



FlatSeal™ Guide 3

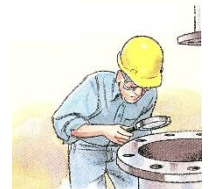
Installation Instructions

1. Cleaning and Inspection

Remove any foreign material and debris from sealing surfaces, bolts, studs, nuts and washers. Pay attention that you do not damage the sealing surface and make sure to use a suitable tool.

Bolts, nuts and washers must be checked for burrs or cracks. Sealing surfaces must be examined for faults and radial scratches. Any damaged components must be replaced.

Material and dimensions of the flat gasket must correspond to the specifications.



2. Fitting the Flat Gasket

Insert the gasket smoothly into the space between the two flanges. The flanges should be aligned without using excessive force, and the sealing surfaces must be positioned in plane-parallel to each other. Any deviations must be corrected.

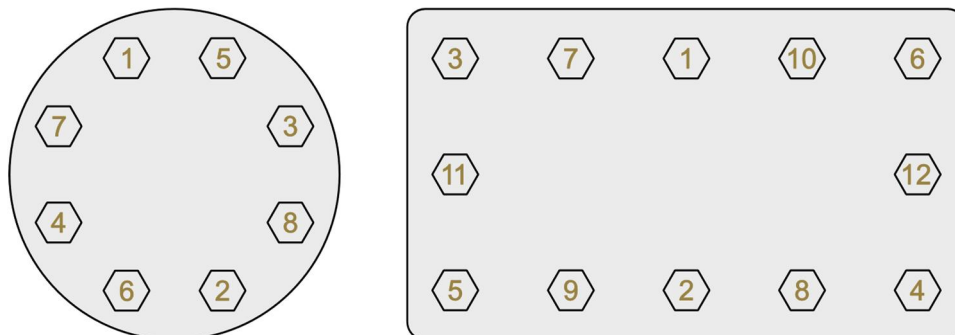
The flat gasket must be centered by the stud-bolts or other means. It should be clean, dry and installed without jointing compounds (lubricants). **Attention:** Graphite gaskets (HMF30 Series) must not be assembled in wet conditions!



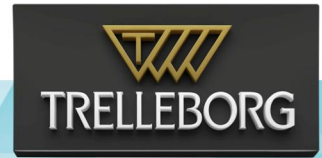
3. Lubrication and Tightening of Bolts

Use only specified or approved (check operating temperature) lubricants. Apply lubricant uniformly to all thread, nut and load-bearing surfaces. Ensure the lubricant does not contaminate either the flange or gasket surface. The screw lubricant used must comply with the specifications for the tightening torque. The friction on the thread and the head support must be considered when calculating the tightening torque. We recommend using nitride or hardened washers.

Bolts are always tightened crosswise. After tightening the bolts by hand (for graphite gaskets, the first bolt should never be tightened too much), use the torque-wrench three times for each bolt, gradually increasing the assembly torque each time (i.e., first time: 30%, second time: 60%, third time: 100%). Finally, each bolt should be checked in a clockwise order. Always use a calibrated torque wrench or other controlled tensioning device.



Make sure to install the gasket with sufficient surface pressure.



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Further Instructions

Never retighten elastomer-bonded, asbestos-free, fiber gaskets after they have been exposed to high temperatures. Only retighten under ambient temperature and without pressure.

Removed soft gaskets should never be refitted.

Further Information

Other FlatSeal™ Guides deal with the following basic topics:

FlatSeal™ Guide 1 – Fundamentals of Flat Gasket Technology

FlatSeal™ Guide 2 – Choice of Sealing Material

FlatSeal™ Guide 3 – Installation Instructions

FlatSeal™ Guide 4 – Optimized Gasket Geometry

FlatSeal™ Guide 5 – Lubrication of Bolts

FlatSeal™ Guide 6 – Roughness of Sealing Surfaces

FlatSeal™ Guide 7 – Service Life of Sealing Systems

FlatSeal™ Guide 8 – Shelf Life of Sealing Materials

FlatSeal™ Guide 9 – Tolerances Cut Parts

FlatSeal™ Guide 10 – Temperature Test

