

ARC-R Specification Sheet

ARC-R · Single-Robot Welding System


1 × W7

Robot

7

Robot axes

Configurable

Linear and vertical travel

Per-weld

Production record

CONFIGURATION

Robot	1 × Catfish W7
Robot axes	7
Linear travel	6–10 m rail in the standard configuration; configurable
Positioner	2-axis in the standard configuration
Vertical positioning	Configurable
Total coordinated axes	Configuration dependent; 10 in the standard configuration (7 robot + 1 rail + 2 positioner)
Seam sensing	Laser seam sensor
Installation	Floor-mounted industrial cell
Controller	Control X: real-time CPU, safety processor/PLC, edge GPU, EtherCAT master, I/O, camera inputs, SSD process logging

PRODUCTION

Workpiece type	Structural assemblies / fabricated steel
Production model	High-mix / flexible manufacturing
Applications	Structural fabrication, workboats, commercial marine structures, frames, beams, panels, welded assemblies, heavy fabricated components

PROCESS

Welding	MIG/MAG, FCAW
Parameters	WPS-governed
Adaptive correction	Only within the approved procedure and configured process limits; every correction logged
Additional processes	Handling, machining, finishing, dispensing, inspection
Work	Stiffened panels, stiffeners, subassemblies, structural weldments

SOFTWARE

Included	Studio, Weld, Proof
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Optional	Mission Control, Fleet
WPS management	Supported
Job scheduling	Supported
Production records	Supported
Record per weld	Current, voltage, wire feed, travel speed, torch angle, path, sensing corrections, WPS, operator, software version, inspection result

INTEGRATION

Plant protocols	OPC UA, PROFINET, EtherNet/IP, MQTT
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SAFETY

Safety architecture	Installation-specific industrial safety architecture
Safety elements	Emergency-stop circuits, safety-rated interlocks, safety PLC, perimeter guarding, access gates, area scanners, light curtains, machine-state monitoring, controlled zones, status towers, safe-stop functions
Real-time loop	Cloud is never in the real-time loop

FUNCTIONS**CAD-to-Weld**

Studio reads the part model, identifies joints and generates weld paths offline.

WPS Match

Each joint is welded with parameters from its assigned, approved WPS.

Seam Locate and Adapt

The laser seam sensor finds the as-built joint and corrects within the approved procedure and configured process limits.

Coordinated Rail and Positioner

Rail travel and two positioner axes move with the robot as one 10-axis system.

Per-Weld Record

Proof logs parameters, path, corrections, operator and inspection result for every weld.

Offline Programming

Paths are simulated in Studio for reach and collision before the part reaches the cell.

Plant Connectivity

OPC UA, PROFINET, EtherNet/IP and MQTT link the cell to existing plant systems.