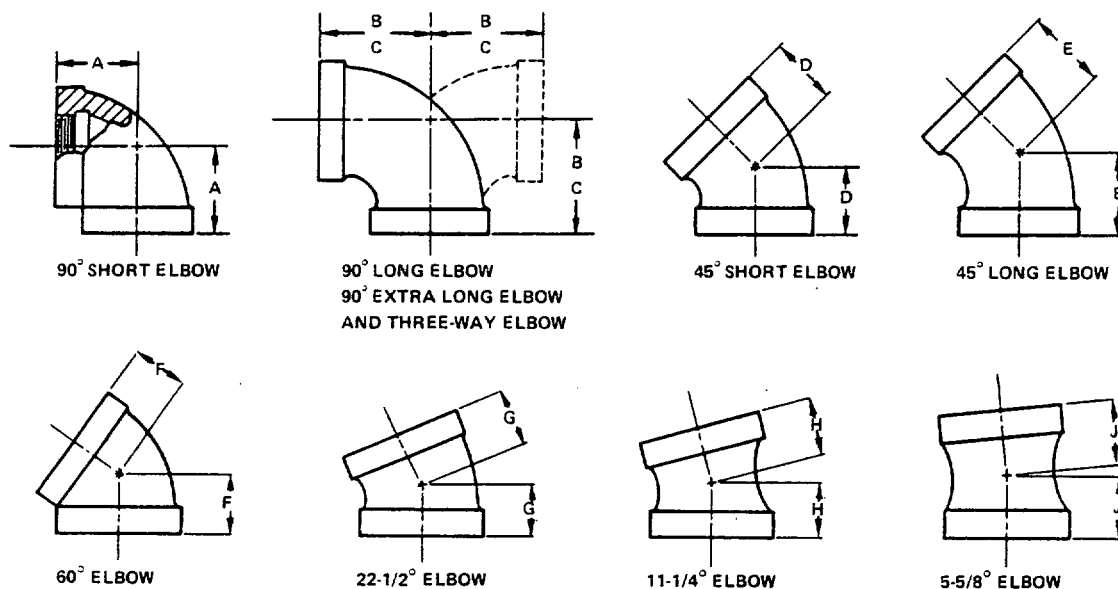


FIGURE 1



(A) TABLE I. Center To End Dimensions.

Nominal Pipe Size	90 Deg. Elbow			45 Deg. Elbow		60 Deg Elbow F	22-1/2 Deg Elbow G	11-1/4 Deg Elbow H	5-5/8 Deg Elbow J
	Short A	Long and 3-Way Elbow B	Extra Long C	Short D	Long E				
1-1/4	1-3/4	2-1/4	3	1-5/16	1-3/4	1-9/16	1-1/8	1-1/16	1-3/16
1-1/2	1-15/16	2-1/2	3-1/2	1-7/16	1-7/8	1-3/4	1-1/4	1-1/4	1-5/16
2	2-1/4	3-1/16	4	1-11/16	2-1/4	2-1/16	1-7/16	1-3/8	1-1/2
2-1/2	2-11/16	3-11/16	4-1/2	1-15/16	2-5/8	2-1/2	1-3/4	1-5/8	1-5/8
3	3-1/16	4-1/4	5-1/4	2-3/16	2-15/16	2-7/8	2	1-13/16	1-3/4
4	3-13/16	5-3/16	6-1/4	2-5/8	3-1/2	3-3/8	2-5/16	2	1-7/8
5	4-1/2	6-1/8	...	3-1/16	4-1/8	3-7/8	2-5/8	2-1/4	2
6	5-1/8	7-1/8	...	3-7/16	4-7/8	4-1/4	2-15/16	2-3/8	2-1/4
8	6-9/16	9	...	4-1/4	...	...	...	...	...

## (A) NOTES:

- MATERIAL:** Material shall be in accordance with ANSI B16.12.
- COATINGS:** Coatings shall be in accordance with ANSI B16.12 and shall be uncoated, coated with a bituminous composition or zinc coated as specified by the MS part number.
- DIMENSIONS:** All dimensions are in inches and shall be in accordance with ANSI B16.12. Three-way elbows have the same dimensions as 90 degree long radius elbows.
- THREADED ENDS:** The threaded ends shall be in accordance with ANSI B16.12. All drainage fittings having openings at 90 degree nominal angle shall be tapped with a pitch of 1/4 inch in one foot and with the pitch in the direction shown in ANSI B16.12.
- GENERAL:**
  - Referenced documents shall be of the issue in effect on date of invitations for bid or requests for proposal.
  - For design feature purposes, this standard takes precedence over procurement documents referenced herein.

(A) DENOTES CHANGES

P.A. NAVY-YD Other Cust ARMY-ME (A)	International Interest	TITLE ELBOWS, CAST-IRON THREADED DRAINAGE	MILITARY STANDARD
Procurement Specification ANSI B16.12 (A)		SUPERSEDES:	MS90522
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User activities: Army - CE  
Navy - MC  
Air Force - 99Review activities: Army -  
Navy -  
Air Force -  
DLACS

6. PART NUMBER: The MS part number is formed by combining the MS numbers with a dash after it, the size code number, the elbow style letter, and the coating identification number.

MS 90522 - X X X

Size code number (see note 7) ————  
 Elbow style letter (see note 8) ————  
 Coating identification number (see note 9) ————

7. SIZE: The nominal pipe size is designated by a digit (see table II).

TABLE II. Code Number to Size.

Code Number	Nominal Pipe Size	Code Number	Nominal Pipe Size
1	1 1/4 inch	6	4 inch
2	1 1/2 inch	7	5 inch
3	2 inch	8	6 inch
4	2 1/2 inch	9	8 inch
5	3 inch		

8. ELBOW STYLE: The elbow style is designated by a single letter (see table III).

TABLE III. Code Letter to Elbow Style.

Code Letter	Elbow Style	Code Letter	Elbow Style
K	90 degree short	R	45 degree long
L	90 degree long	T	60 degree
M	90 degree extra long	W	22 1/2 degree
N	three-way	X	11 1/4 degree
P	45 degree short	Y	5 5/8 degree

9. COATING: The type of coating is designated by a digit (see table IV).

TABLE IV. Code Number to Coating.

Code Number	Coating
1	Uncoated
2	Bituminous composition
3	Zinc coated

P.A. NAVY-YD Other Cust ARMY-ME (A)	International Interest	TITLE ELBOWS, CAST-IRON THREADED DRAINAGE	MILITARY STANDARD
			MS90522
Procurement Specification ANSI B16.12 (A)	SUPERSEDES:		PAGE 2 OF 2

① User activities: Army - CE  
Navy - MC  
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