

REV.  
E

AS5196™

FEDERAL SUPPLY CLASS  
4730

# RATIONALE

ADDED NEW NOTE /19/ AND FIGURE 2 TO REDUCE DIAMETER B OF AS5201 FOR SIZES 0202 AND 0302 ONLY AND FACILITATE ANPT THREAD GAGE INSPECTION.

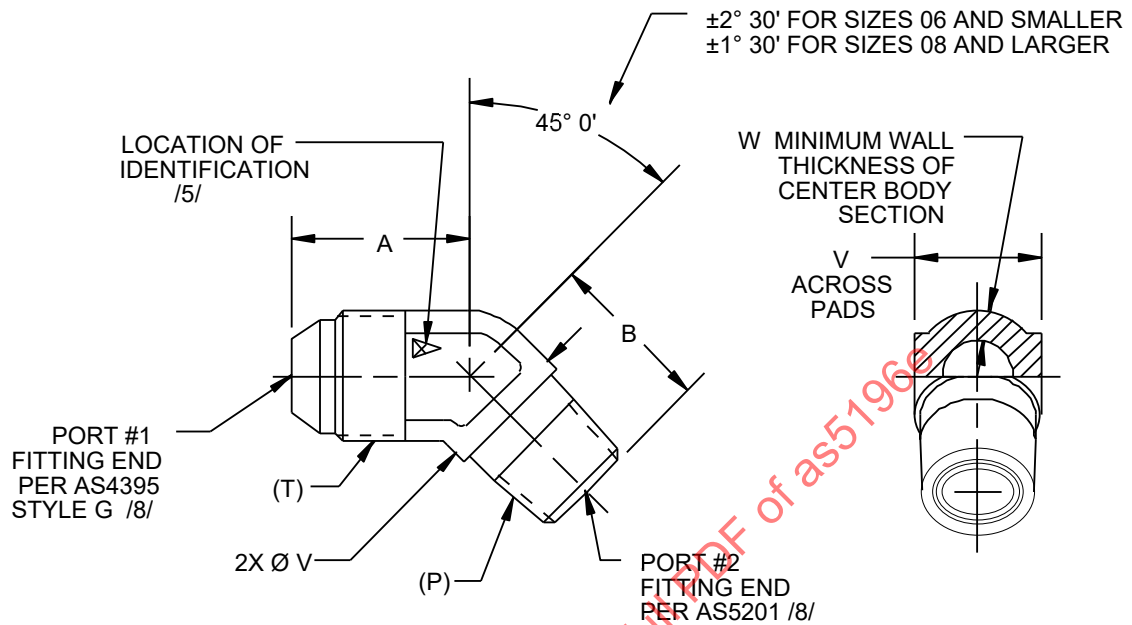
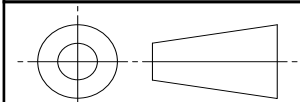


FIGURE 1 - FITTING ELBOW, 45°

For more information on this standard, visit  
<https://www.sae.org/standards/content/AS5196/>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS4842/1 /4/

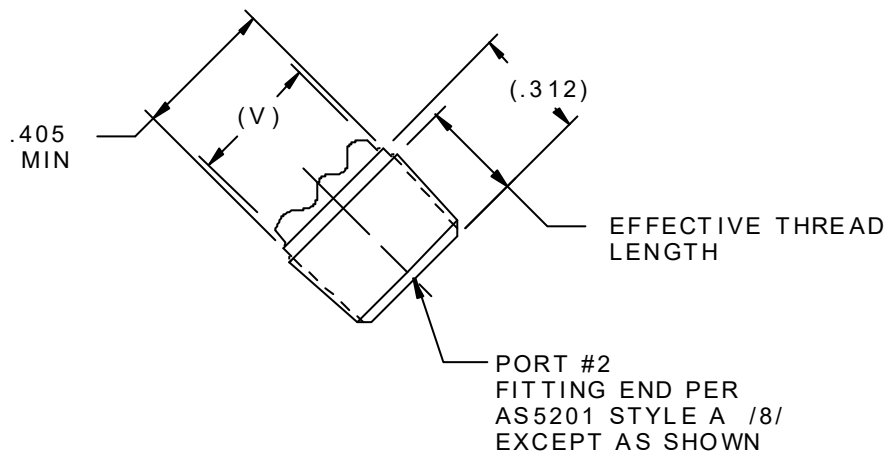


## AEROSPACE STANDARD

FITTING, ELBOW, 45°,  
FLARED TO PIPE

AS5196™  
SHEET 1 OF 5

REV.  
E



**FIGURE 2 - PORT #2 CONFIGURATION FOR SIZES 0202 AND 0203 ONLY /19/**

**NOT RECOMMENDED IN PART - SEE NOTE /17/**

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|                                                                                     |                                        |  |                                |                         |
|-------------------------------------------------------------------------------------|----------------------------------------|--|--------------------------------|-------------------------|
|  | <b>AEROSPACE STANDARD</b>              |  | <b>AS5196™</b><br>SHEET 2 OF 5 | <b>REV.</b><br><b>E</b> |
|                                                                                     | FITTING, ELBOW, 45°,<br>FLARED TO PIPE |  |                                |                         |

TABLE 1 - DIMENSIONS A-B

| BASIC NO.<br>AS5196<br>/16/<br>SIZE CODE | (NOMINAL<br>TUBE SIZE)<br>PORT<br>#1 | (NOMINAL<br>PIPE SIZE)<br>PORT<br>#2 | P THREAD<br>PER<br>AS71051<br>ANPT | T THREAD<br>PER<br>AS8879<br>CLASS 3A | PORT<br>#2<br>STYLE | A     | B<br>±.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      |

TABLE 1A - DIMENSIONS V-W AND WEIGHTS

| BASIC NO.<br>AS5196<br>/16/<br>SIZE CODE | V           | W    | LB/EA<br>APPROX<br>REF<br>AL | LB/EA<br>APPROX<br>REF<br>COPPER | LB/EA<br>APPROX<br>REF<br>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                            |



## AEROSPACE STANDARD

FITTING, ELBOW, 45°,  
FLARED TO PIPEAS5196™  
SHEET 3 OF 5REV.  
E

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

/1/ MATERIAL:

- a. DASH AS CODE LETTER – LOW ALLOY STEEL FORGING OR BAR, TYPE 4130 PER AMS-S-6758 OR AMS6370, OR TYPE 4140 PER AMS6349 OR AMS6382.
- b. CODE LETTER B – TYPE 377 COPPER ALLOY FORGING PER ASTM B124/B-124M OR AMS4614, OR BAR PER ASTM B138/B-138M.
- c. CODE LETTER D – TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS-QQ-A-367 OR AMS4133, 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 AMS4339. /17/
- d. CODE LETTER J – TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5639.
- e. CODE LETTER K – TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5648.
- f. CODE LETTER R – TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5645.
- g. CODE LETTER W – TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS-QQ-A-367 OR AMS4141, OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9, OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124.

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.
- b. MATERIAL CODE LETTER B – CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3 OR NONE.
- c. MATERIAL CODE LETTER D – ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
- d. MATERIAL CODE LETTER J – PASSIVATE PER AMS2700, TYPE 6 OR 7.
- e. MATERIAL CODE LETTER K – PASSIVATE PER AMS2700, TYPE 6 OR 7.
- f. MATERIAL CODE LETTER R – PASSIVATE PER AMS2700, TYPE 6 OR 7.
- g. MATERIAL CODE LETTER W:
  1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
  2. MATERIAL CODE W PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER "V" AFTER THE SIZE CODE IN THE PART NUMBER. HIGH PURITY ALUMINUM COAT PER PROCUREMENT SPECIFICATION. /16/

/4/ PROCUREMENT SPECIFICATION: AS4842/1 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT MANUFACTURED TO THIS STANDARD SHALL MEET THE REQUIREMENTS SPECIFIED HEREIN AND THE PROCUREMENT SPECIFICATION. ORIGINAL COMPONENT MANUFACTURERS (OCM) AND VALUE ADDED DISTRIBUTORS (VAD) SHALL BE LISTED IN THE NADCAP QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT [www.eAuditNet.com](http://www.eAuditNet.com).

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|-------------------------------------------------------------------------------------|----------------------------------------|--------------------------------|-------------------------|
|  | <b>AEROSPACE STANDARD</b>              | <b>AS5196™</b><br>SHEET 4 OF 5 | <b>REV.</b><br><b>E</b> |
|                                                                                     | FITTING, ELBOW, 45°,<br>FLARED TO PIPE |                                |                         |