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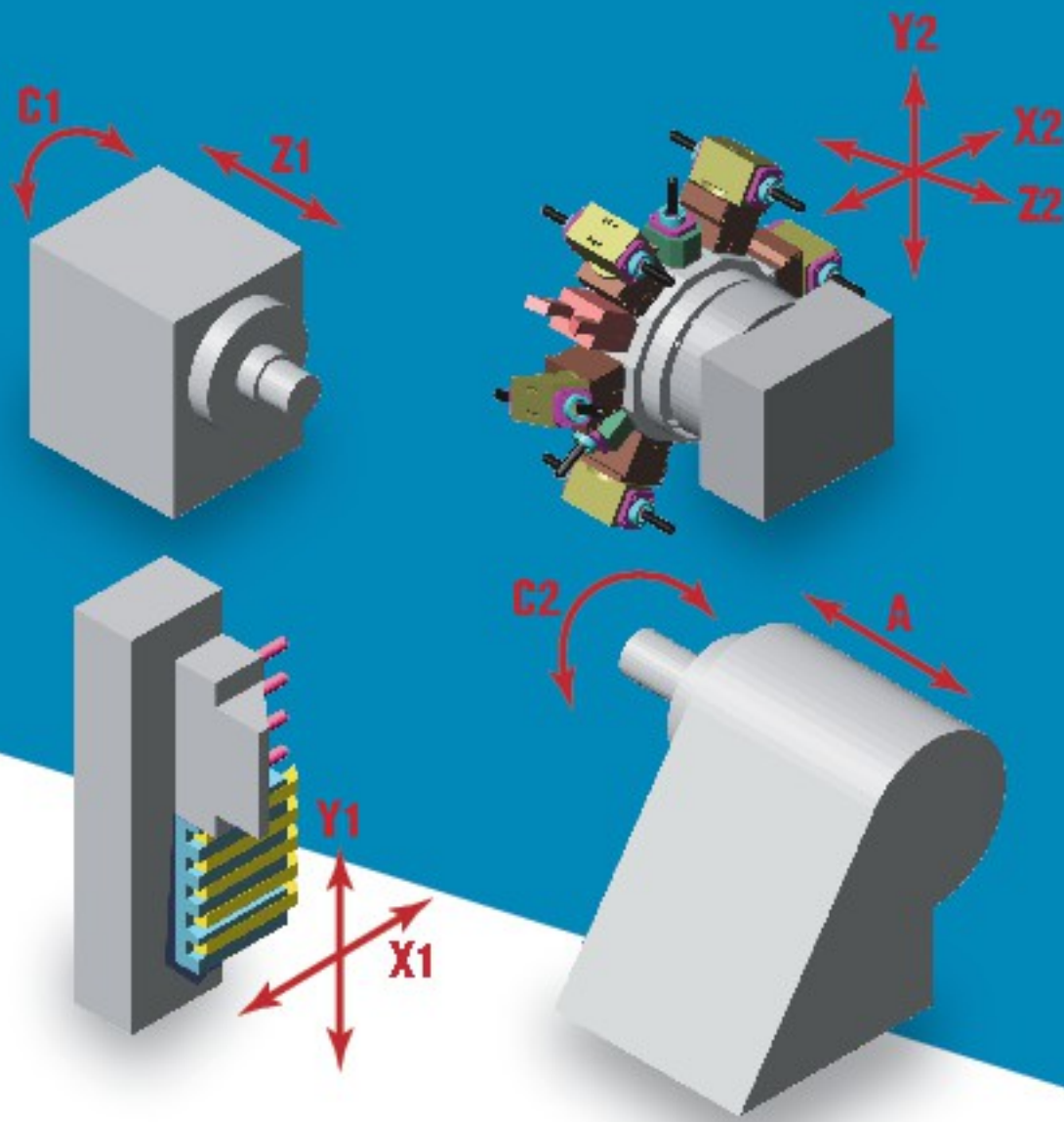
# DIAMOND CSL 42-2Y SERIES



Swiss Type CNC Auto Lathe

走心式CNC自動車床  
金鑽CSL 42型 雙Y系列

# DIAMOND CSL 42-2Y



## Machine Features

★ **Diamond CSL 42-2Y** offers up to 9 axes complex manufacturing capability using the most advanced multi-axes control system.

★ **Diamond CSL 42-2YII** is upgraded with MITSUBISHI 730 controller which possessed control axis superimposition function. It offers up to 10 axes complex manufacturing capability and it can simultaneously process at 3 channels.

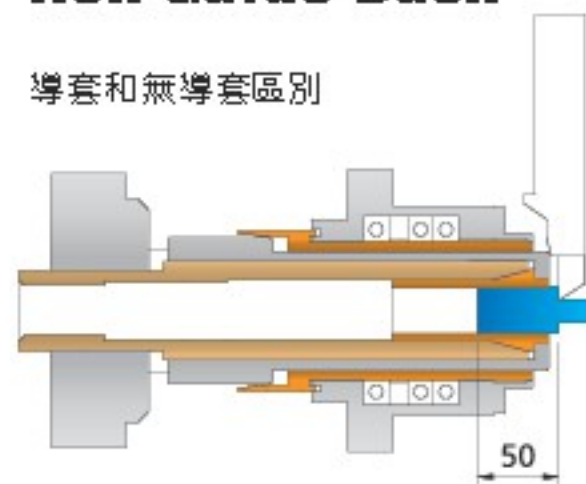
### 機械特點：

★ **金鑽 CSL 42-2Y** 採用最先進的多軸控制系統，可提供多達 9 軸的複雜製造能力。

★ **金鑽 CSL 42-2YII** 升級採用具有控制軸疊加功能的三菱 730 控制器，它提供多達 10 軸的複雜製造能力，並且可以同時在 3 個系統進行處理。

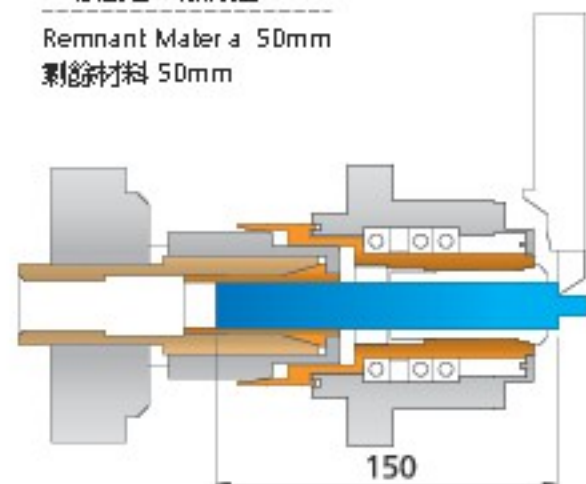
## Guide Bush vs. Non Guide Bush

導套和無導套區別



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

Remnant Material 50mm  
剩餘材料 50mm



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

Remnant Material 150mm  
剩餘材料 150mm

# DIAMOND CSL 42-2YII



## Parts Catcher with Parts Conveyor

工件收集器配成品輸送帶

# SWISS Type CNC Auto Lathe

**Main and Sub-Spindle** are up to 42mm with 12 station power turret. Both built-in spindle are with MP Scale's CS axis construction. This helps to obtain higher spindle rotation accuracy and better surface finish during cutting operation.

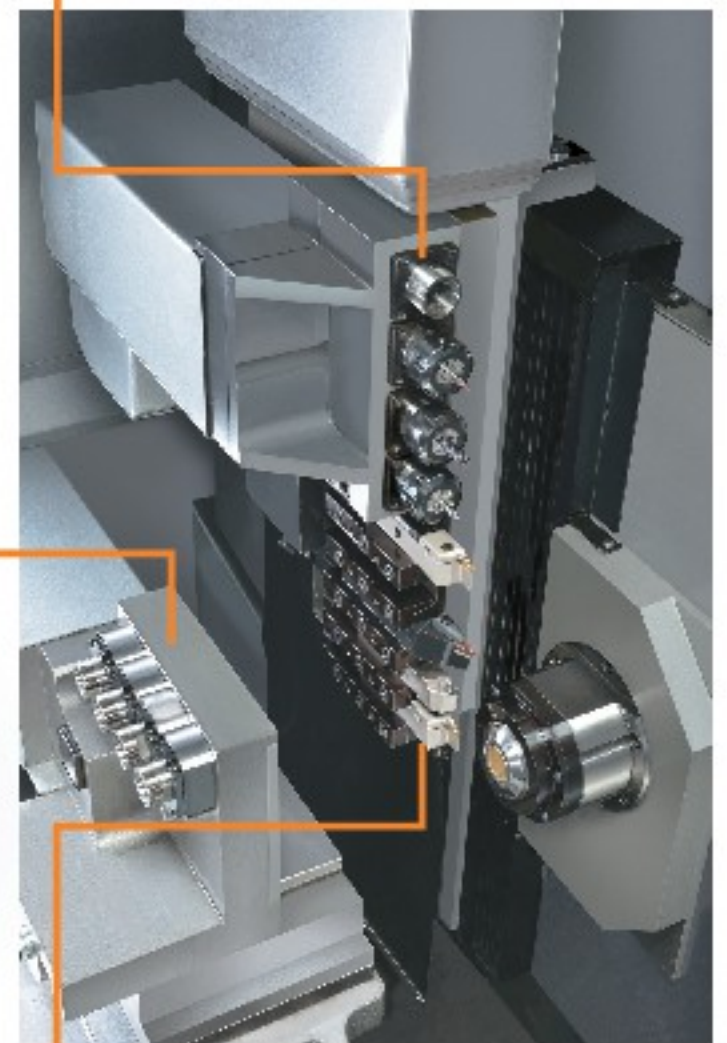
主軸和副主軸高達42毫米，配有12個工位的動力轉塔。內置主軸均採用 MP Scale 的 CS 軸結構。這有助於獲得更高的主軸旋轉精度和更好的切削操作表面光潔度。



12 Stations Power Turret  
Can Do Double-side Processing  
12角動力刀塔可做雙面加工

4 pcs Back Working Driven  
Tool Holder ( for 42-2Y II )  
4支背面鑽銑刀具刀座  
(只限42-2Y II)

4 pcs Cross Working Driven  
Tool Holder  
4支側銑刀具刀座



5 pcs O.D. Turning Tool Holder  
5支外徑刀具刀座

# DIAMOND CSL 42-2Y SPECIFICATIONS 機械規格

We reserve the right to change the above design without prior notification.

ITEMS 項目			Y1 (System 1)	Y2 (System 2)
Working Range 加工範圍	Max. Machining Dia.	最大加工外徑	Ø42 mm	Ø42 mm
	Max. Machining Length	最大加工長度	280 mm	
	Max. Drilling Capacity	最大鑽孔直徑	Ø30 mm	Ø30 mm
	Max. Tapping Capacity	最大攻牙外徑	M16	M16
Tooling System 工具系統	O.D. Turning Tool	外徑刀貝數	5	
	O.D. Turning Tool Dimension	外徑刀貝尺寸	□20x20x120	
	Cross Tool [power – driven tool]	側銑刀貝數	4	
	Cross Tool Dimension	側銑刀貝尺寸	16 mm [ER25]	
	Cross Tool Speed	側銑刀貝轉速	200~6000 rpm	
Power Turret 動力刀塔	Power - driven Tool / Station	轉塔刀貝數量		12
	O.D. Tool Dimension	外徑刀貝尺寸		□20 x 20
	I.D. Tool Dimension	內徑刀貝尺寸		Ø25 mm
	Max. O.D. Turning Tool / Station	外徑刀貝數(最多)		6
	Max. I.D. bore Tool / Station	內徑刀貝數(最多)		6
	Power – driven Tool Dimension	動力刀貝尺寸		16 mm [ER25]
	Power – driven Tool Speed	動力刀貝轉速		200~6000 rpm
	Max. Radial Mill / Drill Tool / Station	徑向動力刀貝數(最多)		12
Max. Axial Mill / Drill Tool / Station	軸向動力刀貝數(最多)		12	
Spindle 主軸	Spindle Hole Dia.	主軸內徑	Ø42 mm	
	Spindle Speed	主軸轉速	200~6000 rpm	
Sub-spindle 背主軸	Sub-spindle Hole Dia.	背主軸內徑		Ø42 mm
	Sub-spindle Speed	背主軸轉速		200~6000 rpm
	Max. Length for Front Ejection	前面出料最大長度		120 mm
	Sub-spindle Max. Drilling Dia.	背面加工最大鑽孔徑		Ø30 mm
	Sub-spindle Max. Tapping Dia.	背面加工最大攻牙徑		M16
Rapid Speed 快速位移	A Axis	A 軸	30m/m in	30m/m in
	X1, Z1, Y1 Axes	X1, Z1, Y1 軸	30m/m in	
	X2, Z2, Y2 Axes	X2, Z2, Y2 軸		30m/m in
Travel 行程	A Axis	A 軸		460 mm
	X1 Axis	X1 軸	45 mm	
	Z1 Axis	Z1 軸	300 mm	
	Y1 Axis	Y1 軸	360 mm	
	X2 Axis	X2 軸		150 mm
	Z2 Axis	Z2 軸		460 mm
	Y2 Axis	Y2 軸		185 mm
Motors 馬達	Main Spindle	主軸馬達	7.5 kW	
	Sub-spindle	背軸馬達		7.5 kW
	Y1, Y2 Axes	Y1, Y2 軸馬達	1.0 kW	1.0 kW
	A, X1, Z1, X2, Z2 Axes	A, X1, Z1, X2, Z2 軸馬達	1.0 kW	1.0 kW
	Rotary Tools	動力刀貝馬達	1.5 kW	2.2 kW
	Coolant Pump	切削馬達	1.5 HP	1.5 HP
	Lubrication	潤滑油馬達	25 w	25 w
Machine Dimensions 機械尺寸	Center Height	主軸中心高		960 mm
	Weight	重量		6380 kgs
	Dimension	機械尺寸		3000 x 1800 x 1980 mm
Air 氣壓	Air Pressure	空氣壓力		5 kg/cm
	Air Supply	空氣量		10 L/min

### Standard Accessories:

- Main spindle
- Sub-spindle
- CS Axis [0.001" orientation]
- Working Light
- Coolant System
- Part off Detective Sensor
- Live Bushing
- Chip Conveyor
- Chip Bucket
- Part Catcher

- 5 pcs O.D. Turning Tool Holder
- 4 pcs Cross Working Driven Tool Holder
- 4 pcs Double Side Turning Holder [Turret]
- 4 pcs Double Boring Bar Holder [Turret]
- 2 pcs Axial Drilling and Milling Head [Turret]
- 2 pcs Radial Drilling and Milling Double Head [Turret]
- Rough Material Bushing [Max. Machining = Bar Diameter x 3]

### DIAMOND CSL 42-2Y II

Additional: 4 pcs Back Working Driven Tool Holder

### 標準附件:

- 正主軸
- 背主軸
- CS軸 [0.001" 定位]
- 工作燈
- 冷卻系統
- 工件切斷檢測
- 可調速轉齒筒
- 齒筒機
- 齒筒箱
- 工件收集器
- 5 支外徑刀貝刀座
- 4 支側銑刀貝刀座
- 4 支雙側外徑刀貝刀座 [刀塔]
- 4 支雙孔內徑刀貝刀座 [刀塔]
- 2 支軸向動力刀貝刀座 [刀塔]
- 2 支雙頭徑向動力刀貝刀座 [刀塔]
- 粗料齒筒 [最大加工長度 - 材料外徑 x 3]

### DIAMOND CSL 42-2Y II

增加: 4 支背面鑽銑刀貝刀座

# DIAMOND CSL 42-2YII SPECIFICATIONS 機械規格

ITEMS 項目			Y1 (system 1)	Y2 (system 2)	(system 3)
Working Range 加工範圍	Max. Machining Dia.	最大加工外徑	Ø42 mm	Ø42 mm	
	Max. Machining Length	最大加工長度	280 mm		
	Max. Drilling Capacity	最大鑽孔直徑	Ø30 mm	Ø30 mm	
	Max. Tapping Capacity	最大攻牙外徑	M16	M16	
Tooling System 工具系統	O.D. Turning Tool	外徑刀貝數	5		
	O.D. Turning Tool Dimension	外徑刀貝尺寸	□ 20x20x120		
	Cross Tool [power – driven tool]	側銑刀貝數	4		
	Cross Tool Dimension	側銑刀貝尺寸	16 mm [ER25]		
	Cross Tool Speed	側銑刀貝轉速	200~6000 rpm		
	Back I.D. Tool	背面內徑刀貝數			4
	Back I.D. Tool Dimension	背面內徑刀貝尺寸			Ø25 mm
	Back Working Driven Tool	背面鑽銑刀貝數			4
	Back Working Driven Tool Dimension	背面鑽銑刀貝尺寸			16 mm [ER25]
	Back Working Driven Tool Speed	背面鑽銑刀貝轉速			200~6000 rpm
Power Turret 動力刀塔	Power - driven Tool / Station	轉塔刀貝數量		12	
	O.D. Tool Dimension	外徑刀貝尺寸		□ 20 x 20	
	I.D. Tool Dimension	內徑刀貝尺寸		Ø25 mm	
	Max. O.D turning Tool / Station	外徑刀貝數(最多)		6	
	Max. I.D. bore Tool / Station	內徑刀貝數(最多)		6	
	Power – driven Tool Dimension	動力刀貝尺寸		16 mm [ER25]	
	Power – driven Tool Speed	動力刀貝轉速		200~6000 rpm	
	Max. Radial Mill / Drill Tool / Station	徑向動力刀貝數(最多)		12	
Max. Axial Mill / Drill Tool / Station	軸向動力刀貝數(最多)		12		
Spindle 主軸	Spindle Hole Dia	主軸內徑	Ø42 mm		
	Spindle Speed	主軸轉速	200~6000 rpm		
Sub-spindle 背主軸	Sub-spindle Hole Dia.	背主軸內徑			Ø42 mm
	Sub-spindle Speed	背主軸轉速			200~6000 rpm
	Max. Length for Front Ejection	前面出料最大長度			120 mm
	Sub-spindle Max. Drilling Dia.	背面加工最大鑽孔徑			Ø30 mm
	Sub-spindle Max. Tapping Dia.	背面加工最大攻牙徑			M16
Rapid Speed 快速位移	X1, Z1, Y1, X2, Z2, Y2, X3, Z3 Axes	X1, Z1, Y1, X2, Z2, Y2, X3, Z3 軸	30m/m in	30m/m in	30m/m in
Travel 行程	X1 Axis	X1 軸	45 mm		
	Z1 Axis	Z1 軸	300 mm		
	Y1 Axis	Y1 軸	360 mm		
	X2 Axis	X2 軸		150 mm	
	Z2 Axis	Z2 軸		480 mm	
	Y2 Axis	Y2 軸		185 mm	
	X3 Axis	X3 軸			250 mm
	Z3 Axis	Z3 軸			480 mm
Motors 馬達	Main / Sub-spindle	主/ 背軸馬達	7.5 kW		7.5 kW
	X1, Z1, Y1, X2, Z2, Y2, X3, Z3 Axes	X1, Z1, Y1, X2, Z2, Y2, X3, Z3 軸馬達	1.0 kW	1.0 kW	1.0 kW
	Rotary Tools	動力刀貝馬達	1.5 kW	2.2 kW	1.5 kW
	Coolant Pump	切削馬達	1.5 HP		1.5 HP
	Lubrication	潤滑油馬達	25 w		25 w
Machine Dimensions 機械尺寸	Center Height	主軸中心高		990 mm	
	Weight	重量		6480 kg	
	Dimension	機械尺寸		3600x2650x2130 mm	
Air 氣壓	Air Pressure	空氣壓力		5 kg/ cm	
	Air Supply	空氣量		10 L/ min	

#### Option Accessories for Power Turret:

- Double Side Turning Holder
- Double Boring Bar Holder
- Axial Drilling And Milling Head
- Radial Drilling And Milling Double Head

#### 刀塔用選擇配件:

- 雙側外徑刀貝刀座
- 雙孔內徑刀貝刀座
- 軸向動力刀貝刀座
- 徑向動力刀貝刀座

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