



AB-326™ Spiral Wound Gaskets- Technical Summary

Enhanced Anti-Buckling Spiral Wound gasket design and performance from the company that pioneered Anti-Buckling Spiral Wound gasket designs.

VSP Technologies, formerly Virginia Sealing Products, Inc. developed and patented the first Anti-Buckling spiral wound gasket in 1999¹. Our latest innovation, the AB-326™ spiral wound gasket, improves upon the performance, versatility and cost effectiveness of current spiral wound and anti-buckling designs.



Conventional Spiral Wound Gaskets require the use of an inner ring to reduce the likelihood of radial inward buckling². Stiffening the gasket inside diameter with an inner ring does not address the underlying cause of radial buckling³, and further creates additional challenges and limitations including increased gasket stiffness (higher assembly torque), inner ring flange protrusion (slip-on flanges)⁴, and unnecessary cost.

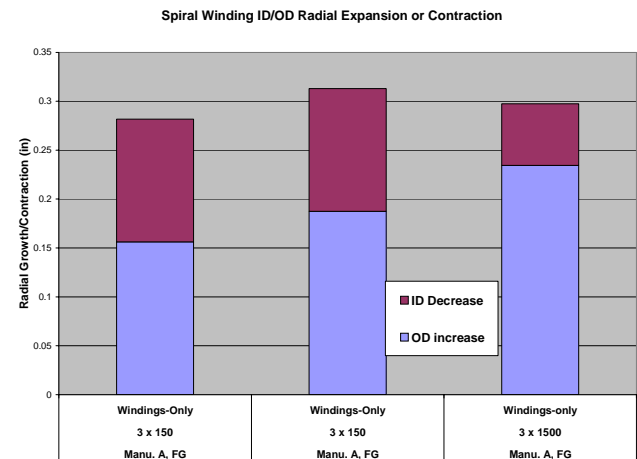
VSP's AB-326™ gaskets are engineered spiral wound gaskets designed to provide:

- **Compliance with ASME B16.20 paragraph 3.2.6 compression requirements**
 - **Low Stress: Suitable for all ASME flange pressure classes 150 - 2500**

- **Accommodates the inherent radial compression behavior of the spiral winding, and minimizes radial buckling forces**
 - **Anti-Buckling: Eliminates the need for costly, problematic inner rings**
- **Designed to fit slip-on and weld neck/socket weld type flanges**
 - **One spiral wound gasket for all size, type, and pressure class flanges**

ANTI-BUCKLING:

When spiral wound gaskets are compressed, 60-80% of the radial displacement of the spiral winding (sealing element) is directed radially OUTWARD.



Conventional spiral wound gaskets contain the winding OD within a solid metal outer ring, and prevent this natural flow tendency.

The AB-326™ gasket accommodates this flow tendency by allowing gasket deflection into specially engineered ID relief ports.



¹ U.S. Patent #5,964,468

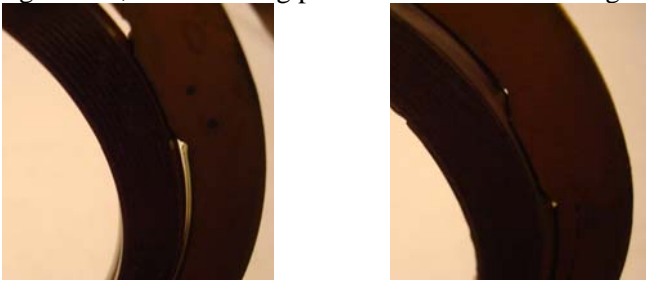
² ASME B16.20-2007, para. 3.2.5

³ ASME PVP 2009-77422, "Compression Behavior Of Spiral Wound Gaskets", Waterland, Bouzid

⁴ VSP Technical Bulletin "Changes To ASME B16.20-Compliance Options", 2008

Coupled with an increased number of wire wraps at the gasket ID, and a considerable increase in the weld securement of all of the ID metal wraps, the root cause of radial buckling in spiral wound gaskets is eliminated.

Engineered, anti-buckling performance w/o inner rings.

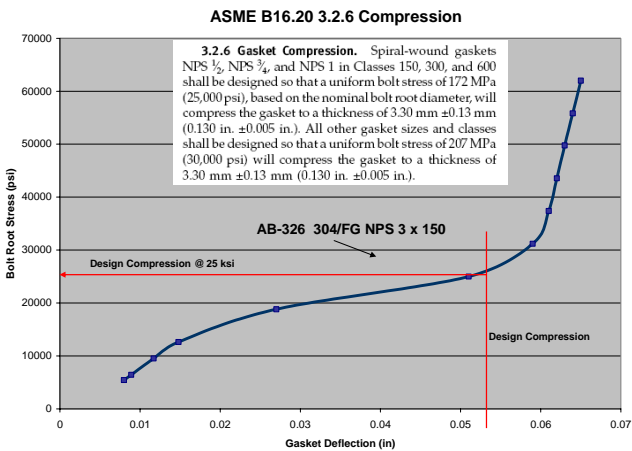


Before Compression

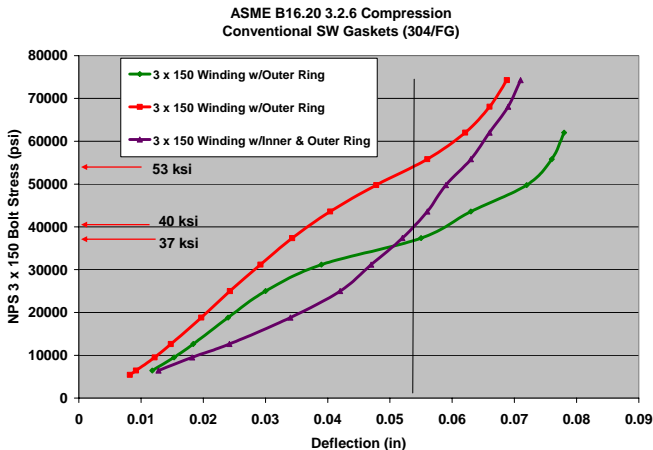
After Compression

LOW STRESS:

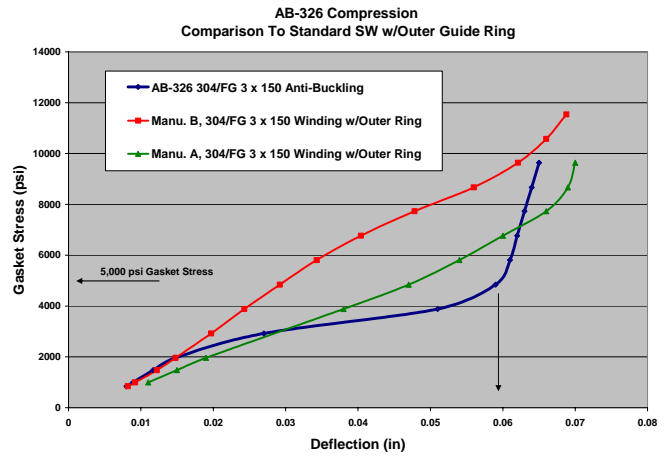
AB-326™ gaskets meet/exceed the compression requirements of ASME B16.20. Shown below, even in the under-bolted NPS 3 x 150 flange, the design compression requirement is met at <30 ksi bolt stress.



Conventional spiral wound gaskets, both with and without inner rings, with flexible graphite and PTFE fillers, typically DO NOT meet the ASME B16.20 compression requirement in several class 150 flange sizes.

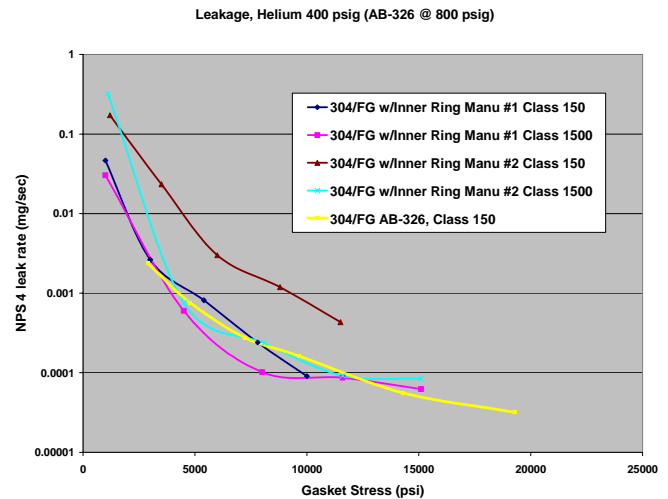


Overall, the AB-326™ gasket exhibits considerably improved compression performance, compressing down to the outer guide ring and seating at 5,000 psi stress. In comparison, conventional spiral wound gaskets require 7,500 – 10,000 psi stress to achieve the same compression.



COMPARABLE SEALING PERFORMANCE:

The AB-326™ provides sealing performance comparable to conventional inner ring spiral wound gaskets.



Technical Data/Specifications:

Standard Construction:

304/FG, 316/FG, 316/ePTFE, 316/ePTFE/FG

Available Sizes:

All Standard ASME B16.5 Flange Sizes
Specials Engineered For Non-Standard Flanges

ASME Gasket factors:

m = 3.0
Y = 5,000 psi

ROTT Gasket Factors:

To Be Determined

Temperature Limits:

ePTFE Filler = 550 °F
ePTFE/FG Filler = 600 °F
Flexible Graphite Filler = 950 °F