

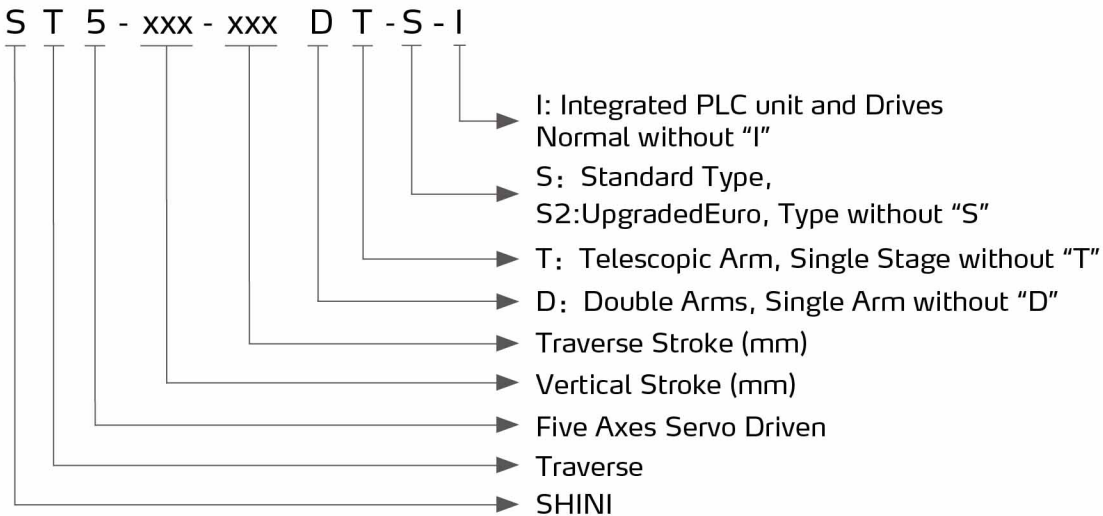
# Standard Five-Axis Servo Driven Robot

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

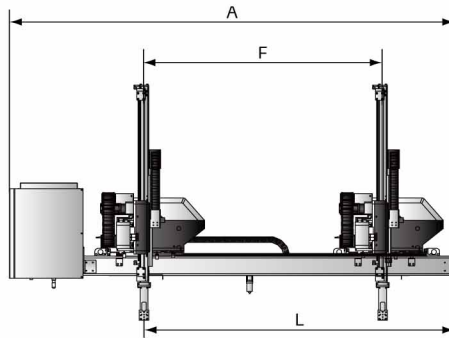
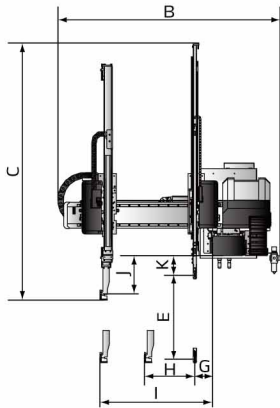
Multi-languages system and reserved auxiliary equipment slots able to support our global clients' need.

## ■ Application

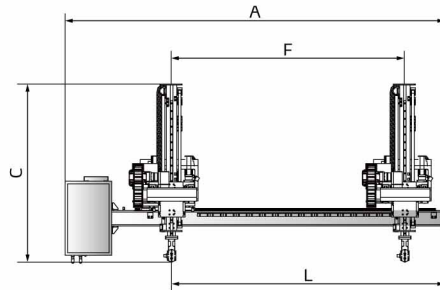
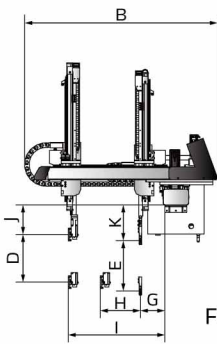
The ST5-S series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Standard and telescopic arm(s) are selectable to cooperate with 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in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

# ST5-S Series

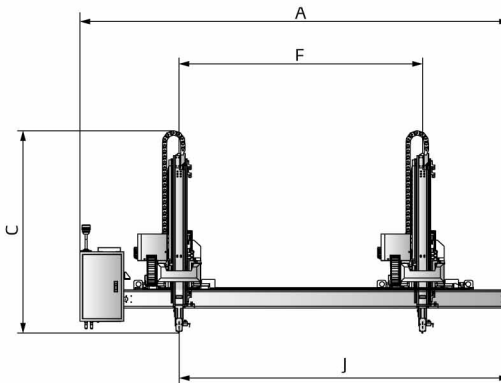
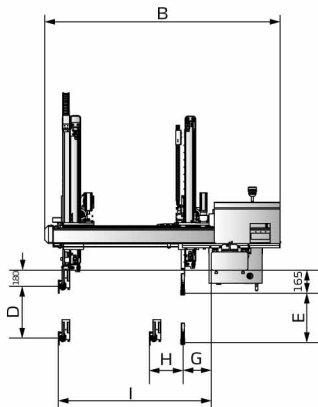
## Outline Drawings



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	Single kick stroke beam	Single kick stroke beam	Single kick stroke beam	Single kick stroke beam
IMM (ton)		50-80	80-160	220-260	320-400	450-650
Traverse Stroke (mm)		1200	1400	1600	1800	2000
Crosswise Stroke (mm)	Main Arm	370	420	420	650	750
	Sub Arm	370	420	420	650	750
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
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.

# 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	850
	Sub Arm	850
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 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

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