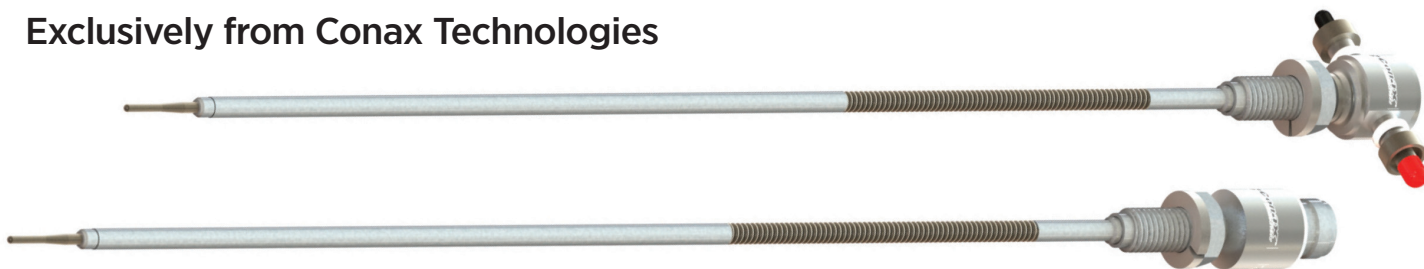


# Enhanced Exhaust Gas Thermocouples

Exclusively from Conax Technologies



## Product Features and Benefits

- Superior design
- Superior quality
- Hermetically sealed for high accuracy and long life
- Simple, quick installation saves time
- Parts are usually in stock to provide quick turnaround time
- Interchangeable with OEM equipment

Conax Technologies has designed an innovative and unique approach to exhaust gas temperature sensors. These sensors address the problem of having sensor tips break off prematurely in service. This common failure occurs because the thermal expansion difference between the radiation shields and the sensors causes the sensors to vibrate appreciably within the radiation shield. The Conax solution is the addition of a high temperature compression spring built into the sensor sheaths so that through the spring's oscillating characteristics in dealing with stress and strain, the spring damps the vibration and keeps the temperature sensor tip stable within the radiation shield by ensuring a continuity of contact between the stop on the sheath and the seat of the radiation shield.

Conax Technologies' hermetically designed exhaust gas thermocouples have been field tested and proved to be more reliable than other suppliers' products for Frame turbine applications. This 100% hermetic thermocouple also has the latest more compatible materials to help eliminate open circuits during start up, thus eliminating false turbine trips and inconvenient down times. Our new exhaust gas thermocouple has been subjected to rigorous qualification tests including vibration testing to 10 million cycles of simulated on turbine operation, thermal cycling the measuring tip 20,000 times between 1220°F (660°C) and room temperature, and thermal cycling the hermetic terminal head 600 times between 700°F and -65°F (370°C and -54°C), passing all OEM qualification tests and meeting

all design specifications required by the OEM. Our unit is manufactured with an all welded construction that is superior to brazing in prolonging the life of the thermocouple. This thermocouple is a direct replacement for all other exhaust gas thermocouples on Frame turbines, whether you are replacing or upgrading your equipment. They can be purchased directly from Conax Technologies to lower your total costs.

## Precise Installation

Conax exhaust gas thermocouples are designed to ensure proper installation every time. The stop at the sensing end of the thermocouple seats firmly into the radiation shield allowing the junction to be in the proper position, giving you the optimum response time and accurate temperature measurement.

The bushing is also fabricated of material that reduces the possibility of seizure in the radiation shield. The cold end features a ceramic insulated junction box using two different sized studs or a keyed 2-pin circular connector to guarantee proper installation every time. It also enables a convenient, stress-free orientation of the thermocouple junction box as it relates to the mating cable.

## Technical Sales Support

Whether you are upgrading or replacing your exhaust thermocouples, Conax Technologies' Technical Team can help you solve your problems.

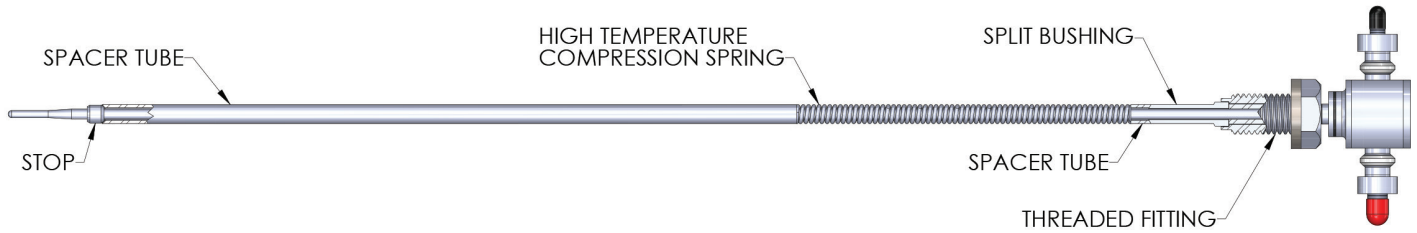
Call our inside Sales Team at **+1 716 684 4500** and you'll get the support you need to make the right choices.



Ideas. Solutions. Success.

## Dimensional Features

## Conax Enhanced Hermetic Exhaust Gas Thermocouple



## Specifications

### Calibration:

- Type K, Chromel Alumel®
- ± 0.4% accuracy (special limits of error)
- Meets the requirements of ASTM E585 and ASTM E608

### Insulation Resistance:

- $1 \times 10^9$  ohms @ 500 VDC

### Time Response:

- 2.9 seconds

### Hermetic Seal:

- $1 \times 10^{-6}$  ssc/sec He for the entire thermocouple

### Sheath Diameter:

- 0.125" (3.2mm)

### Environmental Ranges:

- -20° to 700°F (-29° to 371°C) at the termination
- -20° to 392°F (-29° to 200°C) for the cable
- 100% humidity for the entire thermocouple

### Applications:

- Frame turbines

### Related Products:

- Wheelspace & Exhaust Gas Thermocouple—Model 351A3488 Bulletin 6052
- Exhaust Gas Thermocouple—Model 372A2221 Bulletin 6069
- Bearing Sensors: Bulletin 6035
- Hermetic Wheelspace Thermocouples—Model 361A2289 Bulletin 6053
- Bearing Sensor Wire Seals: Catalog 5001
- RTDs/Thermocouples: Bulletin 6002
- Frame 5, 6, 7 Retrofit Exhaust Gas Sensors Bulletin 6064

### Also Available from Conax Technologies

- Radiation shields—Model 362A1344Pxxx
- Mating cables—Model 361A2327Pxxx
- 2 pin circular connector sensors—Model 362A3345Pxxx

For more information about Conax Technologies, visit [conaxtechnologies.com](http://conaxtechnologies.com).

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