

# **KLINGER®** Graphite Laminate TSM

KLINGER<sup>®</sup> Graphite Laminate TSM fulfills the TA-Luft requirements and offers safety at high temperatures up to 450°C.

Glueless gasket material consisting of impregnated expanded graphite and a 0.1mm thick tanged stainless steel insert.

Stable physical properties over the whole temperature range.

#### **Key features**:

#### **Benefits**:

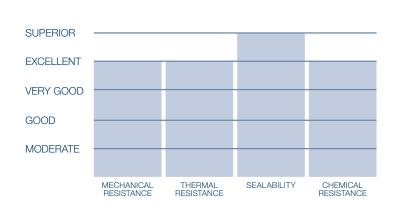
- » Mechanically bonded tanged stainless steel insert
- » Excellent high temperature resistance
- » Excellent chemical resistance

- » Superior tightness (TA-Luft approval)
- » Stable physical properties over the whole temperature range

#### Certificates and approvals:

» TA-Luft (Clean Air)





#### **Industries**:





## Typical technical data for KLINGER® Graphite Laminate TSM:

			TSM 150B	TSM 200B	TSM 300B-2
Thickness		mm	1.5	2.0	3.0
Density of graphite		g/cm <sup>3</sup>	1.0	1.0	1.0
Ash content graphite DIN 51903		%	≤ 2.0	≤ 2.0	≤ 2.0
Insert	Material		1.4401 (or 1.4404)		
Tanged stainless steel sheet	Thickness	mm	0.1	0.1	0.1
	Number of inserts		1	1	2
Compressibility ASTM F36A		%	30 - 45	30 - 45	30 - 45
Recovery ASTM F36A		%	15 -25	15 -25	15 -25
Residual stress DIN 52913	$\sigma_{_D}$ 16h, 300°C, 50 N/mm <sup>2</sup>	N/mm <sup>2</sup>	≥ 45	≥ 45	≥ 45

### Dimensions of the standard sheets:

Sizes:

1000 x 1000 mm

#### Thicknesses:

1.5 mm, 2.0 mm, 3.0 mm

#### Tolerances:

Thickness  $\pm$  5% Length  $\pm$  4 mm, width  $\pm$  4 mm

Other thicknesses, sizes and inserts on request.

#### 200-180-160-140-120-100-2 80-60-40-1 $\frac{8}{2}$ -0

pT diagram for thickness 2.0 mm:

-200 -150 -100 -50 0°C 50 100 150 200 250 300 350 400 450

1

In area one, the gasket material is normally suitable subject to chemical compatibility.

2

In area two, the gasket material may be suitable but a technical evaluation is recommended.

## 3

In area three, do not install the gasket without a technical evaluation.

Always refer to the chemical resistance of the gasket to the media.

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Certified acc. to DIN EN ISO 9001:2008 Subject to technical alterations. Status: June 2016



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