

Conversions

General Conversion Factors

inches to mm:	inches x 25.4 = mm
feet to meter:	feet x 0.3048 = meter
meter to feet:	meter x 3.28 = feet
bar to psi:	bar x 14.5 = psi
psi to bar:	psi x 0.069 = bar
psi to kPa:	psi x 6.9 = kPa

Pressure Conversions

bar	psi	kPa	MPa
0.1	1.5	10	0.01
0.2	2.9	20	0.02
0.3	4.4	30	0.03
0.4	5.8	40	0.04
0.5	7.3	50	0.05
0.6	8.7	60	0.06
0.7	10.2	70	0.07
0.8	11.6	80	0.08
0.9	13.1	90	0.09
1	14.5	100	0.1
2	29.0	200	0.2
3	43.5	300	0.3
4	58.0	400	0.4
5	72.5	500	0.5
6	87.0	600	0.6
7	101.5	700	0.7
8	116.0	800	0.8
9	130.5	900	0.9
10	145	1000	1
20	290	2000	2
30	435	3000	3
40	580	4000	4
50	725	5000	5
60	870	6000	6
70	1015	7000	7
80	1160	8000	8
90	1305	9000	9
100	1450	10000	10
200	2900	20000	20
300	4350	30000	30
400	5800	40000	40
500	7250	50000	50
600	8700	60000	60
700	10150	70000	70
800	11600	80000	80
900	13050	90000	90
1000	14500	100000	100
1100	15950	110000	110
1200	17400	120000	120
1300	18850	130000	130

Dimension Conversions

mm	inches	mm	inches	inches	mm	ft	mm
0.050	0.002"	1.50	0.059"	1/32"	0.79	1	304.8
0.064	0.0025"	2.00	0.079"	1/16"	1.59		
0.075	0.003"	3.00	0.118"	3/32"	2.38		
0.100	0.004"	4.00	0.157"	1/8"	3.17		
0.13	0.005"	4.60	0.181"	1/4"	6.35		
0.17	0.007"	6.00	0.236"	5/16"	7.94		
0.20	0.008"	6.35	0.250"	1/2"	12.70		
0.25	0.010"	6.40	0.252"	1"	25.40		
0.38	0.015"	7.00	0.276"				
0.50	0.020"	10.00	0.394"				
0.75	0.030"	12.70	0.500"				
1.00	0.039"						

Temperature Conversions

°C	°F	°C	°F	°C	°F	°C	°F
-40	-40	100	212	235	455	450	842
-35	-31	105	221	240	464	475	887
-30	-22	110	230	245	473	500	932
-25	-13	115	239	250	482	525	977
-20	-4	120	248	255	491	550	1022
-15	5	125	257	260	500	575	1067
-10	14	130	266	265	509	600	1112
-5	23	°C	°F	270	518	625	1157
0	32	135	275	275	527	650	1202
5	41	140	284	280	536	675	1247
10	50	145	293	285	545	700	1292
15	59	150	302	290	554	725	1337
20	68	155	311	295	563	750	1382
25	77	160	320	300	572	775	1427
30	86	165	329	305	581	800	1472
35	95	170	338	°C	°F	825	1517
40	104	175	347	310	590	850	1562
45	113	180	356	315	599	875	1607
50	122	185	365	320	608	900	1652
55	131	190	374	325	617	925	1697
60	140	195	383	330	626	950	1742
65	149	200	392	335	635	975	1787
70	158	205	401	340	644	1000	1832
75	167	210	410	345	653		
80	176	215	419	350	662		
85	185	220	428	375	707		
90	194	225	437	400	752		
95	203	230	446	425	797		

Length Conversions

mm	inches	mm	inches	inches	mm
0.064	0.0025"	3.00	0.118"	1/32"	0.79
0.13	0.005"	4.00	0.157"	1/16"	1.59
0.17	0.007"	4.60	0.181"	3/32"	2.38
0.25	0.010"	6.00	0.236"	1/8"	3.17
0.50	0.020"	6.35	0.250"	1/4"	6.35
0.75	0.030"	6.40	0.252"	5/16"	7.94
1.00	0.039"	7.00	0.276"	1/2"	12.70
1.50	0.059"	10.00	0.394"	1"	25.40
2.00	0.079"	12.70	0.500"		

Volume Chart

ID/mm	ID/inch	μl/cm	μl/inch	ID/mm	ID/inch	μl/cm	μl/inch
0.050	.002"	0.02	0.05	1.00	.040"	7.85	20.59
0.064	.0025"	0.03	0.08	1.40	.055"	15.39	38.93
0.075	.003"	0.04	0.12	1.52	.060"	18.15	46.33
0.10	.004"	0.08	0.21	1.59	.062"	19.86	49.47
0.13	.005"	0.13	0.32	1.65	.065"	21.38	54.38
0.17	.0067"	0.23	0.58	1.70	.067"	22.70	57.78
0.18	.007"	0.25	0.63	1.78	.070"	24.88	63.06
0.25	.010"	0.49	1.29	2.00	.079"	31.42	80.32
0.38	.015"	1.13	2.90	2.10	.083"	34.64	88.66
0.50	.020"	1.96	5.15	2.16	.085"	36.64	92.99
0.75	.030"	4.42	11.58	2.40	.094"	45.24	113.72

This chart is only a guideline. Because of ID tolerances for our tubing (+/-0.025mm (.001") for premium grade tubing and +/- 0.050 mm (.002") for standard tubing) volumes have to be measured to get an exact result.

Frit Volume

Internal frit volumes are theoretical and calculated by multiplying the total frit volume by the proportion of the pores in the frit (porosity proportion). Stated frit porosi-

ties are only nominal and do not reflect the maximum pore size of a frit. The chart below will help you in selecting the right frit for your application.

SS and Titanium Frits & Polymer Frits

Porosity in μm	Max. pore size in μm	Particles retained in μm	Porosity in %
0.2	1	1.0	22
0.5	2	1.5	26
1	3	3.0	30
2	5	3.5-5.0	35
5	15	15.0	38
10	30	30	40

Standard Threads

Place fitting on the fitting detail below to identify the thread size.

