GORE® JOINT SEALANT

GORE® Joint Sealant is ideally suited for large or complex steel flanges and equipment to achieve an incredibly tight seal. Available on a spool, the user can easily and quickly form a gasket in place on the flange, and achieve significant savings in material, labor, and lead-time over traditional large cut gaskets. Please follow the instructions below:

1. Gasket Selection

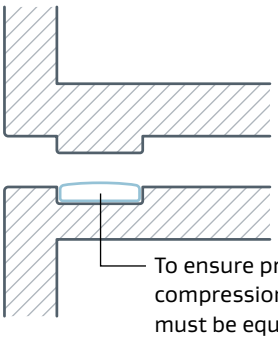
1.1 Select gasket width

For flat face flanges, raised face flanges, and manways: Measure the width of the sealing surface and reference the table below to select the nominal width of GORE® Joint Sealant.

For tongue and groove flanges: Select the nominal groove width.

Effective Sealing Width (mm)	Effective Sealing Width (inches)	Gasket Nominal Width (mm)	Gasket Nominal Width (inches)
3–7	1/8–1/4	3	1/8
7–10	1/4–3/8	5	3/16
10–17	3/8–5/8	7	1/4
17–25	5/8–1	10	3/8
25–40	1–1.5	14	1/2
40–50	1.5–2	17	5/8
50–65	2–2.5	20	3/4
65+	2.5+	25	1

Tongue & Groove



To ensure proper gasket compression, the tongue must be equal to or taller than the groove depth.

Figure 1

ATTENTION

Perform an engineering torque estimation to confirm a gasket stress of at least 17 MPa (2500 psi) can be achieved.

2. Gasket Installation

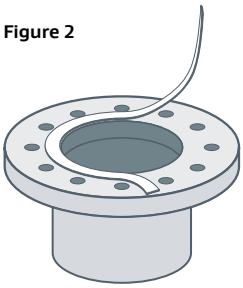
2.1 Open and prepare flanged connection

For ease of installation, open the flanges a minimum of 15 cm (6"). Ensure the flanges are well secured for a safe working environment. To ensure optimal adhesion, remove all oil, graphite, and other residue. The flange surface must be completely dry for the gasket installation adhesive to adhere.

2.2 Postion and apply Joint Sealant

To prevent the adhesive from picking up dirt, do not remove the backing-strip until just before installing the joint sealant. Position the end of the joint sealant around the starting bolt hole as shown in Figure 2.

Figure 2



Apply the joint sealant in sections of about 25 cm (1') at a time, around the full circumference of the flange. Ensure that each section is properly positioned and adhered to the flange before installing the next section. See Figure 3 for typical installation patterns.

ATTENTION

In cold conditions, gently warm the joint sealant to approximately room temperature before installation to make the adhesive more sticky.

2.3 Complete the Joint Sealant gasket

Complete the gasket by overlapping both ends at the starting bolt hole and cut away excess material. See below illustrations.

3. Torquing

3.1 Select a Torque

As a general rule, it is advisable to make the best possible use of the available bolt force. However, the torque recommendations of the equipment manufacturer must be followed at all times.

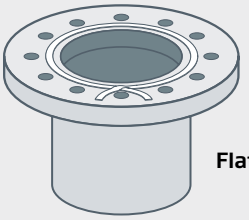
3.2 Flange Tightening Procedure

Unless the equipment manufacturer specializes a certain pattern, follow the below procedure:

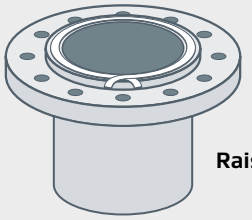
- Close the flanged connection
- Use a calibrated torque wrench to tighten lubricated bolts, working in a star pattern with three incremental passes: one each at 30%, 60% and 100% of recommended torque.
- Follow with circular passes at 100% of recommended torque until no further nut rotation occurs.
- Allow at least 4 hours for flange system relaxation, followed by circular passes at 100% of recommended torque until no further nut rotation occurs.

For additional detail, refer to industry-standard best practices such as ESA/FSA “Gasket Installation Procedures” or ASME PCC-1.

Standard Flanges

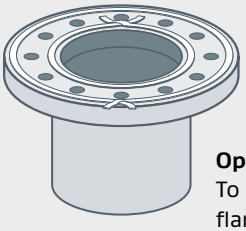


Flat Faced

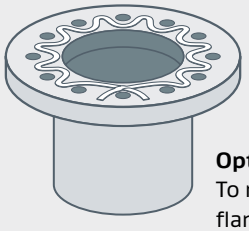


Raised Faced

Fragile Flanges

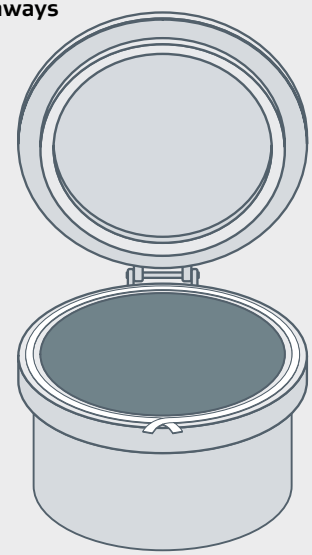


Option 1:
To prevent flange rotation.



Option 2:
To minimize flange rotation.

Manways



For self-energizing manways and access doors, please contact your local Gore representative for installation guidance.

Figure 3

4. Installation – Joint Sealant with nominal width ≥ 17 mm

The skive cut technique is recommended to complete the gasket when 17 mm (5/8") or wider GORE® Joint Sealant is being used

4.1 Skive Cut Technique

Some applications do not have enough force to compress the additional material at the overlap. This is usually the case for Joint Sealant with a nominal width ≥ 17 mm, therefore Gore recommends the skive cut technique for these sizes. In general, the skive cut technique can always be used as an alternative to step 2.3. Repeat steps 2.1 to 2.2 but perform an initial and closing skive cut as described below.

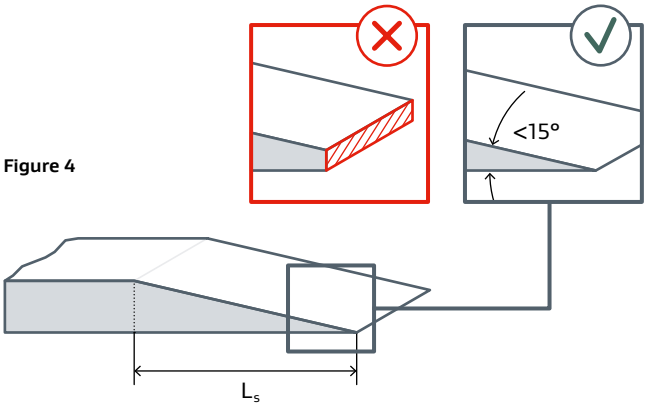


Figure 4

4.2 Perform initial skive cut

Unwind about 50 cm (1.5') of GORE® Joint Sealant onto a clean, firm surface. Do not use the flange surface for this purpose. Cut the end of the tape with a sharp knife using the skiving technique.

4.3 Position and apply Joint Sealant

- Start applying the joint sealant gasket by positioning the skived end of the joint sealant at the location of a bolt. Try to avoid locations where obstructions will hinder access for the second skive cut.
- To prevent the adhesive from picking up dirt, do not remove the backing-strip until just before installing the gasket tape. Be careful not to dislodge the adhesive from the gasket while peeling off the backing strip.
- Bend small increments of gasket tape to the required flange arc and apply the side with the exposed adhesive to the flange, pressing out any gaps between the gasket and flange surface.
- Continue installing the base layer in sections of about 25 cm (1') at a time, around the full circumference of the flange. Ensure that each section is properly positioned and adhered to the flange before installing the next section.

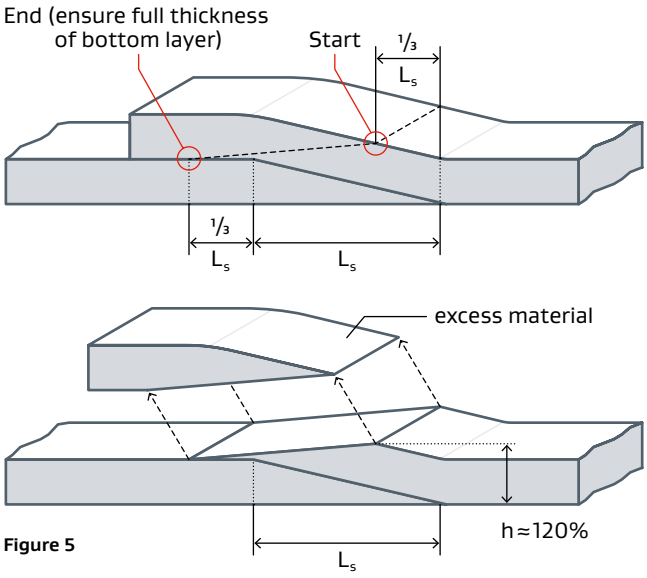


Figure 5

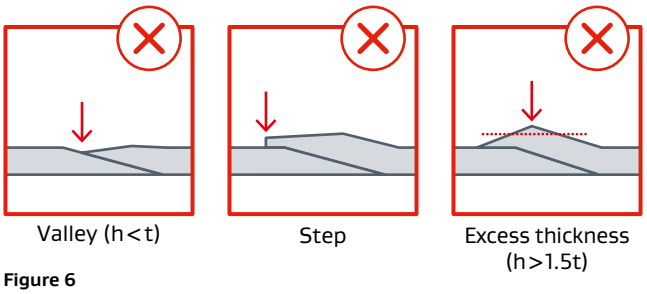
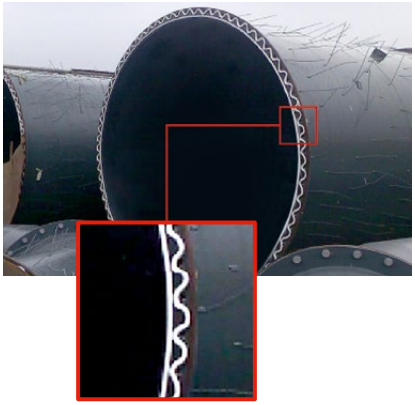


Figure 6



4.4 Closing Skive Cut

Complete the gasket by placing the joint sealant over the first skived end, extending the joint sealant at least ~15 mm (1/2") beyond the top of the skive ramp, and cutting the end square. Press out any gaps between the two gasket layers at the first skive ramp.

- To prepare for the second (final) skive cut, locate and mark the start and end points.
- The start point of the second skive cut is located at the top of the gasket material, at a distance of 1/3 (L_s) from the pointed end of the bottom skive cut (see Figure 4). This will make the tallest section of the skive 1/3 thicker than the base-layer gasket, indicated by (h) in Figure 5.
- The end point of the second skive cut is located where the two gasket tape layers meet, at a distance of 1/3 (L_s) past the top of the first skive ramp.
- On the side of the joint sealant, mark a straight line that connects the start and end points of the second skive cut.
- Cut away the gasket material along the marked line, keeping the knife blade parallel to the flange face to ensure that the skive is approximately the same length from OD to ID.
- Follow the torquing guidelines according to section 3.

For further questions about installation, or about our gaskets in general, contact your local Gore representative.

For gasket selection criteria, technical information, and a complete listing of local sales offices, please visit **gore.com/sealants**.

FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.
All technical information and advice given here is based on Gore's previous experiences and/or test results. Gore gives this information to the best of its knowledge, but assumes no legal responsibility. Customers are asked to check the suitability and usability in the specific application, since the performance of the product can only be judged when all necessary operating data are available. The above information is subject to change and is not to be used for specification purposes. Gore's terms and conditions of sale apply to the sale of the products by Gore.

GORE, *Together, improving life* and designs are trademarks of W. L. Gore & Associates. © 2013–2023 W. L. Gore & Associates GmbH

PLEASE VISIT GORE.COM/SEALANTS TO FIND CONTACT DETAILS FOR ALL LOCAL SALES OFFICES.

North America / South America

W. L. Gore & Associates, Inc. (USA)
T +1 800 654 4229
F +1 410 506 8585
E sealants@wlgore.com

Europe / Middle East / Russia / Africa

W. L. Gore & Associates GmbH (Germany)
T +49 89 4612 2215
F +49 89 4612 43780
E sealants_EU@wlgore.com

Asia / Australia

Gore Industrial Products Trade (Shanghai) Co., Ltd. (China)
T +86 21 5172 8299
F +86 21 6247 9199
E sealants_AP@wlgore.com

SEAL-082-R1-TEC-EN-MAR23