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Service provide

- OEM manufacturing
- Integrated machining technologies application
- Special made machines



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综合目录

COMPREHENSIVE CATALOG

2023





Company philosophy

Persistence - keep innovative

Adhering to the spirit of craftsmanship, technology drives the future! we must keep innovative in the process of pre-sales, manufacturing and after-sales service, to catch up this information explosion and technology globalization world.

Faith - keep promise

Strong faith on manufacturing quality machines is the foundation of success, we always deliver and serve our customer with promised products and additional services, and we do believe that customer chose to trust us which could not be unworthy of.

Honesty - keep humble, the way to strive higher is endless

Just like we had to admit we are finite, and unable to plead customers beyond our capabilities, whereas we must share, take our responsibilities and make us transparently.

Our competitiveness

Produce world class machines | Serve global customers



5S (SEIRI, SEITON, SEISO, SEIKETSU, SHITSUKE) management principles were strictly executed, and ERP production system applied, general parts are used for rapid assembling by courtesy of modularization manufacturing.

Dedicated from high efficient automatic production, we realized the ultimate cost management, and focus our attentions to customers' demands.



SPINDLE FEATURES

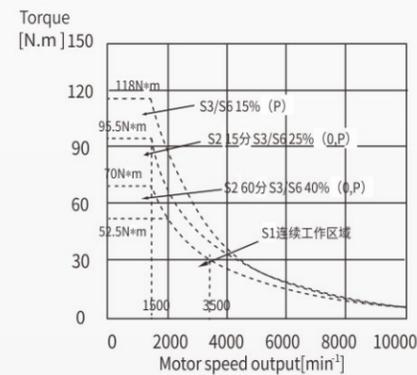
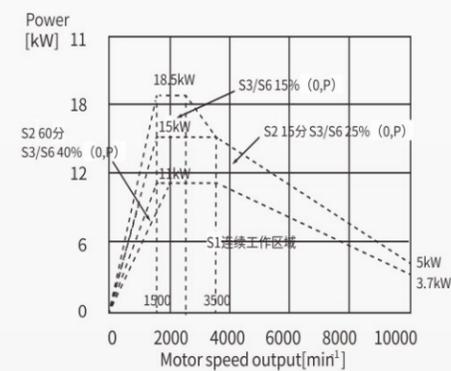
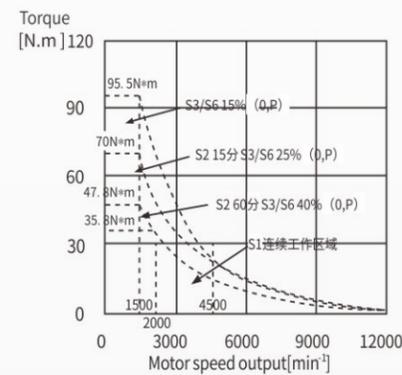
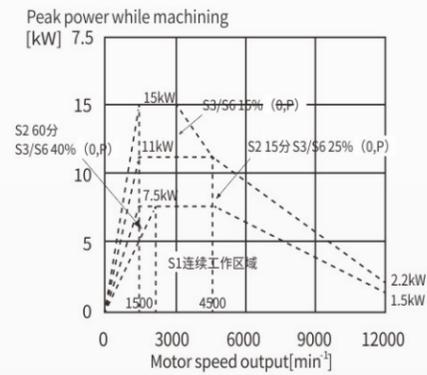
Short nose design $\phi 155\text{mm}$ large external diameter high rigidity special usage spindle



$\phi 155\text{mm}$ short nose spindle

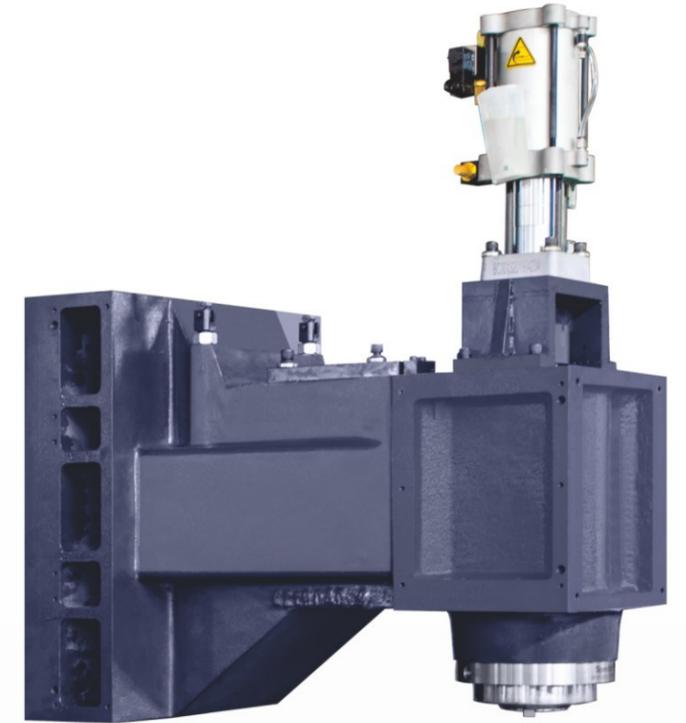
Higher Spindle Torque

Material removal rate of the cutting performance was contributed by the torque, speed and power of the spindle, the higher spindle torque, the higher the cutting force, under the same conditions of material and tool, higher torque means higher cutting feedrate, results in higher machining efficiency, minimized tool vibration and guaranteed machining accuracy, this would protect the machine and extend its using life, the follow charts show the varieties of the spindle torque and rated power related to the spindle speed.



High Performance Spindle

Short nose designed spindle provide a powerful axial pushing force and minimize the heat generated by the bearing, all machining processes of the front hole of the spindle and the concentrated external cylindrical circles of the spindle core are completed at a time, which guarantees the alignment of the spindle hole and external cylindrical.



Mechanical Structure

Spindle speed	Cooling method	Bearing lubrication
8000rpm	Air cooling	Oil lubricating
10000rpm	Oil cooling	Oil lubricating
12000rpm	Oil cooling	Oil lubricating
15000rpm	Oil cooling	Oil lubricating

- Spindle directly driven by motor, capable for high speed high precision machining.
- Choose appropriate oil lubricant & coolant for spindle bushing & bearing, extremely minimized the spindle movement caused by heat expansion.



EXCELLENT QUALITY ORIGINATED FROM ADHERING TO THE STATE-OF-THE-ART WORKMANSHIP



Pres-stretched ball screw

We chose world class suppliers of ball screws including Rexroth, THK, PMI and HIWIN, its excellent quality is the unique way to meet customers' requested higher precision and longer life, although it costs higher as well, fix dual ends of the ball screw for inspection to make sure it parallel with the guide ways 100%, the pre-stretched ball screw is able to eliminate effectively the heat expansion which caused by the heat increasing.

Direct drive servo motor

Normally every motor installation base would not be perpendicular to the ball screw axial line after scraping and grinding, whereas we use a attachment plate to balance and adjust, the servo motors are directly connected to the ball screw though a coupler, which guaranteed the ball screw won't distort or crook even under the higher loading circumstance, which improved the positioning accuracy remarkably and the machining accuracy of threading and profiling, besides these couplers are capable for long term using but not compromising for wear and lower precision.



Ball bar inspection

Every machine we manufactured must be inspected for linear positioning and geometry accuracy by ball bar instrument, while the machine moves in a place with a certain program, high precision ball bar instrument start to track the machine's movement track, to ensure the synchronous performance, and inspect the geometric accuracy, a consequential inspection statistics would reflect the status of the machine, any deviation on geometric and positioning accuracy would be projected to the curve charts for engineer study, and decide whether adjustment required or not.

Laser inspection

Inevitable deviations of repeatability and positioning accuracy caused by assembling and ball screw does exist, thus every machine must be inspected by laser interferometer before departure, repeatability includes horizontally translating objects' single point positioning accuracy and several points positioning accuracy in entire travel, the former factor usually measured by adjusting the device to make the exact claimed position move in several times, and paused for few seconds to record the deviating values, the later factor, is to measure the deviating values between the actual displacements and claimed value at different positions in a certain moving range, to move the measuring device to the aimed position, after repeatedly exchanged the inspection statistics to revise the accuracy of the machine.

HIGH SPEED CNC DRILLING AND TAPPING CENTER / SMALL CNC MILLING MACHINE

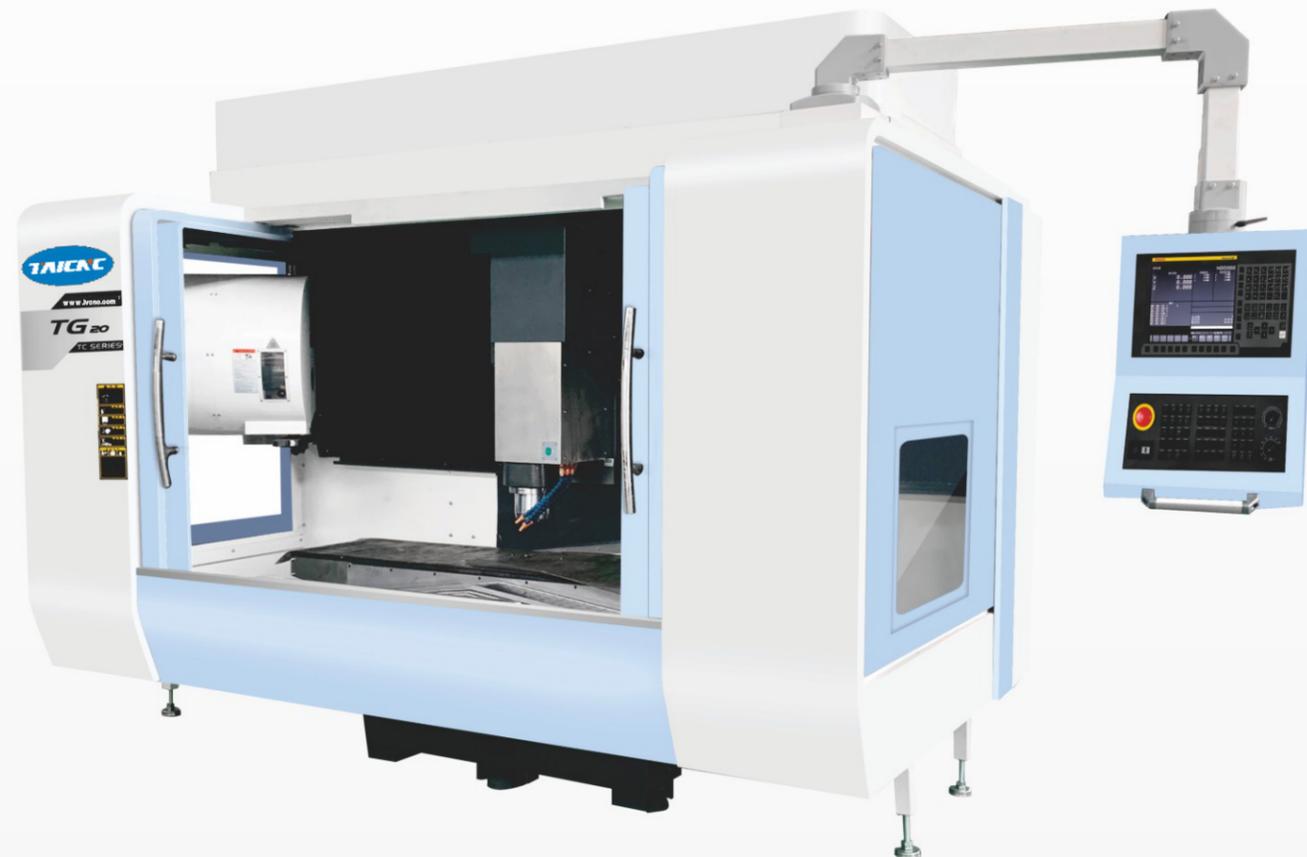


Machine specification

Model	T6V	T7V	T8V	T10V
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS			
Spindle motor	5.5KW	5.5KW	5.5KW	5.5KW
Axial motors	1.3/1.3/3.0B(KW)	1.3/1.3/3.0B(KW)	2.0/2.0/3.0B(KW)	2/2/3.0B(KW)
Travels				
Axis-X	600mm	700mm	800mm	1000mm
Axis-Y	400mm	400mm	500mm	500mm
Axis-Z	300mm	300mm	330mm	330mm
Spindle nose to table	150mm-450mm	150mm-450mm	150mm-480mm	150mm-480mm
Axial rails				
Rail type	3 axes ball guides	3 axes ball guides	3 axes ball guides	3 axes ball guides
Guide width	30mm	30mm	35mm	35mm
Sliding blocks nos(X/Y/Z)	4/4/4	4/4/4	4/4/4	X4/4/4
Ballscrew diameter/pitch	XY:Ø25/16 Z:Ø32/16	XY:Ø25/16 Z:Ø32/16	XYZ:Ø32/16	XYZ:Ø32/16
Spindle				
Spindle taper	BT30	BT30	BT30	BT30
Spindle diameter	Ø100	Ø100	Ø100	Ø100
Transmission type	Direct drive	Direct drive	Direct drive	Direct drive
Spindle speed(standard)	12000rpm	12000rpm	12000rpm	12000rpm
Spindle speed(optional)	15000/20000rpm	15000/20000rpm	15000/20000rpm	15000/20000rpm
Spindle center to column	450mm	450mm	450mm	450mm
Spindle torque	35N/m	35N/m	35N/m	35N/m
Feeding				
Rapid traverse of axes X/Y/Z	48/48/48M/min	48/48/48M/min	48/48/48M/min	48/48/48M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min	10M/min
Worktable				
Table size	700*420mm	800*420mm	1000*500mm	1100*500mm
T-slots (Nos-Width-Span)	3-14mm-120mm	3-14mm-120mm	5-18mm-100mm	5-18mm-100mm
Max load	300KG	300KG	400KG	500KG
Accuracy				
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003	±0.003
Automatic tool changer				
Tool magazine capacity	Disc type 16/21T	Disc type 16/21T	Disc type 16/21T	Disc type 16/21T
Tool shank type	BT30	BT30	BT30	BT30
Tool-To-Tool time	1.3sec	1.3sec	1.3sec	1.3sec
Max tool diameter (Full load/Adjacent empty)	60/80	60/80	60/80	60/80
Max tool length	200mm	200mm	200mm	200mm
Max tool weight	6KG	6KG	6KG	6KG
Other information				
Machine weight (Apprx)	3500KG	3600KG	4500KG	5000KG
Coolant tank capacity	130L	130L	130L	130L
Lubricant capacity	3L	3L	3L	3L
Power consumption	15KVA	15KVA	20KVA	20KVA
Air supply	6PAR	6PAR	6PAR	6PAR
External dimensions	1800mm*2470mm*2370mm	1900mm*2470mm*2370mm	2600mm*2560mm*2550mm	2700mm*2560mm*2550mm

ALUMINUM PROFILE MACHINING CENTER

- An automatic multiple functions machining center Integrated with milling, drilling, tapping and chamfering, specially used for various lengths steel profile, brass profile and aluminum extrusion profile.
- Automatic chip conveyor
- BT30/BT40 spindle is optional, to meet customers' demands
- Fully enclosed sheet metal guards, ensure the safety of the operators and environmental friendly
- Disc/Arm type ATC is optional
- CNC controller Mitsubishi M80A, Fanuc 0i MF Plus, Siemens Sinumerik 828D and Syntec 22MA are optional.



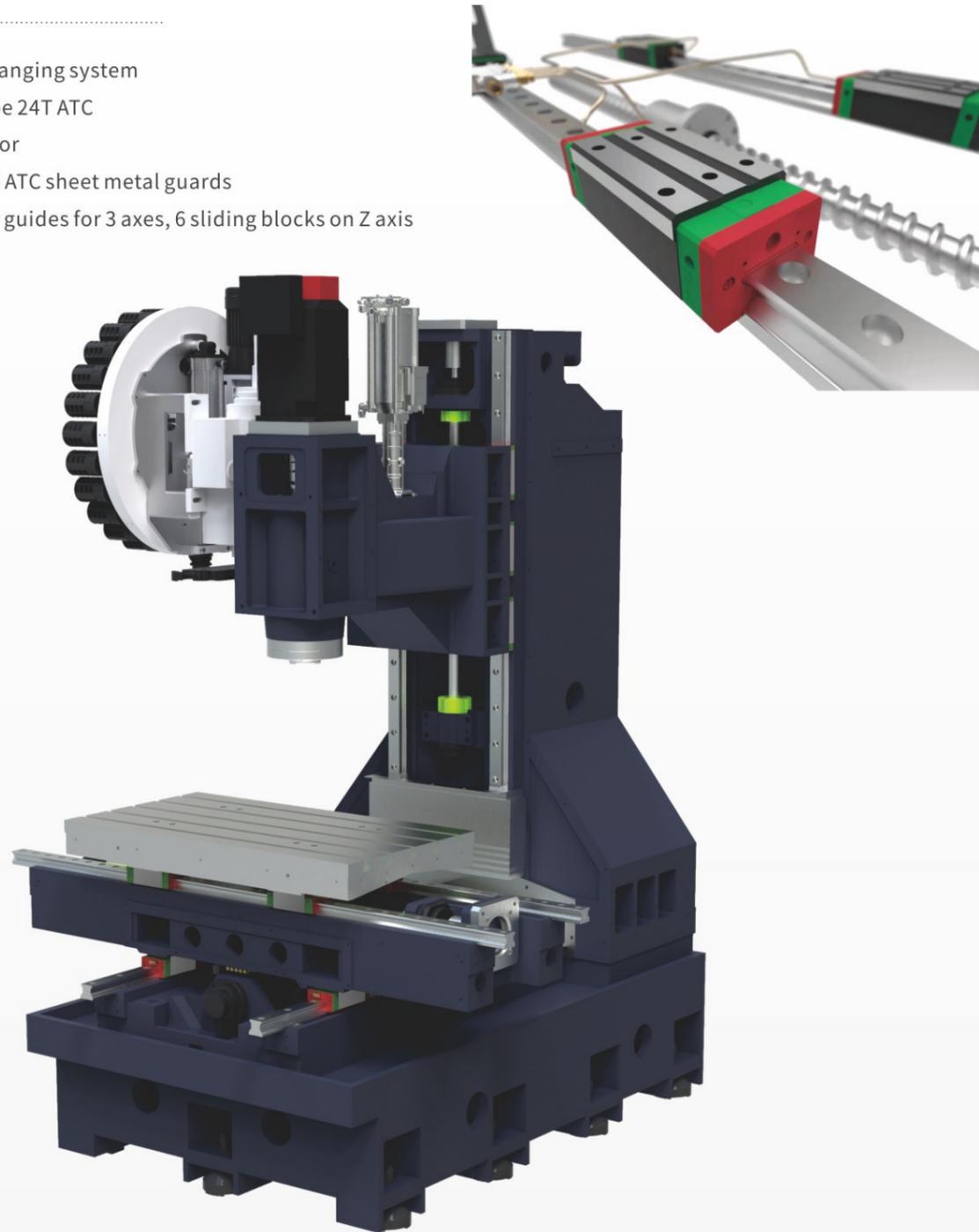
Machine specification

Model	TG16	TG20
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS	
Spindle motor	5.5KW/7.5KW	5.5KW/7.5KW
Axial motors	3.0/3.0/3.0B (KW)	3.0/3.0/3.0B (KW)
Travels		
Axis-X	1600mm	2000mm
Axis-Y	500mm	500mm
Axis-Z	300mm	300mm
Spindle nose to table	150mm-450mm	150mm-450mm
Axial rails		
Rail type	3 axes roller guides	3 axes roller guides
Guide width	X45/Y35/Z35(Y Four rail)	X45/Y35/Z35(Y Four rail)
Sliding blocks nos(X/Y/Z)	X4/8/4	X4/8/4
Ballscrew diameter/pitch	X50Y40Z32	X50Y40Z32
Spindle		
Spindle taper	BT30	BT30
Spindle taper(optional)	BT40	BT40
Spindle diameter	110/150	110/150
Transmission type	Direct drive	Direct drive
Spindle speed(standard)	12000rpm	12000rpm
Spindle speed(optional)	15000/20000rpm	15000/20000rpm
Spindle center to column	550MM	550mm
Spindle torque	35N/m	35N/m
Feeding		
Rapid traverse of axes X/Y/Z	24/36/48M/min	24/36/48M/min
Minimum setting of axes X/Y/Z	0.001	0.001
Cutting feedrate	10M/min	10M/min
Worktable		
Table size	1700*500mm	2100*500mm
T-slots (Nos-Width-Span)	5-18mm-100mm	5-18mm-100mm
Max load	600KG	600KG
Accuracy		
Positioning accuracy(JIS 6338)	±0.008/300mm	±0.008/300mm
Repeatability (JIS 6338)	±0.003	±0.003
Automatic tool changer		
Tool magazine capacity	Disc type 16T/Arm type 24T	Disc type 16T/Arm type 24T
Tool shank type	BT30/BT40	BT30/BT40
Tool-To-Tool time	DISC TYPE 1.3 Sec/ARM TYPE 1.8 Sec	DISC TYPE 1.3 Sec/ARM TYPE 1.8 Sec
Max tool diameter(Full load/Adjacent empty)	60/80	60/80
Max tool length	200mm	200mm
Max tool weight	6KG	6KG
Other information		
Machine weight (Apprx)	6800KG	7300KG
Coolant tank capacity	130L	130L
Lubricant capacity	3L	3L
Power consumption	25KVA	25KVA
Air supply	6PAR	6PAR
External dimensions	2800mm*2440mm*3000mm	3465mm*2440mm*3000mm

HIGH RIGIDITY MOLDS MACHINING CENTER

TC-L series is TAICNC' s latest upgraded vertical machining center, user friendly level critically improved, the latest CNC control system launched further simplified operation interface and powerful functions, the smarter interface, multiple functions, multi-touch TFT screen, make the operation easier, faster and higher machining accuracy the machine achieved.

- Reliable tool changing system
- Robotic arm type 24T ATC
- Oil mist separator
- Fuled enclosed ATC sheet metal guards
- 45# roller linear guides for 3 axes, 6 sliding blocks on Z axis



FULLY ENCLOSED PROTECTION

The fully enclosed sheet metals prevent machine from oil, fluid and scraps leaking, nowadays, we upgraded the ATC with fully enclosed cover as well, eliminated the possibilities of metallic scraps entry, longer the usage of the ATC and lower the risk of ATC malfunction.



HIGH PERFORMANCE MOLDS VERTICAL MACHINING CENTER, 3 AXES ROLLER LINEAR GUIDES



Machine specification

Model	TC-856L	TC-1165L	TC-1370L
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS		
Spindle motor	11KW	11KW	11KW
Axial motors	3.0/3.0/3.0B (KW)	3.0/3.0/3.0B (KW)	3.0/3.0/3.0B (KW)
Z axis balancing mode	Nitrogen	Nitrogen	Weighing block
Travels			
Axis-X	820mm	1100mm	1300mm
Axis-Y	550mm	650mm	700mm
Axis-Z	600mm	600mm	700mm
Spindle nose to table	130mm-680mm	120mm-720mm	120mm-720mm
Axial rails			
Rail type	3 axes roller guides	3 axes roller guides	3 axes roller guides
Guide width	45/45/45mm	45/45/45	45/45/45mm
Sliding blocks nos(X/Y/Z)	4/4/6	6/4/6	6/4/6
Ballscrew diameter/pitch	Ø40/12mm	Ø40/12mm	Ø40/12mm
Spindle			
Spindle taper	BT40	BT40	BT40
Spindle taper(optional)		BBT40 HSK-A63	
Spindle diameter	Ø155	Ø155	Ø150
Transmission type(standard)	Belt drive	Belt drive	Belt drive
Transmission type(optional)	Direct drive	Direct drive	Direct drive
Spindle speed(standard)	8000rpm	8000rpm	8000rpm
Spindle speed(optional)		Belt drive10000rpm/Direct drive12000RPM	
Spindle center to column	580mm	680mm	680mm
Spindle torque	70N/m	70N/m	70N/m
Feeding			
Rapid traverse of axes X/Y/Z	36/36/24M/min	36/36/24M/min	36/36/24M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min
Worktable			
Table size	1000mmX550mm	1200mmX600mm	1350mmX700mm
T-slots (Nos-Width-Span)	5-18mm-100mm	5-18mm-100mm	5-18mm-145mm
Max load	600KG	800KG	900KG
Accuracy			
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003
Automatic tool changer			
Tool magazine capacity	Arm type 24T	Arm type 24T	Arm type 24T
Tool shank type	BT40	BT40	BT40
Tool-To-Tool time	1.8sec(Arm type)	1.8sec(Arm type)	1.8sec(Arm type)
Max tool diameter(Full load/Adjacent empty)	Ø75/Ø150	Ø75/Ø150	Ø75/Ø150
Max tool length	280mm	280mm	280mm
Max tool weight	8KG	8KG	8KG
Other information			
Machine weight (Apprx)	5800KG	7000KG	7500KG
Coolant tank capacity	300L	350L	350L
Lubricant capacity	4L	4L	4L
Power consumption	25KVA	30KVA	30KVA
Air supply	6PAR	6PAR	6PAR
External dimensions	2650mm*2560mm*2550mm	3050mm*2900mm*2800mm	3600mm*3040mm*2900mm

HIGH SPEED AND HIGH PRECISION VERTICAL MACHINING CENTER, 3 AXES BALL LINEAR GUIDES



Machine specification

Model	V64	TC-V855	TC-V10
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS		
Spindle motor	5.5kw	7.5KW	7.5KW
Axial motors	1.3/1.3/3.0B (KW)	2.0/2.0/3.0B (KW)	3.0/3.0/3.0B (KW)
Z axis balancing mode	None	None	None
Travels			
Axis-X	600mm	800mm	1000mm
Axis-Y	400mm	550mm	600mm
Axis-Z	450mm	550mm	600mm
Spindle nose to table	150mm-600mm	120mm-670mm	120mm-670mm
Axial rails			
Rail type	3 axes ball guides	3 axes ball guides	3 axes ball guides
Guide width	30mm	35/45/45mm	35/45/45mm
Sliding blocks nos(X/Y/Z)	X4/4/4	4/4/4	4/4/4
Ballscrew diameter/pitch	XY:Ø25/16 Z:Ø32/16	Ø40/16mm	Ø40/16mm
Spindle			
Spindle taper	BT40	BT40	BT40
Spindle diameter	Ø120	Ø150	Ø155
Transmission type(standard)	Direct drive	Direct drive	Direct drive
Transmission type(optional)	/	Belt drive	Belt drive
Spindle speed(standard)	12000rpm	12000rpm	12000rpm
Spindle speed(optional)	15000rpm	Belt drive8000rpm/Belt drive10000rpm/Direct drive 15000rpm	
Spindle center to column	450mm	580mm	640mm
Spindle torque	35N/m	47N/m	47N/m
Feeding			
Rapid traverse of axes X/Y/Z	48/48/48M/min	48/48/48M/min	48/48/48M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min
Worktable			
Table size	700*400mm	1000mm*550mm	1100mmX600mm
T-slots (Nos-Width-Span)	3-14mm-120mm	5-18mm-100mm	5-18mm-100mm
Max load	300KG	500KG	600KG
Accuracy			
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003
Automatic tool changer			
Tool magazine capacity	Arm type16T	Arm type24T	Arm type24T
Tool shank type	BT40	BT40	BT40
Tool-To-Tool time	1.8sec(Arm type)	1.8sec(Arm type)	1.8sec(Arm type)
Max tool diameter(Full load/Adjacent empty)	60/170	Ø75/Ø150	Ø75/Ø150
Max tool length	200mm	280mm	280mm
Max tool weight	8KG	8KG	8KG
Other information			
Machine weight (Apprx)	3800KG	5600KG	6000KG
Coolant tank capacity	130L	300L	300L
Lubricant capacity	3L	4L	4L
Power consumption	15KVA	20KVA	20KVA
Air supply	6PAR	6PAR	6PAR
External dimensions	1850mm*2470mm*2370mm	2650mm*2560mm*2550mm	2900mm*2560mm*2550mm

HIGH RIGIDITY VERTICAL MACHINING CENTER

X/Y axial roller linear guides + Z axial box ways combination design took both the advantages of linear guides and traditional hard rails, especially considered as the enforcement of the rigidity of the Z axis, improved heavy duty cutting performance, whereas expanded the applicable range of various hard materials.

Widely used for



MECHANICAL PROPERTIES

Solid machining platform

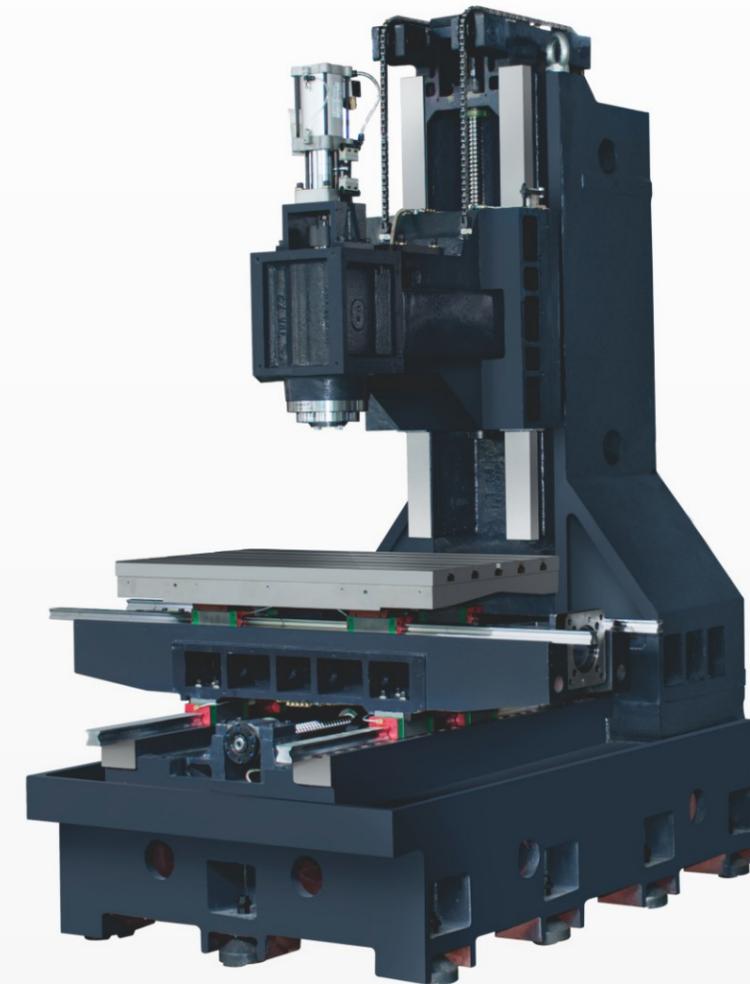
A solid foundation matters the most to all architectures' reliability whatever it is a house, a skyscraper or a bridge, for exactly the same reason, the solidity of vertical machining centers, was determined by the base and column, further it determines the machining performance and accuracy.

Massive iron casting base

The shock absorption performance of iron casting is 10 times superior than that steel structure, we made all of critical structures with iron casting on this basis, the base are iron casted with enforcement ribs, to lower the twisting force distortion and improve the shock absorption, TAICNC has a strictly quality control procedure to make flawless parts.

Triangulated wide-stance column

Ultra wide base and triangulated wide-stance column take full advantages of materials, to utilize the loading capacity of the structural base and column to its maximum, this supports a solid and reliable machining platform, and minimize the twist force, evenly scatter the cutting force and maintain the thermal stability.



HIGH RIGIDITY VERTICAL MACHINING CENTER, 2 AXES ROLLER LINEAR WAYS + 1 AXIS BOX WAY



Machine specification

Model	TC-856B	TC-1165B	TC-1370B
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS		
Spindle motor	11KW	11KW	11KW
Axial motors	3.0/3.0/3.0/3.0B (KW)	3.0/3.0/3.0B (KW)	3.0/3.0/3.0B (KW)
Z axis balancing mode	Nitrogen	Nitrogen	Weighing block
Travels			
Axis-X	820mm	1100mm	1300mm
Axis-Y	550mm	650mm	700mm
Axis-Z	600mm	600mm	700mm
Spindle nose to table	130mm-680mm	120mm-720mm	120mm-720mm
Axial rails			
Rail type	X/Y axes roller guides + Z axis box way		
Guide width	45/45/Hard rail	45/45/Hard rail	45/45/Hard rail
Sliding blocks nos(X/Y/Z)	4/4/Hard rail	6/4/Hard rail	6/4/Hard rail
Ball screw diameter/pitch	Ø40/12mm	Ø40/12mm	Ø40/12mm
Spindle			
Spindle taper	BT40	BT40	BT40
Spindle taper(optional)	BBT40	BBT40	BBT40/BT50
Spindle diameter	Ø155	Ø155	Ø150
Transmission type(standard)	Belt drive	Belt drive	Belt drive
Transmission type(optional)	Direct drive	Direct drive	Direct drive
Spindle speed(standard)	8000rpm	8000rpm	8000rpm
Spindle speed(optional)	Belt drive 10000RPM / Direct drive 12000 RPM		
Spindle center to column	580mm	590mm	590mm
Spindle torque	70N/m	70N/m	70N/m
Feeding			
Rapid traverse of axes X/Y/Z	36/36/15M/min	36/36/15M/min	36/36/15M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min
Worktable			
Table size	1000mmX550mm	1200mmX600mm	1500mmX700mm
T-slots (Nos-Width-Span)	5-18mm-100mm	5-18mm-100mm	5-18mm-145mm
Max load	600KG	800KG	900KG
Accuracy			
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003
Automatic tool changer			
Tool magazine capacity	Arm type 24T	Arm type 24T	Arm type 24T
Tool shank type	BT40	BT40	BT40
Tool-To-Tool time	1.8sec(Arm type)	1.8sec(Arm type)	1.8sec(Arm type)
Max tool diameter(Full load/Adjacent empty)	Ø75/Ø150	Ø75/Ø150	Ø75/Ø150
Max tool length	280mm	280mm	280mm
Max tool weight	8KG	8KG	8KG
Other information			
Machine weight (Apprx)	5800KG	7000KG	7500KG
Coolant tank capacity	300L	300L	350L
Lubricant capacity	4L	4L	4L
Power consumption	25KVA	30KVA	30KVA
Air supply	6PAR	6PAR	6PAR
External dimensions	2650mm*2560mm*2550mm	3050mm*2900mm*2800mm	3600mm*3040mm*2900mm

CNC ENGRAVING AND MILLING MACHINE

CNC engraving and milling machine is widely used for precision tooling, mold core, EDM copper electrode, small aluminum parts and etc., it realizes high machining efficiency and great surface roughness.

- Oil mist separator
- Automatic chip conveyor
- Automatic tool setter
- Spindle oil cooling machine
- Manual pulse generator
- USB port and Ethernet interface

Widely used for



Machine specification

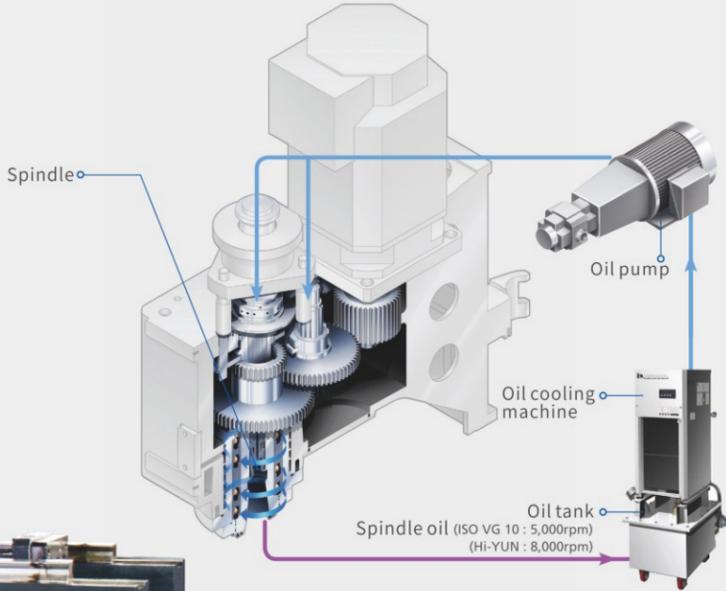
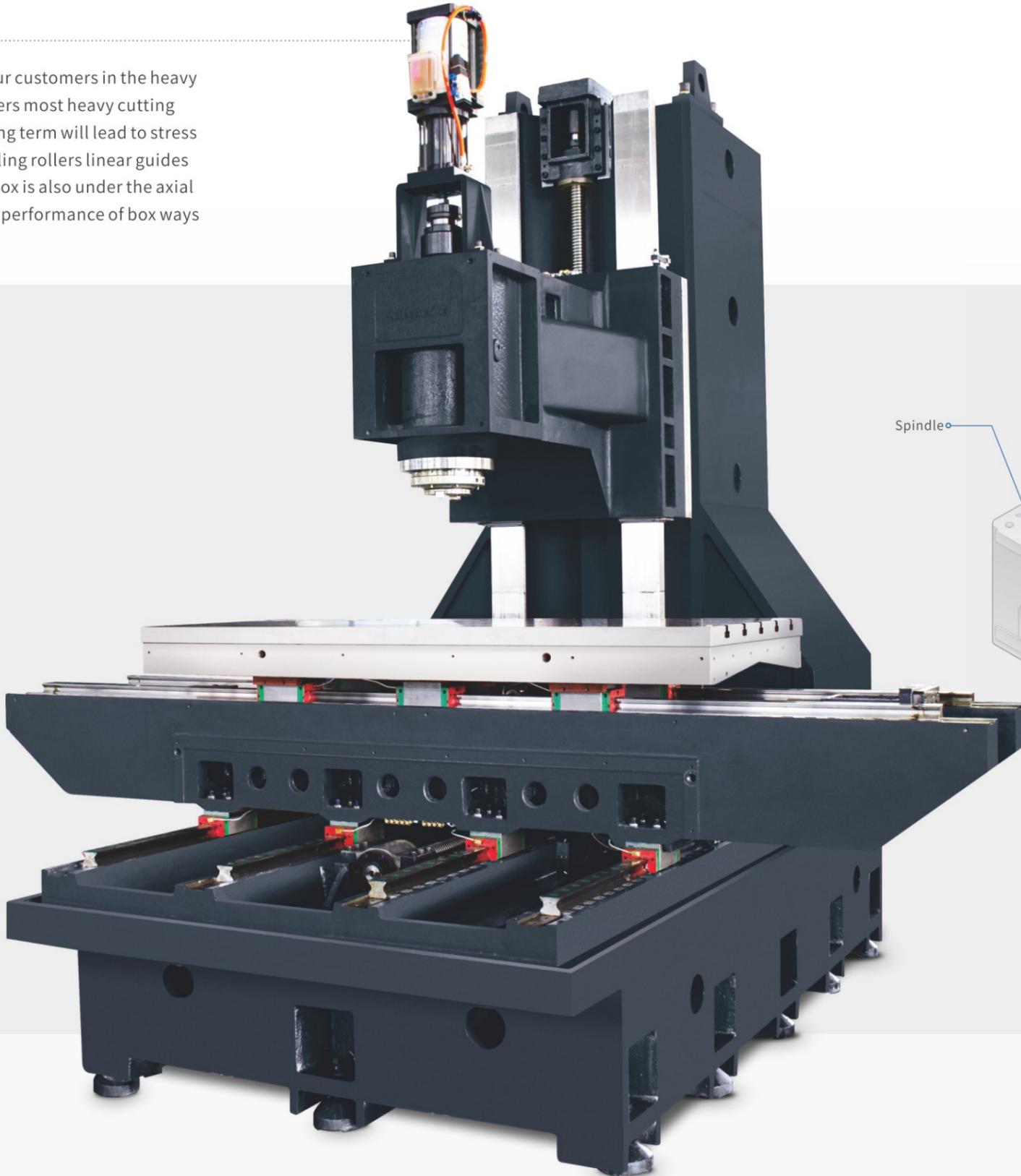
Model	TD-650	TD-870	TD-1085	TD-1285
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS			
Spindle motor	7.5KW	7.5KW	11KW	11KW
Axial motors	1.5X3 (KW)	2.0X3 (KW)	3.0X3(KW)	3.0X3(KW)
Travels				
Axis-X	600mm	700mm	850mm	850mm
Axis-Y	500mm	800mm	1000mm	1200mm
Axis-Z	250mm	320mm	500mm	500mm
Spindle nose to table	50mm-300mm	50mm-370mm	150-650mm	150-650mm
Gantry passing width	760	760	960mm	960mm
Axial rails				
Rail type	3 axes ball guides	3 axes ball guides	3 axes ball guides	3 axes ball guides
Guide width	XY30mmZ25mm	30mm	35mm	35mm
Sliding blocks nos(X/Y/Z)	4/4/4	4/4/4	4/4/4	4/4/4
Ballscrew diameter/pitch	Ø32/5mm	Ø32/8mm	Ø32/10mm	Ø32/10mm
Spindle				
Spindle taper	ER32	ER32	BT40/HSK-A63	BT40/HSK-A63
Spindle diameter	Ø125	Ø125	Ø150	Ø150
Transmission type(optional)	Electro-spindle	Electro-spindle	Electro-spindle	Electro-spindle
Spindle speed(standard)	18000rpm	18000rpm	18000rpm	18000rpm
Spindle speed(optional)	24000rpm	24000rpm	24000rpm	24000rpm
Feeding				
Rapid traverse of axes X/Y/Z	15M/min	15M/min	15M/min	15M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min	10M/min
Accuracy				
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003	±0.003
Worktable				
Table size	600X500mm	800X600mm	900mmX1100mm	900mmX1300mm
T-slots (Nos-Width-Span)	18-100mm	18mm-115mm	18mm-125mm	18mm-125mm
Max load	300KG	400KG	1000KG	1200KG
Other information				
Machine weight (Apprx)	3200KG	4100KG	6800KG	7500KG
Coolant tank capacity	130L	130L	150L	150L
Lubricant capacity	3L	3L	3L	3L
Power consumption	15KVA	15KVA	25KVA	25KVA
Air supply	6PAR	6PAR	6PAR	6PAR
External dimensions	2100mm*1700mm*2370mm	2500mm*1900mm*2370mm	3500mmX2800mmX2700mm	3800mmX2800mmX2700mm

ENFORCEMENT OF SUCCESS DESIGNED FOR HEAVY CUTTING

TAICNC's heavy cutting machining center, have been proven and trusted by our customers in the heavy cutting field, X/Y roller linear guides (heavy load type) and Z axis box ways covers most heavy cutting applications, we have studied massive cases, that worktable load heavy for long term will lead to stress friction and guides wearing, which is difficult to repair, the heavy load type rolling rollers linear guides were provided with extraordinary heavy bearing ability, besides, the spindle box is also under the axial pushing force while the machining process, the excellent bearing and durable performance of box ways could resolve this problem perfectly.



Skilled and experienced scraping work, provide the box ways superb seating quality with the sliding blocks, effectively absorb the vibration and shock generated in the machining process, make the motions smoothly to realize high precision machining work.



Gear drive spindle box was designed for outputting high torque at ultra-low spindle speed, which was significantly improved the heavy cutting performance.

HEAVY CUTTING VERTICAL MACHINING CENTER

TAICNC's heavy cutting vertical machining centers, Y axes are equipped with 4 rolling rollers linear guides (heavy load type), ensure the heavy cutting consistently stable and reliable, 190mm diameter BT50 short nose type spindle, has greater rigidity, and the gear drive transmission spindle box, to cope with the situation where low speed/high torque required, the strong torque and powerful cutting force is quite suitable for hard steel alloys and higher cutting feedrate applications.

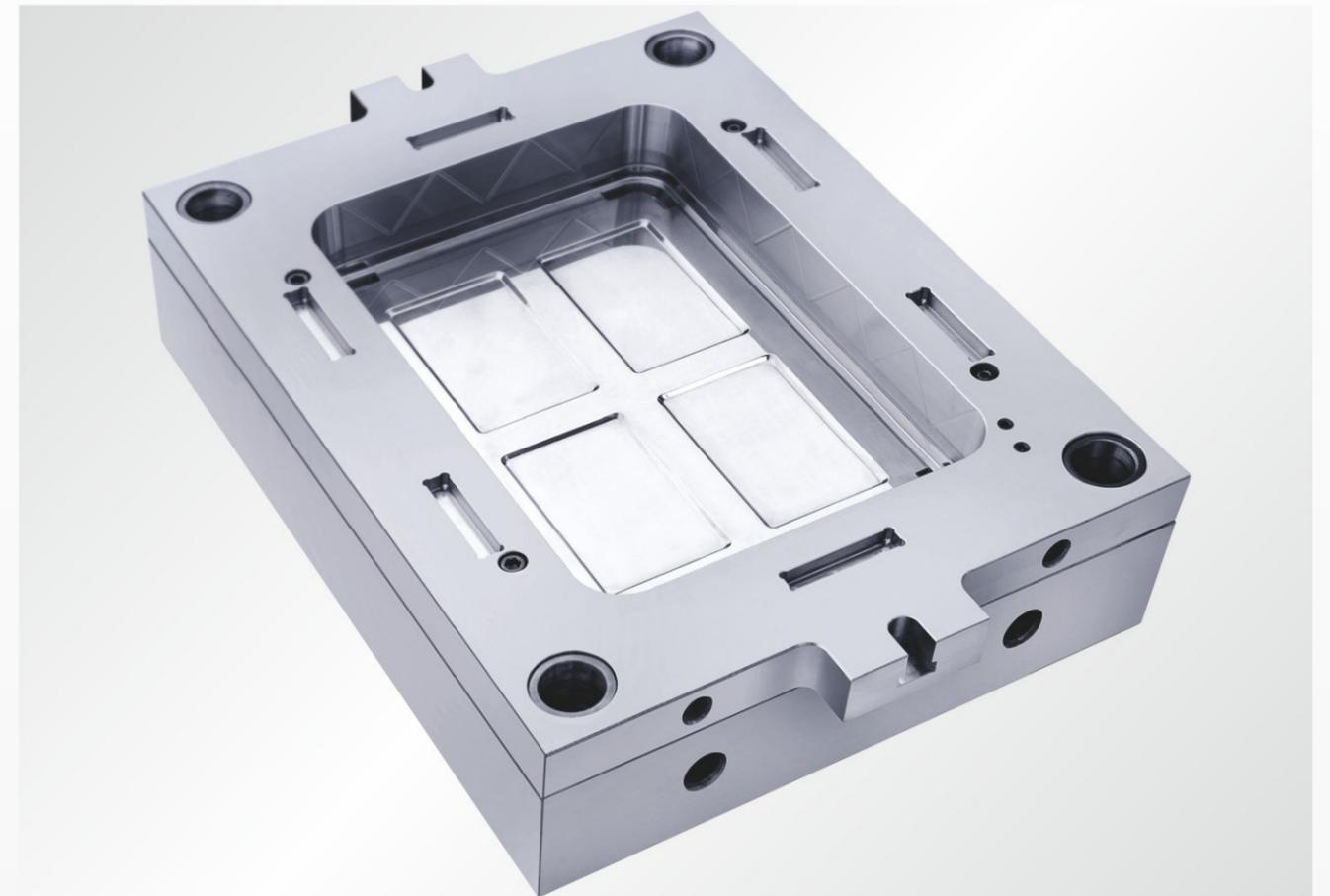
- $\Phi 190\text{mm}$ short nose type spindle
- 4 roller linear guides on Y axis
- Chain type automatic chip conveyor
- Arm type tool changer
- Manual pulse generator
- USB port and Ethernet interface

Models for selection

TC-1270

TC-1580

TC-1890

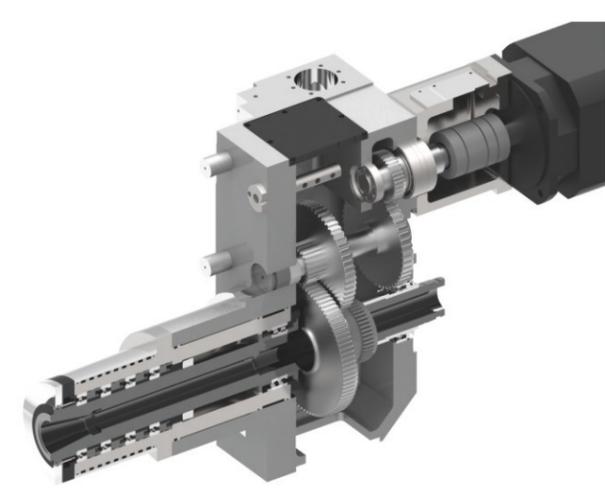


Machine specification

Model	TC-1270L	TC-1580L	TC-1890L	TC-1270B	TC-1580B	TC-1890B
Control system	SYNTEC/MITSUBISHI/FANUC/SIEMENS			SYNTEC/MITSUBISHI/FANUC/SIEMENS		
Spindle motor	15KW	15KW	22KW	15KW	15KW	22KW
Axial motors	3.5/3.5/3.5B(KW)	3.5/3.5/3.5B(KW)	4.5/4.5/4.5KW	3.5/3.5/3.5B (KW)	3.5/3.5/3.5B(KW)	4.5/4.5/4.5KW
Z axis balancing mode	Weighing block	Weighing block	Weighing block	Weighing block	Weighing block	Weighing block
Travels						
Axis-X	1200mm	1300mm	1800mm	1200mm	1300mm	1800mm
Axis-Y	700mm	700mm	900mm	700mm	700mm	900mm
Axis-Z	700mm	700mm	800mm	00mm	700mm	800mm
Spindle nose to table	150mm-850mm	150mm-850mm	180mm-980mm	150mm-850mm	150mm-850mm	180mm-980mm
Axial rails						
Rail type	3 axes roller guides	3 axes roller guides	3 axes roller guides	X/Y axes roller guides + Z axis box way		
Guide width	45/45/45mm	45/45/45mm	45/45/45mm	45/45/Z-box ways	45/45/Z-box ways	45/45/Z-box ways
Sliding blocks nos(X/Y/Z)	6/8/6	6/8/6	6/8/6	6/8/Z-box ways	6/8/Z-box ways	6/8/Z-box ways
Ballscrew diameter/pitch	Ø50/10mm	Ø50/10mm	Ø50/10mm	Ø50/10mm	Ø50/10mm	Ø50/10mm
Spindle						
Spindle taper	BT50	BT50	BT50	BT50	BT50	BT50
Spindle taper(optional)	BT40	BT40	BT40	BT40	BT40	BT40
Spindle diameter	Ø155/Ø190	Ø155/Ø190	Ø190	Ø155/Ø190	Ø155/Ø190	Ø190
Transmission type(standard)	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive
Transmission type(optional)	Direct drive	Direct drive	Direct drive	Gear drive	Gear drive	Gear drive
Spindle speed(standard)	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm
Spindle speed(optional)	Belt drive 8000RPM / Direct drive 12000 RPM			Belt drive 8000RPM / Gear drive 6000RPM		
Spindle center to column	800mm	800mm	950mm	800mm	800mm	950mm
Spindle torque	140N/m	140N/m	152N/m	140N/m	140N/m	152N/m
Feeding						
Rapid traverse of axes X/Y/Z	24/24/24M/min	24/24/24M/min	24/24/24M/min	24/24/15M/min	24/24/15M/min	24/24/15M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min	10M/min	10M/min	10M/min
Worktable						
Table size	1500mm*700mm	1500mm*700mm	2000mm*900mm	1500mm*700mm	1500mm*700mm	2000mm*900mm
T-slots (Nos-Width-Span)	5-18mm-125mm	5-18mm-125mm	7-22mm-150mm	5-18mm-125mm	5-18mm-125mm	7-22mm-150mm
Max load	1000KG	1000KG	2500KG	1000KG	1000KG	2500KG
Accuracy						
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003
Automatic tool changer						
Tool magazine capacity	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T
Tool shank type	BT50	BT50	BT50	BT50	BT50	BT50
Tool-To-Tool time	3sec(Arm type)	3sec(Arm type)	3sec(Arm type)	3sec(Arm type)	3sec(Arm type)	3sec(Arm type)
Max tool diameter(Full load/Adjacent empty)	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225
Max tool length	400mm	400mm	400mm	400mm	400mm	400mm
Max tool weight	15KG	15KG	15KG	15KG	15KG	15KG
Other information						
Machine weight (Apprx)	9000KG	9500KG	14000KG	9000KG	9500KG	16600KG
Coolant tank capacity	450L	500L	500L	450L	500L	500L
Lubricant capacity	6L	6L	6L	6L	6L	6L
Power consumption	35KVA	40KVA	40KVA	35KVA	40KVA	40KVA
Air supply	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR
External dimensions	3600mm*3040mm*2900mm	3600mm*3040mm*2900mm	5100mm*3800mm*3200mm	3600mm*3040mm*2900mm	3600mm*3040mm*2900mm	5100mm*3800mm*3200mm

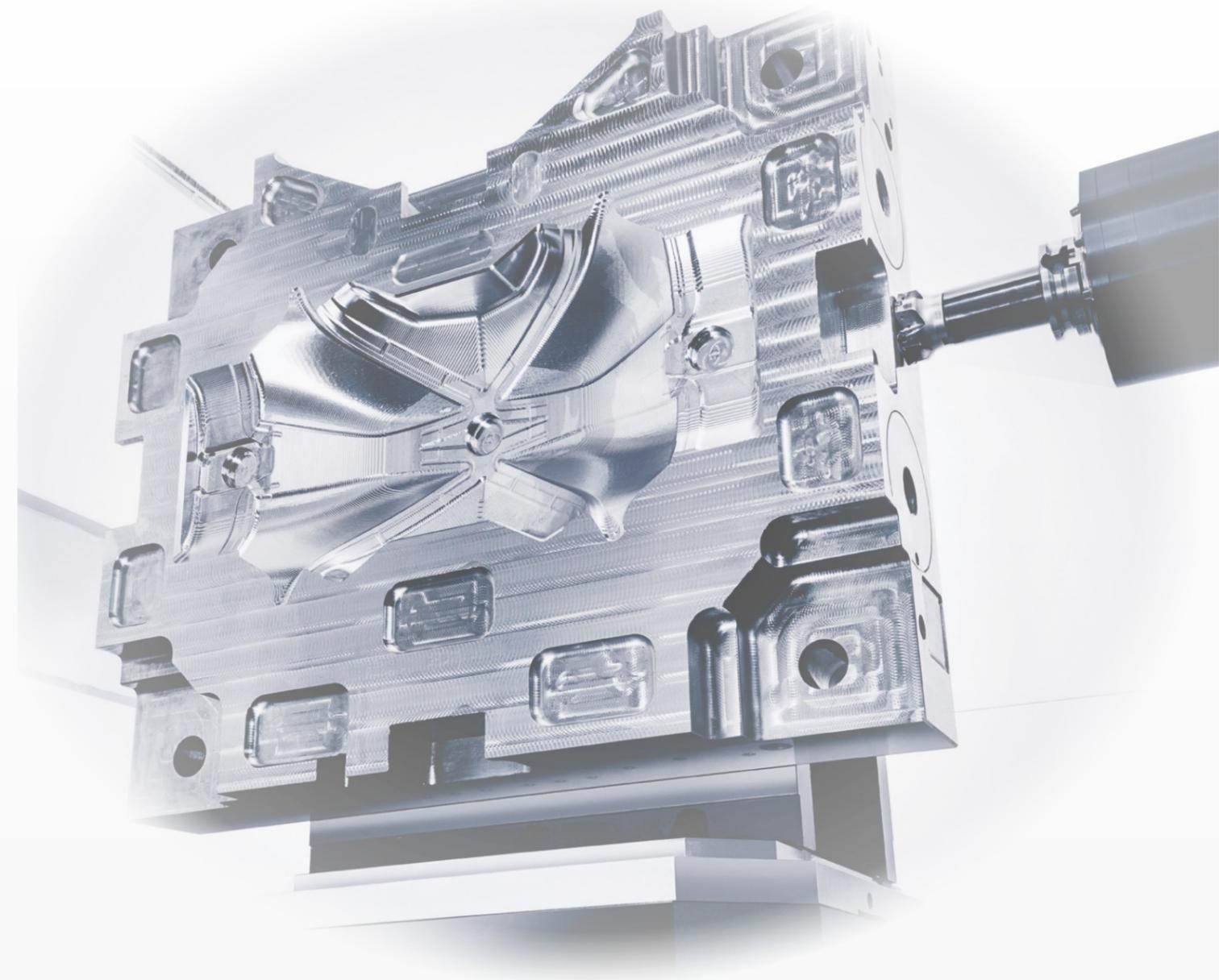
HORIZONTAL MACHINING CENTER

TAICNC Horizontal Machining Centers offer excellent capabilities for heavy cutting solutions, complex cavities and multiple faces are available with integrated 4th axis rotary table.



RELATED DATA

Materials	Cutters	Spindle speed	Cutting depth	Cutting width	Feeding rate	Removal rate
1045 steel	D160mm(8T Corn milling cutter)	380RPM	4mm	130mm	851mm/min	443cm3/min
	D63mm(4T Corn milling cutter)	420RPM	25mm	50mm	200mm/min	250cm3/min
	D98mm U-drill	300RPM			40mm/min	
	D43mm Hi-speed steel drill	200RPM			35mm/min	
HT300 casting iron	D160mm(8T Corn milling cutter)	300RPM	6mm	130mm	840mm/min	655cm3/min
	D63mm(4T Corn milling cutter)	420RPM		50mm	420mm/min	630cm3/min
	D98mm U-drill	300RPM			60mm/min	
	D43mm Hi-speed steel drill	200RPM			50mm/min	



Machine specification

Model	TW-50	TW-63	TW-80	TW-100	TW-1270	TW-1380	TW-1580	TW-1814	TW-1815
Control system	MITSUBISHI/FANUC/SIEMENS				MITSUBISHI/FANUC/SIEMENS				
Spindle motor	11KW	15KW	18.5KW	18.5KW	15KW(BT40/11KW)	15KW	18.5KW	18.5KW	18.5KW
Axial motors	3.0/3.0/3.0(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5(KW)	3.0/3.0/3.0(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5(kw)	4.5/4.5/4.5(kw)
Travels									
Axis-X	1100mm	1300mm	1500mm	1700mm	1200mm	1300mm	1500mm	1800mm	1800mm
Axis-Y	600mm	800mm	1000mm	1030mm	750mm	800mm	800mm	1400mm	1500mm
Axis-Z	600mm	800mm	800mm	1030mm	720mm	800mm	800mm	900mm	1000mm
Spindle center to table	-50mm-550mm	-15mm-785mm	115mm-1115mm	10mm-1040mm	150mm-850mm	150mm-950mm	150mm-950mm	200mm-1100mm	250mm-1750mm
Axial rails									
Rail type	3 axes roller linear guides				X/Y axes roller guides + Z axis box way				
Guide width	45/45/45mm	45/45/45mm(Z轴4轨道)	55/45/45mm(Z轴4轨道)	45/55/55mm	45/45/55mm(Z轴2轨)	45/45/45mm(Z轴4轨道)	45/45/45mm(Z轴4轨道)	55/硬轨/45(Z轴4轨道)	55/硬轨/45(Z轴4轨道)
Sliding blocks nos(X/Y/Z)	6/8/6	6/8/6	6/8/6	6/8/6	6/box way/8	6/box way/8	6/box way/8	6/box way/8	6/box way/8
Ballscrew diameter/pitch	Ø40mm/12mm	XYØ40mmZØ50mm/10mm	Ø50/10mm	Ø50/10mm	Ø40/10mm	XYØ40mmZØ50mm/10mm	Ø50/10mm	Ø50/10mm	Ø50/10mm
Spindle									
Spindle taper	BT40	BT50	BT50	BT50	BT40	BT50	BT50	BT50	BT50
Spindle diameter	Ø155	Ø155	Ø190	Ø190	Ø150/Ø155	Ø155	Ø190	Ø190	Ø190
Transmission type(standard)	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive
Transmission type(optional)	Direct drive	Direct drive	Direct drive	Direct drive	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive
Spindle speed(standard)	8000rpm	8000rpm	6000rpm	6000rpm	8000rpm	8000rpm	6000rpm	6000rpm	6000rpm
Spindle speed(optional)	12000rpm	10000rpm	10000rpm	10000rpm	10000rpm	10000rpm	10000rpm	8000rpm	8000rpm
Spindle torque	47N/m	140N/m	140N/m	140N/m	70N/m	70N/m	140N/m	150N/m	150N/m
Feeding									
Rapid traverse of axes X/Y/Z	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min	20/20/20M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Minimum indexing of worktable	1	1	1	1					
Cutting feedrate	10M/min	10M/min	10M/min	10M/min	10M/min	10M/min	10M/min	10M/min	10M/min
Worktable									
Table size	500mmX500mm	630mmX630mm	800mmX800mm	1000mmX1000mm	1380mmX600mm	1500mmX700mm	1700mmX800mm	2000mm*900mm	2000mm*900mm
T-slots (Nos-Width-Span)	5-18mm-100mm	5-18mm-145mm	5-18mm-100mm	7-22mm-100mm	5-18mm-110mm	5-18mm-145mm	5-18mm-145	5-22-165mm	5-22-165mm
Max load	600KG	700KG	1200KG	3000KG	900KG	1500KG	1500KG	1600KG	1600KG
Accuracy									
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003
Automatic tool changer									
Tool magazine capacity	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T	Arm type 24T
Tool shank type	BT40	BT50	BT50	BT50	BT40	BT50	BT50	BT50	BT50
Tool-To-Tool time	2sec(Arm type)	2sec(Arm type)	2sec(Arm type)	2sec(Arm type)	3sec(Arm type)	2sec(Arm type)	2sec(Arm type)	6sec(Arm type)	6sec(Arm type)
Max tool diameter (Full load/Adjacent empty)	Ø75/Ø150	Ø110/Ø220	Ø110/Ø2200	Ø110/Ø2200	Ø110/Ø220	Ø110/Ø2200	Ø110/Ø2200	225	225
Max tool length	400mm	400mm	400mm	400mm	400mm	400mm	400mm	400mm	400mm
Max tool weight	8KG	18KG	18KG	18KG	8KG	18KG	18KG	8KG	8KG
Other information									
Machine weight (Apprx)	7200KG	9000KG	10000KG	12000KG	7500KG	9000KG	9500KG	16000KG	16500KG
Coolant tank capacity	500L	600L	600L	600L	600L	600L	600L	500L	500L
Lubricant capacity	3L	3L	3L	3L	3L	3L	3L	3L	3L
Power consumption	30KVA	35KVA	40KVA	40KVA	35KVA	35KVA	40KVA	40KVA	40KVA
Air supply	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR
External dimensions	2500mm*2870mm*2785mm	3800mm*3040mm*2900mm	4000mm*3400mm*2900mm	4600mmX3600mmX3200mm	3600mm*3000*2900mm	3800mmX3040mmX2900mm	4000mm*3400mm*2900mm	5100mm*5000mm*3200mm	5100mm*5400mm*3200mm

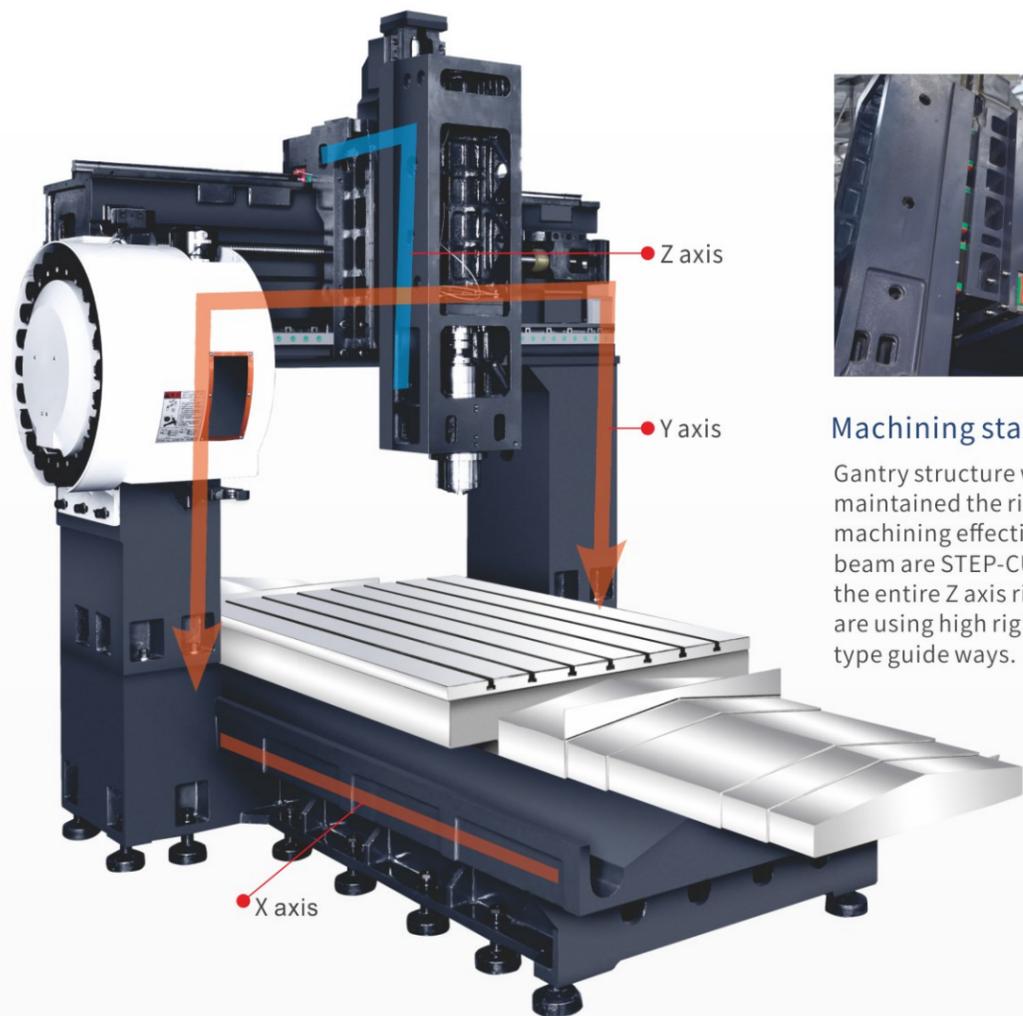
VERTICAL AND HORIZONTAL 5 FACES MACHINING CENTER



Machine specification

Model	TLW-50	TLW-63	TLW-80
Control system	MITSUBISHI/FANUC/SIEMENS		
Spindle motor (Vertical & Horizontal)	11KW	18.5KW	18.5KW
Axial motors(X/Y/Z1/Z2/A)	3.0X5(KW)	4.5/4.5/4.5/4.5/3.0(KW)	4.5/4.5/4.5/4.5/3.0(KW)
Travels			
Axis-X	1100mm	1100mm	1300mm
Axis-Y	700mm	650mm	600mm
Axis-Z1	720mm	800mm	800mm
Axis-Z2	600mm	600mm	600mm
Z1 vertical spindle center to column	650mm	650mm	650mm
Z1 vertical spindle center to table	150mm-870mm	165mm-965mm	160mm-960mm
Z2 horizontal spindle center to table	255mm-905mm	335mm-985mm	415mm-1015mm
Max workpiece rotary diameter	Ø1250mm	Ø1350mm	Ø1400mm
Axial rails			
Rail type	4 axes roller linear guides	4 axes roller linear guides	4 axes roller linear guides
Guide width	45/45/45mm	45/35(4 rails)/55mm	45/35(4 rails)/55mm
Ballscrew diameter/pitch	XYZØ40mm/12mm	XYØ40/12mm Z1.Z2.50/12mm	XYØ40/12mm Z1.Z2.50/12mm
Spindle			
Spindle taper (Vertical & Horizontal)	BT40	BT50	BT50
Spindle diameter	Ø155	Ø190	Ø190
Transmission type(standard)	Direct drive	Belt drive	Belt drive
Spindle speed(Vertical)	12000rpm	8000rpm	6000rpm
Spindle speed(Horizontal)	12000rpm	10000rpm	10000rpm
Spindle torque(Vertical & Horizontal)	70N/m	140N/m	140N/m
Feeding			
Rapid traverse of axes X/Y/Z1/Z2	20/20/20M/min	20/20/20M/min	20/20/20M/min
Minimum setting of axes X/Y/Z1/Z2	0.001	0.001	0.001
Minimum indexing of worktable	1 (1度1分)	1 (1度1分)	1 (1度1分)
Cutting feedrate	10M/min	10M/min	10M/min
Worktable			
Table size	500mmX500mm	630mmX630mm	800mmX800mm
T-slots (Nos-Width-Span)	5-18mm-100mm	5-18mm-145mm	5-18mm-100mm
Max load	600KG	1200KG	2500KG
Accuracy			
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003
Minimum indexing angle	1°	1°	1°
Indexing accuracy(Accumulated)	4sec	4sec	4sec
Rotary table repeatability	±1sec	±1sec	±1sec
Automatic tool changer			
Tool magazine capacity (Vertical & Horizontal)	Arm type 16/24T	Arm type 16/24T	Arm type 16/24T
Tool shank type(Vertical & Horizontal)	BT40	BT50	BT50
Tool-To-Tool time	2sec(Arm type)	7sec(Arm type)	7sec(Arm type)
Max tool diameter(Full load/Adjacent empty)	Ø75/Ø150	Ø110/Ø220	Ø110/Ø220
Max tool length	400mm	400mm	400mm
Max tool weight	8KG	18KG	18KG
Other information			
Machine weight (Apprx)	8500KG	12000KG	13000KG
Coolant tank capacity	500L	600L	600L
Lubricant capacity	3L	3L	3L
Power consumption	40KVA	60KVA	60KVA
Air supply	6PAR	6PAR	6PAR
External dimensions	3050mmX2560mmX2785mm	3280mmX3450mmX3500mm	3520mmX3550mmX3560mm

HIGH SPEED DOUBLE COLUMN VERTICAL MACHINING CENTER



Machining stability is guaranteed

Gantry structure was die casted as a whole, maintained the rigidity and precision machining effectively. Guide ways on the beam are STEP-CUT distributed, enhanced the entire Z axis rigidity, all motion axes are using high rigidity cycling rolling balls type guide ways.

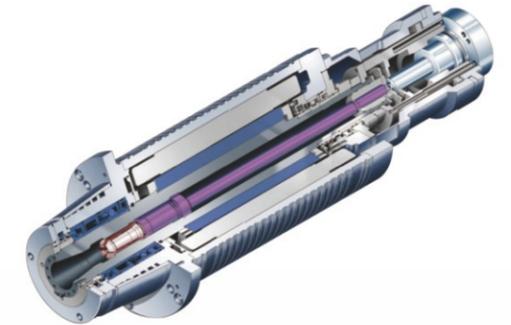
Model	Workpiece dimensions	Max load
1510V	1600x800mm	2000KG
1613V	1700x1000mm	2500KG
2013V	2100x1000mm	3000KG



SPINDLE

Available spindles for option

BT40	12000/15000RPM
BBT40	12000/15000RPM
HSK-A63	15000/18000RPM
	24000RPM ELECTRO-SPINDLE
	30000RPM ELECTRO-SPINDLE



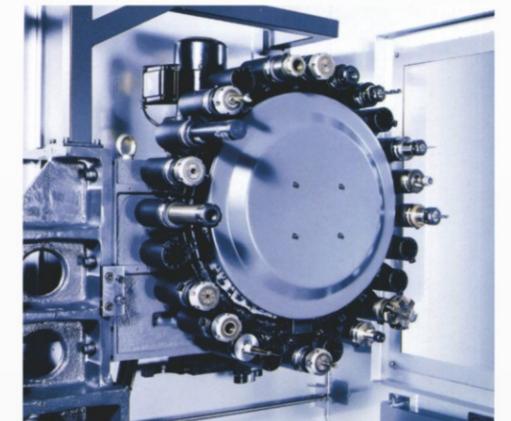
BUILT-IN SPINDLE MOTOR

Integrated spindle with high torque motor, minimized the power loss to achieve extraordinary machining efficiency. Coolant directly sprayed on the bearings, also eliminated the heat expansion, longer the using life.

TOOL MAGAZINE

Available ATC for option

Tool shank type	BT40/BBT40/HSK-A63
Tool selection type	Disc/Chain
Tool storage numbers	24/32/40/52
Tool change method	Robotic arm



OPTIONALS



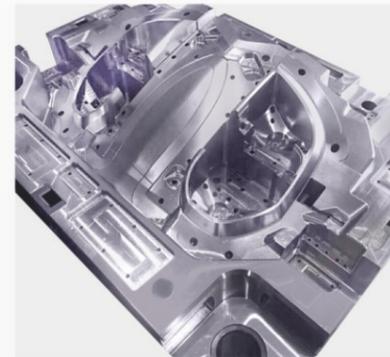
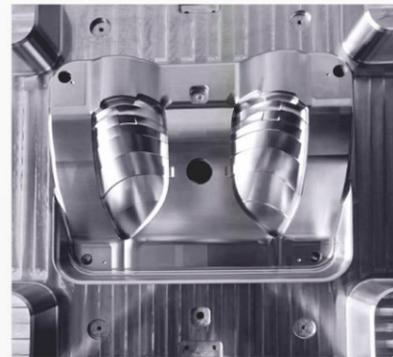
OPTICAL LINEAR SCALE

To improve the position accuracy, and correct the axial coordinates tolerance which caused by heat movement, each axis could choose to install absolute type optical linear scales.

AUTOMATIC MEASURING SYSTEM

To measure the tool and workpiece, and automatically given compensation parameter before the precision machining process is necessary, we offer Workpiece Touch Probe and Tool setter for option.

HIGH SPEED DOUBLE COLUMN VERTICAL MACHINING CENTER



Machine specification

Model	TL-1510L	TL-1613L	TL-2015L
Control system	MITSUBISHI/FANUC/SIEMENS		
Spindle motor	11KW	11KW	11KW
Axial motors	3.0/3.0/3.0KW	4.5/4.5/4.5KW	4.5/4.5/4.5KW
Travels			
Axis-X	1500mm	1600mm	2000mm
Axis-Y	1000mm	1300mm	1500mm
Axis-Z	500mm	600mm	600mm
Spindle nose to table	200mm-700mm	200mm-800mm	200mm-800mm
Gantry passing width	1050mm	1400mm	1520mm
Axial rails			
Rail type	X/Y/Z axes roller guide		
Guide width	45/45/45mm	45/45/45mm	45/55/55mm
Ballscrew diameter	X50/YZ40	50/50/50	50/50/50
Ballscrew pitch	10/10/10	10/10/10	10/10/10
Spindle			
Spindle taper(standard)	BT40	BT40	BT40
Spindle taper(optional)	BBT40/HSK-A63	BBT40/HSK-A63	BBT40/HSK-A63
Spindle diameter	Ø150	Ø150	Ø150
Transmission type(standard)	Direct drive	Direct drive	Direct drive
Transmission type(optional)	Belt drive	Belt drive	Belt drive
Spindle speed(standard)	12000rpm	12000rpm	12000rpm
Spindle speed(optional)	15000rpm/18000rpm	15000rpm/18000rpm	15000rpm/18000rpm
Spindle torque	52N/m	52N/m	52N/m
Feeding			
Rapid traverse of axes X/Y/Z	15/15/15M/min	15/15/15M/min	15/15/15M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min
Worktable			
Table size	1600mmX900mm	1700mmX1200mm	2100mmX1200mm
T-slots (Nos-Width-Span)	5-18mm-165mm	5-18mm-140mm	5-18mm-140mm
Max load	2500KG	3000KG	4000KG
Accuracy			
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003
Automatic tool changer			
Tool magazine capacity	Arm type 24T	Arm type 24T	Arm type 24T
Tool shank type	BT40	BT40	BT40
Tool-To-Tool time	2	2	2
Max tool diameter(Full load/Adjacent empty)	Ø75/Ø150	Ø75/Ø150	Ø75/Ø150
Max tool length	350mm	350mm	350mm
Max tool weight	8KG	8KG	8KG
Other information			
Machine weight (Apprx)	12000KG	12000KG	15000KG
Coolant tank capacity	400L	400L	400L
Lubricant capacity	3L	3L	3L
Power consumption	35KVA	35KVA	35KVA
Air supply	6PAR	6PAR	6PAR
External dimensions	4600mm*2500mm*3000mm	4800mm*2600mm*3200mm	6000mm*2800mm*3200mm

HEAVY CUTTING DOUBLE COLUMN VERTICAL MACHINING CENTER, X/Y AXES ROLLER LINEAR GUIDES, Z AXIS BOX WAY



Availability for options

- Height extending: 200mm
- ATC capacity: 32T/40T
- Tool shank type: CAT50/DIN50/ISO50
- Belt drive spindle: BT50/8000RPM
- CTS (Coolant Through Spindle) system
- X/Y/Z optical linear scales
- Tool Setter
- Workpiece Touch Probe
- Temperature rising compensation system
- Angular milling heads

MECHANICAL FEATURES

- The column and beam are die casted as a whole, design took advantages of rigid box structure and bridge profile, effectively support and bear the vertical forces and horizontal stress, perform the best rigidity in the machining process.
- Distance between spindle center and Z axis guide ways was minimized, shorten the cutting force arm.
- Two groups of high pressure air cylindrical weighing system, to balance the weight of Z axis.

The critical components related to the machining accuracy, machine body, worktable, ball screws, support bases, have been well optimized its structure and precision machined, with benefits of enormous and strict installation control points, the machining accuracy and reliability of the machine have been improved notable, especially the repeatability 30% was enhanced, quite a few performance indexes reaching to the precision class machine standards.

TAICNC double column type vertical machining centers are equipped with automatic lubricator, auto chip conveyor and oil chiller for continuously lubricating, cleaning and cooling the guide ways and ball crews, which guaranteed the machine is possible for long term running. 12000RPM spindle, 24m/min and 15m/min rapid movement on X/Y and Z axis accordingly. Tool to tool time short to 3.8 sec, the above-mentioned factors are fundamentally accelerated the machining efficiency 10% by perfectly integrated and well operated.



Fully enclosed sheet metal guards prevent scraps and coolant from splashing and leaking, there are various extreme protection with cooperative system self-diagnosis alerts and warning, endow the machine to operate continuously, which is suitable for 24 hours non-stop production line.



Machine specification

Series	10-series	13-series	15-series	18-series	18-series	20-series	25-series		
Model	TL-1810B	TL-1613B	TL-2015B	TL-2018B	TL-2518B	TL-3018B	TL-3020B	TL-3025B	TL-4025B
Control system	三菱MITSUBISHI 法那科 FANUC 西门子SIEMENS			三菱MITSUBISHI 法那科 FANUC 西门子SIEMENS					
Spindle motor	18.5KW	18.5KW	18.5KW	18.5KW	18.5KW	18.5KW	18.5KW	22KW	22KW
Axial motors	4.5/4.5/4.5(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5(KW)	4.5/4.5/4.5B(KW)	6/4.5/4.5B(KW)	6/4.5/4.5B(KW)	6/4.5/4.5(KW)	9/5.5/5.5(KW)	9/5.5/5.5(KW)
Z axis balancing mode	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen
Travels									
Axis-X	1800mm	1600mm	2000mm	2000mm	2500mm	3000mm	3050mm	3000mm	4000mm
Axis-Y	1000mm	1300mm	1500mm	1800mm	1800mm	1800mm	2000mm	2900mm	2900mm
Axis-Z	800mm	800mm	800mm	800mm	800mm	800mm	900mm	1000mm	1000mm
Spindle nose to table	180mm-980mm	180mm-980mm	180mm-980mm	200mm-1000mm	200mm-1000mm	200mm-1000mm	200mm-1100mm	300mm-1300mm	300mm-1300mm
Gantry passing width	1000mm	1400mm	1520mm	1850mm	1850mm	1850mm	2000mm	2550mm	2550mm
Table height to ground	1000mm	1000mm	1000mm	1120mm	1120mm	1120mm	1300mm	1400mm	1400mm
Axial rails									
Rail type	X/Y axes roller guide Z axis box ways					X/Y axes roller guide Z axis box ways			
Guide width	45/45/(Z axis box ways)	45/45/(Z axis box ways)	45/45/(Z axis box ways)	55/55/(Z axis box ways)	55/55/(Z axis box ways)	55/55/(Z axis box ways)	55/55/(Z axis box ways)	55/55/(Z axis box ways)	55/55/(Z axis box ways)
Ballscrew diameter	50/50/50.	50/50/50	50/50/50	50/50/50	63/50/50	63/50/50	63/63/50	80/63/50	80/63/50
Ballscrew pitch	12/12/12.	10/10/10	10/10/10	12/12/12	12/12/12	12/12/12	12/12/12	16/10/10	16/10/10
Spindle									
Spindle taper	BT50	BT50	BT50	BT50	BT50	BT50	BT50	BT50	BT50
Spindle diameter	Ø190	Ø190	Ø190	Ø190	Ø190	Ø190	Ø190	Ø190	Ø190
Transmission type(standard)	Belt-drive	Belt-drive	Belt-drive	Belt-drive	Belt-drive	Belt-drive	Belt-drive	Belt-drive	Belt-drive
Transmission type(optional)	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive	Gear drive
Spindle speed(standard)	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm	6000rpm
Spindle speed(optional)	8000rpm	8000rpm	8000rpm	8000rpm	8000rpm	8000rpm	8000rpm	8000rpm	8000rpm
Spindle torque	118N/m	118N/m	118N/m	118N/m	118N/m	118N/m	143N/m	143N/m	143N/m
Feeding									
Rapid traverse of axes X/Y/Z	15/15/15M/min	15/15/15M/min	15/15/15M/min	15/15/15M/min	15/15/15M/min	15/15/15M/min	15/15/15M/min	10/15/15M/min	10/15/15M/min
Minimum setting of axes X/Y/Z	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cutting feedrate	10M/min	10M/min	10M/min	6M/min	6M/min	6M/min	6M/min	6M/min	6M/min
Worktable									
Table size	2000mm*900mm	1700mm*1200mm	2100mm*1200mm	2200mmX1500mm	2700mmX1500mm	3200mmX1500mm	3100mm*1700mm	3000mm*2100mm	4000mm*2100mm
T-slots (Nos-Width-Span)	5-22mm-165mm	7-18mm-150mm	7-18mm-150mm	10-22mm-150mm	10-22mm-150mm	10-22mm-150mm	7-22mm-180mm	11-22mm-180mm	11-22mm-180mm
Max load	3000KG	3000KG	4000KG	7000KG	8000KG	10000KG	10000KG	10000KG	12000KG
Accuracy									
Positioning accuracy(JIS 6338)	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm	±0.005/300mm
Repeatability (JIS 6338)	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003
Automatic tool changer									
Tool magazine capacity	24T	24T	24T	24T	24T	24T	24T	24T	24T
Tool shank type	BT50	BT50	BT50	BT50	BT50	BT50	BT50	BT50	BT50
Tool-To-Tool time	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Max tool diameter(Full load/Adjacent empty)	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225	Ø125/Ø225
Max tool length	400mm	400mm	400mm	400mm	400mm	400mm	400mm	400mm	400mm
Max tool weight	15KG	15KG	15KG	15KG	15KG	15KG	15KG	15KG	15KG
Other information									
Machine weight (Apprx)	13000KG	13000KG	16000KG	20000KG	22000KG	25000KG	26000KG	38000KG	46000KG
Coolant tank capacity	400L	400L	400L	400L	400L	400L	400L	400L	400L
Lubricant capacity	4L	4L	4L	4L	4L	4L	4L	4L	4L
Power consumption	40KVA	40KVA	40KVA	40KVA	45KVA	45KVA	50KVA	60KVA	60KVA
Air supply	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR	6PAR
External dimensions	5000mm*2600mm*3200mm	4800mm*2600mm*3200mm	6000mm*2800mm*3200mm	6000mm*3100*3200mm	7700mm*3100mm*3200mm	8800mm*3100mm*3200mm	8800mm*3286mm*4160mm	11000mm*4600mm*4600mm	12500mm*4600mm*4600mm

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