

A complete range of  
**Pressure and Vacuum  
Sealing Assemblies**

Feedthrough seal fittings for:

- Sensors
- Probes
- Electrodes
- Wires
- Wire bundles
- Optical fibers

 **Conax**<sup>™</sup>  
TECHNOLOGIES

Ideas. Solutions. Success.

+1 800 223 2389 | [ConaxTechnologies.com](http://ConaxTechnologies.com)

# Solutions for a broad range of applications and industries

Conax Technologies manufactures a complete range of pressure and vacuum seal fitting assemblies to carry probes, sensors, wires, electrodes and other elements, satisfying diverse application requirements across a broad spectrum of industries.

The plastic deformation of a sealant material within a fixed housing is the fundamental concept of the Conax sealing technology. The application of this concept, with a thorough understanding of the behavior of sealant materials, has resulted in a range of assemblies with unequalled adaptability.

There are many ranges of pressure and vacuum seal fittings and a number of assemblies that are configured for specific applications, (i.e., for bearing sensors, multiple wires, optical fiber feedthroughs).

The five standard “soft” sealant materials used in Conax seal fittings are Neoprene, Viton, PTFE, Lava and Grafoil. When an element (e.g., probe, sensor, electrode) is inserted in a fitting and the cap is torqued to the recommended setting, the torque on the cap translates an axial force on the follower which compresses or crushes the sealant that is contained within the body, thus creating a seal on the element. Tension in the body acts as a spring to maintain compression; friction between the sealant and the element restrains the element from moving under pressure or vacuum.

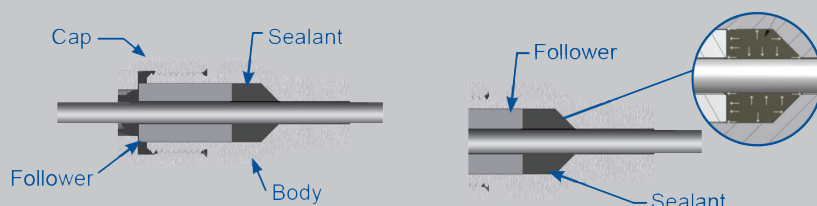
Conax seal fitting assemblies can be specified for use over a temperature range of -400°F (-240°C) to 1600°F (+870°C) and for pressures from vacuum to 35,000 PSI (2400 bar), according to the type and size of fitting and the sealant material selected.

## Fitting assemblies and applications

**Fittings for single sensors and probes from 0.020" (0.5mm) to 3.0" (76mm) dia.—PG seal fittings**



Probe seal fittings are excellent for applications such as single, sheathed thermocouples, resistance thermometers, thermistor probes and other types of sensors. They are easily assembled by simply inserting the sensor element and torquing the cap.



**Multiple sensor and probe seal fittings for elements 0.020" (0.5mm) to 0.125" (3.2mm) dia.—MHC seal fittings**



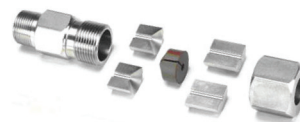
MHC seal fittings enable multiple tubes, probes thermocouples, RTDs, or other sensors to pass through a single fitting. Each probe is electrically isolated and its immersion length is adjustable. Elements may be adjusted, removed and replaced individually.

**Multiple sensor and probe seal fittings, for non-standard sizes and configurations—MHM seal fittings**



MHM seal fittings can often be used when other types of probe fittings are not suitable. They can be customized to accommodate nonstandard sizes and a mixture of element sizes, for special hole patterns and for a higher density of elements than can be accommodated by other types of sealing assemblies. Most fittings are shown in ‘cut-away’ form to illustrate internal components and assembly.

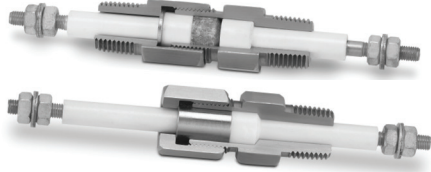
**Single and multiple sensor fittings with split internal components—PGS, SPGA & DSPGA fittings**



These fittings are used when the elements to be sealed can pass through the fitting body but not through the internal components. For example, their process ends may be of a larger diameter than at the sealing point, there may be connectors to pass through the fitting, elements may be long and difficult to handle, or there are other installation constraints.

PGS fittings are for a single element and SPG fittings are for multiple elements, their internal components have a single split. DSPG fittings are for multiple elements and have internal components with a double split.

**Single electrode power fittings—with ceramic insulators and a ‘soft’ sealant—EG fittings; with a single-piece, PTFE, combined insulator/sealant—EGT fittings**



These single conductor sealing fittings are used for high voltage and/or high current feedthroughs to vacuum chambers, autoclaves, transformers, motors, reactor vessels and environmental chambers. EG fittings are available with a choice of sealants and have ceramic insulators. Max. rating 2kV/400A. EGT fittings employ a single, PTFE, combined insulator/sealant component to surround the electrode. Max. rating 8kV/525A. Conductors—copper, nickel or stainless steel. We offer a Peek sealant version for higher pressures.

**Insulated wire sealing—PL fittings**



These power lead fittings have Kapton, insulated copper or thermocouple wire in a number of wire sizes. They are used to feedthrough power leads to autoclaves and sterilizers, transformers, motors and heaters. Wires are individually marked at both ends and are easily installed or replaced. Max. rating 600Vac/850Vdc @ 55A.

**Bare wire sealing and insulated wire sealing with 24 AWG PTFE insulated wire—TG fittings**



TG fittings seal multiple bare wires in a range of wire sizes. They can be used for solid bare wire transducers such as thermocouples, strain gauges, thermistors, resistance element leads and low voltage, low current supplies and signal wires to instrumentation. The same fittings can also be specified as complete assemblies, ready for installation, with 24 AWG size PTFE insulated thermocouple material or copper wires. Applications for this variant include sealing of wires exiting compressor bearing housings, pressure vessels and instruments.

**Bearing sensor wire seals—BSWS**

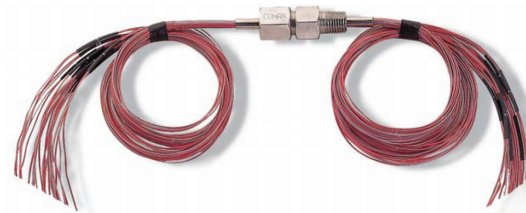


Bearing sensor wire sealing assemblies efficiently seal directly onto the insulated leads of an embedded temperature sensor in an oil filled bearing housing to prevent oil migrating along the leads. They are suitable for motors, turbines, pumps and journal bearing pedestals.

**Pressure and vacuum seal fitting assemblies from Conax Technologies...**

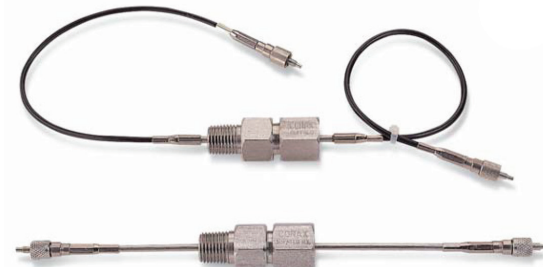
- Are used when probes and other elements must pass through a pressure or environmental boundary.
- Maintain the integrity of the seal at the point of feedthrough penetration.
- Employ ‘soft’ sealant technology so that probes can be adjusted, removed and replaced yet are not deformed during installation.
- Satisfy pressure, vacuum and environmental sealing applications in many industries—from process control and power generation to semiconductor fabrication and steel production.
- Frequently reduce the overall cost of ownership, when compared with other sealing techniques, through reductions in installation time, downtime and the cost of replacement parts.
- Unlike many conventional compression fittings, can carry multiple elements (e.g., probes, wires, electrodes) in a single fitting assembly.

**High density, mechanically sealed, wire feedthroughs using single or multiple probe fittings—HD**



These feedthrough assemblies comprise a high-density, wire feedthrough mounted in a seal fitting. A PTFE-lined, stainless steel tube is swaged over 12, 24, 40 or 60 solid, PTFE-coated, copper and/or thermocouple material wires to make the high-density continuous wire feedthrough for thermocouples, RTDs and low voltage instrumentation.

**Fiber Optic seal assemblies for sealing on optical fiber cables—type FSA**




FSA optical fiber sealing assemblies enable a range of sizes of fiber optic cable to pass through environmental boundaries. Fibers are housed in individual, protective stainless steel tube seals. These may be supplied as a complete integral assembly with connectors, in one of the standard pressure and vacuum seal fittings.

# Conax has the ideas and solutions to help you succeed

Conax Technologies is a global leader in the design and manufacture of temperature sensors, compression seal fittings, and cable and harness assemblies for a broad range of industries and applications. For over 65 years, Conax customers have relied on our expertise to provide both standard products and custom-designed solutions.

Innovative ideas are the result of collaboration. So we take the time to understand your unique challenges and develop solutions that help you—and your customers—succeed. Our commitment to delivering high-quality, leading-edge products on time and at a competitive cost makes us your indispensable partner.

**For more information, visit [ConaxTechnologies.com](https://www.conaxtechnologies.com).**

2300 Walden Avenue, Buffalo, New York 14225 US  
+1 800 223 2389 (P) | +1 716 684 7433 (F)  
[Conax@ConaxTechnologies.com](mailto:Conax@ConaxTechnologies.com)  Made in U.S.A.  
Bulletin 6100, Rev C' ©2021 Conax Technologies 6/21

  
**Conax**<sup>™</sup>  
TECHNOLOGIES  
Ideas. Solutions. Success.