

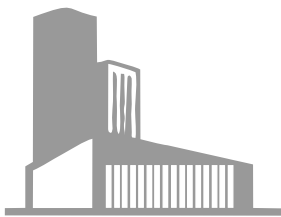
**30 TO 480 TONS
HORIZONTAL TOGGLE
INJECTION MOULDING
MACHINE**



Patidar Machine Tools (PMT) - was established in 2008. Created by **Mr. Dinesh Patel**, with over 30 years of experience in the field of **Injection Moulding**. PMT is located in an ultra-modern facility in **Vadodara, Gujarat**. PMT Established with the aim of manufacturing injection molding machines to process all thermoplastic material. The company was founded on the principles of innovation and technology, with a commitment to product and service excellence.

PMT has always been on the leading edge of new technologies and innovations and today our product range covers injection moulding applications requiring 30 to 480 tons of clamp force with efficiency, excellent productivity and high performance. When you're looking for the most reliable partner in injection moulding technology, look no further than PMT.

PMT is known for its Professionalism, Business Ethics, Superior Technology, Quality, Reliability & Commitment to After Sales Service.



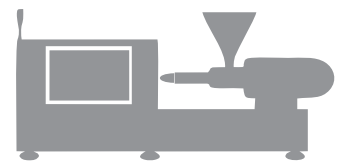
**SINCE
2008**



**10000 + 4000
SQ. FT. AREA**



**6+ COUNTRIES
EXPORTED**

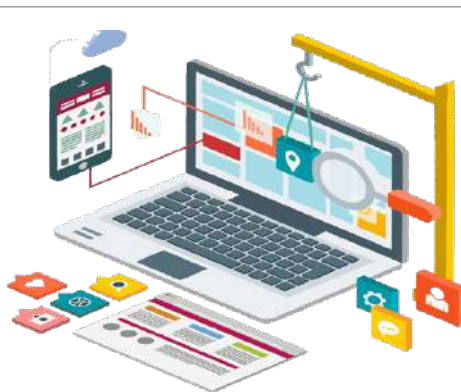


**500+
INSTALLATIONS**



MANUFACTURING

We have a very well experienced manpower for making all parts and mechanism to operates very smoothly and efficient. Our In-House Manufacturing of Critical Components like Valve Mounting Blocks (Hydraulic Manifold) & Hydraulic Cylinders which in turn results into Consistent Quality Components & Controlled Manufacturing Conditions.



DESIGNING

Our Designing department is highly advanced in terms of Engineering & Software which offers Advance Computer Simulations Viz Finite Element Analysis (FEA), Stress & Impact Load Analysis.



ASSEMBLY

Our Cellular Manufacturing Technique has resulted into Manufacturing & Process Excellence, which helps in Injection, Clamp, Hydraulics & Electrical + Electronics.

OUR PARTNERS

YUKEN

ARICO

Rexroth
Bosch Group

SETTIMA[®]
research & innovation, always

Schneider
Electric

PHASE
MOTION CONTROL

POLYCAB
WIRES & CABLES

Parker

ARCUCHI[®] n2s

THK
The Mark of Linear Motion

SIEMENS

INOVANCE

intermot

GEFRAN

C&S
electric

igus[®]

**PRECISION DRIVEN
BY GLOBAL PARTNERS**

Using only trusted
market-leading brands
for superior performance
and long-term reliability.





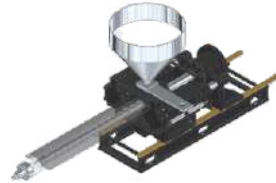
Robust Clamping Unit :

- Robust Integrated Casted 5 Point twin Toggle Clamping
- T-Slot for Easy Mold Change Over
- Automatic Mould adjustment & clamping
- Smooth mould opening
- Low pressure mould protection



Multi Stroke Ejector :

- Smooth & fast Ejection
- Fully guided multi stroke ejector
- Multi point ejector plate
- Ejector speed and pressure programmable in two stages.



Twin Cylinder Injection Unit on LM Guide :

- Injection unit on LM guide rail offers high rigidity, low friction movement
- Twin cylinder injection system ensure reliable and stable
- Uniform load distribution across screw centerline



Screw & Barrel

- The upgraded screw and barrel unit further optimizes color mixing and plasticizing efficiency & excellent melt homogeneity.
- Proven screw geometry & quality for long lasting & consistent performance.



Centralized Lubrication :

- Centralized automatic lubrication system (grease based) for low maintenance & extended toggle life & high efficiency.
- Ensures continuous & optimum lubrication to reduced friction
- Low pressure, min. level



INJECTION MOLDING SOLUTIONS
PMT

PID Temperature Control

- Closed loop PID Temperature control
- Provides precise & actual temperature status
- Thermocouple failure alarm



Automatic Mould Height:

- Fully Automatic mould adjustment & clamping
- Accurate Precise & Consistent Tonnage



Wide Guide for Platen Supports:

- Adjustable Wide guides for platen support
- Reduced platen deflection
- Enhanced life of tie-bars



Advance Precision user-friendly HMI :

- 8" Digital Touch Screen with 3 CPU Processors.
- Dual-core CPU + ASIC architecture
- User friendly HMI
- 120 mold data storage
- 1 year production graph & SPC memory



SERVO MOTOR

- Low energy consumption
- Precise control, Faster response
- Closed loop system
- Excellent consistency & repeatability
- Superior speed & pressure control
- Reduced noise level

TECHNICAL SPECIFICATIONS



Model		PMT-30			PMT-60			PMT-90			PMT-130		
Description	Unit	A	B	C	A	B	C	A	B	C	A	B	C
INJECTION UNIT													
Screw Diameter	mm	20	25	30	25	30	35	30	35	40	35	40	45
Screw L/D Ratio	L/D	25	20	17	24	20	17	23	20	17.5	22.5	20	18
Shot Volume	cm ³	39	61	88	70	105	144	141	192	251	240	314	397
Shot Weight (PS)	gms	31	48	70	56	84	115	112	153	200	192	251	317
Injection Pressure	bar	2560	1640	1150	2240	1570	1140	2160	1587	1215	2140	1875	1295
Injection Rate Into Air	cm ³ /s	26	40	58	46	70	96	56	76	100	96	125	158
Screw Stroke	mm		125			150			200			250	
Screw Speed Max.	rpm		300			300			275			250	
CLAMPING UNIT													
Locking Force	ton		30			60			90			130	
Tie Bars Distance	mm		205 x 255			305 x 305			365 x 365			425 x 425	
Platen Size (HxV)	mm		400 x 350			470 x 470			550 x 550			640 x 640	
Opening Stroke	mm		180			250			350			400	
Max. Mould Height	mm		300			325			400			450	
Min. Mould Height	mm		125			125			150			150	
Max. Day Light	mm		480			575			750			850	
Ejector Stroke	mm		50			65			90			110	
Ejector Force	ton		1.75			3.75			4.5			4.5	
Ejector Number	no.		1			1			5			5	
ELECTRICAL UNIT													
Pump Motor Power (Servo)	kw		8.5			11.5			17.5			17.5	
Heater Power	kw		3.5			5			7.5			11	
Total Power	kw		12			16.5			25			28.5	
Temperature Control Zone	no.		3			4			4			5	
GENERAL													
Oil Tank Capacity	L		150			160			200			300	
Machine Dim.(LxWxH)	M		3.5 x 0.85 x 1.2			4 x 1 x 1.35			4.5 x 1.2 x 1.5			5 x 1.3 x 1.65	
Machine Weight Appx.	Ton		2.3			2.8			3.5			4.3	
Hopper Capacity	L		15			25			25			35	

Model		PMT-170			PMT-200			PMT-225			PMT-280		
Description	Unit	A	B	C	A	B	C	A	B	C	A	B	C
INJECTION UNIT													
Screw Diameter	mm	45	50	55	50	55	60	55	60	65	60	65	70
Screw L/D Ratio	L/D	22	20	18	22	20	18	22	20	18	21.5	20	18.5
Shot Volume	cm ³	476	588	712	686	829	989	829	989	1160	989	1160	1346
Shot Weight (PS)	gms	380	470	548	545	663	791	663	791	928	791	928	1076
Injection Pressure	bar	2102	1702	1409	1883	1538	1307	1866	1558	1336	1950	1605	1440
Injection Rate Into Air	cm ³ /s	158	196	237	196	236	282	207	247	290	247	290	336
Screw Stroke	mm		300			350			350			350	
Screw Speed Max.	rpm		250			240			205			200	
CLAMPING UNIT													
Locking Force	ton		170			200			225			280	
Tie Bars Distance	mm		480 x 480			515 x 515			550 x 550			610 x 610	
Platen Size (HxV)	mm		715 x 715			785 X 785			830 x 830			880 x 880	
Opening Stroke	mm		450			480			525			560	
Max. Mould Height	mm		525			600			600			680	
Min. Mould Height	mm		200			200			200			250	
Max. Day Light	mm		975			1080			1125			1240	
Ejector Stroke	mm		130			150			175			200	
Ejector Force	ton		6			8			8			10	
Ejector Number	no.		16+1			16+1			16+1			16+1	
ELECTRICAL UNIT													
Pump Motor Power (Servo)	kw		23			28			28			41	
Heater Power	kw		12.9			14.1			18.6			18.6	
Total Power	kw		35.9			42.1			46.6			59.6	
Temperature Control Zone	no.		5			5			5			5	
GENERAL													
Oil Tank Capacity	L		400			450			450			500	
Machine Dim.(LxWxH)	M		5.5 x 1.35 x 1.8			6 x 1.4 x 1.8			6.5 x 1.5 x 1.8			6.8 x 1.6 x 1.8	
Machine Weight Appx.	Ton		5.5			6.2			7.5			9	
Hopper Capacity	L		50			50			75			75	

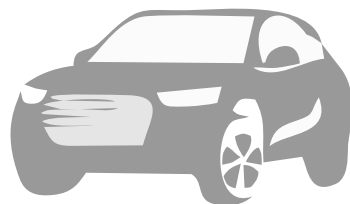
Note: Due to continuous improvement specifications are subject to change without prior notice.

Model		PMT-325			PMT-380			PMT-425			PMT-480		
Description	Unit	A	B	C	A	B	C	A	B	C	A	B	C
INJECTION UNIT													
Screw Diameter	mm	65	70	75	70	75	80	75	80	85	80	85	90
Screw L/D Ratio	L/D	21.5	20	18.5	21.5	20	18.5	21	20	18.5	21	20	18.5
Shot Volume	cm ³	1241	1442	1655	1538	1766	2009	1876	2135	2410	2260	2551	2861
Shot Weight (PS)	gms	992	1153	1324	1230	1412	1607	1500	1708	1928	1808	2040	2288
Injection Pressure	bar	1900	1600	1400	1850	1535	1295	1750	1550	1300	1750	1550	1300
Injection Rate Into Air	cm ³ /s	248	288	331	307	353	401	375	427	482	410	463	520
Screw Stroke	mm		375			400			425			450	
Screw Speed Max.	rpm		200			180			180			180	
CLAMPING UNIT													
Locking Force	ton		325			380			425			480	
Tie Bars Distance	mm		660 x 660			730 x 730			770 x 770			820 x 820	
Platen Size (HxV)	mm		960 x 960			1040 x 1040			1120 x 1120			1200 x 1200	
Opening Stroke	mm		660			720			770			830	
Max. Mould Height	mm		700			780			830			900	
Min. Mould Height	mm		250			250			300			300	
Max. Day Light	mm		1360			1500			1600			1730	
Ejector Stroke	mm		200			200			250			300	
Ejector Force	ton		10			10			15			15	
Ejector Number	no.		16+1			16+1			16+1			16+1	
ELECTRICAL UNIT													
Pump Motor Power (Servo)	kw		42			42			57			57	
Heater Power	kw		23.5			223.5			28			32	
Total Power	kw		65.5			65.5			85			89	
Temperature Control Zone	no.		6			6			6			6	
GENERAL													
Oil Tank Capacity	L		600			700			900			950	
Machine Dim.(LxWxH)	M		7.5 x 1.6 x 2.2			7.8 x 1.8 x 2.4			8 x 2 x 2.5			8.5 x 2.2 x 2.75	
Machine Weight Appx.	Ton		11			13			14.5			16.5	
Hopper Capacity	L		75			100			100			100	

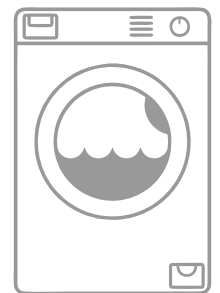
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APPLICATIONS

AUTOMOTIVE COMPONENTS



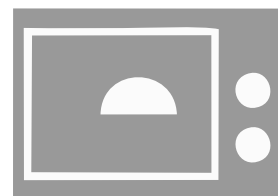
CONSUMER ELECTRONICS



FOOD PACKAGING



COSMETICS



HOUSEHOLD APPLIANCES

MEDICAL EQUIPMENT



TEXTILE INDUSTRY



PET PACKAGING

FEATURES

CLAMPING UNIT

- Low pressure mould protection
- Hard chrome plated tie bars
- Robust Integrated Casted 5 Point twin Toggle Clamping
- Wide guide for Moving platens Reduced platen deflection
Enhanced life of tie-bars
- T-Slot for Easy Mould Change Over
- Automatic & Accurate Mold Height Adjustment for Precise & Consistent Tonnage
- Five Stage Closing and Five Stage Mold Opening Speed & pressure control
- Linear Position Transducer for Accurate Clamping
- Automatic lubrication system (GREASE BASED)
- Position Based Ramping for Accurate Position Switching
- 1 set core Pulling System
- Hydro Electrical Guard Safety

EJECTOR

- Compulsory ejector back function
- Multi point/stroke Ejector. Knock-Out Bar
- 2 Stage Programmable forward & Retract speeds control
- Ejector forward Hold time
- Ejector vibration for multi stroke

INJECTION UNIT

- Twin Cylinder Injection System
- L M Guide (Linear motion guide) for injection unit movement
- Nozzle contact force by pressure switch
- 5 Stage Screw Speed & Pressure Control (Setting) through Screen
- Linear Position Transducer for Accurate Injection Position Control
- Suck Back (Before/After Refilling)
- RPM Indicator on Screen
- Lubricating System for Injection unit (Grease Based)
- Auto purge program
- High Torque Radial Piston Hydro Motor
- Adjustable back pressure control (Manual)
- Chequered Plate below Purge Area & platform

HMI

- 8" Digital Touch color monitor display
- Mould opening smooth function
- Password with Multi Level Setting
- Automatic lubrication after number of cycles
- Total production or running count
- 120 Mold Data Storage
- Statical process control (SPC) of Last 1 Year
- Graphically Presentation of Last 1 year Production

HYDRAULICS

- Energy Saving Variable Displacement Pump/Servo
- Accurate and precise manifold
- Smart and Self-designed hydraulic circuit
- Pump & Motor slide out from Base for Ease of Maintenance
- Valve Placed Near Actuators for Rapid Response
- Continuous Return oil filtration by return line filter
- Alarm for High/Low Oil Temperature
- Hydraulic Valve On / Off Indication

TEMPERATURE

- Accurate PID Temperature Control settable on HMI
- Ceramic energy saving heater bands
- High / Low Heater Temperature Alarm
- Thermocouple failure detection
- Oil Temperature High & Low control
- Auto Heat Startup & Shutdown

OTHERS

- Easy Slide Hopper
- 10 Point water manifolds
- Taper tray for easy product come out
- Heater Protective Cover
- Return Line Filter

OPTIONAL FEATURES

- Eject on fly
- Ejector on Linear Position Transducer based
- Product Drop (Photo) Sensor
- Back Pressure Control Settable on Screen
- BI Metallic/Chrome plating screw-barrel
- IOT System
- Water Battery with Temperature Indicator
- Energy Meter
- Double Core Pull
- Infrared Heater band
- Air Ejector – Single & Double
- Extra Power supply outlets
- Robot Interface Connectivity
- Ancillary Equipment's



INJECTION MOULDING SOLUTIONS
PMT
PATIDAR MACHINE TOOLS

📍 Unit 1: 799/B, G.I.D.C. Ind. Estate, Makarpura, Vadodara-390010, Gujarat.

📍 Unit 2: I-398, G.I.D.C. Ind. Estate, Makarpura, Vadodara-390010, Gujarat.

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