INCH-POUND

AN775 Rev 14
w/AMENDMENT 1
12 June 2012
SUPERSEDING
AN775 Rev 14
19 July 2011

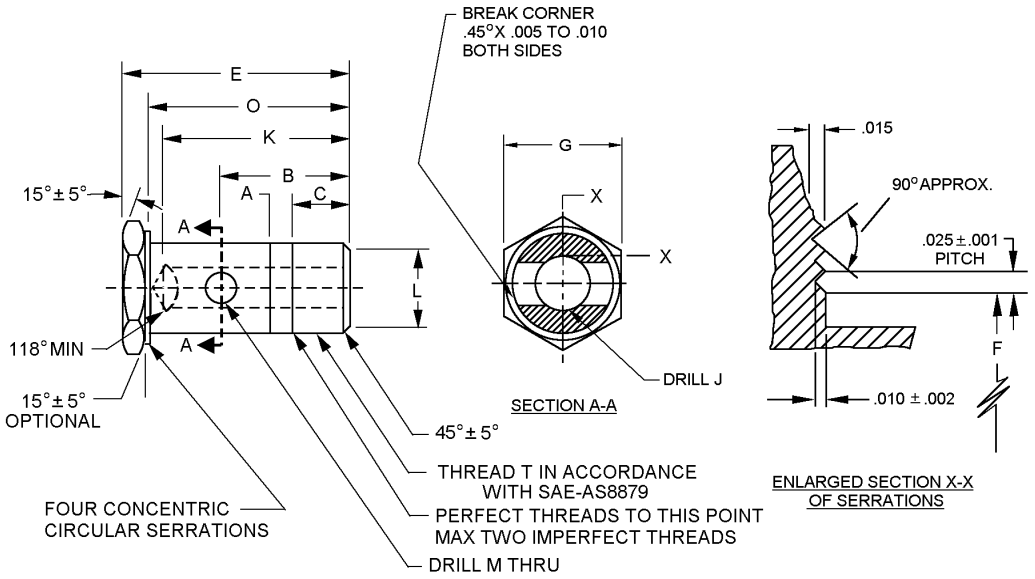
DETAIL SPECIFICATION SHEET

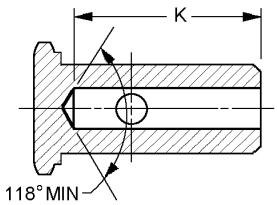
BOLT - FLUID PASSAGE

Reinstated after 19 July 2011. Inactive for new design.
For new design, use SAE-AS5161.

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 SAE-AS4875.

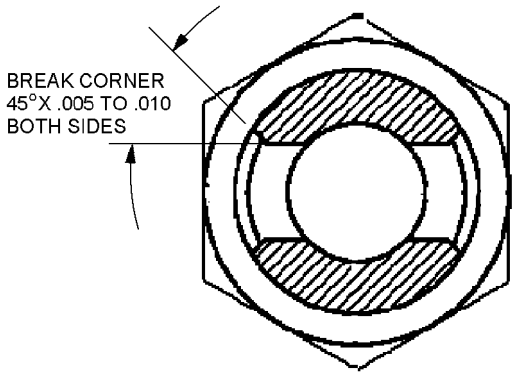




DETAIL A

Inches	mm
.001	0.03
.002	0.05
.005	0.13
.010	0.25
.015	0.38
.025	0.64

FIGURE 1. Bolt - fluid passage dimensions and configurations.



DETAIL B

Dash number	Tubing OD inches (mm)	Thread T (Ref) SAE-AS8879	A Dia. +.000 -.004 (0.10) inches (mm)	B ±.010 (0.25) inches (mm)	C inches (mm)
-4	.250 (6.35)	.4375-20UNJF-3A	.435 (11.05)	.781 (19.84)	.438 (11.13)
-5	.313 (7.95)	.5000-20UNJF-3A	.498 (12.65)	.781 (19.84)	.438 (11.13)
-6	.375 (9.53)	.5625-18UNJF-3A	.560 (14.22)	.875 (22.23)	.468 (11.89)
-8	.500 (12.70)	.750-16UNJF-3A	.748 (19.00)	1.094 (27.79)	.562 (14.27)
-10	.625 (15.88)	.8750-14UNJF-3A	.873 (22.17)	1.250 (31.75)	.594 (15.09)
-12	.750 (19.05)	1.0625-12UNJ-3A	1.060 (26.92)	1.468 (37.29)	.656 (16.66)
-16	1.000 (25.40)	1.3125-12UNJ-3A	1.310 (33.27)	1.687 (42.85)	.656 (16.66)

Dash number	D inches (mm)	E inches (mm)	F Dia. +.010 (0.25) -.000 (see note 7) inches (mm)	G Hex (ref) (see note 5) inches (mm)	
-4	1.188 (47.96)	1.375 (34.93)	.469 (11.91)	.688 (17.48)	±.004 (0.10)
-5	1.188 (47.96)	1.375 (34.93)	.531 (13.49)	.750 (19.05)	±.004 (0.10)
-6	1.344(34.14)	1.562 (39.67)	.594 (15.09)	.813 (20.65)	±.004 (0.10)
-8	1.688 (42.88)	1.938 (49.23)	.781 (19.84)	1.000 (25.40)	±.004 (0.10)
-10	1.969 (50.01)	2.250 (57.15)	.906 (23.01)	1.125 (28.58)	±.005 (0.13)
-12	2.312 (58.72)	2.625 (66.68)	1.094 (27.79)	1.375 (34.93)	±.005 (0.13)
-16	2.812 (71.42)	3.188 (80.98)	1.344 (34.14)	1.625 (41.28)	±.016 (0.41)

FIGURE 1. Bolt - fluid passage dimensions and configurations - Continued.

Dash number	J Dia. inches (mm)	K inches (mm)	L Dia. inches (mm)	M Dia. inches (mm)
-4	.172 (4.37)	1.156 (29.36)	.344 (8.74)	.188 (4.78)
-5	.234 (5.94)	1.156 (29.36)	.406 (10.31)	.219 (5.56)
-6	.297 (7.54)	1.312 (33.32)	.469 (11.91)	.250 (6.35)
-8	.391 (9.93)	1.656 (42.06)	.625 (15.88)	.313 (7.95)
-10	.484 (12.29)	1.938 (49.23)	.750 (19.05)	.375 (9.53)
-12	.609 (15.47)	2.156 (54.76)	.938 (23.83)	.438 (11.13)
-16	.844 (21.44)	2.578 (65.48)	1.188 (30.18)	.625 (15.88)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Break sharp edges .and remove all hanging burrs and slivers.
4. Unless otherwise noted tolerances shall be ±.005 inches (0.13 mm) and angles ±.5°.
5 Tolerances for dimensions G and N are in accordance with SAE-AS4395 style E.
6. Machined surfaces shall be smooth to 125µin Ra, hex surfaces may be 250µin Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
7. Diameter F is last pitch diameter of last serration from point to point.
8. Dimensions A, F, and J shall be concentric within .005 inch (0.13 mm) total indicator movement.
9. For design features purposes, this standard takes precedence over documents referenced herein.
10. Referenced documents shall be of the issue in effect on date of invitation for bid.

FIGURE 1. Bolt - fluid passage dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configuration shall be in accordance with figure 1.

Size -2 through -16 aluminum alloy maximum operating pressure is 1500 psi (10 MPa).

Steel, corrosion resistant steel (CRES), and titanium maximum operating pressure is 3000 psi (21 MPa).

Except as otherwise noted materials shall be in accordance with SAE-AS4875, see table I for material code.

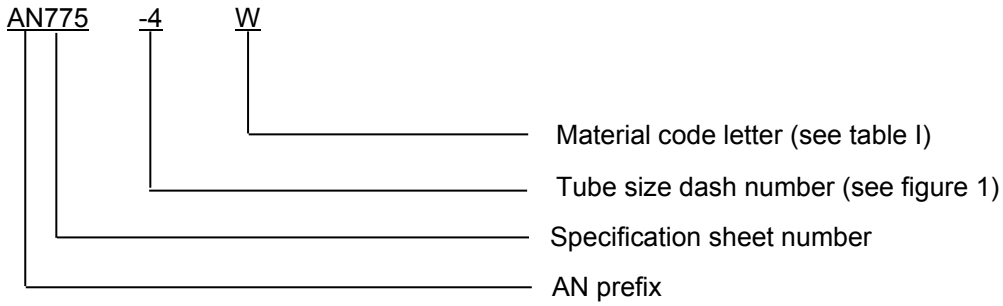
TABLE I. Material and code letters.

Code letter	Material
F	Steel alloy 4130 or 4120 In accordance with SAE-AMS6370 or SAE-AMS6382 1/
J	CRES, type 304
K	CRES, type 316
R	CRES, type 321
T	Titanium alloy 2/
W	Aluminum alloy 7075-T73

1/ Steel alloy 125,000 psi (860 MPa) minimum tensile strength.
2/ Not for use in oxygen systems.

Finishes shall be in accordance with SAE-AS4875.

Part or Identifying Number (PIN): The PIN consists of the letter “AN” the specification sheet number, a dash number for tube size, and a material code letter for material type. Unassigned PIN’s shall not be used.



PIN example: AN775-4W indicates a bolt - fluid passage, .250 inches (6.35 mm) tube OD, .4375-20UNJF-3A (7/16) threaded end, aluminum alloy 7075-T73.

Supersession data:

Steel blank designator has been replaced by steel alloy “F” designator.

Due to stress corrosion cracking aluminum alloys 2014 and 2024 “D” designator has been replaced by aluminum alloy 7075 “W” designator example: AN774-D4 use AN774-W4.

Table II provides a detailed cross-reference of cancelled AN775 PINs and replacement SAE-AS5161 PINs. Users are cautioned to evaluate replacements for their particular application.

CAUTION: The superseding information is valid as of the date of this specification and may be superseded by subsequent revisions of the superseding document.

TABLE II. Cross-reference data.

AN PIN (inactive part)	Tube size	Replacement AS PIN (new design part)	Replacement AN PIN (inactive part)
AN775-4	.250	AS5161-04	AN775-4F
AN775-4D	.250	AS5161W04	AN775-4W
AN775-4J	.250	AS5161J04	
AN775-4K	.250	AS5161K04	
AN775-4R	.250	AS5161R04	
AN775-4T	.250	AS5161T04	
AN775-4W	.250	AS5161W04	
AN775-5	.313	AS5161-05	AN775-5F
AN775-5D	.313	AS5161W05	AN775-5W
AN775-5J	.313	AS5161J05	
AN775-5K	.313	AS5161K05	
AN775-5R	.313	AS5161R05	
AN775-5T	.313	AS5161T05	
AN775-5W	.313	AS5161W05	
AN775-6	.375	AS5161-06	AN775-6F
AN775-6D	.375	AS5161W06	AN775-6W
AN775-6J	.375	AS5161J06	
AN775-6K	.375	AS5161K06	
AN775-6R	.375	AS5161R06	
AN775-6T	.375	AS5161T06	
AN775-6W	.375	AS5161W06	
AN775-8	.500	AS5161-08	AN775-8F
AN775-8D	.500	AS5161W08	AN775-8W
AN775-8J	.500	AS5161J08	
AN775-8K	.500	AS5161K08	
AN775-8R	.500	AS5161R08	
AN775-8T	.500	AS5161T08	
AN775-8W	.500	AS5161W08	

TABLE II. Cross-reference data - Continued.

AN PIN (inactive part)	Tube size	Replacement AS PIN (new design part)	Replacement AN PIN (inactive part)
AN775-10	.625	AS5161-16	AN775-10F
AN775-10D	. 625	AS5161W16	AN775-10W
AN775-10J	. 625	AS5161J16	
AN775-10K	. 625	AS5161K16	
AN775-10R	. 625	AS5161R16	
AN775-10T	. 625	AS5161T16	
AN775-10W	. 625	AS5161W16	
AN775-12	.750	AS5161-12	AN775-12F
AN775-12D	.750	AS5161W12	AN775-12W
AN775-12J	.750	AS5161J12	
AN775-12K	.750	AS5161K12	
AN775-12R	.750	AS5161R12	
AN775-12T	.750	AS5161T12	
AN775-12W	.750	AS5161W12	
AN775-16	1.00	AS5161-16	AN775-16F
AN775-16D	1.00	AS5161W16	AN775-16W
AN775-16J	1.00	AS5161J16	
AN775-16K	1.00	AS5161K16	
AN775-16R	1.00	AS5161R16	
AN775-16T	1.00	AS5161T16	
AN775-16W	1.00	AS5161W16	

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.

Referenced documents. In addition to SAE-AS4875, this document references the following:

ASME B46.1
SAE-AMS6370
SAE-AMS6382
SAE-AS4395
SAE-AS5161
SAE-AS8879

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 4730-2012-029)

Review activities:
Navy - MC, 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.daps.dla.mil.