

**T**aikan

# **High-speed and High-efficiency Drilling & Tapping Machining Center**

High speed | High precision | High efficiency | High rigidity



HIGH-END INTELLIGENT EQUIPMENT OVERALL SOLUTION SERVICE PROVIDER

## **T**aikan

HIGH-END INTELLIGENT EQUIPMENT INTEGRATED SOLUTIONS SERVICE PROVIDER

## SHENZHEN CREATE CENTURY MACHINERY CO.,LTD.

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- Ø Official Website: www.szccm.com





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# WE ARE A DREAM BUILDER FOR THE INNOVATION

Create Century is not only a high-end intelligent equipment manufacturer but also a creator of industrial machine tools and productivity tools

# MACHINERY TAKES SHAPE BUT INNOVATION KNOWS NO BOUNDS

Create Century transcends with innovation of thinking, intelligence, products and services unveiling the realm of intelligent manufacturing and fostering a shared vision of a better future



## **COMPANY PROFILE**

## Founded18years ago ◆

Create Century established in 2005

## Ranking191st ◆

Shenzhen's Top 500 Enterprises in 2022

## Top100businesses ◆

Bao'an District, Shenzhen Top 100 enterprises by added value Top 100 enterprises by output value Top 100 enterprises by tax contribution Top 100 enterprises by innovation

## 2R&D centers

The South China R&D Center The East China R&D Center

## **4**strategic partnership agencies

ONE STATION, ONE LAB, AND TWO CENTERS

Academician <Expert> Workstation of Shenzhen Engineering Technology Research Center of Guangdong Province Engineering Laboratory for Key Technologies in Smart Precision Machining Enterprise Technology Center of Shenzhen

## 500+R&D team members 700+core patents

The Company boasts a technical advisory board consisting of industry-leading technical experts from Mainland China, Taiwan, South Korea, Malaysia, Germany, and other regions, along with a dedicated R&D team of over 500 professionals

Invention patents168
Utility model patents509
Design patents121
Software convrights88

Guangdong Create Century Intelligent Equipment Group Co., Ltd. (Create Century for short; stock code: 300083) was publicly listed on the Shenzhen Stock Exchange in 2010, and underwent a transformation in 2016 to become an intelligent equipment Co., Ltd. in 2016. Create Century is a company that specializes in the research and development, production, sales, and service of highend intelligent equipment. With nearly two decades of industry experience, it is capable of delivering top-quality equipment and comprehensive intelligent solutions to its customers. More importantly, Create Century stands out among similar domestic enterprises for its broad technological expertise and extensive product range.



Dongguan Industrial Park



Yibin Industrial Park



Suzhou Industrial Park



Huzhou Industrial Park



## **Drilling & Tapping Machining Center**

## High-speed High-efficiency High-precision

- Based on accumulated data from 90,000 units, finite element analysis and dynamic optimization design are performed to achieve a maximum acceleration of over 1.2G, thereby ensuring efficient and stable machining
- The tool change time between adjacent slots of the 21T magazine is as short as 1.1S; 21T/26T/30T/40T magazines are available; the maximum length of tool is 300 mm. All such features help improve the adaptability of cutting tools, thus facilitating the intensif ication of production processes



High-speed, high-efficiency and high-precision drilling & milling center

T-500B T-500B Plus





## Featuring high precision, high speed and high rigidity, the machine integrates drilling, tapping, and milling as a whole

## PRODUCT STRUCTURE

### Tool magazine

The tool change time between adjacent slots of the 21T magazine is as short as 1.1S; 21T/26T/30T/40T magazines are available

### Spindle

The high-speed spindle with a rotating speed of 24,000 RPM meets the requirement for high surface smoothness of the product; besides, it works with ceramic ball bearings, which significantly prolongs the lifespan of the spindle

#### Rapid traverse speed

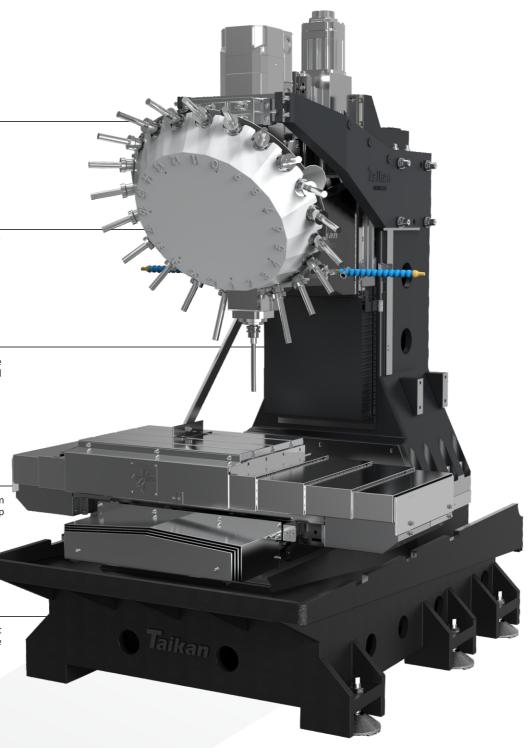
The fast rapid movement speed of the machine tool at 48 m/min helps save processing time and enhance the processing efficiency

### Chip removal

The base is designed with a significant inclination angle for chip discharge, enabling rapid chip removal and increased flow rate of cutting fluid

#### Base

The base is designed to provide six-point support for extra-large span, thereby enhancing the rigidity and vibration resistance of the machine



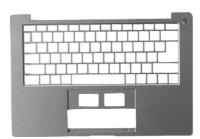
## WORKPIECE DISPLAY

Extensively used to process miniature board parts, disc-shaped components, and casings (housings) for the 3C, auto parts, small-sized mold processing, and medical device industries











equipmentintegrated solutions provider



Independently developed tool magazine equipped with motor drives from system manufacturers
The tool change time between adjacent slots of the 21T magazine is as short as 1.1S.
21T/26T/30T/40T magazines are available; the maximum length of tool is 300 mm



Proprietary spindle demonstrated by 90,000 units; improved load-bearing capacity of bearings and enhanced reliability; the maximum speed is 24,000 RPM



Independently developed permanent magnet synchronous motorized spindle featuring quick start-stop response

The instantaneous acceleration and deceleration at 20,000 revolutions per minute takes around 0.5 seconds; the lubrication configuration of oil and gas reduces the temperature of spindle, thereby prolonging its lifespan





of The 3c series



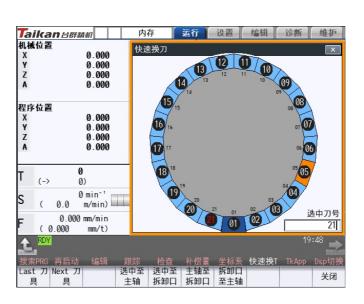


Screw/guide rail

The three-axis screws are of C3 grade, while the linear guide rails are of P grade. These components boast excellent quality and high reliability, effectively ensuring the high precision and high speed of the machine tool

Filtering water tank

Based on the application experience in 90,000 units, the maze-style multi-layer filtering water tank, the internal protection upgrades and the enhanced magazine protection were realized...The reliability of each component is improved to minimize failures and ensure the machine tool can maintain stable production for a long time



M80 control unit

The M80 control unit, which is developed in-house, incorporates robust monitoring and versatile application capabilities; the user-friendly HMI provides customers with pre-configured, efficient processing application solutions, thereby improving the usability for users



Grease lubrication

Standard configuration of T-500B Plus

Grease can form a grease ring with a certain sealing effect that prevents the invasion of solid or fluid contaminants. This feature makes it particularly advantageous for use in damp and highly dusty environments.



## ► PARAMETER TABLE

Items	Units	T-500B	T-500B Plus	
Worktable size	mm	620*400	620*400	
Strokes of the three axes (X/Y/Z)	mm	500/400/320	500/400/320	
Distance from spindle nose to table	mm	180-500	180-500	
T-slot of worktable (number of slots - slot width × spacing)	mm	3-14*120	3-14*120	
Spindle speed	r/min	20-24000	20-20000	
Spindle taper	/	BT-30	BT-30	
Rapid traverse speed X/Y/Z	m/min	48/48/48	48/48/48	
Tool magazine capacity	pc(s)	21	21	
Tool weight	kg	3	3	
Tool length	mm	300	300	

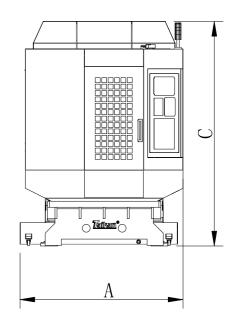
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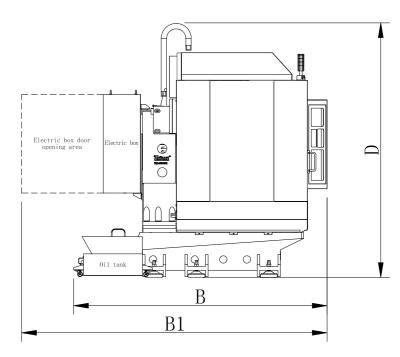
## ► CONFIGURATION TABLE

(● Standard configuration O Optional configuration △ Not supported)

Items	T-500B	T-500B Plus	Items	T-500B	T-500B Plus
24000rpm	•	0	Screw center cooling	Δ	Δ
20000rpm	0	0	Heat exchanger	0	0
12000rpm	0	0	Electric cabinet A/C	0	0
Motorized spindle15000rpm	0	0	The 4th-axis	0	0
Motorized spindle20000rpm	dle20000rpm O The 5th-axis		The 5th-axis	0	0
Water-cooled spindle	0	•	Column heightening	0	0
Oil-cooled spindle	0	0	2 fixture solenoid valves	•	•
MitsubishM80B	0	0	Water gun	0	0
MitsubishM80A	•	•	Tool setter	0	0
FANUC-01 MF(5)	0	0	Probe	0	0
FANUC-01 MF(3)	0	0	Oil-water separator	0	0
FANUC-01 MF(1)	0	0	Oil mist extractor device	0	0
Siemens828D	0	0	Safety lock	•	•
HNC system	0	0	Automatic door	0	0
Rear flushing in machine	0	0	Air tightness detection	0	0
Rear chain chip conveyor	0	0	Fixture O expansion, 16 sets	0	0
Built-in screw row	Δ	Δ	Machining blowing	0	0
BT30 21Ttilt-plate tool	•	•	Machining blowing	0	0
BT30 26Ttilt-plate tool	0	0	MPG	•	•
BT30 30Ttilt-plate tool	0	0	External handwheel	0	0
BT30 40Ttilt-plate tool	0	0	Hydraulic station	0	0
Mitsubishi driving motor	•	•	Spindle ring spray	0	0
Huichuan driving motor	Δ	Δ	Voltage stabilizer	0	0
CTS (2MPa/3MPa/5MPa/7MPa	a) O	0			

## OVERALL LAYOUT DIAGRAM





Overall size									
Type Size	A	В	B1	С	D				
T-500B	1690	2580	3160	2340	2520				
T-500B Plus	1690	2660	3160	2480	2520				



## **General**

## **Drilling & Tapping Machining Center**

## High-speed High-efficiency High-precision

- By employing direct-drive technology for the spindle motor and spindle, the machine gains the ability to exert high output force during high-speed and high-efficiency machining operations. Additionally, the adoption of ceramic ball bearings significantly prolongs the spindle lifespan. Possible speed options include 12,000, 20,000, and 24,000 revolutions per minute
- The specification of X-axis ranges from 600 mm to 2000 mm, ensuring versatility across multiple machine models for customers to cater to a wide range of customer requirements
- Magazine options include BT30 tool magazine and 21T/26T/30T/40T tool magazines. The 24T tool arm magazine improves tool handling capabilities and facilitates process consolidation



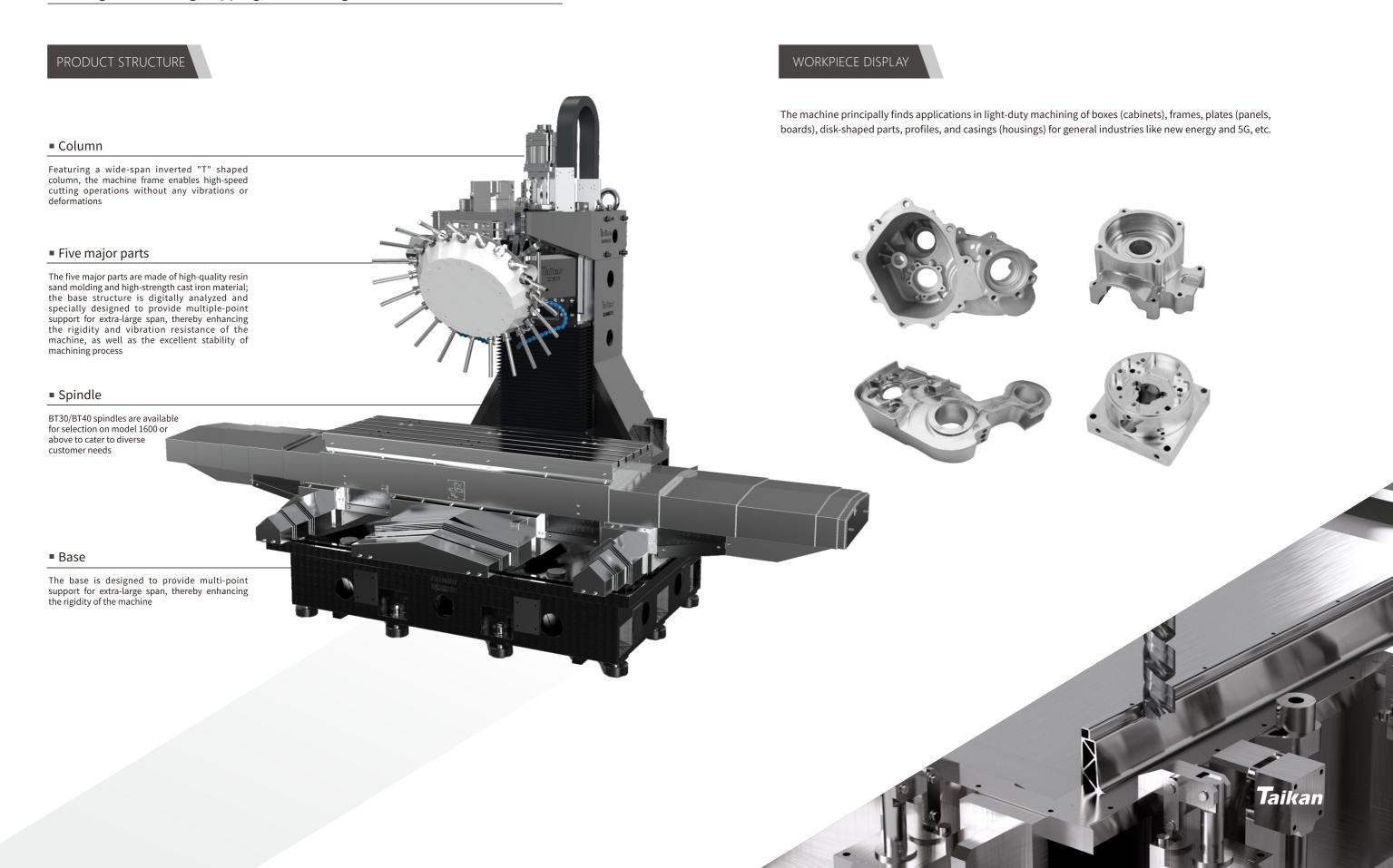
High-speed, high-efficiency and high-precision drilling & milling center

T-520-S T-500P T-600B T-700B T-1000 T-1200 T-1300 T-1600 T-1800 T-2000





## Featuring high precision, high rigidity and high stability, the machine integrates drilling, tapping, and milling as a whole



Items	Units	T-520-S	T-500P	T-600B	T-700B	T-1000	T-1200	T-1300	T-1600	T-1800	T-2000
Worktable size	mm	650*1000(two-sided)	620*400	700*400	800*400	1200*600	1300*650	1300*650	1700*650	1900*650	2000*650
Strokes of the three axes (X/Y/Z)	mm	520/340/350	500/400/350	600/390/340	700/400/320	1100/650/410	1200/650/410	1300/650/410	1600/650/475	1800/650/475	2000/650/475
Distance from spindle nose to table	mm	205-555	160-510	140-460	140-460	155-565	125-535	125-535	100-575	100-575	100-575
T-slot of worktable (number of slots - slot width × spacing)	mm	3-14*100(two sides)	3-14*120	3-18*125	3-18*125	5-18*100	5-18*125	5-18*125	5-18*125	5-18*125	5-18*125
Spindle speed(optional)	r/min	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000
Spindle taper	/	BT-30	BT-30	BT-30	BT-30	BT-30	BT-30	BT-30	BT-30	BT-30	BT-30
Rapid traverse speed X/Y/Z	m/min	36/36/48	48/48/48	48/48/48	48/48/48	36/36/36	36/36/36	36/36/36	30/36/36	30/36/36	27/36/36
Magazine capacity (optional)	pc(s)	21	21	21	21	21	21	21	21	21	21
Tool weight	kg	3	3	3	3	3	3	3	3	3	3
Tool length	mm	200	200	300	300	200	200	200	200	200	200

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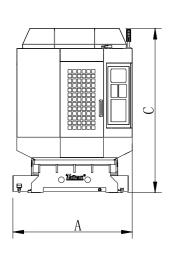
## ► CONFIGURATION TABLE

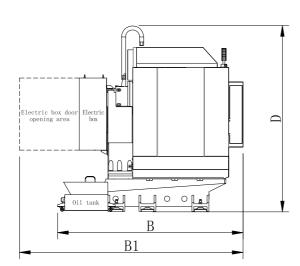
(● Standard configuration O Optional configuration △ Not supported)

Items	T-520-S	T-500P	T-600B/T-700B	T-1000/T-1200/T-1300	T-1600/T-1800/T-2000	Items	T-520-S	T-500P/T-600B/T-700B	T-1000	T-1200/T-1300	T-1600/T-1800/T-2000
24000rpm	0	0	0	0	0	Screw center cooling	Δ	Δ	Δ	Δ	Δ
20000rpm	•	•	•	•	•	Heat exchanger	0	0	0	0	0
12000rpm	0	0	0	0	0	Electric cabinet A/C	0	0	0	0	0
Motorized spindle15000rpm	Δ	0	0	Δ	Δ	The 4th-axis	0	0	0	0	0
Motorized spindle20000rpm	Δ	0	0	Δ	Δ	The 5th-axis	0	0	0	0	0
Water-cooled spindle	0	0	0	0	0	Column heightening	0	0	0	0	0
Oil-cooled spindle	0	0	0	0	0	2 fixture solenoid valves	0	•	0	0	0
MitsubishM80B	0	0	0	0	•	Water gun	0	0	0	0	0
MitsubishM80A	•	•	•	•	0	Tool setter	0	0	0	0	0
FANUC-01 MF(5)	0	0	0	0	0	Probe	0	0	0	0	0
FANUC-01 MF(3)	0	0	0	0	0	Oil-water separator	0	0	0	0	0
FANUC-01 MF(1)	0	0	0	0	0	Oil mist extractor device	0	0	0	0	0
Siemens828D	0	0	0	0	0	Safety lock	•	•	0	0	0
HNC system	0	0	0	0	0	Automatic door	0	0	0	0	0
Rear flushing in machine	•	•	0	•	•	Air tightness detection	0	0	0	0	0
Rear chain chip conveyor	0	0	0	0	0	Fixture O expansion, 16 sets	0	0	0	0	0
Built-in screw row	Δ	Δ	Δ	0	0	Machining blowing	0	0	0	•	0
BT30 21Ttilt-plate tool	•	•	•	•	•	Machining blowing	0	0	0	0	0
BT30 26Ttilt-plate tool	0	0	0	0	0	MPG	$\triangle$	•	0	0	0
BT30 30Ttilt-plate tool	0	0	0	0	0	External handwheel	•	0	•	•	•
BT30 40Ttilt-plate tool	0	0	0	0	0	Hydraulic station	0	0	0	0	0
Mitsubishi driving motor	Δ	Δ	Δ	Δ	Δ	Spindle ring spray	0	0	0	0	0
Huichuan driving motor	•	•	•	•	•	Voltage stabilizer	0	0	0	0	0
CTS (2MPa/3MPa/5MPa/7MPa)	0	0	0	0	0						

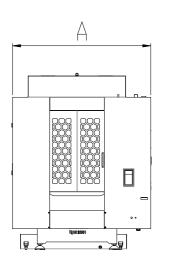


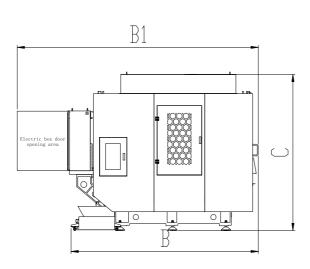
## OVERALL LAYOUT DIAGRAM



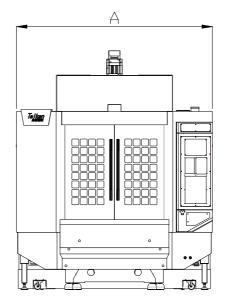


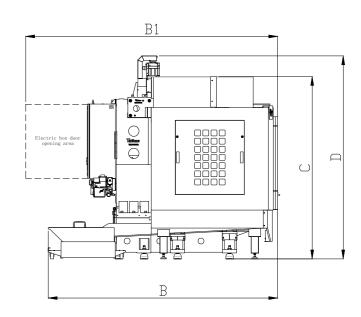
	Overall size									
Type Size	A	В	B1	С	D					
T-500P	1700	2590	3220	2370	2520					
T-600B	1900	2700	3200	2320	2520					
T-700B	2100	2700	3200	2320	2520					



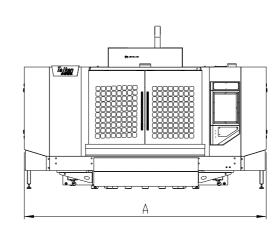


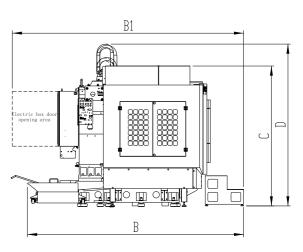
		0veral	l size	
Type Size	A	В	B1	С
T-520-S	2085	3120	2615	2615





	Overall size									
Type Size	A	В	B1	С	D					
T-1000	2700	3420	3600	2520	2720					
T-1200	2970	3400	3570	2520	2720					
T-1300	2970	3400	3570	2520	2720					





	Overall size									
Type Size	A	В	B1	С	D					
T-1600	4150	3900	4200	2550	2950					
T-1800	4400	3900	4200	2550	2950					
T-2000	4800	3900	4200	2550	2950					



## S/SE Series

## **Drilling & Tapping Machining Center**

## Unmatched value for money exceptional stability and high reliability

- The manufacturer incorporates research, supply, production, and sales, and renders one-stop service; the products are available in various specifications, ensuring consistent quality and featuring high-quality accessories; tailor-made and meticulously crafted CNC machine tools cater to customer needs and maximize value for money
- The powerful mechatronics integration technology enhances the response speed of transmission chain, eliminates unnecessary movements during machining, and reduces non-cutting time
- To enhance the stability of the saddle, a configuration with four guide rails on the Y-axis is implemented for strokes exceeding 1,600 mm



High-precision and High-speed Vertical Machining Center

T-500S T-500SE T-600S T-600SE T-700S T-700SE T-800S T-1000S T-1200S T-1600S





The machine tool offers excellent value for money and high stability and reliability, and integrates drilling, tapping, milling, and other processing capabilities into one unit

## PRODUCT STRUCTURE

#### Column

Featuring a wide-span inverted "T" shaped column, the machine frame enables high-speed cutting operations without any vibrations or deformations

### ■ Tool change

Best optimization for high-speed servo tool changing and PLC tool changing, aiming to shorten the tool changing time, achieve quick and stable operation, and minimize non-processing time

#### Mechatronics

The powerful mechatronics integration technology enhances the response speed of transmission chain, eliminates unnecessary movements during machining, and reduces non-cutting time. Optimization control remarkable improves production efficiency

### Chip removal

The base is designed with a significant inclination angle for chip discharge, enabling rapid chip removal and increased flow rate of cutting fluid

#### Base

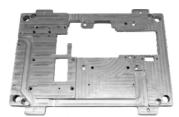
The base is designed to provide multi-point support for extra-large span, thereby enhancing the rigidity and vibration resistance of the machine

## WORKPIECE DISPLAY

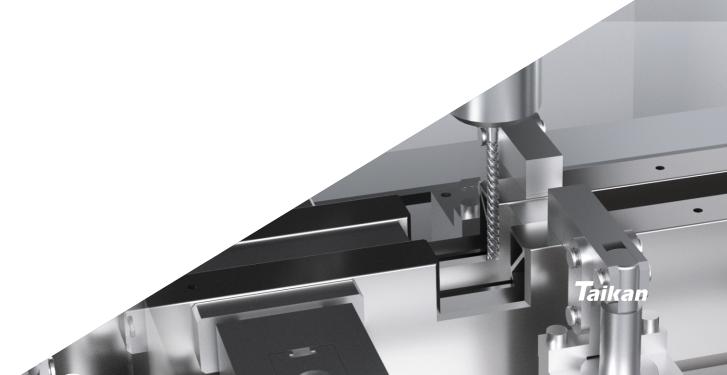
Extensively used to process miniature board parts, disc-shaped components, and casings (housings) for the general, auto parts, small-sized mold processing, and medical device industries











Items	Units	T-500S	T-600S	T-700S	T-500SE	T-600SE	T-700SE	T-800S	T-1000S	T-1200S	T-1600S
Worktable size	mm	620*400	700*400	800*400	620*400	700*400	800*400	1000*500	1100*500	1300*500	1700*550
Strokes of the three axes (X/Y/Z)	mm	500/400/320	600/390/320	700/400/320	500/400/320	600/390/320	700/400/320	800/500/450	1000/500/450	1200/550/450	1600/550/450
Distance from spindle nose to table	mm	180-500	140-460	140-460	180-500	140-460	140-460	125-575	125-575	125-575	100-550
T-slot of worktable (number of slots - slot width × spacing)	mm	3-14*120	3-18*125	3-18*125	3-14*120	3-18*125	3-18*125	5-18*100	5-18*100	5-18*100	5-18*100
Spindle speed(optional)	r/min	20-24000	20-24000	20-24000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000	20-20000
Spindle taper	/	BT-30	BT-30	BT-30							
Rapid traverse speed X/Y/Z	m/min	48/48/48	48/48/48	48/48/48	48/48/48	48/48/48	48/48/48	48/48/48	48/48/48	36/36/36	30/36/36
Magazine capacity (optional)	pc(s)	21	21	21	21	21	21	21	21	21	21
Tool weight	kg	3	3	3	3	3	3	3	3	3	3
Tool length	mm	300	300	300	300	300	300	300	300	250	250

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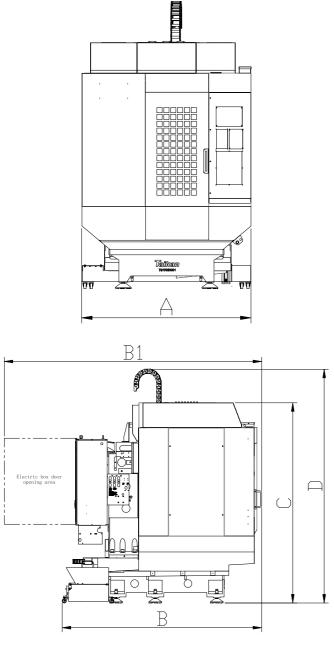
## ► CONFIGURATION TABLE

(● Standard configuration O Optional configuration △ Not supported)

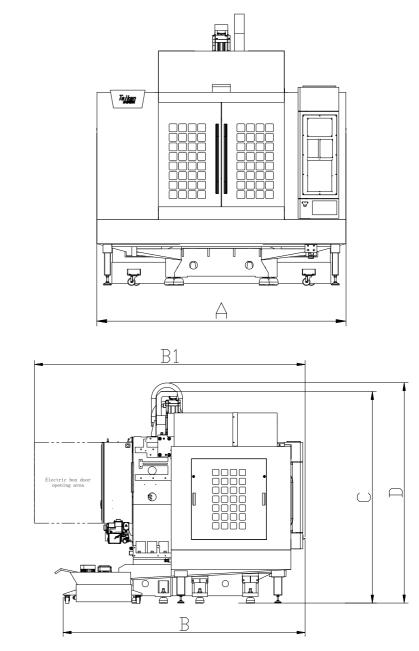
Items	T-500S/T-600S/T-700S	T-500SE/T-600SE/T-700SE	T-800S/T-1000S/T-1200S/1600S	Items	T-500S/T-600S/T-700S	T-500SE/T-600SE/T-700SE	T-800S/T-1000S/T-1200S/1600S
24000rpm	•	0	0	Screw center cooling	Δ	Δ	Δ
20000rpm	0	•	•	Heat exchanger	0	0	0
12000rpm	0	0	0	Electric cabinet A/C	0	0	0
Motorized spindle15000	rpm O	0	Δ	The 4th-axis	0	0	0
Motorized spindle20000	rpm O	0	Δ	The 5th-axis	0	0	0
Water-cooled spindle	0	0	0	Column heightening	0	0	0
Oil-cooled spindle	0	0	0	2 fixture solenoid valv	es •	0	0
MitsubishM80B	0	•	•	Water gun	0	0	0
MitsubishM80A	•	Ο	0	Tool setter	0	0	0
FANUC-01 MF(5)	0	0	0	Probe	0	0	0
FANUC-01 MF(3)	0	0	0	Oil-water separator	0	0	0
FANUC-01 MF(1)	0	0	0	Oil mist extractor devi	ce O	0	0
Siemens828D	0	0	0	Safety lock	•	0	0
HNC system	0	0	0	Automatic door	0	0	0
Rear flushing in machine	0	Ο	0	Air tightness detection	0	0	0
Rear chain chip conveyo	r O	Ο	0	Fixture O expansion, 1	6 sets O	0	0
Built-in screw row	0	0	0	Machining blowing	0	0	0
BT30 21Ttilt-plate tool	•	•	•	Machining blowing	0	0	0
BT30 26Ttilt-plate tool	0	Ο	0	MPG	•	•	0
BT30 30Ttilt-plate tool	0	0	0	External handwheel	0	0	•
BT30 40Ttilt-plate tool	0	0	0	Hydraulic station	0	0	0
Mitsubishi driving motor	Δ	Δ	Δ	Spindle ring spray	0	0	0
Huichuan driving motor	•	•	•	Voltage stabilizer	0	0	0
CTS (2MPa/3MPa/5MPa,	7MPa) O	0	0				



# OVERALL LAYOUT DIAGRAM



	Overall size						
Type Size	A	В	B1	С	D		
T-500S	1660	2510	3010	2350	2520		
T-600S	1800	2510	3010	2350	2520		
T-700S	2000	2510	3010	2350	2520		
T-500SE	1660	2510	3010	2350	2520		
T-600SE	1800	2510	3010	2350	2520		
T-700SE	2000	2510	3010	2350	2520		



			0 11 1				
	Overall size						
Type Size	A	В	B1	С	D		
T-800S	2220	3000	3350	2620	2850		
T-1000S	2610	3000	3350	2620	2850		
T-1200S	2850	3270	3460	2740	2850		
T-1600S	4150	3240	3490	2740	2950		



General & S/SE Series

High-end Intelligent Equipment
Integrated Solutions Provider



Independently developed tool magazine equipped with motor drives from system manufacturers

The high tool change efficiency helps reduce non-processing time.

The availability of 21T/26T/30T/40T tool magazines facilitates process consolidation



Proprietary spindle demonstrated by 90,000 units; improved load-bearing capacity of bearings and enhanced reliability; the maximum speed is 24,000 RPM



The dedicated bearings are imported FAG (Germany)/NSK (Japan) bearings The bearings are self-lubricating, featuring long lifespan, high maximum speed, high load resistance, low noise, excellent rigidity, and simple maintenance





**Optional Configuration** 





The three-axis screws are of C3 grade, while the linear guide rails are of P grade. These components boast excellent quality and high reliability, effectively ensuring the high precision and high speed of the machine tool



## Filtering water tank

The maze-style multi-layer filtering water tank, the internal protection upgrades and the enhanced magazine protection were realized; the reliability of each component is improved to minimize failures and ensure the machine tool can maintain stable production for a long time Other configurations can be chosen based on the optional configuration table to create a cost-effective CNC machine tool with exquisite craftsmanship



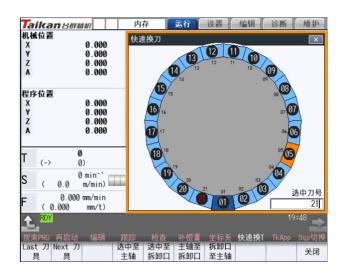
## Coolant through spindle

CTS is optional for reducing tool wear. In particular, the risk of tool breakage in deep-hole machining is significantly reduced. Reducing the localized temperature rise during processing to enhance the longevity of cutting tools



#### Taper shank cleaning

Cleaning the taper shank with a coolant to prevent chips from entering the spindle taper holes, thus maintaining the stability of processing accuracy



### M80 control unit

The M80 control unit, which is developed in-house, incorporates robust monitoring and versatile application capabilities; the user-friendly HMI provides customers with pre-configured, efficient processing application solutions, thereby improving the usability for users

