



Introduction

When you want to reduce the risk of leakage in your hydraulic and instrumentation system, consider Parker seamless stainless steel tubing. Every step of the tube production is controlled to ensure consistent quality. Parker tubing are characterized by the ovality, concentricity and hardness limits required for superior performance in hydraulic and instrumentation system applications, Plus Parker tubing offers the high surface smoothness and close dimensional tolerances needed to ensure there are no leakages when connected with Parker fittings.

Features

- A complete package of tube fittings and tubing via a single order
- Weld-ability
- Plugged ends
- Superior OD Finish and Close tolerances
- Strictly controlled ovality, concentricity and hardness
- High cleanliness of Tubing Inside
- 100% Eddy Current and Hydrostatic tested
- Parker branded for quality assure

Benefits

- The installer only needs to develop one source for products
- Reduce your vendors
- Controlled and consistent quality of steel grades provide easy welding
- Protection of tube ends and ID from environments contamination
- Ensure a high integrity system with Parker tubing and fittings
- Superior performance in a wide variety of system applications, temperatures and pressures
- Suitable for clean environment application
- Easy to identify brand and tubing specifications along the full length of the tubing

Technical Specification

Chemical Composition

Elements	Cr	Ni	Mo	Mn	Si	C	S	P
ASTM A269	16-18%	10-15%	2.0-3.0%	2.0 max	0.75 max	0.035 max	0.03 max	0.04 max
High MO > 2.5%	16-18%	10-15%	2.5-3.0%	2.0 max	0.75 max	0.03 max	0.03 max	0.04 max



Material Standards.

Grade: 316L
UNS: S31603
ASTM: A213/A269
ASME: SA213

Term Definition:

CR: Cold Rolled
CD: Cold Drawn
Nominal Length: 6 meters/EA

Finish Hardness.

190HRB



Option Material Tubing

Any other special such as 321,321H,304,304L,317, 904L, 6Mo, 825 and 625 etc. material tubing, please contact Parker Instrumentation Sales Department.

Dimension

ASTM A269 Tubing

Tube O.D. inch	Nominal Wall Thickness inch	ASTM A269 Tubing Ordering Number		Weight kg/m
		Cold Rolled Tubing	Cold Drawn Tubing	
1/8"	0.028"	TUBE 1/8X.028-316L-CR	TUBE 1/8X.028-316L-CD	0.04
1/4"	0.028"	TUBE 1/4X.028-316L-CR	TUBE 1/4X.028-316L-CD	0.10
	0.035"	TUBE 1/4X.035-316L-CR	TUBE 1/4X.035-316L-CD	0.12
	0.049"	TUBE 1/4X.049-316L-CR	TUBE 1/4X.049-316L-CD	0.16
	0.065"	TUBE 1/4X.065-316L-CR	TUBE 1/4X.065-316L-CD	0.19
3/8"	0.035"	TUBE 3/8X.035-316L-CR	TUBE 3/8X.035-316L-CD	0.19
	0.049"	TUBE 3/8X.049-316L-CR	TUBE 3/8X.049-316L-CD	0.26
	0.065"	TUBE 3/8X.065-316L-CR	TUBE 3/8X.065-316L-CD	0.32
	0.083"	TUBE 3/8X.083-316L-CR	TUBE 3/8X.083-316L-CD	0.39
	0.095"	TUBE 3/8X.095-316L-CR	TUBE 3/8X.095-316L-CD	0.43
1/2"	0.035"	TUBE 1/2X.035-316L-CR	TUBE 1/2X.035-316L-CD	0.26
	0.049"	TUBE 1/2X.049-316L-CR	TUBE 1/2X.049-316L-CD	0.36
	0.065"	TUBE 1/2X.065-316L-CR	TUBE 1/2X.065-316L-CD	0.46
	0.083"	TUBE 1/2X.083-316L-CR	TUBE 1/2X.083-316L-CD	0.56
3/4"	0.049"	TUBE 3/4X.049-316L-CR	TUBE 3/4X.049-316L-CD	0.55
	0.065"	TUBE 3/4X.065-316L-CR	TUBE 3/4X.065-316L-CD	0.72
	0.083"	TUBE 3/4X.083-316L-CR	TUBE 3/4X.083-316L-CD	0.89
	0.095"	TUBE 3/4X.095-316L-CR	TUBE 3/4X.095-316L-CD	1.00
	0.105"	TUBE 3/4X.105-316L-CR	TUBE 3/4X.105-316L-CD	1.09
	0.109"	TUBE 3/4X.109-316L-CR	TUBE 3/4X.109-316L-CD	1.13
1"	0.065"	TUBE 1X.065-316L-CR	TUBE 1X.065-316L-CD	0.98
	0.083"	TUBE 1X.083-316L-CR	TUBE 1X.083-316L-CD	1.23
	0.095"	TUBE 1X.095-316L-CR	TUBE 1X.095-316L-CD	1.39
1-1/4"	0.12"	TUBE 1-1/4X.12-316L-CR	TUBE 1-1/4X.12-316L-CD	2.19
	0.134"	TUBE 1-1/4X.134-316L-CR	TUBE 1-1/4X.134-316L-CD	2.41
1-1/2"	0.12"	TUBE 1-1/2X.12-316L-CR	TUBE 1-1/2X.12-316L-CD	2.67
	0.134"	TUBE 1-1/2X.134-316L-CR	TUBE 1-1/2X.134-316L-CD	2.95

Tube O.D. mm	Nominal Wall Thickness mm	ASTM A269 Tubing Ordering Number		Weight kg/m
		Cold Rolled Tubing	Cold Drawn Tubing	
3	0.71	TUBE 3MMX0.71-316L-CR	TUBE 3MMX0.71-316L-CD	0.04
4	1.00	TUBE 4MMX1.0-316L-CR	TUBE 4MMX1.0-316L-CD	0.08
	0.75	TUBE 6MMX0.75-316L-CR	TUBE 6MMX0.75-316L-CD	0.10
6	1.00	TUBE 6MMX1.0-316L-CR	TUBE 6MMX1.0-316L-CD	0.13
	1.50	TUBE 6MMX1.5-316L-CR	TUBE 6MMX1.5-316L-CD	0.17
8	1.00	TUBE 8MMX1.0-316L-CR	TUBE 8MMX1.0-316L-CD	0.18
	1.50	TUBE 8MMX1.5-316L-CR	TUBE 8MMX1.5-316L-CD	0.24
10	1.00	TUBE 10MMX1.0-316L-CR	TUBE 10MMX1.0-316L-CD	0.23
	1.50	TUBE 10MMX1.5-316L-CR	TUBE 10MMX1.5-316L-CD	0.32
	2.00	TUBE 10MMX2.0-316L-CR	TUBE 10MMX2.0-316L-CD	0.40
	3.00	TUBE 10MMX3.0-316L-CR	TUBE 10MMX3.0-316L-CD	0.53
12	1.00	TUBE 12MMX1.0-316L-CR	TUBE 12MMX1.0-316L-CD	0.28
	1.50	TUBE 12MMX1.5-316L-CR	TUBE 12MMX1.5-316L-CD	0.39
	2.00	TUBE 12MMX2.0-316L-CR	TUBE 12MMX2.0-316L-CD	0.50
	2.50	TUBE 12MMX2.5-316L-CR	TUBE 12MMX2.5-316L-CD	0.59
14	2.00	TUBE 14MMX2.0-316L-CR	TUBE 14MMX2.0-316L-CD	0.60
	2.50	TUBE 14MMX2.5-316L-CR	TUBE 14MMX2.5-316L-CD	0.72
	3.00	TUBE 14MMX3.0-316L-CR	TUBE 14MMX3.0-316L-CD	0.83
	3.50	TUBE 14MMX3.5-316L-CR	TUBE 14MMX3.5-316L-CD	0.92
	4.00	TUBE 14MMX4.0-316L-CR	TUBE 14MMX4.0-316L-CD	1.00
15	1.00	TUBE 15MMX1.0-316L-CR	TUBE 15MMX1.0-316L-CD	0.35
	1.50	TUBE 15MMX1.5-316L-CR	TUBE 15MMX1.5-316L-CD	0.51
16	1.80	TUBE 15MMX1.8-316L-CR	TUBE 15MMX1.8-316L-CD	0.59
	1.50	TUBE 16MMX1.5-316L-CR	TUBE 16MMX1.5-316L-CD	0.54
	2.00	TUBE 16MMX2.0-316L-CR	TUBE 16MMX2.0-316L-CD	0.70
18	2.50	TUBE 16MMX2.5-316L-CR	TUBE 16MMX2.5-316L-CD	0.84
	1.50	TUBE 18MMX1.5-316L-CR	TUBE 18MMX1.5-316L-CD	0.62
	2.00	TUBE 18MMX2.0-316L-CR	TUBE 18MMX2.0-316L-CD	0.80
	2.20	TUBE 18MMX2.2-316L-CR	TUBE 18MMX2.2-316L-CD	0.87
	2.50	TUBE 18MMX2.5-316L-CR	TUBE 18MMX2.5-316L-CD	0.97
20	3.00	TUBE 18MMX3.0-316L-CR	TUBE 18MMX3.0-316L-CD	1.13
	2.00	TUBE 20MMX2.0-316L-CR	TUBE 20MMX2.0-316L-CD	0.90
	2.50	TUBE 20MMX2.5-316L-CR	TUBE 20MMX2.5-316L-CD	1.09
	3.00	TUBE 20MMX3.0-316L-CR	TUBE 20MMX3.0-316L-CD	1.28



TUBING

Tube O.D. mm	Nominal Wall Thickness mm	ASTM A269 Tubing Ordering Number		Weight kg/m
		Cold Rolled Tubing	Cold Drawn Tubing	
22	2.00	TUBE 22MMX2.0-316L-CR	TUBE 22MMX2.0-316L-CD	1.00
	2.80	TUBE 22MMX2.8-316L-CR	TUBE 22MMX2.8-316L-CD	1.34
	3.50	TUBE 22MMX3.5-316L-CR	TUBE 22MMX3.5-316L-CD	1.62
	4.00	TUBE 22MMX4.0-316L-CR	TUBE 22MMX4.0-316L-CD	1.80
25	2.00	TUBE 25MMX2.0-316L-CR	TUBE 25MMX2.0-316L-CD	1.15
	2.50	TUBE 25MMX2.5-316L-CR	TUBE 25MMX2.5-316L-CD	1.41
	3.00	TUBE 25MMX3.0-316L-CR	TUBE 25MMX3.0-316L-CD	1.65
28	2.00	TUBE 28MMX2.0-316L-CR	TUBE 28MMX2.0-316L-CD	1.30
	2.50	TUBE 28MMX2.5-316L-CR	TUBE 28MMX2.5-316L-CD	1.59
	3.50	TUBE 28MMX3.5-316L-CR	TUBE 28MMX3.5-316L-CD	2.14
	4.00	TUBE 28MMX4.0-316L-CR	TUBE 28MMX4.0-316L-CD	2.40

High Molybdenum Tubing

Tube O.D. inch	Nominal Wall Thickness inch	High Molybdenum Tubing Ordering Number		Weight kg/m
		Cold Rolled Tubing	Cold Drawn Tubing	
1/8"	0.028"	TUBE1/8x.028-SSCRMO2.5	TUBE1/8x.028-SSCDMO2.5	0.04
3/16"	0.028"	TUBE3/16x.028-SSCRMO2.5	TUBE3/16x.028-SSCDMO2.5	0.07
1/4"	0.035"	TUBE1/4x.035-SSCRMO2.5	TUBE1/4x.035-SSCDMO2.5	0.12
	0.049"	TUBE1/4x.049-SSCRMO2.5	TUBE1/4x.049-SSCDMO2.5	0.16
	0.065"	TUBE1/4x.065-SSCRMO2.5	TUBE1/4x.065-SSCDMO2.5	0.19
3/8"	0.035"	TUBE3/8x.035-SSCRMO2.5	TUBE3/8x.035-SSCDMO2.5	0.19
	0.049"	TUBE3/8x.049-SSCRMO2.5	TUBE3/8x.049-SSCDMO2.5	0.26
	0.065"	TUBE3/8x.065-SSCRMO2.5	TUBE3/8x.065-SSCDMO2.5	0.32
1/2"	0.035"	TUBE1/2x.035-SSCRMO2.5	TUBE1/2x.035-SSCDMO2.5	0.26
	0.049"	TUBE1/2x.049-SSCRMO2.5	TUBE1/2x.049-SSCDMO2.5	0.36
	0.065"	TUBE1/2x.065-SSCRMO2.5	TUBE1/2x.065-SSCDMO2.5	0.46
	0.083"	TUBE1/2x.083-SSCRMO2.5	TUBE1/2x.083-SSCDMO2.5	0.56
3/4"	0.049"	TUBE3/4x.049-SSCRMO2.5	TUBE3/4x.049-SSCDMO2.5	0.55
	0.065"	TUBE3/4x.065-SSCRMO2.5	TUBE3/4x.065-SSCDMO2.5	0.72
	0.083"	TUBE3/4x.083-SSCRMO2.5	TUBE3/4x.083-SSCDMO2.5	0.89
	0.095"	TUBE3/4x.095-SSCRMO2.5	TUBE3/4x.095-SSCDMO2.5	1.00
	0.105"	TUBE3/4x.105-SSCRMO2.5	TUBE3/4x.105-SSCDMO2.5	1.09
1"	0.049"	TUBE1x.049-SSCRMO2.5	TUBE1x.049-SSCDMO2.5	0.75
	0.065"	TUBE1x.065-SSCRMO2.5	TUBE1x.065-SSCDMO2.5	0.98
	0.083"	TUBE1x.083-SSCRMO2.5	TUBE1x.083-SSCDMO2.5	1.23
	0.105"	TUBE1x.105-SSCRMO2.5	TUBE1x.105-SSCDMO2.5	1.52
	0.125"	TUBE1x.125-SSCRMO2.5	TUBE1x.125-SSCDMO2.5	1.76
1-1/4"	0.065"	TUBE1-1/4x.065-SSCRMO2.5	TUBE1-1/4x.065-SSCDMO2.5	1.24
	0.083"	TUBE1-1/4x.083-SSCRMO2.5	TUBE1-1/4x.083-SSCDMO2.5	1.56
1-1/2"	0.083"	TUBE1-1/2x.083-SSCRMO2.5	TUBE1-1/2x.083-SSCDMO2.5	1.90
	0.095"	TUBE1-1/2x.095-SSCRMO2.5	TUBE1-1/2x.095-SSCDMO2.5	2.15
	0.109"	TUBE1-1/2x.109-SSCRMO2.5	TUBE1-1/2x.109-SSCDMO2.5	2.45

Tube O.D. mm	Nominal Wall Thickness mm	High Molybdenum Tubing Ordering Number		Weight kg/m
		Cold Rolled Tubing	Cold Drawn Tubing	
3	0.71	TUBE3MMX0.71-SSCRMO2.5	TUBE3MMX0.71-SSCDMO2.5	0.04
6	1.00	TUBE6MMX1.0-SSCRMO2.5	TUBE6MMX1.0-SSCDMO2.5	0.13
	1.50	TUBE6MMX1.5-SSCRMO2.5	TUBE6MMX1.5-SSCDMO2.5	0.17
8	1.00	TUBE8MMX1.0-SSCRMO2.5	TUBE8MMX1.0-SSCDMO2.5	0.18
	1.50	TUBE8MMX1.5-SSCRMO2.5	TUBE8MMX1.5-SSCDMO2.5	0.24
10	1.00	TUBE10MMX1.0-SSCRMO2.5	TUBE10MMX1.0-SSCDMO2.5	0.23
	1.50	TUBE10MMX1.5-SSCRMO2.5	TUBE10MMX1.5-SSCDMO2.5	0.32
12	1.00	TUBE12MMX1.0-SSCRMO2.5	TUBE12MMX1.0-SSCDMO2.5	0.28
	1.50	TUBE12MMX1.5-SSCRMO2.5	TUBE12MMX1.5-SSCDMO2.5	0.39
	2.00	TUBE12MMX2.0-SSCRMO2.5	TUBE12MMX2.0-SSCDMO2.5	0.50
14	2.50	TUBE12MMX2.5-SSCRMO2.5	TUBE12MMX2.5-SSCDMO2.5	0.59
	2.00	TUBE14MMX2.0-SSCRMO2.5	TUBE14MMX2.0-SSCDMO2.5	0.60
	2.50	TUBE14MMX2.5-SSCRMO2.5	TUBE14MMX2.5-SSCDMO2.5	0.72
16	1.50	TUBE16MMX1.5-SSCRMO2.5	TUBE16MMX1.5-SSCDMO2.5	0.54
	2.00	TUBE16MMX2.0-SSCRMO2.5	TUBE16MMX2.0-SSCDMO2.5	0.70
18	1.50	TUBE18MMX1.5-SSCRMO2.5	TUBE18MMX1.5-SSCDMO2.5	0.62
	2.00	TUBE18MMX2.0-SSCRMO2.5	TUBE18MMX2.0-SSCDMO2.5	0.80
20	2.00	TUBE20MMX2.0-SSCRMO2.5	TUBE20MMX2.0-SSCDMO2.5	0.90
22	2.00	TUBE22MMX2.0-SSCRMO2.5	TUBE22MMX2.0-SSCDMO2.5	1.00
25	2.00	TUBE25MMX2.0-SSCRMO2.5	TUBE25MMX2.0-SSCDMO2.5	1.15
	2.50	TUBE25MMX2.5-SSCRMO2.5	TUBE25MMX2.5-SSCDMO2.5	1.41

Remarks: For big size (1 1/2" - 2") or thick wall tubing, pls consult with Parker upon your request



Dimensional Tolerances

Product	Size	Tolerances OD mm	Tolerances Length mm	Tolerance Wall Thickness %
CR Tubing	1/8"-1 1/2"	±0.08 mm	0-3.00mm	±10
	3 mm - 28 mm	±0.08 mm	0-3.00mm	±10
CD Tubing	1/8 mm – 1 1/2 mm	±0.10 mm	0-3.00mm	
	3 mm – 28 mm	±0.10 mm	0-3.00mm	±10

Cleaning and Packaging

Product	Size
CD Tubing	20 uin (0.5 um) Ra Max
CD Tubing	Standard Finish (Reference ASTM A269)

All of Tubing ends are protected with polyethylene caps.

CR Tubing is packed in single polyethylene, heat-sealed bags.

CD Tubing is also packed in single polyethylene, heat-sealed bags.

Maximum Allowable Working Pressure Rating Table In Psi Unit

316L STAINLESS STEEL (Seamless)																
Tube O.D.	Wall Thickness															
	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"	5600	6900	8200	9500	12100	16800										
1/8"						8600	10900									
3/16"						5500	7000	10300								
1/4"						4000	5100	7500	10300							
5/16"							4100	5900	8100							
3/8"							3300	4800	6600							
1/2"							2600	3700	5100	6700						
5/8"								3000	4000	5200	6100					
3/4"								2400	3300	4300	5000	5800				
7/8"								2100	2800	3600	4200	4900				
1"									2400	3200	3700	4200	4700			
1-1/4"										2500	2900	3300	3700	4100	4900	
1-1/2"											2400	2700	3000	3400	4000	4500
2"												2000	2200	2500	2900	3200

Remark: Ratings in gray not suitable for gas service.