

STEAM TABLES

(from M. D. Koretsky, "Engineering and Chemical Thermodynamics", John Wiley & Sons, 2004)

Saturated Steam: TEMPERATURE Table

TABLE B.1 Saturated Water: Temperature Table

T °C	P kPa, MPa	\hat{v}_l m ³ /kg	\hat{v}_v m ³ /kg	\hat{u}_l kJ/kg	$\Delta\hat{u}_{lv}$ kJ/kg	\hat{u}_v kJ/kg	\hat{h}_l kJ/kg	$\Delta\hat{h}_{lv}$ kJ/kg	\hat{h}_v kJ/kg	\hat{s}_l kJ/kg K	$\Delta\hat{s}_{lv}$ kJ/kg K	\hat{s}_v kJ/kg K
0.01	0.6113	0.001000	206.132	0.00	2375.3	2375.3	0.00	2501.3	2501.3	0.0000	9.1562	9.1562
5	0.8721	0.001000	147.118	20.97	2361.3	2382.2	20.98	2489.6	2510.5	0.0761	8.9496	9.0257
10	1.2276	0.001000	106.377	41.99	2347.2	2389.2	41.99	2477.7	2519.7	0.1510	8.7498	8.9007
15	1.7051	0.001001	77.925	62.98	2333.1	2396.0	62.98	2465.9	2528.9	0.2245	8.5569	8.7813
20	2.3385	0.001002	57.790	83.94	2319.0	2402.9	83.94	2454.1	2538.1	0.2966	8.3706	8.6671
25	3.1691	0.001003	43.359	104.86	2304.9	2409.8	104.87	2442.3	2547.2	0.3673	8.1905	8.5579
30	4.2461	0.001004	32.893	125.77	2290.8	2416.6	125.77	2430.5	2556.2	0.4369	8.0164	8.4533
35	5.6280	0.001006	25.216	146.65	2276.7	2423.4	146.66	2418.6	2565.3	0.5052	7.8478	8.3530
40	7.3837	0.001008	19.523	167.53	2262.6	2430.1	167.54	2406.7	2574.3	0.5724	7.6845	8.2569
45	9.5934	0.001010	15.258	188.41	2248.4	2436.8	188.42	2394.8	2583.2	0.6386	7.5261	8.1647
50	12.350	0.001012	12.032	209.30	2234.2	2443.5	209.31	2382.7	2592.1	0.7037	7.3725	8.0762
55	15.758	0.001015	9.568	230.19	2219.9	2450.1	230.20	2370.7	2600.9	0.7679	7.2234	7.9912
60	19.941	0.001017	7.671	251.09	2205.5	2456.6	251.11	2358.5	2609.6	0.8311	7.0784	7.9095
65	25.033	0.001020	6.197	272.00	2191.1	2463.1	272.03	2346.2	2618.2	0.8934	6.9375	7.8309
70	31.188	0.001023	5.042	292.93	2176.6	2469.5	292.96	2333.8	2626.8	0.9548	6.8004	7.7552
75	38.578	0.001026	4.131	313.87	2162.0	2475.9	313.91	2321.4	2635.3	1.0154	6.6670	7.6824
80	47.390	0.001029	3.407	334.84	2147.4	2482.2	334.88	2308.8	2643.7	1.0752	6.5369	7.6121
85	57.834	0.001032	2.828	355.82	2132.6	2488.4	355.88	2296.0	2651.9	1.1342	6.4102	7.5444
90	70.139	0.001036	2.361	376.82	2117.7	2494.5	376.90	2283.2	2660.1	1.1924	6.2866	7.4790
95	84.554	0.001040	1.982	397.86	2102.7	2500.6	397.94	2270.2	2668.1	1.2500	6.1659	7.4158
100	0.10135	0.001044	1.6729	418.91	2087.6	2506.5	419.02	2257.0	2676.0	1.3068	6.0480	7.3548
105	0.12082	0.001047	1.4194	440.00	2072.3	2512.3	440.13	2243.7	2683.8	1.3629	5.9328	7.2958
110	0.14328	0.001052	1.2102	461.12	2057.0	2518.1	461.27	2230.2	2691.5	1.4184	5.8202	7.2386
115	0.16906	0.001056	1.0366	482.28	2041.4	2523.7	482.46	2216.5	2699.0	1.4733	5.7100	7.1832
120	0.19853	0.001060	0.8919	503.48	2025.8	2529.2	503.69	2202.6	2706.3	1.5275	5.6020	7.1295
125	0.2321	0.001065	0.77059	524.72	2009.9	2534.6	524.96	2188.5	2713.5	1.5812	5.4962	7.0774
130	0.2701	0.001070	0.66850	546.00	1993.9	2539.9	546.29	2174.2	2720.5	1.6343	5.3925	7.0269
135	0.3130	0.001075	0.58217	567.34	1977.7	2545.0	567.67	2159.6	2727.3	1.6869	5.2907	6.9777
140	0.3613	0.001080	0.50885	588.72	1961.3	2550.0	589.11	2144.8	2733.9	1.7390	5.1908	6.9298
145	0.4154	0.001085	0.44632	610.16	1944.7	2554.9	610.61	2129.6	2740.3	1.7906	5.0926	6.8832
150	0.4759	0.001090	0.39278	631.66	1927.9	2559.5	632.18	2114.3	2746.4	1.8417	4.9960	6.8378
155	0.5431	0.001096	0.34676	653.23	1910.8	2564.0	653.82	2098.6	2752.4	1.8924	4.9010	6.7934
160	0.6178	0.001102	0.30706	674.85	1893.5	2568.4	675.53	2082.6	2758.1	1.9426	4.8075	6.7501
165	0.7005	0.001108	0.27269	696.55	1876.0	2572.5	697.32	2066.2	2763.5	1.9924	4.7153	6.7078
170	0.7917	0.001114	0.24283	718.31	1858.1	2576.5	719.20	2049.5	2768.7	2.0418	4.6244	6.6663

TABLE B.1 Continued

175	0.8920	0.001121	0.21680	740.16	1840.0	2580.2	741.16	2032.4	2773.6	2.0909	4.5347	6.6256
180	1.0022	0.001127	0.19405	762.08	1821.6	2583.7	763.21	2015.0	2778.2	2.1395	4.4461	6.5857
185	1.1227	0.001134	0.17409	784.08	1802.9	2587.0	785.36	1997.1	2782.4	2.1878	4.3586	6.5464
190	1.2544	0.001141	0.15654	806.17	1783.8	2590.0	807.61	1978.8	2786.4	2.2358	4.2720	6.5078
195	1.3978	0.001149	0.14105	828.36	1764.4	2592.8	829.96	1960.0	2790.0	2.2835	4.1863	6.4697
200	1.5538	0.001156	0.12736	850.64	1744.7	2595.3	852.43	1940.7	2793.2	2.3308	4.1014	6.4322
205	1.7230	0.001164	0.11521	873.02	1724.5	2597.5	875.03	1921.0	2796.0	2.3779	4.0172	6.3951
210	1.9063	0.001173	0.10441	895.51	1703.9	2599.4	897.75	1900.7	2798.5	2.4247	3.9337	6.3584
215	2.1042	0.001181	0.09479	918.12	1682.9	2601.1	920.61	1879.9	2800.5	2.4713	3.8507	6.3221
220	2.3178	0.001190	0.08619	940.85	1661.5	2602.3	943.61	1858.5	2802.1	2.5177	3.7683	6.2860
225	2.5477	0.001199	0.07849	963.72	1639.6	2603.3	966.77	1836.5	2803.3	2.5639	3.6863	6.2502
230	2.7949	0.001209	0.07158	986.72	1617.2	2603.9	990.10	1813.8	2803.9	2.6099	3.6047	6.2146
235	3.0601	0.001219	0.06536	1009.88	1594.2	2604.1	1013.61	1790.5	2804.1	2.6557	3.5233	6.1791
240	3.3442	0.001229	0.05976	1033.19	1570.8	2603.9	1037.31	1766.5	2803.8	2.7015	3.4422	6.1436
245	3.6482	0.001240	0.05470	1056.69	1546.7	2603.4	1061.21	1741.7	2802.9	2.7471	3.3612	6.1083
250	3.9730	0.001251	0.05013	1080.37	1522.0	2602.4	1085.34	1716.2	2801.5	2.7927	3.2802	6.0729
255	4.3195	0.001263	0.04598	1104.26	1496.7	2600.9	1109.72	1689.8	2799.5	2.8382	3.1992	6.0374
260	4.6886	0.001276	0.04220	1128.37	1470.6	2599.0	1134.35	1662.5	2796.9	2.8837	3.1181	6.0018
265	5.0813	0.001289	0.03877	1152.72	1443.9	2596.6	1159.27	1634.3	2793.6	2.9293	3.0368	5.9661
270	5.4987	0.001302	0.03564	1177.33	1416.3	2593.7	1184.49	1605.2	2789.7	2.9750	2.9551	5.9301
275	5.9418	0.001317	0.03279	1202.23	1387.9	2590.2	1210.05	1574.9	2785.0	3.0208	2.8730	5.8937
280	6.4117	0.001332	0.03017	1227.43	1358.7	2586.1	1235.97	1543.6	2779.5	3.0667	2.7903	5.8570
285	6.9094	0.001348	0.02777	1252.98	1328.4	2581.4	1262.29	1511.0	2773.3	3.1129	2.7069	5.8198
290	7.4360	0.001366	0.02557	1278.89	1297.1	2576.0	1289.04	1477.1	2766.1	3.1593	2.6227	5.7821
295	7.9928	0.001384	0.02354	1305.21	1264.7	2569.9	1316.27	1441.8	2758.0	3.2061	2.5375	5.7436
300	8.5810	0.001404	0.02167	1331.97	1231.0	2563.0	1344.01	1404.9	2748.9	3.2533	2.4511	5.7044
305	9.2018	0.001425	0.01995	1359.22	1195.9	2555.2	1372.33	1366.4	2738.7	3.3009	2.3633	5.6642
310	9.8566	0.001447	0.01835	1387.03	1159.4	2546.4	1401.29	1326.0	2727.3	3.3492	2.2737	5.6229
315	10.547	0.001472	0.01687	1415.44	1121.1	2536.6	1430.97	1283.5	2714.4	3.3981	2.1821	5.5803
320	11.274	0.001499	0.01549	1444.55	1080.9	2525.5	1461.45	1238.6	2700.1	3.4479	2.0882	5.5361
330	12.845	0.001561	0.012996	1505.24	993.7	2498.9	1525.29	1140.6	2665.8	3.5506	1.8909	5.4416
340	14.586	0.001638	0.010797	1570.26	894.3	2464.5	1594.15	1027.9	2622.0	3.6593	1.6763	5.3356
350	16.514	0.001740	0.008813	1641.81	776.6	2418.4	1670.54	893.4	2563.9	3.7776	1.4336	5.2111
360	18.651	0.001892	0.006945	1725.19	626.3	2351.5	1760.48	720.5	2481.0	3.9146	1.1379	5.0525
370	21.028	0.002213	0.004926	1843.84	384.7	2228.5	1890.37	441.8	2332.1	4.1104	0.6868	4.7972
374.14	22.089	0.003155	0.003155	2029.58	0	2029.6	2099.26	0	2099.3	4.4297	0	4.4297

Saturated Steam: PRESSURE Table

TABLE B.2 Saturated Water: Pressure Table

P kPa, MPa	T °C	\hat{v}_f m ³ /kg	\hat{v}_g m ³ /kg	\hat{u}_f kJ/kg	$\Delta\hat{u}_{fg}$ kJ/kg	\hat{u}_g kJ/kg	\hat{h}_f kJ/kg	$\Delta\hat{h}_{fg}$ kJ/kg	\hat{h}_g kJ/kg	\hat{s}_f kJ/kg K	$\Delta\hat{s}_{fg}$ kJ/kg K	\hat{s}_g kJ/kg K
0.6113	0.01	0.001000	206.132	0	2375.3	2375.3	0.00	2501.3	2501.3	0	9.1562	9.1562
1.0	6.98	0.001000	129.208	29.29	2355.7	2385.0	29.29	2484.9	2514.2	0.1059	8.8697	8.9756
1.5	13.03	0.001001	87.980	54.70	2338.6	2393.3	54.70	2470.6	2525.3	0.1956	8.6322	8.8278
2.0	17.50	0.001001	67.004	73.47	2326.0	2399.5	73.47	2460.0	2533.5	0.2607	8.4629	8.7236
2.5	21.08	0.001002	54.254	88.47	2315.9	2404.4	88.47	2451.6	2540.0	0.3120	8.3311	8.6431
3.0	24.08	0.001003	45.665	101.03	2307.5	2408.5	101.03	2444.5	2545.5	0.3545	8.2231	8.5775
4.0	28.96	0.001004	34.800	121.44	2293.7	2415.2	121.44	2432.9	2554.4	0.4226	8.0520	8.4746
5.0	32.88	0.001005	28.193	137.79	2282.7	2420.5	137.79	2423.7	2561.4	0.4763	7.9187	8.3950
7.5	40.29	0.001008	19.238	168.76	2261.7	2430.5	168.77	2406.0	2574.8	0.5763	7.6751	8.2514
10.0	45.81	0.001010	14.674	191.79	2246.1	2437.9	191.81	2392.8	2584.6	0.6492	7.5010	8.1501
15.0	53.97	0.001014	10.022	225.90	2222.8	2448.7	225.91	2373.1	2599.1	0.7548	7.2536	8.0084
20.0	60.06	0.001017	7.649	251.35	2205.4	2456.7	251.38	2358.3	2609.7	0.8319	7.0766	7.9085
25.0	64.97	0.001020	6.204	271.88	2191.2	2463.1	271.90	2346.3	2618.2	0.8930	6.9383	7.8313
30.0	69.10	0.001022	5.229	289.18	2179.2	2468.4	289.21	2336.1	2625.3	0.9439	6.8247	7.7686
40.0	75.87	0.001026	3.993	317.51	2159.5	2477.0	317.55	2319.2	2636.7	1.0258	6.6441	7.6700
50.0	81.33	0.001030	3.240	340.42	2143.4	2483.8	340.47	2305.4	2645.9	1.0910	6.5029	7.5939
75.0	91.77	0.001037	2.217	384.29	2112.4	2496.7	384.36	2278.6	2663.0	1.2129	6.2434	7.4563
0.100	99.62	0.001043	1.6940	417.33	2088.7	2506.1	417.44	2258.0	2675.5	1.3025	6.0568	7.3593
0.125	105.99	0.001048	1.3749	444.16	2069.3	2513.5	444.30	2241.1	2685.3	1.3739	5.9104	7.2843
0.150	111.37	0.001053	1.1593	466.92	2052.7	2519.6	467.08	2226.5	2693.5	1.4335	5.7897	7.2232
0.175	116.06	0.001057	1.0036	486.78	2038.1	2524.9	486.97	2213.6	2700.5	1.4848	5.6868	7.1717
0.200	120.23	0.001061	0.8857	504.47	2025.0	2529.5	504.68	2202.0	2706.6	1.5300	5.5970	7.1271
0.225	124.00	0.001064	0.7933	520.45	2013.1	2533.6	520.69	2191.3	2712.0	1.5705	5.5173	7.0878
0.250	127.43	0.001067	0.7187	535.08	2002.1	2537.2	535.34	2181.5	2716.9	1.6072	5.4455	7.0526
0.275	130.60	0.001070	0.6573	548.57	1992.0	2540.5	548.87	2172.4	2721.3	1.6407	5.3801	7.0208
0.300	133.55	0.001073	0.6058	561.13	1982.4	2543.6	561.45	2163.9	2725.3	1.6717	5.3201	6.9918
0.325	136.30	0.001076	0.5620	572.88	1973.5	2546.3	573.23	2155.8	2729.0	1.7005	5.2646	6.9651
0.350	138.88	0.001079	0.5243	583.93	1965.0	2548.9	584.31	2148.1	2732.4	1.7274	5.2130	6.9404
0.375	141.32	0.001081	0.4914	594.38	1956.9	2551.3	594.79	2140.8	2735.6	1.7527	5.1647	6.9174
0.40	143.63	0.001084	0.4625	604.29	1949.3	2553.6	604.73	2133.8	2738.5	1.7766	5.1193	6.8958
0.45	147.93	0.001088	0.4140	622.75	1934.9	2557.6	623.24	2120.7	2743.9	1.8206	5.0359	6.8565
0.50	151.86	0.001093	0.3749	639.66	1921.6	2561.2	640.21	2108.5	2748.7	1.8606	4.9606	6.8212
0.55	155.48	0.001097	0.3427	655.30	1909.2	2564.5	655.91	2097.0	2752.9	1.8972	4.8920	6.7892
0.60	158.85	0.001101	0.3157	669.88	1897.5	2567.4	670.54	2086.3	2756.8	1.9311	4.8289	6.7600
0.65	162.01	0.001104	0.2927	683.55	1886.5	2570.1	684.26	2076.0	2760.3	1.9627	4.7704	6.7330
0.70	164.97	0.001108	0.2729	696.43	1876.1	2572.5	697.20	2066.3	2763.5	1.9922	4.7158	6.7080

TABLE B.2 Continued

0.75	167.77	0.001111	0.2556	708.62	1866.1	2574.7	709.45	2057.0	2766.4	2.0199	4.6647	6.6846
0.80	170.43	0.001115	0.2404	720.20	1856.6	2576.8	721.10	2048.0	2769.1	2.0461	4.6166	6.6627
0.85	172.96	0.001118	0.2270	731.25	1847.4	2578.7	732.20	2039.4	2771.6	2.0709	4.5711	6.6421
0.90	175.38	0.001121	0.2150	741.81	1838.7	2580.5	742.82	2031.1	2773.9	2.0946	4.5290	6.6225
0.95	177.69	0.001124	0.2042	751.94	1830.2	2582.1	753.00	2023.1	2776.1	2.1171	4.4869	6.6040
1.00	179.91	0.001127	0.19444	761.67	1822.0	2583.6	762.79	2015.3	2778.1	2.1386	4.4478	6.5864
1.10	184.09	0.001133	0.17753	780.08	1806.3	2586.4	781.32	2000.4	2781.7	2.1791	4.3744	6.5535
1.20	187.99	0.001139	0.16333	797.27	1791.6	2588.8	798.64	1986.2	2784.8	2.2165	4.3067	6.5233
1.30	191.64	0.001144	0.15125	813.42	1777.5	2590.9	814.91	1972.7	2787.6	2.2514	4.2438	6.4953
1.40	195.07	0.001149	0.14084	828.68	1764.1	2592.8	830.29	1959.7	2790.0	2.2842	4.1850	6.4692
1.50	198.32	0.001154	0.13177	843.14	1751.3	2594.5	844.87	1947.3	2792.1	2.3150	4.1298	6.4448
1.75	205.76	0.001166	0.11349	876.44	1721.4	2597.8	878.48	1918.0	2796.4	2.3851	4.0044	6.3895
2.00	212.42	0.001177	0.09963	906.42	1693.8	2600.3	908.77	1890.7	2799.5	2.4473	3.8935	6.3408
2.25	218.45	0.001187	0.08875	933.81	1668.2	2602.0	936.48	1865.2	2801.7	2.5034	3.7938	6.2971
2.50	223.99	0.001197	0.07998	959.09	1644.0	2603.1	962.09	1841.0	2803.1	2.5546	3.7028	6.2574
2.75	229.12	0.001207	0.07275	982.65	1621.2	2603.8	985.97	1817.9	2803.9	2.6018	3.6190	6.2208
3.00	233.90	0.001216	0.06668	1004.76	1599.3	2604.1	1008.41	1795.7	2804.1	2.6456	3.5412	6.1869
3.25	238.38	0.001226	0.06152	1025.62	1578.4	2604.0	1029.60	1774.4	2804.0	2.6866	3.4685	6.1551
3.50	242.60	0.001235	0.05707	1045.41	1558.3	2603.7	1049.73	1753.7	2803.4	2.7252	3.4000	6.1252
4.0	250.40	0.001252	0.049778	1082.28	1520.0	2602.3	1087.29	1714.1	2801.4	2.7963	3.2737	6.0700
5.0	263.99	0.001286	0.039441	1147.78	1449.3	2597.1	1154.21	1640.1	2794.3	2.9201	3.0532	5.9733
6.0	275.64	0.001319	0.032440	1205.41	1384.3	2589.7	1213.32	1571.0	2784.3	3.0266	2.8625	5.8891
7.0	285.88	0.001351	0.027370	1257.51	1323.0	2580.5	1266.97	1505.1	2772.1	3.1210	2.6922	5.8132
8.0	295.06	0.001384	0.023518	1305.54	1264.3	2569.8	1316.61	1441.3	2757.9	3.2067	2.5365	5.7431
9.0	303.40	0.001418	0.020484	1350.47	1207.3	2557.8	1363.23	1378.9	2742.1	3.2857	2.3915	5.6771
10.0	311.06	0.001452	0.018026	1393.00	1151.4	2544.4	1407.53	1317.1	2724.7	3.3595	2.2545	5.6140
11.0	318.15	0.001489	0.015987	1433.68	1096.1	2529.7	1450.05	1255.5	2705.6	3.4294	2.1233	5.5527
12.0	324.75	0.001527	0.014263	1472.92	1040.8	2513.7	1491.24	1193.6	2684.8	3.4961	1.9962	5.4923
13.0	330.93	0.001567	0.012780	1511.09	985.0	2496.1	1531.46	1130.8	2662.2	3.5604	1.8718	5.4323
14.0	336.75	0.001611	0.011485	1548.53	928.2	2476.8	1571.08	1066.5	2637.5	3.6231	1.7485	5.3716
15.0	342.24	0.001658	0.010338	1585.58	869.8	2455.4	1610.45	1000.0	2610.5	3.6847	1.6250	5.3097
16.0	347.43	0.001711	0.009306	1622.63	809.1	2431.7	1650.00	930.6	2580.6	3.7460	1.4995	5.2454
17.0	352.37	0.001770	0.008365	1660.16	744.8	2405.0	1690.25	856.9	2547.2	3.8078	1.3698	5.1776
18.0	357.06	0.001840	0.007490	1698.86	675.4	2374.3	1731.97	777.1	2509.1	3.8713	1.2330	5.1044
19.0	361.54	0.001924	0.006657	1739.87	598.2	2338.1	1776.43	688.1	2464.5	3.9387	1.0841	5.0227
20.0	365.81	0.002035	0.005834	1785.47	507.6	2293.1	1826.18	583.6	2409.7	4.0137	0.9132	4.9269

TABLE B.3 Saturated Water:Solid–Vapor

T °C	P kPa, MPa	\hat{v}_s m ³ /kg	\hat{v}_o m ³ /kg	\hat{u}_s kJ/kg	$\Delta\hat{u}_{so}$ kJ/kg	\hat{u}_o kJ/kg	\hat{h}_s kJ/kg	$\Delta\hat{h}_{so}$ kJ/kg	\hat{h}_o kJ/kg	\hat{s}_s kJ/kg K	$\Delta\hat{s}_{so}$ kJ/kg K	\hat{s}_o kJ/kg K
0.01	0.6113	1.0908	206.153	−333.40	2708.7	2375.3	−333.40	2834.7	2501.3	−1.2210	10.3772	9.1562
0	0.6108	1.0908	206.315	−333.42	2708.7	2375.3	−333.42	2834.8	2501.3	−1.2211	10.3776	9.1565
−2	0.5177	1.0905	241.663	−337.61	2710.2	2372.5	−337.61	2835.3	2497.6	−1.2369	10.4562	9.2193
−4	0.4376	1.0901	283.799	−341.78	2711.5	2369.8	−341.78	2835.7	2494.0	−1.2526	10.5358	9.2832
−6	0.3689	1.0898	334.139	−345.91	2712.9	2367.0	−345.91	2836.2	2490.3	−1.2683	10.6165	9.3482
−8	0.3102	1.0894	394.414	−350.02	2714.2	2364.2	−350.02	2836.6	2486.6	−1.2839	10.6982	9.4143
−10	0.2601	1.0891	466.757	−354.09	2715.5	2361.4	−354.09	2837.0	2482.9	−1.2995	10.7809	9.4815
−12	0.2176	1.0888	553.803	−358.14	2716.8	2358.7	−358.14	2837.3	2479.2	−1.3150	10.8648	9.5498
−14	0.1815	1.0884	658.824	−362.16	2718.0	2355.9	−362.16	2837.6	2475.5	−1.3306	10.9498	9.6192
−16	0.1510	1.0881	785.907	−366.14	2719.2	2353.1	−366.14	2837.9	2471.8	−1.3461	11.0359	9.6898
−18	0.12521	1.0878	940.183	−370.10	2720.4	2350.3	−370.10	2838.2	2468.1	−1.3617	11.1233	9.7616
−20	0.10355	1.0874	1128.113	−374.03	2721.6	2347.5	−374.03	2838.4	2464.3	−1.3772	11.2120	9.8348
−22	0.08535	1.0871	1357.864	−377.93	2722.7	2344.7	−377.93	2838.6	2460.6	−1.3928	11.3020	9.9093
−24	0.07012	1.0868	1639.753	−381.80	2723.7	2342.0	−381.80	2838.7	2456.9	−1.4083	11.3935	9.9852
−26	0.05741	1.0864	1986.776	−385.64	2724.8	2339.2	−385.64	2838.9	2453.2	−1.4239	11.4864	10.0625
−28	0.04684	1.0861	2415.201	−389.45	2725.8	2336.4	−389.45	2839.0	2449.5	−1.4394	11.5808	10.1413
−30	0.03810	1.0858	2945.228	−393.23	2726.8	2333.6	−393.23	2839.0	2445.8	−1.4550	11.6765	10.2215
−32	0.03090	1.0854	3601.823	−396.98	2727.8	2330.8	−396.98	2839.1	2442.1	−1.4705	11.7733	10.3028
−34	0.02499	1.0851	4416.253	−400.71	2728.7	2328.0	−400.71	2839.1	2438.4	−1.4860	11.8713	10.3853
−36	0.02016	1.0848	5430.116	−404.40	2729.6	2325.2	−404.40	2839.1	2434.7	−1.5014	11.9704	10.4690
−38	0.01618	1.0844	6707.022	−408.06	2730.5	2322.4	−408.06	2839.0	2431.0	−1.5168	12.0714	10.5546
−40	0.01286	1.0841	8366.396	−411.70	2731.3	2319.6	−411.70	2838.9	2427.2	−1.5321	12.1768	10.6447

Superheated Steam

TABLE B.4 Superheated Water Vapor

$P = 10 \text{ kPa}$					$P = 50 \text{ kPa}$					$P = 100 \text{ kPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	14.674	2437.9	2584.6	8.1501	sat	3.240	2483.8	2645.9	7.5939	sat	1.6940	2506.1	2675.5	7.3593
50	14.869	2443.9	2592.6	8.1749	100	3.418	2511.6	2682.5	7.6947	100	1.6958	2506.6	2676.2	7.3614
100	17.196	2515.5	2687.5	8.4479	150	3.889	2585.6	2780.1	7.9400	150	1.9364	2582.7	2776.4	7.6133
150	19.513	2587.9	2783.0	8.6881	200	4.356	2659.8	2877.6	8.1579	200	2.1723	2658.0	2875.3	7.8342
200	21.825	2661.3	2879.5	8.9037	250	4.821	2735.0	2976.0	8.3555	250	2.4060	2733.7	2974.3	8.0332
250	24.136	2736.0	2977.3	9.1002	300	5.284	2811.3	3075.5	8.5372	300	2.6388	2810.4	3074.3	8.2157
300	26.445	2812.1	3076.5	9.2812	400	6.209	2968.4	3278.9	8.8641	400	3.1026	2967.8	3278.1	8.5434
400	31.063	2968.9	3279.5	9.6076	500	7.134	3131.9	3488.6	9.1545	500	3.5655	3131.5	3488.1	8.8341
500	35.679	3132.3	3489.0	9.8977	600	8.058	3302.2	3705.1	9.4177	600	4.0278	3301.9	3704.7	9.0975
600	40.295	3302.5	3705.4	10.1608	700	8.981	3479.5	3928.5	9.6599	700	4.4899	3479.2	3928.2	9.3398
700	44.911	3479.6	3928.7	10.4028	800	9.904	3663.7	4158.9	9.8852	800	4.9517	3663.5	4158.7	9.5652
800	49.526	3663.8	4159.1	10.6281	900	10.828	3854.9	4396.3	10.0967	900	5.4135	3854.8	4396.1	9.7767
900	54.141	3855.0	4396.4	10.8395	1000	11.751	4052.9	4640.5	10.2964	1000	5.8753	4052.8	4640.3	9.9764
1000	58.757	4053.0	4640.6	11.0392	1100	12.674	4257.4	4891.1	10.4858	1100	6.3370	4257.3	4890.9	10.1658
1100	63.372	4257.5	4891.2	11.2287	1200	13.597	4467.8	5147.7	10.6662	1200	6.7986	4467.7	5147.6	10.3462
1200	67.987	4467.9	5147.8	11.4090	1300	14.521	4683.6	5409.6	10.8382	1300	7.2603	4683.5	5409.5	10.5182
1300	72.603	4683.7	5409.7	11.5810										
$P = 200 \text{ kPa}$					$P = 300 \text{ kPa}$					$P = 400 \text{ kPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	0.88573	2529.5	2706.6	7.1271	sat	0.60582	2543.6	2725.3	6.9918	sat	0.46246	2553.6	2738.5	6.8958
150	0.95964	2576.9	2768.8	7.2795	150	0.63388	2570.8	2761.0	7.0778	150	0.47084	2564.5	2752.8	6.9299
200	1.08034	2654.4	2870.5	7.5066	200	0.71629	2650.7	2865.5	7.3115	200	0.53422	2646.8	2860.5	7.1706
250	1.19880	2731.2	2971.0	7.7085	250	0.79636	2728.7	2967.6	7.5165	250	0.59512	2726.1	2964.2	7.3788
300	1.31616	2808.6	3071.8	7.8926	300	0.87529	2806.7	3069.3	7.7022	300	0.65484	2804.8	3066.7	7.5661
400	1.54930	2966.7	3276.5	8.2217	400	1.03151	2965.5	3275.0	8.0329	400	0.77262	2964.4	3273.4	7.8984
500	1.78139	3130.7	3487.0	8.5132	500	1.18669	3130.0	3486.0	8.3250	500	0.88934	3129.2	3484.9	8.1912
600	2.01297	3301.4	3704.0	8.7769	600	1.34136	3300.8	3703.2	8.5892	600	1.00555	3300.2	3702.4	8.4557
700	2.24426	3478.8	3927.7	9.0194	700	1.49573	3478.4	3927.1	8.8319	700	1.12147	3477.9	3926.5	8.6987
800	2.47539	3663.2	4158.3	9.2450	800	1.64994	3662.9	4157.8	9.0575	800	1.23722	3662.5	4157.4	8.9244
900	2.70643	3854.5	4395.8	9.4565	900	1.80406	3854.2	4395.4	9.2691	900	1.35288	3853.9	4395.1	9.1361
1000	2.93740	4052.5	4640.0	9.6563	1000	1.95812	4052.3	4639.7	9.4689	1000	1.46847	4052.0	4639.4	9.3360
1100	3.16834	4257.0	4890.7	9.8458	1100	2.11214	4256.8	4890.4	9.6585	1100	1.58404	4256.5	4890.1	9.5255
1200	3.39927	4467.5	5147.3	10.0262	1200	2.26614	4467.2	5147.1	9.8389	1200	1.69958	4467.0	5146.8	9.7059
1300	3.63018	4683.2	5409.3	10.1982	1300	2.42013	4683.0	5409.0	10.0109	1300	1.81511	4682.8	5408.8	9.8780

TABLE B.4 Continued

$P = 500 \text{ kPa}$					$P = 600 \text{ kPa}$					$P = 800 \text{ kPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	0.37489	2561.2	2748.7	6.8212	sat	0.31567	2567.4	2756.8	6.7600	sat	0.24043	2576.8	2769.1	6.6627
200	0.42492	2642.9	2855.4	7.0592	200	0.35202	2638.9	2850.1	6.9665	200	0.26080	2630.6	2839.2	6.8158
250	0.47436	2723.5	2960.7	7.2708	250	0.39383	2720.9	2957.2	7.1816	250	0.29314	2715.5	2950.0	7.0384
300	0.52256	2802.9	3064.2	7.4598	300	0.43437	2801.0	3061.6	7.3723	300	0.32411	2797.1	3056.4	7.2327
350	0.57012	2882.6	3167.6	7.6328	350	0.47424	2881.1	3165.7	7.5463	350	0.35439	2878.2	3161.7	7.4088
400	0.61728	2963.2	3271.8	7.7937	400	0.51372	2962.0	3270.2	7.7078	400	0.38426	2959.7	3267.1	7.5715
500	0.71093	3128.4	3483.8	8.0872	500	0.59199	3127.6	3482.7	8.0020	500	0.44331	3125.9	3480.6	7.8672
600	0.80406	3299.6	3701.7	8.3521	600	0.66974	3299.1	3700.9	8.2673	600	0.50184	3297.9	3699.4	8.1332
700	0.89691	3477.5	3926.0	8.5952	700	0.74720	3477.1	3925.4	8.5107	700	0.56007	3476.2	3924.3	8.3770
800	0.98959	3662.2	4157.0	8.8211	800	0.82450	3661.8	4156.5	8.7367	800	0.61813	3661.1	4155.7	8.6033
900	1.08217	3853.6	4394.7	9.0329	900	0.90169	3853.3	4394.4	8.9485	900	0.67610	3852.8	4393.6	8.8153
1000	1.17469	4051.8	4639.1	9.2328	1000	0.97883	4051.5	4638.8	9.1484	1000	0.73401	4051.0	4638.2	9.0153
1100	1.26718	4256.3	4889.9	9.4224	1100	1.05594	4256.1	4889.6	9.3381	1100	0.79188	4255.6	4889.1	9.2049
1200	1.35964	4466.8	5146.6	9.6028	1200	1.13302	4466.5	5146.3	9.5185	1200	0.84974	4466.1	5145.8	9.3854
1300	1.45210	4682.5	5408.6	9.7749	1300	1.21009	4682.3	5408.3	9.6906	1300	0.90758	4681.8	5407.9	9.5575

$P = 1 \text{ MPa}$					$P = 1.2 \text{ MPa}$					$P = 1.4 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	0.19444	2583.6	2778.1	6.5864	sat	0.16333	2588.8	2784.8	6.5233	sat	0.14084	2592.8	2790.0	6.4692
200	0.20596	2621.9	2827.9	6.6939	200	0.16930	2612.7	2815.9	6.5898	200	0.14302	2603.1	2803.3	6.4975
250	0.23268	2709.9	2942.6	6.9246	250	0.19235	2704.2	2935.0	6.8293	250	0.16350	2698.3	2927.2	6.7467
300	0.25794	2793.2	3051.2	7.1228	300	0.21382	2789.2	3045.8	7.0316	300	0.18228	2785.2	3040.4	6.9533
350	0.28247	2875.2	3157.7	7.3010	350	0.23452	2872.2	3153.6	7.2120	350	0.20026	2869.1	3149.5	7.1359
400	0.30659	2957.3	3263.9	7.4650	400	0.25480	2954.9	3260.7	7.3773	400	0.21780	2952.5	3257.4	7.3025
500	0.35411	3124.3	3478.4	7.7621	500	0.29463	3122.7	3476.3	7.6758	500	0.25215	3121.1	3474.1	7.6026
600	0.40109	3296.8	3697.9	8.0289	600	0.33393	3295.6	3696.3	7.9434	600	0.28596	3294.4	3694.8	7.8710
700	0.44779	3475.4	3923.1	8.2731	700	0.37294	3474.5	3922.0	8.1881	700	0.31947	3473.6	3920.9	8.1160
800	0.49432	3660.5	4154.8	8.4996	800	0.41177	3659.8	4153.9	8.4149	800	0.35281	3659.1	4153.0	8.3431
900	0.54075	3852.2	4392.9	8.7118	900	0.45051	3851.6	4392.2	8.6272	900	0.38606	3851.0	4391.5	8.5555
1000	0.58712	4050.5	4637.6	8.9119	1000	0.48919	4050.0	4637.0	8.8274	1000	0.41924	4049.5	4636.4	8.7558
1100	0.63345	4255.1	4888.5	9.1016	1100	0.52783	4254.6	4888.0	9.0171	1100	0.45239	4254.1	4887.5	8.9456
1200	0.67977	4465.6	5145.4	9.2821	1200	0.56646	4465.1	5144.9	9.1977	1200	0.48552	4464.6	5144.4	9.1262
1300	0.72608	4681.3	5407.4	9.4542	1300	0.60507	4680.9	5406.9	9.3698	1300	0.51864	4680.4	5406.5	9.2983

TABLE B.4 Continued

$P = 4 \text{ MPa}$					$P = 4.5 \text{ MPa}$					$P = 5 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	0.04978	2602.3	2801.4	6.0700	sat	0.04406	2600.0	2798.3	6.0198	sat	0.03944	2597.1	2794.3	5.9733
275	0.05457	2667.9	2886.2	6.2284	275	0.04730	2650.3	2863.1	6.1401	275	0.04141	2631.2	2838.3	6.0543
300	0.05884	2725.3	2960.7	6.3614	300	0.05135	2712.0	2943.1	6.2827	300	0.04532	2697.9	2924.5	6.2083
350	0.06645	2826.6	3092.4	6.5820	350	0.05840	2817.8	3080.6	6.5130	350	0.05194	2808.7	3068.4	6.4492
400	0.07341	2919.9	3213.5	6.7689	400	0.06475	2913.3	3204.7	6.7046	400	0.05781	2906.6	3195.6	6.6458
450	0.08003	3010.1	3330.2	6.9362	450	0.07074	3004.9	3323.2	6.8745	450	0.06330	2999.6	3316.1	6.8185
500	0.08643	3099.5	3445.2	7.0900	500	0.07651	3095.2	3439.5	7.0300	500	0.06857	3090.9	3433.8	6.9758
600	0.09885	3279.1	3674.4	7.3688	600	0.08765	3276.0	3670.5	7.3109	600	0.07869	3273.0	3666.5	7.2588
700	0.11095	3462.1	3905.9	7.6198	700	0.09847	3459.9	3903.0	7.5631	700	0.08849	3457.7	3900.1	7.5122
800	0.12287	3650.1	4141.6	7.8502	800	0.10911	3648.4	4139.4	7.7942	800	0.09811	3646.6	4137.2	7.7440
900	0.13469	3843.6	4382.3	8.0647	900	0.11965	3842.1	4380.6	8.0091	900	0.10762	3840.7	4378.8	7.9593
1000	0.14645	4042.9	4628.7	8.2661	1000	0.13013	4041.6	4627.2	8.2108	1000	0.11707	4040.3	4625.7	8.1612
1100	0.15817	4248.0	4880.6	8.4566	1100	0.14056	4246.8	4879.3	8.4014	1100	0.12648	4245.6	4878.0	8.3519
1200	0.16987	4458.6	5138.1	8.6376	1200	0.15098	4457.4	5136.9	8.5824	1200	0.13587	4456.3	5135.7	8.5330
1300	0.18156	4674.3	5400.5	8.8099	1300	0.16139	4673.1	5399.4	8.7548	1300	0.14526	4672.0	5398.2	8.7055
$P = 6 \text{ MPa}$					$P = 7 \text{ MPa}$					$P = 8 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
sat	0.03244	2589.7	2784.3	5.8891	sat	0.02737	2580.5	2772.1	5.8132	sat	0.02352	2569.8	2757.9	5.7431
300	0.03616	2667.2	2884.2	6.0673	300	0.02947	2632.1	2838.4	5.9304	300	0.02426	2590.9	2785.0	5.7905
350	0.04223	2789.6	3043.0	6.3334	350	0.03524	2769.3	3016.0	6.2282	350	0.02995	2747.7	2987.3	6.1300
400	0.04739	2892.8	3177.2	6.5407	400	0.03993	2878.6	3158.1	6.4477	400	0.03432	2863.8	3138.3	6.3633
450	0.05214	2988.9	3301.8	6.7192	450	0.04416	2977.9	3287.0	6.6326	450	0.03817	2966.7	3272.0	6.5550
500	0.05665	3082.2	3422.1	6.8802	500	0.04814	3073.3	3410.3	6.7974	500	0.04175	3064.3	3398.3	6.7239
550	0.06101	3174.6	3540.6	7.0287	550	0.05195	3167.2	3530.9	6.9486	550	0.04516	3159.8	3521.0	6.8778
600	0.06525	3266.9	3658.4	7.1676	600	0.05565	3260.7	3650.3	7.0894	600	0.04845	3254.4	3642.0	7.0205
700	0.07352	3453.2	3894.3	7.4234	700	0.06283	3448.6	3888.4	7.3476	700	0.05481	3444.0	3882.5	7.2812
800	0.08160	3643.1	4132.7	7.6566	800	0.06981	3639.6	4128.3	7.5822	800	0.06097	3636.1	4123.8	7.5173
900	0.08958	3837.8	4375.3	7.8727	900	0.07669	3835.0	4371.8	7.7901	900	0.06702	3832.1	4368.3	7.7350
1000	0.09749	4037.8	4622.7	8.0751	1000	0.08350	4035.3	4619.8	8.0020	1000	0.07301	4032.8	4616.9	7.9384
1100	0.10536	4243.3	4875.4	8.2661	1100	0.09027	4240.9	4872.8	8.1933	1100	0.07896	4238.6	4870.3	8.1299
1200	0.11321	4454.0	5133.3	8.4473	1200	0.09703	4451.7	5130.9	8.3747	1200	0.08489	4449.4	5128.5	8.3115
1300	0.12106	4669.6	5396.0	8.6199	1300	0.10377	4667.3	5393.7	8.5472	1300	0.09080	4665.0	5391.5	8.4842

TABLE B.4 Continued

$P = 25 \text{ MPa}$					$P = 30 \text{ MPa}$					$P = 35 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
375	.001973	1798.6	1847.9	4.0319	375	.001789	1737.8	1791.4	3.9303	375	.001700	1702.9	1762.4	3.8721
400	.006004	2430.1	2580.2	5.1418	400	.002790	2067.3	2151.0	4.4728	400	.002100	1914.0	1987.5	4.2124
450	.009162	2720.7	2949.7	5.6743	450	.006735	2619.3	2821.4	5.4423	450	.004962	2498.7	2672.4	5.1962
500	.011124	2884.3	3162.4	5.9592	500	.008679	2820.7	3081.0	5.7904	500	.006927	2751.9	2994.3	5.6281
550	.012724	3017.5	3335.6	6.1764	550	.010168	2970.3	3275.4	6.0342	550	.008345	2920.9	3213.0	5.9025
600	.014138	3137.9	3491.4	6.3602	600	.011446	3100.5	3443.9	6.2330	600	.009527	3062.0	3395.5	6.1178
650	.015433	3251.6	3637.5	6.5229	650	.012596	3221.0	3598.9	6.4057	650	.010575	3189.8	3559.9	6.3010
700	.016647	3361.4	3777.6	6.6707	700	.013661	3335.8	3745.7	6.5606	700	.011533	3309.9	3713.5	6.4631
800	.018913	3574.3	4047.1	6.9345	800	.015623	3555.6	4024.3	6.8332	800	.013278	3536.8	4001.5	6.7450
900	.021045	3783.0	4309.1	7.1679	900	.017448	3768.5	4291.9	7.0717	900	.014883	3754.0	4274.9	6.9886
1000	.023102	3990.9	4568.5	7.3801	1000	.019196	3978.8	4554.7	7.2867	1000	.016410	3966.7	4541.1	7.2063
1100	.025119	4200.2	4828.2	7.5765	1100	.020903	4189.2	4816.3	7.4845	1100	.017895	4178.3	4804.6	7.4056
1200	.027115	4412.0	5089.9	7.7604	1200	.022589	4401.3	5079.0	7.6691	1200	.019360	4390.7	5068.4	7.5910
1300	.029101	4626.9	5354.4	7.9342	1300	.024266	4616.0	5344.0	7.8432	1300	.020815	4605.1	5333.6	7.7652
$P = 40 \text{ MPa}$					$P = 50 \text{ MPa}$					$P = 60 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
375	.0016406	1677.1	1742.7	3.8289	375	.0015593	1638.6	1716.5	3.7638	375	.0015027	1609.3	1699.5	3.7140
400	.0019017	1854.5	1930.8	4.1134	400	.0017309	1788.0	1874.6	4.0030	400	.0016335	1745.3	1843.4	3.9317
450	.0036931	2365.1	2512.8	4.9459	450	.0024862	2159.6	2283.9	4.5883	450	.0020850	2053.9	2179.0	4.4119
500	.0056225	2678.4	2903.3	5.4699	500	.0038924	2525.5	2720.1	5.1725	500	.0029557	2390.5	2567.9	4.9320
600	.0080943	3022.6	3346.4	6.0113	600	.0061123	2942.0	3247.6	5.8177	600	.0048345	2861.1	3151.2	5.6451
700	.0099415	3283.6	3681.3	6.3750	700	.0077274	3230.5	3616.9	6.2189	700	.0062719	3177.3	3553.6	6.0824
800	.0115228	3517.9	3978.8	6.6662	800	.0090761	3479.8	3933.6	6.5290	800	.0074588	3441.6	3889.1	6.4110
900	.0129626	3739.4	4257.9	6.9150	900	.0102831	3710.3	4224.4	6.7882	900	.0085083	3681.0	4191.5	6.6805
1000	.0143238	3954.6	4527.6	7.1356	1000	.0114113	3930.5	4501.1	7.0146	1000	.0094800	3906.4	4475.2	6.9126
1100	.0156426	4167.4	4793.1	7.3364	1100	.0124966	4145.7	4770.6	7.2183	1100	.0104091	4124.1	4748.6	7.1194
1200	.0169403	4380.1	5057.7	7.5224	1200	.0135606	4359.1	5037.2	7.4058	1200	.0113167	4338.2	5017.2	7.3082
1300	.0182292	4594.3	5323.5	7.6969	1300	.0146159	4572.8	5303.6	7.5807	1300	.0122155	4551.4	5284.3	7.4837

TABLE B.5 Subcooled Liquid Water

$P = 5 \text{ MPa}$					$P = 10 \text{ MPa}$					$P = 15 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
0	.0009977	0.03	5.02	0.0001	0	.0009952	0.10	10.05	0.0003	0	.0009928	0.15	15.04	0.0004
20	.0009966	83.64	88.64	0.2955	20	.0009972	83.35	93.32	0.2945	20	.0009950	83.05	97.97	0.2934
40	.0010056	166.93	171.95	0.5705	40	.0010034	166.33	176.36	0.5685	40	.0010013	165.73	180.75	0.5665
60	.0010149	250.21	255.28	0.8284	60	.0010127	249.34	259.47	0.8258	60	.0010105	248.49	263.65	0.8231
80	.0010268	333.69	338.83	1.0719	80	.0010245	332.56	342.81	1.0687	80	.0010222	331.46	346.79	1.0655
100	.0010410	417.50	422.71	1.3030	100	.0010385	416.09	426.48	1.2992	100	.0010361	414.72	430.26	1.2954
120	.0010576	501.79	507.07	1.5232	120	.0010549	500.07	510.61	1.5188	120	.0010522	498.39	514.17	1.5144
140	.0010768	586.74	592.13	1.7342	140	.0010737	584.67	595.40	1.7291	140	.0010707	582.64	598.70	1.7241
160	.0010988	672.61	678.10	1.9374	160	.0010953	670.11	681.07	1.9316	160	.0010918	667.69	684.07	1.9259
180	.0011240	759.62	765.24	2.1341	180	.0011199	756.63	767.83	2.1274	180	.0011159	753.74	770.48	2.1209
200	.0011530	848.08	853.85	2.3254	200	.0011480	844.49	855.97	2.3178	200	.0011433	841.04	858.18	2.3103
220	.0011866	938.43	944.36	2.5128	220	.0011805	934.07	945.88	2.5038	220	.0011748	929.89	947.52	2.4952
240	.0012264	1031.34	1037.47	2.6978	240	.0012187	1025.94	1038.13	2.6872	240	.0012114	1020.82	1038.99	2.6770
260	.0012748	1127.92	1134.30	2.8829	260	.0012645	1121.03	1133.68	2.8698	260	.0012550	1114.59	1133.41	2.8575
					280	.0013216	1220.90	1234.11	3.0547	280	.0013084	1212.47	1232.09	3.0392
					300	.0013972	1328.34	1342.31	3.2468	300	.0013770	1316.58	1337.23	3.2259
										320	.0014724	1431.05	1453.13	3.4246
										340	.0016311	1567.42	1591.88	3.6545
$P = 20 \text{ MPa}$					$P = 30 \text{ MPa}$					$P = 50 \text{ MPa}$				
T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K	T °C	\hat{v} m ³ /kg	\hat{u} kJ/kg	\hat{h} kJ/kg	\hat{s} kJ/kg K
0	.0009904	0.20	20.00	0.0004	0	.0009856	0.25	29.82	0.0001	0	.0009766	0.20	49.03	-0.0014
20	.0009928	82.75	102.61	0.2922	20	.0009886	82.16	111.82	0.2998	20	.0009804	80.98	130.00	0.2847
40	.0009992	165.15	185.14	0.5646	40	.0009951	164.01	193.87	0.5606	40	.0009872	161.84	211.20	0.5526
60	.0010084	247.66	267.82	0.8205	60	.0010042	246.03	276.16	0.8153	60	.0009962	242.96	292.77	0.8051
80	.0010199	330.38	350.78	1.0623	80	.0010156	328.28	358.75	1.0561	80	.0010073	324.32	374.68	1.0439
100	.0010337	413.37	434.04	1.2917	100	.0010290	410.76	441.63	1.2844	100	.0010201	405.86	456.87	1.2703
120	.0010496	496.75	517.74	1.5101	120	.0010445	493.58	524.91	1.5017	120	.0010348	487.63	539.37	1.4857
140	.0010678	580.67	602.03	1.7192	140	.0010621	576.86	608.73	1.7097	140	.0010515	569.76	622.33	1.6915
160	.0010885	665.34	687.11	1.9203	160	.0010821	660.81	693.27	1.9095	160	.0010703	652.39	705.91	1.8890
180	.0011120	750.94	773.18	2.1146	180	.0011047	745.57	778.71	2.1024	180	.0010912	735.68	790.24	2.0793
200	.0011387	837.70	860.47	2.3031	200	.0011302	831.34	865.24	2.2892	200	.0011146	819.73	875.46	2.2634
220	.0011693	925.89	949.27	2.4869	220	.0011590	918.32	953.09	2.4710	220	.0011408	904.67	961.71	2.4419
240	.0012046	1015.94	1040.04	2.6673	240	.0011920	1006.84	1042.60	2.6489	240	.0011702	990.69	1049.20	2.6158
260	.0012462	1108.53	1133.45	2.8459	260	.0012303	1097.38	1134.29	2.8242	260	.0012034	1078.06	1138.23	2.7860
280	.0012965	1204.69	1230.62	3.0248	280	.0012755	1190.69	1228.96	2.9985	280	.0012415	1167.19	1229.26	2.9536
300	.0013596	1306.10	1333.29	3.2071	300	.0013304	1287.89	1327.80	3.1740	300	.0012860	1258.66	1322.95	3.1200
320	.0014437	1415.66	1444.53	3.3978	320	.0013997	1390.64	1432.63	3.3538	320	.0013388	1353.23	1420.17	3.2867
340	.0015683	1539.64	1571.01	3.6074	340	.0014919	1501.71	1546.47	3.5425	340	.0014032	1451.91	1522.07	3.4556
360	.0018226	1702.78	1739.23	3.8770	360	.0016265	1626.57	1675.36	3.7492	360	.0014838	1555.97	1630.16	3.6290
					380	.0018691	1781.35	1837.43	4.0010	380	.0015883	1667.13	1746.54	3.8100