

Saturated Steam Temperature Table

T, °C	p, bar	v _f , m ³ /kg	v _g , m ³ /kg	u _f , kJ/kg	u _g , kJ/kg	h _f , kJ/kg	h _g , kJ/kg	s _f , kJ/kg	s _g , kJ/kg
0.01	0.0061	1.0002 × 10 ⁻³	206.1	0.01	2376	0.01	2501	0.0	9.156
5.0	0.0087	1.0001 × 10 ⁻³	147.1	21.00	2383	21.00	2511	0.0762	9.026
10.0	0.0123	1.0001 × 10 ⁻³	106.4	42.01	2389	42.01	2520	0.151	8.901
15.0	0.0170	1.0007 × 10 ⁻³	77.93	62.99	2396	62.99	2529	0.2245	8.781
20.0	0.0234	1.002 × 10 ⁻³	57.79	83.94	2403	83.94	2538	0.2966	8.667
25.0	0.0317	1.0032 × 10 ⁻³	43.36	104.9	2410	104.9	2547	0.3673	8.558
30.0	0.0425	1.0045 × 10 ⁻³	32.90	125.8	2416	125.8	2556	0.4369	8.453
35.0	0.0563	1.0057 × 10 ⁻³	25.22	146.7	2423	146.7	2565	0.5053	8.353
40.0	0.0738	1.0076 × 10 ⁻³	19.52	167.5	2430	167.5	2574	0.5725	8.257
45.0	0.0959	1.010 × 10 ⁻³	15.26	188.4	2437	188.4	2583	0.6386	8.165
50.0	0.1235	1.012 × 10 ⁻³	12.03	209.3	2443	209.3	2592	0.7037	8.076
55.0	0.1576	1.015 × 10 ⁻³	9.569	230.2	2450	230.2	2601	0.7679	7.991
60.0	0.1994	1.017 × 10 ⁻³	7.671	251.1	2457	251.1	2610	0.8311	7.910
65.0	0.2503	1.020 × 10 ⁻³	6.197	272.0	2463	272.0	2618	0.8934	7.831
70.0	0.3119	1.023 × 10 ⁻³	5.042	293.0	2470	293.0	2627	0.9549	7.755
75.0	0.3858	1.026 × 10 ⁻³	4.131	313.9	2476	313.9	2635	1.016	7.682
80.0	0.4739	1.029 × 10 ⁻³	3.407	334.8	2482	334.9	2644	1.075	7.612
85.0	0.5783	1.033 × 10 ⁻³	2.828	355.8	2488	355.9	2652	1.134	7.544
90.0	0.7013	1.036 × 10 ⁻³	2.361	376.8	2494	376.9	2660	1.193	7.479
95.0	0.8455	1.039 × 10 ⁻³	1.982	397.9	2501	398.0	2668	1.250	7.416
100.0	1.013	1.044 × 10 ⁻³	1.673	418.9	2507	419.0	2676	1.307	7.355
110.0	1.433	1.052 × 10 ⁻³	1.210	461.1	2518	461.3	2691	1.418	7.239
120.0	1.985	1.060 × 10 ⁻³	0.892	503.5	2529	503.7	2706	1.528	7.130
130.0	2.701	1.069 × 10 ⁻³	0.669	546.0	2540	546.3	2720	1.634	7.027
140.0	3.613	1.080 × 10 ⁻³	0.509	588.7	2550	589.1	2734	1.739	6.930
150.0	4.758	1.091 × 10 ⁻³	0.393	631.7	2559	632.2	2746	1.842	6.838
160.0	6.178	1.102 × 10 ⁻³	0.307	674.9	2568	675.5	2758	1.943	6.750
170.0	7.916	1.114 × 10 ⁻³	0.243	718.3	2576	719.2	2769	2.042	6.666
180.0	10.02	1.127 × 10 ⁻³	0.194	762.1	2584	763.2	2778	2.140	6.586
190.0	12.54	1.141 × 10 ⁻³	0.157	806.2	2589	807.6	2786	2.236	6.508
200.0	15.54	1.156 × 10 ⁻³	0.127	850.6	2596	852.4	2793	2.331	6.432
210.0	19.06	1.172 × 10 ⁻³	0.104	895.5	2600	897.8	2798	2.425	6.358
220.0	23.18	0.001190	0.086	940.8	2603	943.6	2802	2.518	6.286
230.0	27.95	0.001209	0.072	986.7	2603	990.1	2804	2.610	6.215
240.0	33.44	0.001229	0.060	1033	2603	1037.3	2804	2.702	6.144
250.0	39.73	0.001251	0.050	1080	2603	1085.3	2802	2.793	6.073
260.0	46.88	0.001275	0.042	1128	2600	1134.4	2797	2.884	6.002
270.0	54.98	0.001302	0.036	1177	2592	1184.5	2790	2.975	5.930
280.0	64.11	0.001332	0.030	1227	2587	1236.0	2780	3.067	5.857
290.0	74.36	0.001365	0.026	1279	2573	1289.0	2766	3.159	5.782
300.0	85.81	0.001403	0.022	1332	2560	1344.0	2749	3.253	5.704
320.0	112.7	0.001499	0.015	1445	2531	1461.5	2700	3.448	5.536
340.0	145.9	0.001638	0.011	1570	2462	1594.1	2622	3.659	5.336
360.0	186.5	0.001893	0.007	1725	2351	1760.5	2481	3.915	5.053
374.14	220.9	0.003155	0.003155	2030	2030	2099.0	2099	4.430	4.430

Saturated Steam Pressure Table

p, bar	T, °C	$v_f, \text{m}^3/\text{kg}$	$v_g, \text{m}^3/\text{kg}$	$u_f, \text{kJ/kg}$	$u_g, \text{kJ/kg}$	$h_f, \text{kJ/kg}$	$h_g, \text{kJ/kg}$	$s_f, \text{kJ/kg}$	$s_g, \text{kJ/kg}$
0.02	17.50	1.001×10^{-3}	67.00	73.48	2400	73.48	2534	0.261	8.724
0.04	28.96	1.004×10^{-3}	34.80	121.4	2415	121.4	2554	0.423	8.475
0.06	36.15	1.006×10^{-3}	23.75	151.5	2425	151.5	2567	0.521	8.331
0.08	41.50	1.008×10^{-3}	18.1	173.8	2432	173.8	2577	0.593	8.229
0.1	45.8	1.010×10^{-3}	14.68	191.8	2438	191.8	2585	0.649	8.150
0.2	60.07	1.017×10^{-3}	7.649	251.4	2457	251.4	2610	0.832	7.908
0.3	69.11	1.023×10^{-3}	5.229	289.2	2468	289.2	2625	0.944	7.769
0.4	75.87	1.026×10^{-3}	3.994	317.5	2477	317.6	2637	1.026	7.670
0.5	81.33	1.030×10^{-3}	3.240	340.4	2484	340.5	2646	1.091	7.594
0.6	85.94	1.033×10^{-3}	2.732	359.8	2490	359.9	2653	1.145	7.532
0.8	93.5	1.039×10^{-3}	2.087	391.6	2499	391.7	2666	1.233	7.435
1.0	99.62	1.043×10^{-3}	1.694	417.3	2506	417.4	2675	1.303	7.359
1.5	111.4	1.053×10^{-3}	1.159	466.9	2520	467.1	2694	1.434	7.223
2.0	120.2	1.061×10^{-3}	0.886	504.5	2530	504.7	2707	1.530	7.127
3.0	133.6	1.073×10^{-3}	0.606	561.1	2544	561.5	2725	1.672	6.992
4.0	143.6	1.084×10^{-3}	0.463	604.3	2554	604.8	2739	1.777	6.896
5.0	151.9	1.093×10^{-3}	0.375	639.7	2561	640.2	2749	1.861	6.821
6.0	158.9	1.101×10^{-3}	0.316	669.9	2567	670.6	2757	1.931	6.760
7.0	165.0	1.108×10^{-3}	0.273	696.4	2573	697.2	2764	1.992	6.708
8.0	170.4	1.115×10^{-3}	0.240	720.2	2577	721.1	2769	2.046	6.663
10.0	179.9	1.127×10^{-3}	0.194	761.7	2584	762.8	2778	2.139	6.586
20.0	212.4	1.177×10^{-3}	0.100	906.4	2600	908.8	2800	2.447	6.341
30.0	233.9	1.217×10^{-3}	0.067	1005	2604	1008	2804	2.646	6.187
40.0	250.4	1.252×10^{-3}	0.050	1082	2602	1087	2801	2.796	6.070
50.0	264.0	1.286×10^{-3}	0.039	1148	2597	1154	2794	2.920	5.973
60.0	275.6	1.319×10^{-3}	0.032	1205	2590	1213	2784	3.027	5.889
70.0	285.9	1.352×10^{-3}	0.027	1258	2580	1267	2772	3.121	5.813
80.0	295.1	1.384×10^{-3}	0.024	1306	2570	1317	2758	3.207	5.743
90.0	303.4	1.418×10^{-3}	0.021	1350	2558	1363	2742	3.286	5.677
100.0	311.1	1.453×10^{-3}	0.018	1393	2545	1408	2725	3.360	5.614
120.0	324.8	0.001527	0.014	1473	2513	1491	2685	3.496	5.492
140.0	336.8	0.001611	0.012	1549	2477	1571	2638	3.623	5.372
160.0	347.4	0.001711	0.009	1623	2432	1650	2581	3.746	5.246
180.0	357.0	0.001839	0.008	1699	2375	1732	2510	3.871	5.105
200.0	365.8	0.002036	0.006	1786	2295	1826	2411	4.013	4.931
220.9	374.1	0.003155	0.003155	2030	2030	2099	2099	4.430	4.430

Superheated Steam Tables

Pressure p = 0.1 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
50.0	14.87	2444	2593	8.175
100.0	17.20	2516	2688	8.448
150.0	19.51	2588	2783	8.688
200.0	21.83	2661	2880	8.904
250.0	24.14	2736	2977	9.100
300.0	26.45	2812	3077	9.281
400.0	31.06	2969	3280	9.608
500.0	35.68	3132	3489	9.898
600.0	40.30	3303	3705	10.16
700.0	44.91	3480	3929	10.40
800.0	54.14	3664	4159	10.63

Pressure p = 0.5 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
100.0	3.420	2512	2683	7.695
150.0	3.889	2586	2780	7.940
200.0	4.356	2660	2878	8.158
250.0	4.820	2735	2976	8.356
300.0	5.284	2811	3076	8.537
400.0	6.209	2969	3279	8.864
500.0	7.134	3132	3489	9.155
600.0	8.057	3302	3705	9.418
700.0	8.981	3479	3929	9.660
800.0	9.904	3664	4159	9.885
900.0	10.83	3855	4396	10.10

Pressure p = 1.0 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
100.0	1.696	2507	2676	7.361
150.0	1.936	2583	2776	7.613
200.0	2.172	2658	2875	7.834
250.0	2.406	2733	2974	8.033
300.0	2.639	2810	3074	8.216
400.0	3.103	2968	3278	8.544
500.0	3.565	3132	3488	8.834
600.0	4.028	3302	3704	9.098
700.0	4.490	3479	3928	9.340
800.0	4.952	3664	4159	9.565
900.0	5.414	3855	4396	9.777

Pressure p = 2.0 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
150.0	0.960	2577	2769	7.280
200.0	1.080	2654	2871	7.507
250.0	1.199	2731	2971	7.709
300.0	1.316	2809	3072	7.893
400.0	1.549	2967	3277	8.222
500.0	1.781	3131	3487	8.513
600.0	2.013	3301	3704	8.777
700.0	2.244	3479	3928	9.019
800.0	2.475	3663	4158	9.245
900.0	2.705	3855	4396	9.457
1000	2.937	4053	4640	9.656

Pressure p = 3.0 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
150.0	0.634	2571	2761	7.078
200.0	0.716	2651	2866	7.312
250.0	0.796	2729	2968	7.517
300.0	0.875	2807	3069	7.702
400.0	1.032	2966	3275	8.033
500.0	1.187	3130	3486	8.325
600.0	1.341	3301	3703	8.589
700.0	1.496	3478	3927	8.832
800.0	1.650	3663	4158	9.058
900.0	1.804	3854	4395	9.269
1000	1.958	4052	4640	9.469

Pressure p = 4.0 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
150.0	0.471	2565	2753	6.930
200.0	0.534	2647	2861	7.171
250.0	0.595	2726	2964	7.379
300.0	0.655	2805	3067	7.566
400.0	0.773	2964	3273	7.899
500.0	0.889	3129	3485	8.191
600.0	1.006	3300	3702	8.456
700.0	1.122	3478	3927	8.699
800.0	1.237	3662	4157	8.924
900.0	1.353	3854	4395	9.136
1000	1.469	4052	4639	9.336

Superheated Steam Tables

Pressure p =5.0 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
200.0	0.425	2643	2855	7.059
250.0	0.474	2724	2961	7.271
300.0	0.523	2803	3064	7.460
400.0	0.617	2963	3272	7.794
500.0	0.711	3128	3484	8.087
600.0	0.804	3300	3702	8.352
700.0	0.897	3478	3926	8.595
800.0	0.990	3662	4157	8.821
900.0	1.082	3854	4395	9.033
1000	1.175	4052	4639	9.233
1100	1.267	4256	4890	9.422

Pressure p =6.0 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
200.0	0.352	2639	2850	6.967
250.0	0.394	2721	2957	7.182
300.0	0.434	2801	3062	7.372
400.0	0.514	2962	3270	7.708
500.0	0.592	3128	3483	8.002
600.0	0.670	3299	3701	8.267
700.0	0.747	3477	3925	8.511
800.0	0.825	3662	4157	8.737
900.0	0.902	3853	4394	8.949
1000	0.979	4052	4639	9.149
1100	1.056	4256	4890	9.338

Pressure p = 8.0 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
200.0	0.261	2631	2839	6.816
250.0	0.293	2716	2950	7.038
300.0	0.324	2797	3057	7.233
400.0	0.384	2960	3267	7.572
500.0	0.443	3126	3481	7.867
600.0	0.502	3298	3699	8.133
700.0	0.560	3476	3924	8.377
800.0	0.618	3661	4156	8.603
900.0	0.676	3853	4394	8.815
1000	0.734	4051	4638	9.015
1100	0.792	4256	4889	9.205

Pressure p =10 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
200.0	0.206	2622	2828	6.694
250.0	0.233	2710	2943	6.925
300.0	0.258	2793	3051	7.123
400.0	0.307	2957	3264	7.465
500.0	0.354	3124	3479	7.762
600.0	0.401	3297	3698	8.029
700.0	0.448	3475	3923	8.273
800.0	0.494	3660	4155	8.500
900.0	0.541	3852	4393	8.712
1000	0.587	4051	4638	8.912
1100	0.634	4255	4889	9.102

Pressure p =12 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
200.0	0.169	2613	2816	6.590
250.0	0.192	2704	2935	6.829
300.0	0.214	2789	3046	7.032
400.0	0.255	2955	3261	7.377
500.0	0.295	3123	3476	7.676
600.0	0.334	3296	3696	7.944
700.0	0.373	3474	3922	8.188
800.0	0.412	3660	4154	8.415
900.0	0.451	3852	4392	8.627
1000	0.489	4050	4637	8.827
1100	0.528	4255	4888	9.017

Pressure p = 16 bar				
T , °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
250.0	0.142	2692	2919	6.673
300.0	0.159	2781	3035	6.884
400.0	0.190	2950	3254	7.237
500.0	0.220	3120	3472	7.539
600.0	0.250	3293	3693	7.808
700.0	0.279	3473	3920	8.054
800.0	0.309	3658	4152	8.281
900.0	0.338	3851	4391	8.494
1000	0.367	4049	4636	8.694
1100	0.396	4254	4887	8.884
1200	0.425	4464	5144	9.064

Superheated Steam Tables

Pressure p = 20 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
250.0	0.111	2680	2903	6.545
300.0	0.125	2773	3024	6.766
400.0	0.151	2945	3248	7.127
500.0	0.176	3116	3468	7.432
600.0	0.200	3291	3690	7.702
700.0	0.223	3471	3917	7.949
800.0	0.247	3657	4150	8.177
900.0	0.270	3849	4389	8.390
1000	0.293	4048	4635	8.590
1100	0.317	4253	4886	8.780
1200	0.340	4463	5143	8.961

Pressure p =30 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
250.0	0.071	2644	2856	6.287
300.0	0.081	2750	2994	6.539
400.0	0.099	2933	3231	6.921
500.0	0.116	3108	3457	7.234
600.0	0.132	3285	3682	7.509
700.0	0.148	3467	3912	7.757
800.0	0.164	3654	4146	7.986
900.0	0.180	3847	4386	8.200
1000	0.195	4045	4632	8.401
1100	0.211	4250	4883	8.591
1200	0.227	4461	5141	8.772

Pressure p = 40 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
300.0	0.059	2725	2961	6.362
400.0	0.073	2920	3214	6.769
500.0	0.086	3100	3445	7.090
600.0	0.099	3279	3674	7.369
700.0	0.111	3462	3906	7.620
800.0	0.123	3650	4142	7.850
900.0	0.135	3844	4382	8.065
1000	0.146	4043	4629	8.266
1100	0.158	4248	4881	8.457
1200	0.170	4459	5138	8.638

Pressure p = 60 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
300.0	0.036	2667	2884	6.067
400.0	0.047	2893	3177	6.541
500.0	0.057	3082	3422	6.880
600.0	0.065	3267	3658	7.168
700.0	0.074	3453	3894	7.423
800.0	0.082	3643	4133	7.657
900.0	0.090	3838	4375	7.873
1000	0.097	4038	4623	8.075
1100	0.105	4243	4875	8.266
1200	0.113	4454	5133	8.447

Pressure p =80 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
300.0	0.024	2591	2785	5.791
400.0	0.034	2864	3138	6.363
500.0	0.042	3064	3398	6.724
600.0	0.048	3254	3642	7.021
700.0	0.055	3444	3882	7.281
800.0	0.061	3636	4124	7.517
900.0	0.067	3832	4368	7.735
1000	0.073	4033	4617	7.938
1100	0.079	4239	4870	8.130
1200	0.085	4450	5129	8.311

Pressure p = 100 bar				
T, °C	v, m ³ /kg	u, kJ/kg	h, kJ/kg	s, kJ/kg
350.0	0.022	2699	2923	5.944
400.0	0.026	2832	3097	6.212
500.0	0.033	3046	3374	6.597
600.0	0.038	3242	3625	6.903
700.0	0.044	3435	3871	7.169
800.0	0.049	3629	4115	7.408
900.0	0.053	3826	4361	7.627
1000	0.058	4028	4611	7.832
1100	0.063	4234	4865	8.024
1200	0.069	4445	5124	8.206