

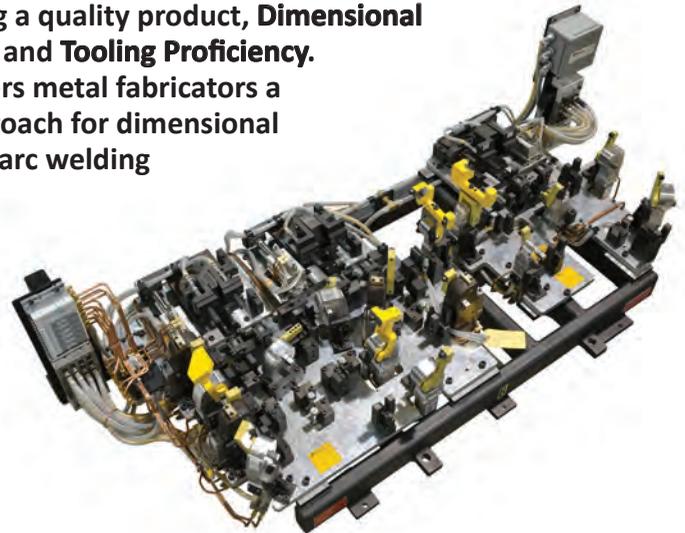
# Genesis<sup>®</sup> Systems Group, LLC **Tooling**



## **Tooling Solutions**

Genesis Systems Group's experience delivering turnkey robotic automation solutions for thousands of applications sets us apart. Genesis understands the welding process, the environment and what it takes to successfully produce high quality welded assemblies.

Genesis has combined the two strongest links to producing a quality product, **Dimensional Engineering** and **Tooling Proficiency**. Genesis offers metal fabricators a unique approach for dimensional control and arc welding fixtures.



## **What it is**

The welding environment presents unique challenges for a manufacturer. Knowing this environment and what to expect is integral in designing a reliable fixture. By using the right materials, sensors, wiring and shields, we design our weld fixtures to withstand the harsh environment for the expected usage and life cycle. By utilizing standard, off-the-shelf components, the amount of customization is greatly reduced. The result is lower repair and replacement costs and increased up-time.

## **What it does**

**Dimensional control** – The weld fixture must produce an assembly that consistently meets the required part tolerances. Our fixture designs provide known locating points with appropriate adjustments. Proper weld joint access is critical. We allow access to welds to accomplish high weld quality.

**INNOVATION AND EXPERIENCE FROM YOUR SINGLE SOURCE**

# Tooling

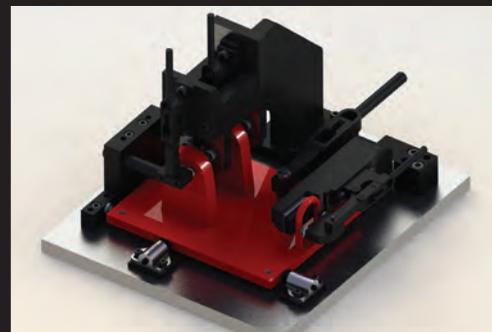
## Commercial Grade Fixture

- Manual clamping
- Minimal pneumatics
- Generally low production volumes
- High degree of operator responsibility
- Little or no error proofing
- Limited assembly configurations
- No special coating for spatter control



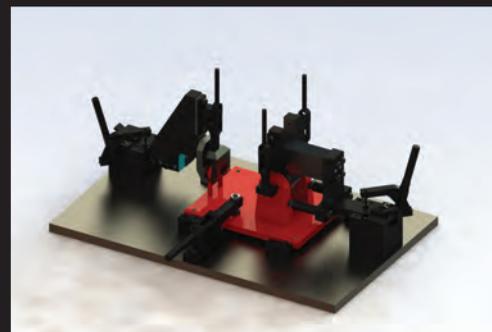
## Manual Weld Industrial Grade Fixture

- Manual clamping
- Moderate degree of operator responsibility in load/unload
- Adjustable fixture
- Special coatings for spatter control



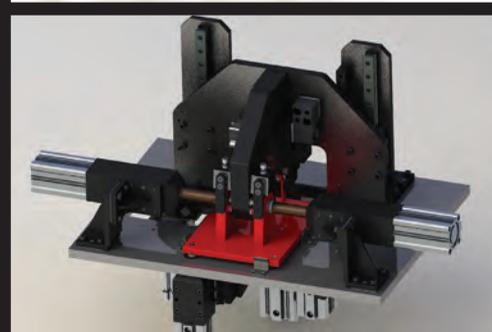
## Robotic Weld/Manual Clamp Industrial Grade Fixture

- Manual clamping
- Simplified degree of operator responsibility in load/unload
- Adjustable fixture
- Special coatings for spatter control
- Fixture designed for higher volumes
- Robot reach and torch access considered in design



## Robotic Weld/Auto Clamp Spec Grade Fixture

- Designed for high volume production
- Sequencing flexibility
- Plumbing and wiring protected
- Slide stops included in both directions
- Includes error proofing
- Locators retractable for ease of unload
- Rough locators to aid loading
- Focus on purchased parts
- Cylinders retracted when possible
- Minimal degree of operator responsibility in load/unload



## Fully Automated Spec Grade Fixture

- Designed for high volume production
- Maximized up-time
- Parts loaded into magazines
- Reduces operator variability
- Operator error eliminated
- Redeployment of robots possible

