General Product Specifications

Solid Sealing Technology (SST) designs and manufactures essential electrical components for today's high-tech world. Our creative material-joining technologies bond ceramics and glass to metal to offer innovative sealing solutions in the form of hermetic feedthroughs, connectors, and custom assemblies.

SST is an Original Equipment Manufacturer. We feel that it is important for our customers to know where their critical components are built. Every hermetic assembly listed in our catalog is proudly made by SST in Watervliet, NY. The (mating) industry-standard air-side plugs have been carefully selected and sourced to work effectively with our manufactured assemblies.

Vacuum Rating

All hermetic parts, as well as all vacuum-rated plugs and accessories, are rated for high vacuum service.

Materials of Construction

All materials are UHV compatible.

- *Ceramic Components* – fully sintered and non-porous alumina ceramic, alumina content >93%
- *Glass Ceramics* – aluminosilicate melted and re-crystallized
- *Metal Components* – Ultrasonically cleaned and degreased with no high-vapor pressure constituents
- *Braze Alloys* – Vacuum-grade braze alloys with no high-vapor pressure constituents

Leak Rate

All hermetic parts are leak-tested on a high-sensitivity dry helium mass spectrometer. SST guarantees a leak rate of less than $1x10^{-10}$ atm.cc/sec He.

Voltage Ratings

Voltage ratings are as specified in the product specifications or on assembly drawings (performance applies when mated to the appropriate mating plug, where applicable). Voltage rating is a DC hi-pot, 1 minute withstand with the part properly mounted on a system with a pressure less than $1x10^{-4}$ torr. **(Note: weldable feedthroughs are designed to have the adapter welded on the vacuum side of flanges or chambers.)**

Current Ratings

Listed value indicates a current that will not cause the assembly to have >60°C temperature-rise from room temperature. This value should be used as a reference due to the many factors associated with connections, cabling, mounting, and operating environment.

Bakeout Temperature

The maximum temperature listed in the product specifications is an acceptable temperature to perform a typical bakeout of the product or system to accelerate outgassing and improve vacuum performance. Customers should contact SST if their application requires extended high-temperature use or significant temperature cycling.

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Pressure

Unless otherwise specified, the listed pressure is the maximum pressure to which the part should be subjected at room temperature. If pressure performance is not included on the sales drawing, or if you would like to request application-specific recommendations, please contact SST. SST has in-house testing capability up to 30KSI.

Sealing Technologies

SST utilizes thick-film metalizing, active metal sealing, brazing, glass-ceramic sealing, glass sealing, TIG welding, and laser welding in the manufacturing process of our standard products.

Refer to https://www.solidsealing.com/technology/manufacturing-processes/ for additional information.

Other Notes

- All products are shipped cleaned and packaged for high vacuum use. Contact SST if your application requires specific cleaning requirements.
- See RoHS and REACH compliance statement on website at: https://www.solidsealing.com/resources/
- SST is compliant with Conflict Minerals requirements
- Standard C of C available upon request
- Contact SST Sales for any other custom certifications or requirements
- See https://www.solidsealing.com/resources/ for part assembly and welding instructions