



# RS-25

## THERMODYNAMIC TABLES

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Temp	Pressure	Pressure	Density (L)	Density (V)	Volume (L)	Volume (V)	Enthalpy (L)	Latent heat	Enthalpy (V)	Entropy (L)	Entropy (V)
[C]	[bara] bubble	[bara] dew	[kg/m <sup>3</sup> ] bubble	[kg/m <sup>3</sup> ] dew	[m <sup>3</sup> /kg]	[litre/kg]	[kJ/kg]	kJ/kg	[kJ/kg]	[kJ/K-kg]	[kJ/K-kg]
-50	0.327	0.291	1462.9	1.918	0.6840	0.5214	139.41	193.41	332.82	0.75616	1.6261
-48	0.366	0.326	1457.1	2.134	0.6860	0.4686	141.73	192.39	334.12	0.76651	1.6241
-46	0.408	0.365	1451.3	2.370	0.6890	0.4220	144.06	191.37	335.43	0.77680	1.6223
-44	0.454	0.407	1445.5	2.625	0.6920	0.3809	146.40	190.33	336.73	0.78704	1.6206
-42	0.504	0.453	1439.6	2.902	0.6950	0.3446	148.75	189.29	338.04	0.79721	1.6191
-40	0.558	0.503	1433.7	3.202	0.6980	0.3123	151.10	188.24	339.34	0.80733	1.6176
-38	0.617	0.558	1427.7	3.526	0.7000	0.2836	153.46	187.19	340.65	0.81739	1.6163
-36	0.681	0.617	1421.8	3.876	0.7030	0.2580	155.83	186.13	341.96	0.82740	1.6150
-34	0.750	0.681	1415.8	4.252	0.7060	0.2352	158.20	185.07	343.27	0.83736	1.6139
-32	0.824	0.750	1409.7	4.657	0.7090	0.2148	160.59	183.98	344.57	0.84727	1.6129
-30	0.904	0.825	1403.6	5.091	0.7120	0.1964	162.98	182.90	345.88	0.85713	1.6119
-28	0.991	0.905	1397.5	5.557	0.7160	0.1800	165.38	181.80	347.18	0.86694	1.6111
-26	1.083	0.992	1391.3	6.056	0.7190	0.1651	167.79	180.69	348.48	0.87671	1.6103
-24	1.183	1.085	1385.1	6.590	0.7220	0.1517	170.21	179.58	349.79	0.88643	1.6096
-22	1.289	1.184	1378.9	7.160	0.7250	0.1397	172.64	178.44	351.08	0.89611	1.6090
-20	1.403	1.291	1372.6	7.769	0.7290	0.1287	175.08	177.30	352.38	0.90574	1.6085
-18	1.524	1.405	1366.3	8.417	0.7320	0.1188	177.53	176.14	353.67	0.91533	1.6080
-16	1.653	1.527	1359.9	9.108	0.7350	0.1098	179.98	174.98	354.96	0.92488	1.6076
-14	1.791	1.657	1353.5	9.842	0.7390	0.1016	182.45	173.80	356.25	0.93440	1.6073
-12	1.938	1.796	1347.0	10.623	0.7420	0.0941	184.92	172.61	357.53	0.94387	1.6070
-10	2.093	1.943	1340.5	11.451	0.7460	0.0873	187.41	171.40	358.81	0.95331	1.6068
-8	2.258	2.099	1333.9	12.330	0.7500	0.0811	189.91	170.17	360.08	0.96272	1.6066
-6	2.433	2.265	1327.3	13.261	0.7530	0.0754	192.41	168.94	361.35	0.97208	1.6065
-4	2.619	2.441	1320.6	14.248	0.7570	0.0702	194.93	167.69	362.62	0.98142	1.6065
-2	2.815	2.628	1313.8	15.292	0.7610	0.0654	197.46	166.41	363.87	0.99073	1.6065

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[C]	[bara] bubble	[bara] dew	[kg/m <sup>3</sup> ] bubble	[kg/m <sup>3</sup> ] dew	[m <sup>3</sup> /kg]	[litre/kg]	[kJ/kg]	kJ/kg	[kJ/kg]	[kJ/K-kg]	[kJ/K-kg]
0	3.022	2.825	1307.0	16.396	0.7650	0.0610	200.00	165.13	365.13	1.0000	1.6065
2	3.240	3.033	1300.1	17.563	0.7690	0.0569	202.55	163.82	366.37	1.0092	1.6065
4	3.470	3.253	1293.2	18.795	0.7730	0.0532	205.11	162.50	367.61	1.0185	1.6066
6	3.713	3.485	1286.1	20.096	0.7780	0.0498	207.69	161.15	368.84	1.0277	1.6068
8	3.968	3.729	1279.0	21.469	0.7820	0.0466	210.28	159.79	370.07	1.0368	1.6070
10	4.237	3.987	1271.9	22.916	0.7860	0.0436	212.88	158.40	371.28	1.0460	1.6072
12	4.519	4.257	1264.6	24.442	0.7910	0.0409	215.49	157.00	372.49	1.0551	1.6074
14	4.815	4.541	1257.3	26.049	0.7950	0.0384	218.11	155.58	373.69	1.0642	1.6076
16	5.125	4.840	1249.8	27.742	0.8000	0.0360	220.75	154.12	374.87	1.0732	1.6079
18	5.450	5.153	1242.3	29.525	0.8050	0.0339	223.41	152.64	376.05	1.0823	1.6082
20	5.791	5.481	1234.7	31.402	0.8100	0.0318	226.08	151.14	377.22	1.0913	1.6085
22	6.147	5.825	1227.0	33.377	0.8150	0.0300	228.76	149.61	378.37	1.1004	1.6088
24	6.520	6.185	1219.1	35.455	0.8200	0.0282	231.46	148.05	379.51	1.1094	1.6091
26	6.909	6.561	1211.2	37.641	0.8260	0.0266	234.17	146.47	380.64	1.1184	1.6095
28	7.316	6.955	1203.1	39.941	0.8310	0.0250	236.90	144.86	381.76	1.1273	1.6098
30	7.740	7.366	1195.0	42.360	0.8370	0.0236	239.65	143.21	382.86	1.1363	1.6101
32	8.182	7.795	1186.7	44.905	0.8430	0.0223	242.41	141.53	383.94	1.1453	1.6105
34	8.643	8.242	1178.2	47.582	0.8490	0.0210	245.19	139.82	385.01	1.1542	1.6108
36	9.124	8.709	1169.7	50.398	0.8550	0.0198	248.00	138.07	386.07	1.1632	1.6111
38	9.623	9.195	1160.9	53.362	0.8610	0.0187	250.82	136.28	387.10	1.1722	1.6114
40	10.143	9.702	1152.0	56.481	0.8680	0.0177	253.66	134.45	388.11	1.1811	1.6117
42	10.684	10.229	1143.0	59.766	0.8750	0.0167	256.52	132.58	389.10	1.1901	1.6120
44	11.246	10.778	1133.7	63.226	0.8820	0.0158	259.40	130.67	390.07	1.1990	1.6122
46	11.830	11.349	1124.3	66.871	0.8890	0.0150	262.31	128.71	391.02	1.2080	1.6124
48	12.436	11.942	1114.7	70.715	0.8970	0.0141	265.24	126.70	391.94	1.2170	1.6126

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[C]	[bara] bubble	[bara] dew	[kg/m <sup>3</sup> ] bubble	[kg/m <sup>3</sup> ] dew	[m <sup>3</sup> /kg]	[litre/kg]	[kJ/kg]	kJ/kg	[kJ/kg]	[kJ/K-kg]	[kJ/K-kg]
50	13.065	12.558	1104.8	74.770	0.9050	0.0134	268.20	124.63	392.83	1.2260	1.6128
52	13.717	13.198	1094.8	79.052	0.9130	0.0127	271.18	122.52	393.70	1.2350	1.6129
54	14.394	13.862	1084.4	83.577	0.9220	0.0120	274.19	120.34	394.53	1.2441	1.6129
56	15.095	14.552	1073.8	88.363	0.9310	0.0113	277.23	118.09	395.32	1.2531	1.6129
58	15.821	15.267	1063.0	93.432	0.9410	0.0107	280.30	115.78	396.08	1.2622	1.6128
60	16.574	16.009	1051.8	98.807	0.9510	0.0101	283.41	113.39	396.80	1.2714	1.6126
62	17.353	16.778	1040.2	104.520	0.9610	0.0096	286.55	110.93	397.48	1.2805	1.6124
64	18.159	17.575	1028.3	110.590	0.9720	0.0090	289.73	108.37	398.10	1.2898	1.6120
66	18.993	18.401	1016.0	117.060	0.9840	0.0085	292.96	105.71	398.67	1.2991	1.6116
68	19.856	19.257	1003.2	123.980	0.9970	0.0081	296.23	102.96	399.19	1.3084	1.6110
70	20.748	20.143	989.9	131.390	1.0100	0.0076	299.55	100.09	399.64	1.3179	1.6103
72	21.670	21.061	976.0	139.350	1.0250	0.0072	302.92	97.09	400.01	1.3274	1.6094
74	22.624	22.012	961.5	147.940	1.0400	0.0068	306.36	93.94	400.30	1.3371	1.6083
76	23.609	22.997	946.3	157.240	1.0570	0.0064	309.87	90.63	400.50	1.3468	1.6070
78	24.628	24.017	930.2	167.360	1.0750	0.0060	313.45	87.13	400.58	1.3568	1.6055
80	25.680	25.073	913.1	178.460	1.0950	0.0056	317.13	83.41	400.54	1.3669	1.6036
82	26.767	26.168	894.8	190.710	1.1180	0.0052	320.92	79.43	400.35	1.3772	1.6014
84	27.890	27.302	875.0	204.370	1.1430	0.0049	324.83	75.14	399.97	1.3879	1.5987
86	29.051	28.479	853.5	219.800	1.1720	0.0046	328.91	70.45	399.36	1.3989	1.5955
88	30.250	29.701	829.5	237.560	1.2060	0.0042	333.19	65.26	398.45	1.4104	1.5915
90	31.489	30.971	802.2	258.520	1.2470	0.0039	337.76	59.36	397.12	1.4226	1.5864