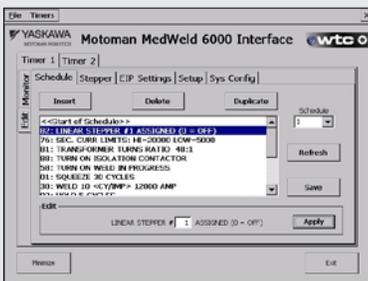


INTEGRATED CABLE PACKAGE

WELD CONTROL ON
PENDANT (OPTIONAL)

BASE CONNECTORS



ES280D

WITH SPOT HARNESS

ES280D-230

SPOT WELDING

Payloads:
280 kg (ES280D)
230 kg (ES280D-230)

TOP REASONS TO BUY

- Proven integrated cable harness for power and utilities increases cable life and reduces life cycle cost
- Integrated control for spot guns with servo-motor drives improves weld quality
- ARM control software maximizes robot speed based on gun dynamics
- Industry's first one-year spot harness warranty

Fast, Streamlined and Powerful

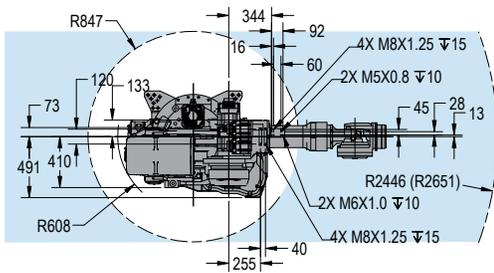
- High-speed "Expert Spot" robots are specifically designed to deliver unmatched performance and reliability in heavy-payload spot welding applications.
- To increase cable life, enhance safety and reduce teaching time, servo gun cables and air and water lines are routed through the robot base and upper arm to robot wrist.
- Compact, slim design allows robot to reduce cycle time and reach into confined spaces, improving system productivity.
- ES280D: 2,446 mm (96.3") horizontal reach. ES280D-230: 2,651 mm (104.4") horizontal reach. Work envelope extends behind body, allowing tools to be placed behind manipulator and providing easy access to weld guns for maintenance.
- Process-specific design, together with patented multiple robot controller, ensures maximum productivity in spot welding applications.
- Floor-mounted

DX100 Controller

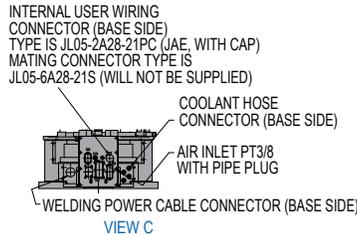
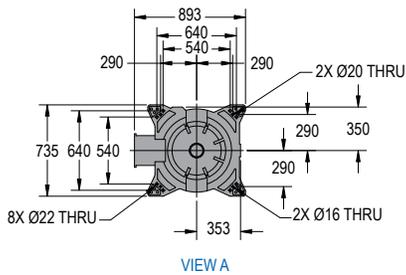
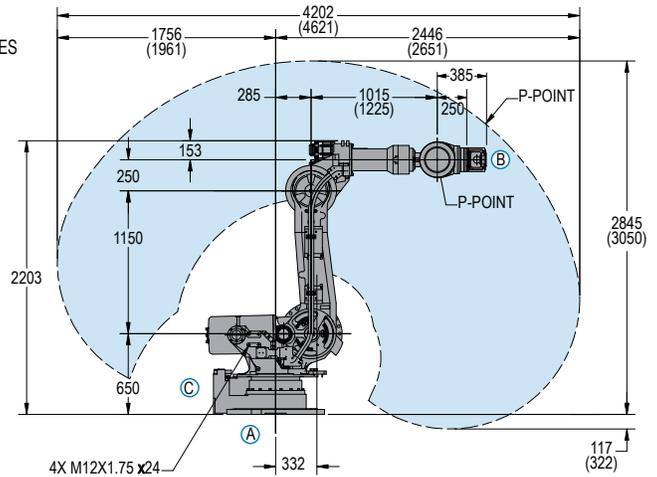
- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Integrated pendant programming applications for Medar and Nadex timers.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated 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.

ES280D/ES280D-230 ROBOTS

ES280D robot shown without harness. ES280D-230 dimensions are same, except where noted. All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.

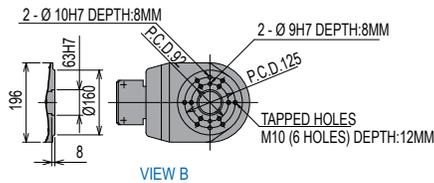


NOTE: DIMENSIONS IN PARENTHESES ARE FOR ES280D-230

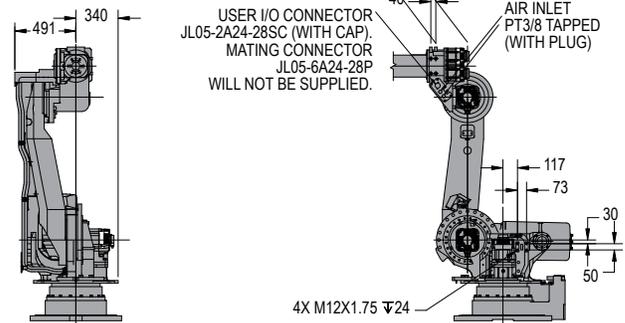


VIEW A

VIEW C



VIEW B



4X M12X1.75 x24

ROBOT SPECIFICATIONS

	ES280D	ES280D-230
Structure	Vertical articulated type	Vertical articulated type
Controlled Axes	6	6
Payload	280 kg (617.4 lbs)	230 kg (507.2 lbs)
Vertical Reach	2,962 mm (116.6")	3,372 mm (132.8")
Horizontal Reach	2,446 mm (96.3")	2,651 mm (104.4")
Repeatability	±0.2 mm (0.008")	±0.2 mm (0.008")
Maximum Motion Range	S-Axis (Turning/Sweep) ±180° L-Axis (Lower Arm) +76°/-60° U-Axis (Upper Arm) +230°/-142.5° R-Axis (Wrist Roll) ±360° [±205°]* B-Axis (Bend/Pitch/Yaw) ±125° [±120°]* T-Axis (Wrist Twist) ±360° [±180°]*	S-Axis ±180° L-Axis +76°/-60° U-Axis +230°/-142.5° R-Axis ±360° [±205°]* B-Axis ±125° [±120°]* T-Axis ±360° [±180°]*
Maximum Speed	S-Axis 90°/s L-Axis 80°/s U-Axis 90°/s R-Axis 115°/s B-Axis 110°/s T-Axis 190°/s	S-Axis 80°/s L-Axis 70°/s U-Axis 80°/s R-Axis 115°/s B-Axis 110°/s T-Axis 190°/s
Approximate Mass	1,120 kg (2,469.6 lbs)	1,130 kg (2,491.7 lbs)
Brakes	All axes	All axes
Power Consumption	10 kVA	10 kVA
Allowable Moment	R-Axis 1,280 N·m B-Axis 1,280 N·m T-Axis 706 N·m	1,280 N·m 1,280 N·m 706 N·m
Allowable Moment of Inertia	R-Axis 140 kg·m ² B-Axis 140 kg·m ² T-Axis 79 kg·m ²	140 kg·m ² 140 kg·m ² 79 kg·m ²

*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	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

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