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An American National Standard

Standard Symbols for Dimensions of Plastic Pipe Fittings[1]

This standard is issued under the fixed designation D 2749; 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 reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

~~ε[1] NOTE—Keywords were added editorially in April 1999.~~

[1] These symbols are under the jurisdiction of ASTM Committee F~~=~~17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.10 on Fittings.

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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. Letter Designations of Dimensions

2.1 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",~~
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,~~
B	=	socket bottom diameter, measured at intersection of socket diameter and radius,
~~C~~	~~=~~	~~socket depth, measured from socket entrance face to socket bottom face,~~
C	=	socket depth, measured from socket entrance face to socket bottom face,
~~D~~	~~=~~	~~inside diameter of body,~~
D	=	inside diameter of body,
~~E~~	~~=~~	~~wall thickness of socket, min,~~
E	=	wall thickness of socket, min,
~~F~~	~~=~~	~~wall thickness of body,~~
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,~~
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,~~
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,~~
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,~~
K	=	intersection of socket center lines to end of fitting (center-to-end), 45° elbow,
~~L~~	~~=~~	~~length over-all, coupling,~~
L	=	length over-all, coupling,
~~M~~	~~=~~	~~outside diameter of hub,~~
M	=	outside diameter of hub,

~~N~~	=	~~socket bottom to socket bottom or seat thickness (center stop thickness or pipe stop thickness),~~
N	=	socket bottom to socket bottom or seat thickness (center stop thickness or pipe stop thickness),
~~P~~	=	~~insert length,~~
P	=	insert length,
~~Q~~	=	~~distance or width across flat,~~
Q	=	distance or width across flat,
~~R~~	=	~~height of head,~~
R	=	height of head,
~~S~~	=	~~length of male thread, includes pilot,~~
S	=	length of male thread, includes pilot,
~~T~~	=	~~length of female thread, includes pilot,~~
T	=	length of female thread, includes pilot,
~~V~~	=	~~root diameter of barbs,~~
V	=	root diameter of barbs,
~~W~~	=	~~cap height,~~
W	=	cap height,
~~X~~	=	~~male end diameter of bushing,~~
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,~~
Y	=	length of barb section,
~~Z~~	=	~~outside diameter of barbs~~
Z	=	outside diameter of barbs
~~CB~~	=	~~counterbore on threaded fittings, optional,~~
CB	=	counterbore on threaded fittings, optional,
~~CM~~	=	~~length of male end, bushing,~~
CM	=	length of male end, bushing,
~~DJ~~	=	~~inside diameter, major, bushing,~~
DJ	=	inside diameter, major, bushing,
~~EJ~~	=	~~wall thickness of socket, major, bushing; wall thickness of male end, bushing,~~
EJ	=	wall thickness of socket, major, bushing; wall thickness of male end, bushing,
~~EN~~	=	~~wall thickness of socket, minor, bushing,~~
EN	=	wall thickness of socket, minor, bushing,
~~EW~~	=	~~radius on socket entrance,~~
EW	=	radius on socket entrance,
~~EX~~	=	~~thickness with 30° taper on socket entrance; 30° entrance chamfer width, and~~
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.~~
EZ	=	thickness with 45° taper on socket entrance; 45° entrance chamfer width.

2.2 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.

3. Illustrations

3.1 Illustrations of typical fittings are shown in Figs. ~~1~~ 2-22.

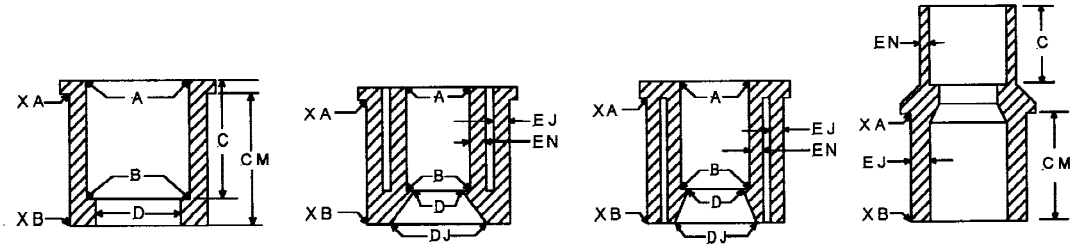


FIG. 1 Reducer Bushings-Socket

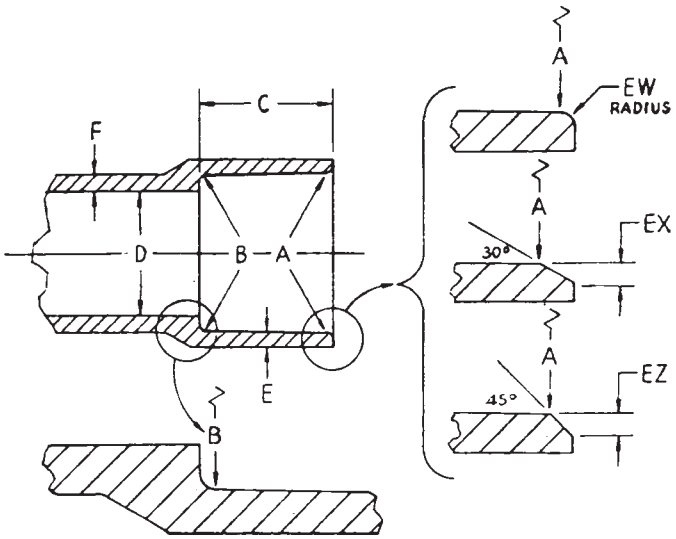


FIG. ~~1~~ 2 Tapered Socket

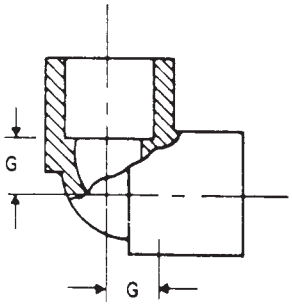


FIG. ~~2~~ 3 90° Elbow-Socket

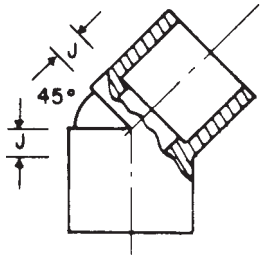


FIG. ~~3~~ 4 45° Elbow-Socket

4. Keywords

plastic pipe fitting; symbol definitions; symbols for dimensions

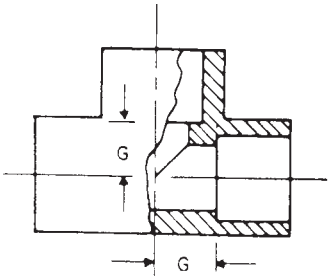


FIG. ~~4~~ 5 Tee-Socket

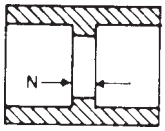


FIG. ~~5~~ 6 Coupling-Socket

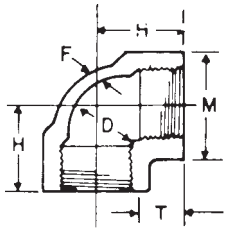


FIG. 7 90° Elbow-Threaded

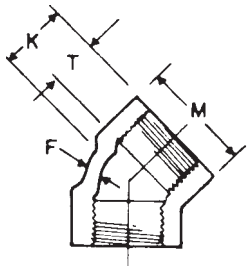


FIG. 8 45° Elbow-Threaded

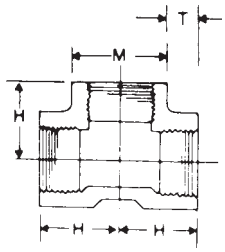


FIG. 9 Tee-Threaded

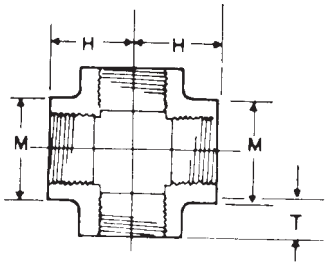


FIG. 10 Cross-Threaded

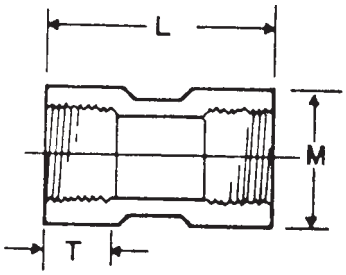
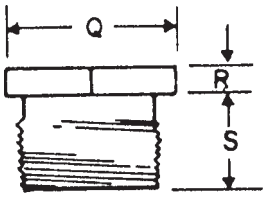
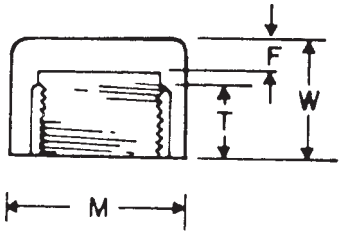


FIG. 11 Coupling-Threaded



PLUG

FIG. 12 Plug-Threaded



CAP

FIG. 13 Cap-Threaded

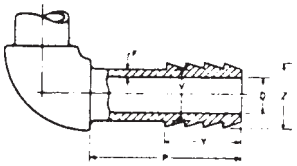


FIG. 14 Insert End

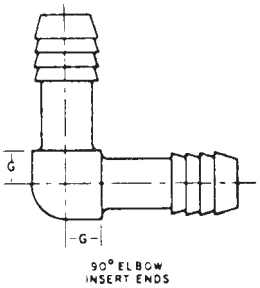


FIG. 15 Insert Elbow

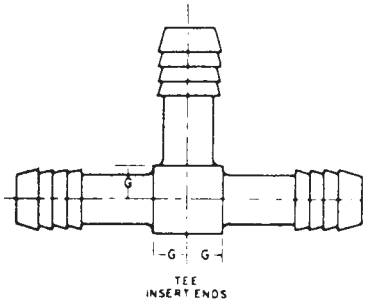


FIG. 16 Insert Tee

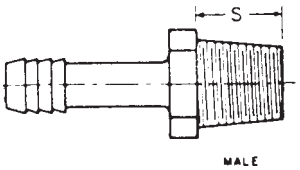


FIG. 17 Insert Adaptor, Male Thread

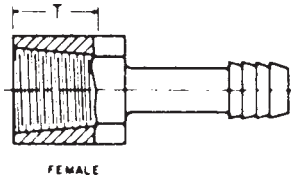
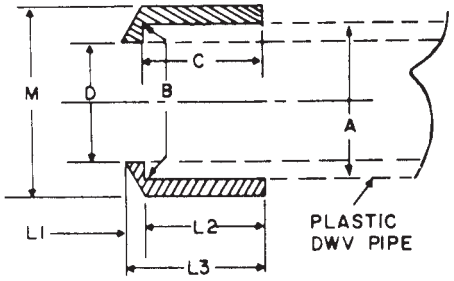


FIG. 18 Insert Adaptor, Female Thread



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

FIG. 19 Plastic Adapter

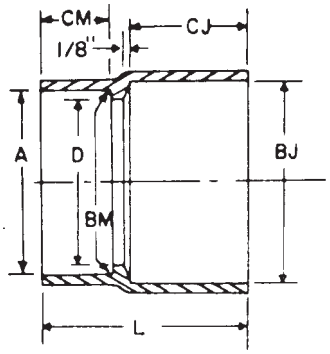
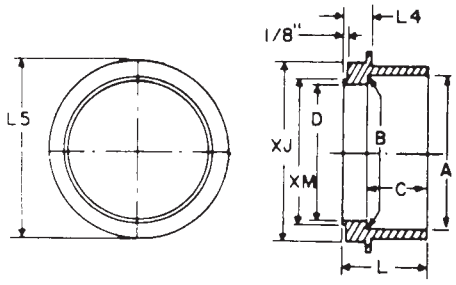
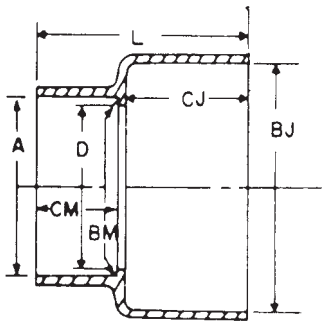


FIG. 20 Plastic Hub



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