



Standard Five Axes Servo Driven Robot

ST5-900-1600DT-S1

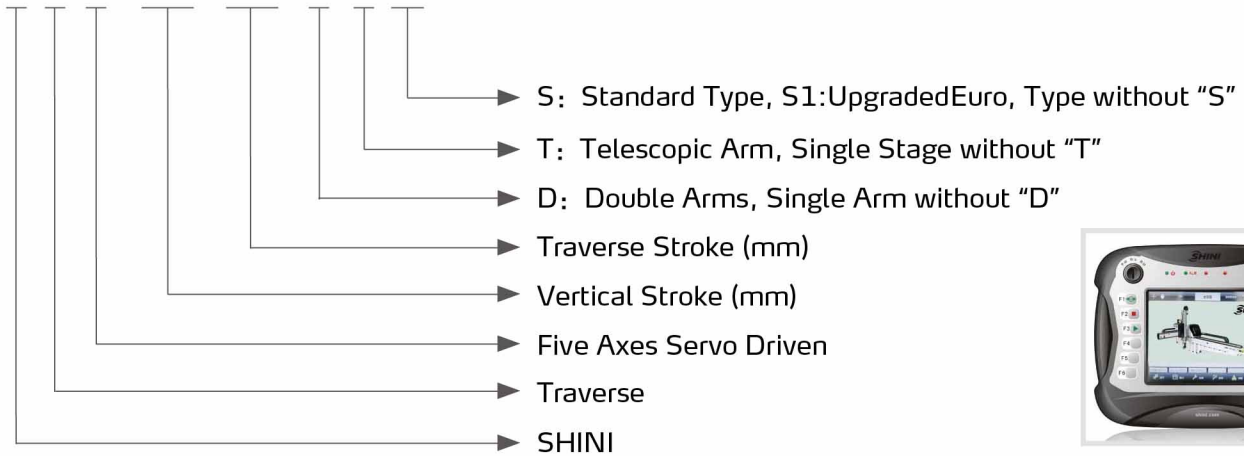


Refer carefully to this manual before operation.

ST5-S Series

■ Coding Principle

S T 5 - xxx - xxx D T -S



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

Position limit sensors and blocks effectively prevent mechanical and electrical malfunctions. Control board with short circuit function.

● Intelligence

8.0 inch high definition TFT touch screen. 3-point switch for safer robot operation. CPU modularization, the operator, main control modular and extension modular has independent CPU, improve the system's respond and keep it safety. 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.



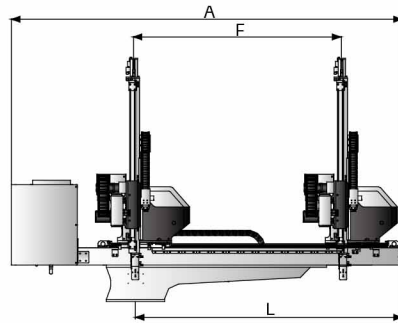
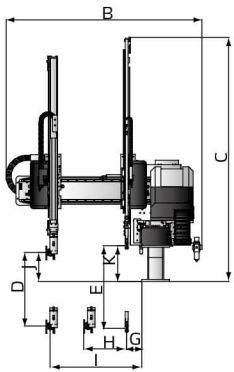
Program Page

■ Application

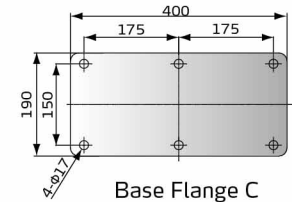
The ST5-S series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Standard and telescopic arm(s) are selectable to cooperate with 2-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine under 300T clamp force.

ST5-S Series

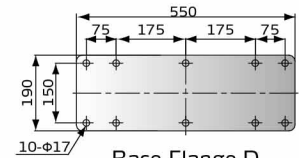
Outline Drawings



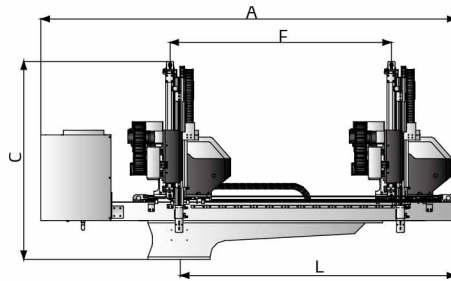
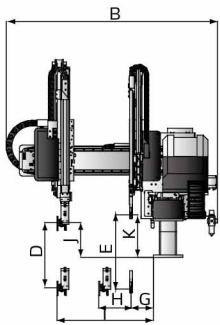
Five Axes Servo



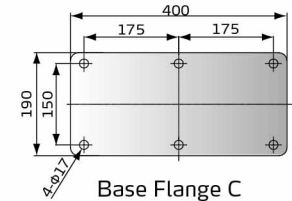
Base Flange C



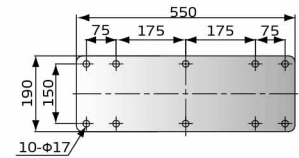
Base Flange D



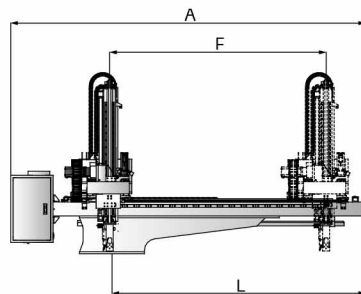
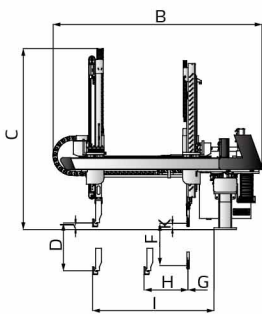
Five Axes Servo Telescopic



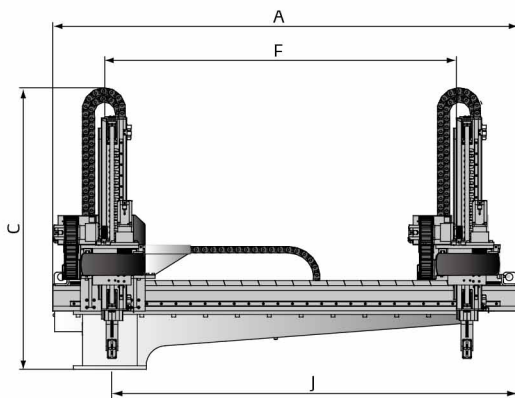
Base Flange C



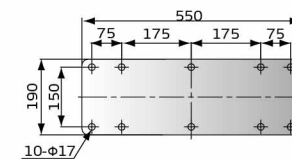
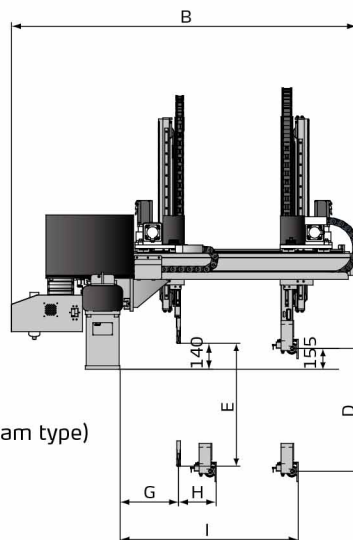
Base Flange D



Five axes servo small telescopic (bracket type) robot arm



Medium Five Axes Servo Telescopic (Movable-beam type)



Base Flange



Specifications

Model		700-1200D-S1	700-1400D-S1	800-1400D-S1	900-1600D-S1	1000-1600D-S1	1100-1800D-S1	1200-1800D-S1
IMM (ton)		50-80	80-160	160-220	220-260	260-320	320-400	400-450
Traverse Stroke (mm)		1200	1400	1400	1600	1600	1800	1800
Crosswise Stroke (mm)	Main Arm	370	370	370	420	530	590	590
	Sub Arm	370	370	370	420	530	590	590
Vertical stroke (mm)	Main Arm	700	700	800	900	1000	1100	1200
	Sub Arm	750	750	850	950	1050	1150	1250
Max Load (with tool) (kg)		5	5	5	6	6	6	6
Min Pick-out Time (sec)		1.3	1.3	1.3	1.4	1.4	1.6	1.6
Min Cycle Time (sec)		5.2	5.2	5.2	5.8	6.2	6.5	6.8
Air Pressure (bar)		4-6	4-6	4-6	4-6	4-6	4-6	4-6
Max. Air Consumption (NL/cycle) *		5	5	5	5	5	5	5
Weight (kg)		260	280	290	310	320	340	350
Base Type		Base C	Base C	Base C	Base C	Base C	Base D	Base D
Dimensions (mm)	A	1770	2600	2600	2800	2800	3000	3000
	B	1250	1390	1390	1410	1600	1660	1660
	C	1660	1630	1730	1830	1930	2030	2130
	D (max)	700	700	800	900	1000	1100	1200
	E (max)	750	750	850	950	1050	1150	1250
	F (max)	1200	1400	1400	1600	1600	1800	1800
	G (min)	145	145	145	135	135	135	135
	H (min)	120	160	160	160	180	180	175
	I (max)	580	650	650	690	835	895	895
	J	190	150	150	140	140	140	140
	K	240	200	200	190	190	190	190
L	1500	1820	1820	2020	2020	2220	2220	

Model		ST5-700-1200DT-S1	ST5-700-1400DT-S1	ST5-800-1400DT-S1	ST5-900-1600DT-S1	ST5-1000-1600DT-S1
IMM (ton)		50-80	80-160	160-220	220-260	260-320
Traverse Stroke (mm)		1200	1400	1400	1600	1600
Crosswise Stroke (mm)	Main Arm	320	320	320	370	475
	Sub Arm	320	320	320	370	475
Vertical stroke (mm)	Main Arm	700	700	800	900	1000
	Sub Arm	750	750	850	950	1050
Max Load (with tool) (kg)		3	3	3	5	5
Min Pick-out Time (sec)		1.2	1.2	1.2	1.3	1.3
Min Cycle Time (sec)		5	5	5	5.5	6
Air Pressure (bar)		4-6	4-6	4-6	4-6	4-6
Max. Air Consumption (NL/cycle) *		4	4	4	4	4
Weight (kg)		280	280	290	310	320
Base Type		Base C	Base C	Base C	Base C	Base C
Dimensions (mm)	A	2400	2600	2600	2800	2800
	B	1430	1430	1430	1490	1610
	C	1220	1220	1270	1340	1400
	D	700	700	800	900	1000
	E	750	750	850	950	1050
	F	1200	1400	1400	1600	1600
	G	185	185	185	185	185
	H	140	140	140	140	135
	I	645	645	645	700	805
	J	160	160	160	160	160
	K	210	210	210	210	210

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 60NL/min.

We reserve the right to change specifications without prior notice.

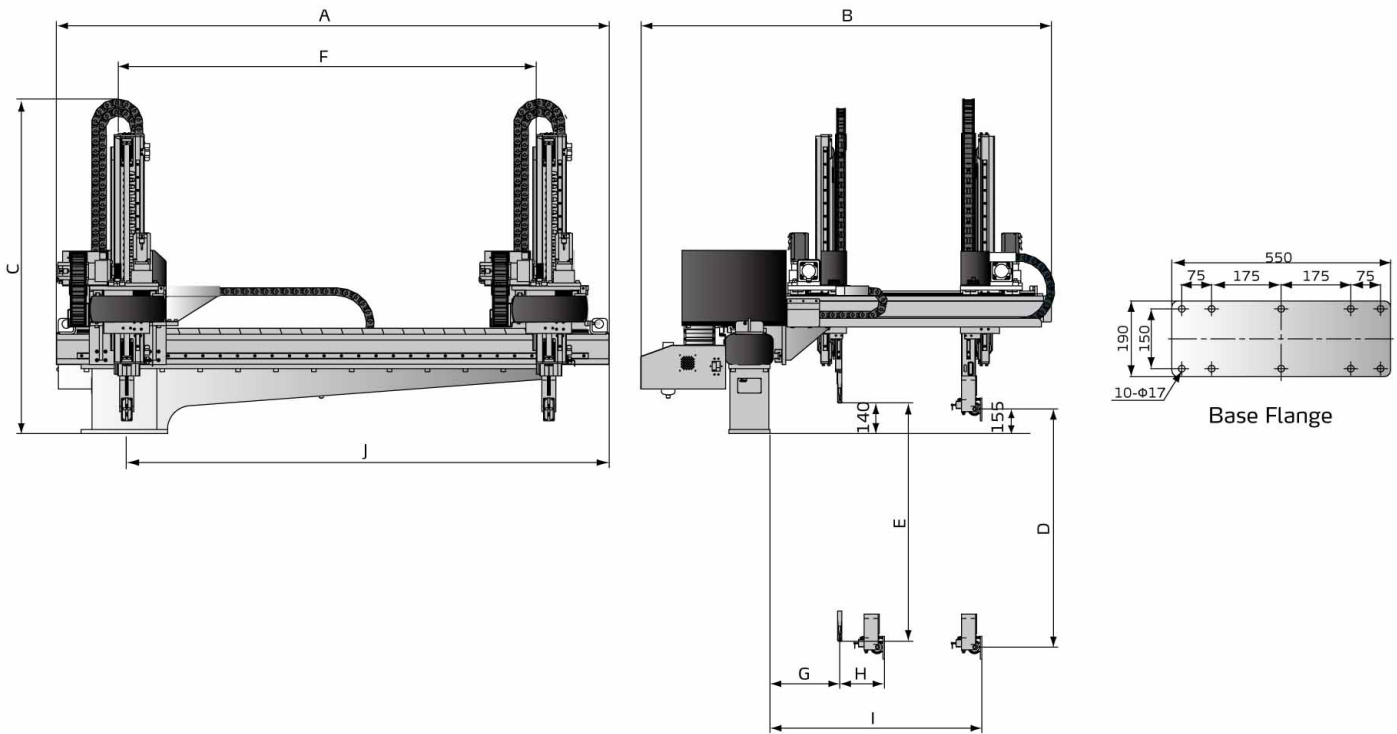
ST5-S Series

Model		ST5-1100-1800DT-S1	ST5-1200-1800DT-S1
IMM (ton)		320-400	400-450
Traverse Stroke (mm)		1800	1800
Crosswise Stroke (mm)	Main Arm	650	650
	Sub Arm	650	650
Vertical stroke (mm)	Main Arm	1100	1200
	Sub Arm	1100	1200
Max Load (with tool) (kg)		6	6
Min Pick-out Time (sec)		1.5	1.5
Min Cycle Time (sec)		6.2	6.5
Air Pressure (bar)		4 ~ 6	4 ~ 6
Max. Air Consumption (NI/cycle) *		4	4
Weight (kg)		340	350
Dimensions (mm)	A	3010	3010
	B	1710	1710
	C	1550	1600
	D (max)	1100	1200
	E (max)	1100	1200
	F (max)	1800	1800
	G (min)	160	160
	H (min)	160	160
	I (max)	1030	1030
	J	60	60
	K	60	60
L	2150	2150	

Model		ST5-1300-2000DT-S1	ST5-1500-2200DT-S1
IMM (ton)		450 ~ 650	650 ~ 850
Traverse Stroke (mm)		2000	2200
Crosswise Stroke (mm)	Main Arm	630	750
	Sub Arm	630	750
Vertical stroke (mm)	Main Arm	1300	1500
	Sub Arm	1350	1550
Max Load (with tool) (kg)		10	12
Min Pick-out Time (sec)		3.2	3.5
Min Cycle Time (sec)		9	9.5
Air Pressure (bar)		4 ~ 6	4 ~ 6
Max. Air Consumption (NI/cycle) *		5	5
Weight (kg)		810	930
Dimensions (mm)	A	2800	3000
	B	2020	2140
	C	1650	1750
	D (max)	1300	1500
	E (max)	1350	1550
	F (max)	2000	2200
	G (min)	245	245
	H (min)	170	170
	I (max)	1100	1220
	J	2700	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.

We reserve the right to change specifications without prior notice.



Medium Five Axes Servo Telescopic (Movable-beam type)

Specifications

Model	ST5-700-1200D-S	ST5-700-1400D-S	ST5-800-1400D-S	ST5-900-1600D-S	ST5-1000-1600D-S	ST5-1100-1800D-S	ST5-1200-1800D-S	
IMM (ton)	50-80	80-180	180-220	220-280	280-320	320-400	400-450	
Traverse Stroke (mm)	1200	1400	1400	1600	1600	1800	1800	
Crosswise Stroke (mm)	Main Arm	370	370	420	530	590	590	
	Sub Arm	370	370	370	420	530	590	
Vertical stroke (mm)	Main Arm	700	700	800	900	1100	1200	
	Sub Arm	750	750	850	950	1150	1250	
Max Load (with tool) (kg)	3	3	3	5	5	5	5	
Min Pick-out Time (sec)	1.3	1.3	1.3	1.4	1.4	1.6	1.6	
Min Cycle Time (sec)	5.2	5.2	5.2	5.8	6.2	6.5	6.8	
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	4	4	4	4	
Weight (kg)	260	280	290	310	320	340	350	
Base Type	Base C	Base C	Base C	Base C	Base C	Base D	Base D	
Dimensions (mm)	A	2540	2740	2740	2960	2960	3160	3160
	B	1390	1390	1390	1410	1600	1660	1660
	C	1630	1630	1730	1830	1930	2030	2130
	D (max)	700	700	800	900	1000	1100	1200
	E (max)	750	750	850	950	1050	1150	1250
	F (max)	1200	1400	1400	1600	1600	1800	1800
	G (min)	145	145	145	135	135	135	135
	H (min)	160	160	160	160	180	180	175
	I (max)	650	650	650	690	835	895	895
	J	150	150	150	150	180	180	180
	K	190	190	190	190	190	190	190
	L	1660	1860	1860	2060	2060	2260	2260

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.

"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.

ST5-S Series

Model		ST5-700-1200DT-S	ST5-700-1400DT-S	ST5-800-1400DT-S	ST5-900-1600DT-S	ST5-1000-1600DT-S	ST5-1100-1800DT-S	ST5-1200-1800DT-S
IMM (ton)		50-80	80-180	180-220	220-280	280-320	320-400	400-450
Traverse Stroke (mm)		1200	1400	1400	1600	1600	1800	1800
Crosswise Stroke (mm)	Main Arm	320	320	320	370	475	535	535
	Sub Arm	320	320	320	370	475	535	535
Vertical stroke (mm)	Main Arm	700	700	800	900	1000	1100	1200
	Sub Arm	750	750	850	950	1050	1150	1250
Max Load (with tool) (kg)		3	3	3	5	5	5	5
Min Pick-out Time (sec)		1.2	1.2	1.2	1.3	1.3	1.5	1.5
Min Cycle Time (sec)		5	5	5	5.5	6	6.2	6.5
Air Pressure (bar)		4-6	4-6	4-6	4-6	4-6	4-6	4-6
Max. Air Consumption (NL/cycle) *		4	4	4	4	4	4	4
Weight (kg)		280	280	290	310	320	340	350
Base Type		Base C	Base C	Base C	Base C	Base C	Base D	Base D
Dimensions (mm)	A	2535	2735	2735	2955	2955	3155	3155
	B	1430	1430	1430	1490	1610	1670	1670
	C	1220	1220	1270	1340	1400	1460	1520
	D	700	700	800	900	1000	1100	1200
	E	750	750	850	950	1050	1150	1250
	F	1200	1400	1400	1600	1600	1800	1800
	G	185	185	185	185	185	185	185
	H	140	140	140	140	135	145	145
	I	645	645	645	700	805	865	865
	J	175	175	175	185	205	205	205
	K	220	220	220	245	245	245	245
L	1660	1860	1860	2060	2060	2260	2260	

Model		ST5-1300-2000DT-S	ST5-1500-2200DT-S
IMM (ton)		450 ~ 650	650 ~ 850
Traverse Stroke (mm)		2000	2200
Crosswise Stroke (mm)	Main Arm	630	750
	Sub Arm	630	750
Vertical stroke (mm)	Main Arm	1300	1500
	Sub Arm	1350	1550
Max Load (with tool) (kg)		10	12
Min Pick-out Time (sec)		3.2	3.5
Min Cycle Time (sec)		9	9.5
Air Pressure (bar)		4 ~ 6	4 ~ 6
Max. Air Consumption (NL/cycle) *		5	5
Weight (kg)		810	930
Dimensions (mm)	A	2800	3000
	B	2020	2140
	C	1650	1750
	D (max)	1300	1500
	E (max)	1350	1550
	F (max)	2000	2200
	G (min)	245	245
	H (min)	170	170
	I (max)	1100	1220
	J	2700	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.
 "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.

We reserve the right to change specifications without prior notice.

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

Factories:

- Taiwan
- Dongguan
- Pinghu
- Ningbo
- Chongqing
- Pune

2018-03-15-04 Copyrights Reserved.

www.shini.com