

UNION MT
Your Choice Of Partner



High Performance Vertical Machining Center

高性能立式加工中心機
MV 760/1000 Series 系列

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Union MechaTronic Inc.

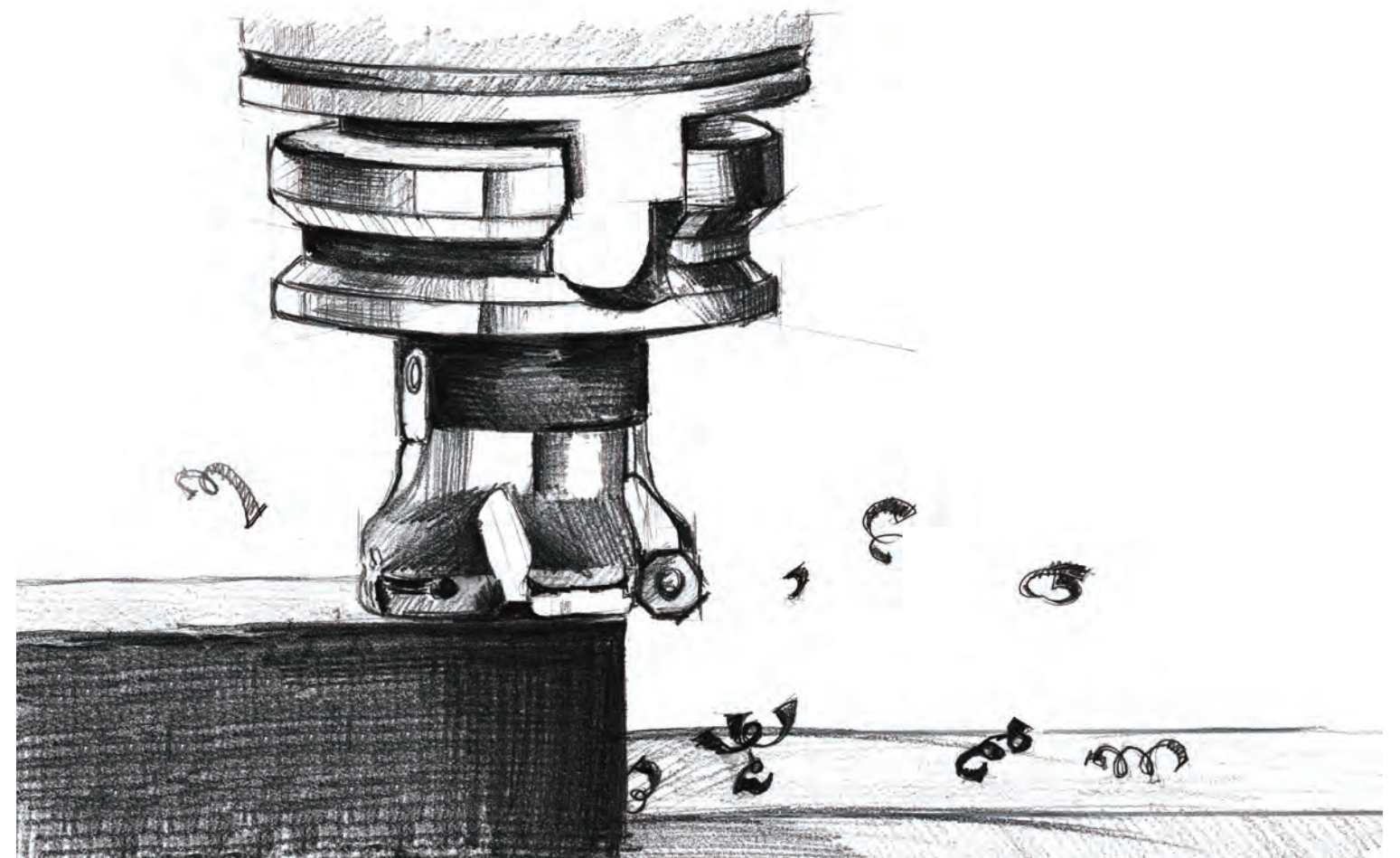
國合科技股份有限公司

41262 台中市大里區國光路一段 206-12 號

TEL+886-4-2485-3708 FAX+886-4-2485-1500

E-mail union@unionmt.com

No.206-12, Sec. 1, Guoguang Rd., Dali Dist., Taichung City 41262, Taiwan



www.unionmt.com

- Please be aware of the continuous performance improving policy, UnionMT reserves the rights to change product specifications, data, options, appearances and etc. without notice.
- 本公司致力於提升產品性能，國合科技保留機床規格、配備、外觀變更及停用之權利，恕不另行通知。
- Note: Some specifications, accessories, pictures, appearances and etc. are optional accessories according to different model. Please consult your Sales Representatives for our latest specifications.
- 本型錄上的圖片部分為選配附件，依據不同機型，與實際有所差異。最新機床規格，請與我們的業務窗口聯繫。
- Version : MVE105B3



在農業生活仰賴農耕帶來經濟效益，
台灣有著象徵勤勞、腳踏實地、貢獻與付出的特有水牛，
如瑞士滿山遍野搖曳牛鈴的乳牛，為人們帶來的貢獻，
不謀而合的在經濟和精神上，連動著人們的生活態度。
進入工業時代的瑞士更多了精密與精準的生活態度。
國合與 SCHAUBLIN 的聯盟合作，結合雙方優異的特質，
除了專業技術的互信，更在人與人之間的相處，多了溫度和情感。

Agricultural life depends on farming to bring economic benefits.
The unique Taiwan water buffaloes symbolize diligence,
steps by steps and contribution.
What Switzerland cows with bell bring to people life is just coincident
with the spirit of the unique Taiwan water buffaloes.
In Switzerland, there are more precisions for life attitude in the industrial age.
The allied cooperation between UNION MT and SCHAUBLIN,
combining the excellent characteristics of both sides,
means not only the reliance of professional technologies,
but more warmth and passion.

Lean but Outstanding

精實團隊 您的最佳選擇



我們不僅提供優質、高效率的解決方案；
更以熱情和負責的態度提供全方位的服務，
我們專注於優質機台組裝，更關注客戶
您的生產力、效率和滿足您的需求。

We provide quality and efficient solutions;
moreover, service with passion and accountability.
More than building machine tools, we care about your
investments on productivity, efficiency, and
requirements.

High Performance Vertical Machining Center

高性能立式加工中心機

- MV760 and MV1000 feature the largest working range, superior accuracy and longevity from excellent scrap skill available for higher precision and operating efficiency.
- MV760 及 MV1000高性能立式加工中心系列，擁有同級機床中最大的工作區域；並以精密劃花工藝，提升您的生產精度及效率。

High Productivity 高產能

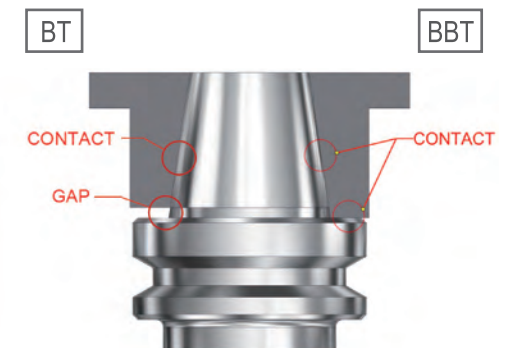
- Standard spindle speed 10,000 rpm, high spindle speed 12,000 or 15,000 rpm with two-speed high/ low ranges providing max machining capability, motor spindle 24,000 rpm available options for high speed machining applications.
- Standard swing arm ATC 24 tools with max tool diameter 90mm with adjacent tool and 180mm without adjacent tool feature for big surface milling and better surface roughness without overlap surface gap machining. 30 tool ATC with fast tool exchange time and CHIP to CHIP time 4 sec for operation efficiency or 48 tools ATC for complex machining are available option.
- 標準主軸轉速10,000rpm，選配附件高轉速12,000rpm及15,000rpm搭配兩段式高低檔，適用於高轉速及低轉速仍能提供最大馬力輸出之切削能力，內藏式主軸馬達24,000rpm適合於高轉速切削加工。
- 標準儲刀倉24支刀，最大相鄰有刀直徑90mm，最大相鄰無刀直徑180mm，適合大面積銑削，無接縫表面之加工。選配件儲刀倉30支刀快速換刀時間CHIP-TO-CHIP 4sec及操作便利性的大刀管理功能提升加工效率或儲刀倉48支刀，適合複雜工件加工。

Robust Machine Structure 高剛性結構

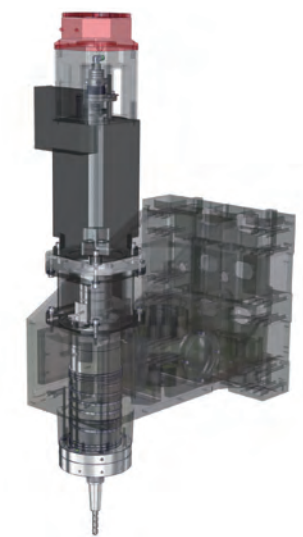
- Unique tool changer support construction provides excellent solid and less vibration and no bending moment on column and headstock.
- Heavyduty and high precision roller linear guide 35/ 45/ 45 mm on X/ Y/ Z axis and preload 45 mm diameter ball screws for transmission rigidity and provide heavy duty machining and stability.
- Headstock symmetrical and enhanced ribs design for reducing vibrations and thermal displacement. Three carriage supports on headstock feature the cutting stability.
- Large, heavily ribbed column and wider guide ways presents rigid structure assure minimal overhang and better distribution of cutting forces.
- Machine structure with Meehanite cast iron and enhanced rib layout assures the best stability.
- 儲刀倉獨立固定結構，提升支撐穩定，大幅降低換刀時對主軸箱及立柱的震動及受彎曲扭矩之影響。
- 重載型高精度級滾柱線軌 X/ Y/ Z 三線軌規格分別為 35/ 45/ 45 mm，高精度預拉大尺寸滾珠導螺桿直徑 45 mm增加傳動系統剛性，提供高切削能力及可靠度。
- 主軸箱對稱性設計及加強肋強化設計，有效降低震動及熱變位；主軸箱六滑塊佈置有效提高高切削穩定度。
- 立柱 X 型加強肋佈置及寬跨距滑道設計，提高剛性以確保最小懸垂及作用力。
- 機台鑄件採用高級米漢納鑄鐵，確保機床精度長期穩定度。

Reliable DDS-Direct Drive Spindle 高可靠度直結式主軸

- DDS-Direct Drive spindle is directly coupled to spindle motor feature least noise and vibrations issues.
- Headstock symmetrical and enhanced ribs FEA design for reducing vibrations and thermal displacement.
- Short spindle nose and four P4 angular contact ceramic bearings design to have solid and close support of bearings in the spindle housing and headstock to provide more cutting stiffness.
- Spindle nose run out 0.0015 mm and 0.006 mm at measuring length 300 mm of test mandrel.
- Standard BIG-PLUS spindle taper assures higher rigidity and machining accuracy through dual faces precisely contact suitable for high speed and heavy duty cutting.
- Thermal cooling control as headstock cooling together with spindle motor cooling system is available as an option to efficiently reduce headstock and spindle motor temperature rise.



Standard Dual Contact Faces BBT or HSK
兩面拘束主軸，BBT或HSK為標準附件



Reliable Spindle & Headstock
高可靠度主軸及主軸箱

- 直結式主軸確保低噪音及低振動特性。
- 主軸箱對稱設計及FEA (有限元素)分析加強肋佈置，吸收震動及減少熱變位。
- 短鼻端及四胞胎 P4 級高精度斜角滾珠陶瓷軸承主軸設計，主軸鼻端伸出較短，主軸軸承配置在主軸套筒緊密與主軸箱結合，大幅增加切削剛性。
- 主軸鼻端偏擺精度 0.0015 mm，主軸測試棒300 mm 偏擺精度 0.006 mm。
- BIG-PLUS 兩面拘束主軸為標準附件，兩面拘束確保主軸兩面的確實接觸，提高切削剛性，加工精度；適用於高速切削及重切削加工。
- 可選配熱冷卻系統，如主軸箱冷卻系統，搭配馬達板等循環冷卻，有效控制主軸箱體及馬達等溫度，以提升加工精度。

Complete Engineering Analysis 全機工程分析

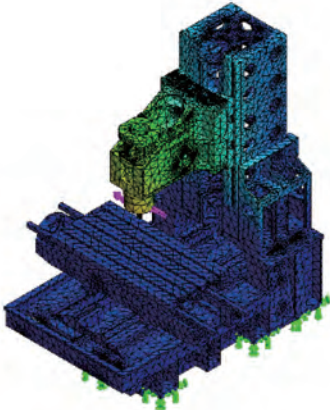
Complete engineering FEA analysis features higher machine stiffness rather than usual stiffness 2.5 kgf/um. FEA techniques used to analyze the structure deformation, stress and etc. assure excellent and optimum structure.

全機 FEA (有限元素) 工程分析，整機剛性值超出一般剛性值 2.5 kgf /um 以上，FEA (有限元素) 經驗技術分析，確保最佳化機床結構。

- Short type spindle nose, higher spindle axial stiffness above 15 kgf/um, together with spindle retention knob gripper force above 1,000 kgf to improve heavy duty machining .
- Life analysis and test of precision draw bar and disc springs assure the operating times above 2M times under normal operation, and suitable to 7 days and 24 hours operation.
- X/ Y/ Z axis thrust 6,283/ 6,283/ 11,519 N, matched with spindle motor output 18.5 kW to increase milling and drilling capability.
- X/ Y/ Z axis rapid travel 36/ 36/ 36 m/min, acceleration 0.7/ 0.7/ 0.5G for greatly reducing non-cutting time.

- 短鼻端主軸，高主軸軸向剛性 15 kgf/um 以上，主軸拉力 1,000 kgf 以上，有效提高切削剛性。
- 精密拉桿及碟型彈簧經工程分析及測試，正常使用壽命200萬次以上，適合7天24小時加工。
- X/ Y/ Z三軸進給推力 6,283/ 6,283/ 11,519 N，搭配主軸馬達最大馬力輸出 18.5 kW，有效提高銑削及鑽削等加工切削能力。
- X/ Y/ Z三軸快速移動率 36/ 36/ 36 m/min，加速度 0.7/ 0.7/ 0.5 G，大幅減少非切削時間，提升效率

Experienced FEA technology
FEA (有限元素)資深工程分析技術



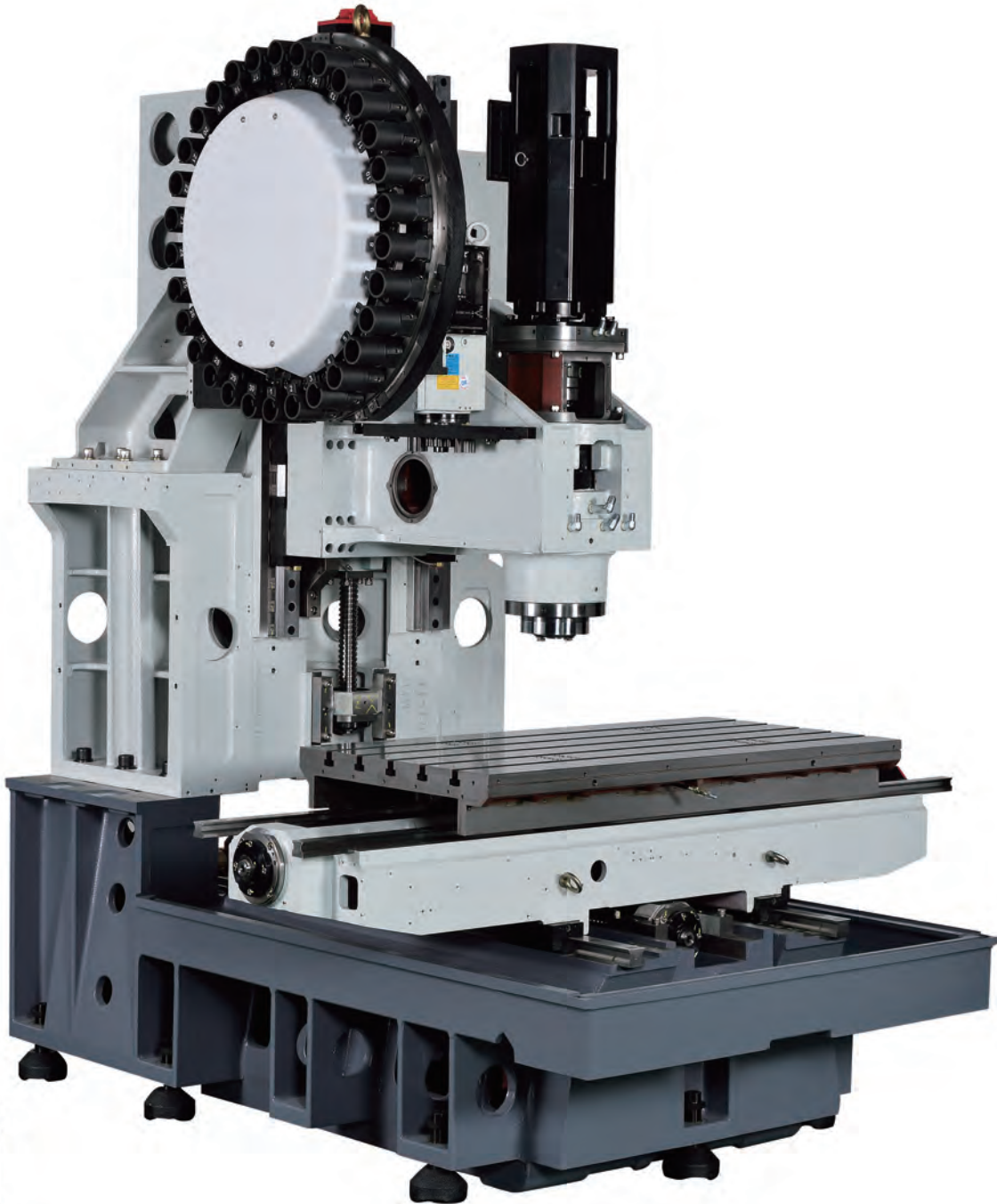
- MV P
- High Precision Machining 0.7G Acceleration
Rapid Feed Rate 36 m/min.
高精度加工 0.7G 加速度及 36 m/min 快速移動率
- MV M
- High Acceleration1G High Speed Machining
Rapid Feed Rate 48 m/min.
1G 高加速度及 48 m/min 快速移動率之高速加工

High Performance Spindle Technology

- Standard coupling spindle 10,000/ 12,000/ 15,000 rpm, or motor spindle 24,000 rpm is available for various machining applications.
- Spindle air purge is standard to prevent spindle bearings from coolant and chips contaminated.

高效能主軸技術

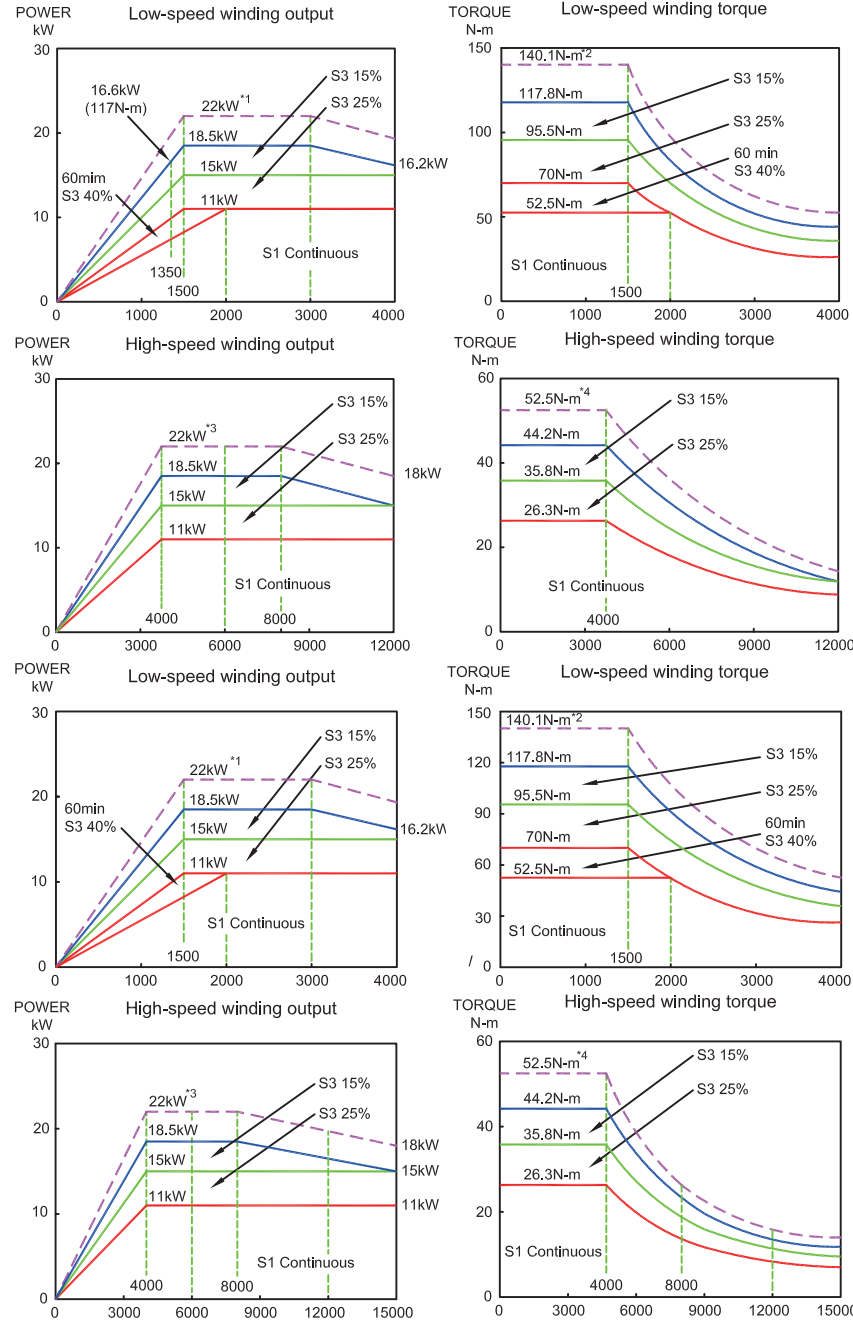
- 直結式主軸轉速 10,000 / 12,000/ 15,000 rpm，或內藏式主軸馬達 24,000 rpm 適合多種不同加工條件。
- 主軸氣幕為標準附件，有效防止切削水及切屑進入主軸，提高主軸可靠度。



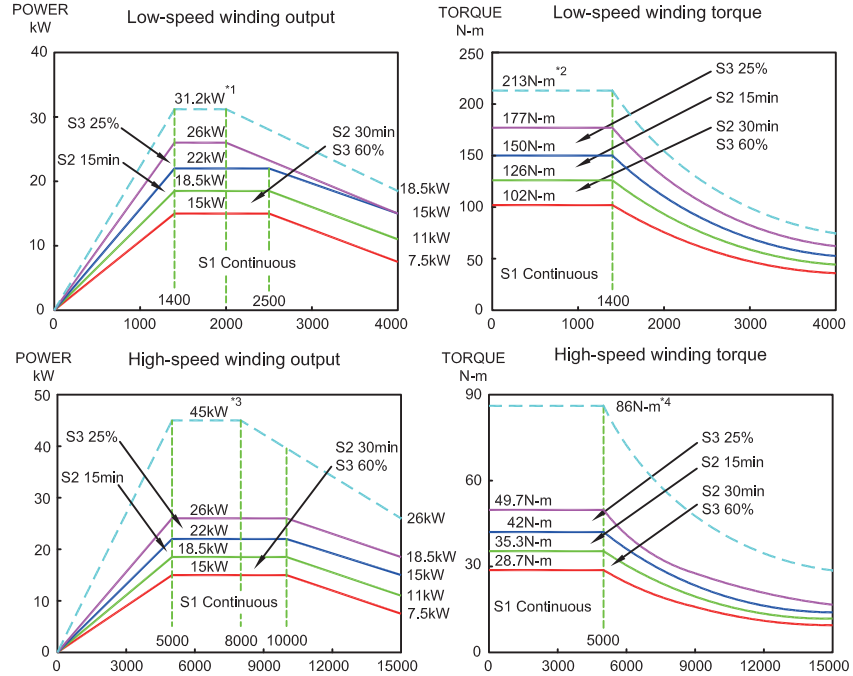
- *1 Maximum output during acceleration at low-speed wiring 低速檔加速最大功率
- *2 Maximum torque during acceleration at low-speed wiring 低速檔加速最大扭矩
- *3 Maximum output during acceleration at high-speed wiring 高速檔加速最大功率
- *4 Maximum torque during acceleration at high-speed wiring 高速檔加速最大扭矩

Low gravity center base, 7 leveling screws and 3 points leveling assure machining stability.
低重心底座，7支基礎螺絲，3點水平校正，確保加工穩定性。

FANUC Spindle Motor Output “P” Series



FANUC Spindle Motor Output “M” Series



Cutting Is Our Talent 切削是我們的專長

We are 'Technology People' providing detailed precision machining analysis. This is more than building machine tools but as a choice partner to provide machining route and analysis to propose an optimum solution.

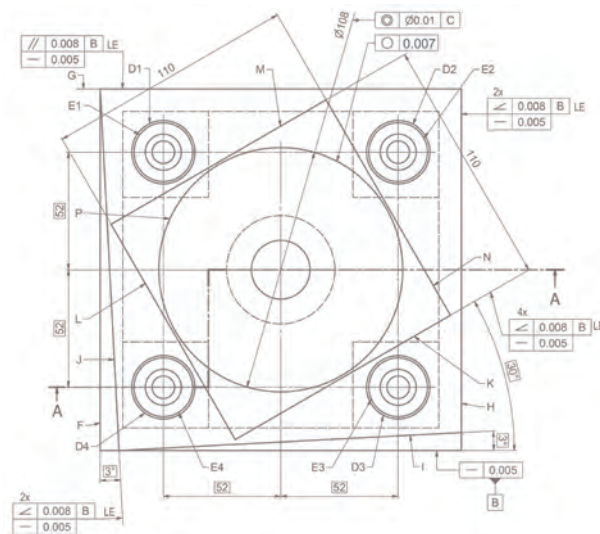
我們秉持 " 技術專業 "，不僅是機床製造者而是站在客戶立場的合作夥伴，提供精密加工資訊與分析，推薦最佳解決方案。

How we work ?

- A. Feasibility Study ↔ Data Input
- B. Trial Request ↔ Analysis
- C. Feedback ↔ Propose

如何提供專業服務？

專業研究	↔	資料審查
試加工	↔	工程分析
回饋	↔	建議方案



Better Than ISO 10791-7
優於 ISO 10791-7

Quality Is Our Culture

品質是我們的堅持

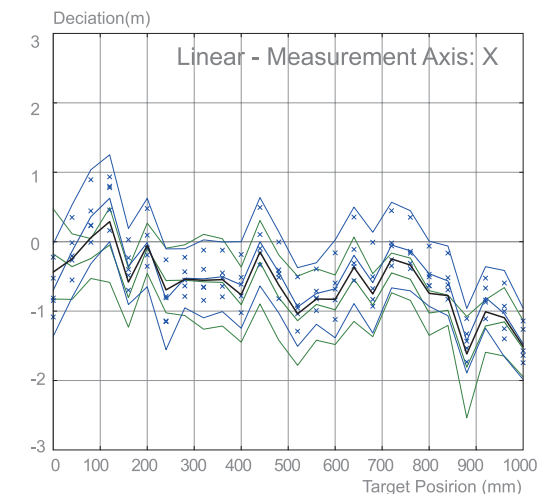
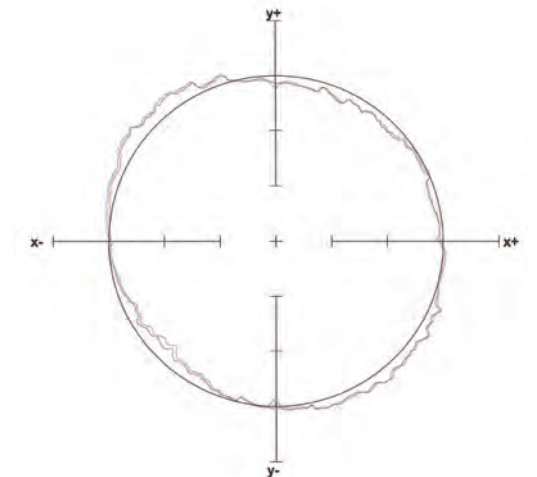
- Smart and complete inspection procedures bring you the quality consistency in trust.
- Spindle run in procedure and machine continuous run in, machine final audit and etc. assure smooth running, stability and temperature control and etc.
- Spindle dynamic balancing guarantee GO.7 and noise level less 78 db considering the health and comfort.

- 完整及落實的機床檢驗程序確保品質一致性及可靠性。
- 嚴密主軸跑合程序，機床連續運轉測試，出機審查程序等確保機床正常運轉、穩定及溫昇控制。
- 主軸動平衡等級 GO.7，提高表面精度。
- 機床噪音值低於 78 db，減少噪音污染，助於人體健康。



Precision Is Our Nature 精度是我們的秉性

- Geometry accuracy aligning, position & repeatability accuracy by our own strict world class standard much less than ISO 10791-2 such as straightness and squareness less than 10 μm .
 - Ball bar accuracy with full circle measurement less than 10 μm .
- 廠內世界級檢驗標準，靜態檢驗、動態檢驗，雷射定位精度及重覆精度標準，遠優於國際ISO10791-2 標準，如真直度及垂直度標準小於 10 μm 。
 - 循圓精度以全圓測量方式，真圓度小於 10 μm 。



MV1000 P Model

Positioning Accuracy 3.321 um

- Positioning accuracy 3.321 μm
- Repeatability accuracy 1.180 μm
- 定位精度 3.321 μm
- 重覆精度 1.180 μm

MV1000 P Model

Circularity Hysteresis 1.7 μm

- Circularity LSC 7.2 μm
- Circularity MZC 6.3 μm
- 最小平方圓 LSC 7.2 μm
- 最小環帶圓 MZC 6.3 μm

Precision Accuracy 高精度

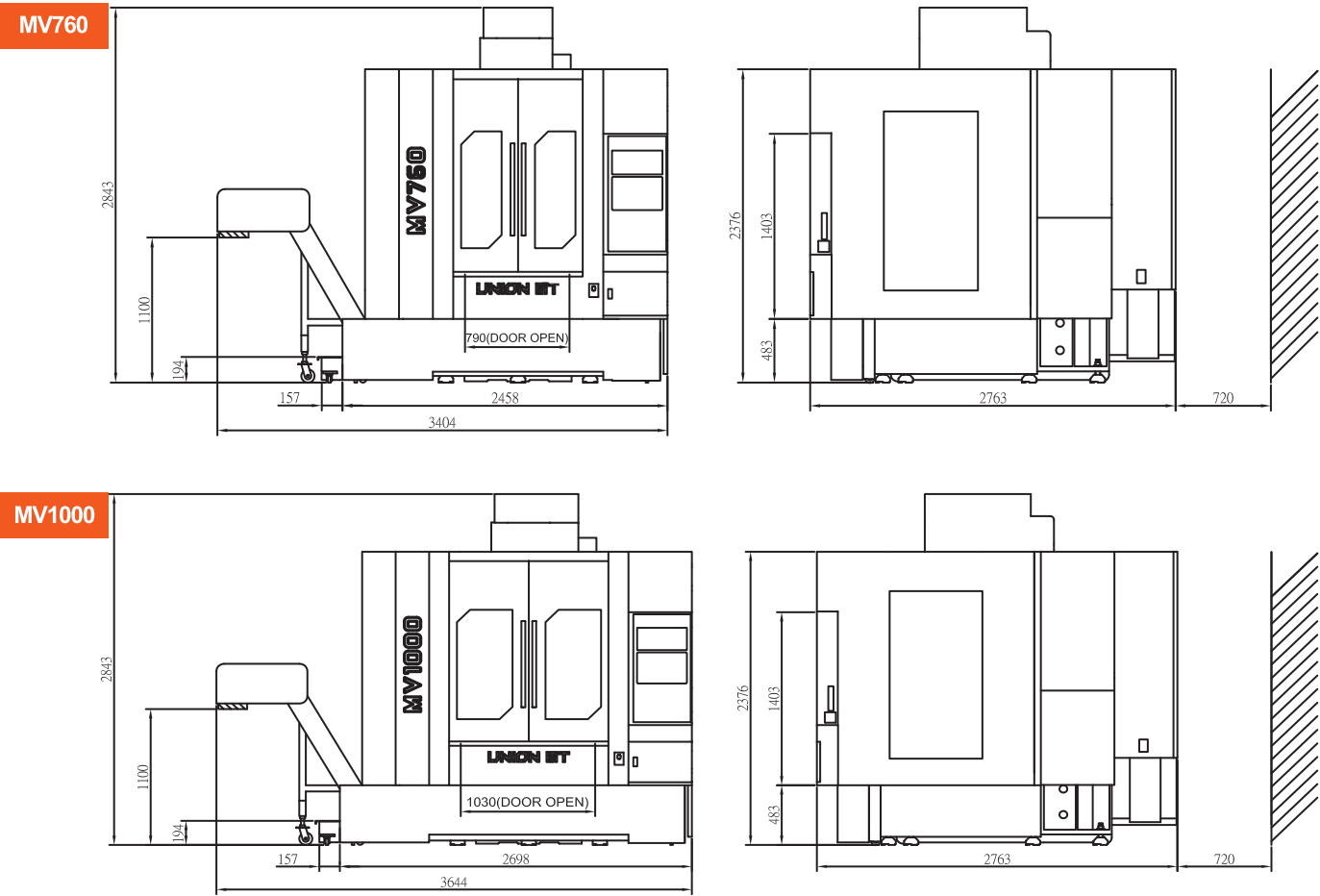
			UNION MT Standard	
			MV 1000 P	MV 1000 M
Straightness full stroke 真直度全行程	X	0.02	0.008	0.008
	Y	0.015	0.008	0.006
	Z	0.015	0.008	0.006
Squareness 直角度	X-Y	0.02/ 500	0.008	0.006
	Y-Z	0.02/ 500	0.008	0.006
	Z-X	0.02/ 500	0.008	0.006
Positioning accuracy 定位精度	X	0.02	0.007	0.005
	Y	0.016	0.007	0.005
	Z	0.016	0.007	0.005
Positioning repeatability 重覆精度	X	0.008	0.005	0.004
	Y	0.006	0.005	0.004
	Z	0.006	0.005	0.004
Spindle run-out on table surface 工作台面主軸 300 直徑偏擺精度		0.02/ 300	0.01/ 300	0.005
Spindle run-out 主軸偏擺精度	At Base	0.01	0.004	0.003
	At 300mm	0.02	0.008	0.006
Circularity 循圓精度	CW	N.A	0.01	0.006
	CCW	N.A	0.01	0.006

Heavy Duty Cutting Capability 切削實力



Spindle type 主軸形式	12,000 rpm Spindle 12,000 rpm主軸			15,000 rpm Spindle CTS 15,000 rpm主軸中心給水		
Machining Capability 加工能力	Drilling Tool Dia x Feed 鑽孔	Tapping Tap 攻牙	Milling Face 面銑	Drilling Tool Dia x Feed 鑽孔	Tapping Tap 攻牙	Milling Face 面銑
S45C	Ø30 mm x 0.10 mm/ rev	M24 x P3.0	300 cc/min	Ø44 mm x 0.10 mm/ rev	M27 x P3.0	360 cc/min
FC200		M27 x P3.0	400 cc/min	Ø44 mm x 0.15 mm/ rev	M30 x P3.5	470 cc/min
ADC12		M30 x P3.5	800 cc/min	Ø44 mm x 0.25 mm/ rev	M30 x P3.5	1,000 cc/min

Compact Footprint 精簡佔地面積



Standard/ Option 標準 / 選配項目

		10P	12P	15P	12M	15M	24M
FANUC OiMF	發那科 OiMF 控制器	●	●	●	●	●	X
Color LCD monitor	彩色 LCD 螢幕	8.4"	8.4"	8.4"	10.4"	10.4"	10.4"
AICC II (Look-ahead 200 blocks)	AICC II (預讀單節 200)	○	○	○	●	●	X
FANUC - data server	發那科資料儲存	○	○	○	○	○	X
FANUC 31iB	發那科 31iB 控制器	X	X	X	○	○	○
FANUC - high speed processing (Look-ahead 600 blocks)	高速處理 (預讀單節 600)	X	X	X	○	○	○
HEIDENHAIN TNC530	海德漢 iTNC530	X	X	X	○	○	●
SIEMENS 828D	西門子 828D	○	○	○	○	○	X
MITSUBISHI M70 (package A)	三菱 M70 (套裝 A)	X	○	○	○	○	X
Tooling	BBT40	●	●	●	●	●	X
	HSK A63	○	○	○	○	○	●
Pull stud for BT tooling	刀柄螺栓	●	●	●	●	●	X
Balance tooling for spindle warm up	平衡刀具	○	○	○	○	○	○
Thermal cooler in headstock and motor	主軸台、馬達熱冷卻	○	○	○	○	○	○
Spindle oil chiller	主軸油冷卻機	○	●	●	●	●	●
30 position tool magazine	30 支刀庫	○	○	○	●	●	●
48 position tool magazine	48 支刀庫	○	○	○	○	○	○
ATC auto door	刀庫自動門	○	○	○	○	○	○
4th axis preparation	第四軸預備介面	○	○	○	●	●	●
Ø255 mm rotary table & tail stock	Ø255 mm 旋轉工作台 & 尾座	○	○	○	○	○	○
Remote MPG	分離式手動脈衝產生器	●	●	●	●	●	●
Transformer	變壓器	○	○	○	○	○	○
Linear encoder	光學尺	○	○	○	○	○	○
Coolant through ball screw	中空導螺桿冷卻系統	X	X	X	○	○	○
Work probe	工件量測	○	○	○	○	○	○
Tool length / breakage measurement	刀具長度 / 破損檢出	○	○	○	○	○	○
Coolant wash down & wash gun	沖屑 & 水槍	●	●	●	●	●	●
8 bar through spindle coolant	主軸中心出水 8 bar	○	○	○	●	●	●
20 bar through spindle coolant	主軸中心出水 20 bar	○	○	○	○	○	○
50 bar through spindle coolant	主軸中心出水 50 bar	○	○	○	○	○	○
Stainless steel chip pan	不鏽鋼集屑盤	○	○	○	●	●	●
Cutter air blast	刀具吹氣裝置	●	●	●	●	●	●
Chip conveyor	除屑機	○	○	○	○	○	○
Mist collector	油霧收集器	○	○	○	○	○	○
Documentation	電子檔手冊	●	●	●	●	●	●
Foundation bolts & blocks	基礎螺絲 & 墊塊	●	●	●	●	●	●
Work light	工作燈	●	●	●	●	●	●
Machine status light	三色工作指示燈	●	●	●	●	●	●
CE & EMC	CE & EMC 認證	○	○	○	○	○	○

● 標準 ○ 選配 X 不提供
● Standard ○ Option X N/A



Larger Tool Capacity and Fast ATC

快速及多種刀具數量儲刀倉

- Faster swing arm type ATC with 24 tools standard and larger capacity 30 or 40 tools option for more versatile applications.
- To ensure smooth and vibration free tool changing; clamp, unclamp and tool selection activated simultaneous with spindle positioning reduce the tool change time.

- 高速換刀臂式儲刀倉，24 支刀標準附件，30 支刀或 48 支刀選配附件以因應不同工件加工需求。
- 快速換刀，將夾刀、鬆刀、選刀幾乎與主軸定位同時作動，以降低刀具換刀時間。



Standard 24
large tool ATC
標準 24 刀 - 大刀儲刀倉



Option 30 tool ATC
選配 30 刀 - 儲刀倉



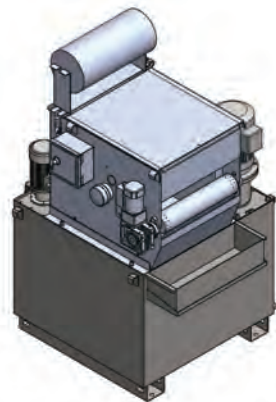
Option 48 tool ATC
選配 48 刀 - 儲刀倉

Efficient Chip Management 高效切屑處理

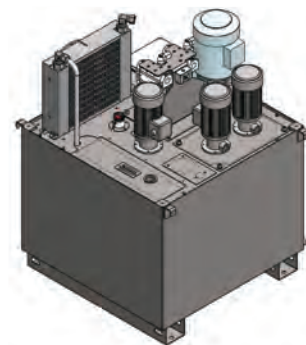
- Pressured coolant wash down and 300 liters for MV760, 400 liters for MV1000, the high volume coolant tank provide efficient coolant flow and chip flow for reducing cutting heat.
- Overflow type coolant tank for easy replenishing coolants and chips clean.
- Friendly access chip pan for easy clean and chips removal.
- Larger coolant tank and separate coolant tank are available as options for higher pressured coolant, high filtrated coolant, coolant cooler or chiller is available for precision machining.
- Both sides and rear chip wash down, provide pressured coolant, pour chips from rear to front.
- Spindle ring-type coolant nozzles and cutter air blast are standard for efficient cooling, flowing away the heat of chips and improving tool life.
- 高壓沖屑及大容量水箱 MV760 300公升及 MV1000 400公升，提供有效沖屑，降低加工熱源。
- 溢流式水箱設計，易於移動、添加切削水及清理切屑。
- 無排屑機時之切屑盤，易於清洗水垢及清理切屑。
- 大容量水箱外，可選配附件之副水箱，專為高壓切削水設計，另有多種過濾裝置，切削水熱交換器或冷卻機以確保高精度加工。
- 機床兩端側沖及底沖提供高壓切削水，有效將切屑排除。
- 主軸切削水環噴及刀具吹氣有效降低所產生加工熱源，快速切屑移除及增加刀具壽命。

選配附件

Optional Coolant Through Spindle up to 50 bar and
Optional Drum Type Paper Filter Coolant Filtration Device
主軸中心給水 50 bar 及選配附件紙袋式過濾裝置



Optional Coolant Through Spindle up to 20 bar and
Optional Coolant Cooler
主軸中心給水 20 bar及選配附件加裝冷卻熱交換器



Technical Specifications 機床規格

“P” Specifications

“M” Specifications

No	Group	ITEM	
1	Working Range 工作範圍	Travel X/Y/Z	三軸行程
2		Spindle nose to table surface	主軸鼻端至工作台面距離
3		Table size	工作台尺寸
4		Table load capacity	工作台最大荷重
5		T slot width/qty/pitch	T形槽 寬度/ 槽數/ 節距
6	Main Spindle 主軸規格	Spindle type	主軸型式
7		Max spindle speed	主軸最大轉速
8		Max spindle output *1	主軸最大功率
9		Max spindle torque	主軸最大扭力
10	Feed Drive 三軸傳動	Feed force X/Y/Z *1	進給推力
11		Rapid travel X/Y/Z	快速移動速率
12		Acceleration X/Y/Z	加速度
13		Linear guide size	滾柱線性滑軌尺寸
14		Ball screw diameter	導螺桿直徑
15	Automatic Tool Changer 自動換刀裝置	Tool selection	刀具選擇
16		Magazine pots	儲刀倉刀具數
17		Max. tool adj. w/o tool	最大刀具直徑 有/ 無鄰刀
18		Max. tool length	最大刀具長度
19		Max. tool weight	最大刀具重量
20		CTC time	換刀時間
21	Accuracy Positioning/ Repeatability 定位精度/ 重覆精度	ISO 230-2	ISO 230-2
22	Coolant System 切削水系統	Coolant tank capacity	水箱容量
23		Nozzle coolant & flush pump	主軸環噴泵及沖屑泵
24		Through spindle coolant	主軸中心給水
25	Lubrication & Cooling 潤滑及冷卻	Spindle	主軸潤滑
26		Thermal cooling	溫昇控制
27	Machine Size 機床尺寸	Height	機器高度
28		Floor space W x D	占地面積 寬度 x 深度
29		Weight	機器重量
30	Connections 動力及空壓需求	Main power	動力供給需求
31		Pneumatic consumption	空壓需求

10 P		12 P		15 P	
760/ 610/ 610mm;		1,020/ 610/ 610 mm			
100~ 710 mm					
1,000 x 600 mm;		1,200 x 600 mm			
500 kg					
18 mm/ 5/ 100 mm					
BBT 40, Coupling		直結式			
10,000 rpm		12,000 rpm		15,000 rpm	
18.5 kW S3 15%					
118 Nm S3 15%					
6,283/ 6,283/ 11,519 N					
36/ 36/ 36 m/min					
0.7/ 0.7/ 0.5 G					
35/ 45/ 45 mm					
45 mm					
Random and shortest selection		雙向就近選刀			
24 (30, 48 Opt)				30 (48 Opt)	
90 (75) mm/ 180 (150) mm				75 mm/ 150 mm	
300 mm				300 mm	
8 kg				7 kg	
4.5 sec				4 sec	
0.007/ 0.005 mm					
300 L ;		400L			
100 L/min 3.5 bar					
20 bar (Option)				20 bar (Option)	
Grease 油脂潤滑				Oil Air 油氣潤滑	
-		Spindle chiller 主軸冷卻			
2,843 mm					
2,458 x 2,763 mm;		2,698 X 2,763 mm			
7,000 kg;		7,400 kg			
70 A/ 220 V/ 3 Phase/ 25 KVA					
5.5 kg/ cm ²					

12 M		15 M		24 M	
760/ 610/ 610mm;		1,020/ 610/ 610 mm			
100~ 710 mm					
1,000 x 600 mm;		1,200 x 600 mm			
500 kg					
18 mm/ 5/ 100 mm					
BBT 40, Coupling		直結式		HSK A63, Motor Spindle 內藏式主軸	
12,000 rpm		15,000 rpm		24,000 rpm	
26 kW S3 25%				25 kW S6 40%	
177 Nm S3 25%				39.8 Nm S6 40%	
8,639/ 8,639/ 11,781 N					
48/ 48/ 48 m/ min					
1/ 1/ 1 G					
35/ 45/ 45 mm					
45 mm					
Random and shortest selection		雙向就近選刀			
30 (48 Opt)				30	
75 mm/ 150 mm				75 mm/ 150 mm	
300 mm				250 mm	
7 kg				5 kg	
4 sec				4 sec	
0.005/ 0.004 mm					
300 L ;		400L			
100 L/min 3.5 bar					
8.5 bar		8.5 bar		8.5 bar	
Oil Air 油氣潤滑					
Thermal control 熱冷卻					
2,843 mm					
2,458 x 2,763 mm;		2,698 X 2,763 mm			
7,000 kg;		7,400 kg			
70 A/ 220 V/ 3 Phase/ 25 KVA					
5.5 kg/ cm ²					

Two faced contact tools are needed for getting better cutting capability.
Actual values may differ from the specification in the catalog caused by optional and peripheral accessories.

使用兩面拘束刀具能提升切削能力。
實際數據會因機台選配項目而有所差異。

*1 Fanuc system spindle & servo motors adopt alpha series motors.

Fanuc 控制系統，主軸及伺服馬達皆採用 α 系列。