FEDERAL SUPPLY CLASS
4730

RATIONALE

ADDED SIZE 1208. REVISED NOTE 14 FOR DEFINITION CORRECTION OF DIMENSION “A1” (FITTING BODY LENGTH). ADDED SUFFIX CODE “B” FOR FITTING ASSEMBLIES WITH BLUE ANODIZED RINGS AND NOTE 16 AS AN OPTION FOR FUTURE REPLACEMENT OF “NO CODE” BLUE COATING OR PAINT. CORRECTED ERRORS IN TABLE 1A COLUMNS “J” 1612, AND “K” 1008, 1010, 1012, 1612, 1616, AND 1620. UPDATED FIGURE AND WEIGHTS. REVISED NOTES 1, 3, 7, AND 15. ADDED NOTES 13 AND 17, AND AS6449 AS A NEW LUBRICANT TYPE.

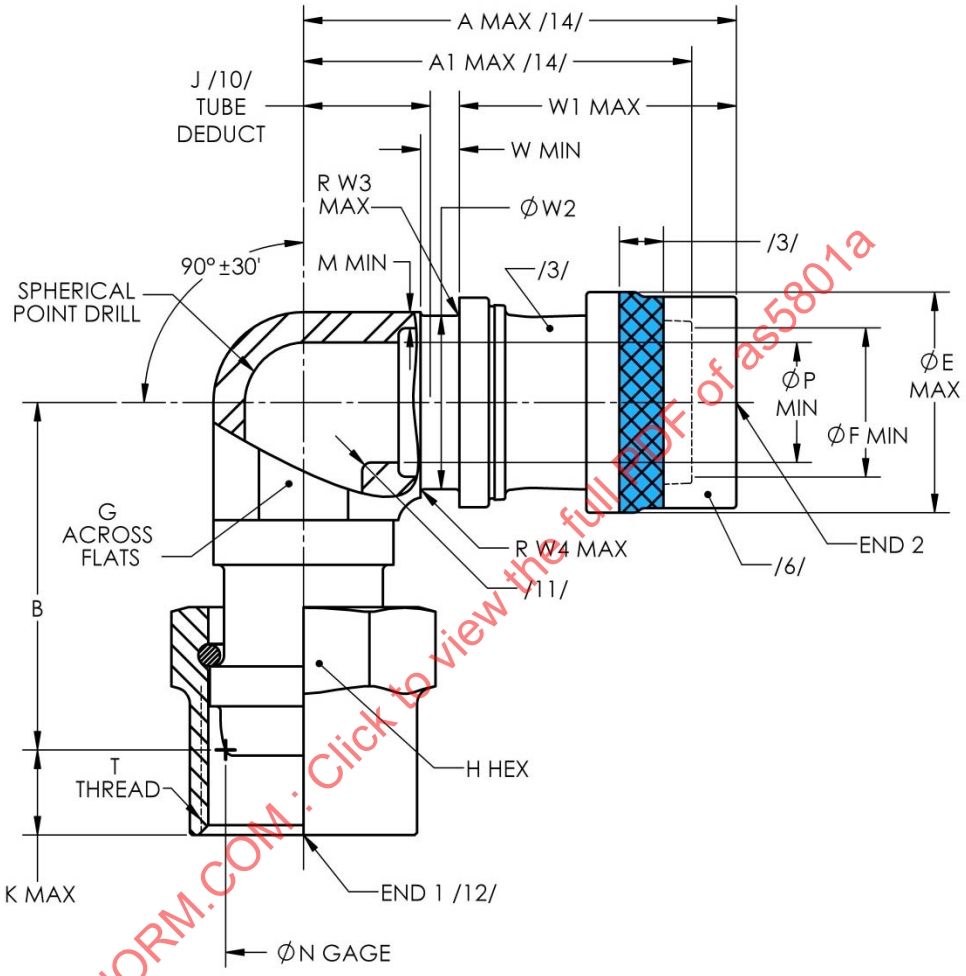

FIGURE 1 - FITTING ASSEMBLY, ELBOW, 90°, FEMALE FLARELESS, AXIAL SWAGED

(SEE TABLE 1A AND 1B FOR DIMENSIONS AND WEIGHTS)

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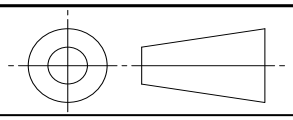
THIRD ANGLE PROJECTION



ISSUED 2008-06 REAFFIRMED 2015-04 REVISED 2015-07

CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS5958 /4/

AEROSPACE STANDARD

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

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TABLE 1A - DIMENSIONS A THROUGH K

BASIC NO. AS5801 /15/ 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	.418
1208	.7500	.5000	1.704	1.558	1.578	.783	.504	.893- .925	1.250	.705	±.175	.433
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	.418
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	.418
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	.871	±.175	.447
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	.447
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	.447
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 /15/ 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	.4375-20 UNJF-3B	.123	.488	.3005	.018	.065	.034
0604	.3750	.2500	.045	.4160	.198	.5625-18 UNJF-3B	.123	.488	.3005	.018	.065	.051
0406	.2500	.3750	.045	.2930	.302	.4375-20 UNJF-3B	.153	.675	.4475	.033	.065	.050
0606	.3750	.3750	.045	.4160	.302	.5625-18 UNJF-3B	.153	.675	.4475	.033	.065	.060
0806	.5000	.3750	.052	.5600	.302	.7500-16 UNJF-3B	.153	.675	.4475	.033	.065	.098
0608	.3750	.5000	.052	.4160	.401	.5625-18 UNJF-3B	.165	.871	.5945	.033	.129	.088
0808	.5000	.5000	.052	.5600	.401	.7500-16 UNJF-3B	.165	.871	.5945	.033	.129	.111
1008	.6250	.5000	.057	.6860	.401	.8750-14 UNJF-3B	.165	.871	.5945	.033	.129	.157
1208	.7500	.5000	.065	.8100	.401	1.0625-12 UNJ-3B	.165	.871	.5945	.033	.129	.240
0810	.5000	.6250	.057	.5600	.507	.7500-16 UNJF-3B	.140	1.190	.7365	.021	.078	.153
1010	.6250	.6250	.057	.6860	.507	.8750-14 UNJF-3B	.140	1.190	.7365	.021	.078	.169
1210	.7500	.6250	.065	.8100	.507	1.0625-12 UNJ-3B	.140	1.190	.7365	.021	.078	.246
1012	.6250	.7500	.065	.6860	.604	.8750-14 UNJF-3B	.154	1.327	.8805	.024	.089	.237
1212	.7500	.7500	.065	.8100	.604	1.0625-12 UNJ-3B	.154	1.327	.8805	.024	.089	.265
1612	1.0000	.7500	.084	1.0620	.604	1.3125-12 UNJ-3B	.154	1.327	.8805	.024	.089	.423
1216	.7500	1.0000	.084	.8100	.802	1.0625-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.471
1616	1.0000	1.0000	.084	1.0620	.802	1.3125-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.488
2016	1.2500	1.0000	.174	1.3160	.802	1.6250-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.920
1620	1.0000	1.2500	.174	1.0620	1.011	1.3125-12 UNJ-3B	.185	1.886	1.4345	.030	.113	.808
2020	1.2500	1.2500	.174	1.3160	1.011	1.6250-12 UNJ-3B	.185	1.886	1.4345	.030	.113	.945

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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, BARS AND WIRE, 18Cr - 9.0Ni (SAE 30302) SOLUTION HEAT TREATED, COLD DRAWN AND STRESS RELIEVED, 125 KSI TENSILE STRENGTH.

- AS5685 STEEL, CORROSION RESISTANT, SAFETY WIRE 18Cr - 11.5Ni (UNS S30500), SOLUTION HEAT TREATED, COLD FINISHED.

- ASTM A580 STEEL, CORROSION RESISTANT, WIRE, TYPE 302 OR 305 CONDITION A, COLD FINISHED.

2. FINISH:

TITANIUM - NONE REQUIRED.

CRES - PASSIVATION PER AMS2700, TYPE 6 OR 7.

/3/ COATINGS/LUBRICANTS /16/:

a. NO SUFFIX CODE LETTER

(1) RING - THE OUTER SURFACE SHALL HAVE A .125 INCH MINIMUM WIDTH BLUE COLORED RING OR SHALL BE COMPLETELY COLORED BLUE TO MATCH THE SWAGE TOOL COLOR CODE SPECIFIED IN THE AS5959 INSTALLATION PROCEDURE. BLUE PTFE COATING OR PAINT SHALL BE RESISTANT TO AS1241 FLUID WHEN USED. MARKING METHODS SHALL BE IN ACCORDANCE WITH AS5958.

(2) BODY - LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV, PTFE OR PETROLEUM-BASED LUBRICANT SHALL BE APPLIED TO PORTIONS OF THE ID AND OD. THE PETROLEUM-BASED LUBRICANT AND/OR AS5272 LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.

(3) NUT - LUBRICATE ID THREADS AND WIRE GROOVE LOAD BEARING SHOULDER OR MATING WIRE GROOVE LOAD BEARING SHOULDER WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II OR PER AS6449 TYPE III OR IV.

(4) WIRE - LUBRICATE THE WIRE WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II OR PER AS6449 TYPE III OR IV.

b. SUFFIX CODE LETTER “B”

(1) RING - THE OUTER SURFACE SHALL HAVE A .125 INCH MINIMUM WIDTH BLUE ANODIZED RING OR SHALL BE COMPLETELY ANODIZED BLUE TO MATCH THE SWAGE TOOL COLOR CODE SPECIFIED IN THE AS5959 INSTALLATION PROCEDURE. MARKING METHODS SHALL BE IN ACCORDANCE WITH AS5958.

(2) BODY - LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV, PTFE OR PETROLEUM-BASED LUBRICANT SHALL BE APPLIED TO PORTIONS OF THE ID AND OD. THE PETROLEUM-BASED LUBRICANT AND/OR AS5272 LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.

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(3) NUT - LUBRICATE ID THREADS AND WIRE GROOVE LOAD BEARING SHOULDER OR MATING WIRE GROOVE LOAD BEARING SHOULDER WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV.

(4) WIRE - LUBRICATE THE WIRE WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR TYPE II, OR PER AS6449 TYPE III OR IV.

/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 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 LOCATED ON THE RING IN THE AREA SHOWN.

7. FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH AS5959. THE AFTER SWAGE ACCEPTABILITY LIMIT DIMENSION "Z" FOR EACH PORT SIZE IS DEFINED IN AS5959.

8. SURFACE TEXTURE: SYMBOBLS PER ASME Y14.36M. REQUIREMENTS PER ASME B46.1 UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES SHALL BE 125 MICROINCHES Ra AND FORGED SURFACES SHALL BE 250 MICROINCHES Ra.

9. DIMENSIONS AND TOLERANCES: ASME Y14.5M-1994.

a. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

b. DIMENSIONAL TOLERANCES SHALL BE ±.005 INCH UNLESS OTHERWISE SPECIFIED.

c. ANGULAR TOLERANCES SHALL BE ±.50° UNLESS OTHERWISE SPECIFIED.

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

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

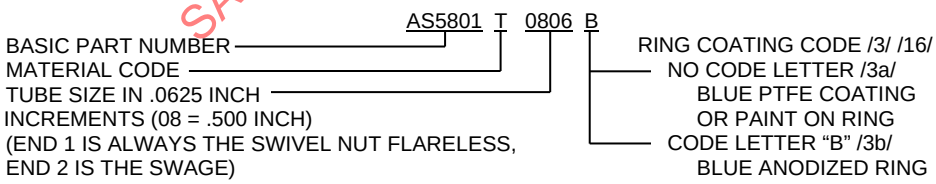
/11/ .030 MIN RADIUS UNLESS QUALIFICATION OF SPECIAL PROCESS WITH SMALLER RADIUS.

/12/ FITTINGS SHALL MATE WITH AS5863-(SIZE). STANDARD COUPLING NUTS SHALL BE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT TO AS4370TXX AND NO SAFETY WIRE HOLE PROVISIONS.

13. INTERPRETATION OF DRAWING PER AS4296.

/14/ DIMENSION “A” IS THE FITTING ASSEMBLY LENGTH AND “A1” IS THE FITTING BODY LENGTH BEFORE SWAGE.

/15/ EXAMPLE OF PART NUMBER:



/16/ NO CODE LETTER PARTS ARE NOT RECOMMENDED FOR PROCUREMENT AFTER 2015/07/01 AND SHOULD BE REPLACED BY ANODIZED PARTS WITH SUFFIX CODE LETTER “B”. BLUE ANODIZED RING CODE “B” PARTS MAY BE ORDERED IN LIEU OF NO CODE PARTS.

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