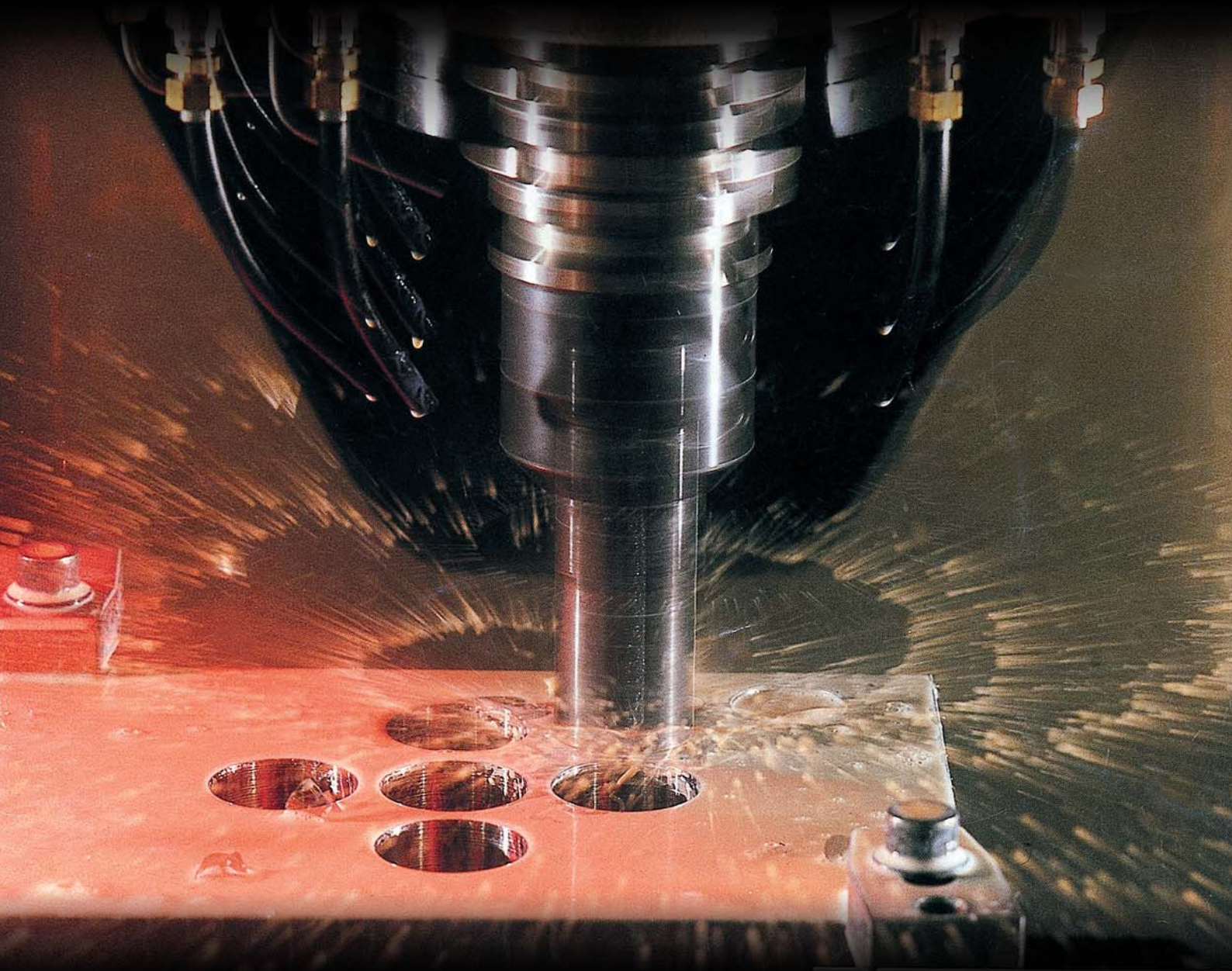


LILIAN





High Precision & Excellent Performance

LILIAN, the leading milling machine builder in Taiwan, was established in 1978 and has built more than twenty thousand manual & CNC milling machines sold to many countries. We are proud of our state-of-art milling machines to be seen in different places around the world. We shall develop more techniques of machine manufacturing in the future and to keep the role as a leading machine tool builder. Our goal is to build another twenty thousand LILIAN milling machines and make them to be seen in every country of the world in coming decade.

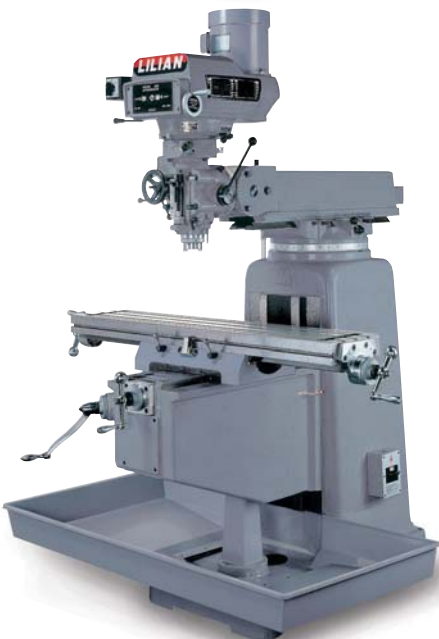
Range of Product

KNEE TYPE		BED TYPE	
MANUAL	CNC	MANUAL	CNC
2S / 2VS / 2VI	4VH CNC (NT30)	BM-5H	BM-5V CNC
3H / 3VH / 3VI	5VH CNC (NT40)	BM-5V	BM-5I CNC
4H / 4VH / 4VI		BM-5I	OX-1 CNC
5H / 5VH / 5VI		OX-1	OX-3 CNC
6H / 6VH / 6VI		OX-3	CNC-400
			CNC-1600



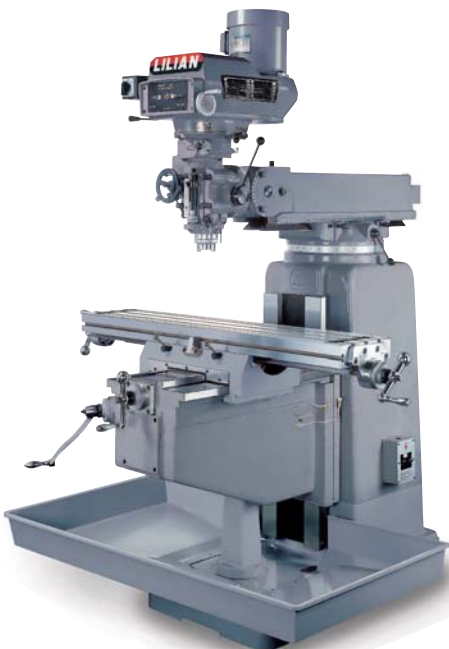
2S/2VS/2VI

Table Size	工作台尺寸	9x42 inch (229x1067 mm)
Travel	X	左右行程 30 inch (762 mm)
	Y	前後行程 13 inch (337 mm)
	Z	上下行程 16 inch (406 mm)
Quill	齒管行程	5 inch (127 mm)
Quill Diameter	齒管內徑	3 3/8 inch (85.725 mm)
Spindle Motor	主軸馬達	3 HP
Spindle Taper	主軸錐度	R8 / NT30
Spindle Speeds-rpm	主軸轉速	60-2720 / 60-4200 / 60-4200
Overall Depth (L)	長	60 5/8 inch (1540 mm)
Overall Width (W)	寬	56 1/2 inch (1435 mm)
Overall Height (H)	高	81 1/8 inch (2060 mm)
Net Weight	淨重	1100 Kgs (2420 lbs)



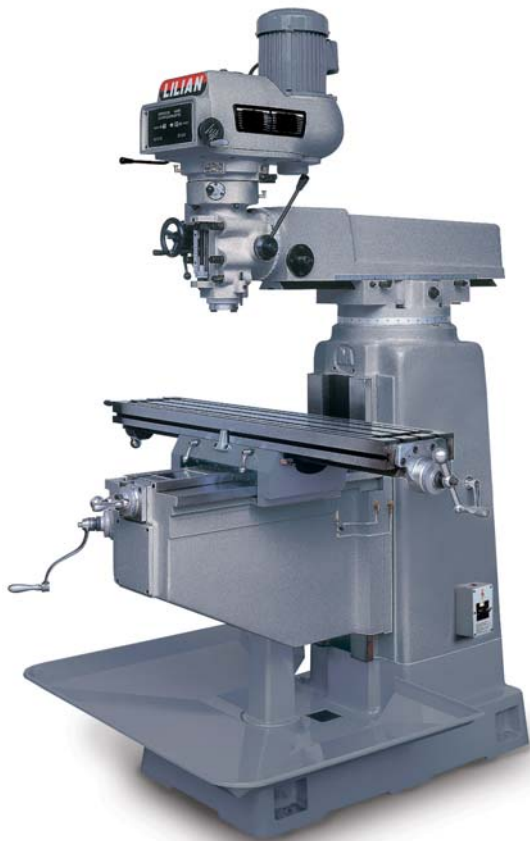
3H/3VH/3VI

Table Size	工作台尺寸	10x50 inch (254x1270 mm)
Travel	X	左右行程 36 inch (914 mm)
	Y	前後行程 16 inch (406 mm)
	Z	上下行程 16 inch (406 mm)
Quill	齒管行程	5 inch (127 mm)
Quill Diameter	齒管內徑	3 3/8 inch (85.725 mm)
Spindle Motor	主軸馬達	3 HP
Spindle Taper	主軸錐度	R8 / NT30
Spindle Speeds-rpm	主軸轉速	60-2700 / 60-4200 / 60-4200
Overall Depth (L)	長	67 3/4 inch (1720 mm)
Overall Width (W)	寬	64 1/2 inch (1640 mm)
Overall Height (H)	高	84 5/8 inch (2150 mm)
Net Weight	淨重	1250 Kgs (2750 lbs)



4H/4VH/4VI (CNC)

Table Size	工作台尺寸	10x50/54 inch (254x1270/1372 mm)
Travel	X	左右行程 36 / 40 inch (914 / 1016 mm)
	Y	前後行程 17 1/2 inch (445 mm)
	Z	上下行程 17 1/2 inch (445 mm)
Quill	齒管行程	5 inch (127 mm)
Quill Diameter	齒管內徑	3 3/8 inch (85.725 mm)
Spindle Motor	主軸馬達	3 HP
Spindle Taper	主軸錐度	R8 / NT30
Spindle Speeds-rpm	主軸轉速	60-2720 / 60-4200 / 60-4200
Overall Depth (L)	長	67 3/4 inch (1720 mm)
Overall Width (W)	寬	64 1/2 inch (1640 mm)
Overall Height (H)	高	90 1/8 inch (2290 mm)
Net Weight	淨重	1500 Kgs (3300 lbs)



5H/5VH/5VI (CNC)

Table Size	工作台尺寸	10x50/54 inch (254x1270/1372 mm)
Travel	X	左右行程 36/40 inch (914 / 1016 mm)
	Y	前後行程 17 1/2 inch (445 mm)
	Z	上下行程 17 1/2 inch (445 mm)
	Quill	齒管行程 5 inch (127 mm)
Quill Diameter	齒管內徑	4 1/8 inch (105 mm)
Spindle Motor	主軸馬達	5 HP
Spindle Taper	主軸錐度	NT40
Spindle Speeds-rpm	主軸轉速	60-3450/60-4200/60-4200
Overall Depth (L)	長	67 3/4 inch (1720 mm)
Overall Width (W)	寬	59 1/2 inch (1510 mm)
Overall Height (H)	高	88 1/8 inch (2240 mm)
Net Weight	淨重	1650 Kgs (3630 lbs)



6H/6VH/6VI

Table Size	工作台尺寸	10x54 inch (254x1372mm)
	可選擇	12x54 inch (305x1372mm) optional
Travel	X	左右行程 34 inch (875 mm)
	Y	前後行程 15 3/4 inch (400 mm)
		Option: 13 3/4 inch (350 mm)
	Z	上下行程 17 1/2 inch (445 mm)
	Quill	齒管行程 5 inch (127 mm)
Quill Diameter	齒管內徑	4 1/8 inch (105 mm)
Spindle Motor	主軸馬達	5 HP
Spindle Taper	主軸錐度	NT40
Spindle Speeds-rpm	主軸轉速	60-3450/60-4200/60-4200
Motor	X,Y	驅動馬達 1/2 HP
	Z	驅動馬達 1 HP
	Coolant	冷卻幫浦 1/8 HP
Feeds	X,Y	X,Y進給率 0-1420 (50 HZ) / 1730 (60 HZ) rpm
	Z	Z進給率 0-470 (50 HZ) / 0-560 (60 HZ) rpm
Table Loading	工作台載重	500 Kgs
Overall Depth (L)	長	67 3/4 inch (1720 mm)
Overall Width (W)	寬	59 1/2 inch (1510 mm)
Overall Height (H)	高	88 1/8 inch (2240 mm)
Net Weight	淨重	1700 Kgs (3740 lbs)

* Standard Features: X & Y axes Reducing Motor, Japanese Brand "YASKAWA" inverter control X&Y axes feeding, Auto Knee, Auto lube, Coolant & Chip pan, Halogen work light, Way covers.

Option: Pneumatic power drawbar, Digital readout.



BM-5H/BM-5V/BM-5I

Table Size	工作台尺寸	15x60 inch (380x1524 mm) optional
Travel	X	左右行程 41 3/8 inch (1050 mm)
	Y	前後行程 19 3/4 inch (500 mm)
	Z	上下行程 23 5/8 inch (600 mm)
	Quill	齒管行程 5 inch (127 mm)
Quill Diameter	齒管內徑	4 1/8 inch (105 mm)
Spindle Motor	主軸馬達	5 HP
Spindle Taper	主軸錐度	NT40
Spindle Speeds-rpm	主軸轉速	60-3450/60-4200/60-4200
Motor	X,Y	驅動馬達 1 HP, X&Y Ballscrews
	Z	驅動馬達 1/2 HP
	Coolant	冷卻幫浦 1/8 HP
Table Loading	工作台載重	500 Kgs
Floor Space	(L x W x H) 面積	2200x1800x2250 mm
Net Weight	淨重	2600 Kgs

* Standard Features: X&Y axes ballscrews, "YASKAWA" inverter control 3 axes feeding, Auto lube, Coolant, Halogen work light.

Option: Pneumatic power drawbar, Digital readout, Z axis ballscrew.

BM-5V CNC/BM-5I (CNC)



Work Table	Size	380x1524 mm
	T-Slot	18x3x80 mm
	X, Y & Z axis Travel	1020x500x500 mm
	Positioning Accuracy	0.005 mm / 300 mm
	Repeatability Accuracy	±0.005 mm
	X, Y & Z Motor	FANUC / MITSUBISHI ANILAM
Spindle	Kw/torque	1.2 kw
	Rapid Speed	5000 mm/min
	Feeding Speed	1-3000 mm/min
	Taper	NT40
	Diameter	105 mm
	Spindle Motor	Variable 7.5 HP/inverter 5HP
General Information	Speed - rpm	60-4200
	Quill Travel	127 mm
	Air Power Required	6 kgs/cm ²
	Coolant Pump	1/8 HP
	Spindle Center to Column	510 mm
	Spindle Center to Work Table	100-600 mm
	Work Table to Floor	840 mm
	Table Loading	600 Kgs
	Floor Space	2450x2200x2350 mm
Packing Size	2550x2300x2350 mm	
Net Weight	2950 Kgs	

* Check master for pitch-error compensation.



OX-1 (CNC)

Table Size	工作台尺寸	500x1900 mm
T-Slot	T槽(寬x數量x間距)	18x5x80 mm
Travel	X	左右行程 1600 mm
	Y	前後行程 630-650 mm
	Z	上下行程 100-750 mm
Spindle Motor	主軸馬達	5 HP
Spindle Taper	主軸錐度	NT40
Spindle Speeds-rpm	主軸轉速	70-3540 rpm (16 steps)
Motor	X,Y,Z 三軸馬達	4.5 Nm
Feeding	X	X軸進給 7500 mm/min
	Y, Z	Y,Z軸進給 5000 mm/min
Coolant Pump	冷卻幫浦	1/2 HP
Max. Table Loading	最大工件載重	1,000 kgs
Electric Power	動力消耗	15 KVA
Floor Space (LxWxH)	佔地面積	2454x1855x2140 mm
Net Weight	淨重	6,500 kgs

- * Standard Features: 3 Axes precision ballscrews, 3 axes servo motors, Auto lube, Coolant, 2 Halogen work light.
- Option: Pneumatic power drawbar, Digital Reatout, Horizontal Milling Attachment (5HP/12 steps/57~1227rpm)
- * Optional Fanuc Oi-Mate MC numerical controller.



OX-3 (CNC)

Table Size	工作台尺寸	500x1900 mm
T-Slot	T槽(寬x數量x間距)	18x5x80 mm
Travel	X	左右行程 1600 mm
	Y	前後行程 630-650 mm
	Z	上下行程 100-750 mm
Spindle Motor	主軸馬達	10 HP
Spindle Taper	主軸錐度	NT50
Spindle Speeds-rpm	主軸轉速	0-610 rpm (6 steps)
Motor	X,Y,Z 三軸馬達	4.5 Nm
Feeding	X	X軸進給 7500 mm/min
	Y, Z	Y, Z軸進給 5000 mm/min
Coolant Pump	冷卻幫浦	1/2HP
Max. Table Loading	最大工件載重	1,000 kgs
Electric Power	動力消耗	15KVA
Floor Space (LxWxH)	佔地面積	2454x1855x2140 mm
Net Weight	淨重	6,500kgs

- * Standard Features: 3 Axes precision ballscrews, 3 axes servo motors, Auto lube, Coolant, 2 Halogen work light.
- Option: Pneumatic power drawbar, Digital Reatout, Horizontal Milling Attachment (5HP/12 steps/57~1227rpm)
- * Optional Fanuc Oi-Mate MC numerical controller.



CNC-400

Work Table	Size	425x1575 mm
	T-Slot	18x4x80 mm
	X, Y & Z axis Travel	1050x500x500 mm
	Positioning Accuracy	0.005 mm / 300 mm
	Repeatability Accuracy	±0.005 mm
	X, Y & Z Motor	FANUC / MITSUBISHI
	Kw/torque	1 kw
	Rapid Speed	10 m
	Feeding Speed	1-5000 mm
	Spindle	Taper
Diameter		65 mm
Spindle Motor		FANUC / MITSUBISHI
Speed - rpm		5.5 / 7.5 kw 60-8000 rpm (10,000rpm-opt.)
General Information	Air Power Required	6 kgs/cm ²
	Coolant Pump	1/4 HP
	Spindle Nose to Table Surface	97-610 mm
	Table Loading	750 Kgs
	Floor Space	3,500x2,750x2,550 mm
	Net Weight	4,500 Kgs
	Electric Power	12 KVA

* Standard Features: Coolant with Tank, Auto lube, Spindle air blast, Halogen Work Light, Rigid Tapping, Two heating fans, Auto power off, 3 color alarm light, RS-232 interface, Pendant MPG, Full enclosed splash guard, Laser & ball-bar roundness measurement.

Option: Oil Coolant, 20 pcs Genova-Type ATC, CTS, Rotary table.



CNC-1600

Work Table	Size	500x1900 mm
	T-Slot	18x5x80 mm
	X,Y & Z axis Travel	1600x620x100-750 mm
	Positioning Accuracy	0.005 / 300 mm
	Repeatability Accuracy	±0.005 mm
	X,Y & Z Motor	FANUC W/ ABS & BRAKE
	Kw / torque	1.8KW
	Rapid Speed	10 m/min
	Feeding Speed	1-8000 mm/min
	Table Loading	800 Kgs
Spindle	Taper	BT40
	Diameter	150 mm
	Spindle Motor	FANUC β 8:7.5/11kw or FANUC β 12:11/15kw
	Speed - rpm	β 8: 8000rpm ; β 12: 7000rpm
General Information	Air Power Required	6 kgs/cm ²
	Coolant Pump	1HP
	Spindle Center to Column	650 mm
	Spindle Center to Work Table	100 - 750 mm
	Column Base Diameter	950/1100 mm
	Work Table to Floor	880 mm
	Floor Space (L x W x H)	2454 x 1855 x 2344 mm
	Net Weight	6,500 kgs
	Electric Power	15 KVA

* Standard Features: Coolant system, Auto Lube, Spindle air blast, Halogen work light, Alarm system, Work air Blast, Rigid Tapping, Two fans for electrical cabinet, Half splash guard, Auto power off, RS-232 interface, Pendant MPG, Laser & ball-bar roundness measurement.

Option: Oil Coolant, 24 pcs Arm Type ATC, Rotary table.

ASSEMBLY LINE



Knee Type Mills Assembly Line



Milling Head Assembly Line



Bed Type Assembly Line



Bed Type CNC Assembly Line



**OX-1 Gear head
(NT40/16 Steps/70-3540rpm)**



**OX-3 Head
(NT50/6 Steps/0-610rpm)**



**CNC-1600 AC Spindle Motor
(Belt Drive/ 0-8000rpm)**



**Horizontal Milling Attachment for
OX-1,OX-3
(5HP/12 Steps/57-1227rpm)**

PARTS FEATURE



R8 or NT30 inverter head for all Manual and CNC mills.



NT40 inverter head for all Manual and CNC mills.



One piece quill housing for 2-5 series of mills to ensure precision alignment and eliminate vibration in high speed.

One piece belt housing base to prevent bearing easily worn-out.



Vari-speed pulley: Bronze keys on the Spindle/motor pulleys are attached with two screws and loctite on each to ensure it does not break easily.



Our special Head auto feed parts which is strong enough to be operated in the Spindle speed over 3000 rpm.

One piece cluster gear assembly to replace Three pieces gear assembly.



Change the key way to spline for safety auto feed.



Three kinds of pulley and belt for light or heavy cutting.

PARTS FEATURE



One piece construction to prevent easily broken.



Compare with old type quill pinion shaft, the new one is with spline. It becomes a very strong and rigid connection.



1HP gear type elevating motor for 500-700kgs heavy loading. It can offer quickly up & down movement at 650 rpm/min.



New double square knee for model 4,5 to eliminate noise while the Knee moving up and down. It also offers the rigidity of knee for no deformation when Table moves in and out in Y-axis direction.



Spring Type micrometer adjusting nut for a 5HP milling head and for quick & easy movement When setting the travel of Quill and Spindle for specific depth of drilling.



Gasket to seal the grease or oil from leaking.



Step pulleys: Aluminum casting attached on external iron ring to extend its life.

INSPECTION



Spindle Bore Runout

Attach the test bar of a test indicator to bar surface. Touch the bar of the indicator to conical bore surface of the spindle.



Spindle Running Noise Measuring

Place noise meter 1m (3.3") in front of machine and the same height as the quill to measure the spindle running noise.



Parallelism of Table Surface to Table Cross Transverse Movement

Attach the base of a test indicator to the column. Touch the stylus of the indicator to the table surface. Traverse the table in and out.



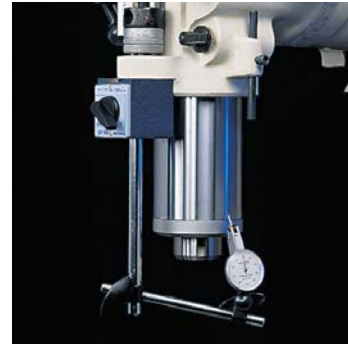
Squareness of Table Surface to Knee Travel

Touch the stylus of the test indicator, which is mounted on fixed part of machine, to surface of square gauge which is placed on the table surface.



Squareness of Table Surface to Quill Travel

Attach the base of a test indicator to the spindle. Touch the stylus of the indicator to surface of the cylinder gauge which is placed on the table surface.



Stiffness of Head and Quill Combination

Move quill down to its lowest position. Attach the base of a test indicator to the milling head. Touch the stylus of the indicator to the quill surface.



Parallelism of Table Surface to Table Longitudinal Movement

Attach the base of a test indicator to the column. Touch the stylus of the indicator to the table surface. Move the table left and right.



Parallelism of Table Surface to Ram Cross Transverse Movement

Attach the base of a test indicator to the ram. Touch the stylus of the indicator to the table surface. Traverse the ram in and out.



Measuring of Squareness of longitudinal Travel to Cross Travel

Firstly adjust Squareness Gauge to assure satisfied parallelism of its edge to Table longitudinal travel by using test indicator. Then remove the test indicator and attach it onto Column slideway to test squareness accuracy of longitudinal travel to cross travel by Cross feeding.

CONTROLLER SYSTEM



MITSUBISHI 64SM
日本三菱 65SM
720M
730M
750M



FANUC Oi-Mate-MC
日本發那科 Oi-MC
18i-MB
31i-MA
32i-MA



ANILAM (PC Base) 3300
美國阿里郎 5300
6300

- Final testing by laser measurement.
- Ball bar roundness measurement instrument.
- Total Quality Assurance System. C.E approval by **AMTRI**.

Milling Head can be chosen for

- Step Pulley
- Variable Speed
- Frequency Drive Type

Standard Accessories

- Tools and Tool Box
- Operation Manual
- Draw Bar
- Level Pads and Level Bolts

頭部選擇

- 有段銑頭
- 無段銑頭
- 變頻銑頭

標準配件

- 調整工具組
- 操作手冊
- 吊桿
- 螺絲墊塊

Optional Accessories

- Halogen Work Light
- Electrical cabinet and control panel
- X,Y&Z axis Power Feed - CE type (Taiwan Made)
- Elevating Motor (Auto Knee)
- Pneumatic Power Drawbar
- Auto Lubrication Pump
- Riser Block (6", 8")
- Horizontal Milling Attachment
- Right Angle Attachment
- Slotting Attachment
- Slotting Tools
- Coolant Pump System
- Way Covers
- Chip Pan

選購配件

- 石英工作燈
- 電氣箱
- 自動進給器
- 上下昇降馬達
- 氣動吊桿組
- 自動潤滑系統
- 墊高塊
- 橫銑整組
- 橫銑頭組
- 插床
- 插床刀具
- 冷卻系統
- 擋渣皮
- 收水盤

※ All specifications and design are subject to change without notice.

The machine color shown on the catalogue is for reference only.

Correct painting color depends on the actual machine.

※ 本型錄規格僅供參考，本公司保有變更權利，恕不另行通知。

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AGENT