The ARC-05HVTe is an automated system that has the capability to weld in the horizontal or vertical position, or at any angle between the 0 and 90 degree positions on the ID and OD of cylindrical parts.

The ability to position part improves bead shape, weld chemistry and improves overall ease of operation and usability of welding process at high deposition rates.

ARC Specialties’ elbow cladding technology performs on-the-fly adjustments of the weld parameters, torch position and torch oscillation as the cross-sectional geometry of the elbow changes throughout the course of the welding process. The system’s software enables operators to simply touch off on two points of the elbow’s ID to generate an automated weld path.

The PLC control system has parameter feedback and overrides for automatic welding. The operator pendant is a touch screen with graphical user interface for ease of operation. The control system includes the ability to save weld schedules to prevent unnecessary parameter input from part to part. The system is skid-mounted for ease of portability.

The slide package and rotary table is integrated into an L-Arm configuration with a tilting axis to orientate from horizontal to vertical and any angle in between. The control cabinet and welding equipment are mounted to the base. The rotary table has a 25” 3-Jaw chuck for part holding.

This automated welding system provides improved production rates while maintaining a small manufacturing footprint. There are optimized deposition rates available for different applications. The ARC-05HVTe switches between multiple weld schedules while welding, uses a high speed turntable to achieve high travel speeds required, and is capable of adjusting to different welding positions.

ARC Specialties can assist with Welding Procedure Qualifications, including the high-deposition capabilities that are available with this machine.
Fully Integrated Robotic Cells
Available with GMAW, GTAW, PTAW, SAW, Plasma Cutting, Machine Tending, Material Handling, Drilling and Tool Changing Options

Cells may be built with one or more robotic arms to work together on:

- conveyor loading
- conveyor unloading
- cutting, beveling, coping
- welding—GTAW, GMAW, PTAW, SAW
- drilling and tapping
- tool changing
- safety fencing, light curtains
- additional safety components

This ability for synchronized motion helps production shops to greatly reduce cycle times.

Once integrated, part geometry can be entered directly into the control system touchscreen. This means that the software is able to build programs for the robotic system automatically. With these kinds of systems, minimal robot programming is required.

All ARC Specialties custom robotic solutions are designed, built and integrated with customers’ specifications in mind.