FEDERAL SUPPLY CLASS
4730

RATIONALE

AS5196C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

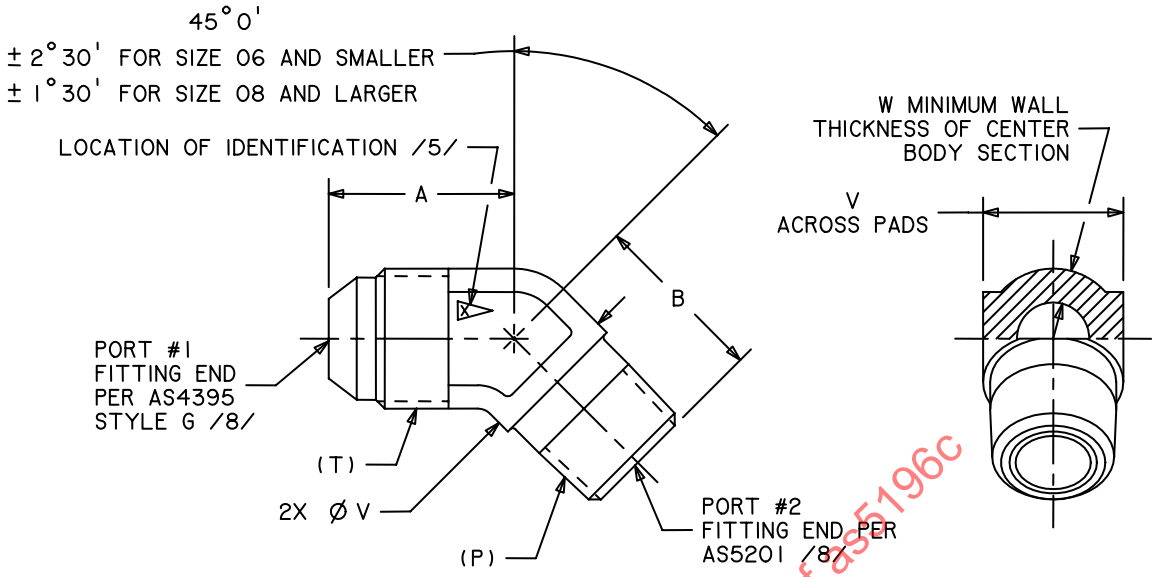


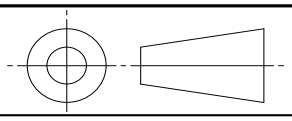
FIGURE 1 – FITTING, ELBOW, 45°
TABLE 1 – DIMENSIONS

BASIC NO. AS5196 /17/ SIZE CODE	(NOMINAL TUBE SIZE) PORT #1	(NOMINAL PIPE SIZE) PORT #2	P THREAD PER AS71051 ANPT	T THREAD PER AS8879 CLASS 3A	PORT #2 STYLE	A	B ±.016
0202	.125	.125	1/8-27	.3125-24 UNJF	B	.665	.500
0302	.188	.125	1/8-27	.3750-24 UNJF	B	.665	.500
0402	.250	.125	1/8-27	.4375-20 UNJF	C	.726	.625
0502	.312	.125	1/8-27	.5000-20 UNJF	C	.774	.625
0604	.375	.250	1/4-18	.5625-18 UNJF	A	.837	.844
0806	.500	.375	3/8-18	.7500-16 UNJF	C	.993	.938
1008	.625	.500	1/2-14	.8750-14 UNJF	C	1.118	1.156
1212	.750	.750	3/4-14	1.0625-12 UNJ	A	1.290	1.188
1612	1.000	.750	3/4-14	1.3125-12 UNJ	C	1.477	1.250
1616	1.000	1.000	1-11 1/2	1.3125-12 UNJ	A	1.477	1.469
2016	1.250	1.000	1-11 1/2	1.6250-12 UNJ	C	1.602	1.531
2020	1.250	1.250	1 1/4-11 1/2	1.6250-12 UNJ	B	1.602	1.656
2420	1.500	1.250	1 1/4-11 1/2	1.8750-12 UNJ	C	1.790	1.656
2824	1.750	1.500	1 1/2-11 1/2	2.2500-12 UNJ	C	1.977	2.000
3232	2.000	2.000	2-11 1/2	2.5000-12 UNJ	C	2.227	2.094

INACTIVE IN PART - SEE NOTE /18/

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS5196C

THIRD ANGLE PROJECTION



ISSUED 1999-04 REVISED 2005-01 REAFFIRMED 2015-04

CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4842/1

AEROSPACE STANDARD

FITTING, ELBOW, 45°,
FLARED TO PIPE

AS5196
SHEET 1 OF 4

REV. C

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)** **Tel: +1 724-776-4970 (outside USA)**
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TABLE 1A – DIMENSIONS AND WEIGHTS

BASIC NO. AS5196 /17/ SIZE CODE	V	W	LB/EA APPROX REF AL	LB/EA APPROX REF CU	LB/EA APPROX REF STEEL
0202	.297-.314	.090	.00918	.0279	.0268
0302	.360-.377	.100	.0133	.0405	.0383
0402	.423-.440	.110	.0189	.0575	.0543
0502	.485-.502	.120	.0251	.0765	.0722
0604	.547-.565	.120	.0356	.108	.103
0806	.735-.753	.150	.0732	.222	.210
1008	.860-.878	.170	.110	.334	.316
1212	1.047-1.065	.185	.173	.527	.497
1612	1.292-1.317	.205	.298	.909	.855
1616	1.292-1.317	.205	.278	.846	.799
2016	1.605-1.630	.240	.549	1.67	1.58
2020	1.605-1.630	.240	.469	1.42	1.35
2420	1.855-1.880	.250	.712	2.16	2.04
2824	2.230-2.260	.350	1.23	4.74	3.54
3232	2.542-2.572	.350	1.78	5.41	5.10

NOTES:

/1/ MATERIAL:

a. DASH AS CODE LETTER – LOW ALLOY STEEL FORGING OR BAR, TYPE 4130 PER AMS-S-6758 OR AMS 6370, OR TYPE 4140 PER AMS 6382. /2/
b. CODE LETTER B – TYPE 377 COPPER ALLOY FORGING PER ASTM B 124 OR AMS 4614, OR HALF HARD FORGING OR BAR PER ASTM B 138.
c. CODE LETTER D – TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS 4133, OR TYPE 2024-T6 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6, OR TYPE 2024-T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR AMS 4339. /2/ /18/
d. CODE LETTER J – TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5639.
e. CODE LETTER K – TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5648.
f. CODE LETTER R – TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5645.
g. CODE LETTER W – TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS 4141, OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9, OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124. /2/

/2/ HEAT TREATMENT:

a. DASH AS CODE LETTER – SEE HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
b. MATERIAL CODE LETTERS D AND W – SEE ELECTRICAL CONDUCTIVITY AND HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
c. OTHER MATERIAL CODE LETTERS - NONE.

3. FINISH:

   a. DASH AS CODE LETTER – CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION. /16/
   b. MATERIAL CODE LETTER B – CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3 OR NONE. /16/
   c. MATERIAL CODE LETTER D – ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
   d. MATERIAL CODE LETTER J – PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII.
   e. MATERIAL CODE LETTER K – PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII.
   f. MATERIAL CODE LETTER R – PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII.
   g. MATERIAL CODE LETTER W:
      1. ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
      2. W CODE PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER “V” AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: COAT WITH HIGH PURITY ALUMINUM PER MIL-DTL-83488, CLASS 3, TYPE II WITH MAXIMUM COATING THICKNESS OF .0005. GLASS BEAD PEEN PRESSURE SHALL BE 25 psi MAXIMUM.

/4/ PROCUREMENT SPECIFICATION: AS4842/1 EXCEPT AS SPECIFIED ON THIS STANDARD. USERS OF THIS STANDARD SHALL PROCURE THIS PRODUCT FROM ACCREDITED MANUFACTURER(S), OR ACCREDITED DISTRIBUTOR(S), AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED MANUFACTURERS LIST (QML) FOR THIS TYPE OF PRODUCT.

/5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D, OR METHOD 7A3, 15A3, OR 15B.

   a. FOR SIZES 06 AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTERS "AS" AND MATERIAL CODE LETTER.
   b. FOR SIZES 08 AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER AND MATERIAL CODE LETTER.

6. INTENDED USE: THIS PART IS DESIGNED FOR USE IN SYSTEMS WITH MAXIMUM OPERATING PRESSURES AS FOLLOWS:

   a. SIZES 02 THROUGH 12 IN ALUMINUM ALLOY AND COPPER ALLOY AND SIZES 02 THROUGH 16 IN STEEL AND CORROSION RESISTANT STEEL AT 3000 psi.
   b. SIZES 16 THROUGH 32 IN ALUMINUM ALLOY AND COPPER ALLOY AND SIZES 20 THROUGH 32 IN STEEL AND CORROSION RESISTANT STEEL AT 1500 psi.

7. THIS STANDARD IS A FUNCTIONAL EQUIVALENT OF MS20823 AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.

/8/ AT THE OPTION OF THE MANUFACTURER, THE SMALLEST ID OF EITHER THE AS4395 OR AS5201 FITTING ENDS FOR A GIVEN PART NUMBER MAY BE MACHINED INTO THE OTHER FITTING ENDS FOR THAT PART NUMBER.

9. WHEN MACHINED FROM BAR OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 1.

10. THE CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT.

11. INTERPRETATION OF DRAWING PER ARP4296.

12. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 µin Ra. FORGED SURFACES MAY BE 250 µin Ra.

13. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.