

Compressibility of Gases, Volumetric									
Gage Pressure		Standard Cubic Feet (scf) of gas or Cubic Meter(m ³) of gas compressed into one cubic foot or one cubic meter of liquid volume at the given pressure and temperature of 70°F (21°C)							
		Theoretical for Ideal Gas	Actual For Real Gases						
			Air	Argon	Helium	Hydrogen	Nitrogen	Oxygen	Natural Gas
psig	bar	scf	scf	scf	scf	scf	scf	scf	scf
1000	69.0	69.03	70.29	71.79	66.37	66.26	69.30	71.83	80.01
1100	75.9	75.83	77.21	79.10	72.64	72.50	76.08	79.15	89.24
1200	82.8	82.63	84.14	86.44	78.86	78.66	82.82	86.52	98.40
1300	89.7	89.44	91.07	93.79	85.03	84.73	89.49	93.89	107.78
1400	96.6	96.25	98.00	101.20	91.16	90.83	96.14	101.27	117.89
1500	103.4	103.04	104.77	108.50	98.12	96.84	102.74	108.66	127.24
1600	110.3	109.84	111.37	115.90	104.28	102.83	109.29	116.09	137.34
1700	117.2	116.65	117.97	123.30	110.40	108.75	115.78	123.50	147.13
1800	124.1	123.45	124.57	130.70	116.49	114.66	122.25	130.88	156.31
1900	131.0	130.25	131.17	138.00	122.54	120.49	128.66	138.27	166.61
2000	137.9	137.05	137.77	145.30	128.55	126.28	134.90	145.68	175.76
2100	144.8	143.86	144.36	152.60	134.53	132.50	140.91	153.04	185.76
2200	151.7	150.66	150.91	159.90	140.47	137.71	147.33	160.34	194.45
2300	158.6	157.46	156.97	167.10	146.37	143.37	153.46	167.64	203.23
2400	165.5	164.27	163.04	174.30	152.25	148.97	159.48	174.92	213.39
2500	172.4	171.07	169.11	181.50	158.08	154.48	165.39	182.04	221.36
2600	179.3	177.87	175.17	188.60	163.89	159.96	171.24	189.18	229.57
2700	186.2	184.67	181.24	195.60	169.66	165.43	177.04	196.27	236.82
2800	193.1	191.48	187.30	202.50	175.40	170.84	182.69	203.26	244.92
2900	200.0	198.28	193.37	209.40	181.10	176.20	188.32	210.24	252.33
3000	206.9	205.08	198.96	216.30	186.78	181.49	193.82	217.09	259.67
3100	213.8	211.88	204.40	223.00	192.42	186.85	199.14	223.86	265.59
3200	220.7	218.69	209.83	229.70	198.03	192.07	204.61	230.56	271.73
3300	227.6	225.49	215.27	236.30	203.60	197.31	209.86	237.18	278.46
3400	234.5	323.29	220.70	242.80	209.15	202.50	215.05	243.65	284.75
3500	241.4	239.10	226.14	249.20	214.66	207.64	220.26	250.10	290.24
3600	248.3	245.90	231.58	255.50	220.15	212.46	225.18	256.41	296.34
3700	255.2	252.71	236.87	261.80	225.60	217.70	230.10	262.63	300.92
3800	262.1	259.50	241.69	267.90	231.03	222.69	234.91	268.69	306.46
3900	269.0	266.31	246.51	274.00	236.42	227.71	239.70	274.74	311.92
4000	275.9	273.11	251.34	279.90	241.79	232.63	244.39	280.66	316.55
4100	282.8	279.91	256.16	285.90	247.13	237.50	249.01	286.35	321.82
4200	289.7	286.71	260.98	291.60	252.44	242.34	253.51	292.12	325.90
4300	296.6	293.52	265.81	297.30	257.72	247.13	257.92	297.68	329.88
4400	303.4	300.32	270.51	302.80	262.97	251.84	262.38	303.20	334.52
4500	310.3	307.12	274.85	308.30	268.19	256.60	266.60	308.67	338.33
4600	317.2	313.93	279.20	313.70	273.39	261.28	270.86	314.08	342.43
4700	324.1	320.73	283.54	319.10	278.55	265.94	275.07	319.36	341.71
4800	331.0	327.53	287.89	324.30	283.70	270.53	279.11	324.10	350.39
4900	337.9	334.33	292.23	329.40	288.81	275.08	282.97	328.96	353.14
5000	344.8	341.14	296.57	334.40	293.90	279.62	286.67	333.83	356.93
5100	351.7	347.94	300.92	339.40	298.96	284.17	290.43	338.69	361.78
5200	358.6	354.74	304.84	344.30	304.00	288.64	294.39	343.56	364.71
5300	365.5	361.54	308.57	349.00	309.01	293.03	298.18	348.42	367.15
5400	372.4	368.35	312.30	353.70	313.99	297.41	301.92	353.29	370.30
5500	379.3	375.15	316.03	358.40	318.95	301.83	305.80	358.15	373.38
5600	386.2	381.95	319.77	362.90	323.88	306.17	309.65	363.02	374.56
5700	393.0	388.76	323.50	367.40	328.80	309.15	313.26	367.88	377.53
5800	400.0	395.56	327.23	371.70	333.68	313.63	316.50	372.75	380.45
5900	406.9	402.36	330.80	376.00	338.54	317.95	319.76	377.22	382.58
6000	413.8	409.16	334.06	380.30	343.37	321.96	322.77	380.96	386.11

This Table is based on absolute pressure (psia) = gage pressure (psig) + 4/17 psia.

One atmosphere = 14.7 psia.