



Standard Symbols for Dimensions of Plastic Pipe Fittings¹

This standard is issued under the fixed designation D2749; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 These symbols specify terminology for the dimensions of pipe fittings made of plastic materials. It consists of a list of letter designations with definitions, followed by drawings of typical fittings, with the significant dimensions labeled in accordance with these letter designations.

2. Referenced Documents

2.1 *ASTM Standards:*²

F1498 Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings

3. Letter Designations of Dimensions

3.1 The letter designations are defined as follows:

- A = socket entrance diameter, measured at intersection of socket diameter and chamfer or radius, regardless of length "C",
- B = socket bottom diameter, measured at intersection of socket diameter and radius,
- C = socket depth, measured from socket entrance face to socket bottom face,
- D = inside diameter of body,
- E = wall thickness of socket, min,
- F = wall thickness of body,
- G = intersection of socket center lines to socket bottom (center-to-socket bottom), 90° elbows, tees, crosses, and shoulder on insert fittings; a laying length,
- H = intersection of socket center lines to end of fitting (center-to-end), 90° elbows, tees, crosses; center to face,
- J = intersection of socket center lines to socket bottom (center-to-socket bottom), 45° elbow; a laying length,
- K = intersection of socket center lines to end of fitting (center-to-end), 45° elbow,
- L = length over-all, coupling,
- M = outside diameter of hub,
- N = socket bottom to socket bottom or seat thickness (center stop thickness or pipe stop thickness),

- P = insert length,
- Q = distance or width across flat,
- R = height of head,
- S = length of male thread, includes pilot,
- T = length of female thread, includes pilot,
- V = root diameter of barbs,
- W = cap height,
- XA = male end of spigot at top, see Fig. 1,
- XB = male end of spigot at bottom, see Fig. 1
- Y = length of barb section,
- Z = outside diameter of barbs
- CB = Pilot on the first thread of internal and external threaded fittings equal to 1/2 to 3/4 the width of the thread pitch as described in Specification F1498, Section 4.5 and Figures 2b and 2c.
- CM = length of male end, bushing,
- DJ = inside diameter, major, bushing,
- EJ = wall thickness of socket, major, bushing; wall thickness of male end, bushing,
- EN = wall thickness of socket, minor, bushing,
- EW = radius on socket entrance,
- EX = thickness with 30° taper on socket entrance; 30° entrance chamfer width, and
- EZ = thickness with 45° taper on socket entrance; 45° entrance chamfer width.

3.2 When there are two different values for one categorical dimension on a fitting, the large one shall be designated with the letter for that category followed by a J meaning major, and the small one shall be designated by the same letter followed by an N meaning minor; for example, on a 45-deg Y-branch, there are two J dimensions, the longer one is designated as JJ and the shorter one as JN. When there are more than two different values for one categorical dimension, they are designated with the proper letter followed by an arabic number; for example, L1, L2, and L3 for the three lengths on a plastic adapter to connect plastic pipe to a cast iron hub.

4. Illustrations

4.1 Illustrations of typical fittings are shown in Figs. 2-22.

5. Keywords

5.1 plastic pipe fitting; symbol definitions; symbols for dimensions

¹ These symbols are under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.10 on Fittings.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

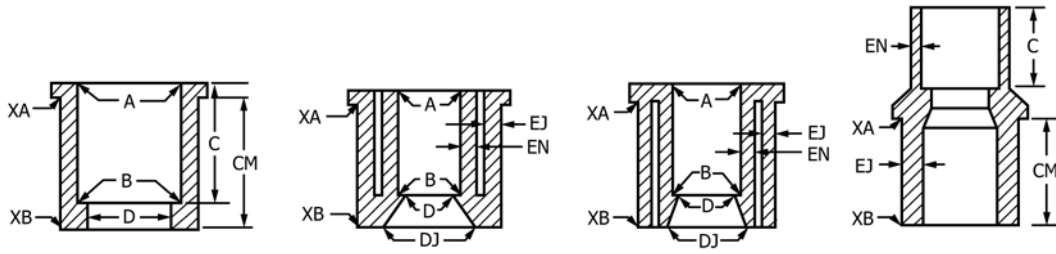


FIG. 1 Reducer Bushings-Socket

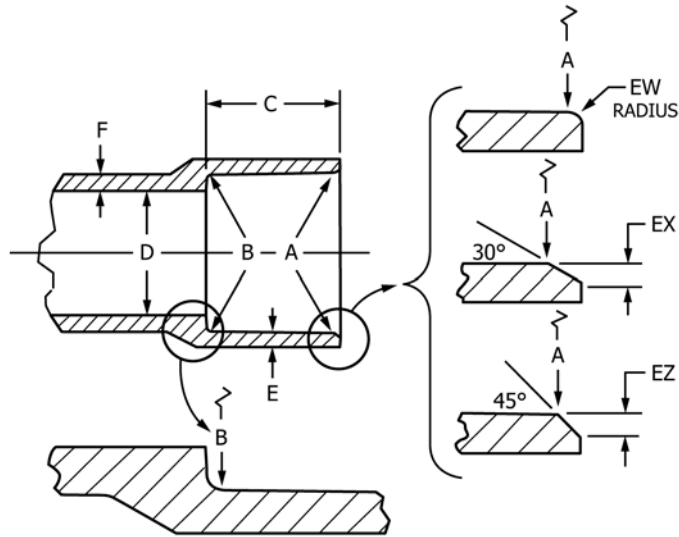


FIG. 2 Tapered Socket

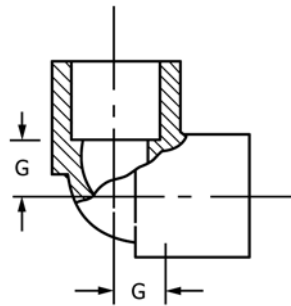


FIG. 3 90° Elbow-Socket

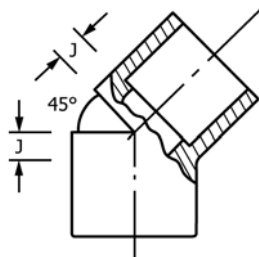


FIG. 4 45° Elbow-Socket

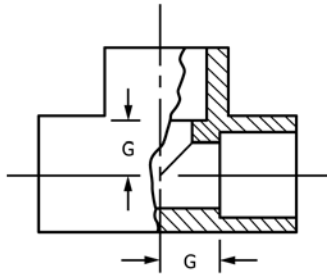


FIG. 5 Tee-Socket

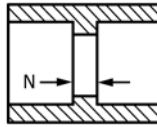


FIG. 6 Coupling-Socket

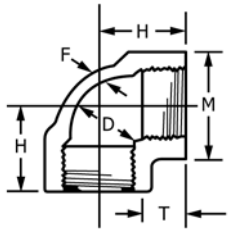


FIG. 7 90° Elbow-Threaded

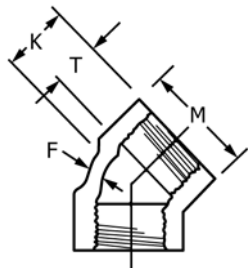


FIG. 8 45° Elbow-Threaded

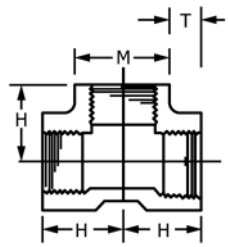


FIG. 9 Tee-Threaded

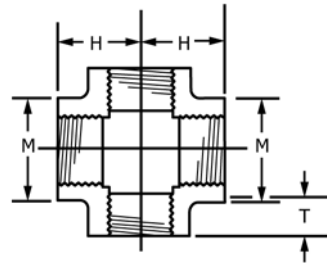


FIG. 10 Cross-Threaded

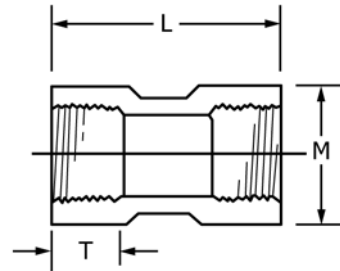
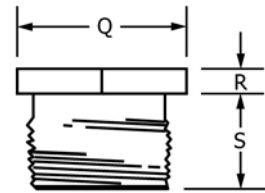
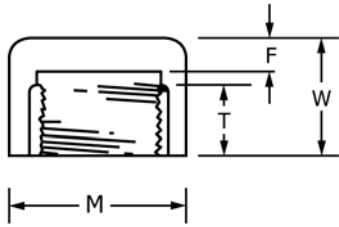


FIG. 11 Coupling-Threaded



PLUG

FIG. 12 Plug-Threaded



CAP
FIG. 13 Cap-Threaded

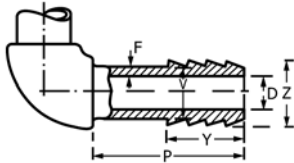
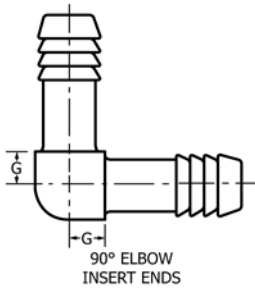
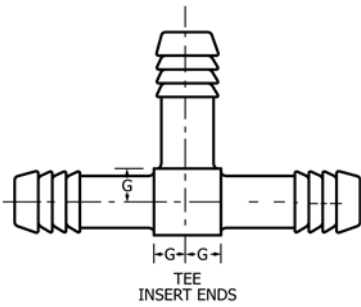


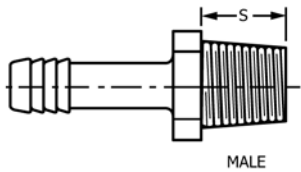
FIG. 14 Insert End



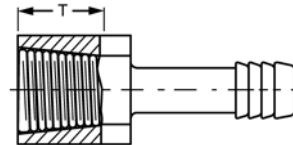
90° ELBOW
INSERT ENDS
FIG. 15 Insert Elbow



TEE
INSERT ENDS
FIG. 16 Insert Tee

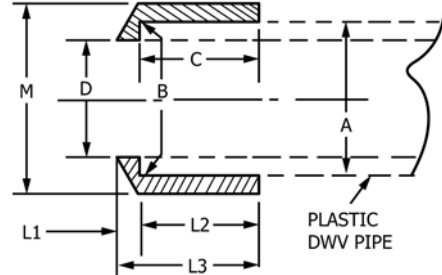


MALE
FIG. 17 Insert Adaptor, Male Thread



FEMALE

FIG. 18 Insert Adaptor, Female Thread



Cemented over the end of the plastic pipe to adapt it for connection to the cast iron hub.

FIG. 19 Plastic Adapter

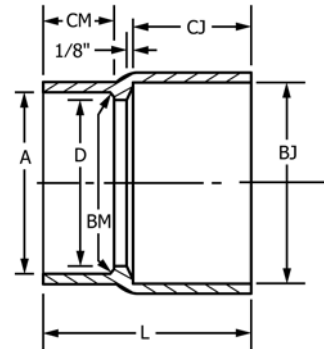
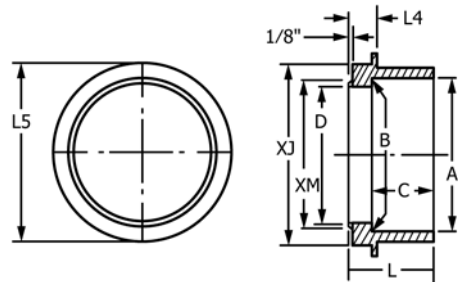
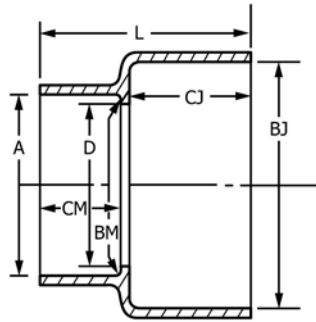


FIG. 20 Plastic Hub



Cements over the end of the plastic pipe to adapt it for connection to the clay pipe hub.

FIG. 21 Plastic Adapter



Adapts the clay pipe spigot to the plastic pipe.

FIG. 22 Plastic Hub

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