

MACHINE SPECIFICATIONS

MODEL			TR-51D II	TR-51A II	TR-60D II	TR-60A II	TR-70D II	TR-70A II	
TRAVEL	X -Travel	mm	510	510	600	600	700	700	
	Y -Travel	mm	420	420	420	420	420	420	
	Z -Travel	mm	400	530	400	530	400	530	
	Table to Spindle Nose	mm	150~550	150~680	150~550	150~680	150~550	150~680	
TABLE	Table Size	mm	600x450		700x450		800x450		
	Max. Load	kgs	250		250		250		
	T Slots (Width x Pitch x No.)	mm	14x100x4		14x100x4		14x100x4		
	Spindle Speed	rpm	8,000		8,000		8,000		
SPINDLE	Max. Tapping Speed	rpm	3,000		3,000		3,000		
	Spindle Taper		7/24 BT#40		7/24 BT#40		7/24 BT#40		
	Transmission		Direct Drive		Direct Drive		Direct Drive		
	Rapid Traverse(G00)	m/min	48/48/48		48/48/48		48/48/48		
FEED RATE	Cutting Feed Rate (G01)	mm/min	10000		10000		10000		
	Tool Shank		BT#40		BT#40		BT#40		
ATC SYSTEM	Pull Studs		P40T-1 MAS403-45*		P40T-1 MAS403-45*		P40T-1 MAS403-45*		
	Magazine Capacity		14	24+1	14	24+1	14	24+1	
	Max. Tool Length	mm	300	300	300	300	300	300	
	Max. Tool Diameter	mm	100	80	100	80	100	80	
	Max. Tool Weight	kgs	3	4	3	4	3	4	
	Tool Change Time	Tool to Tool	sec.	1.8	1.7	1.8	1.7	1.8	1.7
		Chip to Chip	sec.	2.4	2.4	2.4	2.4	2.4	2.4
	ATC Type		Armless	Arm	Armless	Arm	Armless	Arm	
	MOTOR	X - axis(Mitsubishi/Fanuc)	kw	1.5/1.2		1.5/1.2		1.5/1.2	
		Y - axis(Mitsubishi/Fanuc)	kw	1.5/1.2		1.5/1.2		1.5/1.2	
Z - axis(Mitsubishi/Fanuc)		kw	3.0/2.5		3.0/2.5		3.0/2.5		
Spindle Motor		kw	7.5/5.5		7.5/5.5		7.5/5.5		
MACHINE DIMENSIONS	W x D x H	mm	1670x2557x2800	1930x2577x2800	1920x2557x2800	1970x2577x2800	2020x2557x2800	2020x2577x2800	
	Net Weight	kgs	3100	3250	3250	3500	3350	3600	
OPTIONAL ACCESSORIES	High Speed Spindle Upgrade	rpm	10K/12K/15K		10K/12K/15K		10K/12K/15K		
	Spindle Power Upgrade	kw	11/7.5		11/7.5		11/7.5		
	Magazine With Servo Indexing		○	×	○	×	○	×	
	Coolant Through Spindle		△		△		△		
	SK-40,CAT-40 Magazine & Spindle		△		△		△		
	HSK-A63 Magazine & Spindle		△		△		△		
	Extra Low Inertia Spindle Motor (Mitsubishi/Rigid Tapping 4000rpm)		△		△		△		
	ATLM with Breakage Detection		△		△		△		
	Automatic Door		△		△		△		
	Transformer/ Voltage Regulator		△		△		△		
	Workpiece Air Blow System		△		△		△		
	Spindle Oil Mist Lubrication		△		△		△		
	Oil Mist Coolant System		△		△		△		
	4TH or 5TH Axes		△		△		△		
	Thermal Compensation System		△		△		△		
	Coolant Gun		△		△		△		
	Filter/Scraper/Chain Type Chip Conveyor		△		△		△		
	Mist Collect with Top Guard		△		△		△		
Air Conditioner for Electrical Cabinet		△		△		△			

● All specifications, dimensions and design characteristics are subject to change without notice.

○: Standard △: Optional ×: Not available

STANDARD ACCESSORIES

- Spindle air blow device
- Work light (PL light)
- Coolant system and coolant tank.
- Leveling bolts and pads
- Chip flushing system
- Automatic lubrication system
- Tool kit and tools
- Dual-color LED alarm light
- TFT LCD monitor
- Oil cooler(spindle speed 10K/12K/15K)
- Double-cabinet-type electrical cabinet



TRIDENT MACHINERY CO., LTD.

NO.2, JINGKE ROAD, NANTUN DISTRICT, TAICHUNG CITY 40852, TAIWAN
 TEL: +886-4-2355-2655 FAX: +886-4-2355-2099
 E-mail: trident.cnc@msa.hinet.net Web: http://www.trident-cnc.com.tw

Agent:

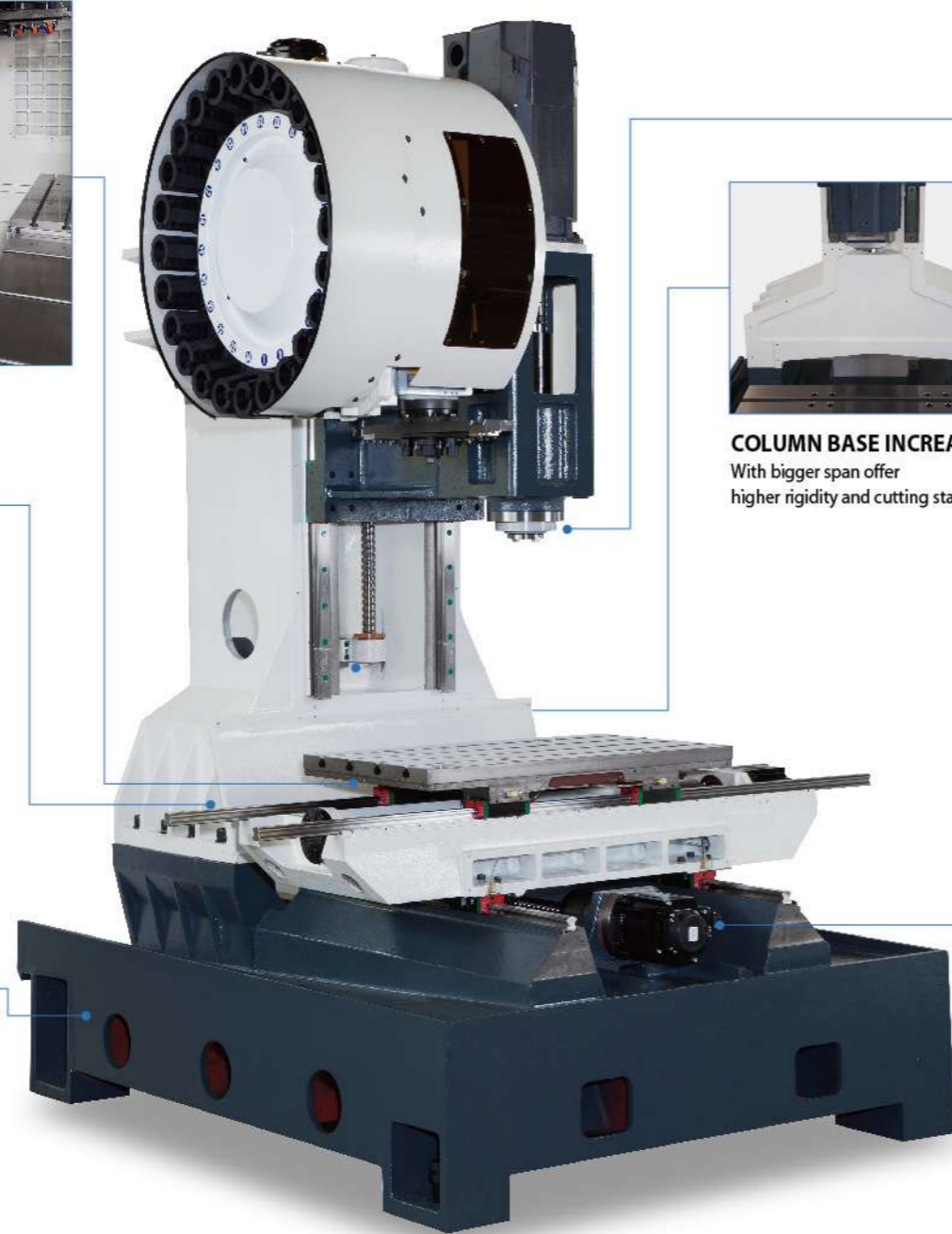
104.08-2000-BT#40II



COMPACT CNC VERTICAL MACHINING CENTER TR-51D II / 60D II / 70D II series

NEW GENERATION CNC COMPACT MACHINE CENTER

OPTIMAL STRUCTURE DESIGN! GUARANTEED RIGIDITY AND STABILITY!



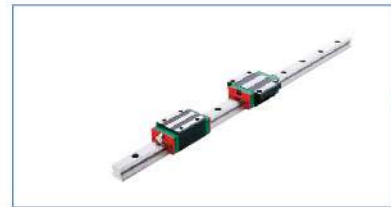
Y AXIS COVER GUARD

Full enclosure design of Y axis to avoid the chips accumulation.



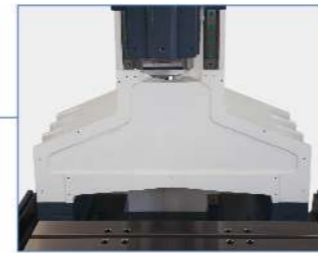
LINEAR WAYS ON 3 AXES

The X,Y,Z-axis slideways are mounted with precision linear ways, fitted with great span between ways, showing maximum stability during high speed traverse. The ball type linear ways feature low friction coefficient and high positioning accuracy.



HIGH EFFICIENCY CHIP FLUSHING SYSTEM AND EXTRA WIDE SPAN

- Back-Flow base design of chip removal angle provides ultimate chip removing capabilities.
- With extra wide span, superior stability.



COLUMN BASE INCREASED
With bigger span offer higher rigidity and cutting stability



DIRECT DRIVE SPINDLE
Direct drive spindle, without noise > vibration and backlash.



MOTOR OF Y AXIS
Y axis motor is mounted in front of machine to reduce the length of y axis ballscrew, and heat difference.



ENCLOSED OF CABLE AND PIPES
All cables are fitted under cover will not be affected in cutting area.

The CNC compact machine center, designed and manufactured by TRIDENT, is your best choice in complex work. New generation with high Performance and optimal structural design, significant increase drilling and tapping efficiency.

- MEEHANITE high quality casting iron assures permanent rigidity and accuracy.
- The three axes slideways are mounted with precision linear ways that ensure high smoothness of traveling. Suitable for high speed machining demand.
- The machine series equipped with high speed traverses on the three axes to significantly increase drilling and tapping efficiency.
- Servo motor directly drives ballscrew, featuring high positioning accuracy without backlash problem.



ARMLESS-TYPE MAGAZINE(SERVO DRIVE)
Tool change time (T-T): 1.8 sec.



ARM-TYPE MAGAZINE(INVERTER)
Tool change time (T-T):
Last model 2.2 sec.
New model 1.7 sec.

CONTROL SPECIFICATIONS

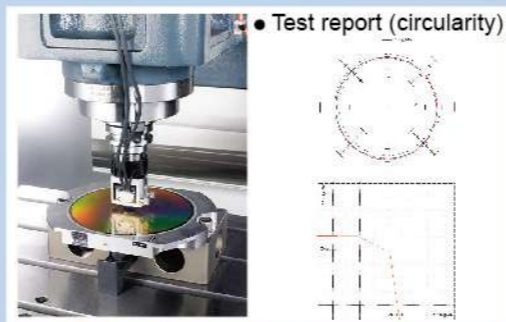
	Mitsubishi			Fanuc	
	M70-VB	M70-VA	M720-VS	Oi-MATE-D	Oi-MF
CPU	64 bit			32 bit	
Max. Controlled Axes	9	11	12	5	9
Max. Simultaneous Axes	4	4	4	4	4
Program Storage Length	512K	512K	512K	1280M(512K)	
Macro Variables Common	400	400	400	400	600
Tool Offset Sets	400	400	400	400	400
Conversational Programming	○	○	○	○	○
Display	8.4" TFT LCD		10.4" TFT LCD	8.4" TFT LCD	
Multi-Language Display	○			○	
Servo System with ABS Encoder	○			○	
Memory Card	○			○	
Ethernet	○			○	
High Speed And Accuracy Machining Code	G05.1 Q1	G05 P10000	SSS	G05.1 Q1	
RS-232 Interface	○			○	
Toolpath Simulation	○	3D		○	
Handwheel Feed Program Simulation	○			×	
Program Buffer Correction	○			×	



• The control panel is placed to achieve the optimum operation ergonomics.

○ : Standard
× : None

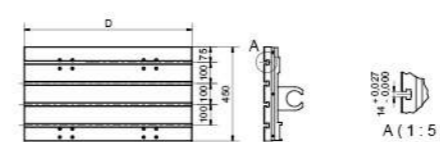
QUALITY CONTROL



- The positioning accuracy is inspected by using Agilent laser unit.
- Positioning accuracy in full travel is less than 0.010mm.
- HEIDENHAIN grid encoder is applied for circular servo adjustment.
- Diameter Ø200, F=3000, circularity <0.010mm

DIMENSIONS

T-slot Dimension



Machine Dimension

	X	Y	Z	D
TR-51D II	1670	2557	2800	600
TR-51A II	1930	2577	2800	600
TR-60D II	1920	2557	2800	700
TR-60A II	1970	2577	2800	700
TR-70D II	2020	2557	2800	800
TR-70A II	2020	2577	2800	800

