

Quality Assurance

At HANNSA, we ensure that the quality of each machine will meet our customers' requirements. HANNSA machine tools are manufactured by a team of highly skilled technicians. Rigorous inspections and tests are conducted, enabling HANNSA to achieve the highest standards.

品質保證

穎漢保證每一台機器品質都將徹底達到客戶的要求。穎漢機器是由一群專業技術人員精心打造而成。此外，每一台機器均歷經嚴格的檢驗與測試，以達到最高的品質標準。

VERTICAL MACHINING CENTER

立式加工中心機

Linear Way Series 線軌系列



SMALL HIGH-SPEED PRECISION MACHINING SERIES

小型高速精密加工系列



YL 850-B

Special Designed for High Speed
Machining Parts

專為高速零件加工而設計

X, Y, Z-axis travel / X, Y, Z軸行程：
850 x 510 x 530 mm

- Linear ways on three axes / 三軸全線軌。
- 10000 rpm belt-drive spindle / 10000 rpm皮帶式主軸。
- BT40 spindle taper / 主軸錐度BT40。
- 24 arm type / 24刀刀庫。
- Fully enclosed splash guard / 全密閉式護罩。



INDUSTRY HIGH-SPEED PRECISION MACHINING SERIES

產業高速精密加工系列



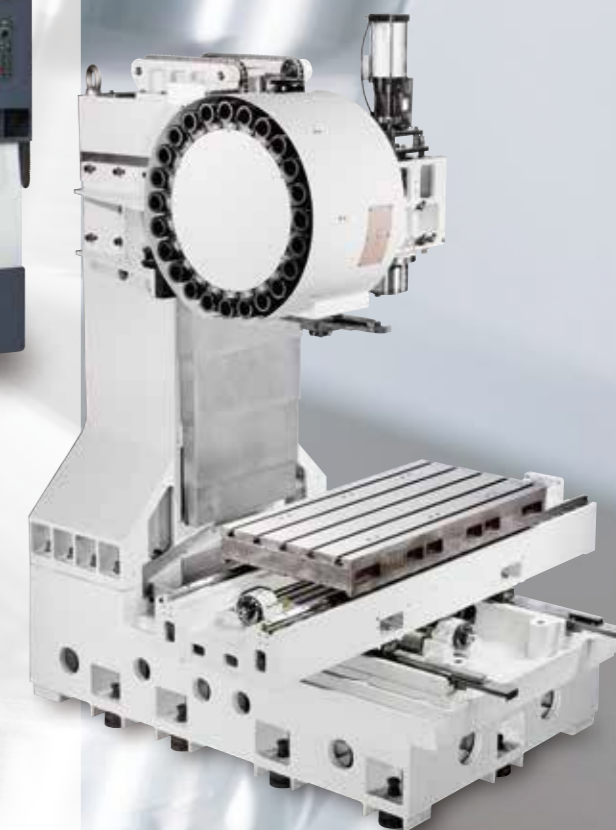
YL 1000-B

Meets the Needs of Precision and
High Speed Cutting

專為精密加工及高速切削而打造!

X, Y, Z-axis travel / X, Y, Z軸行程：
1020 x 600 x 610 mm

- Linear ways on three axes / 三軸全線軌。
- 10000 rpm belt-drive spindle / 10000 rpm皮帶式主軸。
- BT40 spindle taper / 主軸錐度BT40。
- 24 arm type ATC / 24刀刀臂式刀庫。
- Fully enclosed splash guard / 全密閉式護罩。



HIGH SPEED, HIGH PRECISION SERIES

高速精密加工系列



YL 1200-A

YL 1400-A

4 Slideways / 4 線軌底座

Meets the Needs of Precision Cutting
專為精密加工而打造!

X, Y, Z-axis travel / X, Y, Z軸行程：
1200 x 650 x 610 mm (YL1200-A)
1400 x 650 x 610 mm (YL1400-A)

- Four linear ways on base / 底座為4線軌構造。
- Linear ways on three axes / 三軸全線軌。
- 10000 rpm belt-drive spindle / 10000 rpm皮帶式主軸。
- BT40 spindle taper / 主軸錐度BT40。
- 24 arm type ATC / 24刀刀臂式刀庫。
- Fully enclosed splash guard / 全密閉式護罩。
- Y=700mm(Opt) / Y軸行程700mm(選配)



4 Linear Ways on Base
4線軌底座

The box type constructed base is mounted with 4 linear ways, making the machine capable of resisting heavy loads. Additional benefits are its increased feed rate and higher positioning accuracy.

LARGE HIGH-SPEED PRECISION MACHINING SERIES

大型高速精密加工系列



YL 1600-A / YL 1800-A / YL 2000-A

YL 1690-A / YL 1890-A / YL 2090-A

4 Slideways / 4 線軌底座

Meets the Needs of Precision Cutting
專為精密加工而打造!

X, Y, Z-axis travel / X, Y, Z軸行程：
1600 x 650 x 645 mm (YL1600-A)
1800 x 650 x 645 mm (YL1800-A)
2000 x 650 x 645 mm (YL2000-A)

1650 x 900 x 900 mm (YL1690-A)
1850 x 900 x 900 mm (YL1890-A)
2050 x 900 x 900 mm (YL2090-A)

- Four linear ways on base / 底座為4線軌構造。
- Roller type bearing linear guide on 3 axes / 三軸滾柱線軌。
- 10000 rpm belt-drive spindle / 10000 rpm皮帶式主軸。
- BT40 spindle taper / 主軸錐度BT40。
(YL 1600-A / 1800-A / 2000-A)
- 8000 rpm belt-drive spindle / 8000 rpm皮帶式主軸。
- BT50 spindle taper / 主軸錐度BT50。
(YL 1690-A / 1890-A / 2090-A)
- 24 arm type ATC / 24刀刀臂式刀庫。
- Fully enclosed splash guard / 全密閉式護罩。

底座為箱形結構體，裝有4支線性滑軌，使本機具有卓越的耐重負荷能力。並且有效提升進給速度與定位精度。



HIGH PRODUCTIVITY APC SERIES

高產能APC系列



YL 850-B+APC

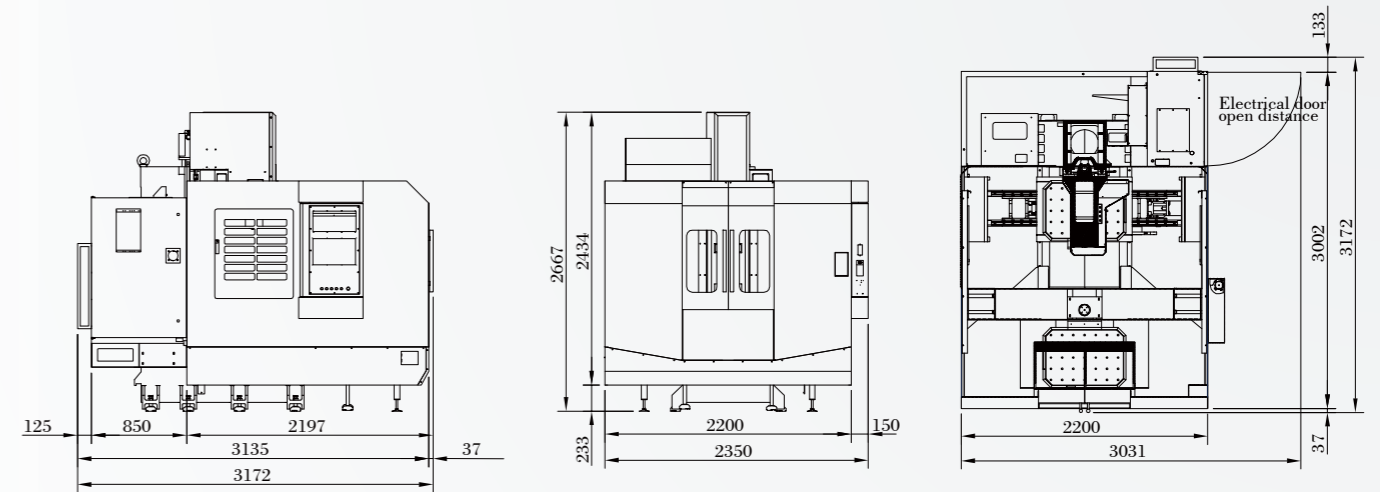
High Speed with Automatic Pallet Changer
Excellent for Mass Production Lines!

高速加工中心機附自動交換工作台
大量生產之首選機種!

X, Y, Z-axis travel / X, Y, Z軸行程：
850 x 500 x 530 mm (YL 850-B+APC)

- Linear ways on three axes / 三軸全線軌。
- 10000 rpm belt-drive spindle / 10000 rpm皮帶式主軸。
- BT40 spindle taper / 主軸錐度BT40。
- 24 arm type ATC / 24刀刀臂式刀庫。
- Fully enclosed splash guard / 全密閉式護罩。

YL 850-B+APC



PERFECTLY DESIGNED MACHINE STRUCTURE THROUGHOUT

完美打造的機械結構

- Meehanite cast iron is tempered for stress relief to ensure structural stability without deformation.
- The base is mounted with high precision linear ways with high feed rate, allowing the machine to perform high speed cutting.
- Reinforced column base greatly increases structural strength.

- 機器結構鑄件為米漢納鑄鐵，再經回火以消除內應力，確保最佳結構穩定性，無變形之慮。
- 底座上面裝置高精密線性滑軌，具有高速進給特性，使本機適用於高速加工。
- 立柱底部加大設計，可大幅提升結構強度。



(YLA)

Specially Designed Column, Stable! Rigid! 特殊設計的立柱 穩重!高剛性!

- The column on the Hannsa machining center is carefully analyzed and designed for increased rigidity.
- The column base is reinforced to increase structural strength and rigidity. With this special design, the machine will exhibit ultra-high stability during high speed operations.
- 類漢加工中心機之立柱，均經過嚴謹的設計與分析，將結構剛性提升到最高境界。
- 立柱底部之加大設計，可大幅增加結構強度與剛性。特殊設計之立柱結構，在高速加工時，更能凸顯獨特的機器穩定性。

Belt-drive Spindle (standard)

皮帶式主軸 (標準配備)

- 8000 rpm spindle speed is standard.(BT50)
- 10000 rpm spindle speed is standard.(BT40)
- Choice of spindle nose tapers—BT, CAT and DIN.
- The spindle is dynamically balanced for extremely smooth running.

- 標準主軸轉速8000 rpm ° (BT50)
- 標準主軸轉速10000 rpm ° (BT40)
- 可選擇BT, CAT, DIN主軸錐度。
- 主軸經動平衡校正，運轉極順暢。

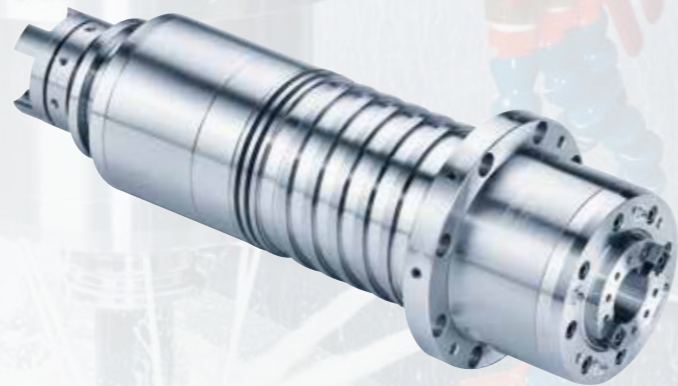


Direct-drive spindle (optional)

直結式主軸 (選配)

- Choice of spindle speeds—8000 and 10000 rpm.(BT50)
- Choice of spindle speeds—12000 and 15000 rpm.(BT40)
- Choice of spindle nose tapers—BT, CAT and DIN.
- The spindle is dynamically balanced for extremely smooth running.

- 主軸轉速選擇-8000及10000 rpm ° (BT50)
- 主軸轉速選擇-12000及15000 rpm ° (BT40)
- 可選擇BT, CAT, DIN主軸錐度。
- 主軸經動平衡校正，運轉極順暢。



Gearbox (YLA Optional)

齒輪箱 (YLA 選配)

The high performance gearbox produces high torque output at low speeds, making the machine suitable for heavy cutting.

搭配使用高性能的齒輪箱，於低速時提供大扭力輸出，適合重切削。



Chain Type Magazine / 鍊條式刀庫 (YLA 選配)

- Bi-directional.
- Tool change can be quickly accomplished in only 3 seconds (tool to tool)(60Hz).
- 選刀方式為雙向。
- 快速換刀可於3秒鐘完成(刀對刀)(60Hz)。



Spindle Head 主軸頭

The spindle head is ruggedly constructed ensuring maximum stability during cutting.

主軸頭擁有高剛性特性，以確保切削時之獨特穩定性。

Arm Type Magazine / 刀臂式刀庫

- Bi-directional, random tool selection.
- Tool change can be quickly accomplished in only 2 seconds (tool to tool)(60Hz). (30 tool Opt.)
- 選刀方式為雙向，任意式選刀。
- 快速換刀只需2秒即可完成(刀對刀)(60Hz)(可選配30刀)。



Air Conditioner for Electrical Cabinet (optional)

電氣箱冷氣機 (選配)

Offering even better cooling to the electrical cabinet, prolonging electrical components' life time.

電氣箱冷氣機提供電氣箱優異的冷卻效果，以延長電氣零組件之使用壽命。



Rear Flushing Device (optional)

後沖裝置 (選配)

The optional rear flushing device provides efficient removal of chips.

後沖裝置具有強勁的沖屑能力。

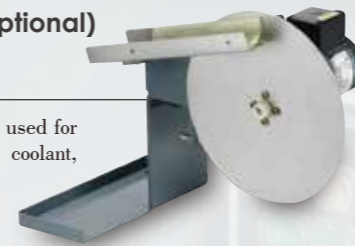


Oil Skimmer (optional)

油水分離機 (選配)

The disc type oil skimmer is used for removing floating oil on coolant, preventing coolant deterioration and odor.

圓盤式油水分離機可將切削液上面之浮油刮除，避免切削液變質及惡臭。



4th Axis Rotary Table (optional)

第4軸旋轉工作台 (選配)

- The rigidly constructed 4th axis rotary table is excellent in indexing accuracy and repeatability.
- Minimum indexing unit is 0.001°
- 具有高剛性的第4軸旋轉工作台，展現優異的定位精度與重覆精度。
- 最小分度精度0.001°。



Chain Type Chip Conveyor (optional)

鏈條式鐵屑輸送機 (選配)



Cleaning Spray Gun 清洗噴槍

The cleaning gun is used for cleaning the workpiece and machine.

清洗噴槍用於消除工件及機器上之切屑。



Air Gun 氣槍

The air gun allows the operator to clean the workpiece.

氣槍可應用於消除工件上面之切屑。



Spindle Oil Cooler 主軸油溫冷卻器

The spindle oil cooler is used to ensure a constant temperature of the spindle, even during long running times. This helps maintain spindle accuracy at all times.

主軸油溫冷卻器使主軸在長時間運轉，也能維持在常溫狀態。隨時確保主軸之高精度。



Chip Auger 螺旋排屑裝置

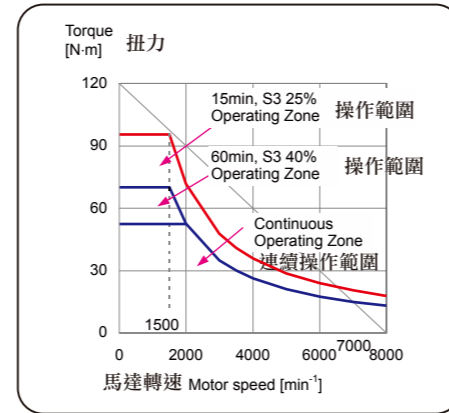
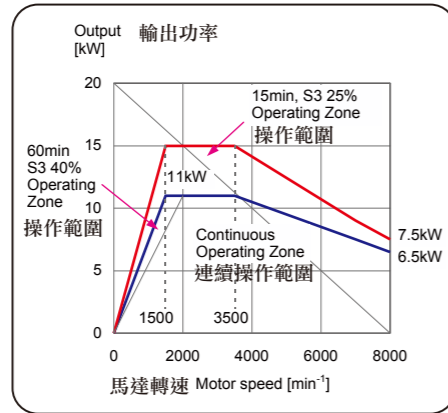
The chip auger is delivers chips to the chip conveyor for easy removal.

此螺旋排屑裝置可將切屑輸送至切屑輸機，使除屑更方便。



Spindle Motor Torque Diagrams 主軸馬達扭力圖

MODEL 11/15KW



MODEL 7.5/11KW

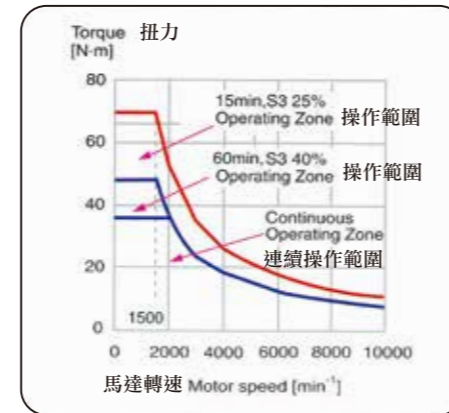
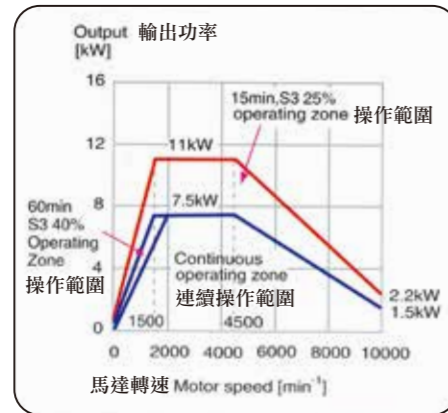
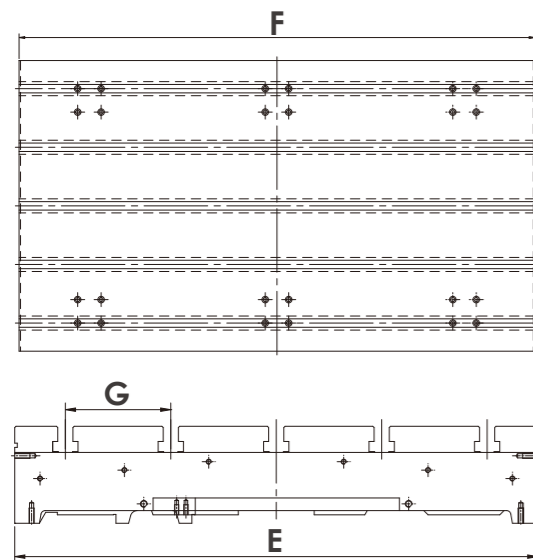


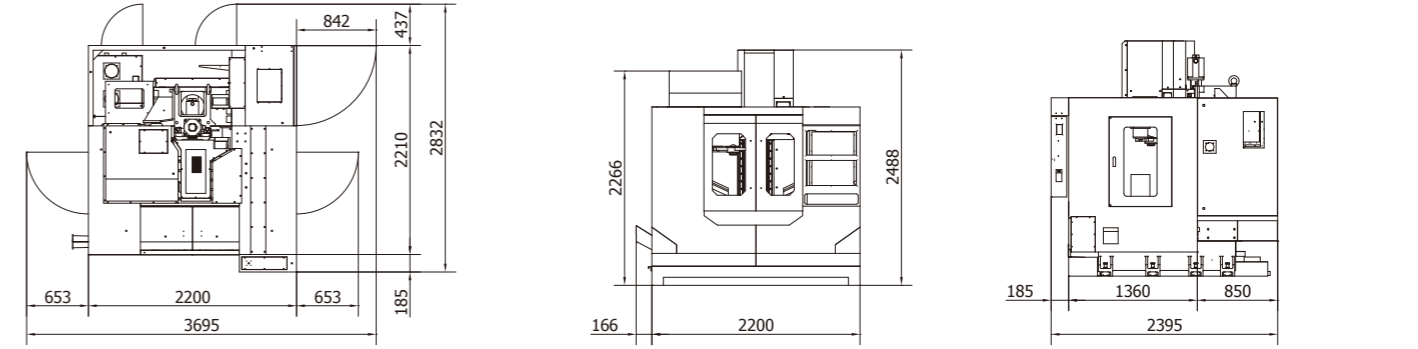
Table Dimensions 加工區域圖



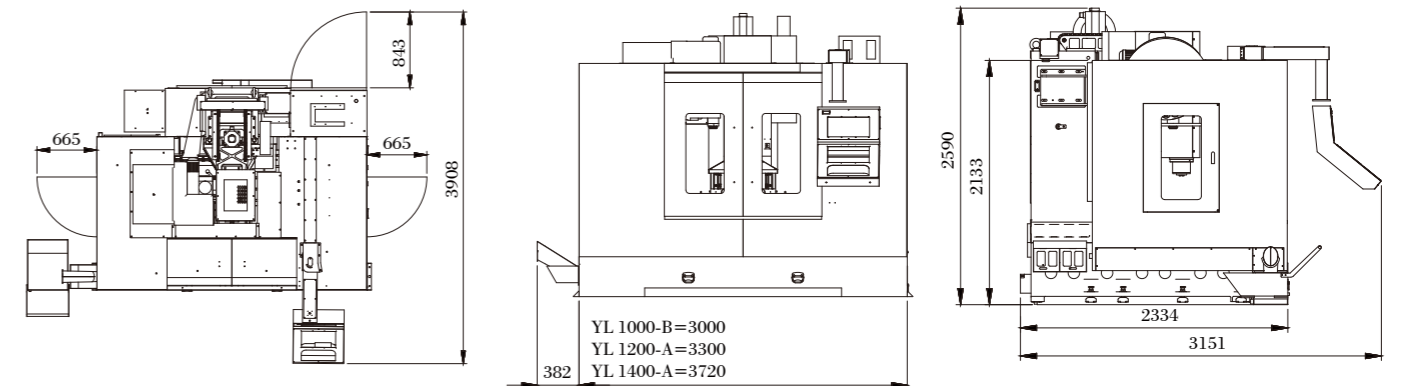
MODEL 機型	E	F	G
YL 850-B	500	850	5 x 18 x 100
YL 1000-B	560	1100	5 x 18 x 115
YL 1200-A	620	1300	5 x 18 x 125
YL 1400-A	620	1400	5 x 18 x 125
YL 1600-A	620	1600	5 x 18 x 125
YL 1800-A	620	1800	5 x 18 x 125
YL 2000-A	620	2000	5 x 18 x 125
YL 1690-A	800	1600	5 x 22 x 150
YL 1890-A	800	1800	5 x 22 x 150
YL 2090-A	800	2000	5 x 22 x 150

Machine Dimensions 機器外觀尺寸圖 (單位:mm)

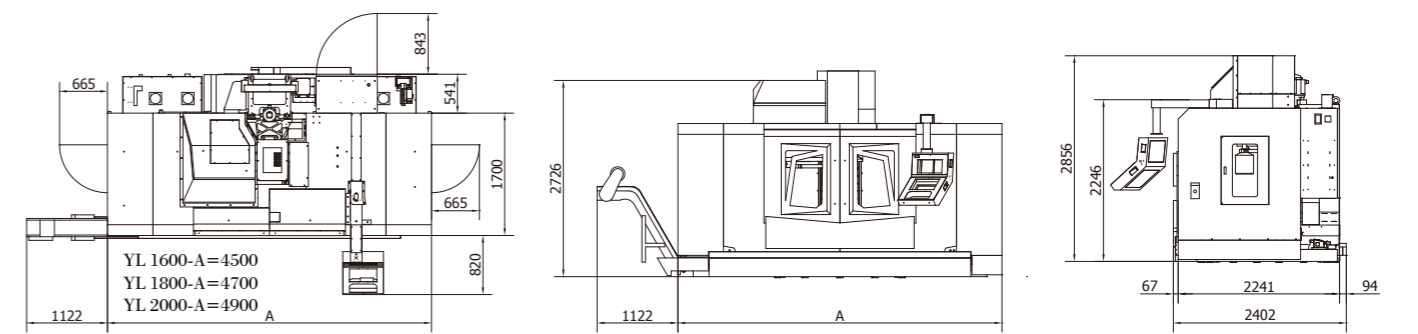
YL 850-B



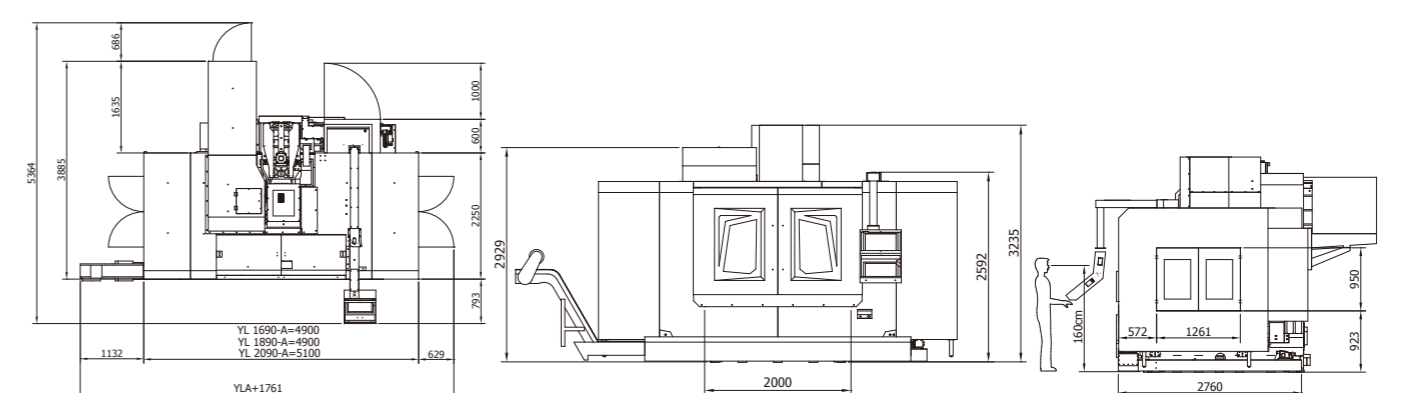
YL 1000-B / YL 1200-A / 1400-A



YL 1600-A / 1800-A / 2000-A



YL 1690-A / 1890-A / 2090-A



QUALITY ASSURANCE

品質保證

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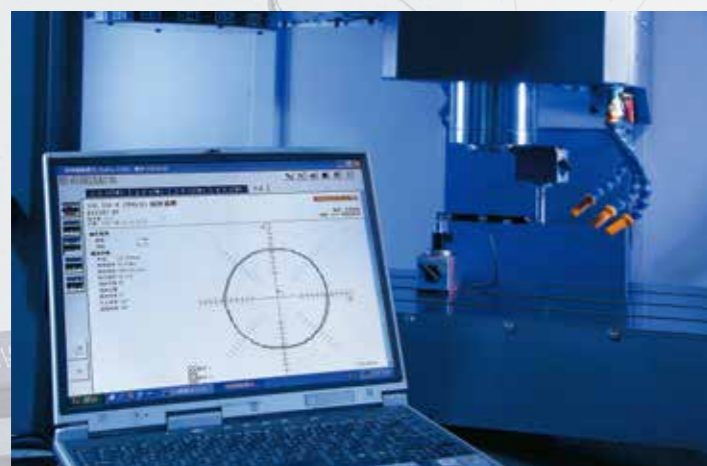
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Laser Inspection 鐳射檢驗

A sophisticated laser unit is employed to inspect the three axes' accuracy, including linear positioning, positioning accuracy, pitch error and backlash, etc. With the laser inspection, positioning accuracy and repeatability can be guaranteed.
Positioning accuracy: $\pm 0.005/300$ mm
Repeatability: ± 0.003 mm

本公司採用精密鐳射儀器檢驗三軸之精度。檢驗項目包括線性定位，定位精度，節距誤差及背隙等。透過鐳射檢驗以保證最佳定位精度與重覆精度。
定位精度： $\pm 0.005/300$ mm
重覆精度： ± 0.003 mm



Ball Bar Test 循圓測試

A ball bar tester is employed for inspecting servo accuracy, static and dynamic geometric errors.

採用循圓測試儀以檢驗伺服精度，靜態與動態幾何誤差。

Specifications 加工尺寸

MODEL 型號	UNITS 單位	YL 850-B	YL 850-B+APC	YL 1000-B
TABLE 工作台				
Working Surface 工作台尺寸	mm	850 x 500	700 x 500	1100 x 560
T-Slots (Number x Size x Distance)	mm	5 x 18 x 100	-	5 x 18 x 115
T型槽尺寸(槽數 x 寬數 x 間距)				
Max. Table Load 最大負載	kg (lbs)	500 (1100)	500 (1100)	900 (1980)
TRAVEL 行程				
Longitudinal Travel (X) X 軸行程	mm	850	850	1020
Cross Travel (Y) Y 軸行程	mm	510	500	600
Headstock Travel (Z) Z 軸行程	mm	530	530	610
Distance Between Spindle End and Table Top 主軸鼻端至工作台面距離	mm	100 - 630	80 - 610	150 - 760
Distance Between Spindle Center and Column Surface 主軸中心至立柱端面距離	mm	550	550	660
SPINDLE 主軸				
Spindle Nose 主軸端孔斜度	type	BT 40 / CAT 40 / DIN 40 / BBT 40	BT 40 / CAT 40 / DIN 40 / BBT 40	BT 40 / CAT 40 / DIN 40 / BBT 40
Spindle Speeds 主軸轉速	r.p.m	10000	10000	10000
Mechanism of Transmission 傳動	type	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式
FEED 進給				
Cutting Feed 切削進給	mm/min	10000	10000	10000
Rapid Traverse (X / Y / Z) 快移速度	M/min	36 / 36 / 30	36 / 36 / 30	36 / 36 / 30
AUTO TOOL CHANGER (ATC) 自動換刀裝置				
Tool Holder 刀把型式	type	BT 40	BT 40	BT 40
Tool Storage Capacity 刀具儲存容量	set	24	24	24
Max. Tool Diameter 最大刀徑	mm	80	80	80
Max. Tool Length 最大刀長	mm	300	250	300
Max. Tool Weight 最大刀重	kg (lbs)	7 (15.4)	7 (15.4)	7 (15.4)
Tool to Tool 刀對刀換刀(60Hz)	sec	2.5	2.5	2.5
MOTORS 馬達				
Spindle Motor Output (Cont. / 30 min.) 主軸驅動馬達 (連續運轉 / 30分鐘額定)	kw	FANUC (7.5/11) (15 HP)	FANUC (7.5/11) (15 HP)	FANUC (7.5 / 11) (15 HP)
Drive Motors X, Y, Z axis 伺服驅動馬達 X, Y, Z 軸	(kw / hp)	0iMF (1.8/2.4) (1.8/2.4) (2.5/3.4)	0iMF (1.8/2.4) (1.8/2.4) (2.5/3.4)	0iMF (1.8/2.4) (1.8/2.4) (2.5/3.4)
MACHINE SPACE & WEIGHT 機器佔地面積與重量				
Floor Space 佔地面積	mm	2366 x 2395 x 2488	3172 x 2350 x 2667	3000 x 2334 x 2590
Net Weight 機器淨重	kg (lbs)	4100 (9020)	5300 (11660)	6300 (13860)
Air Source 氣壓需求	kg / cm ²	6	6	6
Electrical Power Supply 電力需求	kva	20	20	25

● The above specifications are subject to change without prior notice. 以上規格僅供參考，本公司保留修改規格的權力，恕不另行通知

STANDARD ACCESSORIES 標準配備

- Fully enclosed splash guard / 全罩式鉍金
- Central automatic lubrication system / 中央自動潤滑系統
- Tools and tool box / 工具及工具箱
- Work lamp / 工作燈
- Tri-colored lamp guard / 三色警示燈
- Spindle air curtain / 主軸氣幕
- Spindle oil cooler (spindle oil temperature cooler)
主軸油冷裝置 (主軸油溫冷卻機)
- Cleaning spray gun / 清洗噴槍
- Air gun / 空氣槍
- Chip auger / 螺旋排屑裝置
- Chip collector / 集屑車
- Cooling liquid tank / 冷卻液水箱
- X / Y / Z slide way extension protecting cover
- X / Y / Z軸滑道伸縮護蓋
- Horizontal adjustment block and screw / 水平調整塊及螺絲
- Wire-control hand wheel / 線控手輪
- Electrical box heat exchanger / 電氣箱熱交換器
- Rigid tapping / 剛性攻牙
- Automatic shutdown function / 自動斷電功能
- RS232 transmission interface / RS232傳輸介面
- Mechanical and electrical instructions / 機械及電氣操作說明書
- Spindle spray ring / 主軸環噴

Specifications 加工尺寸

MODEL 型號	UNITS 單位	YL 1200-A	YL 1400-A	YL 1600-A	YL 1800-A	YL 2000-A	YL 1690-A	YL 1890-A	YL 2090-A
TABLE 工作台									
Working Surface 工作台尺寸	mm	1300 x 620	1400 x 620	1600 x 620	1800 x 620	2000 x 620	1600 x 800	1800 x 800	2000 x 800
T-Slots (Number x Size x Distance)	mm	5 x 18 x 125	5 x 18 x 125	5 x 18 x 125	5 x 18 x 125	5 x 18 x 125	5 x 22 x 150	5 x 22 x 150	5 x 22 x 150
T型槽尺寸(槽數 x 寬數 x 間距)									
Max. Table Load 最大負載	kg (lbs)	1000 (2200)	1000 (2200)	1200 (2643)	1200 (2643)	1200 (2643)	1500 (3303)	1500 (3303)	1500 (3303)
TRAVEL 行程									
Longitudinal Travel (X) X 軸行程	mm	1200	1400	1600	1800	2000	1650	1850	2050
Cross Travel (Y) Y 軸行程	mm	650 / Opt 700	650 / Opt 700	650 / Opt 700	650 / Opt 700	650 / Opt 700	900	900	900
Headstock Travel (Z) Z 軸行程	mm	610	610	645	645	645	900	900	900
Distance Between Spindle End and Table Top 主軸鼻端至工作台面距離	mm	150 - 760	150 - 760	100 - 745	100 - 745	100 - 745	100 - 1000	100 - 1000	100 - 1000
Distance Between Spindle Center and Column Surface 主軸中心至立柱端面距離	mm	690	690	690	690	690	850	850	850
SPINDLE 主軸									
Spindle Nose 主軸端孔斜度	type	BT 40 / CAT 40 / DIN 40 / BBT 40	BT 40 / CAT 40 / DIN 40 / BBT 40	BT40 / CAT40 / DIN 40 / BBT 40	BT40 / CAT40 / DIN 40 / BBT 40	BT40 / CAT40 / DIN 40 / BBT 40	BT50 / CAT50 / DIN 50 / BBT 50	BT50 / CAT50 / DIN 50 / BBT 50	BT50 / CAT50 / DIN 50 / BBT 50
Spindle Speeds 主軸轉速	r.p.m	10000	10000	10000	10000	10000	8000	8000	8000
Mechanism of Transmission 傳動	type	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式	Belt 皮帶式
FEED 進給									
Cutting Feed 切削進給	mm/min	10000	10000	10000	10000	10000	10000	10000	10000
Rapid Traverse (X / Y / Z) 快移速度	M/min	36 / 36 / 24	36 / 36 / 24	36 / 36 / 24	36 / 36 / 24	36 / 36 / 24	20 / 20 / 20	20 / 20 / 20	20 / 20 / 20
AUTO TOOL CHANGER (ATC) 自動換刀裝置									
Tool Holder 刀把型式	type	BT 40	BT 40	BT 40	BT 40	BT 40	BT 50	BT 50	BT 50
Tool Storage Capacity 刀具儲存容量	set	24	24	24	24	24	24	24	24
Max. Tool Diameter 最大刀徑	mm	80	80	80	80	80	125	125	125
Max. Tool Length 最大刀長	mm	300	300	300	300	300	300	300	300
Max. Tool Weight 最大刀重	kg (lbs)	7 (15.4)	7 (15.4)	7 (15.4)	7 (15.4)	7 (15.4)	15 (33)	15 (33)	15 (33)
Tool to Tool 刀對刀換刀(60Hz)	sec	2.5	2.5	2.5	2.5	2.5	4	4	4
MOTORS 馬達									
Spindle Motor Output (Cont. / 30 min.) 主軸驅動馬達 (連續運轉 / 30分額定)	kw	FANUC (7.5 / 11) (15 HP)	FANUC (7.5 / 11) (15 HP)	FANUC (7.5 / 11) (15 HP)	FANUC (7.5 / 11) (15 HP)	FANUC (7.5 / 11) (15 HP)	FANUC (15 / 18.5) (25 HP)	FANUC (15 / 18.5) (25 HP)	FANUC (15 / 18.5) (25 HP)
Drive Motors X, Y, Z axis 伺服驅動馬達 X, Y, Z 軸	(kw / hp)	0iMF (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (3/4) (3/4) (3/4)	0iMF (3/4)(3/4)(3/4)	0iMF (3/4)(3/4)(3/4)
MACHINE SPACE & WEIGHT 機器佔地面積與重量									
Floor Space 佔地面積	mm	3300 x 2334 x 2590	3720 x 2334 x 2590	4500 x 2402 x 2856	4700 x 2402 x 2856	4900 x 2402 x 2856	4900 x 3885 x 3235	4900 x 3885 x 3235	5100 x 3885 x 3235
Net Weight 機器淨重	kg (lbs)	7600 (16760)	8500 (18700)	10000 (22000)	10500 (23100)	11000 (24200)	14000 (30800)	15000 (33000)	16000 (35200)
Air Source 氣壓需求	kg/cm ²	6	6	6	6	6	8	8	8
Electrical Power Supply 電力需求	kva	25	25	25	25	25	30	30	30

● The above specifications are subject to change without prior notice. 以上規格僅供參考，本公司保留修改規格的權力，恕不另行通知

STANDARD ACCESSORIES 標準配備

- Fully enclosed splash guard / 全罩式鉸金
- Central automatic lubrication system / 中央自動潤滑系統
- Tools and tool box / 工具及工具箱
- Work lamp / 工作燈
- Tri-colored lamp guard / 三色警示燈
- Spindle air curtain / 主軸氣幕
- Spindle oil cooler (spindle oil temperature cooler)
主軸油冷裝置 (主軸油溫冷卻機)
- Cleaning spray gun / 清洗噴槍
- Air gun / 空氣槍
- Chip auger / 螺旋排屑裝置
- Chip collector / 集屑車

- Cooling liquid tank / 冷卻液水箱
- X / Y / Z slide way extension protecting cover
- X / Y / Z軸滑道伸縮護蓋
- Horizontal adjustment block and screw / 水平調整塊及螺絲
- Wire-control hand wheel / 線控手輪
- Electrical box heat exchanger / 電氣箱熱交換器
- Rigid tapping / 剛性攻牙
- Automatic shutdown function / 自動斷電功能
- RS232 transmission interface / RS232傳輸介面
- Mechanical and electrical instructions / 機械及電氣操作說明書
- Spindle spray ring / 主軸環噴

OPTIONAL ACCESSORIES 選擇配備

- Mitsubishi controller / 三菱控制器
- Siemens controller / 西門子控制器
- Direct-drive spindle#40 12000 / 15000 rpm
#40直結式 12000 / 15000轉主軸
- Direct-drive spindle#50 8000 / 10000 rpm
#50直結式8000 / 10000轉主軸
- Gearbox set / 齒輪箱(YLA系列)
- Chain type chip conveyor / 鏈條式鐵屑輸送機
- Rear flushing device / 後沖裝置
- Optical scale / 光學尺
- CTS filter type (20 bar) / 濾罐式主軸中心出水 (20 Bar)
- CTS filter type (30 bar) / 濾罐式主軸中心出水 (30 Bar)
- CTS filter type 70 bar / 濾罐式主軸中心出水 (70 Bar)
- Air conditioner for electrical box (3000 BTU)
電氣箱冷氣機 (3000 BTU)
- Automatic centering device (Renishaw OMP-60)
工件量測系統 (Renishaw OMP-60)
- NC rotary table / NC旋轉分度盤
- The 4th axis interface / 第四軸接線介面
- Transformer / 變壓器
- Rear Cover / 機身後方護罩鉸金
- Oil skimmer / 油水分離機
- Drive Motors X, Y, Z axis (31MB (3/4) (3/4) (3/4))
伺服驅動馬達 X, Y, Z 軸 (31MB (3/4) (3/4) (3/4))