

Technical Note 812 - MJ Adapter Connections

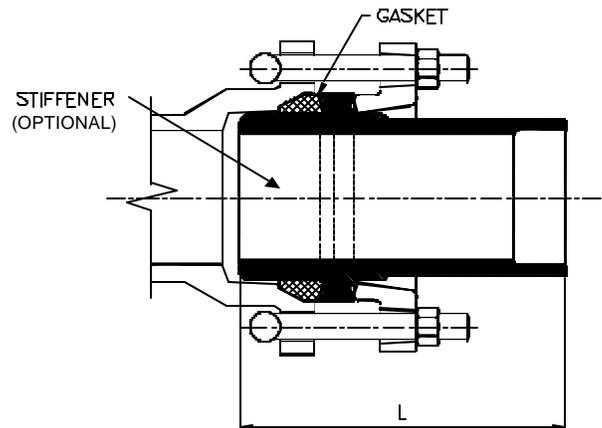
Performance Pipe MJ Adapters

Performance Pipe MJ Adapters are manufactured in standard IPS and DIPS sizes for connecting IPS-sized or DIPS-sized polyethylene pipe to mechanical joint pipe, fittings and appurtenances that meet AWWA C111/ANSI A21.11. Performance Pipe MJ Adapters seal against leakage and restrain against pullout. No additional external clamps or tie rod devices are required.

Performance Pipe MJ Adapters can be provided as:

1. A complete kit including the MJ adapter, stainless steel stiffener (optional), extended t-bolts and nuts, gland and gasket.
2. MJ adapter only, stainless steel stiffener is optional.

Please refer to Performance Pipe Bulletins PP 2.1 and PP 2.2 for product information.



Installation

Alignment

When fitting up, Performance Pipe MJ Adapters must be aligned straight into the mating hub before tightening the gland bolts. Do not draw the MJ Adapter into alignment by tightening the gland bolts. When fitted-up with hand-tight gland bolt nuts, the gap between the socket hub flange and gland bolt flange should be the same all around the joint. The difference between the widest gap and the narrowest gap should not be more than 3/16" (5 mm). (The actual gap measurement can be 1" (25 mm) or more.)

Because polyethylene pipe is flexible, it is not necessary to allow for angular misalignment at MJ Adapter connections. Unlike rigid metal or plastic pipes, flexible polyethylene pipe may be cold bent in the field to a minimum bend radius of 100 times the pipe OD when a fitting, such as an MJ Adapter is present in the bend. Where the PE pipe is protected against bending stress at the joint, a cold bending radius as low as 25 times pipe OD is permissible for Class 160 PE pipe. Please see the Performance Pipe Engineering Manual for information on protecting against bending stresses at joints and cold bending radius.

Assembly

1. Inspect the MJ Adapter kit to be sure all components are present in the correct quantities. The Performance Pipe MJ Adapter kit includes the MJ Adapter with the stiffener, gasket, gland, extended-length gland bolts and nuts.

NOTICE. This publication is for informational purposes and is intended for use as a reference guide. It should not be used in place of the advice of a professional engineer. This publication does not contain or confer any warranty or guarantee of any kind. Performance Pipe has made every reasonable effort towards the accuracy of the information contained in this publication, but it may not provide all necessary information, particularly with respect to special or unusual applications. This publication may be changed from time to time without notice. Contact Performance Pipe to ensure that you have the most current edition.

2. Fit the gland over the fusion end of the MJ adapter (the long end from the rib) and slide it against the rib. The gland projection fits against the rib. See the illustration above.
3. Join the MJ Adapter to polyethylene pipe. Butt fusion using Performance Pipe Recommended Fusion Procedures, Bulletin PP-750, is the preferred joining method. When the gland is against the MJ Adapter rib, the butt fusion end of the MJ Adapter is long enough to be clamped in a butt fusion machine and make the butt fusion. Allow the fusion to cool properly before handling.
4. The mating mechanical joint socket hub and the end of the MJ Adapter must be clean. Thoroughly remove all rust and foreign material from the inside of the socket hub. Wipe the mating end of the MJ Adapter with a clean, dry cloth to remove all dirt and foreign material.
5. Install the gasket on MJ Adapter. Seat the thick section of the gasket against the MJ Adapter rib.
6. Lubricate the gasket, the end of the MJ adapter, and the inside of the socket hub with an approved pipe lubricant meeting AWWA C111. Do not use soapy water.
7. Insert the MJ Adapter into the socket hub. Make sure it is evenly and completely seated in the socket hub. The MJ Adapter and the socket hub must be aligned straight into each other. See "Alignment" above.
8. Insert the gland bolts, and run the nuts up finger-tight.
9. Tighten the gland bolts evenly to 75 - 90 ft-lb (102 - 122 n-m). Tighten in torque increments of about 15 - 20 ft-lb (20 - 27 n-m) each and follow a tightening pattern - tighten the bottom bolt; then the top bolt; then the bolts to either side, and finally the remaining bolts in a crossing pattern from one side to the other. At one torque increment, tighten all bolts completely through the pattern before going up to the next higher torque increment and tightening through the pattern. Tightening with torque-measuring wrenches is strongly recommended. During tightening, maintain approximately the same gap between the gland and the face of the socket hub flange at all points around the joint.