



Severe Service Gaskets



ADVANCE PRODUCTS & SYSTEMS

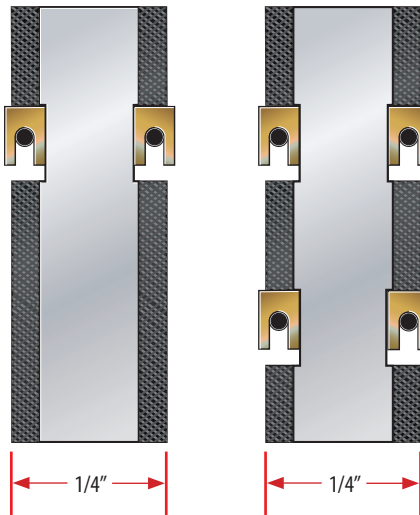
Integra II SSA[®]
Cathodic Isolation Gaskets

Patent Pending



INTEGRA II SSA® CATHODIC ISOLATION GASKETS

The APS Integra II SSA® (Severe Service Application Stainless/Steel) Gasket is an exceptionally dependable gasket used for both insulating and general sealing purposes in Severe Service Applications. This gasket has been developed as an inimitable and effective seal for sealing flanges in which the opportunity for leakage must be held at zero allowance. The Integra II SSA® Gasket is suitable in all services up to and including ANSI 2500# and API 10,000# classes. The Integra II SSA® Gasket was exclusively designed for severe isolating service in harsh environmental applications especially where hydrocarbons are a factor.

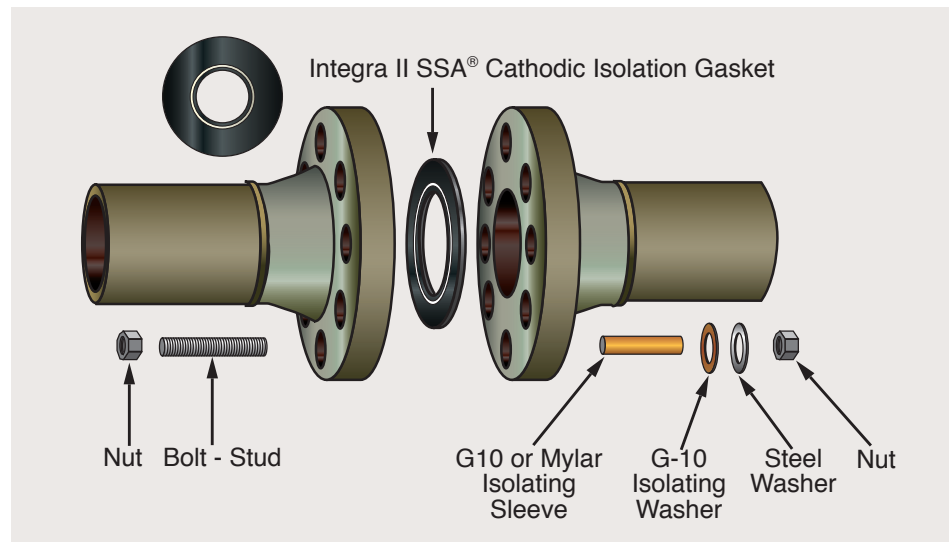


CROSS-SECTIONS OF THE APS INTEGRA II SSA® GASKET

All Integra II SSA® gaskets are manufactured in 1/4" thickness for all diameters.

Gaskets for API 10,000# flanges and require dual seals.

The Integra II SSA® gasket consists of a PTFE spring-energized face seal, seated in a highly compressed insulating glass laminate affixed to a concentrated stainless steel metal core. Because of its all-composite exclusive construction and its exceptional pressure-activated sealing properties, the gasket requires far less bolt stress to seal than most standard isolating gaskets in the industry. The Integra II SSA® gasket's inner diameter is machined to match the exact flange bore dimension specified by the customer to eradicate the possibility of turbulent flow and inner flange face corrosion. This gasket is engineered to be reusable with a replaceable sealing element.

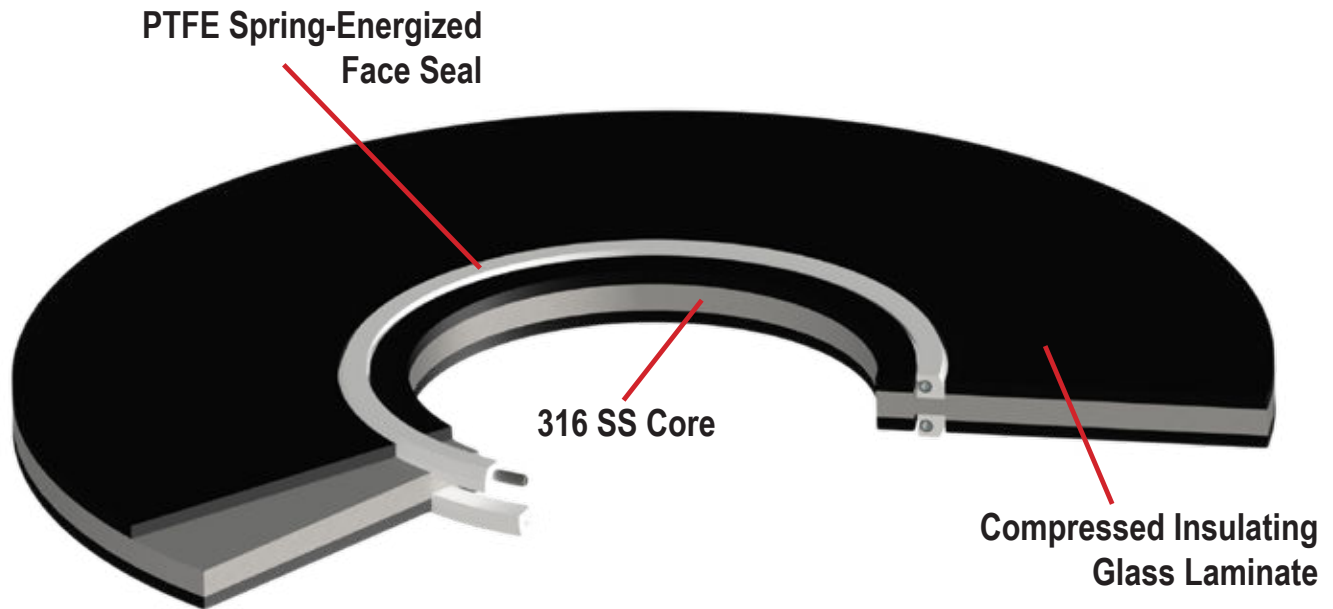


FEATURES:

- Exceptionally dependable for insulating and sealing purposes in severe service applications
- Highly suitable for all severe service applications up to and including ANSI 2500# and API 10,000# classes.
- Zero-free leaks for high sulfur content crude oil or H₂S gas fugitive emissions, proven through multiple applications.

APPLICATIONS:

- Flange isolation with true cathodic protection.
- Isolating between dissimilar metals to prevent galvanic corrosion.
- Wellhead isolation from inter-connected flow lines.
- Mating mismatched dissimilar flanges.
- Eliminate turbulence and flow-induced erosion between ring-joint (RTJ) flanges.
- Protect against corrosion on uncoated or scarred flange faces.
- To seal between flanges subjected to vibration/cavitations
- Eliminate corrosion from forming in the cavities between RTJ flanges where intense modes of hostile chemicals may be present



G-10 Standard SSA S/S Retainer Material Specifications

NEMA Grade
Compression Glass-Reinforced Epoxy Laminate Material:

Compressive Strength	66,000 PSI
Dielectric Strength	800 VPM
Max. Continuous Operating Temp	302 °F (150 °C)
Water Absorption	0.04%
Flexural Strength.....	65,000 PSI
Tensile Strength	51,000 PSI
Bond Strength.....	2,600 lb.
Shear Strength	22,000 lb.

G-11 Optional SSA S/S Retainer Material Specifications

NEMA Grade
Compression Glass-Reinforced Epoxy Laminate Material:

Compressive Strength	58,000 PSI
Dielectric Strength	550 VPM
Max. Continuous Operating Temp	400 °F (205 °C)
Water Absorption	0.08 %
Flexural Strength.....	58,000 PSI
Tensile Strength	41,000 PSI
Bond Strength.....	2,200 lb.
Shear Strength	21,200 lb.

Seal Material

The sealing element is intended to provide a non-penetrating barrier through which no restricted retained matter or other substance can pierce; as a result, the glass composite retainer material permanently holds the seal in place in a static, fully encapsulated manner. Dual spring-energized PTFE seals are available for very high pressures or large diameter flanges.

Standard PTFE Seal Material: PTFE (Spring-Energized)

Designed for multiple applications: A radial load is provided by the helical wound spring. Encapsulation in the seal groove eliminates creep or cold flow. This PTFE spring energized sealing element is manufactured from a special formulated PTFE material which is machined with a wider surface area promoting a constant seal.

Temperature Range: -425 °F to 450 °F (note: gasket material is limiting factor)

Optional: Viton Seal Material

Viton - Designed for general oil and gas applications: This sealing element is used for applications that need to be resistant to chemicals.

Temperature Range: -75 °F to 400 °F

Insulating Sleeve Options

1. G-10 - Glass-Reinforced Epoxy tubing is suitable for continuous exposure to 350 °F. This material is an epoxy laminate that offers excellent resistance to crushing, cracking, breaking and thread pinch.
2. Mylar - Spiral wound Mylar is a general-purpose material recommended for bolting applications with flange temperatures below 300 °F. This material has generally fair resistance to crushing, cracking, breaking and thread pinch.

Insulating Washers

1. G-10 - 1/8" (.125) thick washers cut to standard SAE washer dimensions

Steel Washer Options

1. ZINC STEEL - Zinc-Plated Steel washers cut to standard SAE washer dimensions.
2. SS - Stainless Steel washers cut to standard SAE washer dimensions.

TO ORDER A COMPLETE INSULATING GASKET KIT PLEASE SPECIFY THE FOLLOWING

1. Flange Specification
(ANSI/ASME, API, MSS SP44, BSI or Din Standard)
2. Nominal Pipe Size, Pressure Rating and Bore Size
3. Operating Pressure, Temperature and Media
4. Required Seal Material
5. Isolating Sleeve Material
6. Isolating Washer Material
7. Metal Washer Material (SS/Zinc Steel)

OTHER PRODUCTS AVAILABLE

- Flange Isolating Gasket Kits
- Kleerband® Flange Protectors
- Radolid® Nut & Bolt Protector Caps
- Casing Spacers and End Seals
- Innerlynx® Modular Mechanical Seals
- IsoJoint® Monolithic Isolating Joints
- Foreman Nite Caps - temporary pipe plugs
- UBolt-Cote® and Atlas® Pipe Support



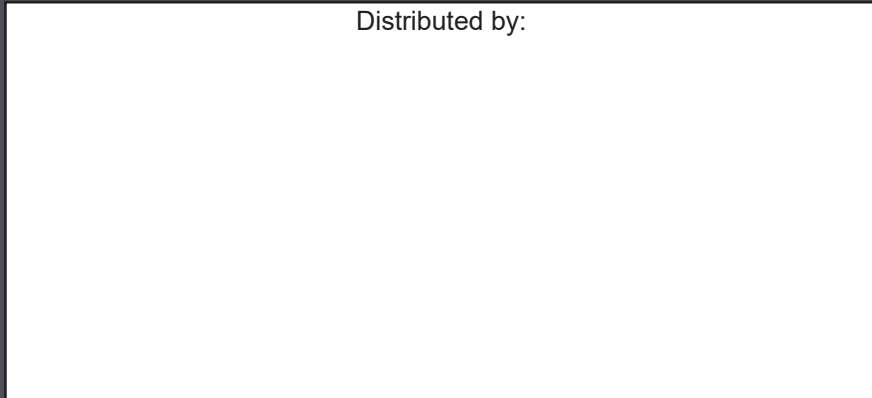
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