



RivaTherm-Compact consists of a stainless steel sheet as carrier material and a 0.5 mm graphite foil glued on both sides as sealing material. All common stainless steel qualities are available. Sheet metal carriers made of other metallic materials with a smooth, scale-free surface are also possible.

Due to the low temperature resistance of soft material sheets, carrier materials made of soft material sheets for reinforcing graphite foils are only suitable for certain areas of application.

Larger seals can be handled particularly well with 2 mm or 3 mm thick carrier sheets. Sheet and support thickness can be freely selected. However, a thicker sheet metal insert does not increase the resilience of the seal.

The surface pressure for pre-forming is very low at  $\sigma_v = 10 \text{ N/mm}^2$ . The acceptable surface pressure with a graphite layer of 0.5 mm and 1.0 mm with a width/height ratio of the layers is  $b_D/h_D < 12$  for 20 °C up to and including 200 °C  $\sigma_v = 120 \text{ N/mm}^2$ ; for 300 °C  $\sigma_v = 110 \text{ N/mm}^2$ ; 400 °C and 500 °C  $\sigma_v = 100 \text{ N/mm}^2$ .

For graphite supports thicker than 1 mm, the maximum bearable surface pressures are lower than those mentioned above and the linings can be pushed out more easily by the internal pressure if not installed properly.

The leakage flow that may then occur, causes the sheet metal base to vibrate which can lead to fatigue fracture after a short time. To avoid this, the minimum surface pressure in the operating state should be  $\sigma_{BU} = 1.5 \cdot p \text{ (N/mm}^2\text{)}$  – but at least 10 N/mm<sup>2</sup>.

## Forms of supply

RivaTherm-Compact can only be processed with special tools. Therefore, only finished seals are delivered. The seals can be made either round or in the form of frames. Seals with holes or retaining straps are also possible.

The dimensions can be up to several meters and only transport possibilities are a limitation.

1 mm thick stainless steel sheet 1.4541 is used as standard, on which 0.5 mm graphite is glued on both sides. On request, the carrier ring can also be coated on both sides with high-purity 99.85 % C nuclear graphite with a chloride content of < 20ppm. If the carbon content is not specified, graphite layers in industrial quality 98% C, with a chloride content of < 50ppm, are bonded.

Min. surface pressure:	10 N/mm <sup>2</sup>
Min. surface pressure:	100 N/mm <sup>2</sup>
Min. temperature:	-200 °C
Max. temperature:	500 °C