FAIR FRIEND • ENGINEERING • EXCELLENCE • LEADERSHIP • EXPERTISE • RELIABILITY

FFG FEELER®

INNOVALUE & EXCELLENCE

HT SERIES

CNC TURNING CENTER

http://www.feeler.com

FFG FEELER®

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ISO 9001
ISO 14001

CE

IT'S VERY WELL MADE IN TAIWAN

12.07-2000-S601000001

FEELER HT SERIES

HT-20 / HT-30 / HT-40

Through years of research and improvement, Feeler R&D team has successfully developed a new generation of CNC turning center. In today's seriously competitive environment, each industry always pursues more efficient and more versatile machining. Feeler HT-Series CNC turning center is just the machine you've come to expect.

Belt driven Spindle

Optimal Structure Design
30° Slant Bed

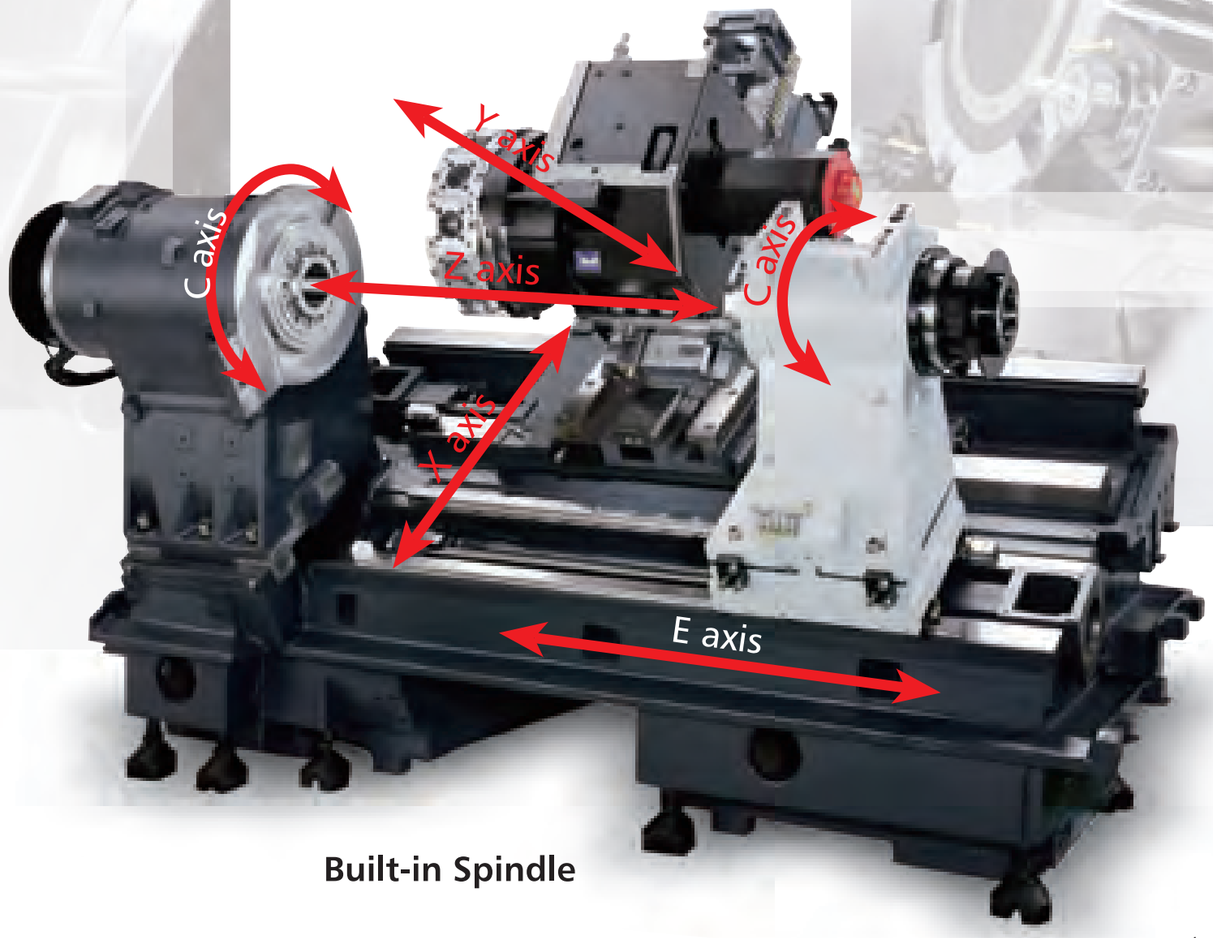
- **Rigid Construction:** 30° slant bed construction with hardened slideways significantly upgrades torsional rigidity to provide maximum support and stability.
- **Slant Bed:** Slant bed design ensures efficient chip disposal and reduces the effect of thermal displacement from hot chips.
- **Slideways Lubrication:** Specially designed slideways lubrication combined with carefully arranged lubrication circuit ensure high accuracy and long service life for slideways and transmission systems.
- **Precision Ballscrews:** Feed systems are transmitted through class C3 pretensioned ballscrews (X,Y-axis) . Circulated cooling on motor bases (Built-in spindle model) effectively increases machining accuracy.
- **Fully Guarded Bed Slideways:** Absolutely prevents chip and coolant entry and the effects from heat.

30° Saddle

Virtual Y-axis system is constructed of 30° saddle compound. This modular design features maximum structural stability and rigidity.

No Turcite-B on Slideways (Opt)

Slideway surfaces on HT Series CNC turning center are not coated with Turcite-B. This special feature may eliminate play problem caused by deformation. It results in high dampening capability, outstanding moving performance and heavy cutting capacity.



Built-in Spindle

12-Position Power Turret

Power turret is driven by a servo motor combined with precision positioning achieved through Ø250 mm curvic coupling. The power turret is ruggedly constructed, providing high speed tool change. Newly designed power tooling system exhibits high efficiency turning and milling performance.

Material	S45C
Spindle speed	650 RPM
Single side cutting depth	8 mm
Cutting speed	200 m/min
Feedrate	0.35/rev

BMT Tool Holder

Ø250 mm

High precision positioning through curvic coupling.

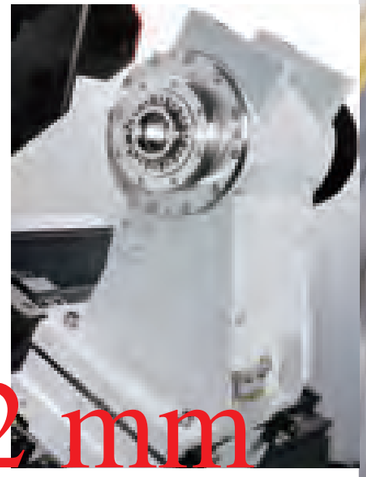
Servo Tailstock

Rigid tailstock is driven by a servo motor, featuring fast and smooth motion and high positioning accuracy.

Rigid Headstock and Spindle

Spindle stock is specially designed to guarantee maximum stability when performing heavy cutting.

Built-in Spindle (Option)



Ø52 mm

Sub Spindle: Extra large hole through spindle

Ø91 mm

Main Spindle: Extra large hole through spindle

Belt driven Spindle (Standard)

Ø88 mm

Main Spindle: Extra large hole through spindle

Ø56 mm

Belt driven Spindle (Standard)

Built-in motor Spindle of Extra Large Hole

Extra large holes through spindles - 91 mm for main spindle and 52 for sub-spindle - are ideal for large workpiece. Powerful built-in motors 15/22 kw for the main spindle and 10/15 kw for the sub-spindle run without power loss of transmission. The main spindle speed is 3,500 rpm and the sub-spindle is 6,000 rpm.

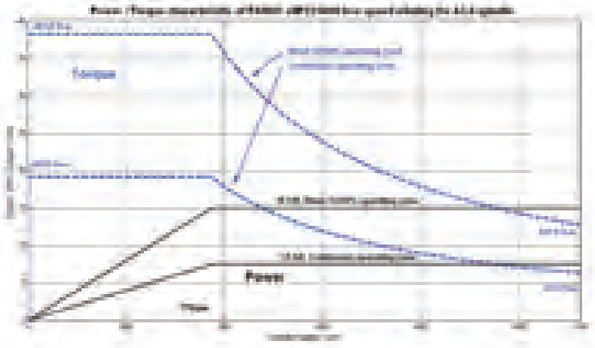
Built-in Spindle (Option)

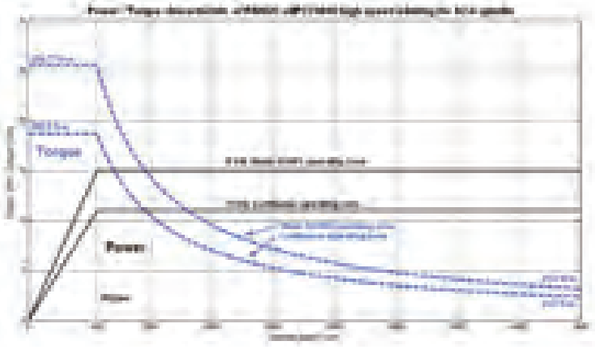
Belt driven Spindle (Standard)

Spindle Power / Torque Diagram

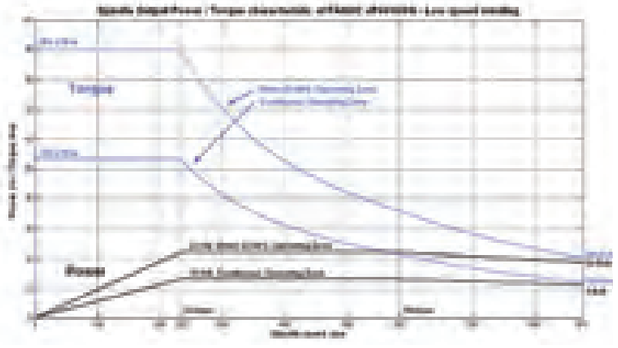
Belt Driven Spindle

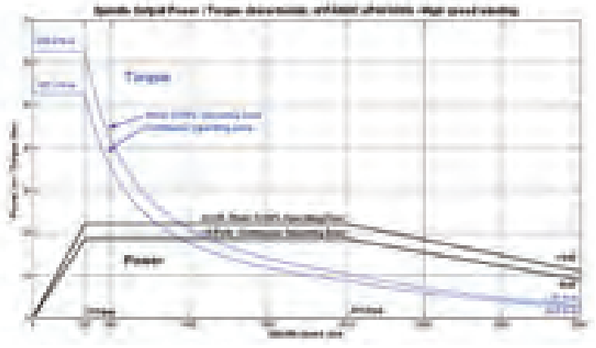
HT-20 Main Spindle



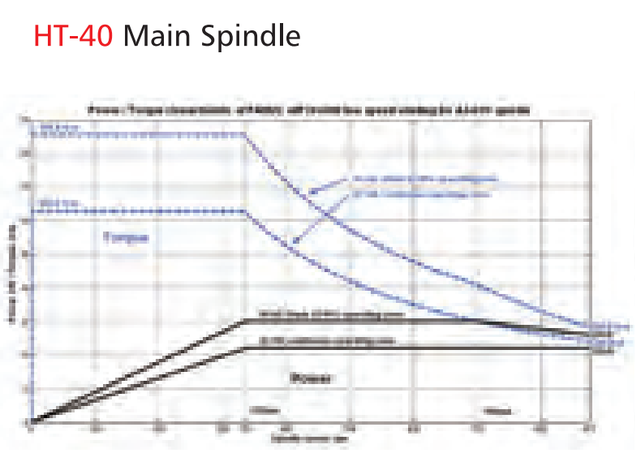


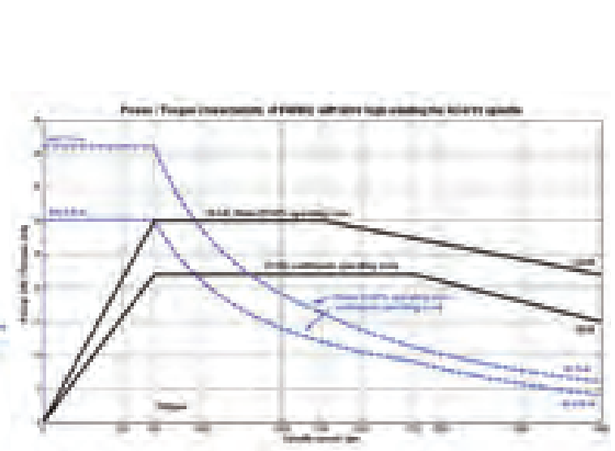
HT-30 Main Spindle



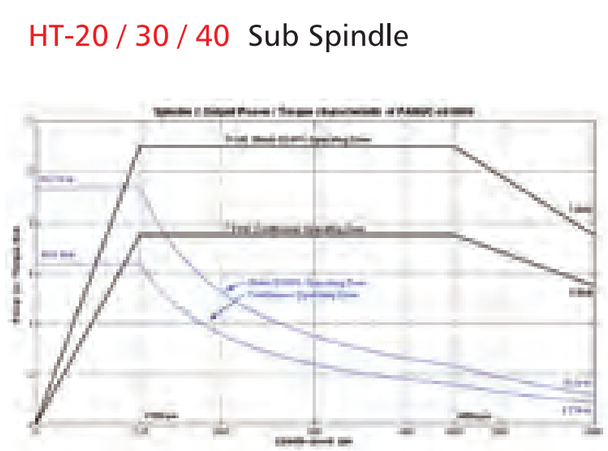


HT-40 Main Spindle

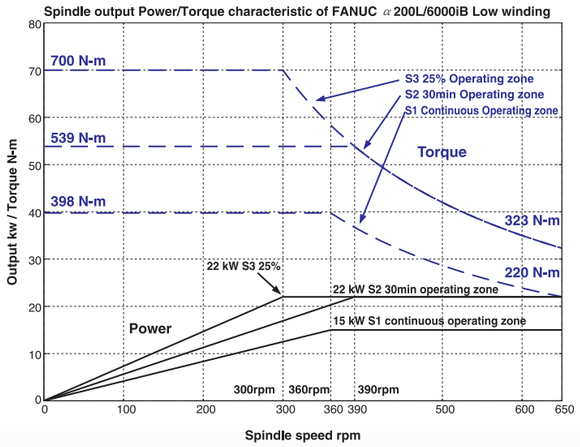


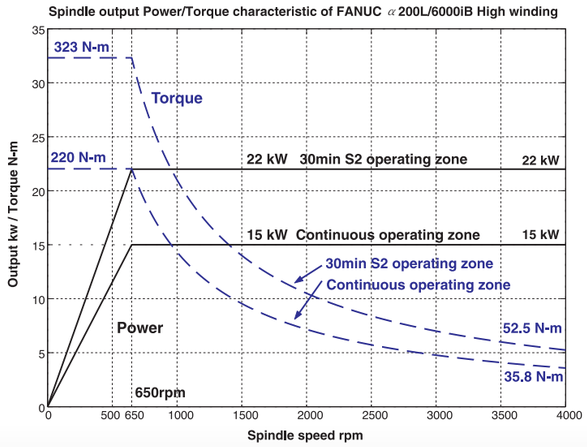


HT-20 / 30 / 40 Sub Spindle

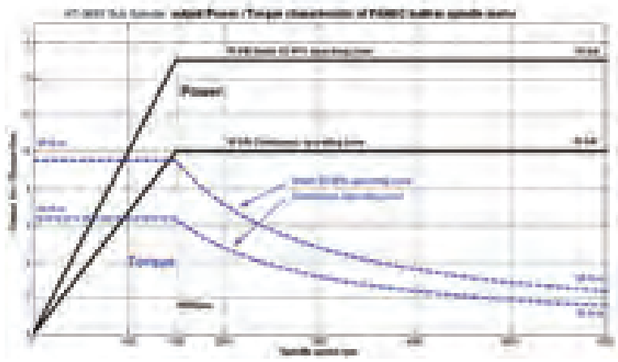


HT-30 Main Spindle





HT-30 Sub Spindle



90° Swiveling Operation Panel

Operation Panel can be swiveled 0°~90° for increased convenience of operation.

Control panel employs LED backlight keys, which permit clear identification even in a poor lighting environment.

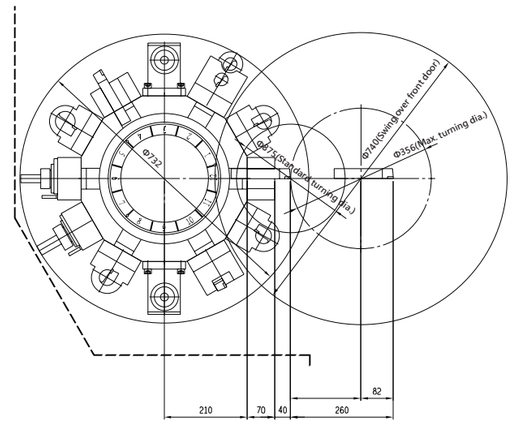
Convenient Coolant Tank Cleaning

Front-pulling coolant tank, chip conveyor remained (optional).

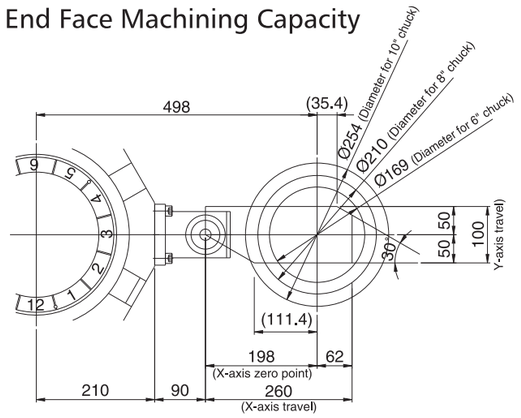
Energy Saving (Optional)

Oil cooler and hydraulic unit are controlled by core inverter for accurate control and considerable energy saving.

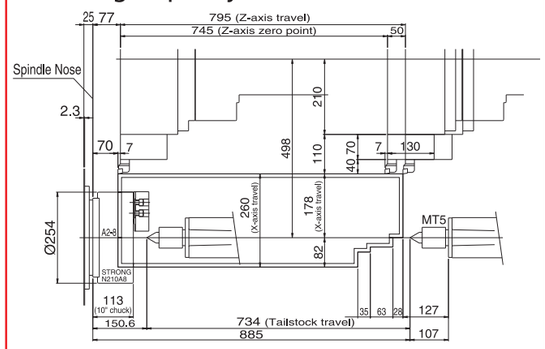
Tooling Range



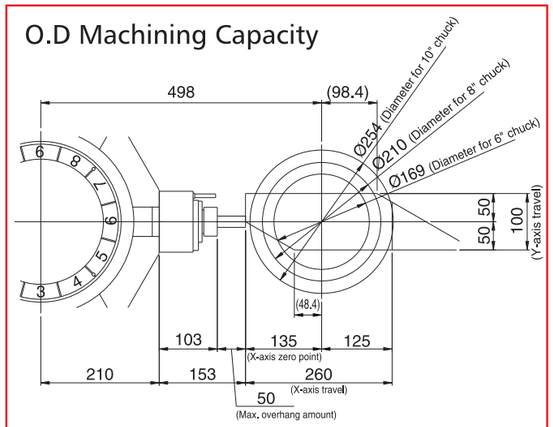
End Face Machining Capacity



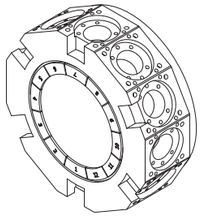
Working Capacity



O.D Machining Capacity



Tooling System



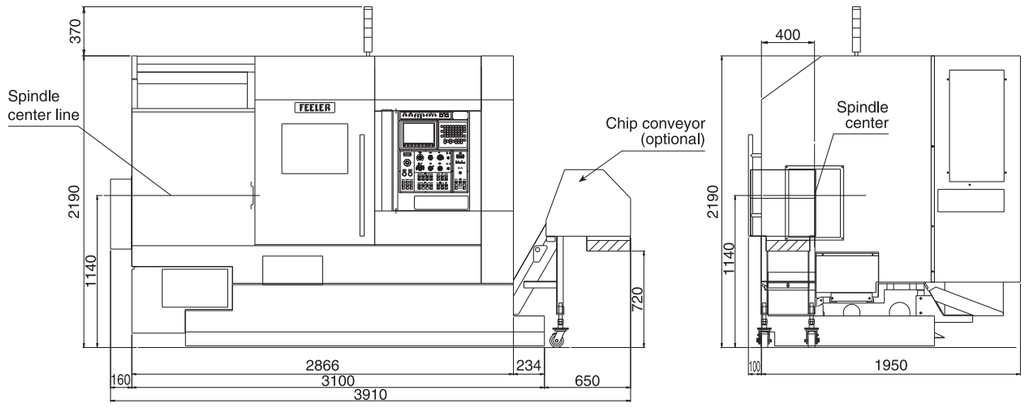
12 STATIONS TURRET

- OD. & FACE CUTTING TOOL □25x25 — MF05000223 ③ OD. & FACE CUTTING HOLDER
- OD. & FACE CUTTING TOOL □25x25 — MF05000224 ① ID. AND FACE CUTTING HOLDER
- BORING BAR ø40 — BORING BAR SLEEVE
  - MF05000210 (ø32), MF05000211 (ø25), MF05000212 (ø20), MF05000213 (ø16), MF05000214 (ø12), MF05000215 (ø10), MF05000216 (ø8)
  - → MF05000225 ③ BORING BAR HOLDER
- DRILL — DRILL SOCKET
  - MF05000220 (MT4), MF05000219 (MT3), MF05000218 (MT2), MF05000217 (MT1)
- U-DRILL DRILL — U-DRILL SOCKET
  - MF05000221 (ø25), MF05000222 (ø20)
  - → MF05000226 U DRILL HOLDER
- → MF05000227 ① ROTARY TOOL HOLDER FOR OD. CUTTING ER 32 COLLET (MAX. ø20)
- → MF05000228 ① ROTARY TOOL HOLDER FOR FACE CUTTING ER 32 COLLET (MAX. ø26)

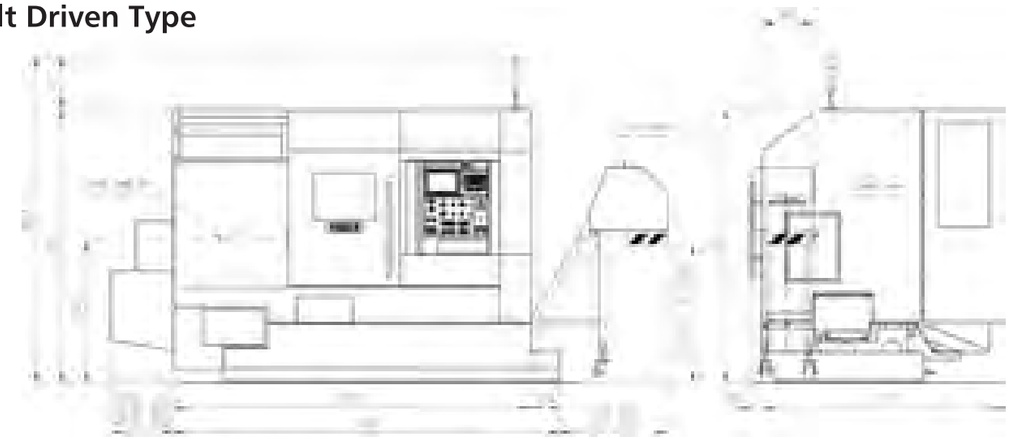
◯ : NO. OF STANDARD SETS FOR HT-30

MACHINE DIMENSIONS

Built-in Type



Belt Driven Type



HT MACHINE SPECIFICATIONS

MODEL	unit	HT-30MC	HT-30SMC		HT-30Y	HT-30SY	
Capacity							
Swing over bed	mm	Φ923.8					
Swing over (front door)	mm	Φ740					
Swing over cross slide	mm	Φ755					
Max. turning diameter	mm	Φ356					
Standard turning diameter	mm	Φ275					
Max. turning length	mm	705					
Bar work capacity	mm	Φ78	Main : Φ78 Sub : Φ45		Φ78	Main : Φ78 Sub : Φ45	
Travel							
X-axis travel	mm	260					
Y-axis travel	mm	795					
Z-axis travel	mm	NONE	NONE		100<±50>	100<±50>	
Spindle							
Max. spindle speed	rpm	3,500	3,500	6,000	3,500	3,500	6,000
Type of spindle nose		JIS A2-8	JIS A2-8	JIS A2-5	JIS A2-8	JIS A2-8	JIS A2-5
Through-spindle hole diame	mm	88	88	56	88	88	56
Min. spindle indexing angle	degree	0.001°	0.001°	0.001°	0.001°	0.001°	0.001°
Spindle bearing inner diameter	mm	Φ130	Φ130	Φ90	Φ130	Φ130	Φ90
Turret							
Number of tool stations		BMT 60-12					
Shank height for square tool	mm	25					
Shank diameter for boring bar	mm	Φ40(Φ50)					
Tool shank diameter for rotary tool	mm	Φ20(Φ26)					
Turret indexing time	sec	0.25					
Max. rotary tool spindle speed	rpm	3,000					
Feedrate							
Rapid traverse rate	mm/min	X, Z : 30,000 Y : NONE E : 7,000 C : 80rpm	X, Z : 30,000 Y : NONE E : 30,000 C : 80rpm		X, Z : 30,000 Y : 10,000 E : 7,000 C : 80rpm	X, Z : 30,000 Y : 10,000 E : 30,000 C : 80rpm	
Tailstock							
Tailstock travel	mm	734	734		734	734	
Tailstock spindle diameter	mm	Φ80	NONE		Φ80	NONE	
Taper hole of tailstock spindle	MT	MT-5	NONE		MT-5	NONE	
Motor output							
Main spindle drive motor(cont/30min)	kW	13/22					
Sub spindle drive motor(cont/30min)	kW	NONE	7.5/11		NONE	7.5/11	
Rotary tool spindle drive motor (cont./30 min)	kW	7					
Feed motor X/Y/Z/E	kW	4/NONE/4/3	4/NONE/4/3		4/4/4/3	4/4/4/3	
Miscellaneous							
Power capacity	KVA	45	50		50	50	
Coolant tank capacity	Liter	265	265		265	265	
Floor space	mm*mm	3,600 x 1,950	3,600 x 1,950		3,600 x 1,950	3,600 x 1,950	
Machine height	mm	2,190	2,190		2,190	2,190	
Machine weight	kg	6,000	6,300		6,200	6,500	

* Specifications are subject to change without prior notice.

STANDARD ACCESSORIES

- HT-30 10" chuck
- Belt driven spindle
- Axial live tool x 1 (Taiwan made)
- Radius live tool x1 (Taiwan made)
- 12-Positin Servo turret
- Servo tailstock
- Turcite-B on slideways
- Hydraulic system and oil chiller (Taiwan made)
- Fixed tailstock quill
- Pre-tensioned ball screws on 4 axes
- Automatic lubrication system
- Fully enclosed splash guard
- Anti-dust electrical cabinet
- 3-color signal light
- Leveling bolts and blocks
- Heat exchanger for electrical cabinet
- Tool box

OPTIONAL ACCESSORIES

- A2-6/66 Belt driven spindle
- A2-8/91 Belt driven spindle
- Built-in spindle
- Built-in 15/22 kW A2-8 main spindle
- Built-in 10/15 kW A2-5 sub spindle
- Without Turcite-B on slideways
- Automatic tool length measurement
- Chip conveyor & bucket
- Inverter type hydraulic system and oil chiller
- Automatic bar feeder or interfacing
- Chip flushing system for chip enclosure
- Coolant gun
- Parts catcher
- Rotating type tailstock
- High pressure coolant pump