

REV.
A

SAE AS5977

FEDERAL SUPPLY CLASS
4730

RATIONALE

ADD -20 SIZE, REVISE TABLE HEADERS AND NOTES

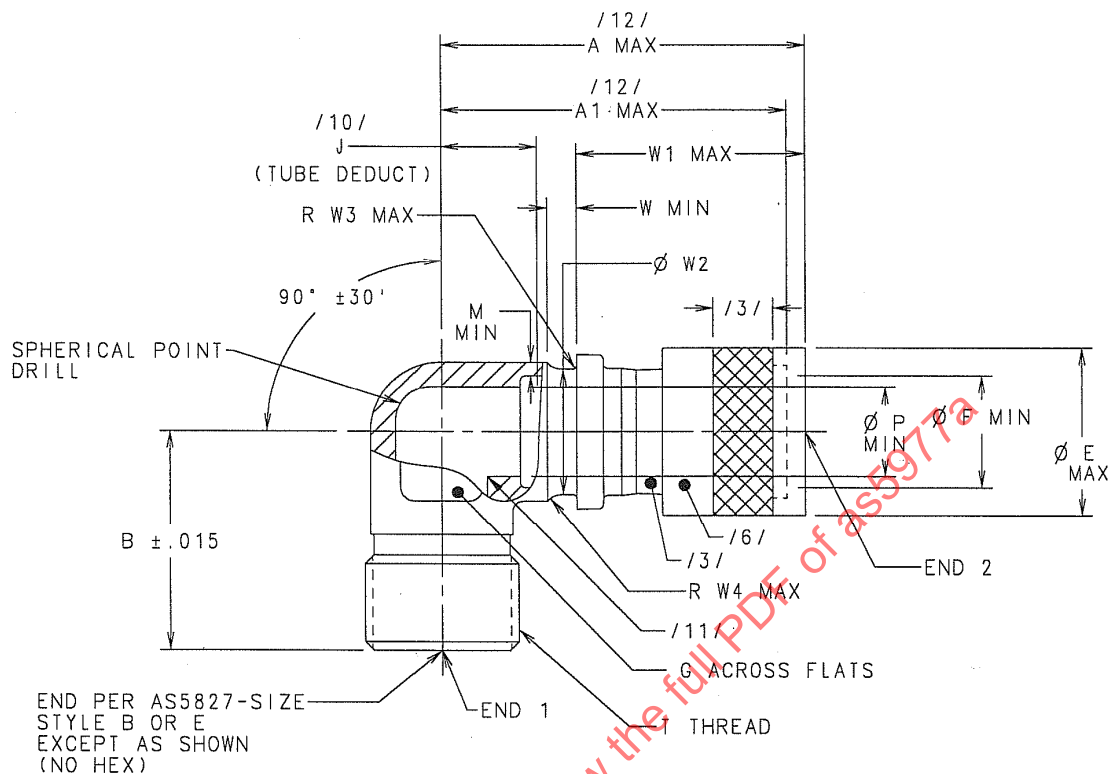
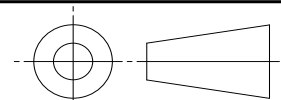


FIGURE 1 – ELBOW, 90 DEGREES, MALE FLARELESS, SWAGE

SEE TABLE 1A AND 1B FOR DIMENSIONAL INFORMATION AND WEIGHTS

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS5977A>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS5958 /4/

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

(R) FITTING ASSEMBLY, 90°, MALE
FLARELESS, AXIALLY SWAGED,
HYDRAULIC, 5080 PSI

SAE AS5977
SHEET 1 OF 4

REV.
A

TABLE 1A - DIMENSIONS A THROUGH J

BASIC NO. AS5977 /13/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	A MAX.	A1 MAX.	B ±.015	E MAX.	F MIN.	G	J /10/ TUBE DEDUCT
0404	.2500	.2500	.935	.848	.767	.466	.253	.348-.380	.353 +/- .150
0604	.3750	.2500	.998	.911	.846	.466	.253	.477-.509	.416 +/- .150
0406	.2500	.3750	1.215	1.099	.830	.609	.378	.477-.509	.416 +/- .150
0606	.3750	.3750	1.215	1.099	.846	.609	.378	.477-.509	.416 +/- .150
0806	.5000	.3750	1.308	1.192	1.032	.609	.378	.615-.647	.509 +/- .150
0608	.3750	.5000	1.516	1.370	.939	.783	.504	.615-.647	.517 +/- .175
0808	.5000	.5000	1.516	1.370	1.032	.783	.504	.615-.647	.517 +/- .175
1008	.6250	.5000	1.579	1.433	1.158	.783	.504	.751-.783	.580 +/- .175
0810	.5000	.6250	1.873	1.669	1.095	.939	.629	.751-.783	.580 +/- .175
1010	.6250	.6250	1.873	1.669	1.158	.939	.629	.751-.783	.580 +/- .175
1210	.7500	.6250	1.998	1.794	1.346	.939	.629	.893-.925	.705 +/- .175
1012	.6250	.7500	2.149	1.944	1.283	1.122	.754	.893-.925	.712 +/- .175
1212	.7500	.7500	2.149	1.944	1.346	1.122	.754	.893-.925	.712 +/- .175
1612	1.0000	.7500	2.308	2.103	1.505	1.122	.754	1.181-1.213	.871 +/- .175
1216	.7500	1.0000	2.606	2.392	1.505	1.495	1.004	1.181-1.213	.878 +/- .200
1616	1.0000	1.0000	2.606	2.392	1.505	1.495	1.004	1.181-1.213	.878 +/- .200
2016	1.2500	1.0000	2.728	2.514	1.627	1.495	1.004	1.609-1.641	1.000 +/- .200
1620	1.0000	1.2500	3.020	2.796	1.627	1.758	1.255	1.609-1.641	1.009 +/- .200
2020	1.2500	1.2500	3.020	2.796	1.627	1.758	1.255	1.609-1.641	1.009 +/- .200

TABLE 1B - DIMENSIONS M THROUGH W4 AND WEIGHTS

BASIC NO. AS5977 /13/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	M MIN.	P MIN.	T THREAD PER AS8879	W MIN.	W1 MAX.	W2 ±.0015	W3 MAX.	W4 MAX.	WEIGHT LB/EA APP. REF.
0404	.2500	.2500	.043	.198	.4375-28 UNJEF-3A	.123	.488	.3005	.018	.065	.019
0604	.3750	.2500	.045	.198	.5625-24 UNJEF-3A	.123	.488	.3005	.018	.065	.029
0406	.2500	.3750	.045	.302	.4375-28 UNJEF-3A	.153	.675	.4475	.033	.065	.028
0606	.3750	.3750	.045	.302	.5625-24 UNJEF-3A	.153	.675	.4475	.033	.065	.038
0806	.5000	.3750	.052	.302	.7500-20 UNJEF-3A	.153	.675	.4475	.033	.065	.060
0608	.3750	.5000	.052	.401	.5625-24 UNJEF-3A	.165	.871	.5945	.033	.129	.070
0808	.5000	.5000	.052	.401	.7500-20 UNJEF-3A	.165	.871	.5945	.033	.129	.076
1008	.6250	.5000	.057	.401	.8750-20 UNJEF-3A	.165	.871	.5945	.033	.129	.121
0810	.5000	.6250	.057	.507	.7500-20 UNJEF-3A	.140	1.190	.7365	.021	.078	.095
1010	.6250	.6250	.057	.507	.8750-20 UNJEF-3A	.140	1.190	.7365	.021	.078	.121
1210	.7500	.6250	.065	.507	1.0625-18 UNJEF-3A	.140	1.190	.7365	.021	.078	.195
1012	.6250	.7500	.065	.604	.8750-20 UNJEF-3A	.154	1.327	.8805	.024	.089	.121
1212	.7500	.7500	.065	.604	1.0625-18 UNJEF-3A	.154	1.327	.8805	.024	.089	.195
1612	1.0000	.7500	.084	.604	1.3125-16 UNJ-3A	.154	1.327	.8805	.024	.089	.388
1216	.7500	1.0000	.084	.802	1.0625-18 UNJEF-3A	.167	1.612	1.1725	.027	.099	.293
1616	1.0000	1.0000	.084	.802	1.3125-16 UNJ-3A	.167	1.612	1.1725	.027	.099	.386
2016	1.2500	1.0000	.174	.802	1.6250-16 UNJ-3A	.167	1.612	1.1725	.027	.099	.665
1620	1.0000	1.2500	.174	1.011	1.3125-16 UNJ-3A	.185	1.886	1.4345	.030	.113	.705
2020	1.2500	1.2500	.174	1.011	1.6250-16 UNJ-3A	.185	1.886	1.4345	.030	.113	.700

NOTES:

/1/ MATERIAL:

CODE LETTER "T"

RING - AMS4965 TITANIUM ALLOY, 6.0AL-4.0V SOLUTION HEAT TREATED AND AGED OR AMS4928 TITANIUM ALLOY 6.0AL-4.0V ANNEALED WITH HIGH STRENGTH CARBON FIBER/EPOXY RESIN COMPOSITE REINFORCEMENT.

BODY - AMS4928 TITANIUM ALLOY, 6.0AL 4.0V ANNEALED

2. FINISH:

TITANIUM - NONE REQUIRED

/3/ COATINGS/LUBRICANTS:

RING - THE OUTER SURFACE SHALL HAVE A .125 IN MINIMUM WIDTH BLUE COLORED RING OR COMPLETELY COLORED BLUE TO INDICATE 5080 PSI MAXIMUM OPERATION PRESSURE. AN AS1241 FLUID RESISTANT PTFE COATING OR PAINT SHALL BE USED.

BODY - SOLID FILM LUBRICANT PER AS5272, TYPE I OR II OR PTFE BASED LUBRICANT MAY BE APPLIED TO PORTIONS OF THE ID AND OD. THE AS5272 OR PTFE BASED LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.

/4/ PROCUREMENT SPECIFICATION: AS5958 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED AND ASSEMBLED BY AN ACCREDITED MANUFACTURER OR ASSEMBLED BY AN ACCREDITED ASSEMBLING DISTRIBUTOR LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED LIST (QPL) PRI QPL AS5958. FOR THIS STANDARD SEE WWW.EAUDITNET.COM FOR 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 AS5958 AND SHALL BE IDENTIFIED ON THE RING.

7. FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH AS5959.

8. SURFACE TEXTURE SHALL BE IN ACCORDANCE WITH AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME B46.1 AND THE SYMBOLS IN ACCORDANCE WITH ASME Y14.36M. UNLESS OTHERWISE SPECIFIED, THE MAXIMUM MACHINED SURFACES SHALL BE 125 μ IN RA AND THE FORGED SURFACES SHALL BE 250 μ IN RA.

9. DIMENSIONS AND TOLERANCES PER AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME Y14.5M 1994.

a. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

b. DIMENSIONAL TOLERANCES SHALL BE $\pm .005$ IN UNLESS OTHERWISE SPECIFIED

c. ANGULAR TOLERANCES SHALL BE ± 0.50 DEGREES UNLESS OTHERWISE SPECIFIED

d. BREAK ALL EDGES .003 TO .010 IN UNLESS OTHERWISE SPECIFIED

/10/ THIS DIMENSION IS THE ALLOWABLE TUBE END POSITIONING FOR SYSTEM LAYOUT DESIGN.

/11/ .030 MIN RADIUS UNLESS QUALIFICATION OF SPECIAL PROCESS WITH SMALLER RADIUS.

/12/ DIMENSION A IS THE FITTING LENGTH PRIOR TO SWAGE AND A1 IS AFTER SWAGE.

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	(R) FITTING ASSEMBLY, 90°, MALE FLARELESS, AXIALLY SWAGED, HYDRAULIC, 5080 PSI		