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.
**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

**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

**RM2-Series Ferris Wheel Positioners**
- MSR-755: 755 | MSR-1255: 1,255
- Rated load (kg): 755 | 1,255
- Index time (sec): 2.9 | 3.8
- Maximum tooling diameter: 1,300 mm
- Pin-to-pin dimension: 2.0 m | 3.0 m
- Rated weld current: 1,200A
- Coordinated motion software
- MotoMount flexible fixture mount

**Total Safety Environment**
- (In compliance with ANSI/RRIA 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

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