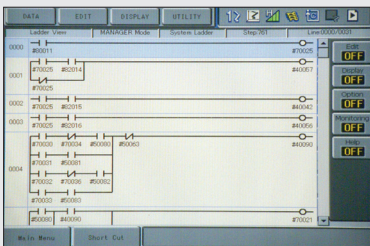
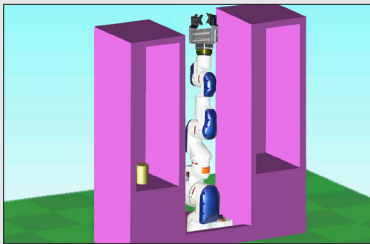


THRU-ARM CABLE AND HOSE ROUTING



LADDER EDITOR



SMALL FOOTPRINT

TOP REASONS TO BUY

- Slim, 7-axis design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment
- Internal utilities and through-hole wrist minimizes integration time and maximizes uptime



SIA50D

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

Payload: 50 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.
- 50 kg payload; 2,597 mm vertical reach; 1,630 mm horizontal reach; ±0.1 mm repeatability.
- Slim, compact and powerful – robot can straighten vertically to take up a minimal amount of floorspace and is just 633 mm wide at widest point.
- Short axis lengths provide extreme motion flexibility.
- Mounting SIA50D robot between two machine tools provides open access to machines for fixture maintenance, adjustment or testing.

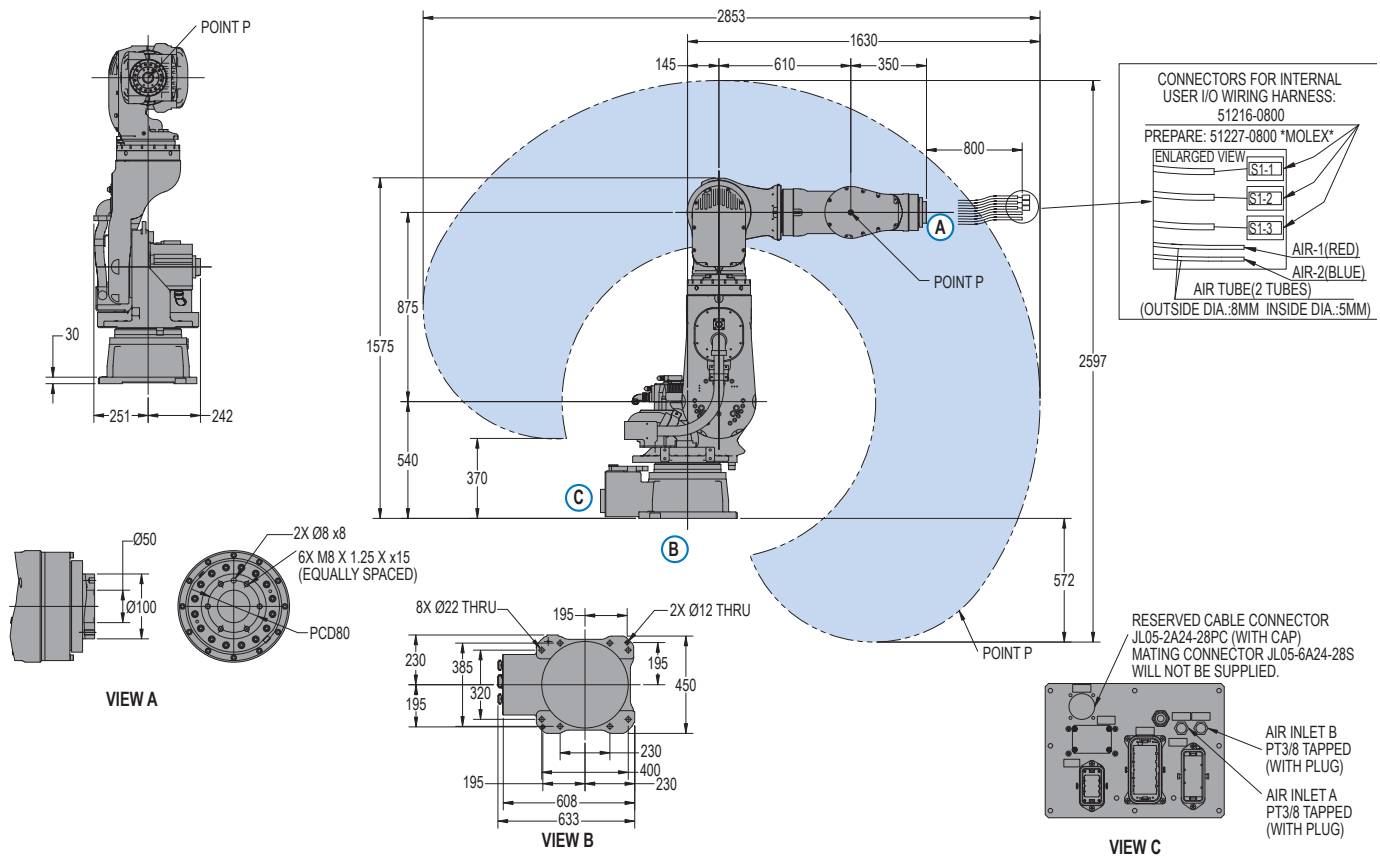
- Operator has clear access to machine operator station for entering offsets, maintenance or other operations.

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.

SIA50D ROBOT

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



SIA50D SPECIFICATIONS

Structure		Articulated
Mounting		Floor
Controlled Axes		7
Payload		50 kg (110.3 lbs)
Vertical Reach		2,597 mm (102.2")
Horizontal Reach		1,630 mm (64.2")
Repeatability		±0.1 mm (±0.004")
Maximum Motion Range	S-Axis (Turning/Sweep)	±180°
	L-Axis (Lower Arm)	+125°/-60°
	E-Axis (Elbow)	±170°
	U-Axis (Upper Arm)	+215°/-35°
	R-Axis (Wrist/Roll)	±170°
	B-Axis (Bend/Pitch/Yaw)	±125°
	T-Axis (Wrist Twist)	±180°
Maximum Speed	S-Axis	170°/s
	L-Axis	130°/s
	E-Axis	130°/s
	U-Axis	130°/s
	R-Axis	130°/s
	B-Axis	130°/s
	T-Axis	200°/s
Approximate Mass		640 kg (1,411.2 lbs)
Power Rating		8.7 kVA
Allowable Moment	R-Axis	377 N • m
	B-Axis	377 N • m
	T-Axis	147 N • m
Allowable Moment of Inertia	R-Axis	29.6 kg • m ²
	B-Axis	29.6 kg • m ²
	T-Axis	12.5 kg • m ²

DX100 CONTROLLER SPECIFICATIONS*

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

www.motoman.com

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