



GORE® Series 500

GASKET TAPE



Installation Instructions



Check out the online installation videos at www.gore.com/s500-installation

GORE® Series 500 gasket tape helps to achieve greater sealing efficiencies with large steel piping and equipment.

Please follow the instructions below:

1. Size Selection

1.1 Gasket Width (b_0)

Select the gasket width that provides the following coverage:

For raised face and flat face flanges:

- 30 – 50% seating when using standard flanges according to EN or JIS.
- 50 – 75% seating when using flanges according to ANSI standard.
- The gasket width for non standard flanges should be designed by calculation to ensure sufficient gasket stress.

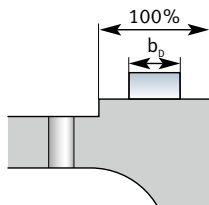


Figure 1

For tongue and groove flanges:

- The entire width of the groove should be covered by the gasket.
- Ensure that the tongue is slightly taller than the groove depth.

For divider bars in heat exchangers:

- The gasket width should cover the entire divider bar width.

1.2 Gasket Thickness

- Most applications require one layer of 3 mm (1/8") gasket tape.
- Conversely for flanges with deviations > 1 mm (0.040"), the 6 mm (1/4") gasket tape is recommended.

2. Installation – Raised Face or Flat Face Flanges

2.1 Prepare the Flange

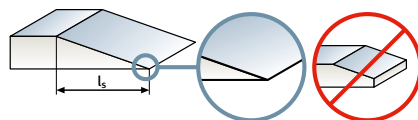
Open the flanges a minimum of 15 cm (6"). Completely clean the surface to ensure optimal adhesion. Remove all oil, graphite, and other residue.

2.2 Perform Initial Skive Cut

Unwind about 0.5 m (1.5 ft) of **GORE® Series 500 gasket tape**. Cut the end with a sharp knife on a clean, firm surface using the skiving technique.

The length of the skive cut, l_s , should match the dimension in table 1.

Figure 2



ATTENTION

It is critical that the skive runs out smoothly, avoiding any step. Be sure to use proper protective gloves when using a knife.

Table 1

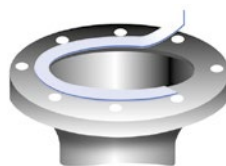
Tape thickness (t)	Skive cut length (l_s)	Maximum height (h)
3 mm (1/8")	15 – 20 mm (3/4")	3.5 – 5.0 mm (3/16")
6 mm (1/4")	25 – 40 mm (1 – 1/4")	6.5 – 9.0 mm (3/8")

2.3 Apply Gasket Tape

Position the skived end of the gasket tape near the designated starting bolt.

Remove the adhesive backing a little at a time, to prevent the adhesive strip from picking up dirt.

Figure 3



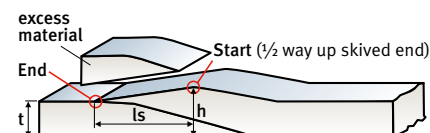
ATTENTION

No additional anti-adhesives spray or liquid should be applied to the flange surfaces. In cold conditions, gently warm the gasket tape before installation.

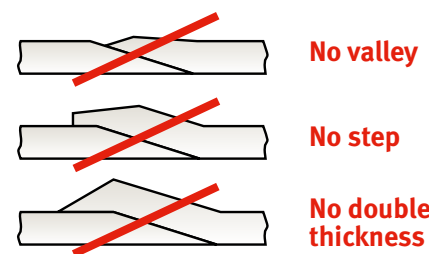
2.4 Complete the Layer of Gasket Tape

Complete the gasket by laying the tape over the skived end, extending beyond ~14 mm (1/2"). To prepare for the second and final skive cut, identify and mark the starting and end points.

Figure 4



Cut away the gasket material at an angle, so that the maximum height, h , matches the dimension in table 1.



For large flanges, multiple joints may be required. Joints should be placed at a bolt hole and as far from one-another as possible (~180° apart for 2 joints, and ~120° apart for 3 joints).

3. Installation – Tongue and Groove Flanges

3.1 On the tongue

Follow steps 2.1 through 2.4 to install the gasket tape. The adhesive strip allows for overhead gasket installation. When closing the flange ensure the gasket tape remains in position.

3.2 In the groove

Follow steps 2.1 through 2.3 to prepare and begin laying the gasket tape within the groove. To complete the gasket described in step 2.4, lay the last 30 cm (1 ft) of the gasket tape in the groove, and mark the location of the starting skive cut using a ball point pen.

Perform the closing skive cut on a flat surface. Complete the gasket by removing the rest of the adhesive backing, laying the gasket in the groove, and overlapping the skived cuts so they resemble Figure 4.



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Want to see a complete heat exchanger installation? Watch the online videos at

www.gore.com/s500-installation

Installation Instructions

4. Installation: Divider Bar Gaskets in Heat Exchangers

4.1 Install the outer gasket

Follow steps 2.1 through 2.4.

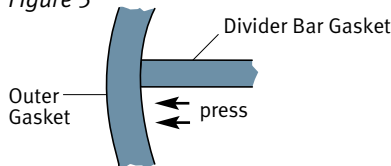
4.2. Prepare divider bar gasket

Completely clean the sealing surface per step 2.1. Measure and cut the gasket tape so the length is slightly oversized by 3 mm (1/8"). Perform a 90° butt cut at both ends.

4.3 Apply divider bar gasket

Remove the adhesive backing and firmly press the end of the gasket into the outer gasket. Lay the tape across the divider bar and firmly press the other end into the outer gasket.

Figure 5



ATTENTION

Divider bars in Heat Exchangers rarely operate at significant differential pressures, therefore, a butt cut pressed firmly into the outer flange gasket will provide an adequate and successful seal. Gore does not recommend any alternative cutting techniques or overlapping at the divider bar and circular gasket interface.

5. Installation: Rectangular Flanges

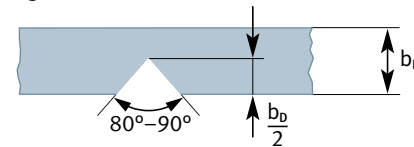
5.1 Prepare the gasket

Follow steps 2.1 through 2.3.

5.2 Turn sharp corners

In order to ensure uniform stress to seal, **GORE® Series 500 Gasket Tape** should be notched at sharp corners. When approaching a sharp corner, cut away an 80–90° notch from the inner edge of the tape as shown in figure 6.

Figure 6



CAUTION

Ensure you leave half the gasket intact.

Bend the gasket around the corner. It is then held in place by the adhesive backing.

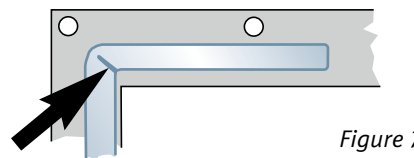


Figure 7

5.3 Complete layer of gasket tape

Follow step 2.4.

6. Installation: Severe Flange Deviations

Should the flanges show irregularities of more than 2 mm (0,080"), a shimming with overlaps can be used. In such cases consult a Gore associate.

7. Torquing

7.1 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.

7.2 Flange Tightening Procedure

Unless the equipment manufacturer specializes a certain pattern, utilize the star pattern, multiple pass, and incremental torque. Refer to the ESA/FSA "Gasket Installation Procedures" for more detailed information on the recommended installation practices.

7.3 Retorque

Retorque is recommended once after the first temperature cycle and after the flange has cooled down to ambient temperature. A temperature cycle is defined as an internal temperature difference (ΔT) greater than 100°C (212°F) for at least 1 hour.

Be sure that the originally selected torque is maintained.

Should you have any further questions about installation, or about our gaskets in general, contact your local GORE representative.

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Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

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