Automated Stud Welding
MESH Automation offers four predesigned formats for the automation of stud welding

**Large Format Gantry Machine Specifications**
- Incoming material blank maximum is 144”x60”x16” (LxWxH); maximum weight is 1,500 lbs.
- Top quality HBS power supplies and stud guns; with up to 8 stud types on one machine

**Medium Format Gantry Machine Specifications**
- Incoming material blank maximum 96”x48”x4” (LxWxH); maximum weight is 500 lbs.
- Top quality HBS power supplies and stud guns, with up to 8 stud types on one machine

**Medium Format Robotic Machine Specifications**
- Incoming material blank maximum 96”x48”x16” (LxWxH); maximum weight is 500 lbs.
- Stud configurations: custom configurable, multiplane welding
- Robot brand: ABB or Fanuc

**Semi-Automatic Machine Specifications**
- Operator loads / unloads onto a positioner with fixture mounted. Safe side of machines have robotic stud welder with top quality HBS power supply and stud gun(s); three-dimensional stud placement

NOTE: Custom sizes and configurations can be accommodated on request to meet individual customer needs.
Achieve the best possible return on your investment

- Faster cycle rates than human operators can achieve and limited only by the power supply duty cycles
- More accurate and consistent than human operators
- Raw material feeding and finished goods handling can be integrated easily into any of our systems
- Rugged and proven equipment from HBS Welding for the power supplies and stud guns
- Rugged and proven motion control from Rockwell, Omron or Siemens
- Rugged and proven robotics from ABB or Fanuc

Our automation stud welding equipment is ideal for those Industries that need studs welded to their parts in a precise and repeatable fashion. All automated MESH solutions have minimal labor requirements with lights out operation possibilities.

With MESH, you have a partner that can deliver the correct automated process for your business. Our innovative and reliable solutions can take care of all your controls integration, raw material interface and finished goods packaging solutions that may be needed.
Robotic Stud Welding

Robotic stud welding is a particularly cost-effective process that offers many benefits including unparalleled flexibility for stud placement and type. The MESH advantage includes:

- Machines that can be configured with one or more robots and automatic stud gun tooling changes.
- Studs that are fed automatically to the stud gun or to tool holders within easy reach of the robot.
- Control system configurations that are easily adaptable to the customer’s specifications and can be configured for standalone control or fully integrated into a MES systems, including Rockwell, Siemens and Omron are common.
- Industrial robots that have high service life and solid service and warranty support from ABB and Fanuc, the brands we use.
- HBS power supplies and automatic stud guns chosen for longevity and process control.
Semi-Automatic Solutions

Most semi-automatic automated stud welding solutions involve parts being manually placed into various fixtures and then the finished parts are manually removed. The rest of the process is automated so that repeatability, quality, throughput and safety are maximized.

The four predesigned base systems MESH offers consist of the following major components that can be mixed and matched for the operation required:

- Stud gun and power supply
- Stud feeding device
- Gun actuator (robot, servo actuator or pneumatic actuator)
- Fixture for holding the parts
- Positioner for fixtures
- Guard system
- Control system

Ideal for lower volume production where repeatability, quality, throughput and safety are maximized!