



Automation Solution

Standard Robot

Simple Solution





Standard Swing-arm Robot 1

SS-650-S1



Refer carefully to this manual before operation.

■ Coding Principle

S S - xxx T - S1



Hand Controller

■ Features

- Appearance
Designed with elegant appearance; Aluminium profiles are largely used to provide compact and streamlined appearance.
- Base Mechanism
Fast mold changing design provides simple method for changing molds. The base is rotatable for 90° by releasing the handle.
- Control System
Dialogic hand controller provides English, Japanese, Traditional Chinese and Simplified Chinese. There are 8 standard programs and memory for up to 50 customized programs with self fault detection. Swing directions are adjustable simply by flipping the switch on the control board. Position limit sensors are applied to all moving directions in order to provide safety mechanically and electrically. Extra 4 sets of I/O pins are available for other applications. Designed to EUROMAP 12, EUROMAP 67 and SPI to provide plug and use.

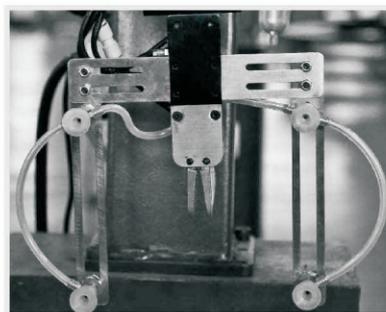
■ Application

The SS-S1 series robot is designed for rapid and precise removal of sprue and runner from injection molding machine, and place them into granulator for recycling. Simple product removal is applicable with optional vacuum generator and EOAT. Suitable for injection molding machine under 250T clamp force.

■ Options



Middle Mold Detector



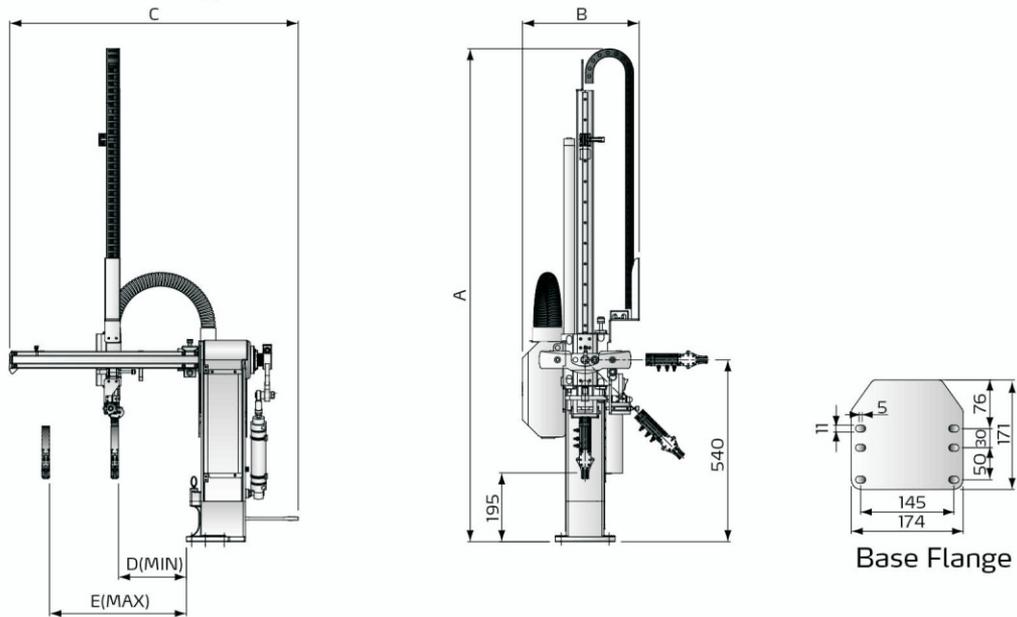
Vacuum Device



Rotate Wrist

SS-S1 Series

Outline Drawings



Specifications

Model	SS-650-S1	SS-650T-S1	SS-750T-S1	
IMM (ton)	100-150	100-150	150-250	
Crosswise Stroke (mm)	120	120	200	
Vertical Stroke (mm)	0-650	0-650	0-750	
Wrist Angle (deg)	50-90	50-90	50-90	
Max Load (with tool) (kg)	0.5	0.5	0.5	
Min Pick-out Time (sec)	0.9	0.9	1	
Min Cycle Time (sec)	4.4	4.2	4.8	
Air Pressure (bar)	4-6	4-6	4-6	
Max Air Consumption (NI/cycle) *	13	12	13	
Weight (kg)	36	48	49	
Dimensions (mm)	A	1460	1200	1250
	B		320	
	C		820	
	D		100	
	E		430	

Notes: 1). "V" stands for vacuum device.

"M" stands for middle mold detector. (Suitable for three-plate mold.)

"R" stands for claw rotating group

"EM12" stands for EUROMAP 12 communication interface.

"EM67" stands for EUROMAP 67 communication interface.

"N" stands for non-operation side, operation side without "N"

2). Power supply requirement: 1Φ, 200~240V, 50/60Hz.

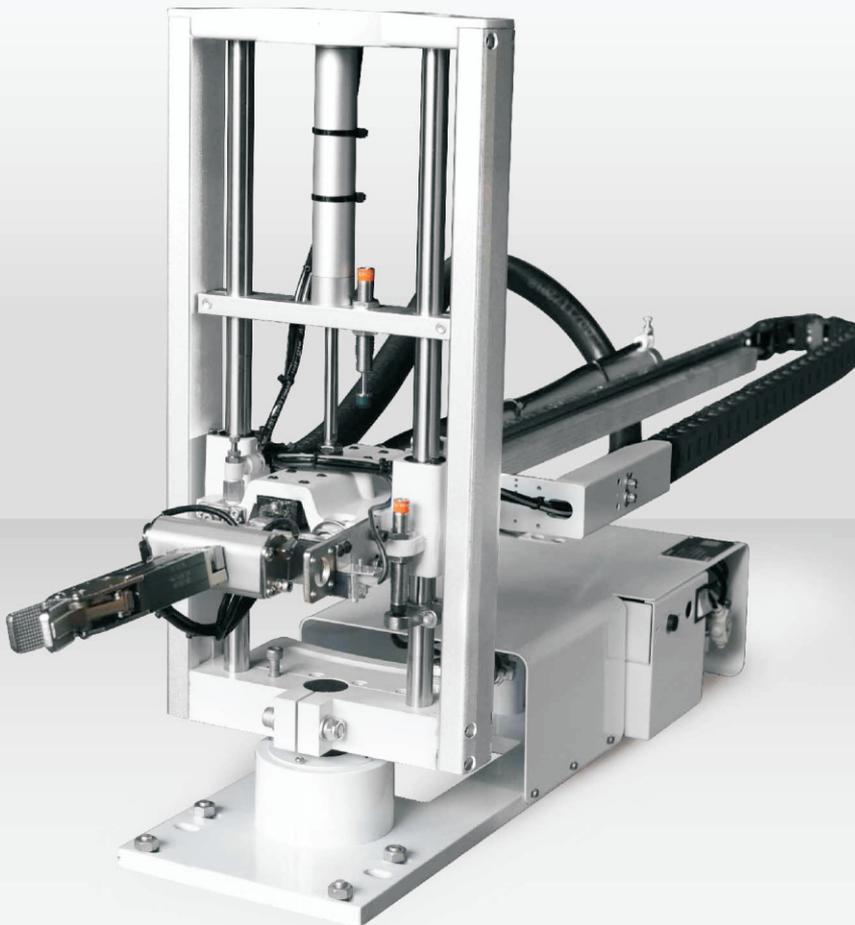
3). " * " Max air consumption for vacuum device 30NI/min.

We reserve the right to change specifications without prior notice.



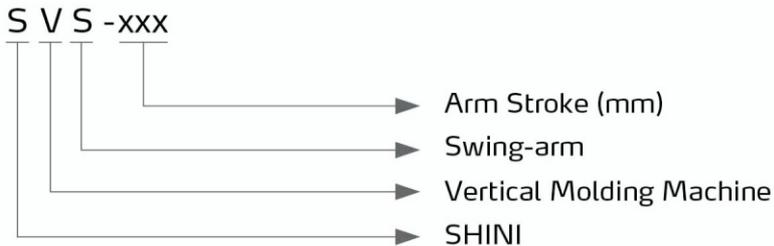
Vertical Molding Machine Swing-arm Robot

SVS-700



Refer carefully to this manual before operation.

■ Coding Principle



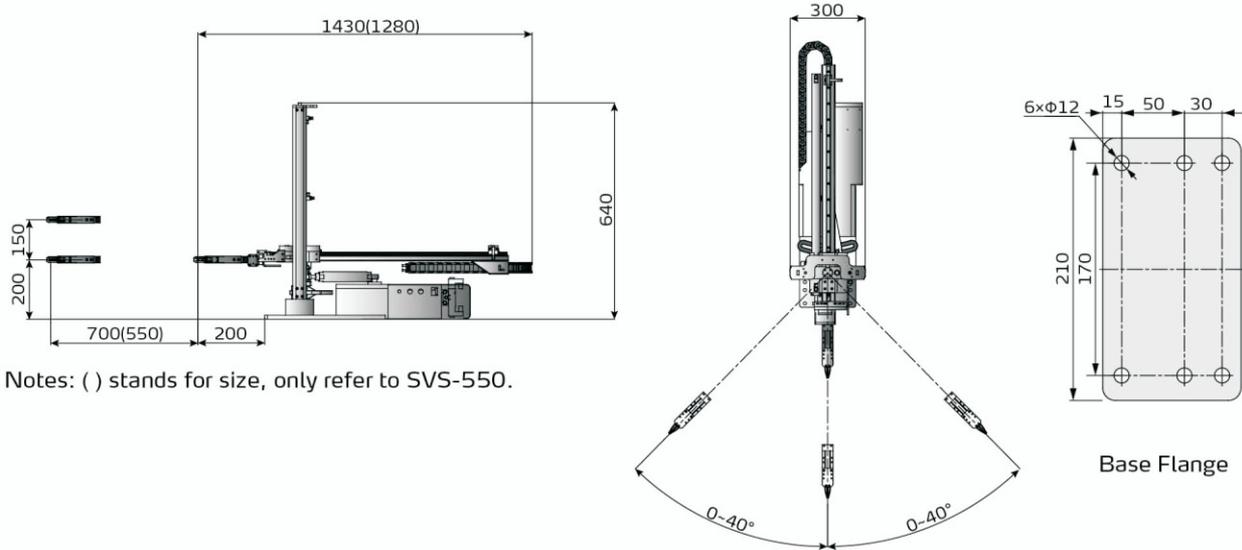
■ Features

- Appearance
Designed with frame-type style, compact and streamlined appearance.
- Safety
Proximity sensors and anti-collision devices are applied to all moving directions in order to provide safety mechanically and electrically.
- Convenience
All limitation device are fixed by sliders, users can adjust them by need, easy to use. Cylinder air flow can be adjusted by filter regulating valve.
- Standardization
All pneumatic accessories, electric accessories, and communication protocols meet the global standards. Interface between injection molding machine and robot is compliance with EUROMAP 12, EUROMAP 67 and SPI.
- User Friendly
Signals can be connected by EUROMAP push-pull connector, easy to plug-in and plug-out. Reserved 4 extra I/O pins for other applications.
- Intelligence
Dialogic hand controller supports 3 languages, including Traditional Chinese, Simplified Chinese and English. System includes 8 standards programs and 50 sets teach programs which can store mold processing conditions and data. The controller also have self-diagnosis function.

■ Application

The SVS series robot is designed for rapid and precise removal of sprue and runner from vertical molding machine, and place them into granulator for recycling.

Outline Drawings



Notes: () stands for size, only refer to SVS-550.

Specifications

Model	SVS-550	SVS-700
IMM(ton)	50~150	100~200
Vertical Stroke(mm)	0~150	0~150
Arm Stroke(mm)	0~550	0~700
Swing Angle(deg)	0~40	0~40
Wrist Angle(deg)	180	180
Max Load (with tool)(kg)	0.5	0.5
Min Pick-out Time(sec)	0.8	0.9
Min Cycle Time(sec)	3	3.2
Max Air Consumption(L)	12	14.5
Power Rating(W)	30	30
Rated Current(A)	0.5	0.5
Air Pressure(bar)	4~6	4~6
Weight(kg)	55	57
Dimensions (W×H×D) (mm)	300×640×1280	300×640×1430

Notes: 1) "EM12" stands for EUROMAP 12 communication interface.
"EM67" stands for EUROMAP 67 communication interface.

2) Power supply requirement: 1Φ, 200~240V, 50/60Hz.

We reserve the right to change the specifications without prior notice.



Standard Three-Axis Servo Driven Robot

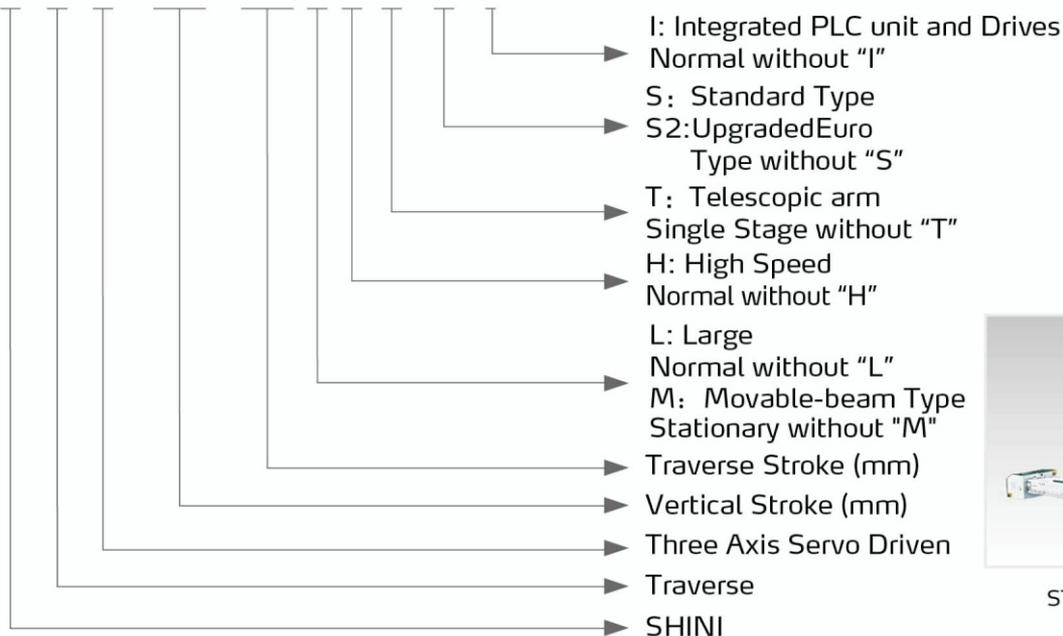
ST3-900-1600T-S2



Refer carefully to this manual before operation.

■ Coding Principle

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



Home Page



ST3-2200-3000LT-S

■ Features

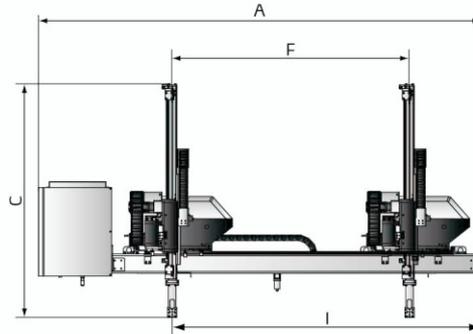
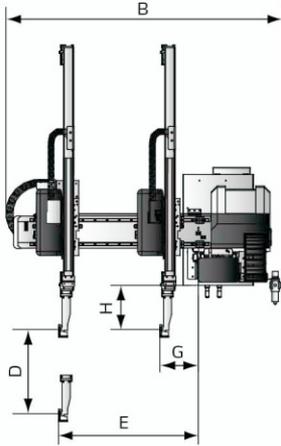
- Precision
All linear movements are driven by heavy duty servo motors with cooperation of precise linear guide rails and high power V belts; fast, silent, and precise. Wrist mechanism employs pneumatic driven rack and pinion system, which accomplishes smooth, stable and precise flipping motion. Vertical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

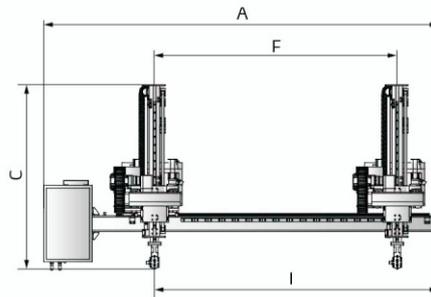
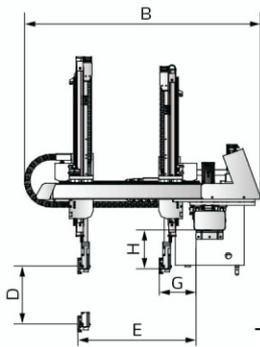
The ST3-S2 series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Apply to 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine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

ST3-S Series

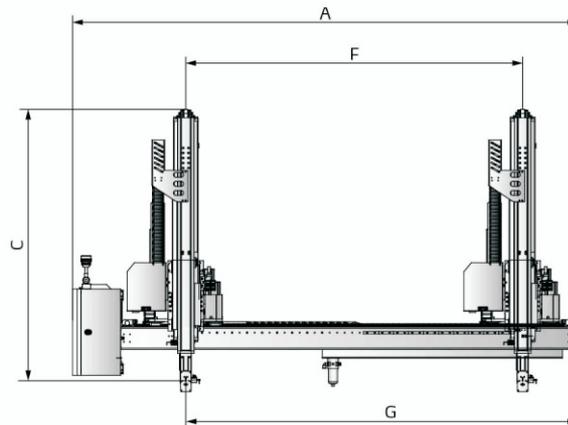
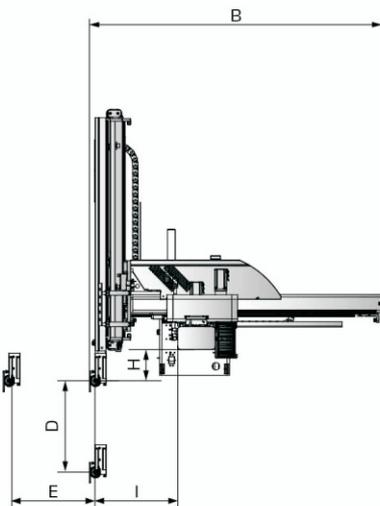
Outline Drawings



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	
Integrated PLC unit and Drives	●	●	●	●	●	-	-	
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
 5) "●" means: option, and add "I" at the model code, and "-" means: unavailable

ST3-S Series

Specifications

Model(ST3)	950-1400MHT-S2	1100-1600MHT-S2	1400-2000MT-S	1600-2200MT-S	1800-2400MT-S	2000-2800MT-S	
Robot Type	Small movable-beam type	Small movable-beam type	Medium movable-beam type	Medium movable-beam type	Medium movable-beam type	Medium movable-beam type	
IMM (ton)	160-220	220-260	450-650	650-850	850-1400	1400-1800	
Traverse Stroke (mm)	1400	1600	2000	2200	2400	2800	
Crosswise Stroke (mm)	650	650	900	1000	1200	1200	
Vertical Stroke (mm)	950	1100	1400	1600	1800	2000	
Max Load (with tool) (kg)	5	5	10	20	20	20	
Min Pick-out Time (sec)	1.3	1.3	3	3.3	3.6	3.8	
Min Cycle Time (sec)	4	4	13	14	16	17.5	
Air Pressure (bar)	4~6	4~6	4~6	4~6	4~6	4~6	
Max. Air Consumption (NL/cycle)*	4	4	6	6	6	6	
Weight (kg)	430	450	530	580	650	690	
Dimensions (mm)	A	2600	2800	3160	3460	3660	3860
	B	1380	1380	1717	2000	2200	2200
	C	1340	1400	1890	2100	2200	2300
	D	950	1100	1400	1600	1800	2000
	E	650	650	1255	1355	1555	1555
	F	1400	1600	2000	2200	2400	2800
	G	2000	2200	2450	2650	2850	3250
	H	180	180	260	260	260	260
	I	230	230	355	355	355	355

- Notes: 1) "M" stands for middle mold detector. (suitable for three-plate mold.)
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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 (NL/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

- Notes: 1) "M" stands for middle mold detector. (suitable for three-plate mold.)
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 "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 60NL/min.

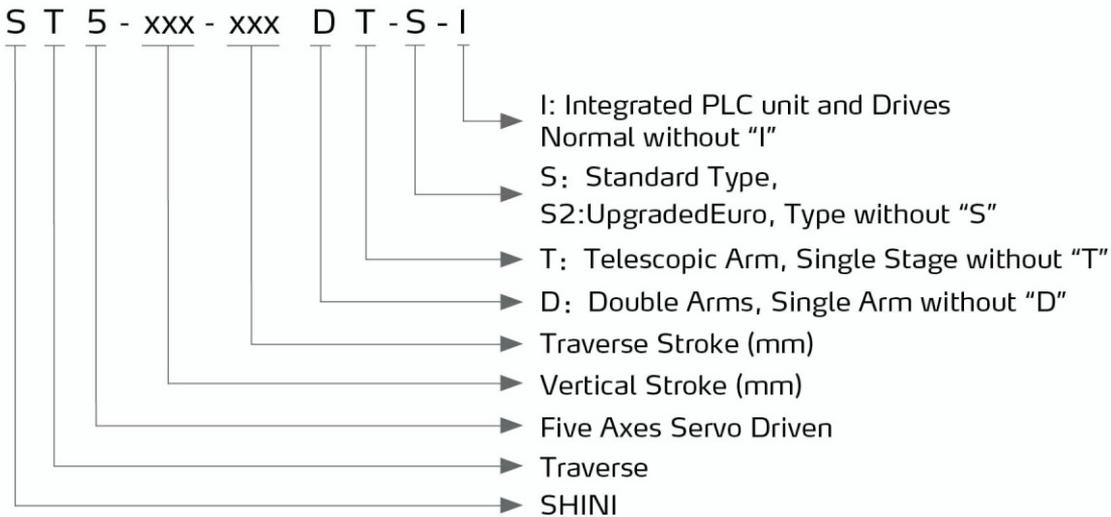
Standard Five-Axis Servo Driven Robot

ST5-900-1600DT-S2



Refer carefully to this manual before operation.

■ Coding Principle



Home Page

■ 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, stabled 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 mainboard, download program data, and the open program teaching, 8BG 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, over-load 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

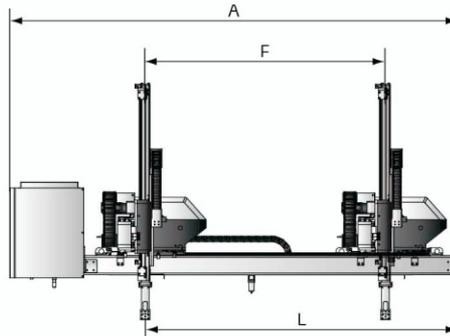
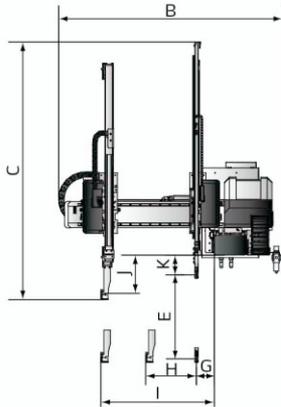
Multi-languages system and reserved auxiliary equipment slots able to support our global clients' need.

■ Application

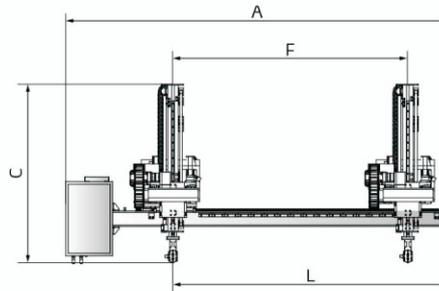
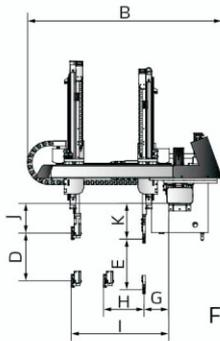
The ST5-S series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Standard and telescopic arm(s) are selectable to cooperate with 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine under 850T clamp force.

ST5-S Series

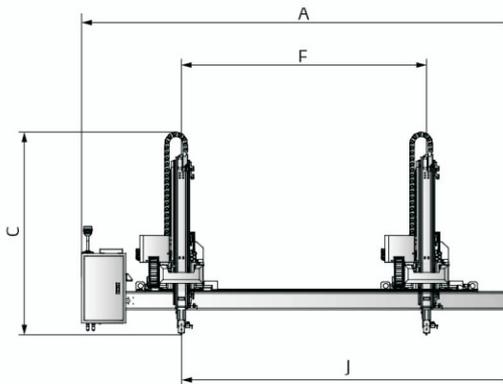
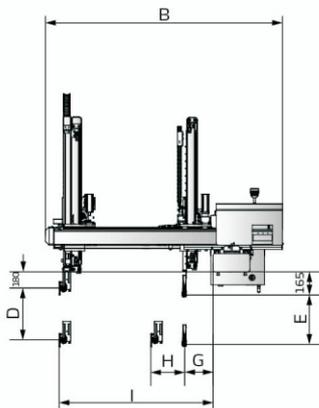
Outline Drawings



5-axis servo with single kick-stroke beam



Five axes servo small telescopic (bracket type) robot arm



Five Axes Servo Telescopic (Movable-beam type)



■ Specifications

Model(ST5)		700-1200D-S2	700-1400D-S2	900-1600DT-S2	1100-1800DT-S2	1300-2000DT-S
Robot Type		Single kick stroke beam				
IMM (ton)		50-80	80-160	220-260	320-400	450-650
Traverse Stroke (mm)		1200	1400	1600	1800	1600
Crosswise Stroke (mm)	Main Arm	370	420	420	650	650
	Sub Arm	370	420	420	650	650
Vertical stroke (mm)	Main Arm	700	700(800)	900(1000)	1100(1200)	1300
	Sub Arm	750	750(850)	950(1050)	1100(1200)	1300
Max Load (with tool) (kg)		3	3	5	6	6
Min Pick-out Time (sec)		1.3	1.3	1.3	1.5	1.5
Min Cycle Time (sec)		5.2	5.2	5.5	6.2	6.5
Air Pressure (bar)		4~6	4~6	4~6	4~6	4~6
Max. Air Consumption (NI/cycle) *		5	5	5	5	6
Integrated PLC unit and Drives		●	●	●	●	●
Weight (kg)		260	280	310	340	370
Dimensions (mm)	A	2230	2560	2760	3010	3210
	B	1250	1390	1490	1710	1710
	C	1470	1465(1565)	1300(1350)	1490(1540)	1610
	D	700	700(800)	900(1000)	1100(1200)	1300
	E	750	750(850)	950(1050)	1100(1200)	1300
	F	1200	1400	1600	1800	2000
	G	145	145	145	160	160
	H	120	160	140	160	160
	I	580	650	700	1030	1030
	J	110	175	240	240	240
	K	90	140	175	240	240
	L	1500	1820	2020	2150	2350

- 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.
 5) "●" means: option, and add "I" at the model code, and "-" means: unavailable

ST5-S Series

Specifications

Model(Medium telescopic)		ST5-1500-2200DT-S
Robot type		Medium size robot with frame type beam
IMM (ton)		650 ~ 850
Traverse Stroke (mm)		2200
Crosswise Stroke (mm)	Main Arm	750
	Sub Arm	750
Vertical stroke (mm)	Main Arm	1500
	Sub Arm	1550
Max Load (with tool) (kg)		12
Min Pick-out Time (sec)		3.5
Min Cycle Time (sec)		9.5
Air Pressure (bar)		4 ~ 6
Max. Air Consumption (NI/cycle) *		6
Integrated PLC unit and Drives		●
Weight (kg)		930
Dimensions (mm)	A	3850
	B	2140
	C	1610
	D (max)	1500
	E (max)	1550
	F (max)	2200
	G (min)	245
	H (min)	170
	I (max)	1220
	J	2900

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.

"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.

5) "●" means: option, and add "I" at the model code, and "-" means: unavailable

We reserve the right to change specifications without prior notice.

Integrated PLC unit and Drives

■ Features

- Safety

It allows safety area setting for safe operation. The robot will stop and alarm once the arm moves beyond the set safety area.

- Intelligent

7" high resolution touch-screen and user friendly interface together with integrated movement control and PLC, which enable quick response time and ease of use. Rigid hardware and circuit design plus Japanese industrial standard electronic components to ensure high stability. Compact size and structure, common DC power supply to servo drives and renowned Panasonic servo motor to enable high performance and power saving.

- User Friendly

Open type teach function allows easy modification and can add extra moves and control signals to satisfy various applications, such as boxing, stacking, insert molding and others. It also supports parallel running of multiple programs which will allow simultaneous control of outer device and can save the cost of adding extra control unit.



Teach pendant

7"high resolution touch-screen
teach pendant-touch-screen
coexist with keypad for ergonomic
and easy use.



Integrated PLC unit and Drives

Common power supply and re-use of
regenerative energy for power saving.
3 electronic filters provide optimal
electrical stabilization to all robot
movements.

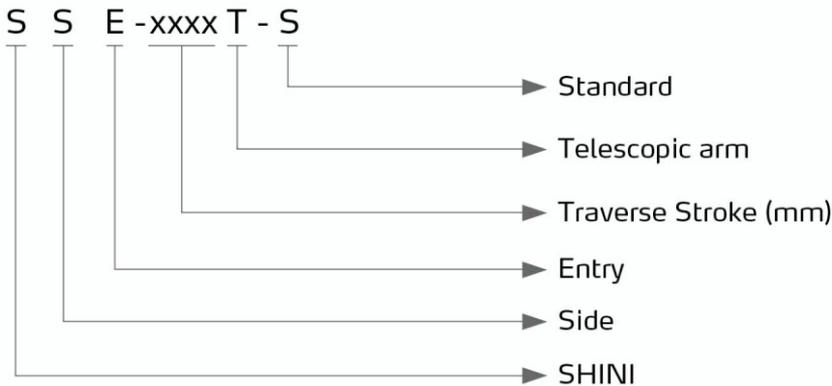
Side Entry Robot

SSE-1400T-S



Refer carefully to this manual before operation

■ Coding Principle



Home page

■ Features

- Employs floor standing, separate from injection molding machine without mechanical vibration frequency interfere.
- Adopt the design of telescopic arm spindle, having achieved double speed and running fast and smooth
- Main-axis is driven by servo motor, high-precision positioning and rapid response
- Servo motors driven stacking units.
- Conveyor and safety guarding included.

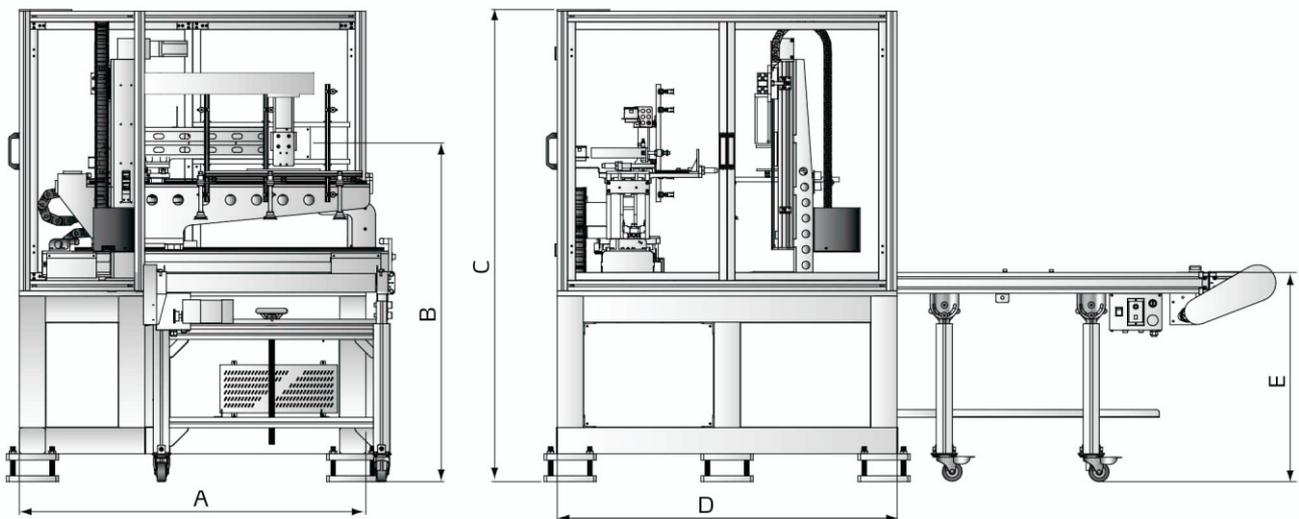


Program page

■ Application

SSE robot is designed for thin-walled products which cycle time below 6sec. With its high speed features can improve the production efficiency. Suitable for injection molding machine with clamping force under 450 tons.

■ Outline Drawings



Specifications

Model		SSE-1400T-S	SSE-1600T-S	SSE-1800T-S
IMM (Ton)		220-300	300-400	400-450
Main Axis	Traverse Stroke (mm)	1400	1600	1800
	Crosswise Stroke (mm)	125	125	125
Stacking	Traverse Stroke (mm)	500	500	600
	Crosswise Stroke (mm)	100	100	100
	Gripper angle (deg)	90	90	90
Conveyor	Belt length (mm)	800	800	1000
	Belt width (mm)	2000	2000	2000
	Adjustable height (mm)	700-1000	700-1000	700-1000
Max. Load(with tool)(kg)		6	6	6
Min Cycle Time (sec)		4.2	4.6	5
Air Pressure (Bar)		4-6	4-6	4-6
Dimensions (mm)	A	1325	1425	1525
	B	Design according to the IMM parameters		
	C	1800	1800	1800
	D	1300	1300	1300
	E	700-1000	700-1000	700-1000
Power		3 ϕ , 380-440V, 50/60Hz		

Note: 1)"EM12" stands for EUROMAP 12 communication interface
 "EM67" stands for EUROMAP 67 communication interface
 2) " * " Extra 60Nl/min air consumption for vacuum device

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