Compressed air table

			ISOTHERMAL COMPRESSION					ADIABATIC COMPRESSION						
			Mean Effective Pressure		Horse Power per Cu. Ft.			Mean Effective Pressure		Horse Power per Cu. Ft.			Final Temperature °F. For Adiabatic Compression	
GAUGE PRESS. — LBS.	ABSOLUTE PRESS. — LBS.=P_2	RATIO OF COMPRESSION — $\frac{P_2}{P_1} = r$	From Atmosphere — Col. 5 x 14.7	Constant — $\log_e r$	From Atmosphere — Col. 7 x 14.7	Constant — .00436 x $\log_e r$	Terminal Volume V_2	From Atmosphere — Col. 10 x 14.7	Constant — $3.44\left[\left(\frac{P_2}{P_1}\right)^{.291}-1\right]$	From Atmosphere — Col. 12 x 14.7	Constant — $.015\left[\left(\frac{P_2}{P_1}\right)^{.291}-1\right]$	Terminal Volume V_2	Based on 60° F. Initial Temp. Col. 15 x 520 - 460 or $520\left[\left(\frac{P_2}{P_1}\right)^{.291}-.460\right]$	Constant $(r)^{.291} = \left(\frac{P_2}{P_1}\right)^{.291}$
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3.0	17.7	1.204	2.7	0.18	.012	.0008	.83	2.807	.191	.0118	.0008	.8764	89	1.05
5.9	20.6	1.401	5.0	0.34	.022	.0015	.71	5.203	.354	.0220	.0015	.7874	114	1.10
8.9	23.6	1.606	6.9	0.47	.030	.0021	.62	7.450	.507	.0323	.0022	.7145	139	1.14
10.0	24.7	1.680	7.6	0.52	.033	.0023	.59	8.210	.559	.0353	.0024	.6918	146	1.16
11.8	26.5	1.802	8.6	0.59	.038	.0026	.55	9.440	.642	.0412	.0028	.6582	159	1.18
15.0	29.7	2.020	10.3	0.70	.045	.0031	.49	11.49	.781	.0500	.0034	.6070	179	1.23
17.7	32.4	2.203	11.6	0.79	.051	.0034	.45	13.06	.888	.0573	.0039	.5707	197	1.26
20.0	34.7	2.361	12.6	0.86	.055	.0037	.42	14.35	.976	.0632	.0043	.5430	208	1.28
23.6	38.3	2.606	14.1	0.96	.061	.0042	.38	16.26	1.106	.0705	.0048	.5060	229	1.32
25.0	39.7	2.701	14.6	0.99	.064	.0043	.37	16.97	1.154	.0735	.0050	.4940	235	1.33
26.5	41.2	2.801	15.1	1.03	.066	.0045	.36	17.69	1.203	.0779	.0053	.4817	243	1.35
30.0	44.7	3.041	16.3	1.11	.071	.0048	.33	19.32	1.315	.0838	.0057	.4541	260	1.38
32.4	47.1	3.203	17.1	1.16	.075	.0051	.31	20.40	1.388	.0896	.0061	.4378	270	1.40
35.0	49.7	3.381	17.9	1.22	.078	.0053	.30	21.53	1.465	.0940	.0064	.4210	282	1.42
38.3	53.0	3.605	18.8	1.28	.082	.0056	.28	22.84	1.556	.1000	.0068	.4025	296	1.45
40.0	54.7	3.721	19.3	1.31	.084	.0057	.27	23.55	1.602	.1030	.0070	.3931	303	1.46
41.2	55.9	3.801	19.6	1.33	.086	.0058	.26	24.00	1.633	.1043	.0071	.3877	308	1.47
44.1	58.8	4.000	20.4	1.39	.089	.0061	.25	25.09	1.708	.1088	.0074	.3742	320	1.49
45.0	59.7	4.061	20.6	1.40	.090	.0061	.25	25.44	1.732	.1118	.0076	.3695	324	1.50
47.1	61.8	4.204	21.0	1.43	.092	.0063	.24	26.22	1.785	.1147	.0078	.3605	330	1.52
50.0	64.7	4.401	21.8	1.48	.095	.0065	.23	27.25	1.855	.1191	.0081	.3495	340	1.54
53.0	67.7	4.605	22.5	1.53	.098	.0067	.22	28.30	1.926	.1235	.0084	.3380	350	1.56
55.0	69.7	4.742	22.9	1.56	.100	.0068	.21	28.98	1.971	.1264	.0086	.3311	358	1.57
55.9	70.6	4.805	23.1	1.57	.101	.0068	.21	29.28	1.993	.1279	.0087	.3280	360	1.58
58.8	73.5	5.000	23.7	1.61	.104	.0070	.20	30.20	2.055	.1323	.0090	.3193	370	1.59
60.0	74.7	5.082	23.9	1.62	.104	.0071	.20	30.59	2.080	.1338	.0091	.3153	375	1.60
61.8	76.5	5.202	24.3	1.65	.106	.0072	.19	31.17	2.120	.1352	.0092	.3102	380	1.61
65.0	79.7	5.422	24.8	1.69	.108	.0074	.18	32.16	2.187	.1397	.0095	.3010	390	1.63
67.7	82.4	5.602	25.4	1.72	.111	.0075	.18	32.94	2.241	.1441	.0098	.2945	400	1.65
70.0	84.7	5.762	25.8	1.75	.112	.0076	.17	33.60	2.286	.1470	.0100	.2886	406	1.66
73.5	88.2	6.002	26.4	1.79	.115	.0078	.17	34.63	2.357	.1515	.0103	.2802	418	1.68
75.0	89.7	6.102	26.6	1.81	.116	.0079	.16	35.05	2.384	.1529	.0104	.2760	420	1.69
78.0	92.7	6.302	27.1	1.84	.118	.0081	.16	35.82	2.437	.1559	.0106	.2704	430	1.70
80.0	94.7	6.442	27.3	1.86	.119	.0081	.15	36.38	2.476	.1589	.0108	.2663	434	1.72
82.4	97.1	6.602	27.8	1.89	.121	.0082	.15	37.01	2.518	.1618	.0110	.2622	442	1.73
85.0	99.7	6.782	28.1	1.91	.123	.0083	.15	37.65	2.563	.1647	.0112	.2570	447	1.74
88.2	102.9	6.992	28.7	1.95	.125	.0085	.14	38.47	2.618	.1677	.0114	.2512	458	1.76
90.0	104.7	7.122	28.9	1.96	.126	.0086	.14	38.95	2.649	.1706	.0116	.2480	460	1.77
92.8	107.5	7.303	29.3	1.99	.128	.0087	.14	39.60	2.695	.1735	.0118	.2440	469	1.78
95.0	109.7	7.463	29.6	2.01	.129	.0088	.13	40.17	2.733	.1750	.0119	.2397	474	1.79
97.1	111.8	7.603	29.9	2.03	.130	.0089	.13	40.67	2.766	.1779	.0121	.2370	480	1.80
100.0	114.7	7.803	30.2	2.05	.132	.0090	.13	41.32	2.815	.1809	.0123	.2321	485	1.82
102.9	117.6	7.997	30.7	2.08	.134	.0091	.12	42.01	2.859	.1838	.0125	.2290	494	1.83
105.0	119.7	8.143	30.8	2.10	.135	.0092	.12	42.50	2.892	.1852	.0126	.2261	495	1.84
107.3	122.0	8.299	31.2	2.12	.136	.0093	.12	43.01	2.926	.1881	.0128	.2227	504	1.85
110.0	124.7	8.483	31.4	2.14	.137	.0093	.12	43.63	2.969	.1911	.0130	.2195	508	1.86
112.0	126.7	8.610	31.7	2.15	.138	.0094	.12	44.01	2.996	.1926	.0131	.2172	514	1.87
115.0	129.7	8.823	32.0	2.18	.140	.0095	.11	44.72	3.041	.1955	.0133	.2130	519	1.88
117.6	132.3	9.000	32.4	2.20	.141	.0096	.11	45.28	3.082	.1970	.0134	.2102	527	1.89
120.0	134.7	9.163	32.6	2.22	.142	.0097	.11	45.73	3.113	.1999	.0136	.2070	529	1.90
122.0	136.7	9.295	32.8	2.23	.143	.0098	.110	46.18	3.141	.2014	.0137	.2056	537	1.91
125.0	139.7	9.503	33.1	2.25	.144	.0098	.100	46.83	3.184	.2043	.0139	.2023	541	1.92
126.7	141.4	9.614	33.2	2.26	.145	.0099	.100	47.17	3.207	.2058	.0140	.2004	547	1.93
130.0	144.7	9.844	33.6	2.29	.147	.0100	.100	47.76	3.251	.2087	.0142	.1975	549	1.94
132.3	147.0	10.00	33.8	2.30	.148	.0101	.100	48.22	3.280	.2101	.0143	.1950	559	1.95
135.0	149.7	10.18	34.1	2.32	.149	.0102	.098	48.72	3.315	.2131	.0145	.1926	560	1.96
140.0	154.7	10.52	34.6	2.35	.151	.0103	.095	49.70	3.381	.2160	0147	.1883	569	1.98
145.0	159.7	10.86	35.0	2.38	.152	.0104	.092	50.65	3.445	.2204	.0150	.1842	579	2.00
150.0	164.7	11.20	35.4	2.41	.154	.0105	.089	51.56	3.510	.2248	.0153	.1797	589	2.02
160.0	174.7	11.89	36.2	2.47	.157	.0107	.084	53.33	3.630	.2322	.0158	.1725	607	2.04
170.0	184.7	12.56	37.0	2.52	.161	.0109	.080	54.97	3.741	.2396	.0163	.1658	624	2.07
180.0	194.7	13.24	37.8	2.57	.164	.0110	.075	56.70	3.858	.2468	.0168	.1600	641	2.12
190.0	204.7	13.93	38.5	2.62	.168	.0114	.072	58.20	3.961	.2542	.0173	.1543	657	2.14
200.0	214.7	14.61	39.1	2.66	.170	.0116	.068	59.79	4.070	.2601	.0177	.1496	674	2.17

Note: The "Compressed Air Table" is for air only, and hp per cu. ft. is based on atmospheric suction at sea level. For suction pressures other than 14.7, hp per cu. ft. must not be taken from column 11, but computed by multiplying the constant from column 12, by absolute intake pressure.