

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

SAE AS6213

FEDERAL SUPPLY CLASS
4730

RATIONALE

THIS SAE AEROSPACE STANDARD (AS) ESTABLISHES THE REQUIREMENTS FOR THE ADAPTER, PORT, REDUCER, WITH 37 DEGREE SPHERICAL FLARED TUBE.

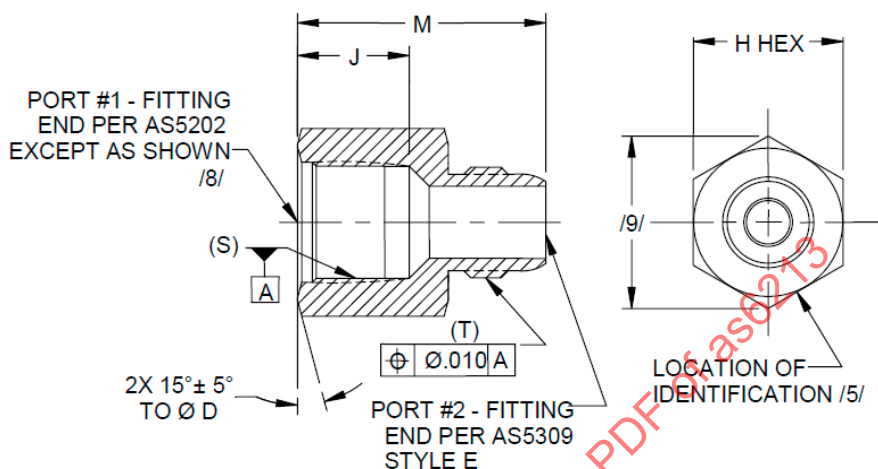
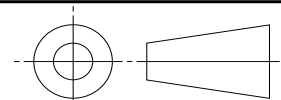


FIGURE 1 - FITTING

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS6213>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS6076

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING, ADAPTER, PORT,
REDUCER, 37 DEGREE SPHERICAL, FLARED

SAE AS6213
SHEET 1 OF 4

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS6213 /19/ SIZE CODE	NOMINAL TUBE SIZE PORT #1	NOMINAL TUBE SIZE PORT #2	S THREAD PER AS8879 CLASS 3B	T THREAD PER AS8879 CLASS 3A	D ±.010	H	J	M	LB EA APPROX AL REF	LB EA APPROX STL REF	LB EA APPROX TI REF
0403	.250	.188	.4375-20UNJF	.3750-24UNJF	.668	.678 - .691	.672	1.297	.0378	.109	.0599
0504	.312	.250	.5000-20UNJF	.4375-20UNJF	.730	.740 - .753	.672	1.500	.0433	.124	.0685
0604	.375	.250	.5625-18UNJF	.4375-20UNJF	.793	.803 - .816	.630	1.391	.0511	.147	.0809
0605	.375	.313	.5625-18UNJF	.5000-20UNJF	.793	.803 - .816	.630	1.375	.0534	.153	.0846
0804	.500	.250	.7500-16UNJF	.4375-20UNJF	.980	.990 - 1.003	.750	1.609	.0649	.186	.103
0805	.500	.313	.7500-16UNJF	.5000-20UNJF	.980	.990 - 1.003	.750	1.547	.0672	.193	.107
0806	.500	.375	.7500-16UNJF	.5625-18UNJF	.980	.990 - 1.003	.750	1.547	.0698	.200	.111
1004	.625	.250	.8750-14UNJF	.4375-20UNJF	1.103	1.113 - 1.128	.810	1.672	.0713	.205	.113
1005	.625	.313	.8750-14UNJF	.5000-20UNJF	1.103	1.113 - 1.128	.810	1.656	.0737	.212	.117
1006	.625	.375	.8750-14UNJF	.5625-18UNJF	1.103	1.113 - 1.128	.810	1.641	.0763	.219	.121
1008	.625	.500	.8750-14UNJF	.7500-16UNJF	1.103	1.113 - 1.128	.810	1.750	.090	.258	.143
1206	.750	.375	1.0625-12UNJ	.5625-18UNJF	1.353	1.363 - 1.380	.940	1.813	.102	.294	.162
1208	.750	.500	1.0625-12UNJ	.7500-16UNJF	1.353	1.363 - 1.380	.940	1.922	.116	.334	.184
1210	.750	.625	1.0625-12UNJ	.8750-14UNJF	1.353	1.363 - 1.380	.940	2.016	.131	.376	.207
1606	1.000	.375	1.3125-12UNJ	.5625-18UNJF	1.603	1.613 - 1.630	.970	1.922	.123	.352	.194
1608	1.000	.500	1.3125-12UNJ	.7500-16UNJF	1.603	1.613 - 1.630	.970	2.032	.136	.391	.216
1610	1.000	.625	1.3125-12UNJ	.8750-14UNJF	1.603	1.613 - 1.630	.970	2.109	.151	.434	.293
1612	1.000	.750	1.3125-12UNJ	1.0625-12UNJ	1.603	1.613 - 1.630	.970	2.203	.179	.514	.283
2008	1.250	.500	1.6250-12UNJ	.7500-16UNJF	1.853	1.863 - 1.880	1.010	2.172	.137	.392	.216
2010	1.250	.625	1.6250-12UNJ	.8750-14UNJF	1.853	1.863 - 1.880	1.010	2.250	.151	.435	.240
2012	1.250	.750	1.6250-12UNJ	1.0625-12UNJ	1.853	1.863 - 1.880	1.010	2.328	.179	.515	.284
2016	1.250	1.000	1.6250-12UNJ	1.3125-12UNJ	1.853	1.863 - 1.880	1.010	2.297	.224	.642	.354

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:

- CODE LETTER F - TYPE 4140 STEEL BAR PER AMS6349 OR AMS6382 OR TYPE 4130 STEEL BAR PER AMS-S-6758 OR AMS6370 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION.
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5639 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5648 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5645 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION.
- CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY BAR PER AMS4928.
- CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9; OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124.

 An SAE International Group	AEROSPACE STANDARD		 AS6213 SHEET 2 OF 4
	FITTING, ADAPTER, PORT, REDUCER, 37 DEGREE SPHERICAL, FLARED		

2. HEAT TREATMENT:

- a. MATERIAL CODE LETTER F - HARDNESS SHALL BE 92 HRB TO 40 HRC PER PROCUREMENT SPECIFICATION.
- b. OTHER 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 LETTERS J, K, AND R - PASSIVATE PER AMS2700, TYPE 6 OR 7.
- 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 IN ALL MATERIALS AT 1500 PSI.

7. THE INTERNAL DIAMETERS SHALL END IN A CONICAL END OF 115 DEGREE MINIMUM INCLUDED ANGLE.

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

/9/ THE HEX CORNERS MAY BE ROUNDED PER ARP1942.

/10/ THE NON-REDUCER CONFIGURATION WITHOUT A SUFFIX PART NUMBER CODE IS THE FUNCTIONAL EQUIVALENT OF AN894 AND MS24398 FOR THE CORRESPONDING FORGING SIZE AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.

11. A 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, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

/12/ WEIGHTS ARE FOR NON-REDUCERS ONLY. REDUCER FITTINGS WILL HAVE LOWER WEIGHTS.

 An SAE International Group	AEROSPACE STANDARD	SAE AS6213 SHEET 3 OF 4	
	FITTING, ADAPTER, PORT, REDUCER, 37 DEGREE SPHERICAL, FLARED		