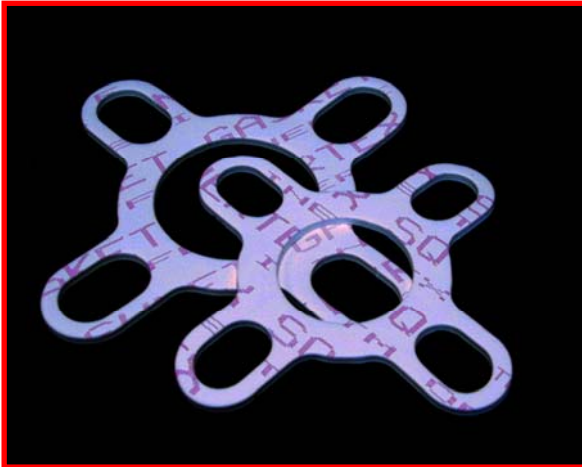


# VSP Technologies OPRA (One Piece Reduced Area) Gaskets

For all lightly loaded flanges: FRP, PVC, PVDF, cast iron, & API 650 Manways, etc.



VSP Technologies' OPRA gaskets  
engineered for low torque flange applications

Engineered reduced area design – 20-50% Lower torque than conventional full face gaskets

Lower torque – Now you can reliably develop a tight seal on delicate flanges **without breakage**

High compressibility expanded PTFE(TEFLON®) –  
Seals against uneven & rough flange surfaces/purity/non-contaminating

100% Expanded PTFE(TEFLON®) – Low stress to seal & reduced creep relaxation

NPS 1/2-24 Gaskets for standard ASME/ANSI B16.5 class  
150 flanges OPRA type 1 - In stock

Non-standard vessel & manway gaskets also available  
(OPRA Type 2) – 1-3 Day design & fabrication turnaround



**U.S. Patent #6,682,081**

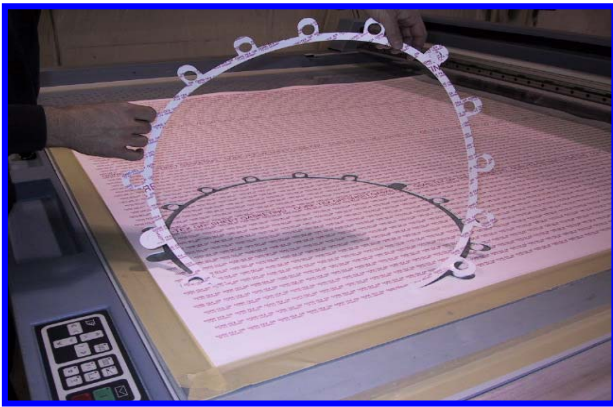
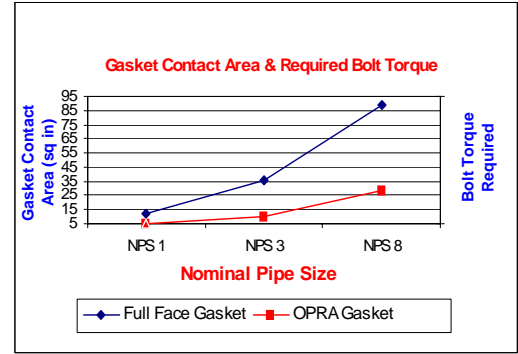
For additional information or to place an order call, (800) 334-6013 or (804) 541-0812

- The OPRA is a unique patent design
- Full face geometry with minimal contact area



**OPRA Type 1**  
Standard ASME  
pipe flanges  
NPS ½ - 24

As gasket contact area decreases, minimum required bolt load decreases



**OPRA Type 2** Vessel/equipment gaskets engineered/ designed to seal with available bolt load of equipment

CADD design & fabrication insures accuracy, quality & rapid order turnaround

**OPRA Type 1: Standard ASME Pipe Flange Gaskets Torque Table (Lubricated Bolts)**

Gasket Size	Optimum Assembly Torque (Ft-lbs)	Gasket Size	Optimum Assembly Torque (Ft-lbs)
NPS 1/2 x 150	20	NPS 6 x 150	70
NPS 3/4 x 150	20	NPS 8 x 150	85
NPS 1 x 150	20	NPS 10 x 150	100
NPS 1 1/4 x 150	25	NPS 12 x 150	125
NPS 1 1/2 x 150	25	NPS 14 x 150	160
NPS 2 x 150	40	NPS 16 x 150	145
NPS 2 1/2 x 150	45	NPS 18 x 150	170
NPS 3 x 150	50	NPS 20 x 150	170
NPS 4 x 150	45	NPS 24 x 150	210

**Technical and Performance Data**

Maximum continuous process temperature: 450° F

Pressure resistance: Vacuum to maximum flange rating (constructed for pressure rating of flange)

Chemical resistance: pH = 0 – 14, (except molten alkali metals, elemental fluorine, and tri-fluoride compounds)

ASME gasket factors: m = 2.5, Y = 2900 psi

Typical PVRC gasket factors: Gb = 1,461 psi, a = 0.189, Gs = 0.15 psi

Tightness & sealability: Max. Gasket Tightness Tp = >36,630

Tightness Class T3 => Leak Rate, LR < 2.5 x 10<sup>-5</sup> mg/sec (NPS 4 Gasket @ 150 psig)