

REV.  
B

AS21906

FEDERAL SUPPLY CLASS  
4730

# RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

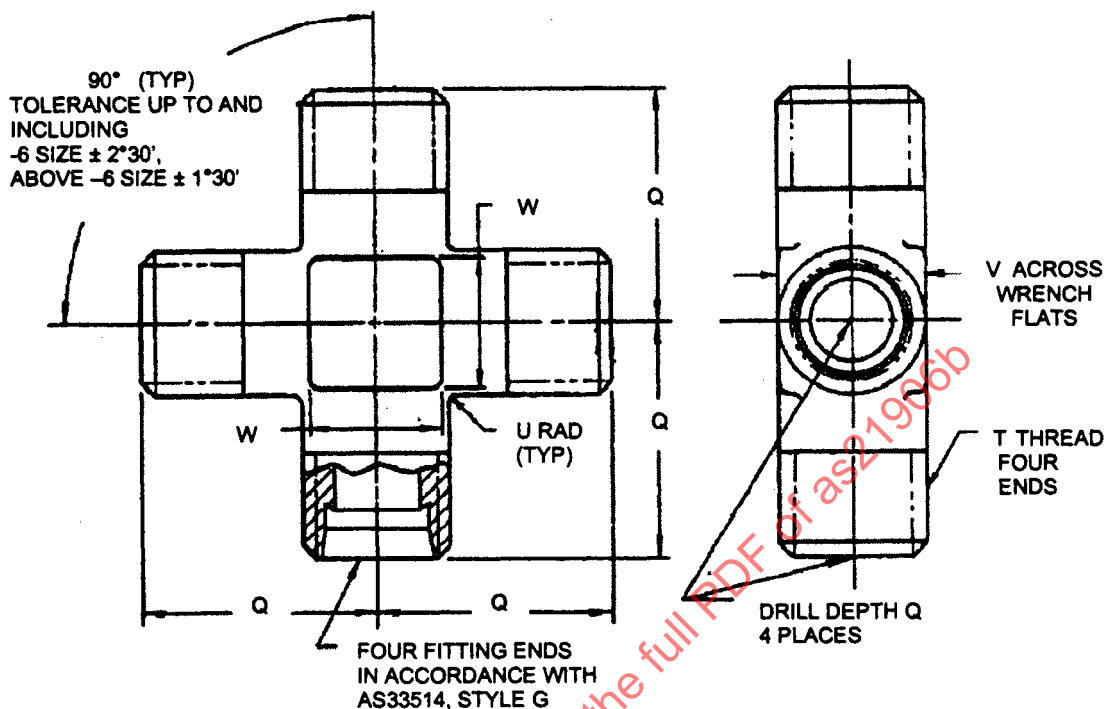


FIGURE 1 - CROSS FLARELESS TUBE

TABLE 1 - DIMENSIONS

| DASH NO. | NOMINAL TUBE SIZE | T THREAD AS8879  | Q<br>+.047<br>-.000 | U<br>RAD | V     | W<br>APPROX | WEIGHT, LB/EA, APPROX, REF. |          |          |
|----------|-------------------|------------------|---------------------|----------|-------|-------------|-----------------------------|----------|----------|
|          |                   |                  |                     |          |       |             | STEEL                       | AL ALLOY | TI ALLOY |
| -2       | .125              | .3125-24 UNJF-3A | .750                | .063     | .313  | .313        | .056                        | .020     | .032     |
| -3       | .188              | .3750-24 UNJF-3A | .813                | .063     | .375  | .375        | .071                        | .025     | .040     |
| -4       | .250              | .4375-20 UNJF-3A | .875                | .063     | .438  | .375        | .085                        | .030     | .049     |
| -5       | .313              | .5000-20 UNJF-3A | .938                | .063     | .500  | .469        | .115                        | .045     | .066     |
| -6       | .375              | .5625-18 UNJF-3A | 1.031               | .094     | .563  | .500        | .134                        | .055     | .077     |
| -8       | .500              | .7500-16 UNJF-3A | 1.250               | .094     | .750  | .688        | .315                        | .115     | .181     |
| -10      | .625              | .8750-14 UNJF-3A | 1.406               | .125     | .875  | .781        | .450                        | .160     | .259     |
| -12      | .750              | 1.0625-12 UNJ-3A | 1.563               | .125     | 1.063 | .906        | .680                        | .240     | .392     |
| -16      | 1.000             | 1.3125-12 UNJ-3A | 1.719               | .125     | 1.313 | 1.094       | 1.000                       | .351     | .577     |
| -20      | 1.250             | 1.6250-12 UNJ-3A | 1.875               | .125     | 1.625 | 1.313       | 1.595                       | .600     | .920     |
| -24      | 1.500             | 1.8750-12 UNJ-3A | 2.000               | .125     | 1.875 | 1.500       | 1.980                       | .727     | 1.142    |
| -32      | 2.000             | 2.5000-12 UNJ-3A | 2.438               | .250     | 2.563 | 2.031       |                             |          |          |

CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: AS18280

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**  
(R)  
CROSS, FLARELESS TUBE

**AS21906**  
SHEET 1 OF 3

**REV.  
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| REV.<br>B                                                                                                                     | NOTES:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                    |                                            |                              |
| AS21906                                                                                                                       | <div>1. MATERIAL:<br/>SEE PROCUREMENT SPECIFICATION.<br/>ALLOY STEEL<br/>ALUMINUM ALLOY<br/>CORROSION RESISTANT STEEL<br/>TITANIUM ALLOY</div> <div>2. FINISH: SEE PROCUREMENT SPECIFICATION</div> <div>3. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.</div> <div>4. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.016, ANGLES ±0°30'.</div> <div>5. PART NUMBERS:<br/>DASH “-” IN PART NUMBER FOR 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/<br/>ADD “V(SIZE)P” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED<br/>ADD “V” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED<br/>ADD “D” IN PLACE OF DASH FOR ALUMINUM ALLOY (2014): CANCELLED AND REPLACED, SEE 7 /C/<br/>ADD “W” IN PLACE OF DASH FOR ALUMINUM ALLOY (7075)<br/>ADD “J” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 304)<br/>ADD “K” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 316)<br/>ADD “R” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 321)<br/>ADD “S” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 347): CANCELLED, SEE 7 /D/<br/>ADD “T” AFTER DASH NUMBER FOR TITANIUM ALLOY (6AL-4V)<br/>EXAMPLES OF PART NUMBERS:<br/>MS21906-4 CROSS, .250 TUBING, 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/<br/>MS21906V4P CROSS, .250 TUBING, CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED<br/>MS21906V4 CROSS, .250 TUBING, CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED<br/>MS21906D4 CROSS, .250 TUBING, ALUMINUM ALLOY (2014) IS CANCELLED AND REPLACED, SEE 7 /C/<br/>MS21906W4 CROSS, .250 TUBING, ALUMINUM ALLOY (7075)<br/>MS21906J4 CROSS, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 304)<br/>MS21906K4 CROSS, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 316)<br/>MS21906-4R CROSS, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 321)<br/>MS21906-4S CROSS, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 347) IS CANCELLED, SEE 7 /D/<br/>MS21906-4T CROSS, .250 TUBING, TITANIUM ALLOY (6AL-4V)</div> <div>6. TITANIUM NOT RECOMMENDED FOR USE IN OXYGEN SYSTEMS.</div> <div>7. SEE TABLE 2 FOR CANCELLED AND SUPERSEDED DOCUMENT AND PART NUMBERS.</div> <div>8. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.</div> <div>9. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.</div> <div>10. USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS OR ACCREDITED DISTRIBUTORS AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS18280 FOR THIS STANDARD. SEE <a href="http://www.pri.sae.org/QPL/as18280.pdf">http://www.pri.sae.org/QPL/as18280.pdf</a> FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIALS ON PRI-QPL-AS18280.</div> <div>11. 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.</div> <div>12. INTERPRETATION OF DRAWING PER ARP4296.</div> <div>13. FLUID PASSAGE, HOLE CONTOUR: ARP4266 (OPTIONAL)</div> |                                                                    |                                            |                              |
| <div><br/>An SAE International Group</div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <div>AEROSPACE STANDARD</div> <div>(R) CROSS, FLARELESS TUBE</div> | <div>AS21906</div> <div>SHEET 2 OF 3</div> | <div>REV.</div> <div>B</div> |