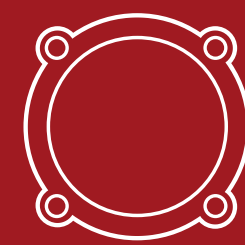




A QUICK GUIDE TO **GRAPHITE GASKETS**

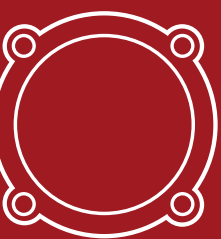


GRAPHITE GASKETS

Expanded graphite, also known as flexible graphite, is produced by treating and heating natural graphite flakes, then compressing them into sheets.

Its conformable structure accommodates minor flange surface irregularities.

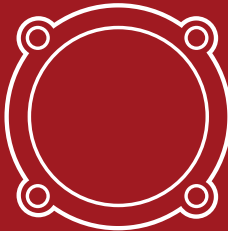
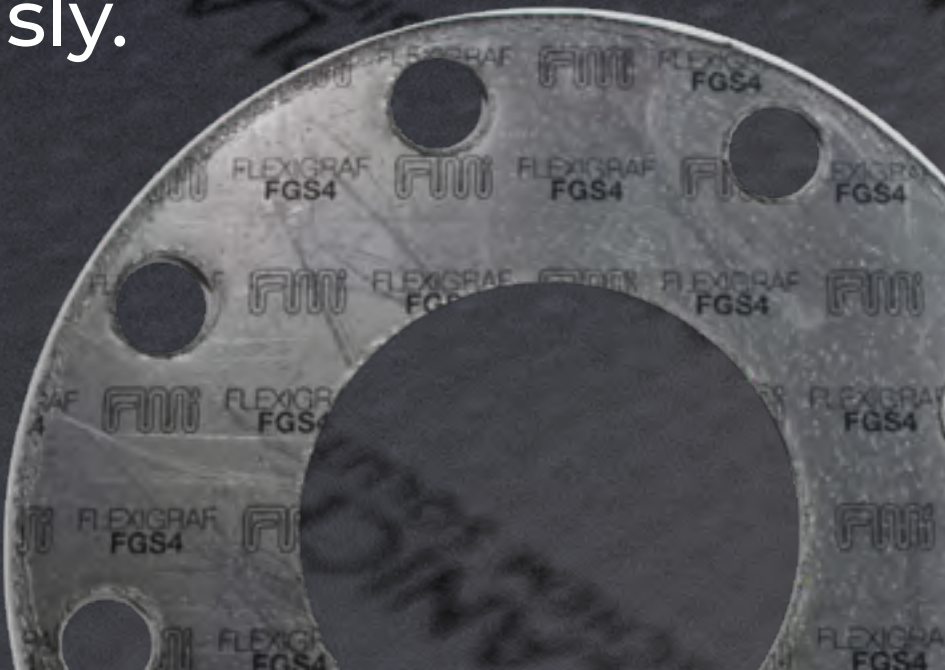
Available with or without metal reinforcement, it is used for steam, hot oils, gases and compatible process chemicals.



OPERATING RANGES

MATERIAL	TEMPERATURE RANGE	MAX PRESSURE
PURE GRAPHITE	Min -200 °C Max +500 °C	100 BAR
REINFORCED GRAPHITE	Min -200 °C Max +500 °C	150 BAR
TANGED GRAPHITE	Min -200 °C Max +500 °C	200 BAR
FOIL GRAPHITE	Min -200 °C Max +400 °C	200 BAR

Figures are indicative and require grade-specific confirmation. Maximum temperature and pressure may not apply simultaneously.



PURE GRAPHITE

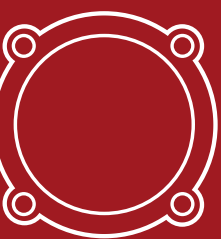
Pure graphite gasket sheets contain expanded graphite without a metal insert.

High conformability supports sealing, while lower handling strength requires care with large profiles and narrow sections.



- ▶ Confined static sealing joints
- ▶ Pump and valve body gaskets
- ▶ Compatible gas & fluid connections

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gaskets**

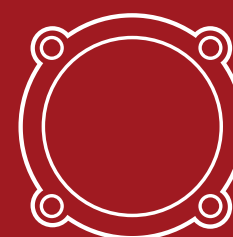


REINFORCED GRAPHITE

Reinforced graphite combines expanded graphite with a metal insert to improve handling strength and load-bearing properties.



- ▶ Steam pipework & valve flanges
- ▶ Heat exchanger connections
- ▶ Refinery & chemical process joints



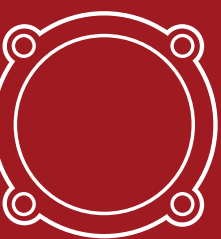
TANGED METAL REINFORCEMENT

A metal sheet with projecting tangs mechanically grips the graphite layers without relying on an adhesive bond.

This construction improves handling strength and resistance to blowout.



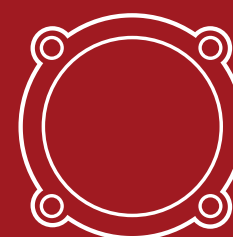
- ▶ Confined static sealing joints
- ▶ Pump and valve body gaskets
- ▶ Compatible gas & fluid connections



WIRE MESH REINFORCEMENT

Wire mesh reinforces graphite, helping resist tearing, extrusion and blowout while maintaining dimensional stability and the conformability needed for effective sealing.

- ▶ Steam pipework connections
- ▶ Pump & valve body joints
- ▶ Chemical process flanges



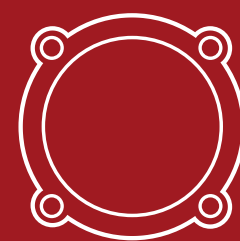
METAL FOIL REINFORCEMENT

Graphite layers are laminated around a thin metal foil insert, improving handling and load-bearing properties.

The foil metal and bonding method influence the laminate's operating limits.



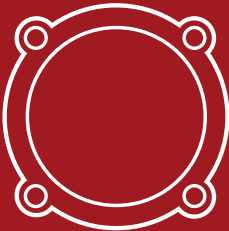
- ▶ Steam and hot-fluid flanges
- ▶ Liquid-level gauge seals
- ▶ Suitable joints with limited bolt loading



FLEXIGRAF & UNIGRAF

Dobson Gaskets is the sole distributor of Panichem gasket materials in the UK.

MATERIAL	COMPOSITION	TEMP. RANGE	MAX PRESSURE
FLEXIGRAF FGS1	Pure nickel foil core	Min -200 °C Max +550 °C	150 Bar
FLEXIGRAF FGS3	Tanged stainless steel core	Min -200 °C Max +550 °C	200 Bar
FLEXIGRAF FGS4	Flat stainless steel core	Min -200 °C Max +550 °C	150 Bar
FLEXIGRAF FGS1200	Pure aluminium alloy core	Min -200 °C Max +550 °C	100 Bar
FLEXIGRAF MULTIFLEX HPT	Tanged stainless steel multilayers core	Min -200 °C Max +550 °C	300 Bar
FLEXIGRAF MULTIFLEX	Flat stainless steel multilayers core	Min -200 °C Max +550 °C	300 Bar
FLEXIGRAF UNIGRAPH 500	Polymer coating both sides	Min -200 °C Max +450 °C	100 Bar
FLEXIGRAF UNIGRAPH 500 HD	Polymer coating both sides	Min -200 °C Max +450 °C	100 Bar
FLEXIGRAF UNIMETAL	Wire mesh with polymer coating both sides	Min -200 °C Max +450 °C	150 Bar





THE GRAPHITE GASKET EXPERTS

Dobson Gaskets combines material knowledge with application experience to help specify graphite gaskets for the required operating duty.

TALK TO OUR TEAM

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