

Checkmate

Superior VSP jointing design and fabrication replaces less effective "Dove-Tail" designs. This jointed technology utilizes close tolerance FLOW Jet Mach 2 water jet fabrication equipment to achieve the tightest possible segmented joint.

VSP Technologies researches and analyzes compression and flow characteristics of all standard gasket materials and can optimize each gasket based upon cross section, thickness, and geometry of the material



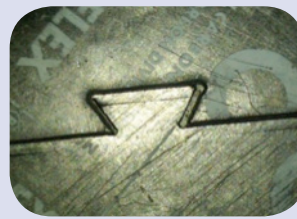
Checkmate vs. Typical Dove-Tail Joint

VSP Checkmate



- ▶ Tightest sealing sectioned gasket
- ▶ Snap-tight interference fit stays together for ease of assembly
- ▶ Long tortuous seam length ($\approx 2X$ that of standard Dove-Tail)
- ▶ Seals at the same stress level as one-piece gaskets
- ▶ Joints are virtually invisible after compression
- ▶ CAD design and water jet fabrication

Typical Dove-Tail Joint



- ▶ Large gaps typically present creating leak paths
- ▶ Shorter leak path
- ▶ Joints visible after compression
- ▶ Higher stress to seal than one-piece gaskets
- ▶ Often fabricated using dies leaving a beveled edge

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

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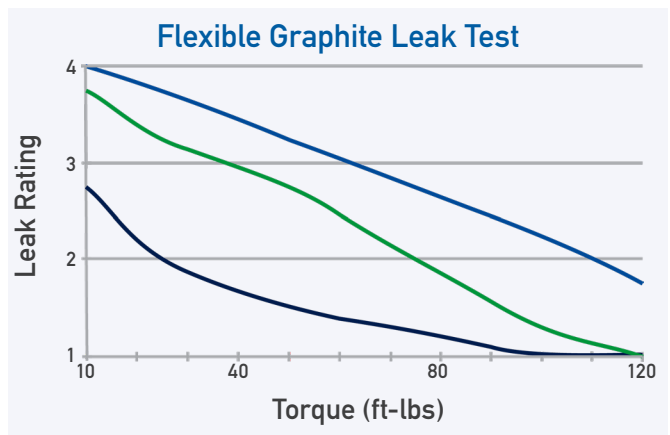
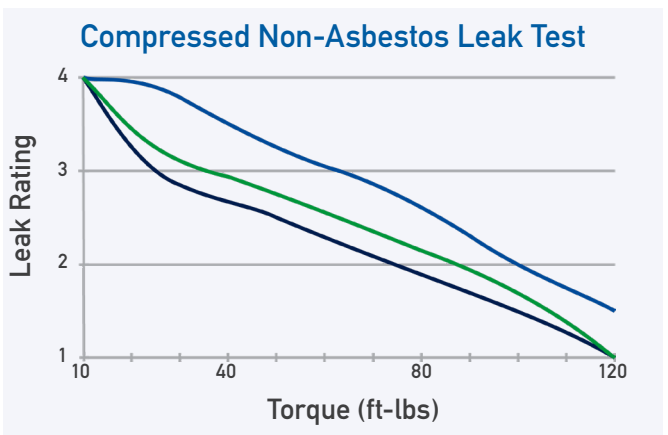
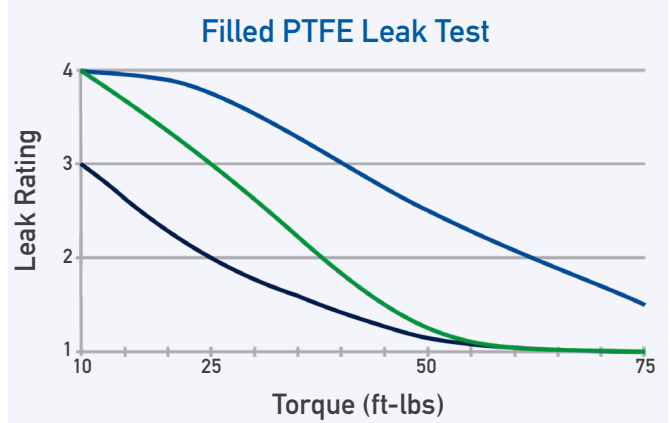
BUBBLE LEAK TEST

100 psig Air Test

- Ring NPS 3x150, 1/8"
- Checkmate NPS 3x150, 1/8" (2 joints)
- Dove-Tail NPS 3x150, 1/8" (2 joints)

Leak Rate Scale

- 1 = No Leak
- 2 = Periodic Bubble
- 3 = Steady Leak
- 4 = Gross Leak



Product Comparison

Product Feature	VSP Checkmate	Intralock	Dove-Tail
Tight fit between mating sections	Best	Better	Poor
Accuracy of fabrication	Best	Better	Poor
Long tortuous path created between mating sections	Best	Better	Poor
Engineered, interference fit between sections	Best	Subject to fabrication company and equipment	Poor
Consistent, tight tolerances between mating sections	Best	Subject to fabrication company and equipment	Poor

Intralock™ Joints

VSP Technologies developed Intralock™ technology for instances where Checkmate™ is not ideal or available i.e.

- ▶ Cross sections under 1/2" with fragile materials like flexible graphite
- ▶ Waterjet cutting is not available based on the time constraints required

Intralock cutting technology uses tightened design and cutting capabilities that is also far superior to dovetail joints

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



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

Contact VSP for ordering information