

TUBE & PIPING

SEAMLESS STAINLESS STEEL TUBE

Generally instrumentation tube and sizes up to 2" OD are supplied in a bright annealed condition. Tubes up to 20mm in imperial and metric sizes, have a maximum hardness of RB80. Lengths available: 5m-7m in randoms or fixed. Tolerances and testing to ASTM A269/A213. Certification to EN 10204-3.1. Other sizes on request.

● MILL STOCK ● U.K. STOCK

Size	Finish	304/L	321	316/L
1/8" OD				
1/8" x 24swg	Cold	●	●	●
1/8" x 22swg	Cold	●	●	●
1/8" x 20swg	Cold	●	●	●
3/16" OD				
3/16" x 24swg	Cold	●	●	●
3/16" x 22swg	Cold	●	●	●
3/16" x 20swg	Cold	●	●	●
3/16" x 18swg	Cold	●	●	●
1/4" OD				
1/4" x 22swg *	Cold	●	●	●
1/4" x 20swg *	Cold	●	●	●
1/4" x 18swg *	Cold	●	●	●
1/4" x 16swg *	Cold	●	●	●
5/16" OD				
5/16" x 22swg *	Cold	●	●	●
5/16" x 20swg *	Cold	●	●	●
5/16" x 18swg *	Cold	●	●	●
5/16" x 16swg *	Cold	●	●	●
3/8" OD				
3/8" x 22swg *	Cold	●	●	●
3/8" x 20swg *	Cold	●	●	●
3/8" x 18swg *	Cold	●	●	●
3/8" x 16swg *	Cold	●	●	●
3/8" x 14swg *	Cold	●	●	●
7/16" OD				
7/16" x 20swg	Cold	●	●	●
1/2" OD				
1/2" x 22swg *	Cold	●	●	●
1/2" x 20swg *	Cold	●	●	●
1/2" x 18swg *	Cold	●	●	●
1/2" x 16swg *	Cold	●	●	●
1/2" x 14swg *	Cold	●	●	●
1/2" x 12swg	Cold	●	●	●
1/2" x 10swg	Cold	●	●	●
5/8" OD				
5/8" x 20swg *	Cold	●	●	●
5/8" x 18swg *	Cold	●	●	●
5/8" x 16swg *	Cold	●	●	●
5/8" x 14swg *	Cold	●	●	●
5/8" x 10swg	Cold	●	●	●
3/4" OD				
3/4" x 20swg *	Cold	●	●	●
3/4" x 18swg *	Cold	●	●	●
3/4" x 16swg *	Cold	●	●	●
3/4" x 14swg *	Cold	●	●	●
3/4" x 12swg *	Cold	●	●	●
5/8" x 10swg	Cold	●	●	●
7/8" OD				
7/8" x 18swg *	Cold	●	●	●
7/8" x 16swg *	Cold	●	●	●
7/8" x 10swg	Cold	●	●	●
1" OD				
1" x 20swg *	Cold	●	●	●
1" x 18swg *	Cold	●	●	●
1" x 16swg *	Cold	●	●	●
1" x 14swg *	Cold	●	●	●
1" x 12swg *	Cold	●	●	●
1" x 10swg	Cold	●	●	●
1" x 0.250	Cold	●	●	●

Size	Finish	304/L	321	316/L
1/8" OD				
1.1/8" x 16swg	Cold	●	●	●
1.1/4" OD				
1.1/4" x 18swg *	Cold	●	●	●
1.1/4" x 16swg *	Cold	●	●	●
1.1/4" x 14swg *	Cold	●	●	●
1.1/4" x 10swg	Cold	●	●	●
1.1/4" x 0.250"	Cold	●	●	●
1.3/8" OD				
1.3/8" x 16swg	Cold	●	●	●
1.1/2" OD				
1.1/2" x 18swg *	Cold	●	●	●
1.1/2" x 16swg *	Cold	●	●	●
1.1/2" x 14swg *	Cold	●	●	●
1.1/2" x 12swg *	Cold	●	●	●
1.1/2" x 10swg	Cold	●	●	●
1.1/2" x 0.250"	Cold	●	●	●
1.5/8" OD				
1.5/8" x 16swg *	Cold	●	●	●
1.3/4" OD				
1.3/4" x 16swg *	Cold	●	●	●
1.3/4" x 10swg *	Cold	●	●	●
2" OD				
2" x 16swg *	Cold	●	●	●
2" x 14swg *	Cold	●	●	●
2" x 12swg	Cold	●	●	●
2" x 10swg	Cold	●	●	●
2" x 0.250" **	Cold	●	●	●
2.1/4" OD				
2.1/4" x 16swg *	Cold	●	●	●
2.1/4" x 10swg	Cold	●	●	●
2.1/4" x 0.250" **	Cold	●	●	●
2.1/2" OD				
2.1/2" x 16swg *	Cold	●	●	●
2.1/2" x 10swg	Cold	●	●	●
2.1/2" x 0.250" **	Hot	●	●	●
2.3/4" OD				
2.3/4" x 16swg *	Cold	●	●	●
2.3/4" x 0.250" **	Hot	●	●	●
3" OD				
3" x 16swg *	Cold	●	●	●
3" x 14swg *	Cold	●	●	●
3" x 12swg	Cold	●	●	●
3" x 10swg	Cold	●	●	●
3" x 0.250" **	Hot	●	●	●
3" x 0.375" **	Hot	●	●	●
4" OD				
4" x 0.250" **	Hot	●	●	●
5" OD				
5" x 0.250" **	Hot	●	●	●
6" OD				
6" x 0.250" **	Hot	●	●	●

* Tubes available dual certified/marked swg/bwg

** Tubes produced to ASTM A312/A999

TUBE & PIPING

ASTM Standards and Tolerances (Latest Edition)

Standard Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes
Designation: A213/A213M – Latest Edition
Tolerances to ASTM A1016

TABLE 2 Permitted Variations in Wall Thickness ^A
Wall Thickness, %

Outside Diameter in. (mm)	0.095 [2.4] and Under		Over 0.095 to 0.150 [2.4 to 3.8], incl		Over 0.150 to 0.180 [3.8 to 4.6], incl		Over 0.180 [4.6]	
	Over	Under	Over	Under	Over	Under	Over	Under
Seamless, Hot-Finished Tubes								
4 [100] and under	40	0	35	0	33	0	28	0
Over 4 [100]	...	...	35	0	33	0	28	0
Seamless, Cold-Finished Tubes								
1 ½ [38.1] and under	20	0						
Over 1 ½ [38.1]	22	0						
Welded Tubes								
All sizes	18	0						

^A These permitted variations in wall thickness apply only to tubes, except internal-upset tubes, as rolled or cold-finished, and before swaging, expanding, bending, polishing, or other fabricating operations.

TABLE 3 Permitted Variations in Outside Diameter ^A

Outside Diameter in. (mm)	Permitted Variations, in. [mm]	
	Over	Under
Hot-Finished Seamless Tubes		
4 [100] or under	1/64 [0.4]	1/32 [0.8]
Over 4 to 7 ½ [100 to 200], incl	1/64 [0.4]	3/64 [1.2]
Over 7 ½ to 9 [200 to 225], incl	1/64 [0.4]	1/16 [1.6]
Welded Tubes and Cold-Finished Seamless Tubes		
Under 1 [25]	0.004 [0.1]	0.004 [0.11]
1 to 1 ½ [25 to 40], incl	0.006 [0.15]	0.006 [0.15]
Over 1 ½ to 2 [40 to 50], excl	0.008 [0.2]	0.008 [0.2]
2 to 2 ½ [50 to 65], excl	0.010 [0.2]	0.010 [0.25]
2 ½ to 3 [65 to 75], excl	0.012 [0.3]	0.012 [0.3]
3 to 4 [75 to 100], incl	0.015 [0.38]	0.015 [0.38]
Over 4 to 7 ½ [100 to 200], incl	0.015 [0.38]	0.025 [0.64]
Over 7 ½ to 9 [200 to 225], incl	0.015 [0.38]	0.045 [1.14]

^A Except as provided in 10.2 and 10.3, these permitted variations include out-of-roundness. These permitted variations in outside diameter apply to hot-finished seamless, welded and cold-finished seamless tubes before other fabricating operation such as upsetting, swaging, expanding, bending, or polishing.

Our UK facility is accredited with ISO certifications 9001, 14001, 18001 and AS9120, so you can be rest assured that the services provided are of the highest quality.

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