



# Electron Beam Welding

**Precision, strength, and the deepest penetration weld available.**

**Electron beam welding can create joints that other processes can't, whether it's welding difficult material combinations together, or precisely placing welds within close proximity of heat-sensitive components, or simply creating the strongest possible weld.**

## Specifications and features

From 0.005 to 3 inches penetration, 20:1 depth-to-width ratio

Welding in high vacuum conditions results in high weld purity and strength

High energy density and precision beam placement provide for small heat affected areas

Easily welds metals like Titanium, Inconel, Aluminum, Copper

Works well joining dissimilar metal combinations

Meets Aerospace AMS 2680, AMS 2681 and AWS D17.1 specifications

NADCAP, AS9100D, ISO 9001:2015 and ISO 13485 certified

CNC controlled welders ensure precise control and repeatability at feed rates from 1 to 200 inches per minute



## Services suited to your application

EB Industries specializes in helping our customers solve problems with design, consultation, supply chain management and pre and post-weld add on services.

CAD/CAM Product Design and Weld Design

Tooling Design & Fabrication

Parts Cleaning & Assembly

Strategic Sourcing and Subcontractor Contract Management

Metallurgical Evaluations

Leak Testing

Destructive and Non-Destructive Testing

Post Weld Thermal Treatment

## Industry recognized quality and certified by





# About EB Industries

## Decades of Experience and Excellence

Founded in 1965 to provide electron beam welding to the aerospace industry  
1984 - Added laser welding capability  
1994 - Pioneered laser hermetic sealing techniques  
2000 - Adopted lean manufacturing methodology, revamped quality control and manufacturing process.  
2013 on - Continuing strategic investment in equipment, expanded workforce, additional shop space.  
16,000 square-foot facility, custom designed for industry specific equipment

### Electron Beam Welding

- Power range up to 15 kilowatts
- Chamber capacity up to 36"x36"x72"
- Automated rapid vacuum cycling
- CNC tables for semi to fully automated production
- Custom designed computer controls of all weld parameters and provides data logging

### Laser Welding

- Power range from 25 to 4000 watts
- Nd:YAG, CO2, Fiber and Disc lasers and Laserstar equipment available
- 2D and 3D automated and semi-automated laser welding and cutting
- ESD and FOD safe environments
- Glove box controlled environment welding stations

### Engineering and Quality Control

- Full CAD/CAM design, metallurgy lab
- Full in-house machine shop for custom tooling development
- In-house sectioning lab for destructive testing
- Digital and conventional visual inspection equipment, full documentation
- Integrated quality and leak testing, mass spectrometer leak testing, pressure bombing, digital x-ray capabilities