Standard Single Axis Servo Driven Robot

ST1-650-1200D-S1

Refer carefully to this manual before operation.

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Coding Principle

S T 1 - xxx - xxx D T A - S1

- S: Standard I / Euro Type Without "S"
- A: Remote Adjustment of Crosswise Axis / Normal Without "A"
- T: Telescopic arm / Single Stage Without "T"
- D: Double arms / Single arm Without "D"
- Traverse Stroke (mm)
- Vertical Stroke (mm)
- Single Axis Servo Driven
- Traverse
- SHINI

Features

- Precision

  Traverse movement is driven by heavy duty servo motor 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.

- Safety

  High efficient shock absorbers allow fast and precise pneumatic driven motion. Drop proof locking mechanism prevents accidences due to malfunction of pneumatic source. Position limit sensors and blocks effectively prevent mechanical and electrical malfunctions. Control board with short circuit function.

- Intelligence

  3.2 inch true color LCD and graphical user interface automatically monitor and real time monitoring. Display error messages, easy to operate and ensure the use of safety. Extra extend I/O ports are available for other application. Teach program and setup cycle movements, provide plug and use without modify control system. Flexible and dialogic programming scheme offer 10 standard programs and 18 customized programs.

- User Friendly

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

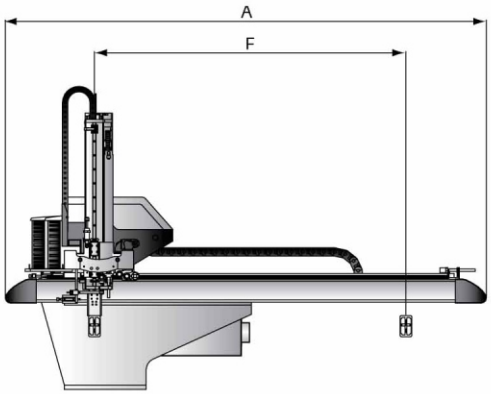
Hand Controller

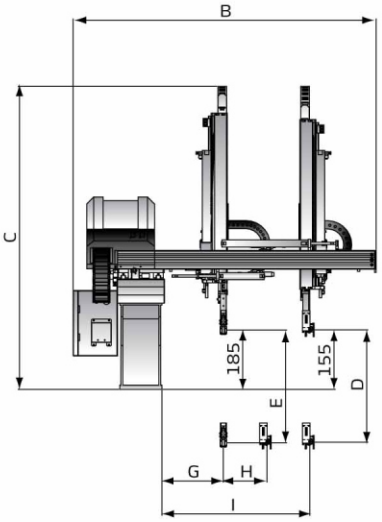
ST1-S1 Series

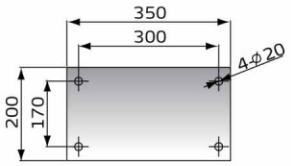
Application

The ST1-S series robot is designed for rapid and precise removal of sprue and products from injection molding machine. Standard and telescopic arm(s) are selectable according to applications of 2-plate molds, 3-plate molds or hot runner systems. Multiple stop points in Z axis, convenient for package. Suitable for injection molding machine with clamping force under 280 tons.

Outline Drawings







Base Flange

Specifications

Model ST1-		650-1200-S1	650-1200D-S1	700-1200-S1	700-1200D-S1	750-1300T-S1	750-1300DT-S1	850-1300T-S1	850-1300DT-S1
IMM (ton)		50 ~ 150	50 ~ 150	100 ~ 150	100~ 150	150 ~ 200	150 ~ 200	200 ~ 280	200 ~ 280
Traverse Stroke Z (mm)		1200	1200	1200	1200	1300	1300	1300	1300
Crosswise Stroke (mm)	Main Arm	200	200	200	200	200	200	200	200
	Sub Arm	-	120	-	120	-	120	-	120
Vertical Stroke (mm)		650	650	700	700	750	750	850	850
Max Load (with tool) (kg)		3	3	3	3	3	3	3	3
Min Pick-out Time (sec)		1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5
Min Cycle Time (sec)		8.5	8.5	8.5	8.5	8.5	8.5	8.6	8.5
Air Pressure (bar)		4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6
Max. Air Consumption (NL/cycle) *		12	22	12	22	12	22	14	23
Weight (kg)		160	190	170	200	180	210	195	225
Dimensions (mm)	A	2030	2030	2030	2030	2030	2030	2030	2030
	B	1300	1300	1300	1300	1300	1300	1300	1300
	C	1470	1470	1520	1520	1250	1250	1300	1300
	D	650	650	700	700	750	750	850	850
	E	-	650	-	650	-	750	-	850
	F	1200	1200	1200	1200	1300	1300	1300	1300
	G	130	130	130	130	130	130	130	130
	H	-	130	-	130	-	130	-	130
	I	800	800	800	800	800	800	800	800
	J	1600	1600	1600	1600	1600	1600	1600	1600

Model		ST1-900-1500T-S1	ST1-900-1500DT-S1	ST1-1000-1500T-S1	ST1-1000-1500DT-S1
IMM (ton)		200 ~ 280	200 ~ 280	280 ~ 320	280 ~ 320
Traverse Stroke Z (mm)		1500	1500	1500	1500
Crosswise Stroke (mm)	Main Arm	200	200	200	200
	Sub Arm	-	120	-	120
Vertical Stroke (mm)		900	900	1000	1000
Max Load (with tool) (kg)		3	3	3	3
Min Pick-out Time (sec)		1.4	1.4	1.7	1.7
Min Cycle Time (sec)		9.5	9.5	9.6	9.6
Air Pressure (bar)		4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6
Max. Air Consumption (Nl/cycle) *		14	25	18	26
Weight (kg)		200	235	250	300
Dimensions (mm)	A	2230	2230	2230	2230
	B	1300	1300	1450	1450
	C	1330	1330	1380	1380
	D	900	900	1000	1000
	E	-	900	-	1000
	F	1500	1500	1500	1500
	G	130	130	130	130
	H	-	130	-	130
	I	800	800	940	940
	J	1800	1800	1800	1800

Model		ST1-1100-1800T-S1	ST1-1100-1800DT-S1	ST1-1200-1800T-S1	ST1-1200-1800DT-S1
IMM (ton)		320 ~ 400	320 ~ 400	400 ~ 450	400 ~ 450
Traverse Stroke Z (mm)		1800	1800	1800	1800
Crosswise Stroke (mm)	Main Arm	200	200	300	300
	Sub Arm	-	120	-	150
Vertical Stroke (mm)		1100	1100	1200	1200
Max Load (with tool) (kg)		5	5	5	5
Min Pick-out Time (sec)		3	3	3	3
Min Cycle Time (sec)		11	11	11.2	11.2
Air Pressure (bar)		4 ~ 6	4 ~ 6	4 ~ 6	4 ~ 6
Max. Air Consumption (Nl/cycle) *		15	26	16	30
Weight (kg)		250	290	270	300
Dimensions (mm)	A	2530	2530	2530	2530
	B	1450	1450	1450	1450
	C	1430	1430	1480	1480
	D	1100	1100	1200	1200
	E	-	1100	-	1200
	F	1800	1800	1800	1800
	G	130	130	130	130
	H	-	130	-	130
	I	940	940	940	940
	J	2100	2100	2100	2100

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.

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Factories:

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