

## 機器規格 Machine Specification

型號 Model	X-2540A	
能力 Capability	工作臺最大旋徑 Max. Swing Over Table	Ø270mm
	兩頂心間最大距離 Max. Distance Between Center	400mm
	最大研磨長度 Max. Grinding Length	400mm
	最大研磨直徑 Max. Grinding Diameter	Ø250mm
	兩頂心間最大承受重量 Max. Loading Held Between Center	60 kgs
砂輪 Grinding Wheel	外徑X寬度X內徑 O.D x Width x I.D	Ø 510 x 50~75 x Ø127mm
	週速度 Surface Speed	33m/sec. (選配OPT.:45m/sec.)
行程 Travel	X軸全移動距離 X-axis Movability Distance	300mm
	X軸快速移動速度 X-axis Rapid Feedrate Speed	6000 mm/min
	X軸自動進給速度 X-axis Auto. Feeding Speed	0.001-2000 mm/min
	X軸最小設定值 X-axis Min. Deeding Setting Value	0.001mm
	Z軸全移動距離 Z-axis Movability Distance	580mm
	Z軸快速移動速度 Z-axis Rapid Feedrate Speed	6000mm/min
	Z軸自動進給速度 Z-axis Auto. Feeding Speed	0.001-2000mm/min
工作主軸 Working Spindle	Z軸最小設定值 Z-axis Min. Deeding Setting Value	0.001mm
	旋轉角度 Swivel Angle	-30°~+90°
	中心頂針規格 Center Tapper	MT3 (選配OPT.: MT4)
	主軸轉速 Spindle Speed	10~300 rpm
迴旋工作臺 Table	工作主軸荷重(含夾具)選配 Max.loading of spindle(tool holder included)	15kg(最長長度 Max. Length 100mm)
	迴旋角度 Swiveling angle	-1°~+8°
尾座 Tailstock	中心頂針規格 Center Tapper	MT3 (選配OPT.: MT4)
	中心頂針移動方式 Center Moving	手動Manual
	尾座軸移動距離 Tailstock Stroke	25 mm
	錐度微調距離 (選配) Micro adjustment (Optional)	± 0.03 mm
馬達 Motor	砂輪馬達 Grinding Wheel Spindle	5.5kw
	工作主軸(伺服馬達) Working Spindle(Servo Motor)	1.0kw
	X軸進給(伺服馬達) X-axis feed(Servo Motor)	1.5kw
	Z軸進給(伺服馬達) Z-axis feed(Servo Motor)	1.5kw
	潤滑油壓馬達 Lubrication Hydraulic Motor	NIL
	動力油壓馬達 Power Hydraulic Motor	0.37 kw
	軸向潤滑 Ballscrew lubrication	自動潤滑 Auto lubricator (LUBE)
容器容量 Tank Volume	冷卻液泵浦 Cutting Coolant Pump	0.375kw
	潤滑油箱 Lubrication Tank	NIL
機器中心高 Machine center height	動力油壓油箱 Power Hydraulic Tank	18L
	工作台面至頂針中心 From work-table to Center Tip	135 mm
	地面起至頂針中心 From Ground to Center Tip	1110 mm

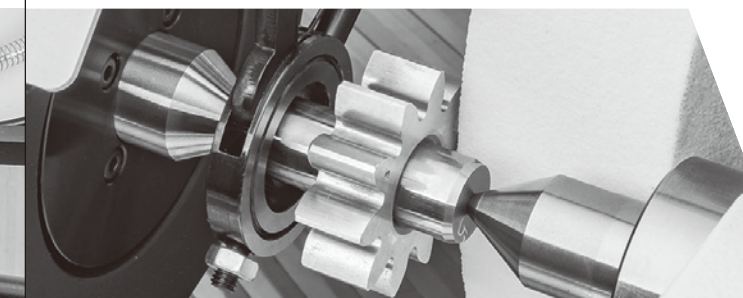
所述機台規格與尺寸，本公司保留變動權力，不另通知。 The mentioned specifications & dimensions are subject to change without notice.

## 標準配件 Standard Accessories

- 三菱 CNC 控制器 x 1 套 CNC controller (Brand: Mitsubishi) x 1set
- 砂輪與砂輪法蘭 x 1 組 Grinding wheel and flange x 1 set
- 砂輪修整座(尾座固定式) x 1 組 Diamond tool holder (tailstock mounted type) x1set
- 頂針 x 2 支 Carbide tipped work centers x 2 pcs
- 冷卻系統 x 1 組 Coolant tank x 1 set
- 油壓系統 x 1 組 Hydraulic system x 1 set
- 工作燈 x 1 組 Work lamp x 1 set
- 工具及工具箱 x 1 組 Kits and tool box x 1 set
- 全罩式板金 x 1 組 Fully splash cover x 1 set
- X軸光學尺 x 1 組 Linear scale for X axis x 1 set
- Z軸光學尺 x 1 組 Linear scale for Z axis x 1 set
- 平衡台及棒 x 1 組 Wheel balancing stand and arbor x 1 set
- 端面量測裝置 x 1 組 Touch probe gauge x 1 set
- 凸輪式帶動環 (6只/組) x 1 組 Cam locked driving dogs x 1 set
- 砂輪變頻器 x 1 組 G.W. Inverter x 1 set

## 選擇配件 Optional Accessories

- 兩端支持座 (2只/組) Work holder (2pcs/set)
- 兩點支持座 2-point steady rest
- 可調式手動三爪夾頭 Adjustable 3-Jaw scroll chuck
- 可調式手動四爪夾頭 Adjustable 4-jaw scroll chuck
- 磁鐵紙帶過濾機 Magnetic with paper filter
- 自動砂輪平衡裝置 Auto. grinding wheel balancer
- 外徑量測裝置 Auto. OD measuring in-process gauge
- 音頻防撞裝置 Gap and crash control
- 油霧回收機 Oil mist collector
- 油壓尾座 Hydraulic tailstock
- 砂輪吊架裝置 Jib crane for loading / unloading G.W.



# X-2540A

斜進式數控外圓磨床

## CNC ANGULAR GRINDING MACHINE



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# X-2540A

## 斜進式數控外圓磨床 CNC ANGULAR GRINDING MACHINE

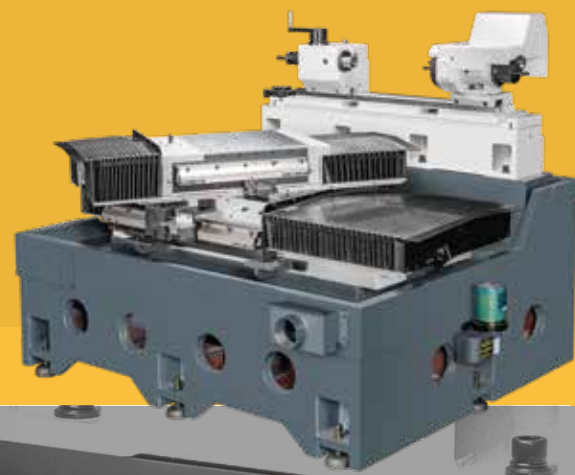


### X-2540A

工作台旋徑 Swivel Over Table:  $\Phi 270\text{mm}$   
兩頂心間距 Distance Between Centers:  $400\text{mm}$   
最大研磨外徑 Max. Grinding Dia.:  $\Phi 250\text{mm}$   
CNC 控制 CNC control  
全罩式板金 Fully splash cover

金格科技斜進式數控外圓磨床，專為提升加工效率所提供，砂輪軸(X軸)與橫移軸(Z軸)採用先進的斜進式十字形滑台設計配合斜進式砂輪軸座，可同時進行外徑及端面研磨加工作業，縮短加工時間，操作系統搭載高性能的CNC控制系統，內建圖形對話式(GUI)操作介面，設定及操作簡易，研磨加工應用廣泛，提供給使用者最便捷的加工環境。

TOPKING CNC Angular Cylindrical Grinding Machine is special offer for high efficiency work. The wheel-head axis (X axis) and traverse axis (Z axis) is angular cross-slide design with angular type grinding wheel-head. X axis and Z axis simultaneous control apply OD grinding and End-face grinding in signal clamping set-up. The CNC controller embedded high performance control system and graphical user operation interface for variable grinding jobs to offer the best grinding solution to our customer.



### 十字滑台設計

- X軸與Z軸結構採用斜進式十字滑台形式設計，縮小佔地面積。兩軸使用全密閉伸縮護罩，完整的保護傳動結構，杜絕研磨屑與冷卻液的汙染。
- X軸與Z軸標配高解析度封閉式抗汙光學尺，控制定位精度。
- 工作台完整的固定在機器床身上，堅固的設計方式有效的穩定工件，提升加工速度及品質。

### Cross-Slide Design

X axis and Z axis is design as angular cross-slide to reduce machine space. Two axes cover by enclosed telescopic covers. To avoid the drive assembly be damaged by grinding dust or coolant liquid underneath the telescopic covers.

X axis and Z axis equip with high resolution enclosed linear scales as standard accessories, for controlling positioning accuracy and finish quality.

The work-table is bolted permanently to the machine base with robust design, keeps the workpiece stable also optimising the process cycle time and quality.



### 斜進式砂輪頭座機構

培林式主軸，採用精密及軸承，提升迴轉精度及掌控使用壽命，特殊軸套設計，便於使用端更換、維修、保養，使工廠管理更緊密。

砂輪主軸採用SNCM-220高級合金鋼材，經正常化、調質、滲碳熱處理、深冷處理等多重處理。再作精密研磨與鏡面處理，表面硬度達HRC62°以上。保證不變形、耐磨耗、永保高精度。

### Angular type wheel head construction

Wheel spindle with high precision bearing, upgrade spindle rotation accuracy and control the using life. Special spindle sleeve design easy to maintenance job. The grinding wheel spindle is precision machined from high quality alloy steel SNCM-220, normalized, tempered, carburized and sub-zero treated, precision ground and mirror-effect treated. Hardness reaches to over HRC 62°. No deformation, maximum wear resistance and lifetime accuracy are assured.

### 研磨循環 Grinding Cycle

#### 直徑研磨 Plunge Grinding



#### 直徑橫移研磨 Plunge / Traverse Grinding



#### 橫移研磨 Traverse Grinding



#### 端面研磨 Shoulder Grinding



### 高剛性工作主軸

- 工作主軸採用精密級軸承，在研磨時展現最佳的穩定性。
- 採用伺服馬達驅動，無段變速可依需求變更速度。

### Rigid work-head

- The work-head spindle runs on precision bearing, assuring spindle stability for OD and End-face grinding.
- Drive by servo motor, providing variable speed.

### 砂輪修整

X軸與Z軸兩軸同動控制，依工件需求，進行多段差成型修整。

### Grinding wheel dressing

X axis and Z axis simultaneous control apply for G.W. profile dressing satisfy for multiple-step grinding in one in-feed



### 人性化操作環境

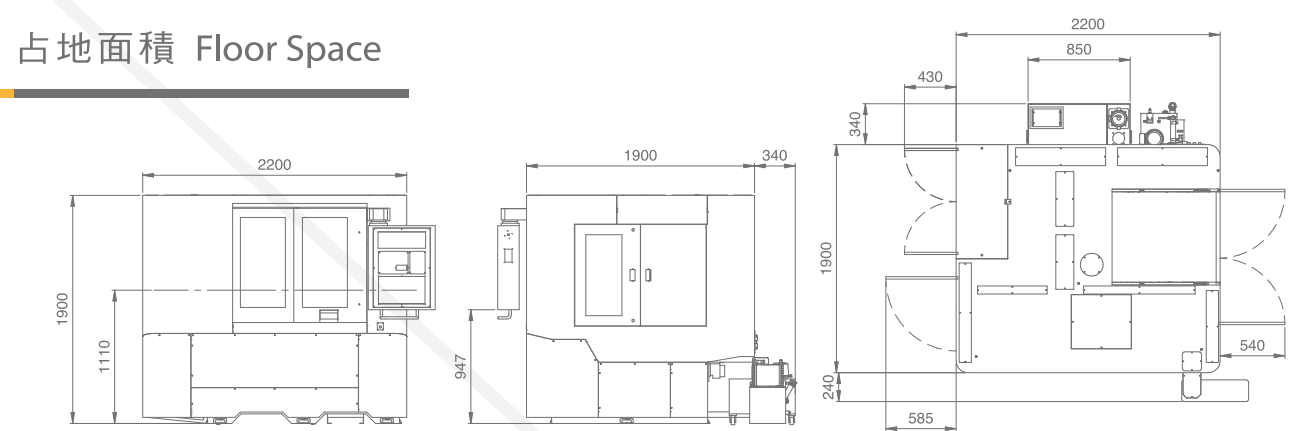


- 內建先進的CNC控制系統搭配圖形對話式的操作界面，操作者可藉著圖形的導引，將複雜的工件分成數個研磨工序，以數值化的方式簡化研磨及修整的工序編輯，不需另外進行複雜的程式編寫(G碼、M碼)，提供最便捷的操作環境。
- 可搭配各式自動量測裝置，提升加工品質及效率。

### User Friendly Operation

- High performances CNC control system with GUI. The operator could input the grinding & dressing value follow the graphical description step by step for a complicated workpiece. The work process could turn to steps into the controller. Do not need to edit complex program as G CODE, M CODE as usual, provided the most convenient operation environment.
- Variable automatically measuring device could be chosen. Increase work quality and efficiency

### 占地面積 Floor Space



單位Unit: mm