

Saturated Pressure Table

| temperature [°C] | pressure [bar] | | density [kg/m³] | | enthalpy [kJ/kg] | | entropy [J/kg*K] | |
|---------------------|-------------------|--------|--------------------|--------|---------------------|--------|---------------------|--------|
| | liquid | vapour | liquid | vapour | liquid | vapour | liquid | vapour |
| -65,0 | 0,406 | 0,290 | 1313,7 | 1,376 | 110,50 | 370,43 | 0,6289 | 1,8992 |
| -64,0 | 0,431 | 0,309 | 1311,0 | 1,457 | 111,81 | 371,06 | 0,6352 | 1,8960 |
| -63,0 | 0,456 | 0,328 | 1308,4 | 1,542 | 113,13 | 371,68 | 0,6414 | 1,8928 |
| -62,0 | 0,483 | 0,349 | 1305,7 | 1,632 | 114,44 | 372,31 | 0,6477 | 1,8897 |
| -61,0 | 0,511 | 0,370 | 1303,0 | 1,725 | 115,76 | 372,93 | 0,6539 | 1,8866 |
| -60,0 | 0,540 | 0,392 | 1300,3 | 1,822 | 117,07 | 373,55 | 0,6600 | 1,8836 |
| -59,0 | 0,570 | 0,416 | 1297,6 | 1,924 | 118,39 | 374,18 | 0,6662 | 1,8806 |
| -58,0 | 0,602 | 0,440 | 1294,9 | 2,031 | 119,71 | 374,80 | 0,6723 | 1,8777 |
| -57,0 | 0,636 | 0,466 | 1292,2 | 2,142 | 121,02 | 375,42 | 0,6784 | 1,8749 |
| -56,0 | 0,670 | 0,493 | 1289,5 | 2,257 | 122,34 | 376,04 | 0,6845 | 1,8721 |
| -55,0 | 0,706 | 0,521 | 1286,7 | 2,378 | 123,67 | 376,66 | 0,6906 | 1,8693 |
| -54,0 | 0,744 | 0,551 | 1284,0 | 2,504 | 124,99 | 377,27 | 0,6966 | 1,8666 |
| -53,0 | 0,784 | 0,582 | 1281,2 | 2,635 | 126,31 | 377,89 | 0,7026 | 1,8640 |
| -52,0 | 0,824 | 0,614 | 1278,4 | 2,771 | 127,64 | 378,51 | 0,7086 | 1,8614 |
| -51,0 | 0,867 | 0,647 | 1275,7 | 2,913 | 128,97 | 379,12 | 0,7146 | 1,8588 |
| -50,0 | 0,912 | 0,682 | 1272,9 | 3,061 | 130,30 | 379,73 | 0,7205 | 1,8563 |
| -49,0 | 0,958 | 0,719 | 1270,1 | 3,214 | 131,63 | 380,35 | 0,7265 | 1,8538 |
| -48,0 | 1,006 | 0,757 | 1267,3 | 3,374 | 132,96 | 380,96 | 0,7324 | 1,8514 |
| -47,0 | 1,056 | 0,797 | 1264,5 | 3,539 | 134,30 | 381,57 | 0,7383 | 1,8490 |
| -46,0 | 1,107 | 0,838 | 1261,6 | 3,711 | 135,63 | 382,18 | 0,7442 | 1,8466 |
| -45,0 | 1,161 | 0,881 | 1258,8 | 3,890 | 136,97 | 382,78 | 0,7500 | 1,8443 |
| -44,0 | 1,217 | 0,926 | 1255,9 | 4,075 | 138,31 | 383,39 | 0,7559 | 1,8421 |
| -43,0 | 1,275 | 0,973 | 1253,1 | 4,268 | 139,65 | 383,99 | 0,7617 | 1,8398 |
| -42,0 | 1,335 | 1,021 | 1250,2 | 4,467 | 141,00 | 384,60 | 0,7675 | 1,8377 |
| -41,0 | 1,397 | 1,071 | 1247,3 | 4,674 | 142,34 | 385,20 | 0,7733 | 1,8355 |
| -40,0 | 1,461 | 1,124 | 1244,4 | 4,888 | 143,69 | 385,80 | 0,7791 | 1,8334 |
| -39,0 | 1,528 | 1,178 | 1241,5 | 5,109 | 145,04 | 386,40 | 0,7848 | 1,8313 |
| -38,0 | 1,597 | 1,234 | 1238,6 | 5,339 | 146,40 | 386,99 | 0,7906 | 1,8293 |
| -37,0 | 1,669 | 1,292 | 1235,7 | 5,577 | 147,75 | 387,59 | 0,7963 | 1,8272 |
| -36,0 | 1,743 | 1,353 | 1232,8 | 5,823 | 149,11 | 388,18 | 0,8020 | 1,8253 |
| -35,0 | 1,819 | 1,415 | 1229,8 | 6,077 | 150,47 | 388,77 | 0,8077 | 1,8233 |
| -34,0 | 1,898 | 1,480 | 1226,8 | 6,340 | 151,84 | 389,36 | 0,8134 | 1,8214 |
| -33,0 | 1,980 | 1,548 | 1223,9 | 6,612 | 153,20 | 389,95 | 0,8191 | 1,8195 |
| -32,0 | 2,065 | 1,617 | 1220,9 | 6,893 | 154,57 | 390,54 | 0,8247 | 1,8177 |
| -31,0 | 2,152 | 1,689 | 1217,9 | 7,184 | 155,94 | 391,12 | 0,8304 | 1,8159 |
| -30,0 | 2,242 | 1,764 | 1214,9 | 7,483 | 157,31 | 391,70 | 0,8360 | 1,8141 |
| -29,0 | 2,335 | 1,841 | 1211,8 | 7,793 | 158,69 | 392,28 | 0,8416 | 1,8123 |
| -28,0 | 2,430 | 1,921 | 1208,8 | 8,113 | 160,07 | 392,86 | 0,8472 | 1,8106 |
| -27,0 | 2,529 | 2,003 | 1205,7 | 8,443 | 161,45 | 393,44 | 0,8528 | 1,8089 |
| -26,0 | 2,631 | 2,088 | 1202,7 | 8,784 | 162,84 | 394,01 | 0,8584 | 1,8072 |
| -25,0 | 2,736 | 2,176 | 1199,6 | 9,135 | 164,22 | 394,58 | 0,8640 | 1,8055 |

| temperature [°C] | pressure [bar] | | density [kg/m³] | | enthalpy [kJ/kg] | | entropy [J/kg*K] | |
|---------------------|-------------------|--------|--------------------|--------|---------------------|--------|---------------------|--------|
| | liquid | vapour | liquid | vapour | liquid | vapour | liquid | vapour |
| -24,0 | 2,844 | 2,267 | 1196,5 | 9,497 | 165,61 | 395,15 | 0,8695 | 1,8039 |
| -23,0 | 2,956 | 2,360 | 1193,4 | 9,871 | 167,01 | 395,71 | 0,8751 | 1,8023 |
| -22,0 | 3,070 | 2,457 | 1190,3 | 10,26 | 168,41 | 396,28 | 0,8806 | 1,8007 |
| -21,0 | 3,189 | 2,557 | 1187,1 | 10,65 | 169,81 | 396,84 | 0,8861 | 1,7991 |
| -20,0 | 3,310 | 2,659 | 1184,0 | 11,06 | 171,21 | 397,40 | 0,8916 | 1,7976 |
| -19,0 | 3,435 | 2,765 | 1180,8 | 11,48 | 172,61 | 397,95 | 0,8971 | 1,7961 |
| -18,0 | 3,564 | 2,874 | 1177,6 | 11,92 | 174,02 | 398,51 | 0,9026 | 1,7946 |
| -17,0 | 3,696 | 2,987 | 1174,4 | 12,36 | 175,44 | 399,06 | 0,9081 | 1,7931 |
| -16,0 | 3,832 | 3,102 | 1171,2 | 12,83 | 176,85 | 399,60 | 0,9136 | 1,7917 |
| -15,0 | 3,972 | 3,221 | 1168,0 | 13,30 | 178,27 | 400,15 | 0,9191 | 1,7903 |
| -14,0 | 4,115 | 3,344 | 1164,7 | 13,79 | 179,69 | 400,69 | 0,9245 | 1,7889 |
| -13,0 | 4,263 | 3,470 | 1161,5 | 14,29 | 181,12 | 401,23 | 0,9300 | 1,7875 |
| -12,0 | 4,414 | 3,600 | 1158,2 | 14,80 | 182,55 | 401,76 | 0,9354 | 1,7861 |
| -11,0 | 4,569 | 3,734 | 1154,9 | 15,34 | 183,98 | 402,30 | 0,9408 | 1,7847 |
| -10,0 | 4,729 | 3,871 | 1151,6 | 15,88 | 185,42 | 402,82 | 0,9462 | 1,7834 |
| -9,0 | 4,893 | 4,012 | 1148,2 | 16,44 | 186,86 | 403,35 | 0,9516 | 1,7821 |
| -8,0 | 5,061 | 4,157 | 1144,9 | 17,02 | 188,30 | 403,87 | 0,9570 | 1,7808 |
| -7,0 | 5,233 | 4,306 | 1141,5 | 17,62 | 189,75 | 404,39 | 0,9624 | 1,7795 |
| -6,0 | 5,409 | 4,459 | 1138,1 | 18,23 | 191,20 | 404,90 | 0,9678 | 1,7782 |
| -5,0 | 5,590 | 4,616 | 1134,7 | 18,85 | 192,66 | 405,41 | 0,9732 | 1,7770 |
| -4,0 | 5,776 | 4,778 | 1131,3 | 19,50 | 194,12 | 405,92 | 0,9786 | 1,7757 |
| -3,0 | 5,966 | 4,944 | 1127,8 | 20,16 | 195,58 | 406,42 | 0,9839 | 1,7745 |
| -2,0 | 6,161 | 5,114 | 1124,3 | 20,84 | 197,05 | 406,92 | 0,9893 | 1,7733 |
| -1,0 | 6,360 | 5,288 | 1120,9 | 21,54 | 198,52 | 407,42 | 0,9947 | 1,7720 |
| 0,0 | 6,565 | 5,467 | 1117,3 | 22,26 | 200,00 | 407,91 | 1,0000 | 1,7708 |
| 1,0 | 6,774 | 5,650 | 1113,8 | 23,00 | 201,48 | 408,40 | 1,0053 | 1,7697 |
| 2,0 | 6,988 | 5,839 | 1110,2 | 23,76 | 202,97 | 408,88 | 1,0107 | 1,7685 |
| 3,0 | 7,207 | 6,032 | 1106,7 | 24,54 | 204,45 | 409,35 | 1,0160 | 1,7673 |
| 4,0 | 7,431 | 6,229 | 1103,1 | 25,34 | 205,95 | 409,83 | 1,0213 | 1,7662 |
| 5,0 | 7,661 | 6,432 | 1099,4 | 26,16 | 207,45 | 410,29 | 1,0267 | 1,7650 |
| 6,0 | 7,895 | 6,640 | 1095,8 | 27,01 | 208,95 | 410,76 | 1,0320 | 1,7639 |
| 7,0 | 8,135 | 6,852 | 1092,1 | 27,87 | 210,46 | 411,21 | 1,0373 | 1,7627 |
| 8,0 | 8,380 | 7,070 | 1088,4 | 28,76 | 211,97 | 411,67 | 1,0426 | 1,7616 |
| 9,0 | 8,631 | 7,293 | 1084,7 | 29,68 | 213,49 | 412,11 | 1,0479 | 1,7605 |
| 10,0 | 8,887 | 7,521 | 1080,9 | 30,62 | 215,01 | 412,56 | 1,0532 | 1,7594 |
| 11,0 | 9,149 | 7,755 | 1077,1 | 31,58 | 216,53 | 412,99 | 1,0585 | 1,7583 |
| 12,0 | 9,416 | 7,994 | 1073,3 | 32,57 | 218,07 | 413,42 | 1,0638 | 1,7571 |
| 13,0 | 9,690 | 8,239 | 1069,5 | 33,58 | 219,60 | 413,85 | 1,0691 | 1,7560 |
| 14,0 | 9,969 | 8,489 | 1065,6 | 34,63 | 221,15 | 414,27 | 1,0744 | 1,7549 |
| 15,0 | 10,25 | 8,746 | 1061,7 | 35,70 | 222,69 | 414,68 | 1,0797 | 1,7538 |

Saturated Pressure Table

| temperature [°C] | pressure [bar] | | density [kg/m³] | | enthalpy [kJ/kg] | | entropy [J/kg*K] | |
|---------------------|-------------------|--------|--------------------|--------|---------------------|--------|---------------------|--------|
| | liquid | vapour | liquid | vapour | liquid | vapour | liquid | vapour |
| 16,0 | 10,54 | 9,007 | 1057,8 | 36,80 | 224,25 | 415,08 | 1,0849 | 1,7527 |
| 17,0 | 10,84 | 9,275 | 1053,8 | 37,92 | 225,81 | 415,48 | 1,0902 | 1,7516 |
| 18,0 | 11,15 | 9,549 | 1049,8 | 39,08 | 227,37 | 415,87 | 1,0955 | 1,7505 |
| 19,0 | 11,45 | 9,829 | 1045,8 | 40,27 | 228,94 | 416,26 | 1,1008 | 1,7494 |
| 20,0 | 11,77 | 10,12 | 1041,7 | 41,49 | 230,52 | 416,64 | 1,1061 | 1,7483 |
| 21,0 | 12,09 | 10,41 | 1037,6 | 42,75 | 232,10 | 417,01 | 1,1114 | 1,7472 |
| 22,0 | 12,42 | 10,71 | 1033,5 | 44,03 | 233,69 | 417,37 | 1,1166 | 1,7461 |
| 23,0 | 12,76 | 11,01 | 1029,3 | 45,36 | 235,28 | 417,73 | 1,1219 | 1,7450 |
| 24,0 | 13,10 | 11,32 | 1025,1 | 46,71 | 236,88 | 418,08 | 1,1272 | 1,7439 |
| 25,0 | 13,44 | 11,64 | 1020,9 | 48,11 | 238,49 | 418,42 | 1,1325 | 1,7428 |
| 26,0 | 13,80 | 11,97 | 1016,6 | 49,54 | 240,10 | 418,75 | 1,1378 | 1,7417 |
| 27,0 | 14,16 | 12,30 | 1012,3 | 51,01 | 241,72 | 419,07 | 1,1431 | 1,7406 |
| 28,0 | 14,53 | 12,64 | 1007,9 | 52,52 | 243,35 | 419,39 | 1,1484 | 1,7394 |
| 29,0 | 14,91 | 12,99 | 1003,5 | 54,08 | 244,99 | 419,69 | 1,1537 | 1,7383 |
| 30,0 | 15,29 | 13,34 | 999,02 | 55,67 | 246,63 | 419,99 | 1,1590 | 1,7371 |
| 31,0 | 15,68 | 13,70 | 994,52 | 57,31 | 248,28 | 420,27 | 1,1643 | 1,7360 |
| 32,0 | 16,08 | 14,07 | 989,97 | 59,00 | 249,94 | 420,55 | 1,1696 | 1,7348 |
| 33,0 | 16,48 | 14,45 | 985,36 | 60,74 | 251,60 | 420,81 | 1,1749 | 1,7336 |
| 34,0 | 16,89 | 14,83 | 980,71 | 62,52 | 253,28 | 421,07 | 1,1802 | 1,7324 |
| 35,0 | 17,31 | 15,22 | 976,01 | 64,35 | 254,96 | 421,31 | 1,1855 | 1,7312 |
| 36,0 | 17,74 | 15,62 | 971,24 | 66,24 | 256,65 | 421,54 | 1,1909 | 1,7300 |
| 37,0 | 18,17 | 16,03 | 966,42 | 68,18 | 258,35 | 421,76 | 1,1962 | 1,7287 |
| 38,0 | 18,61 | 16,44 | 961,54 | 70,18 | 260,06 | 421,97 | 1,2016 | 1,7274 |
| 39,0 | 19,07 | 16,87 | 956,60 | 72,23 | 261,78 | 422,16 | 1,2069 | 1,7262 |
| 40,0 | 19,52 | 17,30 | 951,59 | 74,35 | 263,51 | 422,35 | 1,2123 | 1,7249 |
| 41,0 | 19,99 | 17,74 | 946,52 | 76,53 | 265,25 | 422,51 | 1,2177 | 1,7235 |
| 42,0 | 20,46 | 18,19 | 941,37 | 78,78 | 267,00 | 422,67 | 1,2231 | 1,7222 |
| 43,0 | 20,95 | 18,65 | 936,15 | 81,09 | 268,76 | 422,81 | 1,2285 | 1,7208 |
| 44,0 | 21,44 | 19,11 | 930,85 | 83,48 | 270,53 | 422,93 | 1,2340 | 1,7194 |
| 45,0 | 21,93 | 19,59 | 925,47 | 85,94 | 272,32 | 423,04 | 1,2394 | 1,7180 |
| 46,0 | 22,44 | 20,07 | 920,00 | 88,48 | 274,12 | 423,13 | 1,2449 | 1,7165 |
| 47,0 | 22,96 | 20,57 | 914,45 | 91,11 | 275,93 | 423,20 | 1,2504 | 1,7150 |
| 48,0 | 23,48 | 21,07 | 908,80 | 93,82 | 277,75 | 423,26 | 1,2559 | 1,7135 |
| 49,0 | 24,02 | 21,59 | 903,05 | 96,61 | 279,59 | 423,29 | 1,2614 | 1,7119 |
| 50,0 | 24,56 | 22,11 | 897,19 | 99,51 | 281,45 | 423,31 | 1,2670 | 1,7103 |
| 51,0 | 25,11 | 22,64 | 891,23 | 102,5 | 283,32 | 423,30 | 1,2726 | 1,7087 |
| 52,0 | 25,67 | 23,19 | 885,15 | 105,6 | 285,20 | 423,28 | 1,2782 | 1,7070 |
| 53,0 | 26,24 | 23,74 | 878,95 | 108,8 | 287,10 | 423,23 | 1,2838 | 1,7052 |
| 54,0 | 26,81 | 24,31 | 872,62 | 112,1 | 289,02 | 423,15 | 1,2895 | 1,7034 |
| 55,0 | 27,40 | 24,88 | 866,15 | 115,6 | 290,96 | 423,05 | 1,2952 | 1,7016 |

Saturated Pressure Table

| temperature [°C] | pressure [bar] | | density [kg/m³] | | enthalpy [kJ/kg] | | entropy [J/kg*K] | |
|---------------------|-------------------|--------|--------------------|--------|---------------------|--------|---------------------|--------|
| | liquid | vapour | liquid | vapour | liquid | vapour | liquid | vapour |
| 56,0 | 28,00 | 25,47 | 859,53 | 119,2 | 292,92 | 422,92 | 1,3010 | 1,6997 |
| 57,0 | 28,60 | 26,07 | 852,76 | 122,9 | 294,90 | 422,77 | 1,3068 | 1,6977 |
| 58,0 | 29,22 | 26,68 | 845,82 | 126,8 | 296,91 | 422,58 | 1,3126 | 1,6957 |
| 59,0 | 29,84 | 27,30 | 838,71 | 130,8 | 298,93 | 422,36 | 1,3185 | 1,6935 |
| 60,0 | 30,48 | 27,93 | 831,40 | 135,0 | 300,99 | 422,10 | 1,3244 | 1,6913 |
| 61,0 | 31,12 | 28,58 | 823,90 | 139,4 | 303,07 | 421,81 | 1,3304 | 1,6890 |
| 62,0 | 31,78 | 29,24 | 816,17 | 144,0 | 305,18 | 421,48 | 1,3365 | 1,6867 |
| 63,0 | 32,44 | 29,91 | 808,20 | 148,8 | 307,32 | 421,10 | 1,3426 | 1,6842 |
| 64,0 | 33,11 | 30,59 | 799,98 | 153,8 | 309,49 | 420,68 | 1,3489 | 1,6816 |
| 65,0 | 33,80 | 31,29 | 791,48 | 159,1 | 311,71 | 420,20 | 1,3552 | 1,6788 |
| 66,0 | 34,49 | 32,00 | 782,67 | 164,7 | 313,96 | 419,67 | 1,3616 | 1,6760 |
| 67,0 | 35,20 | 32,73 | 773,51 | 170,6 | 316,26 | 419,08 | 1,3681 | 1,6730 |
| 68,0 | 35,91 | 33,47 | 763,99 | 176,9 | 318,61 | 418,42 | 1,3747 | 1,6698 |
| 69,0 | 36,64 | 34,23 | 754,04 | 183,5 | 321,02 | 417,68 | 1,3814 | 1,6664 |
| 70,0 | 37,37 | 35,00 | 743,61 | 190,6 | 323,48 | 416,86 | 1,3884 | 1,6628 |
| 71,0 | 38,12 | 35,79 | 732,64 | 198,1 | 326,03 | 415,94 | 1,3955 | 1,6589 |
| 72,0 | 38,87 | 36,60 | 721,05 | 206,3 | 328,65 | 414,91 | 1,4028 | 1,6548 |
| 73,0 | 39,64 | 37,43 | 708,72 | 215,2 | 331,37 | 413,75 | 1,4103 | 1,6503 |
| 74,0 | 40,41 | 38,27 | 695,51 | 224,8 | 334,21 | 412,44 | 1,4182 | 1,6454 |
| 75,0 | 41,19 | 39,14 | 681,24 | 235,5 | 337,19 | 410,94 | 1,4265 | 1,6400 |
| 76,0 | 41,99 | 40,04 | 665,63 | 247,4 | 340,35 | 409,22 | 1,4352 | 1,6340 |
| 77,0 | 42,78 | 40,96 | 648,28 | 261,0 | 343,75 | 407,19 | 1,4446 | 1,6271 |
| 78,0 | 43,59 | 41,91 | 628,51 | 276,8 | 347,47 | 404,77 | 1,4548 | 1,6192 |
| 79,0 | 44,39 | 42,90 | 605,15 | 295,9 | 351,69 | 401,76 | 1,4664 | 1,6097 |
| 80,0 | 45,19 | 43,94 | 575,64 | 320,6 | 356,75 | 397,77 | 1,4804 | 1,5974 |
| 81,0 | 45,94 | 45,07 | 532,28 | 357,8 | 363,81 | 391,67 | 1,5000 | 1,5792 |

Calculated by Refprop version 10.0

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revised 07.01.2020

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IBAN: DE707907001600202804 00
 BIC: DEUTDEM790