

DETAIL SPECIFICATION SHEET

HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, PERMANENTLY ATTACHED
 FITTINGS, HIGH TEMPERATURE, MEDIUM PRESSURE, FLARELESS-TO-FLARELESS

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 and
 MIL-DTL-25579.

Hose assembly dimensions for style A: See table I.

TABLE I. Hose assembly dimensions for style A. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/			
1	2		A (nom)	B (max)	C (max)	F (max)
Straight	Straight	3/4	0.191	1.282	0.620	0.580
		4	0.222	1.222	0.620	0.654
		5	0.235	1.340	0.680	0.726
		6	0.230	1.469	0.750	0.798
		8	0.310	1.640	0.880	1.014
		10	0.356	1.940	0.967	1.158
		12	0.393	1.913	1.122	1.447
		16	0.429	2.298	1.480	1.736
		20	0.393	2.577	1.750	2.328
		24	0.398	2.800	2.150	2.621

1/ Style A uses class 1 fittings which are made from corrosion resistant steel (CRES).

2/ Dimensions are shown on figure 1.

3/ Dimensions "A" and "B" are based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

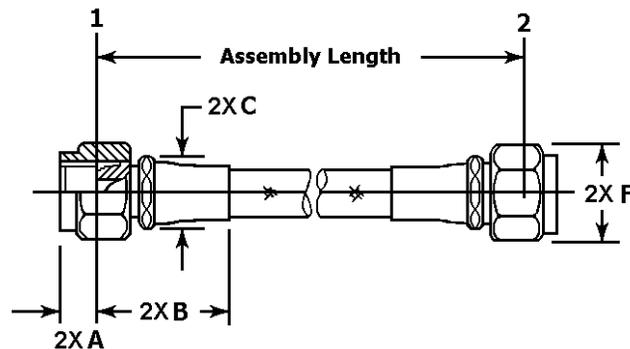


FIGURE 1. Style A hose assembly.

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Hose assembly dimensions for style B: See table II.

TABLE II. Hose assembly dimensions for style B. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/							
1	2		A (nom)	B (max)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)
Straight	45°	3/4	0.191	1.282	0.620	1.240	0.950	0.580	0.412	0.537
		4	0.222	1.222	0.620	1.490	0.970	0.654	0.404	0.529
		5	0.235	1.340	0.680	1.495	1.017	0.726	0.428	0.553
		6	0.230	1.469	0.750	1.610	1.122	0.798	0.506	0.631
		8	0.310	1.640	0.880	1.722	1.426	1.014	0.542	0.789
		10	0.356	1.940	0.967	2.037	1.596	1.158	0.631	0.877
		12	0.393	1.913	1.122	2.368	1.739	1.447	0.631	0.952
		16	0.429	2.298	1.480	2.583	1.931	1.736	0.741	1.069
		20	0.393	2.577	1.750	2.946	2.084	2.328	0.863	1.196
		24	0.398	2.800	2.150	3.210	2.376	2.621	1.012	1.402

1/ Style B uses class 1 fittings which are made from CRES.

2/ Dimensions are shown on figure 2.

3/ Dimensions "A" and "B" are based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

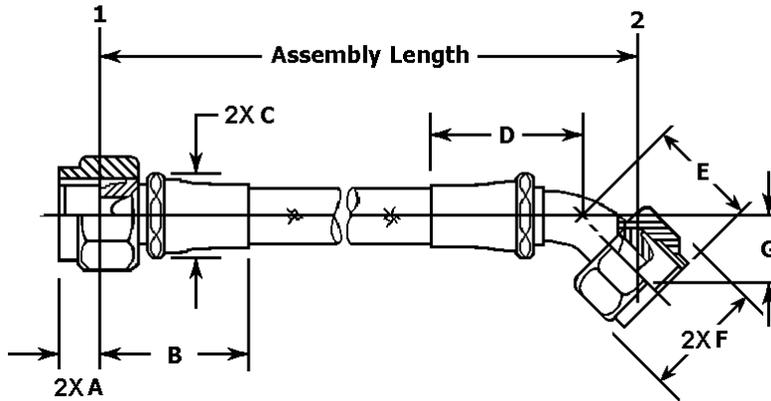


FIGURE 2. Style B hose assembly.

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Hose assembly dimensions for style C: Seed table III.

TABLE III. Hose assembly dimensions for style C. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/							
1	2		A (nom)	B (max)	C (max)	F (max)	H (max)	J (max)	K (min)	K (max)
Straight	90°	3/4	0.191	1.282	0.620	0.580	1.845	1.350	0.721	0.846
		4	0.222	1.222	0.620	0.654	1.885	1.370	0.705	0.830
		5	0.235	1.340	0.680	0.726	1.980	1.550	0.788	0.975
		6	0.230	1.469	0.750	0.798	2.205	1.687	0.895	1.082
		8	0.310	1.640	0.880	1.014	2.495	2.032	1.032	1.282
		10	0.356	1.940	0.967	1.158	2.955	2.437	1.357	1.607
		12	0.393	1.913	1.122	1.447	3.705	2.795	1.591	1.841
		16	0.429	2.298	1.480	1.736	4.100	3.160	1.741	1.991
		20	0.393	2.577	1.750	2.328	4.835	3.664	2.021	2.396
		24	0.398	2.800	2.150	2.621	5.480	4.251	2.403	2.778

- 1/ Style C uses class 1 fittings which are made from CRES.
- 2/ Dimensions are shown on figure 3.
- 3/ Dimensions "A" and "B" are based on end of MS8000 series seal.
- 4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.
- 5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

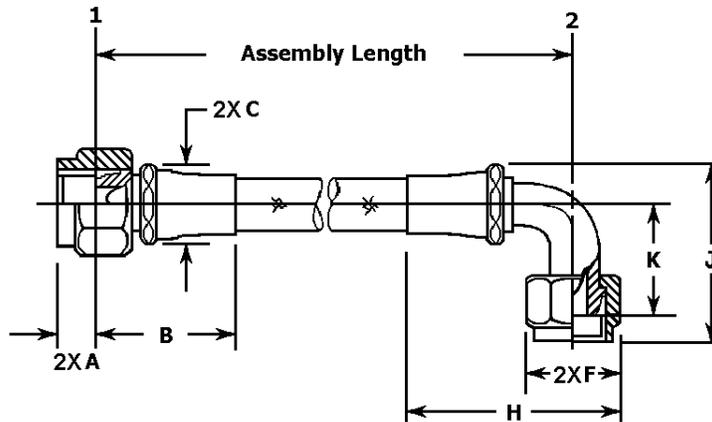


FIGURE 3. Style C hose assembly.

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Hose assembly dimensions for style D: See table IV.

TABLE IV. Hose assembly dimensions for style D. 1/

Fitting ends		Hose size	Dimensions <u>2/</u> , <u>3/</u> , <u>4/</u> , <u>5/</u>						
1	2		A (nom)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)
45°	45°	3/4	0.191	0.620	1.240	0.950	0.580	0.412	0.537
		4	0.222	0.620	1.490	0.970	0.654	0.404	0.529
		5	0.235	0.680	1.495	1.017	0.726	0.428	0.553
		6	0.230	0.750	1.610	1.122	0.798	0.506	0.631
		8	0.310	0.880	1.722	1.426	1.014	0.542	0.789
		10	0.356	0.967	2.037	1.596	1.158	0.631	0.877
		12	0.393	1.122	2.368	1.739	1.447	0.631	0.952
		16	0.429	1.480	2.583	1.931	1.736	0.741	1.069
		20	0.393	1.750	2.946	2.084	2.328	0.863	1.196
		24	0.398	2.150	3.210	2.376	2.621	1.012	1.402

1/ Style D uses class 1 fittings which are made from CRES.

2/ Dimensions are shown on figure 4.

3/ Dimensions "A" is based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

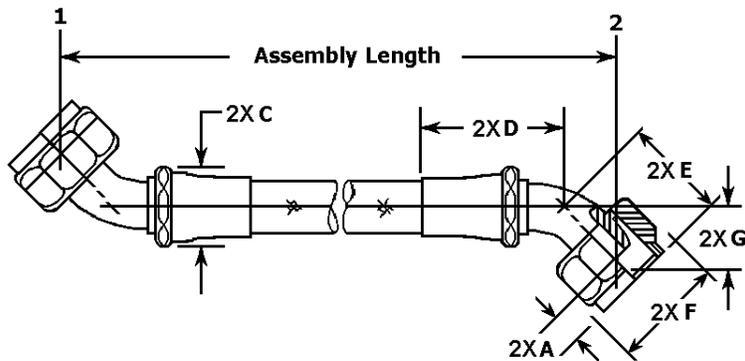


FIGURE 4. Style D hose assembly.

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Hose assembly dimensions for style E: See table V.

TABLE V. Hose assembly dimensions for style E. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/										
			A (nom)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)	H (max)	J (max)	K (min)	K (max)
45°	90°	3/4	0.191	0.620	1.240	0.950	0.580	0.412	0.537	1.845	1.350	0.721	0.846
		4	0.222	0.620	1.490	0.970	0.654	1.404	0.529	1.885	1.370	0.705	0.830
		5	0.235	0.680	1.495	1.017	0.726	0.428	0.553	1.980	1.550	0.788	0.975
		6	0.230	0.750	1.610	1.122	0.798	0.506	0.631	2.205	1.687	0.895	1.082
		8	0.310	0.880	1.722	1.426	1.014	0.542	0.789	2.495	2.032	1.032	1.282
		10	0.356	0.967	2.037	1.596	1.158	0.631	0.877	2.955	2.437	1.357	1.607
		12	0.393	1.122	2.368	1.739	1.447	0.631	0.952	3.705	2.795	1.591	1.841
		16	0.429	1.480	2.583	1.931	1.736	0.741	1.069	4.100	3.160	1.741	1.991
		20	0.393	1.750	2.946	2.084	2.328	0.863	1.196	4.835	3.664	2.021	2.396
		24	0.398	2.150	3.210	2.376	2.621	1.012	1.402	5.480	4.251	2.403	2.778

- 1/ Style E uses class 1 fittings which are made from CRES.
- 2/ Dimensions are shown on figure 5.
- 3/ Dimensions "A" is based on end of MS8000 series seal.
- 4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.
- 5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

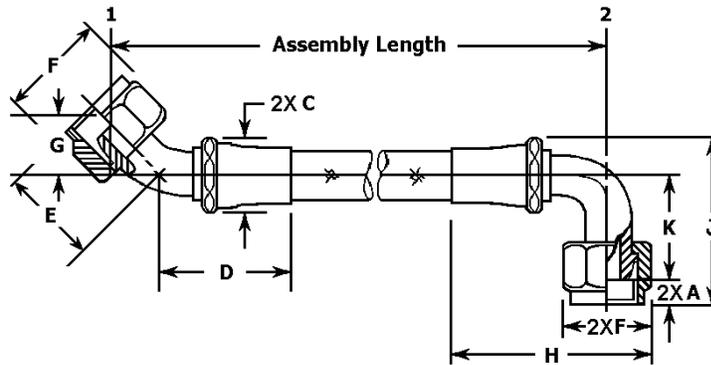


FIGURE 5. Style E hose assembly.

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Hose assembly dimensions for style F: See table VI.

TABLE VI. Hose assembly dimensions for style F. 1/

Fitting ends		Hose size	Dimensions <u>2/</u> , <u>3/</u> , <u>4/</u> , <u>5/</u>						
1	2		A (nom)	C (max)	F (max)	H (max)	J (max)	K (min)	K (max)
90°	90°	3/4	0.191	0.620	0.580	1.845	1.350	0.721	0.846
		4	0.222	0.620	0.654	1.885	1.370	0.705	0.830
		5	0.235	0.680	0.726	1.980	1.550	0.788	0.975
		6	0.230	0.750	0.798	2.205	1.687	0.895	1.082
		8	0.310	0.880	1.014	2.495	2.032	1.032	1.282
		10	0.356	0.967	1.158	2.955	2.437	1.357	1.607
		12	0.393	1.122	1.447	3.705	2.795	1.591	1.841
		16	0.429	1.480	1.736	4.100	3.160	1.741	1.991
		20	0.393	1.750	2.328	4.835	3.664	2.021	2.396
24	0.398	2.150	2.621	5.480	4.251	2.403	2.778		

1/ Style F uses class 1 fittings which are made from CRES.

2/ Dimensions are shown on figure 6.

3/ Dimensions "A" is based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

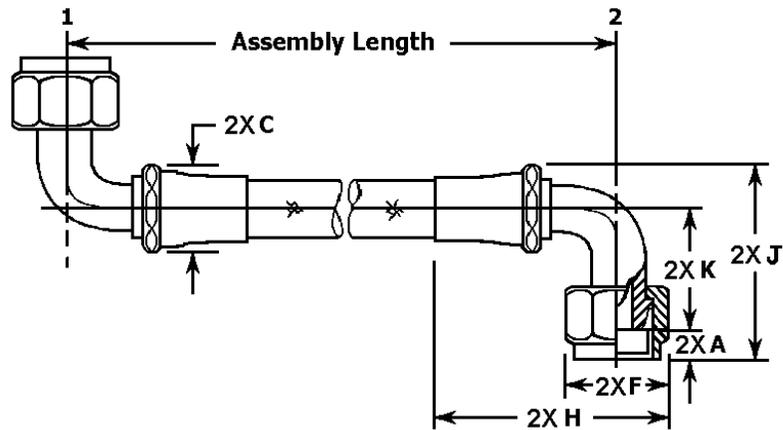


FIGURE 6. Style F hose assembly.

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Hose assembly dimensions for style G: See table VII.

TABLE VII. Hose assembly dimensions for style G. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/			
1	2		A (nom)	B (max)	C (max)	F (max)
Straight	Straight	8	0.310	1.640	0.880	1.014
		10	0.356	1.940	0.967	1.158
		12	0.393	1.913	1.122	1.447
		16	0.429	2.298	1.480	1.736
		20	0.393	2.577	1.750	2.328
		24	0.398	2.800	2.150	2.621

- 1/ Style G uses class 2 fittings which are made from a combination of aluminum and CRES.
- 2/ Dimensions are shown on figure 7.
- 3/ Dimensions "A" and "B" are based on end of MS8000 seal.
- 4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.
- 5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

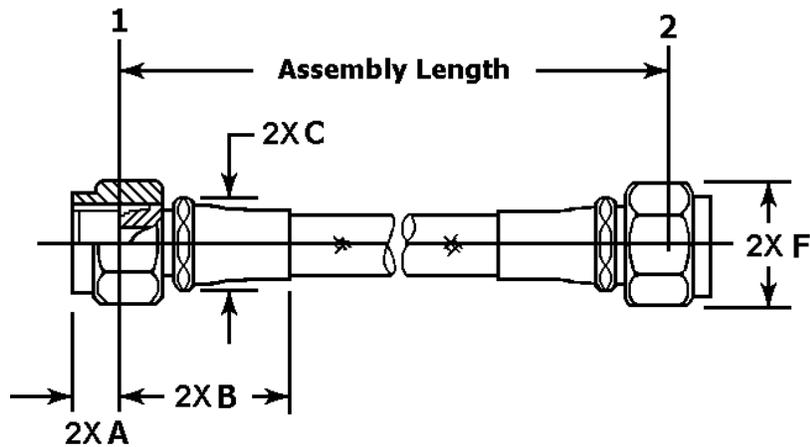


FIGURE 7. Style G hose assembly.

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Hose assembly dimensions for style H: See table VIII.

TABLE VIII. Hose assembly dimensions for style H. 1/

Fitting ends		Hose size	Dimensions <u>2/</u> , <u>3/</u> , <u>4/</u> , <u>5/</u>							
1	2		A (nom)	B (max)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)
Straight	45°	8	0.310	1.640	0.880	1.722	1.426	1.014	0.542	0.789
		10	0.356	1.940	0.967	2.037	1.596	1.158	0.631	0.877
		12	0.393	1.913	1.122	2.368	1.739	1.447	0.631	0.952
		16	0.429	2.298	1.480	2.583	1.931	1.736	0.741	1.069
		20	0.393	2.577	1.750	2.946	2.084	2.328	0.863	1.196
		24	0.398	2.800	2.150	3.210	2.376	2.621	1.012	1.402

1/ Style H uses class 2 fittings which are made from a combination of aluminum and CRES.

2/ Dimensions are shown on figure 8.

3/ Dimensions "A" and "B" are based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS800 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

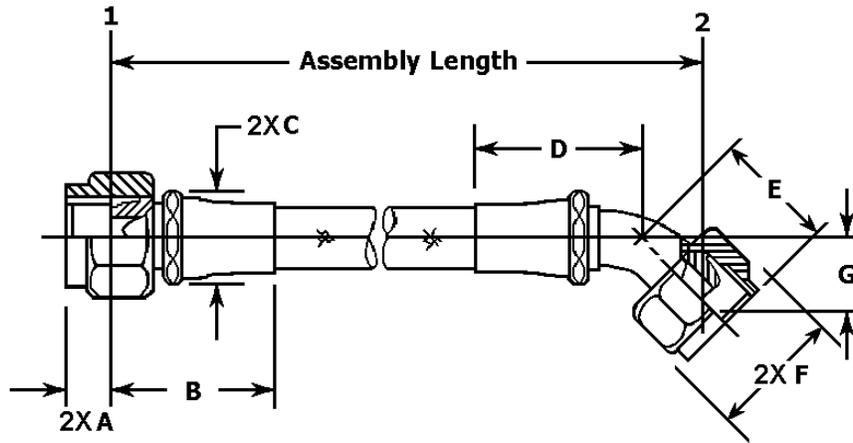


FIGURE 8. Style H hose assembly.

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Hose assembly dimensions for style J: See table IX.

TABLE IX. Hose assembly dimensions for style J. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/							
1	2		A (nom)	B (max)	C (max)	F (max)	H (max)	J (max)	K (min)	K (max)
Straight	90°	8	0.310	1.640	0.880	1.014	2.495	2.032	1.032	1.282
		10	0.356	1.940	0.967	1.158	2.955	2.437	1.357	1.607
		12	0.393	1.913	1.122	1.447	3.705	2.795	1.591	1.841
		16	0.429	2.298	1.480	1.736	4.100	3.160	1.741	1.991
		20	0.393	2.577	1.750	2.328	4.835	3.664	2.021	2.396
		24	0.398	2.800	2.150	2.621	5.480	4.251	2.403	2.778

1/ Style J uses class 2 fittings which are made from a combination of aluminum and CRES.

2/ Dimensions are shown on figure 9.

3/ Dimensions "A" and "B" are based on end of MS8000 series seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

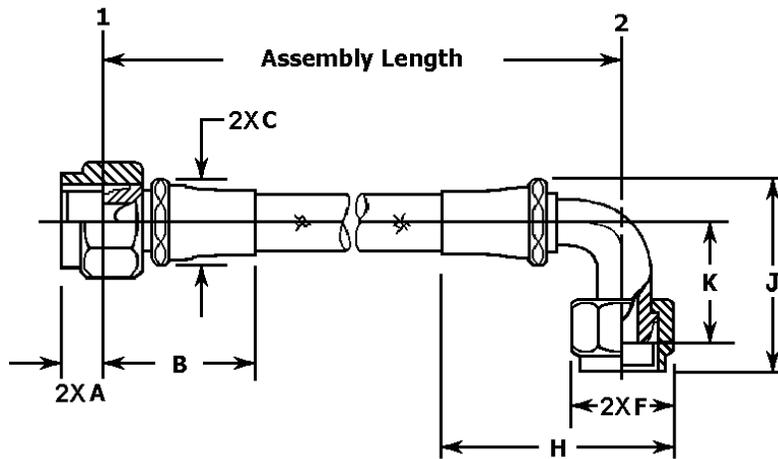


FIGURE 9. Style J hose assembly.

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Hose assembly dimensions for style K: See table X.

TABLE X. Hose assembly dimensions for style K. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/						
1	2		A (nom)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)
45°	45°	8	0.310	0.880	1.722	1.426	1.014	0.542	0.789
		10	0.356	0.967	2.037	1.596	1.158	0.631	0.877
		12	0.393	1.122	2.368	1.739	1.447	0.631	0.952
		16	0.429	1.480	2.583	1.931	1.736	0.741	1.069
		20	0.393	1.750	2.946	2.084	2.328	0.863	1.196
		24	0.398	2.150	3.210	2.376	2.621	1.012	1.402

1/ Style K uses class 2 fittings which are made from a combination of aluminum and CRES.

2/ Dimensions are shown on figure 10.

3/ Dimension "A" is based on end of MS8000 seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

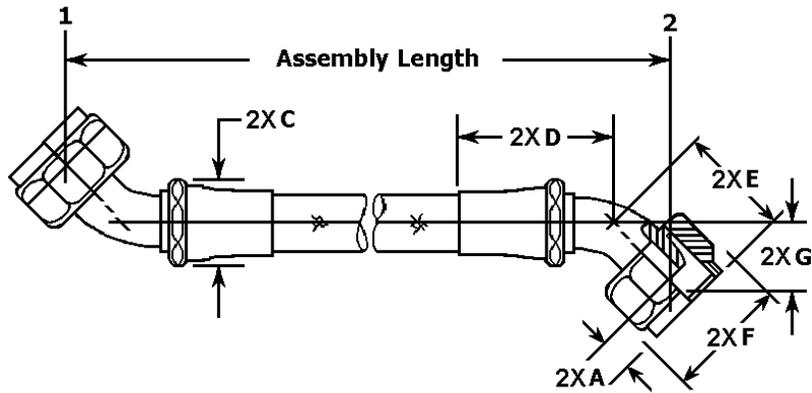


FIGURE 10. Style K hose assembly.

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Hose assembly dimensions for style M: See table XI.

TABLE XI. Hose assembly dimensions for style M. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/										
1	2		A (nom)	C (max)	D (max)	E (max)	F (max)	G (min)	G (max)	H (max)	J (max)	K (min)	K (max)
45°	90°	8	0.310	0.880	1.722	1.426	1.014	0.542	0.789	2.495	2.032	1.032	1.282
		10	0.356	0.967	2.037	1.596	1.158	0.631	0.877	2.955	2.437	1.357	1.607
		12	0.393	1.122	2.368	1.739	1.447	0.631	0.952	3.705	2.795	1.591	1.841
		16	0.429	1.480	2.583	1.931	1.736	0.741	1.069	4.100	3.160	1.741	1.991
		20	0.393	1.750	2.946	2.084	2.328	0.863	1.196	4.835	3.664	2.021	2.396
		24	0.398	2.150	3.210	2.376	2.621	1.012	1.402	5.480	4.251	2.403	2.778

1/ Style M uses class 2 fittings which are made from a combination of aluminum and CRES.

2/ Dimensions are shown on figure 11.

3/ Dimensions "A" is based on end of MS8000 seal.

4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.

5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

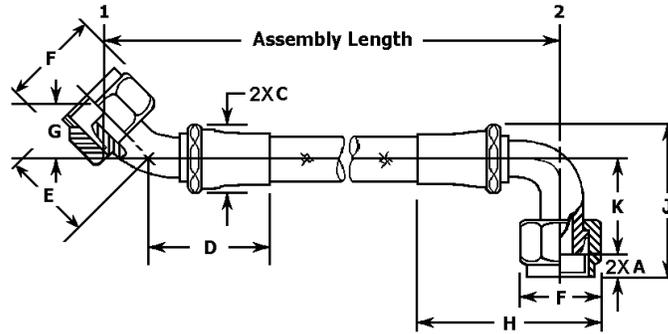


FIGURE 11. Style M hose assembly.

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Hose assembly dimensions for style N: See table XII.

TABLE XII. Hose assembly dimensions for style N. 1/

Fitting ends		Hose size	Dimensions 2/, 3/, 4/, 5/						
1	2		A (nom)	C (max)	F (max)	H (max)	J (max)	K (min)	K (max)
90°	90°	8	0.310	0.880	1.014	2.495	2.032	1.032	1.282
		10	0.356	0.967	1.158	2.955	2.437	1.357	1.607
		12	0.393	1.122	1.447	3.705	2.795	1.591	1.841
		16	0.429	1.480	1.736	4.100	3.160	1.741	1.991
		20	0.393	1.750	2.328	4.835	3.664	2.021	2.396
		24	0.398	2.150	2.621	5.480	4.251	2.403	2.778

- 1/ Style N uses class 2 fittings which are made from a combination of aluminum and CRES.
- 2/ Dimensions are shown on figure 12.
- 3/ Dimensions "A" is based on end of MS8000 series seal.
- 4/ Assembly length (see PIN) is based on end of MS8000 series seal to face of flange.
- 5/ Apply NAS 1760 in accordance with MIL-DTL-25579/1, see requirements.

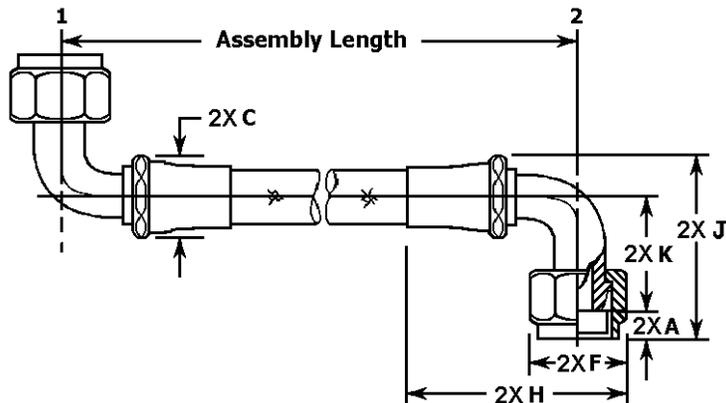


FIGURE 12. Style N hose assembly.

Protective sleeve code: See table XIII.

TABLE XIII. Protective sleeve code.

Code	Type
A	SAE AS1072 sleeve, fire protection, silicone covered, temperature ranging from -65°F to 450°F, and intermittently to 500°F, secured with CRES bands as required. ^{1/}
B	SAE AS1073 - code B sleeve, abrasion protection, heat shrinkable, black polyolefin, temperature ranging from -65°F to 250°F.
C	SAE AS1291 - code A sleeve, chafe guard, extruded seamless white PTFE, temperature ranging from -65°F to 450°F, secured with CRES bands as required.
D	SAE AS1291 - code C sleeve, chafe guard, extruded seamless transparent FEP, temperature ranging from -65°F to 350°F, secured with CRES bands as required.
E	SAE AS1298 sleeve, heavy wall chafe guard, extruded seamless black PTFE, temperature ranging from -65°F to 450°F, secured with CRES bands as required.
L	Lock-wire hole
F	Code A + L
G	Code B + L
H	Code C + L
J	Code D + L
K	Code E + L

^{1/} To prevent wicking of fluids, the cut end of the fire protective sleeve (code A) shall be coated with Room Temperature Vulcanized (RTV) silicone rubber prior to installation. After installation, cracks and voids in the fire protective sleeve shall be coated with RTV rubber to prevent exposure of asbestos or fiberglass.

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Hose assembly size code: See table XIV.

TABLE XIV. Hose assembly size code.

Size	Reference tube OD	Size code
3/4	1/	B
4	0.250	E
5	0.313	F
6	0.375	G
8	0.500	H
10	0.625	J
12	0.750	K
16	1.000	M
20	1.250	N
24	1.500	P

1/ Size 3/4 hose assembly consists of a size 4 tube OD hose assembled with size 3 tube OD fittings.

REQUIREMENTS:

Dimensions: Unless otherwise specified, all dimensions are in inches. Dimensions “E (max)” and “J (max)” are installation dimensions and not design dimensions. Dimension “F” is measured across the corners.

Fittings: The swivel nut and nipple ends shall mate with SAE AS33514 fitting. The swivel nut threads shall be in accordance with SAE AS8879.

Elbow fittings: The ovality of the circular cross section within the angle of the bend of the end fitting elbow shall not exceed 7.5% of the nominal tubing OD.

Assembly classification: Class 1 and class 2 hose assemblies, as specified in MIL-DTL-25579, have been incorporated into the Part or Identifying Number (PIN) as a part of styles.

Angular alignment: Hose assemblies with elbow fittings on each end shall have the angular orientation between the elbows measured counter-clockwise from the centerline of the nearest fitting, positioned at six-o'clock, to the centerline of the other fitting (see figure 13). When applicable, the angular alignment shall be expressed in three digits and specified in the PIN.

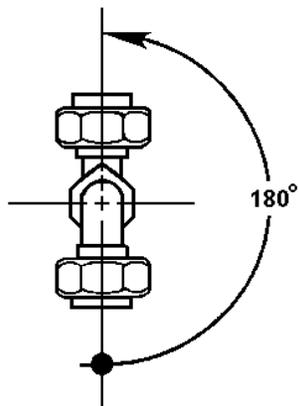
Protective sleeve: If required, the hose assembly shall include a protective sleeve (see table XIII) and its code shall be included in the PIN. Fire protective sleeve shall be subjected to testing in accordance with MIL-DTL-25579.

Assembly length: Hose assembly shall be furnished in lengths as specified in the contract or purchase order (see MIL-DTL-25579); however, tolerances on the length of each hose assembly shall be as follows:

- a. $\pm 1/8$ inch for lengths under 18 inches.
- b. $\pm 1/4$ inch for lengths from 18 inches to 36 inches.
- c. $\pm 1/2$ inch for lengths from 36 inches to 50 inches.
- d. $\pm 1\%$ for lengths over 50 inches.

Flareless fitting, hose connector design: Use MIL-DTL-25579/1 for application of NAS 1760 design or radius ball-nose design.

MS8006C



NOTE: Angular alignment shall be measured in degrees with a tolerance of $\pm 2^\circ$.

FIGURE 13. Measurement of angular alignment between elbow fittings.

TABLE XV. Elbow fitting ovality. 1/

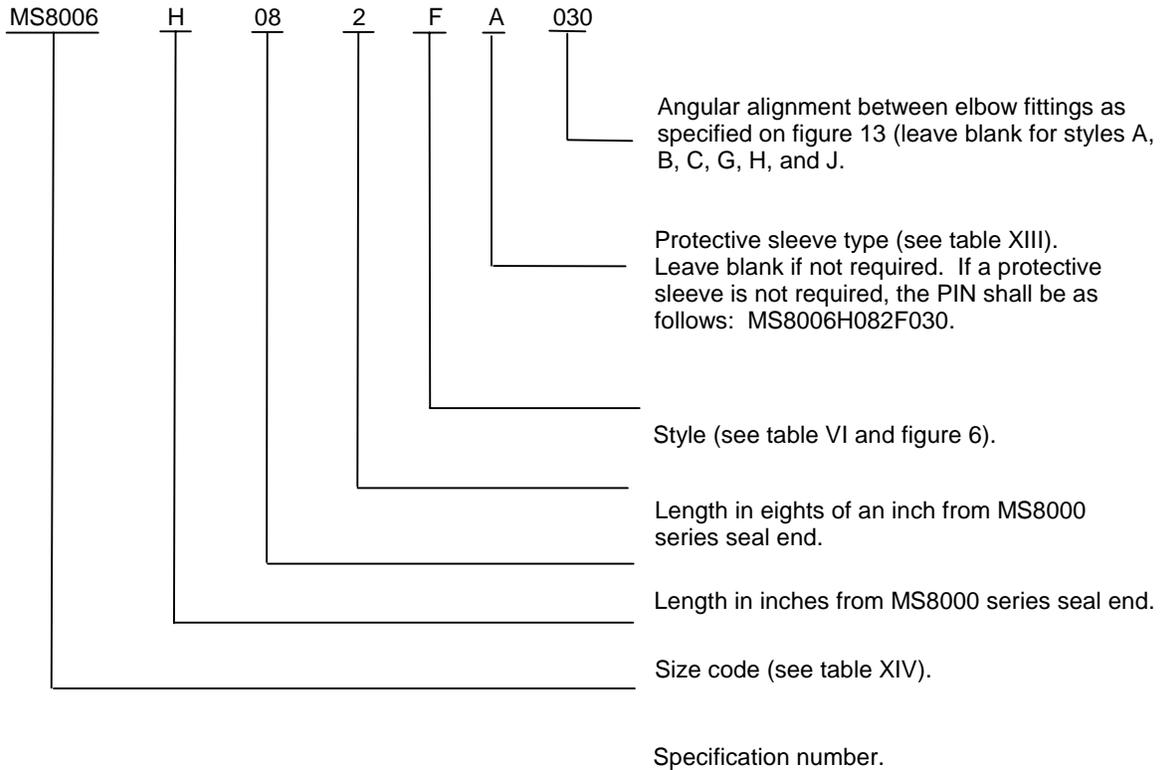
Assembly size	3/4	4	5	6	8	10	12	16	20	24
Ball diameter	0.080	0.119	0.174	0.230	0.313	0.391	0.515	0.750	0.969	1.188

1/ The fitting elbow bend shall be examined for ovality by rolling a ball of applicable diameter through the elbow fitting. The ball shall pass freely through the fitting elbow bend.

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PIN: The PIN for each hose assembly shall include its size code, length, style, protective sleeve type, and the angular alignment between the elbow fittings, as applicable.

Example: The PIN for an 8.250 inch (209.55 mm) length, style F hose assembly with a .500 inch (12.70 mm) tube OD, a fire protective sleeve in accordance with SAE AS1072, and a 30° between the elbow fittings shall be as follows:



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.

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 4720-0206-000)

Review activities:
Army - AR, AT, EA, MI
Navy - MC, SA, SH
Air Force - 70