SPECIFICATION SHEET · E-75

75 TON HORIZONTAL INJECTION MOULDING MACHINE (E SERIES)

Mould clamping force 75 Tons, two screw options from 27 to 32 mm, max. shot weight 82 to 116 gms (PS).

75 Tons — MOULD CLAMPING FORCE

82 to 116 gms — MAX. SHOT WEIGHT (PS)

27 / 32 mm — SCREW DIAMETER OPTIONS

350 X 323 mm — SPACE BETN. TIE BARS H X V

625 mm — MAX. DAY LIGHT OPENING

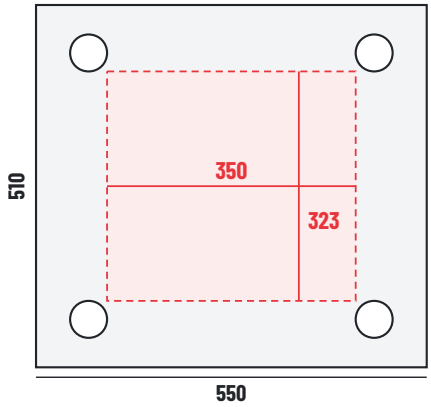
17.5 KW — TOTAL CONNECTED LOAD

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION	UNIT	SCREW A	SCREW B
INJECTION UNIT			
Screw Diameter	mm	27	32
Screw L/D Ratio		18:1	18:1
Max. Swept Volume	Cub.cm	92	129
Max. Shot Weight (PS)	gms	82	116
Max. Injection Pressure	Kg/cm2	2500	1780
Rate Of Injection	cc/sec	50	70
Screw Speed	rpm	300	300
Nozzle Force	Tons	2.9	2.9
LOCKING UNIT			
Mould Clamping Force	Tons	75	
Mould Clamping Stroke	mm	275	
Mould Thickness - Min - Max.	mm	150 - 350	
Max. Day Light Opening	mm	625	
Space Betn. Tie Bars - H X V	mm	350 X 323	
Platen Size	mm	550 X 510	
HYDRAULIC EJECTOR			
Ejector Stroke	mm	75	
Ejector Force	Tons	3.6	
GENERAL			
Servo Motor	KW	10.5	
Heating Capacity	KW	7.0	
Total Connected Load	KW	17.5	
Tank Capacity	Ltrs	180	
Machine Weight	Tons	2.35	
Floor Space (L X W X H)	Mtr.	3.8 X 1.25 X 1.5	

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 **350 X 323** mm	PLATEN SIZE **550 X 510** mm
MOULD THICKNESS **150 - 350** mm	MOULD CLAMPING STROKE **275** mm
MAX. DAY LIGHT OPENING **625** mm	EJECTOR STROKE **75** mm

MOULD AND PART FIT WORKSHEET

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

CHECK	E-75 LIMIT	WHAT TO CONFIRM	YOUR MOULD OR PART	OK
Mould width, height	350 X 323 mm	Fits between tie bars for loading		
Mould plate size	550 X 510 mm platen	Mould clamps fit on the platen		
Mould thickness (closed)	150 - 350 mm	Closed mould height in range		
Opening for removal	275 stroke, 625 day light mm	Part and runner clear when open		
Ejection	75 mm, 3.6 Tons	Travel and force the mould needs		
Shot (parts + runner)	82 (A) / 116 (B) gms PS	Other materials: Calculation Guide		
Injection pressure	2500 (A) / 1780 (B) Kg/cm2	Pressure the part needs		
Clamping force	75 Tons	From projected area: Calculation Guide		

CHOOSING BETWEEN THE SCREW OPTIONS

SCREW OPTION	A · 27 MM	B · 32 MM
Max. Swept Volume Cub.cm	92	129
Max. Shot Weight (PS) gms	82	116
Max. Injection Pressure Kg/cm2	2500	1780
Rate Of Injection cc/sec	50	70
Screw L/D Ratio	18:1	18:1

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	17.5
Heating capacity	KW	7.0
Servo motor	KW	10.5
Tank capacity (oil fill)	Ltrs	180
Machine weight	Tons	2.35
Floor space (L X W X H)	Mtr.	3.8 X 1.25 X 1.5

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 E SERIES

MODEL	E-75	E-100	E-125	E-150	E-165	E-180
Mould clamping force (Tons)	**75**	100	120	140	165 / 180	165 / 180
Max. shot weight PS (gms)	**82 to 116**	126 to 151	151 to 178	186 to 243	249 to 315	249 to 315

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

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RELATED RESOURCES

E SERIES CATALOGUE
https://pratishnaengineers.com/resources/e-series-catalogue/

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

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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.