

Table 18 .... Refrigerant 500 Properties of Superheated Vapor\* (Continued)

| Temp<br>F | Abs Pressure 120 psi<br>Gage Pressure 105.3 psi<br>(Sat Temp 81.54 F) |        |         | Abs Pressure 130 psi<br>Gage Pressure 115.3 psi<br>(Sat Temp 86.96 F) |        |         | Abs Pressure 140 psi<br>Gage Pressure 125.3 psi<br>(Sat Temp 92.08 F) |        |         | Abs Pressure 150 psi<br>Gage Pressure 135.3 psi<br>(Sat Temp 96.94 F) |        |         | Abs Pressure 160 psi<br>Gage Pressure 145.3 psi<br>(Sat Temp 101.52 F) |        |         |
|-----------|-----------------------------------------------------------------------|--------|---------|-----------------------------------------------------------------------|--------|---------|-----------------------------------------------------------------------|--------|---------|-----------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|
| F         | v                                                                     | h      | s       | v                                                                     | h      | s       | v                                                                     | h      | s       | v                                                                     | h      | s       | v                                                                      | h      | s       |
| (At Sat)  | 0.4113                                                                | 108.06 | 0.20151 | 0.3793                                                                | 108.06 | 0.20114 | 0.3516                                                                | 108.04 | 0.20077 | 0.3274                                                                | 108.04 | 0.20043 | 0.3061                                                                 | 108.06 | 0.20007 |
| 100       | 0.4250                                                                | 106.66 | 0.20448 | 0.3899                                                                | 106.15 | 0.20221 | 0.3606                                                                | 107.60 | 0.20338 | 0.3308                                                                | 107.09 | 0.20122 | 0.3150                                                                 | 108.08 | 0.20311 |
| 110       | 0.4455                                                                | 108.50 | 0.21184 | 0.4064                                                                | 110.04 | 0.20915 | 0.3718                                                                | 109.51 | 0.20706 | 0.3410                                                                | 109.08 | 0.20555 | 0.3292                                                                 | 110.60 | 0.20662 |
| 120       | 0.4587                                                                | 110.42 | 0.21460 | 0.4179                                                                | 111.98 | 0.21254 | 0.3827                                                                | 111.54 | 0.21049 | 0.3521                                                                | 111.07 | 0.20832 | 0.3392                                                                 | 112.62 | 0.21007 |
| 130       | 0.4706                                                                | 114.38 | 0.21800 | 0.4291                                                                | 113.94 | 0.21685 | 0.3928                                                                | 113.51 | 0.21489 | 0.3625                                                                | 113.07 | 0.21253 | 0.3492                                                                 | 114.65 | 0.21448 |
| 140       | 0.4823                                                                | 116.30 | 0.22126 | 0.4402                                                                | 115.89 | 0.22197 | 0.4040                                                                | 115.46 | 0.21915 | 0.3728                                                                | 115.06 | 0.21528 | 0.3594                                                                 | 116.65 | 0.21898 |
| 150       | 0.4939                                                                | 118.25 | 0.22449 | 0.4511                                                                | 117.85 | 0.22742 | 0.4144                                                                | 117.46 | 0.22045 | 0.3828                                                                | 117.06 | 0.21858 | 0.3694                                                                 | 118.65 | 0.22351 |
| 160       | 0.5053                                                                | 120.20 | 0.22767 | 0.4619                                                                | 119.83 | 0.23263 | 0.4247                                                                | 119.45 | 0.22569 | 0.3924                                                                | 119.06 | 0.22184 | 0.3794                                                                 | 120.65 | 0.22808 |
| 170       | 0.5166                                                                | 122.17 | 0.23082 | 0.4726                                                                | 121.81 | 0.23768 | 0.4349                                                                | 121.44 | 0.23068 | 0.4020                                                                | 121.07 | 0.22506 | 0.3894                                                                 | 122.65 | 0.23262 |
| 180       | 0.5279                                                                | 124.15 | 0.23394 | 0.4832                                                                | 123.80 | 0.24259 | 0.4449                                                                | 123.46 | 0.23564 | 0.4110                                                                | 123.09 | 0.22984 | 0.3994                                                                 | 124.65 | 0.23712 |
| 190       | 0.5390                                                                | 126.14 | 0.23702 | 0.4937                                                                | 125.80 | 0.24730 | 0.4548                                                                | 125.46 | 0.24060 | 0.4190                                                                | 125.11 | 0.23388 | 0.4094                                                                 | 126.65 | 0.24168 |
| 200       | 0.5500                                                                | 128.14 | 0.24008 | 0.5040                                                                | 127.81 | 0.25181 | 0.4646                                                                | 127.48 | 0.24512 | 0.4284                                                                | 127.15 | 0.23748 | 0.4194                                                                 | 128.65 | 0.24621 |
| 210       | 0.5610                                                                | 130.15 | 0.24310 | 0.5143                                                                | 129.83 | 0.25613 | 0.4743                                                                | 129.51 | 0.24960 | 0.4376                                                                | 129.22 | 0.24196 | 0.4294                                                                 | 130.65 | 0.25074 |
| 220       | 0.5719                                                                | 132.17 | 0.24610 | 0.5245                                                                | 131.85 | 0.26035 | 0.4840                                                                | 131.56 | 0.25398 | 0.4467                                                                | 131.24 | 0.24640 | 0.4394                                                                 | 132.65 | 0.25527 |
| 230       | 0.5827                                                                | 134.21 | 0.24907 | 0.5347                                                                | 133.87 | 0.26457 | 0.4935                                                                | 133.61 | 0.25843 | 0.4558                                                                | 133.30 | 0.25084 | 0.4494                                                                 | 134.65 | 0.25980 |
| 240       | 0.5934                                                                | 136.25 | 0.25202 | 0.5447                                                                | 135.91 | 0.26875 | 0.5030                                                                | 135.67 | 0.26280 | 0.4649                                                                | 135.38 | 0.25528 | 0.4594                                                                 | 136.65 | 0.26433 |
| 250       | 0.6041                                                                | 138.31 | 0.25494 | 0.5547                                                                | 137.93 | 0.27293 | 0.5124                                                                | 137.75 | 0.26695 | 0.4740                                                                | 137.46 | 0.25972 | 0.4694                                                                 | 138.65 | 0.26886 |
| 260       | 0.6147                                                                | 140.38 | 0.25784 | 0.5647                                                                | 140.11 | 0.27709 | 0.5217                                                                | 140.14 | 0.27109 | 0.4831                                                                | 140.08 | 0.26416 | 0.4794                                                                 | 140.65 | 0.27339 |
| 270       | 0.6252                                                                | 142.47 | 0.26072 | 0.5746                                                                | 142.21 | 0.28124 | 0.5311                                                                | 142.24 | 0.27517 | 0.4922                                                                | 142.17 | 0.26860 | 0.4894                                                                 | 142.65 | 0.27792 |
| 280       | 0.6358                                                                | 144.57 | 0.26358 | 0.5845                                                                | 144.31 | 0.28538 | 0.5404                                                                | 144.34 | 0.27924 | 0.5013                                                                | 144.27 | 0.27304 | 0.4994                                                                 | 144.65 | 0.28245 |
| 290       | 0.6463                                                                | 146.68 | 0.26643 | 0.5943                                                                | 146.36 | 0.28952 | 0.5498                                                                | 146.39 | 0.28330 | 0.5103                                                                | 146.32 | 0.27718 | 0.5094                                                                 | 146.65 | 0.28698 |
| 300       | 0.6566                                                                | 148.81 | 0.26923 | 0.6040                                                                | 148.46 | 0.29367 | 0.5592                                                                | 148.51 | 0.28739 | 0.5195                                                                | 148.44 | 0.28132 | 0.5194                                                                 | 148.65 | 0.29151 |
| 310       | 0.6670                                                                | 150.95 | 0.27202 | 0.6138                                                                | 150.50 | 0.29779 | 0.5687                                                                | 150.58 | 0.29144 | 0.5288                                                                | 150.51 | 0.28546 | 0.5294                                                                 | 150.65 | 0.29604 |
| 320       | 0.6773                                                                | 153.10 | 0.27480 | 0.6235                                                                | 152.56 | 0.30189 | 0.5782                                                                | 152.63 | 0.29550 | 0.5380                                                                | 152.60 | 0.28959 | 0.5394                                                                 | 152.65 | 0.30057 |

| Temp<br>F | Abs Pressure 170 psi<br>Gage Pressure 155.3 psi<br>(Sat Temp 105.92 F) |        |         | Abs Pressure 180 psi<br>Gage Pressure 165.3 psi<br>(Sat Temp 110.15 F) |        |         | Abs Pressure 190 psi<br>Gage Pressure 175.3 psi<br>(Sat Temp 114.20 F) |        |         | Abs Pressure 200 psi<br>Gage Pressure 185.3 psi<br>(Sat Temp 118.11 F) |        |         | Abs Pressure 220 psi<br>Gage Pressure 205.3 psi<br>(Sat Temp 125.47 F) |        |         |
|-----------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|
| F         | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       |
| (At Sat)  | 0.2872                                                                 | 107.23 | 0.19973 | 0.2703                                                                 | 107.55 | 0.19941 | 0.2551                                                                 | 107.85 | 0.19908 | 0.2413                                                                 | 108.12 | 0.19875 | 0.2173                                                                 | 108.58 | 0.19800 |
| 110       | 0.2913                                                                 | 108.06 | 0.20121 | 0.2779                                                                 | 109.00 | 0.20291 | 0.2608                                                                 | 109.08 | 0.20130 | 0.2431                                                                 | 108.63 | 0.19944 | 0.2214                                                                 | 109.59 | 0.19980 |
| 120       | 0.3013                                                                 | 110.11 | 0.20577 | 0.2894                                                                 | 111.07 | 0.20651 | 0.2700                                                                 | 111.18 | 0.20490 | 0.2523                                                                 | 110.67 | 0.20311 | 0.2301                                                                 | 111.78 | 0.20349 |
| 130       | 0.3110                                                                 | 112.15 | 0.20927 | 0.2994                                                                 | 113.13 | 0.20998 | 0.2790                                                                 | 113.27 | 0.20831 | 0.2612                                                                 | 112.79 | 0.20668 | 0.2381                                                                 | 113.85 | 0.20708 |
| 140       | 0.3208                                                                 | 114.23 | 0.21268 | 0.3077                                                                 | 115.19 | 0.21330 | 0.2878                                                                 | 115.35 | 0.21176 | 0.2698                                                                 | 114.90 | 0.21017 | 0.2464                                                                 | 115.95 | 0.21068 |
| 150       | 0.3298                                                                 | 116.30 | 0.21598 | 0.3165                                                                 | 117.26 | 0.21658 | 0.2962                                                                 | 117.42 | 0.21514 | 0.2784                                                                 | 116.46 | 0.21359 | 0.2544                                                                 | 118.00 | 0.21420 |
| 160       | 0.3378                                                                 | 118.38 | 0.21915 | 0.3251                                                                 | 119.31 | 0.21973 | 0.3043                                                                 | 119.51 | 0.21819 | 0.2864                                                                 | 118.00 | 0.21698 | 0.2624                                                                 | 119.05 | 0.21771 |
| 170       | 0.3458                                                                 | 120.47 | 0.22228 | 0.3336                                                                 | 121.37 | 0.22288 | 0.3120                                                                 | 121.60 | 0.22175 | 0.2944                                                                 | 119.51 | 0.22026 | 0.2704                                                                 | 120.10 | 0.22122 |
| 180       | 0.3536                                                                 | 122.57 | 0.22538 | 0.3420                                                                 | 123.44 | 0.22593 | 0.3193                                                                 | 123.69 | 0.22480 | 0.3023                                                                 | 121.02 | 0.22331 | 0.2784                                                                 | 121.15 | 0.22473 |
| 190       | 0.3613                                                                 | 124.68 | 0.22845 | 0.3504                                                                 | 125.51 | 0.22898 | 0.3265                                                                 | 125.76 | 0.22785 | 0.3100                                                                 | 122.53 | 0.22637 | 0.2864                                                                 | 122.20 | 0.22824 |
| 200       | 0.3690                                                                 | 126.79 | 0.23149 | 0.3587                                                                 | 127.58 | 0.23193 | 0.3337                                                                 | 127.81 | 0.23072 | 0.3176                                                                 | 124.04 | 0.22932 | 0.2944                                                                 | 123.71 | 0.23175 |
| 210       | 0.3767                                                                 | 128.90 | 0.23452 | 0.3669                                                                 | 129.65 | 0.23488 | 0.3409                                                                 | 129.95 | 0.23361 | 0.3251                                                                 | 125.55 | 0.23227 | 0.3024                                                                 | 125.22 | 0.23526 |
| 220       | 0.3844                                                                 | 131.01 | 0.23755 | 0.3751                                                                 | 131.72 | 0.23783 | 0.3481                                                                 | 132.02 | 0.23644 | 0.3326                                                                 | 127.06 | 0.23522 | 0.3104                                                                 | 126.73 | 0.23877 |
| 230       | 0.3921                                                                 | 133.12 | 0.24058 | 0.3833                                                                 | 133.79 | 0.24078 | 0.3553                                                                 | 133.85 | 0.23937 | 0.3400                                                                 | 128.57 | 0.23817 | 0.3184                                                                 | 128.24 | 0.24228 |
| 240       | 0.4000                                                                 | 135.23 | 0.24361 | 0.3915                                                                 | 135.86 | 0.24373 | 0.3625                                                                 | 135.92 | 0.24230 | 0.3474                                                                 | 130.08 | 0.24112 | 0.3264                                                                 | 129.75 | 0.24579 |
| 250       | 0.4078                                                                 | 137.34 | 0.24664 | 0.4000                                                                 | 137.93 | 0.24678 | 0.3697                                                                 | 138.00 | 0.24533 | 0.3548                                                                 | 131.59 | 0.24397 | 0.3344                                                                 | 131.26 | 0.24930 |
| 260       | 0.4156                                                                 | 139.45 | 0.24967 | 0.4082                                                                 | 140.00 | 0.24983 | 0.3769                                                                 | 140.07 | 0.24838 | 0.3622                                                                 | 133.10 | 0.24682 | 0.3424                                                                 | 132.77 | 0.25281 |
| 270       | 0.4234                                                                 | 141.56 | 0.25270 | 0.4164                                                                 | 142.07 | 0.25288 | 0.3841                                                                 | 142.14 | 0.25143 | 0.3696                                                                 | 134.61 | 0.24977 | 0.3504                                                                 | 134.28 | 0.25632 |
| 280       | 0.4312                                                                 | 143.67 | 0.25573 | 0.4246                                                                 | 144.14 | 0.25591 | 0.3918                                                                 | 144.21 | 0.25448 | 0.3770                                                                 | 136.12 | 0.25272 | 0.3584                                                                 | 135.79 | 0.25983 |
| 290       | 0.4390                                                                 | 145.78 | 0.25876 | 0.4328                                                                 | 146.21 | 0.25894 | 0.3995                                                                 | 146.28 | 0.25753 | 0.3844                                                                 | 137.63 | 0.25577 | 0.3664                                                                 | 137.30 | 0.26334 |
| 300       | 0.4468                                                                 | 147.89 | 0.26179 | 0.4410                                                                 | 148.28 | 0.26197 | 0.4072                                                                 | 148.35 | 0.26058 | 0.3918                                                                 | 139.14 | 0.25882 | 0.3744                                                                 | 138.81 | 0.26685 |
| 310       | 0.4546                                                                 | 149.99 | 0.26482 | 0.4492                                                                 | 150.35 | 0.26500 | 0.4149                                                                 | 150.42 | 0.26361 | 0.4000                                                                 | 140.65 | 0.26187 | 0.3824                                                                 | 140.32 | 0.27036 |
| 320       | 0.4624                                                                 | 152.10 | 0.26785 | 0.4574                                                                 | 152.42 | 0.26803 | 0.4226                                                                 | 152.49 | 0.26664 | 0.4072                                                                 | 142.16 | 0.26492 | 0.3904                                                                 | 141.83 | 0.27387 |

| Temp<br>F | Abs Pressure 240 psi<br>Gage Pressure 225.3 psi<br>(Sat Temp 132.39 F) |        |         | Abs Pressure 260 psi<br>Gage Pressure 245.3 psi<br>(Sat Temp 138.90 F) |        |         | Abs Pressure 280 psi<br>Gage Pressure 265.3 psi<br>(Sat Temp 145.02 F) |        |         | Abs Pressure 300 psi<br>Gage Pressure 285.3 psi<br>(Sat Temp 150.85 F) |        |         | Abs Pressure 320 psi<br>Gage Pressure 305.3 psi<br>(Sat Temp 156.41 F) |        |         |
|-----------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|------------------------------------------------------------------------|--------|---------|
| F         | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       | v                                                                      | h      | s       |
| (At Sat)  | 0.1970                                                                 | 108.06 | 0.19743 | 0.1797                                                                 | 109.25 | 0.19674 | 0.1645                                                                 | 109.45 | 0.19602 | 0.1512                                                                 | 109.68 | 0.19526 | 0.1393                                                                 | 109.62 | 0.19446 |
| 140       | 0.2036                                                                 | 110.70 | 0.20043 | 0.1868                                                                 | 109.51 | 0.19719 | 0.1708                                                                 | 110.00 | 0.19719 | 0.1588                                                                 | 110.60 | 0.19604 | 0.1464                                                                 | 110.50 | 0.19603 |
| 150       | 0.2119                                                                 | 112.95 | 0.20406 | 0.1950                                                                 | 111.86 | 0.20107 | 0.1788                                                                 | 112.00 | 0.20107 | 0.1668                                                                 | 112.00 | 0.20055 | 0.1544                                                                 | 112.00 | 0.20055 |
| 160       | 0.2198                                                                 | 115.17 | 0.20769 | 0.2032                                                                 | 114.08 | 0.20495 | 0.1869                                                                 | 114.25 | 0.20495 | 0.1749                                                                 | 114.25 | 0.20406 | 0.1624                                                                 | 114.25 | 0.20406 |
| 170       | 0.2275                                                                 | 117.37 | 0.21132 | 0.2114                                                                 | 116.30 | 0.20883 | 0.1950                                                                 | 116.47 | 0.20883 | 0.1830                                                                 | 116.47 | 0.20817 | 0.1704                                                                 | 116.47 | 0.20817 |
| 180       | 0.2352                                                                 | 119.57 | 0.21495 | 0.2196                                                                 | 118.52 | 0.21271 | 0.2031                                                                 | 118.69 | 0.21271 | 0.1911                                                                 | 118.69 | 0.21168 | 0.1784                                                                 | 118.69 | 0.21168 |
| 190       | 0.2429                                                                 | 121.78 | 0.21858 | 0.2278                                                                 | 120.74 | 0.21659 | 0.2112                                                                 | 120.91 | 0.21659 | 0.2000                                                                 | 120.91 | 0.21065 | 0.1864                                                                 | 120.91 | 0.21065 |
| 200       | 0.2499                                                                 | 123.99 | 0.22221 | 0.2360                                                                 | 122.96 | 0.22047 | 0.2193                                                                 | 123.13 | 0.22047 | 0.2081                                                                 | 123.13 | 0.21451 | 0.1944                                                                 | 123.13 | 0.21451 |
| 210       | 0.2569                                                                 | 126.20 | 0.22584 | 0.2442                                                                 | 125.18 | 0.22435 | 0.2274                                                                 | 125.35 | 0.22435 | 0.2162                                                                 | 125.35 | 0.21837 | 0.2024                                                                 | 125.35 | 0.21837 |
| 220       | 0.2639                                                                 | 128.41 | 0.22947 | 0.2524                                                                 | 127.40 | 0.22823 | 0.2355                                                                 | 127.57 | 0.22823 | 0.2243                                                                 | 127.57 | 0.22223 | 0.2104                                                                 | 127.57 | 0.22223 |
| 230       | 0.2709                                                                 | 130.61 | 0.23309 | 0.2606                                                                 | 129.62 | 0.23211 | 0.2436                                                                 | 129.79 | 0.23211 | 0.2324                                                                 | 129.79 | 0.22629 | 0.2184                                                                 | 129.79 | 0.22629 |
| 240       | 0.2779                                                                 | 132.80 | 0.23671 | 0.2688                                                                 | 131.84 | 0.23603 | 0.2517                                                                 | 132.01 | 0.23603 | 0.2405                                                                 | 132.01 | 0.23017 | 0.2264                                                                 | 132.01 | 0.23017 |
| 250       | 0.2850                                                                 | 134.99 | 0.24033 | 0.2770                                                                 | 134.06 | 0.24005 | 0.2598                                                                 | 134.23 | 0.24005 | 0.2486                                                                 | 134.23 | 0.23429 | 0.2344                                                                 | 134.23 |         |