



Installation Instructions

Models 230/231 HDPE Pipe Stiffener Inserts

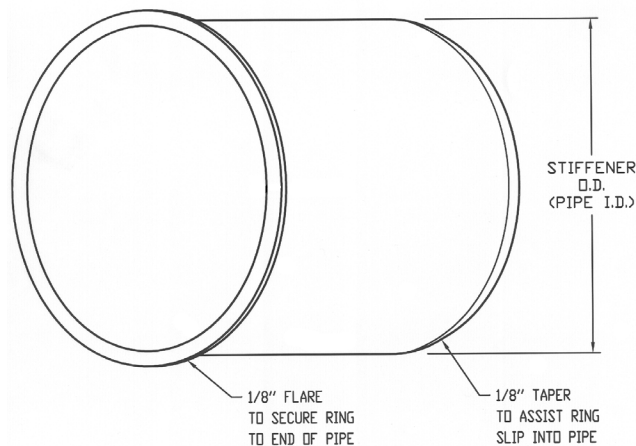
Read instructions before starting installation*

For purposes other than water, contact JCM Industries for application and product assistance.

1. Clean and scrape inside diameter of the pipe for the length of the stiffener. Remove any scale, pipe wrap, debris or dirt that may interfere with the complete sealing of the gasket of the mechanical fitting to be installed. *Prepare pipe ends, measure I.D. of pipe to verify correct size stiffener. Stiffener outside diameter will be measurements provided when ordered or equal to the HDPE Manufacturers published average inside diameter of the pipe. Confirm the proper size and length of the stiffener.
2. To ease installation, the stiffener should be lubricated with water or soapy-water. **DO NOT USE PIPE LUBRICANT.** Place the **TAPERED END** of the stiffener into pipe end. Insert stiffener into the pipe until the **1/8" Flared End** securely catches the pipe end. To firmly insert the stiffener so that the **Flared End** runs home, gently tap the flare face with a rubber hammer or lay a flat piece of wood across the diameter of the stiffener and tap with a heavy object.
3. For applications joining HDPE to HDPE with a bolted fitting, insert JCM stiffener into the ends of pipes to be joined and proceed with fitting installation per instructions. Review bolted fitting instructions for any special notations concerning use of mechanical fitting on high density polyethylene pipe.

*In applications where HDPE pipe end has been cut and the I.D. has closed/necked down or has "Toe-In", installation can be eased by taking a knife and beveling the I.D. of the pipe to open the I.D. to allow insertion of the stiffener. See reverse for information.

JCM 230/231 Pipe Stiffeners are designed for use with mechanical couplings, clamps and fittings where reinforcement of the pipe is necessary for proper gasket seal. Caution needs to be taken to prevent (1) shear loading on the joint, (2) migration of the stiffener out of the end of the pipe from lack of a back load on stiffener rim or load on the stiffener.



*Ensure fitting is suitable for application (confirm size, materials, pressure ratings, line content, meets local governing & association standards, etc.). Pipeline operation forces, including pressure fluctuations, thermal expansion/contraction, movement/shifting, etc. will influence the success of the application. Proper anchorage, restraint, harnessing, thrust blocks or other devices must be provided to prevent pipe movement (lateral, angular, axial) or pipe pullout from the bolt-on fitting. Inspection of the pipe integrity is the responsibility of the end user. JCM recommends the use of calibrated torque wrench. Failure to follow installation instructions will result in voided product warranty.

INT230-0521

For application review or questions contact JCM Industries at 1-800-527-8482, 903-832-2581



Installation Instructions Models 230/231 HDPE Pipe Stiffener Field Guide

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High Density Polyethylene Pipe is produced as an extrusion. This process has a specific cooling process at the extruded die exit point and therefore has a tendency to experience “toe-in” (where the ends of the pipe turn inward for approximately 1.5” in length from the pipe end backwards). This is due to residual stress that is introduced in the polyethylene while being cooled. This can occur at both the point of manufacture or when the pipe is field cut.

Toe-In is more prominent in large diameter HDPE and is less of a problem in smaller sizes because of the amount of reduction and the smaller, more flexible pipe will move easier. The larger and thicker pipe walls close down more and are less capable of expanding to accept the snug fit of the 230/231 Stiffeners.

During installation, pipe ends should be inspected for excessive Toe-In, if the amount of Toe-In prevents the 230/231 stiffener from being inserted into the pipe I.D., following are simple field actions that can be performed to complete the installation.

Tips for Dealing with Toe-In:

1. Use a router, rasp, or other grinding/sanding tool to remove toe-in in the inside of the pipe end.
2. Only remove toe-in where necessary to insert stiffener.
3. Only remove enough toe-in to allow for insertion of stiffener.
4. Remove toe-in evenly around the I.D. of the pipe. Do not remove more from one side than the other.
5. A snug fit of the stiffener is acceptable.
6. In instances with extreme Toe-In, pipe ends can be cut off and the stiffener inserted immediately. Cutting off the reduced diameter section of the pipe can temporarily eliminate the toe-in, however due to the viscoelastic nature of polyethylene, the toe-in will reappear after a given time period.



For additional guidance, contact JCM Industries Technical Services at 1-800-527-8482.