



PERFECT JET

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Profile

Mission: Sincerity Progress Harmony

History of Timeline

1981~Ping Jeng Company starts in Taichung, Taiwan. Capital 2.1 million.Launch :RD-600&600BL

1982~As costumer needs to produce Bed Type Milling Machine:BM-2Vand Radial Drill Machine: CNC-RAMILL-VI.

1983~Launch: BM-3V&BM-4V。

1984~Launch:BM-3MV&BM-4MV。

1985~Launch:BM-3DS&4DS

1986~Launch:CNC-MGD-500&1000。

1987~Launch:CNC-MGD-1015&1020

1988~Launch:CNC-MGD-1520&1525 , TRAK-3S(BM-22VDA)

1989~Launch:DH-1500&3000&6000. Cooperate with American well-known NC Company and entered the U.S. market with CNC Milling Machine successfully. Capital increasing to 19.8 million.

1990~Launch:CNC-MGD-613&813 , TRAK-5S(BM-24VDA)

1991~Launch:CNC-MGD-816&820

1992~Launch:CNC-MGD-1016&1020 , TRAK-2S(BM-21VCA)

1993~Launch:CNC-51-VI/GA/GF(BM-1687). Expand European market & start to develop Box Ways machining centers. CE -TUV of Germany Authentication approved for CNC Milling Machines. Capital increasing to 30 million.

1994~Launch:CNC-61-VI/GA/GD(BM-2087)

1995~Launch:CNC-71-VI/GA/GD(BM-2587) , CNC-81-VI/GA/GD(BM-3087)

1996~Launch:MCV-64BT

1997~MCV-85B&85G

1998~MCV-100B&100G

1999~Launch:MCV-168G&168B.All plants destroyed by 921 earthquake and almost forced to close down the business; after financing and capital increasing to 68 million, and enable to reconstruct the plants.

2000~Launch:MCV-86&116B. Merge a machinery company and acquire related technical staffs and some outstanding European agents.

Develop Linear Guide Way machine center.



2001~Launch:MCV-127B &147B&147G

2002~Launch:MB-4R372 -4axes ROUTING. & MCV-M8 & M6

2003~Launch:CNC-24MA(740)CNC-34/36/46MB (1050-1350),MCV-M10.

Attend EMO and international exhibitions actively to expand global market.

2004~Launch:CNC-12ME(QCM) , MCV-M11. CE-TUV of Germany Authentication approved for all machine tools and successfully expanded Turkey and East Europe.

2005~ Launch:MB-1207/1210 , MCV-M5. As Europe market need to R&D the Moving Column machining centers serial. New CIS & Logo – PERFECT JET & implement ERP management and target management.

2006~Launch:MHD-2678,DH-3100, MCV-M7

2007~Launch: MV-107P&107U, MV-64P&64U. Italy well-known machinery dealer ask to be the exclusive agent for Moving Column serial and sign up 10 machines per year quota.

2008~Launch: MV-86P&86U, MB-1220.

2009~Launch: MCV-2010G, MV-308. R&D Submicron high precision machining center, and joint program of Ministry of Economic Affairs.

2010~Launch: MV-308-5X, MCV-188G.

As European Auto parts and Aero parts market needs, to develop 5-axis swiveling head MV-308-5x and gain the Patent.

2011~Launch: MH-1500D, MH-800P, MCV-435 v . MCV-435 v is launched in TIMTOS Exhibition and wins Grand Award and IENA in Germany invention competition for Grand Champion Award also. Capital increasing to 168 million.

2012~Launch: MH-1213, MH-500P, MH-630P, MCV-2510B/G

2013~Launch: BM-1620, CNC-GD-4axes, CNC-GD-6axes, CNC-GD-8axes



Vision: Cultivate Good Karma in the business, Benefit All People

All machines are developed in-house. We have an outstanding R&D team who is dedicated to researching and developing new machines many years with expertise. Using AUTOCAN R14 software and AUTODESK3D/INVENTOR SERIES.

COMPANY SCOPE:

Land Area:30000m², Factory Area:16000 m², Office Area:22000 m², Capital increasing to 168 million.

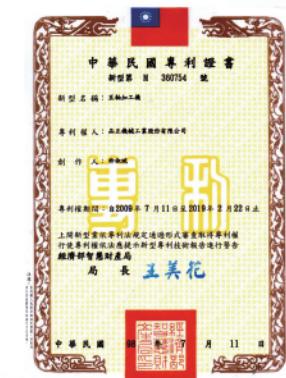
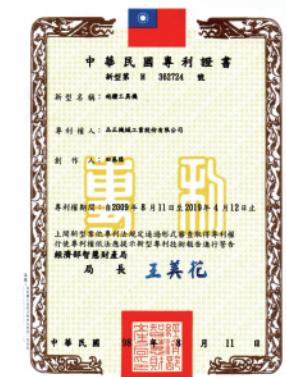
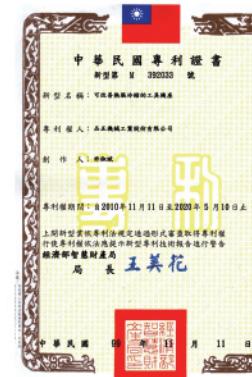
Perfect World, Perfect Jet, Perfect Efficiency:

Creating job opportunity and supporting educational constitution are the main principles of Ping Jeng.

To build a better society, Ping Jeng keeps doing its best to benefit the community for now and the future.



Patent



Specialty Manufacturing

High Precision Machining Center

→ MARKET

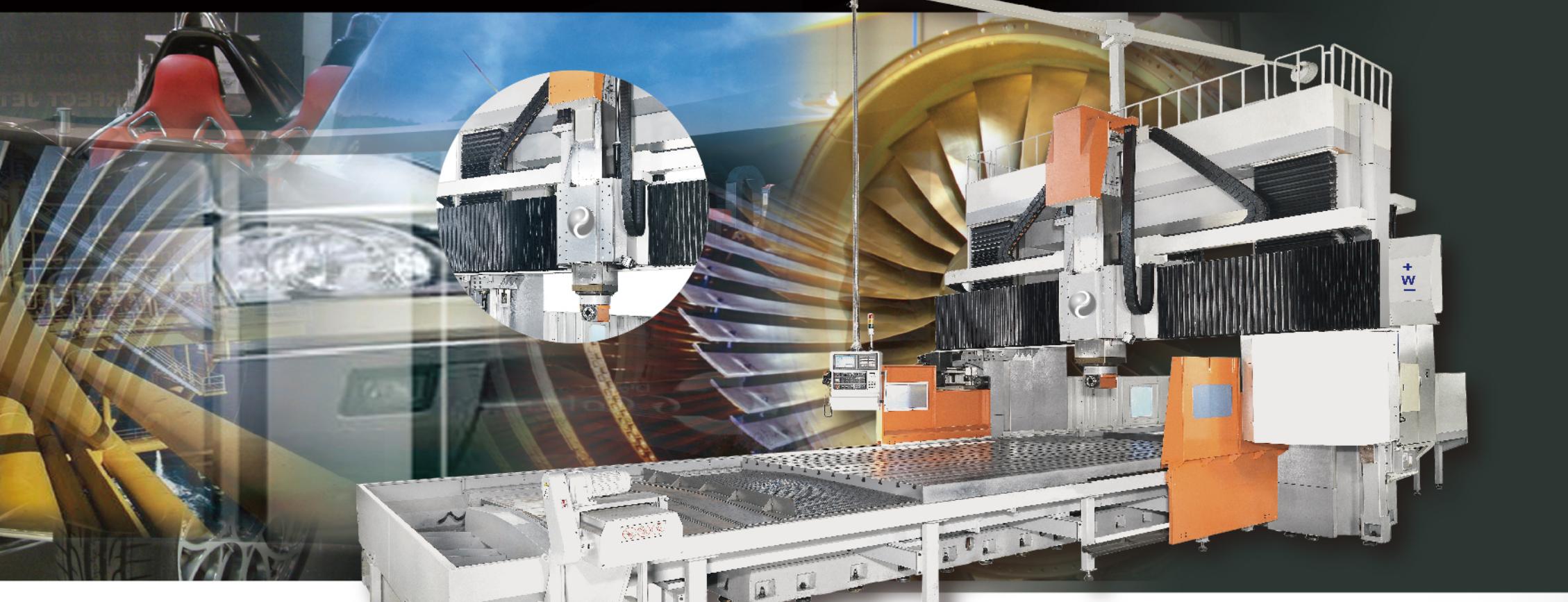
We have sold our machines to different areas in the world and earned a good reputation including



Geographic Location



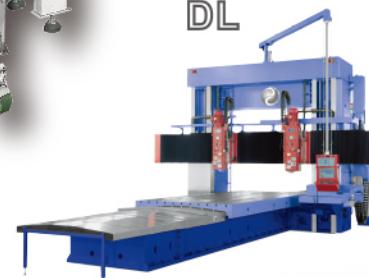
CLEAN ENERGY IS THE ONLY WAY TO PRESERVE EARTH LET US WORK TOGETHER



DS



DL



DK



DV





成本節省，效益提高

橫樑自由升降龍門銑床，能合乎加工物件高低的變化而任意移動W軸適當高度，提高工作效率，降低生產成本，加工範圍更廣更多元、更合乎經濟效益。

超強切削性能

橫樑能更有效的接近加工物件，使主軸與橫樑更貼合減少加工主軸之延伸，發揮高鋼性切削能力、速率提高、降低刀具損耗。

功能多元性

配合刀庫使用W軸可任何高度位置靜止時更換刀具與周邊配備，刀具數量更可依客戶需求安裝。

超強結構

橫樑與立柱採用液壓鎖固強化門型整體結構，橫樑與立柱緊密貼合，鋼性超強，精度穩定。

Characteristic of Crossrail upon-down

The crossrail (W axis) could move upon the height of working piece, to increase the efficiency of machining and save the production cost and enlarge the production range.

Super machining ability

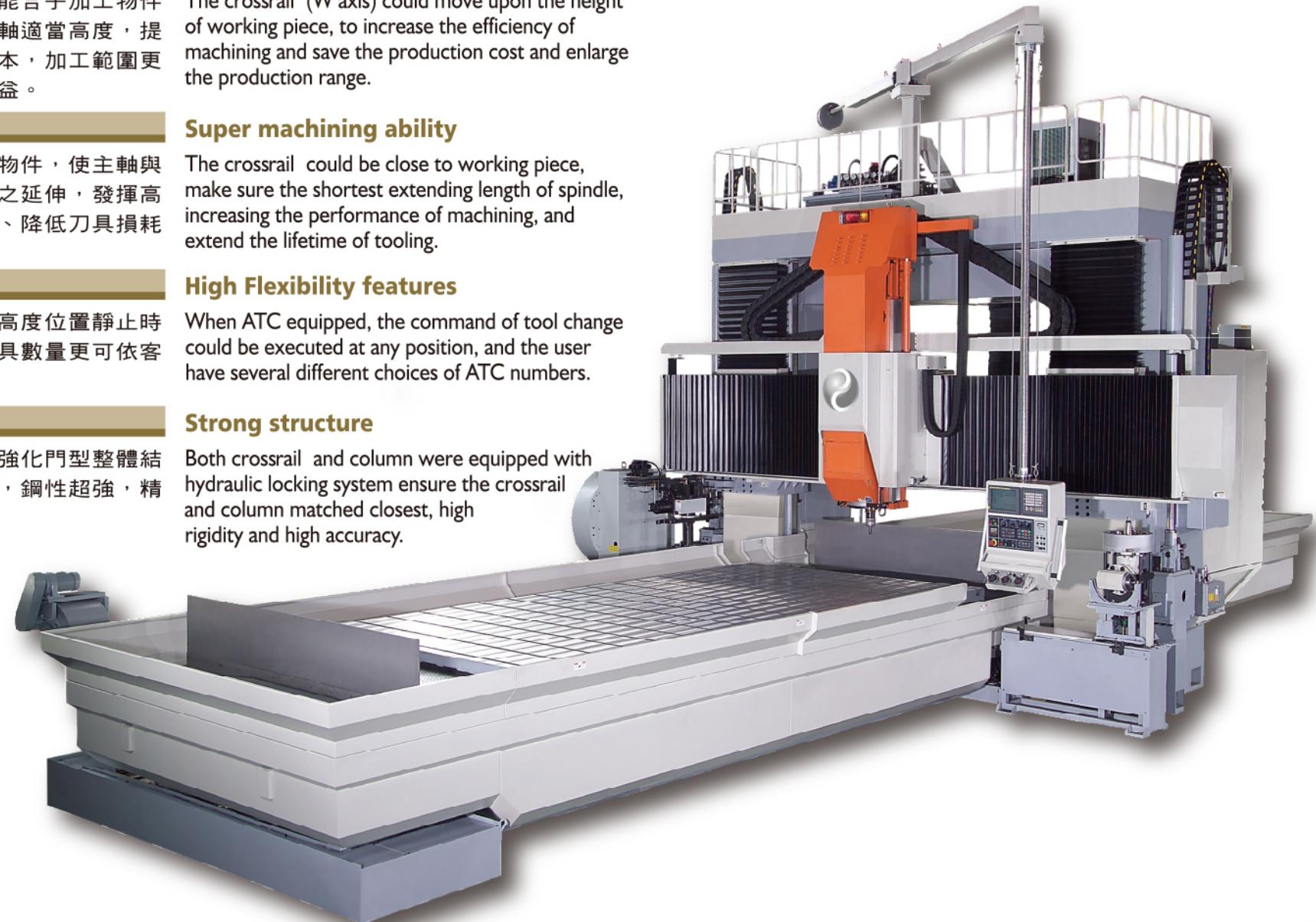
The crossrail could be close to working piece, make sure the shortest extending length of spindle, increasing the performance of machining, and extend the lifetime of tooling.

High Flexibility features

When ATC equipped, the command of tool change could be executed at any position, and the user have several different choices of ATC numbers.

Strong structure

Both crossrail and column were equipped with hydraulic locking system ensure the crossrail and column matched closest, high rigidity and high accuracy.



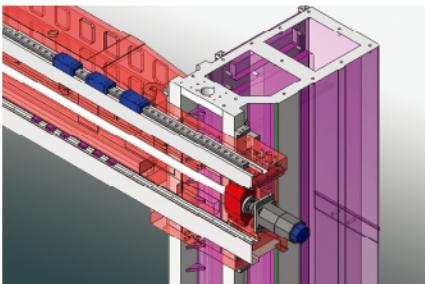
龍門 CNC Double Column Machining Center 動樑綜合加工機 Crossrail Movable Type

Y 軸軌道特性

Y 軸軌道組裝使用雙軌平行式，搭配滾柱與平面滑塊組裝，線軌能保持高速運行靈活性與直線運動，而平面滑塊能高荷重使切削時能產生更高抗力並能保持滑座與橫樑緊密貼合度與移動順暢。

Y axis

Parallel slide ways designed for Y axis, accompanying with both roller and flat type tracker. The linear guide ways keep the sensibility of high-speed moving, and flat type tracker offers higher loading capacity.



控制箱

控制箱外型無菱角設計符合安全可避免碰撞受傷，面板控制鈕為單一元件損壞時可單獨替換，夜間操作有背光顯示功能標示清楚不模糊。

Controller cabinet

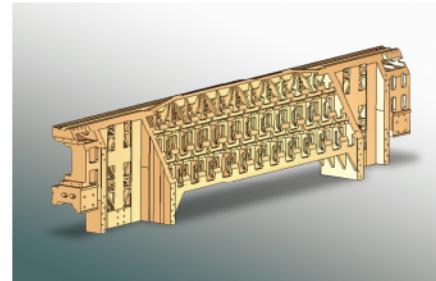
No-shape design cabinet of controller to avoid any accident during operation. Single-unit controlling button could be replaced separately when it was damaged. Background light makes sure the correct operation under the dark operation environment.

橫樑結構特性

橫樑為一體鑄造成型，結構設計採用高鋼性前段交叉肋骨後段箱型結構體，平均分配橫樑背部，外型為橋樑式拱型設計能有效支撑垂直重力與橫向抗力並再切削時發揮最佳剛性。

Crossrail

One-piece iron-casting crossrail, high rigidity structure of Crossing Rib designed of front part and Box type design for rear part. Accompanying bridge type outline, it could support the vertical force of gravity and horizontal resistance, to make sure the best rigidity in machining process.



控制吊桿(選購)

控制箱可依操作時加工工件高低將控制箱、前後、上下、左右移位以達操作者能直接水平目視也可以最短距離控制機器。

Pendant arm of controller cabinet (Optional)

Friendly design of pendant arm. The cabinet of controller could be moved forward-backward, up-down, right-left, to make sure the operator could operate the machine in the best position.



模具加工特性：

粗胚加工：切削量大速度快，高深度加工穩定共振量低。

細胚加工：表面精細平順，曲線圓角不失真，分割線精準無段差。

Characteristic of mold machining Rough molding machining :

Large cutting capacity, high speed, stabilized and lower vibration

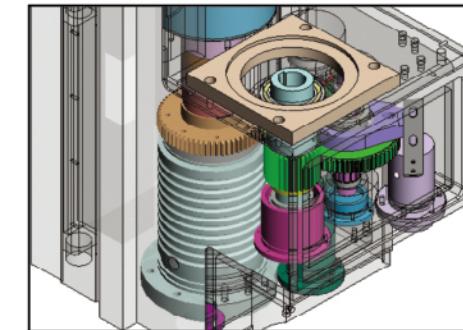
Finished molding machining :

Excellent surface, minimized error of curve / roundness, without segment mark.



主軸齒箱

1. 主軸頭部採用四方型高鋼性設計，方型結構體， $440 \times 440\text{mm}$ ，強度足且不易干涉加工物，滑軌設計階梯型包覆設計主軸中心更接近橫樑切削穩定。
2. 齒輪箱體與主軸主體採一體加工完成，切削扭力之傳導距離短輸出力強切削時抗力穩定，長時間運轉順暢噪音低。

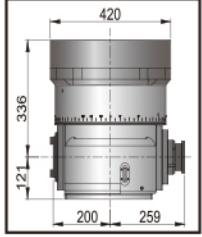
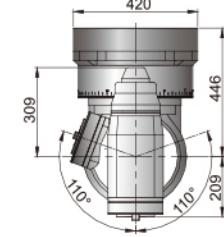
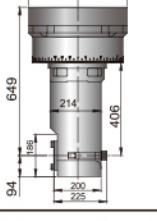
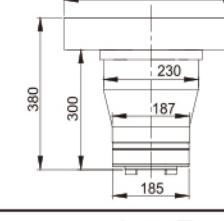
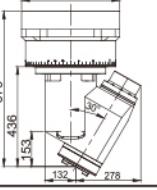
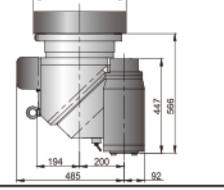
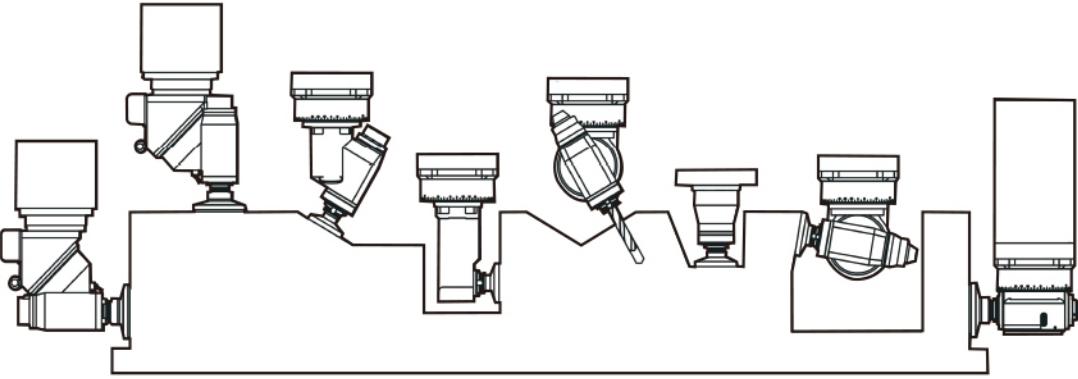


Gear box of spindle

1. Square type design, $440 * 440\text{ mm dimension}$, high rigid structure, minimized the possibility of interference with working piece. Ladder type slide-way make the spindle center most close to the crossrail , increasing the stabilization of machining.

2. Gear box and spindle housing is one-piece iron casting. The short transmission of cutting twist, large output power, stable resistace in large cutting, offer the best machining performance and lowest noise.

Spindle Head Attachment

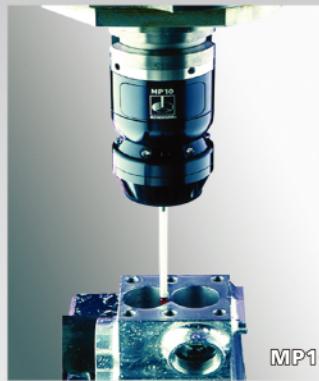
90 degrees head	Specifications	Data	Photo	Swining head	Specifications	Data	Photo
	Auto indexing-5 Face C axis Min indexing 5 Degree Spindle speed 3000 rpm Maximum tool diameter Ø 125 mm Maximum tool length 300 mm Maximum tool weight 18 kg Horizontal spindle Torque 600 Nm Horizontal clamping force 1600 kgf Auto angular head changer- (Optional) Horizontal Auto Tool changer- (Optional)				Auto or Manual Clamping B axis Auto Min indexing 5 Degree C axis Auto Min indexing 5 Degree Taper of spindle nose BT 50 Spindle speed speed 3000 rpm Maximum tool diameter Ø 125 mm Maximum tool length 300 mm Maximum tool weight 18 kg Swivel angle (B Axis) + - 110° Rotate angle (C Axis) -90~180° Tool clamping force 1500 kgf Manual Tool change		
Extension 90 degrees head	Specifications	Data		Extension head	Specifications	Data	
	Auto or Manual clamping Milling head speed 3000 rpm C axis indexing 5 Degree Maximum tool diameter Ø 125 mm Maximum tool length 300 / 500 mm Maximum tool weight 18 kg Tool clamp M24 bolt				Taper of spindle nose BT 50 Spindle speed speed 3000 rpm Maximum tool diameter Ø 125 mm Maximum tool length 150 mm Maximum tool weight 15 kg Tool Clamping force 1400 kgf Spindle Length 300 / 500mm Tool Manual Clamping or Auto		
30 degrees head	Specifications	Data		Auto Type Universal head	Photo		
	Auto or Manual Clamping Milling head speed 3000 rpm C axis min indexing 5 Degree Tool Clamping force 1500 kgf Maximum tool diameter Ø 125 mm Maximum tool length 300 mm Maximum tool weight 15 kg Manual tool change Lubrication grease						
							
Specifications Data Milling head can not be changed A · C axis indexing 5 Degree C axis indexing -90° ~ +270 ° A axis indexing 0° ~ 180° Taper of spindle nose BT 50 Spindle servo motor 22/26(30/35)kW Spindle speed speed 3000 rpm Gear Lubrication Oil mist Oil pressure 50 kg/cm² Maximum tool diameter Ø 125 mm Maximum tool length 300 mm Maximum tool weight 18 kg Spindle torque 800 Nm Auto indexing Incoder Clamping force 2200 kgf Vertical tool change 0 Degree Fixed degree cutting Coolant thru spindle (C · T · S) (Optional)							

●本規格僅供參考，如需選購附件，以設計圖及契約為準。The present specifications for reference only, such as the need to purchase, to design and the contract shall prevail.

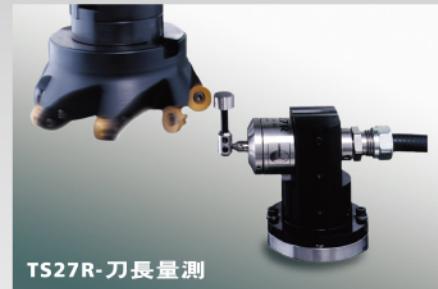
龍門 CNC Double Column Machining Center

動樑綜合加工機 Crossrail Movable Type

選購附件 OPTIONAL SPECIFICATION



MP10-工件量測



TS27R-刀長量測



外罩钣金
Full-Closed Splash Guard



刀庫專利號碼
Patents M304395

刀庫系統 Tool Magazine Capacity



BT50-24DV

BT50-24 支刀

Specification
Model No.: BT50-20,24DV
Power Supply of Magazine: Electric
Power Supply of ATC: Electric
Max. Tool Weight: 15 kgs
Max. Tool Length: 350 mm
Max. Tool Dia.(All pockets full): Ø110,200/mm

BT50-32 支刀

Specification
Model No.: BT50-32,40CV Power Supply of Magazine: Electric
Power Supply of ATC: Electric
Max. Tool Weight: 18 kgs
Max. Tool Length: 350 mm
Max. Tool Dia.(All pockets full): Ø125/250 mm

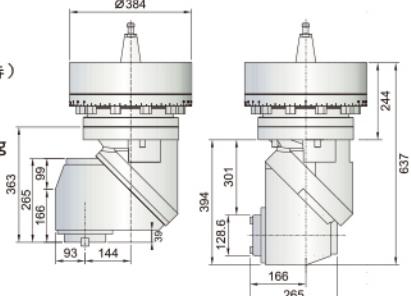


BT50-32CV



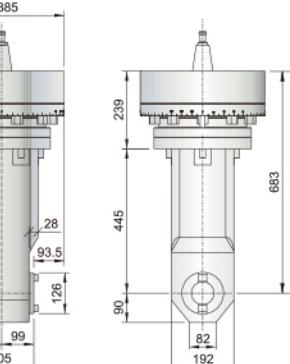
萬向銑頭

(曲齒定位，油壓夾持)
MULTIANGULAR MILLING HEAD
(Conical Teeth Positioning Hydraulic Tool Release)
最大轉速
Speed:1200RPM
BT50



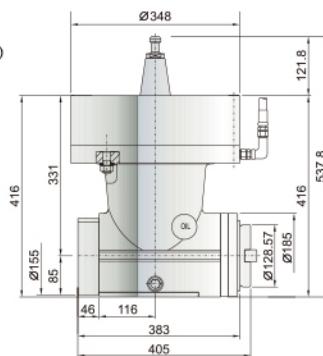
90度深搪銑頭

(曲齒定位，油壓夾持)
ANGULAR HEAD
(Conical Teeth Positioning Hydraulic Tool Release)
最大轉速
Speed:800RPM
BT50



90度銑頭

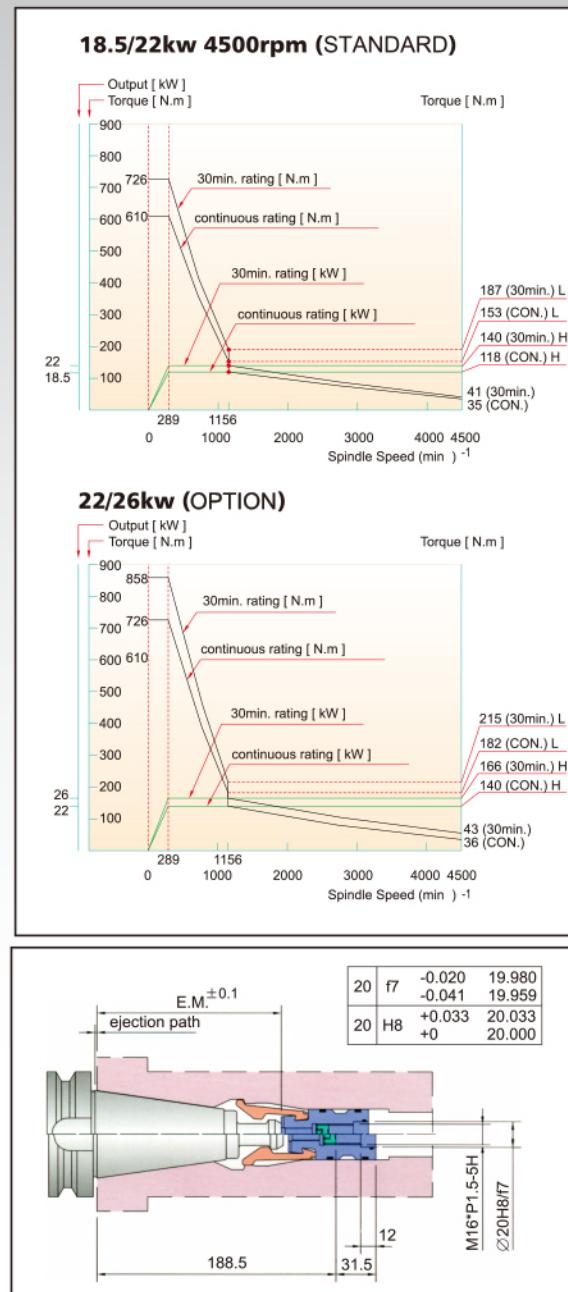
(曲齒定位，油壓夾持)
ANGULAR HEAD
(Conical Teeth Positioning Hydraulic Tool Release)
最大轉速
Speed:2000RPM
BT50





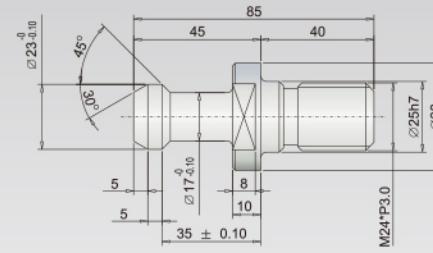
Spanner Code	A	B	C	D
E.M. (mm)	134.6	126	145.75	145.75
Ejection path (mm)	1	1	1	1
Max pull force (N)	25,000	25,000	25,000	25,000
Max Stroke (mm)	6	6	6	6
medium transfer	axial transfer			

Tool Standard	Code
DIN 69871/69872 ISO 7388/1/1 Type A	A
ANSI B 5.50-78 ISO 7388/1/2 Type B	B
MAS 403-1982 BT/PT 2 (30°)	C
MAS 403-1982 BT/PT 1 (45°)	D

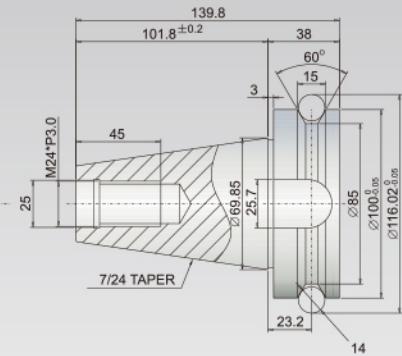


刀把尺寸 TOOL SHANK APPLICABLE

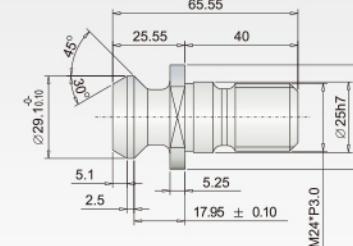
MAS 403-P50T-I



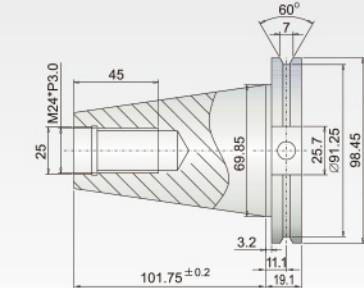
BT-50



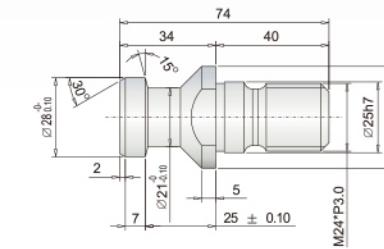
ANSI B5.50 CAT50
ISO 7388/2 Form B



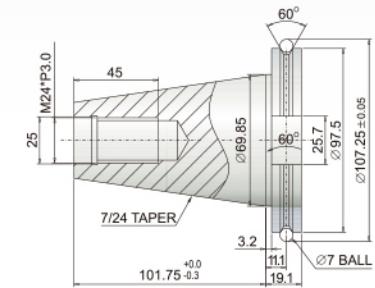
ISO-7388/2
CAT-50



選購 OPTIONAL
DIN 69872 Form A
ISO 7388/2 Form A

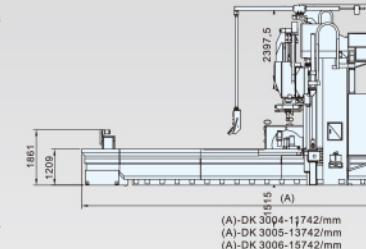
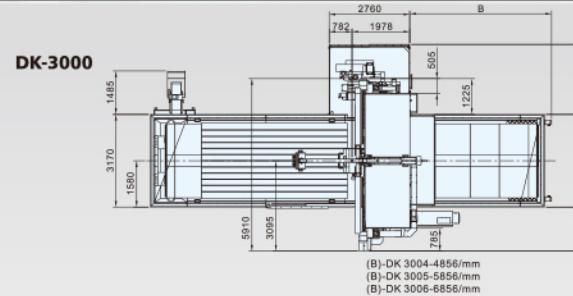
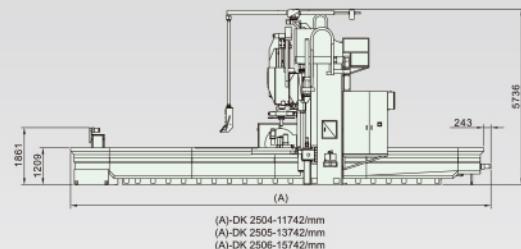
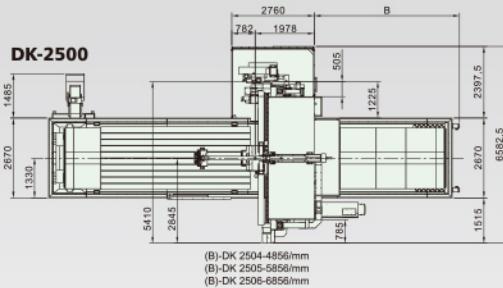


選購 OPTIONAL
DIN 69871



龍門 CNC Double Column Machining Center

動樑綜合加工機 Crossrail Movable Type

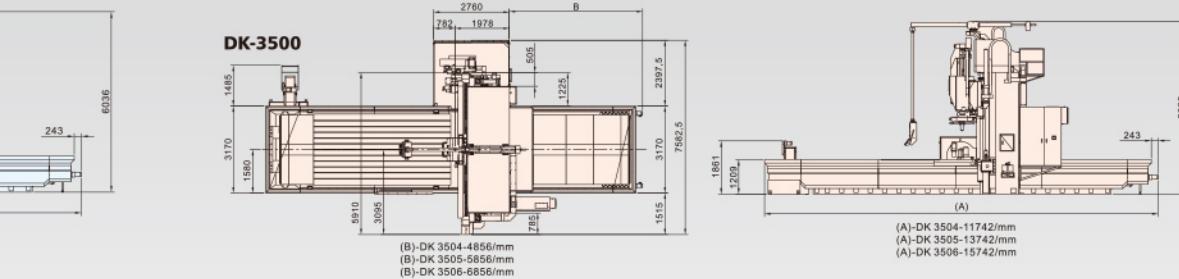


機器規格 Machine Specifications

說明/機械規格 Description/Model	單位 UNIT	DK-2504	DK-2505	DK-2506	DK-3004	DK-3005
X 軸行程 X-axis travel	mm	4150	5150	6150	4150	5150
Y 軸行程 Y-axis travel	mm	2800	2800	2800	3300	3300
Z 軸行程 Z-axis travel	mm	600	600 (800~1000 選購 Optional)	600	600	600 (800~1000 選購 Optional)
主軸鼻端至工作台面距離 Distance from spindle nose and to table	mm	400-1500	400-1500	400-1500	400-1800	400-1800
雙柱間距離 Distance between columns	mm	2600	2600	2600	3100	3100
工作台尺寸(長*寬) Work table size (L x W)	mm	4000 X 2100	5000 X 2100	6000 X 2100	4000 X 2550	5000 X 2550
工作台T槽尺寸 T slot size of worktable	mm		(寬Wide)22*(距Pitch)210*8			(寬Wide)22*(距Pitch)220*10
工作台最大載重量 Max.worktable load	kg	13000	15000	17000	17000	19000
主軸馬達(連續30分鐘) Spindle motor (Cont./30min)	HP		25/30 (35/30 選購 Optional)			30/25 (35/30 選購 Optional)
主軸轉速 Spindle speed	rpm		40-4500-齒輪齒箱 Gear Box			40-4500-齒輪齒箱 Gear Box
主軸轉速變換 Spindle speed variation			H/L、無段液壓變速			H/L、無段液壓變速
主軸內錐孔 Spindle taper			BT50 (ISO50)			BT50 (ISO50)
快速進給速率X、Y軸 Rapid traverse (X/Y axis)	mm/min	9000	9000-Box Way Y:10000	X:8000 Y:10000		X:8000-Box Way Y:9000
快速進給速率Z軸 Rapid traverse Z axis	mm/min		10000-Box Way			10000-Box Way
切削進給速度 Cutting feedrate	mm/min		I-5500			I-5500
橫樑升降動力 W-axis motor	HP		AC5			AC5
橫樑升降動力-NC系統 W-axis motor-for NC	KW		5 (選購 Optional-NC-System)			5 (選購 Optional-NC-System)
橫樑升降滾珠螺桿-NC系統 W-axis-for NC			Ø70P10(Optional-NC-System)			Ø80P10(選購 Optional-NC-Syste
橫樑升降速度 W-axis speed	mm/min		500			500
X、Y、Z 伺服馬達 FANUC-X.Y.Z.servo motor		α40, α30, α30	α40, α30, α30	α40, α30, α30	α40, α30, α30	α40, α30, α30
X、Y、Z 伺服馬達 MITSUBISHI-X.Y.Z.servo motor		HF703, 453, 453B	HF703, 453, 453B	HF903, 453, 453B	HF703, 453, 453B	HF903, 453, 453B
刀庫容量 ATC Tool magazine	pcs		(24、32、40、60、120 選購 Optional)			(24、32、40、60 選購 Optional)
最大刀具直徑(滿刀/鄰刀空) Maximum tool Dia (All pockets full)	mm		24pcs/Ø110, Ø200, 32pcs/Ø125, Ø250			24pcs/Ø110, Ø200, 32pcs/Ø125, Ø
最大刀具長度 Maximum tool length	mm		350			350
最大刀具重量 Maximum tool weight	kg		15kg / 18kg			15kg / 18kg
刀具選刀方式 Tool selection			任意刀號儲存系統 Random tool change system			任意刀號儲存系統 Random tool change
刀柄 Tool holder			BT50 (ISO50)			BT50 (ISO50)
拉力螺栓 Pull stud			MAS403P50T-1- (45°) DIN69872 (選購 Optional)			MAS 403P50T-1- (45°) DIN69872 (選購
換刀時間 Tool changing time	sec		8			8
需求電力 Electrical Power Supply			60KVA, AC220V, 3 phase, 60Hz			65KVA, AC220V, 3 phase, 60Hz
氣壓需求 Air Source	kg/cm ²		5 以上 above			5 以上 above
液壓油箱容量 Hydraulic oil capacity	Liter		300、(5hp · pump)			300、(5hp · pump)
潤滑油箱容量 Lubricator oil capacity	Liter		20			20
切削液箱容量 Cutting fluid box capacity	Liter		1000			1200
佔地面積 Floor space	長度 Length/mm	11742	13742	15742	11742	13742
寬度X高度 Machine W*H(max~mine)	mm		6582X5736/5236、(最高highest/最低lowest)			7082X6536/6036、(最高highest/最低lowest)
機器淨重 Machine net weight	kg	46600	51800	57000	55000	61000



PERFECT JET



DK-3006	DK-3504	DK-3505	DK-3506
6150	4150	5150	6150
3300	3800	3800	3800
600	600	600	600
400-1800	400-1800	400-1800	400-1800
3100	3600	3600	3600
6000 X 2550	4000 X 2750	5000 X 2750	6000 X 2750
		(寬Wide)22*(距Pitch)220*10	
21000	18000	20000	22000
		25/30 (35/30 選購 Optional)	
		40-4500-齒輪齒箱 Gear Box	
		H/L、無段液壓變速	
		BT50 (ISO50)	
X:8000 Y:9000		X:8000-Box Way Y:9000	X:7000 Y:9000
10000		10000-Box Way	10000
		I-5500	
		AC5	
		5(選購 Optional-NC-System)	
		Ø80P10 (選購 Optional-NC-System)	
		500	
ø50, ø30, ø30	ø40, ø30, ø30	ø50, ø30, ø30	ø50, ø30, ø30
HF903, 453, 453B	HF903, 453, 453B	HF903, 453, 453B	HF903, 453, 453B
(24-32-40-60 選購 Optional)			
24pcs/Ø110, Ø200, 32pcs/Ø125, Ø250			
350			
15kg	/	18kg	
任意刀號儲存系統 Random tool change system			
BT50 (ISO50)			
MAS403P50T-I、(45°) DIN69872 (選購 Optional)			
8			
75KVA, AC220V, 3 phase, 60Hz			
5 以上 above			
300、(5hp · pump)			
20			
1300			
15742	117420	13742	15742
		7582X6536/6036、(最高highest/最低lowest)	
67000	79000	85000	91000

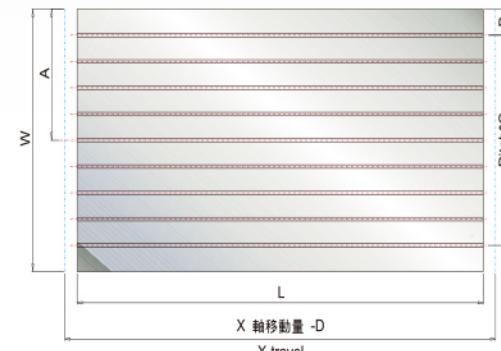
標準附件 Standard accessories

1. 主軸溫控系統
- 2 . Z 軸潤滑監測裝置
3. 主軸H\L變速齒輪箱
- 4 . 三軸防撞安全機構
- 5 . X 軸伸縮鋁金護蓋
- 6 . 中央集中潤滑系統
- 7 . 切削液系統(含泵及儲存箱)
- 8 . 冷卻出水噴頭
- 9 . Y 軸折疊式伸縮罩
10. 腳踏鬆刀開關
11. 可移式手輪
12. 工作燈
13. 程式結束及警示燈
- 14.RS-232接口
- 15.螺旋排削槽
- 16.調整用手工具一套
- 17.技術手冊一套

選購附件 Optional accessories

- 1 . 主軸轉速 6000(Gear Box)~ (8000~10000rpm-DD)
- 2 . Heidenhain數字尺全閉迴路
- 3 . 刀庫容量:24、32、40、60、120刀
- 4 . 手動式90度銑頭(半自動或全自動)
- 5 . 90度銑頭風壓鎖刀機
- 6 . 手動轉角萬向銑頭(半自動或全自動)
- 7 . 排屑車
- 8 . 主軸中央出水系統
- 9 . 自動刀長量測系統
10. 自動工作件測量系統
- 11.NC第四軸旋轉工作台
12. 橫樑升降W軸NC系統
- 13.Z軸行程800~1200mm
- 14.X軸鋼軌滾柱系統

床台尺寸 Table size



T槽尺寸
Tslot size

	W	L	A	B	C	D	E
DK-2503	3000						3300
DK-2504	2100	4000	1050	210	210*8	4300	
DK-2505							5300
DK-2506							6300
DK-3004		4000					4300
DK-3005	2550	5000	1275	175	220*10	5300	
DK-3006							6300
DK-3504		4000					4300
DK-3505	2750	5000	1375	275	220*10	5300	200
DK-3506							6300

DK, DS 床台尺寸相同
Tables are no differences between model DK and DS.

龍門 CNC Double Column Machining Center

動樑綜合加工機 Crossrail Movable Type

門型穩定 不易變形

橫樑固定龍門工中心機，將橫樑採鎖固方式組裝門型架構強度足，當長時間使用時垂直及平行度均能保持相當精確。

靈活性

當主軸高速移動時由於重心低框架穩定不易產左右慣性搖擺而整體貼合緊密度相當密合，高鋼性之強度。

維修單純

精度公差保持度久而調機快速。

橫樑穩定

橫樑鎖固強化門型整體結構，橫樑水平穩定減少自然彎曲下垂能有效支撑主軸重量

拆裝快速

橫樑為一體鑄造成型，結構設計採用高鋼性前段交叉肋骨後段箱型結構體，平均分配橫樑背部，外型為橋樑式拱型設計能有效支撑垂直重力與橫向抗力並再切削時發揮最佳剛性。

Stabilized structure

Fixed type crossrail with strong structure, keeping the excellent verticality and parallelism even though long period operation.

Active design

Lower position of center of gravity plus stabilized structure columns avoid the vibration when spindle moving with high speed.

Simplified maintenance

High rigidity and stabilized structure keep machine's accuracy for longest period, and simplified the maintenance.

Stabilized Crossrail

Stabilized crossrail offers the best parallel stabilization to support the weight of spindle and headstock.

Fast assembling / disassembling



Y軸軌道複合式系統設計

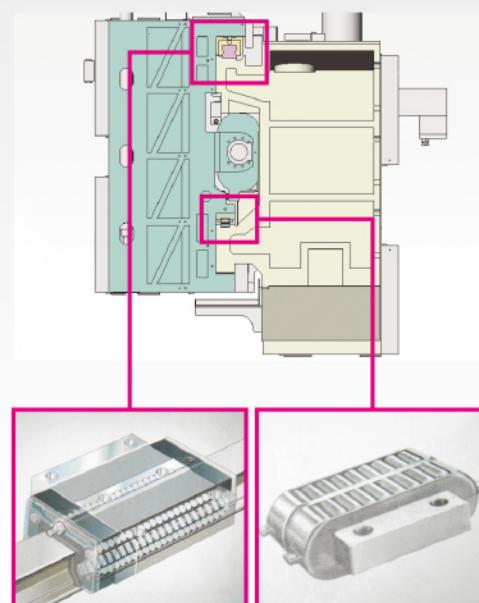
機器Y軸左右採用上方水平軌(滾柱型線性滑軌 Roller Way)與下方水平軌(滾柱平板滑塊 Roller Way)複合式組裝均能使機器再移動時速度加快，而正面方形硬軌與滑座緊密貼合衝擊時切削更加穩定，精度保持長久。

Combination system of Y axis sliding

Roller rail way has been equipped for upper slide and roller way was used for bottom slide, combination system offers faster speed of moving. And box way matches with tracker closely to make sure the stabilization of machining and keep the accuracy.

橫樑軌道系統

DK-DS Cross Rail Way Systems



滾柱線軌
Roller Rail Way

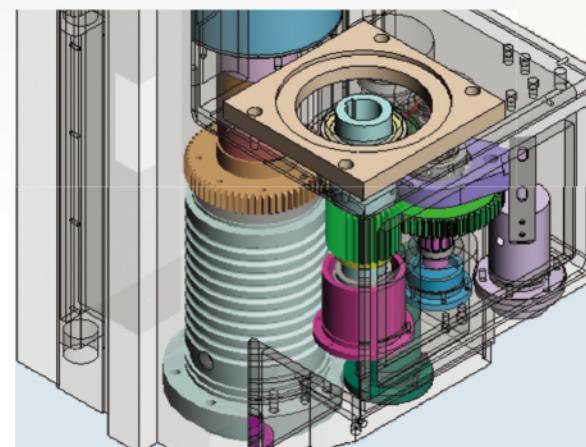
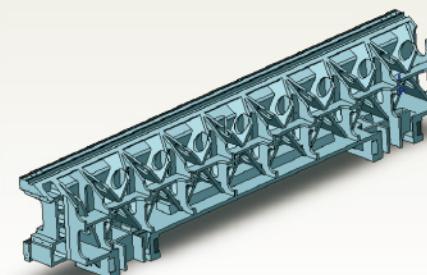
平板滾柱滑塊
Flat Slider

橫樑結構特性

橫樑為一體鑄造成型，結構設計採用高鋼性前段交叉肋骨後段箱型結構體，平均分配橫樑背部，外型為橋樑式拱型設計能有效支撐垂直重力與橫向抗力並再切削時發揮最佳剛性。

Crossrail

One-piece Crossrail , high rigidity structure design Crossing Rib design for front part and Box type design for rear part. Accompanying bridge type outline, it could support the vertical force of gravity and horizontal resistance, to make sure the best rigidity in machining process.

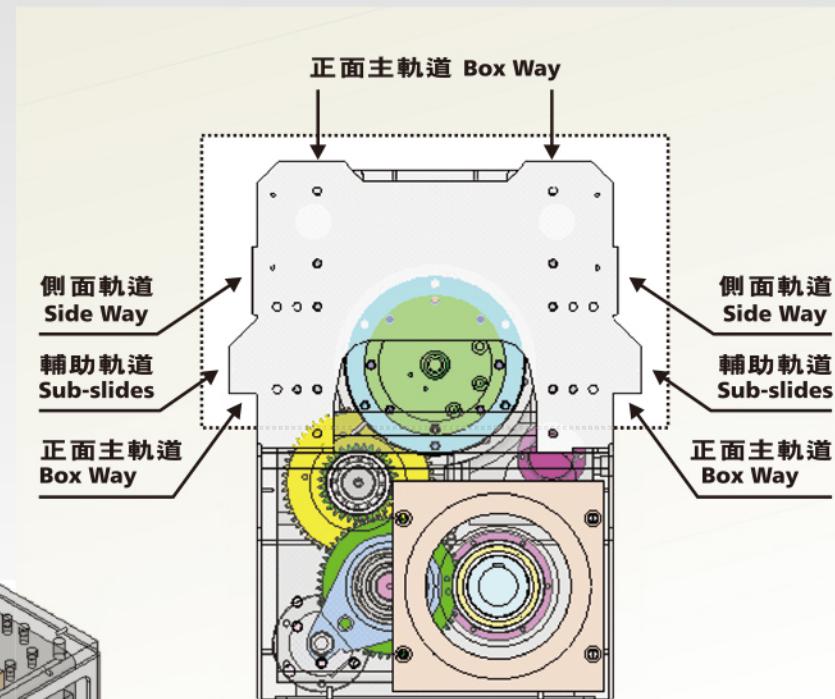


銑削頭示意圖

主軸軌道包覆面，採外殼全包覆設計當主軸加工延伸時能全支撐發揮剛性佳，切削力強之特性並提高穩定性。

Milling Head

Full-covered sliding, supporting the excellent cutting performance and best rigidity when machining, and increasing the stabilization.



主軸齒箱

1. 主軸頭部採用四方型高鋼性設計，方形結構體, 440X440mm，強度足且不易干涉加工物，滑軌設計階梯型包覆設計主軸中心更接近橫樑切削穩定。
2. 齒輪箱體與主軸主體採一體加工完成，切削扭力之傳導距離短輸出力強切削時抗力穩定，長時間運轉順暢噪音低。

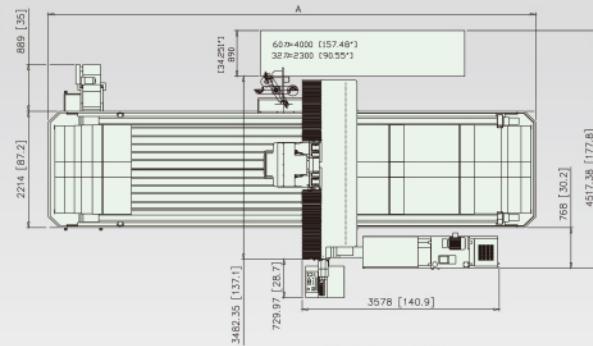
Gear box of spindle

1. Square type design, 440 * 440 mm dimension, high rigid structure, minimized the possibility of interference with working piece. Ladder type slide-way make the spindle center most close to the crossrail , increasing the stabilization of machining.
2. Gear box and Spindle housing is one-piece die casting, offer the best machining performance and lowest noise.

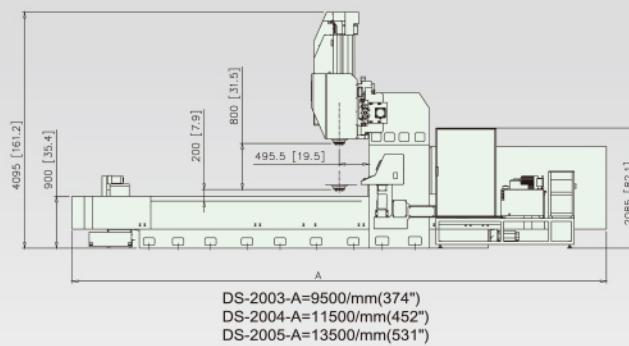
龍門 CNC Double Column Machining Center

動樑綜合加工機 Crossrail Movable Type

DS-2000



DS-2500



標準附件

- 主軸溫控系統
- Z 軸潤滑監測裝置
- 主軸H\L變速齒輪箱
- 三軸防撞安全機構
- X 軸伸縮鈑金護蓋
- 中央集中潤滑系統
- 切削液系統(含泵及儲存箱)
- 冷卻出水噴頭
- Y 軸折疊式伸縮罩
- 腳踏鬆刀開關
- 可移出式手輪
- 工作燈
- 程式結束及警示燈
- RS-232接口
- 螺旋排削槽
- 調整用手工具一套
- 技術手冊一套

選購附件

- 全罩式鈑金護罩
- 主軸轉速6000rpm(8000~10000)
- Heidenhain數字尺全閉迴路
- 刀庫容量:40、60刀
- 手動式90度銑頭
曲齒自動定位(半自動或全自動)
- 90度銑頭風壓鎖刀機
- 手動轉角萬向銑頭(半自動或全自動)
- 排屑收集車
- 主軸中央出水系統
- 自動刀長量測系統
- 自動工件測量系統
- NC第四軸旋轉工作台
- Z軸行程1200~1500mm

機器規格 Machine Specifications

說明/機械規格 Description/Model	單位 UNIT	DS-2004	DS-2005	DS-2006
X 軸行程 X-axis travel	mm	4150	5150	6150
Y 軸行程 Y-axis travel	mm	2300	2300	2300
Z 軸行程 Z-axis travel	mm	800	800	800
主軸鼻端至工作台面距離 Distance from spindle nose and to table	mm	200-1000	200-1000	200-1000
雙柱間距離 Distance between columns	mm	2100	2100	2100
工作台尺寸(長*寬) Work table size (L × W)	mm	4000 × 1700	5000 × 1700	6000 × 1700
工作台T槽尺寸 T slot size of worktable	mm		(寬Wide)22*(距Pitch)210*6	
工作台最大載重量 Max.worktable load	kg	10000	12000	14000
主軸馬達(連續30分鐘) Spindle motor (Cont./30min)	HP		30/25 (35/30 選購 Optional)	
主軸轉速 Spindle speed	rpm		40-4500(6000 選購 Optional) Gear box	
主軸轉速變換 Spindle speed variation			H/L、液壓變速	
主軸內錐孔 Spindle taper			BT50 (ISO50)	
快速進給速率X、Y軸 Rapid traverse (X/Y axis)	mm/min		10000-Box Way	X:8000 Y:10000
快速進給速率Z軸 Rapid traverse Z axis	mm/min		10000-Box Way	
切削進給速度 Cutting feedrate	mm/min		I-5500	
X、Y、Z 伺服馬達 FANUC-X.Y.Z.servo motor		α30, α30, α30	α30, α30, α30	α40, α30, α30
X、Y、Z 伺服馬達 MITSUBISHI-X.Y.Z.servo motor		HF453,453,453B	HF703,453,453B	HF703,453,453B
刀庫容量 ATC Tool magazine	pcs		32 (40-60 選購 Optional)	
最大刀具直徑(滿刀/鄰刀空) Maximum tool Dia (All pockets full)	mm		Ø125, Ø250	
最大刀具長度 Maximum tool length	mm		350	
最大刀具重量 Maximum tool weight	kg		18	
刀具選刀方式 Tool selection			任意刀號儲存系統 Random tool change system	
刀柄 Tool holder			BT50 (ISO50)	
拉力螺栓 Pull stud			MAS403P50T-1 (45°) DIN69872 (選購 Optional)	
換刀時間 Tool changing time	sec		4	
需求電力 Electrical Power Supply			55KVA, AC220V, 3相 phase, 60Hz	
氣壓需求 Air Source	kg/cm ²		5 以上 above	
液壓油箱容量 Hydraulic oil capability	Liter		250、(5hp · pump)	
潤滑油箱容量 Lubricator oil capability	Liter		20	
切削液箱容量 Cutting fluid box capacity	Liter		900	
佔地面積 Floor space	長度 Length/mm	11500	13500	15500
寬度X高度 Machine W*H(max~mine)	mm		4285×3295/4095、(最高highest/最低lowest)	
機器淨重 Machine net weight	kg	28500(約)	32000(約)	35500(約)

●本規格僅供參考，如須選購附件，以設計圖及契約為準。The present specifications for reference only, such as the need to purchase accessories, to design and the contract shall prevail.



PERFECT JET

DS-3000					
DS-2504	DS-2505	DS-2506	DS-3004	DS-3005	DS-3006
4150	5150	6150	4150	5150	6150
2800	2800	2800	3300	3300	3300
800	800	800	800	800	800
200-1000	200-1000	200-1000	200-1000	200-1000	200-1000
2600	2600	2600	3100	3100	3100
5000 X 2100 (寬Wide)22*(距Pitch)210*8	5000 X 2100	6000 X 2100	4000 X 2550	5000 X 2550 (寬Wide)22*(距Pitch)220*10	6000 X 2550
13000 25/30 (30/35 選購 Optional) 40-4500(6000 選購 Optional) H/L、液壓變速 BT50 (ISO50)	15000 17000	18000	20000	22000	
X:10000 Y:10000 10000-Box Way I-5500	X:8000 Y:10000	X:8000 Y:10000	X:8000 Y:10000	X:8000 Y:10000	
α30, α30 HF703,453,453B 32 (40~60 選購 Optional) Ø125, Ø250 350 18 任意刀號儲存系統 Random tool change system BT50 (ISO50) MAS403P50T-I、(45°) DIN69872 (選購 Optional)	α40, α30, α30 HF703,453,453B 32 (40~60 選購 Optional) Ø125, Ø250 350 18 任意刀號儲存系統 Random tool change system BT50 (ISO50) MAS403P50T-I、(45°) DIN69872 (選購 Optional)	α40, α30, α30 HF703,453,453B	α40, α30, α30 HF703,453,453B	α40, α30, α30 HF903,453,453B 32 (40~60 選購 Optional)	α50, α30, α30 HF903,453,453B
60KVA, AC220V, 3相 phase, 60Hz 5 以上 above 250、(5hp · pump) 20 1000 11500 5600X3295/4095、(最高highest/最低lowest) 4100(約)			65KVA, AC220V, 3相 phase, 60Hz 5 以上 above 250、(5hp · pump) 20 1000 11500 6100X3295/4095、(最高highest/最低lowest) 4100(約)		13500 13500 13500 15500 52500(約)
38000(約)	41000(約)	40500(約)	46500(約)	52500(約)	

◎另有機器規格 Are available DS-2507, DS-2508, DS-2509

◎另有機器規格 Are available DS-3507, DS-3508, DS-3509

Standard accessories

1. Spindle temperature control system
2. Spindle lubrication monitoring device
3. Spindle H\L gear box
4. Protection mechanism for three axes
5. Galvanized telescopic cover for X axis
6. Centralized automatic lubricating system
7. Cutting fluid system
8. Cooling water nozzle
9. Y axis slideway dust cover.
10. Foot-paddle automatic tool release switch
11. MPG
12. Working lamp
13. Program ending & warning light
14. RS-232 Interface
15. Screw type chip conveyor
16. Adjustment-use hand tool (one set)
17. Technique manual

Optional accessories

1. Full-closed splash guard
2. Spindle speed 6000rpm(8000~10000-DD)
3. Heidenhain Linear Scale
4. Tool magazine capacity: 40, 60 tools
5. Manual type Angular head (Semi Auto/Full Auto)
6. Angular head with Air power drawbar
7. Manual type universal milling head(Semi Auto/Full Auto)
8. Chip cart
9. CTS system
10. Auto- tool length measurement system
11. Auto-workpiece measurement system
12. Rotary table
- 13.Z axis Travel 1200~1500

DV-VERTICAL LATHE

INNOVATION / TECHNOLOGY / SERVICE



DV-3000T
DV-3000MTD

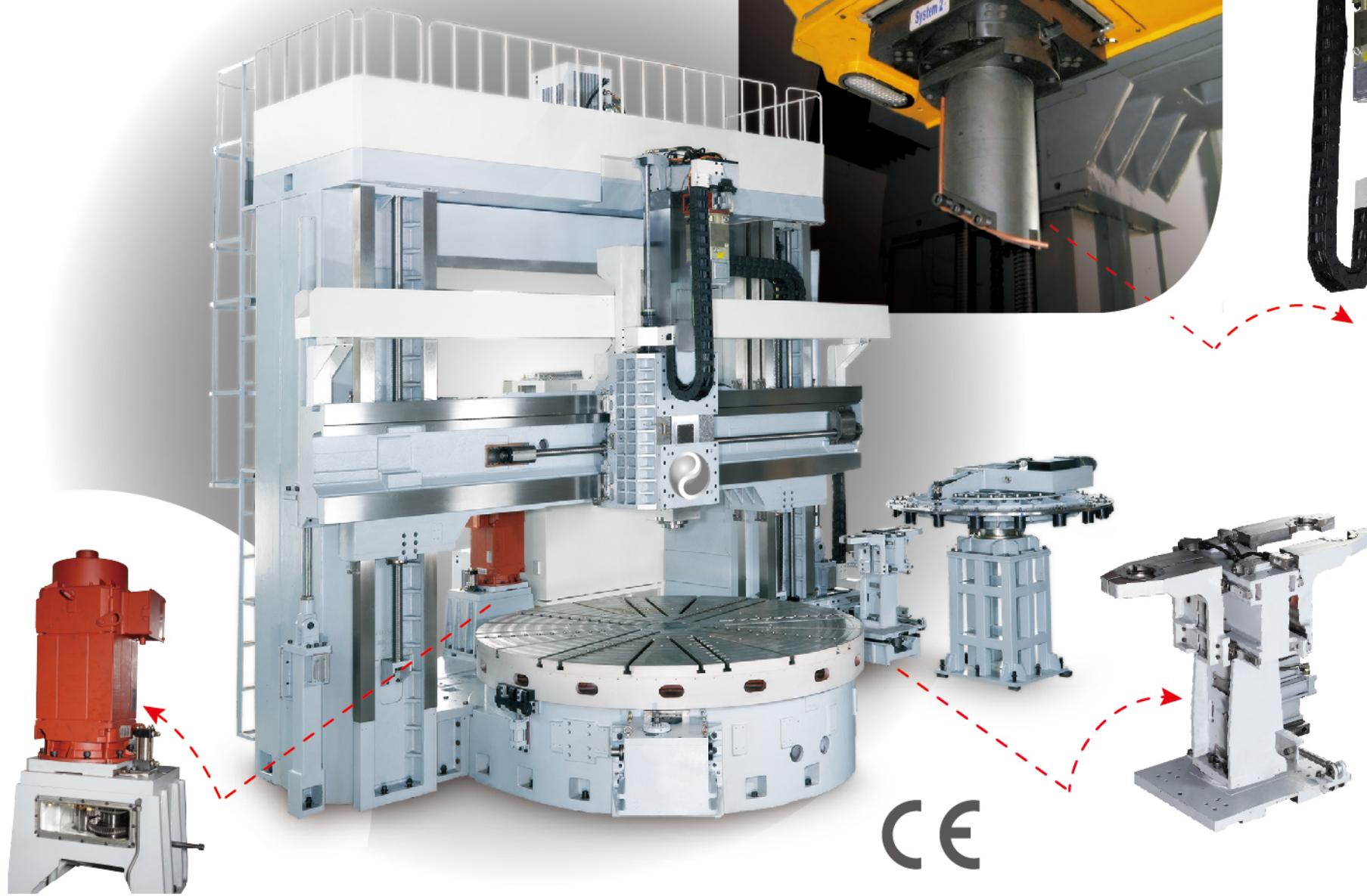
DV-3000MT
DV-3000MTB

DV-4000T
DV-3000MTD

DV-4000MT



PERFECT JET



CE

DV-VERTICAL LATHE

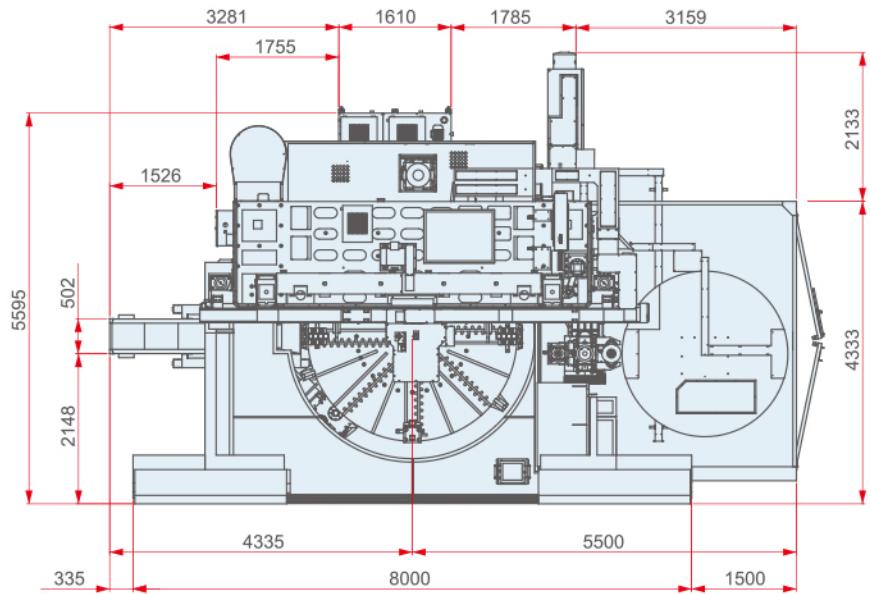


Vertical Lathe Machine Layout

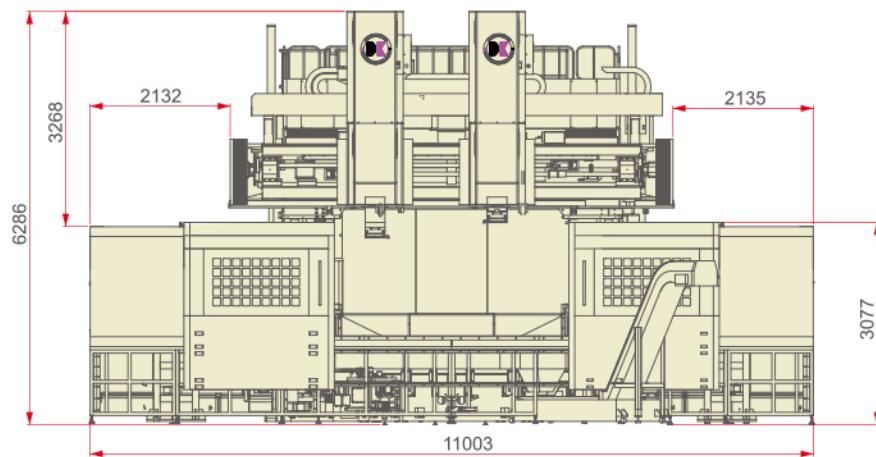
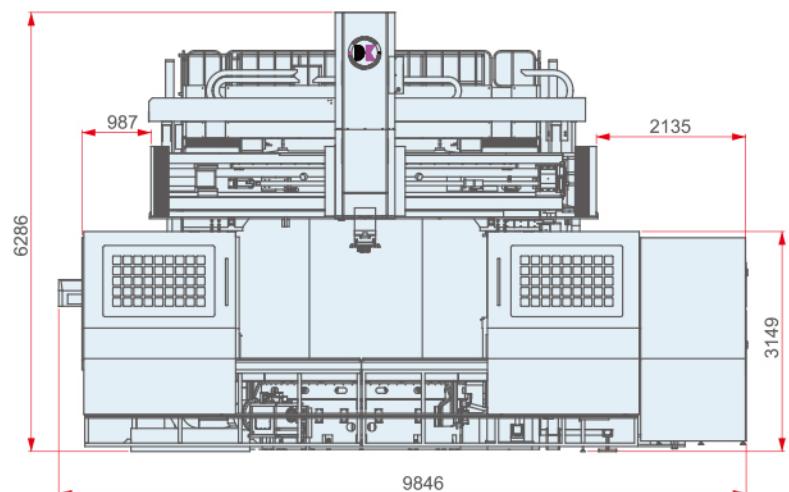
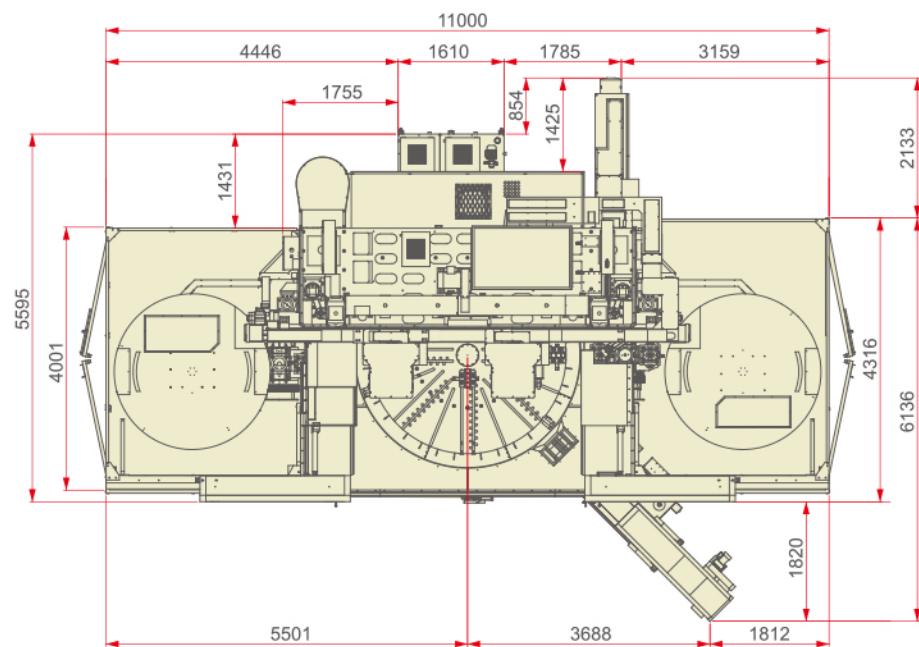


such as the need to purchase accessories to design and the contract shall prevail

DV-3000MT



DV-3000MTD

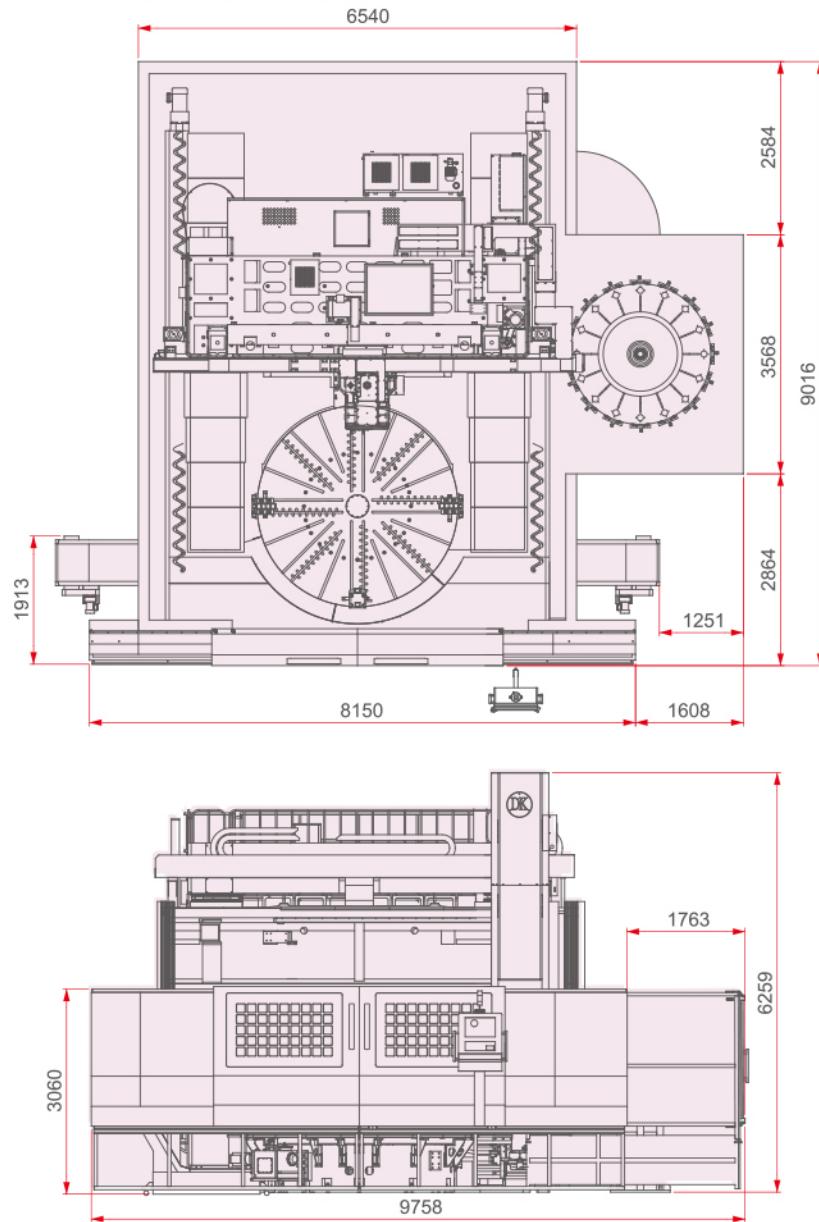


※The Present Specifications and photo for reference only

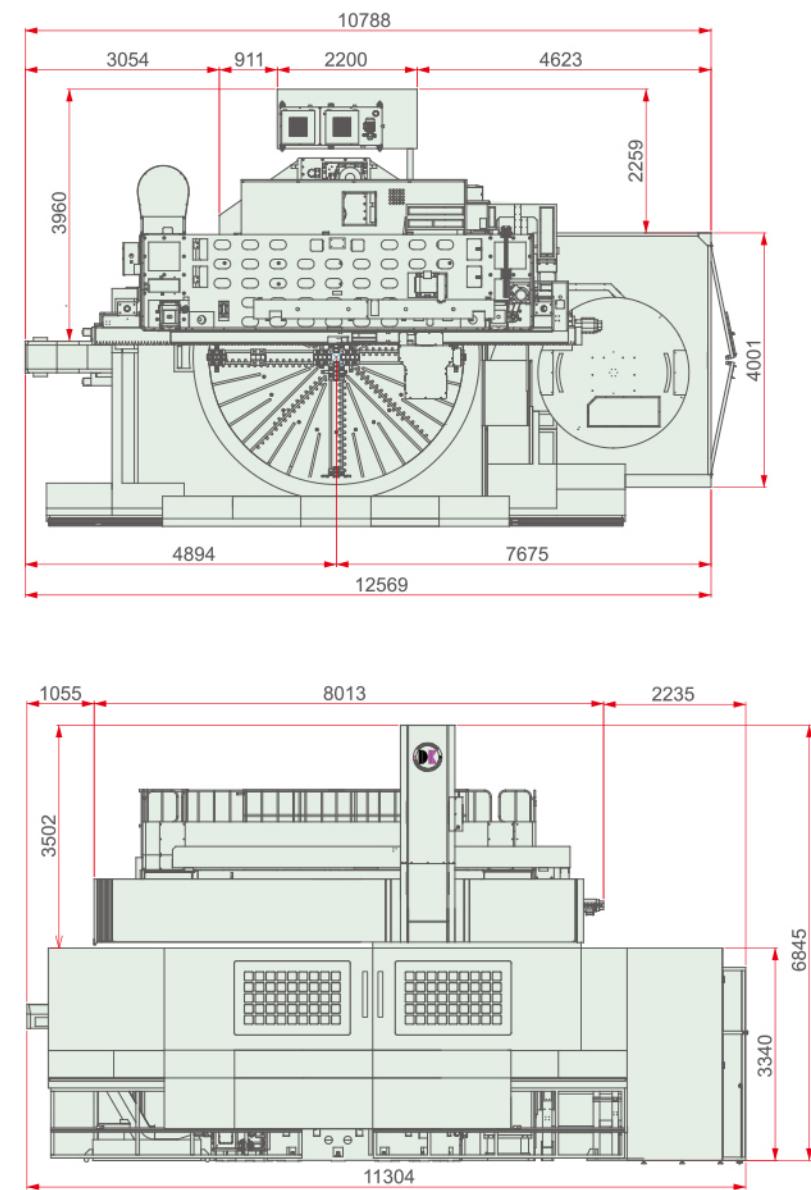
Vertical Lathe Machine Layout

such as the need to purchase accessories to design and the contract shall prevail

DV-3000MTB



DV-4000



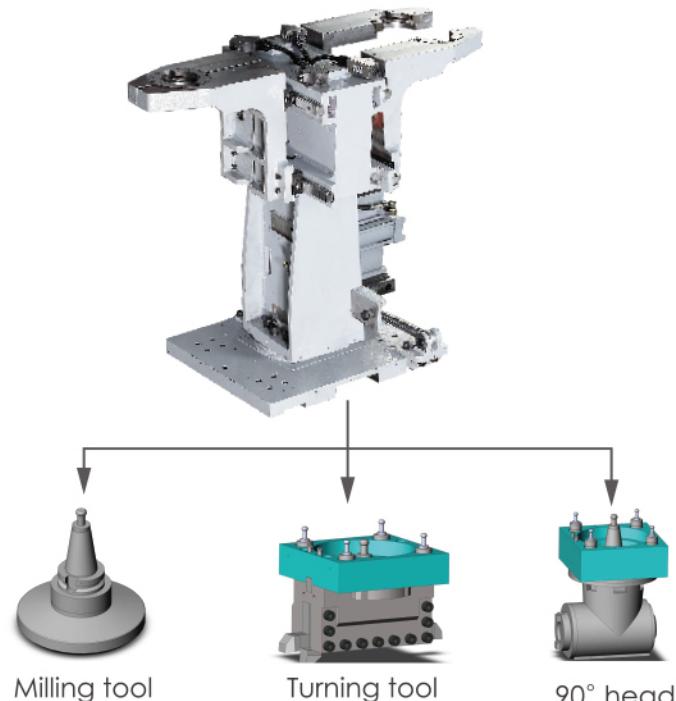
Spindle Boring Specification

Dimensions				Max. Speed	Dimension	Weight	Other Data							
A	d	D	T	n		G	N ₁ ; N ₂	J ₁	J ₂	B ₁	B ₂	r _s	R	
				mm	min ⁻¹		kg	mm						
DV3000	1270.0	1524.0	95.250	250	912-303	375.0	M16	1316.0	1486	47.6	47.6	5.0	7.0	
DV4000	1879.6	2197.1	101.600	106	912-310	756.0	M16	1940.0	2160	49.8	49.8	6.0	8.0	

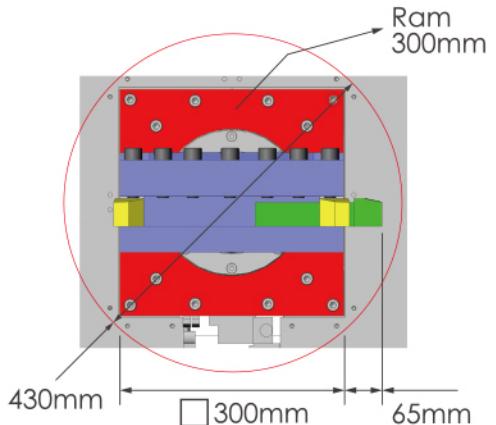
TOOL MAGAZINE

- The machine can be equipped with single or double tool magazine for ISO 50 turning / boring / milling tools or accessories. The magazine is fixed on the floor and it can be changed via a reay station, assuring high precision tool changes.
- The magazine capacity can be 12T, 16T, 32T, 40T, 60T.

Multitasking arm



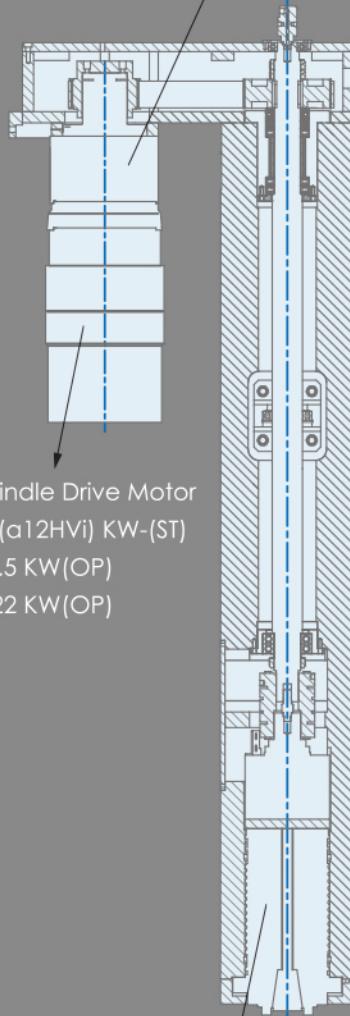
RAM Z-AXIS



- Square ram with hardened and ground steel inserts
- The brass shoes feature high rigidity and wear-resistance.
- Vertical motion is driven via ball screw.
- Hydraulic clamping, unclamping and counter-balancing.
- Turning and milling tools are clamped mechanically and unclamped hydraulically
- ISO 50 Spindle taper cone.
- Rotary encoder for spindle orientation.



Cutting Spindle Gear Box

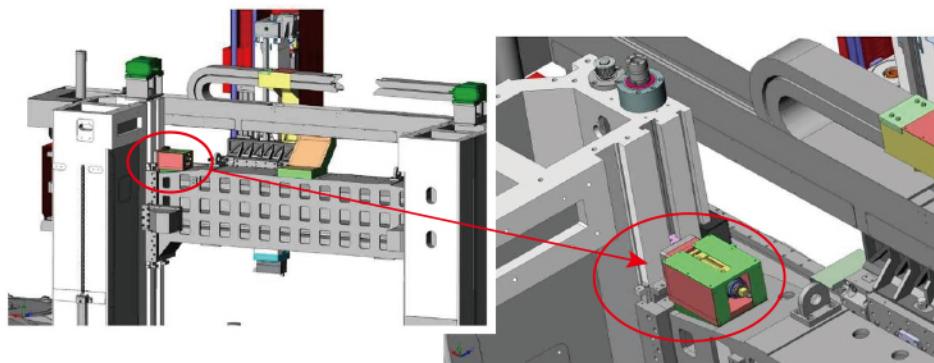


#2 Spindle Drive Motor
11/15(a12HVi) KW-(ST)
15/18.5 KW(OP)
18.5/22 KW(OP)

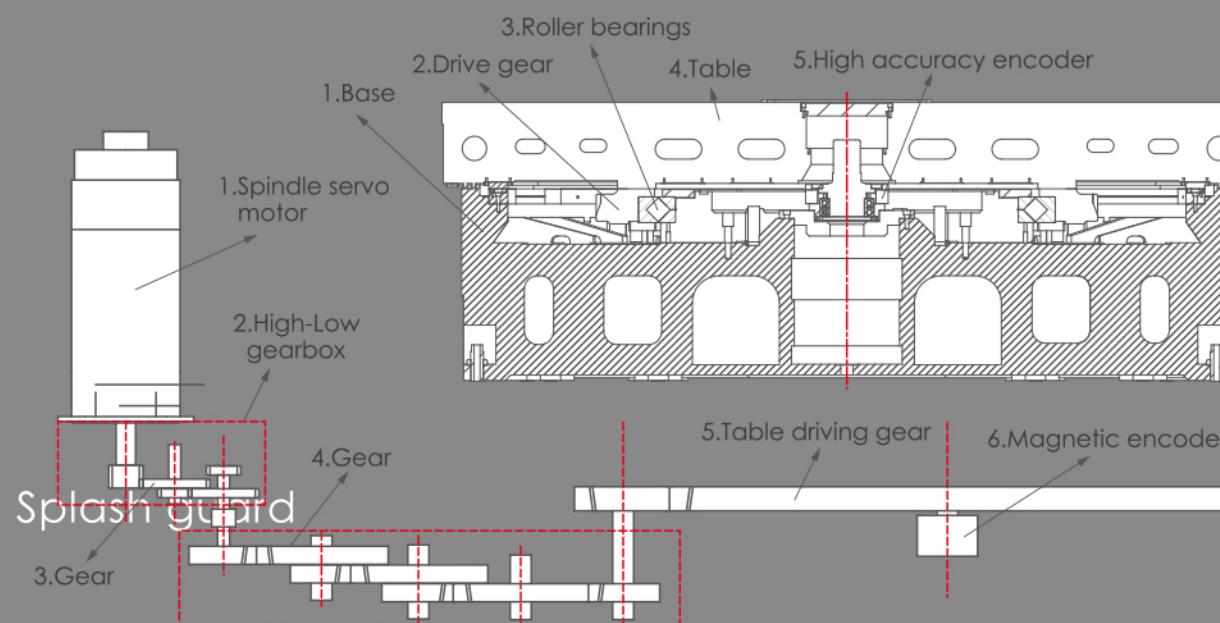
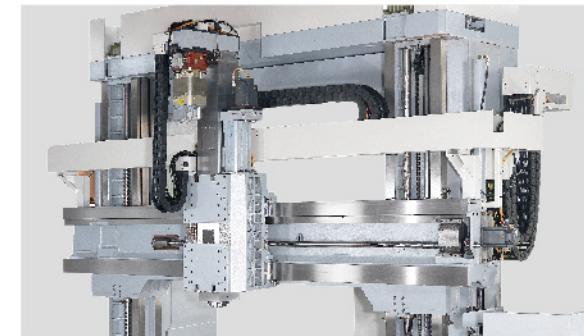
Max pull force (N) 20000

CROSSRAIL CLAMPING PATENT

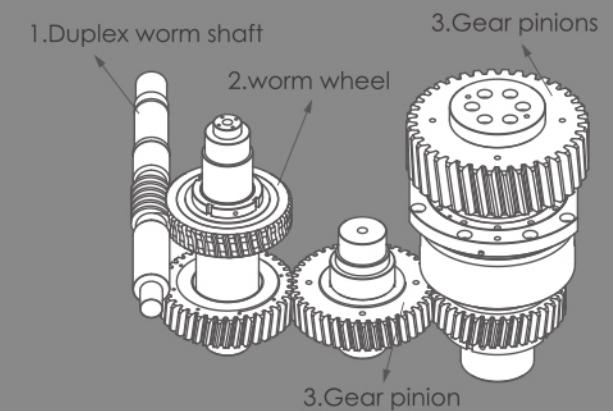
Innovation T type device without space locking system It is very easily causing the crossrail parallel unsteady with table and swing because of the spindle movement, there is some vibration casing by sliding space. This design planned to add 「T type device without space locking system」 behind crossrail and vertical with table. After crossrail paused, this device will clamp automatically. This can reduce space between crossrail and column, swing causing by spindle dramatically. This device also decreasing cutting vibration and increasing 90% accuracy compare to other brands.



PATENT NO: M40475



C Axis

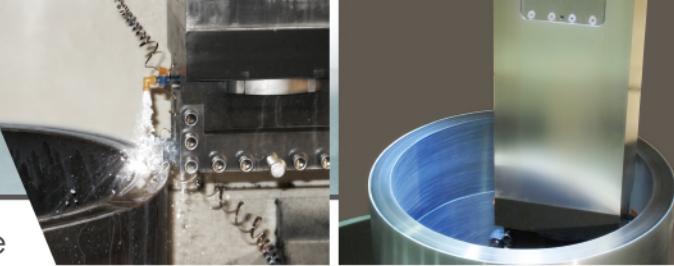


Technical Data

Table Speed, Torque and Power Diagram

Unit:mm

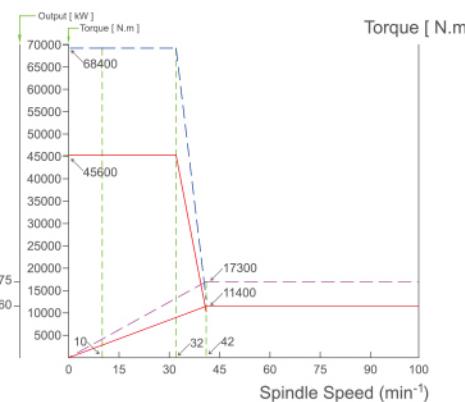
Second Spindle Torque



DV-3000 FANUC AF

- 30min. rating [68400N.m](L)
- Continuous rating [45600N.m](L)
- 30min. rating [17300N.m](H)
- Continuous rating [11400N.m](H)

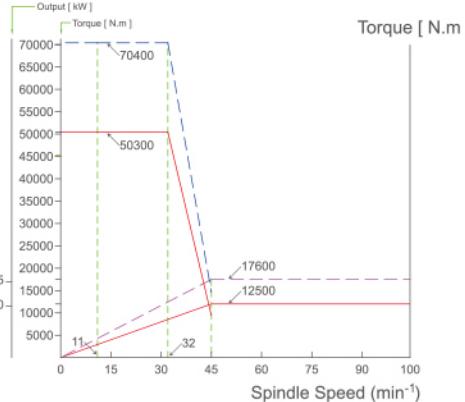
60/75kw 4500rpm



DV-3000 SIEMENS

- S2-30min. rating [70400 N.m](L)
- S1 rating [50300N.m](L)
- S2-30min. rating [17600N.m](H)
- S1 rating [12500 N.m](H)

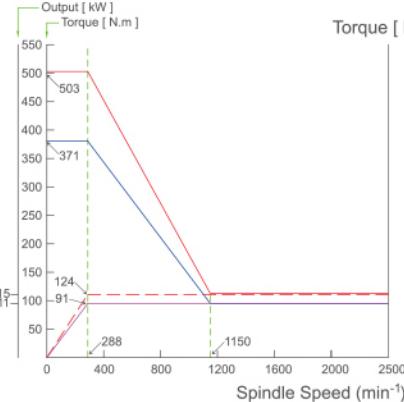
60/84kw 5000rpm



FANUC AF

- 30min. rating [503N.m](L)
- Continuous rating [371N.m](L)
- 30min. rating [124N.m](H)
- Continuous rating [91N.m](H)

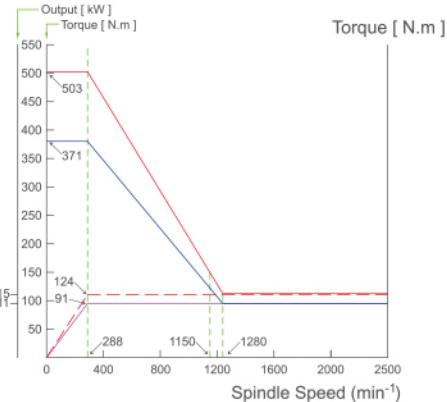
11/15kw 7000rpm



SIEMENS

- S2-30min. rating [503 N.m](L)
- S1 rating [371N.m](L)
- S2-30min. rating [124N.m](H)
- S1 rating [71 N.m](H)

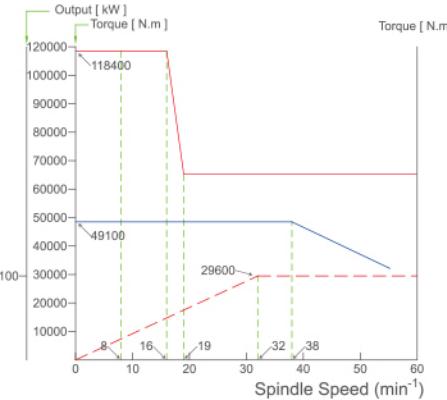
11/15kw 8000rpm



DV-4000 FANUC AF

- Continuous rating [118400N.m](L)
- Continuous rating [49100N.m](M)
- Continuous rating [29600N.m](M)

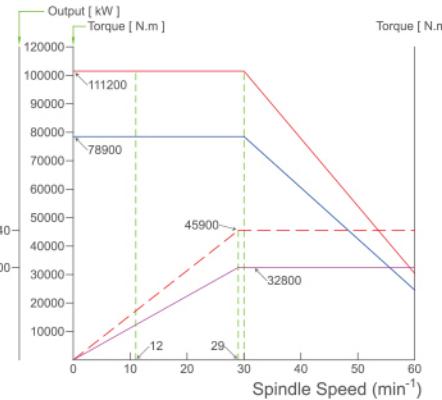
100kw 4500rpm



DV-4000 SIEMENS

- S2-30min rating [111200N.m](L)
- S1 rating [78900N.m](L)
- S2-30min rating [45900N.m](H)
- S1 rating [32800N.m](H)

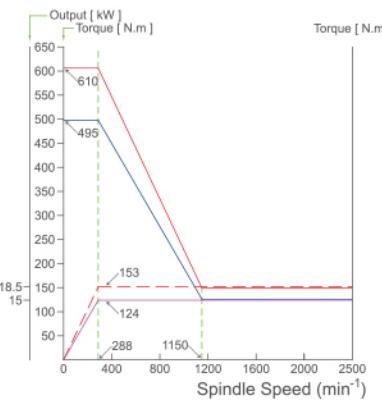
100/140kw 4500rpm



FANUC AF

- 30min. rating [610N.m](L)
- Continuous rating [495N.m](L)
- 30min. rating [153N.m](H)
- Continuous rating [124N.m](H)

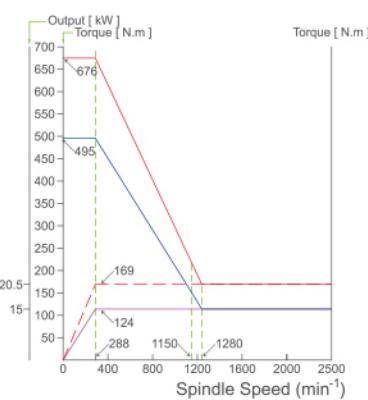
15/18.5kw 7000rpm



SIEMENS

- S2-30min. rating [676 N.m](L)
- S1 rating [495N.m](L)
- S2-30min. rating [169N.m](H)
- S1 rating [124 N.m](H)

15/20.5kw 8000rpm



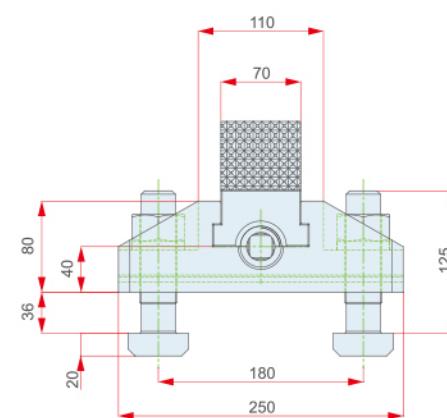
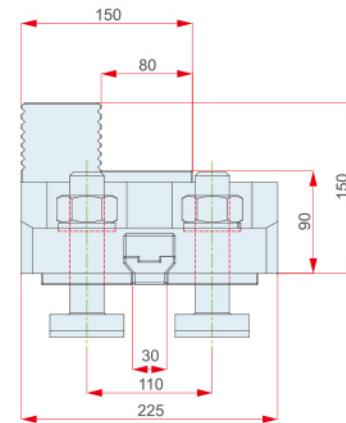
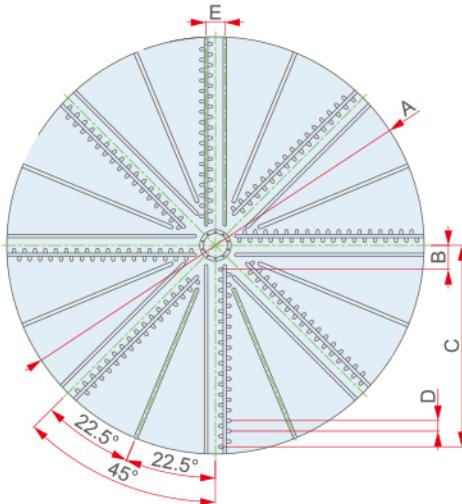
※The Present Specifications and photo for reference only

TABLE SIZE

Unit:mm

MODEL	A	B	C	D	E
DV 3000	ø3000	230	1430	100	180
DV 4000	ø4000	230	1930	100	180

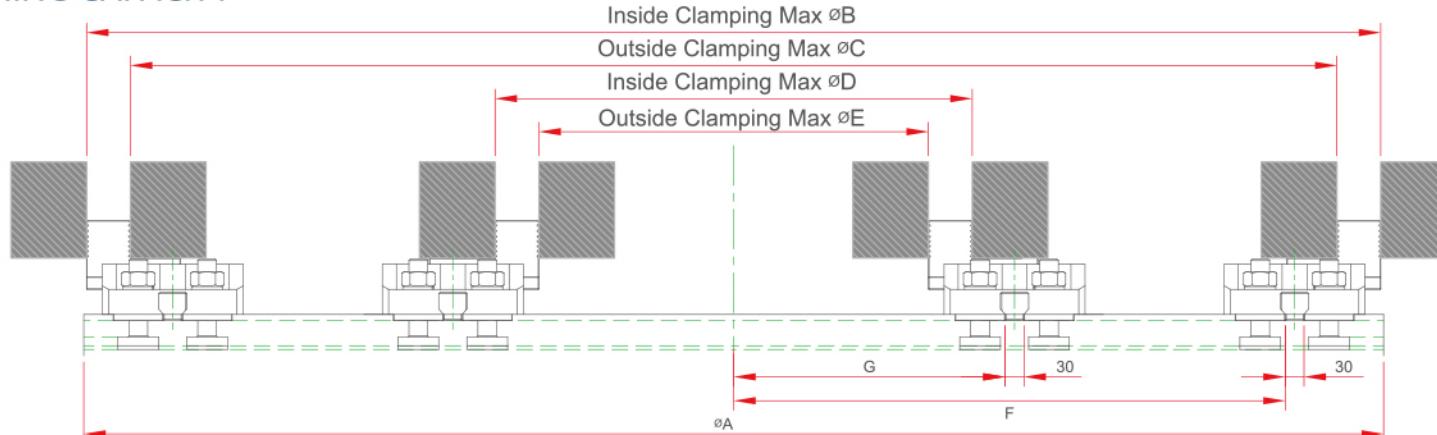
CHUCK AJWS



MODEL	A	B	C	D	E	F	G
DV 3000 Series	ø3000	ø2975	ø2835	ø555	ø415	ø1345	ø365

MODEL	A	B	C	D	E	F	G
DV 4000 Series	ø4000	ø3975	ø3835	ø555	ø415	ø1865	ø365

TURNING CAPACITY



※The Present Specifications and photo for reference only

Tool Holder and Dimensions (ATC Series)

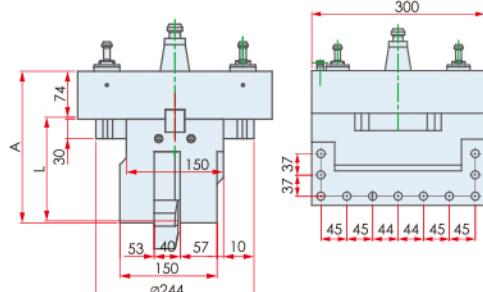
Unit:mm

TYPE	L	A	TOOL SIZE
DT50-160-32	160	309.8	□32
DT50-200-32	200	359.8	□32
DT50-250-32	250	409.8	□32

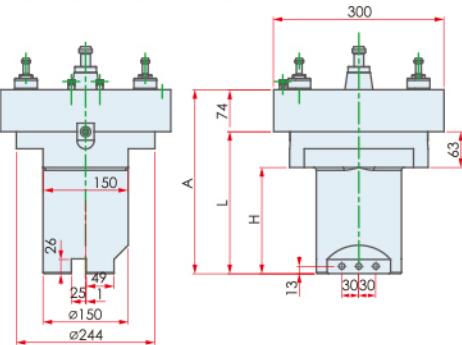
TYPE	H	L	A	TOOL SIZE
DE50-250-25	187	250	399.8	□25
DE50-300-25	237	300	449.8	□25
DE50-350-25	287	350	499.8	□25
DE50-400-25	337	400	579.8	□25

TYPE	H	L	A	TOOL SIZE
DC50-250-25	187	250	399.8	□25
DC50-300-25	237	300	449.8	□25
DC50-350-25	287	350	499.8	□25
DC50-400-25	337	400	579.8	□25

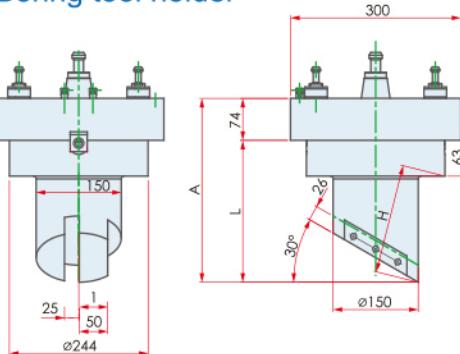
Turning Tool Holder



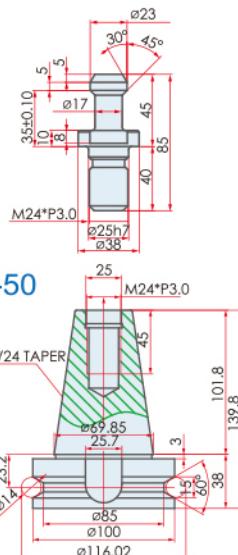
Boring tool holder



Boring tool holder



MAS 403-P50T-1



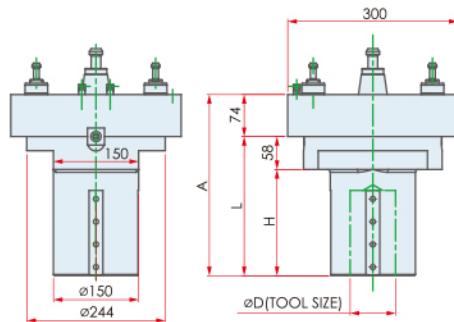
Cutting Toolshank

TYPE	H	L	A	D
DR50-187-32	187	250	399.8	Ø32
DR50-187-40	187	250	399.8	Ø40
DR50-187-50	187	250	399.8	Ø50
DB50-187-60	187	250	399.8	Ø60

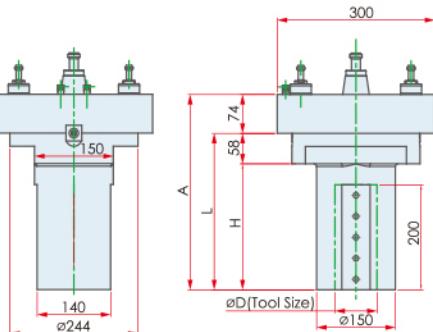
TYPE	H	L	A	D
DSP50-300-80	240	300	450.8	Ø80
DSP50-300-100	240	300	450.8	Ø110

TYPE	H	L	A	D
DB50-250-25	187	250	399.8	□25
DB50-300-25	237	300	449.8	□25
DB50-350-25	287	350	499.8	□25
DB50-400-25	337	400	579.8	□25

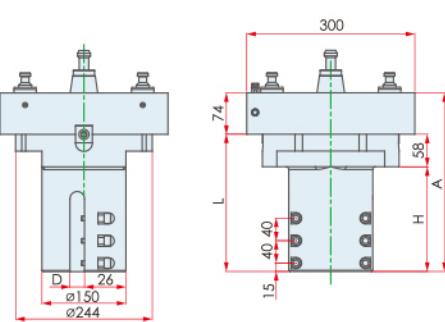
Side lock holder



Side lock holder

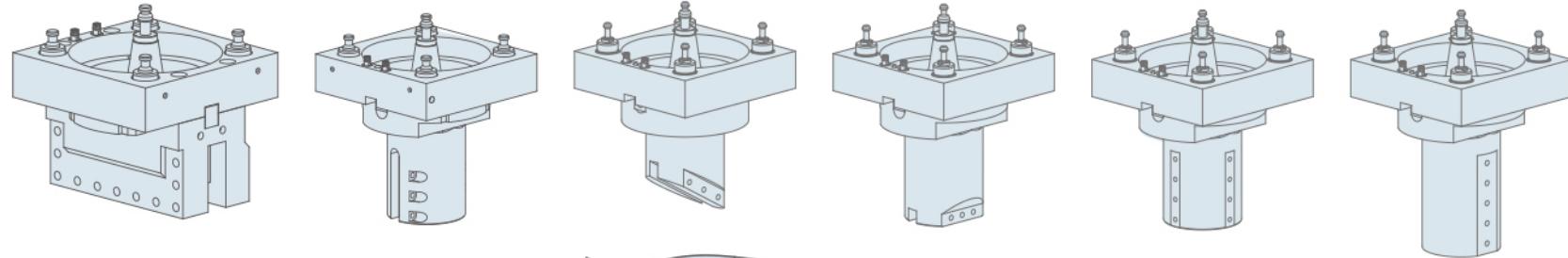


Boring tool holder

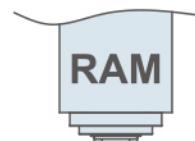


VTC Series

→ Turning tool holder



Tooling System

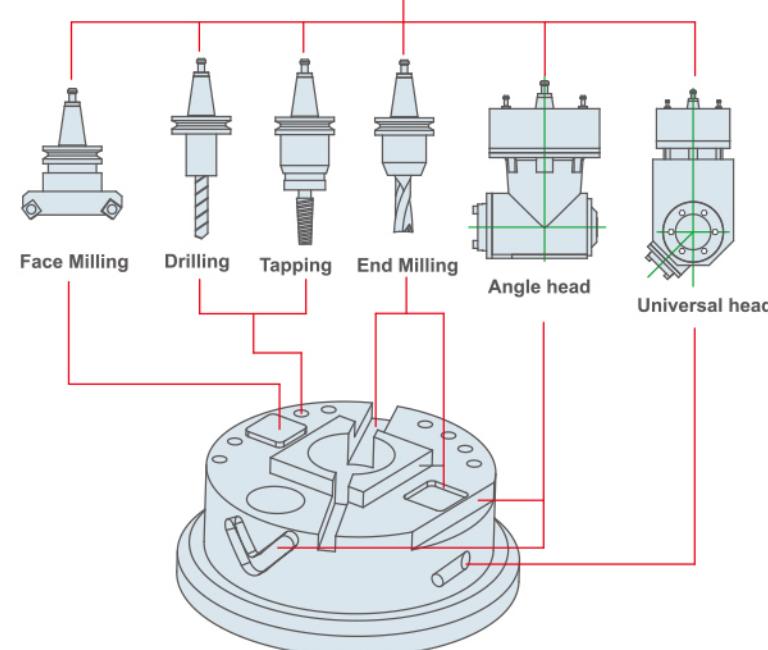
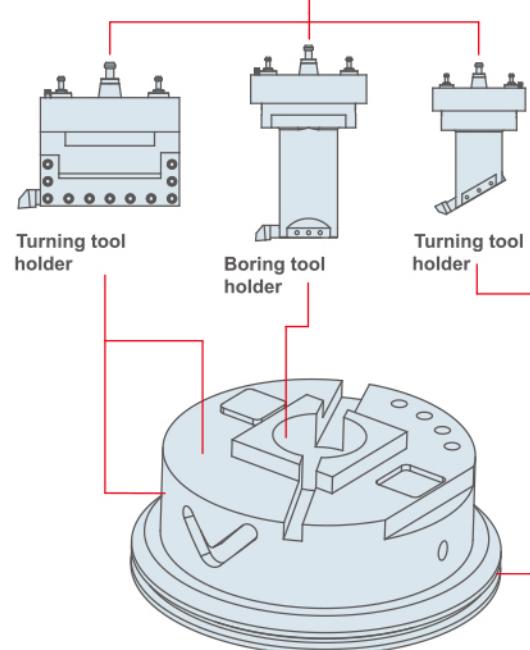


Milling System

BT-50

Turning

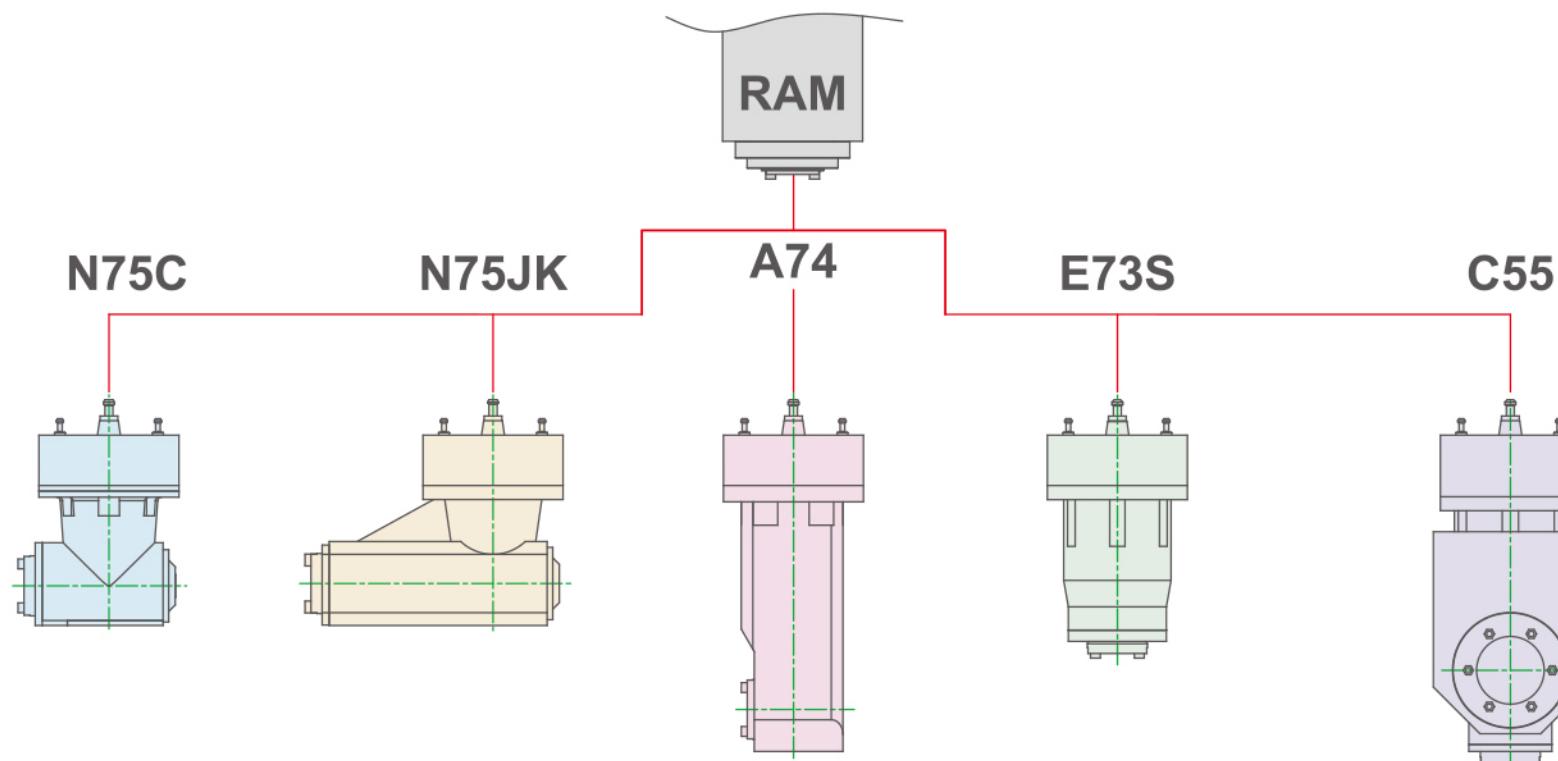
C-Axis





→ OPTIONAL MILLING HEAD

C Axis Milling head



Angle head

RPM: 800/2000

Max Power 38 Kw

Max Dianeter Tool:

Ø150(6")

Tool Taper BT50

Angle head

RPM: 800/2000

Max Power 38 Kw

Max Dianeter Tool:

Ø120(4.7")

Tool Taper BT50

Angle head

RPM: 800/2000

Max Power 38 Kw

Max Dianeter Tool:

Ø120(4.7")

Tool Taper BT50

Extension head

RPM: 800/2000

Max Power 63 Kw

Max Dianeter Tool:

Ø150(6")

Tool Taper BT50

Universal head

RPM: 800/2000

Max Power 35 Kw

Max Dianeter Tool:

Ø120(4.7")

Tool Taper BT50

SPECIFICATIONS

→	STANDARD SPECIFICATION	DEGREE	DV-3000-T	DV-3000-MT C-axis	DV-3000-MTB Y+C-axis	DV-4000-T	DV-4000-MT C-AXIS
Spindle							
Spindle speed	Low steps	rpm	2~32	2~32	2~32	1~16	1~16
	2and steps	rpm	×	×	×	17~38	17~38
	High steps	rpm	33~100	33~100	33~100	39~60	39~60
Cutting Spindle speed	Low	rpm	×	2~1150	2~1150	×	2~1150
	High	rpm	×	1151~2500	1151~2500	×	1151~2500
Max. Torque of Spindle	N.m(kgf-m)	68100(6941)	68100(6941)	68100(6941)	118400(12081)	118400(12081)	
Feed rate							
X Axis Feed Rate	mm/min	8000	8000	8000	7000	7000	
Z Axis Feed Rate	mm/min	10000	10000	10000	10000	10000	
W Axis Moving Rate	mm/min	1000	1000	1000	1000	1000	
Y Axis Moving Rate	mm/min	×	×	4000	×	×	
Cutting Feed Rate	M/rev	1~2100	1~2100	1~2100	1~2100	1~2100	
Manual Feed Rate	M/min	0~5.5	0~5.5	0~5.5	0~5.5	0~5.5	
Capacity							
Table Diameter	mm	Ø3000	Ø3000	Ø3000	Ø4000	Ø4000	
Max Turning Diameter	mm	Ø3400	Ø3400	Ø3400	Ø4400	Ø4400	
Max. Swing	mm	Ø3400	Ø3400	Ø3400	Ø4400	Ø4400	
Max. Turning Height	mm	2000	2000	2000	2300	2300	
Max. Table Load	kg	22000	22000	22000	28000	28000	
Motor FANUC							
Spindle Motor	KW	60/75(a60HVi)	60/75(a60HVi)	60/75(a60HVi)	100(a100HVi)	100(a100HVi)	
#2 Spindle Drive Motor	KW	×	11/15(a12HVi)	11/15(a12HVi)	×	15/18.5(a15HVi)	
X-Axis Servo Motor	KW	5.9	5.9	5.9	5.9	5.9	
Z-Axis Servo Motor	KW	5.9	5.9	5.9	5.9	5.9	
C-Axis Servo Motor	KW	×	5.9	5.9	×	5.9	
Y-Axis Servo Motor	KW	×	×	5.9	×	×	
W-Axis Motor	AC/HP	10	10	10	15	15	
Coolant Motor	KW	0.37	0.37	0.37	0.75	0.75	
#2 Spindle Coolant Motor	KW	×	1.5	1.5	×	1.5	

※The Present Specifications and photo for reference only

Standard equipments

STANDARD SPECIFICATION	DEGREE	DV-3000-T	DV-3000-MT C-axis	DV-3000-MTB Y+C-axis	DV-4000-T	DV-4000-MT C-AXIS
Motor SIEMENS (Optional)						
Spindle Motor	KW	60/84	60/84	60/84	100/140	
#2 Spindle Motor	KW	x	11/15	11/15	x	15/20.5
X-Axis Servo Motor	KW	5.37	5.37	5.37	5.37	5.37
Z-Axis Servo Motor	KW	8.17	8.17	8.17	8.17	8.17
C-Axis Servo Motor	KW	8.17	8.17	8.17	8.17	8.17
Movable Capacity						
Z axis Travel	mm	1200 (1500-OP)	1200 (1500-OP)	1200(1500-OP)	1350 / (1500-OP)	1350 / (1500-OP)
X axis Travel	mm	2300	2300	2300	2800	2800
W-Axis Travel	mm	1400	1400	1400	1700	1700
Y Axis Travel	mm	x	x	-1850	x	x
ATC Magazine						
Tool Magazine Capacity	pcs	12	12	12	12	12
Cutting of Tool Shank	Type	BT50	BT50	BT50	x	BT50
Max. Tool Length	mm	300	300	300	300	300
Max. Tool Weight	kg	70	70	70	70	70
Max. Loading weight of ATC Magazine	kg	840	840	840	840	840
Lubrication System						
Hydraulic tank	Liter	250	250	250	250	250
Cutting Liquid tank	Liter	1000	1000	1200	1200	1200
Lubricated tank	Liter	20	20	20	20	20
Electronic specifications						
Machine Size W \ L \ H	mm	7935x5156x6559	7935x5156x6559	7935x8150x6559	8491x5392x6859	8491x5392x6859
Machine Weight	kg	57900	58900	76900	70800	71800
Power requirement	KVA	120	140	160	140	170
Accuracy	mm	Position Accuracy : ±0.008/500, Repeatability Accuracy : ±0.006 C Axis Position Accuracy : ±7.5°/360° C Axis Repeatability Accuracy : ±5"				

*The Present Specifications and photo for reference only

1. FANCU 0i-TD Controller
2. Heavy duty Manual Jaws (4 Jaws)
3. Spindle with Two-Section Gear Box
4. Lubricated System

5. Cutting Liquid System
6. Air conditioners for electrical Cabinet
7. Tool Box
8. Operational Manual

9. Tool magazine capacity 12 pcs
10. Semi-splash guard

DV-3000

Optional accessories

1. Chip Conveyor
2. C-Axis (Tool changer Turning 6,Milling 6)
3. Tool Magazine for 16 \ 20 \ 32 \ 40 \ 60
4. Z axis Travel 1500 mm
5. SIEMENS 840D
6. FANUC 31i-T Controller
7. Transformer
8. Turning tool holder
9. X \ Z Axis scale
10. Collant Through Spindle
11. Auto Tool Length
12. Workpiece Probe
13. Oil Skimmer
14. W Axis Moving NC Control
15. Y Axis + - 1850 mm
16. CE splash guard

DV-4000

Optional accessories

1. Chip Conveyor
2. C-Axis (Tool changer Turning 6,Milling 6)
3. Tool Magazine for 16 \ 20 \ 32 \ 40 \ 60
4. Z axis Travel 1500 mm
5. SIEMENS 840D
6. FANUC 31i-T Controller
7. Transformer
8. Turning tool holder
9. X \ Z Axis scale
10. Collant Through Spindle
11. Auto Tool Length
12. Workpiece Probe
13. Oil Skimmer
14. CE splash guard
15. Custom designed or modified



PERFECT JET

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