



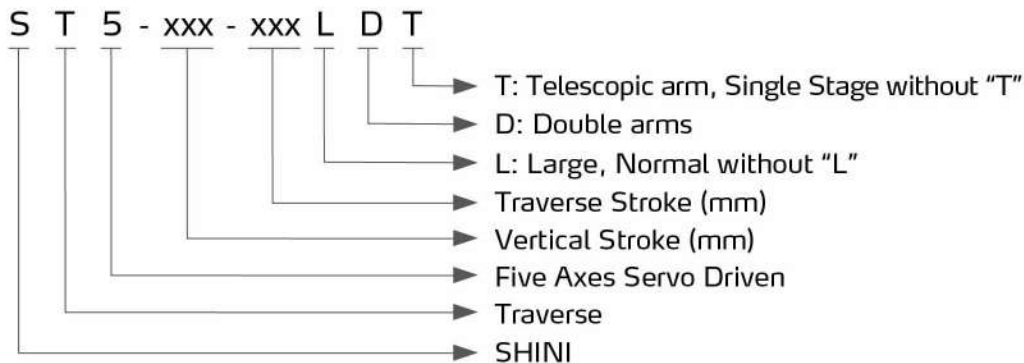
Five Axes Servo Driven Robot

ST5-900-1600DT



Refer carefully to this manual before operation.

■ Coding Principle



Control Panel

■ Features

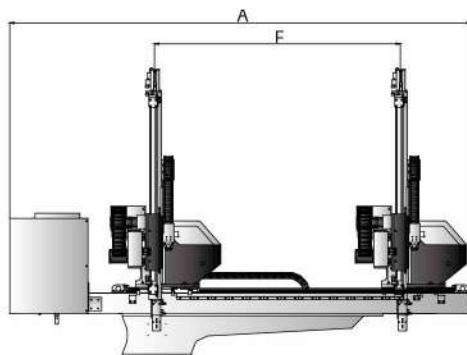
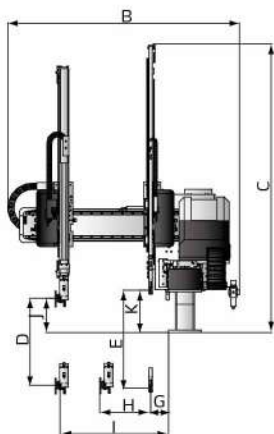
- Appearance
Designed with elegant appearance; Aluminium profiles are largely used to provide compact and streamlined appearance.
- Precision
All linear movements are driven by heavy duty servo motors with cooperation of precise linear guide rails and high power V belts; Fast, silent, and precise. Wrist mechanism employs pneumatic driven rack and pinion system, which accomplishes smooth, stable and precise flipping motion. Vertical arms 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 is designed to CE EMC test with short circuit and noise proof functions.
- Convenience
Control hardware fixtures are designed with flyer structure which provides benefit to maintenance. Cable drag chains help with cable management and ease for maintenance.
- Standardization
All pneumatic accessories, electric accessories, and communication Protocols meet the global standards. Interface between injection molding machine and robot is designed to EUROMAP 12, EUROMAP 67 and SPI.
- Intelligence
Base on VARAN BUS technology with world class 8.4 inch true color touch screen and object oriented program editor, complex and continuous projection can be easily programmed within minimum time. Closed circuit control system cooperating with plug and use hardware modules provides reliable movement that is capable of arranging, stacking, quality checking, in mold inserting etc. Real time remote monitoring and telediagnosis assist better equipment management. USB port allows fast data updating, saving and loading.
- User Friendly
Plug and use industrial connectors achieve simple installation and uninstallation. Servo driven axis provides the possibility of multi points for positioning products and sprues. Multi languages displays and spares communication connections with surrounds machines offer more flexibilities to global customers.

■ Applications

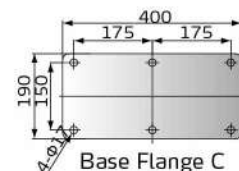
The ST5 series robot is designed for rapid and precise removal of sprue and products from injection molding machine, and place them at desired locations. Standard and telescopic arms are selectable to cooperate with 2-plate mold, 3-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine under 3600T clamp force.

ST5 Series

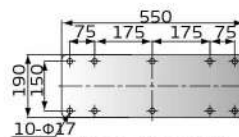
Outline Drawings



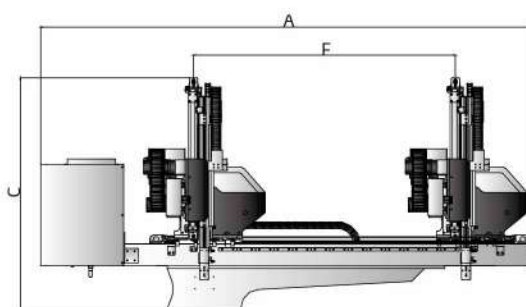
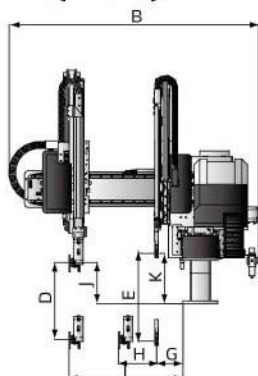
Five Axes Servo(single stage arm)



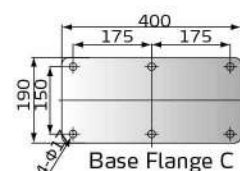
Base Flange C



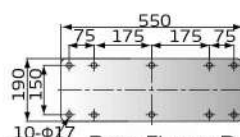
Base Flange D



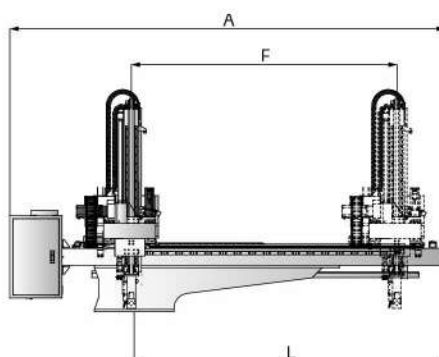
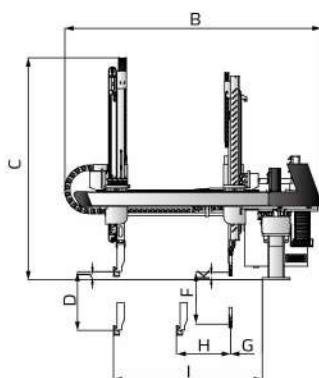
Five Axes Servo Telescopic



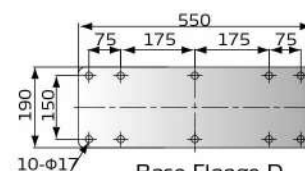
Base Flange C



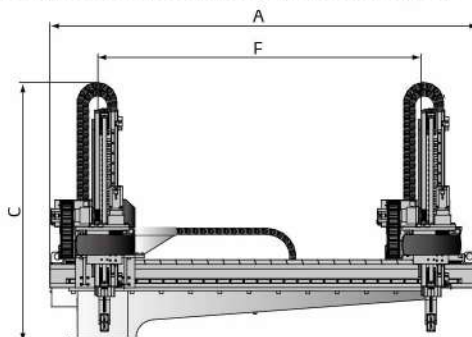
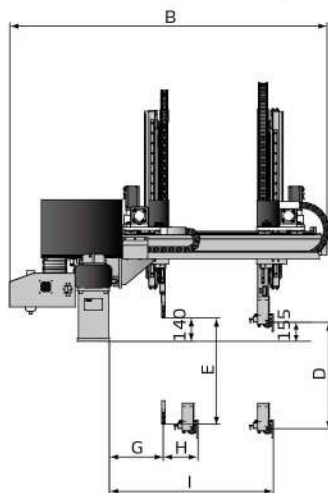
Base Flange D



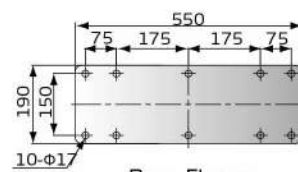
Five Axes Servo Small c (bracket type)



Base Flange D



Five Axes Servo Medium Telescopic



Base Flange

Specifications

Model(Single stage)		ST5-700-1200D	ST5-700-1400D	ST5-800-1400D	ST5-900-1600D	ST5-1000-1600D	ST5-1100-1800D	ST5-1200-1800D
IMM (ton)		50-80	80-160	160-220	220-280	280-320	320-400	400-450
Traverse Stroke (mm)		1200	1400	1400	1600	1600	1800	1800
Crosswise Stroke (mm)	Main arm	425	425	425	470	470	590	590
	Sub arm	425	425	425	470	470	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)		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 Flange C	Base Flange C	Base Flange C	Base Flange C	Base Flange C	Base Flange D	Base Flange D
Dimensions (mm)	A	2440	2640	2640	2860	2860	3060	3060
	B	1350	1350	1350	1410	1410	1530	1530
	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	170	170	170	160	160	160	160
	K	220	220	220	210	210	200	210

Model(Small Telescopic)		ST5-700-1200DT	ST5-700-1400DT	ST5-800-1400DT	ST5-900-1600DT	ST5-1000-1600DT
IMM (ton)		50-80	80-160	160-220	220-280	280-320
Traverse Stroke (mm)		1200	1400	1400	1600	1600
Crosswise Stroke (mm)	Main arm	365	365	365	425	425
	Sub arm	365	365	365	425	425
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 (NI/cycle) *		4	4	4	4	4
Weight (kg)		280	280	290	310	320
Base Type		Base Flange C	Base Flange C	Base Flange C	Base Flange C	Base Flange C
Dimensions (mm)	A	2440	2640	2640	2860	2860
	B	1350	1350	1350	1410	1410
	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	170	170	170	170	170
	K	220	220	220	220	220

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 requirement: 1Φ, 200~240V, 50/60Hz.

3). " * " Extra 60NI/min for vacuum application.

We reserve the right to change specifications without prior notice.

ST5 Series

Model(Small Telescopic)		ST5-1100-1800DT	ST5-1200-1800DT
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(Medium telescopic)		ST5-1300-2000DT	ST5-1500-2200DT
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

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 requirement: 1Φ, 200~240V, 50/60Hz.

3). " * " Extra 60NI/min for vacuum application.

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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

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