



PERFECT JET

TRAVELLING COLUMN VERTICAL/HORIZONTAL MACHINE CENTER
VERTICAL MACHINE CENTER
DEEP HOLE DRILLING & BORING MACHINE
FLOOR TYPE BORING & MILLING MACHINE
CNC & CONVENTIONAL BED-TYPE MACHINE
DOOBLE COLUMNS MACHINING CENTER
CUSTOMIZATION MACHINE



PERFECT JET

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PING JENG MACHINERY

VERTICAL MACHINE CENTER
LINEAR GUIDE/V-SIDE/SQUARE TYPE WAY

[http:// www.perfect-jet.com.tw](http://www.perfect-jet.com.tw)



PERFECT JET

Profile

Mission: Sincerity Progress Harmony

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

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

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



Geographic Location



VERTICAY MACHINE CENTER



PERFECT JET

Designed and Built with Excellent Quality, Efficiency and Accuracy



MCV-M7



MCV-M8
MCV-M10
MCV-M11
MCV-M14



MCV-85/100BA(GA)
MCV-86/116/127(BA)
MCV-147(E)



MCV-M8-5X
MCV-M11-5X



MCV-168GA



MCV-2010GA



MCV-2510GA
MCV-3010GA

LINEAR GUIDE WAY SERIES

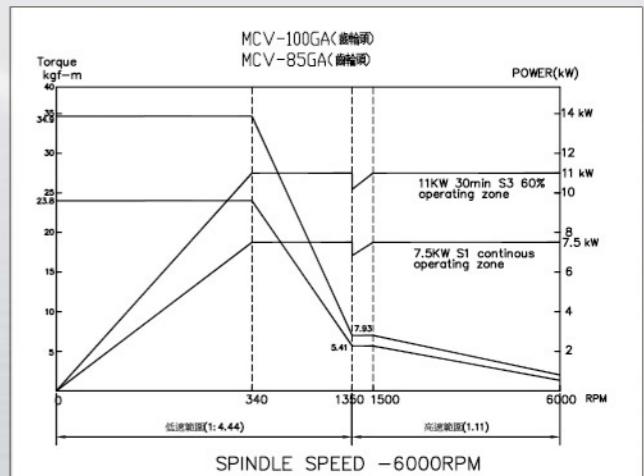
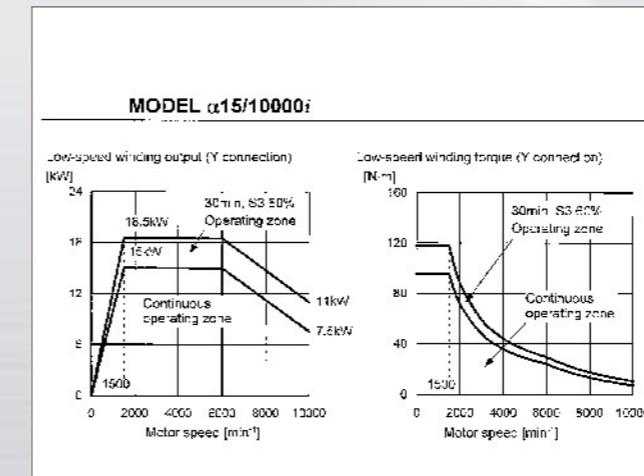
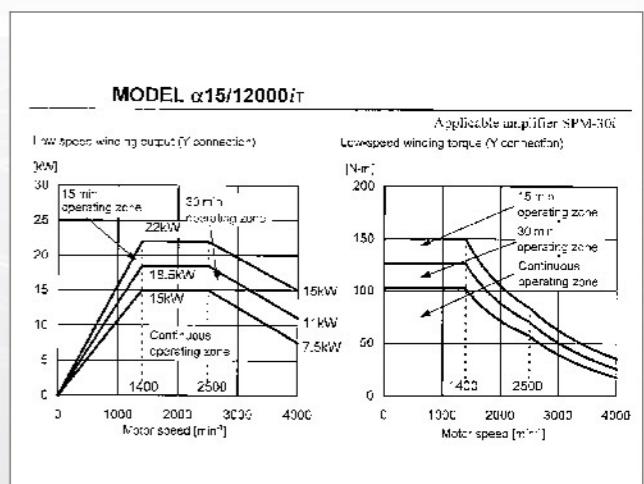
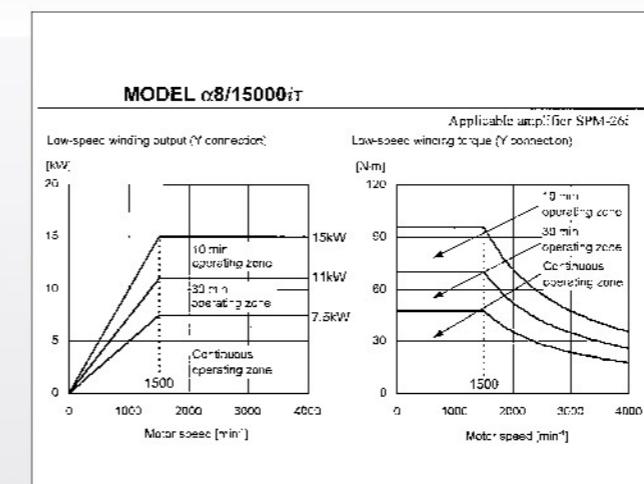
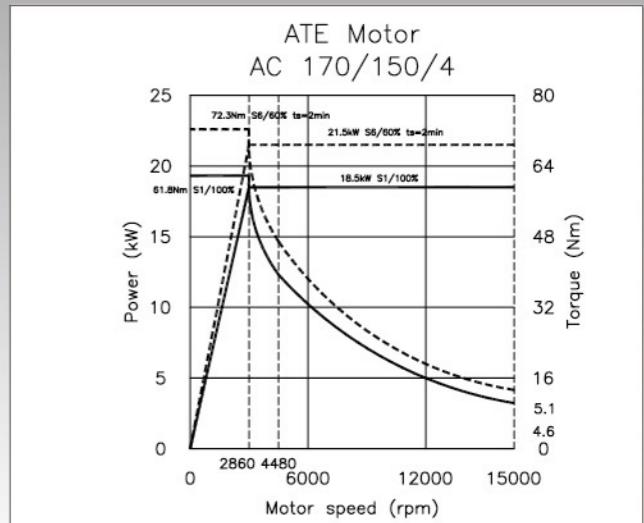
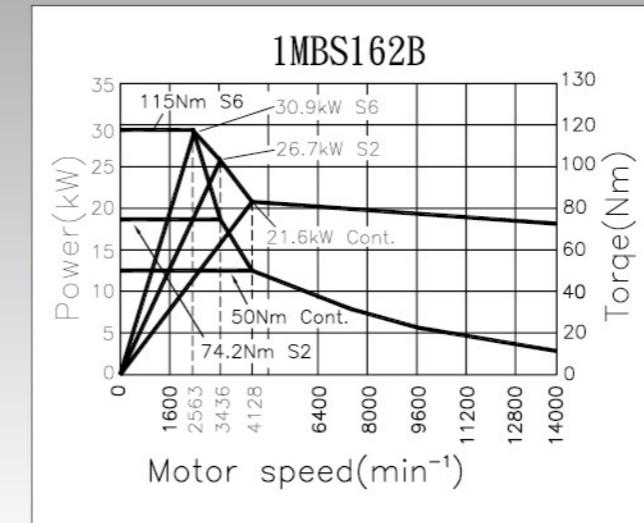
MCV-M11-5X



MH11-5X

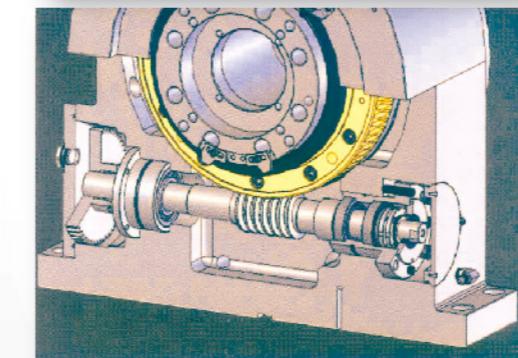


MCV-M11-5X

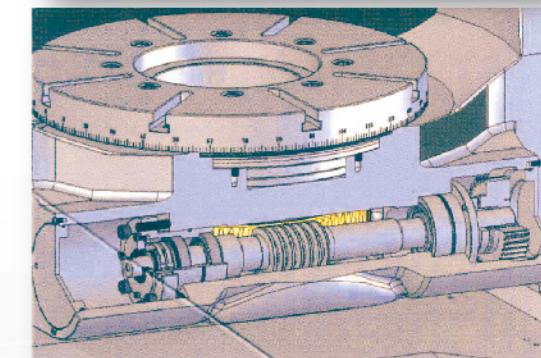
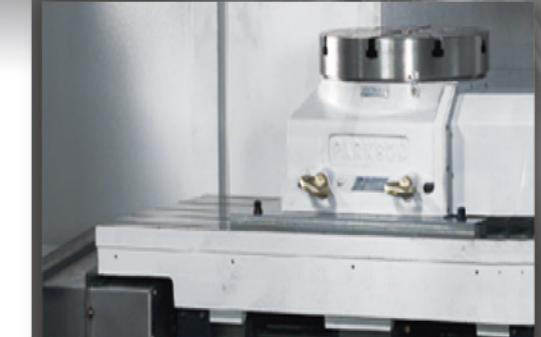


LINEAR GUIDE WAY SERIES

MCV-M8-5X/M11-5X

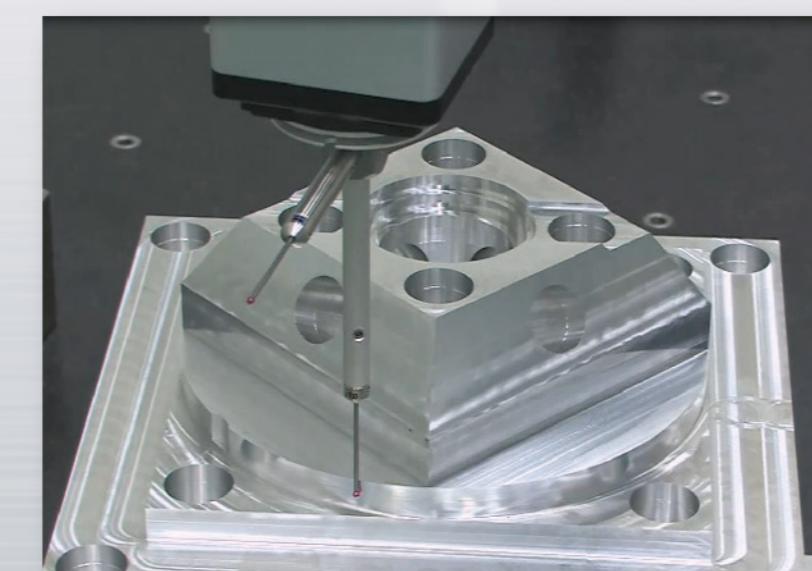
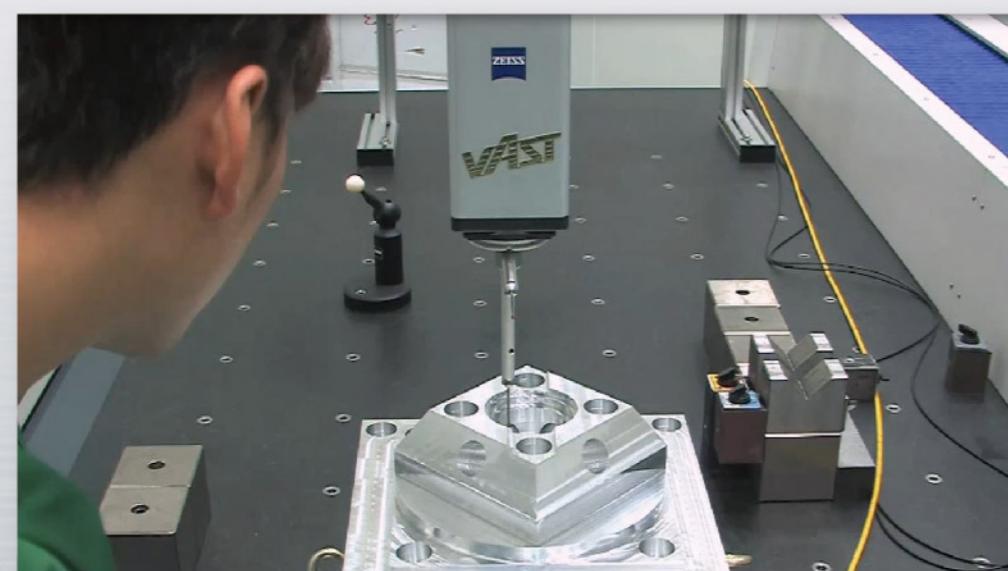


MCV-M8-5X B axis 1 : 90
MCV-M11-5X B axis 1 : 120



MCV-M8-5X C axis 1 : 90
MCV-M11-5X C axis 1 : 90

Item/Model		Unit	M8-5X	M11-5X
Spindle	B axis swiving angle	degree	±110	±110
	Index. swiving head	degree	0. 001	0. 001
	Tap		BBT	HSK-63 / BBT-40
	Transmission		直結	內藏(built)-in
	Motor	KW	3. 7	18. 5
	Speed	RPM	10000(OP.15000)	12000(OP.15000)
Rotary Table	C axis rotary table size	mm	φ220	φ400
	Index.rotary	degree	0. 001	0. 001
	Max.load	KG	200	400
	Motor	KW	1. 6	3. 0
	Speed	RPM	22. 2	11. 1



LINEAR GUIDE WAY SERIES

MCV-M5/M7/M8/M10/M11(H)/M14(H)



HIGH PRECISION HIGH RIGIDTY

HIGH-SPEED MACHINING

Designed for exceptionally accurate milling, drilling, and rigid tapping.

Especially well suited for a wide variety of demanding applications

including high precision molds and dies.



MCV-M8

Advanced contemporary design with state of the art ergonomics.

The rear of the machine has been skillfully designed to conceal and protect the operating elements yet provide ease of maintenance and installation while minimizing the floor space required.



MCV-M14



MCV-M5/M7(H)



MCV-M10



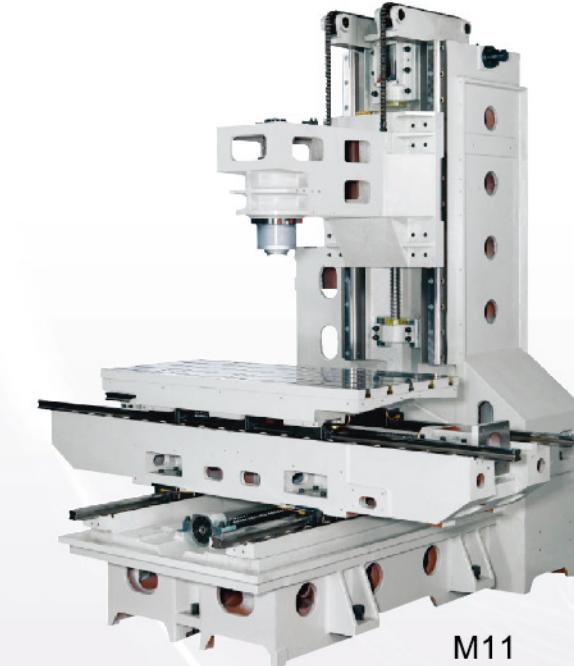
MCV-M11

The extraordinary stiffness of the column and bed construction provides unmatched rigidity.

The massively constructed spindle head casting with generously proportioned internal ribs maximizes rigidity.

The perfect combination of a full enclosure and a properly shaped base provides leak-free operation and ease of chip removal.

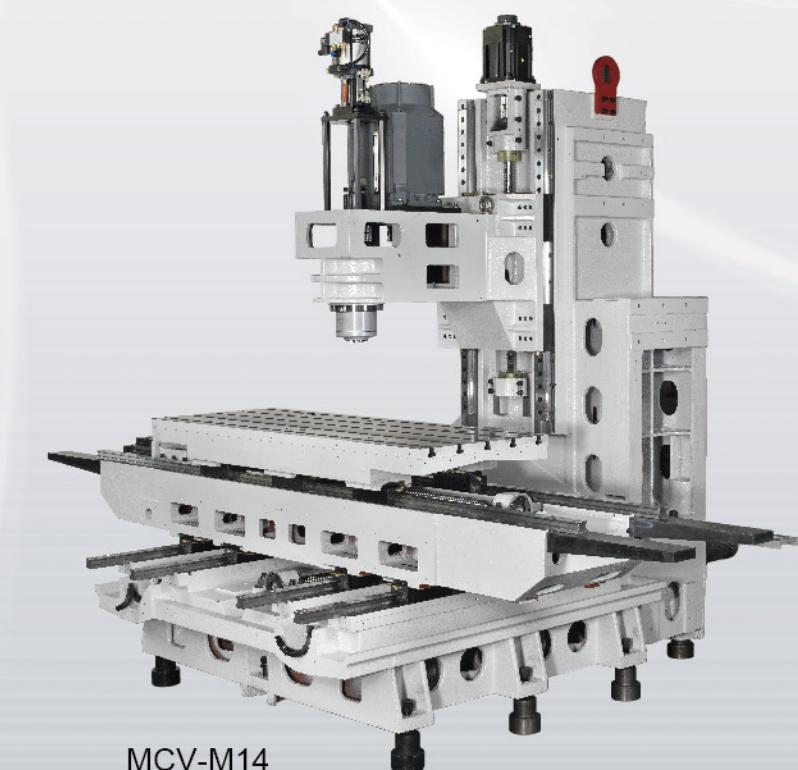
The machine is equipped with a separating system for water and oil.



M11



M5/M7



MCV-M14



M8/M10

Sliding Column Specialist of German Quality Loading & Unloading Equipment for Automated Warehouse



1-to-2 robotics for machine centers



1-to-2



Making CNC process smart

H800

**H800 Loading & Unloading Equipment
for Automated Warehouse
[Patent pending]**

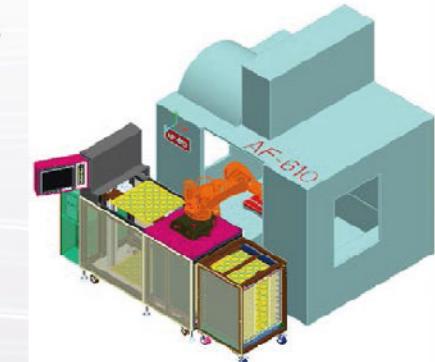
**Addresses labor shortage /
Aims quality stability /
Increases productivity/utilization**



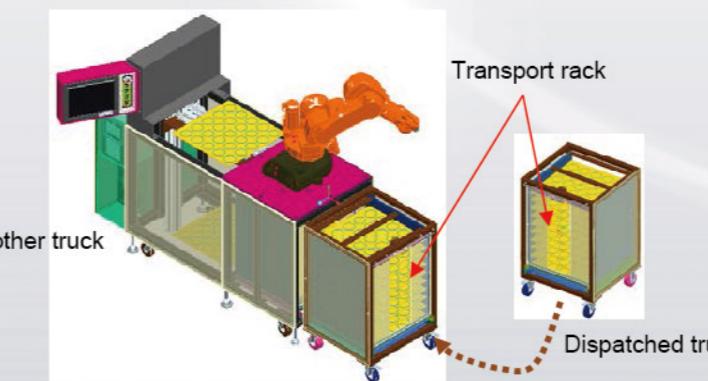
Planning of production line automation addressing issues like products of various small batches, shortage of labor and quality control, to increase machine utilization for CNC process industry.

The robot places, with its grippers, workpieces into a CNC machine center and, when the process is done, picks them to place in the product area.

The transport platform that moves up and down automatically is capable of supplying workpieces for extended hours, enabling automated robotics.



Description of specs and actions: Loading & Unloading Equipment for Automated Warehouse (mother truck + dispatched trucks)



The robot picks workpiece from the Tray.



It unloads them inside the processing machine and grips the completed workpieces back to tray.



The “Loading & Unloading Equipment for Automated Warehouse” includes a mother truck and dispatched trucks, of which the former serves to “supply” while the latter serve to “transport racks” and “change parts”.

When a tray-load is completed, the storage unit rises and lowers to change trays to continue supply.



VERTICAL MACHINE CENTER



PERFECT JET

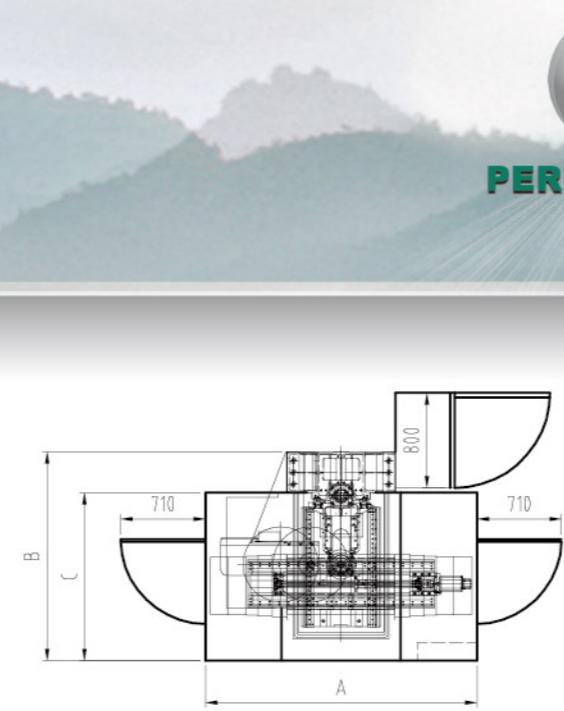
LINEAR GUIDE WAY:

MODEL	UNIT	MCV-M5H	MCV-M5	MCV-M7H	MCV-M7	MCV-M8H	MCV-M8	MCV-M10	MCV-M11H	MCV-M11	MCV-M11-5X	MCV-M14
Travel	X/Y/Z axis	mm	550/400/500		760/450/500		800/500/500	1020/500/500	1100/650/600	1100/600/830	1400x700x600	
	Spindle nose to table surface	mm			100-610				100-700	V20-850 H330-1040	80-680	
	Spindle center to column surface	mm		500			550		675	676	725	
	X/Y/Z way span	mm		370 / 600 / 456				466 / 840 / 526	370 / 600 / 456	380x1280x440		
	Position/Repeatability accuracy	mm			±0.005							
Spindle	Ball bar accuracy	mm				≤0.01						
	Spindle taper					BT-40			B:±110°		BT-40	
	Spindle transmission		Direct-coupled	Belt	Direct-coupled	Belt	Direct-coupled	Belt	Belt	Buit-in	Belt	
controller	Spindle speed	rpm	12000/15000	10000	12000/15000	10000	12000/15000	10000	12000/15000	10000	12000(op.15000)	10000
	CNC control					As customer's choice						
	Spindle motor	kW		5.5/7.5			7.5/11		11/15		11/15(OP 15/18.5)	
Table	X/Y/Z motor	kW		1.5/1.5/3.5			2.0/2.0/3.5	3.0/3.0/4.5	3.0/3.0/4.5		4.0 / 4.0 / 7.0	
	Table size(WxL)	mm	400 x 700		900 x 500		1200 x 500	1300 x 600			600x1600	
	T-slots(Widthx No.xPitch)	mm	18 x 3 x 150		18 x 5 x 100		18 x 5 x 125				18x5x125	
Feed	Table load	kg	300		400		600	800	1000	600	1,200	
	X/Y/Z Rapid feed rate	m/min		36 / 36 / 30							30/30/30	
	Ballscrew O/D / pitch	mm		φ 40 x φ 40 x φ 40 / 10(op.16)			φ 45 x φ 45 x φ 45 / 12(op.16)					
	XYZ Linear	mm	M28 / 34 / 34		M34 / 34 / 34			M45 / 45 / 45				
	Cutting feed rate	m/min	1-12	1-8	1-12	1-8	1-12	1-8	1-8	1-12	1-12	
Magazine	Min. input increment	mm		0.001								
	Max. tool dia./with adjacent tool	mm		φ 77.5 / 150								
	Max. tool weight BT-40	kg		7								
	Max. tool length(Arm/Carousel type)	mm		250 / 200			300 / 250					
	Tool selection			Automatic random (Arm type)								
Others	Tool capacity			Arm 24-30 / Carousel 16-20				Arm 24-30				
	Pull stud	degree		45°								
	Tool changing time(T. to T.)	sec		2.5 - 3.4								
Weight & Dimension	Spindle oil chiller	l		18			40		18			
	Lubrication capacity	l		2					4			
	Heat exchanger	watt		70			80		70			
	Coolant tank	l		200			250		300			
	Pneumatic unit	kg/cm²		6								
Weight & Dimension	Power	kva		15			25		35			
	N.W./G.W.(Approximate)	kg	3200/3500	3400/3700	4350/4600	4600/5000	7000/7300	7500/8500	12000 / 13500			
	Packing(LxWxH)	m	2.3x2.3x2.5		2.4x2.3x2.5		2.8x2.3x2.5	3.4x2.3x2.5	3.4x2.3x2.6	5.6x2.3x2.5		
Weight & Dimension	Floor space(LxWxH)	m	2.04x1.96x2.35	2.28x2.26x2.35	2.38x2.28x2.85	2.7x2.28x2.85	3.0x2.9x3.0	3.0x2.9x3.0	5.0 / 2.8 / 3.1			

Specifications subject to change without notice.

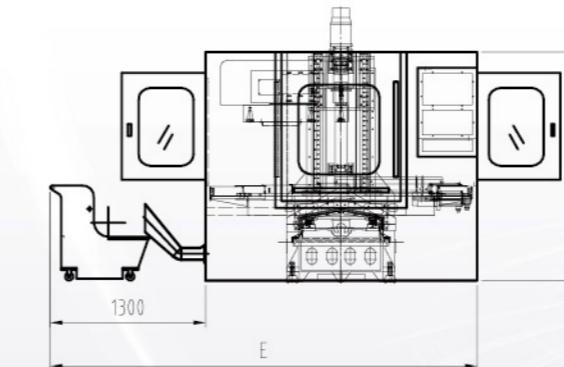
Standard Accessories:

- 1. Direct-coupled drive XYZ axis
- 2. M.P.G.
- 3. Fully splash guard & Pendant operation cabinet
- 4. Belt Spindle 10,000RPM
- 5. Spindle air blast
- 6. Spindle chiller
- 7. Spindle sound-proof
- 8. Automatic lubrication system
- 9. Coolant system
- 10. Air and wash down gun
- 11. Wash down nozzles
- 12. Halogen working lamp&alarm light
- 13. RS-232interface+10M cables
- 14. Heat exchanger on electric cabinet
- 15. M30 auto power off
- 16. Leveling pads and adjusting screws
- 17. Tool box with adjusting tools
- 18. Operating manual and part list
- 19. Rigid tapping
- 10. Cooling ring around spindle
- 11. Scraper type conveyor
- 12. Chip auger
- 13. Oil skimmer
- 14. Transformer
- 15. Voltage regulator
- 16. Seaworthy Packing
- 17. XYZ Roller type way
- 18. 16/20T carousel type ATC
- 19. 24/30T arm type ATC
- 10. Chain type conveyor



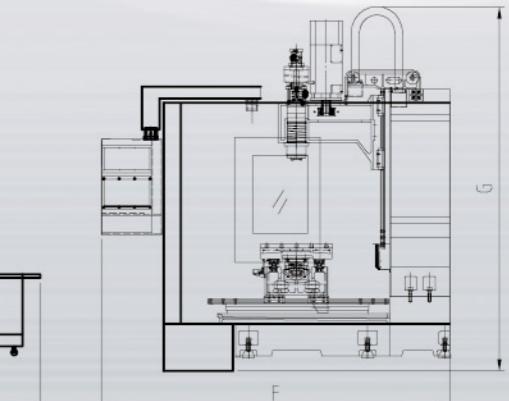
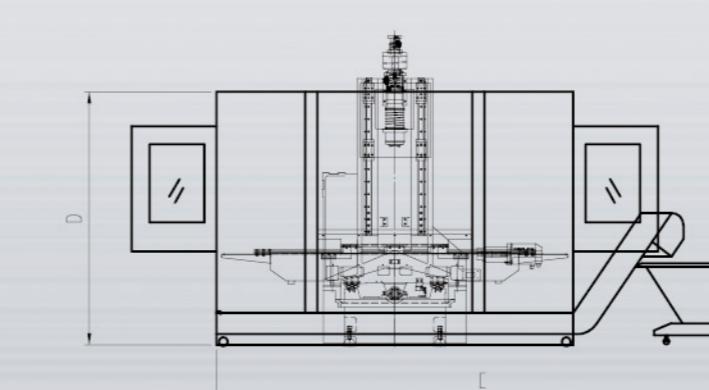
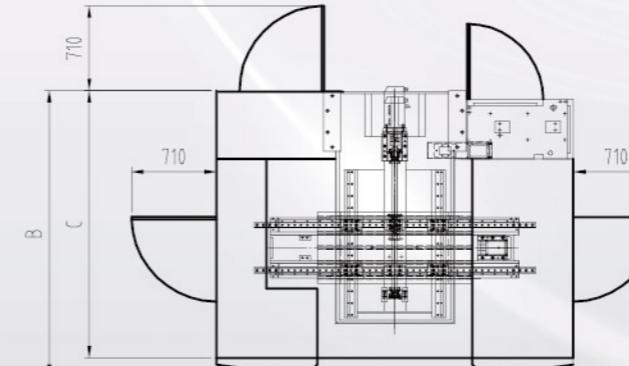
MCV-M5(H)
MCV-M7(H)
MCV-M8(H)
MCV-M10

model	part	A	B	C	D	E	F	G
MCV-M5(H)		2040	1725	1385	1920	3340	1980	2580
MCV-M7(H)		2180	1755	1410	1920	3600	2110	2580
MCV-M8(H)		2380	2250	1410	2120	3800	2900	2850
MCV-M10		2700	2250	1410	2120	3960	2900	2850



MCV-M11(H)
MCV-M14(H)

model	part	A	B	C	D	E	F	G
MCV-M11(H)		3000	2400	2245	2130	4400	2920	3000
MCV-M14(H)		3650	2740	2260	2325	4950	2965	3100



"V" SLIDE-WAYS

MCV-85B·G·H/100B·G·H

Exceptionally Rigid construction that Maintains High Machining Accuracy

Compact, Ergonomic, Rugged Spindle Head Design That is Engineered for Heavy-Duty Cutting & Precision Machining



PERFECT JET

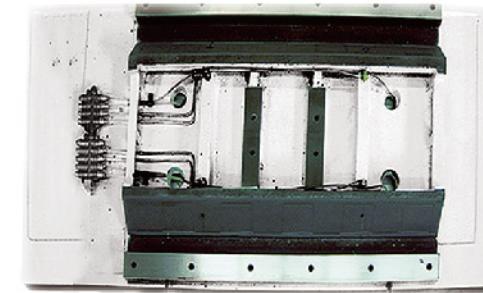
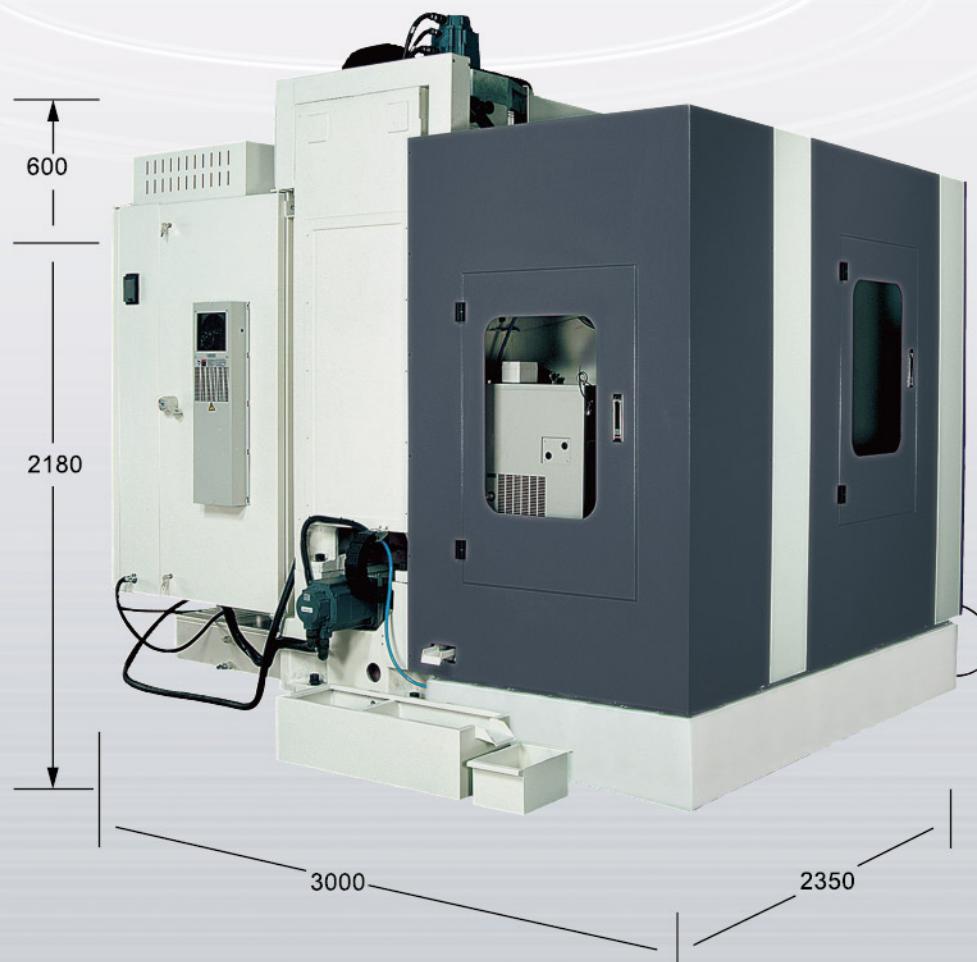


Table : Stiffness
Construction



The "V" shaped slide ways are induction hardened and precisely ground, and supported throughout their travel to insure maximum machining stability and accuracy for the life of the machine.

The "V" shaped slide ways are RULON coated to provide low friction and vibration which insures smooth movement, stability and repeatability accuracy.



G



Z-cover scales designed
for voice-proof & dust-proof



B



H

"V" SLIDE-WAYS 85、G、H/100B、G、H

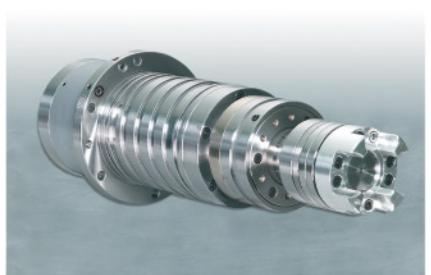
LINEAR GUIDE WAY M5/M7/M8/M10/M11(H)/M14(H)

SQUARE WAY 86/116/127/147E/147B、G、H



PERFECT JET

Accessories:



Advantages of a direct-coupled compared to a built-in spindle design:

- * High rigidity
- * Good heat dissipation
- * High reliability at a lower cost
- * 15000rpm



16T/20T tool carousel type ATC



24T/30T tool Arm type ATC



Rear wash-down nozzles makes chip clean up easily.



Slope telescopic cover to protect the guide ways



Powerful wash down nozzles and air gun are conveniently built in.



Equipped with high reliability lubrication pump and solenoid valves.



20 BAR pump for CTS



Oil skimmer: Eco-friendly coolant disposal system.



Oil collector: Separating for oil and water



Dual vertical coolant pumps are concealed inside the machine to provide for a compact design.

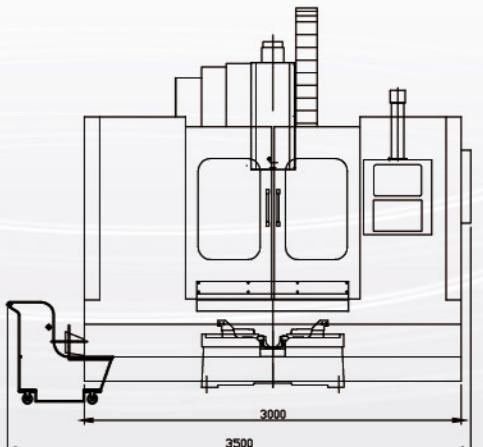
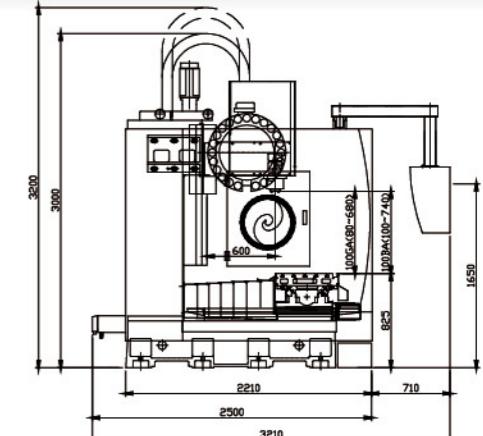
'V' SLIDE-WAYS:

	MODEL	單位	MCV-85B	MCV-85G	MCV-100B	MCV-100G
Travel	X/Y/Z axis	mm	800/600/600		1000/600/600	
	Spindle nose to table surface	mm	140-740	80-680	140-740	80-680
	Spindle center to column surface	mm			600	
	X/Y/Z way span	mm			440 / 870 / 476	
	Position/Repeatability accuracy	mm			±0.005	
Spindle	Ball bar accuracy	mm			≤0.01	
	Spindle taper				BT-40	
	Spindle transmission		Belt	Gear	Belt	Gear
	Spindle speed	rpm	10000	5500	10000	5500
	CNC control				As customer's choice	
Control	Spindle motor	kW				
	X/Y/Z motor	kW			3.0 / 3.0 / 3.0	
	Table size(WxL)	mm	560x1000		560x1200	
Table	T-slots(WidthxNo.xPitch)	mm			18x5x100	
	Table load	kg	500		700	
	Rapid feed rate(X/Y/Z)	m/min	16 / 16 / 16 (P:10)			
	Ballscrew O/D	mm		1-5 / φ40		
	Ballscrew pitch	mm			10	
Feed	Cutting feed rate	m/min			1-5	
	Min. input increment	mm			0.001	
	Max.tool dia./with adjacent tool	mm			φ 77.5 (φ 135)	
	Max.tool weight	kg			7	
	Max.tool length(Arm/Carousel type)	mm			300 / 250	
Magazine	Tool selection				Automatic random (Arm type)	
	Tool capacity				24 / 16 / 20	
	Pull stud	degree			45°	
	Tool changing time(T. to T.)	sec			2.5-3.4	
	spindle oil cooler	l			5	
Others	Lubrication capacity	l			2	
	Heat exchanger	watt			40x2	
	Coolant tank	l			250	
	Pneumatic unit	kg/cm²			6	
	Power	KVA			25	
Weight & Dimension	N.W./G.W.(Approximate)	kg	7200 / 7700		7500 / 8000	
	Packing(LxWxH)	m			3.2 x 2.3 x 3.3	
	Floor space(LxWxH)	m			3.5 x 3.3 x 3.2	

Specifications subject to change without notice.

Standard accessories:

1. Direct-coupled drive XYZ axis
2. M.P.G
3. Fully splash guard& Pendant operation cabinet
4. Belt drive 10,000RPM
5. Spindle air blast
6. Spindle chiller unit
7. Spindle voice-proof
8. Auto lubrication system
9. Coolant system
10. Washing gun and air gun
11. Wash down nozzles
12. Halogen working lamp & alarm light
13. RS-232 interface+10M cables
14. Heat exchanger on electric cabinet
15. M30 auto power off
16. Leveling pads & adjusting screws
17. Tool box with adjusting tools
18. Operating manual and part list
19. Rigid tapping



Optional accessories:

1. Coolant ring around spindle system
2. Coolant through spindle system
3. C.T.S. with separate coolant tank
4. Upgrade spindle motor
5. Spindle taper BT50 (6000RPM)
6. Direct-coupled spindle(H type)
7. 12,000/15,000/24,000 RPM HSK
8. 16/20T carousel type ATC
9. 24/30T Arm type ATC
10. Chain type conveyor
11. Scraper type conveyor
12. Chip auger
13. Oil skimmer
14. Transformer
15. Voltage regulator
16. Seaworthy Packing
17. Gear spindle 5500RPM

SQUARE WAY MCV-86/116/127/147 BA/GA

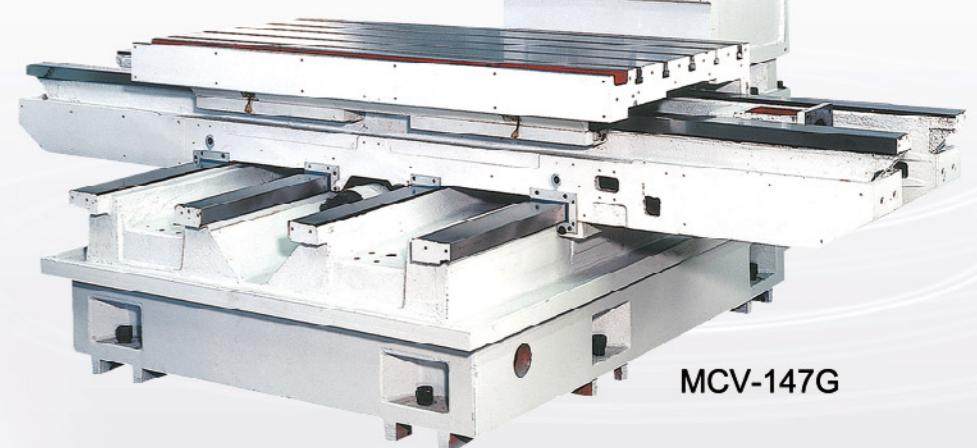


PERFECT JET



RECOMMENDED TYPES OF CHIP CONVEYORS

Cutting Shape	Material	Steelbelt Chip Conveyor	Screw Type Conveyor
Metallic Chip		<input checked="" type="radio"/>	<input checked="" type="radio"/>
Cast Chip		<input checked="" type="radio"/>	
Curly Aluminum Chip		<input checked="" type="radio"/>	<input checked="" type="radio"/>
Aluminum Chip		<input checked="" type="radio"/>	<input checked="" type="radio"/>
Non-Metallic Chip		<input checked="" type="radio"/>	

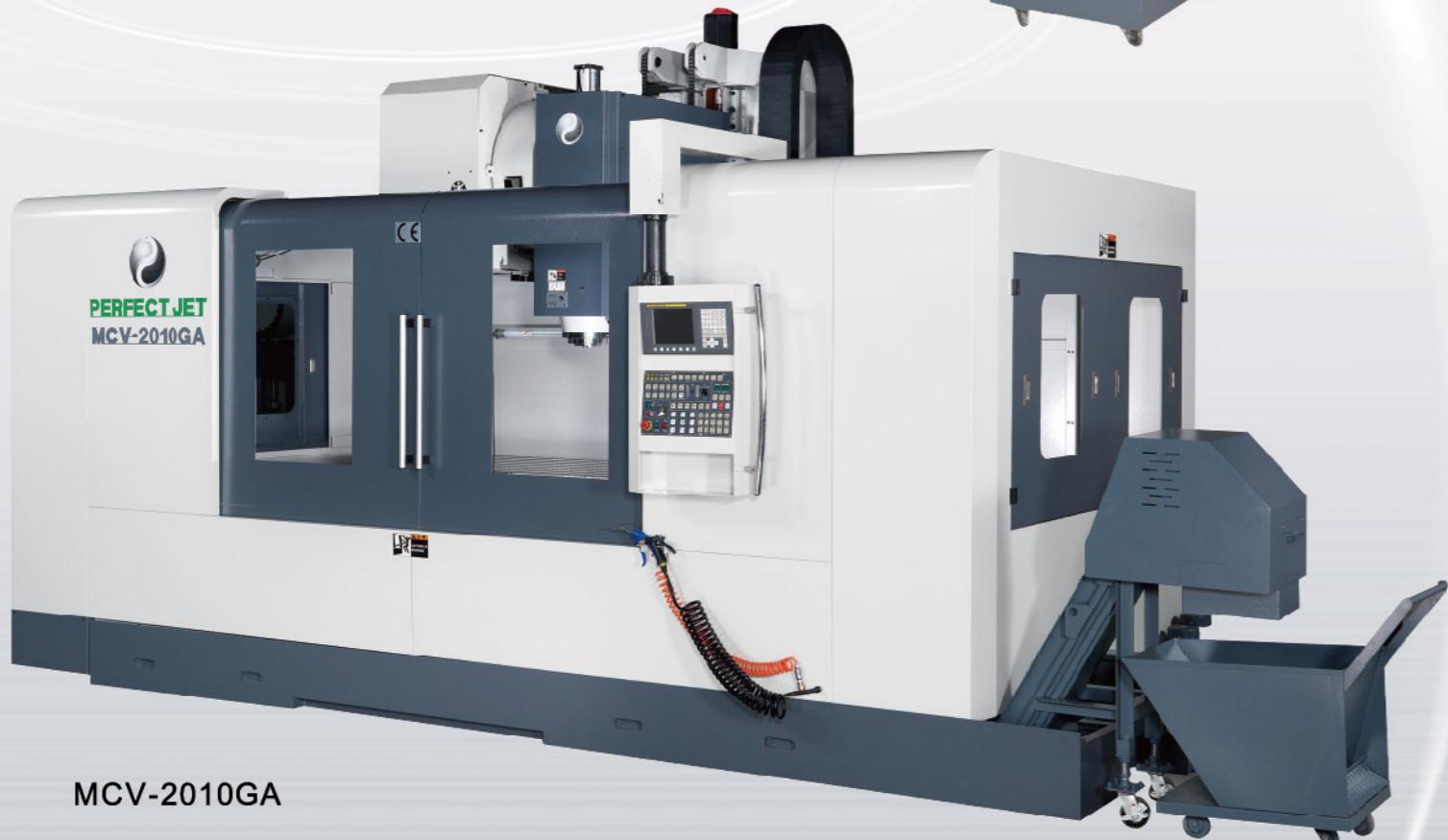


SQUARE TYPE

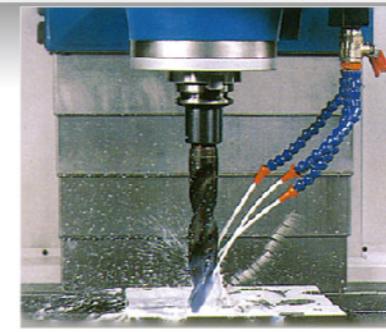
MCV-168/188/2010GA



MCV-168/188G

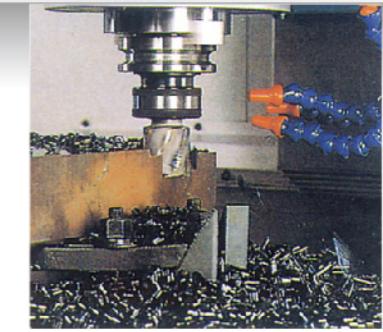


MCV-2010GA



Drilling capacity

Rapid tool(SECO)	φ55mm
Feed rate	150mm/min
Spindle speed	100rpm
Material	S45C(HRC 18°)
Material removal rate	356cc/min

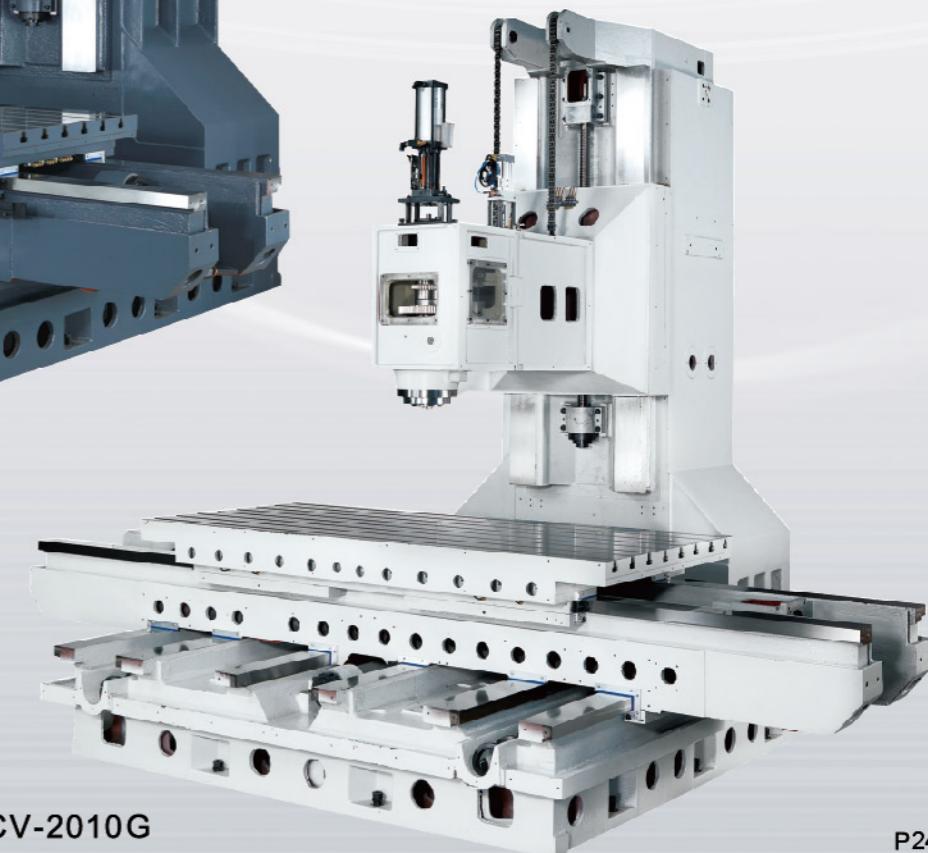


Milling capacity

Tool (OSG-WALTER)	φ50mm
Feed rate	150mm/min
Cutting depth	48rpm
Material	S45C(HRC 18°)
Material removal rate	360cc/min



MCV-168/188G



MCV-2010G

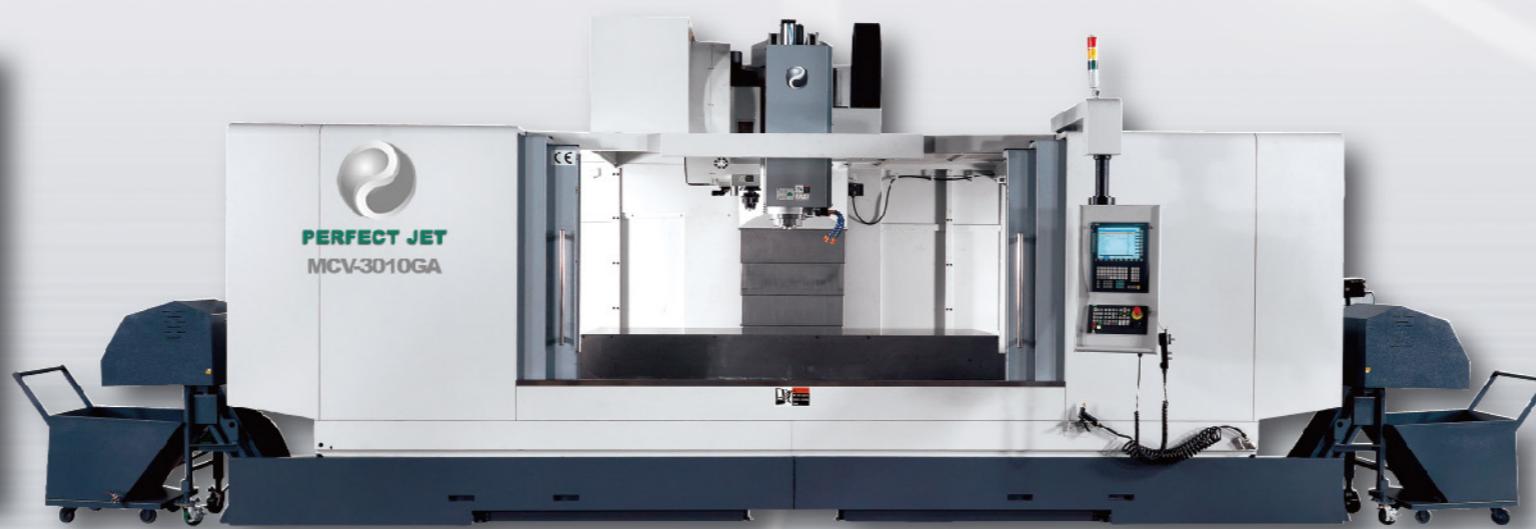
SQUARE TYPE MCV-2510/3010GA



PERFECT JET



MCV-2510/3010 Y axis front/rear has two ball screws and three chip augers.



MCV-2510/3010GA



Two separated telescopic covers stand side by side and enable to clean up chips

VERTICAY MACHINE CENTER

SQUARE TYPE SPECIFICATIONS:

	MODEL	Unit	MCV-86B	MCV-116B	MCV-127B(G)	MCV-147E	MCV-147B(G)	MCV-168B(G)	MCV-188B(G)	MCV-2010B(G)	MCV-2510G	MCV-3010G
Travel	X/Y/Z axis	mm	850/650/600	1100/650/600	1200/700/600	1400/700/600	400/700/700	1600/800/700	1800/800/700	2000/1000/800	2500x1000x800	3000x1000x800
	Spindle nose to table surface	mm	165-765 (G:140-720)		165-865 (G:70-670)			185-885			185-985	
	spindlecenter to column surface	mm	700		750			920			1080	
	X/Y/Z way span	mm	440/880/470		440/1076/470	440/1130/520		650/1600/700	650/2300/700		660/3400/700	
	Position/Repeatability accuracy	mm					±0.005					
	Ball bar accuracy	mm					≤0.01					
Spindle	Spindle taper				BT-40 / BT-50 (G)			BT-50 (G)				
	Spindle driving					Belt (Gear)						
	Spindle speed	rpm			10000 (5500)			6000 (OP. 8000) / 5500				
Controller	CNC controller					As customer's choice						
	Spindle motor	kW	11/15		11 / 15		15/18.5		18.5/22			
	X/Y/Z motor	kW	3.0 / 3.0 / 3.0(B)		3.5 / 3.5 / 3.5		4.5 / 4.5 / 4.5(B)		7 / a / 7(B)	7/7 x 2/7(O)		
Table	Table size(WxL)	mm	1050 x 600	1300x600	1450x600	1450x680	1700x815	1900x850	2200x1000	2700x1000	3100x1000	
	T-slots(Width x No. x Pitch)	mm			18x5x125			22x6x125	22x8x125		22x8x125	
	Table load	kg	800		1000	1200	1400	2000	2200	3000	3200	4000
Feed	Rapid feed rate X/Y/Z	mm/min			15 / 15 / 15			16 / 16 / 16				
	Ballscrew O/D	mm	φ40 x φ40 x φ40		45x45x45		φ50 x φ50 x φ50		φ63x φ50 x φ50			
	Ballscrew pitch O/D	mm			12			10		10		
	Cutting feed rate	mm/min				1-5						
	Min. input increment	mm				0.001						
Magazine	Max. tool dia./tool adjacent	mm			φ 77.5 (φ 150)			φ 110 (φ 220)				
	Max. tool weight BT-40(BT-50)	kg			7			15				
	Max. tool length(Arm/Carousel)	mm			300 / 250			350 (BT-50)				
	Tool selection				Automatic random (Arm type)							
	Tool capacity(Arm/Carousel)			24 ~ 30 / 16 ~ 20		Arm 24 ~ 32 ~ 40						
	Pull stud	degree				45°						
	Tool changing time(T. to T.)	sec			2.5			4.5				
Others	Spindle oil cooler	l				40						
	Lubrication capacity	l				2						
	Heat exchanger	watt				40						
	Coolant tank	l		250		280		300				
	Pneumatic unit	kg/cm ²			6							
	Power	kVA		25		30		45		50		
Weight & Dimension	N.W./G.W.(Approximate)	kg	7000/7500	7500/8000	8500/9000	10000/11000	14000/15000	15000/16000	15500/16500	20000/21500	23000/24500	25000/26500
	Packing(LxWxH)	m		2.4 x2.3 x 2.6		3.5 x 3.3 x 2.7		4.7x2.3x3.3	5.4x3.3x3.5	6.43x3.3x3.5	7.6x3.3x3.5	
	Floor space(LxWxH)	m		2.4 x 2.3 x 2.9	3.5 x 2.3 x 2.6	4.6 x 3.3 x 3.3		7.4x3.6x3.6	8.1x4.2x3.8	9.1x4.2x3.8	9.7x4.2x3.8	

Specifications subject to change without notice.

Standard Accessories:

1. Direct-coupled drive XYZ axis
2. M.P.G.
3. Fully splash guard & Pendant operation cabinet
4. Belt drive spindle 10,000RPM
5. Spindle air blast
6. Spindle chiller
7. Spindle sound-proof
8. Auto lubrication system
9. Coolant system
10. Air gun & washing gun
11. Wash down nozzles
12. Halogen working lamp & alarm light
13. RS-232 interface + 10M cables

Optional Accessories:

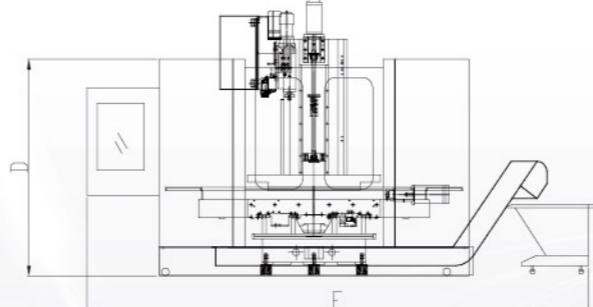
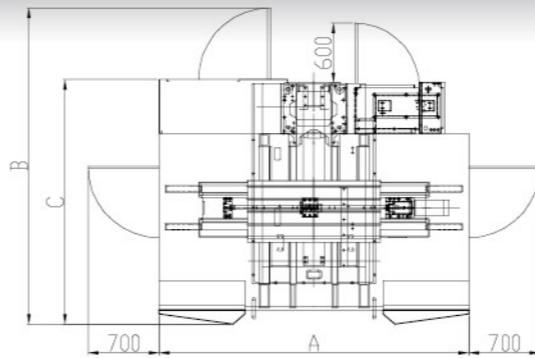
14. Heat exchanger on electric cabinet
15. M30 auto power off
16. Leveling pads and adjusting screws
17. Tool box with adjusting tools
18. Operating manual and part list
19. Rigid tapping
20. Rulon slide-way
1. Coolant ring around spindle
2. Coolant through spindle
3. C.T.S. with separate coolant tank
4. Upgrade motor
5. Spindle taperBT-50
6. Direct-coupled spindle (H type)
7. 12,000/15,000/24,000 RPM HSK
8. 16/20T Carousel ATC
9. 24/30T Arm ATC
10. Chain type conveyor
11. Scraper type conveyor
12. Chip auger
13. Oil skimmer
14. Transformer
15. Voltage regulator
16. Seaworthy Packing
17. Gear (G) 5500 RPM



PERFECT JET

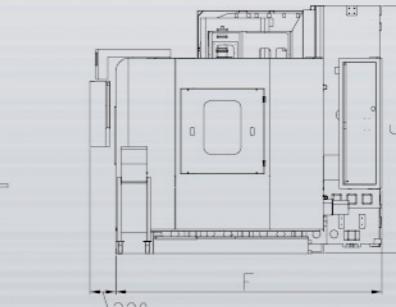
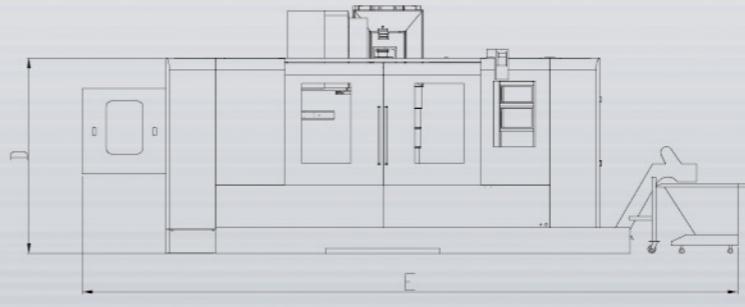
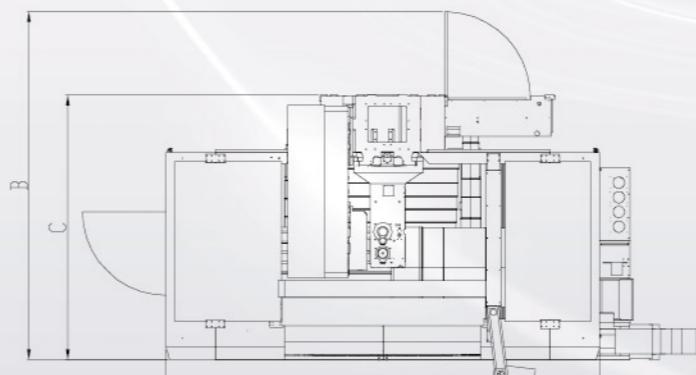
MCV-86B
MCV-116B
MCV-127B(G)
MCV-147B(G)

model	part	A	B	C	D	E	F	G
MCV-86B		2880	2680	2380	2185	3000	2380	3100
MCV-116B						4950		
MCV-127B	3030	3100	2400	2120		5560	2400	3100
MCV-147B	3380							



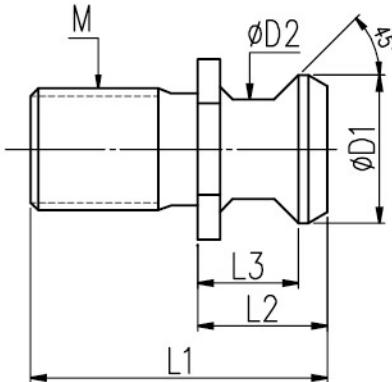
MCV-168B(G)
MCV-188B(G)
MCV-2010B(G)
MCV-2510B(G)

model	part	A	B	C	D	E	F	G
MCV-168B		4660	3540	2300	2330	7360	3030	3600
MCV-188B								
MCV-2010B	5310	4270	3250	2400		8050	3300	3800
MCV-2510B	6310	4270	3350	2400		9050		
MCV-3010	7600	4270	3350	2400	9700	3350	3800	

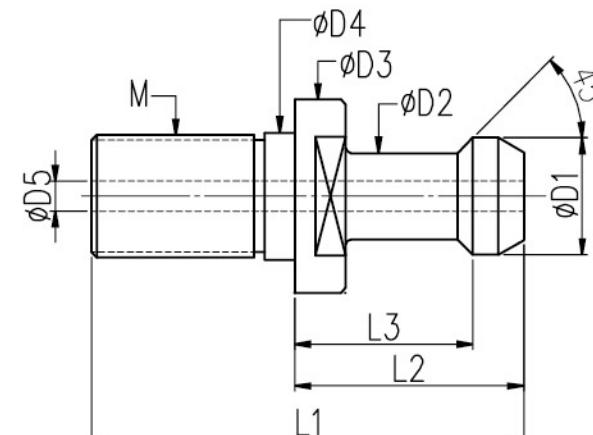
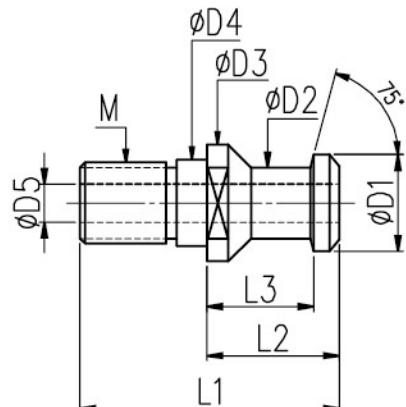
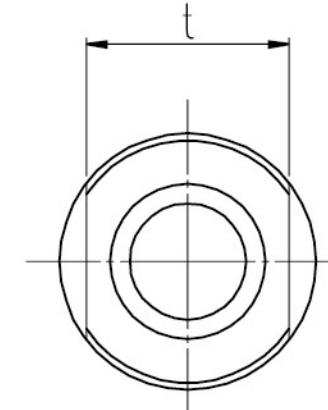


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VERTICAL MACHINE CENTER



Model No.	D1	D2	L1	L2	L3	M
CAT40-A	0.74	0.49	1.5	0.64	0.44	5/8"-11
CAT50-A	1.14	0.82	2.3	1.0	0.7	1"-8



Model No.	D1	D2	D3	D4	D5	L1	L2	L3	M
DIN69872A-16	19	14	23	17	7.5	54	26	20	M16x2.0
DIN69872B-16					4				
DIN69872A-24	28	21	36	25	11.5	74	34	25	M24x3.0
DIN69872B-24					6				

Model No.	D1	D2	D3	D4	D5	L1	L2	L3	M	t
BT40	15	10	23	17	X	60	35	28	M16x2.0	19
BT40-CTS					4					
BT50	23	17	38	25	X	85	45	35	M24x3.0	30
BT50-CTS					6					



According to value velocity, properly apply both cutting feed rate and spindle speed to prolong tool lifespan

$V = \pi DN$ (V: velocity, π : 3.14, D: tool diameter, N: spindle speed)

Gear(G) \ MCV(B)	Linear Way		V Side Way	Square Way
Model	M5、M7	M8、M10、M11	85-100	127、168、2010 3010 147、188、2510
Thread type MM	M16XP2	M24XP3	M30XP3.5	M48XP5
Spindle speed RPM	200	132	106	66

1. Drilling terms: approx. HSSHRC50, twist drill,
Velocity: 30m/min, material: medium carbon steel

Model	M5、M7	M8、M10、M11	85-100	127、168、2010 3010 147、188、2510
Drilling dia MM	φ20	φ28	φ40	φ50
Feed rate MM/REV	0.05	0.08	0.15	0.15
Cutting feed MM/MIN	60	80	130	140
Spindle speed RPM	478	340	239	191

2. Drilling terms: tungsten steel rapid drill,
Velocity: 70m/min, material: medium carbon steel

Model	M5、M7	M8、M10、M11	85-100	127、168、2010 3010 147、188、2510
Drilling dia MM	φ20	φ28	φ40	φ50
Feed rate MM/REV	0.08	0.12	0.15	0.15
Cutting feed MM/MIN	80	100	180	200
Spindle speed RPM	1110	796	557	445

3. Milling terms: face milling cutter, tungsten steel cutter, 2 flutes,
Velocity: 70m/min, material: medium carbon steel

Model	M5、M7	M8、M10、M11	85-100	127、168、2010 3010 147、188、2510
Milling type MM	Φ100X4flutes	Φ100X4flutes	Φ100X4flutes	Φ100X4flutes
Cutting feed rate MM/MIN	500	500	500	500
Cutting width MM	100	100	100	100
Cutting depth MM	2	4	6	7.2
Spindle speed RPM	222	222	222	222
Removal rate CC/MIN	100	200	300	360

4. Side milling terms: straight milling cutter, tungsten steel blades,
Velocity: 70m/min, material: medium carbon steel

Model	M5、M7	M8、M10、M11	85-100	127、168、2010 3010 147、188、2510
Milling type MM	Φ50X6flutes	Φ50X6flutes	Φ50X6flutes	Φ50X6flutes
Cutting feed rate MM/MIN	100	100	100	100
Cutting width MM	50	50	50	50
Cutting depth MM	20	40	60	72
Spindle speed RPM	445	445	445	445
Removal rate CC/MIN	100	200	300	360

