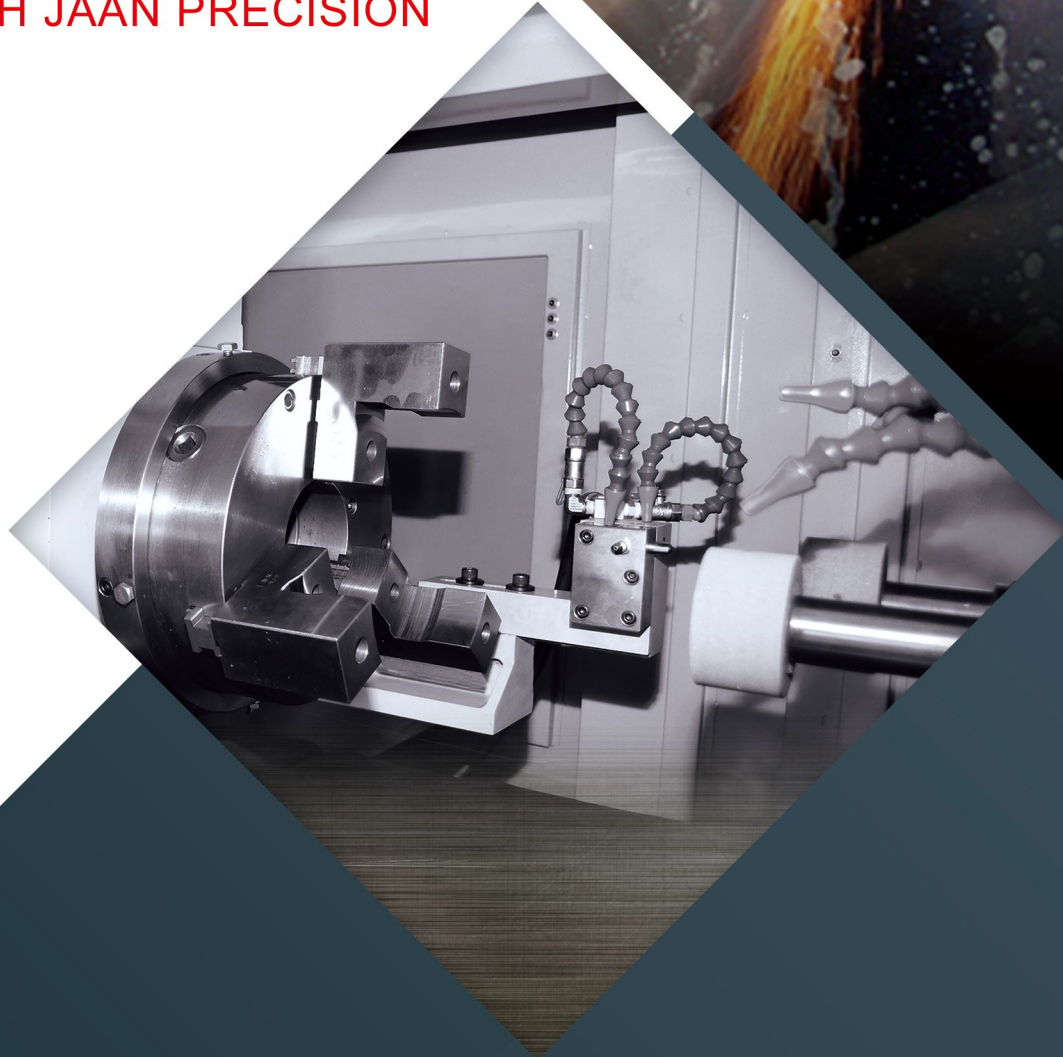




通展精機

LIH-JAAN LIH JAAN PRECISION



五大
宗旨

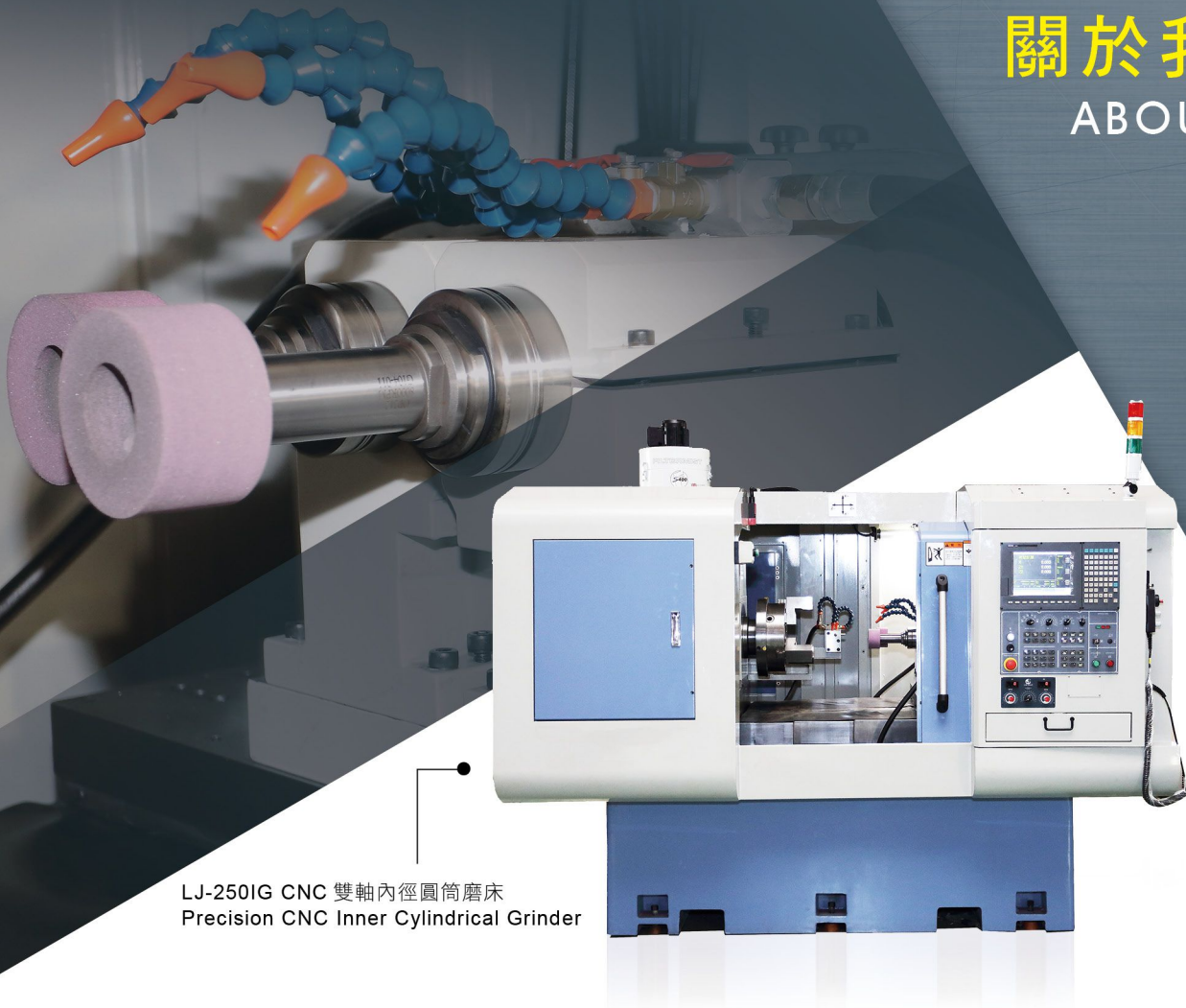
高精度 High Precision

高效率 High Efficiency

高穩定 High Stability

高剛性 High Rigidity

高耐用 High Durability



LJ-250IG CNC 雙軸內徑圓筒磨床
Precision CNC Inner Cylindrical Grinder

公司簡介 COMPANY PROFILE

通展精機工業股份有限公司：成立於西元 1984 年，為專業圓筒磨床製造公司，秉持不斷的研發及創新，並以精益求精之精神朝向**高品質、高精度、高效率**的經營理念邁進，以期提供給客戶更好、更高品質、高精度、高效率的服務。

Lih Jaan Precision Machinery Co., Ltd was established in 1984, the professional cylinder grinding machine manufacturing company, uphold the continuous R&D, innovation, and the spirit of excellence towards **high-quality, high precision, high efficiency** business philosophy to provide customers with higher quality, higher precision, higher efficiency services.

主要產品 PRODUCTS

- 精密萬能圓筒磨床 - 普通型
- 精密油壓圓筒磨床
- CNC 精密萬能圓筒磨床
- CNC 直進式 / 斜進式圓筒磨床
- 壓滾輪磨床
- NC 超重壓滾輪磨床
- CNC 精密螺紋磨床
- 內徑螺紋磨床
- 精密端面磨床
- 內徑油壓圓筒磨床

- Precision Cylindrical Grinder- Manual Type
- Precision Hydraulic Cylindrical Grinder
- CNC Precision Universal Cylindrical Grinder
- CNC Horizontal /Slope Type Cylindrical Grinder
- Precision Heavy Duty Cylindrical Grinder
- NC Super Heavy Duty Cylindrical Grinder
- CNC Precision Thread Grinder
- Precision Inner Thread Grinder
- Precision End Face Grinder
- Precision Inner Cylindrical Grinder

產品介紹

Products



精密萬能圓筒磨床 - 普通型

Precision Cylindrical Grinder-Manual Type

本機採用手動研磨進給、左右採用馬達傳動控制磨床。

This model adopts manual grinding feeding X axis and motor drive is adopted on Z axis.

規格表 SPECIFICATION

| 機型 MODEL | LJ27-500 | LJ27-800 |
|---|---------------------------|-------------|
| | 研磨能力 Grinding Capability | |
| 最大研磨長度 Max Grinding Length | 500 mm | 800 mm |
| 最大研磨直徑 Max Grinding Diameter | 250 mm | |
| 最大研磨重量 Max Grinding Weight | 100 kg | |
| 中心高 Heights of Center | 135 mm | |
| | 砂輪座 Wheelhead | |
| 砂輪尺寸 Grinding Wheel Size | φ 355x25~50x φ 101.6(127) | |
| 砂輪轉速 Grinding Wheel Speed | 1500,1700 RPM | |
| 砂輪最大周數 Max Grinding Linear Velocity | 45 M/S | |
| 砂輪座最小移動量 Min Movement of Wheelhead | 0.005 mm | |
| | 工件主軸 Work Spindle | |
| 夾具最大孔徑 Max Chuck Size | 7" φ 58 | |
| 主軸轉速 Spindle Speed | 40~360 RPM | |
| 主軸台迴轉度 Spindle Swing Angle | ±45° | |
| 主軸錐度 Spindle Taper | MT#4 | |
| | 尾座 Tailstock | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#4 | |
| 尾軸行程 Tailstock Quill Stroke | 30 mm | |
| | 工作台 Worktable | |
| 工作台行程 Worktable Stroke | 500 mm | 800 mm |
| 工作台最快速度 Max Table Moving Speed | 5000 mm / min | |
| 工作台迴轉角度 Table Swing Angle | 10° 7° | 9° 6° |
| | 馬力 Motor Power | |
| 砂輪馬達 Grinding Wheel Motor | 5HP(3.7kw) | |
| 主軸馬達 Main Spindle Motor | 1/4HP(0.2kw) | |
| 工作台馬達 Worktable Motor | 1/8HP(0.1kw) | |
| 冷卻馬達 Cooling Pump | 1/8HP(0.1kw) | |
| 砂輪軸潤滑馬達 Lubricant Motor | 1/8HP(0.1kw) | |
| 機械規格 Machine Size | | |
| 機械尺寸 (長 x 寬 x 高) Machine Dimensions (LxWxH) | 228x144x158 | 278x144x158 |
| 機械重量 Machine Net Weight | 2200 kgs | 2300 kgs |

精密油壓圓筒磨床 LJ27 / LJ37

Precision Hydraulic Cylindrical Grinder

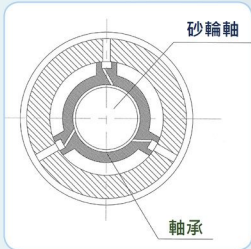


LJ27, LJ37 系列適用於研磨圓柱形、圓錐形零件，工件直徑在 20 mm~350 mm 之小型零件，機構設計可達成少量多樣加工需求並可依加工需求搭載附屬內孔研磨裝置、NC 人機伺服、CNC 控制器高。

LJ27 and LJ37 series are suitable for small size grinding cylindrical and conical parts with diameter of 20 mm ~ 350 mm. The design of the machine can meet a small number of different processing needs and can be equipped with Subsidiary Internal Grinding, NC servo and CNC Controller.

規格表 SPECIFICATION

| 機型 MODEL | LJ27 | | | | LJ37 | | | |
|---|----------------------------|-------------|---------|---------|----------------------------|-------------|---------|---------|
| | 研磨能力 Grinding Capability | | | | | | | |
| 最大研磨長度 Max Grinding Length | 600 mm | 1000 mm | 1500 mm | 2000 mm | 600 mm | 1000 mm | 1500 mm | 2000 mm |
| 最大研磨直徑 Max Grinding Diameter | 250 mm | | | | 350 mm | | | |
| 最大研磨重量 Max Grinding Weight | 150 kg | | | | 150 kg | | | |
| 中心高 Heights of Center | 135 mm | | | | 185 mm | | | |
| | 砂輪座 Wheelhead | | | | | | | |
| 砂輪尺寸 Grinding Wheel Size | φ 406x25~75x φ 152.4 (127) | | | | φ 406x25~75x φ 152.4 (127) | | | |
| 砂輪轉速 Grinding Wheel Speed | 1500,1700 RPM | | | | 1500,1700 RPM | | | |
| 砂輪最大周數 Max Grinding Linear Velocity | 45 M/S | | | | 45 M/S | | | |
| 砂輪座最小移動量 Min Movement of Wheelhead | 0.001 mm | | | | 0.001 mm | | | |
| | 工件主軸 Work Spindle | | | | | | | |
| 夾具最大孔徑 Max Chuck Size | 7" φ 58 | | | | 9" φ 70 | | | |
| 主軸轉速 Spindle Speed | 40~360 RPM | | | | 40~360 RPM | | | |
| 主軸台迴轉度 Spindle Swing Angle | ±45° | | | | ±45° | | | |
| 主軸錐度 Spindle Taper | MT#4 | | | | MT#4 (5) | | | |
| | 尾座 Tailstock | | | | | | | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#4 | | | | MT#4 (5) | | | |
| 尾軸行程 Tailstock Quill Stroke | 30 mm | | | | 30 mm | | | |
| | 工作台 Worktable | | | | | | | |
| 工作台行程 Worktable Stroke | 400 mm | 650 mm | 1000 mm | 2000 mm | 400 mm | 650 mm | 1000 mm | 2000 mm |
| 工作台最快速度 Max Table Moving Speed | 5000 mm / min | | | | 5000 mm / min | | | |
| 工作台迴轉角度 Table Swing Angle | 9° 4' | 7° 3' | 5° 2' | 3° 1' | 9° 4' | 7° 3' | 5° 2' | 3° 1' |
| | 機械規格 Machine Size | | | | | | | |
| 機械尺寸 (長 X 寬 X 高) Machine Dimensions (LxWxH) | 228x150x160 | 228x350x170 | - | - | 228x280x170 | 228x380x170 | - | - |
| 機械重量 Machine Net Weight | 2200 kg | 3500 kg | - | - | 2800 kg | 3500 kg | - | - |



三 高剛性砂輪主軸 High Rigidity Wheel Spindle

高剛性砂輪主軸採用通展自行開發生產之銅襯套式動靜壓軸承。即使經過長時間高速、重切削條件下，仍能保持穩定之高精度表現。

High rigidity grinding wheel spindle is equipped with Lih-Jaan copper bush type hybrid bearing. Provide stable high-accuracy even after long time heavy grinding.



三 油膜吸震設計 Vibration-Absorbing Design

砂輪主軸強制潤滑系統具有良好的制震性能，動壓軸承所產生的油膜壓力，隨研磨作業自動吸收研磨時產生之震動，確保研磨精度。

The forced lubrication system of the grinding wheel spindle features vibration absorbing function. The oil film pressure, created by the hydrodynamic bearings, automatically absorbs vibration according to the current working condition.

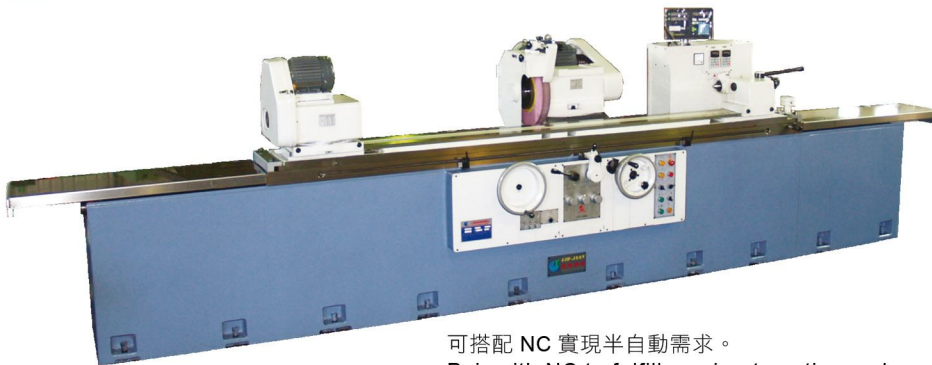


三 多樣化加工機構 Diversified Processing Mechanism

主軸台可 120° 旋轉，砂輪台可左右 30° 旋轉，主軸轉速為無段變速。並可定住與正逆轉，適合中小型，多樣化外圓筒加工。

Spindle table can be 120° rotation, grinding wheel table can be rotated about 30° (R&L), the spindle speed made in stepless. Also can be fixed and reversing, suitable for small and medium-sized, diversified cylinder processing.

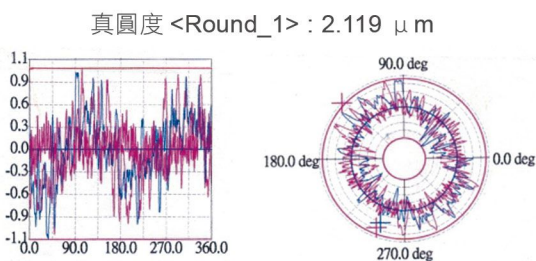
延伸應用 EXTENDED APPLICATION



可搭配 NC 實現半自動需求。
Pair with NC to fulfill semi-automatic need.

可搭配多款廠牌 CNC：西門子、發那科、新代及三菱，也可以進階搭配自動手臂完成全自動化需求。
Pair with variety controller brands：Siemens, FANUC, SYNTEC and Mitsubishi and so on. Moreover, this model can pair with automatic arm to fulfill the fully automatic production.

精度 ACCURACY



V 軸 [um] H 軸 [deg]



加工範例 WORKPIECE SAMPLE



CNC 直進式 / 斜進式圓筒磨床 LJ30 / LJ30(A)

CNC Horizontal/Angular Type Cylindrical Grinder

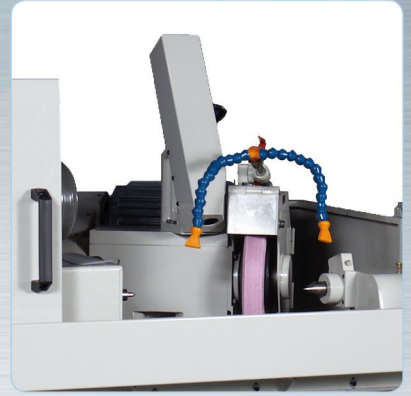


LJ30/LJ30(A) 系列 CNC 直進式 / 斜進式圓筒磨床廣泛適用於直徑範圍在 280mm 內之工件。並可搭配多款廠牌 CNC：西門子、發那科、新代及三菱，也可以進階搭配自動手臂完成全自動化需求。

LJ30 / LJ30 (A) Series CNC Horizontal/Angular Type Cylindrical Grinding Machines are widely used for workpieces with diameters in the range of 280mm and pair with variety controller brands : Siemens, FANUC, SYNTEC and Mitsubishi and so on. Moreover, this model can pair with automatic arm to fulfill the fully automatic production.

規格表 SPECIFICATION

| 機型 MODEL | LJ30-400 | LJ30-400 (A) | LJ30-600 | LJ30-600 (A) |
|--|----------------------------|--------------|----------------------------|--------------|
| | 研磨能力 Grinding Capability | | | |
| 最大研磨長度 Max Grinding Length | 400 mm | | 600 mm | |
| 最大研磨直徑 Max Grinding Diameter | 280 mm | | 280 mm | |
| 最大研磨重量 Max Grinding Weight | 100 kg | | 150 kg | |
| 中心高 Heights of Center | 150 mm | | 150 mm | |
| | 砂輪座 Wheelhead | | | |
| 砂輪尺寸 Grinding Wheel Size | φ 406x25~75x φ 152.4 (127) | | φ 406x25~75x φ 152.4 (127) | |
| 砂輪斜進角度 Wheel Tilt Angle | 0° | 30° | 0° | 30° |
| 砂輪轉速 Grinding Wheel Speed | 1500,1700 RPM | | 1500,1700 RPM | |
| 砂輪最大周數 Max Grinding Linear Velocity | 45 M/S | | 45 M/S | |
| 砂輪座前後移動總行程 Total Back and Forth Stroke | 標準 405:200 特別 450:175 | | 標準 405:200 特別 450:175 | |
| 砂輪座快速進退給行程 Rapid Feed Stroke | 50 mm | | 50 mm | |
| 砂輪座進給總行程 Total Feeding Stroke | 標準 405:160 特別 450:135 | | 標準 405:160 特別 450:135 | |
| | 工件主軸 Work Spindle | | | |
| 夾具最大孔徑 Max Chuck Size | 7" φ 58 | | 9" φ 70 | |
| 主軸轉速 Spindle Speed | 40~360 RPM | | 40~360 RPM | |
| 主軸錐度 Spindle Taper | MT#4 | | MT#4 | |
| | 尾座 Tailstock | | | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#4 | | MT#4 | |
| 尾軸行程 Tailstock Quill Stroke | 30 mm | | 30 mm | |
| | 工作台 Worktable | | | |
| 工作台行程 Worktable Stroke | 400 mm | | 600 mm | |
| 工作台最快速度 Max Table Moving Speed | 5000 mm / min | | 5000 mm / min | |
| 工作台迴轉角度 Table Swing Angle | 9° 4° | | 9° 4° | |
| | 機械規格 Machine Size | | | |
| 機械尺寸 (長 X 寬 X 高) Machine Dimensions (LxWxH) | 239x230x | | 336x230x220 | |
| 機械重量 Machine Net Weight | 4300 kg | | 4800 kgs | |



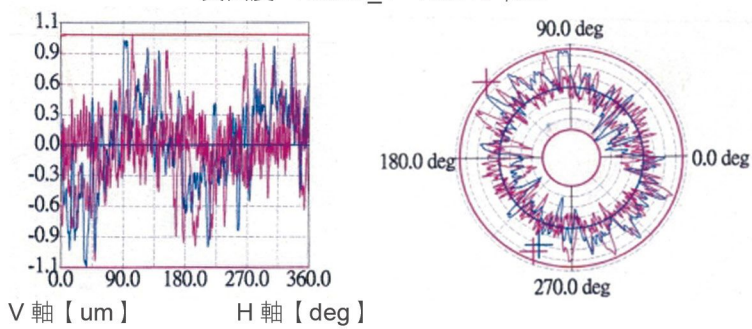
三 斜進式設計 Angular Type

斜進研磨角度達 30°。

Angular grinding angle up to 30° .

精度 ACCURACY

真圓度 <Round_1> : 2.119 μ m



加工範例 WORKPIECE SAMPLE



研磨成品：拉頭



重壓滾輪磨床 LJ56

Precision Heavy Duty Hydraulic Cylindrical Grinder

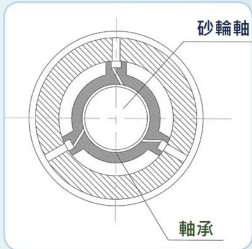


LJ56 系列適用於研磨圓柱形、圓錐形零件，工件直徑在 350 mm~550 (650) mm 之中大型零件，機構設計可達成少量多樣加工需求並可依加工需求搭載附屬內孔研磨裝置、NC 人機伺服、CNC 控制器。

LJ56 series are suitable for large and medium-sized grinding cylindrical and conical parts with diameter of 350 mm ~ 550 (650) mm. The design of the machine can meet a small number of different processing needs and can be equipped with Subsidiary Internal Grinding, NC servo and CNC Controller.

規格表 SPECIFICATION

| 機型 MODEL | LJ56 | | | |
|--|--------------------------|---------|---------|---------|
| | 研磨能力 Grinding Capability | | | |
| 最大研磨長度 Max Grinding Length | 1000 mm | 2000 mm | 3000 mm | 4000 mm |
| 最大研磨直徑 Max Grinding Diameter | 550 mm (650 mm) | | | |
| 最大研磨重量 Max Grinding Weight | 1000 kg | | | |
| 中心高 Heights of Center | 280 mm (350 mm) | | | |
| | 砂輪座 Wheelhead | | | |
| 砂輪尺寸 Grinding Wheel Size | φ 710x50~100x φ 203.2 | | | |
| 砂輪轉速 Grinding Wheel Speed | 890 RPM | | | |
| 砂輪最大周數 Max Grinding Linear Velocity | 33 M/S | | | |
| 砂輪座最小移動量 Min Movement of Wheelhead | 0.001 mm | | | |
| | 工件主軸 Work Spindle | | | |
| 夾具最大孔徑 Max Chuck Size | 10" φ 89 | | | |
| 主軸轉速 Spindle Speed | 25~165 RPM | | | |
| 主軸台迴轉度 Spindle Swing Angle | 0.005 | | | |
| 主軸錐度 Spindle Taper | MT#5 | | | |
| | 尾座 Tailstock | | | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#5 | | | |
| 尾軸行程 Tailstock Quill Stroke | 30 mm | | | |
| | 工作台 Worktable | | | |
| 工作台行程 Worktable Stroke | 1000 mm | 2000 mm | 3000 mm | 4000 mm |
| 工作台最快速度 Max Table Moving Speed | 3500 mm / min | | | |
| 工作台迴轉角度 Table Swing Angle | 3° 1° | 2° 1° | 2° 1° | 1° 30' |
| | 機械規格 Machine Size | | | |
| 機械尺寸 (長 X 寬 X 高) Machine Dimensions (LxWxH) | 228x390x170 | | | |
| 機械重量 Machine Net Weight | 6000 kg | | | |



三 高剛性砂輪主軸 High Rigidity Wheel Spindle

高剛性砂輪主軸採用通展自行開發生產之銅襯套式動靜壓軸承。即使經過長時間高速、重切削條件下，仍能保持穩定之高精度表現。

High rigidity grinding wheel spindle is equipped with Lih-Jaan copper bush type hybrid bearing. Provide stable high-accuracy even after long time heavy grinding.



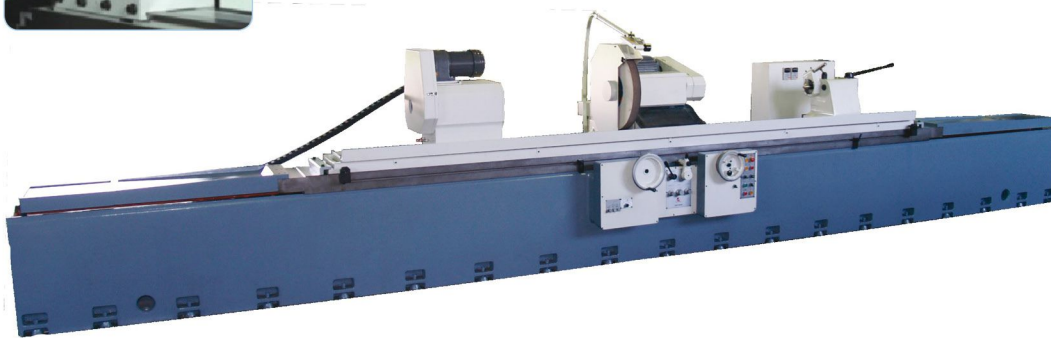
三 油膜吸震設計 Vibration-Absorbing Design

砂輪主軸強制潤滑系統具有良好的制震性能，動壓軸承所產生的油膜壓力，隨研磨作業自動吸收研磨時產生之震動，確保研磨精度。

The forced lubrication system of the grinding wheel spindle features vibration absorbing function. The oil film pressure, created by the hydrodynamic bearings, automatically absorbs vibration according to the current working condition.

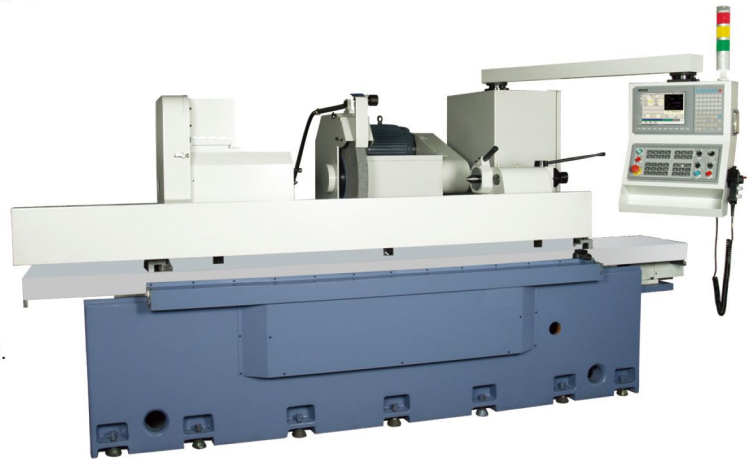


三 主軸台 Main Spindle



可搭配 NC 實現半自動需求。
Pair with NC to fulfill semi-automatic need.

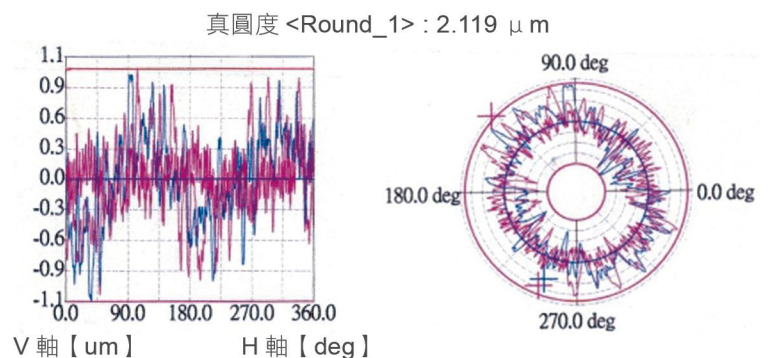
可搭配多款廠牌 CNC：西門子、發那科、新代及三菱，也可以進階搭配自動手臂完成全自動化需求。
Pair with variety controller brands：Siemens, FANUC, SYNTEC and Mitsubishi and so on. Moreover, this model can pair with automatic arm to fulfill the fully automatic production.



加工範例 WORKPIECE SAMPLE

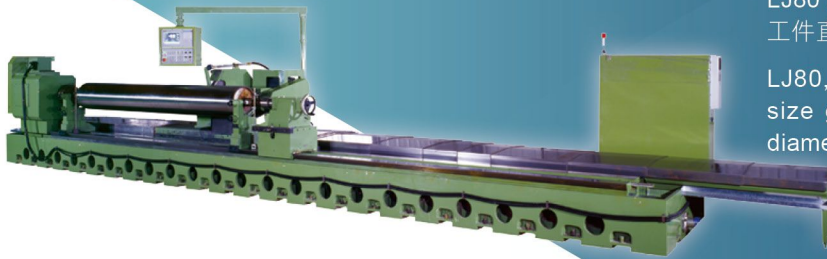


精度 ACCURACY



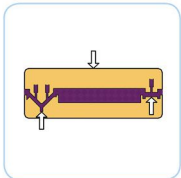
重壓滾輪磨床 LJ80 / LJ100

Precision Super Heavy Duty Hydraulic Cylindrical Grinder



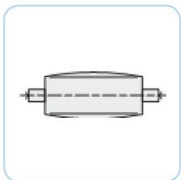
LJ80 / LJ100 NC 系列適用於研磨圓柱形、圓錐形零件，工件直徑在 650 mm~1000 mm 之超大型零件。

LJ80, LJ100 NC series are suitable for super large size grinding cylindrical, conical parts, workpiece diameter 650 mm ~ 1000 mm.



滑板強制循環潤滑使油膜平均於滑道上減低摩擦負荷，確保運動精度及壽命。

Forced lubricating system makes the oil film averaged on each area of all guide ways (V shape and squareshape), which can reduce the frictino, assure the dynamic accuracy and prolong the machine life.



中高研磨（選配）
Convex Grinding (Optional)

加工範例 WORKPIECE SAMPLE

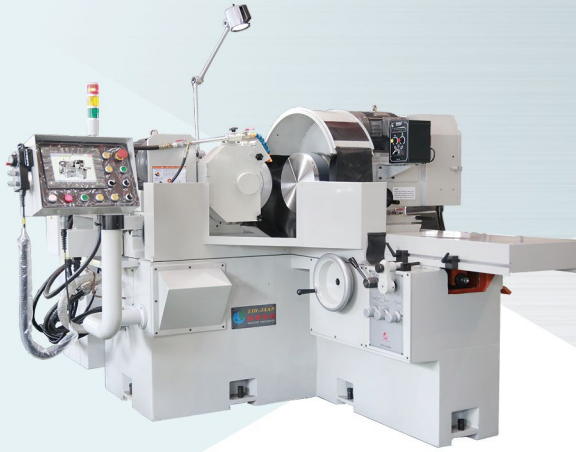


規格表 SPECIFICATION

| 機型 MODEL | LJ80 | | | LJ100 | | |
|--|--------------------------|---------|--------------|-----------------------|---------|---------|
| | 研磨能力 Grinding Capability | | | | | |
| 最大研磨長度 Max Grinding Length | 5000 mm | 6000 mm | 8000 mm | 5000 mm | 6000 mm | 8000 mm |
| 最大研磨直徑 Max Grinding Diameter | 800 mm | | | 1000 mm | | |
| 最大研磨重量 Max Grinding Weight | 5000 kg | | | 10000 kg | | |
| 中心高 Heights of Center | 450 mm | | | 550 mm | | |
| | 砂輪座 Wheelhead | | | | | |
| 砂輪尺寸 Grinding Wheel Size | φ 610x50~100x φ 203.2 | | | φ 610x50~100x φ 203.2 | | |
| 砂輪轉速 Grinding Wheel Speed | 890 RPM | | | 890 RPM | | |
| 砂輪最大周數 Max Grinding Linear Velocity | 30 M/S | | | 30 M/S | | |
| 砂輪座進給速率 (X 軸) Wheelhead Feedrate (X Axis) | 0~3000 mm / min | | | 0~3000 mm / min | | |
| | 工件主軸 Work Spindle | | | | | |
| 夾具最大孔徑 Max Chuck Size | 12" φ 105 | | | 12" φ 105 | | |
| 主軸轉速 Spindle Speed | 5~80 (5~50) RPM | | | 5~80 (5~50) RPM | | |
| 主軸台迴轉度 Spindle Swing Angle | 非旋轉式 | | | 非旋轉式 | | |
| 主軸錐度 Spindle Taper | MT#5 (6) | | | MT#5 (6) | | |
| | 尾座 Tailstock | | | | | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#4 | | | MT#4 (5) | | |
| 尾軸行程 Tailstock Quill Stroke | 40 (80) mm | | | 40 (80) mm | | |
| | 工作台 Worktable | | | | | |
| 工作台行程 Worktable Stroke | 5000 mm | 6000 mm | 8000 mm | 5000 mm | 6000 mm | 8000 mm |
| 工作台進給速率 (Z 軸) Worktable Feedrate (Z Axis) | 0~4000 mm / min | | | 0~4000 mm / min | | |
| 工作台迴轉角度 Table Swing Angle | 非旋轉式 | | | 非旋轉式 | | |
| | 機械規格 Machine Size | | | | | |
| 機械尺寸 (長 X 寬 X 高) Machine Dimensions (LxWxH) | 900x215x205 | | 1100x215x205 | | | |
| 機械重量 Machine Net Weight | 24T | | 28T | | | |

精密端面磨床 LJ-300E

Precision End Face Grinder



LJ-300E 系列 CNC 端面磨床適用於精密刀片之加工，盤面直徑 $\phi 300$ mm，可生產多樣化、多尺寸之刀片。並可搭配多款廠牌 CNC：西門子、發那科、新代及三菱，也可以進階搭配自動手臂完成全自動化需求。針對操作人員安全精心設計，工件可在目視範圍內操作，人員與砂輪成直角配置，工件取卸方便，操作簡易。

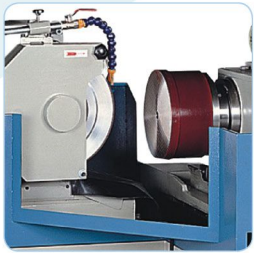
LJ-300E series CNC surface grinding machine is suitable for precision blade processing, the disk diameter is about $\phi 300$ mm, can produce diversified, multi-size blade. Pair with variety controller brands: Siemens, FANUC, SYNTEC and Mitsubishi and so on. Designed for operator's safety, the workpiece can be manipulated in the visual range, operator and wheel settle at right angles, easy to removal of the workpiece and easy to operate as well. Moreover, this model can pair with automatic arm to fulfill the fully automatic production.

三 砂輪主軸安全機制

Wheel Spindle Safety Mechanism

高剛性之砂輪主軸，兩端以特殊動壓軸承三點支撐，當強制潤滑壓力不足時，砂輪主軸自動停止運轉，可確保主軸壽命與精度。

High rigidity of the wheel spindle, use the special dynamic pressure bearing three point support at both end side, when forced lubrication pressure is not enough, the wheel spindle automatically stop running, to ensure the spindle life and accuracy.

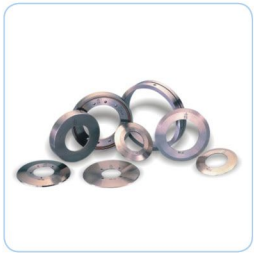


三 加工工件多樣化

Diversified Workpiece

主軸台之鼻端為 A6，法蘭盤可配合磁盤、三爪或夾具等具多樣夾持方法，並可 $\pm 45^\circ$ 旋轉，適合 1m/m~100m/m 之端面研磨，如三爪夾頭之外徑端面。

The A6 nose spindle, the flange plate can be matched with the disk, the three jaw chuck or the clamp with a variety of clamping methods. Also, can be rotated by $\pm 45^\circ$, suitable for 1m/m ~ 100m/m end grinding, such as 3 jaw chuck's outer diameter end face.



規格表 SPECIFICATION

| 機型 MODEL | LJ300E |
|--|--|
| 研磨能力 Grinding Capability | |
| 最大研磨長度 Max Grinding Length | 250 mm |
| 最大研磨直徑 Max Grinding Diameter | 300 mm |
| 最大研磨重量 Max Grinding Weight | 100 kg |
| 中心高 Heights of Center | 210 mm |
| 砂輪座 Wheelhead | |
| 砂輪尺寸 Grinding Wheel Size | $\phi 355 \times 25 \sim 50 \times \phi 152.4 (101.6)$ |
| 砂輪轉速 Grinding Wheel Speed | 1500, 1700 RPM |
| 砂輪最大周數 Max Grinding Linear Velocity | 45 M/S |
| 砂輪座最小移動量 Min Movement of Wheelhead | 0.005 mm |
| 工件主軸 Work Spindle | |
| 主軸轉速 Spindle Speed | 40~360 RPM |
| 主軸台迴轉度 Spindle Swing Angle | $\pm 45^\circ$ |
| 主軸錐度 Spindle Taper | MT#4(5) |
| 工作台 Worktable | |
| 工作台行程 Worktable Stroke | 300 mm |
| 工作台最快速度 Max Table Moving Speed | 5000 mm / min |
| 工作台迴轉角度 Table Swing Angle | $9^\circ \quad 4^\circ$ |
| 機械規格 Machine Size | |
| 機械尺寸 (長 x 寬 x 高) Machine Dimensions (LxWxH) | 225x195x155 |
| 機械重量 Machine Net Weight | 2300kg |

精度 ACCURACY

Mitutoyo Surface SJ-400
DATE 2009-05-16
TIME 09:26:21

R=PROFILE
EVA-L 2.4mm
 $\lambda c = 0.8\text{mm} \times 3$
Ra 0.03 μm
Rz 0.3 μm
Rq 0.04 μm

R=PROFILE
EVA-L 2.4mm
 $\lambda c = 0.8\text{mm} \times 3$
+ $\times 50\text{K}$
 $\times 50$



CNC 精密螺紋磨床 LJ-TG

CNC Precision Thread Grinder



LJ-TG 系列 CNC 螺紋磨床以操作便利及功能強大為其設定特點。

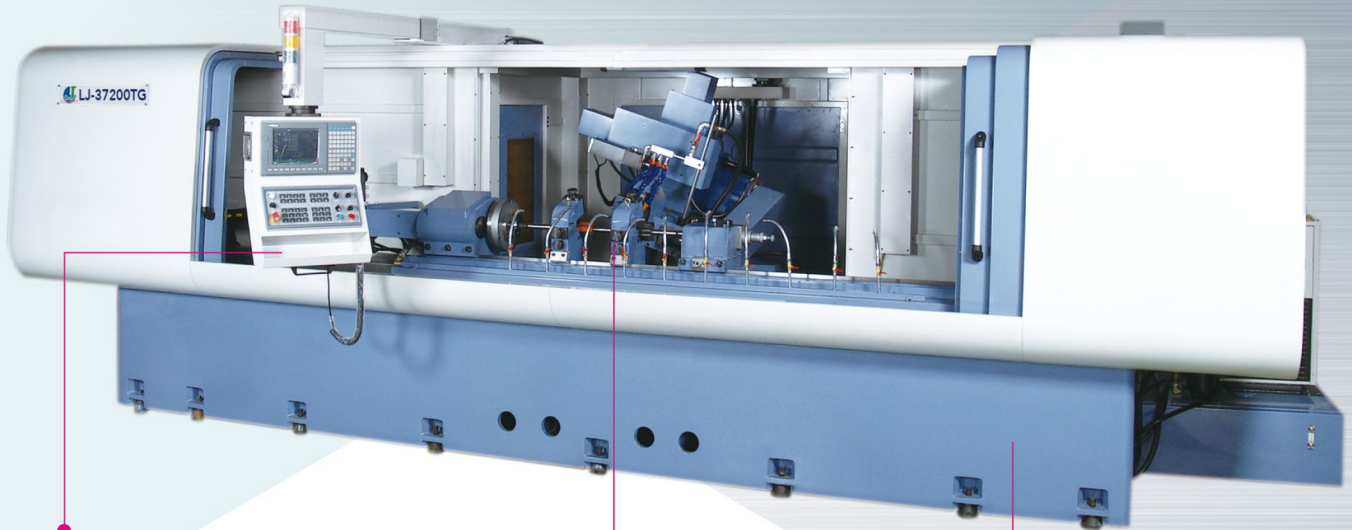
符合各式螺紋、滾珠螺桿、塑料螺桿、滾牙輪、絲攻、螺紋量規以及一般牙等等大量螺紋相關加工。並可搭配多款廠牌 CNC 控制器：西門子、發那科、新代及三菱，也可以進階搭配自動手臂完成全自動化需求。

LJ-TG series CNC thread grinder has easy to operate and powerful features as its futures. Pair with variety controller brands : Siemens, FANUC, SYNTEC and Mitsubishi and so on. Moreover, this model can pair with automatic arm to fulfill the fully automatic production.

Applicate in a wide range of thread-related grinding such as: ball screw, plastic screw, diamond roller, taps, thread gauge and general thread.

規格表 SPECIFICATION

| 機型 MODEL | LJ-2725TG | LJ-2740TG | LJ-3765TG | LJ-37100TG | LJ-37200TG | LJ-37300TG |
|--|------------------------------|-------------|-------------|------------|----------------------|-------------|
| 研磨能力 Grinding Capability | | | | | | |
| 最大工件長度 Max Work Length bwtween Center | 250 mm | 400 mm | 650 mm | 1000 mm | 2000 mm | 3000 mm |
| 最大研磨長度 Max Grinding Length | 200 mm | 350 mm | 550 mm | 900 mm | 1900 mm | 2900 mm |
| 最大研磨直徑 Max Grinding Diameter | 50 mm | 50 mm | 80 mm | 100 mm | 100 mm | 100 mm |
| 最大研磨重量 Max Grinding Weight | 100 kg | 100 kg | 150 kg | 350 kg | 500 kg | 1000 kg |
| 中心高 Heights of Center | 125 mm | 125 mm | 185 mm | 185 mm | 185 mm | 185 mm |
| 砂輪座 Wheelhead | | | | | | |
| 砂輪尺寸 Grinding Wheel Size | φ 406x10~40x φ 203.2(160) | | | | φ 508x10~40x φ 203.2 | |
| 最小砂輪外徑 Min Wheel Outer Diameter | φ 320 | | | φ 400 | | |
| 砂輪轉速 Grinding Wheel Speed | 0~2030 RPM (變頻無段變速) | | | | | |
| 砂輪最大周數 Max Grinding Linear Velocity | 60 M/S or 45 M/S (依砂輪轉速限制配置) | | | | | |
| 砂輪軸傾斜迴轉度 Tilt Rotation Angle of Wheel | (R)±20° | | | (R)±25° | | |
| 工件主軸 Work Spindle | | | | | | |
| 夾具最大孔徑 Max Chuck Size | 5" φ 30 | | 6" φ 44 | 7" φ 58 | 7" φ 58 | 7" φ 58 |
| 主軸迴轉速率 Spindle Speed | Max : 100 | | | | | |
| 最小迴轉角度 Min Rotation Angle | 0.005 | | | | | |
| 主軸錐度 Spindle Taper | MT#4 | | | | | MT#5 |
| 尾座 Tailstock | | | | | | |
| 尾軸孔錐度 Tailstock Quill Taper | MT#4 | | | | | MT#5 |
| 尾軸行程 Tailstock Quill Stroke | 15 mm | | 20 mm | 30 mm | | |
| 工作台 Worktable | | | | | | |
| 工作台行程 Worktable Stroke | 400 mm | | 650 mm | 1000 mm | 2000 mm | 3000 mm |
| 工作台最快速度 Max Table Moving Speed | 4000 mm / min | | | | | |
| 機械規格 Machine Size | | | | | | |
| 機械尺寸 (長 x 寬 x 高) Machine Dimensions (LxWxH) | 256x268x217 | 388x230x240 | 388x230x240 | | 660x225x220 | 950x220x220 |
| 機械重量 Machine Net Weight | 7100 kg | 5900 kg | 5900 kg | | 9000 kg | 14.5ton |



專屬對話式軟體，操作便捷，輸入指定參數，電腦自動加工執行。且可配合多家控制器 FANUC、Siemens、SYNTEC 等等多家廠牌。

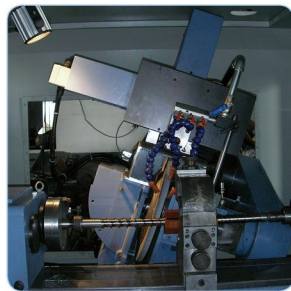
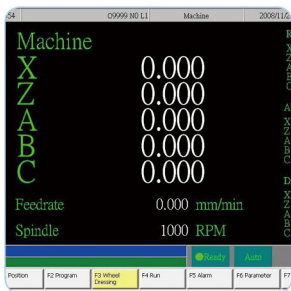
Easy to operate. Pair with variety controller brands: FANUC, Siemens SYNTEC and so on.

調整式砂輪頭設計，符合各式螺紋、滾珠螺桿、螺紋量規等等所有螺紋相關進行高精度、高效率研磨加工。

Meet all thread-related operate.
High-Precision
High-Efficiency

LJ-TG 系列螺紋磨床，機床基座採用 FC30 鑄鐵成型，結構一體成形不只高剛性、高耐用性，更能減少研磨過程的震動達到吸震效果。

LJ-TG series base with FC30 structure can reduce the vibrations to achieve shock absorption effect.



精度 ACCURACY

機構精度 Mechanism

X 軸重複訂位精度：3 μ
Z 軸重複訂位精度：5 μ
C 軸重複訂位精度： $\pm 10''$
※ 搭載光學尺測量

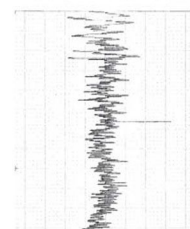
X Axis Positioning Accuracy: 3 μ
Z Axis Positioning Accuracy: 5 μ
C Axis Positioning Accuracy: $\pm 10''$
※ All with optical scale

研磨精度 Grinding Accuracy

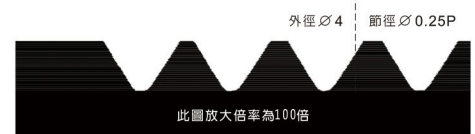
| ISO C5 | |
|------------|----------|
| $e_{2\pi}$ | 8 μ |
| e_{300} | 18 μ |
| ISO C3 | |
| $e_{2\pi}$ | 6 μ |
| e_{300} | 8 μ |

微調螺絲測量精度 Drive Screw M2 x P0.25

Ver. 0.2 μ m/cm
Hor. 200.0 μ m/cm



加工範例 WORKPIECE SAMPLE



內徑油壓圓筒磨床 LJ-150IG

CNC Horizontal/Angular Type Cylindrical Grinder



LJ-IG 系列適用於研磨內孔圓柱形、圓錐形零件，工件內徑在 15 mm~150 mm 之小型零件，機構設計可達成少量多樣加工需求。主軸轉速標準配置為 20,000 RPM，另可依客制需求搭配如 8,000 RPM、10,000 RPM 等等。

LJ-IG series are suitable for small size inner grinding cylindrical and conical parts with inner diameter of 15 mm ~ 150 mm. The mechanism design can meet large-variety production.

The standard speed of the spindle is 20,000 RPM, and it can be matched with custom requirements such as 8,000 RPM, 10,000 RPM and so on.

規格表 SPECIFICATION

| 機型 MODEL | LJ150IG |
|---|--------------------------|
| | 研磨能力 Grinding Capability |
| 最大研磨長度 Max Grinding Length | 150 mm |
| 最大研磨內徑 Max Grinding Inner Diameter | φ 15~φ 150 mm |
| 最大研磨重量 Max Grinding Weight | 50 kg |
| 中心高 Heights of Center | 135 mm |
| | 砂輪座 Wheelhead |
| 砂輪轉速 Grinding Wheel Speed | 標準型 20,000 RPM |
| 砂輪最大周數 Max Grinding Linear Velocity | 45 M/S |
| 砂輪座前後移動總行程 Total Back and Forth Stroke | 150 mm |
| 砂輪座最小移動量 Min Movement of Wheelhead | 0.001 mm |
| | 工件主軸 Work Spindle |
| 主軸轉速 Spindle Speed | 20~100 RPM |
| 主軸台迴轉度 Spindle Swing Angle | 前 20° 後 10° |
| 主軸台移動總行程 Total Back and Forth Stroke | 150 mm |
| 主軸錐度 Spindle Taper | MT#4 |
| | 工作台 Worktable |
| 工作台行程 Worktable Stroke | 標準 400 mm |
| 工作台最快速度 Max Table Moving Speed | 5000 mm / min |
| 工作台迴轉角度 Table Swing Angle | 0.005 |
| | 機械規格 Machine Size |
| 機械尺寸 (長 x 寬 x 高) Machine Dimensions (LxWxH) | 225x195x155 |
| 機械重量 Machine Net Weight | 2300 kg |



圓筒磨床附件 CYLINDRICAL GRINDER ACCESSORIES

| 標準附件 STANDARD ACCESSORIES | 選購附件 OPTIONAL ACCESSORIES |
|---------------------------------|---|
| 砂輪及法蘭 Grinding Wheel and Flange | 磁鐵過濾機 Coolant Filter (Magnetic Type) |
| 砂輪修整器 Dressing Attachment | 紙帶過濾機及紙袋 Coolant Filter (Fabric Type & Paper) |
| 砂輪平衡棒 Balance Arbor | 圓筒磨床專用磨輪規 Grinding Gauge |
| 碳化鎢頂針 Carbide Tipped Center | 三爪夾頭及連結板 3-Jaw Chuck and Flange |
| 冷卻水箱 Cooling Water Tank | 砂輪法蘭組 Grinding Wheel Flange |
| 防濺裝置 Coolant Splash Guard | 砂輪平衡台 Wheel Balancing Base |
| 工具及工具箱 Tool Box | Z 軸光學尺 Z Axis Optical Scale |
| 工作燈 Work Lamp | 兩點中心架 Two Point Steady Rest |
| | 傳動夾具 Driving Carrier |

內圓磨床 INNER CYLINDRICAL GRINDER ACCESSORIES

| 標準附件 STANDARD ACCESSORIES | 選購附件 OPTIONAL ACCESSORIES |
|--------------------------------------|---|
| 平面皮帶 Flat Belt | 紙帶過濾機及紙袋 Coolant Filter (Fabric Type & Paper) |
| 砂輪連接棒 Connection Bar | 砂輪修整器 Dressing Attachment |
| 砂輪修整器 Dressing Attachment | 三爪夾頭及連結板 3-Jaw Chuck and Flange |
| 主軸 A6 鼻端 Spindle A6 Nose | 砂輪法蘭組 Grinding Wheel Flange |
| 鑽石修刀 #10Diamond Dresser | 砂輪平衡台 Wheel Balancing Base |
| 磁鐵過濾機 Coolant Filter (Magnetic Type) | Z 軸光學尺 Z Axis Optical Scale |
| 三爪夾頭及連結板 3-Jaw Chuck and Flange | 三點中心架 Three Point Steady Rest |
| 冷卻水箱 Cooling Water Tank | 傳動夾具 Driving Carrier |
| 防濺裝置 Coolant Splash Guard | |
| 工具及工具箱 Tool Box | |

螺紋磨床附件 THREAD GRINDER ACCESSORIES

| 標準附件 STANDARD ACCESSORIES | 選購附件 OPTIONAL ACCESSORIES |
|---------------------------------|---|
| 砂輪及法蘭 Grinding Wheel and Flange | 磁鐵過濾機 Coolant Filter (Magnetic Type) |
| 砂輪修整器 Dressing Attachment | 紙帶過濾機及紙袋 Coolant Filter (Fabric Type & Paper) |
| 砂輪平衡棒 Balance Arbor | 油溫控制冷卻器 Oil Cooler Unit |
| 碳化鎢頂針 Carbide Tipped Center | 油霧回收機 Oil Mist Collector |
| 冷卻水箱 Cooling Water Tank | 砂輪修整器 Dressing Attachment |
| 工具及工具箱 Tool Box | 砂輪法蘭組 Grinding Wheel Flange |
| 工作燈 Work Lamp | 砂輪平衡裝置 Wheel Balancing System |
| | Z 軸光學尺 Z Axis Optical Scale |
| | 三爪夾頭及連結板 3-Jaw Chuck and Flange |
| | 三點中心架 Three Point Steady Rest |
| | 傳動夾具 Driving Carrier |



通展精機工業股份有限公司

台中市大雅區振興三路2號

TEL : 886-4-25667267 FAX : 886-4-25673348

E-Mail : lih.jaan1984@gmail.com

www.grinder-lihjaan.com