

SP180H AND SP180H-110

HIGH-SPEED, HOLLOW-ARM DESIGN

KEY BENEFITS

Hollow-arm design offers improved cable routing and reduced wear

Harness is sized for spot guns used on aluminum parts

Single robot-to-controller cable connection enables fast setup

High-speed robot motion reduces air-cut time for spot gun

Flexible wrist motion range simplifies programming of complicated parts

SPECIFICATIONS

180 kg payload (SP180H)

110 kg payload (SP180H-110)

2,702 mm horizontal reach

3,393 mm vertical reach

0.05 mm repeatability

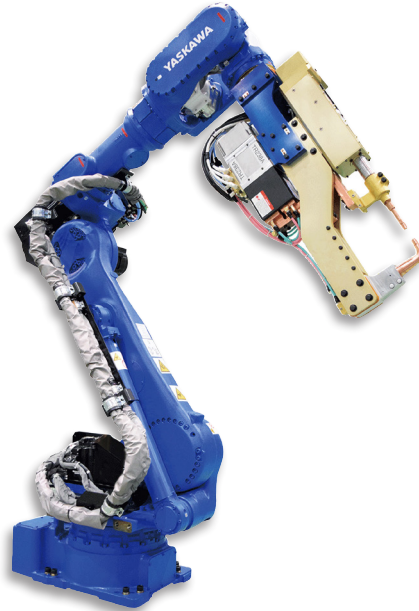
APPLICATION

Spot Welding

Material Handling

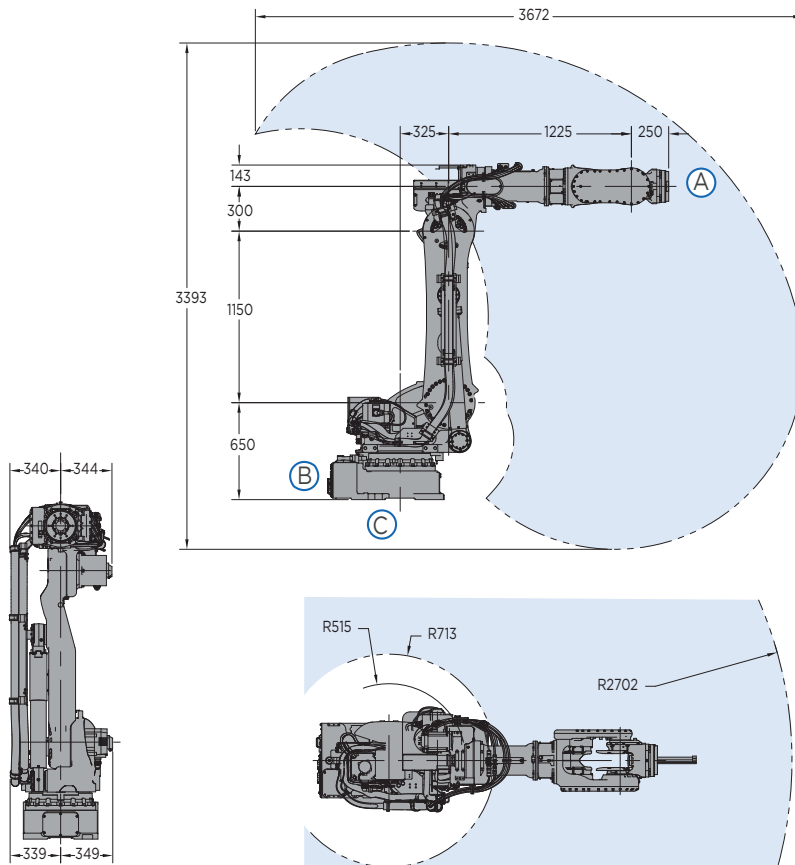
CONTROLLER

YRC1000

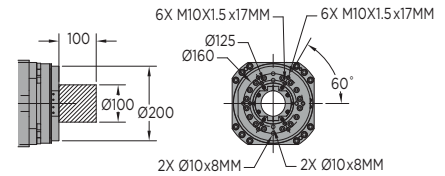


- Powerful, six-axis robots feature exceptionally fast axis speeds and acceleration to reduce air-cut time and increase production output.
- Hollow upper arm reduces interference while simplifying programming.
- Wide wrist motion range improves spot gun positioning and application flexibility.
- Slim design allows for reaching into confined parts as well as close proximity placement of robots for high-density workcells.
- Integrated spot harness in hollow arm provides optimal cable protection and reduces downtime.
- Servo gun and DC timer technology optimized for productivity and quality.
- Spot monitoring and waveform graphing helps check and troubleshoot welding conditions.
- Controller connectivity provides simple wiring to spot timers.
- Robot pendant application for programming Medar® and Nadex® brand timers.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- 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 (3) 8.5 mm ID
 - Water hose (4) 8.5 mm ID
 - Weld power (2) 35 mm², (1) 14 mm²
 - Transformer thermostat (3) 0.75 mm²
 - User I/O (9) twisted pair + (1) 0.3 mm²
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Both models have an IP65-rated wrist and an IP54 body standard.
- Available without harness for material handling applications
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

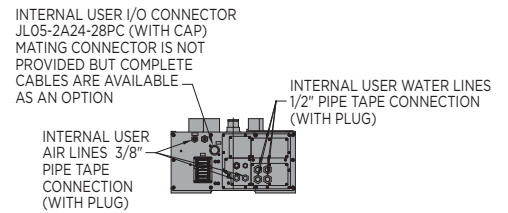
SP180H AND SP180H-110 ROBOTS



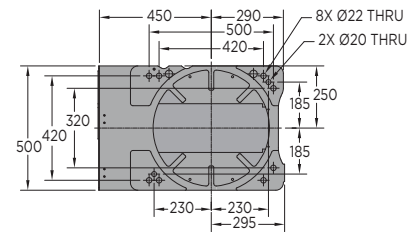
VIEW A



VIEW B



VIEW C



All dimensions are metric (mm) and for reference only.
 Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

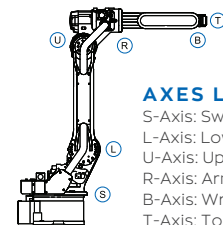
Axes	Maximum motion range		Maximum speed		Allowable moment		Allowable moment of inertia	
	degrees		°/sec		N·m		kg·m ²	
	SP180H	SP180H-110	SP180H	SP180H-110	SP180H	SP180H-110	SP180H	SP180H-110
S	±180	±180	140	120	-	-	-	-
L	+76/-60	+76/-60	97	97	-	-	-	-
U	+90/-86	+90/-86	115	115	-	-	-	-
R	±210	±210	210	150	883	1,000	85	104
B	±130	±130	200	150	883	1,000	85	104
T	±210	±210	310	230	520	618	40	52

Mounting Options: Floor

Item	Unit	SP180H	SP180H-110
Controlled axes		6	
Maximum payload	kg	180	110
Repeatability	mm	0.05	
Horizontal reach	mm	2,702	
Vertical reach	mm	3,393	
Weight	kg	1,120	
Internal user I/O cable		17 conductors w/ ground	
Internal user air line		(1) 3/8" connection	
Power requirements		380-480 VAC	
Power rating	kVA	5	

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



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

YASKAWA

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