

# MS165 MS210

## SPOT WELDING

### KEY BENEFITS

Reduced life cycle cost and increased cable life with proven integrated power and utility cable harness

Increased payload and speed with optimized robot and control for reduced cycle time  
Slim profile for high density spacing and for reaching into confined spaces

Reduced energy consumption and improved maintainability

### SPECIFICATIONS

MS165 payload:  
165 kg with spot harness  
180 kg without spot harness

MS210 payload:  
210 kg with spot harness  
225 kg without spot harness

2,702 mm horizontal reach  
3,393 mm vertical reach  
±0.2 mm repeatability  
Floor mounted

### CONTROLLERS



DX200



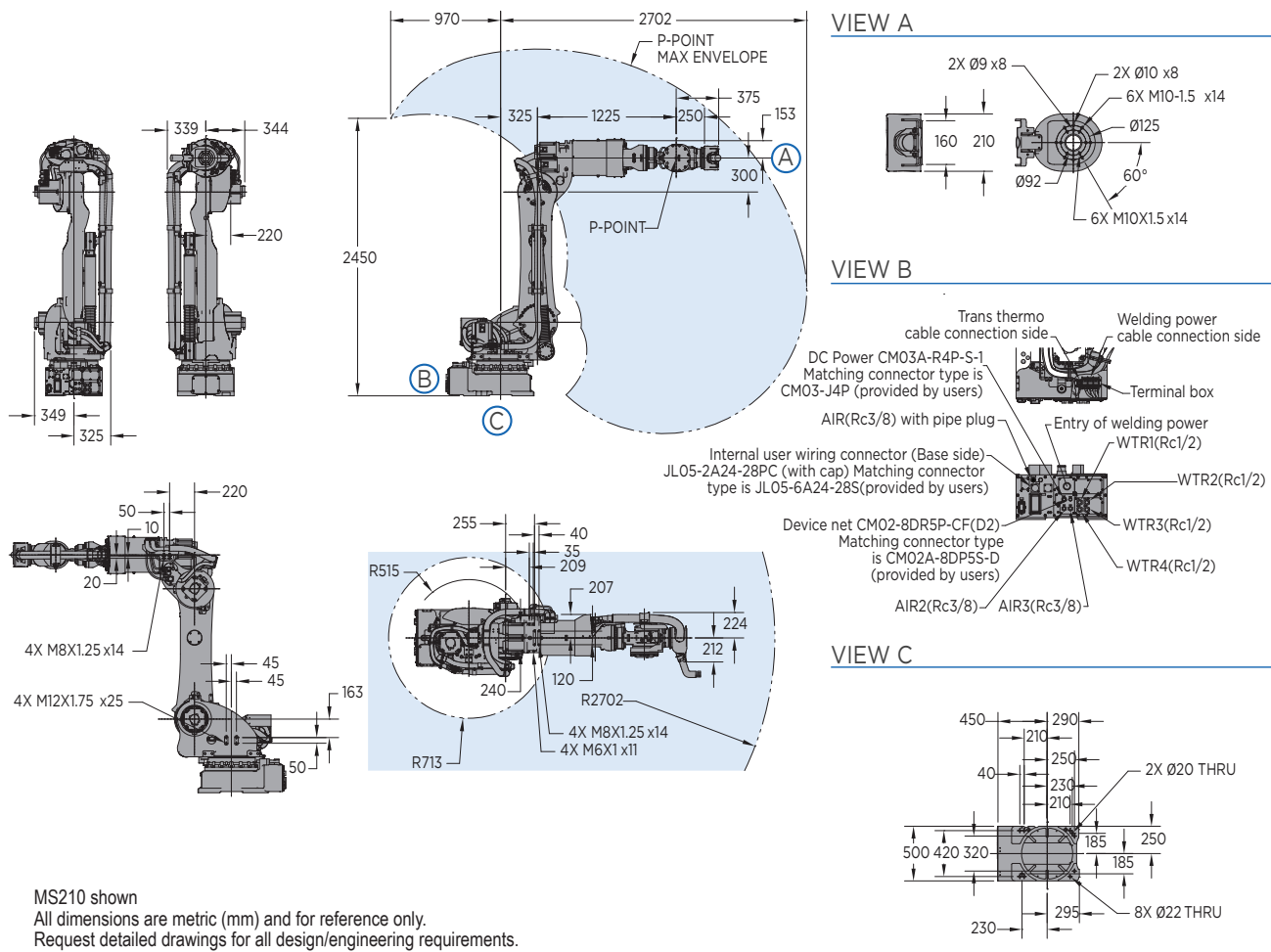
FS100



MLX200

- Six-axis MS165 and MS210 spot welding robots feature optimized vibration control, high-rigidity speed reducers and high-speed spot gun motion which reduces air cut time and improves productivity.
- Expanded wrist motion range eliminates interference and improves application flexibility.
- New, streamlined design features slim base and wrist profiles, and compact gas spring which allow for high density robot spacing. Robots can easily reach into confined spaces, improving application flexibility.
- Up to 70% less power consumption during motion and 25% savings during idle periods compared to previous models.
- Servo gun cables and air and water lines are routed through robot base and upper arm to increase cable life, enhance safety and reduce teaching time.
- Controller connectivity provides simple wiring to spot timers and robot pendant weld programming for Medar® and Nadex® brand timers.
- Numerous spot welding functions to take advantage of servo gun control including:
  - Work thickness detection
  - Multi-step pressure file
  - Tip wear compensation
  - Work search function
  - Servo tip dresser
  - Pendant o-scope
- Spot harness connections
  - Connections from base to upper arm
  - DeviceNet signal and power
  - Connections from base to wrist (gun)
  - Servo motor and encoder
  - Air hose (2) 6.5 mm ID, (1) 8 mm ID
  - Water hose (4) 8 mm ID
  - Weld power (2) 22 mm<sup>2</sup>, (1) 14 mm<sup>2</sup>
  - Transformer thermostat (3) 0.75 mm<sup>2</sup>
  - User I/O (9) twisted pair + (1) 0.3 mm<sup>2</sup>

# MS165 | MS210 ROBOTS



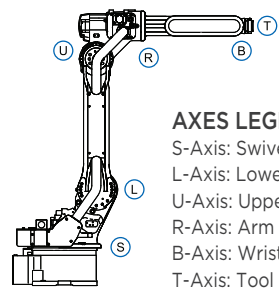
## SPECIFICATIONS: MS165 | MS210 (WITH EXTERNAL CABLE)

Axes	Maximum motion range [°]		Maximum speed [°/sec.]		Allowable moment [N•m]		Allowable moment of inertia [kg•m <sup>2</sup> ]		MS165	MS210
	MS165	MS210	MS165	MS210	MS165	MS210	MS165	MS210		
S	±180	±180	125	120	-	-	-	-	6	6
L	+76/-60	+76/-60	115	97	-	-	-	-	165	210
U	+90/-147	+90/-147	125	115	-	-	-	-	±0.2	±0.2
R	±210*	±210*	182	145	951	1,323	88	143	2,702	2,702
B	±130*	±125*	175	145	951	1,323	88	143	3,393	3,393
T	±210*	±210*	265	220	618	735	46.3	84	0 to +45	0 to +45
									Humidity [%]	20 - 80
									Weight [kg]	1,020
									Power supply, average [kVA]	1.5

\* Motion range limited by spot harness

## OPTIONS

- Extended length manipulator cables
- Robot risers and base plates
- External axis kits for servo guns
- Wide variety of fieldbus cards
- Vision systems
- Digital interface (Dnet or EIP) for Medar
- MedWeld 6000 spot timer



**AXES LEGEND**  
 S-Axis: Swivel Base  
 L-Axis: Lower Arm  
 U-Axis: Upper Arm  
 R-Axis: Arm Roll  
 B-Axis: Wrist Bend  
 T-Axis: Tool Flange

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