



AMETEK[®]
SCP[®]

**High-performance
Connectors for
Extreme
Temperature and
Pressure
Applications**

FIBER OPTIC FEEDTHRU (FOFT)



What is FOFT?

FOFT

is a high-performance fiber optic feedthru.

Its unique process produces a robust hermetic seal between an optical fiber and a metal super alloy with a proprietary seal glass. A very durable compression seal results, which can withstand extreme temperature and pressure conditions. The combination of materials used is also highly resistant to corrosion and chemical attack. The design can be made compatible with standard high-pressure fittings or customized to fit virtually any customer's interface requirements. No other optical fiber based feedthru in the industry can offer the same combination of characteristics and performance for harsh service conditions.

Features:

- ✓ Rugged high-performance design
- ✓ Extreme high-pressure/high-temperature applications
- ✓ Designed to survive in harsh environments
- ✓ Constructed of all low-out gassing materials
- ✓ Convenient interface with standard 3/8" high-pressure fittings
- ✓ Configurable with standard single-mode and multi-mode fibers
- ✓ Optical fiber is continuous to any desired length (standard is one meter)
- ✓ Optional end terminations: bare, stripped, SMA, ST, FC, APC and custom ferrules

Applications:

Down Hole Tools: Optical fiber/glass/metal feedthru for high pressure/temperature oil field service

High-Pressure/Temperature Optical Detector Flow Cell:

PVT instrumentation for oil platforms

Submarines: Pressure hull penetrators, compartment bulkhead connectors and dry mate systems

FOFT Configurations:

FOFT Series 1000
Optical Detector Flow Cell
Miniature FOFT
Four Fiber FOFT
Hybrid Copper FOFT



Performance:

Vacuum Feedthru Interconnect and Pigtails: 10^{-8} torr

Pressure Rating: Up to 30,000 psi continuous

Temperature Rating: Up to 300°C

Insertion Loss: ≤ 0.5 to 2.0 dB depending on fiber

Physical Data of Standard Interconnects:

Vacuum

Length: Customer specified

Interface: Conflat (CF), Del Seal™, ANSI-ISO, ISO KF

Material: Stainless steel

Pressure

Length: Customer specified

Diameter: 1/4" and 3/8" body style

Material: Stainless steel, Super Duplex, Monel or Inconel

Physical Data of Standard Pigtails:

Standard Length: 1 meter

Fiber Options: Single-mode, multi-mode and polarization maintaining

End Termination Interfaces (optional): SMA, ST, FC, APC and custom ferrules



AMETEK SCP is a leader in custom electrical and optical connectors, cable assemblies and hull penetrators that are widely found on the U.S. submarine fleet as well as many other of the world's navies. AMETEK SCP leverages its extensive knowledge of submarine systems and expertise in electrical connector and data transmission technologies to provide electrical interconnect solutions for a wide range of extreme environments, including undersea, oil field, nuclear and aerospace.

AMETEK SCP is a business unit of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of more than \$2.5 billion. For additional information, contact AMETEK SCP, 52 Airport Road, Westerly, RI, 02891 U.S.A. Telephone: +1 401-596-6658. Fax: +1 401-596-8597.

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