



CERTIFICATIONS AND STANDARDS

- ITAR-DDTC
- DFARS
- NIST
- ISO-9001:2015
- ISO-14001:2015
- Traceability and military certifications available
- IPC-620

ORDERING AND DELIVERY

- Engineered and manufactured in the USA
- Made to order in 4 to 6 weeks
- Expedited options available
- Ongoing technical support

Glove Box

Hermetically Sealed Feedthroughs and Connectors

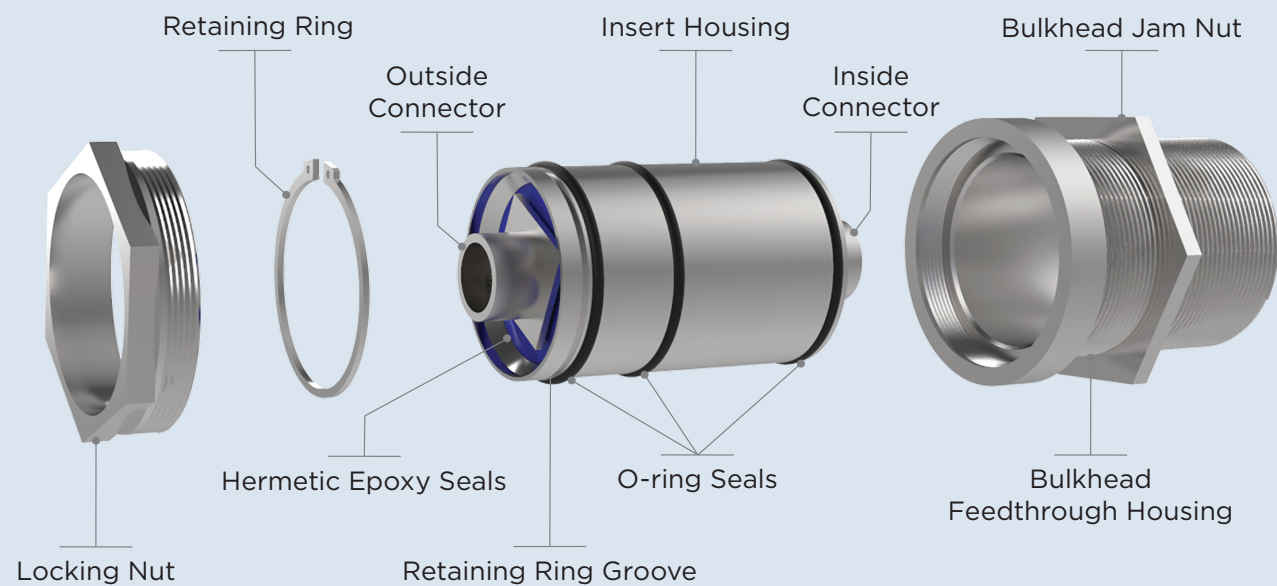
Douglas Electrical provides reliable epoxy-based sealing solutions for nuclear, medical and laboratory glove boxes—bringing power, signal and data into critical environments while protecting operators from hazardous conditions or substances. Our sealing technologies are hermetically, electrically and optically tested for long-term performance in applications involving inert atmosphere containment and hazardous material handling. All of our feedthroughs are engineered and manufactured in the United States.

TECHNICAL ADVANTAGES

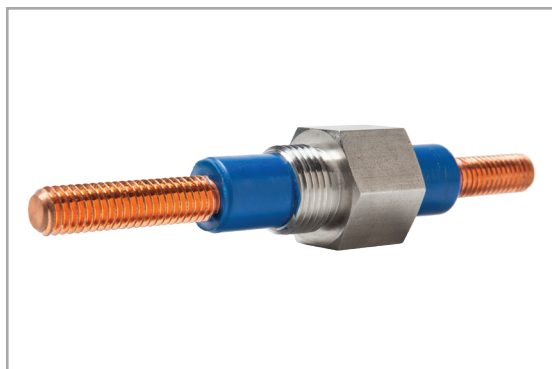
- 100% QC tested for hermetic, electrical and optical performance
- Epoxy seals withstand hot nuclear environments
- Leak rates less than 1×10^{-9} cc He/sec
- Seals any cable—signal, power, high-frequency coaxial, thermocouple, USB and Ethernet
- Seals any connector—Mil-C, circular plastic, sub-D, coaxial, waterproof, thermocouple, high-current and high-voltage
- Lab feedthroughs custom-designed for LANL, LLNL, PNNL, SRNL, Oak Ridge, Ames, INL, SLAC, Brookhaven, AECL, Fermi Labs and more

GLOVE BOX SOLUTIONS

PUSHTHROUGH ASSEMBLIES



- Housing and feedthroughs can be separated allowing for replacement connectors and cables to be installed without breaking hermetic chamber seal.
- Avoid contaminating the outside environment
- Enable chamber maintenance and upgrades
- Quick installation
- Feedthrough options include PotCon, DuctorSeal and OptiSeal
- Bulkhead housing options include weld-in, NPT, bolt on flange and custom



STUDSEAL™ HERMETIC FEEDTHROUGH

- Ideal for high-current/ampere applications
- Transfers power in and out of sealed environments
- Up to 1,000 A and 15,000 VAC
- Easy connection points with simple ring terminals
- Custom stud electrical connections available



CONVENIENCE FEEDTHROUGH

- Easy-to-implement feedthroughs for 120 V power, available in all common NEMA connector insert arrangements including NEMA 5-15 and 5-20
- Other standard power connectors available including 240 V options
- DuctorSeal®, PotCon® and cable-to-connector configurations



POTCON® HERMETIC CONNECTOR FEEDTHROUGH

- Seals any connector required by your application, including high-voltage, high-current, high-speed and thermocouple connectors
- Able to support all common data connectors including D-sub, Cat6, firewire, USB 2.0 and 3.0
- High frequency solutions up to 67 GHz
- Easy mating and unmating at bulkhead interface
- Able to directly cross-reference historic design with drop-in replacements
- Various configurations, including connector-to-connector and connector-to-wire



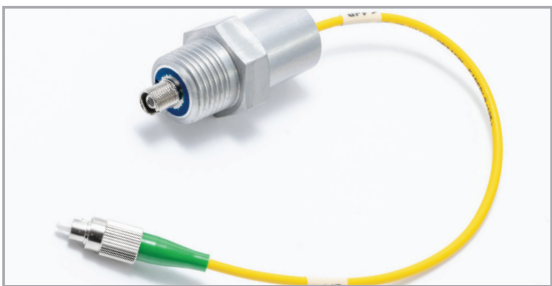
CABLE HARNESS

- Suitable for low-outgassing vacuum applications
- Assembled by IPC-620 Class III certified operators
- Value-added mechanical assembly available upon request
- Fully connectorized “plug-and-play” functionality
- Manufactured using automated wire cutters, crimpers and electrical test equipment ensuring quality and consistency



DUCTORSEAL® WIRE AND CABLE FEEDTHROUGHS

- Uses the same wire and insulation types already approved for use elsewhere in your system
- High-voltage cables up to 30,000 V
- NPT, face seal fittings, SAE, QF/KF flange and custom options available
- Full cable harness options with connectorization available



OPTICAL FIBER FEEDTHROUGH

- Custom bifurcated fiber assemblies with a combination of optical and copper conductors for complex camera systems
- Can seal any fiber optic cable including: standard patch cables, singlemode, multimode, fused glass rod, plastic fiber, ribbon fiber solutions and armored cables
- NPT and face seal fittings



CIRCUITSEAL™ HERMETIC CIRCUIT BOARD SEALER

- Flex, rigid, hybrid and flat flex cable (FFC) styles
- Ideal for applications with space or weight constraints
- Allows for easy use of active and passive signal conditioning at the glove box bulkhead



Douglas Electrical Components

Solving Your Wire and Connector Sealing Challenges

For 75 years, Douglas Electrical has provided custom solutions to meet the demands of glove boxes, medical equipment, semiconductor manufacturing, space simulation, military, vacuum systems, energy—and more. From pin headers and pogo-pin solutions, to cooling feedthroughs and electronic encapsulation, we look for new opportunities to push our boundaries even further to meet your unique application needs.

Visit www.dougaselectrical.com to learn more.

