



## VSP LoadLock®

Enhanced Mechanical Integrity in an ePTFE Gasket  
U.S. Patent Pending

### LoadLock

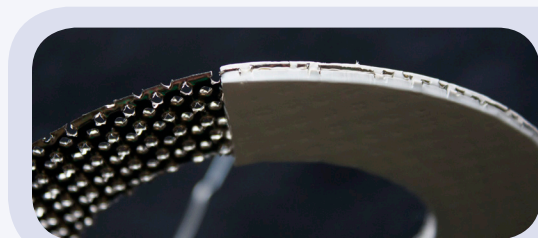
LoadLock combines the strength and blow-out resistance of metallic gaskets with the compressibility and tightness of expanded PTFE gaskets without the use of adhesives.

VSP's proprietary, patent pending design incorporates an engineered perforated 316 stainless steel insert embedded within the expanded PTFE matrix. This dramatically enhances stability, increases blowout resistance, and reduces gasket creep more than conventional ePTFE by itself.



### LoadLock Compared to Conventional Gaskets

- ▶ Compared to conventional ePTFE gaskets:
  - ▶ Lower relaxation & torque loss
  - ▶ Improved creep/cold flow resistance
  - ▶ Higher maximum compression stress limit
  - ▶ Enhanced mechanical integrity at high temperatures
- ▶ Suitable for cryogenic service
  - ▶ Lower assembly stress, ideal for weak flanges
  - ▶ Better conformance to flange surface imperfections
  - ▶ Sheet fabrication/design & supply flexibility

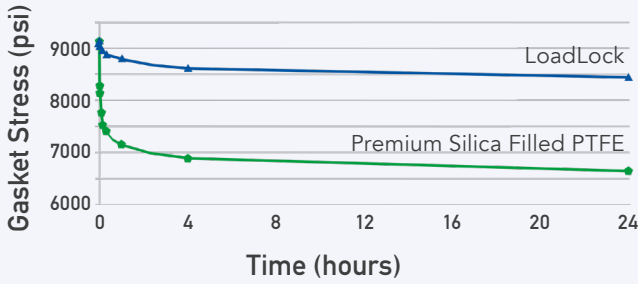


VSP Technologies deploys a team of Engineers and Fluid Sealing Specialists who provide engineered solutions for your unique sealing requirements.

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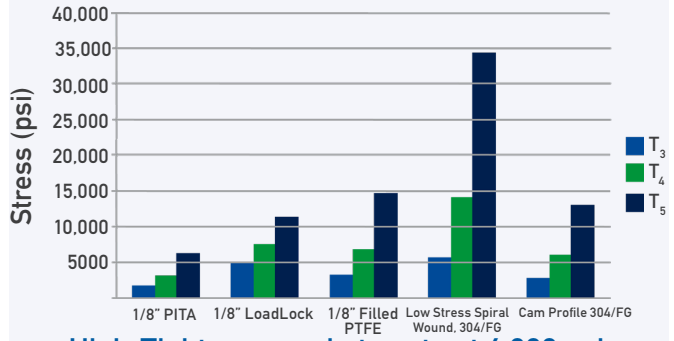
**ENHANCED MECHANICAL INTEGRITY**

**Relaxation Test**



**Minimal stress relaxation**  
 ► Potential for NO Re-Torque™

**Stress (psi) to Develop T3, T4, T5 @ 200 psig**

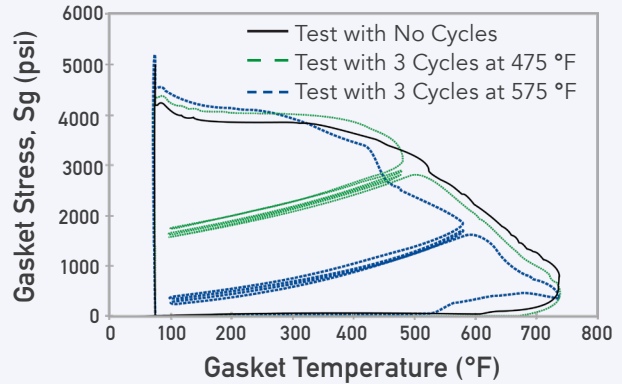


**High-Tightness gasket seats at 4,000 psi**  
 ► T<sub>5</sub> seal at lower stress than other common semi-metallic gaskets.

**HOB2 testing confirms the 545°F Max Temperature in heavy cycling ASME class 150 flanges, nearly 2X the Max Temperature of other PTFE materials in the same qualification test**

► T<sub>R</sub> (Safe Reserve Temp) = 545°F

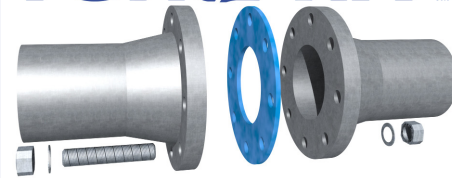
**HOB2 Without Cycles on VSP Loadlock at 435 psi**



**Product Specifications**

Temperature Limit	Max = 550° F
Maximum Compression	>20,000 psi
Standard Construction	316 Stainless Steel Core 100% Premium ePTFE outer facing
Standard Thickness	1/8", 3/32" Fabrication to any size or geometry
ASME Gasket Factors	m=1.4 y=3,400 psi
PVRC Gasket Factors (PVRC ROTT)	G <sub>B</sub> =1681 psi a=0.182 G <sub>S</sub> =2.93E-10 psi

**TORQ-KIT™**



**Ensure complete mechanical and specification compliance with VSP's LoadLock Torq-Kit**

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

Contact VSP for ordering information