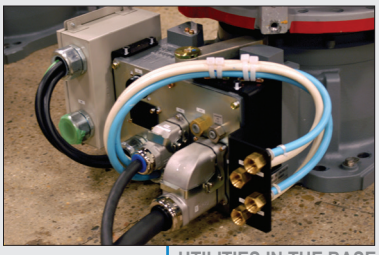
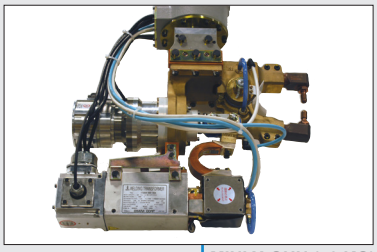
YASKAWA

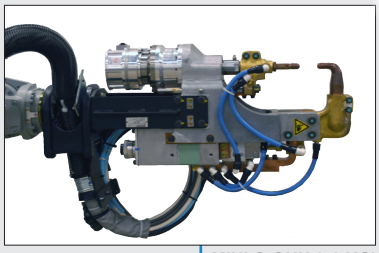
SOLUTIONS IN MOTION®



UTILITIES IN THE BASE



MINI X-GUN (50 KG)



MINI C-GUN (50 KG)

TOP REASONS TO BUY

- Speeds 43% faster than large payload robot for reduced cycle and takt times
- Compact and ideal for use in flexible, high-density layouts
- Offers 50% combined power savings used with lighter, more efficient DC gun

MS80W

WITH SPOT HARNESS

• SPOT WELDING •

Payload: 80 kg

"Master Spot" Welding Robot Ideal for High-Density Layouts

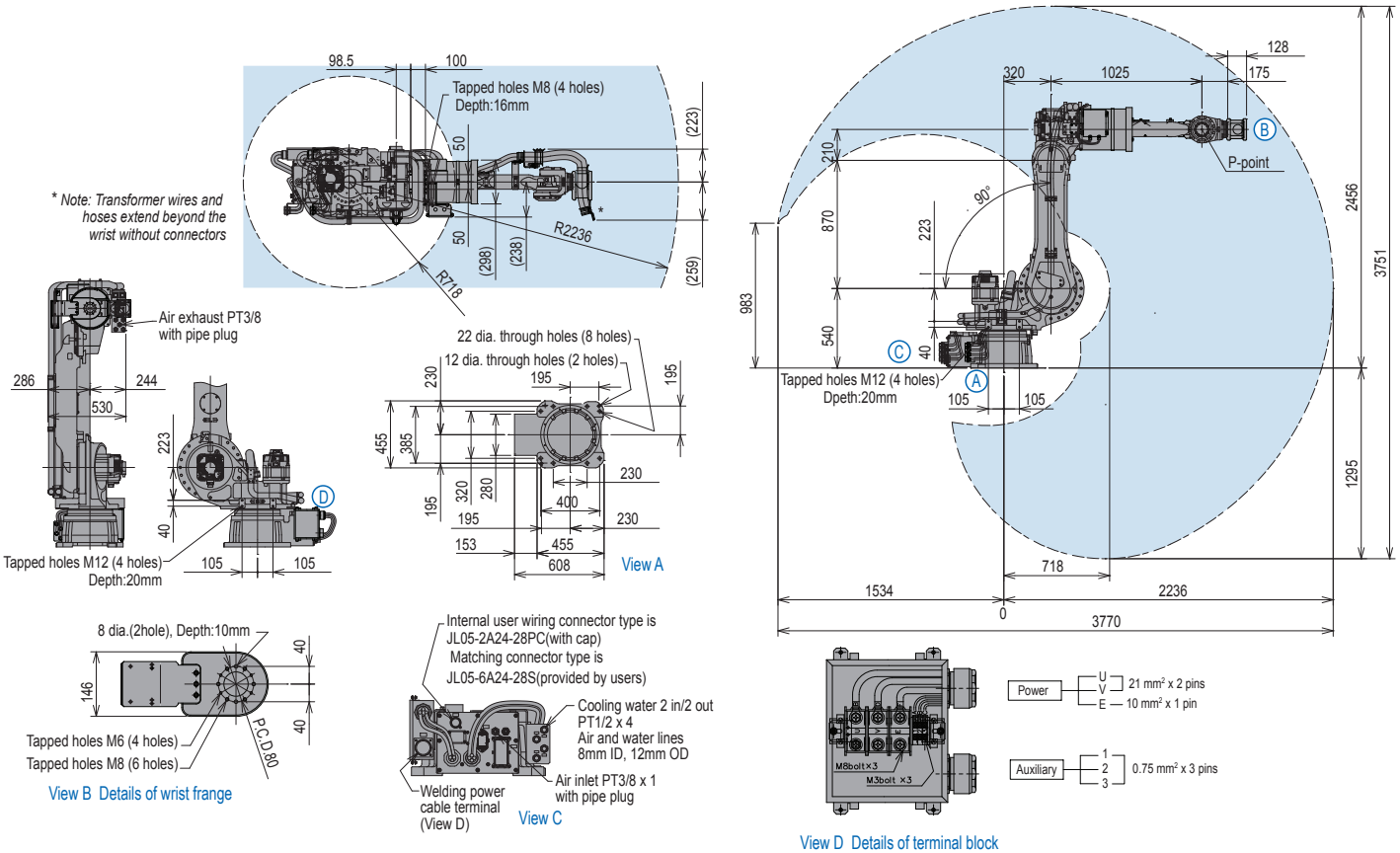
- Quick and agile! Over 43% faster than traditional heavy-payload robots, resulting in shorter takt times and higher throughput.
- Body < 500 mm (19.7") wide, including spot harness; 2,236 mm (88") reach; 72 kg (158.8 lb) payload; ±0.07 mm (±0.003") repeatability.
- Can be placed close to workpieces and other robots for flexible, high-density layouts.
- Offset lower arm allows MS80W to be shelf mounted.
- Yaskawa's compact actuators and higher-frequency DC welding led to new lightweight spot guns.
- Guns are available in X- or C-type configurations with 600-kg clamping force and 15,000-Amp capacity.
- Uses 33% less power even at faster speeds due to lightweight gun. Offers 50% power savings with smaller DC guns versus traditional robots.
- Proven integrated spot harness, prevents interference and reduces programming time. Integrated cabling and hoses last more than six times longer than traditional harnesses, reducing maintenance and improving uptime.

DX100 Controller

- Patented multiple robot control supports up to 8 robots/72 axes. Collision avoidance software prevents robot interference.
- Integrated pendant programming applications for Medar and Nadex timers.
- 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.

MS80W ROBOT

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



MS80W SPECIFICATIONS

Structure		Vertical articulated type
Controlled Axes		6
Payload		72 kg (158.8 lbs)
Vertical Reach		3,751 mm (147.7")
Horizontal Reach		2,236 mm (88")
Repeatability		±0.07 mm (0.003")
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)	±180° +155°/-90° +160°/-185° ±205° * ±120° * ±180° *
Maximum Speed	S-Axis L-Axis U-Axis R-Axis B-Axis T-Axis	170°/s 140°/s 160°/s 230°/s 230°/s 350°/s
Approximate Mass		580 kg (1,278.9 lbs)
Brakes		All axes
Power Consumption		4 kVA
Allowable Moment	R-Axis B-Axis T-Axis	372 N • m 372 N • m 191 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis	26 kg • m² 26 kg • m² 10.3 kg • m²

* Working range with integrated spot harness.

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

YASKAWA

YASKAWA AMERICA, INC. ■ MOTOMAN ROBOTICS DIVISION
100 AUTOMATION WAY, MIAMISBURG, OHIO 45342
TEL: 937.847.6200 ■ FAX: 937.847.6277

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