

INCH-POUND

MS20757C  
 12 February 2013  
 SUPERSEDING  
 MS20757B  
 24 July 1975

DETAIL SPECIFICATION SHEET

CONNECTOR, FIXED FLANGE, TO HOSE

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.

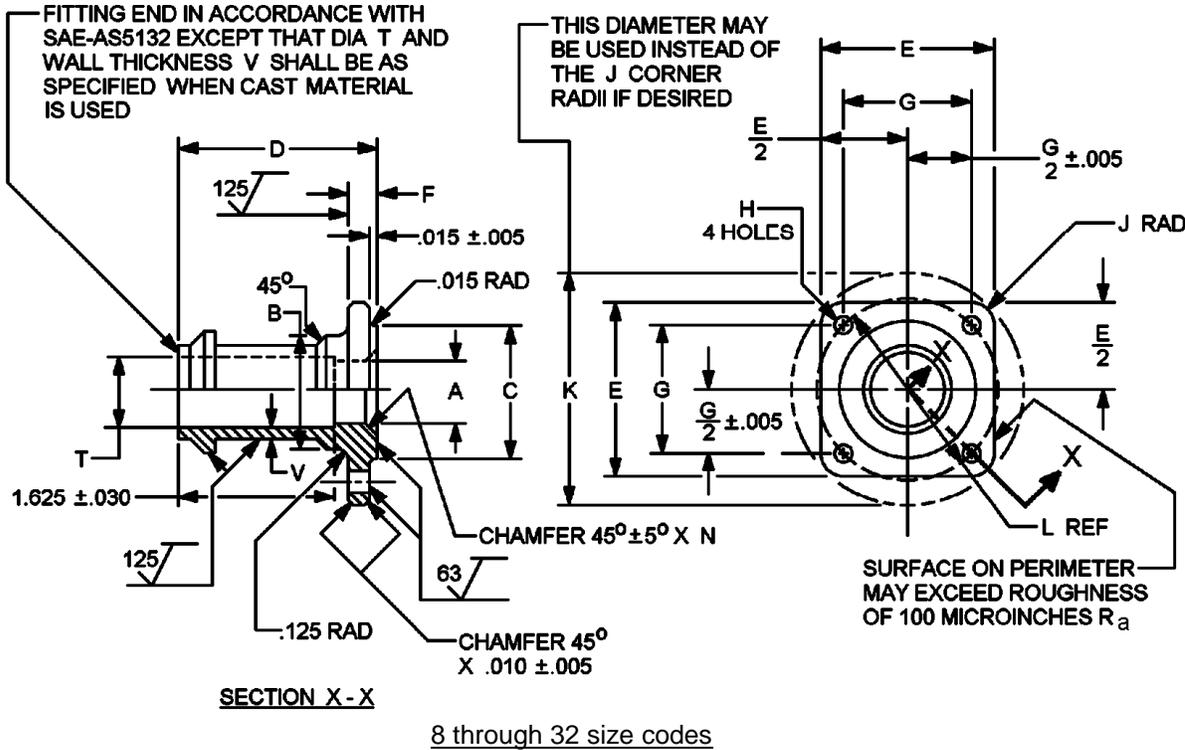
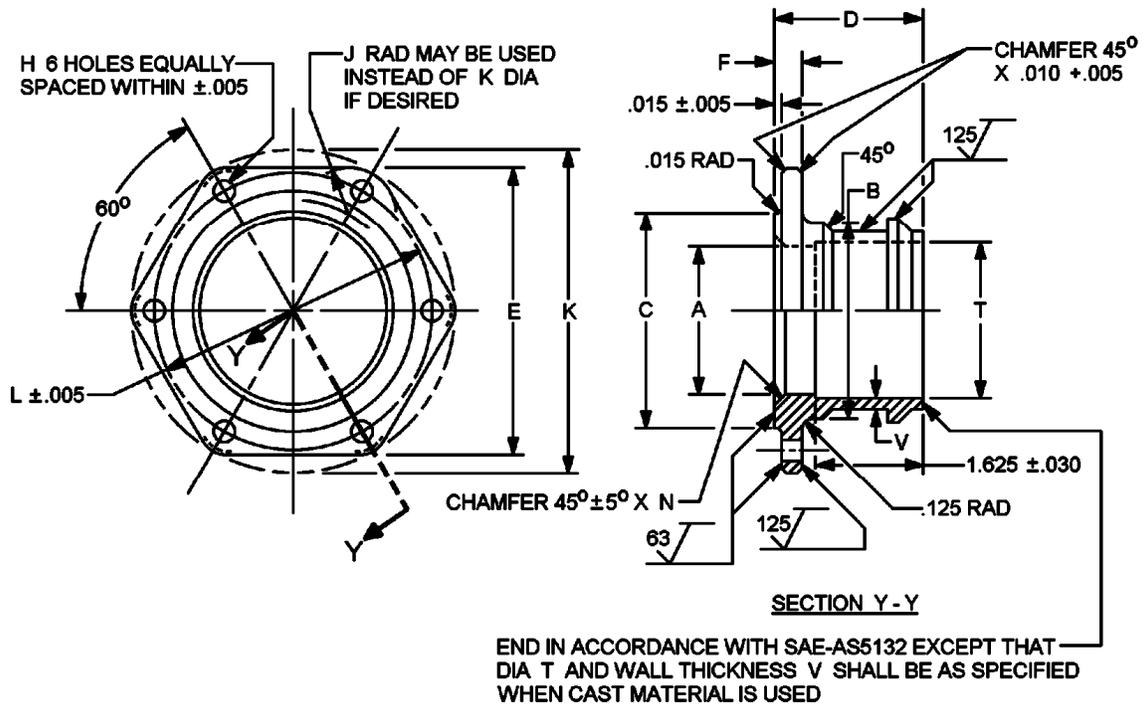


FIGURE 1. Connector fixed flange dimensions and configurations.

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40 and 48 size codes

Inches	mm
.005	0.13
.010	0.25
.015	0.38
.030	0.76
.125	3.18
1.625	41.28

Size code number	Hose ID inch (mm)	A Dia. $\pm .003$ (0.08) inch (mm)	B Dia. +.000 -.015 (0.38)	C Dia. $\pm .010$ (0.25)	D inch (mm)
8	.500 (12.70)	---	---	.875 (22.23)	---
10	.625 (15.88)	---	---	1.000 (25.40)	---
12	.750 (19.05)	.609 (15.47)	.891 (22.63)	1.250 (31.75)	2.000 (50.80)
12-16				1.500 (38.10)	
16	1.000 (25.40)	.844 (21.44)	1.156 (29.36)	1.844 (46.84)	2.062 (52.37)
20	1.250 (31.75)	1.078 (27.38)	1.438 (36.53)	2.125 (53.98)	2.125 (53.98)
20-24				2.750 (69.85)	
24	1.500 (38.10)	1.312 (33.32)	1.688 (42.88)	3.281 (83.34)	2.188 (55.58)
32	2.000 (50.80)	1.781 (45.24)	2.250 (57.15)	3.781 (96.04)	
40	2.500 (63.50)	2.281 (57.94)	2.812 (71.42)		
48	3.000 (76.20)	2.781 (70.64)	3.344 (84.94)		

FIGURE 1. Connector fixed flange dimensions and configurations - Continued.

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Size code number	E inch (mm)		F ±.005 (0.13) inch (mm)	G ±.005 (0.13) inch (mm)	H Dia. +.010 (0.25) -.000 inch (mm)	J Rad. ±.010 (0.25) inch (mm)
8	1.390 (35.31)	± .016 (0.41)	.250 (6.35)	.950 (24.13)	.205 (5.21)	.219 (5.56)
10	1.468 (37.29)			1.038 (26.37)		
12	1.594 (40.49)			1.156 (29.36)		
12-16 16	1.750 (44.45)			1.312 (33.32)		
20	2.188 (55.58)	±.020 (0.51)	.312 (7.92)	1.656 (42.06)	.266 (6.76)	.266 (6.76)
20-24 24	2.375 (60.33)			1.812 (46.02)		.281 (7.14)
32	3.000 (76.20)			2.375 (60.33)	.328 (8.33)	.312 (7.92)
40	4.000 (101.60)			---		.375 (9.53)
48	4.500 (114.30)			---		.625 (15.88)

Size code number	K Dia. ±.010 (0.25)	L Dia.	N Dia.	T Dia. min	V min
8	1.782 (45.26)	1.344 (34.14)	---	---	---
10	1.906 (48.41)	1.468 (37.29)	---	---	---
12	2.094 (53.19)	1.635 (41.53)	.669 (16.99)	.609 (15.47)	.065 (1.65)
12-16 16	2.312 (58.72)	1.855 (47.12)		.904 (22.96)	
20	2.875 (73.03)	2.342 (59.49)	1.138 (28.91)	1.059 (26.90)	.090 (2.29)
20-24 24	3.094 (78.59)	2.562 (65.07)		1.372 (34.85)	
32	3.953 (100.41)	3.359 (85.32)	1.841 (46.76)	1.793 (45.54)	.100 (2.54)
40	4.500 (114.30)	3.812 (96.82)	2.341 (59.46)	2.243 (56.97)	
48	5.000 (127.00)	4.312 (109.52)	2.841 (72.16)	2.793 (70.94)	

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances are ±.005 inch (0.13 mm), angles ±.5°.
4. Break sharp edges and remove all hanging burrs and slivers
5. Annular tool marks up to 63 µin (1.6 µm) Ra max will be allowed, machined surfaces shall be finished to 100µin (2.54 µm) Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
6. Reduction by forging draft angle of 7° maximum is permissible.
7. Break all sharp edges and remove all hanging burrs or slivers which might become dislodged under usage.

FIGURE 1. Connector fixed flange dimensions and configurations - Continued.

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REQUIREMENTS:

Dimensions and configuration shall be in accordance with figure 1.

For design features purposes, this standard takes precedence over documents referenced herein.

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

Porosity test: finished castings shall not leak when subjected to 100-psi (0.7 MPa) internal air pressure and submerged in water for 3 minutes minimum.

This part is designed for use in fuel and oil systems with maximum operating pressures in accordance with table I.

TABLE I. Maximum operating pressure.

Size code number	Material	PSI	MPa
02 thru 08	Aluminum alloy	1500	10.3
10 thru 16	Aluminum alloy	1500	10.3
24 thru 28	Aluminum alloy	500	3.4
32 thru 48	Aluminum alloy	500	3.4

Maximum operating temperature 275° F.

Materials and finishes shall be in accordance with table II.

TABLE II. Material and finish code letters.

Code letter	Material	Finish
D	Aluminum alloy 2014-T4 in accordance with SAE-AMS-QQ-A-225/6 or aluminum alloy casting in accordance with ASTM B108/B108M	Anodized anodize in accordance with MIL-A-8625, type 2, dye light blue
	Aluminum alloy 2024 or 2024 forging and bar stock in accordance with SAE-AS4875	
DA	Aluminum alloy 2014-T4 in accordance with SAE-AMS-QQ-A-225/6 or aluminum alloy casting in accordance with ASTM B108/B108M	Chemical conversion coating in accordance with, MIL-DTL-5541, type II, class 3
	Aluminum alloy 2024 or 2024 forging and bar stock in accordance with SAE-AS4875	
W	Aluminum alloy 7075-T73 or T7352 in accordance with SAE-AS4875	Anodize in accordance with MIL-A-8625, type 2, dye brown
WC	Aluminum alloy 7075-T73 or T7352 in accordance with SAE-AS4875	Chemical conversion coating in accordance with, MIL-DTL-5541, type II, class 3

The connector flange to hose shall not exceed the weight limits specified in table III.

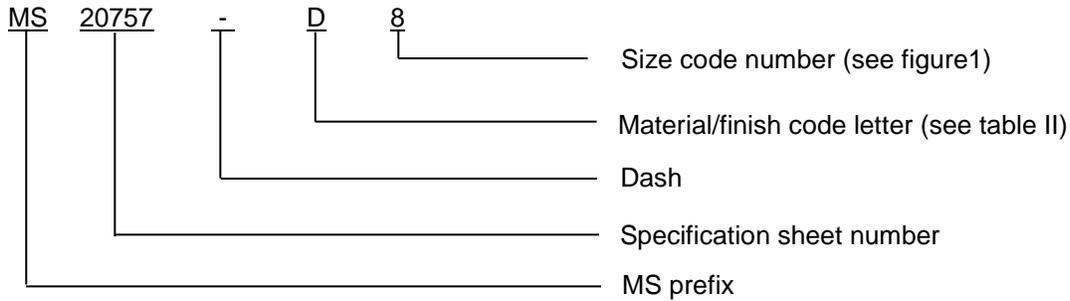
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TABLE III. Weight limits. 1/

Size code number	Weight max lbs. (gr)
8	---
10	---
12	.08 (36)
12-16	.09 (41)
16	.10 (45)
20	.16 (73)
20-24	.21 (95)
24	.22 (100)
32	.34 (154)
40	.49 (222)
48	.58 (263)

1/ Metric equivalents given for information only.

Part or Identifying Number (PIN): The PIN consists of prefix “MS” the specification sheet number, and a dash, letter for material/finish and number for size code. Unassigned PIN's shall not be used.



PIN example: MS20757-D8 indicates a flange to hose adapter .500 inch (12.70 mm) hose ID to a .875 inch (22.23 mm) flange, aluminum alloy 2014-T4 anodized light blue.

Marking: Part shall be permanently marked with the MS PIN, and include the manufacturers CAGE, name, or trademark.

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

Reference design standard MS33786 for installation.

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

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Referenced documents: This document references the following:

MIL-A-8625	SAE-AMS-QQ-A-225/6
MIL-DTL-5541	SAE-AS4875
MS33786	SAE-AS5132
ASME B46.1	
ASTM B108/B108M	

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 4730-2012-078)

Review activities:

Army - MI  
Navy - MC, SA  
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>.