When choosing the best installation for your system, there are a number of considerations, including pressure, temperature and maintenance requirements of your system.

Pressure:
ConFlat flanges are recommended for low pressure applications. Because a ConFlat flange uses an OFE copper gasket, the outgassing range is very low. To reach very low pressures, the system hardware will probably have to be baked out.

Temperature:
ConFlat flanges can be baked to 450˚C, while ISO-NW flanges may be baked to 205˚C if Viton o-rings are used.

Maintenance:
Consider how often your system will require maintenance, since ConFlat flanges are more difficult to assemble and disassemble and require tools. ISO-NW flanges are easy to assemble and disassemble and require no tools.

INSTALLATION

Products in this catalog have been categorized by method of installation. Options include braze, solder, weld, NPT threaded, ConFlat flange, baseplate, and ISO-NW flange.

Braze:
Brazing is compatible for products that have mounting hardware made of nickel, copper-nickel, nickel-iron, Kovar, or stainless steel and that have been manufactured using higher temperature braze alloys. These items are identified in the tables throughout this catalog. Maximum braze temperature should not exceed 500˚C without prior factory approval. Acceptable mounting configurations can be found on page L23.

Solder:
Soldering is acceptable for products that have mounting hardware made of copper, copper-nickel, nickel-iron or Kovar. Acceptable mounting configurations can be found on page L23.

Weld:
Products in this catalog identified for welding utilize Kovar, 52% nickel-iron, or stainless steel mounting hardware. Pulse-TIG, TIG, laser, or E-Beam welding are acceptable. It is important to minimize the heat concentration at seal areas to avoid thermal shock to the insulator. A number of suggested configurations can be found on page L23.

NPT Threaded:
NPT fittings provide reliable leak-free performance down to 10^{-6} torr. Use of Teflon sealing tape is recommended. Bakeouts are limited to 232˚C. Refer to page L26.

ConFlat Flange:
ConFlat flanges are recommended for ultra-high-vacuum applications. They can be used either with a copper gasket for ConFlat to ConFlat mounting or with an o-ring for ConFlat to plate mounting. ConFlat mountings using the copper gasket can be baked to 450˚C with very low outgassing. O-ring applications are limited in vacuum capability by the bakeout limitations of the o-ring. Viton o-ring applications can be baked to 205˚C. See pages L24 - L25.

ISO-NW Flange:
ISO-NW flanges are recommended for vacuum applications down to 10^{-9} torr. Bakeout to 150˚C is required to achieve this vacuum level. The advantage of using the ISO-NW flange mounting option is that installation and removal are quickly and easily accomplished. No tools are required. See page L26.

Baseplate:
Baseplate o-ring seals provide a quick and easy assembly to plates or housings for high-vacuum applications. Baseplates utilize a Viton o-ring and can be baked to 205˚C. See page L26.