INCH-POUND

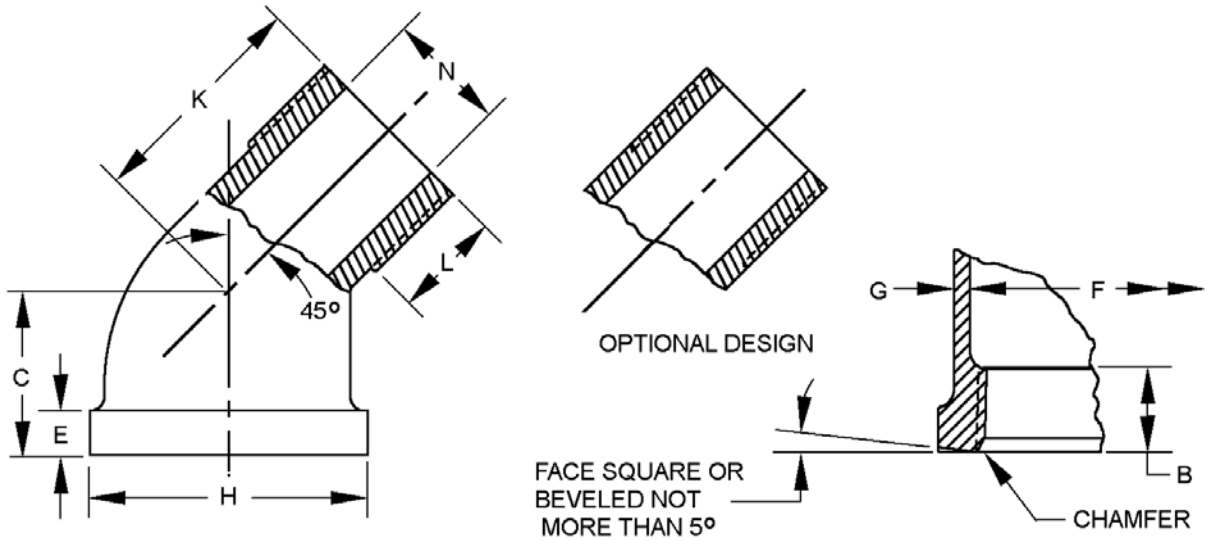
MS39231C
24 July 2015
SUPERSEDING
MS39231B
20 June 1983

DETAIL SPECIFICATION SHEET

ELBOW, PIPE STREET, 45 DEG., (150 & 300 POUNDS)

This specification is approved for use by all
Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and ASME B16.3.



B	-	Length of Thread Min	H	-	Outside Diameter of Band Min
C	-	Center-to-End	K	-	Center-to-End
E	-	Width of Band Min	L	-	Length of External Thread Min
F	-	Inside Diameter of Fitting	N	-	Port Diameter Max
G	-	Metal Thickness			

FIGURE 1. Class 150 and 300 pipe-street elbow dimensions.

AMSC N/A

FSC 4730

TABLE I. Dimensions of Street Elbows – Class 150

Dash No.	Nominal Pipe Size	B	C		E	F		G	H	K		L	N
			Value	Tol. ±		Min	Max			Value	Tol. ±		
1	1⁄8	.25 (6.4)	.70 (17.8)	.03 (0.8)	.20 (5.1)	.41 (10.4)	.44 (11.2)	.09 (2.3)	.69 (17.5)	.84 (21.3)	.03 (0.8)	.26 (6.6)	.20 (5.1)
2	1⁄4	.32 (8.1)	.73 (18.5)	.04 (1.0)	.22 (5.6)	.54 (13.7)	.58 (14.7)	.10 (2.5)	.84 (21.3)	.94 (23.9)	.04 (1.0)	.40 (10.2)	.26 (6.6)
3	3⁄8	.36 (9.1)	.80 (20.3)	.05 (1.3)	.23 (5.8)	.68 (17.3)	.72 (18.3)	.10 (2.5)	1.02 (25.9)	1.03 (26.2)	.05 (1.3)	.41 (10.4)	.37 (9.4)
4	1⁄2	.43 (10.9)	.88 (22.4)	.06 (1.5)	.25 (6.4)	.84 (21.3)	.90 (22.9)	.11 (2.8)	1.20 (30.5)	1.15 (29.2)	.06 (1.5)	.53 (13.5)	.51 (13.0)
5	3⁄4	.50 (12.7)	.98 (24.9)	.06 (1.5)	.27 (6.9)	1.05 (26.7)	1.11 (28.2)	.12 (3.0)	1.46 (37.1)	1.29 (32.8)	.06 (1.5)	.55 (14.0)	.69 (17.5)
6	1	.58 (14.7)	1.12 (28.4)	.07 (1.8)	.30 (7.6)	1.32 (33.5)	1.39 (35.3)	.13 (3.3)	1.77 (45.0)	1.47 (37.3)	.07 (1.8)	.68 (17.3)	.91 (23.1)
7	1-1⁄4	.67 (17.0)	1.29 (32.8)	.07 (1.8)	.34 (8.6)	1.66 (42.2)	1.73 (43.9)	.15 (3.8)	2.15 (54.6)	1.71 (43.4)	.07 (1.8)	.71 (18.0)	1.19 (30.2)
8	1-1⁄2	.70 (17.8)	1.43 (36.3)	.08 (2.0)	.37 (9.4)	1.90 (48.3)	1.97 (50.0)	.16 (4.1)	2.43 (61.7)	1.88 (47.8)	.08 (2.0)	.72 (18.3)	1.39 (35.3)
9	2	.75 (19.1)	1.68 (42.7)	.08 (2.0)	.42 (10.7)	2.38 (60.5)	2.45 (62.2)	.17 (4.3)	2.96 (75.2)	2.22 (56.4)	.08 (2.0)	.76 (19.3)	1.79 (45.5)
10	2-1⁄2	.92 (23.4)	1.95 (49.5)	. . .	.48 (12.2)	2.87 (72.9)	2.97 (75.4)	.21 (5.3)	3.59 (91.2)	2.57 (65.3)	. . .	1.14 (29.0)	2.20 (55.9)
11	3	.98 (24.9)	2.17 (55.1)	. . .	.55 (14.0)	3.50 (88.9)	3.60 (91.4)	.23 (5.8)	4.28 (108.7)	3.00 (76.2)	. . .	1.20 (30.5)	2.78 (70.6)
12	4	1.08 (27.4)	2.61 (66.3)	. . .	.66 (16.8)	4.50 (114.3)	4.60 (116.8)	.26 (6.6)	5.40 (137.2)	3.70 (94.0)	. . .	1.30 (33.0)	3.70 (94.0)
13	5	1.18 (30.0)	. . .	. . .	.78 (19.8)	5.56 (141.2)	5.66 (143.8)	.30 (7.6)	6.58 (167.1)	. . .	. . .	1.41 (35.8)	4.69 (119.1)
14	6	1.28 (32.5)	. . .	. . .	.90 (22.9)	6.62 (168.1)	6.72 (170.7)	.34 (8.6)	7.77 (197.4)	. . .	. . .	1.51 (38.4)	5.67 (144.0)

Notes:

Dimensions are given in inches. Metric equivalents are given in parentheses and are for information only.

For dimension G, metal thickness at no point shall be less than 90 percent of the thickness given in the table.

TABLE II. Dimensions of Street Elbows – Class 300

Dash No.	Nominal Pipe Size	B	C	E	F		G	H	K	L	N
					Min	Max					
15	1⁄4	.43 (10.9)	. . .	.38 (9.7)	.54 (13.7)	.58 (14.7)	.14 (3.6)	.93 (23.6)	. . .	.40 (10.2)	.26 (6.6)
16	3⁄8	.47 (11.9)	. . .	.44 (11.2)	.67 (17.0)	.72 (18.3)	.15 (3.8)	1.12 (28.4)	. . .	.41 (10.4)	.36 (9.1)
17	1⁄2	.57 (14.5)	1.00 (25.4)	.50 (12.7)	.84 (21.3)	.90 (22.9)	.16 (4.1)	1.34 (34.0)	1.38 (35.1)	.53 (13.5)	.49 (12.4)
18	3⁄4	.64 (16.3)	1.13 (28.7)	.56 (14.2)	1.05 (26.7)	1.11 (28.2)	.18 (4.6)	1.63 (41.4)	1.56 (39.6)	.55 (14.0)	.67 (17.0)
19	1	.75 (19.1)	1.31 (33.3)	.62 (15.7)	1.31 (33.3)	1.38 (35.1)	.20 (5.1)	1.95 (49.5)	1.81 (46.0)	.68 (17.3)	.88 (22.4)
20	1-1⁄4	.84 (21.3)	1.50 (38.1)	.69 (17.5)	1.66 (42.2)	1.73 (43.9)	.22 (5.6)	2.39 (60.7)	2.13 (54.1)	.71 (18.0)	1.16 (29.5)
21	1-1⁄2	.87 (22.1)	1.69 (42.9)	.75 (19.1)	1.90 (48.3)	1.97 (50.0)	.24 (6.1)	2.68 (68.1)	2.31 (58.7)	.72 (18.3)	1.35 (34.3)
22	2	1.00 (25.4)	2.00 (50.8)	.84 (21.3)	2.37 (60.2)	2.44 (62.0)	.26 (6.6)	3.28 (83.3)	2.69 (68.3)	.76 (19.3)	1.75 (44.5)
23	2-1⁄2	1.17 (29.7)	. . .	.94 (23.9)	2.87 (72.9)	2.97 (75.4)	.31 (7.9)	3.86 (98.0)	. . .	1.14 (29.0)	2.16 (54.9)
24	3	1.23 (31.2)	. . .	1.00 (25.4)	3.50 (88.9)	3.60 (91.4)	.35 (8.9)	4.62 (117.3)	. . .	1.20 (30.5)	2.67 (67.8)

Notes:

Dimensions are given in inches. Metric equivalents are given in parentheses and are for information only.

For dimension G, metal thickness at no point shall be less than 90 percent of the thickness given in the table.

REQUIREMENTS:

Material: Material shall be in accordance with ASME B16.3.

Protective Coating: Fittings may be black finish or zinc coated in accordance with ASME B16.3 and identified by the letter given in table III.

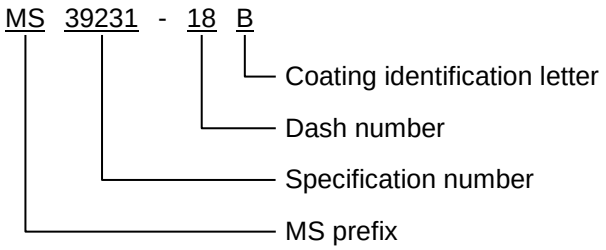
TABLE III. Protective coating identification letter.

Coating	Coating Identification Letter
Zinc	*(none)*
Black	B

Dimensions: Dimension shall be as given on figure 1 and in tables I and table II.

Threads: Street elbows shall be threaded with American Standard Taper Pipe Threads (NPT) in accordance with FED-STD-H28.

Part or Identifying Number (PIN): The PIN consists of the MS prefix, specification number, the dash number, and the coating identification letter.



Examples of a PIN:
MS39231-1 represents a class 150, 1/8 inch elbow with a zinc coating.
MS39231-18B represents a class 300, 3/4 inch elbow with a black coating.

Referenced documents shall be of the issue in effect on date of invitation for bid.

Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Reference documents. In addition to ASME B16.3 this document references the following:

FED-STD-H28

CONCLUDING MATERIAL

Custodians:
Army - AR
Navy - MC
Air Force - 99

Review activities:
Army – AT, AV
Air Force - 71

Preparing activity:
DLA - CC

(Project 4730-2015-048)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.