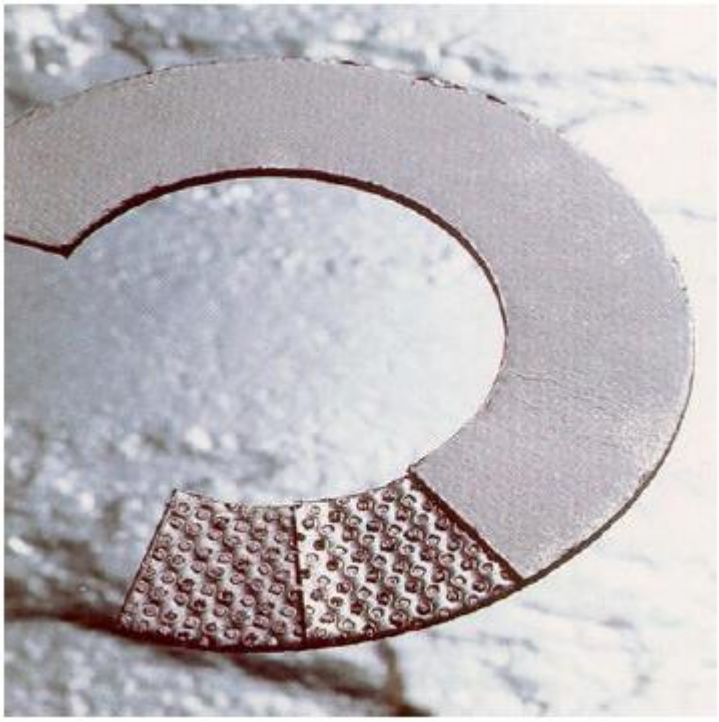
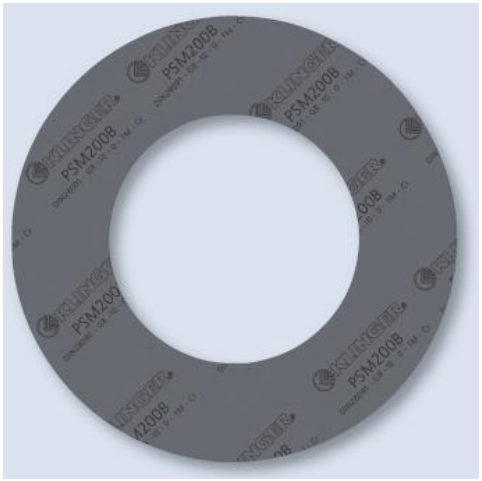
KLINGER

Graphite-Laminate PSM



Fire Safe to API 6FB
Gas Approved/AGA certified to AS4623-2008 Class III (2 MPa)

KLINGER® graphite-laminate PSM



Characteristic and main applications:

Gasket material made of pure expanded graphite with a 0.1 mm thick insert of tanged stainless steel sheet for improved blowout resistance and ease of handling. Due to the excellent chemical and thermal capabilities of graphite it is used extensively throughout the petrochemical and chemical industries for process duties and steam applications.

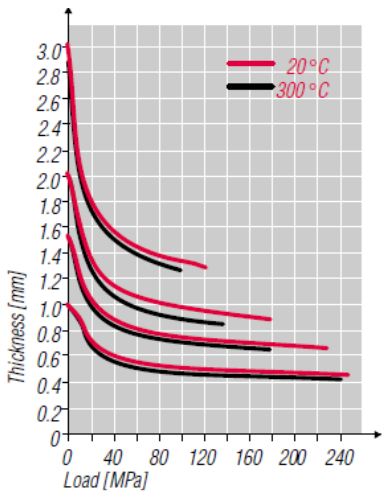
Technical data KLINGER® graphite-laminate PSM			1.0 mm	1.5 mm	2.0 mm
Density of the graphite layer	DIN 28090-2	g/cm³	1.0	1.0	1.0
Purity of graphite [1]	DIN 51903	%	≥ 99.0	≥ 99.0	≥ 99.0
Metallic reinforcement	Tanged metal		1.4401 (or 1.4404)		
	Thickness	mm	0.10	0.10	0.10
	Number of sheets		1	1	1
Compressibility ASTM F36 J	ASTM F36 J	%	25 - 35	30 - 40	35 - 45
Recovery ASTM F36 J	ASTM F36 J	%	15 - 20	15 - 20	12 - 18
Stress relaxation DIN 52913	DIN 52913, 16 h/ 50 MPa/ 300°C	MPa	≥ 46	≥ 46	≥ 46
Klinger cold/hot compression 50 MPa	Thickness decrease at 23°C	%	30 - 40	35 - 45	35 - 45
(KLINGER test method)	Thickness decrease at 300°C	%	1 - 3	1 - 3	1 - 3
Specific leakrate λ	DIN 3535-6	mg/(s*m)	< 0.06	< 0.10	< 0.10
Chloride content of graphite layer [2]	DIN 28090-2	ppm	≤ 40	≤ 40	≤ 40

1). Also available in 99.8% pure nuclear grade on request.
2). Detailed specifications of the graphite foils are available on request.

Gasket Factors per ASTM:

Thickness	M	Y (MPa)
1.5 mm	2.5	18
2.0 mm	2.0	10
3.0 mm	2.0	6

Load diagram:
(typical values)



General Properties:

- Excellent resistance to steam
- Resistant to virtually all media
- Outstanding resistance to high and low temperature (max. temp.: 450ºC (in oxidizing atmosphere) ; 3000ºC (in non-oxidizing atmosphere); 650ºC (Saturated Steam)
- High compressibility
- Good leakage properties
- Unlimited storage life (subject to correct storage conditions)
- Anti stick finish on both sides

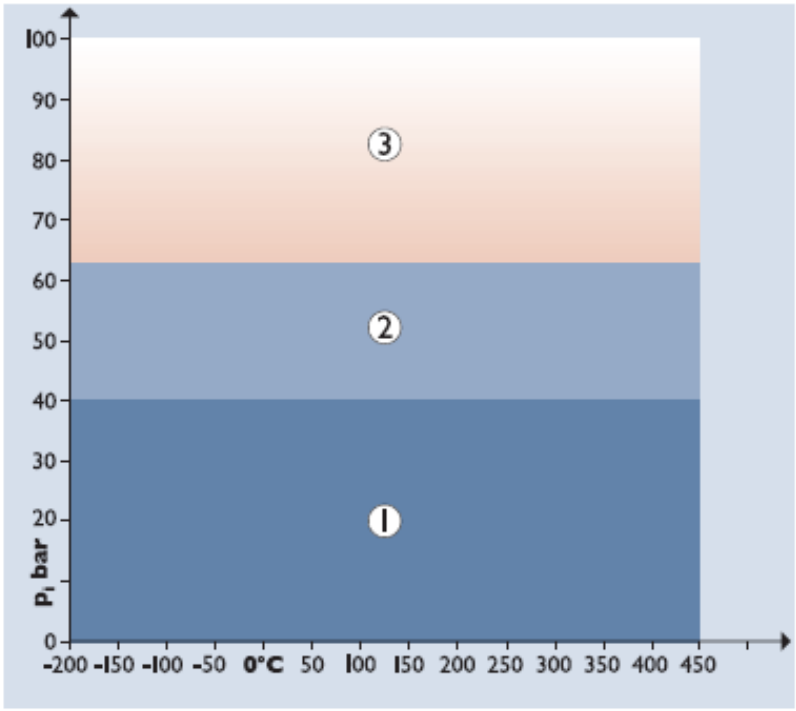
Tests and Certifications:

- BAM approval for use with oxygen ,130 bar / 200ºC
- WRc Approval
- DVGW Gas, DIN 3535-6 Approval
- GL (Lloyd) approval
- Fire Safe Approval, API 6FB
- AGA Gas Approval per AS4623-2008 Class III (2MPa pressure)

KLINGER® graphite-laminate PSM

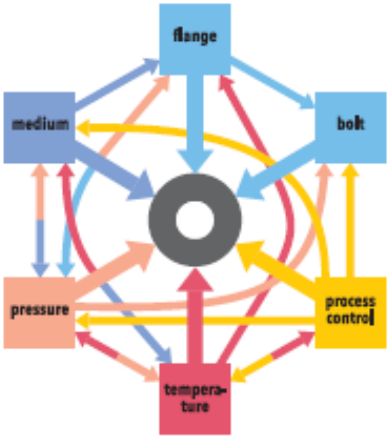
Function and durability

The performance and service life of KLINGER® gaskets depend in large measure on proper storage and fitting, factors beyond the manufactor's control. We can, however, vouch for the excellent quality of our products.
With this in mind, please also observe our installation instructions.



The many and varied demands made on gaskets

The successful operation of a gasket depends upon a multiplicity of factors. Many who use static gaskets believe that the values quoted for maximum admissible temperature and maximum operating pressure are inherent properties or characteristics of gaskets and gasket materials.



Unfortunately, this is not the case. The maximum temperatures and pressures at which gaskets may be used are influenced by a large number of factors.

Therefore a definite statement of these values for gasket material is not possible.

So why does Klinger provide pT diagrams?

For the reasons given the pT diagram is not infallible:
It serves as a rough guide for the end user who often has only the operating temperatures and pres-sures to go on. Additional stresses such as greatly fluctuating load may significantly affect whether a gasket is suitable for the application.

The fields of decision

① If your operating temperatures and pressures fall within this field, a technical examination is normally unnecessary.

② If your operating temperatures and pressures are within this field, a technical examination is recommended.

③ If your operating temperatures and pressures are within this "open" field, a technical examination is always necessary.

Resistance to media must be taken into account in every case.

The three fields of decision do not indicate limits for the use of our material but they indicate a way to select the right gasket material.

Availability:

- Sheeting (mm): 1000 x 1000 , 1500 x 1500
- Thickness: (mm): 0.8, 1.0, 1.5, 2.0, 3.0
- Tolerance: Thickness ±5% of nominal thickness / Sheet ±5 mm of nominal size

Certified acc. to DIN EN ISO 9001:2008.

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