

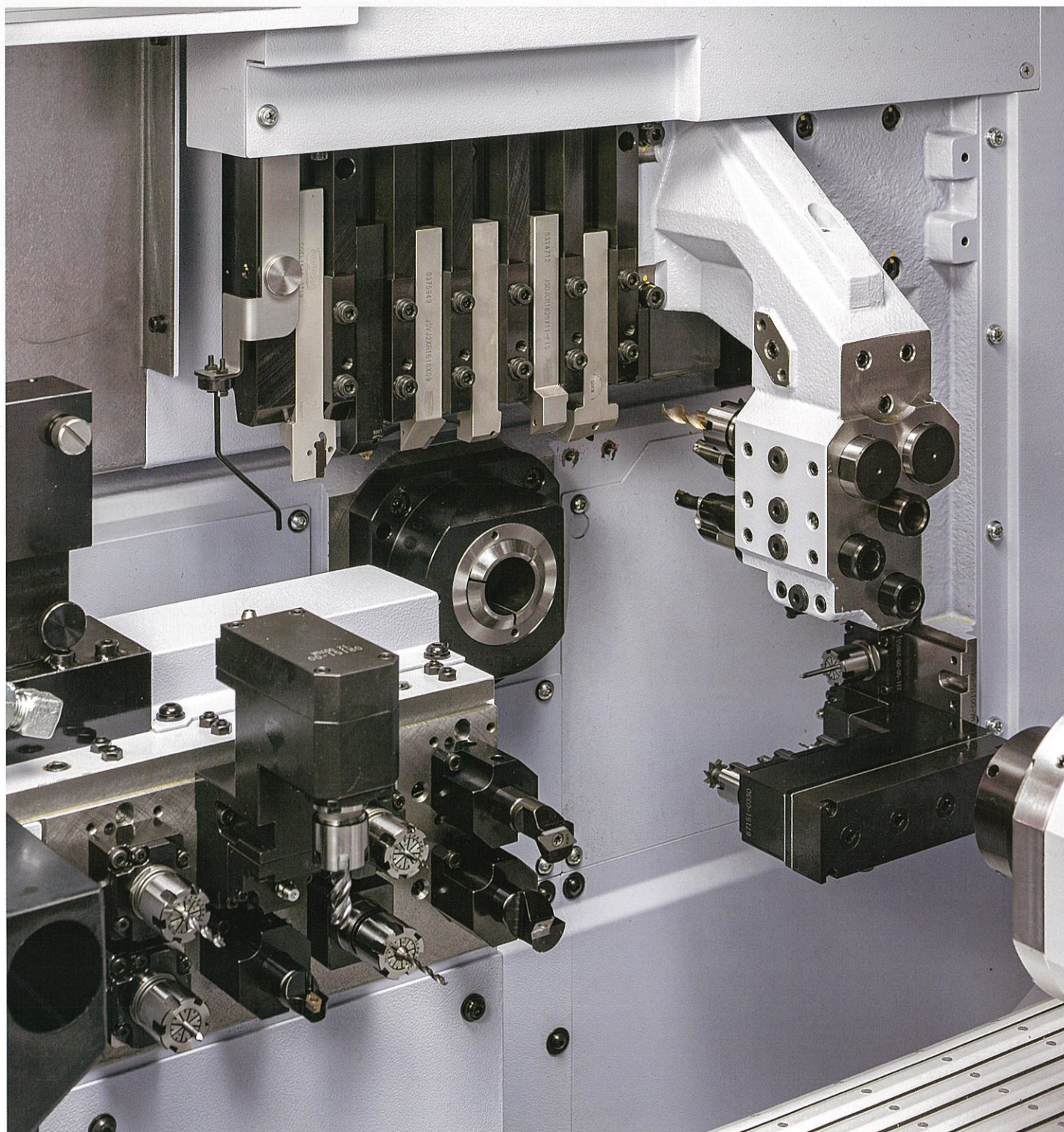


CNC SWISS TYPE AUTOMATIC LATHE

SR-32JIII



Increased flexibility in response to Market demands
for greater capability for large diameter machining



The SR-32JII series offers a choice of layouts to give the User even more capability to help meet their manufacturing requirements.

Star Micronics has again listened to Customers' requirements and produced this flexible machine to help them respond to ever-changing needs for part machining in the global arena. The SR-32JII series enables medium complex to complex components to be produced whilst still offering unrivalled high rigidity and accuracy.

There are two types of the latest model "SR-32JIII" - type A with a back working 6 spindle unit and type B with back working 8 spindle unit

SR-32JIII

type A

CNC SWISS TYPE AUTOMATIC LATHE

- Machine composition :
- Main spindle
 - Sub spindle
 - Gang type Tool post
 - Cartridge-type 5-spindle cross drilling unit
 - Cartridge-type 6-spindle cross drilling unit
 - 6-spindle type cross drilling unit
 - Backworking 6-spindle unit



type B

CNC SWISS TYPE AUTOMATIC LATHE

- Machine composition :
- Machine composition :
- Main spindle
 - Sub spindle
 - Gang type Tool post
 - Cartridge-type 5-spindle cross drilling unit
 - Cartridge-type 6-spindle cross drilling unit
 - 6-spindle type cross drilling unit
 - Backworking 8-spindle unit with Y-axis control

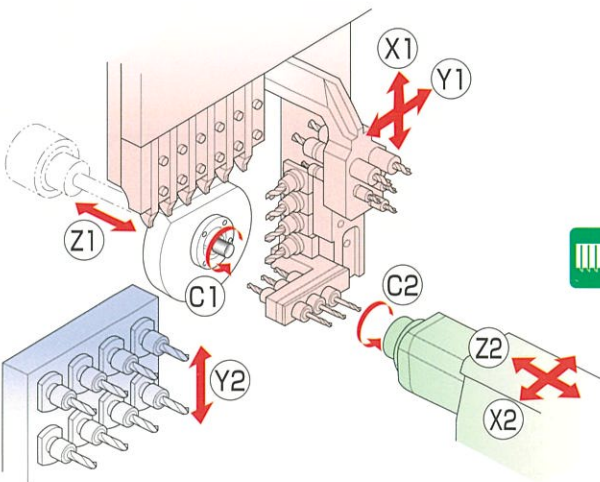


Illustration of tool layout : type B

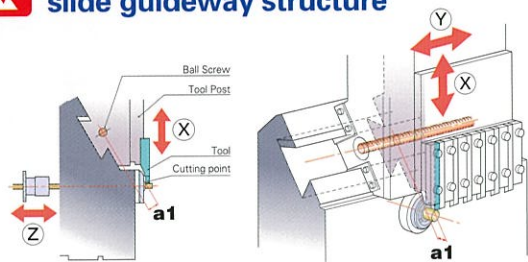
TOOLING SYSTEM

■ Tool holder	Turning tool	6 tools
■ 5-spindle sleeve holder	Front-end stationary tool	5 tools
	Rear-end stationary tool	5 tools
■ Power driven tool	Special tool for cross drilling : 3 tools(ER20)+ Cartridge type (2pos)	
	4 tools(ER16)+ Cartridge type (2pos)	
	6 tools(ER16)	
■ Tool post specially designed for back working unit	typeA	6 tools
	typeB	8 tools(with Y-axis control)

Accuracy, functionality and productivity upgraded from

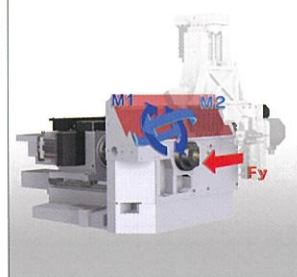
Achievement in High Rigidity and High Accuracy

A rigid tool post with a slant-type slide guideway structure



The Y axis guideway of the tool post employs a slant-type slide guideway. This structure allows the X and Y axis guideways to be arranged radially around the cutting point in order to further improve machine rigidity. In addition, a linear line passing the ball screw center and in parallel with the Y axis guideway can be close (a 1) to the cutting point and therefore further increases rigidity and helps improve both accuracy and surface finish on your mill/turn components.

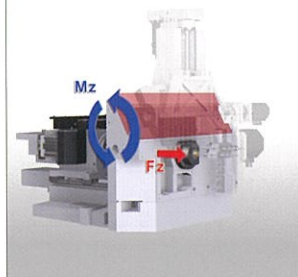
Comparison of moment load by cutting force



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

Slant type ● $M_y=1$
Vertical type ● $M_y=1.3$
Horizontal type ● $M_y=1.9$

Comparison of moment load by feed force

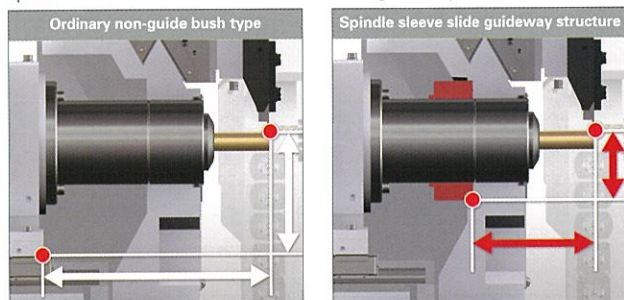


As for the feed force F_z , the moment load M_z of the slant type is the smallest when compared to that of the vertical type and horizontal type.

Slant type ● $M_z=1$
Vertical type ● $M_z=1.3$
Horizontal type ● $M_z=1.5$

A highly rigid spindle sleeve structure when using N.G.B. mode

The N.G.B type introduces a spindle sleeve slide guideway structure. By supporting the cutting force on the guideway, the headstock rigidity is maximized and therefore spindle deflection is minimized to ensure machining accuracy is maintained.

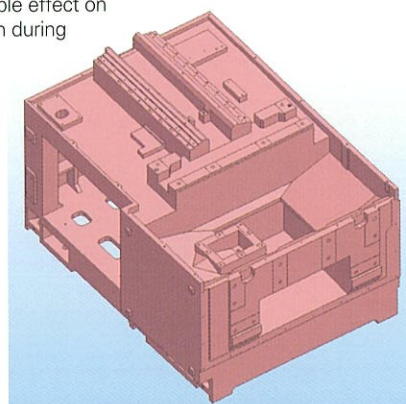


A high rigid tool post specially designed for back working

A dovetail structure is incorporated in the Y2 slideway on the type B back working tool post. Type A also improves tool post rigidity by increasing the casting thickness.

Stronger casting implemented

The base casting thickness is increased by 25% compared to the previous model SR-32J. This improves the frame rigidity and demonstrates remarkable effect on suppression of vibration during machining and thermal displacement during continuous operation.



A built-in spindle for high indexing accuracy

The main and sub spindle employ a built-in structure to enhance spindle indexing speed and accuracy with a built-in sensor.

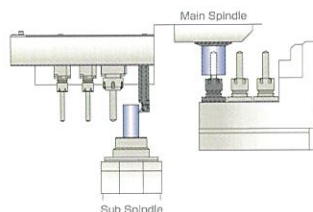
Work holding pressure increased by hydraulic cylinder

The hydraulic cylinder helps to improve the workpiece gripping force and allows high machining accuracy by reducing workpiece deflection even under extreme load.

Pursuit of High Productivity

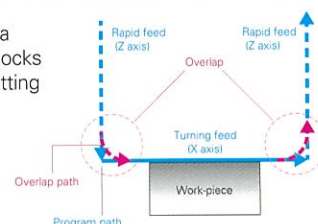
Machining time reduction (mechanical)

Front-end/rear-end overlap machining is optimized and cutting time is minimized by numerous back working variations.



Machining time reduction (control system)

With a smart overlap function, a path between NC command blocks is overlapped to reduce non-cutting time



every angle

Improvement in High Functionality and Machining Ability



The G.B. / N.G.B. switching mechanism

The guide bush type and non-guide bush type are switched over according to the total length of machining parts to realize most suitable machining.



Back working tool post for a broader range of complex machining

A back working tool post is mounted, which can accommodate a maximum of 8 static and/or power tools (type B) with Y axis control and a maximum of 6 static and/or power tools *1 (type A). Various power tools for slotting, milling, etc. are available to meet versatile complex machining on the rear side.

*1 : When selecting the power tool drive unit B (optional).



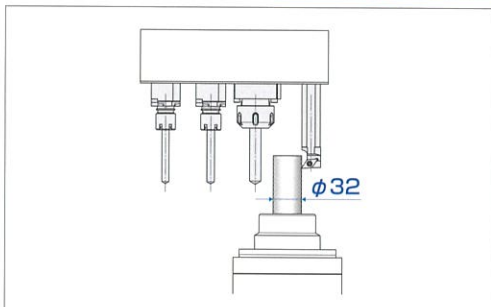
Selectable cross drilling unit

The cross drilling unit includes three types; 5-spindle type (ER20 x 3 tools + 2-pos. cartridge), 6-spindle type (ER16 x 4 tools + 2-pos. cartridge) and 6 spindle type (ER16 x 6 pcs.).

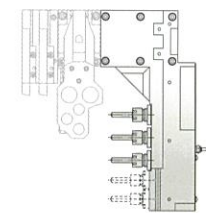
Enlarged tool-to-tool pitch of the back working tool post

The back working tool post has an increased pitch between two tools for OD turning so that large-diameter (max. $\phi 32$ mm) turning is possible without restriction of neighboring tools. Details on page 7 and 8.

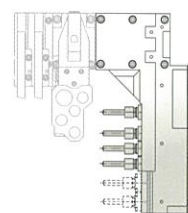
Details in page 7 and 8



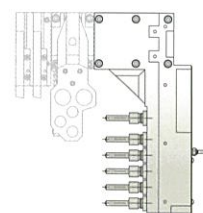
Details in page 5 and 6



□ 5-spindle type cross drilling unit
3 tools(ER20) + Cartridge type (2pos)



□ 6-spindle type cross drilling unit
4 tools(ER16) + Cartridge type (2pos)



□ 6-spindle type cross drilling unit
6 tools(ER16)

04

Improvement in Operability and Workability

The movable operation panel

A movable operation panel with 10.4-inch color display is mounted. It allows machine operation from the best position.



The guide bush switching mechanism (G.B./N.G.B.)

The new switching mechanism (G.B./N.G.B.) employs locate blocks so that the switchover is easier and highly reproducible.

A flip-up door

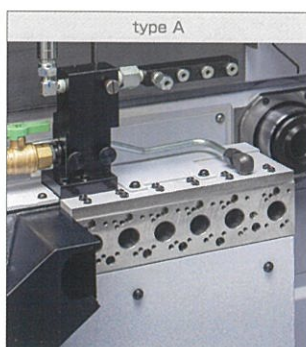
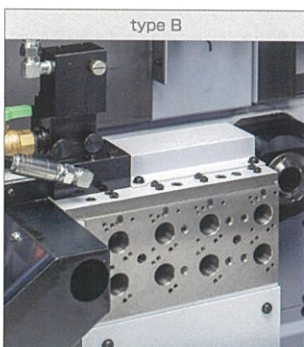
Both the headstock chamber and the cutting chamber use a large-opening, flip-up door to give the user plenty of room to work.

Discharge of machining parts during operation stop

The ON/OFF switch is mounted outside the product conveyor. Machining parts can be manually discharged even while the machine is stopped.

Structural change in the back working tool post

The lower part of the tool mounting surface is set vertically to expand the chip discharge space.



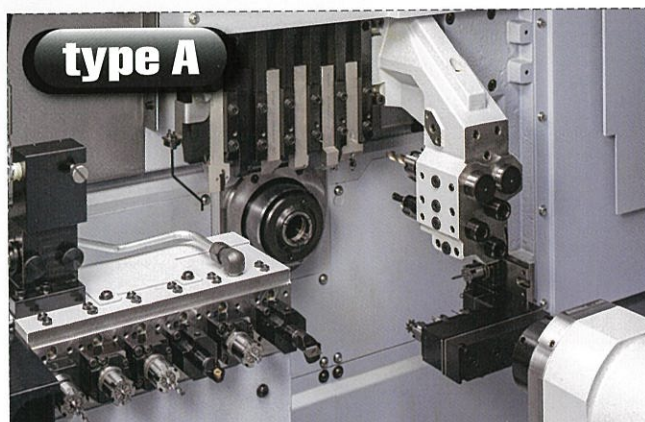
Increased coolant discharge rate for back working tool post

The motor output of the coolant pump for the back working tool post has been increased from 250W to 400W. This helps to reduce problems caused by chips.

Enhanced support software for various operations and tasks

- 1 The "counter screen function" is improved to display the number of required components, remaining machining time and machining finish time for the pre-set number of parts.
- 2 A maintenance timer is increased and a maintenance counter is added to display a message when the counter finishes counting.
- 3 A step to follow next blinks on the operation display for switching between the G.B type and N.G.B type to enable speed of changeover.

Two types of models, A and B,
so the User can choose the optimum functions to meet their



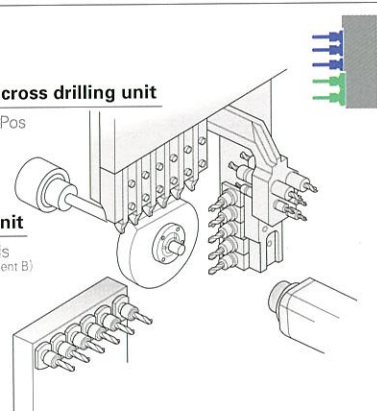
01

Gang type Tool post
Cartridge-type 5-spindle cross drilling unit

ER20x3 tools, Cartridge type 2Pos

Tool post specially designed
for back working unit
Backworking 6-spindle unit

Power-driven tool : Max. 6 tools
(OP : Drive unit for power-driven attachment B)



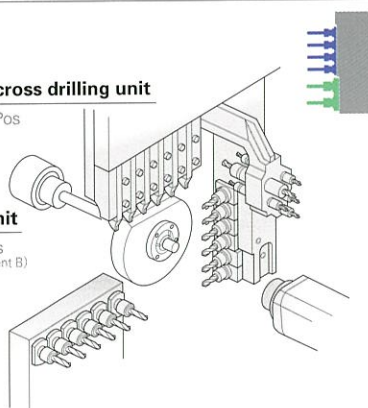
02

Gang type Tool post
Cartridge-type 6-spindle cross drilling unit

ER16x4 tools, Cartridge type 2Pos

Tool post specially designed
for back working unit
Backworking 6-spindle unit

Power-driven tool : Max. 6 tools
(OP : Drive unit for power-driven attachment B)



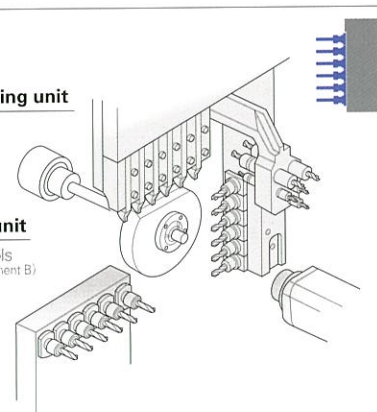
03

Gang type Tool post
6-spindle type cross drilling unit

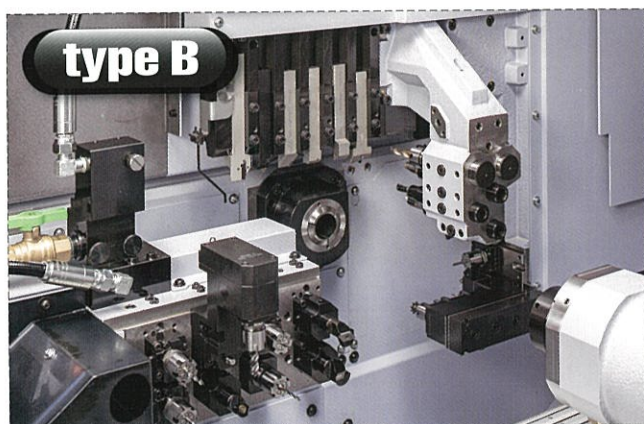
ER16x6 tools

Tool post specially designed
for back working unit
Backworking 6-spindle unit

Power-driven tool : Max. 6 tools
(OP : Drive unit for power-driven attachment B)



05



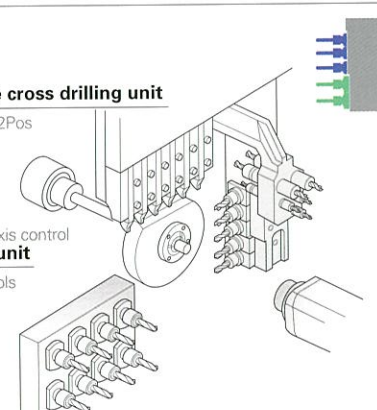
04

Gang type Tool post
Cartridge-type 5-spindle cross drilling unit

ER20x3 tools, Cartridge type 2Pos

Tool post specially designed
for back working unit with Y-axis control
Backworking 8-spindle unit

Power-driven tool : Max. 8 tools



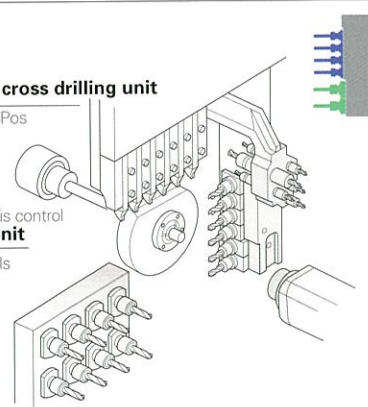
05

Gang type Tool post
Cartridge-type 6-spindle cross drilling unit

ER16x4 tools, Cartridge type 2Pos

Tool post specially designed
for back working unit with Y-axis control
Backworking 8-spindle unit

Power-driven tool : Max. 8 tools



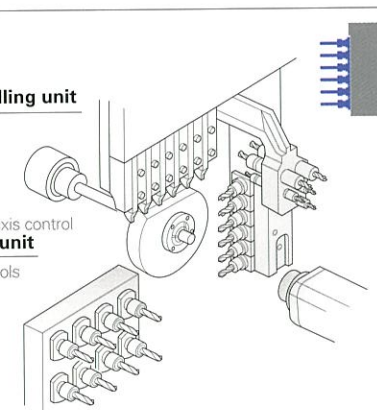
06

Gang type Tool post
6-spindle type cross drilling unit

ER16x6 tools

Tool post specially designed
for back working unit with Y-axis control
Backworking 8-spindle unit

Power-driven tool : Max. 8 tools



requirements

TOOLING SYSTEM

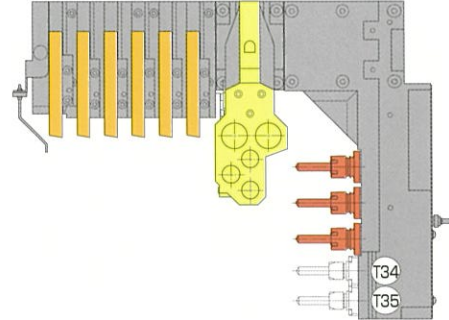
Cartridge-type cross drilling unit – 5-spindle / 6-spindle

type A

type B

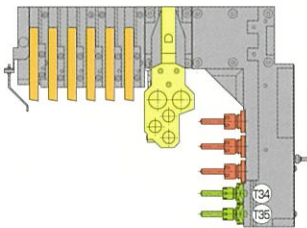
Station for mounting tools for more evolved complex machining. The 2 cartridge stations accommodate tools for milling, front drilling, thread whirling, slotting, polygon machining, etc. These positions further increase the flexibility of the machine.

Basic type



※ The 5-spindle type is shown.

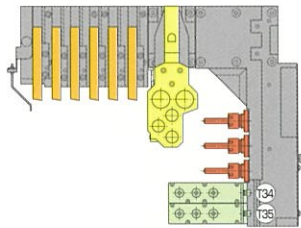
- Tool
- Milling unit
- Cross drilling only
- 3-spindle front drill unit
- Sleeve holder
- Quad-speed milling unit
- 2-spindle front drilling adaptor
- Special unit



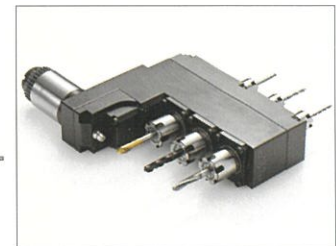
VARIATION 01
Cartridge (2 pos.)



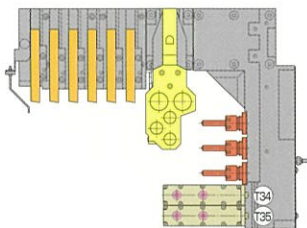
- Milling unit [T34 / T35]
- or
- Quad-speed milling unit [T34 / T35]



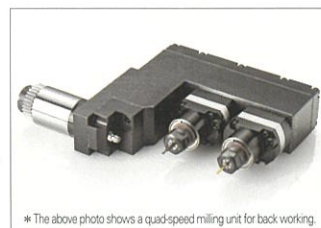
VARIATION 02
Cartridge (2 pos.)



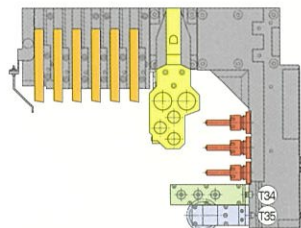
- 3-spindle front drilling unit [T34 / T35]



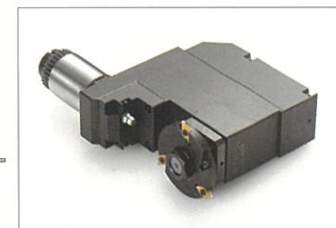
VARIATION 03
Cartridge (2 pos.)



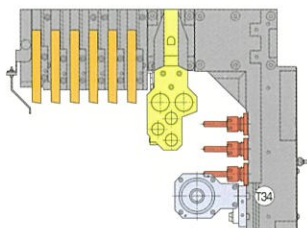
- 2-spindle front drilling adaptor×2 [T34, T35]
- Quad-speed milling unit for back working×4



VARIATION 04
Cartridge (2 pos.)



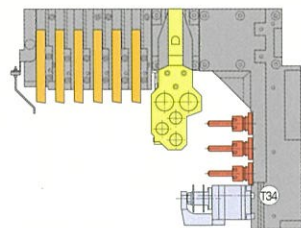
- 3-spindle front drilling unit [T34]
- Polygon machining unit [T35]



VARIATION 05
Cartridge (1 pos.)



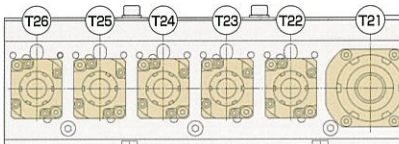
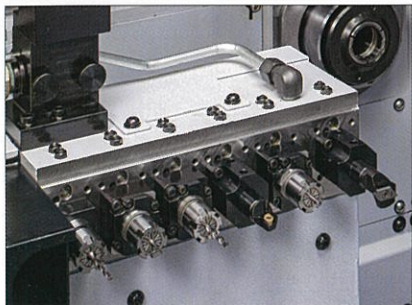
- Thread whirling unit [T34]



VARIATION 06
Cartridge (1 pos.)



- Slotting unit [T34]

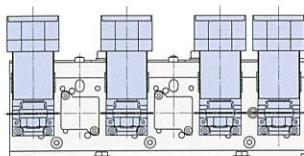


- Max. 6 power tools accommodated
- Various power tool units available
- Coolant-through tool compliant

case01

Mounting of slotting unit

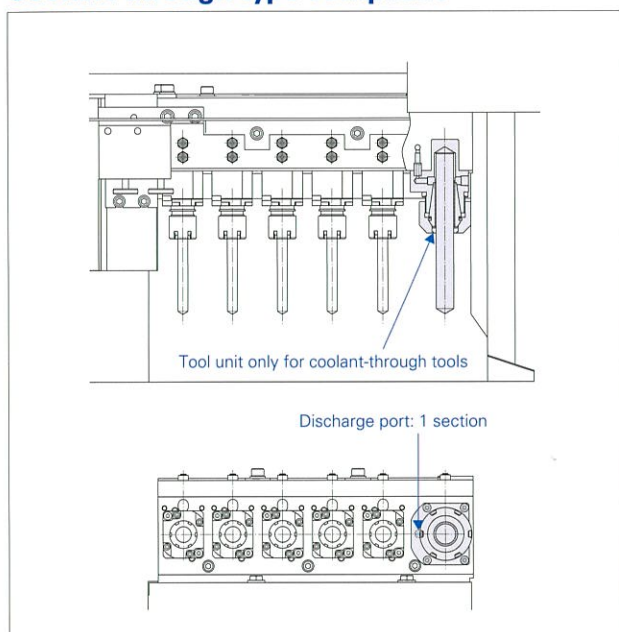
- Mounting is possible onto T21/T22/T24/T26 positions.



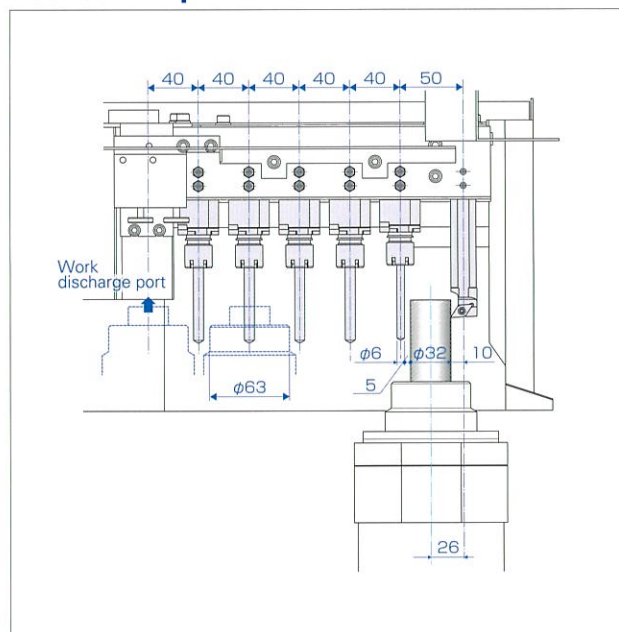
* The above photo shows a quad-speed milling unit for back working.

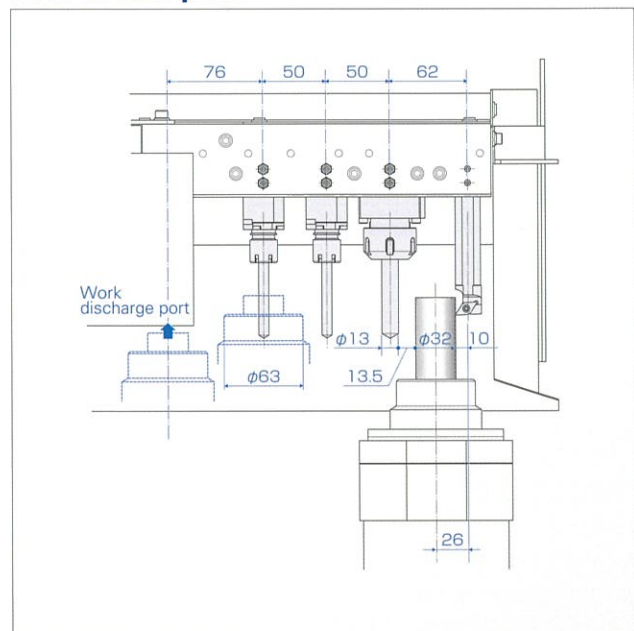
07

Coolant-through type compliant



Tool-to-tool pitch



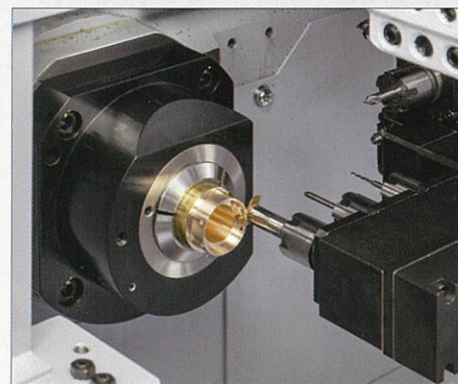
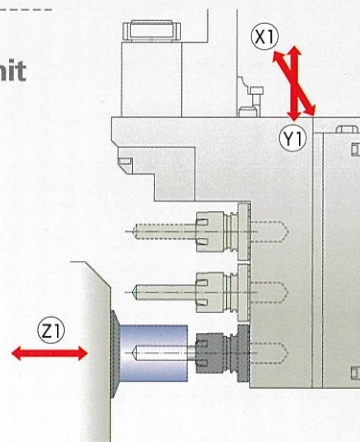


Machining variations for wider needs

Front working variation

VARIATION 01

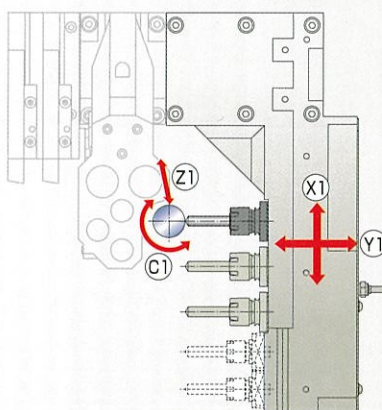
**Machining by
front working drilling unit**



Slitting by T-slot cutter

VARIATION 02

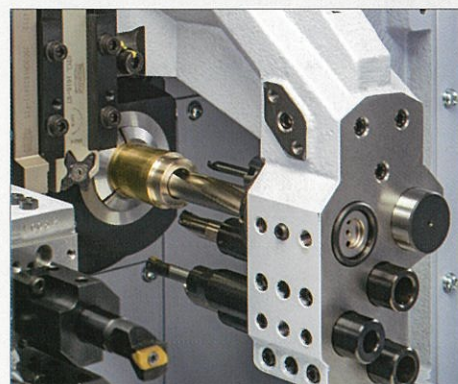
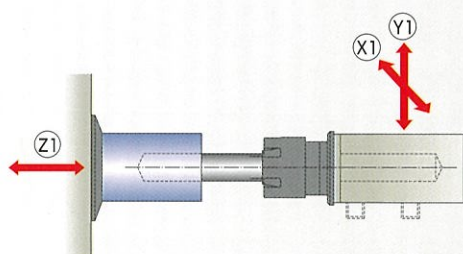
**Machining with
cross drilling unit**



Cross hole ID chamfering

VARIATION 03

Front hole drilling

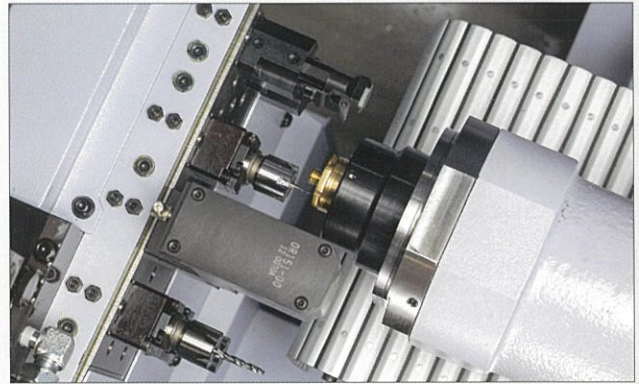
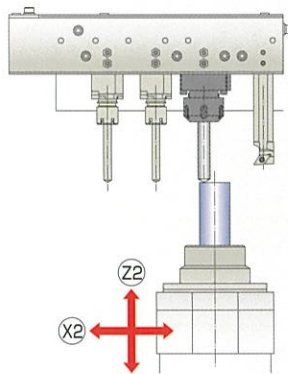


Large-diameter hole drilling

Back working variations

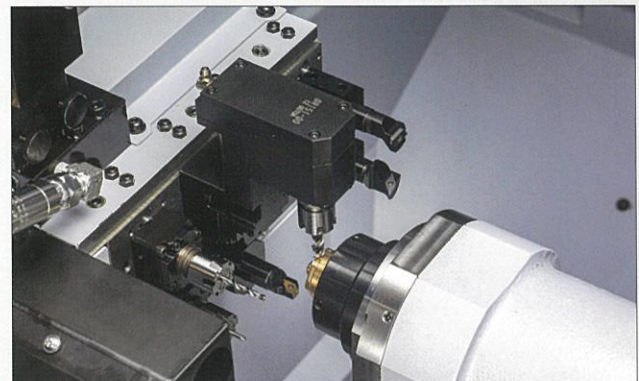
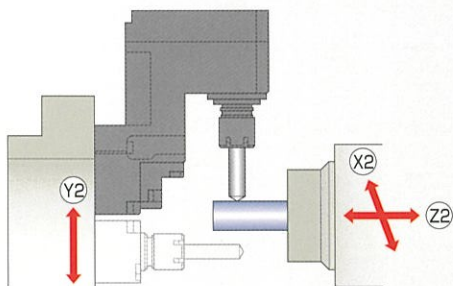
VARIATION 01

Rear eccentric drilling



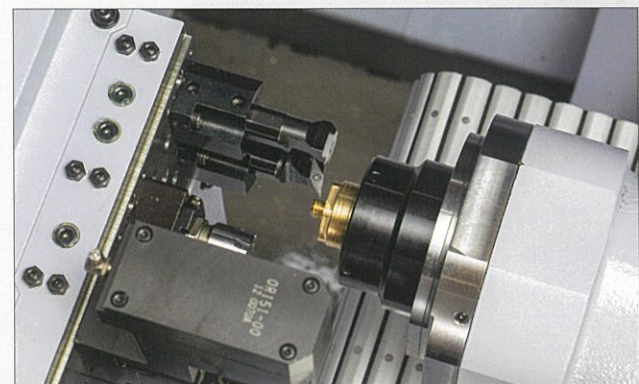
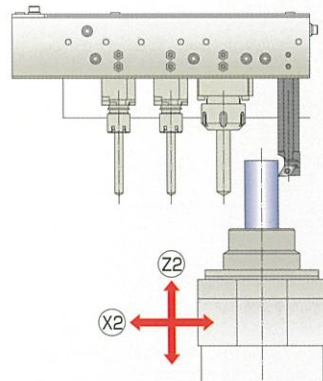
VARIATION 02

Rear cross milling * type B



VARIATION 03

Rear OD machining



□ Standard Machine Specifications

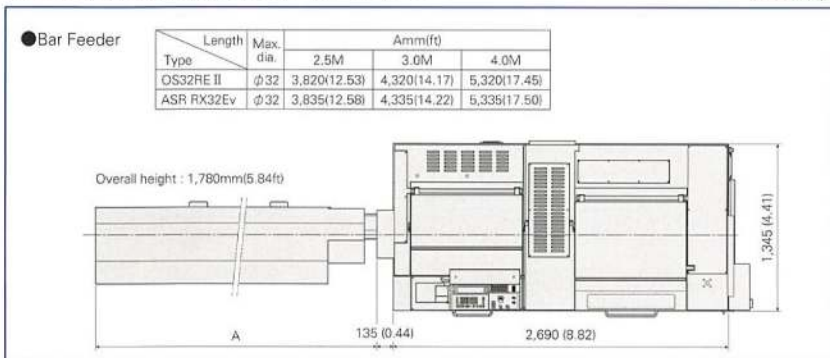
Item		Specifications
Max. machining diameter		φ32mm(1-1/4in) OP: φ34mm(1-11/32in)
Max. headstock stroke	Standard	320mm(12-19/32in)
	R.M.G.B. type	286.5mm(11-9/32in)
	N.G.B. type	Bar diameter×2.5(Max.80mm)(Max.3-5/32in)
Tool	Number of tools	6 tools
	Tool shank	□16mm
5-Spindle sleeve holder	Number of tools	Front 5 tools Rear 5 tools
	Max. drilling capability	φ13mm(33/64in)
	Max. tapping capability	M12×P1.75
Power driven attachment	Number of tools	Cross milling 3 tools(ER20) + Cartridge type 2 positions Cross milling 4 tools(ER16) + Cartridge type 2 positions Cross milling 6 tools(ER16)
	Max. drilling capability	φ10mm(25/64in)
	Max. tapping capability	M8×P1.25
	Spindle speed	Cross milling : Max.6,000min ⁻¹ Cartridge-type tool : Max.8,000min ⁻¹
	Drive motor	2.2kW(continuous) / 3.0kW(5min./30%ED)
	Rapid feed rate	35m/min (X1, X2, Y1, Z1, Z2), 24m/min (Y2) : type B only
	Main spindle indexing angle	C-axis control
Main spindle speed		Max.8,000min ⁻¹
Main spindle motor		7.5kW(continuous) / 11.0kW(10min./25%ED)
Coolant tank capacity		275 ℓ
Dimensions (W×D×H)		2,690×1,345×1,780mm
Weight		4,100kg
Power consumption		8.1kVA
A-weighted sound pressure : note-1		Max.77dB

□ Backworking Attachment Specifications

Item		Specifications
Max. chucking diameter		φ32mm(1-1/4in) OP: φ34mm(1-11/32in)
Max. length for front ejection		125mm(4-59/64in)
Max. parts projection length		45mm(1-49/64in)
Unit especially for backworking note-2	Number of tools	6 tools(type A) 8 tools(type B)
	Max. drilling capability	Stationary tool : φ13mm(33/64in) Power driven tool : φ8mm(5/16in)
	Max. tapping capability	Stationary tool : M10×P1.5 Power driven tool : M 6×P1.0
	Power-driven att. spindle speed	Max.6,000min ⁻¹
	Power-driven att. drive motor	1.0kW(continuous) / 1.2kW(5min./30%ED)
Sub spindle indexing angle		C-axis control
Sub spindle speed		Max.8,000min ⁻¹
Sub spindle motor		3.7kW(continuous) / 5.5kW(10min./40%ED)

□ External Dimensions and Floor Space

unit : mm(ft)



※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.

STAR MICRONICS CO., LTD.

Machine Tools Division

1500-34 Kitanoya, Misawa, Kikugawa, Shizuoka, 439-0023 Japan
TEL:+81-537-36-5594 FAX:+81-537-36-5607

<http://www.star-m.jp/eng/>

Star CNC Machine Tool Corporation
123 Powerhouse Road, Roslyn Heights, NY 11577, U.S.A.
TEL:+1-516-484-0500 FAX:+1-516-484-5820

Star Micronics GB Limited
Unit 1 Riverlands Business Park Paynesway DERBY DE21 7BZ
TEL:+44-1332-86-44-55 FAX:+44-1332-86-40-05

Star Micronics GmbH
Robert-Grob-Str.1, D-78305 Neuenburg, Germany
TEL:+49-7082-7920-0 FAX:+49-7082-7920-20

Star Micronics AG
Lautstrasse3, CH-8112 Otelfingen, Switzerland
TEL:+41-43-411-60-60 FAX:+41-43-411-60-66

Star Machine Tool France
90 Allée de lais, ZI, 74300 Thyez Haute Savoie, France
TEL:+33-450-96-05-97 FAX:+33-450-96-91-54

Shanghai Xingang Machinery Co., Ltd.
2F, 229 Fute Rd.N. The China (Shanghai) Pilot Free Trade Zone
TEL:+86-21-5988-2100 FAX:+86-21-5988-2101

Star Micronics (Thailand) Co., Ltd.
289/23 M.13 Soi Kingkaew 25/1, Kingkaew Rd., T.Rachathewa A.Bangplee Samutprakarn 10540, Thailand
TEL:+66-2-186-8945-47 FAX:+66-2-183-7845

9001 ISO 14001
CERTIFIED

2021.05_Ver1.0_1



AMT Machine Tools LTD.
Canadian Distributor

73 Galaxy Blvd. Units 16 & 17, Rexdale, Ontario - M9W 5T4
Office: 416-675-7760 | Fax: 416-675-6988
www.AMTmachine.com | sales@amtmachine.com

□ Standard Accessories and Functions

1. CNC unit FANUC 32i-B
2. Operation panel 10.4-inch color LCD display
3. Manual pulse generator
4. Pneumatic unit
5. Hydraulic unit
6. Coolant level detector
7. Automatic centralized lubrication unit
8. Door interlock system
9. Cs contouring control (Main / Sub)
10. Spindle clamp unit (Main / Sub)
11. Spindle cooling unit
12. Revolving guide bush unit
13. Drive unit for revolving guide bush
14. Air purge for revolving guide bush
15. Main / Sub collet
16. 6-station tool holder □16mm
17. Cross drilling unit
(Cartridge type - 5-spindle / 6-spindle, special tool for cross drilling unit - 6-spindle)
18. 5-spindle sleeve holder
19. Broken cutoff tool detector
20. Backworking attachment
21. Back 6-spindle unit ※type A
22. 8-spindle backworking unit with Y axis control function ※type B
23. Drive unit for power-driven (8-spindle backworking unit) ※type B
24. Sub spindle air purge unit
25. Parts conveyor
26. Work light
27. Leakage brake

□ Optional Accessories and Functions

1. Coolant flow detector
2. Water removal unit
3. Oil mist filter
4. Beacon
5. Main spindle inner tube
6. Rotary magic guide bush unit
7. Non-guide bush type
8. Feed arrow steady rest
9. Drive unit for power-driven attachment B ※type A Only
10. Parts ejector (Spring type)
11. Parts ejector (Air cylinder type)
12. Parts ejector with guide tube
13. Parts stopper unit
14. Coolant unit (6.9MPa/2.5MPa/0.7MPa)
15. Coolant unit signal cable
16. Coolant unit power cable
17. Coolant valve
18. Coolant pipings
19. Automatic bar feeder interface
20. LAN/RS232C interface
21. Transformer
22. Transformer CE marking version
23. Transformer CE marking specifications

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.(TypeA)