

BCE APPLICATION NOTE

Compression Fitting Feedthrough: A Versatile Solution for Tube and Thermocouple Feedthroughs

BACKGROUND

Vacuum chambers often require tube and thermocouple feedthroughs that allow for specific distances during installation. To address this need, we offer a compression fitting solution, empowering our customers with control over the distance in their installations. Through extensive experimentation, we have designed a feedthrough that enables the maximum quantity of 1/8" compression fittings in a standard KF40 and KF50 flange, while still providing enough distance for necessary compression and disassembly.



SCOPE:

Compressible vacuum flange offers the following features:

- Temperature range: 0°C to +180°C (limited by O-ring's maximum temperature capacity)
- Material: Stainless steel 304
- 1/8" compression fitting with a 7/16" hex bored through
- Compression of any 1/8" diameter tubing or sensor
- 304 stainless steel KF40 and KF50 flanges
- He Leak Tested to achieve a leak rate of 1×10^{-8} ATM, CC/sec or better (leak rate after compression depends on the material and wall thickness of the tubing, as well as the strength of compression)

OUTCOME:

By utilizing a reusable feedthrough, end users can effortlessly introduce new sensors into their systems while maintaining vacuum integrity. These compression fitting feedthroughs provide the flexibility and convenience needed for seamless installations.



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