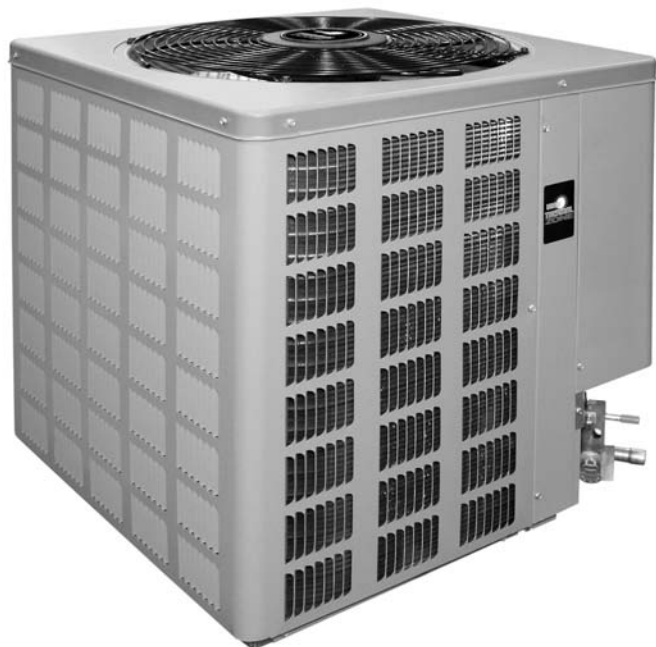


Featuring
Earth-Friendly
R-410A Refrigerant



13 SEER CONDENSING UNITS

Features

- Painted louvered steel cabinet
- Easily accessible control box
- Condenser coils constructed with copper tubing and enhanced aluminum fins
- Grille/Motor mount for quiet fan operation
- Bi-Directional Filter Drier (shipped – not installed)

Applications

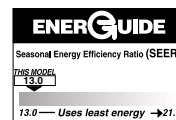
Outdoor condensing unit designed for ground level or rooftop installations. These units offer comfort and dependability for single, multi-family and light commercial applications.

Accessories

- Low Pressure Control (RXAC-A07)
- High Pressure Control (RXAB-A07)
- Low Ambient Control (RXAD-A07)
- Compressor Time Delay Control
- Crankcase Heater
- Sound Enclosure

TZAL-3 SERIES

Manufactured for
Thermal Zone®
Philadelphia, PA



Model Number Identification

| | | | | | | | |
|---------------|---------------------|------------|----------|-------------|--|--------------------------|------------------------|
| TZ | A | L | - | 3 | 18 | 2 | A |
| THERMAL ZONE® | A = AIR CONDITIONER | L = R-410A | | 3 = 13 SEER | NOMINAL COOLING CAPACITY | VOLTAGE | CABINET |
| | | | | | 18 = 18,000 BTU/HR [5.28 kW] 24 = 24,000 BTU/HR [7.03 kW] 30 = 30,000 BTU/HR [8.79 kW] 36 = 36,000 BTU/HR [10.55 kW] 42 = 42,000 BTU/HR [12.31 kW] 48 = 48,000 BTU/HR [14.07 kW] 60 = 60,000 BTU/HR [17.58 kW] | J = 208-230 SINGLE PHASE | A = FULL METAL CABINET |

Performance Data @ ARI Standard Conditions—Cooling

| Model Numbers | | 80°F [26.5°C] DB/67°F [19.5°C] WB Indoor Air 95°F [35°C] DB Outdoor Air | | | | | Sound Rating dB | Indoor CFM [L/s] |
|------------------------|-----------------------------------|--|----------------------------|--------------------------|-------|-------|--------------------|------------------|
| Outdoor Unit TZAL-3 | Indoor Coil and/or Air Handler | Total Capacity BTU/H [kW] | Net Sensible BTU/H [kW] | Net Latent BTU/H [kW] | EER | SEER | | |
| 18 | TCFL-H*2417A* ① | 18,500 [5.4] | 13,400 [3.9] | 5,100 [1.5] | 11.40 | 13.00 | 74 | 650 [307] |
| | TCFL-A*2414A* | 18,500 [5.4] | 13,400 [3.9] | 5,100 [1.5] | 11.40 | 13.00 | 74 | 650 [307] |
| | TCFL-A*2417A* | 18,500 [5.4] | 13,400 [3.9] | 5,100 [1.5] | 11.40 | 13.00 | 74 | 650 [307] |
| | TCFL-H*2414A* | 18,500 [5.4] | 13,400 [3.9] | 5,100 [1.5] | 11.40 | 13.00 | 74 | 650 [307] |
| | TZHLL-2417 (TCSL-H*2417A*) | 18,800 [5.5] | 13,600 [4.0] | 5,200 [1.5] | 12.70 | 14.00 | 74 | 600 [283] |
| | TZHSL-1817 (TCSL-H*2417A*) | 18,500 [5.4] | 13,400 [3.9] | 5,100 [1.5] | 11.85 | 13.00 | 74 | 600 [283] |
| 24 | TCFL-H*2417A* ① | 24,200 [7.1] | 17,450 [5.1] | 6,750 [2.0] | 11.15 | 13.00 | 74 | 800 [378] |
| | TCFL-A*2414A* | 24,200 [7.1] | 17,450 [5.1] | 6,750 [2.0] | 11.15 | 13.00 | 74 | 800 [378] |
| | TCFL-A*2417A* | 24,200 [7.1] | 17,450 [5.1] | 6,750 [2.0] | 11.15 | 13.00 | 74 | 800 [378] |
| | TCFL-H*2414A* | 24,200 [7.1] | 17,450 [5.1] | 6,750 [2.0] | 11.15 | 13.00 | 74 | 800 [378] |
| | TZHLL-2417 (TCSL-H*2417A*) | 24,800 [7.3] | 17,850 [5.2] | 6,950 [2.0] | 12.60 | 14.00 | 74 | 775 [366] |
| | TZHSL-2417 (TCSL-H*2417A*) | 24,200 [7.1] | 17,500 [5.1] | 6,700 [2.0] | 11.45 | 13.00 | 74 | 800 [378] |
| 30 | TCFL-H*3617A* ① | 29,600 [8.7] | 22,500 [6.6] | 7,100 [2.1] | 11.55 | 13.00 | 73 | 1,000 [472] |
| | TCFL-A*3617A* | 29,600 [8.7] | 22,500 [6.6] | 7,100 [2.1] | 11.55 | 13.00 | 73 | 1,000 [472] |
| | TCFL-A*3621A* | 29,600 [8.7] | 22,500 [6.6] | 7,100 [2.1] | 11.55 | 13.00 | 73 | 1,000 [472] |
| | TCFL-H*3621A* | 29,600 [8.7] | 22,500 [6.6] | 7,100 [2.1] | 11.55 | 13.00 | 73 | 1,000 [472] |
| | TZHLL-3617 (TCSL-H*3617A*) | 30,200 [8.8] | 23,050 [6.8] | 7,150 [2.1] | 12.70 | 14.00 | 73 | 1,000 [472] |
| | TZHSL-3017 (TCSL-H*3617A*) | 29,600 [8.7] | 22,550 [6.6] | 7,050 [2.1] | 11.90 | 13.00 | 73 | 950 [448] |
| 36 | TCFL-H*3617A* ① | 34,800 [10.2] | 25,250 [7.4] | 9,550 [2.8] | 11.50 | 13.00 | 75 | 1,050 [495] |
| | TCFL-A*3617A* | 34,800 [10.2] | 25,250 [7.4] | 9,550 [2.8] | 11.50 | 13.00 | 75 | 1,050 [495] |
| | TCFL-A*3621A* | 34,800 [10.2] | 25,250 [7.4] | 9,550 [2.8] | 11.50 | 13.00 | 75 | 1,050 [495] |
| | TCFL-H*3621A* | 34,800 [10.2] | 25,250 [7.4] | 9,550 [2.8] | 11.50 | 13.00 | 75 | 1,050 [495] |
| | TZHLL-3617 (TCSL-H*3617A*) | 36,000 [10.5] | 26,150 [7.7] | 9,850 [2.9] | 12.45 | 14.00 | 75 | 1,200 [566] |
| | TZHSL-3617 (TCSL-H*3617A*) | 35,200 [10.3] | 25,500 [7.5] | 9,700 [2.8] | 11.80 | 13.00 | 75 | 1,100 [519] |
| 42 | TCFL-H*4821A* ① | 41,500 [12.2] | 30,400 [8.9] | 11,100 [3.3] | 11.20 | 13.00 | 77 | 1,400 [661] |
| | TCFL-A*4821A* | 41,500 [12.2] | 30,650 [9.0] | 10,850 [3.2] | 11.25 | 13.00 | 77 | 1,400 [661] |
| | TCFL-A*4824A* | 41,500 [12.2] | 30,650 [9.0] | 10,850 [3.2] | 11.25 | 13.00 | 77 | 1,400 [661] |
| | TCFL-H*4824A* | 41,500 [12.2] | 30,650 [9.0] | 10,850 [3.2] | 11.25 | 13.00 | 77 | 1,400 [661] |
| | TZHLL-4821 (TCSL-H*4821A*) | 42,000 [12.3] | 31,100 [9.1] | 10,900 [3.2] | 12.20 | 14.00 | 77 | 1,400 [661] |
| | TZHSL-4221 (TCSL-H*4821A*) | 41,000 [12.0] | 30,400 [8.9] | 10,600 [3.1] | 11.35 | 13.00 | 77 | 1,350 [637] |
| 48 | TCFL-H*4821A* ① | 47,000 [13.8] | 33,900 [9.9] | 13,100 [3.8] | 11.50 | 13.00 | 77 | 1,525 [720] |
| | TCFL-A*4821A* | 47,000 [13.8] | 33,900 [9.9] | 13,100 [3.8] | 11.50 | 13.00 | 77 | 1,525 [720] |
| | TCFL-A*4824A* | 47,000 [13.8] | 33,900 [9.9] | 13,100 [3.8] | 11.50 | 13.00 | 77 | 1,525 [720] |
| | TCFL-H*4824A* | 47,000 [13.8] | 33,900 [9.9] | 13,100 [3.8] | 11.50 | 13.00 | 77 | 1,525 [720] |
| | TZHLL-4821 (TCSL-H*4821A*) | 48,000 [14.1] | 34,550 [10.1] | 13,450 [3.9] | 12.15 | 14.00 | 77 | 1,600 [755] |
| | TZHSL-4821 (TCSL-H*4821A*) | 47,000 [13.8] | 34,000 [10.0] | 13,000 [3.8] | 11.60 | 13.00 | 77 | 1,525 [720] |
| 60 | TZHSL-4824 (TCSL-H*4824A*) | 47,000 [13.8] | 34,000 [10.0] | 13,000 [3.8] | 11.60 | 13.00 | 77 | 1,525 [720] |
| | TCFL-H*6024A* ① | 56,500 [16.6] | 39,100 [11.5] | 17,400 [5.1] | 11.10 | 13.00 | 77 | 1,550 [731] |
| | TCFL-A*6024A* | 56,500 [16.6] | 39,100 [11.5] | 17,400 [5.1] | 11.10 | 13.00 | 77 | 1,550 [731] |
| | TZHLL-6024 (TCSL-H*6024A*) | 59,000 [17.3] | 40,750 [11.9] | 18,250 [5.3] | 11.85 | 13.50 | 77 | 1,800 [849] |

① Highest sales volume tested combination required by D.O.E. test procedures.

[] Designates Metric Conversions

Electrical and Physical Data

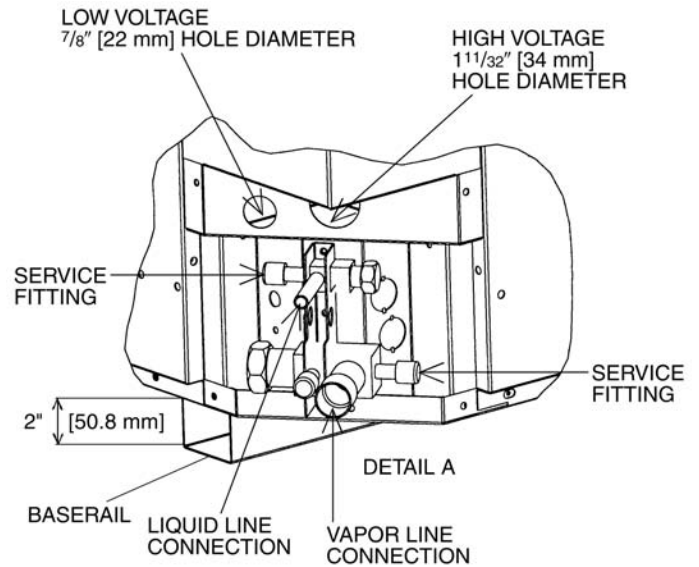
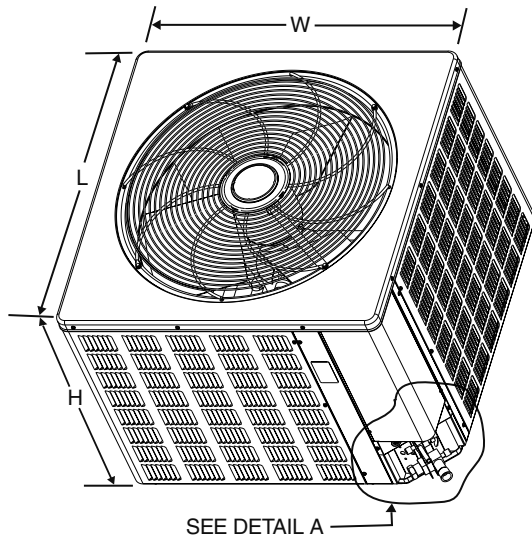
| Model Number TZAL-3 | ELECTRICAL | | | | | | | PHYSICAL | | | | | |
|------------------------|--|--------------------------------|----------------------------------|--|---|---------------------------------|--------------------|--|-------------|-------------|--|------------------|-----------------------|
| | Phase Frequency [HZ] Voltage [Volts] | Compressor | | Fan Motor Full Load Amperes (FLA) | Minimum Circuit Capacity Amperes | Fuse or HACR Circuit Breaker | | Outdoor Coil | | | Refrigerant Per Circuit Oz. [g] | Weight | |
| | | Rated Load Amperes (RLA) | Locked Rotor Amperes (LRA) | | | Minimum Amperes | Maximum Amperes | Face Area Sq. Ft. [m ²] | No. Rows | CFM [L/s] | | Net Lbs. [kg] | Shipping Lbs. [kg] |
| 18 | 1-60-208/230 | 9/9 | 48 | 0.6 | 12/12 | 15/15 | 20/20 | 11.06 [1.03] | 1 | 1645 [776] | 77 [2183] | 127 [57.6] | 135 [61.2] |
| 24 | 1-60-208/230 | 12.8/12.8 | 58.3 | 0.6 | 17/17 | 20/20 | 25/25 | 11.06 [1.03] | 1 | 1700 [802] | 77 [2183] | 126 [57.2] | 134 [60.8] |
| 30 | 1-60-208/230 | 14.1/14.1 | 73 | 0.8 | 19/19 | 25/25 | 30/30 | 13.72 [1.27] | 1 | 2370 [1118] | 95 [2693] | 144 [65.3] | 154 [69.9] |
| 36 | 1-60-208/230 | 17/17 | 96.7 | 0.8 | 23/23 | 30/30 | 35/35 | 16.39 [1.52] | 1 | 2805 [1324] | 106 [3005] | 166 [75.3] | 178 [80.7] |
| 42 | 1-60-208/230 | 21.8/21.8 | 112 | 1.2 | 29/29 | 35/35 | 50/50 | 16.39 [1.52] | 1 | 3295 [1555] | 118 [3345] | 194 [88] | 206 [93.4] |
| 48 | 1-60-208/230 | 21.8/21.8 | 117 | 1.2 | 29/29 | 35/35 | 50/50 | 21.85 [2.03] | 1 | 3295 [1555] | 149 [4224] | 222 [100.7] | 233 [105.7] |
| 60 | 1-60-208/230 | 26.4/26.4 | 134 | 1.2 | 35/35 | 45/45 | 60/60 | 21.85 [2.03] | 1 | 3570 [1685] | 176 [4990] | 227 [103] | 238 [108] |

NOTE: Factory Refrigerant Charge includes refrigerant for 15 feet of standard line set.

Unit Dimensions

| Model No. TZAL-3 | Unit Dimensions | | |
|---------------------|--------------------------------------|--------------------------------------|--|
| | Width "W" Inches | Length "L" Inches | Height "H" Inches |
| 18, 24 | 23 ⁵ / ₈ [600] | 23 ⁵ / ₈ [600] | 24 ¹ / ₄ [616] |
| 30 | 27 ⁵ / ₈ [702] | 27 ⁵ / ₈ [702] | 24 ¹ / ₄ [616] |
| 36, 42 | 31 ⁵ / ₈ [803] | 31 ⁵ / ₈ [803] | 27 ¹⁵ / ₁₆ [710] |
| 48, 60 | 31 ⁵ / ₈ [803] | 31 ⁵ / ₈ [803] | 35 ¹⁵ / ₁₆ [913] |

[] Designates Metric Conversions



Condensing Unit Refrigerant Line Size Information

| Liquid Line Sizing (R-410A) | | | | | | | | | | | | | | |
|-----------------------------|---|----------------------------|---|------------|------------|-------------|-------------|-------------|---|------------|------------|-------------|-------------|-------------|
| System Capacity | Liquid Line Connection Size (Inch I.D.) | Line Size (Inch O.D.) [mm] | Liquid Line Size – Outdoor Unit Above Indoor Coil (Cooling Only—Does not apply to Heat Pumps) | | | | | | Liquid Line Size – Outdoor Unit Below Indoor Coil | | | | | |
| | | | Total Equivalent Length—Feet [m] | | | | | | Total Equivalent Length—Feet [m] | | | | | |
| | | | 25 [7.62] | 50 [15.24] | 75 [22.86] | 100 [30.48] | 125 [38.10] | 150 [45.72] | 25 [7.62] | 50 [15.24] | 75 [22.86] | 100 [30.48] | 125 [38.10] | 150 [45.72] |
| | | | Minimum Vertical Separation—Feet [m] | | | | | | Maximum Vertical Separation—Feet [m] | | | | | |
| 1 1/2 Ton | 3/8" [9.53] | 1/4 [6.35] | 0 | 0 | 0 | 0 | 8 [2.44] | 24 [7.32] | 25 [7.62] | 40 [12.19] | 25 [7.62] | 9 [2.74] | N/A | N/A |
| | | 5/16 [7.94] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 62 [18.90] | 58 [17.68] | 53 [16.15] | 49 [14.94] |
| | | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 75 [22.86] | 72 [21.95] | 70 [21.34] | 68 [20.73] |
| 2 Ton | 3/8" [9.53] | 1/4 [6.35] | 0 | 3 [0.91] | 29 [8.84] | 55 [16.76] | 81 [24.69] | 108 [32.92] | 23 [7.01] | N/A | N/A | N/A | N/A | N/A |
| | | 5/16 [7.94] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 36 [10.97] | 29 [8.84] | 23 [7.01] | 16 [4.88] | 9 [2.74] |
| | | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 72 [21.95] | 70 [21.34] | 68 [20.73] | 65 [19.81] |
| 2 1/2 Ton | 3/8" [9.53] | 1/4 [6.35] | 0 | 14 [4.27] | 56 [17.07] | 98 [29.87] | N/A | N/A | 25 [7.62] | N/A | N/A | N/A | N/A | N/A |
| | | 5/16 [7.94] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 49 [14.94] | 38 [11.58] | 27 [8.23] | 17 [5.18] | 6 [1.83] |
| | | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 68 [20.73] | 65 [19.81] | 62 [18.90] | 58 [17.68] |
| 3 Ton | 3/8" [9.53] | 5/16 [7.94] | 0 | 0 | 0 | 0 | 0 | 9 [2.74] | 25 [7.62] | 50 [15.24] | 37 [11.28] | 22 [6.71] | 7 [2.13] | N/A |
| | | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 68 [20.73] | 63 [19.20] | 58 [17.68] | 53 [16.15] |
| 3 1/2 Ton | 3/8" [9.53] | 5/16 [7.94] | 0 | 0 | 0 | 16 [4.88] | 35 [10.67] | 54 [16.46] | 25 [7.62] | 23 [7.01] | 4 [1.22] | N/A | N/A | N/A |
| | | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 43 [13.11] | 36 [10.97] | 30 [9.14] | 24 [7.32] |
| 4 Ton | 3/8" [9.53] | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 46 [14.02] | 38 [11.58] | 30 [9.14] | 22 [6.71] | 15 [4.57] |
| | | 1/2 [12.57] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 56 [17.07] | 55 [16.76] | 53 [16.15] | 52 [15.85] |
| 5 Ton | 3/8" [9.53] | 3/8* [9.53] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 56 [17.07] | 44 [13.41] | 32 [9.75] | 20 [6.10] |
| | | 1/2 [12.57] | 0 | 0 | 0 | 0 | 0 | 0 | 25 [7.62] | 50 [15.24] | 75 [22.86] | 81 [24.69] | 79 [24.08] | 76 [23.16] |

NOTES: *Standard line size
N/A = Application not recommended.

| Suction Line Length/Size versus Capacity Multiplier (R-410A) | | | | | | | | | | |
|--|----------------------------------|---|-------------------|--|-------------------|---|-------------------|---|-------------------|--|
| Unit Size | | 1 1/2 Ton | 2 Ton | 2 1/2 Ton | 3 Ton | 3 1/2 Ton | 4 Ton | 5 Ton | | |
| Suction Line Connection Size | | 3/4" [19.05] I.D. | | | | 7/8" [22.23] I.D. | | | | |
| Suction Line Run—Feet [m] | | 5/8" [15.88 mm] O.D. Optional 3/4" [19.05 mm] O.D. Standard* | | 5/8" [15.88 mm] O.D. Optional 3/4" [19.05 mm] O.D. Standard* 7/8" [22.23 mm] O.D. Optional | | 3/4" [19.05 mm] O.D. Optional 7/8" [22.23 mm] O.D. Standard* | | 7/8" [22.23 mm] O.D. Optional 1 1/8" [28.58 mm] O.D. Standard* | | |
| 25' [7.62] | Optional Standard Optional | 1.00 1.00 — | 1.00 1.00 — | 1.00 1.00 1.00 | 1.00 1.00 — | 1.00 1.00 — | 1.00 1.00 — | 1.00 1.00 — | 1.00 1.00 — | |
| 50' [15.24] | Optional Standard Optional | .98 .99 — | .98 .99 — | .96 .98 .99 | .98 .99 — | .99 .99 — | .99 .99 — | .99 .99 — | .99 .99 — | |
| 100' [30.48] | Optional Standard Optional | .95 .96 — | .95 .96 — | .94 .96 .97 | .96 .97 — | .96 .98 — | .96 .98 — | .96 .98 — | .97 .98 — | |
| 150' [45.72] | Optional Standard Optional | .92 .93 — | .92 .94 — | .91 .93 .95 | .94 .95 — | .94 .96 — | .95 .96 — | .95 .96 — | .94 .97 — | |

NOTES: *Standard line size
Using suction line larger than shown in chart will result in poor oil return and is not recommended.

[] Designates Metric Conversions

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

GENERAL TERMS OF LIMITED WARRANTY

Thermal Zone® will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

Condenser Coil leaks caused by
factory defectsFive (5) Years
CompressorFive (5) Years
Any Other Part.....Five (5) Years

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See the Thermal Zone® Warranty Card.

NOTES

NOTES

NOTES

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

"In keeping with its policy of continuous progress and product improvement, the right is reserved to make changes without notice."