

INCH-POUND

MS28781E
 w/Amendment 1
 1 October 2009
 SUPERSEDING
 MS28781E
 24 April 2007

DETAIL SPECIFICATION SHEET

FITTING END, 90° ELBOW, ATTACHABLE, HYDRAULIC, HIGH
 PRESSURE HOSE 3000 PSI, FLARED TUBE

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
 MIL-DTL-8789.

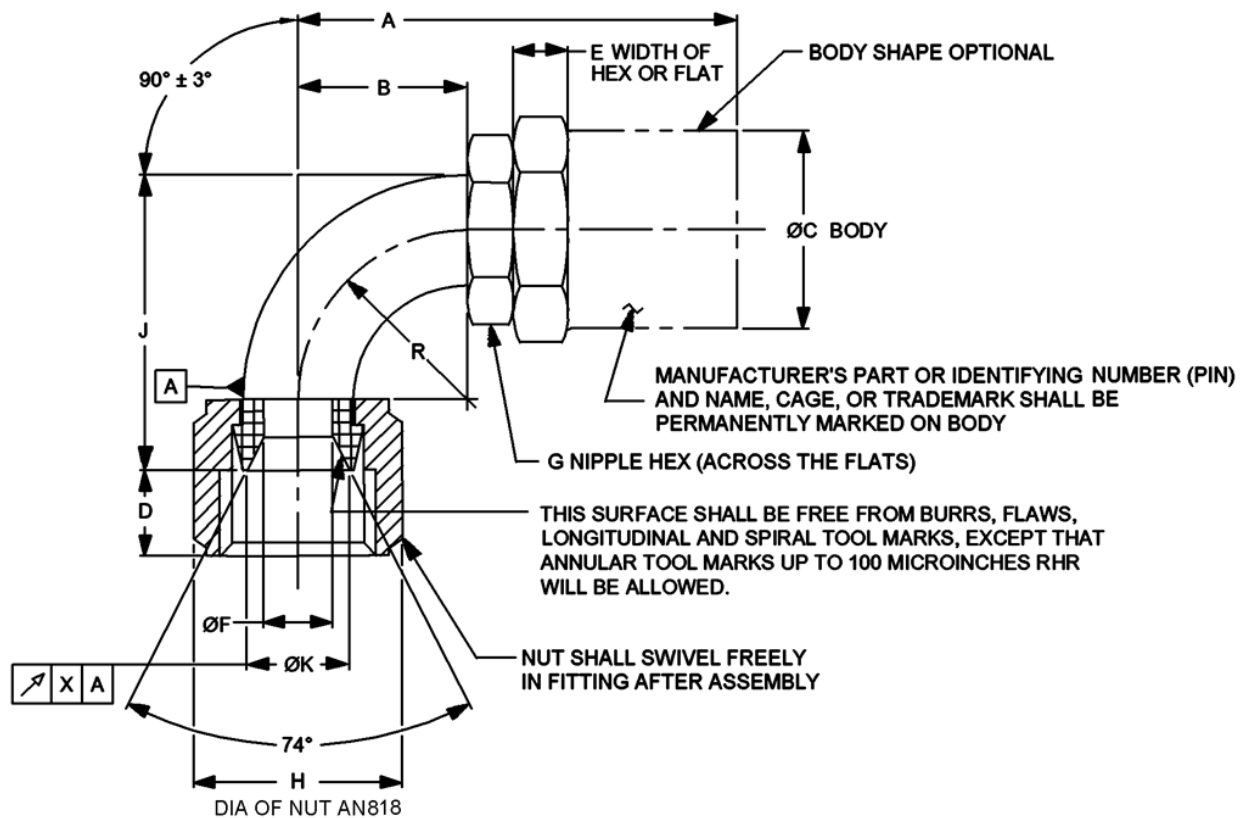


FIGURE 1. Fitting end, 90° elbow, flared tube dimensions and configuration.

MS28781E
w/AMENDMENT 1

Size dash no.	Hose ID ref	Tubing OD	Nut	A max inch (mm)	B max inch (mm)	C Diameter max inch (mm)
4	.218 (5.54)	.250 (6.35)	AN818-4	2.750 (69.85)	.410 (10.41)	.875 (22.23)
5	.281 (7.14)	.313 (7.95)	AN818-5		.473 (12.01)	.937 (23.80)
6	.344 (8.74)	.375 (9.53)	AN818-6	2.875 (73.03)	.535 (13.59)	1.160 (29.46)
8	.438 (11.13)	.500 (12.70)	AN818-8	3.000 (76.20)		1.375 (34.93)
10	.563 (14.30)	.625 (15.88)	AN818-10	3.187 (80.95)	.675 (17.15)	1.550 (39.37)
12	.688 (17.48)	.750 (19.05)	AN818-12	4.000 (101.60)	1.285 (32.64)	1.740 (44.20)
16	.875 (22.23)	1.00 (25.40)	AN818-16	4.750 (120.65)	1.562 (39.67)	2.000 (50.80)

Size dash no.	D inch (mm)		E min inch (mm)	F min inch (mm)	G (see note 5) min Inch (mm)	H Dia. inch (mm)	
4	.375 (9.53)	±.016 (0.41)	.188 (4.78)	.146 (3.71)	.563 (14.30)	.649 (16.48)	
5				.177 (4.50)	.625 (15.88)	.721 (18.31)	
6				.250 (6.35)	.271 (6.88)	.688 (17.48)	.794 (20.17)
8	.438 (11.13)	±.031 (0.79)	.312 (7.92)	.365 (9.27)	.875 (22.23)	1.010 (25.65)	
10	.515 (13.08)			.455 (11.56)	1.000 (25.40)	1.155 (29.34)	
12	.562 (14.27)			.375 (9.53)	.568 (14.43)	1.250 (31.75)	1.443 (36.65)
16	.620 (15.75)			.778 (19.76)	1.500 (38.10)	1.732 (43.99)	

Size dash no.	J max inch (mm)	K diameter inch (mm)		R ±.031 (0.79) inch (mm)	X inch (mm)	Weight max lbs (kg)
4	.754 (19.15)	.295 (7.49)	±.010 (0.25)	.375 (9.53)	005 (0.13)	.13 (59.0)
5	.879 (22.33)	.355 (9.02)		.437 (11.10)		.15 (68.0)
6	.958 (24.33)	.435 (11.05)		.500 (12.70)		.17 (77.1)
8	.972 (24.69)	.570 (14.48)		010 (0.25)	.625 (15.88)	.26 (117.9)
10	1.160 (29.46)	.680 (17.27)			1.250 (31.75)	.40 (181.3)
12	1.816 (46.13)	.850 (21.59)			1.500 (38.10)	.54 (244.9)
16	2.066 (52.48)	1.103 (28.02)	±.015 (0.38)		.83 (376.5)	

FIGURE 1. Fitting end, 90° elbow, flared tube dimensions and configuration - Continued.

MS28781E
w/AMENDMENT 1

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ± 0.005 inch (0.13 mm).
4. The fitting identification shall be marked in accordance with MIL-DTL-8789.
5. Hex or flats shall fit standard wrench openings.
6. Threads shall be in accordance with SAE-AS8879.

FIGURE 1. Fitting end, 90° elbow, flared tube dimensions and configuration - Continued.

REQUIREMENTS:

These fittings are for use with MIL-DTL-8788 hose.
See figure 1 for fitting end sizes, dimensions and weight.

Material: Nipples, nuts, and elbows shall be made of steel and the body of aluminum in accordance with MIL-DTL-8789. As an alternate, the elbow may be fabricated from steel tubing in accordance with MIL-DTL-8789.

Finish:

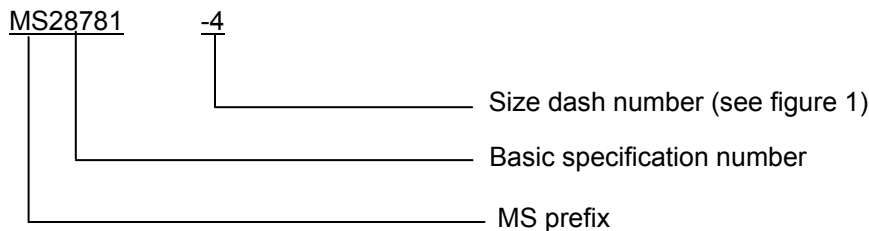
Aluminum alloy, anodic treatment, in accordance with MIL-A-8625, type II.

Steel, cadmium plate, in accordance with SAE-AMS-QQ-P-416, type II, class 3, color optional.

A non-standard swivel nut may be used provided the hex and thread dimensions are in accordance with AN818 and the nut shall not be removable from the assembly.

A true circular cross section is not required within angle of bend, however, a ball .031 smaller than "F" diameter (see figure 1) shall pass through the entire fitting.

PIN:



Example of a PIN: MS28781-4 indicates a .250 inch (6.35 mm) 90° elbow fitting flared to hose.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

MS28781E
w/AMENDMENT 1

Referenced documents. In addition to MIL-DTL-8789, this document references the following:

MIL-A-8625
MIL-DTL-8788
AN818
SAE-AS8879
SAE-AMS-QQ-P-416

CONCLUDING MATERIAL

Custodians:

Army - AT
Navy - AS
Air Force - 99
DLA - CC

Preparing activity:
DLA - CC

(Project 4730-2009-046)

Review activities:

Army - AV, MI
Navy - CG, MC, SA, SH
Air Force - 71

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 data at <http://assist.daps.dla.mil>.