

**FRYER**  
MACHINE SYSTEMS

The Toolroom Company



**CM Series**

*Precision Compact Mill*

The Fryer CM Series is the perfect tool for toolroom, job shop and secondary operations. Built on a solid cast iron platform and using high precision ballscrews, spindle and ATC, the CM can hold the demanding tolerances that industry requires. Programming is accomplished with industry standard G code or Siemens advanced 'Shop Mill' programming. Equipped with an impressive list of standard features the CM Series is by far the best compact milling machine available today.

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## Specifications

- 15" x 10" x 15" travels
- 7.5 HP – 8,000 RPM
- 8 tool ATC



CM-15

## Specifications

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- 20" x 13" x 20" travels
- 7.5 HP – 8,000 RPM
- 10 tool ATC



CM-20

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The CM series is ideal for many industries. Toolrooms like the small size and simple conversational programming. Job shops like the easy set-up keys and the ability to move the machine easily to where it is needed. Mold shops like the 30,000 RPM spindle option and graphite protection package. See how the CM series can be customized to your application.

## Rugged Construction

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- Precision ground ballscrews
- Cast iron construction
- Steel cutting capacity
- Precision linear ways



## 40 Taper Spindle

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- 8,000, 10,000, 12,000 or 15,000 RPM
- Built-in coolant nozzles
- 7.5 HP or 15 HP spindle motors
- CAT or BT-40
- Thin spindle coolant



## Pallet Jack

- Move easily to where a spindle is needed
- Park next to larger machine as 2<sup>nd</sup> Op
- Easy to level and set-up

## Automatic Tool Changer

- 8 or 10 Tool - 40 taper
- 20 tool arm type available
- Fast 5 second change time
- Large 3.5" maximum tool diameter





## 5 Axis Rotary Table

- 6" compact trunnion table
- Full 5 Axis or 3+2 operation
- Perfect for multi-sided machining or complex 5 Axis parts

## High Speed Spindle

- Liquid cooled with refrigeration
- 30 taper, 21,000, 30,000 RPM continuous duty
- Air/ oil lubrication





## Siemens 828 CNC

The advanced Siemens CNC is the perfect control for toolroom and production alike. It includes G code and conversational programming as well as advanced graphics. Animated set-up screens, USB, high speed machining and tool life management make it the most versatile CNC available.

- Conversational programming
- G code programming
- Solid model 3D graphics
- High speed machining
- Fast set-up cycles
- USB file transfer
- PC control simulator (available)

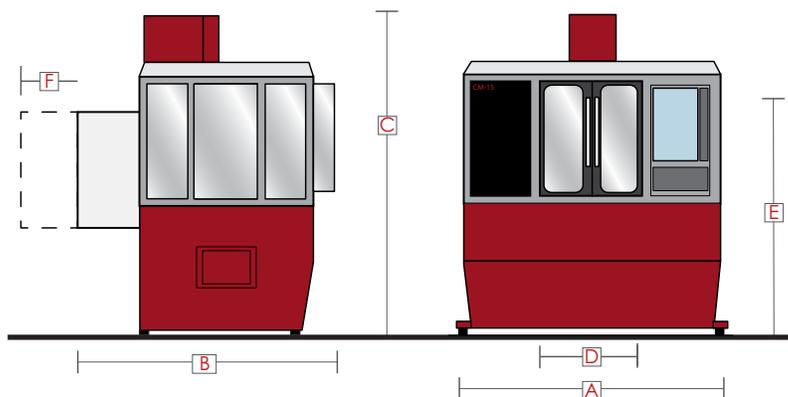
## Fanuc Oi CNC

The industry standard Fanuc Oi CNC is the perfect control for production use. The Fanuc CNC control system is used on millions of machines worldwide. Featuring USB file transfer, high speed machining and tool life management. It also features available full 4th axis contouring and electronic probing making it the most versatile CNC available.

- Fanuc reliability
- G code programming
- High speed machining
- Fast set-up cycles
- USB file transfer
- Tool life management



CM SERIES SPECIFICATIONS		CM-15	CM-20
MACHINE CAPACITY	X Travel	15"	20"
	Y Travel	10"	13"
	Z Travel	15"	20"
	Ballscrew Size	0.630"	1.00"
	Table Load (Evenly Distributed)	350 lbs.	450 lbs.
	Table Size	10" x 32"	12" x 24"
	T-Slots (No./Width)	3 / 0.630"	3 / 0.630"
	Table Top to Floor	32"	30"
SPINDLE	Motor HP (Peak)	7.5 HP	
	Spindle Speed (RPM)	60 - 8,000 RPM (10K, 12K, 15K, 21K, 30K optional)	
	Spindle Torque (max)	35 ft/lbs. @ 350 RPM	
	Tool Type/Taper	CAT 40 (BT option)	
	Spindle Nose to Table (Max to Min)	4" - 19"	3" - 23"
	Spindle Center to Column	11"	15"
ATC	Tool Storage Capacity	8 Station	10 Station (20 optional)
	Tool Change Time	5 Seconds	
	Max. Tool Diameter (full)	3.5"	
	Max. Tool Weight	10.4 lbs.	
	Max. Tool Length	8"	
PERFORMANCE	Positioning Accuracy	+/- 0.0002"	
	Positioning Repeatability	+/- 0.0001"	
	Resolution	0.0001"	
	Rapid Traverse	500 IPM (1,200 optional)	
	Cutting Feed Rate	0.001 - 400 IPM (1,200 optional)	
	Servo Type	AC Digital Brushless	
	Axis Thrust (Peak)	2,200 lbs. X, Y, Z	
GENERAL INFO	Air Pressure Requirements	90 PSI; 3 CFM	
	Coolant Capacity	10 Gallons	
	Coolant Flow	2 Gal/Min	
	Power Requirements	40 AMP; 200-250 VAC 3 PHASE (380-500 optional)	
	Door Open Width	23"	30"
	Shipping Dimensions* (WxDxH)	55" x 52" x 71"	65" x 80" x 80"
	Operating Dimensions (WxDxH)	55" x 52" x 80"	65" x 80" x 80"
	Machine Weight	2,350 lbs.	4,300 lbs.



	CM-15	CM-20
Overall Width (A)	55"	65"
Overall Depth (B)	52"	80"
Maximum Machine Height (C)	80"	80"
Door Width (D)	23"	30"
Console Height (E)	63"	63"
Electrical Cabinet Swing (F)	30.5"	30.5"

\* Requires some disassembly to meet these minimum dimensions. Contact factory for more information.

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Specifications subject to change without prior notice.