

FED. SUP CLASS  
NONE

DIAMETER TOLERANCES

NOMINAL OD	OD TOLERANCE
UP TO 3/32 EXCL	±.001
3/32 TO 3/16 EXCL	±.0015
3/16 TO 1/2 EXCL	±.003
1/2 TO 1 EXCL	±.004
1 TO 1-1/2 EXCL	±.005
1-1/2 TO 2 EXCL	±.006
2 TO 2-1/2 EXCL	±.007
2-1/2 TO 3-1/2 EXCL	±.010
3-1/2 TO 5 INCL	±.015

QUALITY IS THE DIFFERENCE BETWEEN MAX AND MIN OUTSIDE DIAMETERS MEASURED AT ANY ONE CROSS SECTION. THERE IS NO ADDITIONAL TOLERANCE FOR QUALITY OF TUBES HAVING A NOMINAL WALL THICKNESS OF MORE THAN 3 PERCENT OF THE OD.

AN ADDITIONAL QUALITY ALLOWANCE, OF TWICE THE TUBULAR OD TOLERANCE SPREADS SHOWN ABOVE, APPLIED ONE-HALF PLUS AND ONE-HALF MINUS, IS APPLIED TO TUBES HAVING A NOMINAL WALL THICKNESS OF 3 PERCENT OR LESS OF THE NOMINAL OD. THE AVERAGE OF THE MAX AND MIN OD READINGS SHOULD FALL WITHIN THE OD TOLERANCES AS SHOWN IN THE TABLE ABOVE.

EXCLUSIVE AS USED HEREIN IS APPLICABLE ONLY TO THE LARGER DIAMETER LIMIT.

WALL THICKNESS TOLERANCES

NOMINAL WALL THICKNESS	OUTSIDE DIAMETER			
	3/16 TO 1 EXCL	1 TO 2 EXCL	2 TO 4 EXCL	4 TO 5 INCL
TO .025, INCL	±.002			
OVER .025 THRU .028, INCL		±.003	---	---
OVER .028 THRU .032, INCL	±.003		±.004	
OVER .032 THRU .035, INCL		±.004		±.005
OVER .035 THRU .049, INCL	±.004		±.005	
OVER .049 THRU .058, INCL		±.005		±.006
OVER .058 THRU .065, INCL	±.005		±.006	
OVER .065 THRU .072, INCL		±.006		±.007
OVER .072 THRU .083, INCL			±.007	
OVER .083 THRU .095, INCL		±.006		
OVER .095 THRU .109, INCL			±.007	
OVER .109 THRU .120, INCL	---	---		
OVER .120 THRU .134, INCL	---	---		
OVER .134 THRU .149, INCL	---	---	±.008	±.008
OVER .149 THRU .165, INCL	---	---		

EXCLUSIVE AS USED HEREIN APPLIES ONLY TO THE LARGER DIAMETER LIMIT.

FOR REDRAWN WELDED STAINLESS, WALL TOLERANCES ARE ±10 PERCENT.

LENGTH TOLERANCES

NOMINAL LENGTH, LINEAR FEET	OUTSIDE DIAMETER	TOLERANCE
TO 4 INCL	TO 2 INCL	+1/16, -0
	OVER 2 TO 4 INCL	+3/32, -0
	OVER 4	+1/8, -0
OVER 4 TO 10 INCL	TO 2 INCL	+3/32, -0
	OVER 2	+1/8, -0
OVER 10 TO 24 INCL	ALL	+3/16, -0

FOR EVERY 10 FT OR FRACTION THEREOF OVER AND ABOVE 24 FT THERE SHOULD BE AN ADDITIONAL ALLOWANCE OF +1/16, -0.

STRAIGHTNESS: TOLERANCE: STANDARD TOLERANCE FOR STRAIGHTNESS IS .030 INCHES IN A LENGTH OF 3 FT FOR TUBING LENGTHS 24 FT AND UNDER.

INSIDE WELDING FLASH

WALL THICKNESS	MAXIMUM PERMISSIBLE HEIGHT OF WELDING FLASH
.049 AND UNDER	.004
OVER .049 THRU .065, INCL	.008
OVER .065	.012

DIMENSIONS IN INCHES.

Ⓐ DRAWING REVISED.

THIS IS A DESIGN STANDARD. NOT TO BE USED AS A PART NUMBER.

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CUSTODIANS Navy - BuAer Air Force	OTHER INT. A - N - AF -	<b>MILITARY STANDARD</b>	<b>MS33531</b> (ASG)
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:	SHEET 1 OF 1	

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