

REV.  
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RATIONALE

UPDATES AND GENERAL EDITORIAL CORRECTIONS HAVE BEEN MADE. INACTIVATION FOR NEW DESIGN AND REPLACEMENT BY AS6045.

SAE AS1005

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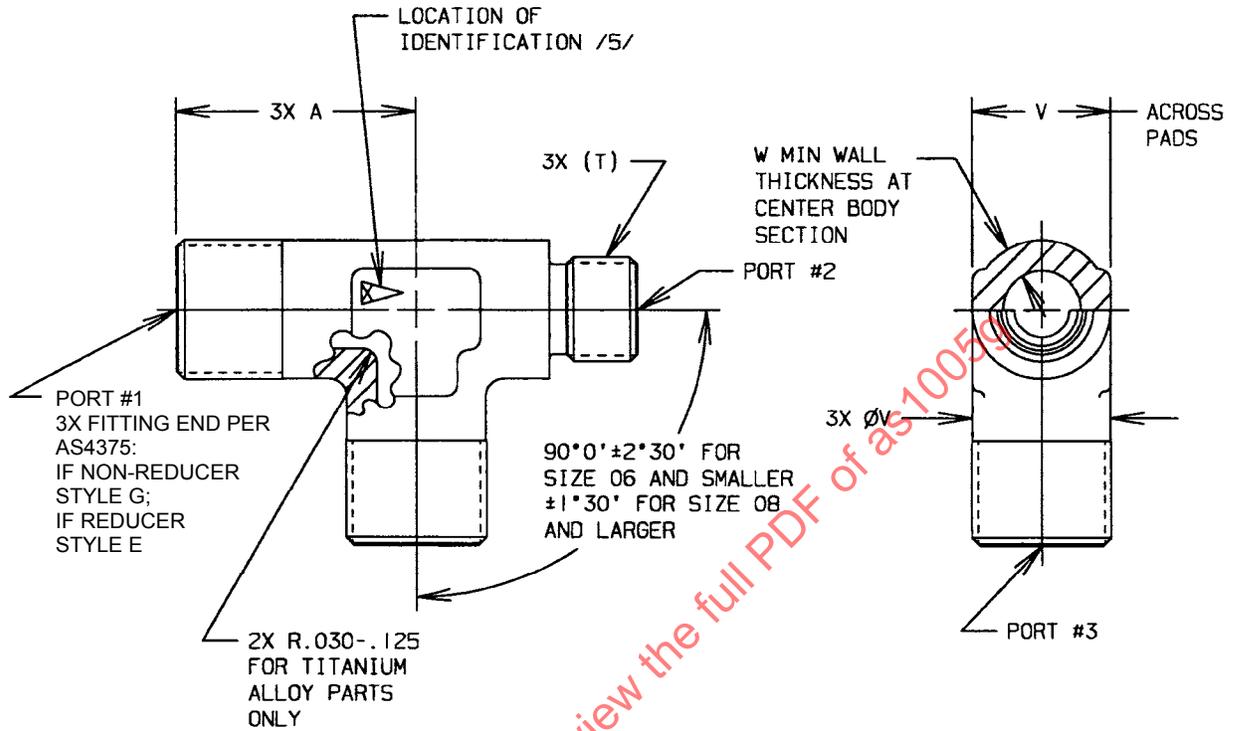
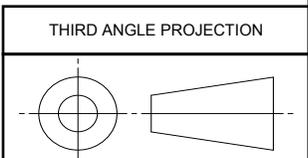


FIGURE 1 - FITTING, TEE, PORT #2 SHOWN AS REDUCER

INACTIVE /21/

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CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

FITTING, TEE,  
STANDARD AND REDUCER,  
FLARELESS

**SAE AS1005**  
SHEET 1 OF 5

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TABLE 1 - DIMENSIONS AND WEIGHTS /12/

BASIC NO. AS1005 /11/ /20/ SIZE CODE	V	W	LB/EA APPROX REF ALUM	LB/EA APPROX REF STEEL	LB/EA APPROX REF TI
02	.297- .314	.090	.0142	.0408	.0225
03	.360- .377	.100	.0217	.0624	.0344
04	.423- .440	.110	.0287	.0824	.0455
05	.485- .502	.120	.0386	.111	.0611
06	.547- .565	.120	.0491	.141	.0778
08	.735- .753	.150	.100	.287	.158
10	.860- .878	.170	.126	.361	.199
12	1.047-1.065	.185	.222	.638	.352
14	1.173-1.191	.200	.278	.799	.441
16	1.292-1.317	.205	.333	.956	.528
20	1.605-1.630	.240	.549	1.58	.870
24	1.855-1.880	.250	.682	1.96	1.08
32	2.542-2.572	.350	1.55	4.44	2.45

TABLE 2 - LEG LENGTH A

FORGING SIZE /11/	TUBE SIZE OF PORT #1, #2, OR #3 /13/												
	02	03	04	05	06	08	10	12	14	16	20	24	32
02	.773	-	-	-	-	-	-	-	-	-	-	-	-
03	.789	.836	-	-	-	-	-	-	-	-	-	-	-
04	.820	.867	.898	-	-	-	-	-	-	-	-	-	-
05	.883	.930	.961	.961	-	-	-	-	-	-	-	-	-
06	.961	1.008	1.039	1.039	1.055	-	-	-	-	-	-	-	-
08	1.086	1.133	1.164	1.164	1.180	1.273	-	-	-	-	-	-	-
10	1.180	1.226	1.258	1.258	1.274	1.367	1.430	-	-	-	-	-	-
12	1.272	1.320	1.351	1.351	1.367	1.460	1.523	1.586	-	-	-	-	-
14	1.398	1.445	1.476	1.476	1.492	1.585	1.648	1.742	1.680	-	-	-	-
16	1.429	1.476	1.507	1.507	1.523	1.616	1.679	1.742	1.742	1.742	-	-	-
20	1.585	1.632	1.663	1.663	1.679	1.772	1.835	1.898	1.898	1.898	1.898	-	-
24	1.710	1.757	1.788	1.788	1.804	1.897	1.960	2.023	2.023	2.023	2.023	2.023	-
32	2.148	2.195	2.226	2.226	2.242	2.335	2.398	2.461	2.461	2.461	2.461	2.461	2.461

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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
14	.875	1.1875-12 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 LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

## /1/ MATERIAL:

- a. CODE LETTER DASH (-) - TYPE 4130 STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/
- b. CODE LETTER D - TYPE 2024-T6 OR -T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS4133. /2/
- c. CODE LETTER F - TYPE 4130 LOW ALLOY STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/
- d. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5639 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- e. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5648 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- f. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5645 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- g. CODE LETTER S - TYPE 347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5646 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- h. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS4928.
- i. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141 OR AMS-QQ-A-367; OR 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124; OR 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9. /2/

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	FITTING, TEE, STANDARD AND REDUCER, FLARELESS		

/2/ HEAT TREATMENT:

- a. MATERIAL CODE LETTER (-) AND F - HARDNESS SHALL BE 92 HRB TO 40 HRC PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTERS D AND W - ELECTRICAL CONDUCTIVITY AND HARDNESS PER PROCUREMENT SPECIFICATION.
- c. MATERIAL CODE LETTERS J, K, R AND S - HARDNESS SHALL BE 80 HRB MINIMUM PER PROCUREMENT SPECIFICATION.
- d. OTHER MATERIAL CODES - NONE.

3. FINISH:

- a. MATERIAL CODE LETTER (-) AND F - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
- b. MATERIAL CODE LETTER D - ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE GREEN SIMILAR TO COLOR 14187 OF FED-STD-595.
- c. MATERIAL CODE LETTERS J, K, R AND S - PASSIVATE PER AMS2700 TYPE 6 OR 7.
- d. MATERIAL CODE LETTER T - FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 OR ANODIZE PER AMS2488, TYPE 2.
- e. MATERIAL CODE LETTER W - ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN SIMILAR TO COLOR 10080 OF FED-STD-595.

/4/ PROCUREMENT SPECIFICATION: AS18280 EXCEPT AS SPECIFIED ON THIS STANDARD, PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS18280 FOR THIS STANDARD. SEE <http://www.eauditnet.com> FOR CURRENT QPL ONLINE.

/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, LETTERS "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. INVENTORIED PARTS CONFORMING TO THE PREVIOUS ISSUE MAY BE USED TO DEPLETION.

7. INTENDED USE: THIS PART IS DESIGNED FOR USE IN TUBING CONNECTION SYSTEMS WITH NOMINAL OPERATING PRESSURES AS FOLLOWS:

- a. SIZES 02 THROUGH 24 IN LOW ALLOY STEEL, CORROSION RESISTANT STEEL AND TITANIUM ALLOY AT 3000 psi.
- b. SIZES 02 THROUGH 20 IN ALUMINUM ALLOY AND SIZE 32 IN ALL OTHER MATERIALS AT 1500 psi.
- c. SIZE 24 IN ALUMINUM ALLOY AT 1000 psi.
- d. SIZE 32 IN ALUMINUM ALLOY AT 600 psi.

8. FOR REDUCER CONFIGURATIONS, THE PRESSURE RATING IS DETERMINED BY THE LARGEST PORT.

9. THE NON-REDUCER CONFIGURATION WITHOUT A SUFFIX PART NUMBER CODE IS THE FUNCTIONAL EQUIVALENT OF AS21905 FOR THE CORRESPONDING FORGING SIZE AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.

10. WHEN MACHINING FROM BAR STOCK OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 2.

/11/ 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.

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