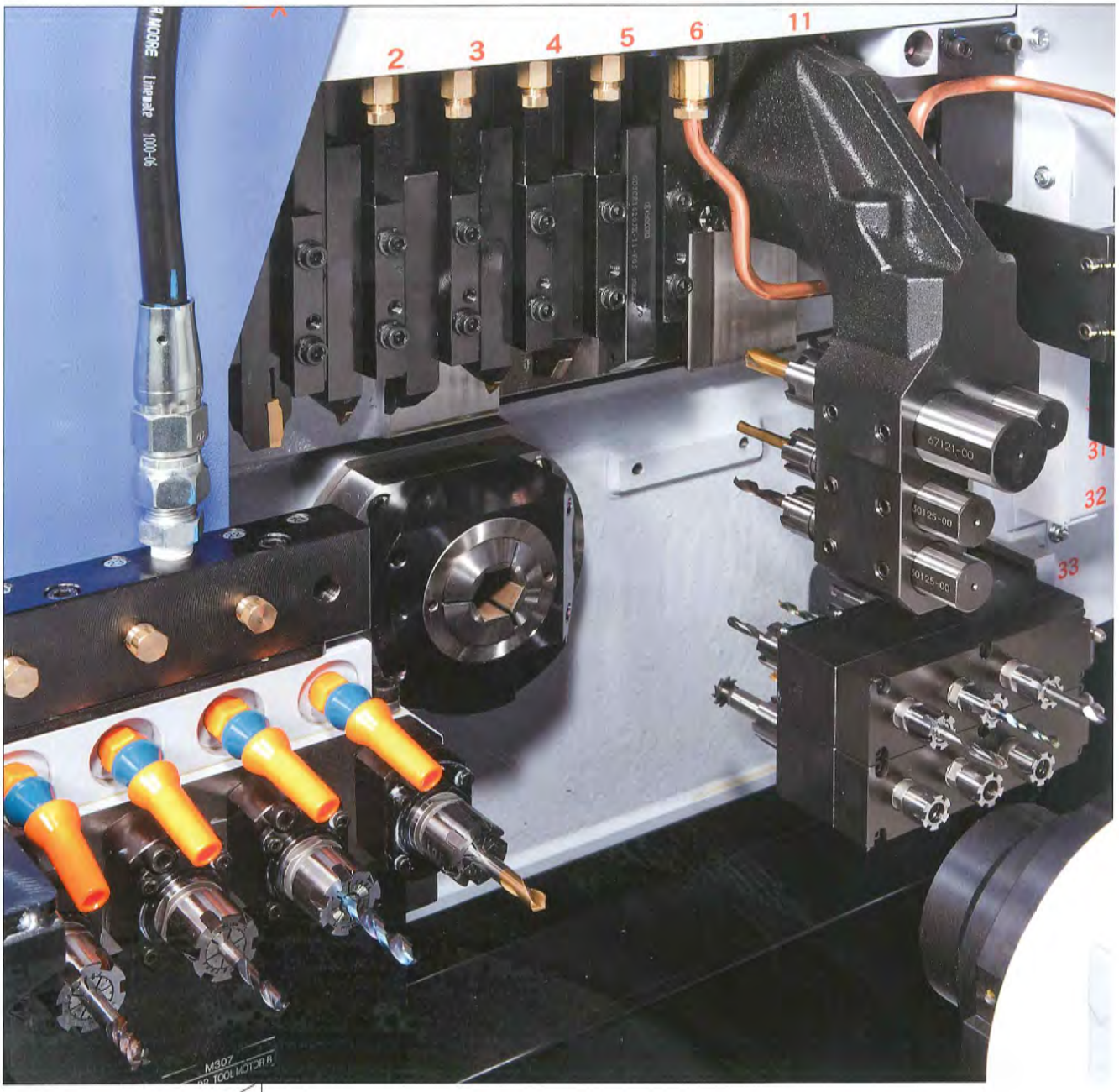
CNC SWISS TYPE AUTOMATIC LATHE

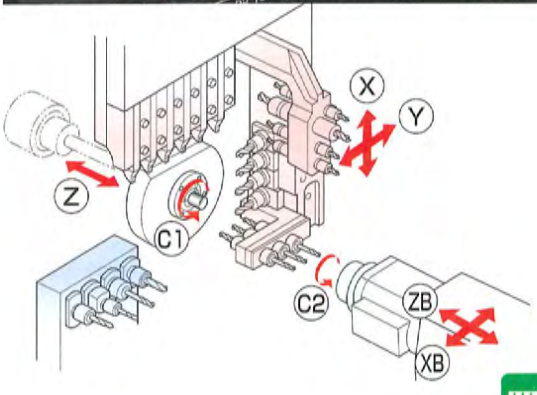
CNC AUTOMATIC LATHE [Non-Guide-Bush Type] Type N

SR-32J

STAR Environmental Standards Conformity models

More Flexible and Use-Friendly for Large-Diameter Workpiece Machining





TOOLING SYSTEM

■ Tool holder	Turning tool	6 tools
■ 4-spindle sleeve holder	Front-end stationary tool	4 tools
	Rear-end stationary tool	4 tools
■ Power-driven tool	Cross machining tool only : 3 tools, Cartridge type : 1Pos / 2Pos	
■ Back 4-spindle unit		4 tools

* : Guide-Bush Type ** : type N

SR-32J

CNC SWISS TYPE AUTOMATIC LATHE

Equipped with a 5-spindle cross drill unit (optional) and movable operation panel, this series is an evolved form of a power machine which is enhanced in machining performance and operability.

❶Highly Rigid and Powerful Output Design Most Suited to Machining of Large-Diameter Workpieces

The machine is equipped with a rigid tool post of a slanted slideway structure and high power spindle motor for machining large-diameter workpieces.

❷Cartridge Type for Flexible Tooling Layouts

The lower 2 spindles of the 5-spindle cross drill unit are cartridge type to enable flexible tooling layouts. (See next page)

❸Comfortable Operation Using Movable Operation Panel

Incorporation of the movable operation panel enables the operation at the best position.

High-Precision and High-Productivity Machining of Large-Diameter Workpieces with Maximum Rigidity and Powerful Drive

Slanted slide guideway structure **High rigidity tool post**

Traditional High Accuracy Machining by Rigid Design from this Series

The SR-32J tool post employs a slant-type slide guideway structure. This enables the construction of the X and Y axes guideways radially around the cutting point to improve machine rigidity. The construction also allows a linear line which passes the ball screw center and forms to be close to the cutting point (Fig. a1 on the right), and reduces the moment load by cutting resistance improves the tool post rigidity in the Y and Z axes directions. The Star original rigid tool post structure allows for an extended tool life and stable accuracy even in continuous machining over time.

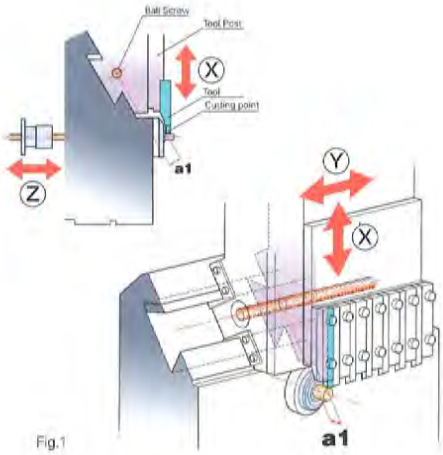
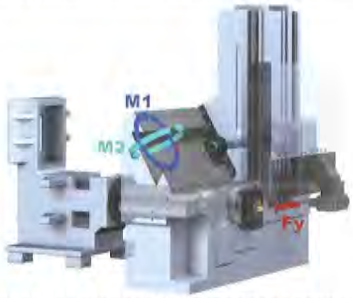


Fig.1

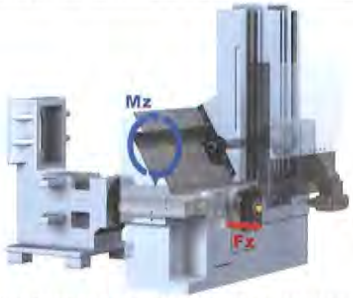
Comparison of moment load by cutting force



The moment load applied to the guideway surface by cutting force is the combined radial and axial load My. The My of the slant type is the smallest when compared to that of the vertical type and horizontal type.

Slant type ● My=1
Vertical type ● My=1.3
Horizontal type ● My=1.9

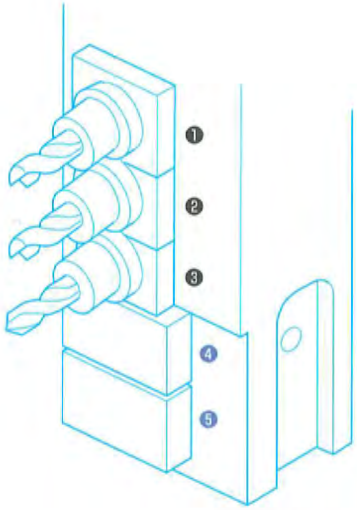
Comparison of moment load by feed force



As for the feed force Fz, the moment load Mz of the slant type is the smallest when compared to that of the vertical type and horizontal type.

Slant type ● Mz=1
Vertical type ● Mz=1.3
Horizontal type ● Mz=1.5

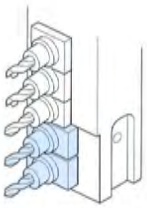
5-Spindle Cross Drill Unit



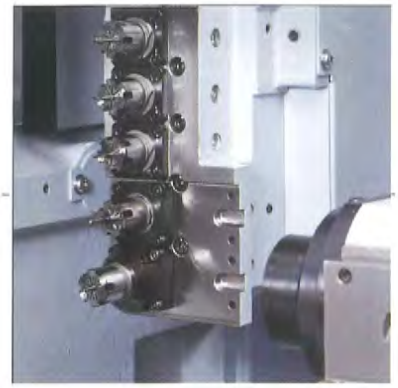
Standard type

POS. 1 Power cross drill
2 Power cross drill
3 Power cross drill
4 Cartridge position
5 Cartridge position

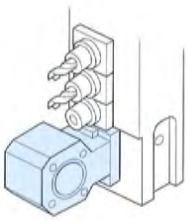
VARIATION 01



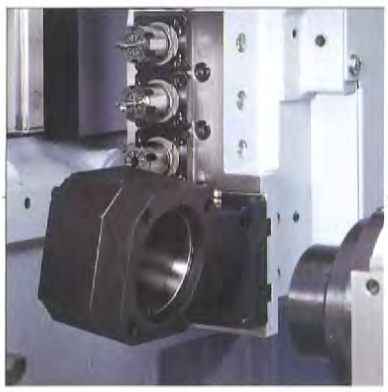
1
2 — Standard type
3
4 Cross drill unit
5 Cross drill unit



VARIATION 04



1
2 — Standard type
3 —
4
5 — Thread whirling unit

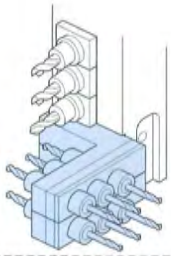


3-spindle opposing front drill unit

Tool Unit

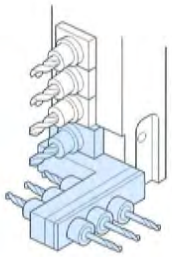
Diversity of Tooling Layouts by Cartridge System

VARIATION 02



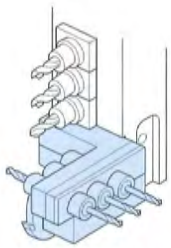
❶
❷ Standard type
❸
❹ 3-spindle opposing drill unit
❺ 3-spindle opposing drill unit

VARIATION 03

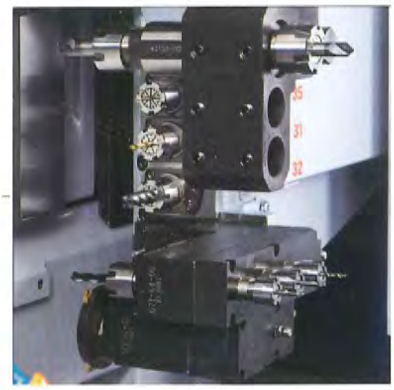


❶
❷ Standard type
❸
❹ Cross drill unit
❺ 3-spindle opposing drill unit

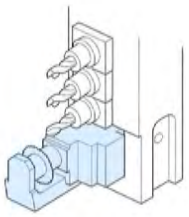
VARIATION 05



❶
❷ Standard type
❸
❹ 3-spindle opposing drill unit
❺ Polygon machining unit



VARIATION 06



❶
❷ Standard type
❸
❹ Slotting unit
❺

☐ 2-spindle opposing front drill unit

☐ 3-spindle opposing front drill unit

☐ Polygon machining unit

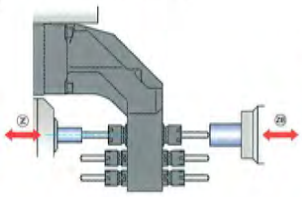
☐ Slotting unit

☐ Thread whirling unit

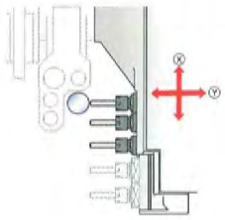
Machining Variations to Cover Many Needs

Front-end working

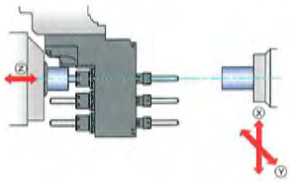
Front / rear-end simultaneous drilling



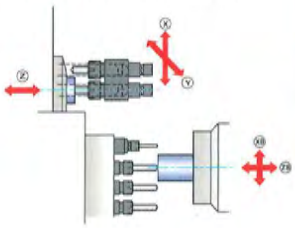
Cross drilling



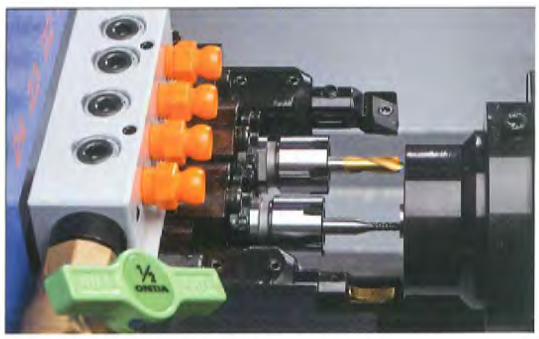
Off-center drilling



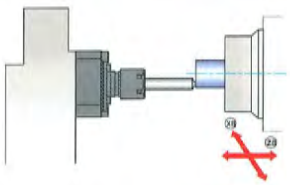
Overlapped machining of main and back machining



Rear-end working



Back off-center machining



Reduction of Remnant Bar Length to 70mm in Response to the Need for Cost Reduction

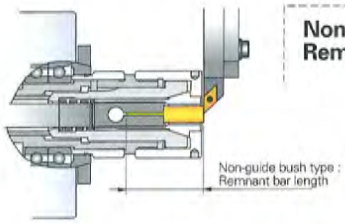
SR-32J type N

CNC AUTOMATIC LATHE [Non-Guide-Bush Type]

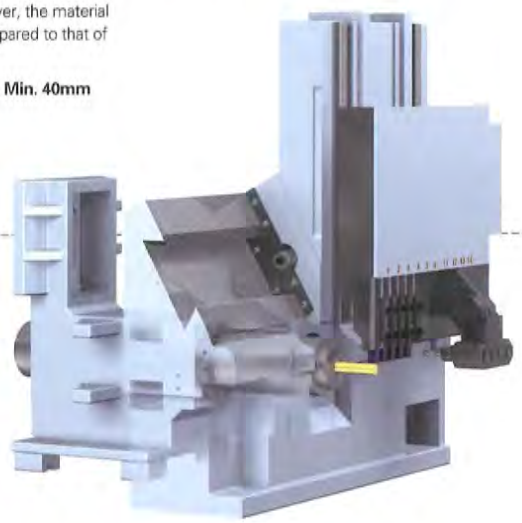
Elimination of a guide bush allows the effective use of materials for short-bar machining.

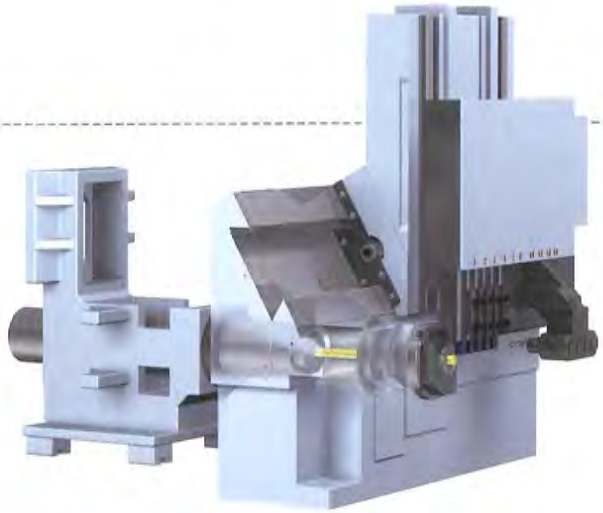
With the ordinary CNC Swiss type automatic lathe, a material equivalent to a length of passing through the guide bush from the material rear end becomes a remnant to be discarded. With the non-guide bush type, however, the material is clamped close to the machining position so that the remnant bar length is reduced by one third compared to that of the Swiss type. The latest N series reduces this remnant bar length to 70mm.

※ **Remnant bar length when the bar feeder used is a forward discharge type SR-32J type N : Min. 40mm**

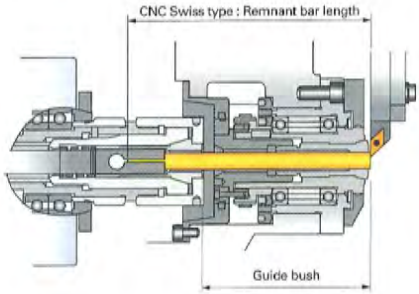


Non-guide bush type : Remnant bar length



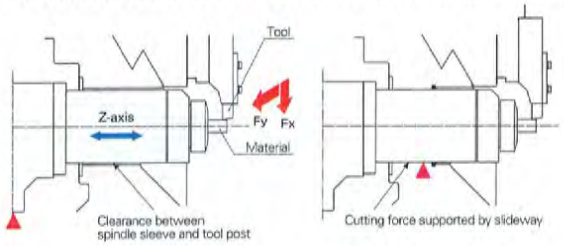


CNC Swiss type : Remnant bar length



High rigidity head stock for Type N

● Ordinary non-guide bush type ● For Type N series



Type N incorporates a spindle sleeve slideway structure.
This slideway supports the cutting force to realize highly rigid head stock.

Standard Machine Specifications

Item		SR-32J	SR-32J type N
Max. machining diameter		φ32mm(1-1/4in)	
Max. headstock stroke	Standard	310mm(12-13/64in)	Bar diameter×2.5
	With R.M.G.B. unit	280mm(11-1/32in)	(Max.80mm)(Max.3-5/32in)
Tool	Number of tools	6 tools	
	Tool shank	□16mm	
4-Spindle sleeve holder	Number of tools	Front 4 tools	
		Rear 4 tools	
	Max. drilling capability	φ13mm(33/64in)	
	Max. tapping capability	M12×P1.75	
Power driven attachment	Number of tools	Cross milling : 3 tools	
		Cartridge type : At 1 position／2 position	
	Max. drilling capability	φ8mm(5/16in)	
	Max. tapping capability	M6×P1.0	
	Spindle speed	Max.5,000min⁻¹	
	Drive motor	1.2kw	
Rapid feed rate		24m/min (X, Y, Z, ZB, XB)	
Main spindle indexing angle		C-axis control	
Main spindle speed		Max.7,000min⁻¹	
Main spindle motor		5.5kw(continuous)／7.5kw(30min./60%ED)	
Coolant tank capacity		174ℓ	
Dimensions (W×D×H)		2,711×1,275×1,705mm	
Weight		3,100kg	
Power consumption		6.2KVA	
A-weighted sound pressure : note-1		Max. 71dB	

Backworking Attachment Specifications

OP : Option

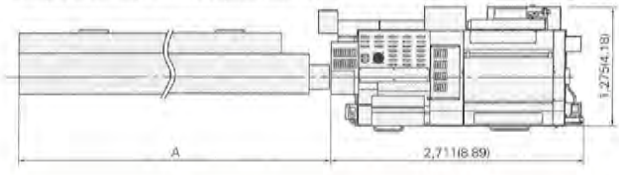
Item			Specifications
Max. chucking diameter			φ32mm(1-1/4in)
Max. length for front ejection			125mm(4-59/64in)
Max. parts projection length			45mm(1-49/64in)
Number of tools			4 tools
Max. drilling capability		Stationary tool	φ13mm(33/64in)
		Power driven tool	φ6mm(15/64in)(OP)
Max. tapping capability		Stationary tool	M10×P1.5
		Power driven tool	M 5×P0.8 (OP)
Power-driven att. spindle speed			Max.6,000min⁻¹ (OP)
Power-driven att. drive motor			0.5kw (OP)
Sub spindle indexing angle			C-axis control
Sub spindle speed			Max.7,000min⁻¹
Sub spindle motor			2.2kw(continuous)/3.7kw(15min./60%ED)

External Dimensions and Floor Space

unit : mm(ft)

●Bar Feeder

Type \ Length	A(mm)		
	2.5M	3.0M	4.0M
OS325E	3,600(11.81)	4,100(13.45)	5,100(16.73)
ASR X-32P	3,630(11.91)	4,130(13.55)	5,130(16.83)



Standard Accessories and Functions

1. CNC unit FANUC 32i-B
2. Operation panel 10.4-inch color LCD display
3. Pneumatic unit
4. Automatic centralized lubrication unit
5. Coolant level detector
6. Door interlock system
7. Broken cutoff tool detector
8. Parts ejection detector
9. Drive unit for revolving guide bush ※
10. Revolving guide bush unit ※
11. Main／Sub collet
12. C-axis control (Main／Sub)
13. Spindle clamp unit (Main／Sub)
14. 6-station tool holder □16mm
15. Drive system for power-driven attachment (including the 3-spindle cross-milling unit)
16. 4-spindle sleeve holder
17. Back 4-spindle unit
18. Parts conveyor
19. Air purge for revolving guide bush ※
20. Main spindle air purge unit ※※
21. Sub spindle air purge unit
22. Sub spindle air blow unit
23. Work light
24. Leakage breake

Optional Accessories and Functions

1. Coolant flow detector
2. Water removal unit
3. Beacon
4. Parts separator unit A
5. Main spindle inner tube ＊※
6. Rotary magic guide bush unit ※
7. Drive unit for power-driven attachment B
8. Parts ejector (Air cylinder type)
9. Parts ejector (Spring type)
10. Parts ejector with guide tube ※
11. Parts stopper unit ※
12. Coolant unit 1.5MPa
13. Coolant unit 6.9MPa
14. Coolant pipings
15. Spindle 15° indexing unit
16. Stopper ※※
17. Automatic bar feeder interface
18. Compliant with the RS-232C interface
19. Transformer
20. Safety relay module version
21. Transformer CE marking version
22. Transformer CE marking specifications

※ SWISS type only ※※ type N only
Units with ＊※ mark differ to type C and type N

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.
note-2 : ● In order to use the rotary tool, the driven system for power-driven tool type B is needed.

※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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