



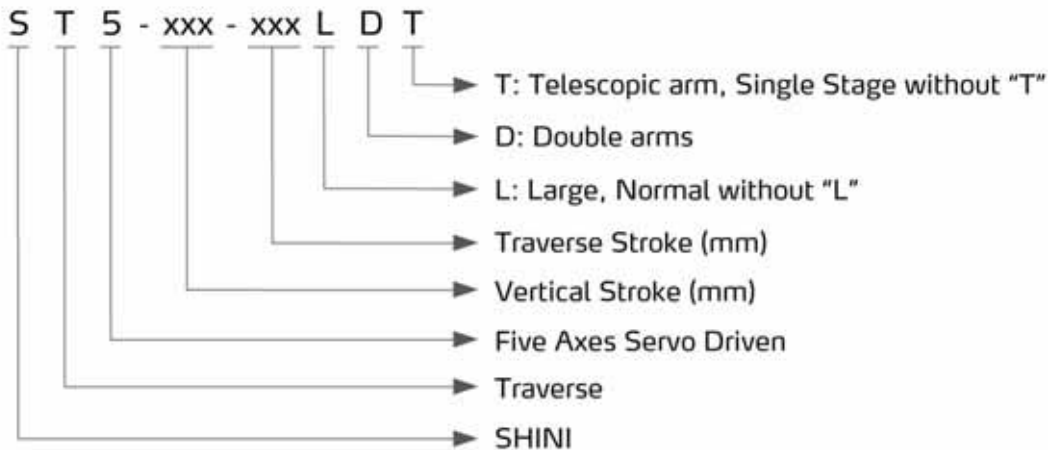
## Five Axes Servo Driven Robot

ST5-900-1600DT



Refer carefully to this manual before operation.

## ■ Coding Principle



## ■ 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.



Control Panel

# ST5 Series

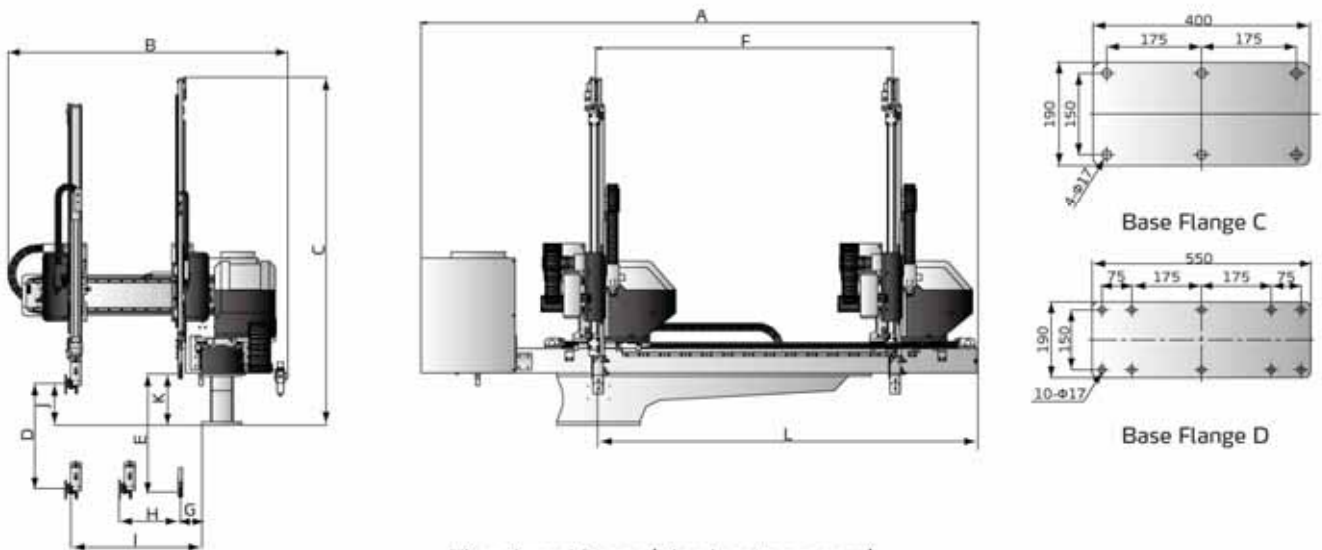
## ● User Friendly

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.

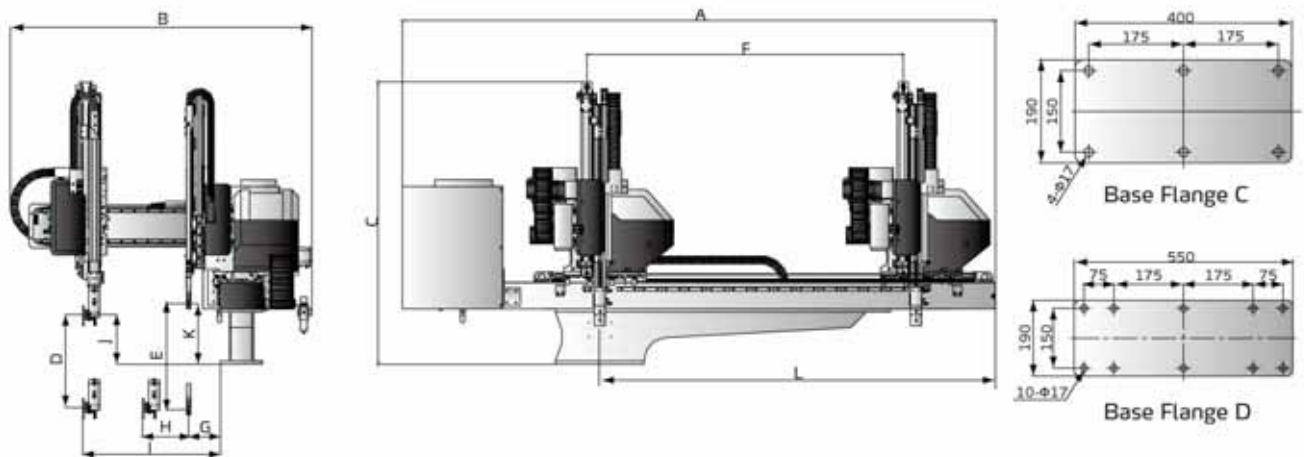
## ■ Applications

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.

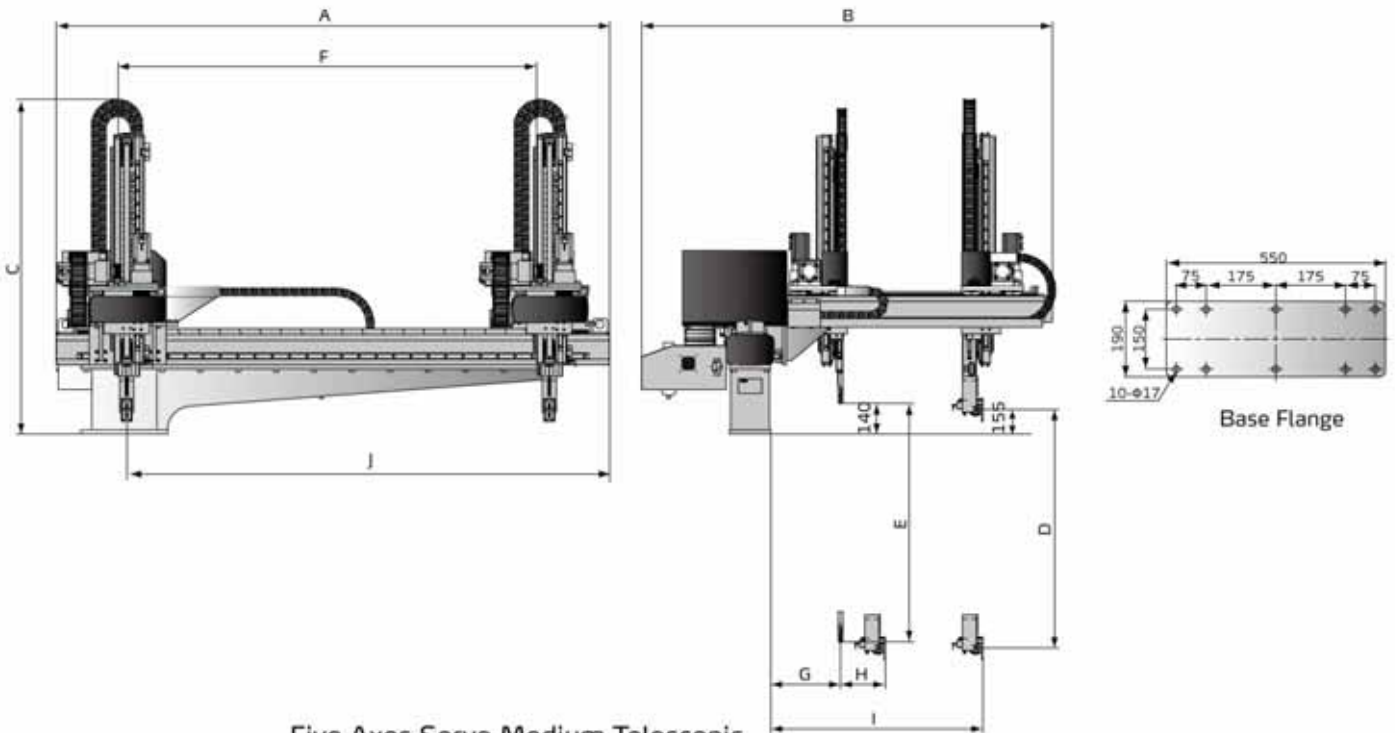
## ■ Outline Drawings



Five Axes Servo(single stage arm)



Five Axes Servo Telescopic



Five Axes Servo Medium Telescopic

## 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	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	1050	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 (NL/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 67 communication interface.

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

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

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

We reserve the right to change specifications without prior notice.



# ST5 Series

Model(Small Telescopic)	ST5-700-1200DT	ST5-700-1400DT	ST5-800-1400DT	ST5-900-1600DT	ST5-1000-1600DT	ST5-1100-1800DT	ST5-1200-1800DT
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	320	320	320	370	475	535
	Sub arm	320	320	320	370	475	535
Vertical Stroke (mm)	Main arm	700	700	800	900	1000	1100
	Sub arm	750	750	850	950	1050	1150
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 (NI/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
	B	1430	1430	1430	1490	1610	1670
	C	1220	1220	1270	1340	1400	1460
	D	700	700	800	900	1000	1100
	E	750	750	850	950	1050	1150
	F	1200	1400	1400	1600	1600	1800
	G	185	185	185	185	185	185
	H	140	140	140	140	135	145
	I	645	645	645	700	805	865
	J	175	175	175	185	205	205
	K	220	220	220	245	245	245
	L	1660	1860	1860	2060	2060	2260

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
	Sub arm	630
Vertical Stroke (mm)	Main arm	1300
	Sub arm	1350
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
	B	2020
	C	1650
	D (max)	1300
	E (max)	1350
	F (max)	2000
	G (min)	245
	H (min)	170
	I (max)	1100
	J	2700

- 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.



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