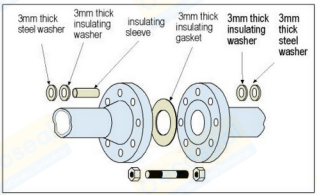
Insulating Gasket Kits

Flanges, the most common trouble area of piping, need to be sealed properly to prevent leakage and must also be cathodically insulated to prevent stray currents which cause corrosion and eventual breakdown of the metal. The insulating gasket kits solve most flange sealing problems, therefore preventing subsequent corrosion and saving the integrity of the pipeline.

There are three styles of insulating gasket kits available to suit raised face, flat face, and ring grooved flanges as illustrated below.

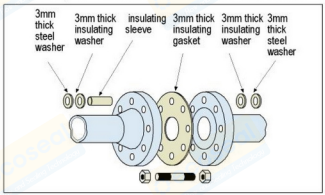
ZW 1200 - RF (APS TYPE F)

ZW 1200 – RF gaskets are made to fit the raised face portion of the flange only. As there are no boltholes in the gasket, the inside diameter of the bolthole circle is slightly smaller than the outside diameter of the gasket, assuring an exact, automatic positioning of the gasket.
Available in the same materials as the ZW 1200 – FF gasket. Standard thickness of 1/8".



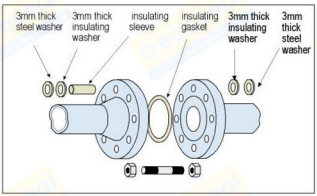
ZW 1200 - FF (APS TYPE E)

ZW 1200 – FF is a full-faced gasket with the same outside diameter as the flange and precision cut boltholes.
This design facilitates proper alignment of the gasket during installation and foreign material is prevented from shorting the flange insulation. ZW 1200 – FF gaskets are available in Neoprene/NBR coated plain face phenolic, as well as a variety of high temperature materials. Standard thickness of 1/8".



ZW 1200 - RTJ (APS TYPE D)

ZW 1200 – RTJ is specifically designed to fit into the ring groove of ring type joint flanges. They are manufactured of a medium weave, fabric-reinforced phenolic material and are sized to ANSI specifications available in basic oval or octagonal shape. Also available are BX gaskets with pressure ratings to 15,000 PSI.



Note :
If required, we also offer the best service in all systems products of APS.

Insulating Gasket Kits

● Insulating Gasket Material

Name	Grade	Water Absorption %	Tensile Strength PSI	Compression Strength PSI	Dielectric Values VPM	Max. Continuous Operating Temperature
Linen/Cloth Reinforced Phenolic	CE	3.5	12,000	34,000	400	257°F (125°C)
Phenolic & Paper Laminate	XP	1.5	18,000	45,000	600	266°F (130°C)
Neoprene/NBR Faced Phenolic & Paper Laminate	XPN	1.5	18,000	45,000	600	266°F (130°C)
Glass Fiber Reinforced Epoxy	FR4/G10	.01	40,000	66,000	800	248°F (140°C)
Glass Fiber Reinforced Epoxy	FR5/G11	.20	43,000	63,000	900	347°F (175°C)
Glass Fiber Reinforced Silicone	G7	.09	22,000	40,000	400	400°F (204°C)

● Insulating Sleeve & Washer Material

Name	Grade	Water Absorption %	Dielectric Strength volts/mil	Max. Continuous Operating Temperature
Polyethylene	-	.01	450	105°F (41°C)
Phenolic & Linen Laminate	CE	1.1	400-500	225°F (107°C)
Glass Fiber Reinforced Epoxy	FR4/G10	.09	530	285°F (140°C)
Polyester Film	Mylar®	.8	4,000	300°F (149°C)
Meta-aramid Fiber	Nomex®	-	400	450°F (232°C)

● One-piece integral Insulating Sleeve & Washer Material

Name	Grade	Water Absorption %	Dielectric Strength volts/mil	Max. Continuous Operating Temperature
Mineral and Mineral / Glass Fiber Reinforced Nylon Resins	Minlon®	.22	1,200	250°F (121°C)

Mylar®, Nomex® and Minlon® are registered tradmarks of E.I. du Pont de Nemours and Company.

Sleeves & One-piece Sleeves & Washer

● Special Materials for HIGH TEMPERATURE

GASKETS : NEMA grade G7 and G10, Durabla®, Durlon®, Lydall™, JMRD81

SLEEVES : Nomex®, NEMA grade G7, G10, Durabla®, Durlon®

WASHERS : NEMA grade G7, G10, Durabla®, Durlon®

NEMA : the National Electrical Manufacturers Association of U.S.A.
Lydall™ : a kind of alumina-silica material. Temperature : up to 2300°F (1260°C)
JMRD JM CLIPPER Red Devil: non-asbestos fiber. Temperature : up to 600°F (316°C)
Durlon® : aramid and inorganic fibers with NBR binder. Temperature : up to 700°F (371°C)
Durabla® : PTFE. Temperature : up to 600°F (316°C)

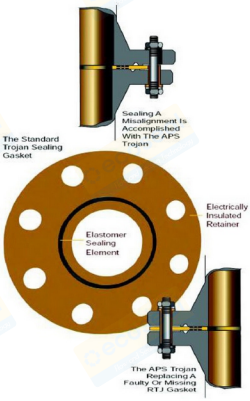
Note: If required, we also offer the best service in all systems products of APS.

THE APS TROJAN

Trojan gaskets are state-of-the-art in near zero leakage static sealing. The elastomer sealing element is encapsulated in the electrically insulated retainer. The encapsulation of the sealing element permits only micro-exposure of the seal to hostile environs of fire, chemicals and corrosive fluids.

Because of the controlled confinement of the elastomer sealing ring within the available volume of the groove in the retainer, 92% to 94% filled volume, a consistent controlled-pressure seal can always be obtained without tremendous bolt loads. Reduced loads allow for reduced flange thickness, smaller bolts and smaller circles.

The cross section of the Trojan Sealing Gasket shows the elastomer sealing element as it appears before compression between flanges. This compression causes the seal to effectively fill the void of the groove and encapsulate, permitting only micro exposure of the actual seal to hostile elements either from within or without.



● Sealing Element Material

Name	Min. Operating Temperature	Max. Continuous Operating Temperature
Nitrile (NBR)	-60 °F (-16 °C)	240 °F (116 °C)
Viton (FKM)	-75 °F (-24 °C)	400 °F (205 °C)
Teflon (PTFE)	-100°F (-38 °C)	450 °F (232 °C)

THE APS QUAD-SEAL TROJAN

Four seals on the new Quad-Seal Trojan further insures the integrity of the sealing capability of an already-proven reliable gasket. For areas where absolute zero leakage is a must, the Quad-Seal Trojan works twice as hard.

Cross Section Of The Quad-Seal Trojan Sealing Gasket

● ADVANTAGES OF THE TROJAN

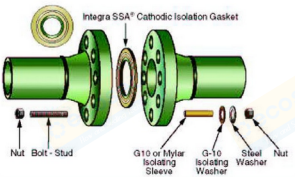
* Can be utilized with mismatched flanges
* Can be utilized with misaligned flanges
* Can be used in place of RTJ or BX rings
* Little initial torque required
* No re-torquing required
* Sealing ring cannot be left out
* Seal design tested for high pressures
* Please consult factory for specific pressures.
* Reusable
* Competitive price
* Limited area of seal exposed (long fire life)
* Compensate for pressure fluctuations, compression changes, vibrations, temperature, variations, etc.
* Greatly reduces human error during installation
* Large selection of materials available
* Three to four times the dielectric strength necessary
* Low installation and maintenance costs
* Gaskets through 144"

Note: If required, we also offer the best service in all systems products of APS.

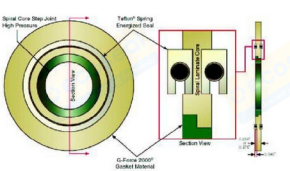
Insulating Gasket Kits

APS INTEGRA SSA®

The APS Integra SSA® Cathodic Isolation Gasket is manufactured from proprietary G-FORCE 2000®, a special glass epoxy material with an impressively high compression strength; The Integra SSA® Cathodic Isolation Gasket is composed by bonding two materials in a step-joint of each material. The G-FORCE 2000® flat laminate is the composition of the outer gasket, and the spiral wound epoxy tube is the composition of the center core. This APS exclusive design contributes to the excellent mechanical strength as well as to the dynamic electrical isolating properties of the Integra SSA® Cathodic Isolation Gasket allowing it to perform efficiently and effectively in severe service applications under extreme pressures and elevated temperatures. Integra SSA® gaskets can be installed in flanges from ANSI 150# to 2500# up to an API 10,000# flange.



Inserted in the gasket is a glass-reinforced, 316SS spring-fortified energized Teflon® or Viton® seal to assist in maintaining a high pressure, chemically resistant seal within the flange. Incorporated within the Teflon® seal, a 316 stainless steel coil spring provides additional compression with minimal cold flow. These characteristics allow constant pressure to be applied, with low cold flow characteristics ultimately providing an outstanding seal and cathodically isolating the flange for superior reliability.



G-Force 2000® material is a flat epoxy laminate woven glass material. The high pressure inner coil is made from spiral wound epoxy tube. The continuous operating temperature is 374°F, 190°C in mechanical applications.

Integra SSA® gaskets are manufactured to accommodate RTJ, full and raised face flanges. All kit components include either G-10 or Mylar sleeves and G-10 isolating washers when Integra SSA® gaskets are installed. The standard thickness of the gasket is as follows: 1/4" up to ANSI 900#; 3/8" up to ANSI 1,500# and API 10,000# and anything above.

● Physical Properties

Rockwell Hardness (.125)	M Scale	111
Moisture Absorption (.125)	%	0.12
Flexural Strength	psi	80,000
Tensile Strength LW	psi	61,000
Compressive Strength flatwise (.500")	psi	91,000
Maximum Operating Temperature	°C	190

Note: 1. Material tested: 0.250" & 0.375" thickness.
2. If required, we also offer the best service in all system products of APS.