EXCELLENCE

THROUGH

EXPERTISE

R4530 CNC TAPPING CENTER

ARES·SEIKI®

R Series 4530

CNC DRILLING & TAPPING CENTER

DIRECT DRIVE SPINDLE ▪ HIGH SPEED 3 AXES RAPID TRAVERSE ▪ HIGH RESPONSE SERVO SYSTEM

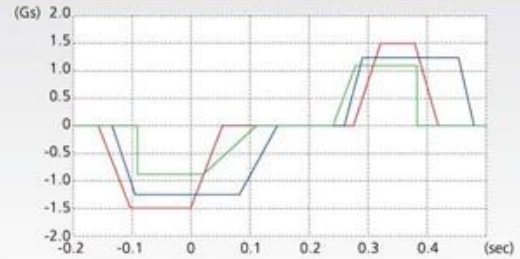
NEWLY DESIGNED MACHINE STRUCTURE AND SERVO SYSTEM

- Spindle speed 60~10,000rpm (STD)
- Spindle speed 60~15,000 / 20,000 / 24,000rpm(OP)
- Rigid tapping 4,000rpm
- Spindle nose taper BT30 (STD) / BBT30 (OP)
- 3 axes rapid traverse X, Y : 48m/min, Z : 60m/min
- Fully enclosed heat isolated electric cabinet
- High speed mechanical ATC system T-T : 1.6 sec
- Directly coupled spindle drive system

Mitsubishi
M70 Controller

FANUC
0iM Controller

R-SERIES CNC PRODUCTION CENTER

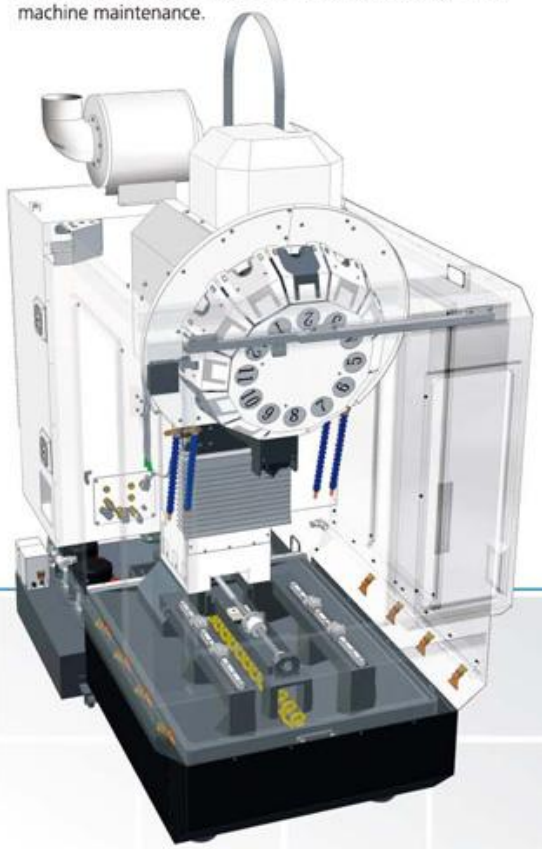


— X-axis acceleration about 1.5G
— Y-axis acceleration about 1.2G
— Z-axis acceleration about 1.1G

- The spindle is directly coupled to the drive motor, which eliminates the transmission error frequently occurring on belt transmission system during high speed tapping. It also extends to service life.
- The machine is equipped with the latest Mitsubishi HF series servomotor, featuring high response speed and horsepower output. Acceleration speeds on three axes reach to 1.5 / 1.2 / 1.1 G, which enormously shorten positioning time especially when performing a short travel.
- Optional low inertia spindle motor. Top tapping speed of 4,000 rpm. Full acceleration in 0.3 seconds. Major reduction in tapping time.

CHIP PURGING SYSTEM (OP)

Full surround purging system of work station integrated with chip conveyer facilitates clean processing and machine maintenance.



DIRECT DRIVE SPINDLE

Direct Drive Spindle : The direct coupled spindle eliminates power transmission loss to develop the highest efficiency possible. The spindle is mounted on four P4 high precision taper roller bearings with the addition of a constant temperature regulation system provides outstanding rigidity.

THE FASTEST SPINDLE ACCELERATION (OP)

Reduced Non-cut Time and Spindle Acceleration/Deceleration

Special design is adopted for the Mitsubishi low inertia spindle motor. Spindle acceleration is quick, from 0 to 15,000rpm in only 0.8 seconds. Especially when performing rigid tapping, frequent acceleration and deceleration is often required. High speed spindle acceleration saves considerable machining time.

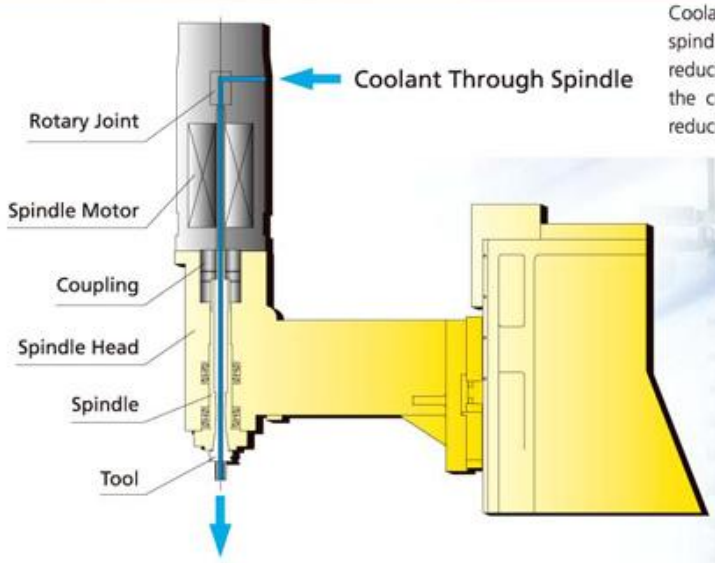
HIGH SPEED

Travel Speed : Provides 48m/min on X and Y axis, and 60m/min on Z axis.
Tapping : The rigid spindle is directly coupled to the motor. This reduces transmission error and maximizes transmission power. Special design is adopted for the Mitsubishi controller with low inertia spindle motor. High tapping speed is up to 4,000 rpm.
Tool Change : Mechanical type system. Structurally sound, stable and reliable. Fast tool changing (T.-T. : 1.6 Sec / C-C : 2.5 Sec)

HIGH RIGIDITY

Machine Structure : Being manufactured from high rigidity cast iron, the machine structure is computer analyzed for maximum rigidity user, fast travel and heavy duty machining conditions.

COOLANT THROUGH SPINDLE



Coolant flow is fed by a high pressure pump through the spindle and out the tip of the cutting tool, immediately reducing any heat at the cut point. This substantially increases the cutting efficiency while extending tool life, this system reduces thermal deformation and provides stable accuracy.

CTS FACILITIES

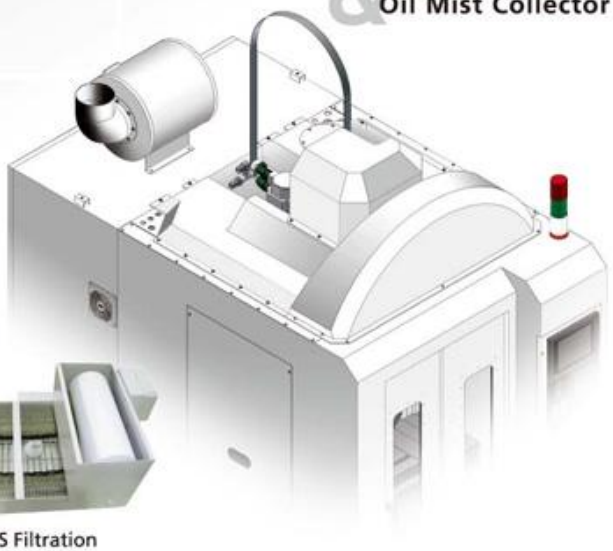

Oil Cooler


CTS Spindle Motor


Water Tank


CTS Filtration

Full Enclosed Splash Guard & Oil Mist Collector

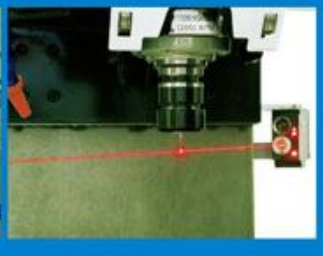


PRECISION TESTING

Laser Interferometer
Tap Calibrator

Bar Testing

Damaged Cutting Tool Sensor



R Series 4530 CNC DRILLING & TAPPING CENTER

DIRECT DRIVE SPINDLE · HIGH SPEED 3 AXES RAPID TRAVERSE · HIGH RESPONSE SERVO SYSTEM

MACHINE SPECIFICATIONS

	Unit	Mitsubishi	FANUC
Table size	mm	500 x 320	
Max. table load	kg	200	
Longitudinal table travel (X)	mm	450	
Cross table travel (Y)	mm	300	
Vertical head travel (Z)	mm	300	
Table to spindle nose	mm	170 ~ 470	
Spindle taper		BT30	
Pull stud		MAS403 P30T-1(45°)	
Spindle motor	kW	5.5 / 3.7	3.7 / 2.2
X drive motor	kW	1.0	1.6
Y drive motor	kW	1.0	1.6
Z drive motor	kW	2.0	3.0
Spindle speeds	rpm	10000	
X, Y, Z axis rapid traverse	m / min	48 / 48 / 60	
Magazine capacity		12	
Max. tool weight	kg	3	
Max. tool length	mm	200	
ATC time	sec	1.6 (T-T)	
	sec	2.5 (C-C)	
Floor space	mm	1200 x 2230 x 2480	
Net weight	kg	2100	

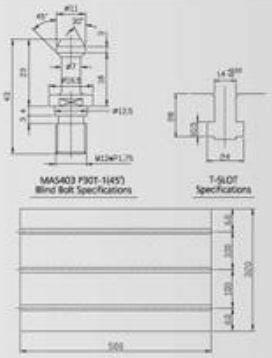
CONTROLLER SPECIFICATIONS

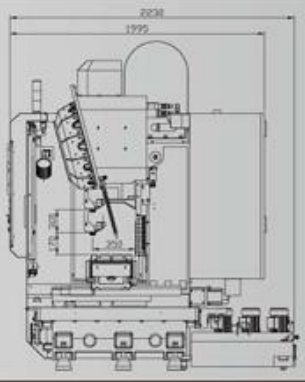
	Mitsubishi	FANUC
	M70-B	0iM
Max. controlled axis	4	4
Max. simultaneous axis	4	4
Standard controlled axis	3	3
Program storage length	600m	640m
Work piece coordinates	54	54
Macro common variables	400	700
Tool offset pairs	400	400
Conversational programming	NAVI	Manual Guide 0i
Monitor	8.4" TFT LCD	
Multi-language display	O	O
ABS servo motor	O	O
Tool length compensation	O	O
Tool path compensation	O	O
On-screen drafting	O	O
High speed data serve & Ethernet	O	OP
High speed & high accuracy machining control mode	G05.1 Q1	
Interface	RS232 / RJ45	RS232
Memory card input / output	O	O

O: Standard **OP: Option**

☆ Tool change time supplied with standard 60Hz power. For electrical requirements other than this standard, please contact one of our personnel.

MACHINE DIMENSIONS





STANDARD ACCESSORIES

- Toolbox and tools
- Auto. lubrication system
- Tool coolant system
- Spindle air blow system
- Leveling bolts and pads
- Direct drive spindle system
- Work light
- Dual electric cases (Heat insulated)
- Dual-color alarm light
- Screw-type chip conveyer
- TFT LCD

OPTIONAL ACCESSORIES

- Mitsubishi 64ASM Controller
- Transformer / stabilizer
- Work piece air blow system
- 15,000 / 20,000 / 24,000rpm high speed spindle (With spindle oil cooling system)
- Coolant through spindle (CTS)
- CTS filter
- Air gun / Water gun
- Surround chip flushing system
- Oil water partition
- Auto. tool length measurement
- Damaged cutting tool sensor
- Full enclosed splash guard
- Oil mist collector
- Auto. door
- High speed & high accuracy machining control mode G05 P10000 (Mitsubishi M70-A)
- The 4th axis (NC Indexing Table)
- Fifth axis (4th axis with sloped rotary table)

☆ ARES·SEIKI reserves the right to change the specifications of it's machines as technology develops without prior notice.

R Series

ARES-SEIKI®

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CE

BIG-PLUS SPINDLE SYSTEM
FACE & TAPER CONTACT

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