



flexible graphite gasket sheet with insert of fiberglass fabric **GRA-FLEX G**

N° 06.G/e.0503

Expanded flexible graphite sheets reinforced with a thin, high temperature resistant fiberglass fabric. The fiberglass non-metallic insertion provides excellent mechanical strength and handling characteristics, while allowing a very easy cutting of gaskets into any shape and superior tightness effectiveness.

GRA-FLEX G gaskets exhibit outstanding creep strength and chemical stability. They do not lose weight nor thickness when exposed to high temperature, making re-tightening not necessary. GRA-FLEX G complies with DIN 28091-4 (technical delivery conditions for graphite-based gasket sheets) with designation GR-O-K-Z.

Applications:

Ideal for a wide range of applications, including high temperature and pressure, mechanical and thermal cycles and shocks. Suitable to confine steam, as well as most chemicals, exception being strong oxidizing media such as nitric acid, chromic acid, etc. (refer to Graflex chemical resistance table). Recommended for standard ANSI 150 and 300 Class flanges, pumps and fittings, light flanges.

Technical Data - typical values relative to 1.5 mm thickness

Insert	Fiberglass fabric		
Continuous use safe maximum temperature *			
- medium: air or oxidizing media	450		°C
- medium: reducing or inert (i.e. steam), but joint exposed to air	550		°C
- medium and joint atmosphere: reducing or inert	600		°C
Continuous use minimum temperature *	- 200		°C
Continuous use maximum pressure *	100		bar
Density of the graphite	DIN 3754	1.0 ÷ 1.1	g/cm ³
Compressibility	ASTM F36	45	%
Recovery	ASTM F36	10 ÷ 25	%
Stress retention - 16 h, 300°C, 50 N/mm ²	DIN 52913	47	N/mm ²
Stress relaxation 22 h, 400°C, 20 N/mm ²	ASTM F 38	< 5	%
Compression strength at room temperature		> 160	N/mm ²
“ “ at 300°C		140	N/mm ²
Tensile strength (min.)	ASTM F 104	20	N/mm ²
Gas sealability to helium 40 bar, room temp.	DIN 3535/4	0,6	ml/min
to nitrogen 40 bar, 400°C		5	ml/min
Gasket constants according to DIN 28090-1: nitrogen leakage < 1 mg/sm			
σ _{VU}		20	N/mm ²
m ₁		3	

* Temperature and pressure limits are given for proper assembly conditions and gasket design. They do not hold simultaneously.

Graphite chemical composition

Purity grades:		STANDARD	PREMIUM	
Ash content	ASTM C 561	1.0	< 0.5	%
Leachable chloride ion content	ASTM F 1277	< 40	< 10	ppm
Leachable fluoride ion content	ASTM F 1277	< 40	< 10	ppm

Supply data:

Sheet size - standard: 1x1, 1.5x1.5 m (upon request: 1x2, 1x3 m)

Thickness - standard: 1.0 – 1.5 – 2.0 – 3.0 mm

References:

DIN 28091-4: technical delivery conditions for graphite-based gasket sheets: GR-O-K-Z

Ecole Polytechnique of Montreal: certification as “fire-safe gasket material” per FITT test

Data here reported correspond to laboratory and field tests typical results, and are meant as non-binding guideline for gasket selection. Therefore, no guarantee claim can be inferred from these data. When needed, we shall be pleased to assist you with specific technical assistance.