



TF系列

TF500
TF600
TF700

鑽孔攻牙高速立式加工中心

High-Speed Vertical Machine Center for Drilling and Tapping



浙江意控機床有限公司
ZHEJIANG YIKONG MACHINE TOOL CO.,LTD

公司簡介

COMPANY PROFILE

浙江意控機床有限公司是一家專業研發生產數控機床、自動化設備的高科技企業，我們不斷力求創新精神，同時融合多家設備生產企業的制造經驗，吸收國內外同行業的先進科研成果，已發展成爲擁有自主研發能力和完善生產、檢驗能力的加工中心機床專業制造商。

公司經過多年市場經營，總生產車間面積8000多平方米。現有杭州研發中心；雲南玉溪光機生產基地；浙江整機制造基地；形成三位一體高效生產交貨服務規模。2018年，意控公司同臺灣研島實業公司達成戰略合作。共同開發高速齒輪頭立式加工中心，力推高端機市場。

公司發展歷程：

2012年成立浙江意控機床有限公司

2016年杭州成立研發中心

2017年雲南玉溪成立光機生產基地

2018年同臺灣研島實業公司達成戰略合作

研發成果：公司現有四大系列常規產品

鑽孔攻牙高速立式加工中心：T、TF系列；

緊湊型高效立式加工中心：V、VF系列；

高速齒輪頭立式加工中心：VM-G系列；

高速同動立式加工中心：VL系列；

機床部分特點：歐洲技術 臺灣研發

VL同動系列：BT40換刀速度僅1.2S，達到世界領先水平，引領中國機床實現換刀1.5S的突破；成爲國內數控機床換刀技術的領航者。

VM-G系列：高剛性、重切削、現有12000轉/分鐘齒輪頭設計；（注：15000轉/分鐘已在研發中）3000轉剛性攻絲，剛柔兼顧。

我們將不斷研發更先進，更能滿足客戶需求，更貼進市場需要的新產品。精細管理，嚴謹制造，爲客戶創造價值，提升產品競爭力而不懈努力！

Zhejiang Yikong Machine Tool Co., Ltd. is a high-tech enterprise specializing in R & D and production of CNC machine tools and automation equipment. We continue to strive for innovation, and at the same time integrate the manufacturing experience of multiple equipment manufacturers, absorb advanced scientific research results in the same industry at home and abroad, and have developed Become a professional manufacturer of machining center machine tools with independent research and development capabilities and perfect production and inspection capabilities.

After years of market operation, the company has a total production workshop area of more than 8,000 square meters. Existing Hangzhou R & D Center; Yunnan Yuxi Optoelectronics Production Base; Zhejiang Machine Manufacturing Base; forming a trinity of efficient production and delivery service scale. In 2018, Italian control company reached a strategic cooperation with Taiwan Yandao Industrial Company. Jointly develop a high-speed gear head vertical machining center to push the high-end machine market.

Company History:

Zhejiang Yikong Machine Tool Co., Ltd. was established in 2012

In 2016, Hangzhou established a research and development center

In 2017, Yunnan Yuxi established optomechanical production base

In 2018, reached strategic cooperation with Taiwan Yandao Industrial Company

R & D results: The company has four series of conventional products

Drilling and tapping high-speed vertical machining center: T, TF series;

Compact and efficient vertical machining center: V, VF series;

High-speed gear head vertical machining center: VM-G series;

High-speed simultaneous vertical machining center: VL series;

Part of the machine features: European technology, Taiwan R & D

VL simultaneous movement series: BT40 tool change speed is only 1.2S, reaching the world's leading level, leading China's machine tools to achieve a breakthrough in tool change 1.5S; becoming the leader of domestic CNC machine tool change technology.

VM-G series: high rigidity, heavy cutting, existing gear head design of 12,000 rpm; (Note: 15,000 rpm has been under development) 3000 rpm rigid tapping, both rigid and flexible.

We will continue to develop new products that are more advanced and better able to meet the needs of customers and meet the needs of the market. Fine management, rigorous manufacturing, create value for customers, and make unremitting efforts to enhance product competitiveness!

企業寄語

ENTERPRISE WISHES

上善若水，厚德載物。

面向未來的發展，我們堅持銳意進取，從點滴做起，從自身做起，不斷提升我們的產品和服務，建設以人為本的和諧企業。樹立“團結、開拓、敬業、奮進”的企業精神，在這個過程中，我們沒有過絲毫懈怠，始終以感恩和專業的精神詮釋着各位合作伙伴寄予我們的厚望，以提供具有高品質的數控機床和服務為自己的驕傲和價值取向。

我們將永遠守護企業精神，更將一如既往地堅持仁德經營、精工製造，做最可以信賴的人，製造最可以信賴的產品！并一直努力履行着這樣的誓言：把價值榮譽、信賴尊重、使命承諾傳遞給員工；把平等合作、真誠互惠傳遞給合作者；把企業價值、真情回饋傳遞給社會；繼續秉承“以質量安全保證信譽”的質量宗旨。為了裝備製造業的發展，我們將勤耕不輟、矢志不移！我們願和所有的朋友攜起手來，團結奮進，共創未來！

The highest good is like that of water. Great virtue promotes growth.

In the face of future development, we insist on forging ahead with determination, start from the little things, start from our own, constantly improve our products and services, build a people-oriented harmonious enterprise and set up the enterprise spirit of "unity, exploitation, dedication and progress". In this process, we do not have any slack and always interpret the expectations of our partners in the grateful and professional spirit to provide high-quality numerically-controlled machine tools and services as our pride and value orientation.

We will always safeguard the enterprise spirit, continue to adhere to kindheartedness management and precision manufacturing, be the most reliable people, and produce the most reliable products! We have always strive to performing such an oath: We will transmit the value, honor, trust, respect, mission and commitment to the staff, transmit the equal operation and sincerely mutual benefit to the cooperators, transmit the enterprise value and promotion feedback to the society and continue to inherit the quality purpose of "taking the quality safety to ensure the reputation". In order to develop the equipment manufacturing industry, we will work hard and take our oath not to change our mind! We are willing to join hands with all our friends to forge ahead in unity and create the future together!



為批量產品加工的客戶取得成功而貢獻力量

We make contributions for customers who carry out batch products processing to achieve success.

正因為如此我們專注如下2點：

Because of this, we focus on the following 2 points:

主軸錐度/Spindle taper
BT30

自主研發的NC系統
Self-developed NC system

低慣性·輕量化
Low inertia-Light weight

實現優異的控制·動作
Realize the excellent control·action

采用高加減速主軸馬達
Adopt the spindle motor with high acceleration and deceleration

減少非加工的動作·時間
Reduce unprocessed action·time

采用面向中高轉速的高扭矩馬達
Adopt the medium-high speed motor with high torque

追求高速產品加工匹配的NC
Pursue NC matched with high-speed product processing

專注人機工學設計理念，實現更便捷的操作性

Focus on the man-machine engineering design concept and realize more convenient operation

全閉式天井鈹金

Fully closed patio sheet metal

防止向機器外部濺出冷卻液和切屑，減輕對主軸馬達的影響。

Prevents splashing of the cooling liquid and cuttings to the external machine and reduces the influence on the spindle motor.

內推拉式側門

Push-pull side door

較傳統鑽孔中心相比，創新性的設計使維護保養顯的得心應手。

Compared with the traditional machining center, the innovative design makes the maintenance become easy and efficient.

外接手輪 方便工件試切

It is convenient to carry out trial cut of the workpiece with the external hand wheel.

工件坐標系設定，對刀更加操作便捷。
The setting of workpiece coordinate system makes the tool operation more convenient.

選配自動門 搭載機器人

Optional auto-door with robot

大大降低操作員勞動強度，實現自動綫聯機。

Greatly reduces the labor intensity of operators and achieves automatic connection.

衝屑槍

Punchings gun

加工後的工件清洗，能更容易的清除機器內的切屑。

The cleaning of workpiece after processing is easier to remove the cuttings in the machine.



高生產效率

HIGH PRODUCTION EFFICIENCY

◆ 追求高加速

Pursue high acceleration



由于Z軸移動最頻繁，Z軸加速度比舊機型顯著提升。
Due to the frequent movement of Z-axis, Z-axis accelerated speed is significantly increased compared with that of the old model.



根據臺面載重量可設定最適當的XY加速度設定機能。
According to the load capacity of the table, the most appropriate X/Y-axis accelerated speed setting function can be set.

◆ 高反應伺服系統

High-response servo system



◆ 無停頓ATC No pause ATC

主軸啟動/停止時間的加快，最適當的刀具移動，Z軸加速度的提升使刀具交換時間最小化。

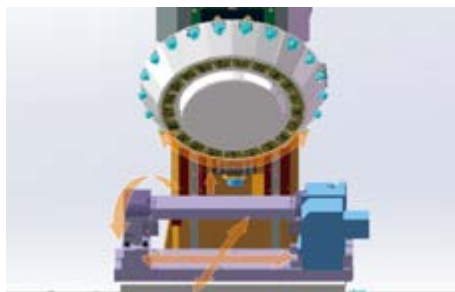
The acceleration of spindle start/stop time, the most appropriate tool movement and the increase of Z-axis accelerated speed minimize the tool switching time.



◆ 同步行程控制 Synchronous stroke control

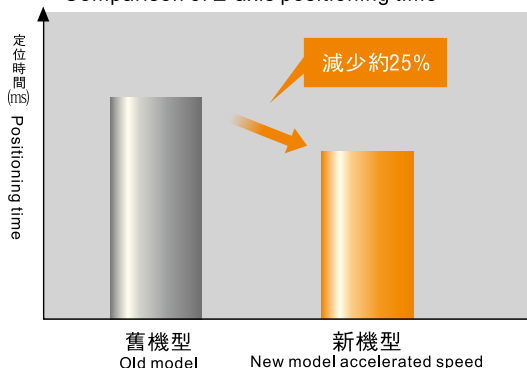
刀具交換的同時，進行XY軸，附加軸的定位，進一步實現無用時間的縮短。

While the tool is exchanged, the positioning of X/Y-axis and additional axis further realize the shortening of the ineffective time.

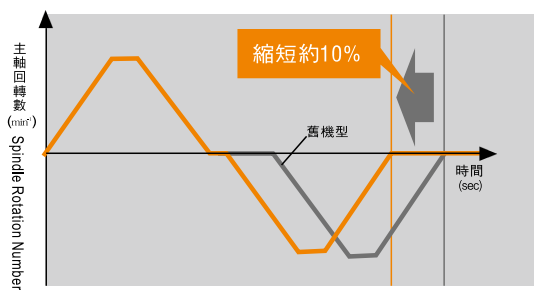


◆ Z軸定位時間比較

Comparison of Z-axis positioning time

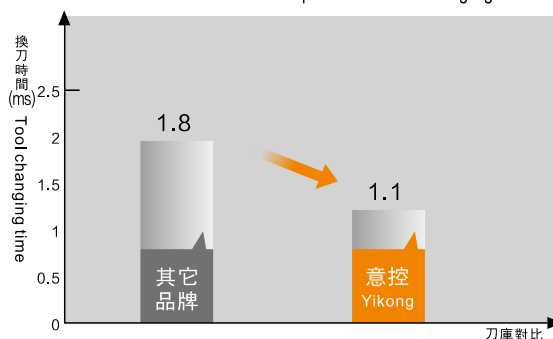


※Z軸原點向行程中心移動
※The Z-axis origin moves toward the center of stroke.



※本公司用加工程序的舉例
※Examples of processing procedures used by the company

■ 換刀時間比較 Comparison of tool changing time



最近刀: The nearest tool: 1.1s
最遠刀: The farthest tool: 1.5s
換刀時間: Tool changing time: 1.1s 1.5s

總結: 與一般的加工中心 (M/C) 想比較，意控的高生產效率顯然易見。持續追求着其他加工中心所達不到的，壓倒性高生產效率。

Conclusion: Compared with the general machining center (M/C), the high production efficiency of Yikong is obviously easy to see. The company continuously pursues the overwhelming high production efficiency that other machining centers can not reach.

主要加工內容
Main processing content

- ◆ Φ 5.1螺紋底孔 Thread bottom hole × 12
- ◆ 鏜孔 Borehole × 2
- ◆ M6螺紋 Thread × 12
- ◆ 使用刀具9把 9 tools are used
- ◆ 沉孔 Countersink × 7

工作交換時間
Work switching time

15秒 1天 (10小時) × 使用率85%
15 seconds per day (10 hours) × Usage rate 85%

生產效果比較
Comparison of production effects

約30%UP
Increased by 30%

優異加工能力

EXCELLENT PROCESSING CAPABILITY

機電一體化開發 ➤ 追求高精度加工

Mechatronics is developed and the high precision machining is pursued.

新控制系統改善了機器剛性，裝有新NC控制裝置，新機能實現了高精度的加工，在圓加工和三維加工發揮威力。
The new control system improves the rigidity of the machine and is equipped with a new NC control device. The new function realizes the high precision machining, and plays a powerful role in the round processing and three-dimensional processing.

◆ 高剛性構造

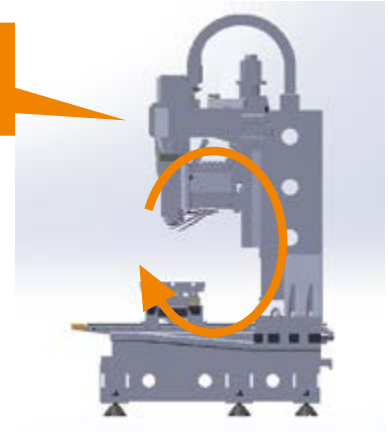
High rigidity structure

基于分析機床剛性數據的基礎上，進一步提升機床剛性。
Based on the analysis of the rigid data of the machine tool, the rigidity of the machine tool is further improved.

特別是針對Z軸，
隨着立柱的設計變更，
剛性提高了約15%
Especially for the Z-axis, the rigidity
increases by about 15% with the
design change of the stand column.

15%UP
Z軸剛性
Z-axis rigidity

Z軸剛性
15%UP



高速 ➤ 高效率加工 ➤ 重型切削加工

High speed ➤ High efficiency processing ➤ Heavy machining

根據長年採用提高機器剛性的技術和高輸出的主軸馬達，從高速、高效率加工到重型切削加工，大幅發揮切削力。
According to the technology of improving the rigidity of the machine and the spindle motor with high output force for a long time, the cutting force is greatly exerted from the high-speed and high-efficiency processing to the heavy machining.

◆ 高輸出力主軸馬達

High output spindle motor

實現高效率加工的中高扭矩領域特徵

Realizes the medium-high torque field characteristic of high-efficiency machining

■ 標準規格的槽加工

Slot processing with standard specification

加工內容 Processing content	切削量：150CC/min Cutting output: 150CC/min
	材質Material: S45C (使用Φ16立銑刀 Use Φ16 end mill)



最適合重型切削的低扭矩領域特徵

It is the most suitable for the low torque field characteristic of heavy cutting

■ 高扭矩規格的大孔徑加工

Large aperture machining with high torque specification

加工內容 Processing content	孔徑Aperture: Φ30mm 材質Material: S45C
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主軸馬達扭矩值

Torque value of spindle motor

標準規格
Standard specification

最大扭矩
Maximum torque
40Nm

高扭矩規格 (選配)
High torque specification (optional)

最大扭矩 (瞬間)
Maximum torque (instant)

92Nm

使用便捷性

USAGE CONVENIENCE



操作性 Operability

增加USB接口、菜單編程、攻絲快回退功能，並且轉載可以快速切換至想看畫面的“快捷鍵”和更易管理程序的輔助文件機能。

Add USB interface, menu programming, tapping fast backward function, and reprint can quickly switch to the "shortcut key" and easier to manage the auxiliary file function of the program.

網絡功能 Network function

大容量的程序數據可以通過以太網高速傳送。此外，轉載了通過電腦顯示機器生產監控畫面的簡易監控機能。

Large capacity of program data can be transmitted over Ethernet at high speed. In addition, the simple monitoring function of displaying machine production monitoring screen through computer is reproduced.

加工輔助功能 Machining auxiliary function

裝載扭矩波形表示、高精度模式、熱變位自動補正等加工輔助機能。

Loading torque waveform representation, high precision mode, thermal displacement automatic correction and other machining aids.

維護性 Maintainability

即時報警、記錄查詢、維護通知等功能。

Instant alarm, record inquiry, maintenance notice and other functions.

系統對應力 System counter stress

轉載標準PLC。輸出功率點數：最大可擴大至各1024點（選配）。

Reprint standard PLC. Output power points: It can be expanded to 1024 points to the maximum extent (optional).

低電量消耗，低空氣量消耗
實現了高環境性能。
全部規格都採用對低消耗電
力有效的“再生電源”。

Low power consumption and low altitude consumption achieve high environmental performance. All specifications are effective "renewable power supply" for low consumption of power.



裝載節能的功能，對地球環境做出貢獻。

Loading energy-saving functions contribute to the global environment.

切削液自動斷開...設定切削液自動斷開時間。

待機模式...設定時間，在機器無動作時伺服關閉。

機能燈自動斷開...可以設定機內燈自動關閉時間。

電源自動斷開...可以設定機床電源自動關閉時間。

Automatic disconnection of cutting fluid: set automatic disconnection time of cutting fluid.

Standby mode: set time, and the servo is closed when the machine is not in operation.

Automatic disconnection of motor lamp: you can set the automatic turn-off time of the internal lamp.

Automatic power disconnection: you can set the automatic shutdown time of the machine tool power supply.

採用了低慣性主軸搭載高能率馬達和節能泵，實現了低消耗電力。
The low inertia spindle is equipped with high energy rate motor and energy saving pump, and the low power consumption is realized.



LED式機內燈 (選配)
LED built-in lamp (optional)



節能型泵
Energy-saving pump

“不生產不良品” “防故障于未然,至少保證不停機” 這些觀點都能使生產效率提高，為此裝載了各樣各樣的功能。

“Don't produce bad products” “Take preventive measure for failures and guarantee no shutdown at least” These views can improve the production efficiency, for which each kind of function is loaded.

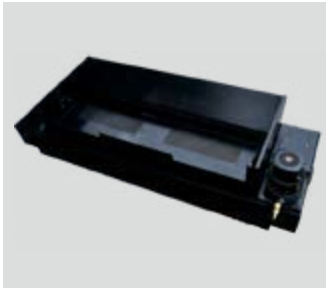


降低不良現象 + 預防故障
Reduce the bad phenomenon + Prevent failure



特殊規格

SPECIAL SPECIFICATION



切削液裝置 Cutting fluid device

根據用途有150L可選。
150L is optional according to the use.



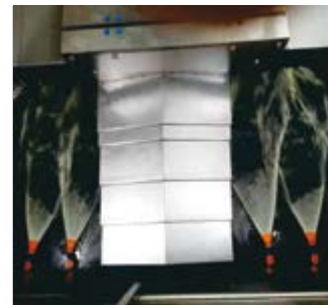
主軸中心出水 (CTS) Spindle center effluent(CTS)

主軸中心出水 (CTS)
採用BT主軸的CTS (1.5MPa)
※3Mpa對應詳情需要請諮詢本公司。
Pindle center effluent(CTS)
uses BT spindle CTS(1.5MPa)
※ For details of 3Mpa, please contact the company.



內拉式側門(可自動) Inner pull side door (automatic)

縮小設備間距，工廠面積利用
最大化，維護保養、更加便捷。
Reduce equipment spacing,
maximize the utilization of
factory area, more convenient of
maintenance.



衝洗裝置 Flusher

衝洗裝置安裝在機內部，有更好的
衝洗切屑的效果，使得在防濺鈹金
側面和切屑容易堆積的地方很容易
去除。

The flusher is installed in the machine
and has a better effect of flushing
chip, which makes it easy to remove in
the side of splash sheet metal and
where the cuttings are easy to pile up.



衝洗水槍 Flushing water gun

加工後的工件衝洗，能更容易
的清洗機器內的切屑。

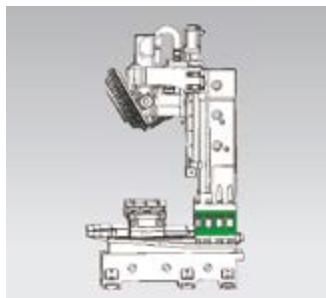
The processed workpiece is
washed, so that the cuttings in
the machine can be more easily
cleaned.



天井鈹金 Courtyard metal plate

關閉天井開口部分，防止向機器外部
濺出冷卻液和切屑的同時，也減輕對
主軸馬達的影響。

Close the opening part of the patio to
prevent the splashing of coolant and
cuttings to the outside of the machine,
and at the same time reduce the
influence on the spindle motor.



立柱加高 (150mm、250mm) Column heightening(150mm、250mm)

根據客戶的需求對應有150mm、
250mm 立柱加高。

According to the needs of
customers, there have column
heightening with 150mm and
250mm.



LED式機內燈 (1燈) LED inner lamp (1 lamp)

LED式的採用更耐用更節能。
The LED style is more durable and
energy-efficient.

特殊規格 SPECIAL SPECIFICATION



警示燈 Caution light

採用LED式，燈泡不易損壞，無需保養維護。

LED type is used. The bulb is not easy to be damaged, and maintenance is not required.



手動脈衝發生器

Manual pulse generator

使用臺面附帶的手動脈衝發生器可以準備作業。

The hand artery flushing generator attached to the table can be used to prepare for work.



高精度模式

High precision mode

預讀程序段，實現高速、高精度的三維加工。同時裝載了提高加工品質的“平滑路徑補正機能”。

And the pre-read program segment is used for realizing the three-dimensional processing of high-speed and high-precision. At the same time, the "smooth path correction function" of improving the processing quality is loaded.



B軸綫 (1軸、2軸)

B-axis(1 axis and 2 axis)

附加的1軸、2軸，可進行多面加工。

Additional 1 axis and 2 axis can be carried out multi-sided processing.

特殊規格 SPECIAL SPECIFICATION

- 切削液裝置
 - ① 100L 泵 250W
兩側切削衝洗 × 2，主軸噴嘴閥 × 1
 - ② 150L 泵 250W
兩側切削衝洗 × 2，主軸噴嘴閥 × 1
 - ③ 150L CTS 泵 250W+650W
兩側切削衝洗 × 2，主軸噴嘴閥 × 1
- 中心出水主軸 (CTS)
- 衝洗裝置
- 衝洗水槍
- 自動間歇給油裝置
- 機內燈(1燈)
- 指示燈(3燈)
- 手動脈衝發生器
- B軸綫(1軸用,2軸用)
- 立柱加高(150mm,250mm)
- 天井鉸金
- 前 (側) 門可實現自動關閉，大幅降低工人勞動強度
- 選配自動排屑機
- 機器人聯機接口
- 工裝自動化接口
- 自動對刀儀
 - 工件夾緊氣密檢測
- 擴張I/O基板 (EXIO基板)
 - ① 標準EXIO基板32
 - ② 追加標準EXIO基板32
- 軟件選配
 - ① 儲存量增加 (約500Mbyte)
 - ② 插入指令宏
 - ③ 高精度模式
- PLC程序的編程軟件
- 變壓機(10K, 16K)
- 說明書
- Cutting fluid device
 - ① 100L pump 250W
Cutting and washing on both sides × 2, spindle nozzle valve × 1
 - ② 150L pump 250W
Cutting and washing on both sides × 2, spindle nozzle valve × 1
 - ③ 150L CTS pump 250W+650W
Cutting and washing on both sides × 2, spindle nozzle valve × 1
- Central water outlet spindle(CTS)
- Flusher
- Flushing water gun
- Automatic intermittent oil feeder
- Inner machine lamp (1 lamp)
- Indicator lamp (3 lamps)
- Manual pulse generator
- Axis B(for axis 1 and axis 2)
- Column heightening (150mm, 250mm)
- Courtyard metal plate
- The front (side) door can be opened and closed automatically, and the labor intensity of the workers can be greatly reduced.
- Optional automatic chip removing machine
- Robot on-line interface
- Tool automation interface
- Automatic tool setting gauge
 - Airtight detection of workholding
- Expansion I/O substrate (EXIO substrate)
 - ① Standard EXIO substrate 32
 - ② Additional standard EXIO substrate 32
- Software matching
 - ① Increase in storage (about 500Mbyte)
 - ② Insert instruction macro
 - ③ High precision mode
- Programming Software of PLC Program
- Transformer (10K, 16K)
- Instructions

機器規格

MACHINE SPECIFICATION

	項目 Project	TF500	TF600	TF700
移動量 Amount of movement	X軸 x-axis (mm)	500	600	700
	Y軸 Y-axis (mm)	400		
	Z軸 Z-axis (mm)	300	400	
	工作臺面至主軸端面的距離 Distance from the work table to the end face of the spindle (mm)	120~420	120~520	
工作臺 Workbench	工作臺面積 Workbench area (mm)	650×400	750×400	850×400
	最大載重量 (均一載重) Maximum load weight (uniform load) (kg)	300		
主軸 Spindle	主軸轉速 Spindle speed (min) (min^{-1})	12000(min^{-1})/20000(min^{-1})		
	主軸錐孔 Taper hole of spindle	BT 30		
	中心出水 Central water discharge	選配 Optional		
進給速度 Feed speed	快速移動 X×Y×Z軸 Fast moving X-axis×Y-axis×Z-axis (m/min)	48/48/48		
	切削進給速度 Cutting feed speed (mm/min)	24/24/24		
刀具交換裝置 Tool exchange device	刀柄型號 Tool holder model	BT 30		
	拉釘規格 Blind rivet specification	MAS-P30T-1(45°)		
	刀具存儲數量 Number of tool storage (把/Handle)	16/21		
	刀具最大長度 Maximum length of tool (mm)	250		
	刀具最大直徑 Maximum diameter of tool (mm)	80		
	刀具最大重量※1 Maximum weight of the tool (Kg)	3		
刀具交換※5 時間 Tool exchange 5 time	刀對刀 Tool to tool (sec)	1.1		
馬達 Motor	主軸馬達 Spindle motor (kW)	3.7-5.5/5.5-7.5		
	進給軸電機 Feed shaft motor (kW)	2.3/2.3/3		
所需動力源 Required power source	電源 Power source	380V		
	電源容量 (連續) Power capacity (continuous) (KVA)	11KVA		
	氣壓源 Pneumatic supply	常用氣壓 Common air pressure (Mpa)	0.4~0.6	
機器尺寸 Machine dimensions	機器高度 Machine Height (mm)	2400		
	所需占地面積 Required floor area (mm)	1660×2405	1960×2405	2060×2405
	機器重量 Machine weight (Kg)	3100	3300	3500
	精度 Precision	軸的雙向定位精度 Accuracy of bidirectional positioning of axis (mm)	±0.008/300	
軸的雙向重複定位精度 Accuracy of bidirectional repetitive positioning of axis (mm)		±0.005/300		
正面門規格 Front door specification		1扇門(可選自動) 1 door (optional and automatic)		
標準附件 Standard accessory	地腳螺栓/4. 水平地腳 Anchor bolts/4. Horizontal anchor	地腳螺栓、工具箱、扳手 (1套) Anchor bolts, toolbox, wrenches (1 set)		

1. 刀具的最大重量根據形狀、重心位置等參數會有所改變，以上僅做參考。

2. 主軸馬達的輸出功率會根據轉速而改變。

3. 根據機器規格、加工程序內容以及周邊機器的使用狀況，常用氣壓會有所改變，設定時請高于參考值。

4. 機器選用不同規格刀庫時，主軸鼻至工作臺距離有差異。

1. The maximum weight of the tool will be changed according to the shape, center of gravity position and other parameters, the above only for reference.

2. The output power of the spindle motor will vary depending on the speed.

3. According to the machine specification, processing program content and the use of the surrounding machine, the common air pressure will be changed, please set higher than the reference value.

4. When the machine selects the tool changer with different specifications, the distance between the spindle and the workbench is different.

機器規格

MACHINE SPECIFICATION

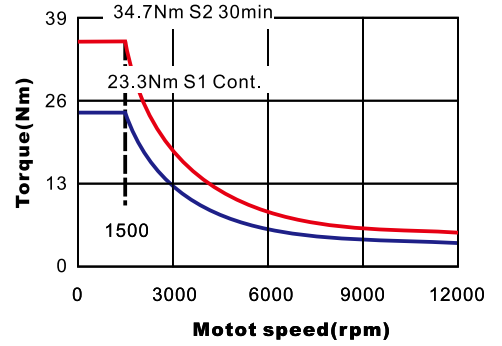
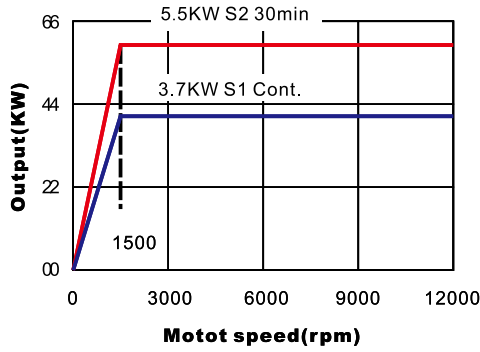
NC裝置規格 Specification of NC device	
控制軸數 Number of control shafts	5軸(X、Y、Z、附加軸2軸) 5 axis(X, Y, Z, additional axis 2 axis).
	定位 5軸(X、Y、Z、A、B) Fixed position 5 axis(X,Y,Z,A,B)
同時控制軸數 Simultaneous control of the number of axes	直綫 4軸(X、Y、Z、附加軸1軸) Straight line 4-axis (X, Y, Z, additional shaft 1 axis) (mm) 圓弧:2軸 螺旋/錐形插補:3軸 (X、Y、Z) Arc: 2 axis spiral / conical interpolation: 3 axis (mm)
最小設置單位 Minimum setting unit	0.001 (mm)
最大指令值 Maximum instruction value	±9999.999mm、±999.9999inch (mm)
外部通信功能 External communication function	USB、以太網 USB、Ethernet

NC機能 NC function	
<ul style="list-style-type: none"> ● 絕對/增量 Absolute / incremental ● 英制/公制 British / metric system ● 角度C/角度R Angle C / angle R ● 坐標回轉 Coordinate rotation ● 同步攻絲 Synchronous rose ● 坐標系設置 Coordinate system setting ● 空運轉 Idling ● 循環啓動 Cycle start ● 背隙補償 Backgap compensation ● 螺距誤差補償 Pitch error compensation ● 快速進給倍率 Fast feed rate ● 切削進給倍率 Cutting feed rate ● 報警記錄 (1,000個) Alarm records (1,000) ● 狀態記錄 Status record ● 機床鎖定 Machine tool locking ● 計算機遙控 Computer remote control ● 內置PLC Built-in PLC 	<ul style="list-style-type: none"> ● 高精度模式A III High Precision Mode A III ● 刀具長度測定 Tool length determination ● 刀具壽命管理/備用刀具 Tool life management / standby tool ● 背景編集 Background compilation ● 程序軌迹描圖 Program trajectory mapping ● 子程序 Subprogram ● 螺旋/圓錐插補 Spiral / conical interpolation ● 切粉衝洗延時 Powder flushing delay ● 切削液自動關閉 (節能機能) Automatic shutdown of cutting fluid (energy saving function) ● 節能燈自動斷電 (節能機能) Automatic power outage of energy-saving lamp(energy-saving function) ● 自動刀具計測※1 Automatic tool measurement※1 ● 波形表示 Waveform representation ● 操作等級 Level of operation ● 外部輸出入按鍵 External input and output button ● 高精度模式B I (預讀3條程序段) High Precision Mode B I (3 blocks read in advance)
	<ul style="list-style-type: none"> (NC) ● 擴張工件坐標系 Extended workpiece coordinate system ● 定標 Calibrate ● 鏡像 Acoustic image ● 菜單編程 Menu programming ● 程序補償輸入 Program compensation input ● 刀具長度補償 Tool length compensation ● 刀具半徑補償 Tool radius compensation ● 宏程序功能 Macro program function ● 局部坐標系統功能 Local coordinate system function ● 單向定位 One-way positioning ● 紙帶運行功能 Paper tape running function (對話Dialogue) ● 動作程序 Action program ● 調度程序 Dispatcher ● 刀具自動選擇 Automatic tool selection ● 切削條件自動設定表示 Automatic setting representation of cutting conditions ● 刀具長度自動補償 Automatic tool length compensation ● 刀具半徑自動補償 Tool radius compensation automatically ● 未知數輸入自動計算 Automatic calculation of unknown input ● 加工順序控制 Processing sequence control

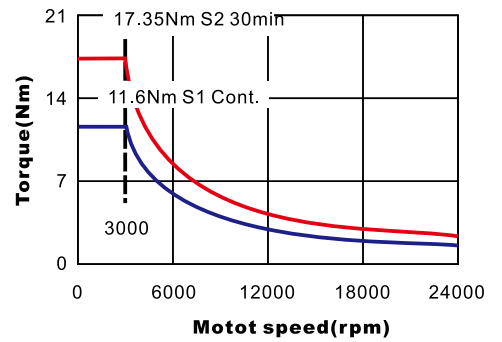
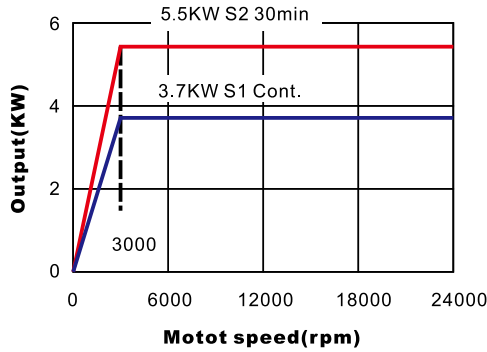
主軸功率-扭矩圖

SPINDLE POWER-TORQUE DIAGRAM

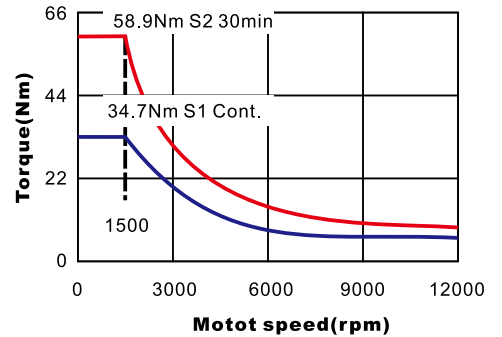
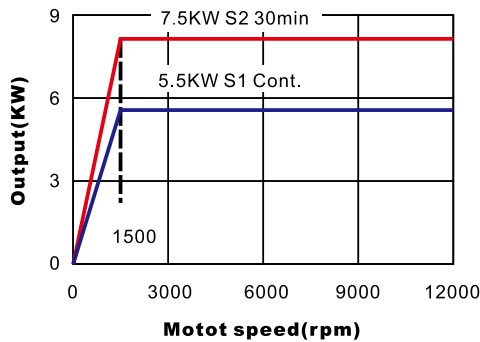
標準
Standard



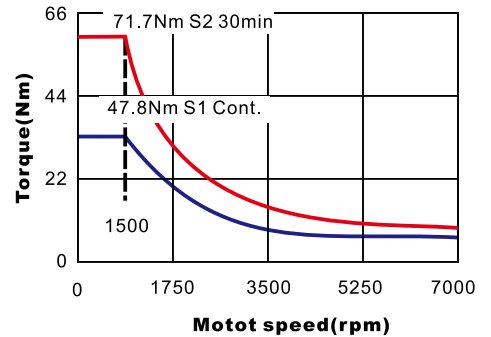
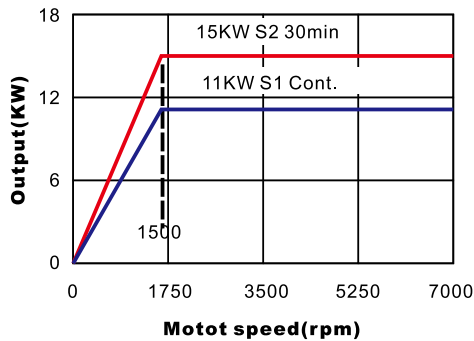
高轉速
High speed



高功率
High power



高扭矩
High torque



加工對象零部件 MACHINING OBJECT PARTS



■ 汽車&摩托車

Automobile & Motorcycle

- ① CVT(無極變速器)
CVT (Non-polar Transmission)
中間殼體 Middle casing
- ② 離合器殼體 Clutch housing
- ③ 氣缸蓋 Cylinder head
- ④ 氣缸體 Cylinder block
- ⑤ EPS殼體 EPS housing
- ⑥ 節氣門體 Throttle body
- ⑦ 電動機殼體
The motor housing
- ⑧ 起動器殼 Starter shell
- ⑨ 飛輪 Flywheel
- ⑩ AT變速器箱
AT transmission box
- ⑪ 曲柄箱 Crankcase
- ⑫ 汽缸頭 Junk head

■ IT&一般機械

IT&General Machinery

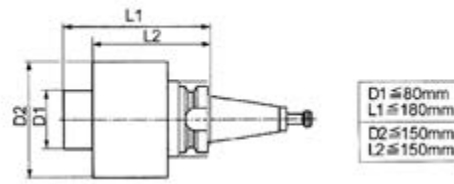
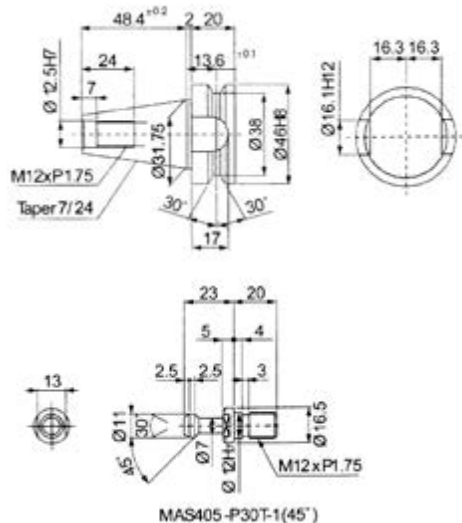
- ⑬ 制動主缸
Brake master cylinder
- ⑭ 轉換叉
Conversion fork
- ⑮ 凸輪軸
Camshaft
- ⑯ 手機 Cellphone
- ⑰ 電腦框架 Computer frame
- ⑱ 硬盤部件 Hard disk component
- ⑲ 鐘表部件 Clock parts
- ⑳ 相機部件 Camera component
- ㉑ 人工骨 Artificial bone

■ 大型零部件

Large components

- ㉒ 中轉箱 Transit box
- ㉓ 同步鏈條殼體
Synchronous chain shell
- ㉔ 卡車用氣缸蓋
Cylinder head for truck

刀柄類型/Tool holder type:

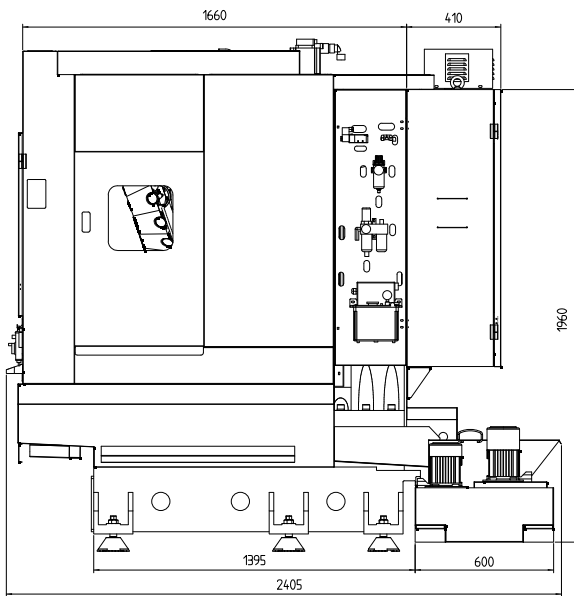


如果冷卻劑密度大于10%，
請諮詢技術工程師，
因為這個可能會影響過濾功能。
If the coolant density is
more than 10%，consult the
technical engineer because
this may affect the filtration
function.

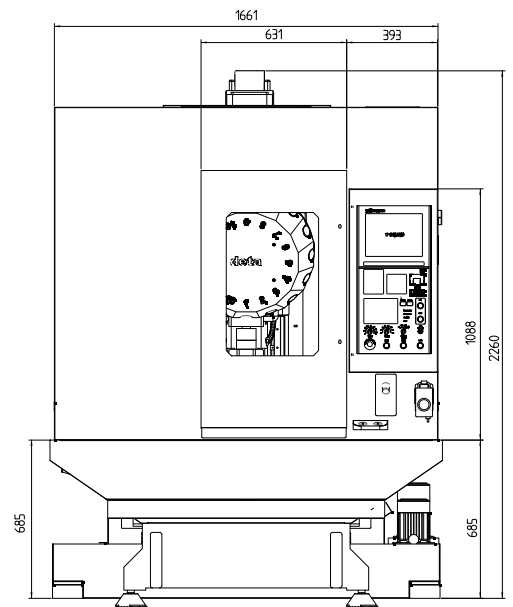
BOUNDARY DIMENSION

TF500外形尺寸

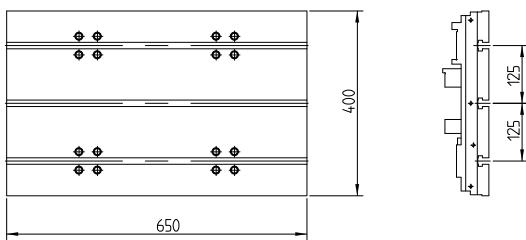
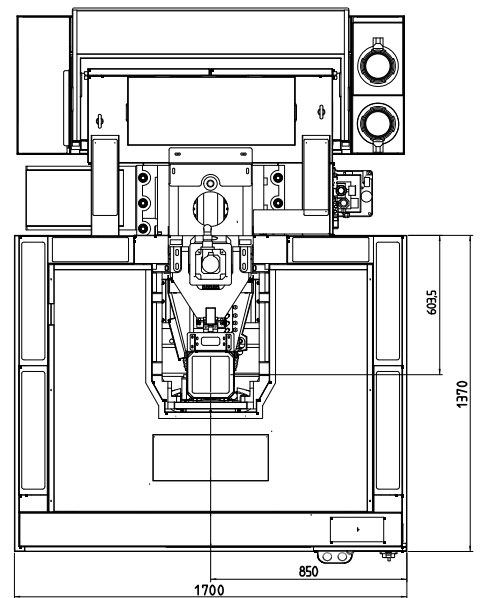
側視圖
Lateral view



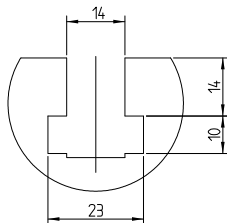
正視圖
Front view



俯視圖
Vertical view



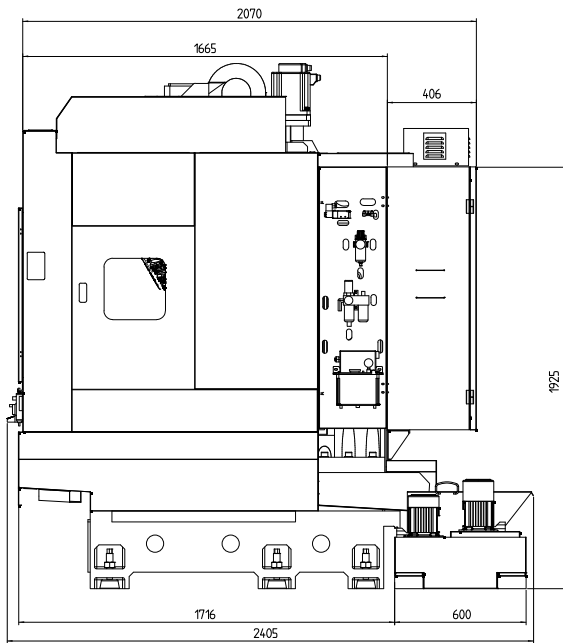
局部放大
Fractionated gain



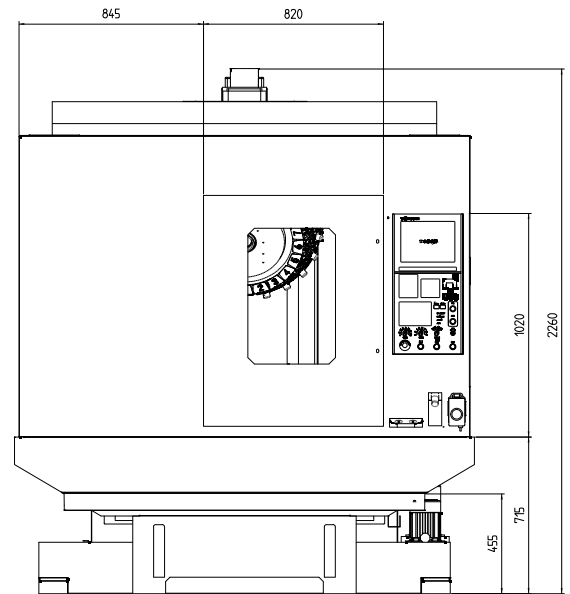
BOUNDARY DIMENSION

TF700外形尺寸

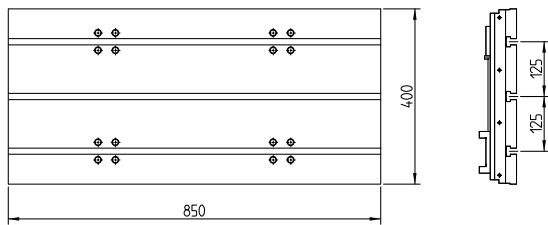
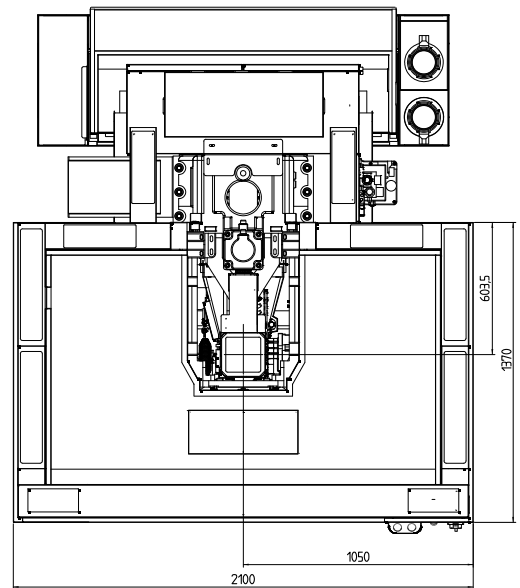
側視圖
Lateral view



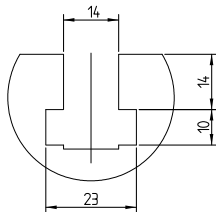
正視圖
Front view



俯視圖
Vertical view



局部放大
Fractionated gain





本公司不斷進行研發改良，如有更新，恕不另行通知，敬請諒解！
The company continues to carry out research, development and improvement. If there is any update, we will not make further notice. Please understand!

[掃一掃關注我們]

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