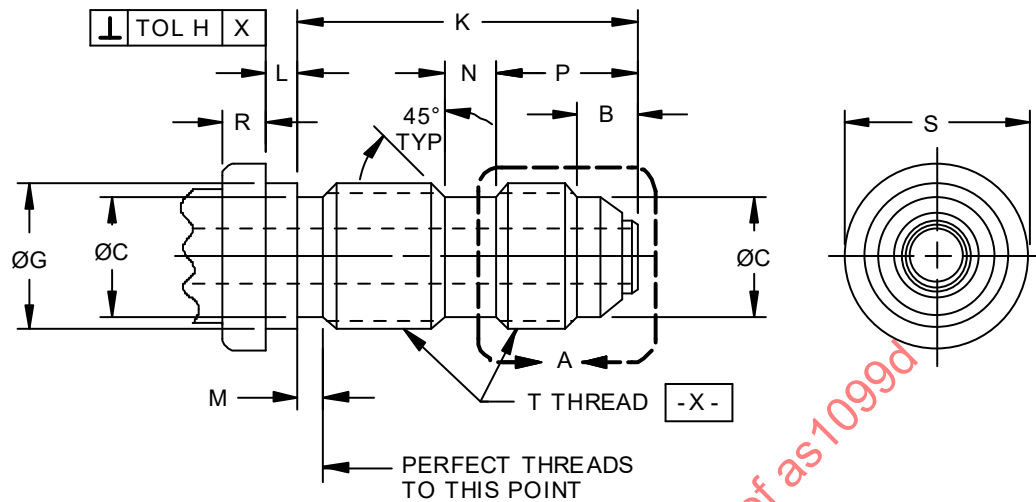


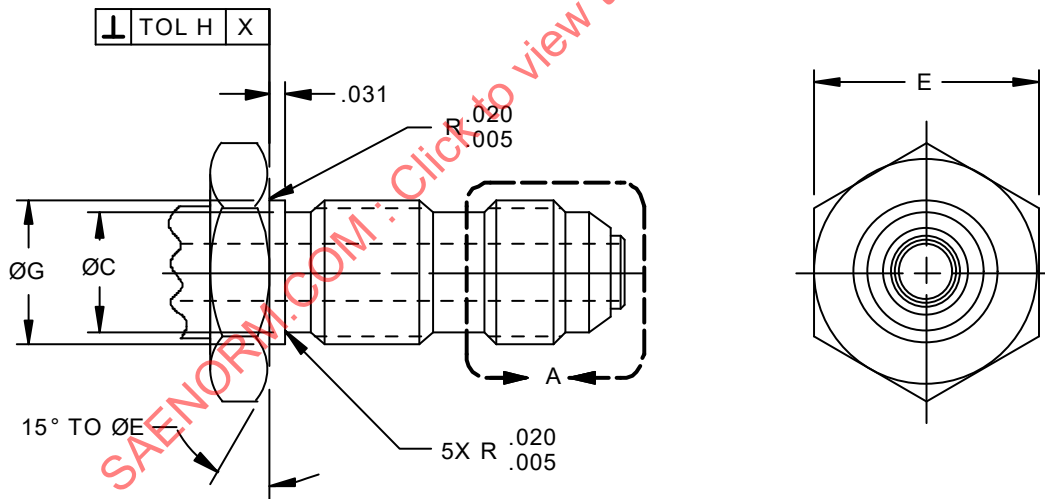
**RATIONALE**

FEDERAL SUPPLY CLASS  
4730

REDRAW GRAPHICS AND TABLES FOR BETTER LEGIBILITY. CORNER RADII DIMENSION INCREASED IN GRAPHICS. DIMENSION M ADDED TO GRAPHICS AND TABLE 2 TO COINCIDE WITH AS4396. GENERAL UPDATES INCORPORATED TO LATEST PRACTICE.



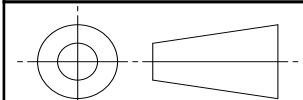
**FIGURE 1 - FITTING END, STYLE S, BULKHEAD FLARED TUBE, FOR SEAL RING**



**FIGURE 2 - FITTING END, STYLE E, BULKHEAD FLARED TUBE, FOR SEAL RING**

For more information on this standard, visit  
<https://www.sae.org/standards/content/AS1099D/>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION:



**AEROSPACE STANDARD**

FITTING END, BULKHEAD FLARED TUBE,  
FOR SEAL RING, STANDARD DIMENSIONS FOR,  
DESIGN STANDARD

**AS1099™**  
SHEET 1 OF 4

**REV. D**

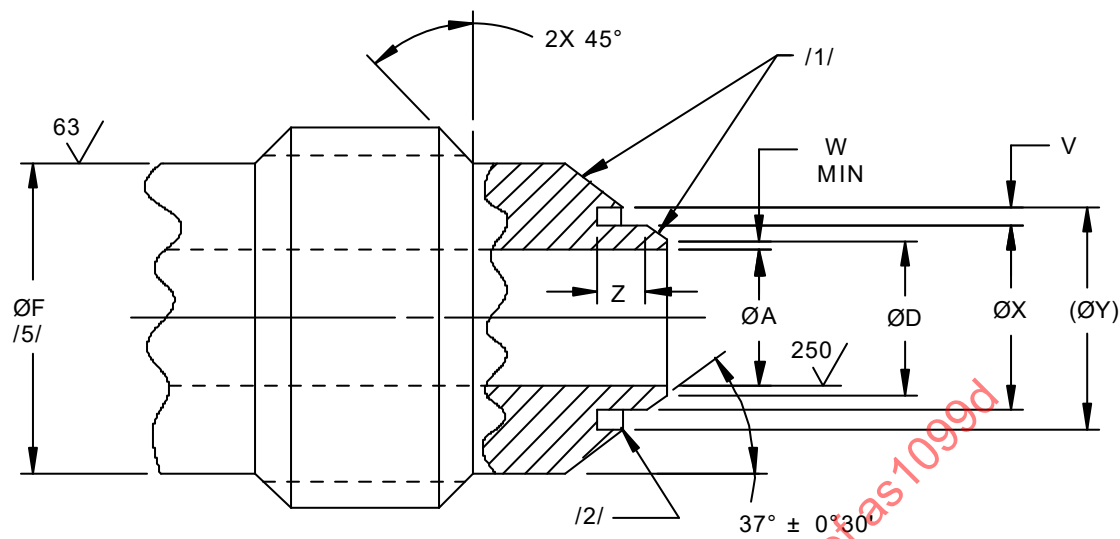


FIGURE 3 - ENLARGED VIEW A FROM FIGURES 1 AND 2

TABLE 1 - DIMENSIONS A-F

| BASIC<br>NUMBER<br>AS1099<br>/13/<br>SIZE CODE | (NOMINAL<br>TUBE<br>SIZE) | T THREAD<br>PER AS8879<br>CLASS 3A | A           | B<br>+.000<br>-.045 | C<br>+.000<br>-.005 | D<br>±.003 | E           | F<br>+.002<br>-.003 |
|------------------------------------------------|---------------------------|------------------------------------|-------------|---------------------|---------------------|------------|-------------|---------------------|
| 04                                             | .250                      | .4375-20UNJF                       | .168- .175  | .208                | .359                | .193       | .684- .691  | .364                |
| 06                                             | .375                      | .5625-18UNJF                       | .293- .301  | .213                | .476                | .318       | .809- .816  | .481                |
| 08                                             | .500                      | .7500-16UNJF                       | .387- .395  | .268                | .654                | .426       | .996-1.003  | .660                |
| 10                                             | .625                      | .8750-14UNJF                       | .480- .488  | .281                | .767                | .539       | 1.121-1.128 | .773                |
| 12                                             | .750                      | 1.0625-12UNJ                       | .604- .614  | .330                | .938                | .664       | 1.371-1.378 | .945                |
| 16                                             | 1.000                     | 1.3125-12UNJ                       | .839- .851  | .330                | 1.188               | .913       | 1.609-1.641 | 1.195               |
| 20                                             | 1.250                     | 1.6250-12UNJ                       | 1.073-1.086 | .382                | 1.501               | 1.147      | 1.859-1.891 | 1.507               |
| 24                                             | 1.500                     | 1.8750-12UNJ                       | 1.307-1.320 | .393                | 1.750               | 1.381      | 2.105-2.145 | 1.756               |
| 28                                             | 1.750                     | 2.2500-12UNJ                       | 1.542-1.557 | .466                | 2.125               | 1.646      | 2.480-2.520 | 2.131               |
| 32                                             | 2.000                     | 2.5000-12UNJ                       | 1.776-1.791 | .476                | 2.375               | 1.880      | 2.730-2.770 | 2.381               |



**AEROSPACE STANDARD**  
FITTING END, BULKHEAD FLARED TUBE,  
FOR SEAL RING, STANDARD DIMENSIONS FOR,  
DESIGN STANDARD

**AS1099™**  
SHEET 2 OF 4

**REV.  
D**

TABLE 2 - DIMENSIONS G-S

| BASIC<br>NUMBER<br>AS1099<br>/13/<br>SIZE CODE | G           | H    | K<br>+.000<br>-.045 | L    | M<br>+.015<br>-.000 | N<br>+.010<br>-.000 | P<br>+.000<br>-.045 | R    | S     |
|------------------------------------------------|-------------|------|---------------------|------|---------------------|---------------------|---------------------|------|-------|
| 04                                             | .429-.438   | .005 | 1.026               | .094 | .075                | .140                | .448                | .125 | .562  |
| 06                                             | .554-.562   | .005 | 1.104               | .094 | .083                | .156                | .481                | .141 | .688  |
| 08                                             | .741-.750   | .005 | 1.260               | .125 | .094                | .187                | .570                | .156 | .875  |
| 10                                             | .865-.875   | .005 | 1.401               | .125 | .107                | .219                | .628                | .172 | 1.000 |
| 12                                             | 1.051-1.062 | .008 | 1.572               | .125 | .125                | .234                | .737                | .188 | 1.188 |
| 16                                             | 1.301-1.312 | .008 | 1.572               | .125 | .125                | .234                | .737                | .188 | 1.438 |
| 20                                             | 1.614-1.625 | .008 | 1.619               | .125 | .125                | .234                | .789                | .188 | 1.750 |
| 24                                             | 1.864-1.875 | .008 | 1.635               | .125 | .125                | .234                | .800                | .188 | 2.000 |
| 28                                             | 2.239-2.250 | .008 | 1.791               | .125 | .125                | .234                | .873                | .188 | 2.375 |
| 32                                             | 2.489-2.500 | .008 | 1.916               | .125 | .125                | .234                | .883                | .188 | 2.625 |

TABLE 3 - DIMENSIONS V-Z

| BASIC<br>NUMBER<br>AS1099<br>/13/<br>SIZE CODE | V<br>+.0015<br>-.0010 | W     | X<br>±.002 | Y     | Z<br>±.0010 |
|------------------------------------------------|-----------------------|-------|------------|-------|-------------|
| 04                                             | .0200                 | .0075 | .220       | .261  | .0533       |
| 06                                             | .0320                 | .0070 | .336       | .401  | .0683       |
| 08                                             | .0320                 | .0140 | .450       | .515  | .0683       |
| 10                                             | .0320                 | .0240 | .560       | .625  | .0683       |
| 12                                             | .0320                 | .0230 | .685       | .750  | .0683       |
| 16                                             | .0320                 | .0290 | .968       | 1.033 | .0683       |
| 20                                             | .0400                 | .0290 | 1.200      | 1.281 | .0710       |
| 24                                             | .0400                 | .0290 | 1.450      | 1.531 | .0710       |
| 28                                             | .0500                 | .0440 | 1.690      | 1.790 | .0900       |
| 32                                             | .0500                 | .0440 | 1.940      | 2.040 | .0900       |

## NOTES:

- /1/ THIS SURFACE SHALL BE FREE OF BURRS, LONGITUDINAL AND SPIRAL TOOL MARKS AND SHALL BE SMOOTH EXCEPT THAT ANNULAR TOOL MARKS WILL BE ALLOWED TO 64 MICROINCHES Ra MAXIMUM.
- /2/ LEAVE GROOVE CORNERS AND EDGES .005 MAXIMUM RADIUS. FINISH GROOVE TO 64 MICROINCHES Ra MAXIMUM.
3. DIMENSIONS C, D, F, AND X SHALL BE CONCENTRIC WITH EACH OTHER AND WITH ALL THE ELEMENTS OF THE 37° ANGLE CONICAL SURFACE MEASURED AND CALCULATED AS INCLUDED ANGLES WITHIN .005 FIM.
4. T (THREAD PITCH DIAMETER) SHALL BE CONCENTRIC TO DIMENSION C WITHIN .005 FIM.
- /5/ GROOVE FORMED SHALL BE SMOOTH AND FREE OF ALL THREAD MARKS.
6. INTERPRETATION OF DRAWING PER AS4296.
7. INVENTORIED PARTS WITH FITTING ENDS CONFORMING TO THE PREVIOUS A REVISION OF THIS STANDARD MAY BE USED TO DEPLETION.
8. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 100 MICROINCHES Ra.

|                                                                                     |                                                                                                  |                                |                   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------|-------------------|
|  | <b>AEROSPACE STANDARD</b>                                                                        | <b>AS1099™</b><br>SHEET 3 OF 4 | <b>REV.<br/>D</b> |
|                                                                                     | FITTING END, BULKHEAD FLARED TUBE,<br>FOR SEAL RING, STANDARD DIMENSIONS FOR,<br>DESIGN STANDARD |                                |                   |