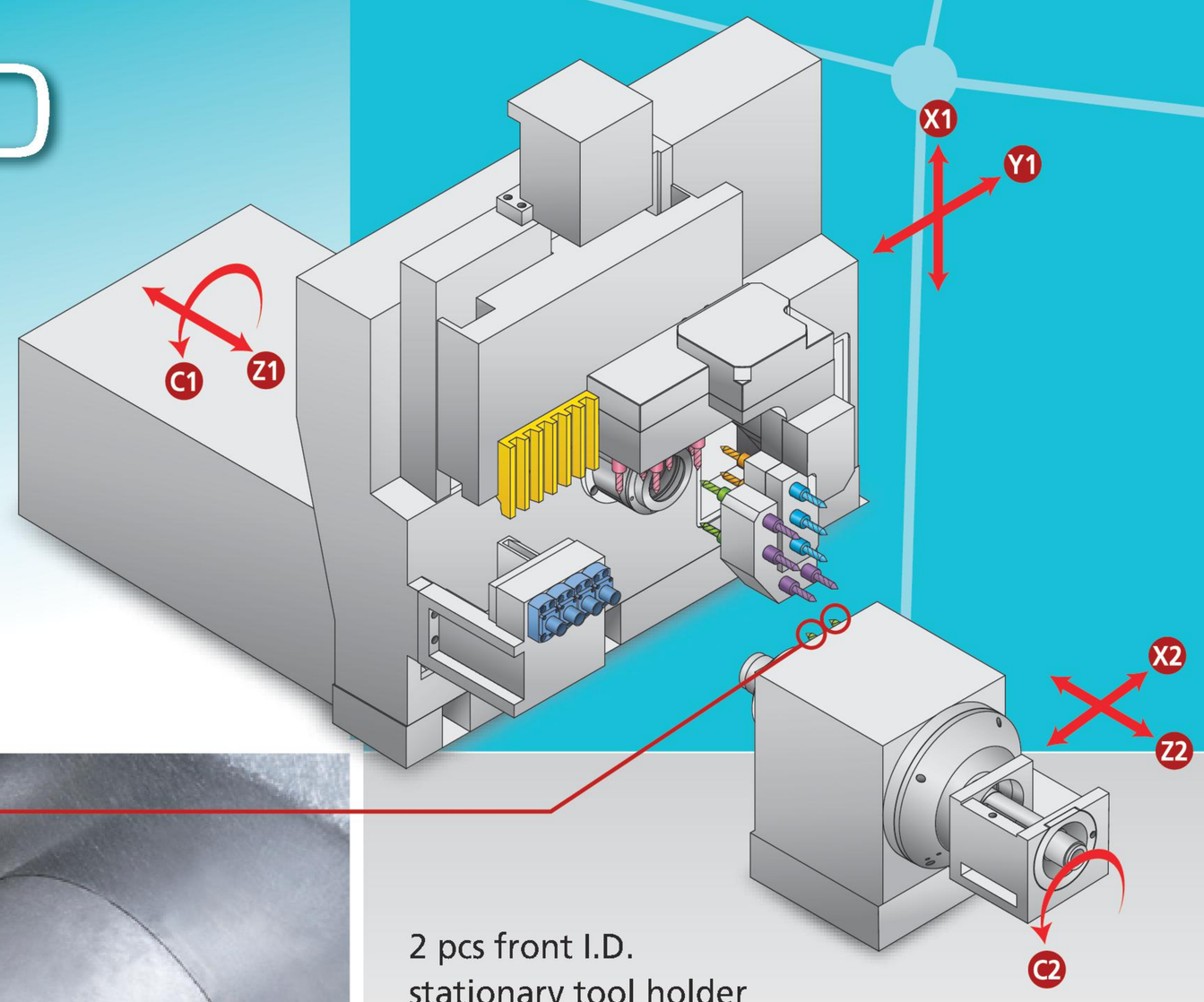
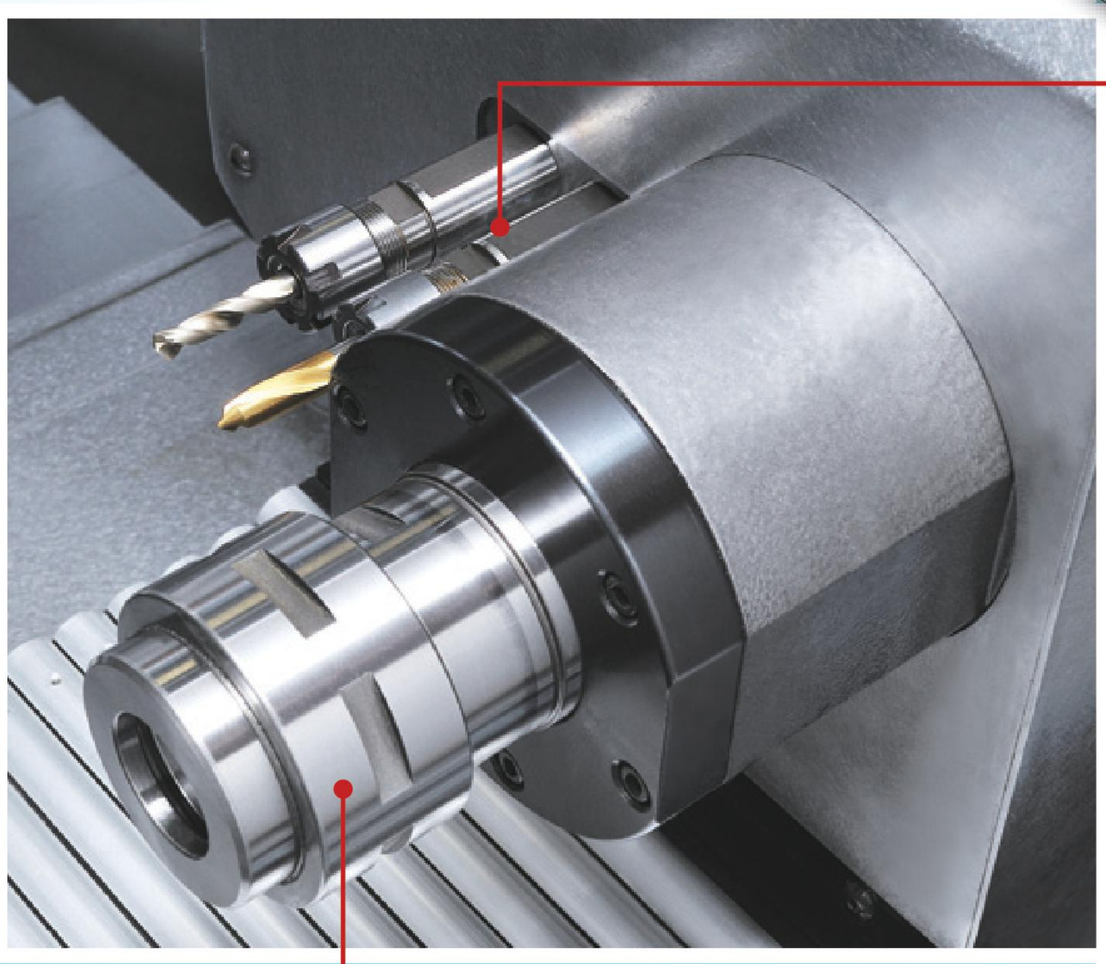
Save a world of time and labor with our latest generation of lathes.
Performance machines and unsurpassed service from PO LY GIM.
DIAMOND B II / III
CSB II / III Series
PO LY GIM

DIAMOND

12CSB Ⅲ
16CSB Ⅲ
20CSB Ⅲ
25CSB Ⅲ



2 pcs front I.D.
stationary tool holder
(Only available for B Ⅲ / CSB Ⅲ with belt type motor)
2支固定正面內徑刀具刀座
(適用於 B Ⅲ/ CSB Ⅲ 配皮帶式背軸)



Sub spindle only with simple C axis for B Ⅲ / CSB Ⅲ
(If the sub-spindle option with built-in motor, it can option CS axis for CSB Ⅲ)
背主軸標準是配 C 軸---B Ⅲ / CSB Ⅲ
如果換配內藏式馬達可選配 CS 軸---CSB Ⅲ

FEATURES 機械特點

■ Cross Travel Sub-spindle

Cross travel sub spindle design. The main and sub spindles can work either one at a time or simultaneously for reduced machining duration. This design brings multi-function front and rear machining.

■ Short Remnant Material

With the optional Rough Material Bushing, the remnant material can be 50mm (depending on the parts length).

■ Raw Material Machining

0.1mm material tolerance can be achieved by using the Rough Material Bushing.

■ Replaceable Fixed / Driven Toolholder Set

The 4 pc back stationary / driven tool holder is replaced by the newly designed replaceable fixed tool holder or driven tool holder. This enables increased tooling flexibility.

■ 十字型走向背主軸

十字型走向背主軸設計，主軸和背軸可以同時或單獨加工，節省加工時間，提供高度及多樣的前後混合加工。

■ 餘料短

選擇粗料套筒即可走心機當走刀機用，殘料長度約50mm，可有效達到精簡材料成本。

■ 粗料加工

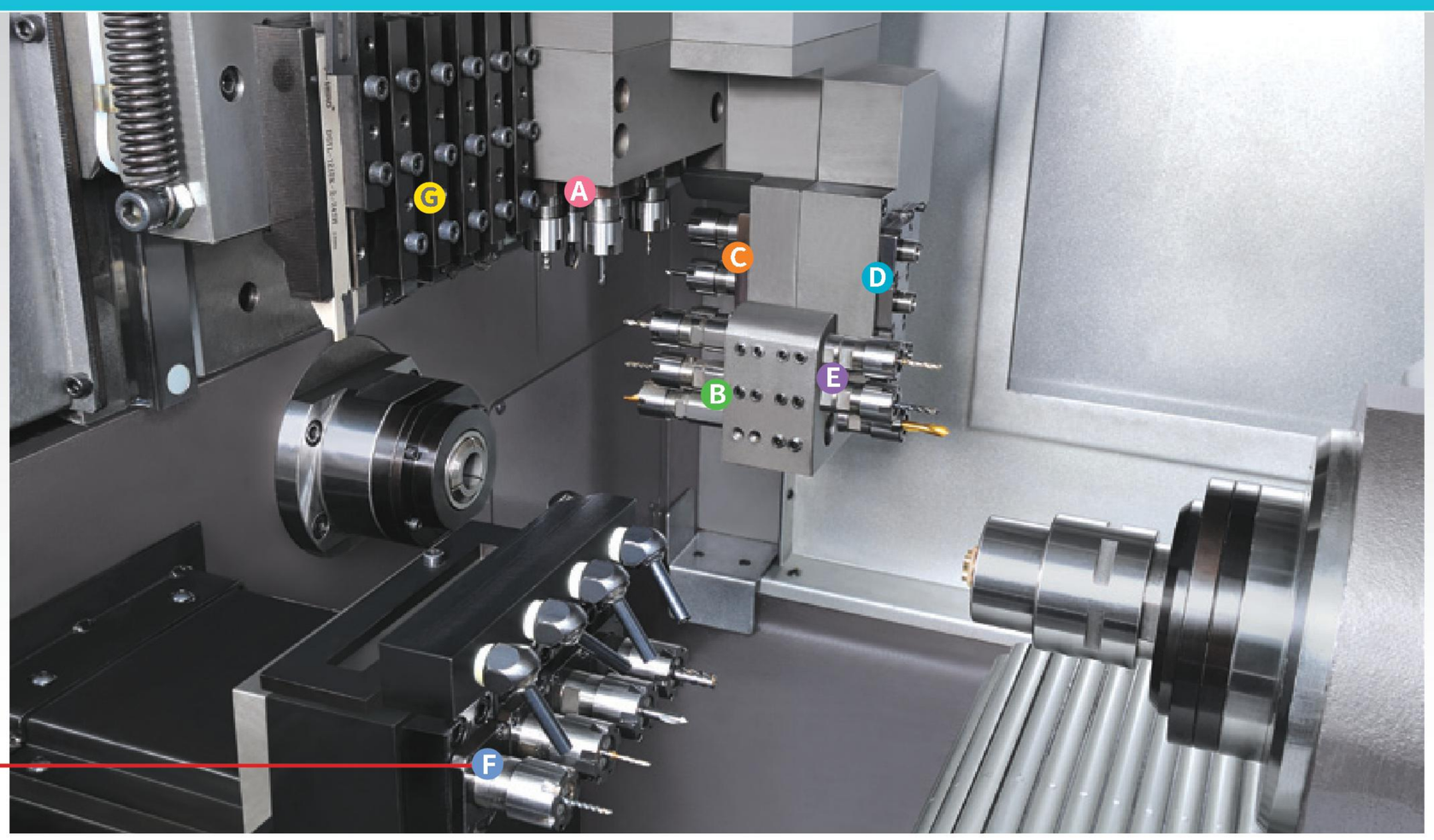
選擇粗料套筒，非研磨棒材也能在走心機加工，材料公差容忍 0.1mm。

■ 可替換式固定 / 動力刀座組

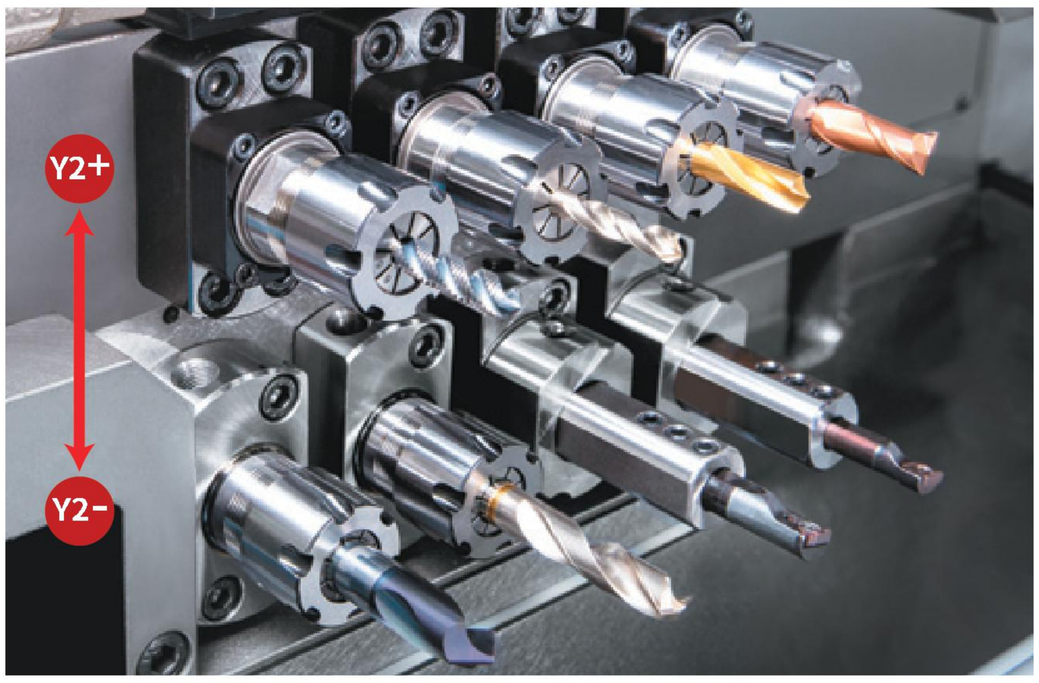
4支背面固定/動力鑽銑刀具刀座是新研發可拆卸安裝固定或動力刀具組之刀座，使您在刀具使用上有更靈活的運用。

SWISS TYPE CNC AUTO LATHE
走心式 CNC 自動車床

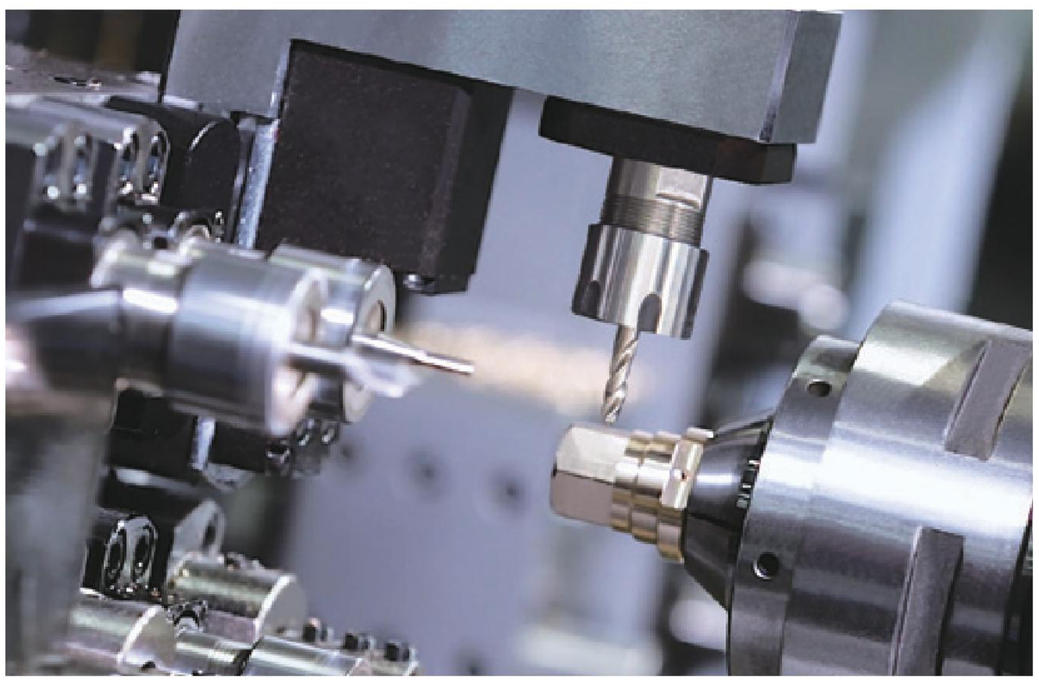
Multifunction High Productivity 7 Axis Machining at a Low Cost.
走心、走刀二用機，有 7 個軸向，多重選擇



- **A** 6 pcs cross working driven tool holder
  6 支側面鑽銑刀具刀座
- **B** 4 pcs I.D. stationary tool holder
  4 支正面內徑刀具刀座
- **C** 3 pcs front working driven tool holder
  3 支正面鑽銑刀具刀座
- **D** 3 pcs back working driven tool holder
  3 支背面鑽銑刀具刀座
- **E** 4 pcs back I.D. stationary tool holder
  4 支背面固定刀具刀座
- **F** 4 pcs back I.D. stationary / working driven tool holder
  4 支背面固定 / 動力鑽銑刀具刀座
- **G** 6 pcs O.D. turning tool holder
  6 支外徑刀具刀座
  (42Type with5 pcs O.D. turning tool
  42型配5支外徑刀)



選配： 背面Y2軸含4支動力鑽銑刀具刀座
Option: Y2 axis with 4 pcs Back Working Driven Tool Holder



選配： 背面選配Y2軸時可加選配立式鑽銑刀具刀座
Option: Optional Radial drilling tool holder when Y2 axis is selected on the sub-spindle

STANDARD ACCESSORIES 標準配件

- Control System: Mitsubishi M70 / M80
- Main spindle
- Back spindle
- Work light
- Coolant system
- Part off detective sensor
- Fixed bushing
  (Except 32B Ⅱ / 32CSB Ⅱ / 42B Ⅱ / 42CSB Ⅱ)
- Live bushing
- Part catcher
- 6 pcs O.D. turning tool holder
  (42 Type with 5 pcs O.D. turning tool)
- 4 pcs I.D. stationary tool holder
- 6 pcs cross working driven tool holder
- 3 pcs front working driven tool holder
- 4 pcs back I.D. stationary tool holder
- 3 pcs back working driven tool holder
- 4 pcs back I.D. stationary / working driven tool holder

- 控制系統：三菱 M70 / M80
- 主軸
- 背面主軸
- 工作燈
- 冷卻系統
- 工件切斷檢測
- 固定式套筒（除 32B Ⅱ / 32CSB Ⅱ / 42B Ⅱ / 42CSB Ⅱ無此配件）
- 同期迴轉套筒
- 工件收集器
- 6 支外徑刀具刀座
  (42 型配 5支外徑刀)
- 4 支正面內徑刀具刀座
- 6 支側面鑽銑刀具刀座
- 3 支正面鑽銑刀具刀座
- 4 支背面內徑刀具刀座
- 3 支背面鑽銑刀具刀座
- 4 支背面固定 / 動力鑽銑刀具刀座

OPTION ACCESSORIES 選擇配件

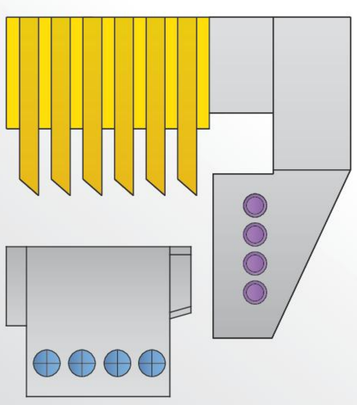
- Control System: Fanuc 0i-TF PLUS
- CS axis
  (CSB Ⅱ Main, back spindle 0.001° orientation)
  (CSB Ⅲ Main spindle 0.001° orientation)
- Rough material bushing
  (without guide bush)
- Chip conveyor + bucket
- 2 pcs front I.D. stationary tool holder
  (available for B Ⅲ/CSB Ⅲ with belt type)
- Y2 Axis

- 控制系統：發那科 0i-TF PLUS
- CS軸
  (CSB Ⅱ 主、背軸 0.001° 定位)
  (CSB Ⅲ 主軸 0.001° 定位)
- 粗料套筒
  (最大加工長度 = 材料外徑 x 3)
- 排屑機＋鐵屑車
- 2支固定正面內徑刀具刀座
  (適用於 B Ⅲ/CSB Ⅲ 配皮帶式背軸)
- Y2 軸

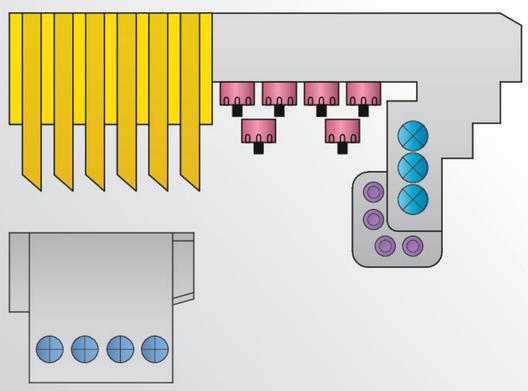
DIAMOND

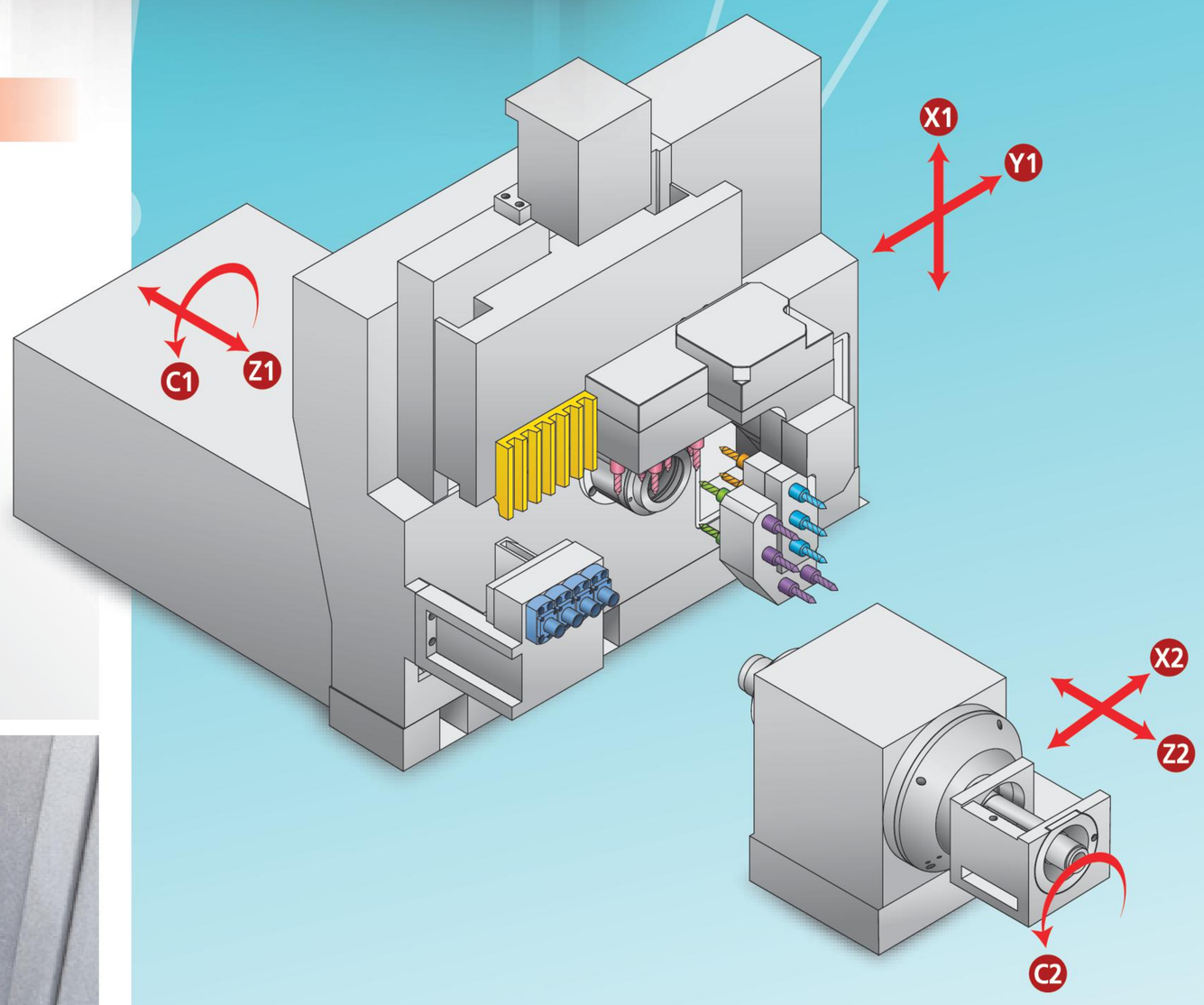
20CSB II / 32CSB II / 42CSB II

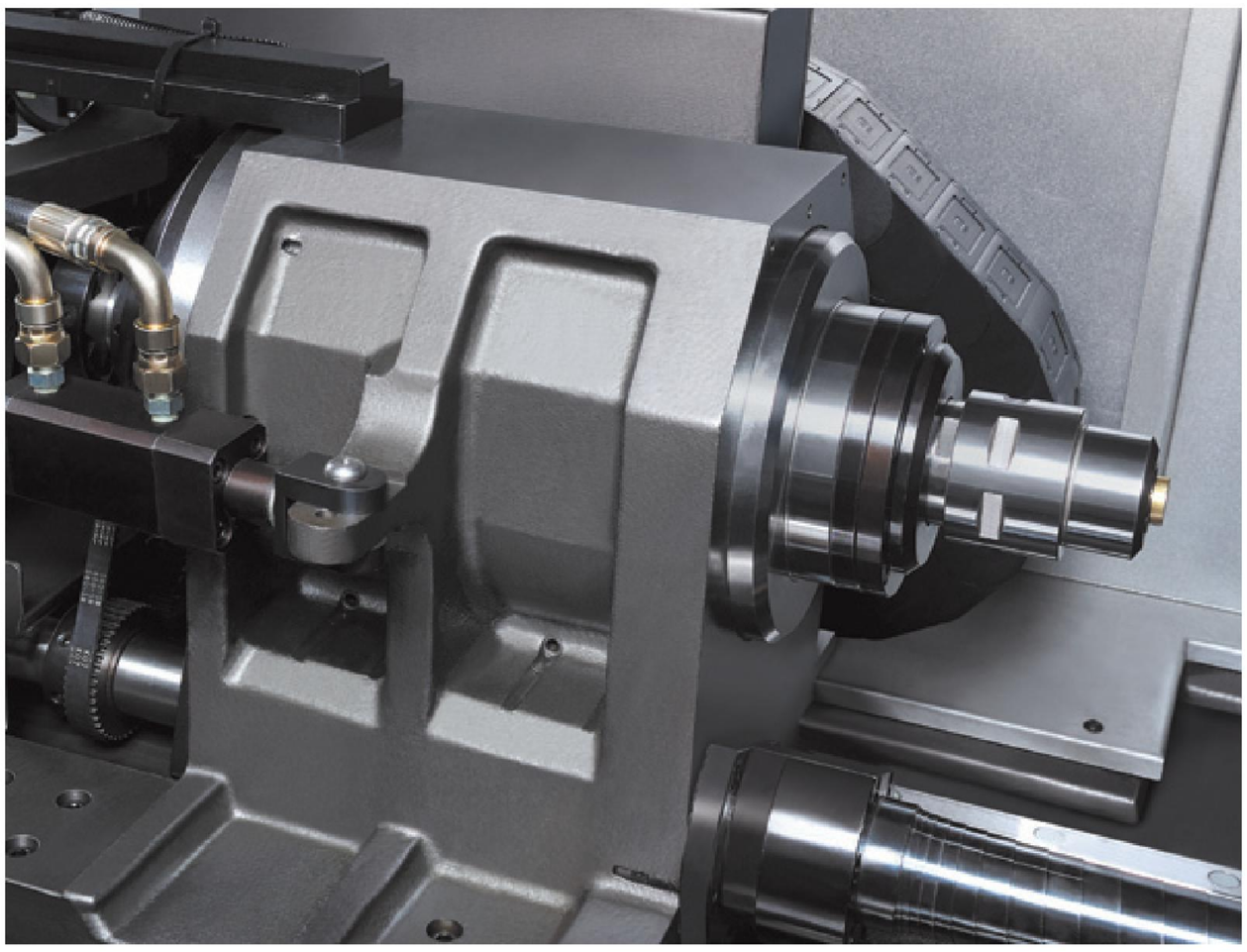
DIAMOND B II/III series



DIAMOND CSB II/III series

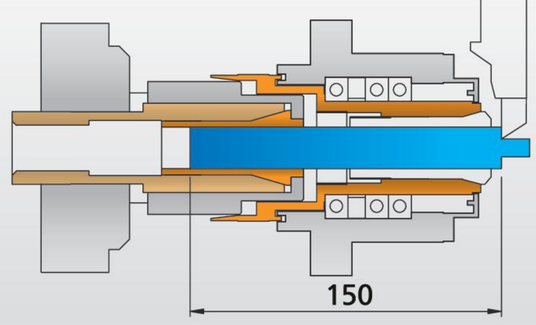






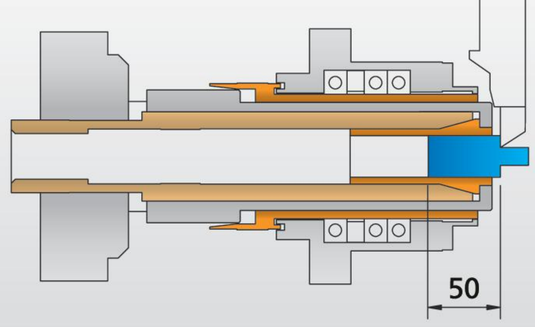
Main spindle can option CS axis

Using Live Bushing with Guide Bush
有導套之主軸構造



Remnant Material 150 mm
剩餘材料 150 mm

Using Rough Material Bushing without Guide Bush
無導套之主軸構造



Remnant Material 50 mm
剩餘材料 50 mm

SPECIFICATIONS

We reserve the rights to change the specs below without any prior notification.

MODEL			金鑽 12B III DIAMOND 12BIII	金鑽 12CSB III DIAMOND 12CSBIII	金鑽 16B III DIAMOND 16BIII	金鑽 16CSB III DIAMOND 16CSBIII	金鑽 20B III DIAMOND 20BIII	金鑽 20CSB III DIAMOND 20CSBIII	金鑽 25B III DIAMOND 25BIII	金鑽 25CSB III DIAMOND 25CSBIII
Working Range 加工範圍	最大加工外徑	Max. machining Dia.	ø12.7 mm	ø12.7 mm	ø16.5 mm	ø16.5 mm	ø20 mm	ø20 mm	ø26 mm	ø26 mm
	最大加工長度	Max. machining length per chucking	200 mm							
	最大鑽孔直徑(主軸)	Max. drilling dia. (main spindle)	ø7 mm	ø7 mm	ø10 mm	ø10 mm	ø10 mm	ø10 mm	ø10 mm	ø10 mm
	最大鑽孔直徑(背軸)	Max. drilling dia. (sub spindle)	ø7 mm	ø7 mm	ø7 mm	ø7 mm	ø7 mm	ø7 mm	ø7 mm	ø7 mm
	最大攻牙外徑(主軸)	Max. tapping dia. (main spindle)	M6	M6	M8	M8	M8	M8	M8	M8
	最大攻牙外徑(背軸)	Max. tapping dia. (sub spindle)	M6	M6	M6	M6	M6	M6	M6	M6
O.D. Tooling 外徑刀	刀具數	Number of tools	6							
	刀具尺寸	Dimension	□12 x 12 x 120							
I.D. Tooling 內徑刀	刀具數	Number of tools	4							
	刀具尺寸	Dimension	10 mm (ER16)							
Cross Working Driven Tooling 側面鑽銑刀	刀具數	Number of tools		6		6		6		6
	刀具尺寸	Dimension		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)
	刀具轉速	Speed		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm
Front Working Driven Tooling 正面鑽銑刀	刀具數	Number of tools		3		3		3		3
	刀具尺寸	Dimension		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)
	刀具轉速	Speed		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm
Back I.D. Tooling 背面內徑刀	刀具數	Number of tools	4 + 4							
	刀具尺寸	Dimension	10 mm (ER16)							
Back Working Driven Tooling 背面鑽銑刀	刀具數	Number of tools		3		3		3		3
	刀具尺寸	Dimension		7 mm (ER11)		7 mm (ER11)		7 mm (ER11)		7 mm (ER11)
	刀具數	Number of tools		4		4		4		4
	刀具尺寸	Dimension		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)		10 mm (ER16)
	刀具轉速	Speed		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm
Spindle 主軸	主軸內徑	Spindle hole dia.	ø13 mm	ø13 mm	ø17 mm	ø17 mm	ø22 mm	ø22 mm	ø27 mm	ø27 mm
	主軸轉速	Spindle speed	200~8,000 rpm							
	主軸定位角度	Main spindle indexing angle	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)
Back Spindle 背主軸	背主軸內徑	Spindle hole dia.	ø13 mm	ø13 mm	ø17 mm	ø17 mm	ø22 mm	ø22 mm	ø27 mm	ø27 mm
	背主軸轉速	Spindle speed	200~5,000 rpm (200~8,000 rpm選配內藏馬達 Option built-in motor)							
	前面出料最大長度	Max. length for front ejection	50 mm							
	背軸定位角度	Sub spindle indexing angle	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)	C axis	C axis (選配CS軸 0.001° 定位 Optional CS axis 0.001° indexing)
Rapid Traverse	快速位移	X1, Y1, Z1, X2, Z2	30 m / min							
Motors 馬達	主軸馬達	Spindle motor	2.2 kW				3.7 kW			
	背主軸馬達	Back spindle motor	2.2 kW (2.2 kW 選配內藏馬達 Option built-in motor)				2.2 kW (3.7 kW 選配內藏馬達 Option built-in motor)			
	X1, Y1, Z1, X2, Z2軸馬達	X1, Y1, Z1, X2, Z2 axes motor	1 kW							
	Y2軸馬達(選配)	Y2 axis motor(option)	1 kW							
	切削馬達	Coolant pump motor	1 HP							
	潤滑油馬達	Lubrication motor	4 W							
	固定手臂動力刀座	Driven tools motor-fixed arm		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)
	背軸可替換式動力刀座	Driven tools motor-back replaced toolholder set		0.4kW(M70) / 1.5kW(M80)		0.4kW(M70) / 1.5kW(M80)		0.4kW(M70) / 1.5kW(M80)		0.4kW(M70) / 1.5kW(M80)
	(選配Y2 軸)	(option Y2 axis)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)
Machine Dimensions 機械尺寸	主軸中心高	Center height	890 mm							
	重量	Weight	1,890 kg	1,920 kg	2,040 kg	2,070 kg	2,090 kg	2,120 kg	2,140 kg	2,170 kg
	(選配Y2 軸)	(option Y2 axis)		2,300 kg		2,450 kg		2,500 kg		2,550 kg
	機械尺寸	Machine dimension	2440 x 1430 x 1650 (2690 x 1495 x 1890 選配 Y2 軸 option Y2 axis)							
Air Pressure 氣壓	空氣壓力	Air pressure	5 kg / cm							
	空氣量	Air supply	10 L / min							

SPECIFICATIONS

We reserve the rights to change the specs below without any prior notification.

MODEL			金鑽 20BⅡ DIAMOND 20BⅡ	金鑽 20CSBⅡ DIAMOND 20CSBⅡ	金鑽 32BⅡ DIAMOND 32BⅡ	金鑽 32CSBⅡ DIAMOND 32CSBⅡ	金鑽 42BⅡ DIAMOND 42BⅡ	金鑽 42CSBⅡ DIAMOND 42CSBⅡ
Working Range 加工範圍	最大加工外徑	Max. machining Dia.	ø20 mm	ø20 mm	ø32 mm	ø32 mm	ø42 mm	ø42 mm
	最大加工長度	Max. machining length per chucking	240 mm					
	最大鑽孔直徑(主 / 背軸)	Max. drilling dia. (main / sub spindle)	ø12 mm	ø12 mm	ø15 mm	ø15 mm	ø15 mm	ø15 mm
	最大攻牙外徑(主 / 背軸)	Max. tapping dia. (main / sub spindle)	M10	M10	M12	M12	M12	M12
O.D. Tooling 外徑刀	刀具數	Number of tools	6				5	
	刀具尺寸	Dimension	□12 x 12 x 120	□12 x 12 x 120	□16 x 16 x 120	□16 x 16 x 120	□16 x 16 x 120	□16 x 16 x 120
I.D. Tooling 內徑刀	刀具數	Number of tools	4					
	刀具尺寸	Dimension	10 mm (ER16)	10 mm (ER16)	13 mm (ER20)	13 mm (ER20)	13 mm (ER20)	13 mm (ER20)
Cross Working Driven Tooling 側面鑽銑刀	刀具數	Number of tools		6		6		6
	刀具尺寸	Dimension		10 mm (ER16)		13 mm (ER20)		13 mm (ER20)
	刀具轉速	Speed		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm
Front Working Driven Tooling 正面鑽銑刀	刀具數	Number of tools		3		3		3
	刀具尺寸	Dimension		10 mm (ER16)		13 mm (ER20)		13 mm (ER20)
	刀具轉速	Speed		200~6,000 rpm		200~6,000 rpm		200~6,000 rpm
Back I.D. Tooling 背面內徑刀	刀具數	Number of tools	4 + 4					
	刀具尺寸	Dimension	10 mm (ER16)	10 mm (ER16)	13 mm (ER20)	13 mm (ER20)	13 mm (ER20)	13 mm (ER20)
Back Working Driven Tooling 背面鑽銑刀	刀具數	Number of tools		3		3		3
	刀具尺寸	Dimension		7 mm (ER11)		10 mm (ER16)		10 mm (ER16)
	刀具數	Number of tools		4		4		4
	刀具尺寸	Dimension		10 mm (ER16)		13 mm (ER20)		13 mm (ER20)
	刀具轉速	Speed		3,000 rpm		3,000 rpm		3,000 rpm
Spindle 主軸	主軸內徑	Spindle hole dia.	ø22 mm	ø22 mm	ø35 mm	ø35 mm	ø45 mm	ø45 mm
	主軸轉速	Spindle speed	200~8,000 rpm	200~8,000 rpm	200~7,000 rpm	200~7,000 rpm	200~5,000 rpm	200~5,000 rpm
	主軸定位角度	Main spindle indexing angle	C-axis					
Back Spindle 背主軸	背主軸內徑	Spindle hole dia.	ø22 mm	ø22 mm	ø35 mm	ø35 mm	ø45 mm	ø45 mm
	背主軸轉速	Spindle speed	200~8,000 rpm	200~8,000 rpm	200~7,000 rpm	200~7,000 rpm	200~5,000 rpm	200~5,000 rpm
	前面出料最大長度	Max. length for front ejection	60 mm				80 mm	
	背主軸定位角度	Sub spindle indexing angle	C-axis					
Rapid Traverse 快速位移	X1, Y1, Z1, X2, Z2	X1, Y1, Z1, X2, Z2	30 m / min					
Motors 馬達	主軸馬達	Spindle motor	3.7 kW	3.7 kW	5.5 kW	5.5 kW	7.5 kW	7.5 kW
	背主軸馬達	Back spindle motor	3.7 kW	3.7 kW	5.5 kW	5.5 kW	5.5 kW	5.5 kW
	Y1, Z1, Z2 軸馬達	Y1, Z1, Z2 axes motor	0.5kW(M70) / 1kW(M80)					
	X1, X2 軸馬達	X1, X2 axis motor	1 kW					
	Y2 軸馬達 (選配)	Y2 axis motor (option)	1 kW					
	切削馬達	Coolant pump motor	1 HP x 2					
	潤滑油馬達	Lubrication motor	4 W x 2					
	固定手臂動力刀座	Driven tools motor-fixed arm		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)
	背軸可替換式動力刀座	Driven tools motor-back replaced toolholder set		1 kW		1 kW		1 kW
	(選配 Y2 軸)	(option Y2 axis)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)		1.5kW(M70) / 2.2kW(M80)
Machine Dimensions 機械尺寸	主軸中心高	Center height	1,050 mm					
	重量	Weight	3,140 kg	3,170 kg	3,390 kg	3,420 kg	3,710 kg	3,740 kg
	(選配 Y2 軸)	(option Y2 axis)		3,550 kg		3,800 kg		4,120 kg
	機械尺寸	Machine dimension	2,500 x 1,280 x 1,780					
Air Pressure 氣壓	空氣壓力	Air pressure	5 kg/cm					
	空氣量	Air supply	10 L/min					

PO LY GIM

PO LY GIM MACHINERY CO., LTD.

富格蘭科技有限公司

苗栗縣366銅鑼鄉竹森村149之1號

No. 149-1, Zhusen Village, Tongluo Shiang,
Miao-Li County 366, Taiwan

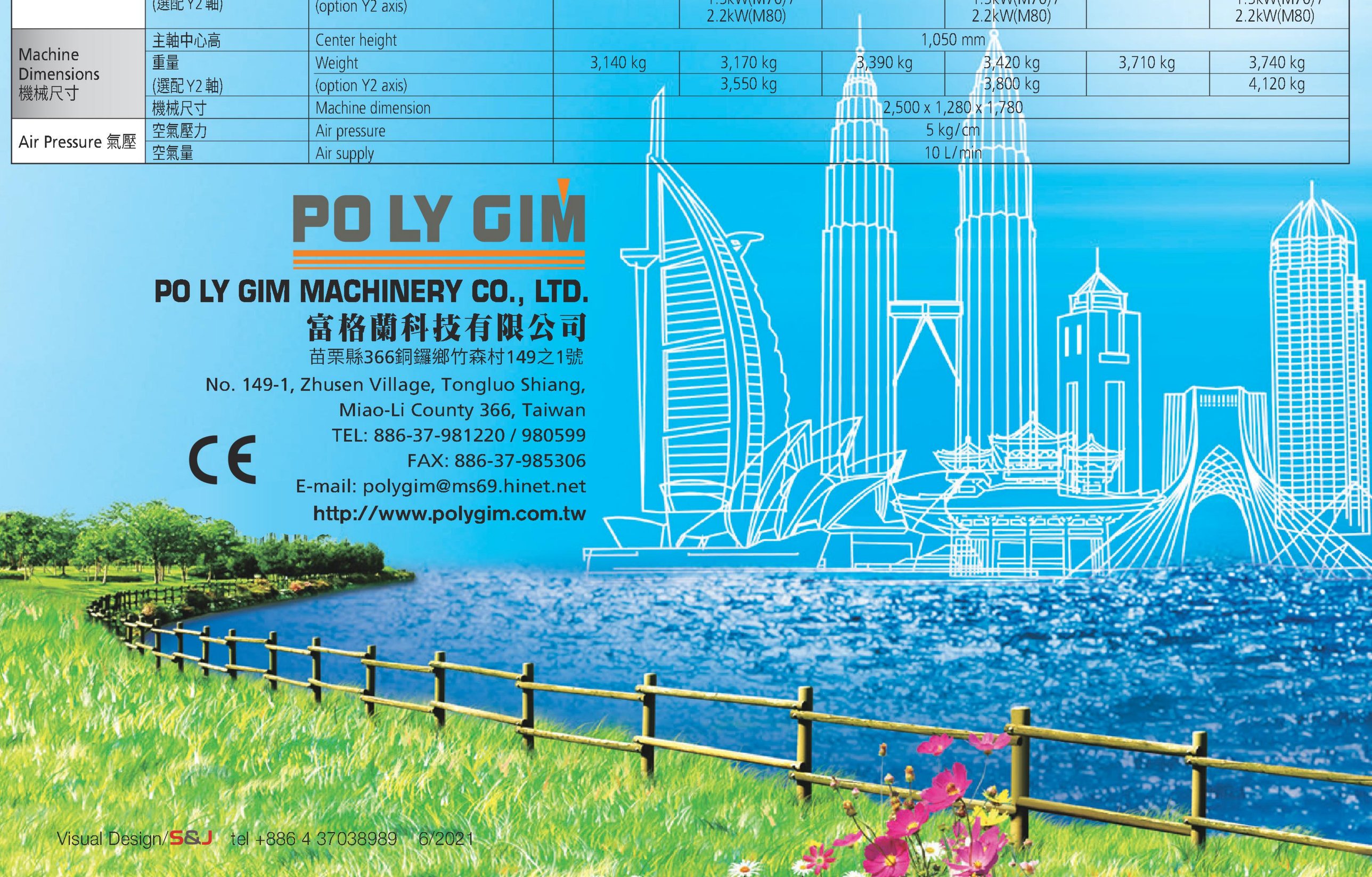
TEL: 886-37-981220 / 980599

FAX: 886-37-985306

E-mail: polygim@ms69.hinet.net

http://www.polygim.com.tw

CE



Visual Design/S&J tel +886 4 37038989 6/2021