

PINTAI

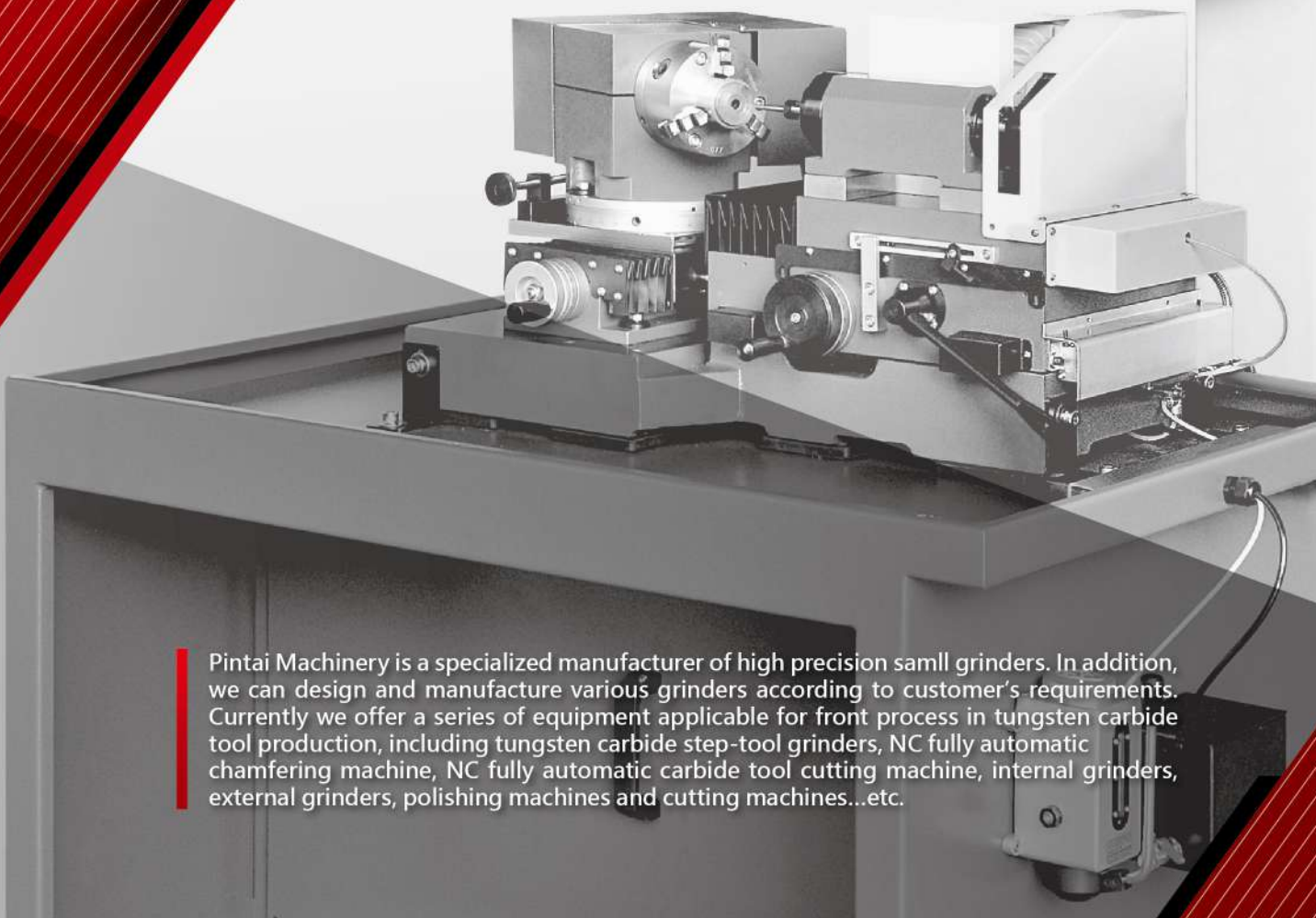
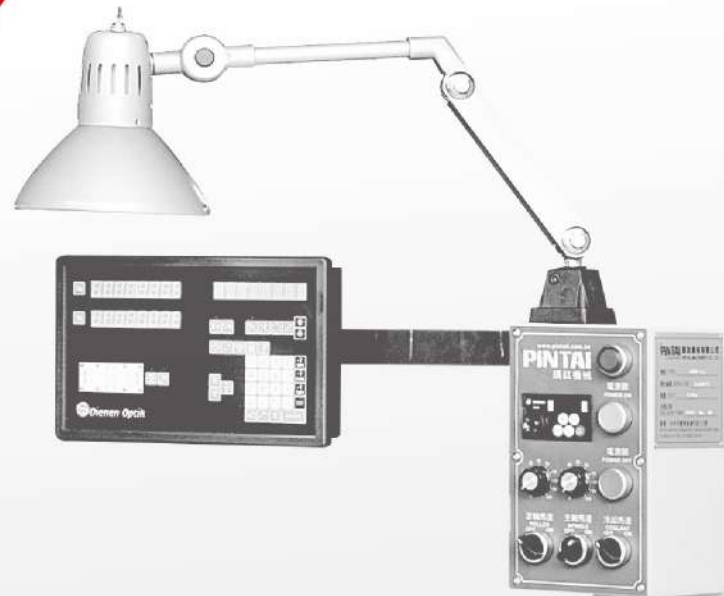
INTERNAL GRINDER

HID4-SP

H16-SP

NC-150

NC-200



Pintai Machinery is a specialized manufacturer of high precision samll grinders. In addition, we can design and manufacture various grinders according to customer's requirements. Currently we offer a series of equipment applicable for front process in tungsten carbide tool production, including tungsten carbide step-tool grinders, NC fully automatic chamfering machine, NC fully automatic carbide tool cutting machine, internal grinders, external grinders, polishing machines and cutting machines...etc.

3-Jaw Chuck Type Internal Grinder

HID4-SP

*Linear Scale : option



Dry Grinding Model (Standard)



Wet Grinding Model (Optional)

With Coolant flushing system and splash guard

Modle/Specification	Unit	HID4-SP
Clamping range of workpiece diameters	mm	Ø1-Ø100
Range of grinding diameter	mm	Ø0.3-Ø30
Travel X axis	mm	90
Travel Y axis	mm	50
Feed		
Y axis feed per graduation	mm	0.005
X · Y axis feed method	-	Manual
X · Y axis feed rate	-	Manual
Work Head		
Work spindle speed (variable)	rpm	0-600
Work head swiveling angle	deg.	±22.5°
Work head servo motor	W	400
Grinding Wheel Head		
Grinding wheel motor	HP	1
Grinding wheel spindle speed (variable)	rpm	0-50000
Machine dimension(L*W*H)	mm	900*1180*1520
Machine weight (approx.)	kg	400

► Machine Features

- Workpiece is clamped a 4" 3-Jaw chuck.
- Workpiece diameter can be clamped is $\varnothing 1 \sim \varnothing 100\text{mm}$.
- X / Y axis feeds are manually operated.
- The grinding wheel spindle running is controlled through a frequency inverter.
- Variable speed change for the wheel spindle and the work spindle.
- Double "V" slideways are hardened. Slide surfaces are precision ground, coated with Turcite-B and hand scraping.

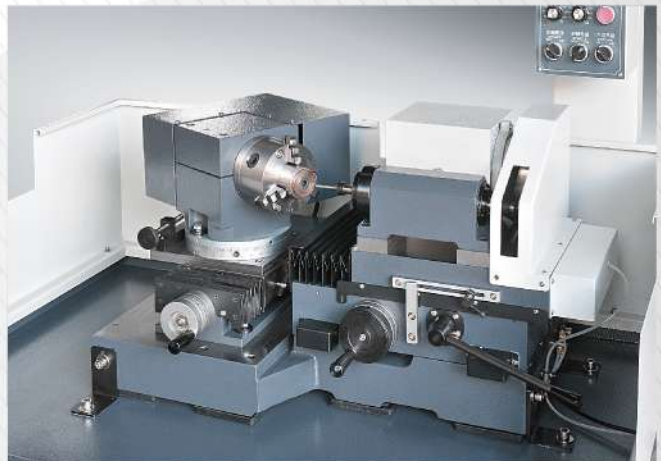
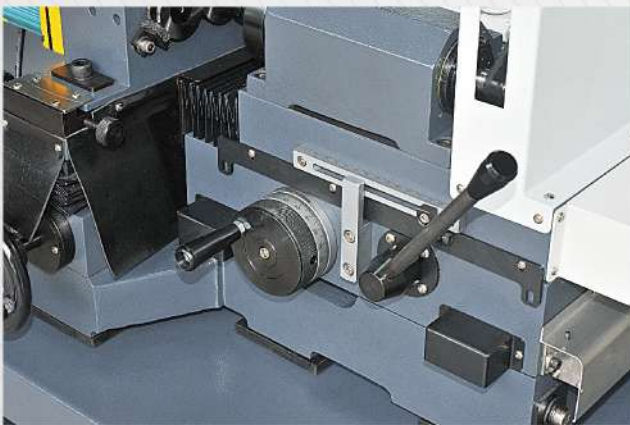


► Control Panel

- A centralized operation panel.

► Work Head

- This machine employs a 4" 3-jaw chuck for clamping workpiece.
- The entire work head can be swiveled in the range of 22.5° (single side) that makes the machine suitable for grinding internal taper of workpiece.
- Work head spindle speed is variable 0~600rpm.



► Grinding Wheel Head

- X axis travel is 90 mm.
- Y axis travel is 50 mm.
- Can install linear scale to have more accurate position, resolution of linear scale is 1 μm .
- Grinding wheel spindle speed is 0~50,000 rpm.

► Standard Accessories

Grinding wheel spindle 50,000 rpm
ER11 Nut
ER11 Collet ($\varnothing 3$ 、 $\varnothing 6$ one each)
 $\pm 45^\circ$ Rotary table

Grinding bar 3030.6060
Tool box and Kit
Working light

► Optional Accessories

Linear scale (two axes 1 μm)
Coolant device
Vacuum cleaner

► Applications

Screw molds Sleeves
Nut molds
Micro parts

Roller Type Internal Grinder

H16-SP

*Linear Scale : option



Dry Grinding Model (Standard)

Wet Grinding Model (Optional)

With Coolant flushing system and splash guard

Modle/Specification	Unit	H16-SP
Clamping range of workpiece diameters	mm	Ø1-25
Range of grinding diameter	mm	Ø1-19
Travel X axis	mm	90
Travel Y axis	mm	50
Feed		
Y axis feed per graduation	mm	0.005
X \ Y axis feed method	-	Manual
X \ Y axis feed rate	-	Manual
Work Head		
Work spindle speed (variable)	rpm	0-380
Work head swiveling angle	deg.	±5°
Work head servo motor	W	25
Grinding Wheel Head		
Grinding wheel motor	HP	1
Grinding wheel spindle speed (variable)	rpm	0-50000
Machine dimension(L*W*H)	mm	850*820*1640
Machine weight (approx.)	kg	330

► Machine Features

- Workpiece is held by rollers.
- X / Y axis feeds are manually operated.
- The grinding wheel spindle running is controlled through a frequency inverter.
- Variable speed change for the wheel spindle and the work spindle.
- Double "V" slideways are hardened. Slide surfaces are precision ground, coated with Turcite-B and hand scraping.



► Control Panel

- A centralized operation panel.

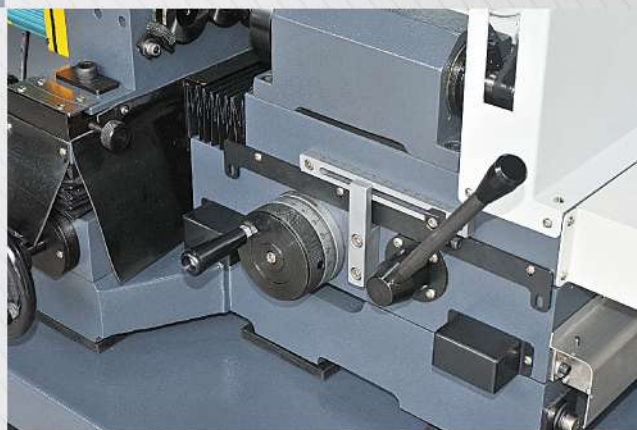


► Work Head

- The workpiece is held on the rollers and can be adjusted vertically to achieve an accurate alignment between the workpiece and the grinding wheel.
- The entire work head can be swiveled in the range of $\pm 5^\circ$ that makes the machine suitable for grinding internal taper of workpiece.
- Work head spindle is variable 0~380 rpm.

► Grinding Wheel Head

- Grinding wheel head feeds through handle control.
- Can install linear scale to have more accurate position, resolution of linear scale is $1\mu\text{m}$.
- Grinding wheel spindle speed is 0~50,000 rpm.



► Standard Accessories

Grinding wheel spindle 50,000 rpm
ER11 Collet ($\text{Ø}3$ 、 $\text{Ø}6$ one each)
ER11 Nut

Grinding bar 3030.6060
Working light
Tool box and Kit

► Optional Accessories

Linear scale (two axes $1\mu\text{m}$)
Coolant device
Vacuum cleaner
 $\pm 45^\circ$ Rotary table

► Applications

Screw molds
Nut molds
Sleeve

3-Jaw Chuck Type NC Internal Grinder

NC-150 / NC-200



Half Cover (Standard)



Fully Cover (Optional)

Modle/Specification	Unit	NC-150	NC-200
Clamping range of workpiece diameters	mm	Ø3-Ø150	Ø5-Ø200
Range of grinding diameter	mm	Ø1-Ø45	Ø3-Ø75
Travel X axis	mm	300	500
Travel Y axis	mm	250	250
Min. Feed unit X axis	mm	0.001	0.001
Min. Feed unit Y axis	mm	0.001	0.001
Feed rate X axis	m/min	0-4	0-4
Feed rate Y axis	m/min	0-4	0-4
Work spindle speed (variable)	rpm	0-800	0-600
Work head swiveling angle	deg.	±22.5°	±22.5°
Wheel spindle speed (variable)	rpm	0-50000	0-30000
Work head spindle servo motor	W	750	850
Wheel head motor	HP	1HP	2
Feed servo motor X axis	W	850	850
Feed servo motor Y axis	W	850	850
Machine dimensions (L*W*H)	mm	1210*1600*1700	1410*1600*1700
Machine weight (approx.)	kg	1500	2000

► Optional Accessories : Coolant system, Fully cover

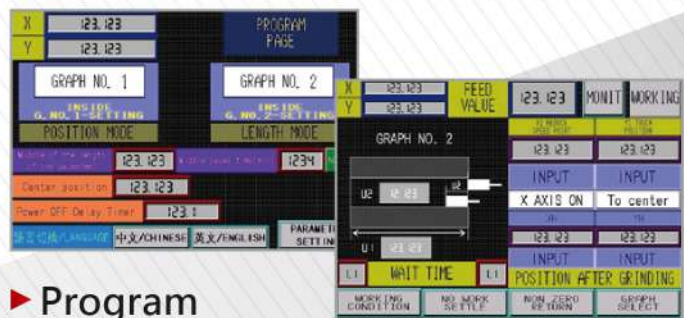
► Machine Features

- Equipped with a NC controller in combination with the use of touch-screen permits easy operation.
- Workpiece is clamped securely by a 3-jaw chuck allowing for rapid feed.
- Rugged machine structure assures maximum stability during grinding.
- X / Y axis automatic feed are driven by individual servo motor.
- Variable speed chage for the wheel spindle and the work spindle.
- High wheel speed dramatically increases machining efficiency and improves surface finish.
- Double "V" slideways are hardened. Slides surfaces are precision ground, coated with Turcite-B and hand scrapping.
- 3-Color warning lamp indicate the current operation condition.
- 3-Jaw Chuck 6" Wheel spindle 50000rpm (NC-150) • 3-Jaw Chuck 8" wheel spindle 30000rpm (NC-200).



► NC Control

- Equipped with a NC controller in combination with the use of touch-screen permits easy operation.



► Program

- X / Y axis automatic feeds are driven by individual servo motor.
- The program can set for position mode or length mode, suitable for blind hole and hollow hole...etc.



► Work Head and Wheel Head

- The entire work head can be swiveled in the range of 22.5° (single side).
- The Grinding wheel head is ruggedly constructed to exhibit outstanding stability during the wheel spindle runs at a high speed. As a result, high machining accuracy is ensured.

► MPG Hand Wheel

- The MPG handwheel provides the micro adjustment of each axis.

► NC-150 Standard Accessories

Internal spindle 50,000rpm
(With connecting rod and
collect connecting rod)
ER11 nut
ER11 collect Ø3.06

Grinding bar 3030.6060
Working light
Air blast device
Half cover
±45° rotary table

Tool box and Kit
(Allen key *1set · Open wrench*3pcs ·
Wrench of spindle*1 ·
Wrench for 3-jaw chuck*1)

► NC-200 Standard Accessories

Internal spindle 30,000rpm
(With connecting rod and
collect connecting rod)
ER20 nut
ER20 collect Ø6.08

Grinding bar 6060
Working light
Air blast device
Half cover
±45° rotary table

Tool box and Kit
(Allen key *1set · Open wrench*3pcs ·
Wrench of spindle*1 ·
Wrench for 3-jaw chuck*1)



PINTAI PINTAI MACHINERY CO., LTD.
No.322, Lianchu Rd., Fengyuan Dist., Taichung, Taiwan 42082

Ver. 201802

+886-4-2537 0951

www.pintai-tw.com

+886-4-2539 1801

info@pintai-tw.com

PINTAI

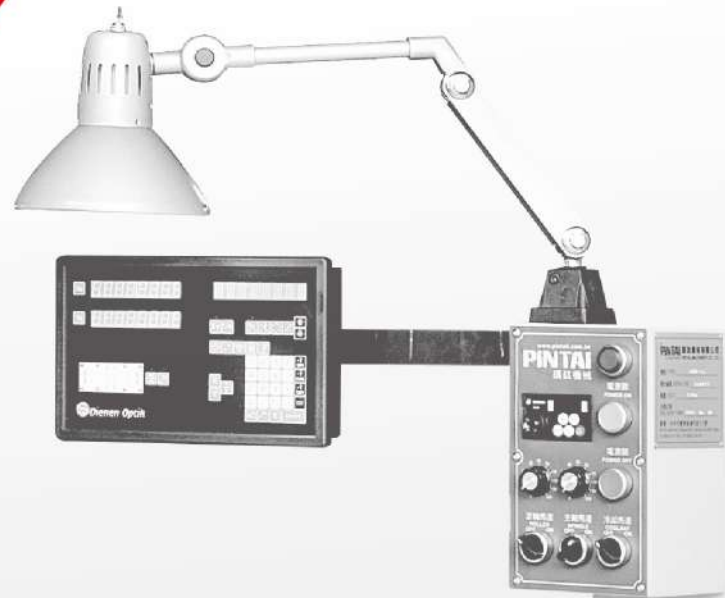
內徑研磨機 系列

HID4-SP

H16-SP

NC-150

NC-200



鑽鈦機械是一家專業生產小型研磨機，我們能夠根據客戶的需求開發出各種研磨機。目前提供鎢鋼刀具前製程一系列設備：NC全自動倒角機、NC全自動鎢鋼切斷機、鎢鋼段差研磨機、內徑研磨機、外徑研磨機、拋光機、切斷機...等

三爪式內徑研磨機【手動】

HID4-SP

※光學尺 (選配)



乾式研磨機型(標準)



濕式研磨機型(選配)

附沖水系統、防水護罩

型號/規格	單位	HID4-SP
可夾持工件直徑	mm	Ø1-Ø100
研磨內徑範圍	mm	Ø0.3-Ø30
X軸行程	mm	90
Y軸行程	mm	50
進給		
Y軸手輪每刻度	mm	0.005
X、Y軸進給方式	-	手動
X、Y軸床台速度	-	手動
工作主軸頭		
工作主軸轉速(無段變速)	rpm	0-600
工作主軸頭迴轉角度	deg.	±22.5°
工作主軸伺服馬達	W	400
砂輪主軸頭		
砂輪主軸馬達	HP	1
砂輪主軸轉速(無段變速)	rpm	0-50000
機械尺寸(長*寬*高)	mm	900*1180*1520
機械重量(約)	kg	400

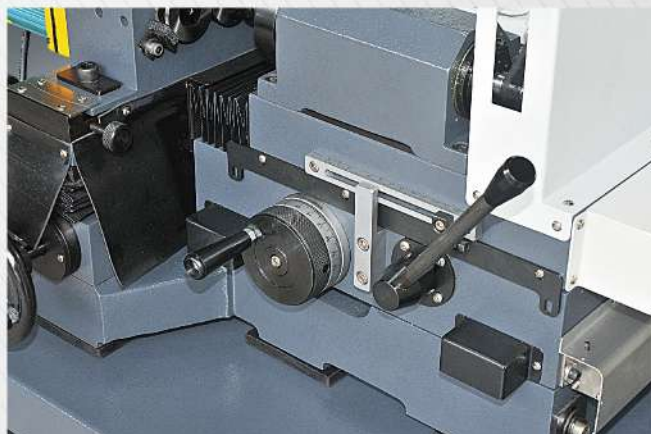
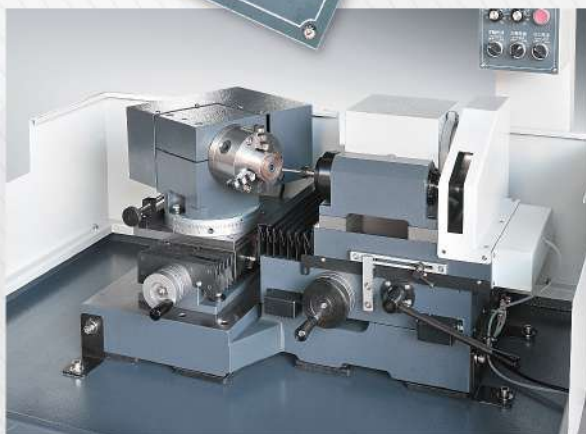
▶ 機台特色

- 三爪夾頭夾持工件
- 可夾持工件尺寸 $\varnothing 1$ - $\varnothing 100$ mm
- X, Y 軸均為手動進給
- 砂輪主軸轉速採用變頻器控制
- 砂輪主軸及工件主軸均可無段變速
- 雙 V 型滑道·經熱處理硬化·滑道面經精密研磨·並貼附 Turcite-B 耐磨片及鏤花處理



▶ 操作面板

- 集中式面板



▶ 三爪夾頭

- 本機採用4"三爪夾頭夾持
- 工作主軸頭可做單邊 22.5° 之迴轉角度調整適合工件內孔錐度研磨
- 工作主軸轉速可無段變速0-600rpm

▶ 砂輪主軸

- X軸行程90mm
- Y軸行程50mm
- 可加裝光學尺提升定位精度·最小單位1um
- 砂輪主軸無段變速0-50,000rpm

▶ 標準配件

內徑主軸50,000rpm
ER11螺帽
ER11筒夾($\varnothing 3$ · $\varnothing 6$)
 $\pm 45^\circ$ 旋轉盤

磨棒3030.6060
工作燈
工具箱及其配件(六角板手*1組、開口板手*3)

▶ 特殊配件

吸塵器
冷卻裝置
光學尺(雙軸,1um)

▶ 應用

螺絲模具
螺帽模具
微小零組件、襯套

滾輪式內徑研磨機【手動】

H16-SP

※光學尺(選配)



乾式研磨機型(標準)



濕式研磨機型(選配)

附沖水系統、防水護罩

型號/規格	單位	H16-SP
可夾持工件直徑	mm	Ø1-25
研磨內徑範圍	mm	Ø1-19
X軸行程	mm	90
Y軸行程	mm	50
進給		
Y軸手輪每刻度	mm	0.005
X、Y軸進給方式	-	手動
X、Y軸床台速度	-	手動
工作主軸頭		
工作主軸轉速(無段變速)	rpm	0-380
工作主軸頭迴轉角度	deg.	±5°
工作主軸伺服馬達	W	25
砂輪主軸頭		
砂輪主軸馬達	HP	1
砂輪主軸轉速(無段變速)	rpm	0-50000
機械尺寸(長*寬*高)	mm	850*820*1640
機械重量(約)	kg	330

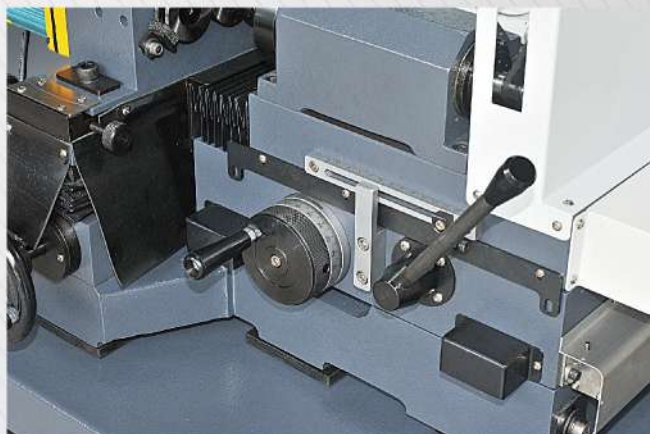
▶ 機台特色

- 滾輪式夾持工件
- X, Y 軸均為手動進給
- 砂輪主軸轉速採用變頻器控制
- 砂輪主軸及工件主軸均可無段變速
- 雙 V 型滑道，經熱處理硬化。滑道面經精密研磨，並貼附 Turcite-B 耐磨片及鍍花處理



▶ 操作面板

- 集中式面板



▶ 滾輪式夾持

- 本機採用滾輪式夾持，搭配可做上下微調，使工件與砂輪對準
- 工作主軸頭可做單邊 $\pm 5^\circ$ 之迴轉角度調整，適合工件內孔錐度研磨
- 工作主軸轉速可無段變速0-380 rpm

▶ 砂輪主軸

- 砂輪主軸頭移動採用進給把手控制
- 可加裝光學尺提升定位精度，最小單位1um
- 砂輪主軸無段變速0-50,000 rpm

▶ 標準配件

內徑主軸 50,000rpm
ER11螺帽
ER11筒夾(Ø3、Ø6)

磨棒3030.6060
工作燈
工具箱及其配件(六角板手*1組、開口板手*3)

▶ 特殊配件

吸塵器
冷卻裝置
光學尺(雙軸,1um)
 $\pm 45^\circ$ 旋轉盤

▶ 應用

螺絲模具
螺帽模具
襯套、脫模具

三爪式內徑研磨機

NC-150 / NC-200



半罩(標準)



全罩(選配)

型號/規格	單位	NC-150	NC-200
可挾持工件	mm	Ø3-Ø150	Ø5-Ø200
研磨內徑範圍	mm	Ø1-Ø45	Ø3-Ø75
最大行程 X軸	mm	300	500
最大行程 Y軸	mm	250	250
最小進給單位 X軸	mm	0.001	0.001
最小進給單位 Y軸	mm	0.001	0.001
床台速度 X軸	m/min	0-4	0-4
床台速度 Y軸	m/min	0-4	0-4
工作主軸轉速(無段變速)	rpm	0-800	0-600
工作主軸頭旋轉角度	deg.	±22.5°	±22.5°
砂輪主軸轉速(無段變速)	rpm	0-50000	0-30000
工作主軸伺服馬達	W	750	850
砂輪主軸馬達	HP	1HP	2
砂輪X軸進給伺服馬達	W	850	850
砂輪Y軸進給伺服馬達	W	850	850
機械尺寸(長*寬*高)	mm	1210*1600*1700	1410*1600*1700
機械重量(約)	kg	1500	2000

▶ 特殊配件：冷卻系統、全罩式板金

▶ 機台特色

- NC控制器配合彩色觸控螢幕，機器操控簡易
- 三爪式夾持工件，夾持穩固，進給快速
- 穩重的機體結構，具有最佳研磨穩定性
- X, Y軸自動進給，採用伺服馬達驅動
- 砂輪主軸及工件主軸均可無段變速
- 三爪夾頭6"主軸轉速 50000rpm(NC-150)
- 高速砂輪主軸轉速，大幅提升加工效率，且研磨面精緻
- 雙V型滑道，經熱處理硬化。滑道面經精密研磨，並貼附Turcite-B耐磨片及鏤花處理
- 附三色警示燈，指示機台操作狀態
- 三爪夾頭8"主軸轉速 30000rpm(NC-200)



▶ NC控制器(標準)

- NC控制器配合彩色觸控螢幕，機器操控簡易



▶ 程式

- X, Y軸自動進給，採用伺服馬達驅動
- 程式可設定座標模式或長度模式，適用於盲孔、通孔等



▶ 工作主軸頭與砂輪主軸頭

- 工作主軸頭可做單邊 22.5°之迴轉角度調整
- 砂輪主軸頭結構穩重，在砂輪高速運轉情況，具有最佳穩定性，以確保加工精度

▶ MPG手輪

- MPG手輪提供各軸數的微調

▶ NC-150 標準配件

內徑主軸50000rpm
(含直結式接桿、筒夾接桿)
ER11螺帽
ER11筒夾(Ø3、Ø6)

磨棒3030.6060
工作燈
吹風裝置
半罩式鍍金

±45°旋轉盤
工具箱及其配件
(含六角板手*1組、開口板手*3、
主軸拆卸板手*1、三爪式板手*1)

▶ NC-200 標準配件

內徑主軸 30000rpm
(含直結式接桿、筒夾接桿)
ER20螺帽
ER20筒夾(Ø6、Ø8)

磨棒6060
工作燈
吹風裝置
半罩式鍍金

±45°旋轉盤
工具箱及其配件
(含六角板手*1組、開口板手*3、
主軸拆卸板手*1、三爪式板手*1)



Ver. 201802

PINTAI

鑽鈦機械有限公司

420 台中市豐原區鎌村路322號

☎ +886-4-2537 0951

☎ +886-4-2539 1801

🏠 www.pintai-tw.com

✉ info@pintai-tw.com