

INCH-POUND

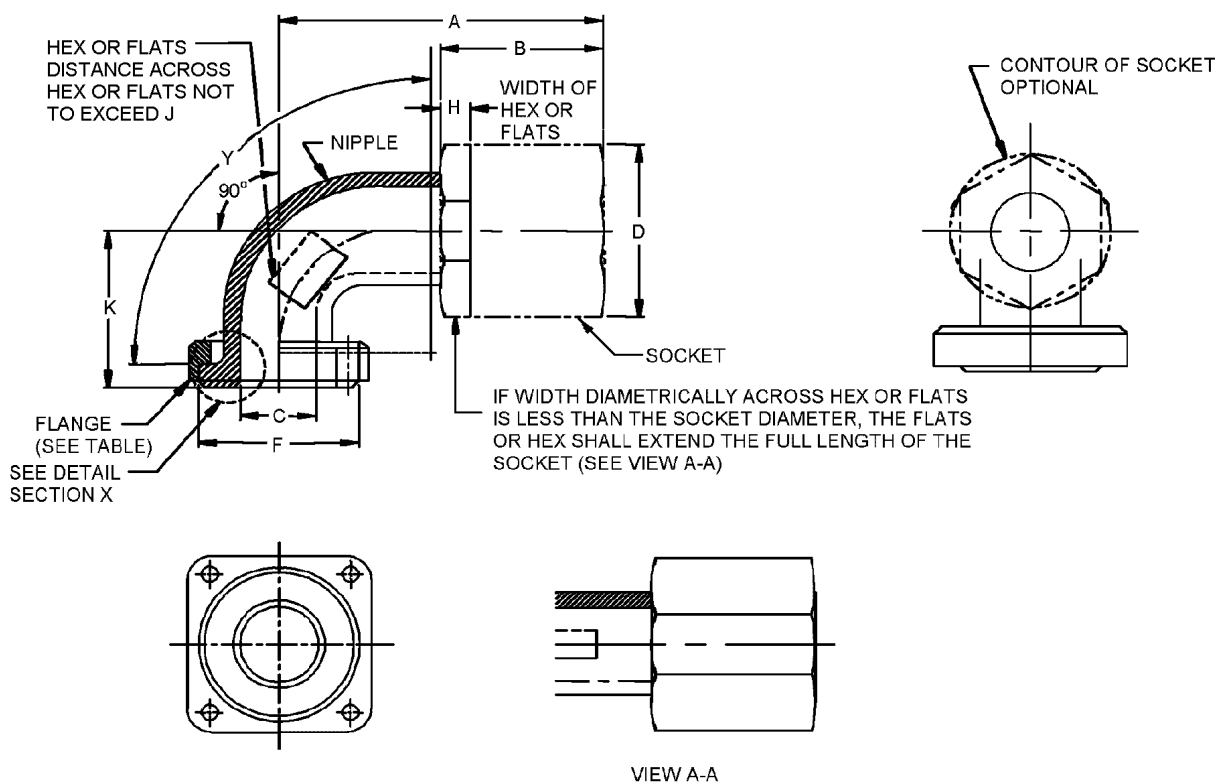
MS28755E  
w/AMENDMENT 1  
14 November 2018  
SUPERSEDING  
MS28755E  
5 June 2012

DETAIL SPECIFICATION SHEET

FITTING END, SELF-SEALING FUEL HOSE, SWIVEL,  
DETACHABLE, FLANGED, 90 DEGREES

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.

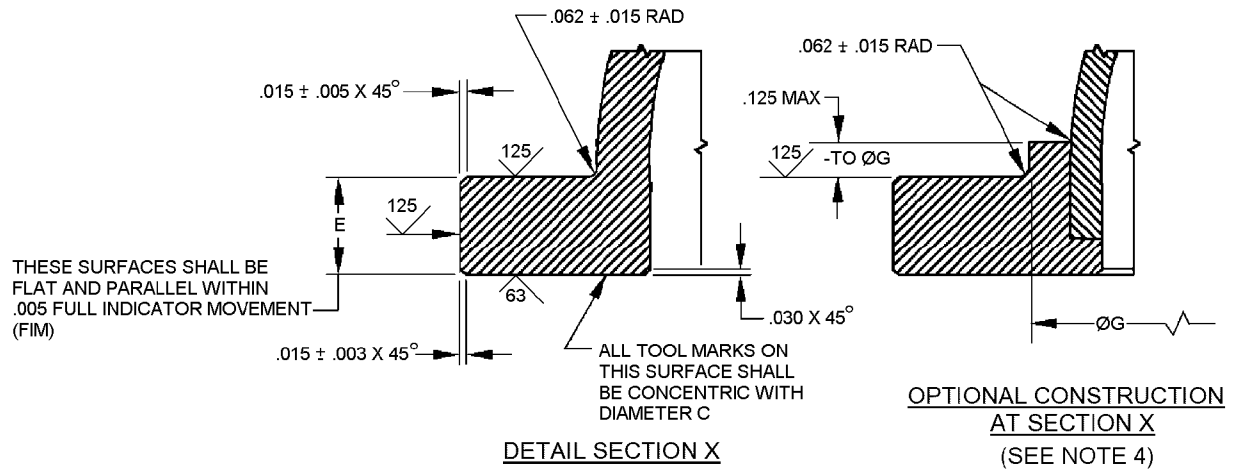


See notes at end of figure.

FIGURE 1. 90° fuel hose fitting.



MS28755E  
w/AMENDMENT 1



inch	mm
.003	0.08
.005	0.13
.015	0.38
.062	1.58
.125	3.18

Size designator	Nominal tubing and hose size (REF)	Flange PIN (see notes 5 and 6)	A Max inch (mm)	B Max inch (mm)	C Min (see note 7) inch (mm)	D Max inch (mm)
16	1 (1.000)	MS20756*16	3.891 (98.83)	2.000 (50.80)	.813 (20.65)	1.953 (49.61)
20	1 ¼ (1.250)	MS20756*20	4.016 (100.01)	2.000 (50.80)	1.047 (26.59)	2.313 (58.75)
24	1 ½ (1.500)	MS20756*24	4.578 (116.28)	2.000 (50.80)	1.281 (32.54)	2.563 (65.10)
32	2 (2.000)	MS20756*32	5.391 (162.33)	2.250 (57.15)	1.750 (44.45)	3.125 (79.38)
40	2 ½ (2.500)	MS20756*40	6.016 (152.81)	2.500 (63.50)	2.219 (56.36)	3.625 (92.08)
48	3 (3.000)	MS20756*48	7.281 (184.94)	2.500 (63.50)	2.828 (71.83)	4.438 (112.73)

Size designator	E +.000 -.005 (0.13) inch (mm)	F (see note 7) +.000 -.005 (0.13) inch (mm)	G Max (see note 7) inch (mm)	H Min inch (mm)	J Min inch (mm)	K Max inch (mm)
16	.156 (3.96)	1.500 (38.10)	1.188 (30.18)	.375 (9.53)	1.343 (34.11)	1.813 (46.05)
20	.156 (3.96)	1.844 (46.84)	1.500 (38.10)	.500 (12.70)	1.656 (42.06)	1.813 (46.05)
24	.188 (4.48)	2.125 (53.98)	1.750 (44.45)	.500 (12.70)	1.906 (48.41)	2.313 (58.75)
32	.188 (4.48)	2.750 (69.85)	2.375 (60.33)	.625 (15.88)	2.531 (64.29)	2.813 (71.45)
40	.188 (4.48)	3.281 (83.34)	2.875 (73.03)	1.000 (25.40)	3.031 (76.99)	3.063 (77.80)
48	.188 (4.48)	3.781 (96.04)	3.375 (85.73)	1.250 (31.75)	3.250 (82.55)	4.313 (109.55)

See notes at end of figure.

FIGURE 1. 90° fuel hose fitting - Continued.

MS28755E  
w/AMENDMENT 1

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances: decimals  $\pm .010$  (0.25 mm); angles  $\pm .01^\circ$ .
4. Dimensions and finishes are the same as detail X unless otherwise noted.
5. Part or Identifying Number (PIN).
6. Material designator D, W or T see MS20756.
7. Diameters C, F and G shall be concentric within .010 inch (0.25 mm) full indicator movement.
8. The true circular cross section is not required within angle Y however, a ball .031 inch (0.79 mm) smaller in diameter than C must pass through.

FIGURE 1. 90° fuel hose fitting - Continued.

## REQUIREMENTS:

Material: Materials shall be in accordance with SAE-AS4841, see table I.

TABLE I. Material and finish designators.

Material designator	Alloy	Finish
D	Aluminum alloy 2014 or 2024	Anodize in accordance with MIL-A-8625, type II. <u>1/</u>
W	Aluminum alloy 7075	Anodize in accordance with MIL-A-8625, type II. <u>1/</u>
Dash (-)	Titanium <u>2/</u>	Fluoride phosphated in accordance with SAE-AMS2486 <u>3/</u>
T	Titanium <u>2/</u>	Anodized in accordance with SAE-AMS2488, type 2

1/ Aluminum alloys 2014 and 2024 aluminum shall be dyed light blue. Aluminum alloy 7075 shall be dyed brown.

2/ Titanium shall not be used in oxygen systems.

3/ A pretreatment, a modification of the fluoride treatment, or a post treatment shall be applied so the final color of the fittings shall be similar to SAE-AMS-STD-595 colors 36076 through 36293.

Fittings shall swivel through 360° with sufficient clearance to allow use of standard wrenches on the nut when the axis of the hose is aligned over the stud or capscrew.

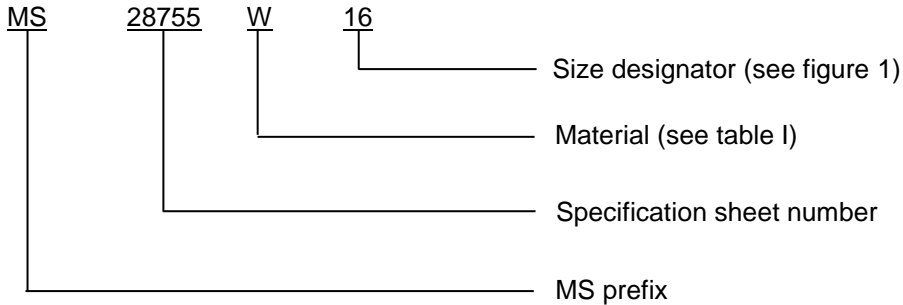
Hex or flats shall fit standard wrench openings.

Surface roughness shall be in accordance with ASME-B46.1.

Remove all burrs and sharp edges. The interior surface of the fitting shall be smooth and free from projections.

MS28755E  
w/AMENDMENT 1

PIN. The PIN shall consist of the prefix MS followed by the specification sheet number, letter for material designator, and a number for the size.



Example of PIN: MS28755W16 indicates a swivel with 90° flange, aluminum, 1-inch hose or tubing size.

Fittings shall be permanently marked with the applicable MS PIN on an unfinished surface of the nipple.

Approximate weights are shown in table II.

TABLE II. Approximate weight.

Size	Weight (Approx) lb (g)	
	Aluminum	Titanium
16	.371 (168.2)	.61 (276.7)
20	.514 (233.1)	.85 (385.5)
24	.848 (384.6)	1.40 (635.0)
32	.947 (429.6)	1.57 (712.1)
40	1.466 (665.0)	2.42 (1097.7)
48	2.000 (907.2)	3.31 (1501.9)

Intended use: Hose assemblies using hose in accordance with MIL-PRF-7061.

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.

MS28755E  
w/AMENDMENT 1

Referenced documents. This document references the following:

MIL-A-8625	SAE-AMS-STD-595/36118	SAE-AMS-STD-595/36251
MIL-PRF-7061	SAE-AMS-STD-595/36134	SAE-AMS-STD-595/36270
MS20756	SAE-AMS-STD-595/36152	SAE-AMS-STD-595/36280
ASME-B46.1	SAE-AMS-STD-595/36170	SAE-AMS-STD-595/36293
SAE-AMS-STD-595/36076	SAE-AMS-STD-595/36173	SAE-AMS2486
SAE-AMS-STD-595/36081	SAE-AMS-STD-595/36176	SAE-AMS2488
SAE-AMS-STD-595/36099	SAE-AMS-STD-595/36231	SAE-AS4841

CONCLUDING MATERIAL

Custodians:

Army - AV  
Navy - AS  
Air force - 99  
DLA - CC

Preparing activity:

DLA - CC

(Project 4730-2018-118)

Review activities:

Navy - 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 database at <https://assist.dla.mil>.