



MACHINE TENDING



THRU-ARM CABLE AND HOSE ROUTING



LADDER EDITOR

TOP REASONS TO BUY

- Dexterity to perform complex tasks; dual 7-axis arms work together or independently
- Slim design optimizes space; provides "human-like" flexibility and range of motion, even in tight spaces
- Simplified tooling reduces cost
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment



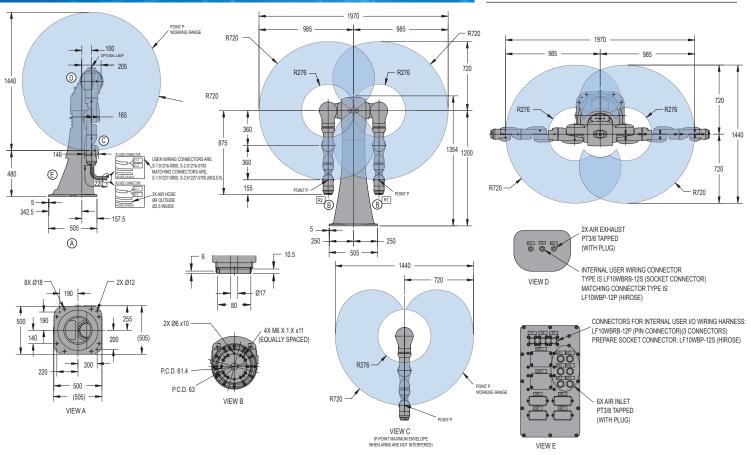
Slim, Dual-Arm Robot with "Human-Like" Flexibility

- Powerful actuator-based design provides "human-like" flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 10 kg (22.1 lb) payload per arm; 720 mm (28.3") horizontal reach per arm; 1,440 mm (56.7") vertical reach per arm; ±0.1 mm (0.004") repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two manipulators can perform simultaneous independent operations.

Ability to hold part with one arm while performing operations on it with other arm. Can transfer a part from one arm to the other with no need to set part down.

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 15.06-1999 and other relevant ISO and CSA safety standards.
 Optional Category 3 functional safety unit.



Structure		Articulated
Mounting		Floor
Controlled Axes		15 (7 axes per arm plus base rotation
Payload		10 kg (22.1 lbs)/arm
Horizontal Reach per Arm		720 mm (28.3")
Horizontal Reach (P-point to P-point)		1,970 mm (77.6")
Vertical Reach		1,440 mm (56.7")
Repeatability		±0.1 mm (±0.004")
Maximum Motion Range	Rotation-Axis (Waist) S-Axis (Lifting) L-Axis (Lower Arm) E-Axis (Elbow) U-Axis (Upper Arm) R-Axis (Upper Arm Twist) B-Axis (Wrist Pitch/Yaw) T-Axis (Wrist Twist)	±170° ±180° ±110° ±170° ±135° ±180° ±110° ±180°
Maximum Speed	Rotation-Axis S-Axis L-Axis E-Axis U-Axis R-Axis B-Axis T-Axis	130°/s 170°/s 170°/s 170°/s 170°/s 200°/s 200°/s 400°/s
Approximate Mass		220 kg (485.1 lbs)
Power Consumption		2.7 kVA
Allowable Moment	R-Axis B-Axis T-Axis	31.4 N • m 31.4 N • m 19.6 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis	1 kg • m ² 1 kg • m ² 0.4 kg • m ²

Dimensions (mm)	1,200 (w) x 1,000 (h) x 650 (d) 47.2" 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	ntenance 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 Z434-0	

^{*}See DX100 Controller data sheet (DS-399) for complete specifications