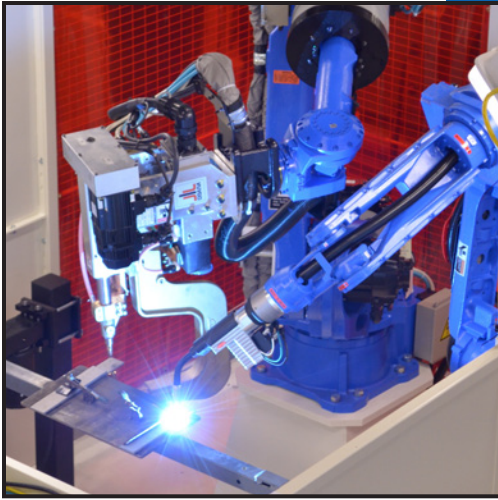


# SpotWorld

with DX100 Controller

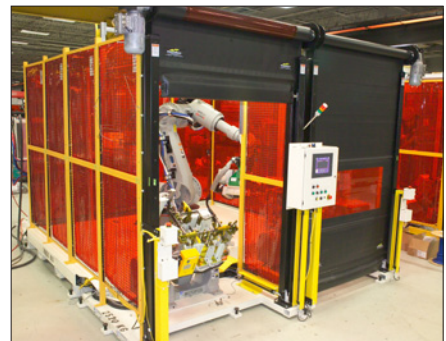


SpotWorld® is a complete workcell with robot, process equipment, part positioner and safeguarding integrated together. It leverages Yaskawa Motoman's "Master Spot" MS-series robots and popular welding positioners to pattern workcells after our popular ArcWorld® product line. Servo-controlled spot guns with Direct Current (DC) spot timers are synchronized to provide improved quality at reduced cycle time.

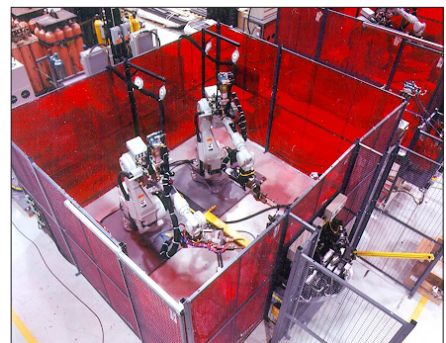
## HIGHLIGHTS

### Productivity with Quality Welds

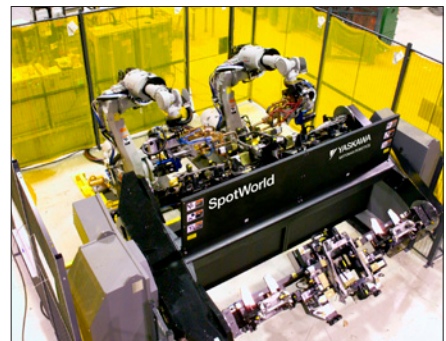
- Popular ArcWorld workcell configurations are easily adapted for spot welding (SpotWorld) to suit a variety of parts and industries.
- Yaskawa Motoman provides service and warranty for robots and positioners in workcell.
- Smaller MS80W or MS120 robots reduce workcell footprint and can be combined with arc welding robots.
- HyperProductivity® with multiple robots in the workcell controlled from one teach pendant.
- Standardized workcells are easily modified to accommodate plant specifications.
- Cost and delivery of custom configurations is reduced by using standard components.
- Integrated spot harness improves uptime and application flexibility by eliminating cable management issues; one-year warranty on harness.
- Servo gun control improves quality and reduces cycle time by providing precise control of electrode force.
- Programming of Medweld 6000 timer with Medar commands from robot pendant.



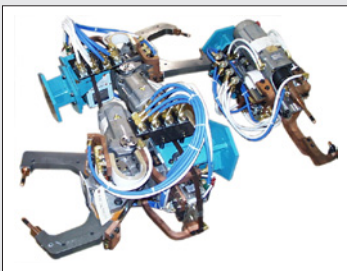
SPOTWORLD C-52S – SERVO TILT/ROTATE



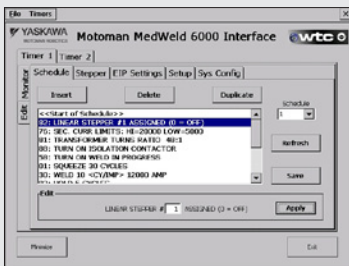
SPOTWORLD 1200 – TURNTABLE



SPOTWORLD 6200 – TRUNNION



SERVO GUNS OPTIMIZE PROCESS



PROGRAM TIMER FROM PENDANT

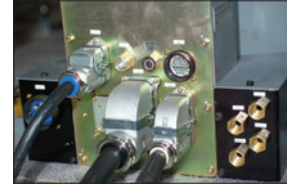
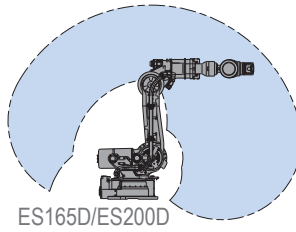
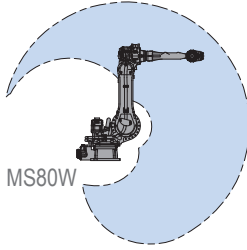
### TOP REASONS TO BUY!

- Integrated spot harness improves wrist flexibility and reduces downtime
- Service and warranty coverage from a single source
- Servo gun and DC timer technology optimized for productivity and quality

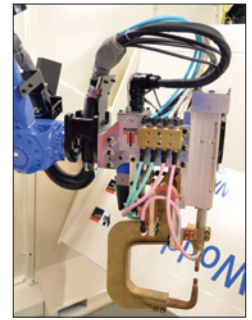
### ARM YOURSELF

...with a spot welding solution that suits your parts and production requirements.

## ROBOT WORK ENVELOPES



BASE CONNECTORS FOR UTILITIES



UTILITIES FOR GUN AT WRIST

## SPOTWORLD SPECIFICATIONS

<b>Robots</b>	MS80W, MS120, ES165D, ES200D
<b>DX100 Controller</b> <i>(See data sheet DS-399)</i>	Programming pendant w/single point of control Large 5.7" color touch screen Menu-driven application software Memory: 200,000 steps, 10,000 instructions Password protection: 4 levels, 100 users Collision detection software Built-in PLC capability Ladder logic editing/monitoring displays Compact flash or USB backup Built-in Ethernet port
<b>Spot Welding Functions</b>	
Master Spot (MS) Integrated Spot Harness (from base to wrist)	Motor and encoder signals Gun power w/thermal sensor wires Water and air lines User I/O
Servo Gun Control	Simple calibration of gun force X or C guns supported Multiple pressure files Timer firing coordinated with pressure file Tip wear compensation positioning One instruction for optimum speed and multi-spot programming Servo gun supported in MotoSim EG-VRC offline software
Medweld 6000 Digital Interface	DeviceNet or Ethernet communication Programming from the teach pendant Graphic programming similar to WebView from WTC Supports Medar commands, steppers and diagnostics
<b>Part Positioner</b>	Two station – SpotWorld C-52S Turntable – SpotWorld 1000 Rotating turntable – SpotWorld IV-4000 Trunnion positioner – SpotWorld IV-6000
<b>Total Safety Environment</b> <i>(in compliance with ANSI/RIA R15.06-1999 and Canadian safety standards.)</i>	Safety-rated, tamper-resistant interlocks Single point of operator control Barrier guarding Cycle start button interlocked w/safeguards Interlocked doors

## OPTIONAL SPOT WELDING FUNCTIONS

- Multi-step pressure function for welding three-plate thicknesses
- GunChg command for tool changing servo guns
- Workpiece thickness detection for error proofing
- Gun correction function to search for part location

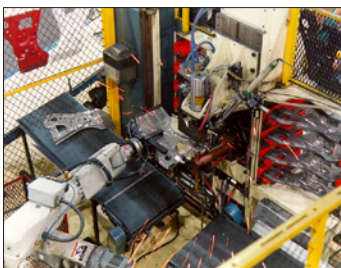
## SERVO GUN MOTORS

- Yaskawa 1.5 or 2.0 kW Sigma III motors (plug-n-play with spot harness; battery enclosed in encoder cover)
- Obara lightweight actuator
- Tolomatic ServoWeld actuator (specify Yaskawa encoder)
- Exlar actuator (specify Yaskawa encoder)

## CELL OPTIONS

- PC-based HMI cell controller
- Timer mounting on controller
- Magnum ToolSight to measure tip wear
- Powered roll-up doors
- Tip dresser
- Tip changer
- Tool changer with servo disconnect
- Utility service disconnects
- Water flow sensors

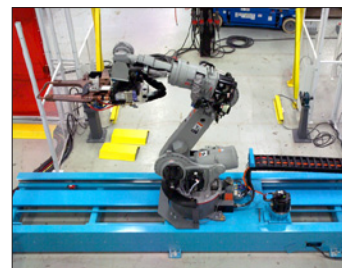
## CUSTOMIZED SPOTWORLD SOLUTIONS



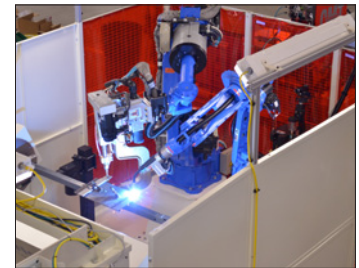
PART TO PROCESS FOR SPOT AND/OR PROJECTION WELD



SPOT-ARC-HANDLING COMBINED FOR LEAN MANUFACTURING



HIGH-MIX, LOW-VOLUME FOR LARGER AGRICULTURE/CONSTRUCTION PARTS



SPOTWORLD IV-6200SL WITH SPOT AND FRONIUS CMT