

AS6105

FEDERAL SUPPLY CLASS
4730

RATIONALE

THIS SAE AEROSPACE STANDARD (AS) ESTABLISHES THE REQUIREMENTS FOR A TEE FITTING WITH 37 DEGREE SPHERICAL FLARED TUBE.

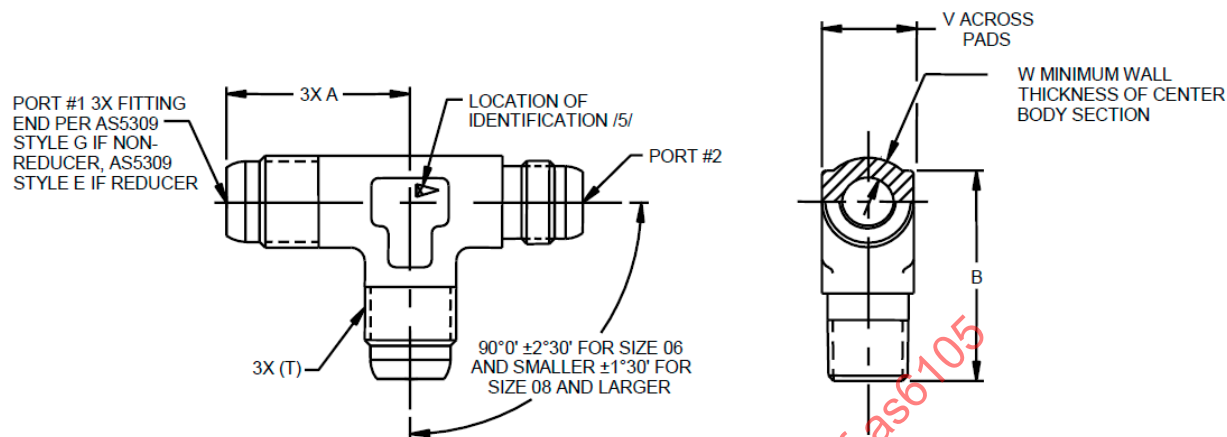


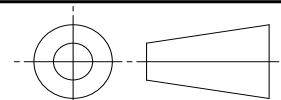
FIGURE 1 - TEE

TABLE 1 – DIMENSIONS AND WEIGHTS /11/

BASIC NO. AS6105 /17/	LB/EA APPROX. REF	LB/EA APPROX. REF	LB/EA APPROX. REF
SIZE CODE	ALUM	CRES	TI
02	.297- .314	.090	.0137
03	.360- .377	.100	.0200
04	.423- .440	.110	.0272
05	.485- .502	.120	.0355
06	.547- .565	.120	.0463
08	.735- .753	.150	.0979
10	.860- .878	.170	.126
12	1.047-1.065	.185	.237
16	1.292-1.317	.205	.344
20	1.605-1.630	.240	.575
24	1.855-1.880	.240	.788
32	2.542-2.572	.350	1.91

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS6105>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS6076

SAE Aerospace
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AEROSPACE STANDARD

FITTING, TEE,
STANDARD AND REDUCER,
37° SPHERICAL, FLARED

SAE AS6105
SHEET 1 OF 4

TABLE 2 – LEG LENGTH A

FORGING SIZE /10/	TUBE SIZE OF PORT #1, #2, #3 02	TUBE SIZE OF PORT #1, #2, #3 03	TUBE SIZE OF PORT #1, #2, #3 04	TUBE SIZE OF PORT #1, #2, #3 05	TUBE SIZE OF PORT #1, #2, #3 06	TUBE SIZE OF PORT #1, #2, #3 08	TUBE SIZE OF PORT #1, #2, #3 10	TUBE SIZE OF PORT #1, #2, #3 12	TUBE SIZE OF PORT #1, #2, #3 16	TUBE SIZE OF PORT #1, #2, #3 20	TUBE SIZE OF PORT #1, #2, #3 24	TUBE SIZE OF PORT #1, #2, #3 32
02	.757	-	-	-	-	-	-	-	-	-	-	-
03	.789	.820	-	-	-	-	-	-	-	-	-	-
04	.789	.811	.882	-	-	-	-	-	-	-	-	-
05	.843	.874	.945	.945	-	-	-	-	-	-	-	-
06	.946	.977	1.048	1.048	1.054	-	-	-	-	-	-	-
08	1.033	1.064	1.135	1.135	1.141	1.242	-	-	-	-	-	-
10	1.135	1.166	1.237	1.237	1.243	1.344	1.445	-	-	-	-	-
12	1.232	1.263	1.334	1.334	1.340	1.441	1.542	1.648	-	-	-	-
16	1.341	1.372	1.443	1.443	1.449	1.550	1.651	1.757	1.804	-	-	-
20	1.544	1.575	1.646	1.646	1.652	1.753	1.854	1.960	2.007	2.054	-	-
24	1.685	1.716	1.787	1.787	1.793	1.894	1.995	2.101	2.148	2.195	2.320	-
32	2.169	2.200	2.271	2.271	2.277	2.378	2.479	2.585	2.632	2.679	2.804	3.054

TABLE 3 – TUBE SIZE AND CORRESPONDING THREAD

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS 3A
02	.125	.3125-24 UNJF
03	.188	.3750-24 UNJF
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-18 UNJF
08	.500	.7500-16 UNJF
10	.625	.8750-14 UNJF
12	.750	1.0625-12 UNJ
16	1.000	1.3125-12 UNJ
20	1.250	1.6250-12 UNJ
24	1.500	1.8750-12 UNJ
32	2.000	2.5000-12 UNJ

NOTES:

NOTICE

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

/1/ MATERIAL:

- CODE LETTER F - TYPE 4140 ALLOY STEEL BAR PER AMS6349 OR AMS6382 OR TYPE 4130 ALLOY STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION.
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5639 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5648 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5645 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.

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- e. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS4928.
 - f. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141 OR AMS-QQ-A-367; 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. MATERIAL CODE LETTER F - HARDNESS SHALL BE 92 HRB TO 40 HRC PER PROCUREMENT SPECIFICATION.
 - b. OTHER MATERIAL CODE LETTERS – NONE.
3. FINISH:
- a. MATERIAL CODE LETTER F - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK.
 - b. MATERIAL CODE LETTER J, K, R – PASSIVATE PER AMS2700, TYPE VI OR VII.
 - c. MATERIAL CODE LETTER T - FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 OR ANODIZE PER AMS2488, TYPE 2.
 - d. MATERIAL CODE LETTER W:
 - 1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
 - 2. W CODE 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.
- /4/ PROCUREMENT SPECIFICATION: AS6076 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER LISTED IN THE NATIONAL AEROSPACE AND DEFENSE CONTRACTORS ACCREDITATION PROGRAM (NADCAP) QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT www.eauditnet.com.
- /5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D, OR METHOD 7A3, 15A3, OR 15B.
- a. FOR SIZE 06 AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTER "AS" AND MATERIAL CODE LETTER.
 - b. FOR SIZE 08 AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER, AND MATERIAL CODE LETTER.
6. INTENDED USE: THIS PART IS DESIGNED FOR USE IN TUBING CONNECTION SYSTEMS WITH MAXIMUM OPERATING PRESSURES AS FOLLOWS:
- a. SIZES 02 THROUGH 16 IN LOW ALLOY STEEL, CORROSION RESISTANT STEEL AND TITANIUM ALLOY AT 3000 PSI.
 - b. SIZES 02 THROUGH 12 IN ALUMINUM ALLOY AT 3000 PSI.
 - c. SIZE 16 IN ALUMINUM ALLOY AND SIZE 20 THROUGH 32 IN ALL MATERIALS AT 1500 PSI.
7. FOR REDUCER CONFIGURATIONS, THE PRESSURE RATING IS DETERMINED BY THE LARGEST PORT.
8. THE NON-REDUCER CONFIGURATION IS THE FUNCTIONAL EQUIVALENT OF AN824 AND MS24402 FOR THE CORRESPONDING FORGING SIZE AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.
9. WHEN MACHINING FROM BAR STOCK OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 1.
- /10/ THE DIMENSIONS IN THE TABLE ARE FOR FINAL MACHINED PARTS. THE FORGING SIZE IS DETERMINED AS THE SIZE NECESSARY TO MAKE THE LARGEST FITTING END.
- /11/ WEIGHTS ARE FOR NON-REDUCERS ONLY. REDUCER FITTINGS WILL HAVE LOWER WEIGHTS.
12. INTERPRETATION OF DRAWING PER ARP4296.

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