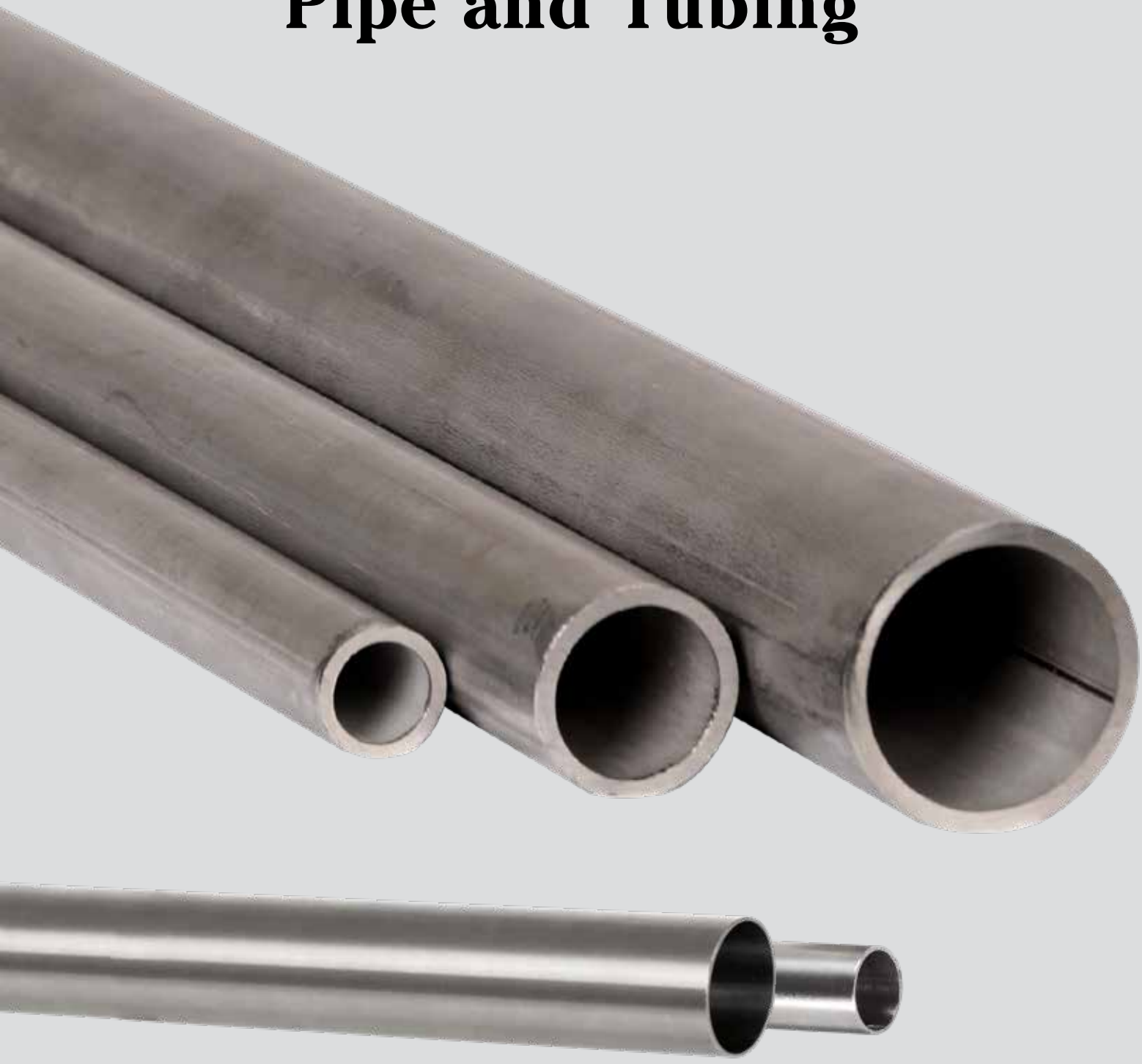
Pipe and Tubing



Pipe and Tubing

Pipe Specifications

- Welded and seamless pipe material conforms to ASTM A312, ASTM A999
- Stainless pipe dimensions conform to ASTM A999, ASME B36.19, ASME B36.10, A276
- Manufacturing facility is ISO 9001:2008
- Pipe sold as single random lengths
- Cut-to-length, threading and grooving available upon request

Instrumentation Tubing Specifications

- Instrumentation tubing dimensions and materials conform to ASTM A269 and ASTM A213

Sanitary Tubing Specifications

- Sanitary tubing dimensions and materials conform to ASTM A269, ASTM A270 and 3-A Approved

Stainless Pipe - Welded Sch 10 & Sch 40

Fig. S6014WP & S6016WP - Sch 10 Welded Pipe

Nominal Diameter in	Part Number		OD in	Wall Thickness in	Pipe Length ft	Weight lb / ft
	304 / 304L	316 / 316L				
1/2	S6014WP004	S6016WP004	0.840	0.083	20	0.6
3/4	S6014WP006	S6016WP006	1.050	0.083	20	0.8
1	S6014WP010	S6016WP010	1.315	0.109	20	1.4
1-1/4	S6014WP012	S6016WP012	1.660	0.109	20	1.8
1-1/2	S6014WP014	S6016WP014	1.900	0.109	20	2.0
2	S6014WP020	S6016WP020	2.375	0.109	20	2.6
2-1/2	S6014WP024	S6016WP024	2.875	0.120	20	3.5
3	S6014WP030	S6016WP030	3.500	0.120	20	4.3
4	S6014WP040	S6016WP040	4.500	0.120	20	5.6
5	S6014WP050	S6016WP050	5.563	0.134	20	7.7
6	S6014WP060	S6016WP060	6.625	0.134	20	9.2

Fig. S6044WP & S6046WP - Sch 40 Welded Pipe

Nominal Diameter in	Part Number		OD in	Wall Thickness in	Pipe Length ft	Weight lb / ft
	304 / 304L	316 / 316L				
1/8	S6044WP001	S6046WP001	0.405	0.068	20	0.2
1/4	S6044WP002	S6046WP002	0.540	0.088	20	0.4
3/8	S6044WP003	S6046WP003	0.675	0.091	20	0.5
1/2	S6044WP004	S6046WP004	0.840	0.109	20	0.8
3/4	S6044WP006	S6046WP006	1.050	0.113	20	1.1
1	S6044WP010	S6046WP010	1.315	0.133	20	1.6
1-1/4	S6044WP012	S6046WP012	1.660	0.140	20	2.2
1-1/2	S6044WP014	S6046WP014	1.900	0.145	20	2.7
2	S6044WP020	S6046WP020	2.375	0.154	20	3.6
2-1/2	S6044WP024	S6046WP024	2.875	0.203	20	5.7
3	S6044WP030	S6046WP030	3.500	0.216	20	7.5
4	S6044WP040	S6046WP040	4.500	0.237	20	10.7
5	S6044WP050	S6046WP050	5.563	0.258	20	14.6
6	S6044WP060	S6046WP060	6.625	0.280	20	18.9

Fig. S6144SP & S6146SP - Sch 40 Seamless Pipe

Nominal Diameter in	Part Number		OD in	Wall Thickness in	Pipe Length ft	Weight lb / ft
	304 / 304L	316 / 316L				
1/8	S6144SP001	S6146SP001	0.405	0.068	20	0.2
1/4	S6144SP002	S6146SP002	0.540	0.088	20	0.4
3/8	S6144SP003	S6146SP003	0.675	0.091	20	0.5
1/2	S6144SP004	S6146SP004	0.840	0.109	20	0.8
3/4	S6144SP006	S6146SP006	1.050	0.113	20	1.1
1	S6144SP010	S6146SP010	1.315	0.133	20	1.6
1-1/4	S6144SP012	S6146SP012	1.660	0.140	20	2.2
1-1/2	S6144SP014	S6146SP014	1.900	0.145	20	2.7
2	S6144SP020	S6146SP020	2.375	0.154	20	3.6

Fig. S6184SP & S6186SP - Sch 80 Seamless Pipe

Nominal Diameter in	Part Number		OD in	Wall Thickness in	Pipe Length ft	Weight lb / ft
	304 / 304L	316 / 316L				
1/8	S6184SP001	S6186SP001	0.405	0.095	20	0.3
1/4	S6184SP002	S6186SP002	0.540	0.119	20	0.5
3/8	S6184SP003	S6186SP003	0.675	0.126	20	0.7
1/2	S6184SP004	S6186SP004	0.840	0.147	20	1.0
3/4	S6184SP006	S6186SP006	1.050	0.154	20	1.4
1	S6184SP010	S6186SP010	1.315	0.179	20	2.1
1-1/4	S6184SP012	S6186SP012	1.660	0.191	20	2.9
1-1/2	S6184SP014	S6186SP014	1.900	0.200	20	3.6
2	S6184SP020	S6186SP020	2.375	0.218	20	5.0

*Fig. 96BP4 Schedule 40 Seamless Brass Pipe**

Nominal Diameter in	Part Number	OD in	Wall Thickness in	Pipe Length ft	Weight lb / ft
	20 ft Length				
1/8	96BP4001200	0.41	0.062	20	0.3
1/4	96BP4002200	0.54	0.082	20	0.4
3/8	96BP4003200	0.67	0.090	20	0.6
1/2	96BP4004200	0.84	0.107	20	0.9
3/4	96BP4006200	1.05	0.114	20	1.3
1	96BP4010200	1.32	0.126	20	1.8
1-/4	96BP4012200	1.66	0.146	20	2.6
1-1/2	96BP4014200	1.90	0.150	20	3.1
2	96BP4020200	2.37	0.156	20	4.1
2-1/2	96BP4024200	2.87	0.187	20	6.0
3	96BP4030200	3.50	0.219	20	8.7
4	96BP4040200	4.50	0.250	20	12.7

Fig. S64ST4 & S64ST6 – Seamless Instrumentation Tubing

Tube OD	Wall Thickness	Part Number		ID	Tube Length	Weight
in	in	304/L	316/L	in	ft	lb / ft
1/8	0.035	S64ST4035001	S64ST6035001	0.055	20	0.03
1/8	0.049	S64ST4049001	S64ST6049001	0.027	20	0.04
1/4	0.028	S64ST4028002	S64ST6028002	0.194	20	0.06
1/4	0.035	S64ST4035002	S64ST6035002	0.180	20	0.08
1/4	0.049	S64ST4049002	S64ST6049002	0.152	20	0.1
1/4	0.065	S64ST4065002	S64ST6065002	0.120	20	0.1
1/4	0.083	S64ST4083002	S64ST6083002	0.084	20	0.1
5/16	0.035	S64ST4035516	S64ST6035516	0.243	20	0.1
3/8	0.035	S64ST4035003	S64ST6035003	0.305	20	0.1
3/8	0.049	S64ST4049003	S64ST6049003	0.277	20	0.1
3/8	0.065	S64ST4065003	S64ST6065003	0.245	20	0.2
3/8	0.083	S64ST4083003	S64ST6083003	0.209	20	0.2
1/2	0.035	S64ST4035004	S64ST6035004	0.430	20	0.1
1/2	0.049	S64ST4049004	S64ST6049004	0.402	20	0.2
1/2	0.065	S64ST4065004	S64ST6065004	0.370	20	0.3
1/2	0.083	S64ST4083004	S64ST6083004	0.334	20	0.4
1/2	0.120	S64ST4120004	S64ST6120004	0.260	20	0.5
5/8	0.035	S64ST4035005	S64ST6035005	0.555	20	0.2
5/8	0.049	S64ST4049005	S64ST6049005	0.527	20	0.3
5/8	0.065	S64ST4065005	S64ST6065005	0.495	20	0.3
5/8	0.083	S64ST4083005	S64ST6083005	0.509	20	0.5
3/4	0.035	S64ST4035006	S64ST6035006	0.680	20	0.2
3/4	0.049	S64ST4049006	S64ST6049006	0.652	20	0.3
3/4	0.065	S64ST4065006	S64ST6065006	0.620	20	0.4
3/4	0.083	S64ST4083006	S64ST6083006	0.584	20	0.6
1	0.035	S64ST4035010	S64ST6035010	0.930	20	0.3
1	0.049	S64ST4049010	S64ST6049010	0.902	20	0.4
1	0.065	S64ST4065010	S64ST6065010	0.870	20	0.6

Fig. S62TP4 & S62TP6 – Sanitary Tubing

Tube OD	Part Number		Wall Thickness	I.D.	Tube Length	Weight
in	304	316	in	in	ft	lb / ft
1/2	S62TP46004	S62TP66004	0.065	0.370	20	0.3
3/4	S62TP46006	S62TP66006	0.065	0.620	20	0.5
1	S62TP46010	S62TP66010	0.065	0.870	20	0.6
1-1/2	S62TP46014	S62TP66014	0.065	1.370	20	0.9
2	S62TP46020	S62TP66020	0.065	1.870	20	1.3
2-1/2	S62TP46024	S62TP66024	0.065	2.370	20	1.6
3	S62TP46030	S62TP66030	0.065	2.870	20	2.0
4	S62TP48040	S62TP68040	0.083	3.834	20	3.4
6	S62TP49060	S62TP69060	0.109	5.782	20	5.3

Stainless Pipe/Tubing - Theoretical Internal Burst Pressures

Pipe

Nominal IPS	Nominal O.D.	Schedule 5S		Schedule 10S		Schedule 40S		Schedule 80S	
		Wall	Pressure	Wall	Pressure	Wall	Pressure	Wall	Pressure
in	in	in	psi	in	psi	in	psi	in	psi
1/8	0.405	-	-	0.049	18150	0.068	25175	0.095	35175
1/4	0.540	-	-	0.065	18050	0.088	24450	0.119	33050
3/8	0.675	-	-	0.065	14450	0.091	20225	0.126	28000
1/2	0.840	0.065	11600	0.083	14825	0.109	19475	0.147	26250
3/4	1.050	0.065	9275	0.083	11850	0.113	16150	0.154	22000
1	1.315	0.065	7425	0.109	12450	0.133	15175	0.179	20425
1-1/4	1.660	0.065	5875	0.109	9850	0.140	12650	0.191	17250
1-1/2	1.900	0.065	5125	0.109	8600	0.145	11450	0.200	15800
2	2.375	0.065	4100	0.109	6875	0.154	9750	0.218	13775
2-1/2	2.875	0.083	4325	0.120	6250	0.203	10600	0.276	14400
3	3.500	0.083	3550	0.120	5150	0.216	9250		
3-1/2	4.000	0.083	3100	0.120	4500	0.226	8475		
4	4.500	0.083	2750	0.120	4000	0.237	7900		
5	5.563	0.109	2950	0.134	3625	0.258	6950		
6	6.625	0.109	2475	0.134	3050	0.280	6350		
8	8.625	0.109	1900	0.148	2575	0.322	5600		
10	10.750	0.134	1875	0.165	2300	0.365	5100		
12	12.750	0.156	1825	0.180	2125	0.375	4400		
14	14.000	0.156	1675	0.188	2025				
16	16.000	0.165	1550	0.188	1775				
18	18.000	0.165	1375	0.188	1575				
20	20.000	0.188	1400	0.218	1625				
24	24.000	0.218	1375	0.250	1550				
30	30.000	0.250	1250	0.312	1550				

Burst Pressure calculated using Barlows' formula: P= 2ST/D

P = Theoretical internal bursting pressures
S = 75,000 psi fiber stress
T = Nominal wall
D = Nominal O.D.

Tubing

Tube OD	Wall Thickness - Inches																	
in	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	0.250	0.313	0.375	0.500	0.750
1/8	19200	24000	39000	42000	58800													
1/4		12000	16800	21000	29400	39000	49800	57000										
5/16		9600	13440	16800	23520	31200	39780	45750										
3/8		8003	11998	14003	19598	26003	33203	38003	43598	48000								
1/2		6000	8400	10500	14700	19500	24900	28500	32700	36000								
5/8		4800	6720	8400	11760	15600	19920	22888	26160	28800	32160	37440	44880					
3/4		3998	5603	6998	9803	12997	16598	18998	21803	24000	26800	31200	37403					
1		3000	4200	5250	7350	9750	12450	14250	16350	18000	20100	23400	28050	37500				
1-1/4		2400	3360	4200	5880	7800	9960	11400	13080	14400	16080	18720	22440	30000				

Burst pressures for 304 and 316 A269 tubing from -20° F and 100° F

The ASME code suggests a safety factor of four
Example: 1/4" O.D. x 0.035 = 5250 psi
For higher temperatures, multiply work pressure by

	300° F	500° F	1000° F
304	0.828	0.744	0.665
316	0.900	0.853	0.746