

INCH-POUND

AN915 Rev 13
 22 November 2013
 SUPERSEDING
 AN915 Rev 12
 19 July 2011

DETAIL SPECIFICATION SHEET

ELBOW, PIPE, 45°

Reinstated after 19 July 2011. Inactive for new design.
 For new design, use SAE-AS4855.

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-AS4842.

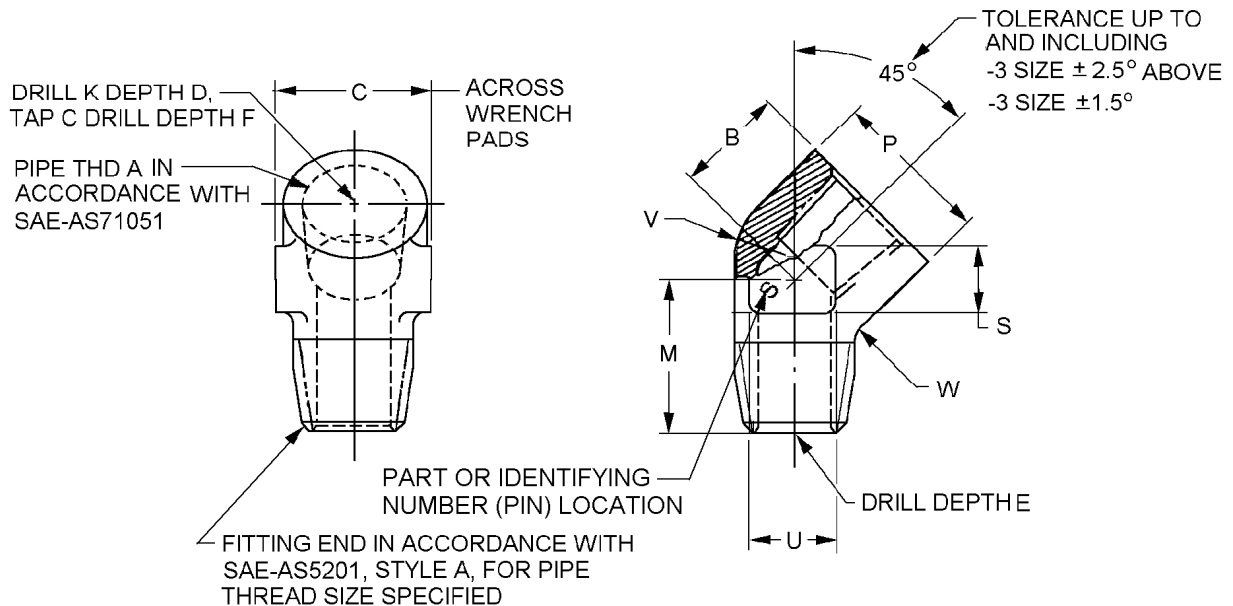


FIGURE 1. Elbow 45° dimensions and configuration.

AN915 Rev 13

Dash number	A Pipe size ANPT SAE-AS71051	B +.047 (1.19) -0.000 (mm)	C mm	D +.047 (1.19) -0.000 (mm)	E +.047 (1.19) -0.000 (mm)	F (mm)
1	1/8-27	.469 (11.91)	.625 (15.88)	.531 (13.49)	.781 (19.84)	.422 (10.72)
2	1/4-18	.625 (15.88)	.813 (20.65)	.688 (17.48)	1.109 (28.17)	.563 (14.30)
3	3/8-18	.719 (18.26)	.938 (23.83)	.813 (20.65)	1.156 (29.36)	.609 (15.47)
4	1/2-14	.906 (23.01)	1.188 (30.18)	1.016 (25.81)	1.453 (36.91)	.797 (20.24)
6	3/4-14	.969 (24.61)	1.375 (34.93)	1.125 (28.58)	1.531 (38.89)	.813 (20.65)
8	1-11 1/2	1.125 (28.58)	1.750 (44.45)	1.313 (33.35)	1.906 (48.41)	.969 (24.61)
10	1/ 1/4-11 1/2	1.156 (29.36)	2.156 (54.76)	1.438 (36.53)	2.156 (54.76)	.969 (24.61)

Dash number	K Dia. (mm)	M +.047 (1.19) -0.000 (mm)	P Dia. (mm)	S Approx (mm)	U Approx (mm)
1	.188 (4.48)	.719 (18.26)	.578 (14.68)	.188 (4.78)	.313 (7.95)
2	.281 (7.14)	1.047 (26.59)	.781 (19.84)	.375 (9.53)	.438 (11.13)
3	.406 (10.31)	1.063 (27.00)	.922 (23.42)	.375 (9.53)	.500 (12.70)
4	.531 (13.49)	1.344 (34.14)	1.156 (29.36)	.500 (12.70)	.625 (15.88)
6	.719 (18.26)	1.375 (34.93)	1.359 (34.52)	.625 (15.88)	.750 (19.05)
8	.938 (23.83)	1.719 (43.66)	1.688 (42.88)	.625 (15.88)	.875 (22.23)
10	1.250 (31.75)	1.875 (47.63)	2.125 (28.58)	.750 (19.05)	1.000 (25.40)

Dash number	V Rad. (mm)	W Rad. (mm)
1	.219 (5.56)	.063 (1.60)
2	.281 (7.14)	.094 (2.39)
3	.359 (9.12)	.094 (2.39)
4	.438 (11.13)	.125 (3.18)
6	.547 (13.89)	.125 (3.18)
8	.688 (17.48)	.125 (3.18)
10	.859 (21.82)	.156 (3.96)

NOTES:

- Dimensions are in inches.
- Metric equivalents are given for information only.
- Unless otherwise specified, tolerances are ± 0.016 inch (0.41 mm).
- Break sharp edges and remove all hanging burrs and slivers.
- Machined surfaces shall be finished to 125 μ m Ra; forged surfaces shall be 250 μ m Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
- 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.

FIGURE 1. Elbow 45° dimensions and configuration - Continued.

REQUIREMENTS:

Dimensions and configuration shall be in accordance with figure 1.

Materials and finishes shall be in accordance with SAE-AS4842; see table I for material code.

AN915 Rev 13

TABLE I. Material and finish code letters.

Material and finish code	Material	Protective chemical finish <u>3/</u> <u>4/</u>
No code <u>1/</u>	Copper alloy, type 377 forging in accordance with ASTM B124/B124M or half hard forging or bar in accordance with ASTM B138/B138M or bar in accordance with SAE-AMS4614.	No finish.
BC <u>1/</u>	Copper alloy, type 377 forging in accordance with ASTM B124/B124M or half hard forging or bar in accordance with ASTM B138/B138M or bar in accordance with SAE-AMS4614.	Cadmium in accordance with SAE-AMS-QQ-P-416, type II, class 3.
J	Type 304 corrosion resistant steel forging or bar in accordance with SAE-AMS-QQ-S-763 or SAE-AMS5639.	Passivate in accordance with SAE-AMS2700, type VI or VII.
K	Type 316 corrosion resistant steel forging or bar in accordance with SAE-AMS-QQ-S-763 or SAE-AMS5648.	Passivate in accordance with SAE-AMS2700, type VI or VII.
R	Type 321 corrosion resistant steel forging or bar in accordance with SAE-AMS-QQ-S-763 or SAE-AMS5645.	Passivate in accordance with SAE-AMS2700, type VI or VII.
T <u>3/</u>	Titanium	Anodize in accordance with SAE-AMS2488, type 2.
W <u>2/</u>	Type 7075-T73 aluminum alloy forging in accordance with SAE-AMS-QQ-A-367 or SAE-AMS4141, or type 7075-T73 aluminum alloy bar in accordance with SAE-AMS-QQ-A-225/9, in accordance with type 7075-T7351 aluminum alloy bar in accordance with SAE-AMS4124.	Anodize in accordance with SAE-AMS2472 or MIL-A-8625, type II, class 2; dye brown similar to color in accordance with FED-STD-595/10080; duplex seal in accordance with procurement specification.
WV <u>2/</u>	Type 7075-T73 aluminum alloy forging in accordance with SAE-AMS-QQ-A-367 or SAE-AMS4141, or type 7075-T73 aluminum alloy bar in accordance with SAE-AMS-QQ-A-225/9, in accordance with type 7075-T7351 Aluminum alloy bar in accordance with SAE-AMS4124.	High purity aluminum in accordance with MIL-DTL-83488, class 3, type II with maximum coating thickness of .0005 inch. Glass bead peen pressure shall be 25 psi (1.72 bar) maximum.

1/ Material code was dash on previous revisions, changed to agree with SAE-ARP1590.

2/ Aluminum code D is canceled; use code W.

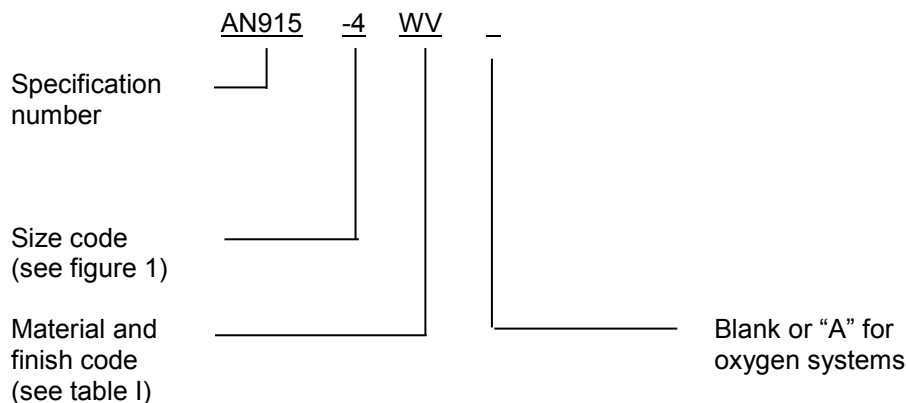
3/ Titanium and cadmium shall not be used in oxygen systems.

4/ Cadmium shall not be used in potable water systems.

AN915 Rev 13

Oxygen systems for aerospace, shipboard, and ground support equipment. Parts for use in oxygen systems shall be identified in the PIN as code "A" and shall be furnished cleaned, packaged, and labeled in accordance with SAE-AS611 to a process approved by the user.

Part or Identifying Number (PIN): The PIN consists of the prefix "AN", specification sheet number, dash number for hose and flared tube size, material finish code letter(s) and blank of "A" for oxygen cleaning requirements. Unassigned PIN's shall not be used.



PIN examples:

AN915-4W indicates an adapter 45° elbow 1/2-14 ANPT internal pipe threads, aluminum alloy 7075-T73.

AN841-4WV indicates an adapter 45° elbow 1/2-14 ANPT internal pipe threads, aluminum alloy 7075-T73 finish with high purity aluminum.

AN841-4WA indicates an adapter 45° elbow 1/2-14 ANPT internal pipe threads, aluminum alloy 7075-T73 for use on oxygen systems.

Guidance on use of alternative parts with less hazardous or non-hazardous materials. This specification provides for a number of alternative plating materials via the PIN. Users should select the PIN with the least hazardous material that meets the form, fit, and function requirements of their application.

Supersession data:

Due to stress corrosion cracking aluminum alloys 2014 and 2024, "D" designator has been replaced by aluminum alloy 7075 "W" designator. Example: AN915-8D use AN915-8W.

Metal cracking due to high temperatures CRES alloy 347 "S" designator has been replaced by CRES alloy 321 "R" designator. Example: AN915-8S use AN915-8R.

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

Table II provides a detailed cross-reference of AN915 PINs and replacement SAE-AS4855 PINs. Users are cautioned to evaluate replacements for their particular application.

AN915 Rev 13

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)	Cancelled PIN	Pipe size	Replacement AS PIN (for new design)	Replacement AN PIN (inactive)
AN915-1		.125	AS4855-01 <u>1/</u>	
	AN915-1D	.125	AS4855W01	AN915-1W
AN915-1J		.125	AS4855J01	
AN915-1K		.125	AS4855K01	
AN915-1R		.125	AS4855R01	
	AN915-1S	.125	AS4855R01	AN915-1R
AN915-1T		.125	NONE	
AN915-1W		.125	AS4855W01	
AN915-2		.250	AS4855-02 <u>1/</u>	
	AN915-2D	.250	AS4855W02	AN915-2W
AN915-2J		.250	AS4855J02	
AN915-2K		.250	AS4855K02	
AN915-2R		.250	AS4855R02	
	AN915-2S	.250	AS4855R02	AN915-2R
AN915-2T		.250	NONE	
AN915-2W		.250	AS4855W02	
AN915-3		.375	AS4855-03 <u>1/</u>	
	AN915-3D	.375	AS4855W03	AN915-3W
AN915-3J		.375	AS4855J03	
AN915-3K		.375	AS4855K03	
AN915-3R		.375	AS4855R03	
	AN915-3S	.375	AS4855R03	AN915-3R
AN915-3T		.375	NONE	
AN915-3W		.375	AS4855W03	
AN915-4		.500	AS4855-04 <u>1/</u>	
	AN915-4D	.500	AS4855W04	AN915-4W
AN915-4J		.500	AS4855J04	
AN915-4K		.500	AS4855K04	
AN915-4R		.500	AS4855R04	
	AN915-4S	.500	AS4855R04	AN915-4R
AN915-4T		.500	NONE	
AN915-4W		.500	AS4855W04	
AN915-6		.750	AS4855-06 <u>1/</u>	
	AN915-6D	.750	AS4855W06	AN915-6W
AN915-6J		.750	AS4855J06	
AN915-6K		.750	AS4855K06	
AN915-6R		.750	AS4855R06	
	AN915-6S	.750	AS4855R06	AN915-6R
AN915-6T		.450	NONE	
AN915-6W		.750	AS4855W06	

See note at end of table.

AN915 Rev 13

TABLE II. Cross-reference data - Continued.

AN PIN (inactive)	Cancelled PIN	Pipe size	Replacement AS PIN (for new design)	Replacement AN PIN (inactive)
AN915-8	AN915-8D	1.000	AS4855-08 <u>1/</u>	AN915-8W
		1.000	AS4855W08	
AN915-8J	AN915-8S	1.000	AS4855J08	AN915-8R
AN915-8K		1.000	AS4855K08	
AN915-8R		1.000	AS4855R08	
AN915-8T		1.000	AS4855R08	
AN915-8W		1.000	NONE	
		1.000	AS4855W08	
AN915-10	AN915-10D	1.250	AS4855-10 <u>1/</u>	AN915-10W
		1.250	AS4855W10	
AN915-10J	AN915-10S	1.250	AS4855J10	AN915-10R
AN915-10K		1.250	AS4855K10	
AN915-10R		1.250	AS4855R10	
AN915-10T		1.250	AS4855R10	
AN915-10W		1.250	NONE	
		1.250	AS4855W10	

1/ SAE part may be unplated or cadmium plated.

Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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

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-AS4842, this document references the following:

FED-STD-595/10080	SAE-AMS-QQ-P-416	SAE-AMS5639
MIL-A-8625	SAE-AMS-QQ-S-763	SAE-AMS5645
MIL-DTL-83488	SAE-AMS2472	SAE-AMS5648
ASME B46.1	SAE-AMS2488	SAE-ARP1590
ASTM B124/B124M	SAE-AMS2700	SAE-AS611
ASTM B138/B138M	SAE-AMS4124	SAE-AS4855
SAE-AMS-QQ-A-225/9	SAE-AMS4141	SAE-AS5201
SAE-AMS-QQ-A-367	SAE-AMS4614	SAE-AS71051

AN915 Rev 13

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 4730-2013-121)

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.dla.mil>.