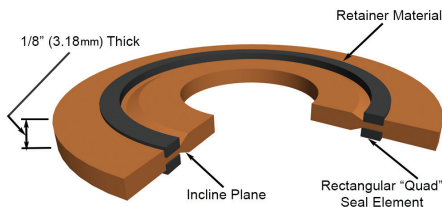


LAMONS ISO GUARD™

Sealing/Isolating Gaskets and Flange Isolation Kits

The ISO GUARD™ sealing/isolating gasket system is designed for general applications where electrical flange isolation and corrosion control are required on pipes containing water/wastewater, gas, natural gas, oil, and other hydrocarbon-based medias up to 302°F (150°C).



Available for flat face, raised face, and ring type joint flanges from 1/2" to 120" (and corresponding API and DN diameters), ANSI 150-1500#, API 2-5K, and PN 20-250, the ISO GUARD™ gasket is an engineered value-added solution for trouble-free operation. The ISO GUARD™ sealing/isolating gasket system consists of a retainer with an incline-plane seal groove geometry designed to optimize each seals elastic memory, in conjunction with a proven rectangular sealing element ("Quad" ring). This design guarantees low bolt load requirements and high sealing reliability. ISO GUARD™ systems are available with a variety of retainers and seal elements.

APPLICATIONS

- ISO GUARD™ gaskets are engineered to provide high reliability sealing and electrical isolation for a wide variety of applications
- High pressure flanges: Up to 1500#, API 5K, and PN 250
- Applications where end users prefer an integral seal element
- For ANSI 2500#, API 10K, and PN 420 applications, please consult factory
- Potable water approved - NSF 61 Certified

A FRESH LOOK AT SEALING - DESIGN FEATURES

A non-spliced (one-piece) Teflon® seal element, available from 1/2" to 24". Combining this seal with the incline-plane groove design is a first for this generation of gasket technology and is an excellent choice for engineers and end users wanting increased seal integrity.

TYPE "E" GASKET

Fits over the bolt holes and extends to the O.D. of the flange to assist contractors as the bolt holes automatically center the gasket. Provides excellent protection against shorting out of the corrosion mitigation hardware.

FIK "101" - 50% = Percentage of Type "E" ISO GUARD™ gaskets that are manufactured and specified for use on applications.



TYPE "F" GASKET

Fits within the bolt hole circle of the flange and extends to the I.D. of the bolt circle providing good protection against shorting out of the corrosion mitigation hardware.

FIK "101" - 50% = Percentage of Type "F" ISO GUARD™ gaskets that are manufactured and specified for use on applications.

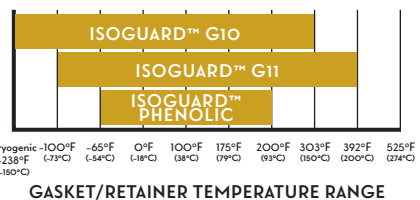
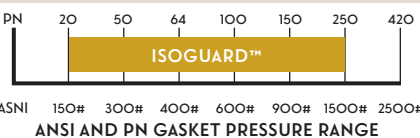
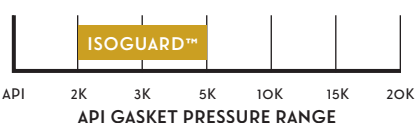
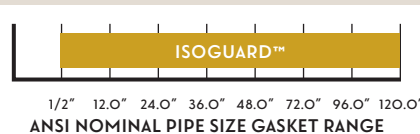


GENERAL FEATURES

- Self-energizing seal
- Incline-plane groove geometry
- Low bolt load required

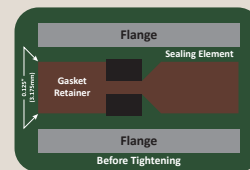


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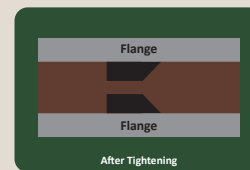
BEFORE TIGHTENING

The flange face makes initial/light contact with the gasket retainer surface (isolation material) and the sealing element protrudes just above the gasket retainer surface.

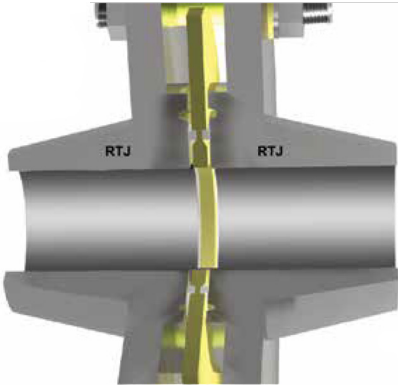


AFTER TIGHTENING

Rectangular sealing element "Quad Seal" in conjunction with the incline-plane provides a self-energized seal. The small gap between seal element and retainer illustrates how the incline-plane allows the seal material to move in a direction other than point loading the gasket web (small area of retainer between the two seals). This movement prevents cracking and breaking of the gasket retainer under high loads. Furthermore, the incline-plane groove provides the seal with greater elastic memory, thereby helping maintain an effective seal even when bolt load may relax over a period of time.



ISOGUARD™ G10 sealing/isolation gaskets are suggested for RTJ applications versus phenolic ring type gaskets.



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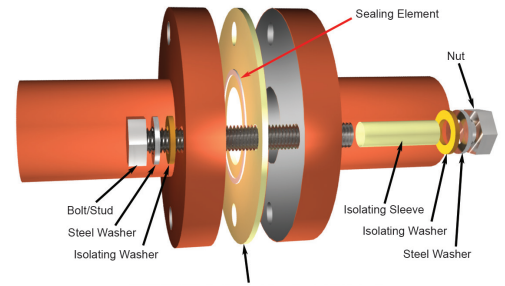
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RETAINER MATERIAL

- G10, G11, Phenolic
- Retainer Thickness 1/8" (0.125") (3.18 mm)

Note: Consider G10 material for nominal pipe sizes of 12-inch and larger or ANSI pressure class 600# and higher.



GASKET/RETAINER MATERIAL SPECIFICATIONS

ASTM	TEST METHOD	G10	G11	PHENOLIC
D149	Dielectric Strength Volts/Mil Short Time	750-800	550	500
D695	Compressive Strength (psi)	65,000	63,000	25,000
D570	Water Absorption (%)	0.05	0.10	1.60
D790	Flexural Strength (psi)	65,000	60,000	22,500
D256	IZOD Impact Strength (Ft-Lbs/Inch)	14.00	12.00	1.20
D638	Tensile Strength (psi)	50,000	42,000	20,000
D732	Shear Strength (psi)	21,000	21,000	10,000
D952	Bond Strength (lb)	2,600	2,200	1,500
	Temperature - Operating	Cryogenic -238°F (-150°C) to +302°F (+150°C)	-100°F (-73°C) to +392°F (+200°C)	-65°F (-54°C) to +220°F (+104°C)

Note: Operating temperature for gaskets and flange isolation kits are based off the gasket retainer temperature. Seal element temperature does not dictate the minimum and maximum gasket operating temperature.

SEAL ELEMENT MATERIALS

- Teflon®, Nitrile, Silicone, Viton®, EPDM

SEALING ELEMENT MATERIAL SPECIFICATIONS

Sealing Element	Temperature - Operating
Teflon® (PTFE)	Cryogenic to +525°F (+274°C)
Nitrile	-40°F (-40°C) to +250°F (+121°C)
Silicone	-75°F (-115°C) to +392°F (+200°C)
Viton®	-20°F (-29°C) to +392°F to (+200°C)
EPDM	-65°F (-54°C) to +250°F to (+121°C)

FACTS

- Based on an industry proven design
- Enhanced with innovative engineered features
- Cycled tested at 10,000 psi at ambient temperature
- Made in the USA
- Tested to Shell Certification Standards
- WRAS Approved
- DNV-GL Approved
- NSF 61 Certified

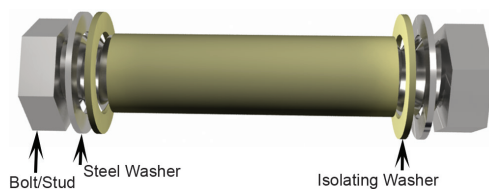
ISO GUARD™ FLANGE ISOLATION KITS

For a flange isolation kit, sleeves and washers are needed. Generally, 95% of ISO GUARD™ gasket flange isolation kits are sold with G10 sleeves and G10 double washer sets when specified with a G10 retainer gasket.

Suggested Sleeve/Washer Sets

SD = Standard (G10 sleeves, steel ZP washers, and G10 washers) – double washer set

NOTE: Use with G10 gasket material.



ED = Economy (mylar sleeves, steel ZP washers, and phenolic washers) – double washer set

NOTE: Use with phenolic gasket material.

