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Nitrogen	Expands	Normal			Charged: psi@70F										
Mass	800	Liters	cu inches	cu feet											
Grams	cc/g	Expanded			1ml cyl	2ml cyl	10ml cyl	15ml cyl	20ml cyl	30mlcyl	50ml cyl	60ml cyl	70ml cyl	80ml cyl	98ml cyl
0.1	80	0.08	4.88	0.003	1,267	633	127	84	63	42	25	21	18	16	13
0.2	160	0.16	9.76	0.006	2,534	1,267	253	169	127	84	51	42	36	32	26
0.3	240	0.24	14.65	0.008		1,900	380	253	190	127	76	63	54	48	39
0.4	320	0.32	19.53	0.011		2,534	507	338	253	169	101	84	72	63	52
0.5	400	0.40	24.41	0.014			633	422	317	211	127	106	90	79	65
1.0	800	0.80	48.82	0.028			1,267	845	633	422	253	211	181	158	129
2.0	1,600	1.60	97.64	0.057			2,534	1,689	1,267	845	507	422	362	317	259
3.0	2,400	2.40	146.46	0.085				2,534	1,900	1,267	760	633	543	475	388
4.0	3,200	3.20	195.28	0.113					2,534	1,689	1,014	845	724	633	517
5.0	4,000	4.00	244.09	0.141						2,111	1,267	1,056	905	792	646
6.0	4,800	4.80	292.91	0.170						2,534	1,520	1,267	1,086	950	776
7.0	5,600	5.60	341.73	0.198							1,774	1,478	1,267	1,109	905
8.0	6,400	6.40	390.55	0.226							2,027	1,689	1,448	1,267	1,034
9.0	7,200	7.20	439.37	0.254							2,280	1,900	1,629	1,425	1,163
10.0	8,000	8.00	488.19	0.283							2,534	2,111	1,810	1,584	1,293
11.0	8,800	8.80	537.01	0.311								2,323	1,991	1,742	1,422
12.0	9,600	9.60	585.83	0.339								2,534	2,172	1,900	1,551
13.0	10,400	10.40	634.65	0.367									2,353	2,059	1,681
14.0	11,200	11.20	683.46	0.396									2,534	2,217	1,810
15.0	12,000	12.00	732.28	0.424										2,375	1,939
16.0	12,800	12.80	781.10	0.452										2,534	2,068
17.0	13,600	13.60	829.92	0.480										2,692	2,198
18.0	14,400	14.40	878.74	0.509											2,327

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Helium Mass Grams	Expands 5600 cc/g	Normal Liters Expanded	Normal cu inches Expanded	Normal cu feet Expanded	Charged: psi@70F 1ml cyl	2ml cyl	10ml cyl	15ml cyl	20ml cyl	30mlcyl	50ml cyl	60ml cyl	70ml cyl	80ml cyl	95ml cyl
0.05	280	0.28	17.09	0.010		2,217	443	296	222	148	89	74	63	55	47
0.1	560	0.56	34.17	0.020			887	591	443	296	177	148	127	111	93
0.2	1,120	1.12	68.35	0.040			1,774	1,182	887	591	355	296	253	222	187
0.3	1,680	1.68	102.52	0.059			2,660	1,774	1,330	887	532	443	380	333	280
0.4	2,240	2.24	136.69	0.079				2,365	1,774	1,182	709	591	507	443	373
0.5	2,800	2.80	170.87	0.099					2,217	1,478	887	739	633	554	467
0.6	3,360	3.36	205.04	0.119					2,660	1,774	1,064	887	760	665	560
0.7	3,920	3.92	239.21	0.138						2,069	1,242	1,035	887	776	653
0.8	4,480	4.48	273.39	0.158						2,365	1,419	1,182	1,014	887	747
0.9	5,040	5.04	307.56	0.178						2,660	1,596	1,330	1,140	998	840
1.0	5,600	5.60	341.73	0.198							1,774	1,478	1,267	1,109	934
1.1	6,160	6.16	375.91	0.218							1,951	1,626	1,394	1,219	1,027
1.2	6,720	6.72	410.08	0.237							2,128	1,774	1,520	1,330	1,120
1.3	7,280	7.28	444.25	0.257							2,306	1,921	1,647	1,441	1,214
1.4	7,840	7.84	478.43	0.277							2,483	2,069	1,774	1,552	1,307
1.5	8,400	8.40	512.60	0.297							2,660	2,217	1,900	1,663	1,400
1.6	8,960	8.96	546.77	0.316								2,365	2,027	1,774	1,494
1.7	9,520	9.52	580.94	0.336								2,513	2,154	1,885	1,587
1.8	10,080	10.08	615.12	0.356								2,660	2,280	1,995	1,680
1.9	10,640	10.64	649.29	0.376									2,407	2,106	1,774
2.0	11,200	11.20	683.46	0.396									2,534	2,217	1,867
2.1	11,760	11.76	717.64	0.415									2,660	2,328	1,960
2.2	12,320	12.32	751.81	0.435										2,439	2,054
2.3	12,880	12.88	785.98	0.455										2,550	2,147
2.4	13,440	13.44	820.16	0.475										2,660	2,240
2.5	14,000	14.00	854.33	0.494											2,334

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Argon Mass Grams	Expands 560 cc/g	Normal Liters	Normal cu inches	Normal cu feet	Charged: psi@70F										
		Expanded			1ml cyl	2ml cyl	10ml cyl	15ml cyl	20ml cyl	30mlcyl	50ml cyl	60ml cyl	70ml cyl	80ml cyl	98ml cyl
0.1	56	0.06	3.42	0.002	887	443	89	59	44	30	18	15	13	11	9
0.2	112	0.11	6.83	0.004	1,774	887	177	118	89	59	35	30	25	22	18
0.3	168	0.17	10.25	0.006	2,660	1,330	266	177	133	89	53	44	38	33	27
0.4	224	0.22	13.67	0.008		1,774	355	236	177	118	71	59	51	44	36
0.5	280	0.28	17.09	0.010		2,217	443	296	222	148	89	74	63	55	45
1.0	560	0.56	34.17	0.020			887	591	443	296	177	148	127	111	90
2.0	1,120	1.12	68.35	0.040			1,774	1,182	887	591	355	296	253	222	181
3.0	1,680	1.68	102.52	0.059			2,660	1,774	1,330	887	532	443	380	333	271
4.0	2,240	2.24	136.69	0.079				2,365	1,774	1,182	709	591	507	443	362
5.0	2,800	2.80	170.87	0.099					2,217	1,478	887	739	633	554	452
6.0	3,360	3.36	205.04	0.119					2,660	1,774	1,064	887	760	665	543
7.0	3,920	3.92	239.21	0.138						2,069	1,242	1,035	887	776	633
8.0	4,480	4.48	273.39	0.158						2,365	1,419	1,182	1,014	887	724
9.0	5,040	5.04	307.56	0.178						2,660	1,596	1,330	1,140	998	814
10.0	5,600	5.60	341.73	0.198							1,774	1,478	1,267	1,109	905
11.0	6,160	6.16	375.91	0.218							1,951	1,626	1,394	1,219	995
12.0	6,720	6.72	410.08	0.237							2,128	1,774	1,520	1,330	1,086
13.0	7,280	7.28	444.25	0.257							2,306	1,921	1,647	1,441	1,176
14.0	7,840	7.84	478.43	0.277							2,483	2,069	1,774	1,552	1,267
15.0	8,400	8.40	512.60	0.297							2,660	2,217	1,900	1,663	1,357
16.0	8,960	8.96	546.77	0.316								2,365	2,027	1,774	1,448
17.0	9,520	9.52	580.94	0.336								2,513	2,154	1,885	1,538
18.0	10,080	10.08	615.12	0.356								2,660	2,280	1,995	1,629
19.0	10,640	10.64	649.29	0.376									2,407	2,106	1,719
20.0	11,200	11.20	683.46	0.396									2,534	2,217	1,810
21.0	11,760	11.76	717.64	0.415									2,660	2,328	1,900
22.0	12,320	12.32	751.81	0.435										2,439	1,991
23.0	12,880	12.88	785.98	0.455										2,550	2,081
24.0	13,440	13.44	820.16	0.475										2,660	2,172
25.0	14,000	14.00	854.33	0.494											2,262
26.0	14,560	14.56	888.50	0.514											2,353

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CO2 Mass Grams	Expands 500 cc/g	Normal Liters	Normal cu inches	Normal cu feet	Charged: psi@70F, Filling ratio: 75%										
		Expanded			1ml cyl	2ml cyl	10ml cyl	15ml cyl	20ml cyl	30mlcyl	50ml cyl	60ml cyl	70ml cyl	80ml cyl	98ml cyl
0.1	50	0.05	3.05	0.002	580	333	64	38	25	12	2	0	0	0	0
0.2	100	0.10	6.10	0.004	850	580	137	89	64	38	17	12	8	5	2
0.3	150	0.15	9.15	0.005	850	742	207	137	101	64	30	25	19	15	9
0.4	200	0.20	12.20	0.007	850	850	272	184	137	89	48	38	31	25	17
0.5	250	0.25	15.26	0.009	850	850	333	229	173	123	64	51	42	35	25
1.0	500	0.50	30.51	0.018		850	580	426	333	229	137	123	96	82	64
8.0	4,000	4.00	244.09	0.141			850	850	850	850	765	696	634	580	500
12.0	6,000	6.00	366.14	0.212				850	850	850	850	850	789	742	662
15.0	7,500	7.50	457.68	0.265					850	850	850	850	850	832	750
20.0	10,000	10.00	610.24	0.353						850	850	850	850	850	850
30.0	15,000	15.00	915.35	0.530							850	850	850	850	850
40.0	20,000	20.00	1220.47	0.706								850	850	850	850
50.0	25,000	25.00	1525.59	0.883									850	850	850
60.0	30,000	30.00	1830.71	1.059										850	850
70.0	35,000	35.00	2135.83	1.236											850
74.0	37,000	37.00	2257.87	1.307											850

CO2 Purity by Grade

Grade	Purity %
Research	99.999
Supercritical Fluid	99.998
Laser	99.95
Anaerobic	99.95
Beverage	99.9
Food	99.9
Bone Dry	99.8
Medical	99.5
Industrial	99.5

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F	°C	liter	Calculated value (cc) Expanded Volume
-45	-42.8	0.429	429.1
-40	-40.0	0.434	434.3
-30	-34.4	0.445	444.7
-20	-28.9	0.455	455.0
-10	-23.3	0.465	465.4
0	-17.8	0.476	475.7
10	-12.2	0.486	486.1
20	-6.7	0.496	496.4
30	-1.1	0.507	506.8
40	4.4	0.517	517.2
50	10.0	0.528	527.5
60	15.6	0.538	537.9
62	16.7	0.540	539.9
70	21.1	0.548	548.2
72	22.2	0.550	550.3
80	26.7	0.559	558.6
90	32.2	0.569	568.9
100	37.8	0.579	579.3
110	43.3	0.590	589.6
120	48.9	0.600	600.0
130	54.4	0.610	610.4
140	60.0	0.621	620.7
145	62.8	0.626	625.9
150	65.6	0.631	631.1

CO2 expansion for 1g (NET WT) based on temperature
This is provided for reference only and was designed to provide you with the basic information needed to evaluate CO2 in a range of temperatures.

CO2=1g
mol weight=44.01
1mol=22.4L
0℃（32F）