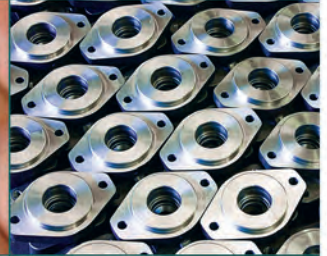


SCI AKY INC

WELDING SYSTEMS AND PROCESSES THAT LEAD THE WORLD



Contract Welding Services
sciaky.com

The World's Most Complete and Versatile Welding Services Company

Sciaky provides a wide range of contract welding services for customers in numerous industries all over the world. We have the capability to weld large assemblies up to **24-feet in length and 50 inches in diameter, to tiny parts that fit in the palm of your hand**. Whether your requirements call for the development of a prototype part or fabrication services for large volume production, Sciaky has the right solution to meet your needs. Best of all, Sciaky's welding services are competitively priced and offer tremendous advantages over smaller job shops in terms of equipment and expertise. Give us a call. There's simply no other welding services provider on the planet like Sciaky.

Why EB?

EB is an excellent choice for applications containing refractory alloys and dissimilar materials. Advantages of electron beam welding include a high power density with very low overall heat input and, therefore, minimum distortion. Electron beam welded parts require a minimum of post weld machining and heat treatment, and, unlike other fusion welding processes electron beam requires no shielding gases. The weld quality is exceptional, while the process is fully automated and extremely efficient—typically 95%.

Our Electron Beam Welding services offer you the following advantages:

- **Versatility to weld thin foils to thick sections (greater than 2.5" depth of penetration)**
- **Multi-axis EB control**
- **High ratio of depth-to-width**
- **Maximum penetration with minimal distortion**
- **Exceptional weld strength**
- **Inert atmosphere (vacuum)**
- **High precision and repeatability with virtually 0% scrap**

Sciaky has been at the forefront of EB welding technology for decades and has used this time-tested technology to meet stringent military specifications on items such as airframes, landing gear, jet engines, guided missiles and vehicle parts.

EB Direct Manufacturing

Sciaky's exclusive Direct Manufacturing (DM) solution, which utilizes our state-of-the-art EB systems, is the only commercially-available, large-scale, fully-programmable means of achieving near-net shape parts. This unique technology can be provided as a service to produce functional prototypes and production parts at a fraction of the cost of traditional manufacturing methods. The process starts with a 3D model from a CAD program and utilizes Sciaky's fully-articulated, moving electron beam gun to deposit metal, layer by layer, until the part is ready for finish machining. Depending on the part being manufactured, deposition rates can range from 15 to 40 pounds of metal per hour.



Our EB Systems

Sciaky's 140,000 square foot facility houses the largest range of EB systems in the world. Our large and small chambers, with CNC-controlled multiple axes, handle some of the largest, most sophisticated EB applications in the industry. Plus, Sciaky's exclusive moving EB gun helps deliver unmatched precision and quality. Below is a partial list of our versatile machines and capabilities:

VX-300 Electron Beam Welder

Hard Vacuum (5×10^{-6} torr)
 42 kW - 60 kV Gun with Optics
 CNC Control - Joint Scanning and Digitizing System
 Work Envelope - 240" x 55" x 54"
 Chamber Interior Dimensions - 300" x 108" x 132"
 (Includes Wire feed system)

VX-68 NG1 Electron Beam Welder

Hard Vacuum (5×10^{-6} torr)
 42 kW - 60 kV Gun with Optics
 CNC Control - Joint Scanning and Digitizing System
 Work Envelope - 51" x 33" x 50"
 Chamber Interior Dimensions - 68" x 68" x 92"
 (Includes Wire feed system)

VX-68 Electron Beam Welder

Hard Vacuum (1×10^{-4} torr)
 42 kW - 60 kV Gun with Optics
 CNC Control - Joint Scanning and Digitizing System
 Work Envelope - 51" x 33" x 50"
 Chamber Interior Dimensions - 68" x 68" x 84"

VX-54 Electron Beam Welder

Hard Vacuum (1×10^{-4} torr)
 15 kW - 60 kV Gun
 CNC Control - Joint Scanning and Digitizing System
 Work Envelope - 37" x 24" x 20"
 Chamber Interior Dimensions - 54" x 50" x 54"

VX-36 Electron Beam Welder

Hard Vacuum (1×10^{-4} torr)
 8 kW - 60 kV Gun
 CNC Control - Joint Scanning and Digitizing System
 Work Envelope - 16" x 16" x 23"
 Chamber Interior Dimensions - 36" x 36" x 36"

AcuWeld 1000 Advanced Arc Welding System 5 axis GTAW / PAW - CNC controlled

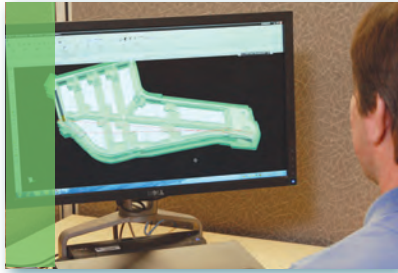


Examples of assemblies/components/parts welded using Sciaky's EB technology

Superconducting Cavities for High Energy Physics, Aircraft Engine Cases and Assemblies, Military Aircraft Components and Structures, Rock-bit Assemblies and Tank Tubes for Petroleum/Mining Diaphragm Assemblies for Power Generation, Transmission Gears for Automotive and Truck/Off-Highway.

Want to learn more? **Call us at 877-450-2518.**

Laboratory Testing and Demonstration Capabilities



The Sciaky process development laboratory is staffed with highly qualified personnel and the latest equipment to evaluate your specialized welding applications and feasibility programs. Our skilled technicians offer the latest welding processes, system design, weld joint design, metallurgical expertise, and programming skills. The process laboratory occupies about 4,000 square feet within the service facility. Additional testing, such as radiographic inspection, ultrasonic inspection, and scanning electron microscopy, can be accommodated.

Additional Contract Welding Services capabilities

- Work handling capacity up to 20 tons
- Laser interferometer
- Cleaning and painting facilities
- Tensile hardness and metallographic testing
- NDE – He leak checking, die penetrant inspection



Sciaky has the right solution, at the right price, to meet your needs. Ask us how.

877-450-2518

sciaky.com

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Direct Manufacturing
Electron Beam Welding
Advanced Arc Welding
Plasma Arc Welding
Resistance Welding
Contract Welding Services