

Elastagraph™ Flange Gaskets

ElastaGraph™ gaskets are made by infusing a seamless layer of flexible graphite at varying densities and thicknesses over a corrugated metallic core. ElastaGraph utilizes a unique corrugated pattern which increases the depth of the groove and the pitch at the peak of the corrugation. This greatly improves the gasket's sealability over traditional corrugated designs.

This increased pitch and groove depth increase ElastaGraph's recovery or "spring back" and reduces the surface area of the gasket for greater unit load at initial torque as well as lower minimum seating stress. This results in bolt stability and increased load retention during thermal cycling. The proprietary production process allows the graphite to be applied without the "seam" that is present in other gaskets fabricated from flexible graphite sheets. The inner diameter of the ElastaGraph is encapsulated by high-density flexible graphite, increasing sealability many times over traditional designs. The traditional designs create a leak path and contribute to stress corrosion of the metal insert. The JM Clipper process also eliminates the mylar/polyester film adhesive used in traditional gasket designs which contributes to volume and bolt torque loss.

ElastaGraph was developed specifically to solve fugitive emission and compliance problems. It also performs well in bolted joints that experience thermal cycling or limited initial bolt load. ElastaGraph is the most economical way of meeting low emission requirements.

Operating limits

Maximum Operating Temperature
1000 °F (550 °C) Steam
850 °F (450 °C) Air
PH Range 0 - 14

Material specifications:

Temperature Capabilities

Cryogenic to 850 °F (460 °C) oxidizing
to 1000 °F (550 °C) steam
to 1700 °F (927 °C) non - oxidizing

Pressure Ratings

Vacuum to 4,500 psi (306 bar)
Depending on Temperature

MATERIAL CONSIDERATIONS:

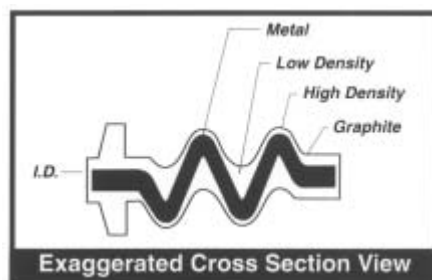
Sealing Material - Flexible graphite has been widely recognized as the material of choice in combining excellent thermal stability with corrosion resistance (nuclear grade available).

Metal Carrier - 316L /1.4404/, 304 /1.4301/
Thickness of the core : 0,6 mm, 0,8 mm
Thickness of graphite 2 x 0,5 mm

The **flexible graphite** completely covers the I.D. of the metal ring providing total corrosion resistance.

The Benefits of Multiple - Density, Multiple - Thickness Flexible Graphite

Traditional graphite products are made to a single density and only provide the benefits of that density. On the other hand, multiple - density products based on the DynaGraph process provide all the benefits of both high and low density materials.



Low Density Benefits : 40 lb / ft3 (0,64 g/cm3)

- ▶ High compression
- ▶ Good sealability on low bolt load
- ▶ Good sealability on irregular flanges
- ▶ High conformability for poor surface finishes

High Density Benefits : 115 lb/ft3 (1,84 g/cm3)

- ▶ High recovery
- ▶ Low porosity, good sealability
- ▶ High - temperature resistance
- ▶ High - pressure resistance
- ▶ Improved handleability
- ▶ High tensile strength
- ▶ Better abrasion resistance

Gasket Factors

Gasket factor m 3.00
Seating Stress Y (psi) 5 000

Dimension Table 4.01

Elastgraph

For Raised Faced Flanges DIN Flanges DN 15 to DN 600

Dimensions in mm

PN	d ₁	d ₂			
		10	16	25	40
DN					
10	18	46	46	46	46
15	22	51	51	51	51
20	27	61	61	61	61
25	34	71	71	71	71
32	43	82	82	82	82
40	48	92	92	92	92
50	57	107	107	107	107
65	73	127	127	127	127
80	86	142	142	142	142
100	108	162	162	168	168
125	134	192	192	194	194
150	162	217	217	224	224
175	183	247	247	-	-
200	213	272	272	-	-
250	267	327	327	-	-
300	318	377	383	-	-
350	363	437	443	-	-
400	414	488	495	-	-
500	518	593	617	-	-
600	618	695	734	-	-

Dimension Table 4.02

Elastagraph

For Raised Faced Flanges per ASME B 16.5

Dimensions in mm

DN / in. /	For pressure 150		For pressure 300	
	d ₁	d ₃	d ₁	d ₃
½	24,45	46,6	24,45	53
¾	30	56,1	30	65,7
1	36,4	65,65	36,4	72
1 ¼	41,4	76,7	42	82,7
1 ½	51,5	84,7	51,5	94,3
2	63,4	104	63,4	110,2
2 ½	76	122,8	76	129,1
3	92	135,5	92	148,2
4	117,35	173,6	117,35	180
5	141,5	195,6	141,5	214,9
6	171,3	221,4	171,3	249,8
8	222,1	278,4	222,1	307
10	276	338,7	276	361
12	327	408,5	327	421,2
14	355,2	451	355,5	486
16	406,2	514,5	406,5	540
18	457	550	457	597,2
20	507,8	604,2	514	654,5
24	608,6	718	609,6	775,4

DynaGraph™ Heat Exchanger Gaskets

Heat exchanger gaskets are made by infusing a seamless layer of flexible graphite at varying densities and thicknesses over a corrugated metallic core. Heat exchanger gaskets utilize a unique corrugated pattern which increases the depth of the groove and the pitch at the peak of the corrugation. This greatly improves the gasket's sealability over traditional corrugated designs.

This increased pitch and groove depth increase heat exchanger gaskets's recovery or "spring back" and reduces the surface area of the gasket for greater unit load at initial torque as well as lower minimum seating stress. This results in bolt stability and increased load retention during thermal cycling. The proprietary production process allows the graphite to be applied without the "seam" that is present in other gaskets fabricated from flexible graphite sheets. Heat Exchanger gaskets are made with a high-density inner ring that increases sealability many times over traditional flexible graphite. These traditional designs create a leak path and contribute to stress

corrosion of the metal insert. The JM Clipper process also eliminates the mylar/polyester film adhesive used in traditional gasket designs which contributes to volume and bolt torque loss.

Heat exchanger gaskets were developed specifically to solve fugitive emission and compliance problems. It also performs well in flanges that experience thermal cycling or limited initial bolt load. Heat exchanger gaskets are the most economical way of meeting low emission requirements.

Operating limits

Maximum Operating Temperature
1000 °F (550 °C) Steam
850 °F (450 °C) Air
PH Range 0 - 14

Composition

Flexible graphite infused over a corrugated metal core (316L / 1.4404, 304 /1.4301)

Table of Heat Exchanger Gasket Shapes
See section 3 - Metallic Jacketed Gaskets