Hermetically Sealed Connectors and Highly Engineered Interconnection Products
Seek, Solve, Serve
Two great brands, one company

AMETEK Interconnect Technologies has brought the skills and capabilities of Hermetic Seal Corporation and Sealtron Inc under a single management. Together these two historic brands have the engineering skills and the production capacity to solve any high reliability interconnection problem, utilizing glass-to-metal-sealing or molding technology using PEEK (polyether ether ketone) polymers and Viton® fluoropolymer elastomers. AMETEK Interconnect Technologies is committed to developing these technologies into new products and markets.

Military-grade circular and rectangular connectors, high-temperature, high-pressure bulkheads, highly engineered hermetic, multi-pin interconnection headers and single feed thrus.
Highly Engineered Custom Hermetic Interconnects

AMETEK Interconnect utilizes specialty materials, manufactured to exacting tolerances to create products with exceptional performance in demanding applications, such as surgical and scientific instruments and motion, pressure and temperature sensors for industrial, energy and flight control, military and space system applications.

AMETEK Interconnect is an industry leader in the use of specialty alloys. It aims to provide its customers with products that meet exacting requirements. High performance glass-to-metal-seals require experience and knowledge of such specialty metals as Inconel®, Monel® MP35N and Hastelloy® nickel alloys, Nitronic stainless steel, and Paliney palladium alloys, and alloys for Type K & N thermocouple applications.

AMETEK Interconnect has manufactured very specialized products that, in the completed application, have achieved fine leak rates as low as $1 \times 10^{-13}$ cc/second helium at 1 atmosphere. AMETEK’s finished products routinely meet $1 \times 10^{-9}$ cc/second leak rates, exceeding all current military connector specifications requirements.
Hermetically Sealed Military-grade Circular and Rectangular Connectors

Sealtron specializes in the manufacture of a full range of qualified military-grade circular connectors. Its world-class factory utilizes lean manufacturing methods. Sealtron manages customer inventories and offers the most competitive lead times in the world.

Hermetic Seal, while qualified to some of the same specifications as Sealtron, focuses more on providing customized circular connectors and rectangular configurations of all types, including those with socket contacts.

▲ Qualified Products Listed:
- ✔ MIL-DTL-38999 Series I, II & III (Sealtron & HSC)
- ✔ MIL-DTL-26482 Series I & II (Sealtron & HSC)
- ✔ MIL-DTL-83723 Series III Types B & T (Sealtron & HSC)
- ✔ MIL-DTL-26500 (HSC)
Other Qualifications:
✔ EN2997 Class Y & YE (Sealtron)
✔ ESC 10, Class YE (Sealtron)

Commercial Equivalents to:
✔ MIL-DTL-5015
✔ MIL-DTL-24308
✔ MIL-DTL-83513
✔ MIL-C-28748
✔ NAS 1599
✔ MIL-C-81703
✔ MIL-DTL-38999 Series IV
✔ MIL-C-81511
✔ MIL-C-24217
✔ MIL-C-24231
✔ MIL-C-22249
✔ MIL-C-19572
✔ MIL-C-22539
✔ ESC 11, Class YE
✔ MIL-C-25955
AMETEK’s Interconnect businesses specialize in the customizing of any of their products to meet specific project needs with in-house machining, glass pre-form manufacturing and an extensive testing capability. Customization may take the form of but is not limited to:

- Alternate body diameters and lengths
- Alternate pin diameters, lengths and termination types
- Specialty materials and finishes
- Alternate insert arrangements
  - Any combination of pin diameters to meet needs for both power and signal throughput
- Socket contacts
- Higher Dielectric Withstanding Voltage rating
- Alternate O-ring materials and groove configurations suitable for custom mounting needs

- Guide pins for blind mating applications
- Threads on housings to allow attachment of back-shells or next level assemblies
- Threaded inserts or threaded bushings in flange mounting holes
- Alternate glass materials to withstand special circumstances, such as:
  - Stable insulation resistance values at high temperatures
  - Temperatures up to 842°F (450°C) at lower pressures
  - Extreme levels of thermal cycling (-85°F to +842°F or -65°C to +450°C) at lower pressures
- Precious metal plated surfaces on the housing to improve ground connection from the housing to next level assembly to reduce the impact of EMI conditions
High-Pressure Bulkheads and Interconnects for the Oil and Gas Industry

*High-Temperature, High-Pressure (HTHP) Bulkheads, Single Pin Feed Thrus, Boots and Accessories; Glass-To-Metal Sealed (GTMS) and Thermoplastic Products*

Hermetic Seal Corp (HSC) is expert at the design and manufacture of high-pressure glass-to-metal sealed electrical bulkheads for the down hole oil and gas drilling and logging instrument market and the upstream sensor market. HSC’s products are used in Wire-line and MWD tools and well completions by the world’s leading oil field services companies. Its products also are used in geophysical instruments and systems.

HSC’s GTMS bulkheads are designed to function in the severe operating conditions commonly encountered in oil and gas exploration. Its highest performing products have reached 37,000 PSI at 500°F (260°C).

HSC’s ruggedized thermoplastic encapsulated GTMS bulkheads are designed to meet the same high pressures and temperatures and to be resilient to the worst shock and vibration found in oil and gas industry.

HSC also makes a range of single feed thrus in thermoplastic and can provide the mating socket and Viton boot kits.
Military-grade circular and rectangular connectors, high-temperature, high-pressure bulkheads, highly engineered hermetic multi-pin interconnection headers and single feed thugs.

Facility size, manufacturing equipment, and test capabilities:

- **103,000 sq. ft. of office and manufacturing space across three facilities**
- **Design expertise and modeling capabilities**
  - Mechanical and electrical
- **New Product Development Team**
- **Fast turn prototyping**
- **Responsive Sales and Customer Service representatives**
- **Engineering support (Solidworks)**
- **High-precision machining facilities experienced in the manufacture of shells, housings and electrodes in high performance alloys**
- **High- and low-temperature brazing**
- **Glass-to-metal sealing**
- **In-house cleaning**
- **Precious metal plating operations**
- **Secondary assembly operations**
- **Testing to**
  - Pressures of 40,000 PSI
  - Pressure at temperature to 35,000 PSI @ 500°F (260°C)
  - Mil Standard or specific customer requirements
- **ISO 9001 registered at all facilities**
- **AS9100 registered at all facilities**