

# 4 Post Wax Injection Machine with Optional Shuttle Table

## Quality • Performance • Reliability

Cleveland Tool and Machine (CTM) produces a line of 4 post framed injection machines that range in sizes from 15 -150 tons with a die working area of 14-62", handling both paste/wax and ceramic slurry material (special sizes available upon request).

## Standard Features

### Injection System

- In-line injection system allows the material to be injected in a straight line from the injection chamber through the unique nozzle design and into the die. This ensures a smooth laminar flow that prevents turbulence.
- Three different injection control systems suited to the user's needs. All systems contain excellent temperature, pressure and flow control.
- Automatic purge of material after each cycle.
- Automatic material charge between cycles.
- Four zones of temperature control.

### Press

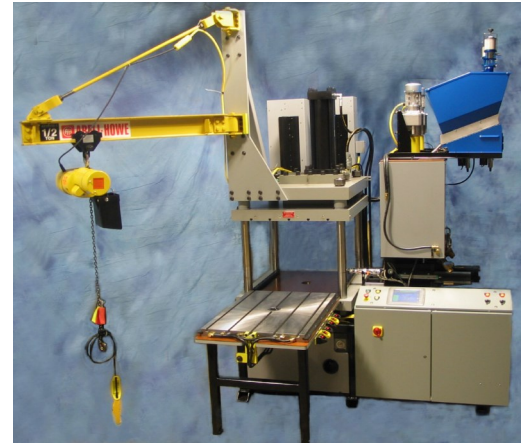
- Available with work table or shuttle table.
- T-slots on bottom and moving platen.
- Low oil level alarm/shutdown.
- High temperature alarm/shutdown.
- Ultra quiet pumping system.
- Independent platen cooling.

### Operator

- All functions on an easy-to-use touch screen interface in user's preferred language.
- Reduced operator fatigue due to ergonomic controls.
- Built to NFPA, ANSI and OSHA safety standards.

### Warranty

All machines carry a full 1 year warranty on all materials and workmanship.



CTM-WI-50-BI-MCC - 50 ton machine with shuttle table, bottom injection, movable clamp cylinder, advanced electronic injection control and jib crane and hoist.



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## PRODUCT DATA SHEET

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# 4 Post Wax Injection Machine with Optional Shuttle Table

## 4 Post Wax Injection Machine Specifications\*

Machine Model	CTM-15		CTM-25		CTM-50		CTM-100	
	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric
Clamp Force - Tons	0-15 ton		0-25 ton		0-50 ton		0-100 ton	
Press Closing Speed	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec
Press Opening Speed	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec	3 in/sec	7.62 cm/sec
Die Mounting	½ in T-slots		½ in T-slots		½ in T-slots		½ in T-slots	
Water Cooled Platens	Included		Included		Included		Included	
Material Holding Tank Capacity	15 gallon	57 liter	15 gallon	57 liter	30 gallon	114 liter	30 gallon	114 liter
Shot Size	100 cu in	1.6 liter	100 cu in	1.6 liter	346 cu in	5.6 liter	785 cu in	12.8 liter
Injection Pressure	0-800 PSI	0-41 BAR	0-800 PSI	0-41 BAR	0-800 PSI	0-41 BAR	0-800 PSI	0-41 BAR
Injection Flow Rate Maximum	15 cu in/sec	245 cc/sec	15 cu in/sec	245 cc/sec	15 cu in/sec	245 cc/sec	25 cu in/sec	425 cc/sec
Injection Cycle Time	0-999 sec		0-999 sec		0-999 sec		0-999 sec	
Nozzle Tip Size (Radius)	⅜ in	.95 cm	⅜ in	.95 cm	⅜ in	.95 cm	⅜ in	.95 cm
Heating System	120 volt- 4+ zones		120 volt- 4+ zones		120 volt- 4+ zones		120 volt- 4+ zones	
Hydraulic System Pressure	2600 PSI	179 BAR	2600 PSI	179 BAR	2600 PSI	179 BAR	3075 PSI	212 BAR
Hydraulic Pump Type	Press. Compensated		Press. Compensated		Press. Compensated		Press. Compensated	
Hydraulic Reservoir Capacity	15 gallon	57 liter	15 gallon	57 liter	20 gallon	74 liter	30 gallon	114 liter
Hydraulic Cooling System	Water Cooled		Water Cooled		Water Cooled		Water Cooled	
Min. Cooling Water Flow	3 GPM	11 LPM	3 GPM	11 LPM	3 GPM	11 LPM	3 GPM	11 LPM
Max. Cooling Water Temperature	80°F	27°C	80°F	27°C	80°F	27°C	80°F	27°C
Cooling Water Connection	½ in NPT		½ in NPT		½ in NPT		½ in NPT	
Standard Electric	460V 3Ph 60 HZ 20 @		460V 3Ph 60 HZ 30 @		460V 3Ph 60 HZ 30 @		460V 3Ph 60 HZ 30 @	
Air Pressure (If Required)	60-80 PSI	4.1-5.5 BAR	60-80 PSI	4.1-5.5 BAR	60-80 PSI	4.1-5.5 BAR	60-80 PSI	4.1-5.5 BAR

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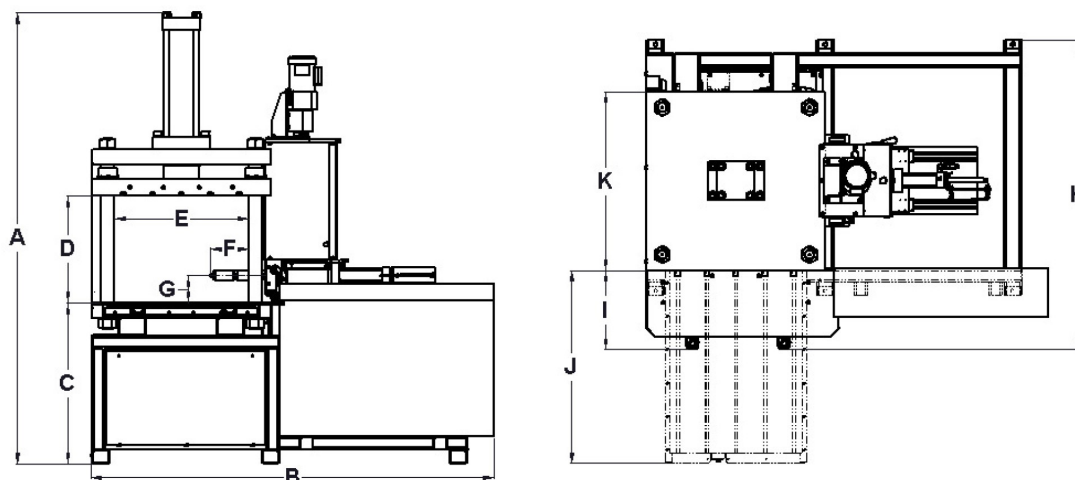
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Machine Model	CTM-15		CTM-25		CTM-50		CTM-100	
	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric
Approximate Weight	3500 lbs	2.45 kgs	5500 lbs	2500 kgs	9500 lbs	4318 kgs	21000 lbs	9525 kgs
A) Height	73.5 in	187 cm	89 in	226 cm	109 in	277 cm	117 in	297 cm
B) Width	65.5 in	166 cm	75 in	191 cm	91 in	231 cm	100 in	254 cm
C) Floor to Table	36 in	91 cm	36 in	91 cm	36 in	91 cm	36 in	91 cm
D) Press Open	14 in	36 cm	20 in	51 cm	30 in	76 cm	40 in	102 cm
E) Work Area-Width	3-14 in	8-36 cm	3-20 in	8-51 cm	3-24 in	8-61 cm	3-36 in	8-91 cm
F) Nozzle In/Out	0-8 in	0-20 cm	0-8 in	0-20 cm	0-8 in	0-20 cm	0-10 in	0-25 cm
G) Nozzle Up/Down	2-9.5 in	5-24 cm	2-9.5 in	5-24 cm	2-9.5 in	5-24 cm	2-14 in	5-35.5 cm
H) Depth	49 in	125 cm	55 in	140 cm	67.5 in	171 cm	80 in	203 cm
I) Work Table	15 in	38 cm	15 in	38 cm	15 in	38 cm	N/A	N/A
J) Shuttle Table	N/A	N/A	15 in	38 cm	40 in	102 cm	46 in	117 cm
K) Work Area-Depth	20.75 in	53 cm	27.5 in	70 cm	40 in	102 cm	48 in	122 cm

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## Optional Features

Wax Melters	Provide on-demand melted wax
Special Electrics	Other than 460VAC 3Ø 60Hz
Shuttle Table	Electro/Hydraulic actuated
Electronic Injection Control (EIC)	Gives precise control of pressure and flow plus many other features to enhance quality and productivity
Auto Die Clamp System	Electro/Hydraulic fast change system
Increased Capacity Injection System	30 gallon reservoir; 1-½, 3 or 5 gallon shot cylinder
Dual Injection Tanks	Quick change system – 15 or 30 gallon capacity each
Multiple Axis Nozzle	Electro/Hydraulic X-Y-Z movements
Bottom Injection	Centerline bottom platen with all controls
Paste Wax Maker	2 zone system for quality homogeneous paste wax
Pattern Ejection	Hydraulically actuated and timed ejection
Platen Temperature Control – Cool	Controls and valves; utilizes in-plant water system
Platen Temperature Control – Heat/Cool	Thermolator and all hookups; utilizes in-plant water system for any make up; cools and heats to 130 °F (54 °C)
CE Safety Systems	Built to comply with known CE standards and supplied with certificate of conformity and risk assessment
Special Press Size	Available per customer specification
Special Options & Designs	Designed and built to customer specifications



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