



SPOTWORLD IV-6000 SERIES

SpotWorld IV-6000M series includes:

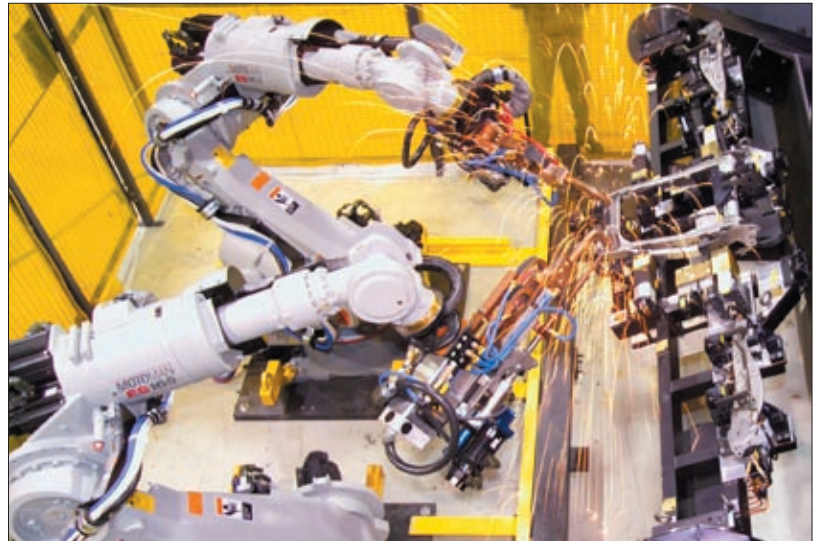
- SWIV-6000M
- SWIV-6200M

(SWIV-6000 represents all models)

The SpotWorld® IV-6000 family of fully integrated robotic solutions features a high-speed positioner and one (SWIV-6000) or two (SWIV-6200) robots for *HyperProductivity*®. This pre-engineered solution provides high-volume, high-performance results and is designed to accommodate multiple fixtures and parts or a single large part. The SWIV-6000 features the Motoman ES165N “Expert Spot” welding robot, NX100 controller with menu-driven spot welding application software, resistance welding package, high-speed “ferris wheel” type positioner with three servo motor drives, and operator interface. Its *total safety environment* features dual-channel safety-rated, tamper-resistant interlocks; complete barrier guarding; single point of operator control (for all robots); dual-channel light curtains – all in compliance with the ANSI/RIA R15.06-1999 safety standard.

HyperProductivity

Our SpotWorld IV solutions redefine robotic arc welding with industry-leading performance. By combining Motoman’s advanced technology and products – including multiple robot controllers, super high-speed positioners, leading-edge process technology, and the fastest robots in the industry – you achieve extraordinary production and quality results.



SpotWorld IV-6200

Robot/Controller

Motoman’s high-speed ES165N “Expert Spot” robot is specifically designed to deliver unmatched performance and reliability in spot welding applications. To increase cable life, enhance safety, and reduce teaching time, the servo gun cables and air and water lines are routed through the robot’s base and upper arm to the robot’s wrist.

The NX100 high-performance controller features a Windows® CE programming pendant with color touch screen, fast processing, easy-to-use INFORM III programming language, and robust PC architecture. The NX100 offers unmatched memory (60,000 steps, 10,000 instructions), multi-level password protection, and an Ethernet port. Advanced Robot Motion (ARM) control provides high-performance path accuracy and vibration control.

Safety features include enhanced dual-channel E-Stop functionality, integrated speed monitoring, manual brake release for the robot, and compliance with both U.S. and Canadian safety standards.

Part Positioning

The MRM2-1200M3X part positioner features a 1200-kg (2,646-lb) payload capacity per side, a 3-meter span (faceplate to faceplate), D-shaped tooling envelope, and three servo axes for high-speed positioning. It indexes in 3.25 seconds when fully loaded. The three-motor design allows the operator to jog the load axis or move to different pre-programmed load positions.

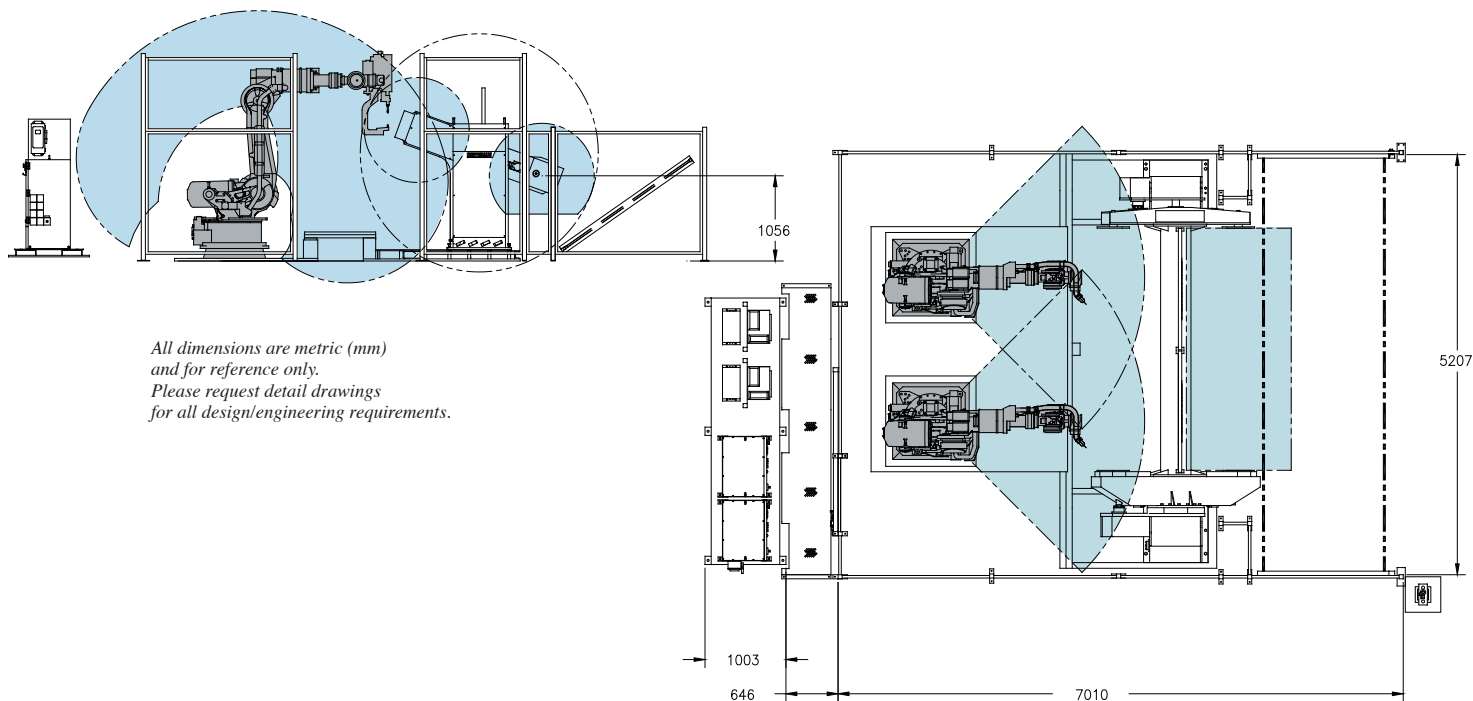
Customer Satisfaction

Motoman is committed to delivering the best customer satisfaction in the robot industry with 24-hour technical and field service support, industry-leading warranties, and maintenance protection plans.

Arm Yourself

...with a SpotWorld IV-6000. The cost-effective, low-risk solution that yields *HyperProductivity* – simply the highest quality and output results in the robotic spot welding industry.

Ask your salesman about Motoman’s three-year warranty, MotoMax® III, available with every SpotWorld.



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

SPOTWORLD IV-6200M SPECIFICATIONS

ES165N Robots (2)	165 kg (363.8 lb) payload In-line, 6-axis, articulated design 2,651 mm (104.4") reach at P-point ±0.2 mm (0.008") repeatability	Spot Welding Packages (per specification)	Integrated spot harness: air, water, power and signal lines Servo controlled or air activated spot gun X or C type guns: transformer per application AC or DC weld control
NX100 Controller	Multiple Robot Control Arm interference software Servo gun software Programming pendant w/single point of control Large 6.5" color touch screen Menu-driven spot welding application software Memory: 60,000 steps, 10,000 instructions Password protection: 4 levels, 100 users Collision detection software Built-in PLC capability Ladder logic editing/monitoring displays Compact flash backup Built-in Ethernet port	MRM2-1200M3X Part Positioner	1,200 kg (2,646 lb) payload capacity per side Three AC servo motor drives 0-20.7 rpm headstock rotation Approx. 3.25-second index time 3,000 mm (118.11") max. part length 1,300 mm (51.2") max. part diameter (see part envelope) 3/8" ID air line to headstock for fixture Ergonomic load and program heights
Operator Push-Button Control Station	Servo ON Master Job Start E-Stop Robot hold Alarm reset Single push-button cycle index (latching relay interlocked for safety)	Total Safety Environment <i>(in compliance with the ANSI/RIA R15.06-1999 safety standard)</i>	Safety-rated, tamper-resistant interlocks Single-point of operator control (all robots) Fixture rotation interlocked with light curtains Barrier guarding with protective arc curtains Cycle start interlocked with safeguards Dual-channel light curtains

Configuration Options

- ES200N robot
200 kg (441 lb) payload
2,651 mm (104.4") reach
±0.2 mm (0.008") repeatability
- Single robot configuration (SWIV-6000) available upon request
- 500-kg positioner (MRM2-500TX)
– SWIII-6000HD
- Indexing rotary table
– SW1000
– SWIII-1000
- Available with PLC and slip rings for fixture control
- Optional 3/4" ID air line
- Operator station options include monochrome or color touch screens
- Operator station options for jog switch or thumbwheel to allow variable load positions

Welding Options

- Medar integrated weld control (AC or MFDC)
- End-of-arm shock sensor
- Water flow sensor
- Tip changer
- Tip dresser; pneumatic or electric
- Adjustable S-axis hard stops
- Limit switches on L- and U-axes
- Side-mount welding transformer bracket

MOTOMAN
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MOTOMAN CORPORATE HEADQUARTERS
805 LIBERTY LANE, WEST CARROLLTON, OHIO 45449
TEL: 937.847.6200 • FAX: 937.847.6277
WEB SITE: www.motoman.com