



Fluid-Tite® PVC Coupling Assembly Guide

1. Application

Stop Couplings – Used to join two male ends of pipe with 1° of total angular deflection or less (0.5° per side of coupling).

High Deflection Stop Couplings – Used to join two male ends of pipe with 5° of total angular deflection or less (2.5° per side of coupling). These can be used in place of small bends or where it is not desirable or possible to bend the barrel of the pipe.

Repair Couplings – Used to connect a new, short piece of pipe to an existing section of pipe that has had a damaged area removed. Additionally, a single repair coupling can be used to “sleeve over” a damage area.

2. Verification

Each Stop and Repair coupling is supplied complete with gaskets and is available in both Cast Iron Outside Diameter (CIOD), and Iron Pipe Size (IPS) diameter standards. Users must verify the correct nominal size and diameter standard of the associated pipe, and ensure that the correct couplings have been supplied prior to beginning repair or assembly. For additional technical information and dimensions, please consult the Fluid-Tite PVC Couplings Product Specification Sheet.

3. Preparation: Pipe Spigot

Take care to ensure the pipe spigots to be joined are properly cut, beveled, and cleaned to ensure a proper seal and assembly of the joint.

Cutting

A square cut is essential for a proper fit of the pipe end into the coupling. A PVC pipe cutter offers the best means of ensuring a square cut on the spigot end of the pipe. A hand or power saw can be used if a PVC pipe cutter is not available.

Field Beveling

Care must be taken to ensure a proper field bevel has been created on the end of the pipe to avoid

cutting or pulling the gaskets on the interior of the coupling. A proper beveling tool, specifically intended for PVC municipal water pipe should be used. If a beveling tool is unavailable, a hand file should be used to create a bevel. Refer to page 3 for required bevel lengths for IPS and CIOD pipes.

Insertion Mark

The pipe to be inserted into the coupling should have an insertion mark drawn on the circumference of the pipe. Refer to the tables on page 3 for proper insertion depth distances from the spigot face and mark the spigot at the proper distance.

Clean & Inspect Spigot

- Using a wet rag, clean off all dirt and other material from the outside surfaces of the pipe spigot up to the newly drawn insertion mark.

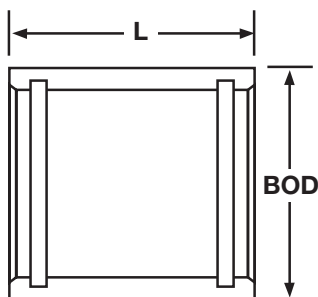
Do not use pipe spigots with disfigured bevels that could damage the gasket when inserted into the coupling.

4. Preparation: Coupling

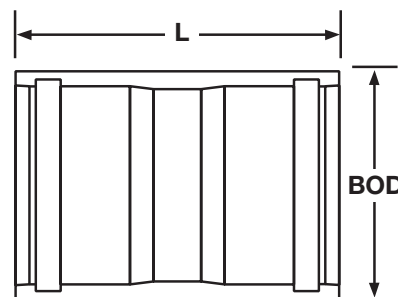
- Using a wet rag, clean out all dirt and other material from inside the coupling including on the gasket.
- If the interior of the coupling gasket groove is dirty or contains debris, carefully remove the gasket, clean the gasket groove in the coupling, and re-insert the gasket.
- Inspect the gaskets for any marks, cuts, or tears prior to assembly. Check to be sure the gasket is evenly seated in the groove so that the white or yellow colored band is clearly seen from the open end of the coupling that will accept the spigot.

Contact the distributor for replacement of any questionable gaskets. Do not install couplings with questionable or deformed gaskets.

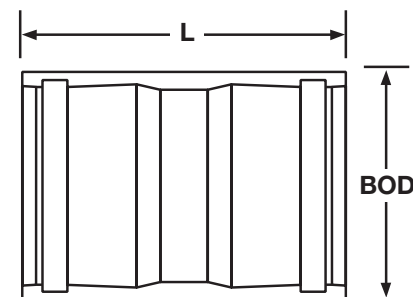
Repair Coupling



Stop Coupling – Standard Profile



Stop Coupling – High Deflection Profile





Fluid-Tite® PVC Coupling Assembly Guide

5. Lubrication

- Apply only NAPCO approved lubricant to the exposed gasket surface (never to the gasket groove) as well as the spigot exterior from the insertion mark to the end of the bevel. Repair couplings require the pipe exterior be lubricated along the entire distance the repair coupling will travel on the pipe.

For potable water piping systems, the lubricant used must meet NSF 61 standards.

Warning: Substances not specifically formulated for this purpose may deteriorate pipe and /or gaskets.

6. Assembly

Stop Couplings

- Line the pipe spigot end and coupling up so that the spigot will enter the coupling as straight as possible. Insertion of the spigot into the coupling at an angle may damage the interior of the coupling and gaskets resulting in a leak.

Tip: A straight alignment of the coupling and spigot is crucial to easy assembly. Take care to ensure the sections being joined are as straight as possible to ensure an easy assembly.

- Using mechanical means only if necessary, insert the spigot end straight into the coupling until the insertion mark on the spigot is flush with the edge of the coupling.
- A bar and block, “come along”, or puller may also be used. Care should be taken to protect the pipe from chains typically used with these types of devices.
- If the pipe is inserted beyond the insertion mark, adjust the insertion depth until the insertion mark is flush with the edge of the coupling.

Repair Couplings

- Line the pipe spigot end and coupling up so that the spigot will enter the coupling as straight as possible. Insertion of the spigot into the coupling at an angle may damage the interior of the coupling and gaskets resulting in a leak.
- Using mechanical means only if necessary, push the spigot straight into the coupling until the spigot end is up against the back side of the far gasket.

- Align the second spigot end as straight as possible and slide the coupling back until the insertion mark is flush with the end of the coupling.
- A bar and block, “come along”, or puller may also be used. Care should be taken to protect the pipe from chains typically used with these types of devices.
- If the pipe is inserted beyond the insertion mark, adjust the insertion depth until the insertion mark is flush with the edge of the coupling.

For Two Repair Couplings

- After cutting and removing the damaged section of pipe, prepare the pipe spigot ends according to step 3, making sure to mark the spigot end of the pipe with an insertion mark equal to $\frac{1}{2}$ of the distance of the coupling being used.
- Apply lubricant to the pipe spigots up to the insertion mark.
- Measure and cut a “pup” joint approximately 2.5” - 3.5” shorter than the distance between the two pipe ends being repaired.
- Prepare the ends of the “pup” joint in according to step 3, and apply lubricant equal to the distance of the repair coupling being used on both ends of the “pup” joint.
- Align the repair couplings so that they will insert over the “pup” joint ends straight. Insertion of the spigot into the coupling at an angle may damage the interior of the coupling and gaskets resulting in a leak.
- Using mechanical means only if necessary, push the repair couplings straight onto the “pup” joint until the spigot end reaches the back of the far gasket.
- After properly aligning the “pup” joint between the two spigot ends of the existing line, push the couplings back over the existing pipe until the coupling edge is approximately $\frac{3}{4}$ ” short of the mark to ensure the coupling is centered over the gap.
- A bar and block, “come along”, or puller may also be used. Care should be taken to protect the pipe from chains typically used with these types of devices.

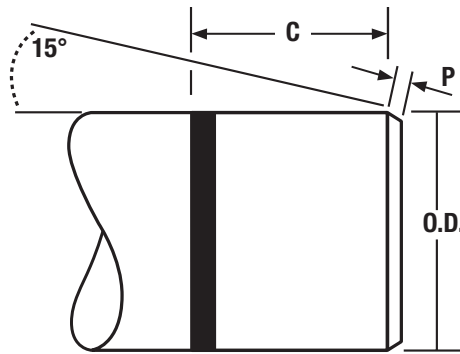


Fluid-Tite® PVC Coupling Assembly Guide

Fluid-Tite® PVC Couplings for Iron Pipe Size (IPS) PVC Pipe		
Nominal Size	Bevel "P" (in.)	Insertion Depth "C" (in.)
1.5	5/32	3.375
2	3/16	3.375
2.5	7/32	3.438
3	9/32	3.500
4	11/32	3.500
6	17/32	3.750
8	19/32	4.000
10	5/8	4.000
12	23/32	4.250

Fluid-Tite® PVC Couplings for Cast Iron Outside Diameter (CIOD) PVC Pipe		
Nominal Size	Bevel "P" (in.)	Insertion Depth "C" (in.)
4	7/16	3.000
6	5/8	3.625
8	13/16	4.125
10	15/16	5.000
12	15/16	5.375

*Bevel dimensions & insertion depths are for pipe cut and beveled in the field



STEP 1: Identify damaged pipe

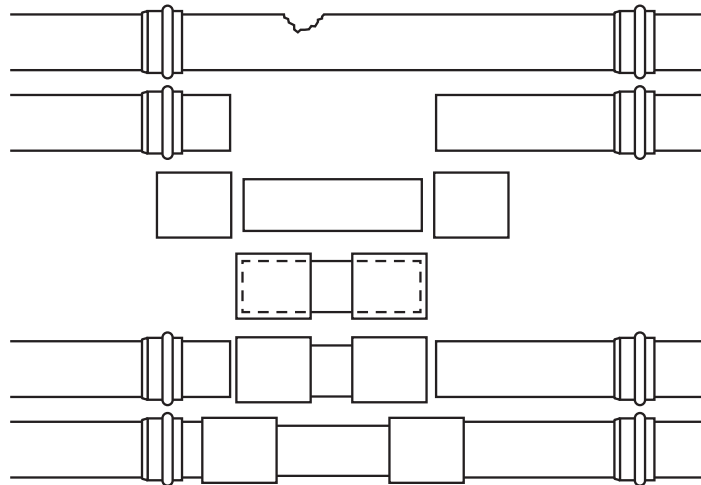
STEP 2: Cut out damaged area

STEP 3: Pup joint and two closure/repair couplings

STEP 4: Slide closure/repair couplings onto pup joint until spigot reaches back side of far gasket

STEP 5: Insert into gap

STEP 6: Slide back closure/repair couplings.
Pressure test as required to verify pipe joint integrity



This document is published for general informational purposes only and is not intended to imply that these materials, procedures, or methods, are suitable for any particular job or should be relied on by the user. Materials, procedures, or methods may vary according to the particular circumstances, local building code requirements, design conditions, or statutory and regulatory requirements. While the information in this document is believed to be accurate and reliable, it is presented without guarantee or responsibility on the part of North American Pipe. User is solely responsible for usage of any material, procedure, or method contained herein.