

FED. SUPPLY CLASS

5365

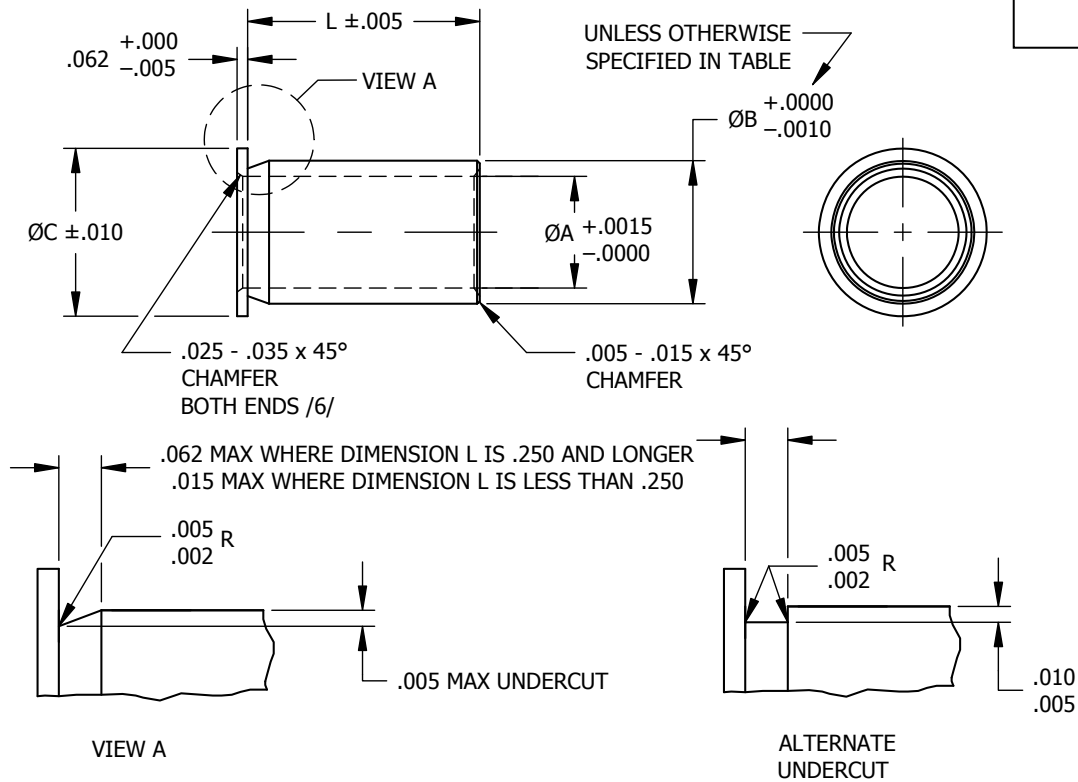


TABLE I – DIMENSIONS

SIZE DASH NO.	BOLT SIZE (REF)	ØA	ØB	ØC	WEIGHT LB/IN		
					STEEL	BRONZE	COPPER- BERYLLIUM
3	.190	.1900	.3136 $\begin{smallmatrix} +.0000 \\ -.0005 \end{smallmatrix}$	.437	.016	.016	.017
4	.250	.2500	.3761 $\begin{smallmatrix} +.0000 \\ -.0005 \end{smallmatrix}$	.500	.020	.020	.021
5	.313	.3125	.4386 $\begin{smallmatrix} +.0000 \\ -.0005 \end{smallmatrix}$	.562	.024	.024	.026
6	.375	.3750	.5013 $\begin{smallmatrix} +.0000 \\ -.0007 \end{smallmatrix}$	.625	.028	.028	.030
7	.438	.4375	.5638 $\begin{smallmatrix} +.0000 \\ -.0007 \end{smallmatrix}$	.687	.032	.031	.034
8	.500	.5000	.6265 $\begin{smallmatrix} +.0000 \\ -.0008 \end{smallmatrix}$	.750	.036	.035	.038
9	.563	.5625	.6892	.812	.040	.039	.043
10	.625	.6250	.8142	1.000	.069	.068	.074
11	.688	.6875	.8767	1.062	.075	.073	.080
12	.750	.7500	.9393	1.125	.081	.079	.086
14	.875	.8750	1.0648	1.250	.093	.091	.099
16	1.000	1.0000	1.1898	1.375	.105	.103	.112
18	1.125	1.1250	1.3148	1.500	.116	.114	.124
20	1.250	1.2500	1.4399	1.625	.128	.126	.137
22	1.375	1.3750	1.5649	1.750	.140	.138	.150
24	1.500	1.5000	1.6899	1.875	.152	.149	.162

THIRD
ANGLE
PROJECTION

PROCUREMENT
SPECIFICATION

NONE

CUSTODIAN

NATIONAL AEROSPACE STANDARDS COMMITTEE

TITLE

**BUSHING, FLANGED, PRESS FIT
STEEL, CRES, BRONZE & COPPER**

REVISION

14

CLASSIFICATION
PART STANDARD

NAS77
SHEET 1 OF 4

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE.

FORM 09-01

REVISION DATE: AUGUST 30, 2013

ISSUE DATE: JANUARY 1944

MATERIAL:

ALUMINUM BRONZE – ALLOY 642 (UNS C64200) PER ASTM B 150/B 150M, CONDITION HR50 (TENSILE TEST, CERTIFICATION AND MILL TEST REPORTS REQUIRED) OR ALLOY 630 (UNS C63000) PER AMS4640.

ALLOY STEEL – 4130 (UNS G41300) PER AMS-S-6758 OR AMS6346, OR 8630 (UNS G86300) PER AMS6280. SEAMLESS ALLOY STEEL TUBING MAY BE USED AS AN OPTIONAL MATERIAL PROVIDED THE FINISHED PRODUCT MEETS ALL OTHER REQUIREMENTS OF THIS DRAWING. WHEN 4130 ALLOY STEEL PER AMS6346 OR AMS-S-6758, CONDITION F-4 IS USED, HEAT TREATMENT IS NOT REQUIRED AND THE HARDNESS SHALL BE VERIFIED IN ACCORDANCE WITH AMS2759.

CRES – 17-4PH (UNS S17400) PER AMS5643

COPPER-BERYLLIUM PER ASTM B 196/B 196M, TEMPER TH04 (HT). MECHANICAL PROPERTIES, CERTIFICATIONS AND MILL TEST REPORTS REQUIRED.

HEAT TREATMENT:

ALLOY STEEL – HEAT TREAT PER AMS2759 TO 125,000 - 145,000 PSI.

CRES – PRECIPITATION HEAT TREAT PER AMS2759 TO CONDITION H 1025.

FINISH:

CADMIUM PLATING PER AMS-QQ-P-416, TYPE II, CLASS 2. /7/

CRES – PASSIVATE PER AMS2700, METHOD 1, TYPE 2 OR TYPE 3, CLASS 1 CLASS 4.

ALUMINUM COAT PER NAS4006, ON OUTSIDE DIAMETER & FLANGE, OVERSPRAY NOT PERMITTED.

CODE:

14

ADD “-” AFTER BASIC NUMBER TO INDICATE ALLOY STEEL. CADMIUM PLATE ALL SURFACES FOR ALLOY STEEL WITH A “-” BUT WITHOUT AN “N” IN THE PART NUMBER. CADMIUM PLATE OUTSIDE SURFACES ONLY AND NO PLATING ON ID WHEN BOTH “-” AND “N” ARE USED. SEE EXAMPLES.
ADD “A” AFTER BASIC NUMBER FOR ALUMINUM BRONZE.
ADD “B” AFTER BASIC PART NUMBER FOR COPPER-BERYLLIUM.
ADD “C” AFTER BASIC PART NUMBER FOR CRES.
FIRST DASH NUMBER INDICATES SIZE CODE IN .0625 INCH INCREMENTS.
SECOND DASH NUMBER INDICATES GRIP IN .010 INCH INCREMENTS. (USE THREE DIGIT CALLOUT)
ADD “P” AFTER SECOND DASH NUMBER FOR CADMIUM PLATED ALL SURFACES (APPLICABLE TO “A”, “B” & “C” MATERIAL CODES ONLY)
ADD “N” AFTER SECOND DASH NUMBER FOR CADMIUM PLATED OUTSIDE SURFACES ONLY AND NO PLATING ON ID (APPLICABLE TO ALL MATERIAL CODES)
ADD “A” AFTER SECOND DASH NUMBER FOR ALUMINUM COAT PER NAS4006, ON OUTSIDE DIAMETER & FLANGE, OVERSPRAY NOT PERMITTED.

COLOR CODE: /11/

ALUMINUM BRONZE, CADMIUM PLATED, TYPE II CLEAR, ALL SURFACES /7/
ALUMINUM BRONZE, CADMIUM PLATED, TYPE II CLEAR, OUTSIDE SURFACES ONLY, UNPLATED ID
ALUMINUM BRONZE, NO PLATING, NATURAL COLOR ON OD AND ID
ALUMINUM BRONZE, NO PLATING, ALUMINUM COATED, LIGHT BLUE DYE ON NONFLANGED END
COPPER-BERYLLIUM, CADMIUM PLATED, TYPE II, OLIVE DRAB CHROMATE
COPPER-BERYLLIUM, CADMIUM PLATED, TYPE II, OLIVE DRAB CHROMATE, OUTSIDE SURFACES ONLY, UNPLATED ID
COPPER-BERYLLIUM, NO PLATING - NATURAL COLOR ON OD AND ID
ALLOY STEEL, CADMIUM PLATED, TYPE II, YELLOW CHROMATE
CRES, PASSIVATED, ALUMINUM COATED - NATURAL COLOR
CRES, PASSIVATED, CADMIUM PLATED, TYPE II, YELLOW CHROMATE

REVISION

14

NAS77
SHEET 2



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