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PARALLEL TWIN SPINDLE
TURNING CENTER
FCL-16PTS

平行雙主軸車削中心機

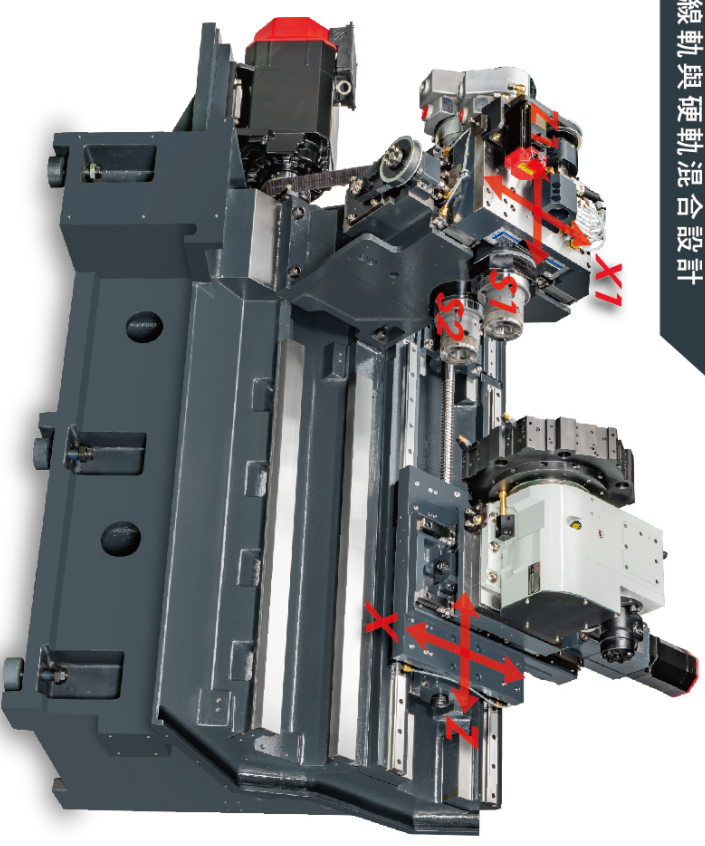
FORCE ONE PARALLEL TWIN SPINDLE TURNING CENTER

平行雙主軸車削中心機 二倍產能 適用自動化生產線



A COMBINATION OF LINEAR GUIDEWAYS AND BOX WAYS DESIGN

線軌與硬軌混合設計



- X / Z axis are cutting feed axis, which are mounted with precision linear guideways. Rapid traverse rates on X and Z axis can reach 30 m/min for increasing machining efficiency.
- X1 axis is a tool compensation axis, which is mounted with precision linear guideways to ensure compensation accuracy. **Z1 axis is designed with box ways that exhibit outstanding rigidity.**

- X、Z軸為車削進給軸，配置精密線軌，快速進給率可達30米/分，有助於提升加工效率。
- X1軸為刀具補償軸，配置精密線軌，以確保補償精度。Z1軸則採用硬軌設計，展現優異的剛性。



PATENT No 新型專利證書: M612298

FCL-16 PTS DOUBLE PRODUCTIVITY IDEAL FOR AUTOMATED PRODUCTION LINES

- The FCL-16PTS series turning center basic structure is specially designed with 2 sets of parallel spindles in combination with high efficiency nine stations on hydraulic power. Each station can be equipped with two tool holders, and the loading capacity of the hydraulic turret is 18 tools. This enables the machine to achieve double throughput. In addition, it also dramatically reduces investment costs and electricity consumption, with a space-saving design that creates high productivity per unit area.

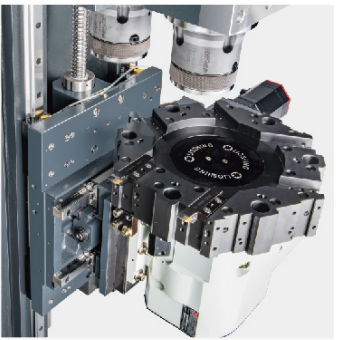
- FCL-16PTS系列車削中心機，具有特殊設計的兩組平行主軸，與高效率車削加工搭配9刀位刀塔，每刀位可使用2把刀具，共18把刀具，單機可達到兩倍產能。並可大幅節省投資成本，節省電力消耗，佔地面積小。

PARALLEL TWIN SPINDLE S1/S2

平行雙主軸 S1/S2

- This machine is equipped with a 6000 RPM high speed precision spindle, which is driven by a high torque spindle motor. It provides high machining efficiency and fine finish on machining surface.
- The spindle is fitted with a Ø5" 3 jaw hydraulic hollow chuck.

- 本機搭載6000 rpm高速高精度主軸，並採用高扭力主軸馬達驅動，加工效率高且加工面精緻。
- 主軸裝置Ø5"三爪中空油壓夾頭。

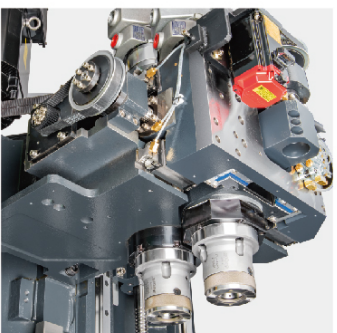


18 TOOLS HYDRAULIC TURRET

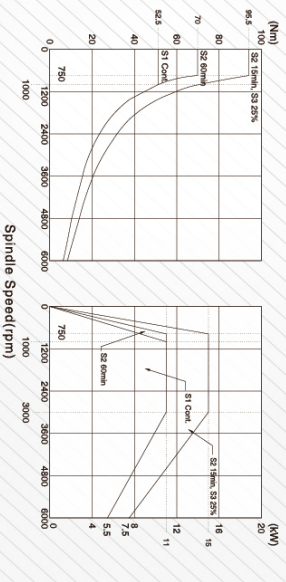
18刀油壓刀塔

- The machine is equipped with a 9-station hydraulic turret. Each station is equipped with two tools, and the loading capacity of the turret is 18 tools. Among which, six stations are fitted with O.D./I.D./facing tool holders, and the remaining three stations only can be fitted with I.D. sleeves.

- 9刀位油壓刀塔，每刀位有2把刀，刀塔容量共18把刀，其中6刀位可安裝外徑/內徑/端面刀座，另外的3刀位僅可安裝內徑刀套。



主軸功率/扭力曲線圖 SPINDLE POWER / TORQUE DIAGRAM

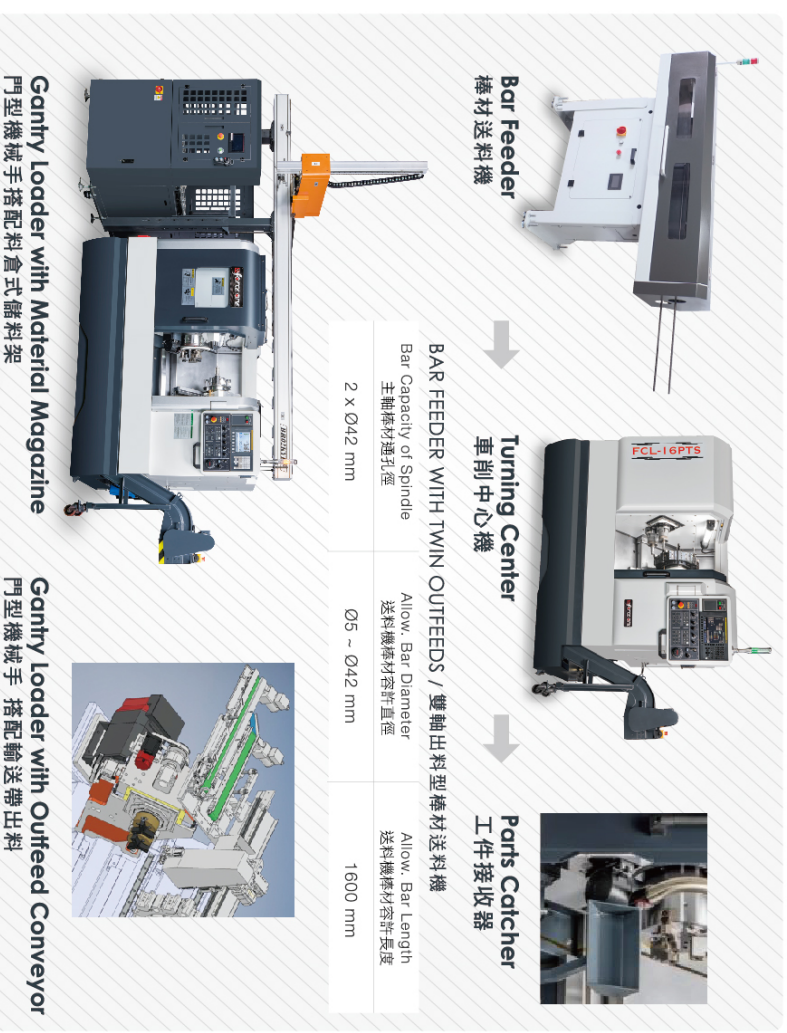


AUTOMATED PRODUCTION LINE (OPT.)

自動化生產線(選配)

- The production process of the automated production line is as follows: the bar feeder with twin outfeeds delivers two bars into the parallel twin spindles of the turning center. After machining, the parts catcher will deliver the finished parts to the parts stocker.
- This production line can achieve two times machining efficiency with the same area occupation, low equipment investment costs, and low energy consumption.
- 自動化生產線之生產流程如下：
雙軸出料型棒材送料機將棒材送入具有平行雙主軸之車削中心機。加工完成後，工件接收器將工件輸送至儲料倉。
- 此生產線配置可達2倍之加工效率，佔地面積相同、設備成本低、能源消耗低。

TWO AXES BAR FEEDER 雙軸棒材送料機形式:

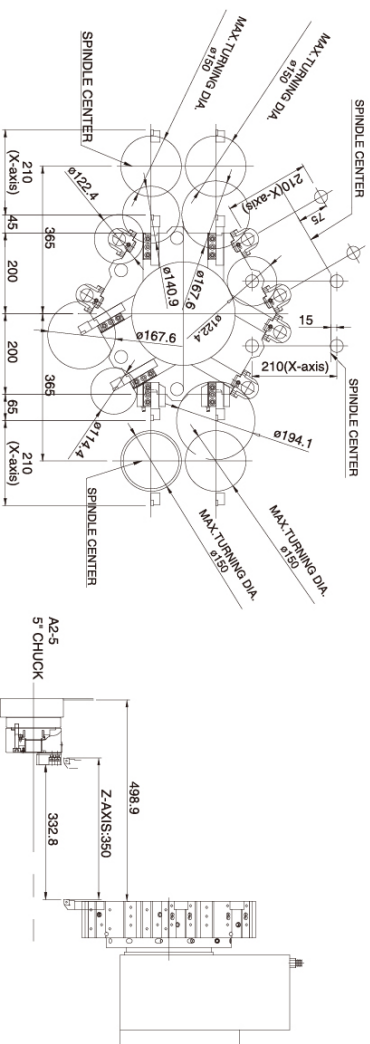


TOOL INTERFERENCE DIAGRAM

刀具干涉圖

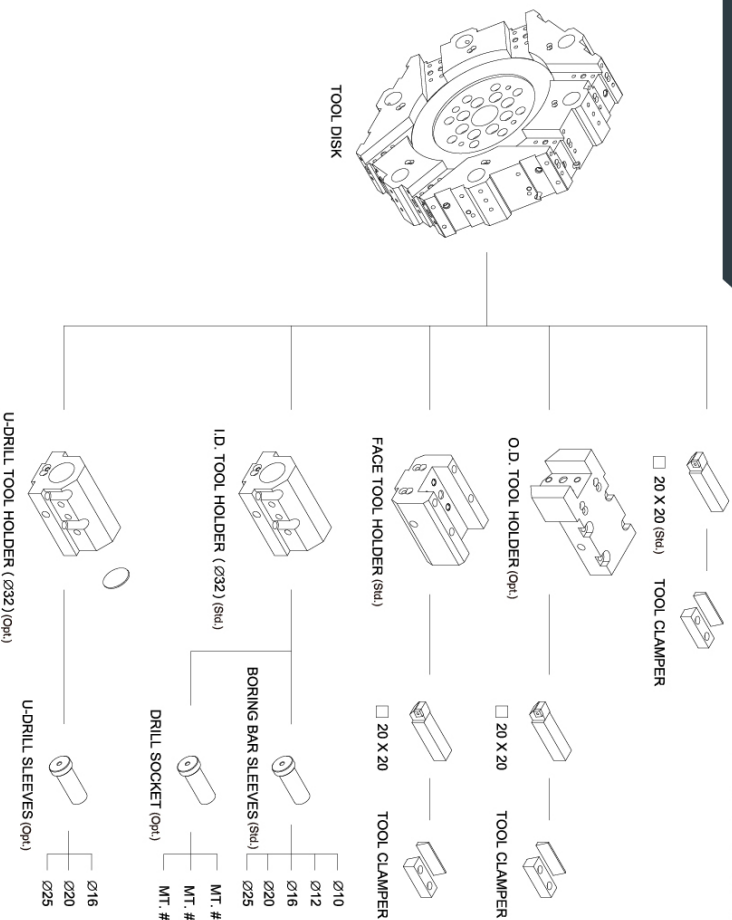
SPECIFICATIONS

機械規格表



TOOLING SYSTEM

刀具系統圖



MODEL 機型	UNIT 單位	FCL-16PTS
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Capacity 加工能力	No. of axis Swing over bed Max. turning diameter Max. turning length Sliderway type Spindle nose Spindle bore	軸數 床面旋徑 最大加工直徑 最大加工長度 軌道 主軸鼻端 主軸通孔徑	4 axis (X / X1 / Z / Z1) Ø400 mm (15.74") Ø220 mm (8.66") Ø150 mm (5.9") 330 mm (13") 線軌 / Linear guideway A2-5
Spindle (1/2) 主軸 (1/2)	Bar capacity Spindle speed Hydraulic chuck	棒材通孔徑 主軸轉速 油壓夾頭	mm(inch) rpm mm(inch)
Turret 刀塔	No. of tools O.D. tooling I.D. tooling X axis travel X1 axis travel Z axis travel Z1 axis travel	刀具數 外徑刀規格 內徑刀規格 X軸行程 X1軸行程 Z軸行程 Z1軸行程	9站 / 9 stations (9T*2=18T/1/8 tools) mm(inch) mm(inch) mm(inch) mm(inch) mm(inch) mm(inch)
X/Z Axis X/Z 軸	Rapid traverse rate (X axis) Rapid traverse rate (Z axis) Rapid traverse rate (Z1 axis) Cutting feed rate (X/Z axis) Dia. Of ballscrew (X axis) Dia. Of ballscrew (X1 axis) Dia. Of ballscrew (Z axis) Dia. Of ballscrew (Z1 axis) Spindle X axis X1 axis Z axis Z1 axis	快速進給速度(X軸) 快速進給速度(Z軸) 快速進給速度(Z1軸) 切削進給速度(X/Z軸) 導螺桿直徑(X軸) 導螺桿直徑(X1軸) 導螺桿直徑(Z軸) 導螺桿直徑(Z1軸) 主軸 X軸 X1軸 Z軸 Z1軸	m/min m/min m/min m/min mm(inch) mm(inch) mm(inch) mm(inch) kW kW kW kW kW
Motors 馬達	Hydraulic pump Coolant pump Coolant tank Coolant tank Height	油壓幫浦 切削水幫浦 油壓箱 切削水箱 長度x寬度 高度	Liter mm(inch) mm(inch) mm(inch) Kgs
Machine size 機器尺寸	Weight (N.W./G.W.)	重量(淨重/毛重)	4500 Kgs / 5050 Kgs

* All specification, design, and characteristics shown on this catalogue are subject to change without prior notice. * 本規格表如有變更，不另行通知，以契約之規格為準。

STANDARD ACCESSORIES

- 3 bar coolant pump
- Automatic lubrication system
- Tool box
- Working light
- Three color alarm light
- Right outlet chip conveyor and bucket
- Hydraulic unit
- Heat exchanger for electric cabinet

標準配備

- 三色警示燈
- 右出型鐵屑輸送機及鐵屑車
- 油壓單元
- 電氣箱熱交換器

OPTIONAL ACCESSORIES

- 20 bar coolant pump
- Oil skimmer
- Coolant chiller
- Coolant gun
- Oil mist collector
- Parts catcher
- Automatic door
- Bar feeder
- Linear scale
- Air gun
- Air conditioner for electric cabinet
- Automatic POW off
- Gantry type parts loader with conveyor
- Gantry type parts loader with parts unloader

選購配備

- 20 bar 切削水泵浦
- 油水分離機
- 切削水冷泵機
- 水槍
- 空氣吹屑
- 油霧回收機
- 工件接收器
- 自動門
- 機械手介面
- 棒材送料機
- 光學尺
- 空氣槍
- 電氣箱空調
- 自動斷電
- 輸送帶型門機機械手
- 料倉式門機機械手

上述刀具于步圖僅供參考，正確詳細資料，請與本公司業務部門聯繫。
The above interference drawing only for reference. Please confirm correct details with the business service.