



Rosemount™ 304 Natural Gas Metering Manifold

Stabilized, Non-Stabilized, and Dielectric Isolator Kit Installation

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⚠ WARNING

Failure to install proper dielectric flange seals or O-rings may cause process leaks, which can result in death or serious injury. Only use dielectric flange seals or O-rings designed for the specific connector.

1.0 Stabilized and non-stabilized connector installation

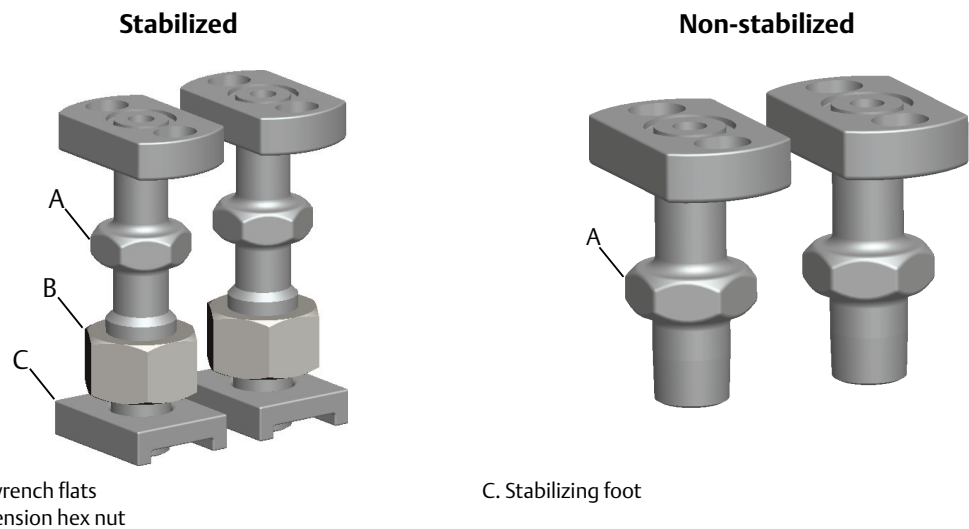
1. Verify equipment is rigid and secure to support weight of connector assemblies.
2. Remove all protection caps from the threaded connections.
3. Verify sealing surfaces and threaded connections are free of dirt, dust, or debris.
4. Wrap PTFE tape on NPT threads, ensuring start of thread is completely covered.
5. Using a 1¹/₄-in. torque wrench, install the first connector into one of the NPT ports in the equipment at 65 ft-lbs (90 N-m).
 - For stabilized connectors, ensure the tension hex nut and the stabilizing foot are installed over the NPT connector thread before installing into the equipment.
6. Repeat steps 4 and 5 to install the second connector.
7. Check the height of the outlet flanges and ensure they are aligned at the same height to allow proper installation of the manifold. If necessary, adjust the connectors to the proper height.
8. Align the stabilizing foot (if present) to the equipment in the desired position, based on a flat or round surface.
9. Tighten the tension hex nut over the stabilizing foot to 110 ft-lbs (150 N-m) using a 1¹/₂-in. wrench.
10. Place PTFE gaskets in the outlet flange grooves of the connectors. Insert the four bolts with washers into the connector holes or slots and hand tighten into manifold process flange.

Note

If installing with a dielectric isolator kit, refer to section 2.0: Dielectric isolator kit installation.

11. Tighten the bolts in sequence as shown in Figure 3 using torque values provided in Table 1-1.

Figure 1. Connector Types



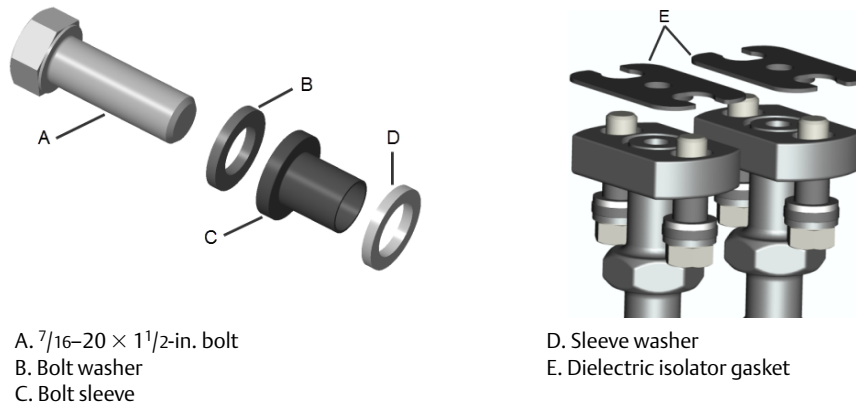
⚠ WARNING

The maximum working pressure for the Rosemount Dielectric Isolator Kit is 4500 psi (310 bar) and maximum temperature is 150 °F (66 °C).

2.0 Dielectric isolator kit installation

1. Connectors must be installed prior to installing dielectric isolator kits.
2. Verify equipment is rigid and secure to support weight of connector assemblies.
3. Verify sealing surfaces and threaded connections are free of dirt, dust, or debris.
4. Ensure the two slots of the dielectric isolator gaskets are aligned to the bolt holes of the connector before mounting to mating flange seal.

Figure 2. Components



⚠ WARNING

There are two different size washers provided. Failure to install both washers could result in process leaks. The washer for the bolt sleeve has a larger inner diameter than the washer for the bolt.

5. Slip the bolt washer under the bolt head. Then slip the bolt sleeve over the bolt with the washer. Finally slip the sleeve washer over the bolt sleeve. Repeat this for all four bolts.
6. Insert the four bolts with sleeves and washers upside down into the connector holes or slots as shown in Figure 2, and hand tighten into manifold process flange.
7. Tighten the bolts in sequence as shown in Figure 3 using torque values provided in Table 1-1. Wait 10 minutes between the initial and final tightening of the bolts to compensate for clamp loss due to material flow.

Figure 3. Bolt Tightening Sequence

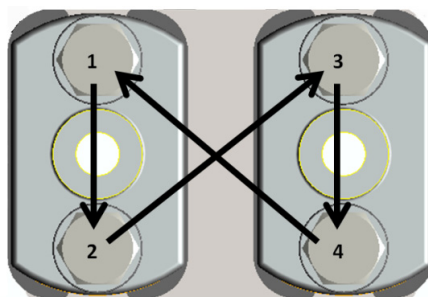


Table 1-1. Torque Values for Connector Bolts

Bolt material	Seal	Initial torque	Final torque
Carbon steel	Dielectric gasket	22 ft-lbs (30 N-m)	28 ft-lbs (38 N-m)
Stainless steel	Dielectric gasket	22 ft-lbs (30 N-m)	22 ft-lbs (30 N-m)
Carbon steel	PTFE O-ring	25 ft-lbs (34 N-m)	54 ft-lbs (73 N-m)
Stainless steel	PTFE O-ring	13 ft-lbs (17 N-m)	25 ft-lbs (34 N-m)

8. Check the installation for leaks after pressurizing the system. Do not exceed 4500 psi (310 bar) max working pressure with the dielectric isolator kit. Max working pressure is limited to 3626 psi (250 bar) at or below -20°F (-29°C) and at or above 150°F (66°C).

Note

The bolt torques listed in [Table 1-1](#) should be re-checked periodically. This is especially true if the dielectric kits are subjected to temperatures near 150°F (66°C).

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