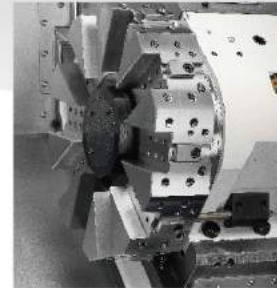
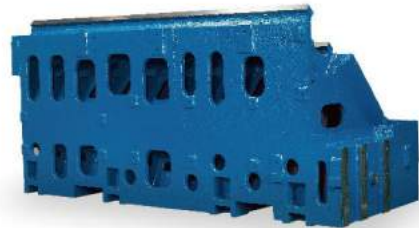


## High Stability High Efficiency Equipment Best Choice to Satisfy High Productivity !

### ■ STRUCTURE

Optimal 45° Slant Bed Structure with High precision high Rigidity and Best Cutting Stability. High Cutting Stability and tool life thanks for Meehanite Casting Body. Excellent Surface thanks for Excellent Damping Effect by High Rigid Box-way. Ball Screw Pre-tension for 3° C makes Good Response in feed systems.



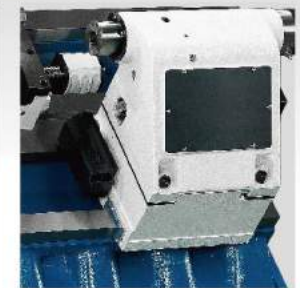
### ■ TURRET

Random tool path selection reduce circle time. Hydraulic turret equipped, servo turret available.



### ■ SPINDLE

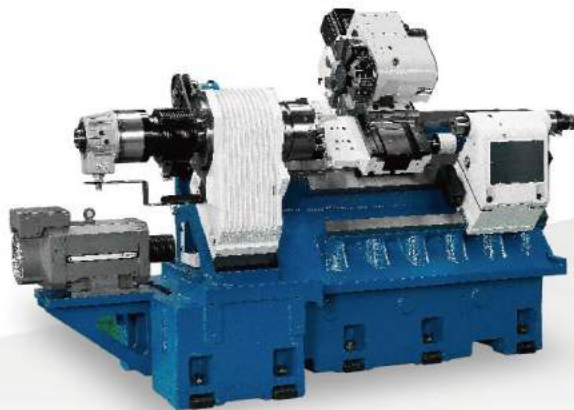
High Capacity spindle equipped with NN type roller bearing. Parts heat treated, grinded and balanced.



### ■ TAILSTOCK

Programmable Hydraulic Tailstock get good support and damping effect.

SA-1006 >>



<< SA-0806



### ■ ELECTRIC COMPONENTS

- All electric parts satisfy CE specifications with good performance and long life.
- Dustproof whole enclosed controller cabinet.
- Heat Exchanger to release heat generated in controller cabinet.

SA-1006 >>



# CNC LATHE / SA、SB Series

## 「Quality」 is our promise to customers!

To keep our promise, we have instruments and processes to make good control through parts machining, assembly accuracy to the final product examination.

Take 「Quality first」 as our rule, we strictly make efforts for our product quality to satisfy customers.

### ■ Machine Inspection and Calibration

- Laser interferometer
- Ball-bar test system
- Balancing Instrument



### SPECIFICATION

ITEM	UNIT	SA-0804	SA-0806	SA-1006	SA-1206	SA-1212	SB-0603	
Travel	Swing over bed	mm	500	500	500	700	400	
	Swing over saddle	mm	300	300	300	450	200	
	Dist. between centers	mm	485	685	685	685	1285	
	X axis travel	mm	150+35	150+35	150+35	225+35	225+35	
	Z axis travel	mm	400	600	600	600	1200	
Capacity	Max. turning dia.	mm	300	300	300	450	120	
	Bar capacity	mm	52 (68)		75 (92)		42	
	Max. turning length	mm	400	600	600	600	1200	
Spindle	Chuck size	Inch	8"		10"		6"	
	Spindle nose		A2-6		A2-8		A2-5	
	Bearing type		NN Type		NN Type		NN Type	
	Bearing dia.	mm	100(110)		130 (140)		85	
	Spindle motor	HP	25		30		10	
	Spindle speed	rpm	4200		3000		5000	
Turret	Turret type		Hydraulic turret		Hydraulic turret		Servo turret	
	No. of tools	pcs	10		10(12)		8	
	O.D. tooling	mm	25		25		20	
	I.D. tooling	mm	40		40		25	
Rapid feed (X/Z)	m/min	20/20		20/20		18/18		
Servo motor (X/Z)	KW	3/3		3/3		1/1		
Tailstock	Control type		Programmable		Programmable		Manual	
	Quill dia.	mm	80		80		60	
	Taper of quill		MT4		MT4		MT5	
Rail way type (X/Z)		Box way / Box way						
Water tank capacity	Liter	120	120	180	180	180	150	
Coolant pump motor	HP	1	2	2	2		3/4	
Power source	KVA	20	20	25	30		20	
Position accuracy	mm	0.005/0.005						0.003/0.003
Repeat accuracy	mm	±0.002/±0.004						±0.002/±0.003
Machine Diameter	Floor space	mm	2450×1750	2755×1780	2755×1780	2650×1750	3550×1750	2200×1600
	Machine net weight	kg	4500	5200	5350	5600	6500	2300

※ Specifications subject to change without notice for improvements and modifications.

#### ■ STANDARD EQUIPMENT

- Hydraulic Turret (SA Series), Servo Turret (SB Series)
- Coolant system
- Fully Enclosed Splash Guard
- Hydraulic chuck
- Hydraulic pressure Check
- Chip Conveyor
- Single point orientation on spindle
- Programmable Tailstock
- Spindle rigid tapping
- Heat Exchanger
- Toolbox with tools
- Tool holder and tool socket
- Tool shim & Splashing block
- Leveling bolts & Pads
- 1 year machine warranty
- 2 years controller warranty

#### ■ OPTIONAL EQUIPMENT

- Auto door
- Over load detect
- Oil mist coolant system
- Ball screw through cooling system
- Bar feeder
- Tool setter
- Hydraulic Cooling System
- Cabinet Air Conditioning system
- Coolant cooling system
- 20 bar High pressure coolant
- 2 step Chuck clamping
- Voltage stabilizer
- Transformer
- Oil separator
- Linear Scale
- Servo turret
- Power turret
- Parts Catcher
- Chuck Air Blast
- Chuck clamp check





# TAPPING & DRILLING CENTER / TP Series



## APPLICATIONS

- Auto parts, light alloy formed parts machining.
- IT components & 3C industries processing applications.
- Super finishing & round chamfering.
- Small hole drilling performance being decreased to 0.1mm.

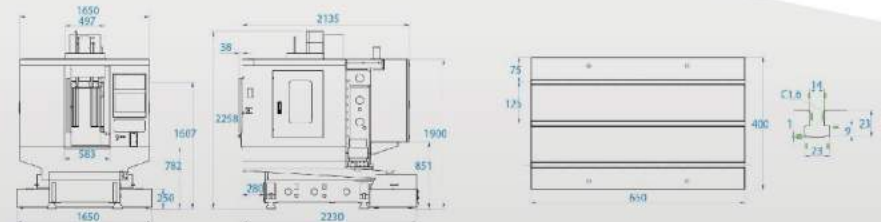
## SPECIFICATION

ITEM		UNIT	TP-500	TP-500H	TP-600	TP-600H
Work Table	Working table size	mm	650x400		800x400	
	T slots	mm	14x3x125		14x3x125	
	Max. table load	kg	200		200	
Travel	X axis travel	mm	500		600	
	Y axis travel	mm	400		400	
	Z axis travel	mm	300		300	
	Spindle nose to table surface	mm	130-430		130-430	
	Spindle center to column	mm	410		410	
Spindle	Transimmission		Direct driving		Direct driving	
	Spindle speed	rpm	20000	12000	20000	12000
	Spindle motor	kw	5.5	7.5	5.5	7.5
	X/Y/Z motor output (Mitsubishi)	kw	1.5/1.5/2.2		1.5/1.5/2.2	
Feed	Rapid feed (X/Y/Z)	m/min	48/48/48		48/48/48	
	Cutting feed rate	m/min	20		20	
Controller	Controller		MITSUBISHI M70A		MITSUBISHI M70A	
	ATC type		Turret type mechanism		Turret type mechanism	
ATC System	Spindle taper		BT-30		BT-30	
	Tool no.	pcs	16(STD.) / 21(OPT.)		16(STD.) / 21(OPT.)	
	Max. tool length	mm	200		200	
	Max. tool weight	kg	3		3	
	Tool to tool time	sec	1.8		1.8	
Air Pressure	Air pressure requirement	kg/cm <sup>2</sup>	6		6	
Machine Diameter	Floor space	mm	2230x1650		2230x1650	
	Machine net weight	kg	2300		2500	

※ Specifications subject to change without notice for improvements and modifications.

## MACHINE DIAMETER

### MODEL: TP-500(H) / TP-600(H)



## FEATURES

- HIGH-SPEED DIRECT-DRIVE SPINDLE
  - High speed spindle direct driving transmission
  - Max. spindle speed: 20000rpm(STD.)、12000rpm(OPT.)
- HIGH-SPEED ATC
  - Turret type ATC featured with indexing mechanism
  - Turret type ATC provides 16T(STD.)、21T(OPT.)
  - Fast tool changing time 1.8 sec. (T to T)
- HIGH RIGIDITY STRUTURE DESIG
  - Provides the strong enough reliability meet for high speed drilling tapping & milling works.
- HIGH-SPEED FEED
  - Rapid feed (X/Y/Z): 48/48/48 m/min
  - Cutting feed rate: 20 m/min





# DOUBLE COLUMN HIGH SPEED CUTTING CENTER / CA Series

## High Rigidity & High Accuracy !

### ■ Applied Domain

Double Column High Speed Cutting Center are designed considering mass ratio optimal structure, un-compatible satisfying cutting request. Easy to achieve high precision parts for molds, electrodes, watches.

Umbrella tool magazine, spindle tool catching for tool change impact preventing, bearing protecting, spindle accuracy and life assurance.

3 axis equipped with preloaded C3 double nut backlash free grinded ball screw, preloaded bearing supported, directed coupling with motor to get rigid position transferring.

High performance built-in spindle equipped with inner cooling socket gets stable temperature controlling for good accuracy.

Double column structure design gets small moving-to-frame ratio for high speed performance.

3 axis equipped with roller type linear guide to get low friction and small deformation.

Coolant System release heat generated by parts cutting, keep machine temperature stable for good accuracy.



### SPECIFICATION

ITEM		UNIT	CA-3006	CA-4008	CA-4011
Structure	Structure	Type	Rigid Double Column	Rigid Double Column	Rigid Double Column
	Column	Type	One Piece Casting	One Piece Casting	One Piece Casting
Travel	X axis	mm	600	800	1100
	Y axis	mm	500	620	600
	Z axis	mm	360	400	500
	Spindle nose to Table	mm	120-480	150-550	150-650
	Column Distance	mm	650	720	720
Spindle	Type		BT-30	BT-40	BT-40
	Speed	rpm	30,000 (Fanuc Built-in)	20,000 (Fanuc Built-in)	20,000 (Fanuc Built-in)
	Power	Kw(HP)	10Kw(14HP)	15Kw(21HP)	15Kw(21HP)
Moving Feed	Moving Feedrate(X/Y/Z)	m/min	24/24/18	30/30/30	30/30/30
Cutting Feed	Cutting Feedrate(X/Y/Z)	mm/min	1-15000	1-20000	1-20000
			Table	Dimension	mm
Table	Tslot(w x n X d)	mm	14x4x100	18x5x100	18x5x100
	Table Load	kg	500	800	1000
	Tool Magazine	Type	Umbrella	Umbrella	Umbrella
Coolant System	Tool Number		20	20	20
	Tool Diameter	mm	65	90	110
	Tool Length	mm	150	200	200
	Pump	kw	1	2	2.5
Machine Diameter	Capacity	Liter	150	250	250
	Floor Space	mm	2200×2200×2450	3100×2300×2500	3100×2300×3000
	Machine Net Weight	kg	5200	8200	11000

※ Specifications subject to change without notice for improvements and modifications.

#### ■ Standard Equipment

- Fanuc OIMD controller
- Built-in spindle
- Spindle oil-air lubrication
- Spindle cooling system
- Spindle surrounded coolant nozzle
- Leveling bolts and pads
- Fully enclosed splash guard
- 3 color alarm light
- Heat Exchanger
- Workpiece air blower
- Coolant gun
- Auto power OFF
- 1 year Machine Warranty
- 2 Years Controller Warranty

#### ■ Optional Equipment

- HSK taper Spindle
- Spindle position Control
- Rigid tapping
- 3 axis ball screw through cooling system
- 3 axis linear scale
- Tool measuring system
- Chip Conveyor with bucket
- Cabinet air conditioning
- Voltage stabilizer
- Transformer



# CNC

## GENERAL CATALOG

- CNC LATHE
- TAPPING, MILLING & DRILLING CENTER
- DOUBLE COLUMN HIGH SPEED CUTTING CENTER