

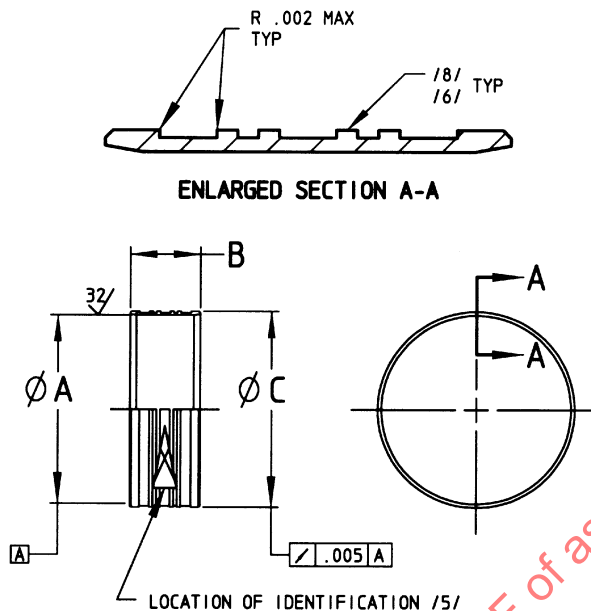
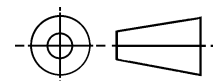


FIGURE 1 - SLEEVE

TABLE 1 - DIMENSIONS AND WEIGHTS /6/

BASIC NO. AS1654 /14/ SIZE CODE	NOM TUBE SIZE REF	A ±.002	B	C ±.004	LB/EA NOM REF ALUM	LB/EA NOM REF CRES	LB/EA NOM REF TI
08	.500	.692	.590	.762	.004	.010	.006
10	.625	.817	.590	.887	.004	.012	.007
12	.750	.997	.670	1.067	.006	.017	.010
16	1.000	1.273	.750	1.343	.008	.022	.013
20	1.250	1.523	.750	1.593	.009	.027	.015
24	1.500	1.793	.750	1.863	.011	.031	.018
28	1.750	2.045	.750	2.114	.012	.035	.020
32	2.000	2.317	.780	2.387	.015	.042	.024
36	2.250	2.567	.780	2.636	.016	.046	.026
40	2.500	2.817	.780	2.887	.018	.051	.029
48	3.000	3.317	.780	3.387	.021	.060	.034
56	3.500	3.831	.780	3.901	.025	.070	.040
64	4.000	4.337	.780	4.407	.028	.079	.045

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3A

PROCUREMENT SPECIFICATION: /4/ AS1650

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

(R) SLEEVE, THREADLESS - FLEXIBLE, FIXED CAVITY,
SELF-BONDING

AS1654
SHEET 1 OF 3

REV. B

REV. B	NOTES: /1/ MATERIAL: a. CODE LETTER A - TYPE 2024-T351, T6, T851, T8510 OR T8511 ALUMINUM ALLOY PER AMS-QQ-A-225/6, AMS 4120, AMS 4339, AMS-QQ-A-200/3, WW-T-700/3, ASTM B 211 OR ASTM B 241. b. CODE LETTER C - 1. TYPE 17-4PH, CONDITION H1075 STA, CORROSION RESISTANT STEEL PER AMS 5643. 2. TYPE 15-5PH, CONDITION H1150 STA, CORROSION RESISTANT STEEL PER AMS 5659. 3. TYPE 303 SERIES, CONDITION A, CORROSION RESISTANT STEEL PER AMS 5638, AMS 5640 OR ASTM A 582. 4. TYPE 304, CONDITION A, CORROSION RESISTANT STEEL PER AMS 5560, AMS 5639, QQ-S-763 OR ASTM A 376. c. CODE LETTER T - 1. TYPE 6AL-4V, CONDITION A, TITANIUM ALLOY PER AMS 4911, AMS 4928 OR AMS 4967 (MIL-T-9047). 2. TYPE CP-70, CONDITION A, COMMERCIALLY PURE TITANIUM PER AMS 4901 OR AMS 4921 (MIL-T-9047).		
AS1654	2. HEAT TREATMENT: a. MATERIAL CODE LETTER A - IF THE RAW MATERIAL IS PROCURED IN THE SOLUTION TREATED CONDITION, AGE TO THE FINAL CONDITION PER AMS-H-6088 OR AMS 2770. b. MATERIAL CODE LETTER C - 1. TYPE 17-4PH - AGE TO CONDITION H1075 PER MIL-H-6875 OR AMS 2759/3. 2. TYPE 15-5PH - AGE TO CONDITION H1150 PER MIL-H-6875 OR AMS 2759/3. 3. TYPE 303 SERIES - NONE. c. MATERIAL CODE LETTER T - NONE. 3. FINISH: a. MATERIAL CODE LETTER A - ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE I, CLASS 1, DICHROMATE SEALED, OR TYPE II, CLASS 2, DYE MAGENTA SIMILAR IN COLOR TO FED-STD-595 NO. 17142, DUPLEX SEALED. b. MATERIAL CODE LETTER C - 1. TYPE 17-4PH OR 15-5PH - PASSIVATE PER AMS-QQ-P-35, TYPE II OR TYPE VIII. 2. TYPE 303 SERIES - PASSIVATE PER AMS-QQ-P-35, TYPE II. 3. TYPE 304 - PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII. c. MATERIAL CODE LETTER T - NONE. /4/ QUALIFICATION: PARTS SHALL BE QUALIFIED TO THE PROCUREMENT SPECIFICATION AS A COMPLETE ASSEMBLY. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEETS OR SIMILAR MEANS. /5/ IDENTIFICATION: MARK PER AS478-30 USING .062 in OR LARGER CHARACTERS. MARK AS A MINIMUM THE MANUFACTURER'S NAME, TRADEMARK AND/OR CAGE CODE, COMPLETE "AS" NUMBER AND DATE OF MANUFACTURE IN QUARTERS (1Q98 = FIRST QUARTER 1998). SIZES 12 AND SMALLER MAY BE INDIVIDUALLY BAGGED WITH A TAG PER AS478-35D CONTAINING THE PREVIOUS INFORMATION. /6/ OTHER DIMENSIONS AND TOLERANCES ARE SPECIFIED AND CONTROLLED BY THE SUPPLIER. THE SUPPLIER IS RESPONSIBLE TO ENSURE COMPATIBILITY WITH THE ASSEMBLY AND COMPLIANCE WITH THE REQUIREMENTS OF THE PROCUREMENT SPECIFICATION. 7. INVENTORIED PARTS CONFORMING TO THE PREVIOUS ISSUE MAY BE USED TO DEPLETION. /8/ OPTIONAL KNURLED OR CIRCUMFERENTIAL GROOVED SURFACE. 9. THE 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 SPECIFICATION. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT. 10. INTERPRETATION OF DRAWING PER ARP4296. 11. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 µin Ra. 12. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED. 13. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994. 14. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS ±.005, ANGULAR DIMENSIONS ±0°30'.		
 The Engineering Society For Advancing Mobility Land Sea Air and Space® 400 Commonwealth Drive, Warrendale, PA 15096-0001	AEROSPACE STANDARD (R) SLEEVE, THREADLESS - FLEXIBLE, FIXED CAVITY, SELF-BONDING	AS1654 SHEET 2 OF 3	REV. B