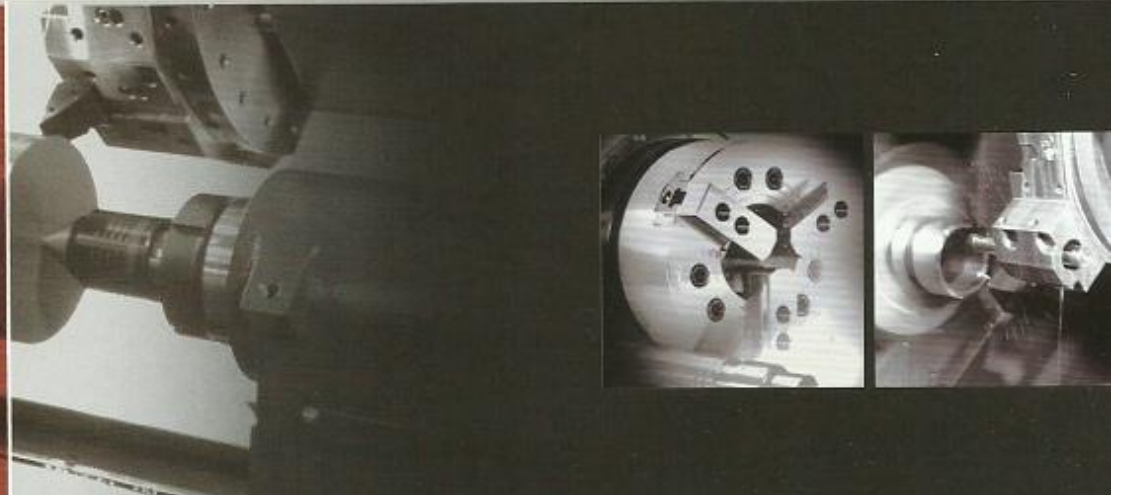




LTC-2660

LARGE TYPE CNC
TURNING CENTER

高精精密重型全自動





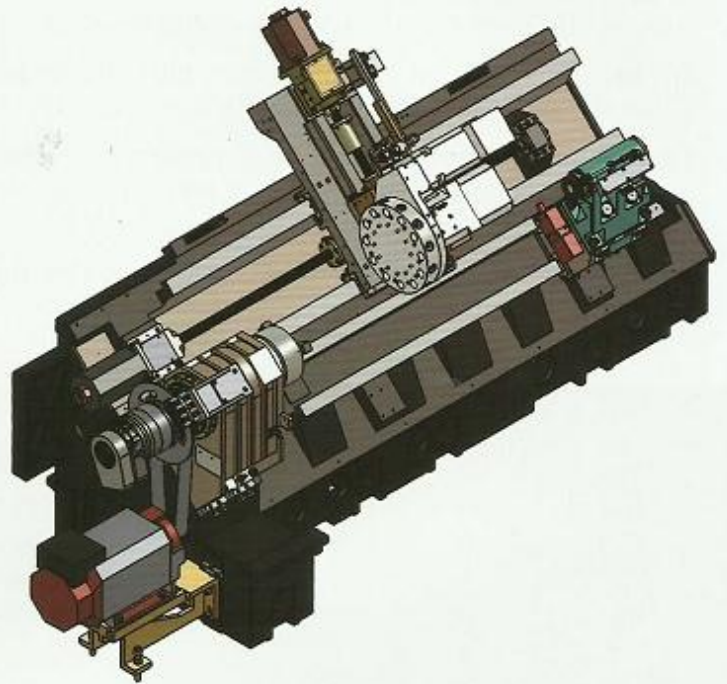
C PRECISION
R
腦車削中心機



LTC-2630/2640/2660

以頂尖材質打造機台 以專業技術超越水平

Great Meehanite cast iron base results in superior cutting performance.



優質的米漢納鑄鐵打造機體與肋骨，確保極高抗扭力及超強耐震性，維持高精度及重切削的加工能力，厚實機台寬大軌道面及硬軌結構大跨距，提供大型工件耐久不變型的穩固支撐。

High quality Meehanite cast iron structure and well-ribbed casting ensure high torsion rigidity and minimize vibration, which leads to long term accuracy and superior cutting performance.

The solid machine with box-way achieves the best stability for heavy workpieces.

機台特點 Machine structure

1. 45°真斜背設計，重心穩固，使用耐久，精度提昇。
2. 散熱性設計，幫助主軸頭散熱，有效消除加工時產生熱能，提高精度。
3. 超越同級車床，雙螺帽設計，加大螺桿直徑及硬軌，位移穩定。
4. 高功率、高扭力強力馬達，高低轉速切削，無往不利。

1. 45° Slant bed designed enhances the stability of the base, which gives structure long-lasting life and precision.
2. Headstock special design which can efficiently eliminate the thermal energy while processing.
3. Exceeding the same level turning center, designed with box way, double nuts ball screw and large screw diameter to ensure the stable displacement.
4. With high power and high torque motor assure the perfect cutting performance.

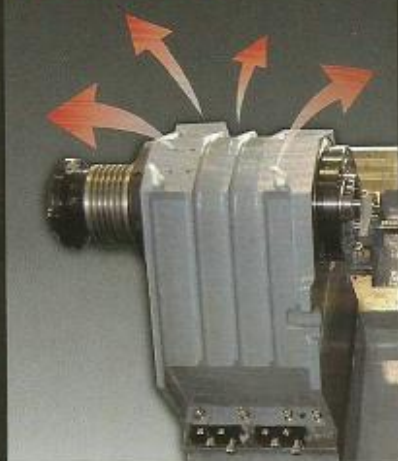


VDI 40 刀塔 (

- VDI的刀塔採用雙向
- 最快的換刀時間僅為
- 穩定的加工。

主軸溫度上升

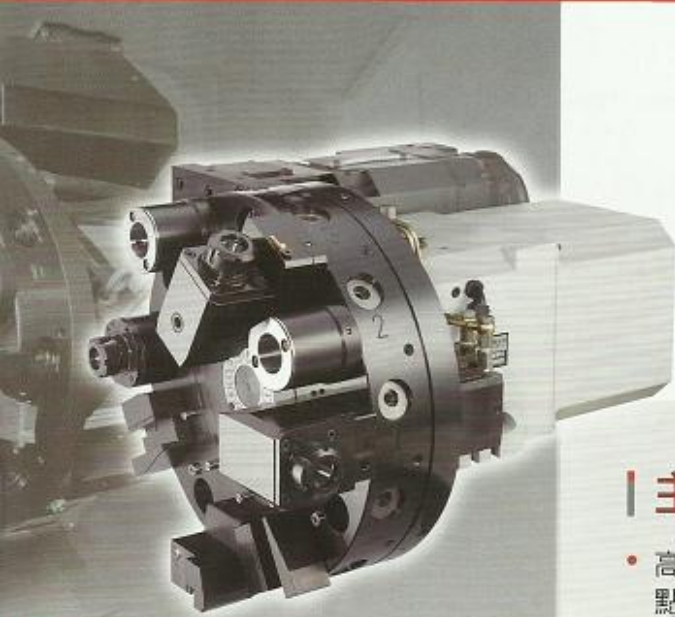
鑄件設計有助散熱



The design prevents thermal distortion.



高剛性 · 高速度 · 高精度
High Rigidity · High Speed · High Accuracy



2刀 VDI 40 power turret 12 tools

功能，在最短的時間內隨機選擇刀具。
0.8 秒。強大的運轉車銑能力，確保

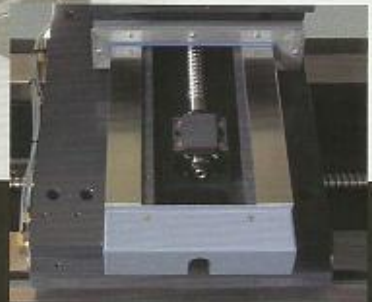
The VDI turret adopts bi-directional, access random turret selection in shortest time.

Fast turret index time in only 0.8 seconds. Powerful cutting and milling capability ensures stable machining.



主軸系統 Spindle Unit

- 高精度之主軸軸承，排列設計為最佳化跨距二點支撐，滿足重切削的平穩度及長時間加工的精密度。
- The high precision bearing is adopted for the spindle. The bearings configuration is designed at optimal span to satisfy the stable, heavy cutting as well as long working hours demand.



高精度的傳動系統 High Accuracy Transmission Unit

- 直結式傳動之X、Z軸馬達及精密高速滾珠導桿的設計。
- 配合預拉裝置，增加導桿剛性，減少熱變形，提高精密度。
- 厚實機台搭配硬軌結構，寬大軌道接觸面加上大跨距，提供大型工件穩固支撐，長久不變形。
- The servo motors and high precision ballscrews with C3 grade are direct coupled on X/Z axes to assure the high rigidity and high precision.
- The ballscrews pretension designed to increase its rigidity and to lower the thermal deformation and enhance the accuracy.
- The solid machine with box way achieves the best possible stability for heavy workpieces, and assures the long-term deformation-free.



| 車削加工應用功能 Turning Process Applications System



豐富的對話式車削及量測循環

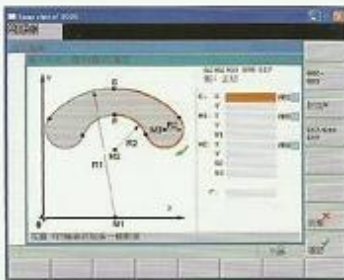
Rich Dialogue Type Turning and Measurement Cycle
標準提供多達20種外徑車削，螺紋車削及搭配動力刀塔的銑削，鑽孔，攻牙循環及手自動刀具工件量測功能。搭配輪廓加工設計輕易完成曲線輪廓外徑車削程式設計。

Provides standard outer diameter turning up to 20 kinds, Dynamic turret with milling, drilling and tapping cycle together with thread turning plus manual and automatic tool measurement function. Contour processing design can complete the curve profile of outer diameter turning programming with ease.

介面操作容易與豐富對話式加工循環

Easy Interface and Rich Interactive Processing Cycle
內建對話式輪廓加工程式設計，多種對話式量測工具及循環縮短學習時間，加工前準備工作。加工程式模擬預覽即時加工路徑顯示降低錯誤發生機率。

Built-in interactive processing programming and wide variety of interactive measurement macro work cycle to shorten the learning-time and preparation. Processing program can simulate the real-time preview and processing path to reduce the probability of error occurring.



對話式輪廓加工
程式設計

Interactive processing
programming design

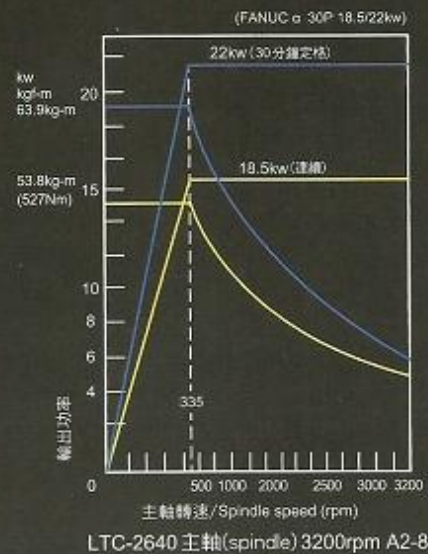
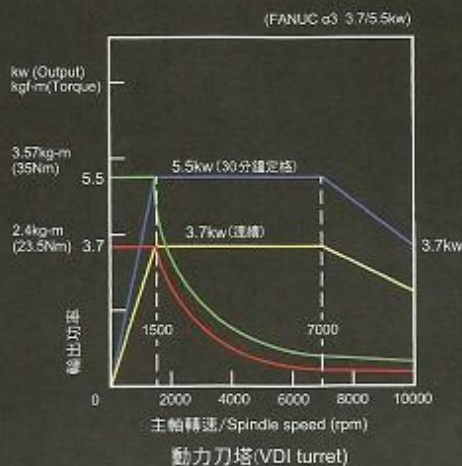


對話式刀具
量測

Interactive tool
measurement

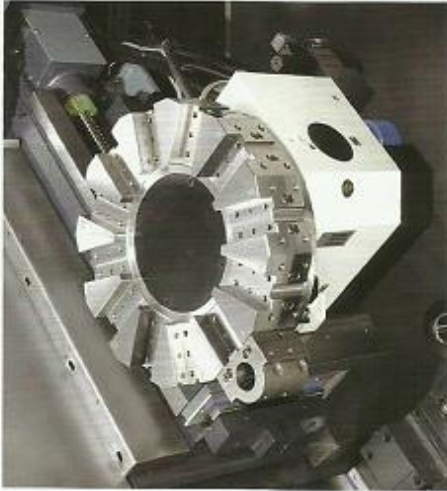
| 主軸轉速扭力圖

Spindle speed-torque characteristic



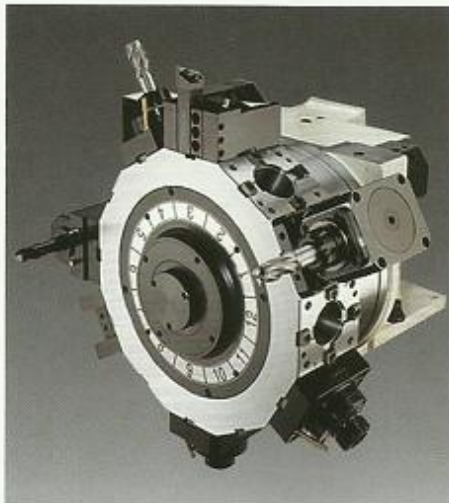
LTC-2640 主軸(spindle) 3200rpm A2-8

| 特殊配件 Optional Equipments



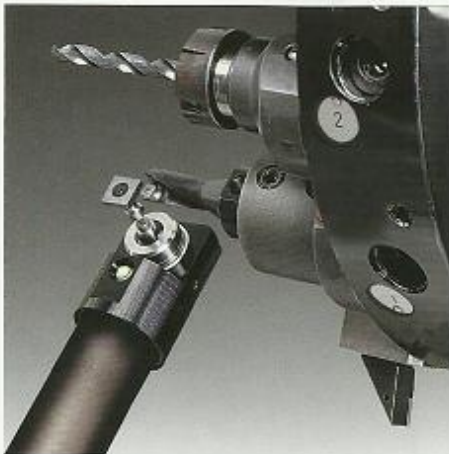
油壓刀塔 Turret

- 標準12刀油壓刀塔。
- 機構採用版型共軛凸輪，可快速平穩的驅動刀盤旋轉，且結構簡單，耐用性高，適合重切削。
- 使用油壓動力源來驅動刀盤旋轉、分度及鬆開鎖緊，動作確實順暢。
- 12 stations hydraulic turret is standard equipment.
- Equipped "double-cam-plate" for indexing mechanism, smooth with turbo-speed to turn the tool-disc, with compact design & high durability suitable for heavy cutting of precision.
- Driving source per hydraulic to turn tool-disc, indexing and clamping/unclamping precisely and correctly.



BMT 動力刀塔 BMT powered turret

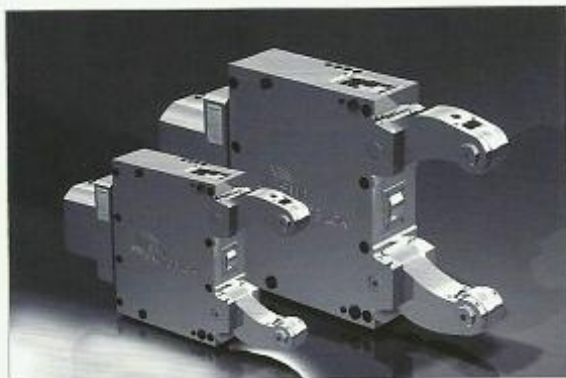
- 刀盤旋轉及分割採用專用型伺服馬達驅動。
- 動力軸採用伺服馬達驅動，扭力大，低噪音。
- 換刀快速，且絕不亂刀。
- 重現精度可達0.003mm。
- 三片式曲齒離合器結構，確保定位精準。
- Turret rotation and indexing is driven by a special servo motor.
- Tool holders are driven by a servo motor that features high torque output and no noise.
- Fast tool change without change error.
- Repeatability accuracy reaches 0.003mm.
- Three-piece type curvic clutch ensures high positioning accuracy.



刀具偵測器 Tool Presetter

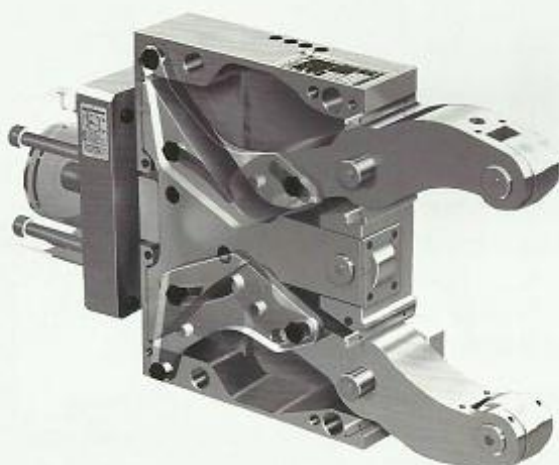
- 採Renishaw HPMA自動刀具設定器，可程式控制之量測，設定於加工數值工件後，偵測臂自動下降，刀具碰觸探針後，自動收回，繼續加工，有效提昇加工精度及良率。
- The Renishaw HPMA automatic tool setter is one of optional accessories. The tool measure processing is fully automatic. The device is programmable to measure the tool automatically while the pre-set machining quantity is reached, the detective arm moves downward for the contact and gauge of problem against cutting tool. The non-stop operating of this device tremendously increases the good quality and productivity.

| 特殊配件 Optional Equipments

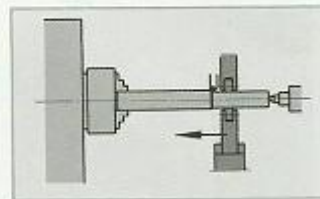
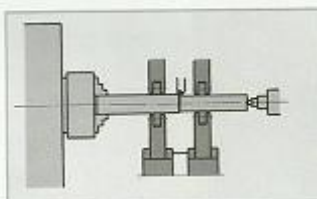


夾持中心架 Self-Centering Steady Rest

- 中心架是車床切削長型工件必不可缺的配件，在搭配使用下大幅提升切削的穩定性及負載力。大範圍的夾持直徑，可保持工件夾持同心度與再現夾持精度。
- Self-centering steady rest is an essential accessory for turning machine to process longer workpiece. Turning machine collocate with steady rest can increase cutting stability and load capacity. A wide range of clamping diameter can maintain workpiece clamping concentricity and accuracy.



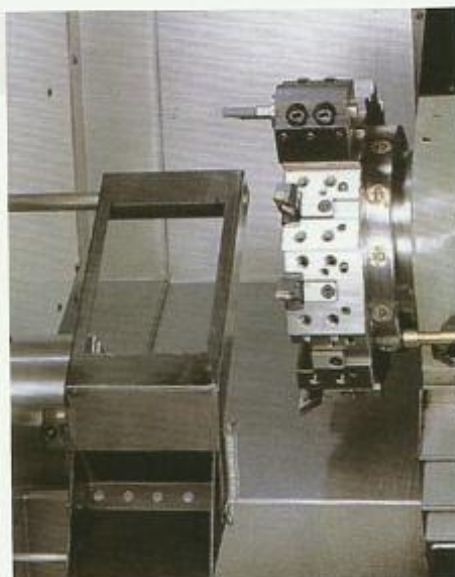
應用範圍 Application



- ▶ 一前一後的固定支撐 ▶ Tandem steady rest fixed
- ▶ 尾端加工的平穩支撐 ▶ Steady rest fixed for end machining

工件接收器 Parts Catcher

- 工件加工完成後，接收器自動承接工件，送到門外工件收集盒內，不必開門即可取得工件，配合自動送料機，大幅提升效率。
- Workpiece is taken by parts catcher after machining. Productivity can be increased when connecting with barfeeder.



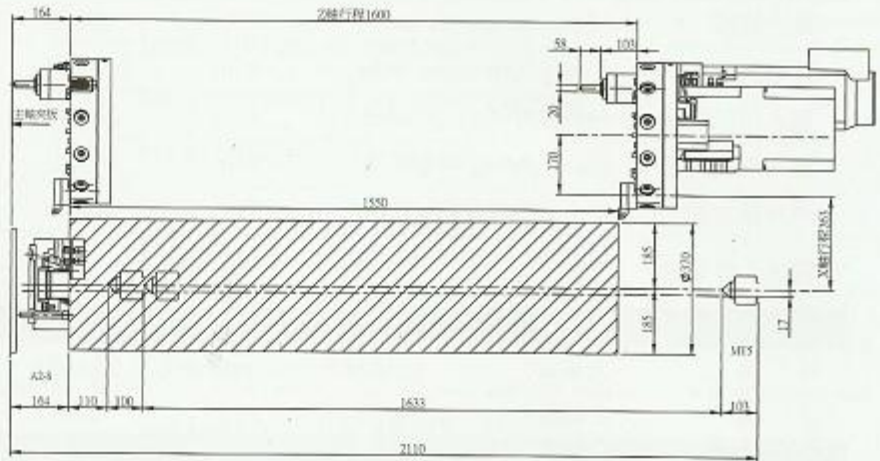
刀具干涉圖

Tool Interference



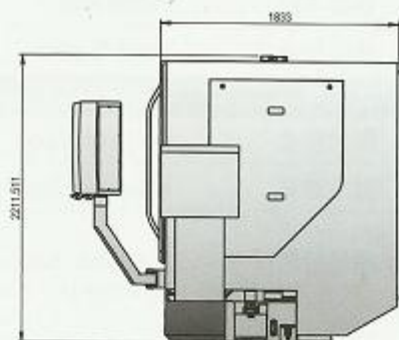
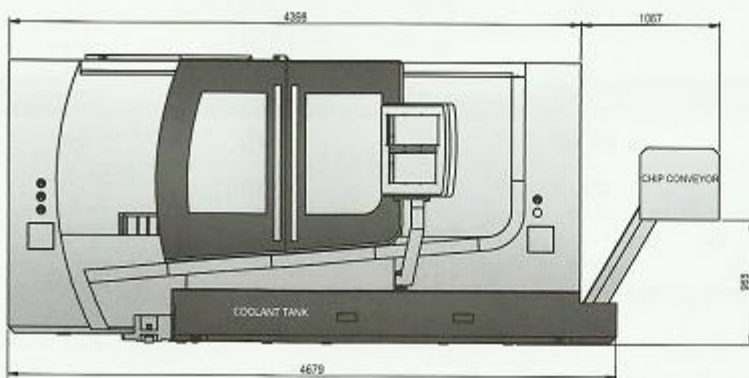
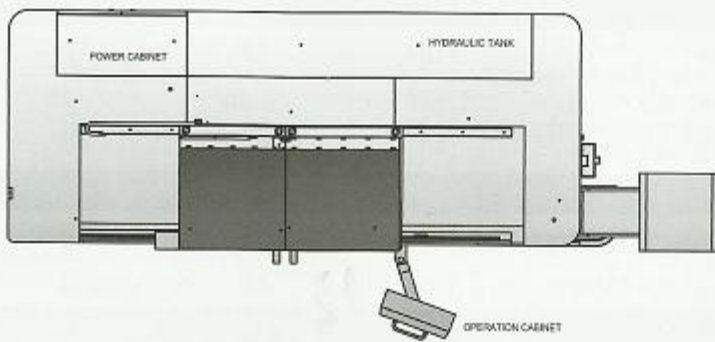
刀具加工範圍圖

Machining Range



Unit (單位) : mm

外觀尺寸圖 Machine Dimensions



Unit (單位) : mm

機台規格 Specifications

項目	MODEL		LTC-2630	LTC-2640	LTC-2660
加工範圍 Capacity					
最大旋徑	Max. swing over bed	mm	Ø680	Ø680	Ø680
滑板上最大旋徑	Swing over cross slide	mm	Ø460	Ø460	Ø460
最大加工直徑	Max. turning diameter	mm	Ø450	Ø450	Ø450
最大加工長度	Max. turning length	mm	750	1050	1550
棒材最大徑	Bar capacity	mm	Ø77	Ø77	Ø77
最大工件重量	Max. workpiece weight (with tailstock)	kg	500	500	500
行程 Travel					
X 軸	X axis	mm	230+35	230+35	230+35
Z 軸	Z axis	mm	800	1100	1600
主軸 Spindle					
主軸轉速	Spindle speed range	rpm	35-3200	35-3200	35-3200
夾頭尺寸	Chuck size	inch	10	10	10
主軸馬達出力	Spindle motor power	KW	11/15	15/18.5	15/18.5
主軸鼻端	Type of spindle nose		A2-8	A2-8	A2-8
主軸孔徑	Spindle bore	mm	Ø90	Ø90	Ø90
刀塔 Turret					
刀柄數	Number of tool stations		12	12	12
外徑刀柄尺寸	Shank height for square tool	mm	□ 25	□ 25	□ 25
擗孔刀柄尺寸	Shank diameter for boring bar	mm	40	40	40
快送進給 Rapid feedrate					
X軸快送	X axis rapid traverse	M/min	15	15	15
Z軸快送	Z axis rapid traverse	M/min	20	20	20
油壓單元 Hydraulic unit					
油壓泵動力	Pump motor	KW	1.5	1.5	1.5
油壓箱容量	Tank capacity	L	70	70	70
其它項目 Miscellaneous					
電力需求	Power supply	KVA	40	40	40
機械總重	Machine Weight	KG	6500	6800	7100
機械外觀尺寸 (長×寬×高)	Machine dimensions (L×W×H)	mm	3600 × 1910 × 2150	3900 × 1910 × 2150	4410 × 2420 × 2200

■ 本型錄之規格如有變更，恕不另行通知。 Specifications are subject to change without notice.

標 / 選配備 Standard / Optional Accessories

機型配件	Accessories	
12刀油壓刀塔	Hydraulic turret 12 stations	●
手動油壓尾座	Manual hydraulic tailstock	●
電氣箱熱交換器	Heat exchanger for electric cabinet	●
全密閉式護罩	Full enclosure splash guard	●
三爪中空夾頭	3-jaw hollow power chuck	●
腳踏開關	Foot switch	●
警示燈	Alarm lamp	●
控制系統(發那科)	Control system(FANUC)	●
控制系統(三菱、西門子)	Control system(MITSUBISHI、SIEMENS)	■
主軸外吹氣	Spindle air outer blast	■
三爪中實夾頭	3-jaw solid power chuck	■
伺服刀塔12刀	Servo turret 12 stations	■
VDI動力刀塔12P	VDI power turret 12 tool stations	■
可程式尾座	Programmable tailstock	■
變壓器	Transformer	■
穩壓器	Power regulator and transformer	■
電氣箱冷卻機	Air conditioner for electric cabinet	■
自動棒材輸送機	Bar feeder	■
自動門	Auto door	■
鐵屑輸送機	Chain type chip conveyer	■
蓄屑車	Chip bucket	■
油霧收集機	Oil mist collector	■
油水分離機	Oil skimmer	■
刀具偵測器	Tool setter	■
機械手	Robot	■
手動中心架	Manual steady rest	■
油壓自動中心架	Hydraulic steady rest	■

●: 標準配件/S.T.D ■: 選配 (OPTION)