

THE FACTORY AUTOMATION COMPANY

FANUC

Perfectly automated  
injection moulding with the

**NEW**

**FANUC ROBOSHOT**

*α-S450iA*



**4500**  
kN  
Clamping force

2 injection units with  
7 screw sizes with up to  
**2827**  
cm<sup>3</sup>  
Injection  
volume

**920 x 920**  
mm  
Tie bar distance

**1000**  
mm  
die height



## FANUC ROBOSHOT

HIGH-PRECISION ELECTRICAL INJECTION MOULDING

- maximum precision
- proven reliability
- excellent repeatability
- optimum process control
- extremely short cycle times

[WWW.FANUC.EU/ROBOSHOT](http://WWW.FANUC.EU/ROBOSHOT)

# α-S450iA Mechanical specifications

Clamping unit					
Clamping mechanism	Double toggle ●				
Tonnage [kN   tonf]	4500   450 (Option 5000   500)				
Maximum and minimum die height Doubleplaten [mm]	1000/350				
Maximum and minimum die height Singleplaten [mm]	-				
Clamping stroke [mm]	900				
Locating ring diameter [mm]	φ200				
Tie bar spacing, HxV [mm]	920x920				
Platen size, HxV [mm]	1300x1300				
Minimum mould size, HxV [mm] *1	535x535				
Ejector stroke [mm]	250				
Maximum ejector force [kN   tonf]	150   15.0				
Small Capacity Injection Model					
Injection unit					
Screw diameter [mm]	56	64	68	72*6	
Injection stroke [mm]	260	260	260	260	
Max. injection volume [cm <sup>3</sup> ]	640	836	944	1059	
Nozzle touch force [kN   tonf]	30   3.0				
<b>Max. Injection Speed mm/s</b> *3	<b>200 (High duty)</b> *7				
Max. injection pressure [MPa] *2	225	175	155	135	
Max. pack pressure [MPa] *2	195	150	130	120	
Max. injection rate [cm <sup>3</sup> /s] *3	493	643	726	814	
Max. screw rotation speed [min <sup>-1</sup> ]	400			300	
<b>Max. Injection Speed mm/s</b> *3	<b>240</b>				
Max. injection pressure [MPa] *2	225	175	155	135	
Max. pack pressure [MPa] *2	195	150	130	120	
Max. injection rate [cm <sup>3</sup> /s] *3	591	772	872	977	
Max. screw rotation speed [min <sup>-1</sup> ]	400			300	
Screw and Barrel					
Number of heater [Barrel]	4				
Number of heater [Nozzle]	1				
Total heater wattage [kW]	23.9	27.2	27.8	27.2	
Machine weight [t] *4	≈ 24				
Standard Model					
Injection unit					
Screw diameter [mm]	68	72	80	90	100
Injection stroke [mm]	260	260	360	360	360
Max. injection volume [cm <sup>3</sup> ]	944	1059	1810	2290	2827
Nozzle touch force [kN   tonf]	30   3.0				
<b>Max. Injection Speed mm/s</b> *3	<b>180</b>				
Max. injection pressure [MPa] *2	280	280	250	200	160
Max. pack pressure [MPa] *2	280	250	200	160	130
Max. injection rate [cm <sup>3</sup> /s] *3	654	733	905	1145	1414
Max. screw rotation speed [min <sup>-1</sup> ]	200				
Screw and Barrel					
Number of heater [Barrel]	Nozzle adaptor 1 + Barrel 4				
Number of heater [Nozzle]	1				
Total heater wattage [kW]	29.1	31.3	33.9	37.9	41.1
Machine weight [t] *4	≈ 29.7				

● standard - not available ( ) with hardware and/or software option

\*1) Smaller mould than this size may limit clamp force.

\*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

- The maximum injection pressure and maximum pack pressure is the maximum value can be set.
- The maximum injection pressure and maximum pack pressure might be limited depending on the moulding condition.

\*3) Maximum injection rate and maximum injection speed is a theoretical value.

- Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

\*4) The machine without option.

\*5) The pressure conversion is 1MPa=10kgf/cm<sup>2</sup>.

\*6) The moulding condition might be limited by the resin. Contact sales for detail.

\*7) 200mm/s specification (High duty) is recommended for high viscosity resin molding or longer injection/pack process molding. Please contact sales for details.