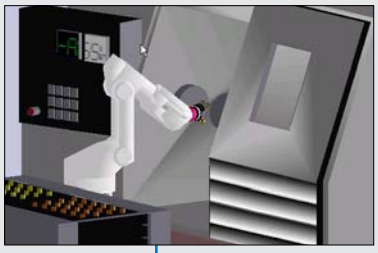
SOLUTIONS IN MOTION®

YASKAWA
MOTOMAN ROBOTICS

MACHINE TENDING

DXM100 CONTROLLER



MOTOSIM® EG OFF-LINE PROGRAMMING

TOP REASONS TO BUY

- Compact design allows maximum performance using minimal floor space
- Yields extraordinary production results while requiring minimal capital investment
- Offers superior performance in packaging, material handling, machine tending, assembly, dispensing and welding applications

MH5
MH5L

ASSEMBLY • DISPENSING • HANDLING
MACHINE TENDING • PACKAGING • WELDING

Payload: 5 kg

Compact, Powerful and Economical

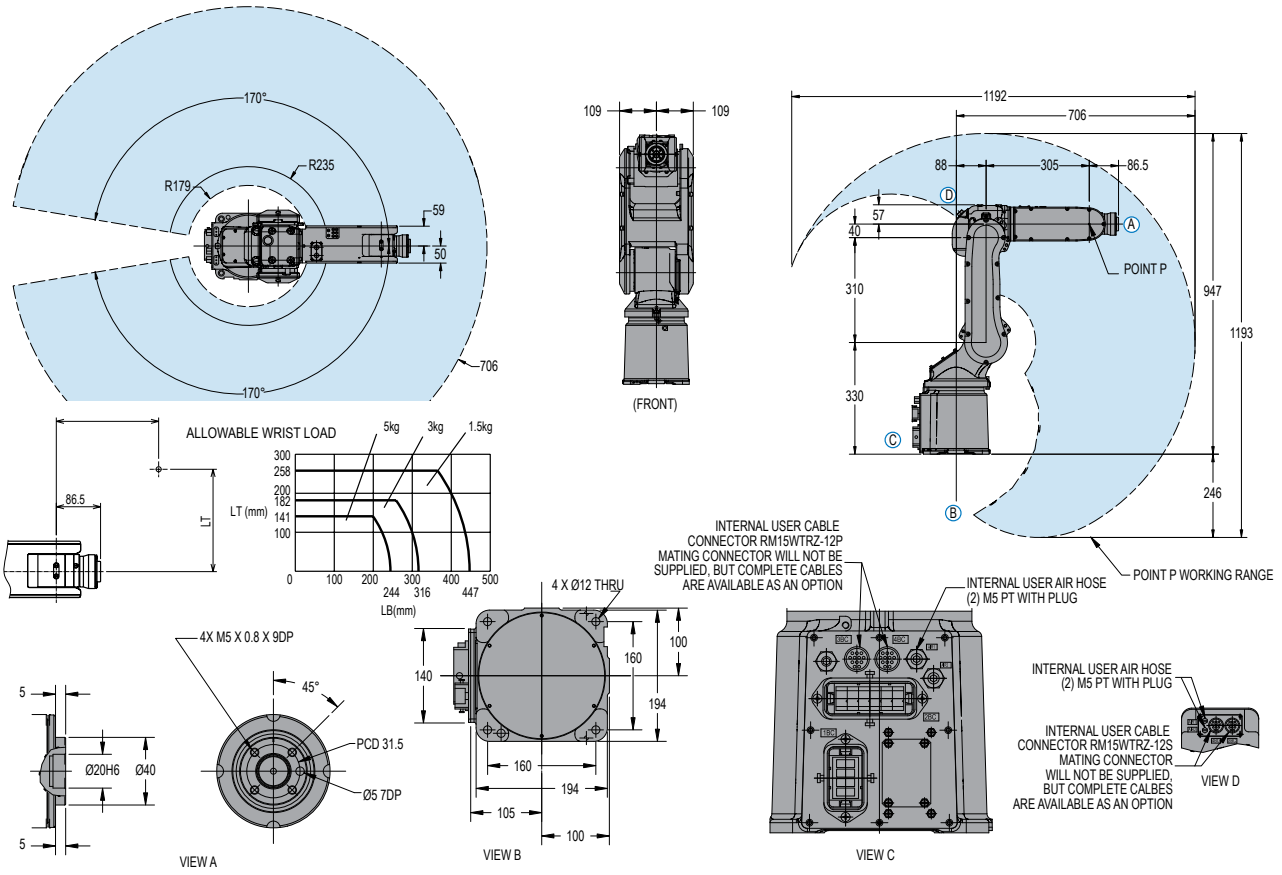
- MH5 model: 706 mm (27.8") reach; ±0.02 mm (0.0008") repeatability. Widest work envelope in its class.
- Extended-reach MH5L robot: 895 mm (35.2") reach; ±0.03 mm (0.001") repeatability for applications requiring a larger work envelope.
- 5 kg (11.03 lb) payload. Improved moment ratings provide increased carrying capacity.
- Robot adjusts performance based on load. Effective for payloads less than 1 kg (2.2 lbs).
- Small footprint and minimal interference radius (179 mm) maximizes floorspace utilization.
- Floor-, wall- or ceiling-mounted options. Brakes on all axes.
- Compact design and built-in collision avoidance features with multiple robot control allow up to eight robots to be used together to optimize productivity.
- Internally routed cables and hoses maximize system reliability.

DXM100 Controller

- Smaller-size DXM100 controller provides layout flexibility.
- 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.

MH5/MH5L ROBOTS

MH5 robot (YR-MH5-C10) shown
All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



ROBOT SPECIFICATIONS

		MH5	MH5L
Structure		Vertical jointed-arm type	Vertical jointed-arm type
Controlled Axes		6	6
Payload		5 kg (11 lbs)	5 kg (11 lbs)
Vertical Reach		1,193 mm (47")	1,560 mm (61.4")
Horizontal Reach		706 mm (27.8")	895 mm (35.2")
Repeatability		±0.02 mm (±0.0008")	±0.03 mm (±0.001")
Maximum Motion Range	S-Axis (Turning/Sweep) L-Axis (Lower Arm) U-Axis (Upper Arm) R-Axis (Wrist Roll) B-Axis (Bend/Pitch/Yaw) T-Axis (Wrist Twist)	±170° +150°/-65° +255°/-136° ±190° ±125° ±360°	±170° +150°/-65° +255°/-138° ±190° ±125° ±360°
Maximum Speed	S-Axis L-Axis U-Axis R-Axis B-Axis T-Axis	376°/s 350°/s 400°/s 450°/s 450°/s 720°/s	270°/s 280°/s 300°/s 450°/s 450°/s 720°/s
Approximate Mass		27 kg (59.5 lbs)	29 kg (63.9 lbs)
Brakes		All axes	All axes
Power Consumption		1 kVA	1 kVA
Allowable Moment	R-Axis B-Axis T-Axis	12 N • m 12 N • m 7 N • m	12 N • m 12 N • m 7 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis	0.3 kg • m^2 0.3 kg • m^2 0.1 kg • m^2	0.3 kg • m^2 0.3 kg • m^2 0.1 kg • m^2
Internal Electric Cable		3 BC 10 Conductors 4 BC 8 Conductors	3 BC 10 Conductors 4 BC 8 Conductors
Internal Air Hose		2 – 1/4" PT Connections	2 – 1/4" PT Connections

DXM100 CONTROLLER SPECIFICATIONS**

Dimensions (mm)* **	800 (w) x 600 (h) x 650 (d) (31.5" x 23.6" 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
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
***Also available with full-size DX100 controller

www.motoman.com

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

YASKAWA
MOTOMAN ROBOTICS

TECHNICAL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
DS-409-D ©2011 YASKAWA AMERICA, INC. JUNE 2011