KF FITTING SEALS

Eliminates Corrosion, Enhances Processing

ENGINEERED COMPONENTS

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.

The Greene, Tweed 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 steal and aluminum components without seal deterioration or metal corrosion. KF Fitting Seals are available in all standard sizes.

FEATURES & BENEFITS

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

APPLICATIONS

LPCVD, etch, furnaces and other processing systems components:

- Exhaust outlets
- Inlet systems
- Scrubbers

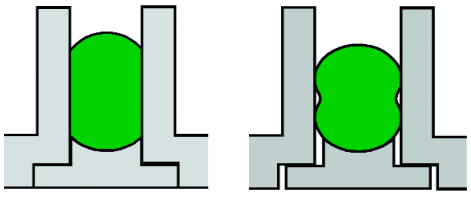
ALUMINUM ISO-KF FITTINGS TESTING

	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 300ºC (572ºF) for 70 hours

**Leak Test performed at room temperature following 24 hours at 300ºC (572ºF)

In compression set testing, Chemraz® 653 perfluoroelastomer KF Fitting Seals demonstrated 50 percent less compression set than seals made from competitive materials. These 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.



Compressed Uncompressed

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such products.

Prior to actual use it is recommended compatibility tests be run to determine suitability in a specific application. This is critical where failure could result in injury or damage. A regular program of inspection and replacement should be implemented. Greene, Tweed technical personnel are available to help with a recommendation.

Contact Us

Greene, Tweed
Semiconductor
Kulpsville, PA, USA

Tel: +1.215.256.9521
Fax: +1.215.256.0189

www.gtsemi.com

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