




Excellent Technology, Delicate Products

全油壓萬能外圓磨床

UNIVERSAL CYLINDRICAL GRINDING MACHINE

NC 外圓磨床

NC CYLINDRICAL GRINDING MACHINE

 **GU-32S/P**  
**GU-3250NC**



## 主要特性 Main Features

### 砂輪軸與靜壓軸承

PARAGON靜壓軸承係本公司獨自研究開發成功之最進步、最實用的流體靜壓軸承。不但具有動壓軸承的優點，且具有輕快、完全沒有金屬磨擦、不發熱、高精度等優點，是一種能維持永久使用的特殊軸承。

### Unique "PARAGON" hydrostatic bearing

The grinding wheel spindle is equipped with unique "PARAGON" hydrostatic bearing which has been successfully developed for years. The hydrostatic bearing not only has the same features as the hydrodynamic bearing but also has the following outstanding features: no metal-to-metal friction, no overheat and no oil leakage as no oil seal is used. It makes spindle run very smooth, light accuracy and long lasting etc.

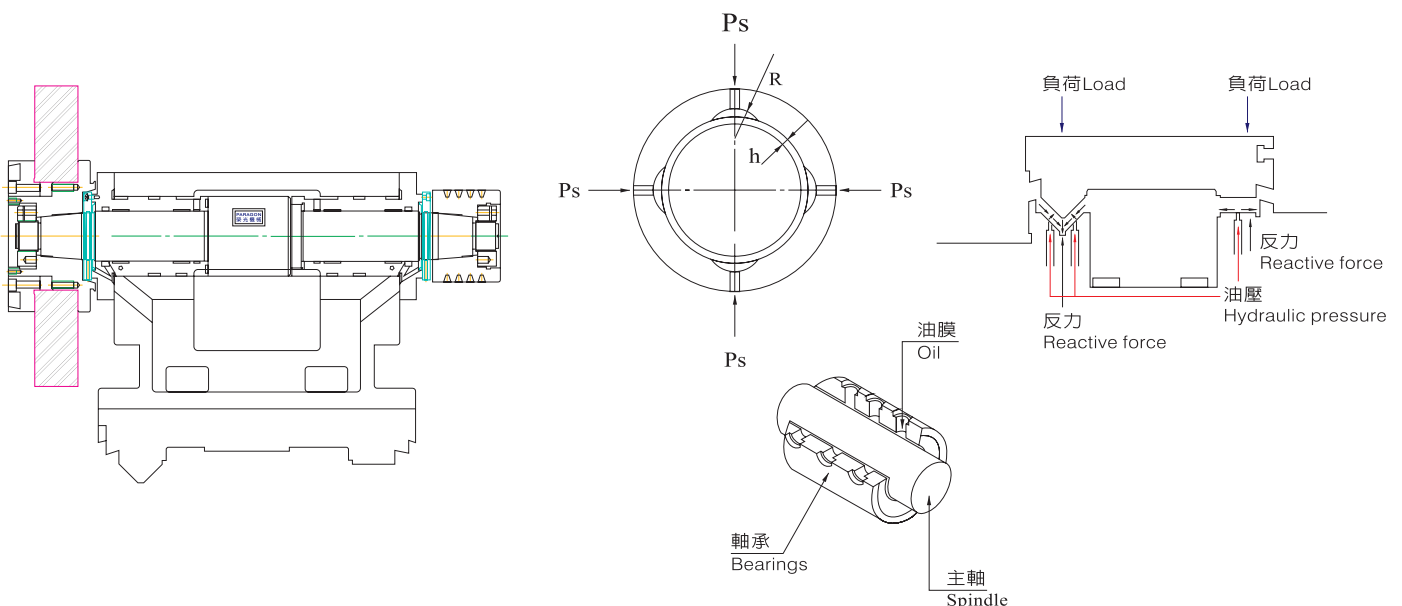
### 砂輪座滑動面和主軸台滑動面

潤滑系統經過油壓濾清器過濾後，設定壓力，直接供給到各滑動面，所以滑動面沒有金屬磨擦，能保持高精度的滑行動作。

### Hydrostatic lubrication on slideways

Hydrostatic lubrication on wheelhead and table slideways ensures consistently accuracy.

- 砂輪主軸軸承採用特殊設計之PARAGON靜壓軸承，無金屬磨擦，免調整永保當初精度，因此給您滿意的研磨結果。
- 工作台與砂輪滑道，亦採用靜壓自動滑潤系統可保持滑道平滑，進給準確，永保壽命。定寸研磨與自動進給裝置，適合精密大量生產。
- 油壓快速進給裝置，可節省上、卸料時間，降低成本。
- 合於人體力學設計，各部控制集中，便於操作。
- 外徑研磨內徑研磨，更換容易。
- Wheelhead is composed of two sections a sub-slide mounted on the Vee and flat shaped, pressure-lubricated slideways of a fixed base-a swiveling wheelhead body supported on the sub-slide. Swiveling featured from 0 to 30 degrees toward workhead or tailstock assures angular setting, and graduations provided at the rear side help quick and easy setup.
- Grinding wheel and guard can be mounted at the right side of the wheelhead for angular grinding.
- Wheelhead body can be moved back manually by 95 mm(3.7 in), providing an extra capacity for large diameter component for internal grinding.
- Grinding wheel spindle, set in BEARING, is driven through vee-shaped belts by a powerful (5 HP) motor. Two grinding wheel speeds can be obtained by means of pulley change, permitting selection of suitable surface speed for wheel diameter from 405 mm (15 in) to 255 mm (10 in). The minimum grinding wheel can grind component of diameter more than 20 mm (0.79 in).





### 砂輪座

砂輪座滑道採用靜壓自動潤滑系統，可保持滑道平滑，進給準確，永保壽命，傳動輪採用C1級滾珠螺桿，砂輪頭旋轉角度範圍 $\pm 30^\circ$ 。

**Wheelhead with precision C1 grade ball screw to achieve high accuracy**

### 主軸頭

萬能主軸頭排列緊密，支持穩固任何研磨皆可確保精密度，主軸頭轉速為伺服馬達無段變速0~600 r.p.m. 旋轉角度範圍 $90^\circ$ 。

### Solid universal workhead

- ❑ Precisely aligned workhead providing the solid support to assure accurate grinding results in various operations.
- ❑ Workhead spindle speed 0-600 r.p.m. controlled by servo motor.



### 工作台及尾座

工作台斜度調整範圍依機種可至 $10^\circ$ 或 $12.5^\circ$ (詳見規格表)。工作台左端裝有百分錶，在研磨斜度工作物時，配合計算表，有直接調整、修正的便利。工作台係油壓驅動，壓力設定在11~13kg/cm，橫向移動速度為50~4000mm/min，無段調整。工作台最小自動行程為3~5m/m。

### Tailstock and slide table

- ❑ Structurally rigid swivel table is arranged to swivel in counterclockwise directions by a crew-adjustment at the left end of the table.
- ❑ Precisely aligned tailstock providing the solid support to assure accurate.



### 直進研磨 Straight Plunge Grinding

小量生產時，自動進刀配合無火花定時器，可得到良好的研磨品質。大量生產時，二段式自動進刀加上二段式測量器(特別附件)，可提供最佳的產量和研磨效果。

Automatic infeed allows good results in small lot production, in conjunction with electronic spark-out timer supplied as standard accessory. Fine combination of automatic dual infeed and automatic 2-setp in process gauging, available at extra price, offers the best production rate and grinding results in large lot production.



### 橫進研磨 Traverse Grinding

自動間歇進刀和油壓驅動的工作台使工作物得到最有效的橫進研磨。

Automatic intermittent infeed and hydraulic table-traverse permit to get efficient traverse grinding jobs.



### 端面研磨 Face Grinding

將工作主軸頭旋轉蓋拆下，換上三爪或四爪夾頭，改變定位梢的位置即可使夾頭旋轉，並將其固定在90°的位置即可作端面研磨。

(GU-2035不能做此研磨)

Grinding a face with workhead set 90 degrees from an ordinary position. A combination live and dead spindle permits an easily-changed chuck workikng.(unable for GU-2035 TYPE)







### 肩部研磨 Shoulder Grinding

工作物外徑與其肩頭研磨要一次完成時，工作物由二頂心支撐且將砂輪改裝在砂輪頭的右邊並旋轉一角度即可研磨。

Grinding diameter and adjacent shoulder on a component held between centers in a single infeed. With a reversible wheel guard and drives, an grinding wheel can be mounted on the right side of wheelhead set in angular position.



### 斜度研磨 Taper Grinding

工作物可由夾頭或二頂心支撐，工作台與砂輪頭都可旋轉且調整容易。

Grinding a tapered component held between centers or by chuck. Table is easily swiveled for this operation. Tapers beyond capacity of swivel table can be ground with a compound swivel features of table and wheelhead.



### 內徑研磨 Internal Grinding

使用鉸鍊型的內徑研磨附件(特別附件)研磨內徑，只要將內徑研磨主軸拉下固定在研磨位置即可研磨。

Grinding an internal diameter with a hinged type internal grinding attachment, available at extra price, permitting a fast grinding action. Internal grinding spindle is quickly swung down into a grinding position.



## 標準附件 Standard Accessories



1. 砂輪及法蘭 ---1組  
Grinding wheel with flange. ---1set



2. 砂輪修整座(工作台固定式)-1組  
Table mounted type diamond tool holder, with diamond tool. ---1set



3. 工具箱 ---1組  
Tool box ---1set



4. 頂針 ---2支  
Carbide-tipped work centers morse Taper No.4 or No.3 ---2pcs

5. 水箱及泵浦 ---1組  
Coolant tank with pump ---1set

6. 電器箱 ---1組  
Standard electric equipment. ---1set

7. 主軸寸動裝置 ---1式  
Wheelhead inching. ---1set

## 特別附件 Optional Accessories

內外徑修整座  
Diamond tool holder for external and internal grinding wheel, table-mounted type, without diamond tool.



3

角度修整裝置  
Angular truing attachment, truing angle 0 thru 90°, table-mounted type, without diamond tool.



4

半徑修整裝置  
Radius truing attachment, truing radius 0 thru 15mm, table-mounted type without diamond tool.



5

尾座固定式修整座

Diamond tool holder, tailstock-mounted type, without diamond tool.



2

工作物支撐座  
Work holder, table-mounted type, 2pcs/set, 10 thru 120mm dia. capacity.



7

二點式固定架  
Adjustable 2-point steady rest, table-mounted type, 10 thru 100mm dia. capacity.



8

四爪夾頭  
Independent 4-jaw chuck, 200mm dia., with reversible jaws and adaptor to spindle nose.



9

三爪夾頭  
Adjust 3-jaw scroll chuck, 178mm dia., with reversible jaws and adaptor to spindle nose.



10

電磁除屑機  
Magnetic coolant separator.



11

紙帶過濾機  
Paper filter.



12

水力分離機  
Hydrocyclone coolant filter.



13

三點式中心架  
Adjustable 3-point steady rest, table-mounted type, 10 thru 100mm dia. capacity.



14

內徑研磨裝置  
Internal grinding attachment.



15

平衡台與平衡棒  
Wheel Balancing stand and arbor



16

砂輪罩上方修整裝置  
Hydraulic wheel forming attachment. (mounted on wheelhead)



17

電子平衡儀  
Vibration meter



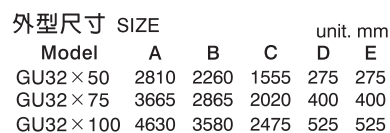
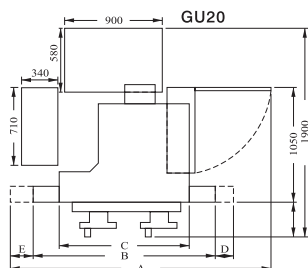
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### 主要規格 Specifications :

機 型 Model :		G U -					
		3250S	3275S	32100S	3250P	3275P	32100P
能力 GENERAL							
兩項心間最大距離 Max. distance between centers	mm(in)	500(20)	750(30)	1000(40)	500(20)	750(30)	1000(40)
工作台最大旋徑 Max. Swing over table	mm	320					
兩項心間最大承受重量 Max. load held between centers	kg	150					
研磨最大外徑 Max. Diameter of component to be ground with full size wheel	mm	280					
砂輪頭 WHEELHEAD							
旋轉角度 Swiveling angle (towrad workhead-toward tailstock)	degree	± 30°					
手動距離 Handwheel feed stroke	mm	160					
自動快速移動距離 Automatic rapid feed stroke	mm	40					
滑座可補充移動量 Additional stroke by sliding on sub-slide base	mm	95 (總計 295) (Total stroke 295)					
間歇進刀設定單位 Automatic intermittent infeed amount (infinitely adjustable)	mm	0.001~3					
自動進刀最小設定單位 Automatic infeed stroke, with servo motor	mm	0.001					
手輪每轉 Movement per turn of handwheel	mm	1					
砂輪 GRINDING WHEEL							
外徑×寬×內徑 Diameter×Width×Hole	mm	405 ×56 ×127					
限速 Wheel speed	mm/min	1800					
工作主軸頭 WORKHEAD							
旋轉角度 Swiveling angle (counterclockwise-clockwise)	degree	90°~30°					
頂針斜度 Center taper, Morse taper	No.	M.T. No.4					
主軸轉速 Spindle speed	r.p.m.	0~600 (伺服馬達無段變速 by Servo Motor)					
尾座 TAILSTOCK							
頂針斜度 Center taper, Morse taper	No.	M.T. No.4					
尾座軸移動距離 Max. retracting stroke of center	mm	35					
工作台 TABLE							
旋轉角度 Swiveling angle (counterclockwise)	degree	9°					
行走速度 Traverse speed (infinitely variable)	mm/min	50~4000					
最小自動往復行程 Min. automatic reciprocating stroke	mm	3					
手輪每轉進給量 Movement per turn of handwheel	mm	20					
馬達 ELECTRIC MOTOR							
砂輪軸 For wheel drive	HP	5 HP (4 P)					
工作主軸台 For workhead drive	kw	1					
油壓泵 For hydraulic oil pump drive	HP	1 HP (6 P)					
砂輪軸潤滑泵 For lubricating oil pump drive, wheel spindle bearings	HP	1/4 HP (2 P)					
研削液泵 For coolant pump drive	HP	1/4 HP (2 P)					
內磨砂輪 For internal grinding	HP	1 HP (2 P)					
容器容量 TANK CAPACITY							
砂輪軸潤滑油箱 For hydraulic and lubricating oil	ℓ	12 ℓ					
油壓桶 For lubricating oil, wheel spindle bearings	ℓ	65 ℓ					
冷卻液桶 For coolant fluid	ℓ	150 ℓ					
機械重量 NET WEIGHT	kg	2800	3200	3600	2800	3200	3600

■ P 型式為砂輪油壓自動進給定寸機型；S 型式為手動砂輪進給機型。P type is automatic wheel infeed, S type is manual wheel infeed.

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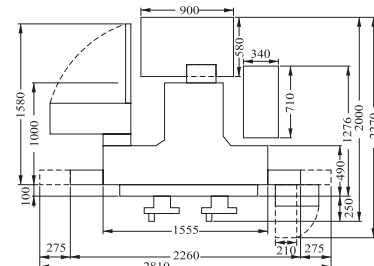
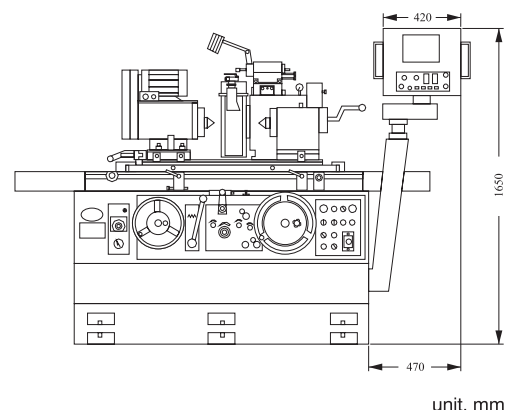


Model	A	B	C	D	E
GU32 × 50	2810	2260	1555	275	275
GU32 × 75	3665	2865	2020	400	400
GU32 × 100	4630	3580	2475	525	525



## 主要規格 Specifications :

機 型 Model :	GU-3250NC
<b>能力 GENERAL</b>	
兩項心間最大距離 Max. distance between centers	500 mm
工作台最大旋徑 Max. Swing over table	320 mm
兩項心間最大承受重量 Max. load held between centers	150 kg
研磨最大外徑 Max. Diameter of component to be ground with full size wheel	280 mm
<b>砂輪頭 WHEELHEAD</b>	
滑板進退刀 Slide feed and retract	PLC 控制 Control
旋轉角度 Swiveling angle (towrad workhead-toward tailstock)	$\pm 30^\circ$
手動距離 Handwheel feed stroke	160 mm
自動快速移動距離 Automatic rapid feed stroke	40 mm
滑座可補充移動量 Additional stroke by sliding on sub-slide base	95 mm (總計 295 mm) (Total stroke 295 mm)
間歇進刀設定單位 Automatic intermittent infeed amount (infinitely adjustable)	0.001~3 mm
自動進刀最小設定單位 Automatic infeed stroke, with servo motor	0.001 mm
手輪每轉 Movement per turn of handwheel	1 mm
<b>砂輪 GRINDING WHEEL</b>	
外徑 × 寬 × 內徑 Diameter × Width × Hole	405 mm × 56 mm × 127 mm
限速 Wheel speed	1570
<b>工作主軸頭 WORKHEAD</b>	
旋轉角度 Swiveling angle (counterclockwise-clockwise)	$90^\circ \sim 30^\circ$
頂針斜度 Center taper, Morse taper	M.T. No.4
主軸轉速 r.p.m. Spindle speed	0~600 (伺服馬達無段變速) by Servo Motor
<b>尾座 TAILSTOCK</b>	
頂針斜度 Center taper, Morse taper	M.T. No.4
尾座軸移動距離 Max. retracting stroke of center	35 mm
<b>工作台 TABLE</b>	
旋轉角度 Swiveling angle (counterclockwise)	$9^\circ$
行走速度 Traverse speed (infinitely variable)	50~4000 mm/min
最小自動往復行程 Min. automatic reciprocating stroke	3 mm
手輪每轉進給量 Movement per turn of handwheel	20 mm
<b>馬達 ELECTRIC MOTOR</b>	
砂輪軸 For wheel drive	5 HP (4 P)
工作主軸台 For workhead drive	1 kw
油壓泵 For hydraulic oil pump drive	1 HP (6 P)
砂輪軸潤滑泵 For lubricating oil pump drive, wheel spindle bearings	1/4 HP (2 P)
研削液泵 For coolant pump drive	1/4 HP (2 P)
砂輪進給軸 Wheel infeed (servo motor)	400 W
<b>容器容量 TANK CAPACITY</b>	
砂輪軸潤滑油箱 For hydraulic and lubricating oil	12 ℓ
油壓桶 For lubricating oil, wheel spindle bearings	65 ℓ
冷卻液桶 For coolant fluid	150 ℓ
<b>機械重量 NET WEIGHT</b>	
	2300 kg



代理商 Agent :



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