



## Standard Three-Axis Servo Driven Robot

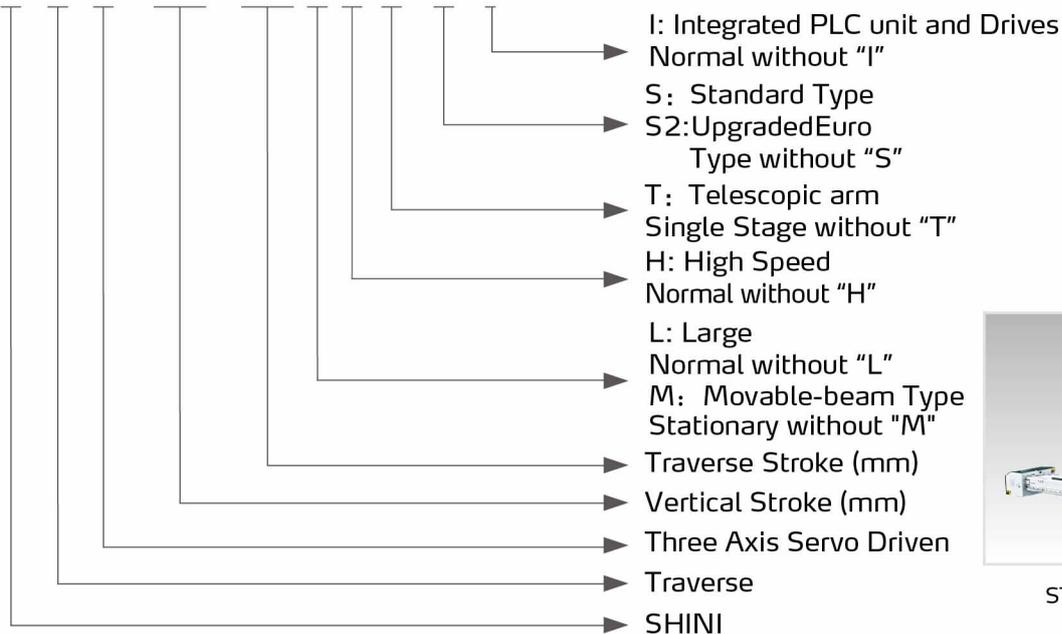
ST3-900-1600T-S2



Refer carefully to this manual before operation.

## ■ Coding Principle

S T 3 - xxx - xxx L H T - S - I



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ST3-2200-3000LT-S

## ■ Features

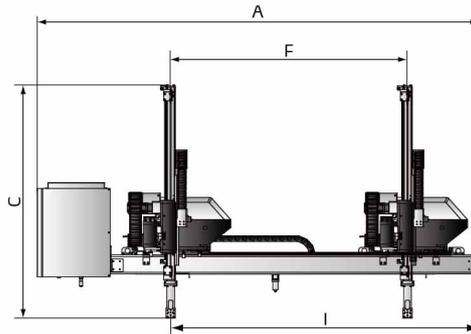
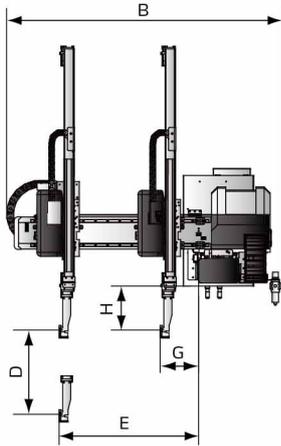
- Precision  
All linear movements are driven by heavy duty servo motors with cooperation of precise linear guide rails and high power V belts; fast, silent, and precise. Wrist mechanism employs pneumatic driven rack and pinion system, which accomplishes smooth, stable and precise flipping motion. Vertical arm with telescopic design efficiently minimizes the cycle time and height of the robot.
- Safety  
The travel limit of the X, Y, and Z-axis are with anti-collision devices. It can effectively prevent operation out of control. Complete dual protection function with the soft and hard limit. Ensure the safe operation of injection molding machine and travel robot. The design of I / O short-circuits protection can effectively prevent the circuit board from damage due to an electrical short circuit.
- Intelligence  
7.0 inch high definition TFT touch screen. The USB can be used to upgrade the manual controller and main-board, download program data, and the open program teaching, 8GB memory, and independent dual 16-bit IO expansion board can expand up to 4 IO boards. The hardware used multi-layer PCB and multi-rank high precision electrical modular, strong anti - interference ability. Hardware protect function, each signal output with intelligent detection, avoid short-circuit, overload and high temperature. Base on the VARAN BUS technology, the system can be extended, strong adaptability and flexibility. Teach modules with stacking and matrix locate functions, support conditional judgment, loop control, signal waiting and others logic instructions.
- User Friendly  
Multi-languages system and reserved auxiliary equipment slots able to support our global clients' need.

## ■ Application

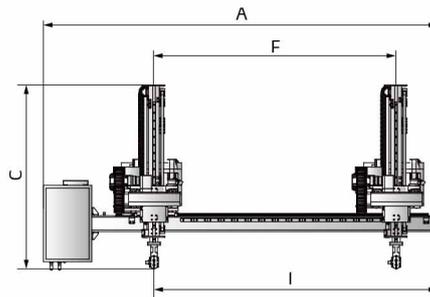
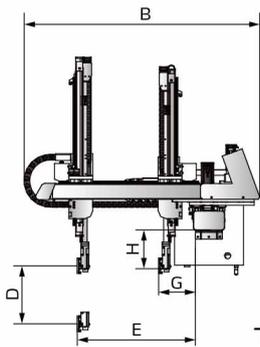
The ST3-S2 series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Apply to 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine with clamping force under 3600 tons.

# ST3-S Series

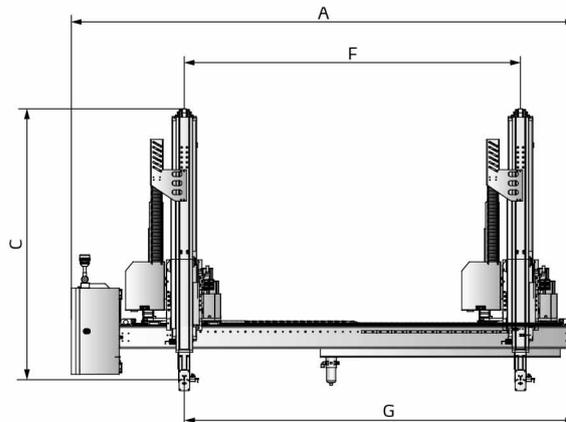
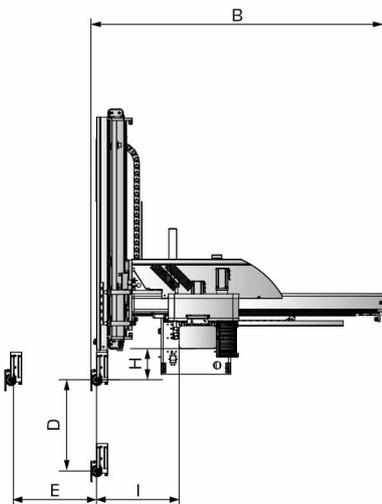
## Outline Drawings



3-axis servo with single kick-stroke beam



Three Axes Servo Telescopic(Stationary-beam type)



Three Axes Servo Telescopic (Movable-beam type)

## ■ Specifications

Model(ST3)	900-1600T-S2	1100-1800T-S2	900-1400SHT-S2	1100-1600SHT-S2	1200-1600MHT-S2	
Robot Type	Single kick stroke beam	Telescopic arm with frame type beam	Small load high speed robot		Smallmovable-beam type	
IMM (ton)	220-260	320-400	160-220	260-320	200-320	
Traverse Stroke (mm)	1600	1800	1400	1600	1600	
Crosswise Stroke (mm)	900	1050	600	600	800	
Vertical Stroke (mm)	900	1100	900	1100	1200	
Max Load (with tool) (kg)	5	6	3	3	8	
Min Pick-out Time (sec)	1.3	1.5	0.65	0.7	1.2	
Min Cycle Time (sec)	5.5	6.4	3.5	3.8	5	
Air Pressure (bar)	4~6	4~6	4~6	4~6	4~6	
Max. Air Consumption (NI/cycle)*	4	6	6	6	6	
Weight (kg)	300	320	360	380	300	
Dimensions (mm)	A	2640	2880	2500	2700	2700
	B	1800	1950	1350	1350	1500
	C	1350	1445	1170	1270	1270
	D	1000	1200	900	1100	1200
	E	900	1160	600	600	800
	F	1600	1800	1400	1600	1600
	G	180	250	1840	2040	2000
	H	230	200	160	160	135
	I	1900	2200	240	240	320

- Notes: 1) "M" stands for middle mold detector. (suitable for three-plate mold.)  
 "EM12" stands for EUROMAP 12 communication interface.  
 "EM67" stands for EUROMAP 67 communication interface.  
 "ABS" at the end of the model code stands for models of high precision.  
 "N" stands for non-operation side, operation side without "N"
- 2) Power supply: 1Φ, 200~240V, 50/60Hz.
- 3) " \* " Max. air consumption for vacuum device 60NI/min.
- 4) ( ) means option

# ST3-S Series

## ■ Specifications

Model(ST3)	1400-2000MT -S	1600-2200MT -S	1800-2400MT -S	2000-2800MT -S	
Robot Type	Medium movable-beam type				
IMM (ton)	450-650	650-850	850-1400	1400-1800	
Traverse Stroke (mm)	2000	2200	2400	2800	
Crosswise Stroke (mm)	1200	1600	1600	1580	
Vertical Stroke (mm)	1400	1600	1800	2000	
Max Load (with tool) (kg)	15	20	20	20	
Min Pick-out Time (sec)	3	3.3	3.6	3.8	
Min Cycle Time (sec)	13	14	16	17.5	
Air Pressure (bar)	4~6	4~6	4~6	4~6	
Max. Air Consumption (Nl/cycle)*	6	6	6	6	
Weight (kg)	530	850	900	950	
Dimensions (mm)	A	3160	3460	3660	3860
	B	1960	2500	2500	2350
	C	1680	1890	1990	2090
	D	1400	1600	1800	2000
	E	1100	1600	1600	1580
	F	2000	2200	2400	2800
	G	2450	2650	2850	3250
	H	145	220	220	220
	I	355	355	355	355

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 "N" stands for non-operation side, operation side without "N"
- 2) Power supply: 1Φ, 200~240V, 50/60Hz.
- 3) " \* " Max. air consumption for vacuum device 60Nl/min.

## ■ Specifications

Model(ST3)	2200-3000LT-S	2600-4000LT-S	3000-4000LT-S	
Robot Type	Large movable-beam type	Large movable-beam type	Large movable-beam type	
IMM (ton)	1800~2400	2400~3000	3000~3600	
Traverse Stroke (mm)	3000	4000	4000	
Crosswise Stroke (mm)	1580	1660	1820	
Vertical Stroke (mm)	2200	2600	3000	
Max Load (with tool) (kg)	20	40	40	
Min Pick-out Time (sec)	4.2	4.5	5.0	
Min Cycle Time (sec)	24	26	28	
Air Pressure (bar)	4~6	4~6	4~6	
Max. Air Consumption (NI/cycle)*	8	8	8	
Weight (kg)	990	1010	1080	
Dimensions (mm)	A	4500	5500	5500
	B	2550	2820	2980
	C	2300	2600	2700
	D	2200	2600	3000
	E	1580	1660	1820
	F	3000	4000	4000
	G	3500	4500	4500
	H	250	250	250
	I	320	320	320

- Notes: 1) "M" stands for middle mold detector. (suitable for three-plate mold.)  
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 2) Power supply: 1Φ, 200~240V, 50/60Hz.  
 3) " \* " Max. air consumption for vacuum device 60NI/min.

## Shini Group

Addr: No. 23, Minhe St., Shulin Dist.,  
New Taipei, Taiwan

Tel: +886 2 2680 9119

Fax: +886 2 2680 9229

Email: [shini@shini.com](mailto:shini@shini.com)

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