FEDERAL SUPPLY CLASS
4730

RATIONALE

NEW STANDARD FOR OPERATING PRESSURES UP TO AND INCLUDING 1500 PSI

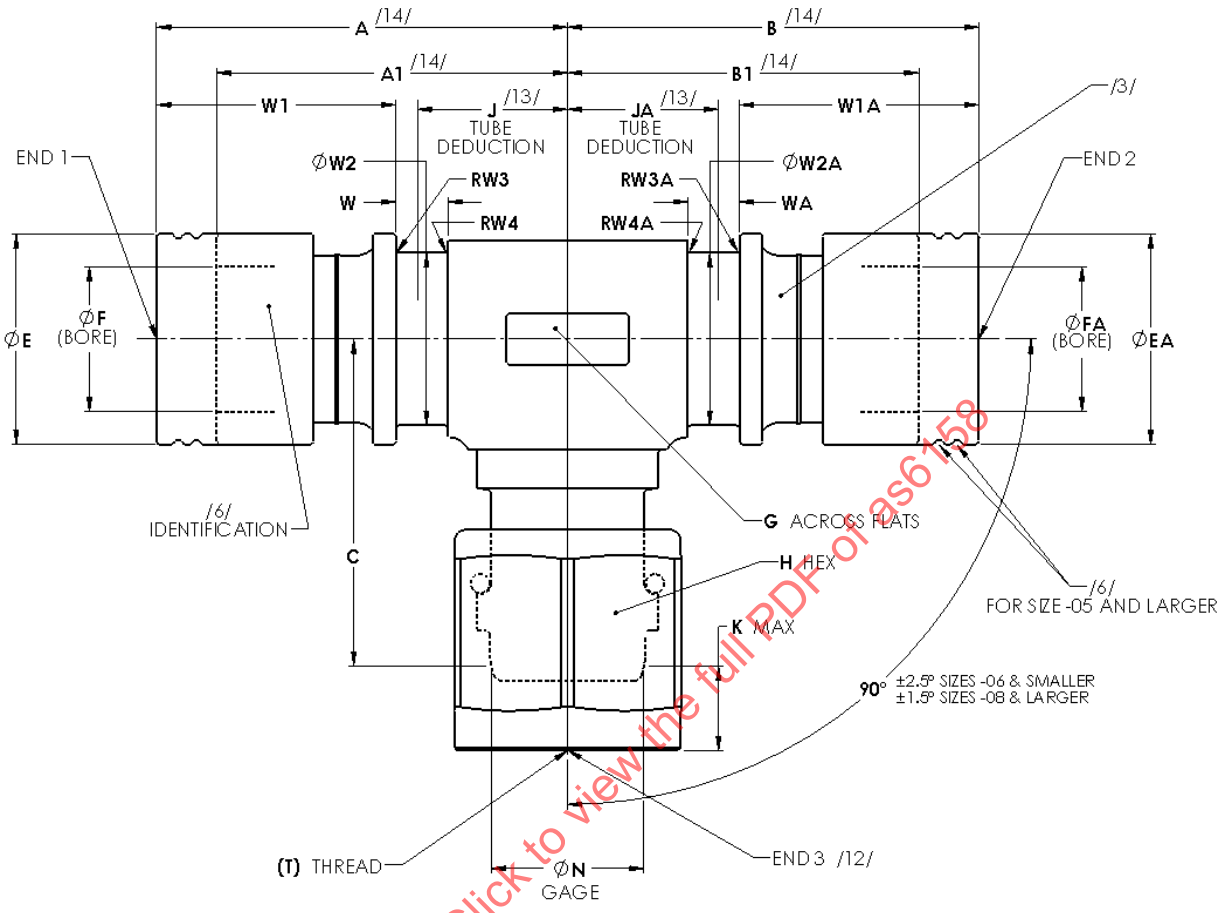
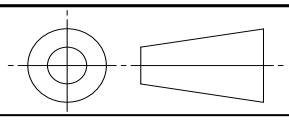


FIGURE 1 - TEE, AXIALLY SWAGED ON THE RUN, FEMALE FLARELESS ON THE SIDE

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS6158

THIRD ANGLE PROJECTION



ISSUED 2011-07

CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS6116

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING ASSEMBLY, TEE, AXIALLY SWAGED ON THE RUN, FEMALE FLARELESS ON THE SIDE, HYDRAULIC, UP TO 1500 PSI

SAE AS6158

TABLE 1A - DIMENSIONS A THROUGH EA

BASIC NO. AS6158 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	A MAX	A1 MAX	B MAX	B1 MAX	C ±.015	ØE MAX	ØEA MAX
040404	.250	.250	.250	1.112	.959	1.112	.959	.874	.435	.435
050505	.3125	.3125	.3125	1.258	1.110	1.258	1.110	.949	.503	.503
060606	.375	.375	.375	1.464	1.237	1.464	1.237	1.047	.580	.580
080808	.500	.500	.500	1.765	1.505	1.765	1.505	1.230	.755	.755
101010	.625	.625	.625	1.843	1.603	1.843	1.603	1.434	.929	.929
121212	.750	.750	.750	2.103	1.823	2.103	1.823	1.598	1.150	1.150
161612	1.000	1.000	.750	2.618	2.238	2.618	2.238	1.760	1.474	1.474
161616	1.000	1.000	1.000	2.618	2.238	2.618	2.238	1.864	1.474	1.474
202020	1.250	1.250	1.250	3.069	2.654	3.069	2.654	2.093	1.768	1.768

TABLE 1B - DIMENSIONS F THROUGH JA

BASIC NO. AS6158 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	ØF MIN	ØFA MIN	G ±.015	(H)	J /13/ TUBE DEDUCTION		JA /13/ TUBE DEDUCTION	
040404	.250	.250	.250	.253	.253	.438	.562	.419	+.150/-.180	.419	+.150/-.180
050505	.3125	.3125	.3125	.3155	.3155	.465	.625	.435	+.150/-.180	.435	+.150/-.180
060606	.375	.375	.375	.378	.378	.563	.688	.492	+.150/-.195	.492	+.150/-.195
080808	.500	.500	.500	.503	.503	.750	.875	.590	+.150/-.210	.590	+.150/-.210
101010	.625	.625	.625	.629	.629	.875	1.000	.663	+.150/-.200	.663	+.150/-.200
121212	.750	.750	.750	.754	.754	1.063	1.250	.783	+.150/-.245	.783	+.150/-.245
161612	1.000	1.000	.750	1.004	1.004	1.304	1.250	.928	+.150/-.330	.928	+.150/-.330
161616	1.000	1.000	1.000	1.004	1.004	1.304	1.500	.928	+.150/-.330	.928	+.150/-.330
202020	1.250	1.250	1.250	1.255	1.255	1.618	1.812	1.104	+.150/-.375	1.104	+.150/-.375

TABLE 1C - DIMENSIONS K THROUGH W1A

BASIC NO. AS6158 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	K MAX	ØN GAGE	(T) THREAD PER AS8879	W MIN	WA MIN	W1 MAX	W1A MAX
040404	.250	.250	.250	.248	.2930	.4375-20 UNJF-3B	.185	.185	.604	.604
050505	.3125	.3125	.3125	.331	.3500	.5000-20 UNJF-3B	.180	.180	.724	.724
060606	.375	.375	.375	.302	.4120	.5625-18 UNJF-3B	.195	.195	.883	.883
080808	.500	.500	.500	.316	.5600	.7500-16 UNJF-3B	.210	.210	1.076	1.076
101010	.625	.625	.625	.424	.6730	.8750-14 UNJF-3B	.225	.225	1.076	1.076
121212	.750	.750	.750	.388	.8100	1.0625-12 UNJ-3B	.235	.235	1.201	1.201
161612	1.000	1.000	.750	.388	.8100	1.0625-12 UNJ-3B	.260	.260	1.566	1.566
161616	1.000	1.000	1.000	.454	1.0620	1.3125-12 UNJ-3B	.260	.260	1.566	1.566
202020	1.250	1.250	1.250	.465	1.3160	1.6250-12 UNJ-3B	.285	.285	1.829	1.829

TABLE 1D - DIMENSIONS W2 THROUGH W4A AND WEIGHTS

BASIC NO. AS6158 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	ØW2 ±.002	ØW2A ±.002	W3 MAX	W3A MAX	W4 MAX	W4A MAX	WEIGHT APPROX LB/EA
040404	.250	.250	.250	.320	.320	.020	.020	.020	.020	.035
050505	.3125	.3125	.3125	.371	.371	.020	.020	.020	.020	.040
060606	.375	.375	.375	.463	.463	.020	.020	.020	.020	.070
080808	.500	.500	.500	.595	.595	.020	.020	.020	.020	.100
101010	.625	.625	.625	.758	.758	.020	.020	.020	.020	.150
121212	.750	.750	.750	.903	.903	.025	.025	.025	.025	.260
161612	1.000	1.000	.750	1.196	1.196	.035	.035	.035	.035	.445
161616	1.000	1.000	1.000	1.196	1.196	.035	.035	.035	.035	.445
202020	1.250	1.250	1.250	1.460	1.460	.035	.035	.035	.035	.730

NOTES:

/1/ MATERIALS:

CODE LETTER "D"

BODY - TYPE 6061-T6 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/8.

RING - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9.

NUT – TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9.

WIRE - TYPE 302 OR 305, CONDITION A CORROSION RESISTANT STEEL WIRE PER ASTM A580 (SIZES -04 AND 05).

- TYPE 2024-T4 OR 2024-T351 ALUMINUM ALLOY WIRE PER AMS-QQ-A-225/6 (SIZES -06 AND LARGER).

2. FINISH:

BODY - CHEMICAL CONVERSION COATED PER MIL-DTL-5541 TYPE I CLASS 3.

RING - ANODIZE PER MIL-A-8625, TYPE II, CLASS 2, DYED GREEN, SIMILAR TO NO. 14187, 14193, OR 14223 OF FED-STD-595 AND SHALL BE DUPLEX SEALED.

NUT - ANODIZED PER MIL-A-8625 TYPE II, CLASS 2, DYED BROWN SIMILAR TO NO. 10080, OF FED-STD-595 AND SHALL BE DUPLEX SEALED.

WIRE - PASSIVATED PER AMS 2700. (SIZES -04 AND -05)

- ANODIZED PER MIL-A-8625 TYPE II, CLASS 2 (YELLOW) WITH DUPLEX SEAL. (SIZES -06 AND LARGER)

/3/ COATINGS/LUBRICANTS:

BODY

A. DRY FILM LUBRICANT PER AS5272 TYPE I SHALL BE APPLIED TO THE OD OF THE AXIALLY SWAGED FITTING END. ADDITIONAL LUBRICANT APPLIED SHALL BE SPECIFIED BY MANUFACTURER. THE LUBRICANTS SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.
B. POLYTETRAFLUOROETHYLENE (PTFE) COAT, LIGHT GREEN, SHALL BE APPLIED TO PORTIONS OF ID (BORE) UP TO THE FIRST GROOVE. OVERSPRAY IN GROOVE IS NOT PERMITTED.
C. A MINIMUM OF TWO GROOVES (END SIZE -05 AND LARGER) SHALL BE FILLED WITH ELASTOMERIC DIMETHYL SILOXANE COMPOUND. FOR SMALLER SIZE ENDS, A MINIMUM OF ONE GROOVE SHALL BE FILLED WITH THE COMPOUND.
WIRE - SOLID FILM LUBRICANT PER AS5272, TYPE I.

/4/ PROCUREMENT SPECIFICATION: AS6116 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS6116 FOR THIS STANDARD. SEE WWW.EAUDITNET.COM FOR THE CURRENT QPL ON-LINE.

5. DIMENSIONS AND TOLERANCES NOT DEFINED ON THIS STANDARD SHALL BE SPECIFIED AND CONTROLLED BY THE MANUFACTURER. THE MANUFACTURER IS RESPONSIBLE TO ENSURE COMPLIANCE WITH THE PROCUREMENT SPECIFICATION.

/6/ IDENTIFICATION SHALL BE IN ACCORDANCE WITH AS6116 AND SHALL BE IDENTIFIED ON THE RING IN THE AREA SHOWN. FOR SIZE -05 AND LARGER, THE RING O.D. SHALL HAVE TWO GROOVES INDICATING DUAL SEALING BACK UP FEATURE.

7. FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH AS6124.

8. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, THE MAXIMUM MACHINED SURFACES SHALL BE 125 µin Ra.

9. BREAK ALL EDGES .003 TO .010 INCHES UNLESS OTHERWISE SPECIFIED.

10. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.

11. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS ±.015, ANGULAR DIMENSIONS ±0 DEGREES 30'.

/12/ FITTINGS SHALL MATE WITH AS5863-(SIZE) OR AS5864-(SIZE). STANDARD COUPLING NUT SHALL BE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT TO AS4370DXXXX.

/13/ DIMENSIONS "J" AND "JA" ARE THE ALLOWABLE TUBE END POSITIONING FOR SYSTEM LAYOUT DESIGN.