

BCE APPLICATION NOTE

ELECTRIC HEATING
ELEMENTS

VACUUM
FEEDTHROUGHS

CUSTOM THERMAL
SYSTEMS

KF40 FLANGE, 125 VOLT, 15A DUAL FEMALE SOCKET FEEDTHROUGH

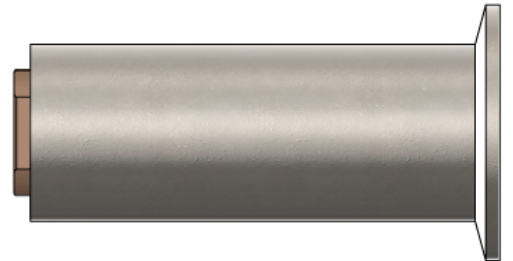
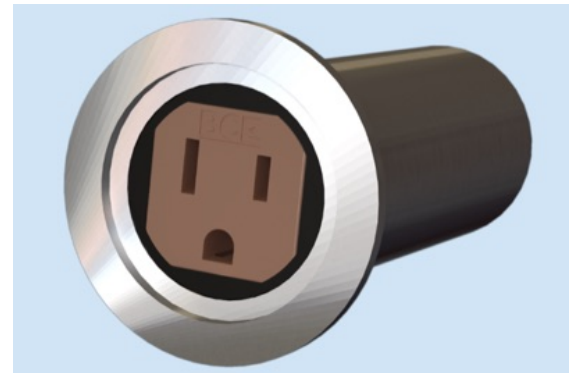
BACKGROUND

A BCE customer needed to replace a bulky power system located within a chamber. A custom KF40 three-slot single female receptacle feedthrough was the optimal solution to help reduce size and increase efficiency.

SCOPE

The KF40 Socket Feedthrough needed to satisfy the following criteria:

- 80°C continuous operating temperature
- 125V and 15A
- Female to female connection
- Vacuum rating: 10^{-5}
- ALL TESTS PERFORMED AT ROOM TEMPERATURE



OUTCOME

BCE designed a simple yet effective unit using a custom elongated KF40 flange with two three-slot single female receptacles. The customer was able to relocate the power system to the outside chamber increasing the available space within the vacuum chamber while maintaining the desired vacuum rating.

BCE's Epoxy chemical adhesion, the strongest mechanism of any adhesive bond, made the seal possible. The viscoelastic nature of the epoxy absorbs vibrations and allows for a better performance by reducing fatigue. [Click here for more information on the KF40 Feedthrough.](#)

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