SPECIFICATION SHEET · PET-220

220 TON PET INJECTION MOULDING MACHINE

Mould clamping force 225 Tons, two screw options from 55 to 60 mm, max. shot weight 513 to 610 gms (PS).

225 Tons
MOULD CLAMPING FORCE

513 to 610 gms
MAX. SHOT WEIGHT (PS)

55 / 60 mm
SCREW DIAMETER OPTIONS

580 x 560 mm
SPACE BETN. TIE BARS H X V

1100 mm
MAX. DAY LIGHT OPENING

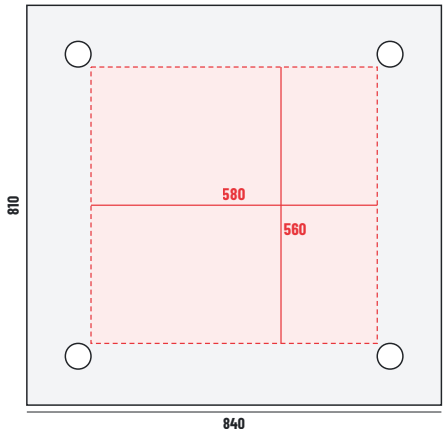
45.4 KW
TOTAL CONNECTED LOAD

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION	UNIT	SCREW A	SCREW B
LOCKING UNIT			
Mould Clamping Force	Tons	225	
Mould Clamping Stroke	mm	500	
Mould Thickness - Min - Max.	mm	200-600	
Max. Day Light Opening	mm	1100	
Space Betn. Tie Bars - H x V	mm	580 x 560	
Platen Size	mm	840 x 810	
HYDRAULIC EJECTOR			
Ejector Stroke	mm	125	
Ejector Force	Tons	7.5	
INJECTION UNIT			
Screw Diameter	mm	55	60
Screw L/D Ratio		18:1	16.5:1
Max. Swept Volume	Cub.cm	570	678
Max. Shot Weight (PS)	gms	513	610
Max. Injection Pressure	Kg/cm2	1674	1406
Rate Of Injection	cc/sec	188	224
Screw Speed	rpm	250	
Nozzle Force	Tons	4.7	
GENERAL (125 LPM)			
Servo Motor	KW	30	
Heating Capacity	KW	15.4	
Total Connected Load	KW	45.4	
Tank Capacity	Ltrs	500	
Machine Weight	Tons	9	
Floor Space (L X W X H)	Mtr.	5.8 X 1.65 X 2.1	

Screw A and Screw B are alternative injection unit configurations. Locking unit, ejector and general values apply to both. Shot weight is stated for PS.

WILL YOUR MOULD FIT?



Platen schematic in mm. Tie-bar diameter is not shown; drawing not to scale.

SPACE BETN. TIE BARS H X V	PLATEN SIZE
580 x 560 mm	**840 x 810** mm
MOULD THICKNESS	**MOULD CLAMPING STROKE**
200-600 mm	**500** mm
MAX. DAY LIGHT OPENING	**EJECTOR STROKE**
1100 mm	**125** mm

MOULD AND PART FIT WORKSHEET

Fill in your values before an enquiry. Discuss anything close to a limit with us.

CHECK	PET-220 LIMIT	WHAT TO CONFIRM	YOUR MOULD OR PART	OK
Mould width, height	580 x 560 mm	Fits between tie bars for loading		
Mould plate size	840 x 810 mm platen	Mould clamps fit on the platen		
Mould thickness (closed)	200-600 mm	Closed mould height in range		
Opening for removal	500 stroke, 1100 day light mm	Part and runner clear when open		
Ejection	125 mm, 7.5 Tons	Travel and force the mould needs		
Shot (parts + runner)	513 (A) / 610 (B) gms PS	Other materials: Calculation Guide		
Injection pressure	1674 (A) / 1406 (B) Kg/cm2	Pressure the part needs		
Clamping force	225 Tons	From projected area: Calculation Guide		

CHOOSING BETWEEN THE SCREW OPTIONS

SCREW OPTION	A · 55 MM	B · 60 MM
Max. Swept Volume Cub.cm	570	678
Max. Shot Weight (PS) gms	513	610
Max. Injection Pressure Kg/cm2	1674	1406
Rate Of Injection cc/sec	188	224
Screw L/D Ratio	18:1	16.5:1

The smaller screw gives higher injection pressure and a smaller shot. The larger screw gives a larger shot and a higher rate of injection at lower pressure.

INSTALLATION AND UTILITIES

ITEM	UNIT	VALUE
Total connected load	KW	45.4
Heating capacity	KW	15.4
Servo motor	KW	30
Tank capacity (oil fill)	Ltrs	500
Machine weight	Tons	9
Floor space (L X W X H)	Mtr.	5.8 X 1.65 X 2.1

SITE CHECKS BEFORE INSTALLATION

- ☐ Power supply for the connected load
- ☐ Hydraulic oil for the first tank fill
- ☐ Cooling water for oil cooler and mould
- ☐ Foundation for the machine weight
- ☐ Lifting for unloading and mould changes
- ☐ Space for robot, conveyor and dryer

Confirm these details with Pratishna Engineers before delivery.

READING THIS SPECIFICATION SHEET

TERM	WHAT IT MEANS
Screw diameter	Injection screw size. A smaller screw gives more pressure, a smaller shot.
Screw L/D ratio	Flighted length over diameter. Affects melting and mixing.
Swept volume	Screw area times injection stroke: largest melt volume per shot.
Shot weight (PS)	Swept volume as a weight of PS. Other materials differ.
Injection pressure	Highest melt pressure the injection unit can apply.
Rate of injection	Melt volume per second. Matters for thin walls and long flows.
Screw speed · nozzle force	Max. screw rotation in recovery · force of nozzle on sprue bush.

TERM	WHAT IT MEANS
Mould clamping force	Force keeping the mould closed against injection pressure.
Clamping stroke	Opening travel of the moving platen.
Mould thickness	Range of closed mould heights the clamp accepts.
Max. day light	Largest gap between fixed and moving platens.
Space betn. tie bars	Clear gap between tie bars. Limits mould size.
Servo motor · heating	Rated servo motor power · barrel and nozzle heater power.
Total connected load	For power supply planning: servo motor plus heating.

OTHER MODELS IN THE PET SERIES

MODEL	PET-75	PET-100	PET-125	PET-150	PET-180	PET-220	PET-260
Mould clamping force (Tons)	75	100	120	140	165 / 180	**225**	250
Max. shot weight PS (gms)	82 to 116	126 to 151	151 to 178	186 to 243	249 to 315	**513 to 610**	661 to 776

Shot weight ranges cover the screw options of each model. Click a model for its page.

WHAT TO SEND FOR A MACHINE RECOMMENDATION

- ☐ Part drawing (2D and 3D CAD)
- ☐ Material and grade
- ☐ Part weight and runner weight
- ☐ Projected area of parts and runner
- ☐ Wall thickness and flow length
- ☐ Number of cavities
- ☐ Mould size (W X H X thickness) and weight
- ☐ Hot runner, core pulls or unscrewing
- ☐ Target cycle time and monthly volume
- ☐ Automation: robot, conveyor, dryer

PRATISHNA ENGINEERS

Mumbai-based injection moulding machine manufacturer with in-house design, manufacturing, assembly, testing and service, supplying India and international markets.

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1,000+ CUSTOMERS

In-house DESIGN TO SERVICE

RELATED RESOURCES

PET INJECTION MOULDING MACHINE BROCHURE
https://pratishnaengineers.com/resources/pet-injection-moulding-machine-brochure/

CLAMPING FORCE & SHOT-SIZE CALCULATION GUIDE
https://pratishnaengineers.com/resources/clamping-force-and-shot-size-calculation-guide/

SEND YOUR PART AND MOULD DETAILS FOR A MACHINE RECOMMENDATION

enquiry@pratishnaengineers.com · +91-22-66970281 / 82 · www.pratishnaengineers.com
A1-4, Vaibhav Ind. Premises, Opp. Oxford Chambers, Saki Vihar Road, Andheri (E), Mumbai 400 072, India

SPECIFICATION NOTE

Specifications are indicative and are based on Pratishna Engineers' standard machine configuration at the date of issue. Values may change with screw, barrel, mould and optional equipment choices, and are subject to change without notice as part of continuous product development. Shot weight is stated for polystyrene (PS). This sheet does not constitute a quotation, warranty or contractual commitment. Final specifications are confirmed only in Pratishna Engineers' written quotation and order acknowledgement.