



Maximize productivity

SANITARY PIPE

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Stainless steel standard of different countries

P.R.China GB3280-84	Japan JIS	International standards ISO083/13 ISO683/16	USA ANSI ASTM	U.K BS970part4 BS1449part2	Germany DIN17440 DIN17224	France NFA35-572 NFA35-576-582 NFA35-584
1Cr18Ni9	SUS302		302	302S25	X12CrNi188	Z10CN18.09
0Cr19Ni9	SUS304	11	304S30400	304S15	X5CrNi189	Z6CN18.09
0Cr19Ni11	SUS304L	10	304LS30403	304S12	X2CrNi189	Z2CN18.09
0Cr17Ni12Mo2	SUS316	20.02a	316S31600	3046S16	X5CrNiMo1810	Z6CND17.12
00Cr17Ni14Mo2	SUS316L	19.19a	316LS31603	316S12	X2CrNiMo1811	Z6CND17.12
0Cr18Ni11Ti	SUS321	15	321S32100	321S12.321S20	X10CrNi189	Z6CNT18.10
00Cr17Ni14Mo2Ti	SUS316Ti		316Ti		X6CrNiMoTi17122	

Chemical composition of general stainless steel

Steel Type		Chemical composition								
		C	Si	Mn	P	S	Ni	Cr	No	Others
China stainless steel	0Cr18Ni9	≤0.08	≤ 1	≤ 2	≤ 0.035	≤ 0.03	8-11	17-19	/	/
	1Cr18Ni9	0.04-0.1	≤ 1	≤ 2	≤ 0.035	≤ 0.03	8-10	17-19	/	/
	0Cr18Ni9Ti	≤0.08	≤ 1	≤ 2	≤ 0.035	≤ 0.03	8-11	17-19	/	Ti:5XC%-0.8
	1Cr18Ni9Ti	≤0.08	≤ 1	≤ 2	≤ 0.035	≤ 0.03	8-11	17-19	/	Ti:5XC%-0.7
	00Cr18Ni10	≤0.03	≤ 1	≤ 2	≤ 0.035	≤ 0.03	8-11	17-19	/	/
	00Cr18Ni12Mo2Ti	≤0.08	≤ 1	≤ 2	≤ 0.035	≤ 0.03	11-14	16-19	1.8-2.5	0.3-0.6
	00Cr17Ni12Mo2	≤0.03	≤ 1	≤ 2	≤ 0.035	≤ 0.03	12-16	16-18	1.8-2.5	/
U.S.A stainless steel	WP304	0.08-0.15	0.75-0	2	0.04	0.03	8-11	18-20	/	/
	WP304L	0.035	0.75	2	0.04	0.03	8-13	18-20	/	/
	WP316	0.08	0.75-1	2	0.04	0.03	11-14	16-18	2-3	/
	WP316L	0.035	0.75-1	2	0.04	0.03	10-15	16-18	2-3	/
	WP321	0.08	0.75-1	2	0.04	0.03	9-13	17-20	/	Ti:5XC%-0.6
Japan stainless steel	SUS304TP	≤0.08	≤ 1	≤ 2	≤ 0.04	≤ 0.03	8-11	18-20	/	
	SUS304LTP	≤0.03	≤ 1	≤ 2	≤ 0.04	≤ 0.03	9-13	18-20	/	
	SUS316TP	≤0.08	≤ 1	≤ 2	≤ 0.04	≤ 0.03	10-14	16-18	2-3	
	SUS316LTP	≤0.03	≤ 1	≤ 2	≤ 0.04	≤ 0.03	12-16	16-18	2-3	
	SUS321TP	≤0.08	≤ 1	≤ 2	≤ 0.04	≤ 0.03	9-13	17-19	/	Ti>5XC%
	SUS316LTP	0.04-0.1	≤ 0.75	≤ 2	≤ 0.03	≤ 0.03	9-13	17-20	/	Ti:4XC%-0.6

Industrial Tube



Material: 304/1.4301:316L/1.4404:ASME BPE
 316L:1.4435NB2 Fe<0.5%
 Standard:DIN11850/01N11866/1S01127/ISO
 2037/BS4825/ISO2851
 Certification: 3A-63-03: EN10204-3.1:
 Polishing:mechanical-polish &electric-polishing
 Roughness: DIN 11866 & ASME BPE

Specification Sheet

Dimension	O.D,Inch	SCH5	SCH10S	SCH10	SCH20	SCH30	SCH40S	SCH40
1/8	0.405	/	1.24	1.24	1.24	1.24	1.73	1.73
1/4	0.54	/	1.65	1.65	1.65	1.65	2.24	2.24
3/8	0.675	/	1.65	1.65	1.65	1.65	2.31	2.31
1/2	0.84	1.65	2.11	2.11	2.11	2.11	2.77	2.77
3/4	1.05	1.65	2.11	2.11	2.11	2.11	2.87	2.87
1	1.315	1.65	2.77	2.77	2.77	2.77	3.38	3.38
1 1/4	1.66	1.65	2.77	2.77	2.77	2.77	3.56	3.56
1 1/2	1.9	1.65	2.77	2.77	2.77	2.77	3.68	3.68
2	2.375	1.65	2.77	2.77	2.77	2.77	3.91	3.91
2 1/2	2.875	2.11	3.18	3.18	3.18	3.18	5.16	5.16
3	3.5	2.11	3.18	3.18	3.18	3.18	4.49	4.49
3 1/2	4	2.11	3.18	3.18	3.18	3.18	5.74	5.74
4	4.5	2.11	3.18	3.18	3.18	3.18	6.02	6.02
5	5.563	2.77	3.40	3.40	3.40	3.40	6.55	6.55
6	6.625	2.77	3.40	3.40	3.40	3.40	7.11	7.11
8	8.625	2.77	3.76	3.76	6.35	7.04	8.18	8.18
10	10.75	3.4	4.19	4.19	6.35	7.80	9.27	9.27
12	12.75	4.01	4.78	4.78	6.35	8.38	9.53	10.31
14	14	3.96	6.35	7.92	7.92	9.53	9.53	11.13
16	16	4.19	6.35	7.92	7.92	9.53	93.53	12.70
18	18	4.19	6.35	7.92	7.92	11.13	11.13	11.13

Dimension	O.D.,Inch	SCH60	SCH80S	SCH80	SCH100	SCH120	SCH140	SCH160	XXS
1/8	0.405	1.73	2.4	2.41	2.41	2.41	2.41	2.41	2.41
1/4	0.54	2.24	3.02	3.02	3.02	3.02	3.02	3.02	3.02
3/8	0.675	2.31	3.2	3.2	3.2	3.2	3.2	3.2	3.2
1/2	0.84	2.77	3.73	3.73	3.73	3.73	3.73	4.78	3.73
3/4	1.05	2.87	3.91	3.91	3.91	3.91	3.91	5.56	3.91
1	1.315	3.38	4.55	4.55	4.55	4.55	4.55	6.35	4.55
1 1/4	1.66	3.56	4.85	1.85	1.85	1.85	1.85	6.35	7.47
1 1/2	1.9	3.68	5.08	5.08	5.08	5.08	5.08	7.14	7.82
2	2.375	3.91	7.14	7.14	7.14	7.14	7.14	8.48	9.09
2 1/2	2.875	5.16	7.01	7.01	7.01	7.01	7.01	9.53	9.70
3	3.5	4.49	7.62	7.62	7.62	7.62	7.62	11.13	10.16
3 1/2	4	5.74	8.08	8.08	8.08	8.08	8.08	0.00	11.07
4	4.5	6.02	8.56	8.56	8.56	11.13	11.13	13.49	14.02
5	5.563	6.55	9.53	9.53	9.53	12.70	12.70	15.88	15.24
6	6.625	7.11	10.97	10.97	10.97	14.27	14.27	18.26	16.15
8	8.625	10.31	12.70	12.70	15.09	18.26	20.62	23.01	17.12
10	10.75	12.70	12.70	15.09	18.26	22.45	25.40	28.58	19.05
12	12.75	14.27	12.70	17.48	21.44	25.40	28.58	33.32	21.95
14	14	15.09	12.70	19.05	23.82	28.58	31.75	32.71	22.23
16	16	16.66	12.70	21.44	26.19	31.75	36.53	40.49	25.40
18	18	19.05	12.70	23.83	29.36	34.93	39.67	45.24	25.40



Sanitary Tube



Standard:

- ISO,SMS,DIN,3A,DS etc.

Material:

-304,316L,321,304L,316

Specification:

-- ϕ 12*1.5mm -219*2mm,length 6M/3M/1M

Fineness:

-Inner and outer fineness of mirror $R_a \leq 0.8 \mu m$,
inner and outer mechanical polish and electric polish
 $R_a \leq 0.38 \mu m$, external surface can be gross
polished or sub-gross polished

3A			SMS-DS		t(mm)		ISO/DF			ISO2037)ISO2851)	
Size	D	t(mm)	Size	D	1	2	Size	D	t(mm)	Size	t(mm)
1/2"	12.7	1.65	25	1.25	1.25	1.5	1/2"	12.7	1.5/1	12	1.0
3/4"	19	1.65	32	1.25	1.25	1.5	3/4"	19.1	1.5/1	12.7	1.0
1"	25.4	1.65	38	1.25	1.25	1.5	1"	25.4	1.5/1.2	17.2	1.0
1 1/2"	38.1	1.65	51	1.25	1.25	1.5	1 1/4"	31.8	1.5/1.2	21.3	1.0
2"	50.8	1.65	63.5	1.50	1.5	2.0	1 1/2"	38.1	1.5/1.2	25	1.2/1.6
2 1/2"	63.5	1.65	76	1.60	1.6	2.0	45	45	2.0	33.7	1.2/1.6
3"	76.2	1.65	89	2.0	2.0	2.0	48	48	1.5	38	1.2/1.6
4"	101.6	2.1	101.6	2.0	2.0	2.0	2"	50.8	1.5	40	1.2/1.6
6"	152.4	2.8					57	57	2.0	51	1.2/1.6
8"	203.2	2.8					2 1/2"	63.5	2.0	63.50	1.6
10"	254	3.4					3"	76.2	2.0	70	1.6
12"	305	3.4					3 1/2"	89	2.0	76.1	1.6
							4"	101.6	2.0	88.9	2.0
							108	108.00	2.0	101.6	2.0
							114.3	114.30	2.0	114.3	2.0
							133	133	3.0	139.7	2.0
							159	159.00	3.0	138.3	2.6
							204	204	2.0	219.1	2.6

DIN11850-1/DIN11850-2				BS4825									
Size	Dxt	Dx1	Dxt	Size	D	t(mm)		ISO1127			JIS G3447		
						1	2	Size	D	t(mm)	Size	D	t(mm)
DN10	12x1.5	13x1.5	14x2.0	12.7	12.7	1.2	1.2	26.9	26.9	1.6	1"	25.4	1.2
DN15	18x1.5	19x1.5	20x2.0	15.88	15.88	1.2	1.2	33.7	33.7	2.0	1 1/4"	31.8	1.2
DN20	22x1.5	23x1.5	24x2.0	19.05	19.05	1.2	1.2	42.4	42.4	2.0	1 1/2"	38.1	1.2
DN25	28x1.5	29x1.5	30x2.0	25.4	25.4	1.2	1.2	48.3	48.3	2.0	2"	50.8	1.5
DN32	34x1.5	35x1.5	36x2.0	38.1	38.1	1.2	1.2	60.3	60.3	2.0	2.5"	63.5	2.0
DN40	40x1.5	41x1.5	42x2.0	50.8	50.8	1.2	1.2	76.2	76.2	2.0	3"	76.2	2.0
DN50	52x1.5	53x1.5	154x2.0	63.5	63.5	1.6	1.6	88.9	88.9	2.0	3 1/2"	89	2.0
DN65	70x2.5	70x2.0	70x2.0	76.2	76.2	1.6	1.6	114.3	114.3	2.0	4"	101.6	2.0
DN80	85x2.0	85x2.0	85x2.0	101.6	101.6	2.0	2.0	139.7	139.7	2.0			
DN100	104x2.0	104x2.0	104x2.0	114.3	114.3	2.0	2.0	168.3	168.3	3.6			
DN125	129x2.0	129x2.0	129x2.0	139.7	139.7	2.0	2.0	219.1	219.1	3.6			
DN150	154x2.0	154x2.0	154x2.0	168.3	168.3	2.6	2.6						
DN200	204x2.0	204x2.0	204x2.0	219.1	219.1	2.6	2.6						
	Series-1	Series-2	Series-3										

General roughness standard （Ra Value）

Grade	Ra （μm）	Surface feature	Application
Mirror polish	≤0.4	No visible texture, clear reflection	Pharmaceutical aseptic equipment, food contact surfaces （FDA/EHEDG）
Precision polish	0.4-0.8	Slight texture, smooth feel	Dairy product pipeline, high-purity chemical medium transportation
Industrial polish	0.8-1.6	Visible uniform texture, no burrs	General chemical pipelines, architectural decoration pipes
Mechanical polish	1.6-3.2	Directional stripes, anti-fingerprint property	Elevator interior, appliance casing
Sand blasting	3.2-6.3	Uniformly smooth and gritty texture	Hidden works, structural support components