

STANDARD ATMOSPHERE, CONTINUED

Altitude h, ft	Temperature °R	Pressure p , in Hg	Density $\rho \times 10^4$ slug/ft ³	Kinematic Viscosity				Speed of Sound			
				$\nu \times 10^4$ ft ² /s	δ , (p/p ₀)	σ , (ρ/ρ_0)	$\sigma^{1/2}$	q/M ²	a, knots	$a\sigma^{1/2}$	
0	518.7	29.92	23.77	1.576	1.0000	1.0000	1.0000	1482	661.5	661.5	
1000	515.1	28.86	23.08	1.614	0.9644	0.9710	0.9854	1429	659.2	649.6	
2000	511.5	27.82	22.41	1.653	0.9298	0.9428	0.9710	1378	656.9	637.8	
3000	508.0	26.82	21.75	1.694	0.8962	0.9150	0.9566	1328	654.6	626.2	
4000	504.4	25.84	21.11	1.735	0.8637	0.8881	0.9424	1280	652.3	614.7	
5000	500.8	24.90	20.48	1.778	0.8320	0.8616	0.9282	1233	650.0	603.4	
6000	497.3	23.98	19.87	1.823	0.8014	0.8359	0.9143	1188	647.7	592.2	
7000	493.7	23.09	19.27	1.868	0.7716	0.8107	0.9004	1143	645.4	581.1	
8000	490.1	22.22	18.68	1.916	0.7428	0.7859	0.8865	1100	643.0	570.0	
9000	486.6	21.39	18.11	1.965	0.7148	0.7619	0.8729	1059	640.7	559.2	
10,000	483.0	20.58	17.55	2.016	0.6877	0.7383	0.8593	1019	638.3	548.5	
11,000	479.4	19.79	17.01	2.067	0.6614	0.7156	0.8459	980.2	636.0	538.0	
12,000	475.9	19.03	16.48	2.121	0.6360	0.6933	0.8327	942.6	633.6	527.6	
13,000	472.3	18.29	15.96	2.176	0.6113	0.6714	0.8194	906.0	631.2	517.2	
14,000	468.7	17.58	15.45	2.234	0.5875	0.6500	0.8062	870.4	628.8	507.0	
15,000	465.2	16.89	14.96	2.293	0.5643	0.6294	0.7933	836.4	626.4	497.0	
16,000	461.6	16.22	14.48	2.354	0.5420	0.6092	0.7805	803.3	624.0	487.1	
17,000	458.0	15.57	14.01	2.418	0.5203	0.5894	0.7677	771.3	621.6	477.2	
18,000	454.5	14.94	13.55	2.484	0.4994	0.5700	0.7550	740.1	619.2	467.5	
19,000	450.9	14.34	13.1	2.553	0.4791	0.5511	0.7424	709.9	616.8	457.9	
20,000	447.3	13.75	12.67	2.622	0.4595	0.5330	0.7301	681.2	614.3	448.5	
21,000	443.8	13.18	12.24	2.697	0.4406	0.5149	0.7176	652.8	611.9	439.1	
22,000	440.2	12.64	11.83	2.771	0.4223	0.4977	0.7055	625.9	609.4	429.9	
23,000	436.6	12.11	11.43	2.849	0.4046	0.4809	0.6934	599.8	606.9	420.9	
24,000	433.1	11.60	11.03	2.932	0.3876	0.4640	0.6812	574.1	604.4	411.7	
25,000	429.5	11.10	10.65	3.016	0.3711	0.4480	0.6694	549.8	601.9	402.9	
26,000	425.9	10.63	10.28	3.103	0.3552	0.4325	0.6576	526.3	599.4	394.2	
27,000	422.4	10.17	9.920	3.193	0.3398	0.4173	0.6460	503.6	596.9	385.6	
28,000	418.8	9.725	9.570	3.286	0.3250	0.4026	0.6345	481.7	594.4	377.2	
29,000	415.3	9.298	9.230	3.383	0.3107	0.3883	0.6231	460.6	591.9	368.8	
30,000	411.7	8.885	8.890	3.487	0.2970	0.3740	0.6116	439.9	589.3	360.4	
30,000	411.7	8.885	8.890	3.487	0.2970	0.3740	0.6116	439.9	589.3	360.4	
31,000	408.1	8.488	8.570	3.591	0.2837	0.3605	0.6004	420.4	586.8	352.3	
31,000	408.1	8.488	8.570	3.591	0.2837	0.3605	0.6004	420.4	586.8	352.3	
32,000	404.6	8.106	8.260	3.698	0.2709	0.3475	0.5895	401.6	584.2	344.4	
33,000	401.0	7.737	7.950	3.813	0.2586	0.3345	0.5783	383.1	581.6	336.4	
34,000	397.4	7.382	7.650	3.933	0.2467	0.3218	0.5673	365.4	579.0	328.5	
35,000	393.9	7.041	7.370	4.051	0.2353	0.3101	0.5568	348.9	576.4	321.0	
36,000	390.3	6.712	7.090	4.178	0.2243	0.2983	0.5461	332.6	573.8	313.4	
37,000	390.0	6.397	6.760	4.379	0.2138	0.2844	0.5333	316.8	573.6	305.9	
38,000	390.0	6.097	6.440	4.597	0.2038	0.2709	0.5205	301.8	573.6	298.5	
39,000	390.0	5.811	6.140	4.821	0.1942	0.2583	0.5082	287.8	573.6	291.5	
40,000	390.0	5.538	5.850	5.060	0.1851	0.2461	0.4961	274.2	573.6	284.5	
45,000	390.0	4.355	4.600	6.435	0.1455	0.1935	0.4399	215.6	573.6	252.3	
50,000	390.0	3.425	3.620	8.177	0.1145	0.1523	0.3902	169.7	573.6	223.8	
55,000	390.0	2.693	2.850	10.39	0.0900	0.1199	0.3463	133.6	573.6	198.6	
60,000	390.0	2.118	2.240	13.22	0.0708	0.0942	0.3070	105.0	573.6	176.1	
65,000	390.0	1.665	1.760	16.82	0.0557	0.0740	0.2721	82.49	573.6	156.1	
70,000	392.4	1.310	1.380	21.56	0.0438	0.0581	0.2409	65.08	575.3	138.6	
75,000	395.1	1.033	1.080	27.72	0.0345	0.0454	0.2132	51.29	577.3	123.1	
80,000	397.9	0.815	0.840	35.85	0.0273	0.0353	0.1880	40.17	579.3	108.9	
85,000	400.6	0.645	0.660	45.89	0.0216	0.0278	0.1666	31.78	581.3	96.87	
90,000	403.3	0.511	0.520	58.59	0.0171	0.0219	0.1479	25.21	583.3	86.28	
95,000	406.1	0.405	0.410	74.74	0.0135	0.0172	0.1313	20.01	585.3	76.87	
100,000	408.8	0.322	0.320	96.30	0.0108	0.0135	0.1160	15.72	587.3	68.14	

p_0 = standard pressure at sea level, 29.92 in Hg, 14.70 lb/in.², ρ_0 = standard density at sea level, 23.77×10^{-4} slugs/ft³, δ = pressure ratio, σ = density ratio, α = speed of sound