

S-LOK

Stainless steel

Seamless Tubing

The best partner for value creation
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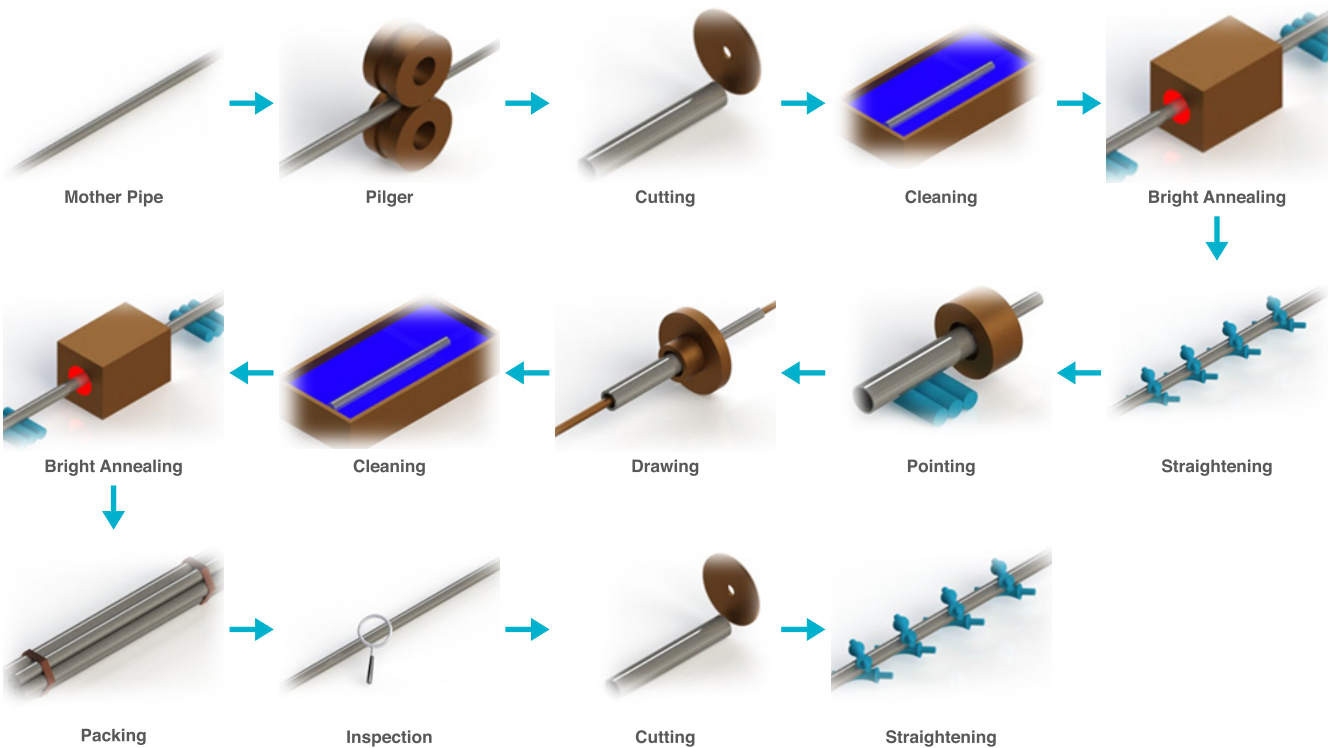
S-LOK Stainless Steel Seamless Tubing

Feature

- 316/316L stainless steel
- 1/8 to 1 inch sizes
- 4 to 20mm sizes
- Tubing is marked with size material, specification, heat no and lot no.



Manufacturing Process



Material Standard

Seamless Tube				Welded Tube			
ASTM / ASME	DIN	EN	JIS	ASTM / ASME	DIN	EN	JIS
A213 / SA213	17458	10216-5	G3463	A249 / SA249	17457	10216-7	G3463
A312 / SA312				A312 / SA312			
A269 / SA269			A269 / SA269	G3459			
A632			A632	G3459 (Special)			
A270			A270	G3447			

Technical Data

Inspection item

Items	AP	BA	EP
Chemical Composition	Mill Sheet	Mill Sheet	Mill Sheet
Mechanical Properties	Mill Sheet	Mill Sheet	Mill Sheet
Measure Tolerance	O	O	O
Roughness	O	O	O
Welding Test	*	*	*
Surface Microscope	*	*	*
Particle Test		*	*
Oil Content		*	*
Eluant Ion check			*
SEM Test			*
Moisture Test			*

* marked are optional tests - Optional tests are available upon request.

Chemical Composition

Element	Composition, wt. %	
	316 / 316L	304 / 304L
C	≤ 0.035	≤ 0.035
Si	≤ 1.0	≤ 1.0
Mn	≤ 2.00	≤ 2.00
P	≤ 0.045	≤ 0.045
S	≤ 0.03	≤ 0.03
Ni	10 ~ 15	8 ~ 12
Cr	16 ~ 18	18 ~ 20
Mo	2 ~ 3	-

Inner Surface Roughness

Level	Ry
AP	≤ 2.0 μm
BA	≤ 0.38 μm
EP	≤ 0.25 μm

Ordering Information



1 - Product

M-T : Tube

2 - Manufacturing method

S : Seamless
W : Welding

3 - Type of Product

S : Straight Type
C : Coil Type

4 - Tube O.D

01 : 1/16" 2M : 2mm
 02 : 1/8" 3M : 3mm
 03 : 3/16" 4M : 4mm
 04 : 1/4" 6M : 6mm
 05 : 5/16" 8M : 8mm
 06 : 3/8" 10M : 10mm
 08 : 1/2" 12M : 12mm
 10 : 5/8" 16M : 16mm
 12 : 3/4" 20M : 20mm
 14 : 7/8" 22M : 22mm
 16 : 1" 25M : 25mm
 20 : 1-1/4" 28M : 28mm
 24 : 1-1/2" 32M : 32mm
 32 : 2" 38M : 38mm

5 - Wall Thickness

028 : 0.028" 080 : 0.8mm
 035 : 0.035" 100 : 1.0mm
 049 : 0.049" 12T : 1.2mm
 065 : 0.065" 150 : 1.5mm
 083 : 0.083" 180 : 1.8mm
 095 : 0.095" 200 : 2.0mm
 109 : 0.109" 220 : 2.2mm
 120 : 0.120" 250 : 2.5mm
 134 : 0.134" 280 : 2.8mm
 156 : 0.156" 300 : 3.0mm

6 - Length

03 : 3m
 04 : 4m
 06 : 6m
 50 : 50m
 60 : 60m

7 - Product Grade

AP : AP Grade
 BA : BA Grade
 EP : EP Grade

8 - Material

S6 : 316/316L
 Stainless Steel
 S4 : 304/304L
 Stainless Steel
 CU : Copper

Ordering Information and Dimensions

Fractional Stainless Steel Seamless Tubing

Tube O.D inch	Tube Wall Thickness inch (mm)	Ordering Number	Length, m	Grade
1/16	0.012 (0.30)	M-TSS-01-012-04-BA-S6	4	BA
1/8	0.028 (0.71)	M-TSS-02-028-06-BA-S6	6	BA
3/16	0.035 (0.89)	M-TSS-03-035-06-BA-S6	6	BA
1/4	0.035 (0.89)	M-TSS-04-035-06-BA-S6	6	BA
	0.039 (1.00)	M-TSS-04-100-04-BA-S6	4	BA
	0.039 (1.00)	M-TSS-04-100-04-EP-S6	4	EP
	0.049 (1.24)	M-TSS-04-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-04-065-06-BA-S6	6	BA
3/8	0.035 (0.89)	M-TSS-06-035-06-BA-S6	6	BA
	0.039 (1.00)	M-TSS-06-100-04-BA-S6	4	BA
	0.039 (1.00)	M-TSS-06-100-04-EP-S6	4	EP
	0.049 (1.24)	M-TSS-06-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-06-065-06-BA-S6	6	BA
1/2	0.035 (0.89)	M-TSS-08-035-06-BA-S6	6	BA
	0.039 (1.00)	M-TSS-08-100-04-BA-S6	4	BA
	0.039 (1.00)	M-TSS-08-100-04-EP-S6	4	EP
	0.049 (1.24)	M-TSS-08-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-08-065-06-BA-S6	6	BA
5/8	0.035 (0.89)	M-TSS-10-035-06-BA-S6	6	BA
	0.049 (1.24)	M-TSS-10-049-06-BA-S6	6	BA
3/4	0.035 (0.89)	M-TSS-12-035-06-BA-S6	6	BA
	0.049 (1.24)	M-TSS-12-049-04-BA-S6	4	BA
	0.049 (1.24)	M-TSS-12-049-04-EP-S6	4	EP
	0.049 (1.24)	M-TSS-12-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-12-065-06-BA-S6	6	BA
7/8	0.065 (1.65)	M-TSS-14-150-06-BA-S6	6	BA
1	0.049 (1.24)	M-TSS-16-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-16-065-04-BA-S6	4	BA
	0.065 (1.65)	M-TSS-16-065-04-EP-S6	4	EP
	0.065 (1.65)	M-TSS-16-065-06-BA-S6	6	BA
	0.083 (2.11)	M-TSS-16-083-06-BA-S6	6	BA
1-1/4	0.049 (1.24)	M-TSS-20-049-06-BA-S6	6	BA
	0.065 (1.65)	M-TSS-20-065-06-BA-S6	6	BA
	0.083 (2.11)	M-TSS-20-083-06-BA-S6	6	BA
1-1/2	0.065 (1.65)	M-TSS-24-065-06-BA-S6	6	BA
	0.083 (2.11)	M-TSS-24-083-06-BA-S6	6	BA
2	0.083 (2.11)	M-TSS-32-083-06-BA-S6	6	BA

Metric Stainless Steel Seamless Tubing

Tube O.D mm	Thickness mm Tube Wall	Ordering Number	Length, m	Grade
4	1.0	M-TSS-04M-100-06-BA-S6	6	BA
6	1.0	M-TSS-06M-100-06-BA-S6	6	BA
8	1.0	M-TSS-08M-100-06-BA-S6	6	BA
	1.5	M-TSS-08M-150-06-BA-S6	6	BA
10	1.0	M-TSS-10M-100-06-BA-S6	6	BA
	1.5	M-TSS-10M-150-06-BA-S6	6	BA
12	1.0	M-TSS-12M-100-06-BA-S6	6	BA
	1.5	M-TSS-12M-150-06-BA-S6	6	BA
15	1.5	M-TSS-15M-150-06-BA-S6	6	BA
16	1.5	M-TSS-16M-150-06-BA-S6	6	BA
20	1.5	M-TSS-20M-150-06-BA-S6	6	BA

↗ Suggested Allowable Working Pressure for Stainless Steel Tubing

Fully annealed 304 or 316 high quality seamless steel tube to ASTM A269 or equivalent.
 Hardness : HRB80 or less

Tube O.D (inch)	Tube Wall Thickness (inch)															
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
1/16	5,600	6,800	8,100	9,400	12,000											
1/8						8,500	10,900									
3/16						5,400	7,000	10,200								
1/4						4,000	5,100	7,500	10,200							
5/16							4,000	5,800	8,000							
3/8							3,300	4,800	6,500	7,500						
1/2							2,600	3,700	5,100	6,700						
5/8								2,900	4,000	5,200	6,000					
3/4								2,400	3,300	4,200	4,900	5,800				
7/8								2,000	2,800	3,600	4,200	4,800				
1									2,400	3,100	3,600	4,200	4,700			
1-1/4											2,400	2,800	3,300	3,600	4,100	4,900
1-1/2												2,300	2,700	3,000	3,400	4,000
2													2,000	2,200	2,500	2,900

Tube O.D (mm)	Tube Wall Thickness (mm)															
	0.3	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5	5.0	
2	210	660														
3		670														
4		500	660													
6		310	420	540	710											
8			310	390	520											
10			240	300	400	510	580									
12			200	250	330	410	470									
14			160	200	270	340	380	430								
15			150	190	250	210	360	400								
16				170	230	290	330	370	400							
18				150	200	260	290	320	370							
20				140	180	230	260	290	330	380						
22				140	180	200	230	260	300	340						
25						180	200	230	260	290	320					
28							180	200	230	260	280	330				
30							170	180	210	240	260	310				
32							160	170	200	220	240	290	330			
38								140	160	190	200	240	270	310		
50											150	180	210	240	270	

- Allowable working pressures are calculated from as S value of 20,000 psi (137.8 MPa) for ASTM A269 tubing at -20 to 100°C (-28 to 37°C), as listed in ASME B 31.3 and ASME B31.1.
- Pressure calculations are based on maximum O.D and minimum wall thickness without allowance for corrosion and erosion.
- To determine bar, multiply psig by 0.0689 / To determine psig, multiply bar by 14.51. / To determine kPa, multiply psig by 6.89.
- For welded tubing, the following derating rate to be applied to weld integrity.
 - for single seam welded tubing, multiply by 0.80
 - for double seam welded tubing, multiply by 0.85