FANUC

Highly-Reliable High-performance
Electric Injection Molding Machine

ROBOSHOT SC series

S180C
S280C
S350C

https://www.fanuc.co.jp/

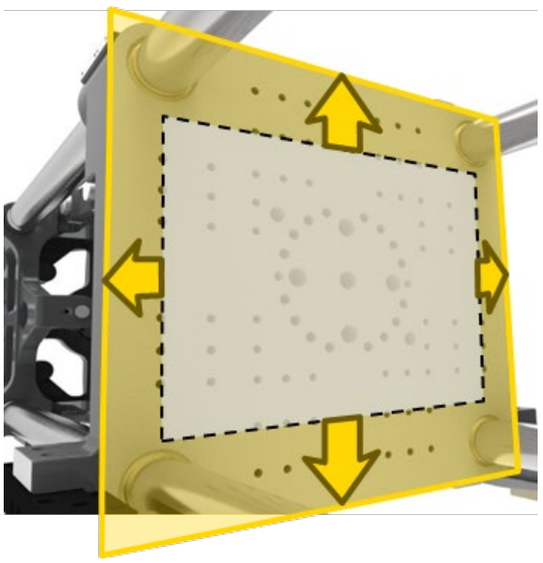
Fusion of Superior control and Evolved clamp mechanism

ROBOSHOT SC series

Evolved clamp mechanism

Champion

The highly reliable and proven high-rigidity clamping unit. Significantly expanded tie bar spacing and clamping stroke.



Expanded **Tie bar spacing**
makes available for bigger mold
more than previous model

H50 mm expanded

α-S150iB W560 H510

S180C W560×H560

W20×H95 mm expanded

α-S250iB W710 H635

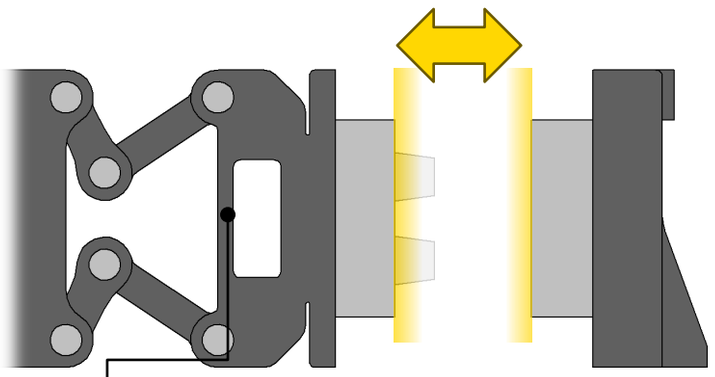
S280C W730×H730

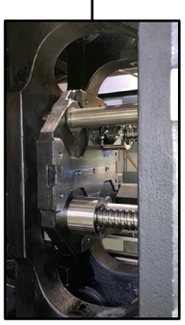
W20×H120 mm expanded

α-S300iB W810 H710

S350C W830×H830

Renewed ejector mechanism design , greatly improving accessibility.





Expanded space
around the ejector.

Make it easier to install and remove
ejector pins and sensors and
comfortable for maintenance work.

Extended **Clamp open/close stroke**
makes available for
deeper molding products
and bigger mold

10 mm expanded

α-S150iB ~~440mm~~

S180C 450mm

30 mm expanded

α-S250iB ~~600mm~~

S280C 630mm

130 mm expanded

α-S300iB ~~600mm~~

S350C 730mm

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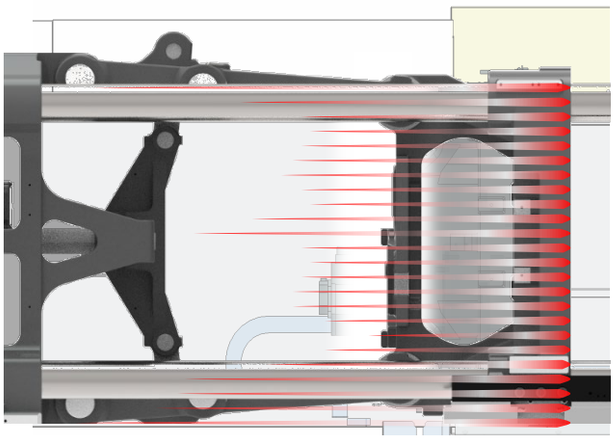
ROBOSHOT SC series

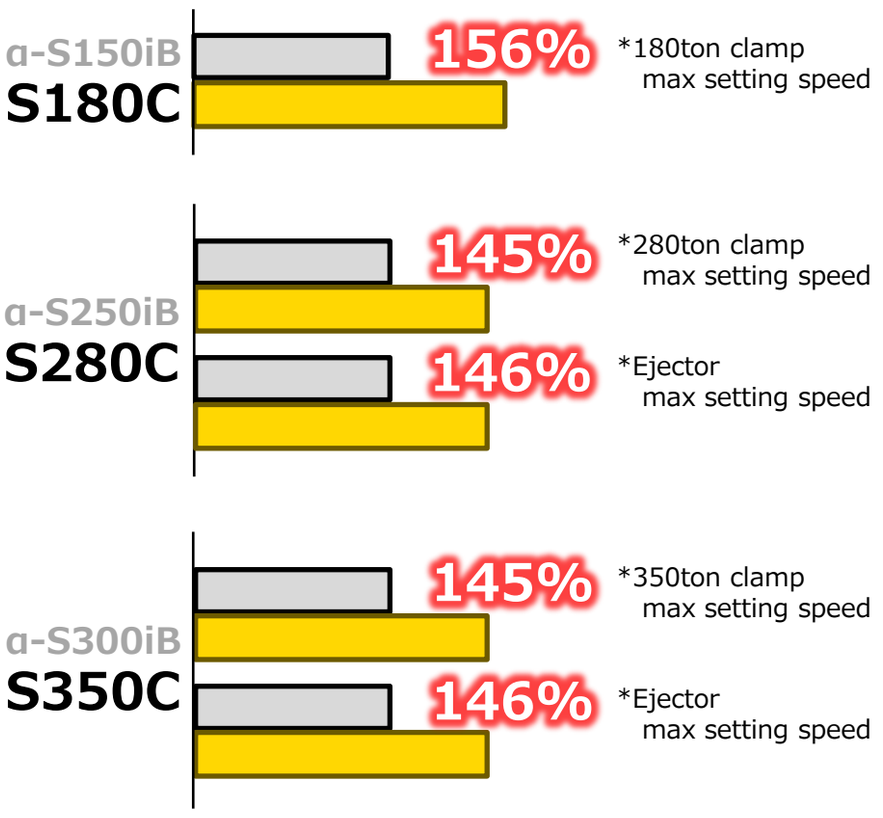
High speed operation to improve productivity

Creative

Faster opening/closing and ejector speed reduce cycle time.
Clamp force adjustment in cycle and minimum clamp force detecting function are equipped as standard. These realize high level productivity.

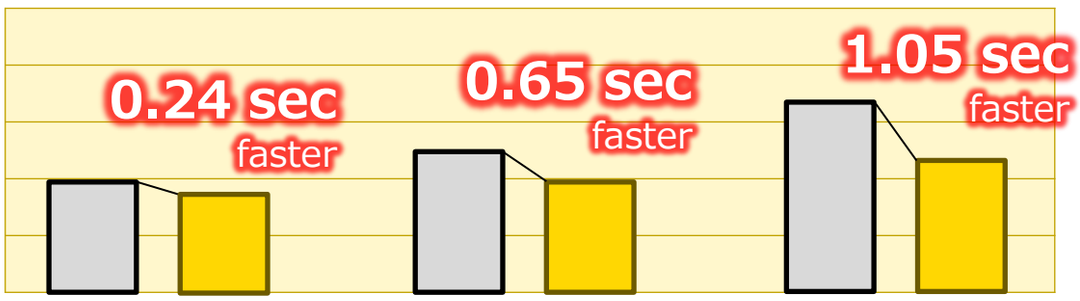


Increased
the speed of clamp and ejector



Clamping force sensor is equipped as standard.
Actual clamping force is on display, clamping force auto adjustment during operation, minimum clamping force detection are available. High-speed and precise mold opening and closing utilizing various standard functions greatly improve production efficiency.

Significantly reduced
Euromap6 dry cycle time



α-S150iB **S180C**
*Comparison
with 180 ton model

α-S250iB **S280C**
*Comparison
with 250 ton model

α-S300iB **S350C**
*Comparison
with 350 ton model

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ROBOSHOT SC series

New environmental act on innovative ideas Cutting-edge

FANUC, a pioneer of electric injection molding that has worked to reduce power consumption advocates the next generation sustainability and breaking new ground in energy conservation.

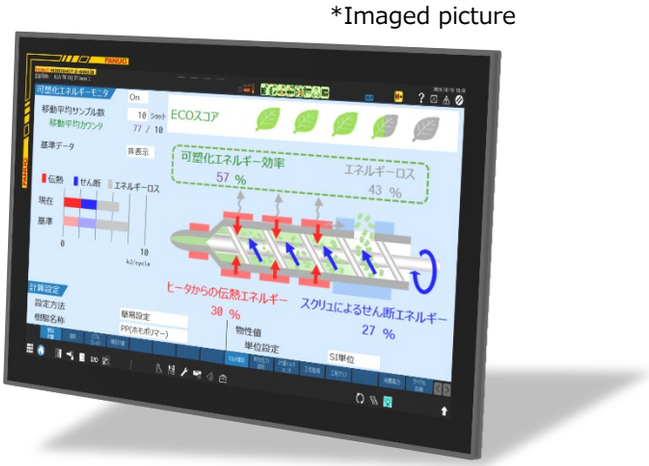
Plasticizing energy monitor

The energy balance consumed in material plasticizing is classified into three categories
"Heat transfer" "Shear," and "Energy loss"

By referring to the displayed ratios, it is possible to adjust the molding conditions to obtain the optimal setting according to the type of resin and molding.

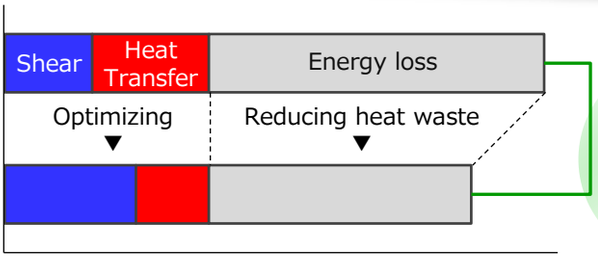
Heat loss from outer surface of the heater and feeding point also be able to quantitatively measured.

*Imaged picture



Barrel temperature auto adjustment

The machine monitors the plasticizing condition.
Adjusts the heater temperature to reduce energy loss so that it reduces power consumption.

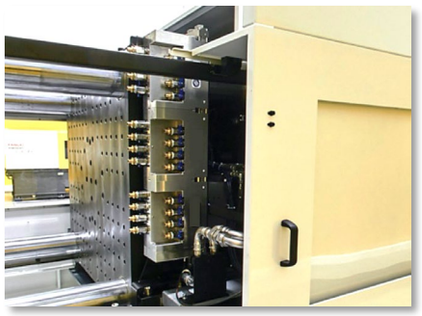


Energy consumption of plasticizing process
▲12.9 %
※PBT test piece

Variety of options capable for several applications Capable

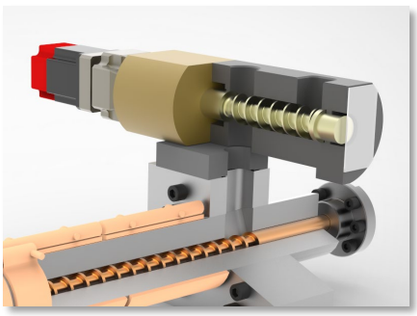
In addition to wide range of standard features, many options are available.
These satisfy requirements needed for various applications, improve quality and add higher value to molding products.

Extended guarding



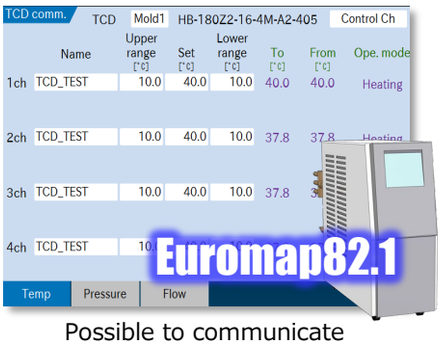
Possible to tidy the wiring route to peripheral devices
*providing space for users to freely design and implement internal piping and manifolds.

Servo feeding device



Possible to control material feeding amount to assist gas evacuation

Mold temperature control device



Possible to communicate with MTCD via OPC UA

ROBOSHOT can be used in variety of molding industries. In addition to general options such as water piping manifolds and external outlet, we offer many options that incorporate FANUC's technologies such as high-speed clamp, high-pressure injection, additional servo axis core control, and OPC UA compatible communication interfaces.

FANUC servo technology
- High Speed Clamp
- High Pressure Injection
- Additional Servo Axis Control

Peripheral devices connect
- OPC UA
- Robot I/F
- Automatic Mood Clamp I/F

Special material molding
- Multi Component Molding
- LSR
- Thermoset Molding

*These are just a few examples. Please feel free to contact us for more information.

Major specification

	Item	Unit	ROBOSHOT S180C																			
Clamp unit	Maximum clamp force	kN	1800																			
	Max-Min die height double platen	mm	600-200 (Max die height change option 500-200)																			
	Max-Min die height single platen	mm	675-275 (Max die height change option 575-275)																			
	Mold open stroke	mm	450																			
	Tie bae spacing W×H	mm	560×560																			
	Platen size W×H	mm	800×800																			
	Ejector force/stroke (No.'s)	kN/mm	35/150 (5)																			
Injection unit	Screw diameter	mm	22	26	28	32	36	40	44	32	36	40	44	48	52	32	36	40	44	48	52	56
	Maximum injection volume	cm^3	29	50	58	103	147	181*	243	121	153	188	268	318	442	121	153	188	268	318	442	640
	Injection unit type		B330S							B710						B900S						
	Max inj. pressure (High prs. mode)	MPa	340	---	---	---	---	---	---	380	345	---	---	---	---	---	---	---	---	---	---	---
	Max inj. pressure (W/C)	MPa	290	260	220	170	---	---	---	310	310	280	240	190	160	300	240	190	---	---	---	---
	Max inj. pressure (General)	MPa	260	260	220	170	---	---	---	280	280	260	220	190	160	280	240	190	---	---	---	---
	Max injection speed	mm/s	550							350						500						
	Max screw rotation speed	min^{-1}	450							400						400						
	Injection unit type		B330							B710G						B900						
	Max inj. pressure (High prs. mode)	MPa	340	340	320	270	220	---	---	380	330	---	---	---	---	380	345	---	---	---	---	---
	Max inj. pressure (W/C)	MPa	290	290	270	250	190	160	---	310	310	260	220	190	160	310	310	280	240	190	160	140
	Max inj. pressure (General)	MPa	260	260	240	220	190	160	---	280	280	260	220	190	160	280	280	260	220	190	160	140
	Max injection speed	mm/s	350							200						350						
	Max screw rotation speed	min^{-1}	450							300						400						
	Injection unit type		B330D							B710D						B1100P						
	Max inj. pressure (High prs. mode)	MPa	---	---	---	270	220	---	---	380	345	---	---	---	---	380	345	320	280	---	---	---
	Max inj. pressure (W/C)	MPa	---	---	---	250	200	180	---	310	310	280	240	190	160	310	310	280	260	230	200	172
	Max inj. pressure (General)	MPa	---	---	---	220	200	180	---	280	280	260	220	190	160	280	280	280	260	230	200	172
	Max injection speed	mm/s	200							280						280						
	Max screw rotation speed	min^{-1}	450							400						400						
	Injection unit type		B430																			
	Max inj. pressure (High prs. mode)	MPa	---	---	---	---	---	---	---													
	Max inj. pressure (W/C)	MPa	---	---	---	290	260	210	170													
	Max inj. pressure (General)	MPa	---	---	---	230	220	210	170													
	Max injection speed	mm/s	350																			
	Max screw rotation speed	min^{-1}	450						400													

	Item	Unit	ROBOSHOT S280C																					
Clamp unit	Maximum clamp force	kN	2800																					
	Max-Min die height	mm	750-300 (Max die height change option 650-300)																					
	Mold open stroke	mm	630																					
	Tie bae spacing W×H	mm	730×730																					
	Platen size W×H	mm	1050×1050																					
	Ejector force/stroke (No.'s)	kN/mm	80/220 (13)																					
Injection unit	Screw diameter	mm	22	26	28	32	36	40	44	32	36	40	44	48	52	56	40	44	48	52	56	64	68	72
	Maximum injection volume	cm^3	29	50	58	103	147	181*	243	121	153	188	268	318	442	640	188	268	318	442	640	836	944	1059
	Injection unit type		B330S							B900S							B1600							
	Max inj. pressure (High prs. mode)	MPa	340	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Max inj. pressure (W/C)	MPa	290	260	220	170	---	---	---	300	240	190	---	---	---	---	280	280	270	240	225	175	155	135
	Max inj. pressure (General)	MPa	260	260	220	170	---	---	---	280	240	190	---	---	---	---	280	280	270	240	225	175	155	135
	Max injection speed	mm/s	550							500							270							
	Max screw rotation speed	min^{-1}	450							400							400							300
	Injection unit type		B330							B900							B1600D							
	Max inj. pressure (High prs. mode)	MPa	340	340	320	270	220	---	---	380	345	---	---	---	---	---	---	---	---	---	---	---	---	---
	Max inj. pressure (W/C)	MPa	290	290	270	250	190	160	---	310	310	280	240	190	160	140	280	280	270	240	225	175	155	135
	Max inj. pressure (General)	MPa	260	260	240	220	190	160	---	280	280	260	220	190	160	140	280	280	270	240	225	175	155	135
	Max injection speed	mm/s	350							350							240							
	Max screw rotation speed	min^{-1}	450							400							400							300
	Injection unit type		B430							B1100P														
	Max inj. pressure (High prs. mode)	MPa	---	---	---	---	---	---	---	380	345	320	280	---	---	---								
	Max inj. pressure (W/C)	MPa	---	---	---	290	260	210	170	310	310	280	260	230	200	172								
	Max inj. pressure (General)	MPa	---	---	---	230	220	210	170	280	280	280	260	230	200	172								
	Max injection speed	mm/s	200							280														
	Max screw rotation speed	min^{-1}	450						400	400														

Note : When high pressure filling mode is used, a special cylinder is needed.
Maximum injection pressure and maximum pack pressure are the maximum values that can be set. Maximum pack pressure is equal to maximum injection pressure.
Maximum injection pressure and maximum pack pressure may vary depends on the installed screw and cylinder specifications.
Molding conditions may be restricted depending on the screw diameter.
For details, please refer a separated documentation "list of specifications".
* : B430 specification with screw diameter of φ40 is selected, the maximum injection volume is 201cm³.

Major specification

	Item	Unit	ROBOSHOT S350C																		
Clamp unit	Maximum clamp force	kN	3500																		
	Max-Min die height	mm	750-300 (Max die height change option 650-300)																		
	Mold open stroke	mm	730																		
	Tie bae spacing W×H	mm	830×830																		
	Platen size W×H	mm	1150×1150																		
	Ejector force/stroke (No.'s)	kN/mm	80/220 (13)																		
Injection unit	Screw diameter	mm	32	36	40	44	48	52	56	40	44	48	52	56	64	68	72	64	68	72	80
	Maximum injection volume	cm^3	121	153	188	268	318	442	640	188	268	318	442	640	836	944	1059	901	1090	1303	1608
	Injection unit type		B900S							B1600								B2400			
	Max inj. pressure (High prs. mode)	MPa	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Max inj. pressure (W/C)	MPa	300	240	190	---	---	---	---	280	280	270	240	225	175	155	135	220	200	185	150
	Max inj. pressure (General)	MPa	280	240	190	---	---	---	---	280	280	270	240	225	175	155	135	220	200	185	150
	Max injection speed	mm/s	500							270								160			
	Max screw rotation speed	min^{-1}	400							400							300	400		300	200
	Injection unit type		B900							B1600D											
	Max inj. pressure (High prs. mode)	MPa	380	345	---	---	---	---	---	---	---	---	---	---	---	---	---				
	Max inj. pressure (W/C)	MPa	310	310	280	240	190	160	140	280	280	270	240	225	175	155	135				
	Max inj. pressure (General)	MPa	280	280	260	220	190	160	140	280	280	270	240	225	175	155	135				
	Max injection speed	mm/s	350							240											
	Max screw rotation speed	min^{-1}	400							400							300				
	Injection unit type		B1100P																		
	Max inj. pressure (High prs. mode)	MPa	380	345	320	280	---	---	---												
	Max inj. pressure (W/C)	MPa	310	310	280	260	230	200	172												
	Max inj. pressure (General)	MPa	280	280	280	260	230	200	172												
	Max injection speed	mm/s	280																		
	Max screw rotation speed	min^{-1}	400																		

Note : When high pressure filling mode is used, a special cylinder is needed.
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Maximum injection pressure and maximum pack pressure may vary depends on the installed screw and cylinder specifications.
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* : B430 specification with screw diameter of φ40 is selected, the maximum injection volume is 201cm³.

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