

# Measures of Pressure

1 pound per square inch = 144 pounds per square foot = 0.068 atmosphere = 2.042 inches of mercury at 62° F = 27.7 inches of water at 62°F = 2.31 feet of water at 62°

1 atmosphere = 30 inches of mercury at 62°F = 14.7 pounds per square inch = 2116.3 pounds per square foot = 33.95 feet of water at 62°F.

1 foot of water at 62°F = 62.355 pounds per square foot = 0.433 pounds per square inch.

1 inch of mercury at 62°F = 1.132 feet of water = 13.58 inches of water = 0.491 pound per square inch.

Column of water 12 inches high, 1 inch diameter = 0.341 pound.

## Metric Pressure Conversion Table

PSI	MPa	kgf/cm <sup>2</sup>	Bar	ATM	PSI	MPa	kgf/cm <sup>2</sup>	Bar	ATM	PSI	MPa	kgf/cm <sup>2</sup>	Bar	ATM	PSI	MPa	kgf/cm <sup>2</sup>	Bar	ATM
25	0.17	1.76	1.72	1.70	2500	17.24	175.77	172.50	170.00	5200	35.85	365.60	358.80	353.60	7900	54.47	555.42	545.10	537.20
50	0.34	3.52	3.45	3.40	2600	17.93	182.80	179.40	176.80	5300	36.54	372.63	365.70	340.40	8000	55.16	562.46	552.00	544.00
75	0.52	5.27	5.18	5.10	2700	18.62	189.83	186.30	183.60	5400	37.23	379.66	372.60	367.20	8100	55.85	569.49	558.90	550.80
100	0.69	7.03	6.90	6.80	2800	19.30	196.86	193.20	190.40	5500	37.92	386.69	379.50	374.00	8200	56.54	576.52	565.80	557.60
200	1.38	14.06	13.80	13.60	2900	19.99	203.89	200.10	197.20	5600	38.61	393.72	386.40	380.80	8300	57.23	583.55	572.70	564.40
300	2.07	21.09	20.70	20.40	3000	20.68	210.92	207.00	204.00	5700	39.30	400.75	393.30	387.60	8400	57.92	590.58	579.60	571.20
400	2.76	28.12	27.60	27.20	3100	21.37	217.95	213.90	210.80	5800	39.99	407.78	400.20	394.40	8500	58.61	597.61	586.50	578.00
500	3.45	35.15	34.50	34.00	3200	22.06	224.98	220.80	217.60	5900	40.68	414.81	407.10	401.20	8600	59.30	604.64	593.40	584.80
600	4.14	42.18	41.40	40.80	3300	22.75	232.01	227.70	224.40	6000	41.37	421.84	414.00	408.00	8700	59.98	611.67	600.30	591.60
700	4.83	49.21	48.30	47.60	3400	23.44	239.04	234.60	231.20	6100	42.06	428.87	420.90	414.80	8800	60.67	618.70	607.20	598.40
800	5.52	56.24	55.20	54.40	3500	24.13	246.07	241.50	238.00	6200	42.75	435.90	427.80	421.60	8900	61.36	625.73	614.10	605.20
900	6.20	63.28	62.10	61.20	3600	24.82	253.10	248.40	244.80	6300	43.44	442.93	434.70	428.40	9000	62.05	632.76	621.00	612.00
1000	6.90	70.31	69.00	68.00	3700	25.51	260.14	255.30	251.60	6400	44.13	449.96	441.60	435.20	9100	62.74	639.79	627.90	618.80
1100	7.58	77.34	75.90	74.80	3800	26.20	267.17	262.20	258.40	6500	44.82	457.00	448.50	442.00	9200	63.43	646.82	634.80	625.60
1200	8.27	84.37	82.80	81.60	3900	26.89	274.20	269.10	265.20	6600	45.51	464.03	455.40	448.80	9300	64.12	653.86	641.70	632.40
1300	8.96	91.40	89.70	88.40	4000	27.58	281.23	276.00	272.00	6700	46.20	471.06	462.30	455.60	9400	64.81	660.89	648.60	639.20
1400	9.65	98.43	96.60	95.20	4100	28.27	288.26	282.90	278.80	6800	46.88	478.09	469.20	462.40	9500	65.50	667.92	655.50	646.00
1500	10.34	105.46	103.50	102.00	4200	28.96	295.29	289.80	285.60	6900	47.57	485.12	476.10	469.20	9600	66.18	674.95	663.30	652.80
1600	11.03	112.49	110.40	108.80	4300	29.65	302.32	296.70	292.40	7000	48.26	492.15	483.00	476.00	9700	66.88	681.98	669.30	659.60
1700	11.72	119.52	117.30	115.60	4400	30.34	309.35	303.60	299.20	7100	48.95	499.18	489.90	482.80	9800	67.57	689.01	676.20	666.40
1800	12.41	126.55	124.20	122.40	4500	31.03	316.38	310.50	306.00	7200	49.64	506.21	496.80	489.60	9900	68.26	696.04	683.10	673.20
1900	13.10	133.58	131.10	129.20	4600	31.72	323.41	317.40	312.80	7300	50.33	513.24	503.70	496.40	10000	68.95	703.07	690.00	680.00
2000	13.79	140.61	138.00	136.00	4700	32.41	330.44	324.30	319.60	7400	51.02	520.27	510.60	503.20	11000	75.84	773.38	759.00	748.00
2100	14.48	147.64	144.90	142.80	4800	33.10	337.47	331.20	326.40	7500	51.71	527.30	517.50	510.00	12000	82.74	843.68	828.00	816.00
2200	15.17	154.68	151.80	149.60	4900	33.78	344.50	338.10	333.20	7600	52.40	534.33	524.40	516.80	13000	89.63	913.99	897.00	884.00
2300	15.86	161.71	158.70	156.40	5000	34.47	351.54	345.00	340.00	7700	53.09	541.36	531.30	523.60	14000	96.53	984.30	966.00	952.00
2400	16.55	168.74	165.60	163.20	5100	35.16	358.57	351.90	346.80	7800	53.78	548.39	538.20	530.40	15000	103.42	1054.60	1035.00	1020.00

PSI x 0.0068948 = megapascals (MPa) = meganewton/meter<sup>2</sup>

PSI x 0.070307 = kilogram-force per square centimeter

PSI x 0.0690 = Bars

PSI x 0.0680 = Atmospheres

1MPa = 10 Bars

1Bar = 14.5 PSI

1 kgf/cm<sup>2</sup> = 14.22 PSI

1 PSI = 0.00689 MPa

## Pressure Conversion

Feet of water to inches of mercury

Feet of Water	In. Hg	Feet of Water	In. Hg
1	0.9	18	15.9
2	1.8	20	17.7
4	3.5	22	19.4
6	5.3	24	21.2
8	7.1	26	23.0
10	8.8	28	24.8
12	10.6	30	26.5
14	12.4	32	28.3
16	14.1	34	30.0

## Vacuum Conversion Table

ATM	PSI	Meter	Feet	mm	Hg inches	%
0.1	1.4	1	3' 3 <sup>3</sup> / <sub>8</sub> "	73.6	2.9	10
0.2	2.8	2	6' 6 <sup>3</sup> / <sub>4</sub> "	147.1	5.8	20
0.3	4.2	3	9' 10 <sup>1</sup> / <sub>8</sub> "	220.7	8.7	30
0.4	5.7	4	13' 1 <sup>1</sup> / <sub>2</sub> "	294.2	11.6	40
0.5	7.1	5	16' 4 <sup>13</sup> / <sub>16</sub> "	367.8	14.5	50
0.6	8.5	6	19' 8 <sup>3</sup> / <sub>16</sub> "	441.3	17.4	60
0.7	10.0	7	22' 11 <sup>1</sup> / <sub>16</sub> "	514.9	20.3	70
0.8	11.4	8	26' 2 <sup>15</sup> / <sub>16</sub> "	588.4	23.2	80
0.9	12.8	9	29' 6 <sup>3</sup> / <sub>8</sub> "	662.0	26.0	90
1.0	14.2	10	32' 9 <sup>1</sup> / <sub>16</sub> "	735.5	29.0	100