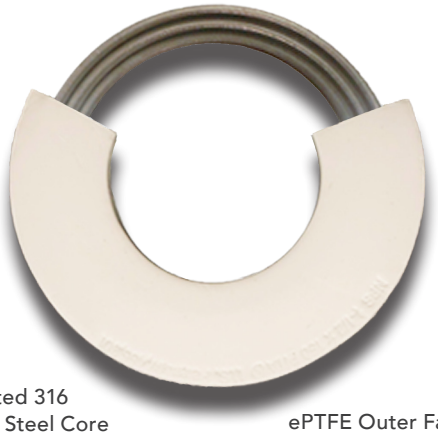
PITA®

Expanded PTFE/Encapsulated Insert
U.S. Patents 7,455,301 & 8,066,843

Underbolted flanges challenge the sealing industry with less-than-ideal sealing situations, i.e., aggressive chemicals and dramatic thermal and high-pressure system cycling.

The PITA® gasket provides broad chemical resistance and high-tightness sealing to meet the challenging requirements of users. Long-term reliability that is realized from utilizing this innovative technology results in significant cost savings for our customers.

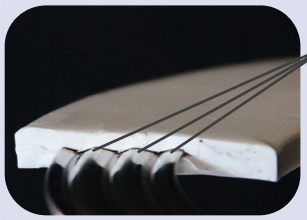


Corrugated 316 Stainless Steel Core

ePTFE Outer Facings

The ultimate gasket for high-tighness sealing at low loads

- **Live-loaded spring insert delivers high gasket recovery, unmatched thermal cycling performance and exceptional operational tightness**
- The superior chemical inertness of the ePTFE allows for standardization in a wide array of chemical processes and services
- Unitized construction eliminates the need for bonding agents resulting in zero process contamination and >2x blowout resistance over other corrugated insert gaskets
- Unique semi-metallic construction provides increased mechanical integrity
- 100% ePTFE seals against rough or damaged flanges
- The reduced area, encapsulated insert-spring technology develops high compressive stress resulting in unmatched sealing performance



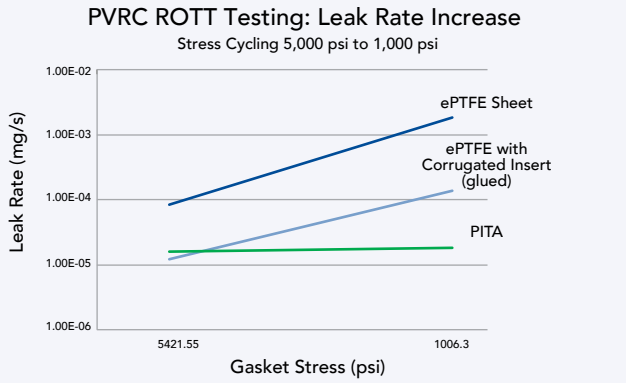
Point Contact Loading

VSP Technologies deploys a team of Engineers and Fluid Sealing Specialists who provide engineered solutions for your unique sealing requirements.

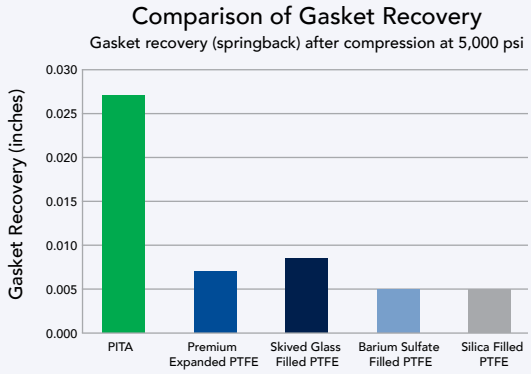
8140 Quality Drive, Prince George, VA 23875
800-334-6013 • vsptechnologies.com

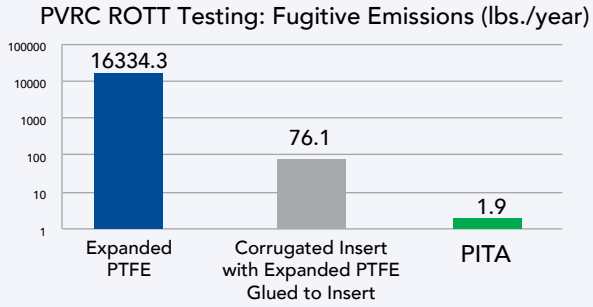
SPRING ENERGIZED CONSTRUCTION

PITA Maintains Low Leakage During Thermal/Stress Cycling



PITA Exhibits Significant Gasket Recovery (5X Other PTFE Constructions)





Comparative Annual Fugitive Emissions (300 ea. NPS 12 Class 150 LJ Flanges @150 psi)

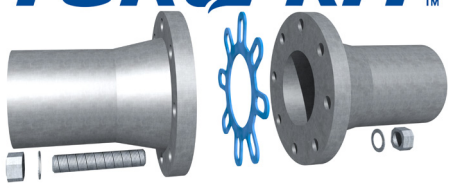
Product Specifications

Temperature Range	Max= 450°F Min= -330°F
Pressure Resistance	Full vacuum to maximum flange rating
Chemical Resistance	All chemical services (pH 0-14) except molten alkali metals, elemental fluorine and aggressive tri-fluoride compounds
ASME Gasket Factors	m=2.5 y=1,200 psi
PVRC Gasket Factors (PVRC ROTT)	G_B=263 psi a=0.299 G_S=2.93E-10 psi
Tightness & Sealability (PVRC ROTT)	$T_{p\ (max)}$=33,749 $T_{p\ (min)}$=13,454
Stress Required to Achieve Helium Leak Rate of 1.02E-04 (mg/sec) @ 150 psig (NPS 4x150 Ring Gasket)	2,078 psi
Safe Reserve Operating Temperature (HOBT2 with Cycles)	500°F ASME Class 150 Service 450°F ASME Class 300 Service
Standard Thickness	1/8" nominal, 1/4" per request

Target Applications

- Cryogenic service
- Class 150 flanges
- Stainless steel bolting
- Exotic metallurgy flanges
- Thermocycling applications
- Low stress/torque applications or equipment
- Chemical service
- Plant standardization
- Low E (Emissions) services

TORQ-KIT™



Ensure complete mechanical and specification compliance with VSP's OPRA Torq-Kit™

All Flange rework components in one box with assembly instructions to ensure reliable performance

Rev.C.10112022