

INCH-POUND

AN848 Rev 12

7 June 2011

SUPERSEDING

AN848 Rev 11

20 March 1979

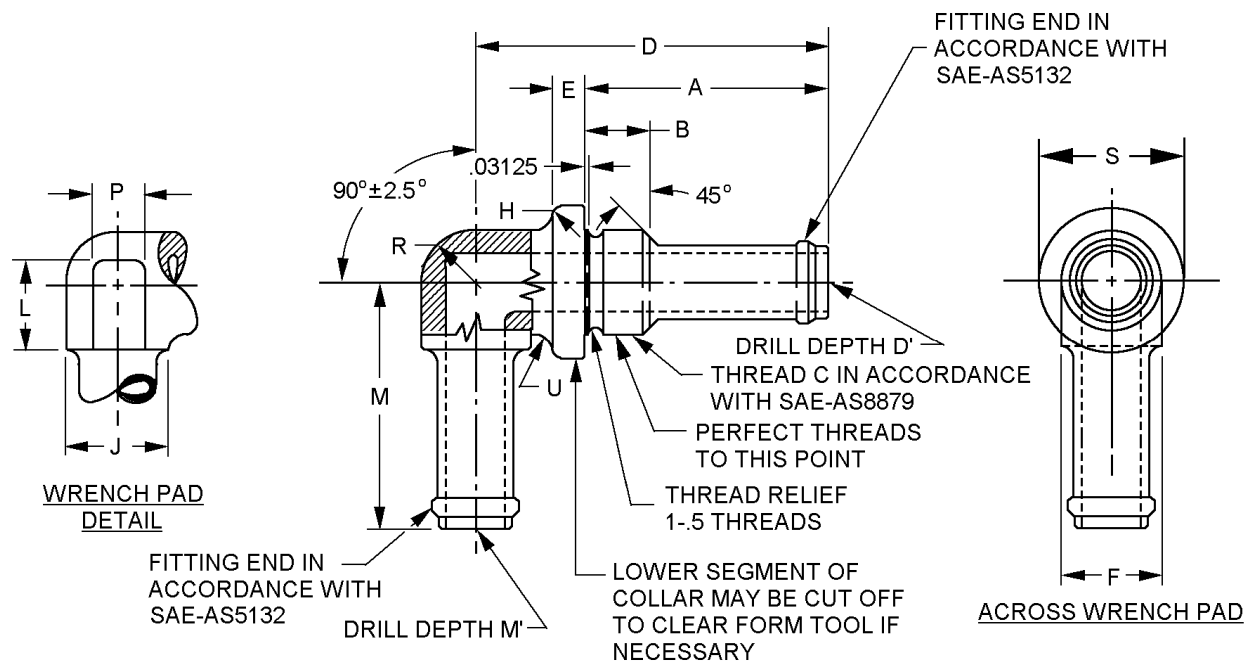
DETAIL SPECIFICATION SHEET

ELBOW, HOSE, 90°

Reinstated after 7 June 2011. Inactive for new design.
For new design, use SAE-AS5188.

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-AS4843.



Inch	mm
.01325	0.80

FIGURE 1. 90° elbow dimensions and configuration.

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Dash number	Hose ID inches (mm)	A inches (mm)	B inches (mm)	Thread C Ref SAE-AS8879	D +.047 (1.19) -.000 inches (mm)
4	.250 (6.35)	1.938 (49.23)	.438 (11.13)	.4375-20UNJF-3A	2.063 (52.40)
6	.375 (9.53)	1.969 (50.01)	.469 (11.91)	.5625-18UNJF-3A	2.625 (66.68)
8	.500 (12.70)	2.000 (50.80)	.500 (12.70)	.7500-16UNJF-3A	2.781 (70.64)
10	.675 (17.15)	2.031 (51.59)	.531 (13.49)	1.875 -12UNJ-3A	2.969 (75.41)
12	.750 (19.05)	2.167 (55.04)	.563 (14.30)	1.0625 -12UNJ-3A	3.094 (78.59)
16	1.000 (25.40)	2.167 (55.04)	.563 (14.30)	1.3125-12UNJ-3A	3.219 (81.76)
20	1.250 (31.75)	2.167 (55.04)	.563 (14.30)	1.6250-12UNJ-3A	3.531 (89.69)
24	1.500 (38.10)	2.167 (55.04)	.563 (14.30)	1.8750-12UNJ-3A	3.656 (92.86)

Dash number	D' +.047 (1.19) -.000 inches (mm)	E inches (mm)	F inches (mm)	H Radius inches (mm)	J Diameter inches (mm)	L Approx. inches (mm)
4	2.500 (63.50)	.156 (3.96)	.438 (11.13)	.063 (1.60)	.438 (11.13)	.313 (7.95)
6	2.672 (67.87)	.188 (4.78)	.563 (14.30)	.063 (1.60)	.563 (14.30)	.500 (12.70)
8	2.844 (72.24)	.219 (5.56)	.750 (19.05)	.094 (2.39)	.750 (19.05)	.625 (15.88)
10	3.094 (78.59)	.250 (6.35)	.875 (22.23)	.094 (2.39)	.875 (22.23)	.750 (19.05)
12	3.219 (81.76)	.250 (6.35)	1.063 (27.00)	.094 (2.39)	1.063 (27.00)	.938 (23.83)
16	3.344 (84.94)	.250 (6.35)	1.313 (33.35)	.125 (3.18)	1.313 (33.35)	1.000 (25.40)
20	3.656 (92.86)	.281 (7.14)	1.625 (41.28)	.125 (3.18)	1.625 (41.28)	1.125 (28.58)
24	3.781 (96.04)	.281 (7.14)	1.875 (47.63)	.125 (3.18)	1.875 (47.63)	1.500 (38.10)

Dash number	M +.047 (1.19) -.000 inches (mm)	M' +.047 (1.19) -.000 inches (mm)	P Approx inches (mm)	R Radius inches (mm)	S Diameter inches (mm)	U Radius inches (mm)
4	1.781 (45.24)	1.828 (43.43)	.250 (6.35)	.219 (5.56)	.625 (15.88)	.063 (1.60)
6	1.875 (47.63)	1.923 (48.84)	.313 (7.95)	.281 (7.14)	.813 (20.65)	.094 (2.39)
8	1.969 (50.01)	2.031 (51.59)	.438 (11.13)	.375 (9.53)	1.000 (25.40)	.094 (2.39)
10	2.063 (52.40)	2.188 (55.58)	.438 (11.13)	.438 (11.13)	1.250 (31.75)	.125 (3.18)
12	2.156 (54.76)	2.281 (57.94)	.500 (12.70)	.531 (13.49)	1.438 (36.53)	.125 (3.18)
16	2.281 (57.94)	2.406 (61.11)	.563 (14.30)	.656 (16.66)	1.688 (42.88)	.125 (3.18)
20	2.500 (63.50)	2.625 (66.68)	.563 (14.30)	.813 (20.65)	2.063 (52.40)	.188 (4.48)
24	2.625 (66.68)	2.750 (69.85)	.625 (15.88)	.938 (22.83)	2.375 (60.33)	.188 (4.48)

Max weight lbs (kg)			
Copper	Al	CRES	Ti
.120 (0.05)	.040 (0.02)	.120 (0.05)	.066 (0.03)
.180 (0.08)	.060 (0.03)	.180 (0.08)	.100 (0.05)
.300 (0.14)	.100 (0.05)	.300 (0.14)	.165 (0.07)
.390 (0.17)	.130 (0.06)	.389 (0.18)	.215 (0.10)
.600 (0.27)	.200 (0.09)	.599 (0.27)	.331 (0.15)
.870 (0.39)	.290 (0.13)	.868 (0.39)	.479 (0.23)
1.500 (0.68)	.500 (0.23)	1.497 (0.68)	.827 (0.38)
2.100 (0.95)	.700 (0.32)	2.096 (1.32)	1.157 (0.52)

FIGURE 1. 90° elbow dimensions and configuration - Continued.

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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances are ± 0.016 inch (0.41 mm).
4. Break sharp edges and remove all hanging burrs and slivers
5. Machined surfaces shall be finished to 125μ in Ra, forged surfaces shall be 250μ inches Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
6. For design features purposes, this standard takes precedence over documents referenced herein.
7. Referenced documents shall be of the issue in effect on date of invitation for bid.

FIGURE 1. 90° elbow dimensions and configuration - Continued.

REQUIREMENTS:

Dimensions and configuration shall be in accordance with figure 1.

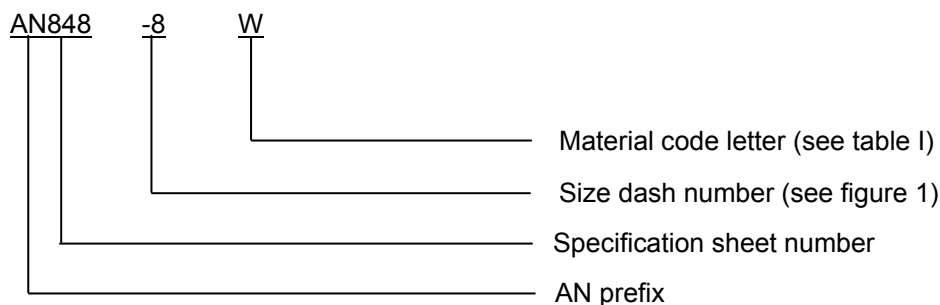
Materials and finishes shall be in accordance with SAE-AS4843, see table I for material code

TABLE I. Material and code letters.

Code letter	Material
Blank	Copper alloy
J	Corrosion resistant steel (CRES), type 304
K	CRES, type 316
R	CRES, Type 321
S	CRES, type 347
T ^{1/}	Titanium alloy
W	Aluminum alloy 7075-T73

^{1/} Not for use in oxygen systems.

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



PIN example: AN848-8WP indicates a 90° elbow hose to hose, .500 inch (12.70 mm) hose, aluminum alloy 7075-T73.

Supersession data. The aluminum "D" designator has been replaced by the "W" designator.

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

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Table II provides a detailed cross-reference of AN848 PINs and replacement SAE-AS5188 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. 1/

AN PIN	Hose Size	Replacement AS PIN	New design
AN848-4	0.250	AS5188B04	AS5188W04
AN848-4D	0.250	AS5188W04	
AN848-4J	0.250	AS5188J04	
AN848-4K	0.250	AS5188K04	
AN848-4R	0.250	AS5188R04	
AN848-4S	0.250	AS5188R04	
AN848-4T	0.250	None	
AN848-4W	0.250	AS5188W04	
AN848-6	0.375	AS5188B06	AS5188W06
AN848-6D	0.375	AS5188W06	
AN848-6J	0.375	AS5188J06	
AN848-6K	0.375	AS5188K06	
AN848-6R	0.375	AS5188R06	
AN848-6S	0.375	AS5188R06	
AN848-6T	0.375	None	
AN848-6W	0.375	AS5188W06	
AN848-8	0.500	AS5188B08	AS5188W08
AN848-8D	0.500	AS5188W08	
AN848-8J	0.500	AS5188J08	
AN848-8K	0.500	AS5188K08	
AN848-8R	0.500	AS5188R08	
AN848-8S	0.500	AS5188R08	
AN848-8T	0.500	None	
AN848-8W	0.500	AS5188W08	
AN848-10	0.625	AS5188B10	AS5188W10
AN848-10D	0.625	AS5188W10	
AN848-10J	0.625	AS5188J10	
AN848-10K	0.625	AS5188K10	
AN848-10R	0.625	AS5188R10	
AN848-10S	0.625	AS5188R10	
AN848-10T	0.625	None	
AN848-10W	0.625	AS5188W10	

See note at end of table.

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TABLE II. Cross-reference data - Continued. 1/

AN PIN	Hose Size	Replacement AS PIN	New design
AN848-12	0.750	AS5188B12	
AN848-12D	0.750	AS5188W12	AS5188W12
AN848-12J	0.750	AS5188J12	
AN848-12K	0.750	AS5188K12	
AN848-12R	0.750	AS5188R12	
AN848-12S	0.750	AS5188R12	AS5188R12
AN848-12T	0.750	None	
AN848-12W	0.750	AS5188W12	
AN848-16	1.000	AN5188B16	
AN848-16D	1.000	AS5188W16	AS5188W16
AN848-16J	1.000	AS5188J16	
AN848-16K	1.000	AS5188K16	
AN848-16R	1.000	AS5188R16	
AN848-16s	1.000	AS5188R16	AS5188R16
AN848-16T	1.000	None	
AN848-16W	1.000	AS5188W16	
AN848-20	1.250	AS5188B20	
AN848-20D	1.250	AS5188W20	AS5188W20
AN848-20J	1.250	AS5188J20	
AN848-20K	1.250	AS5188K20	
AN848-20R	1.250	AS5188R20	
AN848-20S	1.250	AS5188R20	AS5188R20
AN848-20T	1.250	None	
AN848-20W	1.250	AS5188W20	
AN848-24	1.500	AS5188B24	
AN848-24D	1.500	AS5188W24	AS5188W24
AN848-24J	1.500	AS5188J24	
AN848-24K	1.500	AS5188K24	
AN848-24R	1.500	AS5188R24	
AN848-24S	1.500	AS5188R24	AS5188R24
AN848-24T	1.500	None	
AN848-24W	1.500	AS5188W24	

1/ For new design use material designators R or W.

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.

Referenced documents. In addition to SAE-AS4843, this document references the following:

ASME B46.1
SAE-AS5132
SAE-AS5188
SAE-AS8879

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CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 4730-2011-060)

Review activity:

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>.