



PERFECT JET

TRAVELING COLUMN VERTICAL/HORIZONTAL MACHINE CENTER

VERTICAL MACHINE CENTER

DEEP HOLE DRILLING & BORING MACHINE

FLOOR TYPE BORING & MILLING MACHINE

CNC & CONVENTIONAL BED-TYPE MACHINE

DOUBLE COLUMNS MACHINING CENTER

CUSTOMIZED MACHINE



PERFECT JET

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品正機械 PJM

PING JENG MACHINERY INDUSTRY CO., LTD

深孔鉗鑽加工機

DEEP HOLE DRILLING (BORING) MACHINE

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

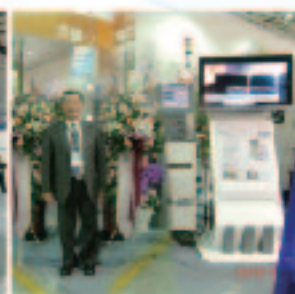
2007~Launch:MV-107P&107U , MV-64P&64U. Italy well-known machinery dealer ask to be the exclusive agent for Moving Column serial and sign up 10 machines per year quota.

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 地理位置 全視圖



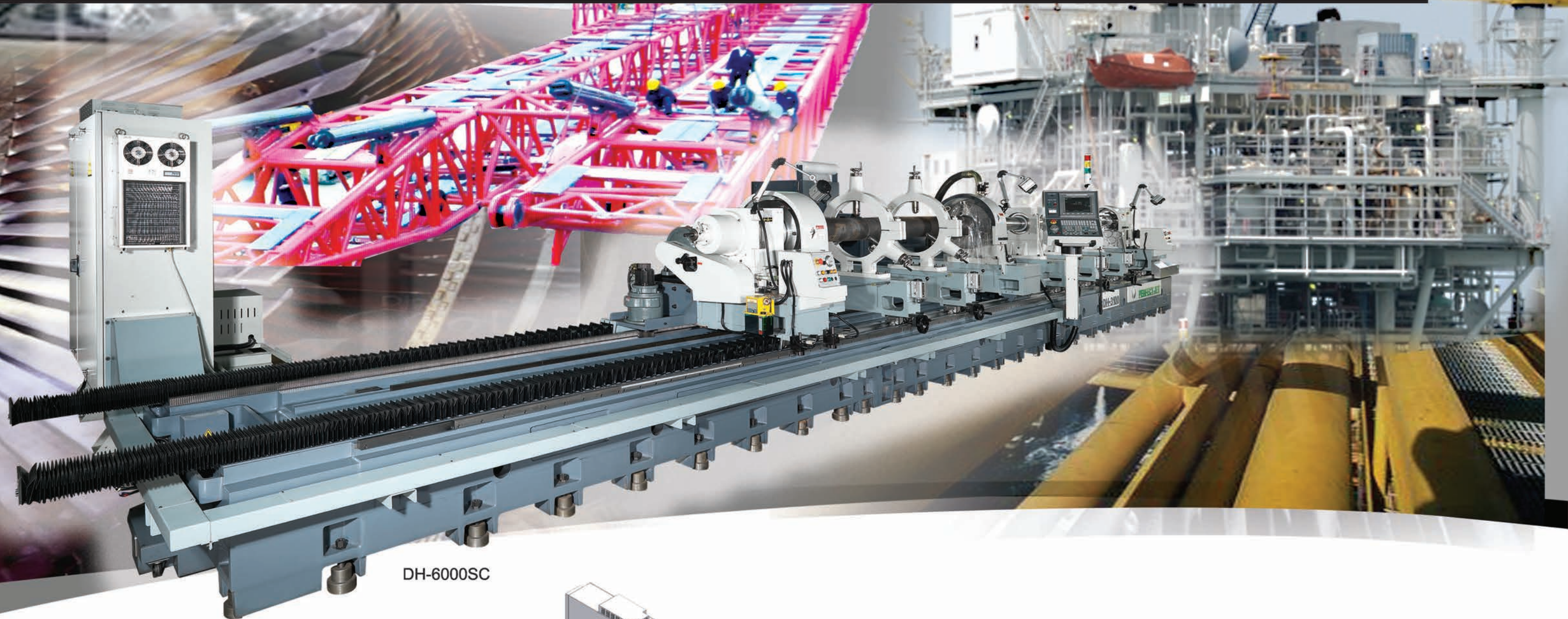
DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鉗加工機



PERFECT JET

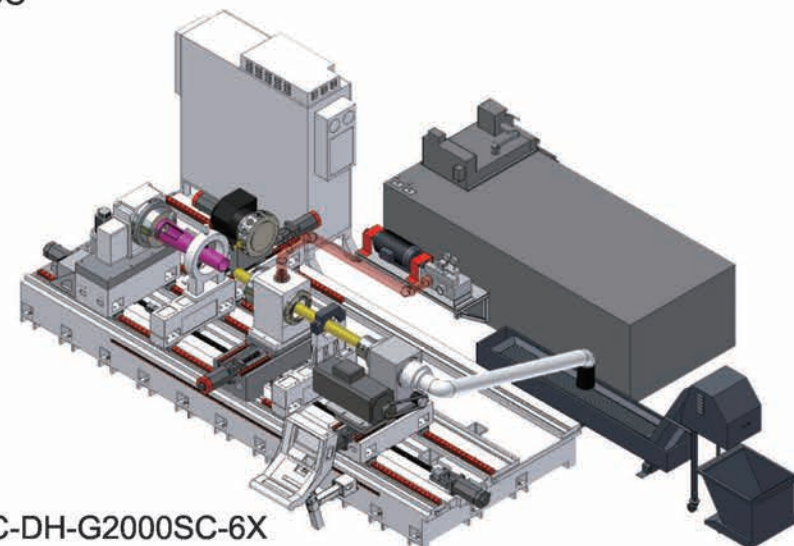
Designed and Built with Excellent Quality, Efficiency and Accuracy



DH-6000SC



DH-3100SC



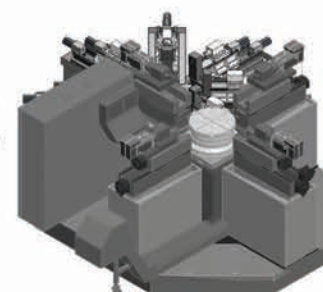
CNC-DH-G2000SC-6X



MGD-610



MGD-1525



PGD-4X 4軸

DEEP HOLE DRILLING (BORING) MACHINE

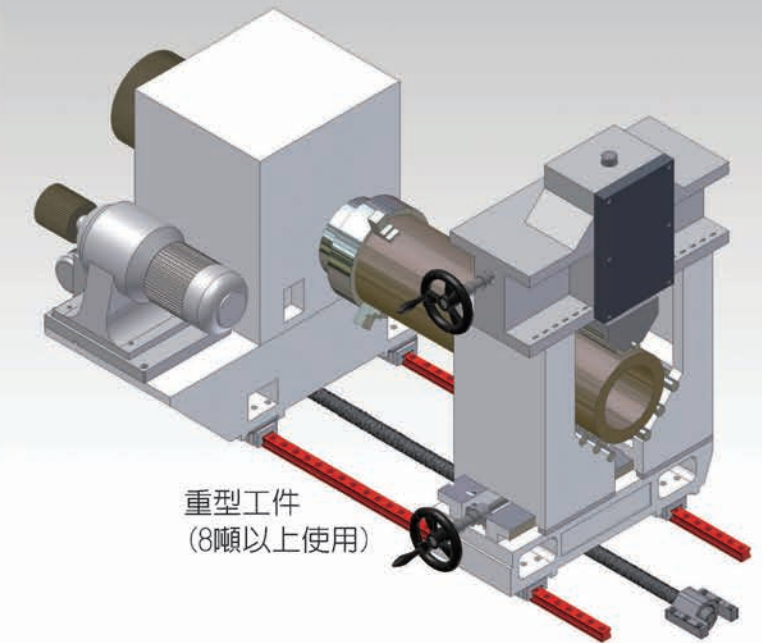
深孔鏜鉗加工機DH系列



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CNC-DH-3000SC~16000SC



重型工件
(8噸以上使用)



CNC-DH-3100SC~6100SC

DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜加工機DH系列

CNC-DH-3000SC~16000SC



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刀桿支撐座省力輕便操作只要0.3KG之力量可移動
Tools holder can be easily moved by 0.3KG force



高壓泵40HPx2=80HP (3000型以上均相同)

刀具軸：齒輪模數6.5
Main spindle: gear modulus

高速
High range 300-1200rpm

低速
Low range 60-300rpm

馬力：
Spindle power:
60HP-100HP-200HP

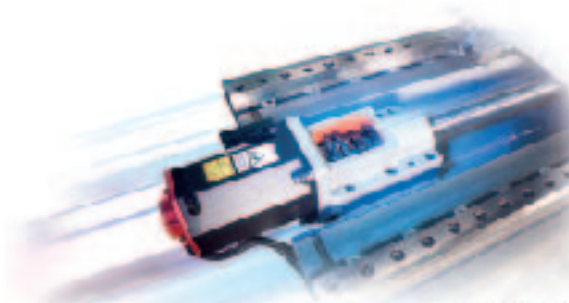


Module

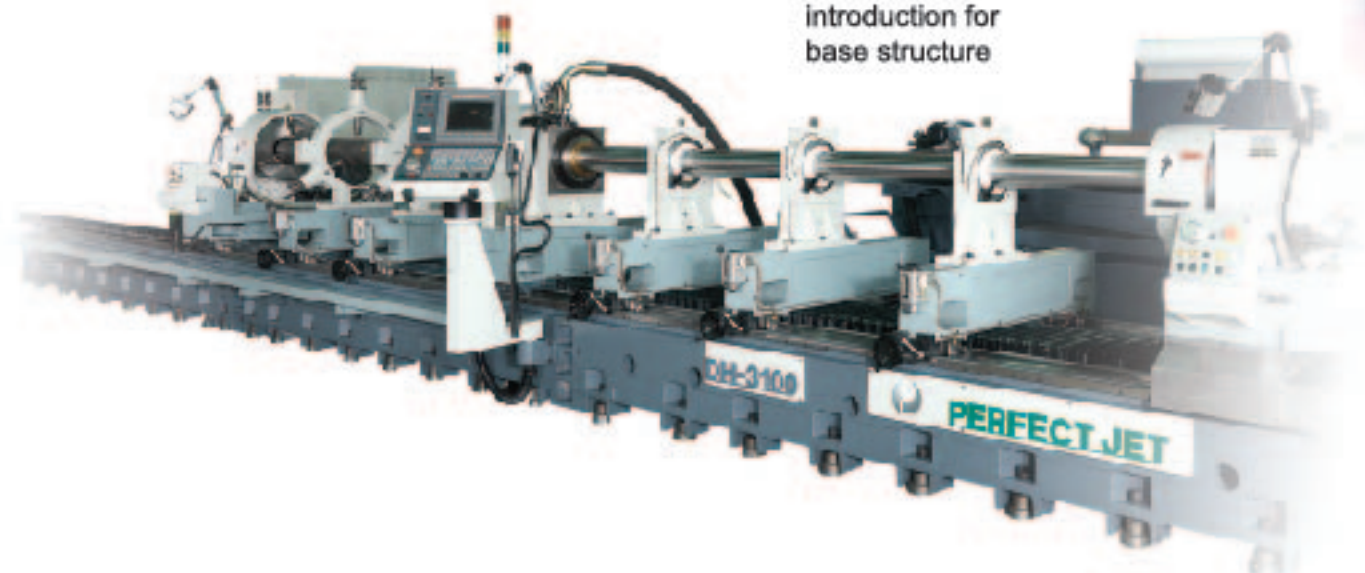
底座強度介紹
introduction for
base structure



工件軸快速移動是用排齒與伺服馬達
Using bevel gear and servo motor
to move jaw holder rapidly



XYZ滾柱線軌M55:
Roller type guide way



Standard Accessories: 標準配件

1. Direct drive Z 直結傳動
2. M.P.G. Z 手動輪
3. Chip auger+cart 捲屑機+鐵屑車
4. Gew spindle 1,000/1,250rpm 齒輪主軸轉速
5. Paper filter & magnetic separator 紙帶、磁鐵過濾機
6. Wool filter 羊毛氈過濾器
7. Automatic lubrication system 自動潤滑系統
8. Coolant system 冷卻系統(2件)
9. Air gun 風槍
10. Halogen working lamp & alarm light 三色警示燈、工作燈
11. RS-232 interface+10M cable RS-232 介面+10米傳輸線
12. Air conditioner 冷氣機(電器箱)
13. M30 auto power off 自動斷電系統
14. Leveling pads & adjusting screws 水平墊塊與水平螺栓
15. Tool box with adjusting tools 工具箱與調整工具
16. Operating manual & part list 操作手冊與零件表

Optional Accessories: 選購配件

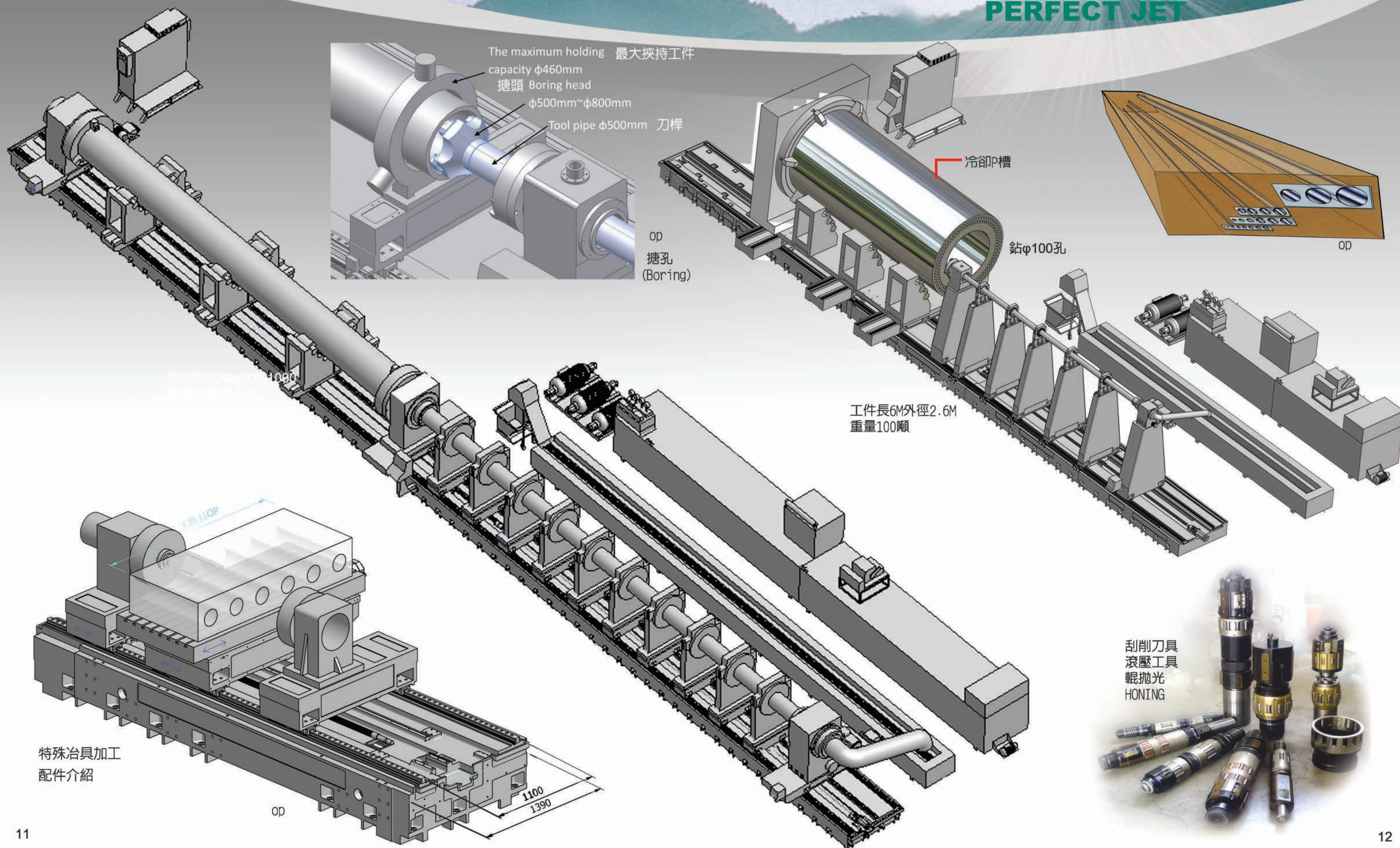
1. Upgrade spindle motor 加大刀具馬達
2. Gundrills 鑽頭
3. Start bush 主軸導套
4. Whip guide 擋油黑膠套
5. Moving whip guide 支撐白膠套
6. Drill grinder 磨刀機
7. Oil cooler 油溫冷凍機
8. Voltage regulator 穩壓器
9. Transformer 變壓器

DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鉗加工機 DH系列



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DEEP HOLE DRILLING (BORING) MACHINE

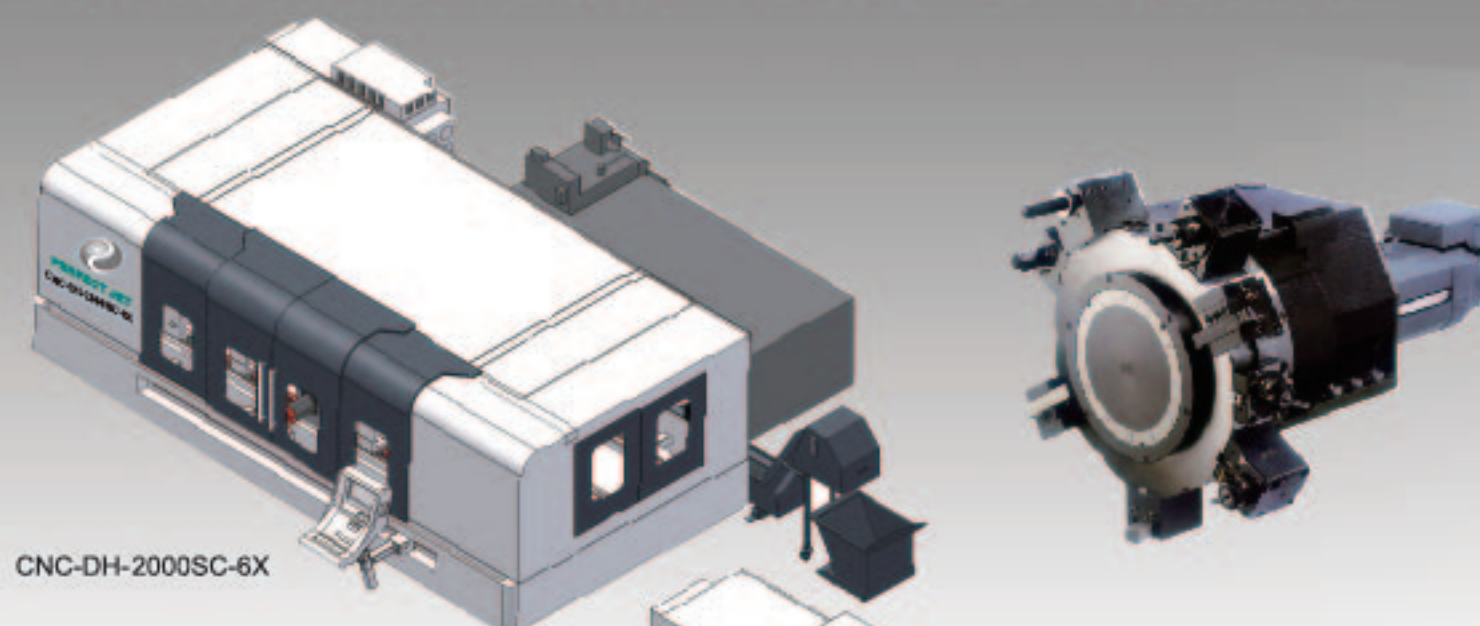
深孔鏜鑽加工機

CNC深孔、鑽、鏜、車、銑、磨、複合加工機

CNC-DH-2000SC/6000SC-12000SC-6X系列



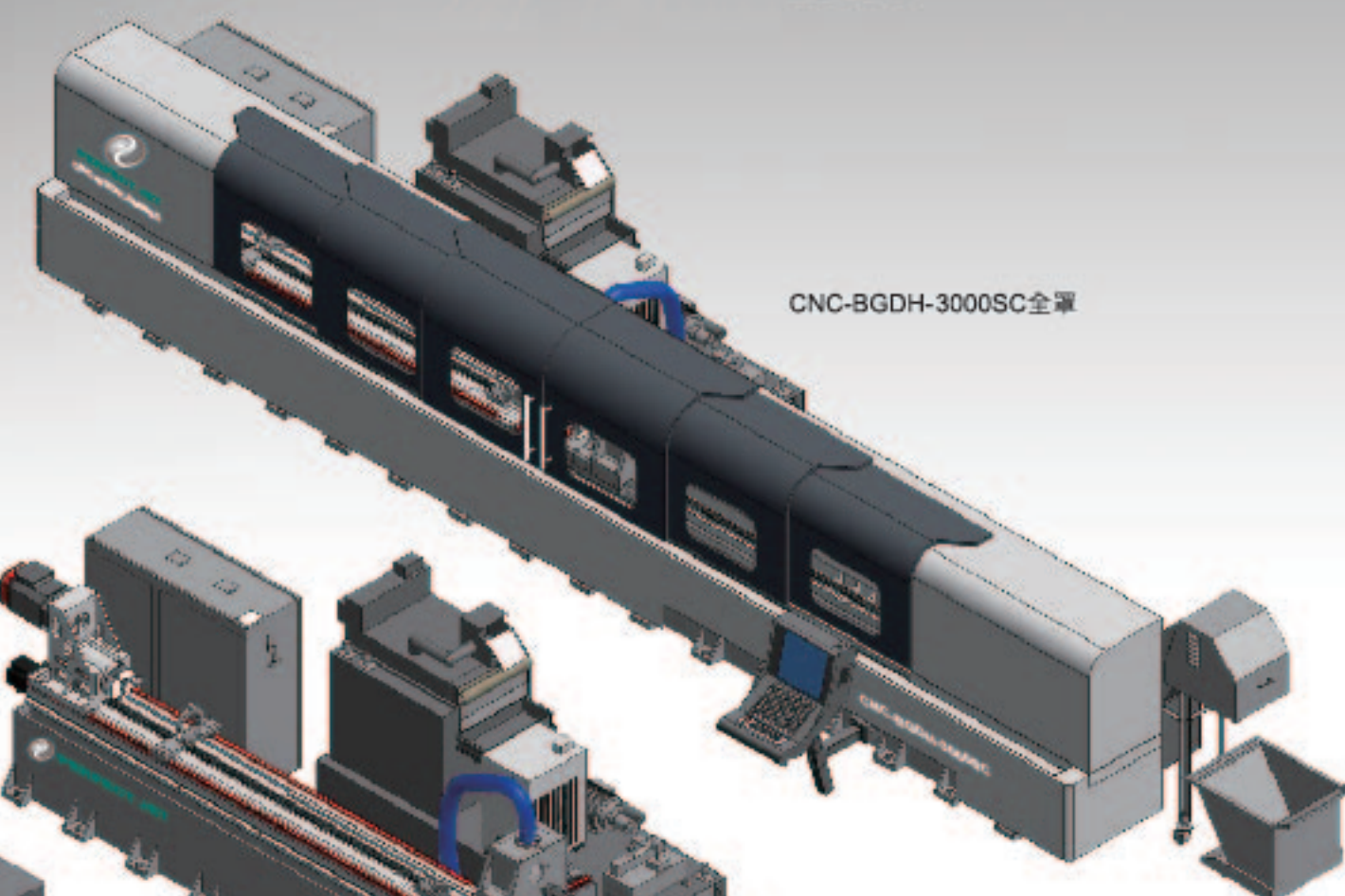
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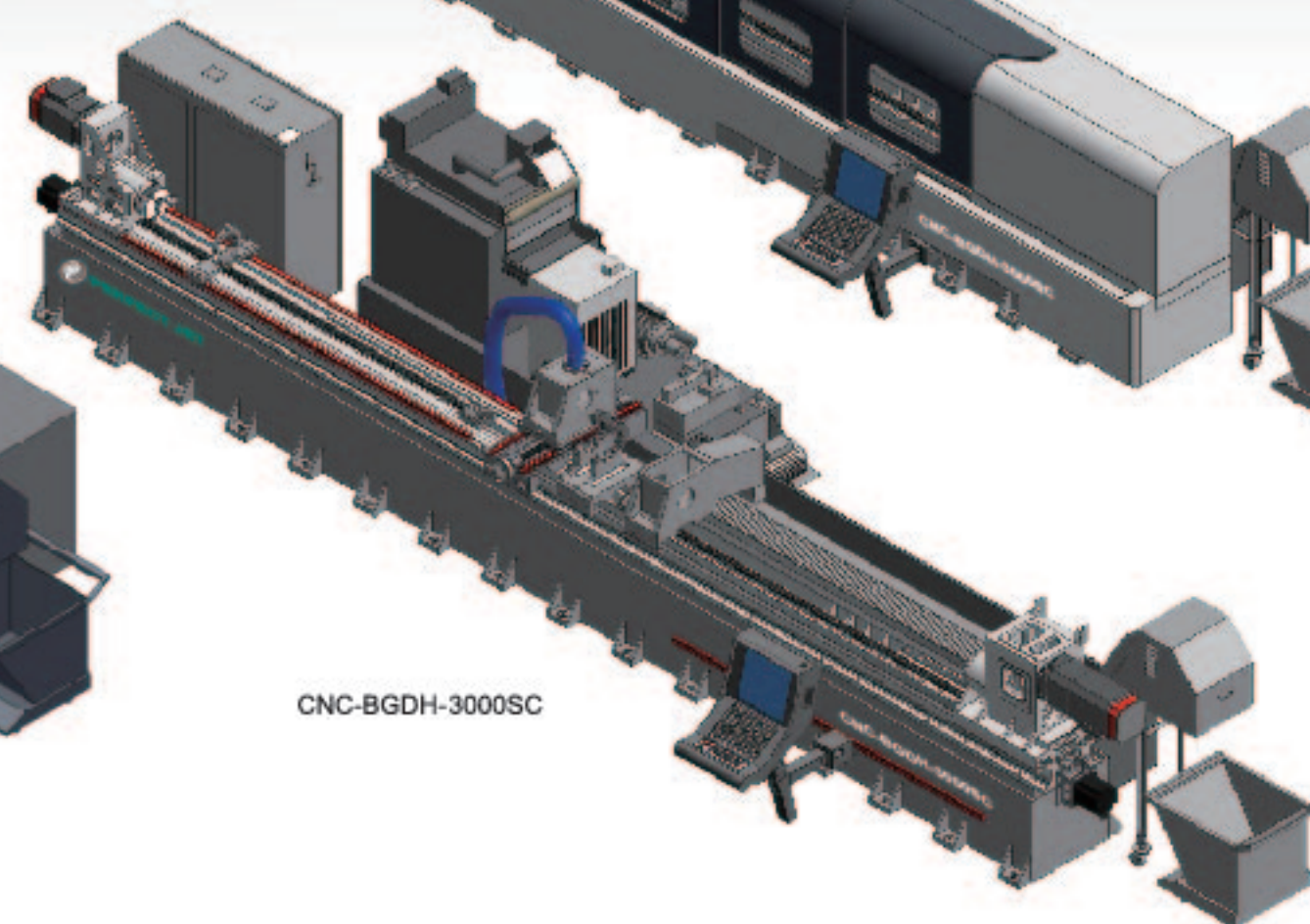
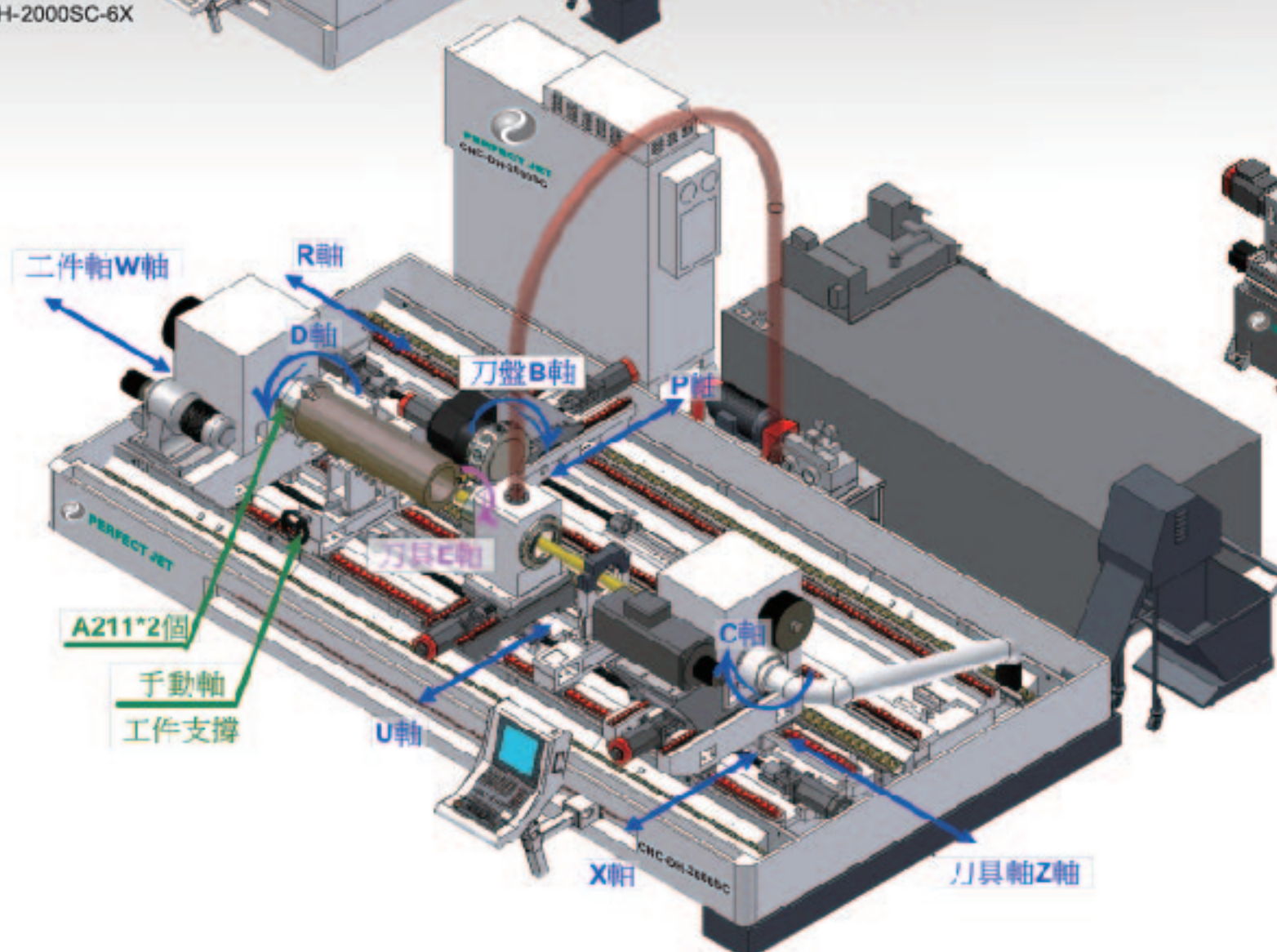
CNC-DH-2000SC-6X

CNC深孔、鑽、鏜、加工機(小炮鑽系列)

CNC-BGDH-3000SC/9000SC 系列



CNC-BGDH-3000SC全罩



CNC-BGDH-3000SC

DEEP HOLE DRILLING (BORING) MACHINE

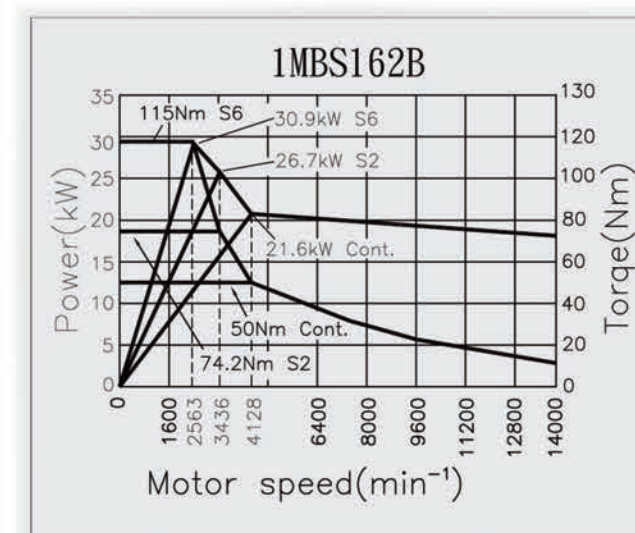
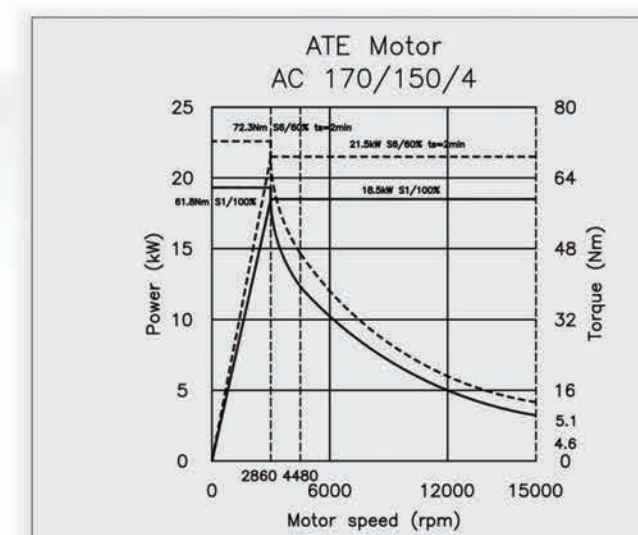
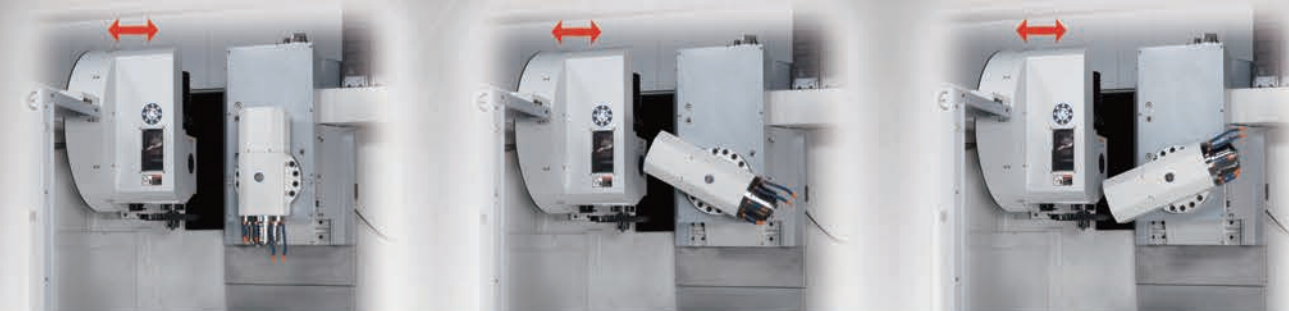
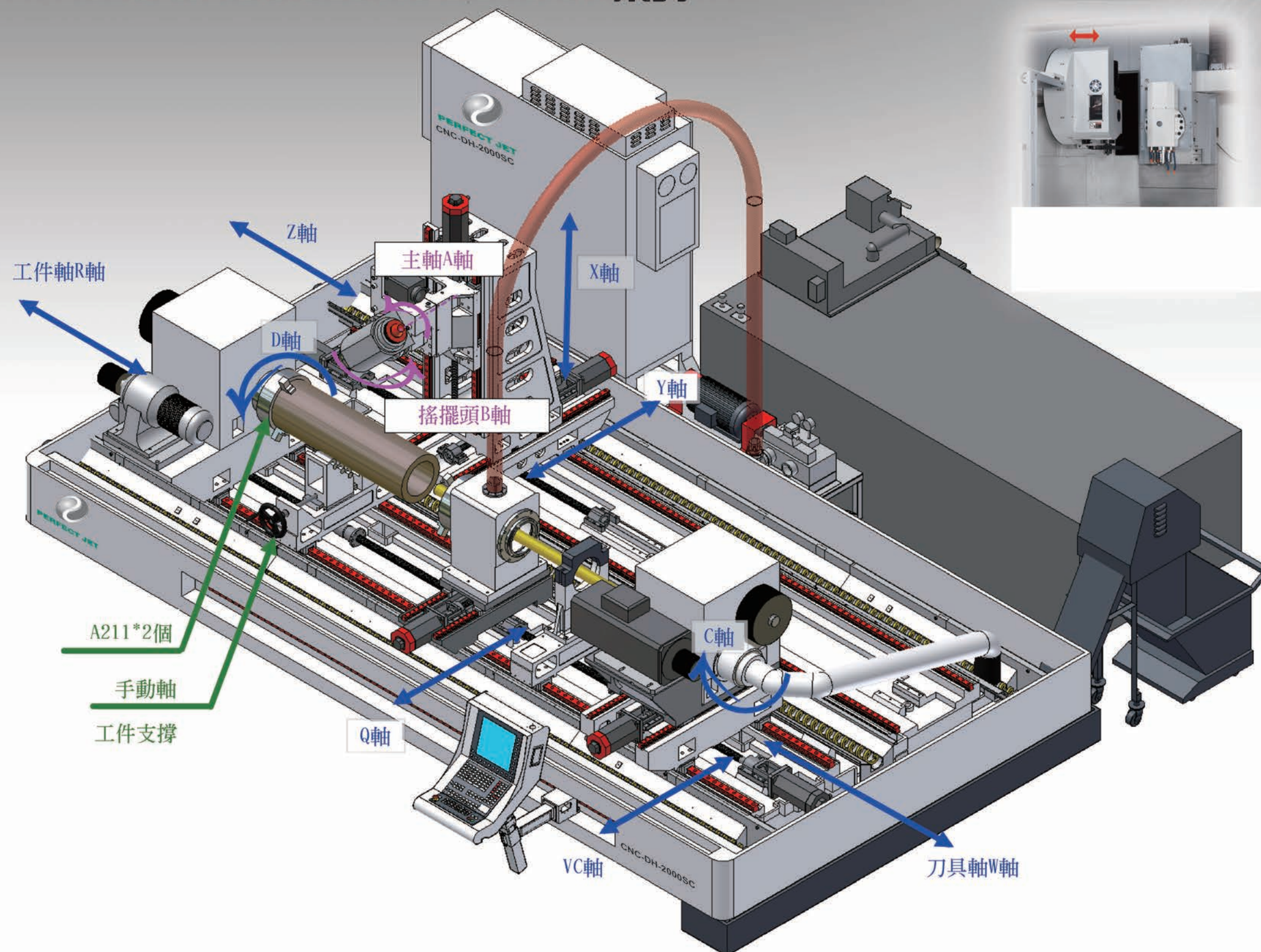
深孔鏜鉗加工機系列



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CNC深孔、鉗、鏜、車、銑、磨、複合加工機

CNC-DH-2000SC/12000SC-8X系列



DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鉗加工機 DH/BGDH 系列



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	Model: CNC	unit	DH3100SC	DH6000SC	DH12000SC	BGDH-3000SC	BGDH-9000SC	DH-2000SC-6X	DH-6000SC-6X	DH-12000SC-6X	DH-2000SC-8X	DH-12000SC-8X		
Travel	Drilling depth / Workpeice length 鑽深/工件長度	mm	3100 / 6000	6000 / 6000	12000 / 12000	3000	9000	2000	6000	12000	2000	12000		
	X/Y/Z軸	mm	Z:3100	Z:6000	Z:12000	Z:3000	Z:9000	X:400 Z:3500	X:400 Z:7000	X:400 Z:14000	X:560 Y:500 Z:3500	X:560 Y:500 Z:17000		
	U/V/W軸	mm	W:5000	W:5000	W:10000	W:10000	W:2000	U:400 W:2700	U:400 W:7000	U:400 W:14000	V:400 W:2700	V:400 W:15000		
	P/Q/R軸	mm	NIL					P:500 R:3500	P:500 R:12000	P:500 R:24000	Q:400 R:2300	Q:400 R:13500		
行程	A/B/C/D/E軸	mm	(o.p. C:1°)											
	Ballscrew diameter (Z axis)	mm	Z:≤4M ϕ 63 , ≥4M ϕ 80								≥12M GEAR RACK		Z:≤4M ϕ 63 , ≥4M ϕ 80, ≥12M GEAR RACK	
	Guideway span & Base width底座軌道/寬度	mm	1100 / 1400				750 / 1000			1960 / 2200				
	Position/Ball bar accuracy定位/循環精度	mm	(o.p. 0.01)										0.01 / ±0.005	
Spindle	Spindle transmission主軸傳動		GEAR Hi/Low module 6.5					GEAR Hi/Low module 5.0						
	Spindle max. speed主軸轉速	rpm	3~30					3~30(o.p. 1300)				5~30		
	Spindle nose to way/swiving主軸到軌道/旋徑	mm	900 / ϕ 1300				530 / ϕ 900							
	D axis index min.最小分度角	degree	(o.p. 1°)											
工件主軸	Clamping chuck夾盤尺寸	mm	ϕ 630 X 2 (o.p. ϕ 800x2 3/4 jaws)				ϕ 500x2 (o.p. ϕ 630x2 3 jaws)							
	Motor power馬力	kw	15 o.p. 20~150 20:1				15 o.p. 20~75 20:1							
	Work piece weight 工件重量	kg	20000 (o.p.120000)				4500	12000	3000	9000	18000	3000	18000	
	Motor power馬力 C	kw	45 O.P. 75~150				25 O.P. 45							
Toolspindle	Tool position刀具分度角度	degree	(o.p. 1°)											
	Spinde max. speed.最高轉速	rpm	60--1000 (o.p.1250)				30--1300(o.p.1700)			1300 / 3000 power turret			1300 / 15000(swiving head搖擺頭)	
	B axis index min.分度範圍	degree	NIL										±110 / 0.001	
	A axis spindle motor A主軸功率	kw	NIL										18	
刀具主軸	C axis index min.最小分度角	degree	(o.p. 1°)											
	Spindle taper tooling主軸刀具型態		BTA										BTA / HSK-T63(o.p.T100)	
	CNC controller		PC BASE					828D (O.P. 840D)				840D		
	X/Y/Z motor軸 伺服馬達	kw	Z:4.4 10:1					X:3 Z:4.4 10:1				X:5 Y:3 Z:9		
控制器	U/V/W motor軸 伺服馬達	kw	W:7.5 100:1				W:4.4 10:1			U:3 W:4.4 10:1			V:3 W:4.4 10:1	
	P/Q/R motor軸 伺服馬達	kw	NIL					P:3 R:7.5				Q:3 R:7.5 100:1		
	A/B/C /D/E軸 變頻馬達	kw	(O.P. C:15 20:1)					B:3 E:7.5				B:2 C:15 20:1		
Feed	X/Y/Z Feed/Min. input increment	M/mm	3.0m/min 0.01mm											
	U/V/W Feed/Min. input increment	M/mm	3.0m/min 0.01mm											
	R/S/T Feed/Min. input increment	M/mm	3.0m/min 0.01mm											
	A/B/C Feed/Min. input increment	M/mm	3.0m/min 0.01mm											
Capacity	Max. drilling dia.最大鑽孔徑	mm	ϕ 38~ ϕ 250 (o.p. ϕ 250~ ϕ 400)				ϕ 25~ ϕ 100(o.p. ϕ 125)							
	Max. tool weight 最大刀具重量	kg	2000 (o.p.3000)				1000(o.p.1500)							
	Max. tool length.最大刀具長度	mm	5017	8016	19000	4500	11000	2700	8000	15000	2700	15000		
	Tube machining管材加工能力	mm	800				500							
Magazine	Max. tool dia.最大直徑	mm	NIL					ϕ 25				ϕ 75		
	Max. tool weight /length最大刀具重量/長度	mm	NIL					NIL				8 / 300		
	Tool selection/ capacity選刀方式/刀庫容量		NIL					12 T power turret				24 T arm type		
	Pull stud刀把拉栓		NIL					BMT 75				HSK-T63(O.P.100)		
刀庫	Tool change time(T to T)換刀時間	sec.	NIL					0.3				2.5(T to T 10)		
Other	High pressure pump高壓泵浦功率	kw	30x2 (o.p.30-60x2)				20 x 2 (o.p.30 x 2)							
	High pressure 壓力	kg/cm ²	5~80											
	High pressure oil delivery供油量	l/min	210~840				150~600							
	Oil tank油箱容量	L	2000Lx4=4000L+4000L (o.p.XL)				2000Lx2=4000L			2000LX3=6000L	2000LX2=4000L	2000LX3=6000L		
其它	Lubrication capacity潤滑能力	L/W	2L X 2				4 L X 2			4 L X 3				
	Chiller capacity(Electrical box)	kcal/hr	1300x2 (o.p.2000 for oil tank)											
	Pneumatic unit空壓單元	kg/cm ²	6(o.p.XL)											
	Power電力	KVA	150	250	270	100	120	125		150	137	150		
Dimension	N.W./G.W.(Approximate)淨重/毛重	ton	36/40	50/55	80 / 90	25 / 30	35 / 40	45 / 53	60 / 70	100 / 115	45 / 55	104 / 120		
	Floor space(LxWxH)佔地面積	m	17X7X2.5	20X7X2.5	29x7x2.5	17x5x2.5	21x5x2.5	7x8x2.5	20x8x2.5	29x8x2.5	7x8x2.8	29x8x2.8		

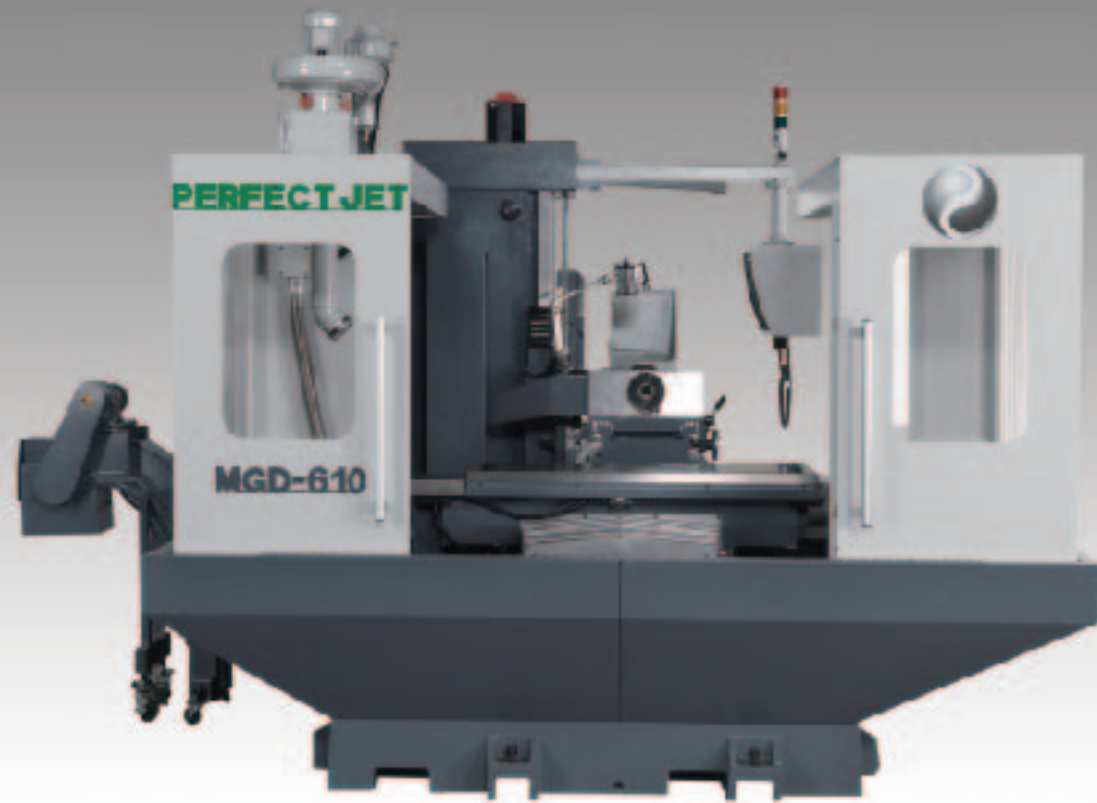
DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜加工機 MGD系列

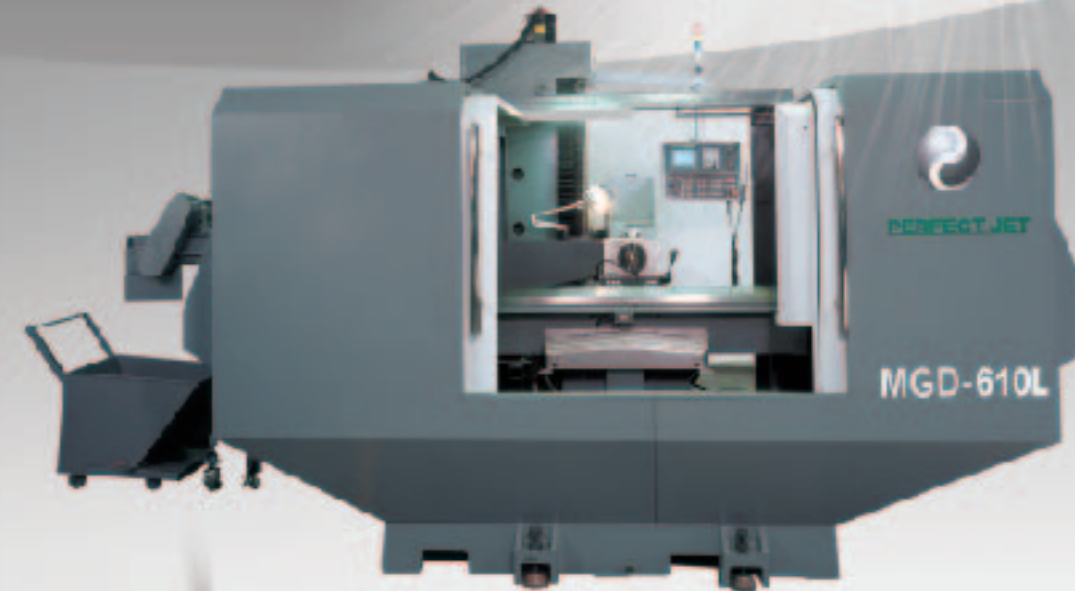
MGD-610/1016



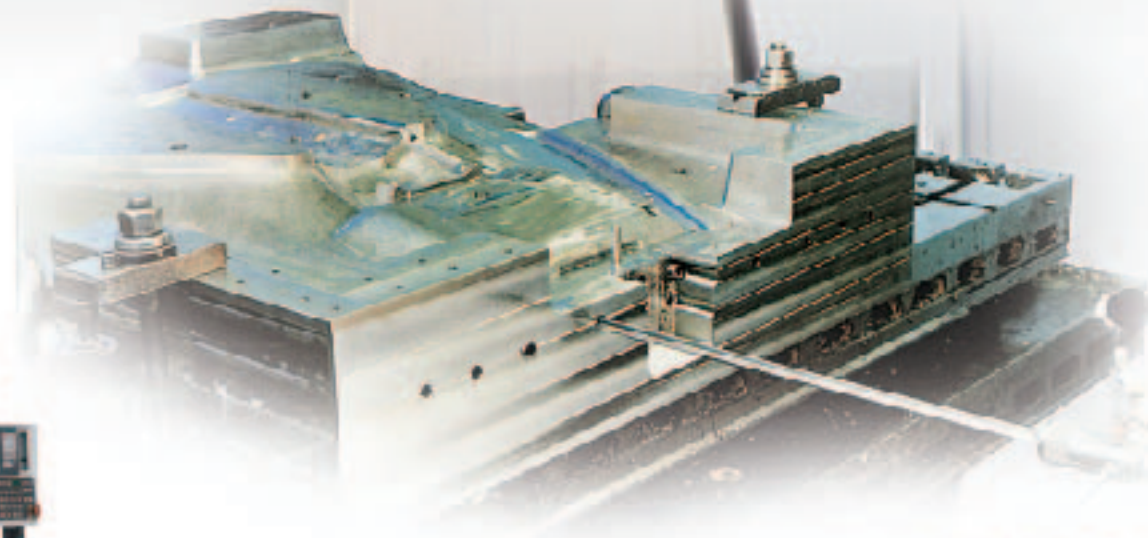
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MGD-610



MGD-610L



MGD-610



MGD-1016

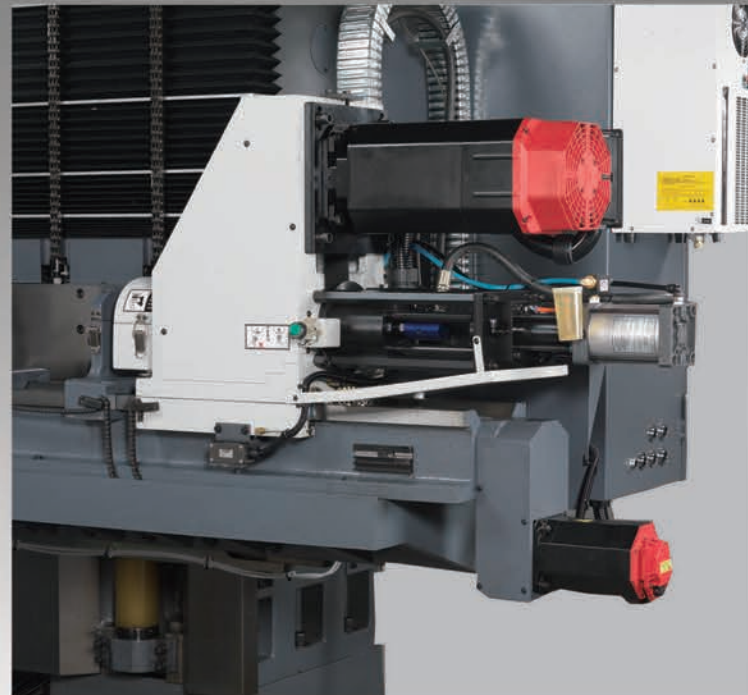
DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜加工機MGD系列

MGD-1515/1520/1530系列

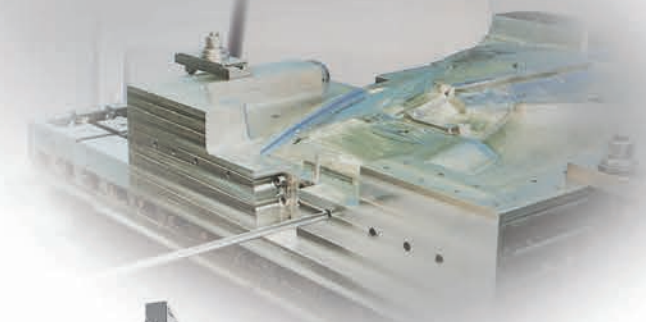
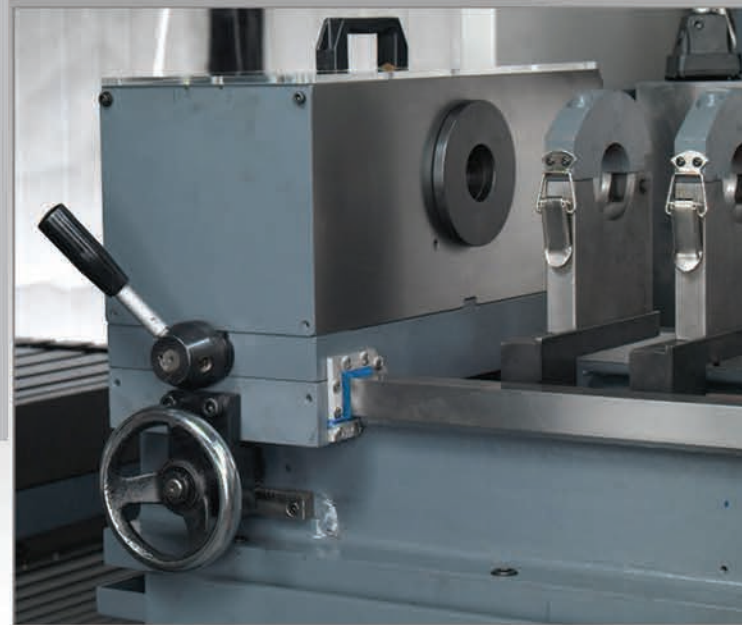


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主軸自動拉刀 Spindle power draw bar
Z軸皮帶傳動 Z axis Belt drive

洩油座左右移動能防止之外洩
Drain set can move left & right to prevent oil leaking



MGD-1515/1520/1530

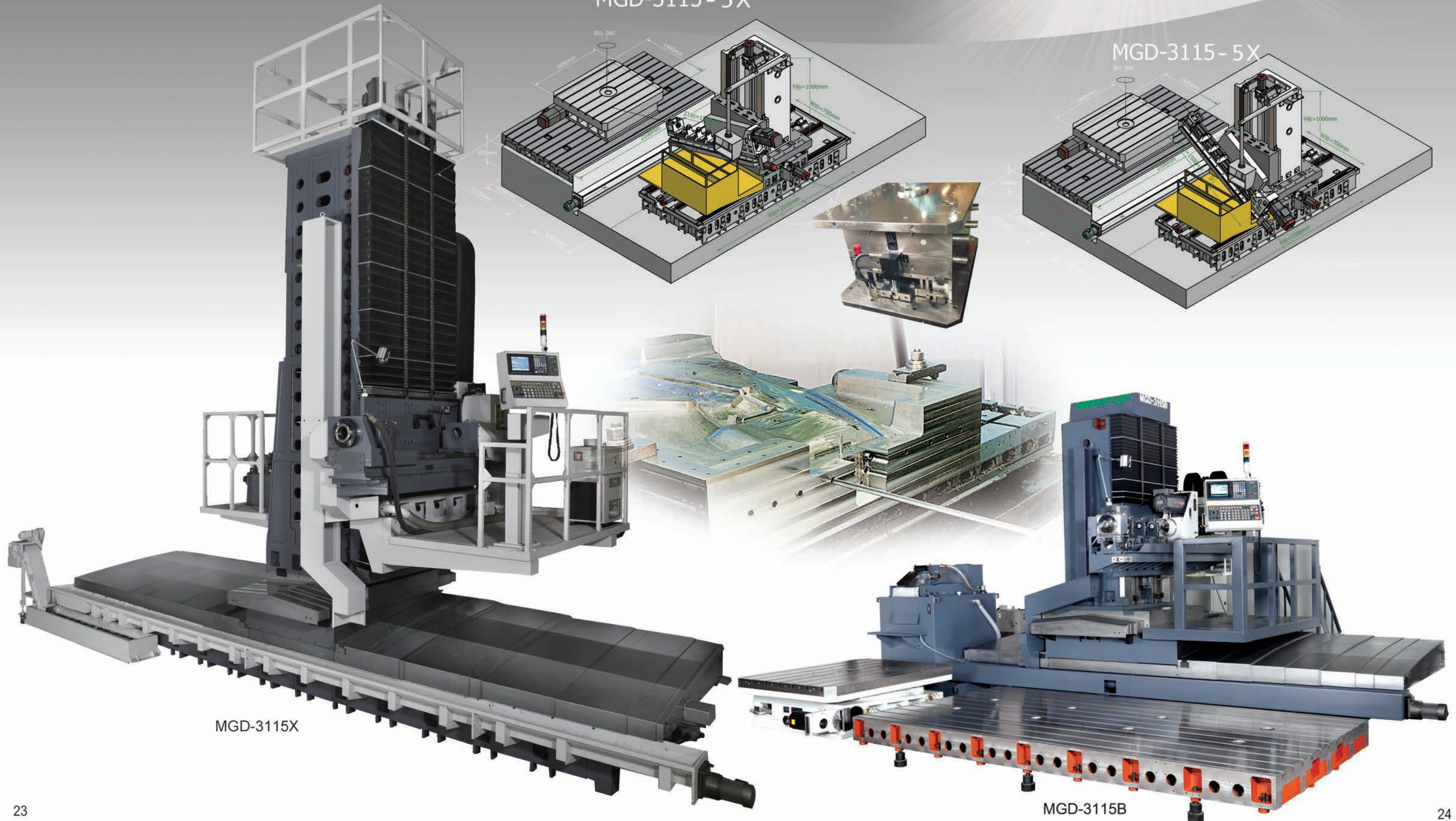


MGD-1525

深孔鏜鉗加工機MGD系列 3115X/B/5X



MGD-3115-5X



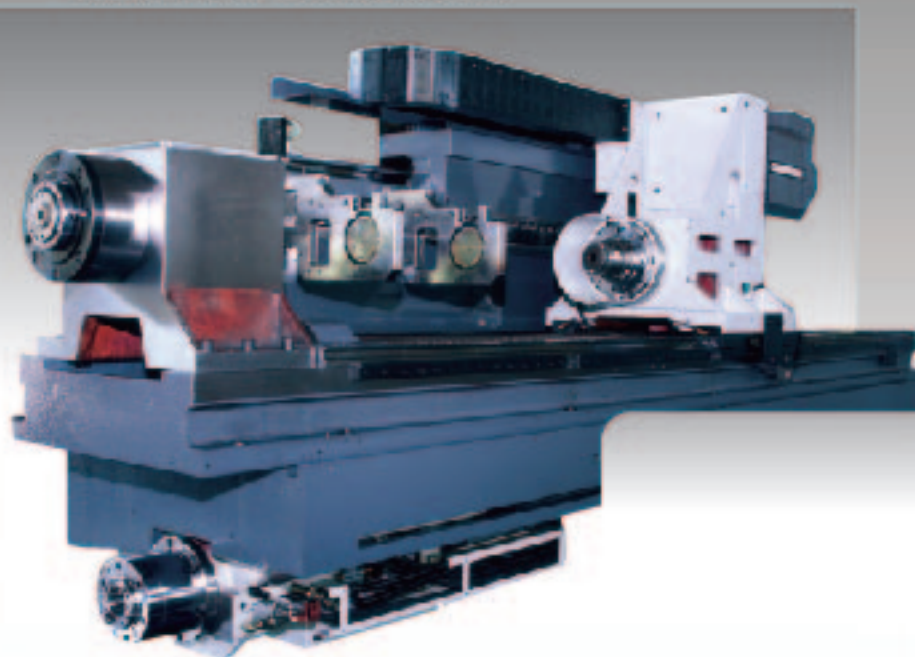
DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鑽加工機MGD系列
3115/L/DL

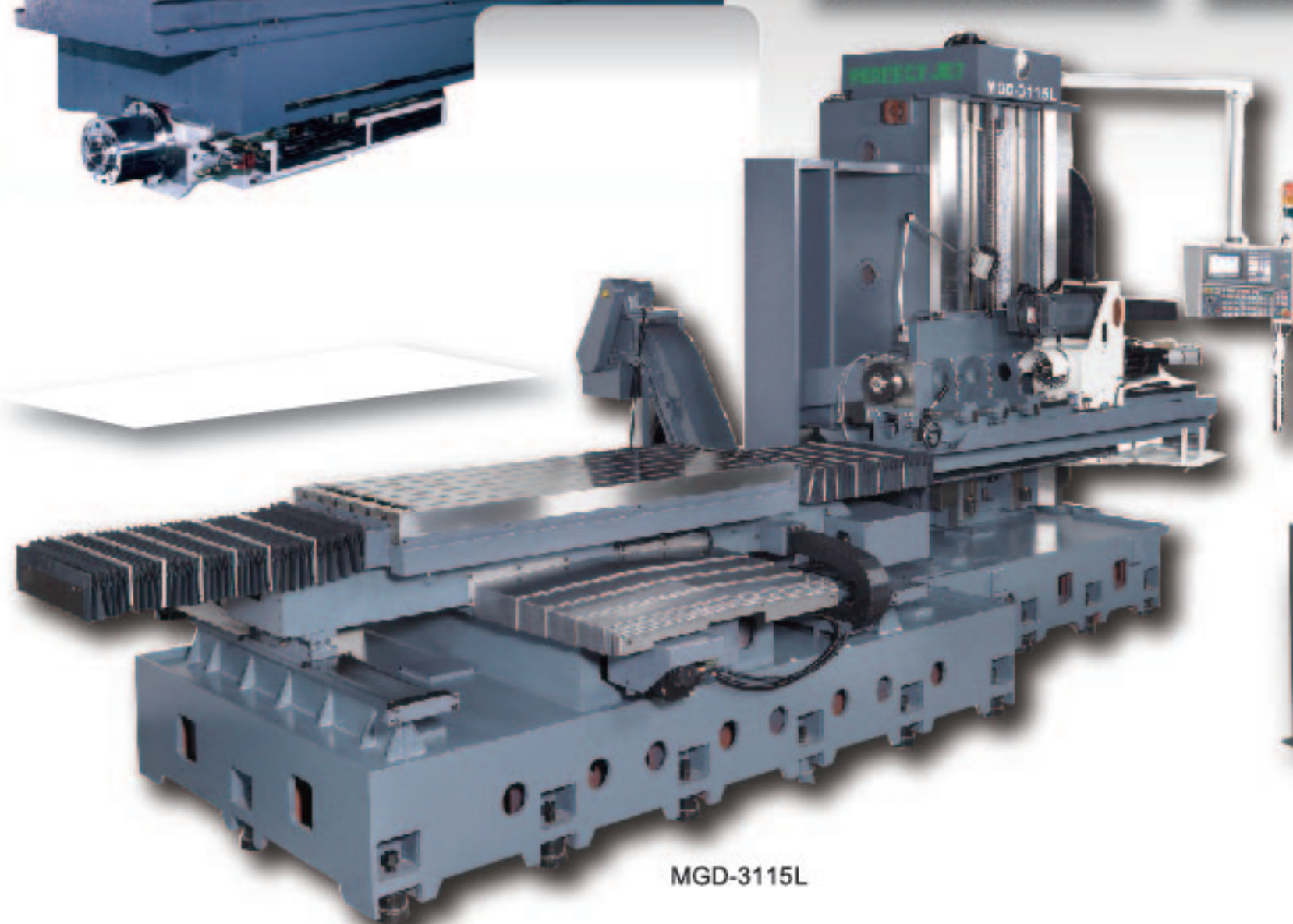
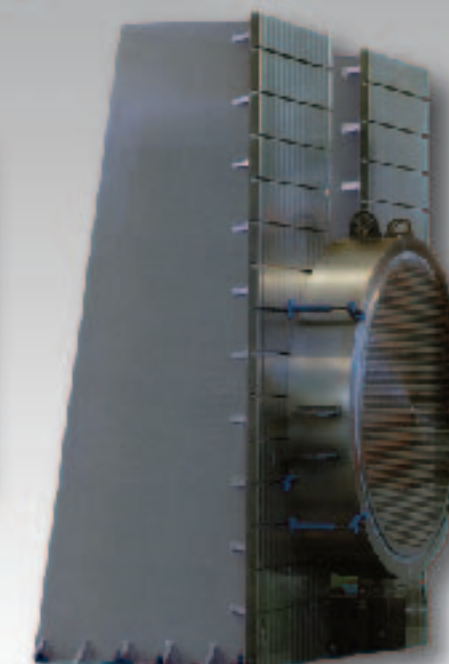
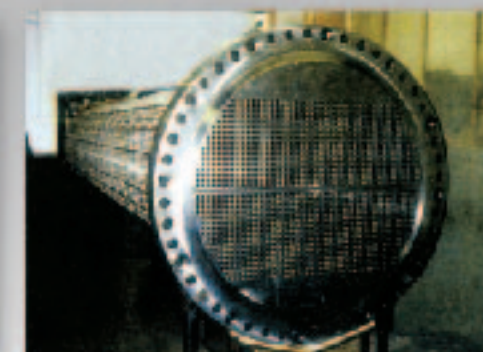


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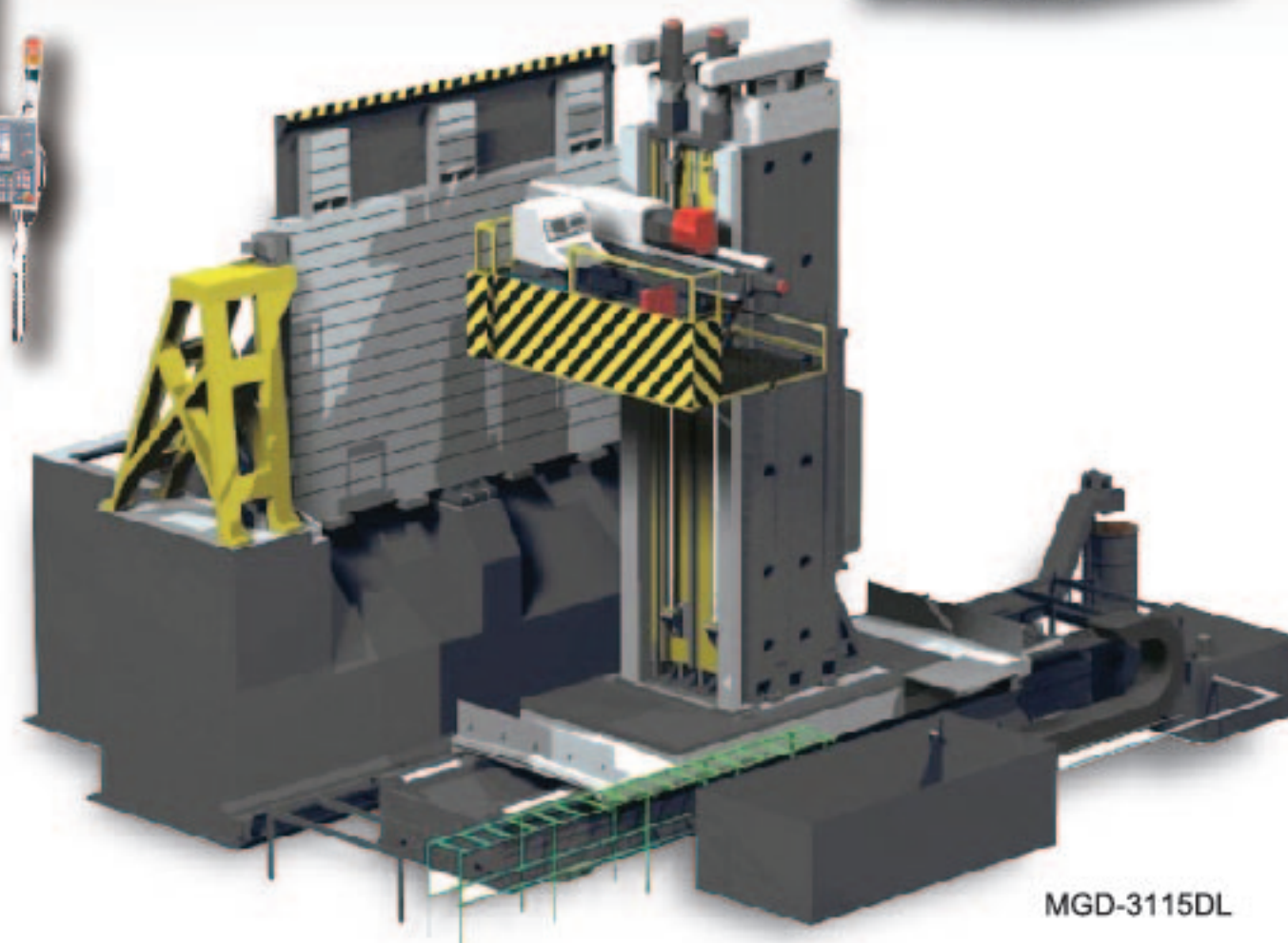
特殊功能上下雙主軸上鉗下銑



特殊功能：op平行雙主軸雙孔鉗



MGD-3115L



MGD-3115DL

DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鑽加工機 MGD系列



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SPECIFICATIONS:規格			MGD-610/1016/1028(L)						MGD-1515/1520/1530			MGD-3115X/B/L/PL/5X				
MODEL:MGD	Unit		610	610L	1016	1016L	1028	1028L	1515	1520	1530	3115X	3115B	3115L	3115DL	3115-5X
Travel 行程	X/Y/Z axis(W) 行程	mm	1300x600x600(500)		1600x1000x1000(300)		2500x1000x1000(300)		2000x1000x1500	2500x1000x1500	3000x1000x1500	5x3x1.2x0.7	3x1.0x1.5x0.7m	0.6x1.0x1.5x1.6m	4x4x0.7x0.8m	3.0x1.0x1.0x0.7 (OP)
		mm	1300x600x800(500)		2000x1000x1000(300)		3000x1000x1000(300)									
	Spindle nose to table surface 主軸鼻頭至工作台面	mm	0~650		50-1050				50 ~ 1050			480-3480	50-1050	110-1110	50-4500	0-1080
	spindle center to column surface 主軸中心至立柱側面	mm	0~500		0~300				410			535	0-700	344	0-700	0-700 (OP)
	X/Y/Z way span (W) 跨距	mm	306x646x234(620)		460x646x234(1000)				660x1200x400			1500x1400x420	1500x800x234x640	1000x1200x234x460	1500x1500x650	1500x1800x400x540
	Position/Repeatability accuracy 定位重複精度	mm	± 0.01													
	Ball bar accuracy 圓圓精度	mm	≥ 0.01													
Spindle 主軸	Spindle taper 主軸端銼度		DIN40:69871 (OP BT50)						DIN 50 (OP BT50)			DIN50			BT-50	DIN50
	Spindle driving 主軸傳動方式		Belt 1:1(OP 1:1.25)						Belt 1:1 (OP 1:1.25)			Gear	BELT 1:1(OP 1:1.25)	BELT 1:1(OP 1:1.5)	GEAR	BELT 1:1(OP 1:1.5)
	Spindle speed 主軸轉速	rpm	8000(OP10000)						8000(OP.10000)			5000	8000(OP.10000)	8000(OP.5000)	6000	8000/10000
Controller 控制器	CNC controller CNC 控制器		As customer's choice						As customer's choice			As customer's choice				
	Spindle motor 主軸馬達	KW	5.5/7.5		7.5/11 (OP. 11/15)				15/18.5			22/26	11/15(OP.15/18.5)	11/15(OP.15/18.5)	30	11/15
	X/Y/Z/W motor 馬達	KW	2.0/3.5B/1.5/2.0		2.5/4.0B/2.0/3.0		3.0/5.5B/2.5/3.5		7.0/7.0B/4.0			9/7B/4.5/9	9/9B/2/7	3/4B/2/3	9/4B+4B/4/4	9/9B/3/7/7
Table 工作台	Table size(WxL) 工作台面積	mm	400x1500		700x1900	700x2300	700x2800	700x3300	1200x2000	1200x2500	1200x3000	4.2/2.1	4.2X2.1 m	1.9x0.7 m	4.5X3.0 m	1.4x1.6 m
	T-slots(Width x No. x Pitch) T型槽	mm	16x5x63		18x6x105				22x8x150			22/11/18.5	22x11x185	18x6x105	28x14x250	22x7x200
	Table load 快速進給 工作台載重	KG	1500		4000	8000			3500	4500	5500	30,000	30,000	4,000	45000	10,000
Feed 進給	Rapid feed rate X/Y/Z/W	M/min	10/10/10/10		15/15/10/15				15			12/9/30/18	15	15/15/7.5/15	10	15/15/15/80
	Cutting feed rate 切削進給	M/min			1-5				1-5					1-5		
	Min. input increment 最小設定移動單位	mm			0.01				0.01					0.01		
Magazine 刀庫	Max. tool dia./tool adjacent 最大刀具直徑/空軋刀	mm	φ 4.0~φ 25(OP. φ 32)						φ 4~φ 25(OP φ 32)			φ 15-φ 80(op φ 100)	φ 4-φ 25 (φ 38)	φ 4-φ 25 (φ 38)	φ 15-φ 80	φ 4-φ 25 (φ 38)
	Max. tool weight DIN40 最大刀具重量	KG	7 (OP.BT#50:12)						7 (OP BT#50 :12)			12				
	Max. tool length 最大刀具長度	mm	1020	1220	1580		2150		2150			1900	2150	2150	1000	1500
	Pull stud 刀把拉栓	degree	15						15			15°	45°		45°	
	Tool changing time 換刀時間	sec	手動換刀						手動換刀							
Others 其它	High pressure pump Motor 高壓泵浦	HP	10						20+10			10				
	High pressure 壓力	kg/cm ²	0-130						0-130			0-130			0-90	0-130
	High pressure Oil delivery	l/min	5~70						5-70			5-350	5-70		5-125	5-70
	Oil tank 油箱容量	L	600 +1200						600 +1200			2701+5000	600 +1200	600+1200	2000x2=4000	600x2
	Lubrication capacity 潤滑能力	l/h	4 / 80 w						4/80 w			6+6150w	4/80w	4+4L/80w	4/80w	4+4L/80w
	Air conditioner 冷卻機	W	700						700			700				
	Pneumatic unit 油壓單位	kg/cm ²	6						6			6				
	Power 電力	KVA	35		40		50		40	45	50	150KVA	50		75	50
Dimension 尺寸	N.W./G.W.(Approximate) 淨重/毛重	Ton	11/13		13/15.5		15/18	18/21	20/22	23/25	26/29	70/75	36/40	36/40	136/145	40/46
	Floor space(LxWxH) 面積	M	4.5x3.5x3.5		6.0x4.5x3.5		8.5x6.0x3.8	6.4/6.2/3.4	7.4/6.2/3.4	8.4/6.2/3.4		14/10/7.2	6/6/5	6/6/5	13/10/8	6/6/5

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Standard Accessories 標準配件

1. Belt drive XYZ(W) 皮帶傳動
2. M.P.G.. XYZ(W) 手動輪
3. Chip conveyor & cart 排屑機 + 鐵屑車
4. Belt Spindle 8,000/10,000rpm 皮帶主軸轉速
5. Paper filter & magnetic separator 紙帶、磁鐵過濾機
6. Wool filter 羊毛氈過濾器
7. Countar-weight 配重裝置
8. Automatic lubrication system 自動潤滑系統
9. Coolant system 冷卻系統
10. Air gun 風槍
11. Halogen working lamp & alarm light 三色警示燈、工作燈
12. RS-232 interface+10M cable RS-232 介面 +10米傳輸線
13. Air conditioner 電器箱冷氣機
14. M30 auto power off 自動斷電系統
15. Leveling pads & adjusting screws 水平墊塊與水平螺栓
16. Tool box with adjusting tools 工具箱與調整工具
17. Operating manual & part list 操作手冊與零件表
18. Tapping 攻牙

Optional Accessories 選購配件

1. Fully splash guard & Pendant operation cabinet 全罩及懸吊式操作箱
2. Upgrade spindle motor 主軸馬達加大
3. Gundrills φ 4—φ 25(φ 32)mm 鑽頭
4. Start bush φ 4—φ 25(φ 32)mm 主軸導套
5. Whip guide φ 4—φ 25(φ 32)mm 擋油黑膠套
6. Moving whip guide φ 4—φ 25(φ 32)mm 支撐白膠套
7. Drill grinder 磨刀機
8. Oil cooler 油溫冷凍機
9. Voltage regulator 穩壓器
10. Transformer 變壓器

DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鉗加工機 BGD 系列

2000SC-1X-2000SC



PERFECT JET

	MODEL	UNIT	BGD-2000SC-1X	BGD-800-2X	BGD-300-6X
TOOL 刀具 Travel 行程	drilling depth 鑽深		2000	800	300
	working piece length 工件長度	mm	2000	800	300
	spindle nose to way/ seiving 主軸端到軌道/旋徑	mm	350	1000	2000
	base way 底座軌道寬	mm	400	250+0.01	180+0.01
	Z way span(ball screw) Z軸跨距(鋼珠螺桿)	mm	400	800x300	300
spindle 主軸	counter rotary chuck 反轉軸夾持	mm	6"-12"三爪夾		OP
	counter rotary working piece 反轉軸工件大小	mm	Max ϕ 300mm		OP
	spindle taper tooling 主軸刀具型號		DIN50:69871		DIN40:69871
	spindle transmission 主軸傳動	H/L		BELT	
	spindle speed 主軸速度	rpm	皮帶	8000	
controller 控制器	CNC controller 控制器品牌			PC BASE	
	spindle motor 主軸馬達	kw	7.5/10kwx1	5.5x1	5.5x3
	Z motor 1:4 gear box 馬達齒輪比1:4	kw	3.0直傳	1.5x2.5	3.0x3.0
	3 jaw clamping chuck 三爪夾頭	mm	ϕ 150- ϕ 305	ϕ 100-200	ϕ 100-150
	working piece axis motor 工件軸馬達	kw	3.75	2	6
feed 進給	working piece weight 工件重量	kg	800	200	300
	Z axis rapid feed rate 進給速率	m/min	12	10	12
	cutting feed rate 切削速率	m/min		1-5	
	Min input increment 最小設定移動	mm		0.01	
	Max drilling dia 最大鑽孔徑	mm	ϕ 4- ϕ 38		ϕ 4- ϕ 16
capacity 加工能力	Max tool weight 最大刀具重量	kg	5		3
	Max tool length 最大刀具長度	mm	2500	1000	600
	high pressure pump 高壓泵浦	kw		7.5x1	7.5x3
	high pressure (bar) 壓力	kg/cm ²		5-130	2-65
	high pressure oil delivery 供油量	l/min		5-70	
other 其他	oil tank 油箱容量	L		600x2=1200	
	lubrication capacity 潤滑能力	l/w		4/105	
	air conditioner 冷卻機	kg/cm ²		250/2000	
	pneumatic unit 油壓單位	wtm/hr		6	
	power 電力	KVA		20	50
dimension 尺寸	N.W./G.W.(approximate) 淨重/毛重	Ton	25	8/10	5/6
	floor space (LXWXH) 占地面積	M	5.5x3.0x2	4x2.5x2.3	5x4.3x2.1

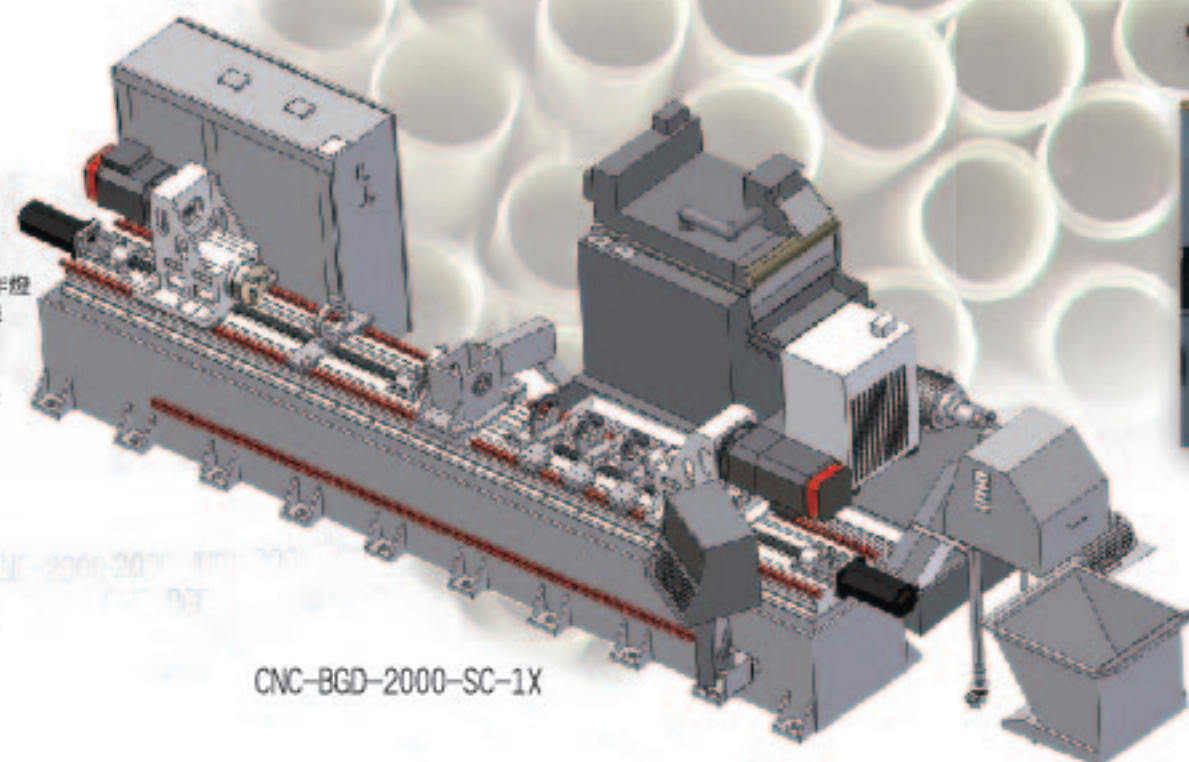
Specifications subject to change without notice 規格、設計及機械物理等變更，恕不另行通知

Standard Accessories: 標準配件

1. Belt drive XY皮帶傳動 Direct drive Z 軸直結傳動
2. M.P.G. XYZ 手動輪
3. Chip conveyor & cart 排屑機/鐵屑車
4. Belt Spindle 8,000/10,000rpm 皮帶主軸轉速
5. Paper filter & magnetic separator 紙帶、磁鐵過濾機
6. Wool filter 羊毛過濾機
7. Automatic lubrication system 自動潤滑系統
8. Coolant system 冷卻系統
9. Air gun 風槍
10. Halogen working lamp & alarm light 三色警示燈、工作燈
11. RS-232 interface+10M cable RS-232 介面+10米傳輸線
12. Air conditioner 冷氣機
13. M30 auto power off 自動斷電系統
14. Leveling pads & adjusting screws 水平墊塊與水平螺絲
15. Tool box with adjusting tools 工具箱與調整工具
16. Operating manual & part list 操作手冊與零件表

Optional Accessories: 選購配件

1. Upgrade spindle motor 加大刀具馬達
2. Gun drills ϕ 4- ϕ 25(ϕ 32)mm 鑽頭
3. Start bush ϕ 4- ϕ 25(ϕ 32)mm 主軸導套
4. Whip guide ϕ 4- ϕ 25(ϕ 32)mm 擋油黑膠套
5. Moving whip guide ϕ 4- ϕ 25(ϕ 32)mm 支撐白膠套
6. Drill grinder 磨刀機
7. Oil cooler 油溫冷卻機
8. Voltage regulator 穩壓器
9. Transformer 變壓器



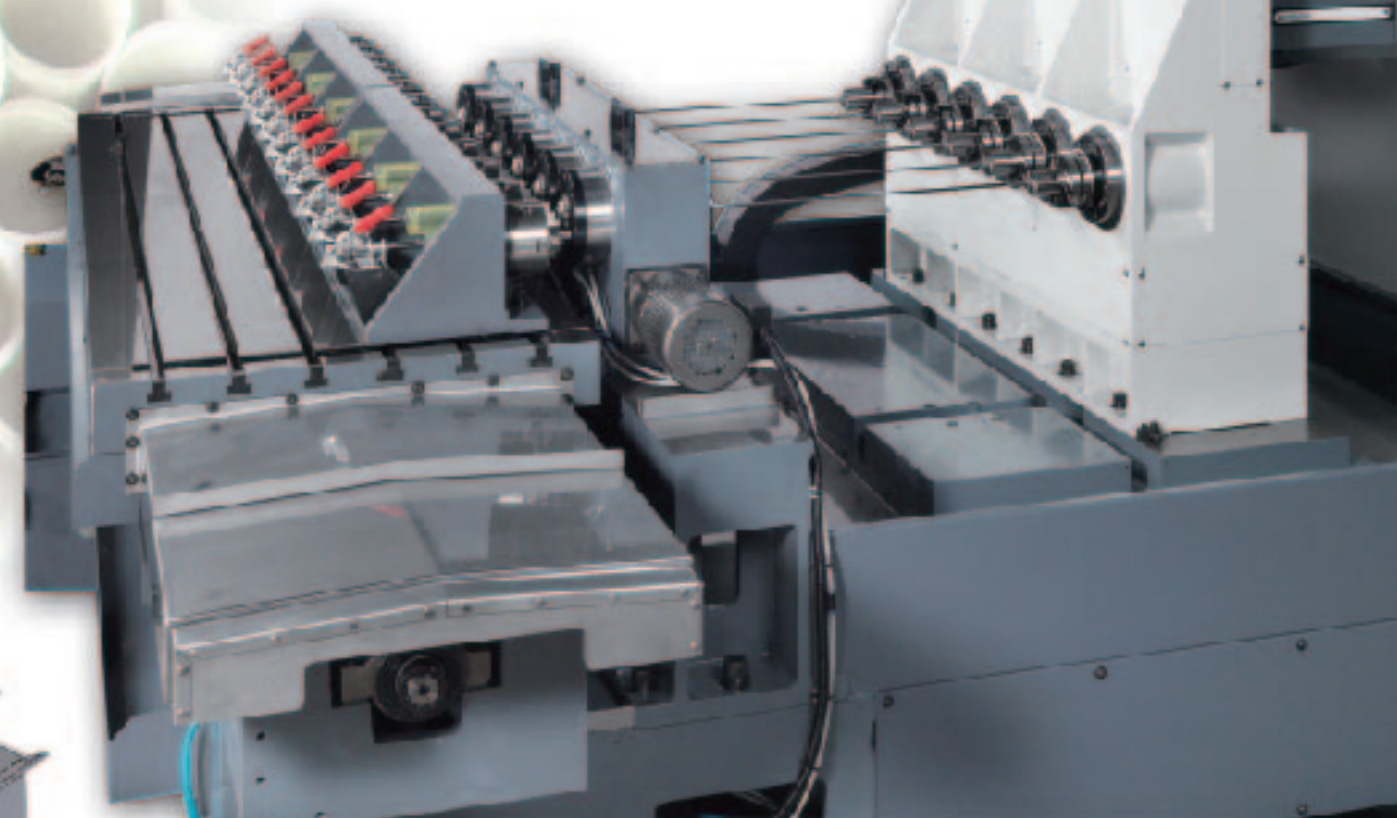
CNC-BGD-2000-SC-1X



CNC-BGD-800-2X



CNC-BGD-300-4X



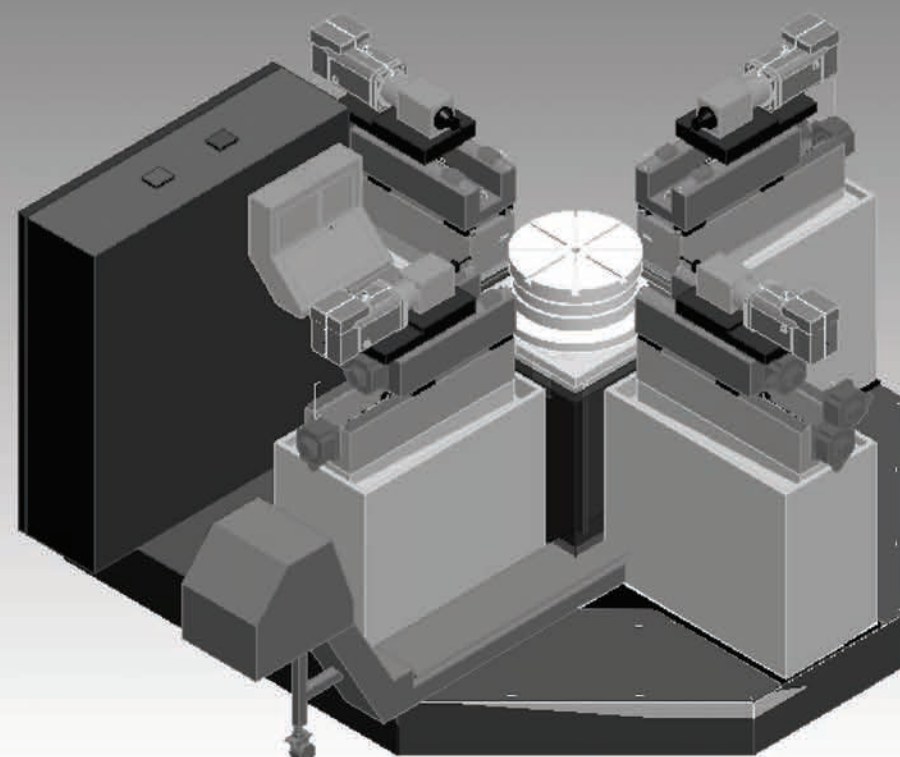
CNC-BGD-300-6X

DEEP HOLE DRILLING MACHINE

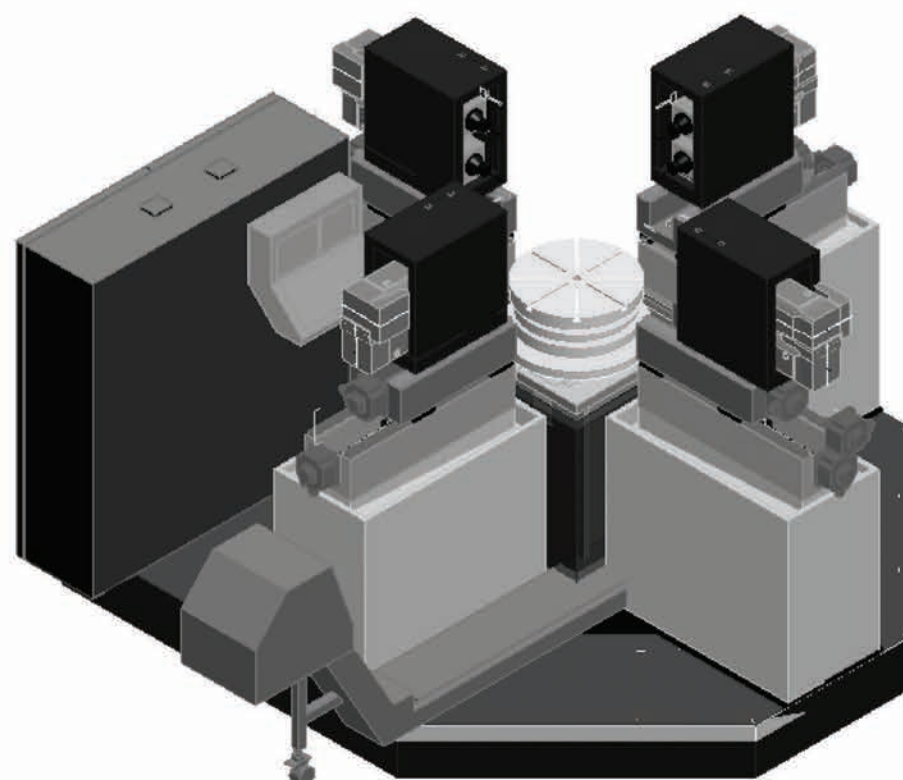
高速度、高精度深孔槍鑽



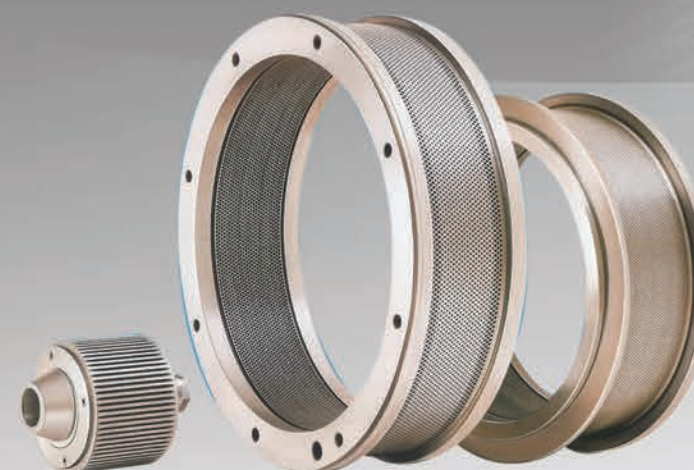
PERFECT JET



PGD-4X



PGD-8X



Pellet Die造粒網模



CNC36 倒角機

SPECIFICATIONS:規格 CNC-PGD-4X/8X					
	MODEL:MGD	Unit	PGD-4X	PGD-8X	CNC-36
Tool 刀具 Travel 行程	Drilling depth 鑽深	mm	400	400	400
	Working piece diameter 工件外徑	mm	φ 350- φ 1400	φ 700- φ 1400	φ 350- φ 1400
	Spindle nose to way/swiving 主軸端到軌道/旋徑	mm	400		400
	Base length 底座軌道寬	mm	3600		3600
	Z way sapn(W) 軸跨距	mm	250x400		Y:620 Z:470
Spindle 主軸	C' ounter rotary chuck with 反轉軸夾持		φ 500	φ 630	φ 500
	Counter rotary angle 反轉軸工件大小		任 ⁹ 一角度±0.01		
	Spindle taper tooling 主軸刀具型態		ER-16		R-8
	Spindle Transmission 主軸傳動		Built-in		Belt
	Spindle speed 主軸速度	rpm	2000-30000		100-5000
Controller 控制器	CNC controller 控制器品牌		PC BASE		可任意選配
	Spindle motor 主軸馬達	KW	3.75		3.15
	Z/X/W 馬達	KW	4/2/2		2.5/3.5/2
	working piece weight 工件重量	KG	1000		1000
	Rapid feed rate Z 進給速率	m/min	10		10
Feed 進給	Cutting feed rate 切削速率	m/min	1-5		1-5
	Min. input increment 最小設定移動	mm	0.01		0.01
	Max. drilling dia. 最大鑽孔徑	mm	φ 1- φ 12		φ 1- φ 12
	Max. tool weight 最大刀具重量	KG	0.5		3
	Max. tool length 最大刀具長度	mm	150		60
Magazine 刀庫	High pressure pump 高壓泵浦	KW	7.5x2	7.5x4	4
	High pressure (BAR) 壓力	kg/cm2	5-150 / 2-75		
	High pressure Oil delivery 供油量	l/min	5-50		
	Oil tank 潤滑能	L	600x2=1200		
	Lubrication capacity 冷卻機	l/w	4/250x1	4/250x2	4/250x1
Others 其它	Air conditioner/cool oil 油壓單位	watt/hr	250/2000		250
	Pneumatic unit	kg/cm2	6		6
	Power 電力	KVA	50	80	12
	N.W./G.W.(Approximate) 淨重/毛重	Ton	13/15	18/21	4/6
	Floor space(LxWxH) 佔地面積	M	2.5x3.0x1.8	3.6x3.6x1.8	2.5x2.5x2

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Standard Accessories: 標準配件

1. Belt drive XYZ(W) 皮帶傳動
2. M.P.G.. XYZ(W) 手動輪
3. Chip conveyor & cart 排屑機+鐵屑車
4. Belt Spindle 8,000/10,000rpm 皮帶主軸轉速
5. Paper filter & magnetic separator 紙帶、磁鐵過濾機
6. Wool filter 羊毛氈過濾器
7. Automatic lubrication system 自動潤滑系統
8. Coolant system 冷卻系統
9. Air gun 風槍
10. Halogen working lamp & alarm light 三色警示燈、工作燈
11. RS-232 interface+10M cable RS-232 介面+10米傳輸線
12. Air conditioner 冷氣機
13. M30 auto power off 自動斷電系統
14. Leveling pads & adjusting screws 水平墊塊與水平螺栓
15. Tool box with adjusting tools 工具箱與調整工具
16. Operating manual & part list 操作手冊與零件表

Optional Accessories: 選購配件

1. Upgrade spindle motor 加大刀具馬達
2. Gundrills φ 4— φ 25(φ 32)mm鑽頭
3. Start bush φ 4— φ 25(φ 32)mm主軸導套
4. Whip guide φ 4— φ 25(φ 32)mm擋油黑膠套
5. Moving whip guide φ 4— φ 25(φ 32)mm支撐白膠套
6. Drill grinder 磨刀機
7. Oil cooler 油溫冷凍機
8. Voltage regulator 穩壓器
9. Transformer 變壓器

DEEP HOLE DRILLING (BORING) MACHINE

深孔鏜鑽加工機

Standard Accessories

標準配備槍鑽MGD系列

Optional Accessories

選用配備



PERFECT JET



Spindle 主軸8000/10000rpm



X/Y/Z/W ballscrew with double nuts 四軸鋼珠螺桿雙帽



Shank move left-right to prevent oil leaking
洩油座左右移動能防止外屑



Chain type chip conveyor
鍊條式排屑機



Equipped with high reliability lubrication pump and solenoid valves
三點組合空壓空制器



Powerful wash down nozzles and air gun are conveniently built in 風槍水槍



High pressure pump 7.5kw
高壓泵浦可提供馬力
Pressure 0-130kg/cm²
壓力0-130kg/cm² : Delivery 0-130kg/cm²
流量5-70L/min

Coolant oil tank
切削液油箱600x2=1200Liter

OP 400x2=800Liter



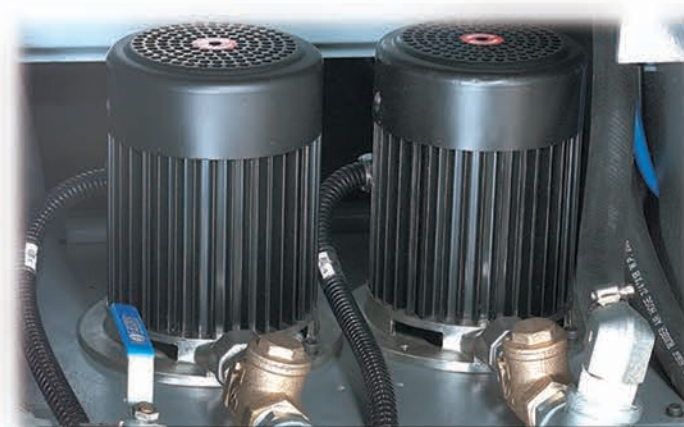
1. Magnetic separator 磁鐵過濾機 (0.02mm)
2. Paper filter 紙帶過濾機 (0.02~0.005mm)



3. Wool filter 羊毛氈過濾機 (0.005mm)



Air conditioner on Electric cabinet
電氣箱冷卻機



Dual vertical coolant pumps
直立式泵浦



Oil mist collector
油霧回收機



Rotary table 0.001°
旋轉工作台任一角度0.001

DEEP HOLE DRILLING TOOLS 深孔鑽、鏜銑刀具介紹



MGD gun-type tools



Gundrill Gunbore Stepbore Gunbore with inserts



BTA- deep hole drilling tools



Drilling head Boring head Trepanning head Skiving head

Ejector

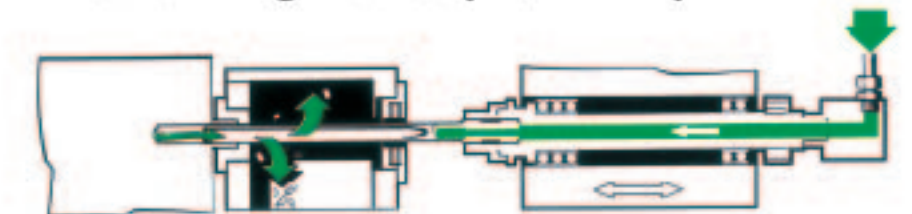


Trepanning drilling head Ejector drilling head T-Max drilling head

留心鑽300mm以內

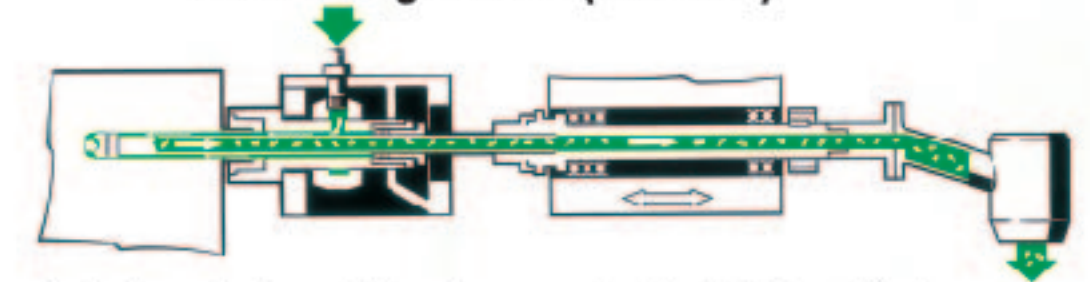
DEEP HOLE DRILLING METHODS 高速鑽孔深奧法門

Gundrilling method(MGDTYPE)



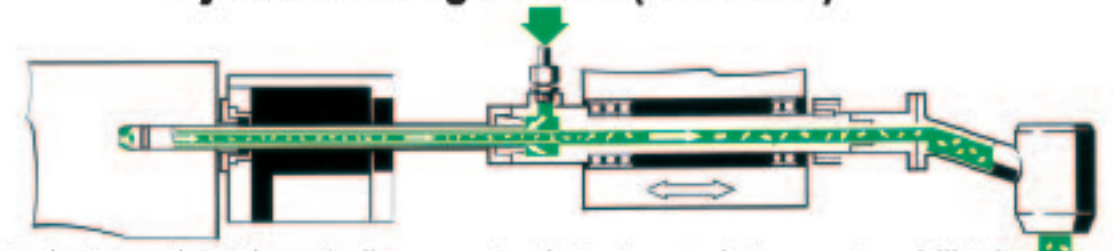
Coolant supply inside of drill spindle and drill shank. Coolant leaves at the drill tip. It streams back together with the chips in the V-shaped flute of the drill shank. Coolant and chips pass through the drillbush into the drillbush carrier.
高壓冷卻液從鑽頭主軸及刀夾內部注入，冷卻液會在刀頭頂端離開，並從V型刀刀的刀夾跟鐵屑一起回流。冷卻液和鐵屑流過支撐套進入支撐套座一起排出。

BTA-drilling method(DHTYPE)



Coolant supply through the oil pressure head behind the drillbush. Coolant flows through the drillbush and then outside of the tool tube in the hole to the drill tip. It streams back together with the chips inside the tube and through the bore spindle. Chips and coolant leave through an outlet at the end of the spindle.
高壓冷卻液從支撐套後面注入，冷卻液流經支撐套及刀套的外部，進入鑽孔及刀頭頂端；和鐵屑回流到刀套內部及主軸內孔中，冷卻液及鐵屑流到主軸內部到尾端，並離開。

Ejector-drilling method(DH TYPE)

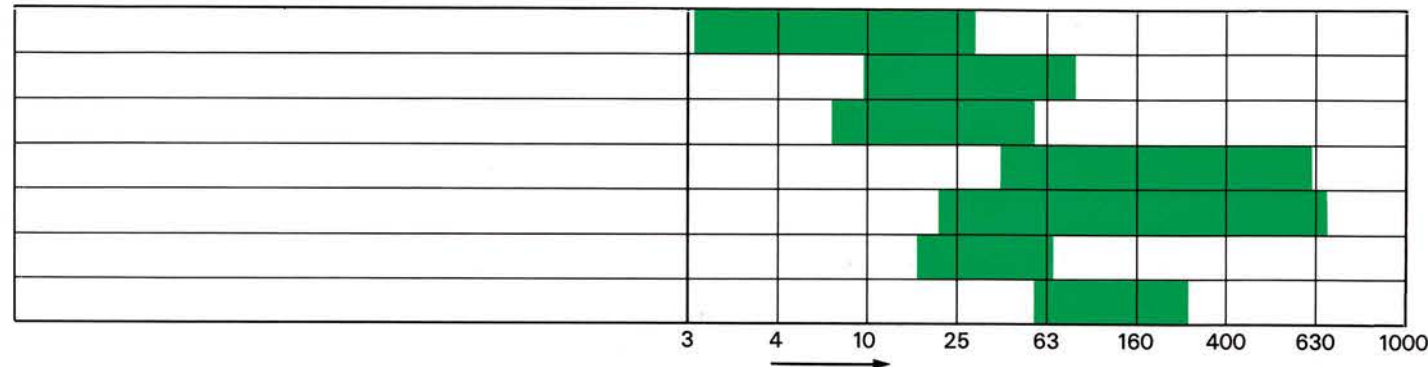


Coolant supply at the spindle nose. Coolant streams between two drill tubes to the drill tip and then back inside the inner tube together with the chips. Part of the coolant is directed in the inner tube through special jets before reaching the drill tip, thus accelerating the backflow of the chips. Coolant and chips leave through an outlet at the end of the bore spindle.
高壓冷卻液從主軸鼻端注入，並從刀套至刀頭回流；進入刀套內部和鐵屑一起流回。在刀頭頂端偵測前，部份的冷卻液會被引至特殊的噴孔流入刀套內部；加速鐵屑的回流速度。冷卻液及鐵屑流到主軸外部到尾端，離開。

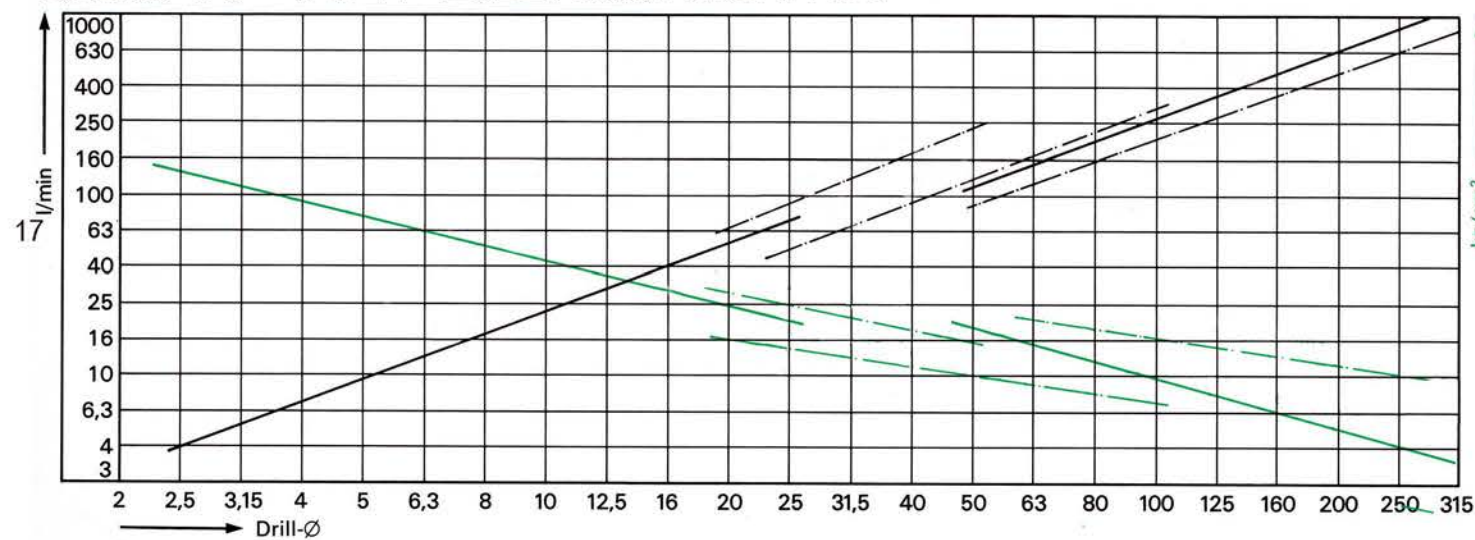
GUIDE VALUE GRAPHS

刀具:進給:油壓容量:高壓力:數具圖表

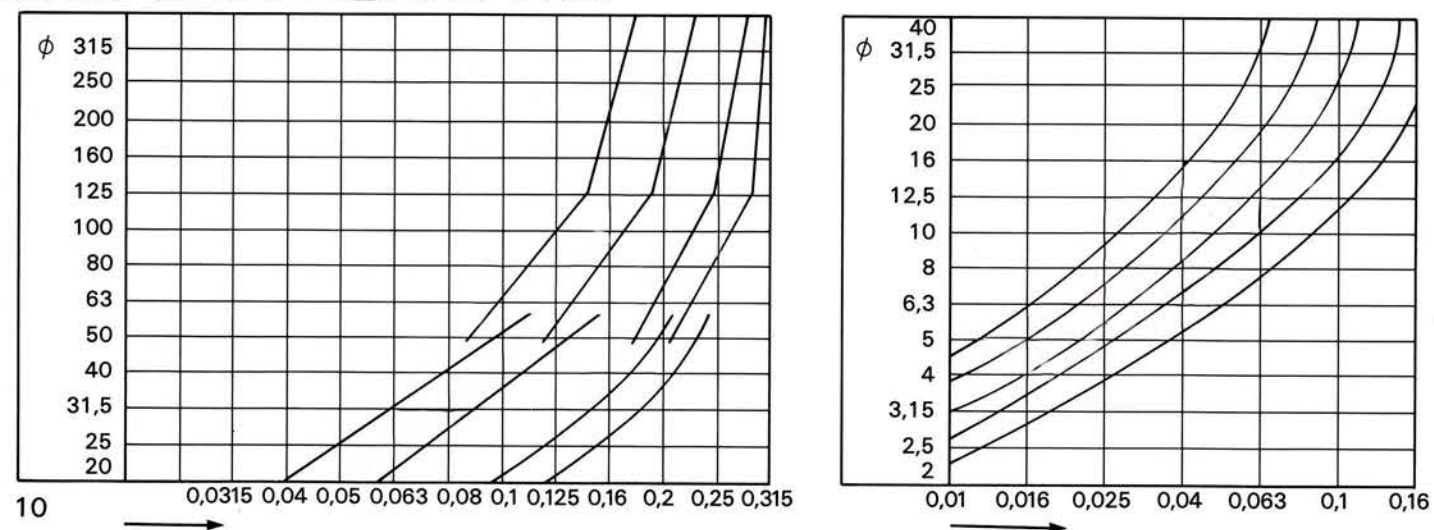
鑽孔大小與刀具應用分析表



鑽孔大小:流量:高壓力應用分析表

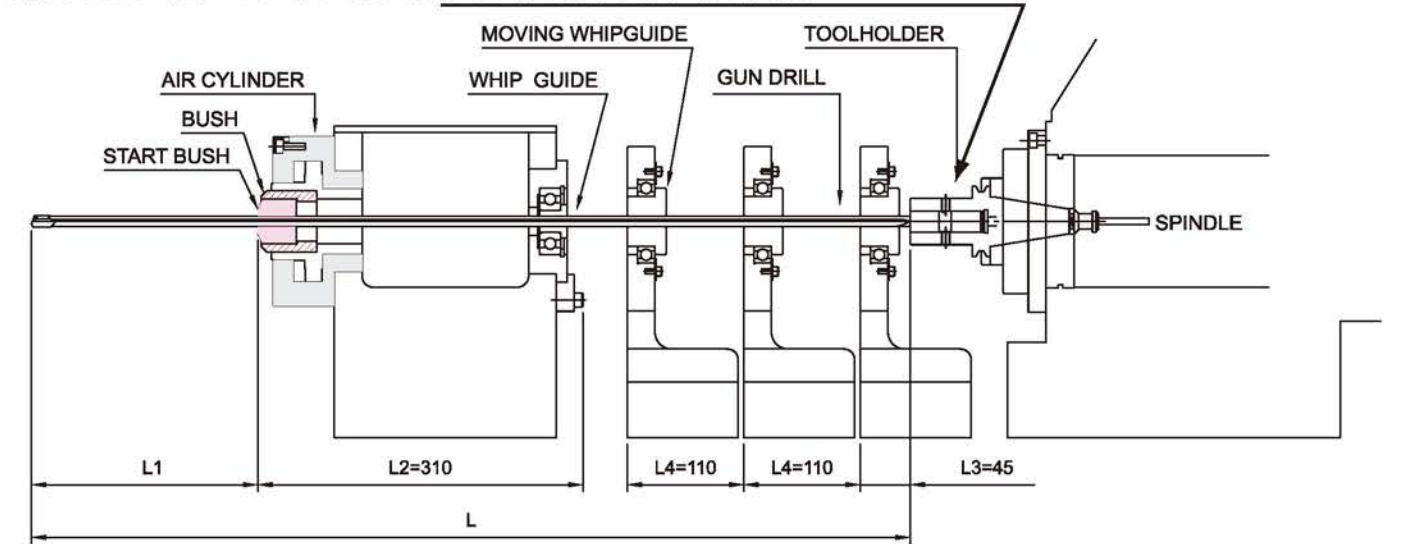


鑽孔與進給量應用分析表



DIMENSIONS REQUIRED FOR CALCULATING LENGTH

DIMENSIONS REQUIRED FOR CALCULATING LENGTH
刀桿內孔支撐大小鑽針分類 $\phi 10$ $\phi 16$ $\phi 25$ $\phi 32$ $\phi 38$

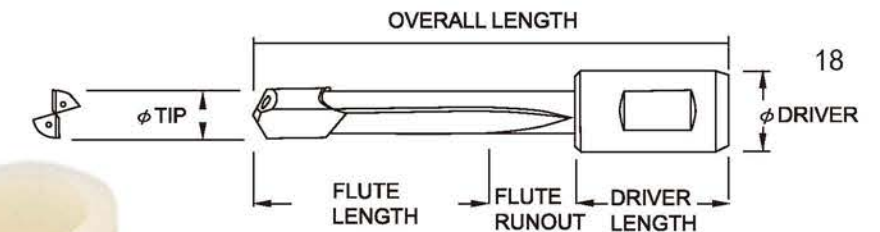


$L = L1 + L2 + L3 + (N-1) \times L4$
L=GUN DRILL LENGTH
N=NUMBER OF THE MOVING WHIPGUIDES

MOVING WHIPGUIDE

鑽針高速旋轉防震白膠套

WHIPGUIDE	DIAMETER
$\phi 45$	$\phi 3 \sim \phi 35$



WHIP GUIDE

支撐座後方止洩油黑膠套

BEARING TYPE	628	6202	6204	6205	6207	6209
GUIDE BUSH	$\phi 3 \sim 5$	$\phi 5.1 \sim 10$	$\phi 10.1 \sim 15$	$\phi 15.1 \sim 20$	$\phi 20.1 \sim 25$	$\phi 25.1 \sim 35$



START BUSH

鑽針支撐錠

START BUSH	DIAMETER	DIAMETER
$\phi 3 \sim \phi 30$	$\phi 30.1 \sim \phi 35$	
BUSH	DIAMETER	DIAMETER
$\phi 40 \times \phi 55$	$\phi 45 \times \phi 55$	



PGD-6X 6 Stations 10 spindles 10 axes CNC Horizontal & Vertical Rotary Transfer Machine

6工位10主軸10軸向CNC臥式&立式圓盤萬能加工機

Industry 4.0 the optimal design and best choice: 10 machining center all in one
專為工業4.0最佳選擇而設計: 10台中心機變成1台萬能機



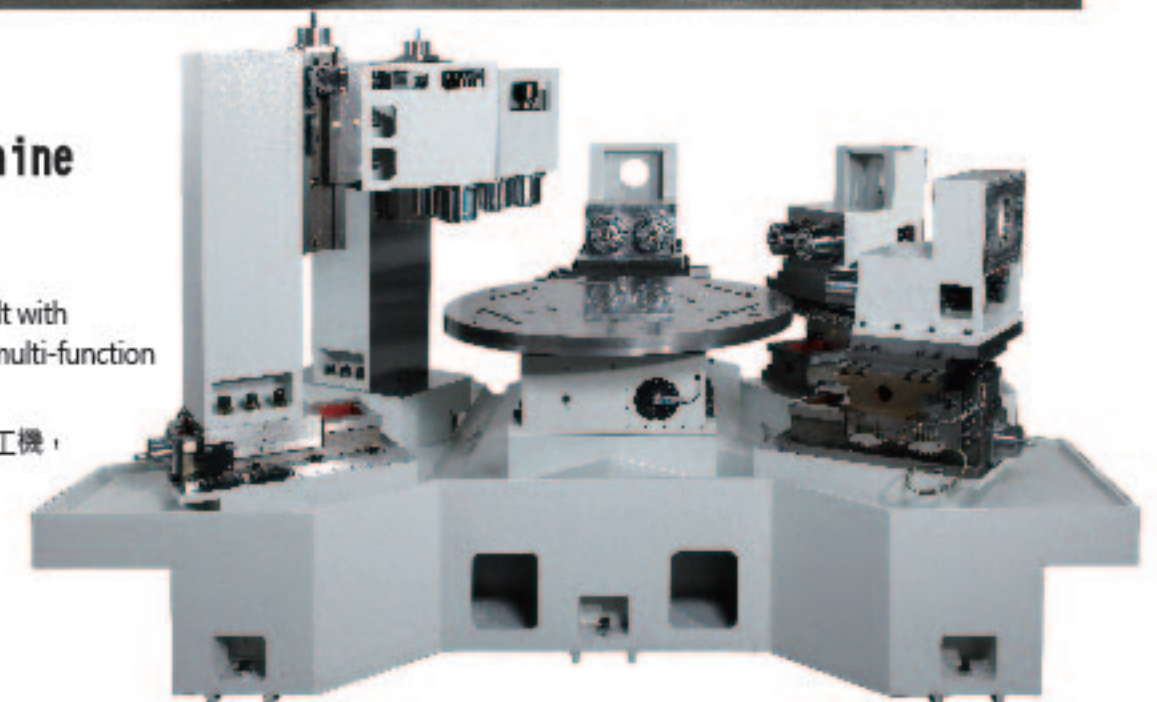
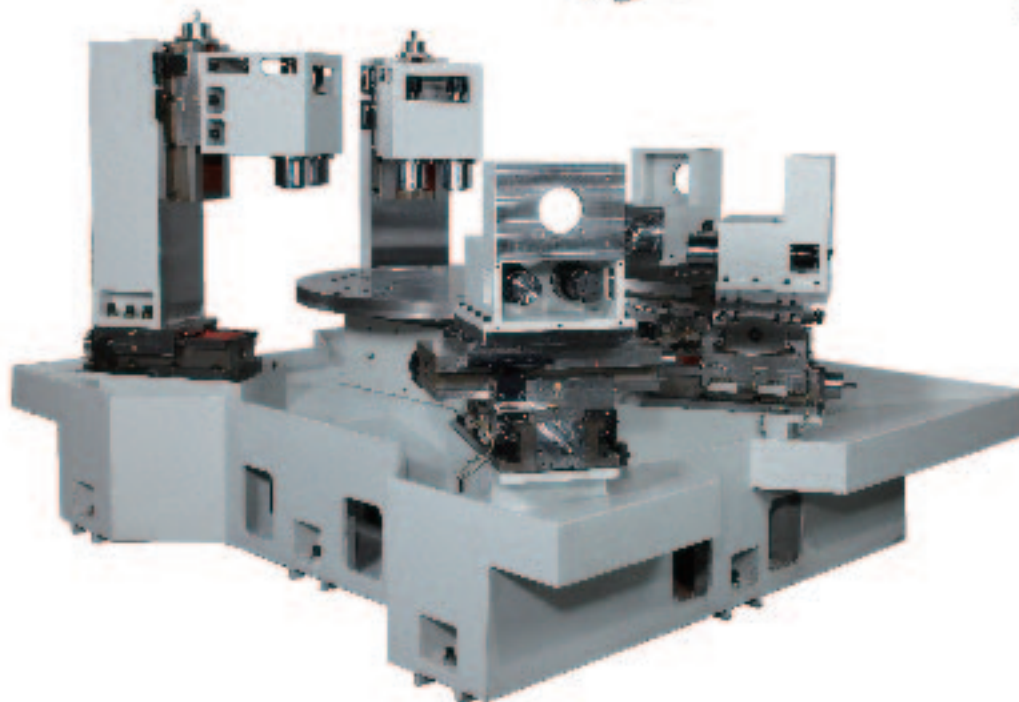
PERFECT JET



Multi-spindles Rotary Transfer Machine 多軸轉盤加工機

Drilling, Tapping, Milling grooves,
Milling Arc angle, Milling sure-face,
Milling side face.
鑽孔, 攻牙, 銑溝槽, 銑圓弧角,
銑平面, 銑側面

Each station can be built with
3 spindles machining, multi-function
machine center.
每站可增加到三軸之加工機,
多功能加工中心。



PGD-6X 6 Stations 10 spindles 10 axes CNC Horizontal & Vertical Rotary Transfer Machine

PGD-6X 專為省人力，省工時，省電力，省空間；自動化生產線，達到無人化工業4.0革命設計。

Saving manpower, machining hours, electricity and space for auto-production and unmanned Industry 4.0 design.



PERFECT JET



Additional more station 12,24,36 hydraulic and circuit clamping design ;
clamping time and pressure are separated and adjustable.
可增設12,24,36站之油壓，多回路夾持設計。夾持時間，壓力大小可分開調節。



First station Index table 分度盤	Table diameter 盤面直徑 mm	600
	Sub-table diameter 副盤直徑 mm	1200
	Repeatability accuracy 盤面工作位置重複精度	±1"
	Overall height 水準放置總高 mm	350
	Clamping torque 鎖緊方式與使用壓力	35
	Min. increment 分度數	6
	Indexing accuracy 分割精度	±5"
Second station Vertical 第二工位 立式	Repeatability accuracy 重複精度	±1"
	Spindle accuracy 主軸旋轉精度 mm	0.003
	Power 功率 KW	9.1x2
	Spindle powerhorse 馬力 HP	12.2
	Torque 扭矩 Nm	36
Third station Vertical 第三工位 立式	Speed 轉速 rpm	3000
	Travel 行程 mm	200
	Spindle accuracy 主軸旋轉精度 mm	0.003
	Power 功率 KW	7.5kw
	Torque 扭矩 Nm	18
Fourth station Horizontal 第四工位 臥式	Speed 轉速 rpm	10000
	Travel 行程 mm	200
	Spindle accuracy 主軸旋轉精度 mm	0.003
	Power 功率 KW	7.5kw
	Torque 扭矩 Nm	18
Fifth station Horizontal 第五工位 臥式	Speed 轉速 rpm	10000
	Travel 行程 mm	200
	Spindle accuracy 主軸旋轉精度 mm	0.003
	Power 功率 KW	7.5kw
	Torque 扭矩 Nm	18
Sixth station Horizontal 第六工位 臥式	Speed 轉速 rpm	3000
	Travel 行程 mm	200
	Spindle accuracy 主軸旋轉精度 mm	0.003
	Power 功率 KW	9.1kw
	Torque 扭矩 Nm	36
Position accuracy 定位精度	X,Y,Z position 定位精度	±0.005
	X,Y,Z repeatability 重複定位精度	±0.004
Machine Reference 機床總體參數		
Machine outlook 機床外形尺寸(長×寬×高) mm	3200x3000x2520	
Floor space 機床占地面積 mm	6050x5000x3000	
Machine N.W. 機床淨重 Kg	8000-9000	
Max. current 滿載電流 A	250	
Compression 壓縮空氣工作壓力 Kg/cm ²	6.0	
Air capacity 單機用氣量 cm ³ /min	500L	
Power voltage 電源要求	380 (1±10%) V 50Hz	

1. Second station milling surface:
精銑面工位，雙主軸，旋轉電機為變頻雙電機，Y,Z雙軸滑台，均為伺服電機；刀柄均採用HSK-63A。

2. Third station drilling lock hole:
鑽鎖軸孔工位，雙主軸，旋轉電機為變頻電機，單電機同步帶傳動雙主軸，Z向單滑台，為伺服電機；刀柄均採用HSK-63A。

3. Fourth station drillings setting hole:
鑽安裝孔，雙主軸，旋轉電機為變頻電機，單電機同步帶傳動雙主軸，X、Z雙滑台，均為伺服電機；刀柄均採用HSK-63A。

4. Fifth station drilling the hole in tread base:
鑽螺紋底孔，雙主軸，旋轉電機為變頻電機，單電機同步帶傳動雙主軸，帶中心出水內冷，X、Z雙滑台，均為伺服電機；刀柄均採用HSK-63A帶中心出水。

5. Sixth station drilling tread squeeze hole:
螺紋擠壓，雙主軸，旋轉電機為伺服電機，單電機同步帶傳動雙主軸，螺紋採用擠壓絲錐加工，X、Z雙滑台，均為伺服電機；刀柄均採用HSK-63A。