



## Standard Three-Axis Servo Driven Robot

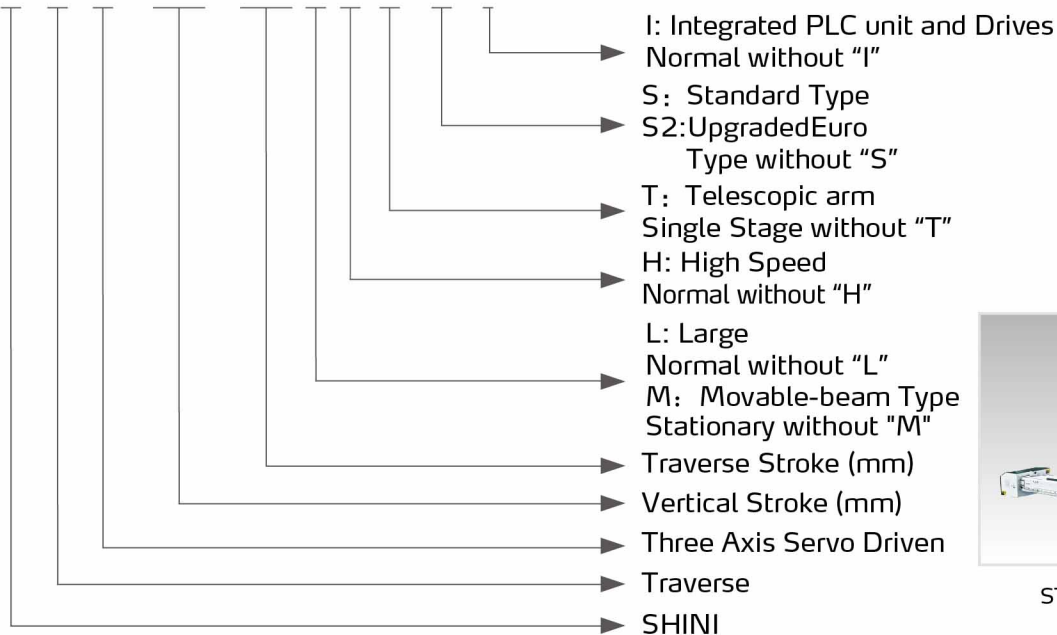
ST3-900-1600T-S2



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

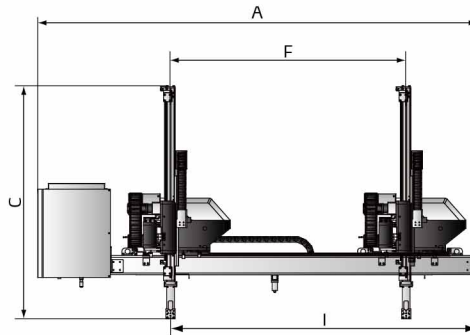
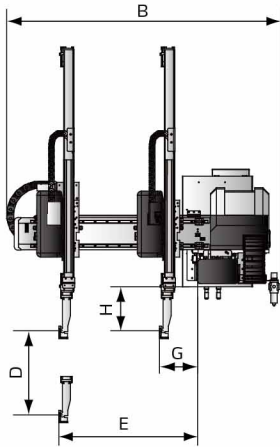
- Precision  
All linear movements are driven by heavy duty servo motors with cooperation of precise linear guide rails and high power V belts; fast, silent, and precise. Wrist mechanism employs pneumatic driven rack and pinion system, which accomplishes smooth, stable and precise flipping motion. Vertical 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

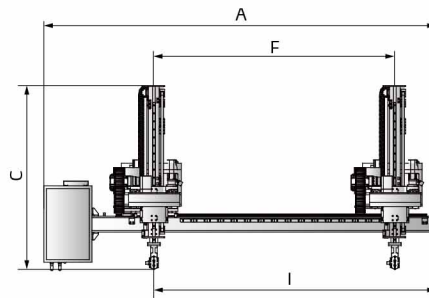
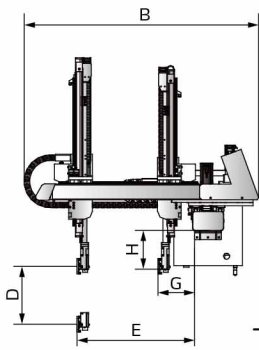
The ST3-S2 series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Apply to 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine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

# ST3-S Series

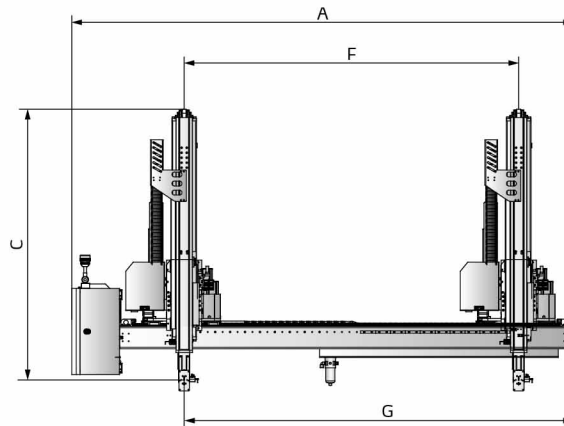
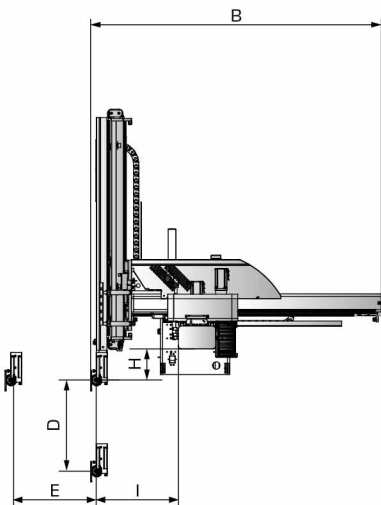
## Outline Drawings



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)	700-1200-S2	700-1400-S2	900-1600T-S2	1100-1800T-S2	1300-1800T-S2	950-1400HT-S2	1100-1600HT-S2	
Robot Type	Single kick stroke beam			Telescopic arm with frame type beam				
IMM (ton)	50~80	80-160	220-260	320-400	400-500	160~220	220~260	
Traverse Stroke (mm)	1200	1400	1600	1800	1800	1400	1600	
Crosswise Stroke (mm)	470	470	525	680	680	560	680	
Vertical Stroke (mm)	700	700(800)	900(1000)	1100(1200)	1300	950	1100	
Max Load (with tool) (kg)	3	3	5	8	8	5	5	
Min Pick-out Time (sec)	1.3	1.3	1.3	1.5	2	1	1.2	
Min Cycle Time (sec)	5.2	5.2	5.5	6.2	8	3.9	4.2	
Air Pressure (bar)	4~6	4~6	4~6	4~6	4~6	4~6	4~6	
Max. Air Consumption (NI/cycle)*	4	4	4	6	6	6	6	
Weight (kg)	230	240	270	320	400	340	390	
Dimensions (mm)	A	2230	2560	2840	3000	3000	2640	2840
	B	1200	1350	1465	1530	1530	1410	1530
	C	1510	1420(1520)	1330(1350)	1390(1445)	1490	1335	1390
	D	700	700(800)	900(1000)	1100(1200)	1300	950	1100
	E	610	610	720	950	950	830	950
	F	1200	1400	1600	1800	1800	1400	1600
	G	155	155	155	190	190	190	190
	H	210	240	240	230	230	230	230
	I	1580	1820	2020	2150	2150	1750	1950

- Notes: 1) "M" stands for middle mold detector. (suitable for three-plate mold.)  
 "EM12" stands for EUROMAP 12 communication interface.  
 "EM67" stands for EUROMAP 12 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)	1200-1600MHT-S2	1400-2000MT-S	1600-2200MT-S	1800-2400MT-S	2000-2800MT-S	
Robot Type	Small movable-beam type	Medium movable-beam type	Medium movable-beam type	Medium movable-beam type	Medium movable-beam type	
IMM (ton)	200-320	450-650	650-850	850-1400	1400-1800	
Traverse Stroke (mm)	1600	2000	2200	2400	2800	
Crosswise Stroke (mm)	800	900	1000	1200	1200	
Vertical Stroke (mm)	1200	1400	1600	1800	2000	
Max Load (with tool) (kg)	8	10	20	20	20	
Min Pick-out Time (sec)	1.2	3	3.3	3.6	3.8	
Min Cycle Time (sec)	5	13	14	16	17.5	
Air Pressure (bar)	4~6	4~6	4~6	4~6	4~6	
Max. Air Consumption (Nl/cycle)*	6	6	6	6	6	
Weight (kg)	300	530	580	650	690	
Dimensions (mm)	A	2700	3160	3460	3660	3860
	B	1500	1717	2000	2200	2200
	C	1270	1890	2100	2200	2300
	D	1200	1400	1600	1800	2000
	E	800	1255	1355	1555	1555
	F	1600	2000	2200	2400	2800
	G	2000	2450	2650	2850	3250
	H	135	260	260	260	260
	I	320	355	355	355	355

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 "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 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)	1500	1660	1820
Vertical Stroke (mm)	2200	2600	3000
Max Load (with tool) (kg)	40	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
	B	2650	2820
	C	2600	2800
	D	2200	2600
	E	1900	2050
	F	3000	4000
	G	3500	4500
	H	350	350
	I	320	320

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 3) " \* " Max. air consumption for vacuum device 60NI/min.

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