

KF Fitting Seals

Eliminates Corrosion, Enhances Processing

KF fittings found in semiconductor wafer processing systems, such as CVD and etch, pose a significant seal design challenge due to the typically high operating temperature of these applications. At high temperatures, seals tend to expand, therefore causing high compression forces on the seal. As a result, the seal is stressed and deteriorates faster.

Greene Tweed's KF Fitting Seal, designed with a unique double lobe geometry for use in KF fittings, improves compression set in high-temperature applications. Greene Tweed's KF Fitting Seal offers superior resistance to a variety of semiconductor processing environments and can be used with both stainless steel and aluminum components without seal deterioration or metal corrosion. KF Fitting Seals are available in all standard sizes.

Aluminum ISO-KF Fittings Testing

	Compression Set*	Leak Test**	
		Initial Leak Rate	Final Leak Rate
Chemraz® 653	26%	1 x 10 ⁻⁹ cc/sec	7 x 10 ⁻⁹ cc/sec
Competitive Product	53%	1 x 10 ⁻⁹ cc/sec	3 x 10 ⁻⁷ cc/sec

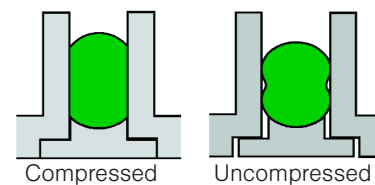
* Compression set testing conducted at 572°F (300°C) for 70 hours

** Leak test performed at room temperature following 24 hours at 572°F (300°C)

Note: Color variations and dark spots that might be observed in Chemraz® parts are considered cosmetic and an inherent result of the polymer curing process. They are not foreign matter and not anticipated to adversely affect the performance of the part in service. Please contact a Greene Tweed applications engineer for additional information.



In compression set testing, Chemraz® 653 FFKM KF Fitting Seals demonstrated 50 percent less compression set than seals made from competitive materials. KF Fitting Seals offer greater leak resistance at high temperatures over time. Although the Greene Tweed seals and competitive material performed equally well at initial installation, the competitive material failed to maintain a vacuum under the same test conditions.



Features and Benefits

- Does not corrode stainless steel at high temperature
- Improved seal integrity with double-lobed design
- Withstands mechanical stresses at high temperatures up to 615°F (324°C)

Applications

LPCVD, etch, furnaces and other processing systems components:

- Exhaust outlets
- Inlet systems
- Scrubbers

Contact Us

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