

OUWIN

創新 質量 專業

Vertical Machining Center

立式加工中心



DONGGUAN CITY BIGA GRATING MACHINERY CO.,LTD

东莞市必嘉光栅机械有限公司

SVP系列

滿足高轉速、高精度、高剛性切削客戶的需求。

特點

1. 重型寬體結構機身及高標準的機床配件能確保機床高剛性和高精度。
2. 45mm超重負荷、高精度、低摩擦系數的直線滾柱導軌、整體式電機座搭配膜片式聯軸器提供更敏捷的高動態性能。
3. 增加機床底部支撐點和加大水平螺絲可更好的吸收加工負載并適當的轉移一部分到地面。
4. 機身採用優質米漢納鑄鐵、重要結合面都精密鏟花研配，這樣不僅能提高機床的整體性能，還可以延長機床的使用壽命。

SVP Series

MVP Series is satisfy customers' needs of high-speed, high-accuracy and high-rigidity cutting equipment.

Feature

1. Heavy ,wide-body structure and high standards machine accessories ensures high-rigidity and high-accuracy of machine.
2. 45mm ultra-heavy load, high accuracy, low friction coefficient roller linear guide ways, the overall motor base together with diaphragm coupling can provide the high keen dynamic performance.
3. Increasing the bottom supporting point of the machine and enlarging the horizontal screws can better absorb the processing load and the appropriately transfer a part of load to the ground.
4. The machine body is made by best Meehanite cast iron, and all major contact surface are all scrapped by excellent skill , which not only improve the overall performance of the machine, but also prolong the working life of the machine.





Travel, table size, load 行程、工作臺尺寸、負載

Table size工作臺尺寸	Unit	SVP650	SVP850	SVP860	SVP1160
Long (X)長	mm	750	1000	950	1200
Width (Y)寬	mm	520	500	600	600
Load 負載	kg	400	500	600	800

Travel 行程	Unit				
X-axis travel (left and right) X軸行程(左右)	mm	600	800	800	1100
Y-axis travel (front and back) Y軸行程(前後)	mm	500	500	600	600
Z-axis travel (up and down) Z軸行程(上下)	mm	550	550	600	600

OUWIN

All parts are precise manufactured, careful adjustment and strict assembly.
所有零部件都經過精確的制造、精心的調整和嚴格的組裝！



Rigidity 剛性

Motor base and bearing pedestal are completely casted on the machine body, so they are stable, lower resonance and strong rigidity.

電機座、軸承座整體澆鑄在機身上，穩固、吸震性好、剛性強。

Rapid rate 快移速度

GOO(X/Y/Z) :
SVP650/850:48/48/48/m/min
SVP860/1160:36/36/30m/min

Pre-straining 3-axes ballscrew, enhancing rigidity and reducing the deformation, so the accuracy is stable and lasting.

預拉緊三軸滾珠絲杆，增強剛性減小變形量，精度穩定持久。

Accuracy and load 精度及負載

Adopting ultra-heavy roller linear guide ways, the workpiece can get excellent tolerance accuracy and geometric accuracy

採用超重載滾柱直線導軌，工件能獲得卓越的公差精度和幾何精度。

Cast iron 鑄鐵

The machine body are made by the best Meehanite cast iron, the five main parts are processed by twice temper of natural aging and vibration aging treatment to ensure that never deformation.

機身采用最好的米漢納鑄鐵制作，五大件均經過自然時效二次回火和振動時效處理以確保永不變形。

The pedestal 底座

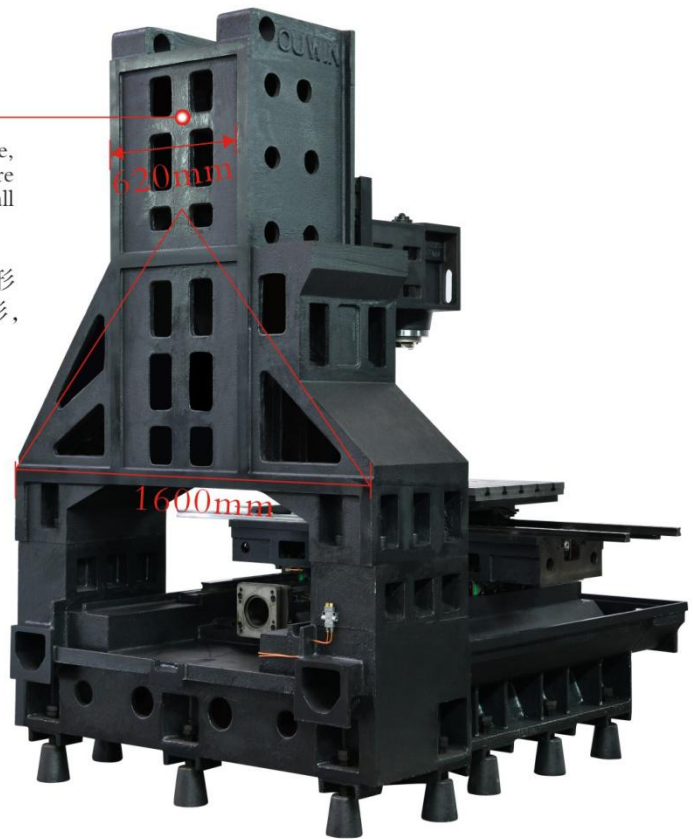
The front and back chip flushing guard are big slant designed, 200mm drop, chip flushing guard integrated casting, The chip flushing easily and convenient for sanitation management. Junction surface of 1600mm wide span column, pedestal weighs 2 tons which are solid and stable.

前後衝屑道大斜度設計，200mm落差，排屑槽一體式澆鑄，排屑輕鬆現場管理衛生方便。1600mm寬大跨距立柱結合面，底座重達2噸扎實穩重。

Vertical column 立柱

1.8 tons major stride lambdoidal column, triangular structure, built-in triangular stiffener design, the tool changer holder are integrally casted , strong, steady and never deformed, the overall rigidity is super strong.

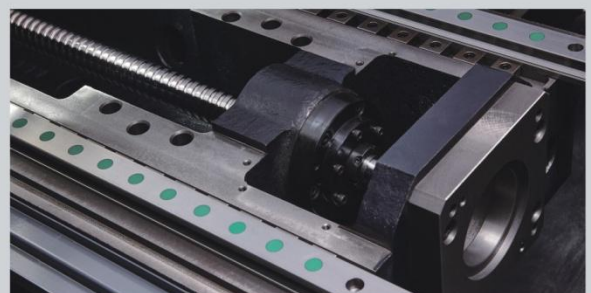
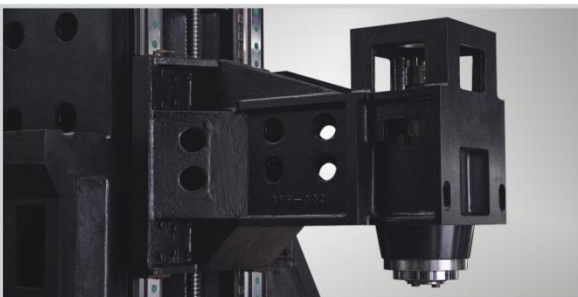
1.8噸重大跨距人字形立柱、三角形結構分布，內置三角形加強筋設計，刀庫界面座一體澆鑄，結實、穩重永不變形，整體剛性超強。

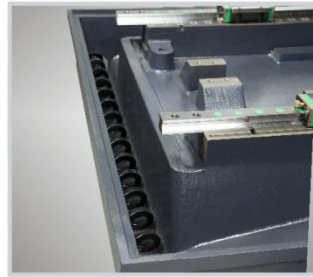
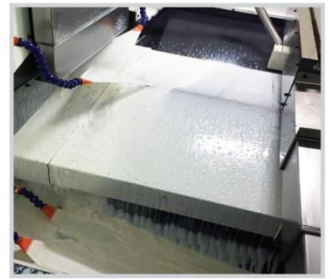
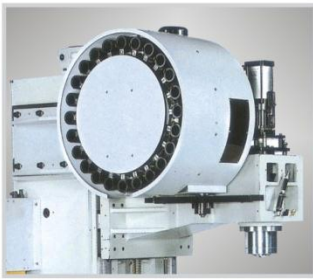


double spiral chip removal 雙螺旋排屑設計

Standard with double chip curling screws, flush system of machine to reduce chip stack , improve chip removing capacity and to reduce manual cleaning time.

標準配備雙卷屑螺桿，機床衝水系統，有效減少切屑堆積，提升切屑移除能力，達到優良排屑，減少人工清潔時間。





Standard accessories 標準配備

Rigid tapping 剛性攻牙

10000rpm/11kw spindle belt type 10000rpm/11kw 皮帶主軸

spindle tool release equipment 主軸鬆刀缸

Spindle oil chiller (spindle oil temperature cooler) 主軸油冷系統

Spindle purge air curtain 主軸氣幕保護系統

Coolant through spindle 主軸環噴系統

workpiece cutting coolant system 工件切削冷卻系統

workpiece blowing coolant system 工件吹氣冷卻系統

Coolant liquid tank 冷卻液水箱

strong flushing system 強衝屑系統

Cleaning Gun, Air gun 清洗噴槍、氣槍

Central automatic lubrication system 中央自動潤滑系統

Three axis bearing lubrication system 三軸軸承潤滑系統

double spiral chip conveyor 雙螺旋排屑器

Arm type tool magazine ATC24P 刀臂式刀庫

Tool changer chip-proof ailing device 刀庫防屑密封裝置

Transformer 變壓器

Automatic power-off function 自動斷電系統

Heat exchanger for electric cabinet 電箱熱交換

Hand-Held Unit-handing pulse 手持操作單元--手脈

Rs232 transmission interface Rs232 傳輸接口

Three-color warning light/Working light 三色報警燈、工作燈

all-closed guard shield 全封閉式護罩

three axis guide rail guard shield 三軸導軌護罩

three axis line guide rail 三軸綫性導軌

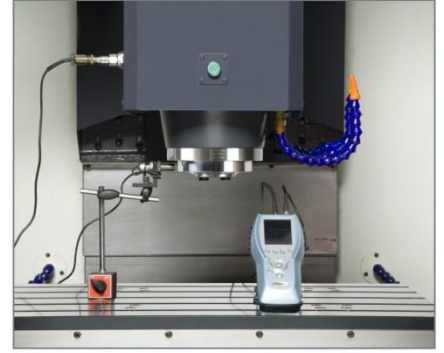
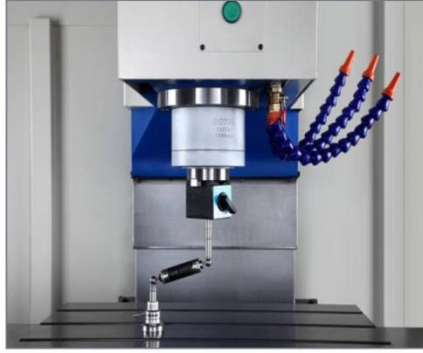
Oily Water Separator 油水分離裝置

basic pad and tool box 基礎墊塊及工具箱



Optional accessories 選擇配備

optional accessories 特殊配置	optional accessories 功能附件	Technical package 技術包
spindle center water output (with filter) 主軸中心出水 (含過濾裝置) the forth axis 第四軸 Hydraulic station (Taiwan) without electronic valve 液壓站 (臺灣) 不含電磁閥 direct coupled spindle 12000rpm/7.5kw直連主軸 belt-type spindle 8000rpm/18.5kw皮帶主軸 Chain-plate dust collector 鏈板式集屑器 oil collector、air conditioner for electric box 油霧收集器、電箱冷氣機 Z axis heighten 300mm Z軸加高300mm	tool setting gauge 對刀儀 cutting fluid level detecting device 切削液水位高低檢測裝置 automatic door 自動門 Operator safety barriers of automatic door 自動門安全光柵 Door Interlock Device 門連鎖裝置 electric oil - water separator 電動油水分離機 Hydraulic station (China) without electronic valve 液壓站 (國產) 不含電磁閥	10000rpm High rigidity (belt-type spindle) 10000rpm 高剛性 (皮帶主軸) spindle cylinder 倍力缸 (主軸鬆刀缸) 24P arm type equency-conversion 24P刀臂式變頻刀庫 (含重刀功能) Tool change time 換刀時間 T to T: 2.5 sec C to C: 4.5 sec enlarge IO storage, electrical equipment upgrade,point to point panel 加IO存儲量、電器升級、點對點面板 Z axis heighten 200mm Z軸加高200mm



Insist on quality, no compromise 堅持品質、絕不妥協

Spindle vibration testing 主軸振動檢測

Using Germany WENZEL 3D CMM machine to make sure spindle quality
使用德國WENZEL 3D CMM機器保證主軸質量

Renishaw ballbar 雷尼紹球杆儀

Optimized circular interpolation in x,y,z planes by tuning each servo drive
通過旋轉每個伺服驅動來優化內插尋圓檢測XYZ三個平面。

Renishaw laser interferometer 雷尼紹干涉儀

Follow German VDI3441 standard testing to ensure the positioning and repeatability accuracy.
采用德國VDI3441標準來檢測確保機床定位及重復定位精度。

3D coordinate measurement 三次元

The main parts of the machine testing before assembly and the accuracy testing of the experiment processing parts
機床關鍵部件裝配前檢測及試加工部件的精度檢測

High Efficiency cutting performance 高效切削性能

SVP860 direct drive spindle BT40 - 12000 rpm AC 7.5/11kw Material: S45C

SVP860 直接驅動主軸BT40 - 12000 rpm AC 7.5/11kw材料:S45C

Face milling machining
面銑加工(φ50×4T)

Spindle speed 主軸轉速	640min ⁻¹
Cutting width (A) 切削寬度(A)	40mm
Cutting depth (B) 切削深度(B)	3mm
Feed rate 進給速度	500mm/min
Cutting capacity 切削量	160cc/min
Spindle motor load 主軸馬達負載	103%
Cutting Material 被削材	S45C

End milling side machining (rough machining)
立銑側面加工(粗加工)(φ16×4T)

Spindle speed 主軸轉速	320min ⁻¹
Cutting width (A) 切削寬度(A)	10mm
Cutting depth (B) 切削深度(B)	20mm
Feed rate 進給速度	180mm/min
Cutting capacity 切削量	56cc/min
Spindle motor load 主軸馬達負載	58%
Cutting Material 被削材	S45C

End milling side machining (super hard)
立銑側面加工(超硬)(φ20×2T)

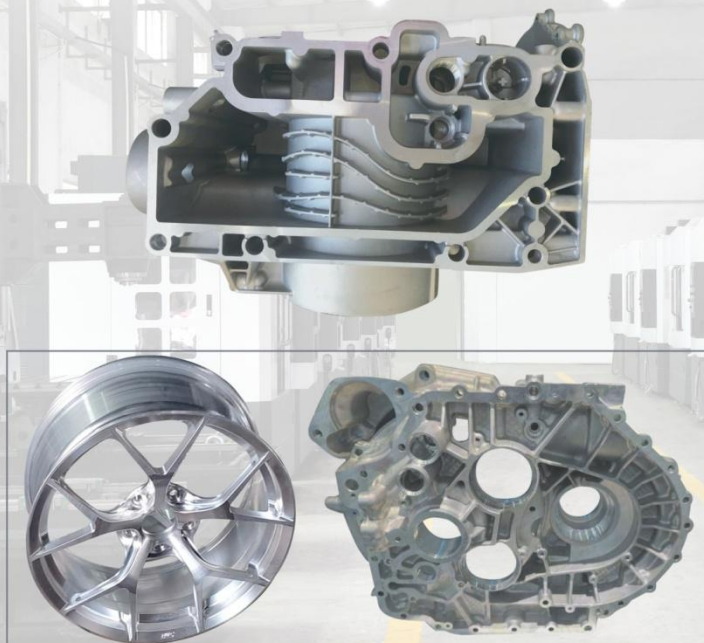
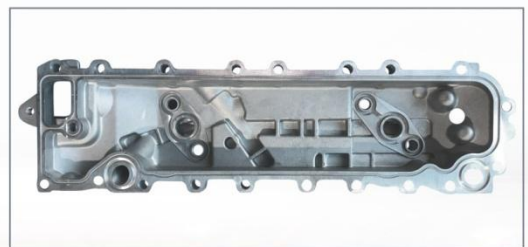
Spindle speed 主軸轉速	3500min ⁻¹
Cutting width (A) 切削寬度(A)	1.2mm
Cutting depth (B) 切削深度(B)	30mm
Feed rate 進給速度	2237mm/min
Cutting capacity 切削量	80cc/min
Spindle motor load 主軸馬達負載	65%
Cutting Material 被削材	S50C

Drilling machining 鑽頭加工
(φ14)

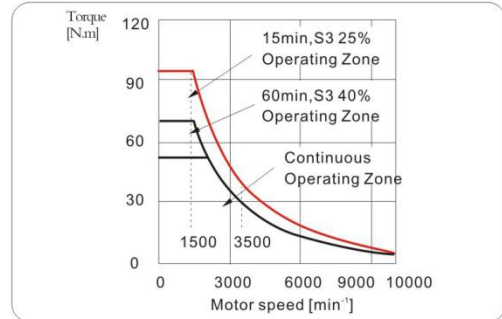
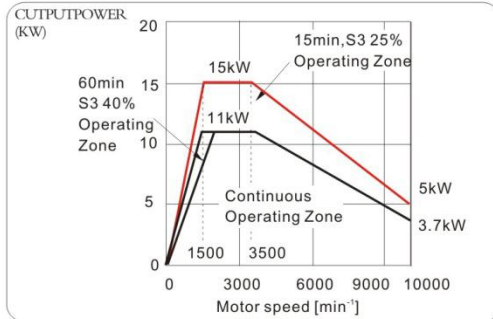
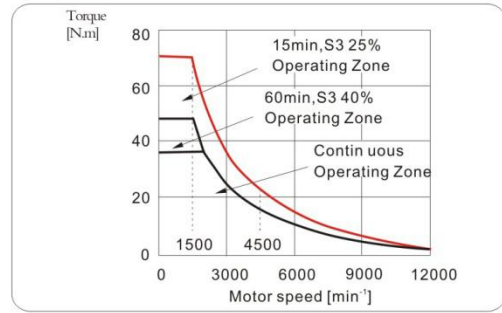
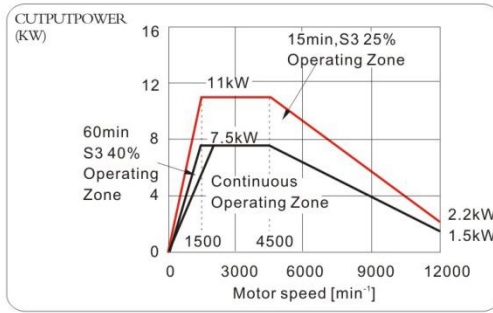
Spindle speed 主軸轉速	2500min ⁻¹
Feed rate 進給速度	1050mm/min
Cutting capacity 切削量	208cc/min
Spindle motor load 主軸馬達負載	92%
Cutting Material 被削材	S45C

Tapping machining 絲錐加工
(M16×P2.0)

Spindle speed 主軸轉速	127min ⁻¹
Feed rate 進給速度	318mm/min
Spindle motor load 主軸馬達負載	33%
Cutting Material 被削材	S45C



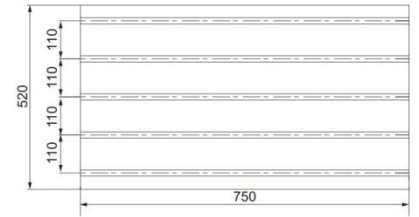
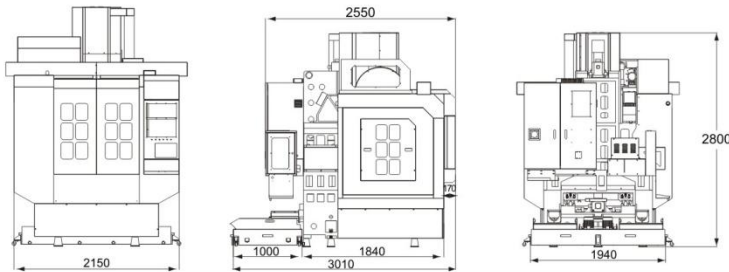
FANUC Spindle motor torque diagram 發那科主軸電機扭矩圖



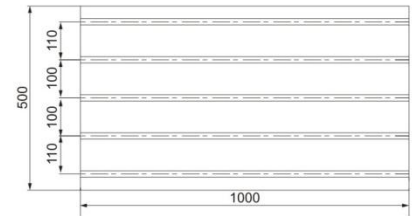
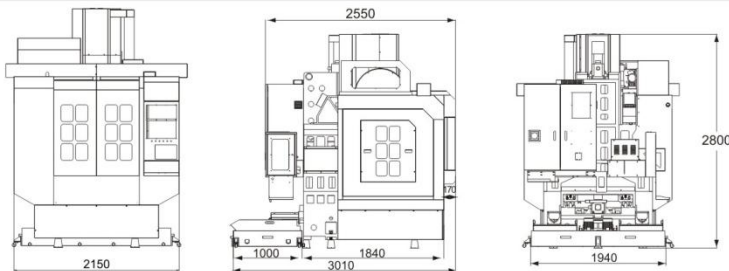
Appearance drawing machine 機器外觀尺寸圖

Table size 工作臺尺寸

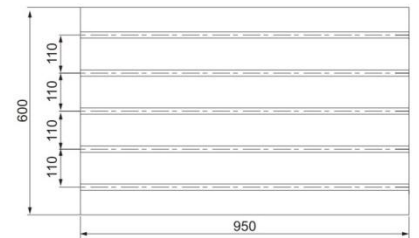
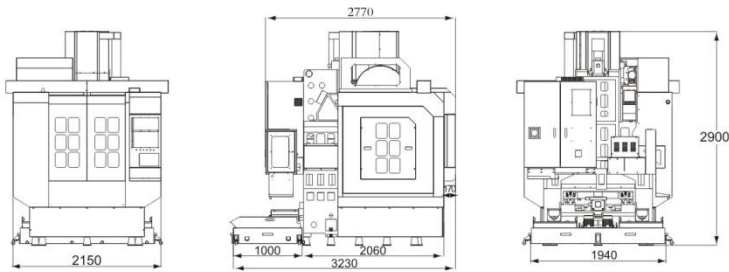
SVP-650



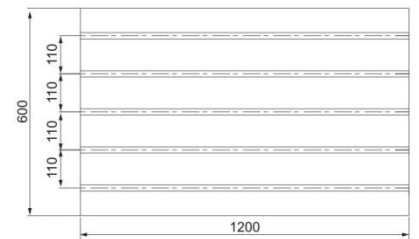
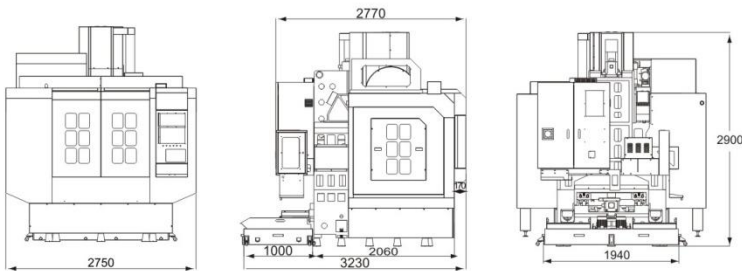
SVP-850



SVP-860



SVP-1160



Processing size 加工尺寸

Model 型號	Unit 單位	SVP650/SVP850	SVP860	SVP1160
Work table 工作臺				
Table size 工作臺尺寸	mm(inch)	750 × 520(30 × 20.8)/ 1000 × 500(40 × 20)	950 × 600(38 × 24)	1200 × 600(48 × 24)
T-slots size(slot number × width × distance) T型槽尺寸(槽數 × 寬度 × 間距)	mm(inch)	5 × 18 × 110(5 × 0.7 × 4.4)	5 × 18 × 110(5 × 0.7 × 4.4)	5 × 18 × 110(5 × 0.7 × 4.4)
Maximum load 最大負載	Kg(lbs)	400(881.84)/500(1102.3)	600(1322.8)	800(1763.7)

Travel 行程

X-axis travel X軸行程	mm(inch)	600(24)/800(32)	800(32)	1100(44)
Y-axis travel Y軸行程	mm(inch)	500(20)	600(24)	600(24)
Z-axis travel Z軸行程	mm(inch)	550(22)	600(24)	600(24)
Distance from Spindle nose to table 主軸鼻端至工作臺面距離	mm(inch)	130–680(5.2–27.2)	120–720(4.8–28.8)	120–720(4.8–28.8)
Distance from spindle center to column surface 主軸中心至立柱端面距離	mm(inch)	525(21)	665(26.6)	665(26.6)

Spindle 主軸

Spindle taper 主軸端孔斜度	type	BT40	BT40	BT40
Spindle Speeds 主軸轉速	r.p.m	10000/12000/15000	10000/12000/15000	10000/12000/15000
Drive 傳動	type	Belt-type/Directly coupled/Directly coupled 皮帶式/直聯/直聯	Belt-type/Directly coupled/Directly coupled 皮帶式/直聯/直聯	Belt-type/Directly coupled/Directly coupled 皮帶式/直聯/直聯

Feed rate 給進

Cutting feed rate 切削給進	m/min(inch/min)	10(393.7)	10(393.7)	10(393.7)
Rapid on (X/Y/Z) axes (X/Y/Z)快移速度	m/min(inch/min)	48/48/48 1889.8/1889.8/1889.8	36/36/30 1417.3/1417.3/1181.1	36/36/30 1417.3/1417.3/1181.1

Automatic tool changing system 自動換刀裝置

Tool Type 刀把型式	type	BT40	BT40	BT40
Tool capacity 刀具儲存容量	set	Arm 24T/24把刀臂式	Arm 24T/24把刀臂式	Arm 24T/24把刀臂式
Maximum tool diameter 最大刀徑	m(inch)	80(3.1)	80(3.1)	80(3.1)
Maximum tool length 最大刀長	m(inch)	300(11.8)	300(11.8)	300(11.8)
Maximum tool weight 最大刀重	kg(lbs)	7(15.4)	7(15.4)	7(15.4)
Tool to tool change 刀對刀換刀	sec	3.0	3.0	3.0

Motor 馬達

Spindle drive motor (Continuous operation / 30 min rated) 主軸驅動馬達(連續運轉/30分額定)	(kw/hp)	FANUC 7.5/11 (10.1/14.8)	FANUC 7.5/11 (10.1/14.8)	FANUC 11/15 (14.8/20.4)
Servo drive motor X, Y, Z axis 伺服驅動馬達 X, Y, Z軸	(kw/hp)	2.0/2.0/3.0 (2.7/2.7/4)	3.0/3.0/3.0 (4/4/4)	3.0/3.0/3.0 (4/4/4)

Machine floor space and weight 機器占地面積與重量

Floor space 占地面積	mm(inch)	2150 × 3010 × 2800 (86 × 120.4 × 112)	2150 × 3230 × 3000 (86 × 129.2 × 120)	2750 × 3230 × 3000 (110 × 129.2 × 120)
Weight 機器重量	kg(lbs)	4900(10802.5)/ 5000(11023.1)	7000(15432.4)	7800(17196.1)

The above specifications are only for your reference, we reserve the right to modify them without notice.
以上規格僅供參考，本公司保留修改規格的權力，恕不另行通知。



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