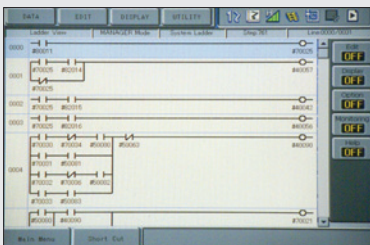
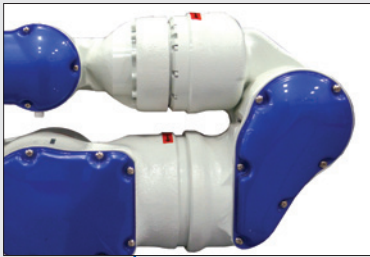


THRU-ARM CABLE AND HOSE ROUTING



LADDER EDITOR



OFFSET ELBOW EXPANDS WORK ENVELOPE

## TOP REASONS TO BUY

- Slim, 7-axis design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces
- Mounts virtually anywhere in any orientation
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment



# SIA5D

ASSEMBLY • INJECTION MOLDING • INSPECTION  
MACHINE TENDING • PACKAGING • PART TRANSFER

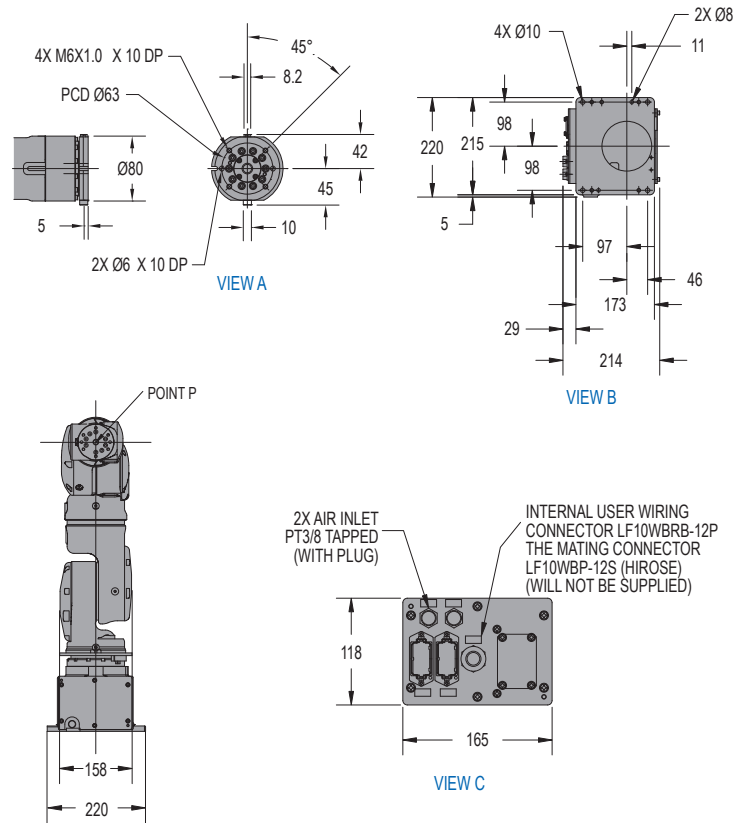
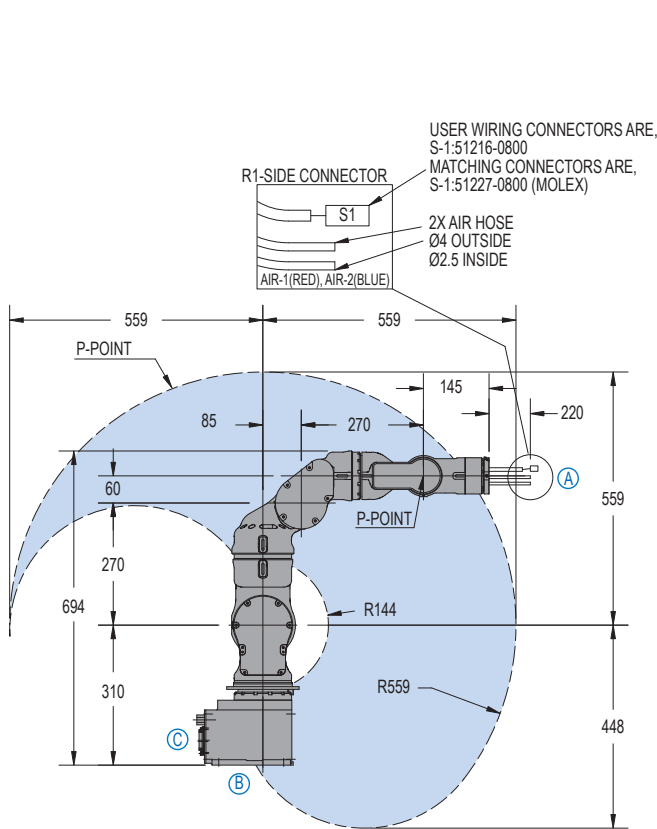
**Payload: 5 kg**

## Compact, Lean and Powerful Arm

- 7-axis actuator-based design and best-in-class wrist performance characteristics provide amazing freedom of movement, coupled with ability to maneuver in very tight areas.
- Superior dexterity enables robot to reorient elbow(s) without affecting hand position or causing self-interference.
- Agile, versatile robot opens up a wide range of industrial applications to robots; ideal for assembly, injection molding, inspection, machine tending and a host of other operations.
- 5 kg payload; 1,007 mm vertical reach; 559 mm horizontal reach;  $\pm 0.05$  mm repeatability.
- Slim, compact and powerful – robot can straighten vertically to take up only one square foot of floorspace and is less than 220 mm wide at widest point.
- Short axis lengths and extreme motion flexibility allow slim manipulator to be positioned out of normal working area (i.e. floor-, ceiling-, wall-, incline- or machine-mounted) without limiting motion range of any axis.

## DX100 Controller

- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.



## SIA5D SPECIFICATIONS

<b>Structure</b>	Articulated	
<b>Mounting</b>	Floor, Wall or Ceiling	
<b>Controlled Axes</b>	7	
<b>Payload</b>	5 kg (11 lb)	
<b>Vertical Reach</b>	1,007 mm (39.6")	
<b>Horizontal Reach</b>	559 mm (22")	
<b>Repeatability</b>	±0.06 mm (±0.002")	
<b>Maximum Motion Range</b>	S-Axis (Turning/Sweep)	±180°
	L-Axis (Lower Arm)	±110°
	E-Axis (Elbow)	±170°
	U-Axis (Upper Arm)	+115 / -90°
	R-Axis (Wrist Roll)	±180°
	B-Axis (Bend/Pitch/Yaw)	±110°
	T-Axis (Wrist Twist)	±180°
<b>Maximum Speed</b>	S-Axis	200°/s
	L-Axis	200°/s
	E-Axis	200°/s
	U-Axis	200°/s
	R-Axis	200°/s
	B-Axis	230°/s
	T-Axis	350°/s
<b>Approximate Mass</b>	30 kg (66.2 lb)	
<b>Power Rating</b>	1 kVA	
<b>Allowable Moment</b>	R-Axis	14.7 N • m
	B-Axis	14.7 N • m
	T-Axis	7.35 N • m
<b>Allowable Moment of Inertia</b>	R-Axis	0.45 kg • m <sup>2</sup>
	B-Axis	0.45 kg • m <sup>2</sup>
	T-Axis	0.11 kg • m <sup>2</sup>
<b>Protection Class</b>	Standard	Not rated
	XP Version* (option)	N/A

\* XP Version: Yaskawa Motoman's eXtra Protection package

## DX100 CONTROLLER SPECIFICATIONS\*\*

<b>Dimensions (mm)</b>	800 (w) x 1,000 (h) x 650 (d) (31.5" x 39.4" x 25.6")
<b>Approximate Mass</b>	250 kg max. (551.3 lbs)
<b>Cooling System</b>	Indirect cooling
<b>Ambient Temperature</b>	During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F)
<b>Relative Humidity</b>	90% max. non-condensing
<b>Primary Power Requirements</b>	3-phase, 240/480/575 VAC at 50/60 Hz
<b>Digital I/O</b>	Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/ NPN-Standard 16 system outputs, 24 user inputs/24 user outputs PNP-Optional 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs
<b>Position Feedback</b>	By absolute encoder
<b>Program Memory</b>	JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps
<b>Pendant Dim. (mm)</b>	169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2")
<b>Pendant Weight</b>	.998 kg (2.2 lbs)
<b>Interface</b>	One Compact Flash slot; One USB Port (1.1)
<b>Pendant Playback Buttons</b>	Teach/Play/Remote Keyswitch selector Servo On, Start, Hold, and Emergency Stop Buttons
<b>Programming Language</b>	INFORM III, menu-driven programming
<b>Maintenance Functions</b>	Displays troubleshooting for alarms, predicts reducer wear
<b>Number of Robots/Axes</b>	Up to 8 robots, 72 axes
<b>Multi Tasking</b>	Up to 16 concurrent jobs, 4 system jobs
<b>Fieldbus</b>	DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet IP/Slave
<b>Ethernet</b>	10 Base T/100 Base TX
<b>Safety</b>	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03

\*\* See DX100 Controller data sheet (DS-399) for complete specifications