

URETHANE STATIC FACE™ SEAL

For S.A.E. J518C 4-Bolt Split Flange

The Greene, Tweed Urethane Static Face Seal is designed to eliminate O-ring-associated problems in 4-bolt split flange assemblies at pressure to 10,000 and beyond, depending on extrusion gap. This economical easily installed one-piece seal is engineered as a “drop-in” replacement for standard O-ring seals.

Superior performance is assured by the seal’s geometry and materials. The shape generates higher unit loading for excellent sealing. While the seal’s durable urethane material combines excellent physical properties with its 90 durometer hardness to dramatically reduce the possibility of extrusion even during high stress situations where the mounting bolts stretch significantly.

Of special note is a new compound, Urethane 369. This high-molecular weight material represents a breakthrough in urethane technology and offers significant advantages in the areas of high and low-temperature performance, as well as in compression set and abrasion resistance. Urethane 369 retains its sealing flexibility and integrity from -50°F to +260°F; an operating envelope at least 100° wider than that of other urethane seal compounds.

Gland Detail



Surface Finish

The Urethane Static Face Seal is recommended for use with standard finishes noted in S.A.E. Specification J518C. For optimal performance, however, Greene, Tweed Engineering recommends gland finish of 32 RMS and a port face finish of 16 RMS.

Seal Configuration

The Urethane Static Face Seal is designed to operate at pressure. Configurations for vacuum service are also available. Contact the Greene, Tweed Industrial Group for specifics.



Part Numbering System

The part numbering system describes the series, size and elastomeric compound.



TABLE 1 TYPICAL PHYSICAL PROPERTIES/DESIGNATORS

PROPERTY	COMPOUND	
	320	369
Hardness, Shore A	95	90
Shore D	50	43
Tensile Strength (MPa)	48.3	31.5
Ultimate Elongation (%)	450	175
Modulus @ 100% (MPa)	14.5	19.1
Modulus @ 300% (MPa)	27.6	-
Brittle Point (ASTM D-746) (°C)	< -40	< -60
Resilience-Bayshore (%) (ASTM D-2632)	38	34
Compression Set-Method B (%) (ASTM D-395)		
22 hours/70°C	22	9
70 hours/70°C	25	11

TABLE 2 DIMENSIONAL INFORMATION

SAE NOMINAL FLANGE HEAD, TUBE OR HOSE SIZE	O-RING DASH NO.	GLAND OD (+.000 -0.005)	GTC SIZE DESIGNATOR
½	210	1.005	01
¾	214	1.255	02
1	219	1.565	03
1 ¼	222	1.755	04
1 ½	225	2.125	05
2	228	2.500	06
2 ½	232	3.005	07
3	237	3.625	08
3 ½	241	4.115	09
4	245	4.615	10
5	253	5.615	11