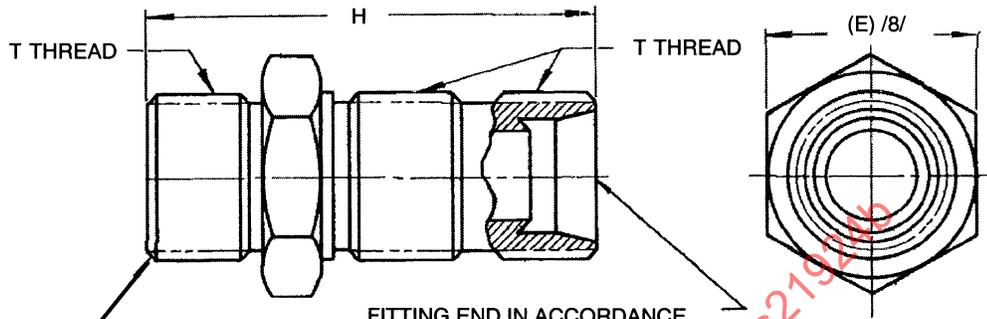


REV.  
B

AS21924

RATIONALE

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



FITTING END IN ACCORDANCE WITH AS33514 STYLE E

FITTING END IN ACCORDANCE WITH AS33515 STYLE E

FIGURE 1 - UNION, FLARELESS TUBE, BULKHEAD AND UNIVERSAL

TABLE 1 - DIMENSIONS

| DASH NO. | NOMINAL TUBE SIZE | T THREAD AS8879  | E /8/ | H     | WEIGHT, LB/EA, APPROX, REF. |          |          |
|----------|-------------------|------------------|-------|-------|-----------------------------|----------|----------|
|          |                   |                  |       |       | STEEL                       | AL ALLOY | TI ALLOY |
| -2       | .125              | .3125-24 UNJF-3A | .563  | 1.484 | .031                        | .011     | .017     |
| -3       | .188              | .3750-24 UNJF-3A | .625  | 1.563 | .048                        | .018     | .027     |
| -4       | .250              | .4375-20 UNJF-3A | .688  | 1.656 | .062                        | .023     | .035     |
| -5       | .313              | .5000-20 UNJF-3A | .750  | 1.688 | .078                        | .029     | .045     |
| -6       | .375              | .5625-18 UNJF-3A | .813  | 1.797 | .095                        | .035     | .054     |
| -8       | .500              | .7500-16 UNJF-3A | 1.000 | 2.031 | .175                        | .064     | .100     |
| -10      | .625              | .8750-14 UNJF-3A | 1.125 | 2.250 | .244                        | .090     | .140     |
| -12      | .750              | 1.0625-12 UNJ-3A | 1.375 | 2.484 | .361                        | .133     | .208     |
| -16      | 1.000             | 1.3125-12 UNJ-3A | 1.625 | 2.469 | .552                        | .202     | .318     |
| -20      | 1.250             | 1.6250-12 UNJ-3A | 1.875 | 2.469 | .678                        | .249     | .391     |
| -24      | 1.500             | 1.8750-12 UNJ-3A | 2.125 | 2.469 | .814                        | .295     | .469     |
| -32      | 2.000             | 2.5000-12 UNJ-3A | 2.750 | 2.734 |                             |          |          |

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ISSUED 1998-08 REVISED 2003-06 REAFFIRMED 2007-07

CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: AS18280

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**  
(R) UNION, FLARELESS TUBE,  
BULKHEAD AND UNIVERSAL

**AS21924**  
SHEET 1 OF 3

**REV. B**

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B

AS21924

NOTES:

1. MATERIAL:SEE PROCUREMENT SPECIFICATION.  
ALLOY STEEL  
ALUMINUM ALLOY  
CORROSION RESISTANT STEEL  
TITANIUM ALLOY
2. FINISH: SEE PROCUREMENT SPECIFICATION.
3. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.
4. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm .016$ , ANGLES  $\pm 0^{\circ}30'$ .
5. PART NUMBER:

DASH “-” IN PART NUMBER FOR 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/  
ADD “V(SIZE)P” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED  
ADD “V” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED  
ADD “D” IN PLACE OF DASH FOR ALUMINUM ALLOY (2024): CANCELLED AND REPLACED, SEE 7 /C/  
ADD “W” IN PLACE OF DASH FOR ALUMINUM ALLOY (7075).  
ADD “J” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 304).  
ADD “K” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 316).  
ADD “R” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 321).  
ADD “S” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 347): CANCELLED, SEE 7 /D/  
ADD “T” AFTER DASH FOR TITANIUM ALLOY (6AL-4V).

EXAMPLES OF PART NUMBERS:

MS21924-4 UNION, .250 TUBING, 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/  
MS21924V4P UNION, .250 TUBING, CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED  
MS21924V4 UNION, .250 TUBING, CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED  
MS21924D4 UNION, .250 TUBING, ALUMINUM ALLOY (2024) IS CANCELLED AND REPLACED, SEE 7 /C/  
MS21924W4 UNION, .250 TUBING, ALUMINUM ALLOY (7075).  
MS21924J4 UNION, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 304).  
MS21924K4 UNION, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 316).  
MS21924-4R UNION, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 321).  
MS21924-4S UNION, .250 TUBING, CORROSION RESISTANT STEEL (TYPE 347) IS CANCELLED, SEE 7 /D/  
MS21924-4T UNION, .250 TUBING, TITANIUM ALLOY (6AL-4V).

6. TITANIUM NOT RECOMMENDED FOR USE IN OXYGEN SYSTEMS.
7. SEE TABLE 2 FOR DOCUMENT AND PART NUMBERS AND SUPERSESSIONS.
- 8/ HEX DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH AS33515, STYLE E.
9. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.
10. 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.
11. 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 <http://www.pri.sae.org/QPL/as18280.pdf> FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIALS ON PRI-QPL-AS18280.
12. 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.
13. INTERPRETATION OF DRAWING PER ARP4296.