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AS5801

FEDERAL SUPPLY CLASS
4730

RATIONALE

AS5801 HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

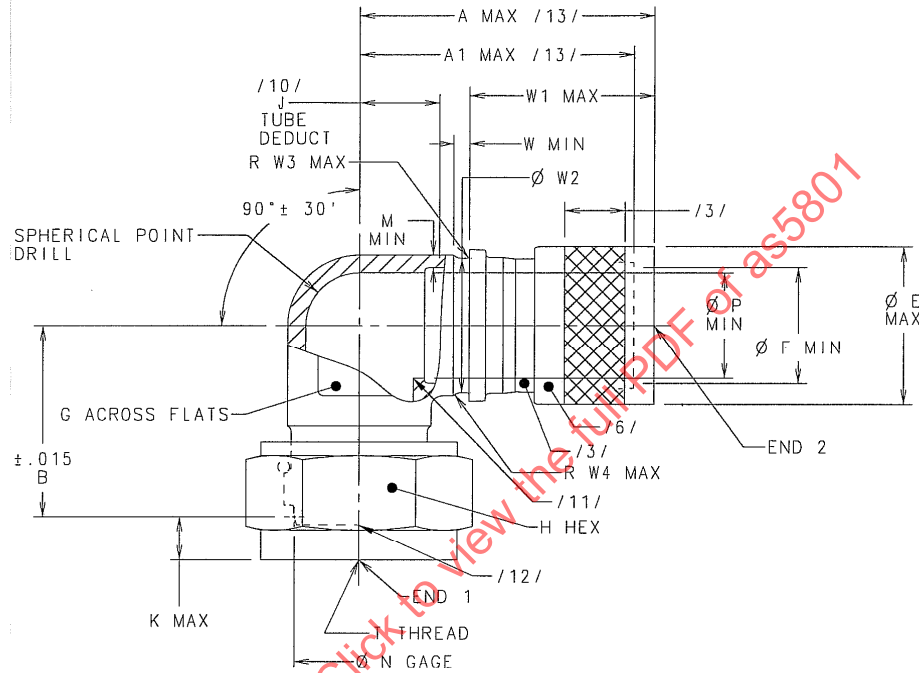
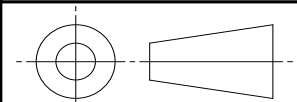


FIGURE 1 - ELBOW, 90 DEGREE, FEMALE FLARELESS, SWAGE

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on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS5801>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS5958 /4/



AEROSPACE STANDARD

FITTING ASSEMBLY, 90°, FEMALE
FLARELESS, AXIALLY SWAGED,
HYDRAULIC, 3000 PSI

AS5801
SHEET 1 OF 4

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ISSUED 2008-06 REAFFIRMED 2015-04

TABLE 1A - DIMENSIONS A THROUGH K

BASIC NO. AS5801 /14/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	A MAX.	A1 MAX.	B ±.015	E MAX.	F MIN.	G	(H)	J /10/ TUBE DEDUCT	K MAX.
0404	.2500	.2500	.935	.848	.878	.466	.253	.348- .380	.563	.353 ±.150	.325
0604	.3750	.2500	.998	.911	1.040	.466	.253	.477- .509	.688	.416 ±.150	.337
0406	.2500	.3750	1.215	1.099	.937	.609	.378	.477- .509	.563	.416 ±.150	.325
0606	.3750	.3750	1.215	1.099	1.040	.609	.378	.477- .509	.688	.416 ±.150	.337
0806	.5000	.3750	1.308	1.192	1.229	.609	.378	.615- .647	.875	.509 ±.150	.380
0608	.3750	.5000	1.516	1.370	1.133	.783	.504	.615- .647	.688	.517 ±.175	.337
0808	.5000	.5000	1.516	1.370	1.229	.783	.504	.615- .647	.875	.517 ±.175	.380
1008	.6250	.5000	1.579	1.433	1.435	.783	.504	.751- .783	1.000	.580 ±.175	.407
0810	.5000	.6250	1.873	1.669	1.310	.939	.629	.751- .783	.875	.580 ±.175	.380
1010	.6250	.6250	1.873	1.669	1.435	.939	.629	.751- .783	1.000	.580 ±.175	.407
1210	.7500	.6250	1.998	1.794	1.592	.939	.629	.893- .925	1.250	.705 ±.175	.433
1012	.6250	.7500	2.149	1.944	1.560	1.122	.754	.893- .925	1.000	.712 ±.175	.407
1212	.7500	.7500	2.149	1.944	1.592	1.122	.754	.893- .925	1.250	.712 ±.175	.433
1612	1.0000	.7500	2.308	2.103	1.862	1.122	.754	1.181-1.213	1.500	.878 ±.175	.437
1216	.7500	1.0000	2.606	2.392	1.766	1.495	1.004	1.181-1.213	1.250	.878 ±.200	.433
1616	1.0000	1.0000	2.606	2.392	1.862	1.495	1.004	1.181-1.213	1.500	.878 ±.200	.437
2016	1.2500	1.0000	2.728	2.514	2.024	1.495	1.004	1.609-1.641	2.000	1.000 ±.200	.460
1620	1.0000	1.2500	3.020	2.796	1.998	1.758	1.255	1.609-1.641	1.500	1.009 ±.200	.437
2020	1.2500	1.2500	3.020	2.796	2.024	1.758	1.255	1.609-1.641	2.000	1.009 ±.200	.460

TABLE 1B - DIMENSIONS M THROUGH W4 AND WEIGHTS

BASIC NO. AS5801 /14/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	M MIN.	N GAGE	P MIN.	T THREAD PER AS8879	W MIN.	W1 MAX.	W2 ±.0015	W3 MAX.	W4 MAX.	WEIGHT LB/EA APPROX. REF.
0404	.2500	.2500	.043	.2930	.198	.4375-20UNJF-3B	.123	.488	.3005	.018	.065	.034
0604	.3750	.2500	.045	.4160	.198	.5625-18UNJF-3B	.123	.488	.3005	.018	.065	.051
0406	.2500	.3750	.045	.2930	.302	.4375-20UNJF-3B	.153	.675	.4475	.033	.065	.043
0606	.3750	.3750	.045	.4160	.302	.5625-18UNJF-3B	.153	.675	.4475	.033	.065	.060
0806	.5000	.3750	.052	.5600	.302	.7500-16UNJF-3B	.153	.675	.4475	.033	.065	.090
0608	.3750	.5000	.052	.4160	.401	.5625-18UNJF-3B	.165	.871	.5945	.033	.129	.088
0808	.5000	.5000	.052	.5600	.401	.7500-16UNJF-3B	.165	.871	.5945	.033	.129	.111
1008	.6250	.5000	.057	.6860	.401	.8750-14UNJF-3B	.165	.871	.5945	.033	.129	.132
0810	.5000	.6250	.057	.5600	.507	.7500-16UNJF-3B	.140	1.190	.7365	.021	.078	.135
1010	.6250	.6250	.057	.6860	.507	.8750-14UNJF-3B	.140	1.190	.7365	.021	.078	.195
1210	.7500	.6250	.065	.8100	.507	1.0625-12UNJ-3B	.140	1.190	.7365	.021	.078	.213
1012	.6250	.7500	.065	.6860	.604	.8750-14UNJF-3B	.154	1.327	.8805	.024	.089	.223
1212	.7500	.7500	.065	.8100	.604	1.0625-12UNJ-3B	.154	1.327	.8805	.024	.089	.256
1612	1.0000	.7500	.084	1.0620	.604	1.3125-12UNJ-3B	.154	1.327	.8805	.024	.089	.450
1216	.7500	1.0000	.084	.8100	.802	1.0625-12UNJ-3B	.167	1.612	1.1725	.027	.099	.434
1616	1.0000	1.0000	.084	1.0620	.802	1.3125-12UNJ-3B	.167	1.612	1.1725	.027	.099	.509
2016	1.2500	1.0000	.174	1.3160	.802	1.6250-12UNJ-3B	.167	1.612	1.1725	.027	.099	.880
1620	1.0000	1.2500	.174	1.0620	1.011	1.3125-12UNJ-3B	.185	1.886	1.4345	.030	.113	.790
2020	1.2500	1.2500	.174	1.3160	1.011	1.6250-12UNJ-3B	.185	1.886	1.4345	.030	.113	.900



AEROSPACE STANDARD

FITTING ASSEMBLY, 90°, FEMALE
FLARELESS, AXIALLY SWAGED,
HYDRAULIC, 3000 PSI

AS5801
SHEET 2 OF 4

NOTES:

/1/ MATERIALS:

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

NUT - AMS4965 TITANIUM ALLOY, 6.0AL 4.0V SOLUTION HEAT TREATED AND AGED OR AMS4928 TITANIUM ALLOY, 6.0AL 4.0V ANNEALED.

WIRE - AMS5637 STEEL, CORROSION RESISTANT, 18Cr - 9.0Ni (UNS 30302) SOLUTION HEAT TREATED AND COLD DRAWN 125 ksi TENSILE STRENGTH

- AMS5685 STEEL, CORROSION RESISTANT, SAFETY WIRE 18CR - 11.5NI, 305 WIRE, SOLUTION HEAT TREATED, COLD FINISHED

- ASTM A 580 STEEL, CORROSION RESISTANT, WIRE, 302 OR 305 CONDITION A

2. FINISH:

TITANIUM - NONE REQUIRED

CRES - PASSIVATION PER AMS2700, TYPE 6 OR 7.

/3/ COATINGS/LUBRICANTS:

RING - THE OUTER SURFACE SHALL HAVE A .125 in MINIMUM WIDTH BLUE COLORED RING OR COMPLETELY COLORED BLUE TO MATCH THE ASSEMBLY TOOLING COLOR CODE SPECIFIED IN AS5959 ASSEMBLY PROCEDURE. AN AS1241 FLUID RESISTANT PTFE COATING OR PAINT SHALL BE USED. THE SWAGE RING IS COLOR CODED BLUE TO INDICATE THE SWAGE END IS QUALIFIED TO 5080 PSI AND IS INSTALLED WITH THE SAME TOOLING AS THE 5080 PSI RATED FITTING.

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 AND PTFE BASED LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.

NUT - LUBRICATE ID THREADS AND WIRE GROOVE LOAD BEARING SHOULDER OR MATING WIRE GROOVE LOAD BEARING SHOULDER WITH SOLID FILM LUBRICANT PER AS5272, TYPE 1 OR TYPE 2.

WIRE - LUBRICATE THE WIRE WITH SOLID FILM LUBRICANT PER AS5272, TYPE I OR TYPE II.

/4/ PRODUCT 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 PRODUCTS LIST (QPL) PRI-QPL-AS5958 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 AS5958 AND SHALL BE IDENTIFIED ON 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 µin Ra AND THE FORGED SURFACES SHALL BE 250 µin Ra.

	AEROSPACE STANDARD	AS5801 SHEET 3 OF 4	
	FITTING ASSEMBLY, 90°, FEMALE FLARELESS, AXIALLY SWAGED, HYDRAULIC, 3000 PSI		