

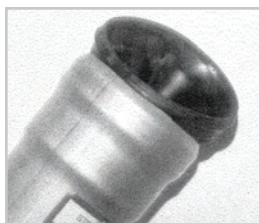
## Cutting the Pipes

Josam Push-Fit pipes can be cut to desired length by various means using manual and electric cutters. The pipes should be cut square and the exterior surface must be free of burrs and slightly rounded or beveled. Fittings may not be cut.

1. Select appropriate pipe lengths. Josam offers 8 different pipe lengths to minimize cuts and waste. Project take-offs should reflect a variety of pipe lengths to suit the pipe layout of the project application.
2. Cut pipe lengths as necessary using the closest pipe length available. In some instances multiple pipe sections may reduce the amount of pipe to be cut.
3. Cut pipes square using either a Josam recommended pipe cutter, a circular saw or a tube style pipe cutter with an appropriate blade or cutting wheel.
4. If using a cutter that does not deburr the pipe, remove any burrs from the exterior surface of the pipe prior to making a joint. A slight bevel on the outside edge of the pipe end will facilitate easy insertion into the socket.
5. Contact Josam Company for recommended pipe cutters.

## Assembling A Josam Push-Fit Joint

The Josam Push-Fit socket and spigot joint is designed to be easily assembled and adjusted without the need of any special tools. Using lubricant available from Josam will allow the pipe material to be inserted into the socket and seal. Steps for making a joint are illustrated below.



1. Insert the seal into the socket if it is not already installed. The seal and pipe should be clean. If necessary remove the seal and rinse with water to remove any dirt.



- a. To insert the seal, squeeze and fold the ring into a heart shape. Press the top lip firmly into the socket with the lip hooking on the top edge.

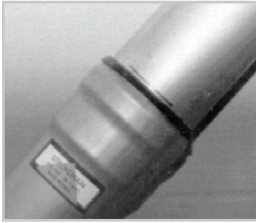


- b. Allow the seal to unfold and press the lip tightly against the entire perimeter of the socket

## Assembling A Josam Push-Fit Joint (Cont'd)



2. Apply a small amount of lubricant (item 40930) to the inside of the sealing ring.



3. Before inserting a spigot end into the socket, it is recommended to mark the insertion depth on the spigot. See insertion Depth 'A' from chart on page 6.

4. Insert the spigot into the socket with a slight turning motion. Push the pipe completely into the socket and then back out approximately 1/4". The lip of the gasket should be visible around the perimeter of the joint.

**Note:** Make adjustments as soon as possible. After the lubricant dries the parts may be difficult to disassemble. If necessary heat the joint with a gas torch to help loosen the joint for disassembly. If heated in this manner, the seal should be replaced prior to reassembling.

## Hanging and Bracing the Pipe System

The Josam Push-Fit pipe systems should be supported to prevent the pipe joint from pushing apart. Use the following guidelines for fixing pipes.

- Josam Company recommends the use of their hangers for properly supporting the system. See page 20.
- Josam hangers or similar split ring hangers should be used to limit or prevent axial movement.
- Alternative hangers must be stainless steel or lined with rubber or non metallic material to protect against galvanic corrosion.
- Secure pipe penetrations to prevent vertical movement.
- Brace end of pipe runs and changes in direction to prevent the pipes from pushing apart. Utilize joint locking clamps and sway braces as necessary.

The rods and hanger spacing must be sufficient to support the weight of the pipes filled with water.

### WEIGHTS OF 39.4" (1 METER) PIPE FILLED WITH WATER.

PIPE SIZE	WEIGHT LBS. (KG)
1 1/2"	5.1 (2.3)
2"	7.3 (3.3)
3"	13.4 (6.1)
4"	24.0 (10.9)
6"	55.0 (25.0)
8"	103.4 (47.0)

## Additional Bracing

Sway braces should be used for limiting movement of the fixed pipes at intervals of 30-50 ft (10-15 meters) and changes in direction and end of lines as necessary to prevent pipes from pushing apart.

**The Josam Push-Fit system must be properly supported by the hanger system to prevent the pipes from pushing apart. Ends of runs and changes in directions must be braced! If properly supported the Josam Push-Fit joint will handle considerable pressure when properly supported (see maximum tested pressures on page 23).**

## Underground installations

316L pipe systems are suitable for direct burial underground in most areas. Soil conditions in some locations may require additional corrosion protection for the pipes prior to burial.

The following guidelines are recommended for underground installations:

1. Use proper trench safety procedures as required by local codes
2. Leveling course should be free from frozen material, large or sharp stones. A minimum 2-4" thick leveling course is recommended.
3. Ensure that pipes are properly pitched and evenly supported along the length of the pipe. Remove material from under the joint so sockets do not bear the weight of the pipes.
4. Brace changes in direction and end of pipe runs to prevent pipes from pushing apart prior to testing and backfilling.
5. 4" of fill surrounding pipes should be sand or crushed stone with maximum 15% passing through 0.075" screen.
6. Apply fill material carefully and compress evenly to 93% standard proctor.

## Installation in concrete

Some concrete additives such as accelerators or retardants, antifreeze, fluidifiers etc. may be corrosive to stainless steel. If additives are used, wrapping or lacquer coating may be required to protect the pipe system.

## Changes in Direction

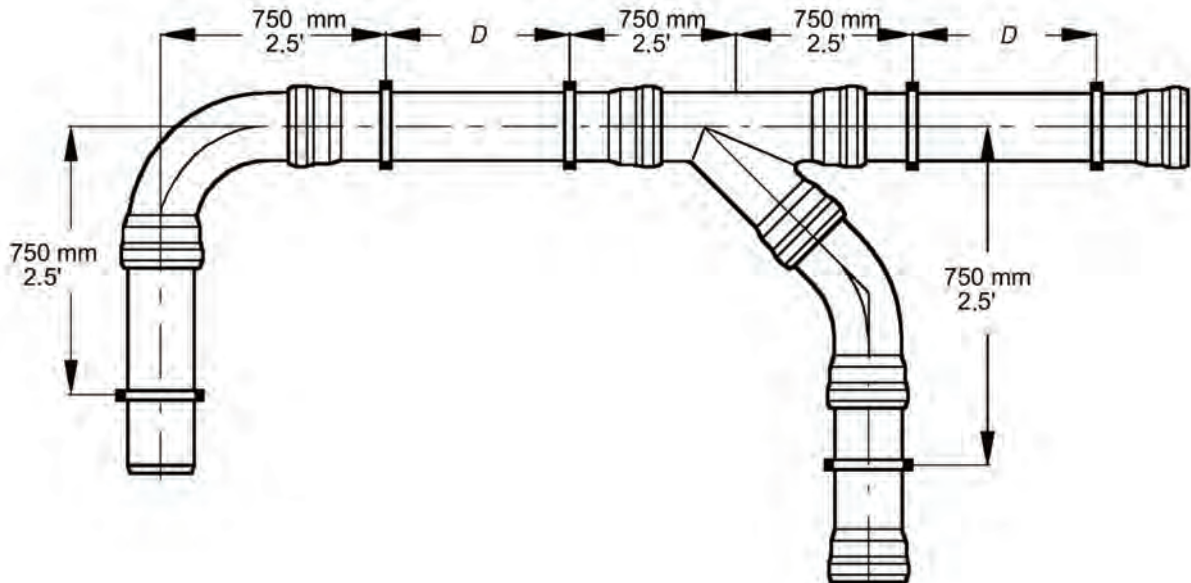
All vertical and horizontal pipes must be fastened at all changes of direction and all branches with hangers spaced no more than 2'6" (750mm).

## Vertical Runs

Vertical pipes should be supported at intervals no more than 9.8' (3 meters).  
 Straight horizontal pipe runs should be supported at maximum spacing indicated in the chart below.

### WEIGHTS OF 39.4" (1 METER) PIPE FILLED WITH WATER.

PIPE SIZE	WEIGHT LBS. (KG)
1-1/2"	6.6' (2.0)
2"	6.6' (2.0)
3"	8.2' (2.5)
4"	9.2' (2.8)
6"	10.8' (3.3)
8"	10.8' (3.3)



## Transition Fittings

The Josam Push-Fit system can be easily adapted to most pipe systems.  
 For information on adapting the Josam Push-Fit system to other pipe systems please contact your local Josam representative or Josam Company directly.