UNIVERSIDAD DE CHILE
FACULTAD DE CIENCIAS FISICAS Y MATEMATICAS
BIBLIOTECA CENTRAL
DEPTO. PROCESOS TECNICOS

UK Steam Tables in SI Units 1970

Thermodynamic Properties of Water and Steam

Viscosity of Water and Steam

Thermal Conductivity of Water and Steam

Graphs for Boiler Feed Pump Calculations

Including formulations, suitable for use in industrial calculations by computer, from which values for the thermodynamic properties may be derived. Correlating formulae for the transport properties are also given.

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Introduction

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In 1967 comprehensive tables of the thermodynamic and transport properties of water and steam in British units were published under the aegis of the Electrical Research Association (ERA). They represent the culmination of several years of work by the ERA's Research Advisory Committee on the Properties of Steam. After the publication of these tables the ERA terminated its traditional support for work on the properties of steam, the Research Advisory Committee was dissolved and reformed, with basically the same membership, as the United Kingdom Committee on the Properties of Steam, under the aegis of the Ministry of Technology. The U.K. committee now forms the channel through which the British contribution to the work of the International Conference on the Properties of Steam (ICPS) will continue to be made and is responsible for the publication of the present steam tables in SI units.

The numerical values of thermodynamic properties given in the ERA tables were computed in the first instance from a set of equations, designated the 1966 IFC Formulation, which was accorded temporary recognition as an international formulation for use in industrial calculations by computer at a meeting in Glasgow in 1966 of the International Formulation Committee (IFC) set up by the Sixth ICPS in New York in 1963. It was realised that in some respects the formulation was imperfect, giving rise to certain local discontinuities and small irregularities, especially near the critical temperature, and the ERA table values were adjusted where necessary to obtain smooth first differences of specific enthalpy and entropy.

At the Seventh ICPS held in Tokyo in September 1968 it was reported that the member nations of the Sixth ICPS had given formal approval to a slightly modified formulation designated the 1967 IFC Formulation for Industrial Use and to another formulation designated the 1968 IFC Formulation for Scientific and General Use. Work is continuing in this field and these formulations do not represent finality, but it is not proposed that there should be any new internationally-agreed formulation for a period of at least five years.

Although the modifications made to the 1966 IFC Formulation to produce the 1967 IFC Formulation significantly reduced many of the discontinuities, there are still small irregularities in the region of the critical temperature. When considering the preparation of the present tables it had to be decided whether such irregularities should be smoothed out, as in the ERA tables, or not. Bearing in mind that the 1967 IFC Formulation has already been used for a number of national steam tables and that the irregularities are confined to regions of little importance in industrial use, it was decided to do no smoothing of the computed values of specific enthalpy and entropy. However, for the use of any who may be interested in the regions where irregularities are found, an appendix is included listing the differences between the 1967 computed values of enthalpy and entropy and the smoothed ERA values. Values of the specific heat capacity derived from the 1967 IFC Formulation were found to be not entirely satisfactory and the values given in these Tables are based on an equation published by Jůza.*

Another factor that had to be considered in preparing the tables was the effect of the supersession of the 1948 International Practical Temperature Scale (IPTS) by the 1968 IPTS. The standard of reference for all current steam tables is the international Skeleton Table of 1963, which is based on the 1948 IPTS. Up to the highest temperatures employed in present-day steam plant the difference between the two temperature scales does not exceed 0.25 K, which is immaterial in industrial terms. It was therefore decided to adhere to the 1948 IPTS, and to include a statement dealing with the differences between the two scales. This is given in the following section on Notation, Units and Physical Constants.

The format and manner of presentation of the data in the present tables is similar to that adopted for the 1967 ERA Tables. The scope is also generally similar, but there are some differences worth noting. For the thermodynamic properties the upper limits of pressure and temperature are 1000 bar (14 500 lbf/in^2) and 800 °C (1472 °F) as against 15 000 lbf/in^2 and 1500 °F respectively for the ERA Tables. On the other hand, using more recent data, values of viscosity and thermal conductivity are given up to 1000 °C, as compared with 1500 °F in the ERA Tables. Data on the surface tension of water at saturation temperature and pressure, calculated from an equation due to Grigull,† are given in Table 5.

In the light of experience gained in using the 1967 ERA Tables it is anticipated that the present tables will satisfactorily meet the needs of all those concerned with the various aspects of steam power plant work. The fact that steam tables have been or are being produced in other countries based on the same formulation should ensure comparability of proposals and analyses from various sources and facilitate international trade.

It is intended to follow up the publication of these tables by the production of charts as required.

* J. Jůza, "An Equation of State for Water and Steam," *Řada technických věd.* Ročnik 76, Sešit 1, Academia, Praha, 1966.

† U. Grigull and J. Bach, "Die Oberflächenspannung und verwandte Zustandsgrössen des Wassers," *Brennstoff-Wärme-Kraft* (BWK), Vol. 18 (1966), No. 2, pp. 73–75.

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Notation, Units and Physical Constants

The notation and units employed are as follows:—

Quantity	*Symbol*	*Unit used in these tables*	*Symbol used for related quantity in Appendix 1*
Temperature, thermodynamic	T	K	θ
Celcius temperature	t	°C	
Pressure, absolute	p	bar = 10^5N/m^2	β
Specific volume	v	dm^3/kg	χ
Specific enthalpy	h	kJ/kg	ϵ
Specific entropy	s	kJ/kg K	σ
Specific heat capacity at constant pressure	c_p	kJ/kg K	
Dynamic viscosity	μ	kg/m s = N s/m^2	
Kinematic viscosity	ν	m^2/s	
Thermal conductivity	λ	W/m K	
Prandtl number	(Pr)		
Surface tension	σ	N/m	

Quantities for saturated liquid	v_f	h_f	s_f	μ_f	ν_f	λ_f
Quantities for saturated vapour	v_g	h_g	s_g	μ_g	ν_g	λ_g
Increment for evaporation	v_{fg}	h_{fg}	s_{fg}			

$$T - t = 273.15 \text{ K}$$
$$1 \text{ K} = \text{one kelvin} = 1.8 \text{ R}$$

The values of the thermodynamic properties given in Tables 1, 2 and 3 have been derived from the dimens less equations given in the 1967 IFC Formulation in conjunction with the following dimensional factors.

$$p/\text{bar} = 221.2\,\beta$$
$$T/\text{K} = 647.3\,\theta$$
$$v/(\text{dm}^3/\text{kg}) = 3.17\,\chi$$
$$h/(\text{kJ/kg}) = 0.1\,(221.2 \times 3.17)\,\epsilon = 70.1204\,\epsilon$$
$$s/(\text{kJ/kg K}) = 0.1\,\frac{221.2 \times 3.17}{647.3}\,\sigma \simeq 0.1083275\,\sigma$$

Range of equations

The upper limits of temperature and pressure of the 1967 IFC Formulation, given in Appendix 1, are 800 °C 1000 bar respectively.

As regards viscosity, the equations in Appendix 3 take into account the most recent work at the Universit Glasgow and permit extrapolation beyond the pressure and temperature limits of the Skeleton Tables, up to 1 bar and 1000 °C respectively.

In computing thermal conductivity, some extrapolation of the equations given in the Supplementary Releas Transport Properties, November, 1964, of the *Sixth International Conference on the Properties of Steam* has employed, as indicated in Appendix 4.

Temperature Scales

In October, 1968, the *Comité International des Poids et Mesures* (CIPM) adopted the International Prac Temperature Scale of 1968 (IPTS–1968) thus replacing the IPTS–48. The change is important in so far a numerical values of temperature derived from the IPTS–68 approximate more closely to recent determinatio thermodynamic temperature than do those derived from IPTS–48. The difference between the two tempera scales is given over the range from 0 °C to 1000 °C in the accompanying table which has been taken fron official text published in *metrologia*.*

* "The International Practical Temperature Scale of 1968," *metrologia*, Vol. 5, No. 2, April 1968, pp. 35–49.

Table 1 Saturation Line; Temperature Range 0.01 °C to 374.15 °C

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
0.01	273.16	0.006112	0.0	2501.6	2501.6	0	9.1575	9.1575	1.0002	206163	0.01
1	274.15	0.006566	4.2	2499.2	2503.4	0.0153	9.1158	9.1311	1.0001	192607	1
2	275.15	0.007055	8.4	2496.8	2505.2	0.0306	9.0741	9.1047	1.0001	179923	2
3	276.15	0.007575	12.6	2494.5	2507.1	0.0459	9.0326	9.0785	1.0001	168169	3
4	277.15	0.008129	16.8	2492.1	2508.9	0.0611	8.9915	9.0526	1.0000	157272	4
5	278.15	0.008718	21.0	2489.7	2510.7	0.0762	8.9507	9.0269	1.0000	147163	5
6	279.15	0.009345	25.2	2487.4	2512.6	0.0913	8.9102	9.0015	1.0000	137780	6
7	280.15	0.010012	29.4	2485.0	2514.4	0.1063	8.8699	8.9762	1.0001	129064	7
8	281.15	0.010720	33.6	2482.6	2516.2	0.1213	8.8300	8.9513	1.0001	120966	8
9	282.15	0.011472	37.8	2480.3	2518.1	0.1362	8.7903	8.9265	1.0002	113435	9
10	283.15	0.012270	42.0	2477.9	2519.9	0.1510	8.7510	8.9020	1.0003	106430	10
11	284.15	0.013116	46.2	2475.5	2521.7	0.1658	8.7119	8.8776	1.0003	99909	11
12	285.15	0.014014	50.4	2473.2	2523.6	0.1805	8.6731	8.8536	1.0004	93835	12
13	286.15	0.014965	54.6	2470.8	2525.4	0.1952	8.6345	8.8297	1.0006	88176	13
14	287.15	0.015973	58.8	2468.5	2527.2	0.2098	8.5963	8.8060	1.0007	82900	14
15	288.15	0.017039	62.9	2466.1	2529.1	0.2243	8.5582	8.7826	1.0008	77978	15
16	289.15	0.018168	67.1	2463.8	2530.9	0.2388	8.5205	8.7593	1.0010	73384	16
17	290.15	0.019362	71.3	2461.4	2532.7	0.2533	8.4830	8.7363	1.0012	69095	17
18	291.15	0.020624	75.5	2459.0	2534.5	0.2677	8.4458	8.7135	1.0013	65087	18
19	292.15	0.021957	79.7	2456.7	2536.4	0.2820	8.4088	8.6908	1.0015	61341	19
20	293.15	0.023366	83.9	2454.3	2538.2	0.2963	8.3721	8.6684	1.0017	57838	20
21	294.15	0.024853	88.0	2452.0	2540.0	0.3105	8.3356	8.6462	1.0019	54561	21
22	295.15	0.026422	92.2	2449.6	2541.8	0.3247	8.2994	8.6241	1.0022	51492	22
23	296.15	0.028076	96.4	2447.2	2543.6	0.3389	8.2634	8.6023	1.0024	48619	23
24	297.15	0.029821	100.6	2444.9	2545.5	0.3530	8.2277	8.5806	1.0026	45926	24
25	298.15	0.031660	104.8	2442.5	2547.3	0.3670	8.1922	8.5592	1.0029	43402	25
26	299.15	0.033597	108.9	2440.2	2549.1	0.3810	8.1569	8.5379	1.0032	41034	26
27	300.15	0.035636	113.1	2437.8	2550.9	0.3949	8.1218	8.5168	1.0034	38813	27
28	301.15	0.037782	117.3	2435.4	2552.7	0.4088	8.0870	8.4959	1.0037	36728	28
29	302.15	0.040040	121.5	2433.1	2554.5	0.4227	8.0524	8.4751	1.0040	34769	29
30	303.15	0.042415	125.7	2430.7	2556.4	0.4365	8.0181	8.4546	1.0043	32929	30
31	304.15	0.044911	129.8	2428.3	2558.2	0.4503	7.9839	8.4342	1.0046	31199	31
32	305.15	0.047534	134.0	2425.9	2560.0	0.4640	7.9500	8.4140	1.0049	29572	32
33	306.15	0.050288	138.2	2423.6	2561.8	0.4777	7.9163	8.3939	1.0053	28042	33
34	307.15	0.053180	142.4	2421.2	2563.6	0.4913	7.8828	8.3740	1.0056	26601	34
35	308.15	0.056216	146.6	2418.8	2565.4	0.5049	7.8495	8.3543	1.0060	25245	35
36	309.15	0.059400	150.7	2416.4	2567.2	0.5184	7.8164	8.3348	1.0063	23967	36
37	310.15	0.062739	154.9	2414.1	2569.0	0.5319	7.7835	8.3154	1.0067	22763	37
38	311.15	0.066240	159.1	2411.7	2570.8	0.5453	7.7509	8.2962	1.0070	21627	38
39	312.15	0.069908	163.3	2409.3	2572.6	0.5588	7.7184	8.2772	1.0074	20557	39
40	313.15	0.073750	167.5	2406.9	2574.4	0.5721	7.6861	8.2583	1.0078	19546	40
41	314.15	0.077773	171.6	2404.5	2576.2	0.5854	7.6541	8.2395	1.0082	18592	41
42	315.15	0.081985	175.8	2402.1	2577.9	0.5987	7.6222	8.2209	1.0086	17692	42
43	316.15	0.086391	180.0	2399.7	2579.7	0.6120	7.5905	8.2025	1.0090	16841	43
44	317.15	0.091001	184.2	2397.3	2581.5	0.6252	7.5590	8.1842	1.0094	16036	44
45	318.15	0.095820	188.4	2394.9	2583.3	0.6383	7.5277	8.1661	1.0099	15276	45
46	319.15	0.10086	192.5	2392.5	2585.1	0.6514	7.4966	8.1481	1.0103	14557	46
47	320.15	0.10612	196.7	2390.1	2586.9	0.6645	7.4657	8.1302	1.0107	13877	47
48	321.15	0.11162	200.9	2387.7	2588.6	0.6776	7.4350	8.1125	1.0112	13233	48
49	322.15	0.11736	205.1	2385.3	2590.4	0.6906	7.4044	8.0950	1.0117	12623	49
50	323.15	0.12335	209.3	2382.9	2592.2	0.7035	7.3741	8.0776	1.0121	12046	50

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
50	323.15	0.12335	209.3	2382.9	2592.2	0.7035	7.3741	8.0776	1.0121	12046	50
51	324.15	0.12961	213.4	2380.5	2593.9	0.7164	7.3439	8.0603	1.0126	11499	51
52	325.15	0.13613	217.6	2378.1	2595.7	0.7293	7.3138	8.0432	1.0131	10980	52
53	326.15	0.14293	221.8	2375.7	2597.5	0.7422	7.2840	8.0262	1.0136	10488	53
54	327.15	0.15002	226.0	2373.2	2599.2	0.7550	7.2543	8.0093	1.0140	10022	54
55	328.15	0.15741	230.2	2370.8	2601.0	0.7677	7.2248	7.9926	1.0145	9578.9	55
56	329.15	0.16511	234.4	2368.4	2602.7	0.7804	7.1955	7.9759	1.0150	9158.7	56
57	330.15	0.17313	238.5	2365.9	2604.5	0.7931	7.1663	7.9595	1.0156	8759.8	57
58	331.15	0.18147	242.7	2363.5	2606.2	0.8058	7.1373	7.9431	1.0161	8380.8	58
59	332.15	0.19016	246.9	2361.1	2608.0	0.8184	7.1085	7.9269	1.0166	8020.8	59
60	333.15	0.19920	251.1	2358.6	2609.7	0.8310	7.0798	7.9108	1.0171	7678.5	60
61	334.15	0.20861	255.3	2356.2	2611.4	0.8435	7.0513	7.8948	1.0177	7353.2	61
62	335.15	0.21838	259.5	2353.7	2613.2	0.8560	7.0230	7.8790	1.0182	7043.7	62
63	336.15	0.22855	263.6	2351.3	2614.9	0.8685	6.9948	7.8633	1.0188	6749.3	63
64	337.15	0.23912	267.8	2348.8	2616.6	0.8809	6.9667	7.8477	1.0193	6469.0	64
65	338.15	0.25009	272.0	2346.3	2618.4	0.8933	6.9388	7.8322	1.0199	6202.3	65
66	339.15	0.26150	276.2	2343.9	2620.1	0.9057	6.9111	7.8168	1.0205	5948.2	66
67	340.15	0.27334	280.4	2341.4	2621.8	0.9180	6.8835	7.8015	1.0211	5706.2	67
68	341.15	0.28563	284.6	2338.9	2623.5	0.9303	6.8561	7.7864	1.0217	5475.6	68
69	342.15	0.29838	288.8	2336.4	2625.2	0.9426	6.8288	7.7714	1.0223	5255.8	69
70	343.15	0.31162	293.0	2334.0	2626.9	0.9548	6.8017	7.7565	1.0228	5046.3	70
71	344.15	0.32535	297.2	2331.5	2628.6	0.9670	6.7747	7.7417	1.0235	4846.4	71
72	345.15	0.33958	301.4	2329.0	2630.3	0.9792	6.7478	7.7270	1.0241	4655.7	72
73	346.15	0.35434	305.5	2326.5	2632.0	0.9913	6.7211	7.7124	1.0247	4473.7	73
74	347.15	0.36964	309.7	2324.0	2633.7	1.0034	6.6945	7.6979	1.0253	4300.0	74
75	348.15	0.38549	313.9	2321.5	2635.4	1.0154	6.6681	7.6835	1.0259	4134.1	75
76	349.15	0.40191	318.1	2318.9	2637.1	1.0275	6.6418	7.6693	1.0266	3975.7	76
77	350.15	0.41891	322.3	2316.4	2638.7	1.0395	6.6156	7.6551	1.0272	3824.3	77
78	351.15	0.43652	326.5	2313.9	2640.4	1.0514	6.5896	7.6410	1.0279	3679.6	78
79	352.15	0.45474	330.7	2311.4	2642.1	1.0634	6.5637	7.6271	1.0285	3541.3	79
80	353.15	0.47360	334.9	2308.8	2643.8	1.0753	6.5380	7.6132	1.0292	3409.1	80
81	354.15	0.49311	339.1	2306.3	2645.4	1.0871	6.5123	7.5995	1.0299	3282.6	81
82	355.15	0.51329	343.3	2303.8	2647.1	1.0990	6.4868	7.5858	1.0305	3161.6	82
83	356.15	0.53416	347.5	2301.2	2648.7	1.1108	6.4615	7.5722	1.0312	3045.8	83
84	357.15	0.55573	351.7	2298.6	2650.4	1.1225	6.4362	7.5588	1.0319	2935.0	84
85	358.15	0.57803	355.9	2296.1	2652.0	1.1343	6.4111	7.5454	1.0326	2828.8	85
86	359.15	0.60108	360.1	2293.5	2653.6	1.1460	6.3861	7.5321	1.0333	2727.2	86
87	360.15	0.62489	364.3	2290.9	2655.3	1.1577	6.3612	7.5189	1.0340	2629.8	87
88	361.15	0.64948	368.5	2288.4	2656.9	1.1693	6.3365	7.5058	1.0347	2536.5	88
89	362.15	0.67487	372.7	2285.8	2658.5	1.1809	6.3119	7.4928	1.0354	2447.0	89
90	363.15	0.70109	376.9	2283.2	2660.1	1.1925	6.2873	7.4799	1.0361	2361.3	90
91	364.15	0.72815	381.1	2280.6	2661.7	1.2041	6.2629	7.4670	1.0369	2279.1	91
92	365.15	0.75608	385.4	2278.0	2663.4	1.2156	6.2387	7.4543	1.0376	2200.2	92
93	366.15	0.78489	389.6	2275.4	2665.0	1.2271	6.2145	7.4416	1.0384	2124.5	93
94	367.15	0.81461	393.8	2272.8	2666.6	1.2386	6.1905	7.4291	1.0391	2051.9	94
95	368.15	0.84526	398.0	2270.2	2668.1	1.2501	6.1665	7.4166	1.0399	1982.2	95
96	369.15	0.87686	402.2	2267.5	2669.7	1.2615	6.1427	7.4042	1.0406	1915.3	96
97	370.15	0.90944	406.4	2264.9	2671.3	1.2729	6.1190	7.3919	1.0414	1851.0	97
98	371.15	0.94301	410.6	2262.2	2672.9	1.2842	6.0954	7.3796	1.0421	1789.3	98
99	372.15	0.97761	414.8	2259.6	2674.4	1.2956	6.0719	7.3675	1.0429	1730.0	99
100	373.15	1.01325	419.1	2256.9	2676.0	1.3069	6.0485	7.3554	1.0437	1673.0	100

X =

Table 1 Saturation Line—*continued*

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
100	373.15	1.01325	419.1	2256.9	2676.0	1.3069	6.0485	7.3554	1.0437	1673.0	100
101	374.15	1.0500	423.3	2254.3	2677.6	1.3182	6.0252	7.3434	1.0445	1618.2	101
102	375.15	1.0878	427.5	2251.6	2679.1	1.3294	6.0021	7.3315	1.0453	1565.5	102
103	376.15	1.1267	431.7	2248.9	2680.7	1.3406	5.9790	7.3196	1.0461	1514.9	103
104	377.15	1.1668	435.9	2246.3	2682.2	1.3518	5.9560	7.3078	1.0469	1466.2	104
105	378.15	1.2080	440.2	2243.6	2683.7	1.3630	5.9331	7.2962	1.0477	1419.3	105
106	379.15	1.2504	444.4	2240.9	2685.3	1.3742	5.9104	7.2845	1.0485	1374.2	106
107	380.15	1.2941	448.6	2238.2	2686.8	1.3853	5.8877	7.2730	1.0494	1330.7	107
108	381.15	1.3390	452.9	2235.4	2688.3	1.3964	5.8651	7.2615	1.0502	1288.9	108
109	382.15	1.3852	457.1	2232.7	2689.8	1.4074	5.8427	7.2501	1.0510	1248.7	109
110	383.15	1.4327	461.3	2230.0	2691.3	1.4185	5.8203	7.2388	1.0519	1209.9	110
111	384.15	1.4815	465.5	2227.3	2692.8	1.4295	5.7980	7.2275	1.0527	1172.6	111
112	385.15	1.5316	469.8	2224.5	2694.3	1.4405	5.7758	7.2164	1.0536	1136.6	112
113	386.15	1.5832	474.0	2221.8	2695.8	1.4515	5.7538	7.2052	1.0544	1101.9	113
114	387.15	1.6362	478.3	2219.0	2697.2	1.4624	5.7318	7.1942	1.0553	1068.5	114
115	388.15	1.6906	482.5	2216.2	2698.7	1.4733	5.7099	7.1832	1.0562	1036.3	115
116	389.15	1.7465	486.7	2213.4	2700.2	1.4842	5.6881	7.1723	1.0571	1005.2	116
117	390.15	1.8039	491.0	2210.7	2701.6	1.4951	5.6663	7.1614	1.0579	975.25	117
118	391.15	1.8628	495.2	2207.9	2703.1	1.5060	5.6447	7.1507	1.0588	946.34	118
119	392.15	1.9233	499.5	2205.1	2704.5	1.5168	5.6231	7.1399	1.0597	918.44	119
120	393.15	1.9854	503.7	2202.2	2706.0	1.5276	5.6017	7.1293	1.0606	891.52	120
121	394.15	2.0492	508.0	2199.4	2707.4	1.5384	5.5803	7.1187	1.0615	865.54	121
122	395.15	2.1145	512.2	2196.6	2708.8	1.5491	5.5590	7.1082	1.0625	840.45	122
123	396.15	2.1816	516.5	2193.7	2710.2	1.5599	5.5378	7.0977	1.0634	816.23	123
124	397.15	2.2504	520.7	2190.9	2711.6	1.5706	5.5167	7.0873	1.0643	792.83	124
125	398.15	2.3210	525.0	2188.0	2713.0	1.5813	5.4957	7.0769	1.0652	770.23	125
126	399.15	2.3933	529.2	2185.2	2714.4	1.5919	5.4747	7.0666	1.0662	748.40	126
127	400.15	2.4675	533.5	2182.3	2715.8	1.6026	5.4538	7.0564	1.0671	727.30	127
128	401.15	2.5435	537.8	2179.4	2717.2	1.6132	5.4330	7.0462	1.0681	706.91	128
129	402.15	2.6215	542.0	2176.5	2718.5	1.6238	5.4123	7.0361	1.0691	687.20	129
130	403.15	2.7013	546.3	2173.6	2719.9	1.6344	5.3917	7.0261	1.0700	668.14	130
131	404.15	2.7831	550.6	2170.7	2721.3	1.6449	5.3711	7.0161	1.0710	649.71	131
132	405.15	2.8670	554.8	2167.8	2722.6	1.6555	5.3507	7.0061	1.0720	631.88	132
133	406.15	2.9528	559.1	2164.8	2723.9	1.6660	5.3302	6.9962	1.0730	614.64	133
134	407.15	3.0407	563.4	2161.9	2725.3	1.6765	5.3099	6.9864	1.0740	597.95	134
135	408.15	3.1308	567.7	2158.9	2726.6	1.6869	5.2897	6.9766	1.0750	581.81	135
136	409.15	3.2229	572.0	2155.9	2727.9	1.6974	5.2695	6.9669	1.0760	566.18	136
137	410.15	3.3173	576.2	2153.0	2729.2	1.7078	5.2494	6.9572	1.0770	551.05	137
138	411.15	3.4138	580.5	2150.0	2730.5	1.7182	5.2293	6.9475	1.0780	536.41	138
139	412.15	3.5127	584.8	2147.0	2731.8	1.7286	5.2093	6.9380	1.0790	522.23	139
140	413.15	3.6138	589.1	2144.0	2733.1	1.7390	5.1894	6.9284	1.0801	508.49	140
141	414.15	3.7172	593.4	2140.9	2734.3	1.7493	5.1696	6.9190	1.0811	495.19	141
142	415.15	3.8231	597.7	2137.9	2735.6	1.7597	5.1499	6.9095	1.0821	482.30	142
143	416.15	3.9313	602.0	2134.9	2736.9	1.7700	5.1302	6.9001	1.0832	469.81	143
144	417.15	4.0420	606.3	2131.8	2738.1	1.7803	5.1105	6.8908	1.0843	457.71	144
145	418.15	4.1552	610.6	2128.7	2739.3	1.7906	5.0910	6.8815	1.0853	445.97	145
146	419.15	4.2709	614.9	2125.7	2740.6	1.8008	5.0715	6.8723	1.0864	434.60	146
147	420.15	4.3892	619.2	2122.6	2741.8	1.8110	5.0520	6.8631	1.0875	423.57	147
148	421.15	4.5101	623.5	2119.5	2743.0	1.8213	5.0327	6.8539	1.0886	412.88	148
149	422.15	4.6337	627.8	2116.3	2744.2	1.8315	5.0134	6.8448	1.0897	402.51	149
150	423.15	4.7600	632.1	2113.2	2745.4	1.8416	4.9941	6.8358	1.0908	392.45	150

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
150	423.15	4.7600	632.1	2113.2	2745.4	1.8416	4.9941	6.8358	1.0908	392.45	150
151	424.15	4.8890	636.5	2110.1	2746.5	1.8518	4.9750	6.8268	1.0919	382.69	151
152	425.15	5.0208	640.8	2106.9	2747.7	1.8619	4.9558	6.8178	1.0930	373.22	152
153	426.15	5.1554	645.1	2103.8	2748.9	1.8721	4.9368	6.8089	1.0941	364.02	153
154	427.15	5.2929	649.4	2100.6	2750.0	1.8822	4.9178	6.8000	1.0953	355.10	154
155	428.15	5.4333	653.8	2097.4	2751.2	1.8923	4.8989	6.7911	1.0964	346.44	155
156	429.15	5.5767	658.1	2094.2	2752.3	1.9023	4.8800	6.7823	1.0976	338.03	156
157	430.15	5.7230	662.4	2091.0	2753.4	1.9124	4.8611	6.7735	1.0987	329.87	157
158	431.15	5.8725	666.8	2087.7	2754.5	1.9224	4.8424	6.7648	1.0999	321.94	158
159	432.15	6.0250	671.1	2084.5	2755.6	1.9325	4.8237	6.7561	1.1011	314.24	159
160	433.15	6.1806	675.5	2081.3	2756.7	1.9425	4.8050	6.7475	1.1022	306.76	160
161	434.15	6.3395	679.8	2078.0	2757.8	1.9525	4.7864	6.7389	1.1034	299.49	161
162	435.15	6.5016	684.2	2074.7	2758.9	1.9624	4.7679	6.7303	1.1046	292.42	162
163	436.15	6.6669	688.5	2071.4	2759.9	1.9724	4.7494	6.7218	1.1058	285.56	163
164	437.15	6.8356	692.9	2068.1	2761.0	1.9823	4.7309	6.7133	1.1070	278.89	164
165	438.15	7.0077	697.3	2064.8	2762.0	1.9923	4.7126	6.7048	1.1082	272.40	165
166	439.15	7.1831	701.6	2061.4	2763.1	2.0022	4.6942	6.6964	1.1095	266.09	166
167	440.15	7.3621	706.0	2058.1	2764.1	2.0121	4.6759	6.6880	1.1107	259.96	167
168	441.15	7.5445	710.4	2054.7	2765.1	2.0219	4.6577	6.6796	1.1119	254.00	168
169	442.15	7.7306	714.7	2051.3	2766.1	2.0318	4.6395	6.6713	1.1132	248.20	169
170	443.15	7.9202	719.1	2047.9	2767.1	2.0416	4.6214	6.6630	1.1145	242.55	170
171	444.15	8.1135	723.5	2044.5	2768.0	2.0515	4.6033	6.6548	1.1157	237.06	171
172	445.15	8.3106	727.9	2041.1	2769.0	2.0613	4.5853	6.6465	1.1170	231.72	172
173	446.15	8.5114	732.3	2037.7	2769.9	2.0711	4.5673	6.6384	1.1183	226.52	173
174	447.15	8.7160	736.7	2034.2	2770.9	2.0809	4.5493	6.6302	1.1196	221.47	174
175	448.15	8.9244	741.1	2030.7	2771.8	2.0906	4.5314	6.6221	1.1209	216.54	175
176	449.15	9.1368	745.5	2027.3	2772.7	2.1004	4.5136	6.6140	1.1222	211.75	176
177	450.15	9.3532	749.9	2023.8	2773.6	2.1101	4.4958	6.6059	1.1235	207.08	177
178	451.15	9.5736	754.3	2020.2	2774.5	2.1199	4.4780	6.5979	1.1248	202.54	178
179	452.15	9.7980	758.7	2016.7	2775.4	2.1296	4.4603	6.5899	1.1262	198.11	179
180	453.15	10.027	763.1	2013.2	2776.3	2.1393	4.4426	6.5819	1.1275	193.80	180
181	454.15	10.259	767.5	2009.6	2777.1	2.1490	4.4250	6.5739	1.1289	189.60	181
182	455.15	10.496	772.0	2006.0	2778.0	2.1587	4.4074	6.5660	1.1302	185.51	182
183	456.15	10.738	776.4	2002.4	2778.8	2.1683	4.3898	6.5581	1.1316	181.53	183
184	457.15	10.983	780.8	1998.8	2779.6	2.1780	4.3723	6.5503	1.1330	177.64	184
185	458.15	11.233	785.3	1995.2	2780.4	2.1876	4.3548	6.5424	1.1344	173.86	185
186	459.15	11.488	789.7	1991.5	2781.2	2.1972	4.3374	6.5346	1.1358	170.17	186
187	460.15	11.747	794.2	1987.8	2782.0	2.2068	4.3200	6.5268	1.1372	166.57	187
188	461.15	12.010	798.6	1984.2	2782.8	2.2164	4.3026	6.5191	1.1386	163.07	188
189	462.15	12.278	803.1	1980.5	2783.5	2.2260	4.2853	6.5113	1.1401	159.65	189
190	463.15	12.551	807.5	1976.7	2784.3	2.2356	4.2680	6.5036	1.1415	156.32	190
191	464.15	12.829	812.0	1973.0	2785.0	2.2451	4.2508	6.4959	1.1430	153.07	191
192	465.15	13.111	816.5	1969.3	2785.7	2.2547	4.2336	6.4883	1.1444	149.90	192
193	466.15	13.398	820.9	1965.5	2786.4	2.2642	4.2164	6.4806	1.1459	146.80	193
194	467.15	13.690	825.4	1961.7	2787.1	2.2738	4.1993	6.4730	1.1474	143.79	194
195	468.15	13.987	829.9	1957.9	2787.8	2.2833	4.1821	6.4654	1.1489	140.84	195
196	469.15	14.289	834.4	1954.1	2788.4	2.2928	4.1651	6.4578	1.1504	137.97	196
197	470.15	14.596	838.9	1950.2	2789.1	2.3023	4.1480	6.4503	1.1519	135.17	197
198	471.15	14.909	843.4	1946.4	2789.7	2.3117	4.1310	6.4428	1.1534	132.44	198
199	472.15	15.226	847.9	1942.5	2790.3	2.3212	4.1140	6.4353	1.1549	129.77	199
200	473.15	15.549	852.4	1938.6	2790.9	2.3307	4.0971	6.4278	1.1565	127.16	200

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Table 1 Saturation Line—*continued*

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
200	473.15	15.549	852.4	1938.6	2790.9	2.3307	4.0971	6.4278	1.1565	127.16	200
201	474.15	15.877	856.9	1934.6	2791.5	2.3401	4.0802	6.4203	1.1581	124.62	201
202	475.15	16.210	861.4	1930.7	2792.1	2.3495	4.0633	6.4128	1.1596	122.13	202
203	476.15	16.549	865.9	1926.7	2792.7	2.3590	4.0465	6.4054	1.1612	119.71	203
204	477.15	16.893	870.5	1922.8	2793.2	2.3684	4.0296	6.3980	1.1628	117.34	204
205	478.15	17.243	875.0	1918.8	2793.8	2.3778	4.0128	6.3906	1.1644	115.03	205
206	479.15	17.598	879.5	1914.7	2794.3	2.3872	3.9961	6.3832	1.1660	112.77	206
207	480.15	17.959	884.1	1910.7	2794.8	2.3966	3.9793	6.3759	1.1676	110.56	207
208	481.15	18.326	888.6	1906.6	2795.3	2.4059	3.9626	6.3686	1.1693	108.40	208
209	482.15	18.699	893.2	1902.6	2795.7	2.4153	3.9459	6.3612	1.1709	106.30	209
210	483.15	19.077	897.7	1898.5	2796.2	2.4247	3.9293	6.3539	1.1726	104.24	210
211	484.15	19.462	902.3	1894.3	2796.6	2.4340	3.9126	6.3466	1.1743	102.23	211
212	485.15	19.852	906.9	1890.2	2797.1	2.4434	3.8960	6.3394	1.1760	100.26	212
213	486.15	20.249	911.5	1886.0	2797.5	2.4527	3.8794	6.3321	1.1777	98.340	213
214	487.15	20.651	916.0	1881.8	2797.9	2.4620	3.8629	6.3249	1.1794	96.461	214
215	488.15	21.060	920.6	1877.6	2798.3	2.4713	3.8463	6.3176	1.1811	94.625	215
216	489.15	21.475	925.2	1873.4	2798.6	2.4806	3.8298	6.3104	1.1829	92.830	216
217	490.15	21.896	929.8	1869.1	2799.0	2.4899	3.8133	6.3032	1.1846	91.075	217
218	491.15	22.324	934.4	1864.9	2799.3	2.4992	3.7968	6.2961	1.1864	89.358	218
219	492.15	22.758	939.1	1860.6	2799.6	2.5085	3.7804	6.2889	1.1882	87.680	219
220	493.15	23.198	943.7	1856.2	2799.9	2.5178	3.7639	6.2817	1.1900	86.038	220
221	494.15	23.645	948.3	1851.9	2800.2	2.5271	3.7475	6.2746	1.1918	84.432	221
222	495.15	24.099	952.9	1847.5	2800.5	2.5363	3.7311	6.2674	1.1936	82.861	222
223	496.15	24.560	957.6	1843.1	2800.7	2.5456	3.7147	6.2603	1.1954	81.324	223
224	497.15	25.027	962.2	1838.7	2800.9	2.5548	3.6984	6.2532	1.1973	79.820	224
225	498.15	25.501	966.9	1834.3	2801.2	2.5641	3.6820	6.2461	1.1992	78.349	225
226	499.15	25.982	971.5	1829.8	2801.4	2.5733	3.6657	6.2390	1.2010	76.909	226
227	500.15	26.470	976.2	1825.3	2801.5	2.5825	3.6494	6.2319	1.2029	75.500	227
228	501.15	26.965	980.9	1820.8	2801.7	2.5917	3.6331	6.2249	1.2048	74.121	228
229	502.15	27.467	985.6	1816.3	2801.8	2.6010	3.6168	6.2178	1.2068	72.771	229
230	503.15	27.976	990.3	1811.7	2802.0	2.6102	3.6006	6.2107	1.2087	71.450	230
231	504.15	28.493	995.0	1807.1	2802.1	2.6194	3.5843	6.2037	1.2107	70.156	231
232	505.15	29.016	999.7	1802.5	2802.2	2.6286	3.5681	6.1967	1.2127	68.890	232
233	506.15	29.547	1004.4	1797.9	2802.2	2.6378	3.5519	6.1896	1.2147	67.649	233
234	507.15	30.086	1009.1	1793.2	2802.3	2.6470	3.5356	6.1826	1.2167	66.435	234
235	508.15	30.632	1013.8	1788.5	2802.3	2.6561	3.5194	6.1756	1.2187	65.245	235
236	509.15	31.186	1018.6	1783.8	2802.3	2.6653	3.5033	6.1686	1.2207	64.081	236
237	510.15	31.747	1023.3	1779.0	2802.3	2.6745	3.4871	6.1616	1.2228	62.940	237
238	511.15	32.317	1028.1	1774.2	2802.3	2.6837	3.4709	6.1546	1.2249	61.822	238
239	512.15	32.893	1032.8	1769.4	2802.3	2.6928	3.4547	6.1476	1.2270	60.725	239
240	513.15	33.478	1037.6	1764.6	2802.2	2.7020	3.4386	6.1406	1.2291	59.654	240
241	514.15	34.071	1042.4	1759.7	2802.1	2.7112	3.4224	6.1336	1.2312	58.603	241
242	515.15	34.672	1047.2	1754.9	2802.0	2.7203	3.4063	6.1266	1.2334	57.574	242
243	516.15	35.281	1052.0	1749.9	2801.9	2.7295	3.3902	6.1196	1.2355	56.564	243
244	517.15	35.898	1056.8	1745.0	2801.8	2.7386	3.3740	6.1127	1.2377	55.575	244
245	518.15	36.523	1061.6	1740.0	2801.6	2.7478	3.3579	6.1057	1.2399	54.606	245
246	519.15	37.157	1066.4	1735.0	2801.4	2.7569	3.3418	6.0987	1.2422	53.655	246
247	520.15	37.799	1071.2	1730.0	2801.2	2.7661	3.3257	6.0917	1.2444	52.724	247
248	521.15	38.449	1076.1	1724.9	2801.0	2.7752	3.3096	6.0848	1.2467	51.811	248
249	522.15	39.108	1080.9	1719.8	2800.7	2.7843	3.2935	6.0778	1.2490	50.915	249
250	523.15	39.776	1085.8	1714.7	2800.4	2.7935	3.2773	6.0708	1.2513	50.037	250

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
250	523.15	39.776	1085.8	1714.7	2800.4	2.7935	3.2773	6.0708	1.2513	50.037	250
251	524.15	40.452	1090.7	1709.5	2800.1	2.8026	3.2612	6.0639	1.2536	49.177	251
252	525.15	41.137	1095.5	1704.3	2799.8	2.8118	3.2451	6.0569	1.2560	48.332	252
253	526.15	41.831	1100.4	1699.1	2799.5	2.8209	3.2290	6.0499	1.2584	47.504	253
254	527.15	42.534	1105.3	1693.8	2799.1	2.8300	3.2129	6.0429	1.2608	46.692	254
255	528.15	43.246	1110.2	1688.5	2798.7	2.8392	3.1968	6.0359	1.2632	45.896	255
256	529.15	43.967	1115.2	1683.2	2798.3	2.8483	3.1807	6.0290	1.2656	45.114	256
257	530.15	44.697	1120.1	1677.8	2797.9	2.8574	3.1645	6.0220	1.2681	44.348	257
258	531.15	45.437	1125.0	1672.4	2797.4	2.8666	3.1484	6.0150	1.2706	43.596	258
259	532.15	46.185	1130.0	1666.9	2796.9	2.8757	3.1323	6.0080	1.2731	42.858	259
260	533.15	46.943	1134.9	1661.5	2796.4	2.8848	3.1161	6.0010	1.2756	42.134	260
261	534.15	47.711	1139.9	1656.0	2795.9	2.8940	3.1000	5.9940	1.2782	41.423	261
262	535.15	48.488	1144.9	1650.4	2795.3	2.9031	3.0838	5.9869	1.2808	40.726	262
263	536.15	49.275	1149.9	1644.8	2794.7	2.9123	3.0676	5.9799	1.2834	40.041	263
264	537.15	50.071	1154.9	1639.2	2794.1	2.9214	3.0515	5.9729	1.2861	39.369	264
265	538.15	50.877	1159.9	1633.5	2793.5	2.9306	3.0353	5.9658	1.2887	38.710	265
266	539.15	51.693	1165.0	1627.8	2792.8	2.9397	3.0191	5.9588	1.2914	38.062	266
267	540.15	52.519	1170.0	1622.1	2792.1	2.9489	3.0028	5.9517	1.2942	37.427	267
268	541.15	53.355	1175.1	1616.3	2791.4	2.9580	2.9866	5.9446	1.2969	36.803	268
269	542.15	54.202	1180.1	1610.5	2790.6	2.9672	2.9704	5.9375	1.2997	36.190	269
270	543.15	55.058	1185.2	1604.6	2789.9	2.9763	2.9541	5.9304	1.3025	35.588	270
271	544.15	55.925	1190.3	1598.7	2789.1	2.9855	2.9378	5.9233	1.3053	34.997	271
272	545.15	56.802	1195.4	1592.8	2788.2	2.9947	2.9215	5.9162	1.3082	34.416	272
273	546.15	57.689	1200.6	1586.8	2787.4	3.0039	2.9052	5.9091	1.3111	33.846	273
274	547.15	58.587	1205.7	1580.8	2786.5	3.0131	2.8889	5.9019	1.3141	33.286	274
275	548.15	59.496	1210.9	1574.7	2785.5	3.0222	2.8725	5.8947	1.3170	32.736	275
276	549.15	60.415	1216.0	1568.5	2784.6	3.0314	2.8561	5.8876	1.3200	32.196	276
277	550.15	61.346	1221.2	1562.4	2783.6	3.0406	2.8397	5.8804	1.3231	31.664	277
278	551.15	62.287	1226.4	1556.2	2782.6	3.0499	2.8233	5.8731	1.3261	31.143	278
279	552.15	63.239	1231.6	1549.9	2781.5	3.0591	2.8068	5.8659	1.3292	30.630	279
280	553.15	64.202	1236.8	1543.6	2780.4	3.0683	2.7903	5.8586	1.3324	30.126	280
281	554.15	65.176	1242.1	1537.2	2779.3	3.0775	2.7738	5.8513	1.3356	29.631	281
282	555.15	66.162	1247.3	1530.8	2778.1	3.0868	2.7573	5.8440	1.3388	29.144	282
283	556.15	67.158	1252.6	1524.3	2777.0	3.0960	2.7407	5.8367	1.3420	28.666	283
284	557.15	68.167	1257.9	1517.8	2775.7	3.1053	2.7241	5.8294	1.3453	28.195	284
285	558.15	69.186	1263.2	1511.3	2774.5	3.1146	2.7074	5.8220	1.3487	27.733	285
286	559.15	70.218	1268.5	1504.6	2773.2	3.1238	2.6908	5.8146	1.3520	27.279	286
287	560.15	71.261	1273.9	1498.0	2771.8	3.1331	2.6741	5.8072	1.3554	26.832	287
288	561.15	72.315	1279.2	1491.2	2770.5	3.1424	2.6573	5.7997	1.3589	26.392	288
289	562.15	73.382	1284.6	1484.5	2769.1	3.1518	2.6405	5.7923	1.3624	59.960	289
290	563.15	74.461	1290.0	1477.6	2767.6	3.1611	2.6237	5.7848	1.3659	25.535	290
291	564.15	75.551	1295.4	1470.7	2766.2	3.1704	2.6068	5.7773	1.3695	25.117	291
292	565.15	76.654	1300.9	1463.8	2764.6	3.1798	2.5899	5.7697	1.3732	24.706	292
293	566.15	77.769	1306.3	1456.8	2763.1	3.1891	2.5730	5.7621	1.3769	24.302	293
294	567.15	78.897	1311.8	1449.7	2761.5	3.1985	2.5560	5.7545	1.3806	23.904	294
295	568.15	80.037	1317.3	1442.6	2759.8	3.2079	2.5389	5.7469	1.3844	23.513	295
296	569.15	81.189	1322.8	1435.4	2758.2	3.2173	2.5218	5.7392	1.3882	23.128	296
297	570.15	82.355	1328.3	1428.1	2756.4	3.2268	2.5047	5.7315	1.3921	22.749	297
298	571.15	83.532	1333.9	1420.8	2754.7	3.2362	2.4875	5.7237	1.3960	22.376	298
299	572.15	84.723	1339.5	1413.4	2752.9	3.2457	2.4702	5.7159	1.4000	22.010	299
300	573.15	85.927	1345.1	1406.0	2751.0	3.2552	2.4529	5.7081	1.4041	21.649	300

Table 1 Saturation Line—*continued*

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
300	573.15	85.927	1345.1	1406.0	2751.0	3.2552	2.4529	5.7081	1.4041	21.649	300
301	574.15	87.144	1350.7	1398.5	2749.1	3.2647	2.4356	5.7003	1.4082	21.293	301
302	575.15	88.374	1356.3	1390.9	2747.2	3.2742	2.4182	5.6924	1.4123	20.944	302
303	576.15	89.617	1362.0	1383.2	2745.2	3.2837	2.4007	5.6844	1.4166	20.600	303
304	577.15	90.873	1367.7	1375.5	2743.2	3.2933	2.3832	5.6765	1.4208	20.261	304
305	578.15	92.144	1373.4	1367.7	2741.1	3.3029	2.3656	5.6685	1.4252	19.927	305
306	579.15	93.427	1379.1	1359.8	2739.0	3.3125	2.3479	5.6604	1.4296	19.599	306
307	580.15	94.725	1384.9	1351.9	2736.8	3.3221	2.3302	5.6523	1.4341	19.275	307
308	581.15	96.036	1390.7	1343.9	2734.6	3.3318	2.3124	5.6442	1.4387	18.957	308
309	582.15	97.361	1396.5	1335.8	2732.3	3.3415	2.2945	5.6360	1.4433	18.643	309
310	583.15	98.700	1402.4	1327.6	2730.0	3.3512	2.2766	5.6278	1.4480	18.334	310
311	584.15	100.05	1408.3	1319.4	2727.6	3.3609	2.2585	5.6195	1.4527	18.029	311
312	585.15	101.42	1414.2	1311.0	2725.2	3.3707	2.2404	5.6111	1.4576	17.730	312
313	586.15	102.80	1420.1	1302.6	2722.7	3.3805	2.2223	5.6028	1.4625	17.434	313
314	587.15	104.20	1426.1	1294.1	2720.2	3.3903	2.2040	5.5943	1.4675	17.143	314
315	588.15	105.61	1432.1	1285.5	2717.6	3.4002	2.1856	5.5858	1.4726	16.856	315
316	589.15	107.04	1438.1	1276.8	2714.9	3.4101	2.1672	5.5772	1.4778	16.573	316
317	590.15	108.48	1444.2	1268.0	2712.2	3.4200	2.1486	5.5686	1.4831	16.294	317
318	591.15	109.93	1450.3	1259.1	2709.4	3.4300	2.1300	5.5599	1.4885	16.019	318
319	592.15	111.40	1456.4	1250.2	2706.6	3.4400	2.1112	5.5512	1.4939	15.747	319
320	593.15	112.89	1462.6	1241.1	2703.7	3.4500	2.0923	5.5423	1.4995	15.480	320
321	594.15	114.39	1468.8	1231.9	2700.7	3.4601	2.0733	5.5334	1.5052	15.216	321
322	595.15	115.91	1475.1	1222.6	2697.6	3.4702	2.0542	5.5244	1.5109	14.956	322
323	596.15	117.44	1481.3	1213.2	2694.5	3.4804	2.0350	5.5154	1.5168	14.699	323
324	597.15	118.99	1487.7	1203.6	2691.3	3.4906	2.0156	5.5062	1.5228	14.445	324
325	598.15	120.56	1494.0	1194.0	2688.0	3.5008	1.9961	5.4969	1.5289	14.195	325
326	599.15	122.14	1500.4	1184.2	2684.6	3.5111	1.9764	5.4876	1.5352	13.948	326
327	600.15	123.73	1506.9	1174.2	2681.1	3.5215	1.9566	5.4781	1.5416	13.704	327
328	601.15	125.35	1513.4	1164.2	2677.6	3.5319	1.9367	5.4685	1.5481	13.463	328
329	602.15	126.98	1519.9	1154.0	2673.9	3.5423	1.9165	5.4588	1.5547	13.225	329
330	603.15	128.63	1526.5	1143.6	2670.2	3.5528	1.8962	5.4490	1.5615	12.989	330
331	604.15	130.29	1533.2	1133.1	2666.3	3.5634	1.8757	5.4391	1.5684	12.757	331
332	605.15	131.97	1539.9	1122.5	2662.3	3.5740	1.8550	5.4290	1.5755	12.527	332
333	606.15	133.67	1546.6	1111.7	2658.3	3.5847	1.8340	5.4188	1.5827	12.300	333
334	607.15	135.38	1553.4	1100.7	2654.1	3.5955	1.8129	5.4084	1.5902	12.076	334
335	608.15	137.12	1560.3	1089.5	2649.7	3.6063	1.7916	5.3979	1.5978	11.854	335
336	609.15	138.87	1567.2	1078.1	2645.3	3.6172	1.7700	5.3872	1.6055	11.635	336
337	610.15	140.64	1574.1	1066.6	2640.7	3.6282	1.7482	5.3764	1.6135	11.418	337
338	611.15	142.42	1581.2	1054.8	2636.0	3.6392	1.7261	5.3653	1.6217	11.203	338
339	612.15	144.23	1588.3	1042.9	2631.2	3.6504	1.7037	5.3541	1.6301	10.991	339
340	613.15	146.05	1595.5	1030.7	2626.2	3.6616	1.6811	5.3427	1.6387	10.780	340
341	614.15	147.89	1602.7	1018.3	2621.0	3.6729	1.6582	5.3312	1.6476	10.573	341
342	615.15	149.76	1610.0	1005.7	2615.7	3.6844	1.6350	5.3194	1.6567	10.367	342
343	616.15	151.64	1617.5	992.8	2610.3	3.6959	1.6115	5.3074	1.6661	10.164	343
344	617.15	153.54	1624.9	979.7	2604.7	3.7075	1.5877	5.2952	1.6758	9.9622	344
345	618.15	155.45	1632.5	966.4	2598.9	3.7193	1.5636	5.2828	1.6858	9.7631	345
346	619.15	157.39	1640.2	952.8	2593.0	3.7311	1.5391	5.2702	1.6961	9.5660	346
347	620.15	159.35	1648.0	938.9	2586.9	3.7431	1.5143	5.2574	1.7067	9.3711	347
348	621.15	161.33	1655.8	924.8	2580.7	3.7553	1.4891	5.2444	1.7178	9.1783	348
349	622.15	163.33	1663.8	910.4	2574.2	3.7676	1.4635	5.2311	1.7292	8.9876	349
350	623.15	165.35	1671.9	895.7	2567.7	3.7800	1.4376	5.2177	1.7411	8.7991	350

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Temperature °C t_s	Temperature K T_s	Abs. Press. bar p_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Temp. °C t_s
350.0	623.15	165.35	1671.9	895.7	2567.7	3.7800	1.4376	5.2177	1.7411	8.7991	350.0
351.0	624.15	167.39	1680.4	880.4	2560.7	3.7933	1.4103	5.2036	1.7532	8.6094	351.0
352.0	625.15	169.45	1689.3	864.2	2553.5	3.8071	1.3822	5.1893	1.7661	8.4205	352.0
353.0	626.15	171.54	1698.4	847.7	2546.1	3.8209	1.3537	5.1746	1.7796	8.2324	353.0
354.0	627.15	173.64	1707.5	830.9	2538.4	3.8349	1.3247	5.1596	1.7937	8.0453	354.0
355.0	628.15	175.77	1716.6	813.8	2530.4	3.8489	1.2953	5.1442	1.8085	7.8592	355.0
356.0	629.15	177.92	1725.9	796.2	2522.1	3.8629	1.2654	5.1283	1.8241	7.6740	356.0
357.0	630.15	180.09	1735.2	778.3	2513.5	3.8772	1.2349	5.1121	1.8406	7.4897	357.0
358.0	631.15	182.29	1744.7	759.9	2504.6	3.8915	1.2037	5.0953	1.8580	7.3061	358.0
359.0	632.15	184.51	1754.3	740.9	2495.2	3.9061	1.1718	5.0780	1.8764	7.1229	359.0
360.0	633.15	186.75	1764.2	721.3	2485.4	3.9210	1.1390	5.0600	1.8959	6.9398	360.0
361.0	634.15	189.02	1774.2	701.0	2475.2	3.9362	1.1052	5.0414	1.9167	6.7566	361.0
362.0	635.15	191.31	1784.6	679.8	2464.4	3.9518	1.0702	5.0220	1.9388	6.5727	362.0
363.0	636.15	193.62	1795.3	657.8	2453.0	3.9679	1.0338	5.0017	1.9626	6.3877	363.0
364.0	637.15	195.96	1806.4	634.6	2440.9	3.9846	0.9958	4.9804	1.9882	6.2010	364.0
365.0	638.15	198.33	1818.0	610.0	2428.0	4.0021	0.9558	4.9579	2.0160	6.0116	365.0
365.5	638.65	199.52	1824.0	597.2	2421.2	4.0111	0.9349	4.9461	2.0309	5.9156	365.5
366.0	639.15	200.72	1830.2	583.9	2414.1	4.0205	0.9134	4.9339	2.0464	5.8186	366.0
366.5	639.65	201.92	1836.6	570.1	2406.7	4.0301	0.8911	4.9213	2.0628	5.7203	366.5
367.0	640.15	203.13	1843.2	555.7	2399.0	4.0401	0.8680	4.9081	2.0802	5.6206	367.0
367.5	640.65	204.35	1850.1	540.8	2390.9	4.0505	0.8440	4.8944	2.0985	5.5191	367.5
368.0	641.15	205.57	1857.3	525.1	2382.4	4.0613	0.8189	4.8801	2.1181	5.4157	368.0
368.5	641.65	206.81	1864.9	508.6	2373.4	4.0726	0.7925	4.8651	2.1391	5.3098	368.5
369.0	642.15	208.04	1872.8	491.1	2363.9	4.0846	0.7647	4.8492	2.1618	5.2011	369.0
369.5	642.65	209.29	1881.2	472.5	2353.7	4.0972	0.7351	4.8324	2.1865	5.0890	369.5
370.0	643.15	210.54	1890.2	452.6	2342.8	4.1108	0.7036	4.8144	2.2136	4.9728	370.0
370.2	643.35	211.04	1894.0	444.2	2338.1	4.1165	0.6903	4.8068	2.2252	4.9249	370.2
370.4	643.55	211.55	1897.9	435.5	2333.4	4.1224	0.6766	4.7990	2.2374	4.8761	370.4
370.6	643.75	212.05	1901.9	426.5	2328.4	4.1285	0.6624	4.7909	2.2502	4.8263	370.6
370.8	643.95	212.56	1906.1	417.1	2323.3	4.1349	0.6477	4.7825	2.2636	4.7754	370.8
371.0	644.15	213.06	1910.5	407.4	2317.9	4.1414	0.6324	4.7738	2.2778	4.7233	371.0
371.2	644.35	213.57	1915.0	397.3	2312.3	4.1483	0.6165	4.7648	2.2928	4.6699	371.2
371.4	644.55	214.08	1919.8	386.7	2306.4	4.1555	0.5998	4.7553	2.3087	4.6150	371.4
371.6	644.75	214.59	1924.8	375.5	2300.3	4.1630	0.5824	4.7454	2.3257	4.5583	371.6
371.8	644.95	215.10	1930.0	363.8	2293.8	4.1710	0.5640	4.7350	2.3439	4.4997	371.8
372.0	645.15	215.62	1935.6	351.4	2287.0	4.1794	0.5446	4.7240	2.3636	4.4389	372.0
372.2	645.35	216.13	1941.5	338.2	2279.6	4.1884	0.5240	4.7124	2.3849	4.3755	372.2
372.4	645.55	216.65	1947.8	324.0	2271.8	4.1980	0.5019	4.6999	2.4083	4.3090	372.4
372.6	645.75	217.16	1954.7	308.7	2263.4	4.2085	0.4780	4.6865	2.4342	4.2389	372.6
372.8	645.95	217.68	1962.2	292.0	2254.2	4.2199	0.4520	4.6719	2.4632	4.1642	372.8
373.0	646.15	218.20	1970.5	273.5	2244.0	4.2326	0.4233	4.6559	2.4963	4.0840	373.0
373.1	646.25	218.46	1975.0	263.5	2238.5	4.2395	0.4077	4.6472	2.5147	4.0412	373.1
373.2	646.35	218.72	1979.9	252.8	2232.7	4.2469	0.3911	4.6379	2.5348	3.9964	373.2
373.3	646.45	218.98	1985.1	241.3	2226.4	4.2548	0.3732	4.6281	2.5567	3.9491	373.3
373.4	646.55	219.24	1990.8	228.8	2219.6	4.2635	0.3539	4.6174	2.5809	3.8989	373.4
373.5	646.65	219.50	1997.0	215.2	2212.2	4.2730	0.3328	4.6058	2.6079	3.8451	373.5
373.6	646.75	219.76	2003.9	200.1	2204.0	4.2836	0.3094	4.5930	2.6387	3.7868	373.6
373.7	646.85	220.02	2011.8	183.1	2194.9	4.2956	0.2831	4.5787	2.6743	3.7227	373.7
373.8	646.95	220.28	2020.9	163.5	2184.4	4.3097	0.2527	4.5623	2.7169	3.6508	373.8
373.9	647.05	220.54	2032.0	139.8	2171.9	4.3268	0.2161	4.5429	2.7701	3.5674	373.9
374.0	647.15	220.81	2046.7	109.5	2156.2	4.3493	0.1692	4.5185	2.8427	3.4659	374.0
374.1	647.25	221.07	2071.1	64.9	2135.9	4.3868	0.1002	4.4871	2.9690	3.3392	374.1
374.15	647.30	221.20	2107.4	0	2107.4	4.4429	0	4.4429	3.17	3.17	374.15

Table 2 Saturation Line; Pressure Range 0.00611 bar to 221.2 bar

Abs. Press. bar	*Temperature* °C	K	*Specific Enthalpy* kJ/kg			*Specific Entropy* kJ/kg K			*Specific Volume* dm³/kg		*Abs. Press.* bar
p_s	t_s	T_s	h_f	h_{fg}	h_g	s_f	s_{fg}	s_g	v_f	v_g	p_s
0.00611	0.01	273.16	0.0	2501.6	2501.6	0	9.1575	9.1575	1.0002	206162.9	0.00611
0.007	1.89	275.04	7.9	2497.1	2505.0	0.0289	9.0785	9.1075	1.0001	181240.0	0.007
0.008	3.77	276.92	15.9	2492.6	2508.5	0.0576	9.0008	9.0584	1.0000	159668.5	0.008
0.009	5.46	278.61	22.9	2488.6	2511.6	0.0831	8.9321	9.0152	1.0000	142788.4	0.009
0.010	6.98	280.13	29.3	2485.0	2514.4	0.1060	8.8706	8.9767	1.0001	129210.7	0.010
0.012	9.67	282.82	40.6	2478.7	2519.3	0.1461	8.7640	8.9101	1.0002	108702.1	0.012
0.014	11.98	285.13	50.3	2473.2	2523.5	0.1803	8.6737	8.8539	1.0004	93930.4	0.014
0.016	14.03	287.18	58.9	2468.4	2527.3	0.2101	8.5953	8.8054	1.0007	82771.9	0.016
0.018	15.85	289.00	66.5	2464.1	2530.6	0.2367	8.5260	8.7627	1.0010	74038.1	0.018
0.020	17.51	290.66	73.5	2460.2	2533.6	0.2606	8.4640	8.7246	1.0012	67011.6	0.020
0.022	19.03	292.18	79.8	2456.6	2536.4	0.2824	8.4077	8.6902	1.0015	61233.3	0.022
0.024	20.43	293.58	85.7	2453.3	2539.0	0.3025	8.3563	8.6588	1.0018	56395.7	0.024
0.026	21.74	294.89	91.1	2450.2	2541.3	0.3210	8.3090	8.6299	1.0021	52284.8	0.026
0.028	22.95	296.10	96.2	2447.4	2543.6	0.3382	8.2651	8.6033	1.0024	48747.2	0.028
0.030	24.10	297.25	101.0	2444.6	2545.6	0.3543	8.2242	8.5785	1.0027	45670.0	0.030
0.032	25.18	298.33	105.5	2442.1	2547.6	0.3695	8.1858	8.5553	1.0029	42968.1	0.032
0.034	26.20	299.35	109.8	2439.7	2549.5	0.3838	8.1498	8.5336	1.0032	40576.4	0.034
0.036	27.17	300.32	113.8	2437.4	2551.2	0.3973	8.1158	8.5132	1.0035	38443.8	0.036
0.038	28.10	301.25	117.7	2435.2	2552.9	0.4102	8.0836	8.4938	1.0037	36530.3	0.038
0.040	28.98	302.13	121.4	2433.1	2554.5	0.4225	8.0530	8.4755	1.0040	34803.3	0.040
0.042	29.83	302.98	124.9	2431.1	2556.0	0.4341	8.0239	8.4581	1.0043	33236.6	0.042
0.044	30.64	303.79	128.3	2429.2	2557.5	0.4453	7.9962	8.4415	1.0045	31808.9	0.044
0.046	31.42	304.57	131.6	2427.3	2558.9	0.4561	7.9696	8.4256	1.0048	30502.1	0.046
0.048	32.17	305.32	134.7	2425.5	2560.3	0.4663	7.9441	8.4105	1.0050	29301.5	0.048
0.050	32.90	306.05	137.8	2423.8	2561.6	0.4763	7.9197	8.3960	1.0052	28194.5	0.050
0.052	33.60	306.75	140.7	2422.2	2562.9	0.4858	7.8962	8.3820	1.0055	27170.4	0.052
0.054	34.27	307.42	143.5	2420.5	2564.1	0.4950	7.8736	8.3686	1.0057	26220.3	0.054
0.056	34.93	308.08	146.3	2419.0	2565.3	0.5039	7.8518	8.3557	1.0059	25336.3	0.056
0.058	35.57	308.72	148.9	2417.5	2566.4	0.5125	7.8307	8.3433	1.0062	24511.7	0.058
0.060	36.18	309.33	151.5	2416.0	2567.5	0.5209	7.8103	8.3312	1.0064	23740.6	0.060
0.062	36.78	309.93	154.0	2414.6	2568.6	0.5290	7.7906	8.3196	1.0066	23018.0	0.062
0.064	37.37	310.52	156.4	2413.2	2569.6	0.5368	7.7715	8.3084	1.0068	22339.4	0.064
0.066	37.93	311.08	158.8	2411.8	2570.7	0.5445	7.7530	8.2975	1.0070	21700.8	0.066
0.068	38.49	311.64	161.1	2410.5	2571.7	0.5519	7.7350	8.2869	1.0072	21098.9	0.068
0.070	39.03	312.18	163.4	2409.2	2572.6	0.5591	7.7176	8.2767	1.0074	20530.4	0.070
0.072	39.55	312.70	165.6	2408.0	2573.6	0.5661	7.7006	8.2667	1.0076	19992.6	0.072
0.074	40.06	313.21	167.7	2406.8	2574.5	0.5730	7.6841	8.2570	1.0078	19483.2	0.074
0.076	40.57	313.72	169.8	2405.6	2575.4	0.5797	7.6680	8.2476	1.0080	18999.8	0.076
0.078	41.06	314.21	171.9	2404.4	2576.3	0.5862	7.6523	8.2385	1.0082	18540.6	0.078
0.080	41.54	314.69	173.9	2403.2	2577.1	0.5926	7.6370	8.2295	1.0084	18103.8	0.080
0.082	42.00	315.15	175.8	2402.1	2578.0	0.5988	7.6221	8.2208	1.0086	17687.7	0.082
0.084	42.46	315.61	177.8	2401.0	2578.8	0.6049	7.6075	8.2124	1.0088	17290.8	0.084
0.086	42.91	316.06	179.6	2399.9	2579.6	0.6108	7.5932	8.2041	1.0090	16912.0	0.086
0.088	43.36	316.51	181.5	2398.9	2580.4	0.6167	7.5793	8.1960	1.0092	16549.8	0.088
0.090	43.79	316.94	183.3	2397.9	2581.1	0.6224	7.5657	8.1881	1.0094	16203.4	0.090
0.092	44.21	317.36	185.1	2396.8	2581.9	0.6280	7.5524	8.1803	1.0095	15871.6	0.092
0.094	44.63	317.78	186.8	2395.8	2582.6	0.6334	7.5393	8.1728	1.0097	15553.5	0.094
0.096	45.04	318.19	188.5	2394.9	2583.4	0.6388	7.5266	8.1654	1.0099	15248.4	0.096
0.098	45.44	318.59	190.2	2393.9	2584.1	0.6441	7.5141	8.1582	1.0101	14955.3	0.098
0.100	45.83	318.98	191.8	2392.9	2584.8	0.6493	7.5018	8.1511	1.0102	14673.7	0.100
0.105	46.79	319.94	195.8	2390.6	2586.5	0.6618	7.4721	8.1339	1.0107	14015.3	0.105
0.110	47.71	320.86	199.7	2388.4	2588.1	0.6738	7.4438	8.1176	1.0111	13415.2	0.110

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Abs. Press. bar p_s	Temperature °C t_s	Temperature K T_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Abs. Press. bar p_s
0.110	47.71	320.86	199.7	2388.4	2588.1	0.6738	7.4438	8.1176	1.0111	13415.2	0.110
0.115	48.60	321.75	203.4	2386.3	2589.7	0.6853	7.4168	8.1021	1.0115	12865.8	0.115
0.120	49.45	322.60	206.9	2384.2	2591.2	0.6964	7.3908	8.0872	1.0119	12361.0	0.120
0.125	50.27	323.42	210.4	2382.3	2592.6	0.7070	7.3659	8.0729	1.0122	11895.5	0.125
0.130	51.06	324.21	213.7	2380.3	2594.0	0.7172	7.3420	8.0592	1.0126	11464.9	0.130
0.135	51.83	324.98	216.9	2378.5	2595.4	0.7271	7.3189	8.0460	1.0130	11065.3	0.135
0.140	52.58	325.73	220.0	2376.7	2596.7	0.7367	7.2966	8.0333	1.0133	10693.4	0.140
0.145	53.30	326.45	223.0	2374.9	2598.0	0.7460	7.2751	8.0211	1.0137	10346.5	0.145
0.150	54.00	327.15	226.0	2373.2	2599.2	0.7549	7.2544	8.0093	1.0140	10022.1	0.150
0.155	54.68	327.83	228.8	2371.6	2600.4	0.7636	7.2343	7.9979	1.0144	9718.0	0.155
0.160	55.34	328.49	231.6	2370.0	2601.6	0.7721	7.2148	7.9868	1.0147	9432.4	0.160
0.165	55.99	329.14	234.3	2368.4	2602.7	0.7803	7.1959	7.9761	1.0150	9163.7	0.165
0.170	56.62	329.77	236.9	2366.9	2603.8	0.7883	7.1775	7.9658	1.0154	8910.3	0.170
0.175	57.23	330.38	239.5	2365.4	2604.9	0.7960	7.1597	7.9557	1.0157	8671.0	0.175
0.180	57.83	330.98	242.0	2363.9	2605.9	0.8036	7.1423	7.9459	1.0160	8444.6	0.180
0.185	58.41	331.56	244.4	2362.5	2606.9	0.8110	7.1254	7.9364	1.0163	8230.1	0.185
0.190	58.98	332.13	246.8	2361.1	2607.9	0.8182	7.1090	7.9272	1.0166	8026.6	0.190
0.195	59.54	332.69	249.2	2359.7	2608.9	0.8252	7.0929	7.9182	1.0169	7833.2	0.195
0.200	60.09	333.24	251.5	2358.4	2609.9	0.8321	7.0773	7.9094	1.0172	7649.2	0.200
0.210	61.15	334.30	255.9	2355.8	2611.7	0.8454	7.0471	7.8925	1.0178	7306.8	0.210
0.220	62.16	335.31	260.1	2353.3	2613.5	0.8581	7.0183	7.8764	1.0183	6994.6	0.220
0.230	63.14	336.29	264.2	2350.9	2615.2	0.8703	6.9908	7.8611	1.0189	6708.9	0.230
0.240	64.08	337.23	268.2	2348.6	2616.8	0.8820	6.9644	7.8464	1.0194	6446.2	0.240
0.250	64.99	338.14	272.0	2346.4	2618.3	0.8933	6.9390	7.8323	1.0199	6204.0	0.250
0.260	65.87	339.02	275.7	2344.2	2619.9	0.9041	6.9146	7.8188	1.0204	5979.9	0.260
0.270	66.72	339.87	279.2	2342.1	2621.3	0.9146	6.8911	7.8058	1.0209	5772.0	0.270
0.280	67.55	340.70	282.7	2340.0	2622.7	0.9248	6.8685	7.7932	1.0214	5578.4	0.280
0.290	68.35	341.50	286.1	2338.1	2624.1	0.9346	6.8466	7.7812	1.0219	5397.9	0.290
0.300	69.13	342.28	289.3	2336.1	2625.4	0.9441	6.8254	7.7695	1.0223	5229.0	0.300
0.310	69.88	343.03	292.5	2334.2	2626.7	0.9534	6.8049	7.7582	1.0228	5070.7	0.310
0.320	70.62	343.77	295.6	2332.4	2628.0	0.9623	6.7850	7.7473	1.0232	4922.0	0.320
0.330	71.33	344.48	298.6	2330.6	2629.2	0.9711	6.7657	7.7368	1.0237	4782.0	0.330
0.340	72.03	345.18	301.5	2328.9	2630.4	0.9795	6.7470	7.7265	1.0241	4650.1	0.340
0.350	72.71	345.86	304.3	2327.2	2631.5	0.9878	6.7288	7.7166	1.0245	4525.5	0.350
0.360	73.38	346.53	307.1	2325.5	2632.7	0.9958	6.7111	7.7069	1.0249	4407.6	0.360
0.370	74.02	347.17	309.8	2323.9	2633.7	1.0037	6.6939	7.6976	1.0253	4295.8	0.370
0.380	74.66	347.81	312.5	2322.3	2634.8	1.0113	6.6771	7.6884	1.0257	4189.8	0.380
0.390	75.28	348.43	315.1	2320.8	2635.9	1.0188	6.6607	7.6795	1.0261	4089.1	0.390
0.400	75.89	349.04	317.7	2319.2	2636.9	1.0261	6.6448	7.6709	1.0265	3993.2	0.400
0.410	76.48	349.63	320.2	2317.7	2637.9	1.0332	6.6292	7.6624	1.0269	3901.9	0.410
0.420	77.06	350.21	322.6	2316.3	2638.9	1.0402	6.6140	7.6542	1.0273	3814.8	0.420
0.430	77.64	350.79	325.0	2314.8	2639.8	1.0471	6.5991	7.6462	1.0276	3731.7	0.430
0.440	78.19	351.34	327.3	2313.4	2640.7	1.0538	6.5846	7.6383	1.0280	3652.2	0.440
0.450	78.74	351.89	329.6	2312.0	2641.7	1.0603	6.5703	7.6306	1.0284	3576.1	0.450
0.460	79.28	352.43	331.9	2310.7	2642.6	1.0667	6.5564	7.6231	1.0287	3503.2	0.460
0.470	79.81	352.96	334.1	2309.3	2643.4	1.0730	6.5428	7.6158	1.0291	3433.4	0.470
0.480	80.33	353.48	336.3	2308.0	2644.3	1.0792	6.5294	7.6086	1.0294	3366.3	0.480
0.490	80.84	353.99	338.5	2306.7	2645.2	1.0853	6.5163	7.6016	1.0298	3302.0	0.490
0.500	81.35	354.50	340.6	2305.4	2646.0	1.0912	6.5035	7.5947	1.0301	3240.1	0.500
0.520	82.33	355.48	344.7	2302.9	2647.6	1.1028	6.4785	7.5814	1.0308	3123.3	0.520
0.540	83.28	356.43	348.7	2300.5	2649.2	1.1140	6.4545	7.5685	1.0314	3014.8	0.540
0.560	84.19	357.34	352.5	2298.2	2650.7	1.1248	6.4313	7.5561	1.0320	2913.9	0.560
0.580	85.09	358.24	356.3	2295.9	2652.1	1.1353	6.4089	7.5442	1.0327	2819.7	0.580
0.600	85.95	359.10	359.9	2293.6	2653.6	1.1455	6.3872	7.5327	1.0333	2731.7	0.600

Table 2 Saturation Line—*continued*

Abs. Press. bar p_s	*Temperature* °C t_s	K T_s	*Specific Enthalpy* kJ/kg h_f	h_{fg}	h_g	*Specific Entropy* kJ/kg K s_f	s_{fg}	s_g	*Specific Volume* dm³/kg v_f	v_g	*Abs. Press.* bar p_s
0.60	85.95	359.10	359.9	2293.6	2653.6	1.1455	6.3872	7.5327	1.0333	2731.7	0.60
0.62	86.80	359.95	363.5	2291.5	2654.9	1.1553	6.3662	7.5216	1.0339	2649.1	0.62
0.64	87.62	360.77	366.9	2289.4	2656.3	1.1649	6.3459	7.5108	1.0344	2571.5	0.64
0.66	88.42	361.57	370.3	2287.3	2657.6	1.1742	6.3261	7.5003	1.0350	2498.5	0.66
0.68	89.20	362.35	373.6	2285.3	2658.8	1.1832	6.3070	7.4902	1.0356	2429.7	0.68
0.70	89.96	363.11	376.8	2283.3	2660.1	1.1921	6.2883	7.4804	1.0361	2364.7	0.70
0.72	90.70	363.85	379.9	2281.4	2661.3	1.2007	6.2702	7.4708	1.0367	2303.1	0.72
0.74	91.43	364.58	383.0	2279.5	2662.4	1.2090	6.2525	7.4616	1.0372	2244.8	0.74
0.76	92.14	365.29	385.9	2277.6	2663.6	1.2172	6.2353	7.4525	1.0377	2189.5	0.76
0.78	92.83	365.98	388.9	2275.8	2664.7	1.2252	6.2185	7.4437	1.0382	2136.9	0.78
0.80	93.51	366.66	391.7	2274.0	2665.8	1.2330	6.2022	7.4352	1.0387	2086.9	0.80
0.82	94.18	367.33	394.5	2272.3	2666.8	1.2407	6.1862	7.4268	1.0392	2039.2	0.82
0.84	94.83	367.98	397.3	2270.6	2667.9	1.2481	6.1706	7.4187	1.0397	1993.8	0.84
0.86	95.47	368.62	400.0	2268.9	2668.9	1.2554	6.1553	7.4107	1.0402	1950.4	0.86
0.88	96.10	369.25	402.6	2267.3	2669.9	1.2626	6.1404	7.4030	1.0407	1908.9	0.88
0.90	96.71	369.86	405.2	2265.6	2670.9	1.2696	6.1258	7.3954	1.0412	1869.1	0.90
0.92	97.32	370.47	407.8	2264.0	2671.8	1.2765	6.1115	7.3879	1.0416	1831.1	0.92
0.94	97.91	371.06	410.3	2262.5	2672.7	1.2832	6.0975	7.3807	1.0421	1794.6	0.94
0.96	98.50	371.65	412.7	2260.9	2673.7	1.2898	6.0837	7.3736	1.0425	1759.6	0.96
0.98	99.07	372.22	415.1	2259.4	2674.6	1.2963	6.0703	7.3666	1.0430	1726.0	0.98
1.00	99.63	372.78	417.5	2257.9	2675.4	1.3027	6.0571	7.3598	1.0434	1693.7	1.00
1.01325	100.00	373.15	419.1	2256.9	2676.0	1.3069	6.0485	7.3554	1.0437	1673.0	1.01325
1.05	101.00	374.15	423.3	2254.3	2677.6	1.3182	6.0252	7.3434	1.0445	1618.1	1.05
1.10	102.32	375.47	428.8	2250.8	2679.6	1.3330	5.9947	7.3277	1.0455	1549.2	1.10
1.15	103.59	376.74	434.2	2247.4	2681.6	1.3472	5.9655	7.3127	1.0466	1486.1	1.15
1.20	104.81	377.96	439.4	2244.1	2683.4	1.3609	5.9375	7.2984	1.0476	1428.1	1.20
1.25	105.99	379.14	444.4	2240.9	2685.2	1.3741	5.9106	7.2846	1.0485	1374.6	1.25
1.30	107.13	380.28	449.2	2237.8	2687.0	1.3868	5.8847	7.2715	1.0495	1325.0	1.30
1.35	108.24	381.39	453.9	2234.8	2688.7	1.3991	5.8597	7.2588	1.0504	1279.1	1.35
1.40	109.32	382.47	458.4	2231.9	2690.3	1.4109	5.8356	7.2465	1.0513	1236.3	1.40
1.45	110.36	383.51	462.8	2229.0	2691.8	1.4225	5.8123	7.2347	1.0522	1196.3	1.45
1.50	111.37	384.52	467.1	2226.2	2693.4	1.4336	5.7897	7.2234	1.0530	1159.0	1.50
1.55	112.36	385.51	471.3	2223.5	2694.8	1.4445	5.7679	7.2123	1.0539	1124.0	1.55
1.60	113.32	386.47	475.4	2220.9	2696.2	1.4550	5.7467	7.2017	1.0547	1091.1	1.60
1.65	114.26	387.41	479.4	2218.3	2697.6	1.4652	5.7261	7.1913	1.0555	1060.1	1.65
1.70	115.17	388.32	483.2	2215.7	2699.0	1.4752	5.7061	7.1813	1.0563	1030.9	1.70
1.75	116.06	389.21	487.0	2213.3	2700.3	1.4849	5.6867	7.1716	1.0571	1003.3	1.75
1.80	116.93	390.08	490.7	2210.8	2701.5	1.4944	5.6677	7.1622	1.0579	977.18	1.80
1.85	117.79	390.94	494.3	2208.5	2702.8	1.5036	5.6493	7.1530	1.0586	952.44	1.85
1.90	118.62	391.77	497.9	2206.1	2704.0	1.5127	5.6313	7.1440	1.0594	928.95	1.90
1.95	119.43	392.58	501.3	2203.8	2705.1	1.5215	5.6138	7.1353	1.0601	906.64	1.95
2.00	120.23	393.38	504.7	2201.6	2706.3	1.5301	5.5967	7.1268	1.0608	885.40	2.00
2.10	121.78	394.93	511.3	2197.2	2708.5	1.5468	5.5637	7.1105	1.0623	845.86	2.10
2.20	123.27	396.42	517.6	2193.0	2710.6	1.5628	5.5321	7.0949	1.0636	809.80	2.20
2.30	124.71	397.86	523.7	2188.9	2712.6	1.5781	5.5018	7.0800	1.0650	776.77	2.30
2.40	126.09	399.24	529.6	2184.9	2714.5	1.5929	5.4728	7.0657	1.0663	746.41	2.40
2.50	127.43	400.58	535.4	2181.0	2716.4	1.6072	5.4448	7.0520	1.0676	718.40	2.50
2.60	128.73	401.88	540.9	2177.3	2718.2	1.6209	5.4179	7.0389	1.0688	692.47	2.60
2.70	129.99	403.14	546.2	2173.6	2719.9	1.6342	5.3920	7.0262	1.0700	668.40	2.70
2.80	131.21	404.36	551.5	2170.1	2721.5	1.6471	5.3669	7.0140	1.0712	646.00	2.80
2.90	132.39	405.54	556.5	2166.6	2723.1	1.6596	5.3427	7.0022	1.0724	625.09	2.90
3.00	133.54	406.69	561.4	2163.2	2724.7	1.6717	5.3192	6.9909	1.0735	605.53	3.00

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Abs. Press. bar p_s	Temperature °C t_s	Temperature K T_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Abs. Press. bar p_s
3.0	133.54	406.69	561.4	2163.2	2724.7	1.6717	5.3192	6.9909	1.0735	605.53	3.0
3.1	134.66	407.81	566.2	2159.9	2726.1	1.6834	5.2965	6.9799	1.0746	587.18	3.1
3.2	135.76	408.91	570.9	2156.7	2727.6	1.6948	5.2744	6.9692	1.0757	569.95	3.2
3.3	136.82	409.97	575.5	2153.5	2729.0	1.7060	5.2530	6.9589	1.0768	553.73	3.3
3.4	137.86	411.01	579.9	2150.4	2730.3	1.7168	5.2321	6.9489	1.0779	538.43	3.4
3.5	138.88	412.03	584.3	2147.3	2731.6	1.7273	5.2118	6.9392	1.0789	523.97	3.5
3.6	139.87	413.02	588.5	2144.4	2732.9	1.7376	5.1921	6.9297	1.0799	510.29	3.6
3.7	140.84	413.99	592.7	2141.4	2734.1	1.7477	5.1728	6.9205	1.0809	497.33	3.7
3.8	141.79	414.94	596.8	2138.6	2735.3	1.7575	5.1541	6.9115	1.0819	485.02	3.8
3.9	142.72	415.87	600.8	2135.7	2736.5	1.7671	5.1358	6.9028	1.0829	473.33	3.9
4.0	143.63	416.78	604.7	2132.9	2737.6	1.7764	5.1179	6.8943	1.0839	462.20	4.0
4.1	144.52	417.67	608.5	2130.2	2738.7	1.7856	5.1004	6.8860	1.0848	451.59	4.1
4.2	145.39	418.54	612.3	2127.5	2739.8	1.7946	5.0833	6.8779	1.0858	441.47	4.2
4.3	146.25	419.40	616.0	2124.9	2740.9	1.8034	5.0666	6.8700	1.0867	431.81	4.3
4.4	147.09	420.24	619.6	2122.3	2741.9	1.8120	5.0503	6.8622	1.0876	422.57	4.4
4.5	147.92	421.07	623.2	2119.7	2742.9	1.8204	5.0342	6.8547	1.0885	413.73	4.5
4.6	148.73	421.88	626.7	2117.2	2743.9	1.8287	5.0186	6.8473	1.0894	405.26	4.6
4.7	149.53	422.68	630.1	2114.7	2744.8	1.8369	5.0032	6.8400	1.0903	397.14	4.7
4.8	150.31	423.46	633.5	2112.2	2745.7	1.8448	4.9881	6.8329	1.0911	389.34	4.8
4.9	151.09	424.24	636.8	2109.8	2746.6	1.8527	4.9733	6.8260	1.0920	381.86	4.9
5.0	151.85	425.00	640.1	2107.4	2747.5	1.8604	4.9588	6.8192	1.0928	374.66	5.0
5.1	152.59	425.74	643.4	2105.1	2748.4	1.8680	4.9445	6.8125	1.0937	367.73	5.1
5.2	153.33	426.48	646.5	2102.7	2749.3	1.8754	4.9305	6.8059	1.0945	361.06	5.2
5.3	154.05	427.20	649.7	2100.4	2750.1	1.8827	4.9168	6.7995	1.0953	354.64	5.3
5.4	154.77	427.92	652.8	2098.1	2750.9	1.8899	4.9033	6.7932	1.0961	348.44	5.4
5.5	155.47	428.62	655.8	2095.9	2751.7	1.8970	4.8900	6.7870	1.0970	342.46	5.5
5.6	156.16	429.31	658.8	2093.7	2752.5	1.9040	4.8769	6.7809	1.0977	336.69	5.6
5.7	156.85	430.00	661.8	2091.5	2753.3	1.9108	4.8641	6.7749	1.0985	331.12	5.7
5.8	157.52	430.67	664.7	2089.3	2754.0	1.9176	4.8514	6.7690	1.0993	325.72	5.8
5.9	158.18	431.33	667.6	2087.2	2754.7	1.9243	4.8389	6.7632	1.1001	320.51	5.9
6.0	158.84	431.99	670.4	2085.0	2755.5	1.9308	4.8267	6.7575	1.1009	315.46	6.0
6.1	159.49	432.64	673.2	2082.9	2756.2	1.9373	4.8146	6.7519	1.1016	310.58	6.1
6.2	160.12	433.27	676.0	2080.8	2756.9	1.9437	4.8027	6.7464	1.1024	305.84	6.2
6.3	160.75	433.90	678.8	2078.8	2757.5	1.9500	4.7910	6.7410	1.1031	301.25	6.3
6.4	161.38	434.53	681.5	2076.7	2758.2	1.9562	4.7794	6.7356	1.1039	296.80	6.4
6.5	161.99	435.14	684.1	2074.7	2758.9	1.9623	4.7680	6.7304	1.1046	292.48	6.5
6.6	162.60	435.75	686.8	2072.7	2759.5	1.9684	4.7568	6.7252	1.1053	288.29	6.6
6.7	163.20	436.35	689.4	2070.7	2760.1	1.9744	4.7457	6.7201	1.1061	284.22	6.7
6.8	163.79	436.94	692.0	2068.8	2760.8	1.9803	4.7348	6.7150	1.1068	280.26	6.8
6.9	164.38	437.53	694.5	2066.8	2761.4	1.9861	4.7240	6.7101	1.1075	276.42	6.9
7.0	164.96	438.11	697.1	2064.9	2762.0	1.9918	4.7134	6.7052	1.1082	272.68	7.0
7.2	166.10	439.25	702.0	2061.1	2763.2	2.0031	4.6925	6.6956	1.1096	265.50	7.2
7.4	167.21	440.36	706.9	2057.4	2764.3	2.0141	4.6721	6.6862	1.1110	258.70	7.4
7.6	168.30	441.45	711.7	2053.7	2765.4	2.0249	4.6522	6.6771	1.1123	252.24	7.6
7.8	169.37	442.52	716.3	2050.1	2766.4	2.0354	4.6328	6.6683	1.1137	246.10	7.8
8.0	170.41	443.56	720.9	2046.5	2767.5	2.0457	4.6139	6.6596	1.1150	240.26	8.0
8.2	171.44	444.59	725.4	2043.0	2768.5	2.0558	4.5953	6.6511	1.1163	234.69	8.2
8.4	172.45	445.60	729.9	2039.6	2769.4	2.0657	4.5772	6.6429	1.1176	229.38	8.4
8.6	173.43	446.58	734.2	2036.2	2770.4	2.0753	4.5595	6.6348	1.1188	224.31	8.6
8.8	174.40	447.55	738.5	2032.8	2771.3	2.0848	4.5421	6.6269	1.1201	219.46	8.8
9.0	175.36	448.51	742.6	2029.5	2772.1	2.0941	4.5251	6.6192	1.1213	214.82	9.0

Table 2 Saturation Line—*continued*

Abs. Press. bar p_s	*Temperature* °C t_s	K T_s	*Specific Enthalpy* kJ/kg h_f	h_{fg}	h_g	*Specific Entropy* kJ/kg K s_f	s_{fg}	s_g	*Specific Volume* dm³/kg v_f	v_g	*Abs. Press.* bar p_s
9.0	175.36	448.51	742.6	2029.5	2772.1	2.0941	4.5251	6.6192	1.1213	214.82	9.0
9.2	176.29	449.44	746.8	2026.2	2773.0	2.1033	4.5084	6.6116	1.1226	210.37	9.2
9.4	177.21	450.36	750.8	2023.0	2773.8	2.1122	4.4920	6.6042	1.1238	206.10	9.4
9.6	178.12	451.27	754.8	2019.8	2774.6	2.1210	4.4759	6.5969	1.1250	202.01	9.6
9.8	179.01	452.16	758.7	2016.7	2775.4	2.1297	4.4602	6.5898	1.1262	198.08	9.8
10.0	179.88	453.03	762.6	2013.6	2776.2	2.1382	4.4447	6.5828	1.1274	194.30	10.0
10.2	180.74	453.89	766.4	2010.5	2776.9	2.1465	4.4295	6.5760	1.1285	190.66	10.2
10.4	181.59	454.74	770.2	2007.5	2777.6	2.1547	4.4145	6.5692	1.1297	187.16	10.4
10.6	182.43	455.58	773.9	2004.5	2778.3	2.1628	4.3998	6.5626	1.1308	183.79	10.6
10.8	183.25	456.40	777.5	2001.5	2779.0	2.1708	4.3854	6.5561	1.1320	180.53	10.8
11.0	184.06	457.21	781.1	1998.6	2779.7	2.1786	4.3712	6.5498	1.1331	177.39	11.0
11.2	184.87	458.02	784.7	1995.6	2780.3	2.1863	4.3572	6.5435	1.1342	174.36	11.2
11.4	185.65	458.80	788.2	1992.8	2780.9	2.1939	4.3434	6.5373	1.1353	171.43	11.4
11.6	186.43	459.58	791.6	1989.9	2781.6	2.2014	4.3299	6.5312	1.1364	168.60	11.6
11.8	187.20	460.35	795.0	1987.1	2782.2	2.2088	4.3165	6.5253	1.1375	165.86	11.8
12.0	187.96	461.11	798.4	1984.3	2782.7	2.2160	4.3034	6.5194	1.1386	163.21	12.0
12.2	188.71	461.86	801.7	1981.6	2783.3	2.2232	4.2904	6.5136	1.1396	160.64	12.2
12.4	189.44	462.59	805.0	1978.8	2783.9	2.2303	4.2776	6.5079	1.1407	158.16	12.4
12.6	190.17	463.32	808.3	1976.1	2784.4	2.2372	4.2650	6.5023	1.1418	155.75	12.6
12.8	190.89	464.04	811.5	1973.4	2784.9	2.2441	4.2526	6.4967	1.1428	153.41	12.8
13.0	191.60	464.75	814.7	1970.7	2785.4	2.2509	4.2404	6.4913	1.1438	151.14	13.0
13.2	192.31	465.46	817.8	1968.1	2785.9	2.2576	4.2283	6.4859	1.1449	148.94	13.2
13.4	193.00	466.15	820.9	1965.5	2786.4	2.2642	4.2164	6.4806	1.1459	146.80	13.4
13.6	193.69	466.84	824.0	1962.9	2786.9	2.2708	4.2046	6.4754	1.1469	144.72	13.6
13.8	194.37	467.52	827.0	1960.3	2787.3	2.2772	4.1930	6.4702	1.1479	142.70	13.8
14.0	195.04	468.19	830.1	1957.7	2787.8	2.2836	4.1815	6.4651	1.1489	140.73	14.0
14.2	195.70	468.85	833.0	1955.2	2788.2	2.2899	4.1702	6.4601	1.1499	138.82	14.2
14.4	196.36	469.51	836.0	1952.7	2788.7	2.2962	4.1590	6.4551	1.1509	136.96	14.4
14.6	197.01	470.16	838.9	1950.2	2789.1	2.3023	4.1479	6.4502	1.1519	135.15	14.6
14.8	197.65	470.80	841.8	1947.7	2789.5	2.3084	4.1370	6.4454	1.1529	133.39	14.8
15.0	198.28	471.43	844.6	1945.3	2789.9	2.3144	4.1262	6.4406	1.1538	131.67	15.0
15.5	199.84	472.99	851.7	1939.2	2790.8	2.3292	4.0997	6.4289	1.1563	127.56	15.5
16.0	201.37	474.52	858.5	1933.2	2791.7	2.3436	4.0740	6.4176	1.1586	123.70	16.0
16.5	202.85	476.00	865.2	1927.3	2792.6	2.3576	4.0490	6.4065	1.1610	120.06	16.5
17.0	204.30	477.45	871.8	1921.6	2793.4	2.3712	4.0246	6.3958	1.1633	116.64	17.0
17.5	205.72	478.87	878.2	1915.9	2794.1	2.3845	4.0008	6.3853	1.1656	113.40	17.5
18.0	207.11	480.26	884.5	1910.3	2794.8	2.3976	3.9776	6.3751	1.1678	110.33	18.0
18.5	208.46	481.61	890.7	1904.8	2795.5	2.4103	3.9549	6.3652	1.1700	107.42	18.5
19.0	209.79	482.94	896.8	1899.3	2796.1	2.4227	3.9327	6.3555	1.1723	104.67	19.0
19.5	211.09	484.24	902.7	1894.0	2796.7	2.4349	3.9111	6.3460	1.1744	102.04	19.5
20.0	212.37	485.52	908.6	1888.7	2797.2	2.4468	3.8899	6.3367	1.1766	99.549	20.0
20.5	213.62	486.77	914.3	1883.4	2797.7	2.4585	3.8691	6.3276	1.1787	97.171	20.5
21.0	214.85	488.00	919.9	1878.3	2798.2	2.4699	3.8488	6.3187	1.1809	94.902	21.0
21.5	216.05	489.20	925.5	1873.2	2798.6	2.4811	3.8289	6.3100	1.1830	92.735	21.5
22.0	217.24	490.39	930.9	1868.1	2799.1	2.4921	3.8094	6.3015	1.1850	90.663	22.0
22.5	218.40	491.55	936.3	1863.1	2799.4	2.5030	3.7902	6.2932	1.1871	88.680	22.5
23.0	219.55	492.70	941.6	1858.2	2799.8	2.5136	3.7714	6.2850	1.1891	86.780	23.0
23.5	220.67	493.82	946.8	1853.3	2800.1	2.5240	3.7529	6.2769	1.1912	84.958	23.5
24.0	221.78	494.93	951.9	1848.5	2800.4	2.5342	3.7348	6.2690	1.1932	83.209	24.0
24.5	222.86	496.01	957.0	1843.7	2800.7	2.5443	3.7170	6.2613	1.1952	81.530	24.5
25.0	223.94	497.09	961.9	1839.0	2800.9	2.5542	3.6994	6.2537	1.1972	79.915	25.0

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Abs. Press. bar p_s	Temperature °C t_s	Temperature K T_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Abs. Press. bar p_s
25.0	223.94	497.09	961.9	1839.0	2800.9	2.5542	3.6994	6.2537	1.1972	79.915	25.0
25.5	224.99	498.14	966.8	1834.3	2801.2	2.5640	3.6822	6.2462	1.1991	78.361	25.5
26.0	226.03	499.18	971.7	1829.7	2801.4	2.5736	3.6652	6.2388	1.2011	76.865	26.0
26.5	227.06	500.21	976.5	1825.1	2801.6	2.5830	3.6485	6.2315	1.2030	75.423	26.5
27.0	228.06	501.21	981.2	1820.5	2801.7	2.5923	3.6321	6.2244	1.2050	74.033	27.0
27.5	229.06	502.21	985.9	1816.0	2801.9	2.6015	3.6159	6.2174	1.2069	72.691	27.5
28.0	230.04	503.19	990.5	1811.5	2802.0	2.6105	3.5999	6.2105	1.2088	71.396	28.0
28.5	231.01	504.16	995.0	1807.1	2802.1	2.6195	3.5842	6.2036	1.2107	70.145	28.5
29.0	231.96	505.11	999.5	1802.7	2802.2	2.6282	3.5687	6.1969	1.2126	68.935	29.0
29.5	232.91	506.06	1003.9	1798.3	2802.2	2.6369	3.5534	6.1903	1.2145	67.765	29.5
30.0	233.84	506.99	1008.3	1794.0	2802.3	2.6455	3.5383	6.1838	1.2163	66.632	30.0
30.5	234.75	507.90	1012.7	1789.7	2802.3	2.6539	3.5234	6.1773	1.2182	65.535	30.5
31.0	235.66	508.81	1017.0	1785.4	2802.3	2.6622	3.5087	6.1710	1.2200	64.473	31.0
31.5	236.56	509.71	1021.2	1781.1	2802.3	2.6704	3.4942	6.1647	1.2219	63.443	31.5
32.0	237.44	510.59	1025.4	1776.9	2802.3	2.6785	3.4799	6.1585	1.2237	62.443	32.0
32.5	238.32	511.47	1029.6	1772.7	2802.3	2.6866	3.4658	6.1524	1.2255	61.474	32.5
33.0	239.18	512.33	1033.7	1768.6	2802.3	2.6945	3.4518	6.1463	1.2273	60.533	33.0
33.5	240.03	513.18	1037.8	1764.4	2802.2	2.7023	3.4380	6.1404	1.2292	59.619	33.5
34.0	240.88	514.03	1041.8	1760.3	2802.1	2.7100	3.4244	6.1345	1.2310	58.731	34.0
34.5	241.71	514.86	1045.8	1756.3	2892.1	2.7177	3.4109	6.1286	1.2327	57.868	34.5
35.0	242.54	515.69	1049.7	1752.2	2802.0	2.7252	3.3976	6.1229	1.2345	57.028	35.0
35.5	243.35	516.50	1053.7	1748.2	2801.8	2.7327	3.3845	6.1172	1.2363	56.211	35.5
36.0	244.16	517.31	1057.5	1744.2	2801.7	2.7401	3.3714	6.1115	1.2381	55.417	36.0
36.5	244.96	518.11	1061.4	1740.2	2801.6	2.7474	3.3585	6.1060	1.2399	54.643	36.5
37.0	245.75	518.90	1065.2	1736.2	2801.4	2.7547	3.3458	6.1004	1.2416	53.889	37.0
37.5	246.53	519.68	1069.0	1732.3	2801.3	2.7618	3.3332	6.0950	1.2434	53.155	37.5
38.0	247.31	520.46	1072.7	1728.4	2801.1	2.7689	3.3207	6.0896	1.2451	52.439	38.0
38.5	248.08	521.23	1076.4	1724.5	2800.9	2.7759	3.3083	6.0842	1.2469	51.742	38.5
39.0	248.84	521.99	1080.1	1720.6	2800.8	2.7828	3.2961	6.0789	1.2486	51.061	39.0
39.5	249.59	522.74	1083.8	1716.8	2800.6	2.7897	3.2840	6.0737	1.2503	50.397	39.5
40.0	250.33	523.48	1087.4	1712.9	2800.3	2.7965	3.2720	6.0685	1.2521	49.749	40.0
41.0	251.80	524.95	1094.6	1705.3	2799.9	2.8099	3.2483	6.0583	1.2555	48.499	41.0
42.0	253.24	526.39	1101.6	1697.8	2799.4	2.8231	3.2251	6.0482	1.2589	47.306	42.0
43.0	254.66	527.81	1108.5	1690.3	2798.9	2.8360	3.2023	6.0383	1.2623	46.167	43.0
44.0	256.05	529.20	1115.4	1682.9	2798.3	2.8487	3.1799	6.0286	1.2657	45.078	44.0
45.0	257.41	530.56	1122.1	1675.6	2797.7	2.8612	3.1579	6.0191	1.2691	44.035	45.0
46.0	258.76	531.91	1128.8	1668.3	2797.0	2.8735	3.1362	6.0097	1.2725	43.036	46.0
47.0	260.08	533.23	1135.3	1661.0	2796.4	2.8856	3.1149	6.0004	1.2758	42.078	47.0
48.0	261.38	534.53	1141.8	1653.9	2795.7	2.8974	3.0939	5.9913	1.2792	41.158	48.0
49.0	262.66	535.81	1148.2	1646.8	2794.9	2.9091	3.0732	5.9823	1.2825	40.275	49.0
50.0	263.92	537.07	1154.5	1639.7	2794.2	2.9207	3.0528	5.9735	1.2858	39.425	50.0
51.0	265.16	538.31	1160.7	1632.7	2793.4	2.9320	3.0327	5.9647	1.2891	38.608	51.0
52.0	266.38	539.53	1166.9	1625.7	2792.6	2.9432	3.0129	5.9561	1.2925	37.820	52.0
53.0	267.58	540.73	1173.0	1618.7	2791.7	2.9542	2.9934	5.9476	1.2958	37.062	53.0
54.0	268.77	541.92	1179.0	1611.8	2790.8	2.9651	2.9741	5.9392	1.2990	36.330	54.0
55.0	269.94	543.09	1184.9	1605.0	2789.9	2.9758	2.9551	5.9309	1.3023	35.624	55.0
56.0	271.09	544.24	1190.8	1598.2	2789.0	2.9864	2.9363	5.9227	1.3056	34.942	56.0
57.0	272.23	545.38	1196.6	1591.4	2788.0	2.9968	2.9177	5.9145	1.3089	34.283	57.0
58.0	273.36	546.51	1202.4	1584.6	2787.0	3.0071	2.8994	5.9065	1.3122	33.646	58.0
59.0	274.46	547.61	1208.1	1577.9	2786.0	3.0173	2.8813	5.8986	1.3154	33.030	59.0
60.0	275.56	548.71	1213.7	1571.3	2785.0	3.0274	2.8633	5.8907	1.3187	32.433	60.0

Table 2 Saturation Line—*continued*

Abs. Press. bar p_s	*Temperature* °C t_s	*Temperature* K T_s	*Specific Enthalpy* kJ/kg h_f	*Specific Enthalpy* kJ/kg h_{fg}	*Specific Enthalpy* kJ/kg h_g	*Specific Entropy* kJ/kg K s_f	*Specific Entropy* kJ/kg K s_{fg}	*Specific Entropy* kJ/kg K s_g	*Specific Volume* dm³/kg v_f	*Specific Volume* dm³/kg v_g	*Abs. Press.* bar p_s
60	275.56	548.71	1213.7	1571.3	2785.0	3.0274	2.8633	5.8907	1.3187	32.433	60
61	276.64	549.79	1219.3	1564.6	2783.9	3.0373	2.8456	5.8830	1.3220	31.855	61
62	277.71	550.86	1224.9	1558.0	2782.9	3.0472	2.8281	5.8753	1.3252	31.295	62
63	278.76	551.91	1230.4	1551.4	2781.8	3.0569	2.8108	5.8676	1.3285	30.752	63
64	279.80	552.95	1235.8	1544.8	2780.6	3.0665	2.7936	5.8601	1.3318	30.225	64
65	280.83	553.98	1241.2	1538.3	2779.5	3.0760	2.7766	5.8526	1.3350	29.714	65
66	281.85	555.00	1246.5	1531.8	2778.3	3.0854	2.7598	5.8452	1.3383	29.218	66
67	282.85	556.00	1251.8	1525.3	2777.1	3.0947	2.7431	5.8378	1.3416	28.736	67
68	283.85	557.00	1257.1	1518.8	2775.9	3.1039	2.7266	5.8305	1.3448	28.267	68
69	284.83	557.98	1262.3	1512.4	2774.7	3.1130	2.7103	5.8233	1.3481	27.812	69
70	285.80	558.95	1267.5	1506.0	2773.4	3.1220	2.6941	5.8161	1.3514	27.368	70
71	286.76	559.91	1272.6	1499.6	2772.2	3.1309	2.6780	5.8090	1.3546	26.937	71
72	287.71	560.86	1277.7	1493.2	2770.9	3.1398	2.6621	5.8019	1.3579	26.517	72
73	288.65	561.80	1282.8	1486.8	2769.6	3.1485	2.6463	5.7949	1.3612	26.109	73
74	289.59	562.74	1287.8	1480.5	2768.2	3.1572	2.6307	5.7879	1.3645	25.711	74
75	290.51	563.66	1292.7	1474.1	2766.9	3.1658	2.6152	5.7810	1.3678	25.323	75
76	291.42	564.57	1297.7	1467.8	2765.5	3.1743	2.5998	5.7741	1.3711	24.944	76
77	292.32	565.47	1302.6	1461.5	2764.1	3.1828	2.5845	5.7673	1.3744	24.575	77
78	293.22	566.37	1307.5	1455.3	2762.7	3.1912	2.5693	5.7605	1.3777	24.215	78
79	294.10	567.25	1312.3	1449.0	2761.3	3.1995	2.5542	5.7537	1.3810	23.864	79
80	294.98	568.13	1317.2	1442.7	2759.9	3.2077	2.5393	5.7470	1.3843	23.521	80
81	295.85	569.00	1321.9	1436.5	2758.4	3.2159	2.5245	5.7404	1.3876	23.187	81
82	296.71	569.86	1326.7	1430.3	2757.0	3.2240	2.5097	5.7337	1.3909	22.860	82
83	297.56	570.71	1331.4	1424.0	2755.5	3.2320	2.4951	5.7271	1.3943	22.540	83
84	298.40	571.55	1336.1	1417.8	2754.0	3.2400	2.4806	5.7206	1.3976	22.228	84
85	299.24	572.39	1340.8	1411.6	2752.4	3.2480	2.4661	5.7141	1.4010	21.923	85
86	300.07	573.22	1345.4	1405.5	2750.9	3.2558	2.4518	5.7076	1.4043	21.624	86
87	300.89	574.04	1350.1	1399.3	2749.3	3.2636	2.4375	5.7011	1.4077	21.332	87
88	301.71	574.86	1354.7	1393.1	2747.8	3.2714	2.4233	5.6947	1.4111	21.046	88
89	302.51	575.66	1359.2	1387.0	2746.2	3.2791	2.4092	5.6883	1.4145	20.767	89
90	303.31	576.46	1363.8	1380.8	2744.6	3.2867	2.3952	5.6820	1.4179	20.493	90
91	304.11	577.26	1368.3	1374.7	2743.0	3.2943	2.3813	5.6756	1.4213	20.225	91
92	304.89	578.04	1372.8	1368.5	2741.3	3.3019	2.3674	5.6693	1.4247	19.962	92
93	304.67	578.82	1377.3	1362.4	2739.7	3.3094	2.3537	5.6630	1.4282	19.705	93
94	306.45	579.60	1381.7	1356.3	2738.0	3.3168	2.3400	5.6568	1.4316	19.453	94
95	307.22	580.37	1386.2	1350.2	2736.3	3.3242	2.3264	5.6506	1.4351	19.206	95
96	307.98	581.13	1390.6	1344.1	2734.7	3.3316	2.3128	5.6444	1.4385	18.964	96
97	308.73	581.88	1395.0	1338.0	2732.9	3.3389	2.2993	5.6382	1.4420	18.726	97
98	309.48	582.63	1399.4	1331.9	2731.2	3.3462	2.2859	5.6320	1.4455	18.493	98
99	310.23	583.38	1403.7	1325.8	2729.5	3.3534	2.2725	5.6259	1.4490	18.265	99
100	310.96	584.11	1408.1	1319.7	2727.7	3.3606	2.2592	5.6198	1.4526	18.041	100
102	312.42	585.57	1416.7	1307.5	2724.2	3.3748	2.2328	5.6076	1.4597	17.604	102
104	313.86	587.01	1425.2	1295.3	2720.6	3.3889	2.2066	5.5955	1.4668	17.184	104
106	315.27	588.42	1433.7	1283.1	2716.9	3.4029	2.1806	5.5835	1.4740	16.778	106
108	316.67	589.82	1442.2	1271.0	2713.1	3.4167	2.1548	5.5715	1.4813	16.386	108
110	318.04	591.19	1450.6	1258.8	2709.3	3.4304	2.1292	5.5596	1.4887	16.007	110
112	319.40	592.55	1458.9	1246.6	2705.4	3.4439	2.1037	5.5477	1.4961	15.641	112
114	320.73	593.88	1467.2	1234.3	2701.5	3.4574	2.0784	5.5358	1.5037	15.286	114
116	322.05	595.20	1475.4	1222.1	2697.5	3.4707	2.0532	5.5240	1.5113	14.942	116
118	323.35	596.50	1483.6	1209.8	2693.4	3.4840	2.0282	5.5121	1.5189	14.609	118
120	324.64	597.79	1491.7	1197.5	2698.2	3.4971	2.0032	5.5003	1.5267	14.285	120

1 bar = 10^5 N/m² 1 bar dm³ = 0.1 kJ

Abs. Press. bar p_s	Temperature °C t_s	Temperature K T_s	Specific Enthalpy kJ/kg h_f	h_{fg}	h_g	Specific Entropy kJ/kg K s_f	s_{fg}	s_g	Specific Volume dm³/kg v_f	v_g	Abs. Press bar p_s
120	324.64	597.79	1491.7	1197.5	2689.2	3.4971	2.0032	5.5003	1.5267	14.285	120
122	325.90	599.05	1499.8	1185.1	2684.9	3.5101	1.9784	5.4885	1.5346	13.971	122
124	327.15	600.30	1507.9	1172.7	2680.6	3.5231	1.9536	5.4766	1.5425	13.666	124
126	328.39	601.54	1515.9	1160.2	2676.2	3.5359	1.9288	5.4648	1.5506	13.370	126
128	329.61	602.76	1523.9	1147.7	2671.6	3.5487	1.9042	5.4529	1.5588	13.081	128
130	330.81	603.96	1531.9	1135.1	2667.0	3.5614	1.8795	5.4409	1.5671	12.800	130
132	332.00	605.15	1539.9	1122.4	2662.3	3.5741	1.8549	5.4290	1.5755	12.526	132
134	333.18	606.33	1547.8	1109.7	2657.5	3.5867	1.8303	5.4169	1.5841	12.260	134
136	334.34	607.49	1555.7	1096.9	2652.6	3.5992	1.8057	5.4048	1.5927	12.000	136
138	335.49	608.64	1563.6	1083.9	2647.6	3.6116	1.7810	5.3927	1.6015	11.746	138
140	336.63	609.78	1571.5	1070.9	2642.4	3.6241	1.7564	5.3804	1.6105	11.498	140
142	337.75	610.90	1579.4	1057.8	2637.2	3.6365	1.7317	5.3681	1.6196	11.257	142
144	338.86	612.01	1587.3	1044.6	2631.9	3.6488	1.7069	5.3557	1.6289	11.020	144
146	339.96	613.11	1595.2	1031.2	2626.4	3.6611	1.6821	5.3432	1.6383	10.790	146
148	341.04	614.19	1603.0	1017.8	2620.8	3.6734	1.6573	5.3307	1.6480	10.564	148
150	342.12	615.27	1610.9	1004.2	2615.1	3.6857	1.6323	5.3180	1.6578	10.343	150
152	343.18	616.33	1618.8	990.5	2609.3	3.6979	1.6073	5.3053	1.6678	10.128	152
154	344.23	617.38	1626.7	976.7	2603.4	3.7102	1.5822	5.2924	1.6780	9.9165	154
156	345.27	618.42	1634.6	962.8	2597.3	3.7224	1.5570	5.2795	1.6885	9.7099	156
158	346.30	619.45	1642.5	948.7	2591.2	3.7347	1.5317	5.2664	1.6992	9.5078	158
160	347.32	620.47	1650.4	934.5	2584.9	3.7470	1.5063	5.2533	1.7102	9.3099	160
162	348.32	621.47	1658.4	920.2	2578.6	3.7592	1.4808	5.2401	1.7214	9.1162	162
164	349.32	622.47	1666.4	905.7	2572.1	3.7716	1.4552	5.2268	1.7330	8.9266	164
166	350.31	623.46	1674.4	891.2	2565.6	3.7841	1.4292	5.2133	1.7446	8.7401	166
168	351.29	624.44	1682.9	875.7	2558.7	3.7973	1.4023	5.1995	1.7569	8.5548	168
170	352.26	625.41	1691.6	860.0	2551.6	3.8106	1.3749	5.1856	1.7695	8.3721	170
172	353.22	626.37	1700.3	844.1	2544.4	3.8239	1.3475	5.1714	1.7825	8.1920	172
174	354.16	627.31	1709.0	828.1	2537.1	3.8372	1.3199	5.1571	1.7961	8.0145	174
176	355.11	628.26	1717.6	811.9	2529.5	3.8503	1.2922	5.1425	1.8101	7.8397	176
178	356.04	629.19	1726.2	795.6	2521.8	3.8635	1.2643	5.1278	1.8247	7.6673	178
180	356.96	630.11	1734.8	779.0	2513.9	3.8766	1.2362	5.1127	1.8399	7.4973	180
182	357.87	631.02	1743.5	762.2	2505.7	3.8897	1.2078	5.0975	1.8557	7.3296	182
184	358.78	631.93	1752.2	745.2	2497.3	3.9029	1.1790	5.0819	1.8722	7.1638	184
186	359.67	632.82	1760.9	727.8	2488.7	3.9161	1.1499	5.0660	1.8894	6.9997	186
188	360.56	633.71	1769.8	710.0	2479.8	3.9295	1.1202	5.0497	1.9074	6.8372	188
190	361.44	634.59	1778.7	691.8	2470.5	3.9430	1.0900	5.0330	1.9262	6.6759	190
192	362.31	635.46	1787.9	673.1	2460.9	3.9568	1.0591	5.0158	1.9460	6.5155	192
194	363.17	636.32	1797.1	653.8	2454.0	3.9708	1.0274	4.9981	1.9669	6.3556	194
196	364.03	637.18	1806.7	633.9	2440.6	3.9851	0.9947	4.9798	1.9889	6.1958	196
198	364.87	638.02	1816.5	613.2	2429.7	3.9998	0.9610	4.9608	2.0124	6.0356	198
200	365.71	638.86	1826.6	591.6	2418.2	4.0151	0.9259	4.9410	2.0374	5.8745	200
202	366.54	639.69	1837.2	568.9	2406.1	4.0310	0.8892	4.9201	2.0643	5.7118	202
204	367.37	640.52	1848.3	544.8	2393.1	4.0476	0.8505	4.8982	2.0935	5.5465	204
206	368.18	641.33	1860.0	519.2	2379.2	4.0653	0.8095	4.8748	2.1256	5.3776	206
208	368.99	642.14	1872.6	491.5	2364.1	4.0843	0.7653	4.8496	2.1612	5.2037	208
210	369.79	642.94	1886.3	461.2	2347.5	4.1049	0.7172	4.8222	2.2018	5.0225	210
212	370.58	643.73	1901.6	427.3	2328.9	4.1279	0.6638	4.7917	2.2489	4.8311	212
214	371.37	644.52	1919.0	388.5	2307.4	4.1543	0.6027	4.7570	2.3059	4.6244	214
216	372.14	645.29	1939.8	341.9	2281.7	4.1858	0.5298	4.7157	2.3788	4.3934	216
218	372.92	646.07	1966.9	281.5	2248.4	4.2271	0.4357	4.6628	2.4819	4.1183	218
220	373.68	646.83	2010.3	186.3	2196.6	4.2934	0.2881	4.5814	2.6675	3.7347	220
221.2	374.15	647.30	2107.4	0	2107.4	4.4429	0	4.4429	3.1700	3.1700	221.2

Table 3 Water and Steam

p (abs) bar		0	0.02			0.04			0.06			0.08			0.10		
t_s	°C		17.5			29.0			36.2			41.5			45.8		
		h	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid			73.5	0.2606	1.0012	121.4	0.4225	1.0040	151.5	0.5209	1.0064	173.9	0.5926	1.0084	191.8	0.6493	1.0102
Sat. Vapour			2533.6	8.7246	67012	2554.5	8.4755	34803	2567.5	8.3312	23741	2577.1	8.2295	18104	2584.8	8.1511	14674
t °C	T K																
0	273.15	2501.8	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002
10	283.15	2520.3	42.0	0.1510	1.0003	42.0	0.1510	1.0003	42.0	0.1510	1.0003	42.0	0.1510	1.0003	42.0	0.1510	1.0002
20	293.15	2538.9	2538.3	8.7404	67582	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	2557.5	2556.9	8.8031	69897	2556.4	8.4818	34920	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	2576.1	2575.6	8.8637	72211	2575.2	8.5426	36081	2574.7	8.3543	24037	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	2594.8	2594.4	8.9226	74524	2593.9	8.6016	37240	2593.5	8.4135	24812	2593.1	8.2797	18598	2592.7	8.1757	14869
60	333.15	2613.5	2613.1	8.9797	76837	2612.7	8.6589	38398	2612.4	8.4709	25586	2612.0	8.3372	19179	2611.6	8.2334	15336
70	343.15	2632.2	2631.9	9.0353	79148	2631.6	8.7146	39556	2631.2	8.5267	26359	2630.9	8.3932	19760	2630.6	8.2894	15801
80	353.15	2651.0	2650.7	9.0894	81459	2650.4	8.7688	40714	2650.1	8.5810	27132	2649.8	8.4476	20341	2649.5	8.3439	16266
90	363.15	2669.9	2669.6	9.1421	83770	2669.3	8.8216	41871	2669.1	8.6339	27904	2668.8	8.5005	20921	2668.5	8.3969	16731
100	373.15	2688.7	2688.5	9.1934	86080	2688.3	8.8730	43027	2688.0	8.6854	28676	2687.8	8.5521	21501	2687.5	8.4486	17195
110	383.15	2707.7	2707.4	9.2435	88390	2707.2	8.9232	44184	2707.0	8.7356	29448	2706.8	8.6024	22080	2706.6	8.4989	17659
120	393.15	2726.6	2726.4	9.2924	90700	2726.2	8.9721	45339	2726.0	8.7846	30219	2725.8	8.6515	22659	2725.6	8.5481	18123
130	403.15	2745.6	2745.5	9.3402	93009	2745.3	9.0200	46495	2745.1	8.8325	30990	2744.9	8.6994	23238	2744.7	8.5961	18586
140	413.15	2764.7	2764.5	9.3870	95319	2764.4	9.0668	47650	2764.2	8.8793	31761	2764.1	8.7463	23816	2763.9	8.6430	19050
150	423.15	2783.8	2783.7	9.4327	97628	2783.5	9.1125	48806	2783.4	8.9251	32532	2783.2	8.7921	24395	2783.1	8.6888	19512
160	433.15	2803.0	2802.8	9.4775	99936	2802.7	9.1573	49961	2802.6	8.9700	33302	2802.4	8.8370	24973	2802.3	8.7338	19975
170	443.15	2822.2	2822.1	9.5213	102245	2821.9	9.2012	51116	2821.8	9.0139	34072	2821.7	8.8809	25551	2821.6	8.7777	20438
180	453.15	2841.4	2841.3	9.5643	104554	2841.2	9.2443	52270	2841.1	9.0569	34843	2841.0	8.9240	26129	2840.9	8.8208	20900
190	463.15	2860.7	2860.6	9.6065	106862	2860.5	9.2865	53425	2860.4	9.0992	35613	2860.3	8.9662	26707	2860.2	8.8631	21363
200	473.15	2880.1	2880.0	9.6479	109171	2879.9	9.3279	54580	2879.8	9.1406	36383	2879.7	9.0077	27284	2879.6	8.9045	21825
210	483.15	2899.5	2899.4	9.6885	111479	2899.4	9.3685	55734	2899.3	9.1812	37153	2899.2	9.0483	27862	2899.1	8.9452	22287
220	493.15	2919.0	2918.9	9.7284	113787	2918.8	9.4084	56889	2918.8	9.2212	37922	2918.7	9.0883	28439	2918.6	8.9852	22750
230	503.15	2938.5	2938.5	9.7677	116095	2938.4	9.4476	58043	2938.3	9.2604	38692	2938.2	9.1275	29017	2938.2	9.0244	23212
240	513.15	2958.1	2958.0	9.8062	118403	2958.0	9.4862	59197	2957.9	9.2990	39462	2957.8	9.1661	29594	2957.8	9.0630	23674
250	523.15	2977.8	2977.7	9.8441	120711	2977.6	9.5241	60351	2977.6	9.3369	40232	2977.5	9.2041	30172	2977.4	9.1010	24136
260	533.15	2997.5	2997.4	9.8814	123019	2997.3	9.5615	61506	2997.3	9.3742	41001	2997.2	9.2414	30749	2997.2	9.1383	24598
270	543.15	3017.2	3017.2	9.9182	125327	3017.1	9.5982	62660	3017.1	9.4110	41771	3017.0	9.2781	31326	3016.9	9.1751	25060
280	553.15	3037.0	3037.0	9.9543	127635	3036.9	9.6344	63814	3036.9	9.4472	42540	3036.8	9.3143	31903	3036.8	9.2113	25521
290	563.15	3056.9	3056.9	9.9899	129943	3056.8	9.6700	64968	3056.8	9.4828	43310	3056.7	9.3500	32481	3056.7	9.2469	25983
300	573.15	3076.9	3076.8	10.0251	132251	3076.8	9.7051	66122	3076.7	9.5179	44079	3076.7	9.3851	33058	3076.6	9.2820	26445
310	583.15	3096.9	3096.8	10.0597	134559	3096.8	9.7397	67276	3096.7	9.5525	44849	3096.7	9.4197	33635	3096.6	9.3167	26907
320	593.15	3116.9	3116.9	10.0938	136867	3116.8	9.7738	68430	3116.8	9.5866	45618	3116.8	9.4538	34212	3116.7	9.3508	27369
330	603.15	3137.1	3137.0	10.1274	139174	3137.0	9.8075	69584	3136.9	9.6203	46388	3136.9	9.4875	34789	3136.8	9.3845	27830
340	613.15	3157.2	3157.2	10.1606	141482	3157.2	9.8407	70738	3157.1	9.6535	47157	3157.1	9.5207	35367	3157.0	9.4177	28292

350	623.15	3177.5	3177.5	10.1934	143790	3177.4	9.8735	71892	3177.4	9.6863	47927	3177.3	9.5535	35944	3177.3	9.4504	28754
360	633.15	3197.8	3197.8	10.2257	146098	3197.7	9.9058	73046	3197.7	9.7186	48696	3197.7	9.5858	36521	3197.6	9.4828	29216
370	643.15	3218.2	3218.2	10.2577	148405	3218.1	9.9378	74200	3218.1	9.7506	49465	3218.1	9.6178	37098	3218.0	9.5148	29677
380	653.15	3238.6	3238.6	10.2892	150713	3238.6	9.9693	75354	3238.5	9.7821	50235	3238.5	9.6493	37675	3238.5	9.5463	30139
390	663.15	3259.2	3259.1	10.3204	153021	3259.1	10.0005	76508	3259.1	9.8133	51004	3259.0	9.6805	38252	3259.0	9.5775	30601
400	673.15	3279.7	3279.7	10.3512	155329	3279.7	10.0313	77662	3279.6	9.8441	51773	3279.6	9.7113	38829	3279.6	9.6083	31062
410	683.15	3300.4	3300.4	10.3817	157636	3300.3	10.0617	78816	3300.3	9.8746	52543	3300.3	9.7418	39406	3300.2	9.6388	31524
420	693.15	3321.1	3321.1	10.4118	159944	3321.0	10.0918	79970	3321.0	9.9047	53312	3321.0	9.7719	39983	3321.0	9.6689	31986
430	703.15	3341.9	3341.8	10.4415	162252	3341.8	10.1216	81124	3341.8	9.9344	54081	3341.8	9.8016	40560	3341.7	9.6986	32447
440	713.15	3362.7	3362.7	10.4710	164559	3362.7	10.1510	82278	3362.6	9.9639	54851	3362.6	9.8311	41137	3362.6	9.7281	32909
450	723.15	3383.6	3383.6	10.5001	166867	3383.6	10.1802	83432	3383.6	9.9930	55620	3383.5	9.8602	41714	3383.5	9.7572	33371
460	733.15	3404.6	3404.6	10.5289	169175	3404.6	10.2090	84586	3404.5	10.0218	56389	3404.5	9.8890	42291	3404.5	9.7860	33832
470	743.15	3425.7	3425.6	10.5574	171482	3425.6	10.2375	85740	3425.6	10.0504	57159	3425.6	9.9176	42868	3425.6	9.8146	34294
480	753.15	3446.8	3446.8	10.5857	173790	3446.7	10.2657	86893	3446.7	10.0786	57928	3446.7	9.9458	43445	3446.7	9.8428	34756
490	763.15	3468.0	3468.0	10.6136	176098	3467.9	10.2937	88047	3467.9	10.1065	58697	3467.9	9.9737	44022	3467.9	9.8707	35217
500	773.15	3489.2	3489.2	10.6413	178405	3489.2	10.3214	89201	3489.2	10.1342	59467	3489.1	10.0014	44599	3489.1	9.8984	35679
510	783.15	3510.6	3510.5	10.6687	180713	3510.5	10.3488	90355	3510.5	10.1616	60236	3510.5	10.0288	45176	3510.5	9.9258	36140
520	793.15	3532.0	3531.9	10.6958	183021	3531.9	10.3759	91509	3531.9	10.1888	61005	3531.9	10.0560	45753	3531.9	9.9530	36602
530	803.15	3553.4	3553.4	10.7227	185328	3553.4	10.4028	92663	3553.4	10.2157	61774	3553.3	10.0829	46330	3553.3	9.9799	37064
540	813.15	3575.0	3574.9	10.7494	187636	3574.9	10.4295	93817	3574.9	10.2423	62544	3574.9	10.1095	46907	3574.9	10.0065	37525
550	823.15	3596.6	3596.5	10.7758	189944	3596.5	10.4559	94971	3596.5	10.2687	63313	3596.5	10.1359	47484	3596.5	10.0329	37987
560	833.15	3618.2	3618.2	10.8019	192251	3618.2	10.4820	96124	3618.2	10.2949	64082	3618.2	10.1621	48061	3618.1	10.0591	38448
570	843.15	3640.0	3640.0	10.8279	194559	3639.9	10.5080	97278	3639.9	10.3208	64851	3639.9	10.1881	48638	3639.9	10.0851	38910
580	853.15	3661.8	3661.8	10.8536	196866	3661.7	10.5337	98432	3661.7	10.3466	65621	3661.7	10.2138	49215	3661.7	10.1108	39372
590	863.15	3683.7	3683.6	10.8791	199174	3683.6	10.5592	99586	3683.6	10.3721	66390	3683.6	10.2393	49792	3683.6	10.1363	39833
600	873.15	3705.6	3705.6	10.9044	201482	3705.6	10.5845	100740	3705.6	10.3973	67159	3705.5	10.2646	50369	3705.5	10.1616	40295
610	883.15	3727.6	3727.6	10.9295	203789	3727.6	10.6095	101894	3727.6	10.4224	67929	3727.6	10.2896	50946	3727.5	10.1866	40756
620	893.15	3749.7	3749.7	10.9543	206097	3749.7	10.6344	103048	3749.7	10.4473	68698	3749.7	10.3145	51523	3749.6	10.2115	41218
630	903.15	3771.9	3771.9	10.9790	208405	3771.8	10.6591	104201	3771.8	10.4719	69467	3771.8	10.3392	52100	3771.8	10.2362	41679
640	913.15	3794.1	3794.1	11.0035	210712	3794.1	10.6836	105355	3794.0	10.4964	70236	3794.0	10.3636	52677	3794.0	10.2606	42141
650	923.15	3816.4	3816.4	11.0277	213020	3816.4	10.7078	106509	3816.3	10.5207	71005	3816.3	10.3879	53254	3816.3	10.2849	42603
660	933.15	3838.7	3838.7	11.0518	215327	3838.7	10.7319	107663	3838.7	10.5448	71775	3838.7	10.4120	53831	3838.7	10.3090	43064
670	943.15	3861.2	3861.2	11.0757	217635	3861.1	10.7558	108817	3861.1	10.5687	72544	3861.1	10.4359	54408	3861.1	10.3329	43526
680	953.15	3883.7	3883.7	11.0995	219943	3883.6	10.7796	109971	3883.6	10.5924	73313	3883.6	10.4597	54985	3883.6	10.3567	43987
690	963.15	3906.2	3906.2	11.1230	222250	3906.2	10.8031	111124	3906.2	10.6160	74082	3906.2	10.4832	55561	3906.2	10.3802	44449
700	973.15	3928.9	3928.8	11.1464	224558	3928.8	10.8265	112278	3928.8	10.6394	74852	3928.8	10.5066	56138	3928.8	10.4036	44910
710	983.15	3951.6	3951.5	11.1696	226865	3951.5	10.8497	113432	3951.5	10.6626	75621	3951.5	10.5298	56715	3951.5	10.4268	45372
720	993.15	3974.3	3974.3	11.1926	229173	3974.3	10.8727	114586	3974.3	10.6856	76390	3974.3	10.5528	57292	3974.3	10.4498	45834
730	1003.15	3997.1	3997.1	11.2155	231481	3997.1	10.8956	115740	3997.1	10.7085	77159	3997.1	10.5757	57869	3997.1	10.4727	46295
740	1013.15	4020.0	4020.0	11.2382	233788	4020.0	10.9183	116894	4020.0	10.7312	77929	4020.0	10.5984	58446	4020.0	10.4954	46757
750	1023.15	4043.0	4043.0	11.2608	236096	4043.0	10.9409	118047	4043.0	10.7537	78698	4043.0	10.6210	59023	4042.9	10.5180	47218
760	1033.15	4066.0	4066.0	11.2832	238403	4066.0	10.9633	119201	4066.0	10.7761	79467	4066.0	10.6433	59600	4066.0	10.5404	47680
770	1043.15	4089.1	4089.1	11.3054	240711	4089.1	10.9855	120355	4089.1	10.7984	80236	4089.1	10.6656	60177	4089.1	10.5626	48141
780	1053.15	4112.3	4112.2	11.3275	243019	4112.2	11.0076	121509	4112.2	10.8204	81005	4112.2	10.6877	60754	4112.2	10.5847	48603
790	1063.15	4135.5	4135.5	11.3494	245326	4135.5	11.0295	122663	4135.4	10.8424	81775	4135.4	10.7096	61331	4135.4	10.6066	49064
800	1073.15	4158.7	4158.7	11.3712	247634	4158.7	11.0513	123816	4158.7	10.8642	82544	4158.7	10.7314	61908	4158.7	10.6284	49526

Table 3 Water and Steam—*continued*

p (*abs*) bar		0.10			0.12			0.14			0.16			0.18			0.20		
t_s °C		45.8			49.4			52.6			55.3			57.8			60.1		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		191.8	0.6493	1.0102	206.9	0.6964	1.0119	220.0	0.7367	1.0133	231.6	0.7721	1.0147	242.0	0.8036	1.0160	251.5	0.8321	1.0172
Sat. Vapour		2584.8	8.1511	14674	2591.2	8.0872	12361	2596.7	8.0333	10693	2601.6	7.9868	9432.4	2605.9	7.9459	8444.6	2609.9	7.9094	7649.2
t °C	T K																		
0	273.15	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002
10	283.15	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002
20	293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	2592.7	8.1757	14869	2592.2	8.0905	12384	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60	333.15	2611.6	8.2334	15336	2611.2	8.1483	12773	2610.8	8.0763	10943	2610.5	8.0137	9569.7	2610.1	7.9585	8502.0	251.1	0.8310	1.0171
70	343.15	2630.6	8.2894	15801	2630.2	8.2045	13162	2629.9	8.1325	11276	2629.5	8.0701	9862.4	2629.2	8.0150	8762.6	2628.8	7.9656	7882.7
80	353.15	2649.5	8.3439	16266	2649.2	8.2591	13550	2648.9	8.1872	11610	2648.6	8.1249	10155	2648.3	8.0699	9022.7	2648.0	8.0206	8117.2
90	363.15	2668.5	8.3969	16731	2668.2	8.3122	13938	2668.0	8.2404	11943	2667.7	8.1782	10446	2667.4	8.1233	9282.3	2667.1	8.0740	8351.2
100	373.15	2687.5	8.4486	17195	2687.3	8.3639	14325	2687.0	8.2922	12275	2686.8	8.2301	10737	2686.5	8.1752	9541.5	2686.3	8.1261	8584.7
110	383.15	2706.6	8.4989	17659	2706.3	8.4143	14712	2706.1	8.3427	12607	2705.9	8.2807	11028	2705.7	8.2258	9800.3	2705.5	8.1768	8817.9
120	393.15	2725.6	8.5481	18123	2725.4	8.4635	15099	2725.2	8.3920	12939	2725.0	8.3300	11319	2724.8	8.2752	10059	2724.6	8.2262	9050.8
130	403.15	2744.7	8.5961	18586	2744.6	8.5116	15485	2744.4	8.4401	13270	2744.2	8.3781	11609	2744.0	8.3234	10317	2743.8	8.2744	9283.4
140	413.15	2763.9	8.6430	19050	2763.7	8.5585	15872	2763.6	8.4871	13602	2763.4	8.4251	11899	2763.2	8.3705	10575	2763.1	8.3215	9515.8
150	423.15	2783.1	8.6888	19512	2782.9	8.6044	16258	2782.8	8.5330	13933	2782.6	8.4711	12189	2782.5	8.4165	10833	2782.3	8.3676	9748.0
160	433.15	2802.3	8.7338	19975	2802.2	8.6494	16644	2802.0	8.5780	14264	2801.9	8.5161	12479	2801.8	8.4615	11091	2801.6	8.4127	9980.1
170	443.15	2821.6	8.7777	20438	2821.4	8.6934	17029	2821.3	8.6220	14595	2821.2	8.5602	12768	2821.1	8.5056	11348	2821.0	8.4568	10212
180	453.15	2840.9	8.8208	20900	2840.8	8.7365	17415	2840.7	8.6652	14925	2840.5	8.6033	13058	2840.4	8.5488	11606	2840.3	8.5000	10444
190	463.15	2860.2	8.8631	21363	2860.1	8.7788	17800	2860.0	8.7074	15256	2859.9	8.6457	13347	2859.8	8.5911	11863	2859.7	8.5423	10675
200	473.15	2879.6	8.9045	21825	2879.5	8.8202	18186	2879.5	8.7489	15586	2879.4	8.6872	13636	2879.3	8.6326	12120	2879.2	8.5839	10907
210	483.15	2899.1	8.9452	22287	2899.0	8.8609	18571	2898.9	8.7897	15917	2898.8	8.7279	13926	2898.7	8.6734	12377	2898.7	8.6246	11138
220	493.15	2918.6	8.9852	22750	2918.5	8.9009	18956	2918.4	8.8296	16247	2918.4	8.7679	14215	2918.3	8.7134	12634	2918.2	8.6647	11370
230	503.15	2938.2	9.0244	23212	2938.1	8.9402	19341	2938.0	8.8689	16577	2937.9	8.8072	14504	2937.9	8.7527	12891	2937.8	8.7040	11601
240	513.15	2957.8	9.0630	23674	2957.7	8.9788	19727	2957.6	8.9075	16907	2957.6	8.8458	14793	2957.5	8.7914	13148	2957.4	8.7426	11832
250	523.15	2977.4	9.1010	24136	2977.4	9.0168	20112	2977.3	8.9455	17237	2977.2	8.8838	15082	2977.2	8.8293	13405	2977.1	8.7806	12064
260	533.15	2997.2	9.1383	24598	2997.1	9.0541	20497	2997.0	8.9829	17567	2997.0	8.9212	15371	2996.9	8.8667	13662	2996.9	8.8180	12295
270	543.15	3016.9	9.1751	25060	3016.9	9.0909	20882	3016.8	9.0196	17898	3016.8	8.9579	15659	3016.7	8.9035	13919	3016.7	8.8548	12526
280	553.15	3036.8	9.2113	25521	3036.7	9.1271	21267	3036.7	9.0558	18228	3036.6	8.9941	15948	3036.6	8.9397	14175	3036.5	8.8910	12757
290	563.15	3056.7	9.2469	25983	3056.6	9.1627	21652	3056.6	9.0915	18558	3056.5	9.0298	16237	3056.5	8.9754	14432	3056.4	8.9267	12988
300	573.15	3076.6	9.2820	26445	3076.6	9.1978	22036	3076.5	9.1266	18888	3076.5	9.0649	16526	3076.4	9.0105	14689	3076.4	8.9618	13219
310	583.15	3096.6	9.3167	26907	3096.6	9.2325	22421	3096.5	9.1613	19217	3096.5	9.0996	16815	3096.5	9.0452	14946	3096.4	8.9965	13450
320	593.15	3116.7	9.3508	27369	3116.7	9.2666	22806	3116.6	9.1954	19547	3116.6	9.1337	17103	3116.5	9.0793	15202	3116.5	9.0306	13681
330	603.15	3136.8	9.3845	27830	3136.8	9.3003	23191	3136.8	9.2291	19877	3136.7	9.1674	17392	3136.7	9.1130	15459	3136.6	9.0643	13912
340	613.15	3157.0	9.4177	28292	3157.0	9.3335	23576	3157.0	9.2623	20207	3156.9	9.2006	17681	3156.9	9.1462	15715	3156.9	9.0975	14143

350	623.15	3177.3	9.4504	28754	3177.3	9.3663	23961	3177.2	9.2951	20537	3177.2	9.2334	17969	3177.2	9.1790	15972	3177.1	9.1303	14374
360	633.15	3197.6	9.4828	29216	3197.6	9.3986	24346	3197.6	9.3274	20867	3197.5	9.2658	18258	3197.5	9.2114	16229	3197.5	9.1627	14605
370	643.15	3218.0	9.5148	29677	3218.0	9.4306	24730	3218.0	9.3594	21197	3217.9	9.2977	18547	3217.9	9.2433	16485	3217.9	9.1947	14836
380	653.15	3238.5	9.5463	30139	3238.4	9.4621	25115	3238.4	9.3910	21527	3238.4	9.3293	18835	3238.3	9.2749	16742	3238.3	9.2262	15067
390	663.15	3259.0	9.5775	30601	3259.0	9.4933	25500	3258.9	9.4221	21856	3258.9	9.3605	19124	3258.9	9.3061	16998	3258.8	9.2574	15298
400	673.15	3279.6	9.6083	31062	3279.6	9.5241	25885	3279.5	9.4530	22186	3279.5	9.3913	19412	3279.5	9.3369	17255	3279.4	9.2882	15529
410	683.15	3300.2	9.6388	31524	3300.2	9.5546	26269	3300.2	9.4834	22516	3300.1	9.4218	19701	3300.1	9.3674	17512	3300.1	9.3187	15760
420	693.15	3321.0	9.6689	31986	3320.9	9.5847	26654	3320.9	9.5135	22846	3320.9	9.4519	19990	3320.8	9.3975	17768	3320.8	9.3488	15991
430	703.15	3341.7	9.6986	32447	3341.7	9.6145	27039	3341.7	9.5433	23176	3341.7	9.4816	20278	3341.6	9.4273	18025	3341.6	9.3786	16222
440	713.15	3362.6	9.7281	32909	3362.6	9.6439	27424	3362.5	9.5727	23505	3362.5	9.5111	20567	3362.5	9.4567	18281	3362.5	9.4081	16453
450	723.15	3383.5	9.7572	33371	3383.5	9.6730	27808	3383.5	9.6019	23835	3383.4	9.5402	20855	3383.4	9.4858	18538	3383.4	9.4372	16684
460	733.15	3404.5	9.7860	33832	3404.5	9.7019	28193	3404.4	9.6307	24165	3404.4	9.5690	21144	3404.4	9.5147	18794	3404.4	9.4660	16914
470	743.15	3425.6	9.8146	34294	3425.5	9.7304	28578	3425.5	9.6592	24495	3425.5	9.5976	21433	3425.5	9.5432	19051	3425.4	9.4945	17145
480	753.15	3446.7	9.8428	34756	3446.7	9.7586	28962	3446.6	9.6875	24825	3446.6	9.6258	21721	3446.6	9.5714	19307	3446.6	9.5228	17376
490	763.15	3467.9	9.8707	35217	3467.8	9.7866	29347	3467.8	9.7154	25154	3467.8	9.6538	22010	3467.8	9.5994	19564	3467.8	9.5507	17607
500	773.15	3489.1	9.8984	35679	3489.1	9.8143	29732	3489.1	9.7431	25484	3489.1	9.6814	22298	3489.0	9.6271	19820	3489.0	9.5784	17838
510	783.15	3510.5	9.9258	36140	3510.4	9.8417	30117	3510.4	9.7705	25814	3510.4	9.7089	22587	3510.4	9.6545	20077	3510.3	9.6058	18069
520	793.15	3531.9	9.9530	36602	3531.8	9.8688	30501	3531.8	9.7977	26144	3531.8	9.7360	22875	3531.8	9.6816	20333	3531.8	9.6330	18300
530	803.15	3553.3	9.9799	37064	3553.3	9.8957	30886	3553.3	9.8246	26473	3553.3	9.7629	23164	3553.2	9.7085	20590	3553.2	9.6599	18531
540	813.15	3574.9	10.0065	37525	3574.8	9.9224	31271	3574.8	9.8512	26803	3574.8	9.7896	23452	3574.8	9.7352	20846	3574.8	9.6865	18761
550	823.15	3596.5	10.0329	37987	3596.4	9.9488	31655	3596.4	9.8776	27133	3596.4	9.8160	23741	3596.4	9.7616	21103	3596.4	9.7130	18992
560	833.15	3618.1	10.0591	38448	3618.1	9.9749	32040	3618.1	9.9038	27462	3618.1	9.8421	24029	3618.1	9.7878	21359	3618.0	9.7391	19223
570	843.15	3639.9	10.0851	38910	3639.9	10.0009	32425	3639.8	9.9297	27792	3639.8	9.8681	24318	3639.8	9.8137	21616	3639.8	9.7651	19454
580	853.15	3661.7	10.1108	39372	3661.7	10.0266	32809	3661.7	9.9555	28122	3661.6	9.8938	24606	3661.6	9.8394	21872	3661.6	9.7908	19685
590	863.15	3683.6	10.1363	39833	3683.6	10.0521	33194	3683.5	9.9810	28452	3683.5	9.9193	24895	3683.5	9.8649	22129	3683.5	9.8163	19916
600	873.15	3705.5	10.1616	40295	3705.5	10.0774	33579	3705.5	10.0062	28781	3705.5	9.9446	25183	3705.5	9.8902	22385	3705.4	9.8416	20146
610	883.15	3727.5	10.1866	40756	3727.5	10.1025	33963	3727.5	10.0313	29111	3727.5	9.9697	25472	3727.5	9.9153	22642	3727.5	9.8667	20377
620	893.15	3749.6	10.2115	41218	3749.6	10.1273	34348	3749.6	10.0562	29441	3749.6	9.9946	25761	3749.6	9.9402	22898	3749.6	9.8915	20608
630	903.15	3771.8	10.2362	41679	3771.8	10.1520	34733	3771.8	10.0809	29771	3771.7	10.0192	26049	3771.7	9.9649	23154	3771.7	9.9162	20839
640	913.15	3794.0	10.2606	42141	3794.0	10.1765	35117	3794.0	10.1053	30100	3794.0	10.0437	26338	3794.0	9.9893	23411	3793.9	9.9407	21070
650	923.15	3816.3	10.2849	42603	3816.3	10.2008	35502	3816.3	10.1296	30430	3816.3	10.0680	26626	3816.3	10.0136	23667	3816.2	9.9650	21300
660	933.15	3838.7	10.3090	43064	3838.7	10.2249	35887	3838.6	10.1537	30760	3838.6	10.0921	26915	3838.6	10.0377	23924	3838.6	9.9891	21531
670	943.15	3861.1	10.3329	43526	3861.1	10.2488	36271	3861.1	10.1776	31089	3861.1	10.1160	27203	3861.1	10.0616	24180	3861.0	10.0130	21762
680	953.15	3883.6	10.3567	43987	3883.6	10.2725	36656	3883.6	10.2014	31419	3883.6	10.1397	27492	3883.6	10.0853	24437	3883.5	10.0367	21993
690	963.15	3906.2	10.3802	44449	3906.2	10.2961	37041	3906.1	10.2249	31749	3906.1	10.1633	27780	3906.1	10.1089	24693	3906.1	10.0603	22224
700	973.15	3928.8	10.4036	44910	3928.8	10.3194	37425	3928.8	10.2483	32078	3928.8	10.1866	28069	3928.7	10.1323	24950	3928.7	10.0836	22455
710	983.15	3951.5	10.4268	45372	3951.5	10.3426	37810	3951.5	10.2715	32408	3951.5	10.2098	28357	3951.4	10.1555	25206	3951.4	10.1068	22685
720	993.15	3974.3	10.4498	45834	3974.2	10.3657	38194	3974.2	10.2945	32738	3974.2	10.2329	28645	3974.2	10.1785	25463	3974.2	10.1299	22916
730	1003.15	3997.1	10.4727	46295	3997.1	10.3885	38579	3997.1	10.3174	33068	3997.1	10.2558	28934	3997.0	10.2014	25719	3997.0	10.1528	23147
740	1013.15	4020.0	10.4954	46757	4020.0	10.4113	38964	4020.0	10.3401	33397	4020.0	10.2785	29222	4019.9	10.2241	25975	4019.9	10.1755	23378
750	1023.15	4042.9	10.5180	47218	4042.9	10.4338	39348	4042.9	10.3627	33727	4042.9	10.3010	29511	4042.9	10.2467	26232	4042.9	10.1980	23609
760	1033.15	4066.0	10.5404	47680	4066.0	10.4562	39733	4065.9	10.3851	34057	4065.9	10.3234	29799	4065.9	10.2691	26488	4065.9	10.2204	23839
770	1043.15	4089.1	10.5626	48141	4089.0	10.4784	40118	4089.0	10.4073	34386	4089.0	10.3457	30088	4089.0	10.2913	26745	4089.0	10.2427	24070
780	1053.15	4112.2	10.5847	48603	4112.2	10.5005	40502	4112.2	10.4294	34716	4112.2	10.3677	30376	4112.2	10.3134	27001	4112.2	10.2647	24301
790	1063.15	4135.4	10.6066	49064	4135.4	10.5225	40887	4135.4	10.4513	35046	4135.4	10.3897	30665	4135.4	10.3353	27258	4135.4	10.2867	24532
800	1073.15	4158.7	10.6284	49526	4158.7	10.5443	41271	4158.7	10.4731	35375	4158.7	10.4115	30953	4158.7	10.3571	27514	4158.7	10.3085	24762

COLEGIO DE CIENCIAS FISICAS Y MATEMATICAS
BIBLIOTECA CENTRAL
DEPTO. PROCESOS TECNICOS
CHILE

Table 3 Water and Steam—*continued*

p (*abs*) bar		0.20			0.22			0.24			0.26			0.28			0.30		
t_s °C		60.1			62.2			64.1			65.9			67.5			69.1		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		251.5	0.8321	1.0172	260.1	0.8581	1.0183	268.2	0.8820	1.0194	275.7	0.9041	1.0204	282.7	0.9248	1.0214	289.3	0.9441	1.0223
Sat. Vapour		2609.9	7.9094	7649.2	2613.5	7.8764	6994.6	2616.8	7.8464	6446.2	2619.9	7.8188	5979.9	2622.7	7.7932	5578.4	2625.4	7.7695	5229.0
t °C	T K																		
0	273.15	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002
10	283.15	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002
20	293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60	333.15	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171
70	343.15	2628.8	7.9656	7882.7	2628.5	7.9208	7162.9	2628.2	7.8798	6562.9	2627.8	7.8421	6055.3	2627.5	7.8071	5620.2	2627.1	7.7745	5243.1
80	353.15	2648.0	8.0206	8117.2	2647.7	7.9759	7376.3	2647.4	7.9350	6758.9	2647.1	7.8974	6236.5	2646.8	7.8625	5788.8	2646.5	7.8300	5400.7
90	363.15	2667.1	8.0740	8351.2	2666.9	8.0294	7589.3	2666.6	7.9887	6954.5	2666.3	7.9511	6417.3	2666.0	7.9163	5956.8	2665.8	7.8839	5557.8
100	373.15	2686.3	8.1261	8584.7	2686.0	8.0816	7801.9	2685.8	8.0409	7149.6	2685.6	8.0034	6597.6	2685.3	7.9687	6124.5	2685.1	7.9363	5714.4
110	383.15	2705.5	8.1768	8817.9	2705.2	8.1323	8014.1	2705.0	8.0917	7344.3	2704.8	8.0543	6777.5	2704.6	8.0196	6291.7	2704.3	7.9873	5870.7
120	393.15	2724.6	8.2262	9050.8	2724.4	8.1818	8226.0	2724.2	8.1412	7538.8	2724.0	8.1039	6957.2	2723.8	8.0693	6458.7	2723.6	8.0370	6026.7
130	403.15	2743.8	8.2744	9283.4	2743.7	8.2301	8437.7	2743.5	8.1896	7732.9	2743.3	8.1523	7136.6	2743.1	8.1177	6625.4	2742.9	8.0855	6182.4
140	413.15	2763.1	8.3215	9515.8	2762.9	8.2772	8649.1	2762.8	8.2368	7926.9	2762.6	8.1995	7315.7	2762.4	8.1650	6791.9	2762.3	8.1329	6337.9
150	423.15	2782.3	8.3676	9748.0	2782.2	8.3233	8860.4	2782.0	8.2829	8120.6	2781.9	8.2457	7494.7	2781.7	8.2112	6958.2	2781.6	8.1791	6493.2
160	433.15	2801.6	8.4127	9980.1	2801.5	8.3684	9071.4	2801.4	8.3280	8314.2	2801.2	8.2908	7673.5	2801.1	8.2564	7124.3	2801.0	8.2243	6648.3
170	443.15	2821.0	8.4568	10212	2820.8	8.4126	9282.3	2820.7	8.3722	8507.6	2820.6	8.3350	7852.1	2820.5	8.3006	7290.3	2820.3	8.2686	6803.3
180	453.15	2840.3	8.5000	10444	2840.2	8.4558	9493.1	2840.1	8.4154	8701.0	2840.0	8.3783	8030.6	2839.9	8.3439	7456.1	2839.8	8.3119	6958.2
190	463.15	2859.7	8.5423	10675	2859.6	8.4982	9703.8	2859.5	8.4578	8894.1	2859.4	8.4207	8209.1	2859.3	8.3864	7621.8	2859.2	8.3544	7112.9
200	473.15	2879.2	8.5839	10907	2879.1	8.5397	9914.4	2879.0	8.4994	9087.2	2878.9	8.4623	8387.4	2878.8	8.4280	7787.5	2878.7	8.3960	7267.5
210	483.15	2898.7	8.6246	11138	2898.6	8.5805	10125	2898.5	8.5402	9280.3	2898.4	8.5031	8565.6	2898.3	8.4688	7953.0	2898.2	8.4368	7422.1
220	493.15	2918.2	8.6647	11370	2918.1	8.6206	10335	2918.0	8.5803	9473.2	2918.0	8.5432	8743.7	2917.9	8.5089	8118.5	2917.8	8.4769	7576.6
230	503.15	2937.8	8.7040	11601	2937.7	8.6599	10546	2937.6	8.6196	9666.1	2937.6	8.5826	8921.8	2937.5	8.5483	8283.9	2937.4	8.5163	7731.0
240	513.15	2957.4	8.7426	11832	2957.4	8.6985	10756	2957.3	8.6583	9858.9	2957.2	8.6212	9099.9	2957.1	8.5869	8449.3	2957.1	8.5550	7885.4
250	523.15	2977.1	8.7806	12064	2977.0	8.7366	10966	2977.0	8.6963	10052	2976.9	8.6593	9277.9	2976.9	8.6250	8614.6	2976.8	8.5930	8039.7
260	533.15	2996.9	8.8180	12295	2996.8	8.7739	11176	2996.7	8.7337	10244	2996.7	8.6967	9455.8	2996.6	8.6624	8779.8	2996.6	8.6305	8194.0
270	543.15	3016.7	8.8548	12526	3016.6	8.8107	11387	3016.5	8.7705	10437	3016.5	8.7335	9633.7	3016.4	8.6992	8945.1	3016.4	8.6673	8348.2
280	553.15	3036.5	8.8910	12757	3036.5	8.8470	11597	3036.4	8.8067	10630	3036.3	8.7697	9811.6	3036.3	8.7355	9110.3	3036.2	8.7035	8502.4
290	563.15	3056.4	8.9267	12988	3056.4	8.8826	11807	3056.3	8.8424	10822	3056.3	8.8054	9989.4	3056.2	8.7711	9275.4	3056.2	8.7392	8656.6
300	573.15	3076.4	8.9618	13219	3076.3	8.9178	12017	3076.3	8.8776	11015	3076.2	8.8406	10167	3076.2	8.8063	9440.6	3076.1	8.7744	8810.8
310	583.15	3096.4	8.9965	13450	3096.4	8.9524	12227	3096.3	8.9122	11208	3096.3	8.8752	10345	3096.2	8.8410	9605.7	3096.2	8.8091	8964.9
320	593.15	3116.5	9.0306	13681	3116.5	8.9866	12437	3116.4	8.9464	11400	3116.4	8.9094	10523	3116.3	8.8751	9770.8	3116.3	8.8432	9119.0
330	603.15	3136.6	9.0643	13912	3136.6	9.0203	12647	3136.6	8.9801	11593	3136.5	8.9431	10701	3136.5	8.9088	9935.9	3136.4	8.8769	9273.1
340	613.15	3156.9	9.0975	14143	3156.8	9.0535	12857	3156.8	9.0133	11785	3156.7	8.9763	10878	3156.7	8.9421	10101	3156.7	8.9102	9427.2

350	623.15	3177.1	9.1303	14374	3177.1	9.0863	13067	3177.0	9.0461	11978	3177.0	9.0091	11056	3177.0	8.9749	10266	3176.9	8.9430	9581.2
360	633.15	3197.5	9.1627	14605	3197.4	9.1187	13277	3197.4	9.0785	12170	3197.4	9.0415	11234	3197.3	9.0073	10431	3197.3	8.9754	9735.3
370	643.15	3217.9	9.1947	14836	3217.8	9.1506	13487	3217.8	9.1105	12363	3217.8	9.0735	11411	3217.7	9.0392	10596	3217.7	9.0074	9889.3
380	653.15	3238.3	9.2262	15067	3238.3	9.1822	13697	3238.2	9.1420	12555	3238.2	9.1050	11589	3238.2	9.0708	10761	3238.2	9.0389	10043
390	663.15	3258.8	9.2574	15298	3258.8	9.2134	13907	3258.8	9.1732	12748	3258.7	9.1362	11767	3258.7	9.1020	10926	3258.7	9.0701	10197
400	673.15	3279.4	9.2882	15529	3279.4	9.2442	14117	3279.4	9.2040	12940	3279.3	9.1671	11945	3279.3	9.1328	11091	3279.3	9.1010	10351
410	683.15	3300.1	9.3187	15760	3300.1	9.2747	14327	3300.0	9.2345	13133	3300.0	9.1975	12122	3300.0	9.1633	11256	3299.9	9.1314	10505
420	693.15	3320.8	9.3488	15991	3320.8	9.3048	14537	3320.8	9.2646	13325	3320.7	9.2276	12300	3320.7	9.1934	11421	3320.7	9.1615	10659
430	703.15	3341.6	9.3786	16222	3341.6	9.3346	14747	3341.5	9.2944	13518	3341.5	9.2574	12477	3341.5	9.2232	11586	3341.5	9.1913	10813
440	713.15	3362.5	9.4081	16453	3362.4	9.3640	14957	3362.4	9.3239	13710	3362.4	9.2869	12655	3362.4	9.2527	11751	3362.3	9.2208	10967
450	723.15	3383.4	9.4372	16684	3383.4	9.3932	15167	3383.3	9.3530	13902	3383.3	9.3160	12833	3383.3	9.2818	11916	3383.3	9.2499	11121
460	733.15	3404.4	9.4660	16914	3404.3	9.4220	15377	3404.3	9.3818	14095	3404.3	9.3449	13010	3404.3	9.3106	12081	3404.2	9.2788	11275
470	743.15	3425.4	9.4945	17145	3425.4	9.4505	15586	3425.4	9.4104	14287	3425.4	9.3734	13188	3425.3	9.3392	12246	3425.3	9.3073	11429
480	753.15	3446.6	9.5228	17376	3446.5	9.4788	15796	3446.5	9.4386	14480	3446.5	9.4016	13366	3446.5	9.3674	12411	3446.4	9.3355	11583
490	763.15	3467.8	9.5507	17607	3467.7	9.5067	16006	3467.7	9.4666	14672	3467.7	9.4296	13543	3467.7	9.3954	12576	3467.6	9.3635	11737
500	773.15	3489.0	9.5784	17838	3489.0	9.5344	16216	3489.0	9.4942	14865	3489.0	9.4573	13721	3488.9	9.4231	12741	3488.9	9.3912	11891
510	783.15	3510.3	9.6058	18069	3510.3	9.5618	16426	3510.3	9.5217	15057	3510.3	9.4847	13898	3510.3	9.4505	12906	3510.2	9.4186	12045
520	793.15	3531.8	9.6330	18300	3531.7	9.5890	16636	3531.7	9.5488	15249	3531.7	9.5119	14076	3531.7	9.4776	13070	3531.6	9.4458	12199
530	803.15	3553.2	9.6599	18531	3553.2	9.6159	16846	3553.2	9.5757	15442	3553.2	9.5388	14254	3553.1	9.5045	13235	3553.1	9.4727	12353
540	813.15	3574.8	9.6865	18761	3574.7	9.6425	17056	3574.7	9.6024	15634	3574.7	9.5654	14431	3574.7	9.5312	13400	3574.7	9.4993	12507
550	823.15	3596.4	9.7130	18992	3596.3	9.6690	17265	3596.3	9.6288	15826	3596.3	9.5918	14609	3596.3	9.5576	13565	3596.3	9.5257	12661
560	833.15	3618.0	9.7391	19223	3618.0	9.6951	17475	3618.0	9.6550	16019	3618.0	9.6180	14786	3618.0	9.5838	13730	3618.0	9.5519	12815
570	843.15	3639.8	9.7651	19454	3639.8	9.7211	17685	3639.8	9.6809	16211	3639.7	9.6439	14964	3639.7	9.6097	13895	3639.7	9.5779	12969
580	853.15	3661.6	9.7908	19685	3661.6	9.7468	17895	3661.6	9.7066	16404	3661.6	9.6697	15142	3661.5	9.6355	14060	3661.5	9.6036	13122
590	863.15	3683.5	9.8163	19916	3683.5	9.7723	18105	3683.5	9.7321	16596	3683.4	9.6952	15319	3683.4	9.6610	14225	3683.4	9.6291	13276
600	873.15	3705.4	9.8416	20146	3705.4	9.7976	18315	3705.4	9.7574	16788	3705.4	9.7205	15497	3705.4	9.6862	14390	3705.4	9.6544	13430
610	883.15	3727.5	9.8667	20377	3727.5	9.8227	18525	3727.4	9.7825	16981	3727.4	9.7455	15674	3727.4	9.7113	14555	3727.4	9.6795	13584
620	893.15	3749.6	9.8915	20608	3749.5	9.8475	18734	3749.5	9.8074	17173	3749.5	9.7704	15852	3749.5	9.7362	14719	3749.5	9.7043	13738
630	903.15	3771.7	9.9162	20839	3771.7	9.8722	18944	3771.7	9.8320	17365	3771.7	9.7951	16029	3771.7	9.7609	14884	3771.6	9.7290	13892
640	913.15	3793.9	9.9407	21070	3793.9	9.8967	19154	3793.9	9.8565	17558	3793.9	9.8196	16207	3793.9	9.7854	15049	3793.9	9.7535	14046
650	923.15	3816.2	9.9650	21300	3816.2	9.9210	19364	3816.2	9.8808	17750	3816.2	9.8439	16385	3816.2	9.8096	15214	3816.2	9.7778	14200
660	933.15	3838.6	9.9891	21531	3838.6	9.9451	19574	3838.6	9.9049	17942	3838.6	9.8680	16562	3838.6	9.8337	15379	3838.5	9.8019	14354
670	943.15	3861.0	10.0130	21762	3861.0	9.9690	19784	3861.0	9.9288	18135	3861.0	9.8919	16740	3861.0	9.8577	15544	3861.0	9.8258	14508
680	953.15	3883.5	10.0367	21993	3883.5	9.9927	19993	3883.5	9.9525	18327	3883.5	9.9156	16917	3883.5	9.8814	15709	3883.5	9.8495	14661
690	963.15	3906.1	10.0603	22224	3906.1	10.0163	20203	3906.1	9.9761	18520	3906.1	9.9391	17095	3906.1	9.9049	15874	3906.0	9.8731	14815
700	973.15	3928.7	10.0836	22455	3928.7	10.0396	20413	3928.7	9.9995	18712	3928.7	9.9625	17272	3928.7	9.9283	16039	3928.7	9.8965	14969
710	983.15	3951.4	10.1068	22685	3951.4	10.0629	20623	3951.4	10.0227	18904	3951.4	9.9857	17450	3951.4	9.9515	16203	3951.4	9.9197	15123
720	993.15	3974.2	10.1299	22916	3974.2	10.0859	20833	3974.2	10.0457	19097	3974.2	10.0088	17627	3974.2	9.9746	16368	3974.1	9.9427	15277
730	1003.15	3997.0	10.1528	23147	3997.0	10.1088	21043	3997.0	10.0686	19289	3997.0	10.0316	17805	3997.0	9.9974	16533	3997.0	9.9656	15431
740	1013.15	4019.9	10.1755	23378	4019.9	10.1315	21252	4019.9	10.0913	19481	4019.9	10.0544	17983	4019.9	10.0202	16698	4019.9	9.9883	15585
750	1023.15	4042.9	10.1980	23609	4042.9	10.1540	21462	4042.9	10.1139	19674	4042.9	10.0769	18160	4042.8	10.0427	16863	4042.8	10.0109	15739
760	1033.15	4065.9	10.2204	23839	4065.9	10.1764	21672	4065.9	10.1363	19866	4065.9	10.0993	18338	4065.9	10.0651	17028	4065.9	10.0333	15893
770	1043.15	4089.0	10.2427	24070	4089.0	10.1987	21882	4089.0	10.1585	20058	4089.0	10.1216	18515	4089.0	10.0873	17193	4089.0	10.0555	16046
780	1053.15	4112.2	10.2647	24301	4112.2	10.2208	22092	4112.1	10.1806	20251	4112.1	10.1436	18693	4112.1	10.1094	17357	4112.1	10.0776	16200
790	1063.15	4135.4	10.2867	24532	4135.4	10.2427	22301	4135.4	10.2025	20443	4135.3	10.1656	18870	4135.3	10.1314	17522	4135.3	10.0995	16354
800	1073.15	4158.7	10.3085	24762	4158.6	10.2645	22511	4158.6	10.2243	20635	4158.6	10.1874	19048	4158.6	10.1532	17687	4158.6	10.1213	16508

0.20 to 0.30 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		0.30			0.32			0.34			0.36			0.38			0.40		
t_s °C		69.1			70.6			72.0			73.4			74.7			75.9		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		289.3	0.9441	1.0223	295.6	0.9623	1.0232	301.5	0.9795	1.0241	307.1	0.9958	1.0249	312.5	1.0113	1.0257	317.7	1.0261	1.0265
Sat. Vapour		2625.4	7.7695	5229.0	2628.0	7.7473	4922.0	2630.4	7.7265	4650.1	2632.7	7.7069	4407.6	2634.8	7.6884	4189.8	2636.9	7.6709	3993.2
t °C	T K																		
0	273.15	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002	−0.0	−0.0002	1.0002
10	283.15	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002
20	293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60	333.15	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171
70	343.15	2627.1	7.7745	5243.1	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228
80	353.15	2646.5	7.8300	5400.7	2646.1	7.7995	5061.1	2645.8	7.7708	4761.5	2645.5	7.7438	4495.2	2645.2	7.7181	4256.9	2644.9	7.6937	4042.4
90	363.15	2665.8	7.8839	5557.8	2665.5	7.8535	5208.6	2665.2	7.8249	4900.5	2664.9	7.7979	4626.6	2664.6	7.7724	4381.6	2664.4	7.7481	4161.0
100	373.15	2685.1	7.9363	5714.4	2684.8	7.9060	5355.6	2684.6	7.8775	5039.0	2684.3	7.8506	4757.6	2684.1	7.8251	4505.8	2683.8	7.8009	4279.2
110	383.15	2704.3	7.9873	5870.7	2704.1	7.9571	5502.3	2703.9	7.9287	5177.2	2703.7	7.9018	4888.3	2703.5	7.8764	4629.8	2703.2	7.8523	4397.1
120	393.15	2723.6	8.0370	6026.7	2723.4	8.0069	5648.7	2723.2	7.9785	5315.1	2723.0	7.9517	5018.7	2722.8	7.9263	4753.4	2722.6	7.9023	4514.6
130	403.15	2742.9	8.0855	6182.4	2742.8	8.0554	5794.8	2742.6	8.0271	5452.8	2742.4	8.0003	5148.7	2742.2	7.9750	4876.7	2742.0	7.9510	4631.9
140	413.15	2762.3	8.1329	6337.9	2762.1	8.1028	5940.7	2761.9	8.0745	5590.2	2761.8	8.0478	5278.6	2761.6	8.0225	4999.8	2761.4	7.9985	4748.9
150	423.15	2781.6	8.1791	6493.2	2781.4	8.1490	6086.4	2781.3	8.1208	5727.4	2781.1	8.0941	5408.3	2781.0	8.0689	5122.7	2780.9	8.0450	4865.8
160	433.15	2801.0	8.2243	6648.3	2800.8	8.1943	6231.9	2800.7	8.1661	5864.4	2800.5	8.1394	5537.8	2800.4	8.1143	5245.5	2800.3	8.0903	4982.5
170	443.15	2820.3	8.2686	6803.3	2820.2	8.2386	6377.2	2820.1	8.2104	6001.3	2820.0	8.1838	5667.1	2819.8	8.1586	5368.1	2819.7	8.1347	5099.0
180	453.15	2839.8	8.3119	6958.2	2839.6	8.2819	6522.5	2839.5	8.2537	6138.0	2839.4	8.2272	5796.3	2839.3	8.2020	5490.6	2839.2	8.1782	5215.4
190	463.15	2859.2	8.3544	7112.9	2859.1	8.3244	6667.6	2859.0	8.2962	6274.7	2858.9	8.2697	5925.4	2858.8	8.2446	5612.9	2858.7	8.2207	5331.7
200	473.15	2878.7	8.3960	7267.5	2878.6	8.3660	6812.6	2878.5	8.3379	6411.2	2878.4	8.3114	6054.4	2878.3	8.2863	5735.2	2878.2	8.2625	5447.8
210	483.15	2898.2	8.4368	7422.1	2898.1	8.4069	6957.6	2898.1	8.3788	6547.7	2898.0	8.3523	6183.3	2897.9	8.3272	5857.3	2897.8	8.3034	5563.9
220	493.15	2917.8	8.4769	7576.6	2917.7	8.4470	7102.4	2917.6	8.4189	6684.1	2917.6	8.3924	6312.2	2917.5	8.3673	5979.4	2917.4	8.3435	5680.0
230	503.15	2937.4	8.5163	7731.0	2937.3	8.4864	7247.2	2937.3	8.4583	6820.4	2937.2	8.4318	6441.0	2937.1	8.4068	6101.5	2937.0	8.3830	5795.9
240	513.15	2957.1	8.5550	7885.4	2957.0	8.5251	7392.0	2956.9	8.4970	6956.7	2956.9	8.4706	6569.7	2956.8	8.4455	6223.5	2956.7	8.4217	5911.8
250	523.15	2976.8	8.5930	8039.7	2976.7	8.5632	7536.7	2976.7	8.5351	7092.9	2976.6	8.5086	6698.4	2976.5	8.4836	6345.4	2976.5	8.4598	6027.7
260	533.15	2996.6	8.6305	8194.0	2996.5	8.6006	7681.4	2996.4	8.5725	7229.1	2996.4	8.5461	6827.0	2996.3	8.5210	6467.3	2996.3	8.4973	6143.5
270	543.15	3016.4	8.6673	8348.2	3016.3	8.6374	7826.0	3016.3	8.6094	7365.2	3016.2	8.5829	6955.6	3016.1	8.5579	6589.1	3016.1	8.5341	6259.3
280	553.15	3036.2	8.7035	8502.4	3036.2	8.6737	7970.6	3036.1	8.6456	7501.3	3036.1	8.6192	7084.2	3036.0	8.5942	6711.0	3036.0	8.5704	6375.1
290	563.15	3056.2	8.7392	8656.6	3056.1	8.7094	8115.2	3056.1	8.6813	7637.4	3056.0	8.6549	7212.7	3056.0	8.6299	6832.8	3055.9	8.6061	6490.8
300	573.15	3076.1	8.7744	8810.8	3076.1	8.7446	8259.7	3076.1	8.7165	7773.5	3076.0	8.6901	7341.2	3076.0	8.6651	6954.5	3075.9	8.6413	6606.5
310	583.15	3096.2	8.8091	8964.9	3096.1	8.7792	8404.2	3096.1	8.7512	7909.5	3096.0	8.7248	7469.7	3096.0	8.6997	7076.3	3096.0	8.6760	6722.1
320	593.15	3116.3	8.8432	9119.0	3116.2	8.8134	8548.7	3116.2	8.7854	8045.5	3116.2	8.7589	7598.2	3116.1	8.7339	7198.0	3116.1	8.7102	6837.8
330	603.15	3136.4	8.8769	9273.1	3136.4	8.8471	8693.2	3136.4	8.8191	8181.5	3136.3	8.7926	7726.6	3136.3	8.7676	7319.7	3136.2	8.7439	6953.4
340	613.15	3156.7	8.9102	9427.2	3156.6	8.8804	8837.6	3156.6	8.8523	8317.5	3156.5	8.8259	7855.1	3156.5	8.8009	7441.4	3156.5	8.7772	7069.0

350	623.15	3176.9	8.9430	9581.2	3176.9	8.9132	8982.1	3176.9	8.8851	8453.4	3176.8	8.8587	7983.5	3176.8	8.8337	7563.1	3176.8	8.8100	718
360	633.15	3197.3	8.9754	9735.3	3197.2	8.9456	9126.5	3197.2	8.9175	8589.4	3197.2	8.8911	8111.9	3197.1	8.8661	7684.7	3197.1	8.8424	730
370	643.15	3217.7	9.0074	9889.3	3217.6	8.9775	9270.9	3217.6	8.9495	8725.3	3217.6	8.9231	8240.3	3217.5	8.8981	7806.4	3217.5	8.8744	741
380	653.15	3238.2	9.0389	10043	3238.1	9.0091	9415.3	3238.1	8.9811	8861.2	3238.1	8.9547	8368.7	3238.0	8.9297	7928.0	3238.0	8.9060	753
390	663.15	3258.7	9.0701	10197	3258.7	9.0403	9559.7	3258.6	9.0123	8997.2	3258.6	8.9859	8497.1	3258.6	8.9609	8049.6	3258.5	8.9372	764
400	673.15	3279.3	9.1010	10351	3279.2	9.0711	9704.1	3279.2	9.0431	9133.1	3279.2	9.0167	8625.4	3279.2	8.9917	8171.2	3279.1	8.9680	776
410	683.15	3299.9	9.1314	10505	3299.9	9.1016	9848.5	3299.9	9.0736	9269.0	3299.9	9.0472	8753.8	3299.8	9.0222	8292.9	3299.8	8.9985	787
420	693.15	3320.7	9.1615	10659	3320.6	9.1317	9992.9	3320.6	9.1037	9404.8	3320.6	9.0773	8882.1	3320.6	9.0523	8414.5	3320.5	9.0286	799
430	703.15	3341.5	9.1913	10813	3341.4	9.1615	10137	3341.4	9.1335	9540.7	3341.4	9.1071	9010.5	3341.4	9.0821	8536.1	3341.3	9.0584	810
440	713.15	3362.3	9.2208	10967	3362.3	9.1910	10282	3362.3	9.1630	9676.6	3362.2	9.1366	9138.8	3362.2	9.1116	8657.6	3362.2	9.0879	822
450	723.15	3383.3	9.2499	11121	3383.2	9.2201	10426	3383.2	9.1921	9812.5	3383.2	9.1657	9267.1	3383.2	9.1407	8779.2	3383.1	9.1170	834
460	733.15	3404.2	9.2788	11275	3404.2	9.2490	10570	3404.2	9.2210	9948.3	3404.2	9.1945	9395.5	3404.1	9.1696	8900.8	3404.1	9.1459	845
470	743.15	3425.3	9.3073	11429	3425.3	9.2775	10715	3425.3	9.2495	10084	3425.2	9.2231	9523.8	3425.2	9.1981	9022.4	3425.2	9.1744	857
480	753.15	3446.4	9.3355	11583	3446.4	9.3057	10859	3446.4	9.2777	10220	3446.4	9.2513	9652.1	3446.3	9.2264	9143.9	3446.3	9.2027	8686
490	763.15	3467.6	9.3635	11737	3467.6	9.3337	11003	3467.6	9.3057	10356	3467.6	9.2793	9780.4	3467.6	9.2543	9265.5	3467.5	9.2306	8802
500	773.15	3488.9	9.3912	11891	3488.9	9.3614	11148	3488.9	9.3334	10492	3488.8	9.3070	9908.7	3488.8	9.2820	9387.1	3488.8	9.2583	8917
510	783.15	3510.2	9.4186	12045	3510.2	9.3888	11292	3510.2	9.3608	10628	3510.2	9.3344	10037	3510.2	9.3094	9508.6	3510.1	9.2857	9033
520	793.15	3531.6	9.4458	12199	3531.6	9.4160	11436	3531.6	9.3880	10763	3531.6	9.3616	10165	3531.6	9.3366	9630.2	3531.5	9.3129	9148
530	803.15	3553.1	9.4727	12353	3553.1	9.4429	11581	3553.1	9.4149	10899	3553.1	9.3885	10294	3553.0	9.3635	9751.7	3553.0	9.3398	9264
540	813.15	3574.7	9.4993	12507	3574.6	9.4695	11725	3574.6	9.4415	11035	3574.6	9.4151	10422	3574.6	9.3902	9873.2	3574.6	9.3665	9379.
550	823.15	3596.3	9.5257	12661	3596.3	9.4959	11869	3596.2	9.4679	11171	3596.2	9.4415	10550	3596.2	9.4166	9994.8	3596.2	9.3929	9494.
560	833.15	3618.0	9.5519	12815	3617.9	9.5221	12014	3617.9	9.4941	11307	3617.9	9.4677	10678	3617.9	9.4428	10116	3617.9	9.4191	9610.
570	843.15	3639.7	9.5779	12969	3639.7	9.5481	12158	3639.7	9.5201	11443	3639.6	9.4937	10807	3639.6	9.4687	10238	3639.6	9.4450	9725.
580	853.15	3661.5	9.6036	13122	3661.5	9.5738	12302	3661.5	9.5458	11578	3661.5	9.5194	10935	3661.5	9.4944	10359	3661.4	9.4708	9841.
590	863.15	3683.4	9.6291	13276	3683.4	9.5993	12446	3683.4	9.5713	11714	3683.4	9.5449	11063	3683.3	9.5199	10481	3683.3	9.4963	9956.
600	873.15	3705.4	9.6544	13430	3705.3	9.6246	12591	3705.3	9.5966	11850	3705.3	9.5702	11192	3705.3	9.5452	10602	3705.3	9.5216	1007
610	883.15	3727.4	9.6795	13584	3727.4	9.6497	12735	3727.4	9.6217	11986	3727.3	9.5953	11320	3727.3	9.5703	10724	3727.3	9.5466	1018
620	893.15	3749.5	9.7043	13738	3749.5	9.6746	12879	3749.5	9.6466	12122	3749.4	9.6202	11448	3749.4	9.5952	10845	3749.4	9.5715	1030.
630	903.15	3771.6	9.7290	13892	3771.6	9.6992	13024	3771.6	9.6712	12257	3771.6	9.6448	11576	3771.6	9.6199	10967	3771.6	9.5962	1041
640	913.15	3793.9	9.7535	14046	3793.9	9.7237	13168	3793.8	9.6957	12393	3793.8	9.6693	11705	3793.8	9.6444	11088	3793.8	9.6207	1053
650	923.15	3816.2	9.7778	14200	3816.2	9.7480	13312	3816.1	9.7200	12529	3816.1	9.6936	11833	3816.1	9.6686	11210	3816.1	9.6450	1064
660	933.15	3838.5	9.8019	14354	3838.5	9.7721	13456	3838.5	9.7441	12665	3838.5	9.7177	11961	3838.5	9.6927	11332	3838.5	9.6691	1076
670	943.15	3861.0	9.8258	14508	3861.0	9.7960	13601	3860.9	9.7680	12801	3860.9	9.7416	12089	3860.9	9.7167	11453	3860.9	9.6930	1088
680	953.15	3883.5	9.8495	14661	3883.5	9.8197	13745	3883.4	9.7917	12936	3883.4	9.7654	12218	3883.4	9.7404	11575	3883.4	9.7167	1099
690	963.15	3906.0	9.8731	14815	3906.0	9.8433	13889	3906.0	9.8153	13072	3906.0	9.7889	12346	3906.0	9.7639	11696	3906.0	9.7403	11111
700	973.15	3928.7	9.8965	14969	3928.7	9.8667	14034	3928.7	9.8387	13208	3928.6	9.8123	12474	3928.6	9.7873	11818	3928.6	9.7636	11227
710	983.15	3951.4	9.9197	15123	3951.4	9.8899	14178	3951.4	9.8619	13344	3951.3	9.8355	12602	3951.3	9.8105	11939	3951.3	9.7869	11342
720	993.15	3974.1	9.9427	15277	3974.1	9.9129	14322	3974.1	9.8849	13480	3974.1	9.8585	12731	3974.1	9.8336	12061	3974.1	9.8099	11457
730	1003.15	3997.0	9.9656	15431	3997.0	9.9358	14466	3997.0	9.9078	13615	3996.9	9.8814	12859	3996.9	9.8565	12182	3996.9	9.8328	11573
740	1013.15	4019.9	9.9883	15585	4019.9	9.9585	14611	4019.9	9.9305	13751	4019.8	9.9041	12987	4019.8	9.8792	12303	4019.8	9.8555	11688
750	1023.15	4042.8	10.0109	15739	4042.8	9.9811	14755	4042.8	9.9531	13887	4042.8	9.9267	13115	4042.8	9.9017	12425	4042.8	9.8780	11804
760	1033.15	4065.9	10.0333	15893	4065.9	10.0035	14899	4065.8	9.9755	14023	4065.8	9.9491	13244	4065.8	9.9241	12546	4065.8	9.9004	11919
770	1043.15	4089.0	10.0555	16046	4088.9	10.0257	15043	4088.9	9.9977	14158	4088.9	9.9713	13372	4088.9	9.9464	12668	4088.9	9.9227	12035
780	1053.15	4112.1	10.0776	16200	4112.1	10.0478	15188	4112.1	10.0198	14294	4112.1	9.9934	13500	4112.1	9.9685	12789	4112.1	9.9448	12150
790	1063.15	4135.3	10.0995	16354	4135.3	10.0697	15332	4135.3	10.0417	14430	4135.3	10.0154	13628	4135.3	9.9904	12911	4135.3	9.9667	12265
800	1073.15	4158.6	10.1213	16508	4158.6	10.0915	15476	4158.6	10.0635	14566	4158.6	10.0372	13757	4158.6	10.0122	13032	4158.6	9.9885	12381

Table 3 Water and Steam—*continued*

p (*abs*) bar		0.40			0.42			0.44			0.46			0.48			0.50		
t_s °C		75.9			77.1			78.2			79.3			80.3			81.3		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		317.7	1.0261	1.0265	322.6	1.0402	1.0273	327.3	1.0538	1.0280	331.9	1.0667	1.0287	336.3	1.0792	1.0294	340.6	1.0912	1.0301
Sat. Vapour		2636.9	7.6709	3993.2	2638.9	7.6542	3814.8	2640.7	7.6383	3652.2	2642.6	7.6231	3503.2	2644.3	7.6086	3366.3	2646.0	7.5947	3240.1
t °C	T K																		
0	273.15	−0.0	−0.0002	1.0002	0.0	−0.0002	1.0002	0.0	−0.0002	1.0002	0.0	−0.0002	1.0002	0.0	−0.0002	1.0002	0.0	−0.0002	1.0002
10	283.15	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.0	0.1510	1.0002
20	293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60	333.15	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171
70	343.15	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228
80	353.15	2644.9	7.6937	4042.4	2644.6	7.6705	3848.3	2644.3	7.6484	3671.9	2644.0	7.6271	3510.8	334.9	1.0753	1.0292	334.9	1.0753	1.0292
90	363.15	2664.4	7.7481	4161.0	2664.1	7.7250	3961.5	2663.8	7.7029	3780.1	2663.5	7.6818	3614.4	2663.3	7.6615	3462.6	2663.0	7.6421	3322.9
100	373.15	2683.8	7.8009	4279.2	2683.6	7.7779	4074.2	2683.3	7.7559	3887.8	2683.1	7.7348	3717.6	2682.8	7.7146	3561.6	2682.6	7.6953	3418.1
110	383.15	2703.2	7.8523	4397.1	2703.0	7.8293	4186.6	2702.8	7.8074	3995.2	2702.6	7.7864	3820.4	2702.3	7.7663	3660.2	2702.1	7.7470	3512.9
120	393.15	2722.6	7.9023	4514.6	2722.4	7.8793	4298.6	2722.2	7.8575	4102.2	2722.0	7.8365	3922.9	2721.8	7.8165	3758.6	2721.6	7.7972	3607.4
130	403.15	2742.0	7.9510	4631.9	2741.9	7.9281	4410.4	2741.7	7.9063	4209.0	2741.5	7.8854	4025.2	2741.3	7.8654	3856.6	2741.1	7.8462	3701.6
140	413.15	2761.4	7.9985	4748.9	2761.3	7.9757	4521.9	2761.1	7.9539	4315.6	2760.9	7.9331	4127.2	2760.8	7.9131	3954.4	2760.6	7.8940	3795.5
150	423.15	2780.9	8.0450	4865.8	2780.7	8.0222	4633.3	2780.6	8.0004	4421.9	2780.4	7.9796	4229.0	2780.3	7.9597	4052.1	2780.1	7.9406	3889.3
160	433.15	2800.3	8.0903	4982.5	2800.1	8.0676	4744.5	2800.0	8.0459	4528.1	2799.9	8.0251	4330.6	2799.7	8.0052	4149.5	2799.6	7.9861	3982.9
170	443.15	2819.7	8.1347	5099.0	2819.6	8.1120	4855.5	2819.5	8.0903	4634.2	2819.4	8.0696	4432.1	2819.2	8.0497	4246.8	2819.1	8.0307	4076.4
180	453.15	2839.2	8.1782	5215.4	2839.1	8.1555	4966.4	2839.0	8.1338	4740.1	2838.9	8.1131	4533.4	2838.7	8.0933	4344.0	2838.6	8.0742	4169.7
190	463.15	2858.7	8.2207	5331.7	2858.6	8.1980	5077.2	2858.5	8.1764	4845.9	2858.4	8.1557	4634.6	2858.3	8.1359	4441.0	2858.2	8.1169	4262.9
200	473.15	2878.2	8.2625	5447.8	2878.1	8.2398	5187.9	2878.0	8.2182	4951.6	2877.9	8.1975	4735.8	2877.8	8.1777	4538.0	2877.7	8.1587	4356.0
210	483.15	2897.8	8.3034	5563.9	2897.7	8.2807	5298.5	2897.6	8.2591	5057.2	2897.5	8.2385	4836.8	2897.4	8.2187	4634.9	2897.4	8.1997	4449.0
220	493.15	2917.4	8.3435	5680.0	2917.3	8.3209	5409.0	2917.2	8.2993	5162.7	2917.2	8.2787	4937.8	2917.1	8.2589	4731.7	2917.0	8.2399	4542.0
230	503.15	2937.0	8.3830	5795.9	2937.0	8.3603	5519.5	2936.9	8.3388	5268.2	2936.8	8.3181	5038.7	2936.7	8.2984	4828.4	2936.7	8.2794	4634.9
240	513.15	2956.7	8.4217	5911.8	2956.7	8.3991	5629.9	2956.6	8.3775	5373.6	2956.5	8.3569	5139.6	2956.5	8.3372	4925.1	2956.4	8.3182	4727.7
250	523.15	2976.5	8.4598	6027.7	2976.4	8.4372	5740.3	2976.3	8.4156	5479.0	2976.3	8.3950	5240.4	2976.2	8.3753	5021.7	2976.1	8.3564	4820.5
260	533.15	2996.3	8.4973	6143.5	2996.2	8.4747	5850.6	2996.1	8.4531	5584.3	2996.1	8.4325	5341.2	2996.0	8.4128	5118.3	2995.9	8.3939	4913.3
270	543.15	3016.1	8.5341	6259.3	3016.0	8.5115	5960.9	3016.0	8.4900	5689.6	3015.9	8.4694	5441.9	3015.9	8.4497	5214.9	3015.8	8.4308	5006.0
280	553.15	3036.0	8.5704	6375.1	3035.9	8.5478	6071.2	3035.9	8.5263	5794.9	3035.8	8.5057	5542.6	3035.8	8.4860	5311.4	3035.7	8.4671	5098.6
290	563.15	3055.9	8.6061	6490.8	3055.9	8.5836	6181.4	3055.8	8.5620	5900.1	3055.8	8.5414	5643.3	3055.7	8.5217	5407.9	3055.7	8.5028	5191.3
300	573.15	3075.9	8.6413	6606.5	3075.9	8.6188	6291.6	3075.8	8.5972	6005.3	3075.8	8.5767	5743.9	3075.7	8.5569	5504.3	3075.7	8.5380	5283.9
310	583.15	3096.0	8.6760	6722.1	3095.9	8.6534	6401.8	3095.9	8.6319	6110.5	3095.8	8.6113	5844.5	3095.8	8.5916	5600.8	3095.7	8.5728	5376.5
320	593.15	3116.1	8.7102	6837.8	3116.0	8.6876	6511.9	3116.0	8.6661	6215.6	3115.9	8.6455	5945.1	3115.9	8.6259	5697.2	3115.9	8.6070	5469.1
330	603.15	3136.2	8.7439	6953.4	3136.2	8.7214	6622.0	3136.2	8.6998	6320.8	3136.1	8.6793	6045.7	3136.1	8.6596	5793.6	3136.0	8.6407	5561.6
340	613.15	3156.5	8.7772	7069.0	3156.4	8.7546	6732.2	3156.4	8.7331	6425.9	3156.3	8.7125	6146.3	3156.3	8.6929	5890.0	3156.3	8.6740	5654.2

350	623.15	3176.8	8.8100	7184.6	3176.7	8.7874	6842.3	3176.7	8.7659	6531.0	3176.6	8.7454	6246.9	3176.6	8.7257	5986.4	3176.6	8.7068	5746.7
360	633.15	3197.1	8.8424	7300.2	3197.1	8.8198	6952.4	3197.0	8.7983	6636.1	3197.0	8.7778	6347.4	3197.0	8.7581	6082.7	3196.9	8.7392	5839.2
370	643.15	3217.5	8.8744	7415.8	3217.5	8.8518	7062.5	3217.4	8.8303	6741.2	3217.4	8.8098	6447.9	3217.4	8.7901	6179.1	3217.3	8.7712	5931.7
380	653.15	3238.0	8.9060	7531.4	3238.0	8.8834	7172.5	3237.9	8.8619	6846.3	3237.9	8.8414	6548.4	3237.9	8.8217	6275.4	3237.8	8.8028	6024.2
390	663.15	3258.5	8.9372	7646.9	3258.5	8.9146	7282.6	3258.5	8.8931	6951.4	3258.4	8.8726	6648.9	3258.4	8.8529	6371.7	3258.4	8.8340	6116.7
400	673.15	3279.1	8.9680	7762.5	3279.1	8.9455	7392.6	3279.1	8.9240	7056.4	3279.0	8.9034	6749.4	3279.0	8.8837	6468.0	3279.0	8.8649	6209.1
410	683.15	3299.8	8.9985	7878.0	3299.8	8.9760	7502.7	3299.7	8.9545	7161.5	3299.7	8.9339	6849.9	3299.7	8.9142	6564.3	3299.6	8.8954	6301.6
420	693.15	3320.5	9.0286	7993.5	3320.5	9.0061	7612.7	3320.5	8.9846	7266.5	3320.4	8.9640	6950.4	3320.4	8.9444	6660.6	3320.4	8.9255	6394.1
430	703.15	3341.3	9.0584	8109.1	3341.3	9.0359	7722.7	3341.3	9.0144	7371.5	3341.2	8.9938	7050.9	3341.2	8.9742	6756.9	3341.2	8.9553	6486.5
440	713.15	3362.2	9.0879	8224.6	3362.2	9.0653	7832.8	3362.1	9.0438	7476.6	3362.1	9.0233	7151.3	3362.1	9.0036	6853.2	3362.1	8.9848	6579.0
450	723.15	3383.1	9.1170	8340.1	3383.1	9.0945	7942.8	3383.1	9.0730	7581.6	3383.0	9.0525	7251.8	3383.0	9.0328	6949.5	3383.0	9.0139	6671.4
460	733.15	3404.1	9.1459	8455.6	3404.1	9.1233	8052.8	3404.1	9.1018	7686.6	3404.1	9.0813	7352.3	3404.0	9.0616	7045.8	3404.0	9.0428	6763.8
470	743.15	3425.2	9.1744	8571.1	3425.2	9.1519	8162.8	3425.1	9.1304	7791.6	3425.1	9.1098	7452.7	3425.1	9.0902	7142.0	3425.1	9.0713	6856.2
480	753.15	3446.3	9.2027	8686.6	3446.3	9.1801	8272.8	3446.3	9.1586	7896.6	3446.3	9.1381	7553.2	3446.2	9.1184	7238.3	3446.2	9.0996	6948.7
490	763.15	3467.5	9.2306	8802.1	3467.5	9.2081	8382.8	3467.5	9.1866	8001.6	3467.5	9.1661	7653.6	3467.4	9.1464	7334.6	3467.4	9.1275	7041.1
500	773.15	3488.8	9.2583	8917.6	3488.8	9.2358	8492.8	3488.8	9.2143	8106.6	3488.7	9.1938	7754.0	3488.7	9.1741	7430.8	3488.7	9.1552	7133.5
510	783.15	3510.1	9.2857	9033.0	3510.1	9.2632	8602.8	3510.1	9.2417	8211.6	3510.1	9.2212	7854.5	3510.1	9.2015	7527.1	3510.0	9.1827	7225.9
520	793.15	3531.5	9.3129	9148.5	3531.5	9.2904	8712.7	3531.5	9.2689	8316.6	3531.5	9.2483	7954.9	3531.5	9.2287	7623.3	3531.4	9.2098	7318.3
530	803.15	3553.0	9.3398	9264.0	3553.0	9.3173	8822.7	3553.0	9.2958	8421.6	3553.0	9.2753	8055.3	3552.9	9.2556	7719.6	3552.9	9.2367	7410.7
540	813.15	3574.6	9.3665	9379.5	3574.5	9.3439	8932.7	3574.5	9.3225	8526.6	3574.5	9.3019	8155.7	3574.5	9.2823	7815.8	3574.5	9.2634	7503.1
550	823.15	3596.2	9.3929	9494.9	3596.2	9.3704	9042.7	3596.1	9.3489	8631.5	3596.1	9.3283	8256.1	3596.1	9.3087	7912.0	3596.1	9.2898	7595.5
560	833.15	3617.9	9.4191	9610.4	3617.8	9.3965	9152.6	3617.8	9.3751	8736.5	3617.8	9.3545	8356.6	3617.8	9.3349	8008.3	3617.8	9.3160	7687.8
570	843.15	3639.6	9.4450	9725.8	3639.6	9.4225	9262.6	3639.6	9.4010	8841.5	3639.6	9.3805	8457.0	3639.5	9.3608	8104.5	3639.5	9.3420	7780.2
580	853.15	3661.4	9.4708	9841.3	3661.4	9.4482	9372.6	3661.4	9.4267	8946.4	3661.4	9.4062	8557.4	3661.4	9.3865	8200.7	3661.3	9.3677	7872.6
590	863.15	3683.3	9.4963	9956.7	3683.3	9.4737	9482.5	3683.3	9.4522	9051.4	3683.3	9.4317	8657.8	3683.3	9.4121	8296.9	3683.2	9.3932	7965.0
600	873.15	3705.3	9.5216	10072	3705.3	9.4990	9592.5	3705.2	9.4775	9156.4	3705.2	9.4570	8758.2	3705.2	9.4374	8393.2	3705.2	9.4185	8057.4
610	883.15	3727.3	9.5466	10188	3727.3	9.5241	9702.4	3727.3	9.5026	9261.3	3727.3	9.4821	8858.6	3727.2	9.4624	8489.4	3727.2	9.4436	8149.7
620	893.15	3749.4	9.5715	10303	3749.4	9.5490	9812.4	3749.4	9.5275	9366.3	3749.4	9.5070	8959.0	3749.3	9.4873	8585.6	3749.3	9.4685	8242.1
630	903.15	3771.6	9.5962	10419	3771.6	9.5737	9922.3	3771.5	9.5522	9471.2	3771.5	9.5317	9059.4	3771.5	9.5120	8681.8	3771.5	9.4931	8334.5
640	913.15	3793.8	9.6207	10534	3793.8	9.5981	10032	3793.8	9.5767	9576.2	3793.8	9.5561	9159.8	3793.7	9.5365	8778.0	3793.7	9.5176	8426.8
650	923.15	3816.1	9.6450	10649	3816.1	9.6224	10142	3816.1	9.6010	9681.1	3816.1	9.5804	9260.1	3816.0	9.5608	8874.2	3816.0	9.5419	8519.2
660	933.15	3838.5	9.6691	10765	3838.5	9.6465	10252	3838.4	9.6251	9786.1	3838.4	9.6045	9360.5	3838.4	9.5849	8970.4	3838.4	9.5660	8611.6
670	943.15	3860.9	9.6930	10880	3860.9	9.6704	10362	3860.9	9.6490	9891.0	3860.9	9.6284	9460.9	3860.8	9.6088	9066.6	3860.8	9.5899	8703.9
680	953.15	3883.4	9.7167	10996	3883.4	9.6942	10472	3883.4	9.6727	9996.0	3883.4	9.6522	9561.3	3883.4	9.6325	9162.8	3883.3	9.6137	8796.3
690	963.15	3906.0	9.7403	11111	3906.0	9.7177	10582	3906.0	9.6963	10101	3905.9	9.6757	9661.7	3905.9	9.6561	9259.0	3905.9	9.6372	8888.6
700	973.15	3928.6	9.7636	11227	3928.6	9.7411	10692	3928.6	9.7196	10206	3928.6	9.6991	9762.1	3928.6	9.6795	9355.2	3928.6	9.6606	8981.0
710	983.15	3951.3	9.7869	11342	3951.3	9.7643	10802	3951.3	9.7429	10311	3951.3	9.7223	9862.4	3951.3	9.7027	9451.4	3951.3	9.6838	9073.3
720	993.15	3974.1	9.8099	11457	3974.1	9.7874	10912	3974.1	9.7659	10416	3974.1	9.7454	9962.8	3974.0	9.7257	9547.6	3974.0	9.7069	9165.7
730	1003.15	3996.9	9.8328	11573	3996.9	9.8103	11022	3996.9	9.7888	10521	3996.9	9.7682	10063	3996.9	9.7486	9643.8	3996.9	9.7297	9258.0
740	1013.15	4019.8	9.8555	11688	4019.8	9.8330	11132	4019.8	9.8115	10626	4019.8	9.7910	10164	4019.8	9.7713	9740.0	4019.8	9.7525	9350.4
750	1023.15	4042.8	9.8780	11804	4042.8	9.8555	11242	4042.8	9.8340	10731	4042.8	9.8135	10264	4042.7	9.7939	9836.2	4042.7	9.7750	9442.7
760	1033.15	4065.8	9.9004	11919	4065.8	9.8779	11351	4065.8	9.8564	10835	4065.8	9.8359	10364	4065.8	9.8163	9932.4	4065.8	9.7974	9535.1
770	1043.15	4088.9	9.9227	12035	4088.9	9.9002	11461	4088.9	9.8787	10940	4088.9	9.8582	10465	4088.9	9.8385	10029	4088.9	9.8197	9627.4
780	1053.15	4112.1	9.9448	12150	4112.1	9.9223	11571	4112.0	9.9008	11045	4112.0	9.8803	10565	4112.0	9.8606	10125	4112.0	9.8418	9719.7
790	1063.15	4135.3	9.9667	12265	4135.3	9.9442	11681	4135.3	9.9227	11150	4135.3	9.9022	10665	4135.2	9.8826	10221	4135.2	9.8637	9812.1
800	1073.15	4158.6	9.9885	12381	4158.6	9.9660	11791	4158.5	9.9445	11255	4158.5	9.9240	10766	4158.5	9.9043	10317	4158.5	9.8855	9904.4

0.40 to 0.50 bar

Table 3 Water and Steam—*continued*

p (abs) bar		0.50			0.55			0.60			0.65			0.70			0.75		
t_s °C		81.3			83.7			86.0			88.0			90.0			91.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		340.6	1.0912	1.0301	350.6	1.1195	1.0317	359.9	1.1455	1.0333	368.6	1.1696	1.0347	376.8	1.1921	1.0361	384.5	1.2132	1.0375
Sat. Vapour		2646.0	7.5947	3240.1	2649.9	7.5623	2963.5	2653.6	7.5327	2731.7	2656.9	7.5055	2534.5	2660.1	7.4804	2364.7	2663.0	7.4570	2216.8
t °C	T K																		
0	273.15	0.0	−0.0002	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002
10	283.15	42.0	0.1510	1.0002	42.0	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002
20	293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017
30	303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50	323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60	333.15	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171
70	343.15	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228
80	353.15	334.9	1.0753	1.0292	334.9	1.0752	1.0292	334.9	1.0752	1.0292	334.9	1.0752	1.0292	334.9	1.0752	1.0292	334.9	1.0752	1.0292
90	363.15	2663.0	7.6421	3322.9	2662.3	7.5966	3018.1	2661.6	7.5549	2764.2	2660.9	7.5164	2549.2	2660.2	7.4806	2365.0	376.9	1.1925	1.0361
100	373.15	2682.6	7.6953	3418.1	2681.9	7.6499	3104.9	2681.3	7.6085	2844.0	2680.7	7.5702	2623.1	2680.0	7.5346	2433.8	2679.4	7.5014	2269.8
110	383.15	2702.1	7.7470	3512.9	2701.5	7.7018	3191.3	2701.0	7.6605	2923.4	2700.4	7.6224	2696.6	2699.8	7.5870	2502.3	2699.3	7.5540	2333.9
120	393.15	2721.6	7.7972	3607.4	2721.1	7.7522	3277.4	2720.6	7.7111	3002.5	2720.1	7.6731	2769.8	2719.6	7.6379	2570.4	2719.1	7.6050	2397.6
130	403.15	2741.1	7.8462	3701.6	2740.7	7.8013	3363.3	2740.2	7.7603	3081.3	2739.7	7.7225	2842.8	2739.3	7.6874	2638.3	2738.8	7.6546	2461.1
140	413.15	2760.6	7.8940	3795.5	2760.2	7.8492	3448.8	2759.8	7.8083	3159.9	2759.4	7.7705	2915.5	2759.0	7.7356	2705.9	2758.5	7.7029	2524.3
150	423.15	2780.1	7.9406	3889.3	2779.7	7.8959	3534.2	2779.4	7.8551	3238.3	2779.0	7.8174	2987.9	2778.6	7.7825	2773.3	2778.2	7.7500	2587.3
160	433.15	2799.6	7.9861	3982.9	2799.3	7.9415	3619.4	2798.9	7.9008	3316.5	2798.6	7.8632	3060.3	2798.2	7.8284	2840.6	2797.9	7.7959	2650.2
170	443.15	2819.1	8.0307	4076.4	2818.8	7.9861	3704.5	2818.5	7.9454	3394.6	2818.2	7.9079	3132.4	2817.9	7.8732	2907.7	2817.6	7.8408	2712.9
180	453.15	2838.6	8.0742	4169.7	2838.3	8.0298	3789.4	2838.1	7.9891	3472.6	2837.8	7.9517	3204.4	2837.5	7.9170	2974.6	2837.2	7.8847	2775.4
190	463.15	2858.2	8.1169	4262.9	2857.9	8.0725	3874.3	2857.7	8.0319	3550.4	2857.4	7.9945	3276.4	2857.1	7.9599	3041.5	2856.9	7.9276	2837.9
200	473.15	2877.7	8.1587	4356.0	2877.5	8.1143	3959.0	2877.3	8.0738	3628.1	2877.0	8.0365	3348.2	2876.8	8.0019	3108.2	2876.6	7.9697	2900.2
210	483.15	2897.4	8.1997	4449.0	2897.1	8.1554	4043.6	2896.9	8.1149	3705.8	2896.7	8.0776	3419.9	2896.5	8.0430	3174.9	2896.3	8.0108	2962.5
220	493.15	2917.0	8.2399	4542.0	2916.8	8.1956	4128.2	2916.6	8.1552	3783.3	2916.4	8.1179	3491.6	2916.2	8.0834	3241.4	2916.0	8.0513	3024.7
230	503.15	2936.7	8.2794	4634.9	2936.5	8.2352	4212.7	2936.3	8.1947	3860.9	2936.1	8.1575	3563.1	2935.9	8.1230	3308.0	2935.7	8.0909	3086.8
240	513.15	2956.4	8.3182	4727.7	2956.2	8.2740	4297.1	2956.0	8.2336	3938.3	2955.9	8.1964	3634.7	2955.7	8.1619	3374.4	2955.5	8.1298	3148.9
250	523.15	2976.1	8.3564	4820.5	2976.0	8.3122	4381.5	2975.8	8.2718	4015.7	2975.7	8.2346	3706.2	2975.5	8.2002	3440.9	2975.3	8.1681	3210.9
260	533.15	2995.9	8.3939	4913.3	2995.8	8.3497	4465.9	2995.6	8.3093	4093.1	2995.5	8.2722	3777.6	2995.3	8.2377	3507.2	2995.2	8.2057	3272.9
270	543.15	3015.8	8.4308	5006.0	3015.7	8.3866	4550.2	3015.5	8.3462	4170.4	3015.4	8.3091	3849.0	3015.2	8.2747	3573.6	3015.1	8.2427	3334.8
280	553.15	3035.7	8.4671	5098.6	3035.6	8.4229	4634.5	3035.4	8.3826	4247.7	3035.3	8.3455	3920.4	3035.2	8.3111	3639.9	3035.0	8.2791	3396.7
290	563.15	3055.7	8.5028	5191.3	3055.5	8.4587	4718.7	3055.4	8.4184	4324.9	3055.3	8.3813	3991.7	3055.2	8.3469	3706.1	3055.0	8.3149	3458.6
300	573.15	3075.7	8.5380	5283.9	3075.6	8.4939	4803.0	3075.4	8.4536	4402.2	3075.3	8.4165	4063.1	3075.2	8.3822	3772.4	3075.1	8.3502	3520.5
310	583.15	3095.7	8.5728	5376.5	3095.6	8.5286	4887.2	3095.5	8.4883	4479.4	3095.4	8.4512	4134.4	3095.3	8.4169	3838.6	3095.2	8.3849	3582.3
320	593.15	3115.9	8.6070	5469.1	3115.7	8.5628	4971.4	3115.6	8.5226	4556.6	3115.5	8.4855	4205.6	3115.4	8.4511	3904.8	3115.3	8.4192	3644.1
330	603.15	3136.0	8.6407	5561.6	3135.9	8.5966	5055.5	3135.8	8.5563	4633.8	3135.7	8.5192	4276.9	3135.6	8.4849	3971.0	3135.5	8.4530	3705.9
340	613.15	3156.3	8.6740	5654.2	3156.2	8.6299	5139.7	3156.1	8.5896	4710.9	3156.0	8.5525	4348.1	3155.9	8.5182	4037.2	3155.8	8.4863	3767.7

350	623.15	3176.6	8.7068	5746.7	3176.5	8.6627	5223.8	3176.4	8.6224	4788.1	3176.3	8.5854	4419.4	3176.2	8.5511	4103.3	3176.1	8.5191	3829.4
360	633.15	3196.9	8.7392	5839.2	3196.8	8.6951	5307.9	3196.7	8.6549	4865.2	3196.7	8.6178	4490.6	3196.6	8.5835	4169.5	3196.5	8.5516	3891.2
370	643.15	3217.3	8.7712	5931.7	3217.3	8.7271	5392.0	3217.2	8.6869	4942.3	3217.1	8.6498	4561.8	3217.0	8.6155	4235.6	3216.9	8.5836	3952.9
380	653.15	3237.8	8.8028	6024.2	3237.7	8.7587	5476.1	3237.7	8.7185	5019.4	3237.6	8.6815	4633.0	3237.5	8.6472	4301.7	3237.4	8.6152	4014.6
390	663.15	3258.4	8.8340	6116.7	3258.3	8.7900	5560.2	3258.2	8.7497	5096.5	3258.1	8.7127	4704.1	3258.1	8.6784	4367.8	3258.0	8.6465	4076.3
400	673.15	3279.0	8.8649	6209.1	3278.9	8.8208	5644.3	3278.8	8.7806	5173.6	3278.7	8.7435	4775.3	3278.7	8.7093	4433.9	3278.6	8.6773	4138.0
410	683.15	3299.6	8.8954	6301.6	3299.6	8.8513	5728.4	3299.5	8.8111	5250.7	3299.4	8.7740	4846.5	3299.4	8.7398	4500.0	3299.3	8.7078	4199.7
420	693.15	3320.4	8.9255	6394.1	3320.3	8.8814	5812.4	3320.2	8.8412	5327.7	3320.2	8.8042	4917.6	3320.1	8.7699	4566.1	3320.0	8.7380	4261.4
430	703.15	3341.2	8.9553	6486.5	3341.1	8.9112	5896.5	3341.1	8.8710	5404.8	3341.0	8.8340	4988.8	3340.9	8.7997	4632.2	3340.8	8.7678	4323.1
440	713.15	3362.1	8.9848	6579.0	3362.0	8.9407	5980.5	3361.9	8.9005	5481.9	3361.9	8.8635	5059.9	3361.8	8.8292	4698.2	3361.7	8.7973	4384.8
450	723.15	3383.0	9.0139	6671.4	3382.9	8.9699	6064.6	3382.9	8.9296	5558.9	3382.8	8.8926	5131.0	3382.7	8.8584	4764.3	3382.7	8.8265	4446.4
460	733.15	3404.0	9.0428	6763.8	3403.9	8.9987	6148.6	3403.9	8.9585	5636.0	3403.8	8.9215	5202.2	3403.8	8.8872	4830.4	3403.7	8.8553	4508.1
470	743.15	3425.1	9.0713	6856.2	3425.0	9.0273	6232.7	3425.0	8.9871	5713.0	3424.9	8.9501	5273.3	3424.8	8.9158	4896.4	3424.8	8.8839	4569.8
480	753.15	3446.2	9.0996	6948.7	3446.2	9.0555	6316.7	3446.1	9.0153	5790.0	3446.0	8.9783	5344.4	3446.0	8.9441	4962.4	3445.9	8.9122	4631.4
490	763.15	3467.4	9.1275	7041.1	3467.4	9.0835	6400.7	3467.3	9.0433	5867.1	3467.2	9.0063	5415.5	3467.2	8.9720	5028.5	3467.1	8.9401	4693.1
500	773.15	3488.7	9.1552	7133.5	3488.6	9.1112	6484.7	3488.6	9.0710	5944.1	3488.5	9.0340	5486.6	3488.5	8.9997	5094.5	3488.4	8.9678	4754.7
510	783.15	3510.0	9.1827	7225.9	3510.0	9.1386	6568.7	3509.9	9.0984	6021.1	3509.9	9.0614	5557.7	3509.8	9.0272	5160.6	3509.8	8.9953	4816.3
520	793.15	3531.4	9.2098	7318.3	3531.4	9.1658	6652.7	3531.3	9.1256	6098.1	3531.3	9.0886	5628.8	3531.2	9.0543	5226.6	3531.2	9.0225	4878.0
530	803.15	3552.9	9.2367	7410.7	3552.9	9.1927	6736.7	3552.8	9.1525	6175.1	3552.8	9.1155	5699.9	3552.7	9.0813	5292.6	3552.7	9.0494	4939.6
540	813.15	3574.5	9.2634	7503.1	3574.4	9.2194	6820.8	3574.4	9.1792	6252.1	3574.3	9.1422	5771.0	3574.3	9.1079	5358.6	3574.2	9.0761	5001.2
550	823.15	3596.1	9.2898	7595.5	3596.0	9.2458	6904.7	3596.0	9.2056	6329.2	3595.9	9.1686	5842.1	3595.9	9.1344	5424.7	3595.8	9.1025	5062.8
560	833.15	3617.8	9.3160	7687.8	3617.7	9.2720	6988.7	3617.7	9.2318	6406.2	3617.6	9.1948	5913.2	3617.6	9.1606	5490.7	3617.5	9.1287	5124.5
570	843.15	3639.5	9.3420	7780.2	3639.5	9.2979	7072.7	3639.4	9.2577	6483.2	3639.4	9.2208	5984.3	3639.3	9.1865	5556.7	3639.3	9.1546	5186.1
580	853.15	3661.3	9.3677	7872.6	3661.3	9.3237	7156.7	3661.3	9.2835	6560.2	3661.2	9.2465	6055.4	3661.2	9.2123	5622.7	3661.1	9.1804	5247.7
590	863.15	3683.2	9.3932	7965.0	3683.2	9.3492	7240.7	3683.2	9.3090	6637.1	3683.1	9.2720	6126.4	3683.1	9.2378	5688.7	3683.0	9.2059	5309.3
600	873.15	3705.2	9.4185	8057.4	3705.2	9.3745	7324.7	3705.1	9.3343	6714.1	3705.1	9.2973	6197.5	3705.0	9.2631	5754.7	3705.0	9.2312	5370.9
610	883.15	3727.2	9.4436	8149.7	3727.2	9.3996	7408.7	3727.1	9.3594	6791.1	3727.1	9.3224	6268.6	3727.1	9.2882	5820.7	3727.0	9.2563	5432.5
620	893.15	3749.3	9.4685	8242.1	3749.3	9.4244	7492.7	3749.2	9.3843	6868.1	3749.2	9.3473	6339.7	3749.2	9.3130	5886.7	3749.1	9.2812	5494.1
630	903.15	3771.5	9.4931	8334.5	3771.5	9.4491	7576.6	3771.4	9.4089	6945.1	3771.4	9.3720	6410.7	3771.3	9.3377	5952.7	3771.3	9.3059	5555.7
640	913.15	3793.7	9.5176	8426.8	3793.7	9.4736	7660.6	3793.7	9.4334	7022.1	3793.6	9.3965	6481.8	3793.6	9.3622	6018.7	3793.5	9.3303	5617.3
650	923.15	3816.0	9.5419	8519.2	3816.0	9.4979	7744.6	3816.0	9.4577	7099.1	3815.9	9.4207	6552.8	3815.9	9.3865	6084.7	3815.9	9.3546	5678.9
660	933.15	3838.4	9.5660	8611.6	3838.4	9.5220	7828.5	3838.3	9.4818	7176.0	3838.3	9.4449	6623.9	3838.3	9.4106	6150.7	3838.2	9.3788	5740.5
670	943.15	3860.8	9.5899	8703.9	3860.8	9.5459	7912.5	3860.8	9.5057	7253.0	3860.7	9.4688	6695.0	3860.7	9.4345	6216.6	3860.7	9.4027	5802.1
680	953.15	3883.3	9.6137	8796.3	3883.3	9.5697	7996.5	3883.3	9.5295	7330.0	3883.2	9.4925	6766.0	3883.2	9.4583	6282.6	3883.2	9.4264	5863.7
690	963.15	3905.9	9.6372	8888.6	3905.9	9.5932	8080.4	3905.8	9.5530	7406.9	3905.8	9.5161	6837.1	3905.8	9.4818	6348.6	3905.8	9.4500	5925.3
700	973.15	3928.6	9.6606	8981.0	3928.5	9.6166	8164.4	3928.5	9.5764	7483.9	3928.5	9.5395	6908.1	3928.4	9.5052	6414.6	3928.4	9.4734	5986.9
710	983.15	3951.3	9.6838	9073.3	3951.2	9.6398	8248.4	3951.2	9.5996	7560.9	3951.2	9.5627	6979.2	3951.1	9.5284	6480.6	3951.1	9.4966	6048.4
720	993.15	3974.0	9.7069	9165.7	3974.0	9.6629	8332.3	3974.0	9.6227	7637.8	3973.9	9.5857	7050.2	3973.9	9.5515	6546.5	3973.9	9.5196	6110.0
730	1003.15	3996.9	9.7297	9258.0	3996.8	9.6857	8416.3	3996.8	9.6456	7714.8	3996.8	9.6086	7121.3	3996.7	9.5744	6612.5	3996.7	9.5425	6171.6
740	1013.15	4019.8	9.7525	9350.4	4019.7	9.7085	8500.2	4019.7	9.6683	7791.8	4019.7	9.6313	7192.3	4019.7	9.5971	6678.5	4019.6	9.5652	6233.2
750	1023.15	4042.7	9.7750	9442.7	4042.7	9.7310	8584.2	4042.7	9.6908	7868.7	4042.6	9.6539	7263.4	4042.6	9.6197	6744.5	4042.6	9.5878	6294.8
760	1033.15	4065.8	9.7974	9535.1	4065.7	9.7534	8668.1	4065.7	9.7132	7945.7	4065.7	9.6763	7334.4	4065.7	9.6421	6810.4	4065.6	9.6102	6356.3
770	1043.15	4088.9	9.8197	9627.4	4088.8	9.7757	8752.1	4088.8	9.7355	8022.7	4088.8	9.6985	7405.4	4088.8	9.6643	6876.4	4088.7	9.6324	6417.9
780	1053.15	4112.0	9.8418	9719.7	4112.0	9.7978	8836.0	4112.0	9.7576	8099.6	4111.9	9.7206	7476.5	4111.9	9.6864	6942.4	4111.9	9.6545	6479.5
790	1063.15	4135.2	9.8637	9812.1	4135.2	9.8197	8920.0	4135.2	9.7795	8176.6	4135.2	9.7426	7547.5	4135.1	9.7083	7008.3	4135.1	9.6765	6541.0
800	1073.15	4158.5	9.8855	9904.4	4158.5	9.8415	9003.9	4158.5	9.8013	8253.5	4158.4	9.7644	7618.6	4158.4	9.7301	7074.3	4158.4	9.6983	6602.6

0.50 to 0.75 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar	0.75			0.80			0.85			0.90			0.95			1.0		
t_s °C	91.8			93.5			95.2			96.7			98.2			99.6		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	384.5	1.2132	1.0375	391.7	1.2330	1.0387	398.6	1.2518	1.0400	405.2	1.2696	1.0412	411.5	1.2866	1.0423	417.5	1.3027	1.0434
Sat. Vapour	2663.0	7.4570	2216.8	2665.8	7.4352	2086.9	2668.4	7.4147	1971.8	2670.9	7.3954	1869.1	2673.2	7.3771	1776.9	2675.4	7.3598	1693.7
t °C / T K																		
0 / 273.15	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.0	−0.0001	1.0002	0.1	−0.0001	1.0002	0.1	−0.0001	1.0002
10 / 283.15	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002
20 / 293.15	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	83.9	0.2963	1.0017	84.0	0.2963	1.0017
30 / 303.15	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.7	0.4365	1.0043	125.8	0.4365	1.0043
40 / 313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.5	0.5721	1.0078
50 / 323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121
60 / 333.15	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8310	1.0171	251.1	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171
70 / 343.15	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228
80 / 353.15	334.9	1.0752	1.0292	334.9	1.0752	1.0292	334.9	1.0752	1.0292	335.0	1.0752	1.0292	335.0	1.0752	1.0292	335.0	1.0752	1.0292
90 / 363.15	376.9	1.1925	1.0361	376.9	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361
100 / 373.15	2679.4	7.5014	2269.8	2678.8	7.4703	2126.2	2678.1	7.4409	1999.6	2677.5	7.4132	1887.0	2676.8	7.3869	1786.2	2676.2	7.3618	1695.5
110 / 383.15	2699.3	7.5540	2333.9	2698.7	7.5230	2186.5	2698.1	7.4938	2056.4	2697.5	7.4663	1940.8	2697.0	7.4401	1837.4	2696.4	7.4152	1744.3
120 / 393.15	2719.1	7.6050	2397.6	2718.6	7.5742	2246.4	2718.0	7.5452	2112.9	2717.5	7.5177	1994.3	2717.0	7.4917	1888.2	2716.5	7.4670	1792.7
130 / 403.15	2738.8	7.6546	2461.1	2738.4	7.6239	2306.0	2737.9	7.5950	2169.2	2737.4	7.5677	2047.5	2737.0	7.5419	1938.7	2736.5	7.5173	1840.8
140 / 413.15	2758.5	7.7029	2524.3	2758.1	7.6723	2365.4	2757.7	7.6436	2225.2	2757.3	7.6164	2100.5	2756.9	7.5906	1989.0	2756.4	7.5662	1888.6
150 / 423.15	2778.2	7.7500	2587.3	2777.8	7.7195	2424.6	2777.5	7.6908	2281.0	2777.1	7.6638	2153.3	2776.7	7.6381	2039.1	2776.3	7.6137	1936.3
160 / 433.15	2797.9	7.7959	2650.2	2797.5	7.7655	2483.6	2797.2	7.7369	2336.6	2796.9	7.7099	2205.9	2796.5	7.6844	2089.0	2796.2	7.6601	1983.8
170 / 443.15	2817.6	7.8408	2712.9	2817.2	7.8105	2542.4	2816.9	7.7820	2392.0	2816.6	7.7550	2258.4	2816.3	7.7295	2138.7	2816.0	7.7053	2031.1
180 / 453.15	2837.2	7.8847	2775.4	2836.9	7.8544	2601.1	2836.6	7.8259	2447.4	2836.4	7.7991	2310.7	2836.1	7.7736	2188.4	2835.8	7.7495	2078.3
190 / 463.15	2856.9	7.9276	2837.9	2856.6	7.8974	2659.8	2856.4	7.8690	2502.6	2856.1	7.8422	2362.9	2855.8	7.8168	2237.9	2855.6	7.7927	2125.4
200 / 473.15	2876.6	7.9697	2900.2	2876.3	7.9395	2718.3	2876.1	7.9111	2557.7	2875.8	7.8843	2415.0	2875.6	7.8590	2287.3	2875.4	7.8349	2172.3
210 / 483.15	2896.3	8.0108	2962.5	2896.0	7.9807	2776.7	2895.8	7.9524	2612.7	2895.6	7.9257	2467.0	2895.4	7.9004	2336.6	2895.2	7.8763	2219.2
220 / 493.15	2916.0	8.0513	3024.7	2915.8	8.0212	2835.0	2915.6	7.9929	2667.7	2915.4	7.9662	2518.9	2915.2	7.9409	2385.8	2915.0	7.9169	2266.0
230 / 503.15	2935.7	8.0909	3086.8	2935.5	8.0608	2893.3	2935.4	8.0326	2722.6	2935.2	8.0059	2570.8	2935.0	7.9807	2435.0	2934.8	7.9567	2312.8
240 / 513.15	2955.5	8.1298	3148.9	2955.3	8.0998	2951.5	2955.2	8.0716	2777.4	2955.0	8.0449	2622.6	2954.8	8.0197	2484.1	2954.6	7.9958	2359.5
250 / 523.15	2975.3	8.1681	3210.9	2975.2	8.1381	3009.7	2975.0	8.1099	2832.2	2974.8	8.0832	2674.4	2974.7	8.0581	2533.2	2974.5	8.0342	2406.1
260 / 533.15	2995.2	8.2057	3272.9	2995.0	8.1757	3067.8	2994.9	8.1475	2886.9	2994.7	8.1209	2726.1	2994.6	8.0957	2582.2	2994.4	8.0719	2452.7
270 / 543.15	3015.1	8.2427	3334.8	3014.9	8.2127	3125.9	3014.8	8.1845	2941.6	3014.7	8.1579	2777.8	3014.5	8.1328	2631.2	3014.4	8.1089	2499.3
280 / 553.15	3035.0	8.2791	3396.7	3034.9	8.2491	3184.0	3034.8	8.2209	2996.3	3034.6	8.1944	2829.4	3034.5	8.1692	2680.1	3034.4	8.1454	2545.8
290 / 563.15	3055.0	8.3149	3458.6	3054.9	8.2849	3242.0	3054.8	8.2568	3050.9	3054.6	8.2302	2881.1	3054.5	8.2051	2729.1	3054.4	8.1813	2592.3
300 / 573.15	3075.1	8.3502	3520.5	3075.0	8.3202	3300.0	3074.8	8.2921	3105.5	3074.7	8.2656	2932.7	3074.6	8.2405	2778.0	3074.5	8.2166	2638.7
310 / 583.15	3095.2	8.3849	3582.3	3095.1	8.3550	3358.0	3094.9	8.3269	3160.1	3094.8	8.3003	2984.2	3094.7	8.2753	2826.8	3094.6	8.2514	2685.2
320 / 593.15	3115.3	8.4192	3644.1	3115.2	8.3893	3416.0	3115.1	8.3611	3214.7	3115.0	8.3346	3035.8	3114.9	8.3096	2875.7	3114.8	8.2857	2731.6
330 / 603.15	3135.5	8.4530	3705.9	3135.4	8.4230	3473.9	3135.3	8.3949	3269.3	3135.2	8.3684	3087.3	3135.1	8.3434	2924.5	3135.0	8.3196	2778.0
340 / 613.15	3155.8	8.4863	3767.7	3155.7	8.4564	3531.9	3155.6	8.4283	3323.8	3155.5	8.4018	3138.8	3155.4	8.3767	2973.4	3155.3	8.3529	2824.4

350	623.15	3176.1	8.3191	3829.4	3176.0	8.4892	3589.8	3175.9	8.4612	3378.3	3175.8	8.4347	3190.3	3175.7	8.4096	3022.2	3175.6	8.3858	2870.8
360	633.15	3196.5	8.5516	3891.2	3196.4	8.5217	3647.7	3196.3	8.4936	3432.8	3196.2	8.4671	3241.8	3196.1	8.4421	3070.9	3196.0	8.4183	2917.2
370	643.15	3216.9	8.5836	3952.9	3216.8	8.5537	3705.6	3216.7	8.5256	3487.3	3216.7	8.4992	3293.3	3216.6	8.4741	3119.7	3216.5	8.4504	2963.5
380	653.15	3237.4	8.6152	4014.6	3237.3	8.5854	3763.4	3237.2	8.5573	3541.8	3237.2	8.5308	3344.8	3237.1	8.5058	3168.5	3237.0	8.4820	3009.8
390	663.15	3258.0	8.6465	4076.3	3257.9	8.6166	3821.3	3257.8	8.5885	3596.3	3257.7	8.5621	3396.2	3257.7	8.5370	3217.3	3257.6	8.5133	3056.2
400	673.15	3278.6	8.6773	4138.0	3278.5	8.6475	3879.2	3278.4	8.6194	3650.7	3278.4	8.5929	3447.7	3278.3	8.5679	3266.0	3278.2	8.5442	3102.5
410	683.15	3299.3	8.7078	4199.7	3299.2	8.6780	3937.0	3299.1	8.6499	3705.2	3299.1	8.6235	3499.1	3299.0	8.5984	3314.7	3298.9	8.5747	3148.8
420	693.15	3320.0	8.7380	4261.4	3320.0	8.7081	3994.8	3319.9	8.6801	3759.6	3319.8	8.6536	3550.5	3319.8	8.6286	3363.5	3319.7	8.6049	3195.1
430	703.15	3340.8	8.7678	4323.1	3340.8	8.7380	4052.7	3340.7	8.7099	3814.1	3340.6	8.6835	3602.0	3340.6	8.6584	3412.2	3340.5	8.6347	3241.4
440	713.15	3361.7	8.7973	4384.8	3361.7	8.7675	4110.5	3361.6	8.7394	3868.5	3361.5	8.7130	3653.4	3361.5	8.6879	3460.9	3361.4	8.6642	3287.7
450	723.15	3382.7	8.8265	4446.4	3382.6	8.7966	4168.3	3382.6	8.7686	3922.9	3382.5	8.7421	3704.8	3382.4	8.7171	3509.6	3382.4	8.6934	3334.0
460	733.15	3403.7	8.8553	4508.1	3403.6	8.8255	4226.1	3403.6	8.7974	3977.4	3403.5	8.7710	3756.2	3403.4	8.7460	3558.3	3403.4	8.7223	3380.3
470	743.15	3424.8	8.8839	4569.8	3424.7	8.8540	4284.0	3424.7	8.8260	4031.8	3424.6	8.7996	3807.6	3424.5	8.7746	3607.0	3424.5	8.7508	3426.5
480	753.15	3445.9	8.9122	4631.4	3445.9	8.8823	4341.8	3445.8	8.8543	4086.2	3445.7	8.8278	3859.0	3445.7	8.8028	3655.7	3445.6	8.7791	3472.8
490	763.15	3467.1	8.9401	4693.1	3467.1	8.9103	4399.6	3467.0	8.8823	4140.6	3467.0	8.8558	3910.4	3466.9	8.8308	3704.4	3466.9	8.8071	3519.1
500	773.15	3488.4	8.9678	4754.7	3488.4	8.9380	4457.4	3488.3	8.9100	4195.0	3488.3	8.8835	3961.8	3488.2	8.8585	3753.1	3488.1	8.8348	3565.3
510	783.15	3509.8	8.9953	4816.3	3509.7	8.9654	4515.1	3509.7	8.9374	4249.4	3509.6	8.9110	4013.2	3509.6	8.8860	3801.8	3509.5	8.8623	3611.6
520	793.15	3531.2	9.0225	4878.0	3531.1	8.9926	4572.9	3531.1	8.9646	4303.8	3531.0	8.9382	4064.5	3531.0	8.9132	3850.5	3530.9	8.8894	3657.8
530	803.15	3552.7	9.0494	4939.6	3552.6	9.0195	4630.7	3552.6	8.9915	4358.2	3552.5	8.9651	4115.9	3552.5	8.9401	3899.1	3552.4	8.9164	3704.1
540	813.15	3574.2	9.0761	5001.2	3574.2	9.0462	4688.5	3574.1	9.0182	4412.6	3574.1	8.9918	4167.3	3574.0	8.9668	3947.8	3574.0	8.9431	3750.3
550	823.15	3595.8	9.1025	5062.8	3595.8	9.0727	4746.3	3595.8	9.0446	4466.9	3595.7	9.0182	4218.6	3595.7	8.9932	3996.5	3595.6	8.9695	3796.5
560	833.15	3617.5	9.1287	5124.5	3617.5	9.0988	4804.0	3617.4	9.0708	4521.3	3617.4	9.0444	4270.0	3617.4	9.0194	4045.1	3617.3	8.9957	3842.8
570	843.15	3639.3	9.1546	5186.1	3639.3	9.1248	4861.8	3639.2	9.0968	4575.7	3639.2	9.0704	4321.4	3639.1	9.0454	4093.8	3639.1	9.0217	3889.0
580	853.15	3661.1	9.1804	5247.7	3661.1	9.1506	4919.6	3661.0	9.1225	4630.1	3661.0	9.0961	4372.7	3661.0	9.0711	4142.5	3660.9	9.0474	3935.2
590	863.15	3683.0	9.2059	5309.3	3683.0	9.1761	4977.3	3682.9	9.1481	4684.4	3682.9	9.1216	4424.1	3682.9	9.0966	4191.1	3682.8	9.0729	3981.5
600	873.15	3705.0	9.2312	5370.9	3705.0	9.214	5035.1	3704.9	9.1734	4738.8	3704.9	9.1469	4475.4	3704.8	9.1220	4239.8	3704.8	9.0982	4027.7
610	883.15	3727.0	9.2563	5432.5	3727.0	9.2265	5092.9	3727.0	9.1985	4793.2	3726.9	9.1720	4526.8	3726.9	9.1471	4288.4	3726.8	9.1233	4073.9
620	893.15	3749.1	9.2812	5494.1	3749.1	9.2514	5150.6	3749.1	9.2233	4847.5	3749.0	9.1969	4578.1	3749.0	9.1719	4337.1	3748.9	9.1482	4120.1
630	903.15	3771.3	9.3059	5555.7	3771.3	9.2760	5208.4	3771.2	9.2480	4901.9	3771.2	9.2216	4629.5	3771.2	9.1966	4385.7	3771.1	9.1729	4166.3
640	913.15	3793.5	9.3303	5617.3	3793.5	9.3005	5266.1	3793.5	9.2725	4956.3	3793.4	9.2461	4680.8	3793.4	9.2211	4434.4	3793.4	9.1974	4212.6
650	923.15	3815.9	9.3546	5678.9	3815.8	9.3248	5323.9	3815.8	9.2968	5010.6	3815.7	9.2704	4732.1	3815.7	9.2454	4483.0	3815.7	9.2217	4258.8
660	933.15	3838.2	9.3788	5740.5	3838.2	9.3489	5381.6	3838.2	9.3209	5065.0	3838.1	9.2945	4783.5	3838.1	9.2695	4531.6	3838.1	9.2458	4305.0
670	943.15	3860.7	9.4027	5802.1	3860.6	9.3729	5439.4	3860.6	9.3449	5119.3	3860.6	9.3184	4834.8	3860.5	9.2935	4580.3	3860.5	9.2698	4351.2
680	953.15	3883.2	9.4264	5863.7	3883.1	9.3966	5497.1	3883.1	9.3686	5173.7	3883.1	9.3422	4886.2	3883.0	9.3172	4628.9	3883.0	9.2935	4397.4
690	963.15	3905.8	9.4500	5925.3	3905.7	9.4202	5554.9	3905.7	9.3922	5228.0	3905.7	9.3658	4937.5	3905.6	9.3408	4677.5	3905.6	9.3171	4443.6
700	973.15	3928.4	9.4734	5986.9	3928.4	9.4436	5612.6	3928.3	9.4156	5282.4	3928.3	9.3891	4988.8	3928.3	9.3642	4726.2	3928.2	9.3405	4489.8
710	983.15	3951.1	9.4966	6048.4	3951.1	9.4668	5670.3	3951.0	9.4388	5336.7	3951.0	9.4124	5040.1	3951.0	9.3874	4774.8	3951.0	9.3637	4536.0
720	993.15	3973.9	9.5196	6110.0	3973.9	9.4898	5728.1	3973.8	9.4618	5391.0	3973.8	9.4354	5091.5	3973.8	9.4104	4823.4	3973.7	9.3867	4582.2
730	1003.15	3996.7	9.5425	6171.6	3996.7	9.5127	5785.8	3996.7	9.4847	5445.4	3996.6	9.4583	5142.8	3996.6	9.4333	4872.1	3996.6	9.4096	4628.4
740	1013.15	4019.6	9.5652	6233.2	4019.6	9.5354	5843.5	4019.6	9.5074	5499.7	4019.5	9.4810	5194.1	4019.5	9.4561	4920.7	4019.5	9.4324	4674.6
750	1023.15	4042.6	9.5878	6294.8	4042.6	9.5580	5901.3	4042.5	9.5300	5554.1	4042.5	9.5036	5245.4	4042.5	9.4786	4969.3	4042.5	9.4549	4720.8
760	1033.15	4065.6	9.6102	6356.3	4065.6	9.5804	5959.0	4065.6	9.5524	5608.4	4065.6	9.5260	5296.8	4065.5	9.5010	5017.9	4065.5	9.4773	4767.0
770	1043.15	4088.7	9.6324	6417.9	4088.7	9.6026	6016.7	4088.7	9.5746	5662.7	4088.7	9.5482	5348.1	4088.6	9.5233	5066.5	4088.6	9.4996	4813.2
780	1053.15	4111.9	9.6545	6479.5	4111.9	9.6247	6074.4	4111.8	9.5967	5717.1	4111.8	9.5703	5399.4	4111.8	9.5454	5115.2	4111.8	9.5217	4859.3
790	1063.15	4135.1	9.6765	6541.0	4135.1	9.6467	6132.2	4135.1	9.6187	5771.4	4135.0	9.5923	5450.7	4135.0	9.5673	5163.8	4135.0	9.5436	4905.5
800	1073.15	4158.4	9.6983	6602.6	4158.4	9.6685	6189.9	4158.3	9.6405	5825.7	4158.3	9.6141	5502.0	4158.3	9.5891	5212.4	4158.3	9.5654	4951.7

0.75 to 1.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		1.0			1.1			1.2			1.3			1.4			1.5		
t_s °C		99.6			102.3			104.8			107.1			109.3			111.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		417.5	1.3027	1.0434	428.8	1.3330	1.0455	439.4	1.3609	1.0476	449.2	1.3868	1.0495	458.4	1.4109	1.0513	467.1	1.4336	1.0530
Sat. Vapour		2675.4	7.3598	1693.7	2679.6	7.3277	1549.2	2683.4	7.2984	1428.1	2687.0	7.2715	1325.0	2690.3	7.2465	1236.3	2693.4	7.2234	1159.0
t °C	T K																		
0	273.15	0.1	−0.0001	1.0002	0.1	−0.0001	1.0002	0.1	−0.0001	1.0002	0.1	−0.0001	1.0002	0.1	−0.0001	1.0002	0.1	−0.0001	1.0001
10	283.15	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.1	0.1510	1.0002
20	293.15	84.0	0.2963	1.0017	84.0	0.2963	1.0017	84.0	0.2963	1.0017	84.0	0.2963	1.0017	84.0	0.2963	1.0017	84.0	0.2963	1.0017
30	303.15	125.8	0.4365	1.0043	125.8	0.4365	1.0043	125.8	0.4365	1.0043	125.8	0.4365	1.0043	125.8	0.4365	1.0042	125.8	0.4365	1.0042
40	313.15	167.5	0.5721	1.0078	167.5	0.5721	1.0078	167.6	0.5721	1.0078	167.6	0.5721	1.0078	167.6	0.5721	1.0078	167.6	0.5721	1.0077
50	323.15	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.3	0.7035	1.0121	209.4	0.7035	1.0121	209.4	0.7035	1.0121	209.4	0.7034	1.0121
60	333.15	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171
70	343.15	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.0	0.9548	1.0228	293.1	0.9548	1.0228	293.1	0.9548	1.0228	293.1	0.9547	1.0228
80	353.15	335.0	1.0752	1.0292	335.0	1.0752	1.0292	335.0	1.0752	1.0292	335.0	1.0752	1.0292	335.0	1.0752	1.0291	335.0	1.0752	1.0291
90	363.15	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361
100	373.15	2676.2	7.3618	1695.5	419.1	1.3069	1.0437	419.1	1.3069	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437
110	383.15	2696.4	7.4152	1744.3	2695.2	7.3689	1583.4	2694.1	7.3263	1449.4	2692.9	7.2869	1336.0	2691.7	7.2502	1238.8	461.3	1.4185	1.0519
120	393.15	2716.5	7.4670	1792.7	2715.4	7.4209	1627.6	2714.4	7.3787	1490.1	2713.3	7.3396	1373.8	2712.3	7.3033	1274.0	2711.2	7.2693	1187.6
130	403.15	2736.5	7.5173	1840.8	2735.6	7.4715	1671.6	2734.6	7.4295	1530.6	2733.7	7.3907	1411.3	2732.7	7.3546	1309.0	2731.8	7.3209	1220.3
140	413.15	2756.4	7.5662	1888.6	2755.6	7.5206	1715.3	2754.7	7.4788	1570.8	2753.9	7.4402	1448.5	2753.0	7.4044	1343.7	2752.2	7.3709	1252.9
150	423.15	2776.3	7.6137	1936.3	2775.6	7.5683	1758.7	2774.8	7.5267	1610.7	2774.0	7.4884	1485.5	2773.2	7.4527	1378.2	2772.5	7.4194	1285.2
160	433.15	2796.2	7.6601	1983.8	2795.5	7.6148	1802.0	2794.8	7.5734	1650.5	2794.1	7.5352	1522.4	2793.4	7.4998	1412.5	2792.7	7.4667	1317.3
170	443.15	2816.0	7.7053	2031.1	2815.4	7.6602	1845.1	2814.7	7.6189	1690.2	2814.1	7.5809	1559.1	2813.4	7.5456	1446.7	2812.8	7.5126	1349.3
180	453.15	2835.8	7.7495	2078.3	2835.2	7.7045	1888.1	2834.6	7.6634	1729.7	2834.1	7.6254	1595.6	2833.5	7.5903	1480.7	2832.9	7.5574	1381.1
190	463.15	2855.6	7.7927	2125.4	2855.0	7.7478	1931.0	2854.5	7.7068	1769.1	2854.0	7.6690	1632.0	2853.5	7.6339	1514.6	2852.9	7.6012	1412.8
200	473.15	2875.4	7.8349	2172.3	2874.9	7.7902	1973.8	2874.4	7.7492	1808.4	2873.9	7.7115	1668.4	2873.4	7.6765	1548.4	2872.9	7.6439	1444.4
210	483.15	2895.2	7.8763	2219.2	2894.7	7.8317	2016.5	2894.3	7.7908	1847.6	2893.8	7.7532	1704.6	2893.4	7.7183	1582.1	2892.9	7.6857	1475.9
220	493.15	2915.0	7.9169	2266.0	2914.5	7.8723	2059.1	2914.1	7.8315	1886.7	2913.7	7.7939	1740.8	2913.3	7.7591	1615.7	2912.9	7.7266	1507.3
230	503.15	2934.8	7.9567	2312.8	2934.4	7.9122	2101.7	2934.0	7.8714	1925.7	2933.6	7.8339	1776.9	2933.3	7.7992	1649.3	2932.9	7.7667	1538.7
240	513.15	2954.6	7.9958	2359.5	2954.3	7.9513	2144.2	2953.9	7.9106	1964.7	2953.6	7.8732	1812.9	2953.2	7.8384	1682.8	2952.9	7.8061	1570.0
250	523.15	2974.5	8.0342	2406.1	2974.2	7.9897	2186.6	2973.9	7.9491	2003.7	2973.5	7.9117	1848.9	2973.2	7.8770	1716.3	2972.9	7.8447	1601.3
260	533.15	2994.4	8.0719	2452.7	2994.1	8.0274	2229.0	2993.8	7.9869	2042.6	2993.5	7.9495	1884.9	2993.2	7.9149	1749.7	2992.9	7.8826	1632.5
270	543.15	3014.4	8.1089	2499.3	3014.1	8.0645	2271.4	3013.8	8.0240	2081.5	3013.5	7.9867	1920.8	3013.2	7.9521	1783.1	3012.9	7.9198	1663.7
280	553.15	3034.4	8.1454	2545.8	3034.1	8.1010	2313.7	3033.8	8.0605	2120.3	3033.6	8.0232	1956.7	3033.3	7.9887	1816.4	3033.0	7.9565	1694.8
290	563.15	3054.4	8.1813	2592.3	3054.1	8.1370	2356.0	3053.9	8.0965	2159.1	3053.6	8.0592	1992.5	3053.4	8.0247	1849.7	3053.1	7.9925	1725.9
300	573.15	3074.5	8.2166	2638.7	3074.2	8.1723	2398.3	3074.0	8.1319	2197.9	3073.8	8.0946	2028.3	3073.5	8.0601	1883.0	3073.3	8.0280	1757.0
310	583.15	3094.6	8.2514	2685.2	3094.4	8.2072	2440.5	3094.1	8.1667	2236.6	3093.9	8.1295	2064.1	3093.7	8.0950	1916.3	3093.5	8.0629	1788.1
320	593.15	3114.8	8.2857	2731.6	3114.6	8.2415	2482.8	3114.3	8.2011	2275.4	3114.1	8.1639	2099.9	3113.9	8.1294	1949.5	3113.7	8.0973	1819.1
330	603.15	3135.0	8.3196	2778.0	3134.8	8.2753	2525.0	3134.6	8.2349	2314.1	3134.4	8.1977	2135.7	3134.2	8.1633	1982.7	3134.0	8.1312	1850.2
340	613.15	3155.3	8.3529	2824.4	3155.1	8.3087	2567.2	3154.9	8.2683	2352.8	3154.7	8.2311	2171.4	3154.5	8.1967	2015.9	3154.3	8.1646	1881.2

350	623.15	3175.6	8.3858	2870.8	3175.4	8.3416	2609.3	3175.3	8.3012	2391.5	3175.1	8.2641	2207.1	3174.9	8.2297	2049.1	3174.7	8.1976	1912.2
360	633.15	3196.0	8.4183	2917.2	3195.9	8.3741	2651.5	3195.7	8.3337	2430.1	3195.5	8.2966	2242.8	3195.3	8.2622	2082.3	3195.1	8.2301	1943.1
370	643.15	3216.5	8.4504	2963.5	3216.3	8.4062	2693.7	3216.1	8.3658	2468.8	3216.0	8.3287	2278.5	3215.8	8.2943	2115.4	3215.6	8.2623	1974.1
380	653.15	3237.0	8.4820	3009.8	3236.8	8.4378	2735.8	3236.7	8.3975	2507.5	3236.5	8.3604	2314.2	3236.3	8.3260	2148.6	3236.2	8.2940	2005.1
390	663.15	3257.6	8.5133	3056.2	3257.4	8.4691	2777.9	3257.3	8.4288	2546.1	3257.1	8.3917	2349.9	3256.9	8.3573	2181.7	3256.8	8.3253	2036.0
400	673.15	3278.2	8.5442	3102.5	3278.1	8.5000	2820.1	3277.9	8.4597	2584.7	3277.8	8.4226	2385.6	3277.6	8.3882	2214.9	3277.5	8.3562	2066.9
410	683.15	3298.9	8.5747	3148.8	3298.8	8.5305	2862.2	3298.6	8.4902	2623.3	3298.5	8.4531	2421.2	3298.3	8.4188	2248.0	3298.2	8.3868	2097.9
420	693.15	3319.7	8.6049	3195.1	3319.5	8.5607	2904.3	3319.4	8.5204	2661.9	3319.3	8.4833	2456.9	3319.1	8.4490	2281.1	3319.0	8.4170	2128.8
430	703.15	3340.5	8.6347	3241.4	3340.4	8.5906	2946.4	3340.2	8.5503	2700.6	3340.1	8.5132	2492.5	3340.0	8.4788	2314.2	3339.8	8.4469	2159.7
440	713.15	3361.4	8.6642	3287.7	3361.3	8.6201	2988.5	3361.1	8.5798	2739.1	3361.0	8.5427	2528.2	3360.9	8.5084	2347.3	3360.7	8.4764	2190.6
450	723.15	3382.4	8.6934	3334.0	3382.2	8.6493	3030.6	3382.1	8.6090	2777.7	3382.0	8.5719	2563.8	3381.8	8.5376	2380.4	3381.7	8.5056	2221.5
460	733.15	3403.4	8.7223	3380.3	3403.3	8.6781	3072.7	3403.1	8.6379	2816.3	3403.0	8.6008	2599.4	3402.9	8.5665	2413.5	3402.8	8.5345	2252.4
470	743.15	3424.5	8.7508	3426.5	3424.4	8.7067	3114.7	3424.2	8.6664	2854.9	3424.1	8.6294	2635.1	3424.0	8.5951	2446.6	3423.9	8.5631	2283.3
480	753.15	3445.6	8.7791	3472.8	3445.5	8.7350	3156.8	3445.4	8.6947	2893.5	3445.3	8.6577	2670.7	3445.2	8.6234	2479.7	3445.0	8.5914	2314.2
490	763.15	3466.9	8.8071	3519.1	3466.7	8.7630	3198.9	3466.6	8.7227	2932.1	3466.5	8.6857	2706.3	3466.4	8.6514	2512.8	3466.3	8.6194	2345.1
500	773.15	3488.1	8.8348	3565.3	3488.0	8.7907	3240.9	3487.9	8.7505	2970.6	3487.8	8.7134	2741.9	3487.7	8.6791	2545.8	3487.6	8.6472	2375.9
510	783.15	3509.5	8.8623	3611.6	3509.4	8.8182	3283.0	3509.3	8.7779	3009.2	3509.2	8.7409	2777.5	3509.1	8.7066	2578.9	3509.0	8.6746	2406.8
520	793.15	3530.9	8.8894	3657.8	3530.8	8.8454	3325.0	3530.7	8.8051	3047.7	3530.6	8.7681	2813.1	3530.5	8.7338	2612.0	3530.4	8.7018	2437.7
530	803.15	3552.4	8.9164	3704.1	3552.3	8.8723	3367.1	3552.2	8.8321	3086.3	3552.1	8.7950	2848.7	3552.0	8.7607	2645.0	3551.9	8.7288	2468.5
540	813.15	3574.0	8.9431	3750.3	3573.9	8.8990	3409.1	3573.8	8.8587	3124.8	3573.7	8.8217	2884.3	3573.6	8.7874	2678.1	3573.5	8.7555	2499.4
550	823.15	3595.6	8.9695	3796.5	3595.5	8.9254	3451.2	3595.4	8.8852	3163.4	3595.3	8.8482	2919.9	3595.2	8.8139	2711.1	3595.1	8.7819	2530.2
560	833.15	3617.3	8.9957	3842.8	3617.2	8.9516	3493.2	3617.1	8.9114	3201.9	3617.0	8.8744	2955.5	3616.9	8.8401	2744.2	3616.9	8.8082	2561.1
570	843.15	3639.1	9.0217	3889.0	3639.0	8.9776	3535.3	3638.9	8.9374	3240.5	3638.8	8.9003	2991.0	3638.7	8.8661	2777.2	3638.6	8.8341	2591.9
580	853.15	3660.9	9.0474	3935.2	3660.8	9.0034	3577.3	3660.7	8.9631	3279.0	3660.7	8.9261	3026.6	3660.6	8.8918	2810.3	3660.5	8.8599	2622.8
590	863.15	3682.8	9.0729	3981.5	3682.7	9.0289	3619.3	3682.6	8.9886	3317.5	3682.6	8.9516	3062.2	3682.5	8.9174	2843.3	3682.4	8.8854	2653.6
600	873.15	3704.8	9.0982	4027.7	3704.7	9.0542	3661.4	3704.6	9.0140	3356.1	3704.5	8.9770	3097.8	3704.5	8.9427	2876.4	3704.4	8.9108	2684.5
610	883.15	3726.8	9.1233	4073.9	3726.8	9.0793	3703.4	3726.7	9.0391	3394.6	3726.6	9.0021	3133.3	3726.5	8.9678	2909.4	3726.4	8.9359	2715.3
620	893.15	3748.9	9.1482	4120.1	3748.9	9.1042	3745.4	3748.8	9.0640	3433.1	3748.7	9.0270	3168.9	3748.6	8.9927	2942.4	3748.6	8.9608	2746.1
630	903.15	3771.1	9.1729	4166.3	3771.0	9.1289	3787.4	3771.0	9.0887	3471.7	3770.9	9.0517	3204.5	3770.8	9.0174	2975.4	3770.7	8.9855	2777.0
640	913.15	3793.4	9.1974	4212.6	3793.3	9.1534	3829.4	3793.2	9.1132	3510.2	3793.1	9.0762	3240.0	3793.1	9.0419	3008.5	3793.0	9.0100	2807.8
650	923.15	3815.7	9.2217	4258.8	3815.6	9.1777	3871.5	3815.5	9.1375	3548.7	3815.5	9.1005	3275.6	3815.4	9.0662	3041.5	3815.3	9.0343	2838.6
660	933.15	3838.1	9.2458	4305.0	3838.0	9.2018	3913.5	3837.9	9.1616	3587.2	3837.8	9.1246	3311.2	3837.8	9.0903	3074.5	3837.7	9.0584	2869.4
670	943.15	3860.5	9.2698	4351.2	3860.4	9.2257	3955.5	3860.4	9.1855	3625.7	3860.3	9.1485	3346.7	3860.2	9.1143	3107.5	3860.2	9.0824	2900.3
680	953.15	3883.0	9.2935	4397.4	3882.9	9.2495	3997.5	3882.9	9.2093	3664.2	3882.8	9.1723	3382.3	3882.8	9.1380	3140.6	3882.7	9.1061	2931.1
690	963.15	3905.6	9.3171	4443.6	3905.5	9.2730	4039.5	3905.5	9.2328	3702.8	3905.4	9.1958	3417.8	3905.3	9.1616	3173.6	3905.3	9.1297	2961.9
700	973.15	3928.2	9.3405	4489.8	3928.2	9.2964	4081.5	3928.1	9.2562	3741.3	3928.1	9.2192	3453.4	3928.0	9.1850	3206.6	3927.9	9.1531	2992.7
710	983.15	3951.0	9.3637	4536.0	3950.9	9.3197	4123.5	3950.8	9.2795	3779.8	3950.8	9.2425	3488.9	3950.7	9.2082	3239.6	3950.7	9.1763	3023.5
720	993.15	3973.7	9.3867	4582.2	3973.7	9.3427	4165.5	3973.6	9.3025	3818.3	3973.6	9.2655	3524.5	3973.5	9.2313	3272.6	3973.4	9.1994	3054.4
730	1003.15	3996.6	9.4096	4628.4	3996.5	9.3656	4207.5	3996.5	9.3254	3856.8	3996.4	9.2884	3560.0	3996.3	9.2542	3305.6	3996.3	9.2223	3085.2
740	1013.15	4019.5	9.4324	4674.6	4019.4	9.3883	4249.5	4019.4	9.3481	3895.3	4019.3	9.3111	3595.6	4019.3	9.2769	3338.6	4019.2	9.2450	3116.0
750	1023.15	4042.5	9.4549	4720.8	4042.4	9.4109	4291.5	4042.4	9.3707	3933.8	4042.3	9.3337	3631.1	4042.2	9.2995	3371.6	4042.2	9.2676	3146.8
760	1033.15	4065.5	9.4773	4767.0	4065.4	9.4333	4333.5	4065.4	9.3931	3972.3	4065.3	9.3561	3666.6	4065.3	9.3219	3404.7	4065.2	9.2900	3177.6
770	1043.15	4088.6	9.4996	4813.2	4088.5	9.4556	4375.5	4088.5	9.4154	4010.8	4088.4	9.3784	3702.2	4088.4	9.3441	3437.7	4088.3	9.3123	3208.4
780	1053.15	4111.8	9.5217	4859.3	4111.7	9.4777	4417.5	4111.7	9.4375	4049.3	4111.6	9.4005	3737.7	4111.6	9.3662	3470.7	4111.5	9.3344	3239.2
790	1063.15	4135.0	9.5436	4905.5	4134.9	9.4996	4459.5	4134.9	9.4594	4087.8	4134.8	9.4224	3773.3	4134.8	9.3882	3503.7	4134.7	9.3563	3270.0
800	1073.15	4158.3	9.5654	4951.7	4158.2	9.5214	4501.5	4158.2	9.4812	4126.3	4158.1	9.4442	3808.8	4158.1	9.4100	3536.7	4158.0	9.3781	3300.8

1.0 to 1.5 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		1.5			1.6			1.7			1.8			1.9			2.0		
t_s °C		111.4			113.3			115.2			116.9			118.6			120.2		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		467.1	1.4336	1.0530	475.4	1.4550	1.0547	483.2	1.4752	1.0563	490.7	1.4944	1.0579	497.9	1.5127	1.0594	504.7	1.5301	1.0608
Sat. Vapour		2693.4	7.2234	1159.0	2696.2	7.2017	1091.1	2699.0	7.1813	1030.9	2701.5	7.1622	977.18	2704.0	7.1440	928.95	2706.3	7.1268	885.40
t °C	T K																		
0	273.15	0.1	−0.0001	1.0001	0.1	−0.0001	1.0001	0.1	−0.0001	1.0001	0.1	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001
10	283.15	42.1	0.1510	1.0002	42.1	0.1510	1.0002	42.2	0.1510	1.0002	42.2	0.1510	1.0002	42.2	0.1510	1.0002	42.2	0.1510	1.0002
20	293.15	84.0	0.2963	1.0017	84.0	0.2963	1.0017	84.0	0.2963	1.0016	84.0	0.2963	1.0016	84.0	0.2963	1.0016	84.0	0.2963	1.0016
30	303.15	125.8	0.4365	1.0042	125.8	0.4365	1.0042	125.8	0.4365	1.0042	125.8	0.4365	1.0042	125.8	0.4365	1.0042	125.8	0.4364	1.0042
40	313.15	167.6	0.5721	1.0077	167.6	0.5721	1.0077	167.6	0.5721	1.0077	167.6	0.5721	1.0077	167.6	0.5721	1.0077	167.6	0.5720	1.0077
50	323.15	209.4	0.7034	1.0121	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.4	0.7034	1.0120
60	333.15	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171	251.2	0.8309	1.0171
70	343.15	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228
80	353.15	335.0	1.0752	1.0291	335.0	1.0752	1.0291	335.0	1.0752	1.0291	335.0	1.0752	1.0291	335.0	1.0752	1.0291	335.0	1.0752	1.0291
90	363.15	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1925	1.0361	377.0	1.1924	1.0361	377.0	1.1924	1.0361	377.0	1.1924	1.0361
100	373.15	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.1	1.3068	1.0437
110	383.15	461.3	1.4185	1.0519	461.3	1.4185	1.0519	461.3	1.4185	1.0519	461.3	1.4185	1.0518	461.3	1.4185	1.0518	461.4	1.4184	1.0518
120	393.15	2711.2	7.2693	1187.6	2710.1	7.2373	1111.9	2709.1	7.2072	1045.1	2708.0	7.1786	985.78	2706.9	7.1515	932.66	503.7	1.5276	1.0606
130	403.15	2731.8	7.3209	1220.3	2730.8	7.2892	1142.8	2729.8	7.2593	1074.3	2728.9	7.2311	1013.5	2727.9	7.2042	959.01	2726.9	7.1786	910.00
140	413.15	2752.2	7.3709	1252.9	2751.3	7.3395	1173.4	2750.4	7.3098	1103.2	2749.6	7.2818	1040.9	2748.7	7.2551	985.10	2747.8	7.2298	934.88
150	423.15	2772.5	7.4194	1285.2	2771.7	7.3882	1203.8	2770.9	7.3588	1131.9	2770.1	7.3309	1068.1	2769.3	7.3045	1011.0	2768.5	7.2794	959.54
160	433.15	2792.7	7.4667	1317.3	2792.0	7.4356	1234.0	2791.3	7.4063	1160.5	2790.5	7.3787	1095.1	2789.8	7.3524	1036.6	2789.1	7.3275	984.00
170	443.15	2812.8	7.5126	1349.3	2812.2	7.4817	1264.0	2811.5	7.4526	1188.8	2810.9	7.4251	1122.0	2810.2	7.3990	1062.1	2809.6	7.3742	1008.3
180	453.15	2832.9	7.5574	1381.1	2832.3	7.5266	1293.9	2831.7	7.4977	1217.0	2831.1	7.4703	1148.7	2830.5	7.4443	1087.5	2830.0	7.4196	1032.5
190	463.15	2852.9	7.6012	1412.8	2852.4	7.5705	1323.7	2851.9	7.5416	1245.1	2851.3	7.5144	1175.3	2850.8	7.4885	1112.7	2850.3	7.4639	1056.5
200	473.15	2872.9	7.6439	1444.4	2872.5	7.6133	1353.4	2872.0	7.5846	1273.1	2871.5	7.5574	1201.7	2871.0	7.5316	1137.9	2870.5	7.5072	1080.4
210	483.15	2892.9	7.6857	1475.9	2892.5	7.6552	1383.0	2892.0	7.6265	1301.0	2891.6	7.5994	1228.1	2891.1	7.5738	1162.9	2890.7	7.5494	1104.2
220	493.15	2912.9	7.7266	1507.3	2912.5	7.6962	1412.5	2912.1	7.6676	1328.8	2911.7	7.6406	1254.4	2911.3	7.6150	1187.9	2910.8	7.5907	1128.0
230	503.15	2932.9	7.7667	1538.7	2932.5	7.7364	1442.0	2932.1	7.7078	1356.6	2931.7	7.6809	1280.7	2931.4	7.6554	1212.8	2931.0	7.6311	1151.7
240	513.15	2952.9	7.8061	1570.0	2952.5	7.7758	1471.3	2952.2	7.7473	1384.3	2951.8	7.7204	1306.9	2951.5	7.6949	1237.6	2951.1	7.6707	1175.3
250	523.15	2972.9	7.8447	1601.3	2972.5	7.8144	1500.7	2972.2	7.7860	1411.9	2971.9	7.7591	1333.0	2971.6	7.7337	1262.4	2971.2	7.7096	1198.9
260	533.15	2992.9	7.8826	1632.5	2992.6	7.8524	1530.0	2992.3	7.8240	1439.5	2992.0	7.7972	1359.1	2991.7	7.7718	1287.2	2991.4	7.7477	1222.4
270	543.15	3012.9	7.9198	1663.7	3012.7	7.8897	1559.2	3012.4	7.8613	1467.1	3012.1	7.8345	1385.2	3011.8	7.8092	1311.9	3011.5	7.7851	1245.9
280	553.15	3033.0	7.9565	1694.8	3032.7	7.9263	1588.5	3032.5	7.8980	1494.6	3032.2	7.8712	1411.2	3031.9	7.8459	1336.5	3031.7	7.8219	1269.3
290	563.15	3053.1	7.9925	1725.9	3052.9	7.9624	1617.6	3052.6	7.9341	1522.1	3052.4	7.9074	1437.2	3052.1	7.8821	1361.2	3051.9	7.8581	1292.8
300	573.15	3073.3	8.0280	1757.0	3073.0	7.9979	1646.8	3072.8	7.9696	1549.6	3072.6	7.9429	1463.1	3072.3	7.9176	1385.8	3072.1	7.8937	1316.2
310	583.15	3093.5	8.0629	1788.1	3093.2	8.0328	1676.0	3093.0	8.0046	1577.0	3092.8	7.9779	1489.1	3092.6	7.9527	1410.4	3092.3	7.9287	1339.5
320	593.15	3113.7	8.0973	1819.1	3113.5	8.0672	1705.1	3113.3	8.0390	1604.4	3113.1	8.0124	1515.0	3112.8	7.9871	1434.9	3112.6	7.9632	1362.9
330	603.15	3134.0	8.1312	1850.2	3133.8	8.1012	1734.2	3133.6	8.0729	1631.8	3133.4	8.0463	1540.9	3133.2	8.0211	1459.5	3133.0	7.9972	1386.2
340	613.15	3154.3	8.1646	1881.2	3154.1	8.1346	1763.3	3153.9	8.1064	1659.2	3153.7	8.0798	1566.7	3153.5	8.0546	1484.0	3153.3	8.0307	1409.5

350	623.15	3174.7	8.1976	1912.2	3174.5	8.1676	1792.3	3174.3	8.1394	1686.6	3174.1	8.1128	1592.6	3174.0	8.0876	1508.5	3173.8	8.0638	1432.8
360	633.15	3195.1	8.2301	1943.1	3195.0	8.2002	1821.4	3194.8	8.1720	1714.0	3194.6	8.1454	1618.5	3194.4	8.1202	1533.0	3194.2	8.0964	1456.1
370	643.15	3215.6	8.2623	1974.1	3215.5	8.2323	1850.4	3215.3	8.2041	1741.3	3215.1	8.1775	1644.3	3214.9	8.1524	1557.5	3214.8	8.1285	1479.4
380	653.15	3236.2	8.2940	2005.1	3236.0	8.2640	1879.5	3235.8	8.2358	1768.6	3235.7	8.2093	1670.1	3235.5	8.1841	1582.0	3235.4	8.1603	1502.7
390	663.15	3256.8	8.3253	2036.0	3256.6	8.2953	1908.5	3256.5	8.2672	1796.0	3256.3	8.2406	1695.9	3256.2	8.2155	1606.5	3256.0	8.1916	1525.9
400	673.15	3277.5	8.3562	2066.9	3277.3	8.3263	1937.5	3277.1	8.2981	1823.3	3277.0	8.2716	1721.8	3276.8	8.2465	1630.9	3276.7	8.2226	1549.2
410	683.15	3298.2	8.3868	2097.9	3298.0	8.3568	1966.5	3297.9	8.3287	1850.6	3297.7	8.3022	1747.6	3297.6	8.2771	1655.4	3297.4	8.2532	1572.4
420	693.15	3319.0	8.4170	2128.8	3318.8	8.3871	1995.5	3318.7	8.3589	1877.9	3318.5	8.3324	1773.3	3318.4	8.3073	1679.8	3318.3	8.2835	1595.6
430	703.15	3339.8	8.4469	2159.7	3339.7	8.4169	2024.5	3339.6	8.3888	1905.2	3339.4	8.3623	1799.1	3339.3	8.3372	1704.2	3339.1	8.3134	1618.8
440	713.15	3360.7	8.4764	2190.6	3360.6	8.4465	2053.5	3360.5	8.4184	1932.5	3360.3	8.3918	1824.9	3360.2	8.3668	1728.7	3360.1	8.3429	1642.1
450	723.15	3381.7	8.5056	2221.5	3381.6	8.4757	2082.4	3381.5	8.4476	1959.7	3381.3	8.4211	1850.7	3381.2	8.3960	1753.1	3381.1	8.3722	1665.3
460	733.15	3402.8	8.5345	2252.4	3402.6	8.5046	2111.4	3402.5	8.4765	1987.0	3402.4	8.4500	1876.4	3402.3	8.4249	1777.5	3402.1	8.4011	1688.5
470	743.15	3423.9	8.5631	2283.3	3423.8	8.5332	2140.4	3423.6	8.5051	2014.3	3423.5	8.4786	1902.2	3423.4	8.4535	1801.9	3423.3	8.4297	1711.7
480	753.15	3445.0	8.5914	2314.2	3444.9	8.5615	2169.3	3444.8	8.5334	2041.6	3444.7	8.5069	1928.0	3444.6	8.4819	1826.3	3444.5	8.4581	1734.9
490	763.15	3466.3	8.6194	2345.1	3466.2	8.5895	2198.3	3466.1	8.5614	2068.8	3466.0	8.5350	1953.7	3465.8	8.5099	1850.7	3465.7	8.4861	1758.0
500	773.15	3487.6	8.6472	2375.9	3487.5	8.6173	2227.3	3487.4	8.5892	2096.1	3487.3	8.5627	1979.5	3487.2	8.5377	1875.1	3487.0	8.5139	1781.2
510	783.15	3509.0	8.6746	2406.8	3508.9	8.6447	2256.2	3508.8	8.6167	2123.3	3508.7	8.5902	2005.2	3508.5	8.5651	1899.5	3508.4	8.5414	1804.4
520	793.15	3530.4	8.7018	2437.7	3530.3	8.6720	2285.1	3530.2	8.6439	2150.6	3530.1	8.6174	2030.9	3530.0	8.5924	1923.9	3529.9	8.5686	1827.6
530	803.15	3551.9	8.7288	2468.5	3551.8	8.6989	2314.1	3551.7	8.6708	2177.8	3551.6	8.6444	2056.7	3551.5	8.6193	1948.3	3551.4	8.5956	1850.8
540	813.15	3573.5	8.7555	2499.4	3573.4	8.7256	2343.0	3573.3	8.6975	2205.0	3573.2	8.6711	2082.4	3573.1	8.6460	1972.7	3573.0	8.6223	1873.9
550	823.15	3595.1	8.7819	2530.2	3595.0	8.7521	2371.9	3595.0	8.7240	2232.3	3594.9	8.6975	2108.1	3594.8	8.6725	1997.1	3594.7	8.6487	1897.1
560	833.15	3616.9	8.8082	2561.1	3616.8	8.7783	2400.9	3616.7	8.7502	2259.5	3616.6	8.7238	2133.9	3616.5	8.6987	2021.4	3616.4	8.6750	1920.2
570	843.15	3638.6	8.8341	2591.9	3638.5	8.8043	2429.8	3638.5	8.7762	2286.7	3638.4	8.7498	2159.6	3638.3	8.7247	2045.8	3638.2	8.7010	1943.4
580	853.15	3660.5	8.8599	2622.8	3660.4	8.8300	2458.7	3660.3	8.8020	2314.0	3660.2	8.7755	2185.3	3660.1	8.7505	2070.2	3660.0	8.7268	1966.6
590	863.15	3682.4	8.8854	2653.6	3682.3	8.8556	2487.6	3682.2	8.8275	2341.2	3682.1	8.8011	2211.0	3682.1	8.7761	2094.5	3682.0	8.7523	1989.7
600	873.15	3704.4	8.9108	2684.5	3704.3	8.8809	2516.6	3704.2	8.8529	2368.4	3704.1	8.8264	2236.7	3704.1	8.8014	2118.9	3704.0	8.7776	2012.9
610	883.15	3726.4	8.9359	2715.3	3726.4	8.9060	2545.5	3726.3	8.8780	2395.6	3726.2	8.8515	2262.4	3726.1	8.8265	2143.3	3726.0	8.8028	2036.0
620	893.15	3748.6	8.9608	2746.1	3748.5	8.9309	2574.4	3748.4	8.9029	2422.8	3748.3	8.8764	2288.1	3748.2	8.8514	2167.6	3748.2	8.8277	2059.1
630	903.15	3770.7	8.9855	2777.0	3770.7	8.9556	2603.3	3770.6	8.9276	2450.1	3770.5	8.9012	2313.8	3770.4	8.8761	2192.0	3770.4	8.8524	2082.3
640	913.15	3793.0	9.0100	2807.8	3792.9	8.9801	2632.2	3792.8	8.9521	2477.3	3792.8	8.9257	2339.5	3792.7	8.9007	2216.3	3792.6	8.8769	2105.4
650	923.15	3815.3	9.0343	2838.6	3815.2	9.0045	2661.1	3815.2	8.9764	2504.5	3815.1	8.9500	2365.2	3815.0	8.9250	2240.7	3815.0	8.9012	2128.6
660	933.15	3837.7	9.0584	2869.4	3837.6	9.0286	2690.0	3837.6	9.0006	2531.7	3837.5	8.9741	2390.9	3837.4	8.9491	2265.0	3837.4	8.9254	2151.7
670	943.15	3860.2	9.0824	2900.3	3860.1	9.0525	2718.9	3860.0	9.0245	2558.9	3860.0	8.9981	2416.6	3859.9	8.9731	2289.4	3859.8	8.9493	2174.8
680	953.15	3882.7	9.1061	2931.1	3882.6	9.0763	2747.8	3882.6	9.0483	2586.1	3882.5	9.0218	2442.3	3882.4	8.9968	2313.7	3882.4	8.9731	2197.9
690	963.15	3905.3	9.1297	2961.9	3905.2	9.0999	2776.7	3905.1	9.0718	2613.3	3905.1	9.0454	2468.0	3905.0	9.0204	2338.0	3905.0	8.9967	2221.1
700	973.15	3927.9	9.1531	2992.7	3927.9	9.1233	2805.6	3927.8	9.0952	2640.5	3927.7	9.0688	2493.7	3927.7	9.0438	2362.4	3927.6	9.0201	2244.2
710	983.15	3950.7	9.1763	3023.5	3950.6	9.1465	2834.5	3950.5	9.1185	2667.7	3950.5	9.0920	2519.4	3950.4	9.0670	2386.7	3950.4	9.0433	2267.3
720	993.15	3973.4	9.1994	3054.4	3973.4	9.1696	2863.4	3973.3	9.1415	2694.9	3973.3	9.1151	2545.1	3973.2	9.0901	2411.1	3973.1	9.0664	2290.4
730	1003.15	3996.3	9.2223	3085.2	3996.2	9.1925	2892.3	3996.2	9.1644	2722.1	3996.1	9.1380	2570.8	3996.1	9.1130	2435.4	3996.0	9.0893	2313.6
740	1013.15	4019.2	9.2450	3116.0	4019.2	9.2152	2921.2	4019.1	9.1872	2749.3	4019.0	9.1607	2596.5	4019.0	9.1357	2459.7	4018.9	9.1120	2336.7
750	1023.15	4042.2	9.2676	3146.8	4042.1	9.2378	2950.0	4042.1	9.2097	2776.4	4042.0	9.1833	2622.1	4042.0	9.1583	2484.1	4041.9	9.1346	2359.8
760	1033.15	4065.2	9.2900	3177.6	4065.2	9.2602	2978.9	4065.1	9.2322	2803.6	4065.1	9.2057	2647.8	4065.0	9.1807	2508.4	4065.0	9.1570	2382.9
770	1043.15	4088.3	9.3123	3208.4	4088.3	9.2824	3007.8	4088.2	9.2544	2830.8	4088.2	9.2280	2673.5	4088.1	9.2030	2532.7	4088.1	9.1793	2406.0
780	1053.15	4111.5	9.3344	3239.2	4111.5	9.3045	3036.7	4111.4	9.2765	2858.0	4111.4	9.2501	2699.2	4111.3	9.2251	2557.1	4111.3	9.2014	2429.1
790	1063.15	4134.7	9.3563	3270.0	4134.7	9.3265	3065.6	4134.7	9.2985	2885.2	4134.6	9.2721	2724.8	4134.6	9.2471	2581.4	4134.5	9.2234	2452.3
800	1073.15	4158.0	9.3781	3300.8	4158.0	9.3483	3094.5	4158.0	9.3203	2912.4	4157.9	9.2939	2750.5	4157.9	9.2689	2605.7	4157.8	9.2452	2475.4

1.5 to 2.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		2.0			2.1			2.2			2.3			2.4			2.5		
t_s °C		120.2			121.8			123.3			124.7			126.1			127.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		504.7	1.5301	1.0608	511.3	1.5468	1.0623	517.6	1.5628	1.0636	523.7	1.5781	1.0650	529.6	1.5929	1.0663	535.4	1.6072	1.0676
Sat. Vapour		2706.3	7.1268	885.40	2708.5	7.1105	845.86	2710.6	7.0949	809.80	2712.6	7.0800	776.77	2714.5	7.0657	746.41	2716.4	7.0520	718.40
t °C	T K																		
0	273.15	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001
10	283.15	42.2	0.1510	1.0002	42.2	0.1510	1.0002	42.2	0.1510	1.0001	42.2	0.1510	1.0001	42.2	0.1510	1.0001	42.2	0.1510	1.0001
20	293.15	84.0	0.2963	1.0016	84.1	0.2963	1.0016	84.1	0.2963	1.0016	84.1	0.2963	1.0016	84.1	0.2962	1.0016	84.1	0.2962	1.0016
30	303.15	125.8	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042
40	313.15	167.6	0.5720	1.0077	167.6	0.5720	1.0077	167.6	0.5720	1.0077	167.6	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077
50	323.15	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.4	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120
60	333.15	251.2	0.8309	1.0171	251.3	0.8309	1.0171	251.3	0.8309	1.0171	251.3	0.8309	1.0170	251.3	0.8309	1.0170	251.3	0.8309	1.0170
70	343.15	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.1	0.9547	1.0228	293.2	0.9547	1.0227
80	353.15	335.0	1.0752	1.0291	335.0	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291
90	363.15	377.0	1.1924	1.0361	377.0	1.1924	1.0361	377.1	1.1924	1.0361	377.1	1.1924	1.0361	377.1	1.1924	1.0361	377.1	1.1924	1.0361
100	373.15	419.1	1.3068	1.0437	419.1	1.3068	1.0437	419.2	1.3068	1.0436	419.2	1.3068	1.0436	419.2	1.3068	1.0436	419.2	1.3068	1.0436
110	383.15	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518
120	393.15	503.7	1.5276	1.0606	503.7	1.5276	1.0606	503.7	1.5276	1.0606	503.7	1.5276	1.0606	503.7	1.5276	1.0606	503.8	1.5275	1.0606
130	403.15	2726.9	7.1786	910.00	2725.9	7.1541	865.66	2724.9	7.1307	825.33	2723.9	7.1082	788.52	2722.9	7.0866	754.76	2721.9	7.0658	723.70
140	413.15	2747.8	7.2298	934.88	2746.9	7.2056	889.45	2746.0	7.1824	848.14	2745.1	7.1602	810.41	2744.2	7.1388	775.83	2743.3	7.1183	744.01
150	423.15	2768.5	7.2794	959.54	2767.7	7.2554	913.01	2766.9	7.2324	870.71	2766.1	7.2104	832.08	2765.3	7.1893	796.67	2764.5	7.1689	764.09
160	433.15	2789.1	7.3275	984.00	2788.4	7.3036	936.38	2787.7	7.2809	893.09	2787.0	7.2590	853.55	2786.2	7.2381	817.31	2785.5	7.2179	783.97
170	443.15	2809.6	7.3742	1008.3	2808.9	7.3505	959.58	2808.3	7.3279	915.29	2807.6	7.3062	874.85	2807.0	7.2854	837.78	2806.3	7.2654	803.67
180	453.15	2830.0	7.4196	1032.5	2829.4	7.3961	982.64	2828.8	7.3736	937.36	2828.2	7.3521	896.01	2827.6	7.3314	858.10	2827.0	7.3115	823.23
190	463.15	2850.3	7.4639	1056.5	2849.7	7.4405	1005.6	2849.2	7.4181	959.29	2848.6	7.3967	917.04	2848.1	7.3762	878.30	2847.5	7.3564	842.66
200	473.15	2870.5	7.5072	1080.4	2870.0	7.4838	1028.4	2869.5	7.4616	981.13	2869.0	7.4402	937.96	2868.5	7.4198	898.39	2868.0	7.4001	861.98
210	483.15	2890.7	7.5494	1104.2	2890.2	7.5262	1051.1	2889.8	7.5040	1002.9	2889.3	7.4827	958.79	2888.9	7.4624	918.38	2888.4	7.4428	881.21
220	493.15	2910.8	7.5907	1128.0	2910.4	7.5675	1073.8	2910.0	7.5454	1024.5	2909.6	7.5242	979.54	2909.2	7.5040	938.30	2908.7	7.4845	900.36
230	503.15	2931.0	7.6311	1151.7	2930.6	7.6080	1096.4	2930.2	7.5860	1046.1	2929.8	7.5649	1000.2	2929.4	7.5446	958.14	2929.0	7.5252	919.44
240	513.15	2951.1	7.6707	1175.3	2950.7	7.6477	1118.9	2950.4	7.6257	1067.6	2950.0	7.6046	1020.8	2949.7	7.5845	977.93	2949.3	7.5651	938.45
250	523.15	2971.2	7.7096	1198.9	2970.9	7.6866	1141.4	2970.6	7.6646	1089.1	2970.2	7.6436	1041.4	2969.9	7.6235	997.66	2969.6	7.6042	957.41
260	533.15	2991.4	7.7477	1222.4	2991.0	7.7247	1163.8	2990.7	7.7028	1110.6	2990.4	7.6819	1061.9	2990.1	7.6618	1017.3	2989.8	7.6425	976.33
270	543.15	3011.5	7.7851	1245.9	3011.2	7.7622	1186.2	3010.9	7.7403	1131.9	3010.6	7.7194	1082.4	3010.3	7.6994	1037.0	3010.0	7.6801	995.21
280	553.15	3031.7	7.8219	1269.3	3031.4	7.7990	1208.6	3031.1	7.7772	1153.3	3030.8	7.7563	1102.8	3030.6	7.7363	1056.6	3030.3	7.7171	1014.0
290	563.15	3051.9	7.8581	1292.8	3051.6	7.8352	1230.9	3051.3	7.8134	1174.6	3051.1	7.7926	1123.3	3050.8	7.7726	1076.2	3050.6	7.7534	1032.9
300	573.15	3072.1	7.8937	1316.2	3071.8	7.8708	1253.2	3071.6	7.8491	1195.9	3071.3	7.8282	1143.7	3071.1	7.8083	1095.7	3070.9	7.7891	1051.6
310	583.15	3092.3	7.9287	1339.5	3092.1	7.9059	1275.5	3091.9	7.8841	1217.2	3091.6	7.8633	1164.0	3091.4	7.8434	1115.3	3091.2	7.8243	1070.4
320	593.15	3112.6	7.9632	1362.9	3112.4	7.9404	1297.7	3112.2	7.9187	1238.5	3112.0	7.8979	1184.4	3111.8	7.8780	1134.8	3111.5	7.8589	1089.1
330	603.15	3133.0	7.9972	1386.2	3132.7	7.9744	1319.9	3132.5	7.9527	1259.7	3132.3	7.9319	1204.7	3132.1	7.9121	1154.3	3131.9	7.8930	1107.9
340	613.15	3153.3	8.0307	1409.5	3153.1	8.0080	1342.2	3152.9	7.9863	1280.9	3152.7	7.9655	1225.0	3152.6	7.9456	1173.7	3152.4	7.9266	1126.6

350	623.15	3173.8	8.0638	1432.8	3173.6	8.0410	1364.4	3173.4	8.0193	1302.1	3173.2	7.9986	1245.3	3173.0	7.9787	1193.2	3172.8	7.9597	1145.2
360	633.15	3194.2	8.0964	1456.1	3194.1	8.0736	1386.6	3193.9	8.0520	1323.3	3193.7	8.0312	1265.6	3193.5	8.0114	1212.6	3193.3	7.9923	1163.9
370	643.15	3214.8	8.1285	1479.4	3214.6	8.1058	1408.7	3214.4	8.0842	1344.5	3214.3	8.0634	1285.8	3214.1	8.0436	1232.1	3213.9	8.0246	1182.6
380	653.15	3235.4	8.1603	1502.7	3235.2	8.1376	1430.9	3235.0	8.1159	1365.6	3234.9	8.0952	1306.1	3234.7	8.0754	1251.5	3234.5	8.0564	1201.2
390	663.15	3256.0	8.1916	1525.9	3255.8	8.1690	1453.1	3255.7	8.1473	1386.8	3255.5	8.1266	1326.3	3255.4	8.1068	1270.9	3255.2	8.0878	1219.9
400	673.15	3276.7	8.2226	1549.2	3276.5	8.1999	1475.2	3276.4	8.1783	1408.0	3276.2	8.1576	1346.6	3276.1	8.1378	1290.3	3275.9	8.1188	1238.5
410	683.15	3297.4	8.2532	1572.4	3297.3	8.2306	1497.3	3297.2	8.2089	1429.1	3297.0	8.1883	1366.8	3296.9	8.1685	1309.7	3296.7	8.1495	1257.1
420	693.15	3318.3	8.2835	1595.6	3318.1	8.2608	1519.5	3318.0	8.2392	1450.2	3317.8	8.2185	1387.0	3317.7	8.1987	1329.0	3317.6	8.1797	1275.7
430	703.15	3339.1	8.3134	1618.8	3339.0	8.2907	1541.6	3338.9	8.2691	1471.3	3338.7	8.2485	1407.2	3338.6	8.2287	1348.4	3338.5	8.2097	1294.3
440	713.15	3360.1	8.3429	1642.1	3359.9	8.3203	1563.7	3359.8	8.2987	1492.5	3359.7	8.2780	1427.4	3359.5	8.2583	1367.8	3359.4	8.2393	1312.9
450	723.15	3381.1	8.3722	1665.3	3381.0	8.3495	1585.8	3380.8	8.3279	1513.6	3380.7	8.3073	1447.6	3380.6	8.2875	1387.2	3380.4	8.2686	1331.5
460	733.15	3402.1	8.4011	1688.5	3402.0	8.3785	1607.9	3401.9	8.3569	1534.7	3401.8	8.3362	1467.8	3401.6	8.3165	1406.5	3401.5	8.2975	1350.1
470	743.15	3423.3	8.4297	1711.7	3423.2	8.4071	1630.0	3423.0	8.3855	1555.8	3422.9	8.3649	1488.0	3422.8	8.3451	1425.9	3422.7	8.3262	1368.7
480	753.15	3444.5	8.4581	1734.9	3444.3	8.4354	1652.1	3444.2	8.4139	1576.9	3444.1	8.3932	1508.2	3444.0	8.3735	1445.2	3443.9	8.3545	1387.3
490	763.15	3465.7	8.4861	1758.0	3465.6	8.4635	1674.2	3465.5	8.4419	1598.0	3465.4	8.4213	1528.4	3465.3	8.4015	1464.5	3465.2	8.3826	1405.8
500	773.15	3487.0	8.5139	1781.2	3486.9	8.4913	1696.3	3486.8	8.4697	1619.0	3486.7	8.4491	1548.5	3486.6	8.4293	1483.9	3486.5	8.4104	1424.4
510	783.15	3508.4	8.5414	1804.4	3508.3	8.5187	1718.4	3508.2	8.4972	1640.1	3508.1	8.4766	1568.7	3508.0	8.4568	1503.2	3507.9	8.4379	1443.0
520	793.15	3529.9	8.5686	1827.6	3529.8	8.5460	1740.4	3529.7	8.5244	1661.2	3529.6	8.5038	1588.9	3529.5	8.4841	1522.5	3529.4	8.4651	1461.5
530	803.15	3551.4	8.5956	1850.8	3551.3	8.5729	1762.5	3551.2	8.5514	1682.3	3551.1	8.5308	1609.0	3551.0	8.5110	1541.9	3550.9	8.4921	1480.1
540	813.15	3573.0	8.6223	1873.9	3572.9	8.5997	1784.6	3572.8	8.5781	1703.3	3572.7	8.5575	1629.2	3572.6	8.5378	1561.2	3572.5	8.5188	1498.6
550	823.15	3594.7	8.6487	1897.1	3594.6	8.6261	1806.6	3594.5	8.6046	1724.4	3594.4	8.5840	1649.3	3594.3	8.5643	1580.5	3594.2	8.5453	1517.2
560	833.15	3616.4	8.6750	1920.2	3616.3	8.6524	1828.7	3616.2	8.6308	1745.5	3616.1	8.6102	1669.5	3616.0	8.5905	1599.8	3615.9	8.5716	1535.7
570	843.15	3638.2	8.7010	1943.4	3638.1	8.6784	1850.8	3638.0	8.6568	1766.5	3637.9	8.6362	1689.6	3637.8	8.6165	1619.1	3637.7	8.5976	1554.3
580	853.15	3660.0	8.7268	1966.6	3660.0	8.7042	1872.8	3659.9	8.6826	1787.6	3659.8	8.6620	1709.8	3659.7	8.6423	1638.4	3659.6	8.6234	1572.8
590	863.15	3682.0	8.7523	1989.7	3681.9	8.7297	1894.9	3681.8	8.7082	1808.6	3681.7	8.6876	1729.9	3681.6	8.6679	1657.7	3681.6	8.6490	1591.4
600	873.15	3704.0	8.7776	2012.9	3703.9	8.7551	1916.9	3703.8	8.7335	1829.7	3703.7	8.7129	1750.0	3703.6	8.6932	1677.0	3703.6	8.6743	1609.9
610	883.15	3726.0	8.8028	2036.0	3726.0	8.7802	1939.0	3725.9	8.7586	1850.7	3725.8	8.7381	1770.2	3725.7	8.7184	1696.3	3725.6	8.6994	1628.4
620	893.15	3748.2	8.8277	2059.1	3748.1	8.8051	1961.0	3748.0	8.7836	1871.8	3747.9	8.7630	1790.3	3747.9	8.7433	1715.6	3747.8	8.7244	1646.9
630	903.15	3770.4	8.8524	2082.3	3770.3	8.8298	1983.0	3770.2	8.8083	1892.8	3770.1	8.7877	1810.4	3770.1	8.7680	1734.9	3770.0	8.7491	1665.5
640	913.15	3792.6	8.8769	2105.4	3792.6	8.8543	2005.1	3792.5	8.8328	1913.9	3792.4	8.8122	1830.6	3792.3	8.7925	1754.2	3792.3	8.7736	1684.0
650	923.15	3815.0	8.9012	2128.6	3814.9	8.8787	2027.1	3814.8	8.8571	1934.9	3814.7	8.8366	1850.7	3814.7	8.8169	1773.5	3814.6	8.7980	1702.5
660	933.15	3837.4	8.9254	2151.7	3837.3	8.9028	2049.1	3837.2	8.8813	1955.9	3837.2	8.8607	1870.8	3837.1	8.8410	1792.8	3837.0	8.8221	1721.0
670	943.15	3859.8	8.9493	2174.8	3859.8	8.9268	2071.2	3859.7	8.9052	1977.0	3859.6	8.8847	1890.9	3859.6	8.8650	1812.1	3859.5	8.8461	1739.5
680	953.15	3882.4	8.9731	2197.9	3882.3	8.9505	2093.2	3882.2	8.9290	1998.0	3882.2	8.9084	1911.1	3882.1	8.8887	1831.4	3882.0	8.8698	1758.1
690	963.15	3905.0	8.9967	2221.1	3904.9	8.9741	2115.2	3904.8	8.9526	2019.0	3904.8	8.9320	1931.2	3904.7	8.9123	1850.7	3904.6	8.8934	1776.6
700	973.15	3927.6	9.0201	2244.2	3927.6	8.9975	2137.3	3927.5	8.9760	2040.1	3927.4	8.9554	1951.3	3927.4	8.9357	1869.9	3927.3	8.9169	1795.1
710	983.15	3950.4	9.0433	2267.3	3950.3	9.0208	2159.3	3950.2	8.9992	2061.1	3950.2	8.9787	1971.4	3950.1	8.9590	1889.2	3950.1	8.9401	1813.6
720	993.15	3973.1	9.0664	2290.4	3973.1	9.0438	2181.3	3973.0	9.0223	2082.1	3973.0	9.0018	1991.5	3972.9	8.9821	1908.5	3972.9	8.9632	1832.1
730	1003.15	3996.0	9.0893	2313.6	3996.0	9.0667	2203.3	3995.9	9.0452	2103.1	3995.8	9.0247	2011.6	3995.8	9.0050	1927.8	3995.7	8.9861	1850.6
740	1013.15	4018.9	9.1120	2336.7	4018.9	9.0895	2225.4	4018.8	9.0680	2124.2	4018.8	9.0474	2031.7	4018.7	9.0277	1947.0	4018.7	9.0088	1869.1
750	1023.15	4041.9	9.1346	2359.8	4041.9	9.1121	2247.4	4041.8	9.0905	2145.2	4041.8	9.0700	2051.9	4041.7	9.0503	1966.3	4041.7	9.0314	1887.6
760	1033.15	4065.0	9.1570	2382.9	4064.9	9.1345	2269.4	4064.9	9.1130	2166.2	4064.8	9.0924	2072.0	4064.8	9.0727	1985.6	4064.7	9.0539	1906.1
770	1043.15	4088.1	9.1793	2406.0	4088.0	9.1567	2291.4	4088.0	9.1352	2187.2	4087.9	9.1147	2092.1	4087.9	9.0950	2004.8	4087.8	9.0761	1924.6
780	1053.15	4111.3	9.2014	2429.1	4111.2	9.1789	2313.4	4111.2	9.1574	2208.2	4111.1	9.1368	2112.2	4111.1	9.1171	2024.1	4111.0	9.0982	1943.1
790	1063.15	4134.5	9.2234	2452.3	4134.5	9.2008	2335.4	4134.4	9.1793	2229.2	4134.4	9.1588	2132.3	4134.3	9.1391	2043.4	4134.3	9.1202	1961.6
800	1073.15	4157.8	9.2452	2475.4	4157.8	9.2226	2357.5	4157.7	9.2011	2250.2	4157.7	9.1806	2152.4	4157.6	9.1609	2062.6	4157.6	9.1420	1980.1

Table 3 Water and Steam—*continued*

p (*abs*) bar	2.5			2.6			2.7			2.8			2.9			3.0		
t_s °C	127.4			128.7			130.0			131.2			132.4			133.5		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	535.4	1.6072	1.0676	540.9	1.6209	1.0688	546.2	1.6342	1.0700	551.5	1.6471	1.0712	556.5	1.6596	1.0724	561.4	1.6717	1.0735
Sat. Vapour	2716.4	7.0520	718.40	2718.2	7.0389	692.47	2719.9	7.0262	668.40	2721.5	7.0140	646.00	2723.1	7.0022	625.09	2724.7	6.9909	605.53
t °C / T K																		
0 / 273.15	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.2	−0.0001	1.0001	0.3	−0.0001	1.0001	0.3	−0.0001	1.0001
10 / 283.15	42.2	0.1510	1.0001	42.2	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001
20 / 293.15	84.1	0.2962	1.0016	84.1	0.2962	1.0016	84.1	0.2962	1.0016	84.1	0.2962	1.0016	84.1	0.2962	1.0016	84.1	0.2962	1.0016
30 / 303.15	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042	125.9	0.4364	1.0042
40 / 313.15	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077
50 / 323.15	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120
60 / 333.15	251.3	0.8309	1.0170	251.3	0.8309	1.0170	251.3	0.8309	1.0170	251.3	0.8308	1.0170	251.3	0.8308	1.0170	251.3	0.8308	1.0170
70 / 343.15	293.2	0.9547	1.0227	293.2	0.9547	1.0227	293.2	0.9547	1.0227	293.2	0.9547	1.0227	293.2	0.9547	1.0227	293.2	0.9547	1.0227
80 / 353.15	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291
90 / 363.15	377.1	1.1924	1.0361	377.1	1.1924	1.0361	377.1	1.1924	1.0360	377.1	1.1924	1.0360	377.1	1.1924	1.0360	377.1	1.1924	1.0360
100 / 373.15	419.2	1.3068	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436
110 / 383.15	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518	461.4	1.4184	1.0518
120 / 393.15	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606
130 / 403.15	2721.9	7.0658	723.70	2720.9	7.0457	695.03	2719.9	7.0263	668.47	546.3	1.6344	1.0700	546.3	1.6343	1.0700	546.3	1.6343	1.0700
140 / 413.15	2743.3	7.1183	744.01	2742.4	7.0984	714.64	2741.5	7.0793	687.44	2740.6	7.0607	662.18	2739.7	7.0428	638.65	2738.8	7.0254	616.70
150 / 423.15	2764.5	7.1689	764.09	2763.7	7.1493	734.02	2762.9	7.1304	706.16	2762.1	7.1120	680.30	2761.3	7.0943	656.22	2760.4	7.0771	633.74
160 / 433.15	2785.5	7.2179	783.97	2784.8	7.1985	753.19	2784.0	7.1797	724.69	2783.3	7.1616	698.22	2782.6	7.1441	673.57	2781.8	7.1271	650.57
170 / 443.15	2806.3	7.2654	803.67	2805.6	7.2461	772.19	2805.0	7.2276	743.03	2804.3	7.2096	715.96	2803.6	7.1922	690.75	2803.0	7.1754	667.22
180 / 453.15	2827.0	7.3115	823.23	2826.4	7.2924	791.04	2825.8	7.2740	761.23	2825.2	7.2561	733.55	2824.6	7.2389	707.78	2824.0	7.2222	683.72
190 / 463.15	2847.5	7.3564	842.66	2847.0	7.3374	809.76	2846.4	7.3191	779.30	2845.9	7.3014	751.01	2845.3	7.2842	724.68	2844.8	7.2677	700.09
200 / 473.15	2868.0	7.4001	861.98	2867.5	7.3812	828.38	2867.0	7.3630	797.26	2866.5	7.3454	768.37	2866.0	7.3284	741.46	2865.5	7.3119	716.35
210 / 483.15	2888.4	7.4428	881.21	2887.9	7.4240	846.90	2887.5	7.4058	815.13	2887.0	7.3883	785.62	2886.6	7.3714	758.15	2886.1	7.3550	732.51
220 / 493.15	2908.7	7.4845	900.36	2908.3	7.4657	865.34	2907.9	7.4476	832.91	2907.5	7.4302	802.80	2907.1	7.4134	774.76	2906.6	7.3971	748.59
230 / 503.15	2929.0	7.5252	919.44	2928.7	7.5065	883.71	2928.3	7.4885	850.62	2927.9	7.4712	819.90	2927.5	7.4544	791.30	2927.1	7.4381	764.60
240 / 513.15	2949.3	7.5651	938.45	2948.9	7.5465	902.01	2948.6	7.5285	868.27	2948.2	7.5112	836.94	2947.9	7.4945	807.77	2947.5	7.4783	780.54
250 / 523.15	2969.6	7.6042	957.41	2969.2	7.5856	920.27	2968.9	7.5677	885.87	2968.6	7.5504	853.93	2968.2	7.5338	824.19	2967.9	7.5176	796.44
260 / 533.15	2989.8	7.6425	976.33	2989.5	7.6240	938.47	2989.2	7.6061	903.42	2988.9	7.5889	870.87	2988.6	7.5723	840.56	2988.2	7.5562	812.28
270 / 543.15	3010.0	7.6801	995.21	3009.8	7.6616	956.64	3009.5	7.6438	920.93	3009.2	7.6266	887.77	3008.9	7.6100	856.90	3008.6	7.5940	828.08
280 / 553.15	3030.3	7.7171	1014.0	3030.0	7.6986	974.77	3029.8	7.6808	938.41	3029.5	7.6637	904.64	3029.2	7.6471	873.19	3028.9	7.6311	843.85
290 / 563.15	3050.6	7.7534	1032.9	3050.3	7.7350	992.87	3050.1	7.7172	955.85	3049.8	7.7001	921.47	3049.5	7.6836	889.46	3049.3	7.6676	859.59
300 / 573.15	3070.9	7.7891	1051.6	3070.6	7.7707	1010.9	3070.4	7.7530	973.27	3070.1	7.7359	938.28	3069.9	7.7194	905.70	3069.7	7.7034	875.29
310 / 583.15	3091.2	7.8243	1070.4	3091.0	7.8059	1029.0	3090.7	7.7882	990.66	3090.5	7.7711	955.06	3090.3	7.7546	921.91	3090.0	7.7387	890.98
320 / 593.15	3111.5	7.8589	1089.1	3111.3	7.8405	1047.0	3111.1	7.8228	1008.0	3110.9	7.8058	971.82	3110.7	7.7893	938.11	3110.5	7.7734	906.64
330 / 603.15	3131.9	7.8930	1107.9	3131.7	7.8746	1065.0	3131.5	7.8569	1025.4	3131.3	7.8399	988.56	3131.1	7.8235	954.28	3130.9	7.8076	922.28
340 / 613.15	3152.4	7.9266	1126.6	3152.2	7.9082	1083.0	3152.0	7.8906	1042.7	3151.8	7.8736	1005.3	3151.6	7.8571	970.43	3151.4	7.8412	937.91

350	623.15	3172.8	7.9597	1145.2	3172.6	7.9414	1101.0	3172.5	7.9237	1060.0	3172.3	7.9067	1022.0	3172.1	7.8903	986.58	3171.9	7.8744	953.52
360	633.15	3193.3	7.9923	1163.9	3193.2	7.9740	1119.0	3193.0	7.9564	1077.3	3192.8	7.9394	1038.7	3192.6	7.9230	1002.7	3192.4	7.9072	969.11
370	643.15	3213.9	8.0246	1182.6	3213.7	8.0063	1136.9	3213.6	7.9887	1094.6	3213.4	7.9717	1055.4	3213.2	7.9553	1018.8	3213.1	7.9395	984.70
380	653.15	3234.5	8.0564	1201.2	3234.4	8.0381	1154.9	3234.2	8.0205	1111.9	3234.0	8.0035	1072.0	3233.9	7.9872	1034.9	3233.7	7.9713	1000.3
390	663.15	3255.2	8.0878	1219.9	3255.0	8.0695	1172.8	3254.9	8.0519	1129.2	3254.7	8.0350	1088.7	3254.6	8.0186	1051.0	3254.4	8.0028	1015.8
400	673.15	3275.9	8.1188	1238.5	3275.8	8.1005	1190.7	3275.6	8.0830	1146.4	3275.5	8.0660	1105.4	3275.3	8.0497	1067.1	3275.2	8.0338	1031.4
410	683.15	3296.7	8.1495	1257.1	3296.6	8.1312	1208.6	3296.4	8.1136	1163.7	3296.3	8.0967	1122.0	3296.1	8.0803	1083.2	3296.0	8.0645	1046.9
420	693.15	3317.6	8.1797	1275.7	3317.4	8.1615	1226.5	3317.3	8.1439	1180.9	3317.1	8.1270	1138.6	3317.0	8.1107	1099.2	3316.8	8.0949	1062.5
430	703.15	3338.5	8.2097	1294.3	3338.3	8.1914	1244.4	3338.2	8.1739	1198.2	3338.0	8.1570	1155.3	3337.9	8.1406	1115.3	3337.8	8.1248	1078.0
440	713.15	3359.4	8.2393	1312.9	3359.3	8.2211	1262.3	3359.2	8.2035	1215.4	3359.0	8.1866	1171.9	3358.9	8.1702	1131.4	3358.8	8.1545	1093.5
450	723.15	3380.4	8.2686	1331.5	3380.3	8.2503	1280.2	3380.2	8.2328	1232.6	3380.1	8.2159	1188.5	3379.9	8.1995	1147.4	3379.8	8.1838	1109.0
460	733.15	3401.5	8.2975	1350.1	3401.4	8.2793	1298.1	3401.3	8.2618	1249.9	3401.2	8.2448	1205.1	3401.0	8.2285	1163.4	3400.9	8.2128	1124.5
470	743.15	3422.7	8.3262	1368.7	3422.6	8.3080	1315.9	3422.4	8.2904	1267.1	3422.3	8.2735	1221.7	3422.2	8.2572	1179.5	3422.1	8.2414	1140.1
480	753.15	3443.9	8.3545	1387.3	3443.8	8.3363	1333.8	3443.7	8.3188	1284.3	3443.5	8.3019	1238.3	3443.4	8.2856	1195.5	3443.3	8.2698	1155.6
490	763.15	3465.2	8.3826	1405.8	3465.0	8.3644	1351.7	3464.9	8.3469	1301.5	3464.8	8.3300	1254.9	3464.7	8.3137	1211.5	3464.6	8.2979	1171.0
500	773.15	3486.5	8.4104	1424.4	3486.4	8.3922	1369.5	3486.3	8.3746	1318.7	3486.2	8.3578	1271.5	3486.1	8.3415	1227.6	3486.0	8.3257	1186.5
510	783.15	3507.9	8.4379	1443.0	3507.8	8.4197	1387.4	3507.7	8.4022	1335.9	3507.6	8.3853	1288.1	3507.5	8.3690	1243.6	3507.4	8.3532	1202.0
520	793.15	3529.4	8.4651	1461.5	3529.3	8.4469	1405.2	3529.2	8.4294	1353.1	3529.1	8.4125	1304.7	3529.0	8.3962	1259.6	3528.9	8.3805	1217.5
530	803.15	3550.9	8.4921	1480.1	3550.8	8.4739	1423.1	3550.7	8.4564	1370.3	3550.6	8.4395	1321.2	3550.5	8.4232	1275.6	3550.4	8.4075	1233.0
540	813.15	3572.5	8.5188	1498.6	3572.4	8.5007	1440.9	3572.3	8.4831	1387.4	3572.2	8.4663	1337.8	3572.1	8.4500	1291.6	3572.0	8.4343	1248.5
550	823.15	3594.2	8.5453	1517.2	3594.1	8.5271	1458.7	3594.0	8.5096	1404.6	3593.9	8.4928	1354.4	3593.8	8.4765	1307.6	3593.7	8.4608	1263.9
560	833.15	3615.9	8.5716	1535.7	3615.8	8.5534	1476.6	3615.8	8.5359	1421.8	3615.7	8.5190	1370.9	3615.6	8.5028	1323.6	3615.5	8.4870	1279.4
570	843.15	3637.7	8.5976	1554.3	3637.7	8.5794	1494.4	3637.6	8.5619	1439.0	3637.5	8.5451	1387.5	3637.4	8.5288	1339.6	3637.3	8.5131	1294.9
580	853.15	3659.6	8.6234	1572.8	3659.5	8.6052	1512.2	3659.4	8.5877	1456.2	3659.4	8.5709	1404.1	3659.3	8.5546	1355.6	3659.2	8.5389	1310.3
590	863.15	3681.6	8.6490	1591.4	3681.5	8.6308	1530.1	3681.4	8.6133	1473.3	3681.3	8.5964	1420.6	3681.2	8.5802	1371.6	3681.1	8.5644	1325.8
600	873.15	3703.6	8.6743	1609.9	3703.5	8.6561	1547.9	3703.4	8.6386	1490.5	3703.3	8.6218	1437.2	3703.2	8.6055	1387.6	3703.2	8.5898	1341.2
610	883.15	3725.6	8.6994	1628.4	3725.6	8.6813	1565.7	3725.5	8.6638	1507.6	3725.4	8.6469	1453.7	3725.3	8.6307	1403.5	3725.2	8.6150	1356.7
620	893.15	3747.8	8.7244	1646.9	3747.7	8.7062	1583.5	3747.6	8.6887	1524.8	3747.5	8.6719	1470.3	3747.5	8.6556	1419.5	3747.4	8.6399	1372.1
630	903.15	3770.0	8.7491	1665.5	3769.9	8.7309	1601.3	3769.8	8.7135	1542.0	3769.8	8.6966	1486.8	3769.7	8.6803	1435.5	3769.6	8.6646	1387.6
640	913.15	3792.3	8.7736	1684.0	3792.2	8.7555	1619.2	3792.1	8.7380	1559.1	3792.0	8.7211	1503.4	3792.0	8.7049	1451.5	3791.9	8.6892	1403.0
650	923.15	3814.6	8.7980	1702.5	3814.5	8.7798	1637.0	3814.5	8.7623	1576.3	3814.4	8.7455	1519.9	3814.3	8.7292	1467.5	3814.2	8.7135	1418.5
660	933.15	3837.0	8.8221	1721.0	3836.9	8.8039	1654.8	3836.9	8.7865	1593.4	3836.8	8.7696	1536.5	3836.7	8.7534	1483.4	3836.7	8.7377	1433.9
670	943.15	3859.5	8.8461	1739.5	3859.4	8.8279	1672.6	3859.4	8.8104	1610.6	3859.3	8.7936	1553.0	3859.2	8.7773	1499.4	3859.2	8.7616	1449.4
680	953.15	3882.0	8.8698	1758.1	3882.0	8.8517	1690.4	3881.9	8.8342	1627.7	3881.8	8.8174	1569.5	3881.8	8.8011	1515.4	3881.7	8.7854	1464.8
690	963.15	3904.6	8.8934	1776.6	3904.6	8.8753	1708.2	3904.5	8.8578	1644.9	3904.4	8.8410	1586.1	3904.4	8.8247	1531.3	3904.3	8.8090	1480.2
700	973.15	3927.3	8.9169	1795.1	3927.2	8.8987	1726.0	3927.2	8.8812	1662.0	3927.1	8.8644	1602.6	3927.1	8.8482	1547.3	3927.0	8.8325	1495.7
710	983.15	3950.1	8.9401	1813.6	3950.0	8.9220	1743.8	3949.9	8.9045	1679.2	3949.9	8.8877	1619.1	3949.8	8.8714	1563.3	3949.7	8.8557	1511.1
720	993.15	3972.9	8.9632	1832.1	3972.8	8.9450	1761.6	3972.7	8.9276	1696.3	3972.7	8.9107	1635.7	3972.6	8.8945	1579.2	3972.6	8.8788	1526.5
730	1003.15	3995.7	8.9861	1850.6	3995.7	8.9679	1779.4	3995.6	8.9505	1713.4	3995.6	8.9337	1652.2	3995.5	8.9174	1595.2	3995.4	8.9017	1542.0
740	1013.15	4018.7	9.0088	1869.1	4018.6	8.9907	1797.2	4018.5	8.9732	1730.6	4018.5	8.9564	1668.7	4018.4	8.9402	1611.1	4018.4	8.9245	1557.4
750	1023.15	4041.7	9.0314	1887.6	4041.6	9.0133	1815.0	4041.5	8.9958	1747.7	4041.5	8.9790	1685.2	4041.4	8.9628	1627.1	4041.4	8.9471	1572.8
760	1033.15	4064.7	9.0539	1906.1	4064.7	9.0357	1832.8	4064.6	9.0183	1764.8	4064.6	9.0014	1701.8	4064.5	8.9852	1643.0	4064.4	8.9695	1588.2
770	1043.15	4087.8	9.0761	1924.6	4087.8	9.0580	1850.5	4087.7	9.0405	1782.0	4087.7	9.0237	1718.3	4087.6	9.0075	1659.0	4087.6	8.9918	1603.7
780	1053.15	4111.0	9.0982	1943.1	4111.0	9.0801	1868.3	4110.9	9.0627	1799.1	4110.9	9.0458	1734.8	4110.8	9.0296	1675.0	4110.8	9.0139	1619.1
790	1063.15	4134.3	9.1202	1961.6	4134.2	9.1021	1886.1	4134.2	9.0846	1816.2	4134.1	9.0678	1751.3	4134.1	9.0516	1690.9	4134.0	9.0359	1634.5
800	1073.15	4157.6	9.1420	1980.1	4157.5	9.1239	1903.9	4157.5	9.1065	1833.4	4157.4	9.0896	1767.8	4157.4	9.0734	1706.9	4157.3	9.0577	1649.9

2.5 to 3.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		3.0			3.1			3.2			3.3			3.4			3.5		
t_s °C		133.5			134.7			135.8			136.8			137.9			138.9		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		561.4	1.6717	1.0735	566.2	1.6834	1.0746	570.9	1.6948	1.0757	575.5	1.7060	1.0768	579.9	1.7168	1.0779	584.3	1.7273	1.0789
Sat. Vapour		2724.7	6.9909	605.53	2726.1	6.9799	587.18	2727.6	6.9692	569.95	2729.0	6.9589	553.73	2730.3	6.9489	538.43	2731.6	6.9392	523.97
t °C	T K																		
0	273.15	0.3	−0.0001	1.0001	0.3	−0.0001	1.0001	0.3	−0.0001	1.0001	0.3	−0.0001	1.0001	0.3	−0.0001	1.0001	0.3	−0.0001	1.0000
10	283.15	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.3	0.1510	1.0001
20	293.15	84.1	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016
30	303.15	125.9	0.4364	1.0042	125.9	0.4364	1.0042	126.0	0.4364	1.0042	126.0	0.4364	1.0042	126.0	0.4364	1.0042	126.0	0.4364	1.0042
40	313.15	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.7	0.5720	1.0077	167.8	0.5720	1.0077
50	323.15	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120	209.5	0.7034	1.0120
60	333.15	251.3	0.8308	1.0170	251.3	0.8308	1.0170	251.3	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170
70	343.15	293.2	0.9547	1.0227	293.2	0.9546	1.0227	293.2	0.9546	1.0227	293.2	0.9546	1.0227	293.2	0.9546	1.0227	293.2	0.9546	1.0227
80	353.15	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.1	1.0751	1.0291	335.2	1.0751	1.0290
90	363.15	377.1	1.1924	1.0360	377.1	1.1924	1.0360	377.1	1.1923	1.0360	377.1	1.1923	1.0360	377.1	1.1923	1.0360	377.2	1.1923	1.0360
100	373.15	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.2	1.3067	1.0436	419.3	1.3067	1.0436
110	383.15	461.4	1.4184	1.0518	461.4	1.4183	1.0518	461.4	1.4183	1.0518	461.5	1.4183	1.0518	461.5	1.4183	1.0518	461.5	1.4183	1.0518
120	393.15	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0606	503.8	1.5275	1.0605	503.8	1.5275	1.0605
130	403.15	546.3	1.6343	1.0700	546.3	1.6343	1.0700	546.3	1.6343	1.0700	546.3	1.6343	1.0700	546.4	1.6343	1.0700	546.4	1.6343	1.0700
140	413.15	2738.8	7.0254	616.70	2737.9	7.0085	596.15	2736.9	6.9920	576.89	2736.0	6.9760	558.79	2735.1	6.9605	541.76	2734.1	6.9453	525.69
150	423.15	2760.4	7.0771	633.74	2759.6	7.0604	612.70	2758.8	7.0442	592.99	2757.9	7.0285	574.46	2757.1	7.0131	557.02	2756.3	6.9982	540.58
160	433.15	2781.8	7.1271	650.57	2781.1	7.1106	629.05	2780.3	7.0946	608.87	2779.6	7.0790	589.91	2778.8	7.0638	572.07	2778.1	7.0491	555.24
170	443.15	2803.0	7.1754	667.22	2802.3	7.1591	645.21	2801.6	7.1432	624.57	2800.9	7.1278	605.18	2800.3	7.1128	586.93	2799.6	7.0982	569.72
180	453.15	2824.0	7.2222	683.72	2823.3	7.2060	661.22	2822.7	7.1903	640.12	2822.1	7.1751	620.30	2821.5	7.1602	601.64	2820.9	7.1458	584.05
190	463.15	2844.8	7.2677	700.09	2844.2	7.2516	677.09	2843.7	7.2360	655.53	2843.1	7.2209	635.28	2842.6	7.2062	616.21	2842.0	7.1919	598.24
200	473.15	2865.5	7.3119	716.35	2865.0	7.2960	692.86	2864.5	7.2805	670.84	2864.0	7.2654	650.15	2863.5	7.2508	630.67	2863.0	7.2366	612.31
210	483.15	2886.1	7.3550	732.51	2885.6	7.3391	708.53	2885.2	7.3238	686.04	2884.7	7.3088	664.92	2884.2	7.2943	645.03	2883.8	7.2802	626.29
220	493.15	2906.6	7.3971	748.59	2906.2	7.3813	724.11	2905.8	7.3660	701.16	2905.4	7.3511	679.60	2904.9	7.3367	659.31	2904.5	7.3226	640.18
230	503.15	2927.1	7.4381	764.60	2926.7	7.4224	739.62	2926.3	7.4072	716.21	2925.9	7.3924	694.21	2925.5	7.3780	673.51	2925.1	7.3640	653.99
240	513.15	2947.5	7.4783	780.54	2947.1	7.4626	755.07	2946.8	7.4475	731.20	2946.4	7.4327	708.76	2946.1	7.4184	687.65	2945.7	7.4045	667.75
250	523.15	2967.9	7.5176	796.44	2967.5	7.5020	770.47	2967.2	7.4869	746.13	2966.9	7.4722	723.26	2966.5	7.4579	701.74	2966.2	7.4441	681.44
260	533.15	2988.2	7.5562	812.28	2987.9	7.5406	785.82	2987.6	7.5255	761.01	2987.3	7.5109	737.71	2987.0	7.4967	715.77	2986.7	7.4828	695.09
270	543.15	3008.6	7.5940	828.08	3008.3	7.5785	801.13	3008.0	7.5634	775.85	3007.7	7.5488	752.11	3007.4	7.5346	729.77	3007.1	7.5208	708.70
280	553.15	3028.9	7.6311	843.85	3028.7	7.6156	816.40	3028.4	7.6006	790.66	3028.1	7.5860	766.48	3027.8	7.5719	743.73	3027.6	7.5581	722.27
290	563.15	3049.3	7.6676	859.59	3049.0	7.6521	831.64	3048.8	7.6371	805.44	3048.5	7.6226	780.82	3048.3	7.6085	757.66	3048.0	7.5947	735.82
300	573.15	3069.7	7.7034	875.29	3069.4	7.6880	846.85	3069.2	7.6730	820.18	3068.9	7.6585	795.13	3068.7	7.6444	771.56	3068.4	7.6307	749.33
310	583.15	3090.0	7.7387	890.98	3089.8	7.7233	862.04	3089.6	7.7083	834.91	3089.3	7.6938	809.42	3089.1	7.6798	785.43	3088.9	7.6661	762.81
320	593.15	3110.5	7.7734	906.64	3110.2	7.7580	877.20	3110.0	7.7431	849.61	3109.8	7.7286	823.68	3109.6	7.7146	799.28	3109.4	7.7009	776.28
330	603.15	3130.9	7.8076	922.28	3130.7	7.7922	892.35	3130.5	7.7773	864.29	3130.3	7.7628	837.93	3130.1	7.7488	813.12	3129.9	7.7352	789.73
340	613.15	3151.4	7.8412	937.91	3151.2	7.8259	907.48	3151.0	7.8110	878.95	3150.8	7.7966	852.16	3150.6	7.7825	826.93	3150.4	7.7689	803.15

350	623.15	3171.9	7.8744	953.52	3171.7	7.8591	922.59	3171.5	7.8442	893.60	3171.3	7.8298	866.37	3171.1	7.8158	840.74	3170.9	7.8022	816.57
360	633.15	3192.4	7.9072	969.11	3192.3	7.8918	937.69	3192.1	7.8770	908.24	3191.9	7.8626	880.57	3191.7	7.8486	854.52	3191.5	7.8350	829.97
370	643.15	3213.1	7.9395	984.70	3212.9	7.9241	952.78	3212.7	7.9093	922.86	3212.5	7.8949	894.75	3212.4	7.8809	868.30	3212.2	7.8673	843.35
380	653.15	3233.7	7.9713	1000.3	3233.5	7.9560	967.86	3233.4	7.9412	937.47	3233.2	7.9268	908.93	3233.0	7.9128	882.06	3232.9	7.8993	856.73
390	663.15	3254.4	8.0028	1015.8	3254.3	7.9875	982.93	3254.1	7.9726	952.07	3253.9	7.9583	923.09	3253.8	7.9443	895.81	3253.6	7.9308	870.09
400	673.15	3275.2	8.0338	1031.4	3275.0	8.0185	997.98	3274.9	8.0037	966.66	3274.7	7.9894	937.25	3274.6	7.9754	909.56	3274.4	7.9619	883.45
410	683.15	3296.0	8.0645	1046.9	3295.8	8.0492	1013.0	3295.7	8.0344	981.25	3295.5	8.0201	951.39	3295.4	8.0061	923.29	3295.2	7.9926	896.80
420	693.15	3316.8	8.0949	1062.5	3316.7	8.0796	1028.1	3316.6	8.0648	995.82	3316.4	8.0504	965.53	3316.3	8.0365	937.02	3316.1	8.0230	910.14
430	703.15	3337.8	8.1248	1078.0	3337.6	8.1096	1043.1	3337.5	8.0948	1010.4	3337.4	8.0804	979.66	3337.2	8.0665	950.74	3337.1	8.0530	923.47
440	713.15	3358.8	8.1545	1093.5	3358.6	8.1392	1058.1	3358.5	8.1244	1025.0	3358.4	8.1101	993.78	3358.2	8.0962	964.45	3358.1	8.0826	936.79
450	723.15	3379.8	8.1838	1109.0	3379.7	8.1685	1073.1	3379.5	8.1537	1039.5	3379.4	8.1394	1007.9	3379.3	8.1255	978.16	3379.2	8.1120	950.11
460	733.15	3400.9	8.2128	1124.5	3400.8	8.1975	1088.2	3400.7	8.1827	1054.1	3400.5	8.1684	1022.0	3400.4	8.1545	991.86	3400.3	8.1410	963.42
470	743.15	3422.1	8.2414	1140.1	3422.0	8.2262	1103.2	3421.8	8.2114	1068.6	3421.7	8.1971	1036.1	3421.6	8.1832	1005.6	3421.5	8.1697	976.73
480	753.15	3443.3	8.2698	1155.6	3443.2	8.2546	1118.2	3443.1	8.2398	1083.1	3443.0	8.2255	1050.2	3442.8	8.2116	1019.2	3442.7	8.1981	990.03
490	763.15	3464.6	8.2979	1171.0	3464.5	8.2827	1133.2	3464.4	8.2679	1097.7	3464.3	8.2536	1064.3	3464.1	8.2397	1032.9	3464.0	8.2262	1003.3
500	773.15	3486.0	8.3257	1186.5	3485.8	8.3105	1148.2	3485.7	8.2957	1112.2	3485.6	8.2814	1078.4	3485.5	8.2675	1046.6	3485.4	8.2540	1016.6
510	783.15	3507.4	8.3532	1202.0	3507.3	8.3380	1163.2	3507.2	8.3232	1126.7	3507.1	8.3089	1092.5	3507.0	8.2951	1060.3	3506.8	8.2816	1029.9
520	793.15	3528.9	8.3805	1217.5	3528.8	8.3653	1178.1	3528.7	8.3505	1141.2	3528.6	8.3362	1106.6	3528.5	8.3223	1074.0	3528.4	8.3089	1043.2
530	803.15	3550.4	8.4075	1233.0	3550.3	8.3923	1193.1	3550.2	8.3775	1155.8	3550.1	8.3632	1120.7	3550.0	8.3494	1087.6	3549.9	8.3359	1056.5
540	813.15	3572.0	8.4343	1248.5	3571.9	8.4190	1208.1	3571.8	8.4043	1170.3	3571.7	8.3900	1134.7	3571.7	8.3761	1101.3	3571.6	8.3627	1069.8
550	823.15	3593.7	8.4608	1263.9	3593.6	8.4455	1223.1	3593.5	8.4308	1184.8	3593.4	8.4165	1148.8	3593.3	8.4027	1115.0	3593.3	8.3892	1083.0
560	833.15	3615.5	8.4870	1279.4	3615.4	8.4718	1238.1	3615.3	8.4571	1199.3	3615.2	8.4428	1162.9	3615.1	8.4289	1128.6	3615.0	8.4155	1096.3
570	843.15	3637.3	8.5131	1294.9	3637.2	8.4978	1253.0	3637.1	8.4831	1213.8	3637.0	8.4688	1176.9	3636.9	8.4550	1142.3	3636.8	8.4415	1109.6
580	853.15	3659.2	8.5389	1310.3	3659.1	8.5237	1268.0	3659.0	8.5089	1228.3	3658.9	8.4946	1191.0	3658.8	8.4808	1155.9	3658.7	8.4673	1122.8
590	863.15	3681.1	8.5644	1325.8	3681.0	8.5492	1282.9	3681.0	8.5345	1242.8	3680.9	8.5202	1205.1	3680.8	8.5064	1169.6	3680.7	8.4929	1136.1
600	873.15	3703.2	8.5898	1341.2	3703.1	8.5746	1297.9	3703.0	8.5599	1257.3	3702.9	8.5456	1219.1	3702.8	8.5318	1183.2	3702.7	8.5183	1149.3
610	883.15	3725.2	8.6150	1356.7	3725.2	8.5998	1312.9	3725.1	8.5850	1271.8	3725.0	8.5708	1233.2	3724.9	8.5569	1196.9	3724.8	8.5435	1162.6
620	893.15	3747.4	8.6399	1372.1	3747.3	8.6247	1327.8	3747.2	8.6100	1286.3	3747.2	8.5957	1247.2	3747.1	8.5819	1210.5	3747.0	8.5684	1175.9
630	903.15	3769.6	8.6646	1387.6	3769.5	8.6494	1342.8	3769.5	8.6347	1300.8	3769.4	8.6205	1261.3	3769.3	8.6066	1224.1	3769.2	8.5932	1189.1
640	913.15	3791.9	8.6892	1403.0	3791.8	8.6740	1357.7	3791.7	8.6593	1315.2	3791.7	8.6450	1275.3	3791.6	8.6312	1237.8	3791.5	8.6177	1202.4
650	923.15	3814.2	8.7135	1418.5	3814.2	8.6983	1372.7	3814.1	8.6836	1329.7	3814.0	8.6694	1289.4	3814.0	8.6555	1251.4	3813.9	8.6421	1215.6
660	933.15	3836.7	8.7377	1433.9	3836.6	8.7225	1387.6	3836.5	8.7078	1344.2	3836.5	8.6935	1303.4	3836.4	8.6797	1265.0	3836.3	8.6663	1228.8
670	943.15	3859.2	8.7616	1449.4	3859.1	8.7465	1402.6	3859.0	8.7318	1358.7	3858.9	8.7175	1317.5	3858.9	8.7037	1278.7	3858.8	8.6902	1242.1
680	953.15	3881.7	8.7854	1464.8	3881.6	8.7702	1417.5	3881.6	8.7555	1373.2	3881.5	8.7413	1331.5	3881.4	8.7275	1292.3	3881.4	8.7140	1255.3
690	963.15	3904.3	8.8090	1480.2	3904.3	8.7939	1432.4	3904.2	8.7791	1387.6	3904.1	8.7649	1345.5	3904.1	8.7511	1305.9	3904.0	8.7376	1268.6
700	973.15	3927.0	8.8325	1495.7	3926.9	8.8173	1447.4	3926.9	8.8026	1402.1	3926.8	8.7883	1359.6	3926.8	8.7745	1319.5	3926.7	8.7611	1281.8
710	983.15	3949.7	8.8557	1511.1	3949.7	8.8405	1462.3	3949.6	8.8258	1416.6	3949.6	8.8116	1373.6	3949.5	8.7978	1333.2	3949.4	8.7843	1295.0
720	993.15	3972.6	8.8788	1526.5	3972.5	8.8636	1477.2	3972.4	8.8489	1431.0	3972.4	8.8347	1387.6	3972.3	8.8209	1346.8	3972.3	8.8074	1308.3
730	1003.15	3995.4	8.9017	1542.0	3995.4	8.8865	1492.2	3995.3	8.8719	1445.5	3995.3	8.8576	1401.7	3995.2	8.8438	1360.4	3995.2	8.8304	1321.5
740	1013.15	4018.4	8.9245	1557.4	4018.3	8.9093	1507.1	4018.3	8.8946	1460.0	4018.2	8.8804	1415.7	4018.2	8.8665	1374.0	4018.1	8.8531	1334.7
750	1023.15	4041.4	8.9471	1572.8	4041.3	8.9319	1522.0	4041.3	8.9172	1474.4	4041.2	8.9030	1429.7	4041.2	8.8891	1387.6	4041.1	8.8757	1348.0
760	1033.15	4064.4	8.9695	1588.2	4064.4	8.9543	1537.0	4064.3	8.9396	1488.9	4064.3	8.9254	1443.8	4064.2	8.9116	1401.3	4064.2	8.8982	1361.2
770	1043.15	4087.6	8.9918	1603.7	4087.5	8.9766	1551.9	4087.5	8.9619	1503.4	4087.4	8.9477	1457.8	4087.4	8.9339	1414.9	4087.3	8.9205	1374.4
780	1053.15	4110.8	9.0139	1619.1	4110.7	8.9987	1566.8	4110.7	8.9841	1517.8	4110.6	8.9698	1471.8	4110.6	8.9560	1428.5	4110.5	8.9426	1387.6
790	1063.15	4134.0	9.0359	1634.5	4134.0	9.0207	1581.7	4133.9	9.0060	1532.3	4133.9	8.9918	1485.8	4133.8	8.9780	1442.1	4133.8	8.9646	1400.9
800	1073.15	4157.3	9.0577	1649.9	4157.3	9.0426	1596.7	4157.2	9.0279	1546.7	4157.2	9.0136	1499.8	4157.2	8.9998	1455.7	4157.1	8.9864	1414.1

3.0 to 3.5 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		3.5			3.6			3.7			3.8			3.9			4.0		
t_s	°C	138.9			139.9			140.8			141.8			142.7			143.6		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		584.3	1.7273	1.0789	588.5	1.7376	1.0799	592.7	1.7477	1.0809	596.8	1.7575	1.0819	600.8	1.7671	1.0829	604.7	1.7764	1.0839
Sat. Vapour		2731.6	6.9392	523.97	2732.9	6.9297	510.29	2734.1	6.9205	497.33	2735.3	6.9115	485.02	2736.5	6.9028	473.33	2737.6	6.8943	462.20
t °C	T K																		
0	273.15	0.3	−0.0001	1.0000	0.3	−0.0001	1.0000	0.3	−0.0001	1.0000	0.3	−0.0001	1.0000	0.4	−0.0001	1.0000	0.4	−0.0001	1.0000
10	283.15	42.3	0.1510	1.0001	42.3	0.1510	1.0001	42.4	0.1510	1.0001	42.4	0.1510	1.0001	42.4	0.1510	1.0001	42.4	0.1510	1.0001
20	293.15	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0016	84.2	0.2962	1.0015	84.2	0.2962	1.0015
30	303.15	126.0	0.4364	1.0042	126.0	0.4364	1.0041	126.0	0.4364	1.0041	126.0	0.4364	1.0041	126.0	0.4364	1.0041	126.0	0.4364	1.0041
40	313.15	167.8	0.5720	1.0077	167.8	0.5720	1.0077	167.8	0.5720	1.0076	167.8	0.5720	1.0076	167.8	0.5720	1.0076	167.8	0.5720	1.0076
50	323.15	209.5	0.7034	1.0120	209.6	0.7033	1.0120	209.6	0.7033	1.0120	209.6	0.7033	1.0119	209.6	0.7033	1.0119	209.6	0.7033	1.0119
60	333.15	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170
70	343.15	293.2	0.9546	1.0227	293.2	0.9546	1.0227	293.2	0.9546	1.0227	293.3	0.9546	1.0227	293.3	0.9546	1.0227	293.3	0.9546	1.0227
80	353.15	335.2	1.0751	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290
90	363.15	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1923	1.0360
100	373.15	419.3	1.3067	1.0436	419.3	1.3067	1.0436	419.3	1.3067	1.0436	419.3	1.3067	1.0436	419.3	1.3066	1.0436	419.3	1.3066	1.0436
110	383.15	461.5	1.4183	1.0518	461.5	1.4183	1.0517	461.5	1.4183	1.0517	461.5	1.4183	1.0517	461.5	1.4183	1.0517	461.5	1.4183	1.0517
120	393.15	503.8	1.5275	1.0605	503.8	1.5274	1.0605	503.8	1.5274	1.0605	503.8	1.5274	1.0605	503.9	1.5274	1.0605	503.9	1.5274	1.0605
130	403.15	546.4	1.6343	1.0700	546.4	1.6343	1.0700	546.4	1.6343	1.0700	546.4	1.6343	1.0700	546.4	1.6342	1.0699	546.4	1.6342	1.0699
140	413.15	2734.1	6.9453	525.69	2733.2	6.9305	510.52	589.1	1.7390	1.0801	589.1	1.7390	1.0800	589.1	1.7390	1.0800	589.1	1.7389	1.0800
150	423.15	2756.3	6.9982	540.58	2755.4	6.9836	525.04	2754.6	6.9693	510.35	2753.7	6.9554	496.42	2752.9	6.9418	483.21	2752.0	6.9285	470.66
160	433.15	2778.1	7.0491	555.24	2777.3	7.0347	539.35	2776.5	7.0207	524.31	2775.8	7.0070	510.07	2775.0	6.9936	496.55	2774.2	6.9805	483.71
170	443.15	2799.6	7.0982	569.72	2798.9	7.0840	553.47	2798.2	7.0701	538.09	2797.5	7.0566	523.52	2796.8	7.0434	509.70	2796.1	7.0305	496.57
180	453.15	2820.9	7.1458	584.05	2820.3	7.1317	567.43	2819.6	7.1180	551.71	2819.0	7.1046	536.82	2818.4	7.0915	522.69	2817.8	7.0788	509.26
190	463.15	2842.0	7.1919	598.24	2841.4	7.1779	581.26	2840.9	7.1643	565.19	2840.3	7.1511	549.98	2839.7	7.1381	535.54	2839.2	7.1255	521.82
200	473.15	2863.0	7.2366	612.31	2862.4	7.2228	594.97	2861.9	7.2093	578.56	2861.4	7.1961	563.02	2860.9	7.1833	548.27	2860.4	7.1708	534.26
210	483.15	2883.8	7.2802	626.29	2883.3	7.2664	608.58	2882.8	7.2530	591.83	2882.4	7.2400	575.96	2881.9	7.2272	560.91	2881.4	7.2148	546.60
220	493.15	2904.5	7.3226	640.18	2904.1	7.3089	622.11	2903.6	7.2956	605.01	2903.2	7.2826	588.82	2902.8	7.2700	573.45	2902.3	7.2576	558.85
230	503.15	2925.1	7.3640	653.99	2924.7	7.3504	635.56	2924.3	7.3372	618.12	2923.9	7.3243	601.60	2923.5	7.3117	585.92	2923.1	7.2994	571.03
240	513.15	2945.7	7.4045	667.75	2945.3	7.3909	648.95	2945.0	7.3778	631.16	2944.6	7.3649	614.31	2944.2	7.3524	598.33	2943.9	7.3402	583.14
250	523.15	2966.2	7.4441	681.44	2965.9	7.4306	662.28	2965.5	7.4175	644.15	2965.2	7.4047	626.97	2964.8	7.3922	610.68	2964.5	7.3800	595.19
260	533.15	2986.7	7.4828	695.09	2986.4	7.4694	675.56	2986.0	7.4563	657.09	2985.7	7.4436	639.58	2985.4	7.4311	622.98	2985.1	7.4190	607.20
270	543.15	3007.1	7.5208	708.70	3006.8	7.5074	688.81	3006.5	7.4944	669.98	3006.2	7.4817	652.15	3005.9	7.4693	635.24	3005.6	7.4572	619.16
280	553.15	3027.6	7.5581	722.27	3027.3	7.5448	702.01	3027.0	7.5317	682.84	3026.7	7.5191	664.69	3026.5	7.5067	647.46	3026.2	7.4947	631.09
290	563.15	3048.0	7.5947	735.82	3047.7	7.5814	715.19	3047.5	7.5684	695.67	3047.2	7.5558	677.19	3047.0	7.5434	659.65	3046.7	7.5314	642.98
300	573.15	3068.4	7.6307	749.33	3068.2	7.6174	728.33	3067.9	7.6045	708.47	3067.7	7.5918	689.66	3067.5	7.5795	671.81	3067.2	7.5675	654.85
310	583.15	3088.9	7.6661	762.81	3088.7	7.6528	741.45	3088.4	7.6399	721.25	3088.2	7.6273	702.11	3088.0	7.6150	683.94	3087.7	7.6030	666.69
320	593.15	3109.4	7.7009	776.28	3109.1	7.6876	754.55	3108.9	7.6747	734.00	3108.7	7.6621	714.53	3108.5	7.6499	696.06	3108.3	7.6379	678.51
330	603.15	3129.9	7.7352	789.73	3129.7	7.7219	767.63	3129.4	7.7090	746.73	3129.2	7.6965	726.94	3129.0	7.6842	708.15	3128.8	7.6723	690.31
340	613.15	3150.4	7.7689	803.15	3150.2	7.7557	780.70	3150.0	7.7428	759.45	3149.8	7.7303	739.32	3149.6	7.7181	720.23	3149.4	7.7061	702.09

350	623.15	3170.9	7.8022	816.57	3170.8	7.7890	793.74	3170.6	7.7761	772.15	3170.4	7.7636	751.70	3170.2	7.7514	732.29	3170.0	7.7395	713.85
360	633.15	3191.5	7.8350	829.97	3191.4	7.8218	806.78	3191.2	7.8089	784.84	3191.0	7.7964	764.06	3190.8	7.7842	744.34	3190.6	7.7723	725.61
370	643.15	3212.2	7.8673	843.35	3212.0	7.8541	819.80	3211.8	7.8413	797.51	3211.7	7.8288	776.40	3211.5	7.8166	756.37	3211.3	7.8047	737.35
380	653.15	3232.9	7.8993	856.73	3232.7	7.8861	832.81	3232.5	7.8732	810.18	3232.4	7.8608	788.74	3232.2	7.8486	768.40	3232.1	7.8367	749.07
390	663.15	3253.6	7.9308	870.09	3253.5	7.9176	845.80	3253.3	7.9048	822.83	3253.1	7.8923	801.06	3253.0	7.8801	780.41	3252.8	7.8683	760.79
400	673.15	3274.4	7.9619	883.45	3274.2	7.9487	858.79	3274.1	7.9359	835.47	3273.9	7.9234	813.37	3273.8	7.9113	792.41	3273.6	7.8994	772.50
410	683.15	3295.2	7.9926	896.80	3295.1	7.9795	871.77	3294.9	7.9667	848.10	3294.8	7.9542	825.68	3294.7	7.9420	804.41	3294.5	7.9302	784.20
420	693.15	3316.1	8.0230	910.14	3316.0	8.0098	884.75	3315.9	7.9970	860.73	3315.7	7.9846	837.98	3315.6	7.9724	816.39	3315.4	7.9606	795.89
430	703.15	3337.1	8.0530	923.47	3336.9	8.0398	897.71	3336.8	8.0271	873.35	3336.7	8.0146	850.27	3336.5	8.0025	828.37	3336.4	7.9906	807.57
440	713.15	3358.1	8.0826	936.79	3358.0	8.0695	910.67	3357.8	8.0567	885.96	3357.7	8.0443	862.55	3357.6	8.0322	840.35	3357.4	8.0203	819.25
450	723.15	3379.2	8.1120	950.11	3379.0	8.0988	923.62	3378.9	8.0861	898.57	3378.8	8.0736	874.83	3378.6	8.0615	852.31	3378.5	8.0497	830.92
460	733.15	3400.3	8.1410	963.42	3400.2	8.1279	936.57	3400.0	8.1151	911.17	3399.9	8.1027	887.10	3399.8	8.0906	864.27	3399.7	8.0787	842.58
470	743.15	3421.5	8.1697	976.73	3421.4	8.1566	949.51	3421.2	8.1438	923.76	3421.1	8.1314	899.37	3421.0	8.1193	876.23	3420.9	8.1075	854.24
480	753.15	3442.7	8.1981	990.03	3442.6	8.1850	962.45	3442.5	8.1722	936.35	3442.4	8.1598	911.63	3442.3	8.1477	888.18	3442.1	8.1359	865.90
490	763.15	3464.0	8.2262	1003.3	3463.9	8.2131	975.38	3463.8	8.2003	948.94	3463.7	8.1879	923.89	3463.6	8.1758	900.12	3463.5	8.1640	877.55
500	773.15	3485.4	8.2540	1016.6	3485.3	8.2409	988.31	3485.2	8.2282	961.52	3485.1	8.2158	936.14	3485.0	8.2037	912.06	3484.9	8.1919	889.19
510	783.15	3506.8	8.2816	1029.9	3506.7	8.2685	1001.2	3506.6	8.2557	974.09	3506.5	8.2433	948.39	3506.4	8.2312	924.00	3506.3	8.2195	900.83
520	793.15	3528.4	8.3089	1043.2	3528.2	8.2958	1014.1	3528.1	8.2830	986.66	3528.0	8.2706	960.63	3527.9	8.2585	935.93	3527.8	8.2468	912.47
530	803.15	3549.9	8.3359	1056.5	3549.8	8.3228	1027.1	3549.7	8.3101	999.23	3549.6	8.2977	972.87	3549.5	8.2856	947.86	3549.4	8.2738	924.10
540	813.15	3571.6	8.3627	1069.8	3571.5	8.3496	1040.0	3571.4	8.3368	1011.8	3571.3	8.3244	985.11	3571.2	8.3124	959.78	3571.1	8.3006	935.73
550	823.15	3593.3	8.3892	1083.0	3593.2	8.3761	1052.9	3593.1	8.3634	1024.4	3593.0	8.3510	997.34	3592.9	8.3389	971.70	3592.8	8.3271	947.35
560	833.15	3615.0	8.4155	1096.3	3614.9	8.4024	1065.8	3614.8	8.3897	1036.9	3614.7	8.3773	1009.6	3614.7	8.3652	983.62	3614.6	8.3534	958.97
570	843.15	3636.8	8.4415	1109.6	3636.8	8.4284	1078.7	3636.7	8.4157	1049.5	3636.6	8.4033	1021.8	3636.5	8.3913	995.54	3636.4	8.3795	970.59
580	853.15	3658.7	8.4673	1122.8	3658.7	8.4543	1091.6	3658.6	8.4415	1062.0	3658.5	8.4292	1034.0	3658.4	8.4171	1007.4	3658.3	8.4053	982.21
590	863.15	3680.7	8.4929	1136.1	3680.6	8.4799	1104.5	3680.5	8.4671	1074.6	3680.5	8.4548	1046.2	3680.4	8.4427	1019.4	3680.3	8.4309	993.82
600	873.15	3702.7	8.5183	1149.3	3702.7	8.5052	1117.4	3702.6	8.4925	1087.1	3702.5	8.4801	1058.5	3702.4	8.4681	1031.3	3702.3	8.4563	1005.4
610	883.15	3724.8	8.5435	1162.6	3724.8	8.5304	1130.3	3724.7	8.5177	1099.7	3724.6	8.5053	1070.7	3724.5	8.4933	1043.2	3724.4	8.4815	1017.0
620	893.15	3747.0	8.5684	1175.9	3746.9	8.5554	1143.1	3746.8	8.5426	1112.2	3746.8	8.5303	1082.9	3746.7	8.5182	1055.1	3746.6	8.5065	1028.6
630	903.15	3769.2	8.5932	1189.1	3769.2	8.5801	1156.0	3769.1	8.5674	1124.7	3769.0	8.5550	1095.1	3768.9	8.5430	1067.0	3768.9	8.5312	1040.2
640	913.15	3791.5	8.6177	1202.4	3791.5	8.6047	1168.9	3791.4	8.5920	1137.3	3791.3	8.5796	1107.3	3791.2	8.5675	1078.9	3791.2	8.5558	1051.8
650	923.15	3813.9	8.6421	1215.6	3813.8	8.6290	1181.8	3813.7	8.6163	1149.8	3813.7	8.6040	1119.5	3813.6	8.5919	1090.8	3813.5	8.5802	1063.4
660	933.15	3836.3	8.6663	1228.8	3836.3	8.6532	1194.7	3836.2	8.6405	1162.3	~~3836.1~~	8.6281	1131.7	3836.0	8.6161	1102.6	3836.0	8.6043	1075.0
670	943.15	3858.8	8.6902	1242.1	3858.7	8.6772	1207.5	3858.7	8.6645	1174.9	3858.6	8.6521	1143.9	3858.5	8.6401	1114.5	3858.5	8.6283	1086.6
680	953.15	3881.4	8.7140	1255.3	3881.3	8.7010	1220.4	3881.2	8.6883	1187.4	3881.2	8.6759	1156.1	3881.1	8.6639	1126.4	3881.0	8.6521	1098.2
690	963.15	3904.0	8.7376	1268.6	3903.9	8.7246	1233.3	3903.9	8.7119	1199.9	3903.8	8.6995	1168.3	3903.7	8.6875	1138.3	3903.7	8.6758	1109.8
700	973.15	3926.7	8.7611	1281.8	3926.6	8.7480	1246.2	3926.6	8.7353	1212.4	3926.5	8.7230	1180.5	3926.4	8.7109	1150.2	3926.4	8.6992	1121.4
710	983.15	3949.4	8.7843	1295.0	3949.4	8.7713	1259.0	3949.3	8.7586	1225.0	3949.3	8.7462	1192.7	3949.2	8.7342	1162.1	3949.1	8.7225	1133.0
720	993.15	3972.3	8.8074	1308.3	3972.2	8.7944	1271.9	3972.2	8.7817	1237.5	3972.1	8.7693	1204.9	3972.0	8.7573	1174.0	3972.0	8.7456	1144.6
730	1003.15	3995.2	8.8304	1321.5	3995.1	8.8173	1284.8	3995.0	8.8046	1250.0	3995.0	8.7923	1217.1	3994.9	8.7802	1185.8	3994.9	8.7685	1156.2
740	1013.15	4018.1	8.8531	1334.7	4018.0	8.8401	1297.6	4018.0	8.8274	1262.5	4017.9	8.8150	1229.3	4017.9	8.8030	1197.7	4017.8	8.7913	1167.7
750	1023.15	4041.1	8.8757	1348.0	4041.1	8.8627	1310.5	4041.0	8.8500	1275.0	4041.0	8.8376	1241.5	4040.9	8.8256	1209.6	4040.8	8.8139	1179.3
760	1033.15	4064.2	8.8982	1361.2	4064.1	8.8851	1323.3	4064.1	8.8724	1287.5	4064.0	8.8601	1253.6	4064.0	8.8481	1221.5	4063.9	8.8363	1190.9
770	1043.15	4087.3	8.9205	1374.4	4087.3	8.9074	1336.2	4087.2	8.8947	1300.1	4087.2	8.8824	1265.8	4087.1	8.8704	1233.3	4087.1	8.8586	1202.5
780	1053.15	4110.5	8.9426	1387.6	4110.5	8.9296	1349.1	4110.4	8.9169	1312.6	4110.4	8.9045	1278.0	4110.3	8.8925	1245.2	4110.3	8.8808	1214.1
790	1063.15	4133.8	8.9646	1400.9	4133.7	8.9515	1361.9	4133.7	8.9389	1325.1	4133.6	8.9265	1290.2	4133.6	8.9145	1257.1	4133.5	8.9028	1225.6
800	1073.15	4157.1	8.9864	1414.1	4157.1	8.9734	1374.8	4157.0	8.9607	1337.6	4157.0	8.9483	1302.4	4156.9	8.9363	1268.9	4156.9	8.9246	1237.2

Table 3 Water and Steam—*continued*

p (*abs*) bar		4.0			4.2			4.4			4.6			4.8			5.0		
t_s °C		143.6			145.4			147.1			148.7			150.3			151.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		604.7	1.7764	1.0839	612.3	1.7946	1.0858	619.6	1.8120	1.0876	626.7	1.8287	1.0894	633.5	1.8448	1.0911	640.1	1.8604	1.0928
Sat. Vapour		2737.6	6.8943	462.20	2739.8	6.8779	441.47	2741.9	6.8622	422.57	2743.9	6.8473	405.26	2745.7	6.8329	389.34	2747.5	6.8192	374.66
t °C	T K																		
0	273.15	0.4	−0.0001	1.0000	0.4	−0.0001	1.0000	0.4	−0.0001	1.0000	0.4	−0.0001	0.99999	0.4	−0.0001	0.99998	0.5	−0.0001	0.99997
10	283.15	42.4	0.1510	1.0001	42.4	0.1510	1.0001	42.4	0.1510	1.0000	42.4	0.1510	1.0000	42.5	0.1509	1.0000	42.5	0.1509	1.0000
20	293.15	84.2	0.2962	1.0015	84.3	0.2962	1.0015	84.3	0.2962	1.0015	84.3	0.2962	1.0015	84.3	0.2962	1.0015	84.3	0.2962	1.0015
30	303.15	126.0	0.4364	1.0041	126.0	0.4364	1.0041	126.1	0.4364	1.0041	126.1	0.4364	1.0041	126.1	0.4364	1.0041	126.1	0.4364	1.0041
40	313.15	167.8	0.5720	1.0076	167.8	0.5720	1.0076	167.8	0.5720	1.0076	167.9	0.5719	1.0076	167.9	0.5719	1.0076	167.9	0.5719	1.0076
50	323.15	209.6	0.7033	1.0119	209.6	0.7033	1.0119	209.6	0.7033	1.0119	209.6	0.7033	1.0119	209.7	0.7033	1.0119	209.7	0.7033	1.0119
60	333.15	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.4	0.8308	1.0170	251.5	0.8308	1.0169	251.5	0.8307	1.0169	251.5	0.8307	1.0169
70	343.15	293.3	0.9546	1.0227	293.3	0.9546	1.0227	293.3	0.9546	1.0227	293.3	0.9546	1.0226	293.3	0.9545	1.0226	293.4	0.9545	1.0226
80	353.15	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.2	1.0750	1.0290	335.3	1.0750	1.0290	335.3	1.0750	1.0290
90	363.15	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1923	1.0360	377.2	1.1922	1.0360	377.3	1.1922	1.0359	377.3	1.1922	1.0359
100	373.15	419.3	1.3066	1.0436	419.3	1.3066	1.0435	419.3	1.3066	1.0435	419.3	1.3066	1.0435	419.3	1.3066	1.0435	419.4	1.3066	1.0435
110	383.15	461.5	1.4183	1.0517	461.5	1.4183	1.0517	461.5	1.4182	1.0517	461.5	1.4182	1.0517	461.6	1.4182	1.0517	461.6	1.4182	1.0517
120	393.15	503.9	1.5274	1.0605	503.9	1.5274	1.0605	503.9	1.5274	1.0605	503.9	1.5274	1.0605	503.9	1.5273	1.0605	503.9	1.5273	1.0605
130	403.15	546.4	1.6342	1.0699	546.4	1.6342	1.0699	546.4	1.6342	1.0699	546.4	1.6342	1.0699	546.4	1.6342	1.0699	546.5	1.6341	1.0699
140	413.15	589.1	1.7389	1.0800	589.1	1.7389	1.0800	589.2	1.7389	1.0800	589.2	1.7389	1.0800	589.2	1.7389	1.0800	589.2	1.7388	1.0800
150	423.15	2752.0	6.9285	470.66	2750.3	6.9028	447.34	2748.5	6.8780	426.14	2746.8	6.8542	406.77	632.2	1.8416	1.0908	632.2	1.8416	1.0908
160	433.15	2774.2	6.9805	483.71	2772.7	6.9551	459.85	2771.1	6.9308	438.16	2769.5	6.9074	418.35	2768.0	6.8849	400.19	2766.4	6.8631	383.47
170	443.15	2796.1	7.0305	496.57	2794.7	7.0055	472.17	2793.3	6.9815	449.99	2791.9	6.9585	429.74	2790.5	6.9363	411.17	2789.1	6.9149	394.08
180	453.15	2817.8	7.0788	509.26	2816.5	7.0541	484.33	2815.2	7.0304	461.66	2814.0	7.0077	440.96	2812.7	6.9858	421.98	2811.4	6.9647	404.51
190	463.15	2839.2	7.1255	521.82	2838.0	7.1010	496.35	2836.9	7.0776	473.18	2835.7	7.0552	452.03	2834.6	7.0336	432.64	2833.4	7.0127	414.80
200	473.15	2860.4	7.1708	534.26	2859.3	7.1466	508.24	2858.3	7.1234	484.59	2857.2	7.1011	462.98	2856.2	7.0798	443.18	2855.1	7.0592	424.96
210	483.15	2881.4	7.2148	546.60	2880.5	7.1908	520.04	2879.5	7.1678	495.89	2878.6	7.1457	473.83	2877.6	7.1245	453.61	2876.6	7.1042	435.01
220	493.15	2902.3	7.2576	558.85	2901.5	7.2338	531.74	2900.6	7.2109	507.09	2899.7	7.1891	484.59	2898.8	7.1680	463.96	2898.0	7.1478	444.97
230	503.15	2923.1	7.2994	571.03	2922.3	7.2757	543.37	2921.5	7.2530	518.23	2920.7	7.2312	495.27	2919.9	7.2104	474.22	2919.1	7.1903	454.86
240	513.15	2943.9	7.3402	583.14	2943.1	7.3166	554.94	2942.4	7.2940	529.30	2941.6	7.2724	505.88	2940.9	7.2516	484.42	2940.1	7.2317	464.67
250	523.15	2964.5	7.3800	595.19	2963.8	7.3565	566.44	2963.1	7.3340	540.30	2962.4	7.3125	516.44	2961.8	7.2919	494.56	2961.1	7.2721	474.43
260	533.15	2985.1	7.4190	607.20	2984.5	7.3956	577.90	2983.8	7.3732	551.27	2983.2	7.3518	526.94	2982.5	7.3313	504.65	2981.9	7.3115	484.14
270	543.15	3005.6	7.4572	619.16	3005.1	7.4339	589.32	3004.5	7.4116	562.18	3003.9	7.3902	537.41	3003.3	7.3698	514.70	3002.7	7.3501	493.80
280	553.15	3026.2	7.4947	631.09	3025.6	7.4714	600.70	3025.1	7.4492	573.06	3024.5	7.4279	547.83	3024.0	7.4075	524.70	3023.4	7.3879	503.43
290	563.15	3046.7	7.5314	642.98	3046.2	7.5082	612.04	3045.7	7.4861	583.91	3045.1	7.4649	558.22	3044.6	7.4445	534.68	3044.1	7.4250	513.02
300	573.15	3067.2	7.5675	654.85	3066.7	7.5444	623.36	3066.2	7.5223	594.73	3065.7	7.5011	568.59	3065.2	7.4809	544.62	3064.8	7.4614	522.58
310	583.15	3087.7	7.6030	666.69	3087.3	7.5799	634.65	3086.8	7.5579	605.52	3086.3	7.5368	578.92	3085.9	7.5165	554.54	3085.4	7.4971	532.11
320	593.15	3108.3	7.6379	678.51	3107.8	7.6149	645.92	3107.4	7.5929	616.29	3107.0	7.5718	589.24	3106.5	7.5516	564.44	3106.1	7.5322	541.63
330	603.15	3128.8	7.6723	690.31	3128.4	7.6493	657.17	3128.0	7.6273	627.04	3127.6	7.6063	599.53	3127.2	7.5861	574.32	3126.7	7.5668	551.12
340	613.15	3149.4	7.7061	702.09	3149.0	7.6831	668.40	3148.6	7.6612	637.77	3148.2	7.6402	609.81	3147.8	7.6201	584.18	3147.4	7.6008	560.60

350	623.15	3170.0	7.7395	713.85	3169.6	7.7165	679.62	3169.2	7.6946	648.49	3168.9	7.6736	620.07	3168.5	7.6536	594.02	3168.1	7.6343	570.05
360	633.15	3190.6	7.7723	725.61	3190.3	7.7494	690.82	3189.9	7.7275	659.19	3189.6	7.7066	630.32	3189.2	7.6865	603.85	3188.8	7.6673	579.50
370	643.15	3211.3	7.8047	737.35	3211.0	7.7818	702.01	3210.6	7.7600	669.88	3210.3	7.7391	640.55	3209.9	7.7190	613.67	3209.6	7.6998	588.93
380	653.15	3232.1	7.8367	749.07	3231.7	7.8138	713.19	3231.4	7.7920	680.56	3231.1	7.7711	650.78	3230.7	7.7511	623.47	3230.4	7.7319	598.35
390	663.15	3252.8	7.8683	760.79	3252.5	7.8454	724.35	3252.2	7.8236	691.23	3251.9	7.8027	660.99	3251.5	7.7827	633.27	3251.2	7.7635	607.76
400	673.15	3273.6	7.8994	772.50	3273.3	7.8766	735.51	3273.0	7.8548	701.89	3272.7	7.8339	671.19	3272.4	7.8140	643.05	3272.1	7.7948	617.16
410	683.15	3294.5	7.9302	784.20	3294.2	7.9074	746.66	3293.9	7.8856	712.54	3293.6	7.8648	681.39	3293.3	7.8448	652.83	3293.0	7.8256	626.55
420	693.15	3315.4	7.9606	795.89	3315.1	7.9378	757.80	3314.9	7.9160	723.18	3314.6	7.8952	691.57	3314.3	7.8753	662.60	3314.0	7.8561	635.94
430	703.15	3336.4	7.9906	807.57	3336.1	7.9678	768.94	3335.9	7.9461	733.82	3335.6	7.9253	701.75	3335.3	7.9054	672.36	3335.0	7.8862	645.31
440	713.15	3357.4	8.0203	819.25	3357.2	7.9976	780.07	3356.9	7.9758	744.45	3356.6	7.9550	711.92	3356.4	7.9351	682.11	3356.1	7.9160	654.68
450	723.15	3378.5	8.0497	830.92	3378.3	8.0269	791.19	3378.0	8.0052	755.07	3377.7	7.9844	722.09	3377.5	7.9645	691.86	3377.2	7.9454	664.05
460	733.15	3399.7	8.0787	842.58	3399.4	8.0560	802.30	3399.2	8.0343	765.68	3398.9	8.0135	732.25	3398.7	7.9936	701.60	3398.4	7.9745	673.40
470	743.15	3420.9	8.1075	854.24	3420.6	8.0847	813.41	3420.4	8.0630	776.29	3420.2	8.0423	742.40	3419.9	8.0224	711.34	3419.7	8.0033	682.76
480	753.15	3442.1	8.1359	865.90	3441.9	8.1132	824.52	3441.7	8.0915	786.90	3441.4	8.0707	752.55	3441.2	8.0509	721.07	3441.0	8.0318	692.10
490	763.15	3463.5	8.1640	877.55	3463.2	8.1413	835.62	3463.0	8.1196	797.50	3462.8	8.0989	762.70	3462.6	8.0790	730.79	3462.3	8.0600	701.44
500	773.15	3484.9	8.1919	889.19	3484.6	8.1692	846.71	3484.4	8.1475	808.10	3484.2	8.1268	772.84	3484.0	8.1069	740.52	3483.8	8.0879	710.78
510	783.15	3506.3	8.2195	900.83	3506.1	8.1967	857.80	3505.9	8.1751	818.69	3505.7	8.1544	782.97	3505.5	8.1345	750.23	3505.3	8.1155	720.11
520	793.15	3527.8	8.2468	912.47	3527.6	8.2241	868.89	3527.4	8.2024	829.27	3527.2	8.1817	793.10	3527.0	8.1618	759.95	3526.8	8.1428	729.44
530	803.15	3549.4	8.2738	924.10	3549.2	8.2511	879.97	3549.0	8.2294	839.86	3548.8	8.2087	803.23	3548.6	8.1889	769.66	3548.4	8.1699	738.77
540	813.15	3571.1	8.3006	935.73	3570.9	8.2779	891.05	3570.7	8.2563	850.44	3570.5	8.2356	813.35	3570.3	8.2157	779.36	3570.1	8.1967	748.09
550	823.15	3592.8	8.3271	947.35	3592.6	8.3044	902.13	3592.4	8.2828	861.01	3592.2	8.2621	823.48	3592.0	8.2423	789.06	3591.8	8.2233	757.41
560	833.15	3614.6	8.3534	958.97	3614.4	8.3307	913.20	3614.2	8.3091	871.59	3614.0	8.2884	833.59	3613.8	8.2686	798.76	3613.6	8.2496	766.72
570	843.15	3636.4	8.3795	970.59	3636.2	8.3568	924.27	3636.0	8.3352	882.16	3635.9	8.3145	843.71	3635.7	8.2947	808.46	3635.5	8.2757	776.03
580	853.15	3658.3	8.4053	982.21	3658.1	8.3827	935.34	3658.0	8.3610	892.72	3657.8	8.3404	853.82	3657.6	8.3206	818.15	3657.4	8.3016	785.34
590	863.15	3680.3	8.4309	993.82	3680.1	8.4083	946.40	3680.0	8.3867	903.29	3679.8	8.3660	863.93	3679.6	8.3462	827.84	3679.4	8.3272	794.65
600	873.15	3702.3	8.4563	1005.4	3702.2	8.4337	957.46	3702.0	8.4121	913.85	3701.8	8.3914	874.03	3701.7	8.3716	837.53	3701.5	8.3526	803.95
610	883.15	3724.4	8.4815	1017.0	3724.3	8.4588	968.52	3724.1	8.4372	924.41	3724.0	8.4166	884.13	3723.8	8.3968	847.21	3723.6	8.3778	813.25
620	893.15	3746.6	8.5065	1028.6	3746.5	8.4838	979.57	3746.3	8.4622	934.96	3746.2	8.4416	894.23	3746.0	8.4218	856.90	3745.8	8.4028	822.55
630	903.15	3768.9	8.5312	1040.2	3768.7	8.5086	990.63	3768.6	8.4870	945.52	3768.4	8.4664	904.33	3768.3	8.4466	866.58	3768.1	8.4276	831.84
640	913.15	3791.2	8.5558	1051.8	3791.0	8.5332	1001.7	3790.9	8.5116	956.07	3790.7	8.4909	914.43	3790.6	8.4712	876.25	3790.4	8.4522	841.13
650	923.15	3813.5	8.5802	1063.4	3813.4	8.5575	1012.7	3813.3	8.5359	966.62	3813.1	8.5153	924.52	3813.0	8.4955	885.93	3812.8	8.4766	850.42
660	933.15	3836.0	8.6043	1075.0	3835.8	8.5817	1023.8	3835.7	8.5601	977.17	3835.6	8.5395	934.61	3835.4	8.5197	895.60	3835.3	8.5008	859.71
670	943.15	3858.5	8.6283	1086.6	3858.3	8.6057	1034.8	3858.2	8.5841	987.71	3858.1	8.5635	944.70	3857.9	8.5437	905.27	3857.8	8.5248	869.00
680	953.15	3881.0	8.6521	1098.2	3880.9	8.6295	1045.9	3880.8	8.6079	998.25	3880.7	8.5873	954.79	3880.5	8.5676	914.94	3880.4	8.5486	878.28
690	963.15	3903.7	8.6758	1109.8	3903.6	8.6531	1056.9	3903.4	8.6316	1008.8	3903.3	8.6109	964.87	3903.2	8.5912	924.61	3903.0	8.5723	887.57
700	973.15	3926.4	8.6992	1121.4	3926.3	8.6766	1067.9	3926.1	8.6550	1019.3	3926.0	8.6344	974.95	3925.9	8.6147	934.27	3925.8	8.5957	896.85
710	983.15	3949.1	8.7225	1133.0	3949.0	8.6999	1079.0	3948.9	8.6783	1029.9	3948.8	8.6577	985.04	3948.7	8.6380	943.94	3948.5	8.6190	906.13
720	993.15	3972.0	8.7456	1144.6	3971.9	8.7230	1090.0	3971.7	8.7014	1040.4	3971.6	8.6808	995.12	3971.5	8.6611	953.60	3971.4	8.6421	915.40
730	1003.15	3994.9	8.7685	1156.2	3994.8	8.7459	1101.0	3994.6	8.7243	1050.9	3994.5	8.7037	1005.2	3994.4	8.6840	963.26	3994.3	8.6651	924.68
740	1013.15	4017.8	8.7913	1167.7	4017.7	8.7687	1112.1	4017.6	8.7471	1061.5	4017.5	8.7265	1015.3	4017.4	8.7068	972.92	4017.3	8.6879	933.95
750	1023.15	4040.8	8.8139	1179.3	4040.7	8.7913	1123.1	4040.6	8.7697	1072.0	4040.5	8.7491	1025.3	4040.4	8.7294	982.57	4040.3	8.7105	943.22
760	1033.15	4063.9	8.8363	1190.9	4063.8	8.8137	1134.1	4063.7	8.7922	1082.5	4063.6	8.7716	1035.4	4063.5	8.7519	992.23	4063.4	8.7330	952.49
770	1043.15	4087.1	8.8586	1202.5	4087.0	8.8360	1145.2	4086.9	8.8145	1093.1	4086.8	8.7939	1045.5	4086.7	8.7742	1001.9	4086.6	8.7553	961.76
780	1053.15	4110.3	8.8808	1214.1	4110.2	8.8582	1156.2	4110.1	8.8366	1103.6	4110.0	8.8161	1055.6	4109.9	8.7963	1011.5	4109.8	8.7774	971.03
790	1063.15	4133.5	8.9028	1225.6	4133.4	8.8802	1167.2	4133.4	8.8586	1114.1	4133.3	8.8381	1065.6	4133.2	8.8183	1021.2	4133.1	8.7994	980.30
800	1073.15	4156.9	8.9246	1237.2	4156.8	8.9020	1178.2	4156.7	8.8805	1124.6	4156.6	8.8599	1075.7	4156.5	8.8402	1030.8	4156.4	8.8213	989.56

Table 3 Water and Steam—*continued*

p (*abs*) bar		5.0			5.2			5.4			5.6			5.8			6.0		
t_s °C		151.8			153.3			154.8			156.2			157.5			158.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		640.1	1.8604	1.0928	646.5	1.8754	1.0945	652.8	1.8899	1.0961	658.8	1.9040	1.0977	664.7	1.9176	1.0993	670.4	1.9308	1.1009
Sat. Vapour		2747.5	6.8192	374.66	2749.3	6.8059	361.06	2750.9	6.7932	348.44	2752.5	6.7809	336.69	2754.0	6.7690	325.72	2755.5	6.7575	315.46
t °C	T K																		
0	273.15	0.5	−0.0001	0.99997	0.5	−0.0001	0.99996	0.5	−0.0001	0.99995	0.5	−0.0001	0.99994	0.6	−0.0001	0.99993	0.6	−0.0001	0.99992
10	283.15	42.5	0.1509	1.0000	42.5	0.1509	1.0000	42.5	0.1509	1.00000	42.5	0.1509	0.99999	42.6	0.1509	0.99998	42.6	0.1509	0.99997
20	293.15	84.3	0.2962	1.0015	84.3	0.2962	1.0015	84.4	0.2962	1.0015	84.4	0.2962	1.0015	84.4	0.2962	1.0015	84.4	0.2962	1.0015
30	303.15	126.1	0.4364	1.0041	126.1	0.4364	1.0041	126.2	0.4363	1.0041	126.2	0.4363	1.0041	126.2	0.4363	1.0041	126.2	0.4363	1.0040
40	313.15	167.9	0.5719	1.0076	167.9	0.5719	1.0076	167.9	0.5719	1.0076	167.9	0.5719	1.0076	168.0	0.5719	1.0076	168.0	0.5719	1.0075
50	323.15	209.7	0.7033	1.0119	209.7	0.7033	1.0119	209.7	0.7033	1.0119	209.7	0.7033	1.0119	209.7	0.7032	1.0119	209.8	0.7032	1.0119
60	333.15	251.5	0.8307	1.0169	251.5	0.8307	1.0169	251.5	0.8307	1.0169	251.5	0.8307	1.0169	251.6	0.8307	1.0169	251.6	0.8307	1.0169
70	343.15	293.4	0.9545	1.0226	293.4	0.9545	1.0226	293.4	0.9545	1.0226	293.4	0.9545	1.0226	293.4	0.9545	1.0226	293.4	0.9545	1.0226
80	353.15	335.3	1.0750	1.0290	335.3	1.0749	1.0290	335.3	1.0749	1.0290	335.3	1.0749	1.0289	335.3	1.0749	1.0289	335.4	1.0749	1.0289
90	363.15	377.3	1.1922	1.0359	377.3	1.1922	1.0359	377.3	1.1922	1.0359	377.3	1.1922	1.0359	377.3	1.1922	1.0359	377.3	1.1921	1.0359
100	373.15	419.4	1.3066	1.0435	419.4	1.3065	1.0435	419.4	1.3065	1.0435	419.4	1.3065	1.0435	419.4	1.3065	1.0435	419.4	1.3065	1.0434
110	383.15	461.6	1.4182	1.0517	461.6	1.4182	1.0517	461.6	1.4182	1.0516	461.6	1.4181	1.0516	461.6	1.4181	1.0516	461.6	1.4181	1.0516
120	393.15	503.9	1.5273	1.0605	503.9	1.5273	1.0604	504.0	1.5273	1.0604	504.0	1.5273	1.0604	504.0	1.5272	1.0604	504.0	1.5272	1.0604
130	403.15	546.5	1.6341	1.0699	546.5	1.6341	1.0699	546.5	1.6341	1.0699	546.5	1.6341	1.0698	546.5	1.6341	1.0698	546.5	1.6340	1.0698
140	413.15	589.2	1.7388	1.0800	589.2	1.7388	1.0800	589.2	1.7388	1.0799	589.2	1.7388	1.0799	589.2	1.7388	1.0799	589.3	1.7387	1.0799
150	423.15	632.2	1.8416	1.0908	632.2	1.8416	1.0908	632.2	1.8416	1.0907	632.2	1.8415	1.0907	632.2	1.8415	1.0907	632.2	1.8415	1.0907
160	433.15	2766.4	6.8631	383.47	2764.8	6.8420	368.04	2763.1	6.8216	353.74	2761.5	6.8019	340.46	2759.9	6.7826	328.09	2758.2	6.7640	316.55
170	443.15	2789.1	6.9149	394.08	2787.6	6.8942	378.30	2786.2	6.8742	363.68	2784.7	6.8548	350.11	2783.2	6.8360	337.47	2781.8	6.8177	325.67
180	453.15	2811.4	6.9647	404.51	2810.1	6.9444	388.39	2808.8	6.9247	373.45	2807.5	6.9056	359.58	2806.2	6.8871	346.66	2804.8	6.8691	334.61
190	463.15	2833.4	7.0127	414.80	2832.2	6.9927	398.32	2831.0	6.9732	383.07	2829.9	6.9544	368.90	2828.7	6.9362	355.71	2827.5	6.9185	343.39
200	473.15	2855.1	7.0592	424.96	2854.1	7.0393	408.14	2853.0	7.0201	392.56	2851.9	7.0016	378.09	2850.8	6.9836	364.62	2849.7	6.9662	352.04
210	483.15	2876.6	7.1042	435.01	2875.7	7.0845	417.84	2874.7	7.0655	401.94	2873.7	7.0472	387.17	2872.7	7.0294	373.42	2871.7	7.0121	360.58
220	493.15	2898.0	7.1478	444.97	2897.1	7.1283	427.45	2896.2	7.1095	411.22	2895.3	7.0913	396.15	2894.4	7.0737	382.12	2893.5	7.0567	369.03
230	503.15	2919.1	7.1903	454.86	2918.3	7.1710	436.98	2917.5	7.1523	420.43	2916.7	7.1343	405.06	2915.8	7.1168	390.75	2915.0	7.0999	377.39
240	513.15	2940.1	7.2317	464.67	2939.4	7.2125	446.45	2938.6	7.1939	429.57	2937.9	7.1760	413.89	2937.1	7.1587	399.30	2936.4	7.1419	385.68
250	523.15	2961.1	7.2721	474.43	2960.4	7.2530	455.85	2959.7	7.2345	438.64	2959.0	7.2167	422.67	2958.3	7.1995	407.79	2957.6	7.1829	393.91
260	533.15	2981.9	7.3115	484.14	2981.3	7.2925	465.20	2980.6	7.2742	447.67	2980.0	7.2565	431.39	2979.3	7.2394	416.23	2978.7	7.2228	402.08
270	543.15	3002.7	7.3501	493.80	3002.1	7.3312	474.51	3001.5	7.3129	456.65	3000.9	7.2953	440.07	3000.3	7.2783	424.63	2999.7	7.2618	410.21
280	553.15	3023.4	7.3879	503.43	3022.8	7.3691	483.78	3022.3	7.3509	465.60	3021.7	7.3334	448.71	3021.1	7.3164	432.98	3020.6	7.3000	418.31
290	563.15	3044.1	7.4250	513.02	3043.6	7.4062	493.02	3043.0	7.3881	474.50	3042.5	7.3706	457.31	3042.0	7.3537	441.30	3041.5	7.3374	426.36
300	573.15	3064.8	7.4614	522.58	3064.3	7.4426	502.23	3063.8	7.4246	483.38	3063.3	7.4072	465.89	3062.8	7.3903	449.60	3062.3	7.3740	434.39
310	583.15	3085.4	7.4971	532.11	3084.9	7.4784	511.41	3084.5	7.4604	492.24	3084.0	7.4430	474.44	3083.5	7.4263	457.86	3083.1	7.4100	442.39
320	593.15	3106.1	7.5322	541.63	3105.6	7.5136	520.57	3105.2	7.4956	501.07	3104.7	7.4783	482.96	3104.3	7.4616	466.10	3103.9	7.4454	450.37
330	603.15	3126.7	7.5668	551.12	3126.3	7.5482	529.71	3125.9	7.5302	509.88	3125.5	7.5130	491.47	3125.1	7.4963	474.32	3124.6	7.4801	458.32
340	613.15	3147.4	7.6008	560.60	3147.0	7.5822	538.83	3146.6	7.5643	518.67	3146.2	7.5471	499.95	3145.8	7.5304	482.53	3145.4	7.5143	466.26

350	623.15	3168.1	7.6343	570.05	3167.7	7.6157	547.93	3167.4	7.5979	527.45	3167.0	7.5806	508.42	3166.6	7.5640	490.72	3166.2	7.5479	474.19
360	633.15	3188.8	7.6673	579.50	3188.5	7.6488	557.02	3188.1	7.6309	536.21	3187.8	7.6137	516.88	3187.4	7.5971	498.89	3187.0	7.5810	482.09
370	643.15	3209.6	7.6998	588.93	3209.3	7.6813	566.10	3208.9	7.6635	544.96	3208.6	7.6463	525.33	3208.2	7.6297	507.05	3207.9	7.6137	489.99
380	653.15	3230.4	7.7319	598.35	3230.1	7.7134	575.16	3229.7	7.6956	553.69	3229.4	7.6785	533.76	3229.1	7.6619	515.20	3228.7	7.6459	497.87
390	663.15	3251.2	7.7635	607.76	3250.9	7.7451	584.22	3250.6	7.7273	562.42	3250.3	7.7102	542.18	3250.0	7.6936	523.33	3249.6	7.6776	505.74
400	673.15	3272.1	7.7948	617.16	3271.8	7.7764	593.27	3271.5	7.7586	571.14	3271.2	7.7415	550.59	3270.9	7.7250	531.46	3270.6	7.7090	513.61
410	683.15	3293.0	7.8256	626.55	3292.7	7.8072	602.30	3292.4	7.7895	579.85	3292.1	7.7724	558.99	3291.8	7.7559	539.58	3291.6	7.7399	521.46
420	693.15	3314.0	7.8561	635.94	3313.7	7.8377	611.33	3313.4	7.8200	588.55	3313.1	7.8029	567.39	3312.9	7.7864	547.69	3312.6	7.7705	529.31
430	703.15	3335.0	7.8862	645.31	3334.8	7.8678	620.35	3334.5	7.8501	597.24	3334.2	7.8331	575.78	3333.9	7.8166	555.79	3333.7	7.8007	537.14
440	713.15	3356.1	7.9160	654.68	3355.8	7.8976	629.37	3355.6	7.8799	605.92	3355.3	7.8629	584.16	3355.0	7.8464	563.89	3354.8	7.8305	544.97
450	723.15	3377.2	7.9454	664.05	3377.0	7.9271	638.37	3376.7	7.9094	614.60	3376.5	7.8923	592.53	3376.2	7.8759	571.98	3376.0	7.8600	552.80
460	733.15	3398.4	7.9745	673.40	3398.2	7.9562	647.38	3397.9	7.9385	623.28	3397.7	7.9215	600.90	3397.4	7.9050	580.06	3397.2	7.8891	560.62
470	743.15	3419.7	8.0033	682.76	3419.4	7.9850	656.37	3419.2	7.9673	631.95	3418.9	7.9503	609.26	3418.7	7.9339	588.14	3418.5	7.9180	568.43
480	753.15	3441.0	8.0318	692.10	3440.7	8.0135	665.37	3440.5	7.9958	640.61	3440.3	7.9788	617.62	3440.0	7.9624	596.22	3439.8	7.9465	576.24
490	763.15	3462.3	8.0600	701.44	3462.1	8.0416	674.35	3461.9	8.0240	649.27	3461.7	8.0070	625.97	3461.4	7.9906	604.29	3461.2	7.9747	584.04
500	773.15	3483.8	8.0879	710.78	3483.5	8.0695	683.33	3483.3	8.0519	657.92	3483.1	8.0349	634.32	3482.9	8.0185	612.35	3482.7	8.0027	591.84
510	783.15	3505.3	8.1155	720.11	3505.0	8.0972	692.31	3504.8	8.0796	666.57	3504.6	8.0626	642.66	3504.4	8.0462	620.41	3504.2	8.0303	599.64
520	793.15	3526.8	8.1428	729.44	3526.6	8.1245	701.29	3526.4	8.1069	675.21	3526.2	8.0899	651.00	3526.0	8.0735	628.46	3525.8	8.0577	607.43
530	803.15	3548.4	8.1699	738.77	3548.2	8.1516	710.26	3548.0	8.1340	683.86	3547.8	8.1170	659.34	3547.6	8.1007	636.52	3547.4	8.0848	615.21
540	813.15	3570.1	8.1967	748.09	3569.9	8.1784	719.22	3569.7	8.1608	692.49	3569.5	8.1439	667.67	3569.3	8.1275	644.56	3569.1	8.1117	623.00
550	823.15	3591.8	8.2233	757.41	3591.6	8.2050	728.18	3591.5	8.1874	701.13	3591.3	8.1705	676.00	3591.1	8.1541	652.61	3590.9	8.1383	630.78
560	833.15	3613.6	8.2496	766.72	3613.5	8.2314	737.14	3613.3	8.2138	709.76	3613.1	8.1968	684.33	3612.9	8.1805	660.65	3612.7	8.1647	638.55
570	843.15	3635.5	8.2757	776.03	3635.3	8.2575	746.10	3635.2	8.2399	718.39	3635.0	8.2229	692.65	3634.8	8.2066	668.69	3634.6	8.1908	646.33
580	853.15	3657.4	8.3016	785.34	3657.3	8.2833	755.05	3657.1	8.2658	727.01	3656.9	8.2488	700.97	3656.8	8.2325	676.72	3656.6	8.2167	654.10
590	863.15	3679.4	8.3272	794.65	3679.3	8.3090	764.00	3679.1	8.2914	735.63	3678.9	8.2745	709.29	3678.8	8.2581	684.76	3678.6	8.2423	661.86
600	873.15	3701.5	8.3526	803.95	3701.3	8.3344	772.95	3701.2	8.3168	744.25	3701.0	8.2999	717.60	3700.9	8.2836	692.79	3700.7	8.2678	669.63
610	883.15	3723.6	8.3778	813.25	3723.5	8.3596	781.90	3723.3	8.3420	752.87	3723.2	8.3251	725.91	3723.0	8.3088	700.81	3722.8	8.2930	677.39
620	893.15	3745.8	8.4028	822.55	3745.7	8.3846	790.84	3745.5	8.3670	761.48	3745.4	8.3501	734.22	3745.2	8.3338	708.84	3745.1	8.3180	685.15
630	903.15	3768.1	8.4276	831.84	3768.0	8.4094	799.78	3767.8	8.3918	770.09	3767.7	8.3749	742.52	3767.5	8.3586	716.86	3767.3	8.3428	692.90
640	913.15	3790.4	8.4522	841.13	3790.3	8.4340	808.72	3790.1	8.4164	778.70	3790.0	8.3995	750.83	3789.8	8.3832	724.88	3789.7	8.3674	700.66
650	923.15	3812.8	8.4766	850.42	3812.7	8.4584	817.65	3812.5	8.4408	787.31	3812.4	8.4239	759.13	3812.3	8.4076	732.90	3812.1	8.3919	708.41
660	933.15	3835.3	8.5008	859.71	3835.1	8.4826	826.59	3835.0	8.4650	795.91	3834.9	8.4481	767.43	3834.7	8.4318	740.91	3834.6	8.4161	716.16
670	943.15	3857.8	8.5248	869.00	3857.7	8.5066	835.52	3857.5	8.4891	804.51	3857.4	8.4722	775.73	3857.3	8.4559	748.92	3857.1	8.4401	723.91
680	953.15	3880.4	8.5486	878.28	3880.3	8.5304	844.45	3880.1	8.5129	813.12	3880.0	8.4960	784.02	3879.9	8.4797	756.94	3879.7	8.4639	731.65
690	963.15	3903.0	8.5723	887.57	3902.9	8.5541	853.37	3902.8	8.5365	821.71	3902.7	8.5197	792.32	3902.5	8.5034	764.94	3902.4	8.4876	739.40
700	973.15	3925.8	8.5957	896.85	3925.6	8.5775	862.30	3925.5	8.5600	830.31	3925.4	8.5431	800.61	3925.3	8.5268	772.95	3925.1	8.5111	747.14
710	983.15	3948.5	8.6190	906.13	3948.4	8.6008	871.22	3948.3	8.5833	838.91	3948.2	8.5664	808.90	3948.1	8.5501	780.96	3947.9	8.5344	754.88
720	993.15	3971.4	8.6421	915.40	3971.3	8.6239	880.14	3971.2	8.6064	847.50	3971.0	8.5896	817.19	3970.9	8.5733	788.96	3970.8	8.5575	762.62
730	1003.15	3994.3	8.6651	924.68	3994.2	8.6469	889.07	3994.1	8.6294	856.09	3994.0	8.6125	825.47	3993.8	8.5962	796.96	3993.7	8.5805	770.36
740	1013.15	4017.3	8.6879	933.95	4017.2	8.6697	897.98	4017.0	8.6522	864.68	4016.9	8.6353	833.76	4016.8	8.6190	804.96	4016.7	8.6033	778.09
750	1023.15	4040.3	8.7105	943.22	4040.2	8.6923	906.90	4040.1	8.6748	873.27	4040.0	8.6579	842.04	4039.9	8.6417	812.96	4039.8	8.6259	785.83
760	1033.15	4063.4	8.7330	952.49	4063.3	8.7148	915.82	4063.2	8.6973	881.86	4063.1	8.6804	850.32	4063.0	8.6641	820.96	4062.9	8.6484	793.56
770	1043.15	4086.6	8.7553	961.76	4086.5	8.7371	924.73	4086.4	8.7196	890.44	4086.3	8.7027	858.60	4086.2	8.6865	828.96	4086.1	8.6707	801.29
780	1053.15	4109.8	8.7774	971.03	4109.7	8.7592	933.64	4109.6	8.7418	899.03	4109.5	8.7249	866.88	4109.4	8.7086	836.95	4109.3	8.6929	809.02
790	1063.15	4133.1	8.7994	980.30	4133.0	8.7813	942.56	4132.9	8.7638	907.61	4132.8	8.7469	875.16	4132.7	8.7306	844.95	4132.6	8.7149	816.75
800	1073.15	4156.4	8.8213	989.56	4156.3	8.8031	951.47	4156.2	8.7856	916.19	4156.1	8.7688	883.44	4156.0	8.7525	852.94	4155.9	8.7368	824.47

Table 3 Water and Steam—*continued*

p (*abs*) bar		6.0			6.2			6.4			6.6			6.8			7.0		
t_s	°C	158.8			160.1			161.4			162.6			163.8			165.0		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		670.4	1.9308	1.1009	676.0	1.9437	1.1024	681.5	1.9562	1.1039	686.8	1.9684	1.1053	692.0	1.9803	1.1068	697.1	1.9918	1.1082
Sat. Vapour		2755.5	6.7575	315.46	2756.9	6.7464	305.84	2758.2	6.7356	296.80	2759.5	6.7252	288.29	2760.8	6.7150	280.26	2762.0	6.7052	272.68
t °C	T K																		
0	273.15	0.6	−0.0001	0.99992	0.6	−0.0001	0.99991	0.6	−0.0001	0.99990	0.6	−0.0001	0.99989	0.7	−0.0001	0.99988	0.7	−0.0001	0.99987
10	283.15	42.6	0.1509	0.99997	42.6	0.1509	0.99996	42.6	0.1509	0.99995	42.6	0.1509	0.99994	42.7	0.1509	0.99993	42.7	0.1509	0.99992
20	293.15	84.4	0.2962	1.0015	84.4	0.2962	1.0014	84.5	0.2962	1.0014	84.5	0.2962	1.0014	84.5	0.2962	1.0014	84.5	0.2962	1.0014
30	303.15	126.2	0.4363	1.0040	126.2	0.4363	1.0040	126.2	0.4363	1.0040	126.3	0.4363	1.0040	126.3	0.4363	1.0040	126.3	0.4363	1.0040
40	313.15	168.0	0.5719	1.0075	168.0	0.5719	1.0075	168.0	0.5719	1.0075	168.0	0.5719	1.0075	168.0	0.5719	1.0075	168.1	0.5719	1.0075
50	323.15	209.8	0.7032	1.0119	209.8	0.7032	1.0118	209.8	0.7032	1.0118	209.8	0.7032	1.0118	209.8	0.7032	1.0118	209.8	0.7032	1.0118
60	333.15	251.6	0.8307	1.0169	251.6	0.8307	1.0169	251.6	0.8307	1.0169	251.6	0.8306	1.0169	251.6	0.8306	1.0168	251.7	0.8306	1.0168
70	343.15	293.4	0.9545	1.0226	293.5	0.9545	1.0226	293.5	0.9544	1.0226	293.5	0.9544	1.0226	293.5	0.9544	1.0225	293.5	0.9544	1.0225
80	353.15	335.4	1.0749	1.0289	335.4	1.0749	1.0289	335.4	1.0749	1.0289	335.4	1.0748	1.0289	335.4	1.0748	1.0289	335.4	1.0748	1.0289
90	363.15	377.3	1.1921	1.0359	377.4	1.1921	1.0359	377.4	1.1921	1.0359	377.4	1.1921	1.0359	377.4	1.1921	1.0358	377.4	1.1921	1.0358
100	373.15	419.4	1.3065	1.0434	419.5	1.3065	1.0434	419.5	1.3064	1.0434	419.5	1.3064	1.0434	419.5	1.3064	1.0434	419.5	1.3064	1.0434
110	383.15	461.6	1.4181	1.0516	461.7	1.4181	1.0516	461.7	1.4181	1.0516	461.7	1.4181	1.0516	461.7	1.4180	1.0516	461.7	1.4180	1.0516
120	393.15	504.0	1.5272	1.0604	504.0	1.5272	1.0604	504.0	1.5272	1.0604	504.0	1.5272	1.0604	504.1	1.5272	1.0604	504.1	1.5271	1.0603
130	403.15	546.5	1.6340	1.0698	546.5	1.6340	1.0698	546.6	1.6340	1.0698	546.6	1.6340	1.0698	546.6	1.6340	1.0698	546.6	1.6339	1.0698
140	413.15	589.3	1.7387	1.0799	589.3	1.7387	1.0799	589.3	1.7387	1.0799	589.3	1.7387	1.0799	589.3	1.7387	1.0799	589.3	1.7386	1.0798
150	423.15	632.2	1.8415	1.0907	632.2	1.8415	1.0907	632.3	1.8415	1.0907	632.3	1.8414	1.0907	632.3	1.8414	1.0906	632.3	1.8414	1.0906
160	433.15	2758.2	6.7640	316.55	675.5	1.9425	1.1022	675.5	1.9424	1.1022	675.5	1.9424	1.1022	675.5	1.9424	1.1022	675.5	1.9424	1.1022
170	443.15	2781.8	6.8177	325.67	2780.3	6.7999	314.62	2778.8	6.7825	304.27	2777.3	6.7656	294.53	2775.7	6.7491	285.37	2774.2	6.7330	276.73
180	453.15	2804.8	6.8691	334.61	2803.5	6.8517	323.32	2802.1	6.8346	312.74	2800.8	6.8181	302.80	2799.4	6.8019	293.44	2798.0	6.7861	284.61
190	463.15	2827.5	6.9185	343.39	2826.3	6.9014	331.87	2825.0	6.8846	321.06	2823.8	6.8684	310.91	2822.6	6.8525	301.35	2821.4	6.8370	292.34
200	473.15	2849.7	6.9662	352.04	2848.7	6.9492	340.28	2847.6	6.9327	329.24	2846.5	6.9167	318.88	2845.3	6.9011	309.12	2844.2	6.8859	299.92
210	483.15	2871.7	7.0121	360.58	2870.7	6.9954	348.57	2869.7	6.9792	337.31	2868.7	6.9633	326.73	2867.7	6.9479	316.77	2866.7	6.9329	307.38
220	493.15	2893.5	7.0567	369.03	2892.6	7.0401	356.77	2891.7	7.0241	345.28	2890.7	7.0084	334.49	2889.8	6.9932	324.33	2888.9	6.9784	314.75
230	503.15	2915.0	7.0999	377.39	2914.2	7.0835	364.89	2913.3	7.0676	353.17	2912.5	7.0521	342.16	2911.7	7.0370	331.80	2910.8	7.0224	322.03
240	513.15	2936.4	7.1419	385.68	2935.6	7.1257	372.93	2934.8	7.1099	360.98	2934.1	7.0945	349.76	2933.3	7.0796	339.19	2932.5	7.0651	329.23
250	523.15	2957.6	7.1829	393.91	2956.9	7.1667	380.92	2956.2	7.1510	368.74	2955.5	7.1358	357.30	2954.7	7.1210	346.53	2954.0	7.1066	336.37
260	533.15	2978.7	7.2228	402.08	2978.0	7.2067	388.85	2977.4	7.1912	376.44	2976.7	7.1760	364.78	2976.0	7.1613	353.81	2975.4	7.1470	343.46
270	543.15	2999.7	7.2618	410.21	2999.1	7.2458	396.73	2998.4	7.2304	384.09	2997.8	7.2153	372.22	2997.2	7.2007	361.04	2996.6	7.1865	350.50
280	553.15	3020.6	7.3000	418.31	3020.0	7.2841	404.58	3019.4	7.2687	391.70	3018.9	7.2537	379.61	3018.3	7.2392	368.23	3017.7	7.2250	357.50
290	563.15	3041.5	7.3374	426.36	3040.9	7.3215	412.39	3040.4	7.3062	399.28	3039.9	7.2913	386.97	3039.3	7.2768	375.39	3038.8	7.2627	364.46
300	573.15	3062.3	7.3740	434.39	3061.8	7.3583	420.17	3061.3	7.3430	406.83	3060.8	7.3281	394.30	3060.3	7.3137	382.51	3059.8	7.2997	371.39
310	583.15	3083.1	7.4100	442.39	3082.6	7.3943	427.92	3082.1	7.3790	414.35	3081.7	7.3642	401.61	3081.2	7.3499	389.61	3080.7	7.3359	378.30
320	593.15	3103.9	7.4454	450.37	3103.4	7.4297	435.65	3103.0	7.4145	421.85	3102.5	7.3997	408.89	3102.1	7.3854	396.68	3101.6	7.3715	385.18
330	603.15	3124.6	7.4801	458.32	3124.2	7.4645	443.36	3123.8	7.4493	429.33	3123.4	7.4346	416.14	3123.0	7.4203	403.74	3122.5	7.4064	392.04
340	613.15	3145.4	7.5143	466.26	3145.0	7.4987	451.05	3144.6	7.4835	436.78	3144.2	7.4688	423.38	3143.8	7.4546	410.77	3143.4	7.4407	398.88

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3165.8	7.5323	458.72	3165.5	7.5172	444.23	3165.1	7.5026	430.61	3164.7	7.4884	417.79	3164.3	7.4745	405.71
[illegible]	[illegible]	[illegible]	7.5479	474.19	3186.7	7.5655	466.38	3186.3	7.5504	451.65	3185.9	7.5358	437.82	3185.6	7.5216	424.79	3185.2	7.5078	412.52
360	633.15	3187.0	7.5810	482.09	3207.5	7.5982	474.03	3207.2	7.5831	459.07	3206.8	7.5685	445.01	3206.5	7.5544	431.79	3206.1	7.5406	419.31
370	643.15	3207.9	7.6137	489.99	3228.4	7.6304	481.66	3228.1	7.6154	466.47	3227.7	7.6008	452.20	3227.4	7.5866	438.76	3227.1	7.5729	426.10
380	653.15	3228.7	7.6459	497.87	3249.3	7.6622	489.29	3249.0	7.6472	473.86	3248.7	7.6326	459.37	3248.4	7.6185	445.73	3248.0	7.6047	432.87
390	663.15	3249.6	7.6776	505.74	3270.3	7.6935	496.90	3270.0	7.6785	481.24	3269.7	7.6640	466.53	3269.3	7.6499	452.69	3269.0	7.6362	439.64
400	673.15	3270.6	7.7090	513.61	3291.3	7.7245	504.51	3291.0	7.7095	488.62	3290.7	7.6950	473.69	3290.4	7.6809	459.64	3290.1	7.6672	446.39
410	683.15	3291.6	7.7399	521.46	3312.3	7.7550	512.11	3312.0	7.7401	495.98	3311.7	7.7256	480.84	3311.4	7.7115	466.58	3311.2	7.6978	453.14
420	693.15	3312.6	7.7705	529.31	3333.4	7.7852	519.70	3333.1	7.7703	503.34	3332.8	7.7558	487.97	3332.6	7.7418	473.51	3332.3	7.7281	459.88
430	703.15	3333.7	7.8007	537.14	3354.5	7.8151	527.28	3354.2	7.8002	510.69	3354.0	7.7857	495.11	3353.7	7.7716	480.44	3353.4	7.7580	466.61
440	713.15	3354.8	7.8305	544.97	3375.7	7.8446	534.86	3375.4	7.8297	518.03	3375.2	7.8152	502.23	3374.9	7.8012	487.36	3374.7	7.7875	473.34
450	723.15	3376.0	7.8600	552.80	3396.9	7.8738	542.43	3396.7	7.8589	525.37	3396.4	7.8444	509.35	3396.2	7.8304	494.27	3395.9	7.8168	480.06
460	733.15	3397.2	7.8891	560.62	3418.2	7.9026	549.99	3418.0	7.8877	532.71	3417.7	7.8733	516.47	3417.5	7.8593	501.18	3417.3	7.8456	486.77
470	743.15	3418.5	7.9180	568.43	3439.6	7.9311	557.55	3439.3	7.9163	540.03	3439.1	7.9018	523.58	3438.9	7.8878	508.09	3438.6	7.8742	493.48
480	753.15	3439.8	7.9465	576.24	3461.0	7.9594	565.11	3460.8	7.9445	547.36	3460.5	7.9301	530.68	3460.3	7.9161	514.98	3460.1	7.9025	500.19
490	763.15	3461.2	7.9747	584.04	3482.5	7.9873	572.66	3482.2	7.9725	554.67	3482.0	7.9581	537.78	3481.8	7.9441	521.88	3481.6	7.9305	506.89
500	773.15	3482.7	8.0027	591.84	3504.0	8.0150	580.21	3503.8	8.0001	561.99	3503.6	7.9857	544.87	3503.3	7.9718	528.77	3503.1	7.9582	513.58
510	783.15	3504.2	8.0303	599.64	3525.6	8.0424	587.75	3525.4	8.0275	569.30	3525.2	8.0131	551.97	3524.9	7.9992	535.65	3524.7	7.9856	520.27
520	793.15	3525.8	8.0577	607.43	3547.2	8.0695	595.29	3547.0	8.0547	576.60	3546.8	8.0403	559.05	3546.6	8.0263	542.54	3546.4	8.0128	526.96
530	803.15	3547.4	8.0848	615.21	3568.9	8.0964	602.82	3568.7	8.0815	583.91	3568.5	8.0672	566.14	3568.3	8.0532	549.41	3568.1	8.0396	533.65
540	813.15	3569.1	8.1117	623.00	3590.7	8.1230	610.35	3590.5	8.1082	591.20	3590.3	8.0938	573.22	3590.1	8.0798	556.29	3589.9	8.0663	540.33
550	823.15	3590.9	8.1383	630.78	3612.5	8.1494	617.88	3612.4	8.1345	598.50	3612.2	8.1202	580.29	3612.0	8.1062	563.16	3611.8	8.0927	547.00
560	833.15	3612.7	8.1647	638.55	3634.4	8.1755	625.41	3634.3	8.1607	605.79	3634.1	8.1463	587.37	3633.9	8.1324	570.03	3633.7	8.1188	553.68
570	843.15	3634.6	8.1908	646.33	3656.4	8.2014	632.93	3656.2	8.1866	613.08	3656.1	8.1722	594.44	3655.9	8.1583	576.89	3655.7	8.1448	560.35
580	853.15	3656.6	8.2167	654.10	3678.4	8.2271	640.45	3678.3	8.2123	620.37	3678.1	8.1979	601.51	3677.9	8.1840	583.75	3677.8	8.1705	567.02
590	863.15	3678.6	8.2423	661.86	3700.5	8.2525	647.96	3700.4	8.2377	627.65	3700.2	8.2234	608.57	3700.0	8.2094	590.61	3699.9	8.1959	573.68
600	873.15	3700.7	8.2678	669.63	3722.7	8.2777	655.48	3722.5	8.2629	634.93	3722.4	8.2486	615.63	3722.2	8.2347	597.47	3722.1	8.2212	580.35
610	883.15	3722.8	8.2930	677.39	3744.9	8.3028	662.99	3744.8	8.2880	642.21	3744.6	8.2736	622.69	3744.4	8.2597	604.32	3744.3	8.2462	587.01
620	893.15	3745.1	8.3180	685.15	3767.2	8.3276	670.50	3767.0	8.3128	649.49	3766.9	8.2985	629.75	3766.7	8.2846	611.18	3766.6	8.2711	593.66
630	903.15	3767.3	8.3428	692.90	3789.6	8.3522	678.00	3789.4	8.3374	656.76	3789.3	8.3231	636.81	3789.1	8.3092	618.03	3789.0	8.2957	600.32
640	913.15	3789.7	8.3674	700.66	3812.0	8.3766	685.51	3811.8	8.3618	664.03	3811.7	8.3475	643.86	3811.5	8.3336	624.87	3811.4	8.3201	606.97
650	923.15	3812.1	8.3919	708.41	3834.4	8.4008	693.01	3834.3	8.3861	671.30	3834.2	8.3717	650.91	3834.0	8.3579	631.72	3833.9	8.3444	613.62
660	933.15	3834.6	8.4161	716.16	3857.0	8.4249	700.51	3856.9	8.4101	678.57	3856.7	8.3958	657.96	3856.6	8.3819	638.56	3856.5	8.3684	620.27
670	943.15	3857.1	8.4401	723.91	3879.6	8.4487	708.00	3879.5	8.4339	685.83	3879.3	8.4196	665.01	3879.2	8.4058	645.40	3879.1	8.3923	626.92
680	953.15	3879.7	8.4639	731.65	3902.3	8.4724	715.50	3902.2	8.4576	693.10	3902.0	8.4433	672.05	3901.9	8.4294	652.24	3901.8	8.4160	633.56
690	963.15	3902.4	8.4876	739.40	3925.0	8.4959	722.99	3924.9	8.4811	700.36	3924.8	8.4668	679.09	3924.6	8.4529	659.08	3924.5	8.4395	640.21
700	973.15	3925.1	8.5111	747.14	3947.8	8.5192	730.49	3947.7	8.5044	707.62	3947.6	8.4901	686.13	3947.5	8.4762	665.91	3947.3	8.4628	646.85
710	983.15	3947.9	8.5344	754.88	3970.7	8.5423	737.98	3970.6	8.5276	714.88	3970.5	8.5133	693.17	3970.3	8.4994	672.75	3970.2	8.4859	653.49
720	993.15	3970.8	8.5575	762.62	3993.6	8.5653	745.47	3993.5	8.5505	722.13	3993.4	8.5362	700.21	3993.3	8.5224	679.58	3993.2	8.5089	660.13
730	1003.15	3993.7	8.5805	770.36	4016.6	8.5881	752.95	4016.5	8.5733	729.39	4016.4	8.5591	707.25	4016.3	8.5452	686.41	4016.2	8.5317	666.76
740	1013.15	4016.7	8.6033	778.09	4039.7	8.6107	760.44	4039.5	8.5960	736.64	4039.4	8.5817	714.28	4039.3	8.5678	693.24	4039.2	8.5544	673.40
750	1023.15	4039.8	8.6259	785.83	4062.8	8.6332	767.92	4062.7	8.6185	743.89	4062.6	8.6042	721.32	4062.5	8.5903	700.07	4062.4	8.5769	680.03
760	1033.15	4062.9	8.6484	793.56	4085.9	8.6555	775.41	4085.8	8.6408	751.14	4085.7	8.6265	728.35	4085.6	8.6127	706.89	4085.5	8.5992	686.67
770	1043.15	4086.1	8.6707	801.29	4109.2	8.6777	782.89	4109.1	8.6630	758.39	4109.0	8.6487	735.38	4108.9	8.6348	713.72	4108.8	8.6214	693.30
780	1053.15	4109.3	8.6929	809.02	4132.5	8.6997	790.37	4132.4	8.6850	765.64	4132.3	8.6707	742.41	4132.2	8.6569	720.54	4132.1	8.6434	699.93
790	1063.15	4132.6	8.7149	816.75	4155.8	8.7216	797.85	4155.7	8.7069	772.88	4155.7	8.6926	749.43	4155.6	8.6788	727.36	4155.5	8.6653	706.55
800	1073.15	4155.9	8.7368	824.47															

6.0 to 7.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		7.0			7.2			7.4			7.6			7.8			8.0		
t_s °C		165.0			166.1			167.2			168.3			169.4			170.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		697.1	1.9918	1.1082	702.0	2.0031	1.1096	706.9	2.0141	1.1110	711.7	2.0249	1.1123	716.3	2.0354	1.1137	720.9	2.0457	1.1150
Sat. Vapour		2762.0	6.7052	272.68	2763.2	6.6956	265.50	2764.3	6.6862	258.70	2765.4	6.6771	252.24	2766.4	6.6683	246.10	2767.5	6.6596	240.26
t °C	T K																		
0	273.15	0.7	−0.0001	0.99987	0.7	−0.0001	0.99986	0.7	−0.0001	0.99985	0.7	−0.0001	0.99984	0.8	−0.0001	0.99983	0.8	−0.0001	0.99982
10	283.15	42.7	0.1509	0.99992	42.7	0.1509	0.99991	42.7	0.1509	0.99990	42.7	0.1509	0.99989	42.8	0.1509	0.99989	42.8	0.1509	0.99988
20	293.15	84.5	0.2962	1.0014	84.5	0.2961	1.0014	84.6	0.2961	1.0014	84.6	0.2961	1.0014	84.6	0.2961	1.0014	84.6	0.2961	1.0014
30	303.15	126.3	0.4363	1.0040	126.3	0.4363	1.0040	126.3	0.4363	1.0040	126.4	0.4363	1.0040	126.4	0.4363	1.0040	126.4	0.4363	1.0040
40	313.15	168.1	0.5719	1.0075	168.1	0.5718	1.0075	168.1	0.5718	1.0075	168.1	0.5718	1.0075	168.1	0.5718	1.0075	168.2	0.5718	1.0075
50	323.15	209.8	0.7032	1.0118	209.9	0.7032	1.0118	209.9	0.7032	1.0118	209.9	0.7032	1.0118	209.9	0.7032	1.0118	209.9	0.7031	1.0118
60	333.15	251.7	0.8306	1.0168	251.7	0.8306	1.0168	251.7	0.8306	1.0168	251.7	0.8306	1.0168	251.7	0.8306	1.0168	251.7	0.8306	1.0168
70	343.15	293.5	0.9544	1.0225	293.5	0.9544	1.0225	293.6	0.9544	1.0225	293.6	0.9544	1.0225	293.6	0.9544	1.0225	293.6	0.9544	1.0225
80	353.15	335.4	1.0748	1.0289	335.5	1.0748	1.0289	335.5	1.0748	1.0289	335.5	1.0748	1.0288	335.5	1.0748	1.0288	335.5	1.0748	1.0288
90	363.15	377.4	1.1921	1.0358	377.4	1.1921	1.0358	377.5	1.1920	1.0358	377.5	1.1920	1.0358	377.5	1.1920	1.0358	377.5	1.1920	1.0358
100	373.15	419.5	1.3064	1.0434	419.5	1.3064	1.0434	419.5	1.3064	1.0434	419.6	1.3064	1.0434	419.6	1.3063	1.0434	419.6	1.3063	1.0433
110	383.15	461.7	1.4180	1.0516	461.7	1.4180	1.0515	461.7	1.4180	1.0515	461.8	1.4180	1.0515	461.8	1.4180	1.0515	461.8	1.4179	1.0515
120	393.15	504.1	1.5271	1.0603	504.1	1.5271	1.0603	504.1	1.5271	1.0603	504.1	1.5271	1.0603	504.1	1.5271	1.0603	504.1	1.5270	1.0603
130	403.15	546.6	1.6339	1.0698	546.6	1.6339	1.0697	546.6	1.6339	1.0697	546.6	1.6339	1.0697	546.7	1.6339	1.0697	546.7	1.6338	1.0697
140	413.15	589.3	1.7386	1.0798	589.3	1.7386	1.0798	589.4	1.7386	1.0798	589.4	1.7386	1.0798	589.4	1.7386	1.0798	589.4	1.7385	1.0798
150	423.15	632.3	1.8414	1.0906	632.3	1.8414	1.0906	632.3	1.8413	1.0906	632.3	1.8413	1.0906	632.3	1.8413	1.0906	632.4	1.8413	1.0906
160	433.15	675.5	1.9424	1.1022	675.5	1.9423	1.1022	675.5	1.9423	1.1021	675.6	1.9423	1.1021	675.6	1.9423	1.1021	675.6	1.9423	1.1021
170	443.15	2774.2	6.7330	276.73	2772.7	6.7172	268.56	2771.1	6.7017	260.84	2769.6	6.6866	253.51	2768.0	6.6718	246.56	719.1	2.0416	1.1144
180	453.15	2798.0	6.7861	284.61	2796.7	6.7707	276.27	2795.3	6.7556	268.38	2793.9	6.7409	260.91	2792.5	6.7264	253.81	2791.1	6.7122	247.06
190	463.15	2821.4	6.8370	292.34	2820.1	6.8219	283.82	2818.9	6.8071	275.76	2817.6	6.7927	268.13	2816.3	6.7785	260.88	2815.1	6.7647	254.00
200	473.15	2844.2	6.8859	299.92	2843.1	6.8710	291.23	2842.0	6.8565	283.00	2840.8	6.8423	275.21	2839.7	6.8284	267.82	2838.6	6.8148	260.79
210	483.15	2866.7	6.9329	307.38	2865.7	6.9183	298.51	2864.7	6.9040	290.12	2863.7	6.8900	282.17	2862.6	6.8764	274.62	2861.6	6.8630	267.46
220	493.15	2888.9	6.9784	314.75	2888.0	6.9639	305.70	2887.1	6.9498	297.14	2886.1	6.9360	289.03	2885.2	6.9226	281.33	2884.2	6.9094	274.02
230	503.15	2910.8	7.0224	322.03	2910.0	7.0081	312.80	2909.1	6.9941	304.07	2908.3	6.9805	295.79	2907.4	6.9672	287.95	2906.6	6.9542	280.49
240	513.15	2932.5	7.0651	329.23	2931.7	7.0509	319.82	2931.0	7.0371	310.92	2930.2	7.0236	302.49	2929.4	7.0105	294.48	2928.6	6.9976	286.88
250	523.15	2954.0	7.1066	336.37	2953.3	7.0925	326.78	2952.6	7.0788	317.71	2951.9	7.0655	309.11	2951.1	7.0524	300.96	2950.4	7.0397	293.21
260	533.15	2975.4	7.1470	343.46	2974.7	7.1331	333.69	2974.1	7.1195	324.44	2973.4	7.1062	315.69	2972.7	7.0933	307.38	2972.1	7.0807	299.48
270	543.15	2996.6	7.1865	350.50	2996.0	7.1726	340.55	2995.4	7.1591	331.43	2994.8	7.1459	322.21	2994.1	7.1331	313.75	2993.5	7.1205	305.71
280	553.15	3017.7	7.2250	357.50	3017.2	7.2112	347.36	3016.6	7.1978	337.78	3016.0	7.1847	328.69	3015.4	7.1720	320.07	3014.9	7.1595	311.89
290	563.15	3038.8	7.2627	364.46	3038.3	7.2490	354.14	3037.7	7.2357	344.38	3037.2	7.2226	335.14	3036.6	7.2099	326.36	3036.1	7.1975	318.03
300	573.15	3059.8	7.2997	371.39	3059.3	7.2860	360.89	3058.8	7.2727	350.96	3058.3	7.2598	341.55	3057.8	7.2471	332.62	3057.3	7.2348	324.14
310	583.15	3080.7	7.3359	378.30	3080.2	7.3223	367.62	3079.8	7.3090	357.51	3079.3	7.2961	347.94	3078.8	7.2835	338.85	3078.3	7.2713	330.23
320	593.15	3101.6	7.3715	385.18	3101.2	7.3579	374.31	3100.7	7.3447	364.04	3100.3	7.3318	354.30	3099.8	7.3193	345.06	3099.4	7.3070	336.29
330	603.15	3122.5	7.4064	392.04	3122.1	7.3929	380.99	3121.7	7.3797	370.54	3121.3	7.3669	360.64	3120.8	7.3544	351.25	3120.4	7.3422	342.32
340	613.15	3143.4	7.4407	398.88	3143.0	7.4273	387.65	3142.6	7.4141	377.03	3142.2	7.4013	366.96	3141.8	7.3889	357.41	3141.4	7.3767	348.34

350	623.15	3164.3	7.4745	403.71	3163.9	7.4611	394.29	3163.5	7.4480	383.50	3163.2	7.4352	373.27	3162.8	7.4228	363.56	3162.4	7.4107	354.34
360	633.15	3185.2	7.5078	412.52	3184.8	7.4944	400.92	3184.5	7.4813	389.95	3184.1	7.4686	379.56	3183.7	7.4562	369.70	3183.4	7.4441	360.33
370	643.15	3206.1	7.5406	419.31	3205.8	7.5272	407.53	3205.4	7.5141	396.39	3205.1	7.5014	385.83	3204.7	7.4891	375.82	3204.4	7.4770	366.31
380	653.15	3227.1	7.5729	426.10	3226.7	7.5595	414.14	3226.4	7.5465	402.82	3226.1	7.5338	392.10	3225.7	7.5215	381.93	3225.4	7.5094	372.27
390	663.15	3248.0	7.6047	432.87	3247.7	7.5914	420.73	3247.4	7.5784	409.24	3247.1	7.5657	398.35	3246.8	7.5534	388.03	3246.4	7.5414	378.22
400	673.15	3269.0	7.6362	439.64	3268.7	7.6228	427.31	3268.4	7.6099	415.65	3268.1	7.5972	404.60	3267.8	7.5849	394.12	3267.5	7.5729	384.16
410	683.15	3290.1	7.6672	446.39	3289.8	7.6539	433.88	3289.5	7.6409	422.04	3289.2	7.6283	410.83	3288.9	7.6160	400.20	3288.6	7.6040	390.09
420	693.15	3311.2	7.6978	453.14	3310.9	7.6845	440.44	3310.6	7.6716	428.44	3310.3	7.6590	417.06	3310.0	7.6467	406.27	3309.7	7.6347	396.01
430	703.15	3332.3	7.7281	459.88	3332.0	7.7148	447.00	3331.7	7.7019	434.82	3331.5	7.6893	423.28	3331.2	7.6770	412.33	3330.9	7.6650	401.93
440	713.15	3353.4	7.7580	466.61	3353.2	7.7447	453.55	3352.9	7.7318	441.20	3352.6	7.7192	429.49	3352.4	7.7070	418.39	3352.1	7.6950	407.84
450	723.15	3374.7	7.7875	473.34	3374.4	7.7743	460.09	3374.2	7.7614	447.57	3373.9	7.7488	435.70	3373.6	7.7366	424.44	3373.4	7.7246	413.74
460	733.15	3395.9	7.8168	480.06	3395.7	7.8035	466.63	3395.4	7.7906	453.93	3395.2	7.7781	441.90	3394.9	7.7658	430.48	3394.7	7.7539	419.64
470	743.15	3417.3	7.8456	486.77	3417.0	7.8324	473.16	3416.8	7.8195	460.29	3416.5	7.8070	448.09	3416.3	7.7947	436.52	3416.1	7.7828	425.53
480	753.15	3438.6	7.8742	493.48	3438.4	7.8610	479.69	3438.2	7.8481	466.64	3437.9	7.8356	454.28	3437.7	7.8234	442.55	3437.5	7.8115	431.41
490	763.15	3460.1	7.9025	500.19	3459.9	7.8893	486.21	3459.6	7.8764	472.99	3459.4	7.8639	460.46	3459.2	7.8517	448.58	3459.0	7.8398	437.29
500	773.15	3481.6	7.9305	506.89	3481.4	7.9173	492.73	3481.1	7.9044	479.33	3480.9	7.8919	466.64	3480.7	7.8797	454.61	3480.5	7.8678	443.17
510	783.15	3503.1	7.9582	513.58	3502.9	7.9450	499.24	3502.7	7.9321	485.67	3502.5	7.9196	472.82	3502.3	7.9074	460.63	3502.1	7.8955	449.04
520	793.15	3524.7	7.9856	520.27	3524.5	7.9724	505.75	3524.3	7.9596	492.01	3524.1	7.9471	478.99	3523.9	7.9349	466.64	3523.7	7.9230	454.91
530	803.15	3546.4	8.0128	526.96	3546.2	7.9996	512.25	3546.0	7.9867	498.34	3545.8	7.9742	485.16	3545.6	7.9621	472.65	3545.4	7.9502	460.77
540	813.15	3568.1	8.0396	533.65	3568.0	8.0265	518.75	3567.8	8.0136	504.67	3567.6	8.0012	491.32	3567.4	7.9890	478.66	3567.2	7.9771	466.63
550	823.15	3589.9	8.0663	540.33	3589.8	8.0531	525.25	3589.6	8.0403	510.99	3589.4	8.0278	497.48	3589.2	8.0157	484.66	3589.0	8.0038	472.49
560	833.15	3611.8	8.0927	547.00	3611.6	8.0795	531.75	3611.4	8.0667	517.31	3611.3	8.0542	503.64	3611.1	8.0421	490.67	3610.9	8.0302	478.34
570	843.15	3633.7	8.1188	553.68	3633.5	8.1057	538.24	3633.4	8.0929	523.63	3633.2	8.0804	509.79	3633.0	8.0683	496.66	3632.8	8.0564	484.19
580	853.15	3655.7	8.1448	560.35	3655.5	8.1316	544.72	3655.4	8.1188	529.94	3655.2	8.1063	515.94	3655.0	8.0942	502.66	3654.8	8.0824	490.04
590	863.15	3677.8	8.1705	567.02	3677.6	8.1573	551.21	3677.4	8.1445	536.26	3677.3	8.1321	522.09	3677.1	8.1199	508.65	3676.9	8.1081	495.88
600	873.15	3699.9	8.1959	573.68	3699.7	8.1828	557.69	3699.5	8.1700	542.57	3699.4	8.1575	528.24	3699.2	8.1454	514.64	3699.1	8.1336	501.72
610	883.15	3722.1	8.2212	580.35	3721.9	8.2080	564.17	3721.7	8.1953	548.87	3721.6	8.1828	534.38	3721.4	8.1707	520.63	3721.3	8.1589	507.56
620	893.15	3744.3	8.2462	587.01	3744.1	8.2331	570.65	3744.0	8.2203	555.18	3743.8	8.2079	540.52	3743.7	8.1958	526.61	3743.5	8.1839	513.40
630	903.15	3766.6	8.2711	593.66	3766.4	8.2579	577.12	3766.3	8.2452	561.48	3766.1	8.2327	546.65	3766.0	8.2206	532.59	3765.8	8.2088	519.23
640	913.15	3789.0	8.2957	600.32	3788.8	8.2826	583.60	3788.7	8.2698	567.78	3788.5	8.2574	552.79	3788.4	8.2453	538.57	3788.2	8.2334	525.06
650	923.15	3811.4	8.3201	606.97	3811.3	8.3070	590.07	3811.1	8.2942	574.07	3811.0	8.2818	558.92	3810.8	8.2697	544.55	3810.7	8.2579	530.89
660	933.15	3833.9	8.3444	613.62	3833.8	8.3312	596.53	3833.6	8.3185	580.37	3833.5	8.3061	565.05	3833.3	8.2940	550.52	3833.2	8.2822	536.72
670	943.15	3856.5	8.3684	620.27	3856.3	8.3553	603.00	3856.2	8.3425	586.66	3856.1	8.3301	571.18	3855.9	8.3180	556.50	3855.8	8.3062	542.55
680	953.15	3879.1	8.3923	626.92	3878.9	8.3792	609.46	3878.8	8.3664	592.95	3878.7	8.3540	577.31	3878.6	8.3419	562.47	3878.4	8.3301	548.37
690	963.15	3901.8	8.4160	633.56	3901.6	8.4028	615.93	3901.5	8.3901	599.24	3901.4	8.3777	583.43	3901.3	8.3656	568.44	3901.1	8.3538	554.19
700	973.15	3924.5	8.4395	640.21	3924.4	8.4264	622.39	3924.3	8.4136	605.53	3924.2	8.4012	589.56	3924.0	8.3891	574.40	3923.9	8.3773	560.01
710	983.15	3947.3	8.4628	646.85	3947.2	8.4497	628.84	3947.1	8.4369	611.81	3947.0	8.4245	595.68	3946.9	8.4125	580.37	3946.7	8.4007	565.83
720	993.15	3970.2	8.4859	653.49	3970.1	8.4728	635.30	3970.0	8.4601	618.10	3969.9	8.4477	601.80	3969.7	8.4356	586.33	3969.6	8.4238	571.64
730	1003.15	3993.2	8.5089	660.13	3993.0	8.4958	641.76	3992.9	8.4831	624.38	3992.8	8.4707	607.91	3992.7	8.4586	592.29	3992.6	8.4468	577.46
740	1013.15	4016.2	8.5317	666.76	4016.0	8.5186	648.21	4015.9	8.5059	630.66	4015.8	8.4935	614.03	4015.7	8.4814	598.25	4015.6	8.4697	583.27
750	1023.15	4039.2	8.5544	673.40	4039.1	8.5413	654.66	4039.0	8.5286	636.94	4038.9	8.5162	620.14	4038.8	8.5041	604.21	4038.7	8.4923	589.08
760	1033.15	4062.4	8.5769	680.03	4062.2	8.5638	661.11	4062.1	8.5511	643.21	4062.0	8.5387	626.26	4061.9	8.5266	610.17	4061.8	8.5149	594.89
770	1043.15	4085.5	8.5992	686.67	4085.4	8.5861	667.56	4085.3	8.5734	649.49	4085.2	8.5610	632.37	4085.1	8.5490	616.13	4085.0	8.5372	600.70
780	1053.15	4108.8	8.6214	693.30	4108.7	8.6083	674.01	4108.6	8.5956	655.76	4108.5	8.5832	638.48	4108.4	8.5712	622.08	4108.3	8.5594	606.50
790	1063.15	4132.1	8.6434	699.93	4132.0	8.6304	680.46	4131.9	8.6176	662.04	4131.8	8.6053	644.59	4131.7	8.5932	628.03	4131.6	8.5814	612.31
800	1073.15	4155.5	8.6653	706.55	4155.4	8.6522	686.90	4155.3	8.6395	668.31	4155.2	8.6271	650.70	4155.1	8.6151	633.99	4155.0	8.6033	618.11

7.0 to 8.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		8.0			8.2			8.4			8.6			8.8			9.0		
t_s °C		170.4			171.4			172.4			173.4			174.4			175.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		720.9	2.0457	1.1150	725.4	2.0558	1.1163	729.9	2.0657	1.1176	734.2	2.0753	1.1188	738.5	2.0848	1.1201	742.6	2.0941	1.1213
Sat. Vapour		2767.5	6.6596	240.26	2768.5	6.6511	234.69	2769.4	6.6429	229.38	2770.4	6.6348	224.31	2771.3	6.6269	219.46	2772.1	6.6192	214.82
t °C	T K																		
0	273.15	0.8	−0.0001	0.99982	0.8	−0.0001	0.99981	0.8	−0.0001	0.99980	0.8	−0.0001	0.99979	0.9	−0.0001	0.99978	0.9	−0.0001	0.99977
10	283.15	42.8	0.1509	0.99988	42.8	0.1509	0.99987	42.8	0.1509	0.99986	42.8	0.1509	0.99985	42.9	0.1509	0.99984	42.9	0.1509	0.99983
20	293.15	84.6	0.2961	1.0014	84.6	0.2961	1.0014	84.6	0.2961	1.0013	84.7	0.2961	1.0013	84.7	0.2961	1.0013	84.7	0.2961	1.0013
30	303.15	126.4	0.4363	1.0040	126.4	0.4363	1.0039	126.4	0.4363	1.0039	126.4	0.4362	1.0039	126.5	0.4362	1.0039	126.5	0.4362	1.0039
40	313.15	168.2	0.5718	1.0075	168.2	0.5718	1.0074	168.2	0.5718	1.0074	168.2	0.5718	1.0074	168.2	0.5718	1.0074	168.2	0.5718	1.0074
50	323.15	209.9	0.7031	1.0118	210.0	0.7031	1.0118	210.0	0.7031	1.0117	210.0	0.7031	1.0117	210.0	0.7031	1.0117	210.0	0.7031	1.0117
60	333.15	251.7	0.8306	1.0168	251.8	0.8306	1.0168	251.8	0.8305	1.0168	251.8	0.8305	1.0168	251.8	0.8305	1.0168	251.8	0.8305	1.0167
70	343.15	293.6	0.9544	1.0225	293.6	0.9543	1.0225	293.6	0.9543	1.0225	293.6	0.9543	1.0225	293.7	0.9543	1.0225	293.7	0.9543	1.0224
80	353.15	335.5	1.0748	1.0288	335.5	1.0747	1.0288	335.5	1.0747	1.0288	335.6	1.0747	1.0288	335.6	1.0747	1.0288	335.6	1.0747	1.0288
90	363.15	377.5	1.1920	1.0358	377.5	1.1920	1.0358	377.5	1.1920	1.0358	377.5	1.1920	1.0358	377.6	1.1919	1.0357	377.6	1.1919	1.0357
100	373.15	419.6	1.3063	1.0433	419.6	1.3063	1.0433	419.6	1.3063	1.0433	419.6	1.3063	1.0433	419.6	1.3063	1.0433	419.7	1.3062	1.0433
110	383.15	461.8	1.4179	1.0515	461.8	1.4179	1.0515	461.8	1.4179	1.0515	461.8	1.4179	1.0515	461.9	1.4179	1.0515	461.9	1.4178	1.0514
120	393.15	504.1	1.5270	1.0603	504.2	1.5270	1.0603	504.2	1.5270	1.0603	504.2	1.5270	1.0602	504.2	1.5270	1.0602	504.2	1.5270	1.0602
130	403.15	546.7	1.6338	1.0697	546.7	1.6338	1.0697	546.7	1.6338	1.0697	546.7	1.6338	1.0697	546.7	1.6338	1.0696	546.7	1.6338	1.0696
140	413.15	589.4	1.7385	1.0798	589.4	1.7385	1.0798	589.4	1.7385	1.0797	589.4	1.7385	1.0797	589.4	1.7384	1.0797	589.5	1.7384	1.0797
150	423.15	632.4	1.8413	1.0906	632.4	1.8413	1.0905	632.4	1.8412	1.0905	632.4	1.8412	1.0905	632.4	1.8412	1.0905	632.4	1.8412	1.0905
160	433.15	675.6	1.9423	1.1021	675.6	1.9422	1.1021	675.6	1.9422	1.1021	675.6	1.9422	1.1021	675.6	1.9422	1.1020	675.6	1.9421	1.1020
170	443.15	719.1	2.0416	1.1144	719.1	2.0416	1.1144	719.1	2.0416	1.1144	719.2	2.0415	1.1144	719.2	2.0415	1.1144	719.2	2.0415	1.1144
180	453.15	2791.1	6.7122	247.06	2789.6	6.6983	240.65	2788.2	6.6847	234.53	2786.8	6.6713	228.70	2785.3	6.6581	223.13	2783.9	6.6452	217.81
190	463.15	2815.1	6.7647	254.00	2813.8	6.7511	247.45	2812.5	6.7378	241.21	2811.2	6.7247	235.26	2809.9	6.7118	229.57	2808.6	6.6992	224.14
200	473.15	2838.6	6.8148	260.79	2837.4	6.8015	254.10	2836.3	6.7885	247.74	2835.1	6.7757	241.66	2833.9	6.7631	235.86	2832.7	6.7508	230.32
210	483.15	2861.6	6.8630	267.46	2860.5	6.8499	260.63	2859.5	6.8371	254.14	2858.5	6.8245	247.94	2857.4	6.8122	242.03	2856.3	6.8001	236.37
220	493.15	2884.2	6.9094	274.02	2883.3	6.8965	267.06	2882.3	6.8839	260.43	2881.4	6.8715	254.11	2880.4	6.8594	248.08	2879.5	6.8475	242.31
230	503.15	2906.6	6.9542	280.49	2905.7	6.9415	273.39	2904.8	6.9290	266.64	2904.0	6.9168	260.19	2903.1	6.9049	254.04	2902.2	6.8931	248.16
240	513.15	2928.6	6.9976	286.88	2927.8	6.9850	279.65	2927.0	6.9727	272.76	2926.2	6.9606	266.19	2925.4	6.9488	259.92	2924.6	6.9373	253.93
250	523.15	2950.4	7.0397	293.21	2949.7	7.0272	285.84	2949.0	7.0151	278.82	2948.2	7.0031	272.12	2947.5	6.9914	265.73	2946.8	6.9800	259.63
260	533.15	2972.1	7.0807	299.48	2971.4	7.0683	291.97	2970.7	7.0562	284.82	2970.0	7.0444	278.00	2969.4	7.0328	271.49	2968.7	7.0215	265.27
270	543.15	2993.5	7.1205	305.71	2992.9	7.1083	298.06	2992.3	7.0963	290.77	2991.6	7.0846	283.82	2991.0	7.0731	277.19	2990.4	7.0618	270.86
280	553.15	3014.9	7.1595	311.89	3014.3	7.1473	304.10	3013.7	7.1354	296.68	3013.1	7.1237	289.61	3012.5	7.1123	282.85	3012.0	7.1012	276.40
290	563.15	3036.1	7.1975	318.03	3035.6	7.1854	310.10	3035.0	7.1736	302.55	3034.5	7.1620	295.35	3033.9	7.1507	288.48	3033.4	7.1396	281.91
300	573.15	3057.3	7.2348	324.14	3056.7	7.2227	316.07	3056.2	7.2109	308.39	3055.7	7.1994	301.06	3055.2	7.1881	294.07	3054.7	7.1771	287.39
310	583.15	3078.3	7.2713	330.23	3077.9	7.2593	322.02	3077.4	7.2475	314.20	3076.9	7.2361	306.75	3076.4	7.2248	299.63	3076.0	7.2139	292.83
320	593.15	3099.4	7.3070	336.29	3098.9	7.2951	327.94	3098.5	7.2834	319.99	3098.0	7.2720	312.41	3097.6	7.2608	305.17	3097.1	7.2499	298.25
330	603.15	3120.4	7.3422	342.32	3120.0	7.3303	333.83	3119.6	7.3186	325.75	3119.1	7.3072	318.04	3118.7	7.2961	310.68	3118.3	7.2852	303.65
340	613.15	3141.4	7.3767	348.34	3141.0	7.3648	339.71	3140.6	7.3532	331.50	3140.2	7.3419	323.66	3139.8	7.3308	316.18	3139.4	7.3199	309.03

350	623.15	3162.4	7.4107	354.34	3162.0	7.3988	345.58	3161.6	7.3872	337.22	3161.2	7.3759	329.26	3160.9	7.3649	321.66	3160.5	7.3540	314.40
360	633.15	3183.4	7.4441	360.33	3183.0	7.4323	351.42	3182.7	7.4207	342.94	3182.3	7.4094	334.85	3181.9	7.3984	327.12	3181.6	7.3876	319.74
370	643.15	3204.4	7.4770	366.31	3204.0	7.4652	357.26	3203.7	7.4537	348.64	3203.3	7.4424	340.42	3203.0	7.4314	332.57	3202.6	7.4206	325.08
380	653.15	3225.4	7.5094	372.27	3225.1	7.4976	363.08	3224.7	7.4861	354.32	3224.4	7.4749	345.98	3224.1	7.4639	338.01	3223.7	7.4532	330.40
390	663.15	3246.4	7.5414	378.22	3246.1	7.5296	368.89	3245.8	7.5181	360.00	3245.5	7.5069	351.53	3245.1	7.4960	343.44	3244.8	7.4852	335.71
400	673.15	3267.5	7.5729	384.16	3267.2	7.5612	374.69	3266.9	7.5497	365.67	3266.6	7.5385	357.06	3266.3	7.5276	348.85	3266.0	7.5169	341.01
410	683.15	3288.6	7.6040	390.09	3288.3	7.5923	380.48	3288.0	7.5808	371.32	3287.7	7.5697	362.59	3287.4	7.5587	354.26	3287.1	7.5480	346.30
420	693.15	3309.7	7.6347	396.01	3309.4	7.6230	386.26	3309.2	7.6116	376.97	3308.9	7.6004	368.11	3308.6	7.5895	359.66	3308.3	7.5788	351.58
430	703.15	3330.9	7.6650	401.93	3330.6	7.6534	392.03	3330.3	7.6419	382.61	3330.1	7.6308	373.63	3329.8	7.6199	365.05	3329.5	7.6092	356.86
440	713.15	3352.1	7.6950	407.84	3351.9	7.6833	397.80	3351.6	7.6719	388.25	3351.3	7.6608	379.13	3351.1	7.6499	370.44	3350.8	7.6393	362.12
450	723.15	3373.4	7.7246	413.74	3373.1	7.7130	403.56	3372.9	7.7016	393.87	3372.6	7.6905	384.63	3372.4	7.6796	375.81	3372.1	7.6689	367.39
460	733.15	3394.7	7.7539	419.64	3394.4	7.7422	409.32	3394.2	7.7309	399.50	3393.9	7.7198	390.13	3393.7	7.7089	381.19	3393.5	7.6983	372.64
470	743.15	3416.1	7.7828	425.53	3415.8	7.7712	415.07	3415.6	7.7598	405.11	3415.3	7.7487	395.62	3415.1	7.7379	386.55	3414.9	7.7273	377.89
480	753.15	3437.5	7.8115	431.41	3437.2	7.7998	420.82	3437.0	7.7885	410.72	3436.8	7.7774	401.10	3436.5	7.7666	391.91	3436.3	7.7560	383.14
490	763.15	3459.0	7.8398	437.29	3458.7	7.8282	426.56	3458.5	7.8168	416.33	3458.3	7.8057	406.58	3458.0	7.7949	397.27	3457.8	7.7843	388.38
500	773.15	3480.5	7.8678	443.17	3480.3	7.8562	432.29	3480.0	7.8449	421.93	3479.8	7.8338	412.05	3479.6	7.8230	402.62	3479.4	7.8124	393.61
510	783.15	3502.1	7.8955	449.04	3501.9	7.8839	438.02	3501.6	7.8726	427.53	3501.4	7.8616	417.52	3501.2	7.8507	407.97	3501.0	7.8402	398.84
520	793.15	3523.7	7.9230	454.91	3523.5	7.9114	443.75	3523.3	7.9001	433.12	3523.1	7.8890	422.99	3522.9	7.8782	413.31	3522.7	7.8677	404.07
530	803.15	3545.4	7.9502	460.77	3545.2	7.9386	449.47	3545.0	7.9273	438.71	3544.8	7.9163	428.45	3544.6	7.9055	418.65	3544.4	7.8949	409.29
540	813.15	3567.2	7.9771	466.63	3567.0	7.9656	455.19	3566.8	7.9543	444.29	3566.6	7.9432	433.90	3566.4	7.9324	423.99	3566.2	7.9219	414.51
550	823.15	3589.0	8.0038	472.49	3588.8	7.9922	460.91	3588.6	7.9809	449.88	3588.4	7.9699	439.36	3588.2	7.9591	429.32	3588.1	7.9486	419.73
560	833.15	3610.9	8.0302	478.34	3610.7	8.0187	466.62	3610.5	8.0074	455.45	3610.3	7.9964	444.81	3610.2	7.9856	434.65	3610.0	7.9750	424.94
570	843.15	3632.8	8.0564	484.19	3632.7	8.0449	472.33	3632.5	8.0336	461.03	3632.3	8.0226	450.26	3632.1	8.0118	439.97	3631.9	8.0013	430.15
580	853.15	3654.8	8.0824	490.04	3654.7	8.0708	478.03	3654.5	8.0595	466.60	3654.3	8.0485	455.70	3654.2	8.0378	445.30	3654.0	8.0272	435.35
590	863.15	3676.9	8.1081	495.88	3676.7	8.0965	483.74	3676.6	8.0853	472.17	3676.4	8.0743	461.14	3676.2	8.0635	450.62	3676.1	8.0530	440.56
600	873.15	3699.1	8.1336	501.72	3698.9	8.1221	489.44	3698.7	8.1108	477.74	3698.6	8.0998	466.58	3698.4	8.0890	455.93	3698.2	8.0785	445.76
610	883.15	3721.3	8.1589	507.56	3721.1	8.1473	495.14	3720.9	8.1361	483.30	3720.8	8.1251	472.02	3720.6	8.1143	461.25	3720.5	8.1038	450.95
620	893.15	3743.5	8.1839	513.40	3743.4	8.1724	500.83	3743.2	8.1612	488.86	3743.1	8.1502	477.45	3742.9	8.1394	466.56	3742.7	8.1289	456.15
630	903.15	3765.8	8.2088	519.23	3765.7	8.1973	506.53	3765.5	8.1860	494.42	3765.4	8.1750	482.88	3765.2	8.1643	471.87	3765.1	8.1538	461.34
640	913.15	3788.2	8.2334	525.06	3788.1	8.2219	512.22	3787.9	8.2107	499.98	3787.8	8.1997	488.31	3787.6	8.1890	477.18	3787.5	8.1785	466.53
650	923.15	3810.7	8.2579	530.89	3810.5	8.2464	517.90	3810.4	8.2351	505.53	3810.3	8.2242	493.74	3810.1	8.2134	482.48	3810.0	8.2030	471.72
660	933.15	3833.2	8.2822	536.72	3833.1	8.2707	523.59	3832.9	8.2594	511.09	3832.8	8.2484	499.16	3832.6	8.2377	487.78	3832.5	8.2272	476.91
670	943.15	3855.8	8.3062	542.55	3855.6	8.2947	529.28	3855.5	8.2835	516.64	3855.4	8.2725	504.59	3855.2	8.2618	493.08	3855.1	8.2513	482.09
680	953.15	3878.4	8.3301	548.37	3878.3	8.3186	534.96	3878.2	8.3074	522.18	3878.0	8.2964	510.01	3877.9	8.2857	498.38	3877.8	8.2752	487.27
690	963.15	3901.1	8.3538	554.19	3901.0	8.3423	540.64	3900.9	8.3311	527.73	3900.7	8.3201	515.42	3900.6	8.3094	503.68	3900.5	8.2989	492.45
700	973.15	3923.9	8.3773	560.01	3923.8	8.3658	546.32	3923.7	8.3546	533.28	3923.5	8.3437	520.84	3923.4	8.3329	508.97	3923.3	8.3225	497.63
710	983.15	3946.7	8.4007	565.83	3946.6	8.3892	551.99	3946.5	8.3780	538.82	3946.4	8.3670	526.26	3946.3	8.3563	514.27	3946.1	8.3458	502.81
720	993.15	3969.6	8.4238	571.64	3969.5	8.4124	557.67	3969.4	8.4011	544.36	3969.3	8.3902	531.67	3969.2	8.3795	519.56	3969.0	8.3690	507.98
730	1003.15	3992.6	8.4468	577.46	3992.5	8.4354	563.34	3992.4	8.4241	549.90	3992.2	8.4132	537.08	3992.1	8.4025	524.85	3992.0	8.3920	513.16
740	1013.15	4015.6	8.4697	583.27	4015.5	8.4582	569.01	4015.4	8.4470	555.44	4015.3	8.4360	542.49	4015.2	8.4253	530.13	4015.1	8.4149	518.33
750	1023.15	4038.7	8.4923	589.08	4038.6	8.4809	574.68	4038.5	8.4697	560.97	4038.4	8.4587	547.90	4038.3	8.4480	535.42	4038.1	8.4376	523.50
760	1033.15	4061.8	8.5149	594.89	4061.7	8.5034	580.35	4061.6	8.4922	566.51	4061.5	8.4812	553.31	4061.4	8.4705	540.71	4061.3	8.4601	528.67
770	1043.15	4085.0	8.5372	600.70	4084.9	8.5257	586.02	4084.8	8.5145	572.04	4084.7	8.5036	558.71	4084.6	8.4929	545.99	4084.5	8.4825	533.83
780	1053.15	4108.3	8.5594	606.50	4108.2	8.5479	591.69	4108.1	8.5367	577.57	4108.0	8.5258	564.12	4107.9	8.5151	551.27	4107.8	8.5047	539.00
790	1063.15	4131.6	8.5814	612.31	4131.5	8.5700	597.35	4131.4	8.5588	583.10	4131.3	8.5478	569.52	4131.2	8.5372	556.55	4131.1	8.5267	544.16
800	1073.15	4155.0	8.6033	618.11	4154.9	8.5919	603.01	4154.8	8.5807	588.63	4154.7	8.5697	574.92	4154.6	8.5591	561.83	4154.5	8.5486	549.33

8.0 to 9.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		9.0			9.2			9.4			9.6			9.8			10.0		
t_s °C		175.4			176.3			177.2			178.1			179.0			179.9		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		742.6	2.0941	1.1213	746.8	2.1033	1.1226	750.8	2.1122	1.1238	754.8	2.1210	1.1250	758.7	2.1297	1.1262	762.6	2.1382	1.1274
Sat. Vapour		2772.1	6.6192	214.82	2773.0	6.6116	210.37	2773.8	6.6042	206.10	2774.6	6.5969	202.01	2775.4	6.5898	198.08	2776.2	6.5828	194.30
t °C	T K																		
0	273.15	0.9	−0.0001	0.99977	0.9	−0.0001	0.99976	0.9	−0.0001	0.99975	0.9	−0.0001	0.99974	1.0	−0.0001	0.99973	1.0	−0.0001	0.99972
10	283.15	42.9	0.1509	0.99983	42.9	0.1509	0.99982	42.9	0.1509	0.99981	42.9	0.1509	0.99980	42.9	0.1509	0.99979	43.0	0.1509	0.99978
20	293.15	84.7	0.2961	1.0013	84.7	0.2961	1.0013	84.7	0.2961	1.0013	84.8	0.2961	1.0013	84.8	0.2961	1.0013	84.8	0.2961	1.0013
30	303.15	126.5	0.4362	1.0039	126.5	0.4362	1.0039	126.5	0.4362	1.0039	126.5	0.4362	1.0039	126.6	0.4362	1.0039	126.6	0.4362	1.0039
40	313.15	168.2	0.5718	1.0074	168.3	0.5718	1.0074	168.3	0.5718	1.0074	168.3	0.5717	1.0074	168.3	0.5717	1.0074	168.3	0.5717	1.0074
50	323.15	210.0	0.7031	1.0117	210.0	0.7031	1.0117	210.1	0.7031	1.0117	210.1	0.7031	1.0117	210.1	0.7031	1.0117	210.1	0.7031	1.0117
60	333.15	251.8	0.8305	1.0167	251.8	0.8305	1.0167	251.9	0.8305	1.0167	251.9	0.8305	1.0167	251.9	0.8305	1.0167	251.9	0.8305	1.0167
70	343.15	293.7	0.9543	1.0224	293.7	0.9543	1.0224	293.7	0.9543	1.0224	293.7	0.9543	1.0224	293.7	0.9542	1.0224	293.8	0.9542	1.0224
80	353.15	335.6	1.0747	1.0288	335.6	1.0747	1.0288	335.6	1.0747	1.0288	335.6	1.0746	1.0288	335.7	1.0746	1.0287	335.7	1.0746	1.0287
90	363.15	377.6	1.1919	1.0357	377.6	1.1919	1.0357	377.6	1.1919	1.0357	377.6	1.1919	1.0357	377.6	1.1919	1.0357	377.7	1.1919	1.0357
100	373.15	419.7	1.3062	1.0433	419.7	1.3062	1.0433	419.7	1.3062	1.0433	419.7	1.3062	1.0433	419.7	1.3062	1.0432	419.7	1.3062	1.0432
110	383.15	461.9	1.4178	1.0514	461.9	1.4178	1.0514	461.9	1.4178	1.0514	461.9	1.4178	1.0514	461.9	1.4178	1.0514	461.9	1.4178	1.0514
120	393.15	504.2	1.5270	1.0602	504.2	1.5269	1.0602	504.2	1.5269	1.0602	504.3	1.5269	1.0602	504.3	1.5269	1.0602	504.3	1.5269	1.0602
130	403.15	546.7	1.6338	1.0696	546.7	1.6337	1.0696	546.8	1.6337	1.0696	546.8	1.6337	1.0696	546.8	1.6337	1.0696	546.8	1.6337	1.0696
140	413.15	589.5	1.7384	1.0797	589.5	1.7384	1.0797	589.5	1.7384	1.0797	589.5	1.7384	1.0797	589.5	1.7383	1.0797	589.5	1.7383	1.0796
150	423.15	632.4	1.8412	1.0905	632.4	1.8411	1.0905	632.4	1.8411	1.0905	632.4	1.8411	1.0904	632.5	1.8411	1.0904	632.5	1.8411	1.0904
160	433.15	675.6	1.9421	1.1020	675.7	1.9421	1.1020	675.7	1.9421	1.1020	675.7	1.9421	1.1020	675.7	1.9420	1.1020	675.7	1.9420	1.1019
170	443.15	719.2	2.0415	1.1144	719.2	2.0415	1.1144	719.2	2.0414	1.1143	719.2	2.0414	1.1143	719.2	2.0414	1.1143	719.2	2.0414	1.1143
180	453.15	2783.9	6.6452	217.81	2782.4	6.6325	212.72	2780.9	6.6199	207.84	2779.5	6.6076	203.16	2778.0	6.5955	198.67	2776.5	6.5835	194.36
190	463.15	2808.6	6.6992	224.14	2807.3	6.6868	218.95	2806.0	6.6746	213.97	2804.7	6.6626	209.20	2803.3	6.6508	204.62	2802.0	6.6392	200.22
200	473.15	2832.7	6.7508	230.32	2831.6	6.7387	225.02	2830.4	6.7267	219.94	2829.2	6.7150	215.07	2828.0	6.7035	210.40	2826.8	6.6922	205.92
210	483.15	2856.3	6.8001	236.37	2855.3	6.7882	230.96	2854.2	6.7766	225.78	2853.1	6.7651	220.82	2852.0	6.7538	216.06	2851.0	6.7427	211.48
220	493.15	2879.5	6.8475	242.31	2878.5	6.8358	236.80	2877.5	6.8243	231.51	2876.6	6.8131	226.45	2875.6	6.8020	221.59	2874.6	6.7911	216.93
230	503.15	2902.2	6.8931	248.16	2901.3	6.8816	242.54	2900.4	6.8704	237.15	2899.6	6.8593	231.99	2898.7	6.8484	227.04	2897.8	6.8377	222.28
240	513.15	2924.6	6.9373	253.93	2923.8	6.9259	248.19	2923.0	6.9148	242.71	2922.2	6.9038	237.44	2921.4	6.8931	232.40	2920.6	6.8825	227.55
250	523.15	2946.8	6.9800	259.63	2946.0	6.9688	253.78	2945.3	6.9578	248.19	2944.5	6.9469	242.83	2943.8	6.9363	237.69	2943.0	6.9259	232.75
260	533.15	2968.7	7.0215	265.27	2968.0	7.0104	259.32	2967.3	6.9995	253.62	2966.6	6.9888	248.15	2965.9	6.9783	242.92	2965.2	6.9680	237.89
270	543.15	2990.4	7.0618	270.86	2989.8	7.0508	264.79	2989.1	7.0400	258.99	2988.5	7.0294	253.43	2987.9	7.0190	248.09	2987.2	7.0088	242.97
280	553.15	3012.0	7.1012	276.40	3011.4	7.0902	270.23	3010.8	7.0795	264.32	3010.2	7.0690	258.66	3009.6	7.0587	253.22	3009.0	7.0485	248.01
290	563.15	3033.4	7.1396	281.91	3032.8	7.1287	275.63	3032.3	7.1180	269.61	3031.7	7.1076	263.85	3031.2	7.0974	258.32	3030.6	7.0873	253.01
300	573.15	3054.7	7.1771	287.39	3054.2	7.1663	280.99	3053.7	7.1557	274.87	3053.2	7.1453	269.00	3052.7	7.1351	263.38	3052.1	7.1251	257.98
310	583.15	3076.0	7.2139	292.83	3075.5	7.2031	286.33	3075.0	7.1926	280.10	3074.5	7.1822	274.13	3074.0	7.1721	268.41	3073.5	7.1622	262.91
320	593.15	3097.1	7.2499	298.25	3096.7	7.2392	291.64	3096.2	7.2287	285.31	3095.8	7.2184	279.24	3095.3	7.2083	273.41	3094.9	7.1984	267.82
330	603.15	3118.3	7.2852	303.65	3117.9	7.2746	296.93	3117.4	7.2641	290.49	3117.0	7.2539	284.32	3116.6	7.2438	278.40	3116.1	7.2340	272.71
340	613.15	3139.4	7.3199	309.03	3139.0	7.3093	302.20	3138.6	7.2989	295.65	3138.2	7.2887	289.38	3137.8	7.2787	283.36	3137.4	7.2689	277.58

350	623.15	3160.5	7.3540	314.40	3160.1	7.3434	307.45	3159.7	7.3331	300.79	3159.3	7.3229	294.42	3158.9	7.3129	288.30	3158.5	7.3031	282.43
360	633.15	3181.6	7.3876	319.74	3181.2	7.3770	312.68	3180.8	7.3667	305.92	3180.4	7.3565	299.45	3180.1	7.3466	293.23	3179.7	7.3368	287.27
370	643.15	3202.6	7.4206	325.08	3202.3	7.4101	317.91	3201.9	7.3998	311.04	3201.6	7.3896	304.46	3201.2	7.3797	298.15	3200.9	7.3700	292.09
380	653.15	3223.7	7.4532	330.40	3223.4	7.4426	323.12	3223.0	7.4323	316.14	3222.7	7.4223	309.46	3222.4	7.4124	303.05	3222.0	7.4027	296.90
390	663.15	3244.8	7.4852	335.71	3244.5	7.4747	328.31	3244.2	7.4645	321.24	3243.9	7.4544	314.45	3243.5	7.4445	307.95	3243.2	7.4348	301.70
400	673.15	3266.0	7.5169	341.01	3265.6	7.5064	333.50	3265.3	7.4961	326.32	3265.0	7.4861	319.43	3264.7	7.4762	312.83	3264.4	7.4665	306.49
410	683.15	3287.1	7.5480	346.30	3286.8	7.5376	338.68	3286.5	7.5273	331.39	3286.2	7.5173	324.40	3285.9	7.5075	317.70	3285.6	7.4978	311.27
420	693.15	3308.3	7.5788	351.58	3308.0	7.5684	343.85	3307.7	7.5582	336.46	3307.4	7.5481	329.37	3307.1	7.5383	322.56	3306.9	7.5287	316.04
430	703.15	3329.5	7.6092	356.86	3329.2	7.5988	349.02	3329.0	7.5886	341.51	3328.7	7.5786	334.32	3328.4	7.5688	327.42	3328.1	7.5592	320.80
440	713.15	3350.8	7.6393	362.12	3350.5	7.6289	354.17	3350.3	7.6187	346.56	3350.0	7.6087	339.27	3349.7	7.5989	332.27	3349.5	7.5893	325.55
450	723.15	3372.1	7.6689	367.39	3371.8	7.6585	359.32	3371.6	7.6484	351.61	3371.3	7.6384	344.21	3371.1	7.6286	337.11	3370.8	7.6190	330.30
460	733.15	3393.5	7.6983	372.64	3393.2	7.6879	364.47	3393.0	7.6777	356.64	3392.7	7.6677	349.14	3392.5	7.6580	341.95	3392.2	7.6484	335.05
470	743.15	3414.9	7.7273	377.89	3414.6	7.7169	369.61	3414.4	7.7067	361.68	3414.1	7.6968	354.07	3413.9	7.6870	346.78	3413.6	7.6775	339.78
480	753.15	3436.3	7.7560	383.14	3436.1	7.7456	374.74	3435.8	7.7354	366.70	3435.6	7.7255	359.00	3435.4	7.7157	351.61	3435.1	7.7062	344.52
490	763.15	3457.8	7.7843	388.38	3457.6	7.7740	379.87	3457.4	7.7638	371.72	3457.1	7.7539	363.92	3456.9	7.7441	356.43	3456.7	7.7346	349.24
500	773.15	3479.4	7.8124	393.61	3479.2	7.8020	384.99	3478.9	7.7919	376.74	3478.7	7.7820	368.83	3478.5	7.7723	361.25	3478.3	7.7627	353.96
510	783.15	3501.0	7.8402	398.84	3500.8	7.8298	390.11	3500.6	7.8197	381.75	3500.4	7.8098	373.74	3500.1	7.8001	366.06	3499.9	7.7905	358.68
520	793.15	3522.7	7.8677	404.07	3522.5	7.8573	395.23	3522.3	7.8472	386.76	3522.1	7.8373	378.65	3521.9	7.8276	370.87	3521.6	7.8181	363.40
530	803.15	3544.4	7.8949	409.29	3544.2	7.8846	400.34	3544.0	7.8745	391.77	3543.8	7.8646	383.55	3543.6	7.8549	375.67	3543.4	7.8454	368.11
540	813.15	3566.2	7.9219	414.51	3566.0	7.9116	405.45	3565.8	7.9014	396.77	3565.6	7.8916	388.45	3565.4	7.8819	380.47	3565.2	7.8724	372.81
550	823.15	3588.1	7.9486	419.73	3587.9	7.9383	410.55	3587.7	7.9282	401.76	3587.5	7.9183	393.34	3587.3	7.9086	385.27	3587.1	7.8991	377.52
560	833.15	3610.0	7.9750	424.94	3609.8	7.9647	415.65	3609.6	7.9546	406.76	3609.4	7.9448	398.24	3609.2	7.9351	390.06	3609.0	7.9256	382.22
570	843.15	3631.9	8.0013	430.15	3631.8	7.9910	420.75	3631.6	7.9809	411.75	3631.4	7.9710	403.13	3631.2	7.9613	394.85	3631.0	7.9518	386.91
580	853.15	3654.0	8.0272	435.35	3653.8	8.0169	425.84	3653.6	8.0069	416.74	3653.5	7.9970	408.01	3653.3	7.9873	399.64	3653.1	7.9779	391.61
590	863.15	3676.1	8.0530	440.56	3675.9	8.0427	430.93	3675.7	8.0326	421.72	3675.6	8.0228	412.89	3675.4	8.0131	404.43	3675.2	8.0036	396.30
600	873.15	3698.2	8.0785	445.76	3698.1	8.0682	436.02	3697.9	8.0582	426.70	3697.7	8.0483	417.77	3697.6	8.0386	409.21	3697.4	8.0292	400.98
610	883.15	3720.5	8.1038	450.95	3720.3	8.0935	441.11	3720.1	8.0835	431.68	3720.0	8.0736	422.65	3719.8	8.0640	413.99	3719.7	8.0545	405.67
620	893.15	3742.7	8.1289	456.15	3742.6	8.1186	446.19	3742.4	8.1086	436.66	3742.3	8.0987	427.53	3742.1	8.0891	418.76	3742.0	8.0796	410.35
630	903.15	3765.1	8.1538	461.34	3764.9	8.1435	451.27	3764.8	8.1335	441.64	3764.6	8.1236	432.40	3764.5	8.1140	423.54	3764.3	8.1045	415.03
640	913.15	3787.5	8.1785	466.53	3787.4	8.1682	456.35	3787.2	8.1582	446.61	3787.1	8.1483	437.27	3786.9	8.1387	428.31	3786.8	8.1292	419.71
650	923.15	3810.0	8.2030	471.72	3809.8	8.1927	461.43	3809.7	8.1826	451.58	3809.5	8.1728	442.14	3809.4	8.1632	433.08	3809.3	8.1537	424.38
660	933.15	3832.5	8.2272	476.91	3832.4	8.2170	466.51	3832.2	8.2069	456.55	3832.1	8.1971	447.00	3832.0	8.1875	437.85	3831.8	8.1780	429.06
670	943.15	3855.1	8.2513	482.09	3855.0	8.2411	471.58	3854.8	8.2310	461.51	3854.7	8.2212	451.86	3854.6	8.2116	442.61	3854.4	8.2021	433.73
680	953.15	3877.8	8.2752	487.27	3877.6	8.2650	476.65	3877.5	8.2549	466.47	3877.4	8.2451	456.73	3877.2	8.2355	447.37	3877.1	8.2261	438.40
690	963.15	3900.5	8.2989	492.45	3900.4	8.2887	481.72	3900.2	8.2787	471.44	3900.1	8.2688	461.59	3900.0	8.2592	452.14	3899.9	8.2498	443.06
700	973.15	3923.3	8.3225	497.63	3923.2	8.3122	486.78	3923.0	8.3022	476.40	3922.9	8.2924	466.44	3922.8	8.2828	456.90	3922.7	8.2734	447.73
710	983.15	3946.1	8.3458	502.81	3946.0	8.3356	491.85	3945.9	8.3256	481.35	3945.8	8.3158	471.30	3945.6	8.3062	461.65	3945.5	8.2967	452.39
720	993.15	3969.0	8.3690	507.98	3968.9	8.3588	496.91	3968.8	8.3488	486.31	3968.7	8.3390	476.15	3968.6	8.3294	466.41	3968.5	8.3199	457.06
730	1003.15	3992.0	8.3920	513.16	3991.9	8.3818	501.97	3991.8	8.3718	491.27	3991.7	8.3620	481.01	3991.6	8.3524	471.16	3991.4	8.3430	461.72
740	1013.15	4015.1	8.4149	518.33	4014.9	8.4047	507.03	4014.8	8.3947	496.22	4014.7	8.3848	485.86	4014.6	8.3752	475.92	4014.5	8.3658	466.37
750	1023.15	4038.1	8.4376	523.50	4038.0	8.4273	512.09	4037.9	8.4173	501.17	4037.8	8.4075	490.71	4037.7	8.3979	480.67	4037.6	8.3885	471.03
760	1033.15	4061.3	8.4601	528.67	4061.2	8.4499	517.15	4061.1	8.4399	506.12	4061.0	8.4301	495.55	4060.9	8.4205	485.42	4060.8	8.4111	475.69
770	1043.15	4084.5	8.4825	533.83	4084.4	8.4722	522.20	4084.3	8.4622	511.07	4084.2	8.4524	500.40	4084.1	8.4429	490.17	4084.0	8.4335	480.34
780	1053.15	4107.8	8.5047	539.00	4107.7	8.4945	527.26	4107.6	8.4845	516.02	4107.5	8.4747	505.25	4107.4	8.4651	494.91	4107.3	8.4557	484.99
790	1063.15	4131.1	8.5267	544.16	4131.0	8.5165	532.31	4130.9	8.5065	520.96	4130.8	8.4967	510.09	4130.8	8.4871	499.66	4130.7	8.4777	489.65
800	1073.15	4154.5	8.5486	549.33	4154.4	8.5384	537.36	4154.3	8.5284	525.91	4154.3	8.5186	514.93	4154.2	8.5090	504.40	4154.1	8.4997	494.30

9.0 to 10.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		10.0			10.5			11.0			11.5			12.0			12.5		
t_s	°C	179.9			182.0			184.1			186.0			188.0			189.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		762.6	2.1382	1.1274	772.0	2.1588	1.1303	781.1	2.1786	1.1331	789.9	2.1977	1.1359	798.4	2.2160	1.1386	806.7	2.2338	1.1412
Sat. Vapour		2776.2	6.5828	194.30	2778.0	6.5659	185.46	2779.7	6.5498	177.39	2781.3	6.5343	170.00	2782.7	6.5194	163.21	2784.1	6.5051	156.94
t °C	T K																		
0	273.15	1.0	−0.0001	0.99972	1.0	−0.0001	0.99970	1.1	−0.0001	0.99967	1.1	−0.0001	0.99965	1.2	−0.0001	0.99962	1.2	−0.0001	0.99960
10	283.15	43.0	0.1509	0.99978	43.0	0.1509	0.99976	43.1	0.1509	0.99973	43.1	0.1509	0.99971	43.2	0.1509	0.99969	43.2	0.1509	0.99966
20	293.15	84.8	0.2961	1.0013	84.8	0.2961	1.0012	84.9	0.2961	1.0012	84.9	0.2961	1.0012	85.0	0.2960	1.0012	85.0	0.2960	1.0012
30	303.15	126.6	0.4362	1.0039	126.6	0.4362	1.0038	126.7	0.4362	1.0038	126.7	0.4362	1.0038	126.8	0.4361	1.0038	126.8	0.4361	1.0038
40	313.15	168.3	0.5717	1.0074	168.4	0.5717	1.0073	168.4	0.5717	1.0073	168.5	0.5717	1.0073	168.5	0.5717	1.0073	168.6	0.5716	1.0073
50	323.15	210.1	0.7031	1.0117	210.1	0.7030	1.0116	210.2	0.7030	1.0116	210.2	0.7030	1.0116	210.3	0.7030	1.0116	210.3	0.7029	1.0116
60	333.15	251.9	0.8305	1.0167	252.0	0.8304	1.0167	252.0	0.8304	1.0167	252.0	0.8304	1.0166	252.1	0.8304	1.0166	252.1	0.8303	1.0166
70	343.15	293.8	0.9542	1.0224	293.8	0.9542	1.0224	293.8	0.9542	1.0223	293.9	0.9541	1.0223	293.9	0.9541	1.0223	294.0	0.9541	1.0223
80	353.15	335.7	1.0746	1.0287	335.7	1.0746	1.0287	335.8	1.0746	1.0287	335.8	1.0745	1.0287	335.8	1.0745	1.0286	335.9	1.0745	1.0286
90	363.15	377.7	1.1919	1.0357	377.7	1.1918	1.0357	377.7	1.1918	1.0356	377.8	1.1917	1.0356	377.8	1.1917	1.0356	377.9	1.1917	1.0356
100	373.15	419.7	1.3062	1.0432	419.8	1.3061	1.0432	419.8	1.3061	1.0432	419.9	1.3060	1.0432	419.9	1.3060	1.0431	419.9	1.3060	1.0431
110	383.15	461.9	1.4178	1.0514	462.0	1.4177	1.0514	462.0	1.4177	1.0513	462.0	1.4176	1.0513	462.1	1.4176	1.0513	462.1	1.4176	1.0513
120	393.15	504.3	1.5269	1.0602	504.3	1.5268	1.0601	504.4	1.5268	1.0601	504.4	1.5267	1.0601	504.4	1.5267	1.0601	504.5	1.5266	1.0600
130	403.15	546.8	1.6337	1.0696	546.8	1.6336	1.0695	546.9	1.6336	1.0695	546.9	1.6335	1.0695	546.9	1.6335	1.0695	547.0	1.6334	1.0694
140	413.15	589.5	1.7383	1.0796	589.6	1.7383	1.0796	589.6	1.7382	1.0796	589.6	1.7382	1.0795	589.6	1.7381	1.0795	589.7	1.7381	1.0795
150	423.15	632.5	1.8411	1.0904	632.5	1.8410	1.0904	632.5	1.8409	1.0903	632.6	1.8409	1.0903	632.6	1.8408	1.0903	632.6	1.8408	1.0902
160	433.15	675.7	1.9420	1.1019	675.7	1.9420	1.1019	675.8	1.9419	1.1019	675.8	1.9418	1.1018	675.8	1.9418	1.1018	675.8	1.9417	1.1018
170	443.15	719.2	2.0414	1.1143	719.3	2.0413	1.1142	719.3	2.0412	1.1142	719.3	2.0412	1.1142	719.3	2.0411	1.1141	719.4	2.0411	1.1141
180	453.15	2776.5	6.5835	194.36	763.1	2.1392	1.1275	763.2	2.1392	1.1274	763.2	2.1391	1.1274	763.2	2.1390	1.1274	763.2	2.1390	1.1273
190	463.15	2802.0	6.6392	200.22	2798.6	6.6108	189.95	2795.2	6.5834	180.61	2791.7	6.5569	172.07	2788.2	6.5312	164.24	2784.6	6.5061	157.02
200	473.15	2826.8	6.6922	205.92	2823.8	6.6645	195.45	2820.7	6.6379	185.92	2817.6	6.6122	177.22	2814.4	6.5872	169.23	2811.2	6.5630	161.88
210	483.15	2851.0	6.7427	211.48	2848.2	6.7157	200.80	2845.5	6.6897	191.09	2842.7	6.6646	182.22	2839.8	6.6403	174.08	2837.0	6.6168	166.59
220	493.15	2874.6	6.7911	216.93	2872.1	6.7647	206.04	2869.6	6.7392	196.14	2867.1	6.7147	187.10	2864.5	6.6909	178.80	2861.9	6.6680	171.17
230	503.15	2897.8	6.8377	222.28	2895.5	6.8117	211.19	2893.2	6.7867	201.09	2891.0	6.7626	191.87	2888.6	6.7394	183.42	2886.3	6.7169	175.64
240	513.15	2920.6	6.8825	227.55	2918.5	6.8569	216.24	2916.4	6.8323	205.96	2914.4	6.8086	196.56	2912.2	6.7858	187.95	2910.1	6.7637	180.02
250	523.15	2943.0	6.9259	232.75	2941.2	6.9006	221.22	2939.3	6.8764	210.75	2937.4	6.8530	201.18	2935.4	6.8305	192.40	2933.5	6.8088	184.33
260	533.15	2965.2	6.9680	237.89	2963.5	6.9430	226.15	2961.8	6.9190	215.47	2960.0	6.8959	205.73	2958.2	6.8738	196.79	2956.5	6.8523	188.56
270	543.15	2987.2	7.0088	242.97	2985.6	6.9840	231.02	2984.0	6.9603	220.15	2982.4	6.9375	210.22	2980.8	6.9156	201.12	2979.1	6.8944	192.74
280	553.15	3009.0	7.0485	248.01	3007.5	7.0240	235.84	3006.0	7.0005	224.77	3004.5	6.9779	214.67	3003.0	6.9562	205.40	3001.5	6.9353	196.88
290	563.15	3030.6	7.0873	253.01	3029.3	7.0629	240.62	3027.9	7.0396	229.36	3026.5	7.0172	219.07	3025.1	6.9957	209.64	3023.6	6.9750	200.97
300	573.15	3052.1	7.1251	257.98	3050.8	7.1009	245.37	3049.6	7.0778	233.91	3048.2	7.0556	223.44	3046.9	7.0342	213.85	3045.6	7.0136	205.02
310	583.15	3073.5	7.1622	262.91	3072.3	7.1381	250.09	3071.1	7.1151	238.43	3069.9	7.0930	227.79	3068.7	7.0718	218.03	3067.4	7.0514	209.05
320	593.15	3094.9	7.1984	267.82	3093.7	7.1745	254.78	3092.6	7.1516	242.93	3091.4	7.1296	232.10	3090.3	7.1085	222.17	3089.1	7.0882	213.04
330	603.15	3116.1	7.2340	272.71	3115.1	7.2101	259.45	3114.0	7.1873	247.40	3112.9	7.1655	236.39	3111.8	7.1445	226.30	3110.7	7.1243	217.01
340	613.15	3137.4	7.2689	277.58	3136.3	7.2451	264.10	3135.3	7.2224	251.85	3134.3	7.2007	240.66	3133.2	7.1798	230.40	3132.2	7.1597	220.97

350	623.15	3158.5	7.3031	282.43	3157.6	7.2795	268.74	3156.6	7.2569	256.28	3155.6	7.2352	244.91	3154.6	7.2144	234.49	3153.7	7.1944	224.90
360	633.15	3179.7	7.3368	287.27	3178.8	7.3133	273.35	3177.9	7.2907	260.70	3176.9	7.2691	249.15	3176.0	7.2484	238.56	3175.1	7.2285	228.81
370	643.15	3200.9	7.3700	292.09	3200.0	7.3465	277.95	3199.1	7.3240	265.10	3198.2	7.3025	253.37	3197.3	7.2818	242.61	3196.4	7.2620	232.72
380	653.15	3222.0	7.4027	296.90	3221.2	7.3792	282.55	3220.3	7.3568	269.49	3219.5	7.3353	257.58	3218.7	7.3147	246.65	3217.8	7.2949	236.60
390	663.15	3243.2	7.4348	301.70	3242.4	7.4114	287.12	3241.6	7.3891	273.87	3240.8	7.3677	261.77	3240.0	7.3471	250.68	3239.2	7.3274	240.48
400	673.15	3264.4	7.4665	306.49	3263.6	7.4432	291.69	3262.9	7.4209	278.24	3262.1	7.3995	265.96	3261.3	7.3790	254.70	3260.5	7.3593	244.35
410	683.15	3285.6	7.4978	311.27	3284.9	7.4745	296.25	3284.1	7.4523	282.60	3283.4	7.4309	270.14	3282.6	7.4105	258.72	3281.9	7.3909	248.20
420	693.15	3306.9	7.5287	316.04	3306.1	7.5054	300.80	3305.4	7.4832	286.95	3304.7	7.4619	274.31	3304.0	7.4415	262.72	3303.3	7.4219	252.05
430	703.15	3328.1	7.5592	320.80	3327.4	7.5359	305.35	3326.8	7.5138	291.30	3326.1	7.4925	278.47	3325.4	7.4722	266.71	3324.7	7.4526	255.89
440	713.15	3349.5	7.5893	325.55	3348.8	7.5661	309.88	3348.1	7.5439	295.63	3347.4	7.5227	282.62	3346.8	7.5024	270.70	3346.1	7.4829	259.73
450	723.15	3370.8	7.6190	330.30	3370.2	7.5958	314.41	3369.5	7.5737	299.96	3368.9	7.5526	286.77	3368.2	7.5323	274.68	3367.6	7.5128	263.55
460	733.15	3392.2	7.6484	335.05	3391.6	7.6253	318.93	3391.0	7.6032	304.29	3390.3	7.5820	290.91	3389.7	7.5618	278.65	3389.1	7.5423	267.37
470	743.15	3413.6	7.6775	339.78	3413.0	7.6543	323.45	3412.4	7.6323	308.60	3411.8	7.6112	295.05	3411.2	7.5909	282.62	3410.6	7.5715	271.19
480	753.15	3435.1	7.7062	344.52	3434.6	7.6831	327.96	3434.0	7.6611	312.92	3433.4	7.6400	299.18	3432.8	7.6198	286.58	3432.2	7.6003	275.00
490	763.15	3456.7	7.7346	349.24	3456.1	7.7115	332.47	3455.6	7.6895	317.22	3455.0	7.6685	303.30	3454.4	7.6483	290.54	3453.9	7.6289	278.80
500	773.15	3478.3	7.7627	353.96	3477.7	7.7397	336.97	3477.2	7.7177	321.53	3476.6	7.6966	307.42	3476.1	7.6765	294.50	3475.5	7.6571	282.60
510	783.15	3499.9	7.7905	358.68	3499.4	7.7675	341.47	3498.9	7.7455	325.83	3498.3	7.7245	311.54	3497.8	7.7044	298.44	3497.3	7.6850	286.40
520	793.15	3521.6	7.8181	363.40	3521.1	7.7951	345.97	3520.6	7.7731	330.12	3520.1	7.7521	315.65	3519.6	7.7320	302.39	3519.1	7.7127	290.19
530	803.15	3543.4	7.8454	368.11	3542.9	7.8224	350.46	3542.4	7.8004	334.41	3541.9	7.7795	319.76	3541.4	7.7593	306.33	3540.9	7.7400	293.97
540	813.15	3565.2	7.8724	372.81	3564.7	7.8494	354.94	3564.3	7.8275	338.70	3563.8	7.8065	323.86	3563.3	7.7864	310.27	3562.8	7.7671	297.76
550	823.15	3587.1	7.8991	377.52	3586.6	7.8762	359.43	3586.2	7.8543	342.98	3585.7	7.8333	327.97	3585.2	7.8132	314.20	3584.7	7.7940	301.54
560	833.15	3609.0	7.9256	382.22	3608.6	7.9027	363.91	3608.1	7.8808	347.26	3607.7	7.8598	332.06	3607.2	7.8398	318.13	3606.8	7.8205	305.31
570	843.15	3631.0	7.9518	386.91	3630.6	7.9289	368.38	3630.2	7.9071	351.54	3629.7	7.8861	336.16	3629.3	7.8661	322.06	3628.8	7.8469	309.09
580	853.15	3653.1	7.9779	391.61	3652.7	7.9550	372.86	3652.2	7.9331	355.81	3651.8	7.9122	340.25	3651.4	7.8922	325.98	3650.9	7.8730	312.86
590	863.15	3675.2	8.0036	396.30	3674.8	7.9807	377.33	3674.4	7.9589	360.08	3674.0	7.9380	344.34	3673.5	7.9180	329.90	3673.1	7.8988	316.63
600	873.15	3697.4	8.0292	400.98	3697.0	8.0063	381.79	3696.6	7.9845	364.35	3696.2	7.9636	348.42	3695.8	7.9436	333.82	3695.4	7.9244	320.39
610	883.15	3719.7	8.0545	405.67	3719.3	8.0317	386.26	3718.9	8.0098	368.62	3718.5	7.9890	352.51	3718.1	7.9690	337.74	3717.7	7.9498	324.15
620	893.15	3742.0	8.0796	410.35	3741.6	8.0568	390.72	3741.2	8.0350	372.88	3740.8	8.0141	356.59	3740.4	7.9942	341.65	3740.0	7.9750	327.91
630	903.15	3764.3	8.1045	415.03	3764.0	8.0817	395.18	3763.6	8.0599	377.14	3763.2	8.0391	360.66	3762.8	8.0191	345.56	3762.5	8.0000	331.67
640	913.15	3786.8	8.1292	419.71	3786.4	8.1064	399.64	3786.0	8.0846	381.40	3785.7	8.0638	364.74	3785.3	8.0439	349.47	3784.9	8.0247	335.42
650	923.15	3809.3	8.1537	424.38	3808.9	8.1309	404.10	3808.5	8.1092	385.65	3808.2	8.0883	368.81	3807.8	8.0684	353.38	3807.5	8.0493	339.18
660	933.15	3831.8	8.1780	429.06	3831.5	8.1552	408.55	3831.1	8.1335	389.91	3830.8	8.1127	372.88	3830.4	8.0928	357.28	3830.1	8.0736	342.93
670	943.15	3854.4	8.2021	433.73	3854.1	8.1794	413.00	3853.8	8.1576	394.16	3853.4	8.1368	376.95	3853.1	8.1169	361.18	3852.7	8.0978	346.67
680	953.15	3877.1	8.2261	438.40	3876.8	8.2033	417.45	3876.5	8.1816	398.41	3876.1	8.1608	381.02	3875.8	8.1409	365.08	3875.5	8.1218	350.42
690	963.15	3899.9	8.2498	443.06	3899.5	8.2270	421.90	3899.2	8.2053	402.66	3898.9	8.1845	385.09	3898.6	8.1646	368.98	3898.3	8.1455	354.16
700	973.15	3922.7	8.2734	447.73	3922.4	8.2506	426.34	3922.0	8.2289	406.90	3921.7	8.2081	389.15	3921.4	8.1882	372.88	3921.1	8.1691	357.91
710	983.15	3945.5	8.2967	452.39	3945.2	8.2740	430.79	3944.9	8.2523	411.15	3944.6	8.2315	393.21	3944.3	8.2116	376.77	3944.0	8.1926	361.65
720	993.15	3968.5	8.3199	457.06	3968.2	8.2972	435.23	3967.9	8.2755	415.39	3967.6	8.2547	397.27	3967.3	8.2349	380.66	3967.0	8.2158	365.39
730	1003.15	3991.4	8.3430	461.72	3991.2	8.3202	439.67	3990.9	8.2985	419.63	3990.6	8.2778	401.33	3990.3	8.2579	384.56	3990.0	8.2389	369.12
740	1013.15	4014.5	8.3658	466.37	4014.2	8.3431	444.11	4013.9	8.3214	423.87	4013.7	8.3007	405.39	4013.4	8.2808	388.45	4013.1	8.2618	372.86
750	1023.15	4037.6	8.3885	471.03	4037.3	8.3658	448.55	4037.1	8.3441	428.11	4036.8	8.3234	409.44	4036.5	8.3036	392.33	4036.3	8.2845	376.59
760	1033.15	4060.8	8.4111	475.69	4060.5	8.3884	452.98	4060.3	8.3667	432.34	4060.0	8.3460	413.50	4059.7	8.3261	396.22	4059.5	8.3071	380.33
770	1043.15	4084.0	8.4335	480.34	4083.8	8.4107	457.42	4083.5	8.3891	436.58	4083.2	8.3684	417.55	4083.0	8.3485	400.10	4082.7	8.3295	384.06
780	1053.15	4107.3	8.4557	484.99	4107.1	8.4330	461.85	4106.8	8.4113	440.81	4106.6	8.3906	421.60	4106.3	8.3708	403.99	4106.1	8.3518	387.79
790	1063.15	4130.7	8.4777	489.65	4130.4	8.4550	466.28	4130.2	8.4334	445.04	4129.9	8.4127	425.65	4129.7	8.3929	407.87	4129.4	8.3739	391.52
800	1073.15	4154.1	8.4997	494.30	4153.8	8.4770	470.71	4153.6	8.4553	449.27	4153.4	8.4346	429.70	4153.1	8.4148	411.75	4152.9	8.3958	395.24

10.0 to 12.5 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar	12.5			13.0			13.5			14.0			14.5			15.0		
t_s °C	189.8			191.6			193.3			195.0			196.7			198.3		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	806.7	2.2338	1.1412	814.7	2.2509	1.1438	822.5	2.2675	1.1464	830.1	2.2836	1.1489	837.4	2.2992	1.1514	844.6	2.3144	1.1538
Sat. Vapour	2784.1	6.5051	156.94	2785.4	6.4913	151.14	2786.6	6.4780	145.75	2787.8	6.4651	140.73	2788.9	6.4527	136.05	2789.9	6.4406	131.67
t °C / T K																		
0 / 273.15	1.2	−0.0001	0.99960	1.3	−0.0000	0.99957	1.3	−0.0000	0.99955	1.4	−0.0000	0.99952	1.4	−0.0000	0.99950	1.5	−0.0000	0.99947
10 / 283.15	43.2	0.1509	0.99966	43.3	0.1509	0.99964	43.3	0.1509	0.99962	43.4	0.1509	0.99959	43.4	0.1509	0.99957	43.5	0.1509	0.99955
20 / 293.15	85.0	0.2960	1.0012	85.1	0.2960	1.0011	85.1	0.2960	1.0011	85.2	0.2960	1.0011	85.2	0.2960	1.0011	85.3	0.2960	1.0010
30 / 303.15	126.8	0.4361	1.0038	126.8	0.4361	1.0037	126.9	0.4361	1.0037	126.9	0.4361	1.0037	127.0	0.4361	1.0037	127.0	0.4360	1.0036
40 / 313.15	168.6	0.5716	1.0073	168.6	0.5716	1.0072	168.6	0.5716	1.0072	168.7	0.5716	1.0072	168.7	0.5716	1.0072	168.8	0.5715	1.0071
50 / 323.15	210.3	0.7029	1.0116	210.4	0.7029	1.0115	210.4	0.7029	1.0115	210.5	0.7029	1.0115	210.5	0.7028	1.0115	210.5	0.7028	1.0114
60 / 333.15	252.1	0.8303	1.0166	252.2	0.8303	1.0166	252.2	0.8303	1.0165	252.2	0.8302	1.0165	252.3	0.8302	1.0165	252.3	0.8302	1.0165
70 / 343.15	294.0	0.9541	1.0223	294.0	0.9541	1.0223	294.0	0.9540	1.0222	294.1	0.9540	1.0222	294.1	0.9540	1.0222	294.2	0.9539	1.0222
80 / 353.15	335.9	1.0745	1.0286	335.9	1.0744	1.0286	336.0	1.0744	1.0286	336.0	1.0744	1.0285	336.0	1.0743	1.0285	336.1	1.0743	1.0285
90 / 363.15	377.9	1.1917	1.0356	377.9	1.1916	1.0355	377.9	1.1916	1.0355	378.0	1.1916	1.0355	378.0	1.1915	1.0355	378.0	1.1915	1.0354
100 / 373.15	419.9	1.3060	1.0431	420.0	1.3059	1.0431	420.0	1.3059	1.0431	420.0	1.3058	1.0430	420.1	1.3058	1.0430	420.1	1.3058	1.0430
110 / 383.15	462.1	1.4176	1.0513	462.2	1.4175	1.0512	462.2	1.4175	1.0512	462.2	1.4174	1.0512	462.3	1.4174	1.0511	462.3	1.4173	1.0511
120 / 393.15	504.5	1.5266	1.0600	504.5	1.5266	1.0600	504.5	1.5265	1.0600	504.6	1.5265	1.0599	504.6	1.5265	1.0599	504.6	1.5264	1.0599
130 / 403.15	547.0	1.6334	1.0694	547.0	1.6334	1.0694	547.0	1.6333	1.0694	547.1	1.6333	1.0693	547.1	1.6332	1.0693	547.1	1.6332	1.0693
140 / 413.15	589.7	1.7381	1.0795	589.7	1.7380	1.0794	589.7	1.7380	1.0794	589.8	1.7379	1.0794	589.8	1.7379	1.0794	589.8	1.7378	1.0793
150 / 423.15	632.6	1.8408	1.0902	632.7	1.8407	1.0902	632.7	1.8407	1.0902	632.7	1.8406	1.0901	632.8	1.8406	1.0901	632.8	1.8405	1.0901
160 / 433.15	675.8	1.9417	1.1018	675.9	1.9417	1.1017	675.9	1.9416	1.1017	675.9	1.9415	1.1016	676.0	1.9415	1.1016	676.0	1.9414	1.1016
170 / 443.15	719.4	2.0411	1.1141	719.4	2.0410	1.1140	719.4	2.0409	1.1140	719.5	2.0409	1.1140	719.5	2.0408	1.1139	719.5	2.0407	1.1139
180 / 453.15	763.2	2.1390	1.1273	763.3	2.1389	1.1273	763.3	2.1388	1.1272	763.3	2.1387	1.1272	763.3	2.1387	1.1271	763.4	2.1386	1.1271
190 / 463.15	2784.6	6.5061	157.02	807.5	2.2355	1.1415	807.6	2.2354	1.1414	807.6	2.2354	1.1414	807.6	2.2353	1.1413	807.6	2.2352	1.1413
200 / 473.15	2811.2	6.5630	161.88	2808.0	6.5394	155.09	2804.7	6.5165	148.79	2801.4	6.4941	142.94	2798.1	6.4722	137.48	2794.7	6.4508	132.38
210 / 483.15	2837.0	6.6168	166.59	2834.1	6.5939	159.66	2831.1	6.5717	153.25	2828.2	6.5500	147.29	2825.2	6.5288	141.73	2822.2	6.5082	136.54
220 / 493.15	2861.9	6.6680	171.17	2859.3	6.6457	164.11	2856.7	6.6240	157.58	2854.0	6.6030	151.51	2851.3	6.5824	145.85	2848.6	6.5624	140.56
230 / 503.15	2886.3	6.7169	175.64	2883.9	6.6951	168.45	2881.6	6.6739	161.79	2879.1	6.6534	155.61	2876.7	6.6334	149.85	2874.3	6.6139	144.47
240 / 513.15	2910.1	6.7637	180.02	2908.0	6.7424	172.70	2905.8	6.7217	165.92	2903.6	6.7016	159.62	2901.4	6.6820	153.75	2899.2	6.6630	148.27
250 / 523.15	2933.5	6.8088	184.33	2931.5	6.7878	176.87	2929.5	6.7675	169.96	2927.6	6.7477	163.55	2925.5	6.7286	157.57	2923.5	6.7099	151.99
260 / 533.15	2956.5	6.8523	188.56	2954.7	6.8316	180.97	2952.9	6.8116	173.94	2951.0	6.7922	167.40	2949.2	6.7733	161.32	2947.3	6.7550	155.64
270 / 543.15	2979.1	6.8944	192.74	2977.5	6.8740	185.01	2975.8	6.8542	177.85	2974.1	6.8351	171.20	2972.4	6.8165	165.01	2970.7	6.7985	159.23
280 / 553.15	3001.5	6.9353	196.88	3000.0	6.9151	189.01	2998.4	6.8955	181.72	2996.9	6.8766	174.95	2995.3	6.8583	168.65	2993.7	6.8405	162.76
290 / 563.15	3023.6	6.9750	200.97	3022.2	6.9550	192.96	3020.8	6.9356	185.54	3019.4	6.9169	178.65	3017.9	6.8988	172.24	3016.5	6.8812	166.25
300 / 573.15	3045.6	7.0136	205.02	3044.3	6.9938	196.87	3043.0	6.9746	189.33	3041.6	6.9561	182.32	3040.3	6.9381	175.79	3038.9	6.9207	169.70
310 / 583.15	3067.4	7.0514	209.05	3066.2	7.0317	200.76	3064.9	7.0127	193.08	3063.7	6.9943	185.95	3062.4	6.9765	179.31	3061.2	6.9592	173.12
320 / 593.15	3089.1	7.0882	213.04	3088.0	7.0687	204.61	3086.8	7.0498	196.81	3085.6	7.0315	189.56	3084.4	7.0139	182.81	3083.3	6.9967	176.51
330 / 603.15	3110.7	7.1243	217.01	3109.6	7.1049	208.44	3108.5	7.0861	200.51	3107.4	7.0680	193.14	3106.3	7.0504	186.28	3105.2	7.0334	179.87
340 / 613.15	3132.2	7.1597	220.97	3131.2	7.1404	212.25	3130.1	7.1217	204.19	3129.1	7.1036	196.70	3128.0	7.0862	189.72	3127.0	7.0693	183.21

350	623.15	3153.7	7.1944	224.90	3152.7	7.1751	216.05	3151.7	7.1566	207.85	3150.7	7.1386	200.24	3149.7	7.1212	193.15	3148.7	7.1044	186.53
360	633.15	3175.1	7.2285	228.81	3174.1	7.2093	219.82	3173.2	7.1908	211.49	3172.3	7.1729	203.76	3171.3	7.1556	196.56	3170.4	7.1389	189.84
370	643.15	3196.4	7.2620	232.72	3195.6	7.2429	223.58	3194.7	7.2244	215.12	3193.8	7.2066	207.27	3192.9	7.1894	199.95	3192.0	7.1727	193.13
380	653.15	3217.8	7.2949	236.60	3217.0	7.2759	227.33	3216.1	7.2575	218.74	3215.3	7.2398	210.76	3214.4	7.2226	203.33	3213.5	7.2060	196.40
390	663.15	3239.2	7.3274	240.48	3238.3	7.3084	231.06	3237.5	7.2901	222.34	3236.7	7.2724	214.24	3235.9	7.2553	206.70	3235.1	7.2387	199.67
400	673.15	3260.5	7.3593	244.35	3259.7	7.3404	234.79	3259.0	7.3221	225.94	3258.2	7.3045	217.72	3257.4	7.2874	210.06	3256.6	7.2709	202.92
410	683.15	3281.9	7.3909	248.20	3281.1	7.3720	238.50	3280.4	7.3537	229.52	3279.6	7.3361	221.18	3278.9	7.3191	213.41	3278.1	7.3027	206.16
420	693.15	3303.3	7.4219	252.05	3302.5	7.4031	242.21	3301.8	7.3849	233.09	3301.1	7.3673	224.63	3300.4	7.3504	216.75	3299.7	7.3340	209.40
430	703.15	3324.7	7.4526	255.89	3324.0	7.4338	245.91	3323.3	7.4156	236.66	3322.6	7.3981	228.08	3321.9	7.3812	220.08	3321.2	7.3648	212.62
440	713.15	3346.1	7.4829	259.73	3345.4	7.4641	249.60	3344.8	7.4460	240.22	3344.1	7.4285	231.51	3343.4	7.4116	223.41	3342.8	7.3953	215.84
450	723.15	3367.6	7.5128	263.55	3366.9	7.4940	253.28	3366.3	7.4759	243.78	3365.6	7.4585	234.95	3365.0	7.4416	226.72	3364.3	7.4253	219.05
460	733.15	3389.1	7.5423	267.37	3388.5	7.5236	256.96	3387.8	7.5055	247.32	3387.2	7.4881	238.37	3386.6	7.4713	230.04	3386.0	7.4550	222.26
470	743.15	3410.6	7.5715	271.19	3410.0	7.5528	260.63	3409.4	7.5348	250.86	3408.8	7.5174	241.79	3408.2	7.5006	233.34	3407.6	7.4843	225.46
480	753.15	3432.2	7.6003	275.00	3431.6	7.5817	264.30	3431.0	7.5637	254.40	3430.5	7.5463	245.20	3429.9	7.5295	236.64	3429.3	7.5133	228.65
490	763.15	3453.9	7.6289	278.80	3453.3	7.6102	267.96	3452.7	7.5923	257.93	3452.2	7.5749	248.61	3451.6	7.5582	239.94	3451.0	7.5420	231.84
500	773.15	3475.5	7.6571	282.60	3475.0	7.6385	271.62	3474.4	7.6205	261.46	3473.9	7.6032	252.02	3473.3	7.5865	243.23	3472.8	7.5703	235.03
510	783.15	3497.3	7.6850	286.40	3496.7	7.6664	275.28	3496.2	7.6485	264.98	3495.7	7.6312	255.42	3495.1	7.6145	246.51	3494.6	7.5984	238.21
520	793.15	3519.1	7.7127	290.19	3518.5	7.6941	278.92	3518.0	7.6762	268.50	3517.5	7.6589	258.81	3517.0	7.6422	249.80	3516.5	7.6261	241.38
530	803.15	3540.9	7.7400	293.97	3540.4	7.7215	282.57	3539.9	7.7036	272.01	3539.4	7.6863	262.20	3538.9	7.6697	253.07	3538.4	7.6536	244.55
540	813.15	3562.8	7.7671	297.76	3562.3	7.7486	286.21	3561.8	7.7307	275.52	3561.3	7.7135	265.59	3560.8	7.6968	256.35	3560.4	7.6808	247.72
550	823.15	3584.7	7.7940	301.54	3584.3	7.7754	289.85	3583.8	7.7576	279.03	3583.3	7.7404	268.98	3582.9	7.7237	259.62	3582.4	7.7077	250.89
560	833.15	3606.8	7.8205	305.31	3606.3	7.8020	293.48	3605.8	7.7842	282.53	3605.4	7.7670	272.36	3604.9	7.7504	262.89	3604.5	7.7343	254.05
570	843.15	3628.8	7.8469	309.09	3628.4	7.8284	297.11	3627.9	7.8106	286.03	3627.5	7.7934	275.73	3627.0	7.7768	266.15	3626.6	7.7607	257.21
580	853.15	3650.9	7.8730	312.86	3650.5	7.8545	300.74	3650.1	7.8367	289.53	3649.6	7.8195	279.11	3649.2	7.8029	269.41	3648.8	7.7869	260.36
590	863.15	3673.1	7.8988	316.63	3672.7	7.8803	304.37	3672.3	7.8625	293.02	3671.9	7.8454	282.48	3671.4	7.8288	272.67	3671.0	7.8128	263.51
600	873.15	3695.4	7.9244	320.39	3695.0	7.9060	307.99	3694.5	7.8882	296.51	3694.1	7.8710	285.85	3693.7	7.8545	275.93	3693.3	7.8385	266.66
610	883.15	3717.7	7.9498	324.15	3717.3	7.9314	311.61	3716.9	7.9136	300.00	3716.5	7.8965	289.22	3716.1	7.8799	279.18	3715.7	7.8640	269.81
620	893.15	3740.0	7.9750	327.91	3739.6	7.9566	315.23	3739.3	7.9388	303.49	3738.9	7.9217	292.58	3738.5	7.9052	282.43	3738.1	7.8892	272.95
630	903.15	3762.5	8.0000	331.67	3762.1	7.9815	318.84	3761.7	7.9638	306.97	3761.3	7.9467	295.94	3760.9	7.9302	285.68	3760.6	7.9142	276.09
640	913.15	3784.9	8.0247	335.42	3784.6	8.0063	322.46	3784.2	7.9886	310.45	3783.8	7.9715	299.30	3783.5	7.9550	288.92	3783.1	7.9390	279.23
650	923.15	3807.5	8.0493	339.18	3807.1	8.0309	326.07	3806.8	8.0132	313.93	3806.4	7.9961	302.66	3806.1	7.9796	292.16	3805.7	7.9636	282.37
660	933.15	3830.1	8.0736	342.93	3829.7	8.0552	329.67	3829.4	8.0375	317.41	3829.0	8.0205	306.01	3828.7	8.0040	295.41	3828.4	7.9881	285.51
670	943.15	3852.7	8.0978	346.67	3852.4	8.0794	333.28	3852.1	8.0617	320.88	3851.7	8.0447	309.37	3851.4	8.0282	298.64	3851.1	8.0123	288.64
680	953.15	3875.5	8.1218	350.42	3875.1	8.1034	336.89	3874.8	8.0857	324.35	3874.5	8.0687	312.72	3874.2	8.0522	301.88	3873.8	8.0363	291.77
690	963.15	3898.3	8.1455	354.16	3897.9	8.1272	340.49	3897.6	8.1095	327.82	3897.3	8.0925	316.06	3897.0	8.0760	305.12	3896.7	8.0601	294.90
700	973.15	3921.1	8.1691	357.91	3920.8	8.1508	344.09	3920.5	8.1331	331.29	3920.2	8.1161	319.41	3919.9	8.0997	308.35	3919.6	8.0838	298.03
710	983.15	3944.0	8.1926	361.65	3943.7	8.1742	347.69	3943.4	8.1566	334.76	3943.1	8.1395	322.76	3942.8	8.1231	311.58	3942.5	8.1072	301.15
720	993.15	3967.0	8.2158	365.39	3966.7	8.1975	351.28	3966.4	8.1798	338.23	3966.1	8.1628	326.10	3965.8	8.1464	314.81	3965.5	8.1305	304.27
730	1003.15	3990.0	8.2389	369.12	3989.7	8.2206	354.88	3989.5	8.2029	341.69	3989.2	8.1859	329.44	3988.9	8.1695	318.04	3988.6	8.1536	307.40
740	1013.15	4013.1	8.2618	372.86	4012.8	8.2435	358.47	4012.6	8.2258	345.15	4012.3	8.2088	332.78	4012.0	8.1924	321.26	4011.7	8.1766	310.52
750	1023.15	4036.3	8.2845	376.59	4036.0	8.2662	362.06	4035.7	8.2486	348.61	4035.5	8.2316	336.12	4035.2	8.2152	324.49	4034.9	8.1993	313.64
760	1033.15	4059.5	8.3071	380.33	4059.2	8.2888	365.66	4058.9	8.2712	352.07	4058.7	8.2542	339.46	4058.4	8.2378	327.71	4058.2	8.2220	316.75
770	1043.15	4082.7	8.3295	384.06	4082.5	8.3112	369.24	4082.2	8.2936	355.53	4082.0	8.2766	342.79	4081.7	8.2602	330.94	4081.5	8.2444	319.87
780	1053.15	4106.1	8.3518	387.79	4105.8	8.3335	372.83	4105.6	8.3159	358.99	4105.3	8.2989	346.13	4105.1	8.2825	334.16	4104.8	8.2667	322.98
790	1063.15	4129.4	8.3739	391.52	4129.2	8.3556	376.42	4129.0	8.3380	362.44	4128.7	8.3210	349.46	4128.5	8.3046	337.38	4128.2	8.2888	326.10
800	1073.15	4152.9	8.3958	395.24	4152.7	8.3775	380.00	4152.4	8.3599	365.89	4152.2	8.3430	352.79	4152.0	8.3766	340.59	4151.7	8.3108	329.21

12.5 to 15.0 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar	15.0			15.5			16.0			16.5			17.0			17.5		
t_s °C	198.3			199.8			201.4			202.9			204.3			205.7		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	844.6	2.3144	1.1538	851.7	2.3292	1.1563	858.5	2.3436	1.1586	865.2	2.3576	1.1610	871.8	2.3712	1.1633	878.2	2.3845	1.1656
Sat. Vapour	2789.9	6.4406	131.67	2790.8	6.4289	127.56	2791.7	6.4176	123.70	2792.6	6.4065	120.06	2793.4	6.3958	116.64	2794.1	6.3853	113.40
t °C / T K																		
0 / 273.15	1.5	−0.0000	0.99947	1.5	−0.0000	0.99945	1.6	−0.0000	0.99942	1.6	−0.0000	0.99940	1.7	−0.0000	0.99937	1.7	−0.0000	0.99935
10 / 283.15	43.5	0.1509	0.99955	43.5	0.1509	0.99952	43.6	0.1509	0.99950	43.6	0.1508	0.99947	43.7	0.1508	0.99945	43.7	0.1508	0.99943
20 / 293.15	85.3	0.2960	1.0010	85.3	0.2960	1.0010	85.4	0.2960	1.0010	85.4	0.2960	1.0010	85.5	0.2959	1.0010	85.5	0.2959	1.0009
30 / 303.15	127.0	0.4360	1.0036	127.1	0.4360	1.0036	127.1	0.4360	1.0036	127.2	0.4360	1.0036	127.2	0.4360	1.0036	127.3	0.4360	1.0035
40 / 313.15	168.8	0.5715	1.0071	168.8	0.5715	1.0071	168.9	0.5715	1.0071	168.9	0.5715	1.0071	168.9	0.5715	1.0071	169.0	0.5714	1.0070
50 / 323.15	210.5	0.7028	1.0114	210.6	0.7028	1.0114	210.6	0.7028	1.0114	210.7	0.7027	1.0114	210.7	0.7027	1.0114	210.8	0.7027	1.0113
60 / 333.15	252.3	0.8302	1.0165	252.4	0.8302	1.0164	252.4	0.8301	1.0164	252.5	0.8301	1.0164	252.5	0.8301	1.0164	252.5	0.8301	1.0164
70 / 343.15	294.2	0.9539	1.0222	294.2	0.9539	1.0221	294.3	0.9539	1.0221	294.3	0.9538	1.0221	294.3	0.9538	1.0221	294.4	0.9538	1.0220
80 / 353.15	336.1	1.0743	1.0285	336.1	1.0743	1.0285	336.1	1.0742	1.0284	336.2	1.0742	1.0284	336.2	1.0742	1.0284	336.3	1.0741	1.0284
90 / 363.15	378.0	1.1915	1.0354	378.1	1.1915	1.0354	378.1	1.1914	1.0354	378.2	1.1914	1.0354	378.2	1.1913	1.0353	378.2	1.1913	1.0353
100 / 373.15	420.1	1.3058	1.0430	420.2	1.3057	1.0429	420.2	1.3057	1.0429	420.2	1.3057	1.0429	420.3	1.3056	1.0429	420.3	1.3056	1.0428
110 / 383.15	462.3	1.4173	1.0511	462.3	1.4173	1.0511	462.4	1.4173	1.0511	462.4	1.4172	1.0510	462.4	1.4172	1.0510	462.5	1.4171	1.0510
120 / 393.15	504.6	1.5264	1.0599	504.7	1.5264	1.0598	504.7	1.5263	1.0598	504.7	1.5263	1.0598	504.8	1.5262	1.0598	504.8	1.5262	1.0597
130 / 403.15	547.1	1.6332	1.0693	547.2	1.6331	1.0692	547.2	1.6331	1.0692	547.2	1.6330	1.0692	547.3	1.6330	1.0691	547.3	1.6329	1.0691
140 / 413.15	589.8	1.7378	1.0793	589.9	1.7378	1.0793	589.9	1.7377	1.0793	589.9	1.7376	1.0792	590.0	1.7376	1.0792	590.0	1.7375	1.0792
150 / 423.15	632.8	1.8405	1.0901	632.8	1.8404	1.0900	632.8	1.8404	1.0900	632.9	1.8403	1.0900	632.9	1.8403	1.0899	632.9	1.8402	1.0899
160 / 433.15	676.0	1.9414	1.1016	676.0	1.9414	1.1015	676.0	1.9413	1.1015	676.1	1.9412	1.1015	676.1	1.9412	1.1014	676.1	1.9411	1.1014
170 / 443.15	719.5	2.0407	1.1139	719.5	2.0407	1.1138	719.6	2.0406	1.1138	719.6	2.0405	1.1138	719.6	2.0405	1.1137	719.6	2.0404	1.1137
180 / 453.15	763.4	2.1386	1.1271	763.4	2.1385	1.1270	763.4	2.1385	1.1270	763.4	2.1384	1.1270	763.5	2.1383	1.1269	763.5	2.1383	1.1269
190 / 463.15	807.6	2.2352	1.1413	807.7	2.2351	1.1412	807.7	2.2351	1.1412	807.7	2.2350	1.1411	807.7	2.2349	1.1411	807.7	2.2349	1.1410
200 / 473.15	2794.7	6.4508	132.38	2791.3	6.4298	127.61	852.4	2.3306	1.1564	852.4	2.3305	1.1564	852.4	2.3304	1.1563	852.5	2.3304	1.1563
210 / 483.15	2822.2	6.5082	136.54	2819.1	6.4880	131.68	2816.0	6.4682	127.12	2812.9	6.4488	122.84	2809.7	6.4297	118.80	2806.5	6.4110	114.98
220 / 493.15	2848.6	6.5624	140.56	2845.9	6.5428	135.62	2843.1	6.5237	130.98	2840.3	6.5050	126.61	2837.5	6.4866	122.50	2834.6	6.4686	118.62
230 / 503.15	2874.3	6.6139	144.47	2871.8	6.5949	139.43	2869.3	6.5763	134.70	2866.8	6.5581	130.26	2864.2	6.5403	126.08	2861.6	6.5229	122.13
240 / 513.15	2899.2	6.6630	148.27	2897.0	6.6444	143.14	2894.7	6.6263	138.33	2892.4	6.6086	133.81	2890.1	6.5912	129.55	2887.8	6.5743	125.54
250 / 523.15	2923.5	6.7099	151.99	2921.5	6.6917	146.77	2919.4	6.6740	141.87	2917.4	6.6567	137.27	2915.3	6.6398	132.94	2913.2	6.6233	128.85
260 / 533.15	2947.3	6.7550	155.64	2945.5	6.7372	150.32	2943.6	6.7198	145.34	2941.7	6.7028	140.65	2939.8	6.6863	136.24	2937.9	6.6701	132.08
270 / 543.15	2970.7	6.7985	159.23	2969.0	6.7809	153.82	2967.3	6.7638	148.74	2965.6	6.7471	143.97	2963.8	6.7309	139.49	2962.1	6.7150	135.25
280 / 553.15	2993.7	6.8405	162.76	2992.2	6.8232	157.25	2990.6	6.8063	152.09	2989.0	6.7899	147.24	2987.4	6.7739	142.67	2985.8	6.7583	138.37
290 / 563.15	3016.5	6.8812	166.25	3015.0	6.8641	160.65	3013.5	6.8474	155.39	3012.1	6.8312	150.46	3010.6	6.8154	145.81	3009.1	6.8000	141.43
300 / 573.15	3038.9	6.9207	169.70	3037.6	6.9038	164.00	3036.2	6.8873	158.66	3034.8	6.8713	153.64	3033.5	6.8557	148.91	3032.1	6.8405	144.45
310 / 583.15	3061.2	6.9592	173.12	3059.9	6.9424	167.32	3058.6	6.9261	161.89	3057.4	6.9103	156.78	3056.1	6.8948	151.97	3054.8	6.8798	147.44
320 / 593.15	3083.3	6.9967	176.51	3082.1	6.9801	170.61	3080.9	6.9639	165.09	3079.7	6.9482	159.89	3078.5	6.9329	155.01	3077.3	6.9180	150.40
330 / 603.15	3105.2	7.0334	179.87	3104.1	7.0169	173.88	3102.9	7.0008	168.26	3101.8	6.9853	162.98	3100.7	6.9701	158.01	3099.6	6.9553	153.33
340 / 613.15	3127.0	7.0693	183.21	3125.9	7.0529	177.12	3124.9	7.0369	171.41	3123.8	7.0214	166.05	3122.8	7.0064	161.00	3121.7	6.9917	156.24

350	623.15	3148.7	7.1044	186.53	3147.7	7.0881	180.34	3146.7	7.0723	174.54	3145.7	7.0569	169.09	3144.7	7.0419	163.96	3143.7	7.0273	159.12
360	633.15	3170.4	7.1389	189.84	3169.4	7.1227	183.55	3168.5	7.1069	177.66	3167.5	7.0916	172.12	3166.6	7.0767	166.91	3165.6	7.0622	161.99
370	643.15	3192.0	7.1727	193.13	3191.1	7.1566	186.74	3190.2	7.1409	180.75	3189.3	7.1257	175.13	3188.4	7.1108	169.84	3187.5	7.0964	164.84
380	653.15	3213.5	7.2060	196.40	3212.7	7.1899	189.92	3211.8	7.1743	183.84	3211.0	7.1591	178.13	3210.1	7.1444	172.75	3209.2	7.1300	167.68
390	663.15	3235.1	7.2387	199.67	3234.3	7.2227	193.08	3233.4	7.2071	186.91	3232.6	7.1920	181.11	3231.8	7.1773	175.65	3231.0	7.1630	170.51
400	673.15	3256.6	7.2709	202.92	3255.8	7.2550	196.24	3255.0	7.2394	189.97	3254.2	7.2244	184.09	3253.5	7.2098	178.55	3252.7	7.1955	173.32
410	683.15	3278.1	7.3027	206.16	3277.4	7.2867	199.38	3276.6	7.2713	193.02	3275.9	7.2563	187.05	3275.1	7.2417	181.43	3274.3	7.2275	176.13
420	693.15	3299.7	7.3340	209.40	3298.9	7.3181	202.52	3298.2	7.3026	196.06	3297.5	7.2877	190.01	3296.8	7.2731	184.30	3296.0	7.2590	178.92
430	703.15	3321.2	7.3648	212.62	3320.5	7.3490	205.64	3319.8	7.3336	199.10	3319.1	7.3187	192.95	3318.4	7.3041	187.17	3317.7	7.2900	181.71
440	713.15	3342.8	7.3953	215.84	3342.1	7.3794	208.76	3341.4	7.3641	202.13	3340.7	7.3492	195.89	3340.1	7.3347	190.02	3339.4	7.3207	184.49
450	723.15	3364.3	7.4253	219.05	3363.7	7.4095	211.87	3363.0	7.3942	205.15	3362.4	7.3794	198.82	3361.7	7.3649	192.87	3361.1	7.3509	187.26
460	733.15	3386.0	7.4550	222.26	3385.3	7.4392	214.98	3384.7	7.4240	208.16	3384.1	7.4091	201.75	3383.4	7.3947	195.72	3382.8	7.3807	190.03
470	743.15	3407.6	7.4843	225.46	3407.0	7.4686	218.08	3406.4	7.4534	211.17	3405.8	7.4385	204.67	3405.2	7.4242	198.56	3404.6	7.4102	192.79
480	753.15	3429.3	7.5133	228.65	3428.7	7.4976	221.18	3428.1	7.4824	214.17	3427.5	7.4676	207.59	3426.9	7.4533	201.39	3426.4	7.4393	195.55
490	763.15	3451.0	7.5420	231.84	3450.5	7.5263	224.27	3449.9	7.5111	217.17	3449.3	7.4963	210.49	3448.7	7.4820	204.22	3448.2	7.4681	198.30
500	773.15	3472.8	7.5703	235.03	3472.2	7.5547	227.35	3471.7	7.5395	220.16	3471.1	7.5248	213.40	3470.6	7.5105	207.04	3470.0	7.4965	201.04
510	783.15	3494.6	7.5984	238.21	3494.1	7.5827	230.43	3493.5	7.5676	223.15	3493.0	7.5529	216.30	3492.5	7.5386	209.86	3491.9	7.5247	203.78
520	793.15	3516.5	7.6261	241.38	3516.0	7.6105	233.51	3515.4	7.5954	226.13	3514.9	7.5807	219.20	3514.4	7.5664	212.67	3513.9	7.5525	206.52
530	803.15	3538.4	7.6536	244.55	3537.9	7.6380	236.58	3537.4	7.6229	229.11	3536.9	7.6082	222.09	3536.4	7.5939	215.48	3535.9	7.5801	209.25
540	813.15	3560.4	7.6808	247.72	3559.9	7.6652	239.65	3559.4	7.6501	232.08	3558.9	7.6354	224.98	3558.4	7.6212	218.29	3557.9	7.6074	211.98
550	823.15	3582.4	7.7077	250.89	3581.9	7.6921	242.72	3581.4	7.6770	235.06	3581.0	7.6624	227.86	3580.5	7.6482	221.09	3580.0	7.6344	214.71
560	833.15	3604.5	7.7343	254.05	3604.0	7.7188	245.78	3603.5	7.7037	238.03	3603.1	7.6891	230.74	3602.6	7.6749	223.89	3602.2	7.6611	217.43
570	843.15	3626.6	7.7607	257.21	3626.1	7.7452	248.84	3625.7	7.7301	240.99	3625.2	7.7155	233.62	3624.8	7.7014	226.69	3624.3	7.6876	220.15
580	853.15	3648.8	7.7869	260.36	3648.3	7.7714	251.89	3647.9	7.7563	243.95	3647.5	7.7417	236.50	3647.0	7.7276	229.48	3646.6	7.7138	222.86
590	863.15	3671.0	7.8128	263.51	3670.6	7.7973	254.95	3670.2	7.7823	246.91	3669.7	7.7677	239.37	3669.3	7.7536	232.27	3668.9	7.7398	225.57
600	873.15	3693.3	7.8385	266.66	3692.9	7.8230	258.00	3692.5	7.8080	249.87	3692.1	7.7934	242.24	3691.7	7.7793	235.06	3691.3	7.7656	228.28
610	883.15	3715.7	7.8640	269.81	3715.3	7.8485	261.04	3714.9	7.8335	252.83	3714.5	7.8189	245.11	3714.1	7.8048	237.84	3713.7	7.7911	230.99
620	893.15	3738.1	7.8892	272.95	3737.7	7.8737	264.09	3737.3	7.8588	255.78	3736.9	7.8442	247.97	3736.5	7.8301	240.62	3736.2	7.8164	233.70
630	903.15	3760.6	7.9142	276.09	3760.2	7.8988	267.13	3759.8	7.8838	258.73	3759.4	7.8693	250.83	3759.1	7.8552	243.40	3758.7	7.8415	236.40
640	913.15	3783.1	7.9390	279.23	3782.7	7.9236	270.17	3782.4	7.9086	261.67	3782.0	7.8941	253.69	3781.6	7.8800	246.18	3781.3	7.8664	239.10
650	923.15	3805.7	7.9636	282.37	3805.3	7.9482	273.21	3805.0	7.9333	264.62	3804.6	7.9188	256.55	3804.3	7.9047	248.96	3803.9	7.8910	241.80
660	933.15	3828.4	7.9881	285.51	3828.0	7.9726	276.24	3827.7	7.9577	267.56	3827.3	7.9432	259.41	3827.0	7.9291	251.73	3826.6	7.9155	244.49
670	943.15	3851.1	8.0123	288.64	3850.7	7.9969	279.28	3850.4	7.9819	270.50	3850.1	7.9675	262.26	3849.7	7.9534	254.50	3849.4	7.9397	247.18
680	953.15	3873.8	8.0363	291.77	3873.5	8.0209	282.31	3873.2	8.0060	273.44	3872.9	7.9915	265.11	3872.5	7.9775	257.27	3872.2	7.9638	249.88
690	963.15	3896.7	8.0601	294.90	3896.4	8.0447	285.34	3896.0	8.0298	276.38	3895.7	8.0154	267.96	3895.4	8.0013	260.04	3895.1	7.9877	252.57
700	973.15	3919.6	8.0838	298.03	3919.3	8.0684	288.37	3918.9	8.0533	279.31	3918.6	8.0390	270.81	3918.3	8.0250	262.80	3918.0	8.0114	255.25
710	983.15	3942.5	8.1072	301.15	3942.2	8.0919	291.39	3941.9	8.0770	282.25	3941.6	8.0625	273.65	3941.3	8.0485	265.56	3941.0	8.0349	257.94
720	993.15	3965.5	8.1305	304.27	3965.2	8.1152	294.42	3964.9	8.1003	285.18	3964.6	8.0858	276.50	3964.4	8.0718	268.33	3964.1	8.0582	260.62
730	1003.15	3988.6	8.1536	307.40	3988.3	8.1383	297.44	3988.0	8.1234	288.11	3987.7	8.1090	279.34	3987.5	8.0950	271.09	3987.2	8.0814	263.30
740	1013.15	4011.7	8.1766	310.52	4011.4	8.1612	300.46	4011.2	8.1464	291.03	4010.9	8.1319	282.18	4010.6	8.1179	273.84	4010.3	8.1044	265.99
750	1023.15	4034.9	8.1993	313.64	4034.6	8.1840	303.48	4034.4	8.1691	293.96	4034.1	8.1547	285.02	4033.8	8.1408	276.60	4033.6	8.1272	268.66
760	1033.15	4058.2	8.2220	316.75	4057.9	8.2066	306.50	4057.6	8.1918	296.89	4057.4	8.1774	287.86	4057.1	8.1634	279.36	4056.9	8.1498	271.34
770	1043.15	4081.5	8.2444	319.87	4081.2	8.2291	309.52	4081.0	8.2142	299.81	4080.7	8.1998	290.69	4080.4	8.1859	282.11	4080.2	8.1723	274.02
780	1053.15	4104.8	8.2667	322.98	4104.6	8.2514	312.53	4104.3	8.2365	302.73	4104.1	8.2221	293.53	4103.8	8.2082	284.86	4103.6	8.1946	276.69
790	1063.15	4128.2	8.2888	326.10	4128.0	8.2735	315.54	4127.8	8.2587	305.65	4127.5	8.2443	296.36	4127.3	8.2303	287.61	4127.0	8.2168	279.37
800	1073.15	4151.7	8.3108	329.21	4151.5	8.2955	318.56	4151.3	8.2807	308.57	4151.0	8.2663	299.19	4150.8	8.2523	290.36	4150.6	8.2388	282.04

15.0 to 17.5 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		17.5			18.0			18.5			19.0			19.5			20		
t_s °C		205.7			207.1			208.5			209.8			211.1			212.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		878.2	2.3845	1.1656	884.5	2.3976	1.1678	890.7	2.4103	1.1700	896.8	2.4227	1.1723	902.7	2.4349	1.1744	908.6	2.4468	1.1766
Sat. Vapour		2794.1	6.3853	113.40	2794.8	6.3751	110.33	2795.5	6.3652	107.42	2796.1	6.3555	104.67	2796.7	6.3460	102.04	2797.2	6.3367	99.549
t °C	T K																		
0	273.15	1.7	−0.0000	0.99935	1.8	−0.0000	0.99932	1.8	−0.0000	0.99930	1.9	0.0000	0.99927	2.0	0.0000	0.99925	2.0	0.0000	0.99922
10	283.15	43.7	0.1508	0.99943	43.7	0.1508	0.99940	43.8	0.1508	0.99938	43.8	0.1508	0.99936	43.9	0.1508	0.99933	43.9	0.1508	0.99931
20	293.15	85.5	0.2959	1.0009	85.6	0.2959	1.0009	85.6	0.2959	1.0009	85.6	0.2959	1.0009	85.7	0.2959	1.0008	85.7	0.2959	1.0008
30	303.15	127.3	0.4360	1.0035	127.3	0.4360	1.0035	127.3	0.4359	1.0035	127.4	0.4359	1.0035	127.4	0.4359	1.0034	127.5	0.4359	1.0034
40	313.15	169.0	0.5714	1.0070	169.0	0.5714	1.0070	169.1	0.5714	1.0070	169.1	0.5714	1.0070	169.2	0.5714	1.0069	169.2	0.5713	1.0069
50	323.15	210.8	0.7027	1.0113	210.8	0.7027	1.0113	210.8	0.7027	1.0113	210.9	0.7026	1.0113	210.9	0.7026	1.0112	211.0	0.7026	1.0112
60	333.15	252.5	0.8301	1.0164	252.6	0.8300	1.0163	252.6	0.8300	1.0163	252.7	0.8300	1.0163	252.7	0.8300	1.0163	252.7	0.8299	1.0162
70	343.15	294.4	0.9538	1.0220	294.4	0.9538	1.0220	294.5	0.9537	1.0220	294.5	0.9537	1.0220	294.5	0.9537	1.0220	294.6	0.9536	1.0219
80	353.15	336.3	1.0741	1.0284	336.3	1.0741	1.0283	336.3	1.0741	1.0283	336.4	1.0740	1.0283	336.4	1.0740	1.0283	336.5	1.0740	1.0282
90	363.15	378.2	1.1913	1.0353	378.3	1.1913	1.0353	378.3	1.1912	1.0353	378.4	1.1912	1.0352	378.4	1.1912	1.0352	378.4	1.1911	1.0352
100	373.15	420.3	1.3056	1.0428	420.3	1.3055	1.0428	420.4	1.3055	1.0428	420.4	1.3055	1.0428	420.5	1.3054	1.0427	420.5	1.3054	1.0427
110	383.15	462.5	1.4171	1.0510	462.5	1.4171	1.0510	462.6	1.4170	1.0509	462.6	1.4170	1.0509	462.6	1.4170	1.0509	462.7	1.4169	1.0508
120	393.15	504.8	1.5262	1.0597	504.8	1.5261	1.0597	504.9	1.5261	1.0597	504.9	1.5260	1.0596	505.0	1.5260	1.0596	505.0	1.5260	1.0596
130	403.15	547.3	1.6329	1.0691	547.3	1.6329	1.0691	547.4	1.6328	1.0691	547.4	1.6328	1.0690	547.4	1.6327	1.0690	547.5	1.6327	1.0690
140	413.15	590.0	1.7375	1.0792	590.0	1.7375	1.0791	590.1	1.7374	1.0791	590.1	1.7374	1.0791	590.1	1.7373	1.0790	590.2	1.7373	1.0790
150	423.15	632.9	1.8402	1.0899	633.0	1.8402	1.0899	633.0	1.8401	1.0898	633.0	1.8401	1.0898	633.1	1.8400	1.0898	633.1	1.8399	1.0897
160	433.15	676.1	1.9411	1.1014	676.2	1.9411	1.1013	676.2	1.9410	1.1013	676.2	1.9409	1.1013	676.3	1.9409	1.1012	676.3	1.9408	1.1012
170	443.15	719.6	2.0404	1.1137	719.7	2.0404	1.1136	719.7	2.0403	1.1136	719.7	2.0402	1.1136	719.8	2.0402	1.1135	719.8	2.0401	1.1135
180	453.15	763.5	2.1383	1.1269	763.5	2.1382	1.1268	763.5	2.1381	1.1268	763.6	2.1381	1.1267	763.6	2.1380	1.1267	763.6	2.1379	1.1267
190	463.15	807.7	2.2349	1.1410	807.8	2.2348	1.1410	807.8	2.2347	1.1409	807.8	2.2346	1.1409	807.8	2.2346	1.1408	807.9	2.2345	1.1408
200	473.15	852.5	2.3304	1.1563	852.5	2.3303	1.1562	852.5	2.3302	1.1562	852.5	2.3301	1.1561	852.5	2.3300	1.1561	852.6	2.3300	1.1560
210	483.15	2806.5	6.4110	114.98	2803.3	6.3926	111.38	2800.0	6.3745	107.96	2796.7	6.3567	104.73	897.7	2.4246	1.1726	897.8	2.4245	1.1725
220	493.15	2834.6	6.4686	118.62	2831.7	6.4509	114.96	2828.8	6.4335	111.48	2825.9	6.4164	108.19	2822.9	6.3995	105.06	2819.9	6.3829	102.09
230	503.15	2861.6	6.5229	122.13	2859.1	6.5058	118.40	2856.4	6.4890	114.87	2853.8	6.4725	111.52	2851.1	6.4562	108.34	2848.4	6.4403	105.32
240	513.15	2887.8	6.5743	125.54	2885.4	6.5577	121.74	2883.1	6.5414	118.15	2880.7	6.5254	114.74	2878.3	6.5097	111.51	2875.9	6.4943	108.43
250	523.15	2913.2	6.6233	128.85	2911.0	6.6071	124.99	2908.9	6.5912	121.33	2906.7	6.5757	117.87	2904.6	6.5604	114.58	2902.4	6.5454	111.45
260	533.15	2937.9	6.6701	132.08	2935.9	6.6543	128.15	2934.0	6.6388	124.43	2932.0	6.6236	120.91	2930.1	6.6087	117.56	2928.1	6.5941	114.38
270	543.15	2962.1	6.7150	135.25	2960.3	6.6995	131.25	2958.5	6.6843	127.47	2956.7	6.6694	123.88	2954.9	6.6549	120.48	2953.1	6.6406	117.24
280	553.15	2985.8	6.7583	138.37	2984.1	6.7430	134.30	2982.5	6.7281	130.45	2980.9	6.7135	126.80	2979.2	6.6992	123.33	2977.5	6.6852	120.04
290	563.15	3009.1	6.8000	141.43	3007.6	6.7850	137.29	3006.1	6.7703	133.37	3004.6	6.7559	129.66	3003.0	6.7419	126.14	3001.5	6.7281	122.79
300	573.15	3032.1	6.8405	144.45	3030.7	6.8257	140.24	3029.3	6.8112	136.26	3027.9	6.7970	132.49	3026.5	6.7831	128.90	3025.0	6.7696	125.50
310	583.15	3054.8	6.8798	147.44	3053.5	6.8651	143.16	3052.2	6.8508	139.11	3050.9	6.8368	135.27	3049.6	6.8231	131.63	3048.2	6.8097	128.17
320	593.15	3077.3	6.9180	150.40	3076.1	6.9035	146.05	3074.8	6.8893	141.93	3073.6	6.8755	138.03	3072.4	6.8619	134.32	3071.2	6.8487	130.81
330	603.15	3099.6	6.9553	153.33	3098.4	6.9409	148.90	3097.3	6.9268	144.72	3096.1	6.9131	140.75	3095.0	6.8997	136.99	3093.8	6.8866	133.41
340	613.15	3121.7	6.9917	156.24	3120.6	6.9774	151.74	3119.6	6.9635	147.48	3118.5	6.9498	143.45	3117.4	6.9365	139.63	3116.3	6.9235	136.00

350	623.15	3143.7	7.0273	159.12	3142.7	7.0131	154.55	3141.7	6.9993	150.23	3140.7	6.9857	146.14	3139.7	6.9725	142.25	3138.6	6.9596	138.56
360	633.15	3165.6	7.0622	161.99	3164.7	7.0481	157.35	3163.7	7.0343	152.96	3162.8	7.0209	148.80	3161.8	7.0078	144.85	3160.8	6.9950	141.10
370	643.15	3187.5	7.0964	164.84	3186.6	7.0824	160.13	3185.6	7.0687	155.67	3184.7	7.0553	151.44	3183.8	7.0423	147.44	3182.9	7.0296	143.63
380	653.15	3209.2	7.1300	167.68	3208.4	7.1160	162.90	3207.5	7.1024	158.37	3206.6	7.0891	154.08	3205.8	7.0762	150.01	3204.9	7.0635	146.14
390	663.15	3231.0	7.1630	170.51	3230.1	7.1491	165.65	3229.3	7.1356	161.05	3228.5	7.1223	156.70	3227.6	7.1094	152.56	3226.8	7.0968	148.64
400	673.15	3252.7	7.1955	173.32	3251.9	7.1816	168.39	3251.1	7.1681	163.73	3250.3	7.1550	159.30	3249.5	7.1421	155.11	3248.7	7.1296	151.13
410	683.15	3274.3	7.2275	176.13	3273.6	7.2137	171.12	3272.8	7.2002	166.39	3272.1	7.1871	161.90	3271.3	7.1743	157.65	3270.5	7.1618	153.60
420	693.15	3296.0	7.2590	178.92	3295.3	7.2452	173.85	3294.6	7.2318	169.04	3293.8	7.2187	164.49	3293.1	7.2059	160.17	3292.4	7.1935	156.07
430	703.15	3317.7	7.2900	181.71	3317.0	7.2763	176.56	3316.3	7.2629	171.69	3315.6	7.2499	167.07	3314.9	7.2372	162.69	3314.2	7.2247	158.53
440	713.15	3339.4	7.3207	184.49	3338.7	7.3070	179.27	3338.0	7.2936	174.32	3337.4	7.2806	169.64	3336.7	7.2679	165.20	3336.0	7.2555	160.98
450	723.15	3361.1	7.3509	187.26	3360.4	7.3372	181.97	3359.8	7.3239	176.96	3359.1	7.3109	172.21	3358.5	7.2983	167.70	3357.8	7.2859	163.42
460	733.15	3382.8	7.3807	190.03	3382.2	7.3671	184.66	3381.6	7.3538	179.58	3380.9	7.3409	174.77	3380.3	7.3282	170.20	3379.7	7.3159	165.86
470	743.15	3404.6	7.4102	192.79	3404.0	7.3966	187.35	3403.4	7.3833	182.20	3402.7	7.3704	177.32	3402.1	7.3578	172.69	3401.5	7.3455	168.29
480	753.15	3426.4	7.4393	195.55	3425.8	7.4257	190.03	3425.2	7.4125	184.81	3424.6	7.3996	179.87	3424.0	7.3871	175.17	3423.4	7.3748	170.72
490	763.15	3448.2	7.4681	198.30	3447.6	7.4545	192.71	3447.0	7.4413	187.42	3446.5	7.4285	182.41	3445.9	7.4159	177.65	3445.3	7.4037	173.14
500	773.15	3470.0	7.4965	201.04	3469.5	7.4830	195.38	3468.9	7.4698	190.02	3468.4	7.4570	184.94	3467.8	7.4445	180.13	3467.3	7.4323	175.55
510	783.15	3491.9	7.5247	203.78	3491.4	7.5112	198.05	3490.9	7.4980	192.62	3490.3	7.4852	187.48	3489.8	7.4727	182.60	3489.3	7.4605	177.97
520	793.15	3513.9	7.5525	206.52	3513.4	7.5391	200.71	3512.8	7.5259	195.21	3512.3	7.5131	190.01	3511.8	7.5007	185.07	3511.3	7.4885	180.37
530	803.15	3535.9	7.5801	209.25	3535.4	7.5666	203.37	3534.9	7.5535	197.80	3534.4	7.5407	192.53	3533.9	7.5283	187.53	3533.4	7.5161	182.78
540	813.15	3557.9	7.6074	211.98	3557.4	7.5939	206.02	3556.9	7.5808	200.39	3556.5	7.5681	195.05	3556.0	7.5556	189.99	3555.5	7.5435	185.18
550	823.15	3580.0	7.6344	214.71	3579.5	7.6209	208.68	3579.1	7.6079	202.97	3578.6	7.5951	197.57	3578.1	7.5827	192.44	3577.6	7.5706	187.57
560	833.15	3602.2	7.6611	217.43	3601.7	7.6477	211.32	3601.2	7.6346	205.55	3600.8	7.6219	200.08	3600.3	7.6095	194.89	3599.9	7.5974	189.96
570	843.15	3624.3	7.6876	220.15	3623.9	7.6742	213.97	3623.5	7.6611	208.13	3623.0	7.6484	202.59	3622.6	7.6361	197.34	3622.1	7.6240	192.35
580	853.15	3646.6	7.7138	222.86	3646.2	7.7004	216.61	3645.7	7.6874	210.70	3645.3	7.6747	205.10	3644.9	7.6623	199.79	3644.4	7.6503	194.74
590	863.15	3668.9	7.7398	225.57	3668.5	7.7264	219.25	3668.1	7.7134	213.27	3667.6	7.7008	207.60	3667.2	7.6884	202.23	3666.8	7.6763	197.12
600	873.15	3691.3	7.7656	228.28	3690.9	7.7522	221.89	3690.4	7.7392	215.84	3690.0	7.7265	210.11	3689.6	7.7142	204.67	3689.2	7.7022	199.50
610	883.15	3713.7	7.7911	230.99	3713.3	7.7778	224.52	3712.9	7.7648	218.40	3712.5	7.7521	212.60	3712.1	7.7398	207.10	3711.7	7.7278	201.88
620	893.15	3736.2	7.8164	233.70	3735.8	7.8031	227.15	3735.4	7.7901	220.96	3735.0	7.7775	215.10	3734.6	7.7651	209.54	3734.2	7.7531	204.25
630	903.15	3758.7	7.8415	236.40	3758.3	7.8282	229.78	3757.9	7.8152	223.52	3757.6	7.8026	217.60	3757.2	7.7903	211.97	3756.8	7.7783	206.63
640	913.15	3781.3	7.8664	239.10	3780.9	7.8531	232.41	3780.5	7.8401	226.08	3780.2	7.8275	220.09	3779.8	7.8152	214.40	3779.4	7.8032	209.00
650	923.15	3803.9	7.8910	241.80	3803.6	7.8777	235.03	3803.2	7.8648	228.64	3802.8	7.8522	222.58	3802.5	7.8399	216.83	3802.1	7.8279	211.36
660	933.15	3826.6	7.9155	244.49	3826.3	7.9022	237.66	3825.9	7.8893	231.19	3825.6	7.8767	225.06	3825.2	7.8644	219.25	3824.9	7.8524	213.73
670	943.15	3849.4	7.9397	247.18	3849.0	7.9265	240.28	3848.7	7.9136	233.74	3848.4	7.9010	227.55	3848.0	7.8887	221.67	3847.7	7.8767	216.09
680	953.15	3872.2	7.9638	249.88	3871.9	7.9505	242.89	3871.5	7.9376	236.29	3871.2	7.9251	230.03	3870.9	7.9128	224.10	3870.6	7.9009	218.46
690	963.15	3895.1	7.9877	252.57	3894.8	7.9744	245.51	3894.4	7.9615	238.84	3894.1	7.9490	232.51	3893.8	7.9367	226.51	3893.5	7.9248	220.82
700	973.15	3918.0	8.0114	255.25	3917.7	7.9981	248.12	3917.4	7.9852	241.38	3917.1	7.9727	234.99	3916.8	7.9605	228.93	3916.5	7.9485	223.17
710	983.15	3941.0	8.0349	257.94	3940.7	8.0217	250.74	3940.4	8.0088	243.92	3940.1	7.9962	237.47	3939.8	7.9840	231.35	3939.5	7.9721	225.53
720	993.15	3964.1	8.0582	260.62	3963.8	8.0450	253.35	3963.5	8.0321	246.47	3963.2	8.0196	239.95	3962.9	8.0074	233.76	3962.6	7.9954	227.88
730	1003.15	3987.2	8.0814	263.30	3986.9	8.0682	255.96	3986.6	8.0553	249.01	3986.3	8.0428	242.42	3986.0	8.0305	236.17	3985.7	8.0186	230.24
740	1013.15	4010.3	8.1044	265.99	4010.1	8.0911	258.56	4009.8	8.0783	251.54	4009.5	8.0658	244.89	4009.2	8.0536	238.58	4009.0	8.0417	232.59
750	1023.15	4033.6	8.1272	268.66	4033.3	8.1140	261.17	4033.0	8.1011	254.08	4032.8	8.0886	247.36	4032.5	8.0764	240.99	4032.2	8.0645	234.94
760	1033.15	4056.9	8.1498	271.34	4056.6	8.1366	263.77	4056.3	8.1238	256.62	4056.1	8.1113	249.83	4055.8	8.0991	243.40	4055.5	8.0872	237.29
770	1043.15	4080.2	8.1723	274.02	4079.9	8.1591	266.38	4079.7	8.1463	259.15	4079.4	8.1338	252.30	4079.2	8.1216	245.80	4078.9	8.1097	239.63
780	1053.15	4103.6	8.1946	276.69	4103.3	8.1814	268.98	4103.1	8.1686	261.68	4102.8	8.1561	254.77	4102.6	8.1439	248.21	4102.3	8.1321	241.98
790	1063.15	4127.0	8.2168	279.37	4126.8	8.2036	271.58	4126.6	8.1908	264.21	4126.3	8.1783	257.23	4126.1	8.1661	250.61	4125.8	8.1543	244.32
800	1073.15	4150.6	8.2388	282.04	4150.3	8.2256	274.18	4150.1	8.2128	266.74	4149.8	8.2003	259.70	4149.6	8.1882	253.01	4149.4	8.1763	246.66

17.5 to 20 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar	20			21			22			23			24			25		
t_s °C	212.4			214.8			217.2			219.5			221.8			223.9		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	908.6	2.4468	1.1766	919.9	2.4699	1.1809	930.9	2.4921	1.1850	941.6	2.5136	1.1891	951.9	2.5342	1.1932	961.9	2.5542	1.1972
Sat. Vapour	2797.2	6.3367	99.549	2798.2	6.3187	94.902	2799.1	6.3015	90.663	2799.8	6.2850	86.780	2800.4	6.2690	83.209	2800.9	6.2537	79.915
t °C · T K																		
0 273.15	2.0	0.0000	0.99922	2.1	0.0000	0.99917	2.2	0.0000	0.99912	2.3	0.0000	0.99907	2.4	0.0000	0.99902	2.5	0.0000	0.99897
10 283.15	43.9	0.1508	0.99931	44.0	0.1508	0.99926	44.1	0.1508	0.99922	44.2	0.1508	0.99917	44.3	0.1508	0.99912	44.4	0.1508	0.99907
20 293.15	85.7	0.2959	1.0008	85.8	0.2959	1.0008	85.9	0.2958	1.0007	86.0	0.2958	1.0007	86.1	0.2958	1.0006	86.2	0.2958	1.0006
30 303.15	127.5	0.4359	1.0034	127.6	0.4359	1.0034	127.7	0.4358	1.0033	127.8	0.4358	1.0033	127.8	0.4358	1.0032	127.9	0.4357	1.0032
40 313.15	169.2	0.5713	1.0069	169.3	0.5713	1.0069	169.4	0.5713	1.0068	169.5	0.5712	1.0068	169.6	0.5712	1.0067	169.7	0.5711	1.0067
50 323.15	211.0	0.7026	1.0112	211.1	0.7025	1.0112	211.1	0.7025	1.0111	211.2	0.7024	1.0111	211.3	0.7024	1.0110	211.4	0.7024	1.0110
60 333.15	252.7	0.8299	1.0162	252.8	0.8299	1.0162	252.9	0.8298	1.0161	253.0	0.8298	1.0161	253.1	0.8297	1.0161	253.2	0.8297	1.0160
70 343.15	294.6	0.9536	1.0219	294.7	0.9536	1.0219	294.7	0.9535	1.0218	294.8	0.9535	1.0218	294.9	0.9534	1.0217	295.0	0.9533	1.0217
80 353.15	336.5	1.0740	1.0282	336.5	1.0739	1.0282	336.6	1.0738	1.0282	336.7	1.0738	1.0281	336.8	1.0737	1.0281	336.9	1.0736	1.0280
90 363.15	378.4	1.1911	1.0352	378.5	1.1911	1.0351	378.6	1.1910	1.0351	378.7	1.1909	1.0350	378.7	1.1908	1.0350	378.8	1.1908	1.0349
100 373.15	420.5	1.3054	1.0427	420.6	1.3053	1.0427	420.6	1.3052	1.0426	420.7	1.3051	1.0426	420.8	1.3051	1.0425	420.9	1.3050	1.0425
110 383.15	462.7	1.4169	1.0508	462.7	1.4168	1.0508	462.8	1.4168	1.0507	462.9	1.4167	1.0507	463.0	1.4166	1.0506	463.0	1.4165	1.0506
120 393.15	505.0	1.5260	1.0596	505.1	1.5259	1.0595	505.1	1.5258	1.0595	505.2	1.5257	1.0594	505.3	1.5256	1.0594	505.3	1.5255	1.0593
130 403.15	547.5	1.6327	1.0690	547.5	1.6326	1.0689	547.6	1.6325	1.0688	547.7	1.6324	1.0688	547.7	1.6323	1.0687	547.8	1.6322	1.0687
140 413.15	590.2	1.7373	1.0790	590.2	1.7372	1.0789	590.3	1.7371	1.0789	590.4	1.7370	1.0788	590.4	1.7369	1.0787	590.5	1.7368	1.0787
150 423.15	633.1	1.8399	1.0897	633.2	1.8398	1.0897	633.2	1.8397	1.0896	633.3	1.8396	1.0895	633.3	1.8395	1.0894	633.4	1.8394	1.0894
160 433.15	676.3	1.9408	1.1012	676.3	1.9407	1.1011	676.4	1.9406	1.1011	676.5	1.9405	1.1010	676.5	1.9403	1.1009	676.6	1.9402	1.1008
170 443.15	719.8	2.0401	1.1135	719.8	2.0400	1.1134	719.9	2.0398	1.1133	719.9	2.0397	1.1132	720.0	2.0396	1.1132	720.1	2.0395	1.1131
180 453.15	763.6	2.1379	1.1267	763.7	2.1378	1.1266	763.7	2.1377	1.1265	763.8	2.1375	1.1264	763.8	2.1374	1.1263	763.9	2.1372	1.1262
190 463.15	807.9	2.2345	1.1408	807.9	2.2343	1.1407	808.0	2.2342	1.1406	808.0	2.2340	1.1405	808.0	2.2339	1.1404	808.1	2.2338	1.1403
200 473.15	852.6	2.3300	1.1560	852.6	2.3298	1.1559	852.6	2.3296	1.1558	852.7	2.3295	1.1557	852.7	2.3293	1.1556	852.8	2.3292	1.1555
210 483.15	897.8	2.4245	1.1725	897.8	2.4243	1.1724	897.8	2.4242	1.1723	897.9	2.4240	1.1722	897.9	2.4238	1.1720	897.9	2.4237	1.1719
220 493.15	2819.9	6.3829	102.09	2813.8	6.3504	96.560	2807.5	6.3187	91.520	2801.2	6.2878	86.907	943.7	2.5176	1.1899	943.7	2.5175	1.1897
230 503.15	2848.4	6.4403	105.32	2843.0	6.4091	99.700	2837.4	6.3787	94.581	2831.8	6.3491	89.897	2826.0	6.3202	85.595	2820.1	6.2920	81.628
240 513.15	2875.9	6.4943	108.43	2871.0	6.4642	102.72	2866.0	6.4349	97.517	2860.9	6.4065	92.759	2855.7	6.3788	88.390	2850.5	6.3517	84.364
250 523.15	2902.4	6.5454	111.45	2897.9	6.5162	105.64	2893.4	6.4879	100.35	2888.9	6.4605	95.513	2884.2	6.4338	91.075	2879.5	6.4077	86.985
260 533.15	2928.1	6.5941	114.38	2924.0	6.5656	108.4	2920.0	6.5382	103.09	2915.8	6.5115	98.177	2911.6	6.4857	93.666	2907.4	6.4605	89.511
270 543.15	2953.1	6.6406	117.24	2949.4	6.6128	111.23	2945.7	6.5860	105.76	2941.9	6.5600	100.76	2938.1	6.5349	96.180	2934.2	6.5104	91.957
280 553.15	2977.5	6.6852	120.04	2974.2	6.6580	113.93	2970.8	6.6317	108.37	2967.3	6.6064	103.29	2963.8	6.5818	98.626	2960.3	6.5580	94.335
290 563.15	3001.5	6.7281	122.79	2998.4	6.7014	116.58	2995.3	6.6756	110.92	2992.1	6.6508	105.76	2988.9	6.6267	101.02	2985.7	6.6034	96.654
300 573.15	3025.0	6.7696	125.50	3022.2	6.7432	119.18	3019.3	6.7179	113.43	3016.4	6.6935	108.18	3013.4	6.6699	103.36	3010.4	6.6470	98.925
310 583.15	3048.2	6.8097	128.17	3045.6	6.7837	121.74	3042.9	6.7588	115.90	3040.2	6.7347	110.56	3037.5	6.7115	105.66	3034.7	6.6890	101.15
320 593.15	3071.2	6.8487	130.81	3068.7	6.8230	124.27	3066.2	6.7983	118.33	3063.7	6.7746	112.90	3061.1	6.7517	107.93	3058.6	6.7296	103.35
330 603.15	3093.8	6.8866	133.41	3091.5	6.8612	126.77	3089.2	6.8368	120.73	3086.8	6.8133	115.22	3084.5	6.7907	110.16	3082.1	6.7689	105.51
340 613.15	3116.3	6.9235	136.00	3114.1	6.8984	129.25	3112.0	6.8742	123.11	3109.7	6.8510	117.51	3107.5	6.8286	112.37	3105.3	6.8071	107.64

350	623.15	3138.6	6.9596	138.56	3136.6	6.9347	131.70	3134.5	6.9107	125.47	3132.4	6.8877	119.77	3130.4	6.8656	114.55	3128.2	6.8442	109.75
360	633.15	3160.8	6.9950	141.10	3158.9	6.9702	134.14	3156.9	6.9464	127.80	3155.0	6.9236	122.02	3153.0	6.9016	116.72	3151.0	6.8804	111.84
370	643.15	3182.9	7.0296	143.63	3181.1	7.0049	136.55	3179.2	6.9813	130.12	3177.3	6.9587	124.25	3175.5	6.9369	118.87	3173.6	6.9158	113.91
380	653.15	3204.9	7.0635	146.14	3203.1	7.0390	138.96	3201.4	7.0155	132.43	3199.6	6.9930	126.46	3197.8	6.9714	121.00	3196.1	6.9505	115.97
390	663.15	3226.8	7.0968	148.64	3225.1	7.0724	141.35	3223.5	7.0491	134.72	3221.8	7.0267	128.67	3220.1	7.0052	123.12	3218.4	6.9845	118.01
400	673.15	3248.7	7.1296	151.13	3247.1	7.1053	143.73	3245.5	7.0821	137.00	3243.9	7.0598	130.85	3242.3	7.0384	125.22	3240.7	7.0178	120.04
410	683.15	3270.5	7.1618	153.60	3269.0	7.1376	146.09	3267.5	7.1145	139.27	3265.9	7.0923	133.03	3264.4	7.0710	127.32	3262.9	7.0505	122.06
420	693.15	3292.4	7.1935	156.07	3290.9	7.1694	148.45	3289.4	7.1464	141.52	3288.0	7.1243	135.20	3286.5	7.1031	129.40	3285.0	7.0827	124.07
430	703.15	3314.2	7.2247	158.53	3312.8	7.2007	150.80	3311.4	7.1778	143.77	3310.0	7.1558	137.36	3308.5	7.1347	131.48	3307.1	7.1143	126.07
440	713.15	3336.0	7.2555	160.98	3334.6	7.2316	153.14	3333.3	7.2088	146.02	3331.9	7.1868	139.51	3330.6	7.1658	133.55	3329.2	7.1455	128.06
450	723.15	3357.8	7.2859	163.42	3356.5	7.2621	155.48	3355.2	7.2393	148.25	3353.9	7.2174	141.65	3352.6	7.1964	135.61	3351.3	7.1763	130.04
460	733.15	3379.7	7.3159	165.86	3378.4	7.2921	157.80	3377.1	7.2694	150.48	3375.9	7.2476	143.79	3374.6	7.2267	137.66	3373.3	7.2066	132.02
470	743.15	3401.5	7.3455	168.29	3400.3	7.3218	160.13	3399.1	7.2991	152.70	3397.9	7.2774	145.92	3396.6	7.2565	139.71	3395.4	7.2365	133.99
480	753.15	3423.4	7.3748	170.72	3422.2	7.3511	162.44	3421.1	7.3285	154.92	3419.9	7.3068	148.05	3418.7	7.2860	141.75	3417.5	7.2660	135.96
490	763.15	3445.3	7.4037	173.14	3444.2	7.3801	164.75	3443.0	7.3575	157.13	3441.9	7.3359	150.17	3440.8	7.3151	143.79	3439.6	7.2952	137.92
500	773.15	3467.3	7.4323	175.55	3466.2	7.4087	167.06	3465.1	7.3862	159.34	3464.0	7.3646	152.28	3462.9	7.3439	145.82	3461.7	7.3240	139.87
510	783.15	3489.3	7.4605	177.97	3488.2	7.4370	169.36	3487.1	7.4145	161.54	3486.0	7.3930	154.39	3485.0	7.3723	147.85	3483.9	7.3525	141.82
520	793.15	3511.3	7.4885	180.37	3510.3	7.4650	171.66	3509.2	7.4425	163.73	3508.2	7.4211	156.50	3507.1	7.4004	149.87	3506.1	7.3806	143.77
530	803.15	3533.4	7.5161	182.78	3532.4	7.4927	173.95	3531.3	7.4703	165.93	3530.3	7.4488	158.60	3529.3	7.4282	151.89	3528.3	7.4085	145.71
540	813.15	3555.5	7.5435	185.18	3554.5	7.5201	176.24	3553.5	7.4977	168.12	3552.5	7.4763	160.70	3551.6	7.4558	153.90	3550.6	7.4360	147.65
550	823.15	3577.6	7.5706	187.57	3576.7	7.5472	178.53	3575.7	7.5249	170.30	3574.8	7.5035	162.80	3573.8	7.4830	155.91	3572.9	7.4633	149.58
560	833.15	3599.9	7.5974	189.96	3598.9	7.5741	180.81	3598.0	7.5518	172.49	3597.1	7.5304	164.89	3596.2	7.5099	157.92	3595.2	7.4903	151.51
570	843.15	3622.1	7.6240	192.35	3621.2	7.6007	183.09	3620.3	7.5784	174.67	3619.4	7.5571	166.98	3618.5	7.5366	159.93	3617.6	7.5170	153.44
580	853.15	3644.4	7.6503	194.74	3643.6	7.6270	185.36	3642.7	7.6048	176.84	3641.8	7.5835	169.06	3640.9	7.5631	161.93	3640.1	7.5434	155.37
590	863.15	3666.8	7.6763	197.12	3665.9	7.6531	187.64	3665.1	7.6309	179.01	3664.3	7.6096	171.14	3663.4	7.5892	163.93	3662.6	7.5697	157.29
600	873.15	3689.2	7.7022	199.50	3688.4	7.6789	189.91	3687.6	7.6568	181.19	3686.7	7.6355	173.22	3685.9	7.6152	165.92	3685.1	7.5956	159.21
610	883.15	3711.7	7.7278	201.88	3710.9	7.7046	192.17	3710.1	7.6824	183.35	3709.3	7.6612	175.30	3708.5	7.6409	167.91	3707.7	7.6213	161.12
620	893.15	3734.2	7.7531	204.25	3733.4	7.7299	194.44	3732.7	7.7078	185.52	3731.9	7.6866	177.37	3731.1	7.6663	169.91	3730.3	7.6468	163.04
630	903.15	3756.8	7.7783	206.63	3756.0	7.7551	196.70	3755.3	7.7330	187.68	3754.5	7.7119	179.44	3753.8	7.6916	171.89	3753.0	7.6721	164.95
640	913.15	3779.4	7.8032	209.00	3778.7	7.7801	198.96	3778.0	7.7580	189.84	3777.2	7.7368	181.51	3776.5	7.7166	173.88	3775.8	7.6971	166.86
650	923.15	3802.1	7.8279	211.36	3801.4	7.8048	201.22	3800.7	7.7827	192.00	3800.0	7.7616	183.58	3799.3	7.7414	175.86	3798.6	7.7220	168.76
660	933.15	3824.9	7.8524	213.73	3824.2	7.8293	203.48	3823.5	7.8073	194.16	3822.8	7.7862	185.64	3822.1	7.7660	177.84	3821.4	7.7466	170.67
670	943.15	3847.7	7.8767	216.09	3847.0	7.8537	205.73	3846.3	7.8317	196.31	3845.7	7.8106	187.71	3845.0	7.7904	179.82	3844.3	7.7710	172.57
680	953.15	3870.6	7.9009	218.46	3869.9	7.8778	207.98	3869.2	7.8558	198.46	3868.6	7.8348	189.77	3867.9	7.8146	181.80	3867.3	7.7952	174.47
690	963.15	3893.5	7.9248	220.82	3892.8	7.9018	210.23	3892.2	7.8798	200.61	3891.6	7.8587	191.83	3890.9	7.8386	183.77	3890.3	7.8192	176.37
700	973.15	3916.5	7.9485	223.17	3915.8	7.9255	212.48	3915.2	7.9035	202.76	3914.6	7.8825	193.88	3914.0	7.8624	185.75	3913.4	7.8431	178.26
710	983.15	3939.5	7.9721	225.53	3938.9	7.9491	214.73	3938.3	7.9271	204.91	3937.7	7.9061	195.94	3937.1	7.8860	187.72	3936.5	7.8667	180.16
720	993.15	3962.6	7.9954	227.88	3962.0	7.9725	216.97	3961.4	7.9505	207.05	3960.8	7.9296	197.99	3960.3	7.9095	189.69	3959.7	7.8902	182.05
730	1003.15	3985.7	8.0186	230.24	3985.2	7.9957	219.21	3984.6	7.9738	209.19	3984.0	7.9528	200.04	3983.5	7.9327	191.66	3982.9	7.9134	183.94
740	1013.15	4009.0	8.0417	232.59	4008.4	8.0187	221.46	4007.8	7.9968	211.33	4007.3	7.9759	202.09	4006.7	7.9558	193.62	4006.2	7.9365	185.83
750	1023.15	4032.2	8.0645	234.94	4031.7	8.0416	223.70	4031.1	8.0197	213.47	4030.6	7.9988	204.14	4030.1	7.9787	195.59	4029.5	7.9595	187.72
760	1033.15	4055.5	8.0872	237.29	4055.0	8.0643	225.93	4054.5	8.0424	215.61	4054.0	8.0215	206.19	4053.4	8.0015	197.55	4052.9	7.9822	189.61
770	1043.15	4078.9	8.1097	239.63	4078.4	8.0868	228.17	4077.9	8.0650	217.75	4077.4	8.0441	208.24	4076.9	8.0240	199.51	4076.4	8.0048	191.49
780	1053.15	4102.3	8.1321	241.98	4101.9	8.1092	230.41	4101.4	8.0873	219.89	4100.9	8.0665	210.28	4100.4	8.0464	201.48	4099.9	8.0272	193.38
790	1063.15	4125.8	8.1543	244.32	4125.4	8.1314	232.64	4124.9	8.1096	222.02	4124.4	8.0887	212.32	4123.9	8.0687	203.44	4123.4	8.0495	195.26
800	1073.15	4149.4	8.1763	246.66	4148.9	8.1534	234.87	4148.4	8.1316	224.15	4148.0	8.1108	214.37	4147.5	8.0908	205.39	4147.0	8.0716	197.14

20 to 25 bar

Table 3 Water and Steam—*continued* or water by switched in to setup

p (*abs*) bar	25			26			27			28			29			30		
t_s °C	223.9			226.0			228.1			230.0			232.0			233.8		
	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid	961.9	2.5542	1.1972	971.7	2.5736	1.2011	981.2	2.5923	1.2050	990.5	2.6105	1.2088	999.5	2.6282	1.2126	1008.3	2.6455	1.2163
Sat. Vapour	2800.9	6.2537	79.915	2801.4	6.2388	76.865	2801.7	6.2244	74.033	2802.0	6.2105	71.396	2802.2	6.1969	68.935	2802.3	6.1838	66.632
t °C / T K																		
0 / 273.15	2.5	0.0000	0.99897	2.6	0.0001	0.99892	2.7	0.0001	0.99887	2.8	0.0001	0.99882	2.9	0.0001	0.99877	3.0	0.0001	0.99872
10 / 283.15	44.4	0.1508	0.99907	44.5	0.1508	0.99903	44.6	0.1508	0.99898	44.7	0.1507	0.99893	44.8	0.1507	0.99889	44.9	0.1507	0.99884
20 / 293.15	86.2	0.2958	1.0006	86.3	0.2958	1.0005	86.4	0.2957	1.0005	86.5	0.2957	1.0005	86.6	0.2957	1.0004	86.7	0.2957	1.0004
30 / 303.15	127.9	0.4357	1.0032	128.0	0.4357	1.0032	128.1	0.4357	1.0031	128.2	0.4356	1.0031	128.3	0.4356	1.0030	128.4	0.4356	1.0030
40 / 313.15	169.7	0.5711	1.0067	169.7	0.5711	1.0067	169.8	0.5711	1.0066	169.9	0.5710	1.0066	170.0	0.5710	1.0065	170.1	0.5709	1.0065
50 / 323.15	211.4	0.7024	1.0110	211.5	0.7023	1.0110	211.6	0.7023	1.0109	211.7	0.7022	1.0109	211.7	0.7022	1.0108	211.8	0.7021	1.0108
60 / 333.15	253.2	0.8297	1.0160	253.3	0.8296	1.0160	253.3	0.8295	1.0159	253.4	0.8295	1.0159	253.5	0.8294	1.0158	253.6	0.8294	1.0158
70 / 343.15	295.0	0.9533	1.0217	295.1	0.9533	1.0216	295.1	0.9532	1.0216	295.2	0.9532	1.0216	295.3	0.9531	1.0215	295.4	0.9530	1.0215
80 / 353.15	336.9	1.0736	1.0280	336.9	1.0736	1.0280	337.0	1.0735	1.0279	337.1	1.0734	1.0279	337.2	1.0734	1.0278	337.3	1.0733	1.0278
90 / 363.15	378.8	1.1908	1.0349	378.9	1.1907	1.0349	379.0	1.1906	1.0348	379.0	1.1906	1.0348	379.1	1.1905	1.0347	379.2	1.1904	1.0347
100 / 373.15	420.9	1.3050	1.0425	420.9	1.3049	1.0424	421.0	1.3048	1.0423	421.1	1.3048	1.0423	421.2	1.3047	1.0422	421.2	1.3046	1.0422
110 / 383.15	463.0	1.4165	1.0506	463.1	1.4164	1.0505	463.2	1.4163	1.0505	463.2	1.4162	1.0504	463.3	1.4162	1.0504	463.4	1.4161	1.0503
120 / 393.15	505.3	1.5255	1.0593	505.4	1.5254	1.0592	505.5	1.5253	1.0592	505.5	1.5252	1.0591	505.6	1.5251	1.0591	505.7	1.5251	1.0590
130 / 403.15	547.8	1.6322	1.0687	547.9	1.6321	1.0686	548.0	1.6320	1.0685	548.0	1.6319	1.0685	548.1	1.6318	1.0684	548.2	1.6317	1.0684
140 / 413.15	590.5	1.7368	1.0787	590.6	1.7367	1.0786	590.6	1.7366	1.0785	590.7	1.7365	1.0785	590.8	1.7364	1.0784	590.8	1.7362	1.0783
150 / 423.15	633.4	1.8394	1.0894	633.5	1.8393	1.0893	633.5	1.8392	1.0892	633.6	1.8391	1.0892	633.7	1.8389	1.0891	633.7	1.8388	1.0890
160 / 433.15	676.6	1.9402	1.1008	676.6	1.9401	1.1008	676.7	1.9400	1.1007	676.8	1.9399	1.1006	676.8	1.9398	1.1005	676.9	1.9396	1.1005
170 / 443.15	720.1	2.0395	1.1131	720.1	2.0393	1.1130	720.2	2.0392	1.1129	720.2	2.0391	1.1128	720.3	2.0390	1.1128	720.3	2.0388	1.1127
180 / 453.15	763.9	2.1372	1.1262	763.9	2.1371	1.1261	764.0	2.1370	1.1260	764.0	2.1368	1.1260	764.1	2.1367	1.1259	764.1	2.1366	1.1258
190 / 463.15	808.1	2.2338	1.1403	808.1	2.2336	1.1402	808.2	2.2335	1.1401	808.2	2.2333	1.1400	808.3	2.2332	1.1400	808.3	2.2330	1.1399
200 / 473.15	852.8	2.3292	1.1555	852.8	2.3290	1.1554	852.8	2.3288	1.1553	852.9	2.3287	1.1552	852.9	2.3285	1.1551	853.0	2.3284	1.1550
210 / 483.15	897.9	2.4237	1.1719	898.0	2.4235	1.1718	898.0	2.4233	1.1717	898.0	2.4231	1.1716	898.1	2.4230	1.1715	898.1	2.4228	1.1714
220 / 493.15	943.7	2.5175	1.1897	943.8	2.5173	1.1896	943.8	2.5171	1.1895	943.8	2.5169	1.1893	943.8	2.5167	1.1892	943.9	2.5165	1.1891
230 / 503.15	2820.1	6.2920	81.628	2814.1	6.2642	77.957	2808.0	6.2369	74.549	990.3	2.6102	1.2087	990.3	2.6100	1.2086	990.3	2.6098	1.2084
240 / 513.15	2850.5	6.3517	84.364	2845.2	6.3253	80.640	2839.7	6.2993	77.185	2834.2	6.2738	73.970	2828.6	6.2488	70.969	2822.9	6.2241	68.162
250 / 523.15	2879.5	6.4077	86.985	2874.7	6.3823	83.205	2869.9	6.3575	79.698	2864.9	6.3331	76.437	2859.9	6.3092	73.395	2854.8	6.2857	70.551
260 / 533.15	2907.4	6.4605	89.511	2903.0	6.4360	85.671	2898.7	6.4120	82.111	2894.2	6.3886	78.800	2889.7	6.3657	75.714	2885.1	6.3432	72.829
270 / 543.15	2934.2	6.5104	91.957	2930.3	6.4867	88.055	2926.4	6.4635	84.439	2922.3	6.4408	81.077	2918.3	6.4187	77.943	2914.1	6.3970	75.015
280 / 553.15	2960.3	6.5580	94.335	2956.7	6.5348	90.370	2953.1	6.5123	86.695	2949.5	6.4903	83.280	2945.8	6.4689	80.098	2942.0	6.4479	77.124
290 / 563.15	2985.7	6.6034	96.654	2982.4	6.5808	92.625	2979.1	6.5588	88.891	2975.7	6.5374	85.421	2972.4	6.5166	82.189	2968.9	6.4962	79.169
300 / 573.15	3010.4	6.6470	98.925	3007.4	6.6249	94.830	3004.4	6.6034	91.036	3001.3	6.5824	87.510	2998.2	6.5621	84.226	2995.1	6.5422	81.159
310 / 583.15	3034.7	6.6890	101.15	3031.9	6.6673	96.992	3029.1	6.6462	93.136	3026.3	6.6256	89.554	3023.4	6.6057	86.218	3020.5	6.5862	83.102
320 / 593.15	3058.6	6.7296	103.35	3056.0	6.7082	99.117	3053.4	6.6874	95.199	3050.8	6.6672	91.560	3048.1	6.6476	88.170	3045.4	6.6285	85.005
330 / 603.15	3082.1	6.7689	105.51	3079.7	6.7478	101.21	3077.2	6.7273	97.229	3074.8	6.7074	93.532	3072.3	6.6881	90.089	3069.9	6.6694	86.874
340 / 613.15	3105.3	6.8071	107.64	3103.0	6.7862	103.28	3100.8	6.7660	99.232	3098.5	6.7464	95.476	3096.2	6.7273	91.978	3093.9	6.7088	88.713

350	623.15	3128.2	6.8442	109.75	3126.1	6.8236	105.32	3124.0	6.8036	101.21	3121.9	6.7842	97.395	3119.7	6.7654	93.843	3117.5	6.7471	90.526
360	633.15	3151.0	6.8804	111.84	3149.0	6.8600	107.34	3147.0	6.8402	103.17	3145.0	6.8210	99.293	3143.0	6.8024	95.685	3140.9	6.7844	92.318
370	643.15	3173.6	6.9158	113.91	3171.7	6.8956	109.34	3169.8	6.8759	105.10	3167.9	6.8570	101.17	3166.0	6.8385	97.508	3164.1	6.8207	94.089
380	653.15	3196.1	6.9505	115.97	3194.3	6.9304	111.33	3192.5	6.9109	107.03	3190.7	6.8921	103.03	3188.9	6.8738	99.315	3187.0	6.8561	95.844
390	663.15	3218.4	6.9845	118.01	3216.7	6.9644	113.30	3215.0	6.9451	108.93	3213.3	6.9264	104.88	3211.6	6.9083	101.11	3209.8	6.8907	97.584
400	673.15	3240.7	7.0178	120.04	3239.0	6.9979	115.26	3237.4	6.9787	110.83	3235.8	6.9601	106.71	3234.1	6.9421	102.88	3232.5	6.9246	99.310
410	683.15	3262.9	7.0505	122.06	3261.3	7.0307	117.21	3259.8	7.0116	112.71	3258.2	6.9931	108.54	3256.6	6.9753	104.65	3255.1	6.9579	101.02
420	693.15	3285.0	7.0827	124.07	3283.5	7.0630	119.14	3282.0	7.0440	114.58	3280.5	7.0256	110.35	3279.0	7.0078	106.41	3277.5	6.9906	102.73
430	703.15	3307.1	7.1143	126.07	3305.7	7.0947	121.07	3304.3	7.0758	116.45	3302.8	7.0575	112.15	3301.4	7.0398	108.15	3299.9	7.0227	104.42
440	713.15	3329.2	7.1455	128.06	3327.8	7.1260	122.99	3326.5	7.1072	118.30	3325.1	7.0890	113.95	3323.7	7.0713	109.89	3322.3	7.0543	106.11
450	723.15	3351.3	7.1763	130.04	3349.9	7.1568	124.91	3348.6	7.1381	120.15	3347.3	7.1199	115.74	3346.0	7.1024	111.62	3344.6	7.0854	107.79
460	733.15	3373.3	7.2066	132.02	3372.1	7.1872	126.81	3370.8	7.1685	121.99	3369.5	7.1504	117.52	3368.2	7.1329	113.35	3367.0	7.1160	109.46
470	743.15	3395.4	7.2365	133.99	3394.2	7.2172	128.71	3393.0	7.1985	123.83	3391.7	7.1805	119.29	3390.5	7.1631	115.07	3389.3	7.1462	111.12
480	753.15	3417.5	7.2660	135.96	3416.3	7.2467	130.61	3415.1	7.2282	125.66	3413.9	7.2102	121.06	3412.8	7.1928	116.78	3411.6	7.1760	112.78
490	763.15	3439.6	7.2952	137.92	3438.5	7.2760	132.50	3437.3	7.2574	127.48	3436.2	7.2395	122.82	3435.0	7.2222	118.48	3433.9	7.2054	114.43
500	773.15	3461.7	7.3240	139.87	3460.6	7.3048	134.38	3459.5	7.2863	129.30	3458.4	7.2685	124.58	3457.3	7.2512	120.18	3456.2	7.2345	116.08
510	783.15	3483.9	7.3525	141.82	3482.8	7.3333	136.26	3481.8	7.3149	131.11	3480.7	7.2971	126.33	3479.6	7.2799	121.88	3478.5	7.2632	117.72
520	793.15	3506.1	7.3806	143.77	3505.1	7.3615	138.14	3504.0	7.3431	132.92	3503.0	7.3254	128.08	3501.9	7.3082	123.57	3500.9	7.2916	119.36
530	803.15	3528.3	7.4085	145.71	3527.3	7.3894	140.01	3526.3	7.3711	134.73	3525.3	7.3533	129.82	3524.3	7.3362	125.26	3523.3	7.3196	121.00
540	813.15	3550.6	7.4360	147.65	3549.6	7.4170	141.87	3548.6	7.3987	136.53	3547.6	7.3810	131.56	3546.7	7.3639	126.94	3545.7	7.3474	122.63
550	823.15	3572.9	7.4633	149.58	3571.9	7.4443	143.74	3571.0	7.4260	138.33	3570.0	7.4084	133.30	3569.1	7.3913	128.62	3568.1	7.3748	124.26
560	833.15	3595.2	7.4903	151.51	3594.3	7.4713	145.60	3593.4	7.4531	140.12	3592.5	7.4355	135.03	3591.5	7.4184	130.30	3590.6	7.4020	125.88
570	843.15	3617.6	7.5170	153.44	3616.7	7.4981	147.45	3615.8	7.4799	141.91	3614.9	7.4623	136.76	3614.0	7.4453	131.97	3613.2	7.4288	127.50
580	853.15	3640.1	7.5434	155.37	3639.2	7.5246	149.31	3638.3	7.5064	143.70	3637.5	7.4888	138.49	3636.6	7.4719	133.64	3635.7	7.4554	129.12
590	863.15	3662.6	7.5697	157.29	3661.7	7.5508	151.16	3660.9	7.5326	145.48	3660.0	7.5151	140.22	3659.2	7.4982	135.31	3658.3	7.4818	130.73
600	873.15	3685.1	7.5956	159.21	3684.3	7.5768	153.01	3683.5	7.5587	147.27	3682.6	7.5412	141.94	3681.8	7.5243	136.97	3681.0	7.5079	132.34
610	883.15	3707.7	7.6213	161.12	3706.9	7.6025	154.85	3706.1	7.5844	149.05	3705.3	7.5670	143.65	3704.5	7.5501	138.64	3703.7	7.5338	133.95
620	893.15	3730.3	7.6468	163.04	3729.6	7.6281	156.69	3728.8	7.6100	150.82	3728.0	7.5925	145.37	3727.2	7.5757	140.29	3726.5	7.5594	135.56
630	903.15	3753.0	7.6721	164.95	3752.3	7.6534	158.53	3751.5	7.6353	152.60	3750.8	7.6179	147.08	3750.0	7.6010	141.95	3749.3	7.5848	137.16
640	913.15	3775.8	7.6971	166.86	3775.0	7.6784	160.37	3774.3	7.6604	154.37	3773.6	7.6430	148.79	3772.8	7.6262	143.60	3772.1	7.6099	138.76
650	923.15	3798.6	7.7220	168.76	3797.9	7.7033	162.21	3797.1	7.6853	156.14	3796.4	7.6679	150.50	3795.7	7.6511	145.26	3795.0	7.6349	140.36
660	933.15	3821.4	7.7466	170.67	3820.7	7.7279	164.04	3820.0	7.7099	157.91	3819.3	7.6926	152.21	3818.6	7.6758	146.91	3818.0	7.6596	141.96
670	943.15	3844.3	7.7710	172.57	3843.6	7.7524	165.87	3843.0	7.7344	159.67	3842.3	7.7170	153.91	3841.6	7.7003	148.55	3841.0	7.6841	143.55
680	953.15	3867.3	7.7952	174.47	3866.6	7.7766	167.70	3866.0	7.7586	161.44	3865.3	7.7413	155.62	3864.7	7.7246	150.20	3864.0	7.7084	145.14
690	963.15	3890.3	7.8192	176.37	3889.7	7.8006	169.53	3889.0	7.7827	163.20	3888.4	7.7654	157.32	3887.7	7.7487	151.84	3887.1	7.7325	146.73
700	973.15	3913.4	7.8431	178.26	3912.7	7.8245	171.35	3912.1	7.8066	164.96	3911.5	7.7893	159.02	3910.9	7.7726	153.49	3910.3	7.7564	148.32
710	983.15	3936.5	7.8667	180.16	3935.9	7.8481	173.18	3935.3	7.8302	166.71	3934.7	7.8130	160.71	3934.1	7.7963	155.13	3933.5	7.7802	149.91
720	993.15	3959.7	7.8902	182.05	3959.1	7.8716	175.00	3958.5	7.8537	168.47	3957.9	7.8365	162.41	3957.3	7.8198	156.76	3956.7	7.8037	151.50
730	1003.15	3982.9	7.9134	183.94	3982.3	7.8949	176.82	3981.8	7.8770	170.22	3981.2	7.8598	164.10	3980.6	7.8432	158.40	3980.0	7.8271	153.08
740	1013.15	4006.2	7.9365	185.83	4005.6	7.9180	178.64	4005.1	7.9002	171.98	4004.5	7.8829	165.79	4004.0	7.8663	160.04	4003.4	7.8502	154.66
750	1023.15	4029.5	7.9595	187.72	4029.0	7.9409	180.46	4028.4	7.9231	173.73	4027.9	7.9059	167.48	4027.4	7.8893	161.67	4026.8	7.8733	156.24
760	1033.15	4052.9	7.9822	189.61	4052.4	7.9637	182.27	4051.9	7.9459	175.48	4051.4	7.9287	169.17	4050.8	7.9121	163.30	4050.3	7.8961	157.82
770	1043.15	4076.4	8.0048	191.49	4075.9	7.9863	184.09	4075.4	7.9685	177.23	4074.8	7.9513	170.86	4074.3	7.9348	164.93	4073.8	7.9187	159.40
780	1053.15	4099.9	8.0272	193.38	4099.4	8.0088	185.90	4098.9	7.9910	178.97	4098.4	7.9738	172.55	4097.9	7.9572	166.56	4097.4	7.9412	160.97
790	1063.15	4123.4	8.0495	195.26	4122.9	8.0310	187.71	4122.5	8.0133	180.72	4122.0	7.9961	174.23	4121.5	7.9796	168.19	4121.0	7.9636	162.55
800	1073.15	4147.0	8.0716	197.14	4146.6	8.0531	189.52	4146.1	8.0354	182.47	4145.6	8.0183	175.91	4145.2	8.0017	169.82	4144.7	7.9857	164.12

25 to 30 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		30			31			32			33			34			35		
t_s °C		233.8			235.7			237.4			239.2			240.9			242.5		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1008.3	2.6455	1.2163	1017.0	2.6622	1.2200	1025.4	2.6785	1.2237	1033.7	2.6945	1.2273	1041.8	2.7100	1.2310	1049.7	2.7252	1.2345
Sat. Vapour		2802.3	6.1838	66.632	2802.3	6.1710	64.473	2802.3	6.1585	62.443	2802.3	6.1463	60.533	2802.1	6.1345	58.731	2802.0	6.1229	57.028
t °C	T K																		
0	273.15	3.0	0.0001	0.99872	3.1	0.0001	0.99867	3.2	0.0001	0.99862	3.3	0.0001	0.99857	3.4	0.0001	0.99852	3.5	0.0001	0.99848
10	283.15	44.9	0.1507	0.99884	45.0	0.1507	0.99879	45.1	0.1507	0.99875	45.2	0.1507	0.99870	45.3	0.1507	0.99865	45.4	0.1507	0.99861
20	293.15	86.7	0.2957	1.0004	86.8	0.2957	1.0003	86.9	0.2956	1.0003	87.0	0.2956	1.0002	87.1	0.2956	1.0002	87.1	0.2956	1.0001
30	303.15	128.4	0.4356	1.0030	128.5	0.4356	1.0029	128.6	0.4355	1.0029	128.7	0.4355	1.0028	128.8	0.4355	1.0028	128.8	0.4354	1.0028
40	313.15	170.1	0.5709	1.0065	170.2	0.5709	1.0064	170.3	0.5709	1.0064	170.4	0.5708	1.0063	170.5	0.5708	1.0063	170.5	0.5708	1.0063
50	323.15	211.8	0.7021	1.0108	211.9	0.7021	1.0107	212.0	0.7020	1.0107	212.1	0.7020	1.0106	212.2	0.7019	1.0106	212.3	0.7019	1.0106
60	333.15	253.6	0.8294	1.0158	253.7	0.8293	1.0157	253.8	0.8293	1.0157	253.8	0.8292	1.0157	253.9	0.8292	1.0156	254.0	0.8291	1.0156
70	343.15	295.4	0.9530	1.0215	295.5	0.9530	1.0214	295.6	0.9529	1.0214	295.6	0.9529	1.0213	295.7	0.9528	1.0213	295.8	0.9527	1.0212
80	353.15	337.3	1.0733	1.0278	337.3	1.0732	1.0277	337.4	1.0732	1.0277	337.5	1.0731	1.0276	337.6	1.0730	1.0276	337.7	1.0730	1.0275
90	363.15	379.2	1.1904	1.0347	379.3	1.1903	1.0346	379.4	1.1903	1.0346	379.4	1.1902	1.0345	379.5	1.1901	1.0345	379.6	1.1900	1.0344
100	373.15	421.2	1.3046	1.0422	421.3	1.3045	1.0421	421.4	1.3044	1.0421	421.5	1.3044	1.0420	421.5	1.3043	1.0420	421.6	1.3042	1.0419
110	383.15	463.4	1.4161	1.0503	463.5	1.4160	1.0502	463.5	1.4159	1.0502	463.6	1.4158	1.0501	463.7	1.4157	1.0501	463.8	1.4157	1.0500
120	393.15	505.7	1.5251	1.0590	505.8	1.5250	1.0590	505.8	1.5249	1.0589	505.9	1.5248	1.0588	506.0	1.5247	1.0588	506.0	1.5246	1.0587
130	403.15	548.2	1.6317	1.0684	548.2	1.6316	1.0683	548.3	1.6315	1.0682	548.4	1.6314	1.0682	548.4	1.6313	1.0681	548.5	1.6312	1.0681
140	413.15	590.8	1.7362	1.0783	590.9	1.7361	1.0783	591.0	1.7360	1.0782	591.0	1.7359	1.0782	591.1	1.7358	1.0781	591.1	1.7357	1.0780
150	423.15	633.7	1.8388	1.0890	633.8	1.8387	1.0890	633.8	1.8386	1.0889	633.9	1.8385	1.0888	634.0	1.8384	1.0888	634.0	1.8383	1.0887
160	433.15	676.9	1.9396	1.1005	676.9	1.9395	1.1004	677.0	1.9394	1.1003	677.0	1.9393	1.1002	677.1	1.9392	1.1002	677.2	1.9390	1.1001
170	443.15	720.3	2.0388	1.1127	720.4	2.0387	1.1126	720.4	2.0386	1.1125	720.5	2.0384	1.1125	720.6	2.0383	1.1124	720.6	2.0382	1.1123
180	453.15	764.1	2.1366	1.1258	764.2	2.1364	1.1257	764.2	2.1363	1.1256	764.3	2.1362	1.1255	764.3	2.1360	1.1254	764.4	2.1359	1.1254
190	463.15	808.3	2.2330	1.1399	808.4	2.2329	1.1398	808.4	2.2327	1.1397	808.5	2.2326	1.1396	808.5	2.2324	1.1395	808.6	2.2323	1.1394
200	473.15	853.0	2.3284	1.1550	853.0	2.3282	1.1549	853.0	2.3281	1.1548	853.1	2.3279	1.1547	853.1	2.3277	1.1546	853.2	2.3276	1.1545
210	483.15	898.1	2.4228	1.1714	898.1	2.4226	1.1712	898.2	2.4225	1.1711	898.2	2.4223	1.1710	898.3	2.4221	1.1709	898.3	2.4220	1.1708
220	493.15	943.9	2.5165	1.1891	943.9	2.5163	1.1890	943.9	2.5162	1.1888	943.9	2.5160	1.1887	944.0	2.5158	1.1886	944.0	2.5156	1.1885
230	503.15	990.3	2.6098	1.2084	990.3	2.6096	1.2083	990.3	2.6094	1.2081	990.4	2.6092	1.2080	990.4	2.6090	1.2079	990.4	2.6088	1.2077
240	513.15	2822.9	6.2241	68.162	2817.1	6.1997	65.530	2811.2	6.1757	63.055	2805.1	6.1519	60.723	1037.6	2.7019	1.2290	1037.6	2.7017	1.2288
250	523.15	2854.8	6.2857	70.551	2849.6	6.2626	67.885	2844.4	6.2398	65.380	2839.0	6.2173	63.021	2833.6	6.1951	60.796	2828.1	6.1732	58.693
260	533.15	2885.1	6.3432	72.829	2880.5	6.3211	70.125	2875.8	6.2993	67.587	2871.0	6.2779	65.198	2866.2	6.2568	62.945	2861.3	6.2360	60.818
270	543.15	2914.1	6.3970	75.015	2910.0	6.3758	72.272	2905.7	6.3549	69.697	2901.4	6.3344	67.275	2897.1	6.3143	64.992	2892.7	6.2944	62.836
280	553.15	2942.0	6.4479	77.124	2938.2	6.4274	74.340	2934.4	6.4072	71.727	2930.5	6.3875	69.269	2926.6	6.3681	66.954	2922.6	6.3490	64.768
290	563.15	2968.9	6.4962	79.169	2965.5	6.4762	76.342	2962.0	6.4567	73.689	2958.5	6.4376	71.194	2954.9	6.4188	68.844	2951.3	6.4004	66.626
300	573.15	2995.1	6.5422	81.159	2991.9	6.5227	78.287	2988.7	6.5037	75.592	2985.5	6.4851	73.061	2982.2	6.4669	70.675	2979.0	6.4491	68.424
310	583.15	3020.5	6.5862	83.102	3017.6	6.5672	80.185	3014.7	6.5487	77.449	3011.7	6.5305	74.878	3008.7	6.5128	72.456	3005.7	6.4954	70.171
320	593.15	3045.4	6.6285	85.005	3042.7	6.6099	82.043	3040.0	6.5917	79.264	3037.3	6.5740	76.652	3034.5	6.5566	74.193	3031.8	6.5396	71.873
330	603.15	3069.9	6.6694	86.874	3067.4	6.6511	83.865	3064.8	6.6332	81.043	3062.3	6.6158	78.391	3059.7	6.5988	75.894	3057.2	6.5821	73.538
340	613.15	3093.9	6.7088	88.713	3091.5	6.6908	85.657	3089.2	6.6733	82.791	3086.8	6.6561	80.098	3084.4	6.6394	77.563	3082.0	6.6230	75.171

350	633.15	3117.5	6.7471	90.526	3115.4	6.7294	87.423	3113.2	6.7120	84.513	3110.9	6.6952	81.778	3108.7	6.6787	79.204	3106.5	6.6626	76.776
360	633.15	3140.9	6.7844	92.318	3138.9	6.7668	89.167	3136.8	6.7497	86.212	3134.7	6.7330	83.435	3132.7	6.7168	80.822	3130.6	6.7009	78.357
370	643.15	3164.1	6.8207	94.089	3162.1	6.8033	90.890	3160.2	6.7863	87.890	3158.2	6.7699	85.072	3156.3	6.7538	82.419	3154.3	6.7381	79.916
380	653.15	3187.0	6.8561	95.844	3185.2	6.8388	92.597	3183.4	6.8221	89.552	3181.5	6.8058	86.691	3179.7	6.7899	83.998	3177.8	6.7744	81.458
390	663.15	3209.8	6.8907	97.584	3208.1	6.8736	94.288	3206.4	6.8570	91.197	3204.6	6.8408	88.294	3202.8	6.8251	85.561	3201.1	6.8097	82.983
400	673.15	3232.5	6.9246	99.310	3230.8	6.9077	95.965	3229.2	6.8912	92.829	3227.5	6.8752	89.883	3225.9	6.8595	87.110	3224.2	6.8443	84.494
410	683.15	3255.1	6.9579	101.02	3253.5	6.9411	97.631	3251.9	6.9247	94.449	3250.3	6.9088	91.460	3248.7	6.8933	88.646	3247.1	6.8781	85.993
420	693.15	3277.5	6.9906	102.73	3276.0	6.9738	99.286	3274.5	6.9576	96.058	3273.0	6.9417	93.026	3271.5	6.9263	90.172	3270.0	6.9113	87.480
430	703.15	3299.9	7.0227	104.42	3298.5	7.0060	100.93	3297.1	6.9898	97.657	3295.6	6.9741	94.582	3294.2	6.9588	91.687	3292.7	6.9439	88.958
440	713.15	3322.3	7.0543	106.11	3320.9	7.0377	102.57	3319.5	7.0216	99.248	3318.2	7.0060	96.129	3316.8	6.9907	93.194	3315.4	6.9759	90.426
450	723.15	3344.6	7.0854	107.79	3343.3	7.0689	104.20	3342.0	7.0528	100.83	3340.6	7.0373	97.668	3339.3	7.0221	94.692	3338.0	7.0074	91.886
460	733.15	3367.0	7.1160	109.46	3365.7	7.0996	105.82	3364.4	7.0836	102.41	3363.1	7.0681	99.200	3361.8	7.0530	96.183	3360.5	7.0384	93.339
470	743.15	3389.3	7.1462	111.12	3388.0	7.1298	107.43	3386.8	7.1140	103.97	3385.6	7.0985	100.73	3384.3	7.0835	97.668	3383.1	7.0689	94.785
480	753.15	3411.6	7.1760	112.78	3410.4	7.1597	109.04	3409.2	7.1439	105.54	3408.0	7.1285	102.25	3406.8	7.1135	99.146	3405.6	7.0990	96.225
490	763.15	3433.9	7.2054	114.43	3432.7	7.1892	110.65	3431.6	7.1734	107.09	3430.4	7.1581	103.76	3429.2	7.1432	100.62	3428.1	7.1287	97.659
500	773.15	3456.2	7.2345	116.08	3455.1	7.2183	112.24	3454.0	7.2026	108.65	3452.8	7.1873	105.27	3451.7	7.1724	102.09	3450.6	7.1580	99.088
510	783.15	3478.5	7.2632	117.72	3477.4	7.2470	113.84	3476.4	7.2314	110.19	3475.3	7.2161	106.77	3474.2	7.2013	103.55	3473.1	7.1869	100.51
520	793.15	3500.9	7.2916	119.36	3499.8	7.2755	115.43	3498.8	7.2598	111.74	3497.7	7.2446	108.27	3496.7	7.2299	105.01	3495.6	7.2155	101.93
530	803.15	3523.3	7.3196	121.00	3522.3	7.3035	117.01	3521.2	7.2879	113.28	3520.2	7.2728	109.77	3519.2	7.2581	106.46	3518.2	7.2438	103.35
540	813.15	3545.7	7.3474	122.63	3544.7	7.3313	118.59	3543.7	7.3158	114.81	3542.7	7.3007	111.26	3541.8	7.2860	107.91	3540.8	7.2717	104.76
550	823.15	3568.1	7.3748	124.26	3567.2	7.3588	120.17	3566.2	7.3433	116.34	3565.3	7.3282	112.74	3564.3	7.3136	109.36	3563.4	7.2993	106.17
560	833.15	3590.6	7.4020	125.88	3589.7	7.3860	121.74	3588.8	7.3705	117.87	3587.8	7.3555	114.23	3586.9	7.3408	110.80	3586.0	7.3266	107.57
570	843.15	3613.2	7.4288	127.50	3612.3	7.4129	123.32	3611.4	7.3974	119.39	3610.5	7.3824	115.71	3609.6	7.3679	112.24	3608.7	7.3537	108.97
580	853.15	3635.7	7.4554	129.12	3634.8	7.4395	124.88	3634.0	7.4241	120.91	3633.1	7.4091	117.19	3632.2	7.3946	113.68	3631.4	7.3804	110.37
590	863.15	3658.3	7.4818	130.73	3657.5	7.4659	126.45	3656.6	7.4505	122.43	3655.8	7.4356	118.66	3654.9	7.4211	115.11	3654.1	7.4069	111.76
600	873.15	3681.0	7.5079	132.34	3680.2	7.4920	128.01	3679.3	7.4767	123.95	3678.5	7.4618	120.13	3677.7	7.4473	116.54	3676.9	7.4332	113.15
610	883.15	3703.7	7.5338	133.95	3702.9	7.5179	129.57	3702.1	7.5026	125.46	3701.3	7.4877	121.60	3700.5	7.4732	117.97	3699.7	7.4592	114.54
620	893.15	3726.5	7.5594	135.56	3725.7	7.5436	131.12	3724.9	7.5283	126.97	3724.1	7.5134	123.07	3723.3	7.4989	119.39	3722.6	7.4849	115.93
630	903.15	3749.3	7.5848	137.16	3748.5	7.5690	132.68	3747.7	7.5537	128.48	3747.0	7.5388	124.53	3746.2	7.5244	120.82	3745.5	7.5104	117.31
640	913.15	3772.1	7.6099	138.76	3771.4	7.5942	134.23	3770.6	7.5789	129.98	3769.9	7.5641	125.99	3769.2	7.5497	122.24	3768.4	7.5357	118.69
650	923.15	3795.0	7.6349	140.36	3794.3	7.6191	135.78	3793.6	7.6039	131.48	3792.9	7.5891	127.45	3792.1	7.5747	123.65	3791.4	7.5607	120.07
660	933.15	3818.0	7.6596	141.96	3817.3	7.6439	137.33	3816.6	7.6287	132.99	3815.9	7.6139	128.91	3815.2	7.5995	125.07	3814.5	7.5856	121.45
670	943.15	3841.0	7.6841	143.55	3840.3	7.6684	138.87	3839.6	7.6532	134.48	3838.9	7.6385	130.36	3838.3	7.6241	126.48	3837.6	7.6102	122.83
680	953.15	3864.0	7.7084	145.14	3863.3	7.6928	140.41	3862.7	7.6776	135.98	3862.0	7.6628	131.81	3861.4	7.6485	127.89	3860.7	7.6346	124.20
690	963.15	3887.1	7.7325	146.73	3886.5	7.7169	141.96	3885.8	7.7017	137.47	3885.2	7.6870	133.27	3884.6	7.6727	129.30	3883.9	7.6588	125.57
700	973.15	3910.3	7.7564	148.32	3909.6	7.7408	143.49	3909.0	7.7257	138.97	3908.4	7.7110	134.71	3907.8	7.6967	130.71	3907.2	7.6828	126.94
710	983.15	3933.5	7.7802	149.91	3932.9	7.7646	145.03	3932.3	7.7494	140.46	3931.7	7.7348	136.16	3931.1	7.7205	132.12	3930.5	7.7066	128.31
720	993.15	3956.7	7.8037	151.50	3956.1	7.7881	146.57	3955.6	7.7730	141.95	3955.0	7.7583	137.61	3954.4	7.7441	133.52	3953.8	7.7303	129.67
730	1003.15	3980.0	7.8271	153.08	3979.5	7.8115	148.10	3978.9	7.7964	143.43	3978.3	7.7818	139.05	3977.8	7.7675	134.92	3977.2	7.7537	131.03
740	1013.15	4003.4	7.8502	154.66	4002.9	7.8347	149.63	4002.3	7.8196	144.92	4001.8	7.8050	140.49	4001.2	7.7908	136.33	4000.6	7.7770	132.40
750	1023.15	4026.8	7.8733	156.24	4026.3	7.8577	151.16	4025.8	7.8426	146.40	4025.2	7.8280	141.93	4024.7	7.8138	137.73	4024.1	7.8000	133.76
760	1033.15	4050.3	7.8961	157.82	4049.8	7.8805	152.69	4049.3	7.8655	147.89	4048.7	7.8509	143.37	4048.2	7.8367	139.12	4047.7	7.8229	135.12
770	1043.15	4073.8	7.9187	159.40	4073.3	7.9032	154.22	4072.8	7.8882	149.37	4072.3	7.8736	144.81	4071.8	7.8594	140.52	4071.3	7.8457	136.47
780	1053.15	4097.4	7.9412	160.97	4096.9	7.9257	155.75	4096.4	7.9107	150.85	4095.9	7.8961	146.25	4095.4	7.8820	141.92	4094.9	7.8682	137.83
790	1063.15	4121.0	7.9636	162.55	4120.5	7.9481	157.27	4120.1	7.9331	152.33	4119.6	7.9185	147.68	4119.1	7.9044	143.31	4118.6	7.8906	139.19
800	1073.15	4144.7	7.9857	164.12	4144.2	7.9702	158.80	4143.8	7.9552	153.81	4143.3	7.9407	149.12	4142.8	7.9266	144.70	4142.4	7.9128	140.54

30 to 35 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		35			36			37			38			39			40		
t_s °C		242.5			244.2			245.8			247.3			248.8			250.3		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1049.7	2.7252	1.2345	1057.5	2.7401	1.2381	1065.2	2.7547	1.2416	1072.7	2.7689	1.2451	1080.1	2.7828	1.2486	1087.4	2.7965	1.2521
Sat. Vapour		2802.0	6.1229	57.028	2801.7	6.1115	55.417	2801.4	6.1004	53.889	2801.1	6.0896	52.439	2800.8	6.0789	51.061	2800.3	6.0685	49.749
t °C	T K																		
0	273.15	3.5	0.0001	0.99848	3.6	0.0001	0.99843	3.7	0.0001	0.99838	3.8	0.0001	0.99833	3.9	0.0002	0.99828	4.0	0.0002	0.99823
10	283.15	45.4	0.1507	0.99861	45.5	0.1507	0.99856	45.6	0.1507	0.99851	45.7	0.1507	0.99846	45.8	0.1507	0.99842	45.9	0.1506	0.99837
20	293.15	87.1	0.2956	1.0001	87.2	0.2955	1.0001	87.3	0.2955	1.0000	87.4	0.2955	1.0000	87.5	0.2955	0.99996	87.6	0.2955	0.99991
30	303.15	128.8	0.4354	1.0028	128.9	0.4354	1.0027	129.0	0.4354	1.0027	129.1	0.4353	1.0026	129.2	0.4353	1.0026	129.3	0.4353	1.0025
40	313.15	170.5	0.5708	1.0063	170.6	0.5707	1.0062	170.7	0.5707	1.0062	170.8	0.5706	1.0061	170.9	0.5706	1.0061	171.0	0.5706	1.0060
50	323.15	212.3	0.7019	1.0106	212.3	0.7018	1.0105	212.4	0.7018	1.0105	212.5	0.7017	1.0104	212.6	0.7017	1.0104	212.7	0.7017	1.0103
60	333.15	254.0	0.8291	1.0156	254.1	0.8291	1.0155	254.2	0.8290	1.0155	254.3	0.8290	1.0154	254.3	0.8289	1.0154	254.4	0.8289	1.0153
70	343.15	295.8	0.9527	1.0212	295.9	0.9527	1.0212	296.0	0.9526	1.0211	296.0	0.9526	1.0211	296.1	0.9525	1.0210	296.2	0.9524	1.0210
80	353.15	337.7	1.0730	1.0275	337.7	1.0729	1.0275	337.8	1.0728	1.0274	337.9	1.0728	1.0274	338.0	1.0727	1.0273	338.1	1.0726	1.0273
90	363.15	379.6	1.1900	1.0344	379.7	1.1900	1.0344	379.7	1.1899	1.0343	379.8	1.1898	1.0343	379.9	1.1898	1.0342	380.0	1.1897	1.0342
100	373.15	421.6	1.3042	1.0419	421.7	1.3041	1.0419	421.8	1.3041	1.0418	421.8	1.3040	1.0418	421.9	1.3039	1.0417	422.0	1.3038	1.0417
110	383.15	463.8	1.4157	1.0500	463.8	1.4156	1.0500	463.9	1.4155	1.0499	464.0	1.4154	1.0499	464.0	1.4153	1.0498	464.1	1.4152	1.0498
120	393.15	506.0	1.5246	1.0587	506.1	1.5245	1.0587	506.2	1.5244	1.0586	506.3	1.5243	1.0586	506.3	1.5242	1.0585	506.4	1.5242	1.0584
130	403.15	548.5	1.6312	1.0681	548.6	1.6311	1.0680	548.6	1.6310	1.0679	548.7	1.6309	1.0679	548.8	1.6308	1.0678	548.8	1.6307	1.0677
140	413.15	591.1	1.7357	1.0780	591.2	1.7356	1.0780	591.3	1.7355	1.0779	591.3	1.7354	1.0778	591.4	1.7353	1.0778	591.5	1.7352	1.0777
150	423.15	634.0	1.8383	1.0887	634.1	1.8382	1.0886	634.1	1.8381	1.0886	634.2	1.8380	1.0885	634.3	1.8378	1.0884	634.3	1.8377	1.0883
160	433.15	677.2	1.9390	1.1001	677.2	1.9389	1.1000	677.3	1.9388	1.0999	677.3	1.9387	1.0999	677.4	1.9386	1.0998	677.5	1.9385	1.0997
170	443.15	720.6	2.0382	1.1123	720.7	2.0381	1.1122	720.7	2.0379	1.1121	720.8	2.0378	1.1121	720.8	2.0377	1.1120	720.9	2.0376	1.1119
180	453.15	764.4	2.1359	1.1254	764.4	2.1358	1.1253	764.5	2.1356	1.1252	764.5	2.1355	1.1251	764.6	2.1353	1.1250	764.6	2.1352	1.1249
190	463.15	808.6	2.2323	1.1394	808.6	2.2322	1.1393	808.6	2.2320	1.1392	808.7	2.2319	1.1391	808.7	2.2317	1.1390	808.8	2.2316	1.1389
200	473.15	853.2	2.3276	1.1545	853.2	2.3274	1.1544	853.2	2.3273	1.1543	853.3	2.3271	1.1542	853.3	2.3270	1.1541	853.4	2.3268	1.1540
210	483.15	898.3	2.4220	1.1708	898.3	2.4218	1.1707	898.4	2.4216	1.1706	898.4	2.4215	1.1704	898.4	2.4213	1.1703	898.5	2.4211	1.1702
220	493.15	944.0	2.5156	1.1885	944.0	2.5154	1.1883	944.1	2.5152	1.1882	944.1	2.5151	1.1881	944.1	2.5149	1.1880	944.1	2.5147	1.1878
230	503.15	990.4	2.6088	1.2077	990.4	2.6085	1.2076	990.4	2.6083	1.2074	990.5	2.6081	1.2073	990.5	2.6079	1.2072	990.5	2.6077	1.2070
240	513.15	1037.6	2.7017	1.2288	1037.6	2.7014	1.2287	1037.6	2.7012	1.2285	1037.6	2.7010	1.2284	1037.7	2.7008	1.2282	1037.7	2.7006	1.2280
250	523.15	2828.1	6.1732	58.693	2822.5	6.1514	56.702	2816.8	6.1299	54.812	2811.0	6.1085	53.017	2805.1	6.0872	51.308	1085.8	2.7934	1.2512
260	533.15	2861.3	6.2360	60.818	2856.3	6.2155	58.804	2851.3	6.1951	56.895	2846.1	6.1750	55.082	2840.9	6.1551	53.358	2835.6	6.1353	51.716
270	543.15	2892.7	6.2944	62.836	2888.2	6.2748	60.797	2883.7	6.2555	58.864	2879.1	6.2364	57.030	2874.5	6.2175	55.287	2869.8	6.1988	53.628
280	553.15	2922.6	6.3490	64.768	2918.6	6.3302	62.700	2914.5	6.3117	60.742	2910.4	6.2935	58.885	2906.3	6.2754	57.120	2902.0	6.2576	55.441
290	563.15	2951.3	6.4004	66.626	2947.7	6.3823	64.530	2944.0	6.3645	62.544	2940.3	6.3469	60.661	2936.5	6.3296	58.872	2932.7	6.3126	57.171
300	573.15	2979.0	6.4491	68.424	2975.6	6.4315	66.297	2972.3	6.4143	64.282	2968.9	6.3973	62.372	2965.5	6.3806	60.558	2962.0	6.3642	58.833
310	583.15	3005.7	6.4954	70.171	3002.7	6.4783	68.011	2999.6	6.4615	65.967	2996.5	6.4451	64.029	2993.4	6.4289	62.188	2990.2	6.4130	60.439
320	593.15	3031.8	6.5396	71.873	3028.9	6.5230	69.681	3026.1	6.5066	67.606	3023.3	6.4906	65.639	3020.4	6.4748	63.771	3017.5	6.4593	61.996
330	603.15	3057.2	6.5821	73.538	3054.6	6.5658	71.312	3052.0	6.5498	69.206	3049.3	6.5341	67.209	3046.7	6.5187	65.314	3044.0	6.5036	63.513
340	613.15	3082.0	6.6230	75.171	3079.6	6.6070	72.911	3077.2	6.5913	70.773	3074.8	6.5760	68.746	3072.3	6.5609	66.823	3069.8	6.5461	64.994

350	623.15	3106.5	6.6626	76.776	3104.2	6.6468	74.482	3102.0	6.6314	72.311	3099.7	6.6163	70.254	3097.4	6.6015	68.302	3095.1	6.5870	66.446
360	633.15	3130.6	6.7009	78.357	3128.4	6.6854	76.028	3126.3	6.6702	73.825	3124.2	6.6553	71.736	3122.0	6.6408	69.755	3119.9	6.6265	67.872
370	643.15	3154.3	6.7381	79.916	3152.3	6.7228	77.553	3150.3	6.7078	75.316	3148.3	6.6931	73.197	3146.3	6.6788	71.186	3144.3	6.6647	69.275
380	653.15	3177.8	6.7744	81.458	3175.9	6.7592	79.059	3174.1	6.7444	76.789	3172.2	6.7299	74.638	3170.3	6.7157	72.597	3168.4	6.7019	70.658
390	663.15	3201.1	6.8097	82.983	3199.3	6.7947	80.549	3197.5	6.7801	78.245	3195.7	6.7657	76.063	3194.0	6.7517	73.992	3192.1	6.7380	72.024
400	673.15	3224.2	6.8443	84.494	3222.5	6.8294	82.024	3220.8	6.8149	79.687	3219.1	6.8007	77.473	3217.4	6.7868	75.372	3215.7	6.7733	73.376
410	683.15	3247.1	6.8781	85.993	3245.5	6.8634	83.487	3243.9	6.8490	81.116	3242.3	6.8349	78.870	3240.7	6.8212	76.738	3239.1	6.8077	74.713
420	693.15	3270.0	6.9113	87.480	3268.4	6.8967	84.938	3266.9	6.8824	82.533	3265.4	6.8684	80.255	3263.8	6.8548	78.093	3262.3	6.8414	76.039
430	703.15	3292.7	6.9439	88.958	3291.2	6.9293	86.379	3289.8	6.9152	83.941	3288.3	6.9013	81.630	3286.8	6.8877	79.437	3285.4	6.8745	77.355
440	713.15	3315.4	6.9759	90.426	3314.0	6.9614	87.812	3312.6	6.9473	85.339	3311.2	6.9336	82.995	3309.7	6.9201	80.772	3308.3	6.9069	78.660
450	723.15	3338.0	7.0074	91.886	3336.6	6.9930	89.236	3335.3	6.9790	86.728	3333.9	6.9653	84.353	3332.6	6.9519	82.099	3331.2	6.9388	79.958
460	733.15	3360.5	7.0384	93.339	3359.2	7.0241	90.652	3357.9	7.0101	88.110	3356.6	6.9965	85.702	3355.3	6.9832	83.418	3354.0	6.9702	81.247
470	743.15	3383.1	7.0689	94.785	3381.8	7.0546	92.062	3380.6	7.0408	89.486	3379.3	7.0272	87.045	3378.1	7.0140	84.730	3376.8	7.0010	82.530
480	753.15	3405.6	7.0990	96.225	3404.4	7.0848	93.465	3403.2	7.0710	90.855	3402.0	7.0575	88.382	3400.8	7.0443	86.035	3399.6	7.0314	83.806
490	763.15	3428.1	7.1287	97.659	3426.9	7.1145	94.863	3425.8	7.1008	92.218	3424.6	7.0873	89.712	3423.4	7.0742	87.335	3422.3	7.0614	85.076
500	773.15	3450.6	7.1580	99.088	3449.5	7.1439	96.255	3448.4	7.1302	93.576	3447.2	7.1168	91.038	3446.1	7.1037	88.629	3445.0	7.0909	86.341
510	783.15	3473.1	7.1869	100.51	3472.0	7.1729	97.643	3470.9	7.1592	94.929	3469.9	7.1459	92.358	3468.8	7.1328	89.919	3467.7	7.1201	87.601
520	793.15	3495.6	7.2155	101.93	3494.6	7.2015	99.026	3493.5	7.1879	96.277	3492.5	7.1746	93.674	3491.4	7.1616	91.203	3490.4	7.1489	88.857
530	803.15	3518.2	7.2438	103.35	3517.2	7.2298	100.40	3516.2	7.2162	97.622	3515.1	7.2030	94.985	3514.1	7.1900	92.484	3513.1	7.1774	90.108
540	813.15	3540.8	7.2717	104.76	3539.8	7.2578	101.78	3538.8	7.2442	98.962	3537.8	7.2310	96.293	3536.8	7.2181	93.760	3535.8	7.2055	91.354
550	823.15	3563.4	7.2993	106.17	3562.4	7.2854	103.15	3561.5	7.2719	100.30	3560.5	7.2587	97.596	3559.5	7.2459	95.033	3558.6	7.2333	92.598
560	833.15	3586.0	7.3266	107.57	3585.1	7.3128	104.52	3584.1	7.2993	101.63	3583.2	7.2862	98.896	3582.3	7.2733	96.302	3581.4	7.2608	93.837
570	843.15	3608.7	7.3537	108.97	3607.8	7.3399	105.88	3606.9	7.3264	102.96	3606.0	7.3133	100.19	3605.1	7.3005	97.567	3604.2	7.2880	95.073
580	853.15	3631.4	7.3804	110.37	3630.5	7.3667	107.24	3629.6	7.3532	104.29	3628.7	7.3402	101.49	3627.9	7.3274	98.830	3627.0	7.3149	96.306
590	863.15	3654.1	7.4069	111.76	3653.3	7.3932	108.60	3652.4	7.3798	105.61	3651.6	7.3667	102.78	3650.7	7.3540	100.09	3649.9	7.3416	97.536
600	873.15	3676.9	7.4332	113.15	3676.1	7.4195	109.96	3675.2	7.4061	106.93	3674.4	7.3931	104.06	3673.6	7.3804	101.35	3672.8	7.3680	98.763
610	883.15	3699.7	7.4592	114.54	3698.9	7.4455	111.31	3698.1	7.4321	108.25	3697.3	7.4191	105.35	3696.5	7.4065	102.60	3695.7	7.3941	99.987
620	893.15	3722.6	7.4849	115.93	3721.8	7.4712	112.66	3721.0	7.4579	109.56	3720.2	7.4450	106.63	3719.5	7.4323	103.85	3718.7	7.4200	101.21
630	903.15	3745.5	7.5104	117.31	3744.7	7.4968	114.01	3744.0	7.4835	110.88	3743.2	7.4705	107.91	3742.5	7.4579	105.10	3741.7	7.4456	102.43
640	913.15	3768.4	7.5357	118.69	3767.7	7.5221	115.35	3767.0	7.5088	112.19	3766.2	7.4959	109.19	3765.5	7.4833	106.35	3764.8	7.4710	103.64
650	923.15	3791.4	7.5607	120.07	3790.7	7.5471	116.69	3790.0	7.5339	113.49	3789.3	7.5210	110.46	3788.6	7.5084	107.59	3787.9	7.4961	104.86
660	933.15	3814.5	7.5856	121.45	3813.8	7.5720	118.03	3813.1	7.5588	114.80	3812.4	7.5459	111.74	3811.7	7.5333	108.83	3811.0	7.5211	106.07
670	943.15	3837.6	7.6102	122.83	3836.9	7.5966	119.37	3836.2	7.5834	116.10	3835.6	7.5706	113.01	3834.9	7.5580	110.07	3834.2	7.5458	107.28
680	953.15	3860.7	7.6346	124.20	3860.1	7.6211	120.71	3859.4	7.6079	117.40	3858.8	7.5951	114.28	3858.1	7.5825	111.31	3857.4	7.5703	108.49
690	963.15	3883.9	7.6588	125.57	3883.3	7.6453	122.04	3882.6	7.6321	118.70	3882.0	7.6193	115.54	3881.4	7.6068	112.54	3880.7	7.5946	109.70
700	973.15	3907.2	7.6828	126.94	3906.5	7.6693	123.37	3905.9	7.6562	120.00	3905.3	7.6434	116.81	3904.7	7.6309	113.78	3904.1	7.6187	110.90
710	983.15	3930.5	7.7066	128.31	3929.9	7.6932	124.70	3929.3	7.6800	121.30	3928.7	7.6673	118.07	3928.0	7.6548	115.01	3927.4	7.6426	112.10
720	993.15	3953.8	7.7303	129.67	3953.2	7.7168	126.03	3952.6	7.7037	122.59	3952.0	7.6909	119.33	3951.5	7.6785	116.24	3950.9	7.6663	113.30
730	1003.15	3977.2	7.7537	131.03	3976.6	7.7403	127.36	3976.1	7.7272	123.89	3975.5	7.7144	120.59	3974.9	7.7020	117.47	3974.4	7.6899	114.50
740	1013.15	4000.6	7.7770	132.40	4000.1	7.7635	128.69	3999.5	7.7505	125.18	3999.0	7.7377	121.85	3998.4	7.7253	118.70	3997.9	7.7132	115.70
750	1023.15	4024.1	7.8000	133.76	4023.6	7.7866	130.01	4023.1	7.7736	126.47	4022.5	7.7608	123.11	4022.0	7.7484	119.92	4021.4	7.7363	116.89
760	1033.15	4047.7	7.8229	135.12	4047.2	7.8095	131.33	4046.6	7.7965	127.75	4046.1	7.7838	124.36	4045.6	7.7714	121.15	4045.1	7.7593	118.09
770	1043.15	4071.3	7.8457	136.47	4070.8	7.8323	132.65	4070.3	7.8193	129.04	4069.8	7.8066	125.62	4069.2	7.7942	122.37	4068.7	7.7821	119.28
780	1053.15	4094.9	7.8682	137.83	4094.4	7.8549	133.97	4093.9	7.8418	130.33	4093.4	7.8292	126.87	4092.9	7.8168	123.59	4092.4	7.8047	120.47
790	1063.15	4118.6	7.8906	139.19	4118.1	7.8773	135.29	4117.7	7.8643	131.61	4117.2	7.8516	128.12	4116.7	7.8392	124.81	4116.2	7.8272	121.66
800	1073.15	4142.4	7.9128	140.54	4141.9	7.8995	136.61	4141.4	7.8865	132.89	4141.0	7.8739	129.37	4140.5	7.8615	126.03	4140.0	7.8495	122.85

35 to 40 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		40			41			42			43			44			45		
t_s °C		250.3			251.8			253.2			254.7			256.0			257.4		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1087.4	2.7965	1.2521	1094.6	2.8099	1.2555	1101.6	2.8231	1.2589	1108.5	2.8360	1.2623	1115.4	2.8487	1.2657	1122.1	2.8612	1.2691
Sat. Vapour		2800.3	6.0685	49.749	2799.9	6.0583	48.499	2799.4	6.0482	47.306	2798.9	6.0383	46.167	2798.3	6.0286	45.078	2797.7	6.0191	44.035
t °C	T K																		
0	273.15	4.0	0.0002	0.99823	4.1	0.0002	0.99818	4.2	0.0002	0.99813	4.3	0.0002	0.99808	4.4	0.0002	0.99803	4.5	0.0002	0.99798
10	283.15	45.9	0.1506	0.99837	46.0	0.1506	0.99832	46.1	0.1506	0.99828	46.2	0.1506	0.99823	46.3	0.1506	0.99818	46.4	0.1506	0.99814
20	293.15	87.6	0.2955	0.99991	87.7	0.2954	0.99987	87.8	0.2954	0.99982	87.9	0.2954	0.99978	88.0	0.2954	0.99973	88.1	0.2954	0.99969
30	303.15	129.3	0.4353	1.0025	129.4	0.4352	1.0025	129.5	0.4352	1.0024	129.6	0.4352	1.0024	129.7	0.4352	1.0024	129.8	0.4351	1.0023
40	313.15	171.0	0.5706	1.0060	171.1	0.5705	1.0060	171.2	0.5705	1.0060	171.2	0.5704	1.0059	171.3	0.5704	1.0059	171.4	0.5704	1.0058
50	323.15	212.7	0.7017	1.0103	212.8	0.7016	1.0103	212.9	0.7016	1.0102	212.9	0.7015	1.0102	213.0	0.7015	1.0102	213.1	0.7014	1.0101
60	333.15	254.4	0.8289	1.0153	254.5	0.8288	1.0153	254.6	0.8287	1.0152	254.7	0.8287	1.0152	254.8	0.8286	1.0152	254.8	0.8286	1.0151
70	343.15	296.2	0.9524	1.0210	296.3	0.9524	1.0210	296.4	0.9523	1.0209	296.5	0.9523	1.0209	296.5	0.9522	1.0208	296.6	0.9521	1.0208
80	353.15	338.1	1.0726	1.0273	338.1	1.0726	1.0272	338.2	1.0725	1.0272	338.3	1.0724	1.0271	338.4	1.0724	1.0271	338.5	1.0723	1.0271
90	363.15	380.0	1.1897	1.0342	380.1	1.1896	1.0341	380.1	1.1895	1.0341	380.2	1.1895	1.0340	380.3	1.1894	1.0340	380.4	1.1893	1.0339
100	373.15	422.0	1.3038	1.0417	422.1	1.3037	1.0416	422.1	1.3037	1.0416	422.2	1.3036	1.0415	422.3	1.3035	1.0415	422.4	1.3034	1.0414
110	383.15	464.1	1.4152	1.0498	464.2	1.4152	1.0497	464.3	1.4151	1.0496	464.3	1.4150	1.0496	464.4	1.4149	1.0495	464.5	1.4148	1.0495
120	393.15	506.4	1.5242	1.0584	506.5	1.5241	1.0584	506.5	1.5240	1.0583	506.6	1.5239	1.0583	506.7	1.5238	1.0582	506.7	1.5237	1.0582
130	403.15	548.8	1.6307	1.0677	548.9	1.6307	1.0677	549.0	1.6306	1.0676	549.0	1.6305	1.0676	549.1	1.6304	1.0675	549.2	1.6303	1.0674
140	413.15	591.5	1.7352	1.0777	591.5	1.7351	1.0776	591.6	1.7350	1.0776	~~591.7~~	1.7349	1.0775	591.7	1.7348	1.0775	591.8	1.7347	1.0774
150	423.15	634.3	1.8377	1.0883	634.4	1.8376	1.0883	634.5	1.8375	1.0882	634.5	1.8374	1.0881	634.6	1.8373	1.0881	634.6	1.8372	1.0880
160	433.15	677.5	1.9385	1.0997	677.5	1.9383	1.0997	677.6	1.9382	1.0996	677.6	1.9381	1.0995	677.7	1.9380	1.0994	677.8	1.9379	1.0994
170	443.15	720.9	2.0376	1.1119	720.9	2.0374	1.1118	721.0	2.0373	1.1117	721.1	2.0372	1.1117	721.1	2.0371	1.1116	721.2	2.0369	1.1115
180	453.15	764.6	2.1352	1.1249	764.7	2.1351	1.1248	764.7	2.1349	1.1248	764.8	2.1348	1.1247	764.8	2.1347	1.1246	764.9	~~2.1345~~	1.1245
190	463.15	808.8	2.2316	1.1389	808.8	2.2314	1.1388	808.9	2.2313	1.1387	808.9	2.2311	1.1386	809.0	2.2310	1.1386	809.0	2.2308	1.1385
200	473.15	853.4	2.3268	1.1540	853.4	2.3267	1.1539	853.5	2.3265	1.1538	853.5	2.3263	1.1537	853.5	2.3262	1.1536	853.6	2.3260	1.1535
210	483.15	898.5	2.4211	1.1702	898.5	2.4209	1.1701	898.5	2.4208	1.1700	898.6	2.4206	1.1699	898.6	2.4204	1.1698	898.6	2.4203	1.1697
220	493.15	944.1	2.5147	1.1878	944.2	2.5145	1.1877	944.2	2.5143	1.1876	944.2	2.5141	1.1875	944.3	2.5140	1.1873	944.3	2.5138	1.1872
230	503.15	990.5	2.6077	1.2070	990.5	2.6075	1.2069	990.5	2.6073	1.2067	990.6	2.6071	1.2066	990.6	2.6069	1.2064	990.6	2.6067	1.2063
240	513.15	1037.7	2.7006	1.2280	1037.7	2.7003	1.2279	1037.7	2.7001	1.2277	1037.7	2.6999	1.2275	1037.7	2.6997	1.2274	1037.7	2.6995	1.2272
250	523.15	1085.8	2.7934	1.2512	1085.8	2.7932	1.2511	1085.8	2.7929	1.2509	1085.8	2.7927	1.2507	1085.8	2.7925	1.2505	1085.8	2.7922	1.2503
260	533.15	2835.6	6.1353	51.716	2830.3	6.1157	50.150	2824.8	6.0962	48.654	2819.2	6.0768	47.223	2813.6	6.0575	45.853	2807.9	6.0382	44.540
270	543.15	2869.8	6.1988	53.628	2865.0	6.1803	52.047	2860.2	6.1620	50.537	2855.3	6.1438	49.095	2850.3	6.1257	47.715	2845.3	6.1078	46.392
280	553.15	2902.0	6.2576	55.441	2897.8	6.2401	53.841	2893.5	6.2227	52.314	2889.1	6.2054	50.857	2884.7	6.1884	49.463	2880.2	6.1714	48.128
290	563.15	2932.7	6.3126	57.171	2928.8	6.2957	55.550	2925.0	6.2791	54.005	2921.0	6.2627	52.530	2917.1	6.2464	51.120	2913.0	6.2303	49.770
300	573.15	2962.0	6.3642	58.833	2958.5	6.3480	57.191	2955.0	6.3320	55.625	2951.4	6.3162	54.130	2947.8	6.3006	52.702	2944.2	6.2852	51.336
310	583.15	2990.2	6.4130	60.439	2987.0	6.3973	58.773	2983.8	6.3818	57.185	2980.6	6.3666	55.670	2977.3	6.3516	54.223	2974.0	6.3367	52.838
320	593.15	3017.5	6.4593	61.996	3014.6	6.4441	60.306	3011.6	6.4291	58.696	3008.7	6.4143	57.159	3005.7	6.3998	55.692	3002.6	6.3854	54.288
330	603.15	3044.0	6.5036	63.513	3041.3	6.4888	61.798	3038.6	6.4742	60.164	3035.8	6.4598	58.606	3033.1	6.4456	57.117	3030.3	6.4317	55.693
340	613.15	3069.8	6.5461	64.994	3067.3	6.5316	63.255	3064.8	6.5173	61.597	3062.3	6.5033	60.015	3059.7	6.4894	58.505	3057.2	6.4758	57.061

350	623.15	3095.1	6.5870	66.446	3092.8	6.5727	64.680	3090.4	6.5587	62.998	3088.1	6.5450	61.393	3085.7	6.5315	59.861	3083.3	6.5182	58.396
360	633.15	3119.9	6.6265	67.872	3117.7	6.6125	66.080	3115.5	6.5987	64.373	3113.3	6.5852	62.744	3111.1	6.5719	61.190	3108.9	6.5589	59.703
370	643.15	3144.3	6.6647	69.275	3142.3	6.6509	67.456	3140.2	6.6374	65.724	3138.1	6.6241	64.072	3136.1	6.6110	62.495	3134.0	6.5982	60.987
380	653.15	3168.4	6.7019	70.658	3166.4	6.6882	68.813	3164.5	6.6749	67.056	3162.6	6.6618	65.379	3160.6	6.6489	63.779	3158.7	6.6363	62.249
390	663.15	3192.1	6.7380	72.024	3190.3	6.7246	70.152	3188.5	6.7114	68.369	3186.7	6.6984	66.669	3184.9	6.6857	65.045	3183.0	6.6733	63.493
400	673.15	3215.7	6.7733	73.376	3214.0	6.7600	71.476	3212.3	6.7469	69.667	3210.5	6.7341	67.942	3208.8	6.7216	66.295	3207.1	6.7093	64.721
410	683.15	3239.1	6.8077	74.713	3237.4	6.7945	72.787	3235.8	6.7816	70.952	3234.2	6.7690	69.202	3232.5	6.7566	67.531	3230.9	6.7444	65.935
420	693.15	3262.3	6.8414	76.039	3260.7	6.8284	74.085	3259.2	6.8156	72.224	3257.6	6.8030	70.449	3256.0	6.7907	68.755	3254.5	6.7787	67.136
430	703.15	3285.4	6.8745	77.355	3283.9	6.8615	75.373	3282.4	6.8488	73.486	3280.9	6.8364	71.686	3279.4	6.8242	69.968	3277.9	6.8122	68.326
440	713.15	3308.3	6.9069	78.660	3306.9	6.8941	76.651	3305.5	6.8815	74.738	3304.1	6.8691	72.913	3302.6	6.8570	71.171	3301.2	6.8451	69.506
450	723.15	3331.2	6.9388	79.958	3329.9	6.9260	77.921	3328.5	6.9135	75.981	3327.1	6.9012	74.131	3325.8	6.8892	72.365	3324.4	6.8774	70.677
460	733.15	3354.0	6.9702	81.247	3352.7	6.9574	79.183	3351.4	6.9450	77.216	3350.1	6.9328	75.341	3348.8	6.9209	73.551	3347.5	6.9092	71.841
470	743.15	3376.8	7.0010	82.530	3375.6	6.9884	80.437	3374.3	6.9760	78.444	3373.0	6.9639	76.544	3371.8	6.9520	74.730	3370.5	6.9404	72.996
480	753.15	3399.6	7.0314	83.806	3398.4	7.0188	81.686	3397.1	7.0065	79.666	3395.9	6.9944	77.741	3394.7	6.9826	75.902	3393.5	6.9711	74.146
490	763.15	3422.3	7.0614	85.076	3421.1	7.0488	82.928	3419.9	7.0366	80.882	3418.8	7.0246	78.931	3417.6	7.0128	77.069	3416.4	7.0013	75.289
500	773.15	3445.0	7.0909	86.341	3443.9	7.0785	84.165	3442.7	7.0662	82.092	3441.6	7.0543	80.116	3440.5	7.0426	78.229	3439.3	7.0311	76.427
510	783.15	3467.7	7.1201	87.601	3466.6	7.1077	85.397	3465.5	7.0955	83.298	3464.4	7.0836	81.296	3463.3	7.0720	79.385	3462.2	7.0606	77.559
520	793.15	3490.4	7.1489	88.857	3489.3	7.1365	86.624	3488.3	7.1244	84.498	3487.2	7.1126	82.471	3486.2	7.1010	80.536	3485.1	7.0896	78.687
530	803.15	3513.1	7.1774	90.108	3512.1	7.1650	87.847	3511.1	7.1530	85.694	3510.0	7.1411	83.642	3509.0	7.1296	81.682	3508.0	7.1183	79.810
540	813.15	3535.8	7.2055	91.354	3534.8	7.1932	89.066	3533.9	7.1812	86.887	3532.9	7.1694	84.808	3531.9	7.1579	82.825	3530.9	7.1466	80.929
550	823.15	3558.6	7.2333	92.598	3557.6	7.2210	90.281	3556.7	7.2090	88.075	3555.7	7.1973	85.971	3554.7	7.1858	83.963	3553.8	7.1746	82.044
560	833.15	3581.4	7.2608	93.837	3580.4	7.2486	91.492	3579.5	7.2366	89.259	3578.6	7.2249	87.130	3577.6	7.2135	85.098	3576.7	7.2022	83.156
570	843.15	3604.2	7.2880	95.073	3603.3	7.2758	92.700	3602.4	7.2639	90.441	3601.5	7.2522	88.286	3600.6	7.2408	86.229	3599.6	7.2296	84.264
580	853.15	3627.0	7.3149	96.306	3626.1	7.3028	93.905	3625.2	7.2909	91.619	3624.4	7.2792	89.439	3623.5	7.2678	87.358	3622.6	7.2567	85.369
590	863.15	3649.9	7.3416	97.536	3649.0	7.3294	95.107	3648.2	7.3176	92.794	3647.3	7.3060	90.588	3646.5	7.2946	88.483	3645.6	7.2835	86.471
600	873.15	3672.8	7.3680	98.763	3671.9	7.3558	96.306	3671.1	7.3440	93.966	3670.3	7.3324	91.735	3669.5	7.3211	89.605	3668.6	7.3100	87.570
610	883.15	3695.7	7.3941	99.987	3694.9	7.3820	97.502	3694.1	7.3702	95.135	3693.3	7.3586	92.878	3692.5	7.3473	90.724	3691.7	7.3363	88.666
620	893.15	3718.7	7.4200	101.21	3717.9	7.4079	98.695	3717.1	7.3961	96.302	3716.3	7.3846	94.020	3715.6	7.3733	91.841	3714.8	7.3623	89.760
630	903.15	3741.7	7.4456	102.43	3740.9	7.4335	99.886	3740.2	7.4218	97.466	3739.4	7.4103	95.158	3738.7	7.3990	92.955	3737.9	7.3880	90.851
640	913.15	3764.8	7.4710	103.64	3764.0	7.4590	101.07	3763.3	7.4472	98.628	3762.5	7.4358	96.295	3761.8	7.4245	94.067	3761.1	7.4135	91.939
650	923.15	3787.9	7.4961	104.86	3787.1	7.4842	102.26	3786.4	7.4724	99.787	3785.7	7.4610	97.428	3785.0	7.4498	95.177	3784.3	7.4388	93.025
660	933.15	3811.0	7.5211	106.07	3810.3	7.5091	103.45	3809.6	7.4974	100.94	3808.9	7.4860	98.560	3808.2	7.4748	96.284	3807.5	7.4639	94.109
670	943.15	3834.2	7.5458	107.28	3833.5	7.5339	104.63	3832.9	7.5222	102.10	3832.2	7.5108	99.690	3831.5	7.4996	97.389	3830.8	7.4887	95.191
680	953.15	3857.4	7.5703	108.49	3856.8	7.5584	105.81	3856.1	7.5467	103.25	3855.5	7.5353	100.82	3854.8	7.5242	98.493	3854.2	7.5133	96.271
690	963.15	3880.7	7.5946	109.70	3880.1	7.5827	106.99	3879.5	7.5711	104.40	3878.8	7.5597	101.94	3878.2	7.5486	99.594	3877.5	7.5377	97.349
700	973.15	3904.1	7.6187	110.90	3903.4	7.6068	108.16	3902.8	7.5952	105.55	3902.2	7.5839	103.07	3901.6	7.5728	100.69	3901.0	7.5619	98.425
710	983.15	3927.4	7.6426	112.10	3926.8	7.6308	109.34	3926.2	7.6192	106.70	3925.6	7.6078	104.19	3925.0	7.5967	101.79	3924.4	7.5859	99.500
720	993.15	3950.9	7.6663	113.30	3950.3	7.6545	110.51	3949.7	7.6429	107.85	3949.1	7.6316	105.31	3948.5	7.6205	102.89	3947.9	7.6097	100.57
730	1003.15	3974.4	7.6899	114.50	3973.8	7.6780	111.68	3973.2	7.6665	108.99	3972.6	7.6551	106.43	3972.1	7.6441	103.98	3971.5	7.6333	101.64
740	1013.15	3997.9	7.7132	115.70	3997.3	7.7014	112.85	3996.8	7.6898	110.13	3996.2	7.6785	107.54	3995.7	7.6675	105.07	3995.1	7.6567	102.71
750	1023.15	4021.4	7.7363	116.89	4020.9	7.7245	114.02	4020.4	7.7130	111.27	4019.8	7.7017	108.66	4019.3	7.6907	106.16	4018.8	7.6799	103.78
760	1033.15	4045.1	7.7593	118.09	4044.5	7.7475	115.18	4044.0	7.7360	112.41	4043.5	7.7247	109.77	4043.0	7.7137	107.25	4042.4	7.7030	104.85
770	1043.15	4068.7	7.7821	119.28	4068.2	7.7703	116.35	4067.7	7.7588	113.55	4067.2	7.7476	110.89	4066.7	7.7366	108.34	4066.2	7.7258	105.91
780	1053.15	4092.4	7.8047	120.47	4092.0	7.7930	117.51	4091.5	7.7815	114.69	4091.0	7.7703	112.00	4090.5	7.7593	109.43	4090.0	7.7485	106.97
790	1063.15	4116.2	7.8272	121.66	4115.7	7.8154	118.67	4115.3	7.8040	115.82	4114.8	7.7927	113.11	4114.3	7.7818	110.51	4113.8	7.7711	108.04
800	1073.15	4140.0	7.8495	122.85	4139.6	7.8378	119.83	4139.1	7.8263	116.96	4138.6	7.8151	114.22	4138.2	7.8041	111.60	4137.7	7.7934	109.10

40 to 45 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		45			46			47			48			49			50		
t_s	°C	257.4			258.8			260.1			261.4			262.7			263.9		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1122.1	2.8612	1.2691	1128.8	2.8735	1.2725	1135.3	2.8856	1.2758	1141.8	2.8974	1.2792	1148.2	2.9091	1.2825	1154.5	2.9207	1.2858
Sat. Vapour		2797.7	6.0191	44.035	2797.0	6.0097	43.036	2796.4	6.0004	42.078	2795.7	5.9913	41.158	2794.9	5.9823	40.275	2794.2	5.9735	39.425
t °C	T K																		
0	273.15	4.5	0.0002	0.99798	4.7	0.0002	0.99793	4.8	0.0002	0.99788	4.9	0.0002	0.99783	5.0	0.0002	0.99778	5.1	0.0002	0.99773
10	283.15	46.4	0.1506	0.99814	46.5	0.1506	0.99809	46.6	0.1506	0.99804	46.7	0.1506	0.99800	46.8	0.1506	0.99795	46.9	0.1505	0.99790
20	293.15	88.1	0.2954	0.99969	88.2	0.2953	0.99964	88.3	0.2953	0.99960	88.4	0.2953	0.99955	88.5	0.2953	0.99951	88.6	0.2952	0.99946
30	303.15	129.8	0.4351	1.0023	129.8	0.4351	1.0023	129.9	0.4351	1.0022	130.0	0.4350	1.0022	130.1	0.4350	1.0021	130.2	0.4350	1.0021
40	313.15	171.4	0.5704	1.0058	171.5	0.5703	1.0058	171.6	0.5703	1.0057	171.7	0.5702	1.0057	171.8	0.5702	1.0056	171.9	0.5702	1.0056
50	323.15	213.1	0.7014	1.0101	213.2	0.7014	1.0101	213.3	0.7013	1.0100	213.4	0.7013	1.0100	213.5	0.7012	1.0099	213.5	0.7012	1.0099
60	333.15	254.8	0.8286	1.0151	254.9	0.8285	1.0151	255.0	0.8285	1.0150	255.1	0.8284	1.0150	255.2	0.8284	1.0149	255.3	0.8283	1.0149
70	343.15	296.6	0.9521	1.0208	296.7	0.9521	1.0207	296.8	0.9520	1.0207	296.9	0.9520	1.0206	296.9	0.9519	1.0206	297.0	0.9518	1.0205
80	353.15	338.5	1.0723	1.0271	338.5	1.0722	1.0270	338.6	1.0722	1.0270	338.7	1.0721	1.0269	338.8	1.0720	1.0269	338.8	1.0720	1.0268
90	363.15	380.4	1.1893	1.0339	380.4	1.1893	1.0339	380.5	1.1892	1.0338	380.6	1.1891	1.0338	380.7	1.1890	1.0337	380.7	1.1890	1.0337
100	373.15	422.4	1.3034	1.0414	422.4	1.3034	1.0414	422.5	1.3033	1.0413	422.6	1.3032	1.0413	422.7	1.3031	1.0412	422.7	1.3030	1.0412
110	383.15	464.5	1.4148	1.0495	464.6	1.4147	1.0494	464.6	1.4147	1.0494	464.7	1.4146	1.0493	464.8	1.4145	1.0493	464.9	1.4144	1.0492
120	393.15	506.7	1.5237	1.0582	506.8	1.5236	1.0581	506.9	1.5235	1.0580	507.0	1.5234	1.0580	507.0	1.5233	1.0579	507.1	1.5233	1.0579
130	403.15	549.2	1.6303	1.0674	549.2	1.6302	1.0674	549.3	1.6301	1.0673	549.4	1.6300	1.0673	549.4	1.6299	1.0672	549.5	1.6298	1.0671
140	413.15	591.8	1.7347	1.0774	591.9	1.7346	1.0773	591.9	1.7345	1.0773	592.0	1.7344	1.0772	592.1	1.7343	1.0771	592.1	1.7342	1.0771
150	423.15	634.6	1.8372	1.0880	634.7	1.8371	1.0879	634.8	1.8370	1.0879	634.8	1.8369	1.0878	634.9	1.8367	1.0877	635.0	1.8366	1.0877
160	433.15	677.8	1.9379	1.0994	677.8	1.9378	1.0993	677.9	1.9376	1.0992	677.9	1.9375	1.0991	678.0	1.9374	1.0991	678.1	1.9373	1.0990
170	443.15	721.2	2.0369	1.1115	721.2	2.0368	1.1114	721.3	2.0367	1.1113	721.3	2.0366	1.1113	721.4	2.0364	1.1112	721.4	2.0363	1.1111
180	453.15	764.9	2.1345	1.1245	765.0	2.1344	1.1244	765.0	2.1343	1.1243	765.1	2.1341	1.1243	765.1	2.1340	1.1242	765.2	2.1339	1.1241
190	463.15	809.0	2.2308	1.1385	809.1	2.2307	1.1384	809.1	2.2306	1.1383	809.2	2.2304	1.1382	809.2	2.2303	1.1381	809.3	2.2301	1.1380
200	473.15	853.6	2.3260	1.1535	853.6	2.3259	1.1534	853.7	2.3257	1.1533	853.7	2.3256	1.1532	853.7	2.3254	1.1531	853.8	2.3253	1.1530
210	483.15	898.6	2.4203	1.1697	898.7	2.4201	1.1695	898.7	2.4199	1.1694	898.7	2.4198	1.1693	898.8	2.4196	1.1692	898.8	2.4194	1.1691
220	493.15	944.3	2.5138	1.1872	944.3	2.5136	1.1871	944.3	2.5134	1.1870	944.4	2.5132	1.1868	944.4	2.5130	1.1867	944.4	2.5129	1.1866
230	503.15	990.6	2.6067	1.2063	990.6	2.6065	1.2062	990.6	2.6063	1.2060	990.7	2.6061	1.2059	990.7	2.6059	1.2057	990.7	2.6057	1.2056
240	513.15	1037.7	2.6995	1.2272	1037.7	2.6992	1.2271	1037.7	2.6990	1.2269	1037.7	2.6988	1.2268	1037.8	2.6986	1.2266	1037.8	2.6984	1.2264
250	523.15	1085.8	2.7922	1.2503	1085.8	2.7920	1.2501	1085.8	2.7917	1.2500	1085.8	2.7915	1.2498	1085.8	2.7912	1.2496	1085.8	2.7910	1.2494
260	533.15	2807.9	6.0382	44.540	2802.0	6.0190	43.278	1134.9	2.8848	1.2756	1134.9	2.8846	1.2754	1134.9	2.8843	1.2752	1134.9	2.8840	1.2750
270	543.15	2845.3	6.1078	46.392	2840.2	6.0899	45.124	2835.0	6.0722	43.907	2829.7	6.0545	42.736	2824.3	6.0368	41.610	2818.9	6.0192	40.526
280	553.15	2880.2	6.1714	48.128	2875.6	6.1547	46.849	2871.0	6.1380	45.622	2866.4	6.1214	44.443	2861.7	6.1049	43.310	2856.9	6.0886	42.219
290	563.15	2913.0	6.2303	49.770	2909.0	6.2144	48.477	2904.9	6.1986	47.237	2900.7	6.1829	46.047	2896.5	6.1674	44.903	2892.2	6.1519	43.803
300	573.15	2944.2	6.2852	51.336	2940.5	6.2700	50.027	2936.8	6.2549	48.772	2933.1	6.2399	47.569	2929.3	6.2252	46.412	2925.5	6.2105	45.301
310	583.15	2974.0	6.3367	52.838	2970.7	6.3221	51.512	2967.3	6.3076	50.242	2963.9	6.2933	49.023	2960.5	6.2791	47.853	2957.0	6.2651	46.728
320	593.15	3002.6	6.3854	54.288	2999.6	6.3712	52.944	2996.5	6.3573	51.657	2993.4	6.3434	50.422	2990.3	6.3298	49.236	2987.2	6.3163	48.097
330	603.15	3030.3	6.4317	55.693	3027.5	6.4179	54.331	3024.7	6.4043	53.025	3021.8	6.3909	51.773	3019.0	6.3777	50.572	3016.1	6.3647	49.417
340	613.15	3057.2	6.4758	57.061	3054.6	6.4624	55.679	3052.0	6.4492	54.355	3049.4	6.4362	53.085	3046.7	6.4233	51.867	3044.1	6.4106	50.697

350	623.15	3083.3	6.5182	58.396	3080.9	6.5050	56.994	3078.5	6.4921	55.651	3076.1	6.4794	54.364	3073.6	6.4669	53.128	3071.2	6.4545	51.941
360	633.15	3108.9	6.5589	59.703	3106.7	6.5460	58.281	3104.4	6.5334	56.919	3102.2	6.5209	55.613	3099.9	6.5087	54.360	3097.6	6.4966	53.156
370	643.15	3134.0	6.5982	60.987	3131.9	6.5856	59.544	3129.8	6.5732	58.162	3127.7	6.5610	56.837	3125.6	6.5489	55.566	3123.4	6.5371	54.346
380	653.15	3158.7	6.6363	62.249	3156.7	6.6239	60.785	3154.8	6.6117	59.384	3152.8	6.5996	58.040	3150.8	6.5878	56.751	3148.8	6.5762	55.513
390	663.15	3183.0	6.6733	63.493	3181.2	6.6610	62.008	3179.3	6.6490	60.586	3177.5	6.6371	59.223	3175.6	6.6255	57.916	3173.7	6.6140	56.660
400	673.15	3207.1	6.7093	64.721	3205.3	6.6972	63.215	3203.6	6.6853	61.773	3201.8	6.6736	60.390	3200.0	6.6621	59.064	3198.3	6.6508	57.791
410	683.15	3230.9	6.7444	65.935	3229.2	6.7324	64.407	3227.6	6.7207	62.945	3225.9	6.7091	61.543	3224.2	6.6977	60.198	3222.5	6.6866	58.906
420	693.15	3254.5	6.7787	67.136	3252.9	6.7668	65.587	3251.3	6.7552	64.104	3249.7	6.7438	62.682	3248.1	6.7325	61.318	3246.6	6.7215	60.009
430	703.15	3277.9	6.8122	68.326	3276.4	6.8005	66.755	3274.9	6.7890	65.251	3273.4	6.7777	63.810	3271.9	6.7665	62.427	3270.4	6.7556	61.099
440	713.15	3301.2	6.8451	69.506	3299.8	6.8335	67.914	3298.3	6.8221	66.389	3296.9	6.8108	64.927	3295.4	6.7998	63.526	3294.0	6.7890	62.180
450	723.15	3324.4	6.8774	70.677	3323.0	6.8659	69.063	3321.6	6.8545	67.517	3320.3	6.8434	66.036	3318.9	6.8324	64.615	3317.5	6.8217	63.250
460	733.15	3347.5	6.9092	71.841	3346.2	6.8977	70.204	3344.9	6.8864	68.638	3343.5	6.8753	67.136	3342.2	6.8645	65.696	3340.9	6.8538	64.313
470	743.15	3370.5	6.9404	72.996	3369.3	6.9289	71.338	3368.0	6.9177	69.751	3366.7	6.9067	68.229	3365.4	6.8960	66.769	3364.2	6.8853	65.368
480	753.15	3393.5	6.9711	74.146	3392.3	6.9597	72.465	3391.1	6.9486	70.857	3389.8	6.9376	69.315	3388.6	6.9269	67.836	3387.4	6.9164	66.416
490	763.15	3416.4	7.0013	75.289	3415.3	6.9900	73.587	3414.1	6.9789	71.957	3412.9	6.9681	70.395	3411.7	6.9574	68.896	3410.5	6.9469	67.458
500	773.15	3439.3	7.0311	76.427	3438.2	7.0199	74.702	3437.1	7.0089	73.051	3435.9	6.9981	71.469	3434.8	6.9874	69.951	3433.7	6.9770	68.494
510	783.15	3462.2	7.0606	77.559	3461.1	7.0494	75.812	3460.0	7.0384	74.140	3458.9	7.0276	72.537	3457.8	7.0171	71.000	3456.7	7.0067	69.524
520	793.15	3485.1	7.0896	78.687	3484.1	7.0784	76.918	3483.0	7.0675	75.224	3481.9	7.0568	73.601	3480.9	7.0463	72.045	3479.8	7.0360	70.550
530	803.15	3508.0	7.1183	79.810	3507.0	7.1072	78.019	3505.9	7.0963	76.304	3504.9	7.0856	74.661	3503.9	7.0751	73.085	3502.9	7.0648	71.571
540	813.15	3530.9	7.1466	80.929	3529.9	7.1355	79.116	3528.9	7.1247	77.380	3527.9	7.1140	75.716	3526.9	7.1036	74.120	3525.9	7.0934	72.589
550	823.15	3553.8	7.1746	82.044	3552.8	7.1636	80.209	3551.9	7.1527	78.452	3550.9	7.1422	76.768	3549.9	7.1318	75.152	3549.0	7.1215	73.602
560	833.15	3576.7	7.2022	83.156	3575.8	7.1913	81.298	3574.8	7.1805	79.520	3573.9	7.1699	77.815	3573.0	7.1596	76.181	3572.0	7.1494	74.611
570	843.15	3599.6	7.2296	84.264	3598.7	7.2187	82.384	3597.8	7.2079	80.585	3596.9	7.1974	78.860	3596.0	7.1871	77.205	3595.1	7.1769	75.617
580	853.15	3622.6	7.2567	85.369	3621.7	7.2458	83.467	3620.9	7.2351	81.646	3620.0	7.2246	79.901	3619.1	7.2143	78.227	3618.2	7.2042	76.620
590	863.15	3645.6	7.2835	86.471	3644.8	7.2726	84.547	3643.9	7.2619	82.704	3643.1	7.2515	80.938	3642.2	7.2412	79.245	3641.3	7.2311	77.619
600	873.15	3668.6	7.3100	87.570	3667.8	7.2991	85.623	3667.0	7.2885	83.760	3666.2	7.2781	81.973	3665.3	7.2678	80.260	3664.5	7.2578	78.616
610	883.15	3691.7	7.3363	88.666	3690.9	7.3254	86.697	3690.1	7.3148	84.812	3689.3	7.3044	83.006	3688.5	7.2942	81.273	3687.7	7.2842	79.609
620	893.15	3714.8	7.3623	89.760	3714.0	7.3515	87.768	3713.2	7.3409	85.862	3712.4	7.3305	84.035	3711.7	7.3203	82.283	3710.9	7.3103	80.600
630	903.15	3737.9	7.3880	90.851	3737.2	7.3772	88.837	3736.4	7.3667	86.909	3735.6	7.3563	85.062	3734.9	7.3462	83.290	3734.1	7.3362	81.589
640	913.15	3761.1	7.4135	91.939	3760.3	7.4028	89.903	3759.6	7.3922	87.954	3758.9	7.3819	86.087	3758.1	7.3718	84.295	3757.4	7.3618	82.575
650	923.15	3784.3	7.4388	93.025	3783.6	7.4281	90.967	3782.9	7.4176	88.997	3782.1	7.4072	87.109	3781.4	7.3971	85.298	3780.7	7.3872	83.559
660	933.15	3807.5	7.4639	94.109	3806.8	7.4531	92.029	3806.1	7.4426	90.037	3805.5	7.4324	88.129	3804.8	7.4223	86.298	3804.1	7.4124	84.540
670	943.15	3830.8	7.4887	95.191	3830.2	7.4780	93.089	3829.5	7.4675	91.076	3828.8	7.4572	89.147	3828.1	7.4472	87.296	3827.5	7.4373	85.520
680	953.15	3854.2	7.5133	96.271	3853.5	7.5026	94.146	3852.9	7.4922	92.112	3852.2	7.4819	90.162	3851.5	7.4719	88.292	3850.9	7.4620	86.497
690	963.15	3877.5	7.5377	97.349	3876.9	7.5270	95.202	3876.3	7.5166	93.146	3875.6	7.5064	91.176	3875.0	7.4963	89.287	3874.3	7.4865	87.473
700	973.15	3901.0	7.5619	98.425	3900.3	7.5513	96.256	3899.7	7.5408	94.179	3899.1	7.5306	92.188	3898.5	7.5206	90.279	3897.9	7.5108	88.446
710	983.15	3924.4	7.5859	99.500	3923.8	7.5753	97.308	3923.2	7.5649	95.209	3922.6	7.5547	93.198	3922.0	7.5447	91.270	3921.4	7.5349	89.418
720	993.15	3947.9	7.6097	100.57	3947.4	7.5991	98.358	3946.8	7.5887	96.238	3946.2	7.5785	94.207	3945.6	7.5685	92.258	3945.0	7.5587	90.388
730	1003.15	3971.5	7.6333	101.64	3970.9	7.6227	99.407	3970.4	7.6123	97.266	3969.8	7.6022	95.214	3969.2	7.5922	93.246	3968.7	7.5824	91.356
740	1013.15	3995.1	7.6567	102.71	3994.5	7.6461	100.45	3994.0	7.6358	98.291	3993.4	7.6256	96.219	3992.9	7.6157	94.231	3992.3	7.6059	92.323
750	1023.15	4018.8	7.6799	103.78	4018.2	7.6694	101.50	4017.7	7.6590	99.315	4017.1	7.6489	97.223	4016.6	7.6390	95.215	4016.1	7.6292	93.288
760	1033.15	4042.4	7.7030	104.85	4041.9	7.6924	102.54	4041.4	7.6821	100.34	4040.9	7.6720	98.225	4040.4	7.6621	96.198	4039.8	7.6523	94.252
770	1043.15	4066.2	7.7258	105.91	4065.7	7.7153	103.59	4065.2	7.7050	101.36	4064.7	7.6949	99.225	4064.2	7.6850	97.179	4063.6	7.6753	95.214
780	1053.15	4090.0	7.7485	106.97	4089.5	7.7380	104.63	4089.0	7.7277	102.38	4088.5	7.7176	100.22	4088.0	7.7077	98.158	4087.5	7.6980	96.175
790	1063.15	4113.8	7.7711	108.04	4113.3	7.7605	105.67	4112.8	7.7503	103.40	4112.4	7.7402	101.22	4111.9	7.7303	99.137	4111.4	7.7206	97.134
800	1073.15	4137.7	7.7934	109.10	4137.2	7.7829	106.70	4136.8	7.7726	104.41	4136.3	7.7626	102.22	4135.8	7.7527	100.11	4135.3	7.7431	98.093

Table 3 Water and Steam—*continued*

p (*abs*) bar		50			52			54			56			58			60		
t_s °C		263.9			266.4			268.8			271.1			273.4			275.6		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1154.5	2.9207	1.2858	1166.9	2.9432	1.2925	1179.0	2.9651	1.2990	1190.8	2.9864	1.3056	1202.4	3.0071	1.3122	1213.7	3.0274	1.3187
Sat. Vapour		2794.2	5.9735	39.425	2792.6	5.9561	37.820	2790.8	5.9392	36.330	2789.0	5.9227	34.942	2787.0	5.9065	33.646	2785.0	5.8907	32.433
t °C	T K																		
0	273.15	5.1	0.0002	0.99773	5.3	0.0002	0.99763	5.5	0.0003	0.99753	5.7	0.0003	0.99743	5.9	0.0003	0.99733	6.1	0.0003	0.99723
10	283.15	46.9	0.1505	0.99790	47.1	0.1505	0.99781	47.3	0.1505	0.99772	47.4	0.1505	0.99762	47.6	0.1505	0.99753	47.8	0.1505	0.99744
20	293.15	88.6	0.2952	0.99946	88.7	0.2952	0.99937	88.9	0.2952	0.99928	89.1	0.2951	0.99919	89.3	0.2951	0.99910	89.5	0.2950	0.99901
30	303.15	130.2	0.4350	1.0021	130.4	0.4349	1.0020	130.6	0.4348	1.0019	130.8	0.4348	1.0018	130.9	0.4347	1.0017	131.1	0.4347	1.0016
40	313.15	171.9	0.5702	1.0056	172.0	0.5701	1.0055	172.2	0.5700	1.0054	172.4	0.5699	1.0053	172.6	0.5699	1.0053	172.7	0.5698	1.0052
50	323.15	213.5	0.7012	1.0099	213.7	0.7011	1.0098	213.9	0.7010	1.0097	214.1	0.7009	1.0096	214.2	0.7008	1.0095	214.4	0.7007	1.0094
60	333.15	255.3	0.8283	1.0149	255.4	0.8282	1.0148	255.6	0.8281	1.0147	255.8	0.8280	1.0146	255.9	0.8279	1.0145	256.1	0.8278	1.0144
70	343.15	297.0	0.9518	1.0205	297.2	0.9517	1.0204	297.4	0.9516	1.0204	297.5	0.9515	1.0203	297.7	0.9514	1.0202	297.8	0.9512	1.0201
80	353.15	338.8	1.0720	1.0268	339.0	1.0718	1.0267	339.2	1.0717	1.0266	339.3	1.0716	1.0265	339.5	1.0714	1.0264	339.6	1.0713	1.0263
90	363.15	380.7	1.1890	1.0337	380.9	1.1888	1.0336	381.1	1.1887	1.0335	381.2	1.1885	1.0334	381.4	1.1884	1.0333	381.5	1.1883	1.0332
100	373.15	422.7	1.3030	1.0412	422.9	1.3029	1.0411	423.0	1.3027	1.0410	423.2	1.3026	1.0408	423.3	1.3024	1.0407	423.5	1.3023	1.0406
110	383.15	464.9	1.4144	1.0492	465.0	1.4142	1.0491	465.1	1.4141	1.0490	465.3	1.4139	1.0489	465.4	1.4137	1.0488	465.6	1.4136	1.0487
120	393.15	507.1	1.5233	1.0579	507.2	1.5231	1.0578	507.4	1.5229	1.0576	507.5	1.5227	1.0575	507.7	1.5225	1.0574	507.8	1.5224	1.0573
130	403.15	549.5	1.6298	1.0671	549.7	1.6296	1.0670	549.8	1.6294	1.0669	549.9	1.6292	1.0668	550.1	1.6290	1.0667	550.2	1.6288	1.0665
140	413.15	592.1	1.7342	1.0771	592.3	1.7340	1.0769	592.4	1.7338	1.0768	592.5	1.7336	1.0767	592.6	1.7334	1.0766	592.8	1.7332	1.0764
150	423.15	635.0	1.8366	1.0877	635.1	1.8364	1.0875	635.2	1.8362	1.0874	635.3	1.8360	1.0873	635.5	1.8358	1.0871	635.6	1.8355	1.0870
160	433.15	678.1	1.9373	1.0990	678.2	1.9371	1.0989	678.3	1.9368	1.0987	678.4	1.9366	1.0986	678.5	1.9364	1.0984	678.6	1.9361	1.0983
170	443.15	721.4	2.0363	1.1111	721.6	2.0361	1.1110	721.7	2.0358	1.1109	721.8	2.0356	1.1106	721.9	2.0353	1.1105	722.0	2.0351	1.1103
180	453.15	765.2	2.1339	1.1241	765.3	2.1336	1.1239	765.4	2.1333	1.1237	765.5	2.1331	1.1236	765.6	2.1328	1.1234	765.7	2.1325	1.1232
190	463.15	809.3	2.2301	1.1380	809.4	2.2298	1.1378	809.4	2.2295	1.1376	809.5	2.2293	1.1374	809.6	2.2290	1.1373	809.7	2.2287	1.1371
200	473.15	853.8	2.3253	1.1530	853.9	2.3249	1.1528	854.0	2.3246	1.1526	854.0	2.3243	1.1524	854.1	2.3240	1.1522	854.2	2.3237	1.1519
210	483.15	898.8	2.4194	1.1691	898.9	2.4191	1.1689	899.0	2.4188	1.1687	899.0	2.4184	1.1684	899.1	2.4181	1.1682	899.2	2.4178	1.1680
220	493.15	944.4	2.5129	1.1866	944.5	2.5125	1.1863	944.5	2.5121	1.1861	944.6	2.5118	1.1858	944.7	2.5114	1.1856	944.7	2.5110	1.1853
230	503.15	990.7	2.6057	1.2056	990.7	2.6054	1.2053	990.8	2.6050	1.2050	990.8	2.6046	1.2048	990.9	2.6042	1.2045	990.9	2.6038	1.2042
240	513.15	1037.8	2.6984	1.2264	1037.8	2.6979	1.2261	1037.8	2.6975	1.2258	1037.8	2.6971	1.2255	1037.9	2.6966	1.2252	1037.9	2.6962	1.2249
250	523.15	1085.8	2.7910	1.2494	1085.8	2.7905	1.2490	1085.8	2.7900	1.2487	1085.8	2.7896	1.2483	1085.8	2.7891	1.2480	1085.8	2.7886	1.2476
260	533.15	1134.9	2.8840	1.2750	1134.9	2.8835	1.2746	1134.8	2.8829	1.2741	1134.8	2.8824	1.2737	1134.8	2.8819	1.2733	1134.7	2.8813	1.2729
270	543.15	2818.9	6.0192	40.526	2807.7	5.9841	38.471	2796.1	5.9490	36.553	1185.2	2.9761	1.3023	1185.1	2.9755	1.3018	1185.1	2.9749	1.3013
280	553.15	2856.9	6.0886	42.219	2847.1	6.0560	40.156	2837.0	6.0236	38.235	2826.7	5.9914	36.439	2816.0	5.9592	34.756	2804.9	5.9270	33.173
290	563.15	2892.2	6.1519	43.803	2883.6	6.1214	41.725	2874.7	6.0912	39.792	2865.6	6.0612	37.989	2856.3	6.0314	36.301	2846.7	6.0017	34.718
300	573.15	2925.5	6.2105	45.301	2917.8	6.1815	43.201	2909.8	6.1530	41.251	2901.7	6.1248	39.434	2893.5	6.0969	37.736	2885.0	6.0692	36.145
310	583.15	2957.0	6.2651	46.728	2950.0	6.2374	44.604	2942.9	6.2102	42.633	2935.6	6.1834	40.798	2928.2	6.1570	39.085	2920.7	6.1310	37.481
320	593.15	2987.2	6.3163	48.097	2980.8	6.2897	45.947	2974.3	6.2636	43.952	2967.7	6.2380	42.096	2961.0	6.2128	40.364	2954.2	6.1880	38.744
330	603.15	3016.1	6.3647	49.417	3010.3	6.3390	47.239	3004.4	6.3138	45.219	2998.4	6.2892	43.340	2992.3	6.2650	41.588	2986.1	6.2412	39.949
340	613.15	3044.1	6.4106	50.697	3038.7	6.3857	48.489	3033.3	6.3614	46.442	3027.7	6.3375	44.539	3022.2	6.3142	42.764	3016.5	6.2913	41.105

350	623.15	3071.2	6.4545	51.941	3066.2	6.4302	49.703	3061.2	6.4066	47.628	3056.1	6.3834	45.700	3051.0	6.3608	43.902	3045.8	6.3386	42.222
360	633.15	3097.6	6.4966	53.156	3093.0	6.4729	50.887	3088.3	6.4498	48.783	3083.6	6.4272	46.828	3078.9	6.4052	45.006	3074.0	6.3836	43.304
370	643.15	3123.4	6.5371	54.346	3119.1	6.5138	52.044	3114.8	6.4912	49.911	3110.4	6.4692	47.929	3106.0	6.4477	46.082	3101.5	6.4267	44.357
380	653.15	3148.8	6.5762	55.513	3144.8	6.5533	53.178	3140.7	6.5312	51.016	3136.6	6.5096	49.006	3132.4	6.4885	47.134	3128.3	6.4680	45.385
390	663.15	3173.7	6.6140	56.660	3169.9	6.5916	54.293	3166.1	6.5698	52.100	3162.2	6.5486	50.062	3158.4	6.5279	48.164	3154.4	6.5077	46.391
400	673.15	3198.3	6.6508	57.791	3194.7	6.6287	55.390	3191.1	6.6072	53.166	3187.5	6.5863	51.100	3183.8	6.5660	49.176	3180.1	6.5462	47.379
410	683.15	3222.5	6.6866	58.906	3219.2	6.6647	56.472	3215.7	6.6436	54.217	3212.3	6.6230	52.122	3208.9	6.6030	50.171	3205.4	6.5834	48.350
420	693.15	3246.6	6.7215	60.009	3243.3	6.6999	57.540	3240.1	6.6790	55.254	3236.9	6.6586	53.130	3233.6	6.6389	51.153	3230.3	6.6196	49.306
430	703.15	3270.4	6.7556	61.099	3267.3	6.7342	58.597	3264.2	6.7135	56.279	3261.2	6.6934	54.126	3258.0	6.6739	52.121	3254.9	6.6549	50.249
440	713.15	3294.0	6.7890	62.180	3291.1	6.7678	59.643	3288.2	6.7473	57.293	3285.2	6.7274	55.111	3282.3	6.7081	53.078	3279.3	6.6893	51.181
450	723.15	3317.5	6.8217	63.250	3314.7	6.8007	60.679	3311.9	6.7804	58.297	3309.1	6.7607	56.085	3306.3	6.7416	54.026	3303.5	6.7230	52.103
460	733.15	3340.9	6.8538	64.313	3338.2	6.8330	61.707	3335.5	6.8128	59.293	3332.9	6.7933	57.051	3330.2	6.7743	54.964	3327.4	6.7559	53.016
470	743.15	3364.2	6.8853	65.368	3361.6	6.8647	62.727	3359.0	6.8447	60.281	3356.5	6.8253	58.009	3353.9	6.8065	55.894	3351.3	6.7882	53.920
480	753.15	3387.4	6.9164	66.416	3384.9	6.8958	63.740	3382.5	6.8760	61.262	3380.0	6.8567	58.960	3377.5	6.8381	56.817	3375.0	6.8199	54.817
490	763.15	3410.5	6.9469	67.458	3408.2	6.9265	64.746	3405.8	6.9068	62.236	3403.4	6.8876	59.904	3401.0	6.8691	57.734	3398.6	6.8511	55.707
500	773.15	3433.7	6.9770	68.494	3431.4	6.9567	65.747	3429.1	6.9371	63.204	3426.8	6.9181	60.843	3424.5	6.8996	58.644	3422.2	6.8818	56.592
510	783.15	3456.7	7.0067	69.524	3454.5	6.9865	66.743	3452.3	6.9669	64.167	3450.1	6.9480	61.776	3447.9	6.9297	59.549	3445.7	6.9119	57.470
520	793.15	3479.8	7.0360	70.550	3477.7	7.0158	67.733	3475.6	6.9964	65.125	3473.4	6.9776	62.703	3471.3	6.9594	60.448	3469.1	6.9417	58.344
530	803.15	3502.9	7.0648	71.571	3500.8	7.0448	68.720	3498.8	7.0255	66.079	3496.7	7.0068	63.626	3494.6	6.9886	61.343	3492.5	6.9710	59.212
540	813.15	3525.9	7.0934	72.589	3523.9	7.0734	69.701	3521.9	7.0542	67.028	3519.9	7.0355	64.545	3517.9	7.0175	62.234	3515.9	7.0000	60.076
550	823.15	3549.0	7.1215	73.602	3547.1	7.1017	70.679	3545.1	7.0825	67.973	3543.2	7.0639	65.460	3541.2	7.0460	63.120	3539.3	7.0285	60.937
560	833.15	3572.0	7.1494	74.611	3570.2	7.1296	71.653	3568.3	7.1105	68.914	3566.4	7.0920	66.371	3564.6	7.0741	64.003	3562.7	7.0568	61.793
570	843.15	3595.1	7.1769	75.617	3593.3	7.1572	72.624	3591.5	7.1382	69.852	3589.7	7.1198	67.278	3587.9	7.1019	64.882	3586.0	7.0846	62.646
580	853.15	3618.2	7.2042	76.620	3616.5	7.1845	73.591	3614.7	7.1655	70.786	3612.9	7.1472	68.182	3611.2	7.1294	65.758	3609.4	7.1122	63.495
590	863.15	3641.3	7.2311	77.619	3639.6	7.2115	74.555	3637.9	7.1926	71.718	3636.2	7.1743	69.083	3634.5	7.1566	66.630	3632.8	7.1395	64.341
600	873.15	3664.5	7.2578	78.616	3662.8	7.2382	75.516	3661.2	7.2194	72.646	3659.5	7.2011	69.981	3657.9	7.1835	67.500	3656.2	7.1664	65.184
610	883.15	3687.7	7.2842	79.609	3686.1	7.2647	76.474	3684.5	7.2459	73.572	3682.8	7.2277	70.876	3681.2	7.2101	68.367	3679.6	7.1931	66.024
620	893.15	3710.9	7.3103	80.600	3709.3	7.2909	77.430	3707.8	7.2721	74.494	3706.2	7.2540	71.768	3704.6	7.2365	69.231	3703.1	7.2195	66.862
630	903.15	3734.1	7.3362	81.589	3732.6	7.3168	78.383	3731.1	7.2981	75.415	3729.6	7.2800	72.658	3728.1	7.2625	70.092	3726.5	7.2456	67.697
640	913.15	3757.4	7.3618	82.575	3755.9	7.3425	79.334	3754.5	7.3238	76.332	3753.0	7.3058	73.546	3751.5	7.2884	70.951	3750.0	7.2715	68.529
650	923.15	3780.7	7.3872	83.559	3779.3	7.3679	80.282	3777.8	7.3493	77.248	3776.4	7.3313	74.431	3775.0	7.3139	71.807	3773.5	7.2971	69.359
660	933.15	3804.1	7.4124	84.540	3802.7	7.3931	81.228	3801.3	7.3745	78.161	3799.9	7.3566	75.313	3798.5	7.3393	72.662	3797.1	7.3225	70.187
670	943.15	3827.5	7.4373	85.520	3826.1	7.4181	82.172	3824.7	7.3996	79.072	3823.4	7.3817	76.194	3822.0	7.3644	73.514	3820.7	7.3476	71.013
680	953.15	3850.9	7.4620	86.497	3849.6	7.4428	83.114	3848.3	7.4244	79.981	3846.9	7.4065	77.072	3845.6	7.3892	74.364	3844.3	7.3725	71.837
690	963.15	3874.3	7.4865	87.473	3873.1	7.4674	84.054	3871.8	7.4489	80.888	3870.5	7.4311	77.949	3869.2	7.4139	75.212	3868.0	7.3972	72.658
700	973.15	3897.9	7.5108	88.446	3896.6	7.4917	84.992	3895.4	7.4733	81.794	3894.1	7.4555	78.824	3892.9	7.4383	76.059	3891.7	7.4217	73.478
710	983.15	3921.4	7.5349	89.418	3920.2	7.5158	85.928	3919.0	7.4974	82.697	3917.8	7.4797	79.697	3916.6	7.4625	76.903	3915.4	7.4459	74.296
720	993.15	3945.0	7.5587	90.388	3943.8	7.5397	86.863	3942.7	7.5214	83.599	3941.5	7.5037	80.568	3940.3	7.4866	77.746	3939.1	7.4700	75.112
730	1003.15	3968.7	7.5824	91.356	3967.5	7.5634	87.796	3966.4	7.5451	84.499	3965.2	7.5275	81.437	3964.1	7.5104	78.587	3962.9	7.4938	75.927
740	1013.15	3992.3	7.6059	92.323	3991.2	7.5870	88.727	3990.1	7.5687	85.397	3989.0	7.5510	82.305	3987.9	7.5340	79.426	3986.8	7.5175	76.740
750	1023.15	4016.1	7.6292	93.288	4015.0	7.6103	89.656	4013.9	7.5920	86.294	4012.8	7.5744	83.171	4011.7	7.5574	80.264	4010.7	7.5409	77.551
760	1033.15	4039.8	7.6523	94.252	4038.8	7.6334	90.585	4037.7	7.6152	87.189	4036.7	7.5976	84.036	4035.6	7.5807	81.101	4034.6	7.5642	78.361
770	1043.15	4063.6	7.6753	95.214	4062.6	7.6564	91.511	4061.6	7.6382	88.083	4060.6	7.6207	84.900	4059.6	7.6037	81.936	4058.6	7.5873	79.170
780	1053.15	4087.5	7.6980	96.175	4086.5	7.6792	92.437	4085.5	7.6610	88.976	4084.5	7.6435	85.762	4083.5	7.6266	82.769	4082.6	7.6102	79.977
790	1063.15	4111.4	7.7206	97.134	4110.4	7.7018	93.361	4109.5	7.6837	89.867	4108.5	7.6662	86.622	4107.6	7.6493	83.602	4106.6	7.6329	80.782
800	1073.15	4135.3	7.7431	98.093	4134.4	7.7243	94.284	4133.5	7.7061	90.757	4132.5	7.6887	87.482	4131.6	7.6718	84.432	4130.7	7.6554	81.587

50 to 60 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		60			62			64			66			68			70		
t_s °C		275.6			277.7			279.8			281.8			283.8			285.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1213.7	3.0274	1.3187	1224.9	3.0472	1.3252	1235.8	3.0665	1.3318	1246.5	3.0854	1.3383	1257.1	3.1039	1.3448	1267.5	3.1220	1.3514
Sat. Vapour		2785.0	5.8907	32.433	2782.9	5.8753	31.295	2780.6	5.8601	30.225	2778.3	5.8452	29.218	2775.9	5.8305	28.267	2773.4	5.8161	27.368
t °C	T K																		
0	273.15	6.1	0.0003	0.99723	6.3	0.0003	0.99714	6.5	0.0003	0.99704	6.7	0.0003	0.99694	6.9	0.0003	0.99684	7.1	0.0004	0.99674
10	283.15	47.8	0.1505	0.99744	48.0	0.1504	0.99734	48.2	0.1504	0.99725	48.4	0.1504	0.99716	48.6	0.1504	0.99706	48.8	0.1504	0.99697
20	293.15	89.5	0.2950	0.99901	89.7	0.2950	0.99892	89.9	0.2949	0.99883	90.1	0.2949	0.99874	90.2	0.2949	0.99865	90.4	0.2948	0.99856
30	303.15	131.1	0.4347	1.0016	131.3	0.4346	1.0016	131.5	0.4345	1.0015	131.7	0.4345	1.0014	131.8	0.4344	1.0013	132.0	0.4344	1.0012
40	313.15	172.7	0.5698	1.0052	172.9	0.5697	1.0051	173.1	0.5696	1.0050	173.3	0.5695	1.0049	173.5	0.5695	1.0048	173.6	0.5694	1.0047
50	323.15	214.4	0.7007	1.0094	214.6	0.7006	1.0094	214.7	0.7005	1.0093	214.9	0.7004	1.0092	215.1	0.7003	1.0091	215.3	0.7003	1.0090
60	333.15	256.1	0.8278	1.0144	256.3	0.8277	1.0143	256.4	0.8276	1.0143	256.6	0.8275	1.0142	256.8	0.8274	1.0141	256.9	0.8273	1.0140
70	343.15	297.8	0.9512	1.0201	298.0	0.9511	1.0200	298.2	0.9510	1.0199	298.3	0.9509	1.0198	298.5	0.9508	1.0197	298.7	0.9506	1.0196
80	353.15	339.6	1.0713	1.0263	339.8	1.0712	1.0262	340.0	1.0711	1.0261	340.1	1.0709	1.0261	340.3	1.0708	1.0260	340.4	1.0707	1.0259
90	363.15	381.5	1.1883	1.0332	381.7	1.1881	1.0331	381.8	1.1880	1.0330	382.0	1.1878	1.0329	382.1	1.1877	1.0328	382.3	1.1875	1.0327
100	373.15	423.5	1.3023	1.0406	423.6	1.3021	1.0405	423.8	1.3020	1.0404	423.9	1.3018	1.0403	424.1	1.3016	1.0402	424.2	1.3015	1.0401
110	383.15	465.6	1.4136	1.0487	465.7	1.4134	1.0486	465.9	1.4132	1.0485	466.0	1.4131	1.0484	466.2	1.4129	1.0482	466.3	1.4127	1.0481
120	393.15	507.8	1.5224	1.0573	507.9	1.5222	1.0572	508.1	1.5220	1.0571	508.2	1.5218	1.0570	508.4	1.5216	1.0569	508.5	1.5215	1.0567
130	403.15	550.2	1.6288	1.0665	550.3	1.6286	1.0664	550.5	1.6284	1.0663	550.6	1.6283	1.0662	550.7	1.6281	1.0661	550.9	1.6279	1.0660
140	413.15	592.8	1.7332	1.0764	592.9	1.7330	1.0763	593.0	1.7328	1.0762	593.2	1.7326	1.0761	593.3	1.7324	1.0759	593.4	1.7321	1.0758
150	423.15	635.6	1.8355	1.0870	635.7	1.8353	1.0869	635.8	1.8351	1.0867	636.0	1.8349	1.0866	636.1	1.8347	1.0865	636.2	1.8345	1.0863
160	433.15	678.6	1.9361	1.0983	678.8	1.9359	1.0981	678.9	1.9357	1.0980	679.0	1.9354	1.0978	679.1	1.9352	1.0977	679.2	1.9350	1.0976
170	443.15	722.0	2.0351	1.1103	722.1	2.0348	1.1102	722.2	2.0346	1.1100	722.3	2.0343	1.1099	722.4	2.0341	1.1097	722.6	2.0338	1.1096
180	453.15	765.7	2.1325	1.1232	765.8	2.1323	1.1231	765.9	2.1320	1.1229	766.0	2.1317	1.1227	766.1	2.1315	1.1226	766.2	2.1312	1.1224
190	463.15	809.7	2.2287	1.1371	809.8	2.2284	1.1369	809.9	2.2281	1.1367	810.0	2.2278	1.1365	810.1	2.2275	1.1363	810.2	2.2273	1.1362
200	473.15	854.2	2.3237	1.1519	854.3	2.3234	1.1517	854.4	2.3231	1.1515	854.5	2.3228	1.1513	854.5	2.3225	1.1512	854.6	2.3222	1.1510
210	483.15	899.2	2.4178	1.1680	899.3	2.4174	1.1678	899.3	2.4171	1.1675	899.4	2.4168	1.1673	899.5	2.4164	1.1671	899.5	2.4161	1.1669
220	493.15	944.7	2.5110	1.1853	944.8	2.5107	1.1851	944.8	2.5103	1.1849	944.9	2.5100	1.1846	945.0	2.5096	1.1844	945.0	2.5092	1.1841
230	503.15	990.9	2.6038	1.2042	991.0	2.6034	1.2039	991.0	2.6030	1.2037	991.0	2.6026	1.2034	991.1	2.6022	1.2031	991.1	2.6018	1.2028
240	513.15	1037.9	2.6962	1.2249	1037.9	2.6958	1.2245	1037.9	2.6953	1.2242	1037.9	2.6949	1.2239	1038.0	2.6945	1.2236	1038.0	2.6940	1.2233
250	523.15	1085.8	2.7886	1.2476	1085.8	2.7881	1.2472	1085.8	2.7876	1.2469	1085.8	2.7872	1.2465	1085.8	2.7867	1.2462	1085.8	2.7862	1.2458
260	533.15	1134.7	2.8813	1.2729	1134.7	2.8806	1.2724	1134.7	2.8803	1.2720	1134.6	2.8797	1.2716	1134.6	2.8792	1.2712	1134.6	2.8787	1.2708
270	543.15	1185.1	2.9749	1.3013	1185.0	2.9742	1.3008	1184.9	2.9736	1.3003	1184.9	2.9730	1.2998	1184.8	2.9724	1.2993	1184.7	2.9719	1.2988
280	553.15	2804.9	5.9270	33.173	2793.5	5.8946	31.679	2781.6	5.8619	30.265	1236.7	3.0677	1.3319	1236.6	3.0670	1.3313	1236.5	3.0663	1.3307
290	563.15	2846.7	6.0017	34.718	2836.8	5.9721	33.227	2826.6	5.9425	31.821	2816.1	5.9129	30.490	2805.3	5.8830	29.226	2794.1	5.8530	28.024
300	573.15	2885.0	6.0692	36.145	2876.3	6.0418	34.650	2867.5	6.0144	33.241	2858.4	5.9872	31.911	2849.0	5.9599	30.652	2839.4	5.9327	29.457
310	583.15	2920.7	6.1310	37.481	2913.0	6.1051	35.975	2905.1	6.0796	34.559	2897.1	6.0542	33.223	2888.9	6.0289	31.960	2880.5	6.0037	30.765
320	593.15	2954.2	6.1880	38.744	2947.3	6.1635	37.224	2940.3	6.1393	35.796	2933.1	6.1154	34.450	2925.8	6.0917	33.180	2918.3	6.0681	31.978
330	603.15	2986.1	6.2412	39.949	2979.8	6.2178	38.413	2973.4	6.1948	36.970	2966.9	6.1720	35.611	2960.3	6.1495	34.329	2953.6	6.1272	33.118
340	613.15	3016.5	6.2913	41.105	3010.8	6.2688	39.551	3004.9	6.2466	38.092	2999.0	6.2248	36.718	2993.1	6.2033	35.423	2987.0	6.1820	34.199

350	623.15	3045.8	6.3386	42.222	3040.5	6.3168	40.648	3035.1	6.2955	39.170	3029.7	6.2744	37.781	3024.2	6.2537	36.470	3018.7	6.2333	35.233
360	633.15	3074.0	6.3836	43.304	3069.2	6.3625	41.710	3064.2	6.3418	40.213	3059.2	6.3214	38.806	3054.2	6.3014	37.480	3049.1	6.2817	36.228
370	643.15	3101.5	6.4267	44.357	3097.0	6.4061	42.742	3092.4	6.3859	41.226	3087.8	6.3661	39.800	3083.1	6.3467	38.457	3078.4	6.3276	37.190
380	653.15	3128.3	6.4680	45.385	3124.0	6.4478	43.748	3119.8	6.4282	42.212	3115.5	6.4089	40.768	3111.1	6.3899	39.407	3106.7	6.3714	38.123
390	663.15	3154.4	6.5077	46.391	3150.5	6.4880	44.732	3146.5	6.4688	43.175	3142.5	6.4499	41.712	3138.4	6.4314	40.333	3134.3	6.4133	39.033
400	673.15	3180.1	6.5462	47.379	3176.4	6.5268	45.697	3172.7	6.5079	44.119	3168.9	6.4894	42.636	3165.1	6.4713	41.239	3161.2	6.4536	39.922
410	683.15	3205.4	6.5834	48.350	3201.9	6.5644	46.645	3198.4	6.5458	45.045	3194.8	6.5277	43.542	3191.2	6.5099	42.127	3187.6	6.4925	40.792
420	693.15	3230.3	6.6196	49.306	3227.0	6.6009	47.578	3223.7	6.5826	45.957	3220.3	6.5647	44.434	3216.9	6.5472	42.999	3213.5	6.5301	41.646
430	703.15	3254.9	6.6549	50.249	3251.8	6.6364	48.498	3248.6	6.6183	46.855	3245.4	6.6007	45.311	3242.2	6.5835	43.858	3239.0	6.5666	42.487
440	713.15	3279.3	6.6893	51.181	3276.3	6.6710	49.406	3273.3	6.6532	47.741	3270.3	6.6358	46.177	3267.2	6.6188	44.704	3264.2	6.6022	43.315
450	723.15	3303.5	6.7230	52.103	3300.6	6.7049	50.304	3297.7	6.6872	48.617	3294.9	6.6700	47.031	3292.0	6.6532	45.539	3289.1	6.6368	44.131
460	733.15	3327.4	6.7559	53.016	3324.7	6.7380	51.192	3322.0	6.7205	49.483	3319.2	6.7035	47.877	3316.5	6.6869	46.364	3313.7	6.6707	44.938
470	743.15	3351.3	6.7882	53.920	3348.7	6.7704	52.073	3346.1	6.7531	50.341	3343.4	6.7363	48.713	3340.8	6.7198	47.181	3338.1	6.7038	45.737
480	753.15	3375.0	6.8199	54.817	3372.5	6.8023	52.946	3370.0	6.7851	51.191	3367.5	6.7684	49.542	3365.0	6.7521	47.990	3362.4	6.7362	46.527
490	763.15	3398.6	6.8511	55.707	3396.2	6.8336	53.812	3393.8	6.8166	52.034	3391.4	6.8000	50.364	3389.0	6.7838	48.792	3386.5	6.7680	47.310
500	773.15	3422.2	6.8818	56.592	3419.9	6.8644	54.671	3417.6	6.8475	52.871	3415.2	6.8310	51.180	3412.9	6.8150	49.588	3410.6	6.7993	48.086
510	783.15	3445.7	6.9119	57.470	3443.5	6.8947	55.525	3441.2	6.8779	53.702	3439.0	6.8615	51.989	3436.7	6.8456	50.377	3434.5	6.8300	48.857
520	793.15	3469.1	6.9417	58.344	3467.0	6.9245	56.374	3464.8	6.9078	54.528	3462.7	6.8916	52.794	3460.5	6.8757	51.161	3458.3	6.8603	49.622
530	803.15	3492.5	6.9710	59.212	3490.5	6.9540	57.218	3488.4	6.9373	55.349	3486.3	6.9212	53.593	3484.2	6.9055	51.941	3482.1	6.8901	50.382
540	813.15	3515.9	7.0000	60.076	3513.9	6.9830	58.058	3511.9	6.9665	56.166	3509.9	6.9504	54.388	3507.9	6.9347	52.715	3505.9	6.9195	51.138
550	823.15	3539.3	7.0285	60.937	3537.4	7.0116	58.894	3535.4	6.9952	56.978	3533.5	6.9792	55.179	3531.5	6.9636	53.486	3529.6	6.9485	51.889
560	833.15	3562.7	7.0568	61.793	3560.8	7.0399	59.725	3558.9	7.0236	57.787	3557.0	7.0076	55.966	3555.1	6.9922	54.252	3553.3	6.9771	52.636
570	843.15	3586.0	7.0846	62.646	3584.2	7.0679	60.553	3582.4	7.0516	58.592	3580.6	7.0357	56.749	3578.7	7.0203	55.015	3576.9	7.0053	53.380
580	853.15	3609.4	7.1122	63.495	3607.7	7.0955	61.378	3605.9	7.0793	59.393	3604.1	7.0635	57.529	3602.3	7.0481	55.774	3600.6	7.0332	54.120
590	863.15	3632.8	7.1395	64.341	3631.1	7.1228	62.199	3629.4	7.1067	60.192	3627.7	7.0909	58.305	3625.9	7.0756	56.530	3624.2	7.0608	54.856
600	873.15	3656.2	7.1664	65.184	3654.5	7.1498	63.018	3652.9	7.1337	60.987	3651.2	7.1181	59.079	3649.6	7.1028	57.283	3647.9	7.0880	55.590
610	883.15	3679.6	7.1931	66.024	3678.0	7.1766	63.833	3676.4	7.1605	61.779	3674.8	7.1449	59.849	3673.2	7.1297	58.033	3671.6	7.1150	56.321
620	893.15	3703.1	7.2195	66.862	3701.5	7.2030	64.646	3699.9	7.1870	62.569	3698.4	7.1715	60.617	3696.8	7.1563	58.780	3695.2	7.1416	57.049
630	903.15	3726.5	7.2456	67.697	3725.0	7.2292	65.456	3723.5	7.2132	63.356	3722.0	7.1977	61.382	3720.5	7.1827	59.525	3718.9	7.1680	57.774
640	913.15	3750.0	7.2715	68.529	3748.6	7.2551	66.264	3747.1	7.2392	64.140	3745.6	7.2238	62.145	3744.1	7.2087	60.267	3742.6	7.1941	58.497
650	923.15	3773.5	7.2971	69.359	3772.1	7.2808	67.069	3770.7	7.2649	64.922	3769.2	7.2495	62.905	3767.8	7.2345	61.007	3766.4	7.2200	59.217
660	933.15	3797.1	7.3225	70.187	3795.7	7.3062	67.872	3794.3	7.2904	65.702	3792.9	7.2750	63.663	3791.5	7.2601	61.745	3790.1	7.2456	59.936
670	943.15	3820.7	7.3476	71.013	3819.3	7.3314	68.673	3818.0	7.3156	66.480	3816.6	7.3003	64.419	3815.3	7.2854	62.480	3813.9	7.2709	60.651
680	953.15	3844.3	7.3725	71.837	3843.0	7.3563	69.472	3841.7	7.3406	67.255	3840.4	7.3253	65.173	3839.0	7.3105	63.213	3837.7	7.2960	61.365
690	963.15	3868.0	7.3972	72.658	3866.7	7.3810	70.269	3865.4	7.3654	68.029	3864.1	7.3501	65.925	3862.8	7.3353	63.945	3861.6	7.3209	62.077
700	973.15	3891.7	7.4217	73.478	3890.4	7.4056	71.064	3889.2	7.3899	68.801	3887.9	7.3747	66.675	3886.7	7.3599	64.674	3885.4	7.3456	62.787
710	983.15	3915.4	7.4459	74.296	3914.2	7.4298	71.857	3913.0	7.4142	69.571	3911.8	7.3991	67.423	3910.6	7.3843	65.401	3909.3	7.3700	63.495
720	993.15	3939.1	7.4700	75.112	3938.0	7.4539	72.649	3936.8	7.4384	70.339	3935.6	7.4232	68.169	3934.5	7.4085	66.127	3933.3	7.3942	64.202
730	1003.15	3962.9	7.4938	75.927	3961.8	7.4778	73.438	3960.7	7.4623	71.105	3959.5	7.4472	68.914	3958.4	7.4325	66.851	3957.2	7.4182	64.907
740	1013.15	3986.8	7.5175	76.740	3985.7	7.5015	74.226	3984.6	7.4860	71.870	3983.5	7.4709	69.657	3982.4	7.4563	67.574	3981.2	7.4420	65.610
750	1023.15	4010.7	7.5409	77.551	4009.6	7.5250	75.013	4008.5	7.5095	72.634	4007.4	7.4945	70.398	4006.4	7.4799	68.295	4005.3	7.4657	66.311
760	1033.15	4034.6	7.5642	78.361	4033.5	7.5483	75.798	4032.5	7.5328	73.395	4031.5	7.5178	71.138	4030.4	7.5032	69.014	4029.4	7.4891	67.011
770	1043.15	4058.6	7.5873	79.170	4057.5	7.5714	76.582	4056.5	7.5560	74.156	4055.5	7.5410	71.877	4054.5	7.5264	69.732	4053.5	7.5123	67.710
780	1053.15	4082.6	7.6102	79.977	4081.6	7.5943	77.364	4080.6	7.5789	74.915	4079.6	7.5640	72.614	4078.6	7.5494	70.449	4077.6	7.5353	68.407
790	1063.15	4106.6	7.6329	80.782	4105.6	7.6171	78.145	4104.7	7.6017	75.672	4103.7	7.5868	73.350	4102.7	7.5723	71.164	4101.8	7.5582	69.103
800	1073.15	4130.7	7.6554	81.587	4129.7	7.6396	78.925	4128.8	7.6243	76.429	4127.9	7.6094	74.084	4126.9	7.5949	71.878	4126.0	7.5808	69.798

60 to 70 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		70			72			74			76			78			80		
t_s °C		285.8			287.7			289.6			291.4			293.2			295.0		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1267.5	3.1220	1.3514	1277.7	3.1398	1.3579	1287.8	3.1572	1.3645	1297.7	3.1743	1.3711	1307.5	3.1912	1.3777	1317.2	3.2077	1.3843
Sat. Vapour		2773.4	5.8161	27.368	2770.9	5.8019	26.517	2768.2	5.7879	25.711	2765.5	5.7741	24.944	2762.7	5.7605	24.215	2759.9	5.7470	23.521
t °C	T K																		
0	273.15	7.1	0.0004	0.99674	7.3	0.0004	0.99664	7.5	0.0004	0.99654	7.7	0.0004	0.99644	7.9	0.0004	0.99635	8.1	0.0004	0.99625
10	283.15	48.8	0.1504	0.99697	49.0	0.1503	0.99688	49.2	0.1503	0.99679	49.4	0.1503	0.99669	49.6	0.1503	0.99660	49.8	0.1503	0.99651
20	293.15	90.4	0.2948	0.99856	90.6	0.2948	0.99848	90.8	0.2947	0.99839	91.0	0.2947	0.99830	91.2	0.2946	0.99821	91.4	0.2946	0.99812
30	303.15	132.0	0.4344	1.0012	132.2	0.4343	1.0011	132.4	0.4342	1.0010	132.6	0.4342	1.0009	132.7	0.4341	1.0009	132.9	0.4340	1.0008
40	313.15	173.6	0.5694	1.0047	173.8	0.5693	1.0046	174.0	0.5692	1.0046	174.2	0.5691	1.0045	174.3	0.5691	1.0044	174.5	0.5690	1.0043
50	323.15	215.3	0.7003	1.0090	215.4	0.7002	1.0089	215.6	0.7001	1.0088	215.8	0.7000	1.0087	216.0	0.6999	1.0087	216.1	0.6998	1.0086
60	333.15	256.9	0.8273	1.0140	257.1	0.8272	1.0139	257.3	0.8270	1.0138	257.4	0.8269	1.0137	257.6	0.8268	1.0136	257.8	0.8267	1.0135
70	343.15	298.7	0.9506	1.0196	298.8	0.9505	1.0195	299.0	0.9504	1.0194	299.1	0.9503	1.0193	299.3	0.9502	1.0193	299.5	0.9501	1.0192
80	353.15	340.4	1.0707	1.0259	340.6	1.0705	1.0258	340.8	1.0704	1.0257	340.9	1.0703	1.0256	341.1	1.0701	1.0255	341.2	1.0700	1.0254
90	363.15	382.3	1.1875	1.0327	382.5	1.1874	1.0326	382.6	1.1873	1.0325	382.8	1.1871	1.0324	382.9	1.1870	1.0323	383.1	1.1868	1.0322
100	373.15	424.2	1.3015	1.0401	424.4	1.3013	1.0400	424.5	1.3012	1.0399	424.7	1.3010	1.0398	424.8	1.3009	1.0397	425.0	1.3007	1.0396
110	383.15	466.3	1.4127	1.0481	466.5	1.4126	1.0480	466.6	1.4124	1.0479	466.7	1.4122	1.0478	466.9	1.4121	1.0477	467.0	1.4119	1.0476
120	393.15	508.5	1.5215	1.0567	508.7	1.5213	1.0566	508.8	1.5211	1.0565	508.9	1.5209	1.0564	509.1	1.5208	1.0563	509.2	1.5206	1.0562
130	403.15	550.9	1.6279	1.0660	551.0	1.6277	1.0658	551.2	1.6275	1.0657	551.3	1.6273	1.0656	551.4	1.6271	1.0655	551.6	1.6269	1.0654
140	413.15	593.4	1.7321	1.0758	593.6	1.7319	1.0757	593.7	1.7317	1.0755	593.8	1.7315	1.0754	594.0	1.7313	1.0753	594.1	1.7311	1.0752
150	423.15	636.2	1.8345	1.0863	636.3	1.8342	1.0862	636.5	1.8340	1.0860	636.6	1.8338	1.0859	636.7	1.8336	1.0858	636.8	1.8334	1.0856
160	433.15	679.2	1.9350	1.0976	679.4	1.9347	1.0974	679.5	1.9345	1.0973	679.6	1.9343	1.0971	679.7	1.9340	1.0970	679.8	1.9338	1.0968
170	443.15	722.6	2.0338	1.1096	722.7	2.0336	1.1094	722.8	2.0333	1.1092	722.9	2.0331	1.1091	723.0	2.0328	1.1089	723.1	2.0326	1.1088
180	453.15	766.2	2.1312	1.1224	766.3	2.1309	1.1222	766.4	2.1307	1.1221	766.5	2.1304	1.1219	766.6	2.1301	1.1217	766.7	2.1299	1.1216
190	463.15	810.2	2.2273	1.1362	810.3	2.2270	1.1360	810.4	2.2267	1.1358	810.5	2.2264	1.1356	810.6	2.2261	1.1354	810.7	2.2258	1.1353
200	473.15	854.6	2.3222	1.1510	854.7	2.3219	1.1508	854.8	2.3216	1.1506	854.9	2.3212	1.1504	855.0	2.3209	1.1502	855.1	2.3206	1.1500
210	483.15	899.5	2.4161	1.1669	899.6	2.4158	1.1667	899.7	2.4154	1.1664	899.8	2.4151	1.1662	899.8	2.4148	1.1660	899.9	2.4144	1.1658
220	493.15	945.0	2.5092	1.1841	945.1	2.5089	1.1839	945.1	2.5085	1.1836	945.2	2.5082	1.1834	945.3	2.5078	1.1831	945.3	2.5075	1.1829
230	503.15	991.1	2.6018	1.2028	991.2	2.6014	1.2026	991.2	2.6010	1.2023	991.3	2.6006	1.2020	991.3	2.6002	1.2018	991.3	2.5999	1.2015
240	513.15	1038.0	2.6940	1.2233	1038.0	2.6936	1.2230	1038.0	2.6932	1.2227	1038.1	2.6928	1.2224	1038.1	2.6923	1.2221	1038.1	2.6919	1.2218
250	523.15	1085.8	2.7862	1.2458	1085.8	2.7857	1.2455	1085.8	2.7853	1.2451	1085.8	2.7848	1.2448	1085.8	2.7843	1.2444	1085.8	2.7839	1.2441
260	533.15	1134.6	2.8787	1.2708	1134.6	2.8781	1.2704	1134.5	2.8776	1.2700	1134.5	2.8771	1.2696	1134.5	2.8766	1.2692	1134.5	2.8761	1.2687
270	543.15	1184.7	2.9719	1.2988	1184.7	2.9713	1.2983	1184.6	2.9707	1.2978	1184.5	2.9701	1.2973	1184.5	2.9695	1.2969	1184.4	2.9689	1.2964
280	553.15	1236.5	3.0663	1.3307	1236.4	3.0656	1.3301	1236.3	3.0650	1.3295	1236.2	3.0643	1.3289	1236.1	3.0636	1.3283	1236.0	3.0629	1.3277
290	563.15	2794.1	5.8530	28.024	2782.5	5.8226	26.878	2770.5	5.7919	25.781	1289.9	3.1605	1.3654	1289.7	3.1597	1.3647	1289.5	3.1589	1.3639
300	573.15	2839.4	5.9327	29.457	2829.5	5.9054	28.321	2819.3	5.8779	27.238	2808.8	5.8503	26.204	2798.0	5.8224	25.214	2786.8	5.7942	24.264
310	583.15	2880.5	6.0037	30.765	2871.9	5.9786	29.630	2863.1	5.9536	28.551	2854.0	5.9285	27.522	2844.8	5.9033	26.541	2835.2	5.8780	25.602
320	593.15	2918.3	6.0681	31.978	2910.7	6.0447	30.839	2903.0	6.0214	29.757	2895.0	5.9982	28.728	2887.0	5.9751	27.747	2878.7	5.9519	26.811
330	603.15	2953.6	6.1272	33.118	2946.8	6.1051	31.970	2939.9	6.0832	30.882	2932.9	6.0615	29.847	2925.7	6.0399	28.863	2918.4	6.0183	27.924
340	613.15	2987.0	6.1820	34.199	2980.8	6.1610	33.041	2974.6	6.1402	31.943	2968.2	6.1196	30.901	2961.8	6.0992	29.909	2955.3	6.0790	28.965

350	623.15	3018.7	6.2333	35.233	3013.1	6.2132	34.063	3007.4	6.1933	32.954	3001.6	6.1737	31.901	2995.8	6.1542	30.900	2989.9	6.1349	29.948
360	633.15	3049.1	6.2817	36.228	3043.9	6.2623	35.044	3038.7	6.2432	33.922	3033.4	6.2243	32.858	3028.1	6.2056	31.847	3022.7	6.1872	30.885
370	643.15	3078.4	6.3276	37.190	3073.6	6.3088	35.991	3068.8	6.2903	34.856	3063.9	6.2721	33.780	3059.0	6.2541	32.757	3054.0	6.2363	31.784
380	653.15	3106.7	6.3714	38.123	3102.3	6.3531	36.910	3097.8	6.3351	35.761	3093.3	6.3174	34.671	3088.8	6.3000	33.636	3084.2	6.2828	32.652
390	663.15	3134.3	6.4133	39.033	3130.2	6.3955	37.804	3126.0	6.3780	36.640	3121.8	6.3607	35.537	3117.6	6.3438	34.489	3113.3	6.3271	33.493
400	673.15	3161.2	6.4536	39.922	3157.4	6.4362	38.676	3153.5	6.4191	37.497	3149.6	6.4022	36.380	3145.6	6.3857	35.319	3141.6	6.3694	34.310
410	683.15	3187.6	6.4925	40.792	3184.0	6.4754	39.530	3180.3	6.4586	38.336	3176.6	6.4422	37.204	3172.9	6.4260	36.130	3169.2	6.4101	35.108
420	693.15	3213.5	6.5301	41.646	3210.1	6.5133	40.368	3206.6	6.4969	39.158	3203.2	6.4807	38.011	3199.7	6.4649	36.923	3196.2	6.4493	35.888
430	703.15	3239.0	6.5666	42.487	3235.8	6.5501	41.191	3232.5	6.5340	39.966	3229.2	6.5181	38.804	3225.9	6.5025	37.701	3222.6	6.4872	36.653
440	713.15	3264.2	6.6022	43.315	3261.1	6.5859	42.002	3258.0	6.5700	40.760	3254.9	6.5543	39.583	3251.8	6.5390	38.466	3248.7	6.5240	37.405
450	723.15	3289.1	6.6368	44.131	3286.1	6.6208	42.802	3283.2	6.6050	41.544	3280.3	6.5896	40.351	3277.3	6.5745	39.220	3274.3	6.5597	38.145
460	733.15	3313.7	6.6707	44.938	3310.9	6.6548	43.591	3308.1	6.6393	42.317	3305.3	6.6240	41.109	3302.5	6.6091	39.963	3299.7	6.5945	38.874
470	743.15	3338.1	6.7038	45.737	3335.5	6.6881	44.372	3332.8	6.6727	43.081	3330.1	6.6577	41.857	3327.4	6.6429	40.696	3324.7	6.6285	39.593
480	753.15	3362.4	6.7362	46.527	3359.9	6.7207	45.144	3357.3	6.7054	43.837	3354.7	6.6906	42.597	3352.2	6.6760	41.422	3349.6	6.6617	40.304
490	763.15	3386.5	6.7680	47.310	3384.1	6.7526	45.910	3381.7	6.7376	44.585	3379.2	6.7228	43.330	3376.7	6.7084	42.139	3374.3	6.6942	41.008
500	773.15	3410.6	6.7993	48.086	3408.2	6.7840	46.668	3405.9	6.7691	45.327	3403.5	6.7545	44.056	3401.1	6.7402	42.850	3398.8	6.7262	41.704
510	783.15	3434.5	6.8300	48.857	3432.2	6.8149	47.421	3430.0	6.8000	46.063	3427.7	6.7856	44.776	3425.4	6.7714	43.554	3423.1	6.7575	42.394
520	793.15	3458.3	6.8603	49.622	3456.2	6.8452	48.168	3454.0	6.8305	46.793	3451.8	6.8161	45.490	3449.6	6.8021	44.253	3447.4	6.7883	43.079
530	803.15	3482.1	6.8901	50.382	3480.0	6.8751	48.910	3477.9	6.8605	47.518	3475.8	6.8462	46.199	3473.7	6.8322	44.947	3471.6	6.8186	43.758
540	813.15	3505.9	6.9195	51.138	3503.8	6.9046	49.648	3501.8	6.8901	48.238	3499.8	6.8759	46.903	3497.7	6.8620	45.636	3495.7	6.8484	44.432
550	823.15	3529.6	6.9485	51.889	3527.6	6.9337	50.381	3525.7	6.9192	48.954	3523.7	6.9051	47.603	3521.7	6.8913	46.320	3519.7	6.8778	45.102
560	833.15	3553.3	6.9771	52.636	3551.4	6.9623	51.110	3549.5	6.9480	49.666	3547.6	6.9339	48.298	3545.7	6.9202	47.001	3543.8	6.9068	45.768
570	843.15	3576.9	7.0053	53.380	3575.1	6.9906	51.835	3573.2	6.9763	50.374	3571.4	6.9624	48.990	3569.6	6.9487	47.677	3567.7	6.9354	46.430
580	853.15	3600.6	7.0332	54.120	3598.8	7.0186	52.557	3597.0	7.0044	51.079	3595.2	6.9905	49.679	3593.5	6.9769	48.350	3591.7	6.9636	47.088
590	863.15	3624.2	7.0608	54.856	3622.5	7.0462	53.276	3620.8	7.0321	51.780	3619.1	7.0182	50.364	3617.3	7.0047	49.020	3615.6	6.9915	47.743
600	873.15	3647.9	7.0880	55.590	3646.2	7.0735	53.991	3644.5	7.0594	52.478	3642.9	7.0457	51.045	3641.2	7.0322	49.686	3639.5	7.0191	48.394
610	883.15	3671.6	7.1150	56.321	3669.9	7.1006	54.704	3668.3	7.0865	53.174	3666.7	7.0728	51.724	3665.1	7.0594	50.349	3663.4	7.0463	49.043
620	893.15	3695.2	7.1416	57.049	3693.7	7.1273	55.413	3692.1	7.1133	53.866	3690.5	7.0996	52.401	3688.9	7.0863	51.010	3687.4	7.0732	49.689
630	903.15	3718.9	7.1680	57.774	3717.4	7.1537	56.120	3715.9	7.1398	54.556	3714.4	7.1262	53.074	3712.8	7.1129	51.668	3711.3	7.0999	50.332
640	913.15	3742.6	7.1941	58.497	3741.2	7.1799	56.825	3739.7	7.1660	55.243	3738.2	7.1524	53.745	3736.7	7.1392	52.323	3735.2	7.1262	50.973
650	923.15	3766.4	7.2200	59.217	3764.9	7.2058	57.527	3763.5	7.1919	55.928	3762.1	7.1784	54.413	3760.6	7.1652	52.976	3759.2	7.1523	51.611
660	933.15	3790.1	7.2456	59.936	3788.7	7.2314	58.227	3787.3	7.2176	56.611	3785.9	7.2041	55.080	3784.5	7.1910	53.627	3783.1	7.1781	52.247
670	943.15	3813.9	7.2709	60.651	3812.6	7.2568	58.925	3811.2	7.2430	57.291	3809.8	7.2296	55.744	3808.5	7.2165	54.276	3807.1	7.2037	52.881
680	953.15	3837.7	7.2960	61.365	3836.4	7.2820	59.620	3835.1	7.2682	57.969	3833.8	7.2549	56.406	3832.5	7.2418	54.922	3831.1	7.2290	53.512
690	963.15	3861.6	7.3209	62.077	3860.3	7.3069	60.314	3859.0	7.2932	58.646	3857.7	7.2799	57.066	3856.4	7.2668	55.566	3855.2	7.2541	54.142
700	973.15	3885.4	7.3456	62.787	3884.2	7.3316	61.006	3883.0	7.3179	59.320	3881.7	7.3046	57.724	3880.5	7.2916	56.209	3879.2	7.2790	54.770
710	983.15	3909.3	7.3700	63.495	3908.1	7.3560	61.695	3906.9	7.3424	59.993	3905.7	7.3292	58.380	3904.5	7.3162	56.849	3903.3	7.3036	55.396
720	993.15	3933.3	7.3942	64.202	3932.1	7.3803	62.384	3930.9	7.3667	60.664	3929.8	7.3535	59.034	3928.6	7.3406	57.488	3927.4	7.3280	56.020
730	1003.15	3957.2	7.4182	64.907	3956.1	7.4043	63.070	3955.0	7.3908	61.333	3953.8	7.3776	59.687	3952.7	7.3647	58.125	3951.5	7.3521	56.642
740	1013.15	3981.2	7.4420	65.610	3980.1	7.4282	63.755	3979.0	7.4147	62.000	3977.9	7.4015	60.338	3976.8	7.3887	58.761	3975.7	7.3761	57.263
750	1023.15	4005.3	7.4657	66.311	4004.2	7.4518	64.438	4003.1	7.4383	62.666	4002.1	7.4252	60.987	4001.0	7.4124	59.395	3999.9	7.3999	57.882
760	1033.15	4029.4	7.4891	67.011	4028.3	7.4753	65.120	4027.3	7.4618	63.331	4026.2	7.4487	61.635	4025.2	7.4359	60.027	4024.1	7.4234	58.500
770	1043.15	4053.5	7.5123	67.710	4052.4	7.4985	65.800	4051.4	7.4851	63.993	4050.4	7.4720	62.282	4049.4	7.4593	60.658	4048.4	7.4468	59.116
780	1053.15	4077.6	7.5353	68.407	4076.6	7.5216	66.479	4075.6	7.5082	64.655	4074.6	7.4951	62.927	4073.6	7.4824	61.288	4072.7	7.4700	59.731
790	1063.15	4101.8	7.5582	69.103	4100.8	7.5445	67.156	4099.9	7.5311	65.315	4098.9	7.5181	63.571	4097.9	7.5054	61.916	4097.0	7.4930	60.344
800	1073.15	4126.0	7.5808	69.798	4125.1	7.5671	67.833	4124.1	7.5538	65.974	4123.2	7.5408	64.214	4122.3	7.5281	62.543	4121.3	7.5158	60.956

Table 3 Water and Steam—*continued*

p (*abs*) bar		80			82			84			86			88			90		
t_s °C		295.0			296.7			298.4			300.1			301.7			303.3		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1317.2	3.2077	1.3843	1326.7	3.2240	1.3909	1336.1	3.2400	1.3976	1345.4	3.2558	1.4043	1354.7	3.2714	1.4111	1363.8	3.2867	1.4179
Sat. Vapour		2759.9	5.7470	23.521	2757.0	5.7337	22.860	2754.0	5.7206	22.228	2750.9	5.7076	21.624	2747.8	5.6947	21.046	2744.6	5.6820	20.493
t °C	T K																		
0	273.15	8.1	0.0004	0.99625	8.3	0.0004	0.99615	8.5	0.0004	0.99605	8.7	0.0004	0.99595	8.9	0.0005	0.99585	9.1	0.0005	0.99576
10	283.15	49.8	0.1503	0.99651	50.0	0.1502	0.99642	50.2	0.1502	0.99632	50.4	0.1502	0.99623	50.5	0.1502	0.99614	50.7	0.1502	0.99605
20	293.15	91.4	0.2946	0.99812	91.5	0.2946	0.99803	91.7	0.2945	0.99794	91.9	0.2945	0.99785	92.1	0.2944	0.99776	92.3	0.2944	0.99767
30	303.15	132.9	0.4340	1.0008	133.1	0.4340	1.0007	133.3	0.4339	1.0006	133.5	0.4339	1.0005	133.7	0.4338	1.0004	133.8	0.4337	1.0003
40	313.15	174.5	0.5690	1.0043	174.7	0.5689	1.0042	174.9	0.5688	1.0041	175.0	0.5688	1.0040	175.2	0.5687	1.0039	175.4	0.5686	1.0039
50	323.15	216.1	0.6998	1.0086	216.3	0.6997	1.0085	216.5	0.6996	1.0084	216.6	0.6995	1.0083	216.8	0.6994	1.0082	217.0	0.6993	1.0081
60	333.15	257.8	0.8267	1.0135	257.9	0.8266	1.0135	258.1	0.8265	1.0134	258.3	0.8264	1.0133	258.4	0.8263	1.0132	258.6	0.8262	1.0131
70	343.15	299.5	0.9501	1.0192	299.6	0.9499	1.0191	299.8	0.9498	1.0190	300.0	0.9497	1.0189	300.1	0.9496	1.0188	300.3	0.9495	1.0187
80	353.15	341.2	1.0700	1.0254	341.4	1.0699	1.0253	341.6	1.0697	1.0252	341.7	1.0696	1.0251	341.9	1.0695	1.0250	342.0	1.0694	1.0249
90	363.15	383.1	1.1868	1.0322	383.2	1.1867	1.0321	383.4	1.1865	1.0320	383.5	1.1864	1.0319	383.7	1.1863	1.0318	383.8	1.1861	1.0317
100	373.15	425.0	1.3007	1.0396	425.1	1.3006	1.0395	425.3	1.3004	1.0394	425.4	1.3003	1.0393	425.6	1.3001	1.0392	425.8	1.3000	1.0391
110	383.15	467.0	1.4119	1.0476	467.2	1.4117	1.0475	467.3	1.4116	1.0474	467.5	1.4114	1.0473	467.6	1.4112	1.0472	467.8	1.4111	1.0471
120	393.15	509.2	1.5206	1.0562	509.4	1.5204	1.0561	509.5	1.5202	1.0560	509.6	1.5200	1.0558	509.8	1.5199	1.0557	509.9	1.5197	1.0556
130	403.15	551.6	1.6269	1.0654	551.7	1.6267	1.0652	551.8	1.6265	1.0651	552.0	1.6264	1.0650	552.1	1.6262	1.0649	552.2	1.6260	1.0648
140	413.15	594.1	1.7311	1.0752	594.2	1.7309	1.0750	594.4	1.7307	1.0749	594.5	1.7305	1.0748	594.6	1.7303	1.0747	594.7	1.7301	1.0745
150	423.15	636.8	1.8334	1.0856	637.0	1.8332	1.0855	637.1	1.8329	1.0854	637.2	1.8327	1.0852	637.3	1.8325	1.0851	637.5	1.8323	1.0850
160	433.15	679.8	1.9338	1.0968	680.0	1.9336	1.0967	680.1	1.9333	1.0965	680.2	1.9331	1.0964	680.3	1.9329	1.0963	680.4	1.9326	1.0961
170	443.15	723.1	2.0326	1.1088	723.2	2.0323	1.1086	723.3	2.0321	1.1085	723.5	2.0318	1.1083	723.6	2.0316	1.1082	723.7	2.0313	1.1080
180	453.15	766.7	2.1299	1.1216	766.8	2.1296	1.1214	766.9	2.1293	1.1212	767.0	2.1291	1.1211	767.1	2.1288	1.1209	767.2	2.1286	1.1207
190	463.15	810.7	2.2258	1.1353	810.8	2.2256	1.1351	810.9	2.2253	1.1349	811.0	2.2250	1.1347	811.1	2.2247	1.1345	811.2	2.2244	1.1344
200	473.15	855.1	2.3206	1.1500	855.1	2.3203	1.1498	855.2	2.3200	1.1496	855.3	2.3197	1.1494	855.4	2.3194	1.1492	855.5	2.3191	1.1490
210	483.15	899.9	2.4144	1.1658	900.0	2.4141	1.1656	900.1	2.4138	1.1654	900.1	2.4135	1.1651	900.2	2.4131	1.1649	900.3	2.4128	1.1647
220	493.15	945.3	2.5075	1.1829	945.4	2.5071	1.1827	945.4	2.5067	1.1824	945.5	2.5064	1.1822	945.6	2.5060	1.1819	945.6	2.5057	1.1817
230	503.15	991.3	2.5999	1.2015	991.4	2.5995	1.2012	991.4	2.5991	1.2009	991.5	2.5987	1.2007	991.5	2.5983	1.2004	991.6	2.5979	1.2001
240	513.15	1038.1	2.6919	1.2218	1038.1	2.6915	1.2215	1038.2	2.6911	1.2212	1038.2	2.6906	1.2209	1038.2	2.6902	1.2206	1038.3	2.6898	1.2203
250	523.15	1085.8	2.7839	1.2441	1085.8	2.7834	1.2437	1085.8	2.7829	1.2434	1085.8	2.7825	1.2430	1085.8	2.7820	1.2427	1085.8	2.7815	1.2423
260	533.15	1134.5	2.8761	1.2687	1134.4	2.8755	1.2683	1134.4	2.8750	1.2679	1134.4	2.8745	1.2675	1134.4	2.8740	1.2671	1134.3	2.8735	1.2667
270	543.15	1184.4	2.9689	1.2964	1184.4	2.9683	1.2959	1184.3	2.9677	1.2954	1184.2	2.9671	1.2950	1184.2	2.9666	1.2945	1184.1	2.9660	1.2940
280	553.15	1236.0	3.0629	1.3277	1235.9	3.0623	1.3272	1235.8	3.0616	1.3266	1235.7	3.0609	1.3260	1235.6	3.0603	1.3255	1235.5	3.0596	1.3249
290	563.15	1289.5	3.1589	1.3639	1289.4	3.1581	1.3632	1289.2	3.1573	1.3625	1289.0	3.1566	1.3618	1288.9	3.1558	1.3611	1288.7	3.1550	1.3604
300	573.15	2786.8	5.7942	24.264	2775.2	5.7656	23.350	2763.1	5.7366	22.469	1345.0	3.2551	1.4040	1344.8	3.2542	1.4031	1344.6	3.2533	1.4022
310	583.15	2835.2	5.8780	25.602	2825.4	5.8526	24.702	2815.4	5.8270	23.838	2805.0	5.8012	23.007	2794.3	5.7751	22.207	2783.2	5.7486	21.434
320	593.15	2878.7	5.9519	26.811	2870.2	5.9288	25.916	2861.6	5.9056	25.058	2852.7	5.8823	24.236	2843.6	5.8590	23.446	2834.3	5.8355	22.685
330	603.15	2918.4	6.0183	27.924	2911.0	5.9969	27.028	2903.4	5.9755	26.171	2895.6	5.9541	25.350	2887.8	5.9328	24.563	2879.7	5.9114	23.807
340	613.15	2955.3	6.0790	28.965	2948.6	6.0588	28.064	2941.9	6.0388	27.203	2935.0	6.0189	26.380	2928.0	5.9990	25.592	2920.9	5.9792	24.836

350	623.15	2989.9	6.1349	29.948	2983.9	6.1159	29.040	2977.8	6.0969	28.173	2971.6	6.0781	27.345	2965.4	6.0594	26.552	2959.0	6.0408	25.792
360	633.15	3022.7	6.1872	30.885	3017.2	6.1689	29.968	3011.7	6.1509	29.094	3006.1	6.1330	28.258	3000.4	6.1152	27.459	2994.7	6.0976	26.694
370	643.15	3054.0	6.2363	31.784	3049.0	6.2188	30.858	3043.9	6.2014	29.974	3038.8	6.1843	29.130	3033.6	6.1673	28.323	3028.4	6.1504	27.551
380	653.15	3084.2	6.2828	32.652	3079.5	6.2659	31.715	3074.8	6.2491	30.821	3070.1	6.2326	29.968	3065.3	6.2162	29.153	3060.5	6.2000	28.372
390	663.15	3113.3	6.3271	33.493	3109.0	6.3106	32.544	3104.7	6.2944	31.640	3100.3	6.2784	30.777	3095.8	6.2626	29.952	3091.4	6.2469	29.163
					h	s	v												
400	673.15	3141.6	6.3694	34.310	3137.6	6.3534	33.350	3133.5	6.3376	32.435	3129.4	6.3220	31.561	3125.3	6.3067	30.727	3121.2	6.2915	29.929
410	683.15	3169.2	6.4101	35.108	3165.4	6.3945	34.136	3161.6	6.3791	33.209	3157.8	6.3639	32.325	3154.0	6.3489	31.480	3150.1	6.3341	30.673
420	693.15	3196.2	6.4493	35.888	3192.6	6.4340	34.904	3189.1	6.4189	33.965	3185.5	6.4041	33.070	3181.9	6.3894	32.215	3178.2	6.3750	31.398
430	703.15	3222.6	6.4872	36.653	3219.3	6.4722	35.656	3215.9	6.4574	34.706	3212.5	6.4429	33.799	3209.1	6.4285	32.934	3205.7	6.4144	32.106
440	713.15	3248.7	6.5240	37.405	3245.5	6.5092	36.395	3242.3	6.4947	35.432	3239.1	6.4804	34.514	3235.9	6.4663	33.638	3232.7	6.4525	32.800
								h	s	v									
450	723.15	3274.3	6.5597	38.145	3271.3	6.5452	37.121	3268.3	6.5309	36.147	3265.3	6.5168	35.217	3262.2	6.5030	34.329	3259.2	6.4894	33.480
460	733.15	3299.7	6.5945	38.874	3296.8	6.5802	37.837	3293.9	6.5661	36.850	3291.1	6.5522	35.908	3288.2	6.5386	35.009	3285.3	6.5252	34.150
470	743.15	3324.7	6.6285	39.593	3322.0	6.6143	38.544	3319.3	6.6004	37.544	3316.5	6.5868	36.590	3313.8	6.5733	35.680	3311.0	6.5601	34.809
480	753.15	3349.6	6.6617	40.304	3347.0	6.6477	39.241	3344.4	6.6340	38.229	3341.8	6.6205	37.263	3339.1	6.6072	36.341	3336.5	6.5942	35.460
490	763.15	3374.3	6.6942	41.008	3371.8	6.6804	39.931	3369.3	6.6668	38.906	3366.8	6.6534	37.928	3364.3	6.6403	36.994	3361.7	6.6275	36.102
500	773.15	3398.8	6.7262	41.704	3396.4	6.7124	40.614	3394.0	6.6990	39.576	3391.6	6.6858	38.586	3389.2	6.6728	37.640	3386.8	6.6600	36.737
510	783.15	3423.1	6.7575	42.394	3420.9	6.7439	41.291	3418.6	6.7305	40.239	3416.3	6.7175	39.237	3413.9	6.7046	38.280	3411.6	6.6920	37.365
520	793.15	3447.4	6.7883	43.079	3445.2	6.7748	41.961	3443.0	6.7616	40.897	3440.8	6.7486	39.882	3438.6	6.7358	38.913	3436.3	6.7234	37.987
530	803.15	3471.6	6.8186	43.758	3469.5	6.8052	42.627	3467.3	6.7921	41.549	3465.2	6.7792	40.522	3463.1	6.7666	39.541	3460.9	6.7542	38.604
540	813.15	3495.7	6.8484	44.432	3493.7	6.8351	43.287	3491.6	6.8221	42.197	3489.5	6.8093	41.157	3487.5	6.7968	40.164	3485.4	6.7845	39.215
550	823.15	3519.7	6.8778	45.102	3517.8	6.8646	43.943	3515.8	6.8516	42.839	3513.8	6.8390	41.787	3511.8	6.8265	40.782	3509.8	6.8143	39.822
560	833.15	3543.8	6.9068	45.768	3541.8	6.8937	44.595	3539.9	6.8808	43.478	3538.0	6.8682	42.413	3536.1	6.8558	41.396	3534.2	6.8437	40.425
570	843.15	3567.7	6.9354	46.430	3565.9	6.9223	45.243	3564.0	6.9095	44.113	3562.2	6.8970	43.035	3560.3	6.8847	42.006	3558.5	6.8727	41.023
580	853.15	3591.7	6.9636	47.088	3589.9	6.9506	45.887	3588.1	6.9379	44.744	3586.3	6.9255	43.653	3584.5	6.9133	42.613	3582.7	6.9013	41.618
590	863.15	3615.6	6.9915	47.743	3613.9	6.9786	46.528	3612.1	6.9659	45.371	3610.4	6.9535	44.268	3608.7	6.9414	43.216	3606.9	6.9295	42.209
600	873.15	3639.5	7.0191	48.394	3637.9	7.0062	47.166	3636.2	6.9936	45.996	3634.5	6.9813	44.880	3632.8	6.9692	43.815	3631.1	6.9574	42.798
610	883.15	3663.4	7.0463	49.043	3661.8	7.0335	47.801	3660.2	7.0210	46.617	3658.6	7.0087	45.489	3656.9	6.9967	44.412	3655.3	6.9849	43.383
620	893.15	3687.4	7.0732	49.689	3685.8	7.0605	48.432	3684.2	7.0480	47.236	3682.6	7.0358	46.095	3681.1	7.0238	45.006	3679.5	7.0121	43.965
630	903.15	3711.3	7.0999	50.332	3709.8	7.0872	49.062	3708.2	7.0748	47.852	3706.7	7.0626	46.698	3705.2	7.0507	45.597	3703.6	7.0390	44.544
640	913.15	3735.2	7.1262	50.973	3733.7	7.1136	49.688	3732.3	7.1012	48.465	3730.8	7.0891	47.298	3729.3	7.0772	46.185	3727.8	7.0656	45.121
650	923.15	3759.2	7.1523	51.611	3757.7	7.1397	50.313	3756.3	7.1274	49.076	3754.9	7.1153	47.897	3753.4	7.1035	46.771	3752.0	7.0919	45.695
660	933.15	3783.1	7.1781	52.247	3781.8	7.1656	50.934	3780.4	7.1533	49.684	3779.0	7.1413	48.492	3777.6	7.1295	47.355	3776.1	7.1180	46.268
670	943.15	3807.1	7.2037	52.881	3805.8	7.1912	51.554	3804.4	7.1790	50.291	3803.1	7.1670	49.086	3801.7	7.1553	47.936	3800.3	7.1438	46.837
680	953.15	3831.1	7.2290	53.512	3829.8	7.2166	52.172	3828.5	7.2044	50.895	3827.2	7.1924	49.678	3825.9	7.1807	48.515	3824.5	7.1693	47.405
690	963.15	3855.2	7.2541	54.142	3853.9	7.2417	52.787	3852.6	7.2295	51.497	3851.3	7.2176	50.267	3850.0	7.2060	49.093	3848.8	7.1946	47.971
700	973.15	3879.2	7.2790	54.770	3878.0	7.2666	53.401	3876.7	7.2544	52.097	3875.5	7.2426	50.854	3874.2	7.2310	49.668	3873.0	7.2196	48.534
710	983.15	3903.3	7.3036	55.396	3902.1	7.2912	54.013	3900.9	7.2791	52.696	3899.7	7.2673	51.440	3898.5	7.2557	50.242	3897.2	7.2444	49.096
720	993.15	3927.4	7.3280	56.020	3926.2	7.3156	54.623	3925.1	7.3036	53.292	3923.9	7.2918	52.024	3922.7	7.2803	50.813	3921.5	7.2690	49.656
730	1003.15	3951.5	7.3521	56.642	3950.4	7.3399	55.231	3949.3	7.3278	53.887	3948.1	7.3161	52.606	3947.0	7.3046	51.383	3945.8	7.2933	50.215
740	1013.15	3975.7	7.3761	57.263	3974.6	7.3639	55.838	3973.5	7.3519	54.481	3972.4	7.3402	53.187	3971.3	7.3287	51.952	3970.2	7.3174	50.771
750	1023.15	3999.9	7.3999	57.882	3998.8	7.3876	56.443	3997.7	7.3757	55.072	3996.7	7.3640	53.766	3995.6	7.3526	52.518	3994.5	7.3414	51.326
760	1033.15	4024.1	7.4234	58.500	4023.1	7.4112	57.047	4022.0	7.3993	55.663	4021.0	7.3877	54.343	4019.9	7.3762	53.084	4018.9	7.3651	51.880
770	1043.15	4048.4	7.4468	59.116	4047.4	7.4346	57.649	4046.3	7.4227	56.251	4045.3	7.4111	54.919	4044.3	7.3997	53.647	4043.3	7.3886	52.432
780	1053.15	4072.7	7.4700	59.731	4071.7	7.4578	58.249	4070.7	7.4460	56.839	4069.7	7.4344	55.494	4068.7	7.4230	54.210	4067.7	7.4119	52.983
790	1063.15	4097.0	7.4930	60.344	4096.0	7.4808	58.849	4095.1	7.4690	57.425	4094.1	7.4574	56.067	4093.1	7.4461	54.771	4092.2	7.4350	53.532
800	1073.15	4121.3	7.5158	60.956	4120.4	7.5037	59.447	4119.5	7.4918	58.009	4118.5	7.4803	56.639	4117.6	7.4690	55.331	4116.7	7.4579	54.090

Table 3 Water and Steam—*continued*

p (*abs*) bar		90			92			94			96			98			100		
t_s °C		303.3			304.9			306.4			308.0			309.5			311.0		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1363.8	3.2867	1.4179	1372.8	3.3019	1.4247	1381.7	3.3168	1.4316	1390.6	3.3316	1.4385	1399.4	3.3462	1.4455	1408.1	3.3606	1.4526
Sat. Vapour		2744.6	5.6820	20.493	2741.3	5.6693	19.962	2738.0	5.6568	19.453	2734.7	5.6444	18.964	2731.2	5.6320	18.493	2727.7	5.6198	18.041
t °C	T K																		
0	273.15	9.1	0.0005	0.99576	9.3	0.0005	0.99566	9.5	0.0005	0.99556	9.7	0.0005	0.99546	9.9	0.0005	0.99536	10.1	0.0005	0.99527
10	283.15	50.7	0.1502	0.99605	50.9	0.1501	0.99595	51.1	0.1501	0.99586	51.3	0.1501	0.99577	51.5	0.1501	0.99568	51.7	0.1501	0.99558
20	293.15	92.3	0.2944	0.99767	92.5	0.2943	0.99758	92.7	0.2943	0.99750	92.9	0.2943	0.99741	93.0	0.2942	0.99732	93.2	0.2942	0.99723
30	303.15	133.8	0.4337	1.0003	134.0	0.4337	1.0002	134.2	0.4336	1.0002	134.4	0.4335	1.0001	134.6	0.4335	0.99999	134.7	0.4334	0.99990
40	313.15	175.4	0.5686	1.0039	175.6	0.5685	1.0038	175.7	0.5684	1.0037	175.9	0.5684	1.0036	176.1	0.5683	1.0035	176.3	0.5682	1.0034
50	323.15	217.0	0.6993	1.0081	217.2	0.6992	1.0080	217.3	0.6991	1.0080	217.5	0.6991	1.0079	217.7	0.6990	1.0078	217.8	0.6989	1.0077
60	333.15	258.6	0.8262	1.0131	258.8	0.8261	1.0130	258.9	0.8260	1.0129	259.1	0.8259	1.0128	259.3	0.8258	1.0127	259.4	0.8257	1.0127
70	343.15	300.3	0.9495	1.0187	300.5	0.9493	1.0186	300.6	0.9492	1.0185	300.8	0.9491	1.0184	300.9	0.9490	1.0183	301.1	0.9489	1.0183
80	353.15	342.0	1.0694	1.0249	342.2	1.0692	1.0248	342.3	1.0691	1.0247	342.5	1.0690	1.0246	342.7	1.0688	1.0245	342.8	1.0687	1.0245
90	363.15	383.8	1.1861	1.0317	384.0	1.1860	1.0316	384.2	1.1858	1.0315	384.3	1.1857	1.0314	384.5	1.1855	1.0313	384.6	1.1854	1.0312
100	373.15	425.8	1.3000	1.0391	425.9	1.2998	1.0390	426.1	1.2996	1.0389	426.2	1.2995	1.0388	426.4	1.2993	1.0387	426.5	1.2992	1.0386
110	383.15	467.8	1.4111	1.0471	467.9	1.4109	1.0470	468.1	1.4107	1.0469	468.2	1.4106	1.0468	468.4	1.4104	1.0467	468.5	1.4103	1.0465
120	393.15	509.9	1.5197	1.0556	510.1	1.5195	1.0555	510.2	1.5193	1.0554	510.4	1.5192	1.0553	510.5	1.5190	1.0552	510.6	1.5188	1.0551
130	403.15	552.2	1.6260	1.0648	552.4	1.6258	1.0647	552.5	1.6256	1.0645	552.7	1.6254	1.0644	552.8	1.6252	1.0643	552.9	1.6250	1.0642
140	413.15	594.7	1.7301	1.0745	594.9	1.7299	1.0744	595.0	1.7297	1.0743	595.1	1.7295	1.0742	595.3	1.7293	1.0740	595.4	1.7291	1.0739
150	423.15	637.5	1.8323	1.0850	637.6	1.8321	1.0849	637.7	1.8319	1.0847	637.8	1.8316	1.0846	638.0	1.8314	1.0845	638.1	1.8312	1.0843
160	433.15	680.4	1.9326	1.0961	680.6	1.9324	1.0960	680.7	1.9322	1.0958	680.8	1.9320	1.0957	680.9	1.9317	1.0956	681.0	1.9315	1.0954
170	443.15	723.7	2.0313	1.1080	723.8	2.0311	1.1079	723.9	2.0309	1.1077	724.0	2.0306	1.1076	724.1	2.0304	1.1074	724.2	2.0301	1.1073
180	453.15	767.2	2.1286	1.1207	767.3	2.1283	1.1206	767.4	2.1280	1.1204	767.6	2.1278	1.1202	767.7	2.1275	1.1201	767.8	2.1272	1.1199
190	463.15	811.2	2.2244	1.1344	811.3	2.2241	1.1342	811.4	2.2239	1.1340	811.5	2.2236	1.1338	811.5	2.2233	1.1336	811.6	2.2230	1.1335
200	473.15	855.5	2.3191	1.1490	855.6	2.3188	1.1488	855.7	2.3185	1.1486	855.8	2.3182	1.1484	855.8	2.3179	1.1482	855.9	2.3176	1.1480
210	483.15	900.3	2.4128	1.1647	900.4	2.4125	1.1645	900.4	2.4122	1.1643	900.5	2.4118	1.1641	900.6	2.4115	1.1639	900.7	2.4112	1.1636
220	493.15	945.6	2.5057	1.1817	945.7	2.5053	1.1815	945.7	2.5050	1.1812	945.8	2.5046	1.1810	945.9	2.5043	1.1808	945.9	2.5039	1.1805
230	503.15	991.6	2.5979	1.2001	991.6	2.5975	1.1999	991.7	2.5972	1.1996	991.7	2.5968	1.1993	991.8	2.5964	1.1991	991.8	2.5960	1.1988
240	513.15	1038.3	2.6898	1.2203	1038.3	2.6894	1.2200	1038.3	2.6890	1.2197	1038.3	2.6885	1.2194	1038.4	2.6881	1.2191	1038.4	2.6877	1.2188
250	523.15	1085.8	2.7815	1.2423	1085.8	2.7811	1.2420	1085.8	2.7806	1.2416	1085.8	2.7801	1.2413	1085.8	2.7797	1.2410	1085.8	2.7792	1.2406
260	533.15	1134.3	2.8735	1.2667	1134.3	2.8729	1.2663	1134.3	2.8724	1.2659	1134.3	2.8719	1.2655	1134.3	2.8714	1.2652	1134.2	2.8709	1.2648
270	543.15	1184.1	2.9660	1.2940	1184.1	2.9654	1.2935	1184.0	2.9648	1.2931	1184.0	2.9643	1.2926	1183.9	2.9637	1.2922	1183.9	2.9631	1.2917
280	553.15	1235.5	3.0596	1.3249	1235.4	3.0589	1.3243	1235.3	3.0583	1.3238	1235.2	3.0576	1.3232	1235.1	3.0570	1.3227	1235.0	3.0563	1.3221
290	563.15	1288.7	3.1550	1.3604	1288.6	3.1543	1.3597	1288.4	3.1535	1.3590	1288.2	3.1527	1.3583	1288.1	3.1520	1.3577	1287.9	3.1512	1.3570
300	573.15	1344.6	3.2533	1.4022	1344.3	3.2524	1.4013	1344.1	3.2515	1.4005	1343.8	3.2506	1.3996	1343.6	3.2497	1.3987	1343.4	3.2488	1.3979
310	583.15	2783.2	5.7486	21.434	2771.7	5.7217	20.686	2759.9	5.6944	19.961	2747.5	5.6665	19.257	2734.7	5.6379	18.570	1402.2	3.3505	1.4472
320	593.15	2834.3	5.8355	22.685	2824.7	5.8118	21.952	2814.8	5.7879	21.245	2804.7	5.7637	20.561	2794.3	5.7393	19.899	2783.5	5.7145	19.256
330	603.15	2879.7	5.9114	23.807	2871.4	5.8899	23.081	2863.0	5.8684	22.381	2854.4	5.8468	21.706	2845.6	5.8251	21.055	2836.5	5.8032	20.425
340	613.15	2920.9	5.9792	24.836	2913.7	5.9594	24.110	2906.3	5.9397	23.412	2898.8	5.9199	22.740	2891.2	5.9001	22.093	2883.4	5.8803	21.468

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2952.6	6.0223	25.064	2946.0	6.0039	24.364	2939.4	5.9855	23.692	2932.6	5.9672	23.044	2925.8	5.9489	22.421
360	633.15	2994.7	6.0976	26.694	2988.9	6.0801	25.961	2983.0	6.0627	25.257	2977.0	6.0454	24.581	2971.0	6.0282	23.931	2964.8	6.0110	23.305
370	643.15	3028.4	6.1504	27.551	3023.1	6.1337	26.812	3017.7	6.1172	26.102	3012.3	6.1007	25.421	3006.8	6.0844	24.766	3001.3	6.0682	24.137
380	653.15	3060.5	6.2000	28.372	3055.7	6.1840	27.625	3050.7	6.1681	26.909	3045.8	6.1524	26.221	3040.8	6.1368	25.561	3035.7	6.1213	24.926
390	663.15	3091.4	6.2469	29.163	3086.9	6.2314	28.408	3082.3	6.2161	27.684	3077.8	6.2010	26.990	3073.1	6.1860	26.322	3068.5	6.1711	25.681
400	673.15	3121.2	6.2915	29.929	3117.0	6.2765	29.165	3112.8	6.2617	28.433	3108.5	6.2470	27.731	3104.2	6.2325	27.056	3099.9	6.2182	26.408
410	683.15	3150.1	6.3341	30.673	3146.2	6.3195	29.900	3142.2	6.3051	29.159	3138.3	6.2909	28.448	3134.3	6.2768	27.766	3130.3	6.2629	27.111
420	693.15	3178.2	6.3750	31.398	3174.6	6.3608	30.615	3170.9	6.3467	29.865	3167.2	6.3329	29.146	3163.4	6.3192	28.456	3159.7	6.3057	27.793
430	703.15	3205.7	6.4144	32.106	3202.3	6.4005	31.314	3198.8	6.3868	30.555	3195.3	6.3732	29.827	3191.8	6.3599	29.129	3188.3	6.3467	28.458
440	713.15	3232.7	6.4525	32.800	3229.4	6.4388	31.998	3226.2	6.4254	31.229	3222.9	6.4121	30.493	3219.6	6.3990	29.786	3216.2	6.3861	29.107
450	723.15	3259.2	6.4894	33.480	3256.1	6.4760	32.668	3253.0	6.4628	31.891	3249.9	6.4498	31.145	3246.8	6.4369	30.429	3243.6	6.4243	29.742
460	733.15	3285.3	6.5252	34.150	3282.4	6.5120	33.328	3279.4	6.4991	32.540	3276.5	6.4863	31.785	3273.5	6.4737	31.061	3270.5	6.4612	30.365
470	743.15	3311.0	6.5601	34.809	3308.3	6.5471	33.977	3305.5	6.5343	33.179	3302.7	6.5218	32.415	3299.9	6.5093	31.681	3297.0	6.4971	30.977
480	753.15	3336.5	6.5942	35.460	3333.9	6.5814	34.617	3331.2	6.5688	33.809	3328.5	6.5563	33.035	3325.9	6.5441	32.293	3323.2	6.5321	31.580
490	763.15	3361.7	6.6275	36.102	3359.2	6.6148	35.248	3356.7	6.6023	34.431	3354.1	6.5901	33.647	3351.6	6.5780	32.895	3349.0	6.5661	32.174
500	773.15	3386.8	6.6600	36.737	3384.4	6.6475	35.872	3381.9	6.6352	35.045	3379.5	6.6231	34.252	3377.0	6.6112	33.491	3374.6	6.5994	32.760
510	783.15	3411.6	6.6920	37.365	3409.3	6.6796	36.490	3407.0	6.6674	35.652	3404.7	6.6554	34.849	3402.3	6.6436	34.079	3400.0	6.6320	33.339
520	793.15	3436.3	6.7234	37.987	3434.1	6.7111	37.101	3431.9	6.6990	36.253	3429.6	6.6871	35.440	3427.4	6.6755	34.660	3425.1	6.6640	33.912
530	803.15	3460.9	6.7542	38.604	3458.8	6.7420	37.707	3456.6	6.7300	36.849	3454.5	6.7183	36.026	3452.3	6.7067	35.236	3450.2	6.6953	34.479
540	813.15	3485.4	6.7845	39.215	3483.4	6.7724	38.308	3481.3	6.7605	37.439	3479.2	6.7489	36.606	3477.1	6.7374	35.807	3475.1	6.7261	35.040
550	823.15	3509.8	6.8143	39.822	3507.8	6.8023	38.904	3505.9	6.7906	38.024	3503.9	6.7790	37.182	3501.9	6.7676	36.373	3499.8	6.7564	35.597
560	833.15	3534.2	6.8437	40.425	3532.3	6.8318	39.495	3530.3	6.8201	38.606	3528.4	6.8086	37.753	3526.5	6.7974	36.935	3524.5	6.7863	36.149
570	843.15	3558.5	6.8727	41.023	3556.6	6.8609	40.083	3554.8	6.8493	39.183	3552.9	6.8379	38.320	3551.0	6.8266	37.492	3549.2	6.8156	36.697
580	853.15	3582.7	6.9013	41.618	3580.9	6.8895	40.667	3579.1	6.8780	39.756	3577.3	6.8667	38.883	3575.5	6.8555	38.046	3573.7	6.8446	37.242
590	863.15	3606.9	6.9295	42.209	3605.2	6.9178	41.247	3603.5	6.9063	40.326	3601.7	6.8951	39.443	3600.0	6.8840	38.596	3598.2	6.8731	37.783
600	873.15	3631.1	6.9574	42.798	3629.5	6.9457	41.824	3627.8	6.9343	40.892	3626.1	6.9231	39.999	3624.4	6.9121	39.142	3622.7	6.9013	38.320
610	883.15	3655.3	6.9849	43.383	3653.7	6.9733	42.398	3652.0	6.9620	41.456	3650.4	6.9509	40.552	3648.8	6.9399	39.686	3647.1	6.9292	38.854
620	893.15	3679.5	7.0121	43.965	3677.9	7.0006	42.969	3676.3	6.9893	42.016	3674.7	6.9782	41.103	3673.1	6.9674	40.227	3671.6	6.9567	39.385
630	903.15	3703.6	7.0390	44.544	3702.1	7.0276	43.538	3700.6	7.0163	42.574	3699.0	7.0053	41.650	3697.5	6.9945	40.764	3696.0	6.9838	39.914
640	913.15	3727.8	7.0656	45.121	3726.3	7.0542	44.103	3724.8	7.0430	43.129	3723.3	7.0321	42.195	3721.8	7.0213	41.300	3720.4	7.0107	40.440
650	923.15	3752.0	7.0919	45.695	3750.5	7.0806	44.667	3749.1	7.0695	43.682	3747.6	7.0585	42.738	3746.2	7.0478	41.832	3744.7	7.0373	40.963
660	933.15	3776.1	7.1180	46.268	3774.7	7.1067	45.228	3773.3	7.0956	44.232	3771.9	7.0847	43.278	3770.5	7.0740	42.363	3769.1	7.0635	41.484
670	943.15	3800.3	7.1438	46.837	3799.0	7.1325	45.786	3797.6	7.1215	44.780	3796.3	7.1106	43.816	3794.9	7.1000	42.891	3793.5	7.0895	42.003
680	953.15	3824.5	7.1693	47.405	3823.2	7.1581	46.343	3821.9	7.1471	45.326	3820.6	7.1363	44.351	3819.2	7.1257	43.417	3817.9	7.1153	42.519
690	963.15	3848.8	7.1946	47.971	3847.5	7.1834	46.897	3846.2	7.1724	45.870	3844.9	7.1617	44.885	3843.6	7.1511	43.941	3842.3	7.1408	43.034
700	973.15	3873.0	7.2196	48.534	3871.7	7.2085	47.450	3870.5	7.1975	46.412	3869.3	7.1868	45.417	3868.0	7.1763	44.463	3866.8	7.1660	43.546
710	983.15	3897.2	7.2444	49.096	3896.0	7.2333	48.001	3894.8	7.2224	46.952	3893.6	7.2117	45.947	3892.4	7.2012	44.983	3891.2	7.1910	44.057
720	993.15	3921.5	7.2690	49.656	3920.3	7.2579	48.550	3919.2	7.2470	47.490	3918.0	7.2364	46.475	3916.8	7.2260	45.501	3915.6	7.2157	44.566
730	1003.15	3945.8	7.2933	50.215	3944.7	7.2823	49.097	3943.5	7.2715	48.027	3942.4	7.2608	47.001	3941.3	7.2504	46.017	3940.1	7.2402	45.073
740	1013.15	3970.2	7.3174	50.771	3969.0	7.3064	49.642	3967.9	7.2957	48.562	3966.8	7.2851	47.526	3965.7	7.2747	46.532	3964.6	7.2645	45.579
750	1023.15	3994.5	7.3414	51.326	3993.4	7.3304	50.186	3992.3	7.3196	49.095	3991.3	7.3091	48.049	3990.2	7.2987	47.046	3989.1	7.2886	46.083
760	1033.15	4018.9	7.3651	51.880	4017.8	7.3541	50.729	4016.8	7.3434	49.627	4015.7	7.3329	48.571	4014.7	7.3226	47.558	4013.6	7.3124	46.585
770	1043.15	4043.3	7.3886	52.432	4042.3	7.3777	51.270	4041.2	7.3670	50.157	4040.2	7.3565	49.091	4039.2	7.3462	48.068	4038.2	7.3361	47.086
780	1053.15	4067.7	7.4119	52.983	4066.7	7.4010	51.810	4065.7	7.3903	50.686	4064.7	7.3799	49.609	4063.8	7.3696	48.577	4062.8	7.3595	47.585
790	1063.15	4092.2	7.4350	53.532	4091.2	7.4241	52.348	4090.3	7.4135	51.214	4089.3	7.4031	50.127	4088.3	7.3928	49.084	4087.4	7.3828	48.084
800	1073.15	4116.7	7.4579	54.080	4115.7	7.4471	52.885	4114.8	7.4365	51.740	4113.9	7.4261	50.643	4112.9	7.4159	49.591	4112.0	7.4058	48.580

Table 3 Water and Steam—*continued*

p (*abs*) bar		100			105			110			115			120			125		
t °C		311.0			314.6			318.0			321.4			324.6			327.8		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1408.1	3.3606	1.4526	1429.5	3.3959	1.4704	1450.6	3.4304	1.4887	1471.3	3.4641	1.5074	1491.7	3.4971	1.5267	1511.9	3.5295	1.5466
Sat. Vapour		2727.7	5.6198	18.041	2718.7	5.5895	16.979	2709.3	5.5596	16.007	2699.5	5.5299	15.113	2689.2	5.5003	14.285	2678.4	5.4707	13.517
t °C	T K																		
0	273.15	10.1	0.0005	0.99527	10.6	0.0005	0.99502	11.1	0.0006	0.99478	11.6	0.0006	0.99453	12.1	0.0006	0.99429	12.6	0.0006	0.99405
10	283.15	51.7	0.1501	0.99558	52.2	0.1500	0.99535	52.7	0.1499	0.99512	53.2	0.1499	0.99489	53.6	0.1498	0.99467	54.1	0.1498	0.99444
20	293.15	93.2	0.2942	0.99723	93.7	0.2941	0.99701	94.2	0.2939	0.99679	94.6	0.2938	0.99657	95.1	0.2937	0.99635	95.6	0.2936	0.99613
30	303.15	134.7	0.4334	0.99990	135.2	0.4333	0.99968	135.6	0.4331	0.99947	136.1	0.4329	0.99925	136.6	0.4328	0.99904	137.0	0.4326	0.99882
40	313.15	176.3	0.5682	1.0034	176.7	0.5680	1.0032	177.2	0.5678	1.0030	177.6	0.5676	1.0028	178.0	0.5674	1.0026	178.5	0.5672	1.0023
50	323.15	217.8	0.6989	1.0077	218.3	0.6986	1.0075	218.7	0.6984	1.0073	219.1	0.6982	1.0070	219.6	0.6979	1.0068	220.0	0.6977	1.0066
60	333.15	259.4	0.8257	1.0127	259.9	0.8254	1.0124	260.3	0.8251	1.0122	260.7	0.8249	1.0120	261.1	0.8246	1.0118	261.5	0.8243	1.0116
70	343.15	301.1	0.9489	1.0183	301.5	0.9486	1.0180	301.9	0.9483	1.0178	302.3	0.9480	1.0176	302.7	0.9477	1.0174	303.1	0.9474	1.0171
80	353.15	342.8	1.0687	1.0245	343.2	1.0684	1.0242	343.6	1.0681	1.0240	344.0	1.0677	1.0238	344.4	1.0674	1.0235	344.8	1.0671	1.0233
90	363.15	384.6	1.1854	1.0312	385.0	1.1851	1.0310	385.4	1.1847	1.0308	385.8	1.1843	1.0305	386.2	1.1840	1.0303	386.6	1.1836	1.0300
100	373.15	426.5	1.2992	1.0386	426.9	1.2988	1.0384	427.3	1.2984	1.0381	427.6	1.2980	1.0379	428.0	1.2977	1.0376	428.4	1.2973	1.0374
110	383.15	468.5	1.4103	1.0465	468.9	1.4098	1.0463	469.2	1.4094	1.0460	469.6	1.4090	1.0458	470.0	1.4086	1.0455	470.3	1.4082	1.0452
120	393.15	510.6	1.5188	1.0551	511.0	1.5184	1.0548	511.3	1.5179	1.0545	511.7	1.5175	1.0542	512.1	1.5171	1.0540	512.4	1.5166	1.0537
130	403.15	552.9	1.6250	1.0642	553.3	1.6246	1.0639	553.6	1.6241	1.0636	554.0	1.6236	1.0633	554.3	1.6232	1.0630	554.6	1.6227	1.0627
140	413.15	595.4	1.7291	1.0739	595.7	1.7286	1.0736	596.1	1.7281	1.0733	596.4	1.7276	1.0730	596.7	1.7271	1.0727	597.1	1.7266	1.0724
150	423.15	638.1	1.8312	1.0843	638.4	1.8307	1.0840	638.7	1.8301	1.0837	639.0	1.8296	1.0833	639.4	1.8291	1.0830	639.7	1.8285	1.0827
160	433.15	681.0	1.9315	1.0954	681.3	1.9309	1.0951	681.6	1.9304	1.0947	681.9	1.9298	1.0944	682.2	1.9292	1.0940	682.5	1.9286	1.0937
170	443.15	724.2	2.0301	1.1073	724.5	2.0295	1.1069	724.8	2.0289	1.1065	725.1	2.0283	1.1061	725.4	2.0277	1.1058	725.7	2.0271	1.1054
180	453.15	767.8	2.1272	1.1199	768.0	2.1266	1.1195	768.3	2.1259	1.1191	768.6	2.1253	1.1187	768.8	2.1246	1.1183	769.1	2.1240	1.1179
190	463.15	811.6	2.2230	1.1335	811.9	2.2223	1.1330	812.1	2.2216	1.1326	812.4	2.2209	1.1321	812.6	2.2202	1.1317	812.9	2.2195	1.1313
200	473.15	855.9	2.3176	1.1480	856.1	2.3169	1.1475	856.4	2.3161	1.1470	856.6	2.3154	1.1466	856.8	2.3146	1.1461	857.0	2.3139	1.1456
210	483.15	900.7	2.4112	1.1636	900.9	2.4104	1.1631	901.0	2.4096	1.1626	901.2	2.4088	1.1621	901.4	2.4080	1.1615	901.6	2.4072	1.1610
220	493.15	945.9	2.5039	1.1805	946.1	2.5030	1.1799	946.3	2.5022	1.1793	946.4	2.5013	1.1788	946.6	2.5004	1.1782	946.7	2.4996	1.1776
230	503.15	991.8	2.5960	1.1988	991.9	2.5951	1.1982	992.1	2.5941	1.1975	992.2	2.5932	1.1969	992.3	2.5922	1.1962	992.4	2.5913	1.1956
240	513.15	1038.4	2.6877	1.2188	1038.5	2.6867	1.2180	1038.6	2.6856	1.2173	1038.6	2.6846	1.2165	1038.7	2.6836	1.2158	1038.8	2.6825	1.2151
250	523.15	1085.8	2.7792	1.2406	1085.8	2.7781	1.2398	1085.9	2.7769	1.2389	1085.9	2.7758	1.2381	1085.9	2.7747	1.2373	1086.0	2.7736	1.2364
260	533.15	1134.2	2.8709	1.2648	1134.2	2.8696	1.2638	1134.2	2.8684	1.2628	1134.1	2.8671	1.2619	1134.1	2.8659	1.2609	1134.1	2.8646	1.2600
270	543.15	1183.9	2.9631	1.2917	1183.7	2.9617	1.2905	1183.6	2.9603	1.2894	1183.5	2.9589	1.2883	1183.4	2.9575	1.2872	1183.3	2.9561	1.2861
280	553.15	1235.0	3.0563	1.3221	1234.7	3.0547	1.3207	1234.5	3.0531	1.3194	1234.3	3.0515	1.3180	1234.1	3.0499	1.3167	1233.9	3.0484	1.3154
290	563.15	1287.9	3.1512	1.3570	1287.6	3.1494	1.3553	1287.2	3.1475	1.3536	1286.8	3.1457	1.3520	1286.5	3.1439	1.3504	1286.2	3.1421	1.3488
300	573.15	1343.4	3.2488	1.3979	1342.8	3.2466	1.3957	1342.2	3.2444	1.3936	1341.7	3.2422	1.3915	1341.2	3.2401	1.3895	1340.6	3.2380	1.3875
310	583.15	1402.2	3.3505	1.4472	1401.3	3.3478	1.4444	1400.5	3.3451	1.4416	1399.6	3.3424	1.4389	1398.8	3.3398	1.4362	1398.1	3.3373	1.4336
320	593.15	2783.5	5.7145	19.256	2754.9	5.6508	17.726	2723.5	5.5835	16.285	1462.1	3.4486	1.4979	1460.9	3.4453	1.4941	1459.7	3.4420	1.4905
330	603.15	2836.5	5.8032	20.425	2812.8	5.7476	18.935	2787.4	5.6904	17.550	2760.0	5.6310	16.251	2730.2	5.5686	15.019	2697.2	5.5018	13.835
340	613.15	2883.4	5.8803	21.468	2863.1	5.8303	19.997	2841.7	5.7797	18.639	2819.0	5.7279	17.376	2794.7	5.6747	16.193	2768.7	5.6195	15.077

350	623.15	2925.8	5.9489	22.421	2908.1	5.9031	20.956	2889.6	5.8571	19.610	2870.1	5.8107	18.365	2849.7	5.7636	17.206	2828.0	5.7155	16.122
360	633.15	2964.8	6.0110	23.305	2949.1	5.9684	21.838	2932.8	5.9259	20.494	2915.8	5.8835	19.255	2898.1	5.8408	18.108	2879.6	5.7976	17.041
370	643.15	3001.3	6.0682	24.137	2987.1	6.0280	22.662	2972.5	5.9882	21.313	2957.4	5.9487	20.074	2941.8	5.9093	18.930	2925.7	5.8698	17.868
380	653.15	3035.7	6.1213	24.926	3022.8	6.0831	23.440	3009.6	6.0454	22.083	2996.0	6.0082	20.838	2982.0	5.9712	19.691	2967.6	5.9345	18.629
390	663.15	3068.5	6.1711	25.681	3056.6	6.1345	24.182	3044.5	6.0985	22.814	3032.1	6.0631	21.560	3019.4	6.0281	20.406	3006.4	5.9935	19.339
400	673.15	3099.9	6.2182	26.408	3089.0	6.1829	24.893	3077.8	6.1483	23.512	3066.4	6.1144	22.248	3054.8	6.0810	21.084	3042.9	6.0481	20.010
410	683.15	3130.3	6.2629	27.111	3120.1	6.2287	25.580	3109.7	6.1954	24.184	3099.2	6.1627	22.907	3088.4	6.1306	21.733	3077.5	6.0991	20.650
420	693.15	3159.7	6.3057	27.793	3150.2	6.2725	26.245	3140.5	6.2401	24.834	3130.7	6.2085	23.543	3120.7	6.1775	22.357	3110.5	6.1471	21.264
430	703.15	3188.3	6.3467	28.458	3179.4	6.3143	26.891	3170.3	6.2828	25.464	3161.1	6.2521	24.159	3151.8	6.2221	22.961	3142.3	6.1927	21.856
440	713.15	3216.2	6.3861	29.107	3207.9	6.3545	27.521	3199.4	6.3238	26.078	3190.7	6.2939	24.758	3182.0	6.2647	23.546	3173.1	6.2362	22.429
450	723.15	3243.6	6.4243	29.742	3235.7	6.3933	28.137	3227.7	6.3633	26.676	3219.6	6.3341	25.341	3211.4	6.3056	24.116	3203.0	6.2778	22.987
460	733.15	3270.5	6.4612	30.365	3263.1	6.4309	28.741	3255.5	6.4014	27.262	3247.8	6.3728	25.911	3240.0	6.3450	24.672	3232.2	6.3179	23.530
470	743.15	3297.0	6.4971	30.977	3289.9	6.4673	29.333	3282.7	6.4384	27.837	3275.5	6.4103	26.470	3268.1	6.3831	25.215	3260.7	6.3565	24.060
480	753.15	3323.2	6.5321	31.580	3316.4	6.5027	29.915	3309.6	6.4742	28.401	3302.7	6.4467	27.017	3295.7	6.4199	25.748	3288.7	6.3939	24.580
490	763.15	3349.0	6.5661	32.174	3342.6	6.5372	30.489	3336.1	6.5092	28.956	3329.5	6.4821	27.556	3322.9	6.4557	26.271	3316.2	6.4302	25.089
500	773.15	3374.6	6.5994	32.760	3368.4	6.5708	31.054	3362.2	6.5432	29.503	3356.0	6.5165	28.086	3349.6	6.4906	26.786	3343.3	6.4654	25.590
510	783.15	3400.0	6.6320	33.339	3394.1	6.6038	31.612	3388.1	6.5765	30.042	3382.1	6.5502	28.608	3376.1	6.5246	27.293	3370.0	6.4998	26.082
520	793.15	3425.1	6.6640	33.912	3419.5	6.6360	32.164	3413.8	6.6091	30.575	3408.1	6.5830	29.124	3402.3	6.5578	27.793	3396.5	6.5334	26.568
530	803.15	3450.2	6.6953	34.479	3444.7	6.6677	32.710	3439.3	6.6410	31.102	3433.8	6.6153	29.633	3428.2	6.5903	28.286	3422.7	6.5662	27.047
540	813.15	3475.1	6.7261	35.040	3469.8	6.6987	33.250	3464.6	6.6723	31.623	3459.3	6.6468	30.137	3454.0	6.6222	28.774	3448.6	6.5983	27.520
550	823.15	3499.8	6.7564	35.597	3494.8	6.7293	33.786	3489.7	6.7031	32.139	3484.7	6.6779	30.635	3479.6	6.6535	29.256	3474.4	6.6298	27.987
560	833.15	3524.5	6.7863	36.149	3519.7	6.7593	34.317	3514.8	6.7334	32.650	3509.9	6.7083	31.129	3505.0	6.6842	29.734	3500.0	6.6608	28.450
570	843.15	3549.2	6.8156	36.697	3544.5	6.7889	34.843	3539.8	6.7631	33.158	3535.0	6.7383	31.618	3530.3	6.7144	30.207	3525.5	6.6912	28.908
580	853.15	3573.7	6.8446	37.242	3569.2	6.8180	35.366	3564.6	6.7925	33.661	3560.1	6.7679	32.103	3555.5	6.7441	30.676	3550.9	6.7211	29.362
590	863.15	3598.2	6.8731	37.783	3593.8	6.8467	35.885	3589.5	6.8214	34.160	3585.0	6.7970	32.585	3580.6	6.7734	31.141	3576.2	6.7506	29.812
600	873.15	3622.7	6.9013	38.320	3618.5	6.8751	36.401	3614.2	6.8499	34.656	3610.0	6.8256	33.063	3605.7	6.8022	31.603	3601.4	6.7796	30.259
610	883.15	3647.1	6.9292	38.854	3643.0	6.9031	36.913	3638.9	6.8780	35.149	3634.8	6.8539	33.538	3630.7	6.8307	32.061	3626.5	6.8082	30.702
620	893.15	3671.6	6.9567	39.385	3667.6	6.9307	37.423	3663.6	6.9058	35.639	3659.6	6.8819	34.010	3655.6	6.8588	32.516	3651.6	6.8365	31.142
630	903.15	3696.0	6.9838	39.914	3692.1	6.9580	37.930	3688.3	6.9333	36.126	3684.4	6.9095	34.478	3680.5	6.8865	32.969	3676.6	6.8643	31.579
640	913.15	3720.4	7.0107	40.440	3716.6	6.9850	38.434	3712.9	6.9604	36.610	3709.1	6.9367	34.945	3705.4	6.9139	33.418	3701.6	6.8919	32.014
650	923.15	3744.7	7.0373	40.963	3741.1	7.0117	38.935	3737.5	6.9872	37.091	3733.9	6.9636	35.408	3730.2	6.9409	33.865	3726.6	6.9190	32.446
660	933.15	3769.1	7.0635	41.484	3765.6	7.0381	39.434	3762.1	7.0137	37.571	3758.6	6.9903	35.869	3755.0	6.9677	34.310	3751.5	6.9459	32.875
670	943.15	3793.5	7.0895	42.003	3790.1	7.0642	39.931	3786.7	7.0399	38.048	3783.3	7.0166	36.328	3779.9	6.9941	34.752	3776.4	6.9725	33.302
680	953.15	3817.9	7.1153	42.519	3814.6	7.0901	40.426	3811.3	7.0659	38.522	3808.0	7.0427	36.785	3804.7	7.0203	35.192	3801.3	6.9987	33.726
690	963.15	3842.3	7.1408	43.034	3839.1	7.1156	40.918	3835.9	7.0916	38.995	3832.7	7.0684	37.239	3829.5	7.0462	35.630	3826.2	7.0247	34.149
700	973.15	3866.8	7.1660	43.546	3863.6	7.1410	41.409	3860.5	7.1170	39.466	3857.4	7.0939	37.692	3854.3	7.0718	36.066	3851.1	7.0504	34.570
710	983.15	3891.2	7.1910	44.057	3888.2	7.1660	41.898	3885.1	7.1421	39.935	3882.1	7.1192	38.142	3879.1	7.0971	36.500	3876.0	7.0759	34.988
720	993.15	3915.6	7.2157	44.566	3912.7	7.1909	42.385	3909.8	7.1671	40.402	3906.8	7.1442	38.591	3903.9	7.1222	36.932	3900.9	7.1011	35.405
730	1003.15	3940.1	7.2402	45.073	3937.3	7.2155	42.870	3934.4	7.1917	40.867	3931.5	7.1690	39.038	3928.7	7.1471	37.362	3925.8	7.1260	35.820
740	1013.15	3964.6	7.2645	45.579	3961.8	7.2398	43.353	3959.0	7.2162	41.331	3956.3	7.1935	39.484	3953.5	7.1717	37.791	3950.7	7.1507	36.234
750	1023.15	3989.1	7.2886	46.083	3986.4	7.2640	43.835	3983.7	7.2404	41.793	3981.0	7.2178	39.928	3978.3	7.1961	38.218	3975.6	7.1752	36.645
760	1033.15	4013.6	7.3124	46.585	4011.0	7.2879	44.316	4008.4	7.2644	42.253	4005.8	7.2419	40.370	4003.1	7.2203	38.644	4000.5	7.1994	37.056
770	1043.15	4038.2	7.3361	47.086	4035.6	7.3116	44.795	4033.1	7.2882	42.712	4030.5	7.2658	40.811	4028.0	7.2442	39.068	4025.5	7.2234	37.464
780	1053.15	4062.8	7.3595	47.585	4060.3	7.3352	45.272	4057.8	7.3118	43.170	4055.3	7.2894	41.250	4052.9	7.2679	39.490	4050.4	7.2472	37.872
790	1063.15	4087.4	7.3828	48.084	4085.0	7.3585	45.749	4082.6	7.3352	43.626	4080.2	7.3129	41.688	4077.8	7.2914	39.912	4075.3	7.2708	38.278
800	1073.15	4112.0	7.4058	48.580	4109.7	7.3816	46.223	4107.3	7.3584	44.081	4105.0	7.3361	42.125	4102.7	7.3147	40.332	4100.3	7.2942	38.682

100 to 125 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		125			130			135			140			145			150		
t_s °C		327.8			330.8			333.8			336.6			339.4			342.1		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1511.9	3.5295	1.5466	1531.9	3.5614	1.5671	1551.8	3.5929	1.5884	1571.5	3.6241	1.6105	1591.2	3.6550	1.6336	1610.9	3.6857	1.6578
Sat. Vapour		2678.4	5.4707	13.517	2667.0	5.4409	12.800	2655.1	5.4109	12.129	2642.4	5.3804	11.498	2629.1	5.3495	10.904	2615.1	5.3180	10.343
t °C	T K																		
0	273.15	12.6	0.0006	0.99405	13.1	0.0007	0.99380	13.6	0.0007	0.99356	14.1	0.0007	0.99332	14.6	0.0007	0.99307	15.1	0.0007	0.99283
10	283.15	54.1	0.1498	0.99444	54.6	0.1497	0.99421	55.1	0.1497	0.99398	55.6	0.1496	0.99375	56.0	0.1496	0.99352	56.5	0.1495	0.99330
20	293.15	95.6	0.2936	0.99613	96.0	0.2935	0.99591	96.5	0.2934	0.99569	97.0	0.2933	0.99547	97.4	0.2932	0.99525	97.9	0.2931	0.99503
30	303.15	137.0	0.4326	0.99882	137.5	0.4325	0.99860	137.9	0.4323	0.99839	138.4	0.4322	0.99818	138.8	0.4320	0.99796	139.3	0.4319	0.99775
40	313.15	178.5	0.5672	1.0023	178.9	0.5670	1.0021	179.4	0.5668	1.0019	179.8	0.5666	1.0017	180.2	0.5665	1.0015	180.7	0.5663	1.0013
50	323.15	220.0	0.6977	1.0066	220.4	0.6975	1.0064	220.8	0.6973	1.0062	221.3	0.6970	1.0060	221.7	0.6968	1.0058	222.1	0.6966	1.0055
60	333.15	261.5	0.8243	1.0116	262.0	0.8241	1.0113	262.4	0.8238	1.0111	262.8	0.8236	1.0109	263.2	0.8233	1.0107	263.6	0.8230	1.0105
70	343.15	303.1	0.9474	1.0171	303.6	0.9471	1.0169	304.0	0.9468	1.0167	304.4	0.9465	1.0165	304.8	0.9462	1.0162	305.2	0.9459	1.0160
80	353.15	344.8	1.0671	1.0233	345.2	1.0668	1.0231	345.6	1.0664	1.0228	346.0	1.0661	1.0226	346.4	1.0658	1.0224	346.8	1.0655	1.0221
90	363.15	386.6	1.1836	1.0300	386.9	1.1833	1.0298	387.3	1.1829	1.0296	387.7	1.1826	1.0293	388.1	1.1822	1.0291	388.5	1.1819	1.0289
100	373.15	428.4	1.2973	1.0374	428.8	1.2969	1.0371	429.1	1.2965	1.0369	429.5	1.2961	1.0366	429.9	1.2958	1.0364	430.3	1.2954	1.0361
110	383.15	470.3	1.4082	1.0452	470.7	1.4078	1.0450	471.1	1.4074	1.0447	471.4	1.4070	1.0445	471.8	1.4066	1.0442	472.2	1.4062	1.0439
120	393.15	512.4	1.5166	1.0537	512.8	1.5162	1.0534	513.1	1.5157	1.0531	513.5	1.5153	1.0529	513.8	1.5149	1.0526	514.2	1.5144	1.0523
130	403.15	554.6	1.6227	1.0627	555.0	1.6222	1.0624	555.3	1.6218	1.0622	555.7	1.6213	1.0619	556.0	1.6208	1.0616	556.4	1.6204	1.0613
140	413.15	597.1	1.7266	1.0724	597.4	1.7261	1.0721	597.7	1.7256	1.0718	598.0	1.7251	1.0715	598.4	1.7246	1.0712	598.7	1.7241	1.0709
150	423.15	639.7	1.8285	1.0827	640.0	1.8280	1.0824	640.3	1.8275	1.0820	640.6	1.8270	1.0817	640.9	1.8264	1.0814	641.3	1.8259	1.0811
160	433.15	682.5	1.9286	1.0937	682.8	1.9281	1.0933	683.1	1.9275	1.0930	683.4	1.9269	1.0926	683.7	1.9264	1.0923	684.0	1.9258	1.0919
170	443.15	725.7	2.0271	1.1054	725.9	2.0265	1.1050	726.2	2.0259	1.1046	726.5	2.0253	1.1043	726.8	2.0247	1.1039	727.1	2.0241	1.1035
180	453.15	769.1	2.1240	1.1179	769.4	2.1233	1.1175	769.6	2.1227	1.1171	769.9	2.1221	1.1167	770.2	2.1214	1.1163	770.4	2.1208	1.1159
190	463.15	812.9	2.2195	1.1313	813.1	2.2188	1.1308	813.4	2.2182	1.1304	813.6	2.2175	1.1300	813.8	2.2168	1.1295	814.1	2.2161	1.1291
200	473.15	857.0	2.3139	1.1456	857.2	2.3131	1.1451	857.5	2.3124	1.1447	857.7	2.3116	1.1442	857.9	2.3109	1.1437	858.1	2.3102	1.1433
210	483.15	901.6	2.4072	1.1610	901.8	2.4064	1.1605	902.0	2.4056	1.1600	902.2	2.4048	1.1595	902.4	2.4040	1.1589	902.6	2.4032	1.1584
220	493.15	946.7	2.4996	1.1776	946.9	2.4987	1.1770	947.1	2.4978	1.1765	947.2	2.4970	1.1759	947.4	2.4961	1.1753	947.6	2.4953	1.1748
230	503.15	992.4	2.5913	1.1956	992.6	2.5904	1.1949	992.7	2.5894	1.1943	992.8	2.5885	1.1937	993.0	2.5876	1.1930	993.1	2.5867	1.1924
240	513.15	1038.8	2.6825	1.2151	1038.9	2.6815	1.2144	1039.0	2.6805	1.2137	1039.1	2.6795	1.2130	1039.2	2.6785	1.2122	1039.2	2.6775	1.2115
250	523.15	1086.0	2.7736	1.2364	1086.0	2.7724	1.2356	1086.0	2.7713	1.2348	1086.1	2.7702	1.2340	1086.1	2.7691	1.2332	1086.2	2.7680	1.2324
260	533.15	1134.1	2.8646	1.2600	1134.0	2.8634	1.2590	1134.0	2.8622	1.2581	1134.0	2.8610	1.2572	1134.0	2.8597	1.2562	1134.0	2.8585	1.2553
270	543.15	1183.3	2.9561	1.2861	1183.2	2.9547	1.2850	1183.1	2.9533	1.2839	1183.0	2.9520	1.2828	1182.9	2.9506	1.2817	1182.8	2.9493	1.2807
280	553.15	1233.9	3.0484	1.3154	1233.7	3.0468	1.3141	1233.5	3.0453	1.3128	1233.3	3.0438	1.3115	1233.1	3.0422	1.3103	1232.9	3.0407	1.3090
290	563.15	1286.2	3.1421	1.3488	1285.8	3.1403	1.3472	1285.5	3.1385	1.3456	1285.2	3.1368	1.3441	1284.9	3.1350	1.3426	1284.6	3.1333	1.3411
300	573.15	1340.6	3.2380	1.3875	1340.1	3.2359	1.3855	1339.7	3.2338	1.3836	1339.2	3.2318	1.3817	1338.7	3.2298	1.3798	1338.3	3.2278	1.3779
310	583.15	1398.1	3.3373	1.4336	1397.3	3.3348	1.4310	1396.6	3.3323	1.4285	1395.9	3.3298	1.4260	1395.2	3.3274	1.4236	1394.5	3.3250	1.4212
320	593.15	1459.7	3.4420	1.4905	1458.5	3.4388	1.4870	1457.4	3.4357	1.4835	1456.4	3.4327	1.4801	1455.3	3.4297	1.4769	1454.3	3.4267	1.4736
330	603.15	2697.2	5.5018	13.835	1526.0	3.5516	1.5600	1524.3	3.5474	1.5548	1522.6	3.5433	1.5497	1520.9	3.5394	1.5449	1519.4	3.5355	1.5402
340	613.15	2768.7	5.6195	15.077	2740.6	5.5618	14.015	2709.9	5.5007	12.994	2675.7	5.4348	11.997	2635.8	5.3603	10.997	1593.3	3.6571	1.6324

350	623.15	2828.0	5.7155	16.122	2805.0	5.6661	15.102	2780.5	5.6150	14.134	2754.2	5.5618	13.211	2725.8	5.5060	12.324	2694.8	5.4467	11.462
360	633.15	2879.6	5.7976	17.041	2860.2	5.7539	16.041	2839.7	5.7093	15.102	2818.1	5.6636	14.213	2795.2	5.6165	13.369	2770.8	5.5677	12.562
370	643.15	2925.7	5.8698	17.868	2908.8	5.8301	16.878	2891.3	5.7901	15.952	2873.0	5.7496	15.082	2853.8	5.7083	14.260	2833.6	5.6662	13.481
380	653.15	2967.6	5.9345	18.629	2952.7	5.8979	17.642	2937.3	5.8612	16.720	2921.4	5.8243	15.858	2904.9	5.7872	15.047	2887.7	5.7497	14.282
390	663.15	3006.4	5.9935	19.339	2993.1	5.9592	18.349	2979.3	5.9250	17.428	2965.2	5.8909	16.567	2950.7	5.8568	15.760	2935.7	5.8225	15.001
400	673.15	3042.9	6.0481	20.010	3030.7	6.0155	19.015	3018.3	5.9833	18.090	3005.6	5.9513	17.227	2992.5	5.9194	16.419	2979.1	5.8876	15.661
410	683.15	3077.5	6.0991	20.650	3066.3	6.0680	19.647	3054.9	6.0373	18.716	3043.3	6.0069	17.848	3031.4	5.9768	17.036	3019.3	5.9469	16.276
420	693.15	3110.5	6.1471	21.264	3100.2	6.1173	20.252	3089.7	6.0878	19.313	3079.0	6.0588	18.438	3068.1	6.0301	17.622	3057.0	6.0016	16.857
430	703.15	3142.3	6.1927	21.856	3132.7	6.1639	20.834	3123.0	6.1355	19.886	3113.0	6.1076	19.004	3103.0	6.0800	18.181	3092.7	6.0528	17.410
440	713.15	3173.1	6.2362	22.429	3164.1	6.2082	21.397	3155.0	6.1808	20.439	3145.8	6.1538	19.549	3136.4	6.1272	18.718	3126.9	6.1010	17.940
450	723.15	3203.0	6.2778	22.987	3194.6	6.2506	21.943	3186.0	6.2240	20.975	3177.4	6.1978	20.075	3168.6	6.1721	19.236	3159.7	6.1468	18.451
460	733.15	3232.2	6.3179	23.530	3224.2	6.2913	22.474	3216.2	6.2654	21.496	3208.1	6.2399	20.586	3199.8	6.2150	19.738	3191.5	6.1904	18.946
470	743.15	3260.7	6.3565	24.060	3253.2	6.3306	22.993	3245.6	6.3052	22.004	3237.9	6.2804	21.084	3230.2	6.2561	20.227	3222.3	6.2322	19.426
480	753.15	3288.7	6.3939	24.580	3281.6	6.3685	23.500	3274.4	6.3437	22.499	3267.1	6.3194	21.569	3259.8	6.2957	20.703	3252.4	6.2724	19.893
490	763.15	3316.2	6.4302	25.089	3309.4	6.4052	23.997	3302.6	6.3809	22.985	3295.7	6.3572	22.044	3288.8	6.3339	21.168	3281.8	6.3112	20.349
500	773.15	3343.3	6.4654	25.590	3336.8	6.4409	24.485	3330.4	6.4171	23.461	3323.8	6.3937	22.509	3317.2	6.3710	21.623	3310.6	6.3487	20.795
510	783.15	3370.0	6.4998	26.082	3363.9	6.4757	24.964	3357.7	6.4522	23.928	3351.5	6.4293	22.966	3345.2	6.4069	22.070	3338.9	6.3850	21.233
520	793.15	3396.5	6.5334	26.568	3390.6	6.5096	25.437	3384.7	6.4865	24.389	3378.8	6.4639	23.415	3372.8	6.4419	22.508	3366.8	6.4204	21.662
530	803.15	3422.7	6.5662	27.047	3417.0	6.5427	25.902	3411.4	6.5199	24.842	3405.7	6.4977	23.857	3400.0	6.4760	22.940	3394.3	6.4548	22.084
540	813.15	3448.6	6.5983	27.520	3443.3	6.5752	26.362	3437.8	6.5526	25.289	3432.4	6.5307	24.293	3426.9	6.5093	23.365	3421.4	6.4885	22.499
550	823.15	3474.4	6.6298	27.987	3469.3	6.6069	26.816	3464.1	6.5847	25.731	3458.8	6.5630	24.723	3453.6	6.5419	23.785	3448.3	6.5213	22.909
560	833.15	3500.0	6.6608	28.450	3495.1	6.6381	27.265	3490.1	6.6161	26.167	3485.1	6.5947	25.148	3480.0	6.5738	24.199	3475.0	6.5535	23.313
570	843.15	3525.5	6.6912	28.908	3520.8	6.6688	27.710	3516.0	6.6470	26.599	3511.1	6.6258	25.568	3506.3	6.6052	24.608	3501.4	6.5851	23.712
580	853.15	3550.9	6.7211	29.362	3546.3	6.6989	28.150	3541.7	6.6773	27.027	3537.0	6.6563	25.984	3532.4	6.6359	25.013	3527.7	6.6160	24.107
590	863.15	3576.2	6.7506	29.812	3571.7	6.7285	28.586	3567.3	6.7071	27.450	3562.8	6.6863	26.396	3558.3	6.6661	25.414	3553.8	6.6465	24.497
600	873.15	3601.4	6.7796	30.259	3597.1	6.7577	29.019	3592.8	6.7365	27.870	3588.5	6.7159	26.804	3584.1	6.6959	25.811	3579.8	6.6764	24.884
610	883.15	3626.5	6.8082	30.702	3622.4	6.7865	29.448	3618.2	6.7655	28.287	3614.0	6.7450	27.208	3609.8	6.7252	26.204	3605.6	6.7058	25.267
620	893.15	3651.6	6.8365	31.142	3647.6	6.8149	29.874	3643.6	6.7940	28.700	3639.5	6.7737	27.609	3635.5	6.7540	26.594	3631.4	6.7349	25.646
630	903.15	3676.6	6.8643	31.579	3672.7	6.8429	30.297	3668.8	6.8221	29.110	3664.9	6.8020	28.007	3661.0	6.7825	26.981	3657.1	6.7635	26.023
640	913.15	3701.6	6.8919	32.014	3697.9	6.8706	30.718	3694.1	6.8499	29.517	3690.3	6.8299	28.403	3686.5	6.8105	27.365	3682.7	6.7917	26.397
650	923.15	3726.6	6.9190	32.446	3722.9	6.8979	31.135	3719.3	6.8774	29.922	3715.6	6.8575	28.795	3711.9	6.8382	27.747	3708.3	6.8195	26.768
660	933.15	3751.5	6.9459	32.875	3748.0	6.9249	31.550	3744.4	6.9045	30.324	3740.9	6.8847	29.186	3737.3	6.8656	28.125	3733.8	6.8470	27.136
670	943.15	3776.4	6.9725	33.302	3773.0	6.9515	31.963	3769.6	6.9313	30.724	3766.1	6.9117	29.573	3762.7	6.8926	28.502	3759.2	6.8741	27.502
680	953.15	3801.3	6.9987	33.726	3798.0	6.9779	32.374	3794.7	6.9578	31.122	3791.3	6.9383	29.959	3788.0	6.9193	28.876	3784.7	6.9009	27.866
690	963.15	3826.2	7.0247	34.149	3823.0	7.0040	32.782	3819.8	6.9840	31.517	3816.5	6.9645	30.342	3813.3	6.9457	29.248	3810.1	6.9274	28.227
700	973.15	3851.1	7.0504	34.570	3848.0	7.0298	33.189	3844.9	7.0099	31.910	3841.7	6.9906	30.723	3838.6	6.9718	29.618	3835.4	6.9536	28.587
710	983.15	3876.0	7.0759	34.988	3873.0	7.0553	33.593	3869.9	7.0355	32.302	3866.9	7.0163	31.103	3863.8	6.9977	29.986	3860.8	6.9796	28.944
720	993.15	3900.9	7.1011	35.405	3898.0	7.0806	33.996	3895.0	7.0609	32.691	3892.0	7.0417	31.480	3889.1	7.0232	30.352	3886.1	7.0052	29.300
730	1003.15	3925.8	7.1260	35.820	3922.9	7.1057	34.397	3920.1	7.0860	33.079	3917.2	7.0669	31.856	3914.3	7.0485	30.717	3911.5	7.0306	29.653
740	1013.15	3950.7	7.1507	36.234	3947.9	7.1304	34.796	3945.1	7.1108	33.465	3942.3	7.0919	32.230	3939.6	7.0735	31.079	3936.8	7.0557	30.005
750	1023.15	3975.6	7.1752	36.645	3972.9	7.1550	35.194	3970.2	7.1355	33.850	3967.5	7.1166	32.602	3964.8	7.0983	31.440	3962.1	7.0806	30.356
760	1033.15	4000.5	7.1994	37.056	3997.9	7.1793	35.590	3995.3	7.1599	34.233	3992.6	7.1411	32.973	3990.0	7.1228	31.800	3987.4	7.1052	30.705
770	1043.15	4025.5	7.2234	37.464	4022.9	7.2034	35.984	4020.4	7.1840	34.614	4017.8	7.1653	33.342	4015.3	7.1472	32.157	4012.7	7.1296	31.052
780	1053.15	4050.4	7.2472	37.872	4047.9	7.2272	36.377	4045.4	7.2080	34.994	4043.0	7.1893	33.710	4040.5	7.1712	32.514	4038.0	7.1537	31.398
790	1063.15	4075.3	7.2708	38.278	4072.9	7.2509	36.769	4070.5	7.2317	35.373	4068.1	7.2131	34.076	4065.7	7.1951	32.869	4063.3	7.1776	31.742
800	1073.15	4100.3	7.2942	38.682	4098.0	7.2743	37.160	4095.6	7.2552	35.750	4093.3	7.2367	34.441	4091.0	7.2187	33.223	4088.6	7.2013	32.086

125 to 150 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		150			155			160			165			170			175		
t_s °C		342.1			344.7			347.3			349.8			352.3			354.6		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1610.9	3.6857	1.6578	1630.6	3.7163	1.6832	1650.4	3.7470	1.7102	1670.5	3.7778	1.7389	1691.6	3.8106	1.7695	1713.3	3.8438	1.8030
Sat. Vapour		2615.1	5.3180	10.343	2600.4	5.2859	9.8126	2584.9	5.2533	9.3099	2568.9	5.2201	8.8333	2551.6	5.1856	8.3721	2533.3	5.1498	7.9268
t °C	T K																		
0	273.15	15.1	0.0007	0.99283	15.6	0.0007	0.99259	16.1	0.0008	0.99235	16.6	0.0008	0.99211	17.1	0.0008	0.99187	17.6	0.0008	0.99163
10	283.15	56.5	0.1495	0.99330	57.0	0.1494	0.99307	57.5	0.1494	0.99284	58.0	0.1493	0.99262	58.4	0.1493	0.99239	58.9	0.1492	0.99216
20	293.15	97.9	0.2931	0.99503	98.3	0.2929	0.99481	98.8	0.2928	0.99459	99.3	0.2927	0.99438	99.7	0.2926	0.99416	100.2	0.2925	0.99394
30	303.15	139.3	0.4319	0.99775	139.7	0.4317	0.99753	140.2	0.4315	0.99732	140.6	0.4314	0.99711	141.1	0.4312	0.99689	141.5	0.4311	0.99668
40	313.15	180.7	0.5663	1.0013	181.1	0.5661	1.0011	181.6	0.5659	1.0009	182.0	0.5657	1.0006	182.4	0.5655	1.0004	182.9	0.5653	1.0002
50	323.15	222.1	0.6966	1.0055	222.6	0.6963	1.0053	223.0	0.6961	1.0051	223.4	0.6959	1.0049	223.8	0.6956	1.0047	224.3	0.6954	1.0045
60	333.15	263.6	0.8230	1.0105	264.0	0.8228	1.0102	264.5	0.8225	1.0100	264.9	0.8223	1.0098	265.3	0.8220	1.0096	265.7	0.8217	1.0094
70	343.15	305.2	0.9459	1.0160	305.6	0.9456	1.0158	306.0	0.9453	1.0156	306.4	0.9451	1.0153	306.8	0.9448	1.0151	307.2	0.9445	1.0149
80	353.15	346.8	1.0655	1.0221	347.2	1.0652	1.0219	347.6	1.0648	1.0217	348.0	1.0645	1.0215	348.4	1.0642	1.0212	348.8	1.0639	1.0210
90	363.15	388.5	1.1819	1.0289	388.9	1.1815	1.0286	389.3	1.1812	1.0284	389.7	1.1808	1.0281	390.0	1.1805	1.0279	390.4	1.1801	1.0277
100	373.15	430.3	1.2954	1.0361	430.7	1.2950	1.0359	431.0	1.2946	1.0356	431.4	1.2943	1.0354	431.8	1.2939	1.0351	432.2	1.2935	1.0349
110	383.15	472.2	1.4062	1.0439	472.5	1.4058	1.0437	472.9	1.4054	1.0434	473.3	1.4050	1.0432	473.6	1.4046	1.0429	474.0	1.4042	1.0427
120	393.15	514.2	1.5144	1.0523	514.5	1.5140	1.0521	514.9	1.5136	1.0518	515.3	1.5131	1.0515	515.6	1.5127	1.0513	516.0	1.5123	1.0510
130	403.15	556.4	1.6204	1.0613	556.7	1.6199	1.0610	557.0	1.6194	1.0607	557.4	1.6190	1.0604	557.7	1.6185	1.0602	558.1	1.6181	1.0599
140	413.15	598.7	1.7241	1.0709	599.0	1.7236	1.0706	599.4	1.7231	1.0703	599.7	1.7226	1.0700	600.0	1.7222	1.0697	600.4	1.7217	1.0694
150	423.15	641.3	1.8259	1.0811	641.6	1.8254	1.0807	641.9	1.8248	1.0804	642.2	1.8243	1.0801	642.5	1.8238	1.0798	642.9	1.8233	1.0795
160	433.15	684.0	1.9258	1.0919	684.3	1.9253	1.0916	684.6	1.9247	1.0913	685.0	1.9241	1.0909	685.3	1.9236	1.0906	685.6	1.9230	1.0902
170	443.15	727.1	2.0241	1.1035	727.4	2.0235	1.1032	727.7	2.0229	1.1028	727.9	2.0223	1.1024	728.2	2.0217	1.1021	728.5	2.0211	1.1017
180	453.15	770.4	2.1208	1.1159	770.7	2.1201	1.1155	771.0	2.1195	1.1151	771.2	2.1189	1.1147	771.5	2.1182	1.1143	771.8	2.1176	1.1139
190	463.15	814.1	2.2161	1.1291	814.3	2.2154	1.1287	814.6	2.2147	1.1283	814.8	2.2141	1.1278	815.1	2.2134	1.1274	815.3	2.2127	1.1270
200	473.15	858.1	2.3102	1.1433	858.4	2.3094	1.1428	858.6	2.3087	1.1423	858.8	2.3080	1.1419	859.0	2.3073	1.1414	859.3	2.3065	1.1410
210	483.15	902.6	2.4032	1.1584	902.8	2.4024	1.1579	903.0	2.4016	1.1574	903.2	2.4008	1.1569	903.4	2.4001	1.1564	903.6	2.3993	1.1559
220	493.15	947.6	2.4953	1.1748	947.7	2.4944	1.1742	947.9	2.4936	1.1736	948.1	2.4928	1.1731	948.3	2.4919	1.1725	948.4	2.4911	1.1720
230	503.15	993.1	2.5867	1.1924	993.2	2.5857	1.1918	993.4	2.5848	1.1912	993.5	2.5839	1.1905	993.6	2.5830	1.1899	993.8	2.5821	1.1893
240	513.15	1039.2	2.6775	1.2115	1039.3	2.6765	1.2108	1039.4	2.6755	1.2102	1039.5	2.6745	1.2095	1039.6	2.6735	1.2088	1039.7	2.6726	1.2081
250	523.15	1086.2	2.7680	1.2324	1086.2	2.7670	1.2316	1086.3	2.7659	1.2308	1086.3	2.7648	1.2301	1086.4	2.7637	1.2293	1086.4	2.7626	1.2285
260	533.15	1134.0	2.8585	1.2553	1133.9	2.8573	1.2544	1133.9	2.8561	1.2535	1133.9	2.8550	1.2526	1133.9	2.8538	1.2517	1133.9	2.8526	1.2509
270	543.15	1182.8	2.9493	1.2807	1182.7	2.9480	1.2796	1182.6	2.9466	1.2786	1182.6	2.9453	1.2776	1182.5	2.9440	1.2765	1182.4	2.9427	1.2755
280	553.15	1232.9	3.0407	1.3090	1232.7	3.0392	1.3078	1232.6	3.0377	1.3065	1232.4	3.0363	1.3053	1232.3	3.0348	1.3041	1232.1	3.0333	1.3029
290	563.15	1284.6	3.1333	1.3411	1284.3	3.1316	1.3396	1284.0	3.1299	1.3381	1283.7	3.1282	1.3366	1283.5	3.1266	1.3352	1283.2	3.1249	1.3338
300	573.15	1338.3	3.2278	1.3779	1337.8	3.2258	1.3761	1337.4	3.2238	1.3743	1337.0	3.2219	1.3725	1336.5	3.2200	1.3707	1336.1	3.2181	1.3690
310	583.15	1394.5	3.3250	1.4212	1393.8	3.3227	1.4189	1393.2	3.3204	1.4166	1392.6	3.3181	1.4143	1392.0	3.3158	1.4121	1391.4	3.3136	1.4099
320	593.15	1454.3	3.4267	1.4736	1453.3	3.4238	1.4705	1452.4	3.4210	1.4674	1451.5	3.4182	1.4644	1450.6	3.4155	1.4615	1449.7	3.4127	1.4586
330	603.15	1519.4	3.5355	1.5402	1517.9	3.5317	1.5357	1516.4	3.5280	1.5313	1515.0	3.5244	1.5270	1513.7	3.5209	1.5229	1512.3	3.5175	1.5189
340	613.15	1593.3	3.6571	1.6324	1590.7	3.6515	1.6248	1588.3	3.6462	1.6176	1586.0	3.6411	1.6108	1583.8	3.6362	1.6042	1581.7	3.6315	1.5980

350	623.15	2694.8	5.4467	11.462	2660.4	5.3826	10.615	2620.8	5.3109	9.7637	2571.7	5.2247	8.8661	1667.7	3.7720	1.7283	1663.6	3.7640	1.7158	
360	633.15	2770.8	5.5677	12.562	2744.6	5.5168	11.787	2716.5	5.4634	11.036	2686.0	5.4067	10.304	2652.4	5.3458	9.5837	2614.8	5.2791	8.8639	
370	643.15	2833.6	5.6662	13.481	2812.4	5.6230	12.740	2789.9	5.5784	12.030	2766.1	5.5323	11.349	2740.7	5.4842	10.691	2713.5	5.4339	10.053	
380	653.15	2887.7	5.7497	14.282	2869.8	5.7116	13.558	2851.1	5.6729	12.871	2831.6	5.6333	12.215	2811.0	5.5928	11.588	2789.4	5.5510	10.985	
390	663.15	2935.7	5.8225	15.001	2920.1	5.7881	14.286	2904.1	5.7534	13.608	2887.4	5.7183	12.966	2870.2	5.6827	12.354	2852.2	5.6464	11.771	
400	673.15	2979.1	5.8876	15.661	2965.4	5.8558	14.948	2951.3	5.8240	14.275	2936.7	5.7920	13.638	2921.7	5.7599	13.034	2906.3	5.7274	12.460	
410	683.15	3019.3	5.9469	16.276	3006.9	5.9171	15.562	2994.3	5.8874	14.889	2981.3	5.8578	14.254	2968.0	5.8281	13.652	2954.4	5.7984	13.082	
420	693.15	3057.0	6.0016	16.857	3045.7	5.9735	16.139	3034.2	5.9455	15.464	3022.5	5.9176	14.827	3010.5	5.8899	14.225	2998.3	5.8622	13.655	
430	703.15	3092.7	6.0528	17.410	3082.3	6.0259	16.687	3071.8	5.9993	16.008	3061.0	5.9728	15.368	3050.1	5.9466	14.764	3039.0	5.9205	14.192	
440	713.15	3126.9	6.1010	17.940	3117.2	6.0752	17.212	3107.5	6.0497	16.527	3097.5	6.0244	15.883	3087.5	5.9993	15.274	3077.2	5.9745	14.700	
450	723.15	3159.7	6.1468	18.451	3150.7	6.1219	17.716	3141.6	6.0972	17.025	3132.4	6.0729	16.376	3123.1	6.0489	15.763	3113.6	6.0251	15.184	
460	733.15	3191.5	6.1904	18.946	3183.1	6.1663	18.203	3174.5	6.1425	17.506	3165.9	6.1190	16.850	3157.2	6.0958	16.232	3148.4	6.0729	15.648	
470	743.15	3222.3	6.2322	19.426	3214.4	6.2087	18.676	3206.4	6.1856	17.971	3198.3	6.1629	17.309	3190.2	6.1404	16.685	3181.9	6.1183	16.096	
480	753.15	3252.4	6.2724	19.893	3244.9	6.2495	19.135	3237.4	6.2270	18.423	3229.8	6.2049	17.754	3222.1	6.1831	17.124	3214.3	6.1617	16.529	
490	763.15	3281.8	6.3112	20.349	3274.7	6.2888	19.583	3267.6	6.2669	18.864	3260.4	6.2453	18.187	3253.1	6.2241	17.551	3245.8	6.2032	16.949	
500	773.15	3310.6	6.3487	20.795	3303.9	6.3268	20.020	3297.1	6.3054	19.293	3290.3	6.2843	18.610	3283.5	6.2636	17.966	3276.5	6.2432	17.359	
510	783.15	3338.9	6.3850	21.233	3332.5	6.3636	20.449	3326.1	6.3426	19.714	3319.7	6.3220	19.023	3313.1	6.3017	18.372	3306.6	6.2818	17.758	
520	793.15	3366.8	6.4204	21.662	3360.7	6.3993	20.869	3354.6	6.3787	20.126	3348.5	6.3585	19.427	3342.3	6.3387	18.770	3336.0	6.3192	18.149	
530	803.15	3394.3	6.4548	22.084	3388.5	6.4341	21.282	3382.7	6.4139	20.531	3376.8	6.3940	19.824	3370.9	6.3746	19.159	3365.0	6.3554	18.532	
540	813.15	3421.4	6.4885	22.499	3415.9	6.4681	21.689	3410.3	6.4481	20.928	3404.7	6.4286	20.214	3399.1	6.4095	19.542	3393.5	6.3907	18.907	
550	823.15	3448.3	6.5213	22.909	3443.0	6.5012	22.089	3437.7	6.4816	21.320	3432.4	6.4624	20.598	3427.0	6.4435	19.918	3421.6	6.4250	19.276	
560	833.15	3475.0	6.5535	23.313	3469.9	6.5337	22.484	3464.8	6.5143	21.706	3459.7	6.4953	20.976	3454.5	6.4768	20.288	3449.3	6.4586	19.639	
570	843.15	3501.4	6.5851	23.712	3496.5	6.5655	22.873	3491.6	6.5463	22.087	3486.7	6.5276	21.348	3481.8	6.5093	20.653	3476.8	6.4913	19.997	
580	853.15	3527.7	6.6160	24.107	3523.0	6.5967	23.259	3518.3	6.5777	22.463	3513.5	6.5592	21.716	3508.8	6.5411	21.013	3504.0	6.5234	20.350	
590	863.15	3553.8	6.6465	24.497	3549.3	6.6273	23.640	3544.7	6.6086	22.835	3540.2	6.5903	22.080	3535.6	6.5724	21.369	3531.0	6.5549	20.699	
600	873.15	3579.8	6.6764	24.884	3575.4	6.6574	24.017	3571.0	6.6389	23.204	3566.6	6.6208	22.440	3562.2	6.6031	21.721	3557.8	6.5858	21.043	
610	883.15	3605.6	6.7058	25.267	3601.4	6.6870	24.390	3597.2	6.6687	23.568	3593.0	6.6507	22.796	3588.7	6.6332	22.069	3584.5	6.6161	21.383	
620	893.15	3631.4	6.7349	25.646	3627.3	6.7162	24.760	3623.3	6.6980	23.929	3619.2	6.6802	23.148	3615.1	6.6629	22.413	3611.0	6.6460	21.720	
630	903.15	3657.1	6.7635	26.023	3653.2	6.7449	25.127	3649.2	6.7269	24.287	3645.3	6.7093	23.497	3641.3	6.6921	22.755	3637.3	6.6753	22.054	
640	913.15	3682.7	6.7917	26.397	3678.9	6.7733	25.491	3675.1	6.7554	24.642	3671.3	6.7379	23.844	3667.4	6.7209	23.093	3663.6	6.7042	22.385	
650	923.15	3708.3	6.8195	26.768	3704.6	6.8013	25.852	3700.9	6.7835	24.994	3697.2	6.7662	24.187	3693.5	6.7493	23.428	3689.8	6.7328	22.713	
660	933.15	3733.8	6.8470	27.136	3730.2	6.8289	26.211	3726.6	6.8112	25.343	3723.1	6.7940	24.528	3719.5	6.7773	23.761	3715.9	6.7609	23.038	
670	943.15	3759.2	6.8741	27.502	3755.8	6.8561	26.567	3752.3	6.8386	25.690	3748.9	6.8215	24.866	3745.4	6.8049	24.091	3741.9	6.7886	23.360	
680	953.15	3784.7	6.9009	27.866	3781.3	6.8831	26.921	3778.0	6.8656	26.035	3774.6	6.8487	25.202	3771.2	6.8322	24.419	3767.9	6.8160	23.681	
690	963.15	3810.1	6.9274	28.227	3806.8	6.9097	27.272	3803.6	6.8924	26.377	3800.3	6.8755	25.536	3797.1	6.8591	24.745	3793.8	6.8431	23.999	
700	973.15	3835.4	6.9536	28.587	3832.3	6.9360	27.622	3829.1	6.9188	26.717	3826.0	6.9020	25.868	3822.8	6.8857	25.068	3819.7	6.8698	24.314	
710	983.15	3860.8	6.9796	28.944	3857.7	6.9620	27.969	3854.7	6.9449	27.056	3851.6	6.9282	26.197	3848.6	6.9120	25.390	3845.5	6.8962	24.628	
720	993.15	3886.1	7.0052	29.300	3883.2	6.9877	28.315	3880.2	6.9707	27.392	3877.2	6.9542	26.525	3874.3	6.9380	25.709	3871.3	6.9223	24.940	
730	1003.15	3911.5	7.0306	29.653	3908.6	7.0132	28.659	3905.7	6.9963	27.727	3902.8	6.9798	26.851	3899.9	6.9638	26.027	3897.1	6.9481	25.250	
740	1013.15	3936.8	7.0557	30.005	3934.0	7.0384	29.001	3931.2	7.0216	28.060	3928.4	7.0052	27.175	3925.6	6.9892	26.343	3922.8	6.9736	25.559	
750	1023.15	3962.1	7.0806	30.356	3959.4	7.0633	29.342	3956.7	7.0466	28.394	3954.0	7.0303	27.498	3951.2	7.0144	26.658	3948.5	6.9989	25.865	150 to 175 bar
760	1033.15	3987.4	7.1052	30.705	3984.8	7.0880	29.681	3982.1	7.0714	28.721	3979.5	7.0551	27.819	3976.9	7.0393	26.970	3974.2	7.0239	26.170	
770	1043.15	4012.7	7.1296	31.052	4010.2	7.1125	30.018	4007.6	7.0959	29.049	4005.0	7.0797	28.138	4002.5	7.0640	27.282	3999.9	7.0487	26.474	
780	1053.15	4038.0	7.1537	31.398	4035.5	7.1367	30.354	4033.1	7.1202	29.376	4030.6	7.1041	28.456	4028.1	7.0884	27.591	4025.6	7.0732	26.776	
790	1063.15	4063.3	7.1776	31.742	4060.9	7.1607	30.689	4058.5	7.1442	29.701	4056.1	7.1282	28.773	4053.7	7.1126	27.900	4051.3	7.0974	27.076	
800	1073.15	4088.6	7.2013	32.086	4086.3	7.1845	31.022	4084.0	7.1681	30.025	4081.6	7.1521	29.088	4079.3	7.1366	28.207	4077.0	7.1215	27.376	

Table 3 Water and Steam—*continued*

p (*abs*) bar		175			180			185			190			195			200		
t_s °C		354.6			357.0			359.2			361.4			363.6			365.7		
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1713.3	3.8438	1.8030	1734.8	3.8766	1.8399	1756.5	3.9095	1.8807	1778.7	3.9430	1.9262	1801.9	3.9779	1.9778	1826.6	4.0151	2.0374
Sat. Vapour		2533.3	5.1498	7.9268	2513.9	5.1127	7.4973	2493.0	5.0740	7.0815	2470.5	5.0330	6.6759	2445.8	4.9890	6.2757	2418.2	4.9410	5.8745
t °C	T K																		
0	273.15	17.6	0.0008	0.99163	18.1	0.0008	0.99139	18.6	0.0008	0.99115	19.1	0.0008	0.99091	19.6	0.0008	0.99067	20.1	0.0008	0.99043
10	283.15	58.9	0.1492	0.99216	59.4	0.1491	0.99194	59.9	0.1491	0.99171	60.4	0.1490	0.99149	60.8	0.1490	0.99126	61.3	0.1489	0.99104
20	293.15	100.2	0.2925	0.99394	100.7	0.2924	0.99372	101.1	0.2923	0.99351	101.6	0.2921	0.99329	102.1	0.2920	0.99308	102.5	0.2919	0.99286
30	303.15	141.5	0.4311	0.99668	142.0	0.4309	0.99647	142.4	0.4307	0.99626	142.9	0.4306	0.99605	143.3	0.4304	0.99584	143.8	0.4303	0.99562
40	313.15	182.9	0.5653	1.0002	183.3	0.5651	1.0000	183.7	0.5649	0.99980	184.2	0.5647	0.99959	184.6	0.5645	0.99938	185.1	0.5643	0.99917
50	323.15	224.3	0.6954	1.0045	224.7	0.6952	1.0043	225.1	0.6950	1.0041	225.6	0.6947	1.0038	226.0	0.6945	1.0036	226.4	0.6943	1.0034
60	333.15	265.7	0.8217	1.0094	266.1	0.8215	1.0092	266.6	0.8212	1.0090	267.0	0.8209	1.0087	267.4	0.8207	1.0085	267.8	0.8204	1.0083
70	343.15	307.2	0.9445	1.0149	307.6	0.9442	1.0147	308.0	0.9439	1.0145	308.4	0.9436	1.0142	308.9	0.9433	1.0140	309.3	0.9430	1.0138
80	353.15	348.8	1.0639	1.0210	349.2	1.0636	1.0208	349.6	1.0632	1.0206	350.0	1.0629	1.0203	350.4	1.0626	1.0201	350.8	1.0623	1.0199
90	363.15	390.4	1.1801	1.0277	390.8	1.1798	1.0274	391.2	1.1795	1.0272	391.6	1.1791	1.0270	392.0	1.1788	1.0267	392.4	1.1784	1.0265
100	373.15	432.2	1.2935	1.0349	432.5	1.2931	1.0346	432.9	1.2928	1.0344	433.3	1.2924	1.0342	433.7	1.2920	1.0339	434.0	1.2916	1.0337
110	383.15	474.0	1.4042	1.0427	474.4	1.4038	1.0424	474.7	1.4034	1.0422	475.1	1.4030	1.0419	475.5	1.4026	1.0416	475.8	1.4022	1.0414
120	393.15	516.0	1.5123	1.0510	516.3	1.5118	1.0507	516.7	1.5114	1.0505	517.0	1.5110	1.0502	517.4	1.5106	1.0499	517.7	1.5101	1.0497
130	403.15	558.1	1.6181	1.0599	558.4	1.6176	1.0596	558.8	1.6171	1.0593	559.1	1.6167	1.0590	559.5	1.6162	1.0588	559.8	1.6158	1.0585
140	413.15	600.4	1.7217	1.0694	600.7	1.7212	1.0691	601.0	1.7207	1.0688	601.4	1.7202	1.0685	601.7	1.7197	1.0682	602.0	1.7192	1.0679
150	423.15	642.9	1.8233	1.0795	643.2	1.8228	1.0792	643.5	1.8222	1.0788	643.8	1.8217	1.0785	644.1	1.8212	1.0782	644.4	1.8207	1.0779
160	433.15	685.6	1.9230	1.0902	685.9	1.9225	1.0899	686.2	1.9219	1.0896	686.5	1.9214	1.0892	686.8	1.9208	1.0889	687.1	1.9203	1.0886
170	443.15	728.5	2.0211	1.1017	728.8	2.0205	1.1014	729.1	2.0199	1.1010	729.4	2.0193	1.1006	729.7	2.0187	1.1003	730.0	2.0181	1.0999
180	453.15	771.8	2.1176	1.1139	772.0	2.1170	1.1136	772.3	2.1163	1.1132	772.6	2.1157	1.1128	772.9	2.1151	1.1124	773.1	2.1145	1.1120
190	463.15	815.3	2.2127	1.1270	815.6	2.2120	1.1266	815.8	2.2114	1.1262	816.1	2.2107	1.1257	816.4	2.2100	1.1253	816.6	2.2093	1.1249
200	473.15	859.3	2.3065	1.1410	859.5	2.3058	1.1405	859.7	2.3051	1.1400	860.0	2.3044	1.1396	860.2	2.3037	1.1391	860.4	2.3030	1.1387
210	483.15	903.6	2.3993	1.1559	903.8	2.3985	1.1554	904.0	2.3977	1.1549	904.2	2.3970	1.1544	904.4	2.3962	1.1539	904.6	2.3954	1.1534
220	493.15	948.4	2.4911	1.1720	948.6	2.4903	1.1714	948.8	2.4894	1.1709	949.0	2.4886	1.1704	949.1	2.4878	1.1698	949.3	2.4869	1.1693
230	503.15	993.8	2.5821	1.1893	993.9	2.5812	1.1887	994.1	2.5803	1.1881	994.2	2.5794	1.1875	994.4	2.5785	1.1869	994.5	2.5776	1.1863
240	513.15	1039.7	2.6726	1.2081	1039.8	2.6716	1.2074	1039.9	2.6706	1.2067	1040.1	2.6696	1.2061	1040.2	2.6687	1.2054	1040.3	2.6677	1.2047
250	523.15	1086.4	2.7626	1.2285	1086.5	2.7616	1.2278	1086.5	2.7605	1.2270	1086.6	2.7595	1.2262	1086.7	2.7584	1.2255	1086.7	2.7574	1.2247
260	533.15	1133.9	2.8526	1.2509	1133.9	2.8514	1.2500	1133.9	2.8503	1.2491	1133.9	2.8491	1.2483	1133.9	2.8480	1.2474	1134.0	2.8468	1.2466
270	543.15	1182.4	2.9427	1.2755	1182.4	2.9414	1.2745	1182.3	2.9401	1.2735	1182.2	2.9389	1.2725	1182.2	2.9376	1.2715	1182.1	2.9363	1.2706
280	553.15	1232.1	3.0333	1.3029	1231.9	3.0319	1.3018	1231.8	3.0305	1.3006	1231.7	3.0290	1.2994	1231.5	3.0276	1.2983	1231.4	3.0262	1.2971
290	563.15	1283.2	3.1249	1.3338	1283.0	3.1233	1.3324	1282.7	3.1217	1.3310	1282.5	3.1201	1.3296	1282.2	3.1185	1.3282	1282.0	3.1169	1.3269
300	573.15	1336.1	3.2181	1.3690	1335.7	3.2162	1.3673	1335.4	3.2143	1.3656	1335.0	3.2125	1.3639	1334.6	3.2107	1.3622	1334.3	3.2089	1.3606
310	583.15	1391.4	3.3136	1.4099	1390.8	3.3114	1.4077	1390.2	3.3092	1.4056	1389.7	3.3071	1.4035	1389.1	3.3049	1.4015	1388.6	3.3028	1.3994
320	593.15	1449.7	3.4127	1.4586	1448.8	3.4101	1.4558	1448.0	3.4075	1.4531	1447.2	3.4049	1.4504	1446.4	3.4023	1.4477	1445.6	3.3998	1.4451
330	603.15	1512.3	3.5175	1.5189	1511.1	3.5141	1.5150	1509.8	3.5108	1.5112	1508.7	3.5076	1.5075	1507.5	3.5044	1.5039	1506.4	3.5013	1.5004
340	613.15	1581.7	3.6315	1.5980	1579.7	3.6269	1.5920	1577.8	3.6225	1.5863	1575.9	3.6182	1.5808	1574.2	3.6140	1.5755	1572.4	3.6100	1.5704

350	623.15	1663.6	3.7640	1.7158	1659.8	3.7566	1.7043	1656.3	3.7496	1.6938	1653.1	3.7430	1.6839	1650.0	3.7368	1.6748	1647.2	3.7308	1.6662
360	633.15	2614.8	5.2791	8.8639	2569.1	5.2002	8.1042	2510.8	5.1020	7.2669	1758.0	3.9102	1.8754	1749.8	3.8959	1.8490	1742.9	3.8835	1.8269
370	643.15	2713.5	5.4339	10.053	2684.2	5.3808	9.4298	2652.5	5.3244	8.8174	2617.7	5.2637	8.2105	2576.6	5.1935	7.5745	2527.6	5.1117	6.9078
380	653.15	2789.4	5.5510	10.985	2766.6	5.5079	10.405	2742.4	5.4632	9.8435	2716.8	5.4166	9.2983	2689.4	5.3678	8.7666	2660.2	5.3165	8.2458
390	663.15	2852.2	5.6464	11.771	2833.4	5.6095	11.212	2813.9	5.5717	10.676	2793.4	5.5330	10.160	2771.9	5.4931	9.6625	2749.3	5.4520	9.1805
400	673.15	2906.3	5.7274	12.460	2890.3	5.6947	11.913	2873.8	5.6615	11.390	2856.7	5.6278	10.889	2838.9	5.5935	10.409	2820.5	5.5585	9.9470
410	683.15	2954.4	5.7984	13.082	2940.4	5.7686	12.540	2926.1	5.7386	12.024	2911.3	5.7083	11.531	2896.1	5.6778	11.059	2880.4	5.6470	10.608
420	693.15	2998.3	5.8622	13.655	2985.8	5.8345	13.115	2973.0	5.8068	12.601	2960.0	5.7791	12.111	2946.6	5.7512	11.644	2932.9	5.7232	11.197
430	703.15	3039.0	5.9205	14.192	3027.6	5.8945	13.650	3016.1	5.8685	13.136	3004.4	5.8427	12.647	2992.4	5.8168	12.181	2980.2	5.7910	11.736
440	713.15	3077.2	5.9745	14.700	3066.9	5.9498	14.155	3056.3	5.9253	13.639	3045.6	5.9009	13.148	3034.7	5.8766	12.681	3023.7	5.8523	12.236
450	723.15	3113.6	6.0251	15.184	3104.0	6.0015	14.636	3094.3	5.9781	14.116	3084.4	5.9549	13.623	3074.4	5.9319	13.154	3064.3	5.9089	12.707
460	733.15	3148.4	6.0729	15.648	3139.4	6.0502	15.096	3130.4	6.0278	14.572	3121.3	6.0056	14.075	3112.0	5.9835	13.603	3102.7	5.9616	13.154
470	743.15	3181.9	6.1183	16.096	3173.5	6.0964	15.538	3165.1	6.0748	15.010	3156.6	6.0534	14.509	3148.0	6.0322	14.034	3139.2	6.0112	13.581
480	753.15	3214.3	6.1617	16.529	3206.5	6.1405	15.966	3198.6	6.1195	15.433	3190.6	6.0988	14.928	3182.5	6.0784	14.448	3174.4	6.0581	13.991
490	763.15	3245.8	6.2032	16.949	3238.4	6.1826	16.381	3231.0	6.1623	15.843	3223.5	6.1423	15.333	3215.9	6.1224	14.848	3208.3	6.1028	14.388
500	773.15	3276.5	6.2432	17.359	3269.6	6.2232	16.785	3262.5	6.2034	16.241	3255.4	6.1839	15.726	3248.3	6.1646	15.237	3241.1	6.1456	14.771
510	783.15	3306.6	6.2818	17.758	3300.0	6.2622	17.178	3293.3	6.2429	16.629	3286.6	6.2239	16.108	3279.9	6.2052	15.614	3273.1	6.1867	15.144
520	793.15	3336.0	6.3192	18.149	3329.8	6.3000	17.563	3323.4	6.2812	17.008	3317.1	6.2626	16.481	3310.7	6.2443	15.982	3304.2	6.2262	15.507
530	803.15	3365.0	6.3554	18.532	3359.0	6.3366	17.939	3353.0	6.3182	17.378	3346.9	6.3000	16.846	3340.9	6.2821	16.341	3334.7	6.2644	15.862
540	813.15	3393.5	6.3907	18.907	3387.8	6.3722	18.308	3382.0	6.3541	17.741	3376.3	6.3363	17.203	3370.5	6.3188	16.693	3364.7	6.3015	16.208
550	823.15	3421.6	6.4250	19.276	3416.1	6.4069	18.670	3410.6	6.3891	18.097	3405.2	6.3716	17.554	3399.6	6.3544	17.038	3394.1	6.3374	16.548
560	833.15	3449.3	6.4586	19.639	3444.1	6.4407	19.027	3438.9	6.4232	18.447	3433.6	6.4060	17.898	3428.3	6.3891	17.376	3423.0	6.3724	16.881
570	843.15	3476.8	6.4913	19.997	3471.8	6.4737	19.378	3466.8	6.4565	18.792	3461.8	6.4395	18.236	3456.7	6.4229	17.709	3451.6	6.4065	17.209
580	853.15	3504.0	6.5234	20.350	3499.2	6.5061	19.724	3494.4	6.4891	19.131	3489.6	6.4723	18.570	3484.7	6.4559	18.037	3479.9	6.4398	17.531
590	863.15	3531.0	6.5549	20.699	3526.4	6.5378	20.065	3521.8	6.5210	19.466	3517.1	6.5045	18.899	3512.5	6.4883	18.360	3507.8	6.4724	17.848
600	873.15	3557.8	6.5858	21.043	3553.4	6.5688	20.403	3548.9	6.5522	19.797	3544.5	6.5360	19.223	3540.0	6.5200	18.679	3535.5	6.5043	18.161
610	883.15	3584.5	6.6161	21.383	3580.2	6.5994	20.736	3575.9	6.5829	20.124	3571.6	6.5669	19.544	3567.3	6.5511	18.993	3563.0	6.5356	18.470
620	893.15	3611.0	6.6460	21.720	3606.8	6.6294	21.066	3602.7	6.6131	20.447	3598.6	6.5972	19.861	3594.4	6.5816	19.304	3590.3	6.5663	18.776
630	903.15	3637.3	6.6753	22.054	3633.4	6.6589	21.393	3629.4	6.6428	20.767	3625.4	6.6271	20.174	3621.4	6.6116	19.612	3617.4	6.5965	19.077
640	913.15	3663.6	6.7042	22.385	3659.8	6.6880	21.716	3655.9	6.6720	21.084	3652.1	6.6564	20.485	3648.2	6.6411	19.916	3644.3	6.6261	19.376
650	923.15	3689.8	6.7328	22.713	3686.1	6.7166	22.037	3682.4	6.7008	21.398	3678.6	6.6854	20.792	3674.9	6.6702	20.218	3671.1	6.6554	19.672
660	933.15	3715.9	6.7609	23.038	3712.3	6.7449	22.355	3708.7	6.7292	21.709	3705.1	6.7139	21.097	3701.5	6.6989	20.516	3697.9	6.6841	19.965
670	943.15	3741.9	6.7886	23.360	3738.4	6.7727	22.670	3734.9	6.7572	22.017	3731.5	6.7420	21.399	3728.0	6.7271	20.812	3724.5	6.7125	20.255
680	953.15	3767.9	6.8160	23.681	3764.5	6.8002	22.983	3761.1	6.7848	22.324	3757.8	6.7697	21.699	3754.4	6.7550	21.106	3751.0	6.7405	20.543
690	963.15	3793.8	6.8431	23.999	3790.5	6.8274	23.294	3787.3	6.8121	22.627	3784.0	6.7971	21.996	3780.7	6.7824	21.397	3777.4	6.7681	20.828
700	973.15	3819.7	6.8698	24.314	3816.5	6.8542	23.603	3813.3	6.8390	22.929	3810.2	6.8241	22.291	3807.0	6.8096	21.686	3803.8	6.7953	21.111
710	983.15	3845.5	6.8962	24.628	3842.4	6.8807	23.909	3839.4	6.8656	23.229	3836.3	6.8508	22.585	3833.2	6.8364	21.973	3830.1	6.8222	21.393
720	993.15	3871.3	6.9223	24.940	3868.3	6.9069	24.214	3865.3	6.8919	23.527	3862.4	6.8772	22.876	3859.4	6.8629	22.258	3856.4	6.8488	21.672
730	1003.15	3897.1	6.9481	25.250	3894.2	6.9328	24.517	3891.3	6.9179	23.823	3888.4	6.9033	23.165	3885.5	6.8891	22.542	3882.6	6.8751	21.949
740	1013.15	3922.8	6.9736	25.559	3920.0	6.9585	24.818	3917.2	6.9436	24.117	3914.4	6.9291	23.453	3911.6	6.9149	22.823	3908.8	6.9011	22.225
750	1023.15	3948.5	6.9989	25.865	3945.8	6.9838	25.117	3943.1	6.9691	24.409	3940.4	6.9546	23.739	3937.7	6.9405	23.103	3935.0	6.9267	22.499
760	1033.15	3974.2	7.0239	26.170	3971.6	7.0089	25.415	3969.0	6.9942	24.700	3966.3	6.9799	24.023	3963.7	6.9659	23.381	3961.1	6.9521	22.771
770	1043.15	3999.9	7.0487	26.474	3997.4	7.0337	25.711	3994.8	7.0191	24.989	3992.3	7.0049	24.306	3989.7	6.9909	23.658	3987.2	6.9773	23.042
780	1053.15	4025.6	7.0732	26.776	4023.1	7.0583	26.006	4020.7	7.0438	25.277	4018.2	7.0296	24.587	4015.7	7.0157	23.933	4013.2	7.0021	23.311
790	1063.15	4051.3	7.0974	27.076	4048.9	7.0826	26.299	4046.5	7.0682	25.564	4044.1	7.0540	24.867	4041.7	7.0402	24.206	4039.3	7.0267	23.579
800	1073.15	4077.0	7.1215	27.376	4074.6	7.1067	26.591	4072.3	7.0923	25.849	4070.0	7.0783	25.146	4067.6	7.0645	24.479	4065.3	7.0511	23.845

175 to 200 ba

Table 3 Water and Steam—*continued*

p (*abs*) bar		200			210			220			230			240			250		
t_s °C		365.7			369.8			373.7											
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid		1826.6	4.0151	2.0374	1886.3	4.1049	2.2018	2010.3	4.2934	2.6675									
Sat. Vapour		2418.2	4.9410	5.8745	2347.5	4.8222	5.0225	2196.6	4.5814	3.7347									
t °C	T K																		
0	273.15	20.1	0.0008	0.99043	21.1	0.0009	0.98995	22.1	0.0009	0.98948	23.1	0.0009	0.98900	24.1	0.0009	0.98853	25.1	0.0009	0.98806
10	283.15	61.3	0.1489	0.99104	62.3	0.1488	0.99059	63.2	0.1486	0.99014	64.2	0.1485	0.98970	65.1	0.1484	0.98925	66.1	0.1482	0.98881
20	293.15	102.5	0.2919	0.99286	103.4	0.2917	0.99243	104.4	0.2914	0.99200	105.3	0.2912	0.99157	106.2	0.2910	0.99115	107.1	0.2907	0.99072
30	303.15	143.8	0.4303	0.99562	144.7	0.4300	0.99520	145.6	0.4296	0.99478	146.5	0.4293	0.99437	147.4	0.4290	0.99395	148.3	0.4287	0.99353
40	313.15	185.1	0.5643	0.99917	185.9	0.5639	0.99876	186.8	0.5635	0.99834	187.7	0.5631	0.99792	188.6	0.5627	0.99751	189.4	0.5623	0.99710
50	323.15	226.4	0.6943	1.0034	227.3	0.6938	1.0030	228.1	0.6934	1.0026	229.0	0.6929	1.0022	229.8	0.6924	1.0018	230.7	0.6920	1.0013
60	333.15	267.8	0.8204	1.0083	268.6	0.8199	1.0079	269.5	0.8194	1.0075	270.3	0.8189	1.0070	271.1	0.8184	1.0066	272.0	0.8178	1.0062
70	343.15	309.3	0.9430	1.0138	310.1	0.9424	1.0134	310.9	0.9419	1.0129	311.7	0.9413	1.0125	312.5	0.9407	1.0121	313.3	0.9401	1.0116
80	353.15	350.8	1.0623	1.0199	351.6	1.0616	1.0194	352.4	1.0610	1.0190	353.2	1.0604	1.0185	354.0	1.0598	1.0181	354.8	1.0591	1.0177
90	363.15	392.4	1.1784	1.0265	393.1	1.1777	1.0260	393.9	1.1770	1.0256	394.7	1.1764	1.0251	395.5	1.1757	1.0247	396.2	1.1750	1.0242
100	373.15	434.0	1.2916	1.0337	434.8	1.2909	1.0332	435.6	1.2902	1.0327	436.3	1.2894	1.0322	437.1	1.2887	1.0318	437.8	1.2879	1.0313
110	383.15	475.8	1.4022	1.0414	476.6	1.4014	1.0409	477.3	1.4006	1.0404	478.0	1.3998	1.0399	478.8	1.3990	1.0394	479.5	1.3982	1.0389
120	393.15	517.7	1.5101	1.0497	518.5	1.5093	1.0491	519.2	1.5084	1.0486	519.9	1.5076	1.0481	520.6	1.5067	1.0476	521.3	1.5059	1.0470
130	403.15	559.8	1.6158	1.0585	560.5	1.6149	1.0579	561.2	1.6140	1.0574	561.9	1.6130	1.0568	562.6	1.6121	1.0563	563.3	1.6113	1.0557
140	413.15	602.0	1.7192	1.0679	602.7	1.7183	1.0673	603.4	1.7173	1.0667	604.0	1.7163	1.0661	604.7	1.7154	1.0656	605.4	1.7144	1.0650
150	423.15	644.4	1.8207	1.0779	645.1	1.8196	1.0773	645.7	1.8186	1.0767	646.4	1.8176	1.0760	647.0	1.8166	1.0754	647.7	1.8156	1.0748
160	433.15	687.1	1.9203	1.0886	687.7	1.9192	1.0879	688.3	1.9181	1.0872	688.9	1.9170	1.0866	689.5	1.9159	1.0859	690.2	1.9148	1.0853
170	443.15	730.0	2.0181	1.0999	730.6	2.0170	1.0992	731.1	2.0158	1.0985	731.7	2.0147	1.0978	732.3	2.0135	1.0971	732.9	2.0124	1.0964
180	453.15	773.1	2.1145	1.1120	773.7	2.1132	1.1113	774.2	2.1120	1.1105	774.8	2.1107	1.1097	775.3	2.1095	1.1090	775.9	2.1083	1.1083
190	463.15	816.6	2.2093	1.1249	817.1	2.2080	1.1241	817.6	2.2067	1.1233	818.1	2.2054	1.1225	818.7	2.2041	1.1217	819.2	2.2028	1.1209
200	473.15	860.4	2.3030	1.1387	860.9	2.3015	1.1378	861.4	2.3001	1.1369	861.8	2.2987	1.1360	862.3	2.2973	1.1352	862.8	2.2959	1.1343
210	483.15	904.6	2.3954	1.1534	905.1	2.3939	1.1525	905.5	2.3924	1.1515	905.9	2.3909	1.1505	906.3	2.3894	1.1496	906.8	2.3879	1.1487
220	493.15	949.3	2.4869	1.1693	949.7	2.4853	1.1682	950.0	2.4837	1.1671	950.4	2.4821	1.1661	950.8	2.4805	1.1651	951.2	2.4789	1.1640
230	503.15	994.5	2.5776	1.1863	994.8	2.5759	1.1851	995.1	2.5741	1.1840	995.4	2.5724	1.1828	995.7	2.5707	1.1817	996.0	2.5689	1.1805
240	513.15	1040.3	2.6677	1.2047	1040.5	2.6658	1.2034	1040.7	2.6639	1.2021	1041.0	2.6620	1.2008	1041.2	2.6602	1.1996	1041.4	2.6583	1.1983
250	523.15	1086.7	2.7574	1.2247	1086.9	2.7553	1.2233	1087.0	2.7532	1.2218	1087.2	2.7512	1.2204	1087.3	2.7492	1.2189	1087.5	2.7472	1.2175
260	533.15	1134.0	2.8468	1.2466	1134.0	2.8445	1.2449	1134.0	2.8423	1.2432	1134.1	2.8401	1.2416	1134.2	2.8379	1.2400	1134.2	2.8357	1.2384
270	543.15	1182.1	2.9363	1.2706	1182.0	2.9338	1.2686	1182.0	2.9313	1.2667	1181.9	2.9289	1.2649	1181.8	2.9265	1.2630	1181.8	2.9241	1.2612
280	553.15	1231.4	3.0262	1.2971	1231.2	3.0234	1.2949	1230.9	3.0207	1.2927	1230.7	3.0180	1.2905	1230.5	3.0153	1.2884	1230.3	3.0126	1.2863
290	563.15	1282.0	3.1169	1.3269	1281.6	3.1138	1.3242	1281.2	3.1107	1.3216	1280.8	3.1076	1.3191	1280.4	3.1046	1.3166	1280.0	3.1017	1.3141
300	573.15	1334.3	3.2089	1.3606	1333.6	3.2053	1.3574	1332.9	3.2018	1.3543	1332.3	3.1983	1.3512	1331.7	3.1949	1.3482	1331.1	3.1916	1.3453
310	583.15	1388.6	3.3028	1.3994	1387.6	3.2987	1.3955	1386.6	3.2946	1.3916	1385.7	3.2907	1.3879	1384.8	3.2868	1.3842	1383.9	3.2829	1.3807
320	593.15	1445.6	3.3998	1.4451	1444.2	3.3949	1.4400	1442.8	3.3901	1.4351	1441.4	3.3854	1.4304	1440.1	3.3809	1.4259	1438.9	3.3764	1.4214
330	603.15	1506.4	3.5013	1.5004	1504.2	3.4953	1.4936	1502.2	3.4895	1.4872	1500.3	3.4838	1.4810	1498.5	3.4783	1.4751	1496.7	3.4730	1.4694
340	613.15	1572.4	3.6100	1.5704	1569.2	3.6022	1.5607	1566.2	3.5947	1.5516	1563.4	3.5876	1.5431	1560.8	3.5808	1.5350	1558.3	3.5743	1.5273

350	623.15	1647.2	3.7308	1.6662	1641.9	3.7197	1.6503	1637.2	3.7095	1.6361	1632.8	3.6999	1.6231	1628.8	3.6909	1.6111	1625.1	3.6824	1.6000
360	633.15	1742.9	3.8835	1.8269	1731.4	3.8625	1.7908	1722.0	3.8449	1.7619	1714.1	3.8296	1.7376	1707.2	3.8159	1.7166	1701.1	3.8036	1.6981
370	643.15	2527.6	5.1117	6.9078	2362.0	4.8447	5.1419	1842.3	4.0333	2.0326	1818.1	3.9926	1.9486	1801.6	3.9638	1.8935	1788.8	3.9411	1.8522
380	653.15	2660.2	5.3165	8.2458	2592.8	5.2015	7.2076	2504.4	5.0559	6.1105	2362.5	4.8302	4.7469	2044.0	4.3370	2.6917	1941.0	4.1757	2.2403
390	663.15	2749.3	5.4520	9.1805	2700.5	5.3652	8.2572	2645.9	5.2711	7.3771	2581.3	5.1632	6.5057	2500.5	5.0322	5.6030	2391.3	4.8599	4.6095
400	673.15	2820.5	5.5585	9.9470	2781.3	5.4863	9.0714	2738.8	5.4102	8.2510	2692.3	5.3294	7.4763	2641.2	5.2430	6.7392	2582.0	5.1455	6.0139
410	683.15	2880.4	5.6470	10.608	2847.6	5.5840	9.7577	2812.6	5.5190	8.9689	2775.0	5.4515	8.2322	2734.7	5.3809	7.5401	2691.3	5.3069	6.8866
420	693.15	2932.9	5.7232	11.197	2904.5	5.6667	10.360	2874.6	5.6091	9.5883	2843.0	5.5502	8.8723	2809.5	5.4896	8.2048	2774.1	5.4271	7.5795
430	703.15	2980.2	5.7910	11.736	2955.0	5.7391	10.904	2928.8	5.6868	10.141	2901.3	5.6338	9.4355	2872.6	5.5801	8.7814	2842.5	5.5252	8.1720
440	713.15	3023.7	5.8523	12.236	3001.0	5.8040	11.405	2977.5	5.7556	10.645	2953.2	5.7070	9.9444	2927.9	5.6581	9.2971	2901.7	5.6087	8.6960
450	723.15	3064.3	5.9089	12.707	3043.6	5.8633	11.874	3022.3	5.8179	11.113	3000.3	5.7727	10.413	2977.7	5.7275	9.7683	2954.3	5.6821	9.1711
460	733.15	3102.7	5.9616	13.154	3083.6	5.9182	12.316	3064.0	5.8753	11.552	3044.0	5.8327	10.851	3023.4	5.7903	10.206	3002.3	5.7479	9.6094
470	743.15	3139.2	6.0112	13.581	3121.5	5.9697	12.738	3103.4	5.9287	11.969	3085.0	5.8882	11.265	3066.1	5.8481	10.617	3046.7	5.8082	10.019
480	753.15	3174.4	6.0581	13.991	3157.8	6.0182	13.142	3141.0	5.9789	12.368	3123.8	5.9402	11.659	3106.3	5.9019	11.007	3088.5	5.8640	10.407
490	763.15	3208.3	6.1028	14.388	3192.8	6.0643	13.531	3177.0	6.0264	12.750	3161.0	5.9892	12.036	3144.7	5.9525	11.380	3128.1	5.9162	10.775
500	773.15	3241.1	6.1456	14.771	3226.5	6.1082	13.907	3211.7	6.0716	13.119	3196.7	6.0357	12.399	3181.4	6.0003	11.737	3165.9	5.9655	11.128
510	783.15	3273.1	6.1867	15.144	3259.3	6.1503	14.271	3245.3	6.1148	13.476	3231.2	6.0800	12.749	3216.9	6.0458	12.082	3202.3	6.0122	11.467
520	793.15	3304.2	6.2262	15.507	3291.2	6.1908	14.625	3278.0	6.1563	13.822	3264.7	6.1225	13.088	3251.1	6.0893	12.415	3237.5	6.0568	11.795
530	803.15	3334.7	6.2644	15.862	3322.4	6.2299	14.970	3309.9	6.1962	14.159	3297.2	6.1633	13.418	3284.5	6.1311	12.738	3271.5	6.0995	12.113
540	813.15	3364.7	6.3015	16.208	3352.9	6.2677	15.308	3341.0	6.2347	14.488	3329.0	6.2026	13.740	3316.9	6.1713	13.053	3304.7	6.1405	12.421
550	823.15	3394.1	6.3374	16.548	3382.9	6.3043	15.638	3371.6	6.2721	14.810	3360.2	6.2407	14.053	3348.7	6.2101	13.359	3337.0	6.1801	12.721
560	833.15	3423.0	6.3724	16.881	3412.4	6.3399	15.961	3401.6	6.3083	15.124	3390.7	6.2776	14.360	3379.7	6.2476	13.659	3368.7	6.2183	13.014
570	843.15	3451.6	6.4065	17.209	3441.4	6.3745	16.279	3431.1	6.3435	15.433	3420.7	6.3134	14.660	3410.3	6.2840	13.952	3399.7	6.2553	13.300
580	853.15	3479.9	6.4398	17.531	3470.1	6.4084	16.591	3460.2	6.3779	15.736	3450.3	6.3482	14.955	3440.3	6.3194	14.239	3430.2	6.2913	13.581
590	863.15	3507.8	6.4724	17.848	3498.4	6.4414	16.898	3489.0	6.4114	16.034	3479.5	6.3822	15.245	3469.9	6.3539	14.521	3460.3	6.3263	13.856
600	873.15	3535.5	6.5043	18.161	3526.5	6.4737	17.201	3517.4	6.4441	16.327	3508.3	6.4154	15.530	3499.1	6.3876	14.798	3489.9	6.3604	14.126
610	883.15	3563.0	6.5356	18.470	3554.3	6.5054	17.499	3545.6	6.4762	16.616	3536.8	6.4479	15.810	3528.0	6.4205	15.071	3519.1	6.3938	14.391
620	893.15	3590.3	6.5663	18.776	3581.9	6.5365	17.794	3573.5	6.5076	16.902	3565.1	6.4797	16.087	3556.6	6.4527	15.340	3548.1	6.4263	14.653
630	903.15	3617.4	6.5965	19.077	3609.3	6.5670	18.085	3601.2	6.5385	17.183	3593.1	6.5109	16.360	3584.9	6.4842	15.605	3576.7	6.4583	14.911
640	913.15	3644.3	6.6261	19.376	3636.6	6.5970	18.373	3628.7	6.5688	17.462	3620.9	6.5416	16.630	3613.1	6.5152	15.867	3605.2	6.4896	15.165
650	923.15	3671.1	6.6554	19.672	3663.6	6.6265	18.658	3656.1	6.5986	17.737	3648.6	6.5717	16.896	3641.0	6.5456	16.125	3633.4	6.5203	15.416
660	933.15	3697.9	6.6841	19.965	3690.6	6.6555	18.940	3683.3	6.6279	18.010	3676.0	6.6013	17.160	3668.7	6.5755	16.381	3661.4	6.5504	15.664
670	943.15	3724.5	6.7125	20.255	3717.5	6.6841	19.220	3710.4	6.6568	18.279	3703.4	6.6304	17.421	3696.3	6.6049	16.633	3689.2	6.5801	15.910
680	953.15	3751.0	6.7405	20.543	3744.2	6.7124	19.497	3737.4	6.6853	18.547	3730.6	6.6591	17.679	3723.8	6.6338	16.884	3716.9	6.6093	16.152
690	963.15	3777.4	6.7681	20.828	3770.9	6.7402	19.772	3764.3	6.7133	18.811	3757.7	6.6874	17.935	3751.1	6.6624	17.131	3744.5	6.6381	16.392
700	973.15	3803.8	6.7953	21.111	3797.5	6.7677	20.044	3791.1	6.7410	19.074	3784.7	6.7153	18.188	3778.3	6.6905	17.377	3771.9	6.6664	16.630
710	983.15	3830.1	6.8222	21.393	3824.0	6.7948	20.314	3817.8	6.7683	19.335	3811.6	6.7428	18.440	3805.4	6.7182	17.620	3799.2	6.6944	16.866
720	993.15	3856.4	6.8488	21.672	3850.4	6.8215	20.583	3844.5	6.7953	19.593	3838.5	6.7700	18.689	3832.5	6.7456	17.861	3826.5	6.7219	17.100
730	1003.15	3882.6	6.8751	21.949	3876.8	6.8480	20.849	3871.0	6.8219	19.850	3865.2	6.7968	18.937	3859.4	6.7726	18.101	3853.6	6.7491	17.331
740	1013.15	3908.8	6.9011	22.225	3903.2	6.8741	21.114	3897.6	6.8483	20.104	3892.0	6.8233	19.183	3886.3	6.7993	18.338	3880.7	6.7760	17.561
750	1023.15	3935.0	6.9267	22.499	3929.5	6.9000	21.377	3924.1	6.8743	20.357	3918.6	6.8495	19.427	3913.2	6.8256	18.574	3907.7	6.8025	17.789
760	1033.15	3961.1	6.9521	22.771	3955.8	6.9255	21.638	3950.5	6.9000	20.609	3945.2	6.8754	19.669	3939.9	6.8517	18.808	3934.6	6.8287	18.016
770	1043.15	3987.2	6.9773	23.042	3982.0	6.9508	21.898	3976.9	6.9254	20.859	3971.8	6.9010	19.910	3966.7	6.8774	19.040	3961.5	6.8546	18.241
780	1053.15	4013.2	7.0021	23.311	4008.2	6.9758	22.156	4003.3	6.9506	21.107	3998.3	6.9263	20.149	3993.3	6.9029	19.271	3988.4	6.8802	18.464
790	1063.15	4039.3	7.0267	23.579	4034.4	7.0006	22.413	4029.6	6.9755	21.354	4024.8	6.9513	20.387	4020.0	6.9280	19.501	4015.1	6.9055	18.686
800	1073.15	4065.3	7.0511	23.845	4060.6	7.0251	22.669	4055.9	7.0001	21.599									

200 to 250 b:

Table 3 Water and Steam—*continued*

p (abs) bar		250			260			270			280			290			300		
t, °C																			
		h	*s*	*v*	*h*	*s*	*v*	*h*	*s*	*v*	*h*	*s*	*v*	*h*	*s*	*v*	*h*	*s*	*v*
Sat. Liquid																			
Sat. Vapour																			
t °C	*T* K																		
0	273.15	25.1	0.0009	0.98806	26.1	0.0009	0.98759	27.1	0.0009	0.98712	28.0	0.0008	0.98665	29.0	0.0008	0.98618	30.0	0.0008	0.98572
10	283.15	66.1	0.1482	0.98881	67.0	0.1481	0.98837	68.0	0.1479	0.98793	68.9	0.1478	0.98749	69.9	0.1477	0.98705	70.8	0.1475	0.98661
20	293.15	107.1	0.2907	0.99072	108.1	0.2905	0.99030	109.0	0.2902	0.98987	109.9	0.2900	0.98945	110.8	0.2898	0.98903	111.7	0.2895	0.98861
30	303.15	148.3	0.4287	0.99353	149.2	0.4284	0.99312	150.0	0.4280	0.99270	150.9	0.4277	0.99229	151.8	0.4274	0.99188	152.7	0.4271	0.99147
40	313.15	189.4	0.5623	0.99710	190.3	0.5620	0.99669	191.2	0.5616	0.99628	192.1	0.5612	0.99587	192.9	0.5608	0.99546	193.8	0.5604	0.99505
50	323.15	230.7	0.6920	1.0013	231.5	0.6915	1.0009	232.4	0.6911	1.0005	233.2	0.6906	1.0001	234.1	0.6902	0.99969	235.0	0.6897	0.99928
60	333.15	272.0	0.8178	1.0062	272.8	0.8173	1.0058	273.6	0.8168	1.0054	274.5	0.8163	1.0049	275.3	0.8158	1.0045	276.1	0.8153	1.0041
70	343.15	313.3	0.9401	1.0116	314.1	0.9396	1.0112	315.0	0.9390	1.0108	315.8	0.9384	1.0104	316.6	0.9379	1.0099	317.4	0.9373	1.0095
80	353.15	354.8	1.0591	1.0177	355.6	1.0585	1.0172	356.3	1.0579	1.0168	357.1	1.0572	1.0163	357.9	1.0566	1.0159	358.7	1.0560	1.0155
90	363.15	396.2	1.1750	1.0242	397.0	1.1743	1.0237	397.8	1.1736	1.0233	398.6	1.1730	1.0228	399.4	1.1723	1.0224	400.1	1.1716	1.0219
100	373.15	437.8	1.2879	1.0313	438.6	1.2872	1.0308	439.3	1.2865	1.0303	440.1	1.2858	1.0299	440.9	1.2850	1.0294	441.6	1.2843	1.0289
110	383.15	479.5	1.3982	1.0389	480.3	1.3974	1.0384	481.0	1.3966	1.0379	481.7	1.3958	1.0374	482.5	1.3951	1.0369	483.2	1.3943	1.0364
120	393.15	521.3	1.5059	1.0470	522.0	1.5051	1.0465	522.8	1.5042	1.0460	523.5	1.5034	1.0455	524.2	1.5025	1.0450	524.9	1.5017	1.0445
130	403.15	563.3	1.6113	1.0557	564.0	1.6104	1.0552	564.7	1.6095	1.0546	565.4	1.6086	1.0541	566.0	1.6077	1.0536	566.7	1.6068	1.0530
140	413.15	605.4	1.7144	1.0650	606.0	1.7135	1.0644	606.7	1.7125	1.0638	607.4	1.7116	1.0633	608.1	1.7106	1.0627	608.7	1.7097	1.0621
150	423.15	647.7	1.8156	1.0748	648.3	1.8145	1.0742	649.0	1.8135	1.0736	649.6	1.8125	1.0730	650.3	1.8115	1.0724	650.9	1.8105	1.0718
160	433.15	690.2	1.9148	1.0853	690.8	1.9137	1.0846	691.4	1.9127	1.0840	692.0	1.9116	1.0834	692.6	1.9105	1.0827	693.3	1.9095	1.0821
170	443.15	732.9	2.0124	1.0964	733.5	2.0112	1.0957	734.1	2.0101	1.0950	734.7	2.0089	1.0944	735.3	2.0078	1.0937	735.9	2.0067	1.0930
180	453.15	775.9	2.1083	1.1083	776.4	2.1071	1.1075	777.0	2.1059	1.1068	777.6	2.1046	1.1060	778.1	2.1034	1.1053	778.7	2.1022	1.1046
190	463.15	819.2	2.2028	1.1209	819.7	2.2015	1.1201	820.2	2.2002	1.1193	820.7	2.1989	1.1185	821.3	2.1976	1.1177	821.8	2.1963	1.1169
200	473.15	862.8	2.2959	1.1343	863.3	2.2945	1.1334	863.7	2.2932	1.1326	864.2	2.2918	1.1317	864.7	2.2904	1.1309	865.2	2.2891	1.1301
210	483.15	906.8	2.3879	1.1487	907.2	2.3864	1.1477	907.6	2.3850	1.1468	908.1	2.3835	1.1459	908.5	2.3820	1.1450	909.0	2.3806	1.1440
220	493.15	951.2	2.4789	1.1640	951.5	2.4773	1.1630	951.9	2.4757	1.1620	952.3	2.4741	1.1610	952.7	2.4726	1.1600	953.1	2.4710	1.1590
230	503.15	996.0	2.5689	1.1805	996.4	2.5672	1.1794	996.7	2.5655	1.1783	997.0	2.5639	1.1772	997.4	2.5622	1.1761	997.7	2.5605	1.1750
240	513.15	1041.4	2.6583	1.1983	1041.7	2.6565	1.1970	1042.0	2.6547	1.1958	1042.2	2.6528	1.1946	1042.5	2.6510	1.1934	1042.8	2.6492	1.1922
250	523.15	1087.5	2.7472	1.2175	1087.7	2.7452	1.2161	1087.8	2.7432	1.2147	1088.0	2.7412	1.2134	1088.2	2.7393	1.2120	1088.4	2.7373	1.2107
260	533.15	1134.2	2.8357	1.2384	1134.3	2.8335	1.2368	1134.4	2.8313	1.2353	1134.5	2.8292	1.2337	1134.6	2.8271	1.2322	1134.7	2.8250	1.2307
270	543.15	1181.8	2.9241	1.2612	1181.8	2.9217	1.2594	1181.7	2.9193	1.2576	1181.7	2.9170	1.2559	1181.7	2.9147	1.2542	1181.8	2.9124	1.2525
280	553.15	1230.3	3.0126	1.2863	1230.2	3.0100	1.2842	1230.0	3.0074	1.2822	1229.9	3.0048	1.2802	1229.8	3.0023	1.2782	1229.7	2.9998	1.2763
290	563.15	1280.0	3.1017	1.3141	1279.7	3.0987	1.3117	1279.4	3.0959	1.3093	1279.1	3.0930	1.3070	1278.8	3.0902	1.3047	1278.6	3.0874	1.3025
300	573.15	1331.1	3.1916	1.3453	1330.6	3.1883	1.3424	1330.1	3.1851	1.3396	1329.6	3.1819	1.3369	1329.1	3.1787	1.3342	1328.7	3.1757	1.3316
310	583.15	1383.9	3.2829	1.3807	1383.1	3.2792	1.3772	1382.4	3.2755	1.3738	1381.6	3.2719	1.3705	1380.9	3.2683	1.3673	1380.3	3.2649	1.3642
320	593.15	1438.9	3.3764	1.4214	1437.8	3.3721	1.4171	1436.7	3.3678	1.4130	1435.6	3.3636	1.4089	1434.6	3.3596	1.4050	1433.6	3.3556	1.4012
330	603.15	1496.7	3.4730	1.4694	1495.1	3.4679	1.4639	1493.5	3.4628	1.4586	1492.0	3.4580	1.4535	1490.6	3.4532	1.4486	1489.2	3.4485	1.4438
340	613.15	1558.3	3.5743	1.5273	1555.9	3.5679	1.5200	1553.7	3.5619	1.5130	1551.6	3.5560	1.5064	1549.6	3.5503	1.5000	1547.7	3.5447	1.4939

350	623.15	1625.1	3.6824	1.6000	1621.7	3.6744	1.5896	1618.5	3.6667	1.5799	1615.5	3.6593	1.5708	1612.7	3.6523	1.5622	1610.0	3.6455	1.5540
360	633.15	1701.1	3.8036	1.6981	1695.6	3.7923	1.6815	1690.6	3.7818	1.6665	1686.1	3.7720	1.6528	1681.9	3.7628	1.6402	1678.0	3.7541	1.6285
370	643.15	1788.8	3.9411	1.8522	1778.4	3.9220	1.8190	1769.6	3.9055	1.7912	1761.9	3.8907	1.7673	1755.1	3.8774	1.7463	1749.0	3.8653	1.7275
380	653.15	1941.0	4.1757	2.2403	1903.0	4.1141	2.0967	1879.5	4.0750	2.0134	1862.4	4.0458	1.9550	1848.9	4.0221	1.9101	1837.7	4.0021	1.8737
390	663.15	2391.3	4.8599	4.6095	2241.2	4.6274	3.5338	2109.4	4.4239	2.7919	2032.6	4.3041	2.4359	1988.3	4.2338	2.2544	1959.1	4.1865	2.1438
400	673.15	2582.0	5.1455	6.0139	2511.7	5.0326	5.2812	2427.5	4.9003	4.5389	2330.7	4.7503	3.8219	2237.0	4.6059	3.2356	2161.8	4.4896	2.8306
410	683.15	2691.3	5.3069	6.8866	2644.6	5.2289	6.2668	2592.2	5.1434	5.6653	2532.2	5.0477	5.0692	2465.6	4.9431	4.4923	2394.5	4.8329	3.9561
420	693.15	2774.1	5.4271	7.5795	2736.5	5.3624	6.9916	2696.6	5.2952	6.4369	2654.3	5.2253	5.9125	2609.0	5.1517	5.4127	2558.0	5.0706	4.9215
430	703.15	2842.5	5.5252	8.1720	2811.0	5.4692	7.6020	2777.9	5.4117	7.0671	2743.2	5.3526	6.5640	2706.9	5.2919	6.0899	2668.8	5.2295	5.6427
440	713.15	2901.7	5.6087	8.6960	2874.4	5.5587	8.1360	2846.0	5.5079	7.6125	2816.5	5.4562	7.1217	2785.9	5.4035	6.6607	2754.0	5.3499	6.2270
450	723.15	2954.3	5.6821	9.1711	2930.2	5.6364	8.6160	2905.3	5.5904	8.0984	2879.6	5.5440	7.6145	2853.0	5.4970	7.1610	2825.6	5.4495	6.7353
460	733.15	3002.3	5.7479	9.6094	2980.6	5.7056	9.0559	2958.3	5.6632	8.5409	2935.4	5.6207	8.0603	2911.9	5.5779	7.6106	2887.7	5.5349	7.1891
470	743.15	3046.7	5.8082	10.019	3027.0	5.7685	9.4653	3006.8	5.7289	8.9504	2986.1	5.6893	8.4705	2964.9	5.6498	8.0222	2943.3	5.6102	7.6025
480	753.15	3088.5	5.8640	10.407	3070.3	5.8264	9.8504	3051.8	5.7890	9.3340	3032.9	5.7519	8.8533	3013.6	5.7148	8.4046	2993.9	5.6779	7.9849
490	763.15	3128.1	5.9162	10.775	3111.2	5.8804	10.216	3094.1	5.8449	9.6968	3076.6	5.8096	9.2140	3058.9	5.7746	8.7637	3040.9	5.7398	8.3428
500	773.15	3165.9	5.9655	11.128	3150.2	5.9311	10.565	3134.2	5.8972	10.042	3118.1	5.8636	9.5566	3101.6	5.8302	9.1038	3085.0	5.7972	8.6808
510	783.15	3202.3	6.0122	11.467	3187.6	5.9792	10.900	3172.7	5.9465	10.373	3157.5	5.9143	9.8839	3142.2	5.8824	9.4281	3126.7	5.8508	9.0023
520	793.15	3237.5	6.0568	11.795	3223.6	6.0249	11.222	3209.6	5.9934	10.691	3195.4	5.9623	10.198	3181.1	5.9317	9.7388	3166.6	5.9014	9.3098
530	803.15	3271.5	6.0995	12.113	3258.5	6.0685	11.534	3245.2	6.0381	10.999	3231.9	6.0081	10.501	3218.4	5.9785	10.038	3204.8	5.9493	9.6052
540	813.15	3304.7	6.1405	12.421	3292.3	6.1104	11.837	3279.8	6.0809	11.296	3267.2	6.0518	10.794	3254.5	6.0231	10.327	3241.7	5.9949	9.8901
550	823.15	3337.0	6.1801	12.721	3325.3	6.1508	12.132	3313.5	6.1220	11.586	3301.5	6.0937	11.078	3289.5	6.0659	10.606	3277.4	6.0386	10.166
560	833.15	3368.7	6.2183	13.014	3357.5	6.1897	12.418	3346.3	6.1616	11.867	3335.0	6.1341	11.355	3323.6	6.1071	10.878	3312.1	6.0805	10.433
570	843.15	3399.7	6.2553	13.300	3389.1	6.2273	12.699	3378.4	6.1999	12.141	3367.6	6.1731	11.624	3356.8	6.1467	11.143	3345.9	6.1208	10.693
580	853.15	3430.2	6.2913	13.581	3420.1	6.2639	12.973	3409.9	6.2370	12.410	3399.6	6.2108	11.887	3389.3	6.1850	11.401	3378.9	6.1597	10.947
590	863.15	3460.3	6.3263	13.856	3450.6	6.2994	13.241	3440.8	6.2731	12.673	3431.0	6.2474	12.144	3421.1	6.2221	11.653	3411.2	6.1974	11.194
600	873.15	3489.9	6.3604	14.126	3480.6	6.3340	13.505	3471.3	6.3082	12.930	3461.9	6.2829	12.397	3452.5	6.2582	11.900	3443.0	6.2340	11.436
610	883.15	3519.1	6.3938	14.391	3510.2	6.3677	13.764	3501.3	6.3424	13.183	3492.3	6.3176	12.644	3483.3	6.2933	12.142	3474.2	6.2696	11.674
620	893.15	3548.1	6.4263	14.653	3539.5	6.4007	14.019	3530.9	6.3757	13.432	3522.3	6.3514	12.887	3513.7	6.3275	12.380	3505.0	6.3042	11.907
630	903.15	3576.7	6.4583	14.911	3568.5	6.4330	14.270	3560.3	6.4084	13.677	3552.0	6.3844	13.126	3543.7	6.3609	12.614	3535.3	6.3380	12.135
640	913.15	3605.2	6.4896	15.165	3597.2	6.4646	14.518	3589.3	6.4404	13.918	3581.3	6.4167	13.362	3573.3	6.3936	12.844	3565.3	6.3710	12.361
650	923.15	3633.4	6.5203	15.416	3625.7	6.4957	14.762	3618.1	6.4717	14.156	3610.4	6.4484	13.594	3602.7	6.4256	13.070	3595.0	6.4033	12.582
660	933.15	3661.4	6.5504	15.664	3654.0	6.5261	15.003	3646.6	6.5025	14.391	3639.2	6.4794	13.823	3631.8	6.4569	13.294	3624.4	6.4350	12.801
670	943.15	3689.2	6.5801	15.910	3682.1	6.5561	15.241	3675.0	6.5327	14.623	3667.8	6.5099	14.049	3660.7	6.4877	13.515	3653.5	6.4661	13.016
680	953.15	3716.9	6.6093	16.152	3710.0	6.5855	15.477	3703.2	6.5624	14.852	3696.3	6.5399	14.272	3689.4	6.5180	13.733	3682.4	6.4966	13.229
690	963.15	3744.5	6.6381	16.392	3737.8	6.6145	15.711	3731.2	6.5916	15.079	3724.5	6.5694	14.493	3717.8	6.5477	13.948	3711.2	6.5265	13.439
700	973.15	3771.9	6.6664	16.630	3765.5	6.6431	15.941	3759.0	6.6204	15.304	3752.6	6.5984	14.712	3746.2	6.5769	14.161	3739.7	6.5560	13.647
710	983.15	3799.2	6.6944	16.866	3793.0	6.6713	16.170	3786.8	6.6488	15.526	3780.6	6.6270	14.928	3774.3	6.6057	14.372	3768.1	6.5850	13.852
720	993.15	3826.5	6.7219	17.100	3820.5	6.6990	16.397	3814.4	6.6768	15.746	3808.4	6.6552	15.142	3802.4	6.6341	14.580	3796.3	6.6136	14.056
730	1003.15	3853.6	6.7491	17.331	3847.8	6.7264	16.622	3842.0	6.7044	15.965	3836.1	6.6829	15.355	3830.3	6.6621	14.787	3824.4	6.6418	14.257
740	1013.15	3880.7	6.7760	17.561	3875.1	6.7534	16.844	3869.4	6.7316	16.181	3863.8	6.7103	15.565	3858.1	6.6897	14.992	3852.4	6.6696	14.457
750	1023.15	3907.7	6.8025	17.789	3902.2	6.7801	17.066	3896.8	6.7585	16.395	3891.3	6.7374	15.773	3885.8	6.7169	15.195	3880.3	6.6970	14.654
760	1033.15	3934.6	6.8287	18.016	3929.3	6.8065	17.285	3924.0	6.7850	16.608	3918.7	6.7641	15.980	3913.4	6.7438	15.396	3908.1	6.7240	14.850
770	1043.15	3961.5	6.8546	18.241	3956.4	6.8326	17.503	3951.3	6.8112	16.820	3946.1	6.7905	16.186	3941.0	6.7703	15.595	3935.8	6.7507	15.045
780	1053.15	3988.4	6.8802	18.464	3983.4	6.8583	17.719	3978.4	6.8371	17.029	3973.4	6.8165	16.389	3968.4	6.7965	15.793	3963.5	6.7770	15.237
790	1063.15	4015.1	6.9055	18.686	4010.3	6.8838	17.934	4005.5	6.8627	17.238	4000.7	6.8423	16.591	3995.8	6.8224	15.990	3991.0	6.8031	15.429
800	1073.15	4041.9	6.9306	18.906	4037.2	6.9090	18.147	4032.5	6.8880	17.444	4027.8	6.8677	16.792	4023.2	6.8480	16.185	4018.5	6.8288	15.619

Table 3 Water and Steam—*continued*

p (*abs*) bar		300			310			320			330			340			350		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	30.0	0.0008	0.98572	31.0	0.0008	0.98525	32.0	0.0008	0.98479	32.9	0.0007	0.98433	33.9	0.0007	0.98387	34.9	0.0007	0.98341
10	283.15	70.8	0.1475	0.98661	71.8	0.1474	0.98617	72.7	0.1472	0.98574	73.6	0.1470	0.98530	74.6	0.1469	0.98487	75.5	0.1467	0.98444
20	293.15	111.7	0.2895	0.98861	112.6	0.2893	0.98819	113.6	0.2890	0.98777	114.5	0.2888	0.98736	115.4	0.2885	0.98694	116.3	0.2883	0.98653
30	303.15	152.7	0.4271	0.99147	153.6	0.4267	0.99106	154.5	0.4264	0.99065	155.4	0.4261	0.99025	156.3	0.4258	0.98984	157.2	0.4254	0.98943
40	313.15	193.8	0.5604	0.99505	194.7	0.5600	0.99465	195.6	0.5596	0.99424	196.4	0.5592	0.99384	197.3	0.5588	0.99344	198.2	0.5584	0.99304
50	323.15	235.0	0.6897	0.99928	235.8	0.6893	0.99888	236.7	0.6888	0.99847	237.5	0.6883	0.99807	238.4	0.6879	0.99766	239.2	0.6874	0.99726
60	333.15	276.1	0.8153	1.0041	277.0	0.8148	1.0037	277.8	0.8142	1.0033	278.6	0.8137	1.0029	279.5	0.8132	1.0025	280.3	0.8127	1.0021
70	343.15	317.4	0.9373	1.0095	318.2	0.9367	1.0091	319.0	0.9362	1.0087	319.9	0.9356	1.0083	320.7	0.9350	1.0078	321.5	0.9345	1.0074
80	353.15	358.7	1.0560	1.0155	359.5	1.0554	1.0150	360.3	1.0548	1.0146	361.1	1.0541	1.0142	361.9	1.0535	1.0137	362.7	1.0529	1.0133
90	363.15	400.1	1.1716	1.0219	400.9	1.1709	1.0215	401.7	1.1703	1.0211	402.5	1.1696	1.0206	403.2	1.1689	1.0202	404.0	1.1683	1.0197
100	373.15	441.6	1.2843	1.0289	442.4	1.2836	1.0285	443.1	1.2829	1.0280	443.9	1.2821	1.0276	444.7	1.2814	1.0271	445.4	1.2807	1.0266
110	383.15	483.2	1.3943	1.0364	483.9	1.3935	1.0360	484.7	1.3927	1.0355	485.4	1.3920	1.0350	486.2	1.3912	1.0345	486.9	1.3904	1.0341
120	393.15	524.9	1.5017	1.0445	525.6	1.5009	1.0440	526.3	1.5001	1.0435	527.1	1.4992	1.0430	527.8	1.4984	1.0425	528.5	1.4976	1.0420
130	403.15	566.7	1.6068	1.0530	567.4	1.6059	1.0525	568.1	1.6050	1.0520	568.8	1.6042	1.0514	569.5	1.6033	1.0509	570.2	1.6024	1.0504
140	413.15	608.7	1.7097	1.0621	609.4	1.7087	1.0616	610.1	1.7078	1.0610	610.8	1.7069	1.0605	611.4	1.7060	1.0599	612.1	1.7050	1.0594
150	423.15	650.9	1.8105	1.0718	651.6	1.8095	1.0712	652.2	1.8085	1.0706	652.9	1.8076	1.0701	653.5	1.8066	1.0695	654.2	1.8056	1.0689
160	433.15	693.3	1.9095	1.0821	693.9	1.9084	1.0815	694.5	1.9074	1.0808	695.1	1.9063	1.0802	695.8	1.9053	1.0796	696.4	1.9042	1.0790
170	443.15	735.9	2.0067	1.0930	736.4	2.0055	1.0923	737.0	2.0044	1.0917	737.6	2.0033	1.0910	738.2	2.0022	1.0904	738.8	2.0011	1.0897
180	453.15	778.7	2.1022	1.1046	779.2	2.1011	1.1039	779.8	2.0999	1.1032	780.4	2.0987	1.1025	780.9	2.0975	1.1018	781.5	2.0963	1.1011
190	463.15	821.8	2.1963	1.1169	822.3	2.1951	1.1162	822.8	2.1938	1.1154	823.4	2.1925	1.1146	823.9	2.1913	1.1139	824.4	2.1900	1.1131
200	473.15	865.2	2.2891	1.1301	865.7	2.2877	1.1292	866.2	2.2864	1.1284	866.7	2.2850	1.1276	867.2	2.2837	1.1268	867.7	2.2824	1.1260
210	483.15	909.0	2.3806	1.1440	909.4	2.3791	1.1431	909.9	2.3777	1.1423	910.3	2.3763	1.1414	910.8	2.3749	1.1405	911.2	2.3735	1.1396
220	493.15	953.1	2.4710	1.1590	953.5	2.4695	1.1580	953.9	2.4680	1.1570	954.3	2.4664	1.1561	954.7	2.4649	1.1551	955.1	2.4634	1.1542
230	503.15	997.7	2.5605	1.1750	998.0	2.5589	1.1739	998.4	2.5572	1.1728	998.7	2.5556	1.1718	999.1	2.5540	1.1707	999.4	2.5524	1.1697
240	513.15	1042.8	2.6492	1.1922	1043.1	2.6475	1.1910	1043.3	2.6457	1.1898	1043.6	2.6440	1.1886	1043.9	2.6422	1.1875	1044.2	2.6405	1.1863
250	523.15	1088.4	2.7373	1.2107	1088.6	2.7354	1.2094	1088.8	2.7335	1.2081	1089.1	2.7316	1.2068	1089.3	2.7298	1.2055	1089.5	2.7279	1.2042
260	533.15	1134.7	2.8250	1.2307	1134.8	2.8229	1.2292	1135.0	2.8209	1.2278	1135.1	2.8188	1.2263	1135.3	2.8168	1.2249	1135.4	2.8148	1.2235
270	543.15	1181.8	2.9124	1.2525	1181.8	2.9102	1.2508	1181.8	2.9079	1.2492	1181.9	2.9057	1.2475	1181.9	2.9035	1.2459	1182.0	2.9013	1.2443
280	553.15	1229.7	2.9998	1.2763	1229.6	2.9973	1.2744	1229.5	2.9949	1.2725	1229.4	2.9924	1.2706	1229.3	2.9900	1.2688	1229.3	2.9877	1.2670
290	563.15	1278.6	3.0874	1.3025	1278.3	3.0847	1.3003	1278.1	3.0820	1.2981	1277.9	3.0793	1.2960	1277.7	3.0767	1.2939	1277.5	3.0741	1.2918
300	573.15	1328.7	3.1757	1.3316	1328.3	3.1726	1.3290	1327.9	3.1696	1.3264	1327.5	3.1666	1.3240	1327.1	3.1637	1.3215	1326.8	3.1608	1.3191
310	583.15	1380.3	3.2649	1.3642	1379.6	3.2614	1.3611	1379.0	3.2580	1.3581	1378.4	3.2547	1.3552	1377.9	3.2514	1.3523	1377.3	3.2482	1.3494
320	593.15	1433.6	3.3556	1.4012	1432.7	3.3516	1.3975	1431.8	3.3478	1.3938	1431.0	3.3440	1.3903	1430.1	3.3403	1.3868	1429.4	3.3367	1.3835
330	603.15	1489.2	3.4485	1.4438	1487.9	3.4440	1.4392	1486.7	3.4395	1.4347	1485.5	3.4352	1.4304	1484.4	3.4309	1.4262	1483.3	3.4268	1.4221
340	613.15	1547.7	3.5447	1.4939	1545.9	3.5393	1.4880	1544.2	3.5341	1.4824	1542.6	3.5290	1.4769	1541.0	3.5240	1.4716	1539.5	3.5192	1.4666

350	623.15	1610.0	3.6455	1.5540	1607.5	3.6390	1.5463	1605.1	3.6327	1.5389	1602.9	3.6266	1.5318	1600.7	3.6207	1.5251	1598.7	3.6149	1.5186
360	633.15	1678.0	3.7541	1.6285	1674.5	3.7459	1.6175	1671.1	3.7381	1.6073	1668.0	3.7306	1.5976	1665.0	3.7234	1.5885	1662.3	3.7166	1.5799
370	643.15	1749.0	3.8653	1.7275	1743.5	3.8540	1.7106	1738.4	3.8435	1.6952	1733.8	3.8337	1.6811	1729.5	3.8244	1.6680	1725.5	3.8156	1.6558
380	653.15	1837.7	4.0021	1.8737	1828.2	3.9847	1.8431	1819.9	3.9692	1.8168	1812.5	3.9551	1.7936	1805.9	3.9423	1.7730	1799.9	3.9304	1.7544
390	663.15	1959.1	4.1865	2.1438	1937.9	4.1513	2.0671	1921.3	4.1232	2.0092	1907.7	4.0997	1.9631	1896.2	4.0795	1.9249	1886.3	4.0617	1.8925
400	673.15	2161.8	4.4896	2.8306	2106.1	4.4029	2.5657	2065.5	4.3389	2.3903	2035.2	4.2905	2.2686	2011.8	4.2525	2.1795	1993.1	4.2214	2.1108
410	683.15	2394.5	4.8329	3.9561	2324.8	4.7255	3.4953	2262.7	4.6297	3.1308	2210.5	4.5490	2.8552	2167.8	4.4824	2.6491	2133.1	4.4278	2.4940
420	693.15	2558.0	5.0706	4.9215	2503.7	4.9855	4.4572	2447.9	4.8989	4.0308	2393.1	4.8144	3.6556	2342.2	4.7359	3.3397	2296.7	4.6656	3.0817
430	703.15	2668.8	5.2295	5.6427	2629.2	5.1654	5.2208	2586.3	5.0972	4.8130	2541.0	5.0263	4.4286	2495.4	4.9553	4.0763	2450.6	4.8861	3.7614
440	713.15	2754.0	5.3499	6.2270	2721.0	5.2952	5.8186	2686.9	5.2394	5.4339	2651.7	5.1827	5.0718	2615.6	5.1252	4.7314	2577.2	5.0649	4.4041
450	723.15	2825.6	5.4495	6.7353	2797.3	5.4014	6.3349	2768.2	5.3526	5.9581	2738.3	5.3033	5.6035	2707.7	5.2535	5.2697	2676.4	5.2031	4.9558
460	733.15	2887.7	5.5349	7.1891	2863.0	5.4916	6.7932	2837.6	5.4479	6.4210	2811.6	5.4040	6.0707	2785.0	5.3597	5.7409	2758.0	5.3151	5.4304
470	743.15	2943.3	5.6102	7.6025	2921.2	5.5704	7.2087	2898.6	5.5306	6.8386	2875.6	5.4906	6.4905	2852.1	5.4506	6.1627	2828.2	5.4103	5.8539
480	753.15	2993.9	5.6779	7.9849	2973.9	5.6410	7.5914	2953.6	5.6041	7.2219	2932.8	5.5672	6.8744	2911.8	5.5303	6.5473	2890.4	5.4934	6.2390
490	763.15	3040.9	5.7398	8.3428	3022.6	5.7052	7.9484	3004.0	5.6706	7.5783	2985.1	5.6362	7.2304	2966.0	5.6018	6.9028	2946.6	5.5676	6.5941
500	773.15	3085.0	5.7972	8.6808	3068.1	5.7644	8.2847	3051.0	5.7318	7.9131	3033.6	5.6993	7.5638	3016.0	5.6670	7.2351	2998.3	5.6349	6.9253
510	783.15	3126.7	5.8508	9.0023	3111.0	5.8196	8.6037	3095.1	5.7885	8.2300	3079.1	5.7578	7.8788	3062.8	5.7272	7.5484	3046.4	5.6968	7.2369
520	793.15	3166.6	5.9014	9.3098	3151.9	5.8714	8.9083	3137.1	5.8418	8.5319	3122.1	5.8124	8.1784	3107.0	5.7832	7.8457	3091.8	5.7543	7.5323
530	803.15	3204.8	5.9493	9.6052	3191.1	5.9205	9.2005	3177.2	5.8920	8.8211	3163.2	5.8638	8.4648	3149.1	5.8359	8.1296	3134.8	5.8083	7.8137
540	813.15	3241.7	5.9949	9.8901	3228.7	5.9671	9.4818	3215.7	5.9397	9.0991	3202.5	5.9125	8.7397	3189.3	5.8857	8.4017	3176.0	5.8592	8.0832
550	823.15	3277.4	6.0386	10.166	3265.2	6.0116	9.7536	3252.9	5.9851	9.3674	3240.5	5.9589	9.0047	3228.0	5.9330	8.6636	3215.4	5.9074	8.3423
560	833.15	3312.1	6.0805	10.433	3300.5	6.0543	10.017	3288.9	6.0286	9.6271	3277.1	6.0032	9.2610	3265.4	5.9781	8.9166	3253.5	5.9534	8.5922
570	843.15	3345.9	6.1208	10.693	3334.9	6.0954	10.273	3323.8	6.0703	9.8791	3312.7	6.0456	9.5094	3301.6	6.0213	9.1617	3290.4	5.9974	8.8341
580	853.15	3378.9	6.1597	10.947	3368.4	6.1349	10.522	3357.9	6.1105	10.124	3347.4	6.0865	9.7509	3336.8	6.0629	9.3996	3326.2	6.0396	9.0687
590	863.15	3411.2	6.1974	11.194	3401.3	6.1732	10.765	3391.3	6.1494	10.363	3381.2	6.1259	9.9861	3371.1	6.1029	9.6312	3361.0	6.0802	9.2969
600	873.15	3443.0	6.2340	11.436	3433.5	6.2103	11.003	3423.9	6.1870	10.597	3414.3	6.1641	10.216	3404.7	6.1416	9.8572	3395.1	6.1194	9.5194
610	883.15	3474.2	6.2696	11.674	3465.1	6.2463	11.236	3456.0	6.2235	10.825	3446.8	6.2010	10.440	3437.6	6.1790	10.078	3428.4	6.1574	9.7366
620	893.15	3505.0	6.3042	11.907	3496.2	6.2813	11.464	3487.5	6.2589	11.049	3478.7	6.2370	10.660	3469.9	6.2154	10.294	3461.1	6.1942	9.9491
630	903.15	3535.3	6.3380	12.135	3526.9	6.3155	11.688	3518.6	6.2935	11.269	3510.1	6.2720	10.876	3501.7	6.2508	10.506	3493.2	6.2300	10.157
640	913.15	3565.3	6.3710	12.361	3557.3	6.3489	11.909	3549.2	6.3273	11.485	3541.1	6.3061	11.088	3533.0	6.2853	10.714	3524.9	6.2648	10.362
650	923.15	3595.0	6.4033	12.582	3587.2	6.3816	12.126	3579.5	6.3603	11.698	3571.7	6.3394	11.296	3563.9	6.3189	10.918	3556.1	6.2988	10.562
660	933.15	3624.4	6.4350	12.801	3616.9	6.4135	12.339	3609.4	6.3926	11.907	3602.0	6.3720	11.501	3594.5	6.3518	11.119	3587.0	6.3321	10.760
670	943.15	3653.5	6.4661	13.016	3646.3	6.4449	12.550	3639.1	6.4242	12.113	3631.9	6.4039	11.703	3624.7	6.3841	11.317	3617.5	6.3646	10.954
680	953.15	3682.4	6.4966	13.229	3675.5	6.4757	12.758	3668.6	6.4552	12.317	3661.6	6.4352	11.902	3654.6	6.4156	11.513	3647.7	6.3965	11.145
690	963.15	3711.2	6.5265	13.439	3704.5	6.5059	12.963	3697.8	6.4857	12.518	3691.1	6.4660	12.099	3684.3	6.4466	11.705	3677.6	6.4277	11.334
700	973.15	3739.7	6.5560	13.647	3733.2	6.5356	13.166	3726.8	6.5157	12.716	3720.3	6.4962	12.293	3713.8	6.4771	11.895	3707.3	6.4584	11.520
710	983.15	3768.1	6.5850	13.852	3761.8	6.5648	13.367	3755.6	6.5451	12.912	3749.3	6.5258	12.485	3743.0	6.5070	12.083	3736.8	6.4885	11.704
720	993.15	3796.3	6.6136	14.056	3790.3	6.5936	13.566	3784.2	6.5741	13.106	3778.2	6.5550	12.674	3772.1	6.5364	12.269	3766.1	6.5181	11.886
730	1003.15	3824.4	6.6418	14.257	3818.6	6.6220	13.762	3812.7	6.6027	13.298	3806.9	6.5838	12.862	3801.0	6.5653	12.452	3795.2	6.5473	12.066
740	1013.15	3852.4	6.6696	14.457	3846.8	6.6500	13.957	3841.1	6.6308	13.488	3835.4	6.6121	13.048	3829.8	6.5939	12.634	3824.1	6.5760	12.244
750	1023.15	3880.3	6.6970	14.654	3874.9	6.6775	14.149	3869.4	6.6586	13.676	3863.9	6.6401	13.232	3858.4	6.6220	12.814	3852.9	6.6043	12.419
760	1033.15	3908.1	6.7240	14.850	3902.8	6.7047	14.340	3897.5	6.6859	13.862	3892.2	6.6676	13.414	3886.9	6.6497	12.992	3881.6	6.6322	12.594
770	1043.15	3935.8	6.7507	15.045	3930.7	6.7316	14.530	3925.5	6.7130	14.047	3920.4	6.6948	13.594	3915.3	6.6770	13.168	3910.1	6.6597	12.766
780	1053.15	3963.5	6.7770	15.237	3958.5	6.7581	14.718	3953.5	6.7396	14.230	3948.5	6.7216	13.773	3943.5	6.7040	13.343	3938.5	6.6868	12.937
790	1063.15	3991.0	6.8031	15.429	3986.2	6.7843	14.904	3981.3	6.7659	14.412	3976.5	6.7481	13.950	3971.7	6.7306	13.516	3966.9	6.7135	13.107

Table 3 Water and Steam—*continued*

p (*abs*) bar		350			360			370			380			390			400		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	34.9	0.0007	0.98341	35.9	0.0006	0.98295	36.8	0.0006	0.98249	37.8	0.0005	0.98204	38.8	0.0005	0.98158	39.7	0.0004	0.98113
10	283.15	75.5	0.1467	0.98444	76.5	0.1466	0.98400	77.4	0.1464	0.98357	78.3	0.1462	0.98315	79.3	0.1461	0.98272	80.2	0.1459	0.98229
20	293.15	116.3	0.2883	0.98653	117.2	0.2880	0.98611	118.1	0.2878	0.98570	119.0	0.2875	0.98529	119.9	0.2872	0.98488	120.8	0.2870	0.98447
30	303.15	157.2	0.4254	0.98943	158.1	0.4251	0.98903	159.0	0.4248	0.98863	159.9	0.4245	0.98823	160.7	0.4241	0.98783	161.6	0.4238	0.98743
40	313.15	198.2	0.5584	0.99304	199.0	0.5580	0.99264	199.9	0.5576	0.99224	200.8	0.5573	0.99184	201.6	0.5569	0.99144	202.5	0.5565	0.99105
50	323.15	239.2	0.6874	0.99726	240.1	0.6870	0.99686	240.9	0.6865	0.99646	241.8	0.6861	0.99606	242.6	0.6856	0.99566	243.5	0.6852	0.99527
60	333.15	280.3	0.8127	1.0021	281.1	0.8122	1.0017	282.0	0.8117	1.0013	282.8	0.8112	1.0009	283.6	0.8107	1.0005	284.5	0.8102	1.0001
70	343.15	321.5	0.9345	1.0074	322.3	0.9339	1.0070	323.1	0.9333	1.0066	323.9	0.9328	1.0062	324.7	0.9322	1.0058	325.6	0.9317	1.0054
80	353.15	362.7	1.0529	1.0133	363.5	1.0523	1.0129	364.3	1.0517	1.0125	365.1	1.0511	1.0121	365.9	1.0505	1.0116	366.7	1.0498	1.0112
90	363.15	404.0	1.1683	1.0197	404.8	1.1676	1.0193	405.6	1.1669	1.0189	406.4	1.1663	1.0184	407.1	1.1656	1.0180	407.9	1.1649	1.0175
100	373.15	445.4	1.2807	1.0266	446.2	1.2800	1.0262	446.9	1.2793	1.0257	447.7	1.2786	1.0253	448.5	1.2778	1.0248	449.2	1.2771	1.0244
110	383.15	486.9	1.3904	1.0341	487.6	1.3897	1.0336	488.4	1.3889	1.0331	489.1	1.3881	1.0326	489.9	1.3874	1.0322	490.6	1.3866	1.0317
120	393.15	528.5	1.4976	1.0420	529.2	1.4968	1.0415	529.9	1.4960	1.0410	530.7	1.4952	1.0405	531.4	1.4944	1.0400	532.1	1.4935	1.0395
130	403.15	570.2	1.6024	1.0504	570.9	1.6016	1.0499	571.6	1.6007	1.0494	572.3	1.5998	1.0489	573.0	1.5990	1.0483	573.7	1.5981	1.0478
140	413.15	612.1	1.7050	1.0594	612.8	1.7041	1.0588	613.5	1.7032	1.0583	614.2	1.7023	1.0577	614.8	1.7014	1.0572	615.5	1.7004	1.0567
150	423.15	654.2	1.8056	1.0689	654.8	1.8046	1.0683	655.5	1.8036	1.0677	656.1	1.8027	1.0672	656.8	1.8017	1.0666	657.4	1.8007	1.0660
160	433.15	696.4	1.9042	1.0790	697.0	1.9032	1.0784	697.7	1.9022	1.0778	698.3	1.9011	1.0772	698.9	1.9001	1.0766	699.6	1.8991	1.0760
170	443.15	738.8	2.0011	1.0897	739.4	2.0000	1.0890	740.0	1.9989	1.0884	740.6	1.9978	1.0878	741.3	1.9967	1.0871	741.9	1.9956	1.0865
180	453.15	781.5	2.0963	1.1011	782.1	2.0952	1.1004	782.7	2.0940	1.0997	783.2	2.0928	1.0990	783.8	2.0917	1.0983	784.4	2.0905	1.0976
190	463.15	824.4	2.1900	1.1131	825.0	2.1888	1.1124	825.5	2.1876	1.1116	826.1	2.1863	1.1109	826.6	2.1851	1.1102	827.2	2.1839	1.1094
200	473.15	867.7	2.2824	1.1260	868.2	2.2811	1.1252	868.7	2.2797	1.1244	869.2	2.2784	1.1236	869.7	2.2771	1.1228	870.2	2.2758	1.1220
210	483.15	911.2	2.3735	1.1396	911.7	2.3721	1.1387	912.1	2.3707	1.1379	912.6	2.3693	1.1370	913.1	2.3679	1.1362	913.5	2.3665	1.1353
220	493.15	955.1	2.4634	1.1542	955.5	2.4619	1.1532	956.0	2.4604	1.1523	956.4	2.4589	1.1513	956.8	2.4575	1.1504	957.2	2.4560	1.1495
230	503.15	999.4	2.5524	1.1697	999.8	2.5508	1.1687	1000.2	2.5492	1.1676	1000.5	2.5476	1.1666	1000.9	2.5460	1.1656	1001.3	2.5444	1.1646
240	513.15	1044.2	2.6405	1.1863	1044.5	2.6388	1.1852	1044.8	2.6371	1.1841	1045.1	2.6354	1.1830	1045.5	2.6337	1.1819	1045.8	2.6320	1.1808
250	523.15	1089.5	2.7279	1.2042	1089.8	2.7261	1.2030	1090.0	2.7242	1.2017	1090.2	2.7224	1.2005	1090.5	2.7206	1.1993	1090.8	2.7188	1.1981
260	533.15	1135.4	2.8148	1.2235	1135.6	2.8128	1.2221	1135.7	2.8108	1.2207	1135.9	2.8089	1.2193	1136.1	2.8069	1.2180	1136.3	2.8050	1.2166
270	543.15	1182.0	2.9013	1.2443	1182.0	2.8991	1.2428	1182.1	2.8970	1.2412	1182.2	2.8949	1.2397	1182.3	2.8928	1.2382	1182.4	2.8907	1.2367
280	553.15	1229.3	2.9877	1.2670	1229.3	2.9853	1.2652	1229.2	2.9830	1.2635	1229.2	2.9807	1.2617	1229.2	2.9784	1.2600	1229.2	2.9761	1.2583
290	563.15	1277.5	3.0741	1.2918	1277.4	3.0715	1.2898	1277.2	3.0689	1.2878	1277.1	3.0664	1.2858	1277.0	3.0639	1.2838	1276.8	3.0614	1.2819
300	573.15	1326.8	3.1608	1.3191	1326.5	3.1580	1.3168	1326.2	3.1551	1.3144	1325.9	3.1523	1.3122	1325.6	3.1496	1.3099	1325.4	3.1469	1.3077
310	583.15	1377.3	3.2482	1.3494	1376.8	3.2450	1.3467	1376.3	3.2419	1.3440	1375.9	3.2388	1.3413	1375.4	3.2357	1.3387	1375.0	3.2327	1.3361
320	593.15	1429.4	3.3367	1.3835	1428.6	3.3331	1.3802	1427.9	3.3296	1.3770	1427.2	3.3261	1.3738	1426.6	3.3227	1.3707	1425.9	3.3193	1.3677
330	603.15	1483.3	3.4268	1.4221	1482.2	3.4227	1.4181	1481.2	3.4187	1.4142	1480.2	3.4147	1.4104	1479.3	3.4109	1.4068	1478.4	3.4071	1.4032
340	613.15	1539.5	3.5192	1.4666	1538.0	3.5145	1.4616	1536.7	3.5098	1.4569	1535.3	3.5053	1.4522	1534.1	3.5009	1.4477	1532.9	3.4965	1.4434

350	623.15	1598.7	3.6149	1.5186	1596.7	3.6094	1.5123	1594.8	3.6039	1.5063	1593.0	3.5987	1.5006	1591.3	3.5935	1.4950	1589.7	3.5885	1.4896
360	633.15	1662.3	3.7166	1.5799	1659.6	3.7099	1.5717	1657.2	3.7035	1.5639	1654.8	3.6974	1.5564	1652.6	3.6914	1.5493	1650.5	3.6856	1.5425
370	643.15	1725.5	3.8156	1.6558	1721.8	3.8073	1.6444	1718.3	3.7993	1.6338	1715.0	3.7917	1.6237	1711.9	3.7844	1.6142	1709.0	3.7774	1.6051
380	653.15	1799.9	3.9304	1.7544	1794.5	3.9194	1.7375	1789.4	3.9091	1.7219	1784.8	3.8993	1.7076	1780.5	3.8901	1.6942	1776.4	3.8814	1.6818
390	663.15	1886.3	4.0617	1.8925	1877.6	4.0457	1.8643	1869.9	4.0312	1.8395	1862.9	4.0179	1.8173	1856.5	4.0056	1.7972	1850.7	3.9942	1.7789
400	673.15	1993.1	4.2214	2.1108	1977.5	4.1953	2.0558	1964.4	4.1727	2.0103	1953.0	4.1528	1.9717	1943.0	4.1351	1.9384	1934.1	4.1190	1.9091
410	683.15	2133.1	4.4278	2.4940	2104.8	4.3829	2.3753	2081.5	4.3453	2.2823	2062.0	4.3135	2.2078	2045.5	4.2861	2.1467	2031.2	4.2621	2.0954
420	693.15	2296.7	4.6656	3.0817	2257.0	4.6040	2.8739	2222.6	4.5504	2.7068	2193.1	4.5040	2.5717	2167.7	4.4637	2.4616	2145.7	4.4285	2.3709
430	703.15	2450.6	4.8861	3.7614	2408.1	4.8205	3.4872	2368.9	4.7599	3.2531	2333.3	4.7048	3.0554	2301.3	4.6551	2.8892	2272.8	4.6105	2.7493
440	713.15	2577.2	5.0649	4.4041	2538.8	5.0050	4.1052	2501.1	4.9467	3.8349	2465.0	4.8908	3.5946	2431.0	4.8382	3.3835	2399.4	4.7893	3.1997
450	723.15	2676.4	5.2031	4.9558	2644.5	5.1524	4.6609	2612.1	5.1013	4.3844	2579.1	5.0497	4.1238	2546.8	4.9995	3.8878	2515.6	4.9511	3.6748
460	733.15	2758.0	5.3151	5.4304	2730.4	5.2704	5.1381	2702.5	5.2255	4.8633	2674.3	5.1805	4.6052	2645.8	5.1355	4.3632	2617.1	5.0906	4.1365
470	743.15	2828.2	5.4103	5.8539	2804.0	5.3700	5.5629	2779.4	5.3297	5.2888	2754.6	5.2894	5.0307	2729.6	5.2491	4.7879	2704.4	5.2089	4.5597
480	753.15	2890.4	5.4934	6.2390	2868.7	5.4566	5.9482	2846.7	5.4197	5.6740	2824.6	5.3829	5.4153	2802.2	5.3462	5.1713	2779.8	5.3097	4.9414
490	763.15	2946.6	5.5676	6.5941	2926.9	5.5334	6.3028	2907.1	5.4993	6.0278	2887.0	5.4653	5.7682	2866.8	5.4314	5.5229	2846.5	5.3977	5.2912
500	773.15	2998.3	5.6349	6.9253	2980.3	5.6028	6.6329	2962.1	5.5710	6.3568	2943.8	5.5392	6.0958	2925.3	5.5076	5.8490	2906.8	5.4762	5.6156
510	783.15	3046.4	5.6968	7.2369	3029.9	5.6666	6.9431	3013.1	5.6365	6.6654	2996.3	5.6066	6.4029	2979.3	5.5769	6.1544	2962.2	5.5474	5.9191
520	793.15	3091.8	5.7543	7.5323	3076.4	5.7256	7.2365	3060.9	5.6971	6.9570	3045.3	5.6688	6.6927	3029.5	5.6407	6.4424	3013.7	5.6128	6.2053
530	803.15	3134.8	5.8083	7.8137	3120.5	5.7809	7.5157	3106.0	5.7537	7.2341	3091.5	5.7268	6.9678	3076.9	5.7000	6.7155	3062.1	5.6735	6.4764
540	813.15	3176.0	5.8592	8.0832	3162.5	5.8329	7.7827	3149.0	5.8069	7.4988	3135.4	5.7811	7.2302	3121.7	5.7555	6.9758	3108.0	5.7302	6.7346
550	823.15	3215.4	5.9074	8.3423	3202.8	5.8821	8.0391	3190.1	5.8571	7.7526	3177.3	5.8323	7.4816	3164.5	5.8078	7.2249	3151.6	5.7835	6.9815
560	833.15	3253.5	5.9534	8.5922	3241.6	5.9290	8.2862	3229.6	5.9048	7.9970	3217.6	5.8810	7.7234	3205.5	5.8574	7.4643	3193.4	5.8340	7.2185
570	843.15	3290.4	5.9974	8.8341	3279.1	5.9737	8.5250	3267.8	5.9503	8.2330	3256.4	5.9273	7.9567	3245.0	5.9045	7.6950	3233.6	5.8819	7.4467
580	853.15	3326.2	6.0396	9.0687	3315.5	6.0166	8.7565	3304.7	5.9939	8.4615	3294.0	5.9716	8.1824	3283.2	5.9495	7.9180	3272.4	5.9276	7.6673
590	863.15	3361.0	6.0802	9.2969	3350.9	6.0578	8.9815	3340.7	6.0358	8.6835	3330.4	6.0140	8.4015	3320.2	5.9926	8.1343	3309.9	5.9714	7.8809
600	873.15	3395.1	6.1194	9.5194	3385.4	6.0976	9.2007	3375.7	6.0761	8.8995	3365.9	6.0549	8.6145	3356.2	6.0341	8.3445	3346.4	6.0135	8.0884
610	883.15	3428.4	6.1574	9.7366	3419.1	6.1361	9.4145	3409.9	6.1151	9.1102	3400.6	6.0944	8.8221	3391.3	6.0741	8.5492	3382.0	6.0540	8.2903
620	893.15	3461.1	6.1942	9.9491	3452.3	6.1733	9.6236	3443.4	6.1528	9.3160	3434.5	6.1326	9.0249	3425.6	6.1127	8.7490	3416.7	6.0931	8.4873
630	903.15	3493.2	6.2300	10.157	3484.8	6.2095	9.8283	3476.3	6.1894	9.5174	3467.8	6.1697	9.2232	3459.3	6.1502	8.9444	3450.8	6.1310	8.6798
640	913.15	3524.9	6.2648	10.362	3516.8	6.2448	10.029	3508.6	6.2251	9.7149	3500.5	6.2057	9.4175	3492.3	6.1866	9.1357	3484.2	6.1678	8.8683
650	923.15	3556.1	6.2988	10.562	3548.3	6.2791	10.226	3540.5	6.2598	9.9087	3532.7	6.2407	9.6082	3524.8	6.2220	9.3233	3517.0	6.2035	9.0530
660	933.15	3587.0	6.3321	10.760	3579.5	6.3127	10.420	3571.9	6.2936	10.099	3564.4	6.2749	9.7954	3556.9	6.2565	9.5075	3549.4	6.2384	9.2343
670	943.15	3617.5	6.3646	10.954	3610.2	6.3455	10.611	3603.0	6.3267	10.286	3595.8	6.3083	9.9795	3588.5	6.2902	9.6886	3581.3	6.2724	9.4124
680	953.15	3647.7	6.3965	11.145	3640.7	6.3776	10.799	3633.7	6.3591	10.471	3626.7	6.3410	10.161	3619.8	6.3232	9.8667	3612.8	6.3056	9.5876
690	963.15	3677.6	6.4277	11.334	3670.9	6.4091	10.984	3664.2	6.3909	10.653	3657.4	6.3730	10.339	3650.7	6.3554	10.042	3644.0	6.3382	9.7602
700	973.15	3707.3	6.4584	11.520	3700.8	6.4400	11.166	3694.3	6.4221	10.832	3687.8	6.4044	10.515	3681.3	6.3871	10.215	3674.8	6.3701	9.9302
710	983.15	3736.8	6.4885	11.704	3730.5	6.4704	11.347	3724.2	6.4526	11.009	3718.0	6.4352	10.689	3711.7	6.4181	10.386	3705.4	6.4013	10.098
720	993.15	3766.1	6.5181	11.886	3760.0	6.5002	11.525	3753.9	6.4827	11.184	3747.9	6.4655	10.861	3741.8	6.4486	10.554	3735.7	6.4320	10.263
730	1003.15	3795.2	6.5473	12.066	3789.3	6.5296	11.701	3783.4	6.5123	11.356	3777.6	6.4953	11.030	3771.7	6.4786	10.720	3765.8	6.4622	10.427
740	1013.15	3824.1	6.5760	12.244	3818.4	6.5585	11.875	3812.8	6.5413	11.527	3807.1	6.5245	11.197	3801.4	6.5080	10.885	3795.7	6.4918	10.588
750	1023.15	3852.9	6.6043	12.419	3847.4	6.5870	12.048	3841.9	6.5700	11.696	3836.4	6.5534	11.363	3830.9	6.5370	11.047	3825.5	6.5210	10.748
760	1033.15	3881.6	6.6322	12.594	3876.3	6.6150	12.218	3870.9	6.5982	11.863	3865.6	6.5818	11.527	3860.3	6.5656	11.208	3855.0	6.5498	10.905
770	1043.15	3910.1	6.6597	12.766	3905.0	6.6427	12.387	3899.8	6.6260	12.028	3894.7	6.6097	11.689	3889.5	6.5938	11.367	3884.4	6.5781	11.061
780	1053.15	3938.5	6.6868	12.937	3933.6	6.6699	12.554	3928.6	6.6535	12.192	3923.6	6.6373	11.850	3918.6	6.6215	11.525	3913.6	6.6060	11.216
790	1063.15	3966.9	6.7135	13.107	3962.0	6.6969	12.720	3957.2	6.6805	12.355	3952.4	6.6645	12.009	3947.6	6.6489	11.681	3942.7	6.6335	11.369
800	1073.15	3995.1	6.7400	13.275	3990.4	6.7234	12.884	3985.7	6.7072	12.516	3981.1	6.6914	12.166	3976.4	6.6758	11.835	3971.7	6.6606	11.521

350 to 400 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		400			410			420			430			440			450		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	39.7	0.0004	0.98113	40.7	0.0004	0.98068	41.7	0.0003	0.98023	42.6	0.0003	0.97978	43.6	0.0002	0.97933	44.6	0.0001	0.97888
10	283.15	80.2	0.1459	0.98229	81.1	0.1457	0.98187	82.1	0.1455	0.98144	83.0	0.1454	0.98102	83.9	0.1452	0.98060	84.8	0.1450	0.98017
20	293.15	120.8	0.2870	0.98447	121.8	0.2867	0.98406	122.7	0.2865	0.98365	123.6	0.2862	0.98325	124.5	0.2859	0.98284	125.4	0.2857	0.98244
30	303.15	161.6	0.4238	0.98743	162.5	0.4235	0.98703	163.4	0.4231	0.98663	164.3	0.4228	0.98624	165.2	0.4225	0.98584	166.1	0.4221	0.98545
40	313.15	202.5	0.5565	0.99105	203.4	0.5561	0.99065	204.2	0.5557	0.99026	205.1	0.5553	0.98987	206.0	0.5549	0.98948	206.8	0.5545	0.98909
50	323.15	243.5	0.6852	0.99527	244.3	0.6847	0.99487	245.2	0.6843	0.99448	246.0	0.6838	0.99409	246.9	0.6834	0.99369	247.7	0.6829	0.99330
60	333.15	284.5	0.8102	1.0001	285.3	0.8097	0.99965	286.1	0.8092	0.99925	287.0	0.8087	0.99886	287.8	0.8082	0.99846	288.6	0.8077	0.99807
70	343.15	325.6	0.9317	1.0054	326.4	0.9311	1.0050	327.2	0.9305	1.0046	328.0	0.9300	1.0042	328.8	0.9294	1.0038	329.6	0.9289	1.0033
80	353.15	366.7	1.0498	1.0112	367.5	1.0492	1.0108	368.3	1.0486	1.0104	369.1	1.0480	1.0100	369.9	1.0474	1.0095	370.7	1.0468	1.0091
90	363.15	407.9	1.1649	1.0175	408.7	1.1643	1.0171	409.5	1.1636	1.0167	410.2	1.1630	1.0163	411.0	1.1623	1.0158	411.8	1.1617	1.0154
100	373.15	449.2	1.2771	1.0244	450.0	1.2764	1.0239	450.7	1.2757	1.0235	451.5	1.2750	1.0230	452.3	1.2743	1.0226	453.0	1.2736	1.0222
110	383.15	490.6	1.3866	1.0317	491.4	1.3859	1.0312	492.1	1.3851	1.0308	492.8	1.3843	1.0303	493.6	1.3836	1.0298	494.3	1.3829	1.0294
120	393.15	532.1	1.4935	1.0395	532.8	1.4927	1.0390	533.6	1.4919	1.0385	534.3	1.4911	1.0381	535.0	1.4903	1.0376	535.7	1.4895	1.0371
130	403.15	573.7	1.5981	1.0478	574.4	1.5972	1.0473	575.1	1.5964	1.0468	575.9	1.5955	1.0463	576.6	1.5947	1.0458	577.3	1.5938	1.0453
140	413.15	615.5	1.7004	1.0567	616.2	1.6995	1.0561	616.9	1.6986	1.0556	617.6	1.6977	1.0551	618.2	1.6968	1.0545	618.9	1.6959	1.0540
150	423.15	657.4	1.8007	1.0660	658.1	1.7998	1.0655	658.8	1.7988	1.0649	659.4	1.7978	1.0643	660.1	1.7969	1.0638	660.7	1.7959	1.0632
160	433.15	699.6	1.8991	1.0760	700.2	1.8981	1.0754	700.8	1.8970	1.0748	701.5	1.8960	1.0742	702.1	1.8950	1.0736	702.7	1.8940	1.0730
170	443.15	741.9	1.9956	1.0865	742.5	1.9946	1.0858	743.1	1.9935	1.0852	743.7	1.9924	1.0846	744.3	1.9913	1.0840	744.9	1.9903	1.0833
180	453.15	784.4	2.0905	1.0976	785.0	2.0894	1.0969	785.5	2.0882	1.0963	786.1	2.0871	1.0956	786.7	2.0860	1.0949	787.3	2.0849	1.0943
190	463.15	827.2	2.1839	1.1094	827.7	2.1827	1.1087	828.3	2.1815	1.1080	828.8	2.1803	1.1073	829.4	2.1791	1.1066	829.9	2.1779	1.1059
200	473.15	870.2	2.2758	1.1220	870.7	2.2746	1.1212	871.2	2.2733	1.1204	871.7	2.2720	1.1197	872.3	2.2707	1.1189	872.8	2.2694	1.1182
210	483.15	913.5	2.3665	1.1353	914.0	2.3651	1.1345	914.5	2.3638	1.1337	915.0	2.3624	1.1328	915.5	2.3611	1.1320	915.9	2.3597	1.1312
220	493.15	957.2	2.4560	1.1495	957.7	2.4545	1.1486	958.1	2.4531	1.1477	958.5	2.4516	1.1468	959.0	2.4502	1.1459	959.4	2.4488	1.1450
230	503.15	1001.3	2.5444	1.1646	1001.7	2.5429	1.1636	1002.1	2.5413	1.1627	1002.4	2.5398	1.1617	1002.8	2.5383	1.1607	1003.2	2.5367	1.1598
240	513.15	1045.8	2.6320	1.1808	1046.1	2.6303	1.1797	1046.4	2.6287	1.1786	1046.8	2.6270	1.1776	1047.1	2.6254	1.1765	1047.5	2.6238	1.1754
250	523.15	1090.8	2.7188	1.1981	1091.0	2.7170	1.1969	1091.3	2.7152	1.1957	1091.6	2.7135	1.1945	1091.8	2.7117	1.1934	1092.1	2.7100	1.1922
260	533.15	1136.3	2.8050	1.2166	1136.5	2.8030	1.2153	1136.7	2.8011	1.2140	1136.9	2.7993	1.2127	1137.1	2.7974	1.2114	1137.3	2.7955	1.2102
270	543.15	1182.4	2.8907	1.2367	1182.5	2.8886	1.2352	1182.6	2.8866	1.2337	1182.7	2.8845	1.2323	1182.9	2.8825	1.2308	1183.0	2.8805	1.2294
280	553.15	1229.2	2.9761	1.2583	1229.2	2.9739	1.2567	1229.3	2.9716	1.2550	1229.3	2.9694	1.2534	1229.3	2.9672	1.2518	1229.4	2.9651	1.2502
290	563.15	1276.8	3.0614	1.2819	1276.7	3.0590	1.2800	1276.7	3.0565	1.2782	1276.6	3.0541	1.2763	1276.5	3.0518	1.2745	1276.5	3.0494	1.2727
300	573.15	1325.4	3.1469	1.3077	1325.2	3.1442	1.3055	1324.9	3.1415	1.3034	1324.7	3.1389	1.3013	1324.5	3.1363	1.2992	1324.4	3.1337	1.2972
310	583.15	1375.0	3.2327	1.3361	1374.6	3.2298	1.3336	1374.2	3.2268	1.3312	1373.9	3.2239	1.3287	1373.5	3.2211	1.3263	1373.2	3.2182	1.3240
320	593.15	1425.9	3.3193	1.3677	1425.4	3.3160	1.3648	1424.8	3.3127	1.3619	1424.2	3.3095	1.3590	1423.7	3.3063	1.3563	1423.2	3.3032	1.3535
330	603.15	1478.4	3.4071	1.4032	1477.6	3.4033	1.3997	1476.8	3.3997	1.3962	1476.0	3.3960	1.3929	1475.2	3.3925	1.3896	1474.5	3.3890	1.3864
340	613.15	1532.9	3.4965	1.4434	1531.7	3.4923	1.4391	1530.6	3.4881	1.4350	1529.5	3.4840	1.4310	1528.5	3.4800	1.4271	1527.5	3.4760	1.4233

350	623.15	1589.7	3.5885	1.4896	1588.1	3.5836	1.4844	1586.6	3.5788	1.4793	1585.1	3.5741	1.4744	1583.8	3.5694	1.4697	1582.4	3.5649	1.4651
360	633.15	1650.5	3.6856	1.5425	1648.5	3.6800	1.5359	1646.5	3.6745	1.5296	1644.7	3.6692	1.5235	1642.9	3.6640	1.5176	1641.3	3.6590	1.5120
370	643.15	1709.0	3.7774	1.6051	1706.3	3.7706	1.5966	1703.7	3.7641	1.5884	1701.2	3.7578	1.5806	1698.8	3.7516	1.5731	1696.6	3.7457	1.5659
380	653.15	1776.4	3.8814	1.6818	1772.7	3.8730	1.6701	1769.1	3.8651	1.6591	1765.8	3.8574	1.6488	1762.6	3.8501	1.6389	1759.7	3.8430	1.6296
390	663.15	1850.7	3.9942	1.7789	1845.3	3.9834	1.7621	1840.4	3.9733	1.7466	1835.8	3.9637	1.7322	1831.5	3.9546	1.7188	1827.4	3.9459	1.7062
400	673.15	1934.1	4.1190	1.9091	1926.1	4.1043	1.8831	1918.9	4.0908	1.8597	1912.3	4.0782	1.8385	1906.2	4.0664	1.8192	1900.6	4.0554	1.8013
410	683.15	2031.2	4.2621	2.0954	2018.7	4.2409	2.0517	2007.7	4.2218	2.0137	1997.9	4.2044	1.9804	1989.0	4.1886	1.9507	1981.0	4.1739	1.9241
420	693.15	2145.7	4.4285	2.3709	2126.7	4.3976	2.2953	2110.0	4.3704	2.2314	2095.3	4.3460	2.1767	2082.3	4.3241	2.1294	2070.6	4.3042	2.0879
430	703.15	2272.8	4.6105	2.7493	2247.3	4.5705	2.6312	2224.7	4.5346	2.5308	2204.5	4.5024	2.4451	2186.5	4.4734	2.3713	2170.4	4.4471	2.3074
440	713.15	2399.4	4.7893	3.1997	2370.3	4.7441	3.0403	2343.6	4.7026	2.9022	2319.3	4.6645	2.7823	2297.2	4.6296	2.6780	2277.0	4.5977	2.5869
450	723.15	2515.6	4.9511	3.6748	2485.8	4.9050	3.4842	2457.7	4.8615	3.3147	2431.4	4.8206	3.1644	2406.9	4.7825	3.0313	2384.2	4.7469	2.9134
460	733.15	2617.1	5.0906	4.1365	2588.9	5.0466	3.9268	2561.5	5.0041	3.7362	2535.3	4.9633	3.5633	2510.2	4.9243	3.4071	2486.4	4.8874	3.2664
470	743.15	2704.4	5.2089	4.5597	2679.2	5.1690	4.3455	2653.9	5.1293	4.1448	2628.7	5.0900	3.9569	2604.2	5.0517	3.7841	2580.8	5.0152	3.6264
480	753.15	2779.8	5.3097	4.9414	2757.2	5.2734	4.7249	2734.7	5.2373	4.5213	2712.2	5.2015	4.3298	2689.8	5.1661	4.1501	2667.5	5.1312	3.9816
490	763.15	2846.5	5.3977	5.2912	2826.1	5.3642	5.0724	2805.7	5.3309	4.8660	2785.3	5.2979	4.6713	2764.9	5.2653	4.4878	2744.7	5.2330	4.3151
500	773.15	2906.8	5.4762	5.6156	2888.1	5.4450	5.3947	2869.5	5.4140	5.1857	2850.8	5.3832	4.9881	2832.1	5.3527	4.8013	2813.5	5.3226	4.6249
510	783.15	2962.2	5.5474	5.9191	2945.0	5.5181	5.6962	2927.8	5.4889	5.4850	2910.5	5.4600	5.2848	2893.3	5.4314	5.0952	2876.1	5.4030	4.9155
520	793.15	3013.7	5.6128	6.2053	2997.8	5.5851	5.9804	2981.9	5.5575	5.7671	2965.9	5.5302	5.5646	2949.8	5.5031	5.3724	2933.8	5.4763	5.1899
530	803.15	3062.1	5.6735	6.4764	3047.4	5.6471	6.2496	3032.5	5.6210	6.0342	3017.6	5.5951	5.8296	3002.7	5.5693	5.6351	2987.7	5.5439	5.4503
540	813.15	3108.0	5.7302	6.7346	3094.2	5.7051	6.5057	3080.3	5.6801	6.2883	3066.4	5.6554	6.0816	3052.4	5.6309	5.8851	3038.5	5.6066	5.6980
550	823.15	3151.6	5.7835	6.9815	3138.7	5.7595	6.7505	3125.7	5.7356	6.5310	3112.7	5.7120	6.3222	3099.6	5.6886	6.1236	3086.5	5.6654	5.9344
560	833.15	3193.4	5.8340	7.2185	3181.2	5.8109	6.9852	3169.0	5.7880	6.7635	3156.8	5.7653	6.5526	3144.5	5.7428	6.3519	3132.2	5.7206	6.1606
570	843.15	3233.6	5.8819	7.4467	3222.1	5.8596	7.2111	3210.6	5.8376	6.9871	3199.1	5.8157	6.7740	3187.5	5.7941	6.5711	3175.9	5.7727	6.3778
580	853.15	3272.4	5.9276	7.6673	3261.5	5.9061	7.4291	3250.6	5.8848	7.2028	3239.7	5.8637	6.9874	3228.8	5.8428	6.7824	3217.9	5.8222	6.5869
590	863.15	3309.9	5.9714	7.8809	3299.6	5.9505	7.6402	3289.3	5.9298	7.4115	3279.0	5.9094	7.1938	3268.7	5.8892	6.9864	3258.3	5.8693	6.7888
600	873.15	3346.4	6.0135	8.0884	3336.6	5.9931	7.8451	3326.8	5.9731	7.6138	3317.0	5.9532	7.3938	3307.2	5.9336	7.1841	3297.4	5.9143	6.9842
610	883.15	3382.0	6.0540	8.2903	3372.7	6.0342	8.0444	3363.3	6.0146	7.8106	3354.0	5.9953	7.5881	3344.6	5.9763	7.3761	3335.3	5.9575	7.1739
620	893.15	3416.7	6.0931	8.4873	3407.8	6.0738	8.2387	3398.9	6.0547	8.0024	3390.0	6.0359	7.7774	3381.1	6.0173	7.5630	3372.2	5.9990	7.3585
630	903.15	3450.8	6.1310	8.6798	3442.3	6.1121	8.4285	3433.7	6.0935	8.1895	3425.2	6.0751	7.9620	3416.7	6.0569	7.7452	3408.2	6.0391	7.5384
640	913.15	3484.2	6.1678	8.8683	3476.0	6.1493	8.6142	3467.8	6.1310	8.3726	3459.7	6.1130	8.1425	3451.5	6.0953	7.9233	3443.4	6.0778	7.7142
650	923.15	3517.0	6.2035	9.0530	3509.2	6.1854	8.7962	3501.3	6.1675	8.5519	3493.5	6.1499	8.3193	3485.7	6.1325	8.0976	3477.8	6.1154	7.8861
660	933.15	3549.4	6.2384	9.2343	3541.8	6.2206	8.9747	3534.3	6.2030	8.7277	3526.8	6.1857	8.4926	3519.2	6.1687	8.2684	3511.7	6.1519	8.0545
670	943.15	3581.3	6.2724	9.4124	3574.0	6.2549	9.1500	3566.8	6.2376	8.9004	3559.5	6.2206	8.6627	3552.3	6.2039	8.4361	3545.1	6.1874	8.2198
680	953.15	3612.8	6.3056	9.5876	3605.8	6.2884	9.3224	3598.8	6.2714	9.0701	3591.8	6.2547	8.8299	3584.9	6.2383	8.6008	3577.9	6.2221	8.3821
690	963.15	3644.0	6.3382	9.7602	3637.2	6.3212	9.4922	3630.5	6.3045	9.2372	3623.8	6.2880	8.9943	3617.0	6.2718	8.7628	3610.3	6.2559	8.5418
700	973.15	3674.8	6.3701	9.9302	3668.3	6.3533	9.6594	3661.8	6.3369	9.4017	3655.3	6.3207	9.1563	3648.9	6.3047	8.9222	3642.4	6.2890	8.6988
710	983.15	3705.4	6.4013	10.098	3699.1	6.3848	9.8242	3692.9	6.3686	9.5639	3686.6	6.3526	9.3158	3680.3	6.3369	9.0793	3674.1	6.3214	8.8536
720	993.15	3735.7	6.4320	10.263	3729.7	6.4157	9.9869	3723.6	6.3997	9.7238	3717.6	6.3839	9.4732	3711.5	6.3684	9.2342	3705.5	6.3532	9.0061
730	1003.15	3765.8	6.4622	10.427	3760.0	6.4461	10.147	3754.1	6.4303	9.8817	3748.3	6.4147	9.6285	3742.4	6.3994	9.3871	3736.6	6.3843	9.1566
740	1013.15	3795.7	6.4918	10.588	3790.1	6.4759	10.306	3784.4	6.4603	10.038	3778.8	6.4450	9.7818	3773.1	6.4298	9.5379	3767.5	6.4150	9.3051
750	1023.15	3825.5	6.5210	10.748	3820.0	6.5053	10.463	3814.5	6.4899	10.192	3809.0	6.4747	9.9333	3803.6	6.4597	9.6869	3798.1	6.4451	9.4517
760	1033.15	3855.0	6.5498	10.905	3849.7	6.5342	10.618	3844.4	6.5189	10.344	3839.1	6.5039	10.083	3833.8	6.4892	9.8342	3828.5	6.4746	9.5966
770	1043.15	3884.4	6.5781	11.061	3879.3	6.5627	10.771	3874.1	6.5476	10.494	3869.0	6.5327	10.231	3863.9	6.5181	9.9798	3858.7	6.5038	9.7398
780	1053.15	3913.6	6.6060	11.216	3908.7	6.5907	10.923	3903.7	6.5758	10.644	3898.7	6.5611	10.377	3893.8	6.5466	10.124	3888.8	6.5324	9.8815
790	1063.15	3942.7	6.6335	11.369	3937.9	6.6184	11.073	3933.1	6.6036	10.791	3928.3	6.5890	10.522	3923.5	6.5747	10.266	3918.7	6.5607	10.022

Table 3 Water and Steam—*continued*

p (*abs*) bar		450			460			470			480			490			500		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	44.6	0.0001	0.97888	45.5	0.0001	0.97844	46.5	0.0000	0.97799	47.4	−0.0001	0.97755	48.4	−0.0002	0.97711	49.3	−0.0002	0.97667
10	283.15	84.8	0.1450	0.98017	85.8	0.1448	0.97975	86.7	0.1446	0.97933	87.6	0.1444	0.97892	88.6	0.1443	0.97850	89.5	0.1441	0.97808
20	293.15	125.4	0.2857	0.98244	126.3	0.2854	0.98203	127.2	0.2851	0.98163	128.1	0.2849	0.98123	129.0	0.2846	0.98083	129.9	0.2843	0.98043
30	303.15	166.1	0.4221	0.98545	166.9	0.4218	0.98505	167.8	0.4215	0.98466	168.7	0.4211	0.98427	169.6	0.4208	0.98388	170.5	0.4205	0.98349
40	313.15	206.8	0.5545	0.98909	207.7	0.5541	0.98870	208.6	0.5537	0.98831	209.4	0.5533	0.98792	210.3	0.5529	0.98754	211.2	0.5525	0.98715
50	323.15	247.7	0.6829	0.99330	248.6	0.6825	0.99291	249.4	0.6820	0.99253	250.2	0.6816	0.99214	251.1	0.6811	0.99175	251.9	0.6807	0.99137
60	333.15	288.6	0.8077	0.99807	289.5	0.8072	0.99767	290.3	0.8067	0.99728	291.1	0.8062	0.99689	292.0	0.8057	0.99650	292.8	0.8052	0.99611
70	343.15	329.6	0.9289	1.0033	330.4	0.9283	1.0029	331.2	0.9278	1.0025	332.1	0.9272	1.0021	332.9	0.9267	1.0017	333.7	0.9261	1.0014
80	353.15	370.7	1.0468	1.0091	371.5	1.0462	1.0087	372.3	1.0456	1.0083	373.1	1.0450	1.0079	373.9	1.0444	1.0075	374.7	1.0438	1.0071
90	363.15	411.8	1.1617	1.0154	412.6	1.1610	1.0150	413.4	1.1604	1.0146	414.1	1.1597	1.0141	414.9	1.1591	1.0137	415.7	1.1584	1.0133
100	373.15	453.0	1.2736	1.0222	453.8	1.2729	1.0217	454.5	1.2722	1.0213	455.3	1.2715	1.0208	456.1	1.2708	1.0204	456.8	1.2701	1.0200
110	383.15	494.3	1.3829	1.0294	495.1	1.3821	1.0289	495.8	1.3814	1.0285	496.6	1.3806	1.0280	497.3	1.3799	1.0276	498.0	1.3791	1.0271
120	393.15	535.7	1.4895	1.0371	536.5	1.4887	1.0366	537.2	1.4880	1.0362	537.9	1.4872	1.0357	538.6	1.4864	1.0352	539.4	1.4856	1.0347
130	403.15	577.3	1.5938	1.0453	578.0	1.5930	1.0448	578.7	1.5922	1.0443	579.4	1.5913	1.0438	580.1	1.5905	1.0433	580.8	1.5897	1.0428
140	413.15	618.9	1.6959	1.0540	619.6	1.6950	1.0535	620.3	1.6941	1.0530	621.0	1.6933	1.0524	621.7	1.6924	1.0519	622.4	1.6915	1.0514
150	423.15	660.7	1.7959	1.0632	661.4	1.7950	1.0627	662.1	1.7940	1.0621	662.7	1.7931	1.0616	663.4	1.7922	1.0610	664.1	1.7912	1.0605
160	433.15	702.7	1.8940	1.0730	703.4	1.8930	1.0724	704.0	1.8920	1.0718	704.6	1.8910	1.0713	705.3	1.8900	1.0707	705.9	1.8890	1.0701
170	443.15	744.9	1.9903	1.0833	745.5	1.9892	1.0827	746.1	1.9882	1.0821	746.7	1.9871	1.0815	747.4	1.9860	1.0809	748.0	1.9850	1.0803
180	453.15	787.3	2.0849	1.0943	787.9	2.0837	1.0936	788.5	2.0826	1.0930	789.0	2.0815	1.0923	789.6	2.0804	1.0917	790.2	2.0793	1.0910
190	463.15	829.9	2.1779	1.1059	830.5	2.1767	1.1052	831.0	2.1755	1.1045	831.6	2.1743	1.1038	832.1	2.1731	1.1031	832.7	2.1720	1.1024
200	473.15	872.8	2.2694	1.1182	873.3	2.2682	1.1174	873.8	2.2669	1.1167	874.3	2.2657	1.1159	874.9	2.2644	1.1152	875.4	2.2632	1.1144
210	483.15	915.9	2.3597	1.1312	916.4	2.3584	1.1304	916.9	2.3570	1.1296	917.4	2.3557	1.1288	917.9	2.3544	1.1280	918.4	2.3531	1.1272
220	493.15	959.4	2.4488	1.1450	959.8	2.4473	1.1442	960.3	2.4459	1.1433	960.7	2.4445	1.1424	961.2	2.4431	1.1416	961.6	2.4417	1.1407
230	503.15	1003.2	2.5367	1.1598	1003.6	2.5352	1.1588	1004.0	2.5337	1.1579	1004.4	2.5322	1.1569	1004.8	2.5307	1.1560	1005.2	2.5293	1.1551
240	513.15	1047.5	2.6238	1.1754	1047.8	2.6222	1.1744	1048.2	2.6206	1.1734	1048.5	2.6190	1.1724	1048.9	2.6174	1.1713	1049.2	2.6158	1.1703
250	523.15	1092.1	2.7100	1.1922	1092.4	2.7083	1.1911	1092.7	2.7065	1.1899	1093.0	2.7048	1.1888	1093.3	2.7031	1.1877	1093.6	2.7015	1.1866
260	533.15	1137.3	2.7955	1.2102	1137.5	2.7937	1.2089	1137.7	2.7918	1.2076	1138.0	2.7900	1.2064	1138.2	2.7882	1.2052	1138.5	2.7864	1.2040
270	543.15	1183.0	2.8805	1.2294	1183.2	2.8785	1.2280	1183.3	2.8765	1.2267	1183.5	2.8745	1.2253	1183.6	2.8726	1.2239	1183.8	2.8707	1.2226
280	553.15	1229.4	2.9651	1.2502	1229.4	2.9629	1.2487	1229.5	2.9608	1.2471	1229.6	2.9587	1.2456	1229.7	2.9566	1.2441	1229.8	2.9545	1.2426
290	563.15	1276.5	3.0494	1.2727	1276.4	3.0471	1.2709	1276.4	3.0448	1.2692	1276.4	3.0425	1.2675	1276.4	3.0402	1.2658	1276.4	3.0380	1.2641
300	573.15	1324.4	3.1337	1.2972	1324.2	3.1312	1.2952	1324.1	3.1287	1.2932	1323.9	3.1262	1.2913	1323.8	3.1237	1.2893	1323.7	3.1213	1.2874
310	583.15	1373.2	3.2182	1.3240	1372.9	3.2154	1.3217	1372.6	3.2127	1.3194	1372.4	3.2100	1.3172	1372.1	3.2073	1.3150	1371.9	3.2046	1.3128
320	593.15	1423.2	3.3032	1.3535	1422.7	3.3001	1.3509	1422.3	3.2971	1.3482	1421.8	3.2941	1.3457	1421.4	3.2911	1.3431	1421.0	3.2882	1.3406
330	603.15	1474.5	3.3890	1.3864	1473.8	3.3855	1.3833	1473.2	3.3822	1.3802	1472.5	3.3788	1.3772	1471.9	3.3755	1.3742	1471.3	3.3723	1.3713
340	613.15	1527.5	3.4760	1.4233	1526.5	3.4722	1.4195	1525.6	3.4683	1.4159	1524.7	3.4646	1.4123	1523.8	3.4609	1.4089	1523.0	3.4572	1.4055

350	623.15	1582.4	3.5649	1.4651	1581.1	3.5605	1.4606	1579.9	3.5562	1.4562	1578.7	3.5519	1.4520	1577.5	3.5477	1.4479	1576.4	3.5436	1.4438
360	633.15	1641.3	3.6590	1.5120	1639.7	3.6541	1.5065	1638.1	3.6493	1.5012	1636.6	3.6446	1.4961	1635.2	3.6400	1.4911	1633.9	3.6355	1.4862
370	643.15	1696.6	3.7457	1.5659	1694.4	3.7399	1.5590	1692.4	3.7343	1.5524	1690.4	3.7289	1.5460	1688.6	3.7236	1.5399	1686.8	3.7184	1.5339
380	653.15	1759.7	3.8430	1.6296	1756.8	3.8362	1.6207	1754.1	3.8296	1.6122	1751.6	3.8232	1.6041	1749.2	3.8170	1.5964	1746.8	3.8110	1.5889
390	663.15	1827.4	3.9459	1.7062	1823.6	3.9377	1.6943	1820.1	3.9297	1.6831	1816.7	3.9221	1.6726	1813.5	3.9148	1.6625	1810.5	3.9077	1.6529
400	673.15	1900.6	4.0554	1.8013	1895.3	4.0450	1.7848	1890.5	4.0351	1.7695	1885.9	4.0258	1.7552	1881.7	4.0168	1.7417	1877.7	4.0083	1.7291
410	683.15	1981.0	4.1739	1.9241	1973.6	4.1604	1.9000	1966.8	4.1477	1.8780	1960.6	4.1358	1.8578	1954.8	4.1246	1.8392	1949.4	4.1140	1.8219
420	693.15	2070.6	4.3042	2.0879	2060.1	4.2861	2.0512	2050.6	4.2694	2.0184	2041.9	4.2540	1.9889	2033.9	4.2396	1.9622	2026.6	4.2262	1.9378
430	703.15	2170.4	4.4471	2.3074	2155.8	4.4232	2.2515	2142.7	4.4014	2.2023	2130.8	4.3814	2.1586	2120.0	4.3629	2.1196	2110.1	4.3458	2.0845
440	713.15	2277.0	4.5977	2.5869	2258.6	4.5683	2.5069	2241.8	4.5413	2.4365	2226.5	4.5165	2.3741	2212.5	4.4935	2.3186	2199.7	4.4723	2.2689
450	723.15	2384.2	4.7469	2.9134	2363.1	4.7138	2.8088	2343.5	4.6829	2.7158	2325.5	4.6542	2.6329	2308.7	4.6275	2.5587	2293.2	4.6026	2.4921
460	733.15	2486.4	4.8874	3.2664	2464.0	4.8524	3.1398	2442.9	4.8195	3.0258	2423.1	4.7884	2.9232	2404.6	4.7592	2.8306	2387.2	4.7316	2.7470
470	743.15	2580.8	5.0152	3.6264	2558.3	4.9802	3.4823	2536.8	4.9466	3.3508	2516.3	4.9146	3.2311	2496.9	4.8842	3.1220	2478.4	4.8552	3.0225
480	753.15	2667.5	5.1312	3.9816	2645.4	5.0966	3.8238	2623.5	5.0626	3.6761	2603.2	5.0308	3.5440	2583.7	5.0003	3.4212	2564.9	4.9709	3.3082
490	763.15	2744.7	5.2330	4.3151	2724.6	5.2012	4.1527	2704.8	5.1698	4.0001	2685.1	5.1389	3.8568	2665.7	5.1085	3.7224	2646.6	5.0786	3.5963
500	773.15	2813.5	5.3226	4.6249	2795.0	5.2928	4.4583	2776.7	5.2635	4.3011	2758.6	5.2346	4.1530	2740.7	5.2061	4.0135	2723.0	5.1782	3.8822
510	783.15	2876.1	5.4030	4.9155	2858.9	5.3750	4.7453	2841.9	5.3473	4.5842	2825.0	5.3199	4.4318	2808.3	5.2930	4.2877	2791.8	5.2665	4.1516
520	793.15	2933.8	5.4763	5.1899	2917.9	5.4497	5.0167	2901.9	5.4234	4.8523	2886.1	5.3975	4.6963	2870.4	5.3719	4.5483	2854.9	5.3466	4.4080
530	803.15	2987.7	5.5439	5.4503	2972.8	5.5186	5.2744	2957.9	5.4936	5.1072	2943.1	5.4688	4.9482	2928.3	5.4444	4.7969	2913.7	5.4202	4.6531
540	813.15	3038.5	5.6066	5.6980	3024.5	5.5826	5.5199	3010.6	5.5587	5.3502	2996.6	5.5351	5.1886	2982.7	5.5117	5.0346	2968.9	5.4886	4.8878
550	823.15	3086.5	5.6654	5.9344	3073.4	5.6423	5.7541	3060.3	5.6195	5.5823	3047.2	5.5970	5.4184	3034.2	5.5746	5.2620	3021.1	5.5525	5.1127
560	833.15	3132.2	5.7206	6.1606	3119.9	5.6985	5.9783	3107.6	5.6767	5.8044	3095.3	5.6550	5.6384	3083.0	5.6336	5.4798	3070.7	5.6124	5.3284
570	843.15	3175.9	5.7727	6.3778	3164.4	5.7515	6.1934	3152.8	5.7305	6.0175	3141.2	5.7097	5.8494	3129.6	5.6891	5.6889	3118.0	5.6688	5.5354
580	853.15	3217.9	5.8222	6.5869	3207.0	5.8017	6.4004	3196.0	5.7815	6.2224	3185.1	5.7615	6.0524	3174.1	5.7417	5.8898	3163.2	5.7221	5.7344
590	863.15	3258.3	5.8693	6.7888	3248.0	5.8495	6.6002	3237.6	5.8300	6.4201	3227.3	5.8107	6.2481	3216.9	5.7915	6.0835	3206.6	5.7726	5.9261
600	873.15	3297.4	5.9143	6.9842	3287.6	5.8951	6.7935	3277.7	5.8762	6.6113	3267.9	5.8575	6.4372	3258.1	5.8390	6.2707	3248.3	5.8207	6.1113
610	883.15	3335.3	5.9575	7.1739	3326.0	5.9389	6.9810	3316.6	5.9205	6.7967	3307.3	5.9023	6.6205	3298.0	5.8844	6.4520	3288.6	5.8666	6.2907
620	893.15	3372.2	5.9990	7.3585	3363.3	5.9809	7.1633	3354.4	5.9630	6.9769	3345.5	5.9453	6.7986	3336.6	5.9279	6.6281	3327.7	5.9106	6.4647
630	903.15	3408.2	6.0391	7.5384	3399.7	6.0214	7.3410	3391.1	6.0040	7.1524	3382.7	5.9867	6.9720	3374.2	5.9697	6.7994	3365.7	5.9529	6.6341
640	913.15	3443.4	6.0778	7.7142	3435.2	6.0605	7.5145	3427.1	6.0435	7.3237	3418.9	6.0267	7.1412	3410.8	6.0101	6.9665	3402.7	5.9937	6.7992
650	923.15	3477.8	6.1154	7.8861	3470.0	6.0985	7.6841	3462.2	6.0818	7.4911	3454.4	6.0653	7.3065	3446.7	6.0491	7.1297	3438.9	6.0331	6.9604
660	933.15	3511.7	6.1519	8.0545	3504.2	6.1353	7.8503	3496.7	6.1190	7.6551	3489.2	6.1028	7.4683	3481.8	6.0869	7.2895	3474.3	6.0712	7.1182
670	943.15	3545.1	6.1874	8.2198	3537.8	6.1711	8.0133	3530.6	6.1551	7.8158	3523.4	6.1393	7.6269	3516.2	6.1237	7.4460	3509.1	6.1083	7.2727
680	953.15	3577.9	6.2221	8.3821	3571.0	6.2061	8.1733	3564.0	6.1903	7.9737	3557.1	6.1748	7.7826	3550.2	6.1595	7.5997	3543.3	6.1443	7.4244
690	963.15	3610.3	6.2559	8.5418	3603.6	6.2402	8.3306	3596.9	6.2247	8.1288	3590.3	6.2094	7.9356	3583.6	6.1943	7.7506	3576.9	6.1795	7.5733
700	973.15	3642.4	6.2890	8.6988	3635.9	6.2735	8.4854	3629.5	6.2583	8.2814	3623.0	6.2432	8.0861	3616.6	6.2284	7.8990	3610.2	6.2138	7.7197
710	983.15	3674.1	6.3214	8.8536	3667.8	6.3062	8.6379	3661.6	6.2911	8.4316	3655.4	6.2763	8.2342	3649.2	6.2617	8.0451	3643.0	6.2473	7.8638
720	993.15	3705.5	6.3532	9.0061	3699.4	6.3381	8.7881	3693.4	6.3233	8.5797	3687.4	6.3087	8.3801	3681.4	6.2944	8.1890	3675.4	6.2802	8.0057
730	1003.15	3736.6	6.3843	9.1566	3730.8	6.3695	8.9363	3724.9	6.3549	8.7257	3719.1	6.3405	8.5240	3713.3	6.3263	8.3308	3707.5	6.3123	8.1456
740	1013.15	3767.5	6.4150	9.3051	3761.8	6.4003	9.0825	3756.2	6.3859	8.8697	3750.6	6.3717	8.6659	3744.9	6.3577	8.4707	3739.3	6.3439	8.2835
750	1023.15	3798.1	6.4451	9.4517	3792.6	6.4306	9.2269	3787.2	6.4164	9.0119	3781.7	6.4023	8.8060	3776.3	6.3885	8.6088	3770.9	6.3749	8.4196
760	1033.15	3828.5	6.4746	9.5966	3823.2	6.4604	9.3695	3818.0	6.4463	9.1523	3812.7	6.4324	8.9444	3807.4	6.4188	8.7451	3802.2	6.4053	8.5540
770	1043.15	3858.7	6.5038	9.7398	3853.6	6.4896	9.5105	3848.5	6.4757	9.2911	3843.4	6.4620	9.0811	3838.3	6.4486	8.8798	3833.3	6.4353	8.6868
780	1053.15	3888.8	6.5324	9.8815	3883.9	6.5185	9.6499	3878.9	6.5047	9.4283	3874.0	6.4912	9.2162	3869.0	6.4778	9.0129	3864.1	6.4647	8.8179
790	1063.15	3918.7	6.5607	10.022	3913.9	6.5469	9.7878	3909.1	6.5333	9.5641	3904.3	6.5199	9.3498	3899.6	6.5067	9.1445	3894.8	6.4937	8.9476

Table 3 Water and Steam—*continued*

p (*abs*) bar		500			520			540			560			580			600		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	49.3	−0.0002	0.97667	51.3	−0.0004	0.97579	53.2	−0.0006	0.97492	55.1	−0.0008	0.97406	56.9	−0.0010	0.97320	58.8	−0.0012	0.97234
10	283.15	89.5	0.1441	0.97808	91.3	0.1437	0.97725	93.2	0.1433	0.97643	95.0	0.1429	0.97561	96.8	0.1425	0.97479	98.7	0.1420	0.97398
20	293.15	129.9	0.2843	0.98043	131.7	0.2838	0.97964	133.5	0.2832	0.97884	135.3	0.2827	0.97806	137.1	0.2821	0.97727	138.9	0.2815	0.97649
30	303.15	170.5	0.4205	0.98349	172.2	0.4198	0.98271	174.0	0.4191	0.98194	175.8	0.4184	0.98117	177.5	0.4177	0.98041	179.3	0.4171	0.97965
40	313.15	211.2	0.5525	0.98715	212.9	0.5517	0.98638	214.6	0.5510	0.98562	216.3	0.5502	0.98486	218.1	0.5494	0.98411	219.8	0.5486	0.98336
50	323.15	251.9	0.6807	0.99137	253.6	0.6798	0.99060	255.3	0.6789	0.98984	257.0	0.6780	0.98908	258.7	0.6771	0.98832	260.4	0.6762	0.98757
60	333.15	292.8	0.8052	0.99611	294.4	0.8042	0.99533	296.1	0.8032	0.99456	297.8	0.8022	0.99379	299.4	0.8012	0.99303	301.1	0.8002	0.99227
70	343.15	333.7	0.9261	1.0014	335.3	0.9250	1.0006	336.9	0.9239	0.99978	338.6	0.9228	0.99900	340.2	0.9218	0.99822	341.8	0.9207	0.99745
80	353.15	374.7	1.0438	1.0071	376.2	1.0426	1.0063	377.8	1.0414	1.0055	379.4	1.0402	1.0047	381.0	1.0391	1.0039	382.6	1.0379	1.0031
90	363.15	415.7	1.1584	1.0133	417.3	1.1571	1.0125	418.8	1.1559	1.0116	420.4	1.1546	1.0108	421.9	1.1533	1.0100	423.5	1.1520	1.0092
100	373.15	456.8	1.2701	1.0200	458.4	1.2688	1.0191	459.9	1.2674	1.0183	461.4	1.2660	1.0174	462.9	1.2647	1.0166	464.5	1.2633	1.0157
110	383.15	498.0	1.3791	1.0271	499.5	1.3777	1.0262	501.0	1.3762	1.0253	502.5	1.3747	1.0245	504.0	1.3733	1.0236	505.5	1.3718	1.0227
120	393.15	539.4	1.4856	1.0347	540.8	1.4840	1.0338	542.3	1.4825	1.0329	543.7	1.4809	1.0320	545.2	1.4794	1.0310	546.6	1.4778	1.0301
130	403.15	580.8	1.5897	1.0428	582.2	1.5880	1.0419	583.6	1.5863	1.0409	585.0	1.5847	1.0399	586.5	1.5831	1.0390	587.9	1.5814	1.0380
140	413.15	622.4	1.6915	1.0514	623.7	1.6897	1.0504	625.1	1.6880	1.0494	626.5	1.6862	1.0484	627.9	1.6845	1.0474	629.2	1.6828	1.0464
150	423.15	664.1	1.7912	1.0605	665.4	1.7894	1.0594	666.7	1.7875	1.0583	668.1	1.7857	1.0573	669.4	1.7838	1.0562	670.7	1.7820	1.0552
160	433.15	705.9	1.8890	1.0701	707.2	1.8871	1.0690	708.5	1.8851	1.0678	709.8	1.8832	1.0667	711.1	1.8812	1.0656	712.4	1.8793	1.0645
170	443.15	748.0	1.9850	1.0803	749.2	1.9829	1.0791	750.5	1.9808	1.0779	751.7	1.9788	1.0767	752.9	1.9767	1.0755	754.2	1.9747	1.0744
180	453.15	790.2	2.0793	1.0910	791.4	2.0771	1.0897	792.6	2.0749	1.0885	793.8	2.0727	1.0872	795.0	2.0706	1.0860	796.2	2.0684	1.0847
190	463.15	832.7	2.1720	1.1024	833.8	2.1696	1.1010	834.9	2.1673	1.0997	836.1	2.1650	1.0983	837.2	2.1627	1.0970	838.4	2.1605	1.0957
200	473.15	875.4	2.2632	1.1144	876.5	2.2607	1.1130	877.5	2.2583	1.1115	878.6	2.2559	1.1101	879.7	2.2534	1.1087	880.8	2.2511	1.1073
210	483.15	918.4	2.3531	1.1272	919.4	2.3505	1.1256	920.4	2.3479	1.1241	921.4	2.3453	1.1225	922.4	2.3428	1.1210	923.4	2.3402	1.1195
220	493.15	961.6	2.4417	1.1407	962.6	2.4389	1.1390	963.5	2.4362	1.1373	964.4	2.4335	1.1357	965.3	2.4308	1.1341	966.3	2.4281	1.1325
230	503.15	1005.2	2.5293	1.1551	1006.1	2.5263	1.1532	1006.9	2.5234	1.1514	1007.8	2.5205	1.1496	1008.6	2.5176	1.1479	1009.5	2.5148	1.1462
240	513.15	1049.2	2.6158	1.1703	1050.0	2.6127	1.1683	1050.7	2.6096	1.1664	1051.5	2.6065	1.1645	1052.2	2.6035	1.1626	1053.0	2.6005	1.1607
250	523.15	1093.6	2.7015	1.1866	1094.2	2.6981	1.1844	1094.9	2.6948	1.1823	1095.5	2.6915	1.1802	1096.2	2.6883	1.1781	1096.9	2.6851	1.1761
260	533.15	1138.5	2.7864	1.2040	1139.0	2.7828	1.2016	1139.5	2.7793	1.1992	1140.0	2.7758	1.1969	1140.6	2.7724	1.1947	1141.2	2.7690	1.1924
270	543.15	1183.8	2.8707	1.2226	1184.2	2.8668	1.2199	1184.6	2.8631	1.2173	1185.0	2.8593	1.2148	1185.4	2.8557	1.2123	1185.9	2.8521	1.2099
280	553.15	1229.8	2.9545	1.2426	1230.0	2.9504	1.2396	1230.2	2.9463	1.2367	1230.5	2.9423	1.2339	1230.8	2.9384	1.2312	1231.1	2.9345	1.2285
290	563.15	1276.4	3.0380	1.2641	1276.4	3.0335	1.2608	1276.4	3.0292	1.2576	1276.5	3.0249	1.2545	1276.7	3.0206	1.2514	1276.8	3.0165	1.2484
300	573.15	1323.7	3.1213	1.2874	1323.5	3.1165	1.2837	1323.4	3.1117	1.2801	1323.3	3.1071	1.2766	1323.2	3.1025	1.2731	1323.2	3.0981	1.2698
310	583.15	1371.9	3.2046	1.3128	1371.4	3.1993	1.3086	1371.0	3.1942	1.3045	1370.7	3.1892	1.3005	1370.4	3.1842	1.2966	1370.2	3.1794	1.2929
320	593.15	1421.0	3.2882	1.3406	1420.3	3.2824	1.3358	1419.6	3.2768	1.3311	1419.0	3.2713	1.3265	1418.4	3.2659	1.3221	1418.0	3.2606	1.3179
330	603.15	1471.3	3.3723	1.3713	1470.2	3.3659	1.3657	1469.2	3.3597	1.3603	1468.2	3.3536	1.3551	1467.4	3.3477	1.3500	1466.6	3.3419	1.3451
340	613.15	1523.0	3.4572	1.4055	1521.4	3.4501	1.3989	1520.0	3.4432	1.3926	1518.7	3.4365	1.3865	1517.4	3.4300	1.3807	1516.3	3.4236	1.3751

350	623.15	1576.4	3.5436	1.4438	1574.3	3.5356	1.4361	1572.3	3.5278	1.4287	1570.5	3.5203	1.4216	1568.7	3.5130	1.4148	1567.1	3.5059	1.4083
360	633.15	1633.9	3.6355	1.4862	1631.3	3.6267	1.4770	1628.9	3.6183	1.4682	1626.7	3.6102	1.4599	1624.7	3.6024	1.4519	1622.8	3.5948	1.4444
370	643.15	1686.8	3.7184	1.5339	1683.4	3.7084	1.5226	1680.3	3.6988	1.5120	1677.4	3.6897	1.5020	1674.8	3.6809	1.4926	1672.3	3.6725	1.4836
380	653.15	1746.8	3.8110	1.5889	1742.5	3.7996	1.5749	1738.5	3.7887	1.5619	1734.9	3.7783	1.5497	1731.5	3.7684	1.5383	1728.4	3.7589	1.5275
390	663.15	1810.5	3.9077	1.6529	1804.8	3.8943	1.6351	1799.7	3.8817	1.6188	1795.1	3.8698	1.6037	1790.8	3.8585	1.5897	1786.9	3.8478	1.5767
400	673.15	1877.7	4.0083	1.7291	1870.3	3.9922	1.7059	1863.7	3.9774	1.6849	1857.7	3.9635	1.6659	1852.3	3.9505	1.6485	1847.3	3.9383	1.6324
410	683.15	1949.4	4.1140	1.8219	1939.6	4.0944	1.7907	1930.9	4.0765	1.7632	1923.2	4.0601	1.7387	1916.2	4.0448	1.7166	1909.9	4.0306	1.6965
420	693.15	2026.6	4.2262	1.9378	2013.4	4.2017	1.8946	2002.0	4.1798	1.8576	1992.0	4.1600	1.8252	1983.0	4.1419	1.7966	1975.0	4.1252	1.7709
430	703.15	2110.1	4.3458	2.0845	2092.6	4.3150	2.0237	2077.5	4.2880	1.9728	2064.5	4.2639	1.9293	2053.0	4.2421	1.8916	2042.8	4.2222	1.8584
440	713.15	2199.7	4.4723	2.2689	2177.0	4.4343	2.1840	2157.6	4.4011	2.1140	2140.9	4.3718	2.0552	2126.3	4.3456	2.0051	2113.5	4.3221	1.9618
450	723.15	2293.2	4.6026	2.4921	2265.5	4.5576	2.3780	2241.7	4.5181	2.2843	2221.0	4.4833	2.2062	2202.9	4.4523	2.1402	2187.1	4.4246	2.0837
460	733.15	2387.2	4.7316	2.7470	2355.6	4.6813	2.6023	2327.9	4.6366	2.4826	2303.6	4.5967	2.3824	2282.2	4.5611	2.2978	2263.2	4.5291	2.2256
470	743.15	2478.4	4.8552	3.0225	2444.4	4.8016	2.8489	2414.0	4.7532	2.7034	2386.9	4.7096	2.5807	2362.6	4.6701	2.4763	2340.9	4.6344	2.3870
480	753.15	2564.9	4.9709	3.3082	2529.9	4.9158	3.1087	2497.9	4.8653	2.9393	2468.9	4.8192	2.7950	2442.6	4.7771	2.6713	2418.8	4.7385	2.5646
490	763.15	2646.6	5.0786	3.5963	2610.8	5.0226	3.3737	2578.3	4.9714	3.1834	2548.4	4.9241	3.0193	2520.9	4.8804	2.8775	2495.7	4.8400	2.7543
500	773.15	2723.0	5.1782	3.8822	2688.6	5.1239	3.6426	2655.3	5.0717	3.4311	2624.5	5.0232	3.2483	2596.5	4.9788	3.0901	2570.6	4.9374	2.9515
510	783.15	2791.8	5.2665	4.1516	2759.5	5.2150	3.9018	2728.3	5.1655	3.6796	2698.3	5.1180	3.4822	2669.5	5.0727	3.3069	2642.7	5.0301	3.1527
520	793.15	2854.9	5.3466	4.4080	2824.3	5.2973	4.1491	2794.7	5.2498	3.9171	2766.2	5.2042	3.7096	2738.8	5.1605	3.5241	2712.6	5.1189	3.3585
530	803.15	2913.7	5.4202	4.6531	2884.7	5.3730	4.3865	2856.5	5.3272	4.1460	2829.1	5.2831	3.9293	2802.7	5.2407	3.7343	2777.4	5.2001	3.5592
540	813.15	2968.9	5.4886	4.8878	2941.5	5.4432	4.6148	2914.6	5.3991	4.3670	2888.3	5.3564	4.1425	2862.9	5.3151	3.9392	2838.3	5.2755	3.7553
550	823.15	3021.1	5.5525	5.1127	2995.2	5.5089	4.8343	2969.7	5.4664	4.5806	2944.5	5.4251	4.3494	2920.0	5.3850	4.1389	2896.2	5.3463	3.9474
560	833.15	3070.7	5.6124	5.3284	3046.3	5.5706	5.0453	3022.0	5.5297	4.7864	2998.1	5.4897	4.5497	2974.6	5.4509	4.3332	2951.7	5.4132	4.1353
570	843.15	3118.0	5.6688	5.5354	3094.9	5.6286	5.2480	3072.0	5.5892	4.9848	3049.2	5.5508	4.7433	3026.8	5.5132	4.5217	3004.8	5.4766	4.3183
580	853.15	3163.2	5.7221	5.7344	3141.4	5.6834	5.4431	3119.7	5.6455	5.1758	3098.1	5.6084	4.9302	3076.8	5.5721	4.7041	3055.8	5.5367	4.4960
590	863.15	3206.6	5.7726	5.9261	3185.9	5.7353	5.6310	3165.4	5.6988	5.3599	3145.0	5.6630	5.1104	3124.7	5.6279	4.8805	3104.7	5.5937	4.6683
600	873.15	3248.3	5.8207	6.1113	3228.8	5.7846	5.8124	3209.3	5.7493	5.5376	3189.9	5.7147	5.2845	3170.7	5.6809	5.0509	3151.6	5.6477	4.8350
610	883.15	3288.6	5.8666	6,2907	3270.1	5.8317	5.9880	3251.6	5.7975	5.7095	3233.1	5.7640	5.4528	3214.8	5.7312	5.2157	3196.7	5.6991	4.9963
620	893.15	3327.7	5.9106	6.4647	3310.0	5.8767	6.1582	3292.4	5.8435	5.8762	3274.9	5.8110	5.6160	3257.5	5.7792	5.3755	3240.2	5.7480	5.1527
630	903.15	3365.7	5.9529	6.6341	3348.8	5.9199	6.3238	3332.0	5.8876	6.0381	3315.3	5.8560	5.7744	3298.7	5.8251	5.5305	3282.2	5.7948	5.3045
640	913.15	3402.7	5.9937	6.7992	3386.6	5.9614	6.4850	3370.5	5.9299	6.1957	3354.5	5.8992	5.9285	3338.6	5.8691	5.6813	3322.9	5.8396	5.4521
650	923.15	3438.9	6.0331	6.9604	3423.4	6.0016	6.6424	3408.0	5.9708	6.3494	3392.7	5.9408	6.0788	3377.5	5.9114	5.8283	3362.4	5.8827	5.5959
660	933.15	3474.3	6.0712	7.1182	3459.4	6.0404	6.7963	3444.7	6.0103	6.4997	3430.0	5.9809	6.2256	3415.4	5.9522	5.9718	3400.9	5.9242	5.7363
670	943.15	3509.1	6.1083	7.2727	3494.8	6.0781	6.9471	3480.6	6.0486	6.6468	3466.5	6.0198	6.3693	3452.4	5.9917	6.1122	3438.5	5.9642	5.8735
680	953.15	3543.3	6.1443	7.4244	3529.5	6.1147	7.0949	3515.8	6.0858	6.7910	3502.2	6.0575	6.5100	3488.7	6.0300	6.2497	3475.3	6.0031	6.0079
690	963.15	3576.9	6.1795	7.5733	3563.7	6.1503	7.2400	3550.5	6.1219	6.9325	3537.4	6.0942	6.6481	3524.4	6.0672	6.3845	3511.5	6.0408	6.1397
700	973.15	3610.2	6.2138	7.7197	3597.4	6.1851	7.3826	3584.6	6.1572	7.0715	3572.0	6.1300	6.7838	3559.4	6.1034	6.5169	3547.0	6.0775	6.2690
710	983.15	3643.0	6.2473	7.8638	3630.6	6.2191	7.5229	3618.3	6.1916	7.2082	3606.1	6.1649	6.9171	3594.0	6.1387	6.6471	3581.9	6.1132	6.3961
720	993.15	3675.4	6.2802	8.0057	3663.5	6.2524	7.6610	3651.6	6.2253	7.3428	3639.8	6.1989	7.0484	3628.0	6.1732	6.7752	3616.4	6.1481	6.5212
730	1003.15	3707.5	6.3123	8.1456	3696.0	6.2849	7.7971	3684.5	6.2583	7.4754	3673.1	6.2323	7.1776	3661.7	6.2069	6.9013	3650.4	6.1822	6.6443
740	1013.15	3739.3	6.3439	8.2835	3728.2	6.3169	7.9313	3717.0	6.2906	7.6061	3706.0	6.2649	7.3050	3695.0	6.2400	7.0256	3684.1	6.2156	6.7656
750	1023.15	3770.9	6.3749	8.4196	3760.1	6.3482	8.0637	3749.3	6.3223	7.7351	3738.6	6.2970	7.4307	3728.0	6.2723	7.1481	3717.4	6.2483	6.8852
760	1033.15	3802.2	6.4053	8.5540	3791.7	6.3790	8.1944	3781.3	6.3534	7.8623	3770.9	6.3284	7.5546	3760.6	6.3041	7.2690	3750.4	6.2804	7.0032
770	1043.15	3833.3	6.4353	8.6868	3823.1	6.4092	8.3235	3813.0	6.3839	7.9879	3803.0	6.3593	7.6770	3793.0	6.3353	7.3883	3783.1	6.3119	7.1196
780	1053.15	3864.1	6.4647	8.8179	3854.3	6.4390	8.4510	3844.5	6.4140	8.1120	3834.8	6.3896	7.7979	3825.1	6.3659	7.5061	3815.5	6.3428	7.2346
790	1063.15	3894.8	6.4937	8.9476	3885.3	6.4683	8.5771	3875.8	6.4435	8.2346	3866.4	6.4195	7.9173	3857.0	6.3961	7.6225	3847.7	6.3732	7.3481
800	1073.15	3925.3	6.5222	9.0759	3916.1	6.4971	8.7017	3906.9	6.4726	8.3558	3897.7	6.4489	8.0353	3888.7	6.4257	7.7376	3879.6	6.4031	7.4603

Table 3 Water and Steam—*continued*

p (*abs*) bar		600			620			640			660			680			700		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	58.8	−0.0012	0.97234	60.7	−0.0014	0.97149	62.6	−0.0016	0.97065	64.5	−0.0019	0.96981	66.3	−0.0021	0.96898	68.2	−0.0024	0.96815
10	283.15	98.7	0.1420	0.97398	100.5	0.1416	0.97317	102.3	0.1412	0.97237	104.1	0.1407	0.97157	105.9	0.1403	0.97078	107.8	0.1398	0.96999
20	293.15	138.9	0.2815	0.97649	140.6	0.2810	0.97572	142.4	0.2804	0.97494	144.2	0.2798	0.97417	146.0	0.2792	0.97341	147.7	0.2786	0.97265
30	303.15	179.3	0.4171	0.97965	181.0	0.4164	0.97889	182.8	0.4157	0.97814	184.5	0.4150	0.97739	186.2	0.4143	0.97664	188.0	0.4136	0.97590
40	313.15	219.8	0.5486	0.98336	221.5	0.5478	0.98261	223.2	0.5470	0.98186	224.9	0.5462	0.98112	226.6	0.5454	0.98039	228.4	0.5446	0.97965
50	323.15	260.4	0.6762	0.98757	262.1	0.6753	0.98682	263.8	0.6744	0.98608	265.4	0.6735	0.98534	267.1	0.6727	0.98460	268.8	0.6718	0.98387
60	333.15	301.1	0.8002	0.99227	302.7	0.7992	0.99152	304.4	0.7982	0.99077	306.0	0.7972	0.99002	307.7	0.7962	0.98928	309.3	0.7953	0.98854
70	343.15	341.8	0.9207	0.99745	343.4	0.9196	0.99668	345.1	0.9185	0.99592	346.7	0.9174	0.99516	348.3	0.9164	0.99441	349.9	0.9153	0.99366
80	353.15	382.6	1.0379	1.0031	384.2	1.0367	1.0023	385.8	1.0356	1.0015	387.4	1.0344	1.0008	389.0	1.0332	0.99998	390.6	1.0321	0.99921
90	363.15	423.5	1.1520	1.0092	425.1	1.1508	1.0084	426.6	1.1495	1.0076	428.2	1.1483	1.0068	429.7	1.1470	1.0060	431.3	1.1458	1.0052
100	373.15	464.5	1.2633	1.0157	466.0	1.2620	1.0149	467.5	1.2606	1.0141	469.0	1.2593	1.0132	470.6	1.2579	1.0124	472.1	1.2566	1.0116
110	383.15	505.5	1.3718	1.0227	507.0	1.3704	1.0218	508.5	1.3690	1.0210	510.0	1.3676	1.0201	511.5	1.3661	1.0193	513.0	1.3647	1.0184
120	393.15	546.6	1.4778	1.0301	548.1	1.4763	1.0292	549.6	1.4748	1.0283	551.0	1.4733	1.0275	552.5	1.4718	1.0266	553.9	1.4703	1.0257
130	403.15	587.9	1.5814	1.0380	589.3	1.5798	1.0371	590.7	1.5782	1.0361	592.2	1.5766	1.0352	593.6	1.5750	1.0343	595.0	1.5734	1.0334
140	413.15	629.2	1.6828	1.0464	630.6	1.6811	1.0454	632.0	1.6794	1.0444	633.4	1.6777	1.0434	634.8	1.6760	1.0425	636.2	1.6743	1.0415
150	423.15	670.7	1.7820	1.0552	672.1	1.7802	1.0542	673.4	1.7784	1.0531	674.8	1.7766	1.0521	676.1	1.7749	1.0511	677.5	1.7731	1.0501
160	433.15	712.4	1.8793	1.0645	713.7	1.8774	1.0634	715.0	1.8755	1.0623	716.3	1.8736	1.0613	717.6	1.8717	1.0602	718.9	1.8699	1.0592
170	443.15	754.2	1.9747	1.0744	755.4	1.9727	1.0732	756.7	1.9707	1.0721	758.0	1.9687	1.0709	759.2	1.9667	1.0698	760.5	1.9648	1.0687
180	453.15	796.2	2.0684	1.0847	797.4	2.0663	1.0835	798.6	2.0642	1.0823	799.8	2.0621	1.0811	801.0	2.0600	1.0799	802.2	2.0579	1.0788
190	463.15	838.4	2.1605	1.0957	839.5	2.1582	1.0944	840.7	2.1560	1.0931	841.8	2.1538	1.0919	843.0	2.1516	1.0906	844.2	2.1494	1.0894
200	473.15	880.8	2.2511	1.1073	881.9	2.2487	1.1059	882.9	2.2463	1.1046	884.1	2.2440	1.1032	885.2	2.2417	1.1019	886.3	2.2394	1.1005
210	483.15	923.4	2.3402	1.1195	924.4	2.3377	1.1181	925.5	2.3352	1.1166	926.5	2.3328	1.1152	927.5	2.3303	1.1137	928.6	2.3279	1.1123
220	493.15	966.3	2.4281	1.1325	967.3	2.4255	1.1309	968.2	2.4228	1.1293	969.2	2.4202	1.1278	970.2	2.4176	1.1262	971.2	2.4151	1.1247
230	503.15	1009.5	2.5148	1.1462	1010.4	2.5120	1.1445	1011.3	2.5092	1.1428	1012.2	2.5065	1.1411	1013.1	2.5037	1.1395	1014.0	2.5010	1.1378
240	513.15	1053.0	2.6005	1.1607	1053.8	2.5975	1.1588	1054.6	2.5945	1.1570	1055.4	2.5916	1.1552	1056.2	2.5887	1.1534	1057.1	2.5859	1.1517
250	523.15	1096.9	2.6851	1.1761	1097.6	2.6820	1.1741	1098.3	2.6789	1.1721	1099.0	2.6758	1.1701	1099.8	2.6727	1.1682	1100.5	2.6697	1.1663
260	533.15	1141.2	2.7690	1.1924	1141.7	2.7656	1.1903	1142.4	2.7623	1.1881	1143.0	2.7590	1.1860	1143.6	2.7558	1.1839	1144.3	2.7526	1.1818
270	543.15	1185.9	2.8521	1.2099	1186.3	2.8485	1.2075	1186.8	2.8449	1.2051	1187.4	2.8415	1.2028	1187.9	2.8380	1.2005	1188.4	2.8346	1.1983
280	553.15	1231.1	2.9345	1.2285	1231.4	2.9307	1.2258	1231.8	2.9269	1.2232	1232.2	2.9232	1.2207	1232.6	2.9195	1.2182	1233.0	2.9159	1.2157
290	563.15	1276.8	3.0165	1.2484	1277.0	3.0124	1.2455	1277.2	3.0084	1.2426	1277.5	3.0044	1.2398	1277.7	3.0005	1.2370	1278.0	2.9966	1.2343
300	573.15	1323.2	3.0981	1.2698	1323.2	3.0937	1.2665	1323.2	3.0893	1.2633	1323.3	3.0851	1.2602	1323.4	3.0809	1.2571	1323.6	3.0767	1.2541
310	583.15	1370.2	3.1794	1.2929	1370.0	3.1746	1.2892	1369.8	3.1700	1.2856	1369.7	3.1654	1.2821	1369.7	3.1609	1.2787	1369.6	3.1564	1.2754
320	593.15	1418.0	3.2606	1.3179	1417.5	3.2554	1.3137	1417.1	3.2504	1.3097	1416.8	3.2454	1.3057	1416.5	3.2405	1.3019	1416.3	3.2358	1.2982
330	603.15	1466.6	3.3419	1.3451	1465.9	3.3363	1.3404	1465.2	3.3308	1.3358	1464.6	3.3254	1.3314	1464.1	3.3201	1.3271	1463.6	3.3149	1.3229
340	613.15	1516.3	3.4236	1.3751	1515.2	3.4174	1.3697	1514.2	3.4113	1.3645	1513.3	3.4054	1.3594	1512.4	3.3996	1.3545	1511.7	3.3939	1.3498

350	623.15	1567.1	3.5059	1.4083	1565.6	3.4990	1.4021	1564.2	3.4923	1.3960	1562.9	3.4857	1.3903	1561.7	3.4793	1.3847	1560.6	3.4730	1.3793
360	633.15	1622.8	3.5948	1.4444	1621.0	3.5875	1.4371	1619.4	3.5804	1.4302	1617.8	3.5735	1.4235	1616.4	3.5667	1.4171	1615.1	3.5602	1.4110
370	643.15	1672.3	3.6725	1.4836	1670.0	3.6643	1.4751	1667.9	3.6564	1.4670	1665.9	3.6488	1.4593	1664.1	3.6414	1.4519	1662.4	3.6342	1.4448
380	653.15	1728.4	3.7589	1.5275	1725.5	3.7498	1.5174	1722.8	3.7411	1.5078	1720.3	3.7327	1.4987	1718.0	3.7245	1.4900	1715.8	3.7167	1.4818
390	663.15	1786.9	3.8478	1.5767	1783.3	3.8376	1.5645	1779.9	3.8279	1.5530	1776.8	3.8185	1.5422	1773.9	3.8095	1.5320	1771.2	3.8009	1.5223
400	673.15	1847.3	3.9383	1.6324	1842.7	3.9267	1.6176	1838.5	3.9157	1.6037	1834.7	3.9051	1.5907	1831.1	3.8951	1.5785	1827.8	3.8855	1.5671
410	683.15	1909.9	4.0306	1.6965	1904.2	4.0173	1.6780	1898.9	4.0047	1.6610	1894.1	3.9928	1.6453	1889.6	3.9814	1.6306	1885.5	3.9706	1.6169
420	693.15	1975.0	4.1252	1.7709	1967.7	4.1096	1.7477	1961.1	4.0951	1.7266	1955.1	4.0815	1.7073	1949.6	4.0686	1.6894	1944.5	4.0564	1.6728
430	703.15	2042.8	4.2222	1.8584	2033.6	4.2040	1.8288	2025.4	4.1871	1.8023	2017.9	4.1714	1.7782	2011.1	4.1567	1.7563	2004.8	4.1428	1.7361
440	713.15	2113.5	4.3221	1.9618	2102.0	4.3006	1.9238	2091.8	4.2809	1.8901	2082.6	4.2627	1.8599	2074.2	4.2458	1.8327	2066.6	4.2300	1.8079
450	723.15	2187.1	4.4246	2.0837	2173.0	4.3994	2.0348	2160.5	4.3766	1.9919	2149.3	4.3556	1.9539	2139.1	4.3362	1.9200	2129.9	4.3182	1.8895
460	733.15	2263.2	4.5291	2.2256	2246.4	4.5002	2.1634	2231.4	4.4739	2.1093	2217.9	4.4499	2.0618	2205.8	4.4278	2.0197	2194.8	4.4073	1.9821
470	743.15	2340.9	4.6344	2.3870	2321.5	4.6019	2.3099	2304.0	4.5723	2.2428	2288.4	4.5453	2.1841	2274.2	4.5204	2.1323	2261.4	4.4975	2.0863
480	753.15	2418.8	4.7385	2.5646	2397.3	4.7032	2.4721	2377.7	4.6708	2.3913	2360.0	4.6410	2.3205	2343.9	4.6136	2.2580	2329.3	4.5882	2.2025
490	763.15	2495.7	4.8400	2.7543	2472.6	4.8026	2.6467	2451.5	4.7681	2.5523	2432.1	4.7361	2.4691	2414.3	4.7065	2.3954	2398.1	4.6790	2.3299
500	773.15	2570.6	4.9374	2.9515	2546.5	4.8988	2.8298	2524.3	4.8629	2.7224	2503.7	4.8293	2.6272	2484.7	4.7980	2.5425	2467.1	4.7688	2.4668
510	783.15	2642.7	5.0301	3.1527	2618.2	4.9909	3.0180	2595.3	4.9542	2.8984	2574.0	4.9197	2.7919	2554.1	4.8873	2.6967	2535.6	4.8569	2.6113
520	793.15	2712.6	5.1189	3.3585	2687.6	5.0791	3.2104	2664.1	5.0414	3.0775	2642.4	5.0064	2.9605	2622.0	4.9734	2.8555	2602.9	4.9422	2.7608
530	803.15	2777.4	5.2001	3.5592	2753.3	5.1614	3.4017	2730.3	5.1245	3.2602	2708.4	5.0893	3.1327	2687.6	5.0557	3.0177	2668.3	5.0242	2.9136
540	813.15	2838.3	5.2755	3.7553	2814.8	5.2375	3.5891	2792.3	5.2012	3.4389	2770.8	5.1665	3.3030	2750.4	5.1335	3.1800	2731.1	5.1020	3.0685
550	823.15	2896.2	5.3463	3.9474	2873.3	5.3090	3.7734	2851.2	5.2732	3.6152	2830.1	5.2389	3.4714	2809.9	5.2061	3.3407	2790.7	5.1748	3.2218
560	833.15	2951.7	5.4132	4.1353	2929.4	5.3767	3.9544	2907.8	5.3415	3.7891	2887.0	5.3077	3.6383	2867.1	5.2752	3.5004	2848.0	5.2440	3.3745
570	843.15	3004.8	5.4766	4.3183	2983.3	5.4410	4.1316	2962.3	5.4066	3.9602	2942.0	5.3733	3.8030	2922.4	5.3412	3.6588	2903.5	5.3103	3.5265
580	853.15	3055.8	5.5367	4.4960	3035.1	5.5021	4.3044	3014.9	5.4685	4.1278	2995.1	5.4359	3.9651	2976.0	5.4044	3.8152	2957.4	5.3739	3.6772
590	863.15	3104.7	5.5937	4.6683	3084.9	5.5602	4.4723	3065.5	5.5275	4.2912	3046.4	5.4957	4.1238	3027.8	5.4648	3.9690	3009.8	5.4348	3.8259
600	873.15	3151.6	5.6477	4.8350	3132.7	5.6153	4.6352	3114.1	5.5836	4.4501	3095.9	5.5526	4.2786	3077.9	5.5225	4.1195	3060.4	5.4931	3.9719
610	883.15	3196.7	5.6991	4.9963	3178.7	5.6677	4.7930	3161.0	5.6369	4.6044	3143.5	5.6069	4.4292	3126.2	5.5775	4.2664	3109.3	5.5489	4.1149
620	893.15	3240.2	5.7480	5.1527	3223.1	5.7176	4.9461	3206.1	5.6877	4.7542	3189.4	5.6585	4.5756	3172.8	5.6300	4.4094	3156.6	5.6021	4.2545
630	903.15	3282.2	5.7948	5.3045	3265.8	5.7652	5.0947	3249.6	5.7362	4.8996	3233.6	5.7078	4.7180	3217.8	5.6801	4.5486	3202.2	5.6529	4.3906
640	913.15	3322.9	5.8396	5.4521	3307.2	5.8108	5.2392	3291.8	5.7826	5.0411	3276.4	5.7550	4.8565	3261.3	5.7279	4.6842	3246.3	5.7015	4.5232
650	923.15	3362.4	5.8827	5.5959	3347.4	5.8546	5.3800	3332.6	5.8271	5.1789	3317.9	5.8001	4.9914	3303.4	5.7738	4.8162	3289.0	5.7480	4.6524
660	933.15	3400.9	5.9242	5.7363	3386.5	5.8967	5.5173	3372.3	5.8699	5.3133	3358.2	5.8436	5.1230	3344.3	5.8178	4.9451	3330.5	5.7926	4.7786
670	943.15	3438.5	5.9642	5.8735	3424.7	5.9374	5.6515	3411.0	5.9111	5.4446	3397.5	5.8854	5.2515	3384.1	5.8603	5.0710	3370.8	5.8356	4.9019
680	953.15	3475.3	6.0031	6.0079	3462.0	5.9768	5.7829	3448.9	5.9510	5.5732	3435.8	5.9259	5.3773	3422.9	5.9012	5.1942	3410.1	5.8771	5.0225
690	963.15	3511.5	6.0408	6.1397	3498.6	6.0150	5.9117	3485.9	5.9897	5.6992	3473.4	5.9651	5.5006	3460.9	5.9409	5.3148	3448.6	5.9172	5.1407
700	973.15	3547.0	6.0775	6.2690	3534.6	6.0521	6.0382	3522.3	6.0273	5.8228	3510.2	6.0031	5.6216	3498.2	5.9794	5.4332	3486.3	5.9562	5.2566
710	983.15	3581.9	6.1132	6.3961	3570.0	6.0883	6.1624	3558.1	6.0639	5.9443	3546.4	6.0401	5.7404	3534.8	6.0168	5.5495	3523.3	5.9940	5.3705
720	993.15	3616.4	6.1481	6.5212	3604.8	6.1236	6.2846	3593.4	6.0996	6.0637	3582.0	6.0762	5.8572	3570.8	6.0532	5.6638	3559.7	6.0308	5.4824
730	1003.15	3650.4	6.1822	6.6443	3639.3	6.1580	6.4048	3628.2	6.1344	6.1813	3617.2	6.1114	5.9722	3606.3	6.0888	5.7763	3595.5	6.0667	5.5925
740	1013.15	3684.1	6.2156	6.7656	3673.3	6.1918	6.5233	3662.5	6.1685	6.2971	3651.9	6.1458	6.0854	3641.3	6.1236	5.8870	3630.9	6.1018	5.7008
750	1023.15	3717.4	6.2483	6.8852	3706.9	6.2248	6.6401	3696.5	6.2019	6.4112	3686.2	6.1795	6.1970	3675.9	6.1576	5.9962	3665.8	6.1361	5.8077
760	1033.15	3750.4	6.2804	7.0032	3740.2	6.2572	6.7553	3730.1	6.2346	6.5238	3720.1	6.2125	6.3070	3710.2	6.1909	6.1038	3700.3	6.1697	5.9130
770	1043.15	3783.1	6.3119	7.1196	3773.2	6.2890	6.8690	3763.4	6.2667	6.6348	3753.7	6.2448	6.4156	3744.1	6.2235	6.2100	3734.5	6.2026	6.0169
780	1053.15	3815.5	6.3428	7.2346	3805.9	6.3202	6.9813	3796.4	6.2982	6.7445	3787.0	6.2766	6.5228	3777.7	6.2556	6.3148	3768.4	6.2350	6.1195
790	1063.15	3847.7	6.3732	7.3481	3838.4	6.3509	7.0921	3829.2	6.3291	6.8528	3820.0	6.3078	6.6286	3811.0	6.2870	6.4183	3802.0	6.2667	6.2207
800	1073.15	3879.6	6.4031	7.4603	3870.6	6.3811	7.2016	3861.7	6.3595	6.9597	3852.8	6.3385	6.7332	3844.0	6.3180	6.5206	3835.3	6.2979	6.3208

600 to 700 bar

Table 3 Water and Steam—*continued*

p (*abs*) bar		700			720			740			760			780			800		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	68.2	−0.0024	0.96815	70.1	−0.0026	0.96733	71.9	−0.0029	0.96651	73.8	−0.0032	0.96570	75.7	−0.0034	0.96490	77.5	−0.0037	0.96410
10	283.15	107.8	0.1398	0.96999	109.6	0.1393	0.96920	111.4	0.1389	0.96842	113.2	0.1384	0.96764	115.0	0.1379	0.96686	116.8	0.1374	0.96609
20	293.15	147.7	0.2786	0.97265	149.5	0.2780	0.97189	151.3	0.2774	0.97114	153.0	0.2768	0.97038	154.8	0.2762	0.96964	156.6	0.2756	0.96889
30	303.15	188.0	0.4136	0.97590	189.7	0.4129	0.97516	191.5	0.4122	0.97443	193.2	0.4115	0.97369	194.9	0.4107	0.97296	196.6	0.4100	0.97224
40	313.15	228.4	0.5446	0.97965	230.1	0.5438	0.97892	231.8	0.5430	0.97820	233.5	0.5422	0.97747	235.2	0.5414	0.97675	236.9	0.5406	0.97604
50	323.15	268.8	0.6718	0.98387	270.5	0.6709	0.98314	272.2	0.6700	0.98241	273.8	0.6691	0.98169	275.5	0.6682	0.98097	277.2	0.6673	0.98026
60	333.15	309.3	0.7953	0.98854	311.0	0.7943	0.98781	312.6	0.7933	0.98707	314.3	0.7923	0.98635	315.9	0.7914	0.98562	317.6	0.7904	0.98490
70	343.15	349.9	0.9153	0.99366	351.5	0.9142	0.99291	353.2	0.9132	0.99217	354.8	0.9121	0.99143	356.4	0.9110	0.99069	358.0	0.9100	0.98996
80	353.15	390.6	1.0321	0.99921	392.2	1.0309	0.99845	393.8	1.0298	0.99769	395.3	1.0286	0.99693	396.9	1.0275	0.99618	398.5	1.0264	0.99544
90	363.15	431.3	1.1458	1.0052	432.9	1.1446	1.0044	434.4	1.1433	1.0036	436.0	1.1421	1.0029	437.5	1.1409	1.0021	439.1	1.1396	1.0013
100	373.15	472.1	1.2566	1.0116	473.6	1.2553	1.0108	475.2	1.2540	1.0100	476.7	1.2527	1.0092	478.2	1.2514	1.0084	479.7	1.2501	1.0076
110	383.15	513.0	1.3647	1.0184	514.5	1.3633	1.0176	516.0	1.3619	1.0168	517.5	1.3605	1.0159	519.0	1.3591	1.0151	520.5	1.3578	1.0143
120	393.15	553.9	1.4703	1.0257	555.4	1.4688	1.0248	556.9	1.4673	1.0240	558.3	1.4658	1.0231	559.8	1.4644	1.0222	561.3	1.4629	1.0214
130	403.15	595.0	1.5734	1.0334	596.4	1.5718	1.0325	597.9	1.5703	1.0316	599.3	1.5687	1.0307	600.7	1.5672	1.0298	602.2	1.5656	1.0289
140	413.15	636.2	1.6743	1.0415	637.6	1.6726	1.0406	639.0	1.6710	1.0396	640.4	1.6693	1.0387	641.8	1.6677	1.0378	643.2	1.6661	1.0368
150	423.15	677.5	1.7731	1.0501	678.8	1.7713	1.0491	680.2	1.7696	1.0481	681.6	1.7678	1.0471	682.9	1.7661	1.0462	684.3	1.7644	1.0452
160	433.15	718.9	1.8699	1.0592	720.2	1.8680	1.0581	721.5	1.8662	1.0571	722.9	1.8643	1.0561	724.2	1.8625	1.0550	725.5	1.8607	1.0540
170	443.15	760.5	1.9648	1.0687	761.8	1.9628	1.0676	763.0	1.9609	1.0665	764.3	1.9589	1.0654	765.6	1.9570	1.0644	766.9	1.9551	1.0633
180	453.15	802.2	2.0579	1.0788	803.5	2.0559	1.0776	804.7	2.0538	1.0765	805.9	2.0518	1.0753	807.2	2.0498	1.0742	808.4	2.0478	1.0731
190	463.15	844.2	2.1494	1.0894	845.3	2.1472	1.0881	846.5	2.1451	1.0869	847.7	2.1430	1.0857	848.9	2.1408	1.0845	850.1	2.1387	1.0833
200	473.15	886.3	2.2394	1.1005	887.4	2.2371	1.0992	888.5	2.2348	1.0979	889.6	2.2326	1.0966	890.8	2.2303	1.0954	891.9	2.2281	1.0941
210	483.15	928.6	2.3279	1.1123	929.7	2.3255	1.1109	930.7	2.3231	1.1095	931.8	2.3207	1.1082	932.9	2.3184	1.1068	934.0	2.3160	1.1055
220	493.15	971.2	2.4151	1.1247	972.2	2.4125	1.1232	973.2	2.4100	1.1218	974.2	2.4075	1.1203	975.2	2.4050	1.1189	976.2	2.4026	1.1174
230	503.15	1014.0	2.5010	1.1378	1014.9	2.4984	1.1362	1015.8	2.4957	1.1347	1016.8	2.4931	1.1331	1017.7	2.4904	1.1315	1018.7	2.4879	1.1300
240	513.15	1057.1	2.5859	1.1517	1057.9	2.5830	1.1500	1058.8	2.5802	1.1483	1059.7	2.5774	1.1466	1060.5	2.5747	1.1449	1061.4	2.5720	1.1433
250	523.15	1100.5	2.6697	1.1663	1101.3	2.6667	1.1645	1102.0	2.6637	1.1626	1102.8	2.6608	1.1608	1103.6	2.6579	1.1590	1104.4	2.6550	1.1573
260	533.15	1144.3	2.7526	1.1818	1144.9	2.7494	1.1798	1145.6	2.7462	1.1778	1146.3	2.7431	1.1759	1147.0	2.7401	1.1739	1147.8	2.7370	1.1720
270	543.15	1188.4	2.8346	1.1983	1189.0	2.8312	1.1961	1189.6	2.8279	1.1939	1190.2	2.8246	1.1918	1190.8	2.8214	1.1897	1191.4	2.8181	1.1876
280	553.15	1233.0	2.9159	1.2157	1233.5	2.9124	1.2133	1233.9	2.9088	1.2109	1234.4	2.9053	1.2086	1234.9	2.9019	1.2063	1235.4	2.8985	1.2041
290	563.15	1278.0	2.9966	1.2343	1278.4	2.9928	1.2317	1278.7	2.9890	1.2290	1279.1	2.9853	1.2265	1279.5	2.9817	1.2240	1279.9	2.9780	1.2215
300	573.15	1323.6	3.0767	1.2541	1323.7	3.0727	1.2512	1323.9	3.0687	1.2483	1324.2	3.0647	1.2455	1324.4	3.0608	1.2428	1324.7	3.0570	1.2401
310	583.15	1369.6	3.1564	1.2754	1369.6	3.1521	1.2721	1369.7	3.1478	1.2689	1369.7	3.1435	1.2658	1369.8	3.1394	1.2628	1370.0	3.1353	1.2598
320	593.15	1416.3	3.2358	1.2982	1416.1	3.2311	1.2946	1415.9	3.2264	1.2910	1415.8	3.2219	1.2876	1415.7	3.2174	1.2842	1415.7	3.2130	1.2809
330	603.15	1463.6	3.3149	1.3229	1463.2	3.3098	1.3188	1462.8	3.3048	1.3148	1462.5	3.2998	1.3110	1462.2	3.2950	1.3072	1461.9	3.2903	1.3035
340	613.15	1511.7	3.3939	1.3498	1510.9	3.3883	1.3452	1510.3	3.3829	1.3407	1509.7	3.3775	1.3364	1509.1	3.3723	1.3321	1508.6	3.3671	1.3280

350	623.15	1560.6	3.4730	1.3793	1559.5	3.4669	1.3740	1558.5	3.4609	1.3690	1557.6	3.4550	1.3641	1556.7	3.4492	1.3593	1555.9	3.4436	1.3547
360	633.15	1615.1	3.5602	1.4110	1613.8	3.5538	1.4051	1612.7	3.5475	1.3993	1611.6	3.5414	1.3938	1610.6	3.5354	1.3884	1609.7	3.5296	1.3833
370	643.15	1662.4	3.6342	1.4448	1660.8	3.6273	1.4380	1659.3	3.6205	1.4314	1657.9	3.6139	1.4251	1656.6	3.6074	1.4190	1655.4	3.6012	1.4131
380	653.15	1715.8	3.7167	1.4818	1713.8	3.7091	1.4739	1711.9	3.7017	1.4663	1710.1	3.6945	1.4591	1708.5	3.6875	1.4521	1707.0	3.6807	1.4454
390	663.15	1771.2	3.8009	1.5223	1768.7	3.7925	1.5131	1766.4	3.7844	1.5043	1764.2	3.7766	1.4959	1762.2	3.7691	1.4879	1760.3	3.7617	1.4802
400	673.15	1827.8	3.8855	1.5671	1824.7	3.8763	1.5562	1821.8	3.8674	1.5459	1819.1	3.8588	1.5361	1816.6	3.8505	1.5268	1814.2	3.8425	1.5180
410	683.15	1885.5	3.9706	1.6169	1881.7	3.9603	1.6040	1878.1	3.9505	1.5919	1874.8	3.9410	1.5804	1871.7	3.9318	1.5695	1868.8	3.9230	1.5592
420	693.15	1944.5	4.0564	1.6728	1939.8	4.0448	1.6574	1935.4	4.0337	1.6430	1931.4	4.0232	1.6294	1927.6	4.0131	1.6167	1924.1	4.0033	1.6046
430	703.15	2004.8	4.1428	1.7361	1999.1	4.1297	1.7175	1993.8	4.1173	1.7002	1988.8	4.1055	1.6841	1984.3	4.0942	1.6690	1980.0	4.0834	1.6548
440	713.15	2066.6	4.2300	1.8079	2059.6	4.2152	1.7853	2053.2	4.2012	1.7644	2047.2	4.1879	1.7451	2041.7	4.1753	1.7272	2036.6	4.1633	1.7104
450	723.15	2129.9	4.3182	1.8895	2121.5	4.3014	1.8618	2113.8	4.2856	1.8366	2106.7	4.2707	1.8134	2100.2	4.2567	1.7920	2094.1	4.2434	1.7722
460	733.15	2194.8	4.4073	1.9821	2184.9	4.3884	1.9482	2175.7	4.3707	1.9176	2167.4	4.3541	1.8897	2159.7	4.3384	1.8641	2152.5	4.3237	1.8405
470	743.15	2261.4	4.4975	2.0863	2249.7	4.4762	2.0452	2239.1	4.4564	2.0081	2229.3	4.4380	1.9746	2220.4	4.4207	1.9440	2212.1	4.4043	1.9160
480	753.15	2329.3	4.5882	2.2025	2315.9	4.5647	2.1530	2303.7	4.5429	2.1086	2292.5	4.5225	2.0685	2282.3	4.5034	2.0322	2272.8	4.4855	1.9990
490	763.15	2398.1	4.6790	2.3299	2383.2	4.6534	2.2714	2369.5	4.6296	2.2188	2356.9	4.6074	2.1715	2345.3	4.5866	2.1287	2334.7	4.5671	2.0898
500	773.15	2467.1	4.7688	2.4668	2450.9	4.7416	2.3991	2435.9	4.7161	2.3381	2422.0	4.6922	2.2831	2409.2	4.6698	2.2333	2397.4	4.6488	2.1881
510	783.15	2535.6	4.8569	2.6113	2518.4	4.8283	2.5344	2502.3	4.8015	2.4650	2487.4	4.7762	2.4022	2473.6	4.7525	2.3453	2460.7	4.7301	2.2934
520	793.15	2602.9	4.9422	2.7608	2585.0	4.9128	2.6753	2568.2	4.8850	2.5979	2552.4	4.8587	2.5275	2537.7	4.8339	2.4634	2524.0	4.8104	2.4049
530	803.15	2668.3	5.0242	2.9136	2650.0	4.9943	2.8200	2632.7	4.9658	2.7348	2616.4	4.9388	2.6572	2601.1	4.9132	2.5863	2586.7	4.8889	2.5213
540	813.15	2731.1	5.1020	3.0685	2712.7	5.0719	2.9672	2695.4	5.0434	2.8743	2678.8	5.0160	2.7899	2663.0	4.9899	2.7125	2648.2	4.9650	2.6414
550	823.15	2790.7	5.1748	3.2218	2772.4	5.1449	3.1133	2755.0	5.1164	3.0143	2738.6	5.0892	2.9237	2723.2	5.0634	2.8408	2708.0	5.0382	2.7639
560	833.15	2848.0	5.2440	3.3745	2829.7	5.2142	3.2593	2812.4	5.1856	3.1537	2795.8	5.1583	3.0569	2780.1	5.1321	2.9678	2765.1	5.1072	2.8859
570	843.15	2903.5	5.3103	3.5265	2885.4	5.2806	3.4051	2868.1	5.2521	3.2935	2851.5	5.2247	3.1908	2835.6	5.1985	3.0961	2820.5	5.1733	3.0087
580	853.15	2957.4	5.3739	3.6772	2939.6	5.3444	3.5500	2922.4	5.3161	3.4328	2905.9	5.2889	3.3247	2890.1	5.2626	3.2248	2874.9	5.2374	3.1324
590	863.15	3009.8	5.4348	3.8259	2992.2	5.4058	3.6935	2975.3	5.3778	3.5712	2959.0	5.3507	3.4580	2943.3	5.3246	3.3532	2928.2	5.2995	3.2561
600	873.15	3060.4	5.4931	3.9719	3043.3	5.4647	3.8350	3026.7	5.4370	3.7080	3010.7	5.4103	3.5902	2995.2	5.3844	3.4808	2980.3	5.3595	3.3792
610	883.15	3109.3	5.5489	4.1149	3092.8	5.5210	3.9740	3076.7	5.4939	3.8429	3061.0	5.4675	3.7208	3045.7	5.4420	3.6071	3031.0	5.4173	3.5013
620	893.15	3156.6	5.6021	4.2545	3140.6	5.5749	4.1100	3125.0	5.5483	3.9752	3109.7	5.5225	3.8494	3094.9	5.4973	3.7319	3080.4	5.4729	3.6222
630	903.15	3202.2	5.6529	4.3906	3186.9	5.6263	4.2429	3171.8	5.6004	4.1048	3157.0	5.5751	3.9756	3142.5	5.5504	3.8547	3128.4	5.5264	3.7415
640	913.15	3246.3	5.7015	4.5232	3231.6	5.6756	4.3725	3217.0	5.6502	4.2315	3202.8	5.6255	4.0993	3188.8	5.6013	3.9753	3175.0	5.5777	3.8590
650	923.15	3289.0	5.7480	4.6524	3274.8	5.7227	4.4991	3260.9	5.6980	4.3553	3247.1	5.6738	4.2203	3233.6	5.6501	4.0936	3220.3	5.6270	3.9744
660	933.15	3330.5	5.7926	4.7786	3316.8	5.7680	4.6226	3303.4	5.7438	4.4762	3290.1	5.7201	4.3387	3277.0	5.6969	4.2094	3264.2	5.6743	4.0876
670	943.15	3370.8	5.8356	4.9019	3357.7	5.8115	4.7434	3344.7	5.7878	4.5945	3331.9	5.7647	4.4545	3319.3	5.7420	4.3228	3306.9	5.7198	4.1987
680	953.15	3410.1	5.8771	5.0225	3397.5	5.8535	4.8615	3385.0	5.8303	4.7103	3372.7	5.8076	4.5680	3360.5	5.7854	4.4340	3348.4	5.7636	4.3076
690	963.15	3448.6	5.9172	5.1407	3436.4	5.8941	4.9773	3424.3	5.8714	4.8237	3412.4	5.8491	4.6792	3400.6	5.8273	4.5429	3389.0	5.8060	4.4144
700	973.15	3486.3	5.9562	5.2566	3474.5	5.9334	5.0909	3462.8	5.9112	4.9350	3451.3	5.8893	4.7882	3439.9	5.8679	4.6499	3428.7	5.8470	4.5193
710	983.15	3523.3	5.9940	5.3705	3511.9	5.9717	5.2023	3500.6	5.9498	5.0442	3489.5	5.9283	4.8953	3478.5	5.9073	4.7548	3467.6	5.8867	4.6222
720	993.15	3559.7	6.0308	5.4824	3548.6	6.0089	5.3119	3537.7	5.9873	5.1516	3526.9	5.9663	5.0005	3516.3	5.9456	4.8580	3505.7	5.9253	4.7234
730	1003.15	3595.5	6.0667	5.5925	3584.8	6.0451	5.4197	3574.3	6.0239	5.2572	3563.8	6.0032	5.1040	3553.5	5.9829	4.9595	3543.3	5.9629	4.8230
740	1013.15	3630.9	6.1018	5.7008	3620.5	6.0805	5.5259	3610.3	6.0597	5.3611	3600.1	6.0392	5.2059	3590.1	6.0192	5.0594	3580.2	5.9996	4.9209
750	1023.15	3665.8	6.1361	5.8077	3655.8	6.1151	5.6304	3645.8	6.0946	5.4636	3636.0	6.0744	5.3063	3626.3	6.0547	5.1578	3616.7	6.0354	5.0174
760	1033.15	3700.3	6.1697	5.9130	3690.6	6.1490	5.7335	3681.0	6.1287	5.5646	3671.4	6.1089	5.4052	3662.0	6.0894	5.2548	3652.6	6.0704	5.1125
770	1043.15	3734.5	6.2026	6.0169	3725.1	6.1822	5.8353	3715.7	6.1622	5.6642	3706.4	6.1426	5.5028	3697.3	6.1234	5.3504	3688.2	6.1046	5.2063
780	1053.15	3768.4	6.2350	6.1195	3759.2	6.2148	5.9357	3750.1	6.1950	5.7625	3741.1	6.1757	5.5991	3732.2	6.1568	5.4448	3723.4	6.1382	5.2989
790	1063.15	3802.0	6.2667	6.2207	3793.0	6.2468	6.0348	3784.2	6.2273	5.8596	3775.5	6.2082	5.6942	3766.8	6.1895	5.5380	3758.2	6.1711	5.3902
800	1073.15	3835.3	6.2979	6.3208	3826.6	6.2782	6.1327	3818.0	6.2589	5.9555	3809.5	6.2401	5.7882	3801.1	6.2216	5.6301	3792.8	6.2034	5.4805

Table 3 Water and Steam—*continued*

p (*abs*) bar		800			820			840			860			880			900		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	77.5	−0.0037	0.96410	79.4	−0.0040	0.96331	81.2	−0.0043	0.96252	83.0	−0.0046	0.96174	84.9	−0.0049	0.96097	86.7	−0.0052	0.96020
10	283.15	116.8	0.1374	0.96609	118.6	0.1369	0.96533	120.3	0.1364	0.96457	122.1	0.1359	0.96381	123.9	0.1354	0.96306	125.7	0.1349	0.96231
20	293.15	156.6	0.2756	0.96889	158.3	0.2749	0.96815	160.1	0.2743	0.96741	161.8	0.2737	0.96668	163.6	0.2731	0.96595	165.3	0.2724	0.96522
30	303.15	196.6	0.4100	0.97224	198.4	0.4093	0.97151	200.1	0.4086	0.97080	201.8	0.4079	0.97008	203.5	0.4071	0.96937	205.3	0.4064	0.96866
40	313.15	236.9	0.5406	0.97604	238.6	0.5398	0.97532	240.3	0.5390	0.97461	242.0	0.5382	0.97390	243.7	0.5374	0.97320	245.4	0.5366	0.97250
50	323.15	277.2	0.6673	0.98026	278.9	0.6664	0.97955	280.5	0.6656	0.97884	282.2	0.6647	0.97813	283.9	0.6638	0.97743	285.6	0.6629	0.97673
60	333.15	317.6	0.7904	0.98490	319.2	0.7894	0.98418	320.9	0.7885	0.98347	322.5	0.7875	0.98276	324.2	0.7865	0.98205	325.8	0.7856	0.98135
70	343.15	358.0	0.9100	0.98996	359.6	0.9089	0.98923	361.3	0.9079	0.98851	362.9	0.9068	0.98779	364.5	0.9058	0.98707	366.1	0.9048	0.98636
80	353.15	398.5	1.0264	0.99544	400.1	1.0252	0.99469	401.7	1.0241	0.99395	403.3	1.0230	0.99322	404.9	1.0218	0.99249	406.5	1.0207	0.99176
90	363.15	439.1	1.1396	1.0013	440.7	1.1384	1.0006	442.2	1.1372	0.99980	443.8	1.1360	0.99904	445.3	1.1348	0.99829	446.9	1.1336	0.99755
100	373.15	479.7	1.2501	1.0076	481.3	1.2488	1.0068	482.8	1.2475	1.0060	484.3	1.2462	1.0053	485.9	1.2449	1.0045	487.4	1.2436	1.0037
110	383.15	520.5	1.3578	1.0143	522.0	1.3564	1.0135	523.5	1.3550	1.0127	525.0	1.3536	1.0119	526.5	1.3523	1.0111	528.0	1.3509	1.0103
120	393.15	561.3	1.4629	1.0214	562.7	1.4614	1.0206	564.2	1.4600	1.0197	565.7	1.4585	1.0189	567.2	1.4571	1.0181	568.6	1.4557	1.0172
130	403.15	602.2	1.5656	1.0289	603.6	1.5641	1.0280	605.0	1.5625	1.0272	606.5	1.5610	1.0263	607.9	1.5595	1.0254	609.4	1.5580	1.0246
140	413.15	643.2	1.6661	1.0368	644.6	1.6644	1.0359	646.0	1.6628	1.0350	647.4	1.6612	1.0341	648.8	1.6596	1.0332	650.2	1.6580	1.0323
150	423.15	684.3	1.7644	1.0452	685.6	1.7627	1.0442	687.0	1.7610	1.0433	688.4	1.7593	1.0424	689.7	1.7576	1.0414	691.1	1.7559	1.0405
160	433.15	725.5	1.8607	1.0540	726.8	1.8589	1.0530	728.2	1.8571	1.0520	729.5	1.8553	1.0510	730.8	1.8535	1.0500	732.2	1.8518	1.0491
170	443.15	766.9	1.9551	1.0633	768.2	1.9532	1.0622	769.5	1.9513	1.0612	770.7	1.9495	1.0601	772.0	1.9476	1.0591	773.3	1.9457	1.0581
180	453.15	808.4	2.0478	1.0731	809.6	2.0458	1.0719	810.9	2.0438	1.0708	812.1	2.0418	1.0697	813.4	2.0398	1.0686	814.6	2.0379	1.0676
190	463.15	850.1	2.1387	1.0833	851.3	2.1366	1.0821	852.5	2.1345	1.0810	853.7	2.1325	1.0798	854.9	2.1304	1.0787	856.1	2.1284	1.0775
200	473.15	891.9	2.2281	1.0941	893.1	2.2259	1.0929	894.2	2.2237	1.0916	895.4	2.2215	1.0904	896.5	2.2194	1.0892	897.7	2.2172	1.0880
210	483.15	934.0	2.3160	1.1055	935.0	2.3137	1.1041	936.1	2.3114	1.1028	937.2	2.3091	1.1015	938.3	2.3068	1.1002	939.4	2.3046	1.0990
220	493.15	976.2	2.4026	1.1174	977.2	2.4001	1.1160	978.3	2.3977	1.1146	979.3	2.3953	1.1132	980.4	2.3929	1.1119	981.4	2.3905	1.1105
230	503.15	1018.7	2.4879	1.1300	1019.6	2.4853	1.1285	1020.6	2.4827	1.1270	1021.6	2.4802	1.1255	1022.6	2.4777	1.1241	1023.6	2.4752	1.1226
240	513.15	1061.4	2.5720	1.1433	1062.3	2.5692	1.1417	1063.2	2.5666	1.1401	1064.1	2.5639	1.1385	1065.0	2.5612	1.1369	1066.0	2.5586	1.1354
250	523.15	1104.4	2.6550	1.1573	1105.2	2.6521	1.1555	1106.1	2.6493	1.1538	1106.9	2.6465	1.1521	1107.8	2.6437	1.1504	1108.6	2.6409	1.1488
260	533.15	1147.8	2.7370	1.1720	1148.5	2.7340	1.1701	1149.2	2.7310	1.1683	1150.0	2.7280	1.1664	1150.8	2.7251	1.1646	1151.5	2.7222	1.1629
270	543.15	1191.4	2.8181	1.1876	1192.1	2.8150	1.1856	1192.7	2.8118	1.1835	1193.4	2.8087	1.1816	1194.1	2.8056	1.1796	1194.8	2.8025	1.1777
280	553.15	1235.4	2.8985	1.2041	1236.0	2.8951	1.2019	1236.5	2.8918	1.1997	1237.1	2.8885	1.1975	1237.7	2.8852	1.1954	1238.3	2.8820	1.1933
290	563.15	1279.9	2.9780	1.2215	1280.3	2.9745	1.2191	1280.7	2.9709	1.2167	1281.2	2.9675	1.2144	1281.7	2.9640	1.2121	1282.2	2.9606	1.2098
300	573.15	1324.7	3.0570	1.2401	1325.0	3.0532	1.2374	1325.3	3.0494	1.2348	1325.7	3.0457	1.2322	1326.0	3.0421	1.2297	1326.4	3.0385	1.2273
310	583.15	1370.0	3.1353	1.2598	1370.1	3.1312	1.2569	1370.3	3.1272	1.2540	1370.5	3.1233	1.2512	1370.8	3.1194	1.2484	1371.0	3.1156	1.2457
320	593.15	1415.7	3.2130	1.2809	1415.7	3.2087	1.2776	1415.7	3.2044	1.2745	1415.8	3.2002	1.2714	1415.8	3.1961	1.2684	1415.9	3.1920	1.2654
330	603.15	1461.9	3.2903	1.3035	1461.7	3.2856	1.2999	1461.5	3.2810	1.2964	1461.4	3.2765	1.2930	1461.3	3.2720	1.2897	1461.2	3.2677	1.2864
340	613.15	1508.6	3.3671	1.3280	1508.2	3.3620	1.3240	1507.8	3.3571	1.3201	1507.4	3.3522	1.3163	1507.1	3.3474	1.3126	1506.8	3.3426	1.3090

350	623.15	1555.9	3.4436	1.3547	1555.2	3.4381	1.3503	1554.5	3.4326	1.3459	1553.8	3.4273	1.3417	1553.2	3.4220	1.3375	1552.7	3.4169	1.3335
360	633.15	1609.7	3.5296	1.3833	1608.8	3.5238	1.3782	1608.0	3.5182	1.3734	1607.3	3.5127	1.3686	1606.6	3.5073	1.3640	1605.9	3.5020	1.3595
370	643.15	1655.4	3.6012	1.4131	1654.3	3.5950	1.4075	1653.2	3.5891	1.4020	1652.2	3.5832	1.3967	1651.4	3.5775	1.3915	1650.5	3.5719	1.3865
380	653.15	1707.0	3.6807	1.4454	1705.5	3.6741	1.4389	1704.2	3.6677	1.4327	1702.9	3.6614	1.4267	1701.8	3.6552	1.4209	1700.7	3.6492	1.4152
390	663.15	1760.3	3.7617	1.4802	1758.5	3.7546	1.4728	1756.8	3.7476	1.4657	1755.2	3.7409	1.4589	1753.8	3.7343	1.4523	1752.4	3.7279	1.4459
400	673.15	1814.2	3.8425	1.5180	1812.0	3.8347	1.5095	1810.0	3.8272	1.5013	1808.0	3.8199	1.4935	1806.2	3.8128	1.4860	1804.6	3.8059	1.4788
410	683.15	1868.8	3.9230	1.5592	1866.2	3.9145	1.5494	1863.6	3.9063	1.5400	1861.3	3.8984	1.5311	1859.1	3.8907	1.5225	1857.0	3.8832	1.5143
420	693.15	1924.1	4.0033	1.6046	1920.8	3.9940	1.5932	1917.7	3.9850	1.5823	1914.8	3.9762	1.5720	1912.1	3.9678	1.5621	1909.6	3.9597	1.5527
430	703.15	1980.0	4.0834	1.6548	1976.0	4.0730	1.6414	1972.3	4.0631	1.6288	1968.8	4.0535	1.6168	1965.5	4.0443	1.6055	1962.5	4.0354	1.5947
440	713.15	2036.6	4.1633	1.7104	2031.8	4.1519	1.6947	2027.4	4.1409	1.6800	2023.2	4.1304	1.6661	2019.3	4.1203	1.6530	2015.7	4.1105	1.6405
450	723.15	2094.1	4.2434	1.7722	2088.4	4.2307	1.7537	2083.2	4.2186	1.7364	2078.3	4.2070	1.7202	2073.7	4.1959	1.7050	2069.3	4.1852	1.6906
460	733.15	2152.5	4.3237	1.8405	2145.9	4.3096	1.8187	2139.8	4.2963	1.7985	2134.1	4.2836	1.7795	2128.7	4.2715	1.7618	2123.7	4.2599	1.7452
470	743.15	2212.1	4.4043	1.9160	2204.5	4.3889	1.8903	2197.4	4.3743	1.8665	2190.8	4.3605	1.8444	2184.6	4.3472	1.8238	2178.8	4.3346	1.8046
480	753.15	2272.8	4.4855	1.9990	2264.1	4.4686	1.9687	2256.0	4.4527	1.9408	2248.5	4.4376	1.9151	2241.5	4.4232	1.8912	2234.9	4.4095	1.8689
490	763.15	2334.7	4.5671	2.0898	2324.8	4.5487	2.0542	2315.7	4.5314	2.0217	2307.2	4.5150	1.9917	2299.3	4.4995	1.9640	2291.9	4.4848	1.9384
500	773.15	2397.4	4.6488	2.1881	2386.4	4.6290	2.1468	2376.3	4.6103	2.1090	2366.8	4.5927	2.0744	2358.1	4.5760	2.0424	2349.9	4.5602	2.0129
510	783.15	2460.7	4.7301	2.2934	2448.7	4.7090	2.2461	2437.6	4.6891	2.2027	2427.2	4.6703	2.1630	2417.5	4.6524	2.1264	2408.5	4.6355	2.0927
520	793.15	2524.0	4.8104	2.4049	2511.1	4.7882	2.3514	2499.1	4.7671	2.3023	2487.9	4.7472	2.2572	2477.4	4.7284	2.2158	2467.6	4.7105	2.1775
530	803.15	2586.7	4.8889	2.5213	2573.1	4.8658	2.4617	2560.3	4.8439	2.4069	2548.4	4.8231	2.3565	2537.2	4.8033	2.3099	2526.6	4.7845	2.2670
540	813.15	2648.2	4.9650	2.6414	2634.1	4.9413	2.5759	2620.8	4.9187	2.5156	2608.2	4.8971	2.4599	2596.4	4.8766	2.4083	2585.3	4.8570	2.3606
550	823.15	2708.0	5.0382	2.7639	2693.6	5.0141	2.6929	2679.9	4.9910	2.6273	2667.0	4.9689	2.5665	2654.7	4.9478	2.5101	2643.0	4.9276	2.4578
560	833.15	2765.1	5.1072	2.8859	2750.9	5.0833	2.8104	2737.5	5.0605	2.7410	2724.2	5.0381	2.6754	2711.6	5.0166	2.6144	2699.6	4.9960	2.5576
570	843.15	2820.5	5.1733	3.0087	2806.0	5.1491	2.9278	2792.3	5.1259	2.8529	2779.2	5.1037	2.7835	2766.8	5.0825	2.7191	2754.9	5.0619	2.6594
580	853.15	2874.9	5.2374	3.1324	2860.3	5.2131	3.0467	2846.4	5.1897	2.9671	2833.0	5.1671	2.8931	2820.2	5.1454	2.8241	2808.0	5.1246	2.7598
590	863.15	2928.2	5.2995	3.2561	2913.7	5.2752	3.1659	2899.7	5.2518	3.0821	2886.3	5.2292	3.0040	2873.4	5.2074	2.9311	2861.0	5.1863	2.8629
600	873.15	2980.3	5.3595	3.3792	2965.9	5.3354	3.2847	2952.0	5.3121	3.1968	2938.7	5.2896	3.1149	2925.9	5.2679	3.0384	2913.5	5.2468	2.9668
610	883.15	3031.0	5.4173	3.5013	3016.8	5.3934	3.4027	3003.1	5.3703	3.3108	2989.9	5.3480	3.2251	2977.2	5.3264	3.1450	2965.0	5.3055	3.0700
620	893.15	3080.4	5.4729	3.6222	3066.4	5.4493	3.5197	3052.9	5.4264	3.4239	3039.9	5.4042	3.3345	3027.3	5.3827	3.2508	3015.2	5.3620	3.1724
630	903.15	3128.4	5.5264	3.7415	3114.7	5.5030	3.6355	3101.4	5.4804	3.5361	3088.5	5.4584	3.4431	3076.1	5.4371	3.3559	3064.1	5.4165	3.2741
640	913.15	3175.0	5.5777	3.8590	3161.7	5.5547	3.7498	3148.6	5.5323	3.6472	3135.9	5.5106	3.5508	3123.6	5.4894	3.4603	3111.8	5.4689	3.3753
650	923.15	3220.3	5.6270	3.9744	3207.2	5.6044	3.8623	3194.5	5.5823	3.7568	3182.1	5.5608	3.6575	3170.0	5.5399	3.5640	3158.2	5.5195	3.4759
660	933.15	3264.2	5.6743	4.0876	3251.5	5.6521	3.9730	3239.1	5.6304	3.8649	3227.0	5.6092	3.7629	3215.1	5.5885	3.6666	3203.6	5.5684	3.5758
670	943.15	3306.9	5.7198	4.1987	3294.6	5.6980	4.0816	3282.6	5.6767	3.9711	3270.7	5.6559	3.8667	3259.2	5.6355	3.7681	3247.8	5.6156	3.6747
680	953.15	3348.4	5.7636	4.3076	3336.6	5.7423	4.1883	3324.9	5.7213	4.0756	3313.4	5.7008	3.9690	3302.1	5.6808	3.8681	3291.0	5.6611	3.7725
690	963.15	3389.0	5.8060	4.4144	3377.5	5.7850	4.2930	3366.2	5.7645	4.1783	3355.0	5.7443	4.0696	3344.1	5.7246	3.9667	3333.2	5.7052	3.8691
700	973.15	3428.7	5.8470	4.5193	3417.6	5.8264	4.3959	3406.6	5.8062	4.2791	3395.8	5.7864	4.1685	3385.1	5.7669	4.0637	3374.6	5.7479	3.9642
710	983.15	3467.6	5.8867	4.6222	3456.8	5.8665	4.4969	3446.2	5.8466	4.3783	3435.7	5.8272	4.2658	3425.3	5.8081	4.1592	3415.1	5.7893	4.0580
720	993.15	3505.7	5.9253	4.7234	3495.3	5.9055	4.5962	3485.0	5.8859	4.4757	3474.8	5.8668	4.3615	3464.8	5.8480	4.2532	3454.8	5.8295	4.1503
730	1003.15	3543.3	5.9629	4.8230	3533.2	5.9434	4.6939	3523.2	5.9242	4.5716	3513.3	5.9053	4.4557	3503.5	5.8868	4.3457	3493.9	5.8686	4.2411
740	1013.15	3580.2	5.9996	4.9209	3570.4	5.9803	4.7900	3560.7	5.9614	4.6659	3551.1	5.9429	4.5483	3541.7	5.9246	4.4367	3532.3	5.9067	4.3306
750	1023.15	3616.7	6.0354	5.0174	3607.1	6.0164	4.8846	3597.7	5.9978	4.7588	3588.4	5.9795	4.6396	3579.2	5.9616	4.5263	3570.1	5.9439	4.4187
760	1033.15	3652.6	6.0704	5.1125	3643.4	6.0517	4.9779	3634.3	6.0333	4.8504	3625.2	6.0153	4.7294	3616.3	5.9976	4.6146	3607.5	5.9802	4.5054
770	1043.15	3688.2	6.1046	5.2063	3679.2	6.0862	5.0699	3670.3	6.0681	4.9407	3661.6	6.0503	4.8181	3652.9	6.0329	4.7016	3644.3	6.0157	4.5910
780	1053.15	3723.4	6.1382	5.2989	3714.7	6.1200	5.1607	3706.0	6.1021	5.0298	3697.5	6.0846	4.9055	3689.1	6.0674	4.7875	3680.7	6.0505	4.6753
790	1063.15	3758.2	6.1711	5.3902	3749.7	6.1531	5.2503	3741.4	6.1355	5.1177	3733.1	6.1182	4.9918	3724.9	6.1012	4.8722	3716.7	6.0845	4.7585
800	1073.15	3792.8	6.2034	5.4805	3784.5	6.1857	5.3388	3776.3	6.1683	5.2045	3768.3	6.1512	5.0770	3760.3	6.1344	4.9559	3752.4	6.1179	4.8407

Table 3 Water and Steam—*continued*

p (*abs*) bar		900			920			940			960			980			1000		
t_s °C																			
		h	s	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s	v
Sat. Liquid																			
Sat. Vapour																			
t °C	T K																		
0	273.15	86.7	−0.0052	0.96020	88.6	−0.0055	0.95944	90.4	−0.0058	0.95869	92.2	−0.0061	0.95794	94.1	−0.0064	0.95720	95.9	−0.0067	0.95646
10	283.15	125.7	0.1349	0.96231	127.5	0.1344	0.96156	129.2	0.1339	0.96082	131.0	0.1333	0.96009	132.8	0.1328	0.95935	134.5	0.1323	0.95863
20	293.15	165.3	0.2724	0.96522	167.1	0.2718	0.96450	168.8	0.2711	0.96378	170.5	0.2705	0.96306	172.3	0.2698	0.96235	174.0	0.2692	0.96164
30	303.15	205.3	0.4064	0.96866	207.0	0.4057	0.96795	208.7	0.4050	0.96724	210.4	0.4042	0.96654	212.1	0.4035	0.96584	213.8	0.4027	0.96515
40	313.15	245.4	0.5366	0.97250	247.1	0.5358	0.97180	248.7	0.5350	0.97111	250.4	0.5341	0.97041	252.1	0.5333	0.96972	253.8	0.5325	0.96904
50	323.15	285.6	0.6629	0.97673	287.2	0.6620	0.97603	288.9	0.6611	0.97534	290.5	0.6602	0.97465	292.2	0.6594	0.97396	293.9	0.6585	0.97328
60	333.15	325.8	0.7856	0.98135	327.4	0.7846	0.98065	329.1	0.7836	0.97995	330.7	0.7827	0.97926	332.4	0.7817	0.97857	334.0	0.7808	0.97788
70	343.15	366.1	0.9048	0.98636	367.7	0.9037	0.98565	369.3	0.9027	0.98494	370.9	0.9016	0.98424	372.6	0.9006	0.98354	374.2	0.8996	0.98284
80	353.15	406.5	1.0207	0.99176	408.1	1.0196	0.99104	409.6	1.0185	0.99031	411.2	1.0174	0.98960	412.8	1.0163	0.98888	414.4	1.0152	0.98817
90	363.15	446.9	1.1336	0.99755	448.5	1.1324	0.99680	450.0	1.1312	0.99607	451.6	1.1300	0.99533	453.1	1.1289	0.99460	454.7	1.1277	0.99387
100	373.15	487.4	1.2436	1.0037	488.9	1.2424	1.0030	490.5	1.2411	1.0022	492.0	1.2398	1.0014	493.5	1.2386	1.0007	495.1	1.2373	0.99994
110	383.15	528.0	1.3509	1.0103	529.5	1.3496	1.0095	531.0	1.3482	1.0087	532.5	1.3469	1.0079	534.0	1.3456	1.0071	535.5	1.3442	1.0064
120	393.15	568.6	1.4557	1.0172	570.1	1.4542	1.0164	571.6	1.4528	1.0156	573.0	1.4514	1.0148	574.5	1.4500	1.0140	576.0	1.4486	1.0132
130	403.15	609.4	1.5580	1.0246	610.8	1.5565	1.0237	612.2	1.5550	1.0229	613.7	1.5535	1.0220	615.1	1.5520	1.0212	616.6	1.5505	1.0204
140	413.15	650.2	1.6580	1.0323	651.6	1.6564	1.0314	653.0	1.6549	1.0306	654.4	1.6533	1.0297	655.8	1.6517	1.0288	657.2	1.6502	1.0279
150	423.15	691.1	1.7559	1.0405	692.5	1.7542	1.0396	693.9	1.7526	1.0386	695.2	1.7509	1.0377	696.6	1.7493	1.0368	698.0	1.7476	1.0359
160	433.15	732.2	1.8518	1.0491	733.5	1.8500	1.0481	734.8	1.8483	1.0471	736.2	1.8465	1.0462	737.5	1.8448	1.0452	738.9	1.8431	1.0443
170	443.15	773.3	1.9457	1.0581	774.6	1.9439	1.0571	775.9	1.9421	1.0561	777.2	1.9402	1.0551	778.5	1.9384	1.0541	779.8	1.9366	1.0531
180	453.15	814.6	2.0379	1.0676	815.9	2.0360	1.0665	817.1	2.0340	1.0654	818.4	2.0321	1.0644	819.7	2.0302	1.0633	820.9	2.0283	1.0623
190	463.15	856.1	2.1284	1.0775	857.3	2.1263	1.0764	858.5	2.1243	1.0753	859.7	2.1223	1.0742	860.9	2.1203	1.0731	862.2	2.1183	1.0720
200	473.15	897.7	2.2172	1.0880	898.8	2.2151	1.0868	900.0	2.2130	1.0856	901.2	2.2108	1.0844	902.4	2.2087	1.0833	903.5	2.2067	1.0821
210	483.15	939.4	2.3046	1.0990	940.6	2.3023	1.0977	941.7	2.3001	1.0964	942.8	2.2979	1.0952	943.9	2.2957	1.0940	945.1	2.2935	1.0928
220	493.15	981.4	2.3905	1.1105	982.5	2.3882	1.1092	983.5	2.3858	1.1078	984.6	2.3835	1.1065	985.7	2.3812	1.1052	986.7	2.3789	1.1039
230	503.15	1023.6	2.4752	1.1226	1024.6	2.4727	1.1212	1025.6	2.4703	1.1198	1026.6	2.4678	1.1184	1027.6	2.4654	1.1170	1028.6	2.4630	1.1156
240	513.15	1066.0	2.5586	1.1354	1066.9	2.5560	1.1338	1067.8	2.5534	1.1323	1068.8	2.5509	1.1308	1069.7	2.5483	1.1293	1070.7	2.5458	1.1279
250	523.15	1108.6	2.6409	1.1488	1109.5	2.6382	1.1471	1110.4	2.6355	1.1455	1111.2	2.6328	1.1439	1112.1	2.6301	1.1423	1113.0	2.6275	1.1408
260	533.15	1151.5	2.7222	1.1629	1152.3	2.7193	1.1611	1153.1	2.7165	1.1594	1153.9	2.7137	1.1576	1154.8	2.7108	1.1559	1155.6	2.7081	1.1543
270	543.15	1194.8	2.8025	1.1777	1195.5	2.7995	1.1758	1196.2	2.7965	1.1739	1196.9	2.7935	1.1721	1197.7	2.7906	1.1702	1198.4	2.7877	1.1684
280	553.15	1238.3	2.8820	1.1933	1238.9	2.8788	1.1913	1239.6	2.8756	1.1892	1240.2	2.8725	1.1873	1240.9	2.8694	1.1853	1241.5	2.8663	1.1833
290	563.15	1282.2	2.9606	1.2098	1282.7	2.9572	1.2076	1283.2	2.9539	1.2054	1283.8	2.9506	1.2032	1284.4	2.9473	1.2011	1284.9	2.9441	1.1990
300	573.15	1326.4	3.0385	1.2273	1326.8	3.0349	1.2248	1327.3	3.0314	1.2224	1327.7	3.0279	1.2201	1328.2	3.0244	1.2178	1328.7	3.0210	1.2155
310	583.15	1371.0	3.1156	1.2457	1371.3	3.1118	1.2431	1371.6	3.1080	1.2405	1371.9	3.1044	1.2379	1372.3	3.1007	1.2354	1372.6	3.0971	1.2329
320	593.15	1415.9	3.1920	1.2654	1416.1	3.1879	1.2625	1416.2	3.1840	1.2596	1416.4	3.1800	1.2568	1416.6	3.1762	1.2541	1416.9	3.1723	1.2514
330	603.15	1461.2	3.2677	1.2864	1461.2	3.2633	1.2832	1461.2	3.2591	1.2801	1461.2	3.2549	1.2770	1461.3	3.2507	1.2740	1461.3	3.2467	1.2710
340	613.15	1506.8	3.3426	1.3090	1506.6	3.3380	1.3055	1506.4	3.3334	1.3020	1506.2	3.3289	1.2986	1506.1	3.3244	1.2953	1505.9	3.3200	1.2921

350	623.15	1552.7	3.4169	1.3335	1552.2	3.4118	1.3296	1551.7	3.4068	1.3257	1551.3	3.4019	1.3220	1550.9	3.3970	1.3184	1550.6	3.3922	1.3148
360	633.15	1605.9	3.5020	1.3595	1605.3	3.4968	1.3552	1604.8	3.4916	1.3509	1604.3	3.4866	1.3468	1603.8	3.4816	1.3427	1603.4	3.4767	1.3388
370	643.15	1650.5	3.5719	1.3865	1649.8	3.5664	1.3816	1649.0	3.5610	1.3769	1648.4	3.5557	1.3723	1647.8	3.5505	1.3678	1647.2	3.5454	1.3635
380	653.15	1700.7	3.6492	1.4152	1699.7	3.6434	1.4098	1698.7	3.6376	1.4045	1697.9	3.6320	1.3993	1697.0	3.6265	1.3944	1696.3	3.6211	1.3895
390	663.15	1752.4	3.7279	1.4459	1751.2	3.7216	1.4398	1750.0	3.7155	1.4338	1748.8	3.7095	1.4281	1747.8	3.7036	1.4225	1746.8	3.6979	1.4171
400	673.15	1804.6	3.8059	1.4788	1803.0	3.7992	1.4719	1801.5	3.7926	1.4652	1800.1	3.7862	1.4587	1798.8	3.7799	1.4524	1797.6	3.7738	1.4464
410	683.15	1857.0	3.8832	1.5143	1855.0	3.8759	1.5064	1853.2	3.8688	1.4988	1851.5	3.8619	1.4915	1849.9	3.8552	1.4844	1848.4	3.8487	1.4776
420	693.15	1909.6	3.9597	1.5527	1907.2	3.9518	1.5437	1905.0	3.9441	1.5351	1902.9	3.9366	1.5268	1900.9	3.9294	1.5188	1899.0	3.9223	1.5111
430	703.15	1962.5	4.0354	1.5947	1959.6	4.0268	1.5844	1956.9	4.0184	1.5745	1954.3	4.0103	1.5651	1951.9	4.0025	1.5560	1949.7	3.9948	1.5473
440	713.15	2015.7	4.1105	1.6405	2012.2	4.1011	1.6287	2009.0	4.0920	1.6174	2005.9	4.0832	1.6066	2003.0	4.0746	1.5964	2000.3	4.0664	1.5865
450	723.15	2069.3	4.1852	1.6906	2065.3	4.1750	1.6770	2061.5	4.1651	1.6641	2057.9	4.1555	1.6518	2054.5	4.1462	1.6401	2051.2	4.1373	1.6290
460	733.15	2123.7	4.2599	1.7452	2119.0	4.2487	1.7296	2114.5	4.2379	1.7148	2110.3	4.2276	1.7008	2106.4	4.2176	1.6875	2102.7	4.2079	1.6748
470	743.15	2178.8	4.3346	1.8046	2173.4	4.3225	1.7866	2168.3	4.3108	1.7696	2163.6	4.2997	1.7536	2159.0	4.2889	1.7385	2154.8	4.2785	1.7242
480	753.15	2234.9	4.4095	1.8689	2228.8	4.3965	1.8482	2223.0	4.3839	1.8288	2217.6	4.3719	1.8105	2212.5	4.3604	1.7933	2207.7	4.3493	1.7770
490	763.15	2291.9	4.4848	1.9384	2285.1	4.4707	1.9145	2278.6	4.4573	1.8922	2272.6	4.4444	1.8714	2266.9	4.4321	1.8518	2261.5	4.4202	1.8334
500	773.15	2349.9	4.5602	2.0129	2342.2	4.5451	1.9856	2335.1	4.5308	1.9601	2328.4	4.5171	1.9364	2322.1	4.5039	1.9142	2316.1	4.4913	1.8934
510	783.15	2408.5	4.6355	2.0927	2400.1	4.6195	2.0615	2392.2	4.6042	2.0325	2384.9	4.5896	2.0055	2377.9	4.5757	1.9804	2371.4	4.5624	1.9568
520	793.15	2467.6	4.7105	2.1775	2458.4	4.6935	2.1421	2449.8	4.6773	2.1092	2441.8	4.6619	2.0788	2434.2	4.6472	2.0504	2427.2	4.6331	2.0239
530	803.15	2526.6	4.7845	2.2670	2516.8	4.7666	2.2272	2507.5	4.7496	2.1903	2498.8	4.7333	2.1560	2490.7	4.7179	2.1241	2483.0	4.7031	2.0944
540	813.15	2585.3	4.8570	2.3606	2574.8	4.8384	2.3164	2564.9	4.8206	2.2753	2555.6	4.8036	2.2371	2546.9	4.7874	2.2016	2538.6	4.7719	2.1684
550	823.15	2643.0	4.9276	2.4578	2632.0	4.9083	2.4091	2621.6	4.8899	2.3638	2611.8	4.8723	2.3217	2602.5	4.8554	2.2823	2593.8	4.8393	2.2456
560	833.15	2699.6	4.9960	2.5576	2688.2	4.9762	2.5047	2677.4	4.9572	2.4553	2667.1	4.9391	2.4092	2657.4	4.9217	2.3661	2648.2	4.9050	2.3259
570	843.15	2754.9	5.0619	2.6594	2743.2	5.0418	2.6024	2732.0	5.0225	2.5491	2721.4	5.0039	2.4992	2711.4	4.9861	2.4525	2701.8	4.9689	2.4086
580	853.15	2808.0	5.1246	2.7598	2796.4	5.1046	2.6998	2785.4	5.0855	2.6438	2774.7	5.0668	2.5910	2764.4	5.0486	2.5407	2754.5	5.0311	2.4935
590	863.15	2861.0	5.1863	2.8629	2849.0	5.1659	2.7990	2837.5	5.1462	2.7391	2826.5	5.1272	2.6828	2816.1	5.1089	2.6300	2806.2	5.0914	2.5803
600	873.15	2913.5	5.2468	2.9668	2901.5	5.2264	2.8996	2889.9	5.2066	2.8365	2878.7	5.1873	2.7771	2867.9	5.1686	2.7210	2857.5	5.1505	2.6681
610	883.15	2965.0	5.3055	3.0700	2953.2	5.2852	2.9998	2941.7	5.2656	2.9338	2930.7	5.2464	2.8717	2919.9	5.2278	2.8131	2909.5	5.2097	2.7577
620	893.15	3015.2	5.3620	3.1724	3003.5	5.3419	3.0990	2992.3	5.3225	3.0301	2981.5	5.3036	2.9654	2970.9	5.2853	2.9043	2960.7	5.2674	2.8467
630	903.15	3064.1	5.4165	3.2741	3052.6	5.3965	3.1974	3041.5	5.3772	3.1254	3030.8	5.3585	3.0578	3020.5	5.3404	2.9941	3010.5	5.3228	2.9341
640	913.15	3111.8	5.4689	3.3753	3100.3	5.4491	3.2953	3089.3	5.4298	3.2201	3078.6	5.4112	3.1495	3068.4	5.3932	3.0829	3058.6	5.3758	3.0202
650	923.15	3158.2	5.5195	3.4759	3146.9	5.4998	3.3928	3135.9	5.4806	3.3146	3125.3	5.4620	3.2409	3115.1	5.4441	3.1714	3105.3	5.4267	3.1058
660	933.15	3203.6	5.5684	3.5758	3192.3	5.5488	3.4899	3181.4	5.5297	3.4089	3170.8	5.5111	3.3323	3160.6	5.4931	3.2599	3150.8	5.4757	3.1915
670	943.15	3247.8	5.6156	3.6747	3236.7	5.5961	3.5864	3225.9	5.5771	3.5027	3215.4	5.5587	3.4235	3205.2	5.5407	3.3485	3195.4	5.5232	3.2775
680	953.15	3291.0	5.6611	3.7725	3280.1	5.6419	3.6819	3269.5	5.6231	3.5960	3259.1	5.6047	3.5145	3249.0	5.5868	3.4371	3239.1	5.5693	3.3637
690	963.15	3333.2	5.7052	3.8691	3322.6	5.6862	3.7765	3312.2	5.6676	3.6885	3301.9	5.6494	3.6049	3291.9	5.6316	3.5254	3282.1	5.6142	3.4498
700	973.15	3374.6	5.7479	3.9642	3364.2	5.7292	3.8698	3354.0	5.7108	3.7799	3343.9	5.6928	3.6945	3334.1	5.6752	3.6131	3324.4	5.6579	3.5356
710	983.15	3415.1	5.7893	4.0580	3405.0	5.7708	3.9618	3395.0	5.7527	3.8702	3385.2	5.7350	3.7831	3375.5	5.7175	3.7000	3366.0	5.7004	3.6208
720	993.15	3454.8	5.8295	4.1503	3445.0	5.8113	4.0524	3435.3	5.7935	3.9593	3425.7	5.7760	3.8706	3416.2	5.7587	3.7860	3406.9	5.7418	3.7052
730	1003.15	3493.9	5.8686	4.2411	3484.3	5.8508	4.1417	3474.9	5.8332	4.0471	3465.5	5.8159	3.9569	3456.3	5.7989	3.8708	3447.2	5.7822	3.7887
740	1013.15	3532.3	5.9067	4.3306	3523.0	5.8891	4.2297	3513.8	5.8718	4.1335	3504.8	5.8548	4.0419	3495.8	5.8381	3.9545	3486.9	5.8216	3.8711
750	1023.15	3570.1	5.9439	4.4187	3561.1	5.9266	4.3163	3552.2	5.9095	4.2187	3543.4	5.8928	4.1258	3534.7	5.8763	4.0370	3526.0	5.8600	3.9523
760	1033.15	3607.5	5.9802	4.5054	3598.7	5.9631	4.4016	3590.1	5.9463	4.3026	3581.5	5.9298	4.2083	3573.0	5.9136	4.1183	3564.6	5.8976	4.0323
770	1043.15	3644.3	6.0157	4.5910	3635.8	5.9989	4.4856	3627.4	5.9823	4.3853	3619.1	5.9660	4.2897	3610.9	5.9500	4.1984	3602.7	5.9342	4.1112
780	1053.15	3680.7	6.0505	4.6753	3672.5	6.0339	4.5685	3664.3	6.0175	4.4668	3656.2	6.0015	4.3699	3648.3	5.9857	4.2773	3640.3	5.9701	4.1889
790	1063.15	3716.7	6.0845	4.7585	3708.7	6.0681	4.6503	3700.8	6.0520	4.5472	3693.0	6.0362	4.4489	3685.2	6.0206	4.3551	3677.5	6.0053	4.2655
800	1073.15	3752.4	6.1179	4.8407	3744.6	6.1017	4.7310	3736.9	6.0858	4.6266	3729.3	6.0702	4.5269	3721.7	6.0548	4.4319	3714.3	6.0397	4.3411

Table 4 – Water and Steam; Specific Heat Capacity at Constant Pressure, kJ/kg K — 0 bar to 1000 bar, 0 °C to 800 °C

Abs. Press. bar	Temperature °C 0	50	100	150	200	220	240	260	280	300	310	320	330	340	350	360	Abs. Press. bar
0	1.859	1.871	1.889	1.913	1.939	1.950	1.962	1.974	1.986	1.998	2.004	2.010	2.017	2.023	2.029	2.036	0
1	4.218	4.181	2.032	1.979	1.974	1.978	1.984	1.992	2.001	2.011	2.016	2.021	2.026	2.032	2.038	2.044	1
10	4.213	4.178	4.214	4.304	2.431	2.316	2.242	2.194	2.162	2.140	2.133	2.127	2.124	2.122	2.122	2.123	10
20	4.208	4.176	4.211	4.301	4.492	2.940	2.672	2.505	2.396	2.321	2.293	2.269	2.251	2.239	2.235	2.231	20
30	4.203	4.174	4.209	4.297	4.486	4.608	3.338	2.944	2.704	2.548	2.485	2.441	2.404	2.376	2.352	2.332	30
40	4.198	4.172	4.207	4.294	4.480	4.600	4.762	3.582	3.116	2.834	2.732	2.649	2.583	2.535	2.504	2.478	40
50	4.194	4.170	4.205	4.291	4.474	4.592	4.751	4.978	3.684	3.199	3.035	2.903	2.803	2.723	2.660	2.608	50
60	4.189	4.168	4.203	4.288	4.468	4.584	4.740	4.961	4.515	3.679	3.418	3.216	3.060	2.944	2.862	2.796	60
70	4.184	4.166	4.201	4.285	4.463	4.577	4.730	4.944	5.290	4.344	3.915	3.619	3.375	3.209	3.090	2.990	70
80	4.180	4.164	4.200	4.282	4.452	4.570	4.720	4.928	5.263	5.307	4.599	4.118	3.775	3.526	3.349	3.213	80
90	4.175	4.162	4.196	4.279	4.453	4.563	4.710	4.912	5.237	5.774	5.622	4.82	4.29	3.928	3.674	3.470	90
100	4.170	4.159	4.194	4.276	4.448	4.556	4.700	4.898	5.212	5.722	6.132	5.795	4.956	4.413	4.066	3.772	100
110	4.165	4.157	4.192	4.273	4.443	4.549	4.691	4.884	5.188	5.673	6.059	7.37	5.90	5.065	4.537	4.143	110
120	4.160	4.155	4.190	4.270	4.438	4.542	4.682	4.871	5.165	5.629	5.992	6.522	7.376	5.945	5.126	4.598	120
130	4.155	4.153	4.188	4.267	4.433	4.535	4.673	4.857	5.143	5.587	5.929	6.416	7.195	7.19	5.92	5.168	130
140	4.150	4.151	4.186	4.264	4.428	4.529	4.664	4.844	5.121	5.547	5.871	6.326	7.032	9.466	7.068	5.874	140
150	4.145	4.149	4.184	4.261	4.423	4.523	4.655	4.830	5.100	5.509	5.816	6.240	6.879	8.075	8.79	6.84	150
160	4.141	4.147	4.182	4.258	4.418	4.517	4.646	4.818	5.080	5.473	5.765	6.162	6.742	7.757	12.14	8.228	160
170	4.137	4.145	4.180	5.255	4.413	4.511	4.637	4.806	5.060	5.439	5.716	6.090	6.624	7.50	9.81	10.49	170
180	4.133	4.143	4.178	4.252	4.408	4.505	4.629	4.795	5.042	5.406	5.670	6.023	6.514	7.293	8.945	15.34	180
190	4.129	4.140	4.176	4.249	4.404	4.499	4.621	4.784	5.024	5.374	5.627	5.961	6.415	7.11	8.46	13.6	190
200	4.125	4.137	4.173	4.247	4.400	4.493	4.613	4.773	5.006	5.344	5.585	5.902	6.328	6.956	8.090	11.36	200
220	4.116	4.133	4.169	4.241	4.391	4.481	4.597	4.751	4.972	5.288	5.509	5.795	6.170	6.695	7.547	9.395	220
240	4.108	4.129	4.165	4.235	4.382	4.470	4.582	4.730	4.940	5.236	5.440	5.700	6.034	6.485	7.160	8.406	240
260	4.100	4.125	4.161	4.230	4.373	4.459	4.568	4.709	4.909	5.188	5.377	5.615	5.916	6.309	6.865	7.785	260
280	4.092	4.121	4.157	4.225	4.365	4.448	4.554	4.690	4.879	5.143	5.319	5.538	5.811	6.160	6.630	7.349	280
300	4.084	4.117	4.153	4.220	4.357	4.438	4.540	4.671	4.851	5.102	5.265	5.468	5.718	6.030	6.437	7.022	300
320	4.076	4.113	4.149	4.215	4.349	4.428	4.527	4.653	4.825	5.063	5.215	5.404	5.633	5.916	6.274	6.764	320
340	4.068	4.109	4.145	4.210	4.341	4.418	4.514	4.636	4.800	5.026	5.169	5.345	5.557	5.814	6.134	6.553	340
360	4.060	4.105	4.141	4.205	4.333	4.408	4.501	4.619	4.776	4.992	5.126	5.290	5.487	5.723	6.011	6.378	360
380	4.053	4.102	4.137	4.200	4.325	4.399	4.489	4.603	4.753	4.960	5.086	5.239	5.422	5.641	5.903	6.227	380
400	4.046	4.099	4.134	4.196	4.318	4.390	4.477	4.587	4.731	4.929	5.048	5.192	5.363	5.566	5.806	6.097	400
450	4.027	4.090	4.125	4.184	4.299	4.368	4.448	4.551	4.680	4.858	4.962	5.087	5.231	5.408	5.600	5.831	450
500	4.010	4.081	4.116	4.173	4.282	4.347	4.423	4.518	4.635	4.795	4.889	4.998	5.123	5.270	5.437	5.628	500
550	3.993	4.072	4.108	4.162	4.266	4.327	4.398	4.486	4.593	4.736	4.823	4.921	5.031	5.156	5.298	5.462	550
600	3.977	4.064	4.099	4.151	4.252	4.308	4.375	4.456	4.555	4.682	4.765	4.852	4.948	5.060	5.186	5.327	600
650	3.962	4.056	4.091	4.141	4.236	4.290	4.353	4.428	4.519	4.637	4.710	4.790	4.877	4.976	5.087	5.210	650
700	3.947	4.048	4.083	4.132	4.222	4.273	4.332	4.402	4.487	4.595	4.660	4.736	4.814	4.902	5.001	5.110	700
750	3.932	4.040	4.075	4.122	4.208	4.257	4.312	4.378	4.457	4.556	4.615	4.685	4.756	4.837	4.924	5.022	750
800	3.918	4.033	4.068	4.113	4.196	4.241	4.294	4.355	4.429	4.520	4.578	4.639	4.705	4.778	4.858	4.946	800
850	3.905	4.026	4.061	4.104	4.184	4.226	4.276	4.333	4.402	4.486	4.538	4.594	4.657	4.725	4.797	4.876	850
900	3.892	4.019	4.054	4.096	4.171	4.212	4.259	4.313	4.377	4.456	4.502	4.554	4.615	4.677	4.743	4.816	900
950	3.880	4.012	4.047	4.088	4.159	4.198	4.243	4.294	4.353	4.427	4.469	4.518	4.574	4.633	4.694	4.760	950
1000	3.868	4.006	4.040	4.080	4.147	4.185	4.227	4.276	4.331	4.400	4.440	4.484	4.536	4.592	4.649	4.710	1000

Values for water are below the stepped line.

1 bar = 10^5 N/m^2

Table 4—*continued*

Abs. Press. bar	Temperature °C 370	380	390	400	410	420	440	460	480	500	550	600	650	700	750	800	Abs. Press. bar
0	2.042	2.049	2.055	2.062	2.068	2.075	2.088	2.102	2.115	2.129	2.163	2.198	2.233	2.268	2.304	2.339	0
1	2.050	2.056	2.062	2.068	2.074	2.080	2.093	2.106	2.119	2.132	2.166	2.200	2.234	2.270	2.305	2.340	1
10	2.124	2.125	2.125	2.126	2.128	2.130	2.137	2.145	2.155	2.165	2.191	2.220	2.253	2.284	2.316	2.350	10
20	2.223	2.212	2.203	2.197	2.193	2.191	2.190	2.192	2.196	2.201	2.219	2.243	2.270	2.299	2.329	2.361	20
30	2.317	2.300	2.285	2.274	2.264	2.256	2.247	2.242	2.240	2.239	2.249	2.268	2.289	2.314	2.342	2.372	30
40	2.445	2.411	2.382	2.359	2.341	2.327	2.307	2.294	2.285	2.281	2.280	2.291	2.308	2.330	2.356	2.384	40
50	2.561	2.517	2.480	2.451	2.425	2.404	2.371	2.349	2.333	2.323	2.311	2.315	2.328	2.346	2.369	2.395	50
60	2.723	2.657	2.599	2.553	2.517	2.487	2.441	2.408	2.385	2.367	2.345	2.341	2.348	2.363	2.383	2.407	60
70	2.890	2.802	2.726	2.665	2.618	2.576	2.517	2.471	2.440	2.414	2.378	2.366	2.369	2.379	2.397	2.418	70
80	3.076	2.964	2.867	2.789	2.726	2.675	2.596	2.538	2.495	2.463	2.414	2.394	2.390	2.397	2.411	2.430	80
90	3.294	3.148	3.027	2.925	2.848	2.782	2.684	2.608	2.554	2.514	2.449	2.421	2.411	2.413	2.425	2.441	90
100	3.548	3.356	3.201	3.078	2.978	2.897	2.774	2.684	2.617	2.567	2.488	2.449	2.433	2.431	2.439	2.453	100
110	3.836	3.595	3.401	3.247	3.127	3.028	2.874	2.764	2.683	2.623	2.527	2.477	2.455	2.449	2.453	2.465	110
120	4.169	3.869	3.625	3.435	3.284	3.163	2.979	2.849	2.753	2.681	2.567	2.507	2.478	2.467	2.468	2.477	120
130	4.579	4.189	3.879	3.647	3.463	3.312	3.092	2.939	2.826	2.741	2.607	2.537	2.501	2.485	2.485	2.489	130
140	5.086	4.567	4.177	3.884	3.659	3.480	3.217	3.035	2.903	2.806	2.651	2.568	2.524	2.503	2.497	2.501	140
150	5.724	5.020	4.521	4.158	3.877	3.660	3.349	3.138	2.985	2.872	2.695	2.600	2.548	2.522	2.512	2.513	150
160	6.555	5.574	4.924	4.465	4.125	3.865	3.494	3.246	3.070	2.942	2.740	2.632	2.572	2.541	2.527	2.525	160
170	7.680	6.281	5.400	4.817	4.403	4.090	3.651	3.363	3.160	3.015	2.785	2.664	2.597	2.560	2.542	2.537	170
180	9.379	7.172	5.990	5.240	4.719	4.339	3.820	3.486	3.256	3.090	2.835	2.698	2.622	2.579	2.557	2.549	180
190	12.24	8.41	6.711	5.731	5.080	4.619	4.003	3.620	3.355	3.171	2.884	2.731	2.647	2.598	2.572	2.561	190
200	18.23	10.20	7.653	6.327	5.500	4.933	4.204	3.759	3.462	3.253	2.935	2.768	2.673	2.618	2.588	2.574	200
220	18.40	19.14	10.68	7.972	6.569	5.697	4.663	4.072	3.692	3.430	3.042	2.840	2.725	2.658	2.619	2.599	220
240	11.80*	69.57	18.20	10.76	8.115	6.709	5.216	4.430	3.947	3.623	3.155	2.915	2.779	2.699	2.651	2.625	240
260	9.743	16.28	46.11	16.31	10.51	8.097	5.891	4.843	4.232	3.834	3.274	2.993	2.835	2.740	2.683	2.650	260
280	8.668	11.62	23.90	26.89	14.37	10.05	6.718	5.319	4.548	4.062	3.399	3.074	2.892	2.783	2.716	2.676	280
300	7.989	9.700	14.59	25.71	19.59	12.70	7.728	5.865	4.898	4.310	3.531	3.158	2.950	2.826	2.749	2.702	300
320	7.514	8.726	11.45	17.08	21.34	15.67	8.925	6.484	5.284	4.578	3.669	3.244	3.010	2.870	2.782	2.728	320
340	7.159	8.028	9.848	12.98	17.50	17.25	10.24	7.170	5.702	4.863	3.813	3.333	3.071	2.914	2.816	2.755	340
360	6.881	7.633	8.860	10.89	13.92	16.10	11.49	7.899	6.148	5.165	3.962	3.424	3.133	2.959	2.850	2.781	360
380	6.655	7.260	8.187	9.631	11.68	13.90	12.35	8.624	6.611	5.478	4.116	3.517	3.196	3.005	2.885	2.808	380
400	6.468	6.968	7.697	8.779	10.26	12.00	12.54	9.277	7.073	5.798	4.273	3.612	3.260	3.051	2.920	2.835	400
450	6.108	6.448	6.889	7.505	8.299	9.237	10.89	10.06	8.078	6.576	4.678	3.857	3.425	3.169	3.008	2.902	450
500	5.846	6.098	6.410	6.808	7.292	7.874	9.077	9.516	8.544	7.189	5.060	4.095	3.586	3.286	3.096	2.970	500
550	5.643	5.841	6.073	6.354	6.680	7.080	7.920	8.530	8.368	7.486	5.414	4.330	3.746	3.404	3.183	3.037	550
600	5.481	5.646	5.832	6.040	6.269	6.537	7.168	7.703	7.865	7.469	5.690	4.543	3.903	3.518	3.270	3.104	600
650	5.343	5.480	5.630	5.803	5.974	6.161	6.625	7.079	7.327	7.220	5.884	4.735	4.050	3.627	3.354	3.171	650
700	5.228	5.350	5.474	5.604	5.745	5.890	6.242	6.614	6.866	6.897	5.980	4.893	4.182	3.732	3.437	3.235	700
750	5.126	5.232	5.346	5.460	5.566	5.675	5.943	6.250	6.495	6.573	5.990	5.015	4.302	3.828	3.514	3.297	750
800	5.040	5.135	5.231	5.332	5.418	5.505	5.715	5.963	6.189	6.294	5.938	5.101	4.403	3.918	3.588	3.356	800
850	4.962	5.046	5.136	5.221	5.292	5.363	5.525	5.730	5.925	6.044	5.847	5.150	4.484	3.996	3.657	3.413	850
900	4.893	4.969	5.046	5.128	5.187	5.244	5.377	5.542	5.709	5.830	5.735	5.170	4.550	4.069	3.720	3.467	900
950	4.830	4.899	4.968	5.041	5.094	5.141	5.248	5.383	5.529	5.646	5.616	5.165	4.598	4.126	3.775	3.517	950
1000	4.775	4.839	4.903	4.967	5.012	5.051	5.140	5.253	5.377	5.487	5.500	5.142	4.630	4.177	3.825	3.564	1000

* Critical Point 374.15 °C and 221.2 bar.

Table 5 Saturation Line; Specific Heat Capacity, Surface Tension and Transport Properties

t °C	p_s bar	Water c_{pf} kJ/kg K	$\sigma\times10^3$ N/m	$\mu_f\times10^6$ N s/m²	$\nu_f\times10^6$ m²/s	λ_f W/m K	$(Pr)_f$	Steam c_{pg} kJ/kg K	$\mu_g\times10^6$ N s/m²	$\nu_g\times10^6$ m²/s	$\lambda_g\times10^3$ W/m K	$(Pr)_g$	t °C
0.01	0.00611	4.218	75.60	1786	1.786	0.569	13.2	1.863	8.105	1672	17.6	0.858	0.01
10	0.01227	4.194	74.24	1304	1.305	0.587	9.32	1.870	8.504	905.	18.2	0.873	10
20	0.02337	4.182	72.78	1002	1.004	0.603	6.95	1.880	8.903	515	18.8	0.888	20
30	0.04241	4.179	71.23	798.3	0.802	0.618	5.40	1.890	9.305	306	19.5	0.901	30
40	0.07375	4.179	69.61	653.9	0.659	0.631	4.33	1.900	9.701	190	20.2	0.912	40
50	0.12335	4.181	67.93	547.8	0.554	0.643	3.56	1.912	10.10	121	20.9	0.924	50
60	0.19920	4.185	66.19	467.3	0.473	0.653	2.99	1.924	10.50	80.6	21.6	0.934	60
70	0.31162	4.191	64.40	404.8	0.414	0.662	2.56	1.946	10.89	54.9	22.4	0.946	70
80	0.47360	4.198	62.57	355.4	0.366	0.670	2.23	1.970	11.29	38.5	23.2	0.959	80
90	0.70109	4.207	60.69	315.6	0.327	0.676	1.96	1.999	11.67	27.6	24.0	0.973	90
100	1.01330	4.218	58.78	283.1	0.295	0.681	1.75	2.034	12.06	20.2	24.9	0.987	100
110	1.4327	4.230	56.83	254.8	0.268	0.684	1.58	2.076	12.45	15.1	25.8	1.00	110
120	1.9854	4.244	54.85	231.0	0.245	0.687	1.43	2.125	12.83	11.4	26.7	1.02	120
130	2.7013	4.262	52.83	210.9	0.226	0.688	1.31	2.180	13.20	8.82	27.8	1.03	130
140	3.6138	4.282	50.79	194.1	0.210	0.688	1.21	2.245	13.57	6.90	28.9	1.05	140
150	4.7600	4.306	48.70	179.8	0.196	0.687	1.13	2.320	13.94	5.47	30.0	1.08	150
160	6.1806	4.334	46.59	167.7	0.185	0.684	1.06	2.406	14.30	4.39	31.3	1.10	160
170	7.9202	4.366	44.44	157.4	0.175	0.681	1.01	2.504	14.66	3.55	32.6	1.13	170
180	10.027	4.403	42.26	148.5	0.167	0.677	0.967	2.615	15.02	2.91	34.1	1.15	180
190	12.551	4.446	40.05	140.7	0.161	0.671	0.932	2.741	15.37	2.40	35.7	1.18	190
200	15.549	4.494	37.81	133.9	0.155	0.664	0.906	2.883	15.72	2.00	37.4	1.21	200
210	19.077	4.550	35.53	127.9	0.150	0.657	0.886	3.043	16.07	1.68	39.4	1.24	210
220	23.198	4.613	33.23	122.4	0.146	0.648	0.871	3.223	16.42	1.41	41.5	1.28	220
230	27.976	4.685	30.90	117.5	0.142	0.639	0.861	3.426	16.78	1.20	43.9	1.31	230
240	33.478	4.769	28.56	112.9	0.139	0.628	0.850	3.656	17.14	1.02	46.5	1.35	240
250	39.776	4.866	26.19	108.7	0.136	0.616	0.859	3.918	17.51	0.876	49.5	1.39	250
260	46.943	4.985	23.82	104.8	0.134	0.603	0.866	4.221	17.90	0.755	52.8	1.43	260
270	55.058	5.134	21.44	101.1	0.132	0.589	0.882	4.575	18.31	0.652	56.6	1.48	270
280	64.202	5.307	19.07	97.5	0.130	0.574	0.902	4.996	18.74	0.565	60.9	1.54	280
290	74.461	5.520	16.71	94.1	0.128	0.558	0.932	5.509	19.21	0.491	66.0	1.61	290
300	85.927	5.794	14.39	90.7	0.127	0.541	0.970	6.148	19.73	0.427	71.9	1.69	300
310	98.700	6.143	12.11	87.2	0.126	0.523	1.024	6.968	20.30	0.372	79.1	1.79	310
320	112.89	6.604	9.89	83.5	0.125	0.503	1.11	8.060	20.95	0.324	87.8	1.92	320
330	128.63	7.241	7.75	79.5	0.124	0.482	1.20	9.580	21.70	0.281	99.0	2.10	330
340	146.05	8.225	5.71	75.4	0.123	0.460	1.35	11.87	22.70	0.245	114	2.36	340
350	165.35	10.07	3.79	69.4	0.121	0.434	1.61	15.8	24.15	0.213	134	2.84	350
360	186.75	15.0	2.03	62.1	0.118	0.397	2.34	27.0	26.45	0.184	162	4.40	360
370	210.54	55	0.47	51.8	0.116	0.340	8.37	107	30.6	0.150	199	16.4	370
374.15	221.2	∞	0	41.4	0.131	0.240		∞	41.4	0.131	240		374.15

1 bar = 10^5 N/m²

Table 6 Water and Steam; Dynamic Viscosity × 10^6

N s/m²

Temp. °C	Absolute Pressure bar 1	20	40	60	80	100	120	140	160	180	200	220	240	Temp. °C
0	1786	1781	1776	1771	1766	1762	1757	1752	1748	1744	1740	1736	1732	0
10	1303	1300	1297	1295	1293	1291	1289	1287	1285	1283	1281	1279	1277	10
20	1002	1000	948	997	996	995	994	993	992	991	990	989	988	20
30	798	797	796	795	795	795	794	794	793	793	792	792	792	30
40	654	653	653	653	652	652	652	652	652	652	651	651	651	40
50	548	548	548	548	548	548	548	548	548	548	548	548	549	50
60	467	467	468	468	469	469	469	470	470	471	471	471	472	60
70	405	405	406	406	407	408	408	409	409	410	411	411	412	70
80	355	356	357	357	358	359	359	360	361	361	362	362	363	80
90	316	316	317	317	318	318	319	319	320	321	321	322	322	90
100	12.1	283	283	283	284	284	284	285	285	286	286	286	287	100
110	12.5	255	255	255	256	256	256	257	257	258	258	258	259	110
120	12.9	231	231	232	233	233	233	234	235	236	236	236	237	120
130	13.3	211	211	212	213	214	214	215	215	216	217	217	218	130
140	13.7	195	195	196	196	197	197	198	198	199	200	200	201	140
150	14.1	180	180	181	181	182	182	183	183	184	185	185	186	150
160	14.5	168	168	169	169	170	171	172	173	173	173	173	174	160
170	14.9	158	158	159	160	160	160	161	161	162	162	162	163	170
180	15.3	149	149	150	151	151	151	152	152	153	153	154	154	180
190	15.8	141	141	142	143	143	143	144	144	145	145	145	146	190
200	16.2	134	134	135	136	136	136	137	138	138	138	139	139	200
210	16.6	128	128	129	130	130	130	131	132	132	132	132	133	210
220	17.0	16.5	123	123	124	124	124	125	125	126	126	127	128	220
230	17.4	17.0	118	118	119	119	119	120	120	121	121	121	122	230
240	17.8	17.5	113	113	114	114	114	115	116	117	117	118	118	240
250	18.3	17.9	109	109	110	110	111	112	113	113	113	114	114	250
260	18.7	18.4	18.1	105	106	106	107	108	109	109	109	109	110	260
270	19.1	18.9	18.6	101	102	102	102	103	104	105	105	105	106	270
280	19.5	19.3	19.1	18.8	98.0	98.6	99.3	100	101	101	101	101	102	280
290	19.9	19.8	19.6	19.4	94.3	95.0	95.8	96.5	97.2	98.0	98.0	98.6	99.2	290
300	20.3	20.2	20.1	20.0	19.8	91.3	92.0	92.7	93.4	94.0	94.6	95.2	95.8	300
310	20.7	20.7	20.6	20.5	20.4	87.3	88.1	88.9	89.7	90.4	91.1	91.7	92.3	310
320	21.2	21.1	21.1	21.1	21.0	21.0	83.9	84.9	85.8	86.6	87.4	88.1	88.8	320
330	21.6	21.6	21.6	21.6	21.6	21.7	21.7	80.2	81.3	82.3	83.2	84.0	84.7	330
340	22.0	22.1	22.1	22.2	22.2	22.3	22.4	22.7	75.9	77.3	78.4	79.4	80.3	340
350	22.5	22.5	22.7	22.8	23.0	23.2	23.5	23.7	24.1	70.9	72.6	73.9	75.0	350
360	22.9	23.0	23.2	23.4	23.7	23.9	24.2	24.6	25.1	26.0	65.0	67.5	69.4	360
370	23.3	23.5	23.7	24.0	24.3	24.6	25.0	25.4	25.9	26.7	28.6	55.5	61.5	370
380	23.7	23.9	24.2	24.4	24.7	25.1	25.6	25.9	26.4	27.2	28.5	30.9	47.5	380
390	24.1	24.3	24.6	24.8	25.1	25.5	25.8	26.3	26.8	27.5	28.4	29.8	32.2	390
400	24.5	24.7	25.0	25.2	25.5	25.8	26.2	26.6	27.1	27.7	28.5	29.5	30.9	400
410	25.0	25.2	25.4	25.6	25.9	26.2	26.6	27.0	27.4	27.9	28.6	29.4	30.5	410
420	25.4	25.6	25.8	26.0	26.3	26.6	26.9	27.3	27.7	28.2	28.8	29.5	30.4	420
430	25.8	26.0	26.2	26.4	26.7	27.0	27.3	27.7	28.1	28.5	29.0	29.6	30.4	430
440	26.2	26.4	26.6	26.9	27.1	27.4	27.7	28.0	28.4	28.8	29.3	29.8	30.5	440
450	26.6	26.8	27.0	27.3	27.5	27.8	28.1	28.4	28.7	29.1	29.6	30.1	30.6	450
460	27.1	27.2	27.4	27.7	27.9	28.1	28.4	28.7	29.1	29.5	29.9	30.3	30.9	460
470	27.5	27.7	27.9	28.1	28.3	28.5	28.8	29.1	29.4	29.8	30.2	30.6	31.1	470
480	27.9	28.1	28.3	28.5	28.7	28.9	29.2	29.5	29.8	30.1	30.5	30.9	31.3	480
490	28.3	28.5	28.7	28.9	29.1	29.3	29.6	29.9	30.2	30.5	30.8	31.2	31.6	490
500	28.7	28.9	29.1	29.3	29.5	29.7	30.0	30.2	30.5	30.8	31.2	31.5	31.9	500
520	29.5	29.7	29.9	30.1	30.3	30.5	30.7	31.0	31.3	31.5	31.9	32.2	32.5	520
540	30.3	30.5	30.7	30.9	31.1	31.3	31.5	31.7	32.0	32.3	32.6	32.9	33.2	540
560	31.2	31.3	31.5	31.7	31.9	32.1	32.3	32.5	32.7	33.0	33.3	33.5	33.9	560
580	32.0	32.1	32.3	32.5	32.7	32.9	33.1	33.3	33.5	33.7	34.0	34.3	34.5	580
600	32.8	32.9	33.1	33.3	33.4	33.6	33.8	34.0	34.3	34.5	34.7	35.0	35.2	600
650	34.8	34.9	35.1	35.2	35.4	35.6	35.7	35.9	36.1	36.3	36.5	36.8	37.0	650
700	36.7	36.9	37.0	37.1	37.3	37.5	37.6	37.8	38.0	38.2	38.4	38.5	38.8	700
750	38.6	38.7	38.9	39.0	39.2	39.3	39.5	39.7	39.8	40.0	40.2	40.3	40.5	750
800	40.5	40.6	40.7	40.9	41.0	41.1	41.3	41.5	41.6	41.8	41.9	42.1	42.3	800
900	44.1	44.2	44.3	44.5	44.6	44.7	44.9	45.0	45.2	45.3	45.4	45.5	45.7	900
1000	47.5	47.6	47.7	47.8	47.9	48.0	48.2	48.3	48.4	48.5	48.6	48.8	49.0	1000

1 bar = 10^5 N/m²

Temp. °C	Absolute Pressure bar 260	280	300	350	400	450	500	550	600	700	800	900	1000	Temp. °C
0	1728	1724	1720	1711	1703	1695	1688	1682	1676	1665	1656	1649	1644	0
10	1275	1273	1272	1268	1265	1262	1260	1257	1255	1252	1250	1249	1249	10
20	987	986	986	985	984	983	982	982	982	982	983	984	986	20
30	792	791	791	791	790	790	790	791	791	792	794	796	799	30
40	651	651	651	652	652	653	653	654	654	656	658	661	664	40
50	549	549	549	550	551	552	553	554	555	557	560	563	565	50
60	472	473	473	474	476	477	478	480	481	484	487	490	493	60
70	412	413	414	416	417	419	420	422	423	427	430	433	436	70
80	363	364	365	367	369	370	372	374	376	379	382	385	388	80
90	323	324	324	326	327	329	330	332	333	336	339	342	344	90
100	287	288	288	289	289	291	292	293	294	296	298	301	303	100
110	259	260	260	261	262	263	264	265	266	268	270	273	275	110
120	237	238	238	239	240	242	243	244	245	248	250	252	255	120
130	218	219	220	221	222	224	225	226	227	230	232	235	237	130
140	201	202	202	204	205	206	207	208	210	212	214	217	219	140
150	186	187	187	189	190	191	192	194	195	197	199	202	204	150
160	175	175	175	176	177	178	180	181	182	184	187	189	191	160
170	163	164	164	166	167	168	169	170	171	174	176	178	180	170
180	155	155	155	156	157	159	160	161	162	164	166	169	171	180
190	146	147	147	148	149	151	152	153	154	156	158	161	163	190
200	140	140	140	141	142	144	145	146	147	149	151	153	156	200
210	133	134	134	135	136	138	139	140	141	143	145	147	149	210
220	129	129	129	130	131	132	133	134	135	137	139	142	144	220
230	123	123	123	125	126	127	128	129	130	132	134	136	139	230
240	119	119	119	120	121	122	123	124	126	128	130	132	134	240
250	114	115	115	116	117	118	119	120	121	124	126	128	130	250
260	111	111	111	112	113	114	115	117	118	120	122	124	126	260
270	107	107	107	109	110	111	112	113	114	116	118	120	122	270
280	103	104	104	105	106	108	109	110	111	113	115	117	119	280
290	100	101	101	102	103	104	105	106	107	109	112	113	115	290
300	96.4	96.9	97.4	98.7	99.9	101	102	103	104	106	108	110	112	300
310	92.9	93.5	94.1	95.4	96.7	97.8	99.0	100	101	103	105	107	109	310
320	89.4	90.0	90.6	91.9	93.3	94.6	95.8	96.9	98.0	100	102	104	106	320
330	85.4	86.1	86.8	88.2	89.7	91.3	92.3	93.4	94.6	96.7	98.7	101	102	330
340	81.1	81.9	82.6	84.2	85.8	87.2	88.5	89.6	90.8	93.0	95.1	97.0	98.8	340
350	76.0	76.9	77.8	79.5	81.3	83.2	84.2	85.5	86.8	89.1	91.3	93.3	95.4	350
360	70.8	72.0	73.2	75.2	77.3	79.0	80.7	82.1	83.5	86.0	88.3	90.3	92.3	360
370	64.8	67.0	68.6	71.1	73.7	75.7	77.7	79.2	80.7	83.3	85.7	87.8	89.8	370
380	57.0	60.7	63.1	67.0	70.4	72.6	74.9	76.6	78.3	81.2	83.7	85.8	87.8	380
390	39.1	50.9	56.2	62.5	66.8	64.7	72.1	74.0	76.0	79.1	81.7	84.0	86.1	390
400	33.3	38.0	45.8	57.3	62.7	66.3	69.2	71.5	73.5	76.9	79.7	82.2	84.4	400
410	32.0	34.2	37.8	52.1	58.0	62.8	66.0	68.7	70.9	74.7	77.7	80.4	82.7	410
420	31.5	32.9	35.0	43.7	52.9	58.5	62.6	65.7	68.3	72.4	75.7	78.5	81.0	420
430	31.3	32.4	33.8	39.5	47.7	54.5	59.1	62.7	65.6	70.1	73.7	76.7	79.3	430
440	31.2	32.2	33.3	37.3	43.6	50.3	55.5	60.9	62.7	67.7	71.6	74.8	77.5	440
450	31.3	32.1	33.0	36.0	40.9	46.8	52.1	58.0	59.9	65.4	69.5	72.9	75.8	450
460	31.5	32.1	32.9	35.5	36.2	43.9	49.0	53.4	57.2	63.0	67.4	71.0	74.1	460
470	31.6	32.2	32.9	35.1	38.1	42.0	46.4	50.7	54.6	60.7	65.4	69.2	72.4	470
480	31.9	32.4	33.0	34.9	37.4	40.7	44.5	48.4	52.2	58.5	63.4	67.3	70.7	480
490	32.1	32.6	33.1	34.8	37.0	39.7	43.0	46.6	50.1	56.4	61.4	65.6	69.0	490
500	32.4	32.8	33.3	34.8	36.8	39.1	42.0	45.1	48.4	54.5	59.6	63.8	67.4	500
520	32.9	33.3	33.8	35.0	36.6	38.5	40.7	43.1	45.8	51.3	56.3	60.6	64.4	520
540	33.5	33.9	34.3	35.4	36.7	38.2	40.0	42.0	44.2	49.0	53.6	57.9	61.6	540
560	34.2	34.5	34.9	35.8	37.0	38.3	39.8	41.4	43.3	47.3	51.5	55.5	59.2	560
580	34.8	35.1	35.5	36.4	37.4	38.5	39.8	41.3	42.8	46.3	50.0	53.7	57.2	580
600	35.5	35.8	36.1	36.9	37.8	38.8	40.0	41.2	42.6	45.6	48.9	52.3	55.6	600
650	37.2	37.5	37.7	38.4	39.2	40.0	40.9	41.8	42.9	45.1	47.6	50.3	53.0	650
700	39.0	39.2	39.4	39.7	40.6	41.3	42.1	42.8	43.7	45.5	47.5	49.6	51.8	700
750	40.7	40.9	41.1	41.6	42.2	42.8	43.4	44.1	44.8	46.3	48.0	49.7	51.6	750
800	42.4	42.6	42.8	43.3	43.8	44.3	44.9	45.5	46.1	47.4	48.8	50.3	51.9	800
900	45.8	45.9	46.1	46.5	46.9	47.3	47.8	48.3	48.8	49.9	51.0	52.1	53.4	900
1000	49.1	49.2	49.3	49.6	50.0	50.4	50.8	51.2	51.6	52.5	53.4	54.3	55.3	1000

Table 7 Water and Steam; Kinematic Viscosity × 10^6 — m^2/s

Temp. °C	Absolute Pressure bar 1	20	40	60	80	100	120	140	160	180	200	220	240	Temp. C
0	1.786	1.779	1.772	1.766	1.760	1.754	1.748	1.741	1.735	1.729	1.723	1.716	1.711	0
10	1.303	1.299	1.295	1.291	1.288	1.285	1.282	1.279	1.276	1.273	1.270	1.267	1.264	10
20	1.004	1.001	0.998	0.996	0.994	0.992	0.990	0.988	0.986	0.984	0.983	0.981	0.979	20
30	0.802	0.800	0.798	0.797	0.796	0.795	0.793	0.792	0.791	0.790	0.789	0.788	0.787	30
40	0.659	0.658	0.657	0.656	0.655	0.654	0.653	0.652	0.652	0.651	0.651	0.650	0.650	40
50	0.554	0.554	0.553	0.553	0.552	0.552	0.552	0.551	0.551	0.550	0.550	0.550	0.550	50
60	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475	60
70	0.414	0.414	0.414	0.415	0.415	0.415	0.415	0.415	0.416	0.416	0.416	0.416	0.417	70
80	0.366	0.366	0.366	0.367	0.367	0.367	0.367	0.368	0.368	0.369	0.369	0.369	0.370	80
90	0.327	0.327	0.327	0.328	0.328	0.328	0.328	0.328	0.329	0.329	0.329	0.330	0.330	90
100	20.5	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	100
110	21.8	0.268	0.268	0.268	0.268	0.268	0.268	0.268	0.269	0.269	0.269	0.269	0.269	110
120	23.1	0.245	0.245	0.245	0.246	0.246	0.246	0.246	0.247	0.247	0.247	0.248	0.248	120
130	24.5	0.225	0.225	0.226	0.227	0.228	0.228	0.229	0.229	0.229	0.229	0.229	0.230	130
140	25.9	0.210	0.210	0.210	0.211	0.211	0.211	0.211	0.212	0.212	0.213	0.213	0.213	140
150	27.4	0.197	0.197	0.197	0.198	0.198	0.198	0.198	0.199	0.199	0.199	0.199	0.200	150
160	28.8	0.185	0.185	0.185	0.186	0.186	0.186	0.187	0.187	0.187	0.188	0.188	0.188	160
170	30.4	0.175	0.175	0.176	0.176	0.177	0.177	0.177	0.178	0.178	0.178	0.178	0.179	170
180	31.9	0.168	0.168	0.168	0.169	0.169	0.169	0.169	0.170	0.170	0.170	0.170	0.170	180
190	33.5	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.162	0.162	190
200	35.2	0.155	0.155	0.155	0.156	0.156	0.156	0.156	0.157	0.157	0.157	0.157	0.157	200
210	36.8	0.150	0.150	0.150	0.150	0.151	0.151	0.151	0.151	0.152	0.152	0.152	0.152	210
220	38.5	1.69	0.146	0.146	0.146	0.147	0.147	0.147	0.147	0.148	0.148	0.148	0.148	220
230	40.3	1.79	0.142	0.142	0.142	0.143	0.143	0.143	0.143	0.144	0.144	0.144	0.144	230
240	42.1	1.89	0.139	0.139	0.139	0.139	0.140	0.140	0.140	0.140	0.141	0.141	0.141	240
250	43.9	2.00	0.136	0.136	0.136	0.136	0.137	0.137	0.137	0.138	0.138	0.138	0.138	250
260	45.8	2.10	0.934	0.134	0.134	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	260
270	47.7	2.21	0.997	0.132	0.132	0.132	0.132	0.132	0.133	0.133	0.133	0.133	0.133	270
280	49.6	2.32	1.058	0.624	0.130	0.130	0.130	0.131	0.131	0.131	0.132	0.132	0.132	280
290	51.6	2.43	1.122	0.674	0.129	0.129	0.129	0.130	0.130	0.130	0.130	0.181	0.131	290
300	53.7	2.54	1.18	0.722	0.480	0.128	0.128	0.128	0.128	0.129	0.129	0.129	0.129	300
310	55.7	2.65	1.25	0.770	0.523	0.126	0.126	0.126	0.126	0.127	0.127	0.127	0.127	310
320	57.8	2.76	1.31	0.818	0.564	0.404	0.125	0.125	0.125	0.125	0.126	0.126	0.126	320
330	60.0	2.88	1.37	0.864	0.604	0.442	0.325	0.124	0.124	0.124	0.125	0.125	0.125	330
340	62.2	3.00	1.44	0.912	0.644	0.479	0.363	0.272	0.123	0.123	0.123	0.123	0.123	340
350	64.4	3.12	1.51	0.962	0.688	0.520	0.403	0.314	0.235	0.121	0.121	0.121	0.121	350
360	66.7	3.25	1.57	1.013	0.731	0.557	0.439	0.350	0.278	0.211	0.118	0.118	0.118	360
370	69.0	3.37	1.64	1.063	0.771	0.594	0.472	0.382	0.312	0.253	0.199	0.112	0.116	370
380	71.4	3.50	1.71	1.109	0.807	0.625	0.502	0.411	0.340	0.284	0.235	0.189	0.123	380
390	73.7	3.62	1.77	1.152	0.841	0.654	0.527	0.435	0.365	0.309	0.262	0.220	0.180	390
400	76.1	3.74	1.83	1.20	0.875	0.682	0.552	0.458	0.387	0.330	0.283	0.244	0.208	400
410	78.6	3.87	1.90	1.24	0.909	0.710	0.577	0.481	0.489	0.350	0.303	0.264	0.230	410
420	81.1	3.99	1.96	1.28	0.944	0.739	0.602	0.503	0.429	0.370	0.322	0.283	0.249	420
430	83.6	4.12	2.03	1.33	0.979	0.768	0.627	0.525	0.449	0.389	0.340	0.300	0.267	430
440	86.2	4.25	2.09	1.37	1.014	0.797	0.651	0.547	0.469	0.408	0.358	0.317	0.283	440
450	88.8	4.38	2.16	1.42	1.05	0.826	0.676	0.569	0.489	0.426	0.376	0.334	0.299	450
460	91.4	4.52	2.23	1.47	1.08	0.855	0.701	0.592	0.509	0.445	0.393	0.350	0.315	460
470	94.1	4.65	2.30	1.51	1.12	0.884	0.726	0.614	0.529	0.463	0.410	0.366	0.330	470
480	96.8	4.79	2.37	1.56	1.16	0.914	0.751	0.636	0.549	0.481	0.427	0.382	0.345	480
490	99.6	4.93	2.44	1.61	1.19	0.944	0.777	0.658	0.569	0.499	0.444	0.398	0.360	490
500	102	5.08	2.51	1.66	1.23	0.974	0.803	0.680	0.589	0.517	0.460	0.414	0.375	500
520	108	5.36	2.66	1.76	1.31	1.035	0.855	0.726	0.629	0.554	0.494	0.445	0.404	520
540	114	5.65	2.81	1.86	1.38	1.097	0.907	0.771	0.670	0.591	0.528	0.476	0.433	540
560	120	5.95	2.96	1.96	1.46	1.160	0.960	0.818	0.711	0.628	0.562	0.507	0.462	560
580	126	6.26	3.11	2.06	1.54	1.224	1.014	0.865	0.753	0.666	0.596	0.539	0.492	580
600	132	6.57	3.27	2.17	1.62	1.29	1.07	0.913	0.795	0.704	0.631	0.571	0.521	600
650	148	7.38	3.68	2.44	1.83	1.46	1.21	1.035	0.903	0.801	0.719	0.652	0.597	650
700	165	8.23	4.11	2.73	2.04	1.63	1.36	1.162	1.015	0.901	0.810	0.736	0.674	700
750	182	9.10	4.55	3.03	2.27	1.81	1.51	1.293	1.131	1.005	0.904	0.822	0.753	750
800	200	10.0	5.01	3.34	2.50	2.00	1.67	1.428	1.250	1.111	1.000	0.910	0.834	800
900	238	11.7	5.86	3.90	2.92	2.39	1.95	1.65	1.46	1.30	1.18	1.07	0.990	900
1000	279	13.4	6.75	4.45	3.35	2.75	2.25	1.94	1.60	1.53	1.41	1.28	1.17	1000

1 bar = 10^5 N/m²

Temp. °C	Absolute Pressure bar 260	280	300	350	400	450	500	550	600	700	800	900	1000	Temp. °C
0	1.705	1.700	1.695	1.683	1.671	1.660	1.649	1.639	1.630	1.612	1.597	1.584	1.573	0
10	1.261	1.258	1.255	1.249	1.243	1.237	1.232	1.227	1.222	1.215	1.208	1.202	1.198	10
20	0.977	0.976	0.975	0.972	0.969	0.966	0.963	0.961	0.959	0.955	0.952	0.950	0.948	20
30	0.786	0.785	0.784	0.782	0.780	0.778	0.777	0.776	0.775	0.773	0.772	0.772	0.772	30
40	0.649	0.649	0.648	0.647	0.646	0.645	0.644	0.644	0.643	0.643	0.643	0.643	0.643	40
50	0.549	0.549	0.549	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.549	0.549	0.550	50
60	0.475	0.475	0.475	0.476	0.476	0.476	0.476	0.476	0.477	0.478	0.479	0.481	0.482	60
70	0.417	0.417	0.418	0.418	0.419	0.420	0.421	0.422	0.422	0.424	0.426	0.427	0.429	70
80	0.370	0.371	0.371	0.372	0.373	0.374	0.375	0.376	0.377	0.379	0.380	0.382	0.384	80
90	0.330	0.330	0.331	0.332	0.333	0.333	0.334	0.335	0.336	0.337	0.339	0.341	0.342	90
100	0.295	0.296	0.296	0.296	0.296	0.297	0.297	0.298	0.298	0.299	0.301	0.302	0.303	100
110	0.269	0.269	0.269	0.270	0.270	0.271	0.271	0.272	0.272	0.273	0.274	0.275	0.277	110
120	0.248	0.248	0.249	0.250	0.250	0.251	0.251	0.252	0.253	0.254	0.255	0.257	0.258	120
130	0.230	0.231	0.231	0.232	0.233	0.234	0.234	0.235	0.236	0.238	0.239	0.240	0.242	130
140	0.214	0.214	0.215	0.215	0.216	0.217	0.218	0.218	0.219	0.221	0.222	0.224	0.225	140
150	0.200	0.201	0.201	0.201	0.202	0.203	0.204	0.205	0.206	0.207	0.208	0.210	0.211	150
160	0.189	0.189	0.189	0.190	0.191	0.191	0.192	0.193	0.194	0.195	0.197	0.198	0.200	160
170	0.179	0.180	0.180	0.181	0.181	0.182	0.183	0.183	0.184	0.185	0.187	0.188	0.190	170
180	0.171	0.171	0.171	0.172	0.173	0.173	0.174	0.175	0.176	0.176	0.178	0.180	0.181	180
190	0.163	0.163	0.164	0.165	0.166	0.167	0.167	0.168	0.169	0.170	0.172	0.173	0.174	190
200	0.158	0.158	0.158	0.159	0.160	0.161	0.161	0.162	0.163	0.164	0.165	0.167	0.168	200
210	0.153	0.153	0.153	0.154	0.155	0.155	0.156	0.157	0.158	0.159	0.160	0.162	0.163	210
220	0.149	0.149	0.149	0.150	0.150	0.151	0.152	0.153	0.153	0.154	0.156	0.157	0.158	220
230	0.144	0.145	0.145	0.146	0.146	0.147	0.148	0.148	0.149	0.150	0.152	0.153	0.154	230
240	0.142	0.142	0.142	0.143	0.143	0.144	0.144	0.145	0.146	0.147	0.148	0.150	0.151	240
250	0.139	0.139	0.139	0.140	0.140	0.141	0.142	0.142	0.143	0.144	0.145	0.146	0.148	250
260	0.136	0.136	0.136	0.137	0.138	0.138	0.139	0.139	0.140	0.141	0.142	0.144	0.145	260
270	0.134	0.134	0.134	0.135	0.136	0.136	0.137	0.137	0.138	0.139	0.140	0.141	0.142	270
280	0.133	0.133	0.133	0.134	0.134	0.135	0.135	0.136	0.136	0.137	0.138	0.139	0.140	280
290	0.131	0.131	0.131	0.132	0.132	0.133	0.133	0.134	0.134	0.135	0.136	0.137	0.138	290
300	0.130	0.130	0.130	0.131	0.131	0.131	0.132	0.132	0.132	0.133	0.134	0.135	0.136	300
310	0.128	0.128	0.128	0.129	0.129	0.130	0.130	0.131	0.131	0.132	0.133	0.133	0.134	310
320	0.127	0.127	0.127	0.128	0.128	0.128	0.128	0.129	0.129	0.130	0.131	0.131	0.132	320
330	0.125	0.125	0.125	0.126	0.126	0.126	0.127	0.127	0.127	0.128	0.129	0.129	0.130	330
340	0.123	0.123	0.123	0.124	0.124	0.124	0.124	0.125	0.125	0.125	0.126	0.127	0.127	340
350	0.121	0.121	0.121	0.121	0.121	0.122	0.122	0.122	0.122	0.123	0.123	0.124	0.125	350
360	0.119	0.119	0.119	0.119	0.119	0.120	0.120	0.121	0.121	0.122	0.122	0.123	0.123	360
370	0.118	0.118	0.118	0.118	0.118	0.119	0.119	0.120	0.120	0.121	0.121	0.122	0.122	370
380	0.119	0.120	0.118	0.118	0.118	0.119	0.119	0.119	0.120	0.120	0.121	0.121	0.122	380
390	0.139	0.122	0.120	0.119	0.119	0.119	0.119	0.119	0.120	0.120	0.121	0.121	0.122	390
400	0.176	0.146	0.128	0.124	0.120	0.120	0.120	0.120	0.120	0.121	0.121	0.122	0.122	400
410	0.200	0.173	0.141	0.125	0.122	0.121	0.121	0.120	0.121	0.121	0.121	0.122	0.122	410
420	0.220	0.194	0.172	0.136	0.125	0.123	0.122	0.121	0.121	0.122	0.122	0.122	0.122	420
430	0.238	0.212	0.191	0.150	0.131	0.125	0.123	0.122	0.122	0.122	0.122	0.122	0.123	430
440	0.254	0.229	0.207	0.165	0.140	0.130	0.126	0.124	0.123	0.123	0.123	0.123	0.123	440
450	0.270	0.244	0.222	0.179	0.151	0.136	0.129	0.127	0.125	0.124	0.123	0.123	0.124	450
460	0.285	0.259	0.236	0.192	0.163	0.144	0.134	0.130	0.127	0.125	0.124	0.124	0.124	460
470	0.299	0.273	0.250	0.205	0.174	0.153	0.141	0.134	0.130	0.127	0.125	0.125	0.125	470
480	0.314	0.287	0.264	0.218	0.185	0.162	0.148	0.139	0.134	0.129	0.127	0.126	0.126	480
490	0.328	0.300	0.277	0.230	0.196	0.172	0.155	0.145	0.138	0.131	0.128	0.127	0.127	490
500	0.342	0.314	0.289	0.241	0.206	0.181	0.163	0.151	0.143	0.134	0.130	0.129	0.128	500
520	0.369	0.340	0.314	0.264	0.227	0.198	0.179	0.165	0.154	0.141	0.135	0.132	0.130	520
540	0.397	0.366	0.339	0.286	0.247	0.218	0.196	0.179	0.167	0.150	0.141	0.137	0.134	540
560	0.424	0.392	0.364	0.308	0.267	0.236	0.212	0.194	0.179	0.160	0.149	0.142	0.138	560
580	0.452	0.418	0.388	0.330	0.286	0.254	0.228	0.208	0.193	0.171	0.157	0.148	0.143	580
600	0.480	0.444	0.413	0.351	0.306	0.271	0.244	0.223	0.206	0.181	0.166	0.155	0.149	600
650	0.550	0.510	0.475	0.406	0.355	0.315	0.284	0.260	0.240	0.210	0.189	0.175	0.165	650
700	0.621	0.577	0.538	0.461	0.404	0.360	0.325	0.297	0.274	0.239	0.215	0.197	0.184	700
750	0.695	0.646	0.603	0.517	0.454	0.405	0.266	0.334	0.309	0.269	0.241	0.220	0.204	750
800	0.771	0.716	0.669	0.575	0.505	0.450	0.407	0.373	0.344	0.300	0.268	0.244	0.225	800
900	0.910	0.850	0.795	0.690	0.605	0.551	0.493	0.451	0.416	0.363	0.323	0.293	0.269	900
1000	1.08	1.01	0.949	0.817	0.719	0.644	0.582	0.533	0.492	0.428	0.380	0.344	0.316	1000

Table 8 Water and Steam; Thermal Conductivity × 10^3 W/m K

Temp. °C	Absolute Pressure bar 1	20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	Temp. °C
0	569	570	571	573	575	577	578	579	581	583	585	588	592	595	599	602	606	0
20	604	605	606	608	610	612	613	614	616	618	620	523	627	630	634	637	640	20
40	632	633	634	636	638	640	641	642	644	646	648	651	654	657	661	664	667	40
60	654	655	656	657	659	661	662	663	665	667	669	672	676	679	682	684	687	60
80	670	671	672	673	675	677	678	679	680	682	684	687	691	694	697	699	702	80
100	24.8	682	683	684	686	688	689	690	691	693	695	698	701	704	707	710	713	100
110	25.5	686	687	688	689	691	692	693	694	696	698	701	704	707	710	713	716	110
120	26.3	688	689	690	691	693	694	695	696	698	700	703	706	709	712	715	718	120
130	27.1	689	690	691	692	694	695	696	698	699	701	704	707	710	713	716	720	130
140	27.9	689	690	691	692	694	695	696	698	699	701	704	707	710	714	717	720	140
150	28.7	688	689	690	692	693	694	695	696	698	700	703	706	709	713	716	720	150
160	29.6	685	686	688	689	691	692	693	695	696	698	701	705	708	711	714	718	160
170	30.5	682	683	685	686	688	689	690	691	693	695	698	702	705	709	710	716	170
180	31.4	677	678	680	681	683	684	685	687	689	691	694	698	702	706	709	713	180
190	32.3	672	673	674	676	678	679	680	682	684	686	690	694	698	702	705	709	190
200	33.2	665	666	668	670	672	673	675	677	679	681	685	689	693	697	700	704	200
210	34.2	657	658	660	662	665	666	668	670	672	674	678	683	687	691	695	699	210
220	35.2	40.0	650	652	656	658	658	663	663	665	667	671	676	680	685	689	693	220
230	36.1	40.3	641	643	645	648	650	652	654	656	658	663	669	673	678	682	686	230
240	37.1	40.8	630	633	635	638	640	642	645	647	649	654	660	665	670	674	679	240
250	38.2	41.4	618	621	623	636	629	632	634	637	639	645	651	656	662	667	671	250
260	39.2	42.1	48.9	607	610	613	617	620	622	625	628	634	641	647	653	658	663	260
270	40.2	42.9	48.7	591	595	599	602	606	609	612	616	622	630	636	643	648	653	270
280	41.3	43.8	48.8	58.1	578	582	587	591	595	598	602	610	618	624	631	637	644	280
290	42.4	44.7	49.2	56.8	559	564	569	574	578	583	587	596	605	612	620	626	633	290
300	43.4	45.7	49.7	56.1	67.2	544	550	555	560	565	570	581	591	599	607	614	621	300
310	44.5	46.7	50.3	55.9	64.8	523	529	535	541	546	552	564	576	585	595	602	610	310
320	45.6	47.7	51.0	55.9	63.3	75.3	506	512	519	525	532	545	559	570	581	589	597	320
330	46.8	48.8	51.9	56.2	62.5	72.0	87.9	487	495	502	509	525	540	553	565	575	584	330
340	47.9	49.9	52.7	56.7	62.2	70.0	82.0	102.9	466	475	484	502	519	534	548	560	570	340
350	49.0	51.0	53.7	57.3	62.2	68.8	78.3	93.1	120.8	442	453	478	495	513	529	542	555	350
360	50.1	52.1	54.7	58.0	62.4	68.2	76.0	87.3	105.1	141.2	412	444	468	488	506	523	537	360
370	51.4	53.2	55.7	58.8	62.8	67.9	74.6	83.6	96.6	117.6	162.2	403	436	460	481	499	517	370
380	52.5	54.4	56.7	59.7	63.3	67.9	73.7	81.3	91.5	106.0	130.0	330	397	428	452	473	493	380
390	53.7	55.5	57.8	60.6	64.0	68.2	73.3	79.8	88.2	99.4	116.0	194	346	392	421	444	466	390
400	54.9	56.7	58.9	61.6	64.8	68.6	73.2	78.9	86.0	95.1	107	160	262	350	389	415	437	400
410	56.1	57.9	60.1	62.6	65.6	69.2	73.4	78.4	84.6	92.2	102	143	206	298	354	385	410	410
420	57.3	59.1	61.2	63.7	66.5	69.9	73.7	78.2	83.7	90.2	98.3	130	180	246	316	354	383	420
430	58.6	60.3	62.4	64.8	67.5	70.6	74.2	78.3	83.2	88.9	95.8	121	163	214	276	324	357	430
440	59.8	61.5	63.6	65.9	68.5	71.4	74.8	78.6	83.1	88.2	94.2	115	149	192	240	293	331	440
450	61.1	62.8	64.8	67.0	69.6	72.4	75.5	79.1	83.1	87.8	93.1	111	137	173	214	262	305	450
460	62.3	64.0	66.0	68.2	70.6	73.3	76.3	79.7	83.4	87.7	92.5	107	130	161	197	236	278	460
470	63.6	65.3	67.2	69.4	71.7	74.3	77.2	80.4	83.9	87.8	92.2	106	124	151	183	216	255	470
480	64.8	66.5	68.5	70.6	72.9	75.4	78.1	81.1	84.4	88.1	92.1	104	121	144	173	201	234	480
490	66.1	67.8	69.7	71.8	74.0	76.5	79.1	82.0	85.1	88.5	92.3	103	118	137	162	189	218	490
500	67.4	69.1	71.0	73.0	75.2	77.6	80.1	82.9	85.9	89.1	92.6	103	116	132	153	179	204	500
520	70.0	71.7	73.5	75.5	77.7	79.9	82.3	84.9	87.6	90.5	93.7	103	113	126	142	162	184	520
540	72.6	74.3	76.1	78.1	80.1	82.3	84.6	87.0	89.6	92.3	95.1	103	112	123	136	151	168	540
560	75.3	76.9	78.8	80.7	82.7	84.8	87.0	89.3	91.7	94.2	96.9	104	112	122	133	145	159	560
580	77.9	79.6	81.4	83.3	85.2	87.3	89.4	91.6	93.9	96.3	98.8	106	113	121	131	141	153	580
600	80.6	82.3	84.1	85.9	87.9	89.8	91.9	94.1	96.3	98.6	101	107	114	122	130	139	149	600
650	87.4	89.0	90.8	92.6	94.5	96.4	98.4	100	102	105	107	112	118	125	132	139	147	650
700	94.3	95.9	97.7	99.4	101	103	105	107	109	111	113	118	124	129	135	141	148	700
750	101	103	105	106	108	110	112	114	116	117	119	124	129	134	140	145	151	750
800	108	110	111	113	115	117	119	120	122	124	126	131	136	141	145	151	156	850
900	122	123	125	127	129	131	132	134	136	138	140	145	150	155	160	165	170	900
1000	135	136	138	140	142	144	145	147	149	151	153	158	163	168	173	178	183	1000

1 bar = 10^5 N/m²

Table 9 Water and Steam; Prandtl Number

t °C	1	50	100	150	200	250	300	350	400	450	500	t °C
	Absolute Pressure bar											
0	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	0
10	9.31	9.16	9.02	8.89	8.76	8.64	8.52	8.42	8.32	8.23	8.15	10
20	6.94	6.84	6.75	6.67	6.59	6.52	6.45	6.38	6.32	6.27	6.22	20
30	5.39	5.32	5.26	5.19	5.15	5.10	5.06	5.02	4.98	4.94	4.91	30
40	4.32	4.27	4.23	4.19	4.15	4.12	4.09	4.06	4.03	4.01	3.99	40
50	3.56	3.53	3.50	3.47	3.44	3.42	3.40	3.38	3.36	3.34	3.33	50
60	2.99	2.97	2.95	2.93	2.92	2.90	2.89	2.87	2.86	2.86	2.85	60
70	2.56	2.54	2.53	2.52	2.51	2.50	2.50	2.49	2.48	2.48	2.48	70
80	2.23	2.22	2.21	2.20	2.20	2.19	2.19	2.18	2.18	2.18	2.17	80
90	1.96	1.95	1.95	1.94	1.94	1.93	1.92	1.92	1.91	1.91	1.91	90
100	0.988	1.74	1.73	1.72	1.72	1.71	1.70	1.70	1.69	1.68	1.68	100
110	0.985	1.57	1.56	1.56	1.55	1.55	1.54	1.54	1.53	1.52	1.52	110
120	0.980	1.42	1.42	1.41	1.41	1.41	1.41	1.40	1.40	1.40	1.40	120
130	0.977	1.31	1.31	1.30	1.30	1.30	1.30	1.30	1.30	1.29	1.29	130
140	0.975	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20	140
150	0.975	1.13	1.13	1.13	1.12	1.12	1.12	1.12	1.12	1.12	1.12	150
160	0.970	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	160
170	0.967	1.01	1.01	1.01	1.00	0.999	0.998	0.996	0.995	0.994	0.993	170
180	0.965	0.964	0.962	0.959	0.957	0.955	0.954	0.952	0.950	0.949	0.948	180
190	0.963	0.929	0.927	0.924	0.921	0.919	0.917	0.915	0.913	0.912	0.911	190
200	0.962	0.908	0.899	0.895	0.892	0.889	0.887	0.885	0.882	0.881	0.881	200
210	0.959	0.887	0.877	0.873	0.869	0.865	0.862	0.860	0.858	0.856	0.855	210
220	0.956	0.868	0.862	0.856	0.851	0.847	0.844	0.841	0.838	0.836	0.834	220
230	0.956	0.857	0.850	0.844	0.839	0.833	0.828	0.824	0.821	0.819	0.817	230
240	0.953	0.853	0.843	0.836	0.829	0.824	0.819	0.814	0.810	0.807	0.804	240
250	0.950	0.855	0.843	0.834	0.825	0.818	0.811	0.806	0.801	0.797	0.794	250
260	0.948	0.860	0.848	0.836	0.825	0.814	0.808	0.801	0.795	0.790	0.786	260
270	0.947	1.43	0.861	0.845	0.830	0.819	0.809	0.801	0.793	0.788	0.783	270
280	0.945	1.34	0.883	0.863	0.843	0.829	0.816	0.808	0.797	0.789	0.781	280
290	0.942	1.28	0.914	0.887	0.861	0.843	0.826	0.813	0.801	0.792	0.783	290
300	0.942	1.23	0.960	0.923	0.887	0.864	0.841	0.826	0.811	0.800	0.789	300
310	0.940	1.19	1.02	0.971	0.922	0.891	0.860	0.840	0.820	0.806	0.793	310
320	0.938	1.15	1.62	1.04	0.970	0.928	0.886	0.860	0.834	0.818	0.802	320
330	0.936	1.13	1.49	1.13	1.03	0.974	0.919	0.885	0.851	0.830	0.810	330
340	0.935	1.10	1.41	1.29	1.13	1.03	0.960	0.915	0.871	0.844	0.818	340
350	0.934	1.10	1.37	2.11	1.30	1.11	1.01	0.951	0.892	0.858	0.825	350
360	0.933	1.09	1.33	1.81	1.79	1.27	1.10	1.02	0.931	0.888	0.846	360
370	0.929	1.08	1.29	1.65	3.21	1.69	1.26	1.09	0.991	0.927	0.879	370
380	0.929	1.06	1.24	1.53	2.23	4.30	1.54	1.23	1.09	0.994	0.926	380
390	0.926	1.04	1.20	1.44	1.88	5.80	2.37	1.50	1.22	1.08	0.992	390
400	0.924	1.03	1.16	1.36	1.68	2.90	4.49	1.95	1.42	1.20	1.08	400
410	0.923	1.01	1.13	1.30	1.54	2.02	3.59	2.66	1.68	1.35	1.17	410
420	0.921	1.00	1.10	1.24	1.45	1.75	2.47	2.97	2.01	1.52	1.29	420
430	0.919	0.971	1.08	1.20	1.37	1.61	1.97	2.58	2.27	1.71	1.41	430
440	0.917	0.980	1.06	1.17	1.31	1.49	1.73	2.13	2.28	1.86	1.52	440
450	0.915	0.972	1.05	1.14	1.26	1.40	1.59	1.83	2.08	1.92	1.62	450
460	0.914	0.965	1.03	1.11	1.21	1.34	1.49	1.64	1.85	1.87	1.68	460
470	0.912	0.959	1.02	1.09	1.18	1.28	1.41	1.53	1.67	1.75	1.67	470
480	0.911	0.952	1.00	1.06	1.15	1.23	1.34	1.45	1.53	1.63	1.62	480
490	0.910	0.947	0.933	1.05	1.12	1.20	1.28	1.38	1.45	1.52	1.55	490
500	0.908	0.941	0.983	1.03	1.09	1.16	1.24	1.32	1.39	1.44	1.48	500
520	0.905	0.932	0.965	1.01	1.05	1.10	1.17	1.21	1.29	1.33	1.35	520
540	0.902	0.923	0.950	0.983	1.02	1.06	1.12	1.16	1.21	1.25	1.28	540
560	0.899	0.916	0.937	0.963	0.993	1.02	1.07	1.10	1.14	1.17	1.20	560
580	0.897	0.909	0.926	0.947	0.971	1.00	1.03	1.06	1.09	1.12	1.12	580
600	0.894	0.903	0.917	0.932	0.952	0.972	1.00	1.02	1.05	1.07	1.10	600
650	0.89	0.89	0.90	0.91	0.91	0.92	0.94	0.96	0.97	0.98	1.00	650
700	0.88	0.88	0.88	0.88	0.88	0.89	0.90	0.91	0.91	0.92	0.93	700
750	0.88	0.88	0.87	0.87	0.87	0.87	0.88	0.88	0.88	0.89	0.89	750
800	0.88	0.87	0.86	0.86	0.86	0.86	0.85	0.85	0.85	0.86	0.86	800
900	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.82	0.81	0.81	0.80	900
1000	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.77	1000

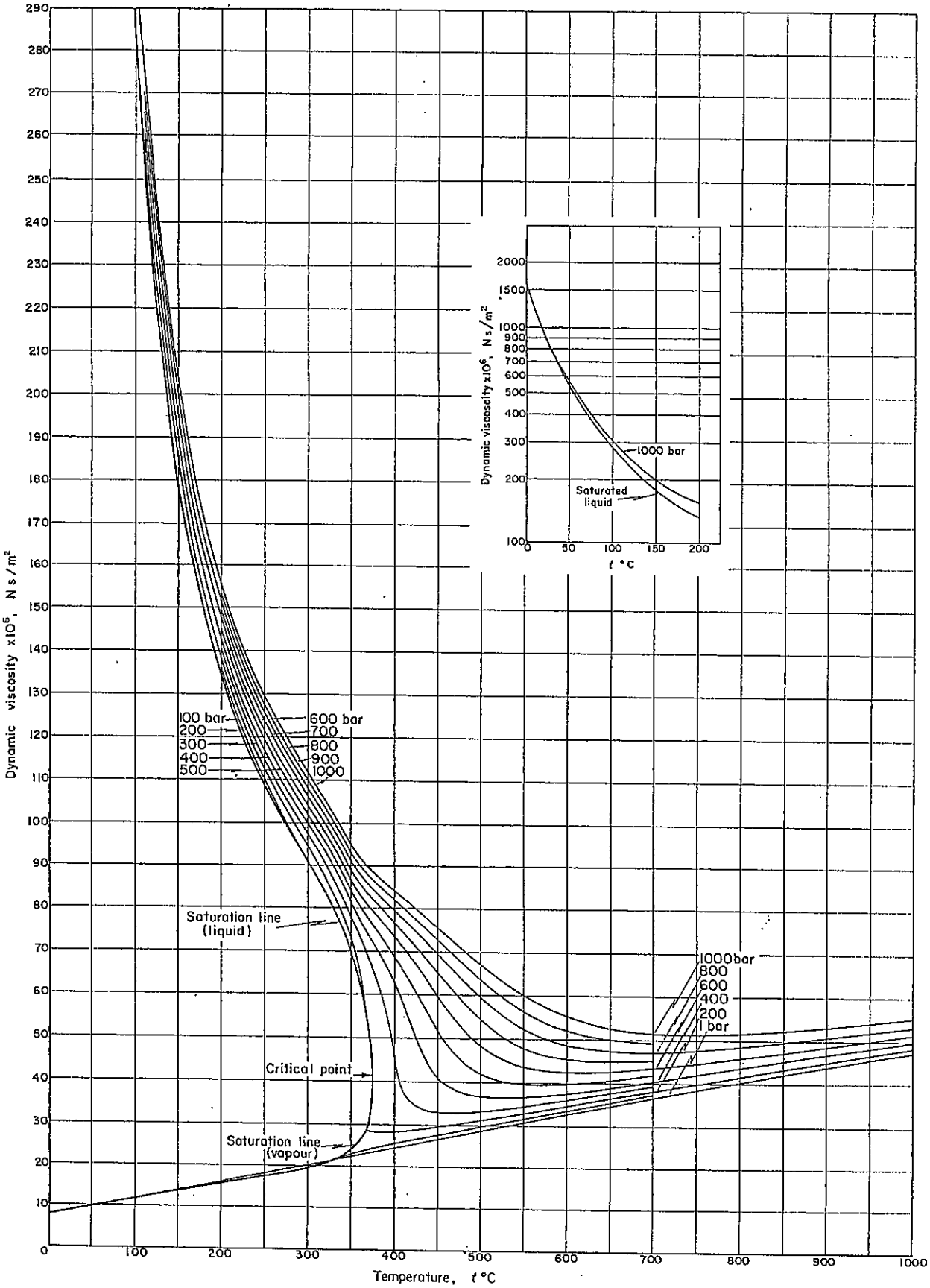


Fig. 1. Dynamic Viscosity of Water and Steam.

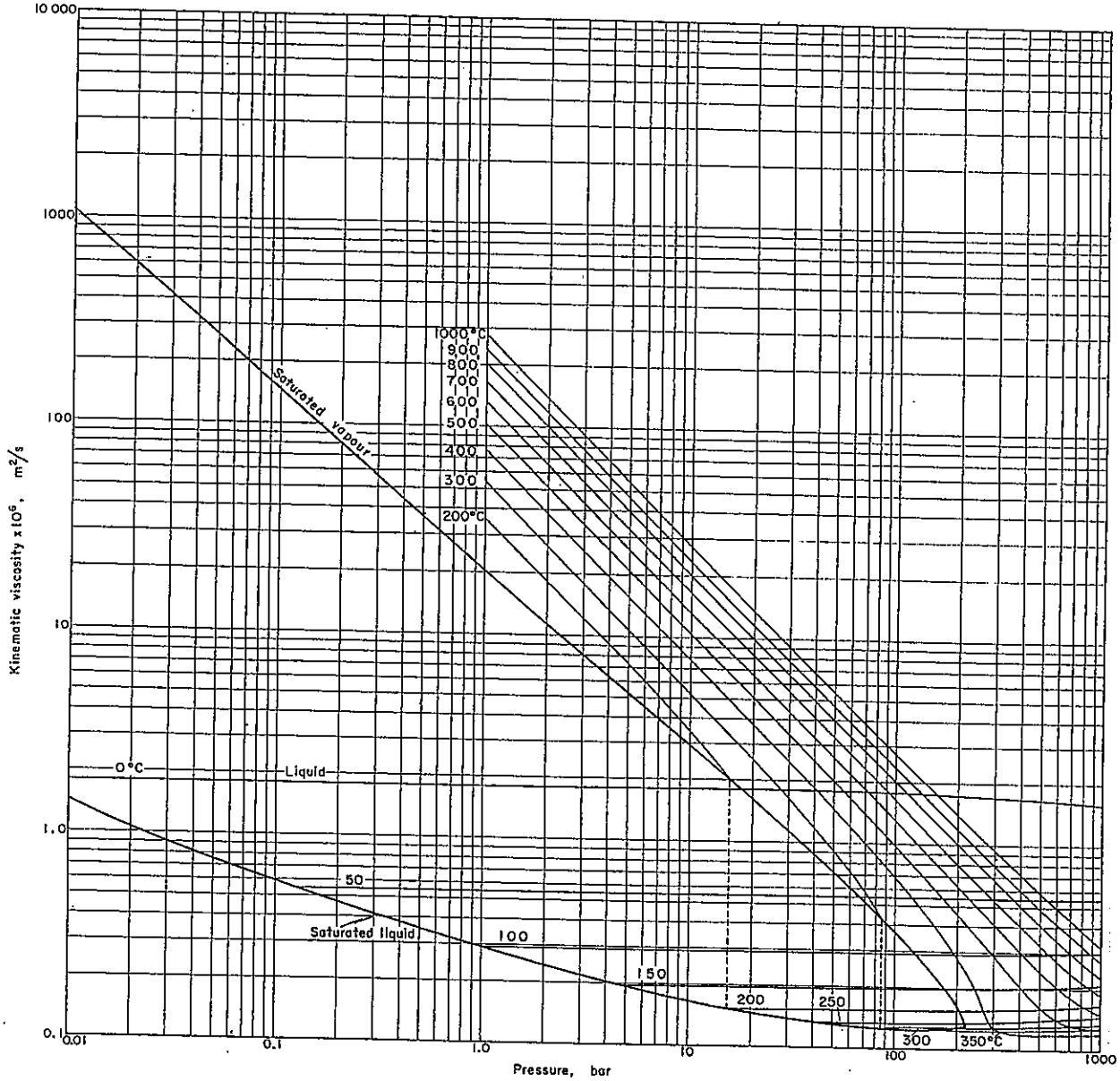


Fig. 2. Kinematic Viscosity of Water and Steam.

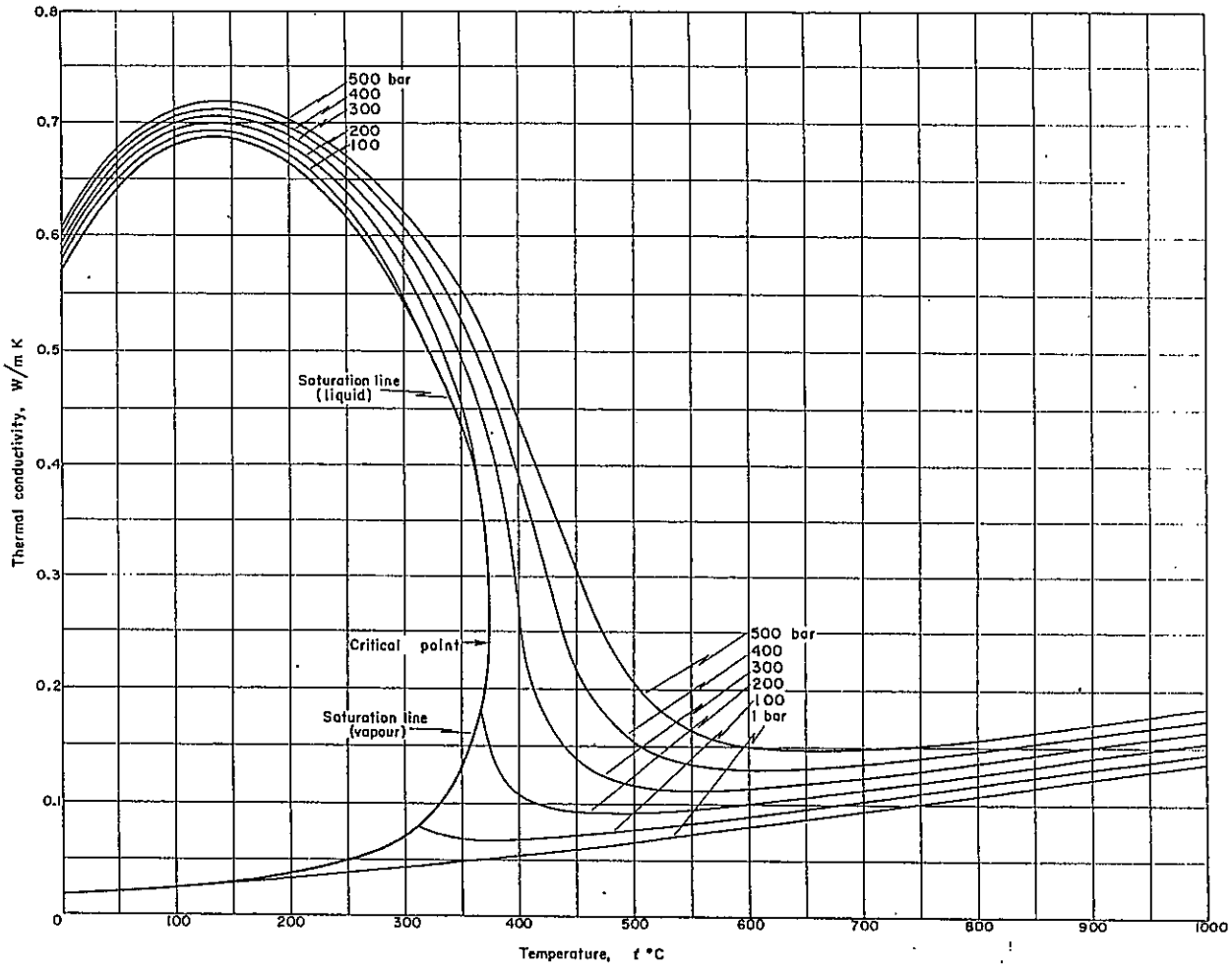


Fig. 3. Thermal Conductivity of Water and Steam.

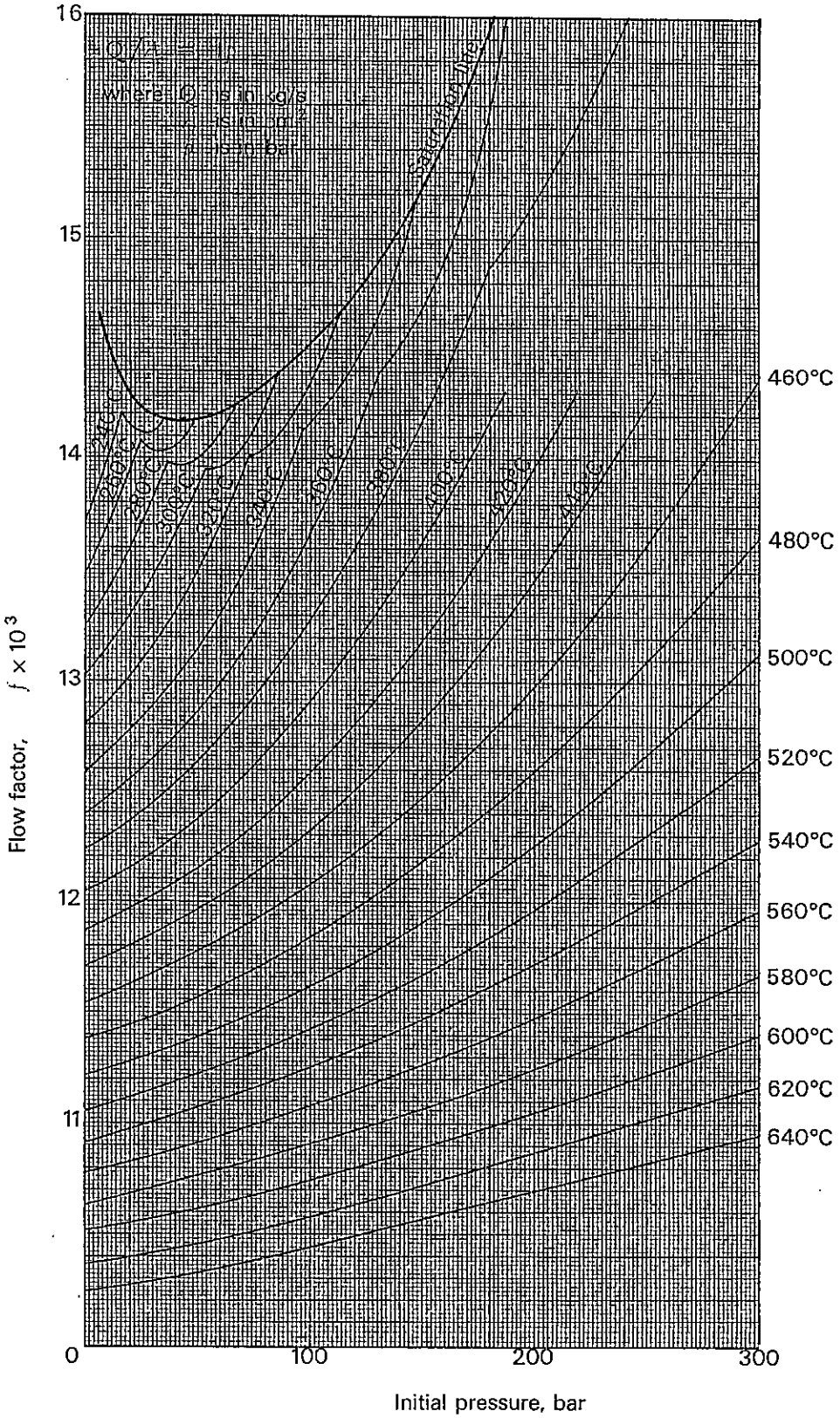


Fig. 4. Critical Mass Flow per Unit Area as a function of initial pressure and temperature.

Table 10 International Skeleton Table, 1963. Saturation Line

Temp. °C	Pressure bar	±	Specific Volume cm³/g Water	±	Specific Volume cm³/g Steam	±	Specific Enthalpy J/g Water	±	Specific Enthalpy J/g Steam	±	Temp. °C
0	0.006 108	0.000 006	1.000 21	0.000 05	206 288	210	−0.041 6	0.000 4	2501	3	0
0.01	0.006 112	0.000 006	1.000 21	0.000 05	206 146	210	0.000 611	0.000 001	2501	3	0.01
10	0.012 271	0.000 010	1.000 4	0.000 1	106 422	110	41.99	0.04	2519	3	10
20	0.023 368	0.000 020	1.001 8	0.000 1	57 836	58	83.86	0.08	2538	2	20
30	0.042 418	0.000 030	1.004 4	0.000 1	32 929	33	125.66	0.08	2556	2	30
40	0.073 750	0.000 038	1.007 9	0.000 1	19 546	19	167.47	0.08	2574	2	40
50	0.123 35	0.000 06	1.012 1	0.000 2	12 045	12	209.3	0.1	2592	2	50
60	0.199 19	0.000 10	1.017 1	0.000 2	7 677.6	7.7	251.1	0.1	2609	2	60
70	0.311 61	0.000 16	1.022 8	0.000 2	5 045.3	5.0	293.0	0.1	2626	2	70
80	0.473 58	0.000 24	1.029 0	0.000 3	3 408.3	3.4	334.9	0.2	2643	2	80
90	0.701 09	0.000 36	1.035 9	0.000 3	2 360.9	2.4	376.9	0.2	2660	2	90
100	1.013 25		1.043 5	0.000 3	1 673.0	1.7	419.1	0.2	2676	2	100
110	1.432 7	0.001 0	1.051 5	0.000 4	1 210.1	1.2	461.3	0.2	2691	2	110
120	1.985 4	0.001 3	1.060 3	0.000 4	891.71	0.89	503.7	0.2	2706	2	120
130	2.701 1	0.001 6	1.069 7	0.000 4	668.32	0.67	546.3	0.3	2720	2	130
140	3.613 6	0.002 1	1.079 8	0.000 4	508.66	0.51	589.1	0.3	2734	2	140
150	4.759 7	0.003 2	1.090 6	0.000 4	392.57	0.39	632.2	0.3	2747	3	150
160	6.180 4	0.004 2	1.102 1	0.000 4	306.85	0.31	675.5	0.3	2758	3	160
170	7.920 2	0.005 3	1.114 4	0.000 4	242.62	0.24	719.1	0.4	2769	3	170
180	10.027	0.007	1.127 5	0.000 4	193.85	0.19	763.1	0.4	2778	4	180
190	12.553	0.008	1.141 5	0.000 4	156.35	0.16	807.5	0.4	2786	4	190
200	15.550	0.008	1.156 5	0.000 4	127.19	0.13	852.4	0.4	2793	4	200
210	19.080	0.008	1.172 6	0.000 4	104.265	0.104	897.7	0.4	2798	4	210
220	23.202	0.009	1.190 0	0.000 4	86.062	0.086	943.7	0.4	2802	4	220
230	27.979	0.010	1.208 7	0.000 4	71.472	0.071	990.3	0.5	2803	4	230
240	33.480	0.012	1.229 1	0.000 4	59.674	0.060	1037.6	0.5	2803	4	240
250	39.776	0.013	1.251 2	0.000 4	50.056	0.050	1085.8	0.5	2801	4	250
260	46.941	0.015	1.275 5	0.000 4	42.149	0.042	1135.0	0.7	2796	4	260
270	55.052	0.017	1.302 3	0.000 4	35.599	0.036	1185.2	0.8	2790	4	270
280	64.191	0.020	1.332 1	0.000 4	30.133	0.030	1236.8	0.8	2780	4	280
290	74.449	0.022	1.365 5	0.000 5	25.537	0.030	1290	1	2766	4	290
300	85.917	0.024	1.403 6	0.000 7	21.643	0.035	1345	1	2749	4	300
310	98.694	0.030	1.447 5	0.000 7	18.316	0.035	1402	2	2727	5	310
320	112.89	0.03	1.499 2	0.000 7	15.451	0.035	1462	2	2700	6	320
330	128.64	0.04	1.562	0.001	12.967	0.035	1526	2	2666	6	330
340	146.08	0.04	1.639	0.001	10.779	0.035	1596	3	2623	7	340
350	165.37	0.04	1.741	0.001	8.805	0.035	1672	3	2565	8	350
360	186.74	0.05	1.894	0.004	6.943	0.040	1762	3	2481	8	360
370	210.53	0.05	2.22	0.02	4.93	0.10	1892	6	2331	12	370
371	213.06	0.10	2.29	0.02	4.68	0.10	1913	6	2305	14	371
372	215.63	0.11	2.38	0.03	4.40	0.11	1937	9	2273	16	372
373	218.2	0.1	2.51	0.04	4.05	0.12	1969	14	2230	18	373
374	220.9	0.1	2.80	0.15	3.47	0.12	2032	20	2146	30	374
374.15 ±0.10	221.2	0.1	3.17	0.15	3.17	0.15	2095	30	2095	30	374.15 ±0.10

Notes: The specific internal energy is made exactly zero for the liquid phase at the triple point.

The states here shown at 0 °C are metastable.

At a pressure of exactly 1.013 25 bar the saturation temperature has the exact assigned value of 100°C on the International Practical Scale of Temperature, 1948.

At a temperature of exactly 100°C on the Thermodynamic Celsius Scale the saturation pressure is 1.013 25 bar, with a tolerance of 0.000 04 bar.

Near the critical point, the tolerances on the specific volume and on the specific enthalpy in the vapour phase are correlated with the corresponding tolerances in the liquid phase. The tolerances on the changes in specific volume and in specific enthalpy on evaporation tend to zero as the critical point is approached.

Table 11 International Skeleton Table, 1963. Water and Steam; Specific Volume cm^3/g

Of each pair of figures the upper represents the adopted value and the lower the tolerance (±)

Pressure bar	Temperature, °C 0	50	100	150	200	250	300	350	375	400	Pressure bar
1	1.0002 .0001	1.0121 .0002	1696 1	1936 1	2173 2	2406 2	2639 2	2871 2	2987 2	3103 2	1
5	0.9999 .0002	1.0119 .0002	1.0433 .0002	1.0906 .0003	425.1 .4	474.4 .4	522.5 .4	570.1 .4	593.7 .4	617.2 .4	5
10	0.9997 .0002	1.0117 .0002	1.0431 .0002	1.0903 .0003	206.0 .3	232.7 .2	257.9 .2	282.4 .2	294.5 .2	306.5 .2	10
25	0.9989 .0002	1.0110 .0002	1.0423 .0002	1.0894 .0003	1.1556 .0003	87.0 .2	98.9 .1	109.7 .1	114.9 .1	120.0 .1	25
50	0.9976 .0002	1.0099 .0002	1.0410 .0002	1.0878 .0003	1.1531 .0003	1.2495 .0004	45.34 .07	51.93 .08	54.90 .09	57.76 .09	50
75	0.9964 .0002	1.0088 .0002	1.0398 .0003	1.0862 .0004	1.1507 .0004	1.2452 .0004	26.71 .05	32.44 .07	34.75 .08	36.91 .08	75
100	0.9952 .0002	1.0077 .0002	1.0386 .0004	1.0846 .0004	1.1483 .0004	1.2409 .0004	1.397 .001	22.44 .05	24.53 .05	26.40 .05	100
125	0.9940 .0002	1.0066 .0002	1.0373 .0004	1.0830 .0004	1.1460 .0004	1.2367 .0004	1.387 .001	16.14 .05	18.25 .04	20.01 .04	125
150	0.9928 .0002	1.0055 .0002	1.0361 .0004	1.0813 .0004	1.1436 .0004	1.2327 .0005	1.378 .001	11.49 .04	13.91 .04	15.65 .04	150
175	0.9915 .0002	1.0044 .0002	1.0348 .0004	1.0798 .0004	1.1414 .0004	1.2288 .0005	1.369 .001	1.716 .002	10.57 .04	12.46 .04	175
200	0.9904 .0002	1.0033 .0002	1.0336 .0004	1.0782 .0004	1.1391 .0004	1.2251 .0005	1.360 .001	1.665 .002	7.68 .03	9.95 .03	200
225	0.9892 .0002	1.0023 .0002	1.0324 .0004	1.0766 .0004	1.1369 .0004	1.2215 .0005	1.352 .001	1.630 .002	2.49 .04	7.86 .03	225
250	0.9880 .0002	1.0012 .0002	1.0313 .0004	1.0751 .0004	1.1347 .0004	1.2179 .0005	1.345 .001	1.600 .002	1.98 .02	6.00 .03	250
275	0.9868 .0002	1.0002 .0002	1.0301 .0004	1.0736 .0004	1.1326 .0004	1.2144 .0005	1.338 .001	1.576 .002	1.865 .010	4.19 .03	275
300	0.9856 .0002	0.9992 .0002	1.0289 .0004	1.0721 .0004	1.1304 .0004	1.2111 .0005	1.331 .001	1.555 .002	1.797 .008	2.82 .02	300
350	0.9834 .0002	0.9972 .0002	1.0267 .0004	1.0692 .0004	1.1264 .0004	1.2046 .0006	1.319 .001	1.519 .003	1.705 .006	2.111 .010	350
400	0.9811 .0002	0.9951 .0002	1.0244 .0004	1.0664 .0004	1.1224 .0004	1.1984 .0006	1.308 .001	1.489 .003	1.644 .005	1.912 .007	400
450	0.9788 .0002	0.9932 .0002	1.0222 .0004	1.0636 .0004	1.1186 .0004	1.1925 .0006	1.297 .001	1.464 .003	1.599 .005	1.804 .006	450
500	0.9766 .0002	0.9912 .0003	1.0200 .0004	1.0609 .0005	1.1148 .0005	1.1868 .0006	1.288 .001	1.443 .003	1.564 .005	1.731 .005	500
550	0.9745 .0003	0.9892 .0003	1.0178 .0004	1.0582 .0005	1.1111 .0005	1.1813 .0006	1.278 .001	1.424 .003	1.533 .005	1.677 .005	550
600	0.9723 .0003	0.9873 .0003	1.0157 .0004	1.0556 .0005	1.1075 .0005	1.1760 .0006	1.270 .001	1.407 .003	1.507 .005	1.634 .004	600
650	0.9703 .0003	0.9854 .0003	1.0137 .0004	1.0530 .0005	1.1040 .0005	1.1709 .0007	1.261 .001	1.393 .003	1.484 .005	1.599 .004	650
700	0.9682 .0003	0.9836 .0003	1.0116 .0004	1.0505 .0005	1.1006 .0005	1.1660 .0007	1.254 .001	1.380 .003	1.464 .005	1.569 .004	700
750	0.9662 .0003	0.9818 .0003	1.0096 .0004	1.0480 .0005	1.0973 .0005	1.1614 .0008	1.246 .001	1.367 .003	1.446 .004	1.543 .004	750
800	0.9642 .0003	0.9800 .0003	1.0076 .0004	1.0456 .0005	1.0941 .0005	1.1568 .0008	1.239 .001	1.355 .003	1.430 .004	1.519 .003	800
850	0.9622 .0003	0.9782 .0003	1.0057 .0004	1.0432 .0005	1.0910 .0005	1.1524 .0008	1.232 .002	1.345 .004	1.415 .004	1.498 .003	850
900	0.9603 .0003	0.9765 .0003	1.0038 .0004	1.0409 .0005	1.0879 .0005	1.1481 .0009	1.226 .002	1.334 .004	1.401 .004	1.480 .003	900
950	0.9584 .0003	0.9748 .0003	1.0019 .0004	1.0386 .0005	1.0848 .0005	1.1439 .0010	1.220 .003	1.324 .004	1.388 .004	1.463 .003	950
1000	0.9566 .0003	0.9731 .0003	1.0000 .0004	1.0363 .0005	1.0818 .0005	1.1398 .0012	1.214 .003	1.314 .004	1.376 .004	1.447 .003	1000

Note: The entry shown for 0 °C and 1 bar relates to a metastable liquid state. The stable state is here solid.

Pressure bar	Temperature, °C 425	450	475	500	550	600	650	700	750	800	Pressu bar
1	3218 2	3334 2	3450 2	3565 2	3797 2	4028 2	4259 2	4490 2	4721 2	4952 2	1
5	640.6 .4	664.1 .4	687.5 .4	710.8 .4	757.4 .4	803.9 .4	850.4 .4	896.9 .4	943.2 .4	989.6 .4	5
10	318.4 .2	330.3 .2	342.2 .2	354.0 .2	377.5 .2	401.0 .2	424.4 .2	447.7 .2	471.1 .2	494.3 .2	10
25	125.0 .1	130.0 .1	135.0 .1	139.9 .1	149.6 .1	159.2 .1	168.8 .2	178.3 .2	187.7 .2	197.2 .2	25
50	60.53 .09	63.24 .09	65.89 .09	68.50 .10	73.61 .10	78.62 .10	83.6 .1	88.4 .1	93.3 .1	98.1 .1	50
75	38.96 .08	40.93 .08	42.83 .08	44.69 .08	48.28 .08	51.76 .08	55.16 .08	58.52 .08	61.82 .08	65.09 .08	75
100	28.12 .05	29.73 .05	31.26 .06	32.76 .07	35.61 .07	38.32 .07	40.96 .08	43.55 .08	46.09 .08	48.58 .08	100
125	21.56 .04	22.98 .04	24.31 .04	25.59 .05	27.99 .05	30.26 .05	32.44 .06	34.56 .06	36.64 .07	38.68 .07	125
150	17.14 .04	18.45 .04	19.65 .04	20.80 .04	22.91 .04	24.88 .04	26.77 .05	28.59 .06	30.35 .06	32.09 .07	150
175	13.93 .03	15.19 .03	16.31 .03	17.36 .04	19.28 .04	21.04 .04	22.71 .04	24.31 .05	25.86 .05	27.38 .06	175
200	11.47 .03	12.71 .03	13.79 .03	14.78 .03	16.55 .03	18.16 .04	19.67 .04	21.11 .05	22.50 .05	23.85 .06	200
225	9.51 .03	10.76 .03	11.81 .03	12.76 .03	14.42 .03	15.92 .03	17.31 .04	18.62 .05	19.88 .05	21.10 .05	225
250	7.89 .02	9.17 .02	10.22 .02	11.14 .02	12.72 .02	14.12 .02	15.42 .03	16.63 .04	17.79 .05	18.91 .05	250
275	6.50 .02	7.85 .02	8.90 .02	9.79 .02	11.32 .02	12.65 .02	13.86 .03	15.00 .03	16.08 .04	17.11 .04	275
300	5.298 .020	6.736 .020	7.799 .020	8.682 .020	10.16 .02	11.43 .02	12.58 .02	13.64 .03	14.65 .03	15.62 .04	300
350	3.430 .012	4.956 .014	6.054 .014	6.928 .015	8.340 .016	9.516 .018	10.56 .02	11.52 .03	12.42 .03	13.27 .04	350
400	2.546 .009	3.686 .012	4.758 .012	5.620 .013	6.980 .014	8.086 .016	9.051 .018	9.93 .02	10.75 .03	11.52 .03	400
450	2.191 .007	2.916 .009	3.814 .010	4.628 .010	5.934 .011	6.982 .013	7.885 .015	8.70 .02	9.45 .02	10.16 .03	450
500	2.010 .006	2.492 .006	3.170 .008	3.884 .008	5.114 .010	6.108 .012	6.960 .014	7.72 .02	8.42 .02	9.07 .03	500
550	1.896 .005	2.245 .005	2.750 .006	3.342 .007	4.464 .008	5.404 .010	6.209 .012	6.93 .02	7.58 .02	8.19 .02	550
600	1.816 .004	2.085 .004	2.474 .005	2.950 .006	3.950 .008	4.831 .009	5.592 .011	6.27 .02	6.89 .02	7.46 .02	600
650	1.756 .004	1.976 .004	2.283 .005	2.672 .005	3.543 .007	4.360 .008	5.080 .010	5.72 .02	6.31 .02	6.85 .02	650
700	1.706 .004	1.892 .004	2.144 .004	2.466 .005	3.221 .006	3.971 .007	4.648 .009	5.26 .01	5.81 .02	6.32 .02	700
750	1.665 .004	1.828 .004	2.040 .004	2.310 .005	2.965 .006	3.648 .007	4.283 .008	4.86 .01	5.39 .02	5.87 .02	750
800	1.631 .003	1.775 .004	1.958 .004	2.189 .004	2.760 .006	3.380 .007	3.972 .008	4.52 .01	5.02 .01	5.48 .02	800
850	1.602 .003	1.731 .003	1.892 .004	2.092 .004	2.594 .005	3.155 .006	3.706 .008	4.22 .01	4.70 .01	5.14 .02	850
900	1.576 .003	1.693 .003	1.837 .004	2.014 .004	2.458 .005	2.966 .006	3.478 .007	3.97 .01	4.42 .01	4.84 .02	900
950	1.552 .003	1.660 .003	1.790 .004	1.948 .004	2.344 .005	2.806 .006	3.282 .007	3.74 .01	4.17 .01	4.57 .02	950
1000	1.530 .003	1.630 .003	1.750 .004	1.892 .004	2.248 .005	2.670 .005	3.111 .006	3.54 .01	3.95 .01	4.34 .02	1000

Table 12 International Skeleton Table, 1963. Water and Steam; Specific Enthalpy J/g

Of each pair of figures the upper represents the adopted value and the lower the tolerance (±)

Pressure bar	Temperature, °C 0	50	100	150	200	250	300	350	375	400	Pressure bar
0	2502 2	2595 2	2689 2	2784 2	2880 2	2978 2	3077 2	3178 2	3229 2	3280 2	0
1	0.06 .01	209.3 .1	2676 2	2777 2	2876 2	2975 2	3074 3	3175 3	3227 3	3278 3	1
5	0.47 .02	209.6 .2	419.4 .2	632.2 .3	2857 3	2961 3	3064 4	3168 4	3220 4	3272 4	5
10	0.98 .02	210.1 .2	419.7 .4	632.4 .4	2830 4	2943 3	3051 4	3158 4	3211 4	3264 4	10
25	2.50 .05	211.3 .2	421.0 .4	633.4 .4	852.8 .4	2881 5	3009 5	3126 4	3184 4	3240 4	25
50	5.05 .10	213.5 .2	422.8 .4	634.9 .4	853.8 .4	1085.8 .5	2925 5	3068 5	3134 4	3196 4	50
75	7.58 .15	215.7 .2	424.7 .4	636.5 .4	855.0 .5	1085.9 .5	2814 6	3003 5	3079 4	3149 4	75
100	10.1 .2	217.9 .2	426.6 .4	638.1 .4	856.1 .5	1086.0 .5	1343 1	2924 5	3017 4	3098 4	100
125	12.6 .3	220.0 .2	428.5 .4	639.7 .4	857.2 .5	1086.1 .6	1340 1	2826 6	2946 6	3041 5	125
150	15.1 .3	222.1 .2	430.4 .4	641.3 .4	858.3 .5	1086.3 .6	1338 1	2692 8	2861 8	2978 6	150
175	17.6 .4	224.3 .3	432.3 .4	642.9 .4	859.5 .5	1086.5 .6	1336 1	1663 3	2755 8	2905 6	175
200	20.1 .4	226.5 .3	434.2 .4	644.5 .4	860.6 .6	1086.8 .6	1334 1	1646 3	2605 8	2819 8	200
225	22.6 .5	228.6 .3	436.1 .4	646.1 .4	861.8 .6	1087.3 .7	1332 1	1633 3	1980 12	2715 8	225
250	25.1 .5	230.7 .3	438.0 .4	647.7 .4	863.0 .6	1087.7 .8	1331 1	1623 3	1850 8	2580 8	250
275	27.5 .5	232.8 .3	439.9 .4	649.3 .4	864.2 .6	1088.2 .8	1330 1	1615 3	1814 8	2383 8	275
300	30.0 .5	235.0 .3	441.8 .4	650.9 .4	865.4 .6	1088.7 .8	1329 1	1609 3	1791 6	2157 8	300
350	34.9 .6	239.2 .3	445.6 .4	654.1 .4	867.9 .6	1090 1	1327 1	1598 3	1762 6	1992 8	350
400	39.7 .7	243.5 .3	449.4 .4	657.4 .4	870.4 .6	1091 1	1325 1	1590 3	1743 6	1934 8	400
450	44.6 .8	247.7 .4	453.2 .4	660.7 .4	873.0 .6	1092 1	1324 1	1582 3	1729 6	1901 8	450
500	49.3 .8	252.0 .4	457.0 .4	664.0 .4	875.6 .6	1094 1	1324 2	1577 3	1717 6	1878 8	500
550	54.1 .8	256.2 .4	460.8 .4	667.3 .4	878.4 .6	1096 1	1323 2	1572 3	1709 6	1860 8	550
600	58.8 .9	260.4 .4	464.6 .4	670.6 .4	881.1 .7	1097 1	1323 2	1568 3	1702 6	1847 8	600
650	63.5 1.0	264.6 .4	468.4 .4	674.0 .5	883.8 .8	1099 1	1323 2	1565 3	1696 6	1836 8	650
700	68.1 1.0	268.8 .5	472.1 .5	677.3 .5	886.6 .8	1101 1	1323 2	1562 3	1691 6	1828 8	700
750	72.7 1.1	273.0 .6	476.0 .5	680.7 .5	889.3 .9	1103 1	1324 2	1560 4	1687 6	1820 8	750
800	77.3 1.2	277.1 .7	479.8 .7	684.0 .7	892.2 .9	1105 1	1324 2	1559 4	1684 6	1814 8	800
850	81.9 1.2	281.3 .8	483.6 .8	687.4 .8	895.0 1.0	1107 2	1325 2	1557 4	1681 6	1808 8	850
900	86.5 1.2	285.4 .9	487.3 .9	690.8 .9	898.0 1.0	1109 2	1326 2	1557 4	1678 6	1804 8	900
950	91.1 1.2	289.6 1.0	491.2 1.0	694.2 1.0	900.9 1.3	1111 2	1327 3	1556 5	1676 6	1799 8	950
1000	95.7 1.2	293.7 1.2	495.0 1.2	697.6 1.2	903.8 1.5	1114 2	1328 3	1555 5	1674 6	1796 8	1000

Notes: The specific internal energy is made exactly zero for the liquid phase at the triple point.
The entry shown for 0°C and 1 bar relates to a metastable liquid state. The stable state is here solid.

Pressure bar	Temperature, °C 425	450	475	500	550	600	650	700	750	800	Pressure bar
0	3332 2	3384 2	3436 2	3489 2	3597 3	3706 3	3817 4	3929 4	4043 4	4159 4	0
1	3330 3	3383 3	3435 3	3488 3	3596 3	3705 3	3816 4	3928 4	4043 4	4159 4	1
5	3325 4	3377 4	3430 4	3484 4	3592 4	3702 4	3813 4	3926 4	4040 4	4157 4	5
10	3317 4	3371 4	3425 4	3478 4	3587 5	3698 5	3810 5	3923 5	4038 6	4155 6	10
25	3295 4	3350 4	3406 4	3462 4	3574 5	3686 5	3799 5	3914 6	4030 6	4147 6	25
50	3257 4	3317 4	3375 4	3434 4	3550 5	3666 5	3782 5	3898 6	4016 6	4136 6	50
75	3216 4	3280 4	3342 4	3404 4	3526 5	3645 6	3764 6	3883 6	4003 6	4124 6	75
100	3172 4	3242 4	3309 4	3374 4	3501 6	3625 8	3747 8	3868 8	3990 8	4112 8	100
125	3125 4	3201 4	3273 4	3343 5	3476 8	3604 10	3729 10	3852 10	3976 10	4100 10	125
150	3073 5	3157 5	3235 5	3310 5	3450 8	3582 10	3711 10	3836 10	3962 10	4089 10	150
175	3017 6	3111 6	3196 6	3277 6	3423 8	3560 10	3692 10	3821 11	3949 11	4077 11	175
200	2955 6	3062 6	3155 6	3241 6	3396 8	3538 10	3673 10	3805 11	3935 11	4065 11	200
225	2885 6	3009 6	3112 6	3205 6	3368 8	3515 10	3654 10	3789 11	3922 11	4053 12	225
250	2807 6	2952 6	3066 6	3167 6	3339 8	3492 10	3635 10	3773 12	3908 12	4041 13	250
275	2718 6	2890 6	3018 6	3125 6	3308 8	3467 10	3615 10	3757 12	3894 13	4030 13	275
300	2614 6	2822 6	2967 6	3084 6	3278 8	3444 10	3596 10	3740 13	3880 13	4018 13	300
350	2375 6	2672 6	2858 6	2998 6	3216 8	3396 10	3557 10	3708 13	3853 13	3994 13	350
400	2203 6	2514 6	2741 6	2906 6	3153 8	3347 10	3518 10	3676 13	3826 13	3971 14	400
450	2115 6	2380 6	2624 6	2813 6	3088 8	3298 10	3478 10	3643 13	3798 13	3948 13	450
500	2064 6	2288 6	2522 6	2723 6	3023 8	3249 10	3439 10	3611 13	3771 13	3925 14	500
550	2030 8	2228 8	2439 8	2641 8	2960 8	3200 10	3400 10	3579 13	3744 13	3902 14	550
600	2005 8	2183 8	2378 8	2571 8	2900 8	3153 10	3362 10	3547 13	3718 13	3879 13	600
650	1986 8	2151 8	2330 8	2514 8	2844 8	3107 10	3324 10	3516 13	3692 13	3857 15	650
700	1971 8	2126 8	2294 8	2468 8	2793 8	3062 10	3288 10	3486 13	3666 14	3836 16	700
750	1958 8	2106 8	2265 8	2430 8	2748 8	3021 10	3253 10	3456 13	3641 15	3814 17	750
800	1948 8	2090 8	2241 8	2399 8	2709 8	2983 10	3219 10	3428 13	3617 15	3793 18	800
850	1938 8	2077 8	2222 8	2373 8	2674 8	2948 10	3187 10	3400 13	3593 16	3773 19	850
900	1932 8	2065 8	2206 8	2351 8	2644 8	2916 10	3157 10	3373 13	3570 16	3753 20	900
950	1925 8	2056 8	2193 8	2333 8	2618 8	2887 10	3129 10	3348 13	3548 16	3734 20	950
1000	1920 8	2047 8	2181 8	2318 8	2595 8	2861 10	3103 10	3324 13	3527 16	3715 20	1000

Table 13 International Skeleton Table, 1964. Water and Steam; Dynamic Viscosity micropoise

Of each pair of figures the upper represents the adopted value and the lower the tolerance (±)

Pressure bar	Temperature, °C 0	50	100	150	200	250	300	350	375	400	425	450	475	500	550	600	650	700	Pressure bar
1	17500 400	5440 140	121.1 1.2	141.5 1.4	161.8 1.6	182.2 1.8	202.5 2.0	223 7	233 7	243 7	253 8	264 8	274 8	284 8	304 9	325 10	345 10	365 11	1
5	17500 400	5440 140	2790 70	1810 50	160.2 1.6	181.4 1.8	202.3 2.0		234 9	244 10	254 10	264 11	274 11	284 11	305 12	325 13	345 14	366 15	5
10	17500 400	5440 140	2790 70	1810 50	158.5 1.6	180.6 1.8	202.2 2.0		234 9	244 10	255 10	265 11	275 11	285 11	305 12	326 13	346 14	366 15	10
25	17500 400	5440 140	2800 70	1820 50	1340 30	177.8 1.8	201.6 2.0		236 9	246 10	256 10	266 11	276 11	287 12	307 12	327 13	347 14	367 15	25
50	17500 400	5450 140	2800 70	1820 50	1350 30	1070 30	200.6 2.0		240 10	250 10	259 10	269 11	279 11	289 12	309 12	329 13	349 14	369 15	50
75	17500 400	5450 140	2800 70	1830 50	1350 30	1080 30	199.2 2.0		244 10	253 10	263 10	273 11	282 11	292 12	312 12	332 13	352 14	372 15	75
100	17500 400	5450 140	2810 70	1830 50	1360 30	1080 30	905 23		249 10	258 10	267 11	276 11	286 11	295 12	315 13	334 13	354 14	374 15	100
125	17500 400	5460 140	2810 70	1840 50	1360 30	1090 30	911 23		254 10	263 10	271 11	280 11	289 12	299 12	318 13	337 14	357 14	376 15	125
150	17400 400	5460 140	2820 70	1840 50	1370 30	1100 30	917 23		262 11	269 11	276 11	285 11	294 12	302 12	321 13	340 14	359 14	379 15	150
175	17400 400	5460 140	2820 70	1850 50	1380 30	1100 30	924 23		273 11	276 11	282 11	290 12	298 12	307 12	324 13	343 14	362 14	381 15	175
200	17400 400	5460 140	2830 70	1860 50	1380 40	1110 30	930 23	735 29	291 12	286 11	289 12	296 12	303 12	311 12	328 13	346 14	365 15	384 15	200
225	17400 400	5460 140	2830 70	1860 50	1390 40	1120 30	936 23	747 30	491 20	299 12	298 12	302 12	309 12	316 13	332 13	350 14	368 15	386 15	225
250	17400 400	5470 140	2840 70	1870 50	1390 40	1120 30	943 24	760 30	597 24	321 13	309 12	310 12	315 13	321 13	336 13	353 14	371 15	389 16	250
275	17400 400	5470 140	2840 70	1870 50	1400 40	1130 30	949 24	772 31	633 25	367 15	324 13	320 13	322 13	327 13	341 14	357 14	374 15	392 16	275
300	17400 400	5470 140	2850 70	1880 50	1400 40	1130 30	955 24	785 31	657 26	458 18	345 14	331 13	330 13	334 13	346 14	361 14	377 15	395 16	300
350	17300 400	5480 140	2860 70	1890 50	1420 40	1150 30	968 24	805 32	693 28	573 23	416 17	363 14	351 14	349 14	357 14	369 15	385 15	401 16	350
400	17300 700	5480 200	2870 120	1900 80	1430 60	1160 50	981 39	825 33	721 29	628 25	503 20	411 16	379 15	369 15	369 15	379 15	392 16	408 16	400
450	17300 700	5490 220	2880 120	1910 80	1440 60	1170 50	993 40	837 33	743 30	664 27	565 23	468 19	415 17	393 16	383 15	389 16	401 16	415 17	450
500	17200 700	5490 220	2890 120	1920 80	1450 60	1180 50	1010 40	850 34	762 30	693 28	609 24	521 21	456 18	421 17	400 16	401 16	410 16	423 17	500
550	17200 700	5500 220	2900 120	1930 80	1460 60	1200 50	1020 40	860 34	780 31	716 29	643 26	564 23	497 20	453 18	418 17	414 16	420 17	431 17	550
600	17200 700	5500 220	2910 120	1940 80	1480 60	1210 50	1030 40	870 35	795 32	736 29	670 27	600 24	534 21	485 19	439 18	428 17	430 17	439 18	600
650	17200 700	5510 220	2920 120	1960 80	1490 60	1220 50	1040 40	882 35	809 32	754 30	693 28	629 25	567 23	516 21	460 18	442 18	441 18	448 18	650
700	17100 700	5510 220	2930 120	1970 80	1500 60	1230 50	1060 40	895 36	822 33	770 31	713 28	654 26	596 24	545 22	482 19	458 18	453 18	458 18	700
750	17100 700	5520 220	2940 120	1980 80	1510 60	1240 50	1070 40	905 36	835 33	784 31	732 29	676 27	621 25	572 23	504 20	474 19	466 19	468 19	750
800	17100 700	5520 220	2950 120	1990 80	1520 60	1260 50	1080 40	915 37	846 34	798 32	748 30	695 28	644 26	596 24	526 21	491 20	478 19	478 19	800

Notes: The entry shown for 0°C and 1 bar relates to a metastable liquid state. The stable state is here solid.
The values and the tolerances in the region of the critical point do not take into account the possibility of an anomalous behaviour of the viscosity in the immediate neighbourhood of the critical point.

Table 14 International Skeleton Table, 1964. Water and Steam; Thermal Conductivity mW/m K

Of each pair of figures the upper represents the adopted value and the lower the tolerance (±)

Pressure bar	Temperature, °C 0	50	100	150	200	250	300	350	375	400	425	450	475	500	550	600	650	700	Pr
1	569	643	24.8	28.7	33.2	38.2	43.4	49.0	51.9	54.9	58.0	61.1	64.2	67.4	73.9	80.6	87.4	94.3	
	11	13	0.8	0.9	1.0	1.1	1.3	1.5	1.6	1.6	2.3	2.4	2.6	2.7	3.0	3.2	3.5	3.8	
5	569	644	681	687	33.8	38.6	43.8	49.4	52.3	55.3	58.3	61.4	64.5	67.7	74.3	80.9	87.7	94.6	
	11	13	14	14	2.0	2.3	2.6	3.0	3.1	3.3	3.5	3.7	3.9	4.1	4.5	4.9	5.3	5.7	
10	570	644	681	687	35.1	39.3	44.4	49.9	52.8	55.7	58.8	61.8	65.0	68.2	74.7	81.4	88.2	95.0	
	11	13	14	14	2.1	2.4	2.7	3.0	3.2	3.3	3.5	3.7	3.9	4.1	4.5	4.9	5.3	5.7	
25	571	645	682	688	665	42.9	46.5	51.6	54.3	57.2	60.2	63.3	66.4	69.6	76.1	82.7	89.5	96.3	
	11	13	14	14	13	2.6	2.8	3.1	3.3	3.4	3.6	3.8	4.0	4.2	4.6	5.0	5.4	5.8	
50	573	647	684	690	668	618	52.5	55.4	57.6	60.2	63.0	65.9	68.9	72.0	78.4	85.0	91.7	98.6	
	11	13	14	14	13	12	3.2	3.3	3.5	3.6	3.8	4.0	4.1	4.3	4.7	5.1	5.5	5.9	
75	575	649	686	691	670	622	63.7	60.8	62.0	63.9	66.3	68.9	71.7	74.7	80.9	87.4	94.0	101	
	11	13	14	14	13	12	3.8	3.6	3.7	3.8	4.0	4.1	4.3	4.5	4.9	5.2	5.6	6	
100	577	651	688	693	672	625	545	68.8	67.9	68.6	70.2	72.4	74.9	77.6	83.5	89.8	96.4	103	1
	12	13	14	14	13	13	11	4.1	4.1	4.1	4.2	4.3	4.5	4.7	5.0	5.4	5.8	6	
125	579	653	689	695	674	629	552	81.3	75.9	74.5	74.9	76.4	78.4	80.8	86.3	92.4	98.9	105	1
	12	13	14	14	13	13	11	4.9	4.6	4.5	4.5	4.6	4.7	4.8	5.2	5.5	5.9	6	
150	581	655	691	696	676	633	559	104	87.5	82.2	80.7	81.0	82.4	84.3	89.3	95.1	101	108	1
	12	13	14	14	14	13	11	6	5.3	4.9	4.8	4.9	4.9	5.1	5.4	5.7	6	6	
175	583	657	693	698	679	636	565	442	106	92.6	87.9	86.5	86.9	88.3	92.5	98.0	104	110	1
	12	13	14	14	14	13	11	22	6	5.6	5.3	5.2	5.2	5.3	5.6	5.9	6	7	
200	585	659	695	700	681	639	571	454	126	107	96.9	93.1	92.1	92.6	96.0	101	107	113	2
	12	13	14	14	14	13	11	23	13	6	5.8	5.6	5.5	5.6	5.8	6	6	7	
225	587	661	696	701	683	642	577	465	297	130	109	101	98.1	97.4	99.6	104	110	115	2
	12	13	14	14	14	13	12	23	30	8	7	6	5.9	5.8	6	6	7	7	
250	589	662	698	703	685	646	582	476	376	157	125	111	105	103	104	107	112	118	2
	12	13	14	14	14	13	12	24	38	16	8	7	6	6	6	6	7	7	
275	591	664	699	705	687	649	588	486	402	200	147	123	113	109	108	111	115	121	2
	12	13	14	14	14	13	12	24	40	20	9	7	7	7	6	7	7	7	
300	592	666	701	706	689	652	592	496	419	264	171	138	122	116	112	114	118	124	3
	12	13	14	14	14	13	12	25	42	26	17	8	7	7	7	7	7	7	
350	596	669	704	710	693	657	601	514	444	351	239	182	147	132	122	122	125	129	3
	12	13	14	14	14	13	12	26	44	35	24	11	9	8	7	7	7	8	
400	599	672	707	713	697	662	609	529	468	390	296	220	177	153	134	130	132	135	4
	12	13	14	14	14	13	12	26	47	39	30	22	18	9	8	8	8	8	
450	603	675	710	716	701	667	616	541	486	416	338	264	210	180	148	139	139	142	4
	12	13	14	14	14	13	12	27	49	42	34	26	21	11	9	8	8	8	
500	606	678	713	720	704	671	622	552	501	436	370	301	246	206	163	149	147	148	5
	12	14	14	14	14	13	12	28	50	44	37	30	25	21	10	9	9	9	

Notes The entry shown for 0°C and 1 bar relates to a metastable liquid state. The stable state is here solid.
The values and the tolerances in the region of the critical point do not take into account the possibility of an anomalous behaviour of the thermal conductivity in the immediate neighbourhood of the critical point.

Appendix 1

The 1967 IFC Formulation for Industrial Use

A formulation of the thermodynamic properties of ordinary water substance
Prepared by the International Formulation Committee (IFC)

Unrestricted publication allowed in all countries

Introduction

With the increasing use of digital computers, particularly in complicated calculations relating to plant design and cycle optimization, it has become necessary to have a *formulation* of the thermodynamic properties of water substance convenient for industrial use.

The various thermodynamic properties are not independent of each other. For example, when the pressure p and temperature T are chosen as the independent variables of the formulation, then expressions (here called *derived functions*) for the specific volume, entropy, enthalpy and all other thermodynamic properties may be derived directly by partial differentiation of the so-called *canonical (or characteristic) function* $g = g\ (p,\ T)$, where g is the specific free enthalpy (Gibbs function). Similarly, when the specific volume v and temperature T are chosen as the independent variables, then expressions for the pressure, specific entropy, enthalpy and all other thermodynamic properties may be derived directly by partial differentiation of the *canonical function* $f = f\ (v,\ T)$, where f is the specific free energy (Helmholtz function). The formulation is presented in terms of these canonical functions, thereby maintaining thermodynamic consistency.

The canonical functions provide the definitive expression of the formulation. The derived functions are for practical use and are secondary to the canonical functions.

The formulation presented herein describes the thermodynamic properties of ordinary water substance throughout the whole of the region that extends in pressure from the ideal-gas limit (at zero pressure) to a pressure of 10^8 N/m^2 (1000 bar), and that extends in temperature from 273.16 K (0.01 °C) to 1073.15 K (800 °C).

This whole region is divided into six *sub-regions*, numbered 1 to 6 and shown on the temperature–entropy plane in Fig. A1 and on the pressure–temperature plane in Fig. A2.

Section 1 of this Statement lists the *physical quantities*, defines the *quantity symbols* and *units* used in the formulation, and defines certain *constant quantities* with the aid of which the expressions are presented in terms of reduced dimensionless variables.

Section 2 presents the *reduced dimensionless quantities* and also the required *thermodynamic relations* by means of which expressions for the derived functions can be obtained from the given canonical functions.

Section 3 specifies the sub-regions, which are identified by numbers, and gives information relating to equations which define the boundaries between sub-regions. These equations are identified by the letters K and L, the K- function being the equation for the saturation line and the L-function being the equation for a boundary between two sub-regions in the single-phase region.

Section 4 gives the specification for the *sub-formulation* to be used in each sub-region. Each such sub-formulation comprises the canonical function relevant to the sub-region, together with derived functions.

Section 5 presents the function giving the saturation line, which also serves as a boundary between sub-regions. This function is identified by the letter K.

Section 6 presents the canonical functions, which are identified by the letters A, B, C and D. The canonical parts of the sub-formulations set out in Section 4 each comprise one or more of these principal canonical functions.

Section 7 gives the values of the constants of the formulation. Most of these values are given numerically; a few, which are derived from other constants, are given symbolically.

The material in sections 1 to 7 is sufficient and necessary to specify the formulation.

Section 8 gives the numerical values of the derived constants and a derived form of the L-function convenient for computer use.

Section 9 presents those derived functions which are of practical importance.

Section 10 gives information on the magnitudes of small discontinuities in property values which occur at some of the boundaries between sub-regions and draws attention to the need for caution when making certain calculations.

1. Physical quantities, quantity symbols, units and defined constant quantities

1.1 *Physical Quantities (Properties)*

The following physical quantities are given the symbols listed:

specific Helmholtz function (specific free energy)	f
specific Gibbs function (specific free enthalpy)	g
specific enthalpy	h
specific entropy	s
specific volume	v
pressure	p
temperature (thermodynamic temperature)	T
specific isochoric heat-capacity	c_v
specific isobaric heat-capacity	c_p
quantities at the critical point	v_c, p_c, T_c
quantities for the saturated liquid	f_f, h_f, s_f, v_f
quantities for the saturated vapour	h_g, s_g, v_g
increments in quantities for evaporation from liquid to vapour	h_{fg}, s_{fg}, v_{fg}
quantities at the triple point	f_{ft}, s_{ft}, p_t, T_t
specific ideal-gas constant	R
saturation pressure	p_s
saturation temperature	T_s

1.2 *Units*

The units of the *Système International d'Unités* (SI units) are used and have the definitions assigned to them by the Conférence Générale des Poids et Mesures, (CGPM).

These SI units are:

Quantities	*Units*	*Unit Symbol*	*Note*
f, g, h	joule per kilogramme	J/kg	
v	metre cubed per kilogramme	m^3/kg	
p	newton per metre squared	N/m^2	1)
	joule per metre cubed	J/m^3	
	pascal	Pa	
T	kelvin	K	
s, R, c_v, c_p	joule per kilogramme kelvin	J/kg K	

Note 1) The names and unit symbols given here are synonyms for the same unit of pressure.

The equations giving the units adopted by the ICPS in terms of the SI units are:

$$1 \text{ J/g} = 1000 \text{ J/kg}$$
$$1 \text{ cm}^3/\text{g} = 0.001 \text{ m}^3/\text{kg}$$
$$1 \text{ bar} = 100\,000 \text{ N/m}^2 = 100\,000 \text{ J/m}^3$$
$$1 \text{ J/g K} = 1000 \text{ J/kg K}$$

The International Organisation for Standardisation (ISO/R 31) has provided equations for other units in terms of SI units.

The definitions given by the CGPM and the ISO imply that

$$T_t = 273.16 \text{ K, exactly,}$$

and that the (thermodynamic) Celsius temperature is exactly $T - T_0$, where

$$T_0 = 273.15 \text{ K, exactly.}$$

The symbol T in this Statement refers throughout to thermodynamic (absolute) temperature. Temperatures on the International Practical Scale of Temperature (1948) provide a closely approximate realisation† of the numerical values on the thermodynamic Celsius scale. The constants listed in Section 7 are appropriate for use when the International Practical Scale and the thermodynamic Celsius scale are treated as being identical.

1.3 *Defined Constant Quantities*

In accordance with the decisions of the ICPS (5th International Conference, London, 1956):

$$s_{ft} = 0, \; f_{ft} = 0.$$

The IFC, at its First Meeting in Prague, 1965, defined certain symbols for certain constant quantities. Among these are:

$$p_{t1} = 611.2 \text{ N/m}^2 = 611.2 \text{ J/m}^3$$
$$T_{c1} = 647.3 \text{ K}$$
$$p_{c1} = 22\,120\,000 \text{ N/m}^2 = 22\,120\,000 \text{ J/m}^3$$
$$v_{c1} = 0.003\,17 \text{ m}^3/\text{kg}$$
$$R_1 = 461.51 \text{ J/kg K}$$

(NOTE: Subscripts t and c, appearing alone, would refer to the actual values at the actual triple and critical points respectively; these values are not known exactly. The further subscript 1 refers to the above constant quantities, which coincide with the values adopted by the 6th International Conference, New York, 1963, as the nearest estimates, at that time, of the true values. It is stressed that the constants listed in Section 7 are those appropriate for use when the defined constant quantities are as given above, and that no alterations to these defined constant quantities can be made without reviewing the values of the constants listed.)

†As does the IPTS of 1968 which has superseded it.

2. Reduced dimensionless quantities, and thermodynamic relations

2.1 *Reduced Dimensionless Quantities*

a) In accord with IFC:

$p/p_{c1} = \beta$, the reduced pressure
$T/T_{c1} = \theta$, the reduced temperature
$v/v_{c1} = \chi$, the reduced volume
$h/(p_{c1}v_{c1}) = \varepsilon$, the reduced enthalpy
$s/(p_{c1}v_{c1}/T_{c1}) = \sigma$, the reduced entropy

b) It has been found expedient to add
$g/(p_{c1}v_{c1}) = \varepsilon - \theta\sigma = \zeta$, the reduced free enthalpy (Gibbs function)

$f/(p_{c1}v_{c1}) = \zeta - \beta\chi = \psi$, the reduced free energy (Helmholtz function)

$R_1T_{c1}/(p_{c1}v_{c1}) = I_1$, the reduced ideal-gas constant.

Use is also made of

$p_s(T)/p_{c1} = \beta_K(\theta)$, the reduced saturation pressure
$T_s(p)/T_{c1} = \theta_K(\beta)$, the reduced saturation temperature
$T_t/T_{c1} = \theta_t$, the reduced triple-point temperature
$p_t/p_{c1} = \beta_t = \beta_K(\theta_t)$, the reduced triple-point pressure.

Numerical values for θ_t, β_t, $p_{c1}v_{c1}$, $p_{c1}v_{c1}/T_{c1}$ and I_1 are given in Section 8.

2.2 *Thermodynamic Relations*

The well-established relations

$$s = -(\partial g/\partial T)_p = -(\partial f/\partial T)_v$$
$$v = +(\partial g/\partial p)_T$$
$$p = -(\partial f/\partial v)_T$$
$$h = g + Ts = f + pv + Ts$$

may be written in terms of the reduced dimensionless quantities.

The relations become

$$\sigma = -(\partial\zeta/\partial\theta)_\beta = -(\partial\psi/\partial\theta)_\chi$$
$$\chi = +(\partial\zeta/\partial\beta)_\theta$$
$$\beta = -(\partial\psi/\partial\chi)_\theta$$
$$\varepsilon = \zeta + \theta\sigma = \psi + \beta\chi + \theta\sigma$$

Moreover,

$$\frac{c_pT_{c1}}{p_{c1}v_{c1}} = -\theta\left(\frac{\partial^2\zeta}{\partial\theta^2}\right)_\beta = -\theta\left(\frac{\partial^2\psi}{\partial\theta^2}\right)_\chi + \theta\left(\frac{\partial^2\psi}{\partial\chi\partial\theta}\right)^2 \Big/ \left(\frac{\partial^2\psi}{\partial\chi^2}\right)_\theta$$

$$\frac{c_vT_{c1}}{p_{c1}v_{c1}} = -\theta\left(\frac{\partial^2\psi}{\partial\theta^2}\right)_\chi = -\theta\left(\frac{\partial^2\zeta}{\partial\theta^2}\right)_\beta + \theta\left(\frac{\partial^2\zeta}{\partial\theta\partial\beta}\right)^2 \Big/ \left(\frac{\partial^2\zeta}{\partial\beta^2}\right)_\theta$$

3. Specification of the sub-regions

3.1 *The sub-regions are specified in the following table and illustrated in Figs. A1 and A2*

Temperature range	Pressure range	Sub-region
$\theta_t \leqq \theta \leqq \theta_1$	$0 \leqq \beta < \beta_K(\theta)$	2
	$\beta = \beta_K(\theta)$	6
	$\beta_K(\theta) < \beta \leqq \beta_2$	1
$\theta_1 < \theta < 1$	$0 \leqq \beta \leqq \beta_L(\theta)$	2
	$\beta_L(\theta) < \beta < \beta_K(\theta)$	3
	$\beta = \beta_K(\theta)$	5
	$\beta_K(\theta) < \beta \leqq \beta_2$	4
$1 \leqq \theta < \theta_2$	$0 \leqq \beta \leqq \beta_L(\theta)$	2
	$\beta_L(\theta) < \beta \leqq \beta_2$	3
$\theta_2 \leqq \theta \leqq \theta_3$	$0 \leqq \beta \leqq \beta_2$	2

The functions $\beta_K(\theta)$ and $\beta_L(\theta)$ are equations for boundaries between sub-regions, the K-function being the equation for the saturation line and the L-function the equation for the boundary between sub-regions 2 and 3. These functions, and the constants required to complete the specification of the sub-regions in the table, are specified in Sections 3.2 and 3.3 respectively.

3.2 *Equations for boundaries between sub-regions*

3.2.1 *The K-function*

Reduced saturation pressure

This function is given in Section 5.

3.2.2 *The L-function*

Reduced pressure along the boundary between sub-regions 2 and 3

$$\beta_L = \beta_L(\theta) = \frac{(\theta_2 - \theta)\beta_1 + (\theta - \theta_1)\beta_2 - L(\theta_2 - \theta)(\theta - \theta_1)}{\theta_2 - \theta_1}$$

whence

$$\frac{d\beta_L}{d\theta} = \beta_L' = \beta_L'(\theta) = \frac{\beta_2 - \beta_1 - L(\theta_2 - 2\theta + \theta_1)}{\theta_2 - \theta_1}$$

Derived forms for β_L and β_L', convenient for computer use, are given in Section 8.2.

3.3 *Constants relating to boundaries between sub-regions*

3.3.1 *Primary constants*

The constant L and the constants relating to the K-function are given in Section 7.1.

3.3.2 *Expressions for values of derived constants*

Expressions for the values of the derived constants θ_t, θ_1, θ_2, θ_3, β_1 and β_2 are given in Section 7.2.

3.3.3 *Numerical values of derived constants*

The numerical values of θ_t, θ_1, θ_2, θ_3, β_1 and β_2 are given in Section 8.1, and the numerical values of the constants relating to the derived forms for β_L and β_L' are given in Section 8.2.

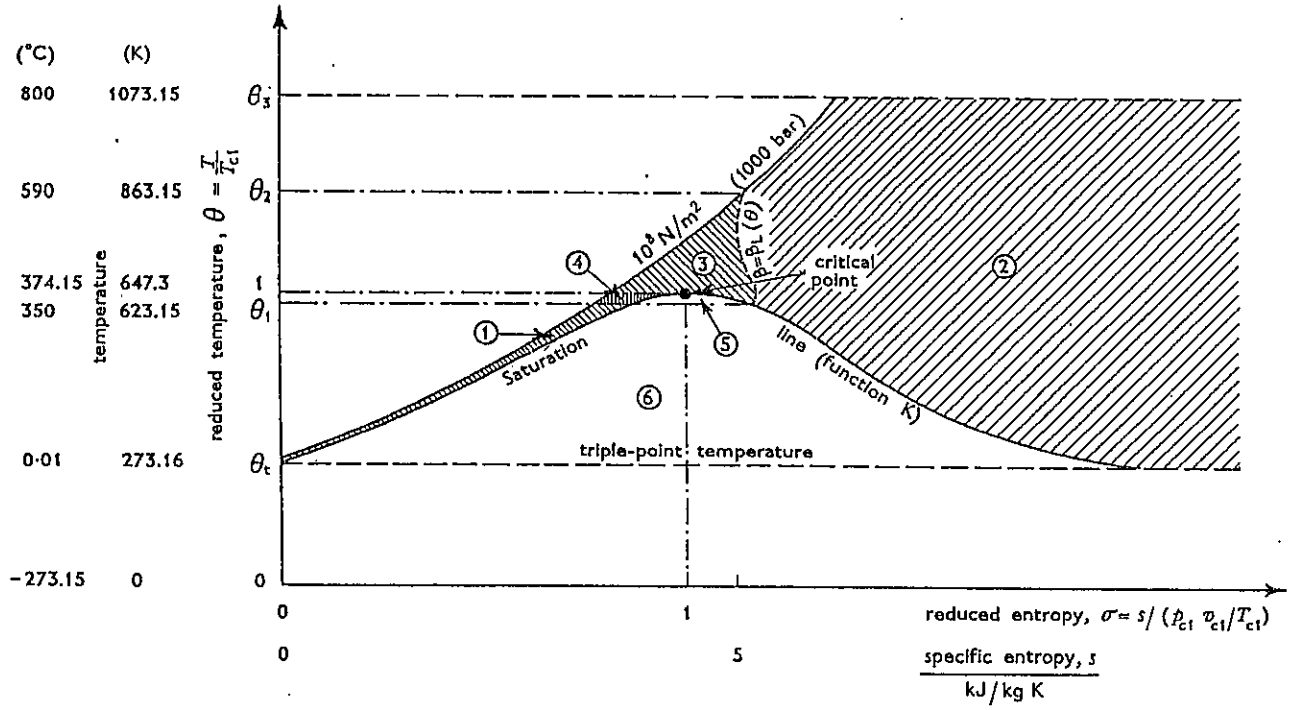


Fig. A1. Illustration of the sub-regions on the temperature-entropy diagram.

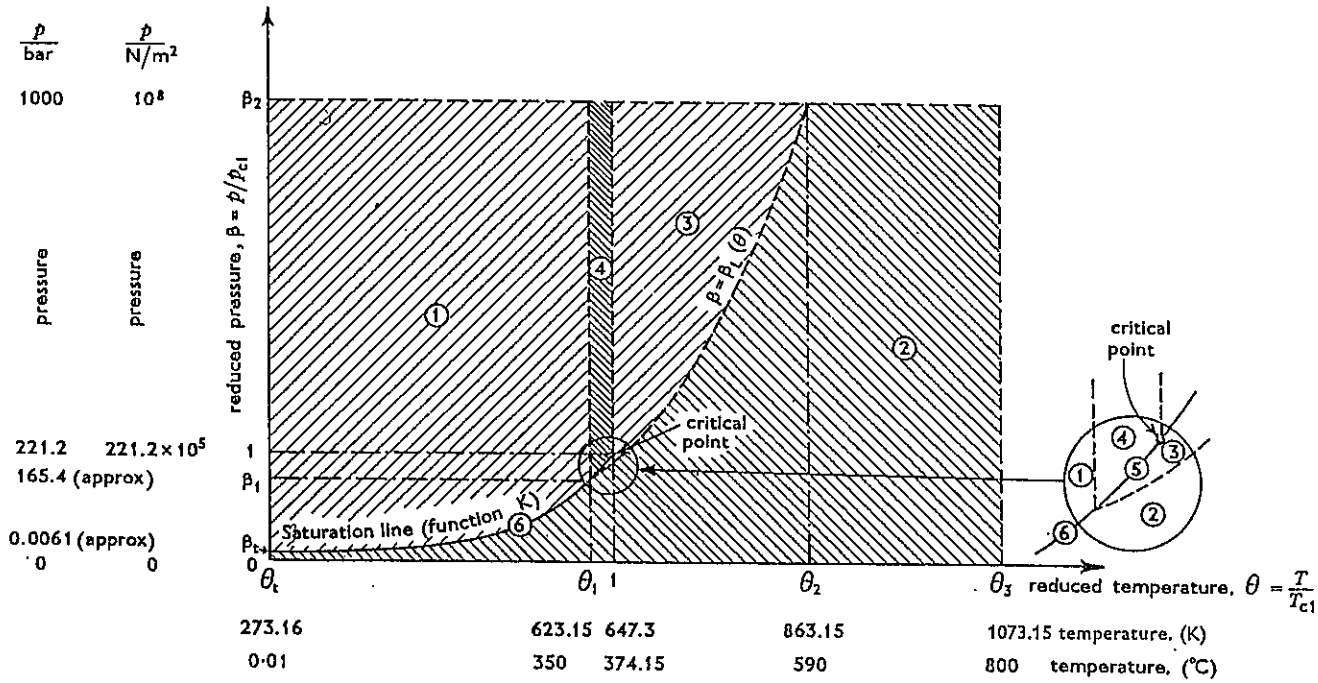


Fig. A2. Illustration of the sub-regions on the pressure-temperature diagram.

4. Sub-formulations

For each sub-region there are set out below

(1) the canonical function, and

(2) the derived functions, and the relations between the canonical and derived functions.

The functions of each sub-formulation are identified by the same number as that identifying the sub-region.

The functions $\zeta_A(\theta, \beta)$, $\zeta_B(\theta, \beta)$, $\psi_C(\theta, \chi)$ and $\psi_D(\theta, \chi)$ are given in Section 6.

The purpose of introducing the terms α_0 and $\alpha_1\theta$ is explained in Section 7.2.

4.1 *Sub-region 1*

$$\begin{aligned}
\zeta &= \zeta_1(\theta, \beta) = \zeta_A(\theta, \beta) + \alpha_0 + \alpha_1\theta \\
\chi &= \chi_1(\theta, \beta) = (\partial\zeta_1/\partial\beta)_\theta \\
\sigma &= \sigma_1(\theta, \beta) = -(\partial\zeta_1/\partial\theta)_\beta \\
\varepsilon &= \varepsilon_1(\theta, \beta) = \zeta_1 + \sigma_1\theta
\end{aligned}$$

4.2 *Sub-region 2*

$$\begin{aligned}
\zeta &= \zeta_2(\theta, \beta) = \zeta_B(\theta, \beta) + \alpha_0 + \alpha_1\theta \\
\chi &= \chi_2(\theta, \beta) = (\partial\zeta_2/\partial\beta)_\theta \\
\sigma &= \sigma_2(\theta, \beta) = -(\partial\zeta_2/\partial\theta)_\beta \\
\varepsilon &= \varepsilon_2(\theta, \beta) = \zeta_2 + \sigma_2\theta
\end{aligned}$$

4.3 *Sub-region 3*†

$$\begin{aligned}
\psi &= \psi_3(\theta, \chi) = \psi_C(\theta, \chi) + \alpha_0 + \alpha_1\theta \\
\beta &= \beta_3\{\theta, \chi\} = -(\partial\psi_3/\partial\chi)_\theta \\
\sigma &= \sigma_3\{\theta, \chi\} = -(\partial\psi_3/\partial\theta)_\chi \\
\varepsilon &= \varepsilon_3\{\theta, \chi\} = \psi_3 + \sigma_3\theta + \beta_3\chi \\
\zeta &= \zeta_3\{\theta, \chi\} = \psi_3 + \beta_3\chi
\end{aligned}$$

Expressions having θ and β as the independent variables are needed later.

The equation $\beta = \beta_3\{\theta, \chi\}$, when solved for χ, gives $\chi = \chi_3(\theta, \beta)$. If there be more than one such root, then χ_3 is the greatest of these.

Then

$$\begin{aligned}
\sigma &= \sigma_3\{\theta, \chi_3(\theta, \beta)\} = \sigma_3(\theta, \beta) \\
\varepsilon &= \varepsilon_3\{\theta, \chi_3(\theta, \beta)\} = \varepsilon_3(\theta, \beta) \\
\zeta &= \zeta_3\{\theta, \chi_3(\theta, \beta)\} = \zeta_3(\theta, \beta)
\end{aligned}$$

4.4 *Sub-region 4*†

$$\begin{aligned}
\psi &= \psi_4(\theta, \chi) \\
&= \psi_C(\theta, \chi) + \alpha_0 + \alpha_1\theta + \psi_D(\theta, \chi) \\
\beta &= \beta_4\{\theta, \chi\} = -(\partial\psi_4/\partial\chi)_\theta \\
\sigma &= \sigma_4\{\theta, \chi\} = -(\partial\psi_4/\partial\theta)_\chi \\
\varepsilon &= \varepsilon_4\{\theta, \chi\} = \psi_4 + \sigma_4\theta + \beta_4\chi \\
\zeta &= \zeta_4\{\theta, \chi\} = \psi_4 + \beta_4\chi
\end{aligned}$$

Expressions having θ and β as the independent variables are needed later. The equation $\beta = \beta_4(\theta, \chi)$, when solved for χ, gives $\chi = \chi_4(\theta, \beta)$. If there be more than one such root, then χ_4 is the least of these.

Then

$$\begin{aligned}
\sigma &= \sigma_4\{\theta, \chi_4(\theta, \beta)\} = \sigma_4(\theta, \beta) \\
\varepsilon &= \varepsilon_4\{\theta, \chi_4(\theta, \beta)\} = \varepsilon_4(\theta, \beta) \\
\zeta &= \zeta_4\{\theta, \chi_4(\theta, \beta)\} = \zeta_4(\theta, \beta)
\end{aligned}$$

4.5,6 *Sub-regions 5 and 6*

$$\beta = \beta_K(\theta)$$

$$\text{Dryness fraction} = \frac{\chi - \chi_f}{\chi_g - \chi_f} = \frac{\sigma - \sigma_f}{\sigma_g - \sigma_f} = \frac{\varepsilon - \varepsilon_f}{\varepsilon_g - \varepsilon_f},$$

where the subscripts f and g refer respectively to the liquid and gaseous phases and the quantities bearing these subscripts are given below.

4.5 *Sub-region 5*

$$\begin{aligned}
\chi_f &= \chi_4(\theta, \beta_K(\theta)), & \chi_g &= \chi_3(\theta, \beta_K(\theta)) \\
\sigma_f &= \sigma_4(\theta, \beta_K(\theta)), & \sigma_g &= \sigma_3(\theta, \beta_K(\theta)) \\
\varepsilon_f &= \varepsilon_4(\theta, \beta_K(\theta)), & \varepsilon_g &= \varepsilon_3(\theta, \beta_K(\theta))
\end{aligned}$$

4.6 *Sub-region 6*

$$\begin{aligned}
\chi_f &= \chi_1(\theta, \beta_K(\theta)), & \chi_g &= \chi_2(\theta, \beta_K(\theta)) \\
\sigma_f &= \sigma_1(\theta, \beta_K(\theta)), & \sigma_g &= \sigma_2(\theta, \beta_K(\theta)) \\
\varepsilon_f &= \varepsilon_1(\theta, \beta_K(\theta)), & \varepsilon_g &= \varepsilon_2(\theta, \beta_K(\theta))
\end{aligned}$$

The definitions given in Sections 4.1 to 4.4 of the derived functions χ_i, σ_i, ε_i ($i = 1$ to 4) are hereby extended to include $\beta = \beta_K(\theta)$.

The function $\beta_K(\theta)$ is given in Section 5.

5. The K-function (saturation line)

Reduced saturation pressure

This function gives the saturation line, which is also a boundary between sub-regions.

The equation for the reduced saturation pressure, β_K, as a function of the reduced temperature, θ, is

$$\beta_K(\theta) = \exp\left[\frac{\frac{1}{\theta}\sum_{\nu=1}^{5} k_\nu(1-\theta)^\nu}{1 + k_6(1-\theta) + k_7(1-\theta)^2} - \frac{1-\theta}{k_8(1-\theta)^2 + k_9}\right]$$

The constants of the K-function are given in Section 7.1.

†See p. 148. *Notes to Appendix 1*, note 1.

6. Canonical Functions

6.1 *The* A-*Function*

Reduced free enthalpy (Gibbs function)

$$\zeta_A(\theta, \beta) = A_0\theta(1 - \ln\theta) + \sum_{\nu=1}^{10} A_\nu\theta^{\nu-1} + A_{11}\left(\tfrac{12}{29}Z - \tfrac{17}{12}Y\right)Z^{\frac{11}{17}}$$
$$+ \{A_{12} + A_{13}\theta + A_{14}\theta^2 + A_{15}(a_6 - \theta)^{10} + A_{16}(a_7 + \theta^{19})^{-1}\}\beta$$
$$- (a_8 + \theta^{11})^{-1}(A_{17}\beta + A_{18}\beta^2 + A_{19}\beta^3)$$
$$- A_{20}\theta^{18}(a_9 + \theta^2)\{(a_{10} + \beta)^{-3} + a_{11}\beta\}$$
$$+ A_{21}(a_{12} - \theta)\beta^3 + A_{22}\theta^{-20}\beta^4$$

where

$$Z = Y + (a_3Y^2 - 2a_4\theta + 2a_5\beta)^{\frac{1}{2}}$$
$$Y = 1 - a_1\theta^2 - a_2\theta^{-6}$$

6.2 *The* B-*Function*

Reduced free enthalpy (Gibbs function)

$$\zeta_B(\theta, \beta) = I_1\theta\ln\beta + B_0\theta(1 - \ln\theta) + \sum_{\nu=1}^{5} B_{0\nu}\theta^{\nu-1} - (B_{11}X^{13} + B_{12}X^3)\beta$$
$$- (B_{21}X^{18} + B_{22}X^2 + B_{23}X)\beta^2 - (B_{31}X^{18} + B_{32}X^{10})\beta^3$$
$$- (B_{41}X^{25} + B_{42}X^{14})\beta^4 - (B_{51}X^{32} + B_{52}X^{28} + B_{53}X^{24})\beta^5$$
$$- \frac{(B_{61}X^{12} + B_{62}X^{11})\beta^4}{1 + b_{61}X^{14}\beta^4} - \frac{(B_{71}X^{24} + B_{72}X^{18})\beta^5}{1 + b_{71}X^{19}\beta^5}$$
$$- \frac{(B_{81}X^{24} + B_{82}X^{14})\beta^6}{1 + (b_{81}X^{54} + b_{82}X^{27})\beta^6} + \beta\left(\frac{\beta}{\beta_L}\right)^{10}\sum_{\nu=0}^{6} B_{9\nu}X^\nu$$

where $X = \exp\{b(1 - \theta)\}$ and $\beta_L = \beta_L(\theta)$, the expression for which is given in Section 3.2.2.

The B-function may also be expressed more compactly as follows:

$$\zeta_B(\theta, \beta) = I_1\theta\ln\beta + B_0\theta(1 - \ln\theta) + \sum_{\nu=1}^{5} B_{0\nu}\theta^{\nu-1} - \sum_{\mu=1}^{5}\left\{\beta^\mu\sum_{\nu=1}^{n(\mu)} B_{\mu\nu}X^{z(\mu,\nu)}\right\}$$
$$- \sum_{\mu=6}^{8}\frac{\sum_{\nu=1}^{n(\mu)} B_{\mu\nu}X^{z(\mu,\nu)}}{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)} b_{\mu\lambda}X^{x(\mu,\lambda)}} + \beta\left(\frac{\beta}{\beta_L}\right)^{10}\sum_{\nu=0}^{6} B_{9\nu}X^\nu$$

The numbers of terms $n(\mu)$ and $l(\mu)$, and the exponents $z(\mu, \nu)$ and $x(\mu, \lambda)$ are as follows:

μ	$n(\mu)$	$z(\mu,\nu)$			$l(\mu)$	$x(\mu,\lambda)$		μ
		$\nu=1$	$\nu=2$	$\nu=3$		$\lambda=1$	$\lambda=2$	
1	2	13	3	—	—	—	—	1
2	3	18	2	1	—	—	—	2
3	2	18	10	—	—	—	—	3
4	2	25	14	—	—	—	—	4
5	3	32	28	24	—	—	—	5
6	2	12	11	—	1	14	—	6
7	2	24	18	—	1	19	—	7
8	2	24	14	—	2	54	27	8

6.3 *The* C-*Function*

Reduced free energy (Helmholtz function)

$$\psi_C(\theta, \chi) = C_{00} + C_{01}\chi + \sum_{\nu=2}^{11} C_{0\nu}\chi^{1-\nu} + C_{012}\ln\chi$$
$$+ \left\{C_{11}\chi + \sum_{\nu=2}^{6} C_{1\nu}\chi^{1-\nu} + C_{17}\ln\chi\right\}(\theta - 1)$$
$$+ \left\{C_{21}\chi + \sum_{\nu=2}^{7} C_{2\nu}\chi^{1-\nu} + C_{28}\ln\chi\right\}(\theta - 1)^2$$
$$+ \left\{C_{31}\chi + \sum_{\nu=2}^{9} C_{3\nu}\chi^{1-\nu} + C_{310}\ln\chi\right\}(\theta - 1)^3$$
$$+ (C_{40} + C_{41}\chi^{-5})\theta^{-23}(\theta - 1) + C_{50}\theta\ln\theta$$
$$+ \chi^6 \sum_{\nu=0}^{4} C_{6\nu}\theta^{-2-\nu} + \sum_{\nu=0}^{8} C_{7\nu}(\theta - 1)^{\nu+1}$$

6.4 *The* D-*function*

Reduced free energy (Helmholtz function)

$$\psi_D(\theta, \chi) = \sum_{\mu=3}^{4}\sum_{\nu=0}^{4} D_{\mu\nu}y^\mu\chi^{-\nu} + y^{32}\sum_{\nu=0}^{2} D_{5\nu}\chi^\nu$$

where

$$y = (1 - \theta)/(1 - \theta_1)$$

6.5 *Constants relating to canonical functions*

The values of the constants introduced in Sections 6.1, 6.2, 6.3 and 6.4 are given in Section 7.1.

7. Values of the constants

7.1 *Numerical values of the primary constants*

7.1.1 *Sub-region 1*

$A_0 = 6.824\,687\,741 \times 10^3$
$A_1 = -5.422\,063\,673 \times 10^2$
$A_2 = -2.096\,666\,205 \times 10^4$
$A_3 = 3.941\,286\,787 \times 10^4$
$A_4 = -6.733\,277\,739 \times 10^4$
$A_5 = 9.902\,381\,028 \times 10^4$
$A_6 = -1.093\,911\,774 \times 10^5$
$A_7 = 8.590\,841\,667 \times 10^4$
$A_8 = -4.511\,168\,742 \times 10^4$
$A_9 = 1.418\,138\,926 \times 10^4$
$A_{10} = -2.017\,271\,113 \times 10^3$
$A_{11} = 7.982\,692\,717 \times 10^0$
$A_{12} = -2.616\,571\,843 \times 10^{-2}$
$A_{13} = 1.522\,411\,790 \times 10^{-3}$
$A_{14} = 2.284\,279\,054 \times 10^{-2}$
$A_{15} = 2.421\,647\,003 \times 10^2$
$A_{16} = 1.269\,716\,088 \times 10^{-10}$
$A_{17} = 2.074\,838\,328 \times 10^{-7}$
$A_{18} = 2.174\,020\,350 \times 10^{-8}$
$A_{19} = 1.105\,710\,498 \times 10^{-9}$
$A_{20} = 1.293\,441\,934 \times 10^1$
$A_{21} = 1.308\,119\,072 \times 10^{-5}$
$A_{22} = 6.047\,626\,338 \times 10^{-14}$
$a_1 = 8.438\,375\,405 \times 10^{-1}$
$a_2 = 5.362\,162\,162 \times 10^{-4}$
$a_3 = 1.720\,000\,000 \times 10^0$
$a_4 = 7.342\,278\,489 \times 10^{-2}$
$a_5 = 4.975\,858\,870 \times 10^{-2}$
$a_6 = 6.537\,154\,300 \times 10^{-1}$
$a_7 = 1.150\,000\,000 \times 10^{-6}$
$a_8 = 1.510\,800\,000 \times 10^{-5}$
$a_9 = 1.418\,800\,000 \times 10^{-1}$
$a_{10} = 7.002\,753\,165 \times 10^0$
$a_{11} = 2.995\,284\,926 \times 10^{-4}$
$a_{12} = 2.040\,000\,000 \times 10^{-1}$

7.1.2 *Sub-region 2*

$B_0 = 1.683\,599\,274 \times 10^1$
$B_{01} = 2.856\,067\,796 \times 10^1$
$B_{02} = -5.438\,923\,329 \times 10^1$
$B_{03} = 4.330\,662\,834 \times 10^{-1}$
$B_{04} = -6.547\,711\,697 \times 10^{-1}$
$B_{05} = 8.565\,182\,058 \times 10^{-2}$
$B_{11} = 6.670\,375\,918 \times 10^{-2}$
$B_{12} = 1.388\,983\,801 \times 10^0$
$B_{21} = 8.390\,104\,328 \times 10^{-2}$
$B_{22} = 2.614\,670\,893 \times 10^{-2}$
$B_{23} = -3.373\,439\,453 \times 10^{-2}$
$B_{31} = 4.520\,918\,904 \times 10^{-1}$
$B_{32} = 1.069\,036\,614 \times 10^{-1}$
$B_{41} = -5.975\,336\,707 \times 10^{-1}$
$B_{42} = -8.847\,535\,804 \times 10^{-2}$
$B_{51} = 5.958\,051\,609 \times 10^{-1}$
$B_{52} = -5.159\,303\,373 \times 10^{-1}$
$B_{53} = 2.075\,021\,122 \times 10^{-1}$
$B_{61} = 1.190\,610\,271 \times 10^{-1}$
$B_{62} = -9.867\,174\,132 \times 10^{-2}$
$B_{71} = 1.683\,998\,803 \times 10^{-1}$
$B_{72} = -5.809\,438\,001 \times 10^{-2}$
$B_{81} = 6.552\,390\,126 \times 10^{-3}$
$B_{82} = 5.710\,218\,649 \times 10^{-4}$
$B_{90} = 1.936\,587\,558 \times 10^2$
$B_{91} = -1.388\,522\,425 \times 10^3$
$B_{92} = 4.126\,607\,219 \times 10^3$
$B_{93} = -6.508\,211\,677 \times 10^3$
$B_{94} = 5.745\,984\,054 \times 10^3$
$B_{95} = -2.693\,088\,365 \times 10^3$
$B_{96} = 5.235\,718\,623 \times 10^2$
$b = 7.633\,333\,333 \times 10^{-1}$
$b_{61} = 4.006\,073\,948 \times 10^{-1}$
$b_{71} = 8.636\,081\,627 \times 10^{-2}$
$b_{81} = -8.532\,322\,921 \times 10^{-1}$
$b_{82} = 3.460\,208\,861 \times 10^{-1}$

7.1.3 *Sub-regions 3 and 4*

$C_{00} = -6.839\,900\,000 \times 10^0$
$C_{01} = -1.722\,604\,200 \times 10^{-2}$
$C_{02} = -7.771\,750\,390 \times 10^0$
$C_{03} = 4.204\,607\,520 \times 10^0$
$C_{04} = -2.768\,070\,380 \times 10^0$
$C_{05} = 2.104\,197\,070 \times 10^0$
$C_{06} = -1.146\,495\,880 \times 10^0$
$C_{07} = 2.231\,380\,850 \times 10^{-1}$
$C_{08} = 1.162\,503\,630 \times 10^{-1}$
$C_{09} = -8.209\,005\,440 \times 10^{-2}$
$C_{010} = 1.941\,292\,390 \times 10^{-2}$
$C_{011} = -1.694\,705\,760 \times 10^{-3}$
$C_{012} = -4.311\,577\,033 \times 10^0$
$C_{11} = 7.086\,360\,850 \times 10^{-1}$
$C_{12} = 1.236\,794\,550 \times 10^1$
$C_{13} = -1.203\,890\,040 \times 10^1$
$C_{14} = 5.404\,374\,220 \times 10^0$
$C_{15} = -9.938\,650\,430 \times 10^{-1}$
$C_{16} = 6.275\,231\,820 \times 10^{-2}$
$C_{17} = -7.747\,430\,160 \times 10^0$
$C_{21} = -4.298\,850\,920 \times 10^0$
$C_{22} = 4.314\,305\,380 \times 10^1$
$C_{23} = -1.416\,193\,130 \times 10^1$
$C_{24} = 4.041\,724\,590 \times 10^0$
$C_{25} = 1.555\,463\,260 \times 10^0$
$C_{26} = -1.665\,689\,350 \times 10^0$
$C_{27} = 3.248\,811\,580 \times 10^{-1}$
$C_{28} = 2.936\,553\,250 \times 10^1$
$C_{31} = 7.948\,418\,420 \times 10^{-6}$
$C_{32} = 8.088\,597\,470 \times 10^1$
$C_{33} = -8.361\,533\,800 \times 10^1$
$C_{34} = 3.586\,365\,170 \times 10^1$
$C_{35} = 7.518\,959\,540 \times 10^0$
$C_{36} = -1.261\,606\,400 \times 10^1$
$C_{37} = 1.097\,174\,620 \times 10^0$
$C_{38} = 2.121\,454\,920 \times 10^0$
$C_{39} = -5.465\,295\,660 \times 10^{-1}$
$C_{310} = 8.328\,754\,130 \times 10^0$
$C_{40} = 2.759\,717\,760 \times 10^{-6}$
$C_{41} = -5.090\,739\,850 \times 10^{-4}$
$C_{50} = 2.106\,363\,320 \times 10^2$
$C_{60} = 5.528\,935\,335 \times 10^{-2}$
$C_{61} = -2.336\,365\,955 \times 10^{-1}$
$C_{62} = 3.697\,071\,420 \times 10^{-1}$
$C_{63} = -2.596\,415\,470 \times 10^{-1}$
$C_{64} = 6.828\,087\,013 \times 10^{-2}$
$C_{70} = -2.571\,600\,553 \times 10^2$
$C_{71} = -1.518\,783\,715 \times 10^2$
$C_{72} = 2.220\,723\,208 \times 10^1$
$C_{73} = -1.802\,039\,570 \times 10^2$
$C_{74} = 2.357\,096\,220 \times 10^3$
$C_{75} = -1.462\,335\,698 \times 10^4$
$C_{76} = 4.542\,916\,630 \times 10^4$
$C_{77} = -7.053\,556\,432 \times 10^4$
$C_{78} = 4.381\,571\,428 \times 10^4$

7.1.4 *Sub-region 4*

$D_{30} = -1.717\,616\,747 \times 10^{0}$
$D_{31} = 3.526\,389\,875 \times 10^{0}$
$D_{32} = -2.690\,899\,373 \times 10^{0}$
$D_{33} = 9.070\,982\,605 \times 10^{-1}$
$D_{34} = -1.138\,791\,156 \times 10^{-1}$
$D_{40} = 1.301\,023\,613 \times 10^{0}$
$D_{41} = -2.642\,777\,743 \times 10^{0}$
$D_{42} = 1.996\,765\,362 \times 10^{0}$
$D_{43} = -6.661\,557\,013 \times 10^{-1}$
$D_{44} = 8.270\,860\,589 \times 10^{-2}$
$D_{50} = 3.426\,663\,535 \times 10^{-4}$
$D_{51} = -1.236\,521\,258 \times 10^{-3}$
$D_{52} = 1.155\,018\,309 \times 10^{-3}$

7.1.5 *Saturation line*

$k_1 = -7.691\,234\,564 \times 10^{0}$
$k_2 = -2.608\,023\,696 \times 10^{1}$
$k_3 = -1.681\,706\,546 \times 10^{2}$
$k_4 = 6.423\,285\,504 \times 10^{1}$
$k_5 = -1.189\,646\,225 \times 10^{2}$
$k_6 = 4.167\,117\,320 \times 10^{0}$
$k_7 = 2.097\,506\,760 \times 10^{1}$
$k_8 = 10^{9}$
$k_9 = 6$

7.1.6 *Boundary between sub-regions 2 and 3*

$$L = 7.160\,997\,524 \times 10^{0}$$

A derived form of the L-function and the values of the resulting derived constants are given in Section 8.2.

7.2 *Expressions for values of derived constants*

$\theta_1 = 27316/64730$ $\quad \beta_2 = 10000/2212$
$\theta_1 = 62315/64730$ $\quad \beta_1 = \beta_K(\theta_1)$
$\theta_2 = 86315/64730$ $\quad \beta_t = \beta_K(\theta_t)$
$\theta_3 = 107315/64730$ $\quad I_1 = R_1 T_{c1}/(p_{c1} v_{c1})$

The numerical values of the above 8 constants are given to 10 digits in Section 8.1.

The constants α_0 and α_1 may be taken each to be zero. If it be desired that the calculated values of the internal energy and entropy at the reference state (the liquid phase at the triple point) each approximate to zero with the highest precision, then these constants should be evaluated, to suit the computer in use, by means of the following expressions:

$$\alpha_0 = [-\zeta_A + \beta(\partial\zeta_A/\partial\beta)_\theta + \theta(\partial\zeta_A/\partial\theta)_\beta]_{\theta=\theta_t,\beta=\beta_t}$$
$$\alpha_1 = [-(\partial\zeta_A/\partial\theta)_\beta]_{\theta=\theta_t,\beta=\beta_t}$$

8. Derived constants†

8.1 *Numerical values of derived constants*

$$\alpha_0 = 0, \quad \alpha_1 = 0$$

$\theta_t = 4.219\,990\,731 \times 10^{-1}$ $\quad \beta_2 = 4.520\,795\,660 \times 10^{0}$
$\theta_1 = 9.626\,911\,787 \times 10^{-1}$ $\quad I_1 = 4.260\,321\,148 \times 10^{0}$
$\theta_2 = 1.333\,462\,073 \times 10^{0}$ $\quad \beta_t = 7.475\,191\,707 \times 10^{-1}$
$\theta_3 = 1.657\,886\,606 \times 10^{0}$ $\quad \beta_t = 2.763\,311\,032 \times 10^{-5}$

For convenience the adopted constant quantities are repeated here:

$T_{c1} = 647.3$ K (exactly)
$p_{c1} = 22\,120\,000$ N/m^2 (exactly)
$v_{c1} = 0.003\,17$ m^3/kg (exactly)

whence the constant quantities given below are derived:

$p_{c1}v_{c1} = 70\,120.4$ J/kg (exactly)
$p_{c1}v_{c1}/T_{c1} = 108.327\,5143$ J/kg K

8.2 *Derived form of the* L-*function and values of the constants relating thereto*

When the L-function is rearranged to give

$$\beta_L = \beta_L(\theta) = L_0 + L_1\theta + L_2\theta^2$$

and consequently

$$\frac{d\beta_L}{d\theta} = \beta_L' = \beta_L'(\theta) = L_1 + 2L_2\,\theta,$$

then the derived constants L_0, L_1 and L_2 have the numerical values

$L_0 = 1.574\,373\,327 \times 10^{1}$
$L_1 = -3.417\,061\,978 \times 10^{1}$
$L_2 = 1.931\,380\,707 \times 10^{1}$

9. Derived functions

9.1 *Sub-region 1*

Reduced volume, $v/v_{c1} = \chi_1 = (\partial\zeta_A/\partial\beta)_\theta$

$$\chi_1 = A_{11}a_5Z^{-\frac{4}{3}} + \{A_{12} + A_{13}\theta + A_{14}\theta^2 + A_{15}(a_6 - \theta)^{10} + A_{16}(a_7 + \theta^{19})^{-1}\}$$
$$- (a_8 + \theta^{11})^{-1}(A_{17} + 2A_{18}\beta + 3A_{19}\beta^2) - A_{20}\theta^{18}(a_9 + \theta^2)\{-3(a_{10} + \beta)^{-4} + a_{11}\}$$
$$+ 3A_{21}(a_{12} - \theta)\beta^2 + 4A_{22}\theta^{-20}\beta^3$$

where

$$Z = Y + (a_3Y^2 - 2a_4\theta + 2a_5\beta)^{\frac{1}{2}}$$
$$Y = 1 - a_1\theta^2 - a_2\theta^{-6}$$

†See p. 148, *Notes to Appendix 1*, note 2.

Reduced entropy, $s/(p_{c1}v_{c1}/T_{c1}) = \sigma_1 = -(\partial\zeta_A/\partial\theta)_\beta - \alpha_1$

$$\sigma_1 = -\alpha_1 + A_0 \ln\theta - \sum_{\nu=2}^{10}(\nu-1)A_\nu\theta^{\nu-2} + A_{11}\left[\left\{\tfrac{5}{12}Z - (a_3-1)Y\right\}Y' + a_4\right]Z^{-\frac{5}{12}}$$
$$+ \{-A_{13} - 2A_{14}\theta + 10A_{15}(a_6-\theta)^9 + 19A_{16}(a_7+\theta^{19})^{-2}\theta^{18}\}\beta$$
$$- 11(a_8+\theta^{11})^{-2}\theta^{10}(A_{17}\beta + A_{18}\beta^2 + A_{19}\beta^3)$$
$$+ A_{20}\theta^{17}(18a_9 + 20\theta^2)\{(a_{10}+\beta)^{-3} + a_{11}\beta\} + A_{21}\beta^3 + 20A_{22}\theta^{-21}\beta^4$$

Reduced enthalpy, $h/(p_{c1}v_{c1}) = \varepsilon_1 = \zeta_A + \alpha_0 + \alpha_1\theta + \theta\sigma_1$

$$\varepsilon_1 = \alpha_0 + A_0\theta - \sum_{\nu=1}^{10}(\nu-2)A_\nu\theta^{\nu-1} + A_{11}\left[Z\left\{17\left(\frac{Z}{29} - \frac{Y}{12}\right) + 5\theta\frac{Y'}{12}\right\} + a_4\theta - (a_3-1)\theta YY'\right]Z^{-\frac{5}{12}}$$
$$+ \{A_{12} - A_{14}\theta^2 + A_{15}(9\theta + a_6)(a_6-\theta)^9 + A_{16}(20\theta^{19} + a_7)(a_7+\theta^{19})^{-2}\}\beta$$
$$- (12\theta^{11} + a_8)(a_8+\theta^{11})^{-2}(A_{17}\beta + A_{18}\beta^2 + A_{19}\beta^3)$$
$$+ A_{20}\theta^{18}(17a_9 + 19\theta^2)\{(a_{10}+\beta)^{-3} + a_{11}\beta\} + A_{21}a_{12}\beta^3 + 21A_{22}\theta^{-20}\beta^4$$

where $Y' = -2a_1\theta + 6a_2\theta^{-7}$

9.2 *Sub-region 2*

Reduced volume, $v/v_{c1} = \chi_2 = (\partial\zeta_B/\partial\beta)_\theta$

$$\chi_2 = I_1\theta/\beta - \sum_{\mu=1}^{5}\mu\beta^{\mu-1}\sum_{\nu=1}^{n(\mu)}B_{\mu\nu}X^{z(\mu,\nu)} - \sum_{\mu=6}^{8}\frac{(\mu-2)\beta^{1-\mu}\sum_{\nu=1}^{n(\mu)}B_{\mu\nu}X^{z(\mu,\nu)}}{\left\{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)}b_{\mu\lambda}X^{x(\mu,\lambda)}\right\}^2} + 11\left(\frac{\beta}{\beta_L}\right)^{10}\sum_{\nu=0}^{6}B_{9\nu}X^\nu$$

where

$X = \exp\{b(1-\theta)\}$

$\beta_L = \beta_L(\theta)$, the expression for which is given in Section 3.2.2, and the numbers of terms $n(\mu)$ and $l(\mu)$, and the exponents $z(\mu, \nu)$ and $x(\mu, \lambda)$, are listed in Section 6.2.

Reduced entropy, $s/(p_{c1}v_{c1}/T_{c1}) = \sigma_2 = -(\partial\zeta_B/\partial\theta)_\beta - \alpha_1$

$$\sigma_2 = -\alpha_1 - I_1\ln\beta + B_0\ln\theta - \sum_{\nu=1}^{5}(\nu-1)B_{0\nu}\theta^{\nu-2} - b\sum_{\mu=1}^{5}\beta^\mu\sum_{\nu=1}^{n(\mu)}z(\mu,\nu)B_{\mu\nu}X^{z(\mu,\nu)}$$
$$- b\sum_{\mu=6}^{8}\frac{\sum_{\nu=1}^{n(\mu)}B_{\mu\nu}X^{z(\mu,\nu)}\left(z(\mu,\nu) - \dfrac{\sum_{\lambda=1}^{l(\mu)}x(\mu,\lambda)b_{\mu\lambda}X^{x(\mu,\lambda)}}{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)}b_{\mu\lambda}X^{x(\mu,\lambda)}}\right)}{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)}b_{\mu\lambda}X^{x(\mu,\lambda)}} + \beta\left(\frac{\beta}{\beta_L}\right)^{10}\sum_{\nu=0}^{6}\left[\left\{\frac{10\beta_L'}{\beta_L} + \nu b\right\}B_{9\nu}X^\nu\right]$$

Reduced enthalpy, $h/(p_{c1}v_{c1}) = \varepsilon_2 = \zeta_B + \alpha_0 + \alpha_1\theta + \theta\sigma_2$

$$\varepsilon_2 = \alpha_0 + B_0\theta - \sum_{\nu=1}^{5}B_{0\nu}(\nu-2)\theta^{\nu-1} - \sum_{\mu=1}^{5}\beta^\mu\sum_{\nu=1}^{n(\mu)}B_{\mu\nu}(1 + z(\mu,\nu)b\theta)X^{z(\mu,\nu)}$$
$$- \sum_{\mu=6}^{8}\frac{\sum_{\nu=1}^{n(\mu)}B_{\mu\nu}X^{z(\mu,\nu)}\left((1 + z(\mu,\nu)b\theta) - \dfrac{b\theta\sum_{\lambda=1}^{l(\mu)}x(\mu,\lambda)b_{\mu\lambda}X^{x(\mu,\lambda)}}{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)}b_{\mu\lambda}X^{x(\mu,\lambda)}}\right)}{\beta^{2-\mu} + \sum_{\lambda=1}^{l(\mu)}b_{\mu\lambda}X^{x(\mu,\lambda)}} + \beta\left(\frac{\beta}{\beta_L}\right)^{10}\sum_{\nu=0}^{6}\left[\left\{1 + \theta\left(\frac{10\beta_L'}{\beta_L} + \nu b\right)\right\}B_{9\nu}X^\nu\right]$$

9.3 *Sub-region 3*

Reduced pressure, $p/p_{c1} = \beta_3 = -(\partial\psi_C/\partial\chi)_\theta$

$$\beta_3 = -\left\{C_{01} + \sum_{\nu=2}^{11}(1-\nu)C_{0\nu}\chi^{-\nu} + C_{012}\chi^{-1}\right\} - \left\{C_{11} + \sum_{\nu=2}^{6}(1-\nu)C_{1\nu}\chi^{-\nu} + C_{17}\,\chi^{-1}\right\}(\theta-1)$$
$$-\left\{C_{21} + \sum_{\nu=2}^{7}(1-\nu)C_{2\nu}\chi^{-\nu} + C_{28}\,\chi^{-1}\right\}(\theta-1)^2 - \left\{C_{31} + \sum_{\nu=2}^{9}(1-\nu)C_{3\nu}\chi^{-\nu} + C_{310}\chi^{-1}\right\}(\theta-1)^3$$
$$+5C_{41}\chi^{-6}\theta^{-23}(\theta-1) - 6\chi^5\sum_{\nu=0}^{4}C_{6\nu}\theta^{-2-\nu}$$

Reduced entropy, $s/(p_{c1}v_{c1}/T_{c1}) = \sigma_3 = -(\partial\psi_C/\partial\theta)_\chi - \alpha_1$

$$\sigma_3 = -\alpha_1 - \left\{C_{11}\chi + \sum_{\nu=2}^{6}C_{1\nu}\chi^{1-\nu} + C_{17}\ln\chi + C_{50}\right\} - 2\left\{C_{21}\chi + \sum_{\nu=2}^{7}C_{2\nu}\chi^{1-\nu} + C_{28}\ln\chi\right\}(\theta-1)$$
$$-3\left\{C_{31}\chi + \sum_{\nu=2}^{9}C_{3\nu}\chi^{1-\nu} + C_{310}\ln\chi\right\}(\theta-1)^2 + (C_{40} + C_{41}\chi^{-5})(22\theta^{-23} - 23\theta^{-24}) - C_{50}\ln\theta$$
$$+\chi^6\sum_{\nu=0}^{4}\{(\nu+2)C_{6\nu}\theta^{-3-\nu}\} - \sum_{\nu=0}^{8}\{(\nu+1)C_{7\nu}(\theta-1)^\nu\}$$

Reduced enthalpy, $h/(p_{c1}v_{c1}) = \varepsilon_3 = \psi_C + \alpha_0 + \alpha_1\theta + \theta\sigma_3 + \chi\beta_3$

$$\varepsilon_3 = \alpha_0 + \left\{(C_{00} - C_{012} - C_{50}) - C_{11}\chi + \sum_{\nu=2}^{11}\nu C_{0\nu}\chi^{1-\nu} - \sum_{\nu=2}^{6}C_{1\nu}\chi^{1-\nu} + (C_{012} - C_{17})\ln\chi\right\}$$
$$+\left\{(-C_{17} - C_{50}) - (C_{11} + 2C_{21})\chi + \sum_{\nu=2}^{6}(\nu-1)C_{1\nu}\chi^{1-\nu} - 2\sum_{\nu=2}^{7}C_{2\nu}\chi^{1-\nu} - 2C_{28}\ln\chi\right\}(\theta-1)$$
$$+\left\{-C_{28} - (2C_{21} + 3C_{31})\chi + \sum_{\nu=2}^{7}(\nu-2)C_{2\nu}\chi^{1-\nu} - 3\sum_{\nu=2}^{9}C_{3\nu}\chi^{1-\nu} - (C_{28} + 3C_{310})\ln\chi\right\}(\theta-1)^2$$
$$+\left\{-C_{310} - 3C_{31}\chi + \sum_{\nu=2}^{9}(\nu-3)C_{3\nu}\chi^{1-\nu} - 2C_{310}\ln\chi\right\}(\theta-1)^3$$
$$+(23C_{40} + 28C_{41}\chi^{-5})\theta^{-22} - (24C_{40} + 29C_{41}\chi^{-5})\theta^{-23}$$
$$+\chi^6\sum_{\nu=0}^{4}\{(\nu-3)C_{6\nu}\theta^{-2-\nu}\} - \sum_{\nu=0}^{8}\{C_{7\nu}(1+\nu\theta)(\theta-1)^\nu\}$$

9.4 *Sub-region 4*

Reduced pressure, $p/p_{c1} = \beta_4 = \beta_3 - (\partial\psi_D/\partial\chi)_\theta$

$$\beta_4 = \beta_3 + \sum_{\mu=3}^{4}\sum_{\nu=0}^{4}\nu D_{\mu\nu}y^\mu\chi^{-\nu-1} - y^{32}\sum_{\nu=0}^{2}\nu D_{5\nu}\chi^{\nu-1}$$

Reduced entropy, $s/(p_{c1}v_{c1}/T_{c1}) = \sigma_4 = \sigma_3 - (\partial\psi_D/\partial\theta)_\chi$

$$\sigma_4 = \sigma_3 + \frac{\sum_{\mu=3}^{4}\sum_{\nu=0}^{4}\mu D_{\mu\nu}y^{\mu-1}\chi^{-\nu} + 32y^{31}\sum_{\nu=0}^{2}D_{5\nu}\chi^\nu}{1-\theta_1}$$

Reduced enthalpy, $h/(p_{c1}v_{c1}) = \varepsilon_4 = \varepsilon_3 + \psi_D + (\sigma_4 - \sigma_3)\theta + (\beta_4 - \beta_3)\chi$

$$\varepsilon_4 = \varepsilon_3 + \sum_{\mu=3}^{4}\sum_{\nu=0}^{4}D_{\mu\nu}\{(1-\mu+\nu)y + \mu/(1-\theta_1)\}y^{\mu-1}\chi^{-\nu} - y^{31}\sum_{\nu=0}^{2}D_{5\nu}\{(31+\nu)y - 32/(1-\theta_1)\}\chi^\nu$$

Note—In the three derived expressions for sub-region 4:

$$y = (1-\theta)/(1-\theta_1)$$

10. Cautionary notes

10.1 *Discontinuities at boundaries between sub-regions*

It should be noted that there are discontinuities in property values at the boundary between sub-regions 2 and 3 and at the boundary between sub-regions 1 and 4. Nevertheless, for the specific volume, specific enthalpy and specific free enthalpy, the discontinuities are less than the maximum values which the First Meeting of the International Formulation Committee (Prague, 1965) recommended should not be exceeded. However, when values of the specific entropy are listed at intervals of 5K, there are four points on the boundary between sub-regions 2 and 3 at which the discontinuity has a value of 0.3 J/kg K, and one point having a value of 0.4 J/kg K, compared with the recommended maximum acceptable value of 0.2 J/kg K.

For the specific heat-capacity, the discontinuities at the boundary between sub-regions 1 and 4 do not exceed the recommended maximum value of 1%, but at the boundary between sub-regions 2 and 3 they are in general in excess of 1%, the greatest discontinuity being 6.5%.

The magnitudes of these discontinuities are not significant industrially.

10.2 *Precautions to be observed in numerical computation*

The precautions and techniques of numerical analysis will be well known to users of this formulation. Two points, however, warrant comment.

1. It will be clearly evident that, in order to attain an adequately precise result from numerical inversion in sub-regions 3 and 4, it is necessary to control the pressure error or the volume error, or both, within appropriate bounds. When pressure alone is controlled, very severe conditions must be imposed (possibly as fine as 1 part in 10^6 or, near the critical point, much finer).

2. Note should be taken of the fact that errors may arise if finite-difference techniques be used with too small an interval.

Notes to Appendix 1

1. In Section 4 of the formulation the brackets {} have been used to distinguish derived functions of θ and χ from derived functions having θ and β as independent variables.

2. If it be desired that the calculated values of all thermodynamic properties shall each be free from dependence on the listed values of the derived constants, then these constants should be evaluated, to suit the computer in use, by means of expressions and constants in or before Section 7.

3. Decisions of the CGPM issued after the preparation of the original text of the introduction to this formulation have affected units for temperature.

The term "degree Kelvin" and its associated indicator "°K" have been abandoned. The SI *unit* of temperature is now called simply the "kelvin" and has the unit symbol "K". We have therefore removed from Section 1.2 those parts of the original text which related to the abandoned nomenclature.

The name pascal and its associated unit symbol Pa, have now been accepted by the International Committee of Weights and Measures, although this acceptance was merely pending at the time of the preparation of the original report.

Values of Δh in Btu/lb and Δs in Btu/lb R to be added to smoothed values of h and s in the 1967 ERA Tables to obtain the corresponding values computed from the 1967 IFC formulation.

Temp. °F	Absolute Pressure, lbf/in²																		Temp. °F
	2400		2500		2600		2700		2800		2900		3000		3200		3400		
	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	
670	0.3	2	2.9	25	0.7	7	0.6	6	0.6	6	0.6	6	0.7	6	0.7	7	0.8	8	670
680	−0.2	−1	0.9	9	3.1	27	4.3	38	1.0	9	1.1	10	1.2	11	1.4	13	1.7	15	680
690	−0.3	−2	−0.4	−3	0.4	4	2.4	21	2.3	20	0.4	4	0.6	6	1.0	10	1.3	12	690
700			−0.3	3	−0.5	4	0.3	2	−0.8	−6	1.1	10	0.5	5	−0.1	0	0	0	700
710					−0.3	3	−0.5	−4	−0.8	−7	−0.5	−3	1.3	11	0.6	6	0.3	4	710
720							−0.3	−3	−0.5	−4	−0.7	−6	0.0	0	1.3	11	0.9	8	720
730											−0.3	−3	−0.5	−4	1.2	11	1.4	12	730
740																	1.6	15	740
750																	0.9	9	750

Temp. °F	Absolute Pressure, lbf/in²																		Temp. °F
	3600		3800		4000		4200		4400		4600		4800		5000		5500		
	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	
660											0.3	3	0.4	4	0.4	4			660
670	0.9	9	1.1	10	1.2	11	1.3	12	1.3	12	1.4	13	1.4	13	1.5	13	1.3	12	670
680	1.9	17	2.1	19	2.3	21	2.2	20	2.0	18	1.7	15	1.6	15	1.4	13	1.4	13	680
690	1.5	14	1.7	16	1.9	17	1.7	15	1.6	15	1.3	12	1.0	10	0.7	7	0.5	5	690
700	−0.2	−1	−0.3	−2	−0.4	−2	−0.2	−1	0	0	0.3	3	0.6	6	0.6	6	0	0	700
710	−1.1	−9	−1.6	−13	−2.0	−16	−1.3	−10	−0.6	−4	0	0	0.8	7	1.5	14	0.3	4	710
720	2.9	25	1.0	10	0.1	2	0.4	4	0.9	8	1.4	12	2.0	17	2.6	23	0.2	2	720
730	0.5	5	2.1	19	2.6	22	1.9	17	1.7	15	1.7	14	1.7	15	2.0	18	0.1	1	730
740	1.3	12	0	0	1.1	10	3.2	28	2.9	25	2.4	21	2.1	19	2.1	18	0.6	6	740
750	1.7	15	1.1	10	−0.3	−2	0.5	5	2.6	22	2.9	25	2.6	22	2.2	19	1.4	13	750
760	1.5	13	1.6	14	0.8	7	−0.5	−3	0.1	2	2.0	17	2.8	24	2.9	25	2.2	19	760
770	0.8	8	1.6	14	1.5	13	0.5	5	−0.5	−3	−0.1	0	1.4	13	2.5	22	2.8	24	770
780			0.8	8	1.7	15	1.3	12	0.3	3	−0.5	−3	−0.2	0	1.0	9	2.8	24	780
790			0.3	2	0.8	8	1.7	15	1.1	10	0.2	2	−0.5	−3	−0.2	−1	2.1	18	790
800					0.4	3	0.8	8	1.6	14	1.0	9	0.1	2	−0.4	−2	1.0	9	800
820							0.3	2	0.4	4	0.8	7	1.2	11	0.7	7	−0.3	−1	820
840													0.5	5	0.7	7			840

Appendix 2—*continued*

Temp. °F	Absolute Pressure, lbf/in²																		Temp. °F
	6000		6500		7000		7500		8000		8500		9000		9500		10000		
	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	
670	1.3	12	1.2	11	1.4	13	1.4	13	1.3	12	1.2	12	1.2	11	1.4	13	1.5	14	670
680	1.1	10	0.9	9	1.2	12	1.3	12	1.1	10	1.2	10	1.3	12	1.5	14	1.8	16	680
690	0.1	2	−0.3	−1	0.1	2	0.1	2	0	0	0	0	0.1	1	0.2	3	0.5	6	690
700	−0.6	−4	−0.8	−6	−0.8	−6	−1.0	−8	−1.1	−8	−1.0	−7	−1.0	−7	−0.9	−6	−0.6	−3	700
710	−0.4	−2	−1.0	−7	−0.6	−4	−1.0	−8	−1.0	−7	−0.9	−6	−0.8	−5	−0.8	−6	−0.4	−2	710
720	−0.4	−3	−0.8	−6	0.1	2	−0.5	−4	−0.7	−5	−0.8	−6	−0.6	−4	−0.6	−4	−0.3	−2	720
730	−0.3	−1	−0.4	−3	0.5	5	−0.5	−4	−0.4	−2	−0.4	−2	−0.3	−1	−0.2	−1	−0.1	1	730
740	0.3	3	0.3	4	1.1	9	0	−1	0.1	1	0.1	2	0.1	2	0.2	2	0.2	3	740
750	1.0	9	0.8	7	0.7	6	0.6	6	0.6	6	0.6	6	0.6	6	0.7	6	0.7	7	750
760	1.7	15	1.4	12	1.2	11	1.1	10	1.1	10	1.0	9	1.0	10	1.1	10	1.1	10	760
770	2.3	20	1.9	17	1.7	15	1.5	13	1.5	13	1.4	12	1.4	12	1.4	12	1.4	12	770
780	2.7	23	2.4	20	2.1	18	1.9	16	1.8	15	1.7	15	1.7	14	1.6	14	1.6	14	780
790	2.8	24	2.7	22	2.4	20	2.2	19	2.0	17	1.9	17	1.9	16	1.8	16	1.8	16	790
800	2.5	21	2.7	23	2.6	22	2.4	20	2.2	19	2.1	18	2.0	17	1.9	17	1.9	16	800
820	0.9	8	2.0	18	2.4	20	2.4	20	2.3	19	2.2	18	2.1	18	2.0	17	1.9	17	820
840	−0.2	0	0.7	7	1.6	14	1.9	17	2.0	17	1.9	16	1.8	16	1.7	15	1.7	15	840
860	−0.5	2	−0.2	0	0.5	6	1.1	10	1.4	12	1.4	13	1.4	12	1.3	12	1.2	11	860
880			−0.7	−4	−0.2	0	0.3	4	0.7	7	0.8	8	0.9	8	0.8	8	0.7	8	880
900					−0.8	−4	−0.6	−2	0.1	3	0.4	5	0.4	5	0.4	5	0.3	4	900
920					−0.3	−2	−0.9	−5	−0.6	−3	0	−2	−0.1	2	0.1	3	0	2	920
940							−0.4	−3	−0.6	−2	−0.5	−2	−0.8	−3	−0.3	−1	−0.2	1	940
960									−0.4	−3	−0.3	−2	−1.2	−9	−0.7	−3	−0.5	−2	960
980											−0.3	−2	−0.6	−4	−0.7	−5	−1.0	−7	980
1000															−0.3	−2	−0.6	−4	1000

Appendix 2—*continued*

Temp. °F	Absolute Pressure, lbf/in²																		Temp. °F
	10500		11000		11500		12000		12500		13000		13500		14000		14500		
	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	Δh	$\Delta s \times 10^4$	
660	−0.2	−2	−0.2	−2	−0.1	−1	−0.2	−2	−0.1	−1	−0.1	−1	−0.1	−1	−0.1	−1	−0.1	−1	660
670	1.5	13	1.5	14	1.5	14	1.6	14	1.7	14	1.8	15	1.7	15	1.8	16	1.8	17	670
680	1.8	16	1.8	17	1.9	17	2.0	19	2.2	20	2.3	21	2.3	21	2.5	22	2.5	23	680
690	0.6	6	0.7	8	0.8	8	0.9	10	1.1	10	1.2	12	1.3	13	1.5	15	1.6	15	690
700	−0.5	−2	−0.4	−1	−0.3	−1	−0.2	0	0.1	0	0	1	0.1	1	0.3	4	0.5	5	700
710	−0.3	−1	−0.4	−2	−0.3	−1	−0.2	0	−0.2	0	0	2	0.1	2	0.3	3	0.5	4	710
720	−0.2	1	−0.2	0	−0.1	0	0.1	1	0.1	1	0.2	3	0.3	3	0.5	5	0.8	7	720
730	0	1	0	2	0.1	3	0.3	3	0.2	3	0.3	4	0.6	6	0.8	8	0.9	9	730
740	0.4	4	0.4	4	0.5	4	0.6	6	0.6	6	0.7	7	0.9	9	1.0	9	1.1	10	740
750	0.8	8	0.8	8	0.9	8	0.9	8	1.0	9	1.1	10	1.1	11	1.2	11	1.3	13	750
760	1.1	10	1.2	10	1.3	11	1.3	11	1.3	12	1.4	13	1.4	12	1.5	14	1.5	14	760
770	1.4	12	1.4	13	1.5	13	1.5	13	1.5	13	1.5	14	1.6	14	1.6	14	1.7	15	770
780	1.6	14	1.6	15	1.6	14	1.7	15	1.7	15	1.7	15	1.7	15	1.7	15	1.7	15	780
790	1.8	16	1.7	15	1.7	15	1.7	15	1.7	16	1.7	15	1.7	16	1.7	16	1.7	15	790
800	1.9	16	1.8	16	1.8	16	1.7	16	1.8	15	1.7	15	1.7	15	1.7	15	1.7	14	800
820	1.8	16	1.8	15	1.8	15	1.7	15	1.7	14	1.6	14	1.4	13	1.4	14	1.3	13	820
840	1.6	14	1.6	14	1.5	14	1.4	13	1.4	12	1.5	12	1.2	11	1.1	11	1.1	10	840
860	1.2	11	1.2	11	1.1	10	1.1	11	1.1	10	0.9	10	0.8	9	0.8	8	0.7	8	860
880	0.7	7	0.7	7	0.7	7	0.6	7	0.5	6	0.5	6	0.5	6	0.4	6	0.3	5	880
900	0.2	4	0.1	4	0.2	3	0.1	3	0.1	3	0.2	3	0.2	4	0.1	3	0.1	3	900
920	−0.2	1	−0.3	0	−0.4	0	−0.4	−1	−0.3	0	−0.3	0	−0.3	0	−0.2	0	−0.2	0	920
940	−0.3	0	−0.5	−2	−0.7	−2	−0.8	−3	−0.7	−3	−0.7	−3	−0.7	−2	−0.6	−2	−0.6	−2	940
960	−0.5	−1	−0.6	−2	−0.9	−4	−1.0	−5	−0.9	−5	−0.9	−4	−0.8	−3	−0.1	−4	−0.8	−4	960
980	−0.5	−2	−0.6	−2	−0.8	−4	−1.0	−6	−0.9	−4	−0.8	−4	−0.8	−4	−1.2	−7	−1.0	−5	980
1000	−0.4	−3	−0.5	−3	−0.6	−4	−0.7	−5	−0.5	−2	−0.4	−1	−0.6	−2	−1.1	−6	−0.8	−3	1000
1020	−0.1	0	−0.2	−1	0	0	0.1	0	0.3	3	0.4	3	−0.1	−1	−0.5	−3	−0.2	0	1020
1040	0.1	1	0.1	1	0.2	2	0.7	5	1.0	7	1.2	7	0.9	6	0.7	5	0.9	5	1040
1060	0.1	1	0.2	1	0.3	2	0.6	4	0.9	6	1.5	9	1.5	10	1.7	11	1.9	12	1060
1080	0.1	1	0.2	1	0.2	2	0.4	3	0.6	4	0.9	6	1.3	9	2.0	13	2.4	16	1080
1100	0.1	1	0.1		0.1	1	0.2	1	0.3	2	0.4	3	0.7	4	1.0	7	1.6	10	1100
1150			0.1		0.1	0		0		0	−0.1	0	−0.1	0	0.1	−1	0.2	−1	1150
1200						−1		−1		0	−0.1	−1	−0.2	−1	−0.2	−2	−0.4	−2	1200
1250										−1	−0.1	0	−0.1	−1	−0.1	−1	−0.2	−2	1250
1300											0	0	−0.1	0	−0.1	0	−0.1	0	1300

Appendix 3

Formulae for the Dynamic Viscosity of Water and Steam

The entries in Tables 5 and 6 are derived from the correlating formulae of Bruges and Gibson,* which formulae give values within the tolerances of the 1964 International Skeleton Table, reproduced here as Table 13. These equations are given below and the viscosity in Ns/m^2 is specified from zero pressure to 1000 bar and from 0 °C to 1000 °C.

(1) *Water at atmospheric pressure in the range* $0\ °C \leqslant t \leqslant 100\ °C$

$$\mu = \sum_{r=0}^{8} a_r T_r(x) \tag{1}$$

where $x = [2(T/T_0) - 2.366\,099\,21]/0.366\,099\,21$ and the coefficients are

$a_0 = 7.654\,497\,35 \times 10^{-4}$
$a_1 = -6.628\,585\,16 \times 10^{-4}$
$a_2 = 2.408\,023\,47 \times 10^{-4}$
$a_3 = -7.973\,601\,35 \times 10^{-5}$
$a_4 = 2.541\,962\,82 \times 10^{-5}$
$a_5 = -8.059\,669\,31 \times 10^{-6}$
$a_6 = 2.589\,903\,20 \times 10^{-6}$
$a_7 = -8.329\,834\,33 \times 10^{-7}$
$a_8 = 2.751\,794\,88 \times 10^{-7}$

(2) *Saturated liquid water in the range* $100\ °C \leqslant t \leqslant 350\ °C$

$$\mu = \sum_{r=0}^{5} b_r T_r(x) \tag{2}$$

where $x = [2(T/T_0) - 3.735\,859\,4]/1.003\,661\,0$ and the coefficients are

$b_0 = 1.381\,879\,27 \times 10^{-4}$
$b_1 = -9.908\,862\,92 \times 10^{-5}$
$b_2 = 2.640\,790\,92 \times 10^{-5}$
$b_3 = -1.533\,888\,02 \times 10^{-5}$
$b_4 = 2.421\,351\,63 \times 10^{-6}$
$b_5 = -1.622\,637\,68 \times 10^{-6}$

(3) *Compressed water*

In the temperature range $0\ °C \leqslant t \leqslant 130\ °C$

$$\mu = \mu_s + \sum_{i=0}^{5} \sum_{j=0}^{5} c_{ij} T_i(x) T_j(y) \tag{3a}$$

where

$$x = (p - p_s) \times 10^{-6} - 1$$

and

$$y = \frac{T - 373.15}{100}$$

and in the temperature range $130\ °C \leqslant t \leqslant 350\ °C$,

$$\mu = \mu_s + \sum_{i=0}^{4} \sum_{j=0}^{3} d_{ij} T_i(x) T_j(z) \tag{3b}$$

where

$$z = \frac{T - 523.15}{150}$$

The value of μ_s is derived from either equation (1) or (2) depending on the temperature, T. The coefficients c_{ij} and d_{ij} are tabulated on page 153.

Equations (3a) and (3b) are valid within the following ranges of pressure and temperature:

Temperature range, °C	Pressure range, bar	Equations
$0 \leqslant t \leqslant 100$	1–10 000	(3a) and (1)
$100 \leqslant t \leqslant 130$	Saturation–3500	(3a) and (2)
$130 \leqslant t \leqslant 300$	Saturation–3500	(3b) and (2)
$300 \leqslant t \leqslant 350$	Saturation–1000	(3b) and (2)

* Bruges, E. A. and Gibson, M. R. "Dynamic Viscosity of Compressed Water to 10 kilobar and Steam to 1500 °C", *J. Mech. Eng. Sci.*, 11, No. 2, 1969, pp. 189–205.

i = 3
j = 1

i
j = 6

Coefficient c_{ij} (equation (3a))

i	j				
	0	1	2	3	4
0	$-8.86952796667 \times 10^{2}$	$-1.58730746282 \times 10^{3}$	$-1.16767754450 \times 10^{3}$	$-6.72988818200 \times 10^{2}$	$-2.82428614169 \times 10^{2}$
1	$-1.49458041236 \times 10^{3}$	$-2.67469156898 \times 10^{3}$	$-1.96766399218 \times 10^{3}$	$-1.13415790410 \times 10^{3}$	$-4.75980307141 \times 10^{2}$
2	$-8.82608875740 \times 10^{2}$	$-1.57944859821 \times 10^{3}$	$-1.16205738446 \times 10^{3}$	$-6.69982959275 \times 10^{2}$	$-2.81204030122 \times 10^{2}$
3	$-3.49565860818 \times 10^{2}$	$-6.25518595616 \times 10^{2}$	$-4.60292172778 \times 10^{2}$	$-2.65497777658 \times 10^{2}$	$-1.11451090730 \times 10^{2}$
4	$-8.38157438965 \times 10^{1}$	$-1.49968961755 \times 10^{2}$	$-1.10380005371 \times 10^{2}$	$-6.37069946172 \times 10^{1}$	$-2.67481596837 \times 10^{1}$
5	$-9.23114312350 \times 10^{0}$	$-1.65148581921 \times 10^{1}$	$-1.21587693674 \times 10^{1}$	$-7.02309033384 \times 10^{0}$	$-2.94940610307 \times 10^{0}$

Coefficient c_{ij} (equation (3a))

i = 3
j = 1

Coefficient d_{ij} (equation (3b))

i = 4
j = 4

j	i	j			
5		0	1	2	3
$-7.24067542375 \times 10^{1}$	0	$-1.01002473749 \times 10^{-1}$	$3.31767627435 \times 10^{-1}$	$-1.02011451527 \times 10^{-1}$	$1.53747600990 \times 10^{-1}$
$-1.22076269753 \times 10^{2}$	1	$-1.63630680052 \times 10^{-1}$	$5.36891946274 \times 10^{-1}$	$-1.64950137076 \times 10^{-1}$	$2.48931811588 \times 10^{-1}$
$-7.22076722920 \times 10^{1}$	2	$-8.47399308460 \times 10^{-2}$	$2.77602513580 \times 10^{-1}$	$-8.51224304670 \times 10^{-2}$	$1.29014694813 \times 10^{-1}$
$-2.86764984400 \times 10^{1}$	3	$-2.55383118217 \times 10^{-2}$	$8.37835630352 \times 10^{-2}$	$-2.56431741097 \times 10^{-2}$	$3.91761598633 \times 10^{-2}$
$-6.90238401943 \times 10^{0}$	4	$-3.42658728002 \times 10^{-3}$	$1.13053682938 \times 10^{-2}$	$-3.45942919228 \times 10^{-3}$	$5.34567564729 \times 10^{-3}$
$-7.64042355461 \times 10^{-1}$	5				

(4) *Superheated steam at low pressures*

$$\mu = a + b\left(\frac{T}{T_0}\right) + c\left(\frac{T}{T_0}\right)^2 - \frac{\rho}{\rho_c}\left\{d + e\left(\frac{T}{T_0}\right)\right\} \tag{4}$$

in the ranges $0\ ^\circ\mathrm{C} \leqslant t \leqslant 326.93\ ^\circ\mathrm{C}$

$0 \leqslant p \leqslant 165$ bar

where
$$a = -2.618\,79 \times 10^{-6}$$
$$b = 1.052\,82 \times 10^{-5}$$
$$c = 1.961\,01 \times 10^{-7}$$
$$d = 9.264\,99 \times 10^{-5}$$
$$e = -4.217\,33 \times 10^{-5}$$
$$1/\rho_c = 0.00315\ \mathrm{m^3/kg}$$

Superheated steam at atmospheric pressure from 100 *to* 1000 °C

$$\mu = \sum_{l=0}^{4} f_l\left(\frac{T}{T_0}\right)^l \tag{5}$$

in the range 100–1000 °C at 1.013 25 bar pressure.

where
$$f_0 = -1.194\,705\,8 \times 10^{-7}$$
$$f_1 = 7.839\,813\,6 \times 10^{-6}$$
$$f_2 = 1.819\,397\,9 \times 10^{-6}$$
$$f_3 = -3.530\,246\,4 \times 10^{-7}$$
$$f_4 = 1.765\,560\,0 \times 10^{-8}$$

[In the range 100–326.93 °C at atmospheric pressure the viscosity should be evaluated from equation (4) but values may also be derived from equation (5) in this range and will be found to differ by no more than 22×10^{-9} kg/m s or about 0.1 per cent. At 326.93 °C equation (4) gives 21.457×10^{-6} kg/m s and equation (5) gives 21.478×10^{-6} kg/m s. Above 326.93 °C equation (5) should be used.]

(5) *Steam at supercritical temperatures* (> 375 °C)

$$\mu = \mu_1 + m\left(\frac{\rho}{\rho_c}\right) + n\left(\frac{\rho}{\rho_c}\right)^2 \tag{6}$$

where μ is the viscosity at any pressure, p, and temperature, T, μ_1 is the viscosity at atmospheric pressure given by equation (5) at the same temperature, T, and ρ is the density at pressure, p, and temperature, T.

The values of the coefficients are

$$m = 9.834\,76 \times 10^{-8}$$

and

$$n = 8.082\,79 \times 10^{-6}$$

The equation is valid in the following ranges

$$375\ °C \leqslant t \leqslant 600\ °C$$
$$1.013\,25\ \text{bar} \leqslant p \leqslant 3500\ \text{bar}$$
$$600\ °C \leqslant t \leqslant 1000\ °C$$
$$1.013\,25\ \text{bar} \leqslant p \leqslant 1000\ \text{bar}$$

In the first three sections of this Appendix the equations take the form of Chebyshev series where $T_r(x)$ is the Chebyshev polynomial of rth degree with x normalized in the range $-1 \leqslant x \leqslant 1$. The polynomials are calculated using a recurrence relation as follows:

$$T_r(x) = 2xT_{r-1}(x) - T_{r-2}(x)$$
$$T_0(x) = 1 \text{ and } T_1(x) = x$$

Hence $T_2(x) = 2x^2 - 1$; $T_3(x) = 4x^3 - 3x$; etc.

Appendix 4

Formulae for the Thermal Conductivity of Water and Steam

The entries in Table 8 have been derived from the equations for thermal conductivity given in the Supplementary Release on Transport Properties, November, 1964, of the *Sixth International Conference on the Properties of Steam* and are reproduced here. These equations, which have as their defined upper limits 700 °C and 500 bar are considered as being valid to 1000 °C and 500 bar. It should be noted that the equations do not specify the thermal conductivity in a region, mainly at supercritical pressures, the precise limits of which are implied in (2) and (3) below.

(1) *Superheated steam at* 1 bar *in the temperature range from* 100 °C to 1000 °C.

$$\lambda_1 \times 10^3 = a + bt + ct^2 + dt^3$$

The relevant quantities and constants are as follows:

Quantity	*Symbol*	*Unit*
thermal conductivity	λ	W/m K
customary temperature	t	°C
Values of constants:		
	a	17.6
	b	5.87×10^{-2}
	c	1.04×10^{-4}
	d	-4.51×10^{-8}

(2) *Superheated steam over the following pressure and temperature ranges:*

Pressure bar	*Temperature* °C
1 to 175	t_s to 700
176 to 225	400 to 700
226 to 275	425 to 700
276 to 350	450 to 700
351 to 450	500 to 700
451 to 500	550 to 700

$$(\lambda - \lambda_1) \times 10^3 = (a + bt + ct^2)\frac{1}{\nu} + \frac{d}{(t-e)^{4\cdot 2}}\left(\frac{1}{\nu}\right)^2$$

The relevant quantity and constants are as follows:

Quantity	*Symbol*	*Unit*
specific volume	v	cm^3/g
Values of constants:		
	a	103.51
	b	0.4198
	c	-2.771×10^{-5}
	d	2.1482×10^{14}
	e	0

and λ_1 is as given in (1).

(3) *Liquid water from saturation pressure to* 500 bar *in the temperature range from* 0 °C *to* 350 °C

$$\lambda \times 10^3 = a_0 + a_1\left(\frac{T}{T_0}\right) + a_2\left(\frac{T}{T_0}\right)^2 + a_3\left(\frac{T}{T_0}\right)^3 + a_4\left(\frac{T}{T_0}\right)^4 + (p - p_s)\left[b_0 + b_1\left(\frac{T}{T_0}\right) + b_2\left(\frac{T}{T_0}\right)^2 + b_3\left(\frac{T}{T_0}\right)^3\right] + (p - p_s)^2\left[c_0 + c_1\left(\frac{T}{T_0}\right) + c_2\left(\frac{T}{T_0}\right)^2 + c_3\left(\frac{T}{T_0}\right)^3\right]$$

The relevant quantities and constants are as follows:

Quantity	*Symbol*	*Unit*
temperature (absolute)	T	K
saturation pressure at temperature T	p_s	bar
Values of constants:		
	T_0	273.15
	a_0	−922.47
	a_1	2839.5
	a_2	−1800.7
	a_3	525.77
	a_4	−73.440
	b_0	−0.94730
	b_1	2.5186
	b_2	−2.0012
	b_3	0.51536
	c_0	1.6563×10^{-3}
	c_1	-3.8929×10^{-3}
	c_2	2.9323×10^{-3}
	c_3	-7.1693×10^{-4}

Appendix 5

Boiler Feed Pump Calculations

Calculations relating to boiler feed pumps for modern power plant cannot be made with sufficient accuracy or facility from a Mollier chart and three special graphs have been prepared for use in such calculations.

Using the equation of state for liquid water given in both the 1966 IFC Formulation and the 1967 IFC Formulation, and computing to two more significant figures than are given in the 1967 Steam Tables, it is found that, within the range of working conditions relevant to boiler feed pumps in modern power plant, the following relationships apply:

(i) with any given initial temperature, the isentropic enthalpy rise is directly proportional to the pressure rise and is negligibly affected by the initial pressure.

(ii) with any given initial temperature, the isentropic temperature rise is approximately proportional to the pressure rise and is not significantly affected by the initial pressure.

The curve on page 157 shows the isentropic feed pump work per 100 bar pressure rise plotted against the initial temperature. Results calculated from this graph are correct to within 0.05 kJ/kg for any pressure rise up to 250 bars.

The curves on page 158 similarly show the mean isentropic temperature rise per 100 bar pressure rise, for total pressure rises of 100 bars and 250 bars. For any other total pressure rise the appropriate mean value can be found by interpolation between these two curves, or in some cases, by extrapolation.

The curves on page 159 show the specific heat capacity of water for pressures of 100, 150, 200 and 250 bars plotted against temperature. These curves, in conjunction with the curves on pages 157 and 158 and the formulae given in the following example, can be used to determine the actual feed pump work from the pressures and temperatures before and after the pump.

Example:

Given

initial temperature	$t_1 = 120$ °C
initial pressure	$p_1 = 7$ bar
discharge pressure	$p_2 = 180$ bar
discharge temperature	$t_2 = 123$ °C

From page 157, isentropic work

$$\Delta h_s = 10.55 \times \frac{173}{100} = 18.25 \text{ kJ/kg}$$

From page 158, isentropic temperature rise is

$$\Delta t_s = 0.838 \times 1.73 = 1.45 \text{ °C}$$

From page 159, evaluate c_p at pressure p_2 and temperature

$$t' = \frac{(t_1 + t_2 + \Delta t_s)}{2}$$

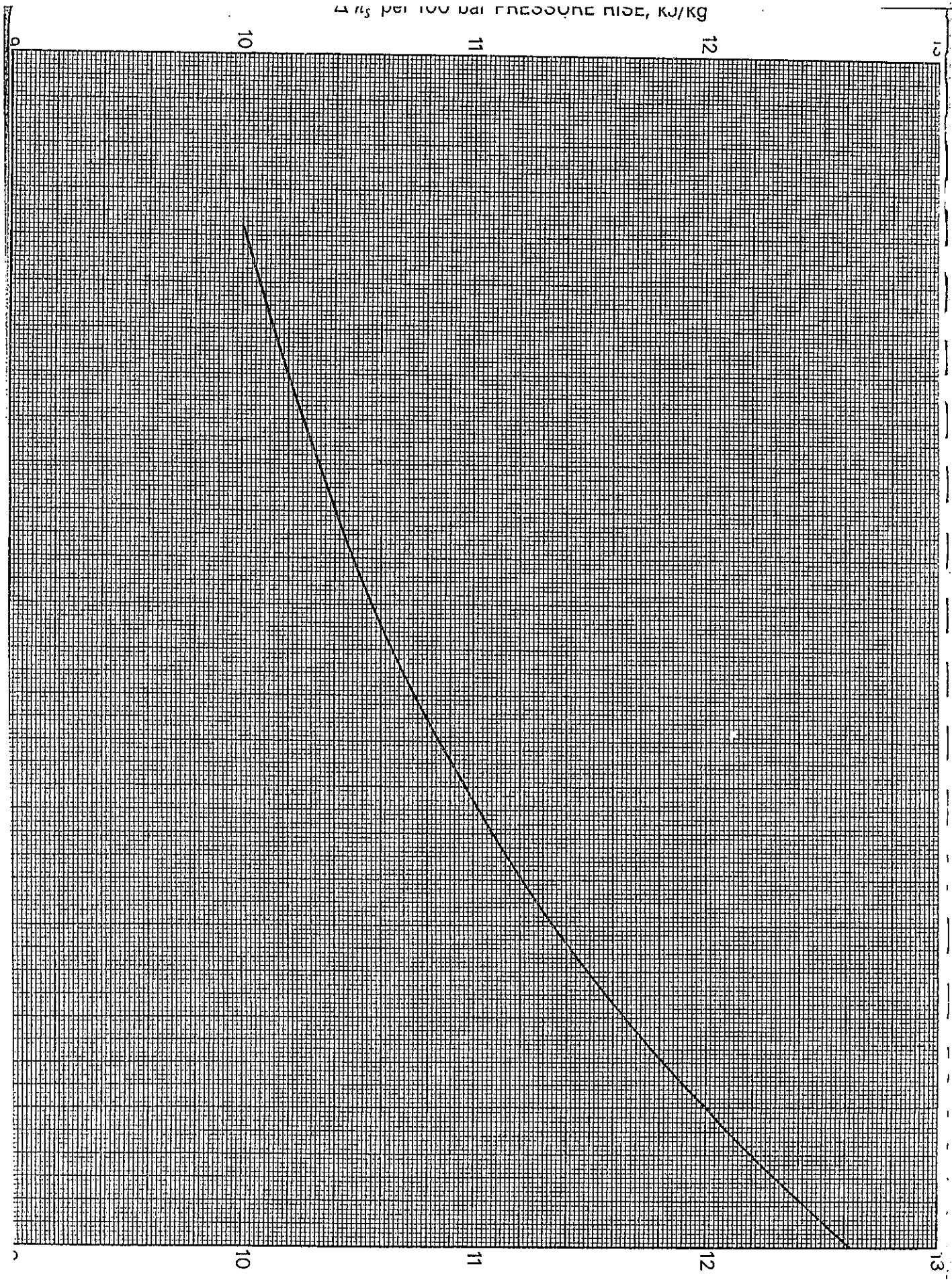
$$t' = \frac{120 + 123 + 1.45}{2} = 122.225 \text{ °C}$$

$$c_p = 4.204$$

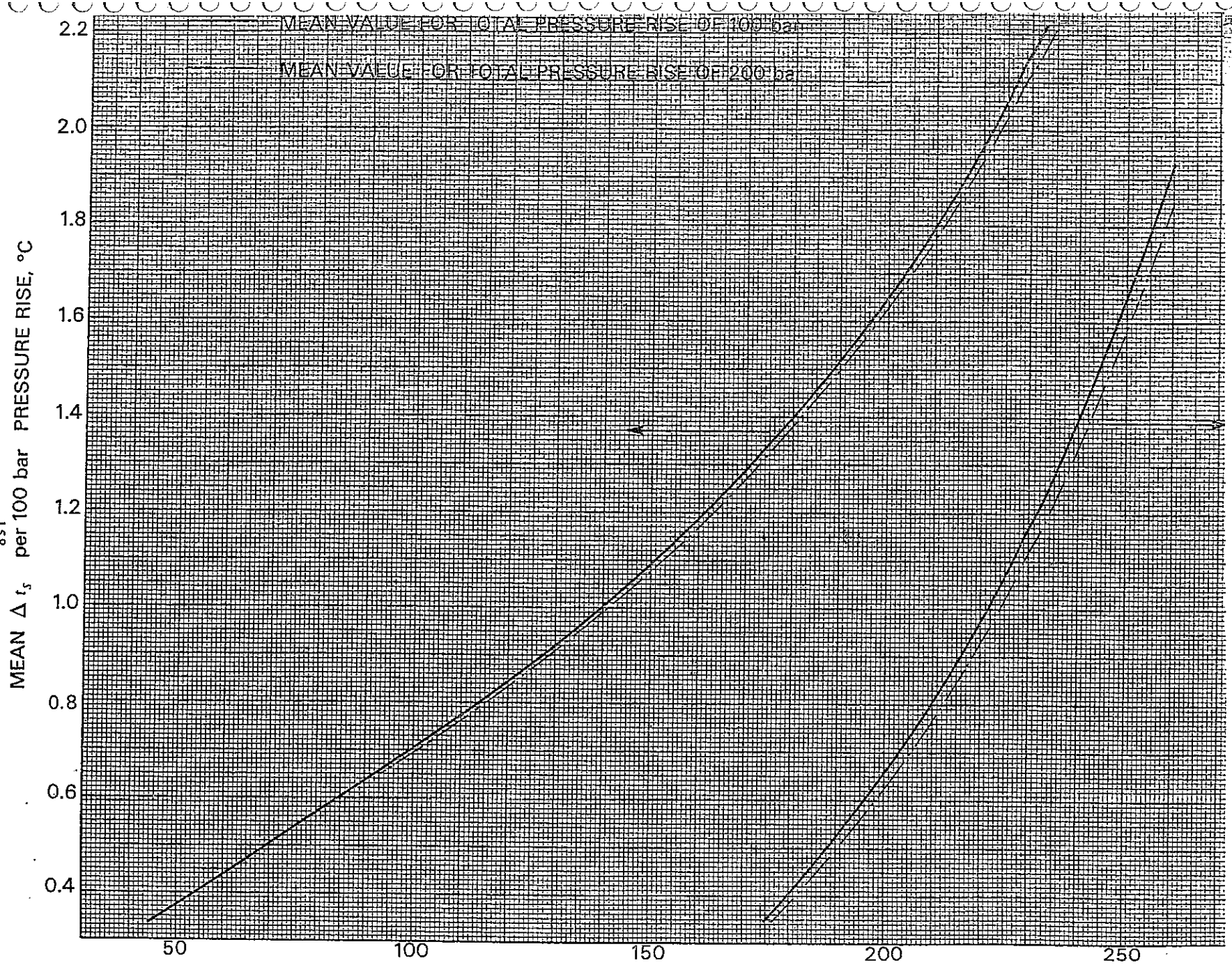
Then actual feed pump work

$$\begin{aligned}\Delta h' &= \Delta h_s + c_p\,(t_2 - t_1 - \Delta t_s)\\ &= 18.25 + 4.204(123 - 120 - 1.45)\\ &= 18.25 + (4.204 \times 1.55)\\ &= 18.25 + 6.5162 = 24.7662 \text{ kJ/kg}\end{aligned}$$

Pump efficiency $= \dfrac{18.25}{24.77} = 73.68\%$



Δh_s per 100 bar PRESSURE RISE, kJ/kg


MEAN VALUE FOR TOTAL PRESSURE RISE OF 100 bar
MEAN VALUE FOR TOTAL PRESSURE RISE OF 200 bar
MEAN Δt_s per 100 bar PRESSURE RISE, °C
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
50
100
150
200
250

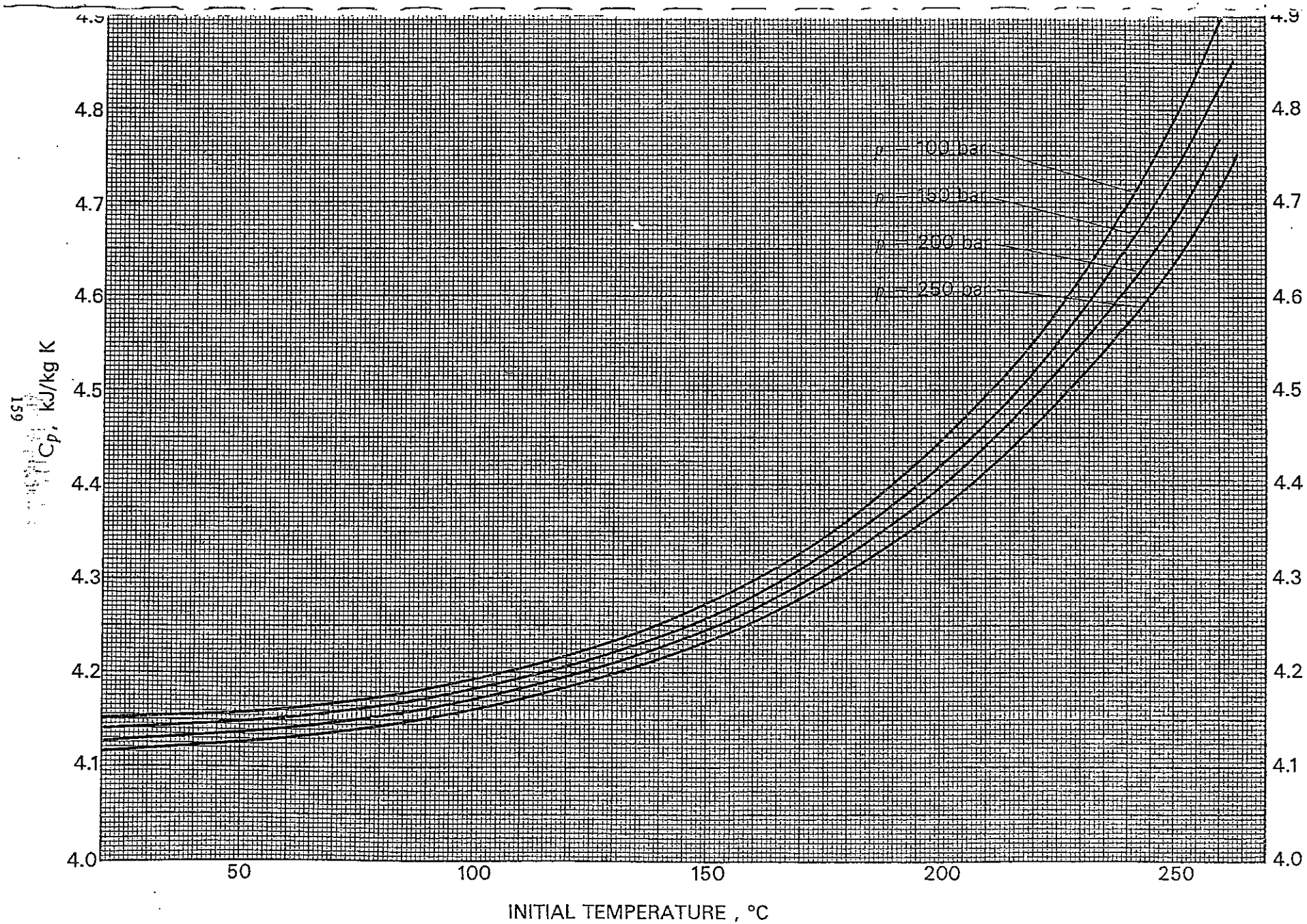


Fig. 7. Specific Heat Capacity of Water at Constant Pressure for Boiler Feed Pump Calculations.

Appendix 6

Conversion Factors

6.1 Conversion Table for Pressure

	bar	kgf/cm²	atm	lbf/in²	inHg
1 bar =	1	1.019 72	0.986 923	14.503 8	29.530 0
1 kgf/cm² =	**0.980 665**	1	0.967 841	14.223 3	28.959 0
1 atm =	**1.013 25**	1.033 23	1	14.695 9	29.921 3
1 lbf/in² =	0.068 947 6	0.070 307 0	0.068 046 0	1	2.036 02
1 inHg =	0.033 863 9	0.034 531 6	0.033 421 1	0.491 154	1

NOTE: 1 bar = $10^5 \frac{\text{newton}}{\text{metre}^2} = 10^5$ pascal = 100 000 Pa

6.2 Conversion Table for Specific Volume

	dm³/kg = cm³/g	ft³/lb
1 cm³/g =	1	0.016 018 5
1 ft³/lb =	62.428 0	1

NOTE: 1 cubic foot = 0.0283168 cubic metre

6.3 Conversion Table for Specific Enthalpy

	kJ/kg = J/g	kcal/kg = cal/g	Btu/lb	kgf m/kg	ft lbf/lb	kWh/kg = Wh/g
1 kJ/kg =	1	0.238 846	0.429 923	101.972	334.553	$2.777\,78 \times 10^{-4}$
1 kcal/kg =	**4.186 8**	1	**1.8**	426.935	1400.70	$\mathbf{1.163 \times 10^{-3}}$
1 Btu/lb =	**2.326**	0.555 556	1	237.186	778.169	$6.461\,11 \times 10^{-4}$
1 kgf m/kg =	$\mathbf{9.806\,65 \times 10^{-3}}$	$2.342\,28 \times 10^{-3}$	$4.216\,10 \times 10^{-3}$	1	3.280 84	$2.724\,07 \times 10^{-6}$
1 ft lbf/lb =	$2.989\,07 \times 10^{-3}$	$7.139\,26 \times 10^{-4}$	$1.285\,07 \times 10^{-3}$	**0.304 8**	1	$0.830\,296 \times 10^{-6}$
1 kWh/kg =	**3600**	859.845	1547.72	$3.670\,98 \times 10^{5}$	$1.204\,39 \times 10^{6}$	1

Factors shown in bold face are exact.

6.4 Conversion Table for Specific Entropy and Specific Heat Capacity

		kJ/kg K = J/g K	kcal/kg K = cal/g K	Btu/lb °R	kgf m/kg K	ft lbf/lb °R	kWh/kg K = Wh/g K
1 kJ/kg K	=	1	0.238 846	0.238 846	101.972	185.863	$2.777\,78 \times 10^{-4}$
1 kcal/kg K	=	4.186 8	1	1	426.935	778.169	1.163×10^{-3}
1 Btu/lb °R	=	4.186 8	1	1	426.935	778.169	1.163×10^{-3}
1 kgf m/kg K	=	$9.806\,65 \times 10^{-3}$	$2.342\,28 \times 10^{-3}$	$2.342\,28 \times 10^{-6}$	1	1.822 69	$2.724\,07 \times 10^{-6}$
1 ft lbf/lb °R	=	$5.380\,32 \times 10^{-3}$	$1.285\,07 \times 10^{-3}$	$1.285\,07 \times 10^{-3}$	0.548 64	1	$1.494\,53 \times 10^{-6}$
1 kWh/kg K	=	3600	859.845	859.845	$3.670\,98 \times 10^{6}$	$0.669\,105 \times 10^{6}$	1

6.5 Conversion Table for Dynamic Viscosity

		kg/m s = N s/m² = Pa s	g/cm s = dyn s/cm² = poise	lb/ft s = pdl s/ft²	kgf s/m²	slug/ft s = lbf s/ft²
1 kg/m s	=	1	10	0.671 969	0.101 972	0.020 885 4
1 g/cm s	=	0.1	1	0.067 196 9	0.010 197 2	$2.088\,54 \times 10^{-3}$
1 lb/ft s	=	1.488 16	14.881 6	1	0.151 750	0.031 081 0
1 kgf s/m²	=	9.806 65	98.066 5	6.589 76	1	0.204 816
1 slug/ft s	=	47.880 3	478.803	32.174 0	4.882 43	1

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6.6 Conversion Table for Kinematic Viscosity

		m²/s	cm²/s = stokes	ft²/s
1 m²/s	=	1	10^{4}	10 763.9
1 cm²/s	=	10^{-4}	1	$1.076\,39 \times 10^{-3}$
1 ft²/s	=	0.092 903	929.030 4	1

6.7 Conversion Table for Thermal Conductivity

		W/m K	W/cm K	cal/cm s K	kcal/m h K	Btu/ft h °F
1 W/m K	=	1	100	23.884 6	8598.45	5777.89
1 W/cm K	=	0.01	1	0.238 846	85.984 5	57.778 9
1 cal/cm s K	=	0.041 868	4.186 8	1	360	241.909
1 k cal/m h K	=	1.163	0.011 63	$2.777\,78 \times 10^{-3}$	1	0.671 969
1 Btu/ft h °F	=	1.730 73	0.017 307 3	$4.133\,79 \times 10^{-3}$	1.488 16	1

Factors shown in bold face are exact.