

### Discover the new all electric plastic injection moulding machine

**ROBOSHOT**  $\alpha$ -SiB series - Highest precision, repeatability and reliability.



Like all of the FANUC ROBOSHOT machines, the  $\alpha$ -SiB Series offers proven power, quality and reliability. It offers numerous upgrades for companies looking for a plastic injection moulding machine with the most flexibility with lower overall life cycle costs, increased productivity, high precision and overall business success.









#### **Highlights:**

- High-performance FANUC PANEL *i*H Pro user interface, which features a large 21.5" display with full HD resolution
- Quicker set-ups, improved graphics and data viewing
- Seamless integration of plug-and-play FANUC robots
- Wide screen multi functional display with pinch and swipe functionality
- Fully conforms to ISO 20430, the international safety standard for injection moulding machines
- Increased data storage, event logging history and connectivity comes as standard
- Enhanced AI functions for predictive check valve assembly wear

WWW.FANUC.EU

### ROBOSHOT $\alpha$ -SiB series

### Technical data summary & overview

Specifications	α-S15 <i>i</i> B	α-S30 <i>i</i> B	α-S50 <i>i</i> B	α-S100 <i>i</i> B	α-S130 <i>i</i> B	α-S150iB (small capacity)	α-S150 <i>i</i> B
Clamp force [kN]	150	300	500	1000	1300	1500	1500
Increased tonnage option [kN]	-	-	650	1250	-	1800	1800
Tie bar spacing HxV [mm]	260x235	310x290	360x320	460x410	530x530	560x510	560x510
Platen size HxV [mm]	355x340	440x420	500x470	660x610	730x730	800x750	800x750
Max/min die height [mm]	260-130	330-150	350-150	450-150	570-200	500-200	500-200
Extended die height option [mm]	-	-	+50	+100	+100	+100	+100
Clamping stroke [mm]	160	230	250	350	400	440	440
Ejector stroke [mm]	50	60	70	100	100	150	150
Ejector force [kN] (std/increased)	7	8	20/60	25/60	25/60	35/80	35/80
Available injection speeds							
160 mm/s	-	-	-	-	-	-	-
180 mm/s	-	-	-	-	-	-	-
200 mm/s	-	-	-	•	•	-	•
200 mm/s (high duty)	-	-	-	•	•	•	-
240 mm/s (high duty)	-	-	-	-	-	-	-
270 mm/s	-	-	-	-	-	-	-
270 mm/s (high duty)	-	-	-	-	-	-	•
280 mm/s (high duty)	-	-	-	-	-	-	-
350 mm/s	-	-	•	•	•	•	•
350 mm/s (high pressure)	-	-	-	-	-	•	
550 mm/s	-	-	•	•	-	•	-
600 mm/s	-	•	-	-	-	-	-
800 mm/s	•	-	•	•	•	•	-
Available screw diameters		i	<u> </u>		<u> </u>		<u>-</u>
14	•	•	0	0	-	-	-
16	•	•	0	0	0	0	-
18	•	•	•	0	0	0	-
20	-	•	•	0	0	0	-
22	-	•	•	•	0	•	-
26	-	-	•	•	•	•	0
28	-	-	•	•	•	•	0
32	-	-	•	•	•	•	•
36	-	-	-	•	•	•	•
40	-	-	-	•	•	•	•
44	-	-	-	-	-	•	•
48	-	-	-	-	-	-	•
52	-	-	-	-	-	-	•
56	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-
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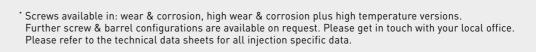
### **ROBOSHOT** $\alpha$ -SiB series

### Technical data summary & overview

α-S220 <i>i</i> B	α-S250 <i>i</i> B	α-S300iB (small capacity)	α-S300 <i>i</i> B	α-S300iB (large capacity)	α-S450iB (ultra small capacity)	α-S450iB (small capacity)	α-S450 <i>i</i> B	α-S450iB (large capacity)
2200	2500	3000	3000	3000	4500	4500	4500	4500
-	3000	3500	3500	3500	5000	5000	5000	5000
650x650	710x635	810x710	810x710	810x710	920x920	920x920	920x920	920x920
900x900	1030x960	1130x1030	1130x1030	1130x1030	1300x1300	1300x1300	1300x1300	1300x1300
650-250	650-300	650-300	650-300	650-300	1000-350	1000-350	1000-350	1000-350
+100	+100	+100	+100	+100	-	-	-	-
550	600	600	600	600	900	900	900	900
150	200	200	200	200	250	250	250	250
35	80	80	80	80	150	150	150	150
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o with hardware and/or software option





standard

<sup>-</sup> not available

### FANUC ROBOSHOT series

## Choose the right model for your application























### ROBOSHOT $\alpha$ -SiB series

### Available features

Display & Input	Standard	Option
21.5" HD Touch screen display	•	-
Simultaneous display of setting screen, monitoring screen & ROBOSHOT-LINKi2	•	-
23 languages - selectable	•	-
Numerical input, incremental input & character inputs in 23 languages	•	-
Managed entry - 200 operators with password and storage in operator log	•	-
Operator management with ID card instead of password	-	•
Customisation of menu buttons	•	-
Setting profile dispays - injection, packing, plasticising, clamp open/close ejection & temperature	•	-
Enhanced graphical user interface - home screen	•	-
Context sensitive help function for setting, signals & alarms	•	-
Operator & maintenance manual displayed on iHMI screen	•	-
VNC client function for remote operation of VNC available device	-	•
Injection & Plasticising		
10 stages of injection pressure & speed control	•	-
4 modes of injection response mode - selectable	•	-
Switchover mode by position, pressure, time, cavity pressure, nozzle pressure signal or filling position	•	-
6 stages of holding pressure & time control including holding speed control	•	-
6 stages of plasticising - screw speed and back pressure control	•	-
Automatic purge function	•	-
Change of auto purge condition sequentially	-	•
Back flow prevention control - precise metering two modes	•	-
AI (Artificial Intelligence) metering control	•	-
AI (Artificial Intelligence) pressure profile trace control - Injection pressure	•	-
AI (Artificial Intelligence) pressure profile trace control - Cavity & nozzle pressure	-	•
Automatic start up parameter mode	•	-
Clamp / Ejector		
6 stages of closing & 5 stages of opening via speed & position control - auto acceleration control	•	-
10 stages of ejector control, 2 stage ejector and 4 patterns of ejector motion control	•	-
In mould degating - Pre ejector function	•	-
Pre ejector function with 0.001 resolution of position & time	-	•
Automatic die height adjustment with clamp force sensor 0kN - max clamp force	•	-
Precise clamp force control - automatic adjustment & optimisation	•	-
Clamp compression function	-	•
Ejector compression function	-	•
Auto production set up function - reduced set up time	-	•
Al Mould protection, complete mould open & close stroke	•	-
Al Ejector protection, complete forward & backward stroke	•	-
Pre-Injection - Simultaneous clamp & injection movement	•	-
Pre-Injection function with 0.001 sec setting resolution	-	•
Simultaneous Ejector forward with clamp opening	•	-
Simultaneous clamp open and plasticising	•	-
Ejector overide function - Simultaneous ejector retract during clamp closing	-	•

### ROBOSHOT $\alpha$ -SiB series

### Available features

Data storage, features and software	Standard	Option
Mould file storage - 500 files	Standard	- Option
Mould file storage to USB device	_	-
Screen image capture to USB device		-
Process monitoring - Cycle alarms, part rejection for 40 items trend charts 100,000 cycles process monitoring		-
Process monitoring judgement alarm	_	_
Alarms log - 50,000 logs exportable to CSV format		-
Log Management - Parameter change log 100,000 events, exportable to CSV format		_
Log Management - Operational change log 100,000 events, exportable to CSV format	_	_
Production management - Container management, counter stop function, production completion calculation		_
Good product rate alarm - Cycle end stop	_	
Preventive maintenance - load & temperature of the machine		-
Al Backflow monitoring through machine learning - Check valve wear indication	_	
Cycle time analysis & display - timing chart		-
Process graphics - wave form display with selectable parameters	_	
Power consumption monitoring & display	_	
Signal output for sampling manually or by designated interval (count or time)	_	_
Interfaces / Inputs / Outputs (other interfaces are available)	•	
12 machine status inputs		_
	_	<del>-</del>
8 machine status outputs 2 Thermat name 100Rana TV/1000Rana T	_	-
2 Ethernet ports - 100Base-TX/1000Base-T	•	
Ethernet Hub 5 ports	_	•
2 USB ports - 3.0/2.0/1.1	-	-
Custom signal function 32 points character input of signal name	•	-
Configurable core function - maximum 6 systems available	•	-
E67 robot interface	•	-
E67/73 robot interface for non operator's side parts removal	-	•
12 free programmable output and 8 input	•	-
Valve gate interface 8 circuits	•	<del>-</del>
Valve gate interface 16 circuits	-	•
Monitor camera interface interlocked to ejector is available	•	-
Data communication auxiliary device SPI protocol - Mould temperature, material dryers, hopper loaders & chillers	•	-
Data communication auxiliary device SPI protocol - Hot runner	-	•
Bad parts reject function	•	-
Cycle stop by external signal. Immediate stop, cycle end stop or display only	•	-
Alarm signal input - cycle stop by external signals	•	-
Shot counter output by 4 binary points of binary data	-	•
Mould ID Signal output by 8 points of binary data	-	•
Analog Input External sensor connection voltage or current, max 2 boards and 4 input signals	-	•
Process graphics data output by voltage - Analog outputs max 4 signals selectable	-	•
Additional axis control - Up to 4 servo cores control & positioning via FANUC servo technology	-	•
ROBOSHOT-LINKi2 Product & Quality management system available in 20 device or 1000 device versions	-	•

# One common servo and control platform -Infinite opportunities THAT's FANUC! FΑ **ROBOTS ROBOCUT ROBODRILL ROBOSHOT** IoT

Industry 4.0

solutions

Electric CNC

Machines

Injection Moulding

Industrial Robots,

Accessories

and Software

CNCs,

Servo Motors

and Lasers

CNC Wire-Cut

Machines

Electric Discharge

Compact

Centres

CNC Machining