SOLUTIONS IN MOTION®

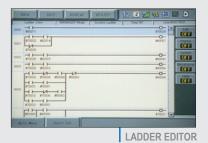




PROCESS-SPECIFIC DESIGN

108		CATEN		-	UNIVERSI	1 00	FUL	-
100					GROUP			
1.4		ICL GROUP:	81		0.11#00		10010 O	_
ARC VELDIN		0001 MOVJ	V.I=0.78		001#00		10012 O	-
¢.		0002 MOVJ			001#00		10013 O	_
VARIABLE		0003 0003 MOVL V=2250			OUT#0005 #10014 O			
8001	0004	0004 0004 MOVL V=500			0UT#00	06 #	10015 O	
DW/DUT		INFUT		1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 - 1940 -	BYTE WAR			
C+				EEC.	NO.		INTENTS	
#0801		20001 #000 #0002 #000		000000	B000	0	0000_0000	RIG
57		#0003 #000		ŏł	B002	T	0000 0000	
		#0004 #000		0 I	B003	0	0000 0000	
SYSTEM INF		#0005 #000		0	B004	0		
	114	#0006 #000	15	οľ	B005	0	0000_0000	
Main News		le Monu						

MULTIPLE WINDOW DISPLAY



TOP REASONS TO BUY

- Application-specific Expert Press Handling robots provide maximum performance and durability
- 34 conductor internal I/O cable provides maximum conductors in a high durability design
- Patented multiple robot control (up to 8 robots/72 axes) simplifies programming
- Energy saving design, reduces power consumption up to 25%
- Small lightweight programming pendant
- MotoSim[®] EG simulation software (optional)



The high-speed EPH130D and EPH130RLD "Expert Press Handling" robots are specifically designed for the rigors of press handing. Both feature a high vibration rating that is ideal for the press room. The EPH130D is used for floor-mounted applications. When a shelf-mounted robot is needed, the EPH130RLD allows improved clearance for die changes.

Fast, Flexible and Powerful

- Floor-mounted EPH130D model: 2,651 mm horizontal reach; 3,372 mm vertical; ±0.2 mm repeatability.
- Shelf-mounted EPH130RLD model: 3,474 mm horizontal reach; 4,151 mm vertical; ±0.3 mm repeatability allows improved clearance for die changes.
- These robots feature higher-performance drive systems on the S-, L- and U-axes (Axes 1, 2 and 3) for high duty cycle applications in the press room.
- The large work envelope allows the robot to be used to tend presses with spacing from 4-7 m.
- These robots can be used in a dual-robot configuration with other DX100-controlled robots to provide maximum flexibility for a variety of processes.

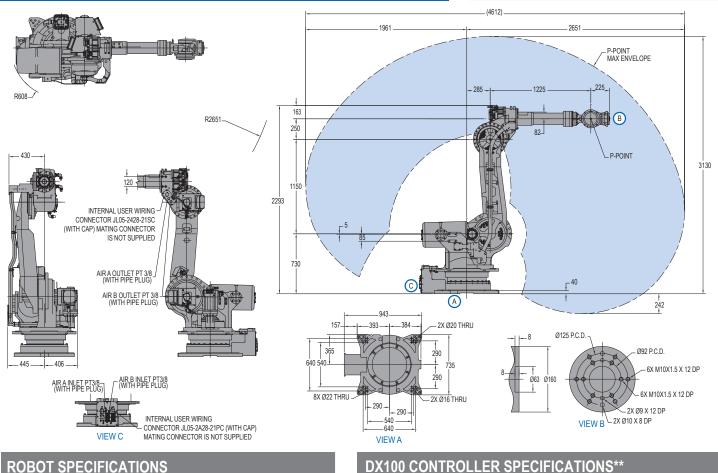
DX100 Controller

Patented multiple robot control supports up to 8 robots/72 axes.

- 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.
- Advanced Robot Motion (ARM) control provides high performance. Best-in-class path planning dramatically reduces teaching time.
- Small, lightweight Windows® CE programming pendant features color touch screen with multiple window display capability. Unique cross-shaped navigation cursor reduces teaching time. All operator controls are located on pendant. Program file names can be up to 32 characters long.

EPH130D ROBOT

EPH130D robot shown. All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



ROBOT SPECIFICATIONS

		EPH130D Floor-Mounted	EPH130RLD Shelf-Mounted	
Structure		Vertical jointed-arm type	Vertical jointed-arm type	
Controlled Axes		6	6	
Payload		130 kg (286.7 lbs.)	130 kg (286.7 lbs.)	
Vertical Reach		3,372 mm (132.8")	4,151 mm (163.4")	
Horizontal Reach		2,651 mm (104.4")	3,474 mm (136.8")	
Repeatability		±0.2 mm (0.008")	±0.3 mm (0.01")	
Maximum Motion Range	S-Axis (Turning/Sweep) L-Axis (Lower Arm) U-Axis (Upper Arm) R-Axis (Wrist Roll) B-Axis (Wrist Pitch/Yaw) T-Axis (Wrist Twist)	±180° +76°/-60° +230°/-137.5° ±360° ±130° ±360°	±180° +70°/-130° +95°/-70° ±360° ±130° ±360°	
Maximum Speed	S-Axis L-Axis U-Axis R-Axis B-Axis T-Axis	130°/s 130°/s 130°/s 215°/s 180°/s 300°/s	110°/s 110°/s 110°/s 215°/s 180°/s 300°/s	
Approximate Mass		1,495 kg (3,296.5 lbs.)	1,445 kg (3,186.2 lbs.)	
Brakes		All axes	All axes	
Power Consumption		7.5 kVA	7.5 kVA	
Allowable Moment	R-Axis B-Axis T-Axis	735 N • m 735 N • m 421 N • m	735 N • m 735 N • m 421 N • m	
Allowable Moment of Inertia	R-Axis B-Axis T-Axis*	45 kg • m ² 45 kg • m ² 15 kg • m ²	45 kg • m ² 45 kg • m ² 15 kg • m ²	
Internal User Electrical Cable		34 conductors + ground	34 conductors + ground	
Internal User Air Hose		2-PT 3/8 connector	2-PT 3/8 connector	
Vibration Rating		9.8 m/s ² (1.0 G)	9.8 m/s ² (1.0 G)	

1,200 (w) x 1,000 (h) x 650 (d) 47.2" x 39.4" x 25.6") Dimensions (mm) Approximate Mass 250 kg max. (551.3 lbs) Indirect cooling **Cooling System** Ambient During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F) Temperature **Relative Humidity** 90% max. non-condensing Primary Power 3-phase, 240/480/575 VAC at 50/60 Hz Requirements Digital I/O Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/ NPN-Standard 16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs PNP-Optional 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 Teach/Play/Remote Keyswitch selector Servo On, Start, Hold, and Emergency Stop Buttons 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

YASKAWA MOTOMAN ROBOTICS

MOTOMAN IS A REGISTERED TRADEMARK WINDOWS IS A REGISTERED TRADEMARK OF MICROSOFT ALL OTHER MARKS ARE THE TRADEMARKS AND REGISTERED TRADEMARKS OF YASKAWA AMERICA, INC.

www.motoman.com

MOTOMAN ROBOTICS 100 AUTOMATION WAY, MIAMISBURG, OHIO 45342 TEL: 937.847.6200 = FAX: 937.847.6277