



# ADVANCE

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## Flange Isolating Gasket Kit Installation Instructions



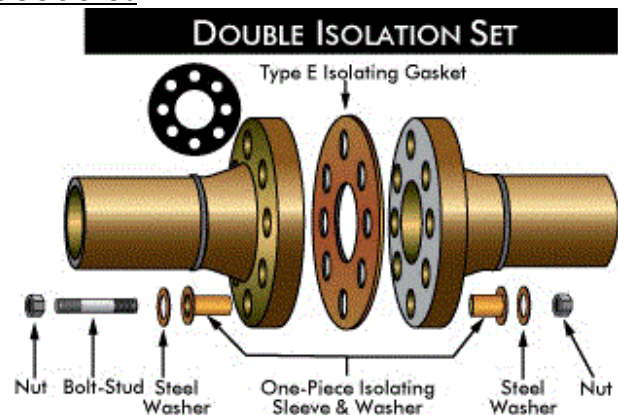
All piping and piping components to be installed should be free of foreign materials and construction debris.

The gasket seating surface should be free from scratches, pits, deposits, or gouges greater than specified in ASME PCC-1 (the surface finish should not exceed 250 AARH). If the seating surface is damaged, it should be machined within the tolerance of the flange specification. If re-machining is not possible, the flange should be replaced.

Stud tensioning can be achieved using a torque wrench and other tensioning devices, such as hydraulic wrenches. Force sensing bolts/studs may be used to measure the stresses in the studs rather than torque values. A uniformity in tensioning is more important than a particular stress or torque level.

### Installation Procedures

1. Inspect the gasket kit and verify that the material is as specified and that the material is not damaged.
2. Clean the bolting materials. Apply lubricant or anti-seizing compound to all threads required for engagement with nuts and nut facings.
3. Align flange faces so that they are parallel and concentric with each other within 0.010 inch without external loading or springing.



4. Line up bolt holes by driving two tapered drift pins, in opposite directions to each other, into two diametrically opposite bolt holes.
5. Check the alignment by inserting isolating sleeves into the bolt holes. If they do not slide in freely, the flanges are not lined up properly. Do not force sleeves into bolt holes as damage to sleeve material could occur.
6. Assemble and install the studs (or bolts) as follows:
  - (1) Run one nut on each stud so that two full threads are showing beyond the nut.
  - (2) Slide a steel washer, isolating washer, and sleeve onto stud and insert into bolt hole. (If flange kit has a single washer set per bolt, only install the sleeve on this side.)
  - (3) From the opposite end of the stud, place an isolating washer, a steel washer, and a nut. Hand tighten.

For F-type gaskets: When installing the stud and nut assemblies, place sleeves, nuts, and washers into the bottom half of flange to support the gasket. Carefully remove the gasket from its packaging and insert it between the flange faces and allow to rest on top of the sleeves.

For E-Type gaskets: When installing the stud and nut assemblies, support gasket in position between flanges and install at least two (2) stud assemblies with sleeves, nuts, and washers into bottom portion of bolt pattern—ensuring the bolt assemblies are inserted through the gasket's bolt holes.

7. Repeat step 6 for the remaining bolt assemblies into flange bolt pattern.
8. Torque the first two studs at diametrically opposite locations (1 and 2 in figure on right) to a maximum of 20% of the final torque value specified. Replace the two drift pins with stud assemblies. Torque the remaining studs to 20% of the final torque value in the sequence (a star pattern) illustrated in figure on right. If Flange faces fail to contact gasket after this step, the flange gap is too large.
9. Repeat steps in procedure (8) increasing the torque to approximately 50% to 60% of the final torque value.
10. Continue torqueing all studs in the sequence of figure on right, using the specified torque setting (100%), until there is no further rotation of nuts.
11. For high-pressure, high-temperature applications, re-torqueing may be necessary and is recommended after startup to compensate for any relaxation or creep in the bolting assemblies.

