

Properties Of Saturated Steam

Table 3: Properties of Saturated Steam

SYSTEM DESIGN

| | Gauge Pressure PSIG | Temperature °F | Heat in Btu/lb. | | | Specific Volume Cu. ft. per lb. | Gauge Pressure PSIG | Temperature °F | Heat in Btu/lb. | | | Specific Volume Cu. ft. per lb. |
|------------|------------------------|-------------------|-----------------|-------------|-------------|---------------------------------------|------------------------|-------------------|-----------------|-------------|-------------|---------------------------------------|
| | | | Sensible | Latent | Total | | | | Sensible | Latent | Total | |
| IN VAC. | 25 | 134 | 102 | 1017 | 1119 | 142.0 | 185 | 382 | 355 | 843 | 1198 | 2.29 |
| | 20 | 162 | 129 | 1001 | 1130 | 73.9 | 190 | 384 | 358 | 841 | 1199 | 2.24 |
| | 15 | 179 | 147 | 990 | 1137 | 51.3 | 195 | 386 | 360 | 839 | 1199 | 2.19 |
| | 10 | 192 | 160 | 982 | 1142 | 39.4 | 200 | 388 | 362 | 837 | 1199 | 2.14 |
| | 5 | 203 | 171 | 976 | 1147 | 31.8 | 205 | 390 | 364 | 836 | 1200 | 2.09 |
| | 0 | 212 | 180 | 970 | 1150 | 26.8 | 210 | 392 | 366 | 834 | 1200 | 2.05 |
| | 1 | 215 | 183 | 968 | 1151 | 25.2 | 215 | 394 | 368 | 832 | 1200 | 2.00 |
| | 2 | 219 | 187 | 966 | 1153 | 23.5 | 220 | 396 | 370 | 830 | 1200 | 1.96 |
| | 3 | 222 | 190 | 964 | 1154 | 22.3 | 225 | 397 | 372 | 828 | 1200 | 1.92 |
| | 4 | 224 | 192 | 962 | 1154 | 21.4 | 230 | 399 | 374 | 827 | 1201 | 1.89 |
| | 5 | 227 | 195 | 960 | 1155 | 20.1 | 235 | 401 | 376 | 825 | 1201 | 1.85 |
| | 6 | 230 | 198 | 959 | 1157 | 19.4 | 240 | 403 | 378 | 823 | 1201 | 1.81 |
| | 7 | 232 | 200 | 957 | 1157 | 18.7 | 245 | 404 | 380 | 822 | 1202 | 1.78 |
| | 8 | 233 | 201 | 956 | 1157 | 18.4 | 250 | 406 | 382 | 820 | 1202 | 1.75 |
| | 9 | 237 | 205 | 954 | 1159 | 17.1 | 255 | 408 | 383 | 819 | 1202 | 1.72 |
| | 10 | 239 | 207 | 953 | 1160 | 16.5 | 260 | 409 | 385 | 817 | 1202 | 1.69 |
| | 12 | 244 | 212 | 949 | 1161 | 15.3 | 265 | 411 | 387 | 815 | 1202 | 1.66 |
| | 14 | 248 | 216 | 947 | 1163 | 14.3 | 270 | 413 | 389 | 814 | 1203 | 1.63 |
| 16 | 252 | 220 | 944 | 1164 | 13.4 | 275 | 414 | 391 | 812 | 1203 | 1.60 | |
| 18 | 256 | 224 | 941 | 1165 | 12.6 | 280 | 416 | 392 | 811 | 1203 | 1.57 | |
| 20 | 259 | 227 | 939 | 1166 | 11.9 | 285 | 417 | 394 | 809 | 1203 | 1.55 | |
| 22 | 262 | 230 | 937 | 1167 | 11.3 | 290 | 418 | 395 | 808 | 1203 | 1.53 | |
| 24 | 265 | 233 | 934 | 1167 | 10.8 | 295 | 420 | 397 | 806 | 1203 | 1.49 | |
| 26 | 268 | 236 | 933 | 1169 | 10.3 | 300 | 421 | 398 | 805 | 1203 | 1.47 | |
| 28 | 271 | 239 | 930 | 1169 | 9.85 | 305 | 423 | 400 | 803 | 1203 | 1.45 | |
| 30 | 274 | 243 | 929 | 1172 | 9.46 | 310 | 425 | 402 | 802 | 1204 | 1.43 | |
| 32 | 277 | 246 | 927 | 1173 | 9.10 | 315 | 426 | 404 | 800 | 1204 | 1.41 | |
| 34 | 279 | 248 | 925 | 1173 | 8.75 | 320 | 427 | 405 | 799 | 1204 | 1.38 | |
| 36 | 282 | 251 | 923 | 1174 | 8.42 | 325 | 429 | 407 | 797 | 1204 | 1.36 | |
| 38 | 284 | 253 | 922 | 1175 | 8.08 | 330 | 430 | 408 | 796 | 1204 | 1.34 | |
| 40 | 286 | 256 | 920 | 1176 | 7.82 | 335 | 432 | 410 | 794 | 1204 | 1.33 | |
| 42 | 289 | 258 | 918 | 1176 | 7.57 | 340 | 433 | 411 | 793 | 1204 | 1.31 | |
| 44 | 291 | 260 | 917 | 1177 | 7.31 | 345 | 434 | 413 | 791 | 1204 | 1.29 | |
| 46 | 293 | 262 | 915 | 1177 | 7.14 | 350 | 435 | 414 | 790 | 1204 | 1.28 | |
| 48 | 295 | 264 | 914 | 1178 | 6.94 | 355 | 437 | 416 | 789 | 1205 | 1.26 | |
| 50 | 298 | 267 | 912 | 1179 | 6.68 | 360 | 438 | 417 | 788 | 1205 | 1.24 | |
| 55 | 300 | 271 | 909 | 1180 | 6.27 | 365 | 440 | 419 | 786 | 1205 | 1.22 | |
| 60 | 307 | 277 | 906 | 1183 | 5.84 | 370 | 441 | 420 | 785 | 1205 | 1.20 | |
| 65 | 312 | 282 | 901 | 1183 | 5.49 | 375 | 442 | 421 | 784 | 1205 | 1.19 | |
| 70 | 316 | 286 | 898 | 1184 | 5.18 | 380 | 443 | 422 | 783 | 1205 | 1.18 | |
| 75 | 320 | 290 | 895 | 1185 | 4.91 | 385 | 445 | 424 | 781 | 1205 | 1.16 | |
| 80 | 324 | 294 | 891 | 1185 | 4.67 | 390 | 446 | 425 | 780 | 1205 | 1.14 | |
| 85 | 328 | 298 | 889 | 1187 | 4.44 | 395 | 447 | 427 | 778 | 1205 | 1.13 | |
| 90 | 331 | 302 | 886 | 1188 | 4.24 | 400 | 448 | 428 | 777 | 1205 | 1.12 | |
| 95 | 335 | 305 | 883 | 1188 | 4.05 | 450 | 460 | 439 | 766 | 1205 | 1.00 | |
| 100 | 338 | 309 | 880 | 1189 | 3.89 | 500 | 470 | 453 | 751 | 1204 | .89 | |
| 105 | 341 | 312 | 878 | 1190 | 3.74 | 550 | 479 | 464 | 740 | 1204 | .82 | |
| 110 | 344 | 316 | 875 | 1191 | 3.59 | 600 | 489 | 473 | 730 | 1203 | .75 | |
| 115 | 347 | 319 | 873 | 1192 | 3.46 | 650 | 497 | 483 | 719 | 1202 | .69 | |
| 120 | 350 | 322 | 871 | 1193 | 3.34 | 700 | 505 | 491 | 710 | 1201 | .64 | |
| 125 | 353 | 325 | 868 | 1193 | 3.23 | 750 | 513 | 504 | 696 | 1200 | .60 | |
| 130 | 356 | 328 | 866 | 1194 | 3.12 | 800 | 520 | 512 | 686 | 1198 | .56 | |
| 135 | 358 | 330 | 864 | 1194 | 3.02 | 900 | 534 | 529 | 666 | 1195 | .49 | |
| 140 | 361 | 333 | 861 | 1194 | 2.92 | 1000 | 546 | 544 | 647 | 1191 | .44 | |
| 145 | 363 | 336 | 859 | 1195 | 2.84 | 1250 | 574 | 580 | 600 | 1180 | .34 | |
| 150 | 366 | 339 | 857 | 1196 | 2.74 | 1500 | 597 | 610 | 557 | 1167 | .23 | |
| 155 | 368 | 341 | 855 | 1196 | 2.68 | 1750 | 618 | 642 | 509 | 1151 | .22 | |
| 160 | 371 | 344 | 853 | 1197 | 2.60 | 2000 | 636 | 672 | 462 | 1134 | .19 | |
| 165 | 373 | 346 | 851 | 1197 | 2.54 | 2250 | 654 | 701 | 413 | 1114 | .16 | |
| 170 | 375 | 348 | 849 | 1197 | 2.47 | 2500 | 669 | 733 | 358 | 1091 | .13 | |
| 175 | 377 | 351 | 847 | 1198 | 2.41 | 2750 | 683 | 764 | 295 | 1059 | .11 | |
| 180 | 380 | 353 | 845 | 1198 | 2.34 | 3000 | 696 | 804 | 213 | 1017 | .08 | |