## 112001 Macris TEL: 04-2473

## Persuing Excellence · Winning Respect



#### Taiwan Headquartei

TAIWAN WINNERSTECH MACHINERY CO., LTD. 37, Lane 282 North 6th, Sec. 4, Changping Rd., Daya Dist., Taichung City 42850, Taiwan. Tel +886-4-2565-2092(3) • Fax +886-4-2565-2391 E-mail: info@winnerstech.com.tw www.winnerstech.com.tw

#### China Factory

NANJING WINNER TECHNOLOGIES CO.,LTD.

No.1-2, Fengyuan Road, Guabu Town, Luhe District, Nanjing
Tel +86-025-57633338 • Fax +86-025-57632338

www.winner.tw.cn

Agent/Dealer/Distributor





# World Class **Ways Series**

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## VMC-D/E 850/1000 2 - Box Ways

## **HIGH QUALITY · SUPER RIGIDITY · EXTREME VERSATILITY**

**BOX TYPE SLIDEWAYS ON 3-AXES** are equipped with Meehanite casting which has been dispatched by heat treatment, quench & tempering, enhance the high rigidity and long-life accuracy.

**WIDE BASE, BOX-SHAPED COLUMN** enhanced saddle and full supported structure, all contribute to the ability for heavy duty machining and also free from load deformation.

**CENTRAL-LUBRICATING SYSTEM** on individual slideways, the volumetric oil can be fed timely and automatically for trouble free when long time slides moving.

**HIGH HORSE POWER SPINDLE MOTOR** is selected for versatile applications. The ZF type gear box can be alternative choice for high torque output.



- D Series X/Y/Z boxways
- E Series Z boxways & X/Y linear



## Connect with HIGH-VALUE MANUFACTURING MARKETS









## VMC-L1100/1300 Y axis 4 - Box Ways

### HIGH RIGIDITY STRUCTURE DESIGN

**THE MAJOR CONSTRUCTION PARTS** are based on super strong cast iron. They are stable and precision-proved in structure.

**WIDE BASE & BOX-SHAPED COLUMN**, enhanced saddle and full supported workpiece structure, all contribute to the ability for heavy duty machining.

**SUPER STRONG DESIGN** on column provides the best heavy cutting rigidity. The lead-guide for counterweight ensures no vibration effect when Z axis moving and cutting.

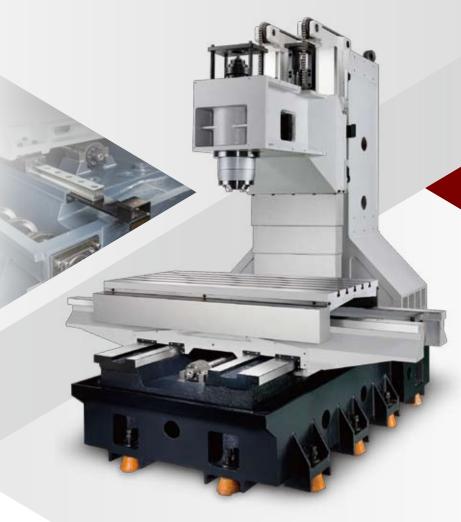
**4-GUIDEWAYS DESIGN ON Y-AXIS**, ensure the machine free from loads deformation. Both reliability and repeatability accuracy are guaranteed.



#### **L SERIES**

- X/Y/Z box ways
- Y axis 4 guideways





#### **Main Specification**

**MODEL: L1300** 

■ Travel: 1300/700/650mm

■ 3-axes Rapid Feed: 24/24/20 M/min.

Spindle Speed: 8000rpm / Belt type (STD)

Spindle Output : 11/15 kw (STD)



#### **CARTRIDGE TYPE SPINDLE**

The spindle use pre-loaded angular contact bearings throughout, to enhance radial stability, enabling heavy cuts in steel. The belt type spindle allows heavier cutting and create a better part finish.



#### **DIRECT-DRIVE SPINDLE**

The most advanced spindle design is an innovative 10,000~12,000rpm, in-line direct-drive spindle that is coupled directly to the motor. This provides super-smooth operation for excellent surface finishes, and reduces operating heat for greater thermal stability.



#### **GEAR-DRIVE SPINDLE**

The geared-head spindle performs increased high torque for heavy duty cutting. All the gear parts are contained in oil box with well-sealed system, to guarantee all parts being lubricated well and make the noise down to low-level.

## VMC-L1601/1801 Y axis 4-guideways

## TOUGH · ACCURATE · VERSATILE

**4-SLIDEWAYS DESIGN** with one piece casting, ensure the rapid travel smoothly and overcome the heavy load deformation, will increase the cutting precision.

**SUPER STRONG CAST IRON** for the major construction part, which has been dispatched by heat treatment & quench tempering, result to super rigidity while heavy cutting.

**WIDE BASE, BOX-SHAPED COLUM** enhanced saddle and full supported structure, all contribute to the ability for heavy duty machining.

**LARGE SPAN BETWEEN BOX-SLIDEWAYS** provide fully support for heavy workpieces.



#### **L SERIES**

- X/Y/Z box ways
- Y axis 4 guideways





#### **Main Specifications**

**MODEL: L1601** 

■ X/Y/Z Travel: 1600/900/800mm

• 3-axes rapid feed: 18/18/18 M/min.

Spindle Speed: 5000 ~ 6000rpm /Belt type (STD)

Spindle Output : 15/18.5 kw (STD)



#### **DOUBLE-NUTTED BALLSCREW**

Double-ancored ballscrew with ever extra broadened bearing nut than any others, enhance high cutting rigidity and reliability.



#### 4-BOXWAYS SERIES

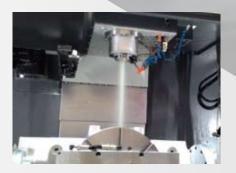
Four box ways on Y-axis with large span guarantees the reliability when table moving and particularly designed for heavy cutting purpose.



#### **3-AXES SERVO MOTOR**

Superior servo motor coupled directly to the ballscrew with rigid shaft couplings, which leads to powerful torque torque and less vibrations.

## **Options**



#### **COOLANT THROUGH SPINDLE(CTS)**

The optional Coolant Through Spindle (CTS) help to increase the higher cutting speed, chips removable for deep-hole drill and fine finishing of pocketing mill.



#### 4TH/ 5TH AXIS ROTARY TABLE

4th / 5th axis rotary table available for multi-sides machining. The reduced set-up time brings higher productivity and absolute parts accuracy.



#### **WORKPIECE MEASUREMENT**

The advance part probing system acts parts inspection and primary-piece measurement, the data quickly advanced the necessary adjustment and coordinate compensation for high quality processing.



#### **LINEAR SCALES**

Linear scales are required when absolute positioning accuracy is necessary, in order to ensure exact axis positioning under fluctuation temperatures. Linear scales can achieve high positioning accuracy.



#### TOOL LENGTH MEASUREMENT

Simplified tool measurement either for tool length or tool outer diameter can be activated with initial M codes for breakage detective and also auto compensation.



#### **COOLANTS JETS AROUND SPINDLE**

While high speed machining, the equipment can help to eliminate the chips stuck inside of workpiece, hence the accuracy and tool life can be kept longer.





**CHAIN TYPE "ATC-30T"** 

The loading capacity is 30 tools. BT - 50 tool shank can be options.



#### **CHAIN TYPE CHIP CONVEYOR**

Chain type chip conveyor provides the most efficient chip removal jobs and best chip-free coolant effect to massive productions.



#### **COOLANT FLUSHING DEVICE**

The optional side-flushing device can help efficient removal of chips.



#### SPINDLE OIL COOLER

Spindle oil cooler can be good helps to keep normal temperature when spindle high speed & long time running.

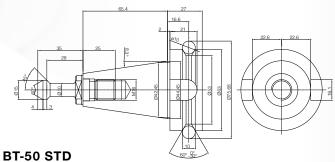


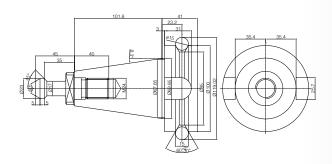
#### **ELECTRICAL CABINET**

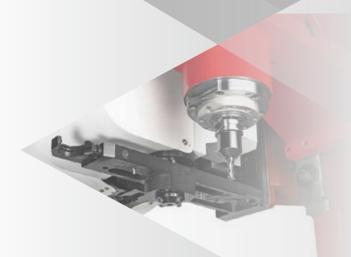
High quality of wiring panels complied with CE standard.

## **Spindle Tool Diagram**

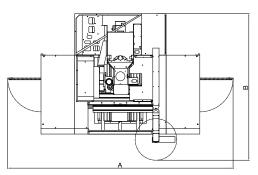
#### BT-40 STD

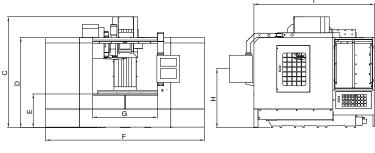




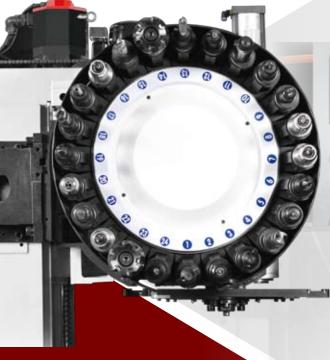


### **Model Dimensions**





Model	Α	В	С	D	E	F	G	н	ı
VMC-D850	4718	3274	2658	2145	866	3060	1366	1500	2671
VMC-D1000	4718	3274	2658	2145	866	3060	1366	1500	2671
VMC-L1100	5383	3568	2972	2269	908	3824	1559	1505	2898
VMC-L1300	5383	3568	2972	2269	908	3824	1559	1505	2898
VMC-L1601	6248	4036	3216	2516	955	4557	2023	1926	3141
VMC-L1801	6665	4228	3270	2516	955	4970	2388	1936	3149







## **Controllers**

FANUC / MITSUBISHI controllers are user-friendly human-computer interface for easy operation; the control panel meets the safety requirement and rotates easily for operation.

#### ATC 24/30

Arm Type Auto Tool Change Magazine – 24 tools for standard equipment.

(Chain type ATC - 30T is option.)



## **Specification**

	Unit	D850	D1000	L1100	L1300	L1601	L1801			
Work Table										
Working table size	mm	1000x560	1150x560	1200x610	1500x710	1860×1000	1970x1000			
T - slots	mm	18x5x100	18x5x100	18x5x100	18x5x140	18x7x120	18x7x120			
Max. table load	kgs	500	650	800	1200	2000	2200			
Travel										
X axis travel	mm	850	1000	1100	1300	1600	1800			
Y axis travel	mm	560	560	650	700	900	900			
Z axis travel	mm	560	560	610	610	800	800			
Spindle nose to table surface	mm	150-710	150-710	150-760	150-760	210-1010	210-1010			
Spindle										
Transmission				Belt-drive						
Spindle taper		BT - 40	BT - 40	BT - 40	BT - 40	BT - 50	BT - 50			
Spindle speed	rpm	8000	8000	8000	8000	6000	6000			
Spindle motor	kw	7.5 / 11	7.5 / 11	11 / 15	11 / 15	15 / 18.5	15 / 18.5			
Feed										
X - Y - Z motor (Fanuc)	kw	3/3/3	3/3/3	3/3/3	3/4/4	7/7/7	7/7/7			
X - Y - Z motor (Mitsubishi)	kw	3/3/3	3/3/3	3.5/3.5/3.5	3.5/3.5/3.5	7/7/7	7/7/7			
X - Y - Z rapid travel	M/min	24/24/18	24/24/18	24/24/18	24/24/18	18/18/18	16/16/16			
X - Y - Z cutting feed rate	M/min	10	10	10	10	8	8			
ATC System										
ATC type				Arm type						
Magazine capacity	pcs	24	24	24	24	24	24			
Max. tool diameter	ø (mm)	100	100	100	100	125	125			
Max. tool length	mm	300	300	300	300	300	300			
Max. tool weight	kgs	8	8	10	10	15	15			
Rail Type										
3-axes rails	3 - axes boxways			X - Y - Z boxways / Y-axis 4 guideways						
Dimension & Others										
Power consumption	KVA	15	15	20	20	30	30			
Air pressure required	kg/cm²	6	6	6	6	8	10			
Floor occupation	cm	310x330x270	310x330x270	385x360x300	385x360x300	460x405x325	500x425x330			
Machine weights	kgs	6800	7000	8200	8500	16000	18000			

#### **Standard Accessories**

- 1 3-axes auto lubrication 7 Heart exchanger system
- 2 Rigid tapping
- 3 Cooling device
- 4 Full enclosed guard
- 5 Spindle air blast
- 6 RS232 transmission interface

- 8 Work lamp
- Alarm Indicator
- 10 Tool kits with foot pad screws
- Telescopic cover on 3 axes
- 12 Maintenance / Operation manual

#### **Optional Accessories**

- 1 FANUC / MITSUBISHI controller
- 2 Chip conveyor
- 3 4th & 5th axis rotary table
- 4 Spindle speed upgrade 10000rpm / 12000rpm(Direct-drive)
- 5 3-axes linear scales
- 6 Spindle cooling system
- 7 Auto tool length measurement

- 8 Work-piece measurement
- 9 Disc oil / coolant separator
- © Coolant through spindle (CTS)
- 11 Spindle splash surround (for arm type only)
- 12 Electric cabinet air conditioner
- 13 Automatic voltage stabilizer
- 14 Transformer