



### Seamless Stainless Steel Pipe ASTM 312 TP316/316L

#### Dimension Specifications:

ASTM A312-10 / ASME SA312-10 - Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes

#### Material Specifications:

TP316

TP316L

#### Size Range:

1/8"NB – 4"NB

#### Wall Thickness:

SCH 10S, 40S, 80S, 160S, STD, XS, XXS

#### Finishing:

Annealed and Pickled (AP)

#### Recommended Bend Radius

A bend radius of 3x the external tube diameter is recommended for cold bending of tubes with tube benders or by hand.

#### Welding Suitability

Tubes made of TP316 & TP316L are suitable for arc welding according to usual techniques. The welding filler should be selected in accordance with DIN EN 1600 and DIN EN 12072 part 1 taking into account the type of application and the welding technique.

#### Chemical Composition:

SS316/SS316L Chemical Composition in %								
	C	Mn	P	S	Si	Ni	Cr	Mo
Min.						11.0	16.0	2.00
Max.	0.035	2.000	0.045	0.030	1.000	14.0	18.0	3.00

#### Mechanical Properties of the tubes at room temperature:

SS316/SS316L	Tensile Strength $R_m$ N/mm <sup>2</sup>	Upper Yield Point $R_{eH}$ N/mm <sup>2</sup> min.	Elongation at rupture $A_5$ % min.	Hardness Test HRB
Min.	515	205	35	
Max.				75





### Elevated Temperature Factor

Elevated Temperature Rating Factor is calculated using as per ASME B31.3. Dual Grades such as TP316/316L meet the requirements for the lower maximum carbon content of the L grades and the higher minimum yield and tensile strength of the non-L grades.

°F	-76	200	400	600	800	1000
°C	-60	93	204	315	426	537
Rating Factor	1.00	1.00	0.96	0.85	0.79	0.76



### Ordering Information:

PS - 01 - AP - NB - 02 X 080  
 I II III IV V VI

- I Type of Item** : PS Stainless Steel Pipes
- II Material Grade** : 01 SS316/SS316L Plain End
- III Item Finish** : AP Annealed & Pickled
- IV Size Designator** : NB Norminal Bore Size
- V OD for tube** :

For Inch NB sizes

Size	1/8"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Code	02	04	05	06	08	10	12
Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Code	16	20	24	32	40	48	64

### VI Pipe Thickness :

Size	SCH10S	SCH40S	SCH80S	SCH160S	SCHXXS
Code	010	040	080	160	XXS



Seamless Stainless Steel Pipe ASTM 312 TP316/316L Working Pressure & Size Range Table

Pipe Size NB (Inche)	Pipe Size NB	Outer Diameter, OD (MM)	Wall Thickness (MM)	Schedule		Inner Diameter ID (MM)	Working Pressure (BAR)	Burst Pressure (BAR)	Weight /6MTRS (KG)
1/8	6	10.3	1.73	40S	STD	6.8	474	1778	2.2
1/8	6	10.3	2.41	80S	XS	5.5	698	2618	2.8
1/4	8	13.7	2.24	40S	STD	9.2	460	1725	3.8
1/4	8	13.7	3.02	80S	XS	7.6	650	2438	4.8
3/8	10	17.1	1.65	10S		13.8	263	870	3.8
3/8	10	17.1	2.31	40S	STD	12.5	371	1391	5.2
3/8	10	17.1	3.20	80S	XS	10.7	537	2014	6.7
1/2	15	21.3	2.77	40S	STD	15.8	356	1335	7.7
1/2	15	21.3	3.73	80S	XS	13.9	497	1864	9.8
1/2	15	21.3	4.75	160S		11.8	659	2471	11.8
1/2	15	21.3	7.47		XXS	6.4	1165	4369	13.5
3/4	20	26.7	2.87	40S	STD	20.9	289	1084	11.8
3/4	20	26.7	3.91	80S	XS	18.8	406	1523	13.4
3/4	20	26.7	5.56	160S		15.6	608	2280	17.6
3/4	20	26.7	7.82		XXS	11.0	921	3454	21.8
1	25	33.4	3.38	40S	STD	26.6	271	1016	15.0
1	25	33.4	4.55	80S	XS	24.3	375	1406	19.4
1	25	33.4	6.35	160S		20.7	547	2051	25.4
1	25	33.4	9.09		XXS	15.2	840	3150	32.7
1 1/4	32	42.2	3.56	40S	STD	35.1	223	836	20.3
1 1/4	32	42.2	4.85	80S	XS	32.5	311	1166	26.8
1 1/4	32	42.2	6.35	160S		29.5	419	1571	33.6
1 1/4	32	42.2	9.70		XXS	22.8	684	2565	46.5
1 1/2	40	48.3	3.68	40S	STD	40.9	200	750	24.3
1 1/2	40	48.3	5.08	80S	XS	38.1	282	1058	32.4
1 1/2	40	48.3	7.14	160S		34.0	411	1541	43.4
1 1/2	40	48.3	10.16		XXS	27.9	615	2306	57.2
2	50	60.3	2.77	10S		54.8	118	443	23.9
2	50	60.3	3.91	40S	STD	52.5	169	634	32.6
2	50	60.3	5.54	80S	XS	49.3	244	915	44.8
2	50	60.3	8.74	160S		42.8	402	1508	66.6
2	50	60.3	11.07		XXS	38.2	525	1969	80.4
2 1/2	65	73.0	3.05	10S		66.9	107	401	32.2
2 1/2	65	73.0	5.16	40S	STD	62.7	185	694	52.8
2 1/2	65	73.0	7.01	80S	XS	59.0	256	960	69.8
2 1/2	65	73.0	9.52	160S		53.9	357	1339	90.3
3	80	88.9	3.05	10S		82.8	87	326	38.7
3	80	88.9	5.49	40S	STD	77.9	160	600	69.0
4	100	114.3	3.05	10S		108.2	68	255	51.0
4	100	114.3	6.02	40S	STD	102.3	136	510	98.0

Note: Working Pressure Calculation: Calculated from ASME B31.1, with values from AMSE B31.3



### Seamless Stainless Steel Pipe ASTM 312 TP316/316L Ordering Code

No.	Part Number	Description
1	PS-01-AP-NB-02-040	1/8"NB x SCH40S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (10.3 x 1.73)
2	PS-01-AP-NB-02-080	1/8"NB x SCH80S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (10.3 x 2.41)
3	PS-01-AP-NB-04-040	1/4"NB x SCH40S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (13.7 x 2.24)
4	PS-01-AP-NB-04-080	1/4"NB x SCH80S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (13.7 x 3.02)
5	PS-01-AP-NB-06-010	3/8"NB x SCH10S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (17.1 x 1.65)
6	PS-01-AP-NB-06-040	3/8"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (17.1 x 2.31)
7	PS-01-AP-NB-06-080	3/8"NB x SCH80S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (17.14 x 3.20)
8	PS-01-AP-NB-08-040	1/2"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (21.3 x 2.77)
9	PS-01-AP-NB-08-080	1/2"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (21.3 x 3.73)
10	PS-01-AP-NB-08-160	1/2"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (21.3 x 4.75)
11	PS-01-AP-NB-08-XXS	1/2"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (21.3 x 7.47)
12	PS-01-AP-NB-12-040	3/4"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (26.7 x 2.87)
13	PS-01-AP-NB-12-080	3/4"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (26.7 x 3.91)
14	PS-01-AP-NB-12-160	3/4"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (26.7 x 5.56)
15	PS-01-AP-NB-12-XXS	3/4"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (26.7 x 7.82)
16	PS-01-AP-NB-16-040	1"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (33.4 x 3.38)
17	PS-01-AP-NB-16-080	1"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (33.4 x 4.55)
18	PS-01-AP-NB-16-160	1"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (33.4 x 6.35)
19	PS-01-AP-NB-16-XXS	1"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (33.4 x 9.09)
20	PS-01-AP-NB-20-040	1 1/4"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (42.2 x 3.56)
21	PS-01-AP-NB-20-080	1 1/4"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (42.2 x 4.85)
22	PS-01-AP-NB-20-160	1 1/4"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (42.2 x 6.35)
23	PS-01-AP-NB-20-XXS	1 1/4"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (42.2 x 9.70)
24	PS-01-AP-NB-24-040	1 1/2"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (48.3 x 3.68)
25	PS-01-AP-NB-24-080	1 1/2"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (48.3 x 5.08)
26	PS-01-AP-NB-24-160	1 1/2"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (48.3 x 7.14)
27	PS-01-AP-NB-24-XXS	1 1/2"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (48.3 x 10.16)
28	PS-01-AP-NB-32-010	2"NB x SCH10S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (60.3 x 2.77)
29	PS-01-AP-NB-32-040	2"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (60.3 x 3.91)
30	PS-01-AP-NB-32-080	2"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (60.3 x 5.54)
31	PS-01-AP-NB-32-160	2"NB x SCH160S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (60.3 x 8.74)
32	PS-01-AP-NB-32-XXS	2"NB x SCHXXS x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (60.3 x 11.07)
33	PS-01-AP-NB-32-010	2 1/2"NB x SCH10S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (73.0 x 3.05)
34	PS-01-AP-NB-32-040	2 1/2"NB x SCH40S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (73.0 x 5.16)
35	PS-01-AP-NB-32-080	2 1/2"NB x SCH80S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (73.0 x 7.01)
36	PS-01-AP-NB-48-010	3"NB x SCH10S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (88.9 x 3.05)
37	PS-01-AP-NB-48-040	3"NB x SCH40S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (88.9 x 5.49)
38	PS-01-AP-NB-64-010	4"NB x SCH10S x 6 MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (114.3 x 3.05)
39	PS-01-AP-NB-64-040	4"NB x SCH40S x 6MTR SS316/316L SMLS PIPE,ANNEAL & PICKLE,PE (114.3 x 6.02)

Note: Working Pressure Calculation: Calculated from ASME B31.1, with values from AMSE B31.3



### **Chuan Kok Hardware & Machinery Pte Ltd**

**Address:** 1783 Geylang Bahru #01-02, Kallang Distripark Singapore 339708

**Telephone Number:** +65 6294 2566

**Fax Number:** +65 6295 7013

**Email Address:** [info@chuankok.com](mailto:info@chuankok.com)

**Website:** [www.chuankok.com](http://www.chuankok.com)

**Business Registration Number:** 198201577Z

**Country of Registration:** Singapore

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