

MOTOMAN SP80

Spot Welding with the SP-series



The MOTOMAN SP80 is a compact spot welding robot with 80 kg payload for servo-controlled lightweight welding guns. This technology allows very compact, cycle-time-optimized, energy-efficient and cost-effective welding cells to be installed in the smallest possible space. This robot is suitable for compact spot welding lines in car body construction with high robot density, for economical welding of small subassemblies, and for space-saving installation on a positioner.

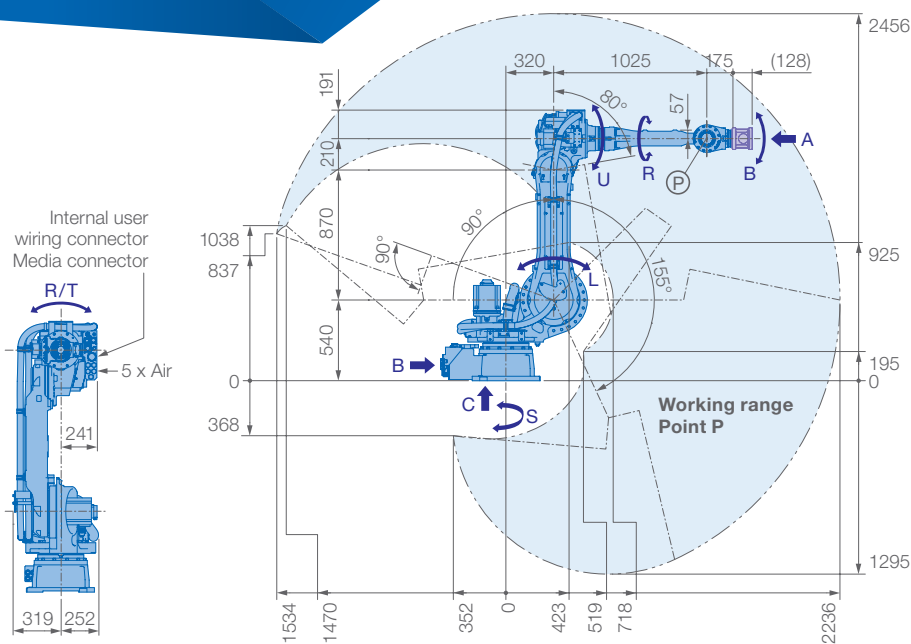
The MOTOMAN SP80 features the latest Yaskawa Sigma7 servo drive technology, is state-of-the-art in terms of dynamics and energy efficiency, and enables outstanding cycle times.

KEY BENEFITS

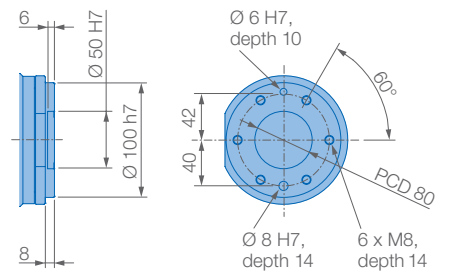
- High payload (80 kg including C-adapter) and large working range (2236 mm)
- High repeatability (± 0.03 mm)
- Extra slim design, integrated cable and media routing via robot arm
- High robot density in production line possible
- Shortened process times
- High dynamics

OPTIONS

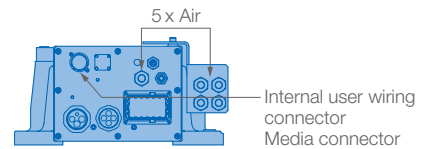
- Cable packages of various designs, easily adaptable
- C-adapter for optimal cable routing on the wrist
- Extended robot cables
- Fieldbus cards
- External drive axes, tracks
- Functional Safety Unit (FSU), area limitations
- Vision system, e.g. MotoSight 2D



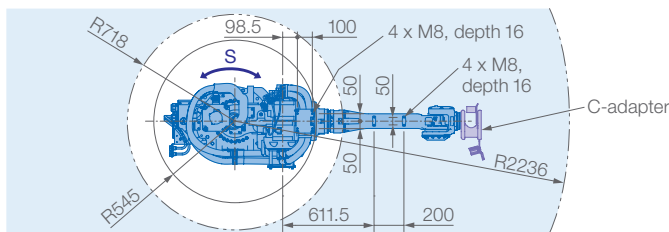
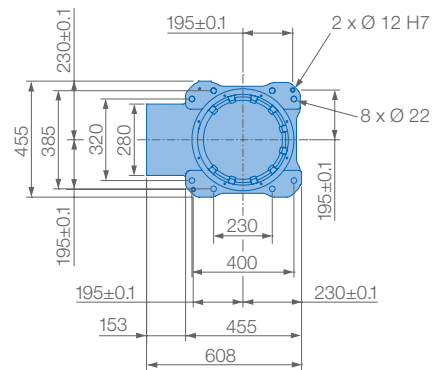
View A



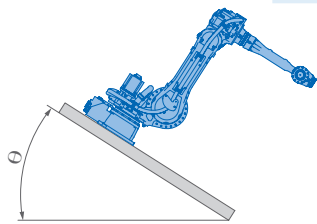
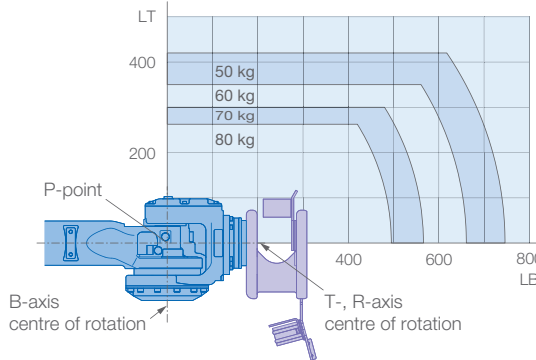
View B



View C



Allowable wrist load with C-adapter



Robot installation angle θ [deg.]	S-axis operating range [deg.]
$0 \leq \theta \leq 30$	± 180 (Standard)
$30 < \theta \leq 35$	± 60
$35 < \theta \leq 45$	± 45
$45 < \theta$	± 30

Mounting options: Floor, ceiling, wall, tilt*

IP Protection: IP54 (body), IP67 (wrist)

* tilt with condition of angle – see table left side

Specifications SP80

Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	6
S	± 180	170	–	–	Max. payload [kg]	80 (88*)
L	+155/–90	140	–	–	Repeatability [mm]	± 0.03
U	+90/–80	160	–	–	Max. working range R [mm]	2236
R	± 205 ($\pm 360^*$)	230	389 (408*)	28 (30*)	Temperature [°C]	0 to +45
B	± 120 ($\pm 125^*$)	230	389 (408*)	28 (30*)	Humidity [%]	20 – 80
T	± 180 ($\pm 360^*$)	350	206	10.3 (11*)	Weight [kg]	630
					Power supply, average [kVA]	4.0

* without C-adapter