

TABLE 2: IDEAL-GAS SPECIFIC HEATS OF VARIOUS COMMON GASES AT 300 K

Gas	Formula	Gas constant R kJ/(kg ×K)	C_p kJ/(kg ×K)	C_v kJ/(kg ×K)	γ
Air	—	0.2870	1.005	0.718	1.400
Argon	Ar	0.2081	0.5203	0.3122	1.667
Butane	C ₄ H ₁₀	0.1433	1.7164	1.5734	1.091
Carbon dioxide	CO ₂	0.1869	0.846	0.657	1.289
Carbon monoxide	CO	0.2968	1.040	0.744	1.400
Ethane	C ₂ H ₆	0.2765	1.7662	1.4697	1.186
Ethylene	C ₂ H ₄	0.2964	1.5462	1.2518	1.237
Helium	He	2.0769	5.1926	3.1156	1.667
Hydrogen	H ₂	4.1240	14.307	10.183	1.405
Methane	CH ₄	0.5182	2.2537	1.7354	1.299
Neon	Ne	0.4119	1.0299	0.8179	1.667
Nitrogen	N ₂	0.2908	1.039	0.743	1.400
Octane		0.0729	1.7113	1.6385	1.044
Oxygen	O ₂	0.2598	0.918	0.658	1.395
Propane	C ₃ H ₈	0.1865	1.6794	1.4809	1.126
Steam	H ₂ O	0.4815	1.8723	1.4108	1.327

TABLE 3: SATURATED WATER- TEMPERATURE TABLE

Temp. °C T	Sat. press. kPa P_{sat}	Specific volume m ³ /kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg×K)			
		Sat. liquid v_f	Sat. vapour v_g	Sat. liquid u_f	Sat. Evap. u_g	Sat. vapour u_g	Sat. liquid h_f	Sat. Evap. h_g	Sat. vapour h_g	Sat. liquid s_f	Sat. Evap. s_g	Sat. vapour s_g			
0.01	0.6113	0.001330	206.14	0.0	2375.3	2375.3	0.01	2501.4	2501.4	0.000	9.1562	9.1562			
5	0.8721	0.001000	147.12	20.97	2361.3	2362.3	22.98	2489.6	2510.6	0.0761	8.9496	0.0257			
10	1.2276	0.001000	106.38	42.00	2347.2	2369.2	47.11	2477.7	2519.8	0.1510	8.7498	8.9008			
15	1.7051	0.001001	77.93	62.99	2333.1	2396.1	62.99	2465.9	2528.9	0.2245	8.5569	8.7314			
20	2.339	0.001002	57.79	83.55	2319.0	2402.9	83.96	2454.1	2538.1	0.2966	8.3706	8.6572			
25	3.169	0.001003	43.36	104.88	2409.8	2309.8	104.89	2442.3	2547.2	0.3674	8.1905	8.5580			
30	4.246	0.001004	32.89	125.78	2290.8	2416.6	125.79	2430.5	2556.3	0.4369	8.0164	8.4533			
35	5.626	0.001006	25.22	146.67	2276.7	2423.4	146.68	2418.6	2565.3	0.5053	7.8478	8.3531			
40	7.384	0.001008	19.52	167.56	2262.6	2430.1	167.57	2406.7	2574.3	0.5725	7.6845	8.2570			
45	9.583	0.001010	15.26	188.44	2248.4	2436.8	168.45	2394.8	2583.2	0.6387	7.5261	8.1648			
50	12.349	0.001012	12.03	209.32	2234.2	2443.5	209.33	2382.7	2592.1	0.7038	7.3725	8.0763			
55	15.758	0.001015	9.568	230.21	2219.9	2450.1	230.23	2370.7	2600.9	0.7679	7.2234	7.9913			
60	19.940	0.001017	7.671	251.11	2205.5	2456.6	251.13	2358.5	2609.6	0.8312	7.0784	7.9095			
65	25.03	0.001020	6.197	272.02	2191.1	2463.1	272.06	2346.2	2518.3	0.8935	6.9375	7.8310			
70	31.19	0.001023	5.042	292.95	2176.6	2469.6	292.98	2333.8	2626.8	0.9549	6.8004	7.7553			
75	38.58	0.001026	4.131	313.90	2162.0	2475.9	313.93	2321.4	2635.3	1.0155	6.6669	7.6824			
80	47.39	0.001029	3.407	334.88	2147.4	2482.2	334.91	2300.8	2643.7	1.0753	6.5359	7.6122			
85	57.83	0.001033	2.828	355.84	2132.6	2488.4	355.90	2295.0	2651.9	1.1343	6.4102	7.5445			
90	70.14	0.001038	2.361	376.85	2117.7	2494.5	376.92	2283.2	2660.1	1.1925	6.2868	7.4791			
95	84.55	0.001040	1.982	397.62	2102.7	2500.6	397.96	2270.2	2663.1	1.2500	6.1659	7.4159			



TABLE 3: SATURATED WATER- TEMPERATURE TABLE (CONT'D)

Temp. °C T	Sat. press. MPa P_{sat}	Specific volume m³/kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg·K)		
		Sat. liquid v_f	Sat. vapour v_g	Sat. liquid u_f	Evap. u_{fg}	Sat. vapour u_g	Sat. liquid h_f	Evap. h_{fg}	Sat. vapour h_g	Sat. liquid s_f	Evap. s_g	Sat. vapour s_g		
100	0.10135	0.001044	1.6729	418.94	2007.6	2506.5	419.04	2257.0	2676.1	1.3009	6.0480	7.3540		
105	0.12082	0.001048	1.4194	440.02	2072.3	2512.4	440.15	2243.7	2683.8	1.3630	5.9328	7.2950		
110	0.14327	0.001052	1.2102	461.14	2057.0	2518.1	461.30	2230.2	2691.5	1.4105	5.8202	7.2307		
115	0.16906	0.001056	1.0366	482.30	2041.4	2523.7	482.48	2216.5	2699.0	1.4734	5.7100	7.1833		
120	0.19853	0.001060	0.8919	503.50	2025.8	2529.3	503.71	2202.6	2706.3	1.5276	5.6020	7.1296		
125	0.2321	0.001065	0.7706	524.74	2009.9	2534.6	524.99	2188.5	2713.5	1.5813	5.4962	7.0775		
130	0.2701	0.001070	0.6685	546.02	1993.9	2539.9	546.31	2174.2	2720.5	1.6314	5.3925	7.0269		
135	0.3130	0.001075	0.5822	567.35	1977.7	2545.0	567.69	2159.6	2727.3	1.6870	5.2907	6.9777		
140	0.3613	0.001080	0.5089	588.74	1961.3	2550.0	589.13	2144.7	2733.9	1.7391	5.1908	6.8299		
145	0.4154	0.001085	0.4463	610.18	1944.7	2554.9	610.63	2129.6	2740.3	1.7907	5.0926	6.6833		
150	0.4758	0.001091	0.3928	631.60	1927.0	2559.5	632.20	2114.3	2746.5	1.8418	4.9960	6.4379		
155	0.5431	0.001096	0.3468	653.24	1910.3	2564.1	653.84	2098.6	2752.4	1.8925	4.9010	6.2935		
160	0.6178	0.001102	0.3071	674.87	1893.5	2568.4	675.55	2082.6	2758.1	1.9427	4.8075	6.1708		
165	0.7005	0.001108	0.2727	696.56	1876.0	2572.5	697.34	2066.2	2763.5	1.9925	4.7153	6.0663		
170	0.7917	0.001114	0.2428	718.33	1858.1	2576.5	719.21	2049.5	2768.7	2.0419	4.6244	5.9557		
175	0.8920	0.001121	0.2168	740.17	1840.0	2580.2	741.17	2032.4	2773.6	2.0909	4.5347	5.8465		
180	1.0021	0.001127	0.19405	762.09	1821.6	2583.7	763.22	2015.0	2778.2	2.1396	4.4161	5.6579		
185	1.1227	0.001134	0.17409	784.10	1802.9	2587.0	785.37	1997.1	2782.4	2.1879	4.3585	5.4579		
190	1.2544	0.001141	0.15654	806.19	1783.8	2590.0	807.62	1978.8	2786.4	2.2359	4.2720	5.2359		
195	1.3978	0.001149	0.14105	828.37	1764.4	2592.8	829.98	1960.0	2790.0	2.2835	4.1863	4.4698		

TABLE 3: SATURATED WATER- TEMPERATURE TABLE (CONT'D)

Temp. °C T	Sat. press. MPa P_{sat}	Specific volume m³/kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg·K)		
		Sat. liquid v_f	Sat. vapour v_g	Sat. liquid u_f	Evap. u_{fg}	Sat. vapour u_g	Sat. liquid h_f	Evap. h_{fg}	Sat. vapour h_g	Sat. liquid s_f	Evap. s_g	Sat. vapour s_g		
200	1.5536	0.001157	0.12736	850.65	1744.7	2595.3	852.45	1940.7	2793.2	2.3309	4.1014	5.4323		
205	1.7230	0.001164	0.11521	873.04	1724.5	2597.5	875.04	1921.0	2796.0	2.3780	4.0172	5.3952		
210	1.9262	0.001173	0.10441	895.53	1703.9	2599.5	897.76	1900.7	2798.5	2.4248	3.9337	5.3595		
215	2.104	0.001181	0.09479	918.14	1682.9	2601.1	920.62	1879.9	2800.5	2.4714	3.8507	5.3221		
220	2.318	0.001190	0.08619	940.87	1661.5	2602.4	943.62	1858.5	2802.1	2.5178	3.7683	5.2861		
225	2.548	0.001199	0.07849	963.73	1639.6	2603.9	966.78	1836.5	2803.3	2.5639	3.6863	5.2503		
230	2.775	0.001209	0.07158	986.74	1617.2	2604.1	990.12	1813.8	2804.0	2.6099	3.6047	5.2146		
235	3.060	0.001219	0.06537	1009.89	1594.2	2604.1	1013.62	1790.5	2804.2	2.6558	3.5233	5.1791		
240	3.344	0.001229	0.05976	1033.21	1570.8	2604.0	1037.32	1765.5	2803.8	2.7015	3.4422	5.1437		
245	3.643	0.001240	0.05471	1056.71	1546.7	2603.4	1061.23	1741.7	2803.0	2.7472	3.3612	5.1083		
250	3.973	0.001251	0.05013	1080.39	1522.0	2602.4	1095.36	1716.2	2801.5	2.7927	3.2602	5.0730		
255	4.319	0.001263	0.04598	1104.28	1506.7	2600.9	1109.73	1689.8	2799.5	2.8333	3.1992	5.0375		
260	4.688	0.001276	0.04221	1128.39	1470.6	2599.0	1134.37	1662.5	2796.9	2.8838	3.1181	5.0019		
265	5.081	0.001289	0.03877	1152.74	1443.9	2596.5	1159.28	1634.4	2793.6	2.9294	3.0368	5.9662		
270	5.499	0.001302	0.03564	1177.36	1416.3	2593.7	1184.51	1605.2	2789.7	2.9751	2.9551	5.9301		
275	5.942	0.001317	0.03279	1202.25	1387.9	2590.2	1210.07	1574.9	2785.0	3.0208	2.8730	5.8938		
280	6.412	0.001332	0.03017	1227.46	1358.7	2586.1	1235.99	1543.6	2779.5	3.0668	2.7903	5.8571		
285	6.909	0.001348	0.02777	1253.00	1328.4	2581.4	1262.31	1511.0	2773.3	3.1130	2.7070	5.8199		
290	7.436	0.001366	0.02557	1278.92	1297.1	2576.0	1289.07	1477.1	2766.2	3.1594	2.6227	5.7821		
295	7.993	0.001384	0.02354	1305.2	1264.7	2569.9	1316.3	1441.8	2758.1	3.2062	2.5375	5.7437		
300	8.581	0.001404	0.02167	1332.0	1231.0	2563.0	1344.0	1404.9	2749.0	3.2534	2.4511	5.7045		
305	9.202	0.001425	0.019948	1359.3	1195.9	2555.2	1372.4	1366.4	2738.7	3.3010	2.3633	5.6643		
310	9.856	0.001447	0.018350	1387.1	1159.4	2546.4	1401.3	1326.0	2727.3	3.3493	2.2737	5.6230		
315	10.547	0.001472	0.016867	1415.5	1121.1	2536.6	1431.0	1283.5	2714.5	3.3982	2.1821	5.5804		
320	11.274	0.001499	0.015488	1444.6	1080.9	2525.5	1461.5	1238.6	2700.1	3.4480	2.0882	5.5362		
330	12.845	0.001561	0.012996	1505.3	993.7	2498.9	1525.3	1140.6	2665.9	3.5507	1.8909	5.4417		
340	14.586	0.001638	0.010797	1570.3	894.3	2464.6	1594.2	1027.9	2522.0	3.6594	1.6763	5.3357		
350	16.513	0.001740	0.008813	1641.9	776.6	2418.4	1670.6	893.4	2563.9	3.7777	1.4335	5.2112		
360	18.651	0.001893	0.006345	1725.2	626.3	2351.5	1760.5	720.3	2481.0	3.9147	1.1379	5.0526		
370	21.03	0.002213	0.004925	1844.0	384.5	2228.5	1890.5	441.6	2332.1	4.1106	0.6865	4.7971		
374.14	22.09	0.003155	0.003155	2029.6	0	2029.6	2099.3	0	2099.3	4.4298	0	4.4298		

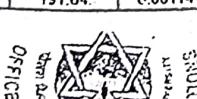


TABLE 4: SATURATED WATER-PRESSURE TABLE

Press. kPa F	Sat. Temp. °C T _{sat}	Specific volume m ³ /kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg·K)			
		Sat. liquid v _l	Sat. vapour v _v	Sat. liquid u _l	Sat. Evap. u _{fg}	Sat. vapour u _v	Sat. liquid h _l	Sat. Evap. h _{fg}	Sat. vapour h _v	Sat. liquid s _l	Sat. Evap. s _{fg}	Sat. vapour s _v			
0.6113	0.01	0.001000	206.14	0.00	2375.3	2375.3	0.01	2501.3	2501.4	0.0000	9.1552	9.1562			
1.0	6.98	0.001000	129.21	29.36	2355.7	2385.0	29.30	2484.9	2514.2	0.1059	8.8697	8.9756			
1.5	13.03	0.001001	67.98	54.71	2338.6	2393.3	54.71	2470.6	2525.3	0.1957	8.6322	8.8279			
2.0	17.50	0.001001	67.00	73.48	2326.0	2399.5	73.48	2460.0	2533.5	0.207	8.4629	8.7237			
2.5	21.09	0.001002	54.25	88.48	2315.9	2404.4	88.49	2451.6	2540.0	0.3120	8.3311	8.6432			
3.0	24.08	0.001003	45.67	101.04	2307.5	2408.5	101.05	2444.5	2545.5	0.3545	8.2231	8.5776			
4.0	28.90	0.001004	34.80	121.45	2293.7	2415.2	121.46	2432.9	2554.4	0.4226	8.0520	8.4746			
5.0	32.88	0.001005	28.19	137.81	2282.7	2420.5	137.82	2423.7	2561.5	0.4764	7.9187	8.3951			
7.5	40.29	0.001008	16.24	160.78	2261.7	2430.5	160.79	2406.0	2574.8	0.5704	7.8750	8.2515			
10	45.83	0.001010	14.67	191.82	2246.1	2437.9	191.83	2392.8	2584.7	0.6493	7.5009	8.1502			
15	53.97	0.001014	10.02	225.02	2222.8	2448.7	225.94	2373.1	2599.1	0.7549	7.2538	8.0085			
20	60.06	0.001017	7.649	251.38	2205.4	2456.7	251.40	2358.3	2609.7	0.8320	7.0766	7.9085			
25	64.97	0.001020	6.204	271.90	2191.2	2463.1	271.93	2346.3	2618.2	0.8931	6.9383	7.8314			
30	69.10	0.001022	5.229	289.20	2179.2	2468.4	289.22	2336.1	2625.3	0.9439	6.8247	7.7886			
40	75.87	0.001027	3.993	317.53	2159.5	2477.0	317.58	2319.2	2636.8	1.0259	6.6441	7.6700			
50	81.33	0.001030	3.240	340.44	2143.4	2483.9	340.49	2305.4	2645.9	1.0910	6.5029	7.5939			
75	91.78	0.001037	2.217	384.31	2112.4	2496.7	384.39	2278.6	2663.0	1.2130	6.2434	7.4584			

TABLE 4: SATURATED WATER-PRESSURE TABLE (CONT'D)

Press. MPa P	Sat. Temp. °C T _{sat}	Specific volume m ³ /kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg·K)			
		Sat. liquid v _l	Sat. vapour v _v	Sat. liquid u _l	Sat. Evap. u _{fg}	Sat. vapour u _v	Sat. liquid h _l	Sat. Evap. h _{fg}	Sat. vapour h _v	Sat. liquid s _l	Sat. Evap. s _{fg}	Sat. vapour s _v			
0.100	99.63	0.001043	1.6940	417.36	2088.7	2506.1	417.46	2258.0	2675.5	1.3026	6.0568	7.3594			
0.125	105.99	0.001048	1.3749	444.18	2069.3	2513.5	444.32	2241.0	2685.4	1.3740	5.9104	7.2844			
0.150	111.37	0.001053	1.1593	466.94	2052.7	2519.7	467.41	2226.5	2693.6	1.4336	5.7897	7.2233			
0.175	116.06	0.001057	1.0036	486.80	2038.1	2524.9	486.99	2213.6	2702.6	1.4849	5.6668	7.1717			
0.200	120.23	0.001061	0.8857	504.49	2025.0	2529.5	504.70	2201.9	2706.7	1.5301	5.5970	7.1271			
0.225	124.00	0.001064	0.7933	520.47	2013.1	2533.6	520.72	2191.3	2712.1	1.5706	5.5173	7.0878			
0.250	127.44	0.001067	0.7187	535.10	2002.1	2537.2	535.37	2181.5	2716.9	1.6072	5.4455	7.0527			
0.275	130.60	0.001070	0.6573	548.59	1991.9	2540.5	548.89	2172.4	2721.3	1.6408	5.3801	7.0209			
0.300	133.55	0.001073	0.6058	561.15	1982.4	2543.6	561.47	2163.8	2725.2	1.6718	5.3201	6.9919			
0.325	136.30	0.001076	0.5620	572.90	1973.5	2546.4	573.25	2155.8	2729.0	1.7036	5.2646	6.9652			
0.350	138.88	0.001079	0.5243	583.95	1965.0	2548.9	584.33	2148.1	2732.4	1.7275	5.2130	6.9405			
0.375	141.32	0.001081	0.4914	594.40	1956.9	2551.3	594.81	2140.8	2735.6	1.7528	5.1647	6.9175			
0.40	143.63	0.001084	0.4325	604.31	1949.3	2553.6	604.74	2133.8	2738.6	1.7766	5.1193	6.8959			
0.45	147.93	0.001088	0.4140	622.77	1934.9	2557.6	623.25	2120.7	2743.9	1.8207	5.0359	6.8065			
0.50	151.86	0.001093	0.3749	639.68	1921.6	2561.2	630.23	2108.5	2748.7	1.8607	4.9600	6.8273			
0.55	155.48	0.001097	0.3427	655.32	1909.2	2564.5	665.93	2097.0	2753.0	1.8973	4.8920	6.7893			
0.60	158.88	0.001103	0.3045	669.90	1897.5	2567.4	670.56	2086.3	2756.8	1.9312	4.8288	6.7600			
0.65	162.07	0.001104	0.2927	683.58	1886.5	2570.1	684.28	2076.0	2760.3	1.9627	4.7703	6.7331			
0.70	164.97	0.001108	0.2729	696.44	1876.1	2572.5	697.22	2066.3	2763.5	1.9922	4.7158	6.7080			
0.75	167.78	0.001112	0.2556	708.64	1866.1	2574.7	709.47	2057.9	2766.4	2.0200	4.6647	6.6847			
0.80	170.43	0.001115	0.2404	720.22	1856.6	2576.8	721.11	2048.0	2769.1	2.0462	4.6166	6.6628			
0.85	172.96	0.001118	0.2270	731.27	1847.4	2578.7	732.22	2039.4	2771.6	2.0710	4.5711	6.6421			
0.90	175.38	0.001121	0.2150	741.83	1838.6	2580.5	742.83	2031.1	2773.9	2.0946	4.5280	6.6226			
0.95	177.69	0.001124	0.2042	751.95	1830.2	2582.1	753.02	2023.1	2775.1	2.1172	4.4869	6.6041			
1.00	179.91	0.001127	0.1944	761.68	1822.0	2583.6	762.81	2015.3	2778.1	2.1387	4.4478	6.5865			
1.10	184.09	0.001133	0.17753	790.09	1806.3	2586.4	781.34	2000.4	2781.7	2.1792	4.3744	6.5536			
1.20	187.90	0.001139	0.16333	797.29	1791.5	2588.3	798.65	1936.2	2784.8	2.2166	4.3067	6.5233			
1.30	191.64	0.001144	0.15125	813.44	1777.5	2591.0	814.93	1972.7	2787.6	2.2515	4.2438	6.4053			



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TABLE 4: SATURATED WATER-PRESSURE TABLE (CONTD)

Press. MPa P	Sat. Temp. °C T _{sat}	Specific volume m ³ /kg		Internal energy kJ/kg				Enthalpy kJ/kg				Entropy kJ/(kg·K)			
		Sat. liquid v _l		Sat. vapour v _v		Sat. liquid u _l		Sat. vapour u _v		Sat. liquid h _l		Sat. vapour h _v		Sat. liquid s _l	
1.40	195.07	0.001149	0.14064	828.70	1764.1	2592.8	030.30	1059.7	2790.0	2.2842	4.1850	6.4693			
1.50	198.32	0.001154	0.13177	843.16	1751.3	2504.5	044.09	1047.3	2792.2	2.3150	4.1298	6.4448			
1.75	205.76	0.001166	0.11349	876.40	1721.4	2597.8	070.50	1017.9	2796.4	2.3051	4.0044	6.3856			
2.00	212.42	0.001177	0.09563	906.44	1693.8	2600.3	008.79	1000.7	2799.5	2.4747	3.8935	6.3409			
2.25	218.45	0.001187	0.08875	933.03	1660.2	2602.0	036.49	1005.2	2801.7	2.5035	3.7957	6.2972			
2.5	223.99	0.001197	0.07990	959.11	1644.0	2603.1	002.11	1041.0	2803.1	2.5547	3.7028	6.2575			
3.0	233.90	0.001217	0.06660	1004.78	1593.3	2604.1	1008.42	1795.7	2804.2	2.6457	3.5412	6.1865			
3.5	242.60	0.001235	0.05707	1045.43	1558.3	2603.7	1049.75	1753.7	2803.4	2.7253	3.4000	6.1253			
4	250.40	0.001252	0.04978	1082.31	1520.0	2602.3	1087.31	1714.1	2801.4	2.7664	3.2737	6.0701			
5	263.99	0.001286	0.03944	1147.81	1449.3	2597.1	1154.23	1640.1	2794.3	2.9202	3.0532	5.9734			
6	275.61	0.001319	0.03244	1205.44	1384.3	2509.7	1213.35	1571.0	2784.3	3.0267	2.8625	5.8892			
7	285.08	0.001351	0.02737	1257.55	1323.0	2500.5	1267.00	1505.1	2772.1	3.1211	2.6927	5.8133			
8	295.06	0.001384	0.02352	1305.57	1264.2	2568.9	1316.64	1441.3	2758.0	3.2068	2.5364	5.7432			
9	303.40	0.001418	0.02048	1350.51	1207.3	2557.6	1363.26	1378.9	2742.1	3.2858	2.3915	5.6722			
10	311.06	0.001452	0.018026	1393.04	1151.4	2544.4	1407.56	1317.1	2724.7	3.3596	2.2544	5.6141			
11	318.15	0.001489	0.015987	1433.7	1096.0	2529.8	1450.1	1255.5	2705.6	3.4295	2.1233	5.5527			
12	324.75	0.001527	0.014263	1473.0	1040.7	2513.7	1491.3	1193.3	2684.9	3.4952	1.9962	5.4924			
13	330.93	0.001567	0.012780	1511.1	985.0	2496.1	1531.5	1130.7	2652.2	3.5606	1.8718	5.4323			
14	336.75	0.001611	0.011485	1548.6	972.8	2476.8	1571.1	1066.5	2637.6	3.6232	1.7485	5.3717			
15	342.24	0.001653	0.010337	1585.6	669.8	2455.5	1610.5	1000.0	2610.5	3.6848	1.6249	5.3098			
16	347.44	0.001711	0.009306	1622.7	806.0	2431.7	1650.1	930.6	2580.6	3.7461	1.4951	5.2455			
17	352.37	0.001770	0.008364	1665.2	744.8	2405.0	1699.3	856.9	2547.2	3.8079	1.3698	5.1777			
18	357.06	0.001840	0.007489	1698.9	675.4	2374.3	1732.0	777.1	2509.1	3.8715	1.2326	5.1044			
19	361.54	0.001924	0.006657	1739.9	598.1	2338.1	1776.5	688.0	2464.5	3.9388	1.0839	5.0228			
20	365.81	0.002036	0.005834	1785.6	507.5	2293.0	1826.3	583.4	2409.7	4.0139	0.9130	4.9269			
21	369.89	0.002207	0.004952	1842.1	388.5	2230.6	1886.4	446.2	2334.6	4.1075	0.6938	4.8013			
22	373.00	0.002742	0.003568	1961.9	125.2	2087.1	2022.2	143.4	2165.6	4.3110	0.2216	4.5327			
22.09	374.12	0.003155	0.003155	2029.6	0	2025.6	2099.3	0	2099.3	4.4295	0	4.4298			

TABLE 5: SUPERHEATED STEAM TABLE

T °C	v m ³ /kg	u kJ/kg	h kJ/kg	s kJ/(kg·K)	v m ³ /kg	u kJ/kg	h kJ/kg	s kJ/(kg·K)	v m ³ /kg	u kJ/kg	h kJ/kg	s kJ/(kg·K)
P = 0.01 MPa (45.81°C)*												
Sat.	14.674	2427.5	2584.7	8.1502	3.240	2483.9	2645.9	7.5939	1.6940	2506.1	2675.5	7.3594
50	14.892	2443.9	2592.6	8.1749								
100	17.196	2515.5	2587.5	8.4479	3.418	2511.6	2882.5	7.8947	1.6958	2508.7	2876.2	7.3014
150	19.512	2587.9	2783.0	8.6882	3.889	2585.6	2780.1	7.9401	1.9364	2582.8	2776.4	7.6134
200	21.825	2661.3	2879.5	8.9038	4.356	2659.9	2877.7	8.1580	2.172	2658.1	2872.2	7.8343
250	24.136	2736.0	2977.3	9.1002	4.820	2735.0	2976.0	8.3556	2.408	2739.7	2974.3	8.0333
300	26.445	2812.1	3076.5	9.2613	5.284	2811.3	3075.5	8.5373	2.639	2810.4	3074.3	8.2158
400	31.063	2968.9	3279.6	9.6077	6.209	2968.5	3278.9	8.8642	3.103	2967.9	3278.2	8.5435
500	35.679	3132.3	3489.1	9.8978	7.134	3132.0	3488.7	9.1546	3.565	3131.6	3488.1	8.8234
600	40.295	3302.5	3765.4	10.1608	8.057	3302.2	3705.1	9.4178	4.028	3301.9	3704.4	9.0976
700	44.911	3479.6	3928.7	10.4028	8.981	3479.4	3928.5	9.6599	4.490	3479.2	3928.2	9.3398
800	49.526	3663.8	4159.0	10.6281	9.904	3663.6	4158.0	9.8852	4.952	3663.5	4158.6	9.5652
900	54.141	3855.0	4396.4	10.8306	10.828	3854.9	4396.3	10.0967	5.414	3854.8	4396.1	9.7767
1000	58.757	4053.0	4640.6	11.0393	11.751	4052.9	4640.5	10.2964	5.875	4052.8	4640.3	9.9764
1100	63.372	4257.5	4891.2	11.2287	12.674	4257.4	4891.1	10.4859	6.337	4257.3	4891.0	10.1659
1200	67.987	4467.9	5147.8	11.4091	13.597	4467.8	5147.7	10.6662	6.799	4467.7	5147.6	10.3463
1300	72.602	4683.7	5409.7	11.5811	14.521	4683.6	5409.6	10.8382	7.260	4683.5	5409.5	10.5183
P = 0.20 MPa (120.23°C)*												
Sat.	0.8857	2529.5	2706.7	7.1272	0.6058	2543.6	2725.3	6.9919	0.4625	2553.6	2738.6	6.8959
150	0.9596	2576.9	2762.3	7.2795	0.6338	2570.8	2761.0	7.0778	0.4768	2564.5	2752.8	6.9299
200	1.0803	2654.4	2750.5	7.5066	0.7163	2650.7	2865.6	7.3115	0.5342	2646.8	2860.5	7.1705
250	1.1988	2731.2	2971.0	7.7086	0.7964	2728.7	2967.6	7.5163	0.5951	2726.1	2964.2	7.3789
300	1.3162	2808.6	3071.8	7.926	0.8753	2806.7	3093.3	7.7022	0.6548	2804.8	3066.8	7.5662
400	1.5493	2966.7	3276.6	8.2218	1.0315	2965.6	3275.0	8.0330	0.7726	2964.4	3273.4	7.8985
500	1.7814	3130.8	3487.1	8.5133	1.1867	3130.0	3486.0	8.3251	0.8893	3129.2	3484.9	8.1913
600	2.013	3301.4	3704.0	8.7770	1.3414	3300.8	3703.2	8.582	1.0055	3300.2	3702.4	8.4558
700	2.244	3478.8	3927.6	9.0794	1.4957	3478.1	3927.1	8.8319	1.1215	3477.9	3925.5	8.6697
800	2.475	3563.1	4158.2	9.2449	1.6499	3562.9	4157.8	9.0576	1.2372	3562.4	4157.3	8.9214
900	2.705	3854.5	4395.8	9.4566	1.8041	3854.2	4395.4	9.2562	1.3529	3853.9	4395.1	9.1362
1000	2.937	4052.5	4640.0	9.5563	1.9581	4052.3	4639.7	9.4690	1.4685	4052.0	4639.4	9.3360
1100	3.168	4257.0	4890.7	9.8458	2.1121	4256.8	4890.4	9.6585	1.5840	4256.5	4890.2	9.5253
1200	3.399	4467.5	5147.5	10.0262	2.2661	4467.2	5147.1	9.8389	1.6996	4467.0	5146.8	9.7060
1300	3.630	4683.2	5409.4	10.1932	2.4201	4683.0	5409.3	10.0116	1.8151	4582.8	5428.8	9.8184



TABLE 5: SUPERHEATED STEAM TABLE (CONT'D)

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)
$P = 0.50 \text{ MPa} (151.86^\circ\text{C})$												
100	0.3749	2561.2	2748.7	6.8213	0.3157	2567.4	2756.8	6.7600	0.2404	2576.8	2769.1	6.6628
200	0.4249	2642.9	2855.4	7.0592	0.3520	2638.9	2850.1	6.9665	0.2608	2730.6	2839.3	6.8158
250	0.4744	2721.5	2960.7	7.2709	0.3938	2720.9	2957.2	7.1816	0.2931	2715.5	2950.0	7.0384
300	0.5226	2802.9	3064.2	7.4559	0.4344	2801.0	3061.6	7.3724	0.3241	2797.2	3056.5	7.2328
350	0.5701	2882.6	3167.7	7.6329	0.4742	2881.2	3165.7	7.5464	0.3544	2878.2	3161.7	7.4089
400	0.6173	2963.2	3271.9	7.7938	0.5137	2962.1	3270.3	7.7079	0.3843	2959.7	3267.1	7.5716
500	0.7109	3128.4	3483.9	8.0873	0.5920	3127.6	3482.8	8.0021	0.4433	3126.0	3480.6	8.1333
600	0.8041	3299.6	3701.7	8.3522	0.6697	3299.1	3700.9	8.2674	0.5018	3297.9	3699.4	8.3770
700	0.8969	3477.5	3925.9	8.5952	0.7472	3477.0	3925.3	8.5107	0.5601	3476.2	3924.2	8.5033
800	0.9896	3662.1	4156.9	8.8211	0.8215	3661.8	4156.5	8.7367	0.6181	3661.1	4155.6	8.8153
900	1.0822	3853.6	4394.7	9.0329	0.9017	3853.4	4394.4	8.9466	0.6761	3852.8	4393.7	9.0153
1000	1.1747	4051.8	4639.1	9.2328	0.9788	4051.5	4638.8	9.1485	0.7340	4051.0	4630.2	9.2050
1100	1.2672	4256.3	4889.9	9.4224	1.0559	4256.1	4889.6	9.3381	0.7919	4255.6	4889.1	9.3855
1200	1.3596	4466.6	5146.6	9.6029	1.1330	4466.5	5146.3	9.5185	0.8497	4466.1	5145.9	9.5575
1300	1.4521	4682.5	5408.6	9.7749	1.2101	4682.3	5408.3	9.6906	0.9076	4681.8	5407.9	
$P = 1.00 \text{ MPa} (179.91^\circ\text{C})$												
100	0.9444	2583.6	2778.1	6.5865	0.16333	2588.8	2784.8	6.5233	0.14084	2592.8	2790.0	6.4693
200	0.2060	2521.9	2827.9	6.6940	0.16930	2612.8	2815.9	6.5858	0.14302	2603.1	2803.3	6.4975
250	0.2327	2709.9	2942.6	6.9247	0.19234	2704.2	2935.0	6.8294	0.16350	2692.3	2927.2	6.7467
300	0.2579	2793.2	3051.2	7.1229	0.2138	2789.2	3045.8	7.0317	0.18228	2785.2	3040.4	6.9534
350	0.2825	2875.2	3152.7	7.3011	0.2345	2872.2	3153.6	7.2121	0.2003	2869.2	3149.5	7.1360
400	0.3066	2957.3	3263.9	7.4651	0.2548	2954.9	3260.7	7.3774	0.2178	2952.5	3257.5	7.3026
500	0.3541	3124.4	3478.5	7.7622	0.2946	3122.8	3476.3	7.6759	0.2521	3121.1	3474.1	7.6027
600	0.4011	3296.8	3697.9	8.0290	0.3339	3295.6	3698.3	7.9435	0.2860	3294.4	3694.8	7.8710
700	0.4478	3475.3	3923.1	8.2731	0.3729	3474.4	3922.0	8.1881	0.3195	3473.6	3920.8	8.1160
800	0.4943	3660.4	4154.7	8.4998	0.4118	3659.7	4153.8	8.4148	0.3528	3659.0	4153.0	8.3431
900	0.5407	3852.2	4392.9	8.7118	0.4505	3851.6	4392.2	8.6272	0.3861	3851.1	4391.5	8.5556
1000	0.5871	4050.5	4637.6	8.9119	0.4892	4050.0	4637.0	8.8274	0.4192	4049.5	4636.4	8.7559
1100	0.6335	4255.1	4888.6	9.1017	0.5278	4254.6	4888.0	9.0172	0.4524	4254.1	4887.5	8.9457
1200	0.6798	4465.6	5145.4	9.2822	0.5665	4465.1	5144.9	9.1977	0.4855	4464.7	5144.4	9.1262
1300	0.7261	4681.3	5407.4	9.4543	0.6051	4680.9	5407.0	9.3698	0.5186	4680.4	5406.5	9.2984
$P = 1.20 \text{ MPa} (187.97^\circ\text{C})$												

TABLE 5: SUPERHEATED STEAM TABLE (CONT'D)

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)
$P = 1.60 \text{ MPa} (201.41^\circ\text{C})$												
100	0.12383	2596.0	2794.0	6.4218	0.11042	2598.4	2797.1	6.3794	0.09963	2600.3	2799.5	6.3409
200	0.13287	2644.7	2857.3	6.5518	0.11673	2636.6	2846.7	6.4808	0.10277	2628.3	2835.8	6.4147
250	0.14184	2692.3	2919.2	6.6732	0.12497	2686.0	2911.0	6.6066	0.11144	2679.6	2902.5	6.5453
300	0.15852	2781.1	3034.8	6.8844	0.14021	2776.9	3029.2	6.8226	0.12547	2772.6	3023.5	6.7664
350	0.17456	2866.1	3145.4	7.0694	0.15452	2863.0	3141.2	7.0100	0.13857	2859.8	3137.0	6.9563
400	0.19065	2950.1	3254.2	7.2774	0.16847	2947.7	3250.9	7.1794	0.15120	2945.2	3247.6	7.1271
500	0.22023	3119.5	3472.0	7.5390	0.21550	3117.9	3469.8	7.4825	0.17568	3116.2	3467.6	7.4317
600	0.25000	3293.3	3693.2	7.8080	0.2220	3292.1	3691.7	7.7523	0.19560	3290.9	3690.1	7.7024
700	0.2794	3472.7	3919.7	8.0535	0.2462	3471.8	3911.8	7.9983	0.2232	3470.9	3917.4	7.9487
800	0.30886	3658.3	4152.1	8.2808	0.2742	3657.6	4151.2	8.2258	0.2467	3657.0	4150.3	8.1765
900	0.3377	3850.5	4390.8	8.4935	0.3001	3849.9	4390.1	8.4386	0.2700	3849.3	4389.4	8.3095
1000	0.3668	4048.0	4635.8	8.6938	0.3260	4048.5	4635.2	8.6391	0.2933	4048.0	4634.6	8.5901
1100	0.3958	4253.7	4887.0	8.8837	0.3518	4253.2	4886.4	8.8290	0.3166	4252.7	4885.9	8.7800
1200	0.4248	4464.2	5143.9	9.0843	0.3776	4463.7	5143.4	9.0096	0.3398	4463.3	5142.9	8.9607
1300	0.4538	4679.9	5406.0	9.2364	0.4034	4679.5	5405.6	9.1818	0.3631	4679.0	5405.1	9.1329
$P = 2.50 \text{ MPa} (223.99^\circ\text{C})$												
100	0.07693	2603.1	2803.1	6.2575	0.06568	2604.1	2804.2	6.1869	0.05707	2603.7	2803.4	6.1253
200	0.08027	2605.8	2806.3	6.2039	0.07058	2644.0	2855.8	6.2872	0.05872	2623.7	2829.2	6.1749
250	0.08700	2652.6	2880.1	6.4085	0.08114	2750.1	2993.5	6.5390	0.06842	2738.0	2977.5	6.4461
300	0.09890	2781.6	3008.8	6.6438	0.09053	2843.7	3115.3	6.7428	0.07678	2835.3	3104.0	6.6579
350	0.10976	2851.9	3126.3	6.8403	0.09936	2932.8	3230.9	6.9212	0.08453	2926.4	3222.3	6.6405
400	0.12010	2939.1	3239.3	7.0148	0.10787	3020.4	3344.0	7.0834	0.09196	3015.3	3337.2	7.0052
450	0.13014	3025.5	3350.8	7.1746	0.11619	3108.0	3456.5	7.2338	0.09918	3103.0	3450.9	7.1572
500	0.13993	3112.1	3462.1	7.3234	0.13243	3285.0	3682.3	7.5085	0.11324	3282.1	3673.4	7.4339
600	0.15330	3288.0	3586.3	7.5960	0.14838	3466.5	3911.7	7.7571	0.12699	3464.3	3908.8	7.6837
700	0.17832	3466.7	3814.5	7.8435	0.16414	3653.5	4145.9	7.9862	0.14056	3651.8	4143.7	7.9134
800	0.19716	3655.3	4148.2	8.0720	0.17960	3846.5	4385.0	8.1999	0.15402	3845.0	4384.1	8.1276
900	0.21590	3847.6	4387.6	8.2853	0.19541	4045.4	4631.6	8.4009	0.16743	4044.1	4630.1	8.3288
1000	0.2346	4046.7	4633.1	8.4861	0.21098	4250.3	4883.3	8.5912	0.18080	4249.2	4881.9	8.5192
1100	0.2532	4251.5	4884.6	8.6762	0.22652	4460.9	5140.5	8.7722	0.19415	4459.0	5139.3	8.7000
1200	0.2718	4462.1	5141.7	8.8569	0.24206	4676.6	5402.8	8.9442	0.20749	4675.5	5401.7	8.8723
$P = 3.00 \text{ MPa} (233.90^\circ\text{C})$												



TABLE 5: SUPERHEATED STEAM TABLE (CONT'D)

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)
$P = 4.0 \text{ MPa (250.40°C)}$												
Sat.	0.04978	2602.3	2801.4	6.0701	0.04406	2600.1	2798.3	6.0198	0.03944	2597.1	2794.3	5.9734
275	0.05457	2667.9	2866.2	6.2285	0.04730	2650.3	2863.2	6.1401	0.04141	2631.3	2858.3	6.0544
300	0.05884	2725.3	2900.7	6.3615	0.05135	2712.0	2943.1	6.2828	0.04532	2698.0	2924.5	6.2094
350	0.06645	2825.7	3092.5	6.5821	0.05840	2817.8	3080.6	6.5131	0.05194	2808.7	3068.4	6.4493
400	0.07341	2919.9	3213.6	6.7690	0.06475	2913.3	3204.7	6.7047	0.05781	2906.6	3195.7	6.5459
450	0.08092	3010.2	3303.3	6.9363	0.07074	3005.0	3323.3	6.8740	0.06330	2999.7	3316.2	6.8108
500	0.08643	3099.5	3445.3	7.0001	0.07651	3005.3	3439.0	7.0301	0.06957	3091.0	3438.3	6.9759
600	0.09885	3279.1	3674.4	7.3688	0.08765	3276.0	3670.5	7.3110	0.07869	3273.0	3666.5	7.2589
700	0.11095	3462.1	3905.9	7.6198	0.09847	3450.9	3903.0	7.5631	0.08849	3457.0	3900.1	7.5122
800	0.12287	3650.0	4141.5	7.8502	0.10911	3648.3	4139.3	7.7942	0.09811	3646.6	4137.1	7.7440
900	0.13469	3843.6	4382.3	8.0647	0.11965	3842.2	4380.0	8.0091	0.10762	3840.7	4378.8	7.9593
1000	0.14645	4042.9	4628.7	8.2662	0.13013	4041.6	4627.2	8.2108	0.11707	4040.4	4625.7	8.1612
1100	0.15517	4248.0	4880.6	8.4567	0.14056	4246.8	4879.3	8.4015	0.12048	4245.6	4878.0	8.3520
1200	0.16987	4456.6	5138.1	8.6376	0.15090	4457.0	5136.9	8.5025	0.13597	4450.3	5135.7	8.5331
1300	0.18156	4674.3	5400.5	8.8100	0.16139	4673.1	5399.4	8.7549	0.14526	4672.0	5398.2	8.7055
$P = 6.0 \text{ MPa (275.64°C)}$												
Sat.	0.03244	2589.7	2784.3	5.8892	0.02737	2580.5	2772.1	5.8133	0.02352	2569.0	2758.0	5.7432
300	0.03616	2667.2	2884.2	6.0674	0.02947	2632.2	2838.4	5.9305	0.02426	2590.0	2755.0	5.7903
350	0.04223	2789.6	3043.0	6.3355	0.03524	2769.4	3016.0	6.2223	0.02995	2747.7	2987.3	6.1301
400	0.04739	2892.9	3177.2	6.5405	0.03993	2878.6	3158.1	6.4478	0.03432	2863.8	3138.3	6.3634
450	0.05214	2998.9	3301.8	6.7193	0.04410	2978.0	3287.1	6.6327	0.03817	2956.7	3272.0	6.5551
500	0.05655	3052.2	3422.2	6.8803	0.04814	3073.4	3410.3	6.7975	0.04175	3054.3	3398.3	6.7240
550	0.06101	3174.6	3504.6	7.0268	0.05195	3167.2	3530.9	6.9486	0.04516	3159.8	3521.0	6.8778
600	0.06525	3266.9	3658.4	7.1677	0.05566	3260.7	3650.3	7.0894	0.04845	3254.4	3642.0	7.2026
700	0.07352	3453.1	3894.2	7.4234	0.06203	3448.5	3888.3	7.3476	0.05481	3443.9	3882.4	7.2812
800	0.08160	3643.1	4132.7	7.6566	0.06981	3639.5	4128.2	7.5822	0.06097	3636.0	4123.8	7.5173
900	0.08958	3837.8	4375.3	7.8727	0.07569	3835.0	4371.8	7.7991	0.06702	3832.1	4368.3	7.7351
1000	0.09749	4037.8	4622.7	8.0751	0.08350	4035.3	4619.8	8.0020	0.07301	4032.8	4616.9	7.9384
1100	0.10536	4243.3	4875.4	8.2661	0.09027	4240.9	4872.8	8.1933	0.07396	4238.6	4870.3	8.1300
1200	0.11321	4454.0	5133.3	8.4474	0.09703	4451.7	5130.9	8.3747	0.08489	4449.5	5128.5	8.3115
1300	0.12106	4669.6	5396.0	8.6199	0.10377	4667.2	5393.7	8.5475	0.09080	4665.0	5391.5	8.4842
$P = 7.0 \text{ MPa (285.88°C)}$												
$P = 8.0 \text{ MPa (295.06°C)}$												

TABLE 5: SUPERHEATED STEAM TABLE (CONT'D)

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg × K)
$P = 9.0 \text{ MPa (303.40°C)}$												
Sat.	0.02048	2557.8	2742.1	5.6772	0.018026	2544.4	2724.7	5.6141	0.013495	2505.1	2673.8	5.4624
325	0.02327	2646.6	2856.0	5.8712	0.019861	2610.4	2809.1	5.7568	0.016129	2624.6	2826.2	5.7118
350	0.02580	2724.4	2956.6	6.0361	0.02242	2699.2	2923.4	5.9443	0.02000	2789.3	3039.3	6.0417
400	0.02993	2848.4	3117.8	6.2854	0.02641	2832.4	3096.5	6.2120	0.02299	2912.5	3199.8	6.2719
450	0.03350	2955.2	3256.6	6.4644	0.02975	2943.4	3240.9	6.4190	0.02560	3021.7	3341.8	6.4618
500	0.03677	3055.2	3386.1	6.6576	0.03279	3045.8	3373.7	6.5986	0.02801	3125.0	3475.2	6.6290
550	0.03987	3152.2	3511.0	6.8142	0.03564	3144.6	3500.9	6.7561	0.03029	3225.4	3604.0	6.7810
600	0.04285	3248.1	3633.7	6.9589	0.03837	3241.7	3625.3	6.9029	0.03460	3224.4	3730.4	6.9213
650	0.04574	3343.6	3755.3	7.0943	0.04101	3338.2	3746.2	7.0396	0.03248	3322.9	3555.3	7.0536
700	0.04857	3439.3	3876.5	7.2221	0.04358	3434.7	3870.5	7.1687	0.03460	3422.9	3555.3	7.0536
800	0.05409	3632.5	4119.3	7.4596	0.04656	3628.9	4114.8	7.4077	0.03869	3620.0	4103.6	7.2965
900	0.05950	3829.2	4364.8	7.6783	0.05349	3826.3	4361.2	7.6272	0.04267	3819.1	4352.5	7.5182
1000	0.06485	4030.3	4614.6	7.8821	0.05832	4027.8	4611.0	7.8315	0.04658	4021.6	4603.8	7.7237
1100	0.07016	4236.3	4867.7	8.0740	0.06312	4234.0	4865.1	8.0237	0.05045	4228.2	4858.8	7.9165
1200	0.07544	4447.2	5126.2	8.2552	0.06789	4444.9	5123.8	8.2055	0.05430	4439.3	5118.0	8.0937
1300	0.08072	4662.7	5389.2	8.4284	0.07265	4660.5	5367.0	8.3793	0.05813	4654.8	5381.4	8.2717
$P = 15.0 \text{ MPa (342.24°C)}$												
$P = 17.5 \text{ MPa (354.75°C)}$												
$P = 20.0 \text{ MPa (365.81°C)}$												
Sat.	0.010337	2455.5	2610.5	5.3098	0.007920	2390.2	2528.8	5.1419	0.005834	2293.0	2409.7	4.9269
300	0.011470	2520.4	2692.4	5.4421	0.012447	2685.0	2902.9	5.7213	0.005142	2619.3	2818.1	5.5540
400	0.015649	2747.0	2975.5	5.8811	0.015174	2644.2	3139.7	5.0184	0.012695	2805.2	3060.1	5.9017
-50	0.018445	2673.5	3156.2	6.1404	0.017353	2970.3	3274.1	6.2383	0.014768	2942.9	3239.2	6.1401
500	0.02056	2996.6	33C3.6	6.3413	0.019288	3083.9	3421.4	6.4230	0.016555	3062.4	3393.5	6.3345
550	0.02293	3104.7	3448.6	6.5199	0.02106	3191.5	3563.1	6.5866	0.018178	3174.0	3537.6	6.5040
600	0.02491	3208.6	3582.3	6.6776	0.02274	3296.0	3693.9	6.7357	0.019693	3261.4	3675.3	6.6582
650	0.02689	3310.3	3712.3	6.8224	0.02434	3321.6	3396.7	6.8726	0.02113	3386.4	3809.0	6.7992
700	0.02661	3410.9	3840.1	6.9572	0.02434	3501.8	4081.1	7.1244	0.02385	3592.7	4069.7	7.0544
800	0.03210	3410.9	4092.4	7.204C	0.02738	3601.8	4335.1	7.3507	0.02645	3797.5	4326.4	7.2830
900	0.03546	3611.9	4342.8	7.4279	0.03031	3604.7	4335.1	7.5589	0.02897	4001.1	4582.6	7.4825
1000	0.03875	4015.4	4596.6	7.6348	0.03316	4009.3	4569.5	7.7531	0.03145	4211.2	4829.1	7.6874
1100	0.04200	4222.6	4852.6	7.8233	0.03597	4216.9	4846.4	7.7531	0.03391	4222.8	4819.7	7.6707
1200	0.04523	4433.0	5112.3	8.0108	0.03376	4282.3	5106.6	7.9350	0.03635	4635.0	5369.7	7.8142
1300	0.04845	4640.1	5374.0	8.1810	0.04154	4613.5	5376.0	8.1093	0.03635	4635.0	5369.7	7.8142



TABLE 6: COMPRESSED LIQUID WATER (CONT'D)

T °C	v m³/kg				u kJ/kg				h kJ/kg				s kJ/(kg × K)			
	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
	$P = 20.0 \text{ MPa} (365.81^\circ\text{C})$												$P = 30 \text{ MPa}$			
Sal.	0.002036	1785.6	1826.3	40139									0.0009766	0.20	49.03	0.0014
0	0.0009904	0.19	20.01	0.0004	0.0009856	0.25	29.82	0.0001	0.0009804	81.00	130.02	0.2848				
20	0.0009928	82.77	102.62	0.2923	0.0009886	82.17	111.84	0.2799	0.0009824	161.86	211.21	0.5527				
40	0.0009992	165.17	185.16	0.5646	0.0009951	164.04	193.89	0.5607	0.0009932	242.58	292.19	0.8052				
60	0.0010084	247.68	267.85	0.8206	0.0010042	245.05	270.19	0.8154	0.0009962	324.31	374.70	1.0440				
80	0.0010199	330.40	350.80	1.0624	0.0010156	328.30	358.77	1.0561	0.0010073	405.88	456.89	1.2703				
100	0.0010237	413.39	434.06	1.2917	0.0010290	410.78	441.66	1.2844	0.0010201	487.65	539.39	1.4857				
120	0.0010496	495.76	517.76	1.5102	0.0010445	493.59	524.93	1.5018	0.0010348	569.77	622.35	1.8915				
140	0.0010678	580.69	602.04	1.7193	0.0010621	576.88	608.75	1.7098	0.0010703	652.41	705.92	1.8891				
160	0.0010885	665.35	687.12	1.9204	0.0010821	660.82	693.28	1.9096	0.0010912	735.69	790.25	2.0794				
180	0.0011120	750.95	773.20	2.1147	0.0011047	745.59	778.73	2.1024	0.0011146	819.7	873.5	2.2834				
200	0.0011388	837.7	860.5	2.3031	0.0011302	831.4	865.3	2.2893	0.0011408	904.7	961.7	2.4419				
220	0.0011635	925.9	949.3	2.4870	0.0011590	918.3	953.1	2.4711	0.0011702	990.7	1049.2	2.5158				
240	0.0012046	1016.0	1040.0	2.6674	0.0011920	1006.8	1042.6	2.6490	0.0012034	1078.1	1138.2	2.7860				
260	0.0012462	1108.6	1133.5	2.8459	0.0012303	1097.4	1134.3	2.8243	0.0012415	1167.2	1220.3	2.6537				
280	0.0012905	1204.7	1230.6	3.0248	0.0012755	1190.7	1229.0	2.9988	0.0012860	1258.7	1323.0	3.1200				
300	0.0013596	1306.1	1333.3	3.2071	0.0013304	1287.9	1327.8	3.1741	0.0013388	1353.3	1420.2	3.2868				
320	0.0014437	1415.7	1444.6	3.3979	0.0013997	1390.7	1432.7	3.3539	0.0014032	1452.0	1522.1	3.4557				
340	0.0015684	1539.7	1571.0	3.6075	0.0014920	1501.7	1546.5	3.5426	0.0014936	1556.0	1630.2	3.6291				
360	0.0018226	1702.8	1739.3	3.8772	0.0016265	1626.6	1675.4	3.7494	0.0015884	1667.2	1746.6	3.8101				
380					0.0018691	1781.4	1837.5	4.0012	0.0015884							

TABLE 7: SATURATED ICE-WATER VAPOUR

Temp. °C T	Sat. press. P_{sat} kPa	Specific volume m³/kg		Internal energy kJ/kg				Enthalpy kJ/kg			Entropy kJ/(kg × K)		
		Sat. ice $v_i = 10^{-3}$	Sat. vapour v_g	Sat. ice u_i	Sat. Subl. $-u_g$	Sat. vapour u_v	Sat. ice h_i	Sat. Subl. h_g	Sat. vapour h_v	Sat. ice s_i	Sat. Subl. s_g	Sat. vapour s_v	
0.01	0.6113	1.0908	206.1	-333.40	2703.7	2375.3	-333.40	2834.8	2501.4	-1.221	10.378	9.156	
0	0.6108	1.0908	206.3	-333.43	2703.8	2375.3	-333.43	2834.8	2501.3	-1.221	10.378	9.157	
-2	0.5176	1.0904	241.7	-337.62	2710.2	2372.6	-337.62	2635.3	2497.7	-1.237	10.456	9.219	
-4	0.4375	1.0901	203.8	-341.78	2711.6	2369.8	-341.78	2835.7	2494.0	-1.253	10.536	9.283	
-6	0.3689	1.0893	334.2	-345.91	2712.9	2367.0	-345.91	2836.2	2490.3	-1.268	10.616	9.342	
-8	0.3102	1.0894	394.4	-350.02	2714.2	2364.2	-350.02	2836.6	2486.6	-1.284	10.698	9.414	
-10	0.2602	1.0891	466.7	-354.09	2715.5	2361.4	-354.09	2837.0	2482.9	-1.299	10.781	9.481	
-12	0.2176	1.0888	553.7	-358.14	2716.8	2358.7	-358.14	2837.3	2479.2	-1.315	10.865	9.550	
-14	0.1815	1.0884	658.8	-362.15	2718.0	2355.9	-362.15	2837.6	2475.5	-1.331	10.950	9.619	
-16	0.1510	1.0881	785.0	-366.14	2719.2	2353.1	-366.14	2837.9	2471.8	-1.346	11.036	9.690	
-18	0.1252	1.0778	940.5	-370.10	2720.4	2350.3	-370.10	2838.2	2468.1	-1.362	11.123	9.752	
-20	0.1035	1.0374	1128.6	-374.03	2721.6	2347.5	-374.03	2838.4	2464.3	-1.377	11.212	9.835	
-22	0.0853	1.0871	1358.4	-377.93	2722.7	2344.7	-377.93	2838.6	2460.6	-1.393	11.302	9.909	
-24	0.0701	1.0868	1640.1	-381.80	2723.7	2342.0	-381.80	2838.7	2456.9	-1.408	11.394	9.985	
-26	0.0574	1.0864	1986.4	-385.64	2724.8	2339.2	-385.64	2838.9	2453.2	-1.424	11.486	10.052	
-28	0.0469	1.0861	2413.7	-389.45	2725.8	2336.4	-389.45	2839.0	2449.5	-1.439	11.580	10.141	
-30	0.0381	1.0858	2943	-393.23	2726.8	2333.6	-393.23	2839.0	2445.8	-1.455	11.676	10.221	
-32	0.0309	1.0854	3800	-396.98	2727.8	2330.8	-396.98	2839.1	2442.1	-1.471	11.773	10.303	
-34	0.0250	1.0851	4419	-400.71	2728.7	2328.0	-400.71	2839.1	2438.4	-1.486	11.872	10.386	
-36	0.0201	1.0848	5444	-404.40	2729.6	2325.2	-404.40	2839.1	2434.7	-1.501	11.972	10.470	
-38	0.0161	1.0844	6731	-408.06	2730.5	2322.4	-408.06	2839.0	2430.9	-1.517	12.073	10.556	
-40	0.0129	1.0841	8354	-411.70	2731.3	2319.6	-411.70	2839.9	2427.2	-1.532	12.176	10.644	



TABLE 5: SUPERHEATED STEAM TABLE (CONT'D)

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)
P = 25.0 MPa												
375	0.0019731	1798.7	1644.0	4.0320	0.0017892	1737.6	1791.5	3.9305	0.0017003	1702.9	1762.4	3.8722
400	0.006004	2430.1	2580.2	5.1418	0.002790	2067.4	2151.1	4.4728	0.002100	1914.1	1987.6	4.2126
425	0.007881	2609.2	2806.3	5.4723	0.005303	2455.1	2614.2	5.1504	0.003428	2253.4	2373.4	4.7747
450	0.009152	2720.7	2949.7	5.6744	0.006735	2619.3	2821.4	5.4424	0.004901	2498.7	2672.4	5.1962
500	0.01123	2884.3	3162.4	5.9592	0.008678	2820.7	3081.1	5.7905	0.006927	2751.9	2994.4	5.6282
550	0.012724	3017.5	3335.6	5.1765	0.010168	2970.2	3275.4	5.0342	0.009527	2921.0	3213.0	5.8026
600	0.014137	3137.9	3491.4	6.3602	0.011446	3100.5	3443.9	6.233*	0.010575	3189.8	3559.9	6.3010
650	0.015433	3251.6	3637.4	6.5229	0.012596	3221.0	3598.9	6.4058	0.011533	3309.8	3713.5	6.4631
700	0.016646	3361.3	3777.5	6.6707	0.013601	3335.8	3745.6	6.5606	0.012278	3536.7	4001.5	6.7450
800	0.018912	3574.3	4047.1	6.9345	0.015623	3555.5	4024.2	6.8332	0.014883	3754.0	4274.9	6.9385
900	0.021045	3783.0	4309.1	7.1680	0.017448	3768.5	4291.9	7.0718	0.016410	3986.7	4541.1	7.2084
1000	0.02310	3990.9	4588.5	7.3802	0.018186	3978.8	4554.7	7.2867	0.017895	4178.3	4804.6	7.4037
1100	0.02512	4200.2	4826.2	7.5765	0.020903	4189.2	4816.3	7.4845	0.019360	4390.7	5068.3	7.5910
1200	0.02711	4412.0	5039.8	7.7605	0.022589	4401.3	5079.0	7.6692	0.020315	4605.1	5333.0	7.7651
1300	0.02910	4626.9	5354.4	7.9342	0.024266	4616.0	5344.0	7.8432				
P = 35.0 MPa												
375	0.0016407	1677.1	1742.8	3.8290	0.0015594	1638.6	1716.6	3.7639	0.0015028	1609.4	1699.5	3.7141
400	0.0019077	1854.6	1830.9	4.1135	0.0017309	1768.1	1874.6	4.0031	0.0016235	1745.4	1843.4	3.9318
425	0.002532	2096.0	2198.1	4.5029	0.002007	1959.7	2060.0	4.2734	0.0018165	1882.7	2001.7	4.1626
450	0.003693	2385.1	2512.6	4.9459	0.002486	2159.6	2284.0	4.5884	0.0020985	2053.9	2179.0	4.4121
500	0.005622	2678.4	2963.3	5.4700	0.003892	2525.5	2720.1	5.1726	0.002956	2390.6	2547.9	4.9321
550	0.006984	2869.7	3149.1	5.7785	0.005118	2763.6	3019.5	5.5485	0.003058	2658.8	2866.2	5.3441
600	0.008094	3022.6	3346.4	6.0144	0.006112	2942.0	3247.6	5.8178	0.004834	2861.1	3151.2	5.6452
650	0.009063	3158.0	3520.6	6.2064	0.007066	3035.6	3411.8	6.0342	0.005595	3028.8	3364.5	5.8829
700	0.009941	3283.8	3681.2	6.3750	0.007727	3230.5	3616.8	6.2180	0.006272	3177.2	3553.5	6.0824
800	0.011523	3517.8	3978.7	6.6662	0.009076	3479.8	3933.6	6.5290	0.007459	3441.5	3889.1	6.4108
900	0.012962	3739.4	4257.9	6.9150	0.010283	3710.3	4224.4	6.7682	0.008508	3681.0	4191.5	6.6805
1000	0.014324	3954.6	4527.6	7.1356	0.011411	3930.5	4501.1	7.0148	0.009490	3906.4	4475.2	6.9127
1100	0.015642	4167.4	4793.1	7.3364	0.012496	4145.7	4770.5	7.2184	0.010409	4124.1	4748.8	7.1195
1200	0.016940	4380.1	5057.7	7.5224	0.013561	4359.1	5037.2	7.4058	0.011317	4338.2	5017.2	7.3083
1300	0.018229	4594.3	5323.5	7.6969	0.014616	4572.8	5303.6	7.5808	0.012215	4551.4	5284.3	7.4837
P = 60.0 MPa												

TABLE 6: COMPRESSED LIQUID WATER

T °C	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)	v m³/kg	u kJ/kg	h kJ/kg	s kJ/(kg °K)
P = 5 MPa (263.9°C)												
Sal	0.0012859	1147.8	1154.2	2.9202	0.0014524	1393.0	1407.6	3.3598	0.0016581	1585.6	1610.5	3.6643
0	0.0009977	0.04	5.04	0.0001	0.0009952	0.09	10.04	0.0002	0.0009928	0.15	15.05	0.0004
20	0.0009995	83.65	88.65	0.2956	0.0009972	83.36	93.33	0.2945	0.0009950	83.06	97.99	0.2934
40	0.0010056	166.95	171.97	0.5705	0.0010034	166.35	176.38	0.5686	0.0010013	165.76	180.78	0.5566
60	0.0010149	250.23	255.30	0.8285	0.0010127	249.36	259.49	0.8258	0.0010105	248.51	263.67	0.8232
80	0.0010256	333.72	338.85	1.0720	0.0010245	332.59	342.83	1.0689	0.0010222	331.48	348.81	1.0658
100	0.0010410	417.52	422.72	1.3030	0.0010365	416.12	426.50	1.2992	0.0010361	414.74	430.28	1.2955
120	0.0010576	501.00	507.09	1.5233	0.0010549	500.08	510.64	1.5189	0.0010522	498.40	514.19	1.5145
140	0.0010768	588.76	602.15	1.7343	0.0010737	584.68	595.42	1.7292	0.0010707	582.66	598.72	1.7242
160	0.0010988	672.82	678.12	1.9375	0.0010953	670.13	681.09	1.9317	0.0010918	657.71	684.07	1.9260
180	0.0011240	759.63	765.25	2.1341	0.0011199	756.65	767.84	2.1273	0.0011159	753.76	770.50	2.1210
200	0.0011530	848.1	853.9	2.3255	0.0011480	844.5	858.0	2.3178	0.0011433	841.0	859.2	2.3104
220	0.0011866	938.4	944.4	2.5128	0.0011805	934.1	945.9	2.5039	0.0011748	929.9	947.5	2.4953
240	0.0012264	1031.4	1037.5	2.6978	0.0012187	1028.0	1038.1	2.6672	0.0012114	1020.8	1039.0	2.6771
260	0.0012749	1127.9	1134.3	2.8830	0.0012645	1121.1	1133.7	2.8699	0.0012550	1114.6	1133.4	2.8576
280					0.0013216	1220.0	1234.1	3.0548	0.0013084	1212.5	1232.1	3.0393
300					0.0013972	1328.3	1342.3	3.2469	0.0013770	1316.6	1337.3	3.2260
320									0.0014724	1431.1	1453.2	3.4247
340									0.0016311	1567.5	1591.9	3.6546
P = 10 MPa (311.05°C)												
P = 15 MPa (342.24°C)												

