

Recommended has been approved by the Buleys. (Department of the Navy) and this is recommended for use by the USAF and is mandatory for use by the USAF. All other military activities are required to be conducted where applicable.

(C) TOLERANCES, OUTSIDE DIMENSION
SEAMLESS AND BUTTWELD MECHANICAL TUBING
PLUS AND MINUS, INCH

LARGEST OUTSIDE DIMENSION ACROSS FLATS, IN.	WALL THICKNESS IN.	TOLERANCE FOR OUTSIDE DIMENSIONS, INCLUDING CONVEXITY OR CONCAVITY
(C) TO 3/4 INCL.	.065 AND LIGHTER	.015
TO 3/4 INCL.	(C) OVER .065	.010
OVER 3/4 TO 1-1/4 INCL.	ALL THICKNESSES	.015
OVER 1-1/4 TO 2-1/2 INCL.	ALL THICKNESSES	.020
OVER 2-1/2 TO 3-1/2 INCL.	.065 AND LIGHTER	.030
OVER 2-1/2 TO 3-1/2 INCL.	OVER .065	.025
OVER 3-1/2 TO 5-1/2 INCL.	ALL THICKNESSES	.030
OVER 5-1/2 TO 7-1/2 INCL.	ALL THICKNESSES	.15

WALL THICKNESS: THE TOLERANCE IS PLUS AND MINUS 10 PERCENT OF NOMINAL WALL THICKNESS.

STRAIGHTNESS: THE TOLERANCE IS .075 IN 3 FEET.

RADII OF CORNERS SEAMLESS MECHANICAL TUBING

SEAMLESS MECHANICAL TUBING			
WALL THICKNESS INCHES	MAXIMUM RADIUS OF CORNERS INCHES	WALL THICKNESS INCHES	MAXIMUM RADIUS OF CORNERS INCHES
OVER .020 TO .049 INCL.	3/32	OVER .156 TO .188 INCL.	9/32
OVER .049 TO .065 INCL.	1/8	OVER .188 TO .250 INCL.	11/32
OVER .065 TO .083 INCL.	9/64	OVER .250 TO .313 INCL.	7/16
OVER .083 TO .095 INCL.	3/16	OVER .313 TO .375 INCL.	1/2
OVER .095 TO .109 INCL.	13/64	OVER .375 TO .500 INCL.	11/16
OVER .109 TO .134 INCL.	7/32	OVER .500 TO .625 INCL.	27/32
OVER .134 TO .156 INCL.	1/4		

TWIST TOLERANCES

LARGEST SIZE
UNDER 1/2
1/2 TO 1-1/2 INCL.
OVER 1-1/2 TO 2-1/2 INCL.
OVER 2-1/2

MAXIMUM TWIST IN 3 FT.
 .050
 .075
 .095
 .125

SQUARENESS OF SIDES: THE TOLERANCE OF SQUARE AND RECTANGULAR TUBES VARIES IN ACCORDANCE WITH THE FOLLOWING FORMULA:

PLUS AND MINUS B = C X .006

B = TOLERANCE FOR OUT OF SQUARE

C = LENGTH OF LONGEST SIDE

EXAMPLE - RECTANGULAR TUBES 2 x 1

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THUS, A 2 x 1 RECTANGULAR TUBE MAY HAVE SIDES FAIL TO BE 90° TO EACH OTHER.
BY PLUS AND MINUS .012.

LENGTH TOLERANCE ON EXACT LENGTHS OF TUBING (ALL TYPES) PLUS 3/8, MINUS 0.

P.A. USAF Other Cust Navy - Wep.	TITLE SQUARE AND RECTANGULAR TUBING - CARBON STEEL AND ALLOY STEEL .35 CARBON, MAXIMUM.	MILITARY STANDARD MS33532(ASG)
PRECISEMENT SPECIFICATION	DISPOSITION	DATE