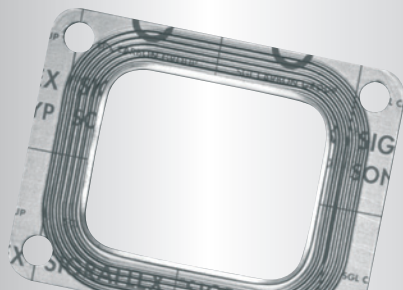
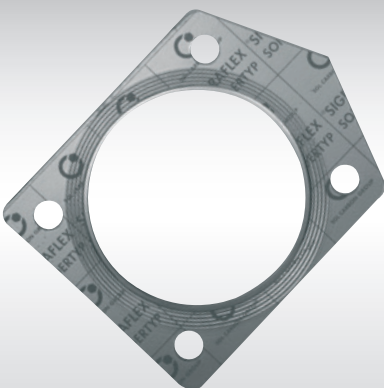
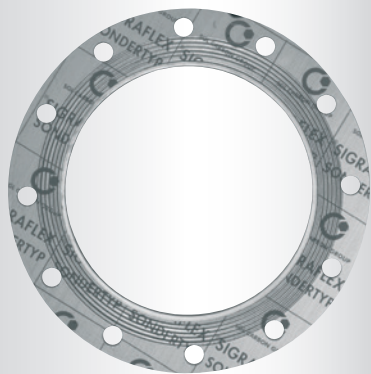




WAVELINE-WLP®

Keeping leakage to a minimum.
Our expertise for a clean environment.



THE PROBLEM

- » When conventional flat gaskets are used in a flange with a smooth sealing strip or other similar connection, the desired tightness is often not achieved. Due to the low bolt forces and flexural rigidity of the flanges, the surface pressure necessary for 'sealing' cannot be applied to the gasket. For example, in a flange according to DIN 2635 with nominal diameter 50/pressure rating 40 and bolt quality 5.6, an effective surface pressure of approx. 28 N/mm² is achieved at 80 % bolt load.
- » In the production of flat gasket semi-finished products (sheet material), the use of fibres or metallic inserts, etc. will inevitably result in an inhomogeneous gasket structure. This structure will exhibit slight diffusion through the gasket cross-section.
- » To compress the seal structure sufficiently gas-tight and to ensure micro-sealing of the surfaces, the available surface pressure is often not sufficient. If these sealing connections are tested by pressure tests, unacceptable leakage will be found.

THE SOLUTION

- » Waveline WLP® gaskets provide the perfect solution to these problems without the need to change the shape of the flange or the bolt quality.
- » The corrugated flat gasket is based on the following idea: a high surface pressure is applied to a conventional flat gasket prior to installation, which gives the gasket a corrugated cross-sectional structure.



PREVIOUS DISADVANTAGES

- » Relatively high leakage, e.g. in case of nitrogen (DVGW checks 1 ml/min = 525.6 litres/year)
- » Pollution (especially in relation to gas)

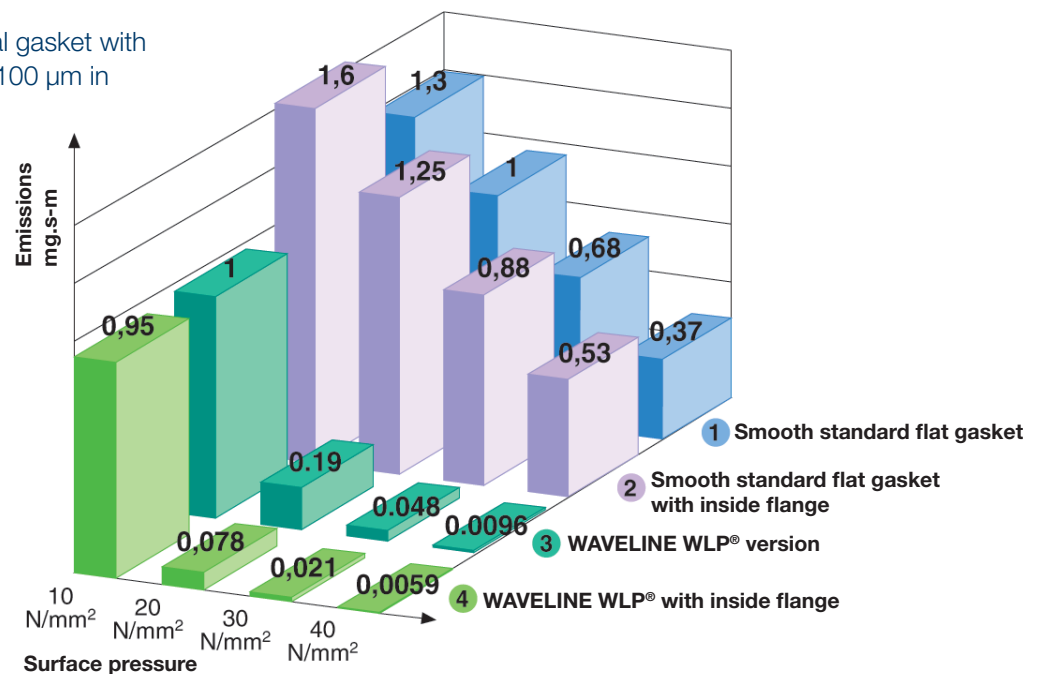


ADVANTAGES

- » Low leakage
- » Reduced costs thanks to lower loss
- » Increased buckling resistance (in case of graphite)
- » Environmentally friendly
- » Improved scratch resistance (in case of graphite)

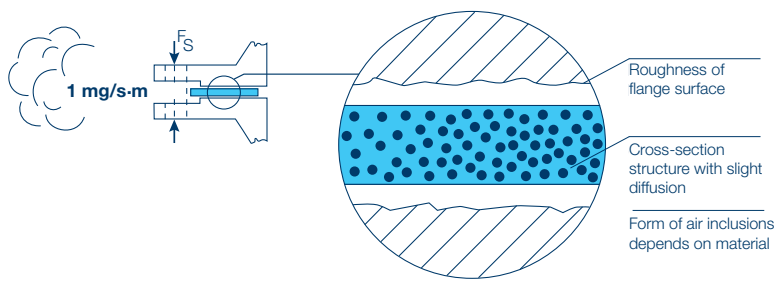
Leak rate comparison at 40 bar nitrogen

Example of a soft material gasket with a practical roughness of 100 µm in sealing area.



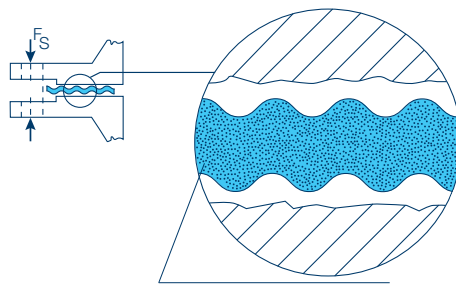
Gasket comparison

Standard flat gasket:



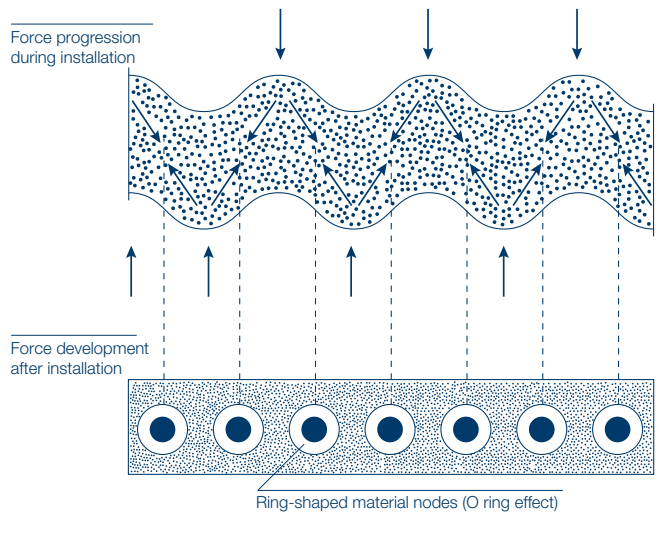
Waveline WLP® gasket:

Standard flat gasket with Waveline WLP®



Graphite: air pockets pressed out.
Density 1.4.

Standard flat gasket with Waveline WLP® during/after installation



Standard flat gasket with Waveline WLP® after installation

