ArcWorld® 6000 Series

Key Benefits

- Pre-engineered arc welding solution
- High robot utilization; parts can be loaded/unloaded at operator station, while the robot processes parts internally
- Functional Safety Unit (FSU) eliminates complex switches or a costly safety PLC
- Sealed or auto-lubricated drives minimize maintenance
- Robot, positioner and workcell covered by single warranty and industry-leading global service organization
- Standard workcell is documented and supported by single source – Yaskawa Motoman

Application

Arc Welding

Models

ArcWorld 6000
ArcWorld 6200
ArcWorld 6300

Controller

YRC1000

- Customizable cells that are intended for medium- to large-sized parts or large quantity production runs.
- Common cell base supports fencing and provides an elevated platform for programmers. Removable deck plates provide access for cable routing.
- Controller(s), power source(s) and auxiliary equipment ships on the same base reducing cable connections and installation time.
- Twist-lock connectors are included on all interconnecting cables.
- Positioner base and cell base bolt together for easy layout and positive location. All bases have leveling bolts with lag provisions.
- Interlocked hinged door on rear of cell provides safe and easy programming, and maintenance access.
- High-speed Motoman® AR-series arc welding robots can reduce cycle time; multiple robots can be combined for HyperProductivity®.
- Enhanced safeguarding, including Functional Safety Unit (FSU) is fully compliant with latest robot safety standard (ANSI/RIA R15.06-2012).

RM2-Series Positioners

- Ferris wheel positioners provide infinite part positioning, enabling the weld joint to be kept in a gravity-neutral welding plane, improving weld quality.
- RM2-755 offers 755-kg payload capacity with 2.9 second index time.
- RM2-1255 offers 1,255-kg payload capacity with 3.8 second index time.
- Both models offer a 2.0 or 3.0 meter tooling span, with up to 1.3-m tooling diameter.
- Patented MotoMount™ fixture mounting system facilitates fixture changes and extends life by reducing stresses in bearings.
- Provisions for utilities include a 41 mm tailstock thru-hole; optional slip rings allow continuous rotation for EtherNet/IP fixture signals and ½-inch air line.
- Coordinated motion technology allows multiple robots to be synchronized with the positioner and other external axes.
- Reduced cycle time due to fast overhead sweep, comfortable load height, and optimal programming/processing position.
AW6000 Series

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SPECIFICATIONS

Robot
AR1440: 12 kg payload; 1,440 mm reach
AR2010: 12 kg payload; 2,010 mm reach

YRC1000 Controller
Programming pendant with single point of control
Large color touch screen
USB and SD card memory storage
Standard workcell software functions
Multi-tasking (up to 7 jobs at once)
Coordinated motion
Mirror copy
Ladder logic editing/display
Collision detection
Software weaving
Ethernet port
Ethernet I/O options

ArcWorld Welding Package
Weld-in-Teach mode function
Graphic arc files
Digital weld interface
Integrated torch package
Arm-mounted 4-roll wire feeder
Welding power source

Common Workcell Features
Cell assembly base
Robot controller and welding power source base
Wire mesh or solid fence panels
Rear hinged door for access

Operator Control
Push-button operator station pedestal
Cycle start palm button
Auto/manual selector switch
E-Stop palm button

RM2-Series Ferris Wheel Positioners
<table>
<thead>
<tr>
<th>RM2-755</th>
<th>RM2-1255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated load</td>
<td>755</td>
</tr>
<tr>
<td>Index time (seconds)</td>
<td>2.9</td>
</tr>
<tr>
<td>Maximum tooling diameter: 1,300 mm</td>
<td></td>
</tr>
<tr>
<td>Pin-to-pin dimension: 2.0 m</td>
<td>3.0 m</td>
</tr>
<tr>
<td>Rated weld current: 1,200A</td>
<td></td>
</tr>
<tr>
<td>Coordinated motion software</td>
<td></td>
</tr>
<tr>
<td>MotoMount flexible fixture mount</td>
<td></td>
</tr>
</tbody>
</table>

Total Safety Environment
(In compliance with ANSI/RIA R15.06-2012 and Canadian safety standards)
Barrier guarding with protective arc curtains
Safety-rated, tamper-resistant interlock
Interlocked access door at the rear of the cell
Powered barrier door with torque limit for safety
E-Stop (pendant and door guards)
FSU software safeguarding without safety PLC or robot base switches

Configuration Options
- Wire mesh or solid fence panels
- Barrier guard door with or without integrated light curtains
- Interior light curtain
- 2.0 or 3.0 m tooling span
- Digital I/O or Ethernet slip rings
- Wire spool or bulk delivery method
- Beacon stack light
- Fume extraction hood
- Secondary enabling switch
- Shielding gas flow sensors
- Weld wire sensing kit

Process Options
- Binzel or Tregaskiss torches and reamers
- Variety of weld packages: Miller, Fronius, Lincoln
- Wide variety of fieldbus cards and HMIs
- Vision systems
- Seam tracking and seam finding packages
- Tip change service box or request station

AW6300-755 shown. All dimensions are metric (mm) and for reference only. Request detailed drawings for all design/engineering requirements.