Maple
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TW-SERIES 2015(EN)

TW-SERIES

TW-series machining center

TW-Series by Maple

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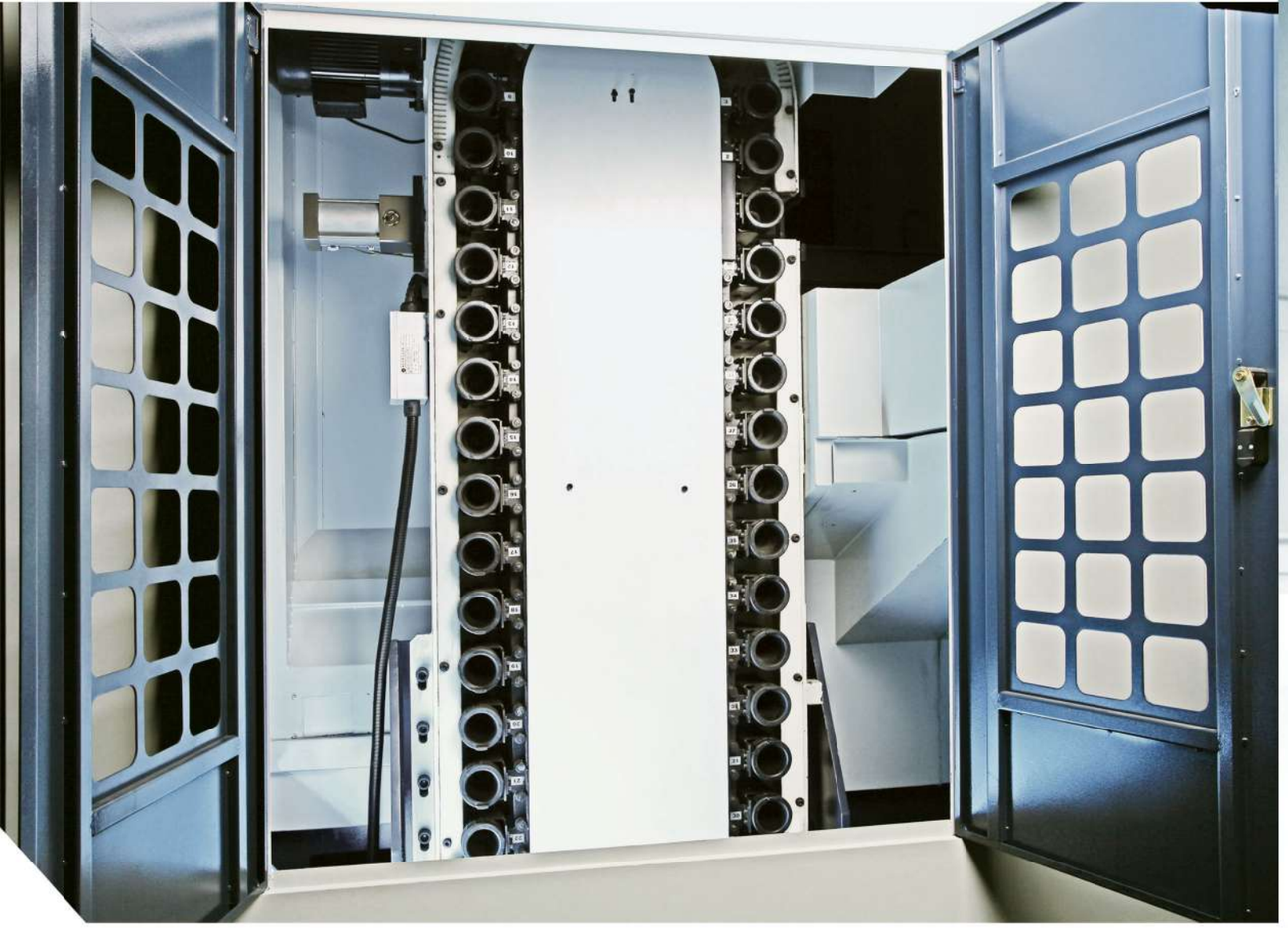
TW-series machining center

- TW-series machining center uses big torque spindle drive and powerful axis drives, has the ability of high cutting feed rate.
- The structure of castings, overloading roller guide way, and excellent cutting surface finish provides the required rigidity for the TW-Series.
- The machine provides excellent stability, can also maintain good positioning accuracy and repeatability in any environment.

High efficiency, High precision, High structural



U-type design for tool changer

- Tool changer capacity is 40 tools (Optional：60/90/120)
- Automatic tool changer is composed of tool library and arm structure, automatic tool changer is separated from the machine, to effectively prevent vibration during tool change or any other reasons that will affect the accuracy positioning of the machine.
- Generally use any tool selection, also can use fixed location tool selection, all tools are returned to original position, effectively preventing large tools collision.

Max tool diameter

- 120 mm (Full tool)
- 200 mm (Neighbor empty tool)

Max tool weight

- 25KG (APC standard)
- 35KG (oil pressure optional)

Max tool length

- 300 mm

TW-800 worktable

•1°rotary worktable, uses the clutch gear positioning, positioning accuracy is not displacement, suitable for loading and heavy cutting.
•0.001° rotary worktable, uses full-circle brake axial packing, the center position is not easily shifted, can be used for cutting while in movement.

Spindle 6000rpm

- With standard belt type BT50, contain oil-cooling function, can lower head thermal deformation, and improve machining accuracy.
- Optional ZF double speed gearbox, can achieve low speed high torque, high-speed power.
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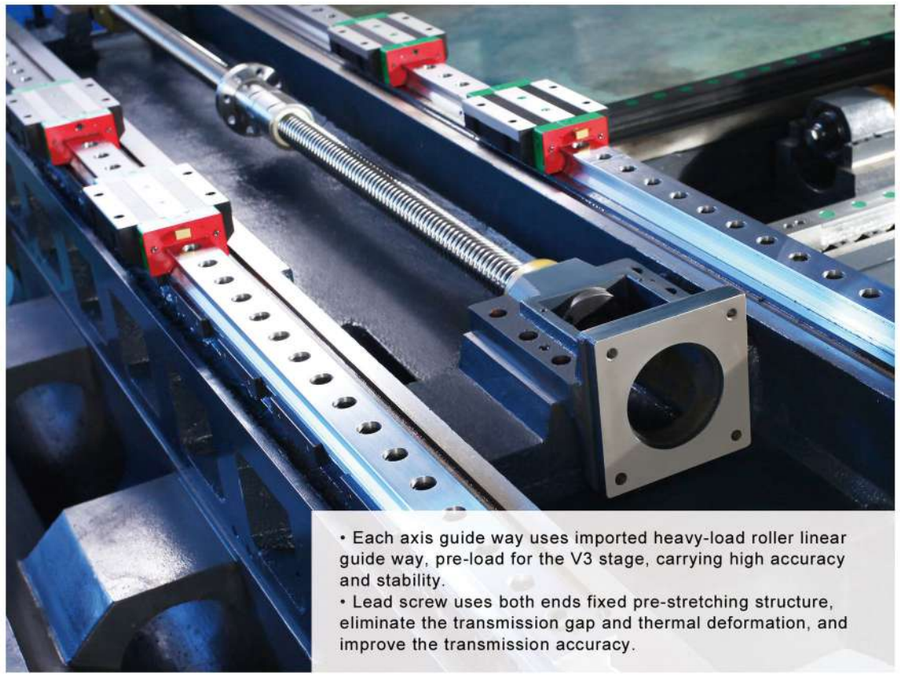
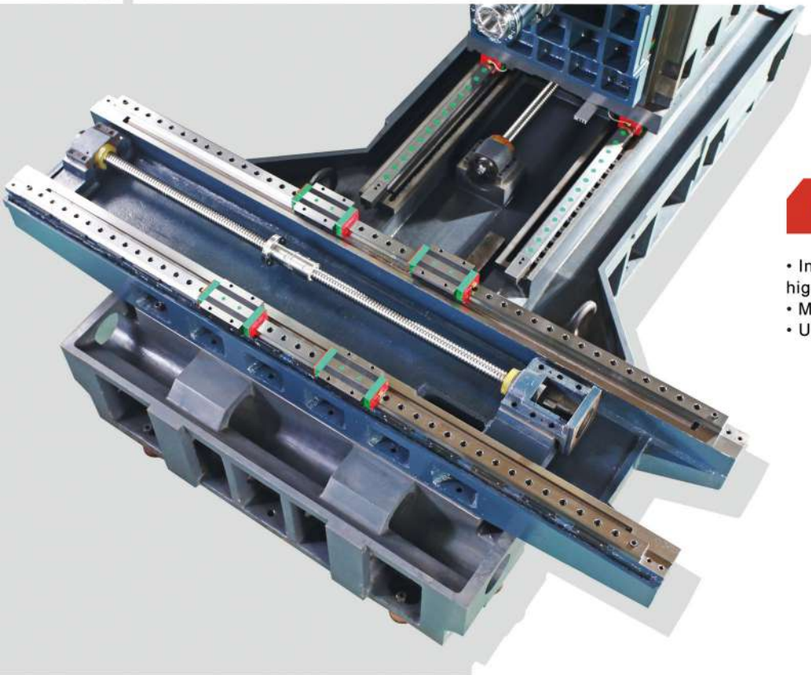


• Each axis guide way uses imported heavy-load roller linear guide way, pre-load for the V3 stage, carrying high accuracy and stability.
• Lead screw uses both ends fixed pre-stretching structure, eliminate the transmission gap and thermal deformation, and improve the transmission accuracy.



Inverted T-type large span bed

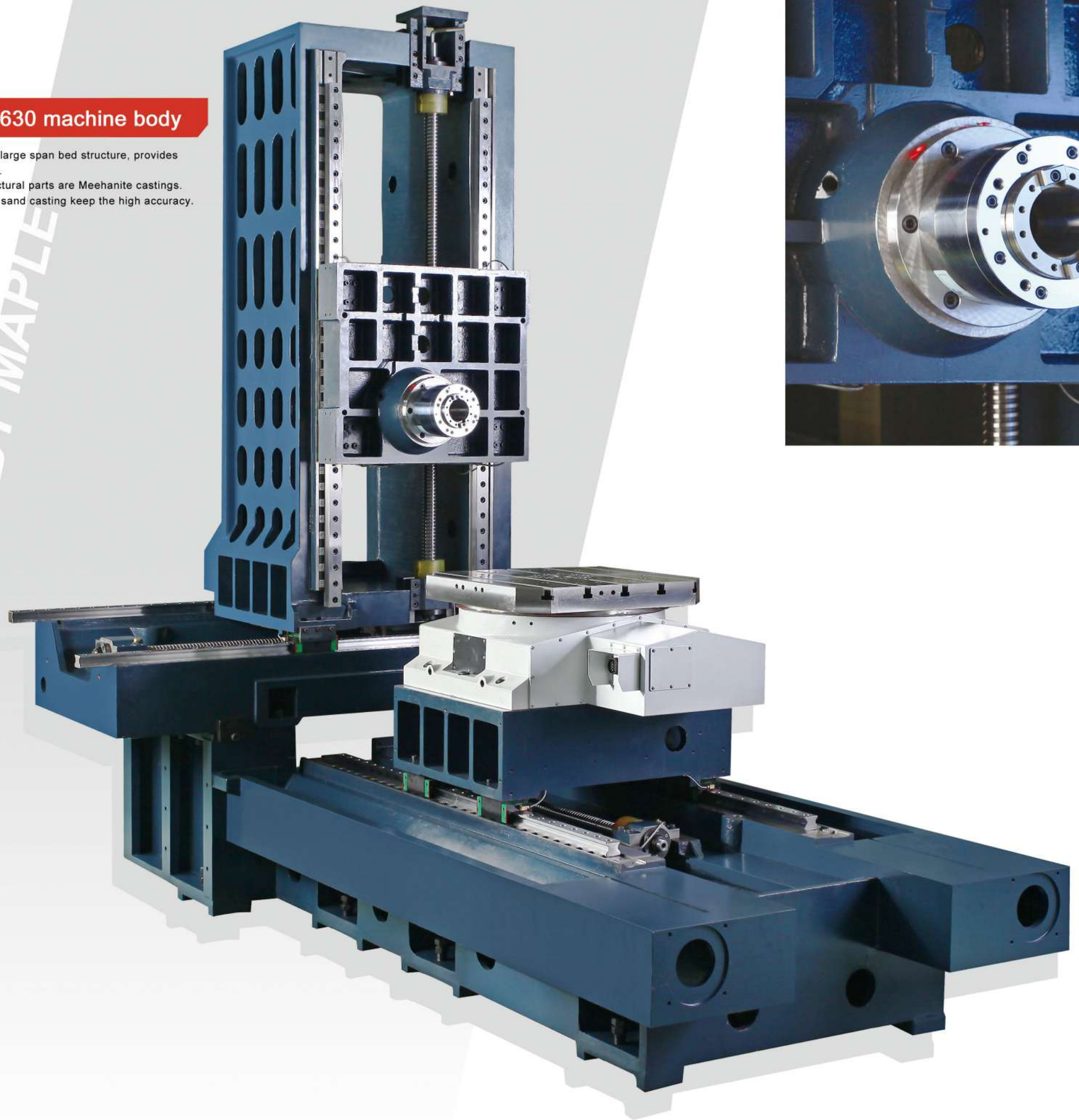
• Inverted T-shaped large span bed structure has high rigidity.
• Main structural parts are Meehanite castings.
• Uses resin sand casting, provides high accuracy.

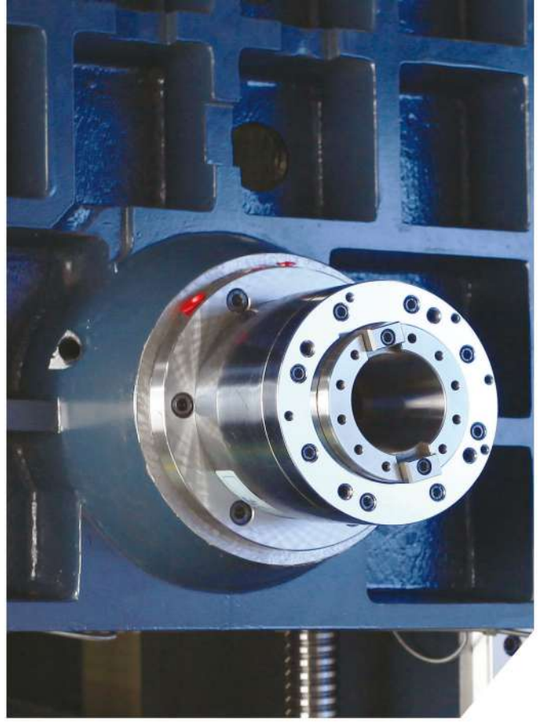
TW-800 complete machine

• Using double helix chip + chain-side row chip conveyor, can remove the chips in a timely and effective manner, avoid chip thermal influence on the machine to ensure high accuracy in machining.
• Complete enclosed machine casing can effectively keep the chip in and the coolant, in the processing area inside the casing.

TW-630 machine body

- T-shaped large span bed structure, provides high rigidity.
- Main structural parts are Meehanite castings. Using resin sand casting keep the high accuracy.



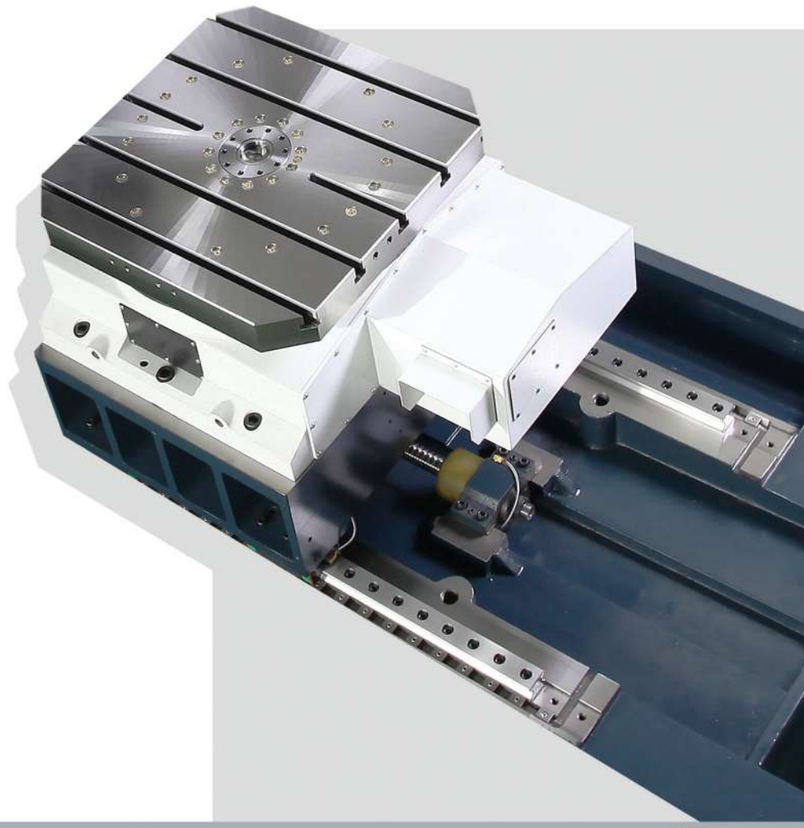


Spindle

- With standard belt type BT50 with oil cooling function, lowers the head thermal deformation, and improve machining accuracy.
- Max spindle speed: 6000rpm.

Rotary worktable

- 1°rotary worktable, uses the clutch gear positioning, positioning accuracy is not easily displaced, suitable for heavy loading and heavy cutting.
- 0.001° rotary worktable, uses full-circle brake axial packing, the center is not easily shifted, can be used for cutting while in movement.



Controller panel

• Four directions rotary control panel, provide the best views for machine operator.

TW-630 complete machine

Series Technical Parameters Sheet

TW-series (single worktable) technical parameters sheet							
TW-Series		Unit	TW-500	TW-630	TW-800	TW-1016	TW-1225
X-axis travel		mm	700	1000	1300	1600	2200
Y-axis travel		mm	600	800	900	1200	1200
Z-axis travel		mm	600	800	900	1350	1350
Spindle surface to worktable center		mm	120-720	130-930	230-1130	230-1580	230-1580
Spindle center to worktable surface		mm	100-700	120-920	150-1050	150-1350	150-1350
Spindle taper			BT50	BT50	BT50	BT50	BT50
Spindle speed		rpm	6000	6000	6000	6000	6000
Cutting feedrate		m/min	1-6000	1-6000	1-8000	1-8000	1-8000
Rapid feedrate(X/Y/Z)		m/min	24/24/24	24/24/24	24/24/24	24/24/24	24/24/24
X/Y/Z-axis motor		kw	3/3/3	3/3/3	7/4/7	7/4/7	7/4/7
Positioning (±)		mm	0. 008	0. 008	0. 012	0. 012	0. 012
Repeatability (±)		mm	0. 005	0. 005	0. 008	0. 008	0. 008
Spindle motor		kw	15	15	22	22	22
Spindle drive type				Belt（ZF Gear）			
Braring diameter		mm	100	100	100	100	100
Worktable	Worktable size	mm	500×500	630×630	800×800	1000×1000	1000×1200
	Worktable motor size	kw	3	3	3	3	3
	T-slot	mm	100×18×4	100×18×5	125×22×6	150×22×6	150×22×7
	Max speed on worktable	rpm	11.1	11.1	11.1	11.1	11.1
	Worktable dividing		1° ×360	1° ×360	1° ×360	1° ×360	1° ×360
	Max load on worktable	kg	800	1200	2000	3000	3000
	Locking force(oil pressure 35kg/cm2)	kg/cm²	4000	4000	5000	5000	5000
	Cutting out accuracy	sec	5	5	5	5	5
Tool changer type			Disc	Disc	Chain	Chain	Chain
Tool changer capacity		T	24	24	40	40	40
Max tool weight		kg	15	15	15	15	15
Max tool length		mm	300	300	300	300	300
Max tool diameter		mm	110	110	125	125	125
Tool exchange time		sec	3. 1	3. 1	3. 1	3. 1	3. 1
Air Required		kg/cm²²	6	6	8	8	8
Power Required		kva	35	35	50	50	50
Machine weight		kg	13000	16000	20000	22000	24000

TW-series (Double worktable) technical parameters sheet							
TW-Series		Unit	TW-500	TW-630	TW-800	TW-1016	TW-1225
X-axis travel		mm	700	1000	1300	1600	2200
Y-axis travel		mm	550	750	800	1100	1100
Z-axis travel		mm	600	800	800	1250	1250
Spindle surface to worktable center		mm	120-720	130-930	230-1030	230-1480	230-1480
Spindle center to worktable surface		mm	100-700	120-920	150-950	150-1250	150-1250
Spindle taper			BT50	BT50	BT50	BT50	BT50
Spindle speed		rpm	6000	6000	6000	6000	6000
Cutting feedrate		m/min	1-6000	1-6000	1-8000	1-8000	1-8000
Rapid feedrate(X/Y/Z)		m/min	24/24/24	24/24/24	24/24/24	24/24/24	24/24/24
X/Y/Z-axis motor		kw	3/3/3	3/3/3	7/7/7	7/7/7	7/7/7
Positioning (±)		mm	0. 005	0. 008	0. 012	0. 012	0. 012
Repeatability (±)		mm	0. 003	0. 005	0. 008	0. 008	0. 008
Spindle motor		kw	15	15	22	22	22
Spindle drive type				Belt（ZF Gear）			
Braring diameter		mm	100	100	100	100	100
Worktable	Worktable size	mm	500×500×2	630×630×2	800×800×2	1000×1000×2	1200×1000×2
	Worktable motor size	kw	3×2	3×2	3×2	3×2	3×2
	T-slot	mm	100×18×4	100×18×5	125×22×6	150×22×6	150×22×7
	Max speed on worktable	rpm	11.1	11.1	11.1	11.1	11.1
	Worktable dividing		1° ×360	1° ×360	1° ×360	1° ×360	1° ×360
	Max load on worktable	kg	500	800	2000	3000	3000
	Locking force(oil pressure 35kg/cm2)	kg/cm²	4000	4000	5000	5000	5000
	Cutting out accuracy	sec	5	5	5	5	5
Tool changer type			Chain	Chain	Chain	Chain	Chain
Tool changer capacity		T	40	40	40	40	40
Max tool weight		kg	15	15	15	15	15
Max tool length		mm	300	300	300	300	300
Max tool diameter		mm	125	125	125	125	125
Tool exchange time		sec	3. 1	3. 1	3. 1	3. 1	3. 1
Air Required		kg/cm²	6	6	8	8	8
Power Required		kva	40	40	55	55	55
Machine weight		kg	13000	19000	24000	26000	29000