

Department of Aerospace Engineering
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Compressible Flow Tables for a Perfect Gas with $\gamma=1.403$

Subsonic isentropic Relationships

M	p_o/p	ρ_o/ρ	T_o/T	A/A^*		M	p_o/p	ρ_o/ρ	T_o/T	A/A^*
0.00	1.000	1.000	1.000	0.000		0.50	1.187	1.130	1.050	1.340
0.02	1.000	1.000	1.000	28.933		0.52	1.203	1.141	1.054	1.303
0.04	1.001	1.001	1.000	14.477		0.54	1.220	1.152	1.059	1.270
0.06	1.003	1.002	1.001	9.663		0.56	1.238	1.164	1.063	1.240
0.08	1.004	1.003	1.001	7.259		0.58	1.257	1.177	1.068	1.213
0.10	1.007	1.005	1.002	5.820		0.60	1.276	1.190	1.073	1.188
0.12	1.010	1.007	1.003	4.863		0.62	1.297	1.203	1.077	1.166
0.14	1.014	1.010	1.004	4.181		0.64	1.318	1.217	1.083	1.145
0.16	1.018	1.013	1.005	3.672		0.66	1.340	1.232	1.088	1.126
0.18	1.023	1.016	1.007	3.277		0.68	1.364	1.247	1.093	1.110
0.20	1.028	1.020	1.008	2.963		0.70	1.388	1.263	1.099	1.094
0.22	1.034	1.024	1.010	2.707		0.72	1.413	1.280	1.104	1.080
0.24	1.041	1.029	1.012	2.495		0.74	1.440	1.297	1.110	1.068
0.26	1.048	1.034	1.014	2.317		0.76	1.467	1.314	1.116	1.057
0.28	1.056	1.040	1.016	2.165		0.78	1.496	1.332	1.123	1.047
0.30	1.065	1.046	1.018	2.035		0.80	1.525	1.351	1.129	1.038
0.32	1.074	1.052	1.021	1.921		0.82	1.556	1.371	1.135	1.030
0.34	1.083	1.059	1.023	1.822		0.84	1.589	1.391	1.142	1.024
0.36	1.094	1.066	1.026	1.735		0.86	1.622	1.412	1.149	1.018
0.38	1.105	1.074	1.029	1.658		0.88	1.657	1.433	1.156	1.013
0.40	1.117	1.082	1.032	1.590		0.90	1.693	1.455	1.163	1.009
0.42	1.129	1.091	1.036	1.529		0.92	1.730	1.478	1.171	1.006
0.44	1.143	1.100	1.039	1.474		0.94	1.769	1.502	1.178	1.003
0.46	1.156	1.109	1.043	1.424		0.96	1.809	1.526	1.186	1.001
0.48	1.171	1.119	1.046	1.380		0.98	1.851	1.551	1.194	1.000
						1.00	1.895	1.577	1.201	1.000

Supersonic isentropic Relationships

M	p_o/p	ρ_o/ρ	T_o/T	A/A^*	v		M	p_o/p	ρ_o/ρ	T_o/T	A/A^*	v
1.00	1.895	1.577	1.201	1.000	0.000		1.90	6.706	3.882	1.727	1.554	23.530
1.02	1.940	1.604	1.210	1.000	0.130		1.92	6.916	3.969	1.743	1.579	24.090
1.04	1.987	1.631	1.218	1.001	0.350		1.94	7.134	4.057	1.758	1.604	24.650
1.06	2.035	1.659	1.226	1.003	0.640		1.96	7.358	4.148	1.774	1.631	25.210
1.08	2.085	1.688	1.235	1.005	0.970		1.98	7.590	4.240	1.790	1.658	25.770
1.10	2.137	1.718	1.244	1.008	1.330		2.00	7.830	4.335	1.806	1.685	26.320
1.12	2.191	1.749	1.253	1.011	1.730		2.02	8.077	4.432	1.822	1.714	26.860
1.14	2.247	1.781	1.262	1.015	2.160		2.04	8.332	4.532	1.839	1.743	27.410
1.16	2.305	1.814	1.271	1.020	2.600		2.06	8.596	4.634	1.855	1.772	27.950
1.18	2.365	1.847	1.281	1.025	3.070		2.08	8.868	4.738	1.872	1.803	28.490
1.20	2.428	1.882	1.290	1.030	3.550		2.10	9.149	4.844	1.889	1.834	29.020
1.22	2.492	1.917	1.300	1.037	4.050		2.12	9.439	4.953	1.906	1.866	29.560
1.24	2.559	1.954	1.310	1.043	4.560		2.14	9.738	5.065	1.923	1.898	30.090
1.26	2.628	1.991	1.320	1.050	5.090		2.16	10.047	5.179	1.940	1.932	30.610
1.28	2.700	2.030	1.330	1.058	5.620		2.18	10.366	5.295	1.958	1.966	31.130
1.30	2.774	2.069	1.341	1.066	6.160		2.20	10.695	5.415	1.975	2.001	31.650
1.32	2.851	2.110	1.351	1.075	6.710		2.22	11.035	5.536	1.993	2.037	32.170
1.34	2.930	2.152	1.362	1.084	7.270		2.24	11.385	5.661	2.011	2.073	32.680
1.36	3.013	2.195	1.373	1.094	7.830		2.26	11.746	5.789	2.029	2.111	33.190
1.38	3.098	2.239	1.384	1.104	8.400		2.28	12.119	5.919	2.047	2.149	33.690
1.40	3.186	2.284	1.395	1.115	8.970		2.30	12.504	6.052	2.066	2.188	34.190
1.42	3.277	2.330	1.406	1.126	9.550		2.32	12.901	6.189	2.085	2.228	34.690
1.44	3.372	2.378	1.418	1.138	10.130		2.34	13.310	6.328	2.103	2.269	35.180
1.46	3.470	2.427	1.430	1.150	10.710		2.36	13.732	6.470	2.122	2.311	35.670
1.48	3.571	2.477	1.441	1.163	11.300		2.38	14.167	6.616	2.141	2.353	36.160
1.50	3.675	2.529	1.453	1.176	11.880		2.40	14.615	6.764	2.161	2.397	36.650
1.52	3.784	2.582	1.466	1.190	12.470		2.42	15.078	6.916	2.180	2.441	37.130
1.54	3.896	2.636	1.478	1.204	13.060		2.44	15.555	7.072	2.200	2.487	37.600
1.56	4.011	2.692	1.490	1.219	13.650		2.46	16.046	7.230	2.219	2.533	38.080
1.58	4.131	2.749	1.503	1.234	14.240		2.48	16.553	7.392	2.239	2.580	38.550
1.60	4.255	2.807	1.516	1.250	14.830		2.50	17.075	7.558	2.259	2.629	39.010
1.62	4.383	2.867	1.529	1.266	15.420		2.52	17.614	7.727	2.280	2.678	39.480
1.64	4.516	2.929	1.542	1.283	16.010		2.54	18.168	7.899	2.300	2.729	39.940
1.66	4.653	2.992	1.555	1.300	16.600		2.56	18.740	8.076	2.321	2.780	40.390
1.68	4.795	3.056	1.569	1.318	17.190		2.58	19.329	8.256	2.341	2.832	40.840
							2.60	19.935	8.440	2.362	2.886	41.290
1.70	4.941	3.123	1.582	1.337	17.770							
1.72	5.093	3.191	1.596	1.356	18.360							
1.74	5.249	3.260	1.610	1.375	18.940							
1.76	5.411	3.332	1.624	1.396	19.520							
1.78	5.578	3.405	1.638	1.416	20.100							
1.80	5.751	3.480	1.653	1.438	20.680							
1.82	5.930	3.556	1.667	1.460	21.260							
1.84	6.115	3.635	1.682	1.482	21.830							
1.86	6.305	3.715	1.697	1.505	22.400							
1.88	6.502	3.798	1.712	1.529	22.970							

Flow Through a Normal Shock Wave

M	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2	p_{02}/p_1		M	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2	p_{02}/p_1
1.00	1.000	1.000	1.000	1.000	1.895		1.80	3.616	2.355	1.535	0.617	4.676
1.02	1.047	1.033	1.013	0.981	1.940		1.82	3.700	2.387	1.550	0.612	4.769
1.04	1.095	1.067	1.027	0.962	1.986		1.84	3.786	2.418	1.566	0.608	4.862
1.06	1.144	1.101	1.040	0.945	2.035		1.86	3.872	2.449	1.581	0.604	4.957
1.08	1.194	1.135	1.053	0.928	2.084		1.88	3.959	2.480	1.596	0.600	5.052
1.10	1.245	1.169	1.065	0.912	2.135		1.90	4.048	2.511	1.612	0.596	5.149
1.12	1.297	1.203	1.078	0.897	2.188		1.92	4.137	2.541	1.628	0.592	5.247
1.14	1.350	1.237	1.091	0.882	2.241		1.94	4.227	2.572	1.644	0.588	5.346
1.16	1.404	1.272	1.104	0.868	2.296		1.96	4.318	2.602	1.660	0.585	5.446
1.18	1.458	1.306	1.116	0.855	2.353		1.98	4.410	2.632	1.676	0.581	5.547
1.20	1.514	1.341	1.129	0.842	2.410		2.00	4.503	2.661	1.692	0.578	5.649
1.22	1.570	1.376	1.141	0.830	2.469		2.02	4.597	2.691	1.709	0.574	5.752
1.24	1.628	1.410	1.154	0.818	2.529		2.04	4.692	2.720	1.725	0.571	5.856
1.26	1.686	1.445	1.167	0.807	2.591		2.06	4.788	2.749	1.742	0.568	5.961
1.28	1.746	1.480	1.179	0.796	2.653		2.08	4.884	2.777	1.759	0.565	6.067
1.30	1.806	1.515	1.192	0.786	2.717		2.10	4.982	2.806	1.776	0.562	6.174
1.32	1.867	1.550	1.205	0.776	2.782		2.12	5.080	2.834	1.793	0.559	6.283
1.34	1.929	1.584	1.218	0.767	2.848		2.14	5.180	2.862	1.810	0.556	6.392
1.36	1.992	1.619	1.231	0.757	2.915		2.16	5.280	2.889	1.828	0.553	6.502
1.38	2.056	1.654	1.243	0.748	2.984		2.18	5.382	2.917	1.845	0.550	6.614
1.40	2.121	1.688	1.256	0.740	3.053		2.20	5.484	2.944	1.863	0.548	6.726
1.42	2.187	1.723	1.269	0.732	3.124		2.22	5.587	2.971	1.881	0.545	6.840
1.44	2.254	1.757	1.283	0.724	3.196		2.24	5.691	2.998	1.899	0.542	6.954
1.46	2.321	1.792	1.296	0.716	3.269		2.26	5.797	3.024	1.917	0.540	7.070
1.48	2.390	1.826	1.309	0.709	3.343		2.28	5.903	3.051	1.935	0.537	7.187
1.50	2.460	1.860	1.322	0.701	3.418		2.30	6.010	3.077	1.953	0.535	7.304
1.52	2.530	1.894	1.336	0.694	3.494		2.32	6.117	3.102	1.972	0.533	7.423
1.54	2.602	1.928	1.349	0.688	3.571		2.34	6.226	3.128	1.991	0.530	7.543
1.56	2.674	1.962	1.363	0.681	3.650		2.36	6.336	3.153	2.009	0.528	7.664
1.58	2.747	1.996	1.377	0.675	3.729		2.38	6.447	3.178	2.028	0.526	7.786
1.60	2.822	2.029	1.391	0.669	3.810		2.40	6.558	3.203	2.048	0.524	7.909
1.62	2.897	2.063	1.405	0.663	3.892		2.42	6.671	3.228	2.067	0.522	8.033
1.64	2.973	2.096	1.419	0.657	3.975		2.44	6.784	3.252	2.086	0.520	8.158
1.66	3.050	2.129	1.433	0.652	4.059		2.46	6.899	3.276	2.106	0.518	8.284
1.68	3.128	2.162	1.447	0.646	4.144		2.48	7.014	3.300	2.126	0.516	8.411
1.70	3.207	2.194	1.461	0.641	4.230		2.50	7.131	3.324	2.145	0.514	8.539
1.72	3.287	2.227	1.476	0.636	4.317		2.52	7.248	3.347	2.165	0.512	8.668
1.74	3.368	2.259	1.491	0.631	4.405		2.54	7.366	3.370	2.186	0.510	8.798
1.76	3.449	2.292	1.505	0.626	4.494		2.56	7.485	3.393	2.206	0.508	8.930
1.78	3.532	2.324	1.520	0.621	4.585		2.58	7.605	3.416	2.226	0.506	9.062
							2.60	7.726	3.439	2.247	0.504	9.195

Flow Through a Plane Oblique Shock Wave

M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2		M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2
1.1	0	65.38	1.000	1.000	1.000	1.100		1.6	0	38.68	1.000	1.000	1.000	1.600
1.1	1.51	76.30	1.166	1.116	1.045	0.971		1.6	2	40.73	1.105	1.074	1.029	1.532
1.1	0	90.00	1.245	1.169	1.065	0.912		1.6	4	42.94	1.219	1.152	1.059	1.464
								1.6	6	45.35	1.345	1.235	1.090	1.393
1.2	0	56.44	1.000	1.000	1.000	1.200		1.6	8	48.05	1.486	1.324	1.122	1.319
1.2	2	61.06	1.120	1.084	1.033	1.111		1.6	10	51.14	1.645	1.421	1.158	1.239
1.2	3.94	71.98	1.353	1.239	1.092	0.950		1.6	12	54.93	1.835	1.531	1.198	1.147
1.2	2	83.85	1.495	1.329	1.125	0.855		1.6	14	60.64	2.103	1.679	1.253	1.021
1.2	0	90.00	1.514	1.341	1.129	0.842		1.6	14.62	65.82	2.320	1.791	1.295	0.919
								1.6	14	70.78	2.498	1.879	1.330	0.834
1.3	0	50.28	1.000	1.000	1.000	1.300		1.6	12	75.85	2.643	1.948	1.357	0.762
1.3	2	53.48	1.107	1.075	1.03	1.224		1.6	10	79.07	2.714	1.980	1.371	0.726
1.3	4	57.46	1.234	1.161	1.063	1.140		1.6	8	81.67	2.759	2.001	1.379	0.702
1.3	6	63.50	1.413	1.278	1.106	1.027		1.6	6	83.95	2.788	2.014	1.384	0.687
1.3	6.65	69.39	1.561	1.370	1.139	0.936		1.6	4	86.05	2.807	2.023	1.388	0.676
1.3	6	75.32	1.679	1.441	1.165	0.864		1.6	2	88.05	2.818	2.028	1.390	0.671
1.3	4	81.63	1.764	1.491	1.183	0.812		1.6	0	90.00	2.822	2.029	1.391	0.669
1.3	2	86.05	1.796	1.509	1.190	0.792								
1.3	0	90.00	1.806	1.515	1.192	0.786		1.7	0	36.03	1.000	1.000	1.000	1.700
								1.7	2	37.93	1.107	1.075	1.030	1.632
1.4	0	45.58	1.000	1.000	1.000	1.400		1.7	4	39.96	1.224	1.155	1.060	1.564
1.4	2	48.18	1.103	1.073	1.029	1.329		1.7	6	42.15	1.352	1.239	1.091	1.494
1.4	4	51.13	1.220	1.152	1.059	1.255		1.7	8	44.54	1.493	1.328	1.124	1.423
1.4	6	54.65	1.355	1.241	1.092	1.173		1.7	10	47.19	1.648	1.423	1.159	1.347
1.4	8	59.40	1.528	1.350	1.132	1.074		1.7	12	50.20	1.824	1.525	1.196	1.266
1.4	9.41	67.71	1.792	1.507	1.189	0.927		1.7	14	53.82	2.031	1.640	1.238	1.174
1.4	8	75.85	1.984	1.615	1.229	0.819		1.7	16	58.89	2.306	1.784	1.293	1.055
1.4	6	80.46	2.058	1.655	1.244	0.777		1.7	16.98	65.31	2.618	1.936	1.352	0.919
1.4	4	83.97	2.096	1.675	1.251	0.755		1.7	16	71.32	2.861	2.047	1.398	0.809
1.4	2	87.07	2.115	1.685	1.255	0.743		1.7	14	75.62	2.999	2.107	1.423	0.745
1.4	0	90.00	2.121	1.688	1.256	0.740		1.7	12	78.52	3.073	2.139	1.437	0.709
								1.7	10	80.88	3.122	2.159	1.446	0.684
1.5	0	41.81	1.000	1.000	1.000	1.500		1.7	8	82.95	3.156	2.173	1.452	0.667
1.5	2	44.07	1.103	1.073	1.029	1.432		1.7	6	84.83	3.180	2.183	1.456	0.655
1.5	4	46.55	1.217	1.150	1.058	1.361		1.7	4	86.61	3.195	2.190	1.459	0.647
1.5	6	49.34	1.344	1.234	1.090	1.288		1.7	2	88.32	3.204	2.193	1.461	0.642
1.5	8	52.59	1.490	1.326	1.123	1.207		1.7	0	90.00	3.207	2.194	1.461	0.641
1.5	10	56.72	1.668	1.435	1.163	1.113								
1.5	12	64.58	1.976	1.610	1.227	0.957								
1.5	12.09	66.58	2.045	1.647	1.241	0.921								
1.5	12	68.56	2.109	1.682	1.254	0.889								
1.5	10	75.95	2.305	1.783	1.293	0.786								
1.5	8	79.68	2.375	1.819	1.306	0.748								
1.5	6	82.64	2.417	1.839	1.314	0.725								
1.5	4	85.24	2.442	1.851	1.319	0.711								
1.5	2	87.66	2.455	1.858	1.322	0.704								
1.5	0	90.00	2.460	1.860	1.322	0.701								

M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2	M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2
1.8	0	33.75	1.000	1.000	1.000	1.800	2.0	0	30.00	1.000	1.000	1.000	2.000
1.8	2	35.54	1.111	1.078	1.031	1.731	2.0	2	31.65	1.118	1.083	1.033	1.928
1.8	4	37.45	1.231	1.159	1.062	1.662	2.0	4	33.40	1.247	1.170	1.066	1.856
1.8	6	39.49	1.362	1.246	1.094	1.593	2.0	6	35.25	1.388	1.262	1.100	1.785
1.8	8	41.69	1.506	1.336	1.127	1.522	2.0	8	37.22	1.541	1.358	1.135	1.713
1.8	10	44.08	1.663	1.431	1.162	1.449	2.0	10	39.33	1.708	1.458	1.172	1.640
1.8	12	46.71	1.837	1.533	1.199	1.371	2.0	12	41.60	1.891	1.563	1.210	1.564
1.8	14	49.70	2.033	1.641	1.239	1.288	2.0	14	44.06	2.091	1.672	1.250	1.485
1.8	16	53.25	2.261	1.761	1.284	1.194	2.0	16	46.77	2.312	1.787	1.294	1.402
1.8	18	58.09	2.559	1.908	1.341	1.074	2.0	18	49.83	2.560	1.908	1.341	1.311
1.8	19.15	64.97	2.939	2.081	1.412	0.920	2.0	20	53.49	2.850	2.042	1.396	1.208
1.8	18	71.31	3.227	2.203	1.465	0.798	2.0	22	58.60	3.235	2.206	1.467	1.072
1.8	16	75.26	3.371	2.261	1.491	0.734	2.0	22.93	64.65	3.647	2.367	1.541	0.924
1.8	14	77.98	3.452	2.292	1.506	0.697	2.0	22	70.18	3.966	2.483	1.598	0.805
1.8	12	80.18	3.506	2.313	1.515	0.671	2.0	20	74.19	4.156	2.548	1.631	0.729
1.8	10	82.10	3.544	2.328	1.522	0.652	2.0	18	76.80	4.260	2.583	1.649	0.686
1.8	8	83.85	3.572	2.339	1.527	0.639	2.0	16	78.88	4.329	2.605	1.662	0.657
1.8	6	85.47	3.592	2.346	1.531	0.629	2.0	14	80.65	4.380	2.622	1.671	0.634
1.8	4	87.02	3.605	2.351	1.533	0.622	2.0	12	82.23	4.418	2.634	1.677	0.617
1.8	2	88.52	3.613	2.354	1.535	0.618	2.0	10	83.68	4.447	2.643	1.682	0.604
1.8	0	90.00	3.616	2.355	1.535	0.617	2.0	8	85.04	4.468	2.650	1.686	0.594
							2.0	6	86.33	4.484	2.655	1.689	0.587
1.9	0	31.76	1.000	1.000	1.000	1.900	2.0	4	87.57	4.495	2.659	1.691	0.582
1.9	2	33.47	1.114	1.080	1.032	1.830	2.0	2	88.79	4.501	2.661	1.692	0.579
1.9	4	35.28	1.239	1.165	1.064	1.760	2.0	0	90.00	4.503	2.661	1.692	0.578
1.9	6	37.22	1.374	1.253	1.097	1.689							
1.9	8	39.28	1.522	1.346	1.131	1.618	2.1	0	28.44	1.000	1.000	1.000	2.100
1.9	10	41.51	1.684	1.444	1.166	1.545	2.1	2	30.04	1.122	1.086	1.034	2.026
1.9	12	43.92	1.861	1.546	1.204	1.470	2.1	4	31.73	1.256	1.176	1.068	1.953
1.9	14	46.58	2.056	1.654	1.243	1.390	2.1	6	33.52	1.403	1.271	1.103	1.879
1.9	16	49.59	2.276	1.769	1.287	1.304	2.1	8	35.42	1.562	1.371	1.140	1.806
1.9	18	53.16	2.532	1.895	1.336	1.206	2.1	10	37.45	1.736	1.475	1.177	1.731
1.9	20	58.01	2.865	2.048	1.399	1.080	2.1	12	39.61	1.926	1.582	1.217	1.655
1.9	21.12	64.77	3.282	2.225	1.475	0.922	2.1	14	41.94	2.132	1.694	1.259	1.576
1.9	20	70.93	3.598	2.349	1.532	0.796	2.1	16	44.46	2.359	1.810	1.303	1.494
1.9	18	74.79	3.758	2.408	1.561	0.729	2.1	18	47.25	2.609	1.932	1.351	1.406
1.9	16	77.41	3.848	2.441	1.577	0.689	2.1	20	50.42	2.891	2.060	1.404	1.310
1.9	14	79.53	3.908	2.462	1.587	0.662	2.1	22	54.25	3.224	2.202	1.465	1.199
1.9	12	81.35	3.952	2.478	1.595	0.641	2.1	24	59.97	3.692	2.384	1.549	1.044
1.9	10	83.00	3.985	2.489	1.601	0.626	2.1	24.56	64.60	4.034	2.506	1.610	0.927
1.9	8	84.52	4.009	2.498	1.605	0.615	2.1	24	68.90	4.314	2.601	1.659	0.829
1.9	6	85.95	4.027	2.504	1.608	0.606	2.1	22	73.43	4.563	2.680	1.703	0.736
1.9	4	87.33	4.039	2.508	1.610	0.600	2.1	20	76.12	4.686	2.718	1.724	0.688
1.9	2	88.67	4.046	2.510	1.612	0.597	2.1	18	78.21	4.767	2.742	1.738	0.655
1.9	0	90.00	4.048	2.511	1.612	0.596	2.1	16	79.96	4.825	2.760	1.749	0.631
							2.1	14	81.51	4.870	2.773	1.756	0.612
							2.1	12	82.91	4.904	2.783	1.762	0.597
							2.1	10	84.22	4.930	2.790	1.767	0.585
							2.1	8	85.45	4.949	2.796	1.770	0.577
							2.1	6	86.63	4.964	2.800	1.773	0.570
							2.1	4	87.77	4.974	2.803	1.774	0.565
							2.1	2	88.89	4.980	2.805	1.775	0.563
							2.1	0	90.00	4.982	2.806	1.776	0.562

M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2
2.2	0	27.04	1.000	1.000	1.000	2.200
2.2	2	28.59	1.127	1.089	1.035	2.123
2.2	4	30.24	1.266	1.183	1.071	2.048
2.2	6	31.99	1.418	1.281	1.107	1.973
2.2	8	33.84	1.585	1.385	1.145	1.898
2.2	10	35.80	1.766	1.492	1.184	1.822
2.2	12	37.89	1.964	1.603	1.225	1.744
2.2	14	40.12	2.179	1.719	1.268	1.664
2.2	16	42.52	2.414	1.838	1.314	1.581
2.2	18	45.13	2.671	1.961	1.362	1.494
2.2	20	48.03	2.956	2.088	1.415	1.401
2.2	22	51.35	3.279	2.224	1.475	1.298
2.2	24	55.46	3.667	2.375	1.544	1.177
2.2	26	63.32	4.345	2.610	1.664	0.963
2.2	26.05	64.60	4.444	2.642	1.682	0.931
2.2	26	65.84	4.537	2.672	1.698	0.900
2.2	24	72.45	4.970	2.802	1.774	0.751
2.2	22	75.34	5.122	2.846	1.800	0.695
2.2	20	77.49	5.219	2.873	1.817	0.658
2.2	18	79.26	5.288	2.891	1.829	0.630
2.2	16	80.80	5.340	2.906	1.838	0.609
2.2	14	82.18	5.380	2.916	1.845	0.593
2.2	12	83.46	5.411	2.925	1.850	0.580
2.2	10	84.65	5.435	2.931	1.854	0.569
2.2	8	85.78	5.453	2.936	1.858	0.561
2.2	6	86.87	5.467	2.940	1.860	0.555
2.2	4	87.93	5.477	2.942	1.862	0.551
2.2	2	88.97	5.482	2.944	1.862	0.548
2.2	0	90.00	5.484	2.944	1.863	0.548
2.3	0	25.77	1.000	1.000	1.000	2.300
2.3	2	27.30	1.131	1.092	1.036	2.221
2.3	4	28.91	1.276	1.189	1.073	2.143
2.3	6	30.62	1.435	1.292	1.111	2.066
2.3	8	32.43	1.608	1.399	1.150	1.989
2.3	10	34.34	1.798	1.510	1.191	1.910
2.3	12	36.37	2.005	1.626	1.233	1.831
2.3	14	38.53	2.230	1.745	1.278	1.750
2.3	16	40.84	2.474	1.867	1.325	1.666
2.3	18	43.33	2.741	1.993	1.376	1.578
2.3	20	46.05	3.034	2.122	1.430	1.486
2.3	22	49.09	3.360	2.256	1.489	1.387
2.3	24	52.62	3.733	2.399	1.556	1.275
2.3	26	57.22	4.198	2.562	1.639	1.138
2.3	27.39	64.63	4.875	2.775	1.757	0.934
2.3	26	71.12	5.362	2.912	1.842	0.777
2.3	24	74.42	5.564	2.965	1.877	0.708
2.3	22	76.70	5.683	2.996	1.897	0.665
2.3	20	78.53	5.765	3.016	1.911	0.634
2.3	18	80.09	5.827	3.032	1.922	0.610
2.3	16	81.47	5.874	3.043	1.930	0.591
2.3	14	82.73	5.911	3.053	1.936	0.576
2.3	12	83.90	5.940	3.060	1.941	0.564
2.3	10	85.01	5.963	3.065	1.945	0.555
2.3	8	86.06	5.980	3.070	1.948	0.547
2.3	6	87.07	5.993	3.073	1.951	0.542
2.3	4	88.06	6.002	3.075	1.952	0.538
2.3	2	89.04	6.008	3.076	1.953	0.536
2.3	0	90.00	6.010	3.077	1.953	0.535

M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2
2.4	0	24.62	1.000	1.000	1.000	2.400
2.4	2	26.12	1.136	1.095	1.037	2.318
2.4	4	27.71	1.286	1.196	1.076	2.238
2.4	6	29.38	1.452	1.302	1.115	2.158
2.4	8	31.16	1.633	1.414	1.155	2.078
2.4	10	33.04	1.831	1.529	1.198	1.998
2.4	12	35.02	2.048	1.649	1.242	1.916
2.4	14	37.13	2.283	1.772	1.288	1.833
2.4	16	39.38	2.540	1.899	1.338	1.748
2.4	18	41.78	2.818	2.028	1.39	1.659
2.4	20	44.38	3.122	2.159	1.446	1.566
2.4	22	47.23	3.457	2.294	1.507	1.468
2.4	24	50.44	3.830	2.434	1.574	1.361
2.4	26	54.29	4.267	2.585	1.651	1.238
2.4	28	59.88	4.865	2.771	1.755	1.071
2.4	28.62	64.68	5.328	2.902	1.836	0.937
2.4	28	69.06	5.699	3.000	1.900	0.825
2.4	26	73.29	6.002	3.075	1.952	0.728
2.4	24	75.81	6.154	3.111	1.978	0.677
2.4	22	77.74	6.255	3.135	1.996	0.641
2.4	20	79.35	6.329	3.152	2.008	0.614
2.4	18	80.76	6.385	3.164	2.018	0.593
2.4	16	82.03	6.429	3.174	2.025	0.576
2.4	14	83.19	6.464	3.182	2.031	0.562
2.4	12	84.28	6.491	3.188	2.036	0.551
2.4	10	85.31	6.513	3.193	2.04	0.542
2.4	8	86.29	6.530	3.197	2.043	0.535
2.4	6	87.24	6.543	3.200	2.045	0.530
2.4	4	88.18	6.552	3.202	2.046	0.527
2.4	2	89.09	6.557	3.203	2.047	0.524
2.4	0	90.00	6.558	3.203	2.048	0.524

M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2	M	δ	β	p_2/p_1	ρ_2/ρ_1	T_2/T_1	M_2
2.5	0	23.58	1.000	1.000	1.000	2.500	2.6	0	22.62	1.000	1.000	1.000	2.600
2.5	2	25.05	1.141	1.098	1.039	2.415	2.6	2	24.07	1.146	1.102	1.040	2.512
2.5	4	26.61	1.297	1.203	1.078	2.332	2.6	4	25.62	1.308	1.210	1.081	2.426
2.5	6	28.27	1.469	1.313	1.119	2.250	2.6	6	27.25	1.487	1.324	1.123	2.341
2.5	8	30.02	1.659	1.429	1.161	2.167	2.6	8	28.98	1.685	1.444	1.166	2.256
2.5	10	31.86	1.866	1.549	1.205	2.084	2.6	10	30.80	1.902	1.570	1.212	2.170
2.5	12	33.82	2.093	1.673	1.251	2.001	2.6	12	32.73	2.140	1.698	1.260	2.083
2.5	14	35.89	2.340	1.801	1.299	1.915	2.6	14	34.77	2.399	1.831	1.311	1.995
2.5	16	38.08	2.609	1.932	1.351	1.827	2.6	16	36.93	2.682	1.965	1.364	1.905
2.5	18	40.42	2.901	2.064	1.405	1.737	2.6	18	39.22	2.988	2.102	1.421	1.813
2.5	20	42.93	3.218	2.199	1.463	1.643	2.6	20	41.66	3.32	2.240	1.482	1.717
2.5	22	45.65	3.564	2.336	1.526	1.544	2.6	22	44.29	3.681	2.380	1.547	1.617
2.5	24	48.66	3.947	2.476	1.594	1.439	2.6	24	47.16	4.077	2.521	1.617	1.512
2.5	26	52.12	4.379	2.622	1.671	1.323	2.6	26	50.38	4.516	2.665	1.695	1.398
2.5	28	56.47	4.904	2.783	1.762	1.183	2.6	28	54.20	5.025	2.818	1.783	1.269
2.5	29.73	64.75	5.803	3.026	1.918	0.940	2.6	30	59.58	5.702	3.000	1.900	1.098
2.5	28	71.80	6.419	3.172	2.024	0.760	2.6	30.74	64.84	6.299	3.145	2.003	0.943
2.5	26	74.76	6.626	3.218	2.059	0.695	2.6	30	69.55	6.762	3.247	2.082	0.817
2.5	24	76.87	6.754	3.246	2.081	0.652	2.6	28	73.47	7.087	3.315	2.138	0.721
2.5	22	78.57	6.844	3.265	2.096	0.621	2.6	26	75.87	7.256	3.349	2.167	0.669
2.5	20	80.02	6.911	3.279	2.108	0.597	2.6	24	77.71	7.368	3.371	2.186	0.632
2.5	18	81.31	6.964	3.29	2.117	0.578	2.6	22	79.24	7.451	3.387	2.200	0.605
2.5	16	82.48	7.006	3.298	2.124	0.562	2.6	20	80.58	7.515	3.399	2.211	0.583
2.5	14	83.57	7.039	3.305	2.13	0.550	2.6	18	81.78	7.565	3.408	2.219	0.565
2.5	12	84.59	7.066	3.311	2.134	0.539	2.6	16	82.87	7.605	3.416	2.226	0.550
2.5	10	85.56	7.087	3.315	2.138	0.531	2.6	14	83.89	7.637	3.422	2.232	0.539
2.5	8	86.49	7.103	3.318	2.141	0.525	2.6	12	84.86	7.663	3.427	2.236	0.529
2.5	6	87.39	7.115	3.321	2.143	0.520	2.6	10	85.77	7.683	3.431	2.240	0.521
2.5	4	88.27	7.124	3.322	2.144	0.516	2.6	8	86.66	7.699	3.434	2.242	0.515
2.5	2	89.14	7.129	3.323	2.145	0.514	2.6	6	87.51	7.711	3.436	2.244	0.510
2.5	0	90.00	7.131	3.324	2.145	0.514	2.6	4	88.35	7.720	3.437	2.246	0.507
							2.6	2	89.18	7.724	3.438	2.247	0.505
							2.6	0	90.00	7.726	3.439	2.247	0.504