



BY JOHNSON CONTROLS

Refrigerant Pressure/ Temperature Chart

TECHNICAL DATA

Supersedes: 50.90-TD1 (1210)

Form 50.90-TD1 (312)

| Temp °F | R-11 Vapor Pressure | R-12 Vapor Pressure | R-113 Vapor Pressure | R-114 Vapor Pressure | R-500 Vapor Pressure | R-502 Vapor Pressure |
|------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| -50.0 | 28.9 | 15.4 | | 27.1 | 12.8 | 0.2 |
| -45.0 | 28.7 | 13.3 | | 26.6 | 10.3 | 1.9 |
| -40.0 | 28.4 | 11.0 | | 26.0 | 7.6 | 4.1 |
| -35.0 | 28.1 | 8.4 | | 25.4 | 4.6 | 6.5 |
| -30.0 | 27.8 | 5.5 | 29.3 | 24.6 | 1.2 | 9.2 |
| -25.0 | 27.4 | 2.3 | 29.2 | 23.8 | 1.2 | 12.1 |
| -20.0 | 27.0 | 0.6 | 29.1 | 22.9 | 3.2 | 15.3 |
| -15.0 | 26.5 | 2.4 | 28.9 | 21.8 | 5.4 | 18.8 |
| -10.0 | 26.0 | 4.5 | 28.7 | 20.6 | 7.8 | 22.6 |
| -5.0 | 25.4 | 6.7 | 28.5 | 19.3 | 10.4 | 26.7 |
| 0.0 | 24.7 | 9.1 | 28.2 | 17.8 | 13.3 | 31.1 |
| 5.0 | 23.9 | 11.8 | 27.9 | 16.2 | 16.4 | 35.9 |
| 10.0 | 23.1 | 14.6 | 27.6 | 14.4 | 19.7 | 41.0 |
| 15.0 | 22.1 | 17.7 | 27.2 | 12.4 | 23.3 | 46.5 |
| 20.0 | 21.1 | 21.0 | 26.8 | 10.2 | 27.2 | 52.5 |
| 25.0 | 19.9 | 24.6 | 26.3 | 7.8 | 31.5 | 58.8 |
| 30.0 | 18.6 | 28.4 | 25.8 | 5.2 | 36.0 | 65.6 |
| 35.0 | 17.2 | 32.5 | 25.2 | 2.3 | 40.8 | 72.8 |
| 40.0 | 15.6 | 36.9 | 24.5 | 0.4 | 46.0 | 80.5 |
| 45.0 | 13.9 | 41.6 | 23.8 | 2.0 | 51.6 | 88.7 |
| 50.0 | 12.0 | 46.7 | 22.9 | 3.8 | 57.5 | 97.4 |
| 55.0 | 10.0 | 52.0 | 22.2 | 5.8 | 63.9 | 106.6 |
| 60.0 | 7.8 | 57.7 | 21.0 | 7.9 | 70.6 | 116.4 |
| 65.0 | 5.4 | 63.7 | 19.9 | 10.1 | 77.8 | 126.7 |
| 70.0 | 2.7 | 70.2 | 18.7 | 12.6 | 85.4 | 137.6 |
| 75.0 | 0.0 | 76.9 | 17.3 | 15.2 | 93.4 | 149.1 |
| 80.0 | 1.5 | 84.1 | 15.8 | 18.0 | 101.9 | 161.2 |
| 85.0 | 3.2 | 91.7 | 14.3 | 20.9 | 111.0 | 174.0 |
| 90.0 | 4.9 | 99.7 | 12.5 | 24.1 | 120.5 | 187.4 |
| 95.0 | 6.8 | 108.2 | 10.6 | 27.5 | 130.5 | 201.4 |
| 100.0 | 8.8 | 117.1 | 8.6 | 31.1 | 141.1 | 216.2 |
| 105.0 | 10.9 | 126.5 | 6.4 | 35.0 | 152.2 | 231.7 |
| 110.0 | 13.2 | 136.4 | 4.0 | 39.1 | 164.0 | 247.9 |
| 115.0 | 15.6 | 146.7 | 1.4 | 43.4 | 176.3 | 264.9 |
| 120.0 | 18.3 | 157.6 | 0.7 | 48.0 | 189.2 | 282.7 |
| 125.0 | 21.0 | 169.0 | 2.2 | 52.8 | 202.8 | 301.4 |
| 130.0 | 24.0 | 180.9 | 3.7 | 58.0 | 217.0 | 320.8 |
| 135.0 | 27.1 | 193.5 | 5.4 | 63.4 | 231.9 | 341.2 |
| 140.0 | 30.4 | 206.5 | 7.2 | 69.0 | 247.4 | 362.6 |
| 145.0 | 34.0 | 220.2 | 9.2 | 75.0 | 263.7 | 385.0 |
| 150.0 | 37.7 | 234.5 | 11.2 | 81.3 | 280.7 | 408.4 |

Vacuum Inches Hg

| Temp °F | R-22 Vapor Pressure | R-123 Vapor Pressure | R-134a Vapor Pressure | R-408A Liquid Pressure | R-404A Liquid Pressure | R-409A Liquid Pressure | R-409A Vapor Pressure | R-407C Liquid Pressure | R-407C Vapor Pressure | R-410A Liquid Pressure |
|------------|---------------------------|----------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| -50.0 | 6.2 | 29.2 | 18.7 | 1.6 | 0.6 | 12.4 | 17.2 | 2.9 | 11.4 | 3.5 |
| -45.0 | 2.7 | 29.0 | 16.9 | 1.1 | 2.7 | 9.7 | 15.2 | 0.4 | 8.5 | 8.5 |
| -40.0 | 0.5 | 28.9 | 14.8 | 3.3 | 5.0 | 6.8 | 13.1 | 2.5 | 5.2 | 11.6 |
| -35.0 | 2.6 | 28.7 | 12.5 | 5.6 | 7.6 | 3.5 | 10.7 | 4.8 | 1.5 | 14.9 |
| -30.0 | 4.9 | 28.4 | 9.8 | 8.2 | 10.4 | 0.0 | 8.1 | 7.3 | 1.3 | 18.5 |
| -25.0 | 7.4 | 28.1 | 6.9 | 11.0 | 13.4 | 2.0 | 5.1 | 10.1 | 3.6 | 22.5 |
| -20.0 | 10.1 | 27.8 | 3.7 | 14.1 | 16.8 | 4.1 | 1.9 | 13.1 | 6.1 | 26.9 |
| -15.0 | 13.2 | 27.4 | 0.1 | 17.5 | 20.5 | 6.5 | 0.8 | 16.5 | 8.8 | 31.7 |
| -10.0 | 16.5 | 27.0 | 1.9 | 21.2 | 24.5 | 9.0 | 2.8 | 20.1 | 11.9 | 36.8 |
| -5.0 | 20.0 | 26.5 | 4.1 | 25.2 | 28.8 | 11.8 | 4.9 | 24.0 | 15.2 | 42.5 |
| 0.0 | 23.9 | 25.9 | 6.5 | 29.5 | 33.5 | 14.8 | 7.2 | 28.3 | 18.9 | 48.6 |
| 5.0 | 28.2 | 25.3 | 9.1 | 34.2 | 38.6 | 18.1 | 9.7 | 33.0 | 22.9 | 55.2 |
| 10.0 | 32.8 | 24.6 | 11.9 | 39.3 | 44.0 | 21.7 | 12.5 | 38.0 | 27.3 | 62.3 |
| 15.0 | 37.7 | 23.7 | 15.0 | 44.8 | 49.9 | 25.5 | 15.4 | 43.5 | 32.0 | 70.0 |
| 20.0 | 43.0 | 22.8 | 18.4 | 50.7 | 56.2 | 29.6 | 18.7 | 49.3 | 37.2 | 78.3 |
| 25.0 | 48.7 | 21.8 | 22.1 | 57.0 | 63.0 | 34.0 | 22.2 | 55.7 | 42.7 | 87.3 |
| 30.0 | 54.9 | 20.7 | 26.0 | 63.7 | 70.3 | 38.7 | 26.0 | 62.5 | 48.7 | 96.8 |
| 35.0 | 61.5 | 19.5 | 30.3 | 71.0 | 78.1 | 43.8 | 30.1 | 69.8 | 55.2 | 107.0 |
| 40.0 | 68.5 | 18.1 | 35.0 | 78.7 | 86.4 | 49.2 | 34.5 | 77.6 | 62.1 | 118.0 |
| 45.0 | 76.0 | 16.6 | 40.0 | 87.0 | 95.2 | 54.9 | 39.2 | 86.0 | 69.5 | 129.7 |
| 50.0 | 84.0 | 15.0 | 45.4 | 95.8 | 104.7 | 61.0 | 44.3 | 94.9 | 77.5 | 142.2 |
| 55.0 | 92.5 | 13.1 | 51.1 | 105.1 | 114.7 | 67.6 | 49.8 | 104.5 | 86.0 | 155.5 |
| 60.0 | 101.6 | 11.2 | 57.3 | 115.1 | 125.3 | 74.5 | 55.6 | 114.6 | 95.1 | 169.6 |
| 65.0 | 111.2 | 9.0 | 63.9 | 125.6 | 136.6 | 81.8 | 61.9 | 125.4 | 104.8 | 184.6 |
| 70.0 | 121.4 | 6.6 | 71.0 | 136.8 | 148.6 | 89.5 | 68.6 | 136.9 | 115.2 | 200.6 |
| 75.0 | 132.2 | 4.0 | 78.6 | 148.7 | 161.2 | 97.7 | 75.8 | 149.1 | 126.2 | 217.4 |
| 80.0 | 143.6 | 1.2 | 86.6 | 161.2 | 174.6 | 106.4 | 83.4 | 162.1 | 137.8 | 235.3 |
| 85.0 | 155.7 | 0.9 | 95.1 | 174.4 | 188.8 | 115.5 | 91.5 | 175.8 | 150.2 | 254.1 |
| 90.0 | 168.4 | 2.5 | 104.2 | 188.4 | 203.7 | 125.2 | 100.2 | 190.2 | 163.4 | 274.1 |
| 95.0 | 181.8 | 4.2 | 113.8 | 203.1 | 219.4 | 135.3 | 109.4 | 205.5 | 177.4 | 295.1 |
| 100.0 | 195.9 | 6.1 | 124.1 | 218.7 | 235.9 | 146.0 | 119.2 | 221.6 | 192.1 | 317.2 |
| 105.0 | 210.7 | 8.1 | 134.9 | 235.4 | 253.4 | 157.2 | 129.6 | 238.5 | 207.8 | 340.5 |
| 110.0 | 226.3 | 10.3 | 146.3 | 252.1 | 271.7 | 169.0 | 140.6 | 256.4 | 224.4 | 365.0 |
| 115.0 | 242.7 | 12.6 | 158.4 | 270.2 | 290.9 | 181.4 | 152.3 | 275.1 | 241.9 | 390.7 |
| 120.0 | 259.9 | 15.1 | 171.1 | 289.1 | 311.1 | 194.4 | 164.7 | 294.7 | 260.5 | 417.7 |
| 125.0 | 277.9 | 17.7 | 184.5 | 308.9 | 332.3 | 208.0 | 177.8 | 315.2 | 280.1 | 445.9 |
| 130.0 | 296.8 | 20.6 | 198.7 | 329.7 | 354.5 | 222.3 | 191.6 | 336.7 | 300.9 | 475.6 |
| 135.0 | 316.5 | 23.6 | 213.6 | 351.5 | 377.8 | 237.2 | 206.3 | 359.2 | 322.9 | 506.5 |
| 140.0 | 337.2 | 26.8 | 229.3 | 374.3 | 402.2 | 252.9 | 221.8 | 382.6 | 346.2 | 539.0 |
| 145.0 | 358.8 | 30.2 | 245.7 | 398.1 | 427.7 | 269.3 | 238.2 | 407.0 | 370.8 | 572.8 |
| 150.0 | 381.5 | 33.8 | 263.0 | 423.0 | 454.4 | 286.4 | 255.5 | 432.4 | 396.9 | 608.1 |

Vacuum Inches Hg