

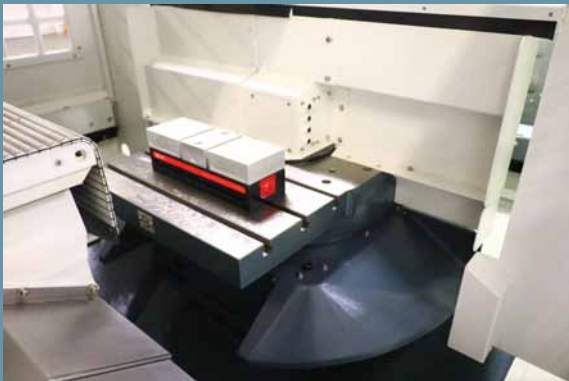
TS-45

Mini Machining Center with APC



CUBIC MACHINERY

OPTIMAL STRUCTURE DESIGN



Double pallet changer improves spindle utilization rate.

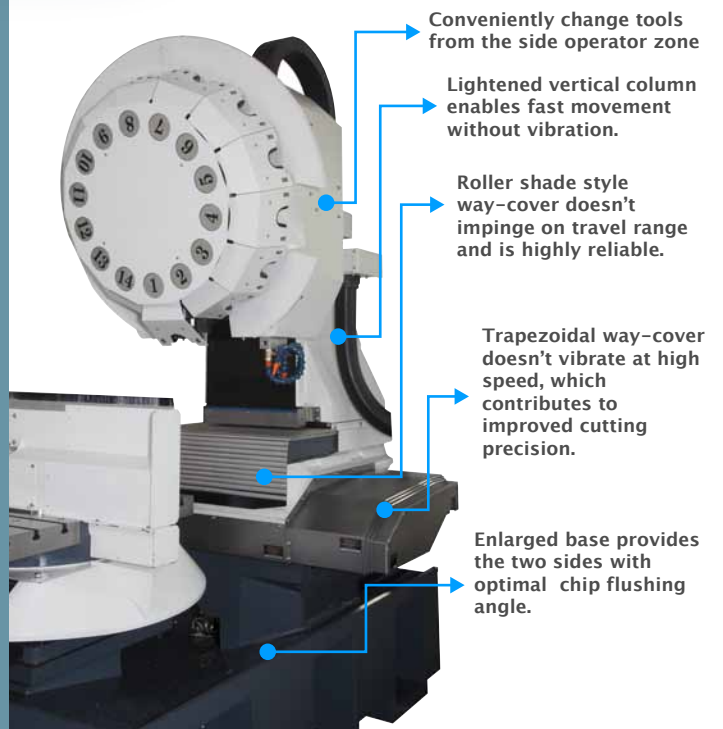
3 piece curve coupling and cam actuated pallet changer is fast, reliable and immune to cutting chip ingress. The pallet changer has fewer moving parts due to the machine's XYZ axes are completely isolated from it.

Each pallet can be outfitted with a 4th axis unit (total of 2). Accommodations for pneumatic or hydraulic connections can be ordered in advance.



Pallet changer indexing is now based on an external encoder, which greatly raises positioning accuracy over the previous coupling gear based design.

Roller shade type way cover on Y-axis not only provides protection from chips but it does so without taking a lot of space and is more reliable.



High Performance Extra Smooth Movement



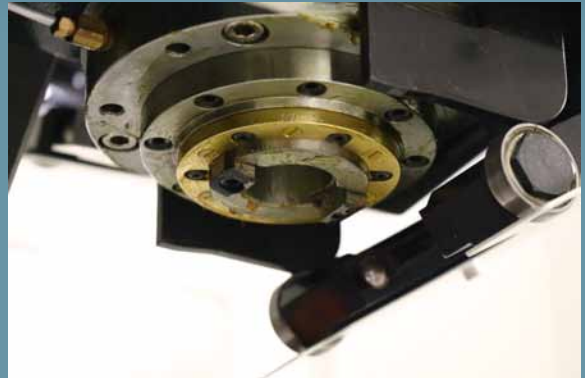
Optimized structure incorporates specially lightened vertical column and wide track design provides high dynamic characteristic able to accelerate quickly without vibration.

Base tracks are on slant bed, which increases span without more floor space.

There are other manufacturers using a machine layout, however only ours has been properly engineered to distribute weights of components in balance with vertical column to avoid shifting center of gravity.

The extra wide base allows chips to be flushed down at an angle.

X axis saddle uses a slant-bed design to enable high speed vertical column movement without vibration.



The spindle uses a high-speed direct coupling design with 24,000 maximum RPM.

The saddle's linear guide blocks are situated at the center of the base, exerting more cutting force directly downward into the base, improving machining repeatability.

High precision linear guide ways are used for all 3 axes



Operator control box can be swiveled for ease of use.

Cable conduits are changed to stainless braided conduits with high abrasion resistance.

User can load and unload tools at the side operator zone.

The new enclosure design improves ease of maintenance and repairs.

CUBIC MACHINERY, INC.
13401 Benson Ave. Chino, CA. 91710

Tel 909 590-9995

Fax 909 590-9996

CubicMachinery.com



MACHINE SPECIFICATIONS

Model		TS-45			
Travel	X travel	450	mm	17.7	inch
	Y travel	320	mm	12.6	inch
	Z travel	330	mm	13	inch
	Spindle nose to work table	180 ~ 580	mm	7 ~ 20	inch
Table	Table size	500 x 325 x 2pcs	mm	19.7 x 12.8 x 2pcs	inch
	Max table capacity	200 per table	kg	440 per table	lb
	T-Slots	14 x 100 x 3 pcs	mm	0.551x3.937 x 3 pcs	
Spindle	Spindle speed	10000	rpm	10000	rpm
	Max tapping speed	4000	rpm	4000	rpm
	Spindle taper	7/24 No.30		7/24 No.30	
	Transmission	Direct drive		Direct drive	
Feed rate	Rapid traverse (G00)	48/48/60	m/min	1889/1889/2362	ipm
	Cutting feedrate (G01)	10000	mm/min	393	ipm
ATC	Tool Shank	BT#30		BT#30	
	ATC type	Armless type		Armless type	
	Magazine capacity	12		12	
	Max tool length	200	mm	7.9	inch
	Max tool diameter	100	mm	3.9	inch
	Max tool weight	2.5	kg	6	lb
	Tool change time (T-T)	1.4	sec	1.4	sec
Motor	X axis	1.8	kw	2	hp
	Y axis	1.8	kw	2	hp
	Z axis	2.5	kw	3	hp
	Spindle	3.7/2.2	kw	5/3	hp
Dimensions	W x D x H	1900 x 3330 x 2480	mm	75 x 131 x 97	inch
	Net weight	4000	kg	8800	lb
Optional accessories	High speed spindle upgrade	12K/15K/20K/24K		12K/15K/20K/24K	
	Motor power upgrade	5.5	kw	7	hp
	Armless 14T magazine				
	Armless 21 T magazine (servo ATC)				
	Connection for table - Hydraulic				
	3-axis linear scale				
	Chip conveyor				
	High pressure coolant through spindle				
	Automatic tool length measurement with breakage detection				
	4th axis rotary table				
	Transformer, voltage regulator				

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

STANDARD ACCESSORIES

- Spindle air blow device.
- Double PL lamp for loading and cutting area.
- Tool coolant system and high flow chip flushing system.
- Pressure detected automatic lubrication system and high efficiency lubrication oil filter.
- Dual-color LED alarm light.
- One-piece dual layer insulated electric cabinet.
- Tool kits and tools.
- Table with twin work area.
- Independent air connection for each work table.