

MACHINE SPECIFICATIONS

MODEL		TR-45S	TR-45E	TR-45L	TR-513	TR-513A	TR-603	TR-603A	TR-703	TR-703A	
TRAVEL	X-Travel	mm	300	450	510	510	600	600	700	700	
	Y-Travel	mm	250	300	300	400	400	400	400	400	
	Z-Travel	mm	300		350	430	350	430	350	430	
	Table to Spindle Nose	mm	175~475		150~500	150~580	150~500	150~580	150~500	150~580	
TABLE	Table Size	mm	280x350	500x320	600x320	600 x 420	700 x 420	700 x 420	850 x 420	850 x 420	
	Max. Load	kg	150	200	250	250	250	250	250	250	
	T Slots (Width x Pitch x No.)	mm	14 x 100 x 3		14 x 100 x 4	14 x 100 x 4	14 x 100 x 4	14 x 100 x 4	14 x 100 x 4	14 x 100 x 4	
SPINDLE	Spindle Speed	rpm	10000		10000	10000	10000	10000	10000	10000	
	Max. Tapping Speed	rpm	4000		4000	4000	4000	4000	4000	4000	
	Spindle Taper		7/24 NO:30		7/24 NO:30	7/24 NO:30	7/24 NO:30	7/24 NO:30	7/24 NO:30	7/24 NO:30	
	Transmission		Direct drive		Direct drive	Direct drive	Direct drive	Direct drive	Direct drive	Direct drive	
FEED RATE	Rapid Traverse (G00)	m/min	48/48/60		48/48/60	48/48/60	48/48/60	48/48/60	48/48/60	48/48/60	
	Cutting Feed Rate (G01)	mm/min	10000		10000	10000	10000	10000	10000	10000	
AUTOMATIC TOOL CHANGER SYSTEM	Tool Shank		BT#30		BT#30	BT#30	BT#30	BT#30	BT#30	BT#30	
	PUII Studs		P30T-1 MAS403-45°		P30T-1 MAS403-45°	P30T-1 MAS403-45°	P30T-1 MAS403-45°	P30T-1 MAS403-45°	P30T-1 MAS403-45°	P30T-1 MAS403-45°	
	ATC Type		Armless		Armless	Arm	Armless	Arm	Armless	Arm	
	Magazine Capacity		12		12	20+1	12	20+1	12	20+1	
	Max. Tool Length	mm	150	200	200	200	200	200	200	200	
	Max. Tool Diameter	mm	100		100	63	100	63	100	63	
	Max. Tool Weight	kg	2.5		2.5	3	2.5	3	2.5	3	
	Tool Change Time	sec.	1.4		1.4	1.5	1.4	1.5	1.4	1.5	
	Chip To Chip	sec.	2.3		2.3	2.4	2.3	2.4	2.3	2.4	
	MOTOR	X-axis (MELDAS)	kw	0.5	1.0	1.5	1.5	1.5	1.5	1.5	1.5
Y-axis (MELDAS)		kw	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Z-axis (MELDAS)		kw	3.0	2.2	3.0	3.0	3.0	3.0	3.0	3.0	
Spindle (MELDAS)		kw	3.7 / 2.2		3.7 / 2.2	3.7 / 2.2	3.7 / 2.2	3.7 / 2.2	3.7 / 2.2	3.7 / 2.2	
MACHINE DIMENSIONS	W x D x H	cm	100x229x233	120x229x233	140x229x233	155x252x260	165x252x280	165x252x280	190x252x260	190x252x280	
	N.W.	kg	2100	2380	2500	3100	3250	3250	3500	3350	3600
OPTIONAL ACCESSORIES	Armless 14T Magazine		×	×	△	△	×	△	×	△	×
	Armless 21T Magazine (Servo ATC)		×	△	△	△	×	△	×	△	×
	Magazine With Servo		△	△	△	△	×	△	×	△	×
	SK-30 Magazine & Spindle			△		△		△		△	
	High Speed Spindle Upgrade To 12k/15K/20K/24K			△		△		△		△	
	Spindle Power Upgrade To 5.5/3.7KW			△		△		△		△	
	Extra Low Inertia Spindle Motor (Rigid Tapping 6000rpm)			△		△		△		△	
	Coolant Through Spindle			△		△		△		△	
	ATLM With Breakage Detection			△		△		△		△	
	Automatic Door			△		△		△		△	
	Transformer / Voltage Regulator			△		△		△		△	
	Workpiece Air Blow System			△		△		△		△	
	Oil Mist System			△		△		△		△	
	4 TH or 5 th Axis			△		△		△		△	
	Coolant Gun			△		△		△		△	
Enclosure Chip Flushing System			△		△		△		△		
Scraper Or Chain Type Chip Conveyor			△		△		△		△		
Mist Collector / Top Full Cover			△		△		△		△		

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

○:Standard △:Optional X:Not available

STANDARD ACCESSORIES

- Spindle air blow device
- Work light (PL Light)
- Coolant system and coolant tank
- Leveling bolts and pads
- Double-cabinet-type electrical cabinet (with heat exchanger)
- Chip auger
- Automatic lubrication system
- Tool kit and tools
- Dual-color LED alarm light
- TFT LCD monitor



TRIDENT MACHINERY CO., LTD.

NO.2, JINGKE ROAD, NANTUN DISTRICT, TAICHUNG CITY 40852, TAIWAN
 TEL: +886-4-2355-2655 FAX: +886-4-2355-2665
 E-mail: trident.cnc@msa.hinet.net Web: http://www.trident-cnc.com.tw

Agent:

101.04-2000-BT#30



CNC TAPPING CENTER

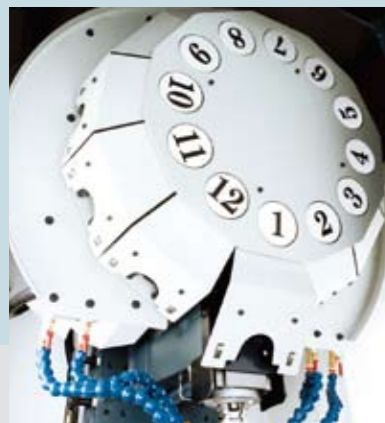
TR-45/513/603/703 series

CNC Tapping Center

Optimal Structural Design! Maximum Stability! Maximum Rigidity!

- The structural parts of the machine are manufactured from high quality Meehanite cast iron, rib reinforced and stress released to assure it remains deformation-free year after year.
- Three axes slideways are mounted with precision linear ways. Extra large span between ways. High feed rate and superior stability.
- Servo motor directly drives ballscrew, featuring high positioning accuracy without backlash problem.

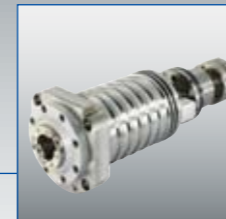
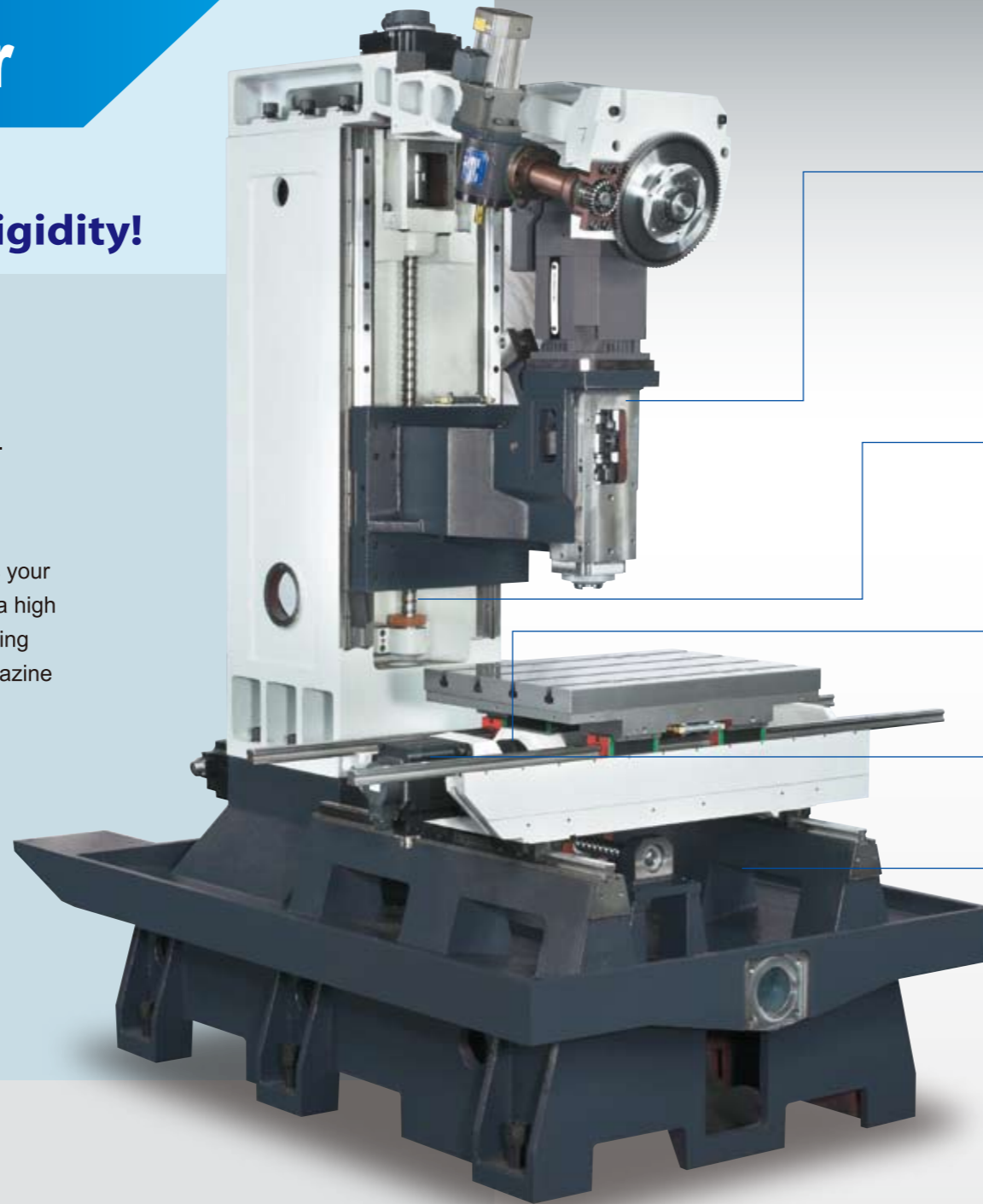
The CNC tapping center, designed and manufactured by TRIDENT, is your best choice in drilling and tapping work. The machine series employs a high speed traverse on three axes to significantly increase drilling and tapping efficiency. In addition, customers may select armless or arm type magazine according to machining requirement. The entire machine is ruggedly constructed to assure the highest machining accuracy.



BT30 Armless Type Magazine
12/14 Tools: Tool to Tool 1.4 sec.



BT30 Arm Type Magazine
20 Tools: Tool to Tool 1.5 sec.



BT#30 Direct Drive Type Spindle Speed

10000, 12000, 15000, 20000, 24000 NBT With Two Faces Contact.

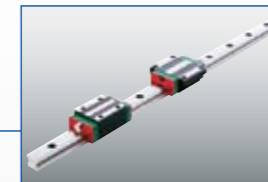


Z axis Telescopic Guard

To conform high speed traverse of Z axis, it provides superior protection for linear ways and extends their service life.



Three axes are driven by high performance motors with quick acceleration and deceleration.



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.



Chip Auger

A chip auger is mounted at the center of the base, removing chips to the rear side of the machine easily. It makes chip disposal convenient.

X, Y Axis Telescopic Guard

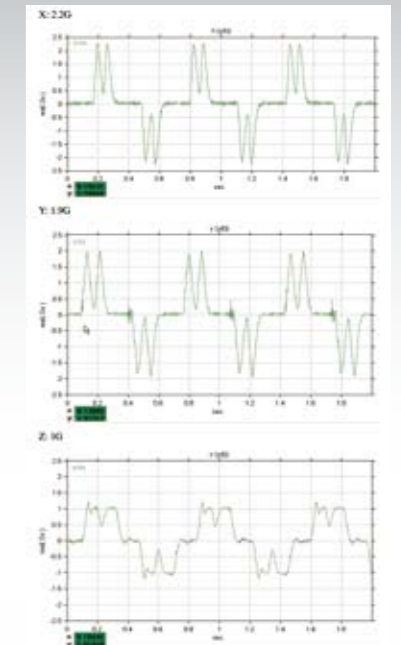
The telescopic guards on X, Y-axis prevent chips or coolant from damaging linear ways. "V" shaped telescopic guard on X, Y axis, allows fast chip removal and high efficiency linear way protection.



Large Capacity Coolant Tank With Casters

Sliding coolant tank can be pulled out easily while coolant pump with mesh filter take away cutting chips quickly.

Acceleration Test Report for TR-45E



CONTROL SPECIFICATIONS

	Mitsubishi				Fanuc	
	E-68	M70-VB	M70-VA	M720-VS	Oi-MATE-D	Oi-MD
CPU	64 bit				32 bit	
Max. Controlled Axes	4	5	8	8	4	7
Max. Simultaneous Axes	4	4	4	4	4	4
Program Storage Length	512K	1024K	1024K	1024K	256K	256K
Macro Variables Common	400	400	400	400	400	600
Tool Offset Sets	200	200	200	200	200	200
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	G08	G05.1 Q1	G05 P10000	SSS	G05.1 Q1	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

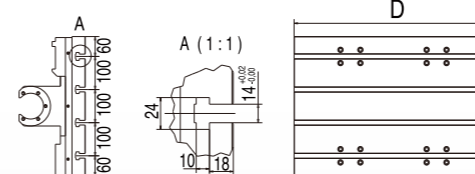
QUALITY CONTROL



• Test report (circularity)
• 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 Ø100, F=3000, circularity <0.010mm.

DIMENSIONS

T-slot Dimension



Machine Dimension

	A	B	C	D
TR-45S	1000	2290	2330	350 x 280
TR-45E	1200	2290	2330	500 x 320
TR-45L	1400	2290	2330	600 x 320
TR-513	1550	2520	2600	600
TR-513A	1650	2520	2800	600
TR-603	1650	2520	2600	700
TR-603A	1650	2520	2800	700
TR-703	1900	2520	2600	850
TR-703A	1900	2520	2800	850

