

COMPANY

With over 100 years of combined experience in ceramic-to-metal sealing, Solid Sealing Technology is committed to serve the high-tech market place.

We understand that our success is dependent on the success of our dedicated workforce and our ability to stay abreast of the latest technology. Our mission is to be the best choice for joining advanced materials while providing value-added engineering and manufacturing services to our customers. SST is a team based working environment and we look to build win-win relationships with our customers, suppliers, and technology partners. SST is the global leader in the high reliability, hermetic sealing market place.

Whether you are looking for standard products or a partner to develop a new bonding technique

for the latest advanced materials, Solid Sealing Technology will be there to support you. SST can deliver "Solid" Customer Service, Rapid Response, On Target Quality, and Superior Customer Value.



Contact SST for standard products available for shipment from stock. Visit our online catalog at www.solidsealing.com.



SST SOLID SEALING TECHNOLOGY, INC.

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SST

SOLID SEALING TECHNOLOGY, INC.

Advanced Material Joining

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MARKETS

Solid Sealing Technology provides high reliability products into many high tech market areas. Our products and unique capabilities enable us to service large OEMs, Distributors, and Research and Development Groups.

- Semiconductor & Analytical Equipment
- Thin Film Coatings
- Industrial LASERS
- Homeland Security & Homeland Defense
 - Radiation Detectors
 - Chemical Detectors (sniffers)
 - High Power X-ray Systems
- Medical
 - MRI
 - X-ray
- Nanotechnology
- Aerospace & Defense
- Power
 - Distribution & Generation
 - Superconductivity
 - Fuel Cells/Alternate Fuels
- Telecommunications
- High Energy Physics
- Downhole Oil

PRODUCTS

The unique capabilities at Solid Sealing Technology provide engineered, hermetic seals that can satisfy a wide range of operating conditions such as: temperature ranges from liquid helium to 450°C, voltages exceeding 200 KV, currents greater than 1000 amps, non-magnetic materials, and UHV to high pressure. SST offers both standard products in stock for immediate shipment as well as custom solutions for your demanding joining requirements.

- Vacuum Feedthroughs and Connectors
- High Voltage Bushings
- Sapphire, Quartz, and Extended Range Viewports
- X-Ray Tubes
- Vacuum Breaks and Multi-layer Stacks
- Thermocouple Feedthroughs
- Coaxial Connectors
- Beamline Feedthroughs and Injector Tubes
- Small Vacuum Vessels and Hermetic Packages
- Metalized Ceramics
- Specialty Metal to Metal Brazed Assemblies
- High Pressure Feedthroughs

www.solidsealing.com

PROCESS

Design and Specify

SST understands that the most critical phase in manufacturing engineered products is the ability to define and specify the customer's requirements. Our "Solid Team" of engineers has the depth and knowledge to design products of high quality standards, whether it be your first prototype piece or volume production. SST uses SolidWorks™ 3-D mechanical design software to insure optimum design fit-ups and to support higher level assembly engineering and design.

Material Procurement

Our materials and components are sourced from world class suppliers. Detailed documentation and specifications ensure that we receive incoming goods that will satisfy your critical requirements.

Critical Handling

SST's cleaning system has the automation and process controls to achieve cleanliness consistency from batch to batch. We have standardized on a specialty aqueous cleaner followed by a cascade D.I. water rinse to ensure top quality results. The same process can be used for precision cleaning of metals, ceramics, and glass and is suitable for UHV environments.

Methods of Manufacturing

At SST we utilize the most advanced manufacturing techniques to produce high reliability assemblies. These include metalizing and plating of ceramics, active metal joining, vacuum and hydrogen brazing, glass ceramic sealing, TIG welding, spot welding, and machining and mechanical assembly.

Special Test

SST has the tools to verify product performance and reliability. All products are 100% leak tested and inspected before they are shipped to our customers.

The leak test is performed with a "dry" helium mass spectrometer and parts are guaranteed to have a leak rate of less than 1×10^{-10} atm.cc/sec. Other equipment and tests include:

- State-of-the-art x-ray fluorescence thickness tester for verification of metalizing and plating thickness.
- Megohm resistance tester (50-1000 V) for pin-pin, pin-ground tests.
- DC HiPot tester to 75,000 volts.
- Thermal cycle and other special requirements can be performed to customer's specifications.

