

ASME B16.12-1991

(REVISION OF ANSI B16.12-1983)

Cast Iron Threaded Drainage Fittings

AN AMERICAN NATIONAL STANDARD



The American Society of
Mechanical Engineers

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(REVISION OF ANSI B16.12-1983)



The American Society of
Mechanical Engineers

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FOREWORD

(This Foreword is not part of ASME B16.12-1991.)

Screw joint drainage fittings were developed about the year 1880 by the Durham House Drainage Company of New York and are often referred to as Durham fittings. At that time, soil pipes and drains in New York had been required to be of plumber's cast iron soil pipe, while Chicago's soil pipes were required to be of lead or plumber's cast iron pipe.

In order to form a continuous passageway with no pockets or obstructions where foreign matter could collect and gradually accumulate, it was necessary to design a special type of screw fitting. Inside diameters of the fittings approximate the nominal size of standard weight wrought steel pipe (Schedule 40). The thread chamber is designed so that when the pipe is tightly screwed into the fitting, its end nearly abuts the shoulder of the fitting, thereby making a practically continuous passage. The threading of these fittings required special care and the threads on the pipe were cut to suit the threads in the fitting.

With the passage of time, manufacturers' practices began to diverge in regard to center-to-end dimensions and other features. The Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) studied the situation, developed a standard practice for these fittings, and published MSS SP-8, Cast Iron Drainage Fittings, in 1929. Subsequently, for better coordination with other screwed fitting standards under the jurisdiction of Sectional Committee B16 of the American Standards Association (ASA), now the American National Standards Institute (ANSI), the subject was assigned to Subcommittee 2 of B16.

A number of drafts of the proposed standard were developed and printer's proofs were distributed to industry for criticism and comment in May, 1940. A revised proposal dated July, 1941, was submitted to the members of the Sectional Committee for letter ballot vote. Following its approval by that body, it was submitted to the sponsors and to ASA with recommendations for approval as an American Standard. This was granted in February, 1942, with the designation ASA B16.12-1942.

The MSS Ferrous Screw Fittings Committee made a thorough study of the 1942 standard and recommended that several changes be made to bring the data in line with current production and usage of this type of fitting. To comply with the recommendations, Subcommittee 2 of Sectional Committee B16 revised portions of the text and illustrations and added dimensional tables for Tucker connections, roof connections, and Tucker Y-branches, as well as dimensions for P-traps, bath traps, and running traps.

A draft, dated September, 1952, was presented to the Sectional Committee for letter ballot vote. Following its approval and that of the sponsor organizations, it was presented to ASA and approval of ASA B16.12-1953 was granted on September 11, 1953.

Subcommittee 2 began a review in 1963 and completed its work in 1964. The Sectional Committee approved a number of minor changes in format and wording, changing the title to Cast Iron Threaded Drainage Fittings. ASA B16.12-1965 was approved on November 12, 1965.

In 1970, further review was initiated by Subcommittee 2, now an ANSI Committee, and ANSI B16.12-1971 was granted approval on November 1, 1971.

The standard was updated and metric (SI) dimensions were added in ANSI B16.12-1977, approved on February 4, 1977.

In 1982, American Standards Committee B16 was reorganized as ASME Standards Committee B16 under procedures accredited by ANSI. Also in 1982, Subcommittee B (formerly 2) updated reference standards, the revision being approved July 20, 1983, as ANSI B16.12-1983. It and later editions are issued on a subscription service addenda basis, which permits revisions made in response to public review comments or Committee actions to be published as necessary. Addenda revisions become effective six months after the Date of Issuance of the addenda.

In this 1991 edition of ASME B16.12, reference standards are again updated and the metric dimensions have been deleted. This edition was approved by ASME, and by ANSI on January 4, 1991. The next edition is scheduled for publication in 1996.

ASME issues written replies to inquiries concerning interpretation of technical aspects of this Standard. With the 1991 edition, interpretations will be included with the addenda service. Interpretations are not part of the addenda to the Standard.

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CAST IRON THREADED DRAINAGE FITTINGS

1 SCOPE

1.1 General

This Standard for cast iron threaded drainage fittings covers:

- (a) size¹ and method of designating openings in reducing fittings;
- (b) marking;
- (c) materials;
- (d) dimensions¹ and tolerances;
- (e) threading;
- (f) ribs;
- (g) coatings; and
- (h) face bevel.

1.2 Applicability

This Standard covers fittings intended for use in gravity drainage systems subject only to gravity head of waste liquids at temperatures from ambient to approximately 212°F. The use of this Standard for pressurized waste handling systems is the responsibility of the user and subject to the requirements of any applicable code.

2 SIZE

The size of the fittings scheduled in the following tables is identified by the corresponding nominal pipe size. In the case of reducing tees, Y-branches, or crosses, the largest run opening shall be given first. The straight line sketches (Fig. 1) illustrate how the reducing fittings are read.

¹The use of the word *nominal* as a modifier of a dimension or size is intended to indicate that the stated dimension or size is used for purposes of designation.

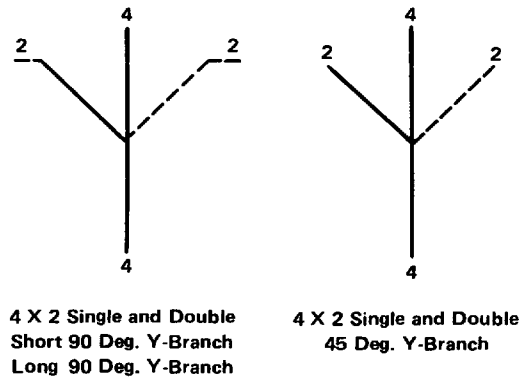


FIG. 1 IDENTIFICATION OF REDUCING FITTINGS

3 MARKING

Each fitting shall be marked with the manufacturer's name or trademark in accordance with the requirements of MSS Standard Practice No. SP-25.

4 MATERIALS

(a) The dimensions prescribed in this Standard are based upon gray iron castings of high quality produced under regular control of chemical and physical properties by a recognized process. The manufacturer shall be prepared to certify that the product has been so produced and that the chemical and physical properties thereof, as proved by test specimens, are equal to the requirements specified in ASTM A 126, Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.

(b) Drainage fittings are regularly made of cast iron. At the option of the manufacturer, drainage fittings may be furnished of malleable iron complying with the minimum physical requirements of ASTM A 197, Specification for Cupola Malleable Iron.

TABLE 1 INSPECTION LIMITS FOR DIAMETER AND WIDTH OF BAND

Nominal Pipe Size	Diameter and Width of Band, Minus, in.
1¼	0.035
1½	0.04
2	0.04
2½	0.05
3	0.05
4	0.06
5	0.06
6	0.07
8	0.09

TABLE 2 INSPECTION LIMITS FOR CENTER-TO-END DIMENSIONS

Nominal Pipe Size	Center-to-End, Plus or Minus, in.
1¼	0.07
1½	0.08
2	0.08
2½	0.10
3	0.10
4	0.12
5	0.12
6	0.14
8	0.16

GENERAL NOTE:

The above limits apply to all fittings covered by this Standard. Inspection limits for end-to-end dimensions shall be double the limits for center-to-end dimensions. The largest opening in the fitting governs the tolerance to be applied to all openings.

5 DIMENSIONS AND TOLERANCES**5.1 Dimensions**

U.S. Customary Units are used in this Standard. Some dimensions of steel pipe from ANSI/ASME B36.10M are listed for convenience in Annex A. Tolerances applicable to dimensions of fittings are specified in paras. 5.2 through 5.6.

5.2 Metal Thickness

At no point in the castings shall the metal thickness be less than 90% of the values listed in Table 3.

5.3 Thread Chamber

The length of thread and total length of thread chamber to shoulder shall not vary from the dimensions shown in the tables by more than plus or minus the equivalent of the pitch of one thread.

5.4 Outside Diameter and Width of Band

The minus tolerances given in Table 1 are permitted on inspection to apply to the diameter of band and width of band.

5.5 Inside Diameter of Fitting

The inside diameter shall not vary from dimensions shown by more than:

- (a) for sizes 1¼ to 4, inclusive, ± 0.03 in.;
- (b) for sizes 5 to 8, inclusive, ± 0.06 in.

5.6 Center-to-End

The center-to-end dimensions shall not vary from the given dimensions by more than the values given in Table 2.

5.7 Shoulder

These fittings are provided with shoulders so that when used with Standard Wall Pipe (ANSI/ASME B36.10M), the end of the pipe practically meets the shoulder as the joint is made up, thereby forming a smooth passageway.

6 THREADING

(a) All fittings (except roof connections) shall be threaded with American National Standard Taper Pipe Threads (ANSI/ASME B1.20.1), and the variations in threading shall be limited to one turn small and no turn large, except for threaded openings without shoulder, which shall be limited to one turn large and one turn small, from the gaging notch on the plug when using working gages. Roof connections may have taper threads as above or American National Standard Straight Pipe Threads, Free Fitting Mechanical Joint (ANSI/ASME B1.20.1).

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(b) When gaging internal threads, the notch shall be flush with the bottom of the chamfer, which shall be considered as being the intersection of the chamfer cone and the pitch cone of the thread. This depth is approximately equal to one-half thread from the face of the fitting.

(c) All threads shall be countersunk a distance not less than one-half thread at an angle of approximately 45 deg. with the axis of the thread, both for the purpose of easier entrance in making a joint and for the protection of the thread. Countersinking shall be concentric with the thread.

(d) The length of thread specified herein shall be measured to include the countersink.

(e) The maximum allowable variation in the alignment of threads of all openings of threaded fittings shall be 0.06 in./ft.

(f) All fittings having openings of 90 deg. nominal angle shall be tapped with a pitch of 0.25 in./ft, with the pitch in the direction shown in Fig. 2.

7 RIBS

The addition of ribs or lugs shall not be prohibited on any drainage fittings.

8 COATINGS

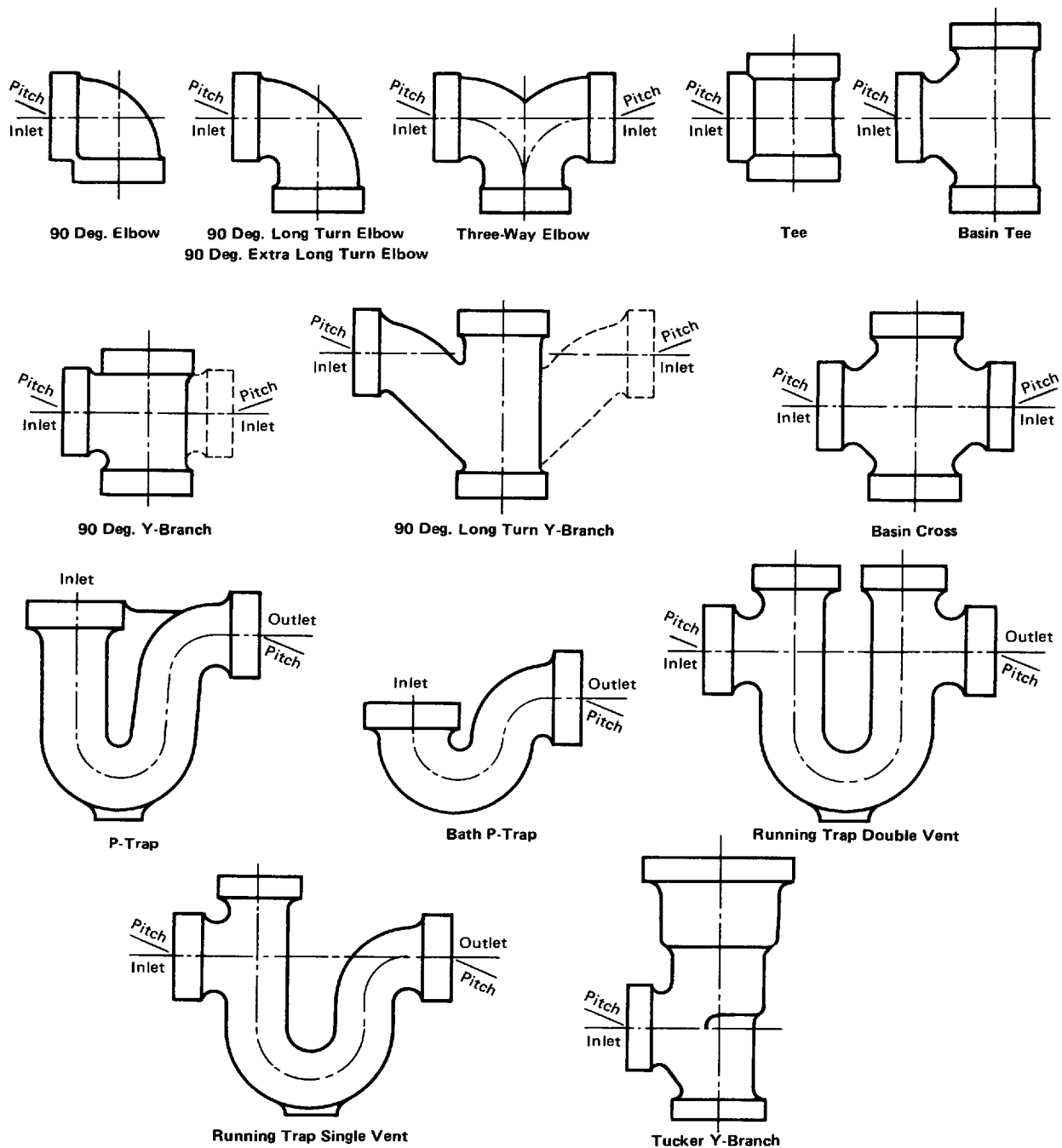
Fittings may be furnished uncoated, or coated with a bituminous composition, or zinc coated by the hot dipped process. The coatings shall be applied prior to threading.

9 FACE BEVEL

A bevel not exceeding 5 deg. is permitted on the faces of fitting openings. Center-to-end, end-to-end, and width of band dimensions may include or exclude the bevel.

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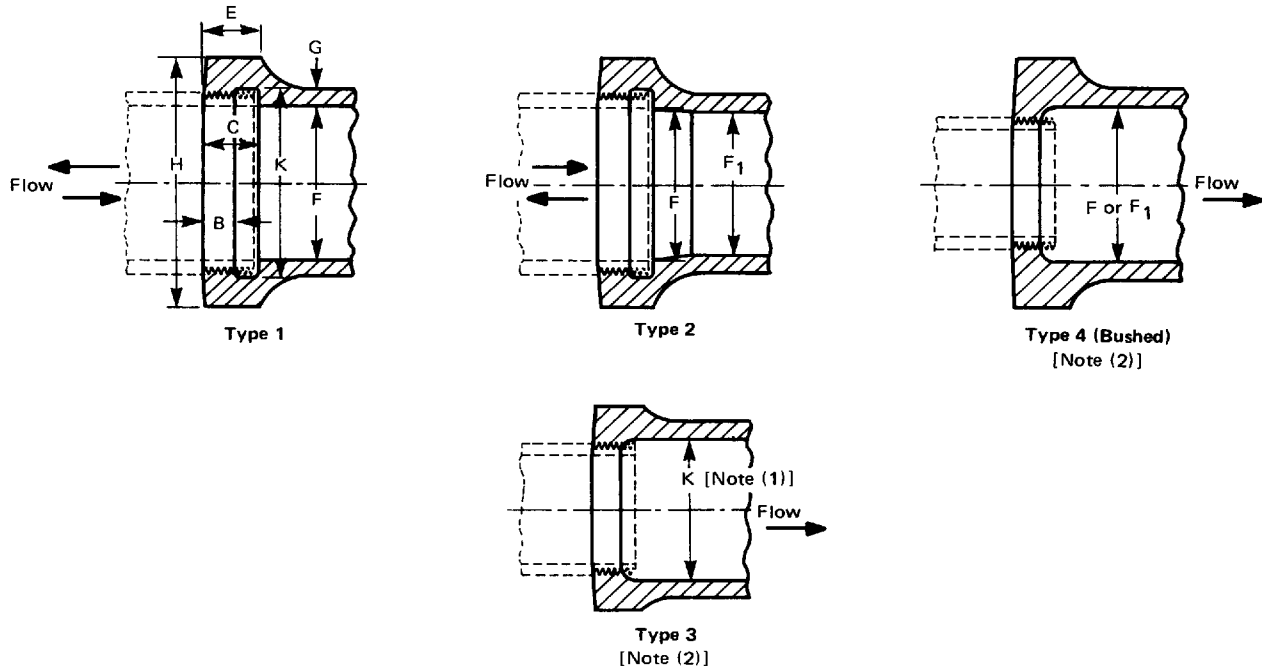
**GENERAL NOTE:**

Inlets of all drainage fittings have openings of 90 deg. nominal angle; outlets of P-traps and bath P-traps, and both inlets and outlets of running traps are tapped, pitched 0.25 in. to the foot with the pitch in the direction shown (exaggerated for purpose of illustration). The faces of bands of pitched openings may be perpendicular to the pitch line. Similar types of reducing fittings are tapped and pitched likewise.

FIG. 2 TYPES OF FITTINGS TAPPED TO PROVIDE 1/4 IN. PITCH

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**TABLE 3 WALL THICKNESS AND THREADED END DIMENSIONS**

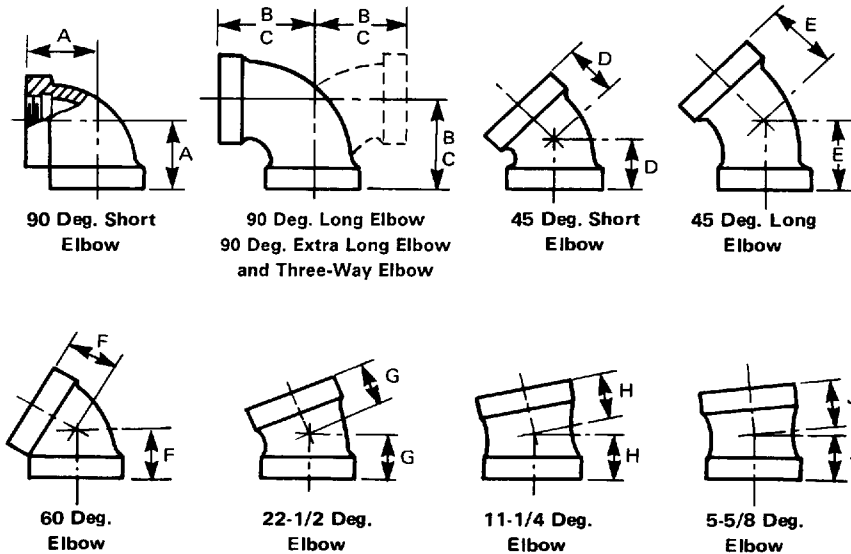
Nominal Pipe Size	Length of Threads B	Total Length of Thread Chamber to Shoulder C	Width of Band E	Inside Diameter of Fitting		Nominal Metal Thickness G	Outside Diameter of Band H	Recess Diameter	
				F	F ₁			Max. K	Min. K
1¼	0.42	0.71	0.71	1.38	1.25	0.18	2.39	1.73	1.66
1½	0.42	0.72	0.72	1.61	1.50	0.20	2.68	1.97	1.90
2	0.44	0.76	0.76	2.07	2.00	0.22	3.28	2.44	2.37
2½	0.68	1.14	1.14	2.47	2.50	0.24	3.86	2.97	2.87
3	0.77	1.20	1.20	3.07	3.00	0.26	4.62	3.60	3.50
4	0.84	1.30	1.30	4.03	4.00	0.31	5.79	4.60	4.50
5	0.94	1.41	1.41	5.05	5.00	0.38	7.05	5.66	5.56
6	0.96	1.51	1.51	6.06	6.00	0.43	8.28	6.72	6.62
8	1.06	1.71	1.71	7.98	8.00	0.55	10.63	8.72	8.62

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Section 5.
 (c) Type 2 fittings having diameters F and F₁ shall be tapered as shown.
 (d) The shoulder and groove, Types 1 and 2, are required on outlet connections. They are also required on inlet connections which are the same size as the outlet connections. Inlet connections which are smaller than the outlet connections may be made as shown in Type 3 or Type 4, at the manufacturer's option.

NOTES:

- (1) Values for K correspond to Reduced Size Inlet.
 (2) The openings for Types 3 and 4 are Reduced Size Inlet.

**TABLE 4 CENTER-TO-END DIMENSIONS OF ELBOWS**

Nominal Pipe Size	90 Deg. Elbow			45 Deg. Elbow		60 Deg. Elbow F	22½ Deg. Elbow G	11¼ Deg. Elbow H	5½ Deg. Elbow J
	Short¹ A	Long² and 3-Way Elbow B	Extra Long C	Short¹ D	Long E				
1¼	1.75	2.25	3.00	1.31	1.75	1.56	1.13	1.06	1.19
1½	1.94	2.50	3.50	1.44	1.88	1.75	1.25	1.25	1.31
2	2.25	3.06	4.00	1.69	2.25	2.06	1.44	1.38	1.50
2½	2.69	3.69	4.50	1.94	2.63	2.50	1.75	1.63	1.63
3	3.06	4.25	5.25	2.19	2.94	2.88	2.00	1.81	1.75
4	3.81	5.19	6.25	2.63	3.50	3.38	2.31	2.00	1.88
5	4.50	6.13	...	3.06	4.13	3.88	2.63	2.25	2.00
6	5.13	7.13	...	3.44	4.88	4.25	2.94	2.38	2.25
8	6.56	9.00	...	4.25	...	...	...	...	...

GENERAL NOTES:

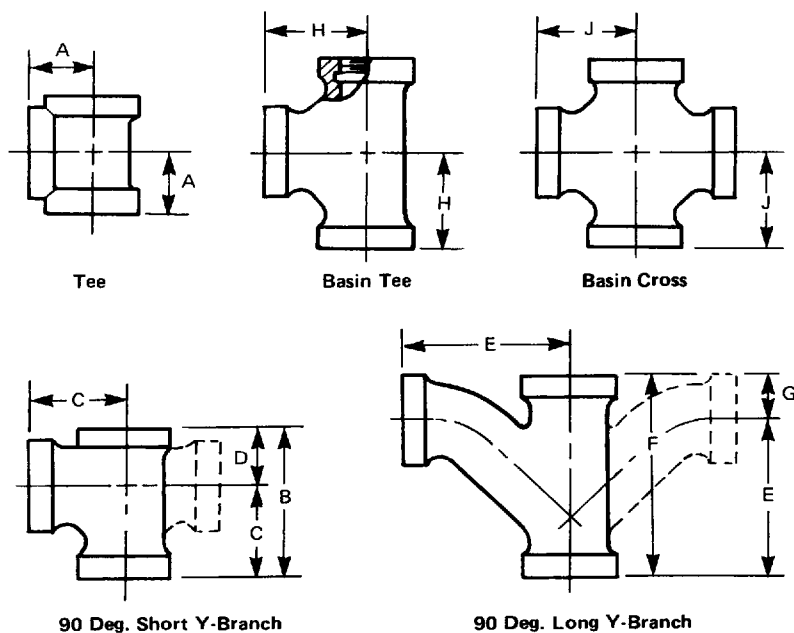
- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.

NOTES:

- (1) Same dimensions as adopted for Class 125 Cast Iron Threaded Fittings (ANSI/ASME B16.4).
 (2) Three-way elbows have same dimensions as 90 deg. long radius elbows.

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**TABLE 5 DIMENSIONS OF TEES, CROSSES, AND Y-BRANCHES**

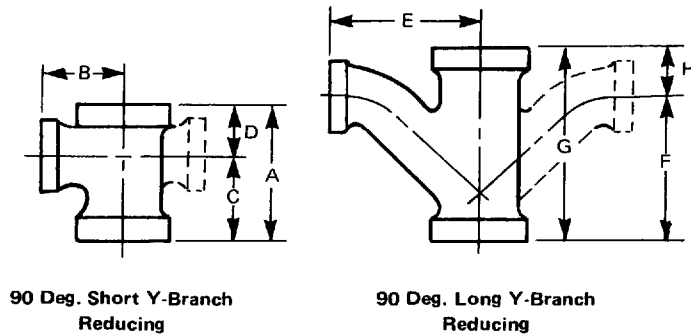
Nominal Pipe Size	Center- to-End of Tee ¹ A	90 Deg. Short ² Y-Branch			90 Deg. Long ² Y-Branch			Center- to-End of Basin Tee H	Center- to-End of Basin Cross J
		End- to-End B	Center- to-End C	Center- to-End D	Center- to-End E	End- to-End F	Center- to-End G		
1¼	1.75	3.75	2.25	1.50	3.63	4.75	1.13	2.31	2.31
1½	1.94	4.25	2.50	1.75	4.13	5.38	1.25	2.69	2.69
2	2.25	5.19	3.06	2.13	5.25	7.00	1.75	3.50	3.50
2½	2.70	6.31	3.69	2.63	6.25	8.25	2.00	4.25	...
3	3.08	7.25	4.25	3.00	7.50	9.88	2.38	...	...
4	3.79	8.75	5.19	3.56	9.88	13.00	3.13	...	...
5	4.50	10.31	6.13	4.19	12.25	15.75	3.50	...	...
6	5.13	11.94	7.13	4.81	14.63	18.75	4.13	...	...
8	6.56	...	...	...	...	...	...	...	...

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.

NOTES:

- (1) Same dimensions as adopted for Class 125 Cast Iron Threaded Fittings (ANSI/ASME B16.4).
 (2) Double Y-branches have same dimensions as single Y-branches.

**TABLE 6 DIMENSIONS OF Y-BRANCHES (REDUCING SIZES)**

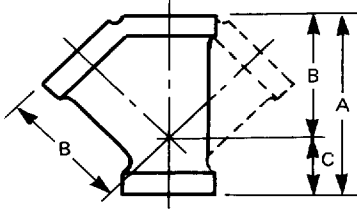
Nominal Pipe Size	90 Deg. Short Y-Branch				90 Deg. Long Y-Branch			
	End- to-End A	Center- to-End B	Center- to-End C	Center- to-End D	End- to-End G	Center- to-End E	Center- to-End F	Center- to-End H
1½ × 1¼	3.88	2.50	2.38	1.50	5.13	3.88	3.94	1.19
2 × 1½	4.63	2.94	2.69	1.94	5.75	4.38	4.44	1.31
2½ × 1½	4.88	3.06	2.81	2.06	5.75	4.56	4.44	1.31
2½ × 2	5.50	3.31	3.25	2.25	7.38	5.75	5.75	1.63
3 × 1½	5.06	3.31	2.94	2.13	5.94	5.00	4.63	1.31
3 × 2	5.69	3.63	3.31	2.38	7.56	6.06	5.94	1.63
4 × 1½	5.25	3.81	3.00	2.25	6.06	5.44	4.75	1.31
4 × 2	5.81	4.06	3.38	2.44	7.69	6.63	6.06	1.63
4 × 2½	6.63	4.44	3.81	2.81	8.63	7.06	6.63	2.00
4 × 3	7.38	4.75	4.31	3.06	10.00	8.06	7.63	2.38
5 × 1½	5.56	4.38	3.19	2.38	6.31	6.00	4.94	1.38
5 × 2	6.13	4.63	3.56	2.56	7.75	7.13	6.13	1.63
5 × 3	7.75	5.25	4.50	3.25	10.25	8.63	7.88	2.38
5 × 4	9.13	5.69	5.38	3.75	13.00	10.44	10.13	2.88
6 × 2	6.25	5.13	3.63	2.63	7.94	7.75	6.31	1.63
6 × 3	7.88	5.75	4.56	3.31	10.38	9.13	8.06	2.31
6 × 4	9.25	6.19	5.44	3.81	13.06	11.00	10.19	2.88
6 × 5	10.56	6.63	6.25	4.31	16.06	12.81	12.56	3.50

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.
 (c) Double Y-branches have same dimensions as single Y-branches.

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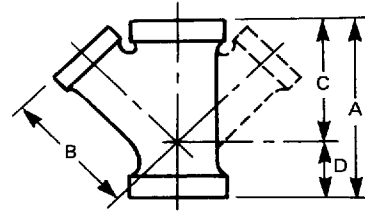
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**TABLE 7 DIMENSIONS OF 45 DEG. Y-BRANCHES**

Nominal Pipe Size	End-to-End A	Center-to-End B	Center-to-End C
1¼	5.00	3.25	1.75
1½	5.50	3.63	1.88
2	6.50	4.38	2.13
2½	7.88	5.38	2.50
3	9.00	6.19	2.81
4	10.88	7.69	3.19
5	12.94	9.19	3.75
6	14.88	10.75	4.13
8	18.81	13.56	5.25

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.
 (c) Double Y-branches have same dimensions as single Y-branches.

**TABLE 8 DIMENSIONS OF 45 DEG. Y-BRANCHES (REDUCING SIZES)**

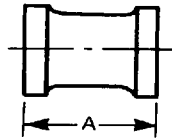
Nominal Pipe Size	End-to-End A	Center-to-End B	Center-to-End C	Center-to-End D
1½ × 1¼	5.25	3.44	3.50	1.75
2 × 1½	5.88	4.13	4.06	1.81
2½ × 1½	6.44	4.63	4.56	1.88
2½ × 2	7.06	5.13	4.94	2.13
3 × 1½	6.63	5.06	4.94	1.69
3 × 2	7.38	5.38	5.31	2.06
3 × 2½	8.00	5.81	5.69	2.31
4 × 1½	7.19	6.06	5.75	1.44
4 × 2	7.69	6.31	6.00	1.69
4 × 3	9.25	7.19	6.88	2.38
5 × 2	8.25	7.19	6.88	1.38
5 × 3	9.81	7.88	7.63	2.19
5 × 4	11.38	8.50	8.44	2.94
6 × 2	8.44	8.06	7.56	0.88
6 × 3	10.00	8.75	8.31	1.69
6 × 4	11.88	9.38	9.06	2.81
6 × 5	13.00	10.00	9.81	3.19
8 × 4	11.44	11.00	10.44	1.00
8 × 6	14.94	12.38	11.88	3.06

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.
 (c) Double Y-branches have same dimensions as single Y-branches.

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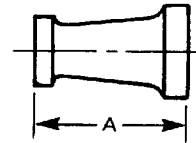
CAST IRON THREADED DRAINAGE FITTINGS

**TABLE 9 DIMENSIONS OF COUPLINGS**

Nominal Pipe Size	End- to-End A
1¼	3.00
1½	3.38
2	3.75
2½	4.00
3	4.25
4	4.50
5	4.75
6	5.00
8	5.62

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.

**TABLE 10 DIMENSIONS OF INCREASERS**

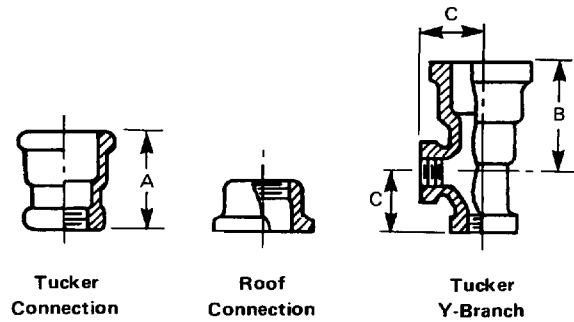
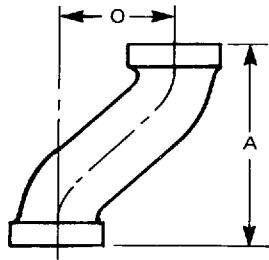
Nominal Pipe Size	End- to-End A
1½ × 2	9.00
2 × 2½	9.00
2 × 3	9.00
2½ × 3	9.00
2 × 4	9.00
3 × 4	9.00
2 × 5	9.00
3 × 5	9.00
4 × 5	9.00
4 × 6	9.00
5 × 6	9.00
4 × 8	9.00
5 × 8	9.00
6 × 8	9.00

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.

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**TABLE 11 DIMENSIONS OF OFFSETS**

Nominal Pipe Size	Offset O	End-to-End A
2	4.00	7.50
2	6.00	9.50
2	8.00	11.50
2	10.00	13.50
3	4.00	8.75
3	6.00	10.75
3	8.00	12.75
3	10.00	14.75
4	4.00	9.75
4	6.00	11.75
4	8.00	13.75
4	10.00	15.75
4	12.00	17.75
5	6.00	12.63
5	8.00	14.63
5	10.00	16.63
5	12.00	18.63
6	6.00	13.63
6	8.00	15.63
6	10.00	17.63
6	12.00	19.63

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.

TABLE 12 DIMENSIONS OF TUCKER CONNECTIONS, ROOF CONNECTIONS, AND TUCKER Y-BRANCHES

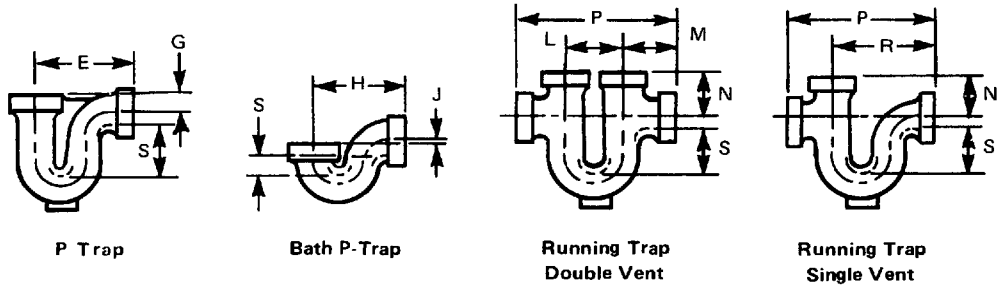
Nominal Pipe Size	Length A	Center-to-Tucker End B	Center-to-Threaded End C
1 1/4	3.75	3.94	2.25
1 1/2	4.00	4.25	2.50
2 [Note (1)]	4.50	4.69	3.06
3	4.75	5.38	4.25
4 [Note (2)]	7.00	...	...
5 [Note (2)]	7.00	...	...
6 [Note (2)]	7.00	...	...

GENERAL NOTES:

- (a) Dimensions are in inches.
 (b) For tolerances, see Table 2.
 (c) The hubs on Tucker connections, roof connections, and Tucker Y-branches are designed to be used with wrought iron and steel pipe of the nominal pipe size.
 (d) For pitch of Tucker Y-branch, see Fig. 2 and para. 6(f).
 (e) Roof connections are not made to standard dimensions, except for the thread which may be either straight or tapered [(see para. 6(a))].

NOTES:

- (1) The size 2 Tucker connection may be made of malleable iron having a diameter to fit within a nominal 4 in. building wall.
 (2) These sizes are provided with loose rings to slip into hubs over wrought pipe. Other sizes may be provided with loose rings at the option of the manufacturer.

**TABLE 13 DIMENSIONS OF P-TRAPS, BATH P-TRAPS, AND RUNNING TRAPS**

Nominal Pipe Size	P-Traps		Bath P-Traps		Running Traps					Water Seal, Min. S	Cleanout, Nominal Pipe Size
	E	G	H	J	P	L	M	N	R		
1¼	3.94	0.75	...	...	7.75	3.13	2.31	2.00	5.44	2.00	¾
1½	4.38	0.88	4.50	0.25	8.38	3.38	2.50	2.25	5.88	2.00	1
2	5.31	0.88	5.31	0	10.13	4.00	3.06	2.56	7.06	2.00	1
3	7.13	1.19	...	...	13.75	5.38	4.19	3.50	9.56	2.50	1¼
4	9.25	1.50	...	...	17.25	7.00	5.13	4.19	12.13	2.50	2

GENERAL NOTES:

- (a) Dimensions are in inches. For pitch of traps, see Fig. 2.
 (b) For tolerances, see Table 2.

ANNEX A
DIMENSIONS OF WELDED AND
SEAMLESS STEEL PIPE (ANSI/ASME B36.10M)

(This Annex is not part of ASME B16.12-1991, and is included for information purposes only.)

Nominal Pipe Size	Outside Diameter	Nominal Wall Thickness, Standard Wall
1/8	0.405	0.068
1/4	0.540	0.088
3/8	0.675	0.091
1/2	0.840	0.109
3/4	1.050	0.113
1	1.315	0.133
1 1/4	1.660	0.140
1 1/2	1.900	0.145
2	2.375	0.154
2 1/2	2.875	0.203
3	3.500	0.216
3 1/2	4.000	0.226
4	4.500	0.237
5	5.563	0.258
6	6.625	0.280
8	8.625	0.322
10	10.750	0.365
12	12.750	0.375
14 O.D.	14.000	0.375
16 O.D.	16.000	0.375
18 O.D.	18.000	0.375
20 O.D.	20.000	0.375
24 O.D.	24.000	0.375

GENERAL NOTES:

- (a) Dimensions are in inches.
- (b) The decimal thicknesses listed for the respective pipe sizes represent their nominal or average wall dimensions. For tolerances on wall thickness, see appropriate material specification.
- (c) Thicknesses shown in boldface type are identical with corresponding thicknesses for Schedule 40 pipe.

ANNEX B

REFERENCES

(This Annex is an integral part of ASME B16.12-1991 and is placed after the main text for convenience.)

The following is a list of standards and specifications referenced in this Standard, showing the year of approval.

ASME Publications (Approved as American National Standards)

ANSI/ASME B1.20.1-1983	Pipe Threads, General Purpose (Inch)
ANSI/ASME B16.4-1985	Cast Iron Threaded Fittings (Classes 125 and 250)
ANSI/ASME B36.10M-1985	Welded and Seamless Wrought Steel Pipe

ASTM Publications

ASTM A 126-84	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
ASTM A 197-87	Specification for Cupola Malleable Iron

MSS Publications

MSS SP-25-1988	Standard Marking System for Valves, Fittings, Flanges and Unions
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Publications of the following organizations appear on the above list:

ASME	The American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017 ASME Order Department 22 Law Drive Box 2300 Fairfield, NJ 07007-2300
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park Street, N.E. Vienna, VA 22180

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Publications appearing above which have been approved as American National Standards may also be obtained from:

ANSI

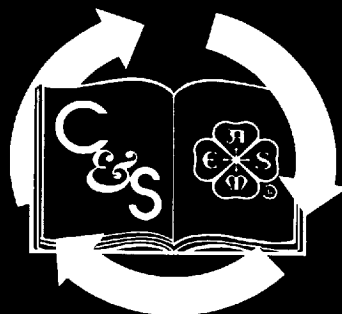
American National Standards Institute, Inc.
1430 Broadway
New York, NY 10018

AMERICAN NATIONAL STANDARDS FOR PIPING, PIPE FLANGES, FITTINGS, AND VALVES

Scheme for the Identification of Piping Systems	A13.1-1981(R1985)
Pipe Threads, General Purpose (Inch)	B1.20.1-1983
Dryseal Pipe Threads (Inch)	B1.20.3-1976(R1982)
Cast Iron Pipe Flanges and Flanged Fittings	B16.1-1989
Malleable Iron Threaded Fittings, Class 150 and 300	B16.3-1985
Cast Iron Threaded Fittings, Classes 125 and 250	B16.4-1985
Pipe Flanges and Flanged Fittings	B16.5-1988
Factory-Made Wrought Steel Buttwelding Fittings	B16.9-1986
Face-to-Face and End-to-End Dimensions of Valves	B16.10-1986
Forged Steel Fittings, Socket-Welding and Threaded	B16.11-1980
Cast Iron Threaded Drainage Fittings	B16.12-1991
Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads	B16.14-1991
Cast Bronze Threaded Fittings, Class 125 and 250	B16.15-1985
Cast Copper Alloy Solder Joint Pressure Fittings	B16.18-1984
Ring-Joint Gaskets and Grooves for Steel Pipe Flanges	B16.20-1973
Nonmetallic Flat Gaskets for Pipe Flanges	B16.21-1978
Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	B16.22-1989
Cast Copper Alloy Solder Joint Drainage Fittings — DWV	B16.23-1984
Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300	B16.24-1979
Buttwelding Ends	B16.25-1986
Cast Copper Alloy Fittings for Flared Copper Tubes	B16.26-1988
Wrought Steel Buttwelding Short Radius Elbows and Returns	B16.28-1986
Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings — DWV	B16.29-1986
Cast Copper Alloy Solder Joint Fittings for Sovent® Drainage Systems	B16.32-1984
Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 125 psig (Sizes ½ Through 2)	B16.33-1990
Valves — Flanged, Threaded, and Welding End	B16.34-1988
Orifice Flanges	B16.36-1988
Hydrostatic Testing of Control Valves	B16.37-1980
Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2½ to 12, 125 psig Maximum)	B16.38-1985
Malleable Iron Threaded Pipe Unions, Classes 150, 250, and 300	B16.39-1986
Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems	B16.40-1985
Functional Qualification Requirements for Power Operated Active Valve Assemblies for Nuclear Power Plants	B16.41-1983(R1989)
Ductile Iron Pipe Flanges and Flanged Fittings, Class 150 and 300	B16.42-1987
Wrought Copper and Copper Alloy Solder Joint Fittings for Sovent® Drainage Systems	B16.43-1982
Cast Iron Fittings for Sovent® Drainage Systems	B16.45-1987
Large Diameter Steel Flanges (NPS 26 Through NPS 60)	B16.47-1990
Power Piping	B31.1-1989
Fuel Gas Piping	B31.2-1968
Chemical Plant and Petroleum Refinery Piping	B31.3-1990
Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols	B31.4-1989
Refrigeration Piping	B31.5-1987
Gas Transmission and Distribution Piping Systems	B31.8-1989
Building Services Piping	B31.9-1988
Slurry Transportation Piping Systems	B31.11-1989
ASME Guide for Gas Transmission and Distribution Piping Systems — 1986 (not an ANSI Standard)	
Manual for Determining the Remaining Strength of Corroded Pipelines (not an ANSI Standard)	B31G-1984
Welded and Seamless Wrought Steel Pipe	B36.10M-1985
Stainless Steel Pipe	B36.19M-1985
Self-Operated and Power-Operated Safety-Related Valves Functional Specification Standard	N278.1-1975(R1984)

The ASME Publications Catalog shows a complete list of all the Standards published by the Society.

The catalog and binders for holding these Standards are available upon request.



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