



OZ Optics

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VACUUM PRESSURE FEEDTHROUGH – FIBER OPTIC

FEATURES:

- Vacuum Seal
- Fiber Can Be Protected in 900µm Furcating Tubing or up to 1mm OD Bare Fiber for Penetrating Style
- Rugged Design
- Compact
- Low Transmission Loss
- Easy Installation
- Wide Range of Connector Types
- Single and Four Fiber Channel Penetrating Version
- Receptacle Type, Penetrating Type
- **LOW COST!**

SPECIFICATIONS:

- **Gas leak rate:** less than 1×10^{-6} scc/sec (tested w/100 psig He)
- **Transmission loss:** <0.3dB for penetrating
1dB typical for receptacle style
- **Hydrostatic pressure test rating:** Up to 4000 psi
- **Available sealants:** Neoprene, Teflon and Viton
- **Fiber Sizes:** 4-1000 micron core/cladding diameters
- **Weight:** Less than 100 grams
- **Temperature Range:** -35°C to +90°C for receptacle type
(Excluding Fiber)
Penetrating type is dependent on the sealant material
Neoprene: -40°C to +90°C
Teflon: -180°C to +230°C
Viton: -20°C to +230°C

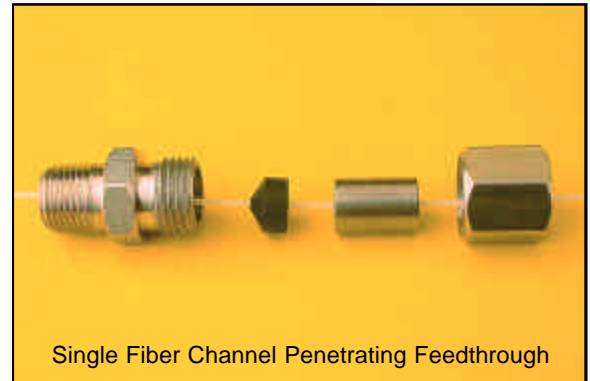
DESCRIPTION:

Fiber optic vacuum feedthroughs provide a simple way to use optical fibers with vacuum and pressure chambers. They are available in two versions - a penetrating feedthrough fiber version and a receptacle style version.

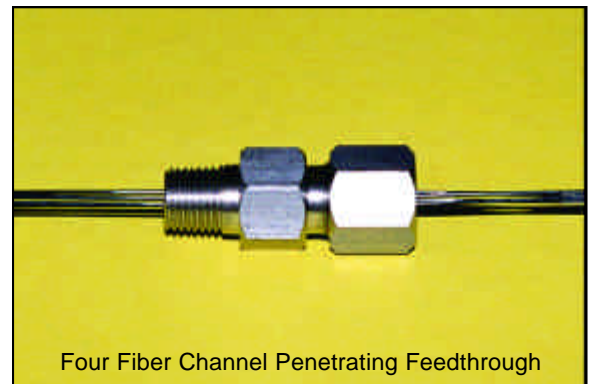
Penetrating versions have the fibers directly installed. One or four fiber versions are available. The fibers are installed in the factory. The fibers pass through a soft sealant material which is compressed by the compressive endcap and internal squeezer of the feedthrough. This constricts the sealant material surrounding the fiber, sealing the hole. A variety of sealant materials can be used. Neoprene is recommended for most applications, while Viton is recommended for high temperature applications, and Teflon for cryogenic applications.

1/4" NPT thread vacuum feedthrough is our standard. 1/8" NPT thread is also available for single channel assemblies with no connectors.

The **receptacle** style version contains a short fiber stub, which is sealed using a vacuum rated glue. An O-ring is used between the chamber wall and the flange to seal the system.



Single Fiber Channel Penetrating Feedthrough



Four Fiber Channel Penetrating Feedthrough



Receptacle Style Feedthrough

ORDERING INFORMATION:

Penetrating Feedthrough Type: **VAC-0A-S-FMJ-XY-W-a/b-1-L**

Feedthrough Type: 1 for Single Channel
4 for Four Fiber Channel

Sealant Material: N for Neoprene
T for Teflon
V for Viton

Fiber Type: M for Multimode
S for Singlemode
P for Polarization Maintaining
QM for High Power Multimode
QS for High Power Singlemode
QP for High Power PM

Connector Code: 3S = Super NTT-FC/PC
3U = Ultra NTT-FC/PC
3A = Angled NTT-FC/PC
8 = AT&T-ST
8S = Super AT&T-ST
8U = Ultra AT&T-ST
SC = SC
SCU = Ultra SC

See Table 6 of the Standard Tables for other connectors.

Fiber Length, in meters, on each side of the feedthrough.

Example: To order 1 meter of fiber at the input and 7 meters at the output, replace the L with 1,7

Fiber Core/Cladding in Microns:
9/125 for 1300/1550nm SM fiber

See tables 1 to 5 of the Standard Tables for other standard fiber sizes.

Wavelength: Specify in nanometers
(Example: 633 for 633nm)

For multimode fibers specify either UVVIS for ultraviolet/visible wavelengths or IRVIS for visible/infrared wavelengths

Receptacle Type: **VAC-3S3S-W-a/b-F**

Wavelength: Specify in nanometers
(Example: 1550 for 1550nm)

Fiber Type: M for Multimode
S for Singlemode

Core/Cladding Diameter, in microns

