

THE FACTORY AUTOMATION COMPANY

**FANUC**

# **ROBOSHOT** *α-SiB* series

High Precision Electric Injection Moulding



The new all electric  
**ROBOSHOT**

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

**40** years of  
ROBOSHOT  
technology

# ROBOSHOT $\alpha$ -SiB minimises running costs to boost bottom-line profitability

On average it costs just 555€ a year (parts and service) to run a ROBOSHOT machine. This analysis derives from data collected at 11 companies across the medical, automotive and consumer industries running 98 ROBOSHOT machines over a total of 65 years. Very low maintenance costs, exceptionally high uptime, fewer components and less wear all mean that concerns over cost of ownership are a thing of the past.

## Your benefits with FANUC ROBOSHOT:







- maximum precision
- proven reliability
- excellent repeatability
- ultimate process control
- very low maintenance
- lowest cost of ownership



### International Safety Standard:

- compliant with EN ISO 20430:2020, the international safety standard for injection moulding machines

## Total cost of ownership (TCO) – There are many cases and ways to calculate it

	 Initial Cost	 Cost of Operation	 Cost of Maintenance	 Cost of Downtime	 Cost of Production	 Remaining Value
<b>FANUC ROBOSHOT</b>	Similar to Electric Injection Moulding Machine	World class energy efficiency	Lowest in the market-place	Lowest in the market-place	Lowest in the market-place	High second hand value
<b>Electric IMM Competitors</b>	Similar or higher than FANUC	5–10% higher than FANUC	25–30% higher than FANUC	10–20% higher than FANUC	10–20% higher than FANUC	Medium second hand value
<b>Hydraulic/ Hybrid IMM Competitors</b>	Lower than FANUC	50–70% higher than FANUC	80–90% higher than FANUC	50–70% higher than FANUC	50–70% higher than FANUC	Low second hand value

# CNC precision for higher productivity

As a prominent manufacturer of servo motors and CNC controls worldwide, we have established ourselves as experts in servo technology and tooling, making us a leading industry player. Long proven in FANUC machining centres, FANUC employs this same state-of-the-art CNC technology in ROBOSHOT to provide an unrivalled electric injection moulding solution. The results are huge versatility, utmost precision of movement and extremely short cycle times to produce larger quantities of consistently high-quality parts.



- enhanced operator panel functionality
- additional core operation buttons
- additional buttons for auto clamping
- additional axis operation

- Full HD 21.5" touch screen
- split screen functionality
- swipe and pinch gestures
- improved response times
- enhanced visualisation
- display of machine manuals on the screen
- display of third party and peripheral equipment screens via VNC add (optional)

- increased injection speed of up to 350 mm/s
- optional all new 550 mm/s injection unit

#### New features:

- screw torque monitoring function
- AI functionality to predict the wear of the check valve assembly

- up to 4 Axis Servo Core Control fully integrated (optional)

#### Enhanced lubrication system:

- less grease
- longer life cycle
- lower running cost

- enhanced AI ejector protection
- improved ejector acceleration
- SPI ejector hole pattern as standard

## In-house servo technology makes the difference

ROBOSHOT's movements are entirely controlled by FANUC designed and built CNC controlled servo drives. This not only results in the fastest acceleration on the market but – in order to ensure ultimate accuracy and exceptional reliability across all processes – highly precise motion, position and pressure control as well.

## Perfection from your mould!

Mould validation represents an essential part of FANUC's extensive range of services and is conducted in our specifically equipped technical centres. Just show us your mould and we will show you what ROBOSHOT can do with it. Always there when you need us, passionate and committed, we are your partner of choice when it comes to a wide range of injection moulding applications.



# World-beating CNC reliability

Drawing on more than 65 years of continuous development, the centrepiece of the FANUC ROBOSHOT is the most reliable CNC control in the world. User friendly and featuring all the standard interfaces, it delivers fast processing times and consistent parts quality.

FANUC prides itself on providing many data software options as standard. The  $\alpha$ -SiB series has been designed with enhanced storage and connectivity options to bring greater benefits to the end user. Alarm logs, change history and operational logs, along with monitoring history have all been significantly enhanced to provide a significant amount of end user, validation data. Couple this with FANUC's ROBOSHOT-LINKi2 production monitoring package and the end user has a very flexible digital storage & monitoring solution to help plan, monitor and increase productivity. With the onset of increased connectivity additional ethernet LAN and USB ports have been incorporated in the  $\alpha$ -SiB series.

## Panel iHPro configuration:

- 21.5" colour touchscreen display
- intuitive iHMI screen
- easy data input and minimal keypad entry
- improved interface to robot operation screen
- supports multiple languages
- alarm log from 5.000 to now 50.000
- last change log from 10.000 to now 100.000
- operations log from 10.000 to now 100.000
- processing monitor history now 40 items with 100.000 shots (process monitor graphs)
- LAN ports: from 1 to 2 (standard configuration), more available as option
- USB ports increased from 1 to 2 ports (USB 3.0)
- compatibility with Euromap 77



## Simple maintenance – early detection

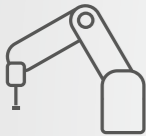
The intuitive visual maintenance interface on FANUC's CNC facilitates faster recoveries after servicing. The integrated early warning system identifies errors before they occur, ensuring maximum precision and consistent quality standards.

- large-screen display unit 21.5-inch PANEL iHPro
- flexible display according to the function (Full screen or simultaneous display)
- intuitive operation with swipe and multi touch support
- intuitive iHMI home screen
- quick and easy data input
- Ethernet and USB interfaces

## Improved connectivity

### VNC (Virtual Network Computing)

Remote display and operation of the screen



Parts picker

### Analog input

Input voltage or current value

Pressure, Temperature sensor



Measuring devices





## Remote monitoring with ROBOSHOT-LINKi2

ROBOSHOT-LINKi2 is a product and quality information management tool that manages up to 1,000 ROBOSHOT machines in real time from remote PCs or smart devices. You can access ROBOSHOT-LINKi2 via web browser on PC or tablet as well as running on the new  $\alpha$ -SiB series split screen display. It can be stranded alone or interfaced via Euromap 63 or 77 for all your future IoT requirements, and with up to 120 months of logged data.

### Status monitor:

- achieves lower cost and higher operation rate
- monitors power consumption
- monitors all process parameters and moulding conditions
- upload & download of Mould files
- productivity & efficiency data

### Quality information:

- provides traceability and advanced quality analysis
- investigate cause of failure and moulding repeatability
- export process parameter information in CSV format, fully configurable

### Diagnosis:

- alarm history
- operation and parameter change history
- remote operation functions
- resin evaluation tool for optimising process conditions

## High-performance injection unit

ROBOSHOT's injection unit features an AI Metering Control that uses torque rather than speed control to achieve a variable screw rotation speed. Its AI Backflow Monitor shows what is happening inside the non return valve, so you can monitor the closing characteristics as well as the wear status of the check ring. The AI Pressure Trace controls the pressure curve to ensure stable injection moulding even if an internal violation occurs. Additional horizontal and vertical injection units can also be added to the ROBOSHOT for multi-component moulding.

### Other ROBOSHOT injection unit features include:

- position control up to 10 micron resolution
- flexible range of screws and barrels
- 10 stages of injection control speed & pressure
- 6 stages of holding pressure control
- 6 stages of plasticising control
- process graphic curves are standard

## Versatile clamp unit

ROBOSHOT's versatile clamp unit features generous tie bar spacing as well as auto die height and optional extended die height functions. The automatic clamp force optimisation checks and automatically adjusts minimum clamp force, giving you increased security and eliminating the need to adjust the clamp force manually.

### Other clamp unit features include:

- 5 point toggle mechanism
- very rigid platens
- ball drive ejector system
- linear guide rails
- SPI Ejector hole pattern change
- Optional Linear guide rails as a European standard



## Electrically driven axes

Every FANUC ROBOSHOT comes with 4 servomotors as standard. Additional servomotors can be integrated as options for a fully integrated servo electric core pull solution. This enables separate control of ROBOSHOT's movements – clamp opening and closing, ejector, screw, and injection – and results in a highly precise and stable process.

## World-beating CNC reliability

Drawing on 65 years of continuous development, the centrepiece of the FANUC ROBOSHOT is the most reliable CNC control in the world. User friendly and featuring all the standard interfaces, it delivers fast processing times and consistent parts quality.

## Extremely consistent injection moulding

with minimal weight deviation thanks to:

- precise V-P switchover
- precise pressure control in 1 bar increments
- precise temperature control in 0.1 °C increments
- precise AI pressure profile control
- precise metering control functions (Unique to FANUC machines)

## Very low maintenance costs

- maximum machine uptime, fewer components and less wear
- Total cost of ownership (TCO)



# The efficient all-rounder for a wide range of industries

Every manufacturing industry sector has its own plastic application requirements. Offering versatility across a huge variety of processing conditions, ROBOSHOT meets the majority of them. Boasting a wealth of standard features designed to help you achieve optimum process conditions and the highest repeatability. ROBOSHOT injection moulding machines are designed for quick and simple set-up whilst maintaining a high degree of functionality. They offer world beating precision moulding resulting in high production yields and unbeatable parts quality. The resultant reliability and low maintenance costs sets the standard for market leading total cost of ownership. Just what your industry needs.

## Absolutely constant dosing

FANUC Precise Metering 3 provides the exact dosing required to produce small high-precision parts such as liquid crystal polymer connectors for PCB boards. This function checks the volume after plasticising, automatic V-P and decompression adjustment. Product quality is improved thanks to constant plasticising volume for low viscosity materials, reduced parts weight variation and the avoidance of bubbles and silver strings.

## Quality assurance and traceability made easy

For full transparency and superior quality management, ROBOSHOT comes with up to 16 Multi Cavity Pressure Channels, cavity balance monitoring and historical data collection. To save money, ensure easier operation and minimise external components, monitoring is done via the CNC. You just select the required part quality.

## Very precise insert moulding

For processes requiring inserts, ROBOSHOT can be supplemented with a FANUC 6-axis Robot fitted with FANUC iRVison, the product of 30 years of experience in intelligent vision systems. Equipped with this technology, the robot picks and places inserts with an amazing degree of accuracy and repeatability. Perfect for small parts, this solution does not require an external guide or fixing.

## Historical traceability

Given the nature of medical products, acquiring and storing process data is critical. To make this easy ROBOSHOT is available with smart features – such as Euromap 63 or 77 and FANUC LINKi2 – designed to capture and store data on a central server and provide complete part traceability.



## FANUC ROBOSHOT for the **Automotive industry**



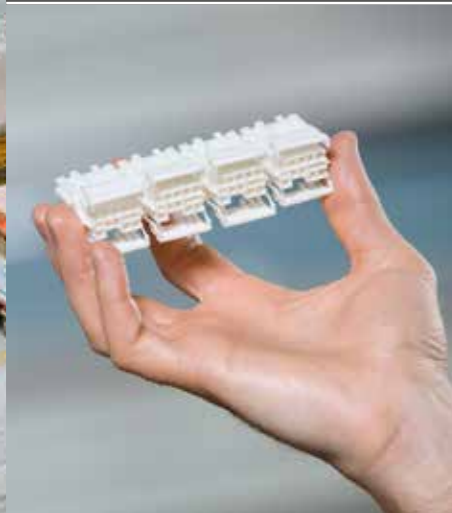
With a host of special functions designed to resolve issues such as gas venting or variations in plasticising time and volume, FANUC ROBOSHOT is ideal for high-volume automotive component production. The most market's most reliable machine, ROBOSHOT keeps on producing flawless parts in fast cycle times and with minimum maintenance. Moreover, because automotive production runs change frequently, ROBOSHOT comes with 6 different screw sizes, providing outstanding versatility from a single machine.

## FANUC ROBOSHOT for the **Medical industry**



Quality, reliability and repeatability are critical in medical product manufacture. For example, the transparency of many medical products means tackling gas venting and changes in viscosity. Here, pre-injection and AI Metering Control functions counter these issues to ensure consistency. In addition, with 6 different screws as standard, ROBOSHOT users can easily accommodate different products.

## FANUC ROBOSHOT for the **Electrical industry**



Producing high numbers of small electrical components requires speed and repeatability. The acceleration delivered by ROBOSHOT's electric servomotors is ideal for creating the thin walls that electrical parts often demand. Moreover, ROBOSHOT smart functions compensate for viscosity changes, while active gas venting further enhances quality.

## FANUC ROBOSHOT for the **Optical industry**



In contrast to standard injection-moulding processes, speeds in the optical industry tend to be very slow and walls often thick. Capable of controlling processes at injection speeds down to 0.5mm/s with unrivalled precision, ROBOSHOT offers further advantages that include high-pressure and optimised screw and barrel technology for transparent materials.

## FANUC ROBOSHOT for the **Construction & Furniture industry**



Precise temperature control is among the requirements when producing components for the construction & furniture industry. With its hot-runner controller fully integrated into the operation of ROBOSHOT machines, users benefit from highly precise temperature control. The speed and repeatability of ROBOSHOT machines are further attributes that benefit the production of small construction parts such as wall ties, packers, shims and fixings.

## FANUC ROBOSHOT for the **Consumer Goods & Packaging industry**



Versatile and efficient, ROBOSHOT machines offer many advantages in producing products for the consumer goods & packaging industry. Machine characteristics such as speed and consistency, matched by cost-effective operations and ultra-low maintenance requirements, means that OEMs and subcontract moulding shops serving this sector will enjoy genuine competitive gain.

# Versatile machinery for all applications

With models capable of exerting clamping forces from 150kN to 5000kN, FANUC ROBOSHOT is ideally suited to a diverse range of straightforward as well as sophisticated injection moulding tasks. Offering huge versatility, ROBOSHOT's unique strength is the freedom it provides you to produce almost anything using just one machine – whether that be delicate items such as camera lenses to products, such as battery cases, that require high levels of exertive force to produce. What is more, thanks to its high level of specification, even standard ROBOSHOT machines can be used to produce specialised items such as micro components, casings and even metal and ceramic parts.



**Thin wall moulding**  
lightguide 0.1 mm  
**High injection speed units with**  
injection speed up to 550 mm/s



**Multi component moulding**  
Vertical and L-position injection units



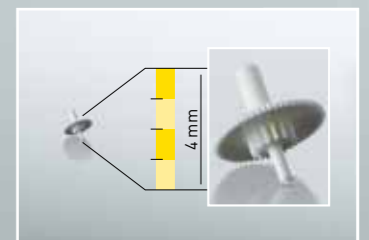
**Precise moulding**



**MIM/CIM**



**Micro-injection moulding**  
Repeatable shot weights from 0,1 g



**LSR moulding**  
Standard liquid silicon packages to  
suit various applications  
**High precision and repeatability**  
Ultimate clamp and injection control  
for flash free LSR moulding



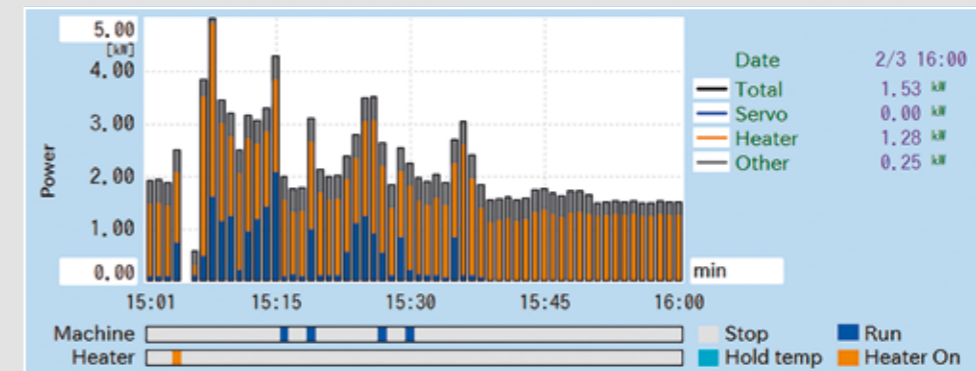


# The road to sustainability with ROBOSHOT

FANUC's long-standing ethos of designing and manufacturing all-electric machines such as the ROBOSHOT helps manufacturers to meet their environmental responsibilities and emissions-reduction targets. Consuming 50-70% less energy than hydraulic machines and up to 5-10% less than other electric injection-moulding machines, further sustainability advantages of all-electric injection-moulding technology include fewer components, lower heat emissions to atmosphere, and no oil or oil recycling costs.

## Power consumption screen

Fitted as standard and including an energy analysis page, this function identifies where energy is consumed during the cycle, enabling you to optimise consumption and identify regenerative power. This also contributes to CO<sub>2</sub> reduction and the ecological footprint.



Lower energy costs  
**FANUC**  
 Save up to 50-70 %

Other Hydraulic Machines

Lower energy costs  
**FANUC**  
 Save up to 5-10 %

Other Electrical Machines



## Protect your valuable moulds!

### Your benefits with FANUC AI mould and ejector protection:

- no damage to moulds
- no repair costs
- no costly downtime
- very easy set-up – just enable and the machine will determine the limits itself
- no loss in moving speed

### Maximum mould and ejector protection

FANUC AI Mould and Ejector Protection provides the best mould protection on the market. Built to minimise downtime, it even indicates when greasing is required or the mould is worn.

#### Mould and ejector protection in both directions

Should an event occur, ROBOSHOT protects your mould during the full opening and closing cycle - Its unique Mould Protection function, measures the motor torque and stops the machine immediately if there is a restriction. The same technology also protects the ejector's forward and reverse movement.

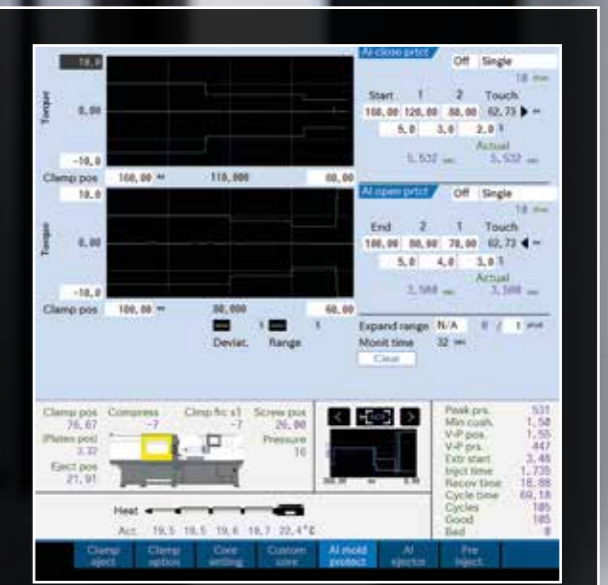
#### Reliable protection at no cost to speed

Unlike the protection on hydraulic systems, ROBOSHOT's Mould Protection functionality has zero impact on clamp closing speeds. This high-speed responsiveness is provided by its electric drives. Clamp tolerances are also programmable across the entire mould movement.



#### For more information:

Scan the code to see FANUC's unique mould protection system in action.



AI mould protection





## Multi-component injection moulding

You can use ROBOSHOT for multi-component injection moulding by adding versatile and easy-to-integrate vertical and horizontal injection units. This advanced moulding technique allows you to inject three different components simultaneously. These additional injection units make it possible to inject two or three different components in one production run. Powered by FANUC's powerful CNC, the injection units offer the same levels of accuracy and repeatability as ROBOSHOT.

### Your benefits:

- fully integrated FANUC CNC
- easy to integrate
- flexible configuration
- turnkey solutions
- cost efficient



## The ROBOSHOT SI-20A vertical injection unit

This vertical injection unit can be installed on top of the ROBOSHOT. Two different types of units can be adapted to a machine range of 100 ton to 300 tons. Fitted with FANUC's latest CNC, the unit offers stable, precision moulding and is encased in a space-saving electrical cabinet.

### Features and benefits:

- controlled by FANUC's CNC
- same accuracy and repeatability as any other ROBOSHOT
- can be installed on current ROBOSHOT models
- integrated screen on ROBOSHOT operation screen
- can be controlled directly from ROBOSHOT iHMI

Item	Unit	FANUC ROBOSHOT SI-20A					FANUC ROBOSHOT SI-300HA				
		Specification					Specification				
Screw diameter	mm	14	16	18	20	22	26	28	32	36	40
Screw stroke	mm	56	56	75	75	75	95	95	128	144	144
Maximum injection volume	cm <sup>3</sup>	9	11	19	24	29	50	58	103	147	181
Maximum injection speed	mm/s	300					330				
Max. injection pressure (high-pressure filling mode)	MPa	-	-	-	-	-	340	320	270	220	-
Maximum injection pressure	MPa	200	180	140	130	120	260	240	220	190	160
Maximum pack pressure	MPa	180	160	120	110	100	260	220	200	170	160
Maximum injection rate	cm <sup>3</sup> /s	46	60	76	94	114	175	203	265	335	414
Maximum screw rotation speed	min <sup>-1</sup>	250					450				
Nozzle touch force	kN	3 (0.3tonf)					15 (1.5tonf)				
Number of heaters	Barrel	3					3				
	Nozzle	1					1				
Heater capacity	kW	2.4	2.8	3.1	3.5	3.8	6.5	7.2	8.4	9.1	9.9
Machine weight	ton	≈ 0.65 (injection unit) ≈ 0.15 (control unit)					Approx. 2.0				



## The ROBOSHOT SI-300HA horizontal injection unit

This horizontal injection unit can be fitted to the side of the ROBOSHOT α-SiA models or later and clamping force of 100 tons or more. Optional FANUC servomotors are available to control rotary tables from the ROBOSHOT SI-300HA. It is flexible and easy to integrate into your ROBOSHOT cell.

### Features and benefits:

- controlled by FANUC's CNC
- same accuracy and repeatability as any other ROBOSHOT
- exchangeable between different ROBOSHOT models (optional hardware required on machine)





### LSR Technology

Today, liquid silicone rubber technology is being used whether for rain sensors or light guides in the automotive sector, optical lenses and medical products. The application range for LSR moulded parts is increasing. FANUC as a pioneer of high precision moulding machines combine adapted LSR plasticising units and process specific options into an outstanding system for LSR moulding solutions.

#### FANUC Package for LSR injection moulding includes:

- cylinder modules with modified screws and sealing for LSR
- shut Off Nozzle for LSR
- integrated mould heating systems
- interfaces to special peripherals
- fully integrated vacuum system



### Ceramic injection moulding Metal injection moulding

Wide range of Screw & Barrel combinations and requirements for all machine models.

#### Features and benefits:

- high precision moulding capability
- high stability and repeatability for low back pressure
- high precision speed (injection, clamp/ejector) control
- pre-injection function
- pre-ejector function

#### AI - Artificial Intelligent features:

- AI metering control - Stabilisation for plasticising
- AI pressure profile trace control - Stabilisation for moulding quality
- AI ejector and mould protection
- stability and repeatability for low back pressure



### Thermoset injection unit

Special Screw & Barrel combinations with Thermoset Special Nozzle

#### Features and benefits:

- high precision moulding capability
- high stability at low speed injection
- stability of temperature control
- gas reduction with Pre-injection function
- pre-ejector function

#### AI - Artificial Intelligent features:

- AI metering control
- AI pressure profile trace control
- AI ejector and mould protection

FANUC ROBOSHOT series

# Choose the right model for your application

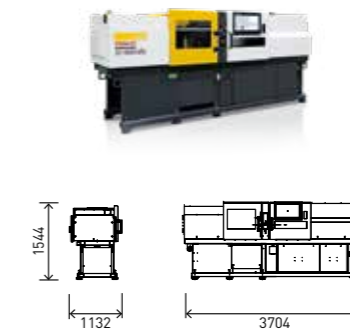
## α-S15iB



## α-S30iB



## α-S50iB



CLAMPING UNIT	Tonnage	kN   tonf	150   15		
	Maximum and minimum die height Double platen	mm	260-130		
Maximum and minimum die height Single platen	mm	-			
Clamping stroke	mm	160			
Locating ring diameter	mm	Ø 60			
Tie Bar Spacing, HxV	mm	260 x 235			
Platen size, HxV	mm	355 x 340			
Ejector point / Ejector Force / Ejector Stroke	point / kN (tonf) / mm	1 / 7 (0.7) / 50			
INJECTION UNIT	Screw diameter	mm	14	16	18
	Injection stroke	mm	56	56	75
	Max. injection volume	cm <sup>3</sup>	9	11	19
	<b>Max. Injection Speed 350</b>	<b>mm/s</b>			
	Max. injection pressure (high-pressure filling mode)	MPa			
	Max. injection & Hold Pressure for W/C injection unit	MPa			
	Max. injection & Hold Pressure for PAL injection unit	MPa			
	Maximum injection rate	cm <sup>3</sup> /s			
	Maximum screw rotation speed	min <sup>-1</sup>			
	Machine weight Double platen   Single platen	t			
	<b>Max. Injection Speed 550</b>	<b>mm/s</b>			
	Max. injection pressure (high-pressure filling mode)	MPa			
	Max. injection & Hold Pressure for W/C injection unit	MPa			
	Max. injection & Hold Pressure for PAL injection unit	MPa			
	Maximum injection rate	cm <sup>3</sup> /s			
	Maximum screw rotation speed	min <sup>-1</sup>			
	Machine weight Double platen   Single platen	t			
	<b>Max. Injection Speed 600</b>	<b>mm/s</b>			
	Max. injection pressure (high-pressure filling mode)	MPa			
	Max. injection & Hold Pressure for W/C injection unit	MPa			
Max. injection & Hold Pressure for PAL injection unit	MPa				
Maximum injection rate	cm <sup>3</sup> /s				
Maximum screw rotation speed	min <sup>-1</sup>				
Machine weight Double platen   Single platen	t				
<b>Max. Injection Speed 800</b>	<b>mm/s</b>	<b>800</b>			
Max. injection & Hold Pressure for W/C injection unit	MPa	250	250	230	
Max. injection & Hold Pressure for PAL injection unit	MPa	250	250	230	
Maximum injection rate	cm <sup>3</sup> /s	123	160	203	
Maximum screw rotation speed	min <sup>-1</sup>	450			
Machine weight Double platen   Single platen	t	≈ 1.5			

300   30					500   50 / Increased (650   65)					
330-150					350-150 / Increased (400-150)					
-					410-210 / Increased (460-210)					
230					250					
Ø 100					Ø 125					
310 x 290					360 x 320					
440 x 420					500 x 470					
1 / 8 (0.8) / 60					5 / 20 (2.0) / Increased 60 (6.0) / 70					
14	16	18	20	22	18	20	22	26	28	32
56	56	75	75	75	75	75	75	95	95	95
9	11	19	24	29	19	24	29	50	58	76
					<b>350</b>					
					300	360	340	290	250	190
					280	310	290	240	220	180
					260	280	260	210	190	150
					89	109	133	185	215	281
					450					
					2.9   ≈ 2.85					
					<b>550</b>					
					300	330	-	-	-	-
					290	310	280	200	170	-
					260	280	260	190	170	-
					139	172	209	292	338	-
					450					
					2.9   ≈ 2.85					
					<b>600</b>					
-	330	330	-	-						
250	280	280	270	220						
250	250	260	270	220						
92	120	152	188	228						
					450					
					≈ 2.0					





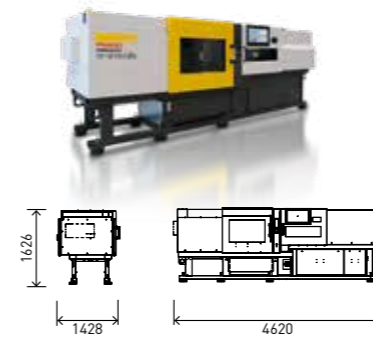
FANUC ROBOSHOT series

# Choose the right model for your application

## α-S100iB



## α-S130iB



## α-S150iB (small capacity)



CLAMPING UNIT	Tonnage	kN   tonf	1000   100 / Increased (1250   125)					
	Maximum and minimum die height Double platen	mm	450-150 / Increased (550-150)					
Maximum and minimum die height Single platen	mm	520-220 / Increased (620-220)						
Clamping stroke	mm	350						
Locating ring diameter	mm	Ø 125						
Tie Bar Spacing, HxV	mm	460 x 410						
Platen size, HxV	mm	660 x 610						
Ejector point / Ejector Force / Ejector Stroke	point / kN (tonf) / mm	5 / 25 (2.5) / Increased 60 (6.0) / 100						
INJECTION UNIT	Screw diameter	mm	22	26	28	32	36	40
	Injection stroke	mm	75	95	95	128	144	144
	Max. injection volume	cm <sup>3</sup>	29	50	58	103	147	181
	<b>Max. Injection Speed 200</b>	<b>mm/s</b>	<b>200</b>					
	Max. injection pressure (high-pressure filling mode)	MPa	340	340	320	270	220	-
	Max. injection & Hold Pressure for W/C injection unit	MPa	290	290	270	250	190	160
	Max. injection & Hold Pressure for PAL injection unit	MPa	260	260	240	220	190	160
	Maximum injection rate	cm <sup>3</sup> /s	76	106	123	160	203	251
	Maximum screw rotation speed	min <sup>-1</sup>	300					
	Machine weight Double platen   Single platen	t	4.4   ≈ 4.25					
	<b>Max. Injection Speed 200 (high duty)</b>	<b>mm/s</b>	<b>200 (high duty)</b>					
	Max. injection pressure (high-pressure filling mode)	MPa	-	-	-	270	220	-
	Max. injection & Hold Pressure for W/C injection unit	MPa	-	-	-	250	200	180
	Max. injection & Hold Pressure for PAL injection unit	MPa	-	-	-	220	200	180
	Maximum injection rate	cm <sup>3</sup> /s	-	-	-	160	203	251
	Maximum screw rotation speed	min <sup>-1</sup>	-	-	-	450		
	Machine weight Double platen   Single platen	t	4.4   ≈ 4.25					
	<b>Max. Injection Speed 350</b>	<b>mm/s</b>	<b>350</b>					
	Max. injection pressure (high-pressure filling mode)	MPa	340	340	320	270	220	-
	Max. injection & Hold Pressure for W/C injection unit	MPa	290	290	270	250	190	160
Max. injection & Hold Pressure for PAL injection unit	MPa	260	260	240	220	190	160	
Maximum injection rate	cm <sup>3</sup> /s	133	185	215	281	356	439	
Maximum screw rotation speed	min <sup>-1</sup>	450						
Machine weight Double platen   Single platen	t	4.4   ≈ 4.25						
<b>Max. Injection Speed 350 (high pressure)</b>	<b>mm/s</b>	<b>350 (high pressure)</b>						
Max. injection & Hold Pressure for W/C injection unit	MPa							
Max. injection & Hold Pressure for PAL injection unit	MPa							
Maximum injection rate	cm <sup>3</sup> /s							
Maximum screw rotation speed	min <sup>-1</sup>							
Machine weight Double platen   Single platen	t	4.4   ≈ 4.25						
<b>Max. Injection Speed 550</b>	<b>mm/s</b>	<b>550</b>						
Max. injection pressure (high-pressure filling mode)	MPa	340	-	-	-	-	-	
Max. injection & Hold Pressure for W/C injection unit	MPa	290	260	220	170	-	-	
Max. injection & Hold Pressure for PAL injection unit	MPa	260	260	220	170	-	-	
Maximum injection rate	cm <sup>3</sup> /s	209	292	338	442	-	-	
Maximum screw rotation speed	min <sup>-1</sup>	450						
Machine weight Double platen   Single platen	t	4.4   ≈ 4.25						

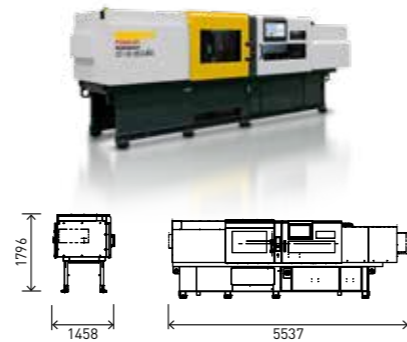
1300   130					1500   150 / Increased (1800   180)						
-					500-200 / Increased (600-200)						
570-200 / Increased (670-200)					575-275 / Increased (675-275)						
400					440						
Ø 125					Ø 160						
530 x 530					560 x 510						
730 x 730					800 x 750						
5 / 25 (2.5) / 100					5 / 35 (3.5) / Increased (80   8.0) / 150						
26	28	32	36	40	22	26	28	32	36	40	44
95	95	128	144	144	75	95	95	128	144	144	160
50	58	103	147	181	29	50	58	103	147	181	243
<b>200</b>											
340	320	270	220	-							
290	270	250	190	160							
260	240	220	190	160							
106	123	160	203	251							
300											
4.9											
<b>200 (high duty)</b>					<b>200 (high duty)</b>						
-	-	270	220	-	-	-	-	270	220	-	-
-	-	250	200	180	-	-	-	250	200	180	-
-	-	220	200	180	-	-	-	220	200	180	-
-	-	160	203	251	-	-	-	160	203	251	-
-	-	450			-	-	-	450			-
4.9					6.4   ≈ 6.15						
<b>350</b>					<b>350</b>						
340	320	270	220	-	340	340	320	270	220	-	-
290	270	250	190	160	290	290	270	250	190	160	-
260	240	220	190	160	260	260	240	220	190	160	-
185	215	281	356	439	133	185	215	281	356	439	-
450					450						
4.9					6.4   ≈ 6.15						
					<b>350 (high pressure)</b>						
					-	-	-	290	260	210	170
					-	-	-	230	220	210	170
					-	-	-	281	356	439	532
					-	-	-	450			450
					6.5   ≈ 6.25						
<b>550</b>					<b>550</b>						
-	-	-	-	-	340	-	-	-	-	-	-
260	220	170	-	-	290	260	220	170	-	-	-
260	220	170	-	-	260	260	220	170	-	-	-
292	338	442	-	-	209	292	338	442	-	-	-
450					450						
4.9					6.4   ≈ 6.15						



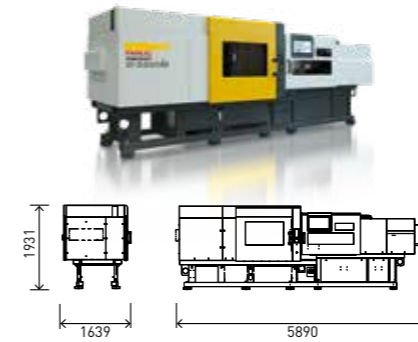
FANUC ROBOSHOT series

# Choose the right model for your application

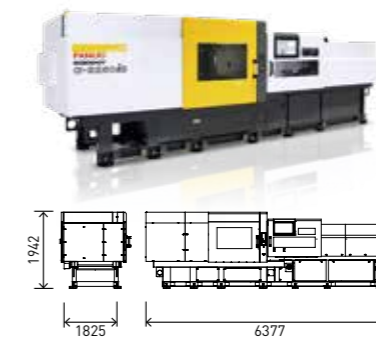
## α-S150iB



## α-S220iB



## α-S250iB



CLAMPING UNIT	Tonnage	kN   tonf	1500   150 / Increased (1800   180)					
	Maximum and minimum die height Double platen	mm	500-200 / Increased (600-200)					
Maximum and minimum die height Single platen	mm	575-275 / Increased (675-275)						
Clamping stroke	mm	440						
Locating ring diameter	mm	Ø 160						
Tie Bar Spacing, HxV	mm	560 x 510						
Platen size, HxV	mm	800 x 750						
Ejector point / Ejector Force / Ejector Stroke	point / kN (tonf) / mm	5 / 35 (3.5) / Increased (80   8.0) / 150						
INJECTION UNIT	Screw diameter	mm	32	36	40	44	48	52
	Injection stroke	mm	150	150	150	176	176	208
	Max. injection volume	cm <sup>3</sup>	121	153	188	268	318	442
	<b>Max. Injection Speed 200</b>	<b>mm/s</b>	<b>200</b>					
	Max. injection pressure (high-pressure filling mode)	MPa	-	-	-	-	-	-
	Max. injection & Hold Pressure for W/C injection unit	MPa	310	310	260	220	190	160
	Max. injection & Hold Pressure for PAL injection unit	MPa	280	280	260	220	190	160
	Maximum injection rate	cm <sup>3</sup> /s	160	203	251	304	361	424
	Maximum screw rotation speed	min <sup>-1</sup>	300					
	Machine weight Double platen   Single platen	t	7.05   ≈ 6.8					
	<b>Max. Injection Speed 270 (high duty)</b>	<b>mm/s</b>	<b>270 (high duty)</b>					
	Max. injection pressure (high-pressure filling mode)	MPa	380	345	320	280	-	-
	Max. injection & Hold Pressure for W/C injection unit	MPa	310	310	280	260	230	200
	Max. injection & Hold Pressure for PAL injection unit	MPa	280	280	280	260	230	200
	Maximum injection rate	cm <sup>3</sup> /s	217	274	339	410	488	573
	Maximum screw rotation speed	min <sup>-1</sup>	400					
	Machine weight Double platen   Single platen	t	7.2   ≈ 6.95					
	<b>Max. Injection Speed 280 (high duty)</b>	<b>mm/s</b>	<b>280 (high duty)</b>					
	Max. injection pressure (high-pressure filling mode)	MPa						
	Max. injection & Hold Pressure for W/C injection unit	MPa						
Max. injection & Hold Pressure for PAL injection unit	MPa							
Maximum injection rate	cm <sup>3</sup> /s							
Maximum screw rotation speed	min <sup>-1</sup>							
Machine weight Double platen   Single platen	t							
<b>Max. Injection Speed 350</b>	<b>mm/s</b>	<b>350</b>						
Max. injection pressure (high-pressure filling mode)	MPa	380	345	-	-	-	-	
Max. injection & Hold Pressure for W/C injection unit	MPa	310	310	280	240	190	160	
Max. injection & Hold Pressure for PAL injection unit	MPa	280	280	260	220	190	160	
Maximum injection rate	cm <sup>3</sup> /s	281	356	439	532	633	743	
Maximum screw rotation speed	min <sup>-1</sup>	400						
Machine weight Double platen   Single platen	t	7.2   ≈ 6.95						

2200   220tonf								2500   250 / Increased (3000   300)							
-								-							
650-250 / Increased (750-250)								650-300 / Increased (750-300)							
550								600							
Ø 160								Ø 160							
650 x 650								710 x 635							
900 x 900								1030 x 960							
9 / 35 (3.5) / 150								9 / 80 (8.0) / 200							
32	36	40	44	48	52	56		32	36	40	44	48	52	56	
150	150	150	176	176	208	208		150	150	150	176	176	208	260	
121	153	188	268	318	442	512		121	153	188	268	318	442	640	
<b>200</b>															
-	-	-	-	-	-	-									
310	310	260	220	190	160	-									
280	280	260	220	190	160	-									
160	203	251	304	361	424	-									
300															
8.7															
<b>270 (high duty)</b>															
380	345	320	280	-	-	-									
310	310	280	260	230	200	172									
280	280	280	260	230	200	172									
217	274	339	410	488	573	665									
400															
8.85															
								<b>280 (high duty)</b>							
								-	-	-	-	-	-	-	-
								310	310	280	260	230	200	172	
								280	280	280	260	230	200	172	
								225	285	351	425	506	594	689	
								400							
								12.5							
<b>350</b>								<b>350</b>							
380	345	-	-	-	-			380	345	-	-	-	-		
310	310	280	240	190	160	140		310	310	280	240	190	160	140	
280	280	260	220	190	160	140		280	280	260	220	190	160	140	
281	356	439	532	633	743	862		281	356	439	532	633	743	862	
400								400							
8.85								12.5							

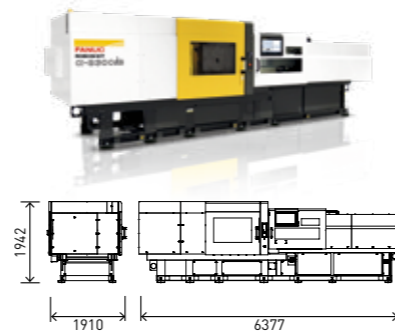




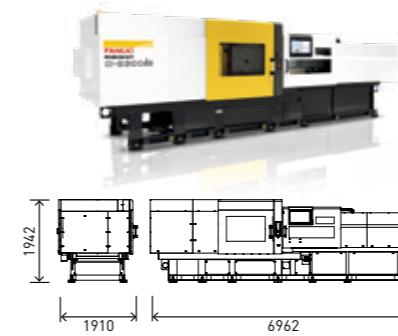
# FANUC ROBOSHOT series

## Choose the right model for your application

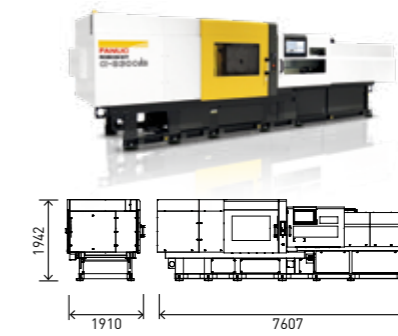
**α-S300iB** (small capacity)



**α-S300iB**



**α-S300iB** (large capacity)



CLAMPING UNIT	Tonnage	kN   tonf	3000   300 / Increased (3500   350)							
	Maximum and minimum die height Single platen	mm	650-300 / Increased (750-300)							
Clamping stroke	mm	600								
Locating ring diameter	mm	Ø 160								
Tie Bar Spacing, HxV	mm	810 x 710								
Platen size, HxV	mm	1130 x 1030								
Ejector point / Ejector Force / Ejector Stroke	point / kN (tonf) / mm	9 / 80 (8.0) / 200								
Screw diameter	mm	32	36	40	44	48	52	56		
Injection stroke	mm	150	150	150	176	176	208	260		
Max. injection volume	cm <sup>3</sup>	121	153	188	268	318	442	640		
<b>Max. Injection Speed 160</b>	<b>mm/s</b>									
Max. injection & Hold Pressure for W/C injection unit	MPa									
Max. injection & Hold Pressure for PAL injection unit	MPa									
Maximum injection rate	cm <sup>3</sup> /s									
Maximum screw rotation speed	min <sup>-1</sup>									
Machine weight Double platen   Single platen	t									
<b>Max. Injection Speed 240 (high duty)</b>	<b>mm/s</b>									
Max. injection & Hold Pressure for W/C injection unit	MPa									
Max. injection & Hold Pressure for PAL injection unit	MPa									
Maximum injection rate	cm <sup>3</sup> /s									
Maximum screw rotation speed	min <sup>-1</sup>									
Machine weight Double platen   Single platen	t									
<b>Max. Injection Speed 270</b>	<b>mm/s</b>									
Max. injection & Hold Pressure for W/C injection unit	MPa									
Max. injection & Hold Pressure for PAL injection unit	MPa									
Maximum injection rate	cm <sup>3</sup> /s									
Maximum screw rotation speed	min <sup>-1</sup>									
Machine weight Double platen   Single platen	t									
<b>Max. Injection Speed 280 (high duty)</b>	<b>mm/s</b>	<b>280 (high duty)</b>								
Max. injection pressure (high-pressure filling mode)	MPa	380	345	320	280	-	-	-		
Max. injection & Hold Pressure for W/C injection unit	MPa	310	310	280	260	230	200	172		
Max. injection & Hold Pressure for PAL injection unit	MPa	280	280	280	260	230	200	172		
Maximum injection rate	cm <sup>3</sup> /s	225	285	351	425	506	594	689		
Maximum screw rotation speed	min <sup>-1</sup>				400					
Machine weight Double platen   Single platen	t				13.7					
<b>Max. Injection Speed 350</b>	<b>mm/s</b>	<b>350</b>								
Max. injection pressure (high-pressure filling mode)	MPa	380	345	-	-	-	-	-		
Max. injection & Hold Pressure for W/C injection unit	MPa	310	310	280	240	190	160	140		
Max. injection & Hold Pressure for PAL injection unit	MPa	280	280	260	220	190	160	140		
Maximum injection rate	cm <sup>3</sup> /s	281	356	439	532	633	743	862		
Maximum screw rotation speed	min <sup>-1</sup>				400					
Machine weight Double platen   Single platen	t				13.7					

3000   300 / Increased (3500   350)										3000   300 / Increased (3500   350)			
650-300 / Increased (750-300)										650-300 / Increased (750-300)			
600										600			
Ø 160										Ø 160			
810 x 710										810 x 710			
1130 x 1030										1130 x 1030			
9 / 80 (8.0) / 200										9 / 80 (8.0) / 200			
40	44	48	52	56	64	68	72	64	68	72	80		
150	176	176	208	260	260	260	260	280	300	320	320		
188	268	318	442	640	836	944	1059	901	1090	1303	1608		
										<b>160</b>			
										220	200	185	150
										220	200	185	150
										514	581	651	804
										400	300	200	
										14.2			
										<b>240 (high duty)</b>			
280	280	270	240	225	175	155	135						
280	280	270	240	225	175	155	135						
301	364	434	509	591	772	871	977						
										400	300		
										14.2			
										<b>270</b>			
280	280	270	240	225	175	155	135						
280	280	270	240	225	175	155	135						
339	410	488	573	665	868	980	1099						
										400	300		
										14.2			



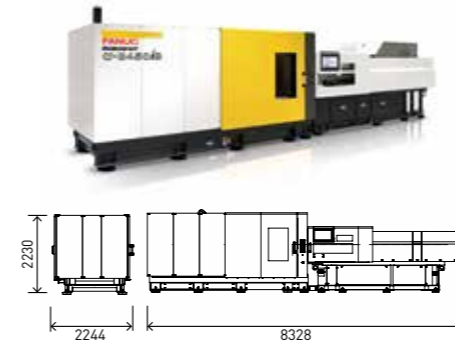
# FANUC ROBOSHOT series

## Choose the right model for your application

**α-S450iB** (ultra small capacity)



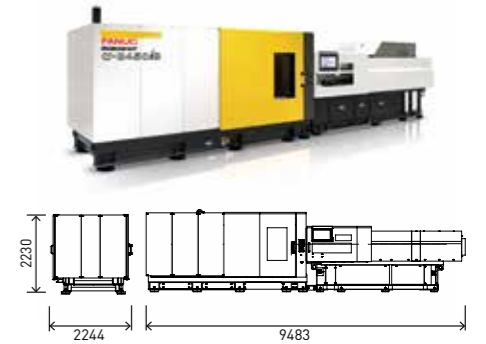
**α-S450iB** (small capacity)



**α-S450iB**



**α-S450iB** (large capacity)



CLAMPING UNIT	Tonnage	kN   tonf	4500   450 / Increased (5000   500)				
	Maximum and minimum die height Single platen	mm	1000-350				
Clamping stroke	mm	900					
Locating ring diameter	mm	Ø 200					
Tie Bar Spacing, HxV	mm	920 x 920					
Platen size, HxV	mm	1300 x 1300					
Ejector point / Ejector Force / Ejector Stroke	point / kN (tonf) / mm	17 / 150 (15.0) / 250					
INJECTION UNIT	Screw diameter	mm	40	44	48	52	56
	Injection stroke	mm	150	176	176	208	260
	Max. injection volume	cm <sup>3</sup>	188	268	318	442	640
	<b>Max. Injection Speed 160</b>	<b>mm/s</b>					
	Max. injection & Hold Pressure for W/C injection unit	MPa					
	Max. injection & Hold Pressure for PAL injection unit	MPa					
	Maximum injection rate	cm <sup>3</sup> /s					
	Maximum screw rotation speed	min <sup>-1</sup>					
	Machine weight Double platen   Single platen	t					
	<b>Max. Injection Speed 180</b>	<b>mm/s</b>					
	Max. injection & Hold Pressure for W/C injection unit	MPa					
	Max. injection & Hold Pressure for PAL injection unit	MPa					
	Maximum injection rate	cm <sup>3</sup> /s					
	Maximum screw rotation speed	min <sup>-1</sup>					
	Machine weight Double platen   Single platen	t					
	<b>Max. Injection Speed 240 (high duty)</b>	<b>mm/s</b>					
	Max. injection & Hold Pressure for W/C injection unit	MPa					
	Max. injection & Hold Pressure for PAL injection unit	MPa					
	Maximum injection rate	cm <sup>3</sup> /s					
	Maximum screw rotation speed	min <sup>-1</sup>					
Machine weight Double platen   Single platen	t						
<b>Max. Injection Speed 270</b>	<b>mm/s</b>						
Max. injection & Hold Pressure for W/C injection unit	MPa						
Max. injection & Hold Pressure for PAL injection unit	MPa						
Maximum injection rate	cm <sup>3</sup> /s						
Maximum screw rotation speed	min <sup>-1</sup>						
Machine weight Double platen   Single platen	t						
<b>Max. Injection Speed 280 (high duty)</b>	<b>mm/s</b>	<b>280 (high duty)</b>					
Max. injection pressure (high-pressure filling mode)	MPa	320	280	-	-	-	
Max. injection & Hold Pressure for W/C injection unit	MPa	280	260	230	200	172	
Max. injection & Hold Pressure for PAL injection unit	MPa	280	260	230	200	172	
Maximum injection rate	cm <sup>3</sup> /s	351	425	506	594	689	
Maximum screw rotation speed	min <sup>-1</sup>	400					
Machine weight Double platen   Single platen	t	24.8					
<b>Max. Injection Speed 350</b>	<b>mm/s</b>	<b>350</b>					
Max. injection & Hold Pressure for W/C injection unit	MPa	280	240	190	160	140	
Max. injection & Hold Pressure for PAL injection unit	MPa	260	220	190	160	140	
Maximum injection rate	cm <sup>3</sup> /s	439	532	633	743	862	
Maximum screw rotation speed	min <sup>-1</sup>	400					
Machine weight Double platen   Single platen	t	24.8					

4500   450 / Increased (5000   500)							4500   450 / Increased (5000   500)				4500   450 / Increased (5000   500)				
1000-350							1000-350				1000-350				
900							900				900				
Ø 200							Ø 200				Ø 200				
920 x 920							920 x 920				920 x 920				
1300 x 1300							1300 x 1300				1300 x 1300				
17 / 150 (15.0) / 250							17 / 150 (15.0) / 250				17 / 150 (15.0) / 250				
48	52	56	64	68	72		64	68	72	80	68	72	80	90	100
176	208	260	260	260	260		280	300	320	320	300	320	360	360	360
318	442	640	836	944	1059		901	1090	1303	1608	1090	1303	1810	2290	2827
							<b>160</b>								
							220	200	185	150					
							220	200	185	150					
							514	581	651	804					
							400	300	200						
							25.9								
											<b>180</b>				
											280	280	250	200	160
											280	280	250	200	160
											653	732	904	1145	1413
											200				
											29.7				
							<b>240 (high duty)</b>								
270	240	225	175	155	135										
270	240	225	175	155	135										
434	509	590	772	871	977										
							400	300							
							25.2								
							<b>270</b>								
270	240	225	175	155	135										
270	240	225	175	155	135										
488	573	665	868	980	1099										
							400	300							
							25.2								



## ROBOSHOT $\alpha$ -SiB series

### Available features

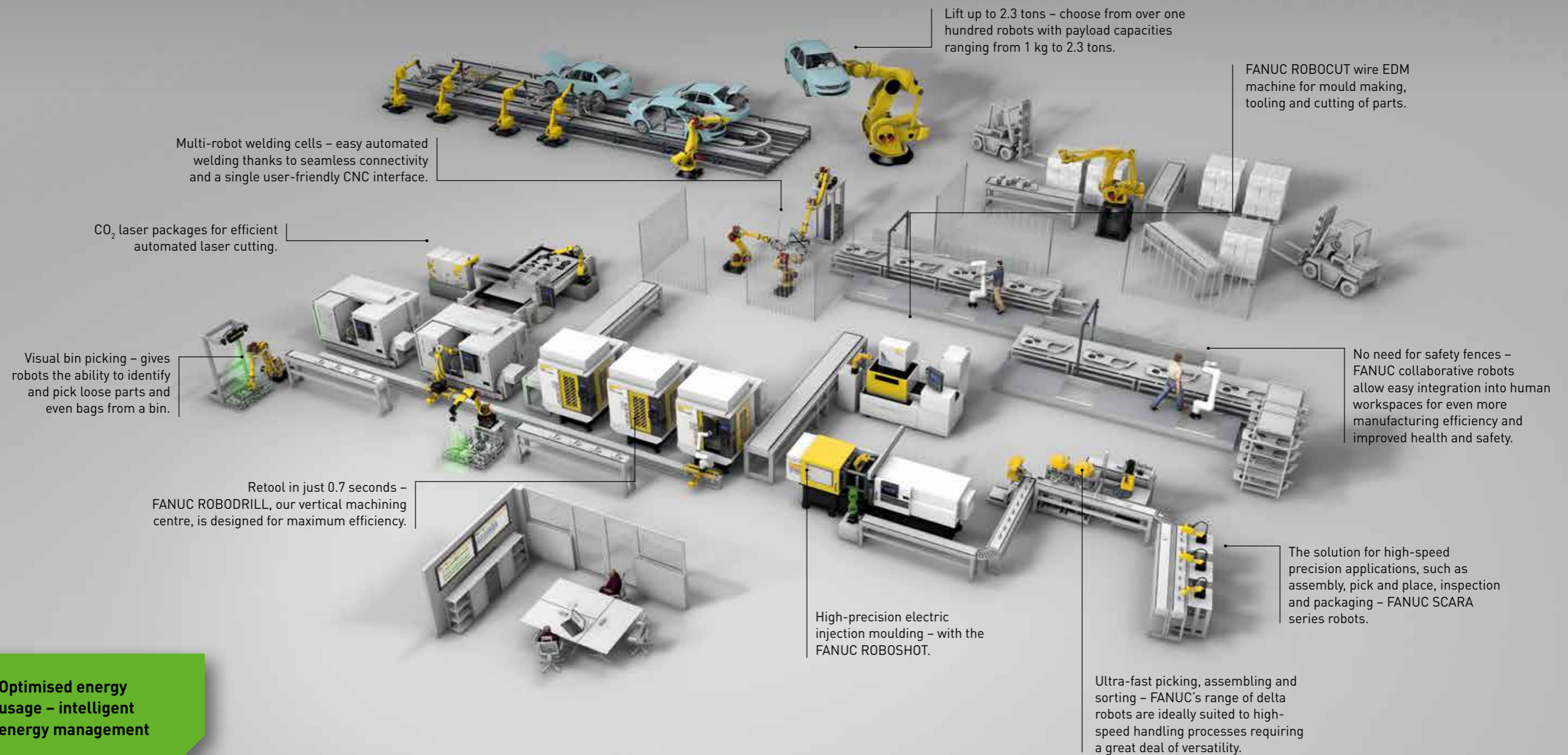
Display & Input	Standard	Option
21.5" HD Touch screen display	●	
Simultaneous display of setting screen, monitoring screen & ROBOSHOT-LINKi2	●	
23 languages - selectable	●	
Numerical input, incremental input & character inputs in 23 languages	●	
Managed entry - 200 operators with password and storage in operator log	●	
Operator management with ID card instead of password		●
Customisation of menu buttons	●	
Setting profile displays - 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 enabled device 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	●	
High resolution pre ejector function		●
Automatic die height adjustment with clamp force sensor	●	
Precise clamp force control - automatic adjustment & optimisation	●	
Clamp compression function		●
Ejector compression function		●
Auto production set up function - reduced set up time		●
AI Mould protection, complete mould open & close stroke	●	
AI 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 override function - Simultaneous ejector retract during clamp closing		●

## ROBOSHOT $\alpha$ -SiB series

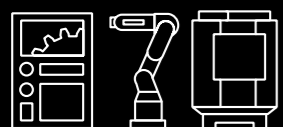
### Available features

Data storage, features and software	Standard	Option
Mould file storage - 500 files	●	
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	●	
AI 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	●	
8 machine status outputs	●	
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	●	
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		●

# intelligent automation – 100% FANUC



**Optimised energy usage – intelligent energy management**



With three core product groups, FANUC is the only company in its sector to develop and manufacture all its major components in-house. Every detail, both hardware and software, undergoes stringent quality control checks as part of an optimised chain. Fewer parts and lean technology make FANUC solutions reliable, predictable and easy to repair. They are made to run and provide you with the highest uptime on the market.



All FANUC products – industrial robots, CNC systems and CNC machines – share a common servo and control platform, providing seamless connectivity and making full-automation scenarios really simple. Since all products share common parts, spare parts management with FANUC is fairly efficient. Plus, global standards make it very easy to go international with FANUC.



### Designed for easy automation

The FANUC Quick & Simple Start up of Robotisation (QSSR) enables you to install FANUC robots in just a few steps. Robots can be easily used for loading and unloading parts, assembling, picking, and placing, and the ergonomically designed work area ensures easy access to the machine. Another plus: all FANUC products speak the same language and share a common servo and control platform – something that makes learning and operating them extremely easy.

#### Your efficiency benefits:

- easy robot-accessibility
- simple plug and play connectivity
- quick & Simple Startup of Robotisation QSSR
- seamless loading and unloading or insert placing
- turn-key solutions
- very exact and highly repeatable insert placement without the need for mechanical guides
- repeatable to +/-0.01 mm (depending on robot model)



FANUC Robot  
LR Mate 200iD  
7L



#### Visual error proofing:

- FANUC's integrated vision system, *iRVision*, identifies part errors according to cavity
- visual identification of part defects or tiny faults such as a single dot in a group of parts
- no revalidation of the production process necessary
- saves a considerable amount of time
- only 1 camera required for multiple cavities

#### Part placement and orientation:

- FANUC's *iRVision* provides a simple part placement solution
- inspection of each part on a conveyor
- identification of the cavity automatically
- an immediate decision is made



# Efficient FANUC service worldwide

Wherever you need us, our comprehensive FANUC network provides sales, support and customer service all around the world. That way, you can be sure you have always got a local contact that speaks your language.

## Efficient long time productivity: FANUC Maintenance Services

To minimise impact on production and get the most out of your machine, we offer maintenance services designed to lower your machine's total cost of ownership (TCO). Whatever your production scenario, FANUC solutions keep your machine running via dedicated preventive, predictive and reactive maintenance procedures that maximise uptime and keep downtime to a bare minimum.

## Efficient training: FANUC Academy

The FANUC Academy offers everything you need to upskill your teams and increase productivity – from introductory programs for beginners through to courses tailored to the needs of expert users and specific applications. Fast and effective learning, on-site training or cross machine training, make up the extensive educational offering.

## Efficient supply: Lifetime OEM spare parts

As long as your machine is in service we will provide you with original spare parts. With more than 20 parts centres all over Europe, dedicated service engineers and direct online access to FANUC stores, availability checks and ordering, we keep you running whatever happens.

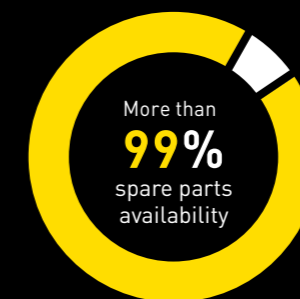
## FANUC Assisted Reality (FAR) Maximize uptime by remote support

With the help of FAR, we can perform a comprehensive remote diagnosis before sending our service technicians to the site. We can also support technicians remotely during field service or even provide direct support to help the customer fix a problem. In many cases, this capability has already helped to reduce downtime. In other instances, thanks to improved remote diagnostics, the technician did not even need to visit the customer site. FAR helps to save costs because we can often fix simple problems or operating errors remotely.

Extended warranty from **24 months** up to **5 years**, upon request.

**24/7** support <sup>1)</sup>

**Aftersales support**  
(warranty, extended contracts, FAR)



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

1) Service is available as a contractual option for selected markets.



# One common servo and control platform – Infinite opportunities THAT'S FANUC!



## **FA**

CNCs,  
Servo Motors  
and Lasers

## **ROBOTS**

Industrial Robots,  
Accessories  
and Software

## **ROBOCUT**

CNC Wire-Cut  
Electric Discharge  
Machines

## **ROBODRILL**

Compact  
CNC Machining  
Centres

## **ROBOSHOT**

Electric CNC  
Injection Moulding  
Machines

## **IoT**

Industry 4.0  
solutions