Three/Five Axes Servo Driven Robot (Driven-control integrated)

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ST5-800-1400DT-S2-I

Refer carefully to this manual before operation.

ST3/5 Series

Coding Principle

ST3/5 - xxx - xxx DT - S - I

- I: Integrated PLC unit and Drives
  Normal without "I"
- S：Standard Type,
  S2:UpgradedEuro, Type without "S"
- D：Double Arms, Single Arm without "D"
  T：Telescopic Arm, Single Stage without "T"
- Traverse Stroke (mm)
- Vertical Stroke (mm)
- SHINI Traverse Three/Five Axes Servo Driven

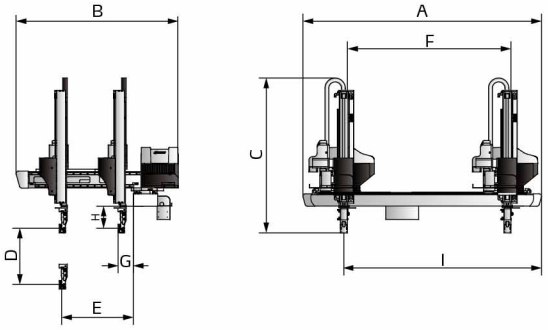
Features

- Advanced driver ensures stable performance;
- Highly modular design and card split structure makes it only has to change corresponding module without disassembling and replacing the whole machine during maintenance, which is better than most of other drive-control units in the market.
- The shared DC bus makes the driver work more stably, with better overload capacity. Moreover, it only needs a regenerative resistor, which saves mount space.
- The main control module and the servo module are connected in the unified base plate, which avoid cumbersome manual wiring and increases the system's stability and reliability;
- The servo parameters can be set by the control plate automatically;
- The bus controlled interface is suitable for all kinds of IMMs (national, European and Japanese standards), suitable for new 8" manipulator;
- It not only features the split stability, but also saves the labor works of wiring, and it shortens the size of the control box.

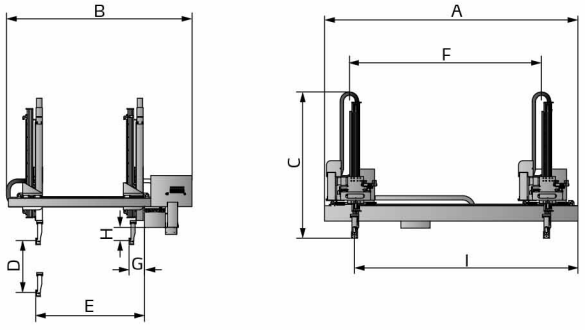
Application

Thina series robot is designed for rapid and precise removal of products from injection molding machine, and place them at desired locations. Apply to 2/3-plate mold or hot runner system. Capable of arranging, stacking, quality checking and in mold placement. Suitable for injection molding machine with clamping force 80~650 tons.

Outline Drawings



3-axis servo with single kick-stroke beam



3-axis telescopic arm with frame type beam

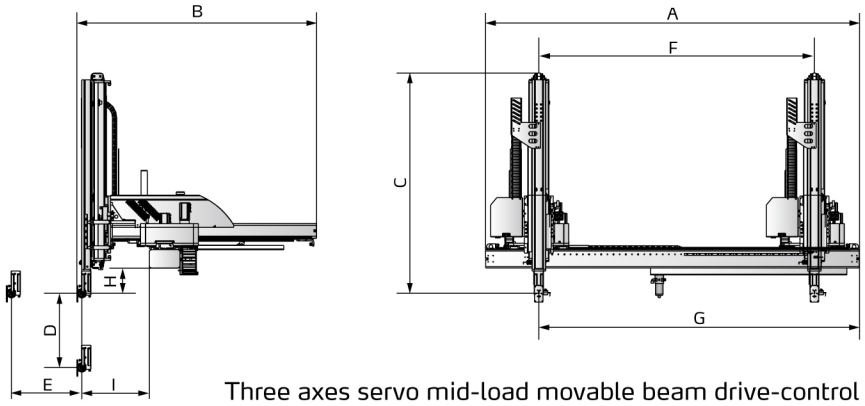
Specifications

Model ST3-		800-1400T-S2-I	1000-1600T-S2-I	1200-1800T-S2-I	1300-2000T-S2-I
Robot Type		Single kick stroke beam	Single kick stroke beam	Frame type beam (Drive-control Integrated)	Frame type beam (Drive-control Integrated)
IMM (ton)		80-160	180-300	320-450	480-650
Traverse Stroke (mm)		1400	1600	1800	2000
Crosswise Stroke (mm)	Main Arm	800	900	1050	1050
	Sub. Arm	-	-	-	-
Vertical Stroke (mm)	Main Arm	800	1000	1200	1300
	Sub. Arm	-	-	-	-
Max Load (with tool) (kg)		5	5	6	6
Min Pick-out Time (sec)		1.3	1.4	1.5	1.8
Min Cycle Time (sec)		5.2	5.5	6.5	6.8
Air Pressure (bar)		4~6	4~6	4~6	4~6
Max. Air Consumption (Nl/cycle) *		4	4	4	6
Weight (kg)		250	300	320	340
Dimensions (mm)	A	2110	2310	2550	2750
	B	1700	1800	1950	1900
	C	1250	1350	1550	1500
	D	800	1000	1200	1300
	E	800	900	1160	1160
	F	1400	1600	1800	2000
	G	180	180	250	250
	H	230	230	200	200
	I	1650	1900	2200	2400

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.

ST3/5 Series

Outline Drawings



Three axes servo mid-load movable beam drive-control integrated robot

Specifications

Model	ST3-	1400-2000MT-S-I	1600-2200MT-S-I	1800-2400MT-S-I	ST3-2000-2800MT-S-I	ST3-2200-3000LT-S-I	ST3-2600-4000LT-S-I
Robot Type		Movable beam type (Drive-control Integrated)					
IMM (ton)		480-650	650-850	850-1400	1400-1800	1800-2400	2400-3000
Traverse Stroke (mm)		2000	2200	2400	2800	3000	4000
Crosswise Stroke (mm)	Main Arm	1200	1600	1600	1600	1600	1800
	Sub. Arm	-	-	-	-	-	-
Vertical Stroke (mm)	Main Arm	1400	1600	1800	2000	2200	2600
	Sub. Arm	-	-	-	-	-	-
Max Load (with tool) (kg)		10	20	20	20	20	40
Min Pick-out Time (sec)		3	3.3	3.6	3.8	4.2	5
Min Cycle Time (sec)		13	14	16	18	24	26
Air Pressure (bar)		4~6	4~6	4~6	4~6	4~6	4~6
Max. Air Consumption (Nl/cycle) *		6	6	6	6	8	8
Weight (kg)		350	650	800	950	1050	1200
Dimensions (mm)	A	2700	3100	3300	3700	3900	5080
	B	1960	2500	2500	2500	2500	2850
	C	1550	1750	1850	1950	2050	2450
	D	1400	1600	1800	2000	3000	2600
	E	1000	1600	1600	1600	1600	1800
	F	2000	2200	2400	2800	3000	4000
	G	2450	2685	2910	3280	3520	4610
	H	120	180	180	180	180	160
	I	320	350	350	350	350	410

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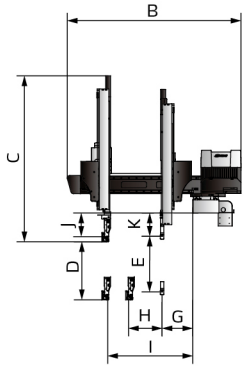
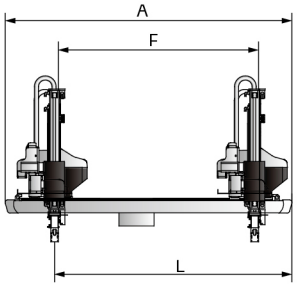
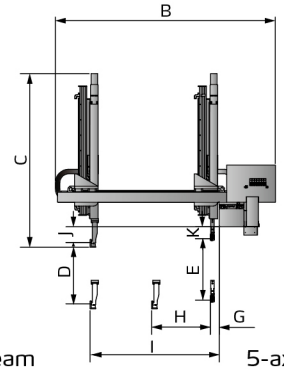
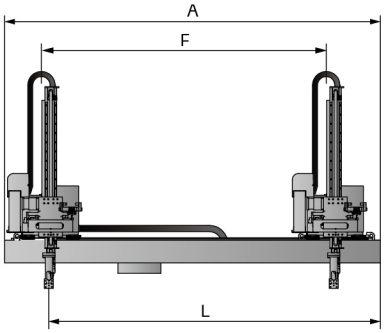
Outline Drawings





5-axis servo with single kick-stroke beam





5-axis telescopic arm with frame type beam

Specifications

Model ST5-		800-1400DT-S2-I	1000-1600DT-S2-I	1200-1800DT-S2-I	1300-2000DT-S-I	1500-2200DT-S-I
Robot Type		5-axis servo with single kick-stroke beam		5-axis telescopic arm with frame type beam		
IMM (ton)		80-160	180-300	320-450	480-650	660-850
IMM (ton)		1400	1600	1800	2000	2200
Crosswise Stroke (mm)	Main Arm	550	650	850	850	850
	Sub. Arm	550	650	850	850	850
Vertical Stroke (mm)	Main Arm	800	1000	1200	1300	1500
	Sub. Arm	800	1000	1200	1300	1500
Max Load (with tool) (kg)		5	5	6	6	12
Min Pick-out Time (sec)		1.3	1.4	1.5	1.8	2.0
Min Cycle Time (sec)		5.2	5.5	6.3	6.8	12
Air Pressure (bar)		4~6	4~6	4~6	4~6	4~6
Max. Air Consumption (Nl/cycle) *		4	4	4	6	6
Weight (kg)		290	320	340	360	450
Dimensions (mm)	A	2110	2310	2550	2750	3100
	B	1700	1800	1900	1900	2020
	C	1250	1350	1450	1500	1740
	D	800	1000	1200	1300	1500
	E	800	1000	1200	1300	1500
	F	1400	1600	1800	2000	2200
	G	180	180	250	250	230
	H	110	110	220	220	340
	I	800	900	1160	1160	1390
	J	230	230	200	200	245
	K	220	220	200	200	245
	L	1650	1900	2200	2400	2620

Notes: 1) "M"stands for middle mold detector. (suitable for three-plate mold.)
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2) Power supply: 1Φ, 200~240V, 50/60Hz.
3) " * " Max. air consumption for vacuum device 60Nl/min.