INCH-POUND

AN915 Rev 14
10 March 2015
SUPERSEDING
AN915 Rev 13
22 November 2013

DETAIL SPECIFICATION SHEET

ELBOW, PIPE, 45 DEGREE

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.

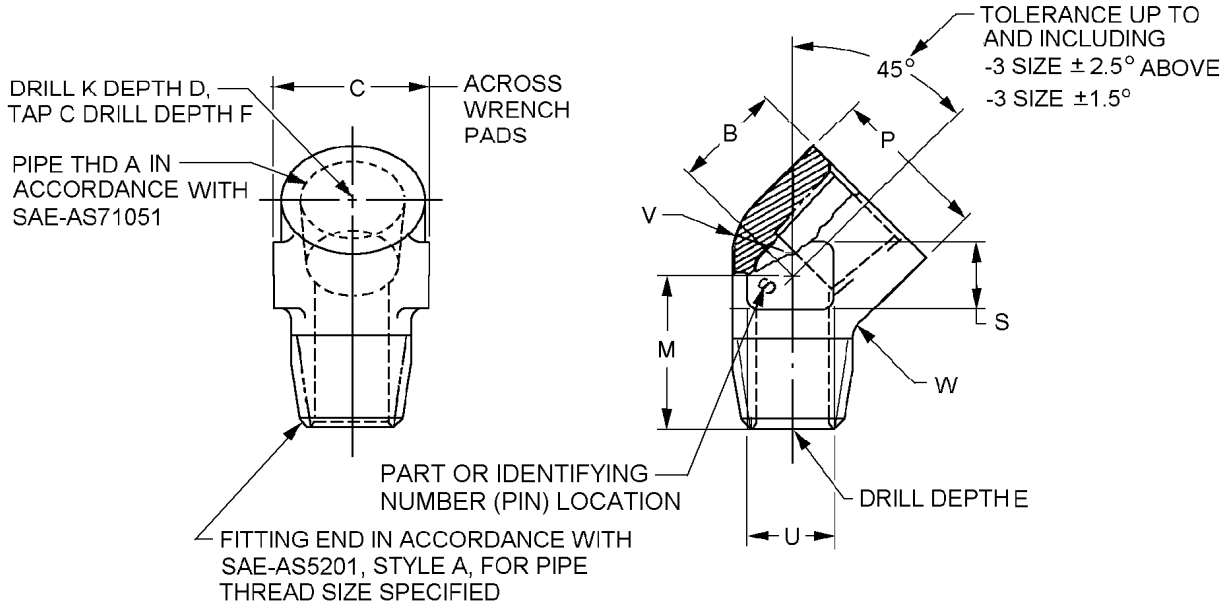


FIGURE 1. Elbow 45° dimensions and configuration.

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:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ±.016 inch (0.41 mm).
4. Break sharp edges and remove all hanging burrs and slivers.
5. Machined surfaces shall be finished to 125µin Ra; forged surfaces shall be 250µin 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. 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.

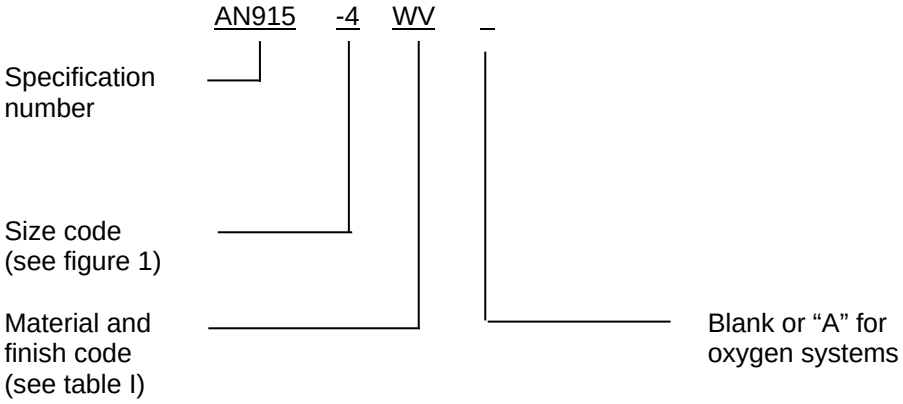
TABLE I. Material and finish code letters.

Material and finish code	Material	Protective chemical finish 3/ 4/
No code 1/	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 1/	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, method 1, type 6 or 7.
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, method 1, type 6 or 7.
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, method 1, type 6 or 7.
T 3/	Titanium in accordance with SAE-AMS4928 alloy 6AI-4V annealed	Anodize in accordance with SAE-AMS2488, type 2. 4/
TF 3/	Titanium in accordance with SAE-AMS4928 alloy 6AI-4V annealed	Fluoride phosphate in accordance with SAE-AMS2486 4/
W 2/	Aluminum alloy forging in accordance with SAE-AMS-QQ-A-367 alloy 7075-T73 or aluminum alloy bar in accordance with SAE-AMS-QQ-A-225/9 or SAE-AMS4124, alloy 7075-T7351 or 7075-T73.	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 2/	Aluminum alloy forging in accordance with SAE-AMS-QQ-A-367 alloy 7075-T73 or aluminum alloy bar in accordance with SAE-AMS-QQ-A-225/9 or SAE-AMS4124, alloy 7075-T7351 or 7075-T73.	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 potable water or oxygen systems.
4/ A pretreatment, a modification of the fluoride treatment, or a post treatment shall be applied so the final color of the fittings shall be similar to FED-STD-595 colors 36076 through 36293.

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.

AN915-4WV indicates an adapter 45° elbow 1/2-14 ANPT internal pipe threads, aluminum alloy 7075-T73 finish with high purity aluminum.

AN915-4WA indicates an adapter 45° elbow 1/2-14 ANPT internal pipe threads, aluminum alloy 7075-T73 for use on oxygen systems.

Cadmium is not recommended. To the users of this document, it is recommended that the use of copper alloy material with cadmium plating be used only when other materials and finishes specified in this document cannot meet performance requirements. 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.

Cross reference data: SAE-AS4855 replacement numbers may be substituted for AN915 PINs, see table III.

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 1/	
	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	
AN915-1TF		.125	None	
AN915-1W		.125	AS4855W01	
AN915-1WV		.125	None	
AN915-2		.250	AS4855-02 1/	
	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	
AN915-2TF		.250	None	
AN915-2W		.250	AS4855W02	
AN915-2WV		.250	None	
AN915-3		.375	AS4855-03 1/	
	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	
AN915-3TF		.375	None	
AN915-3W		.375	AS4855W03	
AN915-3WV		.375	None	
AN915-4		.500	AS4855-04 1/	
	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	
AN915-4TF		.500	None	
AN915-4W		.500	AS4855W04	
AN915-4WV		.500		

See note at end of table.

TABLE II. Cross-reference data - Continued.

AN PIN (inactive)	Cancelled PIN	Pipe size	Replacement AS PIN (for new design)	Replacement AN PIN (inactive)
AN915-6		.750	AS4855-06 1/	
	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		.750	None	
AN915-6TF		.750	None	
AN915-6W		.750	AS4855W06	
AN915-6WV		.750	None	
AN915-8		1.000	AS4855-08 1/	
	AN915-8D	1.000	AS4855W08	AN915-8W
AN915-8J		1.000	AS4855J08	
AN915-8K		1.000	AS4855K08	
AN915-8R		1.000	AS4855R08	
	AN915-8S	1.000	AS4855R08	AN915-8R
AN915-8T		1.000	None	
AN915-8TF		1.000	None	
AN915-8W		1.000	AS4855W08	
AN915-8WV		1.000	None	
AN915-10		1.250	AS4855-10 1/	
	AN915-10D	1.250	AS4855W10	AN915-10W
AN915-10J		1.250	AS4855J10	
AN915-10K		1.250	AS4855K10	
AN915-10R		1.250	AS4855R10	
	AN915-10S	1.250	AS4855R10	AN915-10R
AN915-10T		1.250	None	
AN915-10TF		1.250	None	
AN915-10W		1.250	AS4855W10	
AN915-10WV		1.250	None	

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 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.

Referenced documents. In addition to SAE-AS4842, this document references the following:

FED-STD-595/10080	FED-STD-595/36293	SAE-AMS2488
FED-STD-595/36076	MIL-A-8625	SAE-AMS4124
FED-STD-595/36081	MIL-DTL-83488	SAE-AMS4614
FED-STD-595/36099	ASME B46.1	SAE-AMS4928
FED-STD-595/36118	ASTM B124/B124M	SAE-AMS5639
FED-STD-595/36134	ASTM B138/B138M	SAE-AMS5645
FED-STD-595/36152	SAE-AMS-QQ-A-225/9	SAE-AMS5648
FED-STD-595/36170	SAE-AMS-QQ-A-367	SAE-ARP1590
FED-STD-595/36173	SAE-AMS-QQ-P-416	SAE-AS611
FED-STD-595/36176	SAE-AMS-QQ-S-763	SAE-AS4855
FED-STD-595/36231	SAE-AMS2700	SAE-AS5201
FED-STD-595/36270	SAE-AMS2472	SAE-AS71051
FED-STD-595/36280	SAE-AMS2486	

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 4730-2015-025)

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.